

RETURN WITH BIDLETTING DATE August 5, 2005ITEM NUMBER 6A

Proposal Submitted By

Name _____

Address _____

City/State _____

Zip Code _____ Telephone Number _____

FEIN Number _____ FAX Number _____

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)

PROPOSAL COVER SHEET
Illinois Department of Transportation
DIVISION OF AERONAUTICS
AIRPORT Lansing MunicipalMUNICIPAL DESIGNATION LansingCOUNTY DESIGNATION CookILLINOIS PROJECT NO. IGQ-3329FEDERAL PROJECT NO. 3-17-0121-B21

PLEASE MARK THE APPROPRIATE BOX BELOW:

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

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.

HOW MANY PROPOSALS SHOULD PROSPECTIVE BIDDERS REQUEST?: Prospective bidders should, prior to submitting their initial request for plans and proposals, determine their needs and request the total number of plans and proposals needed for each item requested. There will be a nonrefundable charge of \$15 for each set of plans and specifications issued.

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

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a “Request for Proposal Forms and Plans” he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal 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 plans and proposals	217/782-7806



PROPOSAL

1. Proposal of _____

for the improvement officially known as:

- (a) Lansing Municipal Airport
- (b) The proposed improvement shown in detail on the plans issued by the Department schedule and detail sheets included herein, includes, in general, the following described work:

Construct north quadrant sitework - phase 1; Construct Taxiway G2 extension; Glenwood - Lansing Road improvements.

TO THE DEPARTMENT OF TRANSPORTATION

2. The plans for the proposed work are those issued by the Department of Transportation to cover the work described above.

The specifications are those prepared by the Department of Transportation, Division of Aeronautics and designated as "Standard Specifications for Construction of Airports," adopted January, 1985, the "Supplemental Specifications and Recurring Special Provisions," adopted July 1, 2004 and the "Special Provisions" thereto, adopted and in effect on the date of invitation for bids.

3. **COMPLETION TIME/LIQUIDATED DAMAGES.** It being understood and agreed that the completion within the time limit is an essential part of the contract, the bidder agrees to complete the work within 127 calendar days, unless additional time is granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work on or before the time named herein, or within such extra time as may have been allowed by extensions, the bidder agrees that the Department of Transportation shall withhold from such sum as may be due him/her under the terms of this contract, the costs, as set forth below, which costs shall be considered and treated not as a penalty but as damages due to the State from the bidder by reason of the failure of the bidder to complete the work within the time specified in the contract. The following Schedule of Deductions supersedes the table given in Section 60-09 of the Division's Standard Specifications for Construction of Airports.

Schedule of Deductions for Each Day of Overrun in Contract Time

<u>Original Contract Amount</u>		<u>Daily Charge</u>
<u>From More Than</u>	<u>To and Including</u>	<u>Calendar Day</u>
\$ 0	\$ 25,000	\$ 300
25,000	100,000	375
100,000	500,000	550
500,000	1,000,000	725
1,000,000	2,000,000	900
2,000,000	3,000,000	1,100
3,000,000	5,000,000	1,300
5,000,000	7,500,000	1,450
7,500,000	10,000,000	1,650

A daily charge shall be made for every day shown on the calendar beyond the specified contract time in calendar days.

RETURN WITH BID

4. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, supplemental and applicable recurring special provisions, form of contract and contract bonds, 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.

5. **EXECUTION OF CONTRACT AND CONTRACT BONDS.** 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 bonds 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 and guaranteeing payment in full all bills and accounts for materials and labor used in the construction of the work.

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

<u>Amount of Bid</u>	<u>Proposal Guaranty</u>	<u>Amount of Bid</u>	<u>Proposal Guaranty</u>
Up to \$5,000	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 contract bonds 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 bonds; otherwise, the bid bond shall become void or the proposal guaranty check shall be returned to the undersigned.

RETURN WITH BID

(e) The plans and Special Provisions for each separate contract shall be construed separately for all requirements, except as described in paragraphs (a) through (d) listed above.

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

8. **SCHEDULE OF PRICES.** The undersigned submits herewith his/her schedule of prices covering the work to be performed under this contract; he/she understands that he/she must show in the schedule the unit prices (with no more than two decimal places, i.e. \$25.35, not \$25.348) for which he/she proposes to perform each item of work, that the extensions must be made by him/her, and that if not so done his/her proposal may be rejected as irregular.

The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of additions and deductions; that if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices, the latter shall govern.

STATE JOB #- - - -

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - LA034

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COUNTY NAME	CODE	DIST	AIRPORT NAME	FED PROJECT	ILL PROJECT
COOK	031	01	LANSING MUNICIPAL	3-17-0121-B21	IG-Q - 3329

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR108030	1/C #3/0 600V UG CABLE	L.F.	750.000 X		=		
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	2,550.000 X		=		
AR108406	1/C #6 600 V UG CABLE	L.F.	2,550.000 X		=		
AR108752	1/C #2 GROUND	L.F.	75.000 X		=		
AR108760	1/C #10 GROUND	L.F.	1,050.000 X		=		
AR110212	2" STEEL DUCT, DIRECT BURY	L.F.	50.000 X		=		
AR110214	4" STEEL DUCT, DIRECT BURY	L.F.	180.000 X		=		
AR110217	1 1/2" STEEL DUCT, DIRECT BURY	L.F.	1,050.000 X		=		
AR110504	4-WAY CONCRETE ENCASED DUCT	L.F.	135.000 X		=		
AR110550	SPLIT DUCT	L.F.	260.000 X		=		
AR110610	ELECTRICAL HANDHOLE	EACH	3.000 X		=		
AR125100	ELEVATED RETROREFLECTIVE MARKER	EACH	16.000 X		=		
AR125410	MITL-STAKE MOUNTED	EACH	31.000 X		=		
AR125415	MITL-BASE MOUNTED	EACH	6.000 X		=		
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	1.000 X		=		

LANSING MUNICIPAL
COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - LA034

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	1.000 X		=		
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EACH	2.000 X		=		
AR125470	MODIFY EXISTING SIGN PANEL	EACH	1.000 X		=		
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	4.000 X		=		
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1.000 X		=		
AR150520	MOBILIZATION	L.S.	1.000 X		=		
AR152540	SOIL STABILIZATION FABRIC	S.Y.	12,620.000 X		=		
AR156510	SILT FENCE	L.F.	2,250.000 X		=		
AR156511	DITCH CHECK	EACH	16.000 X		=		
AR156512	BALES	EACH	224.000 X		=		
AR156531	EROSION CONTROL BLANKET	S.Y.	10,250.000 X		=		
AR156540	RIPRAP	S.Y.	30.000 X		=		
AR156543	RIPRAP-GRADATION NO. 3	S.Y.	110.000 X		=		
AR156545	RIPRAP-GRADATION NO. 5	S.Y.	250.000 X		=		
AR162506	CLASS E FENCE 6'	L.F.	400.000 X		=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR162612	CLASS E GATE-12'	EACH	2.000	X	=		
AR162724	ELECTRICAL GATE 24'	EACH	1.000	X	=		
AR162960	RELOCATE CLASS E FENCE	L.F.	529.000	X	=		
AR201610	BITUMINOUS BASE COURSE	TON	1,816.000	X	=		
AR208515	POROUS GRANULAR EMBANKMENT	C.Y.	608.000	X	=		
AR208604	4" AGGREGATE BASE COURSE	S.Y.	6,140.000	X	=		
AR209607	CRUSHED AGG. BASE COURSE - 7"	S.Y.	6,140.000	X	=		
AR209608	CRUSHED AGG. BASE COURSE - 8"	S.Y.	4,280.000	X	=		
AR209611	CRUSHED AGGREGATE BASE COURSE-11"	S.Y.	2,200.000	X	=		
AR401610	BITUMINOUS SURFACE COURSE	TON	1,092.000	X	=		
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	71.000	X	=		
AR401910	REMOVE & REPLACE BIT. PAVEMENT	S.Y.	20.000	X	=		
AR510510	TIE DOWN	EACH	12.000	X	=		
AR510515	GROUND ROD	EACH	2.000	X	=		
AR602510	BITUMINOUS PRIME COAT	GAL.	5,955.000	X	=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR603510	BITUMINOUS TACK COAT	GAL.	1,773.000 X		=		
AR620520	PAVEMENT MARKING-WATERBORNE	S.F.	2,770.000 X		=		
AR701006	6" PVC STORM SEWER	L.F.	190.000 X		=		
AR701184	PRECAST CONC. BOX CULVERT 8' X4'	L.F.	216.000 X		=		
AR701512	12" RCP, CLASS IV	L.F.	65.000 X		=		
AR701515	15" RCP, CLASS IV	L.F.	465.000 X		=		
AR701518	18" RCP, CLASS IV	L.F.	675.000 X		=		
AR701524	24" RCP, CLASS IV	L.F.	116.000 X		=		
AR701900	REMOVE PIPE	L.F.	210.000 X		=		
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	L.F.	1,720.000 X		=		
AR705635	UNDERDRAIN COLLECTION STRUCTURE	EACH	2.000 X		=		
AR705900	REMOVE UNDERDRAIN	L.F.	760.000 X		=		
AR751411	INLET-TYPE A	EACH	2.000 X		=		
AR751540	MANHOLE 4'	EACH	5.000 X		=		
AR751900	REMOVE INLET	EACH	1.000 X		=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR752412	PRECAST REINFORCED CONC. FES 12"	EACH	1.000 X		=		
AR752415	PRECAST REINFORCED CONC. FES 15"	EACH	1.000 X		=		
AR752418	PRECAST REINFORCED CONC. FES 18"	EACH	10.000 X		=		
AR752424	PRECAST REINFORCED CONC. FES 24"	EACH	2.000 X		=		
AR752512	GRATING FOR CONC. FES 12"	EACH	1.000 X		=		
AR752515	GRATING FOR CONC. FES 15"	EACH	1.000 X		=		
AR752518	GRATING FOR CONC. FES 18"	EACH	10.000 X		=		
AR752524	GRATING FOR CONC. FES 24"	EACH	2.000 X		=		
AR752900	REMOVE END SECTION	EACH	2.000 X		=		
AR754410	COMB CONCRETE CURB & GUTTER	L.F.	1,350.000 X		=		
AR754710	CONCRETE FLUME	L.F.	2,600.000 X		=		
AR754915	REMOVE CONCRETE FLUME	L.F.	130.000 X		=		
AR760506	6" DUCTILE IRON WATER MAIN	L.F.	30.000 X		=		
AR760508	8" DUCTILE IRON WATER MAIN	L.F.	20.000 X		=		
AR760512	12" DUCTILE IRON WATER MAIN	L.F.	1,750.000 X		=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR760800	FIRE HYDRANT	EACH	3.000 X		=		
AR760830	WATER VALVE	EACH	2.000 X		=		
AR760860	TAPPING VALVE & SLEEVE	EACH	1.000 X		=		
AR800001	TYPE 1 INLET	EACH	6.000 X		=		
AR800012	BOX CULVERT END SECTION 8' X 4'	EACH	6.000 X		=		
AR800020	BORING AND JACKING	L.F.	143.000 X		=		
AR800043	TYPE 2 INLET	EACH	1.000 X		=		
AR800048	DRAINAGE GATE 30"	EACH	1.000 X		=		
AR800088	5" STEEL DUCT, DIRECT BURY	L.F.	200.000 X		=		
AR800097	RESTRICTOR PLATE - TYPE A	EACH	3.000 X		=		
AR800098	RESTRICTOR PLATE - TYPE B	EACH	1.000 X		=		
AR800099	LINE STOP, 8"	EACH	1.000 X		=		
AR800100	ELECTRIC SERVICE RELOCATION	L.S.	1.000 X		=		
AR800103	EMBANKMENT FILL	C.Y.	22,054.000 X		=		
AR800104	SHOULDER FILL	C.Y.	3,151.000 X		=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
AR800105	1/C #4/0 600V UG CABLE	L.F.	120.000 X		=		
AR800106	STEEL PLATE BEAM GUARDRAIL - TYPE	L.F.	280.000 X		=		
AR800107	STEEL PLATE BEAM GUARDRAIL - TYPE	L.F.	65.000 X		=		
AR800110	BLACK MAPLE-(3")	EACH	21,729.000 X		=		
AR901511	SEEDING-FORMULA 1	ACRE	24.900 X		=		
AR901512	SEEDING-FORMULA 2	ACRE	0.700 X		=		
AR904510	SODDING	S.Y.	275.000 X		=		
AR905510	TOPSOILING (FROM ON SITE)	C.Y.	8,169.000 X		=		
AR908510	MULCHING	ACRE	22.800 X		=		
AR910101	ROADWAY LIGHT POLE, TYPE A	EACH	3.000 X		=		
AR910102	ROADWAY LIGHT POLE, TYPE B	EACH	2.000 X		=		
AR910161	ROADWAY LIGHTING TRANCLOSURE	L.S.	1.000 X		=		
AR910200	ROADWAY SIGN	EACH	7.000 X		=		
AR910975	RELOCATE ROADWAY SIGN	EACH	1.000 X		=		
XX002856	RE-OPTIMIZE TR SIG SY	L SUM	1.000 X		=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0322494	CURB CUT	FOOT	65.000 X		=		
X0323336	LED SF RETRO RED BALL	EACH	6.000 X		=		
X0323337	LED SF RETRO GRN BALL	EACH	6.000 X		=		
X0323418	LED SF RETRO YEL BALL	EACH	6.000 X		=		
X0323419	LED SF RETRO YEL AROW	EACH	1.000 X		=		
X0323420	LED SF RETRO GRN AROW	EACH	1.000 X		=		
X0323421	LED SF RETRO WALK SIG	EACH	2.000 X		=		
X0323422	LED SF RETRO DONT WLK	EACH	2.000 X		=		
X8730250	ELCBL C 20 3C TW SH	FOOT	250.000 X		=		
X8950215	RELOC EXIST HANDHOLE	EACH	1.000 X		=		
Z0001050	AGG SUBGRADE 12	SQ YD	410.000 X		=		
20200500	EARTH EXC WID	CU YD	140.000 X		=		
31101400	SUB GRAN MAT B 6	SQ YD	100.000 X		=		
42000501	PCC PVT 10 JOINTED	SQ YD	425.000 X		=		
44000100	PAVEMENT REM	SQ YD	30.000 X		=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
44000500	COMB CURB GUTTER REM	FOOT	620.000 X		=		
44003100	MEDIAN REMOVAL	SQ FT	3,400.000 X		=		
44003800	MEDIAN SURF REMOVAL	SQ FT	1,600.000 X		=		
60250500	CB ADJ NEW T1F CL	EACH	2.000 X		=		
60608300	COMB CC&G TM2.12	FOOT	175.000 X		=		
60618200	BIT MEDIAN SURF	SQ FT	1,170.000 X		=		
60623714	CONC MEDIAN SPL	SQ FT	830.000 X		=		
60623745	CONC MEDIAN TRANS	SQ FT	360.000 X		=		
70102635	TR CONT & PROT 701701	L SUM	1.000 X		=		
72000100	SIGN PANEL T1	SQ FT	9.000 X		=		
72000200	SIGN PANEL T2	SQ FT	12.000 X		=		
72400800	REMOV SIGN COMPLETE	SQ FT	18.000 X		=		
72400900	REMOV SIGN PANEL	EACH	1.000 X		=		
78001100	PT PVT MK LTRS & SYMB	SQ FT	100.000 X		=		
78001130	PAINT PVT MK LINE 6	FOOT	225.000 X		=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78001180	PAINT PVT MK LINE 24	FOOT	12.000 X		=		
78300100	PAVT MARKING REMOVAL	SQ FT	100.000 X		=		
81000300	CON T 1 GALVS	FOOT	65.000 X		=		
81000600	CON T 2 GALVS	FOOT	220.000 X		=		
81000700	CON T 2 1/2 GALVS	FOOT	200.000 X		=		
81001000	CON T 4 GALVS	FOOT	20.000 X		=		
81018500	CON P 2 GALVS	FOOT	47.000 X		=		
81400100	HANDHOLE	EACH	1.000 X		=		
81400200	HD HANDHOLE	EACH	2.000 X		=		
85000200	MAIN EX TR SIG INSTAL	EACH	1.000 X		=		
87301225	ELCBL C SIGNAL 14 3C	FOOT	250.000 X		=		
87301245	ELCBL C SIGNAL 14 5C	FOOT	650.000 X		=		
87301255	ELCBL C SIGNAL 14 7C	FOOT	650.000 X		=		
87301305	ELCBL C LEAD 14 1PR	FOOT	1,440.000 X		=		
87702850	STL COMB MAA&P 24	EACH	1.000 X		=		

LANSING MUNICIPAL
COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - LA034

ECMS002 DTGECM03 ECMR003 PAGE 11
RUN DATE - 07/13/05
RUN TIME - 194208

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87702870	STL COMB MAA&P 28	EACH	1.000	X		=	
87800400	CONC FDN TY E 30D	FOOT	45.000	X		=	
88000170	SH 1F 3S MAM	EACH	1.000	X		=	
88000290	SH 1F 5S MAM	EACH	3.000	X		=	
88200210	TS BACKPLATE LOU ALUM	EACH	4.000	X		=	
88500100	INDUCTIVE LOOP DETECT	EACH	3.000	X		=	
88600100	DET LOOP T1	FOOT	350.000	X		=	
88700300	LIGHT DETECTOR AMP	EACH	1.000	X		=	
89000100	TEMP TR SIG INSTALL	EACH	1.000	X		=	
89500100	RELOC EX SIG HEAD	EACH	1.000	X		=	
89501250	RELOC EX TS EQUIP	EACH	2.000	X		=	
89501400	REL EM VEH PR SYS D U	EACH	1.000	X		=	
89502200	MOD EX CONTR	EACH	1.000	X		=	
89502300	REM ELCBL FR CON	FOOT	1,500.000	X		=	
89502375	REMOV EX TS EQUIP	EACH	1.000	X		=	

LANSING MUNICIPAL
COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - LA034

ECMS002 DTGECM03 ECMR003 PAGE 12
RUN DATE - 07/13/05
RUN TIME - 194208

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
89502385	REMOV EX CONC FDN	EACH	3.000 X			=	
				TOTAL		\$	

NOTE:

1. EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE.
2. THE UNIT PRICE SHALL GOVERN IF NO TOTAL PRICE IS SHOWN OR IF THERE IS A DISCREPANCY BETWEEN THE PRODUCT OF THE UNIT PRICE MULTIPLIED BY THE QUANTITY.
3. IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER TO ESTABLISH A UNIT PRICE.
4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

RETURN WITH BID

THE PRECEDING SCHEDULE OF PRICES MUST BE

COMPLETED AND RETURNED.

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.

RETURN WITH BID

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 \$145,877.00. Sixty percent of the salary is \$87,526.20.

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.

RETURN WITH BID

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, offers, 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.

RETURN WITH BID

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.

RETURN WITH BID

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.

RETURN WITH BID

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. 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.

RETURN WITH BID

IV. DISCLOSURES

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. 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 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 \$87,526.20? YES _____ NO _____
3. Does anyone in your organization receive more than \$87,526.20 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 \$87,526.20? 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:

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form A
Financial Information &
Potential Conflicts of Interest
Disclosure**

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number		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 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 \$87,526.20 (60% of the Governor’s salary as of 10/1/2000). **(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 _____

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

RETURN WITH BID/OFFER

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

Yes _____ No _____

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

Yes _____ No _____

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

Yes _____ No _____

(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

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form B
Other Contracts &
Procurement Related Information
Disclosure**

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number		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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

RETURN WITH BID

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

 Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

- Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.
- Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.
 - Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.
 - Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

RETURN WITH BID

CERTIFICATIONS REQUIRED BY STATE AND/OR FEDERAL LAW. The bidder is required by State and/or Federal law to make the below certifications and assurances as a part of the proposal and contract upon award. It is understood by the bidder that the certifications and assurances made herein are a part of the contract.

By signing the Proposal Signature Sheet, the bidder certifies that he/she has read and completed each of the following certifications and assurances, that required responses are true and correct and that the certified signature of the Proposal Signature Sheet constitutes an endorsement and execution of each certification and assurance as though each was individually signed:

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 _____

C. **BUY AMERICAN - STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS (JAN 1991)**

(a) The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b)(1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.

(b) The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen, and suppliers in the performance of this contract, except those-

- (1) that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities of a satisfactory quality;

- (2) that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

- (3) that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

(End of Clause)

RETURN WITH BID

D. BUY AMERICAN CERTIFICATE (JAN 1991)

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, is produced in the United States (as defined in the clause Buy American - Steel and Manufactured Products or Buy American - Steel and Manufactured Products For Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from (IDOT, Division of Aeronautics) lists of articles, materials, and supplies excepted from this provision.

PRODUCT

COUNTRY OF ORIGIN

E. NPDES CERTIFICATION

In accordance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter I), and the Clean Water Act, and the regulations thereunder, this certification is required for all construction contracts that will result in the disturbance of five or more acres total land area.

The undersigned bidder certifies under penalty of law that he/she understands the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR100000) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

The Airport Owner or its Agent will:

- 1) prepare, sign and submit the Notice of Intent (NOI)
- 2) conduct site inspections and complete and file the inspection reports
- 3) submit Incidence of Non-Compliance (ION) forms
- 4) submit Notice of Termination (NOT) form

Prior to the issuance of the Notice-to-Proceed, for each erosion control measure identified in the Storm Water Pollution Prevention Plan, the contractor or subcontractor responsible for the control measure(s) must sign the above certification (forms to be provided by the Department).

F. NON-APPROPRIATION CLAUSE

By submitting a bid/proposal under this solicitation the offeror certifies that he/she understands that obligations of the State will cease immediately without penalty or further payment being required in any fiscal year the Illinois General Assembly fails to appropriate or otherwise make available sufficient funds for this contract.

G. Contractor is not delinquent in the payment of any debt to the State (or if delinquent has entered into a deferred payment plan to pay the debt), and Contractor acknowledges the contracting state agency may declare the contract void if this certification is false (30 ILCS 500/50-11, effective July 1, 2002).

RETURN WITH BID

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., August 5, 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, shown in detail on the plans issued by the Department includes, in general, the following described work:

Construct north quadrant sitework - phase 1; Construct Taxiway G2 extension; Glenwood - Lansing Road improvements.
3. **INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and award shall, together with all other documents in accordance with Article 10-15 of the Illinois Standard Specifications for Construction of Airports, 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 proposal 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.
5. **PRE-BID CONFERENCE.** There will be a pre-bid conference held at N/A at the Lansing Municipal Airport administration building. For engineering information, contact Antonio Marin of Crawford, Murphy & Tilly, Inc. at (217) 820-1022.
6. **DISADVANTAGED BUSINESS POLICY.** The DBE goal for this contract is 12.0%.
7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports, the Illinois Division of Aeronautics Supplemental Specifications and Recurring Special Provisions, the Special Provisions dated March 4, 2005 REVISED June 10, 2005 and the Construction Plans dated March 4, 2005 REVISED June 10, 2005 as approved by the Department of Transportation, Division of Aeronautics.

RETURN WITH BID

- 8. INSPECTION OF RECORDS.** The Contractor shall maintain an acceptable cost accounting system. The Sponsor, the FAA, and the Comptroller General of the United States shall have access to any books, documents, paper, and records of the Contractor which are directly pertinent to the specific contract for the purposes of making an audit, examination, excerpts, and transcriptions. The Contractor shall maintain all required records for three years after the Sponsor makes final payment and all other pending matters are closed.
- 9. RIGHTS TO INVENTIONS.** All rights to inventions and materials generated under this contract are subject to Illinois law and to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed. Information regarding these rights is available from the FAA and the Sponsor.
- 10. TERMINATION OF CONTRACT.**
1. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
 2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
 3. If the termination is due to failure to fulfill the Contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
 4. If, after notice of termination for failure to fulfill contract obligations, it is determined that the Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.
 5. The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

RETURN WITH BID

11. BIDDING REQUIREMENTS AND BASIS OF AWARD. When alternates are included in the proposal, the following shall apply:

a. Additive Alternates

- (1) Bidders must submit a bid for the Base Bid and for all Additive Alternates.
- (2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lowest aggregate amount of (i) the Base Bid plus (ii) any Additive Alternate(s) which the Department elects to award.

The Department may elect not to award any Additive Alternates. In that case, award will be to the lowest responsible qualified bidder of the Base Bid.

b. Optional Alternates

- (1) Bidders must submit a bid for the Base Bid and for either Alternate A or Alternate B or for both Alternate A and Alternate B.
- (2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lower of the aggregate of either (i) the Base Bid plus Alternate A or (ii) the Base Bid plus Alternate B.

12. CONTRACT TIME. The Contractor shall complete all work within the specified contract time. Any calendar day extension beyond the specified contract time must be fully justified, requested by the Contractor in writing, and approved by the Engineer, or be subject to liquidated damages.

The contract time for this contract is 127 calendar days and is based on anticipated notice-to-proceed date of September 19, 2005.

13. INDEPENDENT WEIGHT CHECKS. The Department reserves the right to conduct random unannounced independent weight checks on any delivery for bituminous, aggregate or other pay item for which the method of measurement for payment is based on weight. The weight checks will be accomplished by selecting, at random, a loaded truck and obtaining a loaded and empty weight on an independent scale. In addition, the department may perform random weight checks by obtaining loaded and empty truck weights on portable scales operated by department personnel.

14. GOOD FAITH COMPLIANCE. The Illinois Department of Transportation has made a good faith effort to include all statements, requirements, and other language required by federal and state law and by various offices within federal and state governments whether that language is required by law or not. If anything of this nature has been left out or if additional language etc. is later required, the bidder/contractor shall cooperate fully with the Department to modify the contract or bid documents to correct the deficiency. If the change results in increased operational costs, the Department shall reimburse the contractor for such costs as it may find to be reasonable.

RETURN WITH BID

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 4 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 _____

Corporate Seal

By _____

President

(IF A CORPORATION)

Attest _____

Corporate Secretary

Business Address _____

Name of Corporate Officers:

President Corporate Secretary Treasurer

NOTARY CERTIFICATION

STATE OF ILLINOIS,

ALL SIGNATURES MUST BE NOTARIZED

COUNTY OF _____

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

_____ AND _____

(Insert names of individual(s) signing on behalf of bidder)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of the bidder, appeared before me this day in person and acknowledged that they signed, sealed, 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 _____ (Seal)

Notary Public

Item No. 6A
Letting Date: August 5, 2005

Airport: Lansing Municipal Airport
Ill. Proj. No. IGQ-3329
Fed. Proj. No. 3-17-0121-B21

KNOW ALL MEN BY THESE PRESENTS. that we, _____, as PRINCIPAL, and _____, as SURETY are held and firmly bound unto the, hereinafter called the SPONSOR, in the penal sum of 5 percent of the total bid price or of the amount specified in Section 6, PROPOSAL GUARANTEE of the Proposal Document, whichever is the lesser sum, well and truly to be paid unto the said SPONSOR, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the PRINCIPAL has submitted a Bid Proposal to the SPONSOR through its AGENT, the State of Illinois, Department of Transportation, Division of Aeronautics, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above;

NOW, THEREFORE, if the SPONSOR through its AGENT shall accept the Bid Proposal of the PRINCIPAL; and if PRINCIPAL shall within the time and as specified in the Bidding and Contract Documents, submit the DBE Utilization Plan that is acceptable and approved by the AGENT, and if after the award, the PRINCIPAL shall enter into a contract in accordance with the terms of the Bidding and Contract Documents including evidence of insurance coverage's and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for 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 SPONSOR the difference not to exceed the penalty hereof between the amount in the Bid Proposal and such larger amount for which the SPONSOR may contract with another party to perform the work covered by said Proposal Document, then, this obligation to be void; otherwise to remain in full force and effect.

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

IN WITNESS WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by

their respective officers this _____ day of _____ A.D., 20 ____.

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By: _____
(Signature & Title)

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

Notary Certification for Principal and Surety

State of Illinois)
) ss:
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 uses and purposes therein set forth.

Given under my hand and notary seal this _____ day of _____ A.D., 20 ____

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 to the SPONSOR through its AGENT under the conditions of the Bid Bond as shown above.

Electronic Bid Bond ID# _____

Company/Bidder Name _____

Signature and Title _____
Form D.E. (Rev. 12-2001)



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

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.



Illinois Department of Transportation

SECTION III

Special Provisions

For

**CONSTRUCT NORTH QUADRANT SITE WORK – PHASE 1;
CONSTRUCT TAXIWAY G2 EXTENSION;
GLENWOOD-LANSING ROAD INTERSECTION IMPROVEMENTS**

**ILLINOIS PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21**

At

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

March 4, 2005

REVISED JUNE 10, 2005

Prepared By:

CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
600 NORTH COMMONS DRIVE, SUITE 107
AURORA, ILLINOIS 60504
<http://www.cmtengr.com>

03297-02-00



3-18-05

EXP. 11-30-05



3-18-05

EXP. 11-30-05

DIVISION OF AERONAUTICS RECURRING SPECIAL PROVISIONS

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

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GENERAL

These Special Provisions, together with applicable Standard Specifications, Rules and Regulations, Contract Requirements for Airport Improvement Projects, Payroll Requirements and Minimum Wage Rates which are hereto attached or which by reference are herein incorporated, cover the requirements of the State of Illinois, Department of Transportation, Division of Aeronautics for the construction of the subject project at the Lansing Municipal Airport, Lansing, Illinois.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The “Standard Specifications for Construction of Airports”, dated January 1985, State of Illinois Department of Transportation, Division of Aeronautics, and the “Supplemental Specifications and Recurring Special Provisions”, dated July 1, 2004, State of Illinois Department of Transportation, Division of Aeronautics, indicated on the Check Sheet included herein shall govern the project except as otherwise noted in these Special Provisions. In cases of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern. As noted within the Special Provisions the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction dated January 1, 2002 and Cook County Highway Department Traffic Signal Work Special Provisions shall apply.

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COOK COUNTY HIGHWAY DEPARTMENT – TRAFFIC SIGNAL WORK SPECIAL PROVISION
CHECKLIST (1 PAGE) - The SPECIAL PROVISIONS indicated by an "X" are Applicable to this contract.

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IL-530	Erosion Blanket Plan
IL-563	Inlet Protection Straw Bale Barrier Plan
IL-620	Silt Fence Plan
IL-630	Stabilized Construction Entrance Plan

DIVISION I – GENERAL PROVISIONS

SECTION 10 – DEFINITION OF TERMS

10-23 ENGINEER

DELETE:
Paragraph (b).

SECTION 20 – SCOPE OF WORK

20-05 MAINTENANCE OF TRAFFIC

ADD:

If the Contractor fails to comply with the Standard Specifications, contract plans or these Special Provisions concerning traffic control, the Engineer shall execute such work as may be deemed necessary to correct deficiencies and the cost thereof shall be deducted from compensation due or which may become due the Contractor under the contract. The Contractor shall be responsible for supplying, maintaining and moving all barricades required for construction. The cost thereof shall not be paid for separately but shall be considered incidental to the contract unit prices.

20-09 AIRPORT OPERATIONS DURING CONSTRUCTION

a. Construction Activity and Aircraft Movements

For construction activity to be performed in other areas than active operational areas, the storage and parking of equipment and materials, when not in use or about to be installed, shall not encroach upon active operational areas. In protecting operational areas, the minimum clearances maintained for runways shall be in conformance with Part 77 of the Federal Aviation Regulations.

All construction operations shall conform to the plans and in accordance with AC 150/5370-2 (Latest Edition) Operational Safety on Airports During Construction.

b. Limitations On Construction

(1) Open flame welding or torch cutting operations shall be prohibited, unless adequate fire and safety precautions are provided.

(2) Open trenches, excavations and stockpiled material near any pavements shall be prominently marked with red flags and lighted by light units during hours of restricted visibility and/or darkness.

(3) Stockpiled material shall be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions.

(4) The use of explosives shall be prohibited.

(5) Burning shall not be allowed.

c. Debris

Waste and loose material capable of causing damage to aircraft landing gears, propellers, or being ingested in jet engines shall not be placed on active aircraft movement areas. Material tracked on these areas shall be removed continuously during the work project. The Contractor shall provide garbage cans in employee parking areas and storage areas for debris.

20-10 EXCAVATION/DEWATERING

The Contractor shall, at all times, provide and maintain in operation pumping and/or well point equipment for the complete dewatering of the excavation. No structure or pipe shall be permitted to be constructed in an excavated area in which any amount of water flows or is pooled. The Contractor shall design, furnish, install, test, maintain and remove any required excavation support system to maintain the excavation. The cost of excavation support system and dewatering shall be included in the unit price of the associated pay item and not paid for separately.

SECTION 30 – CONTROL OF WORK

30-18 PLANS AND WORK DRAWINGS

DELETE:

References to “approval” in first paragraph and replace with “review”.

SECTION 40 – CONTROL OF MATERIALS

40-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

ADD: After the last paragraph

The Contractor shall certify all materials contained in the contract. Certification documentation shall be submitted to the Engineer. It shall be the sole responsibility of the Contractor to ensure the delivery of adequate and accurate documentation prior to the delivery of the materials.

If, upon delivery and incorporation of any materials, the Contractor has failed to provide the necessary submittals as required by Sections 30-18, 40-01, 40-03 and 40-11 of the Standard and Special Provisions, the pay item shall not included on the Construction Progress Payment report until such submittals have been furnished.

SECTION 50 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

50-17 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS

ADD:

Special care shall be taken on all operations and particularly near pavement edges to avoid damage to edge lights and all underground electrical cable on the airport. The approximate location of existing underground cable is shown on drawings. Any airfield lights or cable that are broken and require replacement because of the Contractor's operations will be replaced by the contractor at his own expense.

Any airfield cable repairs or replacement to any part of the electrical system made necessary by the Contractor's operations will be made by him in the manner specified in Sections 108 and 125 at no cost to the airport. Cost of replacement to be borne by the Contractor shall include any expense incurred in locating as well as repairing or replacing damaged parts of the system by the owning agency.

It shall be the Contractor's responsibility to locate and protect all airport-owned utilities within the construction limits. This includes all electrical cables, storm sewer, drain tile, sanitary sewer and water main.

Special attention is necessary when working near FAA power and control cables. Any FAA utility that is damaged or cut during construction shall be repaired immediately. FAA requires that any damaged cable be replaced in its entirety, not splices will be permitted. No additional compensation will be made for replacement or repair of FAA facilities or cables but, shall be incidental to the contract.

Should any utilities or cables require location, the following people shall be contacted:

LANSING MUNICIPAL AIRPORT

Utility Service or Facility	Person to Contact	Contact Phone
FAA Control & Communications Cable	FAA Sector Field Office	
Village of Lansing Owned	Public Works	1-708-895-7190
Comed - Electric Cables	JULIE	1-800-892-0123
SBC - Telephone Cables	JULIE	1-800-892-0123
NICOR - Gas Lines	JULIE	1-800-892-0123

SECTION 60 – PROSECUTION AND PROGRESS

60-05 LIMITATION OF OPERATIONS

ADD:

The Contractor shall not have access to any part of the active airfield (runways or taxiways) for any equipment or personnel without approval of the Airport Manager.

60-07 TEMPORARY SUSPENSION OF THE WORK

Replace references to “Resident Engineer” with “Engineer” throughout this section.

60-10 DEFAULT AND TERMINATION OF CONTRACT

Replace references to “Project Engineer” with “Engineer” throughout this section.

DIVISION II – PAVING CONSTRUCTION DETAILS

ITEM 152 – EXCAVATION AND EMBANKMENT

(SUPPLEMENTAL SPECIFICATION)

DESCRIPTION

152-1.1

Revise the second sentence of second paragraph of the Supplemental Specification to read:
All associated labor, equipment, materials and incidentals associated with obtaining the Proctor information is considered incidental to Item AR800103.

152-1.2 CLASSIFICATION

DELETE the second, third and fourth paragraphs from Supplemental Specification.

ADD:

All excess material not required for embankment fill, shoulder fill or topsoil placement shall be hauled to an onsite location for stockpiling and classified as “On-Site Stockpile”.

CONSTRUCTION METHODS

152-2.2 EXCAVATION

ADD to Supplemental Specification:

Embankment fill and shoulder fill shall be compacted to a density of not less than the percentage of the maximum dry density, at optimum moisture, shown in Table 1 as determined by the compaction control tests cited in Division VII for ASTM D-698 (Standard Proctor) for aircraft weights under 60,000 pounds.

152-2.6 STRIPPING

Revise the last sentence of the second paragraph of the Supplemental Specification to read:
Should it occur, the cost to remove the unsuitable material shall be paid as On-Site Stockpile and the suitable replacement embankment material shall be paid as Embankment Fill.

152-2.14 DUST CONTROL WATERING

ADD:

This work shall consist exclusively of the control resulting from construction operations and is not intended for use in the compaction of earth embankment.

Dust shall be controlled by the uniform application of sprinkled water and shall be applied as directed by the Engineer, in a manner meeting his approval.

Dust control watering shall not be paid for separately, but shall be considered incidental to this item.

METHOD OF MEASUREMENT

152-3.1

ADD:

Unclassified excavation and topsoil stripping shall not be measured for payment but shall be incidental to embankment fill, shoulder fill, unclassified excavation disposal and topsoil placement (from onsite).

Embankment fill and shoulder fill shall be measured for payment by the number of cubic yards compacted in its final position and all pay quantities shall be computed by the method of average end areas.

On-Site Stockpile shall be measured for payment by the number of cubic yards in its initial position and pay quantities shall be computed by the method of average end areas.

Topsoil placement shall be measured and paid for under Item 905.

152-3.3

Delete this section from the Standard Specification and Supplemental Specification.

152-3.4

Delete this section from Supplemental Specification.

BASIS OF PAYMENT

152-4.1

Delete this section from the Supplemental Specifications.

ADD:

Payment will be made at the contract unit price per cubic yard measured in its final position for "Embankment Fill" and "Shoulder Fill". The prices shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made at the contract unit price per cubic yard measured in its initial position for "On-Site Stockpile". The prices shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the item.

- | | | |
|-----------------|-------------------|-----------------|
| • ITEM AR800103 | EMBANKMENT FILL | PER CUBIC YARD. |
| • ITEM AR800104 | SHOULDER FILL | PER CUBIC YARD. |
| • ITEM AR800110 | ON-SITE STOCKPILE | PER CUBIC YARD. |

ITEM 201001 – BITUMINOUS BASE COURSE – METHOD 1

CHECK SHEET #11

201-3.2 JOB MIX FORMULA (JMF)

Revise Table 2 to read as follows:

TABLE 2 MARSHALL DESIGN CRITERIA

	<u>UNDER 60,000 lb.</u>
Number of Blows	50
Stability (Min.)	1500
Flow	8 – 18
Percent Air Void	1.5 – 3.5
Voids Filled With Asphalt (%)	75 – 90

201-4.09 TRANSPORTING, SPREADING, AND FINISHING

Add the following to this section:

Grade guide wires shall not be required for the auto parking lot only.

201-4.11 JOINTS

Add the following paragraph to this section:

At any time during the base course paving operation it becomes necessary to end a paving lane at a location other than the proposed finished pavement edge because of ending a days paving, machinery breakdown, etc.; the lane end will be sawed back a sufficient distance to provide a smooth, neat appearing joint from which to resume paving. The sawed face will be painted with a tack coat and this work shall be considered incidental to Item 201 Bituminous Base Course, and no additional compensation will be allowed.

201-4.12 SHAPING EDGES

ADD:

All pavement edges, including the pavement ends, must be left in proper alignment as shown on the plans. This may be accomplished by a trimming method or at the Contractor's option by sawing after the paving has been completed. No additional compensation will be made if the sawing method is used.

METHOD OF MEASUREMENT

201-5.1

ADD:

Measurement for payment will not be made for any bituminous base course in excess of 103 percent of the quantity specified by the Engineer.

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR201610 BITUMINOUS BASE COURSE PER TON

ITEM 208 – AGGREGATE BASE COURSE

MATERIALS

208-2.3 GRADATION

DELETE: GRADATION "C" IN TABLE 1.

CONSTRUCTION METHODS

208-3.6 FINISHING AND COMPACTING

ADD:

The base shall be compacted to not less than 100% of maximum density at optimum moisture as determined by compaction control tests specified in Division VII for aircraft with gross weights of 60,000 lbs and less (Standard Proctor ASTM D698).

208-3.8 THICKNESS CONTROL

DELETE this section.

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR208604 4" AGGREGATE BASE COURSE PER SQUARE YARD

ITEM 208515 – POROUS GRANULAR EMBANKMENT

DESCRIPTION

208-1.1

ADD:

This work shall consist of furnishing and placing porous granular embankment as the field conditions warrant at the time of construction as directed by the Engineer.

MATERIALS

208-2.1 UNCRUSHED COARSE AGGREGATE

DELETE: Entire section.

208.2-3 GRADATION

DELETE: Entire section.

ADD:

When submitting materials for consideration, the Contractor shall provide written certification that the material meets the specified requirements. A written gradation shall also be furnished.

Gradation for Porous Granular Embankment shall be as follows:

Sieve	Percent Passing
3 inch	100

2 ½ inch	90-100
2 inch	45-75
1 ½ inch	0-30
1 inch	0-6
IDOT Gradation	CA-1

CONSTRUCTION REQUIREMENTS

208-3.3 PREPARING UNDERLYING COURSE

DELETE: Entire section.

208-3.4 METHODS OF PRODUCTION

DELETE: Entire section.

208-3.5 METHODS OF SPREADING

DELETE: Entire section.

ADD: Paragraph (D)

The porous granular embankment shall be placed in lifts no greater than one (1) foot thick or as directed by the Engineer. Rolling the top of this replacement material with a vibratory roller meeting the requirements of Section 1101 of the IDOT "Standard Specification for Road and Bridge Construction" should be sufficient to obtain the desired keying or interlock and necessary compaction. The Engineer shall verify that adequate keying has been obtained.

208-3.6 FINISHING AND COMPACTING

DELETE: Fifth sentence, first paragraph.

ADD:

The base shall be compacted to the satisfaction of the Engineer.

Capping aggregate will not be required when embankment meeting the requirements of Section 209 of the Standard Specifications or granular subbase is placed on top of the porous granular embankment. Capping aggregate (two (2) inch depth) will be required when embankment meeting the requirements of Section 152 of the Standard Specifications is placed on top of the porous granular embankment.

METHOD OF MEASUREMENT

208-4.3

ADD:

The quantity of Porous Granular Embankment shall be the number of cubic yards as measured by the Engineer at the specified thickness of the material placed. If required, the thickness of PGE measured for payment will include the thickness of the capping stone.

The porous granular embankment shall be used as shown and as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities.

BASIS OF PAYMENT

208-5.1

DELETE: Entire section.

ADD:

Payment for porous granular embankment shall be paid for at the contract unit price per cubic yard, of which price shall be full compensation for the two (2) inch capping stone (if necessary), furnishing, spreading, compacting, watering and all incidentals related to equipment, labor and tools necessary to complete this work.

Payment will be made under:

- ITEM AR208515 POROUS GRANULAR EMBANKMENT PER CUBIC YARD.

ITEM 209 – CRUSHED AGGREGATE BASE COURSE

MATERIALS

209-2.3 GRADATION

DELETE: Gradation “C” in Table 1.

CONSTRUCTION METHODS

209-3.6 FINISHING AND COMPACTING

ADD:

The base shall be compacted to not less than 100% of maximum density at optimum moisture as determined by compaction control tests specified in Division VII for aircraft with gross weights of 60,000 lbs and less (Standard Proctor ASTM D698).

The Contractor shall submit copies of all density test results for each lift to the Engineer prior to acceptance testing.

209-3.8 THICKNESS CONTROL

DELETE this section

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR209607 CRUSHED AGG. BASE COURSE – 7” PER SQUARE YARD.
- ITEM AR209608 CRUSHED AGG. BASE COURSE – 8” PER SQUARE YARD.
- ITEM AR209611 CRUSHED AGGREGATE BASE COURSE – 11” PER SQUARE YARD.

ITEM 401001 – BITUMINOUS SURFACE COURSE – METHOD I

(Central Plant Hot Mix)

CHECK SHEET #19

MATERIALS

401-2.4 PRIME AND TACK COAT

Prime Coat materials shall conform to the material requirements of Item 602 in the “Supplemental Specifications and Recurring Special Provisions”, dated July 1, 2004, State of Illinois Department of Transportation, Division of Aeronautics, and shall be applied as directed by the Engineer.

Tack Coat materials shall conform to the material requirements of Item 603 in the “Supplemental Specifications and Recurring Special Provisions”, dated July 1, 2004, State of Illinois Department of Transportation, Division of Aeronautics, and shall be applied as directed by the Engineer.

COMPOSITION

401-3.2 JOB MIX FORMULA (JMF)

REVISE: Table 2 to read as follows:

TABLE 2 MARSHALL DESIGN CRITERIA	
	Under 60,000 lbs. [1]
Number of Blows	50
Stability (Min.)	1500
Flow	8-18
Percent Air Voids	1.5-3.5
Voids Filled With Asphalt (%)	75-90

CONSTRUCTION METHODS

401-4.11 JOINTS

ADD the following as the fifth paragraph of this section:

If at any time during the surface course paving operation, it becomes necessary to end a paving lane at a location other than the new finished pavement edge because of ending a day's paving, machinery breakdown, etc., the lane end will be sawed back a sufficient distance to provide a smooth, neat appearing joint from which to resume paving. The sawed face will be painted with a tack coat and this work shall be considered incidental to Item 401, Bituminous Surface Course, and no additional compensation will be allowed.

401-4.12 SHAPING EDGES

Add the following as the second paragraph for this section:

All pavement edges, including the pavement ends, must be left in proper alignment, as shown on the plans. This may be accomplished by a trimming method, or, at the Contractor's option, by sawing after the paving has been completed. No additional compensation will be made if the sawing method is used.

METHOD OF MEASUREMENT

401-5.1

ADD:

Measurement for payment will not be made for any bituminous surface course in excess of 103 percent of the quantity specified by the Engineer.

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR401610 BITUMINOUS SURFACE COURSE PER TON

ITEM 401900 – REMOVE BITUMINOUS PAVEMENT

CHECK SHEET #26

401-1.1

ADD: To the second sentence.

The type of material to be removed along with approximate typical pavement section is shown on the plans. Pavement structure information was taken from airport records, data supplied by airport personnel and soil borings. The Contractor shall verify the type and thickness of material to be removed. **No extra compensation will be allowed for any variations in the pavement sections actually encountered.**

CONSTRUCTION METHODS

401-3.1

ADD:

Any damage to the pavement beyond the limits as shown on the plans shall be removed and replaced by the Contractor at this expense. These areas shall be saw cut to a uniform width.

METHOD OF MEASUREMENT

401-4.1

ADD:

If pavement or subgrade material is removed due to negligence on the part of the Contractor, the additional quantity of pavement removal and replacement of subgrade material will not be measured for payment.

BASIS OF PAYMENT

401-5.1

ADD:

Any grading and recompacting of existing granular base course to proper grade shall not be paid for separately but shall be considered incidental to REMOVE BITUMINOUS PAVEMENT.

Payment will be made under:

- ITEM AR401900 REMOVE BITUMINOUS PAVEMENT PER SQUARE YARD

ITEM 401910 – REMOVE AND REPLACE BITUMINOUS PAVEMENT

DESCRIPTION

401-1.1

This item shall consist of bituminous pavement removal and replacement for various utility crossings and patches as shown on the plans. The pavement shall be compacted in accordance with these specifications and shall conform to the lines, grades, thicknesses and typical sections as shown on the plans or as directed by the Engineer.

Each course shall be constructed to the depth, section or elevation required to match the existing pavement structure and shall be rolled, finished and approved prior to the placement of the next course.

MATERIALS

401-2.1 Bituminous Surface Course

The bituminous surface course shall conform to the specifications of Section 401.

401-2.2 Bituminous Base Course

The bituminous base course shall conform to the specification of Section 201.

401-2.3 BITUMINOUS PRIME COAT

The bituminous prime coat shall conform to the specifications of Section 602.

401-2.4 BITUMINOUS TACK COAT

The bituminous tack coat shall conform to the specifications of Section 603.

CONSTRUCTION METHODS

401-3.1

The type of material to be removed along with approximate typical pavement section is shown on the plans. Pavement structure information was taken from airport records, data supplied by airport personnel and soil borings. The Contractor shall verify the type and thickness of material to be removed. **No extra compensation will be allowed for any variations in the pavement sections actually encountered.**

401-3.2

The proposed pavement replacement section shall be as specified herein. Prime coat shall be applied to the aggregate base. Tack coat shall be applied between each lift of asphalt.

401-3.3

The existing pavement areas to be removed shall be done in such a manner as to prevent damage to the adjacent pavements. All edges adjacent to existing pavements shall be saw-cut full depth prior to removal, as directed by the Engineer.

401-3.4

Pavement replacement will be as detailed on the plans and constructed in accordance to the applicable Sections 201, 401, 602 & 603. The various materials required for pavement replacement shall be in accordance with the applicable portions of the Standard Specifications, Supplemental Specifications, Recurring Special Provisions and these Special Provisions. Any damage to pavement beyond the limits as shown on the plans **shall be removed and replaced by the Contractor at his expense. These areas shall be saw cut to a uniform width.**

401-3.5

Pavement removed may be used in the formation of embankment per Section 152 of the Standard Specifications.

401-3.6

Pavement Removal and Replacement shall be the removal of the existing pavements as shown on the plans and the replacement pavement shall match the existing pavement bituminous base course thickness with 2" bituminous surface course placed as final lift. Trench backfill and/or base shall not be paid for separately but shall be considered incidental to this pay item.

METHOD OF MEASUREMENT

401-4.1

The area of pavement removal and replacement shall be measured by the number of square yards, satisfactorily removed, replaced and disposed of as shown on the plans or as directed by the Engineer.

401-4.2

If additional pavement or subgrade material is removed due to negligence on the part of the Contractor, the additional quantity of pavement removal and replacement of subgrade material will not be measured for payment.

401-4.3

The bituminous surface course, bituminous base course, bituminous prime coat and bituminous tack coat will not be measured separately for payment, but will be considered incidental to REMOVE & REPLACE BIT. PAVEMENT, per square yard.

BASIS OF PAYMENT

401-5.1

Payment for REMOVE & REPLACE BIT. PAVEMENT shall be made at the contract unit price per square yard. This price shall include full compensation for sawing, removal, disposal, replacement of asphalt materials, compaction, prime coat, tack coat, including furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work.

Any grading and recompacting of existing granular base course to proper grade shall not be paid for separately but shall be considered incidental to Remove & Replace Bituminous Pavement.

Payment will be made under:

- ITEM AR401910 REMOVE & REPLACE BIT. PAVEMENT PER SQUARE YARD.

ITEM 620 – PAVEMENT MARKING

METHOD OF MEASUREMENT

620-4.1

ADD to Supplemental:

The quantity of permanent markings to be paid for shall be the number of square feet of painting with the specified material **measured only once to apply two coats** in conformance with the specifications and accepted by the Engineer. Quantities will not be distinguished between white, yellow and black colors of

paint. The dimensions measured for the new pavement marking shall be limited to the dimensions of the white or yellow paint.

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR620520 PAVEMENT MARKING – WATERBORNE PER SQUARE FOOT

DIVISION III – FENCING (WIRE FENCE)

ITEM 162 – CHAIN-LINK FENCES (CLASS E)

DESCRIPTION

162-1.1

ADD:

This item shall also include relocation of Class E fence and gates as shown in the plans or as directed by the Engineer.

Top rail shall be used in lieu of top tension wire.

162-2.2 BARBED WIRE

Delete this section.

162-2.3 FENCE POSTS, POST TOPS AND EXTENSIONS, RAILS, GATES, BRACES, STRETCHER BARS AND CLIPS.

ADD to paragraph (c):

The 24' vehicular gate shall be aluminum cantilever slide gate, Edko or approved equal. Gate frame shall be fabricated from minimum 2" square 6061-T6 structural-grade aluminum alloy tubing weighing a minimum of 1.1 pounds per foot. Frame shall be welded at all corners so as to form a rigid unit. Gate shall be fabricated as a single welded unit with Uniweld construction. Intermediate vertical members shall be 2" X 2" 6061-T6 structural-grade aluminum alloy, weighing a minimum of 1.1 pounds per lineal foot. Intermediate verticals shall be spaced apart no more than 6'0" on center, and all vertical members gusseted at top and bottom for greater frame strength and rigidity. Enclosed track shall be a one-piece extrusion of 6061-T6 structural-grade aluminum alloy, weighing a minimum of 3.95 pounds per foot. Track shall be formed to enclose the internal-roller truck assemblies and structurally adequate to serve as the load-bearing surface for the gate panel. Reaction load rating of the track shall be a minimum of 2,000 pounds. Gate frame shall employ bi-directional cross bracing of diagonal tubular aluminum, installed in the vertical plane throughout the gate proper and the counterbalance to allow for vertical chord adjustment, and to add further rigidity to the gate.

Internal-roller truck assembly shall be self-aligning, swivel ball-and-socket type running on four bearing-wheels. Bearing-wheels shall be a minimum 2" diameter x 9/16" wide, rated as medium duty, with a basic dynamic load rating of 2,750 pounds per bearing. Truck body shall be a one-piece structural grade 356-T6 aluminum alloy casting, equipped with milled steel guide wheels to ensure lateral alignment within the track. Guide wheel axle shall extend through the top and bottom of the truck body so as to assure that, regardless of wear, the guide wheels cannot come loose from the axle and lodge in the track. Internal-roller truck assembly shall be affixed to the hanger bracket or other mounting fixture by means of a 5/8" diameter industrial-grade rod end/center bolt, with a maximum static load rating of 10,000 pounds. Attachment of the center bolt to the truck body shall be by means of a swivel joint to ensure equivalent and consistent loading on all bearing-wheels and internal track surfaces throughout the travel of the gate. Internal-roller truck assembly shall have the same reaction load as the enclosed track.

Bottom guide assembly shall consist of a steel mounting bracket with two 3" diameter phenolic roller wheels with sealed roller bearings mounted in such a way as to limit or contain gate lateral movement without binding. Roller wheels shall be braced top and bottom by the essential construction of the bottom guide in such a fashion as to prevent lateral gate movement which could deform the axles of the wheels and defeat the bottom guide assembly. Hanger assembly shall consist of minimum 3/8" thick steel plate, gusseted, which is to be affixed to a 4" O.D. post by means of 1/2" diameter U-bolts. All mounting hardware shall be hot-dip galvanized or plated for corrosion resistance.

Prior to painting, prepare surface by roughening the surface with machine or hand sanders. Prime Coat to be Series 66, 2-3 dry mils and top coat to be Series 73, 2-3 dry mils. Paint to be Tnemec or equal.

Gate fabric shall be the same type as used in the fence construction. The fabric shall be attached securely to the gate frame at intervals not exceeding 15 inches.

162-2.4 WIRE TIES AND TENSION WIRE

ADD:

Coiled spring tension wire of at least 7 gage O.D. galvanized steel wire shall be stretched along the bottom of the fence and securely fastened to the fabric with hog rings at 2 foot intervals. Fabric ties shall not be less than a 9-gauge galvanized steel wire.

162-2.7

ADD:

The Contractor shall provide and install Restricted Area signage as shown on the plans. Sign panels shall be placed on all new fencing and the slide gates. The signs shall be placed at 100 foot intervals. One (1) will be placed on each slide gate. The sign shall be red letters on white background with a red border and shall read 'RESTRICTED/AREA/KEEP OUT' (three separate lines). The letters shall be a minimum of 2½" in height. The sign materials shall conform to Type 1 sign panels as specified in Section 720 of the IDOT Standard Specifications for Road and Bridge Construction

162-2.9 ELECTRIC GATE DRIVE

ADD:

Each electrical gate drive system shall consist of the following:

- One Chain Gate Operator
- One Time Delay
- Two Loops (Inside & Outside Safety Loops and Inside Free Exit Loop)
- Two Vehicle Detectors
- One Card Reader and Goose Neck Stand
- Capability for Interior Three Button Control Station
- One 120V Duplex Waterproof GFCI Receptacle
- 240V - 2 Pole, NEMA 3R non-fused Disconnect
- Concrete foundation for gate driver and goose stand
- Vehicular Barriers
- Miscellaneous Components for a Complete System

GATE DRIVER

The new gate operator shall be designed for continuous operation and shall be capable of actuating roller type gates. Primary power for the operator shall be 240VAC, 1-phase. Contractor shall field verify the voltage. Motor shall be rated 1 HP. The control circuit shall be 24VDC with pre-wired terminal strip for field connection of control devices. All electrical components shall be U.L. or C.S.A. listed. The motor shall be totally enclosed and of the high-starting torque, continuous-duty, industrial type, protected against overload by either a thermal or current sensing overload device. Motor control shall be by means of an across-the-line, mechanically interlocked reversing contactor. Unit shall also have an enclosed on/off power switch for convenience in servicing. The new gate drive shall provide for instant reversal of the gate travel direction without reversal of the electric motor rotation. Driver shall also be capable of driving the gate regardless of snow, ice or moisture on drive rail. Driver shall have a built in manual release that shall disengage the drive wheels to allow manual sliding of the gate in case of power or mechanical failure. The operator housing shall be constructed of high quality steel. It shall be weather resistant and durable and shall be finished with corrosion resistant primer and two enamel top coats for maximum

protection. The operator shall be controlled by card reader, detector loops and any other items and detailed on the plans or specified herein.

It shall be the contractor's responsibility to verify compatibility of all equipment with the gate driver.

The new gate driver shall be Model SL-590 with a travel speed of 1 foot/second as manufactured by Chamberlain Liftmaster or equal.

Mounting - unit shall be mounted on a concrete footing.

Detector Loops.

Two detector loops shall be installed in the pavement as shown on the plans. One detector loop shall be installed in the pavement inside of the gate to allow for the free exit of vehicles leaving the Airfield as detailed in the plans and the safety of the vehicles entering the airport. The other detector loop shall be installed in the pavement outside the gate and shall be used as a safety loop that stops the gate from closing while a vehicle is still in its path.

Card Reader

The proposed card reader shall be programmable and shall be installed on the gooseneck stand as detailed on the plans or as recommended by the manufacturer, The proposed digital keypad shall be PROcard as manufactured by Chamberlain Sentex or equal and gooseneck stand shall be manufactured by Chamberlain or equal

Local Manual Disconnect.

The manual non-fused disconnect shall be mounted as shown on the plans. Disconnect shall be model DU221RB rated 30A, 2 Pole at 240VAC. Disconnect shall be as manufactured by Square D or equal.

Convenience Receptacle

Contractor shall mount duplex, waterproof, GFCI receptacle on electric gate operator as shown on the plans. The necessary hardware labor & equipment including the transformer shall be considered incidental to the gate.

Electrical Wiring

Electrical wiring shall consist of all wiring necessary to properly operate the motorized gate as recommended by the manufacturer or as directed by and to the satisfaction of the Engineer.

Conduit.

Contractor shall furnish and install 3/4" GRS conduit for new detector loops as required by the electric gate manufacturer. All the GRS conduit mentioned above shall be incidental to the 24' electrical vehicular gate and shall not be paid for separately.

162-2.10 CERTIFICATION AND SHOP DRAWINGS

The Contractor shall provide written certification that all materials meet specification requirements prior to start of work.

Shop drawings shall be submitted to the engineer for review prior to the construction of fence and the motorized gate. Shop drawings shall include exact layout, wiring, operation manual, etc., of the motorized gate, truck glide assembly and all appurtenant items.

CONSTRUCTION METHODS

162-3.10 DETECTOR LOOPS

This item shall consist of installing new detector loop cable for use with the new gate assembly. The work shall include saw cutting the pavement for the loops and sealing same and provide all hook ups and testing to make the gate and loops work in unison and as detailed on the plans and specified herein.

162-3.11 RELOCATE EXISTING FENCE AND GATES

ADD:

This item shall consist of relocating existing fence and gate as shown on the plans. The Contractor will not reuse the existing fence post and hardware. The Contractor shall provide new post, new hardware and new concrete foundations. Existing foundation shall be removed and disposed of offsite. In the event existing materials are damaged by the Contractor, new materials conforming to the specifications shall be installed at no additional costs to the Owner

Removal shall include refilling/compacting fence holes with crushed aggregate base or sand and 4 inch topsoil to match existing ground.

BASIS OF PAYMENT

162-5.1

ADD:

Sign panels as shown on the fencing details shall not be paid for separately but shall be incidental to the fence and gate.

Payment will be made under:

- | | | |
|-----------------|------------------------|------------------|
| • ITEM AR162506 | CLASS E FENCE 6' | PER LINEAR FOOT. |
| • ITEM AR162612 | CLASS E GATE – 12' | PER EACH. |
| • ITEM AR162724 | ELECTRIC GATE-24' | PER EACH. |
| • ITEM AR162960 | RELOCATE CLASS E FENCE | PER LINEAR FOOT. |

DIVISION IV – DRAINAGE PIPE

ITEM 701 – PIPE FOR STORM SEWERS AND CULVERTS

DESCRIPTION

701-1.1

ADD:

This item shall consist of the construction of all precast concrete box culverts in accordance with Section 540 Box Culverts of the Illinois Department of Transportation “*Standard Specifications for Road and Bridge Construction*” dated January 1, 2002. The precast concrete box culverts shall be designed in accordance with AASHTO M273.

MATERIALS

701-2.1 GENERAL

DELETE: Entire Section.

ADD:

Pipe shall be of the type and diameter indicated and installed at the locations shown on the plans. Pipe for storm sewers shall be concrete storm sewer pipe Class IV reinforced concrete conforming to ASTM C-76 and PVC-Polyvinyl Chloride Pipe be ASTM D 3034, SDR 35 unless otherwise called out in the plans.

Precast box culverts shall be reinforced precast concrete designed for a HS 20 loading in accordance with AASHTO M273 per Section 504 of the Illinois Department of Transportation “*Standard Specifications for Road and Bridge Construction*” dated January 1, 2002.

701-2.5 RUBBER GASKET JOINTS

ADD:

Rubber gaskets joints meeting ASTM C361 or ASTM C443 will be required on all reinforced concrete pipes within ten (10) feet of either side of a watermain crossing.

701-2.7 BOX CULVERT JOINTS

ADD:

Rubber gasket joints conforming to Section 1056 or mastic joint sealer conforming to Section 1055 of the Illinois Department of Transportation “*Standard Specifications for Road and Bridge Construction*” dated January 1, 2002 shall be used for box culvert joints.

CONSTRUCTION METHODS

701-3.3 Cradle

ADD:

The box culvert granular material shall consist of IDOT CA-18 material.

701-3.13 FARM FIELD TILES

ADD:

All farm field tiles encountered during the construction must be protected, replaced, or connected to the proposed storm sewers and culverts, as directed by the Engineer. Protection, replacement, and connection of farm field tiles will not be measured for payment, but shall be considered incidental to the associated item.

701-3.14 BOX CULVERT INSTALLATION

Concrete box culverts shall be installed in accordance with Section 540 of the Illinois Department of Transportation “Standard Specifications for Road and Bridge Construction”.

BASIS OF PAYMENT

701-5.1

ADD:

If, upon delivery and incorporation of any materials, the Contractor has failed to provide the necessary submittals as required by Sections 30-18, 40-01, 40-03 and 40-11 of the Standard and Special Provisions, the pay item shall not included on the Construction Progress Payment report until such submittals have been furnished.

Payment will be made under:

- | | | |
|-----------------|-----------------------------------|------------------|
| • ITEM AR701006 | 6" PVC STORM SEWER | PER LINEAR FOOT. |
| • ITEM AR701184 | PRECAST CONC. BOX CULVERT 8' X 4' | PER LINEAR FOOT. |
| • ITEM AR701512 | 12" RCP, CLASS IV | PER LINEAR FOOT. |
| • ITEM AR701515 | 15" RCP, CLASS IV | PER LINEAR FOOT. |
| • ITEM AR701518 | 18" RCP, CLASS IV | PER LINEAR FOOT. |
| • ITEM AR701524 | 24" RCP, CLASS IV | PER LINEAR FOOT. |
| • ITEM AR701900 | REMOVE PIPE | PER LINEAR FOOT. |

ITEM 705 – PIPE UNDERDRAINS FOR AIRPORTS

MATERIALS

705-2.13 FILTER FABRIC ENVELOPES FOR PERFORATED (PE) TUBING

ADD:

Materials

- (a) An IDOT approved filter fabric sock may be submitted for approval by the Engineer.

705-2.17 UNDERDRAIN TRENCH ENVELOPE

ADD:

Geotechnical fabric for UD trench lining shall consist of woven or nonwoven filaments of polypropylene, polyester, or polyethylene. Nonwoven fabric may be needle punched, heat-bonded, resin-bonded or combinations thereof. The filaments must be dimensionally stable (i.e., filaments must maintain their relative position with respect to each other) and resistant to delamination. The filaments must be free from any chemical treatment or coating that might significantly reduce porosity and permeability.

(a) Physical Properties. The fabric shall comply with the following physical properties:

Weight oz./sq. yd (g/m ²)	3.5 (120) min.	ASTM D 3776
Grab tensile strength lbs. (N)	100 (450 ^{1/}) min. ^{1/}	ASTM D 4632
Grab elongation @ break (%)	20 min. ^{1/}	ASTM D 4632
Equivalent opening size (EOS NO.)		CW-02215-77 Corps of Engineers
Nonwoven	30 (600 μm) min ^{2/}	
Woven	50 (300 μm) min ^{2/}	

- 1/ For woven fabric, test results shall be referenced to orientation with warp or fill, whichever the case may be. Both woven and nonwoven fabrics shall be tested wet.
2/ Manufacturer's certification of fabric to meet requirements.

CONSTRUCTION METHODS

705-3.3 LAYING AND INSTALLING PIPE

REVISE the 3rd paragraph to the following:

Trenches shall be lined with the underdrain trench envelope prior to placing any stone or underdrain. A 2-foot minimum lap of material is required where breaks in the fabric occur. Prior to installing the pipe, a 1" layer of porous backfill meeting the requirements of Paragraph 2.15 shall be constructed in the bottom of the trench.

705-3.9 UNDERDRAIN REMOVAL

This work shall consist of the removal of existing underdrain of various types and sizes. Trenches resulting from the removal shall be backfilled and compacted in accordance with P-152, Excavation and Embankment for areas in proposed turf or backfilled and compacted in accordance with Section 701-2.7 and 701-3.7 for areas under proposed pavements. Underdrain shall be disposed of by the Contractor off Airport property.

Trench backfill of removal items shall be incidental to the removal item.

BASIS OF PAYMENT

705-5.1

ADD as the last sentence of the first paragraph of the Supplemental Specification:

The underdrain trench envelope shall be considered incidental to the underdrain and shall not be measured for payment purposes.

Delete the fifth paragraph of the Supplemental Specification.

Payment will be made under:

- ITEM AR705526 6" PERFORATED UNDERDRAIN W/SOCK PER LINEAR FOOT.
- ITEM AR705635 UNDERDRAIN COLLECTION STRUCTURE PER EACH.
- ITEM AR705900 REMOVE UNDERDRAIN PER LINEAR FOOT.

ITEM 751 – MANHOLES, CATCH BASINS, INLETS & INSPECTION HOLES

MATERIALS

751-1.1 ADD:

Specifically, this item consists of the construction of inlets, and manholes, as shown on the plans or as directed by the Engineer.

The manhole - type A (4' dia.) shall conform to IDOT Standard 602401 as modified and 602601. The inlet – type A shall conform to IDOT Standard 602301 as modified.

751-2.9 AUTOMATIC DRAINAGE GATES

ADD:

Automatic drainage gates shall be Neenah R-5050-SF30 or equal as detailed on the plans

CONSTRUCTION METHODS

751-3.11 INLET / MANHOLE ADJUSTMENT

All adjustments are to me made with precast rings. All adjusting rings must be mortared together and must be mortared to the casting, as well as to the cone section or flat top of the structure. The maximum height of adjusting rings shall be eight (8) inches including existing rings for any inlet or manhole adjustment. The maximum number of rings in any structure is three. This may require the Contractor to remove existing rings and replace with larger rings.

The Contractor shall be responsible for field checking existing storm sewer, sanitary sewer, and electrical manhole configurations for the necessary adjustments.

751-3.12 INLET / MANHOLE REMOVAL

This work shall consist of the removal of existing concrete drainage inlet and manholes of various types and sizes. Trenches resulting from the manhole removal shall be backfilled and compacted in accordance with P-152, Excavation and Embankment for areas in proposed turf or backfilled and compacted in accordance with Section 701-2.7 and 701-3.7 for areas under proposed pavements. Manholes and inlets shall be disposed of by the Contractor off Airport property.

Trench backfill of removal items shall be incidental to the removal item.

BASIS OF PAYMENT

751-5.1

ADD:

Automatic drainage gates will be paid for at the contract unit price per each complete and in place based on the inside diameter of the storm sewer.

Payment will be made under:

- | | | |
|-----------------|-------------------|-----------|
| • ITEM AR751411 | INLET-TYPE A | PER EACH. |
| • ITEM AR751540 | MANHOLE 4' | PER EACH. |
| • ITEM AR751900 | REMOVE INLET | PER EACH. |
| • ITEM AR800001 | TYPE 1 INLET | PER EACH. |
| • ITEM AR800043 | TYPE 2 INLET | PER EACH. |
| • ITEM AR800048 | DRAINAGE GATE 30" | PER EACH. |

ITEM 752 – CONCRETE CULVERTS, HEADWALLS AND MISCELLANEOUS DRAINAGE STRUCTURES

DESCRIPTION

752-1.1

ADD:

Specifically, this item shall consist of the installation of precast reinforced concrete flared end sections with grates, and concrete endwalls for the precast box culverts, in accordance with these specifications at the locations shown in the plans.

MATERIALS

752-2.2 FLARED END SECTION

The proposed flared end section shall be reinforced concrete conforming to the ASTM Designation C-76, Class IV Pipe, and shall be constructed according to IDOT Standard 542301, and the Grating for the flared end section shall conform to IDOT Standard 542311 in accordance with these specifications at the locations shown in the plans.

752-2.3 PRECAST BOX CULVERT END SECTION

Precast box culvert end sections shall be designed in accordance with AASHTO M273 and placed in accordance with the requirements of Section 540 of the Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction" dated January 1, 2002.

BASIS OF PAYMENT

Payment will be made under:

- | | | |
|-----------------|----------------------------------|-----------|
| • ITEM AR752412 | PRECAST REINFORCED CONC. FES 12" | PER EACH. |
| • ITEM AR752415 | PRECAST REINFORCED CONC. FES 15" | PER EACH. |
| • ITEM AR752418 | PRECAST REINFORCED CONC. FES 18" | PER EACH. |
| • ITEM AR752424 | PRECAST REINFORCED CONC. FES 24" | PER EACH. |
| • ITEM AR752512 | GRATING FOR CONC. FES 12" | PER EACH. |
| • ITEM AR752515 | GRATING FOR CONC. FES 15" | PER EACH. |
| • ITEM AR752518 | GRATING FOR CONC. FES 18" | PER EACH. |
| • ITEM AR752524 | GRATING FOR CONC. FES 24" | PER EACH. |
| • ITEM AR752900 | REMOVE END SECTION | PER EACH. |
| • ITEM AR800012 | BOX CULVERT END SECTION 8' X 4' | PER EACH. |

ITEM 754 – CONCRETE GUTTERS, DITCHES AND FLUMES

DESCRIPTION

754-1.1

ADD:

Combination curb and gutter shall comply with IDOT, Standard 606001-02, B6.12 (Barrier and Depressed).

Concrete flume shall comply with the detail in the construction plans.

MATERIALS

754-2.3 GRANULAR BEDDING

Revise first paragraph of supplement:

A minimum of 4" granular bedding course shall be constructed and mechanically compacted under all proposed combination curbs and gutters and concrete flumes. Granular bedding shall be IDOT CA-6 in accordance with Item 208.

754-2.4 WIRE REINFORCEMENT

Welded wire fabric shall comply with IDOT Standard 420701-01.

CONSTRUCTION METHODS

754-3.6 CONCRETE FLUME

Concrete flumes shall be constructed at the locations and according to the details shown on the plans or as directed by the Engineer.

Anchor walls shall be spaced at no more than 50 feet intervals along the paved. Anchor walls and curtain walls shall be constructed monolithically with the concrete flume.

At the option of the Contractor, No. 3 reinforcing bars placed at 9" inch centers longitudinally in the concrete flume and vertically in the anchor and curtain walls may be used in lieu of the welded wire fabric.

A 12 inch thick preformed joint filler shall be placed at the junction of the concrete flume with any other structure.

754-3.7 CURING AND PROTECTION

Concrete curb and gutter and flumes shall be cured and protected as outlined in Section 610-3.16

METHOD OF MEASUREMENT

754-4.1

ADD:

The cost of saw cutting and disposing offsite items to be removed shall not be measured separately but shall be included in the flume removal unit price.

Granular bedding for concrete flumes and combination curb and gutters shall not be measured separately but shall be considered incidental to the proposed pay item.

Reinforcement for concrete flumes and combination curb and gutters shall not be measured separately but shall be considered incidental to the proposed pay item.

Curing and protection for concrete flumes and combination curb and gutters shall not be measured separately but shall be considered incidental to the proposed pay item.

BASIS OF PAYMENT

754-5.1

ADD:

IDOT Type B6.12 combination curb and gutter shall be paid for as “COMB CONCRETE CURB & GUTTER.”

Payment will be made at the contract unit price per linear foot for “CONCRETE FLUME” completed and accepted in accordance with the plans and specifications.

Payment will be made at the contract unit price per linear foot for “REMOVE CONCRETE FLUME” in accordance with the plans and specifications. The cost of disposal offsite and full depth saw cut shall be included in the removal unit price.

Payment will be made under:

- | | | |
|-----------------|-----------------------------|------------------|
| • ITEM AR754410 | COMB CONCRETE CURB & GUTTER | PER LINEAR FOOT. |
| • ITEM AR754710 | CONCRETE FLUME | PER LINEAR FOOT. |
| • ITEM AR754915 | REMOVE CONCRETE FLUME | PER LINEAR FOOT. |

DIVISION V – TURFING

ITEM 901 – SEEDING

MATERIALS

901-2.1 SEED

DELETE: The seed mix No. 1A & No. 1B from table in the Supplemental Specification and replace with:

SEEDING FORMULA 1 (IDOT Class1)

<u>SEEDS</u>	<u>LBS/ACRE</u>
Kentucky Bluegrass	100
Perennial Ryegrass	60
Creeping Red Fescue	40
TOTAL	200

SEEDING FORMULA 2 (IDOT Class 4A)

<u>SEEDS</u>	<u>LBS/ACRE</u>
Andropogon scoparius (Little Blue Stem)	5
Boutelova curtipenda (Side-Oats Gramma)	5
Elymus Canadensis (Wild Rye)	1
Sporobolus heterolepsis (Prairie Dropseed)	0.5
Annual Ryegrass	25
Oats, Spring	25
Perennial Ryegrass	15
TOTAL	76.5

901-2.2 LIME

DELETE this section of the Standard Specifications.

ADD:

The Contractor shall apply agricultural ground limestone that meet the requirements of Section 1081.07 of the IDOT “Standard Specifications for Road and Bridge Construction”.

901-2.3 FERTILIZER

DELETE: This Section of the Supplemental Specifications.

ADD:

Fertilizer shall be applied at rates that supply the following amounts of nutrients per acre to the distributed areas of seeding:

<u>NUTRIENTS</u>	<u>POUNDS PER ACRE</u>
Nitrogen	90
Phosphorus (P205)	90
Potassium (K20)	90
TOTAL	270

CONSTRUCTION METHODS

901-3.2 DRY APPLICATION METHOD

DELETE: Entire Section

ADD:

- (a) Description: This work shall consist of furnishing, transporting and installing all seeds, plant or other materials required for:
1. Any remedial operations in conformance with the plans as specified in these special provisions or as directed by the Engineer.
- (b) General Requirements: The site will be in the following condition:
1. The grade will be shaped to the elevation shown on the plans.
 2. The topsoil will be free of clods, stones, roots, sticks, rivulets, gullies, crusting, caking and have a soil particle size of no larger than 1".
- (c) Seeding Equipment: Seeding equipment shall meet the following requirements. Any other equipment deemed necessary shall be subject to the approval of the Engineer.
1. Disc: Any disc new for the use shall be in a good state of repair with sound, unbroken blades. The disc shall be weighted if necessary to achieve the required tillage depth.
 2. No-Till Planters and Drills: Rangeland type drills and no-till planters shall be designed specifically for the seeding of native grasses and forbs with depth control bands set at 1/4" - 1/8".
 3. Seedbed Preparation: Seedbed preparation methods shall be approved by the Engineer. Cultivation shall be accomplished at such a time that seeding may occur immediately and without delay. No seeds shall be sown until the Seedbed has been approved by the Engineer.
- (d) Seeding Methods: The Contractor shall submit for approval by the Engineer and schedule for seeding and/or planting at least two weeks prior to the scheduled commencement of work. Broadcast seeders will not be allowed. Seeder will be a drill type planters. The Engineer shall examine and then approve any equipment to be used. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. Equipment shall be operated in a manner to insure complete coverage of the entire area to be seeded. The Engineer shall be notified 48 hours prior to beginning the seeding operations. Any gaps between areas of growth greater than eight square feet shall be resown and/or replanted.
1. No-till or Drill Method: Rolling of the Seedbed will not be required with the use of rangeland type grass drill or no-till planters.

METHOD OF MEASUREMENT

901-4.1

ADD:

Areas of seeding not showing a uniform stand of grass in density and color shall not be approved for payment. Such areas shall be reseeded to the Owner's satisfaction at no additional cost to the contract.

BASIS OF PAYMENT

Payment will be made under:

- ITEM AR901511 SEEDING-FORMULA 1 PER ACRE.
- ITEM AR901512 SEEDING-FORMULA 2 PER ACRE.

ITEM 904 – SODDING

(SUPPLEMENTAL SPECIFICATION)

DESCRIPTION

904-1.1

DELETE: Entire paragraph.

ADD:

This item shall consist of furnishing, hauling, and placing approved live sod at the locations shown on the plans.

MATERIALS

904-2.1 SOD

ADD:

The Contractor shall provide the Engineer, for approval, the species or seed mixture prepared to be used for this item. The sod shall be nursery or field grown. Each piece of sod shall be well covered with turf grass, shall be free from noxious weeds and other objectionable plants, and shall not contain substances injurious to growth. The grass shall be cut to a length of not less than 40 mm (1 1/2 inches) not more than 100 mm (4 inches) before the sod is cut. The sod shall be cut in rectangular pieces with its shortest side not less than 300 mm (12 inches) thick. The sod shall not be cut less than 25 mm (1 inch) thick. This thickness measurement does not include grass.

With respect to inspection for plant diseases and insect infestation, an inspection certificate shall accompany each shipment and on arrival shall be filed with the Engineer.

The sod used shall be approved grass that is native to the locality of work. It shall be either nursery grown or field grown and be well rooted and approved by the Engineer prior to being cut and again before it is laid. Sod that has been grown on soil high in organic matter such as peat will not be acceptable. The consistency of adherent soil shall be such that it will not break, crumble or tear during handling and placing of the sod.

904-2.2 LIME

Lime will not be required unless determined by the Contractor.

904-2.3 FERTILIZER

Fertilizer will not be required unless determined by the Contractor.

904-3.1

DELETE: First paragraph.

ADD:

The areas to be sodded are shown on the plans. The exact limits will be established by the Engineer.

904-3.2 PREPARING THE GROUND SURFACE

ADD:

The areas to be sodded shall be stripped of vegetation, in accordance with Item 152, if necessary, thoroughly disced or scarified to a 3" minimum depth, and brought to grade with topsoil as described in Item 152 - Excavation and Embankment.

904-3.5 LAYING SOD

ADD:

After the ground surface has been prepared and accepted, the Contractor shall furnish and install new sod on the prepared surface.

The Contractor shall establish a smooth transition from the edge of the sod to the existing topsoil surface adjacent to the sod to the satisfaction of the Airport at no additional cost.

904-3.6 WATERING

ADD:

Sod watering shall meet requirements per Section 252.08 of IDOT *Standard Specifications for Road and Bridge Construction*. Sod shall be kept moist until it has become established and its continued growth assured. Watering shall be provided by the Contractor as necessary to promote establishment. No direct payment will be made for watering but it shall be considered incidental to the placement of the sod.

ITEM 905 – TOPSOILING

DESCRIPTION

905-1.1

Revise paragraph two of the Supplemental Specification to read as follows:

No separate payment shall be made for topsoil stripping, stockpiling or excavation from the stockpile.

METHOD OF MEASUREMENT

905-4.1

ADD:

The yardage of topsoil placed in conformance with the plans to be paid for shall be the number of cubic yards of topsoil measured in its final compacted position and pay quantities shall be computed by the method of average end areas and using a 4" depth.

BASIS OF PAYMENT

905-5.1

Revise the first paragraph of the Supplemental Specification to read as follows:

Payment will be made at the contract unit price per cubic yard measured in it's final position for "Topsoiling (From On Site)". This price shall be full compensation for topsoil stripping, stockpiling, spreading, excavation and for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

- ITEM AR905510 TOPSOILING (FROM ON SITE) PER CUBIC YARD.

DIVISION VI – LIGHTING INSTALLATION

ITEM 108 – INSTALLATION OF UNDERGROUND CABLE

EQUIPMENT AND MATERIALS

108-2.2

ADD:

Airfield lighting cable under this item shall be:

- 1/C #8 5KV UG cable in ¾" unit duct

AWOS cable under this item shall be:

- 3-1/C #3/0 UG

Gate operator cable under this item shall be:

- 3-1/C #6 XLP-USE, 1-1/C #10 Ground

Roadway/parking lot lighting cable under this item shall be:

- 2-1/C #6 XLP-USE, 1-1/C #10 Ground

Secondary power cable under this item shall be:

- 3-1/C #4/0 UG, 1/C #2 Ground

108-2.4 CABLE CONNECTIONS

ADD:

To further reduce the possibility of water (moisture) entrance into the connector between the cables and the field-attached connector, heat shrinkable tubing with interior adhesive shall be applied over all cable connections.

The heat shrinkable tubing shall cover the entire L-823 connector. All connections shall be at handholes or light bases. **No direct burial splicing will be allowed.**

No splices will be allowed in the new cable. Cable shall be continuous between pull points. Any repairs necessary to cable damaged during installation shall be done at the Contractor's expense and shall consist of replacing the entire length of damaged cable between pull points.

In line connections for existing cables to be spliced or those that are cut during construction shall be repaired with the cast splice kit. The Contractor shall have a minimum of five (5) splice kits on the jobsite at all times for emergency repairs. Splice markers shall be installed over each splice in cables not to be abandoned. Cast splice kits shall be as specified in paragraph (a). All field splices shall be covered with a flexible polyolefin heat-shrinkable sleeve.

108-3.1 GENERAL

ADD:

The locations of existing cables are taken from available record maps and it will be necessary for the contractor to make field investigations to determine the exact locations of underground cable and conduits at critical points.

108-3.3 TRENCHING

Change 24 inches to 30 inches in the last sentence of the second paragraph within the Supplemental Specifications.

ADD:

The installation of GRS conduit using the plowing-in method will not be allowed.

All cable in unit-duct may be installed using the plowing-in method or direct burial, (refer to Item 108-3.11) except at critical locations where required to protect existing cables or to facilitate construction.

Modify the Supplemental Specifications to be: Cable plowing shall be done at a minimum depth of 30" below finished grade.

108-3.8 SPLICING

DELETE: Paragraph (b) (c) and (e).

ADD:

Direct burial splicing will not be allowed.

Contractor shall use cast splicing kits as described in Article 108-2.4 for any splices made inside the electric handholes. The cast splicing kit shall be series 82-B1 Scotch cast or 90-B1 Scotch cast as manufactured by 3M or equal. Contractor shall provide shop drawing for splicing method and cast splicing kit. Contractor shall also leave minimum 30" of slack on each side of the cable being spliced. The cost of splicing shall be incidental to the cost of installation of underground cables.

108-3.13 TERMINATIONS AND CONNECTIONS

ADD:

The Contractor shall have a minimum of five (5) splice kits on the jobsite at all times for emergency repairs.

If, due to the length of spool ordered by the Contractor, it is necessary to install additional handholes, the Contractor shall supply same at no additional cost to the project. The handhole shall be the size as directed by the Engineer.

BASIS OF PAYMENT

108-5.1

Payment will be made under:

- | | | |
|-----------------|---------------------------|------------------|
| • ITEM AR108030 | 1/C #3/0 600V UG CABLE | PER LINEAR FOOT. |
| • ITEM AR108158 | 1/C #8 5KV UG CABLE IN UD | PER LINEAR FOOT. |
| • ITEM AR108406 | 1/C #6 600 V UG CABLE | PER LINEAR FOOT. |
| • ITEM AR108752 | 1/C #2 GROUND | PER LINEAR FOOT. |
| • ITEM AR108760 | 1/C #10 GROUND | PER LINEAR FOOT. |
| • ITEM AR800105 | 1/C #4/0 600V UG CABLE | PER LINEAR FOOT. |

ITEM 110 – INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT

DESCRIPTION

110-1.1

ADD:

This item shall consist of the construction of the new steel duct direct bury, electrical handholes, concrete encased split duct and duct banks, including appropriate duct markers at the locations shown in the plans or as directed by the Engineer.

Contractor shall provide pull wire for each conduit and cap the unused conduits for future use.

EQUIPMENT AND MATERIALS

110-2.8 ELECTRICAL HANDHOLES

Contractor shall install handholes in locations specified and detailed in the plans. Electrical handholes shall meet the requirements of IDOT standard 814001Modified.

110-2.9 DUCT MARKER

ADD:

The Contractor shall provide duct markers for each new or existing duct being used as detailed in the plans. The cost of installation of the duct markers shall be incidental to the contract.

110-2.10 SPLIT DUCT

ADD:

The Contractor shall install 1-4" PVC concrete encased split duct to accommodate existing airfield cables. Split duct shall be encased in a minimum of 3" concrete surrounding the 4" PVC split duct. The cost of routing of existing cables through the proposed split duct and the cost of concrete encasement shall be incidental to the price of split duct.

110-2.11 AGGREGATE BACKFILL

Crushed stone material conforming to the requirements of Item 208 gradation shall be used for backfill at the pavement crossings for the proposed duct installation. In lieu of aggregate, the contractor may substitute Controlled low strength material backfill for those areas requiring aggregate backfill. This substitution must be approved in writing prior to construction and must be completed at no additional cost to the contract. The CLSM material will be considered incidental to the associated duct item.

CONSTRUCTION METHODS

110-3.5 BACKFILLING

ADD to the Supplemental Specifications:

Crushed Stone conforming to the requirements of Item 208 gradation shall be used for backfill at the pavement crossings for the new duct installation. The granular material shall be compacted to not less than 95% of Standard Proctor laboratory density.

METHOD OF MEASUREMENT

110-4.1

ADD:

The quantity of handholes to be paid for shall be the number of each handhole installed, measured in place and accepted.

BASIS OF PAYMENT

110-5.1

ADD:

Payment will be made at the contract unit price per lineal foot for each type and size of concrete encased duct bank and GRS conduit completed and accepted. These prices shall be full compensation for furnishing all materials and for all preparation, assembly, aggregate backfill, backfill, compaction, sawcutting and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete these items.

Trenching and backfilling shall also be included in the installation/removal of the duct and conduit and shall not be paid for separately.

Payment will be made under:

- | | | |
|-----------------|------------------------------|------------------|
| • ITEM AR110212 | 2" STEEL DUCT, DIRECT BURY | PER LINEAR FOOT. |
| • ITEM AR110214 | 4" STEEL DUCT, DIRECT BURY | PER LINEAR FOOT. |
| • ITEM AR110217 | 1 ½" STEEL DUCT, DIRECT BURY | PER LINEAR FOOT. |
| • ITEM AR110504 | 4-WAY CONCRETE ENCASED DUCT | PER LINEAR FOOT. |
| • ITEM AR110550 | SPLIT DUCT | PER LINEAR FOOT. |
| • ITEM AR110610 | ELECTRICAL HANDHOLE | PER EACH. |
| • ITEM AR800088 | 5" STEEL DUCT, DIRECT BURY | PER LINEAR FOOT. |

ITEM 125 – INSTALLATION OF AIRPORT LIGHTING SYSTEMS

(SUPPLEMENTAL SPECIFICATION)

DESCRIPTION

125-1.1

ADD:

Airfield lighting improvements and modifications shall include:

- Installation of new medium intensity base mounted and stake mounted taxiway edge lights.
- Installation of new elevated retro-reflective markers.
- Installation of new taxiway guidance signs.
- Removal of existing medium intensity stake mounted taxiway lights
- Modify existing sign panel

Existing sign to be modified is Lumacurve model by Standard Signs.

125-1.9 INSPECTION, TEST AND WARRANTY

ADD:

VISUAL EXAMINATION

The most important of all inspection and test procedures is thorough visual inspections. Visual inspections shall be made frequently during installation, at completion of installation, and before energizing the circuits. A careful visual inspection can reveal defects that can be corrected prior to

acceptance tests and energization. Serious damage may occur if defects are subjected to electrical tests or energization. Visual inspections shall include appraisal of:

- (a) Correctness of external connections.
- (b) Good work performance.
- (c) Cleanliness.
- (d) Safety hazards.
- (e) Specific requirements listed herein for individual items. While all equipment manufactured under specifications pass strict factory tests prior to shipment, it shall be inspected for shipping damage immediately upon receipt.
- (f)

ELECTRICAL TESTS ON SERIES LIGHTING CIRCUITS

Before modifying any series circuit, verify the performance of the existing circuit by checking the supply voltage to the regulator and measuring the output current from the regulator on all brightness steps under existing load.

- (a) For home run segments that will not be replaced, disconnect at S-1 cutout and at first fixture and verify cable continuity.
- (b) Check cable connections and perform electrical tests on cable as specified in Section 108.

LIGHTING FIXTURES

An inspection shall be made to determine that the color, quantity, and locations of light are in accordance with the installation drawings. Each light shall be inspected to determine that it is operable, glass is not broken or cracked, correct lamps are installed, and it has been properly leveled and aimed, in accordance with technical orders and manufacturers instructions, where applicable.

FINAL ACCEPTANCE TESTS

After components and circuits have been inspected, as specified in the preceding paragraphs, the entire system shall be inspected and tested as follows:

- (a) Operate each switch for the modified lighting circuits from the remote control position (ATCT) so that each switch position is reached at least twice. During this process, all lights and vault equipment shall be observed to determine that each switch properly controls the corresponding circuit.
- (b) Repeat the above test using the local control switches on the regulators.
- (c) Each lighting circuit shall be tested by operating it continuously at maximum brightness for at least 6 hours. Visual inspection shall be made at the beginning and end of this test to determine that the correct numbers of lights are operating at full brightness. Dimming of some or all of the lights in a circuit is an indication of grounded cables.
- (d) In addition to the above, all equipment shall be subjected to any and all performance tests specified in the manufacturer's instructions.

- (e) Photometric testing. The Airport may, upon completion of the lighting installation and as part of acceptance testing, perform field photometric testing of each new light fixture to assure the installed runway lights meet the photometric requirements specified by FAA. The test results will be recorded and furnished to the Contractor, with any noted deficiencies. The Contractor is responsible for correcting any deficiencies at no additional cost to the Owner. The Contractor shall furnish spares in support of this testing, to include 15% lamps and 5% lenses for the new in-pavement lights. Spares not used shall be provided to the Airport upon completion of the work

125-1.10 GUARANTEE

ADD:

All equipment furnished and work performed under the Contract Documents shall be guaranteed against defects in materials or workmanship for a period of one (1) year from the date of final acceptance. This guarantee does not replace any responsibility for errors or omissions as set forth in state law. Any long-term warranties issued or offered by manufacturers for items of equipment shall be turned over to the Airport.

125-1.11

Any failure of equipment or work due to defects in materials or workmanship shall be corrected by the Contractor at no cost to the Airport.

125-1.12

The Contractor shall ascertain that all lighting system components furnished by him (including FAA approved equipment) are compatible in all respects with each other and the remainder of the new/existing system. Any incompatible components furnished by the Contractor shall be replaced by him at no additional cost to the Airport with a similar unit approved by the Project Engineer (different model or manufacturer) that is compatible with the remainder of the airport lighting system.

125-1.13

The Contractor-installed equipment (including FAA approved) shall not generate any electromagnetic interference in the existing and/or new communications, weather and air traffic control equipment. Any equipment generating such interferences shall be replaced by the Contractor at no additional cost with the equipment meeting applicable specifications and not generating any interference.

EQUIPMENT AND MATERIALS

125-2.1 GENERAL

ADD:

All new equipment shall be listed in Advisory Circular 150/5345-1(Latest Edition) - Approved Airport Lighting Equipment.

Before any electrical materials are ordered, the Contractor shall furnish the Engineer a list of the materials and equipment to be incorporated in the work. This list shall include the name of each item, the Federal Aviation Administration specification number, the manufacturer's name, the manufacturer's catalog number, and the size, type and/or rating of each item, catalog cuts, test data, fuse curves, outline drawings, nameplate drawings, wiring diagrams, and schematic diagrams.

After the list has been approved by the Engineer and prior to installation, the Contractor shall assemble the equipment and materials at a single location, on-site, and request inspection by the Engineer. None of the equipment or materials, other than duct or conduit, may be used on the job until such as inspection has been completed.

All test results from required tests shall be submitted to the Engineer for review and approval.

Airport lighting equipment and materials covered by FAA specifications shall have prior approval of the Federal Aviation Administration, Airport Service, Washington, DC 20591, and shall be listed in the current edition of FAA Advisory Circular AC 150/5345-53, Airport Lighting Equipment Certification Program. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when required by the Engineer.

The following documents, of the issue in effect on the date of application for qualification, are applicable to the extent specified:

<u>Item</u>	<u>Specification</u>	<u>Advisory Circular</u>
Elevated Lights	L-861	AC 150/5345-46B
Transformers, Isolation, 60 Hz	L-830	AC 150/5345-47A
Light base, load bearing	L-868	AC 150/5345-42C
Light base, non-load bearing	L-867	AC 150/5345-42C
Elevated Marker	L-853	AC 150/5345-39B

All FAA Advisory Circular referenced in this specification refer to the most recent edition in circulation.

125-2.7 ISOLATION TRANSFORMERS

ADD:

New transformers for shall be L-830, 6.6A Pri./6.6A Sec. of the wattage recommended by the manufacturer. The number of transformers per light shall also be as recommended by the manufacturer.

125-2.8 LIGHT CANS

ADD:

3/4" thick blank cover plates shall be provided as required.

125-2.10 TAPE

ADD:

Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88, respectively, as manufactured by the Minnesota Mining and Manufacturing Company, or an approved equal.

125-2.11 TAXI GUIDANCE SIGN

ADD:

Taxi holding position signs and taxi guidance signs shall conform to the type, class, style, nomenclature and dimensions shown in the plans to match the existing guidance signs and as specified herein.

Airfield taxiway signs shall be L-858, Size 2, Style 2, Class 2 confirming to the nomenclature indicated in the Plans. For the purposes of this specification, a character shall be defined as a letter, numeral, dot, dash or arrow to be indicated on the sign nomenclature. Sign components and lengths shall be as recommended by the manufacturer. Airfield signs shall conform to nomenclature, number of digits, and dimensions indicated in the plans and specified in FAA circular AC 150/5345-44 (latest revision).

125-2.14 TAXIWAY LIGHTS

ADD:

Taxiway lights shall be base or stake mounted as shown on the plans and shall meet the following FAA specifications:

L-861T Medium Intensity Taxiway Lights

125-2.15 ELEVATED RETROREFLECTIVE MARKERS

ADD:

Elevated retroreflective markers shall be blue stake mounted, omnidirectional, frangible markers as detail on the plans.

125-2.16 LIGHT REMOVAL

ADD:

Existing light bases shall be completely removed and disposed of by the Contractor off Airport property. The excavations shall be backfilled with earth and compacted to the satisfaction of the Engineer.

Existing fixtures and transformers shall be salvaged and remain the property of the Airport. The material shall be delivered to the Airport Maintenance Facility.

CONSTRUCTION METHODS

125-3.1 GENERAL

ADD:

The Contractor shall exercise caution in the installation and removal of all light units. Any units damaged by the Contractor's operations shall be repaired or replaced to the satisfaction of the Engineer at no additional cost to the contract.

125-3.4 PHASING AND INTERRUPTIONS

All existing electrical equipment and lighting systems not included in the phase of work being performed must be kept in operation, unless prior approval of the Owner has been received and as otherwise specified below and on the Drawings. The Contractor may use salvaged materials for temporary construction where required. The permission for temporary work and using salvaged materials shall be obtained from the Owner. Lighting for active runway and taxiway surfaces shall be maintained. Work shall be coordinated with paving operations.

Refer to the special provision of the specification for notification requirements and other information regarding work interruptions due to airport operational requirements or Contractor anticipation for exceeding the limitations described in the above paragraph.

METHOD OF MEASUREMENT

125-4.1

DELETE: Entire section.

ADD:

The quantities to be paid for under this item shall consist of:

- (a) The number of elevated retroreflective markers in place as complete units and accepted by the Engineer.
- (b) The number of taxiway guidance signs in place as complete units and accepted by the Engineer.
- (c) The number of edge lights in place as complete units and accepted by the Engineer.
- (d) The number of light removed.
- (e) The number of sign panels modified,

BASIS OF PAYMENT

125-5.1

ADD:

Payment will be made at the contract unit price for each complete item furnished and installed in place by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation, removals, modifications, relocation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment for topsoiling and seeding of the Item 125 installation areas shall not be paid for separately but shall be considered incidental to the associated item.

Payment will be made under:

- | | | |
|-----------------|------------------------------------|-----------|
| • ITEM AR125100 | ELEVATED RETROREFLECTIVE MARKER | PER EACH. |
| • ITEM AR125410 | MITL-STAKE MOUNTED | PER EACH. |
| • ITEM AR125415 | MITL-BASE MOUNTED | PER EACH. |
| • ITEM AR125443 | TAXIWAY GUIDANCE SIGN, 3 CHARACTER | PER EACH. |
| • ITEM AR125444 | TAXIWAY GUIDANCE SIGN, 4 CHARACTER | PER EACH. |
| • ITEM AR125445 | TAXIWAY GUIDANCE SIGN, 5 CHARACTER | PER EACH. |
| • ITEM AR125470 | MODIFY EXISTING SIGN PANEL | PER EACH. |
| • ITEM AR125901 | REMOVE STAKE MOUNTED LIGHT | PER EACH. |

DIVISION VIII – MISCELLANEOUS

ITEM 150510 – ENGINEER'S FIELD OFFICE

CHECK SHEET #5

ENGINEER'S FIELD OFFICE

150-2.1

REVISE:

Paragraph (g) to the following:

- (g) One (1) electric water cooler dispenser capable of dispensing cold and hot water and a supply of water bottles as needed.

Paragraph (j) to the following:

- (j) 1 dry process copy machine (including maintenance and operating supplies) capable of both collating and reproducing prints up to a half size (11"X 17") and capable of copying field books.

ADD:

- (a) One first-aid cabinet fully equipped.
- (b) One (1) 800 Watt, 0.8 cubic foot microwave oven.
- (c) One (1) Coffee Maker
- (d) Solid waste disposal consisting of two (2) 28-quart waste baskets and an outside trash container of sufficient size to accommodate a weekly provided pick-up service.

BASIS OF PAYMENT

150-3.1

DELETE the second paragraph of this section.

- ITEM AR150510 ENGINEER'S FIELD OFFICE PER LUMP SUM

ITEM 150520 – MOBILIZATION

DESCRIPTION

150-1.1

This work shall consist of preparatory work and operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site for the establishment of offices, buildings and other facilities necessary for work on the project and for all other work or operations which must be performed or costs incurred when beginning work on the project.

BASIS OF PAYMENT

150-2.1

This work will be paid for at the lump sum price for MOBILIZATION. The amount which a Contractor will receive payment for, according to the following schedule, will be limited to a maximum of 3 percent of the original contract amount.

- (a) Upon start of work, 75 percent of the pay item will be paid.
- (b) When 10 percent of the original contract amount is earned, an additional 15 percent of the pay item will be paid.
- (c) When 90 percent of the adjusted contract value is earned, the remaining 10 percent of the pay item will be paid.

- ITEM AR150510 ENGINEER’S FIELD OFFICE PER LUMP SUM

ITEM 156000 – EROSION CONTROL

SEE CHECK SHEET #08

MATERIALS

156-2.6 EROSION CONTROL BLANKET

ADD:

The Contractor shall have the option to install excelsior blanket or knitted straw mat as specified below:

Excelsior Blanket:

Excelsior blanket shall consist of a machine produced mat of wood excelsior of 80 percent 6 inches or longer fiber length. The wood from which the excelsior is cut shall be properly cured to achieve adequately curled and barbed fibers.

The blanket shall be consistent thickness, with the fiber evenly distributed over the entire area of the blanket. The excelsior blanket shall be covered on the top side with a 90 day biodegradable extruded plastic mesh netting having an approximate minimum opening of 16 mm x 16 mm (5/8" x 5/8") to an approximate maximum opening of 50 mm x 25 mm (2" x 1"). The netting shall be entwined with the excelsior mat for maximum strength and ease of handling.

The excelsior blanket shall comply with the following Specifications:

Minimum width, inches, minus 1 inch	24
Minimum weight per square yard, pounds, minus 10 percent	0.8
Minimum length of roll, feet, approximately	150

The excelsior blanket shall be smolder resistant and shall withstand the following test. The excelsior blanket specimen shall not flame or smolder for more than a distance of 12 inches from where a lighted cigarette is placed on the surface of the blanket.

Certification. The manufacturer shall furnish a certification with each shipment of blanket stating the number of rolls furnished and the material complies with the requirements of the Specifications.

Knitted Straw Mat:

Straw mat shall be made of 100 percent biodegradable straw, 0.50 lbs./sq. yd., with light weight photodegradable netting on both sides. The mat shall be sewn together with cotton thread. Straw mat shall be North American Green S150 or approved equal.

Certification. The manufacturer shall furnish a certification with each shipment of blanket stating the number of rolls furnished and the material complies with the requirements of the Specifications.

156-2.7 STAKES FOR EROSION CONTROL BLANKET

ADD:

The blanket shall be secured with biodegradable stakes acceptable to the Engineer. Metal staples will not be allowed.

156-2.8 TEMPORARY DITCH CHECK

ADD:

The temporary ditch check shall be made of urethane foam or geotextile meeting the requirements of Section 280 of the *Standard Specifications for Road and Bridge Construction*.

CONSTRUCTION METHODS

156-3.3 TEMPORARY DITCH CHECKS

Revise paragraph from Special Provision (Check Sheet #8) as follows:

Temporary Ditch checks shall be constructed according IDOT Standard 280001-02.

156-3.9 EROSION CONTROL BLANKET

ADD:

Within 24 hours from the time seeding has been performed, the blanket shall be placed. Prior to placing the mat or blanket, the area to be covered shall be relatively free of all rocks or clods over 1 inch in diameter, and all sticks or other foreign material which will prevent the close contact of the mat or blanket with the seed bed. If as a result of rain, the prepared seed bed becomes crusted or eroded, or if the eroded places, ruts or depressions exist for any reason, the Contractor will be required to rework the soil until it is smooth and to reseed such areas which are reworked. After the area has been properly shaped, fertilized and seeded, the mat or blanket shall be laid out flat, evenly and smoothly, without stretching the material.

The blanket shall be laid in accordance with the manufacturer's recommendations. All ends and edges shall be tightly butted together.

The blanket shall be held in place by means of stakes. The stakes shall be driven at a 90 degree angle to the plane of the soil. Stakes shall be spaced not more than 3 feet apart in 3 rows for each strip, with a row along each edge and one row alternately spaced in the middle. All ends shall be fastened by stakes spaced 6 inches apart across the width.

Once the turf growth has been established, the contractor shall remove all non-biodegradable components. This would include any item that would interfere with the mowing of the new turf which might damage mowing equipment. Furthermore, the contractor shall fill with topsoil or smoothly grade any ruts or gullies that developed during the turf growth period to the satisfaction of the Owner. This work shall be considered incidental to this item.

METHOD OF MEASUREMENT

156-4.4

ADD:

Erosion control blanket shall be the number of square yards satisfactorily completed.

156-4.5

ADD:

Temporary mulch shall not be measured for payment. It shall be considered incidental to Item 908 – Mulching.

BASIS OF PAYMENT

156-5.1

- | | | |
|-----------------|-------------------------|------------------|
| • ITEM AR156510 | SILT FENCE | PER LINEAR FOOT. |
| • ITEM AR156511 | DITCH CHAECK | PER EACH. |
| • ITEM AR156512 | BALES | PER EACH. |
| • ITEM AR156531 | EROSION CONTROL BLANKET | PER SQUARE YARD. |

ITEM 156540 – RIPRAP

SEE CHECK SHEET #10

RIPRAP

156-2.1 RIPRAP

DELETE Last Sentence.

ADD:

The stone material shall be of quality B or better as listed in Article 1005.01(b). Riprap placed at end sections, headwalls, and flared end sections shall meet RR 3 gradation from Article 1005.01(c). Riprap placed and curb cuts and depressed curbs shall meet RR 3 gradation from Article 1005.01(c) but shall be modified as described in note 2 of the table for aggregate ditch check. Riprap placed at the banks and bottom of the relocated ditch at box culvert ends shall meet RR 5 gradation from Article 1005.01(c)

156-3.1

REVISE the first paragraph as follows.

Prior to the placement of riprap material, the Contractor will undercut the designated area a minimum of 12 inches below finished grade for riprap meeting RR 3 gradation. No bedding material shall be required for this gradation. The Contractor will undercut the designated area a minimum of 30 inches below finished grade for riprap meeting RR 5 gradation. The Contractor shall place a minimum of 22 inches of RR 5 riprap with a minimum bedding of 8 inches. The bedding material shall meet gradations RR 1 or CA 3. Filter fabric will be required under all stone riprap.

BASIS OF PAYMENT

156-5.1

ADD:

Riprap meeting the modified RR 3 gradation shall be paid per square yard as "RIPRAP".

Riprap meeting the RR 3 gradation shall be paid per square yard as "RIPRAP-GRADATION NO. 3."

Riprap meeting the RR 5 gradation shall be paid per square yard as "RIPRAP-GRADATION NO. 5."

Bedding material shall not be paid for separately but shall be incidental to the riprap.

Payment will be made under:

- | | | |
|-----------------|------------------------|------------------|
| • ITEM AR156540 | RIPRAP | PER SQUARE YARD. |
| • ITEM AR156543 | RIPRAP-GRADATION NO. 3 | PER SQUARE YARD. |
| • ITEM AR156545 | RIPRAP-GRADATION NO. 5 | PER SQUARE YARD. |

ITEM 760 – WATERMAIN DUCTILE IRON PIPE

DESCRIPTION

760-1.1

The Contractor shall furnish and install the proposed ductile iron pipe of the diameter specified at the locations shown on the plans. The ductile iron pipe shall include excavation, granular bedding, installation of the ductile iron pipe, testing and chlorination of the ductile iron pipe and all incidental work required for a complete and operational piping system.

Select granular backfill shall be incidental to the watermain.

MATERIALS

760-2.1 DUCTILE IRON PIPE

Ductile iron pipe shall be cement-mortar lined ductile iron pipe, push-on type, conforming to the requirements of ANSI/AWWA C-104/A21.4 Class 52.

Sections of ductile iron pipe shall be connected by means of push-on joints except at those locations noted on the plans requiring mechanical joints, consisting of bells cast integrally with the pipe, which have interior angular recesses conforming to the shape and dimension of a rubber sealing gasket. The interior dimensions of which is such that it will admit the insertion of the spigot end of the joining pipe in a manner that will compress the gasket tightly between the bell of the pipe and the inserted spigot, thus securing the gasket and sealing the joint. Such push-on joints shall be of the following makes or equal, conforming to the requirements of ANSI/AWWA C-151/A21.51 A21.51.

- (1) Super Bellite - as supplied by Clow Corporation.
- (2) Tyton - as supplied by the U.S. Pipe and Foundry Co.
- (3) Fastite - as supplied by American Pipe Company

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

760-2.2 BEDDING

Bedding shall meet the IDOT CA-6 gradation set forth in Item 208 unless otherwise approved by the Engineer.

760-2.3 BACKFILL

The material used for select granular backfill shall be aggregate meeting the requirements of IDOT CA-6 gradation set forth in Item 208.

CONSTRUCTION METHODS

760-3.1 DUCTILE IRON PIPE INSTALLATION

The ductile iron pipe shall be installed as detailed on the plans and in accordance with the applicable provisions of the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition).

The ductile iron pipe shall be installed to the grades shown on the plans and shall have a nominal minimum depth of cover of five feet six inches (5'-6") from proposed, future or existing grades.

The Contractor shall excavate under the ductile iron pipe bells to assure uniform bearing of the pipe on the bottom of the trench. Granular bedding shall be placed along the entire length of all ductile iron pipe from six inches (6") below ductile iron pipe to the spring line of the pipe. The bedding material shall be incidental to the ductile iron pipe.

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

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

Adequate provisions shall be made for safely storing and protecting all water pipe prior to the actual installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out.

Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or debris from being deposited therein.

760-3.2 BACKFILL

All trenches in the locations described above shall be backfilled with selected granular backfill to a point not less than three feet (3') from the outside edges of existing and proposed and future pavement and one foot (1') from the outside edges of existing and proposed sidewalk.

Non-paved areas shall be backfilled from the springline with originally excavated material free from rocks, frozen material or large clods and shall be carefully placed and compacted to prevent damage to or the dislodging of the ductile iron pipe.

In paved areas, select granular backfill (from the springline of the pipe to the proposed subgrade) shall be constructed in accordance with Item 208.

After backfilling is completed all trenches shall be compacted by mechanical compaction in accordance with paragraph 701-3.7 of the supplemental specifications.

760-3.3 TESTING

The Contractor shall notify the Village of Lansing and Resident Engineer 72 hours in advance of the testing. A Village of Lansing representative and Resident Engineer shall be present at all testing.

Contractor shall pressure test by filling the pipe with clean water under a minimum hydrostatic pressure of one hundred fifty (150) pounds per square inch for two (2) hours or per the Village of Lansing requirements. The testing shall be in conformance with Section 41-2.13A and 41-2.13B of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition.

After completion of the pressure test the contractor shall conduct a leakage test to determine the quantity of water lost by leakage under the specified test pressure. The leakage test shall be in conformance with 41-2.13C of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition and in conformance with Village of Lansing regulations.

When pressure and leakage tests are completed and prior to being placed into service, the ductile iron pipe and appurtenances shall be disinfected by a method of chlorination approved by the Engineer.

Disinfection of the ductile iron pipe shall conform to Sections 41-2.14A through 41-2.14I of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Latest Edition.

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

METHOD OF MEASUREMENT

760-4.1

Ductile iron pipe will be measured per lineal foot, installed, ready for use and accepted by the Engineer.

BASIS FOR PAYMENT

760-5.1

Excavation, bedding, installation of ductile iron pipe, polyethylene wrap, iron fittings, connections, compaction, pressure testing, leakage testing and chlorination shall be included and paid for under 6", 8", and 12" DUCTILE IRON WATERMAIN per linear foot. Said price shall include all labor materials, equipment and incidentals as shown on the plans and as specified herein to construct a complete and operational piping system.

Select granular backfill and bedding material shall be incidental to the watermain.

Payment will be made under:

- | | | |
|-----------------|----------------------------|-----------------|
| • ITEM AR760506 | 6" DUCTILE IRON WATERMAIN | PER LINEAR FOOT |
| • ITEM AR760508 | 8" DUCTILE IRON WATERMAIN | PER LINEAR FOOT |
| • ITEM AR760512 | 12" DUCTILE IRON WATERMAIN | PER LINEAR FOOT |

ITEM 760800 – FIRE HYDRANT WITH AUXILIARY VALVE

DESCRIPTION

760-1.1

This item shall consist of furnishing fire hydrants with gate valves and valve boxes, tee fittings, Megalugs, 6" lead watermain, and installing them at the locations shown on the engineering drawings and in accordance with the following sections of the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition:

DIVISION IV WATER DISTRIBUTION

Section 42 Gate Valves for Water Mains

Section 44 Valve Vaults and Boxes for Water Mains and Water Services

Section 45 Fire Hydrants

This item shall also consist of adjusting fire hydrants with valve boxes at the locations shown on the plans and in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and the "Standard Specifications for Road and Bridge Construction" Section 564 Moving Fire Hydrants as modified herein.

760-2.1

Fire hydrants shall be Mueller Centurion, Waterous Pacer 250, East Jordan 5-BR with 316 Stainless Steel trim or equal with breakaway flange painted chrome yellow and shall be installed at the locations shown on the plans. Hydrants shall conform to ANSI/AWWA Standard C-502.

760-2.2

Gate valves shall be suitable for buried use and shall be resilient seated type with non-rising stem, O-ring stuffing box and mechanical joints, and shall open to the left. Gate valves shall be ANSI/AWWA C-509 gate valves as manufactured by Mueller, Waterous, East Jordan or equal.

760-2.3

All valve boxes shall be adjustable valve boxes and shall be as manufactured by Bingham & Taylor, Central States Foundry, Tyler 6850 series, or equal. The word "WATER" shall be imprinted on the valve box cover. Valve box stabilizers shall be East Jordan No. 98725 or Adapter Inc. rubber doughnuts.

CONSTRUCTION REQUIREMENTS

760-3.1

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

All hydrants shall be set plumb and shall have their nozzle parallel with the edge of pavement. The pumper connection shall be facing the edge of pavement. Hydrants shall be set to the established grade as shown on the plans.

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

METHOD OF MEASUREMENT

760-4.1

Hydrants with gate valve and box shall be inspected and, if acceptable, counted as individual units in place. No direct measurement for fittings shall be made.

Payment for each fire hydrant with valve box to be adjusted shall be measured in place for each hydrant adjusted.

BASIS OF PAYMENT

Fire hydrants with gate valve and box shall be paid for at the contract unit price per each, which shall be full compensation for all material and equipment required to install hydrants, 6" lead watermain, gate valves and box and for all labor, equipment, tools and other incidentals necessary to complete this work. Depths shown are minimum, no adjustment to the unit prices shall be made for vertical adjustments.

Payment will be made under:

- ITEM AR760800 FIRE HYDRANT PER EACH.

ITEM 760 – IRON FITTINGS

DESCRIPTION

760-1.1

This item shall consist of furnishing and installing cement lined cast iron or ductile iron ductile iron pipe fittings at the locations shown on the plans.

760-1.2

All fittings shall incorporate Megalug retainer glands.

MATERIALS

760-2.1

Fittings shall be cement lined, tar coated ductile iron with mechanical rubber gasketed joints rated 250 psi or ANSI/AWWA C-110/A21.20. (Clow, American, U.S. Pipe or equal).

760-2.2

Encasement of fittings shall be polyethylene film in a tube or sheet form and shall be in accordance with ANSI/AWWA C-105/A21.5 suitable for the appropriate diameter fitting and as specified in Item AR760 POLYETHYLENE WRAP, herein.

760-2.3

All retainer glands shall be Tyler or Mueller Class 350 Mechanical Joints with Megalugs and stainless steel nuts and bolts.

CONSTRUCTION REQUIREMENTS

760-3.1

The Contractor shall install ductile iron pipe fittings in accordance with the drawings, the requirements stated herein, and the applicable construction requirements of Division IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois", as follows:

DIVISION IV WATER DISTRIBUTION

Section 40 Pipe for Water Mains and Service Connections

Section 41 Pipe for Installation for Water Mains

760-3.2

All fittings which deflect the flow 11-1/4 degrees or greater shall have a thrust block. Thrust blocks shall be poured concrete of the dimensions shown on the drawings and in accordance with the provisions of the "Standard Specifications for Water and Sewer Main Construction in Illinois".

760-3.3

All fittings shall be wrapped with two layers of polyethylene film, which shall be clean and free of soil and aggregates. The film shall not be punctured, streaked or damaged during installation and backfilling otherwise the Contractor shall replace the two layers of film at his own expense.

760-3.4

All applicable sections of AR760 Ductile Iron Watermain shall apply to this section.

METHOD OF MEASUREMENT

760-4.1

No direct measurement of fittings, retainer glands, or polyethylene wrap shall be made. All fittings, retainer glands and polyethylene wrap shall be considered incidental to the associated item.

BASIS OF PAYMENT

760-5.1

No direct payment for iron fittings, or retainer glands thrust blocks or any other necessary incidentals shall be made, but shall be considered incidental to the associated items. The cost of furnishing and installing the fittings, and other items detailed herein shall be considered incidental to the contract unit prices for the respective pay items utilizing these materials.

ITEM 760 – TAPPING VALVE AND SLEEVE, WATER VALVE AND LINE STOP

DESCRIPTION

760-1.1

Under this item, the Contractor shall provide all labor, materials and appurtenances necessary to construct tapping valve and sleeve, gate valves and boxes and line stops at the locations shown on the plans and as specified herein. Vaults shall be considered incidental to the water valves.

MATERIALS

760-2.1 GATE VALVES

Gate valves shall meet the requirements of the latest revision of ANSI/AWWA C509. Gate valves shall open to the left (counter clockwise) and shall have mechanical joints ends. Gate valves through 8" in diameter shall have resilient seats. Gate valves installed in fire hydrant leads shall have "O" ring stuffing box. Gate valves shall be as manufactured by Mueller, Waterous or East Jordan, Resilient Wedge Gate Valve with 316 Stainless Steel Trim. Valves shall have factory-installed 304 stainless steel exterior bolting. Stem, indicators, and all working parts shall be fully protected from moisture or weather damage by complete enclosure. All internal and external surfaces shall have a fusion bonded epoxy coating. Operating nuts shall be bronze. Operating nuts shall be 2 inches square.

760-2.2 TAPPING SLEEVES

Tapping sleeves shall be heavy-duty Mueller stainless steel.

760-2.3 VAULTS

Vaults shall be constructed of cast-in-place or precast concrete rings. Concrete shall have a compressive strength of 3500 pounds per square inch at 28 days. Wire fabric reinforcement shall consist of wire conforming to ASTM A-185 or A-497, and bar reinforcement shall conform to ASTM A-615, Grade 40. Precast manholes shall be monolithic and shall conform to ASTM C-478 and shall conform to IDOT Standard 602501. Joints between precast sections shall be made with rubber gaskets or butyl rope. Manhole steps shall be Neenah R-1981-I, East Jordan No. 8501 cast iron or equal or polypropylene coated steel reinforcing rods with load and pull out ratings meeting OSHA Standards. Cast iron frames and grates shall conform to ASTM A-48. The lids shall be a solid, watertight, machine matched cover with concealed pick holes labeled "VILLAGE OF LANSING WATER" and shall be Neenah R1772 with Type B lid or equal. Vaults for water valves shall have a minimum diameter of 5 feet.

760-2.4 VALVE BOXES

All valve boxes shall be adjustable valve boxes and shall be as manufactured by Binham & Taylor, Central States Foundry, Tyler 6850 series, or equal. The word "WATER" shall be imprinted on the valve box cover. Valve box stabilizers shall be East Jordan No. 98725 or Adapter Inc. rubber doughnuts.

760-2.5 LINE STOPS

Line stops shall be as supplied by TD Williamson or approved equal. Tapping sleeve to be heavy-duty stainless steel. Tapping sleeve shall be pressure tested prior to cutting into the existing water main.

CONSTRUCTION REQUIREMENTS

760-3.1 VALVES

Valves shall be installed in accordance with the manufacturer's recommendations. Valves shall be placed on a cast-in-place concrete valve pedestal of the dimensions shown on the drawings. 2" pre-formed joint filter shall be placed between the valve and the pedestal to facilitate future removal of the valve.

760-3.2 VAULTS

Vaults shall be constructed with a precast base section or monolithic base structure as shown on the plans on a compacted 6" IDOT gradation CA-11 base. All lift holes on precast elements shall be thoroughly wetted and filled with mortar, smoothed inside and out. The first barrel section shall be uniformly supported by the base concrete and shall not bear directly on any of the pipes. Castings shall be set in butyl rope.

760-3.3 LINE STOP

Contractor to provide as-built drawings for the buried location of the line stops by providing an elevation to top of blind flange and a minimum of three tie-in points for horizontal control.

METHOD OF MEASUREMENT

760-4.1

TAPPING VALVE AND SLEEVE and WATER VALVE shall be measured on a per each basis as a unit in place and accepted.

BASIS OF PAYMENT

760-5.1

Payment for Tapping Valve and Sleeve in Box and Water Valve and Box shall be made at the contract unit price per each bid for TAPPING VALVE AND SLEEVE and WATER VALVE as a unit installed. Payment shall be full compensation for excavation, bedding and backfill, compaction installation and all labor, materials, equipment and incidentals as shown on the plans and as specified herein.

Valve boxes/vaults shall be incidental to the valves.

Payment for 8" LINE STOP shall be made at the contract unit price per each bid for LINE STOP, 8" as a unit installed, which shall include all labor, material and equipment including excavation, dewatering, bedding and installation to complete the work herein and as shown on the engineering drawings.

Payment shall be made under:

- | | | |
|-----------------|--------------------------|-----------|
| • ITEM AR760830 | WATER VALVE | PER EACH. |
| • ITEM AR760860 | TAPPING VALVE AND SLEEVE | PER EACH. |
| • ITEM AR800099 | LINE STOP, 8" | PER EACH. |

ITEM 760 – POLYETHYLENE WRAP

DESCRIPTION

760-1.1

Polyethylene encasement and taping of all joints shall be installed for all buried ductile iron pipe piping, fittings and valves as shown on the plans.

MATERIALS

760-2.1

Encasement of piping shall be polyethylene film in tube or sheet form and shall be in accordance with ANSI/AWWA C-105/A21.5 suitable for the diameter of pipe specified on the plans.

CONSTRUCTION METHODS

760-3.1

The Contractor shall follow the installation guidelines as set forth within ANSI/AWWA C-105/A21.5 and as detailed on the plans.

BASIS OF PAYMENT

760-4.1

No direct payment will be made for Polyethylene Wrap. The cost of furnishing and installing Polyethylene Wrap shall be considered incidental to the contract unit prices for the respective pay items utilizing the Polyethylene Wrap. These prices shall be full compensation for furnishing all materials and for all preparation, delivering and installation of these materials, and for all labor, equipment and incidentals necessary to complete the item.

ITEM 80020 - BORING AND JACKING

DESCRIPTION

1.1

Under this item, the Contractor shall furnish all labor, equipment and materials necessary to install 12" watermain in a 30" steel casing pipe, bored and jacked into place under pavements at the locations shown on the plans.

Any required traffic control maintenance shall be paid for under Item Traffic Control and Protection, Standard 707701.

MATERIALS

2.1

At the locations shown on the drawings, watermain shall be installed in a steel casing pipe. The steel casing pipe shall be bituminous coated and shall be of leakproof construction, capable of withstanding the anticipated loadings. The steel casing pipe shall have a minimum yield strength of 35,000 psi and shall meet the requirements of ASTM A-139, Grade B. Casing shall be delivered to the jobsite with beveled ends to facilitate field welding. The minimum wall thickness of the steel casing pipe shall be 3/8".

Casing pipe diameter shall be such that there is a minimum of 6" clearance between the largest diameter of the carrying pipe being installed and the minimum inside diameter of the casing pipe including welds.

To facilitate the installation of the inner pipe, that pipe shall be fitted with at least three casing chocks per pipe length. The casing chocks shall be made of corrosion resistant materials and shall have a friction coefficient of 0.12. The casing chocks shall be Model 4810 as manufactured by Power Seal Pipeline Products Corporation of Wichita Falls, Texas, or equal.

CONSTRUCTION METHODS

3.1

At the locations shown on the drawings, the Contractor shall install the pipe in a steel casing pipe. The steel casing pipe shall be installed by boring (auguring) and jacking the casing pipe.

Casing pipe shall be so constructed as to prevent leakage of any substance from the casing throughout its length. Casing shall be installed so as to prevent the formation of a waterway under the pavement, and with an even bearing throughout its length, and shall slope to one end.

Boring and jacking shall consist of pushing the casing pipe with a boring auger rotating within the pipe to remove the spoil. When augers, or similar devices, are used for pipe emplacement, the front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger and cutting head from leading the pipe so that there will be no unsupported excavation ahead of the pipe. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. The over-cut by the cutting head shall not exceed more than ½ inch. The face of the cutting head shall be arranged to provide reasonable obstruction to the free flow of soft or poor material.

The use of water or other liquids to facilitate casing emplacement and spoil removal is prohibited.

Plans and descriptions of the arrangement to be used shall be submitted to the Engineer for review. Sections of steel casing pipe shall be butt welded, full circumference in conformance with ANSI/AWWA C-206, "Field Welding of Steel Water Pipe".

If any obstruction is encountered during installation to stop the forward action of the pipe, and it becomes evident that it is impossible to advance the pipe, operations will cease and the Engineer shall be notified at once. Contractor shall continue jacking operations on a regular basis to prevent cohesive freezing of the casing pipe.

If water is encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site and shall be in constant attended operation on a 24-hour basis until its operation can be safely halted. When dewatering, close observation shall be maintained to detect any settlement or displacement of the embankment.

All operations shall be conducted so as not to interfere with, interrupt, or endanger the operation of traffic or air traffic, nor damage, destroy, or endanger the integrity of pavements. Operations will be subject to highway and airport inspection at any and all times.

Contractor shall maintain jacking and receiving pits in a neat, workmanlike, dry and stable manner. The bottom of the pit shall be lined with aggregate and rails for jacking machines and shall be carefully set to the proper line and grade. Contractor shall provide sheeting or shoring for the jacking and receiving pits or by other acceptable methods to protect against caving or sloughings. The pits shall be secured by temporary fencing and lighted barricades to prevent unauthorized or accidental entry. The Contractor's equipment shall not be placed and stored in a location that would obstruct or otherwise interfere with the adjacent roadway/airport operations. Prior to commencement of the work, the Contractor shall secure field verification of all utility clearances.

After the casing pipe has been properly installed, the Contractor shall install the carrying pipe within the casing in strict accordance with the manufacturer's recommendations.

Chocks shall be attached to the carrying pipe to facilitate installation and adequate pipe bearing support. Adequate measures shall be taken to prevent structural damage to the pipe. The carrying pipe shall be installed so as to be electrically isolated from the casing pipe.

After satisfactory pressure and leakage testing, the ends of the steel pipe shall be sealed with concrete.

Backfilling of the jacking pits and receiving pits shall be per item 152 and 760, respectively, of these specifications.

METHOD OF MEASUREMENT

4.1

Boring and jacking shall be measured by the linear foot of steel casing with watermain in place as measured from end of casing pipe to end of casing pipe.

BASIS OF PAYMENT

5.1

Boring and jacking shall be paid for at the contract unit price per linear foot for BORING AND JACKING, which shall be full compensation for all material and equipment required to furnish and install casing pipe, installation of the watermain pipe, dewatering, and restoration of the jacking pit and receiving pit areas, and shall include all labor, equipment, tools and other incidentals necessary complete this work.

Construction and backfilling of jacking pits and receiving pits shall not be paid for separately but shall be included in the unit bid price of boring and jacking.

Payment will be made under:

- ITEM AR800020 BORING AND JACKING PER LINEAR FOOT.

ITEM 800097 – RESTRICTOR PLATE –TYPE A

ITEM 800098 – RESTRICTOR PLATE – TYPE B

DESCRIPTION

1.1

This item shall consist of the installation of a ¼” thick galvanized restrictor plates of varying dimensions and openings. The diameter opening shall be as specified on the construction plans.

MATERIALS

2.1

The restrictor plate shall be constructed of galvanized steel and fastened to the inside wall of the existing structure with stainless steel anchors.

CONSTRUCTION METHODS

3.1

The contractor shall construct the plate and plate opening in accordance with the details in the plans.

METHOD OF MEASUREMENT

4.1

Restrictor Plate-Type A shall be measured per each of the number of plates installed satisfactorily.
Restrictor Plate-Type B shall be measured per each of the number of plates installed satisfactorily.

METHOD OF MEASUREMENT

4.1

The quantity to be paid under this item shall consist of removing and relocating of existing AWOS panel and electric service for traffic signals to the proposed location as shown on the plans and as specified herein, and shall be measured per lump sum completed in place, tested and accepted by the RE, and ready for operation. The required conduit and cable as required will be measured and paid for under their respective items. All other work required to relocate the facilities as shown shall not be measured but, shall be considered incidental to this item.

BASIS OF PAYMENT

5.1

Payment will be made at the contract unit price for each or lump sum completed and accepted installation. This price shall be full compensation for furnishing all materials and existing equipment to be reused, as required by the Drawings and these Specifications, for all preparation, removals, assembly and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete each installation specified as below.

Payment will be made under:

- ITEM AR800100 ELECTRIC SERVICE RELOCATION PER LUMP SUM.

ITEM 800106 – STEEL PLATE BEAM GUARDRAIL – TYPE A

ITEM 800107 – STEEL PLATE BEAM GUARDRAIL – TYPE B

DESCRIPTION

1.1

Type A guardrail shall consist of furnishing and erecting steel beam guardrail and posts that conform to IDOT Standard 630001-05, Type A. Type B guardrail shall meet the requirements of Type A guardrail and IDOT Standard 630101-05, Case IV. Guardrail shall have traffic barrier terminals at the beginning of the guardrail per IDOT Standard 631011-02 and end sections at the end of all guardrails. Type A and B guardrail shall have bidirectional silver/silver reflectors.

MATERIALS

2.1

Guardrail shall meet the requirements of Article 630.02 *Standard Specifications for Road and Bridge Construction*.

Traffic Barrier Terminals shall meet the requirements of Article 631.02 of the *Standard Specifications for Road and Bridge Construction*.

Reflectors shall meet the requirements of Article 1097 of the *Standard Specifications for Road and Bridge Construction*.

CONSTRUCTION METHODS

3.1

Guardrail shall be constructed according to 630.03 thru 630.05 of the *Standard Specifications for Road and Bridge Construction*.

Traffic Barrier Terminals shall be constructed according to 630.03 thru 630.05 of the *Standard Specifications for Road and Bridge Construction*.

Reflectors and terminal markers shall be installed in accordance with IDOT Standard 635011-01 and spaced every 20'.

METHOD OF MEASUREMENT

4.1

Type A guardrail will be measure for payment in feet. The length measured will be the overall length of the guard rail measured along the top edge of the rail elements to the limits shown on the plans.

Type B guardrail will be measure for payment in feet extending from center to center of the first post driven adjacent to the structure.

Traffic barrier terminals, end sections and reflectors shall not be measured for payment but shall be included in the unit price for Type A and B guardrail.

BASIS OF PAYMENT

5.1

Payment for Steel Plate Beam Guardrail-Type A shall be made at the contract unit price per linear foot. This price shall include full compensation for traffic barrier terminals, end sections and reflectors. This price shall include furnishing all labor, tools, materials, equipment and incidentals necessary to complete this item of work.

Payment for Steel Plate Beam Guardrail-Type B shall be made at the contract unit price per linear foot. This price shall include full compensation for furnishing all labor, tools, materials, equipment, reflectors and incidentals necessary to complete this item of work.

Payment will be made under:

- ITEM AR800106 STEEL PLATE BEAM GUARDRAIL – TYPE A PER LINEAR FOOT.
- ITEM AR800107 STEEL PLATE BEAM GUARDRAIL – TYPE B PER LINEAR FOOT.

ITEM 800169 – GABION EROSION CONTROL

DESCRIPTION

1.1

This item shall consist of furnishing, transporting and installing a protective course of stone confined by wire baskets used for inlet protection and sediment control at the locations shown on the plans and in accordance with details shown on the plan and as specified herein. This item shall include furnishing and installing the geotechnical fabric.

MATERIALS

2.1

The materials shall meet the requirements of Section 284 Gabions and Slope Mattress of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction or per NRCS IL 646 detail.

The fabric shall be gray PVC-coated galvanized steel wire.

Stone material shall meet the Section 156 Riprap material in accordance with these special provisions or per NRCS IL 646 detail.

CONSTRUCTION METHODS

3.1

The construction methods shall meet the requirements of Article 284 Gabions and Slope Mattress of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.

METHOD OF MEASUREMENT

4.1

Gabions, complete, shall include the surface preparation, placement of the geotechnical fabric, riprap and placement and shaping of the riprap. This item shall be measured in place and the area computed in cubic yards.

BASIS OF PAYMENT

5.1

Payment for Gabions shall be made at the contract unit price per cubic yard. This price shall include full compensation for the surface preparation, furnishing and installing the geotechnical fabric, furnishing and installing the stone. This price shall include furnishing all labor, tools, materials, equipment and incidentals necessary to complete this item of work.

Payment will be made under:

- ITEM AR800169 GABION EROSION CONTROL PER CUBIC YARD.

ITEM 910 – ROADWAY LIGHTING

DESCRIPTION

910-1.1

This item shall consist of furnishing and installing roadway lights, brackets, poles, ground rods, foundations, internal wiring, and all accessories required, at the locations shown on the plans or as directed by the Engineer.

The work under this item shall include the furnishing and installation of the Parking Lot Lighting Transclosure, its foundation and all equipment mounted inside or on the transclosure. This equipment includes timeclock, concrete base, all conduits and cables, lighting panelboard, lighting contractors,

convenience receptacles, light fixture and any other equipment necessary to provide a complete and operational system to the satisfaction of the Engineer.

The work under this item shall include the installation of new electric service, furnishing and installation of utility meter base and any other incidental items for complete installation of electric service. It is the Contractor's responsibility to coordinate the utility connection with Commonwealth Edison Company. The required service shall be 120/240 VAC, 1-phase, 3-wire, at 200 AMPS. The Contractor shall install 10'-0" riser on the utility pole per utility's requirements.

EQUIPMENT AND MATERIALS

910-2.1 LIGHT FIXTURES

Luminaries shall be 250 watt high pressure sodium and shall operate with 240V, single phase power supply. The maximum effective projected (EPA) shall not exceed 2.0 square feet.

The housing shall be constructed of heavy-gauge aluminum with no seams, weld beads or any other visible disturbances on the surface of the housing. All the internal and external hardware shall be stainless steel.

The lens shall be thermal and shock resistant glass and shall be sealed to the frame and secured with four retainer clips. The lens frame shall be piano hinged to the housing.

The reflector system shall be Electro brightened anodized and sealed aluminum. The reflector shall be mounted to a 1-piece reflector mask, hinged to the housing for easy access to the ballast compartment.

The ballast shall be tray mounted and rated for -20°F operation and shall be multi-tap type.

The fixture shall be treated, primed, baked, covered with a high solids polyester finish and baked again. The final finish shall be dark bronze or as directed by the Engineer.

Luminaries shall be Cat. No. SL-21-VS-HPS-250 as manufactured by Quality Lighting or equal.

If contractor elects to submit a light fixture other than the specified fixture, Contractor shall be required to provide a foot candle plot of entire proposed parking lot to the Project Engineer for review and approval.

910-2.2 LIGHT POLES

Poles shall be octagonal in shape, and direct buried as shown on the plans. Poles shall be machine-made of pre-stressed, polished concrete. Concrete aggregate shall conform to ASTM C-33 and shall be uniformly graded from a maximum size of ½" to 5% passing #100 sieve. Cement shall conform to ASTM C-150 Type I and III, or other types of special conditions. Water in the Manufacture shall not contain quantities of alkalines, oil or organic matter, which shall be harmful to the quality of the concrete. Pre-stressing wire shall conform to ASTM A-421 except for strengths noted below. Mild reinforcing wire and spiral wire shall conform to ASTM A-82. Top mount coupling shall conform to ASTM C-1215, Mile deformed reinforcing bar shall conform to ASTM A-615 grades 40 and 60. Cast aluminum parts shall conform to ASTM B-26, alloy, SG70A.

The spiral reinforcement shall be not less than 13 gauge. Pitch shall be no more than 4". This reinforcement shall continue from the top of the pole over its entire length and be secured to the longitudinal reinforcement by an approved automatic caging method.

Poles shall be pre-stressed concrete of the design and dimensions as specified and machine-made in steel molds by the centrifugal process to insure maximum density and a smooth finish. Reinforcing shall be placed according to plans and specifications to assure that no cracking shall occur during normal handling.

The proportions of water to cement shall produce a concrete, after steam curing, having a minimum compressive strength of 3500 psi before transfer of pre-stressing force. A minimum 28-day compressive strength of 7,000 psi after atmospheric curing shall be required for concrete with natural aggregate. For concrete with color admixture the minimum 28-day compressive strength shall be 6,000 psi.

Following the casting operations, the pole shall be cured with low pressure steam (175°F) per hour during the next two (2) hours. Poles shall remain in outside storage for as long as needed for the concrete to reach the required compressive strength.

Poles shall be furnished complete with top mount tenon for pole top bracket arrangement described elsewhere in this specifications. Tenon outside diameter shall match that of the pole top bracket. Poles shall be designed to withstand a steady wind load of 80 mph with wind gusts of 100 mph with the EPA of the specified fixture. Poles shall be furnished with handholes.

Mounting heights shall be as detailed in the plans. The finish and color of the poles shall be natural polished with white aggregate to match the existing poles. Contractor shall provide finish and color samples for final selection. Light poles shall be as manufactured by Ameron/Centrecon Incorporated or equal.

Type A light pole shall have one luminaire and Type B light pole shall have two luminaires mounted at 180 degrees. The orientation of the luminaires shall be as shown on the plans.

910-2.3 LIGHT POLE FOUNDATIONS

Light pole foundations shall be 24" diameter and extend 8' below finished grade. Reinforcing steel shall be installed as detailed on the plans.

Anchor bolts shall be supplied by the pole manufacturer and shall be installed according to his recommendations. Anchor bolts shall be "L" shaped and shall be minimum 1" diameter, 36" long with 7" "L" unless otherwise recommended by the pole manufacturer.

Foundations shall conform to the applicable sections of Item 610 of the Standard Specifications.

Light pole foundations shall extend 30" above finished grade.

910-2.4 INTERNAL WIRINGS

All fusing shall be accessible through the pole handhole for the light poles. Contractor shall provide the waterproof splices, breakaway fuse holders, fuses and other miscellaneous items necessary for a complete installation. The breakaway fuse holders and fuses shall be manufactured by Bussman or equal. All splicing of wiring from main power wiring to #10 wiring within pole shall be done at concrete handhole at each pole. All fuses and lighting arrestors shall be within the light pole handhole.

910-2.5 GROUND RODS

All light poles shall be furnished with a ground rod as detailed in the plans. The proposed ground rods shall be ¾" diameter, 10' long copper clad. The top of the rod shall be buried minimum 12" below finished grade. All the connections to the ground rod shall be buried minimum 12" below finished grade. All the connections to the ground rods shall be one shot exothermic welding as manufactured by Cadweld or equal.

910-2.6 CONVENIENCE RECEPTACLES

Receptacles with ground fault circuit interrupters (GFCI) shall be provided and installed where noted on plans. Receptacles shall be rated 20 amp with NEMA 5-20R receptacle configuration. Receptacle shall

be U.L. Class A GFCI unit complying with the tested in accordance with U.L. Standard No. 943. Weatherproof covers shall be provided for all GFCI receptacles.

910-2.7 LIGHTING PANELBOARD

Contractor shall furnish and install a lighting panelboard in the transclosure as detailed on the plans. Lighting panelboards, as installed, shall be U.L. listed, rated 240VAC, and suitable for use at 120/240V, 1-phase. Panelboard shall be provided with main circuit breaker (200 Amp) with 35,000 AIC and branch bolt-on type circuit breakers of the size and ratings as detailed on the panel schedule on the plans with a minimum of 5,000 AIC. Panelboard shall be Square D type NQOD, or equal. Panelboard shall be in a NEMA 12 enclosure. Panelboard shall be 30 CKT.

910-2.8 LIGHTING CONTRACTORS

Lighting Contactors shall be mechanically held, 2P, 240VAC minimum with field convertible contacts and shall be Square D, Type SMO-10 or equal. Contractor shall supply all relays and bases and all necessary contacts as shown on the contractor schematic on the plans. All contactors, relays and selector switches shall be mounted in or on the J-Box described below and as shown on the plans.

910-2.9 TIMECLOCK

Timeclock shall be supplied and installed as detailed on the plans. Timeclock shall be programmable for 365 days for eight circuits and shall be suitable for use at 120/240V. Timeclock shall be model number ET70815CR as manufactured by Intermatic or equal.

910-2.10 TRANSCLOSURE

The transclosure shall be tamper resistant and weather resistant. There shall be no exposed bolts and screws. The construction shall be of No. 12 Ga. mild steel minimum. The transclosure shall be of bolted construction and shall be designed to utilize welded spreader frames at top and bottom. All doors and panels shall have formed edges and all external fasteners shall be of stainless steel. The cover shall be domed to shed water. Construction shall allow additional units to be added on to the existing transclosure at a later date. The transclosure shall have venting design to dissipate the heat of the enclosed equipments. Transclosure shall be shipped completely factory assembled with lifting provisions and shall be mounted on a 4" steel channel skid with lifting provisions. Side panel shall be substituted for door on back side of transclosure. Door hinge shall have a minimum of 0.375" diameter stainless steel. Door shall have a positive 3-point latching mechanism. Door handle shall be capable of accepting a padlock and shall have 0.312" square unthreaded shaft. The primer shall be red oxide, both lead and chromate free. Paint shall be alkyd enamel. Color shall be green, Munsell No. 7.5GY3.2/1.5 with a thickness to be 2.5-3.0 mils after drying.

Transclosure shall be Cat. No. LS554426 as manufactured by Hennessy Products or equal, and shall be complete with aluminum panel.

910-2.11 J-BOX

The proposed 24"H x 12"W x 10"D NEMA 12 J-Box shall be model A-241210LP, with panel A-12P24 as manufactured by Hoffman Engineering Company or equal. Contractor shall mount all contactors and relays in the proposed J-Box and shall mount all selector switches on the front door of the J-Box. Contractor shall submit shop drawings of J-Box and the proposed mounting of the contactor, relays and selector switches in and on the J-Box. Contractor shall leave enough space for minimum of 1 future contactors.

910-2.12 GROUND ROD

The proposed parking lot lighting system shall be grounded to a ground rod as detailed in the plans.

910-2.13 LIGHTING ARRESTER

The proposed lighting control transclosure shall be furnished with a lighting arrester at the location shown in the plans. The proposed lighting arrester shall be manufactured by Square D or equal.

910-2.14 NEW ELECTRIC SERVICE

The new electric service shall be 120/240V, single phase, 4 wire at 200Amps. The contractor shall install conduit riser and new secondary cables up on the utility pole and leave 10'-0" of minimum cable slack for connections by the utility. Also, install a meter base on the side of the lighting transclosure as shown on the plans. The utility meter will be installed by the utility. Coordinate all work the utility company.

CONSTRUCTION METHODS

910-3.1 POLES AND LUMINARIES

Poles and luminaries shall be assembled and wired on the ground, then lifted and bolted in place plumb. The pole shall be considered plumb when the center of the top is directly over the center of the base. Plumb is to be measured with a transit by the Resident Engineer.

Wiring run from luminaire to pole base shall have a strain relief clamp provided at the entry to the luminaire to prevent the wires from pulling loose from their terminals at the luminaire.

Internal wiring of poles and luminaries including fuses and waterproof splices shall be incidental to this item.

Poles and luminaries shall be set on their foundations such that the luminaries aim in the direction indicated on the plans.

All proposed poles shall be grounded to ground rods. Contractor shall use one shot exothermic weld by Cadweld or equal.

910-3.2 RESTORATION

All areas disturbed by the light fixture installation and storing of dirt and other work shall be restored to its original condition. The restoration shall include any necessary topsoiling, fertilizing, seeding or sodding and shall be performed in accordance with the Standard Turfing Specifications. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance.

910-3.3 LIGHTING PANELBOARD

Contractor shall tag all wires in lighting panelboard. Tags shall indicate circuit numbers and shall indicate what the wires supply. Contractor shall also provide a panelboard schedule inside the door, indicating the circuit numbers and the appropriate loads.

9103.4 PHOTOCCELL

Contractor shall shade the photocell from surrounding lights.

METHOD OF MEASUREMENT

910-4.1

The quantity **Type A** light poles to be paid for under this item shall be the number of units furnished with **one** fixture and installed ready for operation. Each unit shall consist of the fuses, internal wiring, ground rods and any miscellaneous items and fittings required to make the unit operational. Light poles shall also consist of the light pole foundations as detailed on the plans.

The quantity **Type B** light poles to be paid for under this item shall be the number of units furnished with **two** fixtures and installed ready for operation. Each unit shall consist of the fuses, internal wiring, ground rods and any miscellaneous items and fittings required to make the unit operational. Light poles shall also consist of the light pole foundations as detailed on the plans.

Each unit shall consist of the ballast, housing and any other items required for successful operations.

The transclosure, new electric service, timeclock, lighting panelboard, ground rod, lighting contractors, lighting arrestor, convenience receptacles, light fixture, and all conduits and conductors shall be measured as a unit, installed, ready for use and accepted by the Engineer.

BASIS OF PAYMENT

910-5.1

Payment will be made at the contract unit price for each Type A and B light pole complete with fixtures, electrical wiring, ground rods, light pole foundation and any other accessories completed by the Contractor and accepted by the Engineer. These prices shall consist of full compensation for furnishing and material, backfilling and compacting trenches, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Lighting transclosure, new electric service, concrete base for transclosure/transformer and all equipment mounted on or inside it as stated previously shall be paid for as a lump sum item. Said price shall include all labor, equipment, materials and incidentals necessary for preparation, assembly and installation to complete the item.

Payment will be made under

- | | | |
|-----------------|-------------------------------|---------------|
| • ITEM AR910101 | ROADWAY LIGHT POLE, TYPE A | PER EACH. |
| • ITEM AR910102 | ROADWAY LIGHT POLE, TYPE B | PER EACH. |
| • ITEM AR910161 | ROADWAY LIGHTING TRANSCLOSURE | PER LUMP SUM. |

ITEM 910200 – ROADWAY SIGN PANELS AND POST

DESCRIPTION

910-1.1

The work shall consist of furnishing Type 1 Sign panels complete with reflectorized sign faces, legend, and supplemental panels and installing them on newly erected sign supports.

910-2.1 MATERIALS

Sign face materials shall conform to Section 720 *Sign Panels and Appurtenances* of IDOT's *Standard Specifications for Road and Bridge Construction*. Sign post materials shall meet the requirements of Section 729 *Metal Post* of IDOT's *Standard Specifications for Road and Bridge Construction*. The post shall be Type B as designated on Illinois Department of Transportation Highway Standard 720011 and 729001. Unless otherwise specified, only galvanized posts shall be used.

INSTALLATION REQUIREMENTS

910-4.1

This work shall consist of furnishing and installing metal posts of the size and type specified, utilizing the direct burial methods.

910-4.2

Materials shall meet the requirements of Article 729 of the Standard Specifications for Road and Bridge Construction. Unless otherwise specified, only galvanized posts shall be used. The post shall be Type B as designated on Illinois Department of Transportation Highway Standard 720011 and 729001.

910-4.3

The metal posts may be driven by hand or mechanical means to a minimum depth of 4 feet (Type B) measured from the ground line or as shown in the plans. The post shall be protected by suitable driving cap and if required by the Engineer, the material around the post will be compacted after driving.

Care shall be taken to avoid scratching, chipping, or other damage to polyester or enamel-coated posts during handling and installation. Chips and scratches may be recoated in the field by a method meeting and coating manufacturer's recommendations except that chips and scratches totaling more than 5% of the surface area of any one post and/or more than 5% of the surface area in any one-foot segment of any one post shall be cause for rejection of the post.

If the post specified is too long, the Contractor may choose to cut the post to the required length. Any post so cut shall be installed with the cut end at the bottom.

910-4.4

New metal posts shall be installed for the sign relocation.

METHOD OF MEASUREMENT

910-5.1

Signs shall be measured per each furnished and installed in accordance with applicable specifications and accepted by the Engineer. Sign posts and supports shall be incidental to this item. No additional compensation shall be made for additional length of posts required.

BASIS OF PAYMENT

The quantity, measured as described above, will be paid for at the contract unit price per each, which price shall be full compensation for all materials and erection of all signs as proposed location and for all materials, labor and equipment necessary to complete the work as described herein.

Payment will be under:

- ITEM AR910200 ROADWAY SIGN PER EACH
- ITEM AR810975 RELOCATE ROADWAY SIGN PER EACH

IDOT, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

SECTION 202 – EARTH AND ROCK EXCAVATION

202.01 DESCRIPTION.

Add:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tools necessary to complete the respective pay item as noted in the plans and specifications.

Disposal shall be paid for under AR152 Unclassified Disposal Offsite.

202.08 BASIS OF PAYMENT.

Payment will be under:

- 20200500 EARTH EXC WID PER CUBIC YARD.

SECTION 207 – POROUS GRANGULAR EMBANKMENT

207.01 DESCRIPTION.

Add:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tools necessary to complete the respective pay item as noted in the plans and specifications.

This work shall be done in accordance with the applicable portions of Section 207 of the Standard Specifications.

207.02 MATERIALS.

Add:

The material shall conform to Article 1004.06 of the Standard Specifications except as follows:

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

<u>Sieve Size</u>	<u>Percent Passing</u>
150 mm (6 inches)	97 \pm 3
100 mm (4 inches)	90 \pm 10
50 mm (2 inches)	45 \pm 25
75 μ m (#200)	5 \pm 5

2. Gravel, Crushed Gravel, and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
150 mm (6 inches)	97±3
100 mm (4 inches)	90±10
50 mm (2 inches)	55±25
4.75 mm (#4)	30±20
75 µm (#200)	5±5

3. Crushed Concrete with Bituminous Materials**

<u>Sieve Size</u>	<u>Percent Passing</u>
150 mm (6 inches)	97±3
100 mm (4 inches)	90±10
50 mm (2 inches)	45±25
4.75 mm(#4)	20±20
75 µm (#200)	5±5

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

207.03 GENERAL.

Add:

The Aggregate subgrade shall be placed in two lifts consisting of a 225 mm (9 inches) and variable nominal thickness lower lift and a 75 mm (3 inches) nominal thickness top lift of capping aggregate having a gradation of CA 6. Reclaimed Asphalt Pavement (RAP) meeting Article 1004.07 of the Standard Specifications and having 100% passing the 75 mm (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. A vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications shall be used to roll each lift of material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.

207.04 METHOD OF MEASUREMENT.

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

Aggregate used for maintenance will not be measured for payment but shall be incidental to its respective pay item.

207.05 BASIS OF PAYMENT.

This work will be paid for at the contract unit price per square yard for AGGREGATE SUBGRADE, 12", which price shall include the capping aggregate.

Payment will be under:

- Z0001050 AGG SUBGRADE 12 PER SQUARE YARD.

SECTION 311 – GRANULAR SUBBASE

311.01 DESCRIPTION.

Add:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tools necessary to complete the respective pay item as noted in the plans and specifications.

311.02 MATERIALS.

Add:

Material shall be IDOT CA-6.

311.12 BASIS OF PAYMENT.

Add:

Payment will be under:

- 31101400 SUB GRAN MAT B 6 PER SQUARE YARD.

SECTION 420 – PORTLAND CEMENT CONCRETE PAVEMENT

420.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications

420.22 METHOD OF MEASUREMENT.

Revise paragraph 3 of Article 420.22(b):

The quantity of pavement fabric will not be measured for payment but shall be included in the unit price of the respective pay item.

420.23 BASIS OF PAYMENT.

Payment will be under:

- 42000501 PCC PVT 10 JOINTED PER SQUARE YARD.

SECTION 440 – REMOVAL OF EXISTING PAVEMENT AND APPURTENANCES

440.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

Pavement to be removed is 10" average thickness portland cement concrete with wire mesh.

Median to be removed is 12" average thickness bituminous pavement.

Median surface removal shall consist of removing variable depth (2" average thickness) of bituminous surface material as shown in the plans or as directed by the Engineer.

440.02 GENERAL.

ADD:

Curb cut shall include the removal of the curb from existing Type-B6.24 combination curb and gutter as directed by the Engineer. The side flares shall be three (3) to one (1) unless otherwise approved by the Engineer.

440.07 METHOD OF MEASUREMENT.

Revise the first sentence of the third paragraph of Article 440.07(b):

Curb cut, combination curb and gutter removal and paved ditch removal will be measured for payment in feet.

440.08 BASIS OF PAYMENT.

ADD:

The contract unit price for curb cut shall include removing and disposing of the curb.

Payment will be under:

- | | | |
|------------|----------------------|------------------|
| • 44000100 | PAVEMENT REM | PER SQUARE YARD. |
| • 44000500 | COMB CURB GUTTER REM | PER LINEAR FOOT. |
| • 44003100 | MEDIAN REMOVAL | PER SQUARE FOOT. |
| • 44003800 | MEDIAN SURF REMOVAL | PER SQUARE FOOT. |
| • X0322494 | CURB CUT | PER LINEAR FOOT. |

**SECTION 602 – CATCH BASIN, MANHOLE, INLET, DRAINAGE STRUCTURES AND
VALVE VAULT CONSTRUCTION**

602.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

602.15 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|--------------------|-----------|
| • 60250500 | CB ADJ NEW T 1F CL | PER EACH. |
|------------|--------------------|-----------|

SECTION 606 – CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH

606.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

606.02 MATERIALS.

ADD:

Portland cement concrete shall be an SI Mix.

Bituminous materials, binder course and surface course shall meet the requirements of Article 406.02. Bituminous concrete surface course shall be PG 64-22, 4% voids at 50 gyrations and maximum 15% rap.

606.08 CONCRETE MEDIANS.

ADD:

PCC Concrete median special shall be constructed in accordance with County of Cook Department of Highways Type C-4 standard.

606.14 BASIS OF PAYMENT.

Revise paragraph six to read:

Any excavation required or disposal of material required to complete the pay item shall not be measured for payment but shall be included in the items unit price.

ADD:

Bituminous materials used to construct bituminous median surface shall not be paid separately for but shall be included in the respective unit price.

Payment will be under:

- | | | |
|------------|-------------------|------------------|
| • 60608300 | COMB CC&G TM2.12 | PER LINEAR FOOT. |
| • 60618200 | BIT MEDIAN SURF | PER SQUARE FOOT. |
| • 60623714 | CONC MEDIAN SPL | PER SQUARE FOOT. |
| • 60623745 | CONC MEDIAN TRANS | PER SQUARE FOOT. |

SECTION 701 – WORK ZONE TRAFFIC CONTROL

701.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

Traffic control shall be provided for a four lane divided Cook County highway with posted speeds of 45 miles per hour. Traffic control shall be in accordance with Highway Standard 701701-04 for all median and shoulder operations.

701.08 BASIS OF PAYMENT.

Payment will be under:

- 70102635 TR CONT & PROT 701701 PER LUMP SUM.

SECTION 720 – SIGN PANELS AND APPURTENANCES

720.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

720.06 BASIS OF PAYMENT.

Payment will be under:

- 72000100 SIGN PANEL T1 PER SQUARE FOOT.
- 72000200 SIGN PANEL T2 PER SQUARE FOOT.

**SECTION 724 – REMOVE, REPLACE AND RELOCATE SIGN PANEL AND SIGN
PANEL ASSEMBLY**

724.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

724.07 BASIS OF PAYMENT.

Removal of posts shall be not paid for separately but shall be included in the unit price of “Remove Sign Complete”.

Payment will be under:

- 72400800 REMOV SIGN COMPLETE PER SQUARE FOOT.
- 72400900 REMOV SIGN PANEL PER EACH.

SECTION 780 – PAVEMENT STRIPING

780.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

780.12 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|-----------------------|------------------|
| • 78001100 | PT PVT MK LTRS & SYMB | PER SQUARE FOOT. |
| • 78001130 | PAINT PVT MK LINE 6 | PER LINEAR FOOT. |
| • 78001180 | PAINT PVT MK LINE 24 | PER LINEAR FOOT. |

SECTION 783 – PAVEMENT MARKING AND MARKING REMOVAL

783.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

780.06 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|----------------------|------------------|
| • 78300100 | PAVT MARKING REMOVAL | PER SQUARE FOOT. |
|------------|----------------------|------------------|

SECTION 810 – UNDERGROUND RACEWAYS

810.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications

810.02 MATERIALS.

ADD:

Coarse aggregate shall meet the requirements of Article 1004.

810.03 INSTALLATION.

ADD the following to Article 810.03(a) (1):

Contractor shall backfill all conduits under proposed pavement with a CA 6 aggregate. The backfill shall be compacted to the satisfaction of the Engineer.

810.04 METHOD OF MEASUREMENT.

ADD:

Aggregate backfill under proposed pavements shall not be measured for payment but shall be included in the unit price of each item.

810.05 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|-----------------|------------------|
| • 81000300 | CON T 1 GALVS | PER LINEAR FOOT. |
| • 81000600 | CON T 2 GALVS | PER LINEAR FOOT. |
| • 81000700 | CON T 2 ½ GALVS | PER LINEAR FOOT. |
| • 81001000 | CON T 4 GALVS | PER LINEAR FOOT. |
| • 81018500 | CON P 2 GALVS | PER LINEAR FOOT. |

SECTION 814 – HANDHOLE

814.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

The Contractor shall install the grounding cable and conduit per Cook County Special Provision Traffic Signal Work for System Ground and Grounding Cable. This work shall be included in Item 814 and will not be paid for separately.

814.04 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|-------------|-----------|
| • 81400100 | HANDHOLE | PER EACH. |
| • 81400200 | HD HANDHOLE | PER EACH. |

SECTION 850 – MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

850.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

850.02 PROCEDURE.

ADD:

The Contractor shall have on staff electricians with IMSA Level II certification to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, telephone service installations, communication cables and conduits to adjacent intersections.

850.03 Maintenance

ADD:

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly.

This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24 hour telephone number for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

The Contractor shall respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work required. The State's

Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

850.04 BASIS OF PAYMENT

Payment will be under:

- 85000200 MAIN EX TR SIG INSTAL PER EACH.

SECTION 873 – ELECTRIC CABLE

873.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

873.05 BASIS OF PAYMENT

Payment will be under:

- | | | |
|------------|----------------------|------------------|
| • 87301225 | ELCBL C SIGNAL 14 3C | PER LINEAR FOOT. |
| • 87301245 | ELCBL C SIGNAL 14 5C | PER LINEAR FOOT. |
| • 87301255 | ELCBL C SIGNAL 14 7C | PER LINEAR FOOT. |
| • 87301305 | ELCBL C LEAD 14 1PR | PER LINEAR FOOT. |
| • X8730250 | ELCBL C 20 3C TW SH | PER LINEAR FOOT. |

SECTION 877 – MAST ARM ASSEMBLY AND POLE

877.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

The Contractor shall install the grounding cable and conduit per Cook County Special Provision Traffic Signal Work for System Ground and Grounding Cable. This work shall be included in Item 877 and will not be paid for separately.

877.02 MATERIALS

ADD:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized.

This work shall consist of furnishing and installing a galvanized steel or extruded aluminum shroud for protection of the mast arm pole base plate. The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall allow air to circulate throughout the mast arm but not allow manifestation of insects or critters. The shroud shall be constructed, installed and designed not to be hazardous to probing fingers and feet. All mounting hardware shall be stainless steel. The shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

877.04 BASIS OF PAYMENT

Payment will be under:

- | | | |
|------------|--------------------|-----------|
| • 87702850 | STL COMB MAA& P 24 | PER EACH. |
| • 87702870 | STL COMB MAA&P 28 | PER EACH. |

SECTION 878 – TRAFFIC SIGNAL CONCRETE FOUNDATION

878.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

878.02 MATERIALS

ADD:

All anchor bolts shall also be hot dipped galvanized the full length of the anchor bolt including the hook.

878.05 BASIS OF PAYMENT

Payment will be under:

- 87800400 CONC FDN TY E 30D PER LINEAR FOOT.

SECTION 880 – SIGNAL HEAD AND OPTICALLY PROGRAMMED SIGNAL HEAD

880.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

880.04 BASIS OF PAYMENT

Payment will be under:

- 88000170 SH 1F 3S MAM PER EACH.
- 88000290 SH 1F 5S MAM PER EACH.
- X0323336 LED SP RETRO RED BALL PER EACH.
- X0323337 LED SF RETRO GRN BALL PER EACH.
- X0323418 LED SF RETRO YEL BALL PER EACH.
- X0323419 LED SF RETRO YEL AROW PER EACH.
- X0323420 LED SF RETRO GRN AROW PER EACH.

SECTION 881 – PEDESTRIAN SIGNAL HEAD

881.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

881.04 BASIS OF PAYMENT

Payment will be under:

- X0323421 LED SF RETRO WALK SIG PER EACH.
- X0323422 LED SF RETRO DONT WALK PER EACH.

SECTION 882 – TRAFFIC SIGNAL BACKPLATE

882.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

882.04 BASIS OF PAYMENT

Payment will be under:

- 88200210 TS BACKPLATE LOU ALUM PER EACH.

SECTION 885 – INDUCTIVE LOOP DETECTOR

885.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

885.04 BASIS OF PAYMENT

Payment will be under:

- 88500100 INDUCTIVE LOOP DETECT PER EACH.

SECTION 886 – DETECTOR LOOP

886.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

886.06 BASIS OF PAYMENT

REVISE First paragraph as follows:

This work shall be paid for at the contract unit price per meter (foot) for DETECTOR LOOP, TYPE I , which price shall be payment in full for all saw cutting, sealant, furnishing and installing the detector loop and all related connections for proper operation

Payment will be under:

- 88600100 DET LOOP T1 PER LINEAR FOOT.

SECTION 887 – EMERGENCY VEHICLE PRIORITY SYSTEM

887.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

887.04 BASIS OF PAYMENT

Payment will be under:

- 88700300 LIGHT DETECTOR AMP PER EACH.

SECTION 890 – TEMPORARY TRAFFIC SIGNAL

890.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

890.02 INSTALLATION

ADD:

All traffic signal sections and pedestrian signal sections shall be 300 mm (12 inches). The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

Contractor will be allowed to use the existing intersection controller for all temporary connections.

All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be incidental to the item Temporary Traffic Signal Installation.

All temporary traffic signal installations shall have vehicular detection installed as shown on the plans or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. Minor cross streets shall have vehicular detection provided by Microwave Vehicle Sensors or Video Vehicle Detection System as shown on the plans or as directed by the Engineer. The microwave vehicle sensor or video vehicle detection system shall be approved by IDOT before furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all

construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system.

All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.

The energy charges for the operation of the traffic signal installation shall be paid for by others.

890.03 MAINTENANCE

ADD:

In addition, a minimum of seven (7) days prior to the switch from the existing signals to the temporary traffic signals, the Contractor shall request that Cook County Highway Department inspect the temporary installation(s).

890.04 BASIS OF PAYMENT

Payment will be under:

- 89000100 TEMP TR SIG INSTALL PER EACH.

**SECTION 895 – REMOVAL, RELOCATION, AND REBUILDING OF EXISTING
SIGNAL AND APPURTENANCES**

890.01 DESCRIPTION.

ADD:

Contractor shall included in their unit price all incidentals, materials, labor, equipment and tolls necessary to complete the respective pay item as noted in the plans and specifications.

The Contractor shall install the grounding cable and conduit per Cook County Special Provision Traffic Signal Work for System Ground and Grounding Cable. This work shall be included in Item 895 and will not be paid for separately.

895.05 RELOCATION.

ADD:

Relocation of an existing electrical handhole shall consist of removing an existing handhole and installing it according to Article 814.03. If required, contractor shall create additional openings in handhole for new conduit.

895.05 REMOVAL.

ADD to Paragraph (a):

All equipment and posts removed shall be returned to the owner unless otherwise directed by the Engineer. Care shall be taken as not to damage any equipment until returned to the owner.

REVISE Paragraph (c) as follows:

Concrete Foundation. The entire concrete foundation shall be removed and backfilled with approved material in turf areas or CLSM under proposed pavement. The CLSM shall meet IDOT, Division of Highways Special Provision for Controlled Low-Strength Material (CLSM). The surface shall be reconstructed to match the adjoining area. The foundation shall be disposed of offsite.

895.07 METHOD OF MEASUREMENT.

ADD:

Additional openings in the relocated handholes shall not be measured for payment but shall be included in the unit cost of the pay item.

Controlled low-strength material (CLSM) shall not be measured for payment but shall be included in the unit cost of the pay item.

895.08 BASIS OF PAYMENT.

Payment will be under:

- | | | |
|------------|-----------------------|------------------|
| • 89500100 | RELOC EX SIG HEAD | PER EACH. |
| • 89501250 | RELOC EX TS EQUIP | PER EACH. |
| • 89501400 | REL EM VEH PR SYS D U | PER EACH. |
| • 89502200 | MOD EX CONTR | PER EACH. |
| • 89502300 | REM ELCBL FR CON | PER LINEAR FOOT. |
| • 89502375 | REMOV EX TS EQUIP | PER EACH. |
| • 89502385 | REMOV EX CONC FDN | PER EACH. |
| • X8950215 | RELOC EXIST HANDHOLE | PER EACH. |

**Special Provisions
Lansing Municipal Airport
Lansing, IL**

**IL Project: IGQ-3329
N. Quad. Site Work -Phase 1
Final Submittal**

**COOK COUNTY HIGHWAY DEPARTMENT - TRAFFIC SIGNAL WORK SPECIAL PROVISION
CHECKLIST (1 PAGE)**

Cook County Highway Department

Traffic Signal Work Special Provision Checklist

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**COOK COUNTY HIGHWAY DEPARTMENT –SPECIAL PROVISION TRAFFIC
SIGNAL WORK (PAGES 1 – 74)**

Special Provision

Traffic Signal Work General

All work and equipment performed and installed under this contract, shall be governed and shall comply to the State of Illinois "Standard Specifications for Road and Bridge Construction" latest edition, herein referred to as the Standard Specifications; the State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition; the "National Electrical Code" latest edition herein referred to as the NEC; the National Electrical Manufacturers Association, herein referred to as NEMA (all publications for traffic control items) latest editions; the International Municipal Signal Association, herein referred to as IMSA "Official Wire & Cable Specifications Manual" latest edition; the Institute of Transportation Engineers, herein referred to as the ITE, Technical Report No.1, "A Standard for Adjustable Face Vehicular Traffic Control Heads"; AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals" and the "Supplemental Specifications" and "Recurring Special Provisions" noted herein.

The following Special Provisions supplement the above specifications, manuals, and code. The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

In order to reduce possible vehicular conflicts with fixed objects and avoid public criticism, it is necessary to require that no posts, poles, heads, or controller cabinets be installed until all traffic signal control equipment is brought to and located on the job site.

The construction, installation and/or removal work shall be accomplished at the following intersection(s):

Description of Work

The work to be done under this contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Control of Traffic Signal Materials

All work shall meet the requirements of the "Standard Specifications for Road and Bridge Construction", except as follows:

In addition to the requirements of the Standard Specifications relating to control of materials, the Contractor shall comply with the following requirements.

The controller and all control equipment shall be of a manufacturer that is approved by this Department. The manufacturer shall have a representative located in the six (6) county Chicago area.

The contractor shall supply samples of all wire and cable, and shall make up and supply samples of each type of cable splice proposed for use in the work for the-Engineer's approval.

Before any signal equipment, including mast arm assemblies, poles, controller cabinets, all control equipment and signal heads, are delivered to the job site, the Contractor shall obtain and forward to the Engineer a certified, notarized statement from the manufacturer, containing the catalog numbers of the equipment and/or material, guaranteeing that the equipment and/or material, after manufacture, comply in all respects with the requirements of the Specifications and these Special Provisions.

All material approval requests shall be submitted a minimum of seven (7) days prior to the delivery of equipment to the job site, or within thirty (30) consecutive calendar days after the Contract is awarded, or within fifteen (15) consecutive calendar days after the pre-construction meeting, whichever is first.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be done at the Contractor's own risk and may be subject to removal and disposal at the Contractor's expense.

The Contractor must submit the following for approval by the Engineer:

- One (1) complete set of manufacturer's descriptive literature, drawings, and specifications of the traffic signal equipment, handholes, junction box, cable, conduit and all associated items that will be installed on the contract.
- Eight (8) complete shop drawings of the mast arm assemblies and poles, showing in detail the fabrication, anchor bolts, and reinforcing materials.
- Eight (8) copies of a letter from the Traffic Signal Contractor listing the manufacturer's name and model numbers of the proposed equipment to be supplied and stating that the proposed equipment meets all Contract requirements. The letter will be reviewed by the Engineer to determine whether the equipment to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
- All above shall be stamped with the Section Number, Permit Number, or Contract Number and Intersection(s) name(s). IDOT pay code item numbers shall also be included on Federal Contracts. If the above required information is not on each sheet of the above literature or letters, the equipment and material cuts will not be reviewed and shall be returned to the Contractor.
- Exceptions, Deviations and Substitutions. In general, exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

Traffic Signals - General

The intent of this Section is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer.

Notification of Intent to Work and Maintenance Transfer

Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of

Illinois, Department of Transportation, Division of Highways, Cook County Highway Department, Private Developer, or the Municipality in which they are located. Once the Contractor has begun any work on any portion of the project all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation", shall become the full responsibility of the Contractor. The Contractor shall supply the engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number.

When the project has a pay item for "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation", the Contractor must notify both the Design Engineer at (312) 603-1730 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

When the road is open to traffic, except as otherwise provided in Section 850, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Design Engineer at (312) 603-1730 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (312) 603-9956. Upon demonstration that the signals are operating and all work is completed in accordance with the contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of the inspection. The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation.

Projects which call for the storage and re-use of existing traffic signal equipment shall meet the requirements of Article 802.11 of the Standard Specifications, which call for a 30 day test period prior to project acceptance.

Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Design Engineer at (312) 603-1730 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. See additional requirements in these specifications under Inductive Loop Detector.

Operation of Existing Traffic Signals

The Contractor is further advised that the existing traffic signal(s), and/or the existing temporary installation(s), must remain in operation during all construction stages except for the most essential down time. Any shutdown of the traffic signal installation(s), for a period to exceed fifteen (15) minutes, must have the prior approval of the Engineer. Such approval will generally only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns will not be allowed during inclement weather or during Holiday periods. Any other traffic signal shutdown, either for periods in excess of one (1) hour or outside of the 10:00 a.m. to 3:00 p.m. weekday period must have prior approval of the Engineer.

The Contractor, prior to the commencement of his work, shall notify the State Electrical Maintenance Contractor, the Cook County Electrical Maintenance Contractor, or the concerned Municipality, of his intent to perform this work.

Location of Underground State and County Maintained Facilities

The Contractor shall be responsible to locate existing IDOT and CCHD electrical facilities prior to performing any work at his/her own expense if this contract includes pay items for "Maintenance of Existing Traffic Signal Installation" and/or "Temporary Traffic Signal Installation." If this contract does not include these pay items, the Contractor may request one free locate for existing IDOT and CCHD electrical facilities from the Electrical Maintenance Contractor(s) prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities the local Counties or Municipalities may need to be contacted, in the City of Chicago contact D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department's Electrical Maintenance Contractor may inspect any signaling device on the Department's highway system at any time without notification.

Damaged Areas, Materials and Paving

All areas and plant material damaged by the installation of Traffic Signal posts, mast arm poles, underground cables or conduits, handholes and control cabinets shall be replaced as follows:

- **Grass Areas:** Replace top soil to a depth of four (4) inches (100 mm), re-grade shoulders, ditch slopes, and open areas back to former existing grades, fertilize, seed and mulch all damaged areas.
- **Sod Areas (areas adjacent to residential, commercial and industrial properties and any other areas as directed by the engineer):** Fertilize and re-sod damaged areas.
- **Plant Materials:** Remove and replace damaged trees, shrubs and vines with the same varieties that existed prior to damage.
- **Shoulders other than Stabilized and Backslopes, medians, sidewalks, pavement, etc.:** Replace shoulder to original condition and restore edge of backslope to original lines and grades. Medians, sidewalks and pavement shall be replaced in kind.

All damaged landscape shall be replaced in accordance with Section 250 through 254 of the Standard Specifications.

Any damage, due to the installation of traffic signal equipment; or necessary removal at handholes, jacking pits, and inspection openings, of sidewalks, curbs, gutters, median and island paving, and/or pavement, shall be repaired or replaced by the Contractor. Repair or replacement shall be made with a like material of like thickness to the existing surface.

Basis of Payment: This work will not be paid for directly but shall be considered as incidental to the contract

Special Tools, Field Tests and Inspection Procedure

Special Tools:

The Contractor shall furnish the Cook County Highway Department with any special tools or wrenches that may be required for assembling or maintaining the control equipment and traffic control signal head assemblies.

Field Tests and Inspection Procedure:

- All control cable, when complete in place but before permanent connection, shall be subject to insulation tests at the discretion of the Engineer. The tests shall be made with approved insulation resistance testing equipment rated at 500 volts D.C. and witnessed by the Engineer. Results of these tests shall be submitted to the Department in written form, bearing the Engineers signature and shall become part of the project records. A final inspection of the traffic signal installation shall not be held until results of this insulation test have been received.
- All equipment such as new controllers and allied central equipment with the exception of cable, conduit, and other materials which require the use of the State of Illinois Materials Testing Laboratories, shall be built in the suppliers shop and inspected by a representative of this Department prior to the installation of such equipment, and upon approval of this equipment an inspection ticket will be issued to the Contractor by the inspection agency (State of Illinois Material Testing Laboratory or the Cook County Highway Mechanical-Electrical Section). The controller and allied control equipment shall be prepared in the suppliers shop and run under a load of a minimum of 500 watts per phase for at least 48 hours before it is inspected for proper operation and sequencing. After it passes this test an inspection ticket will be issued by the Cook County Highway Mechanical-Electrical Section representative and it can then be delivered to the job site for installation.
- Upon completion of the installation, a final inspection will be carried out by qualified representatives of the Highway Agencies involved.
- At the final inspection it will be required that the Contractor will have submitted to the Engineer all necessary inspection tickets for all new equipment and materials installed under this Contract. If the Contractor has not obtained the inspection tickets on any portion of the new equipment and materials, the representative of this Department will have the authority to postpone the final inspection until such time as the above has been satisfied. Any postponement of the final inspection for this reason shall not relieve the Contractor of his full maintenance responsibilities until such time as the installation is re-inspected and accepted by the County.
- A knowledgeable representative of the controller equipment supplier shall be required at the permanent and temporary traffic signal turn-on. The representative shall be knowledgeable of both cabinet design and controller functions and shall have sufficient test and spare equipment to make the traffic signal installation operational.
- The Contractor shall, at the turn-on furnish one set of signal plans of record with field revisions marked in red ink to the maintaining agency.
- Notification from the Contractor and the Equipment Vendor of satisfactory field testing.
- A copy of the approved material letter.

- One (1) copy of the operation and service manuals of the signal controller and associated control equipment.
- Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams.
- The controller manufacturer shall provide a printer at the turn-on to supply a printed form, not to exceed 11" x 17" (280 mm x 430 mm), for recording the traffic signal controller's timings; coordination splits, offsets, cycles; TBC; Time of Day, week and year programs; traffic responsive program, detector phase assignment, type and detector switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturers name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal turn-on. If approved, traffic signal acceptance shall be verbal at the turn-on inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

The Contractor must have all electric work completed, the electrical service installation connected by the utility company and equipment field tested by the Vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines the work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected. The Department will not grant a field inspection until written certification is provided from the Contractor stating the equipment has been field tested and the intersection is operating according to Contract requirements.

The Contractor shall be responsible to provide a Police Officer to direct traffic.

The Contractor shall provide a representative from the control Equipment Vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons.

Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices under which the subject materials and signal equipment are paid and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be done at the Contractor's own risk and may be subject to removal and disposal at the Contractor's expense.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Design Engineer at (312) 603-1730 to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.

If the Contractor fails to comply with any of the aforementioned requirements, the County shall impose such sanctions as it may determine to be appropriate including but not limited to withholding of all payments to the Contractor on this Contract until the provisions of this Special Provision are complied with and/or implementation of Article 108.10 of the Standard Specifications.

Special Provision**Construction at Railroad Crossing**

Prior to the start of work, the Contractor is required to contact the railroad as listed below for requirements pertaining to construction in the vicinity of its existing railroad crossing.

The following is a preliminary summary of the requirements obtained by the County from the Railroad, including approximate costs to the contractor.

1. Prior to the start of any work the contractor is required to obtain, from the Railroad, a Right-Of-Entry Agreement with the Railroad. Cost =
The Railroad official to be contacted is:
NAME:
PHONE:
DOT CROSSING NUMBER:
2. The Contractor is required to use Railroad flagmen during construction. Approximate Cost = \$600 per day per flagman.
3. The contractor will be required to carry Railroad Protective Liability and Property Damage Liability Insurance in accordance with Article 107.11 of the Standard Specifications. The limits of liability shall be in accordance with Article 107.11 of the Standard Specifications unless otherwise noted. A separate policy is required for each railroad indicated below unless otherwise noted.

NAMED INSURED

NUMBER AND SPEED
OF PASSENGER TRAINS

NUMBER AND SPEED
OF FREIGHT TRAINS

APPROVAL OF INSURANCE: The ORIGINAL and one CERTIFIED copy of each required policy shall be submitted to the Resident Engineer 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 the expiration date of each required policy.

Section: _____

The cost to the contractor for payments to the Railroad for all required permits, insurance, flagmen, cable locates, and any other requirements as dictated by the Railroad, shall be incidental to the contract. The County will not reimburse the contractor for these costs, and no additional compensation will be allowed.

Prior the start of work, the contractor shall present proof, to the County, of fulfilling the Railroad's permit and insurance requirements.

Special Provision

Signal Head, Optically Programmed Signal Head and Pedestrian Signal Head

The installation of a signal head, optically programmed signal head and pedestrian signal head shall meet the applicable requirements of Sections 880, 881 and 1078 of the Standard Specifications, except as follows:

All signal and pedestrian heads shall provide 12" (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black) or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.

All connecting hardware and mounting brackets shall be of the inverted post top mounting (horizontal post top) or with post top mounting collars, with black polycarbonate or galvanized brackets. **Aluminum mounting hardware will not be allowed.** All metal to metal joints to have anti-seize compound applied. The anti-seize compound shall be visible to the inspector at the signal turn-on. Bracket mounted signal heads shall be mounted with stainless steel bands at both the top and bottom of the head. Signal heads are to be positioned according to the "District 1 Standard Traffic Signal Design Details".

The signal visors that are furnished with a signal head shall be made of the same kind of material as the signal head.

Signal heads shall be positioned according to the "District 1 Standard Traffic Signal Design Details."

A signal head mounted to a signal post or a mast arm pole shall have a minimum clearance of ten (10) feet (3 m) above the pavement. Optically Programmed signal heads used for distance limiting shall have a minimum clearance of twelve (12) feet (3.6 m) above the pavement. These standard mounting heights shall apply unless otherwise specified.

Pedestrian signal head lenses shall be furnished with the international symbolic "Walking Person" and "Upraised Palm". The visor shall be of the tunnel type. Egg crate sun shields are not permitted. The normal mounting height shall be seven (7) feet (2.1 m) above the pavement or sidewalk.

Lamps shall be manufactured by Duratest, Sylvania, or an approved equal.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **SIGNAL HEAD, OPTICALLY PROGRAMMED SIGNAL HEAD, OR PEDESTRIAN SIGNAL HEAD** of the type specified, which price shall be payment in full for furnishing and installing the signal head, optically programmed signal head, or pedestrian signal head complete. If a signal head with both conventional and optically programmed signal faces is required, it will be paid for as a **COMBINATION SIGNAL HEAD**.

The type specified shall indicate the number of signal faces, the number of signal sections in each signal face and the method of mounting. The sizes of the lenses shall be as indicated on the Plans. For example: **SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED, or PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED.**

Special Provision**Signal Head, Light Emitting Diode**

Effective January 1, 2002

1. General:

- 1.1. Signal Head, Light Emitting Diode (LED), 1 Face, (All Section Quantities), (All Mounting Types) shall meet the requirements of Sections 880 and 881 and Articles 1078.01 and 1078.02 of the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2002, with the following modifications:
- 1.2. All signal and pedestrian heads shall be 12" (300 mm) glossy polycarbonate. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black) or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Post-top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.
- 1.3. The optical unit of all traffic signal and pedestrian head sections shall be light emitting diodes (LEDs) instead of incandescent bulbs. Each signal head shall conform fully to the "Interim Purchase Specification of the Institute of Transportation Engineers (ITE) for LED Vehicle Traffic Signal Modules" published July, 1998, or applicable successor ITE specification.
- 1.4. The lens of each signal indication shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating applied to provide abrasion resistance.
- 1.5. Each pedestrian signal LED module shall provide the ability to actuate the outlined upraised hand and the outlined walking person on one 12 inch (300 mm) section. Two (2) sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225 mm) in height and easily identified from a distance of 120 feet (36.6 m).
- 1.6. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
- 1.7. In the event of a power outage, light output from the LED modules shall cease instantaneously.
- 1.8. In addition to conforming with the requirements for circular LED signal modules, LED arrow indication modules shall meet existing specifications stated in the ITE Standard: "Vehicle Traffic Control Signal Heads," section 9.01. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs. The LEDs shall be spread evenly across the illuminated portion of the arrow area.
- 1.9. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 60 months from the date of delivery. LED signal modules which exhibit luminous intensities less than the minimum values specified in Section 4.1.1 of the Interim Purchase Specification of the ITE for LED Vehicle Traffic Signal Modules within the first 60 months of the date of delivery shall be replaced or

repaired. The manufacturer's written warranty for the LED signal modules shall be dated, signed by an Officer of the company and included in the product submittal to the Department.

- 1.10. Each module shall consist of an assembly that utilizes LEDs as the light source in lieu of an incandescent lamp for use in traffic signal sections.
- 1.11. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian) and white (pedestrian) indications, and GaN for green indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40°C to +74°C.
- 1.12. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

2. Electrical

- 2.1. Maximum power consumption for LED modules is per Table 1.
- 2.2. LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size and color.
- 2.3. The modules shall operate from a 60 HZ \pm 3 HZ AC line over a voltage ranging from 95 volts to 135 volts. The fluctuations of line voltage shall have no visible effect on the luminous intensity of the indications.
- 2.4. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
- 2.5. The LED signal module shall have a power factor of 0.90 or greater.
- 2.6. Total harmonic distortion (current and voltage) induced into an AC power line by an LED signal module shall not exceed 20 percent.
- 2.7. The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients as stated in Section 2.1.6 of NEMA Standard TS-2, 1992.
- 2.8. The LED circuitry shall prevent perceptible flicker to the unaided eye over the voltage range specified above.
- 2.9. All wiring and terminal blocks shall meet the requirements of Section 13.02 of the ITE Publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads).
- 2.10. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
- 2.11. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
- 2.12. The modules and associated on-board circuitry must meet Class A emission limits referred in Federal Communications Commission (FCC) Title 47, SubPart B, Section 15 regulations concerning the emission of electronic noise.

3. Photometric Requirements

- 3.1. The minimum initial luminous intensity values for the modules shall be as stated in Table 2 and/or Table 4 at 25°C.

- 3.2. The modules shall meet or exceed the illumination values as shown in Table 3 and/or Table 4, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
- 3.3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Table 5, throughout the useful life over the operating temperature range.

4. Environmental Requirements

- 4.1. The LED signal module shall be rated for use in the operating temperature range of -40°C (-40°F) to +74°C (+165°F). The modules shall meet all specifications throughout this range.
- 4.2. The LED signal module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991 for Type 4 enclosures to protect all internal components.

5. Construction

- 5.1. The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation. The power supply for the module shall be integral to the unit.
- 5.2. The circuit board and power supply shall be contained inside the module.
- 5.3. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

6. Materials

- 6.1. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
- 6.2. Enclosures containing either the power supply or electronic components of the signal module shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

7. Traffic Signal and Pedestrian LED Module Identification

- 7.1. Each module shall have the manufacturer's name, trademark, model number, serial number, date of manufacture (month-year), and lot number as identification permanently marked on the back of the module.
- 7.2. The following operating characteristics shall be permanently marked on the back of the module: rated voltage and rated power in Watts and Volt-Ampere.
- 7.3. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be one inch (25.4 mm) in diameter. Additionally, the color shall be written out in ½ in (12.7 mm) letters next to the symbol.
- 7.4. If a specific mounting orientation is required, each module shall have prominent and permanent marking(s) for correct indexing and orientation within signal housing. The markings shall consist of an up arrow or the word "UP" or "TOP".

8. Traffic Signal LED Module

8.1. Modules can be manufactured under this specification for the following faces:

- 12 inch (300 mm) circular, multi-section
- 12 inch (300 mm) arrow, multi-section
- 12 inch (300 mm) pedestrian, 2 sections

8.2. The maximum weight of a module shall be 4 lbs. (1.8 kg).

8.3. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weatherproof after installation and connection.

9. Retrofit Traffic Signal Module

9.1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

9.2. Retrofit modules can be manufactured under this specification for the following faces:

- 12 inch (300 mm) circular, multi-section
- 12 inch (300 mm) arrow, multi-section
- 12 inch (300 mm) pedestrian, 2 sections

9.3. The module shall fit into existing traffic signal section housings built to the specifications detailed in ITE Publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads).

9.4. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.

9.5. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).

9.6. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.

9.7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.

10. Two secured, color coded, 600 V, 20 AWG minimum, jacketed wires, conforming to the National Electric Code, rated for service at +105°C, are to be provided for electrical connection for each LED signal module. Conductors for modules, including Retrofit modules, shall be 39.4 inches (1 m) in length, with quick disconnect terminals attached.

11. Lens

11.1. The lens of the module shall be tinted and integral to the unit, convex with a smooth outer surface and made of plastic.

11.2. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.

- 11.3. The LED signal module lens shall be UV stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum period of 60 months without exhibiting evidence of deterioration.
- 11.4. The polymeric lens shall have a surface coating or chemical surface treatment to provide front surface abrasion resistance.
12. The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superceded in this section.
 - 12.1. The arrow module shall meet specifications stated in Section 9.01 of the ITE Publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
 - 12.2. The LEDs shall be spread evenly across the illuminated portion of the arrow area.
13. The following specification requirements apply to the 12 inch (300 mm) PV module only. All general specifications apply unless specifically superceded in this section.
 - 13.1. The module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing with out modification to the housing.
 - 13.2. The LEDs shall be spread evenly across the module.

Basis of Payment: This item shall be paid for at the contract unit price **EACH** for **SIGNAL HEAD, LED**, of the type specified, which price shall be payment in full for furnishing the equipment described above including signal head, LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

Pedestrian head(s) shall be paid for at the contract unit price **EACH** for **PEDESTRIAN SIGNAL HEAD, LED**, of the type specified and of the particular kind of material when specified.

The type specified will indicate the number of faces and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price **EACH** for **SIGNAL HEAD, LED** of the type specified, **RETROFIT**, which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price **EACH** for **PEDESTRIAN SIGNAL HEAD, LED**, of the type specified, **RETROFIT**. which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of faces and the method of mounting.

TABLES

Table 1 Maximum Power Consumption (in Watts)

Temperature	Red		Yellow		Green	
	25°C	74°C	25°C	74°C	25°C	74°C
12 inch (300 mm) circular	11	17	22	25	15	15
12 inch (300 mm) arrow	9	12	10	12	11	11
Pedestrian Indication	Hand-Portland Orange		Person-White			
	6.2		6.3			

Table 2 Minimum Initial Intensities for Circular Indications (in cd)

Angle(v,h)	12 inch (300 mm)		
	Red	Yellow	Green
2.5, ±2.5	399	798	798
2.5, ±7.5	295	589	589
2.5, ±12.5	166	333	333
2.5, ±17.5	90	181	181
7.5, ±2.5	266	532	532
7.5, ±7.5	238	475	475
7.5, ±12.5	171	342	342
7.5, ±17.5	105	209	209
7.5, ±22.5	45	90	90
7.5, ±27.5	19	38	38
12.5, ±2.5	59	119	119
12.5, ±7.5	57	114	114
12.5, ±12.5	52	105	105
12.5, ±17.5	40	81	81
12.5, ±22.5	26	52	52
12.5, ±27.5	19	38	38
17.5, ±2.5	26	52	52
17.5, ±7.5	26	52	52
17.5, ±12.5	26	52	52
17.5, ±17.5	26	52	52
17.5, ±22.5	24	48	48
17.5, ±27.5	19	38	38

Table 3 Maintained Minimum Intensities for Circular Indications (in cd)

Angle(v,h)	12 inch (300 mm)		
	Red	Yellow	Green
2.5, ±2.5	339	678	678
2.5, ±7.5	251	501	501
2.5, ±12.5	141	283	283
2.5, ±17.5	77	154	154
7.5, ±2.5	226	452	452
7.5, ±7.5	202	404	404
7.5, ±12.5	145	291	291
7.5, ±17.5	89	178	178
7.5, ±22.5	38	77	77
7.5, ±27.5	16	32	32
12.5, ±2.5	50	101	101
12.5, ±7.5	48	97	97
12.5, ±12.5	44	89	89
12.5, ±17.5	34	69	69
12.5, ±22.5	22	44	44
12.5, ±27.5	16	32	32
17.5, ±2.5	22	44	44
17.5, ±7.5	22	44	44
17.5, ±12.5	22	44	44
17.5, ±17.5	22	44	44
17.5, ±22.5	20	41	41
17.5, ±27.5	16	32	32

Table 4 Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

	Red	Yellow	Green
Arrow Indication	5,500	11,000	11,000

Table 5 Chromaticity Standards (CIE Chart) Section 8.04 of

Red	Y: not greater than 0.308, or less than 0.998 - x
Yellow	Y: not less than 0.411, nor less than 0.995 - x,
Green	Y: Not less than 0.506 - .519x, nor less than 0.150 + 1.068x, nor more than 0.730 - x

Special Provision

Traffic Signal Backplate

The furnishing and installation of this item shall meet the requirements of Section 882.04 and 1078.03 of the Standard Specifications, except as follows:

Backplates are to be aluminum and louvered with a minimum thickness of 0.05 inch (1.3 mm).

The surface of the backplate shall provide openings (louvers) to allow wind to penetrate and thereby reduce the wind loading on the mast arm and pole. The louver openings shall cover a minimum of twenty (20) percent of the surface area of the backplate. The louvers shall be designed not to deter the purpose of the backplate, which is to shield the signal lens from sunlight. The louvers shall be spaced symmetrically on the backplate in such a way as not to adversely affect its structural integrity.

When more than one backplate is mounted on a pole or post, their louvered symmetry shall be the same.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM**, which price shall be payment in full for furnishing and installing the traffic signal backplate complete.

Special Provision

Illuminated Sign, Light Emitting Diode

Description. This work shall consist of furnishing and installing an illuminated sign with light emitting diodes.

General. The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company, or an approved equal and consist of a weatherproof housing and door, LEDs and transformers.

Display. The LED blank out sign shall provide the correct symbol and color for "NO LEFT TURN" OR "NO RIGHT TURN" indicated in accordance with the requirements of the "Manual on Uniform Traffic Control Devices". The message shall be formed by rows of LEDs.

The message shall be clearly legible. The message shall be highly visible, anywhere and under any lighting conditions, within a 15 degree cone centered about the optic axis.

The sign face shall be 24 inches (600 mm) by 24 inches (600 mm). The sign face shall be completely illegible when not illuminated. No symbol shall be seen under any ambient light condition when not illuminated.

All LEDs shall be T-1 ¼ (5mm) and have an expected lamplife of 100,000 hours. Operating wavelengths will be Red-626nm, Amber-590nm, and Bluish/Green-505nm. Transformers shall be rated for the line voltage with Class A insulation and weatherproofing. The sign shall be designed for operation over a range of temperatures from -35F to +165 F (-37C to +75C).

The LED module shall include the message plate, high intensity LEDs and LED drive electronics. Door panels shall be flat black and electrical connections shall be made via barrier-type terminal strip. All fasteners and hardware shall be corrosion resistant stainless steel.

Housing. The housing shall be constructed of extruded aluminum. All corners and seams shall be heli-arc welded to provide a weatherproof seal around the entire case. Hinges shall be continuous full-length stainless steel. Signs shall have stainless steel hardware and provide tool free access to the interior of the sign. Doors shall be 0.125-inch thick extruded aluminum with a 3/16-inch x 1-inch neoprene gasket and sun hood. The sign face shall have a polycarbonate, matte clear, lexan face plate. Drainage shall be provided by four drain holes at the corners of the housing. The finish on the sign housing shall include two coats of exterior enamel applied after the surface is acid-etched and primed with zinc-chromate primer.

Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and brackets specified herein.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **ILLUMINATED SIGN, L.E.D.** which price shall be payment in full for furnishing and installing the light emitting diode illuminated sign complete.

Special Provision

Traffic Signal Post Pedestrian Pushbutton Post

The furnishing and installation of this item shall meet the requirements of Sections 875, 876, 1077.01 and 1077.02 of the Standard Specifications, except as follows:

All posts, bases, and related mounting hardware shall be hot-dipped galvanized in accordance with AASHTO M 111. A magnetic field tester may be utilized at any time to determine the thickness of galvanization. Average galvanization thickness shall be 2.0 oz. per square foot and minimum thickness shall be 1.8 oz. per square foot. The Contractor shall use a fabric post tightener to attach the post to the base. If the galvanization on the post is removed using a chain post tightener exposing bare metal, the post shall be rejected and replaced with a new post.

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

If the fabricator elects to cut and thread the post after the galvanization process, the bare metal shall immediately be cleaned to remove all cutting solvents and oils, then sprayed with two (2) coats of "Brite Zinc" galvanized compound manufactured by Brite Products, or an approved equal. Any scratches shall be repaired with "Brite Zinc". If the Department approves painting, powder coating by the manufacturer will be required over the galvanizing.

Bases shall be cast iron and octagonal in shape, approximately 15 inches (375 mm) high and 16 inches (400 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced in a 12-1/2" (312 mm) diameter circle.

Welded extensions onto the post shall not be permitted.

Posts are to erected plumb and no shims are allowed between the bottom of the base and the foundation.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TRAFFIC SIGNAL POST, GALVANIZED STEEL**, of the length specified or **PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE I** or **TYPE II**, which price shall be payment in full for furnishing and installing the traffic signal post, base, foundation for pedestrian post, nuts and washers, and pipe cap complete.

Special Provision

Steel Mast Arm Assembly and Pole and/or Steel Combination Mast Arm Assembly and Pole

The furnishing and installation of a steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall meet the requirements of Section 877 and 1077.03 of the Standard Specifications, Plans, and the Standard Drawings for Mast Arm Assembly and Pole, except as follows:

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

Prior to the final acceptance of any steel mast arm assembly and pole and/or steel combination mast arm assembly and pole, the Contractor must furnish to the Engineer a certified, notarized mill analysis of the material used in the steel mast arm assembly and pole and/or steel combination mast arm assembly and pole complete including any other requirements in the Special Provision or Specifications.

The steel mast arm assembly and pole and/or steel combination mast arm assembly and pole furnished shall conform to the following bolt circles. The base of a pole with a mast arm assembly of 16 feet (4.87 m) to 20 feet (6.10 m) in length must fit on a fifteen-inch (380 mm) diameter bolt circle. The base of a pole with a mast arm assembly of 22 feet (6.71 m) to 40 feet (12.20 m) in length must fit on an eighteen-inch (450 mm) diameter bolt circle. The base of a pole with a mast arm assembly of 42 feet (12.80 m) to 55 feet (16.80 m) in length must fit on an twenty one-inch (535 mm) diameter bolt circle. The Anchor Rod size shall refer to the STANDARD 877001-01, 877006-01 or 877011-01. The manufacturer will be allowed to slot the base plate in which other bolt circles may fit, providing that these slots do not affect the integrity of the pole. The traffic signal mast arms shall be of one-piece construction, unless otherwise approved by the Engineer.

All bolts on the mast arm assembly and pole and foundation to have a minimum exposure of at least one thread outside the nut when fully tightened.

The components of a steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall be assembled and erected in accordance with the details shown on the plans. The pole shall be erected vertically on a concrete foundation. The Contractor shall furnish and install leveling and locking nuts and required washers for mounting and plumbing the pole on the anchor bolts. Prior to the approval of the installation, the Contractor shall brush or spray on two (2) coats of "Brite Zinc" galvanized compound to any scratched areas. The pole shall be grounded to a ground rod in accordance with the details shown on the plans.

The base of the mast arm pole shall be protected by a galvanized steel or extruded aluminum shroud for protection of the mast arm pole base plate similar to the dimensions detailed in the "District 1 Standard Traffic Signal Design Details." The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall allow air to circulate throughout the mast arm but not allow manifestation of insects or critters. The shroud shall be constructed, installed and designed not to be hazardous to probing fingers and feet. All mounting hardware shall be stainless steel. The Shroud shall not be paid for separately but shall incidental to the cost of the mast arm assembly and pole.

The steel mast arm assembly and pole and/or steel combination mast arm assembly and pole shall be designed to support one 80 pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²) at the free end of the mast arm, one 80-pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²), 12 feet (3.6 m) inward (or as shown on the plans), another, one 80-pound (36 kg) signal with a projected area of 14.7 square feet (1.37 m²), 12 feet (3.6 m) inward (for arms 36 feet 10.97 m or longer or as shown on the plans) on the mast arm and one 125-pound (56 kg) signal with a projected area of 7.6 square feet (0.71 m²) mounted 12 feet (3.6 m) high on the shaft or one 160-pound (72 kg) signal with a projected area of 7.6 square feet (0.71 m²) mounted 12 feet (3.6 m) high on the shaft of dual mast arms and one 55-pound (25 kg) luminaire with a projected area of 1.6 square feet (0.15 m²) at the end of the luminaire arm

and one 9.9 pound (4.5 kg) camera or detector with a projected area of 1 square feet (0.09 m²) at the end of truss type luminaire mast arm, or the signal, camera detector and luminaire loading shown on the plans, whichever is greater, based on a 80 mile per hour (130 km/h) wind velocity plus 30 percent gust factor.

In addition to the signal loading, the steel mast arm assembly and pole, and/or steel combination mast arm assembly and pole shall be structurally adequate to support a maximum of two (2) sign panels 30" x 72" (750 mm x 1,800 mm) in size mounted back to back and one (1) sign panels 30" x 24" (750 mm x 600 mm) in size mounted from 3 feet (900 mm) from end of the mast arm. The actual size and number of the sign panel(s) to be furnished and installed and the details of mounting shall be as shown on the plan sheet "Mast Arm Mounted Street Name Signs".

Signs attached to poles or posts (such as mast arm signs) shall have mounting brackets and sign channels which are equal to and completely interchangeable with those used by the Department. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **STEEL MAST ARM ASSEMBLY AND POLE**, and/or **STEEL COMBINATION MAST ARM ASSEMBLY AND POLE** of the size(s) specified which price shall be payment in full for furnishing and installing the steel mast arm assembly and pole and/or steel combination mast arm assembly and pole, anchor bolts, nuts, washers, and connected to a ground rod as shown on the Standard, complete.

Special Provision

Traffic Actuated Controller Traffic Actuated Controller with Cabinet Inductive Loop Detector

The furnishing and installation of a traffic actuated controller and an inductive loop detector shall meet the requirements of Section 857, 885, 1074.03 and 1079.01 of the Standard Specifications, except as revised with this Special Provision.

The new and/or temporary controller and all control equipment shall be of a manufacturer that is approved by this Department. The manufacturer shall have a representative located in the six (6) county Chicago area. The Controller shall be NEMA TS2 type 1 Econolite ASC/2S-1000 or Eagle M41 unless specified otherwise on the plans or elsewhere on these specifications. The controller shall be the most recent model and software version supplied by the manufacturer at the time of the approval. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase.

The malfunction monitor unit shall be an EDI Model MMU-16E or equivalent.

Contracts requiring new cabinets shall provide for rack mounted detector amplifiers. Loop amplifiers shall be provided with LCD displays with loop frequency, inductance and change of inductance readings. When calling detectors are called for on the plans, the amplifier shall have the capability of providing vehicle calls to a particular phase when that phase is not in use.

The cabinet shall provide a minimum of sixteen (16) pre-wired load bays for eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation and pedestrian pushbutton isolation. Isolation cards will be required for all pedestrian pushbuttons.

- Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- Surge Protection – EDCO Model 1210 IRS with failure indicator.
- BIU – Containment screw required.
- Transfer Relays – Solid state or mechanical flash relays are acceptable.
- Switch Guards – All switches shall be guarded.
- The controller cabinet must have two (2) porcelain light fixtures with cage protection controlled by a separate toggle switch, and a thermostat.
- Plan & Wiring Diagrams – 12" x 16" (305 mm x 406 mm) moisture sealed container attached to door.
- Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channel (16) of vehicular operation.
- Field Wiring Labels – All field wiring shall be labeled.
- Field Wiring Termination – Approved channel lugs required.
- Power Panel – Provide a nonconductive shield.
- Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
- Police Door – Provide wiring and termination for plug in manual phase advance switch.
- Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

Controller and cabinet interconnected with railroads shall be NEMA TS2 type 1. In addition to the aforementioned equipment specifications, the following shall apply to railroad interconnected equipment:

- Railroad interconnected controllers and cabinets shall be supplied and assembled only by an approved IDOT District One closed loop traffic signal equipment manufacturer supplier. The equipment shall be tested and approved in the equipment supplier's IDOT District One facility prior to field installation.
- Pedestrian clearance during railroad pre-emption will be limited to a flashing don't walk interval equal in length to the vehicle yellow clearance interval and shall time concurrently with the vehicle yellow clearance interval.
- The controller shall provide for immediate track clearance green re-service upon receipt of each subsequent pre-empt demand. During this re-service all normal vehicle clearance intervals, including red revert, will be respected.
- Terminal facility shall be wired so as to provide supervision of all essential pre-emption components. This wiring shall cause the facility to transfer to or remain in flashing operation in the event any critical component is missing, not connected or failed. Interface relays shall be wired so as to be in the energized state during normal (non pre-empt) operation. Failure of a relay coil shall open the supervision loop and cause the intersection to transfer to flashing operation. Each critical element such as controller harnesses and interface relays shall be wired to form a series loop which must be complete for normal operation.
- A method of supervising the three (3) conductor cable interconnecting the traffic and railroad facilities shall provide flashing operation during failed cable conditions. Upon detection of a failed railroad interconnect the controller shall provide one (1) track clearance green interval and shall enter flashing operation at the end of track clearance yellow interval. Such flashing operation must be manually reset. The supervision circuit shall, within reason, be capable of detecting failure of the supervision circuit components themselves, and shall provide fail-safe operation upon such failure.
- Interconnect to railroad facility shall be such that demand for pre-emption begins when the railroad flashers begin to flash and ends when the railroad gates begin to rise.
- An IDOT approved method of controller security shall be implemented to assure data integrity and to preclude changes to critical data. The method shall include a means for the controller to continuously verify controller/cabinet CRC match. The CRC will be developed based on pre-emptor entries, unit data (including phases in use, sequence and ring structure, etc.), overlap assignment and timing, firmware version, and any special memory content necessary to proper operation. Where data is stored in a data module a spare data module shall be provided to the Engineer.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **INDUCTIVE LOOP DETECTOR**, and/or **FULL-ACTUATED CONTROLLER AND CABINET** (if required) of the type specified, which price shall be payment in full for furnishing and installing the inductive loop detector complete with all harnesses and connections for proper operation, and/or for furnishing and installing the controller complete, including malfunction monitor unit, load switches, flashers, flash transfer relays, etc. in a new cabinet or an existing cabinet as specified, with the necessary connections for proper operation.

Special Provision

Master Controller

The installation consist of a master controller shall meet Section 860 of the Standard Specifications except as revised with this Special Provision.

The Manufacturer of the master controller shall be as approved by the Agency that will Maintain the closed loop system. Cook County currently approves only Econolite and Eagle NEMA TS2 Type 1 closed loop systems. If some other Agency will be maintaining the closed loop system the Contractor will contact that Agency to determine what Brand of Equipment is acceptable. The latest model and software version of master controller shall be supplied.

Functional requirements in addition to those in section 860, 863 and 1073.04 of the Standard Specification include:

- The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.
- Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.
- Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud minimum.
- The cabinet shall be provided with a Siecor CAC 3000, or equivalent, Outdoor Network Interface for termination of the telephone service. It shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service. The CAC 3000 shall be equipped with a standard Three Electrode Heavy Duty Gas Tube Surge Arrestor.
- The cabinet shall provide a caller identification unit with 50 number memory.
- The cabinet shall be equipped with a 9600 baud, auto dial/auto answer, modem. It shall be a US robotics 33.6K baud rate or equal.
- Each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacturer's support. Each set shall consist of software on suitable media (CD, 3 1/2" to 5 1/4" floppy disks as requested by the Engineer), and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation. One of these two sets will be provided to the Maintaining Agency's Signal Maintenance Contractor for his use in monitoring the system.
- The contractor shall be required to set-up graphic displays and all software parameters for every intersection to be interconnected under this contract, including complete viewing and control capabilities from the Maintaining Agency's remote monitor.
- The approved manufacturer of equipment shall loan CCHD one (1) master controller and two (2) intersection controllers of the most recent models and the newest software version to be used for instructional purposes in addition to the equipment to be supplied for the contract.
- The Master Controller shall provide a background timer which will prevent phases from being skipped during program changes.

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the master controller. This shall be accomplished through the following process:

- As soon as practical or within one week after the contract has been awarded, the Contractor shall contact (via phone) the CCHD Design Engineer at (312) 603-1730 to request a phone hook-up.
- A follow-up fax transmittal to the CCHD Design Engineer at (312) 603-9956 with all required information pertaining to the phone installation is required from the Contractor as soon as possible or within one week after the initial request has been made. The required information to be supplied on the fax shall include (but not limited to): A street address for the new traffic signal controller (or nearby address); the name and number of the Contractor's employee for the telephone company to contact regarding site work and questions. The phone line installation will then be requested from the County Central Services Office.
- The usual time frame for the activation of the phone line is 6-8 weeks after the CCHD Design Engineer has received the Contractor supplied fax. It is, therefore, imperative that the phone line conduit and pull-string be installed by the Contractor in anticipation of this time frame. On jobs which include roadway widening in which the conduit cannot be installed until this widening is completed, the Contractor will be allowed to delay the phone line installation request until a point in time that is 6-8 weeks prior to the anticipated completion of the traffic signal work. The contractor shall provide the CCHD Design Engineer with an expected installation date considering the 6-8 week processing time.
- The telephone line shall be installed and activated one month before the system final inspection.
- All costs associated with the telephone line installation and activation (not including the contract specified conduit installation between the point of telephone service and the traffic signal controller cabinet) shall be paid for by the CCHD Central Services Office (i.e., this will be a CCHD phone number not a Contractor phone number).

Basis of Payment: The master controller shall be paid for at the contract unit price **EACH** for **MASTER CONTROLLER**, which price shall be payment in full for furnishing and installing the master controller complete with necessary connections for proper operation.

Special Provision

Detector Loop

This work shall consist of furnishing and installing detector loop in accordance with the requirements of Section 886 of the Standard Specifications, except as follows:

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the CCHD Design Engineer at (312) 603-1730 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the portland cement concrete surface, using the same notification process as above.

Each loop lead-in shall be placed in a separate conduit from edge of pavement to handhole. Loop detectors shall be installed according to the requirements of the "District 1 Standard Traffic Signal Design Details". Saw-cuts (homerun on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plans. Spacing between the lead-ins (holes drilled in the pavement) shall not be less than one (1) foot (300 mm) and shall be located one (1) foot (300 mm) from the edge of pavement. Loop lead-in wires should be twisted to provide a minimum of five (5) turns per foot (fifteen [15] turns per meter) from the loop to the splice.

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit 250W175C water proof tag or approved equal secured to each wire with nylon ties. The lead-in wire, including all necessary connections for proper operation, from the edge of pavement to the handhole shall be incidental to the price of the detector loop.

The detector loop cable insulation shall be labeled with the cable specifications.

Resistance to ground shall be a minimum of 100 megohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be greater than 5.

Type 1:

- All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement or the curb shall be cut with a 1/4" (6.3 mm) x 4" (100 mm) long sawcut to mark the location of each loop lead-in.
- Loop sealant shall be a two-component thixotropic chemically cured polyurethane either Chemque Q-Seal 295, Perol Elastic Cement A/C Grade or an approved equal. The sealant shall be installed 1/8" (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.
- Detector loop measurements shall include the sawcut and the length of the loop lead-in leading to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be incidental to the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be incidental to detector loop quantities.

- The corners of all loops shall be core drilled with a two (2) inch (50 mm) bit. All joints and cracks in the pavement that the loop crosses must be core drilled.

Preformed:

- This work shall consist of furnishing and installing a rubberized heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:
- Preformed detector loops shall be installed in new pavement constructed of portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be protected to the satisfaction of the Engineer.
- Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole.
- Preformed detector loops shall be factory assembled. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 17.2 mm (11/16") outside diameter (minimum), 9.5 mm (3/8") inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 1,720 kPa (250 psi) internal pressure rating. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire.

Six foot (1.8 m) round loop(s) may be substituted for six foot (1.8 m) by six foot (1.8 m) square loop(s) and shall be paid for as 24 feet (7.2 m) of detector loop.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER) of DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP**, as specified in the plans, which price shall be payment in full and for furnishing, installing and testing the Detector Loop and all related connections for proper operation.

Special Provision

Video Detection System For Temporary Traffic Signal Installation

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway using only video images of vehicle traffic. In addition to the requirements described below, the video detection system shall meet or exceed the specifications of the Autoscope or the Iteris Vantage Plus systems.

1) General

a) System Hardware

The video detection system shall consist of one to six video cameras, a video detection processor (VDP) capable of processing from one to six video sources, and a pointing device.

b) System Software

The system shall include software that detects vehicles in multiple lanes using only the video image. Detection zones shall be defined using only an on board video menu and a pointing device to place the zones on a video image. Up to 144 detection zones shall be available.

2) Functional Capabilities

- a) The VDP shall process video from up to 6 video sources simultaneously. The sources can be video cameras or S-VHS video tape players. The video shall be input to the VDP in R5170 format and shall be digitized and analyzed in real time. A separate microprocessor for each video input shall be used.
- b) The VDP shall detect the presence of vehicles in up to 24 detection zones per camera. A detection zone shall be approximately the width and length of one car.
- c) Detection zones shall be programmed via an on board menu displayed on a video monitor and a pointing device connected to the VDP. The menu shall facilitate placement of the detection zones quickly and easily.
- d) The VDP shall store up to three different detection zone patterns. The VDP can switch to any one of the three different detection patterns within 1 second of user request via menu selection with the pointing device.
- e) The VDP shall detect vehicles in real time as they travel across each detection zone.
- f) The VDP shall have an RS232 port for communications with an external computer. The VDP RS232 port shall be multi-drop capable.
- g) The VDP shall accept new detection patterns from an external computer through the RS232 port when the external computer uses the correct communications protocol for downloading detection patterns.
- h) The VDP shall send its detection patterns to an external computer through the RS-232 port when requested when the external computer uses the correct communications protocol for uploading detection patterns.

3) Vehicle Detection

- a) Up to 144 detection zones shall be supported and each detection zone can be sized to suit the site and the desired vehicle detection region.
- b) Detection zones shall be capable of being Or'ed or ANDed together to indicate vehicle presence on a single detector output channel.
- c) Placement of detection zones shall be done by using only a pointing device, and a graphical interface built into the YDP and displayed on a video monitor, to draw the detection zones on the video image from each video camera.
- d) Up to 3 detection zone patterns shall be saved for each camera within the VDP memory and this memory shall prevent loss during power outages.
- e) The selection of the detection zone pattern for current use shall be done through a menu. It shall be possible to activate a detection zone pattern from VDP memory and have that detection zone pattern available within 1 second of activation.
- f) When a vehicle is detected crossing a detection zone, the corners of the detection zone will flash on the video overlay display to confirm the detection of the vehicle.
- g) Detection shall be at least 98% accurate in good weather conditions, with slight degradation possible under adverse weather conditions (e.g. rain, snow, or fog) which reduce visibility. Detection accuracy is dependent upon camera placement, camera quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to camera location or quality. See section 5.12 for recommended camera placement.
- h) The VDP shall provide 32 channels of detection through either a NEMA TS 1 port or a NEMA TS2 port.
- i) The VDP shall provide dynamic zone reconfiguration (DZR). DZR enables normal operation of existing detection zones when one zone is being added or modified during the setup process. The VDP shall output a constant call on any detector channel corresponding to a zone being modified.
- j) Detection zones shall be directional to reduce false detection from objects traveling in directions other than the desired direction of travel in the detection area.
- k) Detection zone setup shall not require site specific information such as latitude and longitude to be entered into the system.
- l) Detection zone setup shall not require temporal information such as date and time.
- m) The VDP shall process the video input from each camera using a separate microprocessor at 30 frames per second.
- n) The VDP shall output a constant call for each enabled detector output channel if a loss of video signal occurs. The VDP shall output a constant call during the background learning period.

Basis of Payment: Payment in full for furnishing, installing and setting up the video detection system, with necessary connections and programming for proper operation shall be included in the pay item for **TEMPORARY TRAFFIC SIGNAL INSTALLATION.**

Special Provision

Pedestrian Pushbutton

The installation of a Pedestrian Pushbutton shall meet Section 888 and 1074.02 of the Specifications except as revised with this Special Provision.

This item shall consist of furnishing and installing a Pelco Pedestrian Pushbutton Station of cast aluminum alloy or an approved equal.

The assembly shall provide ADA pushbuttons with one of the following signs: SF-1017, SF-1018 or SF-1020 (5" x 7 3/4" [127 mm x 197 mm]).

Basis of Payment: This work shall be paid for at the contract unit price **EACH** for **PEDESTRIAN PUSH-BUTTON**, which price shall be payment in full for furnishing and installing the pushbutton assembly complete.

Special Provision

Conduit

The installation of a conduit shall meet the requirements of Sections 810 of the Standard Specifications, except as revised with this Special Provision.

Pavement, driveways, and curbs shall not be removed to install electrical conduits.

All conduit installed underground shall have a minimum depth of two feet six inches (2'-6" [760 mm]) except under railroad tracks where the conduit shall be a minimum of five feet (5' [1.52 m]) as measured to the outside diameter of the conduit on the top side.

All conduit splices shall be solid threaded couplings. Conduit terminating in junction and pull boxes shall be terminated with hubs, integral box hubs, or integral box bosses.

Directional boring or plowing will be allowed in place of trenched and backfilled or pushed conduit, but no additional compensation will be allowed.

All conduit attached to a structure shall have a minimum of one (1) expansion joint placed within the length of the attached conduit. At each end of the structure the Contractor shall install a weatherproof galvanized cast iron box with a minimum size of 8" (200 mm) x 8" (200 mm) x 6" (150 mm) deep. The installation of these two (2) boxes and any required expansion joints shall be considered incidental to the unit price for conduit attached to structure.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **CONDUIT** of the type and size specified, which price shall be payment in full for furnishing and installing the conduit and fittings complete. Trench and Backfill will be paid for separately.

Special Provision

Unit Duct, Without Cable, in Trench

This work shall consist of furnishing and installing unit duct, without cable, in trench of the type and size specified. The installation of a duct shall meet all applicable requirements of the Standard Specifications of Section 810. All installation of unit duct shall be incidental to the contract and not paid for separately. Polyethylene unit duct shall be used for all detector loop raceways to handholes. All duct shall be placed a minimum depth of 30 inches (750 mm) or as shown on the contract plans or standard details.

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct and its manufacture shall conform to the standards of NEMA Publication TC7, ASTM Standard Specifications D3485 and NEC article 354.

On temporary traffic signal installations with detector loops, polyethylene unit duct shall be used for detector loop raceways from the saw-cut to 10 feet (3 m) up the wood pole, unless otherwise shown on the plans.

Material: The duct shall be manufactured from high density polyethylene complying with ASTM D1248, Type III, Class C and the requirements listed in Table 2-1 of NEMA TC7. Submittal information shall demonstrate compliance with the details of these requirements.

Construction: Duct dimensions shall conform to the standards listed in Table 2-2 of NEMA TC7. Submittal information shall demonstrate compliance with these requirements.

As specified in NEMA TC7, the duct shall be clearly and durably marked at least every 10 feet (3 meters) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Freeze-up Test: A ten foot length of the duct bent into an upright "U" shape shall be filled with water and then placed in a low temperature cabinet and maintained at -20 degrees C for 24 hours. The duct shall not crack or burst during the test.

Compression Test: The test shall be conducted on a six inch (150 mm) sample of the duct. Samples are placed between six inch (150 mm) plates and compressed at the rate of one-half inch (12.5 mm) per minute until the distance between the plates is reduced by 50%, recording the load required to compress the duct. The samples are then removed and allowed to stand for exactly 5 minutes. The load required to compress the sample shall be equal to or greater than that listed below and the duct shall have returned to nor less than 85% of its original diameter at the end of the 5 minutes.

Nominal Size		Load
¾ inch.	20 mm	122 lbs.
1 inch.	25 mm	167 lbs.
1 ¼ inch.	30 mm	243 lbs.
1 ½ inch.	40 mm	297 lbs.
2 inch.	50 mm	387 lbs.

Tests: All of the tests referred to above and the applicable tests in the cited ASTM Standards shall be performed on the duct at the manufacturer's plant and certified copies of the reports of the results of these tests shall be submitted to the Engineer prior to the installation of the duct.

Special Provision

Trench and Backfill for Electrical Work

The constructing and backfilling of a trench shall meet the requirements of Section 815 of the Standard Specifications, except as follows:

The Trench shall not be less than two (2) feet six (6) inches (760 mm) in depth.

All trenches shall be backfilled as soon as possible after the installation of the conduit or cable. Any material excavated from the trenches, that in the opinion of the Engineer is satisfactory backfilling material, may be used for backfilling of trenches. Cinders, rocks or other deleterious materials will not be permitted in the backfilling material. Trenches under pavement, paved shoulders, curb, gutter, or sidewalk shall be backfilled with sand or stone screenings.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)**, measured in place, for **TRENCH AND BACKFILL FOR ELECTRICAL WORK**, which price shall include the cost of all excavation, furnishing and placing all backfill material, and the disposal of surplus excavations.

Special Provision**Electric Cable**

The installation of an electric cable shall meet the requirements of Section 873 and 1076.04 of the Standard Specifications, except as follows:

The jacket for electric cable in this contract shall be of the polyvinyl chloride type meeting the requirements of IMSA 19-1. (Traffic signal cable shall be solid copper No. 14 unless otherwise specified in the plans or these Special Provisions). No other type of jacket will be allowed, except as follows:

The service cable may have a XLP jacket.

Communications and lead-in cable shall have a gray or chrome jacket.

Electric cable sized No. 12 AWG and smaller shall be solid.

The length of cable slack shall be in accordance with the following schedule:

Location	Cable Slack		Location	Vertical Slack	
	ft.	m		ft.	m
Handhole	6.5 ft.	2 m	All Foundations	3.5 ft.	1.1 m
Double Handhole	13 ft.	4 m	Mast Arm Length to Signal = L	20 + L ft.	6.1 + L m
Signal Post	2 ft.	0.6 m	Bracket Mounted	13 ft.	4 m
Controller cabinet	1 ft.	0.3 m	Ped. Pushbutton	4 ft.	1.2 m
Fiber Optic	13 ft.	4 m	Electric Service	13.5 ft.	4.1 m
Electric Service	1 ft.	0.3 m	Service to Ground	13.5 ft.	4.1 m
Ground Cable	1 ft.	0.3 m	Post Mounted	6 ft.	1.8 m

The cable splice connection of the detector loop and the lead-in cable to the controller shall conform to Section 873 of the Standard Specifications or to the requirements set forth in the "District 1 Standard Traffic Signal Design Details".

Heat shrink splices shall be used according to "District 1 Standard Traffic Signal Design Details".

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE** of the type, size and number of conductors as specified, which price shall be payment in full for furnishing the material and making all electrical connections and installing the cable complete, measured as specified.

Special Provision

Railroad Interconnect Cable

Railroad Interconnect Cable: This work shall consist of furnishing and installing an electric cable of the type, size, and number of conductors specified. The cable shall meet the requirements of Section 817 and 873 of the "Standard Specifications," except for the following:

The cable shall be three conductor standard #14 copper cable in a clear polyester binder, shielded with #36 AWG tinned copper braid with 85% coverage, and insulated with .016" polyethylene (black, blue, red). The jacket shall be black 0.045 PVC or polyethylene.

Basis of Payment: This work shall be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C**, which price shall be payment in full for furnishing, installing, and making all electrical connections in the traffic signal controller cabinet. Connections in the railroad controller cabinet shall be performed by railroad personnel.

Special Provision

Fiber Optic Cable

The installation of a fiber optic electric cable shall meet the requirements of Section 817 and 871 of the Standard Specifications, except as follows:

The control cabinet distribution enclosure shall be 3M Model 8173 or an approved equal. The fiber optic cable shall provide six (6) fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. A minimum of six (6) fibers from each cable shall be terminated with mechanical connectors in the distribution enclosure. Fibers not being used shall be labeled "SPARE". Fibers not attached to the distribution enclosure shall be capped and sealed.

A minimum of 13 feet (4 m) of slack cable shall be provided for the controller cabinet. The controller cabinet slack cable shall be stored as directed by the Engineer.

Fiber optic cable shall be gel filled or use an approved water blocking tape.

In order to trace the fiber optic cable after installation, an XLP black insulated copper cable No. 14 AWG shall be pulled in the same conduit as the fiber optic cable. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. The tracer cable will be allowed to be spliced at the handholes only. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable splice shall use a Western Union Splice soldered with resin core flux. All exposed surfaces of the solder shall be smooth. Splices shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. The splice shall be covered with WCSMW 30/100 heat shrink tube, minimum length 4" (100 mm) and with a minimum 1" (25 mm) coverage over the XLP insulation, underwater grade.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM12F**, which price shall be payment in full for furnishing the material and distribution enclosure and making all connections and installing the cable complete, measured as specified. The tracer cable shall be paid for as **ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C** per **FOOT (METER)**.

Special Provision

System Ground and Grounding Cable

System Ground: Grounding of all traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the National Electrical Code and Article 807 of the Standard Specifications. See IDOT District 1 traffic signal detail plan.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable foundation pay item and will not be paid for separately. All steel ground rods shall be copper clad, a minimum of 10' (3.0 m), and 3/4" (20mm) in diameter.

Testing shall be according to Section 801.11.

- a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment grounding conductor shall be green color coded. The following is in addition to Section 801.14 of the Standard Specifications.
 - 1) Equipment grounding conductors shall be XLP insulated No.6 gauge copper, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 - 2) Equipment grounding conductors shall be bonded, using a listed grounded connector (Burdny type KC/K2C, as applicable or approved equal), to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. A listed electrical joint compound shall be applied to all conductors terminations, connector threads and contact points. Bonding to existing handhole frames and covers shall be paid for separately.
 - 3) All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.
- c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, listed pressure connectors, listed clamps or other approved listed means.

GROUNDING CABLE

The cable shall meet the requirements of Section 817 of the "Standard Specifications".

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6, 1C**, which price shall be payment in full for furnishing labor and material including grounding clamps, cable and hardware. All ground rods shall be incidental to the cost of associated items for Concrete Foundations and Service Installation.

Special Provision

Grounding Existing Handhole Frame and Cover

Description. This work shall consist of all materials and labor required to bond the equipment grounding conductor to the existing handhole frame and handhole cover. All installations shall meet the requirements of the details in "District 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications.

The equipment grounding conductor shall be bonded to the handhole frame and to the handhole cover. Two (2) ½-inch diameter x 1 ¼-inch long hex-head stainless steel bolts, spaced 1.75-inches apart center-to-center shall be fully welded to the frame and to the cover to accommodate a heavy duty Listed grounding compression terminal (Burndy type YGHA or approved equal). The grounding compression terminal shall be secured to the bolts with stainless steel split-lock washers and nylon-insert locknuts.

Welding preparation for the stainless steel bolt hex-head to the frame and to the cover shall include thoroughly cleaning the contact and weldment area of all rust, dirt and contaminants. The Contractor shall assure a solid strong weld. The welds shall be smooth and thoroughly cleaned of flux and spatter. The grounding installation shall not affect the proper seating of the cover when closed.

The grounding cable shall be paid for separately.

Method of Measurement. Units measured for payment will be counted on a per handhole basis, regardless of the type of handhole and its location.

Basis of Payment. This work shall be paid for at the contract unit price **EACH** for **GROUNDING EXISTING HANDHOLE FRAME AND COVER** which shall be payment in full for grounding handhole complete.

Special Provision

Service Installation Pole Mount

The installation of a service installation shall meet the requirements of Section 805 of the Standard Specifications, except as follows:

All installations shall meet the requirements of the details in the "District 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications.

Materials:

1. General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
2. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
3. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
4. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.
5. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.
6. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
7. The Contractor shall notify the Commonwealth Edison Marketing Representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Commonwealth Edison Marketing Representative has received service charge payments from the Contractor. Prior to contacting the Commonwealth Edison marketing

representative for service connection, the service installation controller cabinet and cable must be installed for inspection by Commonwealth Edison.

8. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10' (3.0 meters) in length, and 3/4" (20 mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation:

1. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
2. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.

The Commonwealth Edison Marketing Representative for this project is:

Mr.

Telephone:

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **SERVICE INSTALLATION, POLE MOUNT**, which shall be payment in full for furnishing and installing the service installation complete. **SERVICE INSTALLATION, POLE MOUNT** shall include the 3/4" (20 mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility company to provide electrical services to the service installation will be paid for in accordance with Article 109.05 of the Standard Specifications.

Special Provision**Service Installation Ground Mount**

This work shall consist of furnishing and installing a service installation for underground service connection.

Materials:

1. General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
2. The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel 0.075-inch (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.
3. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
4. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.
5. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.
6. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
7. The Contractor shall notify the Commonwealth Edison Marketing Representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Commonwealth Edison Marketing Representative has received service charge payments from the Contractor. Prior to contacting the Commonwealth Edison marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by Commonwealth Edison.

8. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10' (3.0 meters) in length, and 3/4" (20 mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation:

1. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
2. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

The Contractor shall make connections to the line side of the circuit breaker and install the remainder of the electric cable in the conduit to the Commonwealth Edison transformer pad.

The Commonwealth Edison Marketing Representative for this project is:

Mr.

Telephone:

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **SERVICE INSTALLATION, GROUND MOUNT**, which price shall be payment in full-for furnishing and installing the service installation complete. The type A foundation which includes the ground rod shall be paid for separately. Any charges by the utility company to provide electrical services to the service installation will be paid for in accordance with Article 109.05 of the Standard Specifications.

Special Provision

Electric Service

The Commonwealth Edison Company or Division of Commonwealth Edison Company shall provide and install all necessary cable, switchgear and transformers on the power pole to be used for the service to the control cabinet as called for on the plans; provide service drops, install rigid steel or fibre portion of the pole riser (rigid steel or fibre conduit and fittings to be furnished by the Contractor); connect service drops to cable brought to service pole by Contractor. Where transformer manholes are used, electrical service shall be as called for on the plans.

The Cook County Highway Department has contacted the power company and secured the location and cost of electrical facilities. It will be the responsibility of the Electrical Contractor to contact the power company, request and consummate the agreement for these facilities as described herein and at locations as shown on the plans.

Basis of Payment: This work will be paid for at the **LUMP SUM** price for **ELECTRIC SERVICE** which work shall include all labor, materials, equipment, tools and incidentals necessary to complete the work as specified herein and as shown on the plans. The Commonwealth Edison Company or Division thereof shall bill the Electrical Contractor direct, for all costs incurred as a result of work done under this Special Provision for which a Lump Sum price of \$ _____ has been included in the Schedule of Prices.

The above figure includes the standard five (5) percent handling charge for the first \$10,000.00 and one (1) percent (%) for any amount greater than \$10,000.00.

Special Provision

Handhole

The installation of a handhole shall meet the requirements of Section 814 of the Standard Specifications, except as follows:

All concrete handholes are to be cast in place against undisturbed earth. No pre-cast concrete handholes will be accepted.

The handholes shall have an inside dimension of 21-1/2" (549 mm) minimum. Frames and lid openings shall match this dimension.

The cover of the handhole shall be labeled "TRAFFIC SIGNALS" with legible raised letters.

All conduits will enter the handhole at a depth of 30" (760 mm) except for the conduits between the curb and handhole for detector loops when the handhole is less than five (5) feet (1.52 m) from the detector loop.

All cable hooks are to be hot dipped galvanized in accordance with AASHTO Specification M111.

For grounding purposes the handhole frame shall have provisions for a 7/16" (15.875 mm) diameter stainless bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole frame and cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (300 mm).

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 3/8" 9.525 mm (9.525 mm) diameter and extend into the handhole at least 6 inches (150 mm). Hooks shall be placed a minimum of 12 inches (300 mm) below the lid or lower if additional space is required.

The French drain shall be constructed of crushed stone or gravel, Gradation CA 5 or CA 7, and according to Section 601 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **HANDHOLE, HEAVY-DUTY HANDHOLE, or DOUBLE HANDHOLE**, which price shall be payment in full for all necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

Special Provision

**Rebuild Existing Handhole
Rebuild Existing Heavy Duty Handhole
Rebuild Existing Double Handhole**

This item shall consist of rebuilding a handhole, heavy duty handhole and/or double handhole at location(s) as shown on the plans or as directed by the Engineer. The work shall consist of removing the frame and cover and the walls of the handhole to a depth of thirteen (13) inches (330 mm) below finished grade.

Upon completion of the above work, for handhole and heavy duty handhole four (4) holes, for the double handhole six (6) holes, four (4) inches (100 mm) in depth and one half (1/2) inch (15 mm) in diameter, shall be drilled into the remaining concrete, for handhole and heavy duty handhole one (1) hole centered on each wall and for the double handhole one (1) hole centered on each side wall and two (2) holes evenly spaced on the front and back walls. Number 3 steel dowels eight (8) inches (200 mm) in length shall be furnished and installed in the drilled holes with masonry epoxy.

All concrete debris shall be removed from the right-of-way to a location approved by the Engineer.

The area adjacent to each wall of the handhole shall be excavated to allow forming. All steel hooks (galvanized), frame and cover and concrete shall be provided to construct a rebuilt handhole, heavy duty handhole or double handhole according to applicable portions of the Standard Specifications. If the Contractor damages the existing frame and cover, the Contractor shall be responsible for replacing the frame and cover at no cost to the County.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **REBUILD EXISTING HANDHOLE, REBUILD EXISTING HEAVY DUTY HANDHOLE, REBUILD EXISTING DOUBLE HANDHOLE**, which price shall be payment in full for all labor, all materials, and equipment necessary to complete the work described above and as indicated in the Plans.

Special Provision**Concrete Foundation**

The installation of a concrete foundation shall meet the requirements of Section 878.03 of the Standard Specifications and the Standard Drawing for Concrete Foundations, except as follows:

All anchor bolts shall be according to Section 1006.09, except all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hook.

Concrete foundation, type A, for traffic signal posts shall provide anchor bolts meeting the requirements of Section 1006.09 of the Standard Specifications, with the bolt pattern specified within the "District 1 Standard Traffic Signal Design Details". All Type A foundations shall be a minimum depth of 48" (1.22 m).

Concrete foundation, type D, for traffic signal cabinets shall be a minimum of 48" (1.22 m) long and 31" (790 mm) wide. The concrete apron shall be 36" X 48" X 5" (910 mm X 1220 mm X 130 mm). Anchor bolts shall meet the requirements of Section 1006.09 of the Standard Specifications with bolt spacing as required by the manufacturer. All Type D foundations shall be a minimum depth of 48" (1.22 m).

Concrete foundation, type E, for mast arm and combination mast arm poles shall meet the following requirements:

Mast Arm Length	Foundation Depth *	Foundation Diameter	Spiral Diameter	Quantity of No. 15 (No. 5) Bars
Less than 9.1 m (30')	3.0 m (10'-0")	750 (30)	600 (24)	8
Greater than or equal to 9.1 m (30') and less than 12.2 m (40')	4.1 m (13'-6")	750 (30)	600 (24)	8
	3.4 m (11'-0")	900 (36)	750 (30)	8
Greater than or equal to 12.2 m (40') and less than 15.2 m (50')	4.0 m (13'-0")	900 (36)	750 (30)	12
Greater than or equal to 15.2 m (50') and up to 16.8 m (55')	4.6 m (15'-0")	900 (36)	750 (30)	12

- * These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined Compressive Strength (Q_u) > 100kPa (1.0 tsf). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

No foundation is to be poured until the Resident Engineer gives approval as to the depth of the foundation.

Foundations used for Roadway Lighting shall provide an extra 2-1/2 inch (65 mm) duct.

Basis of Payment: This work will be paid for at the contract unit price per **FOOT (METER)** of depth for:

CONCRETE FOUNDATION, TYPE A
CONCRETE FOUNDATION, TYPE D
CONCRETE FOUNDATION, TYPE E - 30" (750 mm) Dia.
CONCRETE FOUNDATION, TYPE E - 36" (900 mm) Dia.

which price shall be payment in full for all necessary excavating or drilling, back filling, disposal of unsuitable material, form work, ground rods and furnishing all materials within the limits of the foundation, except anchor bolts for type E foundation.

Special Provision

Modify Existing Type "D" Foundation

This item shall consist of the partial removal of an existing Type "D" Foundation at the location shown on the plans, or as directed by the Engineer. The existing foundation shall be removed to a depth of at least twelve (12) inches below finished grade. The disposal of the concrete debris outside of the right-of-way shall be included in this item. The existing conduit shall remain in place and shall be carefully protected. The new conduits from the double handhole shall be installed, if required, as shown on the plans.

Upon completion of the above work, holes for steel dowels of the size indicated shall be drilled in the remaining concrete where indicated on the drawings.

The adjacent area shall be excavated and forming with anchor bolts and new conduit stubs provided to provide a concrete foundation for a Type IV cabinet. The contractor shall follow the recommendations of the manufacturer, subject to approval of the Engineer, in forming and constructing the foundation.

Provide a three (3) foot by four (4) foot wide P.C.C. apron sidewalk, five (5) inches thick, on the side of the access door to the controller to facilitate servicing the controller.

Anchor bolts shall be new and shall meet all the requirements of Section 1006.09 and 1077.01 of the Standard Specifications.

All anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hook.

Basis of Payment: This work shall be paid for at the contract unit price **EACH** for **MODIFY EXISTING TYPE "D" FOUNDATION**, which price shall be payment in full for all labor, materials and equipment necessary to complete the work described above and as indicated on the drawings. The removal of the existing traffic signal controller shall be incidental to this pay item, as well as the pulling and reinstalling of the existing cable from conduit.

Special Provision

Remove Existing Traffic Signal Equipment

The removal of existing traffic signal equipment shall meet the requirements of Section 895.05 of the Standard Specifications, except as follows:

This work shall consist of removing the existing traffic signal equipment at an intersection as listed and as shown on the plans.

All equipment to be returned to an Agency shall be delivered by the Contractor to the Agency's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the Agency's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the Agency, including model and serial numbers, where applicable. He shall also provide a copy of the contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the Agency's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time he takes maintenance of the signal installation until the acceptance of a receipt drawn by the Agency's Electrical Maintenance Contractor indicating the items have been returned in good condition.

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of by them outside the right-of-way at their expense.

All equipment is to be disassembled so as to make for easy loading and storage into Agency stock as per the Engineers instructions.

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT** per intersection which price shall be payment in full for removing the equipment, and storing and/or disposing of it as required. The salvage value of the equipment retained by the Contractor shall be reflected in this contract unit price.

Special Provision

Temporary Traffic Signal Installation

This item shall consist of furnishing, installing, maintaining and removing a temporary traffic signal installation at an existing intersection as shown on the plans and as described herein. The energy charges for the operation of the traffic signal installation shall be paid for by others if the installation is replacing an existing signal. Otherwise charges shall be paid for under Section 109.04 of the Road Specifications.

Only an approved Equipment Vendor will be allowed to assemble the temporary traffic signal cabinet. Only controllers supplied by an approved Equipment Vendor will be approved for use on temporary traffic signals. Only an approved Closed Loop Equipment Vendor shall assemble and test a temporary railroad interconnected traffic signal cabinet. (Refer to Traffic Actuated Controller Specification). A representative of the approved control Equipment Vendor shall be present at the temporary traffic signal turn-on inspection.

All "railroad interconnected" temporary traffic signal controllers and cabinets shall be newly constructed. Only controllers and cabinets supplied by one of the IDOT District 1 approved closed loop Equipment Manufacturers will be allowed.

The installation of a temporary traffic signal installation shall meet the requirements of Section 890 and 802.07 of the Standard Specifications and the Standard Drawings, except as follows:

Equipment: The Contractor shall provide the following:

- All control equipment for the temporary traffic signal shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be of the same manufacturer brand and model number with current software installed.
- Only controllers supplied by one of the Cook County Highway Department approved closed loop equipment manufacturers will be approved for use at temporary signal locations. Controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with approved CCHD or District 1 monitoring software installed in NEMA TS1 or TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length.
- All temporary traffic signal controllers shall meet or exceed the requirements of section 857 with regards to internal time coordination and preemption. The controller settings shall be set in the field as directed by the Engineer.
- All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 100 mm (4 inch) diameter holes to run the electric cables through. The 100 mm (4 inch) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
- Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 807 of the Standard Specifications and shall meet the requirements of the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems".

- All traffic signal sections and pedestrian signal sections shall be of the 12" (300 mm) type. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.
- The existing system interconnect is to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. If the Master Controller is at this location it and its associated phone line(s) shall be maintained either in this cabinet or with patch cables as shown in the plans. All labor and equipment required to install and maintain the existing interconnect as part of the temporary traffic signal installation shall be incidental to the item Temporary Traffic Signal Installation.
- All existing street name and intersection regulatory signs shall be removed from existing poles and relocated and securely fastened to the signal span wire. If new mast arm assembly and poles and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.
- All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the County. All labor and material required to install and maintain the emergency vehicle pre-emption installation shall be incidental to the item Temporary Traffic Signal Installation.
- All temporary traffic signal installations shall have vehicle detection shall be installed as shown on the plans, or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. Minor cross streets shall have vehicular detection provided by Microwave Vehicle Sensors or Video Vehicle Detection System as shown on the plans or as directed by the Engineer. The microwave vehicle sensor or video vehicle detection system shall be approved by CCHD before furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system.

All labor and material required to comply with these requirements shall be considered incidental to the bid price of temporary traffic signal installation.

Maintenance Procedures: The Contractor shall perform the following maintenance procedures for each temporary installation designated to remain in operation during construction.

The Contractor Shall:

- Have on staff electricians with IMSA Level II certification to provide signal maintenance.

- Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, light detectors, lamp failures, and general operation of the traffic signal.
- Check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to insure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment.
- Provide immediate corrective action to replace burned out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
- Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.
- Provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. A near right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. At approaches, where a Yellow Flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all his vehicles assigned to the maintenance of traffic signal installations with a sufficient number of Stop Signs as specified herein. The Contractor shall maintain sufficient number of spare Stop Signs in stock at all times to replace Stop Signs which may be damaged or stolen.
- Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
- The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period of time that the original control equipment is being overhauled
- Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each and every day of the year for emergency calls by the Engineer.
- Respond to all emergency calls from the Department or municipality within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the temporary traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's or the County's Electrical Maintenance Contractor perform the maintenance work required. The State's or County's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor.

When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as any physical work begins on the contract or any portion thereof until which time the temporary

signals are functioning and the existing signals are removed. Maintenance responsibility of the existing signals shall be incidental to those previously listed for Temporary Traffic Signal Installation. In addition, seven days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the Design Engineer at (312) 603-1730 for an inspection of the Installation(s). The Design Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the State's or County's Electrical Maintenance Contractor or the Municipalities Contractor prior to the Contractor taking over maintenance of the installation. The Resident Engineer, Engineer, and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this section.

Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, District 1 Traffic Signal Specifications and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the above requirements for "Temporary Traffic Signal Installation". In addition all electric cable shall be aurally suspended, at a minimum height of 18 feet (5.5 m), on temporary wood poles (Class 5 or better) of 45 feet (13.7 m), minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection may be used in place of the detector loops as approved by the Engineer.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **TEMPORARY TRAFFIC SIGNAL INSTALLATION**, which price shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, all material required, the installation and complete removal of the temporary traffic signal. Sixty percent of the bid price will be paid following approval of each installation. The remaining 40 percent will be paid following removal of each installation.

Special Provision

Maintenance of Existing Traffic Signal Installation

This item shall consist of maintaining the existing traffic signal installation at an intersection as shown on the plans and as described herein. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the contract or any portion thereof. The energy charges for the operation of the traffic signal installation shall be paid for by others. The maintenance of an existing traffic signal installation shall meet the requirements of Section 802.07 and 850 of the Standard Specifications except as follows:

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, telephone service installations, communications cables and conduit to adjacent intersections.

Seven days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall request that the Resident Engineer contact the Cook County Design Engineer at (312) 603-1730 for an inspection of the installation(s). The Design Engineer shall establish a date and time of inspection and at this time shall check the installation to determine if any corrective work should be done by the State, the County, or the Municipalities Electrical Maintenance Contractor prior to the Contractor taking over the maintenance of the installation(s). The Resident Engineer, the Design Engineer, and the State, County, or Municipality Maintenance Contractor and the Contractor shall mutually agree on the date of maintenance transfer to the Contractor for this contract.

Maintenance Procedures: The Contractor shall perform the following maintenance procedures for each existing installation designated to remain in operation during construction:

- Have on staff electricians with IMSA Level II certification to provide signal maintenance.
- Patrol and inspect each installation every two (2) weeks for proper alignment of signal heads, light detectors, lamp failures, and general operation of the traffic signal.
- Check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to insure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment.
- Provide immediate corrective action to replace burned out lamps or damaged sockets. When lamps are replaced, the reflector and lens shall be cleaned. All replacement lamps shall meet the approval of the Engineer. The Contractor shall repair or replace all defective equipment from any cause whatsoever.
- Maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.
- Provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. A near right signal must also be maintained. When repairs at a signalized intersection require that the controller be disconnected and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor is required to place stop signs (R1-1-36) at each approach to the intersection as a temporary means of regulating traffic. At approaches, where a Yellow Flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all his vehicles assigned to the maintenance of traffic signal installations with a sufficient number of Stop Signs as

specified herein. The Contractor shall maintain sufficient number of spare Stop Signs in stock at all times to replace Stop Signs which may be damaged or stolen.

- Replace defective or damaged equipment. If the proper sequence with full detection cannot be obtained immediately, a controller which will provide the proper sequence and full detection shall be installed within twelve (12) hours of removal of the original controller.
- The Contractor shall be required to maintain the existing type of equipment and sequence of operations during the period of time that the original control equipment is being overhauled
- Provide the Engineer with the names, addresses, and telephone numbers of two (2) persons qualified and assigned to the maintenance of the traffic signal installation. These people must be made available 24 hours per day, each and every day of the year for emergency calls by the Engineer.
- Respond to all emergency calls from the Department or municipality within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the State or County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the temporary traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's or the County's Electrical Maintenance Contractor perform the maintenance work required. The State's or County's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

Basis of Payment: This work will be paid for at the contract unit price **EACH** for **MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION**, which price shall be payment in full for all materials, equipment, and labor necessary to maintain the existing traffic signals as shown on the plans. Each intersection shall be paid for separately.

Special Provision

Emergency Vehicle Priority System

The installation of an emergency vehicle priority system shall meet Sections 887 and 1072 of the Standard Specifications, except as revised with this Special Provision.

It shall be the Contractor's responsibility to contact the municipality or Fire District to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the Contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. A letter from the Agency is to be included with equipment submittals indicating what brand of equipment is acceptable to the Agency.

All new installations shall be equipped with confirmation beacons as shown on the "District 1 Standard Traffic Signal Design Details". The confirmation beacon shall consist of a 150 watt Par 38 flood lamp for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signaled by a flashing indication at the rate specified by Section 4E-5 of the "Manual On Uniform Traffic Control Devices". The stopped pre-empted movements shall be signaled by a continuous indication.

All light operated systems shall operate at a uniform rate of 14.035 Hz ± 0.002 , or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the County.

The pre-emption detector amplifier shall be paid for on a basis of one (1) each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

Basis Of Payment: The transmitting unit, the detector unit, and the phasing unit will be paid for at the Contract unit price **EACH** for **LIGHT TRANSMITTER, LIGHT DETECTOR, or LIGHT DETECTOR AMPLIFIER** which price shall be payment in full for furnishing and installing the light transmitter, light detector, or light detector amplifier complete, with necessary connections for proper operation. The furnishing and installing of a confirmation beacon shall be considered incidental to the pay item for **LIGHT DETECTOR**.

The lead-in cable will be paid for at the contract unit price per **FOOT (METER)** for **ELECTRIC CABLE IN CONDUIT, NO. 20, 3/C, TWISTED, SHIELDED** or **ELECTRIC CABLE AERIAL SUSPENDED, NO. 20, 3/C, TWISTED, SHIELDED** which price shall be payment in full for furnishing and installing the lead-in cable and making all electrical connections. The electric cable shall be shielded and have three (3) stranded conductors colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the manufacturer of the Emergency Vehicle Priority System Equipment.

Special Provision

Relocate Existing Emergency Vehicle Priority System, Detector Unit

This item shall consist of relocating the existing emergency vehicle priority system light detector from an existing traffic signal mast arm or post to the new traffic signal mast arm or post as indicated in the plans or as directed by the Engineer.

The work shall include disconnecting light detector and reconnecting it to the new cable.

The emergency vehicle system is not to be inoperative for more than forty-eight (48) hours and the Contractor must notify the municipality or Fire Protection District seventy-two (72) hours prior to the disconnection of the equipment.

Basis of Payment: This item will be paid for at the contract unit price **EACH** for **RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT** which price shall be payment in full for disconnecting the existing light detector, relocating and connecting the light detector to the new cable complete and operating to the satisfaction of the Engineer.

The confirmation beacon and light detector lead-in cables will be paid for at the contract unit price per **FOOT** for **ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C, ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL NO. 14 3C, or ELECTRIC CABLE AERIAL SUSPENDED, NO. 20 3C, TWISTED, SHIELDED**, which price shall be payment in full for furnishing and installing the lead-in cable and making all electrical connections. The length of measurement shall be the distance horizontally measured between changes in direction, including cable in mast arms and slack cables. All vertical cables will not be measured for payment. Slack cables will be paid for as lead-in cables in conduit.

Special Provision

Relocating Existing Emergency Vehicle Priority System, Phasing Unit

This item shall consist of relocating the existing emergency vehicle priority system phasing unit (light detector amplifier) from an existing traffic signal controller to the new traffic signal controller cabinet, as indicated in the plans or as directed by the Engineer.

The work shall include disconnecting the emergency vehicle priority system phasing unit(s) (light detector amplifier) and reconnecting it/them to a new wiring harness which is to be factory wired into the new traffic signal controller cabinet.

The emergency vehicle system is not to be inoperative for more than forty-eight (48) hours and the Contractor must notify the municipality or Fire Protection District seventy-two (72) hours prior to the disconnecting of the equipment.

Basis of Payment: This item will be paid for at the contract unit price **EACH** for **RELOCATING EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT** which price shall be payment in full for disconnecting the existing phasing unit (light detector amplifier), relocating and connecting the phasing unit (light detector amplifier) to the new wiring harness at its new location complete and operating to the satisfaction of the Engineer.

Special Provision

Confirmation Beacon System

The installation of a confirmation beacon system shall be installed into an existing emergency vehicle priority system as shown on the plans and as stated herein.

The confirmation beacon shall consist of a 150 watt Par 38 flood lamp for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signaled by a flashing indication at the rate specified by Section 4E-5 of the "Manual on Uniform Traffic Control Devices". The stopped pre-emption movements shall be signaled by a continuous indication.

Basis of Payment: The confirmation beacon will be paid for at the contract unit price **EACH** for **CONFIRMATION BEACON SYSTEM**, which price shall be payment in full for furnishing and installing the confirmation beacon complete, with necessary connections for proper operation.

Special Provision

Re-optimize Traffic Signal System

This work shall consist of providing a revised Signal Coordination and Timing (SCAT) Report and implementing optimized timings to an existing previously optimized closed loop traffic signal system. This work is required due to the addition of a signalized intersection to an existing system or a modification of an existing traffic system which affects the quality of an existing system's operation. **Maintenance of the subject intersection shall not be accepted by the Department until the signal is turned on, is acceptable and the re-optimized timings are approved and implemented.**

After the new signalized intersection is added or the existing signal is modified, the traffic signal system shall be re-optimized by a Consultant who is still monitoring the Traffic Signal System, if any, or a CCHD approved Consultant.. Failure to get County approval of the Consultant will cause the SCAT work not to be reviewed and will be at the sole cost of the Contractor. Any signal timing problems/complaints shall be investigated by the Consultant and as requested by the Traffic Signal Design Engineer and resolved to the Department's satisfaction within a three-year period after the first report is submitted to CCHD. The consultant will be required to assist in trouble shooting the optimized system for problems encountered with the system at no cost to the County. Trouble shooting shall include (but not limited to) answering complaints, writing letters, making split adjustment, identifying and correcting oscillation problems, etc.. The consultant shall not charge extra man-hours for this three-year trouble shooting period. The Contractor shall contact the Traffic Signal Design Engineer at (312) 603-1730 for a Consultant who is still monitoring the Traffic Signal System or for a listing of approved Consultants.

A listing of existing signal equipment, interconnect information and existing phasing/timing patterns may be obtained from the Department if available and as appropriate. The existing SCAT Report is available for review at the CCHD office and if the Consultant provides blank floppy disk, copies containing software runs for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall consult with the Traffic Signal Design Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system; in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the re-optimization.

Traffic counts shall be taken at the subject intersection a minimum of 30 days after the traffic signals are approved for operation by the Design Engineer. Seven day/twenty-four hour automatic traffic recorder counts will be required and manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m. and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday, and if necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, heavy vehicles, buses and pedestrian movements.

A capacity analysis shall be conducted at the subject intersection to determine its level of service and degree of saturation. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system with minor adjustments if necessary. Changes to the cycle lengths and offsets for the entire system may be required due to the addition/modification of the subject intersection. Both volume and occupancy shall be considered when developing the re-optimized timing program. Signal system optimization analyses shall be conducted utilizing SYNCHRO, PASSER II, TRANSYT 7F, SIGNAL 2000, or other appropriate approved computer software.

If the system is being re-optimized due to the addition of a signalized intersection, all the intersections shall be re-addressed according to the current standard of CCHD. The proposed signal timing plan shall be forwarded to CCHD for review and approval seven days prior to the traffic signal turn on at the intersection. The timing plan shall be implemented at least two working days prior to the turn on of the traffic signal. The timing plan shall include a traffic responsive program and a time-of-day program which

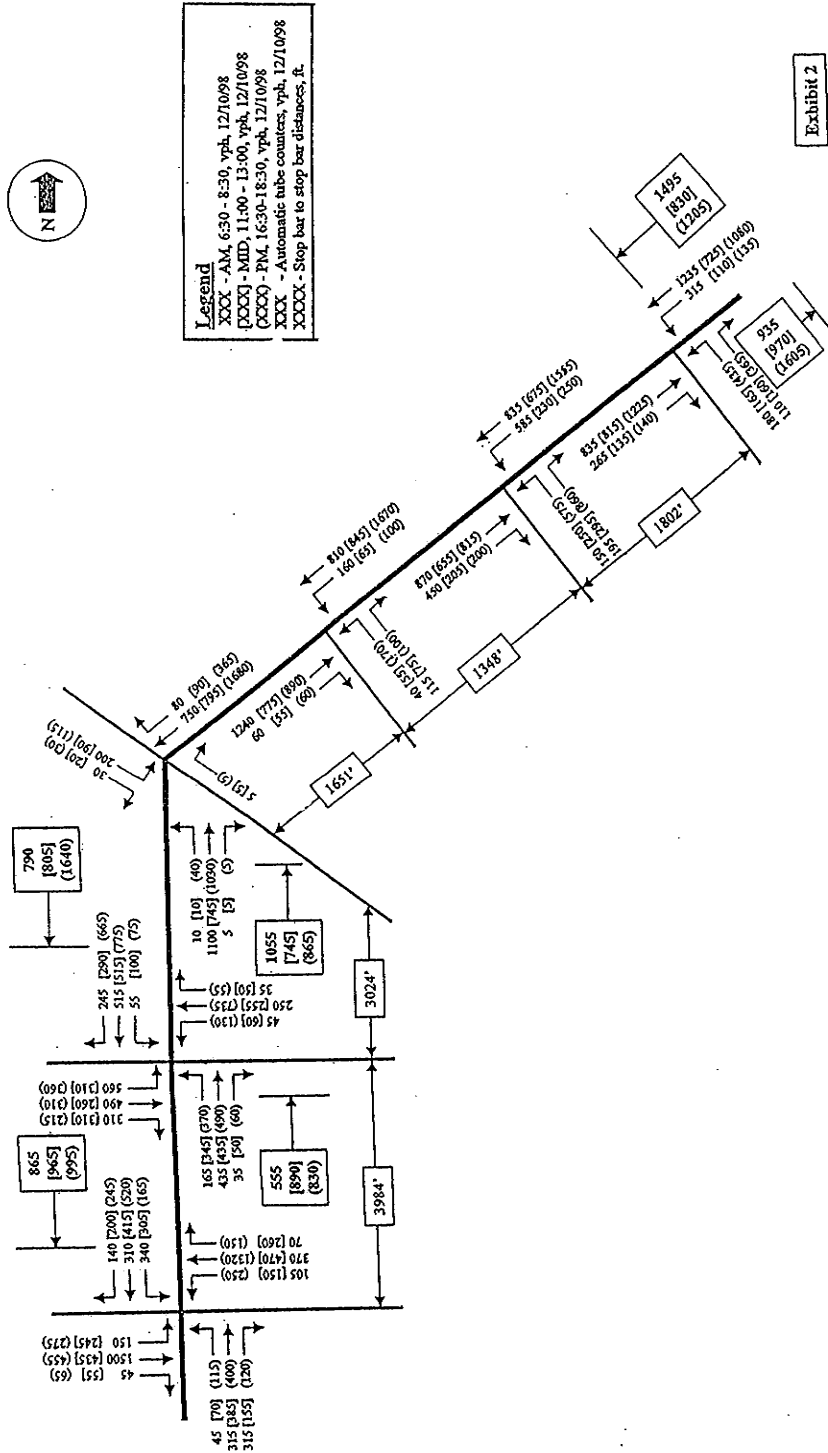
may be used as a back-up system. After downloading the system timings, the Consultant shall make fine tuning adjustments to the timing in the field to alleviate observed adverse operating conditions and to enhance operations. The timing plan shall be re-evaluated after the signal has been turned on and traffic has had an opportunity to adjust to the new signal. Any necessary timing changes shall be made at that time with the approval of the Design Engineer.

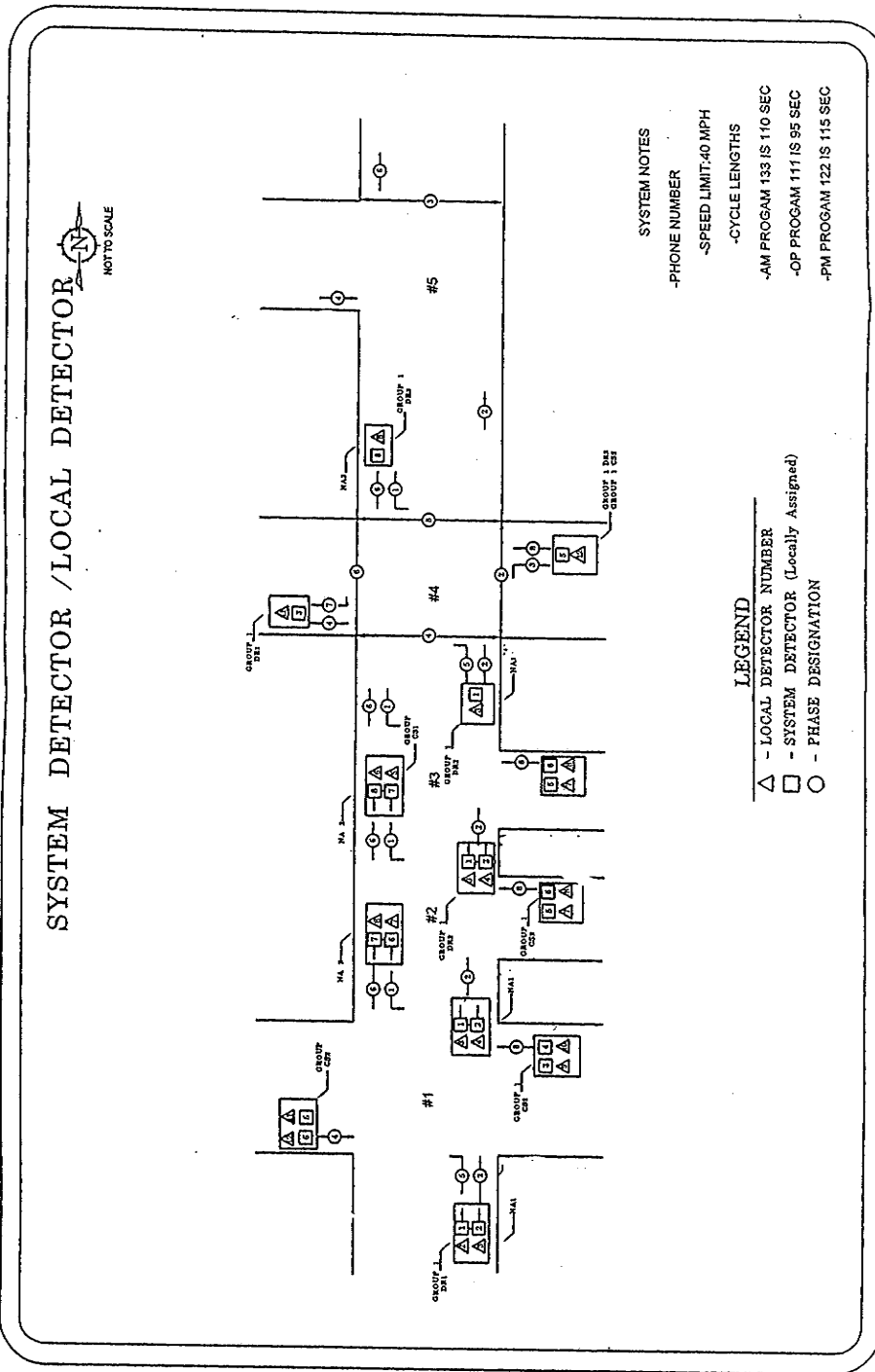
The Contractor shall notify the Consultant the dates of turn-on. The Manufacturer shall furnish box prints as soon as the cabinets are tested and accepted.

The Consultant shall furnish to CCHD an original and two copies of the revised SCAT Report for the re-optimized system. The report shall contain the following: turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analyses for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results and special recommendations and/or observations. The new report shall follow the format of the old report and shall incorporate all data from the old report which remains unchanged. System detector/ local detector relationship layout, Time of Day plan layout, system overview layout, traffic volume layout, PC travel chart for comparing before/after traffic flow implement shall be included in the report. Copies of the entire database including signal system optimization analyze files, intersection displays, zone map with system numbering loops and any other displays which the system software allows shall be furnished with electronic copy via CD to CCHD and to CCHD's Traffic Signal Maintenance Contractor.

Basis of Payment: This work shall be paid for at the contract unit price per **LUMP SUM** for **RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM**, which price shall be payment in full for performing all work described herein.

Road Volumes





System 13

Pedestrian Phases	111 (Pattern 1)		112 (Pattern 2)		113 (Pattern 3)		114 (Pattern 4)		115 (Pattern 5)		116 (Pattern 6)		117 (Pattern 7)		118 (Pattern 8)	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
1	15 65 0 0	30 64 0 0	15 65 0 0	30 64 0 0	15 61 0 0	30 64 0 0	15 65 0 0	30 64 0 0	15 65 0 0	30 64 0 0	15 65 0 0	30 64 0 0	15 65 0 0	30 64 0 0	15 65 0 0	30 64 0 0
2	0 80 0 20	0 94 0 26	0 80 0 20	0 94 0 26	0 76 0 24	0 94 0 26	0 80 0 20	0 94 0 26	0 80 0 20	0 94 0 26	0 80 0 20	0 94 0 26	0 80 0 20	0 94 0 26	0 80 0 20	0 94 0 26
3		30 68 0 0		36 63 0 0	20 53 0 0	36 63 0 0		36 63 0 0	20 60 0 0	36 63 0 0		36 63 0 0	20 60 0 0	36 63 0 0	20 60 0 0	36 63 0 0
4		0 98 0 22	0 98 0 22	0 98 0 22	0 73 0 27	0 98 0 22	0 98 0 22	0 98 0 22	0 80 0 40	0 98 0 22	0 80 0 40	0 98 0 22	0 80 0 40	0 98 0 22	0 80 0 40	0 98 0 22
5		20 77 0 0	20 77 0 0	20 77 0 0	13 65 0 0	20 77 0 0	20 77 0 0	20 77 0 0	15 80 0 0	20 77 0 0	15 80 0 0	20 77 0 0	15 80 0 0	20 77 0 0	15 80 0 0	20 77 0 0
6		0 97 0 23	0 97 0 23	0 97 0 23	0 78 0 28	0 97 0 23	0 97 0 23	0 97 0 23	0 85 0 35	0 97 0 23	0 85 0 35	0 97 0 23	0 85 0 35	0 97 0 23	0 85 0 35	0 97 0 23
7		13 64 0 0	13 64 0 0	13 64 0 0	11 52 0 0	13 64 0 0	13 64 0 0	13 64 0 0	12 70 0 0	13 64 0 0	12 70 0 0	13 64 0 0	12 70 0 0	13 64 0 0	12 70 0 0	13 64 0 0
8		17 43 14 46	17 43 14 46	17 43 14 46	15 36 14 35	17 43 14 46	17 43 14 46	17 43 14 46	15 50 15 40	17 43 14 46	15 50 15 40	17 43 14 46	15 50 15 40	17 43 14 46	15 50 15 40	17 43 14 46
9		17 43 26 34	17 43 26 34	17 43 26 34	18 33 20 28	17 43 26 34	17 43 26 34	17 43 26 34	25 40 22 33	17 43 26 34	25 40 22 33	17 43 26 34	25 40 22 33	17 43 26 34	25 40 22 33	17 43 26 34
10		18 35 14 53	18 35 14 53	18 35 14 53	20 22 15 33	18 35 14 53	18 35 14 53	18 35 14 53	14 32 15 59	18 35 14 53	14 32 15 59	18 35 14 53	14 32 15 59	18 35 14 53	14 32 15 59	18 35 14 53
11		13 40 14 53	13 40 14 53	13 40 14 53	12 40 16 32	13 40 14 53	13 40 14 53	13 40 14 53	14 32 19 55	13 40 14 53	14 32 19 55	13 40 14 53	14 32 19 55	13 40 14 53	14 32 19 55	13 40 14 53
12		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13		19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	0	19 30 15 30	0	19 30 15 30	0	19 30 15 30	0	19 30 15 30
14		19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	19 30 15 30	0	19 30 15 30	0	19 30 15 30	0	19 30 15 30	0	19 30 15 30

Phases	1	2	3	4	5	6	7	8
Timings in seconds	1	2	3	4	5	6	7	8

Zone 13			
PROGRAM	Time	COS	PATTERN
1	0:00	Free	0
1	5:30	111	1
1	7:00	112	4
1	9:00	211	2
1	15:15	311	3
1	19:00	211	2
2	0:00	Free	0
2	6:00	211	2

Pedestrian Phases	2	2	4	4	6	6	8	8
Timings in seconds	2	2	4	4	6	6	8	8

Revised on: November 2, 2000

Special Provision

Optimize Traffic Signal System

This work shall consist of providing a Signal Coordination and Timing (SCAT) Report and implementing optimized timings to a new closed loop traffic signal system. Maintenance of the subject system shall not be accepted by the Department until optimized timings are implemented. This work shall also consist of providing temporary traffic signal timings for all temporary traffic signals. This shall include adjustments to the programs during construction staging changes, traffic volume changes and traffic pattern changes throughout the construction project which could result in numerous changes to the signal timings and traffic signal system programs. Any signal timing problems/complaints shall be investigated by the Consultant and as requested by the Design Engineer and resolved to the Department's satisfaction within a five-year period after the first report is submitted to County. The consultant will be required to assist in trouble shooting the optimized system for problems encountered with the system at no cost to the County. Trouble shooting shall include (but not limited to) answering complaints, writing letters, making split adjustment, identifying and correcting oscillation problems, etc.. The consultant shall not charge extra man-hours for this five-year trouble shooting period. The consultant shall be responsible to monitor the above Traffic Signal Systems daily and or as requested by the Engineer. **The consultant shall call/fax CCHD and CCHD's Traffic Signal Maintenance Contractor prior to any data downloads.**

The traffic signal system shall be optimized by a CCHD approved Consultant. **Failure to get County approval of the Consultant will cause the SCAT work not to be reviewed and will be at the sole cost of the Contractor.** The Contractor shall contact the Design Engineer at (312) 603-1730 for a listing of approved Consultants. The Contractor shall have a contract with the approved Consultant at the pre-construction meeting or the contract award date, whichever date comes first.

The Consultant shall consult with the Design Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system; in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

Seven day/twenty-four hour automatic traffic recorder counts will be required and manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m. and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday, and as necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, heavy vehicles, buses and pedestrian movements.

A capacity analysis shall be conducted to determine its level of service and degree of saturation at each intersection. Appropriate signal timings shall be developed for each intersection. Both volume and occupancy shall be considered when developing the traffic responsive program. Signal system optimization analyses shall be conducted utilizing SYNCHRO, PASSER II, TRANSYT 7F, SIGNAL 2000, or other appropriate approved computer software.

The proposed signal-timing plan shall be forwarded to CCHD for review and approval seven days prior to any traffic signal turn on. The timing plan shall be implemented at least two working days prior to the turn on of the traffic signal. The timing plan shall include a time-of-day program. After all traffic signals on the system are turned on the Consultant will get detector logs from the system detectors for a minimum of two (2) weeks before writing a traffic responsive program. After downloading the system timings and programs, the Consultant shall make fine tuning adjustments to the timing in the field to alleviate observed adverse operating conditions and to enhance operations. The timing plan shall be reevaluated after the system has been turned on and traffic has had an opportunity to adjust to the new system. Any necessary timing changes shall, be made at that time with the approval of the Design Engineer. The final system timings shall include a traffic responsive program with time-of-day programs which may be used as a back-up system. The consultant shall identify the need for additional system loops both on the

arterial or side streets (early on after manual counts are taken as well as any possible deletion of system loops). Justify the need to add or subtract system detectors, check the local controller data before making the system program.

The Contractor shall notify the Consultant the dates of turn-on. Manufacturer shall furnish box prints as soon as the cabinets are test and accepted.

The Consultant shall furnish to CCHD an original and two copies of the SCAT Report for the optimized system. The report shall contain the following: turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analyses for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results, system detector/ local detector relationship layout, Time of Day plan layout, system overview layout, traffic volume layout, PC travel chart for comparing before/after traffic flow implement and special recommendations and/or observations. All the layouts shall be similar as the attached examples. Copies of the entire database including signal system optimization analyze files, intersection displays, zone map with system numbering loops, all original graphic PCX files (base files) and any other displays which the system software allows shall be furnished with electronic copy via CD to CCHD and to CCHD's Traffic Signal Maintenance Contractor.

Basis of Payment: This work shall be paid for at the contract unit price per lump sum for **OPTIMIZE TRAFFIC SIGNAL SYSTEM**, which price shall be payment in full for performing all work described herein.

Road Volumes

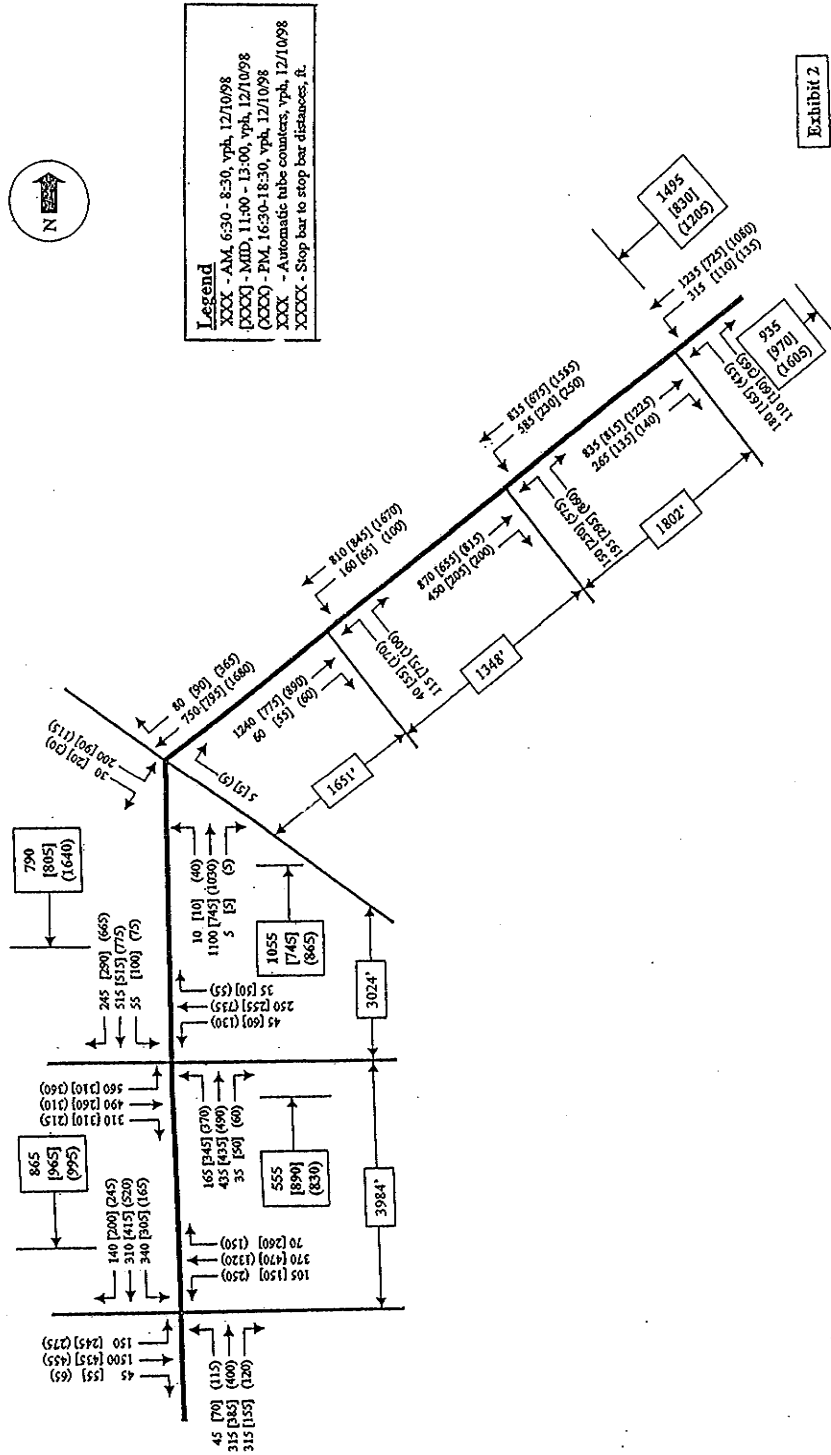
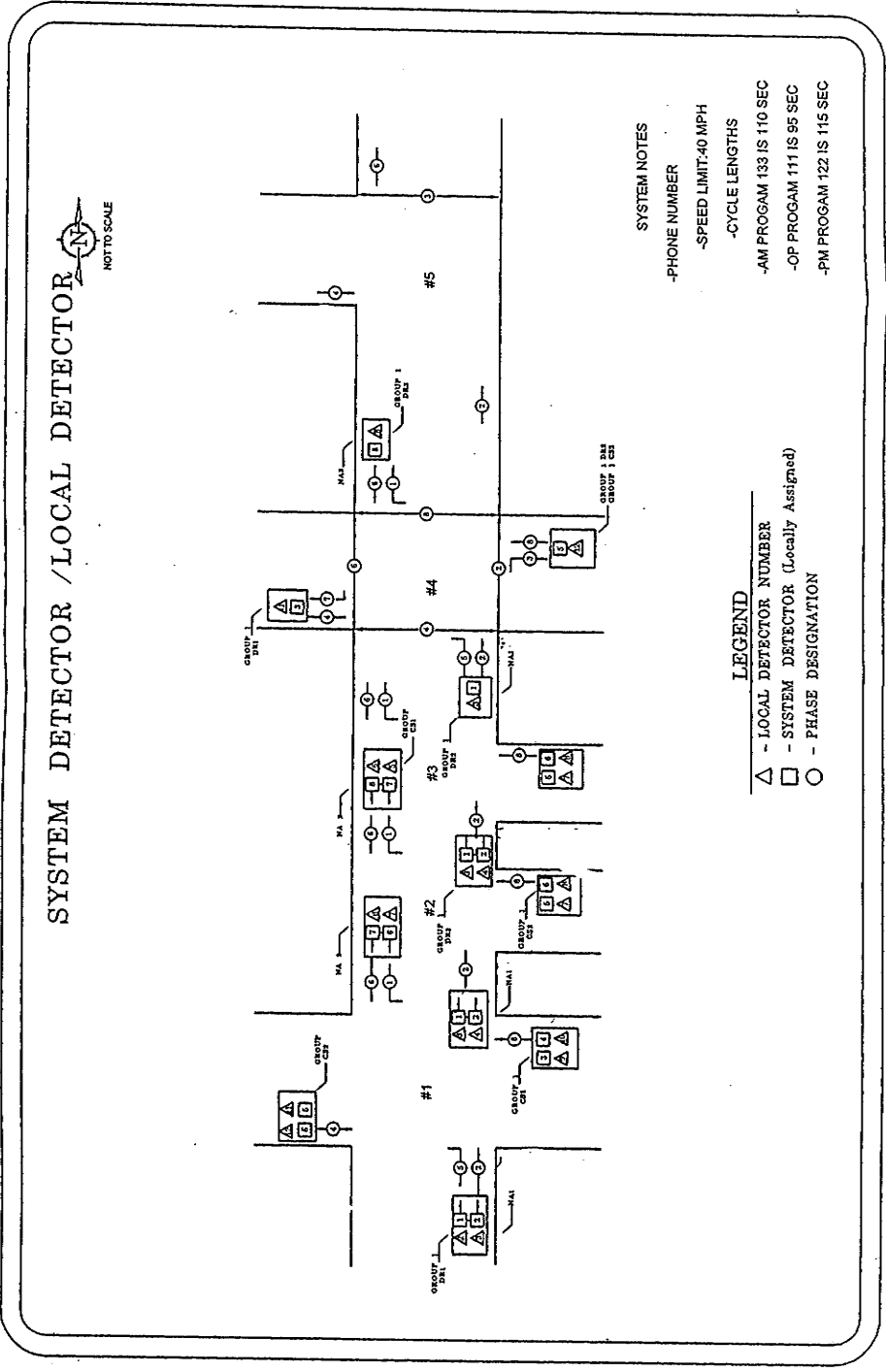


Exhibit 2



System 13

Phases	111 (Pattern 1)						112 (Pattern 2)						113 (Pattern 3)						114 (Pattern 4)						115 (Pattern 5)									
	Before		Alter		Offset		Before		Alter		Offset		Before		Alter		Offset		Before		Alter		Offset		Before		Alter		Offset					
	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T	W	T				
1	15	65	0	0	30	64	0	0	15	65	0	0	30	64	0	0	101	15	61	0	0	15	65	0	0	110	22	66	0	0	103			
2	0	80	0	20	0	94	0	26	0	80	0	20	0	94	0	26	0	0	76	0	24	0	80	0	20	0	90	0	30	0	88			
3					30	66	0	0	35	63	0	0	69	35	63	0	0	20	53	0	0	76	20	60	0	0	25	60	0	0	88			
4					0	98	0	22	0	88	0	22	0	0	98	0	22	0	0	73	0	27	0	88	0	20	0	85	0	35	0	35		
5					20	77	0	0	20	77	0	0	43	20	77	0	0	43	13	65	0	0	81	15	80	0	0	12	83	0	0	35		
6					0	97	0	23	0	97	0	23	0	0	97	0	23	0	0	78	0	22	0	95	0	0	95	0	25	0	25	0	25	
7					13	64	0	0	13	64	0	0	45	13	64	0	0	45	0	63	12	25	34	0	82	13	25	39	0	45	0	45		
8					17	43	14	46	17	43	14	46	0	17	43	14	46	0	11	52	0	0	34	12	70	0	0	13	64	0	0	0	0	
9					17	43	26	34	17	43	26	34	0	17	43	26	34	0	15	36	14	35	0	15	50	15	40	16	45	15	44	0	0	0
10	14	30	15	30	18	35	14	53	14	30	15	30	58	17	43	14	53	20	32	15	33	42	14	32	15	59	13	40	15	52	63	63		
11	17	30	15	30	13	40	14	53	17	30	15	30	57	13	40	14	53	12	40	16	32	0	14	32	18	55	13	40	15	52	0	0	0	

Phases	1	2	3	4
Triangs in seconds	5	6	7	8

Zone 13			
PROGRAM	Time	COS	PATTERN
1	000	Free	0
1	5:30	111	1
1	7:00	112	4
1	9:00	211	2
1	15:15	311	3
1	19:00	211	2
2	0:00	Free	0
2	5:00	211	2

Phases	1	2	3	4
Triangs in seconds	5	6	7	8

Revised for: November 2, 2000

Special Provision

Median Removal and Replacement

This work consists of removing and replacing existing concrete median at locations shown on the plans or when directed by the Engineer, in accordance with the applicable requirements of Sections 440 and 441 of the Standard Specifications. The replaced median shall be similar in design to that which is existing.

If the median is partially removed, the Contractor shall machine saw a perpendicular clean joint between that portion of the median to be removed and that which is to remain in place. The depth of removal shall be as directed by the Engineer to accommodate the proposed cross-section of the median replacement material.

If the Contractor removes or damages any median or pavement out side the limits of the designated removal, he shall remove and replace that portion at his own expense to the satisfaction of the Engineer.

Basis of Payment: This work shall be paid for at the contract unit price per **SQUARE FOOT (SQUARE METER)** for **MEDIAN REMOVAL AND REPLACEMENT**, which price shall include all labor material and equipment necessary to complete the work in place, as specified herein and as directed by the Engineer.

Special Provision

Sidewalk Removal and Replacement

This work consists of removing and replacing existing concrete sidewalk at locations shown on the plans or when directed by the Engineer, in accordance with the applicable requirements of Sections 440 and 424 of the Standard Specifications. The replaced sidewalk shall be similar in design to that which is existing.

Basis of Payment: This work shall be paid for at the contract unit price per **SQUARE FOOT (SQUARE METER)** for **SIDEWALK REMOVAL AND REPLACEMENT**, which price shall include all labor material and equipment necessary to complete the work in place, as specified herein and as directed by the Engineer.

Special Provision

**Relocate Existing Light Standard and
Luminaire Complete in Place**

This item shall consist of removing a light standard and luminaire from its existing location and reinstalling the lighting unit on a new foundation (if needed), at another location, new wire from luminaire terminal block to pole handhole, splicing to existing circuit, as required, or as directed by the Engineer. The contractor shall take due precautions during the removal and relocation operations to prevent any damage to the pole or the luminaire. Any damages sustained shall be repaired or replaced at the sole expense of the contractor, to the satisfaction of the Engineer.

When relocating wooden lighting standards, the existing wood pole shall be removed and disposed of by the contractor. A new wood pole of the same type and size shall be furnished and installed complete. The existing mast arm and luminaire shall be relocated to the new wood pole.

Contact the Village Engineer for details of relocation.

The new foundation (if needed) will not be paid for separately but shall be included in this work and shall be of the same type as is existing. The removal and reinstallation of screw in type foundations will not be paid for separately but shall be included in this work.

The new cable and/or unit duct with cable, if required, shall be of the same type as existing and will not be paid for separately but shall be included in this work. The new cable and/or unit duct with cable if necessary shall be brought back to the next light standard or service installation.

All splicing shall be with an approved underground splice kit and will not be paid for separately but shall be included in this work.

One black and one white #10 wire shall be provided in each pole from the terminal block of the luminaire fixture to the pole handhole. Wires shall be continuous from fixture to base of pole. Splices are to be made in the pole handhole. The wire shall be #10 A.W.G. type THHN 600 volt. Quick disconnect in-line fuse holders must be installed in each line of each pole relocated.

Special Tools: The Contractor shall furnish the Cook County Highway Department with any special tools or wrenches that may be required for assembling or maintaining the Lighting Unit and Control Equipment.

Installation: The Electrical Contractor shall coordinate the cable trenching, placement and backfilling operations with the various Contractors involved in the roadway construction so that the cable will not be damaged by (A) the use of a mechanized road building equipment in the area where underground cable is or will be in existence, (B) stone or other foreign materials falling into the trench or mixing into the trench backfill material.

All wiring, connecting and grounding shall conform to the latest publication of the National Electrical Code.

All splices, taps and grounding connections shall be inspected by an inspector of the Cook County Highway Department, before wires are permanently trained in the handholes.

When splices are made in handholes or manholes the splices, when cables are trained around sides of handhole, shall be so trained that they are a minimum of six inches above the conduit entrances to handhole.

All ends of conduit terminating in the control cabinet shall be blocked with a neoprene plug, as indicated on the control cabinet plan and sealed with an approved sealing compound.

Field Tests and Inspection Procedure:

- (a) All secondary cable, complete shall be subjected to insulation tests after such cable is installed and before luminaries are connected into their respective circuits. Such tests shall be carried out by use of approved insulation resistance testing equipment with a minimum rating of 500 V DC and shall be witnessed by representatives of the Cook County Highway Department.

A minimum reading of five (5) megohms shall be required for each individual circuit.

- (b) The completed installation shall be inspected by the Contractor and the Engineer, in accordance with Field Check List and data sheets as issued by this Department for this installation. One copy of such completed data sheets shall be returned to this Department.

- (c) Upon approval of the items listed above, a Final Inspection will be carried out by qualified representatives of the Highway Agencies involved.

The cost of all field tests and inspection procedures as outlines herein shall be considered incidental to the Contract.

Connections to Existing Work:

Where new work connects to existing work, the Contractor shall do all necessary cutting and fitting to the existing work and shall remove all existing work as required to make satisfactory connections with the work to be performed under the contract so as to leave the entire work in a finished and workmanlike manner as approved by the Engineer.

The Contractor shall furnish all labor and materials to the furtherance of this end, whether or not they are distinctly shown on the plans, in any of the STANDARD SPECIFICATIONS or in these Special Provisions. All such work shall be considered incidental to this Contract unless specifically shown in the Summary of Quantities, for this Section.

Roadway lighting system which are being replaced/relocated must remain in operation throughout the project. No lighting circuit or portion thereof shall be removed from night time operation without the approval of the Engineer. The Contractor shall patrol the lighting systems once every two weeks to check for any problems. The portions of the lighting system to be maintained are the circuits under construction in this project. If the Contractor need to gain access to the lighting controller, they must contact the maintenance agency.

When damage occur to any existing electrical systems during this contract, the Engineer will designate the repairs as emergency or non-emergency in nature. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification, to the satisfaction of the Engineer. Emergency repairs shall be performed when three or more lights on a circuit or three successive lights are not operational. The work must be completed within 48 hours. Knocked down equipment which results in a danger to the motoring public will be considered an emergency repair and responded to within one hour of notification.

The Engineer shall coordinate the maintenance transfer with all agencies involved.

Basis of Payment: This item will be paid for at the contract unit price **EACH** for **RELOCATE EXISTING LIGHT STANDARD AND LUMINAIRE COMPLETE IN PLACE** which price shall be payment in full for removing and resetting the pole and luminaire, concrete foundation (if needed), removal and reinstallation of screw-in foundation, fuse holders, wire, cable, unit duct with cable, splicing kit, all fittings as required, No. 10 insulated wire from luminaire terminal block to pole handhole, all nuts, bolts, and incidentals necessary to complete the work as shown on the plans.

Special Provision

City Electric Manholes To Be Adjusted

Description: This work shall consist of the adjustment of existing City Electric manholes. The work shall 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.

Construction Method: This classification shall include all those existing City Electric manholes which are to be adjusted to grade where 0.6 meters or less of masonry will be either added, removed, or rebuilt to bring the specified casting to the finished grade of the proposed improvement.

Backfilling to sub-base elevation shall be done with sand as specified in Article 550.07; however, no separate payment for backfilling will be made under this item and the work will be considered incidental to 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 not be allowed. The interior of the adjustment shall be "battered" 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 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.

Under no circumstance shall an adjustment not be completed in the same day as it is started. Under no circumstance shall debris be left in the street over night.

The contractor shall stage adjustment work so that traffic flows in a safe manner.

Method of Measurement: This work will be measured on a per each basis which will include up to the first 0.6 meters of required masonry work.

Basis of Payment: This work shall be paid for at the contract unit price per **EACH** for **CITY ELECTRIC MANHOLES TO BE ADJUSTED**. This price shall be payment in full for excavation, construction, backfilling, concrete, brick, mortar, disposal of surplus excavation, form work and all labor and materials including reinforcement bars and ladder rungs.

IDA POLICY MEMORANDUMS

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 1, 1994

Springfield

Number: **87-4**

TO: CONSULTING ENGINEERS

SUBJECT: DETERMINATION OF BULK SPECIFIC GRAVITY (d)
OF COMPACTED BITUMINOUS MIXES

- A. SCOPE. This method of test covers the determination of the bulk specific gravity and the percent air, of core samples from compacted bituminous mixtures using a saturated surface-dry procedure.
- B. DEFINITIONS.
1. Bulk Specific Gravity (d) or density is the weight per unit volume (gms/cc) of a mixture in its existing state of consolidation. The volume measurement for this specific gravity will include the volume of all the aggregate, asphalt, and air spaces (voids) in the aggregate particles and between the aggregate particles.
 2. Theoretical Maximum Specific Gravity (D) ASTM 2041 is the weight per unit volume (gms/cc) of a mixture assuming complete consolidation; i.e., all the air spaces (voids) between the aggregate particles are eliminated.
 3. Percent Density is a measure of the degree of compaction in relation to the Theoretical Maximum Specific Gravity.
 4. Percent Air is a measure of the air voids in the compacted pavement.
- C. APPARATUS.
1. Balance - The balance shall be accurate to 0.1 gm throughout the operating range. It may be mechanical or electrical and shall be equipped with a suitable suspension apparatus and holder to permit weighing of the core in water while suspended from the balance. If the balance is a beam type, it shall be set up so that the core is placed in the basket that is suspended from the zero (0) end of the balance arm.
 2. Water bath - The container for immersing the core in water while suspended from the balance shall be equipped with an overflow outlet for maintaining a constant water level. This water bath should be large enough to handle full-depth cores. When testing several cores at the same time, a dish-pan, sink or suitable container may be used for soaking.

D. PROCEDURE.

1. Prior to testing, cores shall be sorted on a flat surface in a cool place. The sample(s) shall be brushed with a wire brush and/or other suitable means, to remove all loose and/or foreign materials, such as seal coat, tack coat, foundation material, soil, paper, and foil, prior to testing.
2. If a core contains binder and surface or multiple lifts, the lifts shall be separated. This may be done in the following manner:
 - a. Mark the separation line between the two lifts.
 - b. Place the core in a freezer for 20-25 minutes.
 - c. Place a 2 or 3-inch wide chisel on the separation line and tap with a hammer. Rotate the core and continue this process until the core separates. Brush loose pieces with a wire brush if needed.
 - d. Allow 2-3 hours for the core to return to ambient temperature before proceeding.
3. Prepare the water baths for soaking and weighing with water at 77° F. Water baths should be maintained at this temperature throughout testing. Saturate the cores by submerging in the water for a minimum of 20 minutes.
4. With the balance and water bath properly assembled and zeroed, suspend the sample from the balance and submerge it in the water bath. The core must be placed with the original top and bottom in a vertical position. If necessary, add sufficient water to bring the water level up to the overflow outlet. Permit any excess to overflow. Read and record the Saturated Submerged Weight. Designate this weight as (C).
5. Remove the core from the water bath and blot the excess water from the surface of the core with an absorbent cloth or other suitable material. This must be done quickly to prevent the internal water from escaping.
6. Place the core on the balance and read and record the Saturated Surface-dry Weight in air. Designate this weight as (B).
7. Place the core in a tared pan and dry in an oven. When the core is dry, (less than 0.5 gm loss in one hour) record the weight and subtract the pan weight. Designate this weight as (A).

8. The following calculation is used to determine the Bulk Specific Gravity of the core.

$$d = \frac{A}{B-C}$$

d = Bulk Specific Gravity
A = Oven dry weight
B = Saturated surface-dry weight
C = Saturated submerged weight

- E. PERCENT DENSITY. The following calculation is used to determine the percent density of the core:

$$\% \text{ Density} = 100 \times \frac{d}{D}$$

d = Bulk Specific Gravity
D = Theoretical Maximum Gravity*

Note: The Theoretical Maximum Gravity (D) is determined from the mix design until current Vacuum Pycnometer test are available.

- F. PERCENT AIR. To calculate the percent air use the following formula:

$$\% \text{ Air} = 100 - \% \text{ Density}$$

- G. WEIGHT PER SQUARE YARD OF COMPACTED MIXTURE. The actual weight per square yard of a compacted mixture can be calculated by using the Bulk Specific Gravity (d). The volume of a square yard of pavement one (1) inch thick is 0.75 cubic foot. Taking the weight of a cubic foot of water as 62.37 pounds, one square yard of compacted material, one (1) inch thick weighs:

$$\text{Pounds Per Sq. Yd. (1" thick)} = 0.75 \times 62.37 \times d$$

Roger H. Barcus
Chief Engineer

Supersedes Policy Memorandum 87-4 effective January 1, 1987.

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 1, 2003	Springfield	Number 96-1
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TO: CONSULTING ENGINEERS

SUBJECT: ITEM 610, STRUCTURAL PORTLAND CEMENT CONCRETE:
JOB MIX FORMULA APPROVAL & PRODUCTION TESTING.

- I. This policy memorandum addresses the Job Mix Formula (JMF) approval process and production testing requirements when Item 610 is specified for an airport construction contract.
- II. PROCESS
 - a. The contractor may submit a mix design with recent substantiating test data or he may submit a mix design generated by the Illinois Division of Highways with recent substantiating test data for approval consideration. The mix design should be submitted to the Resident Engineer.
 - b. The Resident Engineer should verify that each component of the proposed mix meets the requirements set forth under Item 610 of the *Standard Specifications for Construction of Airports* and/or the contract special provisions.
 - c. The mix design should also indicate the following information:
 1. The name, address, and producer/supplier number for the concrete.
 2. The source, producer/supplier number, gradation, quality, and SSD weight for the proposed coarse and fine aggregates.
 3. The source, producer/supplier number, type, and weight of the proposed flyash and/or cement.
 4. The source, producer/supplier number, dosage rate or dosage of all admixtures.
 - d. After completion of Items b and c above, the mix with substantiating test data shall be forwarded to the Division of Aeronautics for approval. Once the mix has been approved the production testing shall be at the rate in Section III as specified herein.

III. PRODUCTION TESTING

- a. One set of cylinders or beams, depending on the strength specified, shall be cast for acceptance testing for each day the mix is used. In addition, at least one slump and one air test shall be conducted for each day the mix is used. If more than 100 c.y. of the mix is placed in a given day, additional tests at a frequency of 1 per 100 c.y. shall be taken for strength, slump, and air. In **no** case will concrete with a slump greater than 4 inches be allowed for use on the project.
- b. If the total proposed amount of Item 610 Structural Portland Cement Concrete as calculated by the Resident Engineer is less than 50 c.y. for the entire project, the following shall apply:
 - The Resident Engineer shall provide a copy of the calculations of the quantity of Item 610 to the Division of Aeronautics.
 - One set of cylinders or beams, depending the strength specified, shall be cast for acceptance testing.
 - One air content and one slump test shall be taken for acceptance testing.
 - In no case will concrete with a slump greater than 4 inches be allowed for use on the project.
- c. The Resident Engineer shall collect actual batch weight tickets for every batch of Item 610 concrete used for the project. The actual batch weight tickets shall be kept with the project records and shall be available upon request of the Department of Transportation.

Jim Bildilli
Chief Engineer

supersedes policy memorandum 96-1 dated April 15, 1998.

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

April 1, 2003

Springfield, Illinois

Number 96-2

TO: CONTRACTORS

SUBJECT: REQUIREMENTS FOR LABORATORY, TESTING, QUALITY CONTROL, AND PAVING
OF BITUMINOUS CONCRETE MIXTURES

I. SCOPE

The purpose of this policy memorandum is to define to the Contractor the requirements concerning the laboratory, testing, Quality Control, and paving of bituminous concrete mixtures. References are made to the most recent issue of the Standard Specifications for Construction of Airports and to American Society for Testing and Materials (ASTM) testing methods. The Quality Assurance and acceptance responsibilities of the Engineer are described in Policy Memorandum 96-3.

II. LABORATORY

The Contractor shall provide a laboratory located at the plant and approved by the Illinois Division of Aeronautics (IDA). The laboratory shall be of sufficient size and be furnished with the necessary equipment and supplies for adequately and safely performing the Contractor's Quality Control testing as well as the Engineer's acceptance testing as described in Policy Memorandum 96-3.

The effective working area of the laboratory shall be a minimum of 600 square feet with a ceiling height of not less than 7.5 feet. Lighting shall be adequate to illuminate all working areas. It shall be equipped with heating and air conditioning units to maintain a temperature of $70^{\circ} \text{F} \pm 5^{\circ} \text{F}$.

The laboratory shall have equipment that is in good working order and that meets the requirements set forth in the following ASTM test standards:

ASTM C 117	Test Method for Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 75	Sampling Aggregates
ASTM D 1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D 2041	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
IDOT	Ignition Method for Determining Asphalt Content
ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures using Saturated Surface Dry Specimens
ASTM D 3203	Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D 2950	Density of Bituminous Concrete in Place by Nuclear Method
ASTM D 4125	Asphalt Content of Bituminous Mixtures by Nuclear Method
ASTM C 127	Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Standard Test Method for Specific Gravity and Absorption of Fine Aggregate

The Asphalt Institute's *Mix Design Methods for Asphalt Concrete Manual No. 2 (MS-2)*

The laboratory and equipment furnished by the Contractor shall be properly calibrated and maintained. The Contractor shall maintain a record of calibration results at the laboratory. The Engineer may inspect measuring and testing devices at any time to confirm both calibration and condition. If the Resident Engineer determines that the

equipment is not within the limits of dimensions or calibration described in the appropriate test method, the Engineer may stop production until corrective action is taken. If laboratory equipment becomes inoperable or insufficient to keep up with mix production testing, the Contractor shall cease mix production until adequate and/or sufficient equipment is provided.

III. MIX DESIGN TESTING

The Mix Design letter with accompanying approved Job Mix Formula (JMF) will be issued by the IDA Engineer of Materials. The Contractor will be required to perform the sampling and laboratory testing for the mix design according to the following guidelines: [Note: A testing summary chart can be found in Appendix B.]

- A. Material sources meeting the requirements of the contract shall be submitted in writing at or before the preconstruction conference in the following format:
1. To: Jim Bildilli, Chief Engineer
Attn: Mike Wilhelm, Engineer of Materials
Division of Aeronautics
One Langhorne Bond Drive
Springfield, Illinois 62707
 2. Producer name and location of each aggregate
 3. Producer # for each aggregate (producers are assigned this number by IDOT Central Bureau of Materials)
 4. Material code for each aggregate
 5. Gradation and Quality designation for each aggregate (i.e. CA-11, etc.)
 6. Producer, producer #, and specific gravities of asphalt cement
 7. Performance Graded Binder 64-22 shall be used unless otherwise approved by the IDA Engineer of Materials.

- B. The Contractor shall obtain representative samples of each aggregate. The individual obtaining samples shall have successfully completed the IDOT Aggregate Technician Course under the IDOT Division of Highways, QC/QA program. The sample size shall be approximately 280 lb. for each coarse aggregate, 150 lb. for each fine aggregate, 15 lb. for the mineral filler or collected dust, and 1 gallon of asphalt cement.
- C. The Contractor shall split the aggregate samples down and run gradation tests according to the testing methods referenced in Appendix B of this memorandum. The remaining aggregates shall be set aside for further Mix Design testing. The results of the gradation tests, along with the most recent stockpile gradations, shall be reported by fax to the IDA Engineer of Materials for engineering evaluation. If the gradation results are deemed non-representative or in any way unacceptable, new representative samples may be required at the direction of the IDA Engineer of Materials. Only composite gradations are required under this procedure.
- D. Based on the accepted gradation results, the IDA Engineer of Materials will return blend percentages for each aggregate to be used in determining the Job Mix Formula. In addition, the Engineer of Materials shall specify directions for mix temperature and asphalt content(s), and number of Marshall Blows for preparation of the Marshall Mix Design.
- E. After receipt of the information from step D., the Contractor shall make specimens and perform the following tests for each asphalt content specified by the Engineer. [Note: Actual test designation is referenced in Appendix B of this memorandum.]

Marshall Tests

Maximum Specific Gravity -- "D"

Bulk Specific Gravity -- "d"

Marshall Stability

Marshall Flow

% air voids

- F. All technicians who will be performing mix design testing and plant sampling/testing shall have successfully completed the IDOT Division of Highways Bituminous Concrete Level 1 Technician Course "Bituminous Concrete Testing". The Contractor may also provide a Gradation Technician

who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Bituminous Concrete Level 2 Technician.

- G. The mix design testing results shall be reported to the IDA Engineer of Materials.
- H. The IDA Engineer of Materials shall generate and issue the approved Mix Design with the Job Mix Formula (JMF) for the manufacture of bituminous mixtures using the Contractor's testing results.
- I. The above procedure, III. MIX DESIGN TESTING, shall be repeated for each change in source or gradation of materials.

IV. MIX PRODUCTION TESTING

The Quality Control of the manufacture and placement of bituminous mixtures is the responsibility of the Contractor. The Contractor shall perform or have performed the inspection and tests required to assure conformance to contract requirements. Quality Control includes the recognition of defects and their immediate correction. This may require increased testing, communication of test results to the plant or the job site, modification of operations, suspension of bituminous mix production, rejection of material, or other actions as appropriate. The Resident Engineer shall be immediately notified of any failing tests and subsequent remedial action. Form AER M-14 shall be reported to the Engineer and Resident Engineer no later than the start of the next work day. In addition, AER M-9 and M-11 shall be given to the Resident Engineer daily (Appendix A). The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for Quality Control. This individual shall have successfully completed the IDOT Division of Highways Bituminous Concrete Level II Technician Course "Bituminous Concrete Proportioning and Mixture Evaluation." In addition to the QC Manager, the Contractor shall provide sufficient and qualified personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. The following plant tests and documentation shall be required: [Note: A summary chart of testing can be found in Appendix B.]

- A. Minimum of one (1) complete hot bin or combined belt analysis per day of production or every 1,000 tons, whichever is more frequent.
- B. Minimum one (1) stockpile gradation for each aggregate and/or mineral filler per week when a batch plant is utilized. Minimum of one (1) gradation for each aggregate per day of production or every 1,000 tons when a drum plant is used, and one (1) gradation per week for mineral filler when a drum plant is used.

- C. A certification from the quarry for the total quantity of aggregate listing the source, gradation type, and quality designation of aggregate shipped.
- D. Original asphalt shipping tickets listing the source and type of asphalt shipped.
- E. One mix sample per 1,000 tons of mix. The sample shall be split in half. One half shall be reserved for testing by the Engineer. The other half shall be split and tested by the Contractor for Marshall, Extraction, Gradation, Maximum Specific Gravity, and Air Void tests in accordance with the appropriate ASTM standard referenced herein. [See Appendix B.]
 - 1. In place of the extraction test, the Contractor may provide the asphalt content by a calibrated ignition oven test using the IDOT Division of Highways' latest procedure. The correction (calibration) factor for aggregate type shall be clearly indicated in the reported test results.

From these tests, the Contractor shall interpret the test data and make necessary adjustments to the production process in order to comply with the approved JMF.

V. QUALITY CONTROL

A. Control Limits

Target values shall be determined from the approved JMF. The target values shall be plotted on the control charts within the following control limits:

<u>Parameter</u>	<u>Control Limits</u>	
	<u>Individual Test</u>	<u>Moving Avg. of 4</u>
% Passing		
1/2 in.	± 7 %	± 4 %
No. 4	± 7 %	± 4 %
No. 8	± 5 %	± 3 %
No. 30	± 4 %	± 2.5 %
No. 200 *	± 2.0 % *	± 1.0 % *
Asphalt Content	± 0.45 %	± 0.2 %

* No. 200 material percents shall be based on washed samples. Dry sieve gradations (-200) shall be adjusted based on anticipated degradation in the mixing process.

B. Control Charts

Standardized control charts shall be maintained by the Contractor at the field laboratory. The control charts shall be displayed and be accessible at the field laboratory at all times for review by the Engineer. The individual required test results obtained by the Contractor shall be recorded on the control chart immediately upon completion of a test, but no later than 24 hours after sampling. Only the required plant tests and resamples shall be recorded on the control chart. Any additional testing of check samples may be used for controlling the Contractor's processes, but shall be documented in the plant diary.

The results of assurance tests performed by the Engineer will be posted as soon as available.

The following parameters shall be recorded on control charts:

1. Combined Gradation of Hot-Bin or Combined Belt Aggregate Samples (Drier Drum). (% Passing 1/2 in., No. 4., No. 8, No. 30, and No. 200 Sieves)
2. Asphalt Content
3. Bulk Specific Gravity of Marshall Sample
4. Maximum Specific Gravity of Mixture

C. Corrective Action for Required Plant Tests

Control Limits for each required parameter, both individual tests and the average of four tests, shall be exhibited on control charts. Test results shall be posted within the time limits previously outlined.

1. Individual Test Result. When an individual test result exceeds its control limit, the Contractor shall immediately resample and retest. If at the end of the day no material remains from which to resample, the first sample taken the following day shall serve as the resample as well as the first sample of the day. This result shall be recorded as a retest. If the retest passes, the Contractor may continue the required plant test frequency. Additional check samples should be taken to verify mix compliance.

2. Asphalt Content. If the retest for asphalt content exceeds control limits, mix production shall cease and immediate corrective action shall be instituted by the Contractor. After corrective action, mix production shall be restarted, the mix production shall be stabilized, and the Contractor shall immediately resample and retest. Mix production may continue when approved by the Engineer. The corrective action shall be documented.

Inability to control mix production is cause for the Engineer to stop the operation until the Contractor completes the investigation identifying the problems causing failing test results.

3. Combined Aggregate/Hot-Bin. For combined aggregate/hot-bin retest failures, immediate corrective action shall be instituted by the Contractor. After corrective action, the Contractor shall immediately resample and retest. The corrective action shall be documented.

- a. Moving Average. When the moving average values trend toward the moving average control limits, the Contractor shall take corrective action and increase the sampling and testing frequency. The corrective action shall be documented.

The Contractor shall notify the Engineer whenever the moving average values exceed the moving average control limits. If two consecutive moving average values fall outside the moving average control limits, the Contractor shall cease operations. Corrective action shall be immediately instituted by the Contractor. Operations shall not be reinstated without the approval of the Engineer. Failure to cease operations shall subject all subsequently produced material to be considered unacceptable.

- b. Mix Production Control. If the Contractor is not controlling the production process and is making no effort to take corrective action, the operation shall stop.

VI. TEST SECTION AND DENSITY ACCEPTANCE (**Note: Applies only when specified.**)

- A. The purpose of the test section is to determine if the mix is acceptable and can be compacted to a consistent passing density.

A quick way to determine the compactibility of the mix is by the use of a nuclear density gauge in the construction of a growth curve. An easy way to construct a growth curve is to use a good vibratory roller. To construct the curve, an area the width of the roller in the middle of the mat is chosen and the roller is allowed to make one compactive pass. With the roller stopped some 30 feet away, a nuclear reading is taken and the outline of the gauge is marked on the pavement. The roller then makes a compaction pass in the opposite direction and another reading is taken. This scenario is continued until at least two (2) passes are made past the maximum density obtained.

The maximum laboratory density potential of a given mix is a direct function of the mix design air voids. Whereas, the actual maximum field density is a function of the type of coarse aggregates, natural or manufactured sands, lift thickness, roller type (static or vibratory), roller and paver speed, base condition, mix variation, etc. All of these items are taken into consideration with the growth curve.

1. High Density in the Growth Curve. If the growth curve indicates a maximum achievable field density of between 95 to 98 percent of the Theoretical Maximum Density (D), you can proceed with the Rolling Pattern. On the other hand, if the maximum achievable density is greater than 98 percent, a quick evaluation (by use of an extractor, hot bin gradations, nuclear asphalt determinator, etc.) must be made of the mix. When adjustments are made in the mix, a new growth curve shall be constructed.
2. Low Density in the Growth Curve. If the growth curve indicates the maximum achievable density is below 94 percent, a thorough evaluation of the mix, rollers, and laydown operations should be made. After a thorough evaluation of all factors (mix, rollers, etc.), asphalt or gradation changes may be in order as directed by the Engineer. Again, any changes in the mix will require a new growth curve. Note that the nuclear density test is a quality control tool and not an acceptance test. All acceptance testing is to be conducted by the use of cores, unless otherwise specified.

3. Acceptance of Test Section. The Contractor may proceed with paving the day after the test section provided the following criteria have been met:
 - a. Four random locations (2 cores per location cut longitudinally and cored by the Contractor) will be selected by the Engineer within the test strip. The cores must show a minimum of 94% density.
 - b. All Marshall and extraction test results from mix produced for the test section must be within the tolerances required by specification.
 - c. The Contractor shall correlate his nuclear gauge to the cores taken in the test section. Additional cores may be taken at the Contractor's expense for this purpose within the test section area, when approved by the Engineer.

4. Density Acceptance under Production Paving. The responsibility for obtaining the specified density lies with the Contractor. Therefore, it is important that the nuclear density gauge operator communicate with the roller operators to maintain the specified density requirements. The Contractor shall provide a Bituminous Concrete Density Tester who has successfully completed the Department's "Bituminous Concrete Nuclear Density Testing Course" to run all required density tests on the job site. Density acceptance testing, unless otherwise specified, is described as follows:
 - a. The Contractor shall cut cores at random locations within 500 ton sublots as directed by the Resident Engineer.
 - b. The cores should be extracted so as not to damage them, since they are used to calculate the Contractor's pay.
 - c. The Engineer will run "Quick d" tests on the cores to give the Contractor an indication of how compaction is running for the next day's paving.
 - d. A running average of four (4) Maximum Theoretical Gravities (D) will be used for calculating percent compaction.
 - e. Final core density tests and pay calculations will be performed by the Resident Engineer and delivered to the Contractor.

Supersedes policy memorandum 96-2 dated January 1, 1999

APPENDIX A

BITUMINOUS WORKSHEET

Airport: _____ Project No.: _____ AIP No.: _____

Mix Design # : _____ Material Code: _____ Producer: _____

Prod. #: _____

AGGREGATE

Mat'l. Code: _____

Producer #: _____

Prod. Name _____

Location: _____

Percent Passing

Sieve Size

1 inch	_____	_____	_____	_____	_____
3/4 inch	_____	_____	_____	_____	_____
1/2 inch	_____	_____	_____	_____	_____
3/8 inch	_____	_____	_____	_____	_____
No. 4	_____	_____	_____	_____	_____
No. 8	_____	_____	_____	_____	_____
No. 16	_____	_____	_____	_____	_____
No. 30	_____	_____	_____	_____	_____
No. 50	_____	_____	_____	_____	_____
No. 100	_____	_____	_____	_____	_____
No. 200	_____	_____	_____	_____	_____
Washed (y/n)	_____	_____	_____	_____	_____
O.D. Gravity	_____	_____	_____	_____	_____
App. Gravity	_____	_____	_____	_____	_____
Absorption	_____	_____	_____	_____	_____
Asphalt Gravity	_____	Asphalt Source	_____	Asphalt Producer No.	_____

MARSHALL DATA

% Asphalt _____

M. Stability _____

Flow _____

D _____

0 _____

% Air Voids _____

Q.C. Manager Name: _____ Phone number: _____

Laboratory Location: _____ Fax Number: _____

Remarks: _____

Bituminous Mixture Daily Plant Output

Date: _____

Tons/Hr.	Batch Wt.	Batches	Loads	Tons	Mix No.	Airport: _____
AC Prod.	Material	% Mix	Add Prod	Material	% AC	Ill. Project: _____
Temp. (F)	Agg Drier	Agg Bin	Asphalt	Bit. Mix	Bit. Mix	AIP Project: _____
Max					(RE/RT)	Consultant: _____
Min						Contractor: _____
Wtd. Avg.						Producer: _____

Mix Time	Dry	Wet	Total	Plant Oper.	Start	Stop	Delays	Hrs
Contract		Job No.	Qty	Contract		Job No.	Qty.	

Remarks _____

Bin	RAP	Bin 5	Bin 4	Bin 3	Bin 2	Bin 1	M.F.	New Bit	Wash	Changed
Mix %										
Lb/Bt-Rev									Mix Form	Spec Range
Agg %								% Pass		
1.5	Wt %									
	% Bin									
1	Wt %									
	% Bin									
3/4	Wt %									
	% Bin									
1/2	Wt %									
	% Bin									
3/8	Wt %									
	% Bin									
4	Wt %									
	% Bin									
8	Wt %									
	% Bin									
16	Wt %									
	% Bin									
30	Wt %									
	% Bin									
50	Wt %									
	% Bin									
100	Wt %									
	% Bin									
200	Wt %									
	% Bin									
Bit.										
AC - Prod	Ac-Code	Ticket	Date	Qty	AC-Prod	AC-Code	Ticket	Date	Qty	

Bituminous Mixtures Extraction

Date: _____

Airport: _____ Consultant: _____

Illinois Project: _____ Contractor: _____

AIP Project No.: _____ Producer: _____

Mix #: _____ Dry Time: _____ Lot: _____ Sublot: _____

Type: _____ Washed: _____

Sieve	Wt.	Accum. Wt.	% Passing	Mix Formula	Tolerance	Spec Range
1.5						
1						
3/4						
1/2						
3/8						
4						
8						
16						
30						
50						
100						
200						
Tot Agg						
Bit						

Extraction Data		
Pan, New Filter & Sample		g
Pan & New Filter		g
Sample		g
Pan, Used Filter, Aggregate		g
Pan & New Filter		g
Aggregate		g
Pan & Used Filter		g
Pan & New Filter		g
Dust in Filter		g
Sample		g
Aggregate		g
Bitumen		g

New Bit:	Marshall Stab:	Blows:	Gyro:	Flow:	TSR:
Bulk SPGR:	Max SPGR:	% Voids:	DEN (PCF):		

Remarks: _____

CC: _____ Tested by: _____

APPENDIX B

QUALITY CONTROL TESTING (PLANT)

PARAMETER	FREQUENCY	SAMPLE SIZE	TEST METHOD	REPORT FORM
Aggregate Gradations: Hot bins for batch and continuous plants--- Individual cold-feeds or combined belt-feeds for drier drum plants.	Minimum 1 per day of production and at least 1 per 1000 tons.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm 1 gallon asphalt cement	ASTM C 136	AER M-9
Aggregate gradations: Stockpiles	Minimum 1 per aggregate per week per stockpile.	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm *Note: The above test sample sizes are to be obtained from splitting down a larger sample from the stockpiles.	ASTM C 136	AER M-9
Maximum Specific Gravity	Minimum 1 per 1000 tons	1200 gm per test	ASTM D 2041	AER M-11 and AERM-14
Bulk Specific Gravity	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 2726	AER M-11 and AERM-14
Marshall Stability and Flow	Minimum 1 per 1000 tons	1250 gm per briquette	ASTM D 1559	AER M-11 and AERM-14
% Air Voids	Minimum 1 per 1000 tons		ASTM D 3203	AER M-11 and AERM-14
Extraction	Minimum 1 per 1000 tons	1000 gm (surface) 1500 gm (base)	ASTM D 2172	AER M-11 and AERM-14
Ignition Oven Test	Minimum 1 per 1000 tons	1500 gm		AER M-14
Nuclear Asphalt Gauge	Minimum 1 per 1000 tons	1000-1100 gm	ASTM D 2145	AER M-14

MIX DESIGN TESTING

PARAMETER	FREQUENCY	SAMPLE SIZE	TEST METHOD	REPORT FORM
Representative samples of each aggregate and asphalt cement.	1 per aggregate and 1 asphalt cement.	280 lb. (coarse) 150 ob. (fine) 15 lb. (min. filler) 1 gallon asphalt cement	ASTM D 75	N/A
Aggregate Gradation	1 per aggregate	CA07/11: 5000 gm CA13: 2000 gm CA16: 1500 gm Fine agg: 500 gm	ASTM C 136	Bituminous Worksheet (Appendix A)
Maximum Specific Gravity	2 per specified asphalt content	1200 gm per test	ASTM D 2041	Bituminous Worksheet (Appendix A)
Bulk Specific Gravity	3 briquettes per specified asphalt content	1250 gm per briquette	ASTM D 2726	Bituminous Worksheet (Appendix A)
Marshall Stability and Flow	3 briquettes	1250 gm per briquette	ASTM D 1559	Bituminous Worksheet (Appendix A)
% Air Voids	1 per specified asphalt content		ASTM D 3203	Bituminous Worksheet (Appendix A)

QUALITY CONTROL TESTING (PAVER)

PARAMETER	FREQUENCY	SAMPLE SIZE	TEST METHOD	REPORT FORM
Nuclear Density Test	As required by the Contractor to maintain consistent passing density	Various locations	ASTM D 2950	

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 1, 1997

Springfield, Illinois

Number 96-3

TO: CONSULTING ENGINEERS

SUBJECT: REQUIREMENTS FOR QUALITY ASSURANCE ON PROJECTS
WITH BITUMINOUS CONCRETE PAVING

I. SCOPE

The purpose of this policy memorandum is to define to the Consulting Engineer the requirements concerning Quality Assurance on bituminous concrete paving projects. Specifically, this memo applies whenever the Contractor is required to comply with the requirements set forth in Policy Memorandum 96-2, *“Requirements for Laboratory, Testing, Quality Control, and Paving of Bituminous Concrete Mixtures”*.

II. LABORATORY APPROVAL

The Resident Engineer shall review and approve the Contractor’s plant laboratory to assure that it meets the requirements set forth in the contract specifications and Policy Memorandum 96-2. This review and approval shall be completed prior to utilization of the plant for the production of any mix.

III. QUALITY ASSURANCE DURING PRODUCTION PAVING

A. At the option of the Engineer, independent assurance tests may be performed on split samples taken by the Contractor for Quality Control testing. In addition, the Resident Engineer shall witness the sampling and splitting of these samples at the start of production and as needed throughout mix production. The Engineer may select any or all split samples for assurance testing. These tests may be performed at any time after sampling. The test results will be made available to the Contractor as soon as they become available.

B. The Resident Engineer may witness the sampling and testing being performed by the Contractor. If the Resident Engineer determines that the sampling and Quality Control tests are not being performed according to the applicable test procedures, the Engineer may stop production until corrective action is taken. The Resident Engineer will promptly notify the Contractor, both verbally and in writing, of observed deficiencies. The Resident Engineer will document all witnessed samples and tests. The Resident Engineer may elect to obtain samples for testing, separate from the Contractor's Quality Control process, to verify specification compliance.

1. Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits:

<u>Test Parameter</u>	<u>Acceptable Limits of Precision</u>
% Passing	
1/2 in.	5.0 %
No. 4	5.0 %
No. 8	3.0 %
No. 30	2.0 %
No. 200	2.2 %
Asphalt Content	0.3 %
Maximum Specific Gravity of Mixture	0.026
Bulk Specific Gravity of Marshall Sample	0.045

2. In the event a comparison of the required plant test results is outside the above acceptable limits of precision, split or independent samples fail the control limits, an extraction indicates non-specification mix, or a continual trend of difference between Contractor and Engineer test results is identified, the Engineer will immediately investigate. The Engineer may suspend production while the investigation is in progress. The investigation may include testing by the Engineer of any remaining split samples or a comparison of split sample test results on the mix currently being produced. The investigation may also include review and observation of the Contractor's technician performance, testing procedure, and equipment. If a problem is identified with the mix, the Contractor shall take immediate corrective action. After corrective action, both the Contractor and the Engineer shall immediately resample and retest.

- C. The Contractor shall be responsible for documenting all observations, records of inspection, adjustments to the mixture, test results, retest results, and corrective actions in a bound hardback field book or bound diary which will become the property of IDA upon completion and acceptance of the project. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the Contractor's Consultants, or the producer of bituminous mix material. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

Results of adjustments to mixture production and tests shall be recorded in duplicate and sent to the Engineer.

IV. ACCEPTANCE BY ENGINEER

Density acceptance shall be performed according to Policy Memorandum 87-2, or according to the acceptance procedure outlined in the Special Provisions.

State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

February 27, 2002

Springfield, Illinois

Number 97-2

TO: CONSULTING ENGINEERS

SUBJECT: PAVEMENT MARKING PAINT ACCEPTANCE

I. SCOPE

The purpose of this policy memorandum is to define the procedure for acceptance of pavement marking paint.

II. RESIDENT ENGINEER'S DUTIES

The Resident Engineer shall follow the acceptance procedure outlined as follows:

- A. Require the painting contractor to furnish the name of the paint manufacturer and the batch number proposed for use prior to beginning work. Notify the I.D.A. Materials Certification Engineer when this information is available.
- B. Require the manufacturer's certification before painting begins. Check the certification for compliance to the contract specifications.
 1. The certification shall be issued from the manufacturer and shall include the specification and the batch number.
 2. The paint containers shall have the manufacturer's name, the specification and the batch number matching the certification.
- C. If no batch number is indicated on the certification or containers, sample the paint according to the procedure for the corresponding paint type.
- D. If the I.D.A. Materials Certification Engineer indicates that batch number has not been previously sampled and tested, sample the paint according to the procedure for the corresponding paint type. The Division of Aeronautics will provide paint cans upon request by the Resident Engineer. Samples will only be taken in new epoxy lined cans so that the paint will not be contaminated. It is important to seal the sample container immediately with a tight cover to prevent the loss of volatile solvents.

Mark the sample cans with the paint color, manufacturer's name, and batch number. The paint samples and manufacturer's certification shall be placed in the mail within 24 hours after sampling. Address the samples to the Materials Certification Engineer at:

Illinois Department of Transportation
Division of Aeronautics
One Langhorne Bond Drive
Springfield, Illinois 62707

Sampling Procedures for Each Paint Type:

1. Waterborne or Solvent Base Paints
 - a. Take the paint sample from the spray nozzle when the contractor begins marking. A sample consists of two one-pint cans taken per batch number.
 - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.

2. Epoxy Paint
 - a. Take separate one-pint samples of each paint component prior to marking. Before drawing samples, the contents of each component's container must be thoroughly mixed to make certain that any settled portion is fully dispersed. **Do not combine the two components or sample from the spray nozzle.**
 - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.

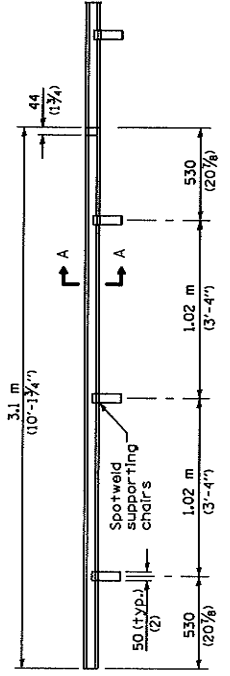
III. TESTING

The paint will be tested for acceptance by the IDOT Bureau of Materials and Physical Research for conformance to the contract specifications.

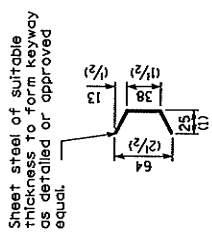
Jim Bildilli
Chief Engineer

Supersedes policy memorandum 97-2 dated April 10, 1997

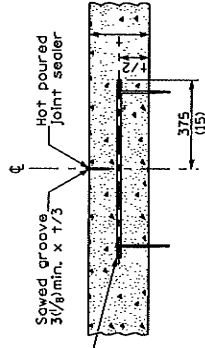
I.D.O.T. STANDARD DRAWINGS



TYPE C METAL JOINT



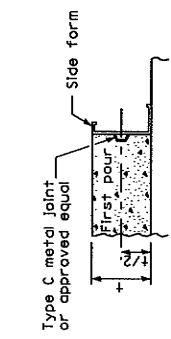
SECTION A-A



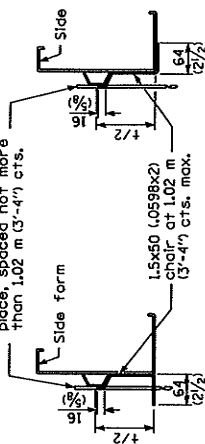
LONGITUDINAL SAWED JOINT

No. 19x750 (No. 6x30) Tie bars at 750 (30) cts. (shown on support pins)

Channel pin, size sufficient to securely hold joint in place, spaced not more than 1.02 m (3'-4") cts.

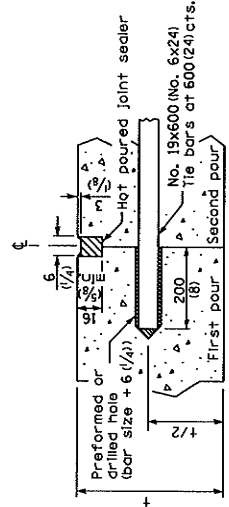


LONGITUDINAL KEYED JOINT

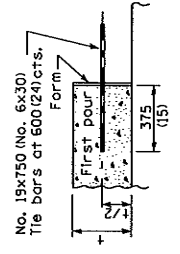


SUPPORTING CHAIR ALTERNATE

SUPPORTING CHAIR ALTERNATE



LONGITUDINAL CONSTRUCTION JOINT (TIE BAR GROUDED IN PLACE)



LONGITUDINAL CONSTRUCTION JOINT (TIE BAR FORMED IN PLACE)

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

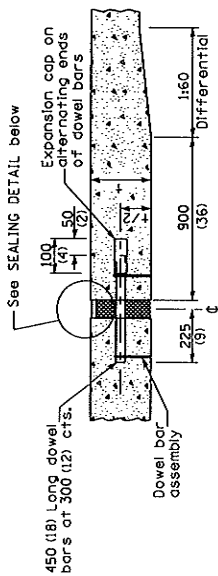
DATE	REVISIONS
1-1-04	Rev. expansion joint and minor corrections to other joints.
1-1-03	Rev. sowed contraction joints to unsealed and reduced width.

PASSED ILLINOIS DEPARTMENT OF TRANSPORTATION ENGINEER OF POLICY AND PROCEDURES APPROVED ENGINEER OF DESIGN AND ENVIRONMENT	ISSUED 1-1-97 SUBJECT: ILL. 2004 PROJECT: ILL. 2004 DRAWING: ILL. 2004 DRAWING: ILL. 2004
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PAVEMENT JOINTS

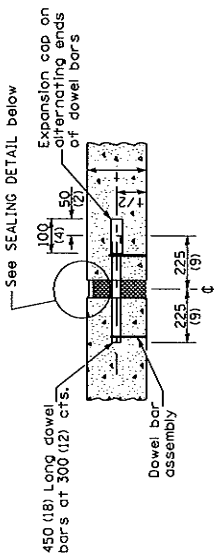
(Sheet 1 of 2)

STANDARD 420001-05

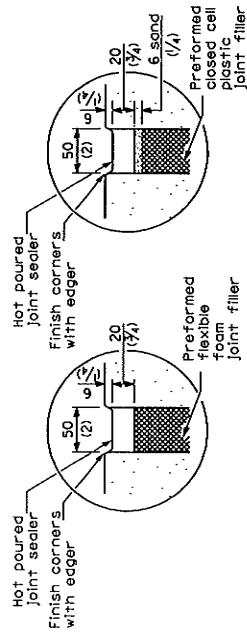


TRANSVERSE EXPANSION JOINT *
(FOR PAVEMENTS WITH UNEQUAL THICKNESS)

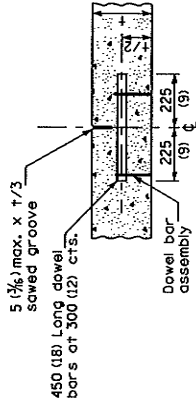
* For expansion joints formed using a construction header, the expansion caps shall be installed on the exposed end of each bar once the header has been removed and the joint filler material has been installed.



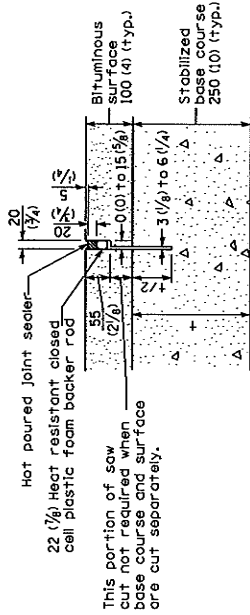
TRANSVERSE EXPANSION JOINT *
(FOR PAVEMENTS WITH EQUAL THICKNESS)



SEALING DETAIL



TRANSVERSE CONTRACTION JOINT



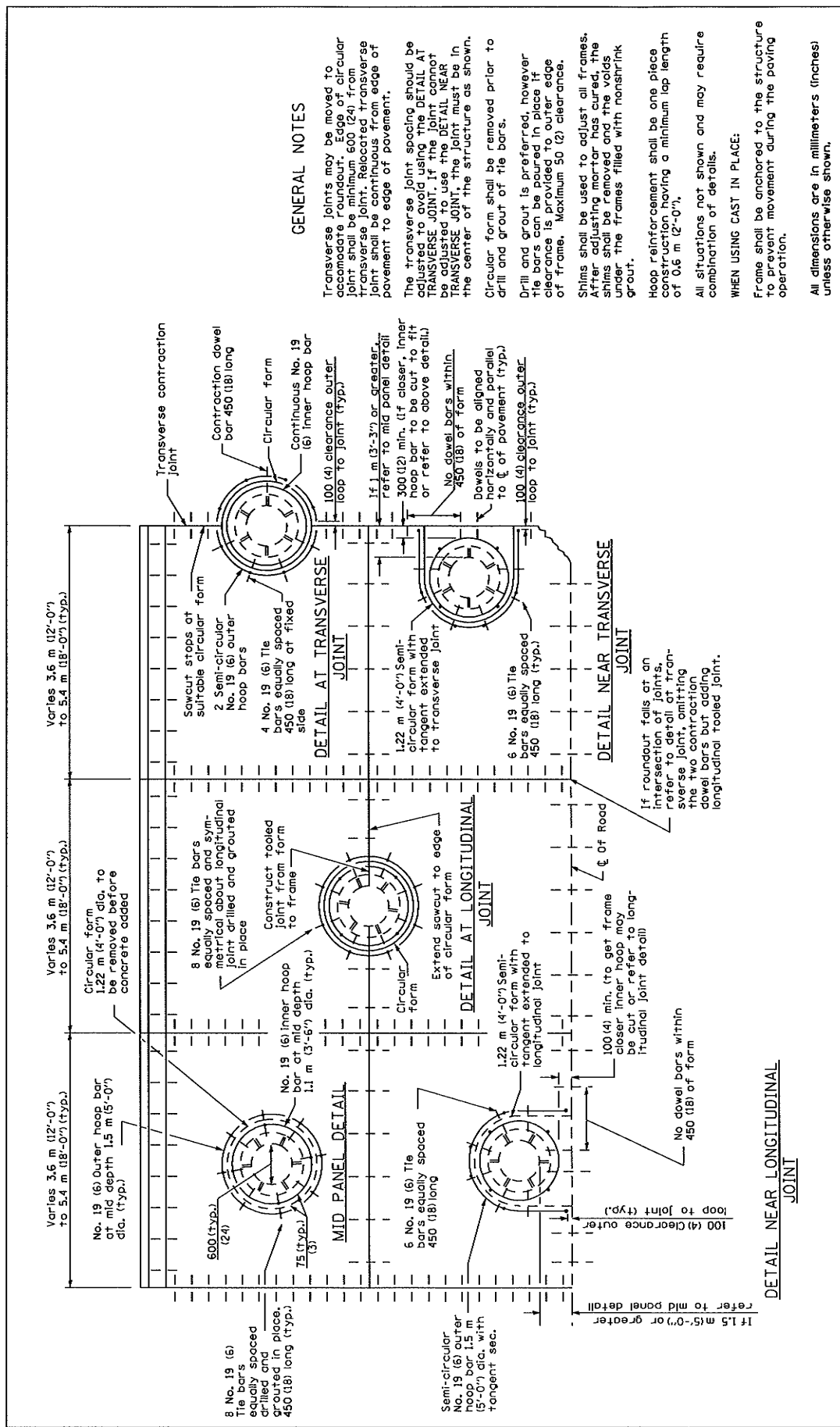
TRANSVERSE CONTRACTION JOINT
(FOR CAM, CFA AND LFA BASE COURSE MIXTURES)

This portion of saw cut not required when base course and surface are cut separately.

DOWEL BAR TABLE	
PAVEMENT THICKNESS	DOWEL BAR DIAMETER
200 (8) or greater	38 (1 1/2)
175 (7) thru 199 (7.99)	32 (1 1/4)
Less than 175 (7)	25 (1)

Illinois Department of Transportation
 PASSED BY _____ JUNE 11, 2004
 ENGINEER OF HIGHWAY DESIGN
 APPROVED BY _____ JUNE 11, 2004
 ENGINEER OF DESIGN AND ENVIRONMENT

PAVEMENT JOINTS
 (Sheet 2 of 2)
STANDARD 420001-05



GENERAL NOTES

Transverse joints may be moved to concrete roundout. Edge of circular joint shall be minimum 600 (24) from transverse joint. Relocated transverse joint shall be continuous from edge of pavement to edge of pavement.

The transverse joint spacing should be adjusted to avoid using the DETAIL AT TRANSVERSE JOINT. If the joint cannot be adjusted to use the DETAIL NEAR TRANSVERSE JOINT, the joint must be in the center of the structure as shown.

Circular form shall be removed prior to drill and grout of tie bars.

Drill and grout is preferred, however tie bars can be poured in place if clearance is provided to outer edge of frame. Maximum 50 (2) clearance.

Shims shall be used to adjust all frames. After adjusting mortar has cured, the shims shall be removed and the voids under the frames filled with nonshrink grout.

Hoop reinforcement shall be one piece construction having a minimum lap length of 0.6 m (2'-0").

All situations not shown and may require combination of details.

WHEN USING CAST IN PLACE:

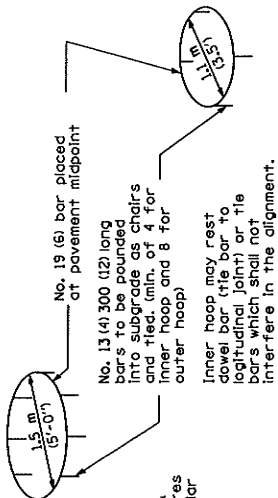
Frame shall be anchored to the structure to prevent movement during the paving operation.

All dimensions are in millimeters (inches) unless otherwise shown.

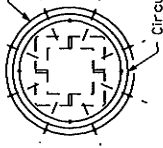
Illinois Department of Transportation
 PASSED: JUNE 11, 2004
 ENGINEER OF POLICY AND PROCEDURES: *Michael J. Dwyer*
 APPROVED: *Michael J. Dwyer*
 ENGINEER OF RECORD AND EXISTING: *Michael J. Dwyer*

DATE	REVISIONS
1-1-04	Soft converted metric reinf.
1-1-00	New Standard

PCC PAVEMENT ROUNDOUTS
 (Sheet 1 of 2)
STANDARD 420111-01



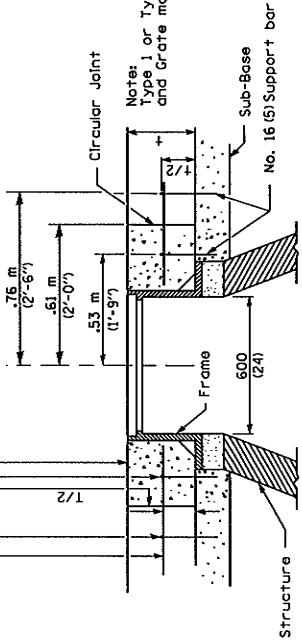
All dimensions same for the majority of circular frame & grates. For larger structures use larger diameter circular form diameter by 300 (12) each and add two additional equally spaced tie bars.



ROUNDOUT FOR SQUARE FRAME & GRATE AND MANHOLES

Drill and Grout No. 19 (6) Tie Bar 600 (24)
No. 19 (6) Outer loop reinf.
No. 19 (6) Inner loop reinf.

Prop. Class S1 concrete (higher strength concrete may be used if no detrimental shrinkage cracks occur.)



DETAIL OF REINFORCEMENT FOR PAVEMENT ROUNDOUT

All dimensions are in millimeters (inches) unless otherwise shown.

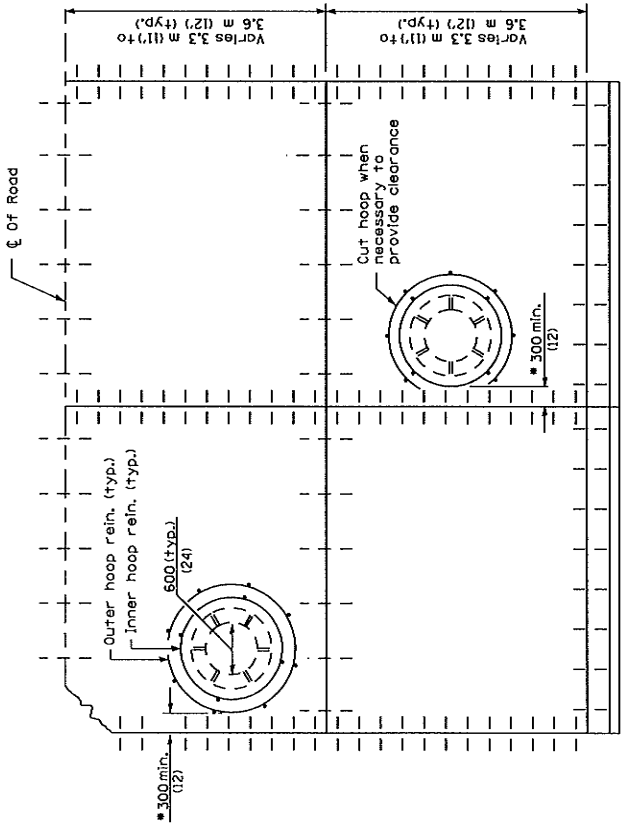
Illinois Department of Transportation
 PASSED JUNE 1, 2004
 ENGINEER OF PUBLIC WORKS AND PROCEDURES
 APPROVED JUNE 1, 2004
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

PCC PAVEMENT ROUNDOUTS

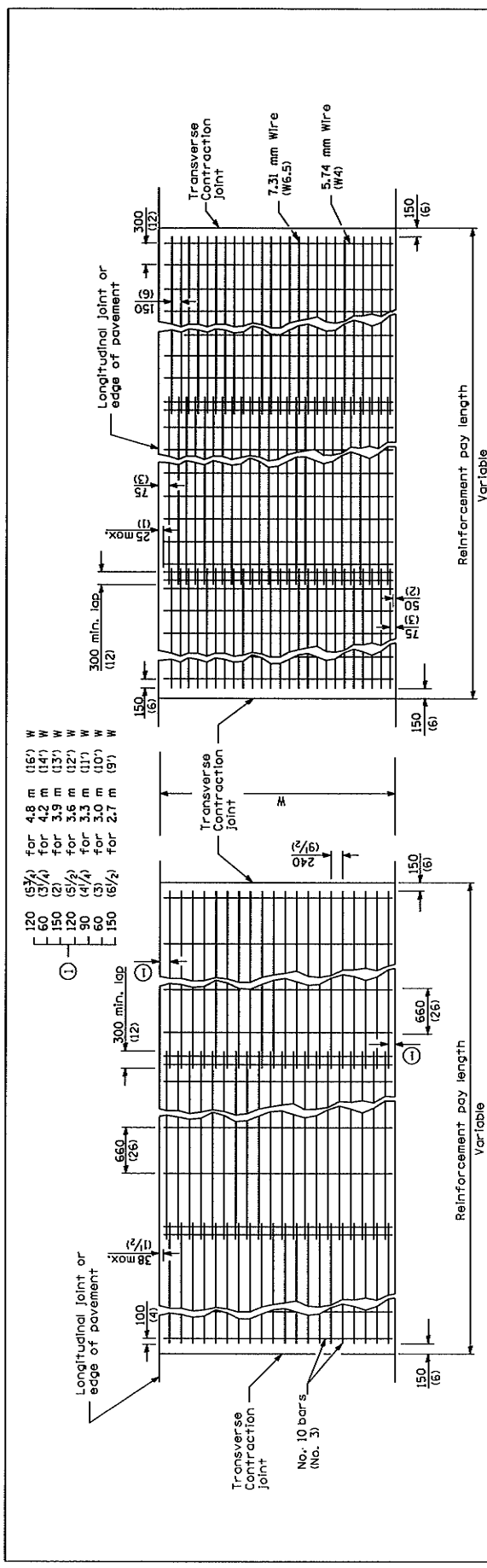
(Sheet 2 of 2)

STANDARD 420111-01



* Less than 300 (12) formed roundout to be used.

CAST IN PLACE DETAIL



Approximately 3.07 kg/m² (63 lbs./100 sq. ft.)

TYPE A

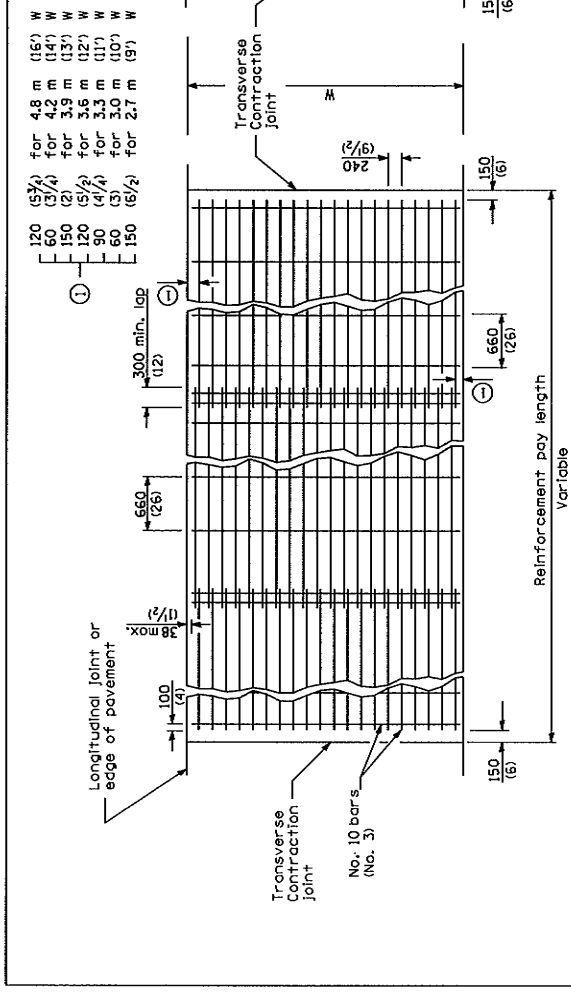
GENERAL NOTES

- Pavement block-outs shall be at least 600 mm (24") from contraction joints.
- Pavement fabric which is lapped longitudinally shall have a minimum lap of 150 mm (6").
- Pavement fabric may be positioned with the transverse wires on top or bottom of the longitudinal wires.
- All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-04	Minor corrections of joint information
1-1-97	Revised Standard 2347-5.

PAVEMENT FABRIC

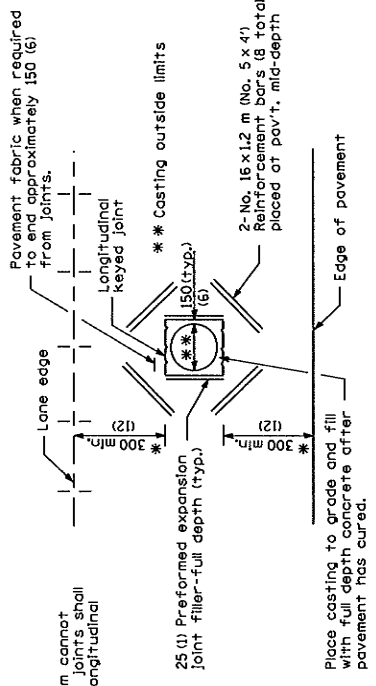
STANDARD 420701-01



Approximately 3.07 kg/m² (63 lbs./100 sq. ft.)

When clipped bar mats are used, each bar intersection shall be clipped with 3.74 mm (W1.7) wire.

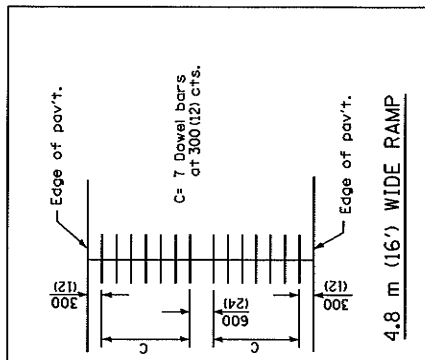
TYPE B



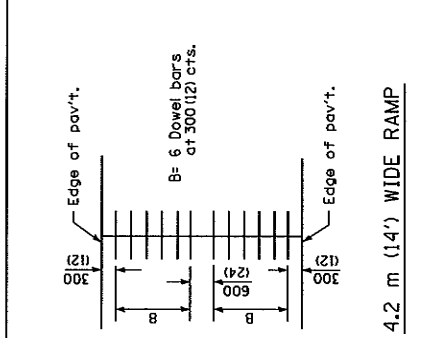
- * When the 300 mm (12") minimum cannot be achieved, the transverse joints shall be extended to either the longitudinal joint or edge of pavement.

DETAIL OF ADDED REINFORCEMENT FOR PAVEMENT BLOCKS-OUTS

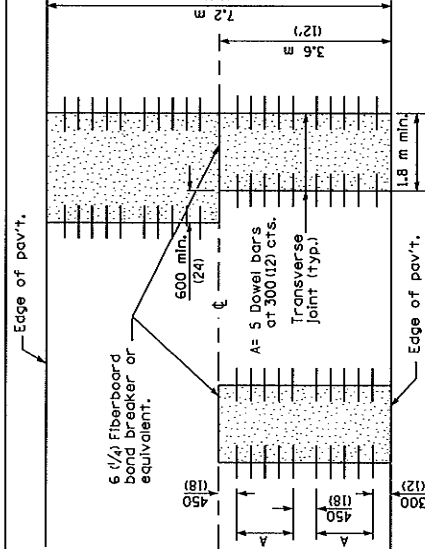
PASSED APPROVED BY ENGINEER OF PUBLIC WORKS APPROVED BY ENGINEER OF HIGHWAY AND PAVEMENT	ILLINOIS DEPARTMENT OF TRANSPORTATION ISSUED 1-1-97
	2004 2004
	2004 2004



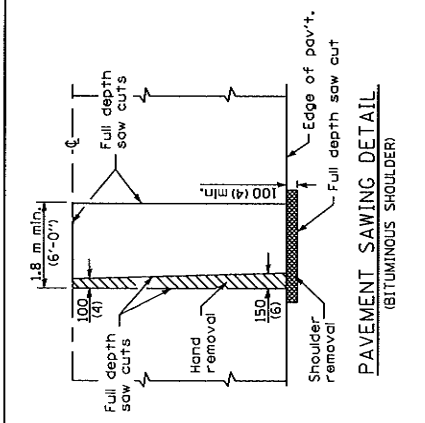
4.8 m (16') WIDE RAMP



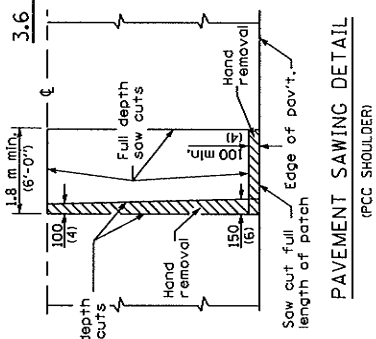
4.2 m (14') WIDE RAMP



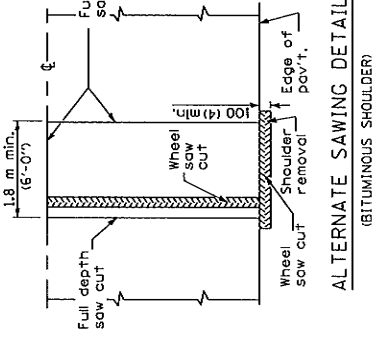
3.6 m (12') WIDE LANES



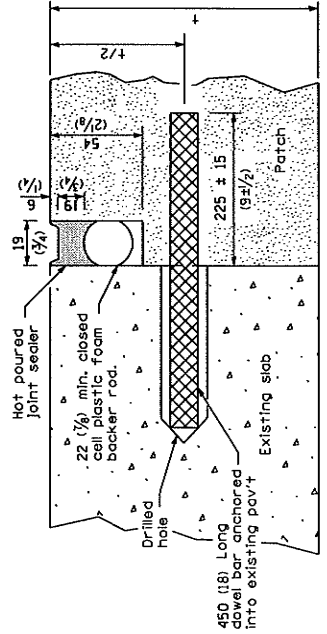
PAVEMENT SAWING DETAIL (BITUMINOUS SHOULDER)



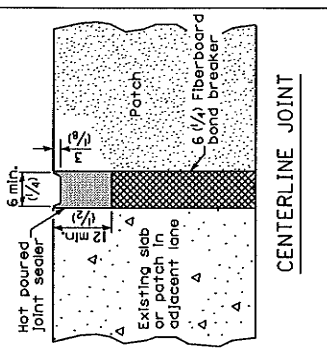
PAVEMENT SAWING DETAIL (PCC SHOULDER)



ALTERNATE SAWING DETAIL (BITUMINOUS SHOULDER)



TRANSVERSE JOINT

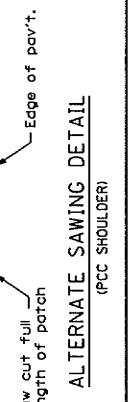


CENTERLINE JOINT

DOWEL BAR TABLE			
PAVEMENT THICKNESS	DOWEL BAR DIAMETER	HOLE DIAMETER	
200 (8) or greater	38 (1 1/2)	41 (1 1/4)	
180 (7) thru 199 (7.99)	32 (1 1/4)	35 (1 3/8)	
Less than 180 (7)	25 (1)	29 (1 1/8)	

GENERAL NOTES
 The transverse joints for Class B patches shall align with joints or cracks in the adjacent lane whenever possible.
 For Class B patches 1.4 m (45') or longer, transverse contraction joints shall be installed at regular intervals per the joint spacing of the existing pavement.
 See Standard 420701 for details of pavement fabric.
 All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-04	Revised expansion caps and general notes.
1-1-03	Revised expansion joint dowels to epoxy coated, and minor revisions.



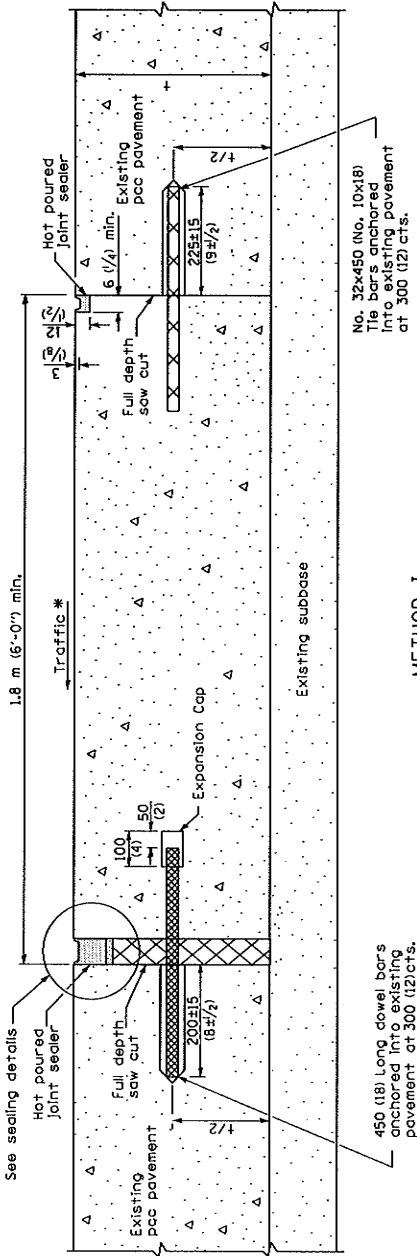
ALTERNATE SAWING DETAIL (PCC SHOULDER)

Illinois Department of Transportation
 PASSED January 1, 2004
 ENGINEER OF RECORD
 APPROVED January 1, 2004
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

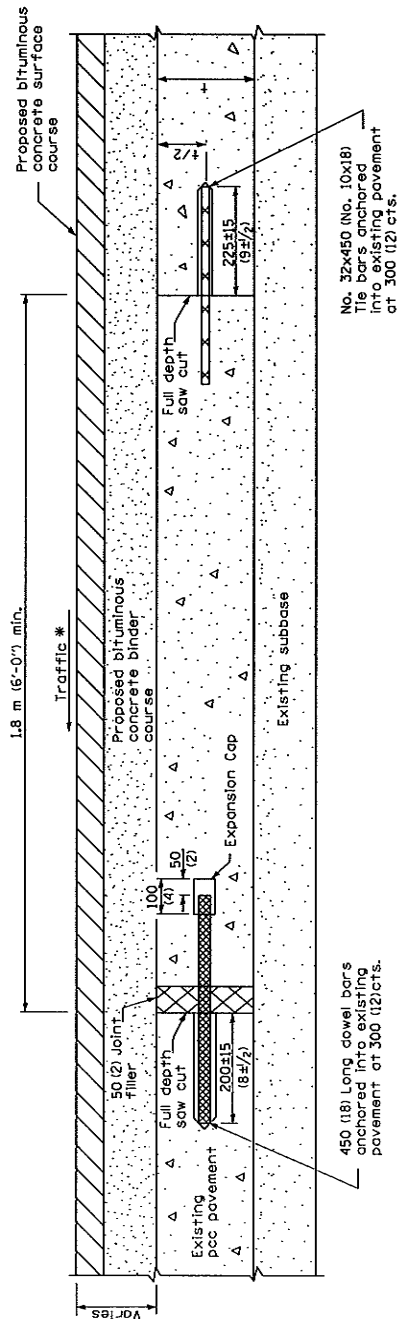
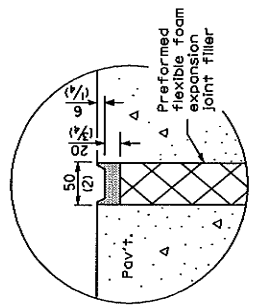
CLASS B PATCHES
STANDARD 442101-05
 (Sheet 1 of 2)

TRANSVERSE EXPANSION JOINTS



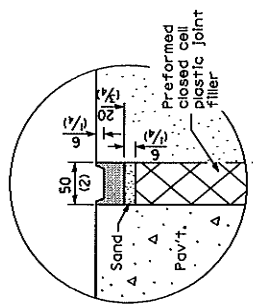
METHOD I
(Without Resurfacing)

SEALING DETAIL



METHOD II
(With Resurfacing)

SEALING DETAIL



NOTE

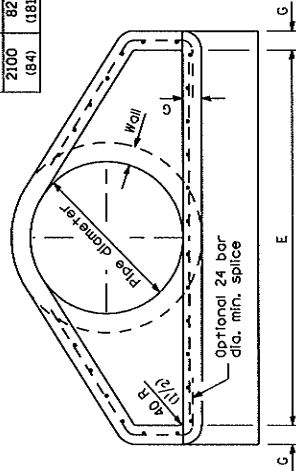
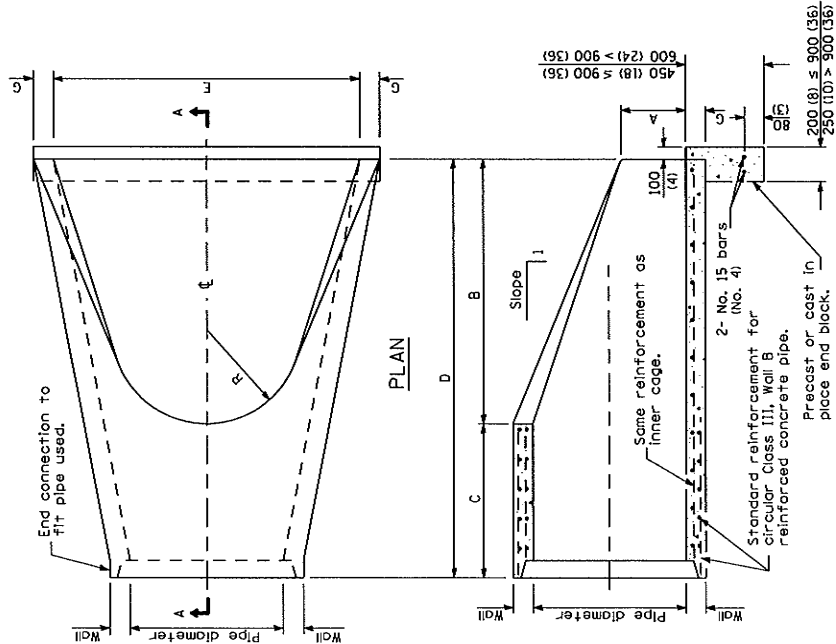
* When re-establishing a transverse expansion joint on a two-lane two-way road, reverse the orientation of the dowel bars with respect to traffic for one of the patches such that the joint will be continuous across both lanes.

Illinois Department of Transportation
 PASSED: *[Signature]* January 1, 2004
 ENGINEER OF PUBLIC INFRASTRUCTURES
 APPROVED: *[Signature]* January 1, 2004
 ENGINEER OF DESIGN AND ENVIRONMENT

CLASS B PATCHES
 STANDARD 442101-05
 (Sheet 2 of 2)

PIPE DIA.	APPROX. WT., KG (LBS.)	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
300	240	51	102	610	1,241 m	1,851 m	610	51	229	1:2.4
(12)	(530)	(2)	(4)	(24)	(4'-0 1/2")	(6'-0 3/4")	(24)	(2)	(9)	
375	335	57	152	686	1,168 m	1,854 m	762	57	280	1:2.4
(15)	(740)	(2 1/2)	(6)	(27)	(3'-10 1/2")	(6'-1 1/4")	(30)	(2 1/2)	(11)	
450	450	64	229	686	1,168 m	1,854 m	914	64	305	1:2.4
(18)	(990)	(2 1/2)	(9)	(27)	(3'-10 1/2")	(6'-1 1/4")	(36)	(2 1/2)	(12)	
525	580	70	229	889	965	1,067 m	1,067 m	70	330	1:2.4
(21)	(1280)	(2 3/4)	(9)	(35)	(38)	(6'-1 1/4")	(3'-6 1/2")	(2 3/4)	(13)	
600	690	76	241	1,105 m	762	1,867 m	1,219 m	76	356	1:2.5
(24)	(1520)	(3)	(9 1/2)	(3'-7 1/2")	(30)	(6'-1 1/2")	(4'-0 1/2")	(3)	(14)	
675	875	83	267	1,219 m	648	1,867 m	1,372 m	83	368	1:2.4
(27)	(1930)	(3 1/4)	(10 1/2)	(4'-0 1/2")	(26 1/2)	(6'-1 1/2")	(4'-6 1/2")	(3 1/4)	(14 1/2)	
750	995	89	305	1,375 m	502	1,874 m	1,524 m	89	381	1:2.5
(30)	(2190)	(3 3/4)	(12)	(4'-6 1/2")	(19 1/4)	(6'-1 3/4")	(5'-0 1/2")	(3 3/4)	(15)	
825	1,450	95	343	1,486 m	997	2,483 m	1,676 m	95	445	1:2.5
(33)	(3200)	(3 3/4)	(13 1/2)	(4'-10 1/2")	(39 1/4)	(8'-1 3/4")	(5'-6 1/2")	(3 3/4)	(17 1/2)	
900	1,860	102	381	1.6 m	883	2,483 m	1,829 m	102	508	1:2.5
(36)	(4100)	(4)	(15)	(5'-3 1/2")	(34 3/4)	(8'-1 3/4")	(6'-0 1/2")	(4)	(20)	
1050	2,440	114	533	1.6 m	889	2,489 m	1,981 m	114	559	1:2.5
(42)	(5380)	(4 1/2)	(21)	(5'-3 1/2")	(35)	(8'-2 1/2")	(6'-6 1/2")	(4 1/2)	(22)	
1200	2,970	127	610	1,829 m	660	2,489 m	2,134 m	127	559	1:2.5
(48)	(6550)	(5)	(24)	(6'-0 1/2")	(26)	(8'-2 1/2")	(7'-0 1/2")	(5)	(22)	
1350	3,740	140	686	1,651 m	889	2,54 m	2,286 m	140	610	1:2.0
(54)	(8240)	(5 1/2)	(27)	(5'-5 1/2")	(35)	(8'-4 1/2")	(7'-6 1/2")	(5 1/2)	(24)	
1500	3,960	152	889	1,524 m	991	2,515 m	2,438 m	152	*	1:1.9
(60)	(8730)	(6)	(35)	(5'-0 1/2")	(39)	(8'-3 1/2")	(8'-0 1/2")	(6)	*	
1650	4,860	165	762	1,829 m	686	2,515 m	2,591 m	165	*	1:1.7
(66)	(10710)	(6 1/2)	(30)	(6'-0 1/2")	(27)	(8'-3 1/2")	(8'-6 1/2")	(6 1/2)	*	
1800	5,680	178	914	1,981 m	533	2,514 m	2,743 m	152	*	1:1.8
(72)	(12520)	(7)	(36)	(6'-6 1/2")	(21)	(8'-3 1/2")	(9'-0 1/2")	(6)	*	
1950	6,700	191	914	2,286 m	533	2,819 m	2,896 m	165	*	1:1.8
(78)	(14770)	(7 1/2)	(36)	(7'-6 1/2")	(21)	(9'-3 1/2")	(9'-6 1/2")	(6 1/2)	*	
2100	8,240	203	914	2,299 m	533	2,832 m	3,048 m	165	*	1:1.6
(84)	(18160)	(8)	(36)	(7'-6 1/2")	(21)	(9'-3 1/2")	(10'-0 1/2")	(6 1/2)	*	

* Radius as furnished by manufacturer



END VIEW

SECTION A-A

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V/H).

All dimensions are in millimeters (inches) unless otherwise shown.

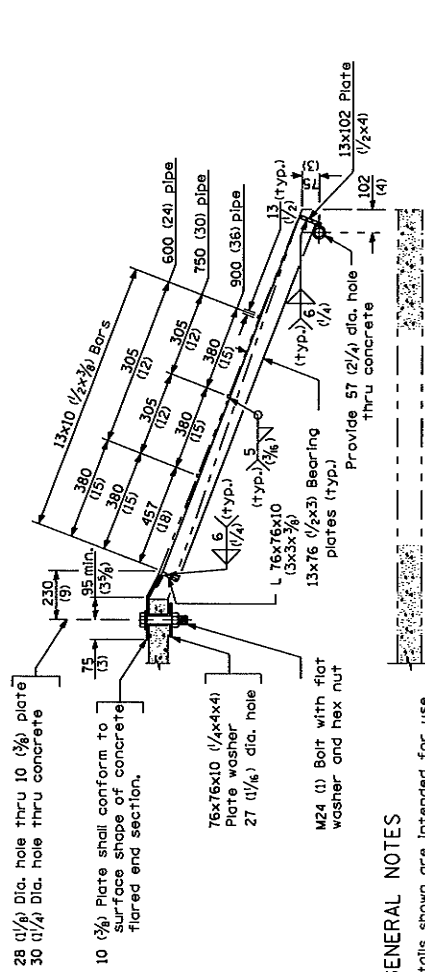
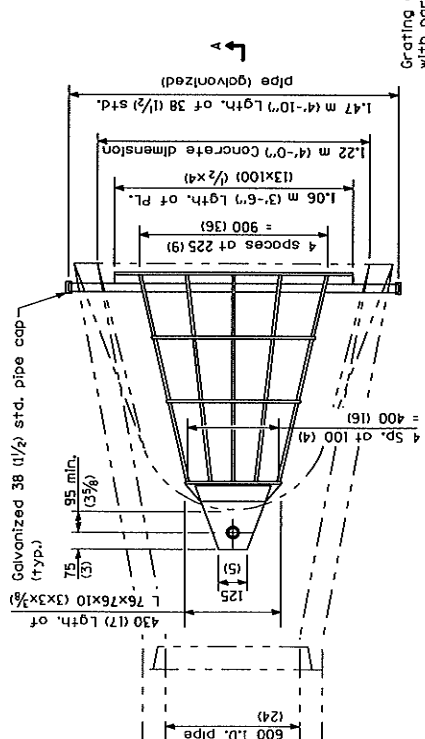
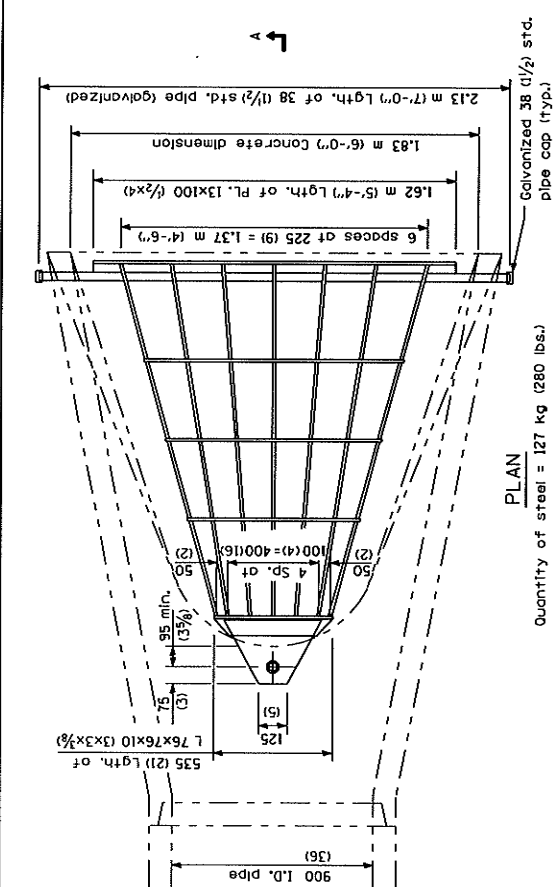
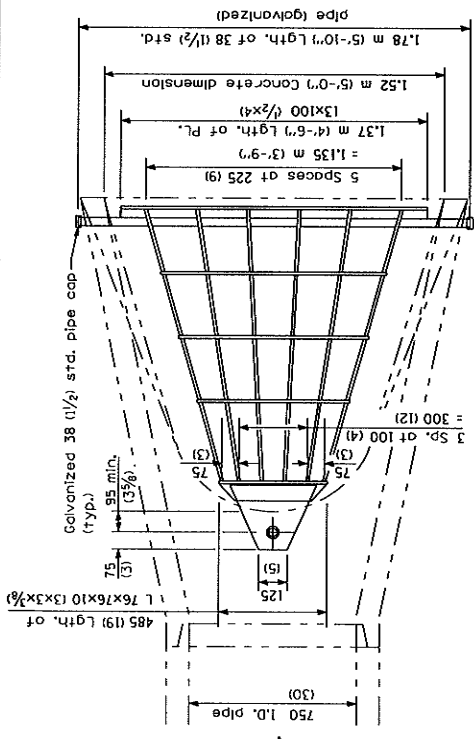
Illinois Department of Transportation
 APPROVED: *[Signature]* 1987
 ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED: *[Signature]* 1987
 ENGINEER OF DESIGN AND INSTRUMENTATION

DATE	REVISIONS
1-1-97	Renum. Standard 2449-1.
	Deleted DN Symbol.
11-1-94	Revised metric values and slopes.

PRECAST REINFORCED CONCRETE FLARED END SECTION

STANDARD 542301

MODIFY GRATE FOR 12", 15" AND 18" FLARED END SECTIONS



GENERAL NOTES

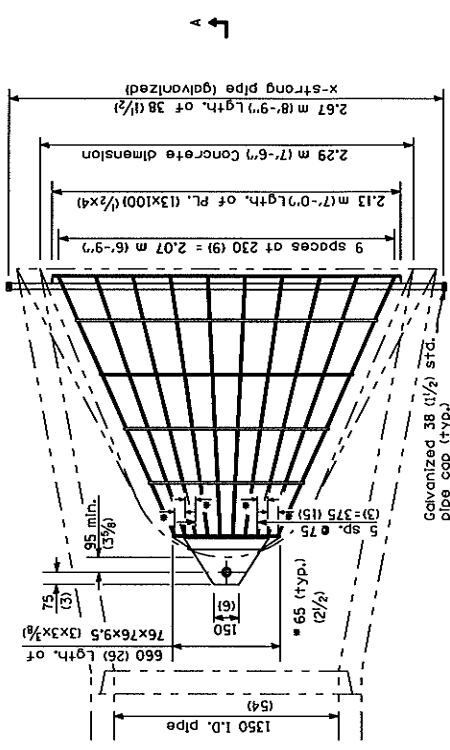
- Grating details shown are intended for use with particular sizes of precast reinforced concrete flared end sections as shown on standards 542301 and 542306.
- Approximate quantity of steel shown includes total quantity of grating, bolts, nuts, washers and steel pipe.
- Holes in the precast concrete flared end sections shall be cored to the diameters noted. If core-out on the other end of the hole occurs, the hole shall be filled with grout to correct the diameter of the hole.

All dimensions are in millimeters (inches) unless otherwise shown.

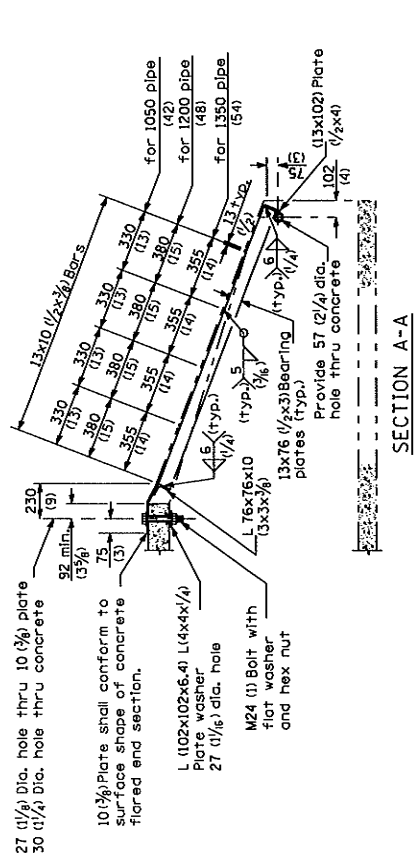
DATE	REVISIONS
1-1-97	Remum. Standard 2364-3 and Standard 2379-2.
6-15-94	Moved G.N. to Specs. Added Metric.

STANDARD 542311

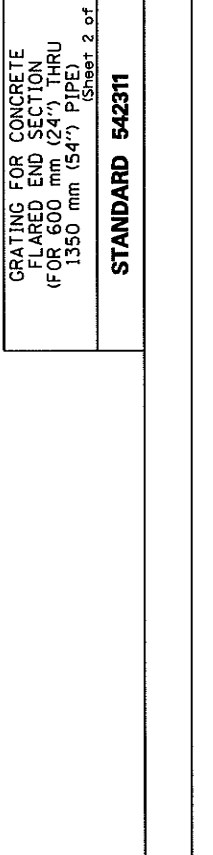
Illinois Department of Transportation
 PASSED BY: [Signature] 1997
 ENGINEER OF ROADWAY
 APPROVED BY: [Signature] 1987
 ENGINEER OF DESIGN AND ENVIRONMENT



PLAN
Quantity of steel = 193 kg (425 lbs.)



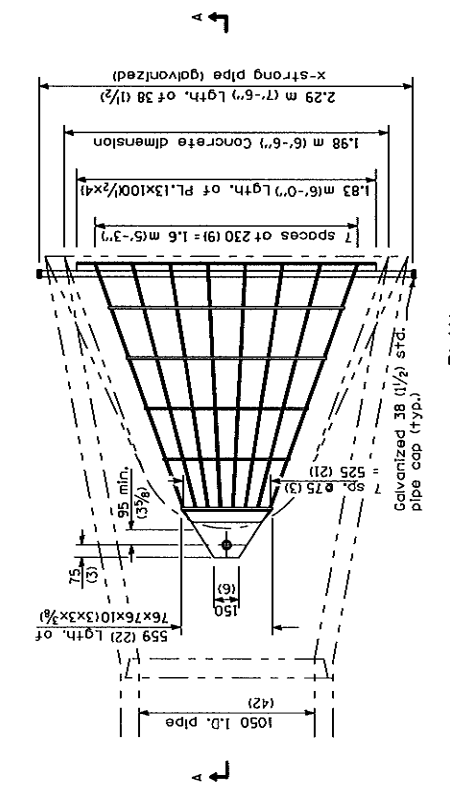
PLAN
Quantity of steel = 145 kg (320 lbs.)



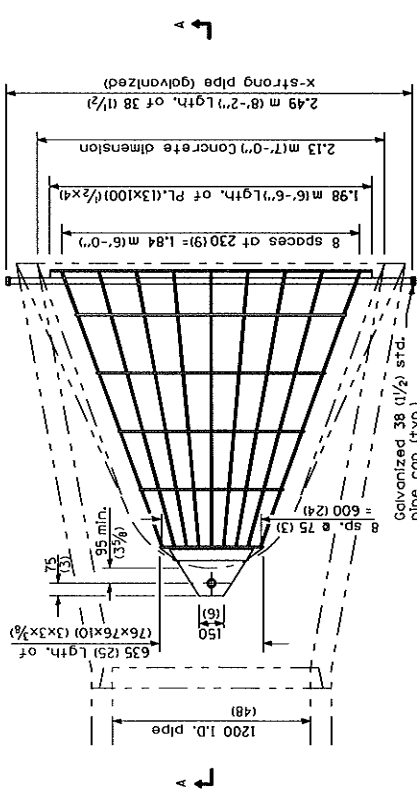
All dimensions are in millimeters (inches) unless otherwise shown.

GRATING FOR CONCRETE
FLARED END SECTION
(FOR 600 mm (24") THRU
1350 mm (54") PIPE)
(Sheet 2 of 2)

STANDARD 542311



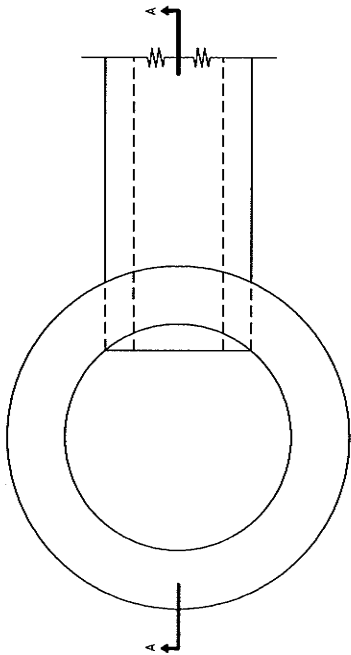
PLAN
Quantity of steel = 145 kg (320 lbs.)



PLAN
Quantity of steel = 181 kg (400 lbs.)

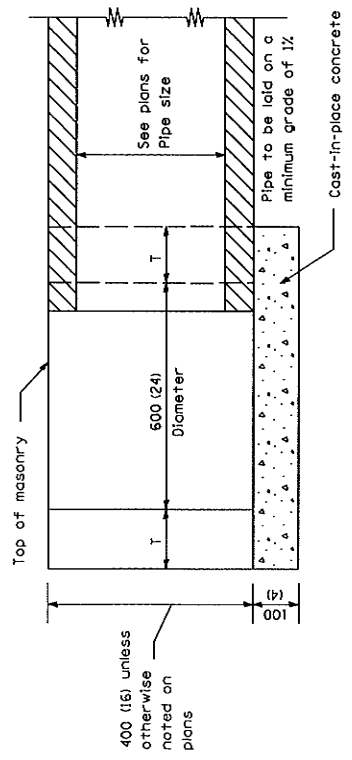
Illinois Department of Transportation
PASSED _____ 1987
ENGINEER OF STRUCTURAL ARCHITECTURES
APPROVED _____ 1987
ENGINEER OF DESIGN AND CONSTRUCTION

16-1-1 03018

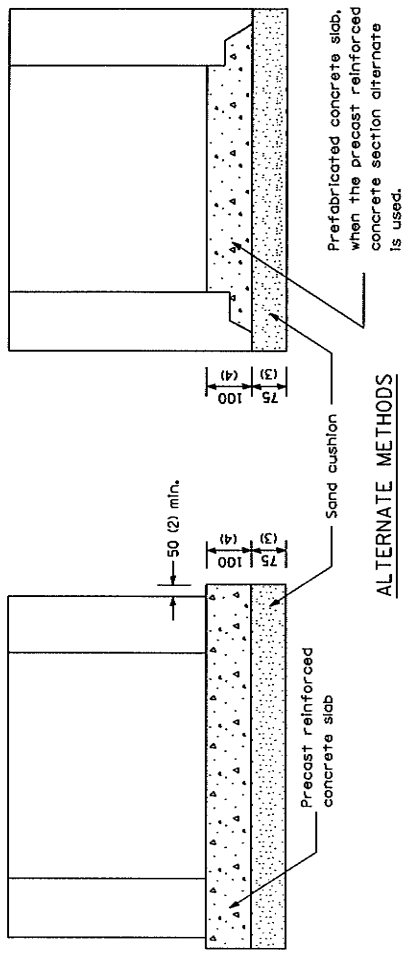


PLAN

ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	200 (8)
CAST-IN-PLACE CONCRETE	150 (6)
CONCRETE MASONRY UNIT	125 (5)
PRECAST REINFORCED CONCRETE SECTION	75 (3)



SECTION A-A



ALTERNATE METHODS

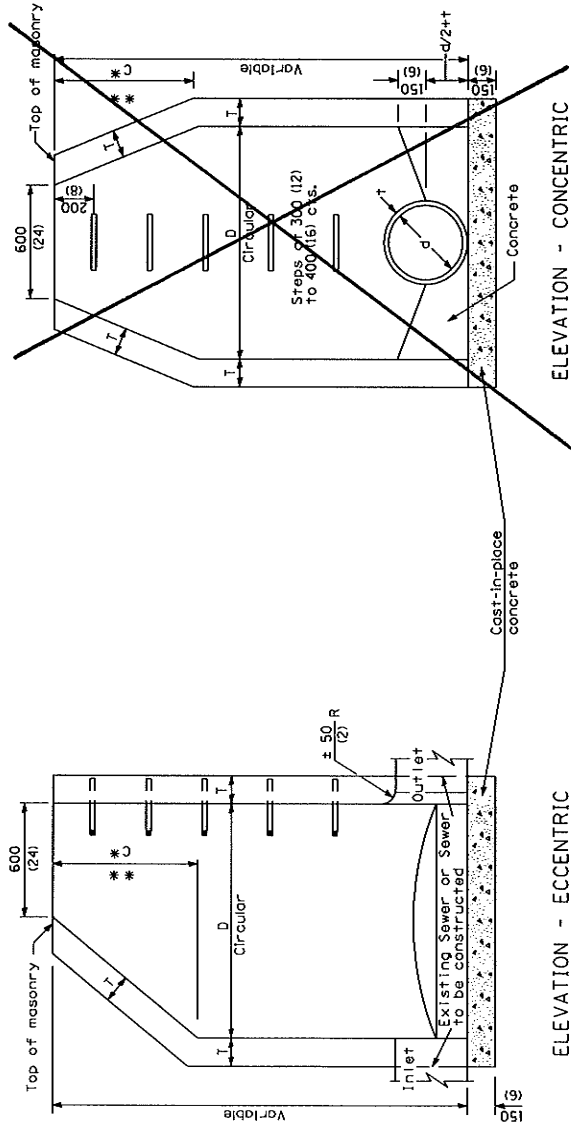
All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation
 PASSED _____ 1997
 ENGINEER OF DESIGN AND PROCEEDURES
 APPROVED _____ 1997
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-97	Renum. Standard 1683-5.
6-15-94	Moved G.N. to Specs. Added Metric.

INLET - TYPE A

STANDARD 602301



ALTERNATE MATERIALS FOR WALLS	D	C	T (min.)
Concrete-Masonry Unit	1.2 m (4'-0")	750 (30)	125 (5)
Block-Masonry	1.2 m (4'-0")	750 (30)	200 (8)
Precast Reinforced Concrete Section	1.2 m (4'-0")	750 (30)	100 (4)
Cast-in-place Concrete	1.2 m (4'-0")	750 (30)	150 (6)

GENERAL NOTES

- See Standard 60270J for details of steps.
- * Dimension "C" for Precast Reinforced concrete sections may vary from the dimension given to plus 150 mm (6").
- ** See Standard 60260J for Optional Precast Reinforced Concrete Flat Slab Top.

All dimensions are in millimeters (inches) unless otherwise shown.

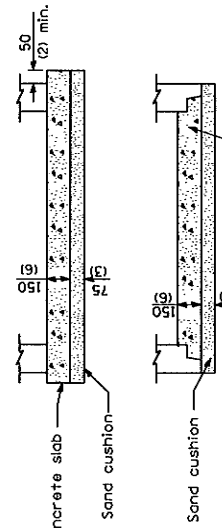
DATE	REVISIONS
1-1-97	Renum. Standard 1527-10.
6-15-94	Moved G.N. to Specs. Deleted step details & Cook County note.

MANHOLE TYPE A

STANDARD 602401

ELEVATION - CONCENTRIC

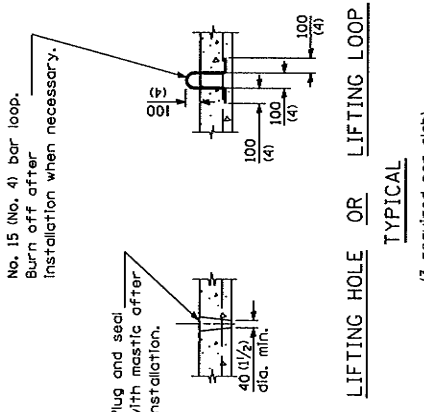
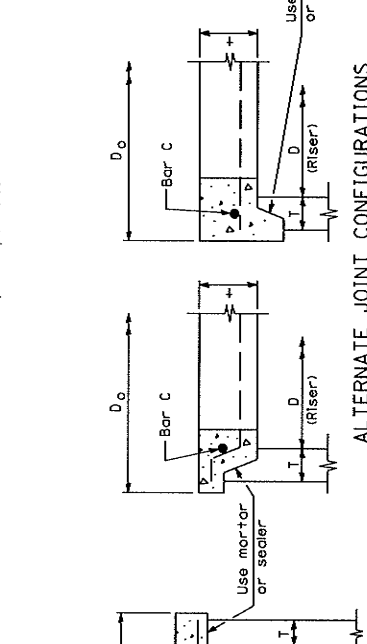
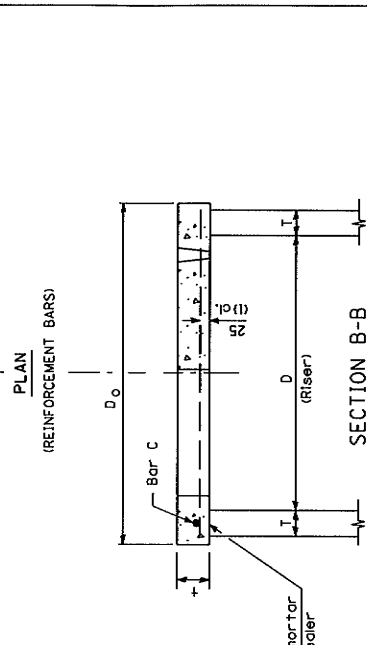
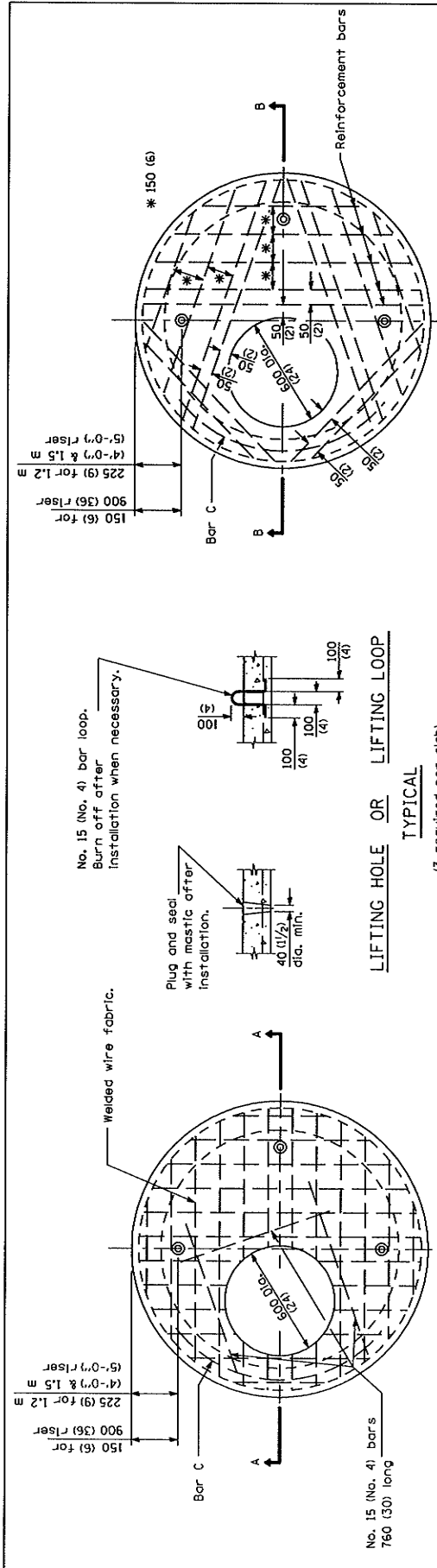
ELEVATION - ECCENTRIC



ALTERNATE BOTTOM SLAB

Illinois Department of Transportation
 PASSED _____ JANUARY 1, 1997
 ENGINEER OF DESIGN AND PROVISIONS
 APPROVED _____ JANUARY 1, 1997
 ENGINEER OF DESIGN AND PROVISIONS

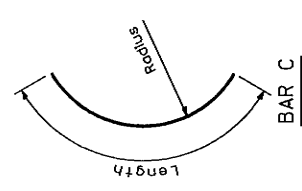
ISSUED 1-1-97



LIFTING HOLE OR LIFTING LOOP
TYPICAL
(3 required per slab)

ALTERNATE JOINT CONFIGURATIONS

D	Y	D _o (min.)	Reinforcement or Bar size each direction	No. 15 (No. 4) Bar size	No. 15 (No. 4) Length/Radius
900 (36)	150 (6)	12 + 12	425 mm ² /m (120 sq. inch/ft.)	No. 15 1.2 m (No. 4) (4'-0")	480 (19)
1.2 m (4'-0")	150 (6)	12 + 12	740 mm ² /m (135 sq. inch/ft.)	No. 15 1.35 m (No. 5) (4'-6")	660 (26)
1.5 m (5'-0")	200 (8)	12 + 12	740 mm ² /m (135 sq. inch/ft.)	No. 15 1.5 m (No. 5) (5'-0")	810 (32)



GENERAL NOTES
The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602011, 602306, 602401, or 602501 at the option of the Contractor or when field conditions prohibit the use of tapered tops.
All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS

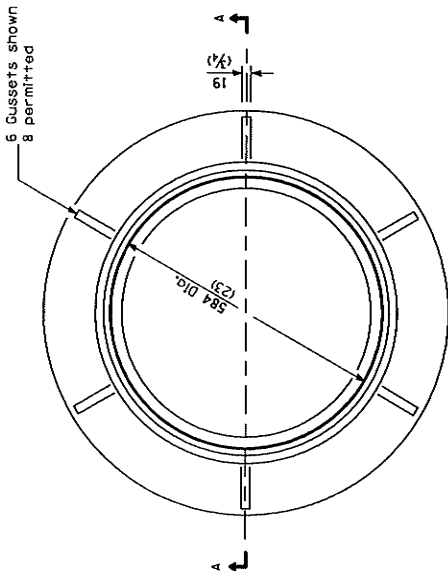
DATE	REVISIONS
1-1-97	Renum. Standard 2354-2
6-15-94	Moved G.N. to Specs. Added Metric. Revised title.

PRECAST REINFORCED CONCRETE
FLAT SLAB TOP

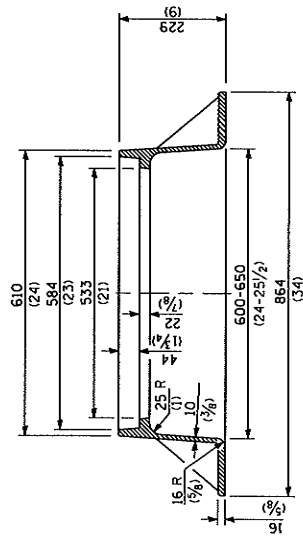
STANDARD 602601

Illinois Department of Transportation
PASSED: JUNE 11, 1997
ENGINEER OF DESIGN: [Signature]
APPROVED: [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

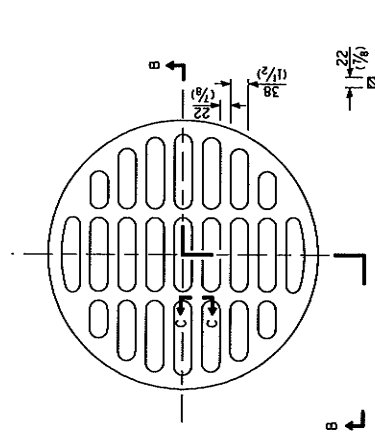


CAST FRAME

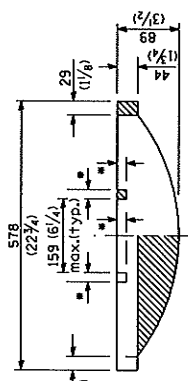


SECTION A-A

Gray Iron

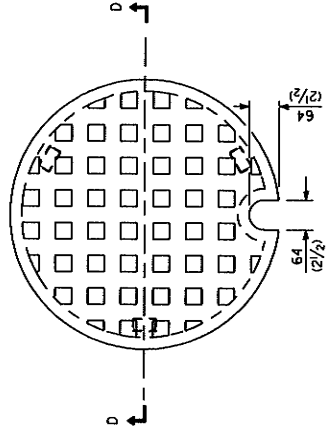


SECTION C-C

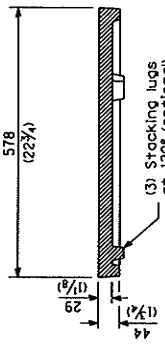


SECTION B-B

CAST OPEN LID



SECTION D-D



CAST CLOSED LID

Gray Iron Lid

All dimensions are in millimeters (inches) unless otherwise shown.

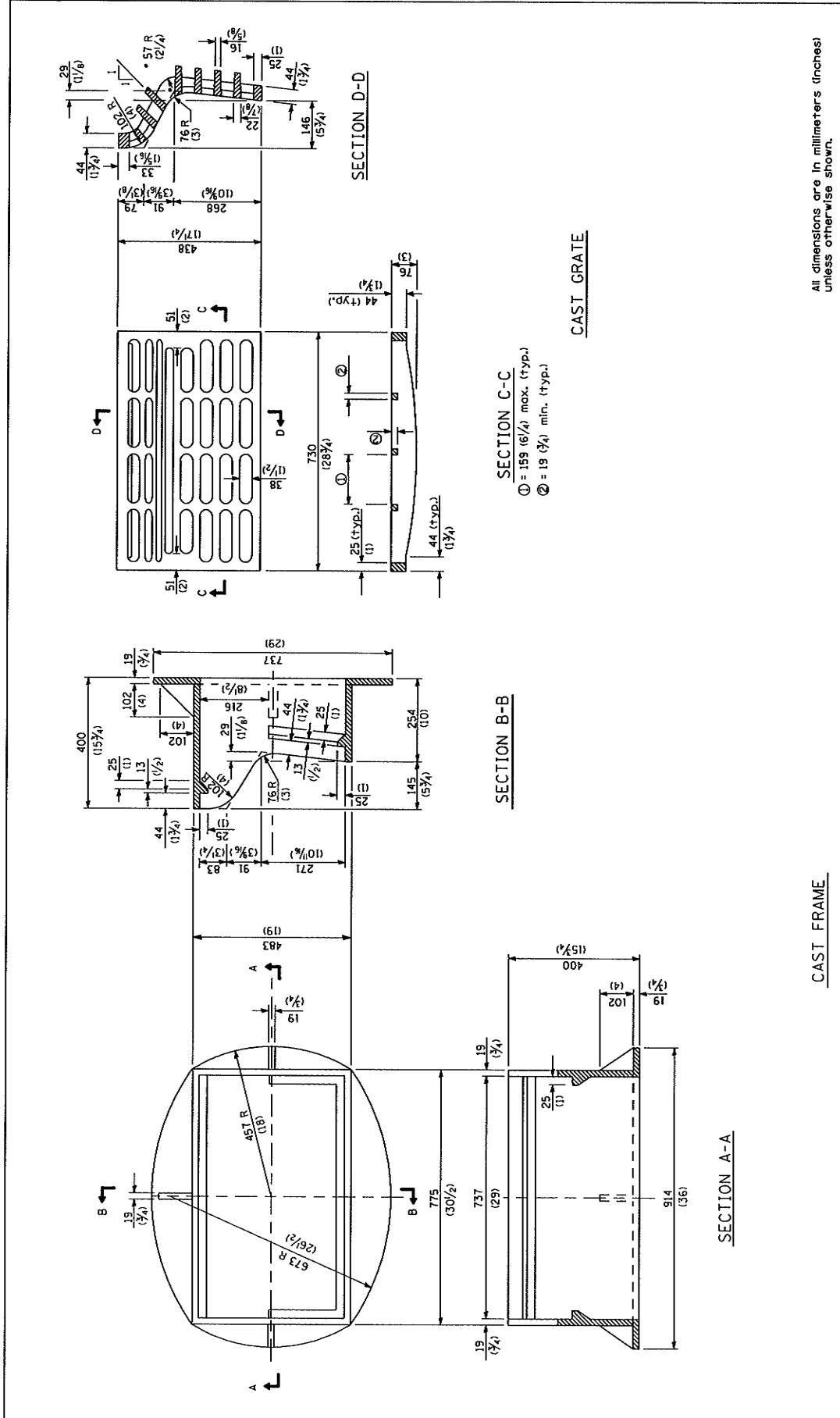
Illinois Department of Transportation	ISSUED 1-1-97
PASSED	JANUARY 1, 2004
ENGINEER OF HIGHWAY AND PROCEDURES	
APPROVED	JANUARY 1, 2004

DATE	REVISIONS
1-1-04	Removed weights.
1-1-02	Changed well thickness from 7/8 to 3/8.

FRAME AND LIDS

TYPE 1

STANDARD 604001-02



CAST FRAME

CAST GRATE

SECTION C-C
 ⓪ = 159 (6 1/4) max. (typ.)
 ⓑ = 19 (3/4) min. (typ.)

CAST GRATE

SECTION B-B

SECTION D-D

SECTION A-A

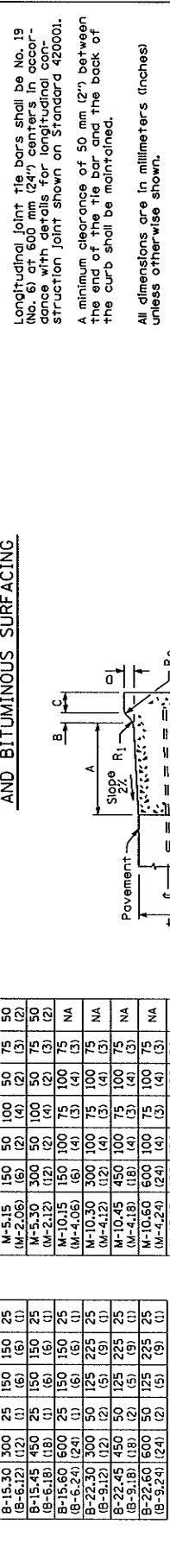
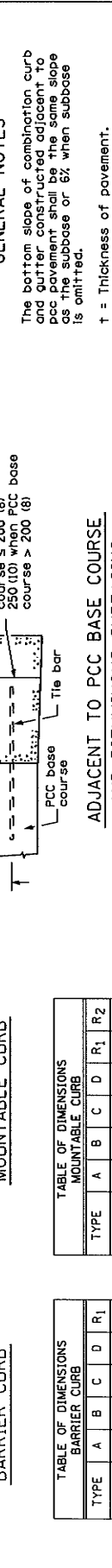
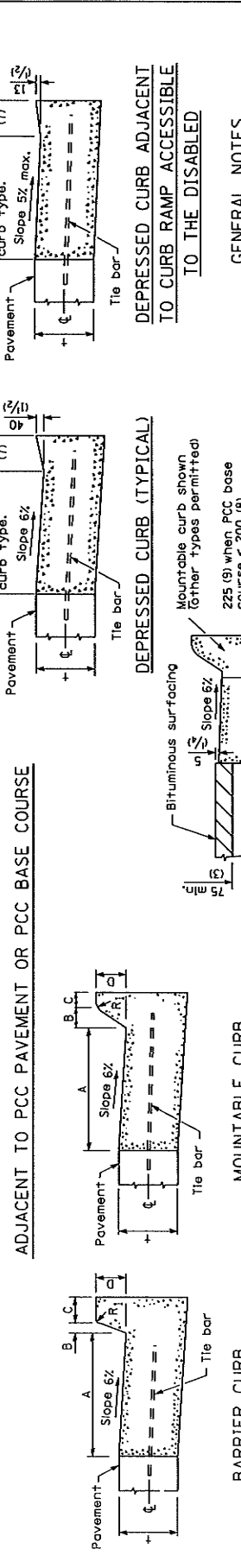
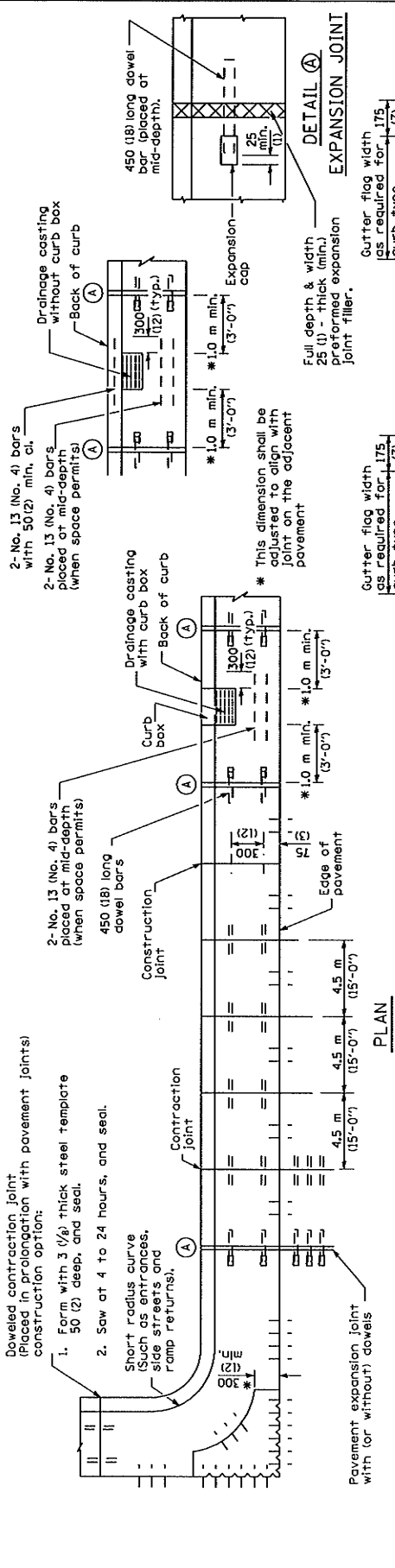
Illinois Department of Transportation
 PASSED: _____ 2004
 ENGINEER OF POLICE SUPERVISOR
 APPROVED: _____ 2004
 ENGINEER OF DESIGN AND ESTIMATION

ISSUED: 1-1-97

DATE	REVISIONS
1-1-04	Removed weights.
1-1-97	Renum. Standard 2221-7.

FRAME AND GRATE
 TYPE 12
 STANDARD 604061-01

All dimensions are in millimeters (inches) unless otherwise shown.



GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 19 (16) bars spaced at 600 (24) mm (24") on center with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 50 mm (2") between the end of the tie bar and the back of the curb shall be maintained.

All dimensions are in millimeters (inches) unless otherwise shown.

TABLE OF DIMENSIONS BARRIER CURB

TYPE	A	B	C	D	R ₁
B-15.30	300	25	150	150	25
(B-6.12)	(12)	(1)	(6)	(6)	(1)
B-15.45	450	25	150	150	25
(B-6.18)	(18)	(1)	(6)	(6)	(1)
B-15.60	600	25	150	150	25
(B-6.24)	(24)	(1)	(6)	(6)	(1)
B-22.30	300	50	125	225	25
(B-9.12)	(12)	(2)	(5)	(9)	(1)
B-22.45	450	50	125	225	25
(B-9.18)	(18)	(2)	(5)	(9)	(1)
B-22.60	600	50	125	225	25
(B-9.24)	(24)	(2)	(5)	(9)	(1)

TABLE OF DIMENSIONS MOUNTABLE CURB

TYPE	A	B	C	D	R ₁	R ₂
M-5.15	150	50	100	50	75	50
(M-2.06)	(6)	(2)	(4)	(2)	(3)	(2)
M-5.30	300	50	100	50	75	50
(M-2.12)	(12)	(2)	(4)	(2)	(3)	(2)
M-10.15	150	100	75	100	75	NA
(M-4.06)	(6)	(4)	(3)	(4)	(3)	
M-10.30	300	100	75	100	75	NA
(M-4.12)	(12)	(4)	(3)	(4)	(3)	
M-10.45	450	100	75	100	75	NA
(M-4.18)	(18)	(4)	(3)	(4)	(3)	
M-10.60	600	100	75	100	75	NA
(M-4.24)	(24)	(4)	(3)	(4)	(3)	
M-15.15	150	150	50	150	50	NA
(M-6.06)	(6)	(6)	(2)	(6)	(2)	
M-15.30	300	150	50	150	50	NA
(M-6.12)	(12)	(6)	(2)	(6)	(2)	
M-15.45	450	150	50	150	50	NA
(M-6.18)	(18)	(6)	(2)	(6)	(2)	
M-15.60	600	150	50	150	50	NA
(M-6.24)	(24)	(6)	(2)	(6)	(2)	

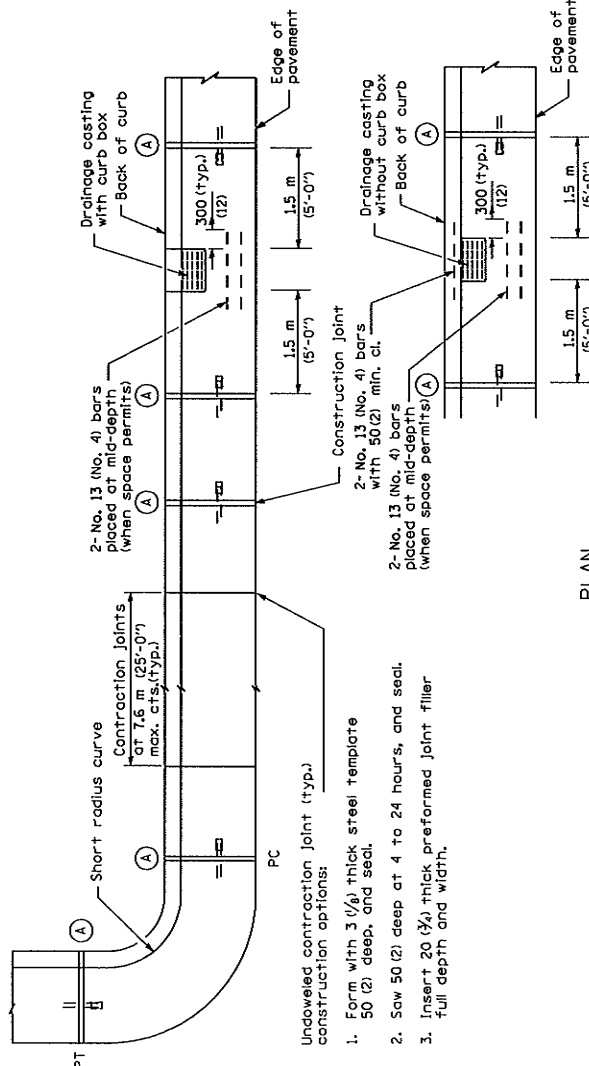
CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER (Sheet 1 of 2)

STANDARD 606001-02

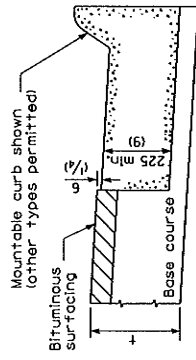
REVISIONS

DATE	REVISIONS
I-1-04	Revised expansion cap and soft converted metric reinforcement.
I-1-98	Rev. slope on M-5 (M-2) curbs. Del. "Hinge Joint" from plan view.

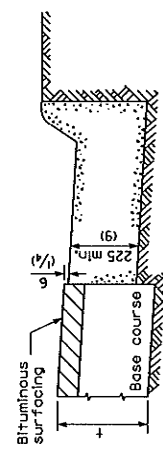
M-5.15 (M-2.06) and M-5.30 (M-2.12)



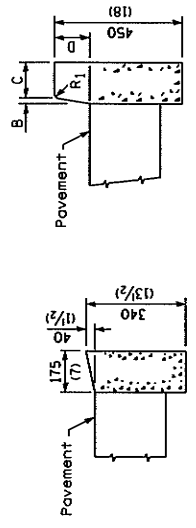
PLAN



ON DISTURBED SUBGRADE



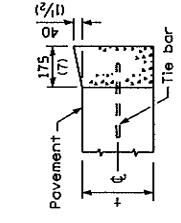
ON UNDISTURBED SUBGRADE



DEPRESSED CURB

BARRIER CURB

ADJACENT TO FLEXIBLE PAVEMENT



DEPRESSED CURB

BARRIER CURB

ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

ON DISTURBED SUBGRADE

ON UNDISTURBED SUBGRADE

ADJACENT TO FLEXIBLE PAVEMENT

CONCRETE CURB TYPE B

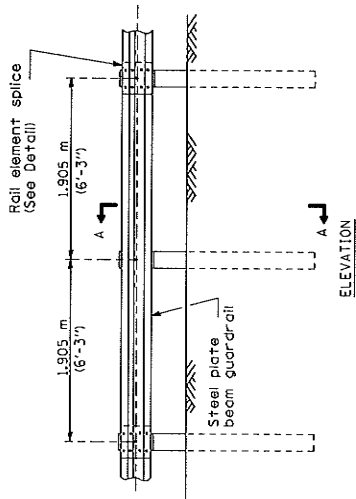
All dimensions are in millimeters (inches) unless otherwise shown.

CONCRETE CURB TYPE B
AND COMBINATION
CONCRETE CURB AND GUTTER
(Sheet 2 of 2)

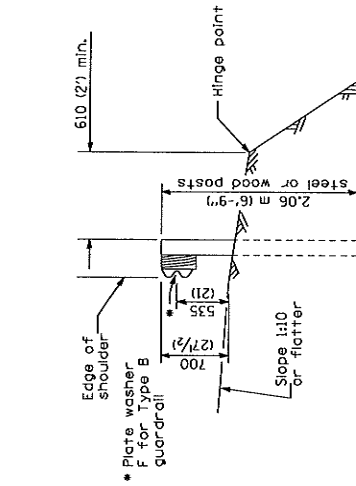
STANDARD 606001-02

Illinois Department of Transportation
PASSED JEROME J. 2004
APPROVED BY MICHAEL J. 2004
ENGINEER OF PUBLIC WORKS PROCEDURES
APPROVED BY MICHAEL J. 2004
ENGINEER OF PUBLIC WORKS PROCEDURES

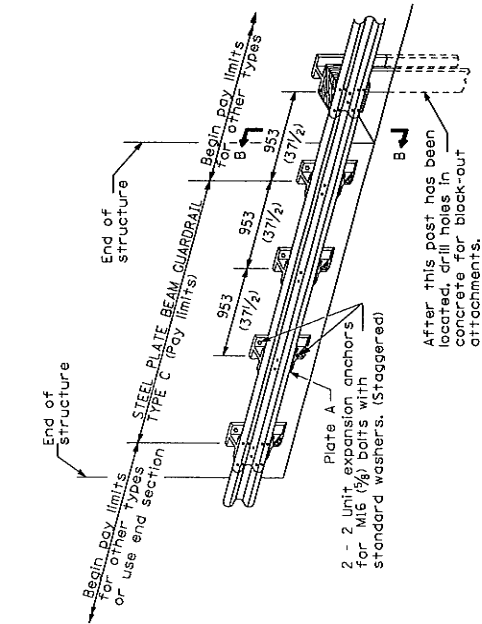
ISSUED 1-1-97



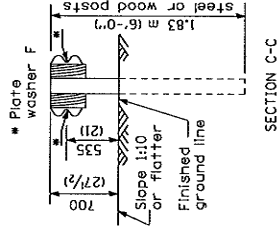
TYPE A
1.905 m (6'-3") Typical post spacing



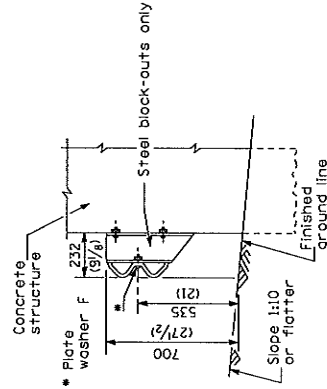
SECTION A-A



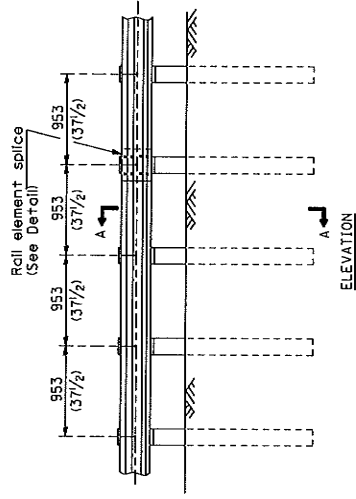
TYPE C
953 (37 1/2) Block-out spacing



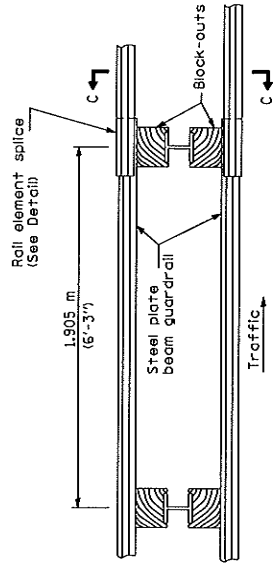
SECTION C-C



SECTION B-B



TYPE B
953 (37 1/2) Closed post spacing



TYPE D
Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
All dimensions are in millimeters (inches) unless otherwise shown.

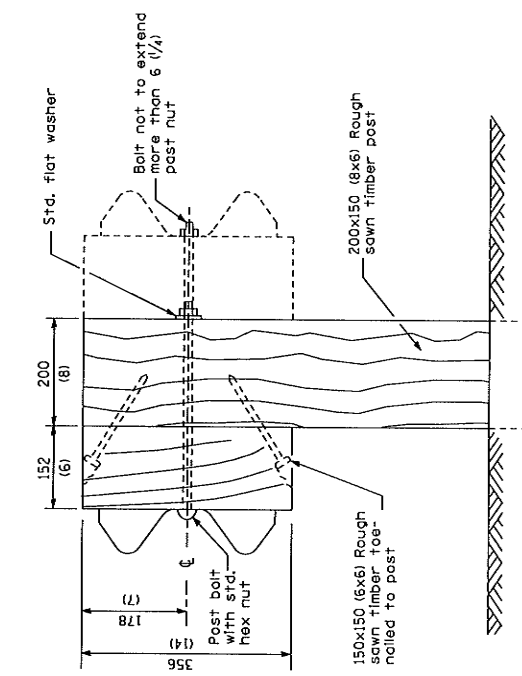
DATE	REVISIONS
1-1-05	Rev. post in impervious material on sheet 4.
10-1-02	Added min. spacing from guardrail post to shoulder hinge point.

STEEL PLATE BEAM GUARDRAIL

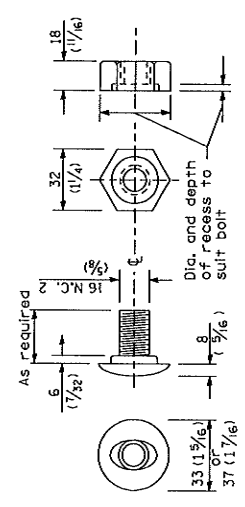
(Sheet 1 of 4)

STANDARD 630001-05

Illinois Department of Transportation
 PASSED JANUARY 1, 2005
 APPROVED BY *Michael D. Boudreau*
 ENGINEER OF POLICY AND PROCEDURES
 ISSUED 1-1-91
 APPROVED BY *Michael D. Boudreau*
 ENGINEER OF DESIGN AND ENVIRONMENT



WOOD POST CONSTRUCTION



POST OR SPLICE BOLT & NUT

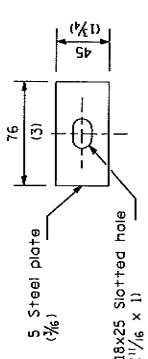
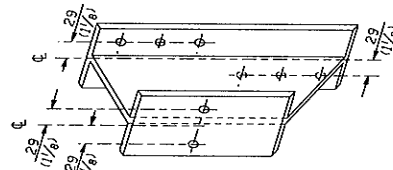
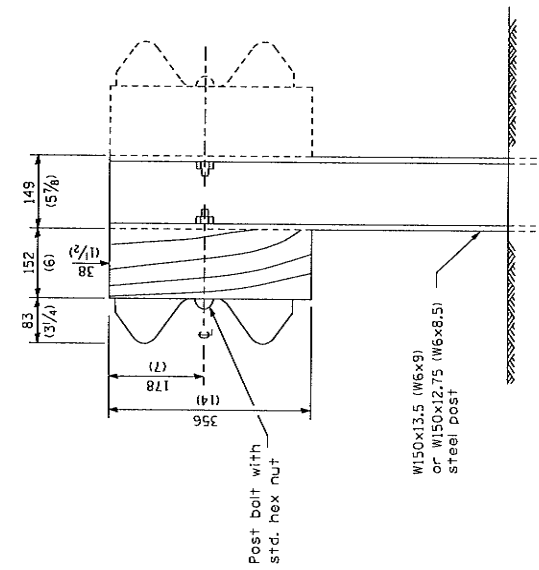


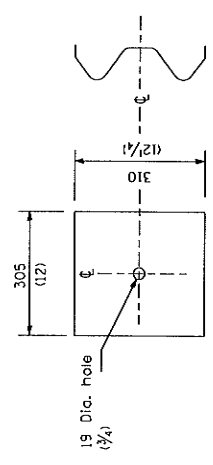
PLATE WASHER F



STEEL BLOCK-OUT DETAIL



STEEL POST CONSTRUCTION



NOTE

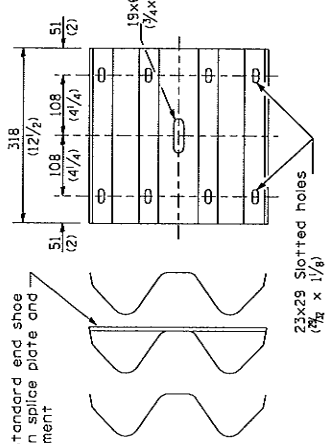
Plate A shall be placed between rail element and block-out or non-splice matching points only when steel block-outs are used.

PLATE A

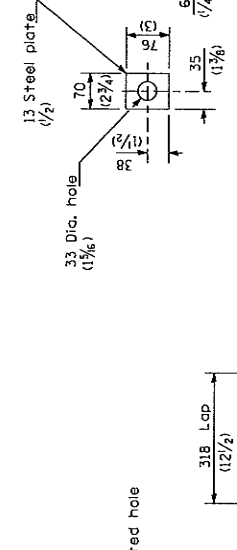
STEEL PLATE BEAM
GUARDRAIL
(Sheet 2 of 4)
STANDARD 630001-05

Illinois Department of Transportation
PASSED _____ 2005
APPROVED _____ 2005
ENGINEER OF PUBLIC WORKS
APPROVED _____ 2005
ENGINEER OF DESIGN AND ENVIRONMENT

Place standard end shoe between splice plate and rail element



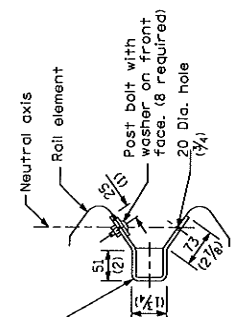
SPLICE PLATE



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

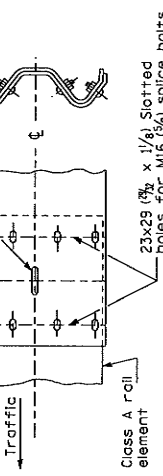
ANCHOR PLATE T DETAILS



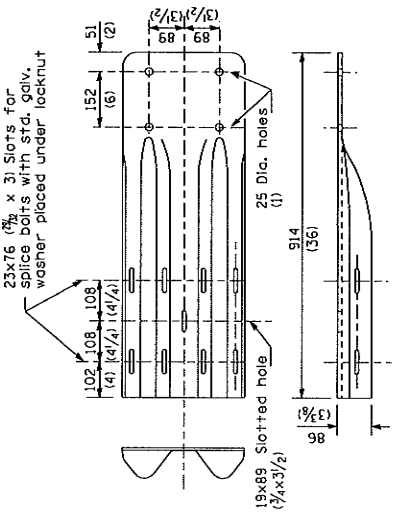
NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



RAIL ELEMENT SPLICE



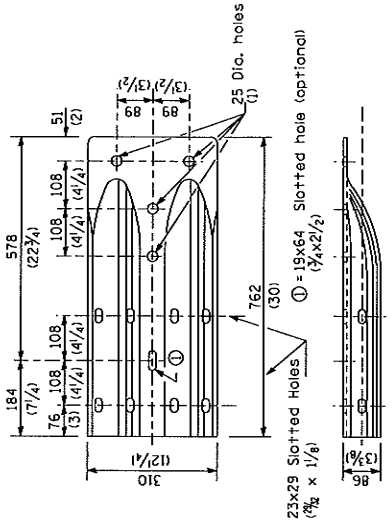
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guard-rail movement.

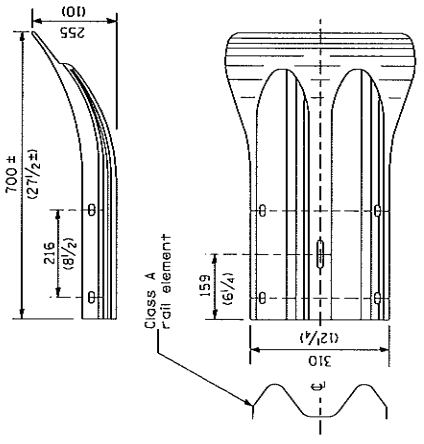
The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE



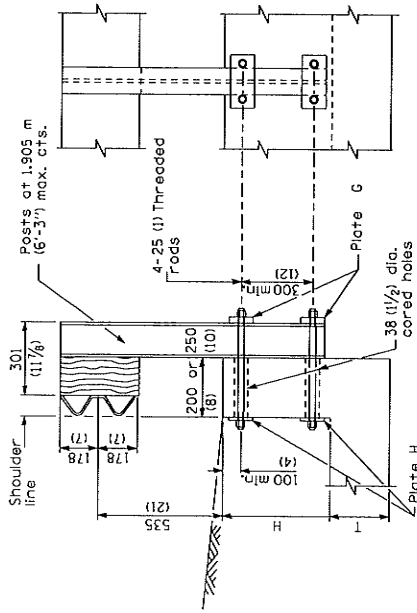
ALTERNATE END SHOE



END SECTION

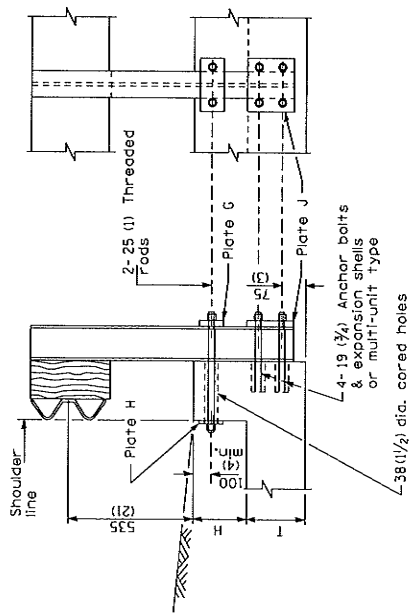
Illinois Department of Transportation
 PASSED JANUARY 1, 2005
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED JANUARY 1, 2005
 ENGINEER OF DESIGN AND ENVIRONMENT

STEEL PLATE BEAM GUARDRAIL
 (Sheet 3 of 4)
STANDARD 630001-05



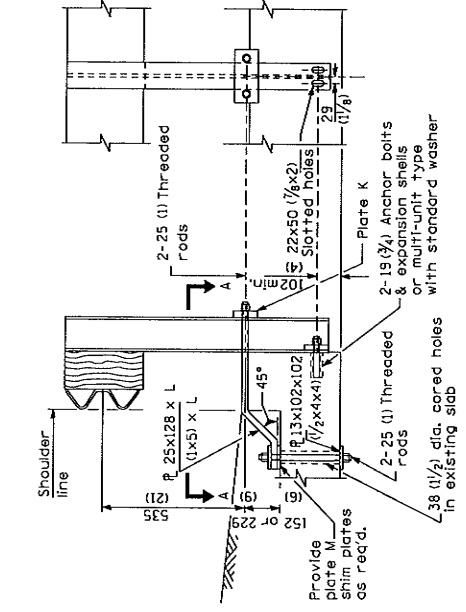
CROSS SECTION
CONDITION H > 450 (18)

ELEVATION



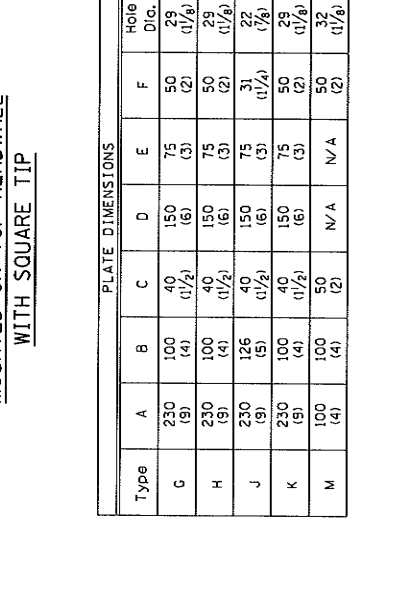
ELEVATION
CROSS SECTION

CONDITION H < 450 (18) & H+T ≥ 510 (20)

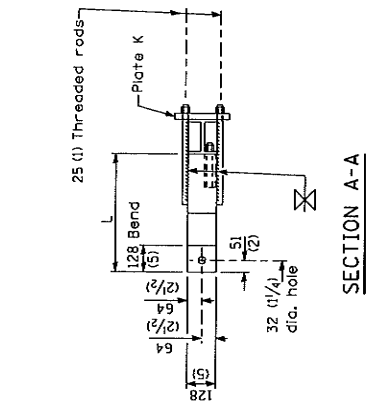


CROSS SECTION
CASE II
MOUNTED ON TOP HEADWALL
WITH SQUARE TIP

ELEVATION



ELEVATION
CROSS SECTION



SECTION A-A

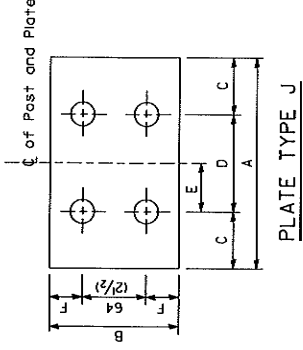


PLATE TYPE J

GENERAL NOTES

Except as noted, dimensions and notes specified for case II, III, and IV are the same as specified for case I.
For details of guardrail elements not shown, see Standard 630001.
All threaded rods shall be installed with heavy hex nuts and standard washers.

All dimensions are in millimeters (inches) unless otherwise shown.

Type	A	B	C	D	E	F	Hole Dia.	Thickness
G	230 (9)	100 (4)	40 (1 1/2)	150 (6)	75 (3)	50 (2)	29 (1 1/8)	25 (1)
H	230 (9)	100 (4)	40 (1 1/2)	150 (6)	75 (3)	50 (2)	29 (1 1/8)	13 (1/2)
J	230 (9)	126 (5)	40 (1 1/2)	150 (6)	75 (3)	31 (1 1/4)	22 (1)	25 (1)
K	230 (9)	100 (4)	40 (1 1/2)	150 (6)	75 (3)	50 (2)	29 (1 1/8)	32 (1 1/4)
M	100 (4)	100 (4)	50 (2)	N/A	N/A	50 (2)	32 (1 1/4)	13 (1/2)

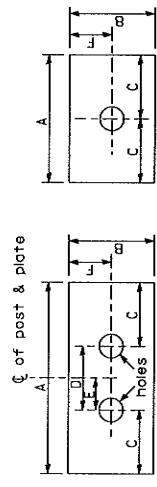


PLATE TYPES G, H & K

Center of post & plate

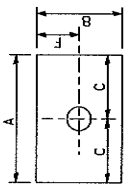


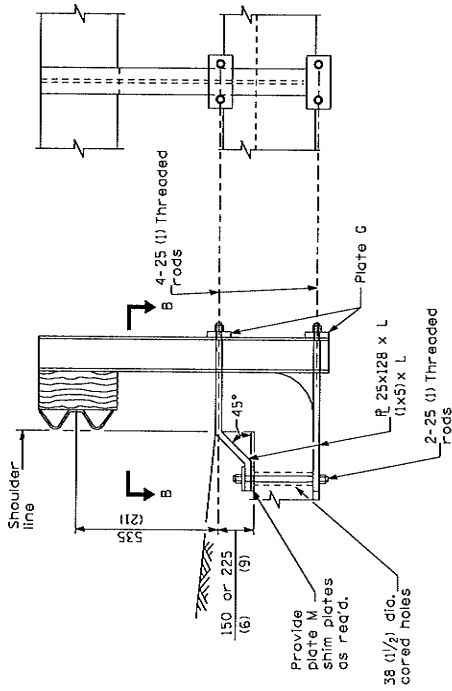
PLATE TYPE M

Illinois Department of Transportation
 PASSED JANUARY 1, 2005
 ENGINEER OF FACTORY INSPECTION APPROVED
 ISSUED 1-1-91
 ENGINEER OF DESIGN AND ENVIRONMENT

CASE I
MOUNTED ON
RAISED HEADWALL

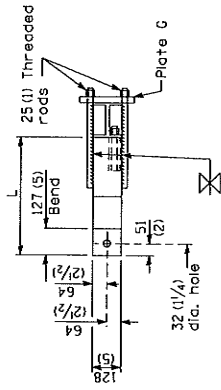
GUARDRAIL MOUNTED
ON EXISTING CULVERTS
(Sheet 1 of 2)
STANDARD 630101-05

DATE	REVISIONS
1-1-05	Revised Case IV on sheet 2 of 2.
1-1-03	Revised gusset dimension on case IV cross section.



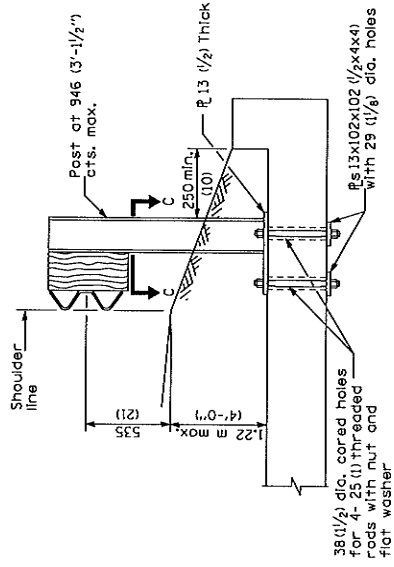
CROSS SECTION

ELEVATION

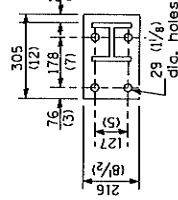


SECTION B-B

CASE III
MOUNTED ON HEADWALL
WITH CURVED OR DEMOLISHED TIP



CROSS SECTION



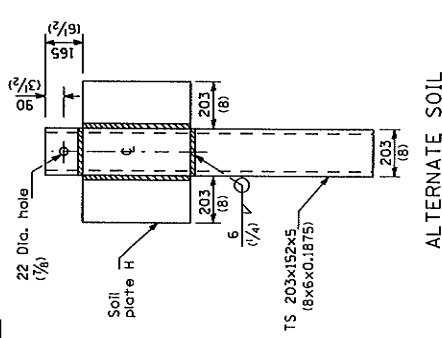
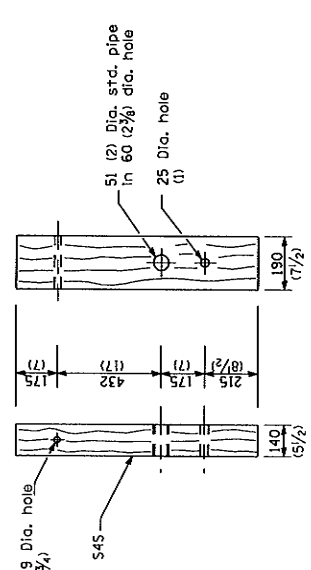
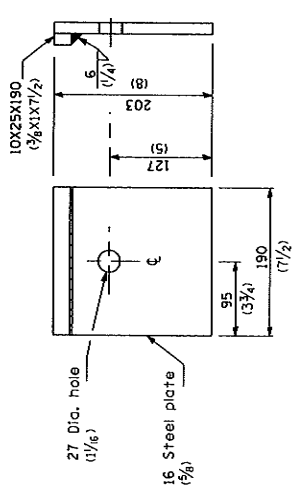
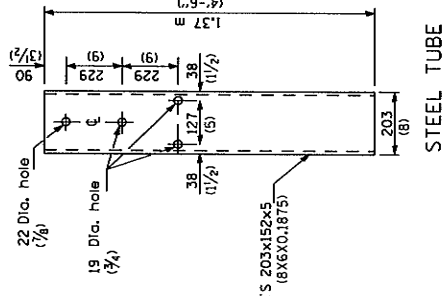
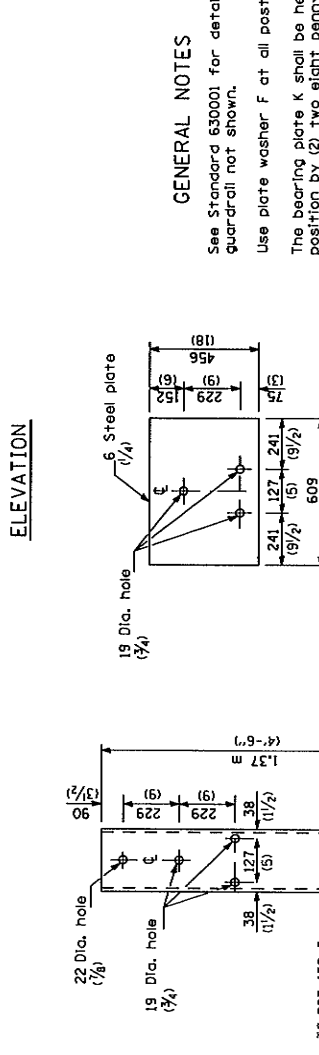
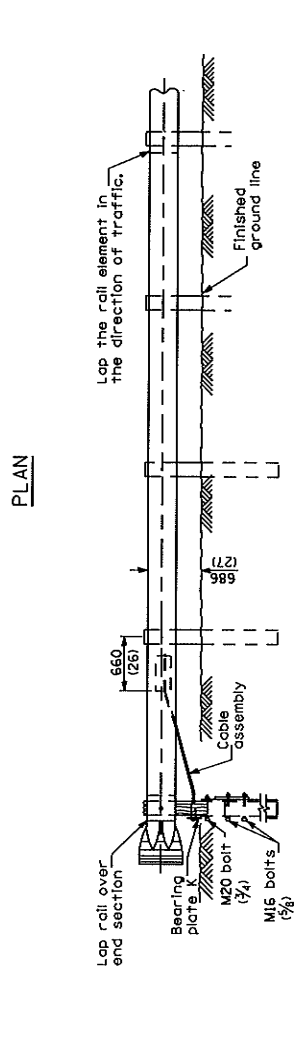
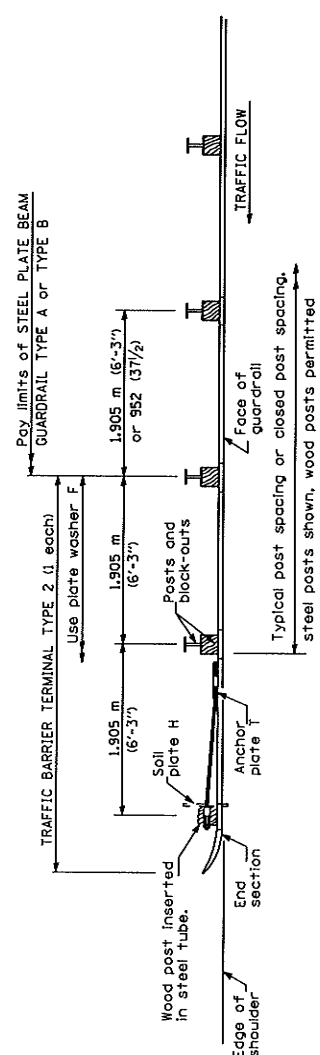
SECTION C-C

CASE IV
MOUNTED ON SLAB

All dimensions are in millimeters (inches) unless otherwise shown.

GUARDRAIL MOUNTED ON EXISTING CULVERTS
(Sheet 2 of 2)
STANDARD 630101-05

Illinois Department of Transportation
 PASSED January 1, 2005
 ENGINEER OF PUBLIC WORKS
 APPROVED [Signature] January 1, 2005
 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 1-1-97



GENERAL NOTES

See Standard 630001 for details of guard-rail not shown.

Use plate washer F at all posts.

The bearing plate K shall be held in position by (2) two eight penny nails driven into the post and bent over the top of the plate.

All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-00	Del. Plate A.
10-1-98	Revised to wooden block-out.

ISSUED 1-1-97

ILLINOIS DEPARTMENT OF TRANSPORTATION

ISSUED 11-2000

ENGINEER OF TRAFFIC SAFETY DEVICES

APPROVED

ILLINOIS DEPARTMENT OF TRANSPORTATION

ENGINEER OF DESIGN AND ENVIRONMENT

TRAFFIC BARRIER TERMINAL TYPE 2

STANDARD 631011-02

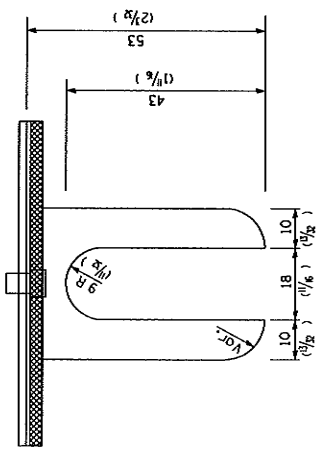
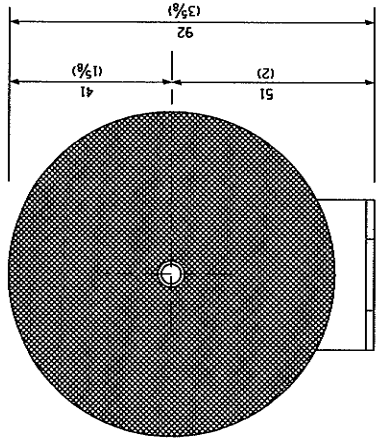
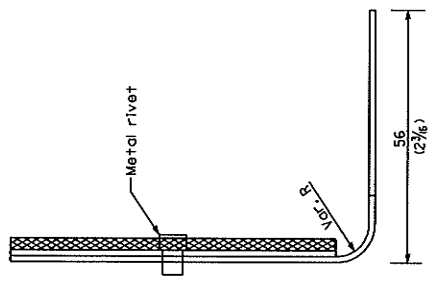
STEEL TUBE

WOOD POST

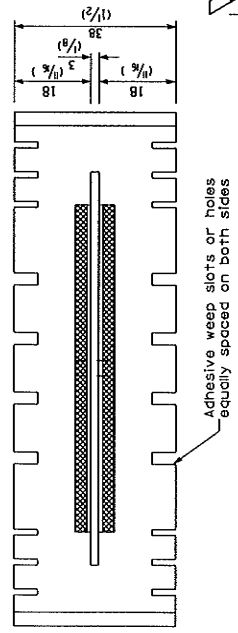
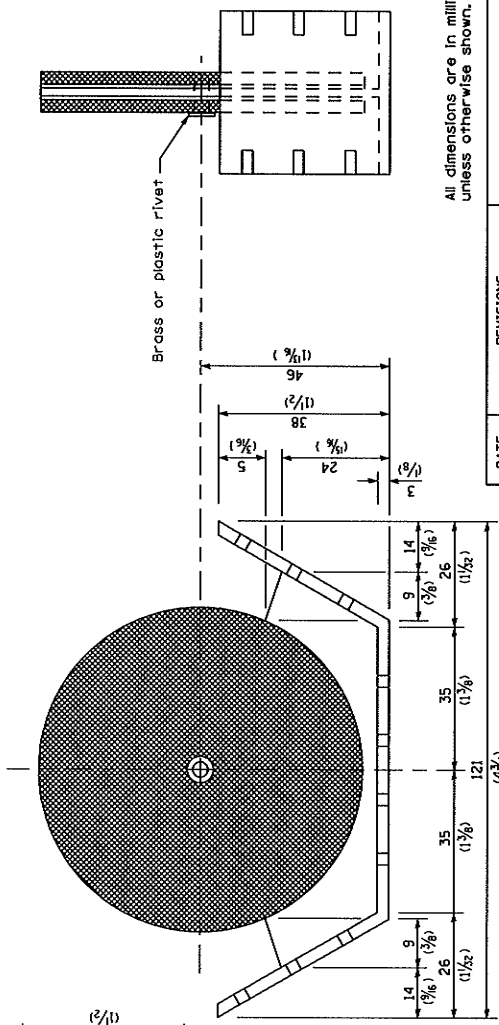
BEARING PLATE K

SOIL PLATE H

ALTERNATE SOIL PLATE CONNECTION



REFLECTOR MARKER TYPE A



Adhesive weep slots or holes
equally spaced on both sides

All dimensions are in millimeters (inches)
unless otherwise shown.

DATE	REVISIONS
1-1-01	Revised signature block.
1-1-00	New Standard

REFLECTOR MARKER AND MOUNTING DETAILS
(Sheet 1 of 3)

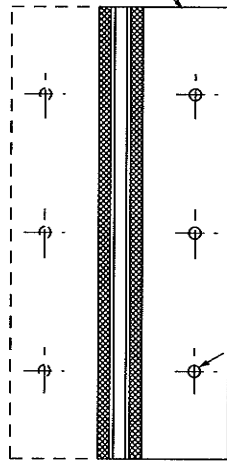
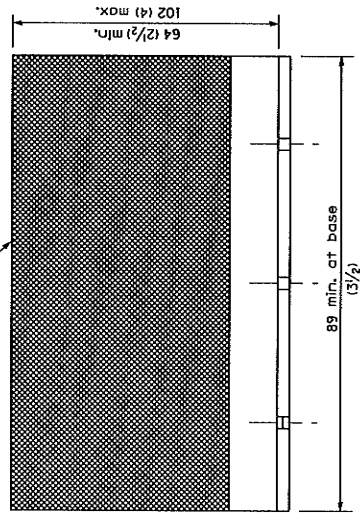
STANDARD 635011-01

REFLECTOR MARKER TYPE B

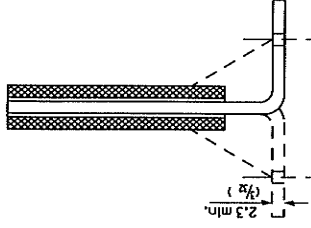
Illinois Department of Transportation
ISSUED 1-1-2000

APPROVED January 1, 2001
ENGINEER OF OPERATIONS
APPROVED March 1, 2001
ENGINEER OF DESIGN AND ENVIRONMENT

Min. reflective area
4,194 mm² (16 1/2 Sq. in.)
each side. May be
rectangular or slight
trapezoid.

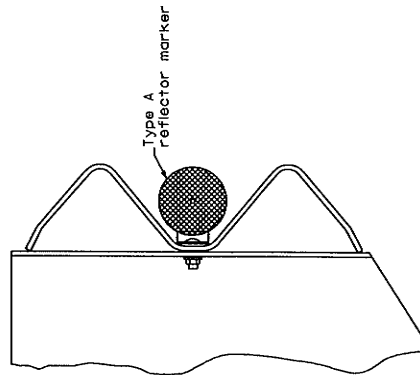


Minimum total area of
base 4516 mm² (7.0 Sq. in.)

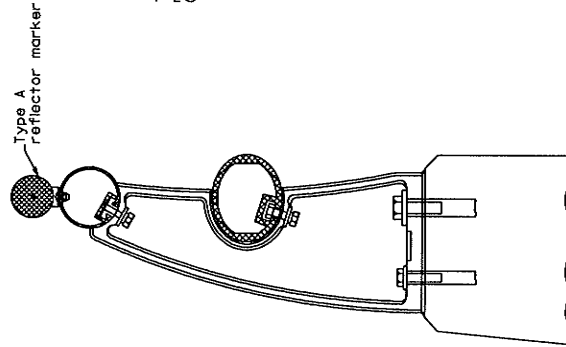


Cross section may be "L"
or "I" shaped and may have
side supports at ends.

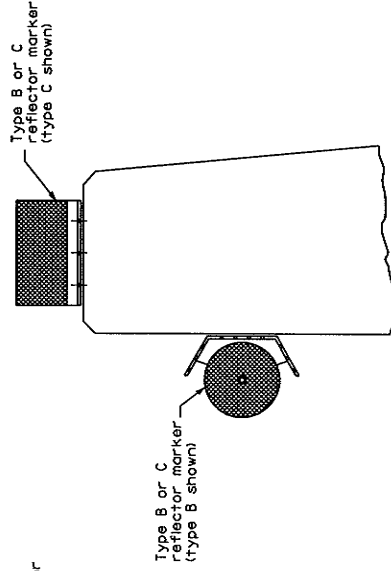
REFLECTOR MARKER TYPE C



TYPICAL MOUNTING WITH REFLECTOR



TYPICAL MOUNTING DETAIL
FOR BRIDGE RAIL REFLECTOR



TYPICAL MOUNTING DETAIL
FOR BARRIER WALL REFLECTOR

All dimensions are in millimeters (inches)
unless otherwise shown.

Illinois Department of Transportation
ISSUED 1-1-2000

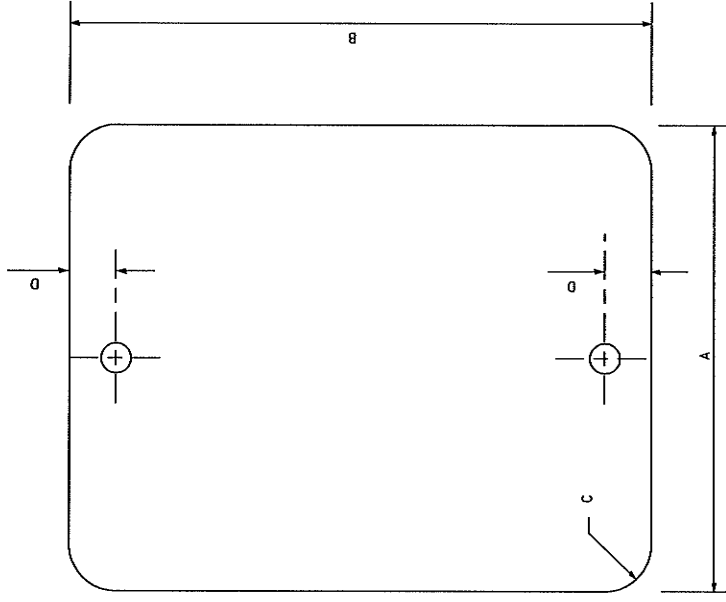
APPROVED: [Signature] 2001
ENGINEER OF OPTICAL ENGINEERING

APPROVED: [Signature] 2001
ENGINEER OF DESIGN AND ENVIRONMENT

**REFLECTOR MARKER AND
MOUNTING DETAILS**

(Sheet 2 of 3)

STANDARD 635011-01



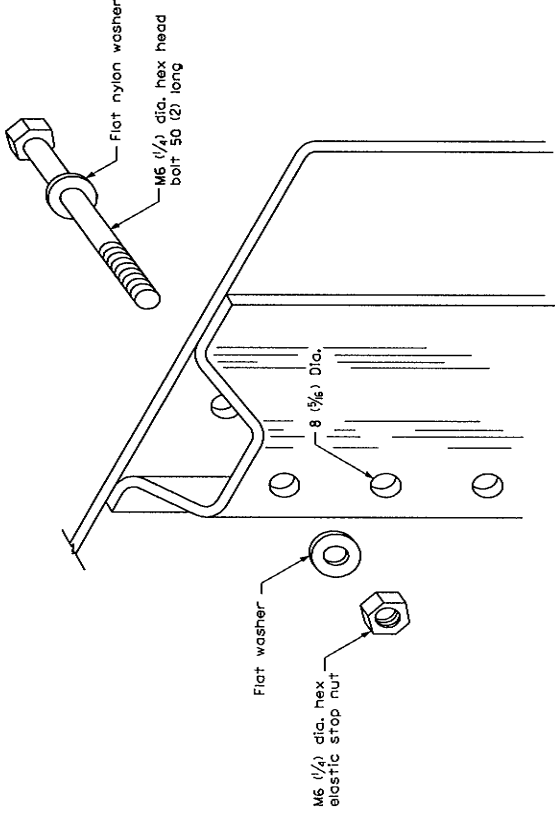
STANDARD TERMINAL MARKER

All dimensions are in millimeters (inches) unless otherwise shown.

REFLECTOR MARKER AND MOUNTING DETAILS

(Sheet 3 of 3)

STANDARD 635011-01

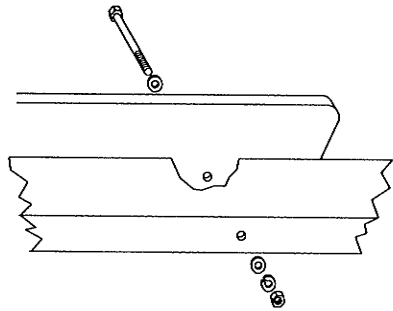


DETAIL OF MOUNTING TERMINAL MARKER TO POST

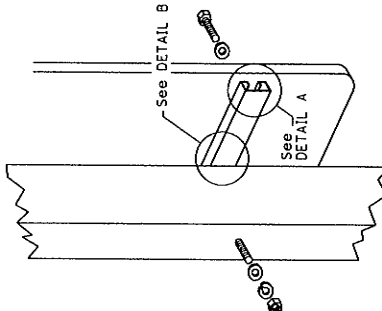
SIGN SIZE	DIMENSIONS			
	A	B	C	D
305x406 (12x16)	305 (12.0)	406 (16.0)	38 (1.5)	50 (2.0)

Illinois Department of Transportation
 APPROVED: *[Signature]* 2001
 ENGINEER OF OPERATIONS
 APPROVED: *[Signature]* 2001
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUE 01-1-2000

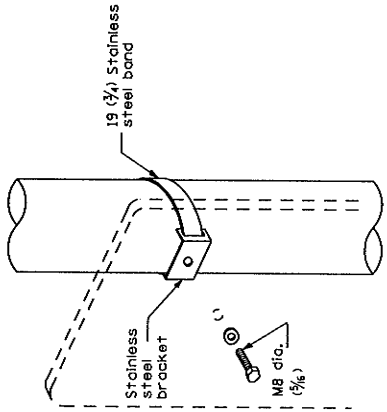


Sign panel 900 (36) wide or less

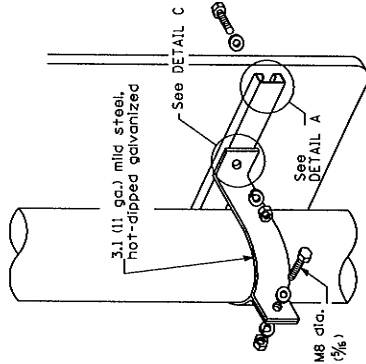


Sign panel over 900 (36) wide

WOOD OR TELESCOPING STEEL POSTS

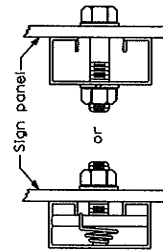


Sign panel 900 (36) wide or less

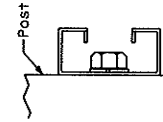


Sign panel over 900 (36) wide

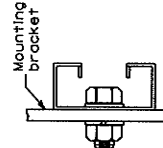
LIGHT OR SIGNAL STANDARDS



DETAIL A

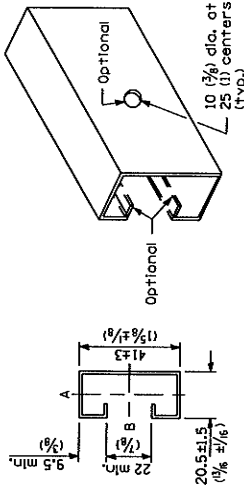


DETAIL B

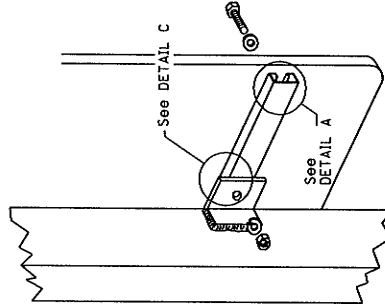


DETAIL C

Section modulus (minimum)	Axis A	Axis B
Steel	819 mm ³ (0.050 in. ³)	1720 mm ³ (0.105 in. ³)
Aluminum	2458 mm ³ (0.150 in. ³)	5162 mm ³ (0.315 in. ³)



SUPPORTING CHANNEL DETAILS



ROUTE MARKER ASSEMBLY

BREAKAWAY STEEL TUBING POSTS
(all sign panel sizes)

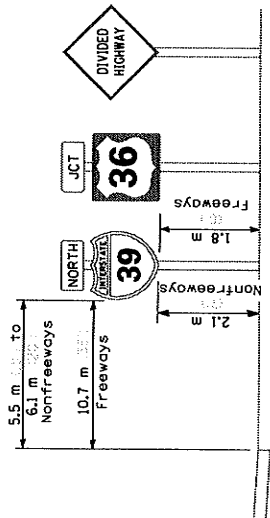
All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation
 APPROVED: [Signature] 1997
 PROJECT: [Signature]
 ENGINEER OF OPERATIONS
 APPROVED: [Signature] 1997
 PROJECT: [Signature]
 ENGINEER OF DESIGN AND ENVIRONMENT

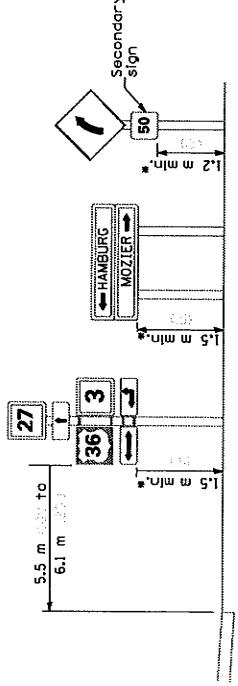
DATE	REVISIONS
1-1-97	Renum. Standard 2319-6.
2-1-95	Moved G. N. to Specs. Added metric.

SIGN PANEL MOUNTING DETAILS

STANDARD 720001

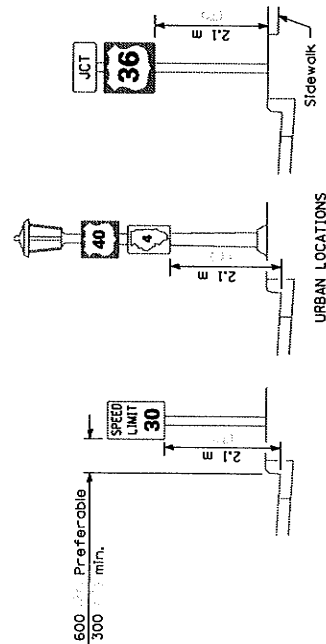


MULTILANE HIGHWAYS



* In any area where parking is likely to occur or where there are obstructions to view or where signs are located over sidewalks, the height shall be at least 2.1 m.

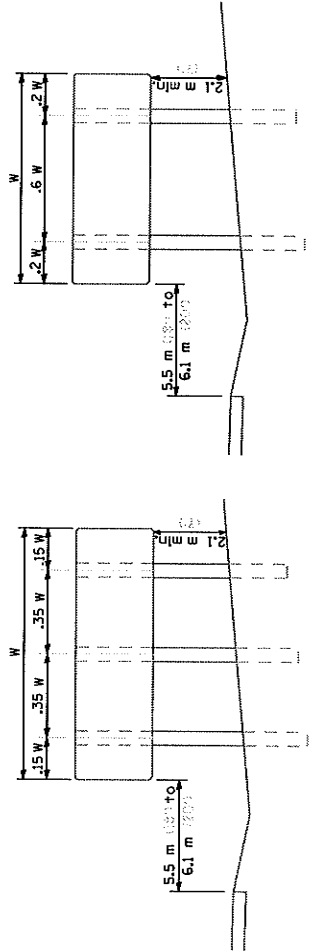
TWO LANE RURAL HIGHWAYS



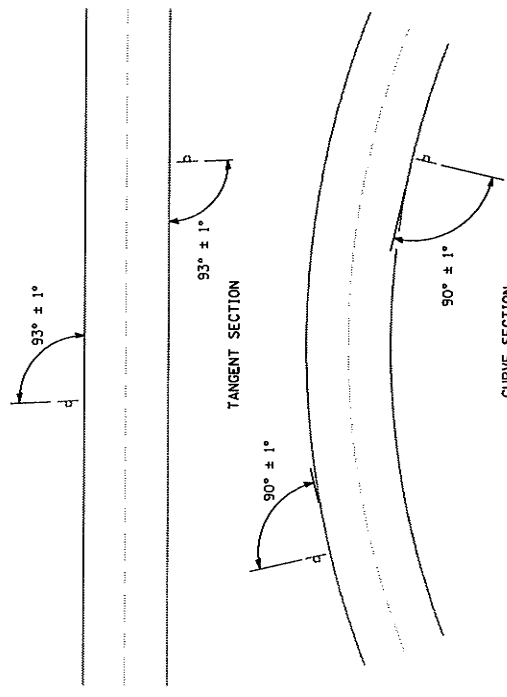
URBAN LOCATIONS

TYPICAL INSTALLATIONS

Signs in any area shall be erected to a uniform height above the edge of the pavement.



POST SPACING FOR NON-FREEWAY SIGN PANELS



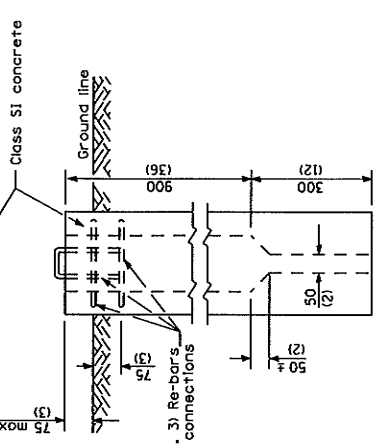
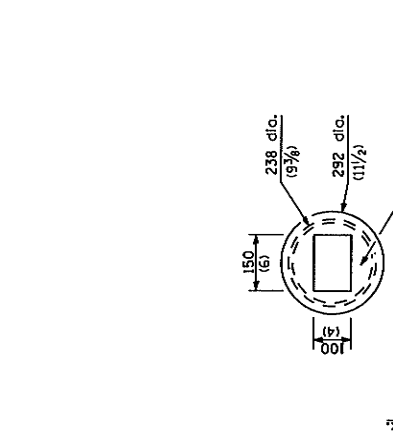
GROUND MOUNT SIGN POSITIONING

All dimensions are in millimeters (inches) unless otherwise shown.

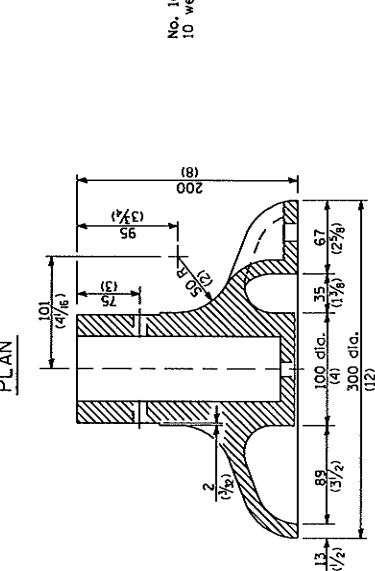
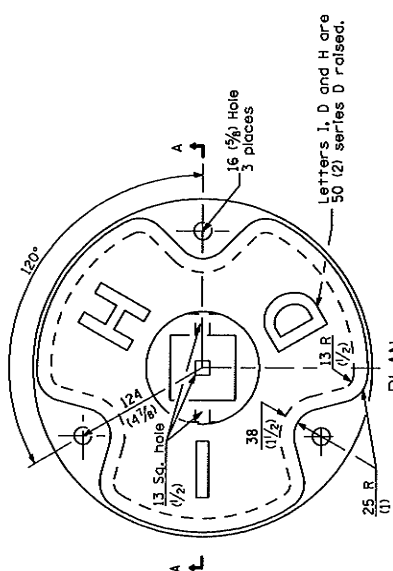
DATE	REVISIONS
1-1-97	Renum. Standard 2320-5.
2-1-95	Rev. angle for ground mounted signs on tangent.

Illinois Department of Transportation	ISSUED 1-1-97
APPROVED: <i>[Signature]</i>	1997
ENGINEER OF PRACTICE	
APPROVED: <i>[Signature]</i>	1997
ENGINEER OF DESIGN AND ENVIRONMENT	

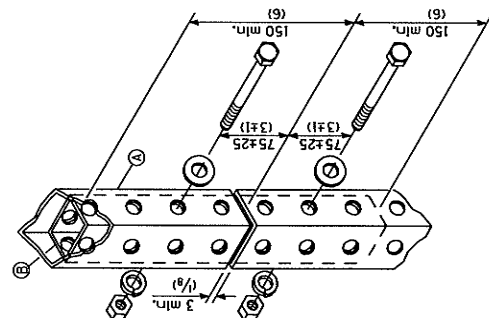
SIGN PANEL
ERECTION DETAILS
(Sheet 1 of 2)
STANDARD 720006



CONCRETE FOUNDATION FOR WOOD POSTS

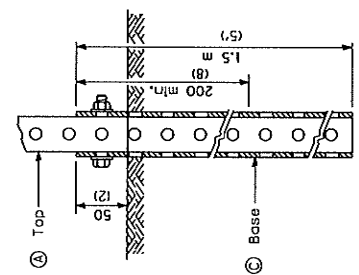


SECTION A-A

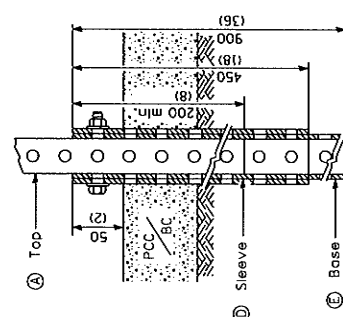


SPLICE DETAIL

(A)	51 x 51 x var. (2 x 2 x var.)
(B)	44 x 44 x 300 (1 3/4 x 1 3/4 x 12)
(C)	57 x 57 x 1500 (2 1/4 x 2 1/4 x 60)
(D)	64 x 64 x 450 (2 1/2 x 2 1/2 x 18)
(E)	57 x 57 x 900 (2 1/4 x 2 1/4 x 36)



GROUND MOUNT DETAIL



PAVEMENT MOUNT DETAIL

All bolts M10 (3/8") hex head zinc or cadmium plated.

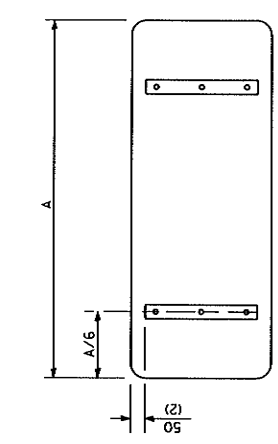
TELESCOPING STEEL POST ASSEMBLY

All dimensions are in millimeters (inches) unless otherwise shown.

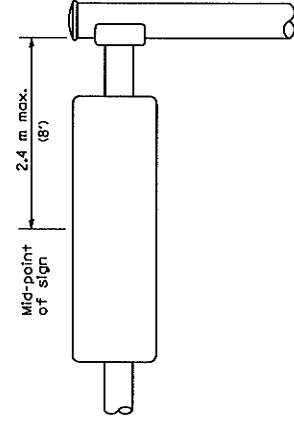
SIGN PANEL
ERECTION DETAILS
(Sheet 2 of 2)
STANDARD 720006

CAST IRON BASE FOR TELESCOPING STEEL SIGN POST
ANCHOR BOLT DETAIL
POST ASSEMBLY DETAIL

Illinois Department of Transportation
APPROVED: [Signature] 1987
ENGINEER OF SPECIAL INSPECTION
APPROVED: [Signature] 1987
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97



SUPPORTING CHANNELS

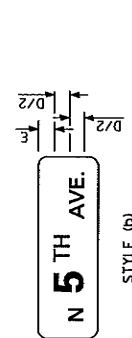


MOUNTING LOCATION

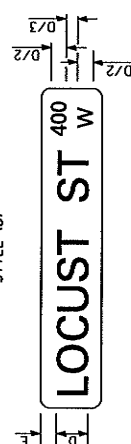
GENERAL NOTES

All signs shall have a white reflectorized legend and border on a green reflectorized background.
 The sign panels shall be mounted as shown on Standard 720001 or as specified in the plans.
 All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-04	Revised mounting location.
1-1-97	Renum. Standard 2380-5.
MAST ARM MOUNTED STREET NAME SIGNS	
STANDARD 720016-01	



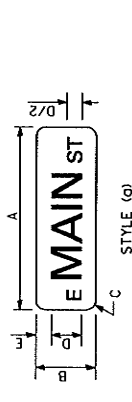
STYLE (b)



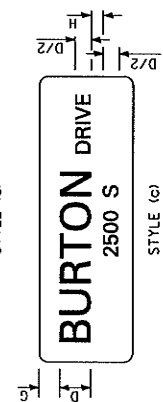
STYLE (c)



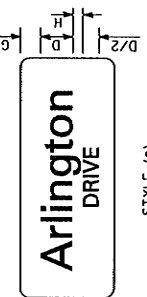
STYLE (f)



STYLE (g)



STYLE (e)



STYLE (d)

When road classification only is on the second line, it should not be abbreviated.

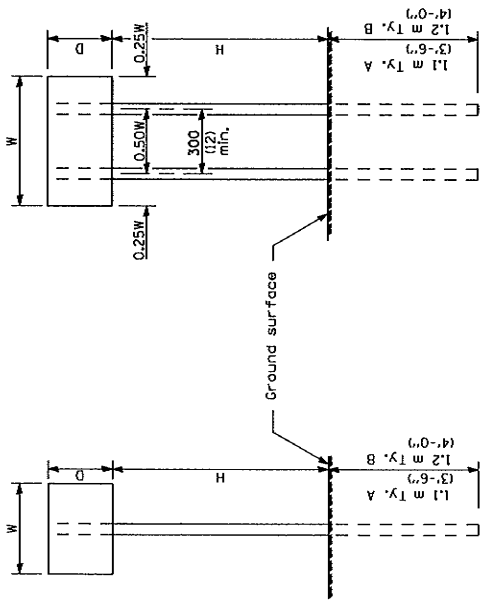
TYPICAL SIGN STYLES

SIGN STYLE	DIMENSIONS										LETTER SIZE			UC / LC PRIMARY	BORDER
	A	B	C	D	E	F	G	H	1	2	UPPER CASE PRIMARY	1	2		
a,b,d	Var. (18)	450 (150)	40 (6)	150 (6)	150 (6)	-	-	-	-	-	150/115 (6/4.5)	-	-	15 (0.6)	-
c,e	Var. (24)	600 (24)	40 (1.5)	150 (6)	-	-	175 (7)	100 (4)	-	-	150/115 (6/4.5)	-	750 (30)	15 (0.6)	-
a,b,d	Var. (24)	600 (24)	40 (1.5)	200 (8)	200 (8)	-	-	-	-	-	200/150 (8/6)	-	-	15 (0.6)	-
f	Var. (30)	750 (30)	60 (2.25)	150 (6)	165 (6.5)	125 (5)	-	-	-	-	150/115 (6/4.5)	-	-	20 (0.8)	-
c,e	Var. (30)	750 (30)	60 (2.25)	200 (8)	-	-	230 (9)	115 (4.5)	-	-	200/150 (8/6)	-	-	20 (0.8)	-
a,b,d	Var. (30)	750 (30)	60 (2.25)	250 (10)	250 (10)	-	-	-	-	-	250/180 (8/6)	-	-	20 (0.8)	-
c,e	Var. (36)	900 (36)	60 (2.25)	250 (10)	-	-	-	-	-	-	250/180 (8/6)	-	1250 (50)	20 (0.8)	-
f	Var. (40)	1000 (40)	75 (3.0)	200 (8)	215 (8.5)	120 (5)	-	-	-	-	200/150 (8/6)	-	-	20 (0.8)	-
f	Var. (48)	1200 (48)	75 (3.0)	250 (10)	250 (10)	200 (8)	-	-	-	-	250/150 (10/7.5)	-	-	20 (0.8)	-

* Supplemental Messages

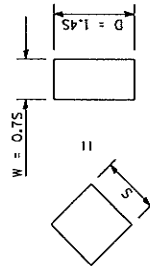
Illinois Department of Transportation
 APPROVED: [Signature] 2004
 ENGINEER OF SPECIAL INSPECTION
 APPROVED: [Signature] 2004
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

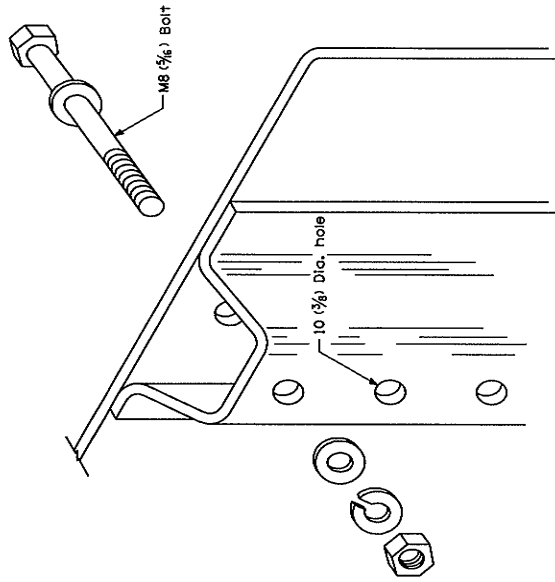


ONE POST INSTALLATION

TWO POST INSTALLATION



For diamond shaped sign with side S as shown, use required post size for a sign with W = 0.75 and D = 1.45.



DETAIL OF MOUNTING SIGN TO POST

NOTE: Minimum of 2 bolts per post required.

SIGN DEPTH (D)	H	NO. AND TYPE OF POST FOR SIGN WIDTH (W)			
		300 (12)	450 (18)	600 (24)	750 (30)
450 (18)	1.5 m (5'-0")	A	A	A	A
	1.7 m (5'-6")	A	A	A	A
600 (24)	1.8 m (6'-0")	A	A	A	A
	2.0 m (6'-6")	A	A	A	B
	2.1 m (7'-0")	A	A	A	B
	2.3 m (7'-6")	A	A	A	B
	2.4 m (8'-0")	A	A	A	B
	2.6 m (8'-6")	A	A	A	B
750 (30)	2.7 m (9'-0")	A	A	A	B
	1.5 m (5'-0")	A	A	A	B
	1.6 m (5'-6")	A	A	A	B
	1.8 m (6'-0")	A	A	A	B
	2.0 m (6'-6")	A	A	A	B
	2.1 m (7'-0")	A	A	A	B
900 (36)	2.3 m (7'-6")	A	A	A	B
	2.4 m (8'-0")	A	A	A	B
	2.6 m (8'-6")	A	A	A	B
	2.7 m (9'-0")	A	A	A	B
	1.5 m (5'-0")	A	A	A	B
	1.7 m (5'-6")	A	A	A	B
1.2 m (4'-0")	1.8 m (6'-0")	A	A	A	B
	2.0 m (6'-6")	A	A	A	B
	2.1 m (7'-0")	A	A	A	B
	2.3 m (7'-6")	A	A	A	B
	2.4 m (8'-0")	A	A	A	B
	2.6 m (8'-6")	A	A	A	B

GENERAL NOTES

DESIGN: Current AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

LOADING: for 95 km/h (60 mph) wind velocity with 30% gust factor, normal to sign.

SOIL PRESSURE: Minimum allowable soil pressure 120 kPa (11.25 tsf).

See Standard 72001 for details of Types A and B posts.

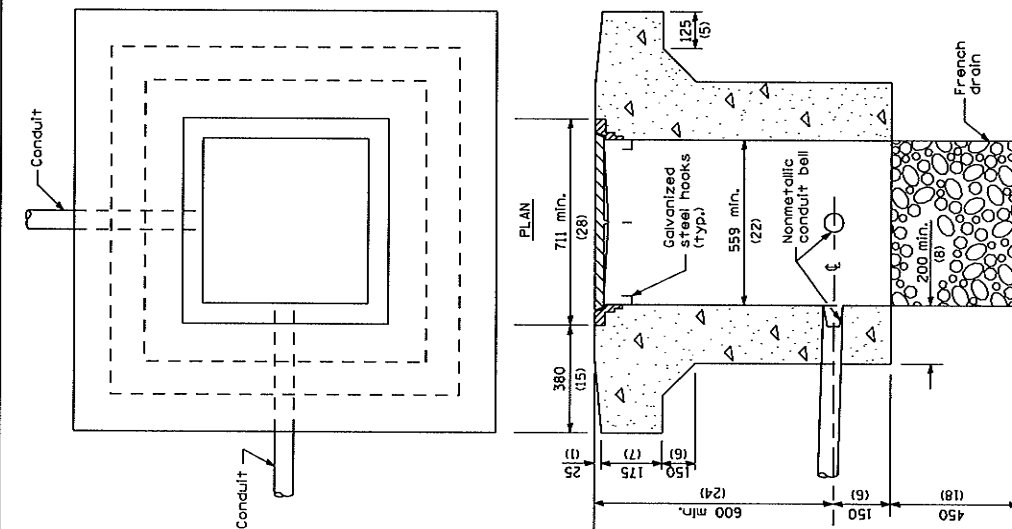
All dimensions are in millimeters (inches) unless otherwise shown.

APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

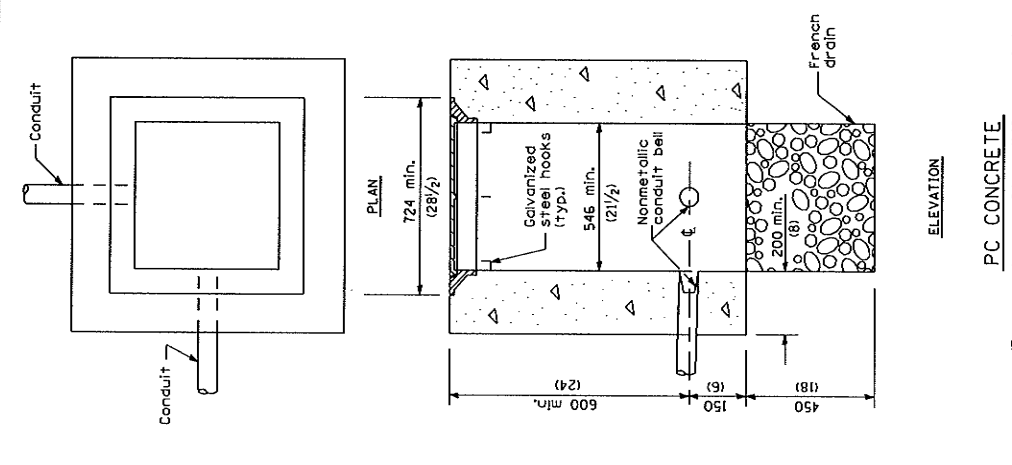
STANDARD 729001

DATE	REVISIONS
1-1-97	Renum. Standard 2363-2.
6-15-94	Moved C.N. to Specs
	Added Metric

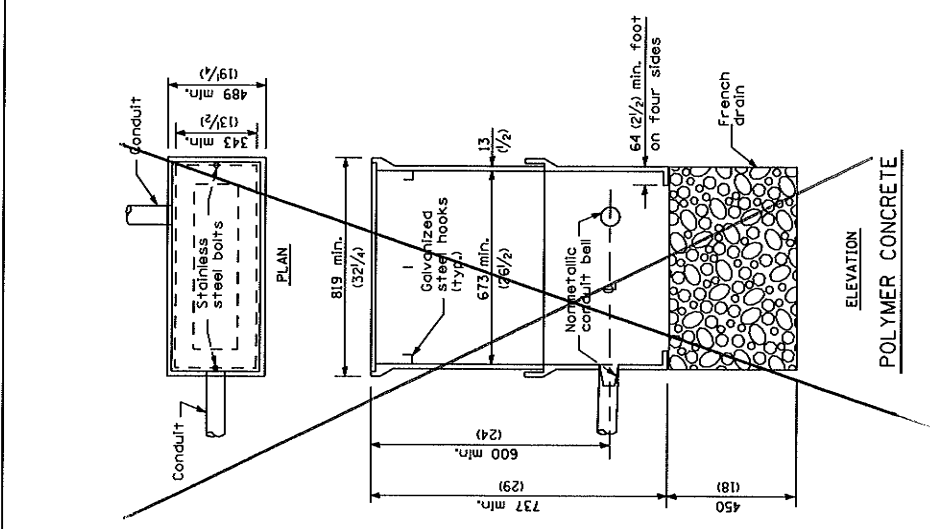
Illinois Department of Transportation
 DIVISION OF TRANSPORTATION
 ENGINEER OF TRANSPORTATION
 APPROVED: [Signature]
 ISSUED: 1-1-97



ELEVATION
PC CONCRETE - HEAVY DUTY
 (Frame and cover 118 kg (260 lbs.) min.)



ELEVATION
PC CONCRETE
 (Frame and cover 64 kg (140 lbs.) min.)



ELEVATION
POLYMER CONCRETE

DATE	REVISIONS
1-1-97	Revised Standard 2368-2.
	Rev. casting & inside dim. for heavy duty.
2-1-95	Del. note, Incr. F & G width for heavy duty.
	Rev. mort. to poly. conc.

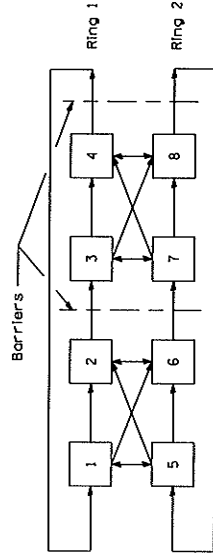
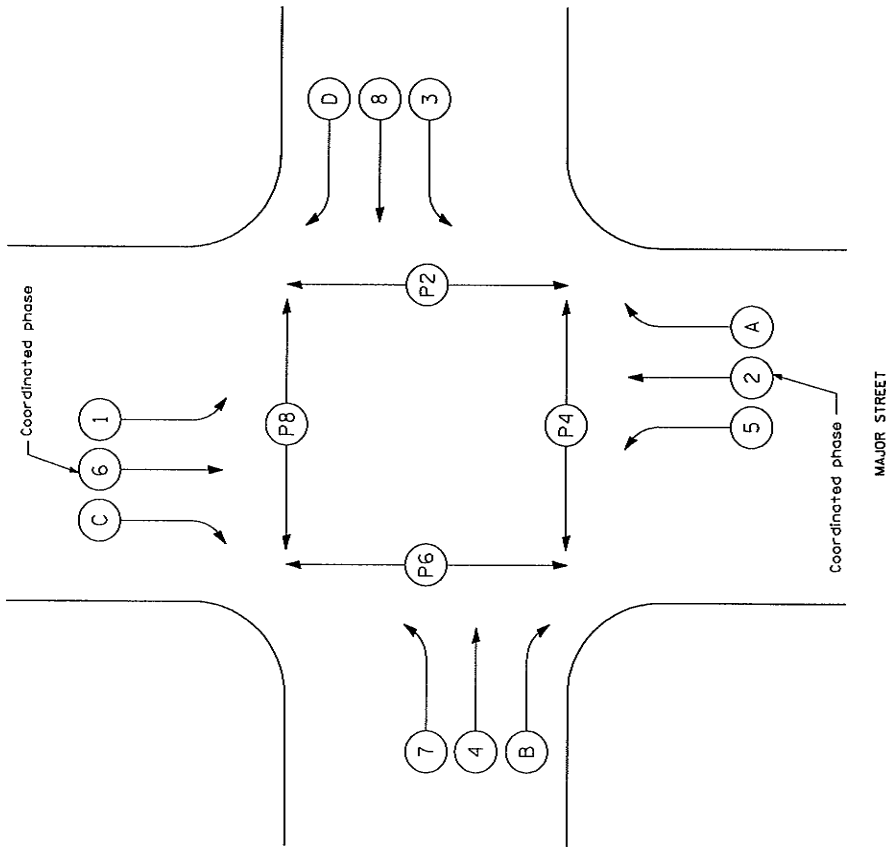
All dimensions are in millimeters (inches) unless otherwise shown.

CONCRETE HANDHOLES

STANDARD 814001

Illinois Department of Transportation
 APPROVED *[Signature]* 1997
 ENGINEER OF OPERATIONS
 APPROVED *[Signature]* 1997
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



NEMA EIGHT PHASE DUAL RING
ACTUATED CONFIGURATION

LEGEND

- (X) • (X) Vehicular phase no. x
- (P) Pedestrian phase no. x
- (A), (B), (C), (D) Right turn overlaps where:
 - (A) = (2) + (3)
 - (B) = (4) + (5)
 - (C) = (6) + (7)
 - (D) = (8) + (1)

NEMA
National Electrical Manufacturers
Association

All dimensions are in millimeters (inches)
unless otherwise shown.

STANDARD PHASE DESIGNATION DIAGRAM (NEMA)

DATE	REVISIONS
1-1-97	Revised Standard 2393-2.
2-1-95	Totally revised.

STANDARD PHASE
DESIGNATION DIAGRAMS
AND PHASE SEQUENCES
(Sheet 1 of 2)

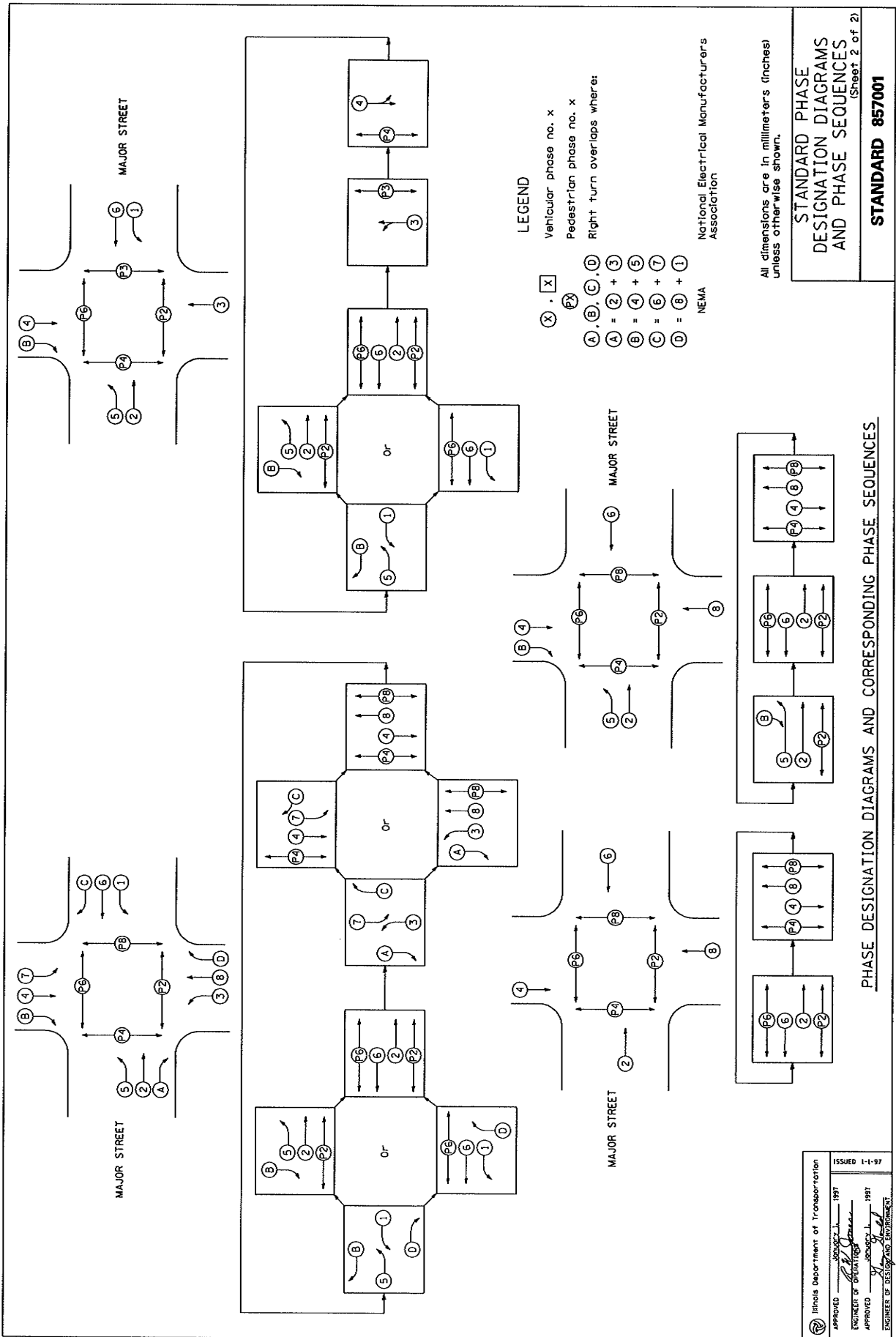
STANDARD 857001

Illinois Department of Transportation

APPROVED _____ 11/11/97
ENGINEER OF TRANSPORTATION

APPROVED _____ 11/11/97
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



LEGEND

Vehicle phase no. x
 Pedestrian phase no. x
 Right turn overlaps where:

(A), (B), (C), (D)
 (A) = (2) + (3)
 (B) = (4) + (5)
 (C) = (6) + (7)
 (D) = (8) + (1)

NEMA
 National Electrical Manufacturers Association

All dimensions are in millimeters (inches) unless otherwise shown.

STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
 (Sheet 2 of 2)

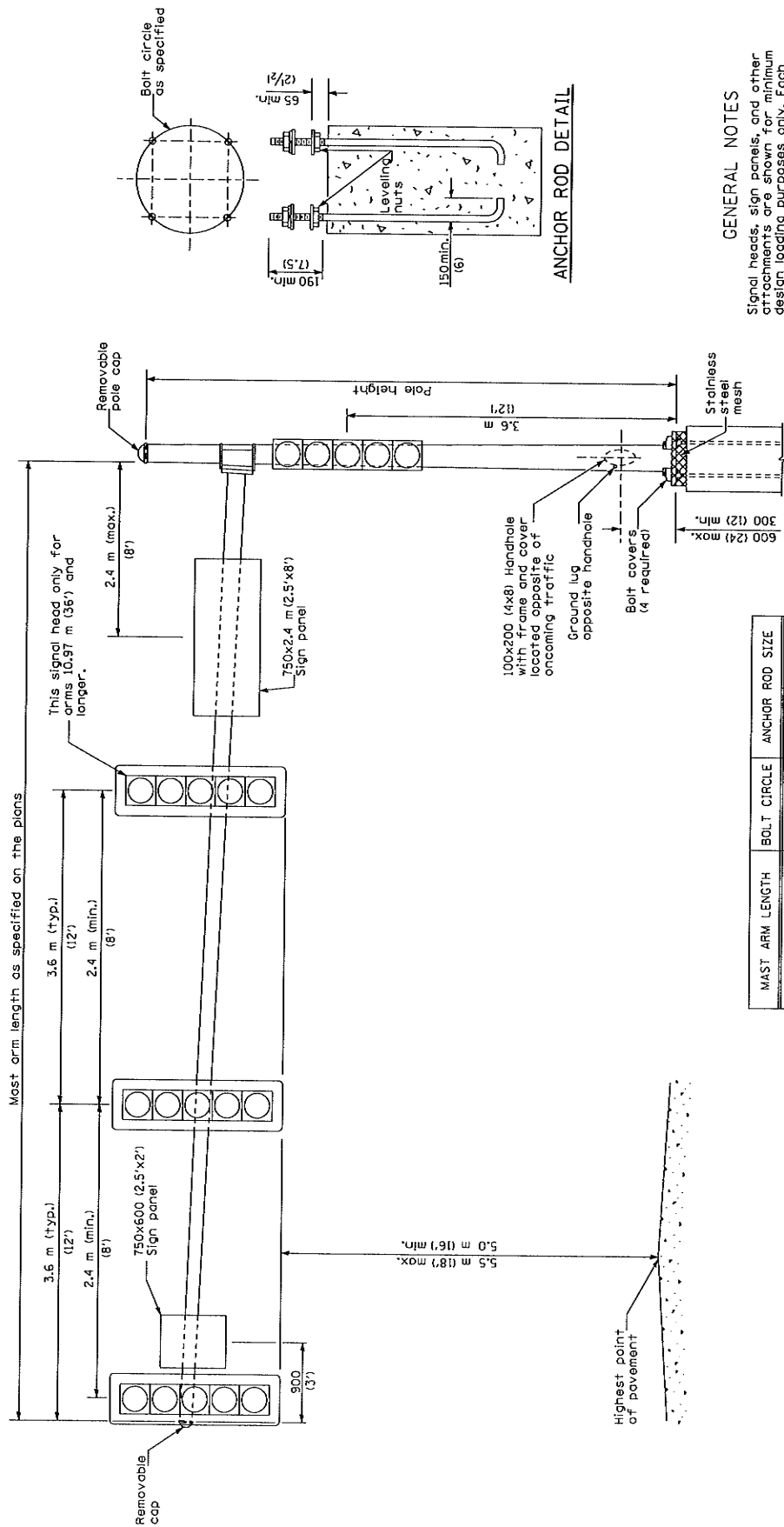
STANDARD 857001

PHASE DESIGNATION DIAGRAMS AND CORRESPONDING PHASE SEQUENCES

Illinois Department of Transportation
 ISSUED 1-1-97

APPROVED: [Signature] 1997
 ENGINEER OF TRANSPORTATION

APPROVED: [Signature] 1997
 ENGINEER OF DESIGN AND ENVIRONMENT



MAST ARM LENGTH	BOLT CIRCLE	ANCHOR ROD SIZE
4.87 m thru 6.10 m (16' thru 20')	380 (15)	38 x 1.5 m (1.5 x 60)
6.71 m thru 8.14 m (22' thru 30')	450 (18)	38 x 1.5 m (1.5 x 60)
9.75 m thru 12.20 m (32' thru 40')	450 (18)	44 x 2.10 m (1.75 x 84)
12.80 m thru 16.80 m (42' thru 55')	535 (21)	44 x 2.10 m (1.75 x 84)

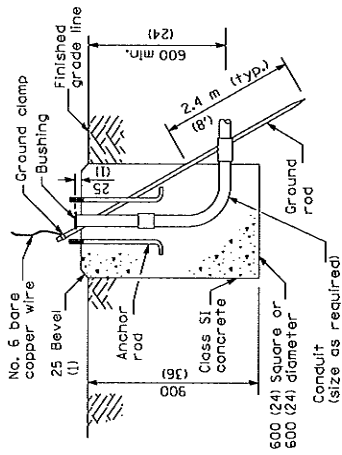
DATE	REVISIONS
1-1-05	Revised size of sign panel and location of handhole.
1-1-04	Revised to show current loading requirements.

Illinois Department of Transportation
 APPROVED: J. J. [Signature] 2005
 ENGINEER OF OPERATIONS
 APPROVED: [Signature] 2005
 ENGINEER OF DESIGN AND ENVIRONMENT

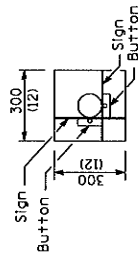
ISSUED 1-1-02

STEEL MAST ARM ASSEMBLY AND POLE

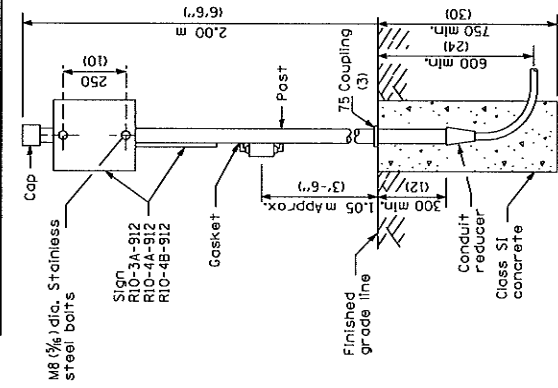
STANDARD 877001-02



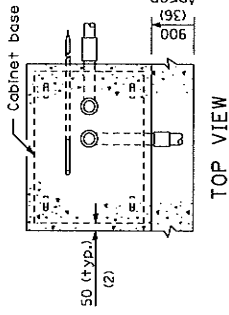
TYPICAL ONE BUTTON INSTALLATION



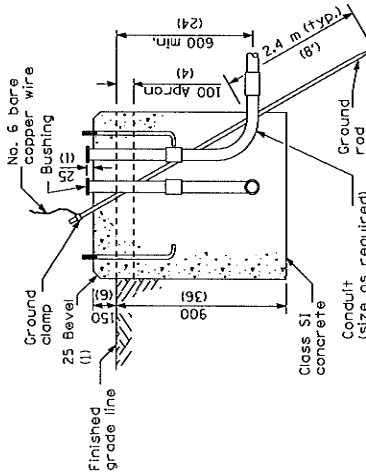
TYPICAL TWO BUTTON INSTALLATION



PEDESTRIAN PUSH BUTTON POST INSTALLATION



TYPE A



TYPE D

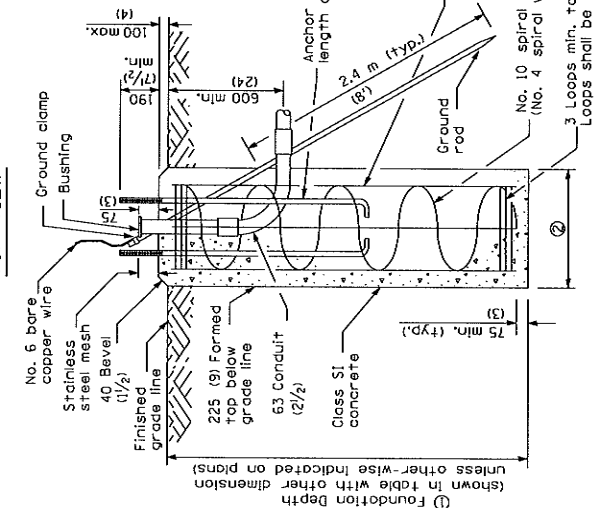
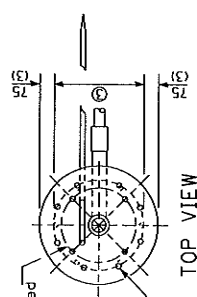
FOR GROUND MOUNTED CONTROLLER CABINET

All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS
1-1-05	Revised Type E foundation detail.
1-1-04	Revised Type E foundation table.

Illinois Department of Transportation	ISSUED 1-1-02
APPROVED	2005
ENGINEER OF OPERATIONS	2005
APPROVED	2005
ENGINEER OF PEDESTRIAN ENVIRONMENT	

CONCRETE FOUNDATION DETAILS
(Sheet 1 of 2)
STANDARD 878001-03



Most Arm Length	① Foundation Depth *	② Foundation Diameter	③ Spiral Diameter	④ Quantity of No. 15 Bars (No. 5)
Less than 9.1 m (30')	3.0 m (10'-0")	750 (30)	600 (24)	8
Greater than or equal to 9.1 m (30') and less than 12.2 m (40')	4.1 m (13'-6")	750 (30)	600 (24)	8
Greater than or equal to 12.2 m (40') and less than 15.2 m (50')	3.4 m (11'-0")	900 (36)	750 (30)	12
Greater than or equal to 15.2 m (50') and up to 18.8 m (62')	4.0 m (13'-0")	900 (36)	750 (30)	12
	4.6 m (15'-0")	900 (36)	750 (30)	12

* These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (qu) > 100 kPa (1.0 tsf). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation grilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

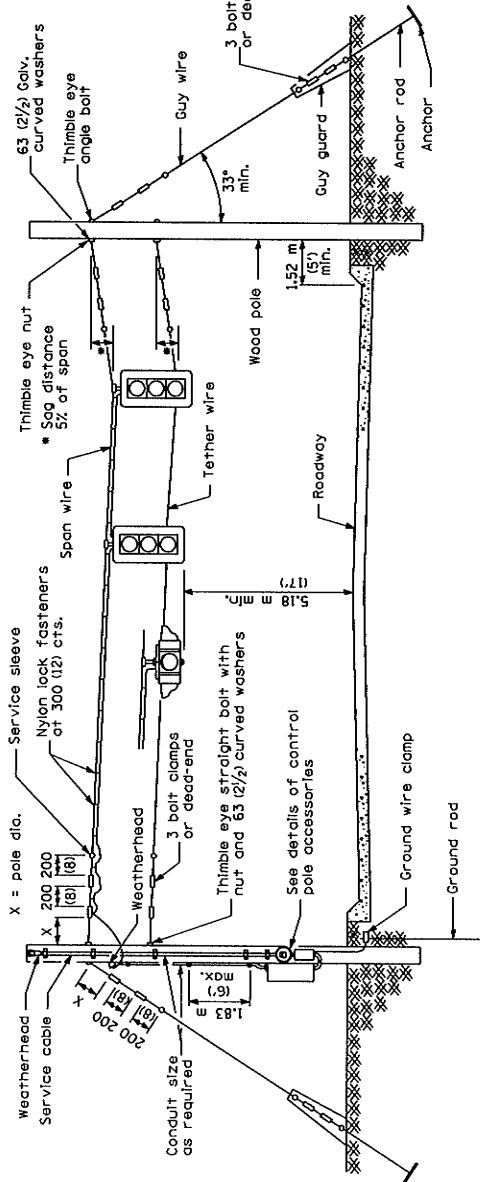
TYPE E

For standard and combination mast arm assemblies. Mast arm assemblies with dual arms require a special foundation design.

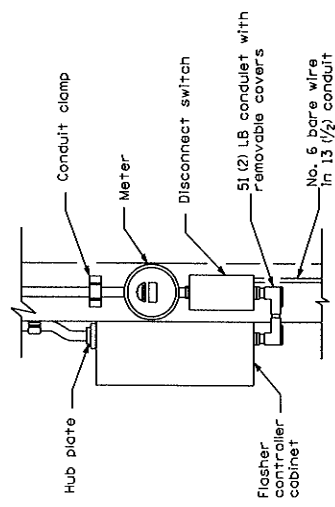
All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation
 APPROVED: [Signature] JUNE 11, 2005
 ENGINEER OF OPERATIONS
 APPROVED: [Signature] JUNE 11, 2005
 ENGINEER OF DESIGN AND EQUIPMENT

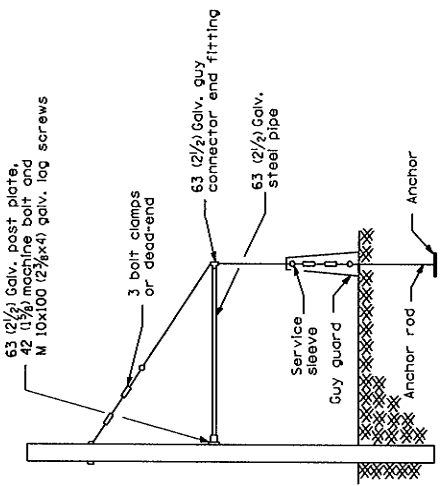
CONCRETE FOUNDATION DETAILS
 (Sheet 2 of 2)
STANDARD 878001-03



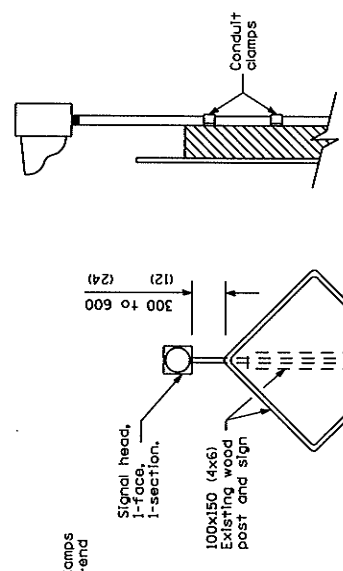
SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON



CONTROL POLE DETAIL



SIDEWALK GUY DETAIL



MOUNTING DETAIL

POST MOUNTED FLASHING BEACON

All dimensions are in millimeters (inches) unless otherwise shown.

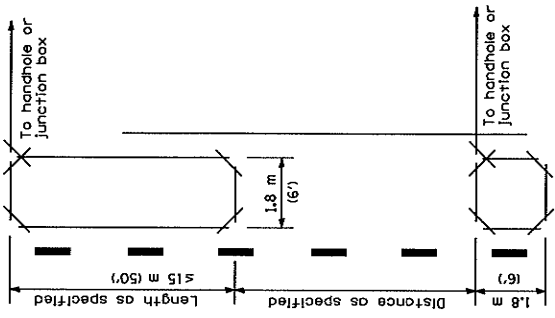
DATE	REVISIONS
1-1-02	Renum. Standard 840001.
1-1-97	Renum. Standard 2372-1.

SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

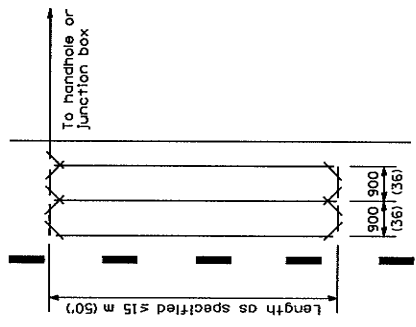
STANDARD 880001

Illinois Department of Transportation
 APPROVED: [Signature] 0202
 ENGINEER OPERATIONS
 APPROVED: [Signature] 0202
 ENGINEER OF DESIGN AND ENVIRONMENT

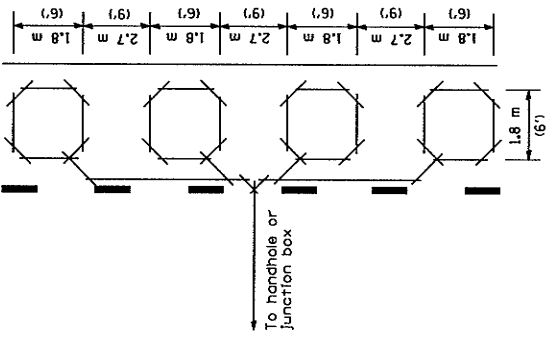
ISSUED 1-1-02



FOR EXTENDED-CALL DETECTION

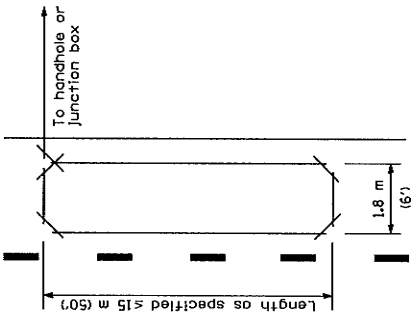


FOR PRESENCE DETECTION QUADRUPOLE LOOP

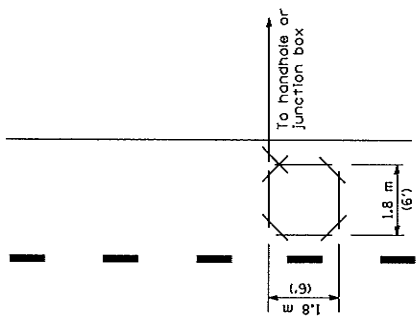


FOR PRESENCE DETECTION MULTIPLE LOOP IN SERIES

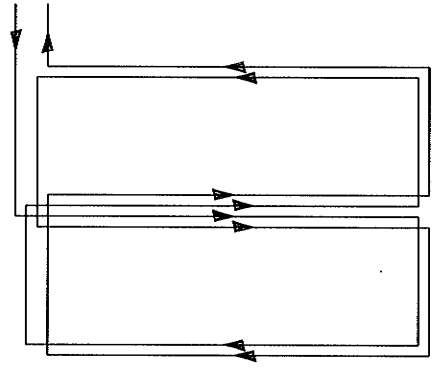
SLOT PLAN



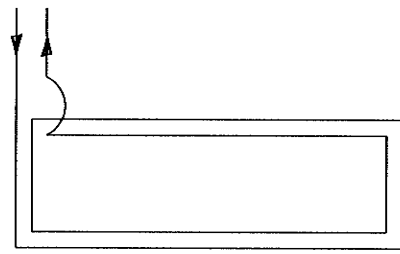
FOR PRESENCE DETECTION LONG LOOP



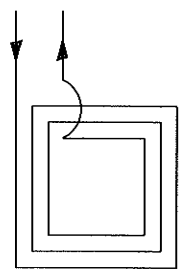
FOR PRESENCE DETECTION SHORT LOOP



QUADRUPOLE LOOP



LONG LOOP



SHORT LOOP

All dimensions are in millimeters (inches) unless otherwise shown.

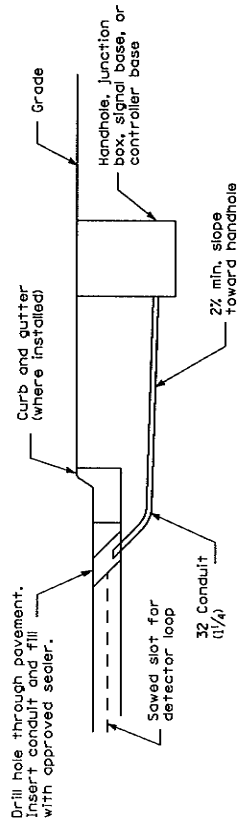
TYPICAL LAYOUTS FOR DETECTION LOOPS

STANDARD 886006

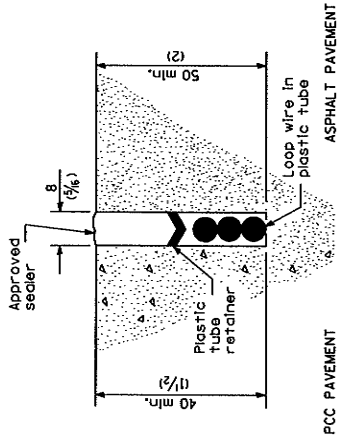
DATE	REVISIONS
1-1-02	Renum. Standard 846006.
1-1-97	Renum. Standard 2394-1.

WIRING DIAGRAM

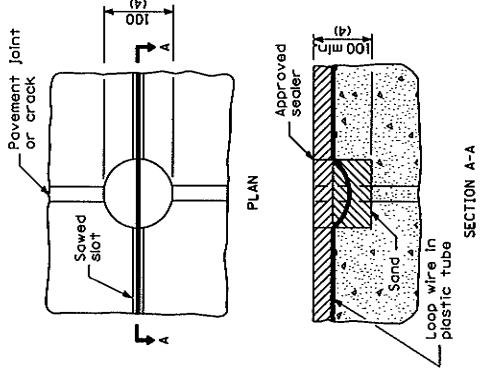
APPROVED ENGINEER OF OPERATIONS	ISSUED 1-1-02
APPROVED ENGINEER OF DESIGN AND ENVIRONMENT	



DETECTOR LOOP LEAD-IN

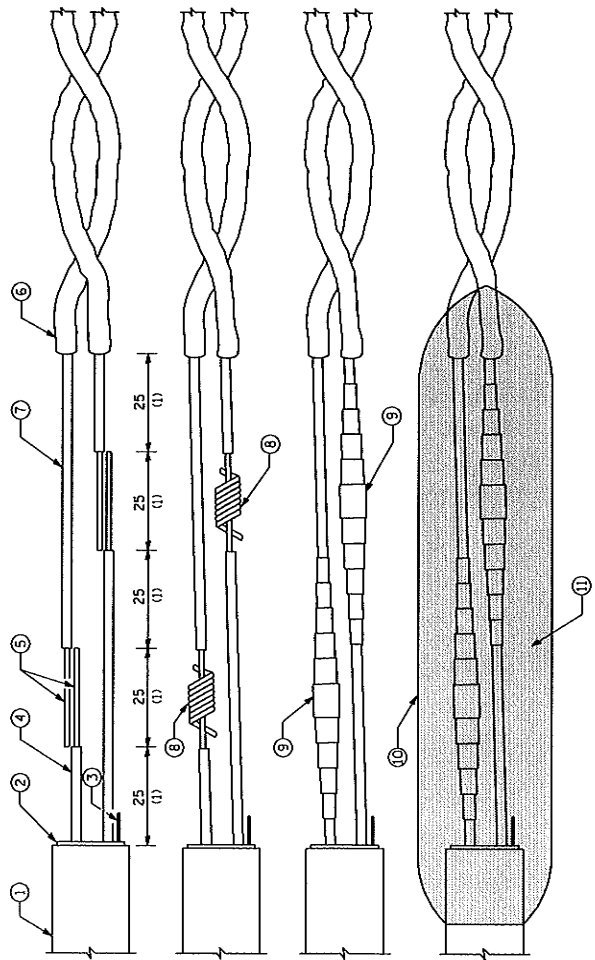


DETECTOR LOOP INSTALLATION



NOTE
Loop wire shall follow saw cut to bottom, forming slack section at joint.

DETECTOR LOOP AT PAVEMENT JOINT OR PAVEMENT CRACK



- ① = Lead-in cable (single pair or multipair)
- ② = Lead-in cable shield
- ③ = Lead-in cable shield drain-wire
- ④ = Lead-in cable shield insulated conductor
- ⑤ = Bare conductor
- ⑥ = Loop wire in tube
- ⑦ = Loop wire insulated conductor
- ⑧ = Twisted and resin soldered conductor
- ⑨ = Electrical tape insulated splice
- ⑩ = Rigid mold
- ⑪ = Waterproof and dielectric resin

Illinois Department of Transportation
 APPROVED: [Signature] 2002
 ENGINEER OF SPECIAL SERVICES
 APPROVED: [Signature] 2002
 ENGINEER OF DESIGN AND ENVIRONMENT

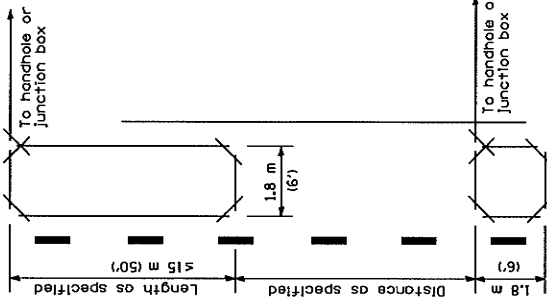
LOOP WIRE AND LEAD-IN CABLE SPLICE

All dimensions are in millimeters (inches) unless otherwise shown.

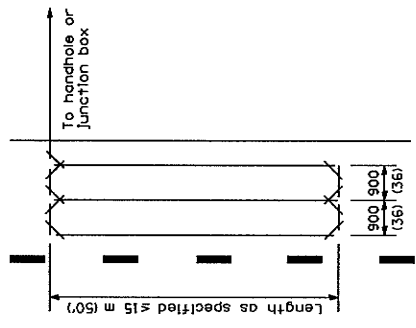
DATE	REVISIONS
1-1-02	Renum. Standard 846001.
1-1-97	Renum. Standard 2370-2.

DETECTOR LOOP INSTALLATIONS

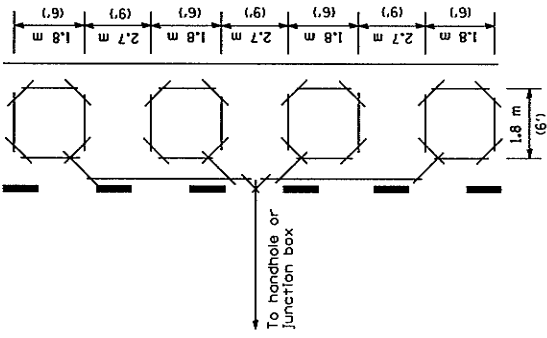
STANDARD 886001



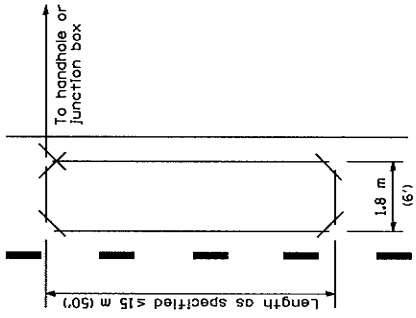
FOR EXTENDED-CALL DETECTION



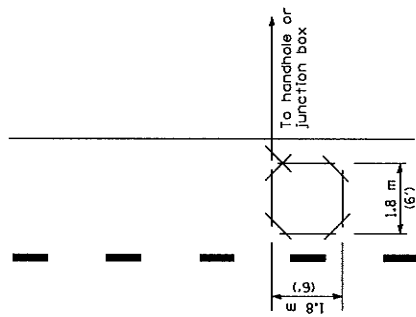
FOR PRESENCE DETECTION QUADRUPOLE LOOP



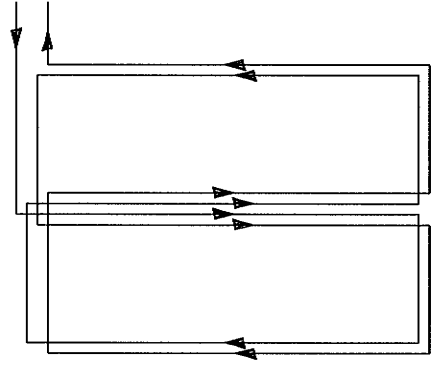
FOR PRESENCE DETECTION MULTIPLE LOOP IN SERIES



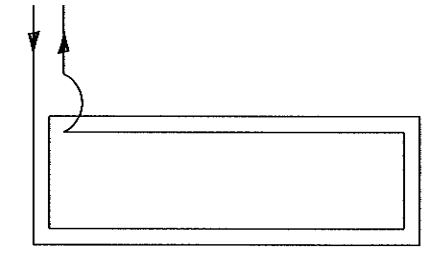
FOR PRESENCE DETECTION LONG LOOP



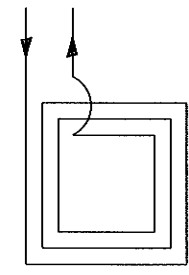
FOR POINT DETECTION SHORT LOOP



QUADRUPOLE LOOP



LONG LOOP



SHORT LOOP

All dimensions are in millimeters (inches) unless otherwise shown.

TYPICAL LAYOUTS FOR DETECTION LOOPS

STANDARD 886006

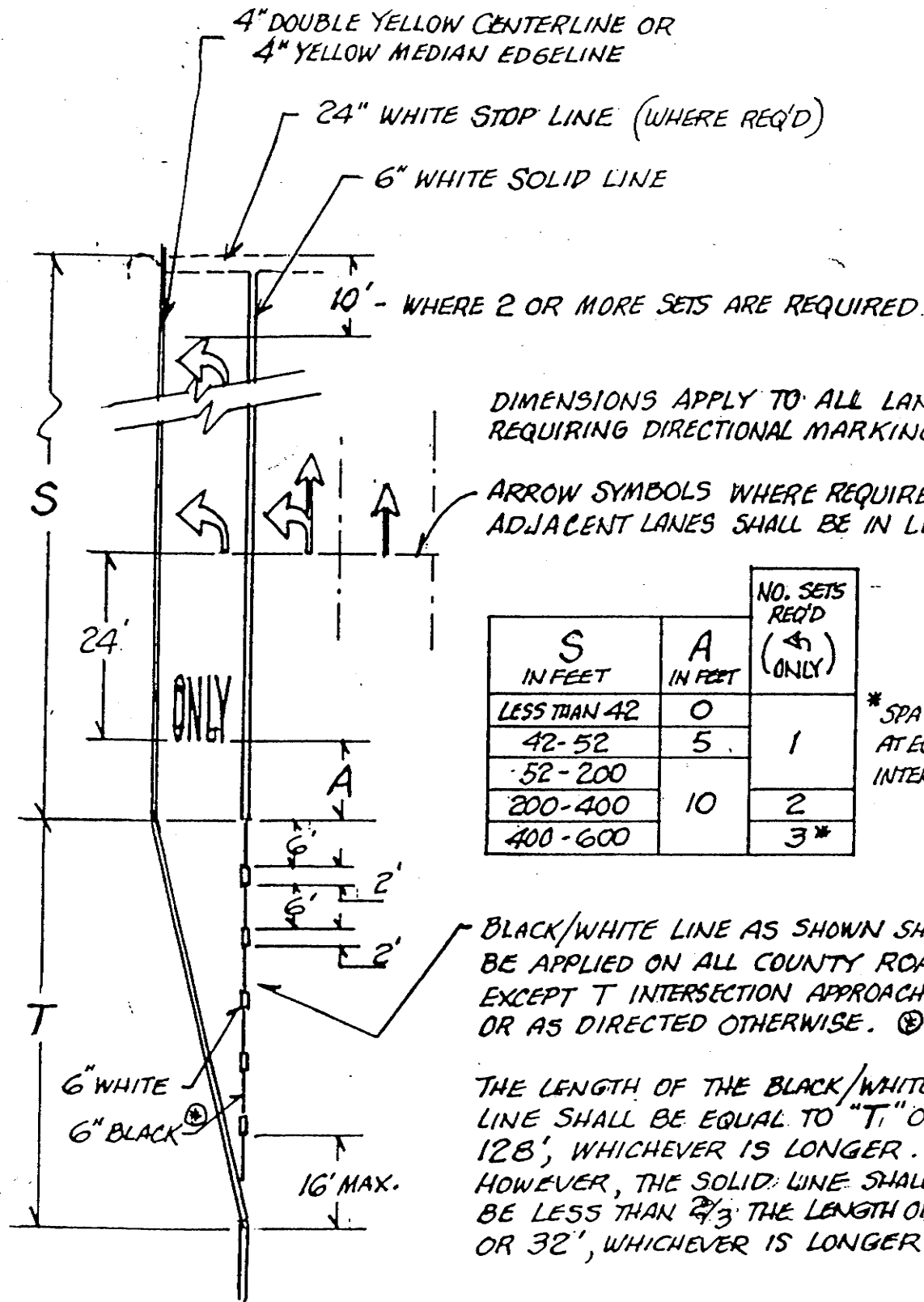
DATE	REVISIONS
1-1-02	Renum. Standard 846006.
1-1-97	Renum. Standard 2394-1.

Illinois Department of Transportation	ISSUED 1-1-02
APPROVED [Signature] 2002	
ENGINEER OF OPERATIONS	
APPROVED [Signature] 2002	
ENGINEER OF DESIGN AND ENVIRONMENT	

**Special Provisions
Lansing Municipal Airport
Lansing, IL**


**IL Project: IGQ-3329
N. Quad. Site Work -Phase 1
Final Submittal**

COOK COUNTY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS



DIMENSIONS APPLY TO ALL LANES REQUIRING DIRECTIONAL MARKING.

ARROW SYMBOLS WHERE REQUIRED IN ADJACENT LANES SHALL BE IN LINE.

S IN FEET	A IN FEET	NO. SETS REQ'D ( ONLY)
LESS THAN 42	0	1
42-52	5	
52-200	10	2
200-400		3*
400-600		

* SPACED
AT EQUAL
INTERVALS

BLACK/WHITE LINE AS SHOWN SHALL BE APPLIED ON ALL COUNTY ROADS EXCEPT T INTERSECTION APPROACHES OR AS DIRECTED OTHERWISE. (C)

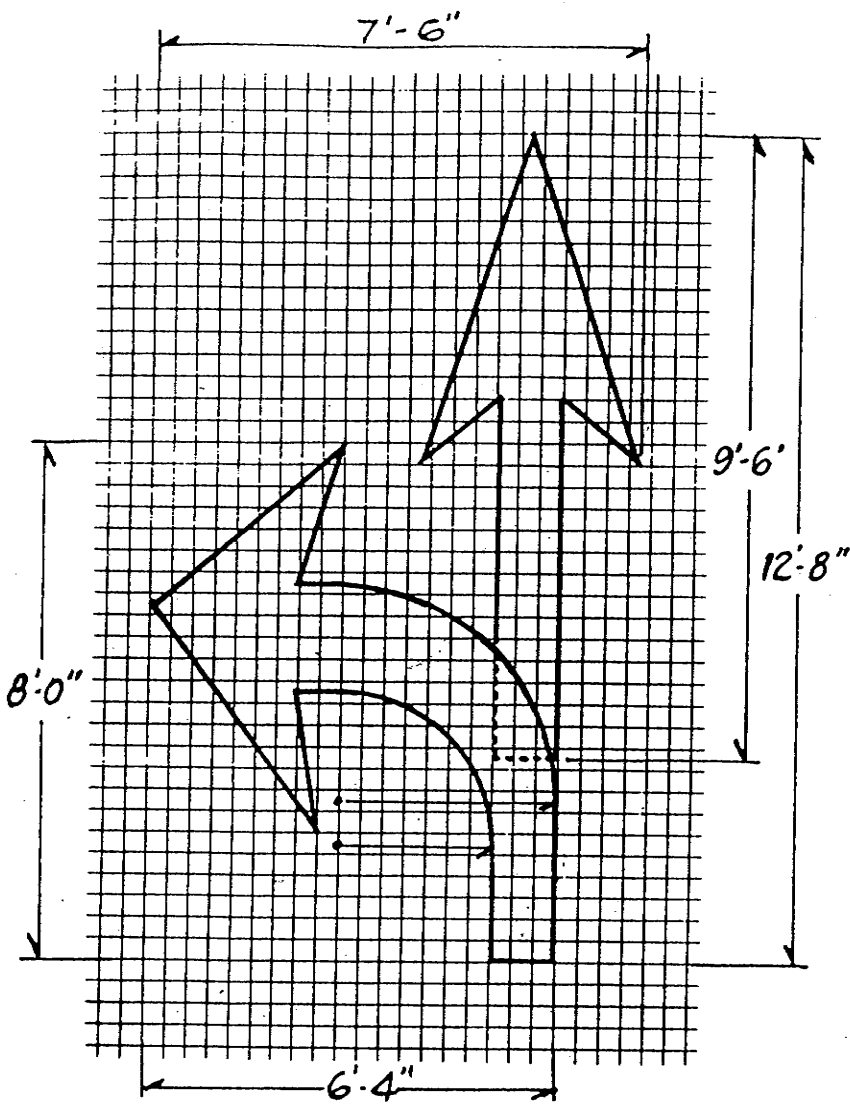
THE LENGTH OF THE BLACK/WHITE LINE SHALL BE EQUAL TO "T," OR 128', WHICHEVER IS LONGER. HOWEVER, THE SOLID LINE SHALL NOT BE LESS THAN 2/3 THE LENGTH OF "S" OR 32', WHICHEVER IS LONGER.

(C) BLACK SHALL BE OMITTED ON NEW BITUMINOUS SURFACES, AND THE DASHED LINE SHALL BE INCLUDED IN THE COST FOR PAINT PAVEMENT MARKING LINE - 6" WHITE.

DIRECTIONAL LANE MARKING LAYOUT

TMD-105-4

TJK-2/89 7/90 4/92



GRID SCALE:

EACH SQUARE = 4 INCHES ON A SIDE.

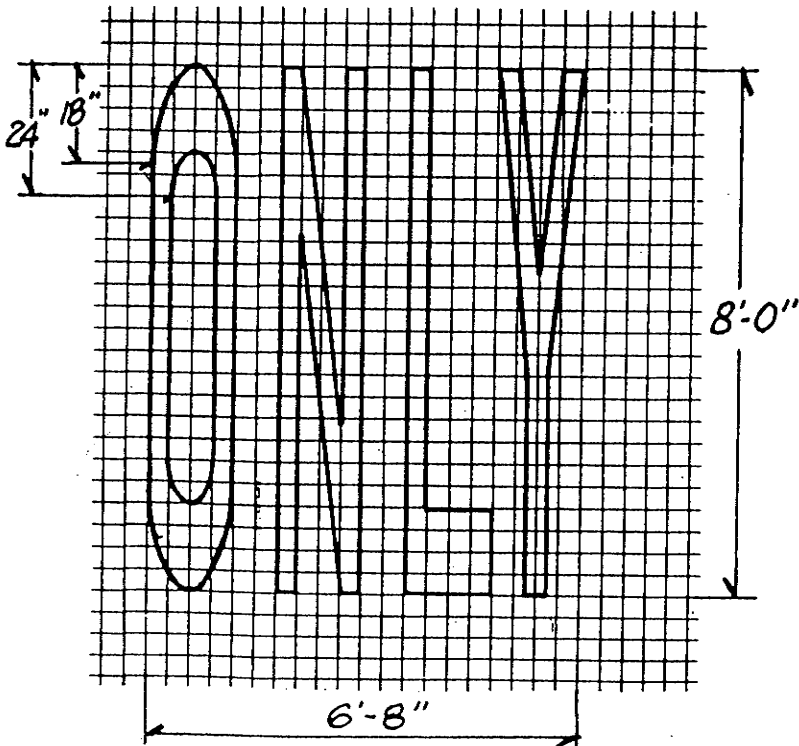
ALL LETTERS AND SYMBOLS: WHITE.

	SQ. FT.
↖ OR ↗	15.6
↑	11.7
↖ OR ↗	26.0
↖ ↗	27.2
ONLY	22.6

FOR PLACEMENT
SEE TMD-105-

DIRECTIONAL
LANE MARKINGS
DETAILS

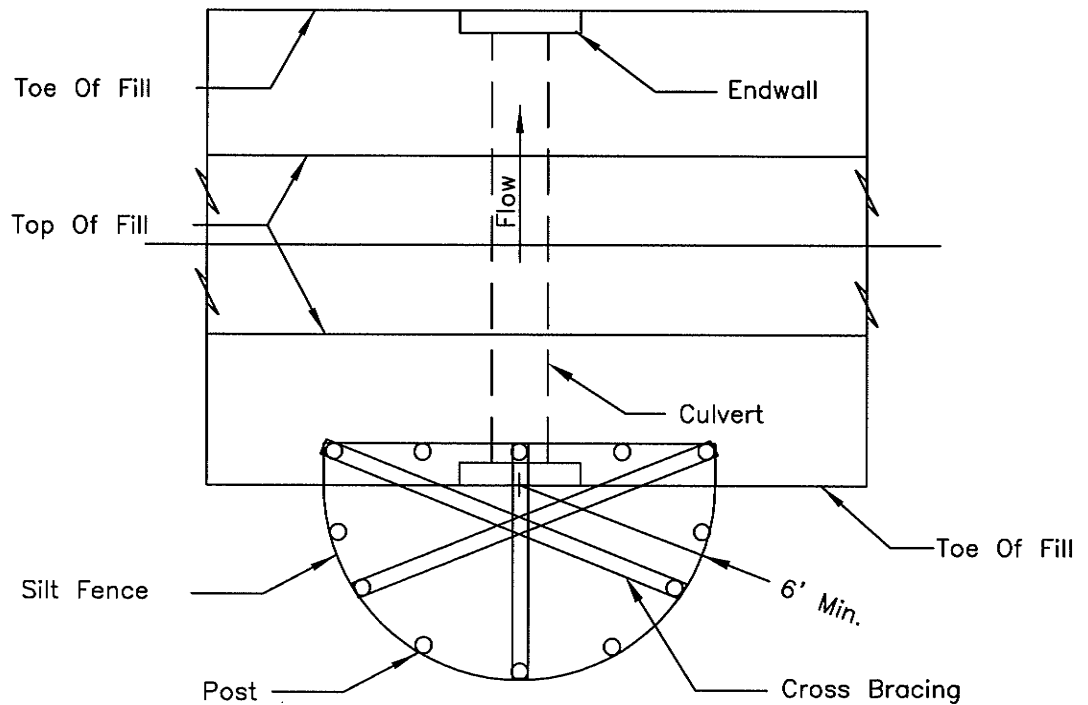
TMD-106-5



TKX 6/89 4/92

NATURAL RESOURCES CONSERVATION SERVICE STANDARD DRAWINGS

CULVERT INLET PROTECTION - SILT FENCE



PLAN VIEW

NOTES:

1. The silt fence shall meet the requirements as shown on standard drawing IL-620 SILT FENCE except the maximum post spacing shall be 3 feet and the tops of posts shall be cross braced.
2. Sediment shall be removed when the sediment has accumulated to one-half the height of the silt fence.
3. The maximum drainage area to the culvert being protected is 1 acre.

REFERENCE

Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



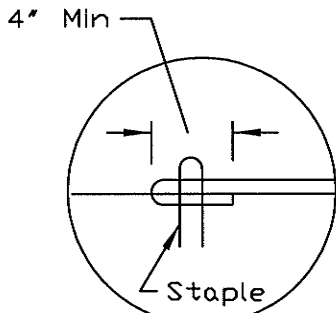
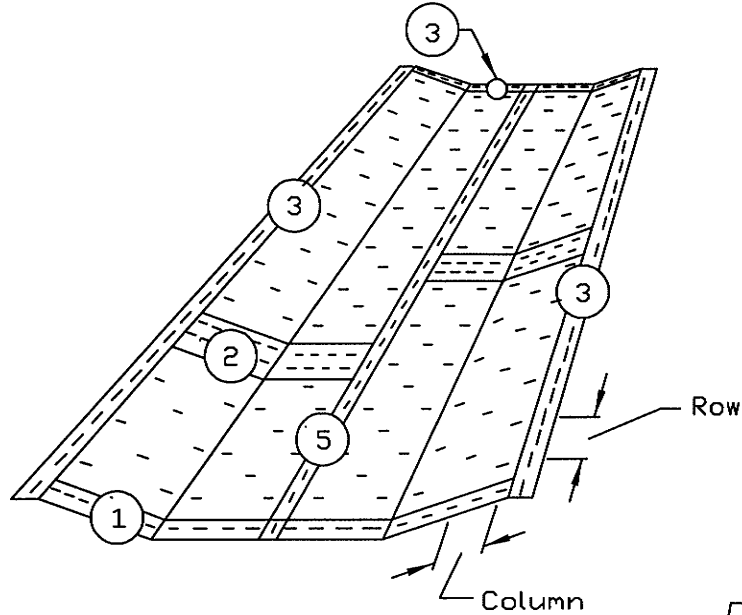
STANDARD DWG. NO.

IL-508SF

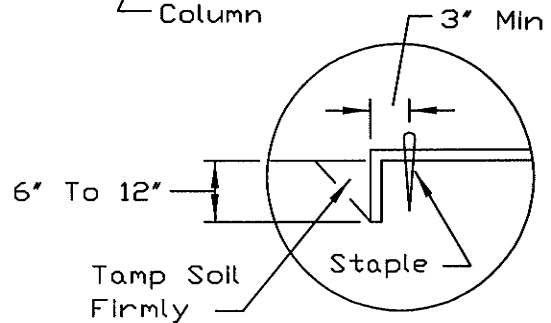
SHEET 1 OF 1

DATE 1-29-99

EROSION BLANKET PLAN

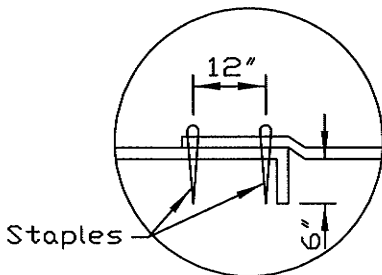


Terminal Fold
Jute Mesh Only

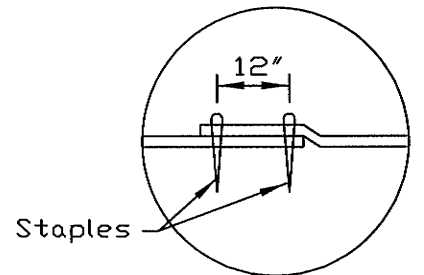


Terminal Fold
Excelsior Blanket
Erosion Control Paper

DETAIL 1



Junction Slot
Jute Mesh
Erosion Control Paper



Junction Slot
Excelsior Blanket

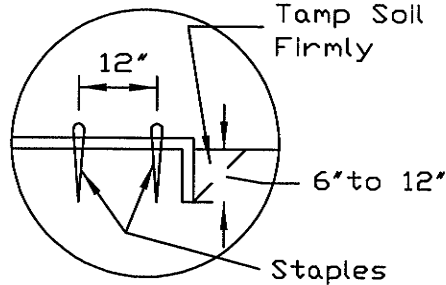
DETAIL 2

REFERENCE
 Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



STANDARD DWG. NO.
 IL-530
 SHEET 1 OF 2
 DATE 5-24-94

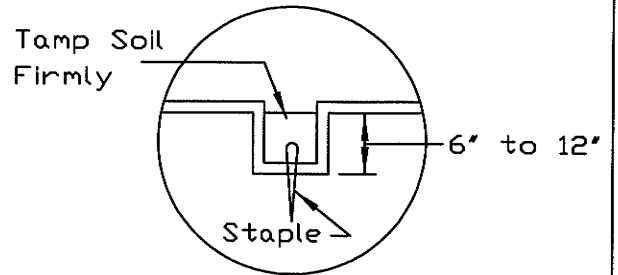
EROSION BLANKET PLAN



Anchor Slot

Jute Mesh
Excelsior Blanket
Erosion Control Paper

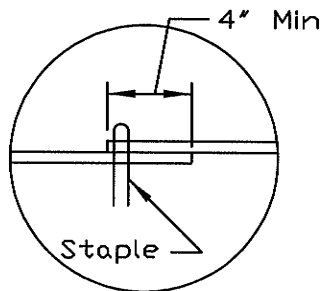
DETAIL 3



Check Slot

Erosion Control Paper

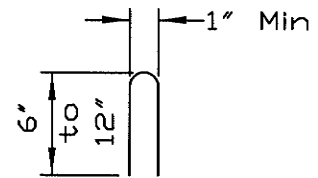
DETAIL 4



Lap Joint

Jute Mesh
Erosion Control Paper
Excelsior Blanket Shall
Be Butted Together.

DETAIL 5



STAPLE DETAIL

NOTES:

1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12' intervals.

REFERENCE

Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



NRCS

Natural Resources Conservation Service

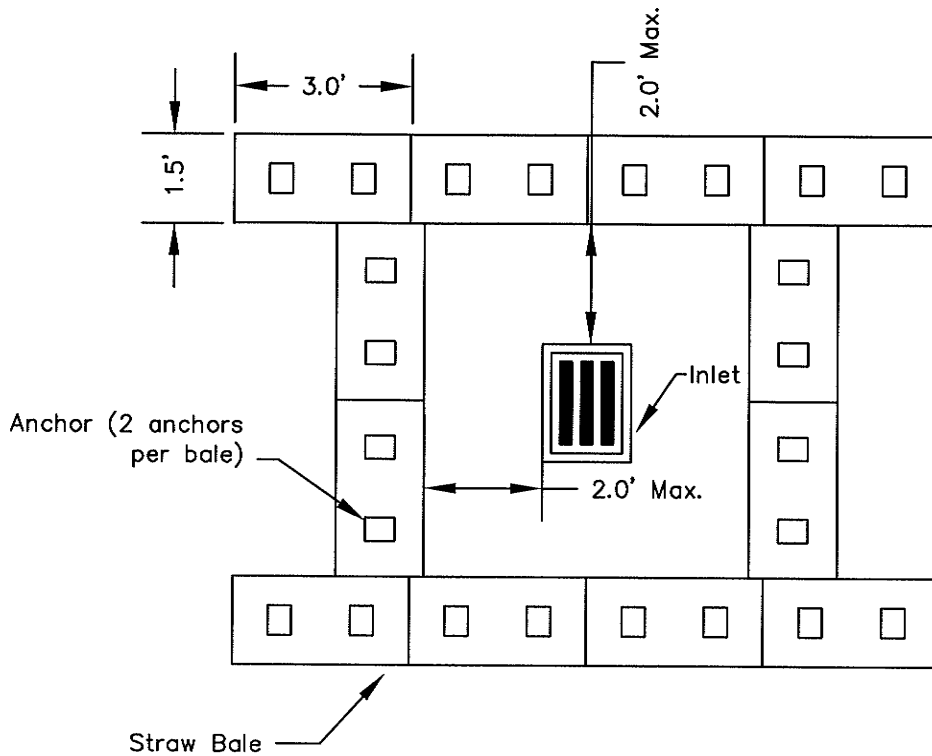
STANDARD DWG. NO.

IL-530

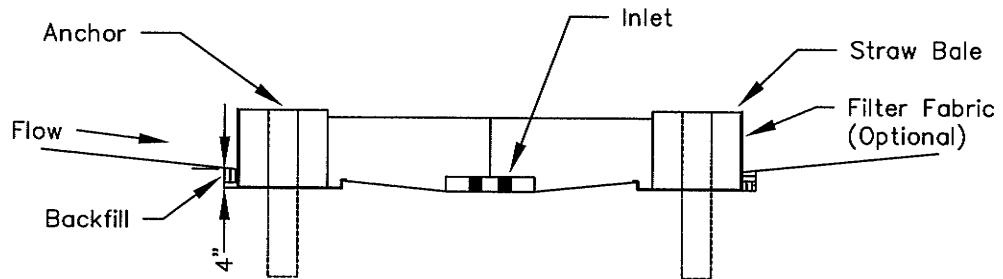
SHEET 2 OF 2

DATE 3-1-95

INLET PROTECTION STRAW BALE BARRIER PLAN



PLAN



SECTION

NOTES:

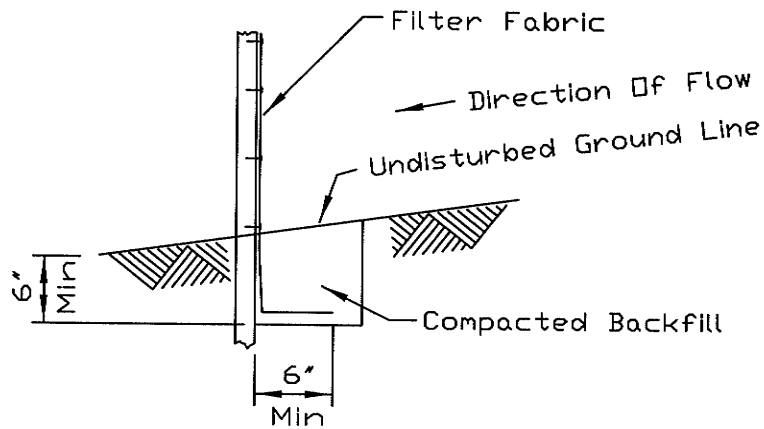
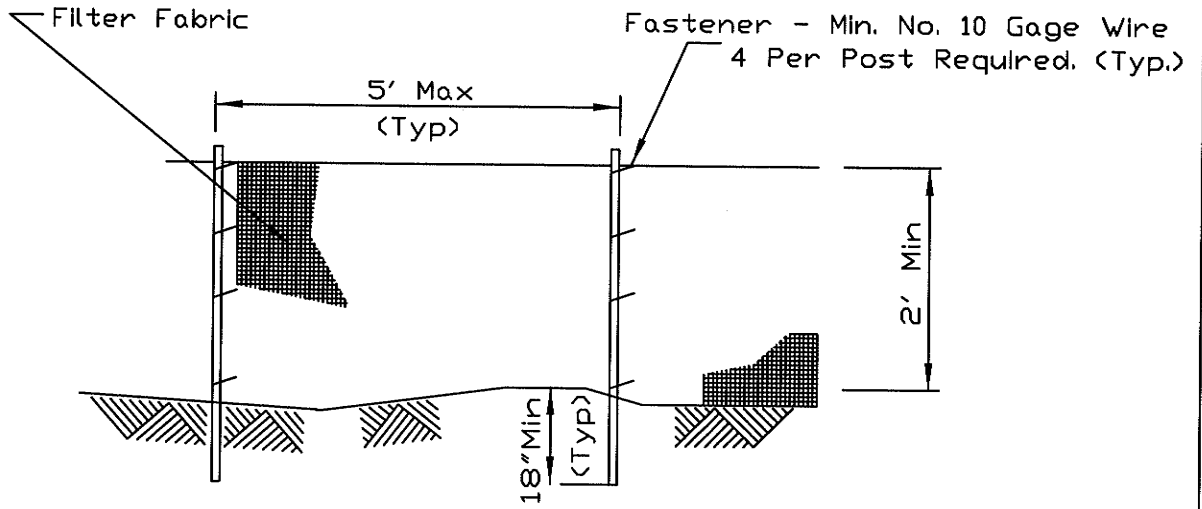
1. The immediate land area around the inlet should be relatively flat (less than 1% slope) and located so that the accumulated sediment can be easily removed.
2. The inside edge of the bales shall be a maximum of 2 feet from the edge of the inlet.
3. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE Table 1 or 2, Class 1 with AOS of at least 30 for nonwoven and 50 for woven.
4. Anchors shall be rebar, steel pickets or 2" x 2" stakes, and shall be long enough to extend at least 1.5 to 2.0 feet into the ground when the top is flush with the bale.

REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



STANDARD DWG. NO.
IL-563
 SHEET 1 OF 1
 DATE 11-23-01

SILT FENCE PLAN



FABRIC ANCHOR DETAIL

NOTES:

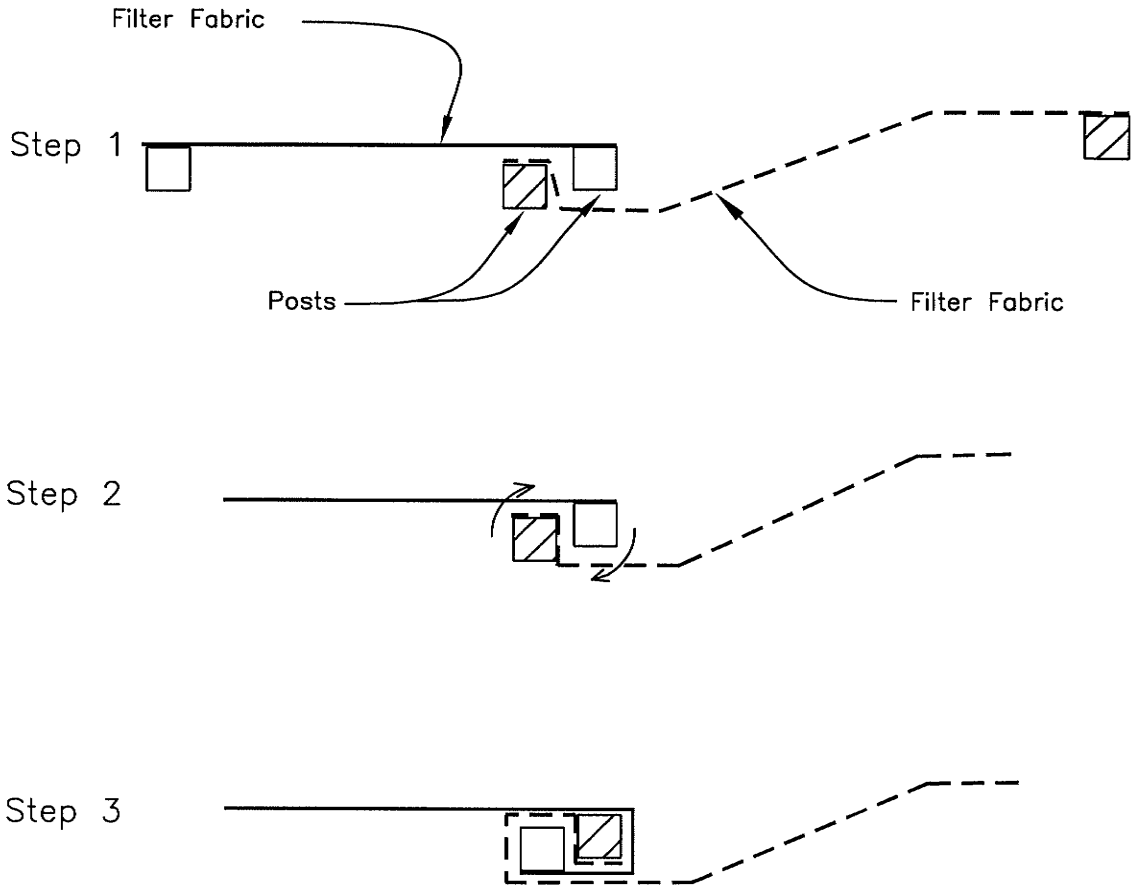
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



STANDARD DWG. NO.
IL-620
SHEET 1 OF 2
DATE 11-20-01

SILT FENCE



ATTACHING TWO SILT FENCES

NOTES:

1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Drive both posts a minimum of 18 inches into the ground and bury the flap.

REFERENCE

Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



NRCS

Natural Resources Conservation Service

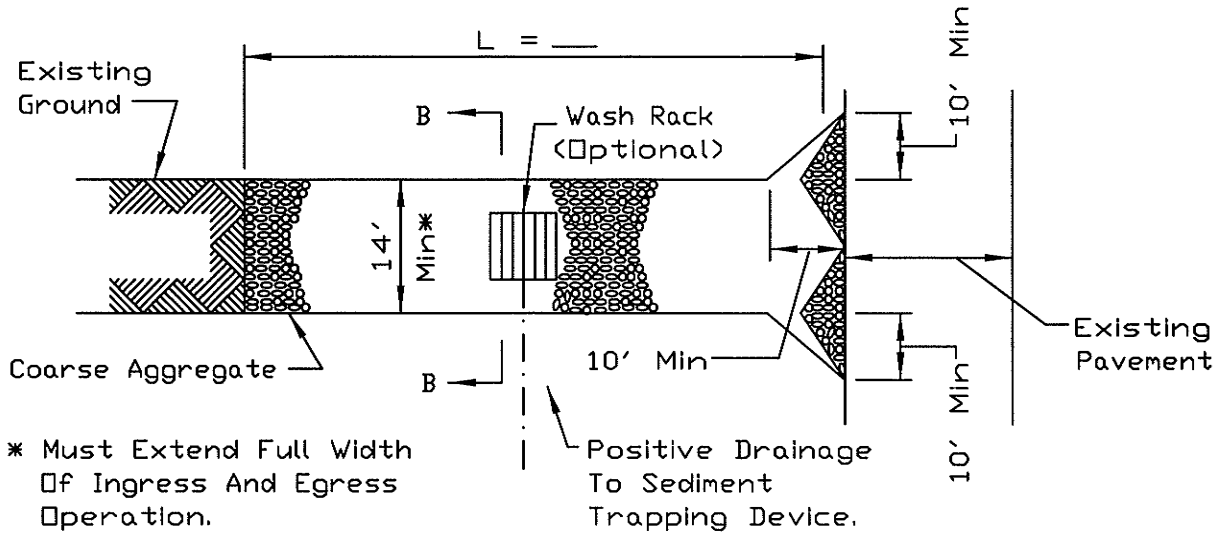
STANDARD DWG. NO.

IL-620(W)

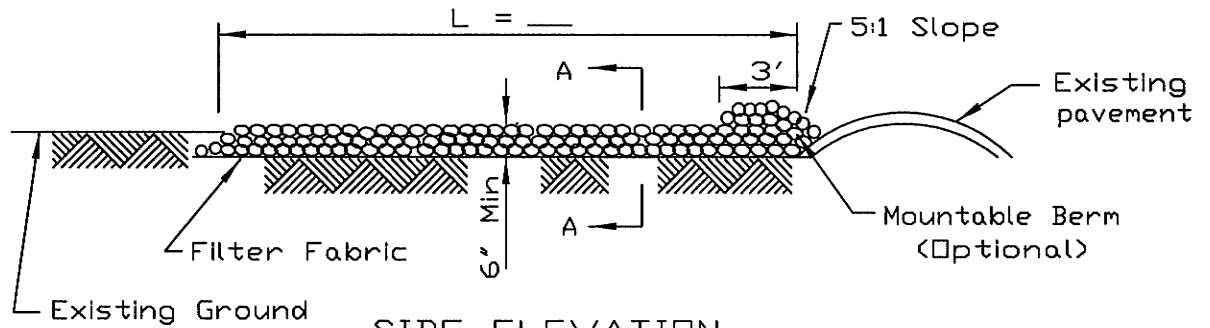
SHEET 2 OF 2

DATE 1-29-99

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW



SIDE ELEVATION

NOTES:

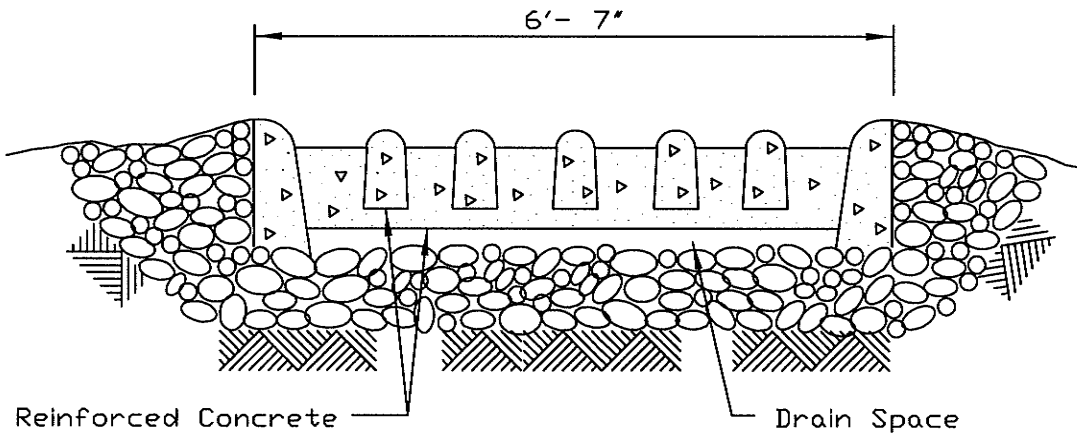
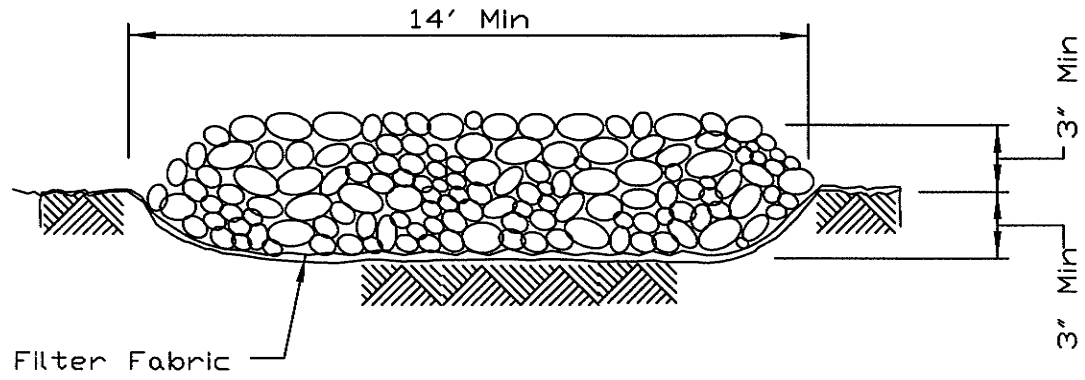
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



STANDARD DWG. NO.
IL-630
SHEET 1 OF 2
DATE 8-18-94

STABILIZED CONSTRUCTION ENTRANCE PLAN



REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



NRCS

Natural Resources Conservation Service

STANDARD DWG. NO.	IL-630
SHEET	2 OF 2
DATE	8-18-94

CONTRACT REQUIREMENTS

(1) Airport Improvement Program projects. The work in this contract is included in the federal Airport Improvement Program and is being undertaken and accomplished by the Illinois Department of Transportation, Division of Aeronautics and the Municipality, hereinafter called the Co-Sponsors, in accordance with the terms and conditions of a Grant Agreement between the Co-Sponsors and the United States, under the Airport and Airway Improvement Act of 1982 (Public Law 97-248; Title V, Section 501 et seq., September 3, 1982; 96 Stat. 671; codified at 49 U.S.C Section 2201 et seq.) and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs of the Project that are determined to be allowable Project costs under the Act. The United States is not a party to this contract and no reference in this contract to FAA or representative thereof, or to any rights granted to the FAA or any representative thereof, or the United States, by the contract, makes the United States a party to this contract.

(2) Consent of Assignment. The Contractor shall obtain the prior written consent of the Co-Sponsors to any proposed assignment of any interest in or part of this contract.

(3) Convict Labor. No convict labor may be employed under this contract.

(4) Veterans Preference. In the employment of labor, except in executive, administrative, and supervisory positions, preference shall be given to veterans of the Vietnam era and disabled veterans as defined in Section 515(c) of the Airport and Airway Improvement Act of 1982. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

(5) Withholding: Sponsor from Contractor. Whether or not payments or advances to the Co-Sponsors are withheld or suspended by the FAA, the Co-Sponsors may withhold or cause to be withheld from the Contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics employed by the Contractor or any subcontractor on the work the full amount of wages required by this contract.

(6) Nonpayment of Wages. If the Contractor or subcontractor fails to pay any laborer or mechanic employed or working on the site of the work any of the wages required by this contract the Co-Sponsors may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment or advance of funds until the violations cease.

(7) FAA Inspection and Review. The Contractor shall allow any authorized representative of the FAA to inspect and review any work or materials used in the performance of this contract.

(8) Subcontracts. The Contractor shall insert in each of his subcontracts the provisions contained in Paragraphs (1), (3), (4), (5), (6), and (7) above and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

(9) Contract Termination. A breach of Paragraph (6), (7), and (8) above may be grounds for termination of the contract.

PROVISIONS REQUIRED BY THE REGULATIONS OF THE SECRETARY OF LABOR 29 CFR 5.5

(a) Contract Provisions and Related Matters.

(1) Minimum Wages.

Revised 1/92

(i) All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provision of paragraph (a)(1)(iv) of this section; also, 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 paragraph 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) 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.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(ii)(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The 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. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(ii)(C) In the event the Contractor, the laborers or mechanics to be employed in the 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 questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(ii)(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs 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. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(2) Withholding. The Federal Aviation Administration shall upon its own action or written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor 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, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, 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 (Agency) may, after written notice to the Contractor, sponsor, applicant, or owner, 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.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such work, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office Management and Budget under OMB control numbers 1215-0140 and 1215-0017).

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph 5.5(a)(3)(i) of Regulations, 29 CFR Part 5. 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 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB control number 1215-0149).

(ii)(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor, or subcontractor or his or 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 5.5(a)(3)(i) of Regulations, 29 CFR Part 5 and that such information is correct and complete;

(2) That each 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 Regulations, 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed as specified in the applicable wage determination incorporated into the contract.

(ii)(C) 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 (a)(3)(ii)(B) of this section.

(ii)(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, 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 Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action 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.

(4) Apprentices and Trainees

(i) Apprentices. 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 U.S. Department of Labor, 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 or her first 90 days of probationary employment as a 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. The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. 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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. 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 will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. 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 U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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 ration permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contract 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.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(5) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses contained in paragraph (a)(1) through (10) of this contract and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by an subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract determination: debarment. A breach of these contract clauses paragraphs (a)(1) through (10) and the 2nd clause (b)(1) through (5) below may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by referenced in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 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 U.S. Department of Labor, or the employees or their representatives.

(10) Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), (4) and (5) of this section in full in AIP construction contracts in excess of \$2,000. These clauses shall be inserted in addition to the clauses required by paragraph 5.5(a) or paragraph 4.6 of Part 4 of this title. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) 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 and trainees described in paragraphs 5 and 6 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.

(2) Violations: Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his/her unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in 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 subparagraph (1) of this paragraph, in the sum of \$10.00 for each calendar day on which such employee was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 subparagraph (2) of this paragraph.

(4) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

(5) Working Conditions. No Contractor or subcontractor may require any laborer or mechanic employed in the performance of any contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards (29 CFR 1926) issued by Department of Labor.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in paragraph 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017).

FEDERAL REGULATIONS VOL. 40, #74,
WEDNESDAY, APRIL 16, 1975, PAGE 17124,
ADMINISTRATION OF THE CLEAR AIR ACT
& WATER POLLUTION CONTROL ACT
(with respect to Federal Grants)

In connection with the administration of the Clean Air Act and the Water Pollution Control Act with respect to Federal Grants, specific requirements have been imposed of any contract which is not exempt under the provisions of 40 CFR 15.5.

(1) Any facility listed on the EPA List of Violating Facilities pursuant to Paragraph 15.20 of 40 CFR as of the date of the contract award will not be utilized in the performance of any non-exempt contract or subcontract.

(2) The Contractor shall comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 USC 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq. relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in Section 114 and Section 308 of the Air Act and Water Act, respectively, and all regulations and guidelines issued thereunder after the award of the contract.

(3) Prompt notification shall be required prior to contract award to the awarding official by the Contractor who will receive the award of the receipt of any communication from the Director, Office of Federal Activities, U.S. Environmental Protection Agency, indicating that a facility to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

(4) The Contractor shall include or cause to be included the criteria and requirements in paragraphs 1 through 4 in any non-exempt subcontract and will take such action as the Government may direct as a means of enforcing such provisions.

Attachment No. 1

During the performance of the contract, the Contractor agrees as follows:

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on the behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- (3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or worker's representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of 24 September 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of 24 September 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of 24 September 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

ATTACHMENT NO. 2

EACH PRIME CONTRACTOR SHALL INSERT IN EACH SUBCONTRACT THE CERTIFICATION IN APPENDIX B, AND FURTHER, SHALL REQUIRE ITS INCLUSION IN ANY LOWER TIER SUBCONTRACT, PURCHASE ORDER, OR TRANSACTION THAT MAY IN TURN BE MADE.

- Appendix B of 49 CFR Part 29 -

This certification applies to subcontractors, material suppliers, vendors and other lower tier participants.

Appendix B--Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. 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.

3. 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 when submitted or has become erroneous by reason of changed circumstances.

4. 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 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.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. 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.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it 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.

8. 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 a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

STATE REQUIRED CONTRACT PROVISIONS
ALL FEDERAL-AID CONSTRUCTION CONTRACTS

Effective February 1, 1969
Revised January 2, 1973

The following provisions are State of Illinois requirements and are in addition to the Federal requirements.

"EQUAL EMPLOYMENT OPPORTUNITY"

In the event of the Contractor's noncompliance with any provisions of this Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission's Rules and Regulations for Public Contracts, the Contractor may be declared nonresponsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be canceled or avoided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this contract, the Contractor agrees as follows:

- (1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (2) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (in accordance with the Commission's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin or ancestry.
- (4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Fair Employment Practices Commission and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
- (5) That it will submit reports as required by the Illinois Fair Employment Practices Commission's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Commission or the contracting agency, and in all respects comply with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.
- (6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Fair Employment Practices Commission for purposes of investigation to ascertain compliance with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.
- (7) That it will include verbatim or by reference the provisions of paragraphs 1 through 7 of this clause in every performance subcontract as defined in Section 2.10(b) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every subcontractor; and that it will also so include the provisions or paragraphs 1, 5, 6 and 7 in every supply subcontract as defined in Section 2.10(a) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event any subcontractor fails or refuses to comply therewith. In addition, no Contractor will utilize any subcontractor declared by the Commission to be nonresponsible and therefore ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

CONSTRUCTION CONTRACT PROCUREMENT POLICIES

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SECTION 1

PROPOSAL REQUIREMENTS AND CONDITIONS

1-01 ADVERTISEMENT (Notice to Bidders). The State of Illinois shall publish the advertisement at such places and at such times as are required by local law or ordinances. The published advertisement shall state the time and place for submitting sealed proposals; a description of the proposed work; instructions to bidders as to obtaining proposal forms, plans, and specifications; proposal guaranty required; and the Owner's right to reject any and all bids.

For Federally assisted contracts the advertisement shall conform to the requirements of local laws and ordinances pertaining to letting of contracts and, in addition, shall conform to the requirements of the appropriate parts of the Federal Aviation Regulations applicable to the particular contract being advertised.

1-02 PREQUALIFICATION OF BIDDERS.

- (a) When the awarding authority is the State of Illinois, each prospective bidder, prior to being considered for issuance of any proposal forms will be required to file, on forms furnished by the Department, an experience questionnaire and a confidential financial statement in accordance with the Department's Instructions for Prequalification of Contractors. The Statement shall include a complete report of the prospective bidder's financial resources and liabilities, equipment, past record and personnel, and must be submitted at least thirty (30) days prior to the scheduled opening of bids in which the Contractor is interested.

After the Department has analyzed the submitted "Contractor's Statement of Experience and Financial Condition" and related information and has determined appropriate ratings, the Department will issue to the Contractor a "Certificate of Eligibility". The Certificate will permit the Contractor to obtain proposal forms and plans for any Department of Transportation letting on work which is within the limits of the Contractor's potential as indicated on his "Certificate of Eligibility", subject to any limitations due to present work under contract or pending award as determined from the Contractor's submitted "Affidavit of Availability". Bidders intending to consistently submit proposals shall submit a "Contractor's Statement of Experience and Financial Condition" at least once a year. However, prequalification may be changed during that period upon the submission of additional favorable reports or upon reports of unsatisfactory performance.

Before a proposal is issued, the prospective bidder will be required to furnish an "Affidavit of Availability" indicating the location and amount of all uncompleted work under contract, or pending award, either as principal or subcontractor, as well as a listing of all subcontractors and value of work sublet to others. The prospective bidder may be requested to file a statement showing the amount and condition of equipment which will be available.

Before an award is made, the bidder may be required to furnish an outline of his plans for conducting the work.

- (b) When the awarding authority for contract construction work is the County Board of a county; the Council, the City Council, or the President and Board of Trustees of a city, village or town, each prospective bidder, in evidence of his competence, shall furnish the awarding authority as a prerequisite to the release of proposal forms by the awarding authority, a certified or photostatic copy of a "Certificate of Eligibility" issued by the Department of Transportation, in accordance with Section 1-02(a).

The two low bidders must file within 24 hours after the letting a sworn affidavit, in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work, using the blank form made available for this affidavit. One copy shall be filed with the awarding authority and two copies with the District Highway Office.

1-03 CONTENTS OF PROPOSAL FORMS. Upon request, the Department will furnish the prequalified bidders a proposal form. This form will state the location and description of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items for which unit bid prices are invited. The proposal form will state the time in which work must be completed, the amount of the proposal guaranty, labor requirements, and date, time and place of the opening of proposals. The form will also include any special provisions or requirements which vary from or are not contained in these specifications.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. Any addenda officially issued by the Department, will be considered a part of the proposal whether attached or not.

For Federally assisted contracts, the proposal shall conform to the requirements of local laws and ordinances pertaining to letting of contracts and, in addition, shall conform to the requirements of the appropriate parts of the Federal Aviation Regulations pertaining to the particular contract being let.

1-04 ISSUANCE OF PROPOSAL FORMS. The Department shall refuse to issue a proposal form for any of the following reasons:

- (a) Lack of competency and adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Section 1-02(a).
- (b) Uncompleted work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- (c) False information provided on a bidder's "Affidavit of Availability".
- (d) Failure to pay, or satisfactorily settle, all bills due for labor and material on former contracts in force at the time of issuance of proposal forms.
- (e) Failure to comply with any prequalification regulations of the Department.
- (f) Default under previous contracts.
- (g) Unsatisfactory performance record as shown by past work for the Department, judged from the standpoint of workmanship and progress.
- (h) When the Contractor is suspended from eligibility to bid at a public letting where the contract is awarded by, or require approval of, the Department.
- (i) When any agent, servant, or employee of the prospective bidder currently serves as a member, employee, or agent of a governmental body that is financially involved in the proposed work.
- (j) When any agent, servant, or employee of the prospective bidder has participated in the preparation of plans or specifications for the proposed work.

1-05 INTERPRETATION OF QUANTITIES IN BID SCHEDULE. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 20 of the Illinois Standard Specifications for Construction of Airports without in any way invalidating the unit bid prices.

1-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs, underground utilities and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

1-07 PREPARATION OF THE PROPOSAL. The bidder shall submit his proposal on the form furnished by the Department. The proposal shall be executed property, and bids shall be made for all items indicated in the proposal form, except that when alternate bids are asked, a bid on more than one alternate for each item is not required, unless otherwise provided. The bidder shall indicate, in figures, a unit price for each of the separate items called for in the proposal; he shall show the products of the respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the proposal shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder which shall be written with ink.

If the proposal is made by an individual, his name and business address shall be shown. If made by a firm or partnership, the name and business address of each member of the firm or partnership shall be shown. If made by a corporation, the proposal shall show the names, titles, and business address of the president, secretary, and treasurer, and the seal of the corporation shall be affixed and attested by the secretary.

The proposal shall be issued to a prequalified bidder in the same name and style as the financial statement used for prequalification and shall be submitted in like manner.

1-08 REJECTION OF PROPOSALS. The Department reserves the right to reject proposals for any of the conditions in Article 1-04 or for any of the following reasons:

- (a) More than one proposal for the same work from an individual, firm, partnership, or corporation under the same or different names.
- (b) Evidence of collusion among bidders.
- (c) Unbalanced proposals in which the prices for some items are obviously out of proportion to the prices for other items.
- (d) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items or lump sum pay items.
- (e) If the proposal is other than that furnished by the Department; or if the form is altered or any part thereof is detached.
- (f) If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
- (g) If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- (h) If the proposal is not accompanied by the proper proposal guaranty.
- (i) If the proposal is prepared with other than ink or typewriter.
- (j) If the proposal is submitted in any other name other than that to whom it was issued by the Department.

1-09 PROPOSAL GUARANTY. Each Proposal shall be accompanied by either a bid bond on the Department of Transportation, Division of Aeronautics form contained in the proposal, executed by a corporate surety company satisfactory to the Department or by a bank cashier's check or a properly certified check for not less than 5 percent of the amount bid.

Bank cashier's checks, or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois.

1-10 DELIVERY OF PROPOSALS. Each proposal should be submitted in a special envelope furnished by the Department. The blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Department is used, it shall be of the same general size and shape and be similarly marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Department at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and place specified in the Notice to Bidders. Proposals received after the time for opening of bids will be returned to the bidder unopened.

1-11 WITHDRAWAL OF PROPOSALS. Permission will be given a bidder to withdraw a proposal if he makes his request in writing or by telegram before the time for opening proposals. If a proposal is withdrawn, the bidder will not be permitted to resubmit this proposal at the same letting. With the approval of the Engineer, a bidder may withdraw a proposal and substitute a new proposal prior to the time of opening bids.

1-12 PUBLIC OPENING OF PROPOSALS. Proposals will be opened and read publicly at the time and place specified in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

1-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- (a) Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- (b) Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner.
- (c) If the bidder is considered to be in "default" for any reason specified in the Subsection 1-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

1-14 WORKER'S COMPENSATION INSURANCE. Prior to the approval of his contract by the Division, the Contractor shall furnish to the Division certificates of insurance covering Worker's Compensation, or satisfactory evidence that this liability is otherwise taken care of in accordance with Section 4.(a) of the "Worker's Compensation Act of the State of Illinois" as amended.

SECTION 2

AWARD AND EXECUTION OF CONTRACT

2-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. In the event of a discrepancy between unit bid prices and extensions, the unit bid price shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- (a) If the proposal is irregular as specified in the subsection titled REJECTION OF PROPOSALS of Section 1.
- (b) If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS of Section 1.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals; waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable State and Local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise.

2-02 AWARD OF CONTRACT. The award of contract will be made within 60 calendar days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by letter, that his bid has been accepted, and that he has been awarded the contract.

If a contract is not awarded within 60 days after the opening of proposals, a bidder may file a written request with the Division for the withdrawal of his bid and the Division will permit such withdrawal.

For Federally assisted contracts, unless otherwise specified in this subsection, no award shall be made until the FAA has concurred in the Owner's recommendation to make such award and has approved the Owner's proposal contract to the extent that such concurrence and approval are required by Federal Regulations.

2-03 CANCELLATION OF AWARD. The Division reserves the right to cancel the award without liability to the bidder at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection titled APPROVAL OF CONTRACT of this section. The Division at the time of cancellation will return the proposal guaranty.

2-04 RETURN OF PROPOSAL GUARANTY. The proposal guaranties of all except the two lowest bidders will be returned promptly after the proposals have been checked, tabulated, and the relation of the proposals established. Proposal guaranties of the two lowest bidders will be returned as soon as the Construction Contract, Performance Bonds, and Payment Bonds of the successful bidder have been properly executed and approved.

If any other form of proposal guaranty is used, other than a bid bond, a bid bond may be substituted at the Contractor's option.

2-05 REQUIREMENT OF PERFORMANCE AND PAYMENT BONDS. The successful bidder for a contract, at the time of the execution of the contract, shall deposit with the Division separate performance and payment bonds each for the full amount of the contract. The form of the bonds shall be that furnished by the Division, and the sureties shall be acceptable to the Division.

2-06 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the Contract and shall return the signed Contract to the Owner (Sponsor) for signature (execution) and subsequently return all copies to the Division. The fully executed surety bonds specified in the subsection title REQUIREMENTS OF PERFORMANCE AND PAYMENT BONDS of this section will be forwarded to the Division within 15 days of the date mailed or otherwise delivered to the successful bidder. If the Contract and Bonds are mailed, special handling is recommended.

If the bidder to whom award is to be made is a corporation organized under the laws of a State other than Illinois, the bidder shall furnish the Division a copy of the corporation's certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish such evidence of a certificate of authority within the time required will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the State, not as a penalty, but in payment of liquidated damages sustained as a result of such failure.

2-07 APPROVAL OF CONTRACT. Upon receipt of the contract and bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the contract to the Division for approval and execution by the Division. Delivery of the fully executed contract to the Contractor shall constitute the Department's approval to be bound by the successful bidder's proposal and the terms of the contract.

2-08 FAILURE TO EXECUTE CONTRACT. If the contract is not executed by the Division within 15 days following receipt from the bidder of the properly executed contracts and bonds, the bidder shall have the right to withdraw his bid without penalty.

Failure of the successful bidder to execute the contract and file acceptable bonds within 15 days after the contract has been mailed to him shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the State, not as a penalty, but as liquidation of damages sustained.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS

The requirements of the following provisions written for Federally-assisted construction contracts, including all goals and timetables and affirmative action steps, shall also apply to all State-funded construction contracts awarded by the Illinois Department of Transportation.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

APPENDIX A

The following goal for female utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goal is applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or nonfederally related construction contract or subcontract.

AREA COVERED (STATEWIDE)

Goals for Women apply nationwide.

GOAL

	Goal (percent)
Female Utilization.....	... 6.9

APPENDIX B

Until further notice, the following goals for minority utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally-assisted construction contracts and subcontracts in excess of \$10,000. to be performed in the respective geographical areas. The goals are applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally-assisted or nonfederally related construction contract or subcontract.

<u>Economic Area</u>	<u>Goal (percent)</u>
056 Paducah, KY:	
Non-SMSA Counties -	5.2
IL - Hardin, Massac, Pope	
KY - Ballard, Caldwell, Calloway, Carlisle, Crittenden,	
Fulton, Graves, Hickman, Livingston, Lyon, McCracken, Marshall	

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<u>Economic Area</u>	<u>Goal (percent)</u>
080 Evansville, IN:	
Non-SMSA Counties -	3.5
IL - Edwards, Gallatin, Hamilton, Lawrence, Saline, Wabash, White	
IN - Dubois, Knox, Perry, Pike, Spencer	
KY - Hancock, Hopkins, McLean, Mublenberg, Ohio, Union, Webster	
081 Terre Haute, IN:	
Non-SMSA Counties -	2.5
IL - Clark, Crawford	
IN - Parke	
083 Chicago, IL:	
SMSA Counties:	19.6
1600 Chicago, IL -	
IL - Cook, DuPage, Kane, Lake, McHenry, Will	
3740 Kankakee, IL -	9.1
IL - Kankakee	
Non-SMSA Counties	18.4
IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam	
IN - Jasper, Laporte, Newton, Pulaski, Starke	
084 Champaign - Urbana, IL:	
SMSA Counties:	
1400 Champaign - Urbana - Rantoul, IL -	7.8
IL - Champaign	
Non-SMSA Counties -	4.8
IL - Coles, Cumberland, Douglas, Edgar, Ford, Piatt, Vermilion	
085 Springfield - Decatur, IL:	
SMSA Counties:	
2040 Decatur, IL -	7.6
IL - Macon	
7880 Springfield, IL -	4.5
IL - Mendard, Sangamon	
Non-SMSA Counties	4.0
IL - Cass, Christian, Dewitt, Logan, Morgan, Moultrie, Scott, Shelby	
086 Quincy, IL:	
Non-SMSA Counties	3.1
IL - Adams, Brown, Pike	
MO - Lewis, Marion, Pike, Ralls	
087 Peoria, IL:	
SMSA Counties:	
1040 Bloomington - Normal, IL -	2.5
IL - McLean	

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APPENDIX B (CONTINUED)

<u>Economic Area</u>	<u>Goal (percent)</u>
6120 Peoria, IL - IL - Peoria, Tazewell, Woodford	4.4
Non-SMSA Counties - IL - Fulton, Knox, McDonough, Marshall, Mason, Schuyler, Stark, Warren	3.3
088 Rockford, IL: SMSA Counties: 6880 Rockford, IL - IL - Boone, Winnebago	6.3
Non-SMSA Counties - IL - Lee, Ogle, Stephenson	4.6
098 Dubuque, IA: Non-SMSA Counties - IL - JoDaviess IA - Atlamakee, Clayton, Delaware, Jackson, Winnesheik WI - Crawford, Grant, Lafayette	0.5
099 Davenport, Rock Island, Moline, IA - IL: SMSA Counties: 1960 Davenport, Rock Island, Moline, IA - IL - IL - Henry, Rock Island IA - Scott	4.6
Non-SMSA Counties - IL - Carroll, Hancock, Henderson, Mercer, Whiteside IA - Clinton, DesMoines, Henry, Lee, Louisa, Muscatine MO - Clark	3.4
107 St. Louis, MO: SMSA Counties: 7040 St. Louis, MO - IL - IL - Clinton, Madison, Monroe, St. Clair MO - Franklin, Jefferson, St. Charles, St. Louis, St. Louis City	14.7
Non-SMSA Counties - IL - Alexander, Bond, Calhoun, Clay, Effingham, Fayette, Franklin, Greene, Jackson, Jasper, Jefferson, Jersey, Johnson, Macoupin, Marion, Montgomery, Perry, Pulaski, Randolph, Richland, Union, Washington, Wayne, Williamson MO - Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Gasconade, Iron, Lincoln, Madison, Maries, Mississippi, Montgomery, Perry, Phelps, Reynolds, Ripley, St. Francois, St. Genevieve, Scott, Stoddard, Warren, Washington, Wayne	11.4

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These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the provisions and specifications set forth in its federally assisted contracts, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Illinois Division of Aeronautics will provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction contract and/or subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. This notification will list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the entire State of Illinois for the goal set forth in APPENDIX A and the county or counties in which the work is located for the goals set forth in APPENDIX B.

STANDARD FEDERAL EQUAL EMPLOYMENT
OPPORTUNITY CONSTRUCTION CONTRACT
SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
 - d) "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000. the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

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3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working as such sites or in such facilities.
 - b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractors may have taken.

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- d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreements; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

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- p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specified minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy his requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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ANNUAL EEO-1 REPORT TO JOINT REPORTING COMMITTEE AS REQUIRED AT

41 CFR 60-1.7(a)

Any Contractor having a Federal contract of \$50,000 or more and 50 or more employees is required to file annual compliance reports on Standard Form 100 (EEO-1) with the Joint Reporting Committee in accordance with the instructions provided with the form. The Contractor will provide a copy of such a report to the contracting agency within 30 days after the award of a contract.

The Contractor shall require its subcontractors to file an SF 100 within 30 days after award of the subcontract if (1) it is not exempt from the provisions of these regulations in accordance with 60-1.5, (2) has 50 or more employees, (3) first tier subcontractor, and (4) has a subcontract amounting to \$50,000 or more.

Subcontractors below the first tier which perform construction work at the site of construction shall be required to file such a report if (1) it is not exempt from the provisions of these regulations in accordance with 60-1.5, (2) has 50 or more employees and has a subcontract amounting to \$50,000 or more.

The SF 100 is available at the following address:

Joint Reports Committee
EEOC - Survey Division
1801 "L" Street N.W.
Washington, D.C. 20750

Phone (202) 663-4968

DISADVANTAGED BUSINESS POLICY

I. NOTICE

This proposal contains the special provision entitled "Required Disadvantaged Business Participation." Inclusion of this Special Provision in this contract satisfies the obligations of the Department of Transportation under federal law as implemented by 49 CFR 23 and under the Illinois "Minority and Female Business Enterprise Act."

II. POLICY

It is public policy that the businesses defined in 49 CFR Part 23 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with State or Federal funds. Consequently, the requirements of 49 CFR Part 23 apply to this contract.

III. OBLIGATION

The Contractor agrees to ensure that the businesses defined in 49 CFR Part 23 have the maximum opportunity to participate in the performance of this contract. In this regard, the Contractor shall take all necessary and reasonable steps, in accordance with 49 CFR Part 23, to ensure that the said businesses have the maximum opportunity to compete for and perform portions of this contract. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

The Contractor shall include the above Policy and Obligation statements of this Special Provision in every subcontract, including procurement of materials and leases of equipment.

IV. DBE/WBE CONTRACTOR FINANCE PROGRAM

On contracts where a loan has been obtained through the DBE/WBE Contractor Finance Program, the Contractor shall cooperate with the Department by making all payments due to the DBE/WBE Contractor by means of a two-payee check payable to the Lender (Bank) and the Borrower (DBE/WBE Contractor).

V. BREACH OF CONTRACT

Failure to carry out the requirements set forth above and in the Special Provision shall constitute a breach of contract and may result in termination of the contract or liquidated damages as provided in the special provision.

(Rev. 9/21/92)

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

- I. 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.
- II. 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.
- III. 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 is 22.77% of 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 this 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.
- IV. 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 12.0% 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.

- V. 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.
- VI. 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.

VII. 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. 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 contract. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.

E. DBE as a material supplier:

1. 60% 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.

VIII. 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, Division of Aeronautics, 1 Langhorne Bond Drive, Capital Airport, Springfield, IL 62707-8415 (Telefax: 217-785-4533). 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.

IX. 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 Division of Aeronautics. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Division of Aeronautics, 1 Langhorne Bond Drive, Capital Airport, Springfield, IL 62707-8415. Telephone number (217) 785-8514. Telefax number (217) 785-4533.
- 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 Division of Aeronautics 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 Division and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Division 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 without regard to any retainage withheld by the Department, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the Division's Chief 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.

Certification of Nonsegregated Facilities - as Required by 41 CFR 60-1.8

(Applicable to (1) contracts, (2) subcontracts, and (3) agreements with applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause).

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of his certification is a violation of the Equal opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, 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, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR
CERTIFICATIONS OF NONSEGREGATED FACILITIES

A certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000.00 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C 1001.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
Instructions for Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. 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.
4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. 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 meaning set out in the Definitions and Coverage sections of the rules implementing Executive Order 12540. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. 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.
7. 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 Transaction", provided by the department or agency entering into this covered transaction without modification in all lower covered transactions and in all solicitations for lower covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it 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 (Tel. #).
9. 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 a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 8 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and
Other Responsibility Matters - 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 an Federal department or agency;
 - b. Have not within a three-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 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 (1)(b) of this certification; and
 - d. Have not within a three-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.

CERTIFICATION REGARDING LOBBYING (Applicable to contracts in excess of \$100,000):

Certification for Contracts, Grants, Loans and Cooperative Agreements.

The undersigned bidder certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have paid or will be paid, by or behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any 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.
- (2) 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 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.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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 Section 1352, title 31, U.S. Code. 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.

WORKERS' COMPENSATION INSURANCE

Prior to the execution of his construction contract by the Illinois Department of Transportation, Division of Aeronautics, hereinafter referred to as "Division", the Contractor shall furnish to the Division certificates of insurance covering Workers' Compensation, or satisfactory evidence that this liability is otherwise taken care of in accordance with Section 4.(a) of the "Workers' Compensation Act of the State of Illinois" as amended.

Such insurance, or other means of protection as herein provided, shall be kept in force until all work to be performed under the terms of the contract has been completed and accepted in accordance with the specifications, and it is hereby understood and agreed that the maintenance of such insurance or other protection, until acceptance of the work by the Division is a part of the contract. Failure to maintain such insurance, cancellation by the Industrial Commission of its approval of such other means of protection as might have been elected, or any other act which results in lack of protection under the said "Workers' Compensation Act" may be considered as a breach of the contract.

SPECIAL PROVISION FOR DOMESTIC SOURCE FOR STEEL

Control of Materials: All steel products, as defined by the Illinois Steel Products Procurement Act, incorporated into this project shall be manufactured or produced in the United States and, in addition, shall be domestically fabricated. The Contractor shall obtain from the steel producer and/or fabricator, in addition to the mill analysis, a certification that all steel products meet these domestic source requirements.

CLAUSE TO BE INCLUDED IN ALL SOLICITATIONS,
CONTRACTS, AND SUBCONTRACTS RESULTING FROM PROJECTS FUNDED UNDER THE AIP

The Contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens or nationals of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a Contractor that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list.
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a Contractor or subcontractor who is unable to certify to the above. If the Contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on the said list for use on the project, the Federal Aviation Administration may direct, through the sponsor, cancellation of the contract at no cost to the Government.

Further, the Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The Contractor may rely upon the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The Contractor shall provide immediate written notice to the sponsor if the Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide immediate written notice to the Contractor, if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct, through this sponsor, cancellation of the contract or subcontract for default at no cost to the Government.

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 provision. The knowledge and information of a Contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.