



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

January 7, 2011

SUBJECT: FAP Route 353
Project ACNHF-0353 (020)
Section (12 & 13) WRS-3
Will County
Contract No. 62479
Item No. 136, January 21, 2011 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Replaced the Schedule of Prices.
2. Revised pages iii & iv of the Table of Contents to the Special Provisions.
3. Revised pages 11, 12, 15, 26, 34 - 43 & 45 - 51 of the Special Provisions.
4. Added pages 214 - 237 to the Special Provisions.
5. Revised sheets 12, 13, 14, 26, 34, 88, 89, 92, 406, 415A, 522, 572-574, 591, 704, 707, 710A, 940, 977, 979, 981, 1021, 1031 & 1110 of the Plans.

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Scott E. Stitt, P.E.
Acting Engineer of Design and Environment

A handwritten signature in black ink, appearing to read 'Ted B. Walschleger', with a small 'P.E.' to the right.

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: Diane O'Keefe, Region 1, District 1; Mike Renner; Estimates

TBW:MS:jc

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 62479

State Job # - C-91-219-02
 PPS NBR - 1-71012-0500
 County Name - WILL - -
 Code - 197 - -
 District - 1 - -
 Section Number - (12&13)WRS-3

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
A2C020G3	T-CARYA CORDIF CG 3G	EACH	22.000				
A2C023G3	T-CARYA OVATA CG 3G	EACH	28.000				
A2C035G3	T-JUGLANS NIGRA CG 3G	EACH	15.000				
A2C041G3	T-OSTRYA VIRGIN CG 3G	EACH	16.000				
A2C049G3	T-QUERC ALBA CG 3G	EACH	62.000				
A2C056G3	T-QUERC MACR CG 3G	EACH	15.000				
A2C061G3	T-QUERC RUBRA CG 3G	EACH	15.000				
A2C108G5	T-JUGLANS CINERA CG 5	EACH	15.000				
A2000120	T-ACERX FREM AB 2-1/2	EACH	35.000				
A2000262	T-MORUS RUB RM CL 3'	EACH	5.000				
A2001818	T-ACER SACR GM 2-1/4	EACH	5.000				
A2002020	T-AESCLUSUS GLA 2-1/2	EACH	21.000				
A2002376	T-BETULA NIGRA CL 12'	EACH	9.000				
A2002566	T-CARP CAROL SF 6'	EACH	38.000				
A2002714	T-CARYA OVATA 1-3/4	EACH	1.000				

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A2002920	T-CELTIS OCCID 2-1/2	EACH	90.000				
A2004720	T-GLED TRI-I SM 2-1/2	EACH	72.000				
A2005020	T-GYMNOCLA DIO 2-1/2	EACH	62.000				
A2005316	T-LIQUDAMB STYR 2	EACH	11.000				
A2005416	T-LIRIODEN TUL 2	EACH	7.000				
A2005616	T-OSTRYA VIRG 2	EACH	19.000				
A2006318	T-P SEROTINA 3 GAL	EACH	41.000				
A2006416	T-QUERCUS ALBA 2	EACH	3.000				
A2006516	T-QUERCUS BICOL 2	EACH	46.000				
A2006570	T-QUERCUS BICL CL 8'	EACH	3.000				
A2006616	T-QUERCUS IMBR 2	EACH	25.000				
A2006716	T-QUERCUS MACR 2	EACH	42.000				
A2007620	T-TAXODIUM DIS 2-1/2	EACH	40.000				
A2007870	T-TILIA AMER CL 8'	EACH	11.000				
A2007920	T-TILIA AMER RD 2-1/2	EACH	6.000				

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A2064012	T-QUERC ALBA XR 2-1/2	EACH	23.000				
B2001168	T-CERCIS CAN CL 7'	EACH	43.000				
B2001668	T-CRATAE CRU-I SF 7'	EACH	39.000				
B2001864	T-CRATAE MOLL CL 5'	EACH	13.000				
B2003368	T-MALUS DW CL 7'	EACH	18.000				
B2003416	T-MALUS FLOR TF 2	EACH	8.000				
B2005415	T-PRUN VR SH CRC 5 CF	EACH	18.000				
B2006168	T-SYRING PEK M CL 7'	EACH	28.000				
B2006268	T-SYRING RET CL 7'	EACH	87.000				
C2C00324	S-ARONIA MELAN IB 2'C	EACH	205.000				
C2C01424	S-CORNUS AMOMUM 2'C	EACH	445.000				
C2C01624	S-CORNUS SERICEA 2'C	EACH	65.000				
C2C03424	S-HYDRA ARBOR AN 2'C	EACH	75.000				
C2C05124	S-POTEN FRUT JK 2'C	EACH	80.000				
C2C05225	S-PRUNUS VIRGINIA 3'C	EACH	40.000				

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C2C05815	S-RHUS AROMA GRO 15C	EACH	634.000				
C2C05936	S-RHUS GLABRA 3'C	EACH	65.000				
C2C06212	S-RIBES AMER WBC 12WC	EACH	131.000				
C2C06220	S-RIBES MO GOOSB 12WC	EACH	128.000				
C2C09250	S-RUBUS ODOR PF R 2'C	EACH	35.000				
C2C09624	S-SAMBUCUS CANAD 2'C	EACH	15.000				
C2C11024	S-SYRINGA PAT MK 2'C	EACH	20.000				
C2C11616	S-VIBURN ACERIFOL 2'C	EACH	28.000				
C20005G5	S-C CLANDONENS BMB 5G	EACH	110.000				
C2005348	S-PRUNUS AMER 4'	EACH	40.000				
C2008318	S-ROSA PURP PAV 18	EACH	36.000				
C2012460	S-VIBURN LENT 5'	EACH	42.000				
C2012760	S-VIBURN PRUN 5'	EACH	10.000				
D2001560	E-JUNIP VIRG 5'	EACH	100.000				
D2002272	E-PICEA PUNG GLAU 6'	EACH	3.000				

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D2002484	E-PINUS FLX VWP 7'	EACH	40.000				
D2002986	E-PINUS STROBUS 8'	EACH	14.000				
D2003776	E-THUJA OCC SMARAG 5'	EACH	67.000				
E20200G1	V-PARTHEN QUINQ 1G	EACH	4,073.000				
K0012970	PERENNIAL PLNT BULB T	UNIT	1.000				
K0012990	P PL ORNAMENT T GAL P	UNIT	69.250				
K0013030	P PL WETLND 2X4 DPPLG	UNIT	34.080				
K0013100	P PL WOODLAND T QRT P	UNIT	1.600				
K0026850	PERENNIAL PLANT CARE	SQ YD	2,700.000				
K0029618	WEED CONT BROADLF TRF	GALLON	10.000				
K0029626	WEED CONTROL TEASEL	POUND	1.000				
K0029632	WEED CONT N SEL/N RES	GALLON	2.500				
K0029634	WEED CONTR PRE-EM GRN	POUND	119.000				
K0036120	MULCH PLACEMENT 4	SQ YD	5,733.000				
K1005465	SELECT MOWING STAKES	EACH	8.000				

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XX008438	TR CONT-PROT TEMP DET	EACH	27.000				
X0301423	NOISE AB WALL GRD MT	SQ FT	94,454.000				
X0322959	WEED CONT NS/NR WETLN	GALLON	0.250				
X0322992	COARSE SAND PLACE 4	SQ YD	900.000				
X0324450	SEG CONC BLK WALL, SP	SQ FT	140.000				
X0325034	MH TA 6D W/2 T1FOL RP	EACH	2.000				
X0325405	FILL EX STORM SEWERS	CU YD	1.700				
X0325714	FL BEACON P MTD SP IN	EACH	1.000				
X0325758	MAN TA 8 DIA T8 G	EACH	2.000				
X0326136	FAC & CAB SPL	EACH	7.000				
X0327036	BIKE PATH REM	SQ YD	10,791.000				
X0327037	SPECIAL GRATE NO. 1	EACH	1.000				
X0327038	SPECIAL GRATE NO. 2	EACH	1.000				
X0327039	TEMP ACCESS RD SP	L SUM	1.000				
X0327124	PRECAST CONC RISER	EACH	1.000				

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X2800520	ABOVE GRADE INLT FLTR	EACH	130.000				
X4021000	TEMP ACCESS- PRIV ENT	EACH	35.000				
X4022000	TEMP ACCESS- COM ENT	EACH	56.000				
X4023000	TEMP ACCESS- ROAD	EACH	28.000				
X4403800	MEDIAN SURF REMOVAL	SQ FT	39,823.000				
X4811900	AGGREGATE SHLDS SPL	TON	1,752.000				
X6020088	MAN TA 8 DIA T1F CL	EACH	15.000				
X6020096	MH TA 6D W/2 T1FCL RP	EACH	7.000				
X6020098	MAN TA 9 DIA T1F CL	EACH	6.000				
X6022930	MAN TA 5 DIA SPL F&G	EACH	1.000				
X6025300	CB ADJUST SPL	EACH	5.000				
X6026050	SANITARY MANHOLE ADJ	EACH	47.000				
X6026200	INLETS ADJUST SPL	EACH	10.000				
X6041810	GRATES T3 SPL	EACH	1.000				
X6062100	STAB MED SURF 12	SQ YD	834.000				

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X6640200	TEMP CH LK FENCE	FOOT	8,416.000				
X6700410	ENGR FLD OFF A SPL	CAL MO	24.000				
X7010218	TRAF CONT & PROT SPL	EACH	1.000				
X7030104	WET TEM PM TAPE T3 4	FOOT	326,305.000				
X7030106	WET TEM PM TAPE T3 6	FOOT	20,122.000				
X7030112	WET TEM PM TAPE T3 12	FOOT	3,868.000				
X7030120	WET TEM PM TAP T3 L&S	SQ FT	3,920.000				
X7030124	WET TEM PM TAPE T3 24	FOOT	1,577.000				
X8050015	SERV INSTALL POLE MT	EACH	7.000				
X8620020	UNINTER POWER SUPPLY	EACH	7.000				
X8710020	FOCC62.5/125 MM12SM12	FOOT	25,338.000				
X8730027	ELCBL C GROUND 6 1C	FOOT	5,602.000				
X8730250	ELCBL C 20 3C TW SH	FOOT	3,019.000				
Z0001050	AGG SUBGRADE 12	SQ YD	16,741.000				
Z0001055	AGG SUBGRADE 12 SPL	SQ YD	223,079.000				

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Z0007430	TEMP SIDEWALK	SQ FT	359.000				
Z0010555	DITCH CLEANING	FOOT	136.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018804	TEMP DRAINAGE SYS N1	FOOT	25.000				
Z0018805	TEMP DRAINAGE SYS N2	FOOT	44.000				
Z0018806	TEMP DRAINAGE SYS N3	FOOT	75.000				
Z0026407	TEMP SHT PILING	SQ FT	5,362.000				
Z0028462	GEOTEX RETAIN WALL	SQ FT	340.000				
Z0030150	IMPACT ATTEN NRD TL3	EACH	15.000				
Z0030350	IMP ATTN REL NRD TL3	EACH	14.000				
Z0030850	TEMP INFO SIGNING	SQ FT	468.000				
Z0033046	RE-OPTIMIZE SIG SYS 2	EACH	2.000				
Z0033060	PREFORM DETECT LOOP	FOOT	6,395.000				
Z0033090	ELCBL C TRACER 14 1C	FOOT	25,177.000				
Z0042002	POROUS GRAN EMB SUBGR	CU YD	8,402.000				

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Z0056608	STORM SEW WM REQ 12	FOOT	633.000				
Z0056610	STORM SEW WM REQ 15	FOOT	357.000				
Z0056612	STORM SEW WM REQ 18	FOOT	289.000				
Z0056614	STORM SEW WM REQ 21	FOOT	343.000				
Z0056616	STORM SEW WM REQ 24	FOOT	96.000				
Z0056620	STORM SEW WM REQ 30	FOOT	48.000				
Z0056622	STORM SEW WM REQ 36	FOOT	281.000				
Z0056624	STORM SEW WM REQ 42	FOOT	32.000				
Z0056628	STORM SEW WM REQ 54	FOOT	64.000				
Z0062456	TEMP PAVEMENT	SQ YD	44,233.000				
Z0064600	SELECTIVE CLEARING	ACRE	1.250				
Z0073002	TEMP SOIL RETEN SYSTM	SQ FT	1,568.000				
Z0073345	SLEEPER SLAB	FOOT	576.000				
Z0073510	TEMP TR SIGNAL TIMING	EACH	4.000				
Z0076600	TRAINEES	HOUR	5,000.000		0.800		4,000.000

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20100110	TREE REMOV 6-15	UNIT	7,448.000				
20100210	TREE REMOV OVER 15	UNIT	2,050.000				
20101000	TEMPORARY FENCE	FOOT	200.000				
20101100	TREE TRUNK PROTECTION	EACH	2.000				
20101200	TREE ROOT PRUNING	EACH	2.000				
20200100	EARTH EXCAVATION	CU YD	148,602.000				
20201200	REM & DISP UNS MATL	CU YD	82,156.000				
20400800	FURNISHED EXCAVATION	CU YD	49,371.000				
20800150	TRENCH BACKFILL	CU YD	30,356.000				
21001000	GEOTECH FAB F/GR STAB	SQ YD	2,608.000				
21101615	TOPSOIL F & P 4	SQ YD	97,889.000				
21101630	TOPSOIL F & P 8	SQ YD	64,056.000				
21101685	TOPSOIL F & P 24	SQ YD	14,671.000				
21101815	COMPOST F & P 4	SQ YD	42,311.000				
25000100	SEEDING CL 1	ACRE	2.250				

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25000210	SEEDING CL 2A	ACRE	11.000				
25000310	SEEDING CL 4	ACRE	20.750				
25000314	SEEDING CL 4B	ACRE	0.250				
25000322	SEEDING CL 5A	ACRE	8.750				
25000400	NITROGEN FERT NUTR	POUND	1,860.000				
25000500	PHOSPHORUS FERT NUTR	POUND	1,860.000				
25000600	POTASSIUM FERT NUTR	POUND	1,860.000				
25100630	EROSION CONTR BLANKET	SQ YD	513,425.000				
25200110	SODDING SALT TOLERANT	SQ YD	55,483.000				
25200200	SUPPLE WATERING	UNIT	1,440.000				
28000250	TEMP EROS CONTR SEED	POUND	7,415.000				
28000305	TEMP DITCH CHECKS	FOOT	6,220.000				
28000400	PERIMETER EROS BAR	FOOT	21,351.000				
28000510	INLET FILTERS	EACH	900.000				
28100105	STONE RIPRAP CL A3	SQ YD	551.000				

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28100113	STONE RIPRAP CL A7	SQ YD	269.000				
28100205	STONE RIPRAP CL A3	TON	90.000				
28100207	STONE RIPRAP CL A4	TON	390.000				
28100209	STONE RIPRAP CL A5	TON	465.000				
28100211	STONE RIPRAP CL A6	TON	250.000				
28200200	FILTER FABRIC	SQ YD	1,654.000				
31101200	SUB GRAN MAT B 4	SQ YD	306.000				
31101400	SUB GRAN MAT B 6	SQ YD	834.000				
31200502	STAB SUBBASE HMA 4.5	SQ YD	223,079.000				
35101500	AGG BASE CSE B	CU YD	775.000				
35101800	AGG BASE CSE B 6	SQ YD	22,459.000				
35501308	HMA BASE CSE 6	SQ YD	3,277.000				
35501316	HMA BASE CSE 8	SQ YD	5,169.000				
35600704	HMA BC WID 7	SQ YD	156.000				
40600200	BIT MATLS PR CT	TON	106.000				

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40600625	LEV BIND MM N50	TON	18.000				
40600895	CONSTRUC TEST STRIP	EACH	1.000				
40600982	HMA SURF REM BUTT JT	SQ YD	53.000				
40601005	HMA REPL OVER PATCH	TON	117.000				
40603080	HMA BC IL-19.0 N50	TON	771.000				
40603310	HMA SC "C" N50	TON	5,631.000				
40603335	HMA SC "D" N50	TON	1,010.000				
40701861	HMA PAVT FD 9	SQ YD	8,951.000				
40701956	HMA PAVT FD 13 3/4	SQ YD	499.000				
40800030	AGG PR CT	TON	30.000				
42000416	PCC PVT 9 3/4 JOINTD	SQ YD	193,039.000				
42001300	PROTECTIVE COAT	SQ YD	229,336.000				
42300400	PCC DRIVEWAY PAVT 8	SQ YD	90.000				
42400200	PC CONC SIDEWALK 5	SQ FT	115,670.000				
42400800	DETECTABLE WARNINGS	SQ FT	2,089.000				

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44000100	PAVEMENT REM	SQ YD	211,649.000				
44000200	DRIVE PAVEMENT REM	SQ YD	16,740.000				
44000300	CURB REM	FOOT	2,040.000				
44000400	GUTTER REM	FOOT	128.000				
44000500	COMB CURB GUTTER REM	FOOT	20,750.000				
44000600	SIDEWALK REM	SQ FT	34,041.000				
44002216	HMA RM OV PATCH 4	SQ YD	521.000				
44004250	PAVED SHLD REMOVAL	SQ YD	2,361.000				
44201771	CL D PATCH T4 10	SQ YD	66.000				
44201796	CL D PATCH T4 12	SQ YD	297.000				
48101500	AGGREGATE SHLDS B 6	SQ YD	1,822.000				
50100400	REM EXIST STRUCT N2	EACH	1.000				
50100500	REM EXIST STRUCT N3	EACH	1.000				
50100600	REM EXIST STRUCT N4	EACH	1.000				
50100700	REM EXIST STRUCT N5	EACH	1.000				

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50100800	REM EXIST STRUCT N6	EACH	1.000				
50100900	REM EXIST STRUCT N7	EACH	1.000				
50101000	REM EXIST STRUCT N8	EACH	1.000				
50101100	REM EXIST STRUCT N9	EACH	1.000				
50101200	REM EXIST STRUCT N10	EACH	1.000				
50101300	REM EXIST STRUCT N11	EACH	1.000				
50105220	PIPE CULVERT REMOV	FOOT	3,174.000				
50800105	REINFORCEMENT BARS	POUND	70,563.000				
50901720	BICYCLE RAILING	FOOT	420.000				
50901750	PARAPET RAILING	FOOT	64.000				
51500100	NAME PLATES	EACH	9.000				
54002020	EXPAN BOLTS 3/4	EACH	16.000				
54003000	CONC BOX CUL	CU YD	383.500				
54010302	PCBC 3X2	FOOT	291.000				
54010303	PCBC 3X3	FOOT	361.000				

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54010402	PCBC 4X2	FOOT	293.000				
54010403	PCBC 4X3	FOOT	120.500				
54010705	PCBC 7X5	FOOT	126.000				
54010804	PCBC 8X4	FOOT	65.000				
54011004	PCBC 10X4	FOOT	266.000				
54011210	PCBC 12X10	FOOT	210.000				
542A0229	P CUL CL A 1 24	FOOT	251.000				
542A0235	P CUL CL A 1 30	FOOT	126.000				
542A1069	P CUL CL A 2 24	FOOT	458.000				
542A1072	P CUL CL A 2 27	FOOT	162.000				
542A1087	P CUL CL A 2 42	FOOT	115.000				
542A1099	P CUL CL A 2 54	FOOT	123.000				
542D0220	P CUL CL D 1 15	FOOT	90.000				
542D0223	P CUL CL D 1 18	FOOT	135.000				
542D0229	P CUL CL D 1 24	FOOT	159.000				

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542D1060	P CUL CL D 2 15	FOOT	159.000				
5421A024	P CUL CL A 1 24 TEMP	FOOT	44.000				
5421A030	P CUL CL A 1 30 TEMP	FOOT	5.000				
5421A036	P CUL CL A 1 36 TEMP	FOOT	58.000				
5421D015	P CUL CL D 1 15 TEMP	FOOT	114.000				
5421D018	P CUL CL D 1 18 TEMP	FOOT	107.000				
54213657	PRC FLAR END SEC 12	EACH	2.000				
54213660	PRC FLAR END SEC 15	EACH	34.000				
54213663	PRC FLAR END SEC 18	EACH	12.000				
54213666	PRC FLAR END SEC 21	EACH	4.000				
54213669	PRC FLAR END SEC 24	EACH	21.000				
54213672	PRC FLAR END SEC 27	EACH	5.000				
54213675	PRC FLAR END SEC 30	EACH	6.000				
54213681	PRC FLAR END SEC 36	EACH	1.000				
54213687	PRC FLAR END SEC 42	EACH	3.000				

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54213699	PRC FLAR END SEC 54	EACH	2.000				
54213705	PRC FLAR END SEC 60	EACH	1.000				
54247130	GRATING-C FL END S 24	EACH	21.000				
54247140	GRATING-C FL END S 27	EACH	5.000				
54247150	GRATING-C FL END S 30	EACH	6.000				
54247170	GRATING-C FL END S 36	EACH	1.000				
54247180	GRATING-C FL END S 42	EACH	3.000				
54247200	GRATING-C FL END S 54	EACH	2.000				
54247210	GRATING-C FL END S 60	EACH	1.000				
550A0050	STORM SEW CL A 1 12	FOOT	1,766.000				
550A0070	STORM SEW CL A 1 15	FOOT	1,087.000				
550A0090	STORM SEW CL A 1 18	FOOT	452.000				
550A0110	STORM SEW CL A 1 21	FOOT	446.000				
550A0120	STORM SEW CL A 1 24	FOOT	1,535.000				
550A0130	STORM SEW CL A 1 27	FOOT	296.000				

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550A0140	STORM SEW CL A 1 30	FOOT	307.000				
550A0150	STORM SEW CL A 1 33	FOOT	390.000				
550A0160	STORM SEW CL A 1 36	FOOT	21.000				
550A0180	STORM SEW CL A 1 42	FOOT	395.000				
550A0210	STORM SEW CL A 1 60	FOOT	18.000				
550A0240	STORM SEW CL A 1 78	FOOT	18.000				
550A0340	STORM SEW CL A 2 12	FOOT	23,594.000				
550A0360	STORM SEW CL A 2 15	FOOT	5,533.000				
550A0380	STORM SEW CL A 2 18	FOOT	2,625.000				
550A0400	STORM SEW CL A 2 21	FOOT	981.000				
550A0410	STORM SEW CL A 2 24	FOOT	1,499.000				
550A0420	STORM SEW CL A 2 27	FOOT	2,048.000				
550A0430	STORM SEW CL A 2 30	FOOT	1,020.000				
550A0450	STORM SEW CL A 2 36	FOOT	1,714.000				
550A0470	STORM SEW CL A 2 42	FOOT	316.000				

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550A0480	STORM SEW CL A 2 48	FOOT	272.000				
550A0490	STORM SEW CL A 2 54	FOOT	1,644.000				
550A0500	STORM SEW CL A 2 60	FOOT	368.000				
550A0530	STORM SEW CL A 2 78	FOOT	1,066.000				
550A0660	STORM SEW CL A 3 15	FOOT	10.000				
550A0730	STORM SEW CL A 3 30	FOOT	109.000				
550A0780	STORM SEW CL A 3 48	FOOT	128.000				
550A0790	STORM SEW CL A 3 54	FOOT	552.000				
550A1090	STORM SEW CL A 4 54	FOOT	725.000				
550A4300	SS CL A 1 EQRS 30	FOOT	17.000				
550B0050	STORM SEW CL B 1 12	FOOT	247.000				
550B0070	STORM SEW CL B 1 15	FOOT	125.000				
550B0090	STORM SEW CL B 1 18	FOOT	158.000				
550B0120	STORM SEW CL B 1 24	FOOT	352.000				
550B0140	STORM SEW CL B 1 30	FOOT	35.000				

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550B0190	STORM SEW CL B 1 48	FOOT	35.000				
550B0410	STORM SEW CL B 2 24	FOOT	39.000				
55100500	STORM SEWER REM 12	FOOT	4,495.000				
55100700	STORM SEWER REM 15	FOOT	2,928.000				
55100900	STORM SEWER REM 18	FOOT	1,878.000				
55101200	STORM SEWER REM 24	FOOT	2,518.000				
55101400	STORM SEWER REM 30	FOOT	167.000				
55101600	STORM SEWER REM 36	FOOT	119.000				
55101900	STORM SEWER REM 48	FOOT	35.000				
56400100	FIRE HYDNITS TO BE MVD	EACH	57.000				
60107600	PIPE UNDERDRAINS 4	FOOT	6,364.000				
60200105	CB TA 4 DIA T1F OL	EACH	1.000				
60200805	CB TA 4 DIA T8G	EACH	20.000				
60201340	CB TA 4 DIA T24F&G	EACH	173.000				
60204505	CB TA 5 DIA T8G	EACH	5.000				

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60205040	CB TA 5 DIA T24F&G	EACH	8.000				
60206705	CATCH BASINS TB	EACH	3.000				
60206905	CB TC T1F OL	EACH	2.000				
60207605	CB TC T8G	EACH	64.000				
60207915	CB TC T11V F&G	EACH	56.000				
60208240	CB TC T24F&G	EACH	211.000				
60218300	MAN TA 4 DIA T1F OL	EACH	1.000				
60218400	MAN TA 4 DIA T1F CL	EACH	102.000				
60219000	MAN TA 4 DIA T8G	EACH	3.000				
60221000	MAN TA 5 DIA T1F OL	EACH	8.000				
60221100	MAN TA 5 DIA T1F CL	EACH	86.000				
60221700	MAN TA 5 DIA T8G	EACH	7.000				
60223800	MAN TA 6 DIA T1F CL	EACH	7.000				
60224005	MAN TA 6 DIA T8G	EACH	4.000				
60224446	MAN TA 7 DIA T1F CL	EACH	5.000				

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60236200	INLETS TA T8G	EACH	2.000				
60240210	INLETS TB T1F OL	EACH	2.000				
60240215	INLETS TB T1F CL	EACH	1.000				
60240301	INLETS TB T8G	EACH	1.000				
60240305	INLETS TB T10F&G	EACH	4.000				
60240312	INLETS TB T11V F&G	EACH	78.000				
60240328	INLETS TB T24F&G	EACH	291.000				
60240390	INLETS TB W/SPL GRATE	EACH	2.000				
60250200	CB ADJUST	EACH	27.000				
60251520	CB ADJ NEW T11V F&G	EACH	2.000				
60255500	MAN ADJUST	EACH	30.000				
60257900	MAN RECONST	EACH	4.000				
60260050	SAN MAN RECONST	EACH	2.000				
60260100	INLETS ADJUST	EACH	1.000				
60261320	INLET ADJ NEW T11VF&G	EACH	10.000				

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60265700	VV ADJUST	EACH	38.000				
60402210	GRATES T8	EACH	1.000				
60406000	FR & LIDS T1 OL	EACH	2.000				
60406100	FR & LIDS T1 CL	EACH	7.000				
60500040	REMOV MANHOLES	EACH	36.000				
60500050	REMOV CATCH BAS	EACH	139.000				
60500060	REMOV INLETS	EACH	15.000				
60600095	CLASS SI CONC OUTLET	CU YD	93.000				
60600605	CONC CURB TB	FOOT	3,373.000				
60603800	COMB CC&G TB6.12	FOOT	634.000				
60605000	COMB CC&G TB6.24	FOOT	77,056.000				
60614600	PAVED DITCH SPEC	FOOT	950.000				
60618300	CONC MEDIAN SURF 4	SQ FT	5,196.000				
60619200	CONC MED TSB6.06	SQ FT	108.000				
60619600	CONC MED TSB6.12	SQ FT	710.000				

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60620000	CONC MED TSB6.24	SQ FT	771.000				
60620200	CONC MED TSB6.24 MOD	SQ FT	69,269.000				
60624600	CORRUGATED MED	SQ FT	2,432.000				
63200310	GUARDRAIL REMOV	FOOT	1,826.000				
63301210	REM RE-E SPBGR TY A	FOOT	25.000				
66900200	NON SPL WASTE DISPOSL	CU YD	335.000				
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				
66900530	SOIL DISPOSAL ANALY	EACH	5.000				
66901000	BACKFILL PLUGS	CU YD	7.000				
67100100	MOBILIZATION	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	700.000				
70106800	CHANGEABLE MESSAGE SN	CAL MO	108.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	128,220.000				
70400100	TEMP CONC BARRIER	FOOT	2,175.000				
70400200	REL TEMP CONC BARRIER	FOOT	2,625.000				

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72000100	SIGN PANEL T1	SQ FT	2,157.250				
72000200	SIGN PANEL T2	SQ FT	910.500				
72400200	REMOV SIN PAN ASSY TB	EACH	64.000				
72400710	RELOC SIGN PANEL T1	SQ FT	18.000				
72800100	TELES STL SIN SUPPORT	FOOT	932.000				
72900100	METAL POST TY A	FOOT	960.000				
73000100	WOOD SIN SUPPORT	FOOT	3,946.000				
78000100	THPL PVT MK LTR & SYM	SQ FT	1,164.800				
78000200	THPL PVT MK LINE 4	FOOT	14,724.000				
78000400	THPL PVT MK LINE 6	FOOT	6,654.000				
78000600	THPL PVT MK LINE 12	FOOT	1,512.000				
78000650	THPL PVT MK LINE 24	FOOT	183.000				
78008300	POLYUREA PM T2 LTR-SY	SQ FT	3,296.800				
78008310	POLYUREA PM T2 LN 4	FOOT	26,862.000				
78008330	POLYUREA PM T2 LN 6	FOOT	28,494.000				

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78008350	POLYUREA PM T2 LN 12	FOOT	13,588.000				
78008370	POLYUREA PM T2 LN 24	FOOT	2,022.000				
78100100	RAISED REFL PAVT MKR	EACH	2,239.000				
78100200	TEMP RAIS REF PVT MKR	EACH	131.000				
78100300	REPLACEMENT REFLECTOR	EACH	138.000				
78200530	BAR WALL MKR TYPE C	EACH	348.000				
81000600	CON T 2 GALVS	FOOT	21,240.000				
81000700	CON T 2 1/2 GALVS	FOOT	31.000				
81000800	CON T 3 GALVS	FOOT	301.000				
81001000	CON T 4 GALVS	FOOT	371.000				
81018500	CON P 2 GALVS	FOOT	4,665.000				
81018600	CON P 2 1/2 GALVS	FOOT	183.000				
81018700	CON P 3 GALVS	FOOT	131.000				
81018900	CON P 4 GALVS	FOOT	2,923.000				
81400100	HANDHOLE	EACH	60.000				

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81400200	HD HANDHOLE	EACH	25.000				
81400300	DBL HANDHOLE	EACH	14.000				
81900200	TR & BKFIL F ELECT WK	FOOT	21,643.000				
* 85000200	MAIN EX TR SIG INSTAL	EACH	2.000				
* 85700205	FAC T4 CAB SPL	EACH	2.000				
86400100	TRANSCEIVER - FIB OPT	EACH	7.000				
87301215	ELCBL C SIGNAL 14 2C	FOOT	7,166.000				
87301225	ELCBL C SIGNAL 14 3C	FOOT	10,736.000				
87301245	ELCBL C SIGNAL 14 5C	FOOT	9,903.000				
87301255	ELCBL C SIGNAL 14 7C	FOOT	12,577.000				
87301305	ELCBL C LEAD 14 1PR	FOOT	18,986.000				
87301805	ELCBL C SERV 6 2C	FOOT	489.000				
87502440	TS POST GALVS 10	EACH	1.000				
87502480	TS POST GALVS 14	EACH	1.000				
87502500	TS POST GALVS 16	EACH	7.000				

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87502520	TS POST GALVS 18	EACH	1.000				
87700160	S MAA & P 24	EACH	2.000				
87700170	S MAA & P 26	EACH	1.000				
87700230	S MAA & P 38	EACH	2.000				
87700260	S MAA & P 44	EACH	1.000				
87700270	S MAA & P 46	EACH	4.000				
87700280	S MAA & P 48	EACH	3.000				
87700300	S MAA & P 52	EACH	3.000				
87700340	S MAA & P 58	EACH	1.000				
87700400	S MAA & P 60	EACH	1.000				
87700404	S MAA & P 62	EACH	3.000				
87702162	S MAA & P DMA 14 & 52	EACH	1.000				
87702289	S MAA & P DMA 22 & 60	EACH	1.000				
87702587	S MAA & P DMA 38 & 22	EACH	1.000				
87702738	S MAA & P DMA 50 & 18	EACH	1.000				

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* DELETED							
* 87702776	S MAA & P DMA 56 & 14	EACH	1.000				
87702782	S MAA & P DMA 52 & 26	EACH	1.000				
87703214	S MAA & P DMA 60 & 14	EACH	1.000				
87800100	CONC FDN TY A	FOOT	40.000				
87800150	CONC FDN TY C	FOOT	28.000				
87800400	CONC FDN TY E 30D	FOOT	30.000				
87800415	CONC FDN TY E 36D	FOOT	231.000				
87800420	CONC FDN TY E 42D	FOOT	168.000				
87900200	DRILL EX HANDHOLE	EACH	4.000				
88030020	SH LED 1F 3S MAM	EACH	39.000				
88030050	SH LED 1F 3S BM	EACH	4.000				
88030080	SH LED 1F 4S MAM	EACH	3.000				
88030100	SH LED 1F 5S BM	EACH	13.000				
88030110	SH LED 1F 5S MAM	EACH	34.000				

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88030220	SH LED 2F 5S BM	EACH	2.000				
88030230	SH LED 2F 1-3 1-4 BM	EACH	1.000				
88030250	SH LED 2F 1-4 1-5 BM	EACH	1.000				
88030310	SH LED 3F 3S BM	EACH	1.000				
88102717	PED SH LED 1F BM CDT	EACH	14.000				
88102747	PED SH LED 2F BM CDT	EACH	14.000				
88200210	TS BACKPLATE LOU ALUM	EACH	76.000				
* 88500100	INDUCTIVE LOOP DETECT	EACH	91.000				
88700200	LIGHT DETECTOR	EACH	12.000				
88700300	LIGHT DETECTOR AMP	EACH	5.000				
88800100	PED PUSH-BUTTON	EACH	42.000				
89000100	TEMP TR SIG INSTALL	EACH	4.000				
89501400	REL EM VEH PR SYS D U	EACH	4.000				
* 89501410	REL EM VEH PR SYS P U	EACH	4.000				
89501510	RELOC EX FL BEACON	EACH	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 62479

State Job # - C-91-219-02
 PPS NBR - 1-71012-0500
 County Name - WILL - -
 Code - 197 - -
 District - 1 - -
 Section Number - (12&13)WRS-3

Project Number
 ACNHF-0353/020/

Route
 FAP 353

* REVISED : JANUARY 6, 2011

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
* 89502375	REMOV EX TS EQUIP	EACH	6.000				
89502380	REMOV EX HANDHOLE	EACH	33.000				
89502385	REMOV EX CONC FDN	EACH	24.000				

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Materials.

Materials used for grates shall be structural steel, AASHTO M270 Grade 36 as per Article 1006.04 of the Specifications. All structural steel shall be galvanized after fabrication. Field welding is prohibited.

Specifications.

Shop drawings and fabrication shall comply with the provisions of Section 505 of the Specifications except for the Method of Measurement and Basis of Payment. Galvanization shall conform to the requirements of AASHTO M111. All Welding materials shall be in accordance with current American Welding Society (AWS) Specifications.

Method of Measurement.

This item shall be measured per each SPECIAL GRATE NO. 1 installed in accordance with the plans or as ordered by the Engineer.

Basis of Payment.

This item will be paid for at the contract unit price for each SPECIAL GRATE NO. 1 as shown on the plans, which price shall include all labor, materials, shop drawings and equipment to furnish, fabricate and install SPECIAL GRATE NO. 1 in accordance with the plans.

SPECIAL GRATE NO. 2

Description.

This work shall consist of furnishing all materials and labor, fabrication, shop drawings and installation of SPECIAL GRATE NO. 2.

Materials.

Materials used for grates shall be structural steel, AASHTO M270 Grade 36 as per Article 1006.04 of the Specifications. All structural steel shall be galvanized after fabrication. Field welding is prohibited.

Specifications.

Shop drawings and fabrication shall comply with the provisions of Section 505 of the Specifications except for the Method of Measurement and Basis of Payment. Galvanization shall conform to the requirements of AASHTO M111. All Welding materials shall be in accordance with current American Welding Society (AWS) Specifications.

Method of Measurement.

This item shall be measured per each SPECIAL GRATE NO. 2 Installed in accordance with the plans or as ordered by the Engineer.

Basis of Payment.

This item will be paid for at the contract unit price for each SPECIAL GRATE NO. 2 as shown on the plans, which price shall include all labor, materials, shop drawings and equipment to furnish fabricate and install SPECIAL GRATE NO. 2 in accordance with the plans.

GRATES, TYPE 3 (SPECIAL)

Description. This work shall consist of furnishing all materials and labor, fabrication, shop drawings and installation of GRATES, TYPE 3 (SPECIAL).

Revised 01/07/2011

Materials. Materials used for grates shall be structural steel, AASHTO M270 Grade 36 as per Article 1006.04 of the Specifications. All structural steel shall be galvanized after fabrication. Field welding is prohibited.

Specifications. Shop drawings and fabrication shall comply with the provisions of Section 505 of the Specifications except for the Method of Measurement and Basis of Payment. Galvanization shall conform to the requirements of AASHTO M111. All Welding materials shall be in accordance with current American Welding Society (AWS) Specifications.

Method of Measurement. This item shall be measured per each GRATES, TYPE 3 (SPECIAL) Installed in accordance with the plans or as ordered by the Engineer.

Basis of Payment. This item will be paid for at the contract unit price for each GRATES, TYPE 3 (SPECIAL) As shown on the plans, which price shall include all labor, materials, shop drawings and equipment to furnish, fabricate and install GRATES, TYPE 3 (SPECIAL) in accordance with the plans.

TEMPORARY DRAINAGE SYSTEM NO. 1

Description.

This work shall consist of furnishing all equipment, materials, and labor necessary for the installation and removal of TEMPORARY DRAINAGE SYSTEM NO. 1.

Materials.

Materials used for temporary pipe culvert shall be Corrugated Steel Pipe, AASHTO M 36 as per Article 1006.01 of the Specifications or Corrugated Aluminum Alloy Pipe, AASHTO M 196 as per Article 1006.3 of the Specifications.

Specifications.

TEMPORARY DRAINAGE SYSTEM NO.1 shall comply with the provisions of Section 542.09 of the Specifications except for the Method of Measurement and Basis of Payment.

Method of Measurement.

This item shall be measured per foot TEMPORARY DRAINAGE SYSTEM NO. 1 installed in accordance with the plans or as ordered by the Engineer.

Basis of Payment.

This item will be paid for at the contract unit price per foot for TEMPORARY DRAINAGE SYSTEM NO. 1 as shown on the plans, which price shall include all equipment, labor, materials, installation, and removal of TEMPORARY DRAINAGE SYSTEM NO. 1 in accordance with the plans.

TEMPORARY DRAINAGE SYSTEM NO. 2

Description.

This work shall consist of furnishing all equipment, materials, and labor necessary for the installation and removal of TEMPORARY DRAINAGE SYSTEM NO. 2.

Revised 01/07/2011

After paving US 30 he will pave the side roads as soon as practical to meet the requirements of the EXTENDED LIFE CONCRETE PAVEMENT (30 YEAR) (DISTRINCT ONE) special provision.

BICYCLE RAILING

Description. Bicycle railing shall be furnished and erected in accordance with section 509 of the standard specifications except as detailed in the bicycle railing detail included in the contract plan drawings.

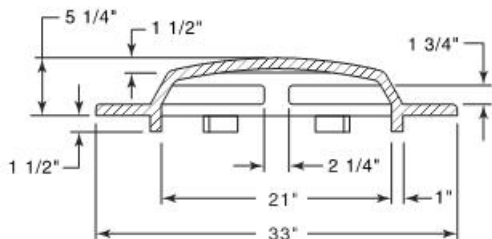
Method Of Measurement. Bicycle railing will be measured in feet. the length paid for will be the overall length along the top longitudinal railing member through all posts and gaps.

Basis Of Payment. Bicycle railing of the type specified will be paid for at the contract unit price per foot for bicycle railing.

CATCH BASIN, MANHOLE, AND INLET WITH SPECIAL GRATE

This work shall consist of constructing catch basins, manholes, or inlets with special grates in accordance with Section 602 of the Standard Specifications.

The special grate shall be constructed of Gray Iron or Ductile Iron with the following dimensions:



The minimum opening area of the grate shall be 2 square feet and the minimum weir length shall be 6 feet.

When catch basins or inlets are specified, this work shall be paid for at the contract unit price per each for CATCH BASINS or INLETS, of the type or type and diameter specified, WITH SPECIAL GRATE.

When manholes are specified, this work shall be paid for at the contract unit price per each for MANHOLES, of the type and diameter specified, WITH SPECIAL FRAME AND GRATE.

Revise 01/07/2011

This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

Method of Measurement: All traffic control (except traffic control pavement marking) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis. Traffic control pavement markings will be measured per foot (meter).

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

SHORT TERM PAVEMENT MARKING, TEMPORARY PAVEMENT MARKING and PAVEMENT MARKING TAPE TYPE III will be paid for separately.

TRAFFIC CONTROL PLAN

Effective: September 30, 1985

Revised: January 1, 2007

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

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

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

STANDARDS:

701001	701006	701011	701201	701206	701301	701306
	701311	701326	701701	701801	701901	

DETAILS:

Traffic Control and Protection for Side Roads, Intersections, And Driveways (TC-10)
Typical Applications Raised Reflective Pavement Markers (Snow Plow Resistant) (TC-11)
District One Typical Pavement Markings (TC-13)
Traffic Control and Protection at Turn Bays (To Remain Open to Traffic) (TC-14)
Pavement Marking Letters and Symbols for Traffic Staging (TC-16)
Typical Marking for Closing State Highways (TC-21)
Arterial Road Information Signing (TC-22)
Driveway Entrance Signing (TC-26)

SPECIAL PROVISIONS:

TEMPORARY ACCESS ROAD (SPECIAL)
TYPE III TEMPORARY TAPE FOR WET CONDITIONS
DETOUR AND PAVING OPERATIONS
MAINTENANCE OF ROADWAYS
AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS
WORK ZONE TRAFFIC CONTROL (LUMP SUM PAYMENT)
TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR
TEMPORARY INFORMATION SIGNING
FLAGGER AT SIDE ROADS AND ENTRANCES
IMPACT ATTENUATORS, TEMPORARY
PERSONAL PROTECTIVE EQUIPMENT
REFLECTIVE SHEETING ON CHANNELIZING DEVICES

Revised 01/07/2011

(b) Quality. For surface courses and binder courses when used as surface course, the coarse aggregate shall be Class B quality or better. For Class A (seal or cover coat), other binder courses, and surface course IL-9.5L (Low ESAL), the coarse aggregate shall be Class C quality or better. For All Other courses, the coarse aggregate shall be Class D quality or better.

(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-25.0 IL-19.0 IL-12.5 IL-9.5	CA 7 ^{1/} or CA 8 ^{1/} CA 11 ^{1/} CA 16 and/or CA 13 CA 16
HMA Low ESAL	IL-19.0L IL-9.5L	CA 11 ^{1/} CA 16
HMA All Other	Stabilized Subbase or Shoulders	CA 6 ^{2/} , CA 10, or CA 12

1/ CA 16 or CA 13 may be blended with the gradations listed.

2/ CA 6 will not be permitted in the top lift of shoulders.

CONCRETE NOISE ABATEMENT WALLS (ABSORPTIVE AND REFLECTIVE) (DIST 1)

Effective: September 5, 2008

Revised: July 25, 2010

This work shall consist of furnishing the design, shop drawings, materials, post anchorage, and construction of noise abatement walls (noise walls) according to these special provisions, the contract plans and and/or as directed by the Engineer.

General. The noise abatement walls shall consist of panels spanning between vertical posts supported by concrete foundations (ground mounted) or attached to/supported by another structure (structure mounted) as shown on the plans. The design, material, fabrication and construction shall comply with this Special Provision and the requirements specified by the noise wall supplier selected by the Contractor for use on this project. The walls shall have no omissions or gap except as detailed.

The Contractor shall verify the locations for proposed ground mounted wall for conflicts and realign or redesign the wall to avoid any conflicts. The Contractor shall inform the Engineer in writing of any conflicts before realigning or redesigning the wall.

Post spacing shall avoid existing and proposed underground utilities and storm sewers.

Wall components shall be fabricated and erected to produce a precast concrete reflective noisewall system and/or an absorptive noise reduction system at the locations indicated herein.

Revised 01/07/2011

The noise reduction system shall satisfy the acoustical requirements stated in these special provisions. An absorptive noise reduction system may be used as an alternate to a reflective noise wall system. Wooden walls will not be allowed as substitutes.

All appurtenances behind, in front of, under, over, mounted upon, or passing through, such as drainage structures, fire hydrant access, highway signage, emergency access, utilities, and storm sewers shall be accounted for in design of the wall.

Submittals. The Contractor shall prepare a wall and foundation design submittal and submit to the Engineer; the Department's Bureau of Bridges and Structures will review the submittal for approval. The noise walls shall be designed and constructed to extend to the minimum lines, grades and dimensions of the wall envelope, with no omissions or gaps, as shown on the contract plans and as directed by the Engineer.

Complete design calculations for wall panels, posts, foundations, and all connections and shop drawings shall be submitted to the Department for review and approval no later than 90 days prior to beginning construction of the wall. The time required for the preparation and review of these submittals shall be charged to the allowable contract time. Delays caused by untimely submittals or insufficient data will not be considered justifications for any time extensions. No additional compensation will be made for any additional material, equipment or other items found necessary to comply with the project specifications as a result of the Engineer's review. The Contractor will be required to submit the necessary shop drawings. All submittals shall be signed and sealed by a Structural Engineer licensed in Illinois and include, but not be limited to, the following items:

Submittals shall include all details, dimensions, quantities and cross sections necessary for the construction of the noise abatement walls and will include but not be limited to:

- (1) A plan view of the wall indicating the stations and offsets required to locate the drilled shaft foundations. The proposed foundation diameter(s) and spacing(s) shall be indicated with all changes to the horizontal alignment shown. Each panel and post shall be numbered and any changes in type or size shall be noted. The centerline of any utilities passing under the wall and locations of expansion joints, access doors, lighting, signing, curb cuts, and drainage structures shall also be shown.
- (2) An elevation view of the wall, indicating the elevations of the top of the posts and panels as well as the elevations of the bottom of the panels, tops of the shaft foundations, all steps in wall system, the finished grade line, and vertical clearances to existing utilities and storm sewers. Each post size and length, panel type and size, and foundation depth shall be designated.
- (3) A typical cross section(s) that shows the panel, post, foundation or bridge parapet, and the elevation relationship between existing ground conditions and the finished grade as well as slopes adjacent to the wall.
- (4) All general notes required for constructing the wall.
- (5) All details for the steps in the bottom of panels shall be shown. The bottom of the panels shall be located at or below the theoretical bottom of panel line shown on the contract plans.

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The theoretical bottom of panel line is assumed to be 8 in (200 mm) below the finished grade line at front face of the wall for ground mounted noise walls and at the top of the structure for structure mounted noise walls, unless otherwise shown on the contract plans.

- (6) Tops of the panels and posts shall extend to or above the theoretical top of wall line shown on the contract plans. All panel tops shall be cast and placed horizontally with any changes in elevation accomplished by stepping adjacent panel sections at posts. Steps shall not exceed 1 ft (300 mm) in height, except within the last 50 ft (15 m) where 2 ft (600 mm) steps will be permitted.
- (7) All panel types shall be detailed. The details shall show panel orientation, all dimensions necessary to cast and fabricate each type of panel, the reinforcing steel, and location of post or foundation connection hardware as well as lifting devices embedded in the panels and posts. The Noise Reduction Coefficient (NRC) of each panel of the absorptive face shall be noted.
- (8) All post types shall be detailed. The details shall show all dimensions necessary to cast and/or fabricate each type of post, the reinforcing steel, connecting plates, and anchorage details. Post spacing for walls shall be limited to a distance that does not over stress the supporting structure.
- (9) Details of wall panels with appurtenances attached to or passing through the wall, as shown on the contract plans, such as utilities, emergency access doors, framed openings, drainage structures, signs, etc. shall be shown. Any modifications to the design or location of these appurtenances to accommodate a particular system shall also be submitted.
- (10) All architectural panel treatment, including color, texture and form liner patterns shall be shown. All joints shall be placed horizontal or vertical.
- (11) The details for the connection between panels and posts as well as their connection to the foundation, independent beam, retaining wall, and/or bridge parapet shall be shown. Foundation details including details showing the dimensions, reinforcement and post anchorage system for the drilled shaft foundations shall be shown.
- (12) Testing, certifications and reports from independent laboratories showing that the panel's sound Transmission Loss (TL) and NRC for the panel and post deflection satisfy the criteria shown in the design criteria section of this specification. The testing for the flame spread, smoke density and freeze-thaw/salt scaling requirements described in the materials section of this specification shall also be submitted.
- (13) Manufacturer recommended installation requirements, a sequence of construction and a detailed bill of materials shall be included.
- (14) The color of the wall panels and support posts identified by Federal Standard 595-B color number.

The Contractor shall deliver to the Department, attention Mr. Rick Wanner (847-705-4172), a 2 ft x 2 ft (600 mm x 600 mm) sample of the colors, textures and patterns proposed for use on the project for approval.

Revised 01/07/2011

The samples must be made at the same plant that will be making the product for the noise walls under this contract and be representative of those which will be tested per this specification. Once the color sample is approved, a batch shall be designated by batch number and date and will remain the standard for the entire project.

The Contractor shall submit site access plans showing access and limits of the work areas for the installation of the wall. Any required traffic controls shall be according to the requirements in the special provision for TRAFFIC CONTROL PLAN.

The initial submittal shall include three (3) sets of shop drawings and calculations. One set of drawings will be returned to the Contractor with any corrections indicated. The Contractor shall do no work or ordering of materials for the structure until the Engineer has approved the submittal.

Design Criteria. The wall system shall be designed to withstand wind pressure, applied perpendicular to the panels in either direction, according to the AASHTO Guide Specifications for Structural Design of Sound Barriers, 1989 and interims. The concrete and steel components shall be designed according to the AASHTO Standard Specifications for Highway Bridges with a design life of 35 years unless otherwise noted. The wall system shall be designed to withstand active earth pressure and live load surcharge at locations indicated on the plans. The contractor shall be responsible for the structural adequacy of the panels, posts, foundations and connections as well as overall wall overturning stability. Prestressed and/or post tensioned panel concepts will not be permitted.

The design wind loading shall be as specified on the plans but not less than 35 psf (1.7 kN/m²) when located on bridge structures, retaining walls or traffic barriers. This loading can be reduced to 25 psf (1.2 kN/m²) for ground mounted walls where it is located more than a distance equal to the height of the wall away from the edge of pavement. When a sound wall is also required to support earth pressures, the service design active earth pressure shall be based on an equivalent fluid pressure of 40 pounds per cubic foot (641 kg/m³) and a live load surcharge pressure equal to not less than 2 feet (600 mm) of earth pressure. The earth pressure fill height shall be defined by the proposed grade line elevation and the theoretical bottom of panel line. For structure mounted noise walls, the dead weight must not exceed 55 psf (2.6 kPa) of wall face area.

For ground mounted walls, Reinforcement of the concrete foundation shafts shall consist of a minimum of 8-#5 (#15) vertical bars symmetrically placed and tied with #3 (#10) ties at 6 in. (150 mm) centers. An additional tie shall be provided at the top and bottom of the foundation. As an alternative to the ties, a #3 (#10) spiral at a 6 in. (150 mm) pitch with an additional 1 1/2 turns at the top and bottom of the foundation or an equivalent 4 x 4 – W12.3 x W7.4 welded wire fabric may be substituted. The post shall be connected to the foundation by embedding the post inside the concrete foundation shaft. Embedded posts shall extend into the foundation shafts a minimum of 80 percent of the shaft length. The posts may alternatively be mounted to the foundation shafts with base plates and anchor bolts as required by design. The minimum number of anchor bolts per post shall be 4-1 in. (M24) diameter bolts with a minimum embedment of 18 in. (450 mm).

The material and construction of the foundations (drilled shafts) for ground mounted noise walls shall be according to Section 516 except that the payment for the drilled shaft and reinforcement will be included with the payment for the NOISE ABATEMENT WALL, GROUND MOUNTED.

Revised 01/07/2011

The shaft foundation dimensions shall be determined using Broms method of analysis. Soil borings from prior soil investigations are shown in the plans. The design shall utilize a factor of safety of 2.0, applied to the soil shear strength if cohesive or the unit weight if granular, and account for the effects of a sloping ground surface and water table indicated on the plans. The following should be assumed for the foundation design:

Effective unit weight	70 pcf (1120 kg/m ³)
Internal friction angle	30 degrees
Cohesion intercept	0 ksf (0 kg/m ³)

The post spacing for structure mounted noise walls shall be as shown on the plans but in no case greater than 15 feet (4.6 m) center to center. Except where otherwise indicated on the plans, the maximum post spacing for ground mounted noise walls shall be as specified in the Contractor's approved design.

The maximum allowable panel deflection shall be no more than the panel length (L) divided by 240 (L/240). The vertical posts shall have a maximum deflection of (H/180) where H is the height of the post above the foundation. A lateral load report shall be submitted to the Engineer indicating that the above noted design lateral loads can be applied to the panels and/or posts without exceeding noted deflection tolerance. The test shall apply lateral loads to the panel simulating uniform wind pressure.

The design shall account for the presence of all appurtenances mounted on or passing through the wall such as drainage structures, existing or proposed utilities, emergency access doors and other items.

Corrugations, ribs or battens on the panel must be oriented vertically when erected. The panels shall be designed to prevent entrapment and ponding of water. The walls shall not have openings allowing the perching or nesting of birds or the collection of dirt, debris or water.

The walls shall not have handholds or grips promoting climbing of the walls. Any bolts or fasteners used to connect material to the supporting panel, posts, or foundations shall be recessed or embedded in concrete, hidden from view and weather exposure. No external mechanical fastening devices such as frames or clips shall be used for these connections. The post to foundation connection shall utilize a corrosion protection system that is designed to last 75 years.

The noise abatement material shall be designed to achieve a sound TL equal to or greater than 20 dB in all one-third octave bands from 100 hertz to 5000 hertz, inclusive, when tested according to ASTM E-90. The sound absorptive material shall have a minimum NRC as indicated in Table 1.

Table 1

Noise Wall No.	From	To	Noise Wall Side	NRC*	Comments
Noise Wall A	201+45.00	212+15.00	Main Route	Reflective	
	201+45.00	212+15.00	Residential	Reflective	

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Noise Wall B	241+17.85	250+69.08	Main Route	Reflective	
	241+17.85	250+69.08	Residential	Reflective	
Noise Wall C	280+00.00	286+00.00	Main Route	Reflective	
	280+00.00	286+00.00	Residential	Reflective	
Noise Wall D	309+88.63	316+17.14	Main Route	Reflective	
	309+88.63	316+17.14	Residential	Reflective	
Noise Wall E	324+48.18	328+69.60	Main Route	Reflective	
	324+48.18	328+69.60	Residential	Reflective	
Noise Wall F	364+83.13	371+55.34	Main Route	Reflective	
	364+83.13	371+55.34	Residential	Reflective	
Noise Wall G	372+50.33	390+00.00	Main Route	Reflective	
	372+50.33	390+00.00	Residential	Reflective	
Noise Wall H	391+32.54	397+57.54	Main Route	Reflective	
	391+32.54	397+57.54	Residential	Reflective	

* For the side of the wall specified as reflective, no minimum NRC is required.

The NRC shall be determined per ASTM E795, tested according to ASTM C423 (mounting type A). The ratio of noise absorptive material on the panel surface to total wall area (including posts) shall be greater than 90 percent. NRC testing shall be performed on coated samples, utilizing the stain that will be applied for color.

Access Doors

All access doors shall be designed to fit within the design of the noise wall as shown on the plans. Doors shall be complete with hardware and locking devices. Each door shall provide a 3 ft (0.9 m) wide by 7 ft (2.1 m) high minimum clear access opening. Both door jambs shall be securely fastened to anchored posts. Front and back face of the installed door shall be flush with the faces of the noise wall.

Perimeter and internal door frame shall consist of welded hot dip galvanized steel channels and miscellaneous angle stiffeners and plates designed to provide support for noise wall panels to match the noise wall material as specified in this special provision. Infill noise panel geometry and color shall match the adjacent noise wall panels. Noise wall panels shall be fastened to steel frames as per panel manufacturer's recommendations.

Revised 01/07/2011

The door, jambs, head, hinges, door appurtenances, and adjacent ground mounted posts shall be designed to withstand the wind pressure of 25 psf (122 kg/m²) with the door in fully open and fully closed positions and support the weight of the door and a 300 lb (136 kg) vertical load on the non-hinged side of the door. Provide steel bracing as required. Door bottom shall be equipped with drainage holes to avoid accumulation of trapped moisture.

Door jambs and head section shall be hot dip galvanized steel. Door hinges shall be barrel type, edge mount, extra heavy-duty, hot dip galvanized steel or stainless steel. The hinges shall be designed to support the weight of door assembly, wind loads on the open door, and a 300 lb (136 kg) vertical load on the non-hinged side of the door.

Door pulls shall be provided on both sides of access door(s). Door locking hardware shall be hasp-type to be used with a padlock and shall be located according to local fire department or ComEd requirements as applicable. A solid steel Knox-Box shall be provided and mounted near the hasp location at the steel post on the locking hardware side of door. The Knox-box for emergency access doors shall be according to local fire department requirements. The Knox-box for access door at the Dynamic Messaging Sign (DMS) shall be according to ComEd requirements.

Doors shall be equipped with lifting bolts or beams as required for safe lifting of door units.

Materials. Noise wall materials shall conform to the supplier's standards, AASHTO Specifications for noise walls and the following:

- (a) Reinforcement bars shall satisfy ASTM A706 Grade 60 (400). Welded wire fabric shall be according to AASHTO M 55.
- (b) Anchor bolts shall conform to ASTM F1554 Grade 55 or 105.
- (c) The precast elements shall be according to applicable portions of Section 1042 (Exception: Coarse Aggregate shall meet the requirements of Article 1004.02(f)). Additionally, dry cast concrete element will not be permitted. Wooden or steel materials will not be allowed as substitutes for the panels.
- (d) For sound absorptive panels, the manufacturer shall provide test information from an independent lab that the panels are durable. This information shall be either a freeze/thaw test according to AASHTO T 161 (ASTM C 666) Procedure A or B, and it shall be a salt scaling test according to ASTM C 672.

For the freeze/thaw test, a minimum of three specimens shall have been tested. The maximum weight (mass) loss after 300 cycles shall be 7.0 percent. The panel shall have no cracks, delamination (applies to composite material panel), or other excessive physical distress upon completion of the test.

For the salt scaling test, the test method shall be modified as outlined in Appendix D of the Guidelines for Evaluating the Performance of Highway Sound Barriers by the Highway Innovative Technology Evaluation Center (HITEC), A Service Center of the Civil Engineering Research Foundation, CERF REPORT: HITEC 96-04, Product 24 (October 1996). The maximum weight (mass) loss after 50 cycles using a 3 percent sodium chloride solution shall be 0.2 psf (0.1 kg/m²).

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The panel shall have no cracks, delamination (applies to composite material panel), or other excessive physical distress upon completion of the test.

For sound reflective panels, evidence of durability by one of the two previously mentioned tests is required for all materials except Class PC concrete.

- (e) The manufacturer for the noise abatement wall shall provide their quality control plan for testing the product, and test results shall be provided upon request by the Engineer. Manufacturers on the Approved List of Certified Precast Concrete Producers who are approved for noise abatement walls will be considered in compliance with this requirement.
- (f) Steel plates and posts shall conform to AASHTO M 270 (M 270 M) Grade 36 (250) or 50 (345). All portions of the post shall be galvanized according to AASHTO M111 and ASTM A385. Steel bolts, nuts, washers and anchor bolts shall be galvanized according to AASHTO M232. The portion of steel posts exposed to view shall then be painted with a paint system in the shop according to the special provision for Surface Preparation and Painting of Galvanized Steel Traffic Structures. The cost for Surface Preparation and Painting of Galvanized Steel Traffic Structures shall be included in the contract unit price for NOISE ABATEMENT WALL of the type required. The color of the paint system shall closely match the panels.
- (g) Lifting inserts cast into the panels shall be hot dipped galvanized.
- (h) Non shrink grout shall be according to Article 1024.
- (i) The color of both sides of the panels, posts and other visible elements shall be a light brown earth tone unless stated otherwise on the contract plans. Colors shall be achieved through the use of integral pigments or stains, which are in compliance with the environmental regulation of the State of Illinois. Components manufactured with integral pigment shall be tested and certified in conformance to ASTM C979. Stains shall be non film forming, penetrating stains. Stains shall be applied to concrete at the cured age of the manufacturer's recommendation. Surface preparation and application shall be according to manufacturer written recommendations. Coloring of concrete elements shall be accomplished using a single component water based, sound absorptive, penetrating, architectural stain that is weather resistant. Stains and/or pigments must be applied at the manufacturing plant; application in the field on site will not be allowed. The final color shall be consistent with the quality and appearance of the approved sample.
- (j) The finish shall consist of a rolled Ashlar Stone finish and shall have a minimum 0.75 in (19 mm) impression.
- (k) With the exception of the steel and Portland cement concrete elements of the wall, all materials shall be tested for flame spread and smoke density developed according to ASTM E84. The material must exhibit a flame-spread index less than 10 and a smoke density developed value of 10 or less.

Fabrication. All precast units shall be manufactured according to Section 504 and the following requirements and tolerances with respect to the dimensions shown on the approved shop drawings.

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- (a) The minimum reinforcement bar cover shall be 1 1/2 in (40 mm).
- (b) All reinforcement shall be epoxy coated
- (c) Panel dimensions shall be within 1/4 in (6 mm).
- (d) All hardware embedded in panels or posts shall be within 1/4 in (6 mm).
- (e) Angular distortion with regard to panel squareness, defined as the difference between the two diagonals, shall not exceed 1/2 in (13 mm).
- (f) Surface defects on formed surfaces measured on a length of 5 ft (1.5 m) shall not be more than 0.10 in (2.5 mm).
- (g) Posts shall be installed plumb to within 1/2 in (13 mm) of vertical for every 15 ft (5 m) of height and to within 1/2 in (13 mm) of the station and offset indicated on the approved shop drawings.
- (h) Drilled shaft foundations shall be placed within 2 in (50 mm) of the station and offset indicated on the approved shop drawings.
- (i) Panel reinforcement and lifting devices shall be set in place to the dimension and tolerances shown on the plans and these special provisions prior to casting.

The date of manufacture, the production lot number, and the piece-mark shall be clearly noted on each panel.

Absorptive material shall be permanently attached to their supporting elements and no external mechanical fastening systems such as frames or clips shall be used. Any bolts or fasteners used shall be recessed or embedded below the surface.

The panels, posts and other visible elements shall be fabricated with a light brown earth tone color following the procedures noted in the materials section of this special provision unless otherwise shown on the contract plans.

Any chipping, cracks, honeycomb, or other defects, to be allowed, shall be within acceptable standards for precast concrete products according to Section 1042.

Construction. The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the contract unit price for Noise Abatement Wall of the type specified. The instructions provided by the wall supplier are guidelines and do not relieve the contractor of the responsibility to adhere to contract requirements.

It is recommended that all bottom panels be installed for a length of wall prior to placing middle or top panels. After bottom panels are in-place, finish grading can be accomplished with heavy equipment by reaching over the in-place panels.

Site excavations and/or fill construction shall be completed to plan elevations and profiles prior to the start of wall foundation construction. All underground utility or drainage structure installation shall be completed prior to foundation installation. The ground elevations as shown on the plans and the approved noise wall shop drawings shall be verified by the contractor and discrepancies corrected prior to material fabrication. Buried utilities shall be marked to verify proper clearance from the drilled foundations. The Contractor should consider overhead obstruction such as electric and telephone wires prior to wall erection.

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For ground mounted walls, if the soils encountered during drilling of the foundations do not satisfy the design strengths shown on the contract plans, the Engineer shall be notified to evaluate the required foundation modifications. The shaft foundation will normally require additional length, which may be paid separately under Article 104.03. All drilled shaft excavations shall be filled with concrete within 6 hours of their initiation. The concrete for the drilled shaft foundations shall be placed against undisturbed, in-place soils. The concrete at the top of the shaft shall be shaped to provide the panels on each side of the post adequate bearing area and correct elevation per the approved shop drawings.

The panels shall be delivered to the project site in full truckload quantities. They may be off-loaded individually or by forklift with a solid steel plate spanning between the forks. Providing uniform, fully distributed bearing support to the underside of the panels. Units shall be shipped, handled and stored in such a manner as to minimize the danger of staining, chipping, spalling, development of cracks, fractures, and excessive bending stresses. Panels shall be stored and shipped in bundles, on edge. Any touch up and repair is at the Contractor's expense and shall be carried out according to the manufacturer's recommendations or as directed by the Engineer.

Method of Measurement. Noise abatement walls will be measured in square feet (square meters) from the wall envelope, defined by the theoretical top of wall line to the theoretical bottom of panel line for the length of the wall (ground mounted or structure mounted) as shown on the contract plans.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for NOISE ABATEMENT WALL, GROUND MOUNTED and/or NOISE ABATEMENT WALL, STRUCTURE MOUNTED.

Drilled shafts, concrete, reinforcement bars and other elements for structures supporting NOISE ABATEMENT WALL, STRUCTURE MOUNTED will not be paid for under this item, but will be paid as specified elsewhere under their specific pay items.

EPOXY COATING ON REINFORCEMENT (DISTRICT ONE)

Effective: January 1, 2007

For work outside the limits of bridge approach pavement, all references in the Highway Standards and Standard Specifications for reinforcement, dowel bars, tie bars and chair supports for pavement, shoulders, curb, gutter, combination curb and gutter and median shall be epoxy coated, unless noted on the plan.

FINE AGGREGATE FOR HOT- MIX ASPHALT (HMA) (D-1)

Effective: May 1, 2007

Revised: January 15, 2010

Add the following to the gradation tables of Article 1003.01(c) of the Standard Specifications:

FINE AGGREGATE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	3/8	No. 4	No. 8	No. 16	No. 200
FA 22	100	6/	6/	8±8	2±2

Revised 01/07/2011

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

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

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

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

Removal of temporary pavement will be paid for at the contract unit price per square yard (square meter) for PAVEMENT REMOVAL.

Designer Note:

HMA temporary pavement shall consist of two items, an HMA binder course making up the bulk of the thickness and an HMA surface course for the riding surface; typically 8" – 10" for binder course and 2" for surface course. Make sure to include both items in the HMA Mixture Requirement Table

When used as an option, "PC concrete temporary pavement shall consist of Class PV Concrete meeting the requirements of Art. 1020 of the Standard Specifications" which note shall appear on the plans adjacent to the HMA Mix Table; typically 10" thick.

For quantity estimation purposes, excavation quantities should be estimated assuming the thicker design if both design options are being shown in the plans.

USE OF RAP (DIST 1)

Effective: January 1, 2007

Revised: September 15, 2010

In Article 1030.02(g) of the Standard Specifications, delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT

1031.01 Description. Reclaimed Asphalt Pavement (RAP) results from the cold milling or crushing of an existing Hot-Mix Asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction. The contractor can also request that a processed pile be tested by the Department to determine the aggregate quality as described in Article 1031.04, herein.

Revised 01/07/2011

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type and size as listed below (i.e. "Homogenous Surface").

Prior to milling or removal of an HMA pavement, the Contractor may request the District to provide verification of the existing mix composition to clarify appropriate stockpile.

- (a) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (b) Conglomerate 5/8. Conglomerate 5/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 5/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen.
- (c) Conglomerate 3/8. Conglomerate 3/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 3/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 3/8 in. (9.5 mm) or smaller screen.
- (d) Conglomerate Variable Size. Conglomerate variable size RAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate variable size RAP shall be processed prior to testing by crushing and screening to where all RAP is separated into various sizes. All the conglomerate variable size RAP shall pass the 3/4 in. (19 mm) screen and shall be a minimum of two sizes.
- (e) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low Esal), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content.

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- (f) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

1031.03 Testing. When used in HMA, the RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

- (a) Testing Conglomerate 3/8 and Conglomerate Variable Size. In addition to the requirements above, conglomerate 3/8 and variable size RAP shall be tested for maximum theoretical specific gravity (G_{mm}) at a frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).
- (b) Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous/ Conglomerate	Conglomerate “D” Quality
1 in. (25 mm)		± 5%
3/4 in. (19 mm)		
1/2 in. (12.5 mm)	± 8%	± 15%
No. 4 (4.75 mm)	± 6%	± 13%
No. 8 (2.36 mm)	±5%	
No. 16 (1.18 mm)		± 15%
No. 30 (600 μm)	± 5%	
No. 200 (75 μm)	± 2.0%	± 4.0%
Asphalt Binder	± 0.4% ^{1/}	± 0.5%
G_{mm}	±0.02 ^{2/}	
G_{mm}	±0.03 ^{3/}	

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- 1/ The tolerance for conglomerate 3/8 shall be ± 0.3 %.
- 2/ Applies only to conglomerate 3/8. When variation of the G_{mm} exceeds the ± 0.02 tolerance, a new conglomerate 3/8 stockpile shall be created which will also require an additional mix design.
- 3/ Applies only to conglomerate variable size. When variation of the G_{mm} exceeds the ± 0.03 tolerance, a new conglomerate variable size stockpile shall be created which will also require an additional mix design.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP shall not be used in HMA unless the RAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

1031.04 Quality Designation of Aggregate in RAP. The quality of the RAP shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (a) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) surface mixtures are designated as containing Class B quality coarse aggregate.
- (b) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder and IL-9.5L surface mixtures are designated as Class D quality coarse aggregate.
- (c) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (d) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

Aggregate Quality Testing of RAP:

The processed pile shall have a maximum tonnage of 5,000 tons (4500 metric tons). The pile shall be crushed and screened with 100 percent of the material passing the 3/4 in. (19 mm) sieve. The pile shall be tested for AC content and gradation and shall conform to all requirements of Article 1031.03 Testing, herein. Once the uniformity of the gradation and AC content has been established, the Contractor shall obtain a representative sample with district oversight of the sampling. This sample shall be no less than 50 lbs (25 kg) and this sample shall be delivered to a Consultant Lab, prequalified by the Department for extraction testing according to Illinois Modified AASHTO T 164. After the AC has been extracted, the Consultant Lab shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid directly by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

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1031.05 Use of RAP in HMA. The use of RAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Use in HMA Surface Mixtures (High and Low ESAL). RAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be either homogeneous or conglomerate 3/8 or variable size in which the coarse aggregate is Class B quality or better.
- (c) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be homogeneous, conglomerate 5/8, or conglomerate 3/8, conglomerate variable size, in which the coarse aggregate is Class C quality or better.
- (d) Use in Shoulders and Subbase. RAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be homogeneous, conglomerate 5/8, conglomerate 3/8, conglomerate variable size, or conglomerate DQ.
- (e) The use of RAP shall be a contractor's option when constructing HMA in all contracts. When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table for a given N Design.

Maximum Mixture RAP Percentage

HMA Mixtures ^{1/3/}		Maximum % RAP	
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30/40 ^{2/}	30	10
50	25/40 ^{2/4/}	15/25 ^{2/}	10 ^{4/}
70	25/30 ^{2/}	10/20 ^{2/}	10
90	25/30 ^{2/}	10/15 ^{2/}	10
105	25/30 ^{2/}	10/15 ^{2/}	10

- 1/ For HMA Shoulder and Stabilized Sub-Base (HMA) N-30, the amount of RAP shall not exceed 50 percent of the mixture.
- 2/ Value of Max percent RAP if 3/8 Rap or conglomerate variable size RAP is utilized.
- 3/ When RAP exceeds 20 percent the AC shall be PG58 -22. However, when RAP exceeds 20 percent and is used in full depth HMA pavement the AC shall be PG58 -28.
- 4/ Polymerized Leveling Binder, IL-4.75 is 15 percent

1031.06 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP material meeting the above detailed requirements.

RAP designs shall be submitted for volumetric verification. If additional RAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

1031.07 HMA Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

Revised 01/07/2011

To remove or reduce agglomerated material, a scalping screen, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design. When producing mixtures containing conglomerate 3/8 or conglomerate variable size RAP, a positive dust control system shall be utilized.

HMA plants utilizing RAP shall be capable of automatically recording and printing the following information.

(a) Drier Drum Plants

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA Mix number assigned by the Department
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)
- (4) Accumulated dry weight of RAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP material (per size) as a percent of the total mix to the nearest 0.1 unit.
- (8) Aggregate and RAP moisture compensators in percent as set on the control panel (Required when accumulated or individual aggregate and RAP are printed in wet condition).

(b) Batch Plants

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram)
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) Individual RAP Aggregate weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram)
- (7) Residual asphalt binder of each RAP size material as a percent of the total mix to the nearest 0.1 percent.

Revised 01/07/2011

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Other". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

GENERAL REQUIREMENTS FOR WEED CONTROL SPRAYING

Effective: February 7, 2007

Experience.

The Contractor shall have previous experience with the use of weed control chemicals. He/she shall have had at least one (1) season's experience in the use of their chemicals in spraying highway right-of-way or at least three (3) season's experience in their use in farm or custom spraying. The Contractor shall observe and comply with all sections of the Illinois Custom Spray Law, including licensing.

Equipment.

The equipment used shall consist of a vehicle-mounted tank, pump, spray bar and handgun, plus any other accessories needed to complete the specified work. Spraying shall be done through multiple low-pressure flooding or broad jet nozzles mounted on spray bars operated not more than 36" above the ground. If different sizes or types of nozzles are used to make up the spray pattern, the pressure, sizes and capacities shall be adjusted to provide a uniform rate of application for each segment of the spray pattern. Hand spray guns may be used for spraying areas around traffic control devices, lighting standard and similar inaccessible areas. Maximum speed of the spray vehicle during application of chemical shall be five (5) miles per hour.

Pumps used shall have a volume and pressure capacity range sufficient to deliver the mixture at a pressure to provide the required coverage and to keep the spray pattern full and steady without pulsation or excessive pressure as to cause fogging. Maximum pressure for application shall be 15 PSI. Quick acting shut-off valves and spring-loaded ball check valves shall be provided to stop the spray pattern with a minimum of nozzle drip. In areas where the spray vehicle must traverse the right-of-way, a four-wheel drive vehicle with flotation tires will be required to minimize damage to the ground surface.

Prior to beginning work, the Contractor shall obtain approval from the Engineer of the spraying equipment proposed for completing this work. The proposed equipment shall be in an operational condition and available for inspection by the Engineer at least two (2) weeks prior to the proposed starting time. If requested by the Engineer, the Contractor shall demonstrate the calibration of the equipment.

The equipment must provide consistently uniform coverage and keep the spray mixture sufficiently agitated or the work will be suspended until the equipment is repaired or replaced.

Revised 01/07/2011

PERENNIAL PLANTS (MODIFIED)

Effective: January 1, 2011

Revised: December 3, 2010

Revise Section 254 of the Standard Specifications to read:

“SECTION 254. PLANTING PERENNIAL PLANTS

254.01 Description. This work shall consist of furnishing, transporting, and planting perennial plants.

254.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Bulb Type	1081.02(a)
(b) Ornamental Type	1081.02(b)
(c) Prairie Type	1081.02(b)
(d) Wetland Emergent Type	1081.02(b)
(e) Sedge Meadow Type	1081.02(b)
(f) Woodland Type	1081.02(b)
(g) Mulch	1081.06(b)

254.03 Planting Time. Planting times for the various types of perennial plants shall be as follows.

(a) Bulb Type. Bulb Type plants shall be planted between October 15 and November 15.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, and Sedge Meadow Type plants shall be planted between May 1 and June 15 or between August 15 and September 15.

(c) Woodland Type plants shall be planted between April 1 and May 15.

254.04 Transporting and Storing Plants. The Engineer will inspect the plants at the worksite at the beginning of each planting day and reject any material that is not properly packaged (including clear labeling by species) or that is not in a firm, moist, or viable condition. Any plants remaining at the end of the day shall be removed from the work site and properly stored by the Contractor. Before planting, sufficient water shall be added to potted plants to insure that the soil around the roots is not dry and crumbly when the plants are removed from the pots.

254.05 Layout of Planting. When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. If no prepared soil planting bed is specified, the plants shall be planted in areas that have existing cover or have been seeded and mulched or sodded. Where perennial plants, except bulb type plants, shall be planted, the planting beds shall be delineated with selective mowing stakes.

Selective mowing stakes shall be according to Article 250.08.

The Contractor shall place the marking flags and outline each area for mass or solid planting. The Engineer will contact the Roadside Development Unit at (847) 705-4171 at least 72 hours prior to planting to verify the layout.

Added 01/07/2011

254.06 Planting Procedures. The spacing of the plants shall be as shown on the plans, or as directed by the Engineer, to uniformly fill the planting beds. Individual plants within the beds shall be planted as follows.

(a) Bulb Type. Bulb type plants shall be planted to a depth of 6 in. (150 mm) in turf areas or prepared beds.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. When planted in prepared soil planting beds, these plants shall be planted by a hand method approved by the Engineer.

Disposal of sod and debris (rock, stones, concrete, bottles, plastic bags, etc.) shall be removed from the perennial planting bed as specified in Article 202.03.

When planted in existing turf, the planting area shall be mowed to a maximum height of 2 in. (50 mm).

In existing cover, or seeded and mulched or sodded planting areas, a 12 in. (300 mm) diameter planting area for individual plants shall be prepared. The existing cover, or seed and mulch shall be cut and removed from the 12 in. (300 mm) diameter planting area and the soil within the planting area loosened to a depth of 6 in. (150 mm). The plants shall be planted within the planting area and immediately watered with at least 1 gal (5 L) of water per plant.

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to placement of mulch:

- Spade a planting bed edge at approximately a 45 degree angle and to a depth of approximately 3-inches (75 mm) around the perimeter of the perennial bed. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.
- Compost furnish and place shall be applied to the planting beds to a depth of 2-inch (100 mm) than tilled into the soil to a depth of 6-inches (150 mm) to amend the existing topsoil.
- Coarse sand (FA2) 28 lbs/sq. ft. (140 kg/sq m) shall be placed on the planting beds to a depth of 2-inch (100 mm) than tilled into the soil to a depth of 6-inches (150 mm) to amend the existing topsoil.
- Pre-emergent Herbicide shall be used in the perennial beds prior to the placement of mulch. See specification for Weed Control, Pre-emergent Herbicide.

254.07 Mulching. Within 24 hours, the entire perennial plant bed shall be mulched to a depth of with 3 inches (75 mm) of fine grade Shredded Mulch. A mulch sample shall be submitted to the Engineer for approval 72 hours prior to placing. Care shall be taken to place the mulch in a way that does not smother the plants. When plants are planted in prepared soil planting beds, the entire bed shall be mulched. Bulb type plants planted in existing turf need not be mulched.

Added 01/07/2011

254.08 Period of Establishment. Period of Establishment for the various types of perennial plants shall be as follows.

(a) No period of establishment will be required for bulb type plants.

(b) Perennial plants must undergo a 30-day period of establishment. Additional watering shall be performed **not less than twice a week for four weeks** following installation. Water shall be applied at the rate of 2 gallons per square foot. Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional watering.

A spray nozzle that does not damage small plants must be used when watering perennial plants. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing water to flow beyond the periphery of the bed

During the period of establishment, weeds and grass growth shall be removed from within the mulched perennial beds. This weeding shall be performed twice during the 30 day period of establishment. The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the extent of weeding.

The weeding may be performed in any manner approved by the Engineer provided the weed and grass growth, including their roots and stems, are removed from the area specified. Mulch disturbed by the weeding operation shall be replaced to its original condition. All debris that results from this operation must be removed from the right-of-way and disposed of at the end of each day in accordance with Article 202.03.

At the end of the period of establishment, the Contractor will be permitted to replace any unacceptable plants and shall thoroughly weed all the beds.

254.09 Method of Measurement. This work will be measured for payment in units of 100 perennial plants of the type and size specified. Measurement for payment of this work will not be performed until at the end of the 30 day establishment period for the replacement planting. Only plants that are in place and alive at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, a quantity equal to 25 percent of the number of units of plants originally planted will be considered measured for payment.

Selective Mowing Stakes will be measured for payment as each in place.

Compost Furnish and Place will be measured for payment as specified in Art. 211.07.

Coarse Sand (FA2) will be measured for payment as specified in Coarse Sand Placement.

Pre-emergent Herbicide will be measured for payment as specified in Weed Control, Pre-emergent Granular Herbicide.

254.10 Basis of Payment. This work will be paid for at the contract unit price per unit for PERENNIAL PLANTS, of the type and size specified.

Added 01/07/2011

Selective mowing stakes will be paid for at the contract unit price per each for SELECTIVE MOWING STAKES.

Coarse sand (FA2) will be paid for as specified in COARSE SAND PLACEMENT.

COMPOST FURNISH AND PLACE will be paid for as specified in Art. 211.08.

Pre-emergent Herbicide will be paid for as specified in WEED CONTROL, PRE-EMERGENT HERBICIDE.

Payment for Shredded Mulch shall be included in contract unit price of the perennial plant pay item.”

Revise Article 1081.02 of the Standard Specifications to read:

“**1081.02 Perennial Plants.** Perennial plants shall be as follows.

(a) Bulb Type. Bulb type plants shall include bulbs, tubers, rhizomes, and corms. Bulb type plants shall meet the current standards adopted by the ANLA. The Contractor shall furnish the Engineer a shipping ticket or label documenting that the variety, color, and size of the bulb type plants supplied are as specified in the plans.

(b) Ornamental Type, Prairie Type, Wetland Emergent Type, Sedge Meadow Type, and Woodland Type. These plants shall meet the current standards adopted by the ANLA. Flats or lots of plants shall be clearly labeled by variety, and the Contractor shall furnish the Engineer a shipping ticket or label documenting that the plants supplied are of the variety specified in the plans.”

USE OF RAS (D-1)

Effective: August 15, 2010

Revised: October 25, 2010

Description. Reclaimed asphalt shingles (RAS) meeting Type I or Type 2 requirements will be permitted in HMA mixtures as specified herein for overlay applications only. RAS shall not be used in full depth HMA pavement. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable materials, as defined in Bureau of Materials and Physical Research Policy Memorandum 28-10.0, by weight of RAS. All RAS used shall come from a BMPR approved processing facility.

Definitions. RAS shall meet either Type I or Type 2 requirements as specified herein.

- (a) Type I. Type I RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
- (b) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Added 01/07/2011

Stockpiles. RAS shall be ground and processed to 100 percent passing the 3/8 in. sieve and 93 percent passing the #4 sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise approved by the Engineer, mechanically blending a maximum of 5.0 percent by weight of the aggregate blend in HMA design, manufactured sand (FM20 or FM 22) with the processed RAS will be permitted to improve workability. The sand shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be filed by Department contract number and kept for a minimum of 3 years.

Testing. RAS shall be sampled and tested during stockpiling.

For testing during stockpiling, washed extraction, G_{mm} and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 250 tons (225 metric tons) thereafter. A minimum of five tests are required to establish an average gradation and asphalt cement content of the RAS for use in an HMA mix design. A Bulk Specific Gravity value of 2.300 shall be used for RAS when used in an HMA mix design. Other Gravity Values maybe used in an HMA design but shall be verified by the Department.

Before testing, each field sample shall be split to obtain two samples. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

Evaluation of Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content, gradation and G_{mm} . Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 μm)	± 4%
No. 200 (75 μm)	± 2.0 %
Asphalt Binder Content	± 1.5 %
G_{mm}	± 0.04

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content, or G_{mm} test results fall outside the specified tolerance, or if the percent unacceptable materials exceeds 0.5 percent by weight of material retained on the #4 sieve, the RAS shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

Added 01/07/2011

Use of RAS in HMA. Type 1 or Type 2 RAS may be used in All HMA Mixtures as follows:

(a) SMA and High ESAL Surface Mixes:

(1) The maximum allowable RAS usage in SMA and IL 4.75 shall be as follows:

- a. RAS shall not exceed 5.0 percent by weight of total mix.
- b. If used in conjunction with Reclaimed Asphalt Pavement (RAP) the contribution of asphalt binder from the RAS and RAP combined shall not exceed 20 percent of the total asphalt binder.

(2) The virgin asphalt binder grade shall be as follows:

Mix Type	Percent RAS/RAP Asphalt Binder Replacement			
	< 10%		10-20%	
	Type 1	Type 2	Type 1	Type 2
SMA and High ESAL Surface Mixes	No grade ^{1/} bump	No grade ^{1/} bump	Reduce high temperature by one grade ^{1/}	Reduce high temperature by one grade ^{1/}

1/ One asphalt binder grade bump represents a change of 6° Celsius.

b) High ESAL Binder and Leveling Binder Mixes:

(1) The maximum allowable RAS usage in HMA High ESAL Binder and Leveling Binder Mixes shall be as follows:

- a. RAS shall not exceed 5.0 percent by total weight of mix.
- b. If used in conjunction with RAP the contribution of asphalt binder from the RAS and RAP combined shall not exceed 30 percent of the total asphalt binder.

(2) Virgin asphalt binder grade shall be as follows:

Mix Type	Percent RAS/RAP Asphalt Binder Replacement			
	10-19%		20-30%	
	Type 1	Type 2	Type 1	Type 2
High ESAL Binder and Leveling Binder Mixes	No grade ^{1/} bump	Reduce high temperature by one grade ^{1/}	Reduce high & low temperature by one grade ^{1/}	Reduce high & low temperature by one grade ^{1/}

1/ One asphalt binder grade bump represents a change of 6° Celsius.

2/ No grade bump necessary for percent RAS/RAP/FRAP asphalt binder replacement less than 10 percent

c) HMA Low ESAL and HMA "All Other"

Added 01/07/2011

- (1) The maximum allowable RAS usage in HMA Low ESAL and HMA "All Other" mixtures shall be as follows:
- a. RAS shall not exceed 5.0 percent by total weight of mix.
 - b. If used in conjunction with RAP the contribution of asphalt binder from the RAS and RAP combined shall not exceed 40 percent of the total asphalt binder.
- (2) Virgin asphalt binder grade shall be as follows:

Mix Type	Percent RAS/RAP Asphalt Binder Replacement			
	< 20%		20-40%	
	Type 1	Type 2	Type 1	Type 2
HMA Low ESAL and HMA "All Other"	No grade ^{1/} bump	Reduce low temperature by one grade ^{1/}	Reduce high & low temperature by one grade ^{1/}	Reduce high & low temperature by one grade ^{1/}

1/ One asphalt binder grade bump represents a change of 6° Celsius.

HMA Mix Designs. RAS and RAS/RAP designs shall be submitted for volumetric verification. Type 1 and Type 2 RAS are not interchangeable in a mix design.

HMA Production. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that mixture production is halted when RAS flow is interrupted.

When producing HMA containing RAS, a positive dust control system shall be utilized.

HMA plants utilizing RAS shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

Added 01/07/2011

- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAS material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAS weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAS material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.”

Added 01/07/2011

STORM WATER POLLUTION PREVENTION PLAN



Storm Water Pollution Prevention Plan

Route F.A.P. 353 Marked Rte. U.S. ROUTE 30 (Lincoln Highway)
Section (12 & 13) WRS-3 Project No. _____
County WILL Contract No. 62479

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Diane O'Keefe, P.E.
Print Name
Deputy Director / Region One Engineer
Title
Illinois Department of Transportation
Agency

Signature
1-3-11
Date

I. **Site Description:**

A. The following is a description of the project location:

This project is located along US Route 30 (Lincoln Highway) from Williams St. (a local street) to US Route 45 (La Grange Rd.) in northern Will County, through the Villages of New Lenox, Mokena and Frankfort and unincorporated portions of Will County in New Lenox and Frankfort Townships. The project has a large watershed with steep slopes in places. Between a quarter of a mile and one-and-a-half miles of watershed are above the project. Elevations drop as much as 80 feet from the far edge of the watershed to the project. Hence, there is a potential for large volumes of runoff with high discharges that will have to be passed through the site. The downstream receiving properties include the Forrest Preserve District of Will County.

B. The following is a description of the construction activity which is the subject of this plan:

The proposed activity consists of the reconstruction of US Route 30 (Lincoln Highway) from Williams St. (a local street) to US Route 45 (La Grange Road). US Route 30 is a principal east-west Strategic Regional Arterial (SRA) and part of the National Highway System (NHS) intended to supplement the regions expressway and Interstate systems and to connect the regional transportation network. The existing US Route 30 roadway consists primarily of 1 – 12 ft. lane in each direction from Williams St to US Route 45 with additional lanes and auxiliary lanes located at traffic signals and various intersections along US Route 30. The existing average daily traffic volumes along US Route 30 range from 15,000 to 16,000 vehicles. The proposed improvements consist of reconstructing US Route 30 to 2-12 ft. lanes in each direction separated by a 22-foot wide raised curb median throughout the limits, except a 12-foot wide bi-directional turn lane will be utilized from the west project limits to the west entrance to Lincoln-Way High School. Combination concrete curb and gutter will be constructed with a new storm sewer drainage system and ditches to drain storm water. A 10 foot wide bike path and/or 5 foot sidewalk will be constructed adjacent to the road on either side. These improvements will affect flowing water at approximately seven locations; Culverts G, B, J, D, E, K, and L. The 20 year projected average daily traffic volumes for the year 2020 range from 24,000 to 27,000 vehicles per day. The proposed improvement has been designed to minimize stormwater impacts. Commitments are made to the Will

County Forest Preserve District to include special provisions for erosion and sediment control, and IDOT will install chain link fencing and non-intrusion signage around wetlands and waters.

- C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Refer to Stage Construction notes for Pre-stage, Stage 1, Stage 2, Stage 3 and Stage 4 for sequence of major activities which will disturb soils.

- D. The total area of the construction site is estimated to be 115 acres.

The total area of the site that is estimated will be disturbed by excavation, grading or other activities is 109 acres.

- E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

The weighted average of the runoff coefficient for this project is computed as 0.58 before construction and 0.69 after construction.

- F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

Ashkum Silty Clay Loam (232A) The NCRS Classifies Ashkum as Typic Endoaquolls that is poorly drained. The potential for surface run-off is low. Permeability is moderately slow. Saturated hydraulic conductivity is moderately slow. When drained, an intermittent apparent high water table is 0.5 foot above the surface to 1.0 foot below the surface at some time between January and May in normal years.

Beecher Silt Loam (298B) The NCRS Classifies Beecher as Udollic Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is low to high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Blount Silt Loam (23B) The NCRS Classifies Blount as Aericep Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is medium to very high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Bryce Silty Clay (235A) The NCRS Classifies Bryce as Vertic Endoaquolls that is poorly drained. The potential for surface run-off is low. Permeability is slow to very slow. Saturated hydraulic conductivity is very slow to moderately slow. An apparent seasonal high water table ranges from 0.5 foot above to a depth of 1.0 foot at some time between January and May in normal years.

Chatsworth Silty Clay (241D3) The NCRS Classifies Chatsworth as Oxyaquic Eutrudepts that is moderately well drained. The potential for surface run-off is very high. Permeability is very slow. Saturated hydraulic conductivity is very slow to slow. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Chatsworth Silty Clay Loam (241F) The NCRS Classifies Chatsworth as Oxyaquic Eutrudepts that is moderately well drained. The potential for surface run-off is very high. Permeability is very slow. Saturated hydraulic conductivity is very slow to slow. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Elliott Silt Loam (146B) The NCRS Classifies Elliott as Aquic Argiudolls that is somewhat poorly drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 1.0 foot to 2.0 foot at some time between January and May in normal years.

Frankfort Silt Loam (320B) The NCRS Classifies Frankfort as Udollic Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is medium to very high. Permeability is very slow. Saturated hydraulic conductivity is very slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Frankfort Silty Clay Loam (320C2) The NCRS Classifies Elliott as Udollic Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is very high. Permeability is very slow. Saturated hydraulic conductivity is very slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Markham Silt Loam (531C2) The NCRS Classifies Markham as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Nappanee Silt Loam (228B) The NCRS Classifies Nappanee as Aeris Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is high. Permeability is very slow. Saturated hydraulic conductivity is very slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Nappanee Silty Clay Loam (228C2) The NCRS Classifies Nappanee as Aeris Epiaqualfs that is somewhat poorly drained. The potential for surface run-off is very high. Permeability is very slow. Saturated hydraulic conductivity is very slow to moderately rapid. An intermittent perched high water table is at a depth of 0.5 foot to 2.0 foot at some time between January and May in normal years.

Ozaukee Silt Loam (530B) The NCRS Classifies Ozaukee as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is medium. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Ozaukee Silt Loam (530C2) The NCRS Classifies Ozaukee as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Ozaukee Silt Loam (530D2) The NCRS Classifies Ozaukee as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Ozaukee Silt Loam (530E2) The NCRS Classifies Ozaukee as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Ozaukee Silt Loam (530F) The NCRS Classifies Ozaukee as Oxyaquic Hapludalfs that is moderately well drained. The potential for surface run-off is very high. Permeability is slow. Saturated hydraulic conductivity is slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

Varna Silt Loam (223C2) The NCRS Classifies Varna as Oxyaquic Argiudolls that is moderately well drained. The potential for surface run-off is high. Permeability is slow. Saturated hydraulic conductivity is very slow to moderately rapid. An intermittent perched high water table is at a depth of 2.0 foot to 3.5 foot at some time between February and April in normal years.

- G. The following is a description of potentially erosive areas associated with this project:

Potential erosive areas associated with this project will include ditches and embankments.

- H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

The entire project site within the IDOT right-of-way will involve clearing, excavation and stockpiling rough grading, final grading, preparation for seeding and plantings and excavation of trenches as the soil disturbing activities.

Embankments are constructed as part of this improvement and are sloped at 1:3 (V:H) or flatter for the permanent condition and 1:2 or flatter during staging. The length of slope varies from 0.5 ft to 7 ft.

- I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

J. The following is a list of receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

- Unnamed Tributary of Hickory Creek – located north of US 30 and west of Spencer Rd
- Unnamed Tributary of Hickory Creek - located west of Prestancia Dr
- Hickory Creek Tributary No. 2 – located east of 108th Ave
- Hickory Creek Tributary No. 1 located at the end of Cedar Ln
- Tributary A of Hickory Creek Tributary No. 1- located east of Elm St

The Unnamed Tributaries of Hickory Creek , Hickory Creek Tributary No. 1 and Hickory Creek Tributary No. 2 flow towards Hickory Creek and ultimately end up in Des Plaines River.

- Wetland Site 1 – North of US 30, west of Marley Road - impacted acreage - 0.02 of 0.23 total acreage
- Wetland Site 2 – North of US 30, north of Spencer Road - impacted acreage - 0.24 of 0.43 total
- Wetland Site 4 – North and south of US 30, west and North of Tall Grass- impacted acreage - 0.10 of 0.20

Note: The receiving waters are not impaired for suspended solids, turbidity or siltation, and the receiving waters are not listed as Biologically Significant Streams.

K. The following pollutants of concern will be associated with this construction project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II (A) (1) (a) and II (A) (3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 14 or more calendar days.

- a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following Stabilization Practices will be used for this project:

- Preservation of Mature Vegetation
- Erosion Control Blanket / Mulching

- | | |
|---|---|
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" type="checkbox"/> Sodding |
| <input type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the Stabilization Practices listed above will be utilized:

Temporary Erosion Control Seeding will be used to stabilize soils until permanent erosion control measures can be put in place. Sodding and permanent seeding will be used for permanent erosion control measure.

Erosion control blanket is specified as ditch lining for permanent or temporary seeding where velocity does not exceed 8 feet per second, on slopes where erosion is a potential problem or steeper than 3:1 and adjacent to shoulders where traffic may blow off mulch.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, and rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following Structural Practices will be used for this project:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input checked="" type="checkbox"/> Temporary Ditch Check | <input checked="" type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input checked="" type="checkbox"/> Other (specify) In-Stream Work Plans |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Aggregate Ditch | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (specify) |

Describe how the Structural Practices listed above will be utilized:

Perimeter Erosion Barrier will be constructed as shown in the erosion control plans to prevent sediment from leaving the construction site by overland flow prior to any other construction activities.

Temporary ditch checks will be constructed in the flow lines of all ditches to prevent soil erosion.

Storm Drain Inlet Filters will be used to prevent construction runoff from entering the storm sewer system.

Riprap is specified at all pipe outfalls, in high velocity or constant flow ditch lines with high velocity or where concentrated flows change direction or profile.

The Contractor will be required to develop and submit in-stream work plans for work in flowing water. Refer to the General notes on the structural plans.

Aggregate ditch lining will be specified for ditches with higher flow velocity.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction

operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- a. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Section 59-8 (Erosion and Sediment Control) in Chapter 59 (Landscape Design and Erosion Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Section 59-8 are selected for implementation or if practices are applied to situations different from those covered in Section 59-8, the technical basis for such decisions will be explained below.

- b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls.

Riprap outlet protection will be used on all outlets to ditches or streams. Inline detention will be used for all outlets to existing storm sewer systems. Permanent ditch checks will be constructed, and a net reduction of approximately 19,000 square feet of concrete median surface will be replaced with salt-tolerant sod.

4. Other Controls:

- a. Vehicle Entrances and Exits – Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s) he will use to construct and maintain them.

- b. Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
 - All products delivered to the project site must be properly labeled.
 - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
 - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
 - Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
 - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.
- c. Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
 - Perimeter Erosion Barrier
 - Temporary Seeding
 - Temporary Mulch
 - Plastic Covers
 - Soil Binders
 - Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s) he will use on the project and how they will be maintained.

- d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
- f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

None applicable

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

The Contractor must maintain in good operating condition all erosion control devices shown on the plans and as directed by the Engineer.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV (B) shall be made and retained as

part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

- D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of the incident. The resident Engineer shall then complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

- A. Spill Prevention and Control – BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.
- B. Concrete Residuals and Washout Wastes – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
 - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
 - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
 - Concrete waste solids/liquids shall be disposed of properly.
- C. Litter Management – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.
- D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site.
- E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s) he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:
- Containment
 - Spill Prevention and Control
 - Use of Drip Pans and Absorbents

- Automatic Shut-Off Nozzles
- Topping Off Restrictions
- Leak Inspection and Repair

F. Vehicle and Equipment Maintenance – On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.



Contractor Certification Statement

The Resident Engineer is to make copies of this form and every contractor and sub-contractor will be required to complete their own separate form.

Route	<u>F.A.P. 353</u>	Marked Rt.	<u>U.S. Route 30 (Lincoln Highway)</u>
Section	<u>(12 & 13) WRS-3</u>	Project No.	<u></u>
County	<u>Will</u>	Contract No.	<u>62479</u>

This certification statement is part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project; I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

Contractor

Sub-Contractor

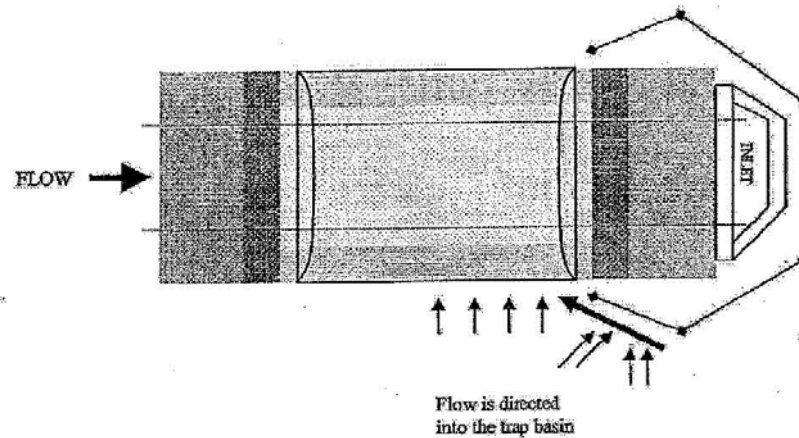
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Print Name	Signature
_____	_____
Title	Date
_____	_____
Name of Firm	Telephone
_____	_____
Street Address	City/State/ZIP










**Construction of a Sediment Trap
A Best Management Practice
Used for Jobsite Outfall Protection**

This guide documents the implementation and use of the new preferred method of jobsite outfall protection. Silt fence is not an effective protection measure, because it is not permeable enough for a major outfall. A sediment trap is only effective with a suitable quantity of water in it. For this reason, it is encouraged that sediment traps be used to protect outfalls with a drainage area greater than 4,500 square feet (~.1 Acres) and less than 216,000 square feet (~5 Acres). Above 216,000 square feet, a sediment basin should be used to drain the area, or a diversion should be constructed to divert clean water from upstream around the construction site. On most IDOT projects, there isn't enough room on state right of way for a sediment basin, so a diversion is generally the solution for large drainage areas. In locations with drainage areas between .1 and 5 acres, sediment traps should be constructed on all current and new construction projects where practical, effective immediately. Remember, this is simply a new configuration of old pay items, so nothing should need to be added to the contract. For permanent sediment traps being constructed, contact Rick Wanner in the District One headquarters, Bureau of Maintenance office for evaluation and to ensure that maintenance is informed of the trap's existence.

Sediment Trap



LEGEND

-  Ditch Check (Stone, Triangular Silt Dike, Excelsior Roll)
-  Silt Fence
-  Water's path into the trap
-  Trap basin to allow sediment to settle
-  Erosion Control Blanket and seeding (on side slope)
-  Seeding only
-  Exterior flow protection (Protecting against shear stress)

PURPOSE:

A sediment trap is a containment area where sediment-laden runoff is temporarily detained under stagnant conditions, allowing sediment to settle out before the runoff is discharged. Sediment traps are formed by excavation of a small, shallow, long basin in a low drainage area, with a ditch check on the upstream and downstream side of the trap basin. The sediment trap is an effective ditch outfall or inlet/pipe protection system for drainage areas no greater than 216,000 sq. ft. (~5 acres) and no less than 4,500 square feet (~.1 acres).

IMPLEMENTATION:

- Construct prior to wet season and construction activities.
- Locate where sediment-laden runoff enters a storm drain or watercourse.
- Sediment traps are never to be located in live streams.
- Access to the sediment trap must be available for maintenance purposes.
- Consider whether the trap is needed as a long term or a temporary practice. Use permanent (stone) or temporary (excelsior rolls, triangular silt dikes) ditch checks accordingly.

DESIGN:

- Sediment traps generally release a slow flow that may be directed into a culvert, a sewer inlet or may simply be released to another sediment trap if there is a large drainage area.
- Sediment traps must have silt fence surrounding the acceptor to ensure water does not flow into the pipe unfiltered unless the acceptor is a ditch, in which case, no additional silt fence is needed. This silt fence should be positioned such that the water may still flow from the sides of the trap into the trap basin, and if possible, the silt fence should direct water into the trap basin, on the upstream side of the second ditch check.
- A ditch check must be located on both the upstream and downstream ends of the holding trap basin. These ditch checks may be triangular silt dikes or excelsior rolls for temporary sediment traps, or stone for permanent sediment traps. The ditch check on the downstream side of the trap must be contained within the silt fence if the acceptor is a culvert. Otherwise, for outlets, the ditch check must be located on the downstream side of the perimeter barrier.
- Temporary sediment traps should be built with the timeframe of the construction job in mind, or a single construction season. Temporary traps should be constructed using either triangular silt dikes or excelsior rolls.
- If the sediment trap is to remain functional as a permanent water quality feature, it should be constructed using stone ditch checks. Permanent sediment traps must be constructed in locations out of the sub-grade of the road, and out of the clear zone. Ditch checks in permanent sediment traps must have a 2:1 slope or flatter on both the upstream and the downstream side of the ditch check.
- A sediment trap can also be a semi-permanent feature. If the ditch checks are made of excelsior rolls, they will function for a while, but will eventually break down. This allows for the construction of a trap that will remain in place after construction, but will not permanently remain in place. This may allow for establishment of vegetation as the primary filtration method in place of the ditch check without blocking water unnaturally or permanently.
- The top of ditch checks are to be at least 1-½' higher than the bottom of the holding trap basin, and should be no less than 1' higher than the water's normal flowing height. Also, ditch checks should be spaced such that the bottom of the upstream ditch check is no higher than the top of the downstream ditch check. This will depend on the slope of the ditch.

- The holding trap basin should be excavated so that the cross-section looks like a 'U' (instead of a 'V'). This U-shaped ditch discourages erosion in the middle crook of the ditch and increases the capacity of the trap.
- The trap basin shall have a capacity of no less than 3600 cubic feet per acre of drainage area. This is enough space to hold 1 inch of water per acre. See Figure 1 for standard dimensions. If the drainage area is less than 4,500 sq. ft. (.1 acre), consider using an Inlet filter or another BMP in place of the sediment trap.
- Under no circumstance shall a sediment trap or series of sediment traps cover a total drainage area of more than 5 acres. If this is the case, or an appropriate amount of land is available, a sediment basin should be constructed in place of a sediment trap.
- Stabilize any exposed soil in the sediment trap that could be subject to erosion from the flow of water, including the trap basin. A Turf Reinforcement Mat and permanent seeding works well for long term installations, but temporary seeding and/or an erosion control blanket will suffice as a temporary measure.
- An armored overflow must be constructed.
- Regardless of the type of acceptor (with the sole exception of a ditch), leave approximately 5 feet between the final ditch check and the acceptor. This allows the water flow to settle, which lowers the risk of disturbing sediment that may be in the acceptor. This gap should be protected against the effects of shear stress from the flowing water.
- On particularly steep slopes, it may be most effective to place multiple smaller sediment traps in rapid succession to cover the drainage area. In this case, it would be most cost-efficient to allow sediment traps to share ditch checks.
- Shear stress can cause sediment to be picked up by flowing water. Attention should be paid to the shear stress to ensure that the soil in the ditch before and after the sediment trap does not get eroded. These areas must be protected. See the Shear Stress page (6) for formulas and more information.

PLANS AND SPECIFICATIONS:

- The plans and specifications for sediment traps will show the following requirements:
 - Location of the sediment trap(s).
 - Size of the trap basin including width, length, and depth.
 - Minimum cross section of embankment.
 - Minimum profile through spillway.
 - Location of emergency spillway, if used.
 - Graduation and quality of stone.
 - The installation, inspection, and maintenance schedules with the responsible party identified.

INSPECTION/MAINTENANCE:

- Sediment traps are to be inspected by the resident engineer and contractor every 7 calendar days and after a storm event of ½" or greater (including snowfall) on a temporary basis. On a permanent basis, traps should be checked at least once every 2 years.
- The trap should be cleaned of silt when the trap becomes 50% filled. The material removed must be disposed of in accordance with good housekeeping practices, incorporated into the fill material, or disposed of in accordance with IEPA regulations.
- Inspect the outlet for erosion and any needed stabilization.
- Inspect the outlet for any sediment discharge and discolored water.
- If sediment is discharged or other pollutants are identified at the discharge point, other BMPs, such as sand filters, may be required to filter pollutants.
- Note that the first ditch check is primarily used to slow the water, while the second is primarily used to catch remaining sediment. Inspection of the first ditch check, therefore, is primarily a structural inspection, while the second is primarily a check for sediment clogging.

NOTES ON THE DIMENSIONS OF THE TRAP:

The volume of the trap may be calculated using the following formula (only applies on shallow slopes of 5% or less):

$$\text{Volume} = (\text{Depth of the trap}) \times (\text{Length between ditch checks}) \times (\text{Width of the ditch})$$

SEDIMENT TRAP DIMENSION MATRIX					
Depth	Length	Width	Capacity (cu. ft.)	Drainage Area Max. (sq. ft.)	Drainage Area Max. (acres)
1-1/2'	125'	10'	1,875	22,500	.52
1-1/2'	100'	10'	1,500	18,000	.417
1-1/2'	75'	10'	1,125	13,500	.3125
1-1/2'	50'	10'	750	9,000	.21
1-1/2'	25'	10'	375	4,500	.1
2'	100'	10'	2,000	24,000	.55
2'	80'	10'	1,600	19,000	.44
2'	60'	10'	1,200	14,500	.33
2'	40'	10'	800	9,600	.22
2'	30'	10'	600	7,250	.17
2'	25'	10'	500	6,000	.14

Figure 1

For reference, 1 Acre ~ 43200 sq. ft.

Shear Stress

STRAIGHT SECTIONS OF DITCHES

$$\tau_d = \gamma(dS)$$

where

τ_d = maximum shear stress, lb/ft² (Pa)
 γ = unit weight of water, 62.4 lb/ft³ (9810 N/m³)
 d = maximum depth of flow, ft (m)
 S = average bed slope or energy slope, ft/ft (m/m)

BENDS IN DITCHES

Flow around a channel bend imposes higher shear stresses on the channel boundaries. The maximum shear stress in a bend is a function of the radius of curvature and the bottom width of the channel and is given by:

$$\tau_b = K_b \tau_d$$

where

τ_b = maximum shear stress in a bend, lb/ft² (Pa)
 $K_b = 2.38 - 0.206 \left(\frac{R_c}{B} \right) + 0.0073 \left(\frac{R_c}{B} \right)^2$

where

K_b = bend coefficient - function of R_c/B
 R_c = radius to centerline of channel, ft (m)
 B = bottom width of channel, ft (m)

To determine which BMP to use to protect the ditch, calculate the Shear Stress and compare to the following values:

- < 3 psf (147 Pa) → Erosion Control Blanket and Seeding
- < 8 psf (392 Pa) → Turf Reinforcement Mat and Seeding
- > 8 psf (392 Pa) → Stone lining

RELEVANT PAY ITEMS:

- EARTH EXCAVATION
- PERIMETER EROSION BARRIER
- Stone size IDOT RR-4
- ROCKFILL *CA 1*
- TEMPORARY DITCH CHECKS
- TEMPORARY EROSION CONTROL SEEDING or SEEDING, CLASS 2A
- TEMPORARY EROSION CONTROL BLANKET