ALLAMAKEE Co. HMA PAVEMENT WIDENING WITH HMA RESURFACING STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03

LETTING DATE 12-17-2019

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

ALLAMAKEE COUNTY

HMA PAVEMENT WIDENING WITH HMA RESURFACING

From 10th Ave NW in Waukon to
South Rd in Lansing

SCALES: As Noted

REVISIONS

TOTAL 56
PROJECT IDENTIFICATION NUMBER
15-03-009-020
PROJECT NUMBER
STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03
R.O.W. PROJECT NUMBER

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

INDEX OF SHEETS

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
1	STA 15+50.0 to STA 109+03.45	9,353.45	1.77
	STA EQ STA 109+03.45 BACK= STA 109+36.09 AHEAD		
	STA 109+36.09 to STA 171+90.99	6,254.90	1.18
	STA EQ STA 171+90.99 BACK= STA 171+90.39 AHEAD		
	STA 171+90.39 to STA 253+29.50	8,139.11	1.54
	STA EQ STA 253+29.50 BACK= STA 253+08.76 AHEAD		
	STA 253+08.76 to STA 308+16.60	5,507.84	1.04
	STA EQ STA 308+16.60 BACK= STA 308+17.52 AHEAD		
	STA 308+17.52 to STA 326+03.13	1,785.61	0.34
	STA EQ STA 326+03.13 BACK= STA 326+03.71 AHEAD		
	STA 326+03.71 to STA 371+12.74	4,509.03	0.85
	STA EQ STA 371+12.74 BACK= STA 371+21.06 AHEAD		
	STA 371+21.06 to STA 470+76.84	9,955.78	1.89
	STA EQ STA 470+76.84 BACK= STA 471+05.97 AHEAD		
	STA 471+05.97 to STA 752+66.35	28,160.38	5.33
	STA EQ STA 752+66.35 BACK= STA 752+20.79 AHEAD		
	STA 752+20.79 to STA 802+25.00	5,004.21	0.95
	TOTAL	78,670.31	14.90

DESIGN DATA RURAL

2020	AADT	1,800	V.P.D.
2040	AADT	1,900	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		9	%
Total Design ESALs		499,320	

LICENSED PROFESSIONAL ENGINEER
MARY K. KELLY
17552
IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly licensed Professional Engineers under the laws of the State of Iowa.

Mary K Kelly 10/1/19
Signature Date

MARY K. KELLY

My license renewal date is December 31, 2020

Pages or sheets covered by this seal: A.1-A.2, B.1-B.3, C.1-C.21, D.1-D.28 & J.1-J.2

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER A.1

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STA EQ
STA 308+16+6 BK=
STA 308+17.52 AH

STA EQ
STA 326+03.13 BK=
STA 326+03.71 AH

STA EQ
STA 371+12.74BK=
STA 371+21.06 AH

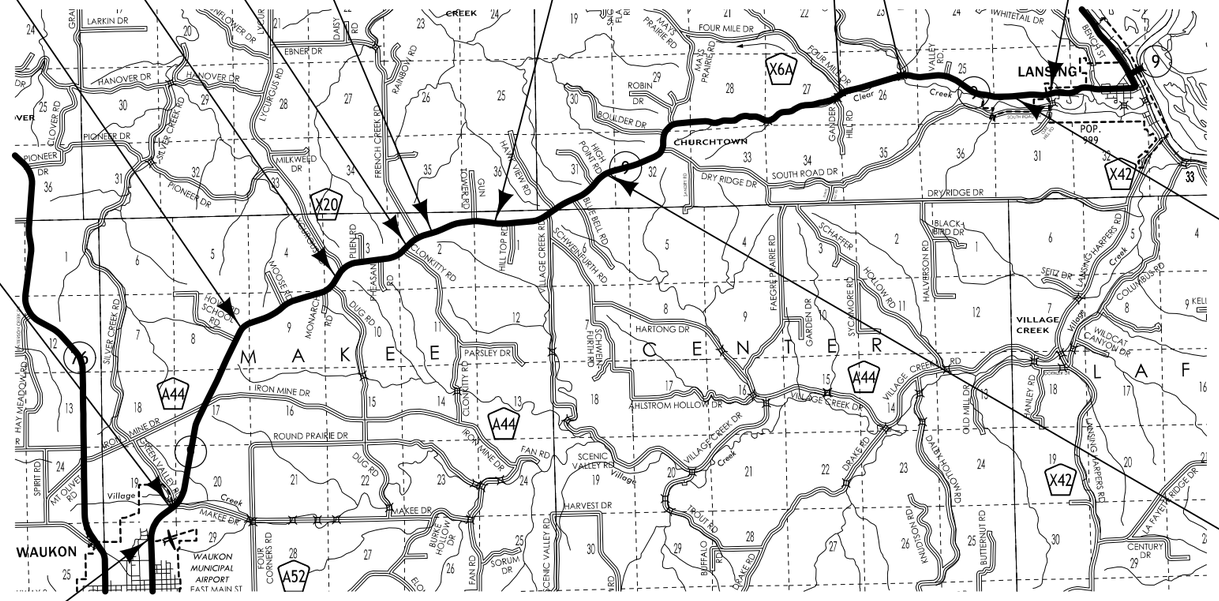
STA 802+25
END PROJECT
(near South Rd)

STA EQ
STA 253+29.5 BK=
STA 253+08.76 AH

FHWA 13501

FHWA 13511

STA EQ
STA 171+90.99 BK=
STA 171+90.39 AH



STA EQ
STA 109+03.45 BK=
STA 109+36.09 AH

STA EQ
STA 752+66.35 BK=
STA 752+20.79 AH

STA EQ
STA 470+76.84 BK=
STA 471+05.97 AH

STA 15+50.0
BEGIN PROJECT
(near 10th Ave NW)

LOCATION MAP SCALE
0 1 2 3
Miles

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER A.2

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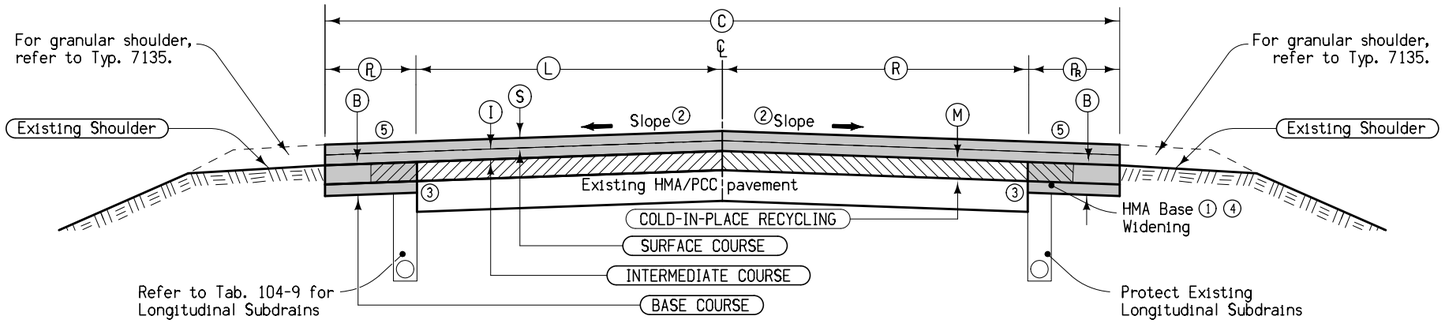
MK-1

Design Rates	
Item	Rate
Surface Course	147 lbs./cu. ft.
Intermediate Course	147 lbs./cu. ft.
Base Course	145 lbs./cu. ft.
Tack Coat	0.05 gal./sq. yd.
Binder Content	6.0% Binder
Foam Content	0.11% Agent



Notes:

① HMA base widening shall be performed prior to Cold-in-Place recycling. The top 3" of the newly placed base widening unit shall be included in the Cold In-Place recycling operation.

② Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping.

③ Provide a vertical edge similar to what can be achieved with a milling machine. Incidental to Class 13 Excavation.

④ Suspend base widening at paved side roads and at the turn lane. Refer to Typicals 2620 and 7149 for additional information.

⑤ Paved shoulder cross slope shall match mainline cross slope except in super elevated curves. See PV-301 for additional information.

⑥ Surface and intermediate quantities are shown in Tabulation 100-25. Base quantities area shown in Tabulation 112-9.

Location		Estimated Quantities									
Station To Station		(S) Inches	(I) Inches	(C) Feet	(L) Feet	(R) Feet	(M) Inches	(P_L) Feet	(P_R) Feet	(B) Inches	Remarks
											Begin Project/N-3 notch
16+25.0	21+50.0	1.5	1.5	50.0	24.0	12.0	3	4.0	10.0	7	Replace 10' RT
21+50.0	32+00.0	1.5	1.5	44.0	24.0	12.0	3	4.0	4.0	7	Climb LT
32+00.0	38+60.0	1.5	1.5	44.0-32.0	24.0-12.0	12.0	3	4.0	4.0	7	Climb taper
38+60.0	70+20.0	1.5	1.5	32.0	12.0	12.0	3	4.0	4.0	7	
70+20.0	75+00.0	1.5	1.5	32.0-44.0	12.0	12.0-24.0	3	4.0	4.0	7	Climb taper
75+00.0	113+00.0	1.5	1.5	44.0	12.0	24.0	3	4.0	4.0	7	Climb RT
113+00.0	119+60.0	1.5	1.5	44.0-32.0	12.0	24.0-12.0	3	4.0	4.0	7	Climb taper
119+60.0	501+00.0	1.5	1.5	32.0	12.0	12.0	3	4.0	4.0	7	
											See MK-2
517+60.0	518+80.0	1.5	1.5	32.0-44.0	12.0-24.0	12.0	3	4.0	4.0	7	Climb taper
518+80.0	520+00.0	1.5	1.5	44.0	24.0	12.0	3	4.0	4.0	7	Climb LT
520+00.0	554+00.0	1.5	1.5	50.0	24.0	12.0	3	4.0	10.0	7	Replace and new 10' RT
554+00.0	555+00.0	1.5	1.5	44.0	24.0	12.0	3	4.0	4.0	7	Climb LT
555+00.0	560+00.0	1.5	1.5	46.0	24.0	12.0	3	6.0	4.0	7	Replace 6' LT
560+00.0	644+20.0	1.5	1.5	44.0	24.0	12.0	3	4.0	4.0	7	Climb LT
644+20.0	650+80.0	1.5	1.5	44.0-32.0	24.0-12.0	12.0	3	4.0	4.0	7	Climb taper
650+80.0	769+60.0	1.5	1.5	32.0	12.0	12.0	3	4.0	4.0	7	
769+60.0	771+00.0	1.5	1.5	32.0-31.0	12.0-15.0	12.0	3	4.0-0	4.0	7	Transisition to Urban/MK-2

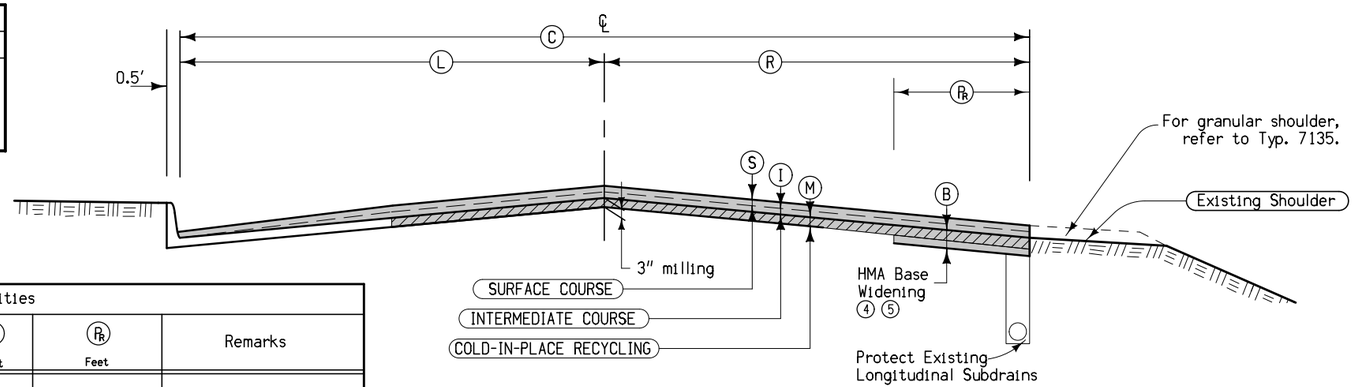
TYPICAL CROSS SECTION COLD IN-PLACE RECYCLING HMA RESURFACING WITH BASE WIDENING

MK-2

HMA Paving

Pavement Scarification

Design Rates	
Item	Rate
Surface Course	147 lbs./cu. ft.
Intermediate Course	147 lbs./cu. ft.
Tack Coat	0.05 gal./sq. yd.
Binder Content	6.0% Binder



Notes:

① Section may be modified as directed by the Engineer through areas of special shaping.

② Pavement scarification shall continue through intersections.

③ Contractor shall use care near intakes, manholes and other structures. Any damage to structures as a result of contractor negligence shall be replaced or repaired by the contractor at no cost to the DOT.

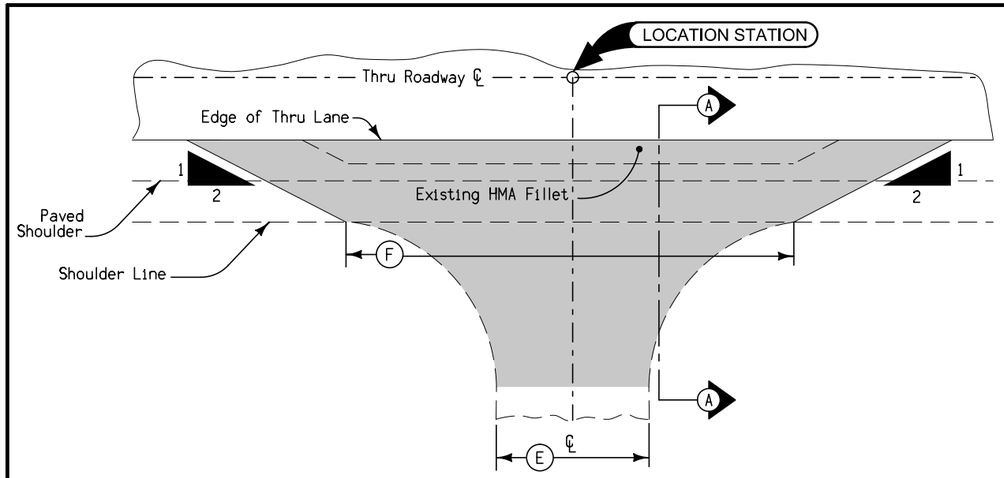
④ Quantities are shown in Tabulation 100-25.

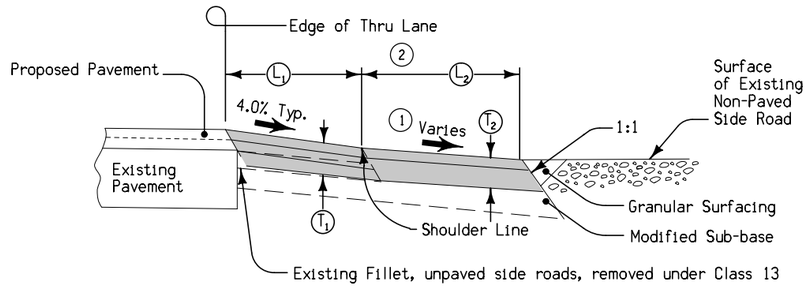
⑤ Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping.

Location		Estimated Quantities						
Station To Station		(S) Inches	(I) Inches	(C) Feet	(L) Feet	(R) Feet	(P_R) Feet	Remarks
								See MK-1
501+00.0	514+00.0	1.5	1.5	36.0	20.0	16.0	8.0 (on LT)	Curb LT
514+00.0	517+60.0	1.5	1.5	36.0-54.0	16.0-28.0	20.0	8.0	Curb RT
								See MK-1
771+00.0	800+15.0	1.5	1.5	31.0	15.0	16.0	4.0	Curb LT
800+15.0	800+85.0	1.5	1.5	31.0-30.0	15.0	16.0-15.0	4.0-0	Curb LT
								End project/N-3 notch

TYPICAL PAVEMENT SCARIFICATION & HMA RESURFACING URBAN SECTION

7149
Modified





SECTION A-A

Special shaping of existing surface prior to placement of fillet or fillet extension may be requested by the Engineer and will be incidental to other work on the project.

(1) Match existing slope.

(2) At skewed sideroads, the L distances are measured along sideroad centerline.

(T1) = 1.5" Surface Course
1.5" Intermediate Course
3" Base Course

(T2) = 1.5" Surface Course
4.5" Intermediate Course

100% STATE

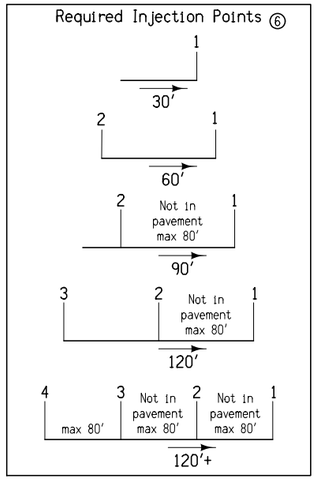
Station Location	(F) Feet	(T1) Inches	(L1) Feet	Remarks
15+50.0	40.0	6	10.0	10th Ave NW
44+72.3	155.0	6	10.0	Makee Dr NE
44+72.3	65.0	6	10.0	Green Valley Rd NW
52+85.0	60.0	6	10.0	Radio Park Ln
119+13.5	125.0	6	10.0	A44/Iron Mine Dr
119+13.5	125.0	6	10.0	A44/Iron Mine Dr
169+36.6	50.0	6	10.0	Howard Rd
211+55.0	65.0	6	10.0	Moose Rd
248+02.7	105.0	6	10.0	Dug Rd
260+45.2	145.0	6	10.0	X20/Lycurgus Rd
276+14.8	90.0	6	10.0	Plein Rd
289+54.7	90.0	6	10.0	Pheasant Rd
307+20.7	120.0	6	10.0	Clonkitty Rd
320+20.1	115.0	6	10.0	French Creek Dr
361+41.6	80.0	6	10.0	Gun Tower Rd
387+84.9	105.0	6	10.0	Hilltop Rd
413+61.4	95.0	6	10.0	Village Creek Rd
419+21.5	75.0	6	10.0	Hawk View Rd
434+70.5	75.0	6	10.0	Bluebell Rd
452+05.2	85.0	6	10.0	High Point Rd
506+70.9	75.0	6	10.0	Dry Ridge Dr
518+891	65.0	6	10.0	Bolder Dr
526+95.0	90.0	6	10.0	X6A/Mays Prairie Rd
646+53.2	60.0	6	10.0	Gander Hill Rd
652+30.9	95.0	6	10.0	X6A/ Four Mile Dr
697+25.0	105.0	6	10.0	Gruber Ridge Rd
726+38.4	70.0	6	10.0	Valley Rd
755+39.0	50.0	6	10.0	Driftwood Ln
756+88.0	30.0	6	10.0	Creek View Ln
759+31.0	50.0	6	10.0	Clear Creek Blvd
801+45.2	45.0	6	10.0	South Rd

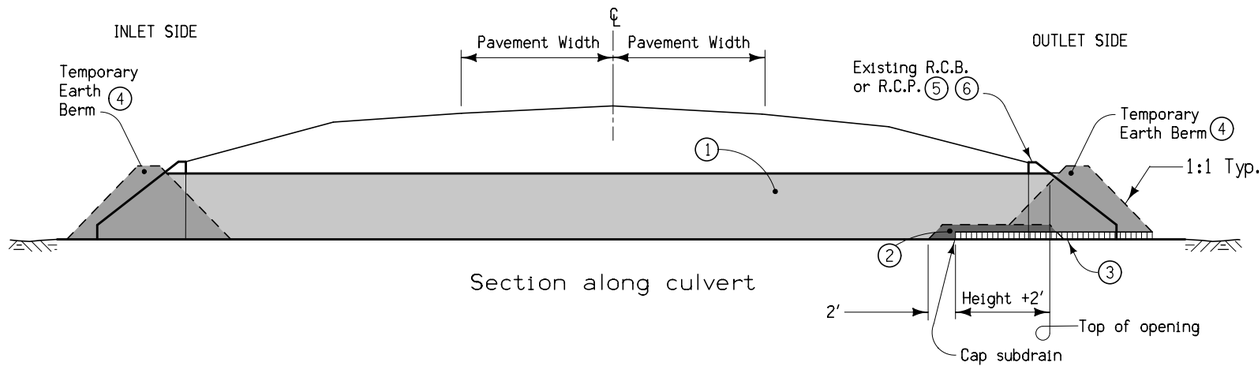
100% COUNTY

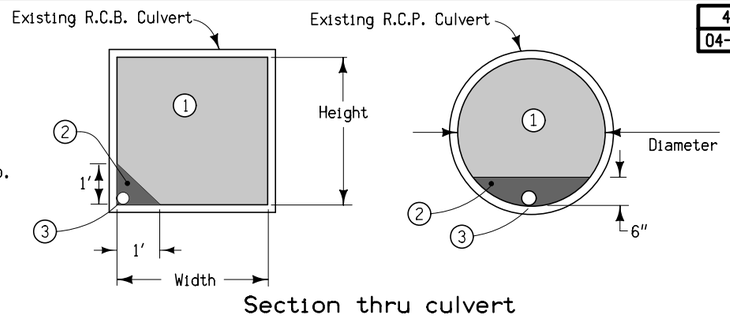
Station Location	(E) Feet	(T2) Inches	(L2) Feet	Remarks
44+72.3	28.0	6	40.0	Makee Dr NE
119+13.5	28.0	6	40.0	A44/Iron Mine Dr
248+02.7	28.0	6	40.0	Dug Rd
307+20.7	28.0	6	40.0	Clonkitty Rd
320+20.1	28.0	6	40.0	French Creek Rd
413+61.4	28.0	6	40.0	Village Creek Rd
506+70.9	28.0	6	40.0	Dry Ridge Dr
526+95.0	28.0	6	40.0	X6A/Mays Prairie Rd
646+53.2	28.0	6	40.0	Gander Hill Rd
652+30.9	28.0	6	40.0	X6A/ Four Mile Dr
697+25.0	28.0	6	40.0	Gruber Ridge Rd

FILLET EXTENSION FOR NON-PAVED SIDE ROADS

4315
04-15-08



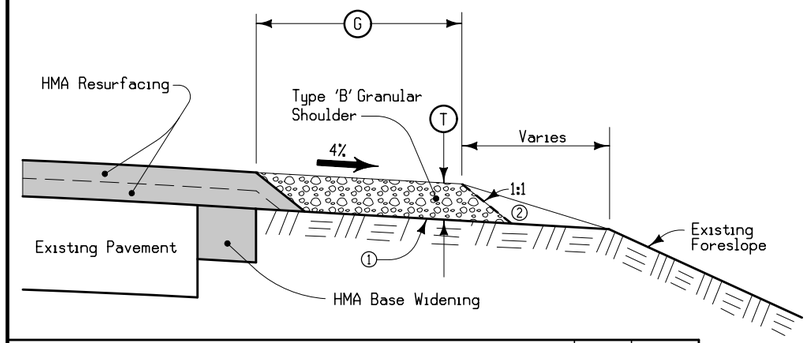




① Flowable Mortar.
② Granular Backfill.
③ 4″ subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2′ plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2′. Subdrain and granular backfill are incidental to flowable mortar.
④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
⑤ Removal of headwalls may be required.
⑥ Outlet shall be filled first. See injection point detail for additional information.

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Rectangular structures less than 8′ in either height or width. Circular structures less than 10′ Dia.)

7135
Modified



LOCATION				T ② Inches	G Feet
ROAD IDENTIFICATION	STATION TO STATION		SIDE		
IA 9					
	16+50.0	21+50.0	RT	6	0
	21+50.0	514+00.0	RT	6	6.0
	514+00.0	517+60.0	RT	6	2.0
	517+60.0	554+00.0	RT	6	0
	554+00.0	800+15.0	RT	6	6.0
	800+15.0	800+85.0	RT	6	6.0-10.0
	16+50.0	501+00.0	LT	6	6.0
	501+00.0	514+00.0	LT	6	2.0
	514+00.0	555+00.0	LT	6	6.0
	555+00.0	560+00.0	LT	6	4.0
	560+00.0	769+60.0	LT	6	6.0
	769+60.0	771+00.0	LT	6	6.0-10.0

Notes:
① Existing shoulder surface to be shaped to a uniform cross slope prior to placing granular shoulder material. Shape to ensure the thickness of the granular shoulder material is not less than the thickness of the resurfacing.
② Nominal thickness adjusted to account for existing slopes.
③ Placing granular shoulder material in advance of Class 13 Excavation for Widening and Base Widening shall be performed as part of the 'Granular Shoulders, Type B' bid item.

TYPICAL SECTION FOR TYPE 'B' GRANULAR SHOULDER
ADJACENT TO HOT MIX ASPHALT RESURFACING

100-1D
10-18-05

PROJECT DESCRIPTION

This project includes cold-in-place recycling and resurfacing of IA 9 in Allamakee county from 10th Ave NW in Waukon to South Road in Lansing in Allamakee county. The existing 24 foot average width HMA will be widened four feet on each side. The pavement will then be cold-in-place recycled three inches and have three inches of new HMA added. Existing pipes will be extended, longitudinal subdrains will be added and low tension cable guardrail will be updated. Centerline and shoulder rumble strips will also be included in this project. Shoulder widening work will be paid under Division 2 work. Allamakee county will extend unpaved sideroad radii under Division 3 work.

262-6
10-18-05

UTILITIES
(NOT A POINT 25 PROJECT)

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

100-1C
04-17-12

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: 100% DOT- Project #STP-009-9(71)--2C-03
Division 2: 100% DOT- Project #HSIPX-009-9(88)--3L-03
Division 3: 100% Allamakee County

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
1	2101-0850002	CLEARING AND GRUBBING	UNIT	934					934					
2	2102-2625000	EMBANKMENT-IN-PLACE	CY	909.6					909.6					
3	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	CY	266.5					266.5					
4	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY		603.0				603.0					
5	2115-0100000	MODIFIED SUBBASE	CY	286.1		475.2			761.3					
6	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON		37,055.5				37,055.5					
7	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA		1,537.40				1,537.40					
8	2125-2225050	RESHAPING DITCHES	STA	39.50					39.50					
9	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	316.0					316.0					
10	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	49					49					
11	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	429.1	11,740.8	950.4			13,120.3					
12	2213-6745700	REMOVAL OF FLUMES	EACH	7					7					
13	2214-5145150	PAVEMENT SCARIFICATION	SY	6,382.8					6,382.8					
14	2303-1031750	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON	294.00	28,154.00				28,448.00					
15	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX	TON	27,280.00		780.40			28,060.40					
16	2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, NO	TON	27,211.00		260.10			27,471.10					
		SPECIAL FRICTION REQUIREMENT												
17	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	3,287.00	1,689.20	62.50			5,038.70					
18	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1.00					1.00					
19	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY	EACH	79980					79980					
		VOIDS (FORMULA - BY PAY FACTOR)												
20	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD	EACH	79980					79980					
		VOIDS (FORMULA - BY PAY FACTOR)												
21	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	3,199.5					3,199.5					
22	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT	EACH	75937					75937					
		SMOOTHNESS (BY SCHEDULE)												
23	2318-1001100	COLD IN-PLACE RECYCLED ASPHALT PAVEMENT	SY	299,640.0					299,640.0					
24	2318-1001220	ASPHALT STABILIZING AGENT (FOAMED ASPHALT)	TON	988.8					988.8					
25	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00					1.00					
26	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	999.4					999.4					
27	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	2					2					
28	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	1					1					
29	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	3					3					
30	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36	EACH	34					34					
		IN.												
31	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.	EACH	3					3					
32	2416-1160018	CULVERT, CONCRETE ENTRANCE PIPE, 18 IN. DIA.	LF	50					50					
33	2416-1240036	CULVERT, 3000D CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	42					42					
34	2416-1240048	CULVERT, 3000D CONCRETE ROADWAY PIPE, 48 IN. DIA.	LF	24					24					
35	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.	LF	258					258					
36	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN.	LF	30					30					
37	2417-0225018	APRONS, METAL, 18 IN. DIA.	EACH	139					139					
38	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	17					17					
39	2417-0225030	APRONS, METAL, 30 IN. DIA.	EACH	9					9					
40	2422-0360018	APRONS, UNCLASSIFIED, 18 IN. DIA.	EACH	1					1					
41	2422-1723018	CULVERT, UNCLASSIFIED ROADWAY PIPE, 18 IN. DIA.	LF	50					50					
42	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	35,396.5					35,396.5					
43	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	161					161					
44	2505-4008130	REMOVAL OF CABLE GUARDRAIL	LF	7,120.0					7,120.0					
45	2505-6000111	HIGH TENSION CABLE GUARDRAIL	LF	6,330.0					6,330.0					
46	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR	EACH	16					16					
47	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	EACH	1					1					
48	2506-4984000	FLOWABLE MORTAR	CY	5.7					5.7					
49	2507-3250005	ENGINEERING FABRIC	SY	698.0					698.0					
50	2507-6800061	REVETMENT, CLASS E	TON	396.0					396.0					
51	2507-8029000	EROSION STONE	TON	162.0					162.0					
52	2510-6745850	REMOVAL OF PAVEMENT	SY	3,044.4					3,044.4					
53	2512-1725206	CURB AND GUTTER, P.C. CONCRETE, 2.0 FT.	LF	55.0					55.0					
54	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	1,213.3					1,213.3					
55	2520-3350015	FIELD OFFICE	EACH	1					1					
56	2526-8285000	CONSTRUCTION SURVEY	LS	1.00					1.00					
57	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	9,883.60					9,883.60					
58	2528-8445110	TRAFFIC CONTROL	LS	1.00					1.00					
59	2528-8445113	FLAGGERS	EACH						See Proposal					
60	2528-8445115	PILOT CARS	EACH						See Proposal					
61	2529-8174010	SUBBASE (PATCHES)	SY	215.0					215.0					

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: 100% DOT- Project #STP-009-9(71)--2C-03
Division 2: 100% DOT- Project #HSIPX-009-9(88)--3L-03
Division 3: 100% Allamakee County

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
62	2529-8174050	PATCH SUBDRAIN	EACH	17					17					
63	2533-4980005	MOBILIZATION	LS	1.00					1.00					
64	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	1,412.2					1,412.2					
65	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)	GAL	1,530.8					1,530.8					
66	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA	706.1					706.1					
67	2601-2636015	NATIVE GRASS SEEDING	ACRE	0.3					0.3					
68	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	1.2					1.2					
69	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	1.5					1.5					
70	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	2,640.0					2,640.0					
71	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	2,640.0					2,640.0					
72	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	252.0					252.0					
73	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	1,936.0					1,936.0					
74	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	7,832.0					7,832.0					
75	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	9,768.0					9,768.0					
76	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1					1					
77	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1					1					

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850002	**CLEARING AND GRUBBING**
		Refer to Tabulation 110-17 for additional information.
-	-	-
2	2102-2625000	**EMBANKMENT-IN-PLACE**
		Refer to Tabulations 104-13 and 104-13A for additional information. Quantity is for fill for pipe extensions. The Contractor shall supply all fill material needed. Removal of small brush or debris in these area shall be considered incidental to this bid item.
		Material obtained from item "Excavation, Class 13, Widening" may be used for this work.
		Overhaul will not be paid for this item.
-	-	-
3	2102-2713070	**EXCAVATION, CLASS 13, ROADWAY AND BORROW**
		Refer to Tabulation 107-24. Item is for excavation of surplus material at existing cable guardrail locations.
-	-	-
4	2105-8425005	**TOPSOIL, FURNISH AND SPREAD**
		All disturbed areas not covered by concrete, asphalt, gravel or sod shall have a minimum of 4 inches of topsoil. The Contractor shall provide all the required topsoil. Topsoil from stripping and approved by the Engineer for placement may also be used. Stripping of topsoil for placement of fill is considered incidental to this bid item. Refer to Tabulation 103-10 for additional information.
-	-	-
5	2115-0100000	**MODIFIED SUBBASE**
		Refer to Tabulation 100-25.
-	-	-
6	2121-7425020	**GRANULAR SHOULDERS, TYPE B**
		Refer to Typical 7135 and Tabulation 112-9 for additional information.
-	-	-
7	2123-7450000	**SHOULDER CONSTRUCTION, EARTH**
		- -
-	-	-
8	2125-2225050	**RESHAPING DITCHES**
		Ditches shall be graded to a minimum of 1% to provide positive drainage, as determined by Engineer in the field. Refer to Tabulation 300-1 for locations.
-	-	-
9	2212-5070310	**PATCHES, FULL-DEPTH REPAIR**
10	2212-5070330	**PATCHES BY COUNT (REPAIR)**
		Refer to Tabulation 102-6C for additional information.
-	-	-

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
11	2213-2713300	**EXCAVATION, CLASS 13, FOR WIDENING**
		Refer to Typicals MK-1 through MK-2 and 7149 and Tabulation 100-25 and 112-9 for additional information. Excavation not used on the project shall become property of the Contractor and removed from the project.
		Overhaul will not be paid for this item.
		Excavate granular roadway in order to construct extended HMA fillets. Item will be paid at plan quantity for Division 3.
-	-	-
12	2213-6745700	**REMOVAL OF FLUMES**
		Refer to Tabulation 110-2 for additional information.
-	-	-
13	2214-5145150	**PAVEMENT SCARIFICATION**
		Refer to Typicals MK-1 through MK-2 and Tabulations 100-25 and 102-16 for additional information.
-	-	-
14	2303-1031750	**HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX**
15	2303-1032500	**HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX**
16	2303-1033500	**HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, NO SPECIAL FRICTION REQUIREMENT**
17	2303-1258283	**ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC**
18	2303-6911000	**HOT MIX ASPHALT PAVEMENT SAMPLES**
		Refer to Typicals MK-1, MK-2, and 7149 and Tabulation 100-25 and 112-9 for additional information. Estimated project quantities include an additional 5% for irregularities.
		Division 2 and 3 will be paid at plan quantity.
-	-	-
19	2303-7000610	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)**
20	2303-7000620	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)**
		Estimated 0.5 times the tons of HMA.
-	-	-
21	2315-8275025	**SURFACING, DRIVEWAY, CLASS A CRUSHED STONE**
		Refer to Tabulations 100-25 and 102-3 for additional information.
-	-	-
22	2317-7000120	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)**
		Estimated at 0.24 times the square yards of surface paving.
-	-	-
23	2318-1001100	**COLD IN-PLACE RECYCLED ASPHALT PAVEMENT**
24	2318-1001220	**ASPHALT STABILIZING AGENT (FOAMED ASPHALT)**
		Refer to Typicals MK-1 through MK-2 and Tabulation 100-25 for additional information. Foamed asphalt shall be PG 52-34S.
-	-	-
25	2401-6745650	**REMOVAL OF EXISTING STRUCTURES**
		Refer to Tabulations 110-2 and 110-9 for additional information.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
26	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT
		Refer to Tabulations 104-13 and 104-13A for additional information.
		Silt inside the existing culverts shall be removed to the extent necessary for positive flowline creation.
-	-	-
27	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.
28	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
29	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.
30	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.
31	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.
32	2416-1160018	CULVERT, CONCRETE ENTRANCE PIPE, 18 IN. DIA.
33	2416-1240036	CULVERT, 3000D CONCRETE ROADWAY PIPE, 36 IN. DIA.
34	2416-1240048	CULVERT, 3000D CONCRETE ROADWAY PIPE, 48 IN. DIA.
35	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.
36	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN.
37	2417-0225018	APRONS, METAL, 18 IN. DIA.
38	2417-0225024	APRONS, METAL, 24 IN. DIA.
39	2417-0225030	APRONS, METAL, 30 IN. DIA.
40	2422-0360018	APRONS, UNCLASSIFIED, 18 IN. DIA.
41	2422-1723018	CULVERT, UNCLASSIFIED ROADWAY PIPE, 18 IN. DIA.
		Refer to Tabulations 104-13, 104-13A and 110-2 for additional information.
-	-	-
42	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.
43	2502-8221306	SUBDRAIN OUTLET, DR-306
		Refer to Typicals MK-1, MK-2 and Tabulation 104-9 for additional information.
		Restoration of site is also incidental to outlet installation.
-	-	-
44	2505-4008130	REMOVAL OF CABLE GUARDRAIL
		Refer to Tabulations 110-7B and 110-13 for additional information.
-	-	-
45	2505-6000111	HIGH TENSION CABLE GUARDRAIL
46	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR
47	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT
		Refer to Tabulation 108-9A for additional information. Spare parts kit shall include a tension meter.
		Deliver tension meter to Joel Monroe, phone 563-880-0084.
-	-	-
48	2506-4984000	FLOWABLE MORTAR
		Refer to Typical 4315 and Tabulation 110-9. To be used to fill existing culvert at STA 517+50.0.
		Do not fill existing outlet box with mortar other than to facilitate new drainage to newly installed pipe out letting box.
-	-	-
49	2507-3250005	ENGINEERING FABRIC
50	2507-6800061	REVETMENT, CLASS E
51	2507-8029000	EROSION STONE
		Refer to Tabulation 100-23 for additional information.
-	-	-
52	2510-6745850	REMOVAL OF PAVEMENT
		Refer to Tabulation 110-1 for additional information.
-	-	-
53	2512-1725206	CURB AND GUTTER, P.C. CONCRETE, 2.0 FT.
		Refer to Tabulation 112-4 for additional information.
-	-	-
54	2515-6745600	REMOVAL OF PAVED DRIVEWAY
		Refer to Tabulation 110-8 for additional information.
-	-	-
55	2520-3350015	FIELD OFFICE
		- -
-	-	-
56	2526-8285000	CONSTRUCTION SURVEY
		- -
-	-	-
57	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED
		Refer to Tabulation 108-22 for additional information. Final pavement markings shall be placed a minimum of 30 days after final HMA placement.
-	-	-
58	2528-8445110	TRAFFIC CONTROL
		Refer to Sheet J.1 for additional information.
-	-	-
59	2528-8445113	FLAGGERS
		- -
-	-	-
60	2528-8445115	PILOT CARS
		- -
-	-	-
61	2529-8174010	SUBBASE (PATCHES)
62	2529-8174050	PATCH SUBDRAIN
		Refer to Tabulation 102-6C for additional information.
-	-	-
63	2533-4980005	MOBILIZATION
		- -
-	-	-

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
64	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE
65	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)
66	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE
		Refer to Tabulation 112-10 for additional information.
-	-	-
67	2601-2636015	NATIVE GRASS SEEDING
		- -
-	-	-
68	2601-2636043	SEEDING AND FERTILIZING (RURAL)
		- -
-	-	-
69	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING
		- -
-	-	-
70	2602-0000030	SILT FENCE FOR DITCH CHECKS
		Refer to Tabulation 110-18 for additional information. This item includes estimated locations for placement of "Silt Fence for Ditch Checks" to address possible erosion encountered during construction.
		Verify the specific locations with Engineer prior to placement.
-	-	-
71	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS
		This item is included for "Silt Fence and Silt Fence for Ditch Check Removal", including removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth.
-	-	-
72	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK
		This item is included for clean-out and repair of "Silt Fence and Silt Fence for Ditch Checks" installed for the project. Estimated at 10% of "Silt Fence and Silt Fence for Ditch Check" quantities.
-	-	-
73	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.
74	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.
75	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
		Refer to Tabulation 100-19 for additional information. Verify specific locations with Engineer prior to placement. Quantity includes an additional 10%. Silt Fence may be substituted at no additional cost to the contracting authority at the discretion of the Engineer.
-	-	-
76	2602-0010010	MOBILIZATIONS, EROSION CONTROL
		- -
-	-	-
77	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL
		- -
-	-	-

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-351	10-15-19	High Tension Cable Guardrail
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-121	10-17-17	Connected Pipe Joints
DR-122	10-18-16	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
DR-201	10-16-18	Concrete Aprons
DR-203	04-21-15	Metal Pipe Aprons and Beveled Ends
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
DR-621	04-18-17	Pipe Extension
DR-651	04-18-17	Unclassified Pipe Culvert
EC-201	10-15-19	Silt Fence
EC-301	10-18-16	Rock Erosion Control (REC)
EC-502	04-21-15	Seeding in Rural Areas
EW-105	04-21-15	Reshaping Slopes and Ditches
EW-501	10-20-15	Rural Entrance
EW-503	10-20-15	Side Road Grading
PM-110	10-16-18	Line Types
PM-120	10-21-14	Stop Lines and Islands
PM-221	10-18-16	Climbing Lane
PM-420	10-15-19	Two-Lane Roadway with no Turn Lanes (One-Way Stop Condition)
PM-520	10-15-19	Two-Lane Roadway with no Turn Lanes (Two-Way Stop Condition)
PR-140	04-21-15	Subbase Patches
PR-201	10-21-14	Runouts for Resurfacing
PR-202	10-21-14	Notches for Resurfacing (with or without Runout)
PV-12	04-19-16	Milled Shoulder Rumble Strips
PV-13	10-17-17	Milled Centerline Rumble Strips
PV-102	10-18-16	PCC Curb Details
PV-202	04-16-13	Hot Mix Asphalt Resurfacing
PV-203	10-15-13	HMA Base Widening
PV-301	04-19-11	Superelevation Details Two Lane Roadway
SI-881	04-16-19	Special Signs for Workzones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-213	10-15-19	Lane Closure with Flaggers
TC-214	10-15-19	Lane Closure with Flaggers for use with Pilot Car
TC-282	10-15-19	Uneven Lanes

BD-1

CULTURAL RESOURCES

The Contractor shall avoid any ground disturbance and achieve low project vibration levels when working near these properties:

Allamakee County Poor Farm Cemetery- near 877 Hwy 9
St. Mary's Church Cemetery- 1831 Lycurgus Rd
Landmark Inn- 1172 Hwy 9
Marsden on the Ridge- 1066 Hwy 9
Lansing Ridge Cemetery-1353 Hwy 9
Gethsemane Capel Cemetery- 2212 Main St

262-4
04-16-13

AUTOMATIC TRAFFIC RECORDER

Automatic Traffic Recorder (ATR) installation is located within this project's construction limits (STA 789+90). Notify the Iowa DOT's Transportation Data Office (telephone number 515-239-1197) a minimum of 7 days prior to working near the ATR installation. Transportation Data personnel will locate and mark the ATR one time. Treat these ATR systems similar to other public utilities. The Contractor is responsible for paying for unapproved damage they have caused to the ATR system.

281-2
10-15-13

INDIVIDUAL STORM WATER PERMIT

This project is regulated by the requirements of Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) permit, Permit No. ##-##-#-##. A copy of this permit is available from the Iowa DOT Office of Contracts upon request. Co-permittee certification statement requirements from Standard Specifications Section 2602 apply.

281-3
10-17-17

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: undisturbed foreslopes and ditches will act as vegetated buffers, silt fence placed downstream of disturbed areas in ditches where drainage leaves the ROW and at roadway culverts.

111-25
10-18-11

INDEX OF TABULATIONS

100-1U
Modified

UTILITIES

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Jim Cooper
Waukon (Water)
(563)419-4213
cws@sbtek.net

110-13
04-20-10

DELIVERY AND STOCKPILING

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks
Guardrail posts			Waukon DOT shop	Joel Monroe, 563-880-0084	

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed per plan revisions or by contract modification, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The prime contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITES
- A. Designer:
  1. Prepares Base PPP included in the project plan.
  2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
  3. Signature authority on the Base PPP and NOI.
- B. Contractor/Subcontractor:
  1. Affected contractors/subcontractors are co-permittees with the IDOT and will sign a certification statement adhering to the requirements of the NPDES permit and this PPP plan. Affected contractors/subcontractors are anyone responsible for sediment or erosion controls or involved in land disturbing activities. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
  2. Submit an Erosion Control Implementation Plan (ECIP) according to Specifications Section 2602 and any additional plan notes.
  3. Install and maintain appropriate controls.
  4. Supervise and implement good housekeeping practices.
  5. Conduct joint required inspections of the site with inspection staff.
  6. Comply with training and certification requirements of Specifications Section 2602.
  7. Signature authority on Co-Permittee Certification Statements and storm water inspection reports.
- C. RCE/Inspector:
  1. Update PPP whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the discharge of pollutants from the project.
  2. Maintain an up-to-date record that identifies contractors and subcontractors as co-permittees.
  3. Make these plans available to the DNR upon their request.
  4. Conduct joint required inspections of the site with the contractor/subcontractor.
  5. Complete an inspection report after each inspection.
  6. Signature authority on storm water inspection reports and Notice of Discontinuation (NOD).

II. PROJECT SITE DESCRIPTION
- A. This Pollution Prevention Plan (PPP) is for the construction of HMA Pavement Widening with HMA Resurfacing.
- B. This PPP covers approximately 355.88 acres with an estimated 1.5 acres being disturbed. The portion of the PPP covered by this contract has 1.5 acres disturbed.
- C. The PPP is located in an area of one soil association (Downs-Fayette-Nordness). The estimated weighted average runoff coefficient number for this PPP after completion will be 0.30.
- D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
  1. Drainage patterns – Plan and Profile sheets and Situation plans.
  2. Proposed Slopes – Cross Sections.
  3. Areas of Soil Disturbance – construction limits shown on Plan and Profile sheets.
  4. Location of Structural Controls – Tabulations on C sheets.
  5. Locations of Non-structural Controls – Tabulations on C sheets.
  6. Locations of Stabilization Practices – generally within construction limits shown on Plan and Profile sheets.
  7. Surface Waters (including wetlands) – Project Location Map and Plan and Profile sheets.
  8. Locations where storm water is discharged – Plan and Profile sheets.
- E. The base site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries.
- F. Runoff from this work will flow into roadway ditches, unnamed drainage swales, Silver, Village, and Clear Creeks and the Mississippi River.

III. CONTROLS
- A. The contractor's ECIP specified in Article 2602.03 for accomplishment of storm water controls should clearly describe the intended sequence of major activities and for each activity define the control measure and the timing during the construction process that the measure will be implemented.
- B. Preserve vegetation in areas not needed for construction.
- C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water monitoring inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B.
  1. EROSION AND SEDIMENT CONTROLS
     a. Stabilization Practices
        1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
        2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
           a) Permanently ceased on any portion of the site, or
           b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
        3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
        4) Permanent and Temporary Stabilization practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located on the C sheets of the plan.

110-12A
10-17-17

POLLUTION PREVENTION PLAN

Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation.
        5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
        6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located on the C sheets of the plan. Additional information may be found in Tabulations in the C or T sheets of the plans or is referenced in Standard Specifications Section 2105.
     b. Structural Practices
        1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
        2) Structural practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located on the C sheets of the plan, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B sheets of the plans or are referenced in the Standard Road Plans Tabulation.
     c. Storm Water Management
        1) Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located on the C sheets of the plan, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.
  2. OTHER CONTROLS
     a. Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.
        1) Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
        2) Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
        3) Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
        4) Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
        5) Spill Prevention and Control - Implement procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.
        6) Concrete Residuals and Washout Wastes - Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
        7) Concrete Grooving/Grinding Slurry – Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.
        8) Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onside fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water.
        9) Litter Management - Ensure employees properly dispose of litter.
        10) Dewatering – Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.
  3. APPROVED STATE OR LOCAL PLANS
     During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES
The contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS
- A. Inspections shall be made jointly by the contractor and the contracting authority at least once every seven calendar days. Storm water monitoring inspections will include:
  1. Date of the inspection.
  2. Summary of the scope of the inspection.
  3. Name and qualifications of the personnel making the inspection.
  5. Review erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
  6. Major observations related to the implementation of the PPP.
  7. Identify corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water monitoring inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection.

VI. NON-STORM WATER DISCHARGES
This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION
Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS
- A. Base PPP - Initial Pollution Prevention Plan.

110-12A
10-17-17

POLLUTION PREVENTION PLAN

B. Amended PPP - May include Plan Revisions or Contract Modifications for new items, storm water monitoring inspection reports, and fieldbook entries made by the inspector.
C. IDR - Inspector's Daily Report - this contains the inspector's daily diary and bid item postings.
D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
E. Signature Authority - Representative from Designer, Contractor/Subcontractor, or RCE/Inspector authorized to sign various storm water documents.

CERTIFICATION STATEMENT

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.

Mary K Kelly
Signature

Mary K. Kelly
Printed or Typed Name

Signature

Printed or Typed Name

100-19
04-19-16

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Location			Length of Installation			
Begin Station	End Station	Side	9 inch Dia LF	12 inch Dia LF	20 inch Dia LF	Remarks
60+70.00	68+65.00	RT			795.0	
62+70.00	71+81.00	LT			911.0	
77+00.00	84+57.00	RT			757.0	
91+50.00	99+40.00	LT			790.0	
322+35.00	333+60.00	RT			1125.0	
410+00.00	418+47.00	LT			847.0	
527+50.00	536+62.50	RT			912.5	
743+75.00	753+57.50	RT			982.5	
Mainline	pipe work			1760.0		
				1760.0	7120.0	TOTALS

100-34
10-17-17

STORMWATER DRAINAGE BASIN AND STORAGE

Refer to EC Standards and 570s Details.

Drainage Basin Location						Summary of Stormwater Storage							
Basin No.	Station to Station		Side	Discharge Point Station	Discharge Point Side	Total Disturbed Area Acres	Disturbed Area with Storage Provided Acres	Disturbed Area without Storage Provided Acres	Best Management Practice	Total Storage Volume Provided CF	Total Storage Volume Required CF	Storage Volume Met? Yes/No	Remarks
1	15+50.00	119+13.00	Both			0.3	0.3	0.0	Silt Fence for Ditch Check (EC-201)	2931.2	1080.0	Yes	
1	15+50.00	119+13.00	Both						Vegetated Buffer				
1	119+13.00	506+21.00	RT						Silt Fence for Ditch Check (EC-201)	23710.5			
1	119+13.00	506+31.00	RT						Vegetated Buffer				
2	119+13.00	260+64.00	LT			0.3	0.3	0.0	Silt Fence for Ditch Check (EC-201)	25599.6	1080.0	Yes	
2	119+13.00	260+64.00	LT						Vegetated Buffer				
3	260+64.00	506+21.00	LT			0.2	0.2	0.0	Silt Fence for Ditch Check (EC-201)	22733.5	720.0	Yes	
3	260+64.00	506+21.00	LT						Vegetated Buffer				
4	506+21.00	802+25.00	Both			0.8	0.8	0.0	Silt Fence for Ditch Check (EC-201)	18890.3	2880.0	Yes	
4	506+21.00	802+25.00	Both						Vegetated Buffer				
						1.6	1.6	0.0		93865.1	5760.0		TOTALS

103-10
Modified

TOPSOIL STRIPPING AND PLACEMENT

Location				Anticipated Quantity CY	Topsoil Placement Thickness IN	Remarks
Road Identification	Dir. of Traffic	Begin Station	End Station			
IA 9						
		Various		488.0	4.0	Ditch reshaping
		Various		86.0	4.0	Pipe work
		Various		26.0	4.0	Revetment
		Various		3.0	4.0	Clearing and grubbing
				603.0		TOTAL

232-10
04-18-17

EMERALD ASH BORER

Any living, dead, cut or fallen material of the ash (Fraxinus spp.) including trees, nursery stock, logs, firewood, stumps, roots, branches, and composted or uncomposted ash chips can be freely moved within the yellow areas of the most recent Federal EAB Quarantine & Authorized Transit.

https://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/downloads/eab_quarantine_map.pdf.

Obtain appropriate Compliance Agreements from USDA APHIS PPQ prior to moving any of the above listed ash articles to areas outside the yellow zone on the map.

For questions, concerns, and general assistance, contact:

USDA APHIS PPQ, Iowa office, 515-414-3295

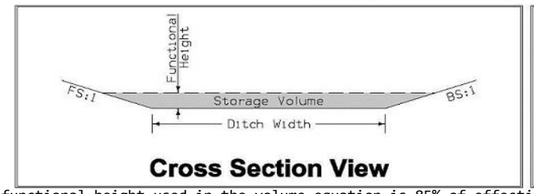
Or

Iowa Department of Agriculture & Land Stewardship
515-725-1470
Entomology@IowaAgriculture.gov

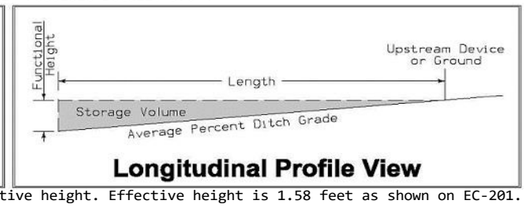
100-18
10-17-17

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201 Possible Detail: 570-4



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: $[0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]$

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg.% Slope Ditch Grade	Volume*	
				LF	LF	LF	FS:1	BS:1	FT		CF	
1	1	50+15.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	4.4%	456.0	
1	1	74+85.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	3.6%	521.1	
1	1	74+85.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	3.6%	521.1	
1	1	76+63.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	2.3%	781.7	
1	1	88+50.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	5.9%	325.7	
1	1	88+50.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	5.9%	325.7	
2	1	147+60.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.5%	4103.7	
1	1	153+00.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.5%	4103.7	
2	1	157+27.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.5%	4103.7	
2	1	168+29.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
2	1	179+70.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	4.0%	521.1	
2	1	188+00.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	4.0%	521.1	
2	1	196+17.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
2	1	208+48.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
1	1	208+61.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
2	1	238+42.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.6%	4103.7	
2	1	239+15.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.6%	4103.7	
1	1	241+80.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.1%	4103.7	
3	1	265+00.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
1	1	265+20.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
3	1	281+95.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.8%	2019.3	
1	1	285+30.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.8%	2019.3	
3	1	285+55.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
1	1	300+00.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.1%	1302.8	
3	1	302+00.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.1%	1302.8	
1	1	316+16.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.8%	2019.3	
1	1	319+55.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
3	1	345+50.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
1	1	379+41.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.1%	4103.7	
3	1	400+46.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.4%	4103.7	
3	1	405+00.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.4%	4103.7	
3	1	465+84.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.8%	977.1	
1	1	485+82.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	508+96.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	560+55.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	622+40.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	632+50.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	649+60.00	BOTH	60.0	6.0	60.0	4.0	10.0	10.0	1.1%	1302.8	
4	1	670+25.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.1%	1302.8	
4	1	710+75.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	1.6%	1302.8	
4	1	734+35.00	RT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
4	1	735+36.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	0.3%	4103.7	
4	1	755+69.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	2.5%	781.7	
4	1	772+00.00	LT	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	785+03.00	BOTH	30.0	3.0	30.0	4.0	10.0	10.0	1.0%	2019.3	
4	1	788+17.00	BOTH	60.0	6.0	60.0	4.0	10.0	10.0	1.0%	2019.3	
a	1	Culvert work		1200.0	120.0	1200.0	4.0	10.0	10.0	1.0%	2019.3	
				2640.0	264.0	2640.0					108130.5	TOTALS

300-1
Modified

DITCH RESHAPING

Side	Location		Remarks
	Station	Length (STA)	
			Mainline Pipes
Both	50+15	1.5	total for both sides
RT	153+00	0.5	
RT	508+96	0.5	
LT	560+55	0.5	
LT	622+40	1.0	
RT	640+20	0.5	
Both	649+60	2.0	total for both sides
RT	670+25	0.5	
RT	686+00	1.0	
RT	710+75	0.5	
RT	734+35	0.5	
RT	765+70	0.5	
Both	785+03	1.0	total for both sides
Both	788+17	2.0	total for both sides
			Sideroads/Entrance Pipes
Both	74+85 RT	1.0	total for both sides
Both	74+85 LT	1.0	total for both sides
Out	76+63 LT	0.5	
Out	88+50 RT	0.5	
Out	88+50 LT	0.5	
Out	147+60 LT	0.5	
Both	157+27 LT	1.0	total for both sides
Out	168+29 LT	0.5	
Both	179+70 LT	1.0	total for both sides
Both	188+00 LT	1.0	total for both sides
Both	196+17 LT	1.0	total for both sides
In	208+48 LT	0.5	
In	208+61 RT	0.5	
Both	238+42 LT	1.0	total for both sides
Both	239+15 LT	1.0	total for both sides
In	241+80 RT	0.5	
Both	265+00 LT	1.0	total for both sides
Both	265+20 RT	1.0	total for both sides
Both	281+95 LT	1.0	total for both sides
Both	285+30 RT	1.0	total for both sides
In	285+55 LT	0.5	
Both	300+00 RT	1.0	total for both sides
Out	316+16 RT	0.5	
Both	319+55 RT	1.0	total for both sides
Both	345+81 LT	1.0	total for both sides
Both	379+41 RT	1.0	total for both sides
Both	400+46 LT	1.0	total for both sides
Both	405+00 LT	1.0	total for both sides
Both	465+84 LT	1.0	total for both sides
Both	485+82 RT	1.0	total for both sides
Out	632+50 LT	0.5	
Out	735+36 LT	0.5	
In	755+69 LT	0.5	
Out	772+00 LT	0.5	
		39.5	TOTAL

110-08
Modified

REMOVAL OF FILLETS

* Not a Bid Item

Location		Area	Saw Cut*	Remarks
Station	Side	SY	LF	
Various	B	840.0		Area beyond Class 13,
				existing fillets at 42
				locations
Various	B	373.3		Area beyond Class 13,
				existing fillets at 14
				unpaved sideroads
		1213.3		TOTAL

102-16
10-21-14

NOTCHES AND RUNOUTS FOR RESURFACING

Refer to PR-201 and PR-202.

(1) Bid item. Applies only to Types 'N1' and 'N3' on PR-202. Refer to 100-25 for remaining values.

Location Station	Type of Notch or Runout	(S)	(I)	(DI)	(L)	(M)	Pavement Scarification (1)	Remarks
		IN	IN	IN	FT	IN	SY	
15+50.00	Type 'N3'	2.0	1.0		75.0	3.0		See Tab 100-25
802+25.00	Type 'N3'	2.0	1.0		75.0	3.0		See Tab 100-25
33 Paved entrances	Type 'R2'	2.0	1.0		30.0			
6 Paved Side roads	Type 'R2'	2.0	1.0		30.0			

102-5
04-18-17

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth IN	Type	Depth IN	Type	Depth IN	Type	Depth IN	Source	Type	Durability Class	Type	
	3	9	Both	279.56	282.25	1992		FN-9-9(36)--21-03	AAC	2							McCabe Qry	C.LST.			
						1980		F-9-9(17)--20-03	BAC	3	ATB	7					Churchtown	C.LST.			
				282.25	284.51	1992		FN-9-9(36)--21-03	AAC	2							McCabe Qry	C.LST.			
						1980		F-9-9(17)--20-03	BAC	3	ATB	3.5					Churchtown	C.LST.			
						1964		FN-161*<1>	AAC	3							Johnson	C.LST.			
						1931		P-677ABC	PC7	7							Rose Spur- Dub	C.LST.			
				284.51	287.91	1992		FN-9-9(36)--21-03	AAC	2							McCabe Qry	C.LST.			
						1980		F-9-9(17)--20-03	BAC	3	ATB	7					Churchtown	C.LST.			
				287.91	290.13	1992		FN-9-9(36)--21-03	AAC	2							McCabe Qry	C.LST.			
						1980		F-9-9(18)--20-03	BAC	3							Churchtown	C.LST.			
						1964		FN-161*<1>	AAC	2							Johnson	C.LST.			
						1931		P-677ABC	PC7	7							Rose Spur-Dub	C.LST.			
				290.13	293.25	1992		FN-9-9(36)--21-03	AAC	2							McCable Qry	C.LST.			
						1980		FN-9-9(18)--20-03	BAC	3		3.5					Churchtown	C.LST.			
				293.25	294.46	1992		FN-9-9(36)--21-03	AAC	2							McCabe Qry	C.LST.			
						1980		FN-9-9(18)--20-03	RAC	3							Churchtown	C.LST.			
						1964		FN-161*<1>	AAC	2							Johnson	C.LST.			
						1931		P-677ABC	PC7	7							Rose Spur-Dub	C.LST.			

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

* Not a bid item

Location Station	Description	Fill Material		4" Perforated Subdrain*	Remarks
		Flowable Mortar CY	Granular Backfill* TON	LF	
517+50.0 LT	Existing 15" intake				
	outfall	5.7	0.5	6.0	

112-4
10-21-14

CURBS AND RAISED ISLANDS

Refer to PV-20, PV-102, and 6000s Detail Series.

(1) Bid Item

Point No.	Station	Offset	Island Interior Area (1) SY	Curb and Gutter			Remarks
				Curb Type	Gutter Width FT	Length (1) LF	
	517+40.00	RT		6" Standard PCC	2.0	55.0	New curb
						55.0	TOTAL

110-1
04-16-13

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area SY	Saw Cut* LF	Remarks
16+50.00	21+50.00	RT	HMA	555.6		Existing paved shoulder
520+00.00	532+70.00	RT	HMA	1411.1		Existing paved shoulder
547+30.00	554+00.00	RT	HMA	744.4		Existing paved shoulder
555+00.00	560+00.00	LT	HMA	333.3		Existing paved shoulder
				3044.4		TOTAL

110-7B
10-19-10

REMOVAL OF CABLE GUARDRAIL

* Not a bid item
(1) Lane(s) to which the installation is adjacent

Location No.	(1) Direction of Traffic	Station to Station		Side	Type (High/Low Tension)	Cable Remove LF	Post * Footings, Concrete Remove Yes/No	End Terminal* Remove No.	Remarks
	EB	60+70.00	68+65.00	RT	Low Tension	795.0	Yes	2	
	EB	77+00.00	84+57.00	RT	Low Tension	757.0	Yes	2	
	EB	322+35.00	333+60.00	RT	Low Tension	1125.0	Yes	2	
	EB	527+50.00	536+62.50	RT	Low Tension	912.5	Yes	2	
	EB	743+75.00	753+57.50	RT	Low Tension	982.5	Yes	2	
	EB	62+70.00	71+81.00	LT	Low Tension	911.0	Yes	2	
	EB	91+50.00	99+40.00	LT	Low Tension	790.0	Yes	2	
	EB	410+00.00	418+47.00	LT	Low Tension	847.0	Yes	2	
						7120.0			TOTAL

110-2
04-16-13

REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks
23+10.0 RT	4 existing 48" RCP sections	Replace with 4 new 48" RCP
79+05.0 RT	Existing flume on mainline pipe	Replace with rock flume
94+90.0 LT	42' of existing pipe	Replace with new pipe
94+90.0 LT	Existing flume on mainline pipe	Replace with rock flume
135+25.0 RT	Existing flume on mainline pipe	Replace with rock flume
314+40.0 RT	Existing flume on mainline pipe	Replace with rock flume
517+50.0 RT	Existing flume on mainline pipe	Replace with rock flume
531+97.0 RT	Existing flume on mainline pipe	Replace with rock flume
765+70.0 LT	Existing flume on mainline pipe	Replace with rock flume
Numerous sideroad and entrance pipes	All 18" or 24" CMP	Cut up to 4', but majority 1', to install aprons and re-establish drainage flow
785+00.0 LT	Entrance 15" CMP	Replace with 18" CMP

CLEARING AND GRUBBING

Location		Work and Material Type	Trees, Stumps, and Logs and Down Timber Material Diameters												All Other Materials		Estimated Quantities			Remarks
Station to Station or Ref. Loc. Sign to Ref. Loc. Sign or Description	Direction of Travel		3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>42"-48"	>48"-60"	>60"-72"	>72"	Length	Width	Units	Area	Herbicide Application	
																FT	FT	Units	Acres	Each	
MAINLINE PIPES																					
23+10.5 LT		Trees - Clearing and Grubbing	2	3														14.9			
29+90.0 LT		Trees - Clearing and Grubbing	3															4.8			
68+25.0 Both		Trees - Clearing and Grubbing	1			1												11.0			
79+05.0 RT		Trees - Clearing and Grubbing		3				1	1	1								112.7			
94+90.0 Both		Trees - Clearing and Grubbing		1		1												13.3			
111+25.0 RT		Trees - Clearing and Grubbing			1													6.7			
121+50.0 LT		Trees - Clearing and Grubbing			1													6.7			
135+25.0 LT		Trees - Clearing and Grubbing		3	1													18.4			
249+50.0 LT		Brush - Clearing														10.0	5.0	0.4			
281+85.0 LT		Trees - Clearing and Grubbing			1													6.7			
326+85.0 RT		Trees - Clearing and Grubbing			1													6.7			
346+50.0 RT		Trees - Clearing and Grubbing		3														11.7			
382+85.0 LT		Trees - Clearing and Grubbing		1														3.9			
520+90.0 RT		Trees - Clearing and Grubbing					1											13.5			
531+97.0 RT		Brush - Clearing														20.0	10.0	1.6			
555+30.0 Both		Trees - Clearing and Grubbing				11			2									161.4			
568+51.0 LT		Trees - Clearing and Grubbing		3														11.7			
572+68.0 LT		Trees - Clearing and Grubbing		7														27.3			
579+60.0 LT		Trees - Clearing and Grubbing		3														11.7			
584+12.0 Both		Trees - Clearing and Grubbing	12		5	1			1									91.1			
594+75.0 Both		Trees - Clearing and Grubbing	6		1		1											29.8			
616+60.0 RT		Trees - Clearing and Grubbing	1					1	1									52.6			
675+75.0 RT		Trees - Clearing and Grubbing	2													20.0	2.0	3.5			
754+99.0 RT		Trees - Clearing and Grubbing				2			1	1								97.8			
765+70.0 RT		Trees - Clearing and Grubbing		5														19.5			
771+38.0 RT		Trees - Clearing and Grubbing				5												47.0			
788+17.0 LT		Trees - Clearing and Grubbing	2					1								40.0	20.0	31.6			
SIDEROAD/ENTRANCE PIPES																					
21+81.0 RT		Brush - Clearing														20.0	10.0	1.6			
110+00.0 RT		Trees - Clearing and Grubbing				1			2									67.4			
198+21.0 RT		Trees - Clearing and Grubbing	3															4.8			
474+62.0 RT		Trees - Clearing and Grubbing	1															1.6			
526+95.0 LT		Trees - Clearing and Grubbing	3															4.8			
735+36.0 LT		Trees - Clearing and Grubbing	2						1									32.2			
787+00.0 RT		Trees - Clearing and Grubbing	2															3.2			
																		933.6			TOTAL

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

Location				L	W	Rock Erosion Control (REC)					Material Bid Quantities			Remarks
Road Identification	Begin Station	End Station	Side			Type 1 Rock Ditch Check	Type 2 Rock Ditch	Type 3 Rock Flume	Type 4 Rock Splash Basin	Type 5 Rock Slope Protection	Eng. Fabric	Class E Revetment	Erosion Stone	
			Lt./Rt.	FT	FT						SY	TON	TON	
IA 9														
	79+05.00		RT	6	40			1			40.0	34.0		
	94+90.00		LT	6	60			1			57.0	50.5		
	135+25.00		LT	6	20			1			22.0	17.0		
	314+40.00		LT	8	10				1		16.0	10.5		
	508+96.00		LT	8.5	10				1		17.0	11.0		
	517+50.00		RT	7.5	40			1			47.0	40.0		
	520+90.00		RT	8	10				1		16.0	11.0		
	531+97.00		RT	8.5	50			1			63.0	56.0		
	568+51.00		RT	20	30				1		84.0		80.0	
	572+68.00		LT	20	30				1		112.0	70.0		5' deep
	584+12.00		LT	10	25				1		39.0	32.0		
	616+60.00		RT	5	10		1				22.0	15.0		Both sides apron
	634+25.00		RT	10	25				1		52.0	32.0		4' deep
	754+99.00		RT	20	20				1		59.0		53.0	
	765+70.00		LT	4	40			1			30.0		29.0	Inc shoulder flume
	787+00.00		RT	6	20				1		22.0	17.0		Entrance pipe
											698.0	396.1	162.0	TOTALS

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location					Depth	Longitudinal Subdrain (DR-303)								Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)				DR-303, DR-305 or DR-306				
Line No.	Road or Lane Identification	Station to Station		Side	D	Size	Length	Size	Length	Standard Road Plan and Type	Size	Length		Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT				CY	CY	
1	NBL	16+50.00	20+50.00	RT	36.0	4.0	460.0							16+50.00	DR-306	35.5		
														20+50.00	DR-306			
2	NBL	20+50.00	23+05.00	RT	36.0	4.0	315.0							20+50.00	DR-306	24.3		
														23+05.00	DR-306			
3	NBL	23+15.00	26+45.00	RT	36.0	4.0	390.0							23+15.00	DR-306	30.1		
														26+45.00	DR-306			
4	NBL	62+00.00	66+00.00	LT	24.0	4.0	460.0							62+00.00	DR-306	21.3		
														66+00.00	DR-306			
5	NBL	66+00.00	71+35.00	LT	24.0	4.0	595.0							66+00.00	DR-306	27.5		
														71+35.00	DR-306			
6	NBL	111+00.00	115+00.00	LT	36.0	4.0	460.0	24.0						111+00.00	DR-306	35.5		
														115+00.00	DR-306			
7	NBL	115+00.00	119+00.00	LT	36.0	4.0	460.0							115+00.00	DR-306	35.5		
														119+00.00	DR-306			
8	NBL	119+00.00	123+00.00	LT	36.0	4.0	460.0							119+00.00	DR-306	35.5		
														123+00.00	DR-306			
9	NBL	123+00.00	127+10.00	LT	36.0	4.0	470.0							123+00.00	DR-306	36.3		
														127+10.00	DR-306			
10	NBL	127+20.00	131+00.00	LT	36.0	4.0	440.0							127+20.00	DR-306	34.0		
														131+00.00	DR-306			
11	NBL	131+00.00	135+20.00	LT	36.0	4.0	480.0							131+00.00	DR-306	37.0		
														135+20.00	DR-306			
12	NBL	144+00.00	148+00.00	LT	36.0	4.0	460.0							144+00.00	DR-306	35.5		
														148+00.00	DR-306			
13	NBL	148+00.00	152+00.00	LT	36.0	4.0	460.0							148+00.00	DR-306	35.5		
														152+00.00	DR-306			
14	NBL	152+00.00	156+00.00	LT	36.0	4.0	460.0							152+00.00	DR-306	35.5		
														156+00.00	DR-306			
15	NBL	156+00.00	160+00.00	LT	36.0	4.0	460.0							156+00.00	DR-306	35.5		
														160+00.00	DR-306			
16	NBL	160+00.00	164+00.00	LT	36.0	4.0	460.0							160+00.00	DR-306	35.5		
														164+00.00	DR-306			
17	NBL	164+00.00	168+00.00	LT	36.0	4.0	460.0							164+00.00	DR-306	35.5		
														168+00.00	DR-306			
18	NBL	168+00.00	171+90.99	LT	36.0	4.0	451.0							168+00.00	DR-306	34.8		
														171+90.99	DR-306			
19	NBL	171+90.39	176+00.00	LT	36.0	4.0	469.6							171+90.39	DR-306	36.2		
														176+00.00	DR-306			
20	NBL	176+00.00	180+00.00	LT	36.0	4.0	460.0							176+00.00	DR-306	35.5		
														180+00.00	DR-306			
21	NBL	180+00.00	184+80.00	RT	36.0	4.0	540.0							180+00.00	DR-306	41.7		
														184+80.00	DR-306			
22	NBL	184+90.00	188+00.00	RT	36.0	4.0	370.0							184+90.00	DR-306	28.5		
														188+00.00	DR-306			
23	NBL	188+00.00	192+00.00	RT	36.0	4.0	460.0							188+00.00	DR-306	35.5		
														192+00.00	DR-306			
24	NBL	192+00.00	196+00.00	RT	36.0	4.0	460.0							192+00.00	DR-306	35.5		
														196+00.00	DR-306			
25	NBL	196+00.00	201+00.00	RT	36.0	4.0	560.0							196+00.00	DR-306	43.2		
														201+00.00	DR-306			
26	NBL	210+00.00	214+26.00	RT	36.0	4.0	486.0							210+00.00	DR-306	37.5		
														214+26.00	DR-306			
27	NBL	214+36.00	218+00.00	LT	36.0	4.0	424.0							214+36.00	DR-306	32.7		
														218+00.00	DR-306			
28	NBL	218+00.00	222+00.00	LT	36.0	4.0	460.0							218+00.00	DR-306	35.5		
														222+00.00	DR-306			
29	NBL	222+00.00	226+00.00	LT	36.0	4.0	460.0							222+00.00	DR-306	35.5		
														226+00.00	DR-306			
30	NBL	226+00.00	230+00.00	LT	36.0	4.0	460.0							226+00.00	DR-306	35.5		
														230+00.00	DR-306			
31	NBL	230+00.00	234+00.00	LT	36.0	4.0	460.0							230+00.00	DR-306	35.5		
														234+00.00	DR-306			
32	NBL	234+00.00	238+00.00	RT	36.0	4.0	460.0							234+00.00	DR-306	35.5		
														238+00.00	DR-306			
33	NBL	238+00.00	242+00.00	LT	36.0	4.0	460.0							238+00.00	DR-306	35.5		
														242+00.00	DR-306			
34	NBL	242+00.00	246+00.00	LT	36.0	4.0	460.0							242+00.00	DR-306	35.5		
														246+00.00	DR-306			
35	NBL	246+00.00	249+45.00	LT	36.0	4.0	405.0							246+00.00	DR-306	31.3		
														249+45.00	DR-306			
36	NBL	249+55.00	254+00.00	LT	36.0	4.0	525.7							249+55.00	DR-306	40.6		Includes STA EQ
														254+00.00	DR-306			
37	NBL	254+00.00	258+00.00	RT	36.0	4.0	460.0							254+00.00	DR-306	35.5		
														258+00.00	DR-306			
38	NBL	258+00.00	262+00.00	RT	36.0	4.0	460.0							258+00.00	DR-306	35.5		
														262+00.00	DR-306			
39	NBL	262+00.00	266+00.00	RT	36.0	4.0	460.0							262+00.00	DR-306	35.5		

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location					Depth	Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
Line No.	Road or Lane Identification	Station to Station		Side	D	Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT			CY	CY	
													266+00.00	DR-306			
40	NBL	266+00.00	270+00.00	RT	36.0	4.0	460.0						266+00.00	DR-306	35.5		
													270+00.00	DR-306			
41	NBL	270+00.00	274+00.00	RT	36.0	4.0	460.0						270+00.00	DR-306	35.5		
													274+00.00	DR-306			
42	NBL	274+00.00	278+00.00	RT	36.0	4.0	460.0						274+00.00	DR-306	35.5		
													278+00.00	DR-306			
43	NBL	278+00.00	282+00.00	LT	36.0	4.0	460.0						278+00.00	DR-306	35.5		
													282+00.00	DR-306			
44	NBL	282+00.00	286+00.00	LT	36.0	4.0	460.0						282+00.00	DR-306	35.5		
													286+00.00	DR-306			
45	NBL	286+00.00	290+00.00	LT	36.0	4.0	460.0						286+00.00	DR-306	35.5		
													290+00.00	DR-306			
46	NBL	290+00.00	294+00.00	LT	36.0	4.0	460.0						290+00.00	DR-306	35.5		
													294+00.00	DR-306			
47	NBL	294+00.00	298+00.00	LT	36.0	4.0	460.0	24.0					294+00.00	DR-306	35.5		
													298+00.00	DR-306			
48	NBL	303+95.00	307+95.00	LT	36.0	4.0	460.0	24.0					303+95.00	DR-306	35.5		
													307+95.00	DR-306			
49	NBL	307+95.00	311+95.00	LT	36.0	4.0	459.1						307+95.00	DR-306	35.4		Includes STA EQ
													311+95.00	DR-306			
50	NBL	311+95.00	314+35.00	LT	36.0	4.0	300.0	24.0					311+95.00	DR-306	23.1		
													314+35.00	DR-306			
51	NBL	319+75.00	323+75.00	LT	36.0	4.0	460.0	24.0					319+75.00	DR-306	35.5		
													323+75.00	DR-306			
52	NBL	323+75.00	326+80.00	LT	36.0	4.0	364.4						323+75.00	DR-306	28.1		Includes STA EQ
													326+80.00	DR-306			
53	NBL	326+90.00	331+75.00	LT	36.0	4.0	545.0						326+90.00	DR-306	42.1		
													331+75.00	DR-306			
54	NBL	331+75.00	335+00.00	LT	36.0	4.0	385.0						331+75.00	DR-306	29.7		
													335+00.00	DR-306			
55	NBL	344+00.00	348+00.00	RT	36.0	4.0	460.0						344+00.00	DR-306	35.5		
													348+00.00	DR-306			
56	NBL	348+00.00	352+00.00	RT	36.0	4.0	460.0						348+00.00	DR-306	35.5		
													352+00.00	DR-306			
57	NBL	352+00.00	356+00.00	RT	36.0	4.0	460.0						352+00.00	DR-306	35.5		
													356+00.00	DR-306			
58	NBL	356+00.00	360+00.00	RT	36.0	4.0	460.0						356+00.00	DR-306	35.5		
													360+00.00	DR-306			
59	NBL	360+00.00	364+00.00	RT	36.0	4.0	460.0						360+00.00	DR-306	35.5		
													364+00.00	DR-306			
60	NBL	364+00.00	368+00.00	RT	36.0	4.0	460.0						364+00.00	DR-306	35.5		
													368+00.00	DR-306			
61	NBL	368+00.00	372+00.00	LT	36.0	4.0	451.7						368+00.00	DR-306	34.9		Includes STA EQ
													372+00.00	DR-306			
62	NBL	372+00.00	376+00.00	LT	36.0	4.0	460.0						372+00.00	DR-306	35.5		
													376+00.00	DR-306			
63	NBL	376+00.00	380+00.00	LT	36.0	4.0	460.0						376+00.00	DR-306	35.5		
													380+00.00	DR-306			
64	NBL	380+00.00	384+00.00	LT	36.0	4.0	460.0						380+00.00	DR-306	35.5		
													384+00.00	DR-306			
65	NBL	384+00.00	388+00.00	LT	36.0	4.0	460.0						384+00.00	DR-306	35.5		
													388+00.00	DR-306			
66	NBL	388+00.00	393+50.00	LT	36.0	4.0	610.0	24.0					388+00.00	DR-306	47.1		
													393+50.00	DR-306			
67	NBL	756+50.00	760+50.00	LT	36.0	4.0	460.0	24.0					756+50.00	DR-306	35.5		
													760+50.00	DR-306			
68	NBL	760+50.00	764+50.00	LT	36.0	4.0	460.0						760+50.00	DR-306	35.5		
													764+50.00	DR-306			
69	NBL	764+50.00	768+50.00	LT	36.0	4.0	460.0						764+50.00	DR-306	35.5		
													768+50.00	DR-306			
70	NBL	768+50.00	771+00.00	LT	36.0	4.0	310.0						768+50.00	DR-306	23.9		
													771+00.00	DR-306			
71	NBL	771+00.00	775+00.00	LT	36.0	4.0	460.0						771+00.00	DR-306	35.5		
													775+00.00	DR-306			
72	NBL	775+00.00	779+00.00	LT	36.0	4.0	460.0						775+00.00	DR-306	35.5		
													779+00.00	DR-306			
73	NBL	779+00.00	783+00.00	LT	36.0	4.0	460.0						779+00.00	DR-306	35.5		
													783+00.00	DR-306			
74	NBL	783+00.00	787+00.00	LT	36.0	4.0	460.0						783+00.00	DR-306	35.5		
													787+00.00	DR-306			
75	NBL	787+00.00	791+00.00	LT	36.0	4.0	460.0						787+00.00	DR-306	35.5		
													791+00.00	DR-306			
76	NBL	791+00.00	795+00.00	LT	36.0	4.0	460.0						791+00.00	DR-306	35.5		
													795+00.00	DR-306			
77	NBL	795+00.00	799+00.00	LT	36.0	4.0	460.0						795+00.00	DR-306	35.5		
													799+00.00	DR-306			

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location					Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station	Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
					Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
				IN	IN	FT	IN	FT		IN	FT			CY	CY	
		Subdrain Oulet only														
		50+25.00	LT	36.0		30.0						50+25.00	DR-306			
		86+50.00	RT	36.0		30.0						86+50.00	DR-306			
		400+00.00	RT	24.0		30.0						400+00.00	DR-306			
		630+00.00	LT	24.0		30.0						630+00.00	DR-306			
		652+80.00	RT	24.0		30.0						652+80.00	DR-306			
		707+05.00	LT	24.0		30.0						707+05.00	DR-306			
		713+80.00	LT	24.0		30.0						713+80.00	DR-306			
						35396.5						161 Outlets		2682.8		TOTALS

FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (MAINLINE PIPES)

Refer to Standard Road Plans DR-121, DR-122, and DR-213.

* Not a bid item

Existing Information		New Information		Length of New Const.	Flow Line Elevations		Dimensions				Removal and Reinstallation of Culvert Aprons and Pipes						New Apron No.		Apron Guard* (DR-213)	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
Location	Size and Type of Culvert	Size	Type of Culvert				Total (LF)		Extensions (LF)		Aprons		Culvert Sections Left Side		Culvert Sections Right Side										
		IN		LF	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.*	FT	NO.*	FT	IN	OUT	NO.	TYPE	NO.	TYPE	CY	CY	
23+10.5	48" x 165' RCP	48	RCP					24			1	1	1	6	4	24						Type 3	88.6	118.1	See 110-2, 110-17
26+50.0	24" x 145.5 RCP										1											Type 3	6.0	8.0	
29+90.0	24" x 114' RCP										1	1										Type 3	18.0	24.0	See 110-17
46+05.0	Twin 8'x 8' x RCB																							12.0	Clean inlet
50+15.0	30" x 124' RCP										1	1	1	6	2	12						Type 3	30.0	40.0	See 300-1
68+25.0	10' x 6' x RCB																								See 110-17
79+05.0	24" x 197.5' RCP	24	RCP								1		5	30				1				Type 3	47.3	63.0	See 100-23, 110-17
94+90.0	36" x 227' RCP	36	RCP				42				1	1			3	18						Type 3	51.0	68.0	See 100-23, 110-17
111+25.0	24" x 155.5' RCP										1											Type 3	6.0	8.0	See 110-17
121+50.0	24" x 137.5' RCP																								See 110-17
127+15.0	24" x 98' RCP																								
135+25.0	30" x 198' RCP	30	RCP															1				Type 3	7.5	10.0	See 100-23, 110-17
139+60.0	24" x 102' RCP																								
153+00.0	24" x 109.5' RCP										1											Type 3	6.0	8.0	See 300-1
184+85.0	2' x 2', 30" x 114' RCB/RCP	30	RCP															1				Type 3	7.5	10.0	
206+20.6	2'x 2', 30" x 96' RCB/RCP										1	1	6	36	6	36				C-2	2	Type 3	90.0	120.0	
214+31.0	2' x 2', 30" x 129.5' RCB/RCP																								
249+50.0	24" x 142' RCP																								See 110-17
272+90.0	24" x 151.5' RCP										1											Type 3	6.0	8.0	
281+85.0	2' x 2', 30" x 130.5' RCB/RCP											1										Type 3	7.5	10.0	See 110-17
295+40.0	24" x 132' RCP																								
309+00.0	36" x 216' RCP											1										Type 3	8.0	12.0	
314+40.0	24" x 163' RCP											1										Type 3	6.0	8.0	See 100-23, 110-2
326+85.0	30" x 227' RCP										1											Type 3	7.5	10.0	See 110-17
346+50.0	24" x 148' RCP										1	1	2	12	2	12						Type 3	27.0	36.0	See 110-17
382+85.0	24" x 200' RCP										1											Type 3	6.0	8.0	See 110-17
508+68.0	open throat intake-15" x 20.5' RCP																								
508+96.0	2' x 2', 30" x 56' RCP																								See 100-23, 300-1
510+75.0	intake-24" x 65' RCP										1											Type 3	6.0	8.0	
511+90.0	intake-15" 112.5' RCP																								rock in pipe
514+40.5	intake-15" x 56' RCP																								
517+50.0	intake-15" x 82' RCP	18"	UNC	50						50								1				Type 3	15.0	20.0	See 100-23, 110-9
520+90.0	24" x 93' RCP										1	1	1	6	3	18						Type 3	22.5	30.0	See 100-23, 110-17
531+97.0	2'x 2', 30" x 274' RCP																								See 100-23, 110-17
555+30.0	8' x 6' x 173' RCB																								See 110-17
560+55.0	4' x 6' x 117.5' RCB																								See 300-1
568+51.0	8' x 10' x 142' RCB																								See 100-23, 110-17
572+68.0	8' x 10' x 156' RCB																								See 100-23, 110-17
579+60.0	12' x 10' x 121' RCB																								See 110-17
584+12.0	15'/12' x 10' x 123.5' RCB																								See 100-23, 110-17
594+75.0	12' x 10' x 97' RCB																								See 110-17
602+00.0	30" x 118' RCP										1		1	6								Type 3	10.5	14.0	
605+10.0	30" x 134' RCP										1		2	12								Type 3	11.3	15.0	

FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (MAINLINE PIPES)

Refer to Standard Road Plans DR-121, DR-122, and DR-213.

* Not a bid item

Existing Information		New Information		Length of New Const.	Flow Line Elevations		Dimensions				Removal and Reinstallation of Culvert Aprons and Pipes						New Apron No.		Apron Guard* (DR-213)	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
							Total (LF)		Extensions (LF)		Aprons		Culvert Sections												
													Left Side		Right Side										
Location	Size and Type of Culvert	Size	Type of Culvert	Length of New Const.	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.*	FT	NO.*	FT	IN	OUT	Apron Guard* (DR-213)	TYPE	NO.	Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
		IN		LF																					
616+60.0	8'/5' x 5' x 88' RCB																								See 100-23, 110-17
622+40.0	4' x 6' x 98' RCB																								See 300-1
634+25.0	4' x 5.5' x 84' RCB																								See 100-23
640+20.0	24" x 144' RCP											1										Type 3	6.0	8.0	See 300-1
649+60.0	Triple 10' x 8' x 89' RCB																								See 300-1
663+75.0	36" x 102' RCP											1			1	6						Type 3	16.5	22.0	
670+25.0	36" x 106' RCP										1	1										Type 3	13.5	18.0	See 300-1
675+75.0	36" x 126' RCP										1		3	18								Type 3	38.2	51.0	See 110-17
686+00.0	36" x 112.5' RCP										1		1	6								Type 3	16.5	22.0	See 300-1
694+85.0	Triple 12' x 6' x 87' RCB																								
710+75.0	30" x 149' RCP	30"	RCP								1		3	18			1					Type 3	45.0	60.0	See 300-1
723+75.0	12' x 10' x 48.5' RCB																								
734+35.0	4' x 4', 48" x 96' RCB/RCP																								See 300-1
754+99.0	8' x 6' x 122' RCB																								See 100-23, 110-17
765+70.0	24" x 155' RCP										1											Type 3	6.0	8.0	See 100-23,110-17,300-1
771+38.0	2' x 2', 30" x 117' RCB/RCP										1		1	6								Type 3	12.0	16.0	See 110-17
777+66.0	2' x 2', 24" x 117' RCB/RCP																								
784+65.0	intake-15" x 32' RCP																								
785+03.0	4' x 4', 48" x 33' RCB/RCP																								See 300-1
788+17.0	3' x 3', 42" x 122' RCB/RCP										1											Type 3		10.0	See 110-17, 300-1
																							645.0	883.4	TOTALS

FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (SIDE ROAD AND ENTRANCE PIPES)

Refer to Standard Road Plans DR-121, DR-122, and DR-213.

* Not a bid item

Existing Information		New Information		Length of New Const.	Flow Line Elevations		Dimensions				Removal and Reinstallation of Culvert Aprons and Pipes						New Apron No.		Apron Guard* (DR-213)	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
							Total (LF)		Extensions (LF)		Aprons		Culvert Sections												
													Left Side		Right Side										
Location	Size and Type of Culvert	Size	Type of Culvert	Length of New Const.	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.*	FT	NO.*	FT	IN	OUT	Apron Guard* (DR-213)	TYPE	NO.	Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
		IN		LF																					
SIDE ROADS																									
241+80.0 RT	18" x 88' CMP	18	CMP														1	1					2.5	5.5	
289+54.7 RT	24" x 56' CMP																								
361+41.6 LT	24" x 49' CMP	24	CMP															1					1.5	4.0	
387+84.9 RT	24" x 68' CMP																								
753+20.0 LT	30" x CMP	30	CMP														1	1					6.0	12.0	
754+55.0 LT	18" x 94' CMP	18	CMP														1	1					2.5	5.5	
ENTRANCE																									
19+74.0 LT	18" x ' CMP	18	CMP														1						1.0		
21+81.0 RT	30' x 138' CMP	30	CMP														1						1.5		See 110-17
40+32.0 LT	18" x 62' CMP	18	CMP														1	1					2.0		
52+05.0 LT	36/30" x 118' CMP	30	CMP														1	1					3.0		
52+50.0 RT	18" x 102' CMP	18	CMP														1	1					2.0		
53+50.0 LT	30" x ' CMP	30	CMP														1	1					3.0		
69+95.0 RT	18" x 170' CMP	18	CMP														1	1					2.0		
72+70.0 LT	18' x ' CMP	18	CMP														1	1					2.0		
74+85.0 RT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
74+85.0 LT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
76+63.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
88+50.0 RT	18" x 64' CMP	18	CMP														1	1					2.0		See 300-1
88+55.0 LT	18" x 64' CMP	18	CMP														1	1					2.0		See 300-1
98+65.0 RT	24" x 64' CMP	24	CMP														1	1					3.0		
99+81.0 LT	24" x 70' CMP	24	CMP														1	1					3.0		
110+00.0 RT	18" x 56' CMP	18	CMP														1	1					2.0		See 110-17
125+23.0 RT	18" x 120 CMP	18	CMP														1	1					2.0		
142+04.0 RT	18" x 88' CMP	18	CMP														1	1					2.0		
147+60.0 LT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
157+27.0 LT	18" x 64' CMP	18	CMP														1	1					2.0		See 300-1
160+98.0 RT	18" x 64' CMP	18	CMP														1	1					2.0		
168+29.0 LT	18" x 72' CMP	18	CMP														1	1					2.0		See 300-1
179+70.0 LT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1

FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (SIDE ROAD AND ENTRANCE PIPES)

Refer to Standard Road Plans DR-121, DR-122, and DR-213.

* Not a bid item

Existing Information		New Information		Length of New Const.	Flow Line Elevations		Dimensions				Removal and Reinstallation of Culvert Aprons and Pipes						New Apron No.		Apron Guard* (DR-213)	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	Embank.-In-Place	Class 20	Remarks
							Total (LF)		Extensions (LF)		Aprons		Culvert Sections												
													Left Side		Right Side										
Location	Size and Type of Culvert	Size	Type of Culvert														IN	OUT							
		IN		LF	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.*	FT	NO.*	FT			NO.	TYPE	NO.	TYPE	CY	CY	
184+39.0 RT	18" x 56' CMP	18	CMP														1	1					2.0		
188+00.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
196+17.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
198+21.0 RT	18" x 56' CMP	18	CMP														1	1					2.0		See 110-17
207+20.0 RT	18" x ' CMP	18	CMP														1	1					2.0		
208+48.0 LT	18" x 78' CMP	18	CMP														1	1					2.0		See 300-1
208+61.0 RT	18" x 64' CMP	18	CMP														1	1					2.0		See 300-1
231+17.0 RT	18" x 100' CMP	18	CMP														1	1					2.0		
238+42.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
239+15.0 LT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
241+80.0 RT	18" x 88' CMP	18	CMP														1	1					2.0		See 300-1
265+00.0 LT	18" x 52' CMP	18	CMP														1	1					2.0		See 300-1
265+20.0 RT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
281+95.0 LT	18" x 48' CMP	18	CMP														1	1					2.0		See 300-1
285+30.0 RT	18" x 62' CMP	18	CMP														1	1					2.0		See 300-1
285+55.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
289+60.0 LT	18" x 80' CMP	18	CMP														1	1					2.0		
300+00.0 RT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
302+00.0 LT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
316+16.0 RT	18" x 88' CMP	18	CMP														1	1					2.0		See 300-1
317+28.0 LT	18" x 96' CMP	18	CMP														1	1					2.0		
319+55.0 RT	18" x 56' CMP	18	CMP														1	1					2.0		See 300-1
345+81.0 LT	18" x 94' CMP	18	CMP														1	1					2.0		See 300-1
347+40.0 LT	18" x 104' CMP	18	CMP														1	1					2.0		
349+00.0 LT	18" x 96' CMP	18	CMP														1	1					2.0		
351+23.0 LT	18" x 64' CMP	18	CMP														1	1					2.0		
352+81.0 LT	18" x 72' CMP	18	CMP														1	1					2.0		
345+50.0 LT	18" x CMP	18	CMP														1	1					2.0		
379+35.0 LT	18" x 64' CMP	18	CMP														1	1					2.0		
379+41.0 RT	18" x 88' CMP	18	CMP														1	1					2.0		See 300-1
395+00.0 LT	18" x 80' CMP	18	CMP														1	1					2.0		
400+46.0 LT	18" x 96' CMP	18	CMP														1	1					2.0		See 300-1
403+00.0 LT	24" x ' CMP	24	CMP														1	1					3.0		
405+00.0 LT	18" x 38' CMP	18	CMP														1	1					2.0		See 300-1
430+63.0 RT	18" x 44' CMP	18	CMP														1	1					2.0		
437+31.0 LT	18" x 68' CMP	18	CMP														1	1					2.0		
451+00.0 RT	18" x 102' CMP	18	CMP														1	1					2.0		
452+00.0 RT	18" x 80' CMP	18	CMP														1	1					2.0		
465+84.0 LT	18" x 64' CMP	18	CMP														1	1					2.0		See 300-1
474+62.0 RT	18" x 48' CMP	18	CMP														1	1					2.0		See 110-17
485+82.0 RT	18" x ' CMP	18	CMP														1	1					2.0		See 300-1
499+50.0 RT	18" x 64' CMP	18	CMP														1	1					2.0		
508+59.0 RT	18" x 46' CMP	18	CMP														1	1					2.0		
526+95.0 RT	18" x 54' CMP	18	CMP														1						1.0		See 110-17
539+55.0 LT	24" x 84' CMP	24	CMP														1	1					3.0		
543+71.0 RT	18" x 74' CMP	18	CMP														1	1					2.0		
594+50.0 RT	24" x 92' CMP	24	CMP														1	1					3.0		
615+23.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		
632+50.0 LT	24" x 70' CMP	24	CMP														1	1					3.0		See 300-1
655+17.0 LT	24" x 62' CMP	24	CMP														1	1					3.0		
690+52.0 LT	18" x 56' CMP	18	CMP														1	1					2.0		
723+23.0 LT	30" x 76'	30	CMP														1	1					3.0		
726+38.4 RT	18" x ' CMP	18	CMP														1	1					2.0		
735+36.0 LT	24" x 102' CMP	24	CMP														1	1					3.0		See 110-17, 300-1
755+10.0 LT	18" x ' CMP	18	CMP														1	1					2.0		
755+69.0 LT	18" x 70' CMP	18	CMP														1	1					2.0		See 300-1
765+00.0 LT	18" x ' CMP	18	CMP														1	1					2.0		
772+00.0 LT	18" x ' CMP																								See 300-1
785+00.0 LT	15" x ' RCP	18	RCP	50			25	25									1	1					16.0		
787+00.0 RT	18" x ' CMP	18	CMP														1						1.0		See 100-23, 110-17
																							197.9	27.1	TOTALS

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening (1)			W	(1) (2) PR	(2) SR	Pipe Culvert (3)					Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.		HMA	PCC		
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	
Various	both																3199.500	79 entrances

GRADING FOR HIGH TENSION CABLE GUARDRAIL INSTALLATIONS

Refer to Standard Road Plan EW-302

(1) Lane(s) to which the installation is adjacent.

Location				Dimensions			Protection Length	Earthwork:	Remarks
No.	Direction of (1) Traffic	Station	Side	C_A	C_O	C_T	(C_A+C_O+C_T)	Earthwork Type	
				FT	FT	FT	FT	CY	
		60+27.00	RT				800.0	29.6	Remove existing hump
		77+10.00	RT				790.0	29.3	Remove existing hump
		322+37.00	RT				1115.0	41.3	Remove existing hump
		527+44.00	RT				915.0	33.9	Remove existing hump
		743+60.00	RT				975.0	36.1	Remove existing hump
		62+17.00	LT				960.0	35.6	Remove existing hump
		92+03.00	LT				780.0	28.9	Remove existing hump
		410+04.00	LT				860.0	31.9	Remove existing hump
								266.5	TOTAL

HIGH TENSION CABLE GUARDRAIL

(1) Lane(s) to which the installation is adjacent.

Refer to BA-351.

Location					Dimensions			Bid Items		Remarks
No.	Direction of (1) Traffic	Station	Side	Offset D_θ	Approach C_A	Obstacle C_O	Trailing C_T	Protection Length (C_A+C_θ+C_T)	End Anchor	
				FT	FT	FT	FT	FT	No.	
		61+20.00	RT					695.0	2	STA location based on 50' anchor length
		77+50.00	RT					660.0	2	
		322+85.00	RT					1025.0	2	Total length is less two 50' anchor
		528+00.00	RT					815.0	2	sections
		744+25.00	RT					885.0	2	
		63+20.00	LT					810.0	2	
		92+00.00	LT					690.0	2	
		410+50.00	LT					750.0	2	
								6330.0	16	TOTALS

FULL-DEPTH PATCHES

Possible Standards: PR-101, PR-102, PR-103, PR-104, PR-105 and PR-140.

Location				Dimension			PCC Patches												
Count	Station	Reference Location Sign	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	C R C	Ramp with Dowels	HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint	Patch Subdrain	'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
							PR-103	PR-102	PR-104	PR-105			PR-140	PR-101	PR-101 or PR-140			PR-101		
			L, R, or B	FT	FT	IN	SY	SY	SY	SY	SY	TON	SY	SY	No.	No.	No.	No.	No.	
1	16+60		LT	4.0	23.0	5.0					10.2		10.6							
1	85+50		RT OUT	40.0	6.0	5.0					26.7		30.4							CLIMBING LANE
1	87+15		RT OUT	12.0	12.0	5.0					16.0		17.1							CLIMBING LANE
1	93+25		RT OUT	30.0	6.0	5.0					20.0		22.8							CLIMBING LANE
1	94+90		RT OUT	8.0	6.0	5.0					5.3		6.1							CLIMBING LANE
1	94+90		LT	8.0	6.0	5.0					5.3				1					
1	228+35		RT	4.0	12.0	15.0					5.3				1					
1	228+35		LT	4.0	12.0	15.0					5.3		5.7							
1	229+60		RT	4.0	12.0	15.0					5.3				1					
1	229+60		LT	4.0	12.0	15.0					5.3		5.7							
1	237+15		RT	4.0	12.0	15.0					5.3				1					
1	237+15		LT	4.0	12.0	15.0					5.3		5.7							
1	238+50		RT	6.0	12.0	15.0					8.0				1					
1	238+50		LT	6.0	12.0	15.0					8.0		8.6							
1	239+20		RT	4.0	12.0	15.0					5.3				1					
1	239+20		LT	4.0	12.0	15.0					5.3		5.7							
1	258+20		RT	4.0	12.0	15.0					5.3		5.7							
1	258+20		LT	4.0	12.0	15.0					5.3				1					
1	272+76		RT	4.0	12.0	15.0					5.3		5.7							
1	272+76		LT	4.0	12.0	15.0					5.3				1					
1	273+65		RT	4.0	12.0	15.0					5.3		5.7							
1	273+65		LT	4.0	12.0	15.0					5.3				1					
1	294+00		RT	4.0	12.0	5.0					5.3		5.7							
1	296+05		RT	4.0	12.0	5.0					5.3		5.7							
1	296+05		LT	4.0	12.0	5.0					5.3		5.7							
1	296+75		RT	4.0	12.0	5.0					5.3		5.7							
1	296+75		LT	4.0	12.0	5.0					5.3		5.7							
1	297+60		RT	4.0	12.0	5.0					5.3		5.7							
1	297+60		LT	4.0	12.0	5.0					5.3		5.7							
1	298+10		RT	4.0	12.0	5.0					5.3				1					
1	298+10		LT	4.0	12.0	5.0					5.3		5.7							
1	367+00		RT	4.0	12.0	5.0					5.3		5.7							
1	367+00		LT	4.0	12.0	5.0					5.3				1					
1	367+50		RT	4.0	12.0	5.0					5.3		5.7							
1	367+50		LT	4.0	12.0	5.0					5.3				1					
1	369+60		RT	4.0	12.0	5.0					5.3				1					
1	369+60		LT	4.0	12.0	5.0					5.3		5.7							
1	374+15		RT	4.0	12.0	5.0					5.3				1					
1	374+15		LT	4.0	12.0	5.0					5.3		5.7							
1	374+70		RT	4.0	12.0	5.0					5.3				1					
1	374+70		LT	4.0	12.0	5.0					5.3		5.7							
1	376+81		RT	4.0	12.0	5.0					5.3				1					
1	376+81		LT	4.0	12.0	5.0					5.3		5.7							
1	377+40		RT	4.0	12.0	5.0					5.3				1					
1	377+40		LT	4.0	12.0	5.0					5.3									
1	486+30		RT	4.0	12.0	14.0					5.3									No subbase
1	486+30		LT	4.0	12.0	14.0					5.3									No subbase
1	496+00		RT	5.0	8.0	14.0					4.4									No subbase
1	496+00		LT	5.0	8.0	14.0					4.4									No subbase
49											316.4		215.3		17					TOTALS

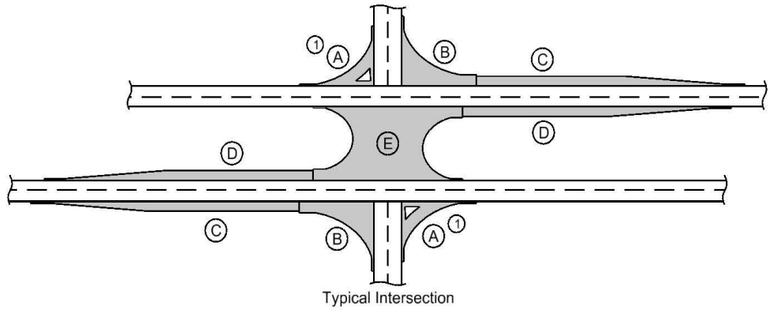
SHOULDERS

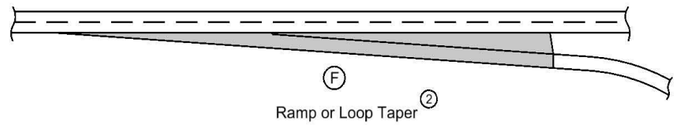
(1) Lane(s) to which the shoulder is adjacent.
(2) Bid Item
(3) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(4) Does not include shrink.

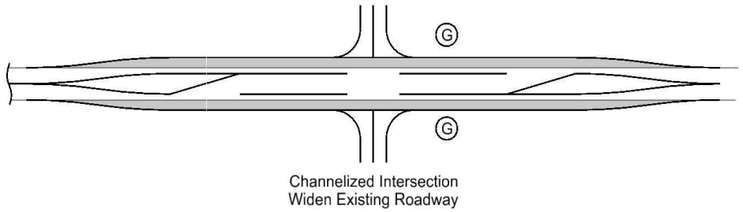
Calculations assume a HMA unit weight (lbs/cf) of 145, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

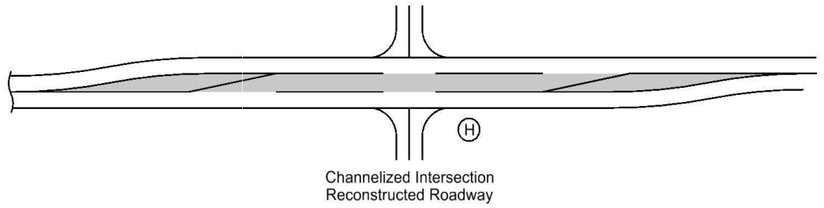
Location							Quantities																Remarks
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(G) Width	(L) Length	(3) Class 13 Excavation	Hot Mix Asphalt		Binder	Paved Shoulder	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			
														HMA Alternate		PCC Alternate					(2) STA	HMA	PCC
					FT	FT	FT	CY (2)	TON	TON/STA	TONS	SY (2)	SY (2)	TON (2)	TON/STA	TON (2)	TON/STA	CY (2)	TON (2)	TON/STA		(4) CY	(4) CY	
IA 9		16+50.00	21+50.00	RT	10.0	0.0	500.0	92.6	211.458	42.292	12.688								106.750		5.0			
		21+50.00	109+03.45	RT	4.0	6.0	8753.5	648.4	1480.792	16.917	88.848								2120.086	24.220	87.5			
		109+36.09	113+00.00	RT	4.0	6.0	363.9	27.0	61.561	16.917	3.694								88.139	24.220	3.6			
		113+00.00	171+90.99	RT	4.0	6.0	5891.0	436.4	996.559	16.917	59.794								1426.798	24.220	58.9			
		171+90.39	253+29.50	RT	4.0	6.0	8139.1	602.9	1376.866	16.917	82.612								1971.292	24.220	81.4			
		253+08.76	308+16.60	RT	4.0	6.0	5507.8	408.0	931.743	16.917	55.905								1333.999	24.220	55.1			
		308+17.52	322+35.00	RT	4.0	6.0	1417.5	105.0	239.790	16.917	14.387								343.314	24.220	14.2			
		322+35.00	326+03.13	RT	4.0	6.0	368.1	27.3	62.275	16.917	3.737								89.161	24.220	3.7			
		326+03.71	333+60.00	RT	4.0	6.0	756.3	56.0	127.939	16.917	7.676								183.173	24.220	7.6			
		333+60.00	371+12.74	RT	4.0	6.0	3752.7	278.0	634.839	16.917	38.090								908.914	24.220	37.5			
		371+21.06	470+76.84	RT	4.0	6.0	9955.8	737.5	1684.186	16.917	101.051								2411.290	24.220	99.6			
		471+05.97	514+00.00	RT	4.0	6.0	4294.0	318.1	726.407	16.917	43.584								1040.014	24.220	42.9			
		514+00.00	517+60.00	RT	8 ex	2.0	360.0												69.048	19.180	3.6			
		517+60.00	520+00.00	RT	10.0	0.0	240.0	44.4	101.500	42.292	6.090								51.240	21.350	2.4			
		520+00.00	532+70.00	RT	10.0	0.0	1270.0	235.2	537.104	42.292	32.226								271.145	21.350	12.7			
		532+70.00	547+30.00	RT	10.0	0.0	1460.0	270.4	617.458	42.292	37.048								311.710	21.350	14.6			
		547+30.00	554+00.00	RT	10.0	0.0	670.0	124.1	283.354	42.292	17.001								143.045	21.350	6.7			
		554+00.00	752+66.35	RT	4.0	6.0	19866.4	1471.6	3360.724	16.917	201.643								4811.630	24.220	198.7			
		752+20.79	753+60.00	RT	4.0	6.0	139.2	10.3	23.550	16.917	1.413								33.717	24.220	1.4			
		753+60.00	800+15.00	RT	4.0	6.0	4655.0	344.8	787.471	16.917	47.248								1127.441	24.220	46.6			
		800+15.00	800+85.00	RT	4 to 0	6 to 10	70.0	2.6	5.921	8.458	0.355								23.471	33.530	0.7			
		16+50.00	109+03.45	LT	4.0	6.0	9253.5	685.4	1565.374	16.917	93.922								2241.186	24.220	92.5			
		109+36.09	171+90.99	LT	4.0	6.0	6254.9	463.3	1058.120	16.917	63.487								1514.937	24.220	62.5			
		171+90.39	253+29.50	LT	4.0	6.0	8139.1	602.9	1376.865	16.917	82.612								1971.292	24.220	81.4			
		253+08.76	308+16.60	LT	4.0	6.0	5507.8	408.0	931.742	16.917	55.905								1333.999	24.220	55.1			
		308+17.52	326+03.13	LT	4.0	6.0	1785.6	132.3	302.066	16.917	18.124								432.475	24.220	17.9			
		326+03.71	371+12.74	LT	4.0	6.0	4509.0	334.0	762.777	16.917	45.767								1092.087	24.220	45.1			
		371+21.06	410+00.00	LT	4.0	6.0	3878.9	287.3	656.187	16.917	39.371								939.479	24.220	38.8			
		410+00.00	470+76.84	LT	4.0	6.0	6076.8	450.1	1027.998	16.917	61.680								1471.811	24.220	60.8			
		471+05.97	501+00.00	LT	4.0	6.0	2994.0	221.8	506.490	16.917	30.389								725.154	24.220	29.9			
		501+00.00	514+00.00	LT	8ex		1300.0												277.550	21.350	13.0			
		514+00.00	555+00.00	LT	4.0	6.0	4100.0	303.7	693.583	16.917	41.615								993.020	24.220	41.0			
		555+00.00	560+00.00	LT	6.0	4.0	500.0	55.6	126.875	25.375	7.612								109.550	21.910	5.0			
		560+00.00	752+66.35	LT	4.0	6.0	19266.4	1427.1	3259.222	16.917	195.553								4666.310	24.220	192.7			
		752+20.79	769+60.00	LT	4.0	6.0	1739.2	128.8	294.216	16.917	17.653								421.237	24.220	17.4			
		769+60.00	771+00.00	LT	4 to 0	6 to 10	140.0	5.2	11.842	8.458	0.710								46.942	33.530	1.4			
								11740.8	26813.014		1608.781								37055.462		1537.4			TOTAL- DIV 2
Makee Dr NE		44+72.30		RT	10.0			51.7	25.290		1.517													
A44/Iron Mine Dr		119+13.50		RT	10.0			57.0	27.888		1.673													
Dug Rd		248+02.70		RT	10.0			35.6	17.412		1.045													
Clonkitty Rd		307+20.70		RT	10.0			30.6	14.959		0.898													
French Creek Rd		320+20.10		LT	10.0			33.3	16.300		0.978													
Village Creek Rd		413+61.40		RT	10.0			29.1	14.246		0.855													
Dry Ridge Dr		506+70.90		RT	10.0			24.0	11.733		0.704													
X6A/Mays Prairie		526+95.00		LT	10.0			25.9	12.663		0.760													
Gander Hill Rd		646+53.20		RT	10.0			28.0	13.715		0.823													
X6A/Four Mile Dr		652+30.90		LT	10.0			29.6	14.464		0.868													
Gruber Ridge Rd		697+25.00		LT	10.0			36.8	18.004		1.080													
								381.5	186.675		11.201													TOTAL- DIV 1

HMA PAVEMENT









(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.

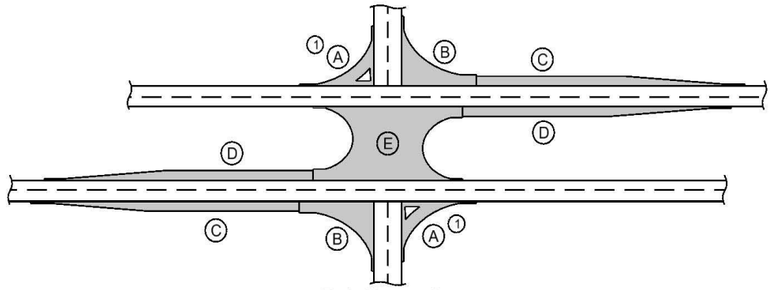
(2) Refer to PV-410, PV-411, PV-412, and PV-414.

(3) Quantity includes Pavement Header.

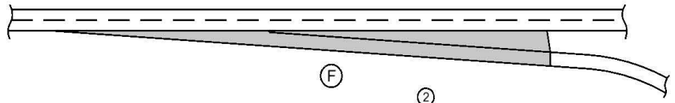
Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 145, and a special backfill unit weight (lbs/cf) of 140.

Location				Mainline			Area (3)								Bid Items												
															Hot Mix Asphalt Pavement						Binder						
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A (1)	B	C	D	E	F (2)	G	H	Surface		Intermediate		Cold-In-Place		Surface	Intermediate	Foam Asphalt	Special Backfill	Excavation, Class 13	Modified Subbase	Pavement Scarification	Remarks
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	Width	SY	TONS	TONS	TONS	TONS	CY	CY	SY	
IA 9	EB	15+50.0	16+25.0	46.0	75.0	383.3									42.3	383.6	21.2	385.2			2.5	1.3					383.3	
	EB	16+25.0	21+50.0	50.0	525.0	2916.7									321.7	2918.3	161.6	2930.7			19.3	9.7					2916.7	
	EB	21+50.0	32+00.0	44.0	1050.0	5133.3									566.3	5136.6	284.9	5169.0	44.0	5133.3	34.0	17.1	16.9					
	EB	32+00.0	38+60.0	44-32	660.0	2786.7									307.5	2788.7	154.7	2806.0	32.0	2346.7	18.4	9.3	7.7				440.0	
	EB	38+60.0	70+20.0	32.0	3160.0	11235.6									1239.8	11245.3	623.7	11313.6	32.0	11235.6	74.4	37.4	37.1					
	EB	70+20.0	75+00.0	32-44	480.0	2026.7									223.6	2028.1	112.5	2040.7	32.0	1706.7	13.4	6.7	5.6				320.0	
	EB	75+00.0	109+03.5	44.0	3403.5	16639.1									1835.6	16649.6	923.6	16754.6	44.0	16639.1	110.1	55.4	54.9					
STA EQ	EB																						0.0					
	EB	109+36.1	113+00.0	44.0	363.9	1779.1									196.3	1780.2	98.8	1791.5	44.0	1779.1	11.8	5.9	5.9					
	EB	113+00.0	119+60.0	44-32	660.0	2786.7									307.5	2788.7	154.7	2806.0	32.0	2346.7	18.4	9.3	7.7					
	EB	119+60.0	171+91.0	32.0	5231.0	18599.1									2052.3	18615.2	1032.4	18728.2	32.0	18599.1	123.1	61.9	61.4					
STA EQ	EB																						0.0					
	EB	171+90.4	253+29.5	32.0	8139.1	28939.1									3193.3	28964.2	1606.3	29140.0	32.0	28939.1	191.6	96.4	95.5					
STA EQ	EB																						0.0					
	EB	253+08.8	308+16.6	32.0	5507.8	19583.4									2160.9	19600.4	1087.0	19719.4	32.0	19583.4	129.7	65.2	64.6					
STA EQ	EB																						0.0					
	EB	308+17.5	326+03.1	32.0	1785.6	6348.8									700.6	6354.3	352.4	6392.9	32.0	6348.8	42.0	21.1	21.0					
STA EQ	EB																						0.0					
	EB	326+03.7	371+12.7	32.0	4509.0	16032.1									1769.1	16046.0	889.9	16143.4	32.0	16032.1	106.1	53.4	52.9					
STA EQ	EB																						0.0					
	EB	371+21.1	470+76.8	32.0	9955.8	35398.3									3906.1	35429.1	1964.9	35644.2	32.0	35398.3	234.4	117.9	116.8					
STA EQ	EB																						0.0					
	EB	471+06.0	501+00.0	32.0	2994.0	10645.4									1174.7	10654.7	590.9	10719.4	32.0	10645.4	70.5	35.5	35.1					
	EB	501+00.0	514+00.0	36.0	1300.0	5200.0									573.7	5204.0	288.6	5236.1	32.0	4622.2	34.4	17.3	15.3				577.8	
	EB	514+00.0	517+60.0	36-48	360.0	1680.0									185.3	1681.1	93.3	1691.7	32.0	1280.0	11.1	5.6	4.2				400.0	
	EB	517+60.0	518+80.0	32-44	120.0	506.7									55.9	507.0	28.1	510.2	32.0	426.7	3.4	1.7	1.4				80.0	
	EB	518+80.0	555+00.0	44.0	3620.0	17697.8									1952.4	17709.0	982.4	17820.7	44.0	17697.8	117.1	58.9	58.4					
	EB	555+00.0	560+00.0	46.0	500.0	2555.6									281.9	2557.1	141.9	2573.3	44.0	2444.4	16.9	8.5	8.1				111.1	
	EB	560+00.0	644+20.0	44.0	8420.0	41164.4									4541.2	41190.4	2284.9	41450.3	44.0	41164.4	272.5	137.1	135.8					
	EB	644+20.0	650+80.0	44-32	660.0	2786.7									307.5	2788.7	154.7	2806.0	32.0	2346.7	18.4	9.3	7.7				440.0	
	EB	650+80.0	752+66.4	32.0	10186.4	36218.1									3996.5	36249.6	2010.4	36469.6	32.0	36218.1	239.8	120.6	119.5					
STA EQ	EB																						0.0					
	EB	752+20.8	769+60.0	32.0	1739.2	6183.9									682.4	6189.2	343.3	6226.8	32.0	6183.9	40.9	20.6	20.4					
	EB	769+60.0	771+00.0	32-31	140.0	490.0									54.1	490.4	27.2	493.4	31.0	482.2	3.2	1.6	1.6				7.8	
	EB	771+00.0	800+15.0	31.0	2915.0	10040.6									1108.0	10049.6	557.3	10110.3	31.0	10040.6	66.5	33.4	33.1					
	EB	800+15.0	801+25.0	31-30	110.0	372.8									41.1	373.1	20.7	375.4			2.5	1.2					372.8	
	EB	801+25.0	801+50.0	30.0	25.0	84.7									9.3	84.8	4.7	85.3			0.6	0.3					83.3	
	EB	801+50.0	802+25.0	30.0	75.0	254.2									28.0	254.4	14.1	255.4			1.7	0.8					250.0	
10th Ave NW	LT	15+96.0		30.0		123.7									13.6	123.7	6.8	123.7			0.8	0.4						
Makee Dr NE	RT	44+72.3		10.0		232.6									25.6	232.6	12.8	232.6			1.5	0.8				38.8		
Green Valley Rd	LT	44+72.3		30.0		200.0									22.1	200.0	11.0	200.0			1.3	0.7						
Radio Park Ln	RT	52+85.0		30.0		100.0									11.0	100.0	5.5	100.0			0.7	0.3						
A44/Iron Mine Dr	RT	119+13.5		10.0		256.4									28.3	256.4	14.1	256.4			1.7	0.8				42.7		

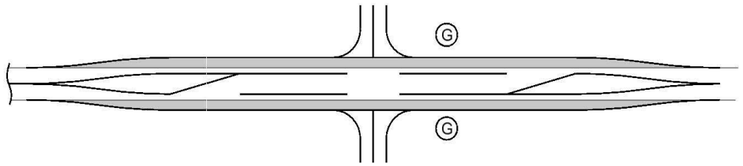
HMA PAVEMENT



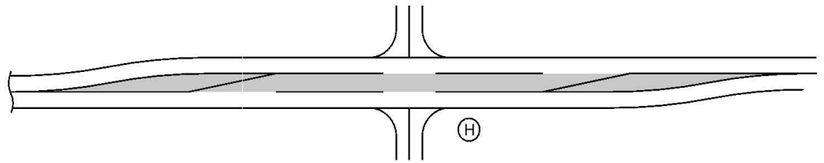
Typical Intersection



Ramp or Loop Taper (2)



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway

(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.

(2) Refer to PV-410, PV-411, PV-412, and PV-414.

(3) Quantity includes Pavement Header.

Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 145, and a special backfill unit weight (lbs/cf) of 140.

Location			Mainline			Area (3)								Bid Items												
														Hot Mix Asphalt Pavement						Binder						
Road Identification	Direction of Travel	Station to Station	Width	Length	Area	A (1)	B	C	D	E	F (2)	G	H	Surface		Intermediate		Cold-In-Place		Surface	Intermediate	Foam Asphalt	Special Backfill	Excavation, Class 13	Modified Subbase	Pavement Scarification	Remarks
			FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	Width	SY	TONS	TONS	TONS	TONS	CY	CY	SY	
A44/Iron Mine Dr	LT	119+13.5	30.0		166.7									18.4	166.7	9.2	166.7			1.1	0.6						
Howard Rd	LT	169+36.6	10.0		93.1									10.3	93.1	5.1	93.1			0.6	0.3						
Moose Rd	LT	211+55.0	10.0		111.6									12.3	111.6	6.1	111.6			0.7	0.4						
Dug Rd	RT	248+02.7	10.0		160.1									17.7	160.1	8.8	160.1			1.1	0.5				26.7		
X20-Lycurgus Rd	LT	260+45.2	30.0		166.7									18.4	166.7	9.2	166.7			1.1	0.6						
Plein Rd	LT	276+14.8	10.0		111.9									12.3	111.9	6.2	111.9			0.7	0.4						
Pheasant Rd	RT	289+54.7	10.0		98.0									10.8	98.0	5.4	98.0			0.6	0.3						
Clonkitty Rd	RT	307+20.7	10.0		137.6									15.2	137.6	7.6	137.6			0.9	0.5				22.9		
French Creek Rd	LT	320+20.1	10.0		149.9									16.5	149.9	8.3	149.9			1.0	0.5				25.0		
Gun Tower Rd	LT	361+41.6	10.0		147.9									16.3	147.9	8.2	147.9			1.0	0.5						
Hilltop Rd	RT	387+84.9	10.0		149.0									16.4	149.0	8.2	149.0			1.0	0.5						
Village Creek Rd	RT	413+61.4	10.0		131.0									14.4	131.0	7.2	131.0			0.9	0.4				21.8		
Hawk View Rd	LT	419+21.5	10.0		116.1									12.8	116.1	6.4	116.1			0.8	0.4						
Bluebell Rd	RT	434+70.5	10.0		146.1									16.1	146.1	8.1	146.1			1.0	0.5						
High Point Rd	LT	452+05.2	10.0		104.1									11.5	104.1	5.7	104.1			0.7	0.3						
Dry Ridge Dr	RT	506+70.9	10.0		107.9									11.9	107.9	5.9	107.9			0.7	0.4				18.0		
Bolder Dr	LT	518+89.1	10.0		111.6									12.3	111.6	6.1	111.6			0.7	0.4						
X6A/Mays Prairie	LT	526+95.0	10.0		116.4									12.8	116.4	6.4	116.4			0.8	0.4				19.4		
Gander Hill Rd	RT	646+53.2	10.0		126.1									13.9	126.1	7.0	126.1			0.8	0.4				21.0		
X6A/Four Mile Dr	LT	652+30.9	10.0		133.0									14.7	133.0	7.3	133.0			0.9	0.4				22.2		
Gruber Ridge Rd	LT	697+25.0	10.0		165.6									18.3	165.6	9.1	165.6			1.1	0.5				27.6		
Valley Rd	LT	726+38.4	10.0		106.2									11.7	106.2	5.9	106.2			0.7	0.4						
Driftwood Ln	LT	755+39.0	10.0		60.9									6.7	60.9	3.4	60.9			0.4	0.2						
Creek View Ln	LT	756+88.0	10.0		52.9									5.8	52.9	2.9	52.9			0.3	0.2						
Clear Creek Blvd	RT	759+31.0	10.0		74.0									8.2	74.0	4.1	74.0			0.5	0.2						
South Rd	RT	801+45.2	30.0		95.6									10.5	95.6	5.3	95.6			0.6	0.3						
33 Paved drives		Various	30.0				2750.0							303.2	2750.0	151.6	2750.0			18.2	9.1						
														34564.9	313513.9	17386.0	315391.8		299640.4	2073.9	1043.2	988.8			286.1	6382.8	TOTALS
DIVISION 3																											
Makee Dr NE	RT	44+72.3	40.0		535.3									59.0	535.3	118.0	535.3			3.5	7.1			178.4	89.2		
A44/Iron Mine Dr	RT	119+13.5	40.0		362.2									39.9	362.2	79.9	362.2			2.4	4.8			120.7	60.4		
Dug Rd	RT	248+02.7	40.0		291.1									32.1	291.1	64.2	291.1			1.9	3.9			97.0	48.5		
Clonkitty Rd	RT	307+20.7	40.0		238.4									26.3	238.4	52.6	238.4			1.6	3.2			79.5	39.7		
French Creek Rd	LT	320+20.1	40.0		295.3									32.6	295.3	65.1	295.3			2.0	3.9			98.4	49.2		
Village Creek Rd	RT	413+61.4	40.0		212.1									23.4	212.1	46.8	212.1			1.4	2.8			70.7	35.4		
Dry Ridge Dr	RT	506+70.9	40.0		188.9									20.8	188.9	41.7	188.9			1.2	2.5			63.0	31.5		
X6A/Mays Prairie	LT	526+95.0	40.0		226.9									25.0	226.9	50.0	226.9			1.5	3.0			75.6	37.8		
Gander Hill Rd	RT	646+53.2	40.0		144.8									16.0	144.8	31.9	144.8			1.0	1.9						
X6A/Four Mile Dr	LT	652+30.9	40.0		276.3									30.5	276.3	60.9	276.3			1.8	3.7			92.1	46.1		
Gruber Ridge Rd	LT	697+25.0	40.0		224.4									24.7	224.4	49.5	224.4			1.5	3.0			74.8	37.4		
														330.3	2995.9	660.6	2995.9			19.8	39.6			950.4	475.2		TOTALS

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25 DCY4: Double Centerline (Yellow) @ 2.00 NPY4: No Passing Zone Line (Yellow) @ 1.25 BLW4: Broken Lane Line (White) @ 0.25 ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00 SLW2: Stop Line (White) @ 6.00

Location							Length by Line Type (Unfactored)														Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2							
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
IA 9	15+50.00	25+00.00	EB	Waterborne/Solvent Paint	x	x	x		9.50		9.50	19.00		0.30								
After CIP	25+00.00	26+19.00	EB	Waterborne/Solvent Paint	x	x	x			1.19	1.19	2.38										
	26+19.00	55+63.00	EB	Waterborne/Solvent Paint	x	x	x	29.44			0.31	58.88		0.60								
	55+63.00	62+48.00	EB	Waterborne/Solvent Paint	x	x	x			6.85		13.70										
	62+48.00	70+23.00	EB	Waterborne/Solvent Paint	x	x	x	7.75				15.50										
	70+23.00	99+36.00	EB	Waterborne/Solvent Paint	x	x	x			29.13	30.00	58.26										
	99+36.00	109+03.45	EB	Waterborne/Solvent Paint	x	x	x		9.67			19.35										
	109+36.09	119+14.00	EB	Waterborne/Solvent Paint	x	x	x		9.78			19.56		0.60								
	119+14.00	126+76.00	EB	Waterborne/Solvent Paint	x	x	x			7.62		15.24										
	126+76.00	166+55.00	EB	Waterborne/Solvent Paint	x	x	x	39.79				79.58										
	166+55.00	171+90.99	EB	Waterborne/Solvent Paint	x	x	x			5.36		10.72										
	171+90.39	178+76.00	EB	Waterborne/Solvent Paint	x	x	x			6.86		13.71										
	178+76.00	186+84.00	EB	Waterborne/Solvent Paint	x	x	x		8.08			16.16										
	186+84.00	208+66.00	EB	Waterborne/Solvent Paint	x	x	x			21.82		43.64										
	208+66.00	219+31.00	EB	Waterborne/Solvent Paint	x	x	x		10.65			21.30										
	219+31.00	228+31.00	EB	Waterborne/Solvent Paint	x	x	x			9.00		18.00										
	228+31.00	233+09.00	EB	Waterborne/Solvent Paint	x	x	x	4.78				9.56										
	233+09.00	242+00.00	EB	Waterborne/Solvent Paint	x	x	x			8.91		17.82										
	242+00.00	244+65.00	EB	Waterborne/Solvent Paint	x	x	x	2.65				5.30										
	244+65.00	253+24.00	EB	Waterborne/Solvent Paint	x	x	x			8.59		17.18		0.30								
	253+24.00	253+29.50	EB	Waterborne/Solvent Paint	x	x	x			0.06		0.11										
	253+08.76	253+77.00	EB	Waterborne/Solvent Paint	x	x	x			0.68		1.36										
	253+77.00	264+02.00	EB	Waterborne/Solvent Paint	x	x	x	10.25				20.50		0.30								
	264+02.00	273+70.00	EB	Waterborne/Solvent Paint	x	x	x			9.68		19.36										
	273+70.00	292+12.00	EB	Waterborne/Solvent Paint	x	x	x	18.42				36.84										
	292+12.00	293+85.00	EB	Waterborne/Solvent Paint	x	x	x			1.73		3.46										
	293+85.00	300+46.00	EB	Waterborne/Solvent Paint	x	x	x		6.61			13.22										
	300+46.00	308+16.60	EB	Waterborne/Solvent Paint	x	x	x			7.71		15.41		0.30								
	308+17.52	308+94.00	EB	Waterborne/Solvent Paint	x	x	x			0.76		1.53										
	308+94.00	311+10.00	EB	Waterborne/Solvent Paint	x	x	x		2.16			4.32										
	311+10.00	318+31.00	EB	Waterborne/Solvent Paint	x	x	x			7.21		14.42										
	318+31.00	319+65.00	EB	Waterborne/Solvent Paint	x	x	x	1.34				2.68										
	319+65.00	326+03.13	EB	Waterborne/Solvent Paint	x	x	x			6.38		12.76		0.30								
	326+03.71	327+41.00	EB	Waterborne/Solvent Paint	x	x	x			1.37		2.75										
	327+41.00	371+12.74	EB	Waterborne/Solvent Paint	x	x	x	43.72				87.43										
	371+21.06	395+63.00	EB	Waterborne/Solvent Paint	x	x	x	24.42				48.84										
	395+63.00	405+45.00	EB	Waterborne/Solvent Paint	x	x	x			9.82		19.64										
	405+45.00	408+18.00	EB	Waterborne/Solvent Paint	x	x	x		2.73			5.46										
	408+18.00	417+62.00	EB	Waterborne/Solvent Paint	x	x	x			9.44		18.88		0.30								
	417+62.00	441+07.00	EB	Waterborne/Solvent Paint	x	x	x	23.45				46.90										
	441+07.00	444+31.00	EB	Waterborne/Solvent Paint	x	x	x			3.24		6.48										
	444+31.00	459+84.00	EB	Waterborne/Solvent Paint	x	x	x		15.53			31.06										
	459+84.00	463+54.00	EB	Waterborne/Solvent Paint	x	x	x			3.70		7.40										
	463+54.00	470+76.84	EB	Waterborne/Solvent Paint	x	x	x	7.23				14.46										
	471+05.97	491+87.00	EB	Waterborne/Solvent Paint	x	x	x	20.81				41.62										
	491+87.00	500+25.00	EB	Waterborne/Solvent Paint	x	x	x			8.38		16.76										
	500+25.00	526+95.00	EB	Waterborne/Solvent Paint	x	x	x		26.70		5.65	53.40		0.60								
	526+95.00	541+09.00	EB	Waterborne/Solvent Paint	x	x	x			14.14	14.14	28.28										
	541+09.00	649+85.00	EB	Waterborne/Solvent Paint	x	x	x		108.76		11.15	217.52		0.30								
	649+85.00	652+94.00	EB	Waterborne/Solvent Paint	x	x	x			3.09		6.18		0.30								
	652+94.00	673+39.00	EB	Waterborne/Solvent Paint	x	x	x	20.45				40.90										
	673+39.00	678+98.00	EB	Waterborne/Solvent Paint	x	x	x			5.59		11.18										
	678+98.00	681+75.00	EB	Waterborne/Solvent Paint	x	x	x	2.77				5.54										
	681+75.00	686+37.00	EB	Waterborne/Solvent Paint	x	x	x			4.62		9.24										
	686+37.00	699+69.00	EB	Waterborne/Solvent Paint	x	x	x	13.32				26.64		0.30								
	699+69.00	701+06.00	EB	Waterborne/Solvent Paint	x	x	x			1.37		2.74										
	701+06.00	712+58.00	EB	Waterborne/Solvent Paint	x	x	x		11.52			23.04										
	712+58.00	718+93.00	EB	Waterborne/Solvent Paint	x	x	x			6.35		12.70										
	718+93.00	731+07.00	EB	Waterborne/Solvent Paint	x	x	x	12.14				24.28										
	731+07.00	734+30.00	EB	Waterborne/Solvent Paint	x	x	x			3.23		6.46										
	734+30.00	751+59.00	EB	Waterborne/Solvent Paint	x	x	x		17.29			34.58										
	751+59.00	752+66.35	EB	Waterborne/Solvent Paint	x	x	x			1.07		2.15										
	752+20.79	757+35.00	EB	Waterborne/Solvent Paint	x	x	x			5.14		10.28										
	757+35.00	789+04.00	EB	Waterborne/Solvent Paint	x	x	x	31.69				63.38										
	789+04.00	798+90.20	EB	Waterborne/Solvent Paint	x	x	x			9.86		19.72										
	798+90.20	802+25.00	EB	Waterborne/Solvent Paint	x	x	x		3.35			6.70		0.30								

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25 | DCY4: Double Centerline (Yellow) @ 2.00 | NPY4: No Passing Zone Line (Yellow) @ 1.25 | BLW4: Broken Lane Line (White) @ 0.25 | ELW4: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 1.00 | SLW2: Stop Line (White) @ 6.00

Location								Length by Line Type (Unfactored)												Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side L	Side C	Side R	BCY4* STA	DCY4 STA	NPY4** STA	BLW4 STA	ELW4 STA	ELY4 STA	SLW2 STA	STA	STA	STA	STA	STA	STA	STA	
After Inter	15+50.00	802+25.00	EB	Waterborne/Solvent Paint	x	x	x	314.42	242.33	229.96	71.94	1573.41		4.80								
After Surfac	15+50.00	802+25.00	EB	Waterborne/Solvent Paint	x	x	x	314.42	242.33	229.96	71.94	1573.41		4.80								
Final	15+50.00	802+25.00	EB	Waterborne/Solvent Paint	x		x	314.42	242.33	229.96	71.94	1573.41		4.80								
				Factored Total: Waterborne/Solvent Paint				314.42	1938.65	1149.78	71.94	6293.62	-	115.20	-	-	-	-	-	-	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							9883.61											

MILLED RUMBLE STRIPS

See PV-12 and PV-13.

* Calculated at 18" width for Shoulder.

Location					Length		Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks
Road Identification	Station to Station		Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	PCC	HMA	Shoulder	PCC Paved	HMA Paved	Granular\ Earth	
					STA	STA	GAL	FT	FT	FT	
	35+20.00	109+03.45		Centerline		73.83	0.0				
	109+36.09	171+90.99		Centerline		62.55	0.0				
STA EQ											
	171+90.39	253+29.50		Centerline		81.39	0.0				
STA EQ											
	253+08.76	308+16.60		Centerline		55.08	0.0				
STA EQ											
	308+17.52	326+03.13		Centerline		17.86	0.0				
STA EQ											
	326+03.74	374+12.74		Centerline		48.09	0.0				
STA EQ											
	371+21.06	470+76.84		Centerline		99.56	0.0				
STA EQ											
	471+05.97	501+00.00		Centerline		29.94	0.0				
Suspend for Church											
	518+00.00	590+28.30		Centerline		72.28	0.0				
STA EQ											
	590+32.09	752+66.35		Centerline		162.34	0.0				
STA EQ											
	752+20.79	755+39.00		Centerline		3.18	0.0				
	35+20.00	109+03.45	HMA	Right Shoulder		73.83	80.0				
	109+36.09	171+90.99	HMA	Right Shoulder		62.55	67.8				
	171+90.39	253+29.50	HMA	Right Shoulder		81.39	88.2				
	253+08.76	308+16.60	HMA	Right Shoulder		55.08	59.7				
	308+17.52	326+03.13	HMA	Right Shoulder		17.86	19.4				
	326+03.74	374+12.74	HMA	Right Shoulder		48.09	52.1				
	371+21.06	470+76.84	HMA	Right Shoulder		99.56	107.9				
	471+05.97	501+00.00	HMA	Right Shoulder		29.94	32.5				
	518+00.00	590+28.30	HMA	Right Shoulder		72.28	78.4				
	590+32.09	752+66.35	HMA	Right Shoulder		162.34	175.9				
	752+20.79	755+39.00	HMA	Right Shoulder		3.18	3.5				
	35+20.00	109+03.45	HMA	Left Shoulder		73.83	80.0				
	109+36.09	171+90.99	HMA	Left Shoulder		62.55	67.8				
	171+90.39	253+29.50	HMA	Left Shoulder		81.39	88.2				
	253+08.76	308+16.60	HMA	Left Shoulder		55.08	59.7				
	308+17.52	326+03.13	HMA	Left Shoulder		17.86	19.4				
	326+03.74	374+12.74	HMA	Left Shoulder		48.09	52.1				
	371+21.06	470+76.84	HMA	Left Shoulder		99.56	107.9				
	471+05.97	501+00.00	HMA	Left Shoulder		29.94	32.5				
	518+00.00	590+28.30	HMA	Left Shoulder		72.28	78.4				
	590+32.09	752+66.35	HMA	Left Shoulder		162.34	175.9				
	752+20.79	755+39.00	HMA	Left Shoulder		3.18	3.5				
				Totals	PCC	HMA	Fog Seal				
				HMA Shoulders		1412.21	1530.8				
				HMA Centerlines		706.10					

Discharge
PT (TYP)

STA 15+96.0
10th Ave NW

MAKEE TWP.
T98N R5W

STA 16+50 BEGIN PROJECT & DIVISION 1
BEGIN 24' RECONSTRUCTION WITH 12' CLIMBING LANE

STA 22+00.00
END DIVISION 1
BEGIN DIVISION 2

STA 15+50.0
BEGIN PROJECT

Discharge
PT (TYP)

(NOT PART OF THIS CONTRACT)

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.1

64 RALPH M. SWEENEY

64a H.G. LÜDEMAN (FEE) WILLIAM C. & CONNIE M. KERNDT (C.P.)
64. DAVID H. & Katherine A. HOGENDORN
68. CHARLES A. & EVELENA SOMMERS

B.M. 14A
ELEV. 1175.83

B.M. 15
ELEV. 1121.12

PARCEL NO. 66 TOTAL SETTLEMENT: $ 12,520.00
GRANTOR: H.G. Lüdeman (Fee) William C. Kerndt
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 07-26-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 292-294

MAKEE TWP
T 98 N R 5 W

56' PIN
P.O.T. 27+16.6' AHEAD OF
P.I. 25+87.90
IRON PIN
SEC 19

Borrow 'A'
15,600 C.Y. Available

Contractor Needs		
Grader	Paver	Location
315 H.P.	0 1640 T	Roadway
175 H.P.		Borrow Pit
4570 C.Y.	Mixer	Totals

MATCH 50 Lt.
R.O.W. Marker

+00.0 ~ WATER R.O.W. MKR.

+80 PROP. DIKE
EL. 1181.5

ABANDONED RECORDED 6-16-80 BOOK 112 PAGE 441-442

Easement to Construct and Maintain Structures and Rock Lined Berm

CURVE DATA
Δc = 49°49'00"
D = 2°45'00"
T = 967.49'
L = 1811.52'
E = 213.68'
R = 2083.48'
c = 0.014

PROP. SLOPE PROTECTION FOR DETAILS SEE X-SECT. # SHEET

Δ = 54°41'00" RT.
Θs = 3°26'00"
Ls = 250'
Ts = 1249.46'
Es = 285.18'
Xc = 249.91'
Yc = 5.00'
LT = 166.70'
ST = 83.36'
LC = 249.96'
P = 12.5'
K = 124.99'

ABANDONED 9-7-82 BOOK 116 PAGE 52-53

STA. 25+87.0
2'x2'x41.5' R.C.B. (P.I. 25+87 ABANDONED)
D.A. = 4 AC.-R.
INSTALL = 24" RF-1 & RF-13 FLUME AT STA. 26+50, SKEW 15°
LT. 1176.X51
E.L. RT. 1172.X79
FLUME 1159.9

NOTE: From Sta. 21+50 to Sta. 28+50 (Rt. Side) Build Fence Berm as detailed on Cross Sections. The 1,425 (Class 10) required is available from Borrow "A".

+00 - 24' LT. BEGIN 40:1 TAPER

INSTALL SUBDRAIN LINE NO. 1, SHEET NO. 3D

78"x29" CONC. PIPE (REMOVED)

+80 12' LT. END TAPER & CLIMBING LANE

P.O.T. 37+69.01

STA. 30+03.5
2'x2'x41.5' R.C.B. (REMOVED)
D.A. = 7 AC.-R.
INSTALL = 24" RF-1
AT STA. 29+90
E.L. LT. 1160.84 (66)
RT. 1155.09

STA. 40+69.5
6'x6'x75' R.C.B. (CREASE IN TOP SLAB & FILLED)
D.A. = 48+54+2+2+7+1 = 116 AC.-R.-H.
(CARRY AHEAD)
ABANDONED 9-7-82 BOOK 116 PAGE 50-51

SEC. 19

0 50 100

STA. 46+05
D.A. = 1124 AC.-H.
BUILT TWIN 8'x8' R.C.B. AT STA. 46+05, SKEW 15°
E.L. LT. 1102.60 15
RT. 1100.60 14
(DITCH OUTLET)
DES. NO. 176

CURVE DATA (SURVEY)
Δc = 39°51'00"
D = 2°30'00"
T = 830.76'
L = 1594.00'
E = 145.92'
R = 2291.83'

Δ = 44°06'00" LT.
Θs = 3° 07' 30"
Ls = 250'
Ts = 1100.65'
Es = 200.08'
Xo = 249.93'
Yo = 4.54'
LT = 166.69'
ST = 83.36'
LC = 249.97'
P = 1.13'
K = 124.99'

+61 ENTRANCE

STA 44+72.3 NW Valley Green Rd

STA 44+72.3 Makee Dr NE

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 24

P.O.C. 44+72.27 (O.R.)
P.O.T. 44+86.30 (SURVEY & O.R.)

SEC 19 SEC 20

TEMP. EASE. 75" TO CMP (REMOVED)

OFF. RELOC.

63°12'40"

SURVEY CLOSED

+50 LEVEL

P.I. 50+53.27 (O.R.)
IRON PIN

STA. 50+60
2'x2'x41.5' R.C.B. (REMOVED)
D.A. = 10 AC.-R.
INSTALL = 30" RF-1
AT STA. 50+15
E.L. LT. 1109.X14
RT. 1108.X45

24"-84° CMP (REMOVED)

PROP. SLOPE & DITCH BOTTOM PROTECTION. FOR DETAILS SEE X-SECT. # SHEET

CURVE DATA (OFF. RELOC.)
Δc = 38°49'00" Δ = 45° 04' 00" LT.
D = 2°30'00" Θs = 3°07'30"
T = 807.46' Ls = 250'
L = 1552.67' Ts = 1076.33'
E = 138.08' Es = 190.65'
R = 2291.83' Xc = 249.93'
e = 0.073 Yc = 4.54'
θ = 205' LT = 166.69'
ST = 83.36'
LC = 249.91'
P = 1.13'
K = 124.99'

PROP. INTERCEPT DITCH

INSTALL SUBDRAIN LINE NO. 2, SHEET NO. 3D

TEMP. EASE. TO BE REMOVED Grain Bin

GRAIN BIN

TELE. BOX

FLAG POLE

RADIO STA.

WELL

WATER VALVE

STA 52+85.0 Red Top Park Ln

RADIO TOWER

+85 ENTRANCE

EXISTING TOPO. IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

CLASS 10 F+15%+30% = 231 + 9,608 (1800) = 9,845 C = 9,845 (1800) FROM STA. 17+50 = 668 TO STA. 32+50 = 993 10,356 10,356

CLASS 12 C = 8,652 [9,688] F = 933

CLASS 10 C = 9573 (1027) NOTE: ( ) = UNSUITABLE L = C + SWELL F+15% = 9018 (1027) TO S.R. RT. STA. 44+72.27 = 328 TO S.R. LT. STA. 44+72.27 = 317 9573

CLASS 12 C = 12,197 [13,172] F = 1,767 FROM STA. 24+06 = 993 TO STA. 50 = 6,128 14,115 14,115

CLASS 10 F+15% = 9804 (334) C = 10340 (334) TO S.R. LT. STA. 44+72.27 = 536 10,340

CLASS 12 C = 1634 [1634] FROM STA. 54+ = 793 8455 F = 846

REMOVED OLD PAVEMENT

VARI

1/2:1 ROCK BACKSLOPE LT. (BENCHED) SEE X-SECTIONS FOR DETAILS

852 C.Y. UNSUIT. MAT'L. TYPE "B" DISPOSAL

ELIMINATED BACKSLOPE ROLL LT.

PARCEL NO. 68 TOTAL SETTLEMENT: $ 800.00
GRANTOR: Clark Clarence & Alice Gutman
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: CONDI HELD: 11-15-77
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK PAGE

PROP. TYPE "C" ENT. (1150) CLOSED V.C. = 900' (1150) +35 +20 +30 1171.22 +20 1158.6 -2.0% RT. DITCH +00 1153.0 -13.6% RT. DITCH -0.4% RT. DITCH -3.1% RT. DITCH +50 1146.2 +00 1146.0 -3.48% +00 1134.9 SUBGR. TREAT. NO. 1

1491 C.Y. UNSUITABLE MATERIAL
501 C.Y. CLASS "A" DISPOSAL
996 C.Y. CLASS "B" DISPOSAL

SUBGRADE TREATMENT NO. 2

EXISTING PAVEMENT

FIELD ENT.

PROP. TYPE "C" ENT. (1120)

V.C. = 1000'

+50 1119.1 +00 1118.10 +00 1111.0 +50 1112.2 -1.8% SPECIAL RT. DITCH +25 1124.1 -10.0% LT. DITCH +50 1119.1 +60 +50 +40 +60 +80 +85 +1.50% +2.3% RT. DITCH +00 1120.1 +4.07% LT. DITCH +4.4% RT. DITCH +25 1109.1 +50 1109.1 8% 8% PROP. TYPE "C" ENT. (1110) PROP. TYPE "C" ENT. CLOSED FARM ENT. (1110)

8 C.Y. SHALE BACKSLOPE PROTECTION LT. FOR DETAILS SEE X-SECT.

	LT.	RT.
	3'x10'	
VARI	NO DITCH	
	71.22	
	89.81	
	88.42	
	81.05	
	85.10	
	84.30	
	83.04	
	81.14	
	80.45	
	79.19	
	77.94	
	74.70	
	75.49	
	74.29	
	73.11	
	71.96	
	70.81	
	69.68	
	68.51	
	67.48	
	66.40	
	65.34	
	64.30	
	63.28	
	62.28	
	61.29	
	60.32	
	59.37	
	58.43	
	57.52	
	56.62	
	55.75	
	54.86	
	51.38	
	47.90	
	44.42	
	40.94	
	37.46	
	33.98	
	30.50	
	29.05	
	28.32	
	28.05	
	27.27	
	26.54	
	25.84	
	25.17	
	24.54	
	23.93	
	23.36	
	22.81	
	22.30	
	21.82	
	21.37	
	20.95	
	20.57	
	20.21	
	19.88	
	19.59	
	19.33	
	19.09	
	18.87	
	18.68	
	18.52	
	18.38	
	18.26	
	18.16	
	18.08	
	18.02	
	17.98	
	17.96	
	17.95	
	17.96	
	17.98	
	18.02	
	18.08	
	18.16	
	18.26	
	18.38	
	18.52	
	18.68	
	18.87	
	19.09	
	19.33	
	19.59	
	19.88	
	20.21	
	20.57	
	20.95	
	21.37	
	21.82	
	22.30	
	22.81	
	23.36	
	23.93	
	24.54	
	25.17	
	25.84	
	26.54	
	27.27	
	28.05	
	28.32	
	29.05	
	30.50	
	34.98	
	39.46	
	43.94	
	48.42	
	51.90	
	55.38	
	58.86	
	62.34	
	65.82	
	69.30	
	72.78	

64. RALPH M. SWEENEY
67. DAVID R. & SHARON S. HOGENDORN
69. GORDON W. KAESER
69A ~~MAHLON~~ " S " ~~ECKLEY~~ ~~COOPERATIVE ASSOCIATION~~
70. MAURICE HART

B.M. #16
ELEV. 1112.40

MAKEE TWP
T 98 N R 5 W
SEC 20

~~INTERCEPT~~ SUBDRAIN
LINE NO. 3, SHEET NO. 3D

GRANTOR: Gordon W. Kaeser
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-02-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 111 PAGE 456

B.M. #17
ELEV. 1193.21

NITROGEN FERTILIZER BULK TANK

PARCEL NO. 69 TOTAL SETTLEMENT: $ 18,700.00
GRANTOR: Gordon W. Kaeser
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 05-26-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 111 PAGE 455

~~Temp. Fence~~

ABANDONED 12-31-84 RECORDED BOOK 118 PAGE 538

ABANDONED 12-31-84 RECORDED BOOK 118 PAGE 540

~~Type "A" Ent.~~ Type "B" Ent.

+14 ~~+18 GRADE~~ TYPE "B" ENT.

~~+80 PROP.~~ DICE L. 1118.5

R.W.

℄ OFF. RELOC.

EXISTING R.W.

EXISTING R.O.W.

℄ SURVEY

~~Temp. Easement to Construct End Pushpiers~~

~~PROP.~~ TYPE "C" ENTS.

+10 ENTRANCE

DUMP

+00 24' RT. BEGIN 40:1 TAPER & CLIMBING LANE

+00 24' RT. END TAPER

~~+55 PROP.~~ R.W. MKR.

TEMP. EASE.

ATTROX. ¼ ¼ SEC. LINE

~~STA. 19+57~~
~~2'x4'x65'-5" RCB.~~ (REMOVED)
DA. = 4 AC. -H.
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 19+05
LT. F-L. 1176.52
(1159.71 = F-L. RT.)
~~1150.0~~
FLUME 1139.7

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

~~CONC. FLUME~~ CONC. ~~CENTRAL~~ TROUGH (REMOVED)

~~INTERCEPT~~ DITCH STA. 60+29.61 (O.R.) 54FT. LT. (SURVEY)

CS. 57+79.41 (O.R.) ~~FROM~~ 55FT. RT. (SURVEY)

~~FROM~~ STA. 68+82.94 (SURVEY)

~~-03 PROP.~~ -39 LT. R.O.W. MKR.

RIPRAP

EXISTING R.O.W.

GUY WIRES

TOWER

+62 ENTRANCE

EXIST. GROUND

3' LIMESTONE RIPRAP

TYPICAL SECTION DITCH OUTLET @ STA. 68+25

~~STA. 67+85~~ ~~BROKE~~
~~6'x6'x66' RCB~~ ~~BREAK~~ IN TOP SLAB & FILL
DA. = 292+14 = 306 AC. -H.
BUILD 10'x6' TAPERED TO 6'x6' R.C.B.
AT STA. 68+25, SKEW 30°
LT. ~~1114.5~~ 1113.89
FL. INTER. 1111.5
RT. 1108.~~57~~
(DITCH OUTLET)
DES. 276

DITCH OUTLET SEE TYPICAL SECTION THIS SHEET

~~+35 PROP.~~ +15 Type "C" Ent. Closed

~~+35~~ ENTRANCE

~~+3 TOSCHE~~ (REMOVED)

~~-03 PROP.~~ -39 LT. R.O.W. MKR.

~~+55 PROP.~~ R.O.W. MKR.

~~+70 PROP.~~ +80 TYPE "C" ENTS.

Discharge PT (TYP)

Discharge PT (TYP)

0 50 100

NOTE
( ) = UNSUITABLE
[ ] = C + SWELL

CLASS 10 F+10% = 30,417 (10,982)
C = 45,556 (11,482) F+15% = 6780 (500)
TO STA. 38± = 8299
45,556

C = 50,835 [54,507]
FROM STA. 94± = 8347
FROM STA. 105+50± = 4907
67,761

CLASS 12
F = 66,968
TO STA. 61± = 793
27,761

CLASS 10 F+10% = 440
C = 8470 (2147) F+30% = 8030 (2147)
8470

CLASS 12
C = 7770 [8440] F = 5628
FROM STA. 174± = 5435
13875
TO STA. 67+50± = 8347
13875

REMOVE OLD PAVEMENT

11,160 C.Y. UNSUIT. MAT'L. TYPE "B" DISPOSAL

16 C.Y. SHALE BACKSLOPE PROTECTION LT. FOR DETAILS, SEE X-SECT.

9 C.Y. SHALE BACKSLOPE PROTECTION RT. FOR DETAILS, SEE X-SECT.

~~Prop.~~ Type "A" Ent.

+00 1152.10

+50 1125.8

+2.3% RT. DITCH

+1.50%

1½:1 ROCK BACKSLOPE LT. (BENCHED) SEE X-SECTIONS FOR DETAILS

1½:1 ROCK BACKSLOPE RT. (BENCHED) SEE X-SECTIONS FOR DETAILS

VARI

SUBGRADE TREATMENT NO. 3

5' DITCH
3'x10' DITCH

3:1 LT. FORESLOPE

3:1 RT. FORESLOPE
NO DITCH

2,803 C.Y. UNSUIT. MAT'L.
601 C.Y. TYPE "A" DISPOSAL
1,558 C.Y. TYPE "B" DISPOSAL
638 C.Y. USE FOR TOPSOIL

ELIMINATE BACKSLOPE ROLL LT.

~~Prop.~~ Type "B" Ent.

~~PROP.~~ TYPE "C" ENT.

+00 1195.30

+50 1184.6

+50 1171.7

+2.3% LT. DITCH

+3.60%

V.C. = 800'

SUBGR. TREAT. NO. 4

SUBGR. TREAT. NO. 5

4'x10' DITCH

3'x10' DITCH

NO DITCH

DITCH GRADES

LT.
RT.

| | | |

69. GORDON W. KAESER
70. MAURICE HART
71. Oliver & Margery Roderick

BM. 17 'A'
ELEV. 1238.30

MAKEE TWP
T 98 N R 5 W
SEC. 20 SEC. 17

Discharge
PT (TYP)

PARCEL NO. 70 TOTAL SETTLEMENT: $ 865.00
GRANTOR: MAURICE HART
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 3-21-78 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 111 PAGE 467

PARCEL NO. 71 TOTAL SETTLEMENT: $ 2,500.00
GRANTOR: OLIVER K. RODERICK
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 01-18-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 81-83

CURVE DATA (OFF. RELOC.)
Δc = 42°15'30"
D = 2°00'00"
T = 307.63'
L = 612.92'
E = 16.47'
R = 2,864.79'
e = 0.065
S = 295
Δ = 16°15'30"
θs = 2°00'00"
Ls = 200'
Ts = 509.29'
Es = 29.66'
Xc = 199.98'
Yc = 2.33'
LT = 133.34'
ST = 66.67'
LC = 199.99'
P = 0.58'
K = 100.00'

CURVE DATA (SURVEY)
Δ = 17°17'30" RT.
θ = 2°00'00"
T = 435.60'
E = 864.58'
R = 32.93'
R = 2864.79'

DA. = 14 AC. - H.
INSTALL 36" RF-1 & RF-13 FLUME
AT STA. 94+90, SKEW 5°
FLUME 1216.7
F.L. LT. 1234.35
RT. 1257.26

DA. = 4.0 AC. - R.
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 111+25, SKEW 15°
LT. 1317.78
F.L. RT. 1312.77
FLUME 1300.2

EQUATION: S.T. 109+03.45 (O.R.) (BACK)
= STA. 109+36.09 (SURVEY) (AHEAD)

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--2C-03	IOWA	5		11	241

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.4

70. MAURICE HART
71. Oliver & Margery Roderick
72. M. A. EATON
73. JOSEPH P. & LYNDA K. PALMER
74. A.V. PALMER
75. ALLAMAKEE COUNTY
76. HAROLD F. GRUBER
74A. A.V. Palmer & Richard Kistler

B.M. #18 'A' ELEV. ~~1318.78~~ 1320.27

B.M. #19 ELEV. 1295.92

B.M. 19 'A' ELEV. 1298.66

B.M. #20 'A' ELEV. ~~1279.78~~ 1277.05

B.M. #21 'A' ELEV. ~~1288.78~~ 1284.04

MAKEE TWP
T 98 N R
SEC 17

~~TILLAGE~~ SUBDRAIN LINE NO. 5, SHEET NO. 3D

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

STA 119+13.5 A44/Iron Mine Dr

STA 119+13.5 A44/Iron Mine Dr

This Cable To Be Abandoned

~~TEMP. ENSE.~~

P.O.T. 119+13.50 5ST Pin

P.O.T. 120+81.53

~~+00 PROP.~~ JOINT TYPE "C" ENT.

P.C. 129+43.84 (SURVEY)

~~+44 PROP.~~ TYPE "C" ENT.

~~+45 PROP.~~ TYPE "C" ENT.

~~+00 PROP.~~ TYPE "C" ENT.

~~+00 PROP.~~ DIKE EL. 1313.5

~~+78 PROP.~~ TYPE "C" Joint Ent.

P.I. 138+53.89 (SURVEY)

SET PIN P.I. 140+53.89 (O.R.)

EXISTING R.O.W.

FIELD ENT.

TERRACE

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 24

CURVE DATA (SURVEY)
Δ = 1°41'00" LT.
D = 0°05'38"
T = 910.05'
L = 1820.00'
E = 6.68'
R = 61,946.46'
C = N.C.

CURVE DATA (O.R.)
Δ = 3°03'10.9" LT.
D = 0°18'00"
T = 508.96'
L = 1017.68'
E = 6.78'
R = 19,098.59'
C = N.C.

PARCEL NO. 72 TOTAL SETTLEMENT: $ 4,567.00
GRANTOR: M.A. EATON
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: ____ COND. HELD: 11-03-77
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK ____ PAGE ____

PARCEL NO. 73 TOTAL SETTLEMENT: $ 8350.00
GRANTOR: JOSEPH P. PALMER
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: ____ COND. HELD: 11-03-77
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK ____ PAGE ____

PARCEL NO. 74 TOTAL SETTLEMENT: $ 45246.00
GRANTOR: A.V. PALMER
ACCESS RIGHTS ACQUIRED: ☒ YES ☐ NO
CONTRACT SIGNED: 03-02-77 COND. HELD: ____
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK 107 PAGE 75-77

PARCEL NO. 74A TOTAL SETTLEMENT: $ 1595.00
GRANTOR: A.V. PALMER RICHARD J. KISTLER
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-02-77 COND. HELD: ____
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK 107 PAGE 78-80

PARCEL NO. 75 TOTAL SETTLEMENT: $ 18,248.00
GRANTOR: ALLAMAKEE COUNTY
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: ____ COND. HELD: 02-08-78
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK ____ PAGE ____

~~STA. 120+87~~ ~~2'-2'x59' RCB~~ (REMOVED)
D.A. = 2 AC.-R.
INSTALL 24" RF-1 & RF-13 FLUME AT STA. 121+50, SKEW 15°
FLUME 1295.3
F.L. LT. 1309.14
RT. 1310.02

~~STA. 126+98~~ ~~2'-2'x42' RCB~~ (REMOVED)
D.A. = 4 AC.-R.
INSTALL 24" RF-1 AT STA. 127+15
F.L. LT. 1294.33
RT. 1298.56

~~STA. 135+24~~ ~~2'-2'x60.5' RCB~~ (REMOVED)
D.A. = 10 AC.-R.
INSTALL 30" RF-1 & RF-13 FLUME AT STA. 135+25
FLUME 1254.6
F.L. LT. ~~1266.01~~ 1265.94
RT. 1271.63

~~STA. 139+59.6~~ ~~2'-2'x39.5' RCB~~ (REMOVED)
D.A. = 2 AC.-R.
INSTALL 24" RF-1 AT STA. 139+60
F.L. LT. 1271.60
RT. 1272.00

~~+00 PROP.~~ TYPE "C" ENT.

~~18" x 45° CMP~~ (REMOVED)

~~18" x 24" RCP~~ (REMOVED)

~~2'x2'x62' RCB~~ (REMOVED)

NOTE: ( ) = UNSUITABLE
[ ] = C + SWELL

CLASS 10 C = F + 30% = 9326

CLASS 12 C = 18[193] F = 193

REMOVE OLD PAVEMENT

BREAK UP OLD PAVEMENT

-0.40%

+00 1321.83

V.C. = 800'

12%

~~PROP.~~ TYPE "C" ENT.

-2.28%

+00 1294.0

-4.2% RT. DITCH

-1.2% RT. DITCH

+00 1293.0

+25 1291.5

V.C. = 1000'

+25 1291.94

+1.0% RT. DITCH

+00 1292.2

+0.52%

+00 1296.2

4%

~~PROP.~~ TYPE "C" ENT.

376 C.Y. UNSUITABLE MATERIAL

3700 C.Y. PLOWING & SHAPING

SUBGR. TREAT. NO. 7

5' DITCH | SIDE ROAD DITCH | 5' DITCH | NO DITCH | 5' DITCH | NO DITCH | 5' DITCH | DITCH GRADES | NO DITCH | 4' DITCH VARI | DITCH GRADE | NO DITCH RT

115	120	125	130	135	140	145
23.43 23.32 23.20 23.04 22.91 22.75 22.57 22.37 22.14 21.94 21.70 21.44 21.17 20.87 20.57 20.28 19.95 19.61 19.25 18.88 18.49 18.07 17.68 17.25 16.80 16.34 15.87 15.38 14.89 14.35 13.82 13.27 12.71	10.43	08.15	05.87	03.59	01.31	99.03	96.75	94.47	92.19	89.91 87.34 88.78 88.24 87.71 87.20 86.71 86.24 85.78 85.34 84.92 84.52 84.13 83.76 83.41 83.08 82.76 82.46 82.18 81.92 81.67 81.44 81.23 81.04 80.86 80.70 80.56 80.44 80.33 80.24 80.17 80.12 80.08 80.06 80.06 80.08 80.11 80.16 80.23 80.32 80.42 80.54 80.93	81.45

ALLAMAKEE COUNTY

AS-BUILT PLANS, FOR INFORMATION ONLY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	6			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	6		12	241

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.5

75. ALLAMAKEE COUNTY ~~ELEV. 1283.00~~
76. HAROLD F. GRUBER
77. LLOYD & HELEN NEWTON
78. DELMAR W. THIELE

BM = 23
ELEV. 1284.80

PARCEL NO. 77 TOTAL SETTLEMENT: $ 1750.00
GRANTOR: LLOYD NEWTON
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 01-19-77 COND. HELD: —
R.O.W. BY: FEE — PERM. EASE. —
DEED RECORDED IN BOOK 107 PAGE 30-32

SEC. 17 SEC 8

MAKEE TWP
T 98 N R 5 W

STA. 172+00 - STOP 24' RECONSTRUCTION
BEGIN WIDENING AND RESURFACING
FOR DETAILS OF SIDE ROAD SEE SHEET NO. 25

PARCEL NO. 78 TOTAL SETTLEMENT: $ 3,215.00
GRANTOR: DELMAR W. THIELE
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 02-10-77 COND. HELD: —
R.O.W. BY: FEE — PERM. EASE. —
DEED RECORDED IN BOOK 107 PAGE 84-86

STA 169+36.6 Howard Rd

Discharge PT (TYP)

Discharge PT (TYP)

℄ OFFICE RELOCATION

UNMARKED CEMETERY

+97-74' LT. R.O.W. MKR.
+09-57' LT. R.O.W. MKR.
R.W. EXISTING ROW

P.T. 147+63.84 (SURVEY)

+50 ~~PROP.~~ DIKE EL. 1284.0

P.I. 153+45.92 (O.R.)

P.I. 156+91.56 (SURVEY)

℄ SURVEY

CURVE DATA (O.R.)
Δ = 3°13'07.2" RT.
D = 0°16'00"
T = 536.59'
L = 1072.69'
R = 19,098.59'
e = N.C.

CURVE DATA (SURVEY)
Δ = 1°05'30" RT.
D = 0°05'00"
T = 655.02
L = 1310.00
R = 3.12
R = 69754.9
e = N.C.

~~TEMP. EASE.~~

+29 ~~PROP.~~ TYPE "C" ENT.

TEL. RISER

~~10"×20' C.M.P. (REMOVED)~~

~~15" R.C.P.~~ (REMOVED)

+10 ~~PROP.~~ TYPE "C" ENT.

P.C. 170+82.22 (O.R.)
SET NAIL

P.T. 171+90.99 (O.R.)
SET NAIL

~~10"×16' C.M.P. (REMOVED)~~

P.I. 167+36.61 (O.R.)
SET PIN
P.O.T. 169+36.00 (SURVEY)

P.O.C. 169+36.61 (O.R.)

+26 ~~+31.5 PROP.~~ SAFETY DIKE

~~+38 +00 PROP.~~ TYPE "C" ENT.

~~TEMP. EASE.~~

P.I. 163+46.54 (SURVEY)

P.C. 174+27.77 (SURVEY)

~~2'-2'×46.2' RCB (REMOVED)~~
~~STA. 153+00.3~~
D.A. = 4 AC.-R.
INSTALL 24" RF-1
AT STA. 153+00
EL. LT. 1280.0 1279.97
RT. ~~1278.86~~
DITCH OUTLET

~~+50 PROP.~~ TYPE "C" ENT.

~~150 PROP.~~ TYPE "C" ENT.

~~+40 PROP.~~ TYPE "C" ENT.

~~TEMP. EASE.~~

~~TEMP. EASE.~~

SEC. LINE

P.C. 145+08.73 (O.R.)
SET NAIL

P.C. 150+36.54 (SURVEY)

P.I. 158+81.22 (O.R.)
SET NAIL

+39-24' RT. R.O.W. MKR.
+39-42' RT. R.O.W. MKR.

+61-32' RT. R.O.W. MKR.
+61-50' RT. R.O.W. MKR.

HYDRANT
WATER TOWER
COUNTY HOME
FLAG POLE

CLOSED
FIELD ENT.

CURVE DATA (O.R.)
Δ = 0°45'26.3" LT.
D = 0°05'00"
T = 454.39'
L = 908.77'
R = 68,754.94'
e = N.C.

EQUATION: STA. 171+90.39 (SURVEY) AHEAD = STA. 171+90.99 (O.R.) BACK

NOTE: Sta. 172+00 to Sta. 182+00 Lt. Side
Leave 1081 cu. yds. in Lt. Ditch.
To be excavated by the Paving Contractor to construct Lt. foreslopes Sta. 172+00 to Sta. 182+00. Grading Contr. to excavate only 1649 cu. yds. (Class 10).

CLASS 10
C = 10,183 (932)
FROM STA. 105± = 45,021
FROM SIDE ROAD LT. 119+3.50 = 307
58,511
F+30% = 35,511 (932)

NOTE: ( ) = UNSUITABLE
[ ] = C+SWELL

CLASS 10
C = 1,286 (17)
FROM STA. 185± LT. = 1340
12,626
F+30% = 12,626 (17)

C = 0
FROM STA. 180± LT. = 42
FROM STA. 182± LT. = 91
133

CLASS 12
F = 133

CLASS 10 (See Note Above)
F+50% 309
C = 2130 TO STA. 135± = 1340 LT.
Remaining for Paving = 1081
2130

RIGHT

+0.52%
+0.02%
-0.3% LT. DITCH
+0.4% LT. DITCH
+0.3% RT. DITCH
+0.4% RT. DITCH
V.C. = 600'

~~PROP.~~ TYPE "C" ENT.

~~EXIST. PAVEMENT~~

REMOVED OLD PAVEMENT

949 C.Y. UNSUITABLE MATERIAL
TYPE "C" DISPOSAL

VARI

3:1 RT. FORESLOPE

3:1 LT. FORESLOPE

SAFETY DIKE

SIDE ROAD DIKE

NO DITCH
3'×8' DITCH
5'×8' DITCH
8' WIDE DITCH GRADE
4' DITCH
DITCH GRADES
DITCH GRADE
4' DITCH RT.

| | | |

78. DELMAR W. THIELE
79. LEO HENRY
80. LILLIAN & IDA R. COLLINS
81. DORE M. & ERMA HALVERSON
82. HARVEY M. HALVERSON

MAKEE TWP
T 98 N R 5 W
SEC 8 | SEC 9

ELEV. 1286.28

PARCEL NO. 81 TOTAL SETTLEMENT: $715.00
GRANTOR: DORE M. HALVERSON
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 02-17-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 87-89

TEMP. EASE.
PAST: 179+52.4 5ST PIN
10" ø C.M.P. (REMOVED)
P.I. 180+25.49
+54 +50 PROP TYPE "C" ENT.
PAST: 71.22' AHEAD OF P.I. 5/8" PIN
+00 182.8
+00 PROP TYPE "C" ENT.
+80 PROP TYPE "C" ENT.
TEMP. EASE.
+45 Prop. Type "C" Ent.
+39 PROP TYPE "C" ENT.
+00 Prop. Type "C" Ent.
TEMP. EASE.
+00 PROP TYPE "C" ENT.
+61 35' LT. R.O.W. MKR.
+30 60' LT. R.O.W. MKR.
+38 ENTRANCE
+61 PROP TYPE "C" ENT.
+00 Prop. Type "C" Ent.
+21
+32.2
(REMOVED)
P.I. 202+04.30 IRON PIN
ELEV. 1269.77
Discharge PT (TYP)
Discharge PT (TYP)
2-2 WIRES
3 WIRES
CLOSED
WINDMILL
WELL
SHED
HSE
R.W.
TYPE "C" ENT.
TYPE "C" ENT.
TYPE "C" ENT

79. LEO HENRY
80. LILLIAN & IDA R. COLLINS
83. JOHN A. REGAN
84. JOHN A. & KATHLENE REGAN

BM # 27 A' ELEV. ~~1259.75~~ 1258.74

BM # 29 A' ELEV. ~~1268.62~~ 1269.12

BM # 30 ELEV. 1272.55

CURVE DATA
Δ = 22°00'00" LT.
D = 1°30'00"
T = 142.48'
L = 1466.67'
E = 11.49'
R = 3819.72'
c = 0.053

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 25

MAKEE TWP
T 98 N R 5 W
SEC 9

STA 211+55.0 Moose Rd

Discharge PT (TYP)

P.O.T. 211+55.00

74° 49' 30"

P.I. 215+15.63 IRON PIN

EXISTING R.O.W.

205+88.49 SET NAIL

~~PROP~~ TYPE "C" ENT.

~~PROP~~ 12" RCP

(REMOVED)

~~PROP~~ SAFETY DIKE

~~PROP~~ FENCE

~~PROP~~ 4" FARM ENT.

+61 ~~PROP~~ TYPE "C" ENT.

STA. 206+20.6
2'x2'x54' RCB
D.A.=8 AC.-R
EXTEND WITH 30" RF-1
F.L. LT. 1250.~~57~~5
RT. 1252.~~83~~

~~39.50 RT. R.O.W. MKR.~~

~~37.40 RT. R.O.W. MKR.~~

~~33.50 RT. R.O.W. MKR.~~

~~37.50 RT. R.O.W. MKR.~~

CURVE DATA
Δ = 22°30'00" RT.
D = 3°30'00"
T = 330.58'
L = 652.38'
E = 33.04'
R = 1637.02'
e = 0.080
S = 2.80

P.T. 218+37.43 SET NAIL

PARCEL NO. 83 TOTAL SETTLEMENT: ~~37,500.00~~ 37,328.00
GRANTOR: JOHN A. REGAN
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: COND. HELD: 02-28-78
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK PAGE

STA. 214+31
2'x2'x54' RCB
DA.=4AC.-R
EXTEND WITH 30" RF-1 & RF-13 FLUME
LT. 1260.~~84~~31
F.L. RT. ~~1254.0~~ 1256.77
FLUME 1245.0

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

STA. 224+00 STOP WIDENING & RESURFACING
RESUME 24' RECONSTRUCTION

~~PROP~~ TYPE "C" ENT.

~~PROP~~ TYPE "C" ENT.

~~PROP~~ TYPE "C" ENT.

P.T. 228+04.78 SET PIN

P.C. 224+78.08 (O.R.) SET NAIL

STA. 232+97
2'x2'x42' RCB (PLUG & ABANDONED)
D.A.=4 AC.-R
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 232+75
FLUME 1246.9
F.L. LT. ~~1255.0~~ 1258.97
RT. ~~1260.0~~ 1261.98

CURVE DATA (O.R.)
Δ = 2°43'00" RT.
D = 0°25'00"
T = 326.06'
L = 652.00'
E = 3.87'
R = 13,750.99
e = 0.015
S = 2.10'

~~PROP~~ TYPE "C" ENT.

~~PROP~~ TYPE "C" ENT.

P.T. 231+30.08 (O.R.) SET NAIL

~~PROP~~ 6" SURFACE DRAIN

~~PROP~~ FENCE

Do Not Disturb Trees

~~PROP~~ 4" FARM ENT.

~~PROP~~ 12" RCP

~~10.66' LT. R.O.W. MKR.~~

~~96.84' RT. R.O.W. MKR.~~

℄ SURVEY

℄ OFF RELOC

3 WIRES

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCE TO OFFICE RELOCATION CENTERLINE.

CLASS 10
C = 667
FROM SR LT. STA. 211+55.1644
FROM STA. 184 + LT. 3500
FROM STA. 219 + RT. 2211
11,246
F+30% = 11,246

Removed Old Pavement

~~PROP~~ TYPE "C" ENT.

Break up Old Pavt

~~PROP~~ TYPE "C" ENT.

~~Break~~ up Old Pavement

+00 1276.1 (TIE IN 3" HIGH)

+00 1277.14

+00 1273.1

+00 1278.4

+0.7%

+00 1272.1

+0.3% RT. DITCH

-1.3% LT. DITCH

-0.3% LT. DITCH

+00 1270.5

+00 1272.5

-1.1%

-0.56%

+00 1271.1

DITCH

+00 1272.2

-16.1% RT. DITCH

-5.2% RT. DITCH

-2.4% RT. DITCH

+00 1265.0

+00 1262.5

+75 1262.0

V.C. = 1000'

(1270)

(1270)

(1260)

~~PROP~~ SAFETY DIKE

+50 1261.6

-0.4% LT. DITCH

+00 1261.0

+3.3% LT. DITCH

+50 1260.1

+00 1265.0

(1260)

~~PROP~~ TYPE "C" ENT.

~~FARM ENT~~

EL. LT. ~~1251.09~~
RT. ~~1252.31~~

F.L. ~~LT. 1259.5~~
~~RT. 1261.4~~

LEFT
RIGHT

1300 1290 1280 1270 1260 1250 1240

4' DITCH VARI | NO. DITCH | 4' DITCH | 4' DITCH | SIDE ROAD | DITCH GRADE | NO. DITCH | VARI | DITCH GRADE | 4' DITCH | EXIST. DITCH | 4' DITCH | NO. DITCH | DITCH GRADE | DITCH GRADE | VARI | DITCH GRADE | NO. DITCH | LT. RT.

76.11 76.16 76.21 76.25 76.28 76.31 76.34 76.36 76.38 76.39 76.39 76.40 76.39 76.38 76.37 76.36 76.33 76.31 76.28 76.24 76.20 76.15 76.10 76.04 75.98 75.92 75.85 75.77 75.69 75.61 75.52 75.41 75.32 75.11 75.00 74.88 74.76 74.63 74.50 74.36 73.80

205 210 215 220 225 230 235

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	6			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	6		15	241

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.8

83. JOHN A. REGAN
JOHN A. & KATHLENE REGAN
85. LARRY & ALICE MAGNER (C.R.)
86. ST. MARY'S CHURCH OF LYCURGUS IOWA, INC.
87. VIOLA (HAAS) MOUNT
83A PETER W. BIEBER, JR. ET AL.

MAKEE TWP T 98 N R 5 W

BM # 32 ELEV. 1270.11

BM # 33 'A' ELEV.

BM # 34 'A' ELEV. 1272.48

CURVE DATA (SURVEY)
Δc = 32° 46' 30" Δ = 41° 31' 30" LT.
D = 3° 30' 00" Ds = 4° 22' 30"
T = 481.41' Ls = 250'
L = 936.43' Ts = 746.20'
E = 69.32' Es = 115.40'
R = 1637.02' Xc = 249.85'
Yc = 6.36'
LT = 166.72'
ST = 83.38'
LC = 249.94'
P = 1.59'
K = 124.98'

CURVE DATA (O.R.)
Δc = 35° 29' 30" Δ = 44° 14' 30" LT.
D = 3° 30' 00" Ds = 4° 22' 30"
T = 523.88' Ls = 250'
L = 1014.05' Ts = 791.04'
E = 81.78' Es = 131.79'
R = 1637.02' Xc = 249.85'
e = 0.080 Yc = 6.36'
LT = 166.72'
ST = 83.38'
LC = 249.94'
P = 1.59'
K = 124.98'

CURVE DATA
Δc = 43° 12' 00" Δ = 51° 51' 00" RT.
D = 3° 30' 00" Ds = 4° 22' 30"
T = 648.14' Ls = 250'
L = 1234.29' Ts = 925.30'
E = 123.64' Es = 185.71'
R = 1637.02' Xc = 249.85'
e = 0.080 Yc = 6.36'
S = 295 LT = 166.72'
ST = 83.38'
LC = 249.94'
P = 1.59'
K = 124.98'

+00 PROF TYPE "C" ENT.
+42 PROF TYPE "C" ENT.
+30 PROF TYPE "C" ENT.
+50 PROF TYPE "C" ENT.
+58 PROF TYPE "C" ENT.
+48 PROF TYPE "C" ENT.
+40 PROF SAFETY DIKE

Discharge PT (TYP)
Discharge PT (TYP)
Discharge PT (TYP)

BORROW "B"
5,930 C.Y. AVAILABLE
5,593 C.Y. REQUIRED
1,553 C.Y. TOPSOIL REQUIRED

BORROW "D"
7,000 C.Y. AVAILABLE
6,604 C.Y. REQUIRED

BORROW "C"
6,900 C.Y. AVAILABLE
6,848 C.Y. REQUIRED

& OFF. RELOC.
& SURVEY
APPROX. SEC. LINE
APPROX. 1/4 1/4 SEC. LINE
R.W.L.
FENCE
2 WIRES
REMOVE
CEMETERY
P.O.C. 247+82.01 (SURVEY)
P.O.C. 248+02.73 (O.R.)
P.O.C. 260+45.22
P.I. 245+28.07 (O.R.)
P.I. 246+18.5 (SURVEY)
P.I. 265+68.34
P.O.T. 247+49.30 SET PIN
P.O.T. 262+65.3 SET PIN
P.O.T. 260+64.44
FOR DETAILS OF SIDE ROAD SEE SHEET NO. 26
STA. 248+02.7 Dug Rd
STA. 260+45.2 Lycurgus Rd
EQUATION: STA. 253+06.08 (O.R.) BACK = STA. 253+29.50 (O.R.) AHEAD
EQUATION: STA. 252+08.4 (SURVEY) BACK = STA. 253+29.50 (O.R.) AHEAD
STA. 249+39 RT. 31° 43' 43" RCB (REMOVE)
DA. = 2½ AC.-R
INSTALL 24" RF-1 & RF-13 PLUME AT STA. 249+50
PLUME 1247.6
F.L. LT. 1258.74
RT. 1262.10
0 50 100

PARCEL NO. 83A TOTAL SETTLEMENT: $ 1,084.00
GRANTOR: Richard G. Bieber
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 05-05-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 291-293

PARCEL NO. 87 TOTAL SETTLEMENT: $ 3,770.00
GRANTOR: Viola Haas Mount
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 08-15-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 209-211

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

CLASS 10 C = 34,643 (1051)
FROM BORROW B = 5,593 F+25% = 13,355
C = 6,745 F+30% = 36,017 (1051)
D = 2,068 49,372
From Sta. 221+ F = 322
49,372

REMOVE OLD PAVEMENT
BREAK UP OLD PAVEMENT
8% 3% 6% -9% -0.56% -0.10% 0.10% 4% -4%
V.C. = 800'
+00 1271.00
+50 1262.6
+75 1264.2
+00 1263.3
+50 1263.7
+75 1262.1
+50 1262.6
+0.3% RT. DITCH
+0.3% LT. & RT. DITCH
-0.3% LT. DITCH
-0.3% RT. DITCH
-0.3% LT. DITCH
LOSE C.Y. (INSUIT. MAT'L.) TYPE "B" DISPOSAL
ELIMINATE BACKSLOPE ROLL LT.
NO DITCH 4' DITCH 5' DITCH NO DITCH VARI. DITCH GRADE DITCH GRADES NO DITCH 5' DITCH SIDE ROAD VARI. DITCH GRADE LT. RT.

235	240	245	250	255	260	265
1290	1280	1270	1260	1250	1240	

73.86 73.34 73.10 72.97 72.84 72.71 72.58 72.46 72.35 72.23 72.13 72.02 71.92 71.82 71.72 71.63 71.54 71.46 71.38 71.30 71.23 71.16 71.09 71.03 70.97 70.91 70.86 70.81 70.77 70.73 70.69 70.66 70.63 70.60 70.50 70.40 70.30 70.20 70.10 70.10 70.00 69.90 69.80 69.70 69.58 69.48 69.38 69.28 69.18 69.08 68.98 68.88 68.78 68.68 68.58 68.48

EQUATION: STA. 253+06.08 (O.R.) BACK = STA. 253+29.50 (O.R.) AHEAD

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	5		16	291

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.9

86. JOHN A. REGAN
87. VIOLA (HAAS) MOUNT
88. WILLIAM M. REGAN
89. GEORGE C. & GENEVIEVE C. TROENDLE
90. Raymond E. & Marjorie Troendle

MAKEE TWP
T 98 N R 5 W
SEC 3

Discharge PT (TYP)

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 27

STA 276+14.8 Plein Rd

BORROW "E"
1,400 C.Y. AVAILABLE
1,195 C.Y. REQUIRED

SET PIN 260.00' AHEAD OF P.I. 265+68.34

+00 PROP. Type "C" Ent

P.I. 265+68.34

R.O.T. 276+14.83

CURVE DATA

Δc =	43°12'20"	Δ =	51°57'00" RT.
D =	3° 30' 00"	Ds =	4° 22' 30"
T =	648.14'	Ls =	250'
L =	1234.29'	Ts =	923.30'
E =	123.64'	Es =	185.71'
R =	1637.02'	Xc =	249.85'
e =	0.080	Yc =	6.36'
S =	2%	LT =	166.72'
		ST =	83.38'
		LC =	248.94'
		P =	1.59'
		K =	124.98'

STA. 273+79 ~~PLUG & ABANDON~~ (PLUG & ABANDONED)
D.A. = 6½ AC.-R.
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 272+90
LT. 1260.39
F.L. RT. 1255.18
FLUME 1242.9

PARCEL NO. 90 TOTAL SETTLEMENT: $ 1,070.00
GRANTOR: RAYMOND E TROENDLE
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 06-27-77 COND. HELD:
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK 108 PAGE 40-45

+10 PROP. JOINT TYPE "C" ENT. (USE AS SAFETY DIKE)

~~TEMP. EASE.~~
BORROW "E"
10,000 C.Y. AVAILABLE
6,329 C.Y. REQUIRED

STA. 278+00, STOP 24' RECONSTRUCTION
RESUME WIDENING AND RESURFACING

PARCEL NO. 89 TOTAL SETTLEMENT: $ 10,000.00
GRANTOR: GEORGE C. TROENDLE
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: ____ COND. HELD: 11-09-77
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK ____ PAGE ____

~~+10 PROP. TYPE "C" ENT.~~
ABANDONED
RECORDED 8-9-83
BOOK 117
PAGE 54-55

+53 50' LT. R.O.W. MKR.

GARAGE
CORN CRIBS
SHEDS
NSE

~~10" CMP~~ (REMOVED)

Discharge PT (TYP)

APPROX. ¼ SEC. LINE

+55 ~~+58 PROP.~~ TYPE "C" ENT.

+64 50' LT. R.O.W. MKR.

~~14" RCP~~ (REMOVED)

+60 PROP. SAFETY DIKE

PARCEL NO. 88 TOTAL SETTLEMENT: 20,000
GRANTOR: WILLIAM REGAN
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: ____ COND. HELD: 11-09-77
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK ____ PAGE ____

STA. 289+54.7 Pheasant Rd

BORROW "F"

P.O.T. 289+54.73

ABANDONED
RECORDED 8-9-83
BOOK 117
PAGE 56-57

~~15" CMP~~ (REMOVED)

STA. 292+00 END WIDENING AND RESURFACING
RESUME 24' RECONSTRUCTION

~~TEMP. EASE.~~
BORROW "F"
16,000 C.Y. AVAILABLE
6,329 C.Y. REQUIRED

~~+25 TYPE "C" ENT.~~

~~+10 FIELD ENT.~~

~~24" CMP~~ (REMOVED)

~~84°05'22"~~

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 27

STA. 281+85
2'x2'x51' RCB
D.A. = 1.2 + 0.8 = 2 AC.-R.
EXTEND WITH 30" RF-1 & RF-13 FLUME
FLUME 1244.5
F.L. LT. 1256.28
RT. 1260.64

Discharge PT (TYP)

~~STA. 294+90~~
~~2'x2'x52' RCB~~ (REMOVED)
D.A. = 3 AC.-R.
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 295+40
FLUME 1254.9
F.L. LT. 1261.25
RT. 1268.18

C = 8704 (80) CLASS 12
FROM S.R. LT. 276+14.83 = 3378
FROM BORROW "D" = 4835 (116)
12,117
F+80% = 16,117 (236)

CLASS 12
C=392 [392] F=392

LEFT

RIGHT

CLASS 10
F+50% = 1884
C=3102 TO STA 315 ± = 12.18
3102

CLASS 10
F+50% = 636
C=5400 (264) TO STA 313 ± = 47.64 (264)
5400

NOTE: ( ) = UNSUITABLE
[ ] = C = SWELL

REMOVE OLD PAVEMENT

4%
(1260)
PROP. TYPE "C" ENT.

80 C.Y. UNSUIT. MAT'L TYPE "B" DISPOSAL

28 C.Y. UNSUIT. MAT'L (RT. SIDE) TYPE "B" DISPOSAL

~~PROP.~~ TYPE "C" ENT.

284 C.Y. UNSUIT. MAT'L (RT. SIDE) TYPE "B" DISPOSAL

8%
PROP. TYPE "C" ENT.

REMOVE OLD PAVEMENT

+00 1274.80 (TIE IN 3" HIGH)

+0.29%

-0.9% RT. DITCH

+25 1268.1

+00 1270.1

VARI

+00 1266.65 (TIE IN 3" HIGH)

0%

+50 1267.43

-0.10%

-0.31%

-0.3% RT. DITCH

+50 1262.5

-0.2% LT. DITCH

+00 1261.4

+90 1260.0

+0.9% LT. DITCH

V.C. = 300'

+50 1262.3

4% ~~PROP.~~ JOINT TYPE "C" ENT.

-0.8% RT. DITCH

+00 1261.5

+1.3% RT. DITCH

+85 1260.0

+0.8% RT. DITCH

+00 1266.5

8%

+00 1264.9

2%

~~PROP.~~ TYPE "C" ENT.

ELIMINATED BACKSLOPE ROLL LEFT

PROP. SAFETY DIKE

~~FIELD ENT.~~

CLOSED

(1260)

(1270)

DITCH GRADES

DITCH GRADE 4% | NO DITCH | SIDE ROAD | 5' DITCH | 4' DITCH | NO DITCH | DITCH GRADES | 4' DITCH | 4' DITCH | DITCH GRADE | VARI | SIDE ROAD | 5' DITCH | NO DITCH | DITCH GRADE | LT. RT.

68.46 68.38 68.28 68.18 68.08 67.98 67.88 67.78 67.68 67.58 67.55 67.52 67.48 67.44 67.40 67.35 67.30 67.24 67.18 67.11 67.04 66.96 66.65 74.80 75.09 75.31 75.37 75.42 75.44 75.45 75.45

265 270 275 280 285 290 295

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	1			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	1		17	241

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.10

88. WILLIAM M. REGAN
91. DAIRYLAND POWER COOP.
93. DELBERT G. & BETTY LOU TIMMERMAN
95. HAROLD W. & WILLARD H. FRITZ

CURVE DATA (SURVEY)
Δ = 38°36'30" LT.
D = 3°00'00"
T = 668.98'
L = 1286.94'
E = 113.77'
R = 1909.86'

CURVE DATA (O.R.)
Δ = 38°36'30" LT.
θs = 3°45'00"
Ls = 250'
Ts = 794.44'
Es = 115.22'
Xc = 249.89'
Yc = 5.45'
LT = 166.10'
ST = 83.37'
LC = 249.95'
P = 1.36'
K = 124.98'
Δc = 31°06'30"
D = 3°00'00"
T = 531.60'
L = 1036.94'
E = 72.60'
R = 1909.86'
e = 0.078
s = 295

B.M.# 39 ELEV. 1279.20 ✓ B.M. 39 A ELEV. 1273.87
B.M.# 40 A ELEV. 1263.29
B.M.# 42 ELEV. 1244.92
MAKEE TWP T 98 N R 5 W
SEC 3 SEC 2

Discharge PT (TYP)
Discharge PT (TYP)
Discharge PT (TYP)
Discharge RT (TYP)

STA 307+20.7 Clonkitty Rd
STA 320+20.1 French Creek Dr

CONTRACT SIGNED: 07-15-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 273-276

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 28

BORROW "G"
17,000 C.Y. AVAILABLE
16,848 C.Y. REQUIRED
8,264 C.Y. TOPSOIL REQ.

BORROW "F"
BORROW "H"
37,500 C.Y. AVAILABLE
37,197 C.Y. REQUIRED
3,676 C.Y. TOPSOIL REQ.

P.O.S. 307+20.73 (O.R.)
P.O.T. 307+21.65 (SURVEY)
P.O.C. 320+20.13 (O.R.)
P.I. 319+08.05 (SURVEY & OFF. RELOC.) IRON PIN

INSTALL SUBDRAIN LINE NO. 6, SHEET NO. 3D
INSTALL SUBDRAIN LINE NO. 7, SHEET NO. 3D

STA. 294+90
2'x2'x52' R.C.B.
D.A. = 3 AC.-R.
INSTALL 24" RF-1 & RF-13 FLUME AT STA. 295+40
FLUME 1254.9
F.L. LT. 1267.825
RT. 1268.818

P.T. 300+74.10 (SURVEY & OFF. RELOC.) IRON PIN

STA. 308+46
3'x3'x58' RCB (PLUG & ABANDON)
D.A. = 13+7 = 20 AC.-R.
INSTALL 36" RF-1 & RF-13 FLUME AT STA. 309+00
FLUME 1224.7
F.L. LT. ~~1238.0~~ 1237.69
RT. ~~1240.0~~ 1244.83

STA. 314+60.5
3'x3'x41' RCB (REMOVED)
D.A. = 3½ AC.-R
INSTALL 24" RF-1 & RF-13 FLUME AT STA. 314+40
FLUME 1234.0
RT. ~~1248.0~~ 1253.08
LT. 1247.83

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

CLASS 10 F+30% = 24,112 C=28,352 TO S.R. RT. 307+20.73 = 2,240 28,352
CLASS 12 C=2057 (2235) F=2235
C = 1871 (1760) CLASS 10 F+30% = 30,276 (160)
FROM STA. 100' LT. = 1218
FROM STA. 287+RT = 4764 (264)
BORROW "E" = 1125 (15)
BORROW "F" = 6329 (311)
BORROW "G" = 14,899 30,276
CLASS 10 C = 3632 (377) FROM S.R. LT. STA. 310+20.13 = 16,683 15,315 F+30% = 15,315 (377)
CLASS 12 C=248 (286) F=286

REMOVED OLD PAVEMENT
BREAK UP OLD PAVEMENT
PROP TYPE "C" ENT.
PROP SAFETY DIKE
FIELD ENT. CLOSED
160 C.Y. UNSUIT. MAT'L. TYPE "C" DISPOSAL
371 C.Y. UNSUIT. MAT'L. TYPE "B" DISPOSAL
5:1 RT. BORROW BACKSLOPE; FOR DETAILS SEE X-SECTIONS
5:1 LT. BORROW BACKSLOPE SEE X-SECTIONS FOR DETAILS
ELIMINATED BACKSLOPE: ROLL LT.
SUBGRADE TREATMENT NO. 8
SUBGRADE TREATMENT NO. 9
NO DITCH
5' DITCH
DITCH GRADES
SIDE ROAD
3:1 LT. FORESLOPE
V.C. = 500'
V.C. = 700'
-1.12%
-1.0% RT. DITCH
-2.6% RT. DITCH
-0.5% RT. DITCH
+3.8% RT. DITCH
-0.10%
+0.8% RT. DITCH
+0.3% LT. DITCH
-1.0% RT. DITCH
-4.1% LT. DITCH
-4.9% RT. DITCH
-0.76%
20%
4%
10%

NOTE: ( ) = UNSUITABLE
[ ] = C+SWELL

EQUATION: ST. 324+03.13 (O.R. BACK) (SURVEY AHEAD) = STA. 326+05.03

CURVE DATA (O.R.)
Δ = 29°26'00" RT.
θs = 3°01'30"
Ls = 250'
Ts = 721.25'
Es = 78.90'
Xc = 249.93'
Yc = 4.54'
LT = 166.69'
ST = 83.36'
LC = 249.97'
P = 1.13'
K = 124.99'

CURVE DATA (SURVEY)
Δc = 23°11'00"
D = 2°30'00"
T = 470.10'
L = 927.33'
E = 47.12'
R = 2,291.83'
e = 0.073
s = 295'
Δ = 29°26'00" RT.
D = 2°30'00"
T = 601.96'
L = 1177.33'
E = 77.14'
R = 2,291.83'

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	9			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	9		18	241

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.11

93. DELBERT G. & BETTY LOU TIMMERMAN
94. DELBERT G. TIMMERMAN, ARLENE YEAROUS, LAVERN W. TIMMERMAN & LYNN W. MORROW (FEE) IDA R. COLLINS & PHILIP F. WEICHNER (C.P.)
95. HAROLD W. & WILLARD H. FRITZ
96. IRVIN C. BANGS ESTATE FRANCIS C. REGAN (C.P.)
97. DENNIS W. & ELIZABETH A. REGAN
98. Earl G. Johnson (Fee) - Dennis BRouer (C.P.)
99. EMIL L. & AMANDA B. FRITZ
100.
WALTER J. MARTIN & Margaret M. Martin
101. HERMAN H. KERNDT (FEE) DONALD W. KERNDT (C.P.)

B.M. #42 ELEV. 1244.92

B.M. #43 ELEV. 1246.46

B.M. #44 ELEV. 1248.33

ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: Purchase 10-21-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 266-269

Discharge PT (TYP)

CURVE DATA (OFF RELOC.)

Δ	= 7°30'00" LT.	Δc	= 5°30'00"
θs	= 1°00'00"	D	= 1°00'00"
Ls	= 2.00'	T	= 275.21'
Ts	= 475.56'	L	= 550.00'
Es	= 12.58'	E	= 6.61'
Xc	= 199.99'	R	= 5,729.58'
Yc	= 1.16'	e	= 0.038
LT	= 133.34'	S	= 245°
ST	= 66.67'		
LC	= 200.00'		
P	= 0.29		
K	= 100.00'		

TEMP. EASE.
+75 PROP. TYPE "C" ENT.
CS 329+68.36 (O.R.)
ST 329+68.36 (O.R.)
CS 330+73.98 (SURVEY)
ST 330+73.98 (SURVEY)
CS 330+73.88 (SURVEY)
CS 332+18.36 (O.R.)
ST 332+18.36 (O.R.)
50' R/W
EXISTING R.O.W.
15"-20" RCP (REMOVED)
+68 66' LT.
BARN
HSE
+34 80' LT.
+73-42' LT.
P.I. 334+93.92 (SURVEY & OFF RELOC.)
℄ OFF. RELOC.
+10 PROP. TYPE "C" ENT.
+05
APPROX. ¼ SEC. LINE
CS 335+68.36 (O.R.)
ST 335+68.36 (O.R.)
CS 336+18.36 (O.R.)
ST 336+18.36 (O.R.)
CS 337+18.36 (O.R.)
ST 337+18.36 (O.R.)
CS 338+18.36 (O.R.)
ST 338+18.36 (O.R.)
CS 339+18.36 (O.R.)
ST 339+18.36 (O.R.)
CS 340+18.36 (O.R.)
ST 340+18.36 (O.R.)
CS 341+18.36 (O.R.)
ST 341+18.36 (O.R.)
CS

% IRVIN C. BANGS ESTATE (FEE), FRANCIS C. REGAN (C.P.)
101. HERMAN H. KERNDT (FEE), DONALD W. KERNDT (C.P.)
102. DONALD R. ALDRICH (C.P.)

STA 361+41.6 Gun Tower Rd

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 29

~~16"x 24' CMP~~ (REMOVED)
P.O.C. 361+41.61 (O.R.)

P.I. 362+08.61 (O.R.) Iron Pin

BORROW "J"

P.I. 364+61.64 (SURVEY)

MAKEE TWP
T 98 N R 5 W

STA 371+12.74 (O.R.) BACK = EQUATION
STA 371+21.06 (SURVEY) AHEAD

℄ SURVEY R.W.

℄ OFF. RELOC. R.W.

P.O.T. 361+82.24

℄ 115

CURVE DATA (SURVEY)
Δc = 9°13'30"
D = 1°00'00"
T = 462.25'
L = 922.50'
R = 5729.58'
Δ = 11°13'30" RT.
θs = 1°00'00"
Ls = 200'
Ts = 663.08'
Es = 27.60'
Xc = 199.99'
Yc = 1.15'
LT = 133.34'
ST = 66.67'
LC = 200.00'
P = 0.29
K = 100.00'

CURVE DATA (OFF. RELOC.)
Δc = 13°26'30"
D = 1°30'00"
T = 450.12'
L = 896.11'
E = 26.43'
R = 3,819.72'
e = 0.053
s = 245
Δ = 16°26'30" RT.
θs = 1°30'00"
Ls = 200'
Ts = 651.91'
Es = 40.10'
Xc = 199.99'
Ye = 1.15'
LT = 133.34'
ST = 66.67'
LC = 199.99'
P = 0.44
K = 100.00'

CURVE DATA (SURVEY)
Δc = 10°15'00"
D = 1°15'00"
T = 411.10'
L = 820.00'
E = 18.40'
R = 4583.66'
e = 0.046
s = 245'
Δ = 12°45'00" LT.
θs = 1°15'00"
Ls = 200'
Ts = 612.16'
Es = 28.88'
Xc = 200.00'
Yc = 1.45'
LT = 133.34'
ST = 66.61'
LC = 209.00'
P = 0.37'
K = 100.00'

BORROW "J"
28,150 C.Y. AVAILABLE
28,100 C.Y. REQUIRED
6,871 C.Y. TOPSOIL REQ'D

~~STA 373+26.3~~
~~122'x 39.5' RCB~~ (REMOVED)
D.A. = 1 AC.-R.
(ELIMINATED)

0 50 100

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

~~TEMP. EASE.~~

+40 PROP. TYPE "C" ENT.

+35 PROP. TYPE "C" ENT.

WINDMILL

~~STA 382+00~~
~~2'x 2'x 56' RCB~~ (REMOVED)
D.A. = 3 AC.-R.
INSTALL 24" RF-1 & RF-13 FLUME
AT STA. 382 + 85
FLUME 1212.9
F.L. LT. ~~1232.81~~ 231.98
RT. 124.06

PARCEL NO. 102 TOTAL SETTLEMENT: $ 14,072.00
GRANTOR: DONALD R. ALDRICH
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 06-23-97 COND. HELD:
R.O.W. BY: FEE ____ PERM. EASE. ____
DEED RECORDED IN BOOK 112 PAGE 367

PARCEL NO. 102 TOTAL SETTLEMENT: $4,000.00
GRANTOR: Ronald R. & Lois Aldrich
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 3/2/00 COND. HELD: Damage for ~~PERM. EASE.~~ Serverance
DEED RECORDED IN BOOK 112 PAGE 267
For Short Fall of Topsoil--Replacement on Borrow J

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

NOTE: ( ) = UNSUITABLE
[ ] = C + SWELL

C = 4495 (1124) CLASS 10
FROM STA 407± = 10356
FROM STA 424+60± × 138% = 16,733
F+30% = 16,733 (93)

C = 112 [14]
FROM STA 438+70± = 4141
4155

CLASS 12
F = 4155

FROM S.R. RT STA 387+84.92 = 756
25,879

CLASS 10
C = 25,123 (5312)
F+20% = 1,403
F+30% = 24,476 (5312)
25,879

C = 3476 [3553] CLASS 12
FROM STA 409± = 513
FROM STA 424+80± = 5.1 T
FROM STA 426± = 9208
FROM STA 438± × 205
FROM STA 438+20± = 1870
15,860
F = 5,860

REMOVED OLD PAVEMENT

1124 C.Y. UNSUIT. MAT'L
93 C.Y. TYPE "C" DISPOSAL 103 C.Y. USE FOR TOPSOIL

+30
+55 1258.62
+0.50 %
V.C. = 800'
+0.12 %
+0.3% LT. DITCH
+40 1252.9
+00 1254.3
V.C. = 1000'
-2.6% RT. DITCH
+00 1260.10
+40 1250.5
-4.2% RT. DITCH
-1.0% RT. DITCH
+00 1246.0
+85 1248.0
FARM ENT.
PROP. TYPE "C" ENT.
PROP. TYPE "C" ENT.
CLOSED
4%
VARI 5:1 LT. BORROW BACKSLOPE SEE X-SECTIONS FOR DETAILS
VARI
VARI 3:1 LT. FORESLOPE
EXIST. DITCH VARI
EQUATION STA 371+12.74 (O.R.) BACK = STA 371+21.06 (SURVEY) AHEAD
5' DITCH
NO DITCH
SIDE ROAD
DITCH GRADE
DITCH GRADES RT.

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA				

F-9-9(14)--20-03

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA			20	24

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.13

92. ARTHUR S. CHRISTENSEN ESTATE (FEE) HAROLD & SHIRLEY MARTI (C.P.)
101. HERMAN H. KERNDT (FEE) DONALD W. KERNDT (C.P.)
102. " " " DONALD R. ALDRICH (C.P.)
103. HAROLD B. & SHIRLEY J. MARTI
104. EDWIN J. HELBLING
105. WILLARD F. & ARLENE KERNDT

B.M. # 47
ELEV. 1235.14

B.M. # 48
ELEV. 1250.46

P.O.T. 413+61.44

Discharge
PT (TYP)

MAKEE TWP
T 98 N R 5 W
SEC 1

PARCEL NO. 101 TOTAL SETTLEMENT: $ 12,931.00
GRANTOR: ESTATE OF DONALD W. KERNDT
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-16-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 279-290

ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-23-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 109 PAGE 162-165

PARCEL NO. 103 TOTAL SETTLEMENT: $ 8,500.00
GRANTOR: HAROLD B. MARTI
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 10-07-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 282-287

PARCEL NO. 92 TOTAL SETTLEMENT: $ 6350.00
GRANTOR: HAROLD B. MARTI
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 10-07-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 270-272, 279-281

INSTALL SUBDRAIN LINE NO. 8, SHEET NO. 3D
INSTALL SUBDRAIN LINE NO. 9, SHEET NO. 3D
INSTALL SUBDRAIN LINE NO. 10, SHEET NO. 3D
INSTALL SUBDRAIN LINE NO. 11, SHEET NO. 3D
FOR DETAILS, SEE SHEET NO. 7.4 A

CURVE DATA
Δ = 22°47' 30"
D = 3° 00' 00"
T = 384.95'
L = 759.72
E = 38.41
R = 1909.86'
e = 0.018
S = 2.95

Δ = 30° 17' 30" LT.
θs = 3° 45' 00"
Ls = 250
Ts = 642.31
Es = 70.14
Xc = 245.89
Yc = 54.5
Lt = 166.70
Sta = 833.37
Lc = 249.95
P = 126
K = 124.98

STA 387+84.9
Hilltop Rd

STA 413+61.4 Rd
Creek Stage

+30 PROP. TYPE "C" ENT.
+34 ENTRANCE
+46 PROP. TYPE "C" ENT.
+08 R.O.W. MKR.
+02 PROP. TYPE "C" ENT.
+86 PROP. TYPE "C" ENT.
+43 PROP. TYPE "C" ENT.
+34 PROP. TYPE "C" ENT.
+00 PROP. TYPE "C" ENT.
+00 PROP. JOINT TYPE "C" ENT.
+15 ENT.
+81 16' R.O.W. MKR.
+00 PROP. TYPE "C" ENT.

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 29
FOR DETAILS OF SIDE ROAD SEE SHEET NO. 30

2,890 C.Y. AVAILABLE
2,888 C.Y. REQUIRED
1,702 C.Y. TOPSOIL REQ'D

WINDMILL PUMP
WINDMILL (SEALED)
WELL
BARN REMOVED
SHED
HOG
CRIB
CORNCRIB
CLOSED
EXISTING ROW
EXISTING R.W.
R.W. EXISTING
FARM ENT. +83
FARM ENT. +15
FARM ENT. +34
FARM ENT. +43
FARM ENT. +86
FARM ENT. +02
FARM ENT. +08
FARM ENT. +81
TEMP. EASE.
FIELD ENT.
WIRE
FENCE
GRAVEL
LOCAL RD.
P.I. 406+51.01 FOUND PIN
SEC. 1
SEC. 6

NOTE: ( ) = UNSUITABLE
[ ] = C.I. SWELL

CLASS 10
C=37,545 (4538)

F+10% = 20,859 (4538)
F+20% = 447
F+30% = 3086
TO STA. 358 ± = 1382
TO STA. 373 ± = 10356
TO S.R. LT. STA. 361+41.61 = 1056
TO S.R. RT. STA. 413+61.44 = 359
37,545

REMOVED OLD PAVEMENT
5887 C.Y. UNSUIT. MAT'L
268 C.Y. TYPE "A" DISPOSAL
5619 C.Y. TYPE "B" DISPOSAL
278 C.Y. UNSUIT. MAT'L TYPE "B" DISPOSAL
211 C.Y. UNSUIT. MAT'L TYPE "A" DISPOSAL

-1.20%
-1.00% RT. DITCH
-0.50% RT. DITCH
+0.44%
+0.3% LT. DITCH
-0.3% LT. DITCH
-4.0% RT. DITCH
-0.3% RT. DITCH
V.C.=1000'
14%
15%
13%
11%
10%
4%

+00 1244.0
+50 1242.3
+00 1238.22
+50 1242.70
+00 1239.4
+00 1243.5
+50 1250.18
+00 1243.5
+00 1242.9
+00 1235.5
+00 1235.2

PROP. TYPE "C" ENT.
PROP. JOINT TYPE "C" ENT.
FIELD ENT.
FARM ENT.
CLOSED

3:1 LT. FORESLOPE
VARI
NO DITCH
DITCH GRADE
SIDE ROAD
5' DITCH
3' DITCH
LT.
RT.

SUBGRADE TREATMENT NO. 10
Subgrade Treatment No. 11

Revised Oct 3 1978

385	390	395	400	405	410	415

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(14)--20-03	IOWA	5		21	2.91

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.14

92. ARTHUR S. CHRISTENSEN ESTATE (FEE)
HAROLD & SHIRLEY MARTI (C.P.)
105. WILLARD F. & ARLENE KERNDT
106 - Donald R. Aldrich
109. ALFRED R. & MARCELLA GAERT
110. PEARL THIELE ET AL.
106A - Walter N. & Lorraine C. Johnson
105A - Neil & Sharon Kiesan
FOR DETAILS OF SIDE ROAD SEE SHEET NO. 30
MAKEE TWP T 98 N R 5 W
STA 419+21.5 Hawk View Rd
STA 434+70.5 Bluebell Rd
Discharge PT (TYP)
Discharge PT (TYP)
Discharge PT (TYP)
Discharge PT (TYP)
LANSING TWP T 99 N R 4 W
SEC 31
B.M. # 50 ELEV. 1224.35
SUBDRAIN LINE NO 12, SHEET NO. 3D
SUBDRAIN LINE NO 13, SHEET NO. 3D
TRAN FIN P.I. 446+46.54 (SURVEY & OFF. RELOC.)
P.O.T. 419+21.54 (SURVEY & O.R.)
P.O.T. 434+74.95 (SURVEY)
P.O.T. 434+70.51 (O.R.)
TYPE "C" ENT.
TYPE "C" Joint ENT.
FOR DETAILS OF SIDE ROAD SEE SHEET NO. 31
+36.0 R.O.W. MKR.
P.O.T. 444+81.65 SET PIN
P.O.T. 44.00' OF PI'S
P.I. 445+45.23 (SURVEY)
P.I. 446+41.65 (O.R.)
PARCEL NO. 110 TOTAL SETTLEMENT: $ 16,607.00
GRANTOR: PEARL THIELE, RUTH RYAN, RUTH BALG
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-02-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 344-345
PARCEL NO. 106 TOTAL SETTLEMENT: $ 4,756.00
GRANTOR: DONALD R. ALDRICH
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 06-23-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 111 PAGE 472
PARCEL NO. 109 TOTAL SETTLEMENT: $ 1,340.00
GRANTOR: ALFRED R. SAEWERT
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 06-30-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 111 PAGE 475
PARCEL NO. 110 TOTAL SETTLEMENT: $ 16,607.00
GRANTOR: PEARL THIELE CHESTER THIELE, MARION BY
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-02-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 344-345
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 03-02-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 276-278
EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE
ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.
CURVE DATA (SURVEY)
Δc = 10°56'00"
D = 1°00'00"
T = 548.33'
L = 1093.33'
E = 26.18'
R = 5729.58'
Δ = 12°56'00" RT.
θs = 1°00'00"
Ls = 200'
Ts = 149.46'
Es = 36.98'
Xc = 199.99'
Yc = 1.16'
LT = 133.34'
ST = 66.61'
LC = 200.00'
P = 0.29
K = 100.00'
CURVE DATA (OFF-RELOC.)
Δc = 8°56'00"
D = 1°00'00"
T = 447.51'
L = 893.33'
E = 17.45'
R = 5,729.58'
e = 0.038
S = 245'
Δ = 10°56'00" RT.
θs = 1°00'00"
Ls = 200'
Ts = 648.36'
Es = 26.41'
Xc = 199.99'
Yc = 1.16'
LT = 133.34'
ST = 66.61'
LC = 200.00'
P = 0.29
K = 100.00'
CLASS 12
C = 39.338 [41,625]
FROM S.R. LT. STA. 419+11.54 = 46
41,671
TO STA. 385+80± = 513
TO STA. 386± = 513
TO S.R. RT. STA. 413+61.44 = 600
41,671
F = 40,047
NOTE: ( ) = UNSUITABLE [ ] = C + SWELL
CLASS 10
C = 17,359 (2024)
TO STA. 412 ± = 8381
17,359
F+10% = 8378 (2024)
CLASS 12
C = 4892 [15,093]
TO STA. 382+30 ± = 205
TO STA. 385 ± = 9,208
15,093
F = 5,680
CLASS 10
C = 6407 (1814)
F+10% = 6424 (1814)
F+30% = 783
6407
REMOVED OLD PAVEMENT
2309 C.Y. UNSUIT. MAT'L TYPE "B" DISPOSAL
BROKE & BREAK-UP OLD PAVEMENT
-1.28%
+2.40%
V.C. = 800'
-0.5% RT. DITCH
PROP. TYPE "C" ENT. (USE AS SAFETY DIKE)
5005 C.Y. UNSUIT. MAT'L TYPE "B" DISPOSAL
33 C.Y. SHALE BACKSLOPE PROTECTION LT.
60 C.Y. SHALE BACKSLOPE PROTECTION RT.
FOR DETAILS SEE X-SECT.
3:1 LT. FORESLOPE VARI
SUBGRADE TREATMENT NO. 11
DITCH GRADE
NO DITCH
SIDE ROAD
3'x0' DITCH
4'x0' DITCH
5' DITCH
LT.
RT.
Revised Oct. 3, 1978
35 C.Y. SHALE BACKSLOPE PROTECTION LT.
40 C.Y. SHALE BACKSLOPE PROTECTION RT.
AS-BUILT PLANS, FOR INFORMATION ONLY
ALLAMAKEE COUNTY
PROJECT NUMBER
STATE IOWA
FED. ROAD DIST. NO. 8
FISCAL YEAR
SHEET NO.
TOTAL SHEETS
PROJECT NUMBER F-9-9(14)--20-03
STATE IOWA
FED. ROAD DIST. NO. 8
FISCAL YEAR
SHEET NO. 22
TOTAL SHEETS 221
FILE NO.
ENGLISH
DESIGN TEAM KELLY \ MEISE \ NIE
ALLAMAKEE COUNTY
PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03
SHEET NUMBER D.15

110. PEARL THIELE, et al.
111. HENRY C. RISSMAN
112. LANSING RIDGE CEMETERY ASSN.
113. JOHN L. COX & GARY R. & MARY V. JOHNSON

CURVE DATA (SURVEY)
Δc = 25°17'30"
D = 2°15'00"
T = 511.34'
L = 1124.01'
E = 63.31'
R = 2546.48'

Δ = 30°55'00" LT.
θs = 2°48'45"
Ls = 250'
Ts = 829.48'
Es = 96.64'
Xc = 247.94'
Yc = 4.09'
LT = 166.69'
ST = 83.35'
LC = 249.97'
P = 1.02'
K = 124.99'

CURVE DATA (OFF. RELOC.)
Δc = 22°55'00"
D = 2°00'00"
T = 580.68'
L = 1145.83'
E = 58.26'
R = 2,864.79'
c = 0.065
Δ = 26°55'00" LT.
θs = 2°00'00"
Ls = 200'
Ts = 785.71'
Es = 81.49'
Xc = 199.98'
Yc = 2.33'
LT = 133.34'
ST = 66.61'
LC = 199.99'
P = 0.58'
K = 100.00'

BM # 52
ELEV. 1268.12

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 31

STA 452+05.2
High Point Rd

P.O.S. 452+05.18 (O.R.)

C.S. 451+01.17 (O.R.)

& OFF. RELOC.

& SURVEY

P.I. 445+41.65 (O.R.)
P.I. 445+45.73 (SURVEY)

+00 PROP. JOINT TYPE "C" ENT.

Discharge PT (TYP)

+00 PROP. SAFETY DIKE

+15 PROP. TYPE "C" ENT.

T.S. 453+64.84 (O.R.)

S.C. 456+14.84 (O.R.)

S.C. 468+00.35 (SURVEY)

CURVE DATA (SURVEY)
Δc = 29° 48' 00"
D = 3° 30' 00"
T = 435.58'
L = 851.43'
E = 56.96'
R = 1637.02'

Δ = 34° 33' 00" RT.
θs = 4° 22' 30"
Ls = 250'
Ts = 698.01'
Es = 98.90'
Xc = 249.85'
Yc = 6.36'
LT = 166.72'
ST = 83.38'
LC = 249.94'
P = 1.59'
K = 124.58'

LANSING TWP
T 99 N R 4 W
SEC 31

P.I. 462+68.36 (SURVEY)
= P.I. 462+47.04 (O.R.)

+87 PROP. TYPE "C" ENT.

CURVE DATA (OFF. RELOC.)
Δc = 30° 18' 00"
D = 2° 30' 00"
T = 620.53'
L = 1212.00'
E = 82.52'
R = 2291.83'
c = 0.013
Δ = 36° 33' 00" RT.
θs = 3° 07' 30"
Ls = 250'
Ts = 882.20'
Es = 122.92'
Xc = 249.93'
Yc = 4.53'
LT = 166.69'
ST = 83.36'
LC = 249.97'
P = 1.13'
K = 124.99'

C.S. 466+71.78 (SURVEY)

ST. 468+26.84 (O.R.)
ST. 468+21.79 (SURVEY)

BM # 53
ELEV. 1234.25

+84 50 LT. ROW MKR.

STA. 472+00
BEGIN PROJECT & DIVISION 1
BEGIN WIDENING & RESURFACING

+65 PROP. TYPE "C" ENT.

EQUATION: S.T. 470+76.84 (O.R.) BACK = STA. 471+05.97 (SURVEY) AHEAD

SEC. 32

R.W.

0 50 100

SAFETY DIKE
(1260) 13%
PROP. JOINT TYPE "C" ENT.
+00 1266.98
V.C.=1200'
+2.40%
-1.79%
CLOSED CEMETARY ENT.
CLOSED
PROP. JOINT TYPE "C" ENT.
CLOSED FIELD ENT.
EXISTING PAVEMENT
PROP. TYPE "C" ENT.
10%
+00 1240.13
-0.3% RT. DITCH
+00 1235.3
+00 1234.1
V.C.=500'
+1.00%
+00 1243.84
FIELD ENT.
PROP. TYPE "C" ENT.
EQUATION
ST. 470+76.84 (O.R.) BACK
= STA. 471+05.97 (SURVEY) AHEAD
LT.
RT.

NO DITCH | 5' DITCH | SIDE ROAD | 5' DITCH | NO DITCH | 3' x 10' DITCH | NO DITCH | 5' DITCH | 4' DITCH | LT. RT.

445	450	455	460	465	470	475

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN-9-9(18)--20-03	IOWA	5		4	2

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.16

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B.M. # 54
ELEV. 1233.36

113. JOHN L. COX
114. GARY R. & MARY V. JOHNSON
115. ESTHER MARTI (FEE) CLARENCE SWEAT (C.P.)
117. CALHOUN COOPERATIVE CREAMERY CO.
118. ESTHER MARTI
119. Earl G. Johnson & Lillian L. Johnson
120. CLARENCE P. SWEAT
121. JOHN A. & MARILYN R. SANCHEZ

Discharge PT (TYP)

Discharge PT (TYP)

LANSING TWP
T 99 N R 4 W
SEC 32

Discharge PT (TYP)

Discharge PT (TYP)

CURVE DATA
Δ = 8° 49' 00" LT.
D = 1° 00' 00"
T = 441.71'
L = 881.67'
E = 17.00'
R = 5729.58'
e = 0.038

PARCEL NO. 114 TOTAL SETTLEMENT: 3465.00
GRANTOR: GARY R. JOHNSON
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 2-9-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 106 PAGE 589-593

PARCEL NO. 119 TOTAL SETTLEMENT: $100.00
GRANTOR: EARL G. JOHNSON
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 9-14-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 582-583

PARCEL NO. 118 TOTAL SETTLEMENT: $1950.00
GRANTOR: ESTHER MARTI
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 119-120

PARCEL NO. 117 TOTAL SETTLEMENT: $20,000.00
GRANTOR: CALHOUN COOP. CREAMERY
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 5-25-77 COND. HELD: 3-29-78
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK PAGE

CURVE DATA
Δ = 64° 01' 00" LT.
D = 6° 00' 00"
T = 596.90'
L = 1066.94'
E = 171.21'
R = 954.93'
e = 0.061

Discharge PT (TYP)

Bell Telephone
Central States Power

R.W.
+85 PROP
TYPE "C" ENT.

TEMP EASE

P.C. 480+61.10
SEP MAPLE

+40 PROP
TYPE "C" ENT.

P.I. 489+42.77
SEP MAPLE

+82 TYPE C ENT
485+02.81
IRON PIN

+15 PROP
TYPE "C" ENT.

+90 PROP JOINT
TYPE "B" ENT.
(PAVED)
+90 PROP
TYPE "B" ENT.
(PAVED)

P.C. 500+24.51
NW 2ND

+40 Begin Curb
LT

FLAG POLE

+15 PROP
TYPE "C" ENT.

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

0 50 100

CLASS 10
LT. C = 214.9 (306) F = 50% TO STA. 476+RT = 982 = 1,161 (44) 2149

CLASS 12
C = 700 (805) F = 0 WASTE = 805 805

CLASS 10
C = 1,826 (161) F = 50% WASTE = 290 = 1,536 1,826

CLASS 10
RT. C = 1784 (450) FROM STA 475+LT. = 982 F = 50% = 2,766 (205) 2,766

CLASS 12
C = 14 (16) F = 16

CLASS 10
C = 1,248 (428) F = 50% = 1248

( ) = UNSUITABLE
[ ] = C + SWELL

PARCEL NO. 113 TOTAL SETTLEMENT: $4875.00
GRANTOR: JOHN L. COX
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 2-9-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 12-16

(1250) 12% PROP TYPE "C" ENT. FARM ENT

(1240) 10% PROP TYPE "C" ENT. CLOSED FARMER

478 C.Y. UNSUITABLE MATERIAL
44 C.Y. TYPE "C" DISPOSAL, 429 C.Y. USE FOR TOPSOIL

818 C.Y. UNSUITABLE MATERIAL
205 C.Y. TYPE "C" DISPOSAL, 613 C.Y. USE FOR TOPSOIL

(1250) 8% PROP TYPE "C" ENT. CLOSED FIELD ENT.

(1260) 6% PROP TYPE "B" ENT.

(1260) 6% PROP JOINT TYPE "B" ENT.

+0.4% RT. DITCH
+50 1256.0
+50 1257.2

(1240) 10% PROP TYPE "C" ENT. FIELD ENT.

4' DITCH
4' DITCH
NO DITCH
NO DITCH
4' DITCH
NO DITCH
4' DITCH
NO DITCH
NO DITCH
DITCH GRADE
NO DITCH
CURB & GUTTER LT. RT.
VARI.
2 "V" DITCH

1270 1260 1250 1240 1230 1220

475 480 485 490 495 500 505

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	S			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F-9-9(18)--20-03	IOWA	S		5	204

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.17

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115. ESTHER MARTI (FEE) CLARENCE SWEAT (C.P)
117. CALHOUN COOPERATIVE CREAMERY CO.
118. ESTHER MARTI
119. EARL G. Johnson & LILLIAN L. Johnson
120. CLARENCE P. SWEAT
121. JOHN A. & MARILYN R. SANCHEZ
122. JEROME E. & JEANNE M. WELSH
123. ARLIE J. & ELIZABETH M. GORDON
124. Northeast Iowa Church of Christ Evangelistic and Missionary Foundation, Inc. (VERIFY)
125. BERNARD J. & DOROTHY A. ZEIMET
126. LORRAINE D. & HERBERT B. HIRTH
127. RAYMOND F. & MARJORIE C. TROENDLE
128. ALLAMAKEE COUNTY
129. RUTH L. RUSSEL
130. CLARENCE T. WENDEL (SUBJ. TO LIFE USE TO MILLIE MARTI)
131. WILLIAM J. & RUTH C. REA
127A. FRED C. & KAREN M. KEATLEY

B.M. # 56
ELEV. 1255.53

LANSING TWP
T 99 N · R 4 W
SEC · 32

STA. 514+00
STOP WIDENING AND RESURFACING
BEGIN WIDENING AND RESURFACING
WITH 12' CLIMBING LANE

STA 506+70.9
Dry Ridge Dr

STA 518+89.1
Bolder Dr

STA 526+95.0
X6A/Mays Prairie Rd

Discharge
PT (TYP)

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 17

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 15

NOTE: FOR ADDITIONAL DETAILS, SEE SHEETS 6B, 6C, 6D, 6E & 6F

ALLAMAKEE COUNTY

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.18

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131. WILLIAM J. & RUTH C. REA
132. JOHN T. & HAZEL HENNESSY

B.M. # 59 ELEV. 1125.16

B.M. # 60A ELEV. ~~1082.38~~ 1082.38

B.M. # 61 B ELEV. ~~1018.76~~ 1018.77

B.M. # 62 B ELEV. ~~1017.25~~ 1014.00

Discharge PT (TYP)

Discharge PT (TYP)

Discharge PT (TYP)

LANSING TWP
T 99 N R 4 W
SEC 28
SEC 29

~~Install~~ Subdrain Line No. 2

~~Install~~ Subdrain Line No. 3

CURVE DATA
Δ = 26° 28' 30" LT.
D = 7° 30' 00"
T = 268.59'
L = 513.00'
E = 45.13'
R = 763.94'
e = 0.080

PARCEL NO. 132 TOTAL SETTLEMENT: $ 7648.00
GRANTOR: JOHN T. HENNESSY
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 6-28-77 COND. HELD: ____
R.O.W. BY: FEE ____ PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 214-217

+30 ~~PROP~~ DIKE EL. 1173.0

~~PROP~~ TYPE 'C' ENT.

+14 TYPE 'C' ENT.

8'x14' RCP

~~PROP~~ CLOSED

GARAGE

WINDMILL

BARN

CONC. SILO

STEEL BIN

L.P. GAS TANK

Bell Telephone

Prop. Intercept Ditch

+75 TYPE 'C' ENT.

+30 ~~PROP~~ TYPE 'C' ENT.

STA. 531+37
2-2'x10' RCB
D.A. 11 Ac.-VH
EXTEND WITH 30'RF-1 & RE-13 FLUME
FL. LT. 1168.8
FL. RT. 1122.0
FLUME 1105.6

STA. 550+00 RT.
0.80 CFS SPRING WATER
0.84 CFS SPRING DITCH
CALIFORNIA - 7 PIPE RISER
(REMOVE)

15"CSP & CMP PIPE (REMOVE)

+10 TYPE 'C' ENT.

STA. 557+10
8'x6' 91 RCB
D.A. 176-11-187 Ac.-VH
EXTEND WITH 8'x6' RCB, SKEW 30°
FL. LT. 1005.5
FL. RT. 1009.47

RR. spike EL. 557+82.53 DITCH

~~PROP~~ INTERCEPT DITCH

CURVE DATA
Δ = 18° 38' 30" RT
D = 4° 00' 00"
T = 235.10'
L = 466.04'
E = 19.17'
R = 1433.39'
e = 0.080

0 50 100

CLASS 16	CLASS 17		CLASS 10	CLASS 12	CLASS 10	CLASS 12
C = F + 20% = 2,861	3DZZ [505]	TO STA. 552 ± LT. = 449	C = F + 20% = 4423	= 663 [707]	C = F + 20% = 5,416	= 370 [425]
	C = 582 [682]	TO STA. 556 ± LT. = 636	FROM STA. 532 ± LT. = 5,111	C = 449	FROM STA. 538 ± LT. = 449	C = 636
CLASS 10	F	TO STA. 561 ± LT. = 1196	4425	1154 F = 1154		1041 F = 1041
C = 2,832 (4/4) F = 20% = 2,832		3,051				

() = UNSUITABLE
[ ] = 6" SWELL

LT. RT.

VARI. 1½:1 LT. BACKSLOPE VARI.

3:1 RT. FORESLOPE VARI.

PLACE ROCK FILL KEY ON RT. FORESLOPE SEE CROSS SECTIONS FOR DETAILS. (2073 C.Y.)

~~PROP~~ TYPE 'C' ENT.

~~PROP~~ TYPE 'C' ENT.

~~PROP~~ TYPE 'C' ENT.

CLOSED

1139 C.Y. UNSUITABLE MATERIAL
452 C.Y. TYPE "C" DISPOSAL, 527 C.Y. USE FOR TOPSOIL

VARI. 1½:1 RT. BACKSLOPE

PLACE ROCK FILL KEY ON LT. FORESLOPE SEE CROSS SECTIONS FOR DETAILS. (1011 C.Y.)

PLACE ROCK FILL KEY ON LT. FORESLOPE (710 C.Y.)

SEE CROSS SECTIONS FOR DETAILS

3:1 LT. FORESLOPE

944 C.Y. UNSUITABLE MATERIAL
612 C.Y. TYPE "C" DISPOSAL
332 C.Y. USED FOR TOPSOIL

Revised Oct. 3, 1978

4' DITCH VARI. NO DITCH 4'x10' DITCH NO DITCH 4' DITCH 4' DITCH VARI. NO DITCH 4'x10' DITCH NO DITCH VARI. VARI. 4' DITCH VARI. NO DITCH VARI. DITCH GRADE

530 535 540 545 550 555 560

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN9-9(18)--20-03	IOWA	5		7	264

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.19

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BM # 63 A
ELEV. ~~994.17~~

BM # 63 B
ELEV. ~~972.73~~

BM # 64 A
ELEV. ~~953.36~~

BM # 64-B
ELEV. 938.75

LANSING TWP
T 99 N R 4 W
SEC 28

PARCEL NO. 133 TOTAL SETTLEMENT: $2595.00
GRANTOR: J. & METTILLE
ACCESS RIGHTS ACQUIRED: ☒ YES ☐ NO
CONTRACT SIGNED: 6-21-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 310 - 314

132. JOHN T. & HAZEL HENNESSY
133. GEORGE L. & IRENE C. METTILLE (FEE)
JAMES E. & CONSTANCE K. METTILLE (E.P.)

STA. 590+00
END WIDENING AND RESURFACING WITH 12' CLIMBING LANE
BEGIN 24' RECONSTRUCTION WITH 12' CLIMBING LANE.

CURVE DATA
Δ = 36° 50' 00" LT.
D = 6° 00' 00"
T = 317.97'
L = 613.89'
E = 51.55'
R = 954.93'
c = 0.080

CURVE DATA
Δ = 15° 07' 00" LT.
D = 6° 00' 00"
T = 126.71'
L = 251.94'
E = 8.37'
R = 954.93'
c = 0.080

CURVE DATA
Δ = 38° 08' 00" RT.
D = 6° 30' 00"
T = 304.66'
L = 586.67'
E = 51.17'
R = 881.47'
c = 0.080

CURVE DATA
Δ = 27° 33' 00" RT.
D = 6° 00' 00"
T = 234.11'
L = 459.17'
E = 28.28'
R = 954.93'
c = 0.080

CURVE DATA
Δ = 44° 16' 00" RT.
D = 6° 00' 00"
T = 387.43'
L = 736.11'
E = 75.65'
R = 954.93'
c = 0.080

STA. 560+55
4'x6' x 67.5' RCB
DA = 22 AC-VH
EXTEND LT/RT WITH 4'x5½' RCB
LT 994.5
FL RT 1007.0

STA. 568+91
8'x10'x91'
DA = 170+11-22+120+92.9 AC-VH
EXTEND LT/RT WITH 8'x10' RCB
FL LT 981.0
FL RT 976.5

STA. 572+05
8'x10'x85' R.C.B.
DA = 20+329+349 AC-VH
EXTEND LT/RT WITH 8'x10' RCB
FL LT 951.5
FL RT 960.5

STA. 579+00
12'x10'x61' R.C.B.
DA = -252+349+601 AC-VH
CARRY AHEAD

STA. 584+12
15'x10'x595' R.C.B.
DA = -16-601+2=619 AC-VH
EXTEND LT/RT WITH 12'x10' R.C.B.
FL LT 941.0
FL RT 936.5

STA. 584+12
15'x10'x595' R.C.B.
DA = -16-601+2=619 AC-VH
EXTEND LT/RT WITH 12'x10' R.C.B.
FL LT 937.5
FL RT 926.5

STA. 590+28
3'x3'x115' R.C.B.
CARRY AHEAD

Revised Oct. 3, 1978

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5		8	204

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER D.20

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107. WILLIAM S. & MARY BETH MINER
132. JOHN T. & HAZEL HENNESSY
133. GEORGE L. & IRENE C. METTILLE (FEE)
JAMES E. & CONSTANCE K. METTILLE (C.P.)
134. WILLIAM J. TROENDLE SR.
& GERTRUDE TROENDLE (FEE)
JAMES & CONSTANCE METTILLE (C.P.)
135. CHARLES WILLIAM MEISTER
136. R.W. DAUBENDIEK
137. CHARLES A. & BEVERLY FITZ

BM # 65 C
ELEV. ~~911.20~~ 908.28

BM # 66
ELEV. ~~910.92~~

BM # 67 A
ELEV. ~~907.78~~ 905.78

B.M. # 68 A
ELEV. ~~862.26~~ 861.15

SEC 28

LANSING TWP
T 99 N R 4 W

SEC 27

SURVEY
CURVE DATA
Δ = 15°00'00" LT.
D = 1°45'00"
T = 567.28'
L = 967.74'
E = 192.51'
R = 739.30'

PARCEL NO. 134 TOTAL SETTLEMENT: $ 7702.56
GRANTOR: TROENDLE (FEE) METTILLE (C.P.)
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 6-21-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 325-329

~~Subdrain~~ Line No. 7

~~Subdrain~~ Line No. 8

+30 ~~PROP~~ DIKE
EL. 894.5

+00 ~~PROP~~ DIKE
EL. 885.5

+30 ~~PROP~~ DIKE
EL. 860.5

OFFICE RELOCATION
CURVE DATA
Δ = 30°32'54" LT. Δc = 15°32'54"
θs = 7°30'00" D = 7°30'00"
Ls = 200.00' T = 104.30'
Ts = 309.16' L = 207.31'
Es = 30.23' E = 7.09'
P = 2.18' R = 763.94'
K = 99.94' c = 0.08
Xc = 199.60'
Yc = 8.72'
Lt = 133.45'
St = 66.78'
Lc = 199.85'

OFFICE RELOCATION
CURVE DATA
Δ = 43°00'00" RT. Δc = 28°00'00"
θs = 7°30'00" D = 7°30'00"
Ls = 200.00' T = 190.47'
Ts = 401.72' L = 373.33'
Es = 59.48' E = 23.39'
P = 2.18' R = 763.94'
K = 99.94' c = 0.08
Xc = 199.66'
Yc = 8.72'
Lt = 133.45'
St = 66.78'
Lc = 199.85'

OFFICE RELOCATION
CURVE DATA
Δ = 79°00'00" LT.
D = 7°30'00"
T = 629.75'
L = 1053.33'
E = 226.10'
R = 763.94'
c = 0.08

SURVEY
CURVE DATA
Δ = 16°02'00"
D = 6°00'00"
T = 134.49'
L = 267.22'
E = 9.42'
R = 954.93'

Δ = 28°02'00" RT.
θs = 6°00'00"
L = 200'
Ts = 338.78'
Es = 31.10'
Xc = 199.76'
Yc = 6.98'
Lt = 133.41'
St = 66.74'
D = 6°00'00"
P = 1.74'
K = 99.96

SPECIAL DITCH

SPECIAL DITCH

SPECIAL DITCH

Bell Tel

R.W.

P.C. 590+74.56 SURVEY
P.C. 590+38.00 (OR.)
5/8" IRON PIN

P.I. 605+31.03 (SURVEY)
P.I. 605+76.82 (O.R.)
IRON PIN

P.I. 620+99.35 (OR.)
IRON PIN

P.T. 590+15.88 SURVEY
P.T. 590+15.88 (OR.)
5/8" IRON PIN

P.C. 612+31.55 (OR.)
5/8" IRON PIN

P.T. 613+44.84 (O.R.)
5/8" IRON PIN

P.C. 613+44.84 (O.R.)
5/8" IRON PIN

P.T. 617+44.84 (O.R.)
5/8" IRON PIN

P.C. 617+44.84 (O.R.)
5/8" IRON PIN

+22.50' RT.
R.O.W. MAR.

+31.69' RT.
R.O.W. MAR.

50 ~~PROP~~
TYPE "C" ENT.

~~+25 PROP~~
TYPE "C" ENT.

+00 ~~PROP~~
TYPE "C" ENT.

(132) ~~(REMOVE)~~ ~~CMP~~ ~~PIPE~~ (REMOVE)

TEMP. EASE.

TEMP. EASE.

TEMP. EASE.

~~INSTALL 30" RF-1 & RF-13 FLUME~~ (REMOVED)

D.A. = 6.31 AC. - V.H.
~~BUILD 12'x10' R.C.B.~~
AT STA. 594+75, SKEW 30°
FL. LT. 896.83
RT. 895.01

(136) D.A. = 8.4 AC. - V.H.
~~INSTALL 30" RF-1 & RF-13 FLUME~~
AT STA. 600+00
FL. LT. 891.0
RT. 889.0

(137)

(135)

(134) D.A. = 10 AC. - V.H.
~~INSTALL 30" RF-1~~
RF-13 FLUME
AT STA. 605+10
LT. 882.0
FL. RT. 881.0
FLUME 872.1

(136)

(134) D.A. = 200 AC. - V.H.
~~BUILD 8'x5' TAPERED TO 5'x5' R.C.B.~~
WITH STUB FLUME AT
STA. 616+60
LT. 854.82
FL. TAPER 851.5
RT. 850.56
FLUME 842.0

(107)

(133)

(134)

(136)

0 50 100

PARCEL NO. 136 TOTAL SETTLEMENT: $ 905.00
GRANTOR: MAE DAUBENDIEK
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 4-4-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 146-148

PARCEL NO. 137 TOTAL SETTLEMENT: $ 1,501.00
GRANTOR: CHARLES A. FITZ
ACCESS RIGHTS ACQUIRED: ☐ YES ☐ NO
CONTRACT SIGNED: 3-25-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 108 PAGE 133-135

CLASS 10 C = 149 [194]
FROM STA. 523+LT. = 25,006
FROM STA. 587+LT. = 7,604
F+30% = 32,759

CLASS 12
C = 17,509 [18,900]
FROM STA. 561+50 LT. = 9,109
FROM STA. 575+50 LT. = 7,091
FROM STA. 581+ = 1,779
36,329

CLASS 10
C+30% = 8,990

CLASS 10 C = 149 [194]
FROM STA. 523+LT. = 3349
FROM STA. 528+LT. = 10,282
FROM STA. 588+RT. = 6013
19,838

CLASS 12
F = 19,838

FOR DETAILS OF RT. BACKSLOPE SEE CROSS SECTIONS

FOR DETAILS OF LEFT BACKSLOPE SEE CROSS SECTIONS

REMOVED OLD PAVEMENT

REMOVED OLD PAVEMENT

F = 36,329

3:1 LT. FORESLOPE

3:1 RT. FORESLOPE

3:1 RT. FORESLOPE

PLACE ROCK ON RT. FORESLOPE BERM SEE CROSS SECTIONS FOR DETAILS

PLACE ROCK ON RT. FORESLOPE BERM SEE CROSS SECTIONS FOR DETAILS

VARI

VARI

VARI

VARI

VARI

VARI

VARI

VARI

-2.80%

590+00 TIE IN 3 HIGH EL. 924.05

V.C. = 600'

+10 908.9

-2.57% LT. DITCH

+00 899.4

-1.5% RT. DITCH

+00 910.05

+00 890.5

+50 903.2

+50 896.0

+50 895.0

-1.90%

-1.2% RT. DITCH

+50 887.0

+50 882.3

+0.4% LT. DITCH

+00 882.9

+00 881.6

-4.5% RT. DITCH

+50 865.8

DITCH GRADES (20')

+00 882.9

-2.3% LT. DITCH

+00 878.3

+00 877.15

+50 865.7

-5.6% LT. DITCH

+50 854.6

+00 855.0

-2.6% LT. DITCH

-2.80%

-1.4% RT. DITCH

+50 643.0

+50 648.5

366 C.Y. UNSUIT. MATERIAL TYPE "A" DISPOSAL

+09

+12%

2%

PROP TYPE "C" ENT.

PROP TYPE "C" ENT.

(910)

(880)

(860)

CLOSED

CLOSED

Revised Oct. 3, 1978

NO DITCH | 4'x10' DITCH | VARI | 3'x10' DITCH | VARI | SPECIAL DITCH GRADE (5') | VARI | DITCH GRADE | SPECIAL DITCH GRADE | 5' DITCH | NO DITCH | VARI | SPECIAL DITCH GRADES | VARI | NO DITCH | VARI | DITCH GRADES (20') | 5' DITCH | NO DITCH | VARI | SPECIAL DITCH GRADE | DITCH GRADE (20') | VARI | DITCH GRADE (20') | LT. | NO DITCH | RT.

24.05 21.25 18.45 17.76 17.07 16.39 15.75 15.07 14.42 13.78 13.15 12.53 11.92 11.32 10.73 10.14 09.57 09.00 08.46 07.90 07.37 06.84 06.33 05.81 05.31 04.82 04.33 03.85 03.38 02.92 02.45 02.05 01.65 01.25 00.85 00.55 00.25 00.05 00.15 00.35 00.65 00.95 01.25 01.55 01.85 02.15 02.45 02.75 03.05 03.35 03.65 03.95 04.25 04.55 04.85 05.15 05.45 05.75 06.05 06.35 06.65 06.95 07.25 07.55 07.85 08.15 08.45 08.75 09.05 09.35 09.65 09.95 10.25 10.55 10.85 11.15 11.41 10.72 10.06 09.35 08.65 07.95 07.25 06.55 05.85 05.15 04.45 03.75 03.05 02.35 01.65 00.95 00.25

590 595 600 605 610 615 620

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F N9-9(18)--20-03	IOWA	5		9	204

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.21

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134. WILLIAM J. TROENDLE SR. & GERTRUDE TROENDLE (FEE)
JAMES & CONSTANCE METTILLE (C.P.)

138. LAURAYNE BATTEEN

139. ROBERT V. STRUB

OFFICE RELOCATION CURVE DATA

Δ = 9°45'00" LT. Δc= 3°45'00"
Θs= 3°00'00" D = 3°00'00"
Ls= 200.00' T = 62.52'
Ts= 262.96' L = 125.00'
Es= 7.81' E = 1.02'
P = 0.81' R = 1909.86'
K = 99.99' C = 0.061
Xc= 199.95'
Yc= 3.49'
LT.= 133.35'
ST.= 66.68'
LC= 199.98'

B.M.#69 A
ELEV. 873.06

B.M. # 70 B
ELEV. 838.63

B.M. # 71 - A
ELEV. 831.07

OFFICE RELOCATION CURVE DATA

Δ = 22°33'30" LT. Δc= 13°48'30"
Θs= 4°22'30" D = 3°30'00"
Ls= 250.00' T = 198.22'
Ts= 451.78' L = 394.52'
Es= 33.86' E = 11.96'
P = 1.59' R = 1631.02'
K = 124.97' C = 0.073
Xc= 249.85'
Yc= 6.36'
LT.= 166.72'
ST.= 83.38'
LC= 249.93'

LANSING TWP
T 99 N R 4 W
SEC 27

SURVEY
CURVE DATA
Δ= 12° 05' 00"
D = 3° 30' 00"
T = 173.38'
L = 345.48'
E = 9.16'
R = 1637.02'

Δ = 20° 50' 30"
Θs= 4° 22' 30"
Ls= 250'
Ts= 428.34'
Es= 29.07'
Xc= 248.85'
Yc= 6.36'
LT= 166.72'
ST= 83.38'
LC= 249.84'
P = 1.59'
K = 124.98'

644+20, 24' LT.
BEGIN 40:1 TAPER

649+00, 12' LT.
END 40:1 TAPER

STA 646+53.2
Gander Hill Rd

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN 9-9(18)--20-03	IOWA	5		10	200

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.22

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139. ROBERT V. STRUB
140. EVA B. GANDER
141. NORENE E. & WILLIAM J. MANDERSCHEID

BM # 72 C
ELEV. ~~794.31~~ 794.67

BM # 73 [illegible]
ELEV. [illegible]

BM # 74 B
ELEV. ~~767.36~~ 767.40

BM # 75 A
ELEV. ~~803.06~~ 803.01

LANSING T 99 N R 4 W
SEC 26
SEC 27

OFFICE RELOCATION CURVE DATA
Δ = 3°43'00" LT.
D = 1°00'00"
T = 185.90'
L = 371.67'
E = 3.01'
R = 5729.58'
e = 0.029

SURVEY CURVE DATA
Δ = 13° 23' 30" LT.
D = 3° 00' 00"
T = 224.22'
L = 446.39'
E = 13.12'
R = 1908.86'

STA 652+30.9 X6A/ 4 Mile Dr

~~Instead~~ Subdrain Line No.12

~~Instead~~ Subdrain Line No.13

~~Instead~~ Subdrain Line No.14

FOR DETAILS OF SIDE ROAD SEE SHEET No.19

P.I. 653+95.57 (O.R.)
P.I. 653+43.81 (SURVEY)

+25 ~~PROP~~ DIKE EL. 779.5

+51 - ~~SEE~~ LT. R.O.W. MKR.
+84 - ~~SEE~~ LT. R.O.W. MKR.

+00 ~~PROP~~ DIKE EL. 772.0

+20 ~~PROP~~ DIKE EL. 765.0

+52 ~~PROP~~ TYPE "C" ENT. (USE AS SAFETY DIKE)

P.O.C. 652+81 LT (O.R.)

P.I. 665+24.90 (SURVEY)

P.I. 665+10.00 (O.R.)

~~PROP~~ TYPE "C" ENT.

SPECIAL DITCH

~~PROP~~ SPECIAL DITCH

APPROX. ¼ SEC. LINE

SURVEY CURVE DATA
Δ = 2° 15' 00" RT.
D = 3° 30' 00"
T = 301.10
L = 601.14
E = 28.56
R = 1631.62

OFFICE RELOCATION CURVE DATA
Δ = 23° 15' 00" RT.
Δc = 14° 30' 00"
Rs = 4° 22' 30"
D = 3° 30' 00"
Ls = 250.00
T = 208.24
E = 42.06
L = 411.27
Es = 39.91
E = 15.19
C = 159
R = 1631.02
Xc = 249.89
Yc = 4.34
LT = 166.12
ST = 83.34
LC = 249.94
e = 0.073

~~EXIST~~ 36" RF-1 (REMOVE)
DA = 28 AC - V.H.
~~INSTALL~~ 36" RF-1
AT STA 663+75
LT. 771.3-B
RT. 774.2-O

~~EXIST~~ 36" RF-1 (REMOVE)
DA = 26 AC - V.H.
~~INSTALL~~ 36" RF-1
AT STA 670+25
F.L. LT. 767.3
RT. 763.0

SURVEY CURVE DATA
Δ = 11° 14' 00" RT.
D = 4° 00' 00"
T = 140.87
L = 280.83
E = 6.91
R = 1432.39

5 WIRES

~~EXIST~~ 36" RF-1 & RF-13 (REMOVE)
DA = 17 AC - V.H.
~~INSTALL~~ 36" RF-1 & RF-13 FLUME
AT STA 675+75
LT. 767.0-B
RT. 759.86
F.L. FLUME 748.1

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

CLASS 10
C = 14,078
F = 20% = 3,588
TO STA 618± 440
14,078

CLASS 12
C = 5650 [5716]
F = 32
TO STA 653± 5455
5716

CLASS 10
C = F + 20% = 30,781

CLASS 12
C = 2890 [2919]
F = 2804
TO STA 646± 115
2919

CLASS 10
C = 6466
FROM STA 548± = 4692 F + 20% = 11,648
FROM STA 656± = 490
11,648

CLASS 12
C = 1265 [1265]
F = 0
TO STA 645± = 1265
1265

REMOVE OLD PAVEMENT

FOR DETAILS OF LT. BACKSLOPE, SEE CROSS SECTIONS

PARCEL NO. 140 TOTAL SETTLEMENT $ 5982.00
GRANTOR: EVA B. GANDER
ACCESS RIGHTS ACQUIRED: ☐ YES ☑ NO
CONTRACT SIGNED: 5-26-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 107 PAGE 294-296

Trap Type "C" Ent.

Trap Type "C" Ent.

PROP TYPE "C" ENT.

PLACE ROCK ON RT. FORESLOPE BERM SEE CROSS SECTIONS FOR DETAILS

3:1 RT. FORESLOPE

EXISTING PAVEMENT

Revised Oct 3, 1978

3,206 C.Y. PLOWING AND SHAPING

PROP TYPE "C" ENT. (USE AS SAFETY DIKE)

1,930 C.Y. PLOWING AND SHAPING

-1.10%

+3.0% LT. DITCH

+0.5% LT. DITCH

-3.0%

-1.0% LT. DITCH

V.C. = 800

NO DITCH | VARI | SIDE ROAD | 5' DITCH | VARI | 4' DITCH | NO DITCH | VARI | 5' DITCH | DITCH GRADE (10') | DITCH | GRADES (20') | VARI | 5' DITCH (15') | 5' DITCH VARI 15'-0" | 5' DITCH (10') LT. | RT. 1.1% RT. DITCH

SPECIAL DITCH GRADE | NO DITCH | 1.6% RT. DITCH

650 655 660 665 670 675 680

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	S			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN9-9(18)--20-03	IOWA	S		11	264

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.23

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140. EVA B. GANDER
141. NORENE E. & WILLIAM J. MANDERSCHEID

BM # 76 C
ELEV. ~~741.68~~ 737.73

LANSING TWP
T 99 N R 4 W
SEC 26

~~Install~~ Subdrain Line No. 14

~~Install~~ Subdrain Line No. 15

~~Install~~ Subdrain Line No. 16

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 19

SEC. 25

STA 697+25.0
Gruber Ridge Rd

SURVEY CURVE DATA
Δ = 13° 54' 30" LT.
D = 4° 00' 00"
T = 174.71'
L = 347.71'
E = 10.62'
R = 1432.39'

OFFICE RELOCATION CURVE DATA
Δ = 17° 22' 34" LT.
θ_s = 5° 00' 00"
L_s = 250'
T_s = 344.13'
E_s = 18.47'
P = 1.82'
K = 124.91'
X_c = 249.81'
Y_c = 7.27'
LT = 166.13'
ST = 83.40'
LC = 249.92'
Δc = 7° 22' 34"
D = 4° 00' 00"
T = 92.33'
L = 184.40'
E = 2.97'
R = 1432.39'
C = 0.077

BM # 774
ELEV. ~~758.68~~ 758.21

P.I. 698+50.94 (SURVEY)
P.I. 698+78.66 (SURVEY)
P.I. 705+53.20 (SURVEY)
P.O.T. 698+99.10 (O.R.)
P.O.C. 697+25.00 (O.R.)
P.O.T. 698+97
+94-58' LT. R.O.W. MKR.
+50 ~~PROP~~ DIKE EL. 745.0
+25 ~~PROP~~ DIKE EL. 740.0
+00 ~~PROP~~ TYPE "C" ENT.
~~PROP~~ TYPE "C" ENT. USE AS SAFETY DIKE
+53-51' RT. R.O.W. MKR.
~~EXIST~~ TYPE "C" ENT. (REMOVE)
~~EXIST~~ CONC. APRON (REMOVE)
~~EXIST~~ CONC. BOX (REMOVE)
~~EXIST~~ CONC. APRON (REMOVE)
~~EXIST~~ 18" CMP (REMOVE)
~~EXIST~~ 24" CMP (REMOVE)
~~EXIST~~ 30" CMP

BM # 77 A
ELEV. ~~734.28~~ 738.21

PARCEL NO. 144 TOTAL SETTLEMENT: $300.00
GRANTOR: DICK SCHNEDEN - FORD & MERCURY
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 5-26-77 COND. HELD: _____
R.O.W. BY: FEE _____ PERM. EASE. ✓
DEED RECORDED IN BOOK 112 PAGE 516

141. NORENE E. & WILLIAM J. MANDERSCHEID
142. DONALD J. & MARY KELLEHER
144. DICK SCHNEDEN FORD & MERCURY INC.
145. AMERICAN OIL COMPANY
146. WILLIAM R. JR. & MARY TROENDLE

TEMP. EASE.

BM # 76 A
ELEV. ~~727.41~~ 727.41

FOR DETAILS OF SIDE ROAD SEE SHEET NO. 2C

LANSING TWP
T 99 N R 4 W
SEC. 26

PARCEL NO. 146 TOTAL SETTLEMENT: +$8,000.00
GRANTOR: WILLIAM TROENDLE
ACCESS RIGHTS ACQUIRED: ☐ YES ☐ NO
CONTRACT SIGNED: _____ COND. HELD: 3-1-78
R.O.W. BY: FEE _____ PERM. EASE. _____
DEED RECORDED IN BOOK _____ PAGE _____

PARCEL #146
RESOLUTION OF ABANDONMENT
DATED 12/24/80
STA. 726+43.9 to 735+31.4

STA. 726+38.4
Valley Rd

BORROW "A"
104,000 C.Y. AVAILABLE

Contractor Needs (Cu Yds)		
Contr.	Class 10	Class 12
Grader	25,065	44,568
Project	2,998	
Total	28,063	44,568

Grader needs Additional 60 Cu. Yds. For Top Soil (See Sheet No. 3 G)

~~+40 PROP~~ +36 TYPE "C" ENT.

~~18"-16" RCP~~ (REMOVE)

P.I. 729+77.88 (SURVEY)

~~+30 PROP~~ +30 DIKE EL. 726.5

~~+75 PROP~~ +75 DIKE EL. 740.0

~~REMOVE~~ ABANDON RD

R.W. CLOSED

Subdrain Line No. 12

Interstate Power

Bell Telephone

OFFICE RELOCATION

~~PROP~~ 17 Type "C" Ent.

~~PROP~~ TYPE "B" ENT. (PAVED)

~~PROP~~ 723 ~~+90 PROP~~ TYPE "B" ENT. (PAVED)

P.I. 724+60.15 (O.R.)

P.C. 725+97.92 (SURVEY)

P.O.C. 726+38.44 (O.R.)

P.C. 739+23.64 (SURVEY)

OFFICE RELOCATION CURVE DATA
Δ = 42° 42' 36" Rt. Δc = 39° 21' 04"
θs = 14° 15" D = 2° 15' 00"
Ls = 150 T = 910.56
Ys = 10.11.21 L = 1,148.94
Es = 186.21 E = 151.90
R = 8,191.37 Rc = 7,546.48
L = 75.00 θ = 0.0069
X = 149.99
Y = 1.47
LT = 100.00
SURVEY 5° 50.00
LC = 149.99

SURVEY CURVE DATA
Δ = 9° 05' 00" RT.
D = 2° 00' 00"
T.S. = 227.56
L = 454.17
E = 9.02
R = 2864.79'

~~PROP~~ DA = 1.80 AC.
~~BUILD~~ 12' x 10' R.C.B. 30° SKEW
AT STA. 723+15
LT. 115.4
RT. 114.2
~~CULVERT CONTRACTOR TO REMOVE EXISTING CULVERT~~

Discharge
PT (TYP)

~~PROP~~ DA = 35 AC-VR
INSTALL 48" RF-1 WITH 4'x4' STUB FLUME
AT STA. 734+35
LT. 722.0
RT. 714.6
FLUME: 705.4
~~CULVERT CONTRACTOR TO REMOVE EXISTING CULVERT~~

EXISTING TOPO. IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

Revised Oct. 3 1978

B.L. RT. FORESLOPE VARI REMOVE/OLD PAVEMENT

FOR DETAILS OF LT. BACKSLOPE, SEE CROSS SECTIONS

+00 723.99
+50 727.2
+75 736.5
0.6% LT. DITCH
+0.4% LT. DITCH
1.56%
V.C.=600'
EXISTING PAVEMENT
~~PROP~~ TYPE "B" ENT.
~~PROP~~ TYPE "C" ENT.
10%
4%
(730)
(720)
+00 728.39
+50 727.0
+10 719.2
3.0% LT. DITCH
+00 723.5
+0.3% LT. DITCH
+00 724.1
-0.4% LT. DITCH
+0.08%
+00 729.83
+50 724.1
+00 722.1
+50 722.3
+0.3% LT. DITCH
V.C.=400'
LT. 123.4
RT. 119.0
1,266 C.Y. PLOWING AND SHAPING

DITCH GRADES (10') | 4' DITCH | DITCH GRADE | ENTRANCE | NO DITCH | SIDE ROAD | DITCH GRADES | VARI | DITCH GRADE (10')

43.04 42.90 42.86 42.73 42.58 42.42 42.23 42.03 41.80 41.56 41.30 41.02 40.71 40.39 40.05 39.69 39.31 37.75 36.19 34.63 33.07 32.93 32.92 31.98 31.45 31.35 31.04 30.76 30.50 30.25 30.02 29.81 29.62 29.44 29.28 29.14 29.02 28.91 28.82 28.74 28.69 28.65 28.64 28.62 28.63 28.71 28.79 28.87 28.96 29.03 29.11 29.19 29.27 29.35 29.43 29.51 29.59 29.67 29.68 29.65 29.60 29.56 29.41 29.27 29.11 28.91 28.69 28.43 28.15 27.84

710 715 720 725 730 735 740

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN9-9(18)--20-03	IOWA	5		13	264

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.25

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146. WILLIAM R. JR. & MARY TROENDLE
147. Gary L. Dahlstrom — SURVEY
148. EARL C. & CHARLENE GARRETT
149. BURTON J. & ALICE M. FEUERHELM
150. NORTHERN ENGRAVING COMPANY INC.
152. LYLE G. & LINDA L. PETERS
184. JAY WENDEL

CURVE DATA
Δ = 4° 28' 00" LT.
D = 1° 00' 00"
T = 223.45'
L = 446.67'
E = 4.36'
R = 5729.58'

OFFICE RELOCATION CURVE DATA
Δ = 25°27'30" LT. Δc = 12°51'30"
θs = 6° 15'00" D = 5°00'00"
Ls = 250.00' T = 130.14'
Ts = 384.32' L = 259.17'
Es = 31.20' E = 7.37'
P = 2.27' R = 1145.92'
K = 124.95' c = 0.08
Xc = 249.10'
Yc = 9.08'
LT. = 166.71'
ST. = 83.43'
LC = 249.87'

SURVEY
CURVE DATA
Δ = 21° 04' 30" LT.
D = 5° 00' 00"
T = 213.16'
L = 421.50'
E = 19.66'
R = 1145.92'

BM # 81 A ELEV. 703.85 704.86
BM # 82 ELEV 698.85
BM # 83 A ELEV. 700.25 702.08
LANSING T 99 N R 4 W
LANSING T 99 N R 3 W
SEC. 25
SEC. 30

CURVE DATA
Δ = 11° 34' 00" LT.
D = 2° 00' 00"
T = 290.15'
L = 578.33'
E = 14.66'
R = 2864.79'
c = 0.051

STA 755+39.0 Driftwood Ln
STA 756+88.0 View Ln
STA 759+31.0 Creek Blvd
Clear Creek

Discharge PT (TYP)
Discharge PT (TYP)

STA 156+00 STORM 24" RECONSTRUCTION RESUME P.W. / DENING & RESURFACING

INSTALL 24" KF-1 & KF-13 FLUME AT STA. 165+10
LT. 695.0
EL. RT. 695.5
FLUME 674.6

EXISTING TOPO IS REFERENCED TO SURVEY CENTERLINE. ALL PROPOSED WORK IS REFERENCED TO OFFICE RELOCATION CENTERLINE.

PARCEL NO. 147 TOTAL SETTLEMENT: $800.00
GRANTOR: Gary L. Dahlstrom
ACCESS RIGHTS ACQUIRED: ☐ YES ☐ NO
CONTRACT SIGNED: 10-25-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 102E PAGE 276-278

PARCEL NO. 146 TOTAL SETTLEMENT: $7000.00
GRANTOR: EARL C. GARRETT
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: 7-28-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK 102 PAGE 510-512

PARCEL NO. 149 TOTAL SETTLEMENT: $5000.00
GRANTOR: BURTON J. FEUERHELM
ACCESS RIGHTS ACQUIRED: ☐ YES ☒ NO
CONTRACT SIGNED: CONDEMNED 3-30-78
R.O.W. BY: FEE PERM. EASE.
DEED RECORDED IN BOOK PAGE

Revised Oct. 3, 1978

AS-BUILT PLANS, FOR INFORMATION ONLY

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	S		14	264

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN-9-9(18)--20-03	IOWA	S		14	264

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.26

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148. EARL C. & CHARLENE GARRETT
149. BURTON J. & ALICE M. FEUERHELM
150. NORTHERN ENGRAVING CO. INC.
151. LYLE C. PETERS
153. GETHSEMANE CEMETERY ASSN.
154. LANSING CO. INC.
155. J.W. Underwood
156. PATRICK J. & CORRINE BURKE
169. LYNN W. & MARGARET D. MORROW
170. EARL M. & AMY C. SCHMIDT
171. PATRICK J. & ESTHER F. SCHWAB
172. EDWARD ARTHUR KNOPF
185. State of Iowa

CURVE DATA
Δ = 4° 45' 30" LT.
D = 1° 00' 00"
T = 238.05'
L = 475.83'
E = 4.94'
R = 5729.58'
e = U.A.C.

STA. 771+00
BEGIN WIDENING & RESURFACING WITH INTEGRAL CURB LT.

LANSING T 99 N R 3 W SEC 30

BM #85 ELEV. 692.45
BM #86 A ELEV. ~~693.10~~ 692.10
BM #87 ELEV. 707.03

+13 PROP TYPE "C" ENT. 24' DROPPED CURB
PROP RA-34 INTAKE LINE NO.2, SHEET NO. 3E (WITH DROP CURB AND PAVED FLUME)
PROP RA-34 INTAKE LINE NO.3, SHEET NO.3E (WITH DROP CURB AND PAVED FLUME)
+82 PROP TYPE "C" ENT. 24' DROPPED CURB
+43 PROP TYPE "C" ENT. 24' DROPPED CURB
+00 PROP 4' CURB OPENING LT. 0.15 SQ. SODDING WITH 0.80 SQ. SPECIAL DITCH CONTROL (JUTE MECH OVER SOD)
+00 PROP 4' CURB OPENING LT. 0.15 SQ. SODDING WITH 0.80 SQ. SPECIAL DITCH CONTROL (JUTE MECH OVER SOD)
+00 PROP 4' CURB OPENING LT. 0.15 SQ. SODDING WITH 0.80 SQ. SPECIAL DITCH CONTROL (JUTE MECH OVER SOD)
+38 TYPE ENT. +61.56' LT. R.O.W. MKR.
PROP 10' CURB TRANSITION
+62 TYPE C ENT.
+38 TYPE C ENT.
+62.106' LT. R.O.W. MKR.
TEMP EASE.
TELEPHONE RISER
OUTLET
P.I. 788+23.79 Set ø IRON PIN
P.I. 797+67.15 IRON PIN
P.C. 795+79.41 SET ø IRON PIN
MOBILE HOMES
MAINTENANCE SHED
FLAGPOLE
PUMP
TELEPHONE
48" x 94" CMP
+17 PROP TYPE "B" ENT. (PAVED ASPHALT)
+25 PROP JOINT TYPE "B" ENT. (PAVED ASPHALT)
CURVE DATA Δ = 9° 49' 30" RT. D = 2° 00' 00" R = 286.23' L = 491.25' T = 10.56' E = 2864.79' e = U.A.C.
Trees in Temporary Easement shall not be disturbed
Trees in Temporary Easement shall not be disturbed
Discharge PT (TYP)
Discharge PT (TYP)
Revised Nov. 15, 1979
Erosion Control Contractor placed Revetment Rock flumes at Curb openings - Sta. 792+00, 794+00, 796+00 and 799+00 Lt.
STATE OF IOWA
0 50 100

STA. 771+38 2'x2'x43' RCB DA=15.7 AC. H. EXTEND WITH 30' RF-1 & RF-13 FLUME LT. 495.5 FL. RT. 690.8 FLUME 679.2
STA. 771+66 2'x2'x43' RCB DA=~~15.7~~ AC. H. EXTEND RT WITH 24' RF-1 & RF-13 FLUME INSTALL RA-34 INTAKE LT. RT. 689.8 FLUME 675.0
STA. 784+03 4'x4'x49' RCB DA=6.2 AC-H-VH. EXTEND LT WITH 48' RF-1 FL. LT. 685.5
STA. 786+17 3'x3'x60' RCB DA=12 AC-H-VH. EXTEND WITH 42' RF-1 LT. 685.2 FL. RT. 692.8

PARCEL NO. 172 TOTAL SETTLEMENT: $800.00
GRANTOR: EDWARD KNOPF
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 7-20-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 512-519

PARCEL NO. 172 TOTAL SETTLEMENT: $930.00
GRANTOR: HAROLD KNIEF
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 8-25-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 108 PAGE 16-18

NOTE: STA. 771+00 LT. TO STA. 800+85 LT. SEE SHEET NO.16 FOR FORM GRADE ELEVATIONS.

PARCEL NO. 150 TOTAL SETTLEMENT: $300.00
GRANTOR: NORTHERN ENGRAVING CO.
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 8-24-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 108 PAGE 288-290

PARCEL NO. 153 TOTAL SETTLEMENT: $1800.00
GRANTOR: GETHSEMANE CEMETARY
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 7-15-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 520-523

PARCEL NO. 154 TOTAL SETTLEMENT: $1800.00
GRANTOR: LANSING CO. INC.
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 7-18-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 371-373

PARCEL NO. 155 TOTAL SETTLEMENT: $600.00
GRANTOR: J.W. Underwood
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 6-29-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 327-329

PARCEL NO. 156 TOTAL SETTLEMENT: $1140.00
GRANTOR: PATRICK BURKE
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 6-23-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 107 PAGE 366-370

PARCEL NO. 169 TOTAL SETTLEMENT: $850.00
GRANTOR: LYNN MORROW (FEE) THOMAS (POWER)
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 9-8-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 108 PAGE 221-223

PARCEL NO. 170 TOTAL SETTLEMENT: $600.00
GRANTOR: AMY C. SCHMIDT
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 9-1-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 108 PAGE 127-129

PARCEL NO. 171 TOTAL SETTLEMENT: $700.00
GRANTOR: NOLA MORRISON
ACCESS RIGHTS ACQUIRED: ☐YES ☒NO
CONTRACT SIGNED: 9-1-77 COND. HELD:
R.O.W. BY: FEE PERM. EASE. ✓
DEED RECORDED IN BOOK 108 PAGE 130-132

CLASS 10 C=F+50%+1544
CLASS 12 C=57 [57] TO STA. 787+60 RT. = 57 / 57
CLASS 10 C=1188 F+50% = 238
CLASS 12 C=1096 [1096] F=0 TO STA. 791+ RT. = 1096 / 1096
CLASS 10 C=194 FROM BORROW "A" 3816 F+50%=3990 3990
CLASS 12 F=193 FROM STA. 794+ LT. = 57 FROM STA. 796+ LT. = 1096 / 1153
0 Waste = 378 Waste = 556 1188 RT.
CLASS 10 C=120 FROM BORROW "A" 1793 F+50%=1913 1913
PROP TYPE "C" ENT. 24' DROPPED CURB
PROP JOINT TYPE "B" ENT.
PROP TYPE "B" ENT.
PROP TYPE "C" ENT. 24' DROPPED CURB
ELIMINATED BACKSLOPE ROLL LT.
0.8% LT. DITCH
0.5% LT. DITCH (PAVED)
0.7% LT. DITCH (PAVED)
1.5% LT. DITCH (PAVED)
+0.5% LT. DITCH
+0.7% LT. DITCH
CLOSE D
SPECIAL CONCRETE GUTTER (LT. DITCH)
PLACE ROCK FILL KEY ON RT. FORESLOPE, SEE CROSS SECTION FOR DETAILS (583)
WIDENING & RESURFACING WITH INTEGRAL CURB LT.
WIDENING AND RESURFACING RT.
DITCH GRADE
USE EXISTING DITCH
DITCH GRADE
VAR
DITCH GRADE
USE EXISTING DITCH
NO DITCH
NO DITCH VARI
DITCH GRADE
3' DITCH
DITCH GRADE LT. RT.

770 775 780 785 790 795 800

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA				

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN9-9(18)--20-03	IOWA	9		15	260

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.27

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156. PATRICK J. & CORRINE BURKE
157. THOMAS VINCENT & VICTORIA ANN SPINNER
158. ROBERT J. & JANET R. PROTSMAN

160. LEO A. & MILDRED L. STIRN
161. NORBERT R. SPINNER
172. EDWARD ARTHUR KNOPF
174. CLARENCE W. & DELORES M. FEE
182. ERNEST J. & ALICE D. LUSTER

CURB FORM GRADE ELEVATIONS STA. 771+00 TO 800+85

STATION	FORM GRADE	STATION	FORM GRADE	STATION	FORM GRADE	STATION	FORM GRADE
771+00	99.40	779+00	96.51	787+00	90.29	795+00	91.81
771+25	99.27	779+25	96.28	787+25	90.17	795+25	91.84
771+50	99.14	779+50	96.05	787+50	90.04	795+50	91.88
771+75	99.02	779+75	95.83	787+75	89.91	795+75	91.91
772+00	98.89	780+00	95.60	788+00	89.79	796+00	91.94
772+25	98.76	780+25	95.31	788+25	89.80	796+25	91.97
772+50	98.63	780+50	95.02	788+50	89.82	796+50	92.00
772+75	98.49	780+75	94.74	788+75	89.83	796+75	92.05
773+00	98.36	781+00	94.45	789+00	89.84	797+00	92.12
773+25	98.28	781+25	94.31	789+25	89.91	797+25	92.20
773+50	98.21	781+50	94.15	789+50	89.98	797+50	92.35
773+75	98.13	781+75	94.01	789+75	90.05	797+75	92.45
774+00	98.05	782+00	93.86	790+00	90.12	798+00	92.51
774+25	97.98	782+25	93.67	790+25	90.17	798+25	92.56
774+50	97.92	782+50	93.49	790+50	90.23	798+50	92.62
774+75	97.86	782+75	93.29	790+75	90.29	798+75	92.67
775+00	97.79	783+00	93.10	791+00	90.34	799+00	92.72
775+25	97.69	783+25	92.87	791+25	90.39	799+25	92.80
775+50	97.58	783+50	92.66	791+50	90.43	799+50	93.04
775+75	97.47	783+75	92.43	791+75	90.48	799+75	93.29
776+00	97.37	784+00	92.21	792+00	90.53	800+00	93.52
776+25	97.32	784+25	91.98	792+25	90.65	800+25	93.57
776+50	97.28	784+50	91.76	792+50	90.77	800+50	93.50
776+75	97.25	784+75	91.53	792+75	90.88	800+75	93.43
777+00	97.20	785+00	91.30	793+00	91.00	800+85	93.28
777+25	97.15	785+25	91.20	793+25	91.13		
777+50	97.10	785+50	91.12	793+50	91.27		
777+75	97.05	785+75	91.03	793+75	91.41		
778+00	97.01	786+00	90.94	794+00	91.53		
778+25	96.88	786+25	90.78	794+25	91.67		
778+50	96.75	786+50	90.61	794+50	91.72		
778+75	96.64	786+75	90.45	794+75	91.78		

Bm. 87 A
Elev. 693.67

STA. 800+85, END WIDENING & RESURFACING
~~BEGIN 2" B-RECONSTRUCTION~~
END DIVISION I, ~~BEGIN DIVISION II~~
& PROJECT

STA 802+25.0
END PROJECT

STA 801+45.2
South Rd

800 TOWN OF LANSING

~~TEMP.~~ SHED

~~PROP~~ RA-16B INTAKE
LINE NO.4, SHEET NO.3D

+86 ~~PROP~~ TYPE "C"
ENT. 18' DROPPED CURB

805

+14 ~~PROP~~ TYPE "C"
ENT. 24' DROPPED CURB
(6" P.C. CONCRETE)

~~PROP~~ RA-8 INTAKE
LINE NO. 5, SHEET NO. 3D

P.O.T. 801+45.23
MOTEL SIGN
MOTEL
GAZ
HO

+76 ~~PROP~~ TYPE "B"
ENT. 45° DROPPED CURB

+09 ~~PROP~~
TYPE "C" ENT.
18' DROPPED CURB

REMOVE WALK

12"x38' CMP
(REMOVE)

P.I. 805+32.81

~~PROP~~ 15" 2000 D PIPE
(LINE NO. 6)

TELEPHONE RISER

+89.49' R
R.O.W. MKR

+14.51' R
R.O.W. MKR

+65 ~~PROP~~ JOINT
TYPE "C" ENT.
30' DROPPED CURB

R.W.

FOR DETAILS OF SIDE ROAD SEE SHEET NO.2B

802+08
~~PROP~~ 51" RCP (PLUG & ABANDON) ED
DR. 1 AC.-H

CURVE DATA
Δ = 19° 15' 30" RT.
D = 4° 00' 00"
T = 243.02'
L = 481.46'
E = 20.47'
R = 1432.39'
C = N.C.

~~PROP~~ RA-8 INTAKE
LINE NO.6, SHEET NO.3D

NOTE: FOR ADDITIONAL DETAILS SEE RESIDENT ENGINEERS 1"=10' SCROLL

(FOR INFORMATION ONLY)

CLASS 10
C = 82.6
FROM BORROW "A" = 379
F+30% = 1205

ELIMINATE BACKSLOPE
ROLL LT. & RT.

REMOVE OLD PAVEMENT

+85

(695)

4%

~~PROP~~ TYPE "B" ENT.
45° DROPPED CURB

~~PROP~~ TYPE "C" ENT.
18' DROPPED CURB
(690)

ELIMINATE BACKSLOPE
ROLL LT.

800+85 (TIE IN 3" HIGH)
ELEV 693.58

-0.30%

+0.5% LT DITCH

+00
692.64

14.7%

(685)

~~PROP~~ TYPE "C" ENT.
24' DROPPED CURB

+00
692.0

+86

+65

V.C. = 400

2%

-5.80%

(690)

~~PROP~~ TYPE "C" ENT.
18' DROPPED CURB

3%

~~PROP~~ JOINT TYPE "C" ENT.
30' DROPPED CURB

WIDENING & RESURFACING WITH INTEGRAL CURB LT.
WIDENING & RESURFACING RT.

SUBGRADE TREATMENT NO. 9

DITCH GRADE VARI
NO DITCH

NO DITCH - INTEGRAL CURB LT.
NO DITCH - INTEGRAL CURB RT.

LT.																			LT.
RT.	93.54	93.12	92.92	92.63	92.25	91.79	91.34	90.61	89.89	89.08	88.19	87.22	86.15	85.00	83.77	82.45	81.04		RT.

800 805

AS-BUILT PLANS, ~~FOR INFORMATION ONLY~~

ALLAMAKEE COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	IOWA	5			

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN-9-9(18)--2-03	IOWA	5		16	223

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-009-9(71)--2C-03	SHEET NUMBER D.28

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108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No restrictions expected									

108-26A
08-01-08

STAGING NOTES

1) IA 9 traffic to be detoured.

1.1) Contractor shall replace and repair mainline pipes between Waukon and A44/Iron Mine Rd.

2) Install subdrains and perform pipe work.

3) Perform patching.

4) Construct base widening and installation of paved shoulders.

5) Perform scarification in urban areas.

6) Perform Cold-In-Place recycling.

7) Place HMA.

8) Place final pavement markings and rumble strips.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

Stage 1 – The Contractor shall close IA 9 to traffic for the replacement and repair of the mainline culverts at STA 23+10 and STA 94+90 as specified in Tabulation 104-13. See Sheet J.2 for the traffic control layout. The Iowa DOT will coordinate the traffic control and signage until Stage 1 work is complete.

Stage 2- After completion of the Stage 1 work, through traffic shall be maintained at all times during construction.

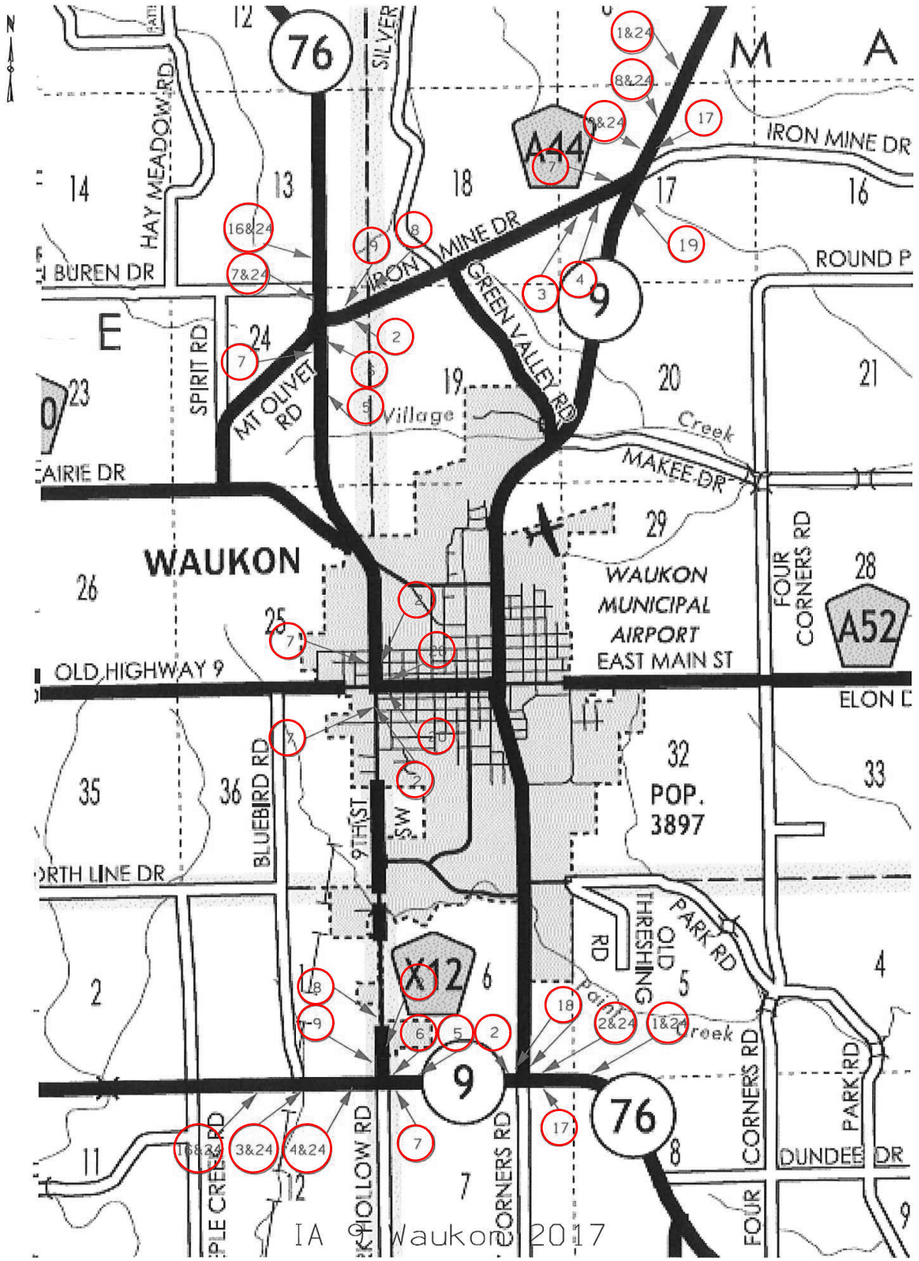
The Contractor shall coordinate traffic control with other project in the area.

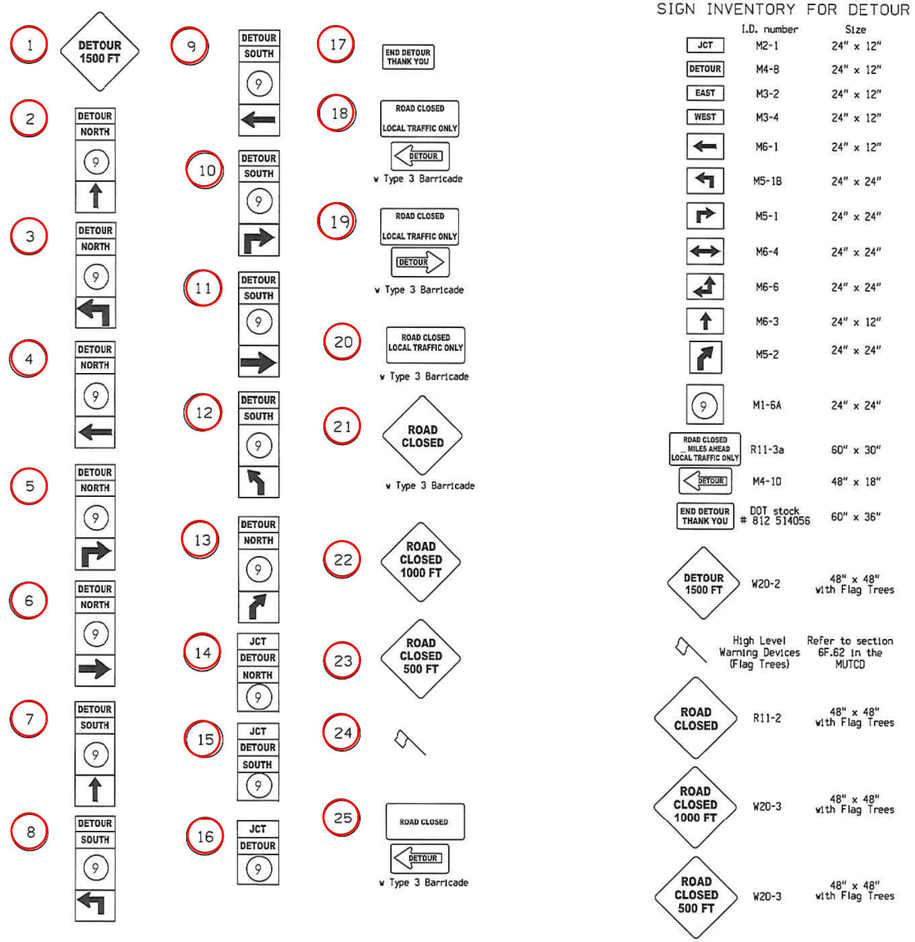
111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
To be discussed at pre-con	





SIGN INVENTORY FOR DETOUR

	I.D. number	Size
JCT	M2-1	24" x 12"
DETOUR	M4-8	24" x 12"
EAST	M3-2	24" x 12"
WEST	M3-4	24" x 12"
	M6-1	24" x 12"
	M5-1B	24" x 24"
	M5-1	24" x 24"
	M6-4	24" x 24"
	M6-6	24" x 24"
	M6-3	24" x 12"
	M5-2	24" x 24"
9	M1-6A	24" x 24"
ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	60" x 30"
DETOUR	M4-10	48" x 18"
END DETOUR THANK YOU	DOT stock # 812 514056	60" x 36"
DETOUR 1500 FT	W20-2	48" x 48" with Flag Trees
	High Level Warning Devices (Flag Trees)	Refer to section 6F.62 in the MUTCD
ROAD CLOSED	R11-2	48" x 48" with Flag Trees
ROAD CLOSED 1000 FT	W20-3	48" x 48" with Flag Trees
ROAD CLOSED 500 FT	W20-3	48" x 48" with Flag Trees

SHEET PROVIDED FOR INFORMATION ONLY

DETOUR SIGNED BY THE IOWA DEPARTMENT OF TRANSPORTATION

IA 9 DETOUR DETAILS

FILE NO.	ENGLISH	DESIGN TEAM KELLY \ MEISE \ NIE	ALLAMAKEE COUNTY	PROJECT NUMBER STP-9-9(71)--2C-03/HSIPX-9-9(88)--3L-03	SHEET NUMBER J.2

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