LETTING DATE 4/16/2019

← TIED W/ WHKS AOA/RESURFACING PROJECT IN CLERMONT

FAYETTE/CLAYTON/ALLAM Co. HMA PAVEMENT WIDENING WITH HMA RESURFACING NHSX-018-8(46)--2R-33

IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

FAYETTE/CLAYTON/ALLAM COUNTY

HMA PAVEMENT WIDENING WITH HMA RESURFACING

From Stone Street in Clermont to
West Street in Postville

SCALES: As Noted

REVISIONS

TOTAL 44
PROJECT IDENTIFICATION NUMBER
18-33-018-010
PROJECT NUMBER
NHSX-018-8(46)--2R-33
R.O.W. PROJECT NUMBER

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	**Typical Cross Sections and Details**
B.1 - 5	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1	Project Description
C.1 - 2	Estimated Project Quantities
C.2 - 3	Estimate Reference Information
C.7	Standard Road Plans
C.3	Index of Tabulations
C.5 - 6	Pollution Prevention Plan
C.7	General Notes
C.4 - 19	Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
D.1 - 16	Plan & Profile Legend & Symbol Information Sheet
G Sheets	**Survey Sheets**
G.1	Reference Ties and Bench Marks
G.1	Horizontal Control Tab. & Super for all Alignments
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.1	Staging Notes Stage
	* Color Plan Sheets

Refer to the Proposal Form for list of applicable specifications.

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

IOWA ONE CALL
1-800-292-8989 | 811
www.iowaonecall.com
Know what's below. Call before you dig.

FIELD EXAM SET
13 DECEMBER, 2018
ATTENDEES
NICK HUMPAL
MARY KELLY
DUANE NIE
GABE ETTERGRUEN
GARRY GRUNNA
TRACY MEISE

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
1	STA 578+13.8 to STA 670+77.38	99,263.58	1.75
	STA EQ STA 670+77.38 BACK= STA 670+60.88 AHEAD		
	STA 670+60.88 to STA 756+60.08	8,599.20	1.63
	STA EQ STA 756+60.08 BACK = STA 758+40.35 AHEAD		
	STA 758+40.35 to STA 840+20.3	8,179.95	1.55
	STA EQ STA 840+20.3 BACK= STA 0+00.0 (CC) AHEAD		
	STA 0+00.0 (CC) to STA 77+72.99 (CC)	7,772.99	1.47
	STA EQ STA 77+72.99 (CC) BACK= STA 0+00.0 AHEAD		
	STA 0+00.0 to 46+50.48	4,650.48	0.88
	STA EQ STA 46+50.48 BACK= STA 46+53.63 AHEAD		
	STA 46+53.63 to STA 61+46.17	1,492.54	0.28
	STA EQ STA 61+46.17 BACK= STA 60+35.25 AHEAD		
	STA 60+35.25 to STA 65+03.0	467.75	0.09
	TOTAL	40,426.49	7.66

DESIGN DATA RURAL		
2019 AADT	3,150	V.P.D.
2039 AADT	3,500	V.P.D.
20-- DHV	--	V.P.H.
TRUCKS	16	%
Total Design ESALs	1,471,680	

LICENSED PROFESSIONAL ENGINEER
NICKOLAS J. HUMPAL
19723
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.

Signature Date

NICKOLAS J. HUMPAL

My license renewal date is December 31, 2019

Pages or sheets covered by this seal: A.1-A.2, B.1-B.5, C.1-C.19, D.1-D.16, G.1, J.1

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER A.1

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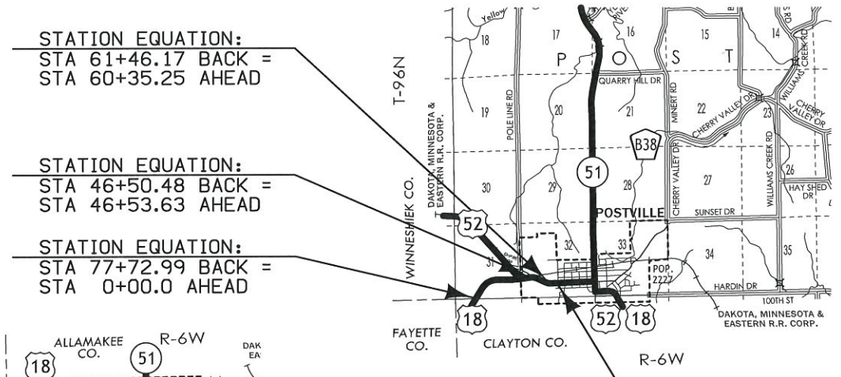
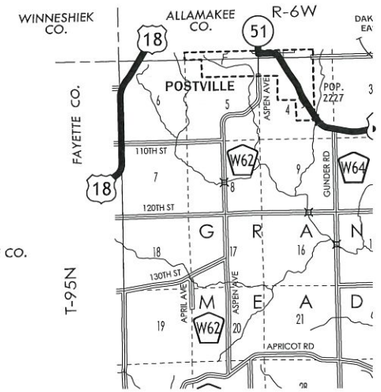
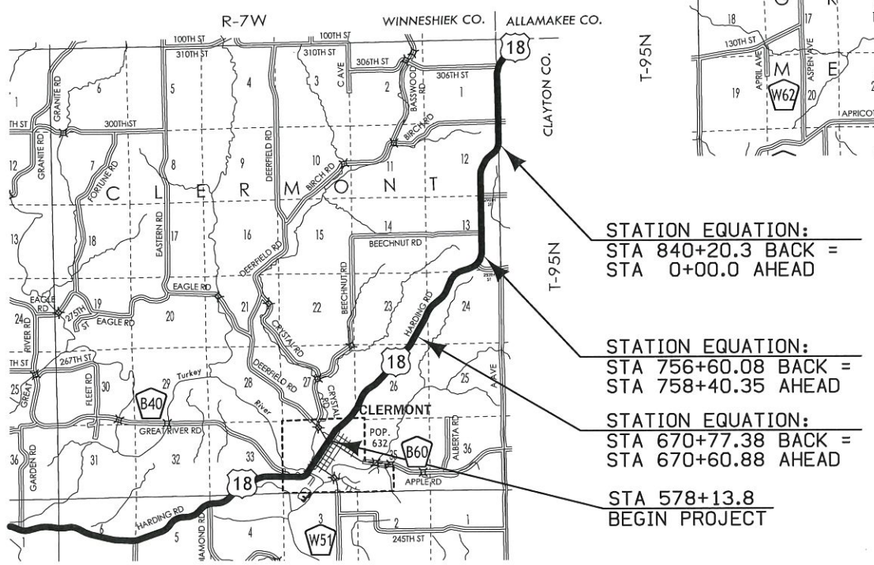


ALLAMAKEE COUNTY





FAYETTE COUNTY

CLAYTON COUNTY

STATION EQUATION:
STA 840+20.3 BACK =
STA 0+00.0 AHEAD

STATION EQUATION:
STA 756+60.08 BACK =
STA 758+40.35 AHEAD

STATION EQUATION:
STA 670+77.38 BACK =
STA 670+60.88 AHEAD

STA 578+13.8
BEGIN PROJECT

N

N

LOCATION MAP SCALE
0 1 2 3
Miles

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER A.2

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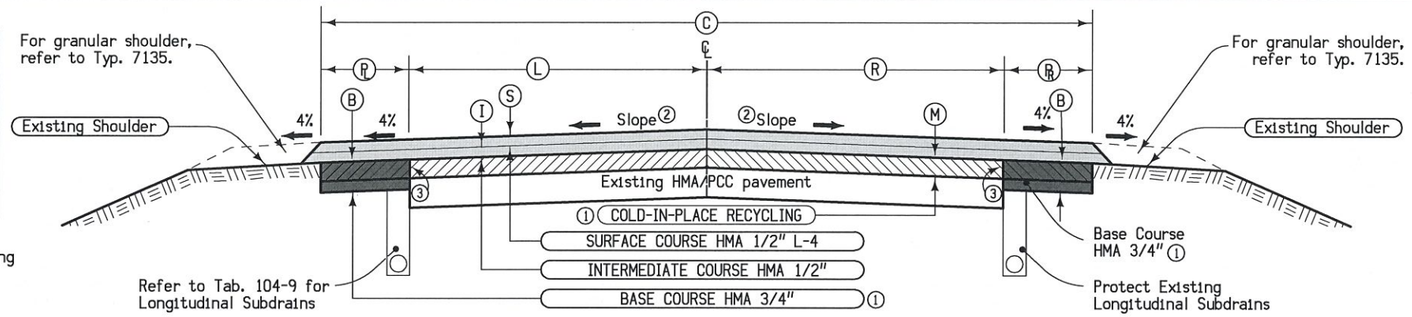
Design Rates	
Item	Rate
Surface Course	147 lbs./cu. ft.
Intermediate Course	147 lbs./cu. ft.
Base Course	145 lbs./cu. ft.
Tack Coat	0.05 gal./sq. yd.
Binder Content	6.0%
Foam Asphalt Agent	.0011 tons/sq. yd./in.



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 cold-in-place recycled.
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 clean vertical edge similar to what can be achieved with a milling machine. Incidental to "Excavation, Class 13, Waste".
4. Asphalt binder for surface and intermediate courses shall be PG 58-34H. Asphalt binder for base widening shall be PG 58-34S. Foamed asphalt binder for C-I-P-R shall be PG 52-34S.
5. Discontinue base widening at existing paved intersections; refer to Typical 7154B for additional information. Base widening to be extended through current unpaved sideroad intersections; see Typical 7149 for additional information.
6. Suspend C-I-P-R at continuously reinforced PC patches and other PC patches as directed by the Engineer.
7. Refer to tabulation listing of existing superelevated curves and Standard Road Plans for additional requirements through superelevated curves.

B.1

PV-301

Location		Ⓢ	Ⓘ	Ⓒ	Ⓟ	Ⓛ	Ⓡ	Ⓡ	Ⓑ	Ⓜ	Remarks
Station To Station		Inches	Inches	Feet	Feet	Feet	Feet	Feet	Inches	Inches	
578+13.8	578+57.6	2	0-2	32	4	12	12	4	7	0	Type N3 notch intermediate runout
578+57.6	580+00.0	2	2	32	4	12	12	4	7	3	
580+00.0	585+00.0	2	2	40-52	10-ex	12	12-24	6-ex	0	3	Existing paved shoulder- both sides
											See Typical NH-2
597+00.0	597+70.0	2	2	46	4	12	24	6	7	3	Guardrail paving- RT
											See Typical NH-2
612+00.0	615+50.0	2	2	44	4	12	24	4	7	3	Climbing lane- RT
615+50.0	620+30.0	2	2	44-32	4	12	24-12	4	7	3	Climbing lane taper- RT
620+30.0	636+37.0	2	2	32	4	12	12	4	7	3	
636+37.0	641+55.0	2	2	34	4	12	12	6	7	3	Guardrail paving- RT
641+55.0	659+55.0	2	2	32	4	12	12	4	7	3	
659+55.0	663+65.0	2	2	34	4	12	12	6	7	3	Guardrail paving- RT
663+65.0	670+77.4	2	2	32	4	12	12	4	7	3	
											STA EQ STA 670+77.4 BK = STA 670+60.9 AH
670+60.9	672+50.0	2	2	32	4	12	12	4	7	3	
672+50.0	734+50.0	2	2	30.5	3.25-ex	12	12	3.25-ex	0	3	Existing shoulder- both sides
734+50.0	756+60.1	2	2	32	4	12	12	4	7	3	
											STA EQ STA 756+60.1 BK = STA 758+40.4 AH
758+40.4	788+00.0	2	2	32	4	12	12	4	7	3	
788+00.0	806+00.0	2	2	30.5	3.25-ex	12	12	3.25-ex	0	3	Existing shoulders- both sides
806+00.0	840+20.3	2	2	32	4-ex	12	12	4-ex	0	3	Existing shoulders- both sides
											STA EQ STA 840+20.3 BK = STA 0+00.0 (CC) AH
0+00.0 (CC)	9+00.0 (CC)	2	2	32	4-ex	12	12	4-ex	0	3	Existing shoulders- both sides
9+00.0 (CC)	15+50.0 (CC)	2	2	30.5	3.25-ex	12	12	3.25-ex	0	3	Existing shoulders- both sides
15+50.0 (CC)	23+00.0 (CC)	2	2	32	4	12	12	4	7	3	
23+00.0 (CC)	77+73.0 (CC)	2	2	30.5	3.25-ex	12	12	3.25-ex	0	3	Existing shoulders- both sides
											STA EQ STA 77+73.0 (CC) BK = STA 0=00.0 AH
0+00.0	18+75.0	2	2	30.5	3.25-ex	12	12	3.25-ex	0	3	Existing shoulder- both sides
18+75.0	37+25.0	2	2	32	4	12	12	4	7	3	
37+25.0	41+24.0	2	2	44	4	24	12	4	7	3	US 52 turn lane
41+24.0	43+04.0	2	2	44-32	4	24-12	12	4	7	3	US 52 turn lane taper
45+70.0	45+70.0	2	2	32	4	12	12	4	7	3	
46+50.0	46+50.0	2	2	32-31	4	12-15	12	4	7	3	Taper to curb section
											See Typical NH-3

4" OVERLAY

3" CIP

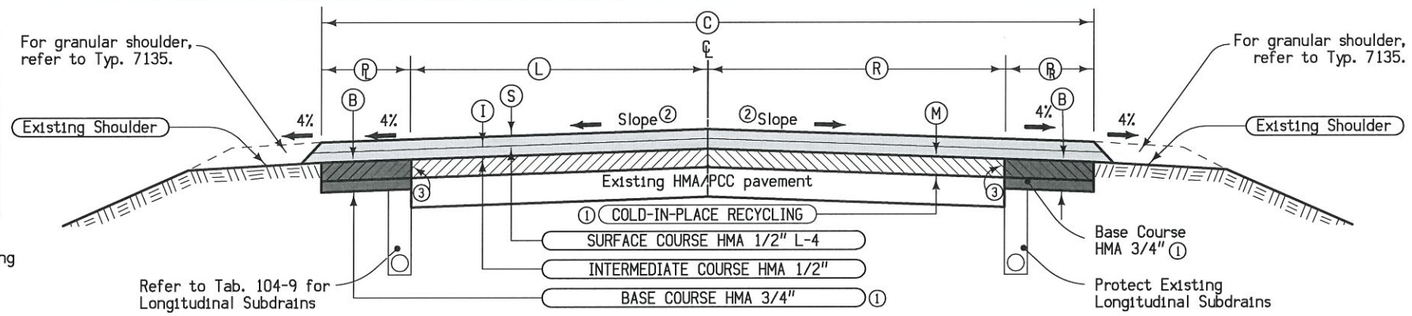
ADD TYPICAL FOR CLIMBING LANE/PAVEMENT SCARIFICATION AREAS

DOES SHOULDER SLOPE AT DIFFERENT RATE IN SUPER AREAS? CHANGE/NOTE ON DETAIL

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

NH-2

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%
Foam Asphalt Agent	.0011 tons/sq. yd./in.



Location		Ⓢ	Ⓘ	Ⓒ	Ⓟ	Ⓛ	Ⓡ	$Ⓡ_R$	Ⓑ	Ⓜ	Remarks
Station To Station		Inches	Inches	Feet	Feet	Feet	Feet	Feet	Inches	Inches	
585+00.0	597+00.0	2	2	46	4	12	24	6-ex	7	3	Existing paved shoulder RT
											See Typical NH-1
597+70.0	603+50.0	2	2	52	10-ex	12	24	6	7	3	Existing paved shoulder LT, Guardrail paving RT
603+50.0	612+00.0	2	2	50	10-ex	12	24	4	7	3	Existing paved shoulder LT

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 cold-in-place recycled.

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 clean vertical edge similar to what can be achieved with a milling machine. Incidental to "Class 13 Excavation for Widening".

④ Asphalt binder for surface and intermediate courses shall be PG 58-34H. Asphalt binder for base widening shall be PG 58-34S. Foamed asphalt binder for C-I-P-R shall be PG 52-34S.

⑤ Discontinue base widening at existing paved intersections; refer to Typical 7154B for additional information. Base widening to be extended through current unpaved sideroad intersections; see Typical 7149 for additional information.

⑥ Suspend C-I-P-R at continuously reinforced PC patches and other PC patches as directed by the Engineer.

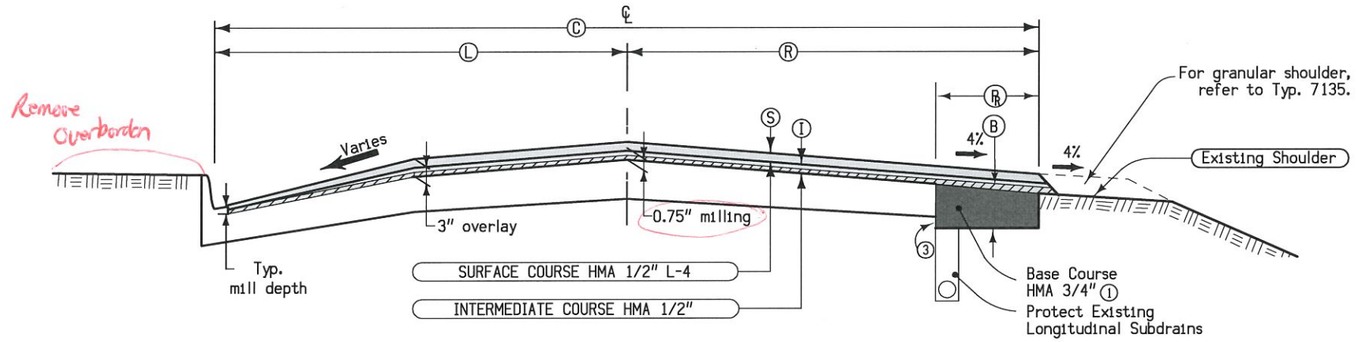
⑦ Refer to tabulation listing of existing superelevated curves and Standard Road Plans for additional requirements through superelevated curves.

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

NH-3

HMA Paving
Pavement Scarification
HMA Base Widening

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



Location		Ⓢ	Ⓘ	Ⓒ	Ⓛ	Ⓡ	$Ⓡ_R$	Ⓑ	Remarks
Station To Station		Inches	Inches	Feet	Feet	Feet	Feet	Feet	
									See Typical NH-1
46+53.6	47+41.1	2-1.5	2-1.5	31	15	16	4	6	Transition
47+41.1	60+65.5	1.5	1.5	31	15	16	4	6	
60+65.5	61+25.5	1.5	1.5	31-30	15	16-15	4-0	6	
									See Typical NH-4

Notes:

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

② Tack Coat estimated for 2 applications.

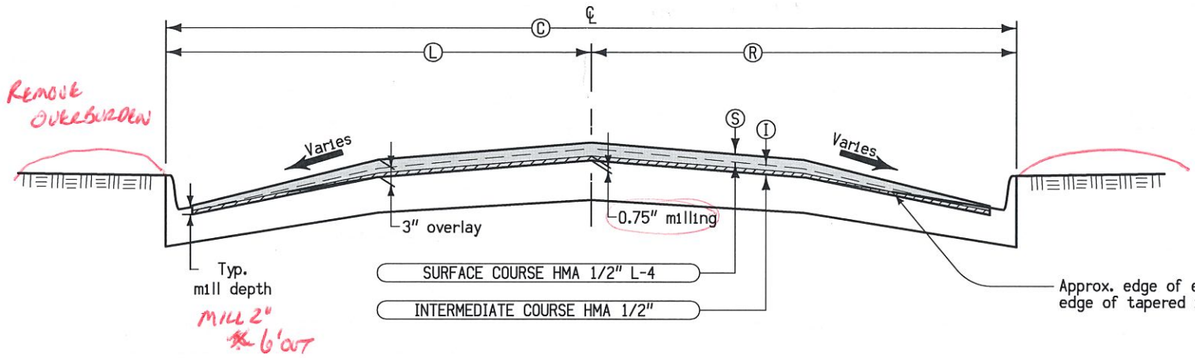
③ Pavement scarification shall continue through intersections. All Existing HMA surface overlay to be removed to original PCC surface.

TYPICAL PAVEMENT SCARIFICATION & HMA RESURFACING CURBED ONE SIDE

NH-4

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:

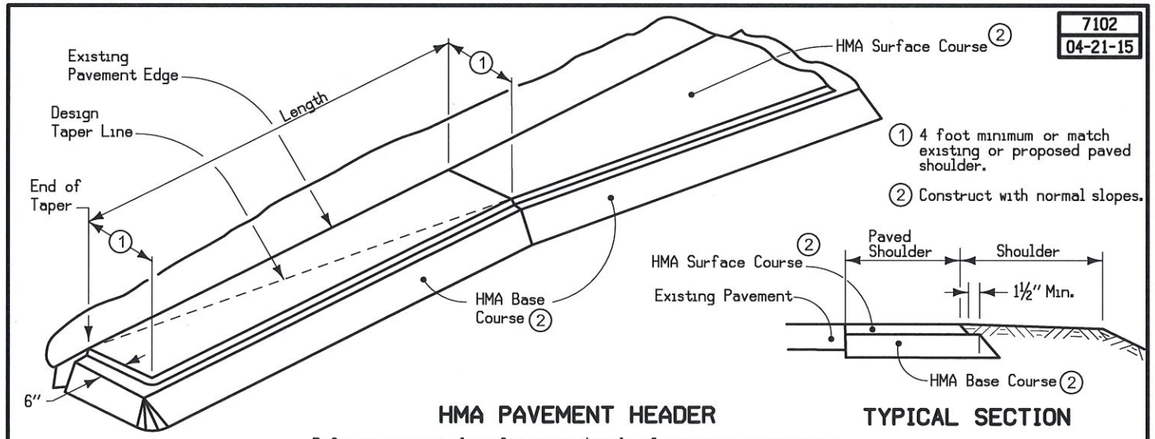
1. Section may be modified as directed by the Engineer through areas of special shaping.
2. Tack Coat estimated for 2 applications.
3. Pavement scarification shall continue through intersections.

Location		Ⓢ	Ⓘ	Ⓒ	Ⓛ	Ⓡ	Remarks
Station To Station		Inches	Inches	Feet	Feet	Feet	
61+25.5	61+46.2	1.5	1.5	30	15	15	
60+35.3	61+25.5	1.5	1.5	30	15	15	STA EQ STA 61+46.2 BK = STA 60+35.3 AH
61+25.5	63+90.5	1.5	1.5	30	15	15	
63+90.5	65+03.0	1.5	1.5-0	30	15	15	Type N3 notch, intermediate runout

VERIFY END

TYPICAL PAVEMENT SCARIFICATION & HMA RESURFACING

7102
04-21-15

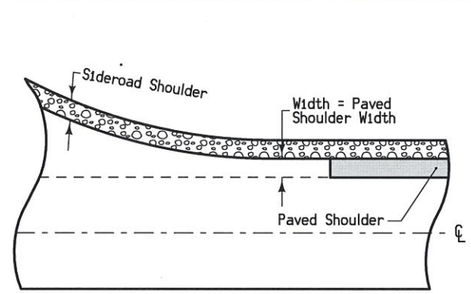


HMA PAVEMENT HEADER

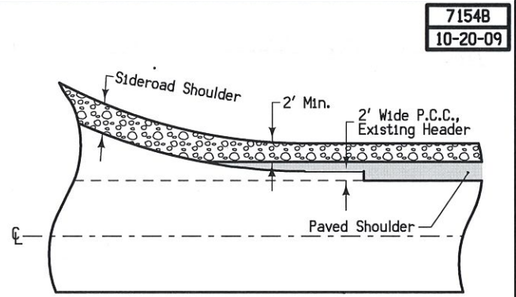
TYPICAL SECTION

Refer to project plans for exact details of pavement requirements.

7154B
10-20-09



With Newly Constructed Returns



At UAC Returns

PAVED SHOULDER DETAIL AT RETURNS

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER B.3

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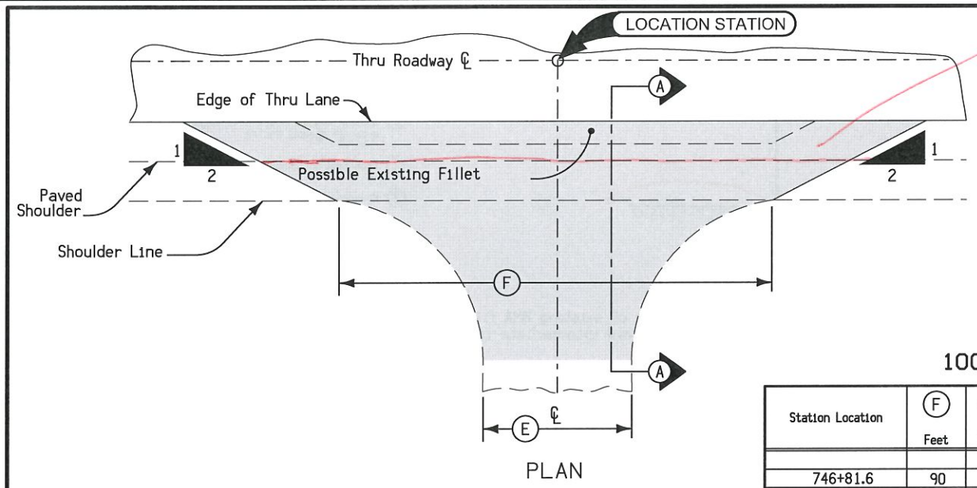
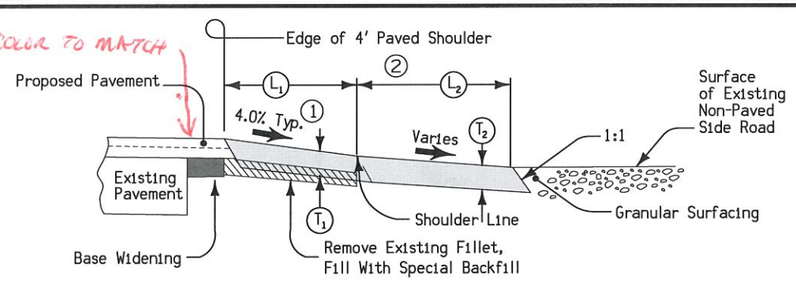


PLAN



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.

100% STATE

Station Location	(F) Feet	(T_1) Inches	(L_1) Feet	Remarks
746+81.6	90	6	4.0	280th St- RT
771+17.5	78	6	4.0	Beechnut Rd-LT
797+72.8	110	6	4.0	290th St-RT
14+99.8 (CC)	100	6	4.0	110th St-RT
14+99.8 (CC)	111	6	4.0	Birch Rd-LT
54+93.0 (CC)	60	6	4.0	306th St-LT
45+94.0	63	6	4.0	Empire-LT

100% COUNTY

Station Location	(E) Feet	(T_2) Inches	(L_2) Feet	Remarks
746+81.6	24.0	6	40.0	280th St- RT
771+17.5	24.0	6	40.0	Beechnut Rd-LT
797+72.8	24.0	6	40.0	290th St-RT
14+99.8 (CC)	26.0	6	40.0	110th St-RT
14+99.8 (CC)	28.0	6	40.0	Birch Rd-LT
54+93.0 (CC)	24.0	6	40.0	306th St-LT
45+94.0	30.0	6	40.0	Empire-LT

(T_1) = 2.0" Surface Course
4.0" Intermediate Course

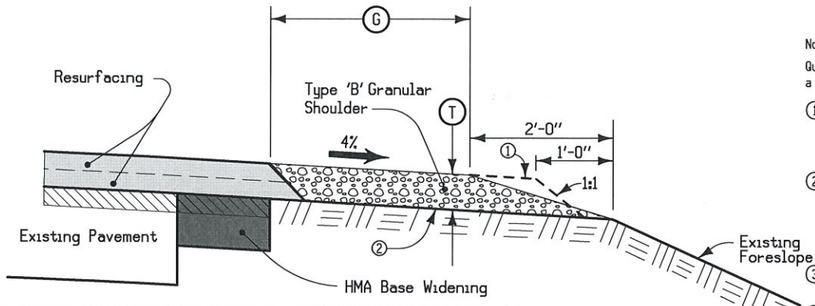
(T_2) = 2.0" Surface Course
4.0" Intermediate Course

FILLET EXTENSION FOR NON-PAVED SIDE ROADS

ADD FLOWABLE/CULVERT VACATION TYPICAL

6 b/c 6+4+40' = 50'
paved
base
widen

7135
Modified



Notes:

Quantities have been determined on the basis of a design weight of 140 lbs. per cubic foot.

(1) Place and compact material to the dashed lines; then blade and shape to foreslope that portion above the solid line in the outer 2' and roll with loaded truck tire.

(2) 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. Shaping shall be incidental to Type 'B' Granular Shoulder

(3) Nominal thickness adjusted to account for existing slopes steeper than 4%.

(4) See Tabulation 112-9 for Quantities.

(5) Refer to tabulation listing of existing superelevated curves and Standard Road Plans for additional requirements through superelevated curves.

LOCATION				(T) Inches (3)	(G) Feet
SECTION IDENTIFICATION	STATION TO STATION		SIDE		
	578+13.0	580+00.0	BOTH	6	6.0
Existing guardrail	580+00.0	597+00.0	RT	6	4.0
New guardrail	597+00.0	603+50.0	RT	6	4.0
	603+50.0	636+37.0	RT	6	6.0
New guardrail	636+37.0	641+67.0	RT	6	4.0
	641+67.0	659+55.0	RT	6	6.0
New guardrail	659+55.0	663+62.0	RT	6	4.0
	663+62.0	~~585+00.0~~	RT	6	6.0
Existing paved shoulder	580+00.0	597+70.0	LT	6	0.5
	~~585+00.0~~	612+00.0	LT	6	6.0
Existing paved shoulder	597+70.0	~~670+77.4~~	LT	6	0.5
	612+00.0	670+77.4	LT	6	6.0
STA EQ	670+77.4	670+60.9			
	670+60.9	672+50.0	BOTH	6	6.0
	672+50.0	734+50.0	BOTH	6	6.0
	734+50.0	756+60.1	BOTH	6	6.0
STA EQ	756+60.1	758+40.4			
	758+40.4	788+00.0	BOTH	6	6.0
	788+00.0	806+00.0	BOTH	6	6.0
	806+00.0	840+20.3	BOTH	6	6.0
STA EQ	840+20.3	0+00.0 (CC)			
	0+00.0 (CC)	9+00.0 (CC)	BOTH	6	6.0
	9+00.0 (CC)	15+50.0 (CC)	BOTH	6	6.0
	15+50.0 (CC)	23+00.0 (CC)	BOTH	6	6.0
	23+00.0 (CC)	77+73.0 (CC)	BOTH	6	6.0
STA EQ	77+73.0 (CC)	0+00.0			
	0+00.0	18+75.0	BOTH	6	6.0
	18+75.0	46+50.0	BOTH	6	6.0
STA EQ	46+50.0	46+53.6			
	46+53.6	47+41.1	RT	6	6.0
	47+41.1	60+65.5	RT	6	6.0
	60+65.5	61+25.5	RT	6	6.0

670+77.4

612+00.0

CONCERN W/DROP OFF ON NEW PLACED GRANULAR SHOULDER

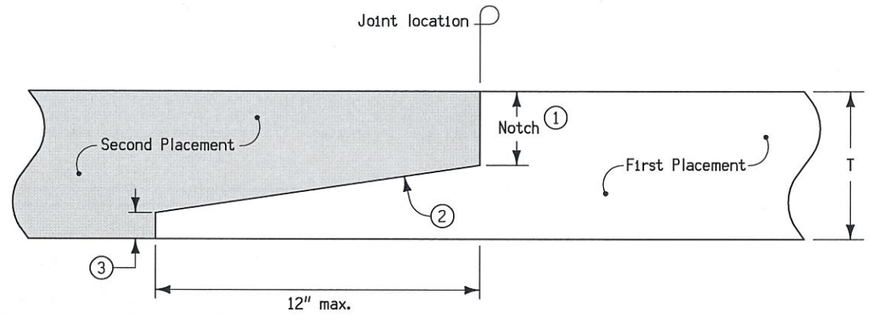
MACADAM STONE - SHOULDER & OA CLEARANCE

reflect shoulder cross slopes found

TYPICAL SECTION FOR TYPE 'B' GRANULAR SHOULDER

Class 13 OUTSIDE HOTPOINT?

7315
10-20-09



Notes:

(1) Notch: Min = nominal maximum aggregate size + ¼". Max = T/2.

(2) 12:1 Slope

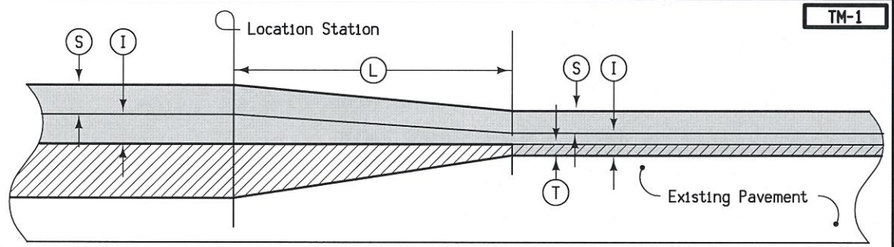
(3) Optional step at toe of slope: Max = 1".

LONGITUDINAL HMA NOTCHED WEDGE JOINT T = 2" OR GREATER

TM-1

Posted Speed Limit (mph)	Runout Ratio (ft per inch)
45 or More	50
20 to 45	25
Under 20	10 *

* Based on turning maneuvers at side roads and intersections.



(S) Surface Course
(I) Intermediate Course
(M) Milling

HMA Paving
Pavement Scarification

Location Station	(L) Feet	(S) Inches	(I) Inches	(T) Inches	Remarks
46+53.6	87.5	2	2		3" CIP Transitioning to
		1.5	1.5	0.75	0.75" Scarification

TRANSITION BETWEEN CIP AND MILLED MAINLINE PAVEMENT AREAS

100-1D
10-18-05

PROJECT DESCRIPTION

This project includes cold-in-place recycling and resurfacing US 18 in Fayette, Clayton and Allamakee counties from the intersection with Stone Street in Clermont east to the intersection with West Street in Postville. The existing 24 foot average width HMA will be widened 4 feet on each side. The pavement will then be cold-in-place recycled 32 feet wide to a depth of 3.0 inches and then overlaid with 4.0 inches of HMA. Within Postville the pavement will be scarified 0.75 inches and then resurfaced with 3.0 inches of new HMA. Existing pipes will be extended, longitudinal subdrains will be added and guardrail will be updated. Centerline and shoulder rumble strips will also be included in this project.

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)

DIV 1 100% DOT
DIV 2 FAYETTE COUNTY
DIV 3 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	10					10					
2	2102-0425070	SPECIAL BACKFILL	TON	333.9					333.9					
3	2102-2625000	EMBANKMENT-IN-PLACE	CY	146.5					146.5					
4	2102-2713090	EXCAVATION, CLASS 13, ~~WASTE~~ WIDENING	CY	3,236.3	159.4	85.3			3,481.0					
5	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	156.5					156.5					
6	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	18,607.2					18,607.2					
7	2122-5500060	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN.	SY	1,060.0					1,060.0					
8	2125-2225050	RESHAPING DITCHES	STA	9.00					9.00					
9	2214-5145150	PAVEMENT SCARIFICATION	SY	14,367.3					14,367.3					
10	2303-1031750	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON	5,743.90					5,743.90					
11	2303-1042500	HOT MIX ASPHALT HIGH TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX	TON	17,305.30	149.10	79.80			17,534.20					
12	2303-1043504	HOT MIX ASPHALT HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-4	TON	17,387.80	73.80	39.50			17,501.10					
13	2303-1258343	ASPHALT BINDER, PG 58-34S, STANDARD TRAFFIC	TON	344.60					344.60					
14	2303-1258344	ASPHALT BINDER, PG 58-34H, HIGH TRAFFIC	TON	2,081.60	13.34	7.25			2,102.19					
15	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1.00					1.00					
16	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH	21613					21613					
17	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH	21613					21613					
18	2303-9093010	HOT MIX ASPHALT, DRIVEWAY	SY	810.5					810.5					
19	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	359.0					359.0					
20	2316-0000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	36505					36505					
21	2318-1001100	COLD IN-PLACE RECYCLED ASPHALT PAVEMENT	SY	136,613.0					136,613.0					
22	2318-1001220	ASPHALT STABILIZING AGENT (FOAMED ASPHALT)	TON	450.8					450.8					
23	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00					1.00					
24	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	145.2					145.2					
25	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	5					5					
26	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	2					2					
27	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	2					2					
28	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.	EACH	15					15					
29	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.	EACH	1					1					
30	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	180					180					
31	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	160					160					
32	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	LF	160					160					
33	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.	LF	16					16					
34	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN.	LF	6					6					
35	2417-0225018	APRONS, METAL, 18 IN. DIA.	EACH	55					55					
36	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	4					4					
37	2417-1060018	CULVERT, CORRUGATED METAL ROADWAY PIPE, 18 IN. DIA.	LF	4					4					
38	2435-0600120	INTAKE ADJUSTMENT, MAJOR	EACH	1					1					
39	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	21,131.5					21,131.5					
40	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	96					96					
41	2505-4008130	REMOVAL OF CABLE GUARDRAIL	LF	2,287.0					2,287.0					
42	2505-6000111	HIGH TENSION CABLE GUARDRAIL	LF	2,290.0					2,290.0					
43	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR	EACH	6					6					
44	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	EACH	1					1					
45	2506-4984000	FLOWABLE MORTAR	CY	8,017.4 V QUANTITY					8,017.4					
46	2507-3250005	ENGINEERING FABRIC	SY	66.0					66.0					
47	2507-6800061	REVETMENT, CLASS E	TON	25.5					25.5					
48	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A	LF	60.0					60.0					
49	2519-3280000	FENCE, FIELD	LF	60.0					60.0					
50	2519-4200140	REMOVAL OF FENCE, FIELD	LF	110.0					110.0					
51	2520-3350010	FIELD LABORATORY	EACH	0					0					
52	2520-3350015	FIELD OFFICE	EACH	0					0					
53	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	106,058.90 V QUANTITY					106,058.90					
54	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	2					2					
55	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS	STA	16,199.10					16,199.10					
56	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS	EACH	2					2					
57	2528-8445110	TRAFFIC CONTROL	LS	1.00					1.00					
58	2528-8445113	FLAGGERS	EACH						See Proposal					
59	2528-8445115	PILOT CARS	EACH						See Proposal					
60	2529-2242304	CD JOINT ASSEMBLY	EACH	0					0					

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

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
61	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA	SY	0.0					0.0					
62	2529-5070111	PATCHES, FULL-DEPTH FINISH, BY AREA (50 FEET OR GREATER IN LENGTH)	SY	0.0					0.0					
63	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT	EACH	0					0					
64	2529-8174010	SUBBASE (PATCHES)	SY	0.0					0.0					
65	2529-8174050	PATCH SUBDRAIN	EACH	0					0					
66	2530-0400061	HOT MIX ASPHALT (PARTIAL DEPTH PATCH MATERIAL)	TON	0.0					0.0					
67	2530-5070221	REGULAR PARTIAL DEPTH HOT MIX ASPHALT FINISH PATCHES, BY AREA	SY	0.0					0.0					
68	2533-4980005	MOBILIZATION	LS	1.00					1.00					
69	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	807.5					807.5					
70	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)	GAL	875.6					875.6					
71	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA	403.7					403.7					
72	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS	LS	1.00					1.00					
73	2602-0000020	SILT FENCE	LF	2,785.0					2,785.0					
74	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	750.0					750.0					
75	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	3,535.0					3,535.0					
76	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	354.0					354.0					
77	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	2,290.0					2,290.0					
78	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	2,290.0					2,290.0					
		CONSTRUCTION SURVEY												

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850002	**CLEARING AND GRUBBING**
		Refer to Tabulation 110-17 for additional information.
-	-	-
2	2102-0425070	**SPECIAL BACKFILL**
		Refer to Typicals 7149 and 7156 and Tabulations 100-25 and 112-9 for additional information.
-	-	-
3	2102-2625000	**EMBANKMENT-IN-PLACE**
		Refer to Tabulations 104-13, 104-13A, 107-23 and 112-9 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 areas shall be considered incidental to this bid item.
		Material obtained from item "Excavation, Class 13, Waste" may be used for this work.
		Overhaul will not be paid for this item.
-	-	-
4	2102-2713090	**EXCAVATION, CLASS 13, ~~WASTE~~** WIDENING – IS PLAN QUANTITY ITEM
		Refer to Typicals NH-1, NH-2, 7149, 7154B and 7156 and Tabulation 112-9 for additional information.
REMOVE ENTIRE DRIVE MULCH		Excavation not used in the project shall become property of the Contractor and removed from the project.
		Overhaul will not be paid for this item.
		Quantity include scarifying through existing shoulder strengthening, HMA driveway fillets and existing tapers within the excavation limits.
		Excavate granular roadway in order to construct extended HMA fillets. Item will be paid at plan quantity for Divisions 2 and 3.
-	-	-
5	2105-8425005	**TOPSOIL, FURNISH AND SPREAD**
		All disturbed areas not covered by concrete, asphalt or gravel 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.
-	-	-
6	2121-7425020	**GRANULAR SHOULDERS, TYPE B**
		Refer To Typicals 7135 and 7145 and Tabulation 112-9 for additional information.
-	-	-
7	2122-5500060	**PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN.**
		Refer to Typical 7156 and Tabulation 112-9 for additional information.
-	-	-
8	2125-2225050	**RESHAPING DITCHES**
		Refer to Tabulation 300-1 for additional information.
-	-	-

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
9	2214-5145150	**PAVEMENT SCARIFICATION**
		Refer to Typical NH-4 and Tabulations 100-25 and 102-16 for additional information.
-	-	-
10	2303-1031750	**HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX**
11	2303-1042500	**HOT MIX ASPHALT HIGH TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX**
12	2303-1043504	**HOT MIX ASPHALT HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-4**
13	2303-1258343	**ASPHALT BINDER, PG 58-34S, STANDARD TRAFFIC**
14	2303-1258344	**ASPHALT BINDER, PG 58-34H, HIGH TRAFFIC**
15	2303-6911000	**HOT MIX ASPHALT PAVEMENT SAMPLES**
		Refer to Typicals NH-1, NH-2, NH-3, 7149, 7154B and 7315 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.
		~~Surface quantity is increased by 1,500 tons along with its binder, proportionally, to allow for HMA test strip quantities.~~
-	-	-
16	2303-7000610	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)**
17	2303-7000620	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)**
		Estimated at 0.5 times the tons of HMA.
-	-	-
18	2303-9093010	**HOT MIX ASPHALT, DRIVEWAY**
19	2315-8275025	**SURFACING, DRIVEWAY, CLASS A CRUSHED STONE**
		Refer to Tabulation 102-3 for additional information.
-	-	-
20	2316-0000120	**PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)**
		Estimated at 0.24 times the square yards of surface paving.
-	-	-
21	2318-1001100	**COLD IN-PLACE RECYCLED ASPHALT PAVEMENT**
22	2318-1001220	**ASPHALT STABILIZING AGENT (FOAMED ASPHALT)**
		Refer to Typical NH-1 and Tabulation 100-25 for additional information. Foamed asphalt shall be PG 52-34S.
-	-	-
23	2401-6745650	**REMOVAL OF EXISTING STRUCTURES**
		Refer to Tabulations 110-2 and 110-9 for additional information. Existing headwalls shall be removed prior to installation of flowable mortar.
-	-	-
24	2402-2720100	**EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT**
		Refer to Tabulations 104-13 and 104-13A for additional information.
		Silt inside the existing livestock passes shall be removed to extent necessary for positive flowline creation for newly installed pipe, excess silt may be left in pipe prior to placing of flowable mortar.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
25	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
26	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.
27	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.
28	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.
29	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.
30	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.
31	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.
32	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.
33	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.
34	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN.
35	2417-0225018	APRONS, METAL, 18 IN. DIA.
36	2417-0225024	APRONS, METAL, 24 IN. DIA.
37	2417-1060018	CULVERT, CORRUGATED METAL ROADWAY PIPE, 18 IN. DIA.
		Refer to Tabulations 104-13, 104-13A and 110-2 for additional information.
-	-	-
38	2435-0600120	INTAKE ADJUSTMENT, MAJOR
		Refer to Tabulation 104-10 for additional information.
-	-	-
39	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.
40	2502-8221306	SUBDRAIN OUTLET, DR-306
		Refer to Typicals NH-1, NH-2 and Tabulation 104-9 for additional information.
-	-	-
41	2505-4008130	REMOVAL OF CABLE GUARDRAIL
		Refer to Tabulation 110-7B for additional information. REFER TO ~~EITHER~~ CONTRACTOR OWNERSHIP ~~OR~~ ~~DELIEVER AND STOCKPILE~~.
-	-	-
42	2505-6000111	HIGH TENSION CABLE GUARDRAIL
43	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR
44	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT — does include tensioner meter? WOULD LIKE
		Refer to Tabulation 108-8A for additional information.
-	-	-
45	2506-4984000	FLOWABLE MORTAR
		Refer to Typical 4315. To be used to fill existing cattle passes.
-	-	-
46	2507-3250005	ENGINEERING FABRIC
47	2507-6800061	REVETMENT, CLASS E
		Refer to Tabulation 100-23 for additional information.
-	-	-
48	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A
49	2519-3280000	FENCE, FIELD
50	2519-4200140	REMOVAL OF FENCE, FIELD
		Refer to Tabulations 100-7 and 100-8 for additional information.
-	-	-
51	2520-3350010	FIELD LABORATORY
		- -
-	-	-
52	2520-3350015	FIELD OFFICE
		- -
-	-	-
53	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED
54	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED
55	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS
56	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS
		Refer to Tabulations 108-22 and 108-29 for additional information. Grooving depth shall be 0.08 inches to 0.10 inches. Grooving and final pavement markings shall be placed a minimum of 30 days after final HMA placement.
-	-	-
57	2528-8445110	TRAFFIC CONTROL
		Refer to Sheet J.1 for additional information.
-	-	-
58	2528-8445113	FLAGGERS
		- -
-	-	-
59	2528-8445115	PILOT CARS
		- -
-	-	-
60	2529-2242304	CD JOINT ASSEMBLY
61	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA
62	2529-5070111	PATCHES, FULL-DEPTH FINISH, BY AREA (50 FEET OR GREATER IN LENGTH)
63	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT
64	2529-8174010	SUBBASE (PATCHES)
65	2529-8174050	PATCH SUBDRAIN
		Refer to Tabulation 102-6C for additional information.
-	-	-
66	2530-0400061	HOT MIX ASPHALT (PARTIAL DEPTH PATCH MATERIAL)
		- -
-	-	-
67	2530-5070221	REGULAR PARTIAL DEPTH HOT MIX ASPHALT FINISH PATCHES, BY AREA
		- -
-	-	-
68	2533-4980005	MOBILIZATION
		- -
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
69	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE
70	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)
71	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE
		Refer to Tabulation 112-10 for additional information.
-	-	-
72	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS
		Refer to Tabulations FENCING, GUARDRAIL, INTAKE for additional information.
-	-	-
73	2602-0000020	SILT FENCE
		Refer to Tabulation 110-17 for additional information. Verify specific locations with the Engineer prior to placement. Quantity include an additional 10%.
-	-	-
74	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 the Engineer prior to placement.
-	-	-
75	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.
-	-	-
76	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 quantities.
-	-	-
77	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.
78	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
		Refer to Tabulation 100-19 for additional information. To be used in conjunction with Silt Fence to control sediment.
-	-	-

INDEX OF TABULATIONS

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	
	Fayette	US 18	EB	273.05	274.96	1991		FN-18-8(29)--20-33	ACC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	3	ATB	8	SAS	6			Pattison Qry	C. LST.			
				274.96	276.14	1991		FN-18-8(29)--20-33	AAC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	3	ATB	8	SAS	6			Pattison Qry	C. LST.			
						1965		FN-863	AAC	2							Houg	C. LST.			
						1930		P-639	PC7	7							Marquette	C. LST.	1		
				276.14	277.16	1991		FN-18-8(29)--20-33	AAC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	3	ATB	8	SAS	6			Pattison Qry	C. LST.			
				277.16	278.1	1991		FN-18-8(29)--20-33	AAC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	1.5	TBB	1.5					Pattison Qry	C. LST.			VL FDEP AC
						1965		FN-863	AAC	2							Houg	C. LST.			
						1930		P-639	PC7	7							Marquette	C. LST.	1		
	Clayton	US 18	EB	278.1	279.58	1991		F-18-8(29)--20-33	AAC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	1.5	TBB	1.5					Pattison Qry	C. LST.			
						1965		FN-863	AAC	2							Houg	C. LST.			
						1930		P-639	PC7	7							Marquette	C. LST.	1		
	Allamakee	US 18	EB	279.58	280.85	1991		F-18-8(29)--20-33	AAC	4							Green Qry	C. LST.			
						1977		FN-18-8(14)--21-33	AAC	1.5	TBB	1.5					Pattison Qry	C. LST.			& FDEP AC
						1965		FN-863	AAC	2							Houg	C. LST.			
						1937		P-639	PC7	7							Marquette	C. LST.	1		

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PROPOSED POSTED SPEED LIMIT

Road Identification	Begin Station	End Station	Proposed Posted Speed Limit			Remarks
			35 or less	40 - 45	over 45	
US 18						
	578+13.80	581+84.00	x			
	581+84.00	598+14.00		x		
	598+14.00	670+77.38			x	
						STA EQ
	670+60.88	756+60.08			x	
						STA EQ
	758+40.35	840+20.00			x	
						STA EQ
	0+00.0 (CC)	77+72.99 (CC)			x	(CC)= Clayton County
						STA EQ
	+00.00	30+41.00			x	
	30+41.00	46+50.48		x		
						STA EQ
	46+53.63	47+50.00		x		
	47+50.00	61+46.17	x			
						STA EQ
	60+35.25	65+03.00	x			

100-1U
Modified

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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. Is signature authority on the Base PPP.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. 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. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted.
5. Supervises and implements good housekeeping practices.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.

C. Subcontractors:
1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if 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. Implement good housekeeping practices.

D. RCE/Project Engineer:
1. Is Project Storm Water Manager.
2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for monitoring inspection reports on a monthly basis, to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.

E. Inspector:
1. Updates 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. Maintains an up-to-date record that identifies contractors and subcontractors as co-permittees.
3. Makes these plans available to the DNR upon their request.
4. Conducts joint required inspections of the site with the contractor/subcontractor.
5. Completes an inspection report after each inspection.
6. Is signature authority on storm water inspection reports.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of a *Describe Type of Facility*.

B. This PPP covers approximately *Provide # Of Acres* acres with an estimated *Provide # of Acres* acres being disturbed. The portion of the PPP covered by this contract has *Provide # of Acres* acres disturbed.

C. The PPP is located in an area of *Provide # of Types Of Soil Association* soil association (*Provide Soil Association Type or* *Types*). The estimated weighted average runoff coefficient number for this PPP after completion will be *Provide runoff coefficient Number*.

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 in C sheets.
5. Locations of Non-structural Controls – Tabulations in 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.

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POLLUTION PREVENTION PLAN

E. The base storm water 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 *List Outlets for Runoff*.

III. CONTROLS

A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications 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 of the Standard Specifications.

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 in the C sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets.
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 in the C sheets. Additional information may be found in Tabulations in the C or T sheets or is referenced in Section 2105 of the Standard Specifications.

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 in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found in the B sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C sheets.

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 lengths 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 in the C sheets, 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 (105-4) in the C sheets. 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 all 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 chemical spill and leak prevention and response 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 - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. 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 onsite 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. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
9) Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
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.

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POLLUTION PREVENTION PLAN

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 of 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. Identification of 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 and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

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 headwalls or 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.
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 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.

_____
Signature

_____
Printed or Typed Name

_____
Signature

_____

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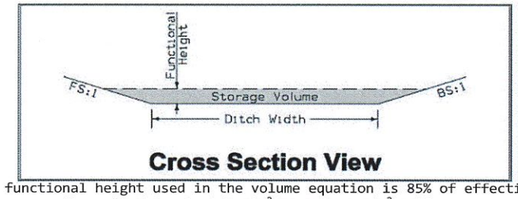
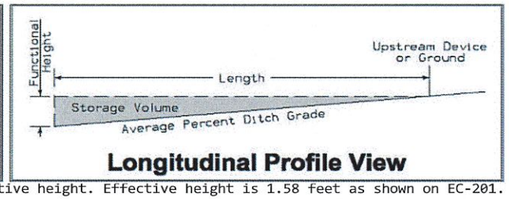
SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



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	Volume*	
				LF	LF	LF	FS:1	BS:1	FT	Ditch Grade	CF	
	1	616+10.00	RT	30.0	3.0	30.0	6.0	3.0	10.0	0.4%		
	1	616+10.00	LT	30.0	3.0	30.0	6.0	3.0	10.0	0.4%		
	1	771+15.00	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.4%		
	1	778+06.50	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	778+06.50	LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
					3.0	30.0						
	1	780+56.00	RT-RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	780+56.00	RT-LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	812+42.00	RT-RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	812+42.00	RT-LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	816+90.00	LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
					3.0	30.0						
	1	825+30.00	LT-RT	30.0	3.0	30.0	6.0	3.0	10.0	0.2%		
	1	825+30.00	LT-LT	30.0	3.0	30.0	6.0	3.0	10.0	0.2%		
	1	828+10.00	LT	30.0	3.0	30.0	6.0	3.0	10.0	0.4%		
	1	11+90.0 (CC)	RT	30.0	3.0	30.0	6.0	3.0	10.0	0.2%		
	1	11+90.0 (CC)	LT	30.0	3.0	30.0	6.0	3.0	10.0	0.4%		
					3.0	30.0						
	1	17+20.0 (CC)	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	17+20.0 (CC)	LT	30.0	3.0	30.0	6.0	3.0	10.0	0.4%		
	1	27+97.0 (CC)	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	39+40.0 (CC)	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	39+40.0 (CC)	LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
					3.0	30.0						
	1	54+93.0 (CC)	LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	55+84.2 (CC)	RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	55+84.2 (CC)	LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	64+48.0 (CC)	LT-RT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
	1	64+48.0 (CC)	LT-LT	30.0	3.0	30.0	6.0	3.0	10.0	1.0%		
				750.0	87.0	870.0						TOTALS

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STORMWATER DRAINAGE BASIN AND STORAGE

Refer to EC Standards and 570s Details.

Drainage Basin Location					Summary of Stormwater Storage							Remarks
Basin No.	Station to Station		Side	Discharge Point	Total Disturbed Area	Disturbed Area with Storage Provided	Disturbed Area without Storage Provided	Best Management Practice	Total Storage Volume Provided	Total Storage Volume Required	Storage Volume Met?	
				Station / Side	Acres	Acres	Acres		CF	CF	Yes/No	

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10-18-11

STANDARD ROAD PLANS

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

Number	Date	Title
BA-351	04-20-10	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
EC-201	10-16-18	Silt Fence
EC-204	04-18-17	Perimeter and Slope Sediment Control Devices
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
MI-101	10-20-15	Fencing Layout
MI-103	10-20-15	Deer Fence and Field Fence Construction
MI-104	10-17-17	Fence Construction at Channel Crossings, Flood Plains, and Minor Ground Depressions
PM-110	10-16-18	Line Types
PM-111	04-21-15	Symbols and Legends
PM-120	10-21-14	Stop Lines and Islands
PM-221	10-18-16	Climbing Lane
PM-420	04-19-11	Two-Lane Roadway with no Turn Lanes (One-Way Stop Condition)
PM-520	04-19-11	Two-Lane Roadway with no Turn Lanes (Two-Way Stop Condition)
PM-521	04-19-11	Two-Lane Roadway with Right Turn Lanes
PR-120	04-16-19	Double Reinforced Pavement Over Box Culverts
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-101	04-16-19	Joints
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	10-17-17	Special Signs for Workzones
SW-211	04-17-18	Storm Sewer Pipe Connections
SW-512	04-17-18	Circular Area Intake
SW-604	04-17-18	Castings for Area Intakes
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-213	04-17-12	Lane Closure with Flaggers
TC-214	10-17-17	Lane Closure with Flaggers for use with Pilot Car
TC-282	04-19-11	Uneven Lanes

100-19
04-19-16

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Location			Length of Installation			Remarks
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	
590+00.00	603+50.00	RT			1350.0	
636+25.00	641+55.00	RT			530.0	
659+55.00	663+65.00	RT			410.0	
					2290.0	TOTAL

LEAVE DIKES IN PLACE

232-3A
04-16-19

EROSION CONTROL (RURAL SEEDING)

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

232-11
04-16-19

EROSION CONTROL (STABILIZING CROP SEEDING)

If outside of permanent seeding dates in Section 2601 of the Standard Specifications, or if required by a storm water permit, place stabilizing crop, fertilizer, and mulch on the disturbed area as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,1 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are incidental to mobilization and will not be paid for separately.

300-1
Modified

DITCH RESHAPING

Side	Location		Remarks
	Station	Length (STA)	
RT	771+15.0	0.5	Entrance pipe, inlet side
RT	780+56.0	1.0	Entrance pipe, 0.5 STA each side
RT	812+42.0	1.0	Entrance pipe, 0.5 STA each side
~~LT~~ RT	816+90.0	0.5	Mainline pipe
LT	825+30.0	1.0	Entrance pipe, 0.5 STA each side
LT	828+10.0	0.5	Mainline pipe
	11+90.0 (CC)	1.0	Mainline pipe, 0.5 STA each side
RT	27+97.0 (CC)	1.0	Entrance pipe, outlet side
	39+40.0 (CC)	1.0	Mainline pipe, 0.5 STA each side
LT	54+93.0 (CC)	0.5	Entrance pipe, outlet side
LT	64+48.0 (CC)	1.0	Entrance pipe, 0.5 STA each side
		9.0	TOTAL
			(CC) Clayton County

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
590+00.00	603+50.00	RT	1490.0	
636+25.00	641+55.00	RT	590.0	
659+55.00	663+65.00	RT	450.0	
			2530.0	TOTAL

232-3B
04-16-19

EROSION CONTROL (URBAN SEEDING)

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,4 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are incidental to mobilization and will not be paid for separately.

232-3C
04-16-19

EROSION CONTROL (NATIVE GRASS SEEDING)

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed and mulch on the disturbed area lying 8 feet or more beyond the shoulder as follows:

SEED MIX:

Big bluestem (Andropogon geradii)	6 lbs. PLS/Acre (7.0 kg/ha)
Indiangrass (Sorghastrum nutans)	6 lbs. PLS/Acre (7.0 kg/ha)
Little bluestem (Schizachyrium scoparium)	6 lbs. PLS/Acre (7.0 kg/ha)
Partridge Pea (Chamaecrista fasciculata)	4 lbs. PLS/Acre (4.5 kg/ha)
Sideoats grama (Bouteloua curtipendula)	4 lbs. PLS/Acre (4.5 kg/ha)
Canada wildrye (Elymus canadensis)	2 lbs. PLS/Acre (2.2 kg/ha)
Switchgrass (Panicum virgatum)	1 lbs. PLS/Acre (1.1 kg/ha)
Oats (Avena sativa)	32 lbs./Acre (36.0 kg/ha)

Furnish Big bluestem, Indiangrass, Canada wildrye and Little bluestem that is debearded or equal to facilitate the application of seed.

Furnish seed certified as Source Identified Class (Yellow Tag) Source G0-Iowa. Oats are excluded from this requirement.

Place seed according to the requirements of Article 4169.02 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed and mulch are incidental to mobilization and will not be paid for separately.

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

110-17
04-18-17

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	
649+93.0	WB	Trees - Clearing and Grubbing				1												9.4			
761+28.0		Trees - Clearing and Grubbing																			
788+65.0		Trees - Clearing and Grubbing																			
812+42.0 RT		Trees - Clearing and Grubbing																			
812+42.0 LT		Trees - Clearing and Grubbing																			
5+25.0 (CC) RT	EB	Trees - Clearing and Grubbing																			
38+37.0 (CC) LT	BOTH	Trees - Clearing and Grubbing																			
39+40.0 (CC)	BOTH	Trees - Clearing and Grubbing																			
64+48.0 (CC) LT	BOTH	Trees - Clearing and Grubbing																			
25+49.0 RT	EB	Trees - Clearing and Grubbing																			
36+57.55 LT	WB	Trees - Clearing and Grubbing																			
																		9.4			TOTAL
(CC)= Clayton County																					

~~FILL IN~~

CASE WILL REMOVE ONE TREE @ SS+84.2 (CC) 24" MULBERRY

103-10
Modified

TOPSOIL STRIPPING AND PLACEMENT

Location				Quantity	Topsoil Placement Thickness	Remarks
Road Identification	Dir. of Traffic	Begin Station	End Station	CY	IN	
US 18		Various		45.4	4.0	Culvert Work, See Tab 104-13, 104-13A
		Various		111.1	4.0	Ditch Reshaping work, See Tab 300-1
				156.5		TOTAL

100-08
04-17-18

REMOVAL OF FENCE

Removal of Field Fence is incidental to Clearing and Grubbing.

Location From Station	Location From Offset	Location To Station	Location To Offset	Type	Length LF	Remarks
616+10.0 LT				Field	20.0	
616+10.0 RT				Field	30.0	
778+06.5 LT				Field	20.0	
778+06.5 RT				Field	0.0	Leave existing fence at this location
55+84.2 (CC) LT				Field	~~20.0~~ 50	(CC)=Clayton county
55+84.2 (CC) RT				Field	~~20.0~~ 200	
					110.0	TOTAL

110-7B
10-19-10

REMOVAL OF CABLE GUARDRAIL

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

No.	(1) Direction of Traffic	Location Station to Station		Side	Type (High/Low Tension)	Cable Remove LF	Post * Footings, Concrete Remove Yes/No	End Terminal* Remove No.	Remarks
	EB	590+00.00	603+50.00	RT	Low Tension	1350.0	Yes	2	
	EB	636+37.00	641+67.00	RT	Low Tension	530.0	Yes	2	
	EB	659+55.00	663+62.00	RT	Low Tension	407.0	Yes	2	
						2287.0			TOTAL

108-9A
04-20-10

HIGH TENSION CABLE GUARDRAIL

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

Refer to BA-351.

No.	Location Direction of (1) Traffic	Location Station	Location Side	Location Offset D_θ FT	Dimensions Approach C_A FT	Dimensions Obstacle C_O FT	Dimensions Trailing C_T FT	Bid Items Protection Length $(C_A+C_\theta+C_T)$ FT	Bid Items End Anchor No.	Remarks
	EB	590+00.00	RT					1350.0	2	
	EB	636+25.00	RT					530.0	2	
	EB	659+55.00	RT					410.0	2	
								2290.0	6	TOTALS

110-13
04-20-10

DELIVERY AND STOCKPILING

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks
Cable guardrail					
Guardrail posts					

100-7
10-16-12

FENCING

* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location From Station	Location From Offset	Location To Station	Location To Offset	Side	Chain Link Fence Length* LF	Chain Link Fence Type	Chain Link Gate No.* EACH	Chain Link Gate Type	Deer Fence Length* LF	Deer Brace Panels* EACH	Deer Gate No.* EACH	Deer Gate Type	Field Fence Length* LF	Field Brace Panels* EACH	Field Gate No.* EACH	Field Gate Type	Channel Crossing Length* LF	Channel Crossing Type	Remarks
616+10.0 LT													~~10.0~~	MAYBE?			10.0	A	
616+10.0 RT													~~10.0~~	EXIST			10.0	A	
778+06.5 LT													10.0	YES			10.0	A	
778+06.5 RT													~~10.0~~				10.0	A	
55+84.2 (CC) LT													~~10.0~~ 40				10.0	A	
55+84.2 (CC) RT													~~10.0~~				10.0	A	
(CC)=Clayton County													60.0				60.0		TOTALS

ADDED LT LT

NOTE: NEED 5' B/H CABLE RAIL TO BE EFFECTIVE. CHECK BA + EARTHWORK STANDARDS

PAVED SHOULDER TYP TO STOP PRIOR TO CABLE GUARDRAIL

ERSION OUTSIDE CABLE IS NOT GRADED PROPERLY - HARD TO MAINTAIN

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	
1	NBL	580+80.00	584+80.00	RT	42.0	4.0	460.0						580+80.00	DR-306	42.6		
													584+80.00	DR-306			
2	NBL	584+80.00	588+80.00	RT	42.0	4.0	460.0						584+80.00	DR-306	42.6		
													588+80.00	DR-306			
3	NBL	588+80.00	591+55.00	RT	42.0	4.0	335.0						588+80.00	DR-306	31.0		
													591+55.00	DR-306			
4	NBL	591+65.00	595+70.00	LT	42.0	4.0	465.0						591+65.00	DR-306	43.1		
													595+70.00	DR-306			
5	NBL	595+70.00	598+20.00	LT	42.0	4.0	310.0						595+70.00	DR-306	28.7		
													598+20.00	DR-306			
6	NBL	598+30.00	602+34.00	LT	42.0	4.0	464.0						598+30.00	DR-306	43.0		
													602+34.00	DR-306			
7	NBL	602+34.00	606+34.00	LT	42.0	4.0	460.0						602+34.00	DR-306	42.6		
													606+34.00	DR-306			
8	NBL	606+34.00	610+34.00	LT	42.0	4.0	460.0						606+34.00	DR-306	42.6		
													610+34.00	DR-306			
9	NBL	610+34.00	614+34.00	LT	42.0	4.0	460.0						610+34.00	DR-306	42.6		
													614+34.00	DR-306			
10	NBL	614+34.00	617+05.00	LT	42.0	4.0	331.0						614+34.00	DR-306	30.6		
													617+05.00	DR-306			
11	NBL	617+15.00	621+70.00	LT	42.0	4.0	515.0						617+15.00	DR-306	47.7		
													621+70.00	DR-306			
12	NBL	621+80.00	625+80.00	LT	42.0	4.0	460.0						621+80.00	DR-306	42.6		
													625+80.00	DR-306			
13	NBL	625+80.00	629+80.00	LT	42.0	4.0	460.0						625+80.00	DR-306	42.6		
													629+80.00	DR-306			
14	NBL	629+80.00	634+80.00	LT	42.0	4.0	560.0						629+80.00	DR-306	51.9		
													634+80.00	DR-306			
15	NBL	634+80.00	639+00.00	LT	42.0	4.0	480.0						634+80.00	DR-306	44.4		
													639+00.00	DR-306			
16	NBL	639+10.00	643+10.00	LT	42.0	4.0	460.0						639+10.00	DR-306	42.6		
													643+10.00	DR-306			
17	NBL	643+10.00	647+10.00	LT	42.0	4.0	460.0						643+10.00	DR-306	42.6		
													647+10.00	DR-306			
18	NBL	647+10.00	649+10.00	LT	42.0	4.0	260.0						647+10.00	DR-306	24.1		
													649+10.00	DR-306			
19	NBL	649+10.00	653+10.00	LT	42.0	4.0	460.0						649+10.00	DR-306	42.6		
													653+10.00	DR-306			
20	NBL	653+10.00	657+10.00	LT	42.0	4.0	460.0						653+10.00	DR-306	42.6		
													657+10.00	DR-306			
21	NBL	657+10.00	661+65.00	LT	42.0	4.0	515.0						657+10.00	DR-306	47.7		
													661+65.00	DR-306			
22	NBL	661+75.00	665+75.00	RT	42.0	4.0	460.0						661+75.00	DR-306	42.6		
													665+75.00	DR-306			
23	NBL	665+75.00	669+75.00	RT	42.0	4.0	460.0						665+75.00	DR-306	42.6		
													669+75.00	DR-306			
24	NBL	669+75.00	672+00.00	RT	42.0	4.0	301.5						669+75.00	DR-306	27.9		Includes STA EQ
													672+00.00	DR-306			
25	NBL	715+00.00	719+00.00	LT	42.0	4.0	460.0						715+00.00	DR-306	42.6		
													719+00.00	DR-306			
26	NBL	719+00.00	723+00.00	LT	42.0	4.0	460.0						719+00.00	DR-306	42.6		
													723+00.00	DR-306			
27	NBL	723+00.00	727+00.00	RT	42.0	4.0	460.0						723+00.00	DR-306	42.6		
													727+00.00	DR-306			
28	NBL	727+00.00	731+00.00	RT	42.0	4.0	460.0						727+00.00	DR-306	42.6		
													731+00.00	DR-306			
29	NBL	731+00.00	735+00.00	RT	42.0	4.0	460.0						731+00.00	DR-306	42.6		
													735+00.00	DR-306			
30	NBL	735+00.00	739+00.00	RT	42.0	4.0	460.0						735+00.00	DR-306	42.6		
													739+00.00	DR-306			
31	NBL	739+00.00	741+50.00	RT	42.0	4.0	310.0						739+00.00	DR-306	28.7		
													741+50.00	DR-306			
32	NBL	745+00.00	749+00.00	LT	42.0	4.0	460.0						745+00.00	DR-306	42.6		
													749+00.00	DR-306			
33	NBL	749+00.00	753+00.00	RT	42.0	4.0	460.0						749+00.00	DR-306	42.6		
													753+00.00	DR-306			
34	NBL	753+00.00	757+00.00	RT	42.0	4.0	460.0						753+00.00	DR-306	42.6		
													757+00.00	DR-306			
35	NBL	757+00.00	761+00.00	RT	42.0	4.0	460.0						757+00.00	DR-306	42.6		
													761+00.00	DR-306			
36	NBL	761+00.00	765+00.00	RT	42.0	4.0	460.0						761+00.00	DR-306	42.6		
													765+00.00	DR-306			
37	NBL	765+00.00	768+00.00	RT	42.0	4.0	360.0						765+00.00	DR-306	33.3		
													768+00.00	DR-306			
38	NBL	772+00.00	776+00.00	RT	42.0	4.0	460.0						772+00.00	DR-306	42.6		
													776+00.00	DR-306			
39	NBL	776+00.00	780+00.00	RT	42.0	4.0	460.0						776+00.00	DR-306	42.6		
													780+00.00	DR-306			

104-9
10-17-17

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				
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		Porous* Backfill	Class "A"* Crushed Stone	Remarks
						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	
40	NBL	803+00.00	807+00.00	RT	42.0	4.0	460.0						803+00.00	DR-306	42.6		
													807+00.00	DR-306			
41	NBL	807+00.00	811+00.00	RT	42.0	4.0	460.0						807+00.00	DR-306	42.6		
													811+00.00	DR-306			
42	NBL	811+00.00	815+00.00	RT	42.0	4.0	460.0						811+00.00	DR-306	42.6		
													815+00.00	DR-306			
43	NBL	828+15.00	832+15.00	LT	42.0	4.0	460.0						828+15.00	DR-306	42.6		
													832+15.00	DR-306			
44	NBL	832+15.00	836+15.00	LT	42.0	4.0	460.0						832+15.00	DR-306	42.6		
													836+15.00	DR-306			
45	NBL	836+15.00	840+20.00	LT	42.0	4.0	465.0						836+15.00	DR-306	43.1		
													840+20.00	DR-306			
46	NBL	55+80.0 (CC)	59+80.0 (CC)	RT	42.0	4.0	460.0						55+80.0 (CC)	DR-306	42.6		
													59+80.0 (CC)	DR-306			
47	NBL	59+80.0 (CC)	62+00.0 (CC)	RT	42.0	4.0	280.0						59+80.0 (CC)	DR-306	25.9		
													62+00.0 (CC)	DR-306			
48	NBL	6+00.00	10+00.00	RT	42.0	4.0	460.0						6+00.00	DR-306	42.6		
													10+00.00	DR-306			
							21131.5										

110-2
04-16-13

REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks
587+60.0 LT	18" x 52' CMP	
611+68.0 LT	18" x 55' CMP	
616+10.0 RT	4' x 6' x 102' RCB	Remove existing apron
616+10.0 LT	4' x 6' x 102' RCB	Remove existing apron
694+25.0 RT	18" x 70' CMP	
695+92.0 RT	18" x 75' CMP	
711+50.0 LT	18" x 46' CMP	
719+95.0 LT	18" x 72' CMP	
724+49.0 RT	18" x 60' CMP	
767+50.0 RT	18" x 85' CMP	
771+15.0 RT	18" x 30' CMP	Remove 1' RT
778+06.5 RT	4' x 6' x 156' RCB	Remove existing apron
778+06.5 LT	4' x 6' x 156' RCB	Remove existing apron
780+50.0 RT	24" x ? CMP	Remove 2' RT
782+50.0 RT	18" x 45' CMP	
797+93.0 LT	18" x 100' CMP	
803+71.0 RT	18" x 56' CMP	Remove 1' RT
806+40.0 RT	18" x 75' CMP	Remove 2' RT
812+42.0 RT	18" x 72' CMP	Remove 1' each side
20+02.0 (CC) LT	18" x 48' CMP	
51+30.0 (CC) RT	18" x 30' CMP	Remove 2' each side
53+00.0 (CC) RT	18" x 90' CMP	Remove 1' each side
54+93.0 (CC) LT	18" x 65' CMP	
55+84.2 (CC) RT	4' x 6' x 79.4' RCB	Remove existing apron
55+84.2 (CC) LT	4' x 6' x 79.4' RCB	Remove existing apron
69+25.0 (CC) RT	18" x 65' CMP	
72+46.0 (CC) LT	24" x 50' CMP	
72+46.0 (CC) RT	18" x 66' CMP	
0+11.0 RT	18" x 74' CMP	
0+11.0 LT	18" x 48' CMP	
60+00.0 RT	18" x 40' CMP	

104-10
08-01-08

ADJUSTMENT OF FIXTURES

MH IN AUSTINVILLE

POSSIBLY ADD 1' PIPE SECTION

No.	Location Station	Type of Fixture	Adjustment
	50+39.0 LT	Beehive intake	Install riser to bring intake level with top of curb

104-11
08-01-08

REBUILDING OF INTAKES AND UTILITY ACCESSES

No.	Location Station	Type	Adjustment
	50+39.0 LT	Behive intake	Maybe this is the tab to use?

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	Granular Backfill*		
		CY	TON	LF	
616+10.00	4' x 6' x 102'	2436.4	30.0		
778+06.50	4' x 6' x 156'	3687.0	30.0		
55+84.2 (CC)	4' x 6' x 79.4'	1894.0	30.0		(CC)=Clayton county
		8017.4			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
							Total (LF)		Extensions (LF)		Aprons		Culvert Sections												
													Left Side		Right Side										
Location	Size and Type of Culvert	Size	Type of Culvert																						
		IN		LF	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.*	FT	NO.*	FT	IN	OUT	NO.	TYPE	NO.	TYPE	CY	CY	
580+46.0	24" x 76' RCP																								UAC
580+85.0	24" x 76' RCP											1											1.2	2.4	
591+60.0	4' x 4' x 138' RCB																								UAC
598+24.0	24" x 169' RCP																								UAC
616+10.0	4' x 6' x 102' RCB	24"	RCP	100			50	50									1	1					16.0	8.0	See Tab 110-9
617+10.0	24" x 239.7' RCP																						6.0		Fill hole
621+75.0	24" x 249.6' RCP										1	1											2.4	4.7	
639+04.0	24" x 202.4 RCP										1												1.2	2.4	
649+93.0	24" x 138' RCP																								See Tab 110-17
661+70.0	24" x 236.3' RCP										1												1.2	2.4	
	STA EQ																								
682+97.0	24" x 144.6' RCP										1												1.2	2.4	
701+40.0	24" x 86' RCP											1											1.2	2.4	
	STA EQ																								
761+28.0	24" x 104' RCP											1											1.2	2.4	See Tab 110-17
778+06.5	4' x 6' x 156' RCB	42"	RCP	160			80	80									1	1					12.0	10.0	See Tab 110-9
788+65.0	24" x 76' RCP										1	1											2.4	4.7	See Tab 110-17
794+00.0	36" x 74' RCP										1												7.4	14.8	
816+90.0	24" x 66' RCP																								See Tab 300-1
828+10.0	24" x 72' RCP																								See Tab 300-1
	STA EQ																								
1+18.0 (CC)	24" x 97' RCP										1	1	1	8	1	8							7.1	14.2	
11+90.0 (CC)	24" x 78' RCP										1												1.2	2.4	See Tabs 100-23, 300-1
17+20.0 (CC)	24" x 68' RCP																								See Tab 100-23
25+00.0 (CC)	42" x 104' RCP										1		1	6									9.8	14.2	
39+40.0 (CC)	36" x 75' RCP										1												3.7	7.4	See Tabs 110-17, 300-1
55+84.2 (CC)	4' x 6' X 79.4' RCB	24"	RCP	80			40	40									1	1					16.0	8.0	See Tab 110-9
	STA EQ																								
28+22.0	30" x 164' RCP	30"	RCP	~~160~~			~~80~~	~~80~~			1	1	2	20	2	20	~~1~~	~~1~~					Δ ~~24.0~~	Δ ~~32.0~~	
33+35.0	36" x 201.4' RCP																								UAC
35+45.0	36" x 218' RCP																								UAC
	STA EQ																								
50+39.0	18" x 75' HDPE	18"	CMP	4					4																See Tab 104-10/11
51+36.0	18" x 79' CMP	18"	CMP														1						1.0	1.5	
59+44.0	24" x 48'																								UAC
	STA EQ																								
62+05.0	15" x 31'																								
65+18.0	15" x 32'																								
	(CC)= Clayton County																						116.0	136.2	TOTALS

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

Location				(L)	(W)	Rock Erosion Control (REC)					Material Bid Quantities			Remarks
						Type 1	Type 2	Type 3	Type 4	Type 5				
Road Identification	Begin Station	End Station	Side			Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection	Eng. Fabric	Class E Revetment	Erosion Stone	
			Lt./Rt.	FT	FT						SY	TON	TON	
US 18	11+90.0 (CC)		RT	8	10				x		22.0	8.5		
	17+20.0 (CC)		RT	8	10				x		22.0	8.5		
	17+20.0 (CC)		LT	8	10				x		22.0	8.5		
	(CC)= Clayton	County									66.0	25.5		TOTALS

FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (SIDEROAD & 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										NO.*	FT	NO.*	FT	IN	OUT	NO.	TYPE	NO.	TYPE			
		IN		LF	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT											CY	CY	
587+60.0 LT	18" x 52' CMP																1						0.5		See Tab 110-2
594+50.0 RT	18" x 138' CMP																1	1					1.0		
611+68.0 LT	18" x 55' CMP																1	1					1.0		See Tab 110-2
618+59.0 RT	CMP																1	1					1.0		
	STA EQ																								
694+25.0 RT	18" x 70' CMP																1	1					1.0		See Tab 110-2
695+92.0 RT	18" x 75' CMP																1	1					1.0		See Tab 110-2
711+50.0 LT	18" x 46' CMP																1	1					1.0		See Tab 110-2
719+95.0 LT	18" x 72' CMP																1	1					1.0		See Tab 110-2
724+49.0 RT	18" x 60' CMP																1	1					1.0		See Tab 110-2
	STA EQ																								
767+50.0 RT	18" x 85' CMP																1	1					1.0		See Tab 110-2
771+15.0 RT	18" x 30' CMP																1	1					1.0		See Tabs 110-2, 300-1
780+56.0 RT	24" x CMP																1	1					1.5		See Tabs 110-2, 300-1
782+50.0 RT	18" x 45' CMP																1	1					1.0		See Tab 110-2
790+82.0 LT	18" x 78' CMP																1	1					1.0		
797+93.0 LT	18" x 100' CMP																1	1					1.0		See Tab 110-2
803+71.0 RT	18" x 56' CMP																1	1					1.0		See Tab 110-2
805+40.0 LT	18" x 80' CMP																							1.5	Clean pipe
806+40.0 RT	18" x 75' CMP																1	1					1.0		See Tab 110-2
812+42.0 LT	18" x 77' CMP																								See Tab 110-17
812+42.0 RT	18" x 72' CMP																1	1					1.0		See Tabs 110-17, 300-1
825+30.0 LT	18" x 78' CMP																								See Tab 300-1
	STA EQ																								
5+25.0 (CC) RT	18" x 81' CMP																								See Tab 110-17
20+02.0 (CC) LT	18" x 48' CMP																1	1					1.0		See Tab 110-2
27+97.0 (CC) RT	18" x 60' CMP																1	1					1.0	2.5	See Tab 300-1
38+37.0 (CC) LT	18" x 56' CMP																								See Tab 110-17
51+30.0 (CC) RT	18" x 30' CMP																1	1					1.0		See Tab 110-2
53+00.0 (CC) RT	18" x 90' CMP																1	1					1.0	2.5	See Tab 110-2
54+93.0 (CC) LT	18" x 65' CMP																1	1					1.0	2.5	See Tab 110-2, 300-1
64+48.0 (CC) LT	18" x 38' CMP																								See Tabs 110-17, 300-1
69+25.0 (CC) RT	18" x 65' CMP																1	1					1.0		See Tab 110-2
72+46.0 (CC) LT	24" x 50' CMP																1	1					1.5		See Tab 110-2
72+46.0 (CC) RT	18" x 66' CMP																1	1					1.0		See Tab 110-2
	STA EQ																								
0+11.0 RT	18" x 74' CMP																1	1					1.0		See Tab 110-2
0+11.0 LT	18" x 48' CMP																1	1					1.0		See Tab 110-2
25+49.0 RT	18" x 65' CMP																1	1					1.0		See Tab 110-17
36+57.55 LT	36" x 85' RCP																								See Tab 110-17
	STA EQ																								
60+00.0 RT	18" x 40' CMP																1	1					1.0		See Tab 110-2
	STA EQ																								
	(CC)= Clayton County																						30.5	9.0	TOTALS

102-3
10-16-18

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	
															810.5			7 Paved Driveways
																	359.000	57 Granular Driveways

102-14
04-18-17

PARTIAL DEPTH HMA OR PCC REPAIR PATCHES

Location						Type HMA or PCC	Dimension of Patch		Est. Quantities			Remarks
No.	Begin Station	End Station	Begin Reference Location Sign	End Reference Location Sign	Lane		Length	Width	PCC	HMA		
							FT	FT	SF	SY	TONS	

GARY WILL PROVIDE

102-16
10-21-14

NOTCHES AND RUNOUTS FOR RESURFACING

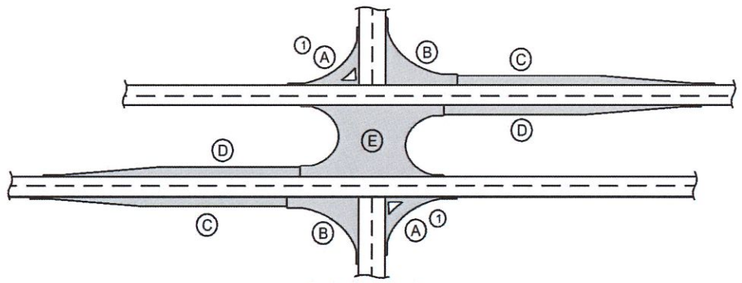
Refer to PR-201 and PR-202.
(1) Bid item. Applies only to Types 'N1' and 'N3' on PR-202. Refer to 100-25 for remaining values.

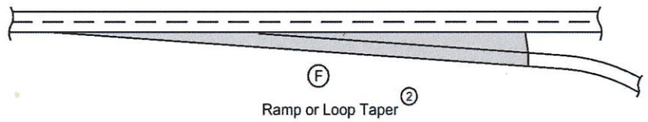
Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement (1) Scarification	Remarks
		IN	IN	IN	FT	IN	SY	
578+13.80	Type 'N3'	2.0	2.0		100.0	2.0	177.8	Begin project
45+66.10	Type 'TM1'	2.0	2.0		200.0	0.8		Transition between CIPR and milling
65+03.00	Type 'N3'	1.5	1.5		75.0	0.8	125.0	End project
580+66.00	Type 'R2'	2.0	2.0		40.0		51.1	Iowa St- RT
36+60.50	Type 'R2'	2.0	2.0		40.0		306.7	US 52- LT
							660.6	TOTAL

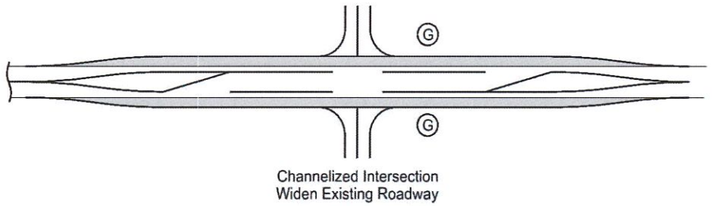
BUTT JOINT AT RADIUS IN POSTVILLE - WEST STREET - WEST SIDE & EVEN W/RADIUS

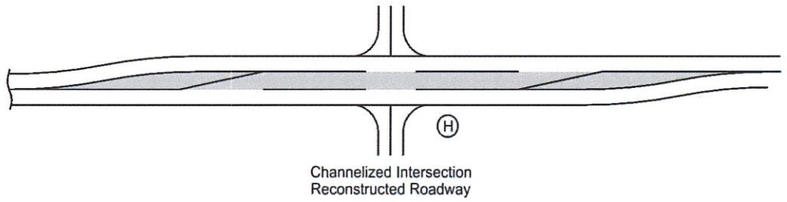
CHECK INTAKES - POSTVILLE

HMA PAVEMENT







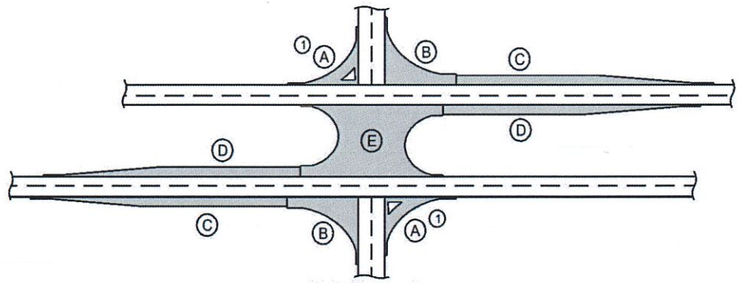


1. Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
2. Refer to PV-410, PV-411, PV-412, and PV-414.
3. Quantity includes Pavement Header.

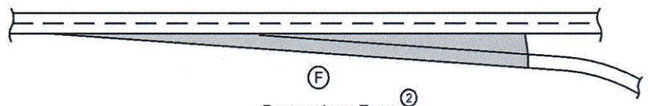
Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 145, and a special backfill unit weight (lbs/cf) of 140.

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	Modified Subbase	Granular Subbase	Pavement Scarification	Remarks
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	TONS	SY	TONS	TONS	TONS	TONS	CY	SY	SY	
US 18		578+13.80	578+57.60	32.0	43.8	155.7									17.3	157.4	8.7	158.2			1.0	0.5						
		578+57.60	580+00.00	32.0	142.4	506.3									56.4	511.6	57.0	516.9		506.3	3.4	3.4	1.7					
		580+00.00	585+00.00	40-52	500.0	2555.6									283.8	2574.1	285.8	2592.6		1777.8	17.0	17.2	5.9				777.8	
		585+00.00	597+70.00	46.0	1270.0	6491.1									720.8	6538.1	726.0	6585.2		4515.6	43.2	43.6	14.9				1975.6	
		597+70.00	603+50.00	52.0	580.0	3351.1									371.8	3372.6	374.2	3394.1		2062.2	22.3	22.5	6.8				1288.9	
		603+50.00	612+00.00	50.0	850.0	4722.2									524.1	4753.7	527.6	4785.2		3022.2	31.4	31.7	10.0				1700.0	
		612+00.00	615+50.00	44.0	350.0	1711.1									190.1	1724.1	191.5	1737.0		1244.4	11.4	11.5	4.1				466.7	
		615+50.00	620+30.00	44-32	480.0	2026.7									225.4	2044.4	227.4	2062.2		1706.7	13.5	13.6	5.6				320.0	
		620+30.00	636+37.00	32.0	1607.0	5713.8									636.5	5773.3	643.1	5832.8		5713.8	38.2	38.6	18.9					
		636+37.00	641+55.00	34.0	518.0	1956.9									217.9	1976.1	220.0	1995.3		1841.8	13.1	13.2	6.1				115.1	
		641+55.00	659+55.00	32.0	1800.0	6400.0									713.0	6466.7	720.3	6533.3		6400.0	42.8	43.2	21.1					
		659+55.00	663+65.00	34.0	410.0	1548.9									172.4	1564.1	174.1	1579.3		1457.8	10.3	10.4	4.8				91.1	
		663+65.00	670+77.38	32.0	712.4	2532.9									282.2	2559.3	285.1	2585.7		2532.9	16.9	17.1	8.4					
STA EQ		670+77.38	670+60.88																				0.0					
		670+60.88	672+50.00	32.0	189.1	672.4									74.9	679.4	75.7	686.4		672.4	4.5	4.5	2.2					
		672+50.00	734+50.00	30.5	6200.0	21011.1									2341.8	21240.7	2367.1	21470.4		22044.4	140.5	142.0	72.7					
		734+50.00	756+60.08	32.0	2210.1	7858.1									875.4	7939.9	884.4	8021.8		7858.1	52.5	53.1	25.9					
STA EQ		756+60.08	758+40.35																	0.0			0.0					
		758+40.35	788+00.00	32.0	2959.6	10523.2									1172.3	10632.8	1184.4	10742.4		10523.2	70.3	71.1	34.7					
		788+00.00	806+00.00	30.5	1800.0	6100.0									679.9	6166.7	687.2	6233.3		6400.0	40.8	41.2	21.1					
		806+00.00	840+20.30	32.0	3420.3	12161.1									1354.7	12287.7	1368.7	12414.4		12161.1	81.3	82.1	40.1					
STA EQ		840+20.30	0+00.0 (CC)																				0.0					
		0+00.0 (CC)	9+00.0 (CC)	32.0	900.0	3200.0									356.5	3233.3	360.2	3266.7		3200.0	21.4	21.6	10.6					
		9+00.0 (CC)	15+50.0 (CC)	30.5	650.0	2202.8									245.5	2226.9	248.2	2250.9		2311.1	14.7	14.9	7.6					
		15+50.0 (CC)	23+00.0 (CC)	32.0	750.0	2666.7									297.1	2694.4	300.1	2722.2		2666.7	17.8	18.0	8.8					
		23+00.0 (CC)	77+72.99 (CC)	30.5	5473.0	18547.4									2067.2	18750.1	2089.5	18952.8		19459.5	124.0	125.4	64.2					
STA EQ		77+72.99 (CC)	+00.00																				0.0					
		+00.00	18+75.00	30.5	1875.0	6354.2									708.2	6423.6	715.9	6493.1		6666.7	42.5	43.0	22.0					
		18+75.00	37+25.00	32.0	1850.0	6577.8									732.8	6646.3	740.3	6714.8		6577.8	44.0	44.4	21.7					
		37+25.00	41+24.00	44.0	399.0	1950.7									216.7	1965.4	218.3	1980.2		1418.7	13.0	13.1	4.7				532.0	
		41+24.00	43+04.00	44-32	180.0	760.0									84.5	766.7	85.3	773.3		640.0	5.1	5.1	2.1				120.0	
		43+04.00	45+70.00	32.0	266.0	945.8									105.4	955.6	106.4	965.5		945.8	6.3	6.4	3.1					
		45+70.00	46+50.50	32-31	80.5	281.8									31.4	284.7	31.7	287.7		286.2	1.9	1.9	0.9					
STA EQ		46+50.50	46+53.63																									
		46+53.63	47+41.10	31.0	87.5	301.3									29.1	301.3	29.1	301.3			1.7	1.7					301.3	
		47+41.10	60+65.50	31.0	1324.4	4561.8									377.2	4561.8	377.2	4561.8			22.6	22.6					4561.8	
		60+65.50	61+25.50	31-30	60.0	203.3									16.8	203.3	16.8	203.3			1.0	1.0					203.3	
		61+25.50	61+46.20	30.0	20.7	69.0									5.7	69.0	5.7	69.0			0.3	0.3					69.0	
STA EQ		61+46.20	60+35.25																									
		60+35.25	61+25.50	30.0	90.3	300.8									24.9	300.8	24.9	300.8			1.5	1.5					300.8	
		61+25.50	63+90.50	30.0	265.0	883.3									73.0	883.3	73.0	883.3			4.4	4.4					883.3	
		63+90.50	65+03.00	30.0	112.5	375.0	DOUBLE V END								31.0	375.0	15.5	375.0			1.9	0.9						
Iowa St	RT	580+66.00		40.0		102.2									11.3	102.3	5.7	104.3			0.7	0.3						

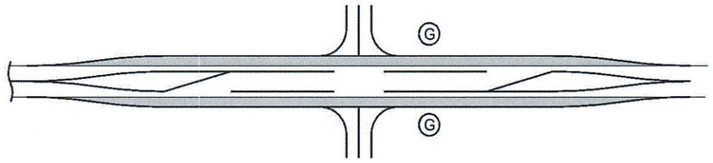
HMA PAVEMENT



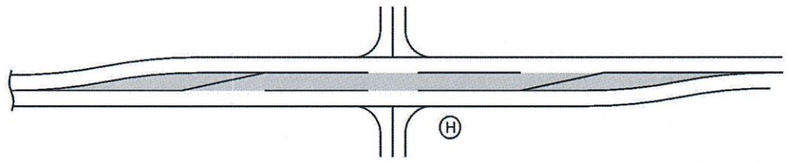
Typical Intersection



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						Bid Items: Binder			Bid Items				
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	Modified Subbase	Granular Subbase	Pavement Scarification	Remarks
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	TONS	SY	TONS	TONS	TONS	TONS	CY	SY	SY	
		63+90.50	65+03.00	30.0	112.5	375.0									31.0	375.0	15.5	375.0			1.9	0.9						ON PREVIOUS PAGE ↑
Iowa St	RT	580+66.00		40.0		102.2									11.3	102.3	5.7	104.3			0.7	0.3						
Iowa St	LT	580+66.00		40.0		102.2									11.3	102.3	5.7	104.3			0.7	0.3						
280th St	RT	746+81.60		10.0		82.1									9.1	82.2	9.2	83.8			0.5	0.6						
Beechnut Rd	LT	771+17.50		10.0		82.2									9.1	82.3	9.2	83.9			0.5	0.6						
290th St	RT	797+72.80		10.0		82.2									9.1	82.3	9.2	83.9			0.5	0.6						
110th St	RT	14+99.8 (CC)		10.0		84.4									9.3	84.5	9.5	86.1			0.6	0.6						
Birch Rd	LT	14+99.8 (CC)		10.0		86.7									9.6	86.8	9.7	88.4			0.6	0.6						
306th St	LT	54+93.0 (CC)		10.0		81.0									8.9	81.1	9.1	82.6			0.5	0.5						
US 52	LT	36+60.50		40.0		613.4									67.7	614.1	34.5	625.7			4.1	2.1						
Empire Dr	LT	45+94.00		30.0		203.0									22.4	203.2	11.4	207.1			1.3	0.7						
		(CC)= Clayton	County												16481.2	151125.5	16559.8	152578.2		136613.0	988.9	993.6	450.8				13706.7	TOTALS
DIVISION 2																												
280th St	RT	746+81.60		40.0		132.7									14.8	134.0	29.8	135.3			0.9	1.8						
Beechnut Rd	LT	771+17.50		40.0		160.3									17.8	161.9	36.0	163.5			1.1	2.2						
290th St	RT	797+72.80		40.0		160.2									17.8	161.8	36.0	163.4			1.1	2.2						
Birch Rd	LT	14+99.8 (CC)		40.0		178.0									19.8	179.8	40.0	181.6			1.2	2.4						
															70.3	637.5	142.0	643.8			4.2	8.5						TOTALS
DIVISION 3																												
110th St	RT	14+99.8 (CC)		40.0		169.1									18.8	170.8	38.0	172.5			1.1	2.3						
306th St	LT	54+93.0 (CC)		40.0		168.6									18.8	170.3	37.9	172.0			1.1	2.3						
															37.6	341.1	76.0	344.5			2.3	4.6						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															
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(G) Width	(L) Length	Class 13 (3) Excavation	Asphalt, Base Standard under, 58-34			6" Paved Shoulder	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks
														HMA Alternate		PCC Alternate					STA (2)	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		CY (4)	CY (4)	
		578+13.8	580+00.0	RT	4.0	6.0	186.2	16.1	31.5	16.9	1.9								45.6	24.5				
		580+00.0	597+00.0	RT		4.0	1700.0												297.5	17.5				
		597+00.0	603+50.0	RT		4.0	650.0	180.6				433.3		136.5	21.0				113.8	17.5				
		603+50.0	636+25.0	RT	4.0	6.0	3275.0	283.0	554.0	16.9	33.2								802.4	24.5				
		636+25.0	641+55.0	RT		4.0	530.0	147.2				353.3		111.3	21.0				92.8	17.5				
		641+55.0	659+55.0	RT	4.0	6.0	1800.0	155.6	304.5	16.9	18.3								441.0	24.5				
		659+55.0	663+65.0	RT		4.0	410.0	113.9				273.3		86.1	21.0				71.8	17.5				
		663+65.0	670+77.4	RT	4.0	6.0	712.4	61.6	120.5	16.9	7.2								174.5	24.5				
STA EQ		670+77.4	670+60.9	RT																				
		670+60.9	672+50.0	RT	4.0	6.0	189.1	16.3	32.0	16.9	1.9								46.3	24.5				
		672+50.0	734+50.0	RT		6.0	6200.0												1519.0	24.5				
		734+50.0	756+60.1	RT	4.0	6.0	2210.1	191.0	373.9	16.9	22.4								541.5	24.5				
STA EQ		756+60.1	758+40.4	RT																				
		758+40.4	788+00.0	RT	4.0	6.0	2959.6	255.8	500.7	16.9	30.0								725.1	24.5				
		788+00.0	806+00.0	RT		6.0	1800.0												441.0	24.5				
		806+00.0	840+20.3	RT		6.0	3420.3												838.0	24.5				
STA EQ		840+20.3	0+00.0 (CC)	RT																				
		0+00.0 (CC)	9+00.0 (CC)	RT		6.0	900.0												220.5	24.5				
		9+00.0 (CC)	15+50.0 (CC)	RT		6.0	650.0												159.3	24.5				
		15+50.0 (CC)	23+00.0 (CC)	RT	4.0	6.0	750.0	64.8	126.9	16.9	7.6								183.8	24.5				
		23+00.0 (CC)	77+73.0 (CC)	RT		6.0	5473.0												1340.9	24.5				
STA EQ		77+73.0 (CC)	+00.0	RT																				
		+00.0	18+75.0	RT		6.0	1875.0												459.4	24.5				
		18+75.0	46+50.5	RT	4.0	6.0	2775.5	239.9	469.5	16.9	28.2								680.0	24.5				
STA EQ		46+50.5	46+53.6	RT																				
		46+53.6	47+41.1	RT	4.0	6.0	87.5	6.5	12.7	14.5	0.8								21.4	24.5				6" Depth
		47+41.1	60+65.5	RT	4.0	6.0	1324.4	98.1	192.0	14.5	11.5								324.5	24.5				6" Depth
		60+65.5	61+25.5	RT	4.0	6.0	60.0	4.4	8.7	14.5	0.5								14.7	24.5				6" Depth
		578+13.8	580+00.0	LT	4.0	6.0	186.2	16.1	31.5	16.9	1.9								45.6	24.5				
		580+00.0	585+00.0	LT		0.5	500.0												26.3	5.3				
		585+00.0	597+70.0	LT	4.0	6.0	1270.0	109.8	214.8	16.9	12.9								311.2	24.5				
		597+70.0	612+00.0	LT		0.5	1430.0												75.1	5.3				
		612+00.0	670+77.4	LT	4.0	6.0	5877.4	507.9	994.3	16.9	59.7								1440.0	24.5				
STA EQ		670+77.4	670+60.9	LT																				
		670+60.9	672+50.0	LT	4.0	6.0	189.1	16.3	32.0	16.9	1.9								46.3	24.5				
		672+50.0	734+50.0	LT		6.0	6200.0												1519.0	24.5				
		734+50.0	756+60.1	LT	4.0	6.0	2210.1	191.0	373.9	16.9	22.4								541.5	24.5				
STA EQ		756+60.1	758+40.4	LT																				
		758+40.4	788+00.0	LT	4.0	6.0	2959.6	255.8	500.7	16.9	30.0								725.1	24.5				
		788+00.0	806+00.0	LT		6.0	1800.0												441.0	24.5				
		806+00.0	840+20.3	LT		6.0	3420.3												838.0	24.5				
STA EQ		840+20.3	0+00.0 (CC)	LT																				
		0+00.0 (CC)	9+00.0 (CC)	LT		6.0	900.0												220.5	24.5				
		9+00.0 (CC)	15+50.0 (CC)	LT		6.0	650.0												159.3	24.5				
		15+50.0 (CC)	23+00.0 (CC)	LT	4.0	6.0	750.0	64.8	126.9	16.9	7.6								183.8	24.5				
		23+00.0 (CC)	77+73.0 (CC)	LT		6.0	5473.0												1340.9	24.5				
STA EQ		77+73.0 (CC)	+00.0	LT																				
		+00.0	18+75.0	LT		6.0	1875.0												459.4	24.5				
		18+75.0	46+50.5	LT	4.0	6.0	2775.5	239.9	469.5	16.9	28.2								680.0	24.5				
		(CC)= Clayton	County					3236.3	5470.4		328.2	1060.0		333.9					18607.2					TOTALS

MACADAM EAST OF CLERMONT

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
SLW4: Solid Lane Line (White) @ 1.00

Location							Length by Line Type (Unfactored)															Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW4									
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
After CIP																						
	578+13.8	585+50.0	BOTH	Waterborne/Solvent Paint	x	x	x	7.4				14.7		0.2								
	585+50.0	597+02.0	BOTH	Waterborne/Solvent Paint	x	x	x			11.5	11.5	23.0										
	597+02.0	615+50.0	BOTH	Waterborne/Solvent Paint	x	x	x		18.5		18.5	37.0										
	615+50.0	629+11.0	BOTH	Waterborne/Solvent Paint	x	x	x		13.6			27.2										
	629+11.0	640+54.0	BOTH	Waterborne/Solvent Paint	x	x	x			11.4		22.9										
	640+54.0	668+05.0	BOTH	Waterborne/Solvent Paint	x	x	x	27.5				55.0										
	668+05.0	670+77.4	BOTH	Waterborne/Solvent Paint	x	x	x			2.7		5.4										
STA EQ	670+77.4	670+60.9																				
	670+60.9	677+82.0	BOTH	Waterborne/Solvent Paint	x	x	x			7.2		14.4										
	677+82.0	695+84.0	BOTH	Waterborne/Solvent Paint	x	x	x		18.0			36.0										
	695+84.0	702+64.0	BOTH	Waterborne/Solvent Paint	x	x	x			6.8		13.6										
	702+64.0	706+57.0	BOTH	Waterborne/Solvent Paint	x	x	x		3.9			7.9										
	706+57.0	711+83.0	BOTH	Waterborne/Solvent Paint	x	x	x			5.3		10.5										
	711+83.0	716+60.0	BOTH	Waterborne/Solvent Paint	x	x	x			4.8		9.5										
	716+60.0	722+82.0	BOTH	Waterborne/Solvent Paint	x	x	x		6.2			12.4										
	722+82.0	727+85.0	BOTH	Waterborne/Solvent Paint	x	x	x			5.0		10.1										
	727+85.0	736+79.0	BOTH	Waterborne/Solvent Paint	x	x	x			8.9		17.9										
	736+79.0	738+43.0	BOTH	Waterborne/Solvent Paint	x	x	x		1.6			3.3										
	738+43.0	746+82.0	BOTH	Waterborne/Solvent Paint	x	x	x			8.4		16.8										
	746+82.0	753+21.0	BOTH	Waterborne/Solvent Paint	x	x	x		6.4			12.8		0.3								
	753+21.0	756+60.1	BOTH	Waterborne/Solvent Paint	x	x	x			3.4		6.8										
STA EQ	756+60.1	758+40.4																				
	758+40.4	762+98.0	BOTH	Waterborne/Solvent Paint	x	x	x			4.6		9.2										
	762+98.0	792+26.0	BOTH	Waterborne/Solvent Paint	x	x	x	29.3				58.6		0.3								
	792+26.0	807+15.0	BOTH	Waterborne/Solvent Paint	x	x	x			14.9		29.8		0.3								
	807+15.0	811+10.0	BOTH	Waterborne/Solvent Paint	x	x	x		4.0			7.9										
	811+10.0	816+92.0	BOTH	Waterborne/Solvent Paint	x	x	x			5.8		11.6										
	816+92.0	840+20.3	BOTH	Waterborne/Solvent Paint	x	x	x		23.3			46.6										
STA EQ	840+20.3	0+00.0 (CC)																				
	0+00.0 (CC)	2+62.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x		262.0			524.0										
	2+62.0 (CC)	9+46.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			684.0		1368.0										
	9+46.0 (CC)	12+48.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x		302.0			604.0										
	12+48.0 (CC)	18+37.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			589.0		1178.0		0.6								
	18+37.0 (CC)	18+87.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x	50.0				100.0										
	18+87.0 (CC)	23+92.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			505.0		1010.0										
	23+92.0 (CC)	25+95.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x		203.0			406.0										
	25+95.0 (CC)	33+35.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			740.0		1480.0										
	33+35.0 (CC)	48+69.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x		1534.0			3068.0										
	48+69.0 (CC)	58+00.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			931.0		1862.0		0.4								
	58+00.0 (CC)	73+14.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x	1514.0				3028.0										
	73+14.0 (CC)	77+73.0 (CC)	BOTH	Waterborne/Solvent Paint	x	x	x			459.0		918.0										
STA EQ	77+73.0 (CC)	+00.0																				
	+00.0	6+46.0	BOTH	Waterborne/Solvent Paint	x	x	x			6.5		12.9										
	6+46.0	19+28.0	BOTH	Waterborne/Solvent Paint	x	x	x		12.8			25.6										
	19+28.0	28+37.0	BOTH	Waterborne/Solvent Paint	x	x	x			9.1		18.2										
	28+37.0	30+63.0	BOTH	Waterborne/Solvent Paint	x	x	x	2.3				4.5										
	30+63.0	36+60.0	BOTH	Waterborne/Solvent Paint	x	x	x			6.0		11.9		0.4								
	36+60.0	41+24.0	BOTH	Waterborne/Solvent Paint	x	x	x			4.6		9.3	4.6									
	41+24.0	45+29.0	BOTH	Waterborne/Solvent Paint	x	x	x			4.1		8.1										
	45+29.0	46+50.5	BOTH	Waterborne/Solvent Paint	x	x	x		1.2			2.4		0.3								
STA EQ	46+50.5	46+53.6																				
	46+53.6	59+89.0	BOTH	Waterborne/Solvent Paint	x	x	x		13.4			26.7										
	59+89.0	61+46.2	BOTH	Waterborne/Solvent Paint	x	x	x			1.6		3.1										
STA EQ	61+46.2	60+35.3																				
	60+35.3	65+03.0	BOTH	Waterborne/Solvent Paint	x	x	x			4.7		9.4										
After Intermediate			BOTH	Waterborne/Solvent Paint	x	x	x	1630.4	2423.9	4045.2		16199.1										
After Surface			BOTH	Waterborne/Solvent Paint	x	x	x	1630.4	2423.9	4045.2		16199.1										
Grooving			BOTH	Grooves Cut for Pavement Markings	x	~~x~~	x					16199.1	MAKE JUST EDGE, NO CENTERLINE B/C RUMBLE									
After Grooving			BOTH	Waterborne/Solvent Paint	x	x	x	1630.4	2423.9	4045.2		16199.1										
	(CC)= Clayton	County																				
				Factored Total: Waterborne/Solvent Paint				1630.4	19391.3	20226.1	7.5	64796.3	4.6	2.7	-	-	-	-	-	-	-	-
				Factored Total: Grooves Cut for Pavement Markings				-	-	-	-	16199.1	-	-	-	-	-	-	-	-	-	-
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							106058.9											
				Bid Quantity: Grooves Cut for Pavement Markings							16199.1											

108-29
04-21-15

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location		STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCLW	XNGW	STPW	AHDW	ONLW	BIKW	LANW	XITW	Groove Cuts	Remarks
	Station	Side															SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT		
																									EACH	
US 18	37+37.00	LT		1																					1	
	38+12.00	LT		1																					1	
				2																					2	TOTALS

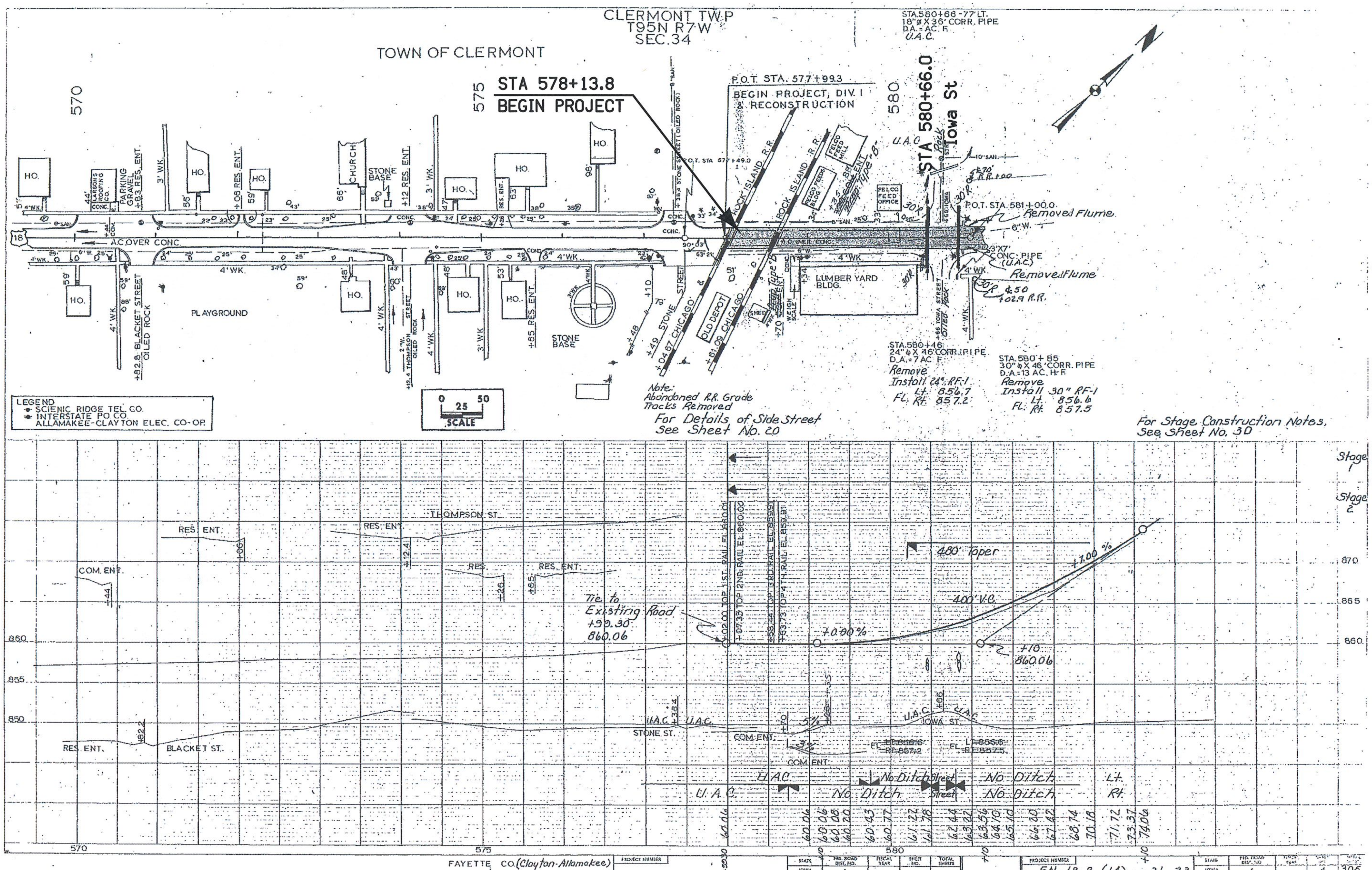
112-10
04-16-19

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	
	578+64.00	670+77.38	HMA	Right Shoulder		92.13	99.9				
STA EQ	670+77.38	670+60.88									
	670+60.88	756+60.08	HMA	Right Shoulder		85.99	93.2				
STA EQ	756+60.08	758+40.35									
	758+40.35	840+20.30	HMA	Right Shoulder		81.80	88.7				
STA EQ	840+20.30	0+00.0 (CC)									
	0+00.0 (CC)	77+72.99 (CC)	HMA	Right Shoulder		77.73	84.3				
STA EQ	77+72.99 (CC)	+00.00									
	+00.00	46+50.48	HMA	Right Shoulder		46.50	50.4				
STA EQ	46+50.48	46+53.63									
	46+53.63	61+46.17	HMA	Right Shoulder		14.93	16.2				
STA EQ	61+46.17	60+35.25									
	60+35.25	65+03.00	HMA	Right Shoulder		4.68	5.1				
	578+64.00	670+77.38	HMA	Left Shoulder		92.13	99.9				
STA EQ	670+77.38	670+60.88									
	670+60.88	756+60.08	HMA	Left Shoulder		85.99	93.2				
STA EQ	756+60.08	758+40.35									
	758+40.35	840+20.30	HMA	Left Shoulder		81.80	88.7				
STA EQ	840+20.30	0+00.0 (CC)									
	0+00.0 (CC)	77+72.99 (CC)	HMA	Left Shoulder		77.73	84.3				
STA EQ	77+72.99 (CC)	+00.00									
	+00.00	46+50.48	HMA	Left Shoulder		46.50	50.4				
STA EQ	46+50.48	46+53.63									
	46+53.63	61+46.17	HMA	Left Shoulder		14.93	16.2				
STA EQ	61+46.17	60+35.25									
	60+35.25	65+03.00	HMA	Left Shoulder		4.68	5.1				
	578+64.00	670+77.38	HMA	Centerline		92.13	0.0				
STA EQ	670+77.38	670+60.88									
	670+60.88	756+60.08	HMA	Centerline		85.99	0.0				
STA EQ	756+60.08	758+40.35									
	758+40.35	840+20.30	HMA	Centerline		81.80	0.0				
STA EQ	840+20.30	0+00.0 (CC)									
	0+00.0 (CC)	77+72.99 (CC)	HMA	Centerline		77.73	0.0				
STA EQ	77+72.99 (CC)	+00.00									
	+00.00	46+50.48	HMA	Centerline		46.50	0.0				
STA EQ	46+50.48	46+53.63									
	46+53.63	61+46.17	HMA	Centerline		14.93	0.0				
STA EQ	61+46.17	60+35.25									
	60+35.25	65+03.00	HMA	Centerline		4.68	0.0				
	(CC)= Clayton	County				807.53	875.6				TOTAL- SHOULDER
						403.76					TOTAL- CENTERLINE



AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM	COUNTY	PROJECT NUMBER	NHSX-018-8(46)--2R-33	SHEET NUMBER	D.1

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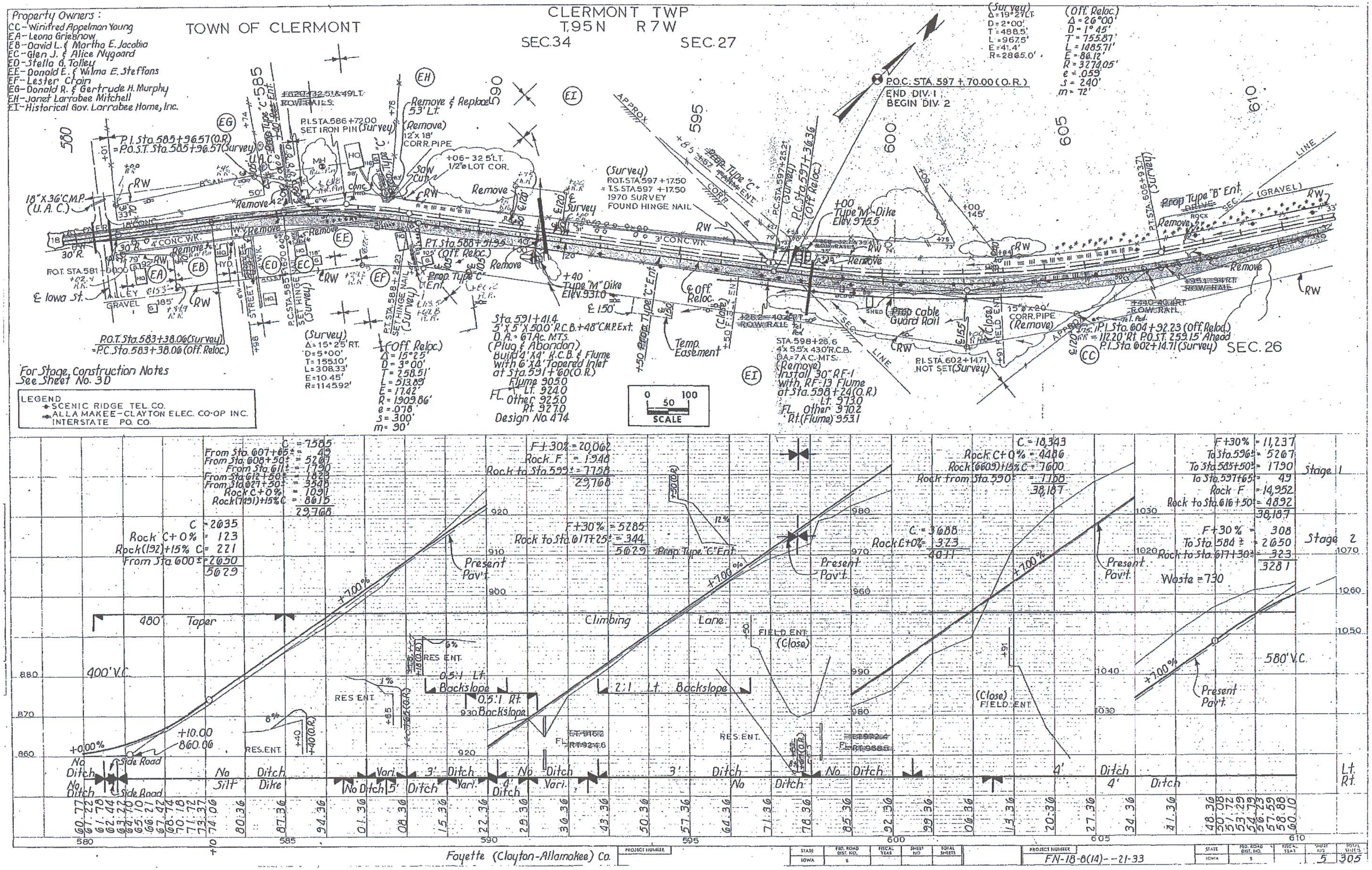

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.2

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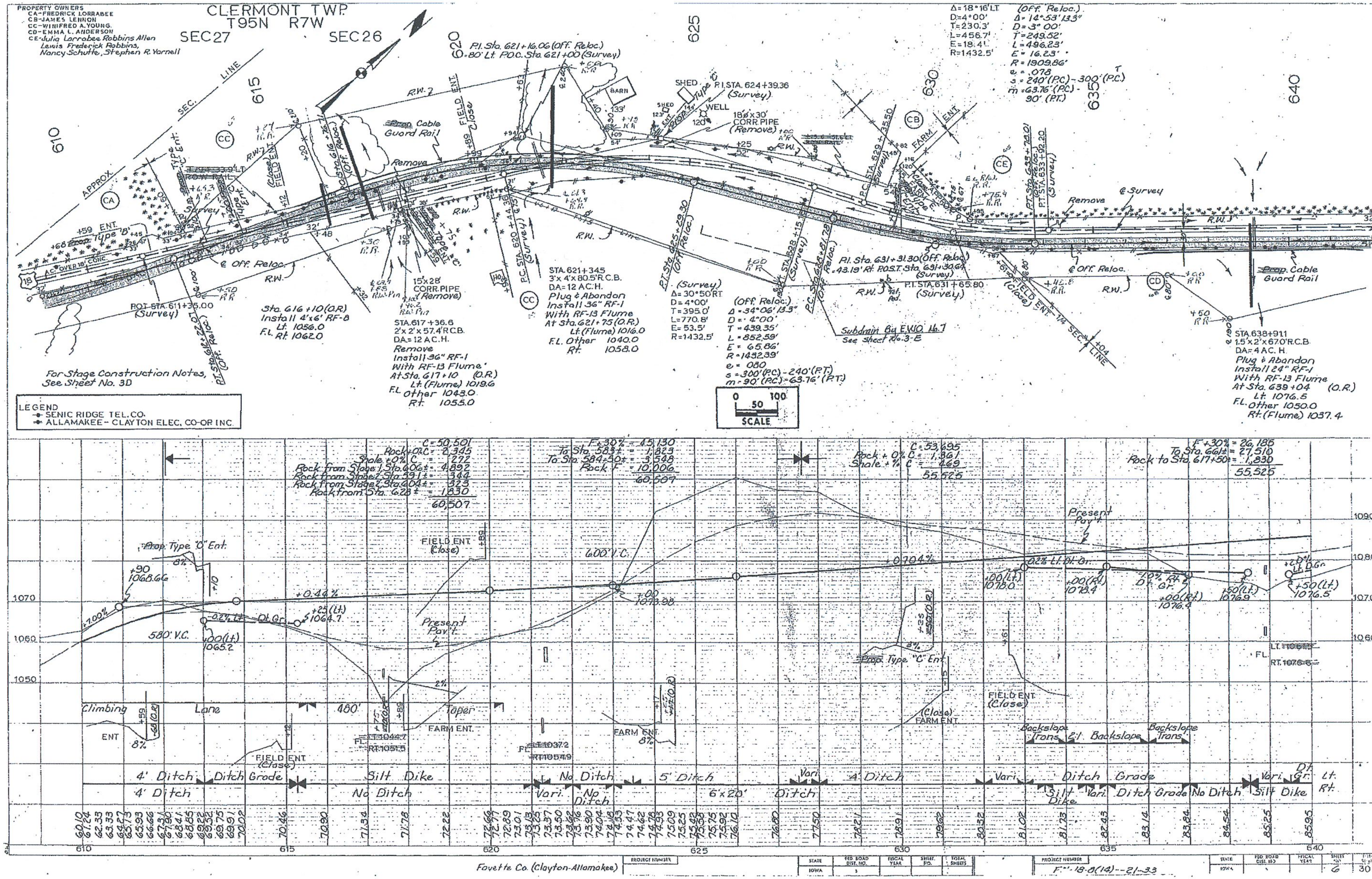
PROPERTY OWNERS
CA-FREDRICK LORRABEE
CB-JAMES LENNON
CC-WINIFRED A. YOUNG
CD-EMMA L. ANDERSON
CE-Julia Lorrabee Robbins Allen, Lewis Frederick Robbins, Nancy Schutte, Stephen R. Yarnell
CLERMONT TWP.
T95N R7W
SEC27
SEC26
P.I. Sta. 621+16.06 (Off. Reloc.)
0.80' Lt. P.O.C. Sta. 621+00 (Survey)
P.I. STA. 624+39.36 (Survey)
18"x30' CORR. PIPE (Remove)
Prop. Cable Guard Rail
Δ=18°16' LT.
D=4°00'
T=230.3'
L=456.7'
E=18.4'
R=1432.5'
(Off. Reloc.)
Δ= 14°53'13.3"
D= 3° 00'
T= 249.52'
L= 496.23'
E= 16.23'
R= 1909.86'
e= .078
s= 240'(P.C.)- 300'(P.T.)
m= 63.76'(P.C.)-90'(P.T.)
POT STA. 611+35.00 (Survey)
Sta. 616+10 (O.R.) Install 4'x6' RF-8
F.L. Lt. 1056.0 Rt. 1062.0
15"x28' CORR. PIPE (Remove)
STA. 617+36.6
2'x2'x57.4' R.C.B.
DA=12 AC.H.
Remove
Install 36" RF-1 With RF-13 Flume At Sta. 617+10 (O.R.)
F.L. Lt. (Flume) 1019.6 Other 1043.0 Rt. 1055.0
STA. 621+34.5
3'x4'x80.5' R.C.B.
DA=12 AC.H.
Plug & Abandon
Install 36" RF-1 With RF-13 Flume At Sta. 621+75 (O.R.)
F.L. Lt. (Flume) 1016.0 Other 1040.0 Rt. 1058.0
(Survey)
Δ=30°50' RT
D=4°00'
T=395.0'
L=770.8'
E=53.5'
R=1432.5'
(Off. Reloc.)
Δ= 34°06'13.3"
D= 4°00'
T= 439.35'
L= 852.59'
E= 65.86'
R= 1432.39'
e= .080
s= 300'(P.C.)-240'(P.T.)
m= 90'(P.C.)-63.76'(P.T.)
P.I. Sta. 631+31.30 (Off. Reloc.)
43.19' Rt. P.O.S.T. Sta. 631+30.69 (Survey)
P.I. STA. 631+65.80 (Survey)
Subdrain By E.W.O. No. 7
See Sheet No. 3-E
STA. 638+91.1
1.5'x2'x67.0' R.C.B.
DA=4 AC.H.
Plug & Abandon
Install 24" RF-1 With RF-13 Flume At Sta. 639+04 (O.R.)
F.L. Lt. 1076.5 Other 1050.0 Rt. (Flume) 1037.4
For Stage Construction Notes, See Sheet No. 3D
LEGEND
SENIC RIDGE TEL. CO.
ALLAMAKEE-CLAYTON ELEC. CO-OP INC.
0 50 100
SCALE
C=50,501
Rock + 0% C = 2,345
Shale + 0% C = 272
Rock from Stage 1, Sta. 606± = 4,892
Rock from Stage 1, Sta. 591± = 344
Rock from Stage 1, Sta. 404± = 323
Rock from Sta. 628± = 1,830
60,507
F + 30% = 45,130
To Sta. 583± = 1,823
To Sta. 584+50± = 3,548
Rock F = 10,006
60,507
C = 53,695
Rock + 0% C = 1,361
Shale + % C = 469
55,525
F + 30% = 26,185
To Sta. 661± = 27,510
Rock to Sta. 617+50± = 1,830
55,525
+0.44%
+0.704%
580' V.C.
600' V.C.
+1.00%
Present Pav't.
Climbing Lane
480'
Taper
4' Ditch
Ditch Grade
Silt Dike
No Ditch
5' Ditch
6'x20'
Vari.
Backslope Trans.
E.I. Backslope
Dt. Gr.
Lt.
Rt.
Fayette Co. (Clayton-Allamakee)
F.-18-8(14)--21-33
IOWA
6
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM	COUNTY	PROJECT NUMBER	NHSX-018-8(46)--2R-33	SHEET NUMBER	D.3

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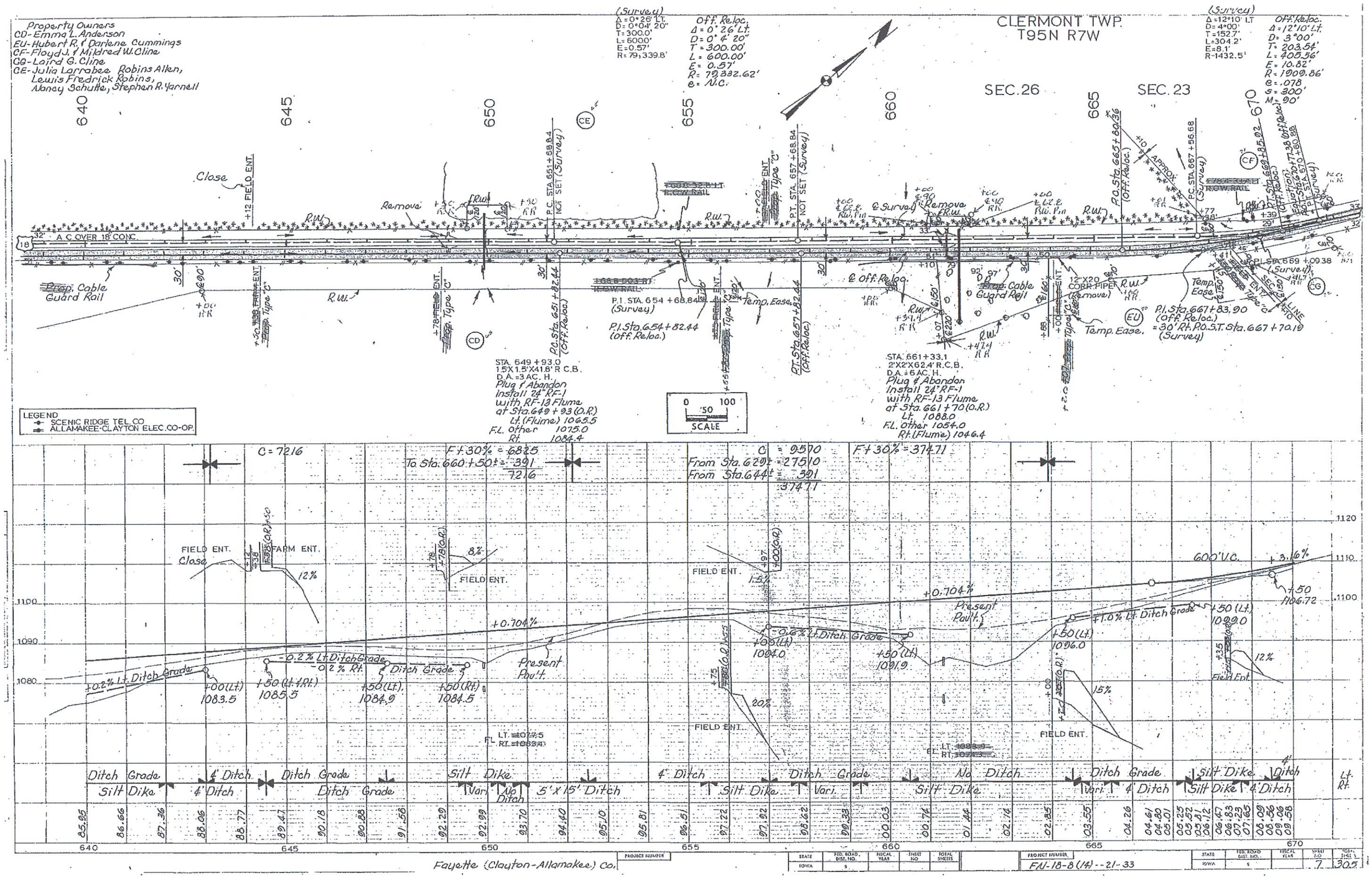

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.4

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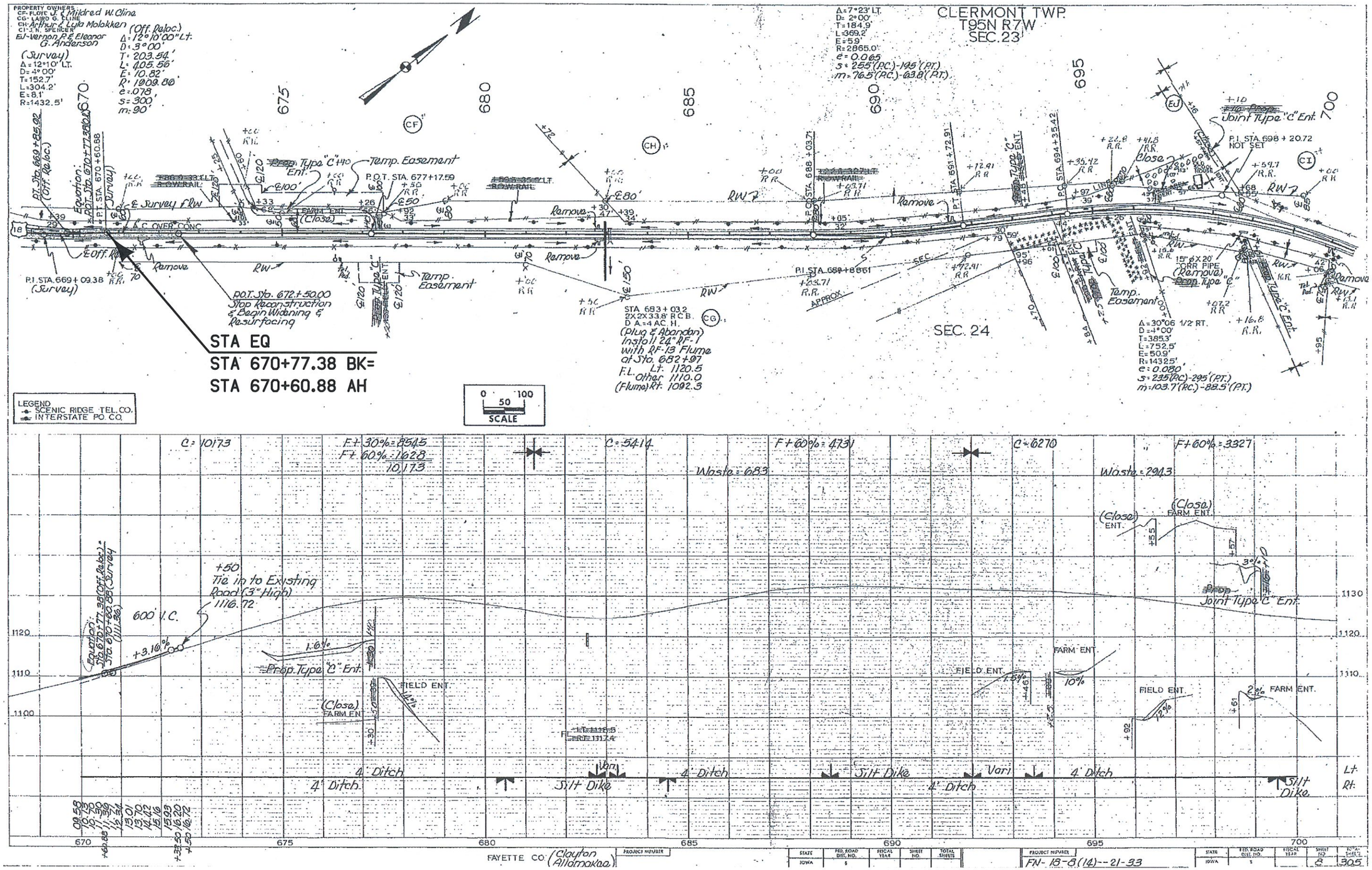

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.5

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PROPERTY OWNERS
CI-J.N. SPENCER
CJ-LLOYD N. AMES
CK-Millard Nelson, Jr. & La Vonne Nelson
CL-ED HEINES

Δ=29°23 1/2' LT.
D=4°00'
T=375.7'
L=734.8'
E=48.5'
R=1432.5'
e=0.080'
S=2.95'
m=88.5'

CLERMONT TWP.
T95N R7W
SEC. 24

Subdrain No.1
See Sheet No.3E

STA. 701+46.2
2'X2'X36.7' R.C.B.
D.A.=3 1/2 AC. H.
Plug & Abandon
Install 24"RF-1
at Sta. 701+40
FL. Lt 1119.5
Rt 1112.0

P.I. STA 711+64.00

P.I. Sta 729+16.38 (Off. Reloc.)
= P.O.T. Sta. 729+16.38
(Survey)

P.I. STA 731+27.80
NOT SET (Survey)

(Survey)
Δ=65°51' RT.
D=4°20'
T=856.3'
L=1519.6'
E=253.0'
R=1322.4'

(Off Reloc.)
Δ=52°00' RT.
D=4°20'
T=644.88'
L=1200.00'
E=148.80'
R=1322.21'
e=0.80'
S=2.95'(P.C.)-2.40'(P.T.)
m=88.5'(P.C.)-39.0'(P.T.)

LEGEND
SCENIC RIDGE TEL. CO.
INTERSTATE PO. CO.

0 50 100
SCALE

C=6604

E+60%=2786
To Sta. 727+1750
4536

Waste=2068

C=1921
From Sta. 711+1750
3671

F+60%=3671

Prop. Type "C" FIELD ENT. 9%
Prop. Type "C" FARM ENT. 9%
Farm ENT. 0%
Prop. Type "C" FARM ENT. 4%
Prop. Type "C" FARM ENT. 8%

+00(Lt) 1143.3
+045% Lt. Ditch Grade
+00(Lt) 1144.7
+00(Lt) 1147.6
-12% Lt. Ditch Grade
+50(Lt) 1146.0

4' Ditch | Vari | Silt | Dike | 4' Ditch | 4' Ditch | 3' Ditch | Ditch Grade | 4' Ditch | Vari | 3' Ditch | Ditch Grade | 4' Ditch | Silt | Dike | Silt | Dike | Lt / Rt

Fayette (Clayton-Allamakee) Co.

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
FN-18-8(14)--21-33	IOWA	S		9	302

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.6

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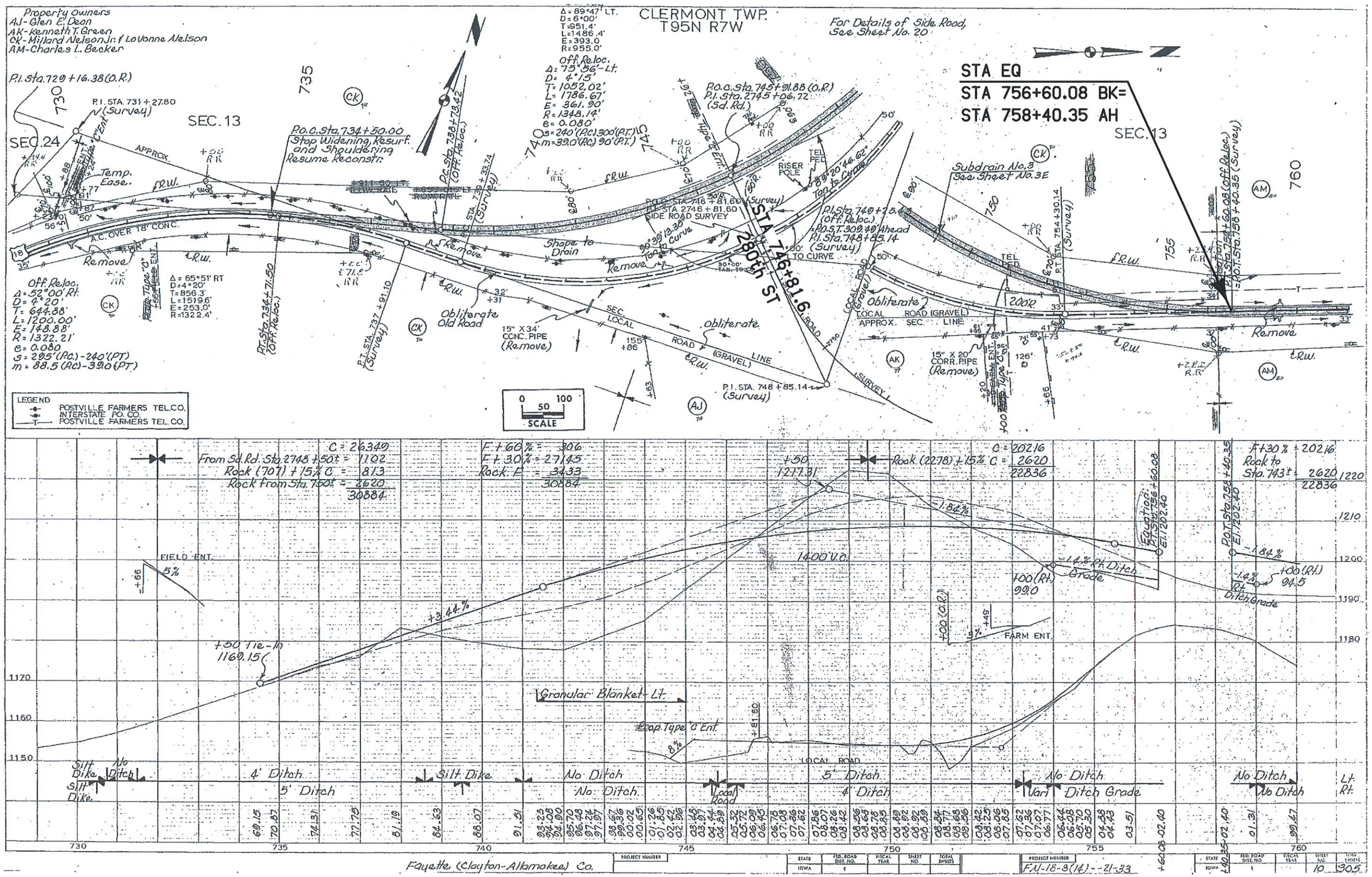

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.7

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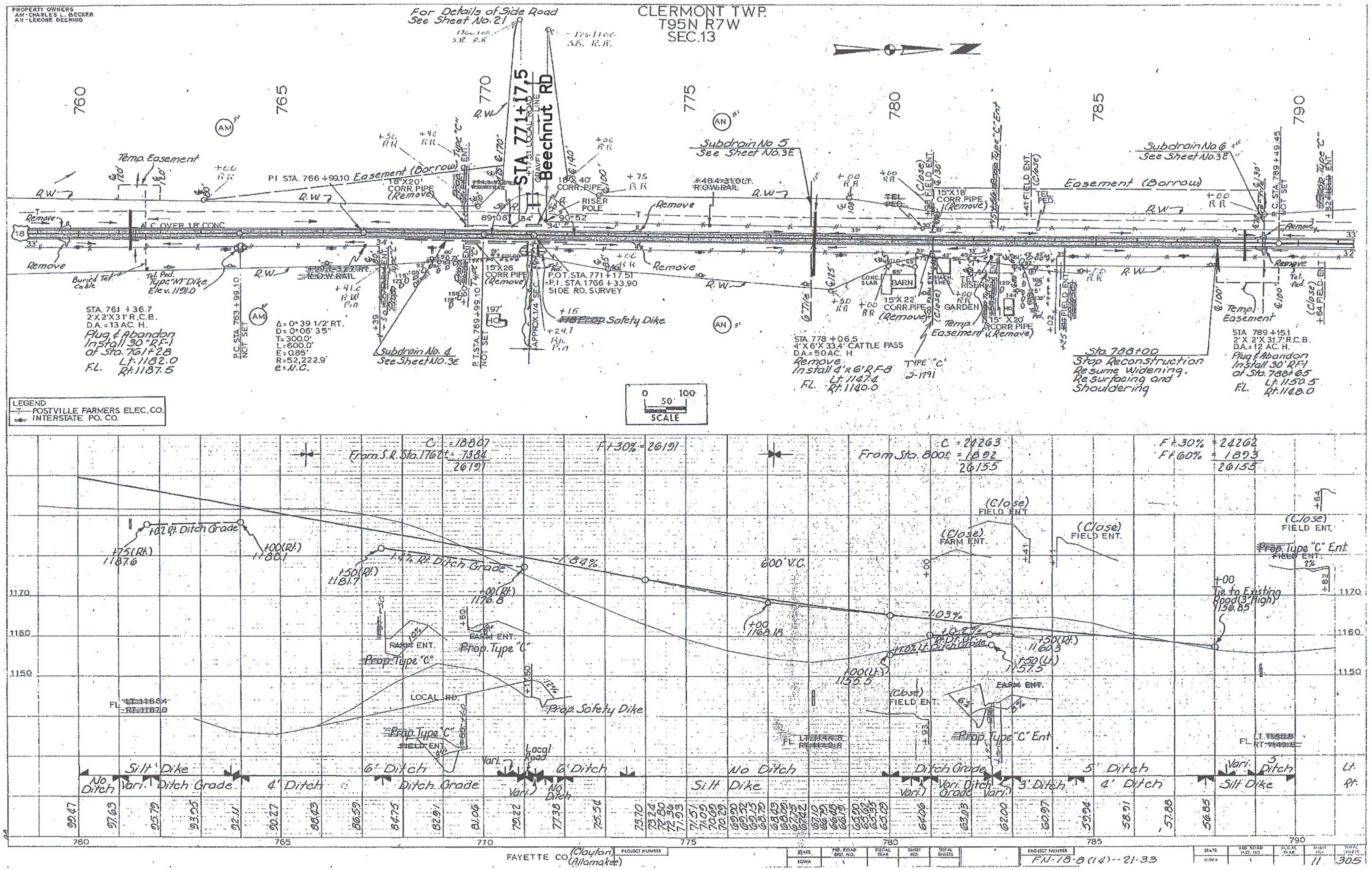
PROPERTY OWNERS
AM - CHARLES L. BECKER
AN - LEONE DEERING
For Details of Side Road See Sheet No. 21
CLERMONT TWP.
T95N R7W
SEC.13
STA. 771+17.5
Beechnut RD
Temp. Easement
P.I. STA. 766+99.10
Easement (Borrow)
18"X20' CORR. PIPE (Remove)
18"X40' CORR. PIPE
RISER POLE
Subdrain No. 5 See Sheet No. 3E
Easement (Borrow)
Subdrain No. 6 See Sheet No. 3E
P.C. STA. 789+49.45 NOT SET
Remove
Buried Tel. Cable
Tel. Ped.
Type "M" Dike Elev. 1191.0
15"X26' CORR. PIPE (Remove)
P.O.T. STA. 771+17.51
=P.I. STA. 1766+33.90
SIDE RD. SURVEY
Prop. Safety Dike
STA. 761+36.7
2'X2'X31' R.C.B.
D.A.=13 AC. H.
Plug & Abandon
Install 30' RF-1
at Sta. 761+28
Lt. 1182.0
FL. Rt. 1187.5
P.C. STA. 763+99.10 NOT SET
Δ=0°39 1/2' RT.
D=0°06'35"
T=300.0'
L=600.0'
E=0.86'
R=52,222.9'
e=N.C.
Subdrain No. 4 See Sheet No. 3E
P.T. STA. 769+99.10 NOT SET
BARN
15"X22' CORR. PIPE (Remove)
GARDEN
Temp. Easement
15"X20' CORR. PIPE (Remove)
STA. 778+06.5
4'X6'X33.4' CATTLE PASS
D.A.=50 AC. H.
Remove
Install 4'x6' RF-8
Lt. 1147.4
FL. Rt. 1140.0
Sta. 788+00
Stop Reconstruction
Resume Widening,
Resurfacing and
Shouldering
STA. 789+15.1
2'X2'X31.7' R.C.B.
D.A.=12 AC. H.
Plug & Abandon
Install 30' RF-1
at Sta. 788+65
Lt. 1150.5
FL. Rt. 1148.0
LEGEND
POSTVILLE FARMERS ELEC. CO.
INTERSTATE PO. CO.
SCALE
From S.R. Sta. 1762+
F+30% = 26191
From Sta. 800+
600' V.C.
-1.84%
-1.03%
Tie to Existing Road (3" High)
Prop. Type "C"
LOCAL RD.
Prop. Safety Dike
Silt Dike
No Ditch
Ditch Grade
4' Ditch
6' Ditch
No Ditch
Silt Dike
Ditch Grade
3' Ditch
5' Ditch
4' Ditch
Silt Dike
FAYETTE CO. (Clayton) (Allamakee)
FN-18-8(14)--21-33
IOWA
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.8

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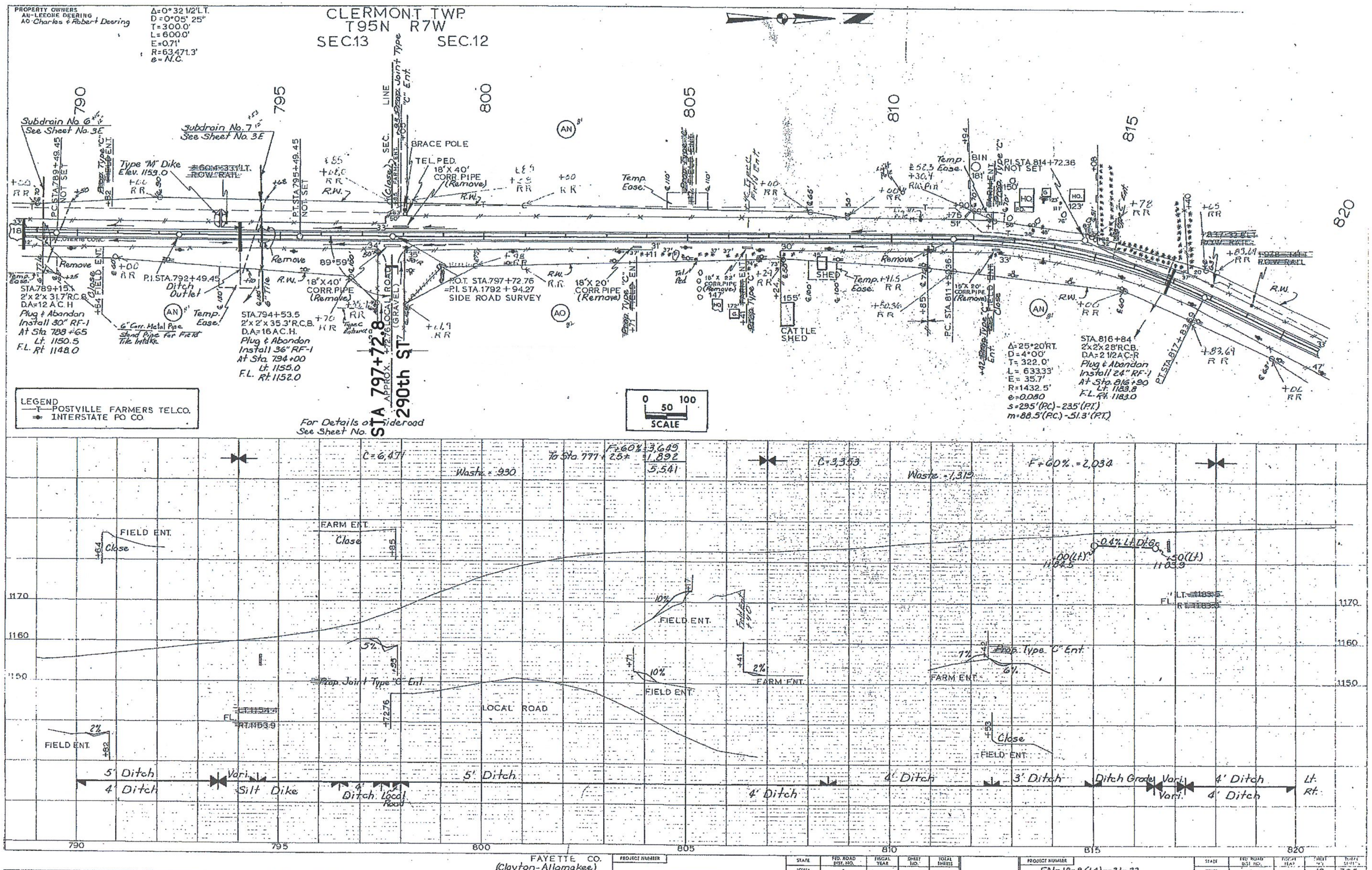
PROPERTY OWNERS
AN-LEEONE DEERING
AO-Charles & Robert Deering
Δ=0°32 1/2'LT.
D=0°05' 25"
T=300.0'
L=600.0'
E=0.71'
R=63471.3'
e=N.C.
CLERMONT TWP.
T95N R7W
SEC.13
SEC.12
790
795
800
805
810
815
820
Subdrain No. 6
See Sheet No. 3E
Subdrain No. 7
See Sheet No. 3E
Type "M" Dike
Elev. 1153.0
ROW RAIL
SEC. LINE
BRACE POLE
TEL.PED.
18"X 40' CORR. PIPE (Remove)
Temp. Ease.
P.C.STA.789+49.45 NOT SET
P.T.STA.795+49.45 NOT SET
P.I.STA.792+49.45
Ditch Outlet
Remove
STA.789+15
2'x 2'x 31.7' R.C.B.
D.A.=12 A.C.
Plug & Abandon
Install 30" RF-1
At Sta. 788+65
Lt. 1150.5
F.L. Rt. 1148.0
6" Corr. Metal Pipe Stand Pipe for Field Tile Intake
STA.794+53.5
2'x 2'x 35.3' R.C.B.
D.A.=16 A.C.
Plug & Abandon
Install 36" RF-1
At Sta. 794+00
Lt. 1155.0
F.L. Rt. 1152.0
18"X 40' CORR. PIPE (Remove)
STA 797+72.8
APPROX. 290th ST
LOCAL ROAD (GRAVEL)
P.O.T. STA.797+72.76 = P.I. STA.1792+94.27 SIDE ROAD SURVEY
18"X 20' CORR. PIPE (Remove)
SHED
CATTLE SHED
Temp. Ease.
P.C. STA. 811+50.36
BIN
P.I.STA.814+72.36 NOT SET
HO.
Δ=25°20' RT.
D=4°00'
T=322.0'
L=633.33'
E=35.7'
R=1432.5'
e=0.080
s=295'(P.C.)-235'(P.T.)
m=88.5'(P.C.)-51.3'(P.T.)
STA.816+84
2'x 2'x 28' R.C.B.
D.A.=2 1/2 A.C.
Plug & Abandon
Install 24" RF-1
At Sta. 816+90
Lt. 1183.8
F.L. Rt. 1183.0
P.T. STA. 817+83.69
LEGEND
POSTVILLE FARMERS TEL.CO.
INTERSTATE PO CO
SCALE
0 50 100
For Details of Sideroad See Sheet No.
C=6,471
Waste = 930
To Sta. 777
F+60% = 3,649
1,892
5,541
C=3,353
Waste = 1,319
F+60% = 2,034
FIELD ENT.
Close
FARM ENT.
Close
1170
1160
1150
Prop. Joint Type "C" Ent.
LOCAL ROAD
FIELD ENT.
FARM ENT.
Prop. Type "C" Ent.
0.4% Lt. Dike
5' Ditch
4' Ditch
Vari.
Silt Dike
Ditch
Local Road
3' Ditch
Ditch Grade
4' Ditch
Lt.
Rt.
FAYETTE CO.
(Clayton-Allamakee)
PROJECT NUMBER
STATE
IOWA
FN-18-8(14)--21-33
12
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM	COUNTY	PROJECT NUMBER	NHSX-018-8(46)--2R-33	SHEET NUMBER	D.9

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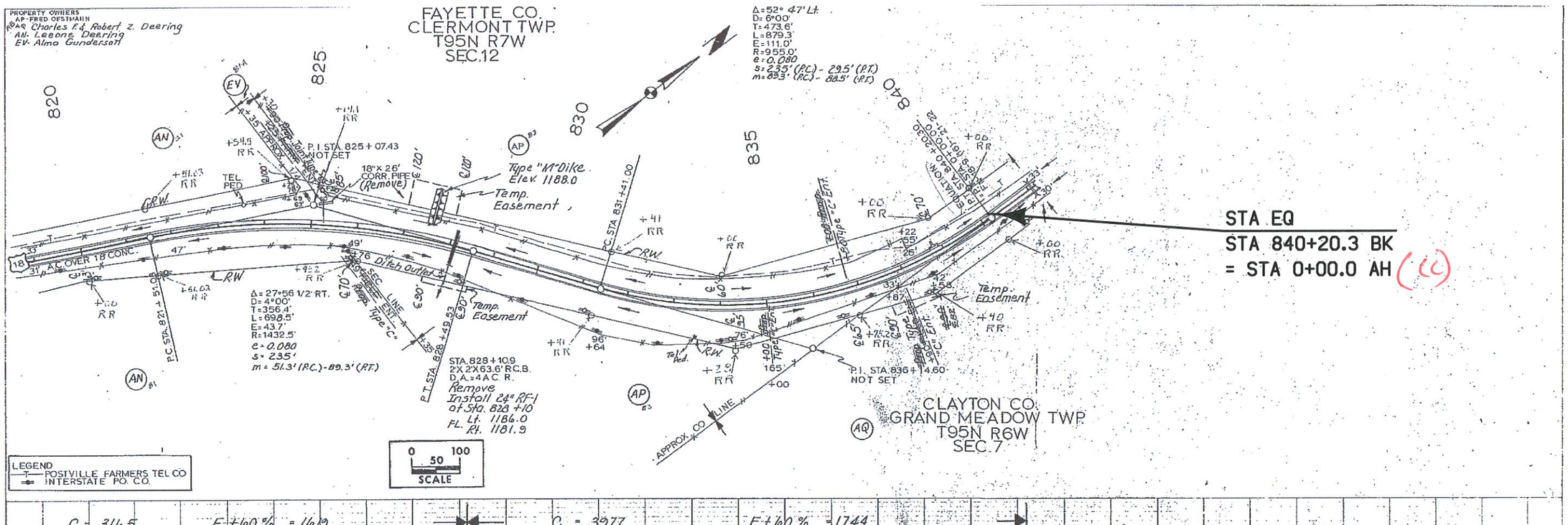

AS-BUILT PLANS, FOR INFORMATION ONLY

STATE	FED. ROAD PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	$			1

PROJECT NUMBER	STATE	FED. ROAD PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN-18-8(14)--21-33	IOWA	$		13	305

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.10

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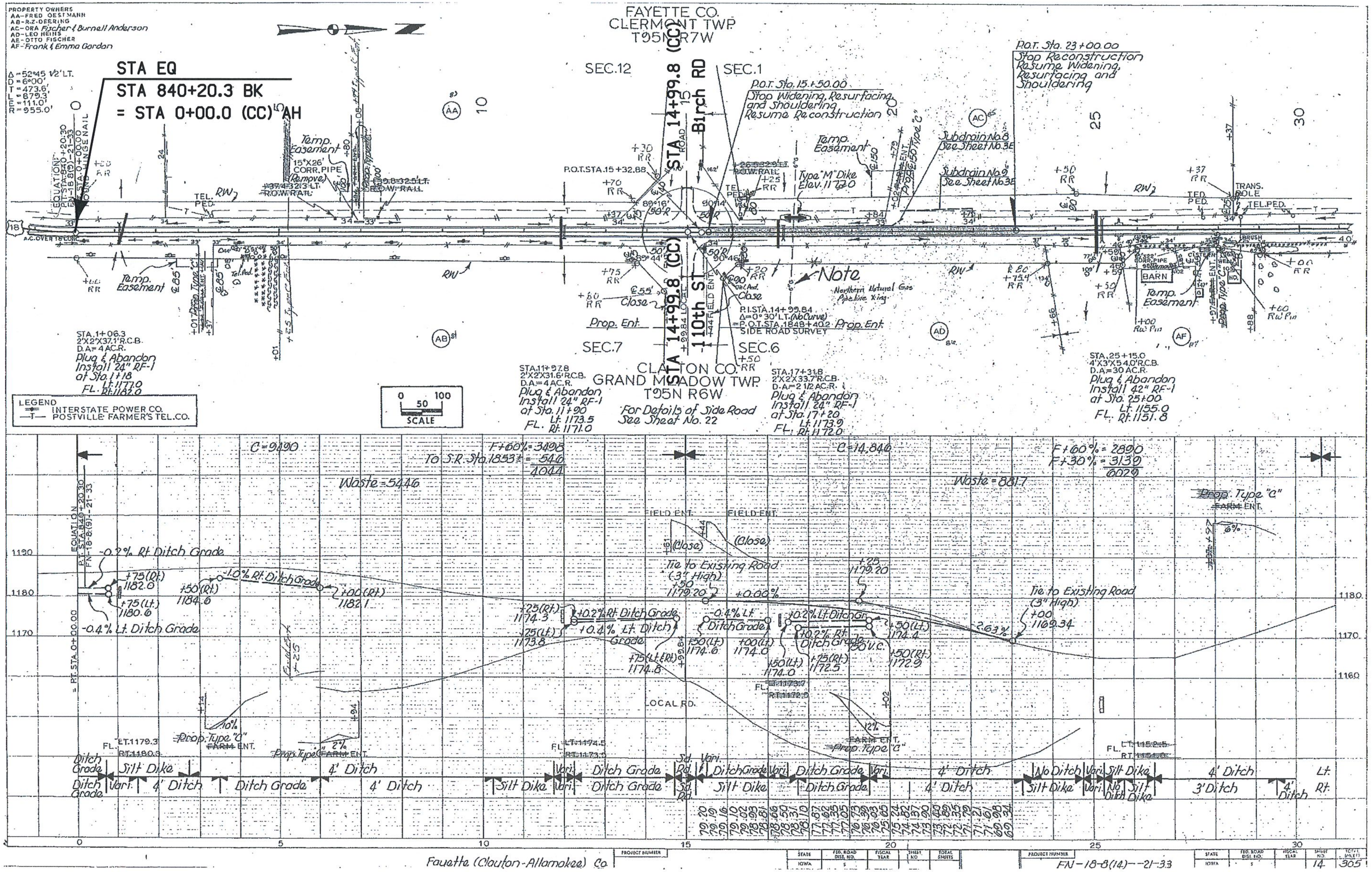
PROPERTY OWNERS
AA-FRED OESTMANN
AB-R.Z. DEERING
AC-ORA Fischer & Burnell Anderson
AD-LEO HEINS
AE-OTTO FISCHER
AF-Frank & Emma Gordon
FAYETTE CO.
CLERMONT TWP.
T95N R7W
STA EQ
STA 840+20.3 BK
= STA 0+00.0 (CC) AH
SEC.12
SEC.1
SEC.7
SEC.6
STA 14+99.8 (CC)
Birch RD
110th ST
P.O.T. Sta. 15+50.00
Stop Widening, Resurfacing and Shouldering
Resume Reconstruction
P.O.T. Sta. 23+00.00
Stop Reconstruction
Resume Widening, Resurfacing and Shouldering
Subdrain No.8 See Sheet No.3E
Subdrain No.9 See Sheet No.3E
Type "M" Dike Elev. 1172.0
Note
Northern Natural Gas Pipeline Xing
P.I. STA. 14+99.84
Δ=0°30' LT. (No Curve)
=P.O.T. STA. 1848+40.2
SIDE ROAD SURVEY
CLAYTON CO.
GRAND MEADOW TWP.
T95N R6W
For Details of Side Road See Sheet No. 22
STA. 1+06.3
2'X2'X37.1' R.C.B.
D.A.=4 AC.R.
Plug & Abandon
Install 24" RF-1
at Sta. 1+18
STA. 11+97.8
2'X2'X31.6' R.C.B.
D.A.=4 AC.R.
Plug & Abandon
Install 24" RF-1
at Sta. 11+90
STA. 17+31.8
2'X2'X33.7' R.C.B.
D.A.=2 1/2 AC.R.
Plug & Abandon
Install 24" RF-1
at Sta. 17+20
STA. 25+15.0
4'X3'X54.0' R.C.B.
D.A.=30 AC.R.
Plug & Abandon
Install 42" RF-1
at Sta. 25+00
LEGEND
INTERSTATE POWER CO.
POSTVILLE FARMER'S TEL. CO.
SCALE
C=9190
Waste=5446
C=14,846
Waste=8817
Tie to Existing Road (3" High)
Ditch Grade
Silt Dike
4' Ditch
3' Ditch
Fayette (Clayton-Allamakee) Co.
FN-18-8(14)--21-33
IOWA
14
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM	COUNTY	PROJECT NUMBER	NHSX-018-8(46)--2R-33	SHEET NUMBER D.11

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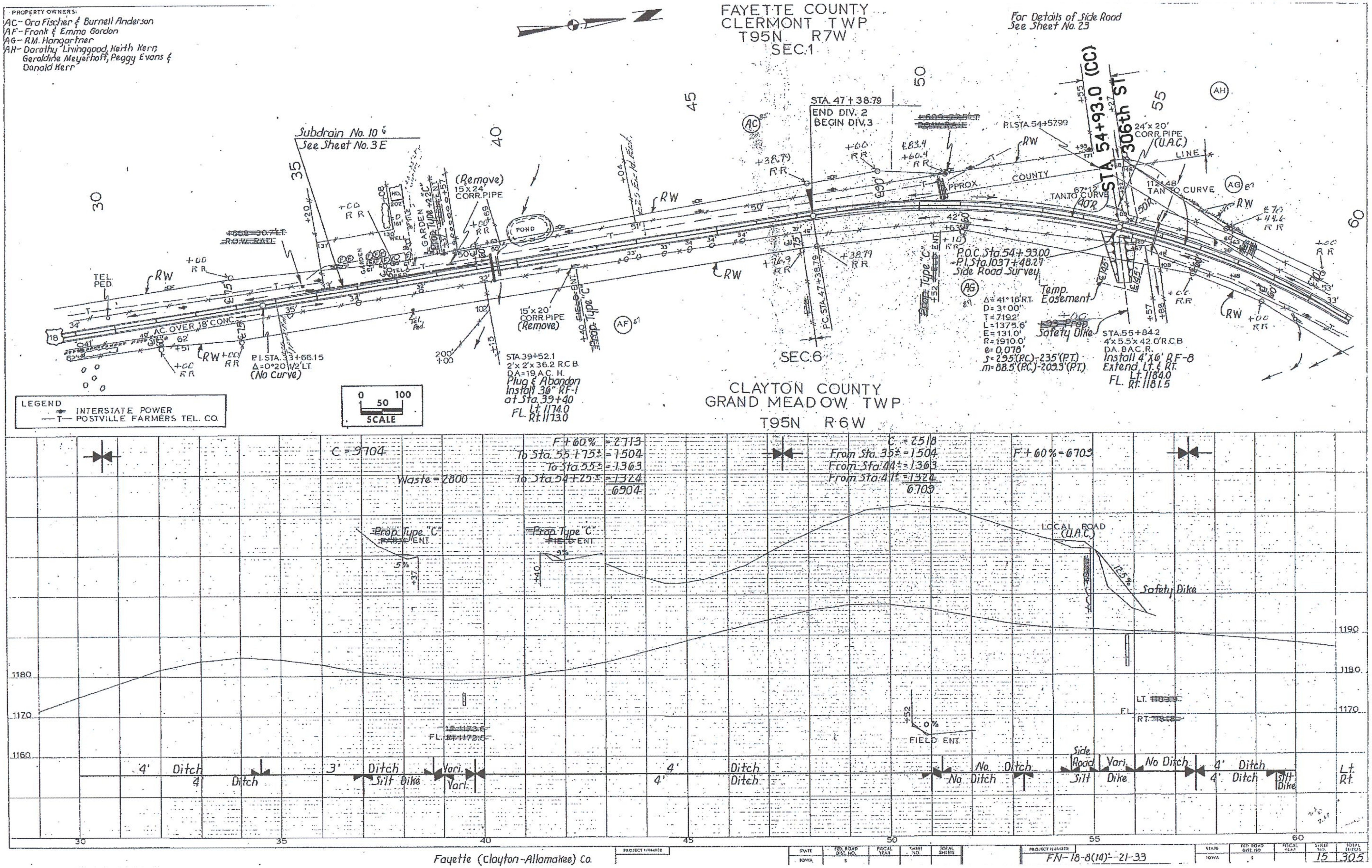
PROPERTY OWNERS:
AC- Ora Fischer & Burnell Anderson
AF- Frank & Emma Gordon
AG- R.M. Hongartner
AH- Dorothy Livinggood, Keith Kern
Geraldine Meyerhoff, Peggy Evans &
Donald Kerr
FAYETTE COUNTY
CLERMONT TWP
T95N R7W
SEC.1
For Details of Side Road
See Sheet No. 23
STA. 47+38.79
END DIV. 2
BEGIN DIV. 3
STA 54+93.0 (CC)
306th ST
Subdrain No. 10
See Sheet No. 3 E
(Remove)
15x24' CORR. PIPE
POND
24'x 20' CORR. PIPE (U.A.C.)
P.I. STA. 54+57.99
TAN TO CURVE
P.O.C. Sta. 54+93.00
P.I. Sta. 1037+48.29
Side Road Survey
Temp. Easement
Δ = 41°16' RT.
D = 3°00'
T = 719.2'
L = 1375.6'
E = 131.0'
R = 1910.0'
e: 0.078'
S = 295' (P.C.) - 235' (P.T.)
m: 88.5' (P.C.) - 209.3' (P.T.)
Safety Dike
STA. 55+84.2
4'x 5.5'x 42.0' R.C.B.
D.A. 8 AC. R.
Install 4'x 6' RF-8
Extend Lt. & Rt.
FL. Lt. 1184.0
Rt. 1181.5
AC. OVER 18" CONC.
P.I. STA. 33+66.15
Δ = 0°20'1/2" LT.
(No Curve)
15'x 20' CORR. PIPE (Remove)
STA. 39+52.1
2'x 2'x 36.2 R.C.B.
D.A. = 19 A.C. H.
Plug & Abandon
Install 36" RF-1
at Sta. 39+40
FL. Lt. 1174.0
Rt. 1173.0
SEC.6
CLAYTON COUNTY
GRAND MEADOW TWP
T95N R6W
LEGEND
INTERSTATE POWER
POSTVILLE FARMERS TEL. CO.
0 50 100
SCALE
C = 9704
Waste = 2800
F + 60% = 2713
To Sta. 55+75± = 1504
To Sta. 55± = 1363
To Sta. 54+25± = 1324
6904
C = 2518
From Sta. 35± = 1504
From Sta. 44± = 1363
From Sta. 41± = 1324
6709
F + 60% = 6709
Prop. Type "C" FIELD ENT.
LOCAL ROAD (U.A.C.)
Safety Dike
FIELD ENT.
4' Ditch
3' Ditch
Silt Dike
Vari.
No Ditch
Side Road
Lt.
Rt.
1190
1180
1170
1160
30
35
40
45
50
55
60
Fayette (Clayton-Allamakee) Co.
FN-18-8(14)--21-33
IOWA
15
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.12

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PROPERTY OWNERS
A.G.-RM HANGARTNER
AI- Duane & Patricia Gordon, ½ Int.
Donald & Betty Gordon, ½ Int.
EW- John G. Barbis, Estate

Δ= 8°27'LT.
D= 2°00'
T= 211.7'
L= 422.5'
E= 7.8'
R= 2865.0'
e= 0.065'
S= 105'(P.C.)-255'(P.T.)
m= 169.3'(P.C.)-76.5'(P.T.)

CLAYTON COUNTY
GRAND MEADOW TWP
T95N R 6W
SEC. 6

ALLAMAKEE COUNTY
POST TWP
T96N R 6W
SEC. 31

APPROX. COUNTY LINE

POT. STA. 77+72.99
END DIV. 3
BEGIN DIV. 4

STA EQ
STA 77+72.99 (CC) BK=
STA 0+00.0 AH

EQUATION
P.O.T. STA. 77+72.99
= P.O.T. STA. 0+00.00
EN-18-9-(16)-21-03

Δ= 41°16' RT.
D= 3°00'
T= 719.2'
L= 1375.6'
E= 131.0'
R= 1910.0'
e= 0.078
S= 295'(P.C.)-235'(P.T.)
m= 88.5'(P.C.)-209.3'(P.T.)

P.I. STA. 63+77.59
P.T. STA. 61+14.39

LEGEND
INTERSTATE POWER CO.
—T— POSTVILLE FARMERS TEL CO

SCALE 0 50 100

C = F + 60% = 4354

Prop. Type "C" FARM ENT. 3%
Prop. Type "C" FIELD ENT. 8%
Prop. Type "C" FARM ENT. 10%
Prop. Type "C" FIELD ENT. 8%
Prop. Type "C" FIELD ENT. 6%
Prop. Type "C" Ent. 8%

1190
1180
1170

4' Ditch | Silt Dike | No Ditch | 4' Ditch | 3' Ditch | No Ditch | Silt Dike | 4' Ditch | 4' Ditch | Lt. Rt.

60 65 70 75

Fayette (Clayton-Allamakee) Co.

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

PROJECT NUMBER FN-18-8(14)--21-33

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		16	305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.13

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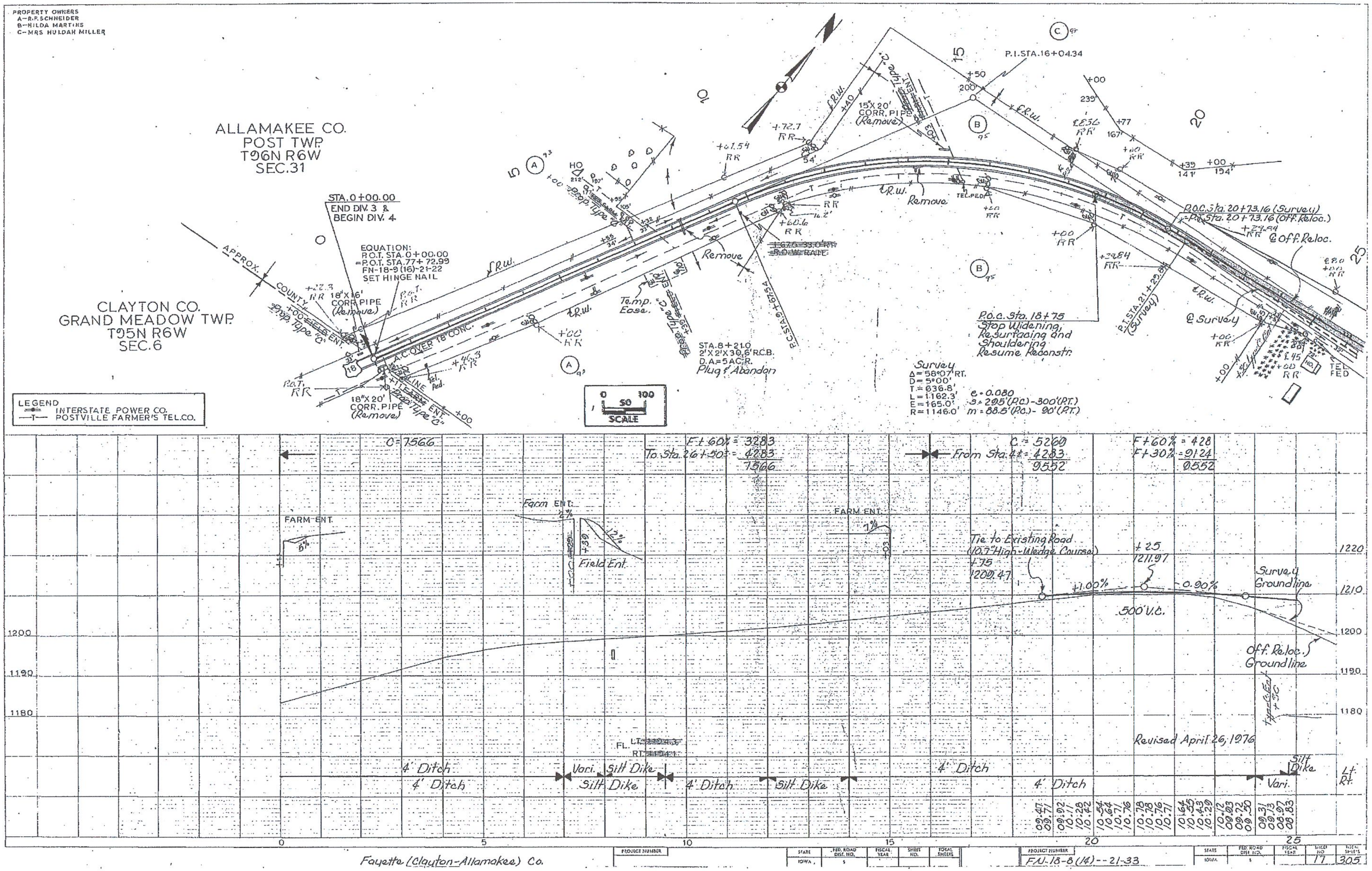
PROPERTY OWNERS
A-B.F. SCHNEIDER
B-HILDA MARTINS
C-MRS HULDAH MILLER
ALLAMAKEE CO.
POST TWP.
T96N R6W
SEC.31
CLAYTON CO.
GRAND MEADOW TWP.
T95N R6W
SEC.6
STA.0+00.00
END DIV. 3 &
BEGIN DIV. 4
EQUATION:
P.O.T. STA. 0+00.00
=P.O.T. STA.77+72.99
FN-18-9(16)-21-22
SET HINGE NAIL
18"X16' CORR. PIPE (Remove)
18"X20' CORR. PIPE (Remove)
15"X20' CORR. PIPE (Remove)
A.C. OVER 18" CONC.
P.I. STA. 16+04.34
STA. 8+21.0
2'X2'X30.6' R.C.B.
D.A.=5AC.R.
Plug & Abandon
P.O.C. Sta. 18+75
Stop Widening, Resurfacing and Shouldering
Resume Reconstr.
P.O.C. Sta. 20+73.16 (Survey)
=P.I. Sta. 20+73.16 (Off. Reloc.)
Survey
Δ=58°07' RT.
D=5°00'
T=636.8'
L=1162.3'
E=165.0'
R=1146.0'
e=0.080
S=295'(P.C.)-300'(P.T.)
m=88.5'(P.C.)-90'(P.T.)
LEGEND
INTERSTATE POWER CO.
POSTVILLE FARMER'S TEL.CO.
0 50 100
SCALE
C=7566
F+60%=3283
To Sta. 26+50=4283
7566
C=5260
From Sta. 4+=4283
9552
F+60%=428
F+30%=9124
9552
FARM ENT.
Field Ent.
Tie to Existing Road (10.7" High-Wedge Course)
+75
1200.47
+25
1211.97
+1.00%
-0.90%
500' V.C.
Survey Groundline
Off. Reloc. Groundline
Revised April 26, 1976
4' Ditch
Vari.
Silt Dike
Fayette (Clayton-Allamakee) Co.
F.N-18-8(14)--21-33
IOWA
77
305

AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.14

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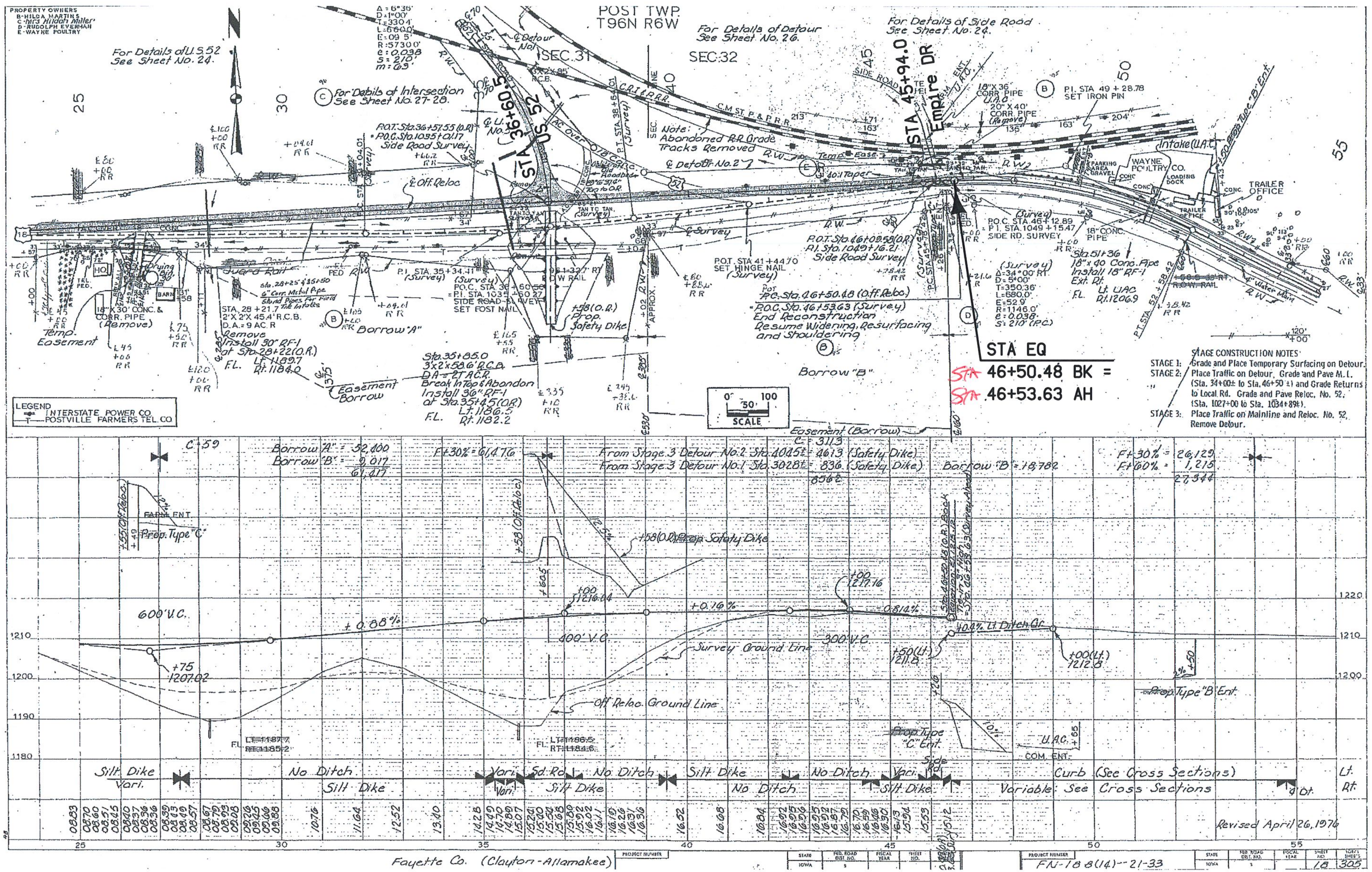
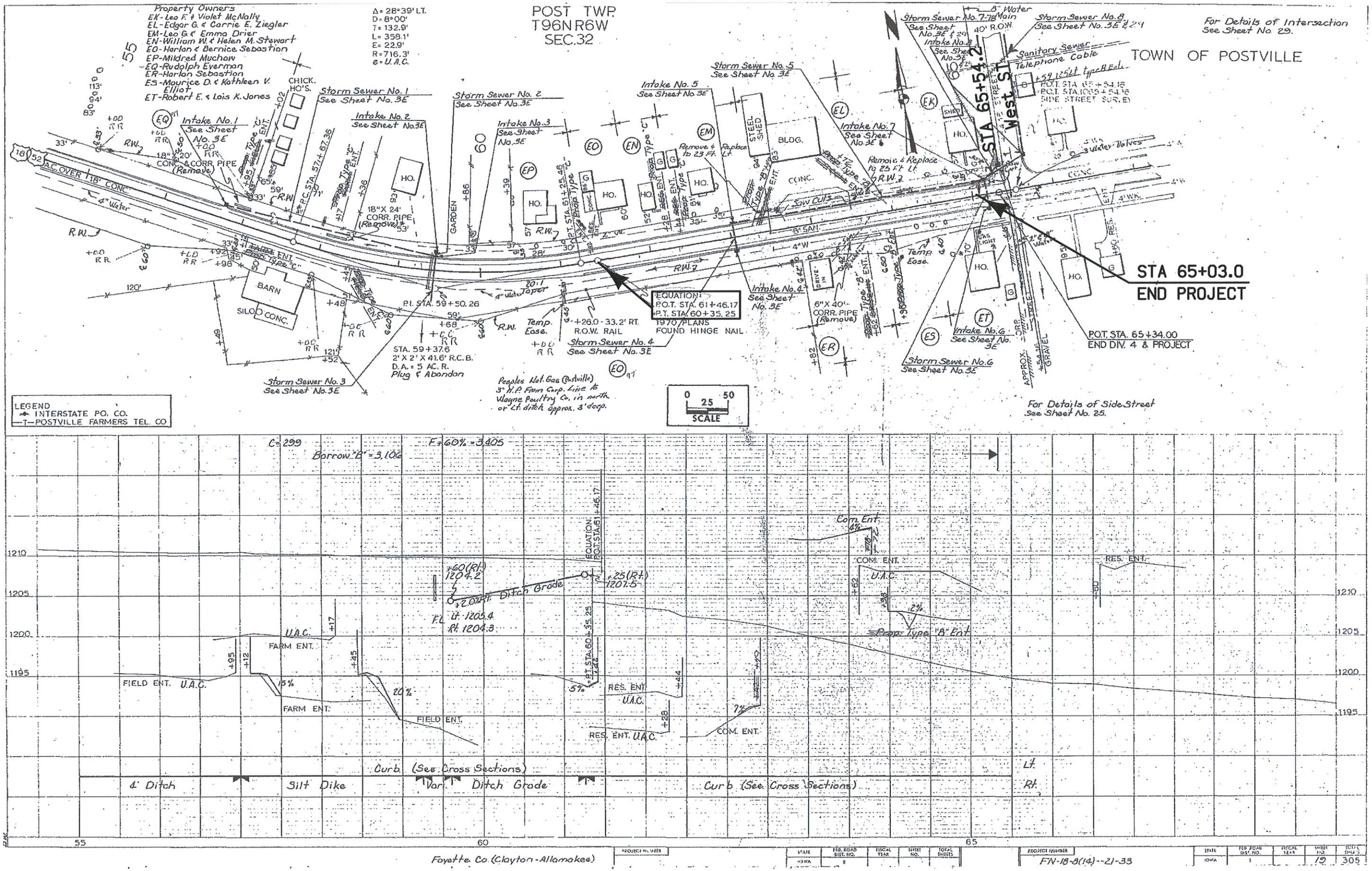


AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.15



AS-BUILT PLANS, FOR INFORMATION ONLY

FILE NO.	ENGLISH	DESIGN TEAM HUMPAL \ MEISE \ NIE	FAYETTE/CLAYTON/ALLAM COUNTY	PROJECT NUMBER NHSX-018-8(46)--2R-33	SHEET NUMBER D.16

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SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
75-14	585+96.57	1910	7.8	513.9		PV-301	579+78.33	579+78.33	579+78.33	584+92.23			583+38.06			579+80.97		584+39.52	
							591+84.96	591+84.96	591+84.96	586+71.06			588+25.23			591+82.32		587+23.77	
75-14	604+92.23	3274	5.9	1485.7		PV-301	586+96.37	586+96.37	586+96.37	601+82.07			597+36.36			587+06.44			
							622+62.06	622+62.06	622+62.06	607+76.36			612+22.07			622+51.99			
75-14	621+16.06	1432	8.0	852.6		PV-301	610+79.89	610+79.89	610+79.89	619+32.49			616+76.71			610+84.15	619+28.23	618+25.92	
							631+26.12	631+26.12	631+26.12	622+73.52			625+29.30			631+21.86	622+77.78	623+80.10	
75-14	631+31.3	1910	7.8	496.2		PV-301	625+34.46	625+34.46	625+34.46	630+30.66			628+81.80			625+37.00		629+79.77	
							639+25.35	639+25.35	639+25.35	634+29.15			635+78.01			639+22.81		634+80.04	
75-14	654+82.44	79333	0.0	600		PV-301	647+62.44	647+62.44	647+62.44	653+62.44				651+82.44					
							662+02.44	662+02.44	662+02.44	656+02.44				657+82.44					
75-14	667+83.9	1910	7.8	405.6		PV-301	662+96.44	662+96.44	662+96.44	667+02.04			665+80.36			662+98.52		666+60.44	
							672+69.84	672+69.84	672+69.84	668+64.24			669+85.92			672+67.76		669+05.84	
75-14	689+88.61	2865	6.5	369.2		PV-301	685+45.27	685+45.27	685+45.27	689+14.47			688+03.71			685+47.54			
							694+31.35	694+31.35	694+31.35	690+62.15			691+72.91			694+29.08			
75-14	698+20.72	1433	8.0	752.5		PV-301	689+08.67	689+08.67	689+08.67	696+61.17			694+35.42			689+12.43	696+57.41	695+67.11	
							707+14.67	707+14.67	707+14.67	699+62.17			701+87.92			707+10.91	699+65.93	700+56.23	
75-14	711+64	1433	8.0	734.8		PV-301	702+73.94	702+73.94	702+73.94	710+08.74			707+88.30			702+77.61	710+05.07	709+16.89	
							720+37.46	720+37.46	720+37.46	713+02.66			715+23.10			720+33.79	713+06.33	713+94.51	
	729+16.38	1322	8.0	1200		PV-301	714+31.50	714+31.50	714+31.50	726+31.50			722+71.50			714+37.50	726+25.50	724+81.50	
							746+31.10	746+31.10	746+31.10	734+31.10			737+91.10			746+25.10	734+37.10	735+81.10	
75-14	749+25.43	1348	8.0	1787		PV-301	726+22.52	726+22.52	726+22.52	744+09.52			738+73.42			726+31.46	744+00.59	741+86.15	
							769+10.98	769+10.98	769+10.98	751+23.98			756+60.08			769+02.05	751+32.92	753+47.36	
75-14	766+99.1	52223	0.0	600		PV-301	759+79.10	759+79.10	759+79.10	765+79.10				763+99.10					
							774+19.10	774+19.10	774+19.10	768+19.10				769+99.10					
75-14 uac	792+49.45	63471	0.0	600		PV-301	785+29.45	785+29.45	785+29.45	791+29.45				789+49.45					
							799+69.45	799+69.45	799+69.45	793+69.45				795+49.45					
75-14	814+72.36	1433	8.0	633.3		PV-301	807+07.05	807+07.05	807+07.05	813+40.35			811+50.36			807+10.22	813+37.18	812+61.19	
							822+27.00	822+27.00	822+27.00	815+93.70			817+83.69			822+23.83	815+96.87	816+72.86	
75-14	825+07.43	1433	8.0	698.5		PV-301	816+62.08	816+62.08	816+62.08	823+60.58			821+51.03			816+65.57	823+57.09	822+73.27	
							833+38.48	833+38.48	833+38.48	826+39.98			828+49.53			833+34.99	826+43.47	827+27.29	
	836+14.6	955	8.0	879.3		PV-301	825+25.49	825+25.49	825+25.49	834+04.79			831+41.00			825+29.89	834+00.39	832+94.88	
							846+35.81	846+35.81	846+35.81	837+56.51			840+20.30			846+31.41	837+60.91	838+66.42	
75-14	54+57.99	1910	7.8	1375.6		PV-301	37+75.87	37+75.87	37+75.87	51+51.47			47+38.79			37+82.92		50+10.38	
							70+77.31	70+77.31	70+77.31	57+01.71			61+14.39			70+70.26		58+42.80	
75-14	63+77.59	2865	6.5	422.5		PV-301	58+70.14	58+70.14	58+70.14	62+92.64			61+65.89			58+72.74			
							68+84.14	68+84.14	68+84.14	64+61.64			65+88.39			68+81.54			
75-14	16+04.34	1146	8.0	1162.3		PV-301	1+53.93	1+53.93	1+53.93	13+16.23			9+67.54			1+59.74	13+10.42	11+70.94	
							29+43.45	29+43.45	29+43.45	17+81.15			21+29.84			29+37.64	17+86.96	19+26.44	
75-14 uac	49+28.78	1146	0.0	680		PV-301	41+02.42	41+02.42	41+02.42	47+82.42				45+78.42					
							57+34.42	57+34.42	57+34.42	50+54.42				52+58.42					
75-14 uac	59+50.26	716.3	0.0	358.1		PV-301	55+16.69	55+16.69	55+16.69	58+74.79				57+67.36					
							63+76.13	63+76.13	63+76.13	60+18.03				61+25.46					

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1) Through traffic shall be maintained at all times during construction.

2) The Contractor shall coordinate traffic control with other projects 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	

108-26A
08-01-08

STAGING NOTES

1) Install subdrains and perform pipe work.

2) Perform patching.

3) Perform scarification in urban areas.

4) Construct base widening and installation of paved shoulders.

5) Perform Cold-In-Place recycling.

6) Place HMA.

7) Groove and place final pavement markings.

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									