LETTING DATE 9-1-15

4 Total Sheets

IOWA DEPARTMENT OF TRANSPORTATION

Project Development Division

PLANS OF PROPOSED IMPROVEMENT ON THE

FAS/FARM TO MARKET SYSTEM

WINNEBAGO COUNTY
LONGITUDINAL SUBDRAINS
LFM-CO95(66)--7X-95

On 100th Avenue from 430th Street North 6.124 miles to 490th Street and West 0.992 miles to 90th Avenue.
Winnebago County, Iowa

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, Series 2012, plus General Supplemental Specifications; and applicable Supplemental Specifications, Developmental Specifications, and Special Provisions, shall apply to the construction on this project.

Scales: As Noted

TRAFFIC CONTROL PLAN

This road will remain open to through traffic during construction.

Traffic control devices, procedures, layouts, signing, and pavement markings installed within the limits of this project shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, as adopted by the Department per 761 of the Iowa Administrative Code (IAC) Chapter 130.

Refer to Standard Road Plan TC-214 for details.

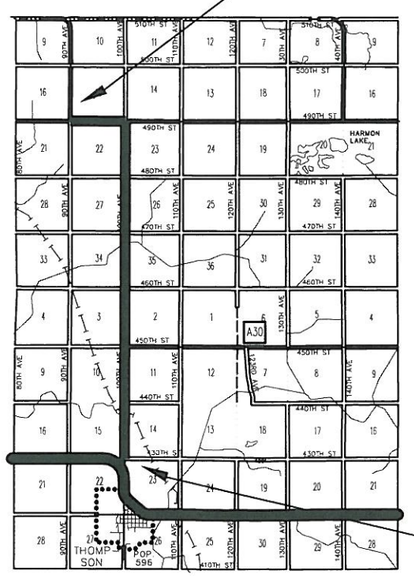
Contractor shall be responsible for installation, maintenance, and removal of safety devices.

INDEX OF SHEETS

105-3
10-18-05

No.	Description
A.1	Title Sheet, Traffic Control Plan
C.1	Estimated Project Quantities, Estimate Reference Information, Standard Road Plans
C.2-C.3	Tabulations

EOP – STA. 378+75



BOP – STA. 10+50

Location Map Scale
0 1 2 3 miles

PROJECT LOCATION
LFM-C095(66)--7X-95
On 100th Avenue from 430th Street North 6.124 miles to 490th Street and West 0.992 miles to 90th Avenue.
Winnebago County, Iowa

MILEAGE SUMMARY

Div.	Location	Lin.Ft.	Miles
	STA. 10+50 TO STA. 378+75	36,825	
	TOTAL LENGTH PROJECT	36,825	6.974

DESIGN DATA RURAL

2011 AADT	560 VPD
2031 AADT	840 VPD
Trucks	15%
Total Design ESALS	>302,400

IOWA ONE CALL
800 / 292-8989
TOLL FREE
CALL - BEFORE - YOU - DIG

UTILITY CONTACTS

COMPANY	NAME	PHONE NO.
WINNEBAGO COOPERATIVE TELECOM ASSOCIATION	ROB RENNEKER	1-800-592-6105
HEARTLAND POWER COOPERATIVE	PETE PAULSON	1-641-590-6956

2011 AADT 560 V.P.D.

APPROVED

Terry Durby Chairperson

Mike Stensrud

Bill Jensvold

Approved Board of Supervisors

PROF. ENGINEER SCOTT T. MEINDERS 21410 IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

SCOTT T. MEINDERS Date 7/29/15

My license renewal date is December 31, 2016

Pages or sheets covered by this seal: ALL SHEETS

WINNEBAGO COUNTY
LFM-C095(66)--7X-95

STANDARD ROAD PLANS

105-4
10-16-07

The following Standard Plans shall be considered applicable to construction work on this project.

Number	Date	Sheets	Title
DR-303	4-21-15	1-2	Subdrains (Longitudinal)
DR-304	4-21-15	1	Outlets for Longitudinal, Transverse, and Backslope Subdrains
TC-214	4-16-13	1	Lane Closure with Flaggers for Use With Pilot Cars

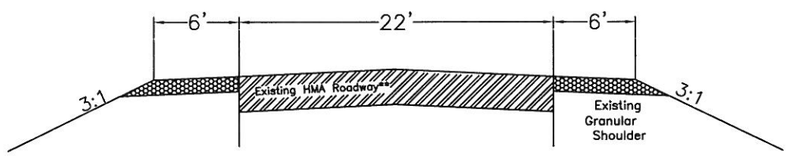
ESTIMATED PROJECT QUANTITIES

NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	TOTAL
1	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	72,377
2	2502-8221304	SUBDRAIN OUTLET, DR-304	EA	166
3	2528-8445110	TRAFFIC CONTROL	LS	1
4	2528-8445113	FLAGGERS	EA	52
5	2528-8445115	PILOT CARS	EA	26
6	2533-4980005	MOBILIZATION	LS	1

DO NOT SCALE

TYPICAL CROSS SECTION

Existing Roadway



ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
1	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA. INSTALL SUBDRAINS TO 42 INCH DEPTH IN UNPAVED SHOULDERS. ENGINEERING FABRIC IS NOT REQUIRED. EXCAVATED MATERIAL MAY BE SPREAD ON THE ROADWAY FORESLOPE WITH NO SEEDING REQUIRED.
2	SUBDRAIN OUTLET, DR-304 SEE STANDARD ROAD PLAN DR-304 FOR DETAILS. RODENT GUARDS WILL BE REQUIRED. PLASTIC SLEEVES WILL BE PROVIDED BY THE COUNTY FOR INSTALLATION OVER MARKER POSTS.
3-5	TRAFFIC CONTROL, FLAGGERS, PILOT CARS SEE SHEET A.1 FOR TRAFFIC CONTROL PLAN. REFER TO STANDARD ROAD PLAN TC-214 FOR DETAILS.
6	MOBILIZATION

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

*Not a bid item

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm			DR-303, DR-304, or DR-305				
						Size	Length	Size	Length	Size	Type	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT			CY	CY	
1	NBL	10+50.00	12+50.00	RT	42.0	4.0	212.0						12+50.00	DR-304	19.6	3.7	
2	NBL	12+50.00	21+50.00	RT	42.0	4.0	912.0						12+50.00	DR-304	84.4	14.5	
													21+50.00	DR-304		0.8	
3	NBL	21+50.00	30+75.00	RT	42.0	4.0	937.0						21+50.00	DR-304	86.8	14.8	
													30+75.00	DR-304		0.8	preceding gap for cable rail
4	NBL	41+40.00	53+00.00	RT	42.0	4.0	1172.0						41+40.00	DR-304	108.5	18.5	
													53+00.00	DR-304		0.8	
5	NBL	53+00.00	62+25.00	RT	42.0	4.0	937.0						53+00.00	DR-304	86.8	14.8	
6	NBL	63+00.00	73+00.00	RT	42.0	4.0	1012.0						73+00.00	DR-304	93.7	16.0	
7	NBL	73+00.00	79+75.00	RT	42.0	4.0	687.0						73+00.00	DR-304	63.6	11.0	
													79+75.00	DR-304		0.8	
8	NBL	79+75.00	91+00.00	RT	42.0	4.0	1137.0						79+75.00	DR-304	105.3	17.9	
													91+00.00	DR-304		0.8	
9	NBL	91+00.00	94+50.00	RT	42.0	4.0	362.0						91+00.00	DR-304	33.5	6.0	
													94+50.00	DR-304		0.8	
10	NBL	94+50.00	99+00.00	RT	42.0	4.0	462.0						94+50.00	DR-304	42.8	7.5	
													99+00.00	DR-304		0.8	
11	NBL	99+00.00	104+00.00	RT	42.0	4.0	512.0						99+00.00	DR-304	47.4	8.3	
													104+00.00	DR-304		0.8	
12	NBL	104+00.00	114+25.00	RT	42.0	4.0	1037.0						104+00.00	DR-304	96.0	16.4	
													114+25.00	DR-304		0.8	
13	NBL	116+25.00	125+75.00	RT	42.0	4.0	962.0						125+75.00	DR-304	89.1	15.2	
14	NBL	125+75.00	138+00.00	RT	42.0	4.0	1237.0						125+75.00	DR-304	114.5	19.5	
													138+00.00	DR-304		0.8	
15	NBL	138+00.00	148+50.00	RT	42.0	4.0	1062.0						138+00.00	DR-304	98.3	16.8	
													148+50.00	DR-304		0.8	
16	NBL	148+50.00	159+00.00	RT	42.0	4.0	1062.0						148+50.00	DR-304	98.3	16.8	
													159+00.00	DR-304		0.8	
17	NBL	159+00.00	162+00.00	RT	42.0	4.0	312.0						159+00.00	DR-304	28.9	5.2	
													162+00.00	DR-304		0.8	
18	NBL	162+00.00	169+80.00	RT	42.0	4.0	792.0						162+00.00	DR-304	73.3	12.6	
19	NBL	170+80.00	179+00.00	RT	42.0	4.0	832.0						179+00.00	DR-304	77.0	13.2	
20	NBL	179+00.00	187+50.00	RT	42.0	4.0	862.0						179+00.00	DR-304	79.8	13.7	
													187+50.00	DR-304		0.8	
21	NBL	187+50.00	200+00.00	RT	42.0	4.0	1262.0						187+50.00	DR-304	116.9	19.9	
													200+00.00	DR-304		0.8	
22	NBL	200+00.00	212+50.00	RT	42.0	4.0	1262.0						200+00.00	DR-304	116.9	19.9	
													212+50.00	DR-304		0.8	
23	NBL	212+50.00	216+50.00	RT	42.0	4.0	412.0						212+50.00	DR-304	38.1	6.7	
													216+50.00	DR-304		0.8	
24	NBL	216+50.00	221+50.00	RT	42.0	4.0	512.0						216+50.00	DR-304	47.4	8.3	
													221+50.00	DR-304		0.8	preceding gap for road
25	NBL	224+25.00	234+25.00	RT	42.0	4.0	1012.0						224+25.00	DR-304	93.7	16.0	
													234+25.00	DR-304		0.8	
26	NBL	234+25.00	243+75.00	RT	42.0	4.0	962.0						234+25.00	DR-304	89.1	15.2	
													243+75.00	DR-304		0.8	
27	NBL	243+75.00	248+25.00	RT	42.0	4.0	462.0						243+75.00	DR-304	42.8	7.5	
													248+25.00	DR-304		0.8	
28	NBL	248+25.00	253+00.00	RT	42.0	4.0	487.0						248+25.00	DR-304	45.1	7.9	
													253+00.00	DR-304		0.8	
29	NBL	253+00.00	264+00.00	RT	42.0	4.0	1112.0						253+00.00	DR-304	103.0	17.5	
													264+00.00	DR-304		0.8	
30	NBL	264+00.00	275+50.00	RT	42.0	4.0	1162.0						264+00.00	DR-304	107.6	18.3	
													275+50.00	DR-304		0.8	
31	NBL	276+50.00	281+00.00	RT	42.0	4.0	462.0						281+00.00	DR-304	42.8	7.5	
32	NBL	281+00.00	288+00.00	RT	42.0	4.0	712.0						281+00.00	DR-304	65.9	11.4	
													288+00.00	DR-304		0.8	
33	NBL	288+00.00	294+50.00	RT	42.0	4.0	662.0						281+00.00	DR-304	61.3	10.6	
													294+50.00	DR-304		0.8	
33	NBL	294+50.00	296+50.00	RT	42.0	4.0	212.0						294+50.00	DR-304	19.6	3.7	
													296+50.00	DR-304		0.8	
34	NBL	296+50.00	306+50.00	RT	42.0	4.0	1012.0						296+50.00	DR-304	93.7	16.0	
													306+50.00	DR-304		0.8	
35	NBL	306+50.00	313+25.00	RT	42.0	4.0	687.0						306+50.00	DR-304	63.6	11.0	
													313+25.00	DR-304		0.8	
36	NBL	313+25.00	318+00.00	RT	42.0	4.0	487.0						313+25.00	DR-304	45.1	7.9	
													318+00.00	DR-304		0.8	
37	NBL	318+00.00	328+00.00	RT	42.0	4.0	1012.0						318+00.00	DR-304	93.7	16.0	
													328+00.00	DR-304		0.8	
38	WBL	327+00.00	331+75.00	RT	42.0	4.0	487.0						327+00.00	DR-304	45.1	7.9	
													331+75.00	DR-304		0.8	
39	WBL	331+75.00	336+50.00	RT	42.0	4.0	487.0						331+75.00	DR-304	45.1	7.9	
													336+50.00	DR-304		0.8	
40	WBL	336+50.00	345+50.00	RT	42.0	4.0	912.0						336+50.00	DR-304	84.4	14.5	
													345+50.00	DR-304		0.8	
41	WBL	345+50.00	354+50.00	RT	42.0	4.0	912.0						345+50.00	DR-304	84.4	14.5	
													354+50.00	DR-304		0.8	
41	WBL	354+50.00	362+00.00	RT	42.0	4.0	762.0						354+50.00	DR-304	70.6	12.1	
													362+00.00	DR-304		0.8	
42	WBL	362+00.00	370+00.00	RT	42.0	4.0	812.0						362+00.00	DR-304	75.2	12.9	
													370+00.00	DR-304		0.8	
43	WBL	370+00.00	378+75.00	RT	42.0	4.0	887.0						370+00.00	DR-304	82.1	14.1	
44	SBL	10+50.00	12+50.00	RT	42.0	4.0	212.0						12+50.00	DR-304	19.6	3.7	
45	SBL	12+50.00	21+50.00	RT	42.0	4.0	912.0						12+50.00	DR-304	84.4	14.5	
													21+50.00	DR-304		0.8	
46	SBL	21+50.00	31+50.00	RT	42.0	4.0	1012.0						21+50.00	DR-304	93.7	16.0	
													31+50.00	DR-304		0.8	
46	SBL	31+50.00	36+50.00	RT	42.0	4.0	512.0						31+50.00	DR-304	47.4	8.3	
													36+50.00	DR-304		0.8	
47	SBL	36+50.00	39+50.00	RT	42.0	4.0	312.0						36+50.00	DR-304	28.9	5.2	
													39+50.00	DR-304		0.8	
48	SBL	39+50.00	53+00.00	RT	42.0	4.0	1362.0						39+50.00	DR-304	126.1	21.4	
													53+00.00	DR-304		0.8	
49	SBL	53+00.00	62+25.00	RT	42.0	4.0	937.0						53+00.00	DR-304	86.8	14.8	
50	SBL	63+00.00	73+00.00	RT	42.0	4.0	1012.0						73+00.00	DR-304	93.7	16.0	
51	SBL	73+00.00	79+75.00	RT	42.0	4.0	687.0						73+00.00	DR-304	63.6	11.0	
													79+75.00	DR-304		0.8	
52	SBL	79+75.00	91+00.00	RT	42.0	4.0	1137.0						79+75.00	DR-304	105.3	17.9	
													91+00.00	DR-304		0.8	
53	SBL	91+00.00	94+50.00	RT	42.0	4.0	362.0						91+00.00	DR-304	33.5	6.0	
													94+50.00	DR-304		0.8	
54	SBL	94+50.00	99+00.00	RT	42.0	4.0	462.0						94+50.00	DR-304	42.8	7.5	
													99+00.00	DR-304		0.8	
55	SBL	99+00.00	104+00.00	RT	42.0	4.0	512.0						99+00.00	DR-304	47.4	8.3	
													104+00.00	DR-304		0.8	
56	SBL	104+00.00	114+25.00	RT	42.0	4.0	1037.0						104+00.00	DR-304	96.0	16.4	
													114+25.00	DR-304		0.8	
57	SBL	116+25.00	125+75.00	RT	42.0	4.0	962.0						125+75.00	DR-304	89.1	15.2	
58	SBL	125+75.00	138+00.00	RT	42.0	4.0	1237.0						125+75.00	DR-304	114.5	19.5	
													138+00.00	DR-304		0.8	
59	SBL	138+00.00	148+50.00	RT	42.0	4.0	1062.0						138+00.00	DR-304	98.3	16.8	
													148+50.00	DR-304		0.8	
60	SBL	148+50.00	159+00.00	RT	42.0	4.0	1062.0						148+50.00	DR-304	98.3	16.8	
													159+00.00	DR-304		0.8	
61	SBL	159+00.00	162+00.00	RT	42.0	4.0	312.0						159+00.00	DR-304	28.9	5.2	
													162+00.00	DR-304		0.8	
62	SBL	162+00.00	169+80.00	RT	42.0	4.0	792.0						162+00.00	DR-304	73.3	12.6	

PLANS BY: SM

DATED: 7/28/2015

WINNEBAGO COUNTY

PROJECT NUMBER	STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
LFM-C095(66)--7X-95	IOWA		2016	C.2	4

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

*Not a bid item

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet				
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm			DR-303, DR-304, or DR-305		Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT			CY	CY	
63	SBL	170+80.00	179+00.00	RT	42.0	4.0	832.0						179+00.00	DR-304	77.0	13.2	
64	SBL	179+00.00	187+50.00	RT	42.0	4.0	862.0						179+00.00	DR-304	79.8	13.7	
													187+50.00	DR-304		0.8	
65	SBL	187+50.00	200+00.00	RT	42.0	4.0	1262.0						187+50.00	DR-304	116.9	19.9	
													200+00.00	DR-304		0.8	
66	SBL	200+00.00	212+50.00	RT	42.0	4.0	1262.0						200+00.00	DR-304	116.9	19.9	
													212+50.00	DR-304		0.8	
67	SBL	212+50.00	216+50.00	RT	42.0	4.0	412.0						212+50.00	DR-304	38.1	6.7	
													216+50.00	DR-304		0.8	
68	SBL	216+50.00	221+50.00	RT	42.0	4.0	512.0						216+50.00	DR-304	47.4	8.3	
													221+50.00	DR-304		0.8	
69	SBL	224+25.00	234+25.00	RT	42.0	4.0	1012.0						224+25.00	DR-304	93.7	16.0	
													234+25.00	DR-304		0.8	
70	SBL	234+25.00	243+75.00	RT	42.0	4.0	962.0						234+25.00	DR-304	89.1	15.2	
													243+75.00	DR-304		0.8	
71	SBL	243+75.00	248+25.00	RT	42.0	4.0	462.0						243+75.00	DR-304	42.8	7.5	
													248+25.00	DR-304		0.8	
72	SBL	248+25.00	253+00.00	RT	42.0	4.0	487.0						248+25.00	DR-304	45.1	7.9	
													253+00.00	DR-304		0.8	
73	SBL	253+00.00	264+00.00	RT	42.0	4.0	1112.0						253+00.00	DR-304	103.0	17.5	
													264+00.00	DR-304		0.8	
74	SBL	264+00.00	275+50.00	RT	42.0	4.0	1162.0						264+00.00	DR-304	107.6	18.3	
													275+50.00	DR-304		0.8	
75	SBL	276+50.00	281+00.00	RT	42.0	4.0	462.0						281+00.00	DR-304	42.8	7.5	
76	SBL	281+00.00	294+50.00	RT	42.0	4.0	1362.0						281+00.00	DR-304	126.1	21.4	
													294+50.00	DR-304		0.8	
77	SBL	294+50.00	296+50.00	RT	42.0	4.0	212.0						294+50.00	DR-304	19.6	3.7	
													296+50.00	DR-304		0.8	
78	SBL	296+50.00	306+50.00	RT	42.0	4.0	1012.0						296+50.00	DR-304	93.7	16.0	
													306+50.00	DR-304		0.8	
79	SBL	306+50.00	313+25.00	RT	42.0	4.0	687.0						306+50.00	DR-304	63.6	11.0	
													313+25.00	DR-304		0.8	
80	SBL	313+25.00	318+00.00	RT	42.0	4.0	487.0						313+25.00	DR-304	45.1	7.9	
													318+00.00	DR-304		0.8	
81	SBL	318+00.00	328+00.00	RT	42.0	4.0	1012.0						318+00.00	DR-304	93.7	16.0	
													328+00.00	DR-304		0.8	
82	EBL	327+00.00	331+75.00	RT	42.0	4.0	487.0						327+00.00	DR-304	45.1	7.9	
													331+75.00	DR-304		0.8	
83	EBL	331+75.00	336+50.00	RT	42.0	4.0	487.0						331+75.00	DR-304	45.1	7.9	
													336+50.00	DR-304		0.8	
84	EBL	336+50.00	345+50.00	RT	42.0	4.0	912.0						336+50.00	DR-304	84.4	14.5	
													345+50.00	DR-304		0.8	
85	EBL	345+50.00	354+50.00	RT	42.0	4.0	912.0						345+50.00	DR-304	84.4	14.5	
													354+50.00	DR-304		0.8	
85	EBL	354+50.00	362+00.00	RT	42.0	4.0	762.0						354+50.00	DR-304	70.6	12.1	
													362+00.00	DR-304		0.8	
86	EBL	362+00.00	370+00.00	RT	42.0	4.0	812.0						362+00.00	DR-304	75.2	12.9	
													370+00.00	DR-304		0.8	
87	EBL	370+00.00	378+75.00	RT	42.0	4.0	887.0						370+00.00	DR-304	82.1	14.1	
					TOTALS		########						169.0		6701.6	1210.7	

PLANS BY: SM

DATED: 7/28/2015

WINNEBAGO COUNTY

PROJECT NUMBER	STATE	FHWA REGION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
LFM-C095(66)--7X-95	IOWA		2016	C.3	4