

Road Evaluation and Redesign

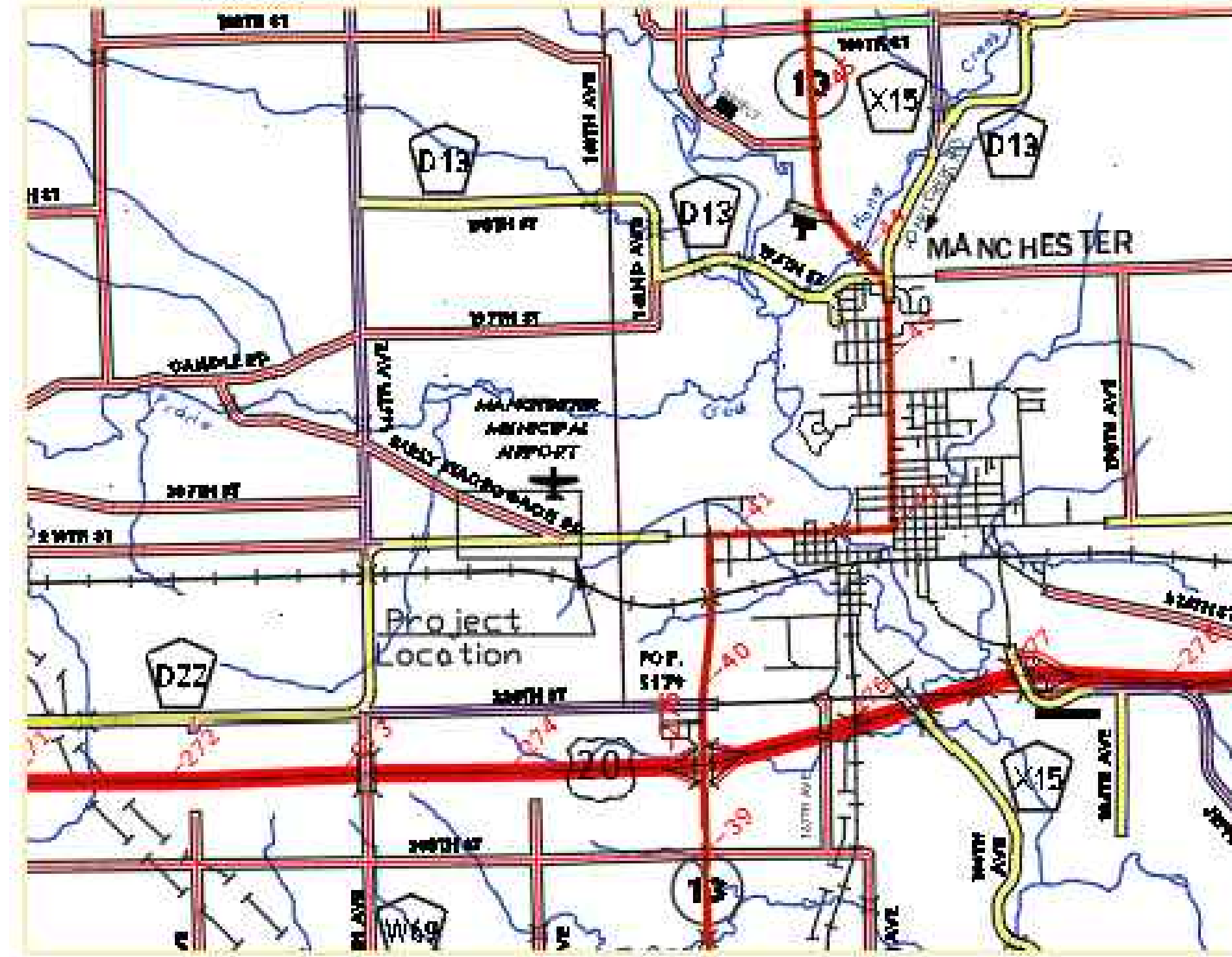


Client: City of Manchester Location:
Manchester, Iowa (52057)

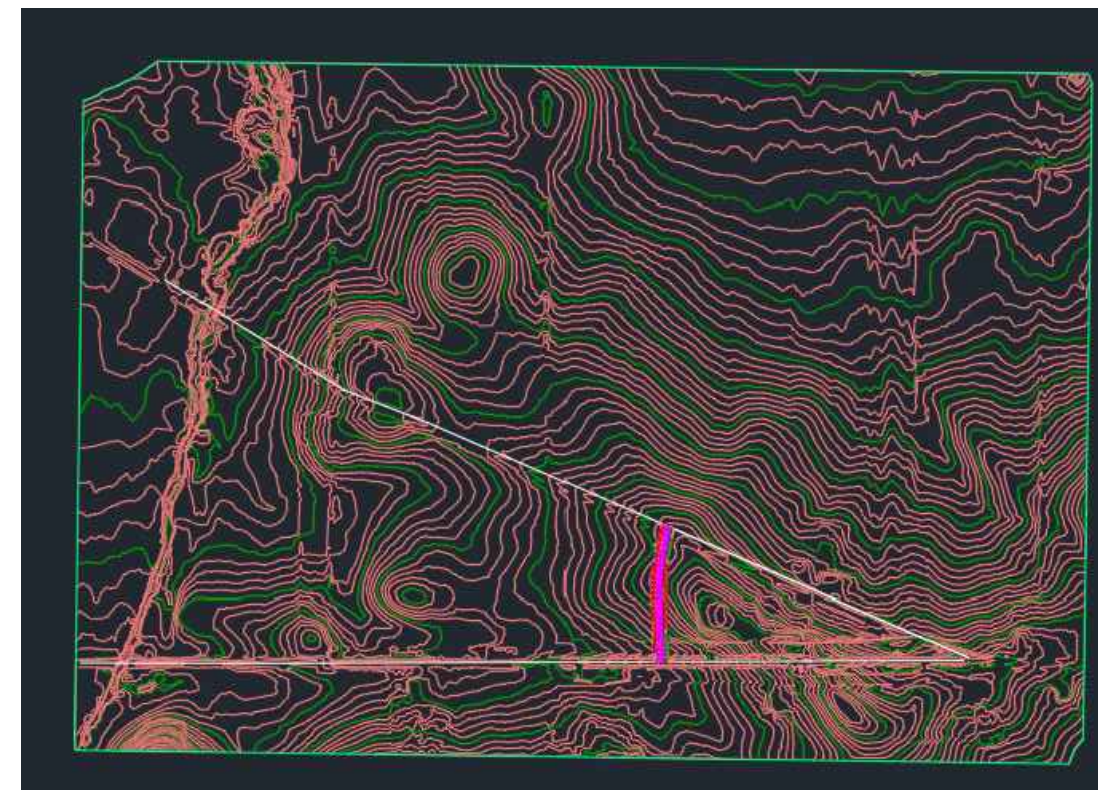
Plan Sheet - General Information

Page Number - Description

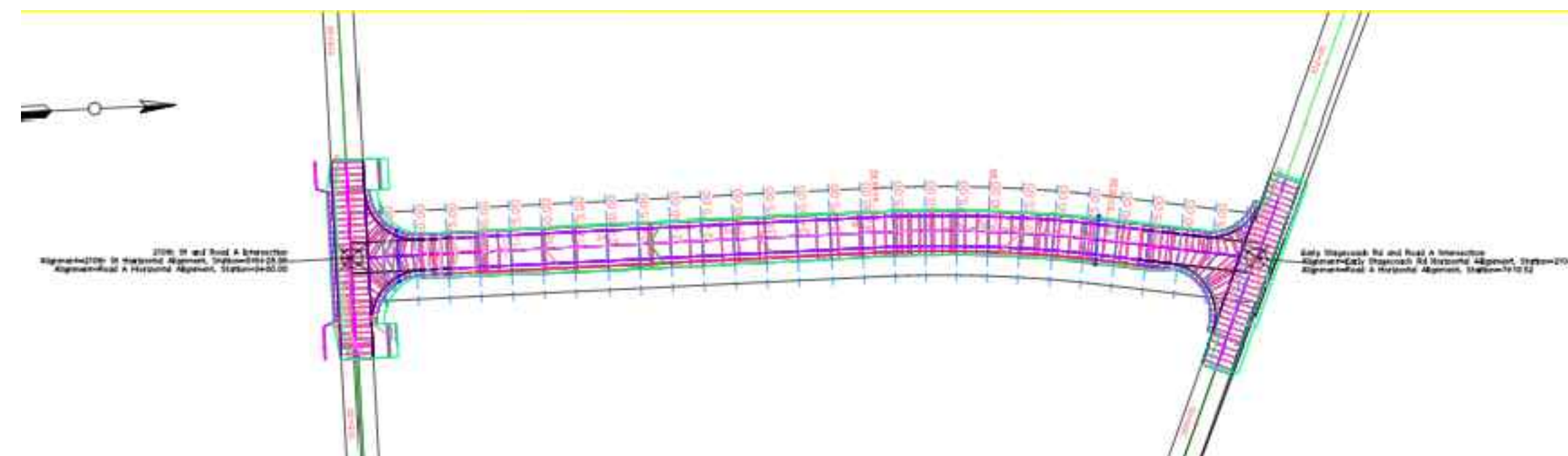
- A1 Title Sheet
- B1 Typical Cross Sections and Details
- C1-C2 Tabulations
- D1 Plan and Profile Sheets
- H1 Right-of-Way Sheets
- J1-J2 Traffic Control
- N1 Signing Information
- RR1 Erosion Control Plan Sheets
- T1 Earthwork Summary
- V1 Culvert Plans
- W1-W2 Mainline Cross Section Information



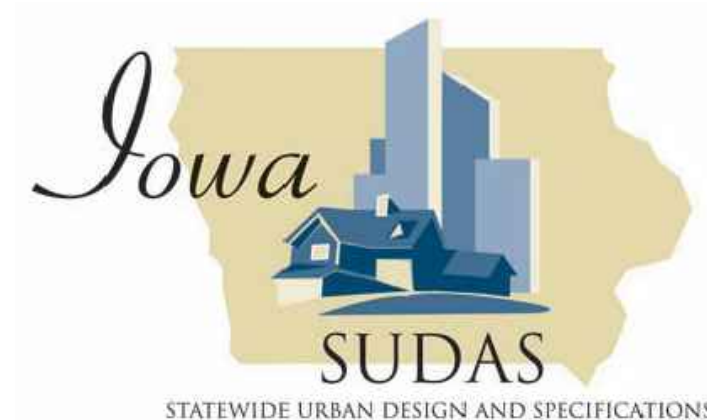
Project Extents from Iowa DOT - Delaware County Map along Early Stagecoach Road and 210th Street south of the Manchester Municipal Airport



Contour Map of the Existing Road A - Preferred alternative



Plan view of the Alternative Road A - 710'



Design Standards came from the following agencies: Iowa SUDAS, Iowa DOT, APAI, and to contact the Iowa One Call for future digging

PROJECT:	CEE: 4850
DATE :	05/07/2021
DRAWN BY:	BPS
REVISION:	

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT FOR CONSTRUCTION

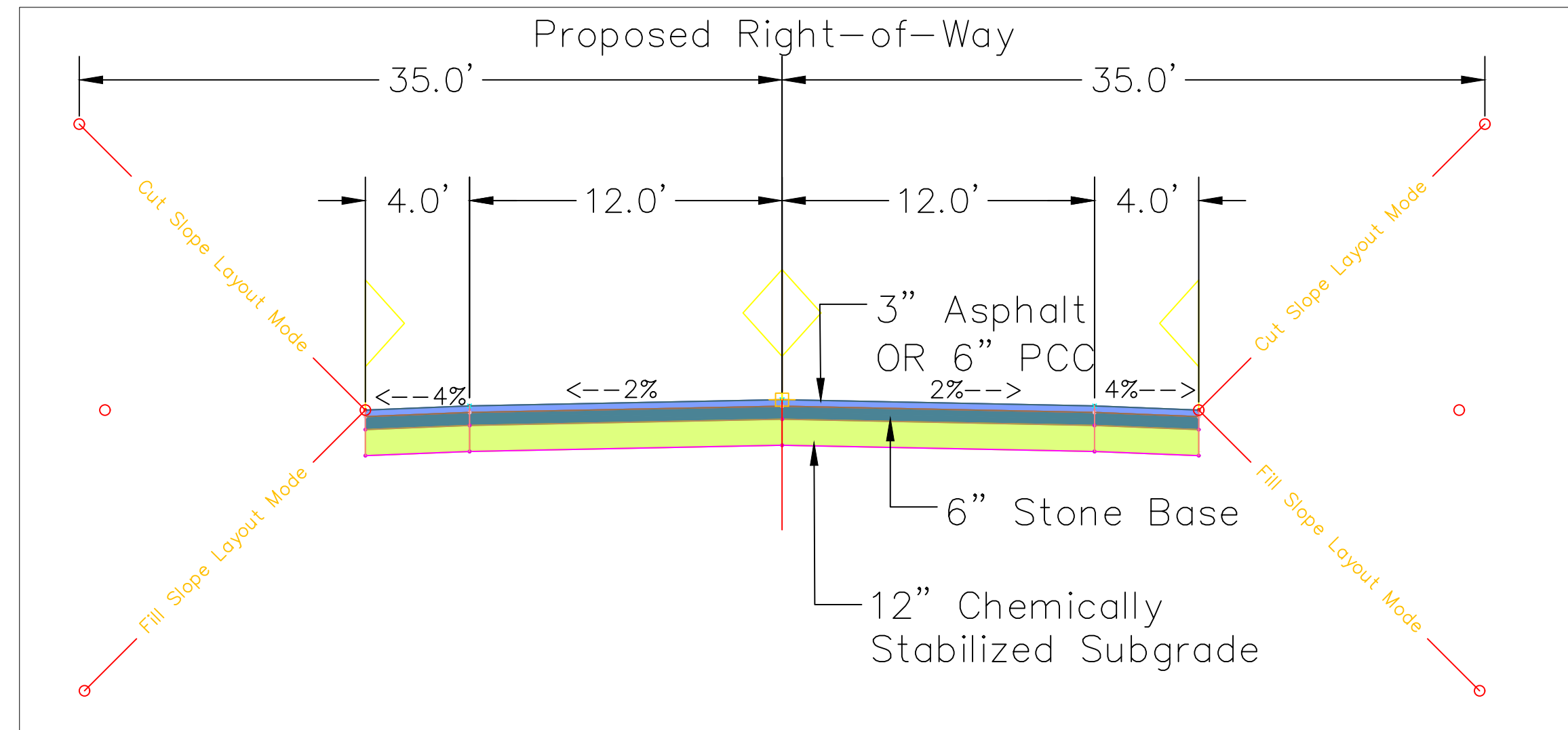
Road Evaluation and ReDesign
 IOWA CIVIL & ENVIRONMENTAL ENGINEERING
 Early Stagecoach Road
 Manchester, Delaware County, Iowa

SHEET NAME

Title Sheet
A1

SHEET NO.

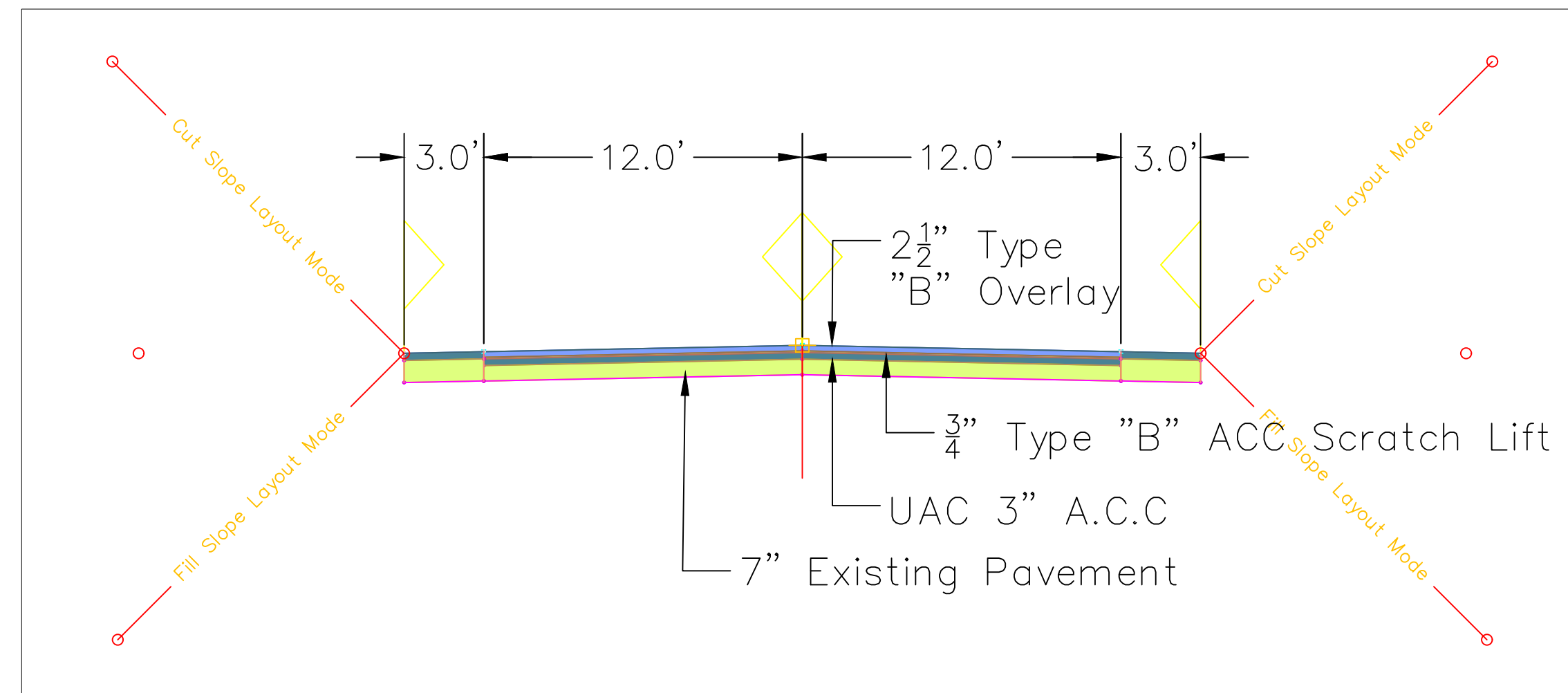
A1



Road A Standard Cross Section

3" HMA Flexible Pavement OR 6" PCC
 6" Stone Base
 12" Chemically Stabilized Subgrade

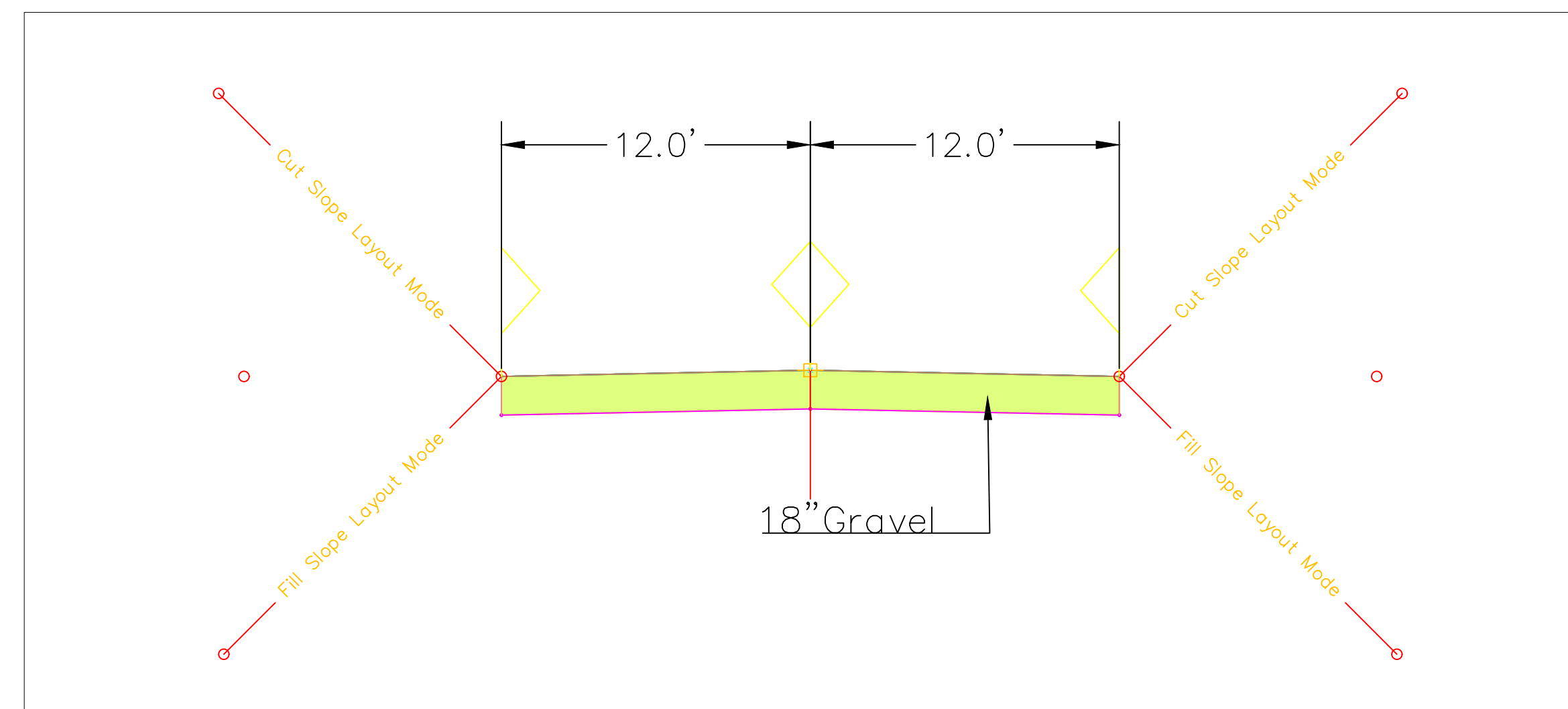
4:1 Daylighting Slopes to 70' Right-of-Way



210th Street Standard Cross Section Based on 1999 Resurfacing

2 1/2" Type "B" Overlay
 3/4" Type "B" ACC Scratch Lift
 UAC 3" A.C.C.
 7" Existing PCC Pavement

2:1 Daylighting Slopes with a 4' Ditch



Early Stagecoach Road Standard Cross Section

Assumed 18" gravel depth and a 24' width
 Assumed daylighting slopes of 4:1

PROJECT: CEE: 4850
 DATE: 04/21/2012
 DRAWN BY: CEF
 REVISION:

THE UNIVERSITY OF IOWA
 CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign



Early Stagecoach Road
 Manchester, Iowa

SHEET NAME

Road A Cross Section
 Proposed Cross Section

SHEET NO.

B1

100-1A
5/10/2021

ESTIMATED PROJECT QUANTITIES

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2101-0850001	CLEARING & GRUBBING	ACRE	0.4	
2	2102-2710070	EXCAVATION CL 10, RDWY & BORROW	CY	686.4	
3	2105-8425015	TOPSOIL STRIP SALVAGE & SPREAD	CY	631.6	
4	2107-0425020	COMPACTING BACKFILL ADJACENT TO BRIDGES, CULVERTS OR STRUCTURES	CY	631.6	
5	2111-8174100	GRANULAR SUBBASE	SY	1894.7	
6	2213-8201030	BASE WIDENING, 3 IN. HMA MIXTURE	SY	1894.7	
7	2401-6750001	REMOVALS AS PER PLAN	LS	1	
8	2402-2720100	EXCAVATION CL 20 RDWY PIPE CULV	CY	10	
9	2417-1007000	CORR PIPE CULV, 12 IN	LF	69	
10	2524-6765010	RMV+RE-INSTALL SIGN, AS PER PLAN	EACH	1	
11	2524-6765016	REMOVE AND REINSTALL REFERENCE LOCATION SIGN	EACH	1	
12	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EACH	5	
13	2524-9100030	OBJECT MARKER, TYPE 3	EACH	3	
14	2524-9210007	REFERENCE LOCATION SIGN	EACH	1	
15	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS	LF	22	
16	2524-9325001	TYPE A SIGNS ALUM	SF	10	
17	2527-9263112	PAINTED PAVEMENT MARKINGS, HIGHBUILD WATERBORNE	STA	14.2	
18	2528-2518000	SAFETY CLOSURE	EACH	1	
19	2528-8445110	TRAFFIC CONTROL	LS	1	
20	2533-4980005	MOBILIZATION	LS	1	
21	2601-2634100	MULCHING	ACRE	0.4	
22	2601-2636015	NATIVE GRASS SEEDING	ACRE	0.4	
23	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	14000	
24	2601-2700020	TRANSITION MAT	SF	320	
25	2602-0000020	SILT FENCE	LF	280	
26	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	4	
27	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	

PROJECT: CEE: 4850

DATE : 05/10/2021

DRAWN BY: CEF

REVISION:

THE UNIVERSITY OF IOWA

CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAMANS CENTER FOR THE
ENGINEERING ARTS AND SCIENCES

103 S CAPITOL ST
IOWA CITY, IOWA 52242

PHONE: 319.335.5647

FAX: 319.335.5660

EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
FOR CONSTRUCTION

Road Evaluation and Redesign



Early Stagecoach Road
Manchester, Iowa

SHEET NAME

Tabulations
C1

SHEET NO.

C1

100-17 4/8/2021				
TAULATION OF SILT FENCES Refer to EC-201				
Location		Length		Remarks
Begin Station	End Station	Side	LF	
0+50	6+50	West	600	

105-4 4/7/2021		
STANDARD ROAD PLANS		
The following Standard Road Plans apply to construction work on this project.		
Number	Date	Title
PM-110	4/7/2021	Line Types
PM-420	4/7/2021	Two-lane Roadway with no Turn Lanes
SI-101	4/7/2021	Locations-Types 'A' Signs
SI-173	4/7/2021	Object Markers
EC-101	4/7/2021	Wood Excelsior Mat for Ditch Protection
EC-103	4/7/2021	Wood Excelsior Mat for Slope Protection
EC-105	4/7/2021	Transition Mat
EC-201	4/7/2021	Silt Fence
TC-252	4/8/2021	Routes Closed to Traffic

108-22 4/7/2021											
PAVEMENT MARKING LINE TYPES See PM-110											
DCY4: Double Centerline (Yellow) @ 2.00					ELW4: Edge Line Right (White) @ 1.00						
Location					Length by Line Type (Unfactored)					Remarks	
Road ID	Station to Station	Dir. of Travel	Marking Type	Side			DCY4	ELW4			
				L	C	R	STA	STA			
Road A	0+22.00	6+88.00	North	Highbuilid Waterborne	x		6.7				
Road A	0+22.00	6+88.00	BOTH	Highbuilid Waterborne		x		6.7			

108-23A 4/8/2021	
TRAFFIC CONTROL PLAN	
During the dates listed in the Tabulation of Special Events, all roadways and sidewalks shall be fully open to traffic	
210th Street	
At all times both lanes of traffic shall be maintained, for a limited length and duration the the WB traffic lane may be narrowed slightly for construction	
Early Stagecoach Road	
At all times both lanes of traffic shall be maintained, for a limited length and duration the the EB traffic lane may be narrowed slightly for construction	
Intersection of Early Stagecoach Road and 210th Street	
At the start of construction and all times after the intersection will be closed to traffic. Access to Manchester Municipal Airport or the homes along Early Stagecoach Road will have to be off of 145th Avenue.	

190-66 4/8/2021			
SUMMARY OF TYPE 'A' SGNS			
Sign Number	Quantity	Size	Total Sign Area
	EACH	IN	SF
1	1	36	7.5
2	1	36	7.5

PROJECT:	CEE: 4850
DATE :	04/08/2021
DRAWN BY:	CEF
REVISION:	

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

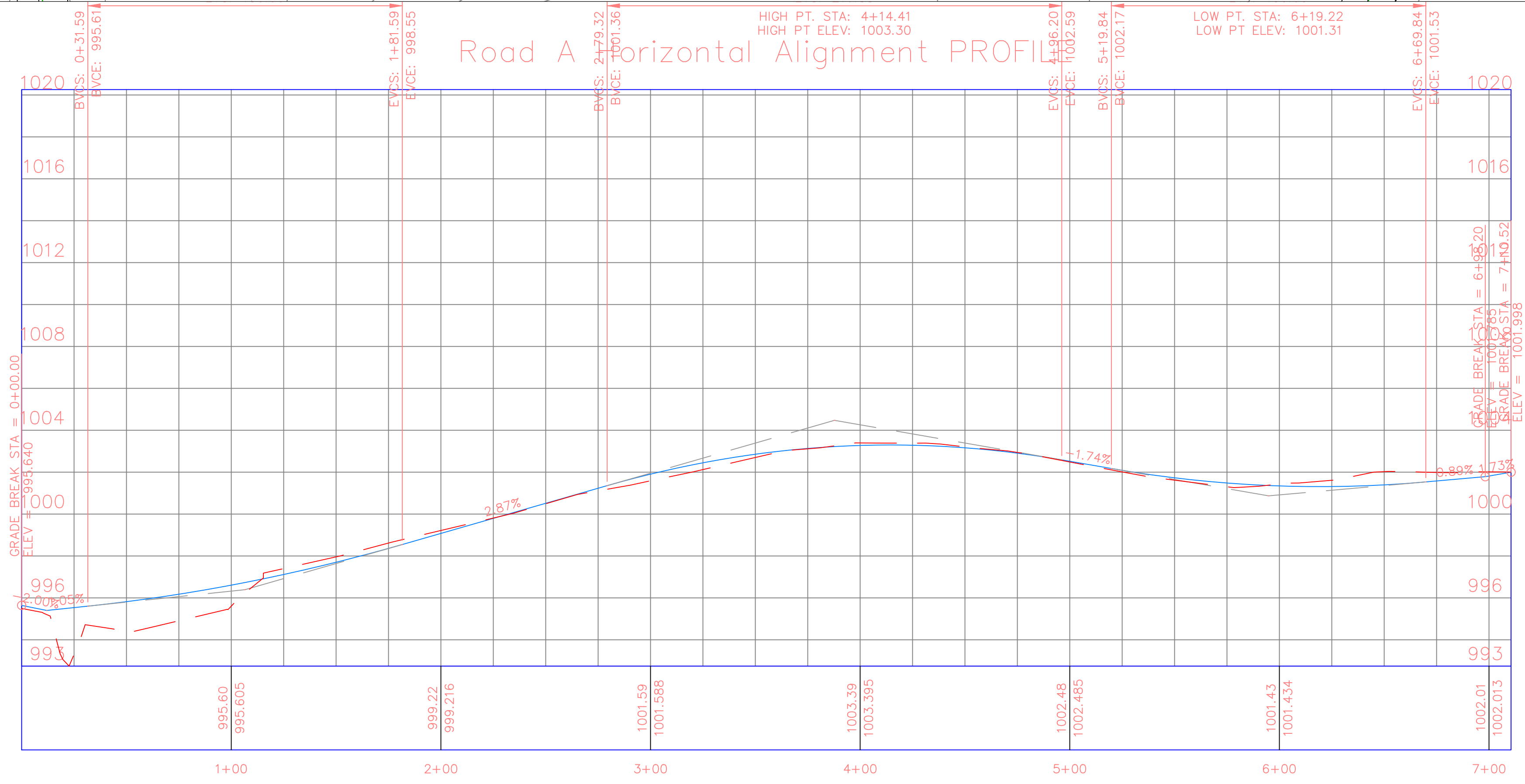
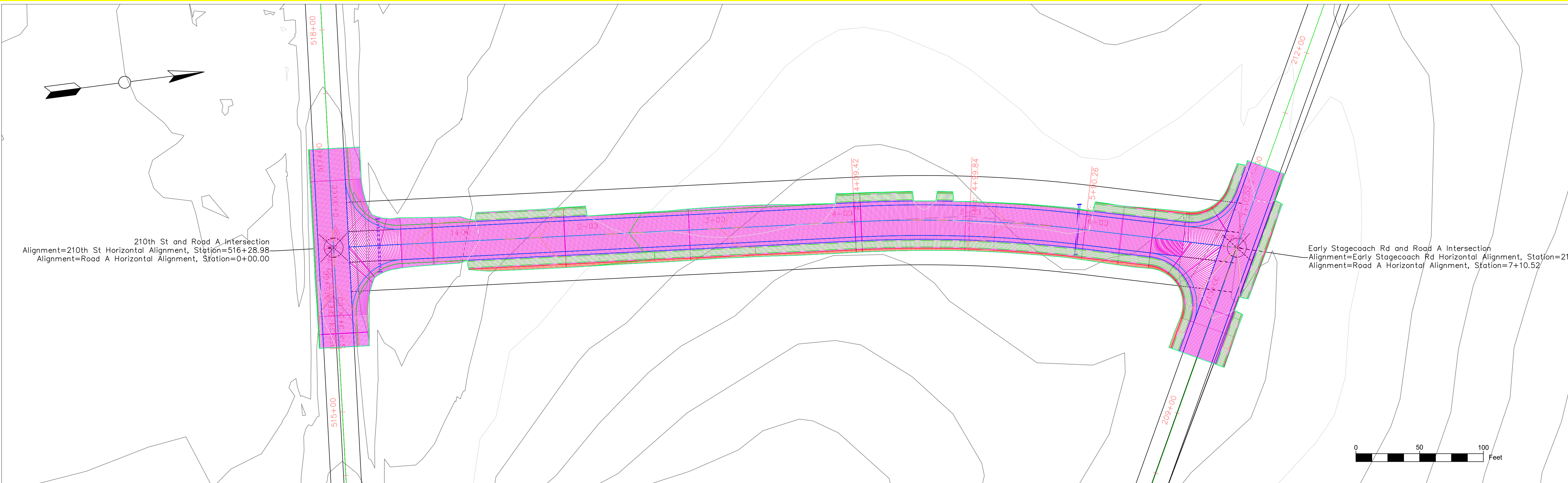


EDUCATIONAL - NOT FOR CONSTRUCTION

Road Evaluation and ReDesign
 Early Stagecoach Road
 Manchester, Delaware County, Iowa

SHEET NAME
 Plan Sheet
 C2

SHEET NO.
C2



PROJECT: CEE: 4850
DATE: 04/07/2012
DRAWN BY: CEF
REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
4105 SEAMANS CENTER FOR THE
ENGINEERING ARTS AND SCIENCES
103 S CAPITOL ST
IOWA CITY, IOWA 52242
PHONE: 319.335.5647
FAX: 319.335.5660
EMAIL: civil-hawks@uiowa.edu

EDUCATIONAL - NOT FOR CONSTRUCTION

ROAD EVALUATION & REDESIGN

IOWA
CIVIL & ENVIRONMENTAL
ENGINEERING

Early Stagecoach Road
Manchester, Iowa

SHEET NAME
Plan and Profile
Proposed Plan

SHEET NO.
D1



Road A begins 6060.31 feet from Delaware County GPS Control PT 2001-39 at an angle of North 30° West.

The centerline of the road sits 225 feet west of the west property line for 1543 210th St with 35 feet of right-of-way on either side.

THENCE (1) North 0°00'00" West, 409.42 feet to the beginning of a curve concave easterly, said curve has a radius of 1080.08 feet;

THENCE (2) northerly along said curve through a central angle of 9°35'35" an arc distance of 180.84 feet to a point of tangency;

THENCE (3) North 9°35'35" East, 120.26 feet.

PROJECT: CEE: 4850
 DATE: 04/20/2012
 DRAWN BY: CEF
 REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign



Early Stagecoach Road
 Manchester, Iowa

SHEET NAME
 Right-of-Way

SHEET NO.
H1

TRAFFIC CONTROL PLAN

Intersections will not be closed at the same time
 Early Stagecoach to be used as detour while 210th is under construction.
 210th to be used as detour while Early Stagecoach is under construction.

Access to Manchester Airport shall not be obstructed during construction.

TABULATION OF SPECIAL EVENTS

Event	Location	Date
N/A		

COORDINATED OPERATIONS

Other works in progress during the same period of time will be included.

Project	Type of Work
N/A	

STAGING NOTES

Stage 1 Construction/Traffic:

Close intersetion of 210th St and project road.
 Construct roadway and daylighting from Sta. 0+00 to Sta. 3+50.

 Shift 210th St. traffic to Early Stagecoach between intersection of Early Stagecoach and 210th, and intersection of 210th and 145th Ave

Stage 2 Construction/Traffic:

Open intersection of 210th and project road.
 Close intersection of Early Stagecoach and project road.
 Construct roadway and daylighting from Sta. 3+50 to end

Shift Early Stagecoach traffic to 210th between intersection of Early Stagecoach and 210th, and intersection of Early Stagecoach and 145th Ave.

Stage 3 Construction/Traffic:

Open Intersection of Early Stagecoach
 Dead end Early Stagecoach at intersection of Early Stagecoach and 210th St and Sta. 200+00
 Remove road and replace with grass.

Install barrier at intersection of Early Stagecoach and 210th
 Install signage indicating route to airport at interesection of project road and 210th st.

PROJECT: CEE: 4850
DATE: 04/23/2012
DRAWN BY: MMB
REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT FOR CONSTRUCTION

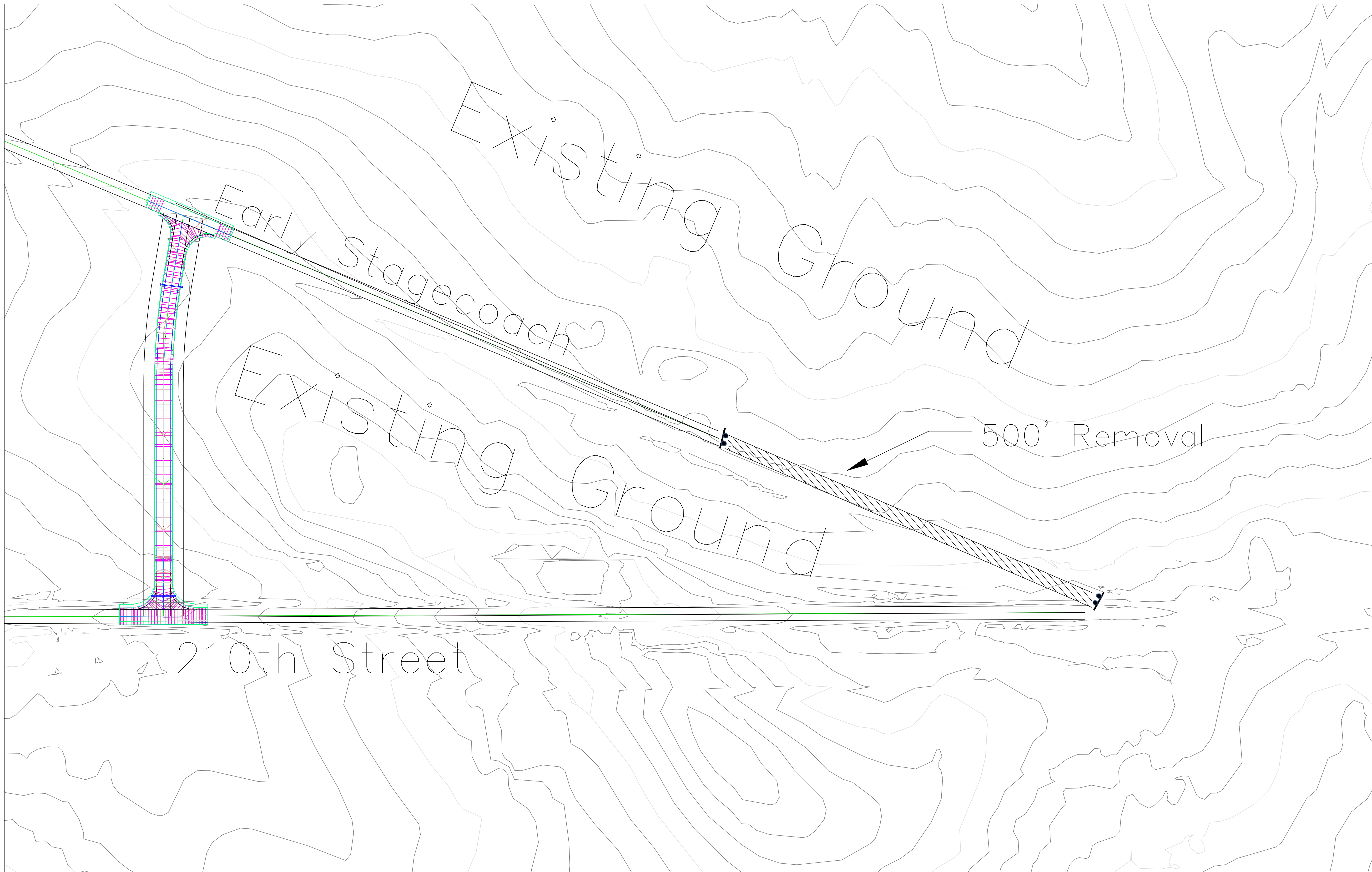
Road Evaluation and Redesign



Early Stagecoach Road
Manchester, Iowa

SHEET NAME
Plan Sheet
Staging & Signage

SHEET NO.
J1



PROJECT: CEE: 4850
 DATE : 03/31/2021
 DRAWN BY: MMB
 REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

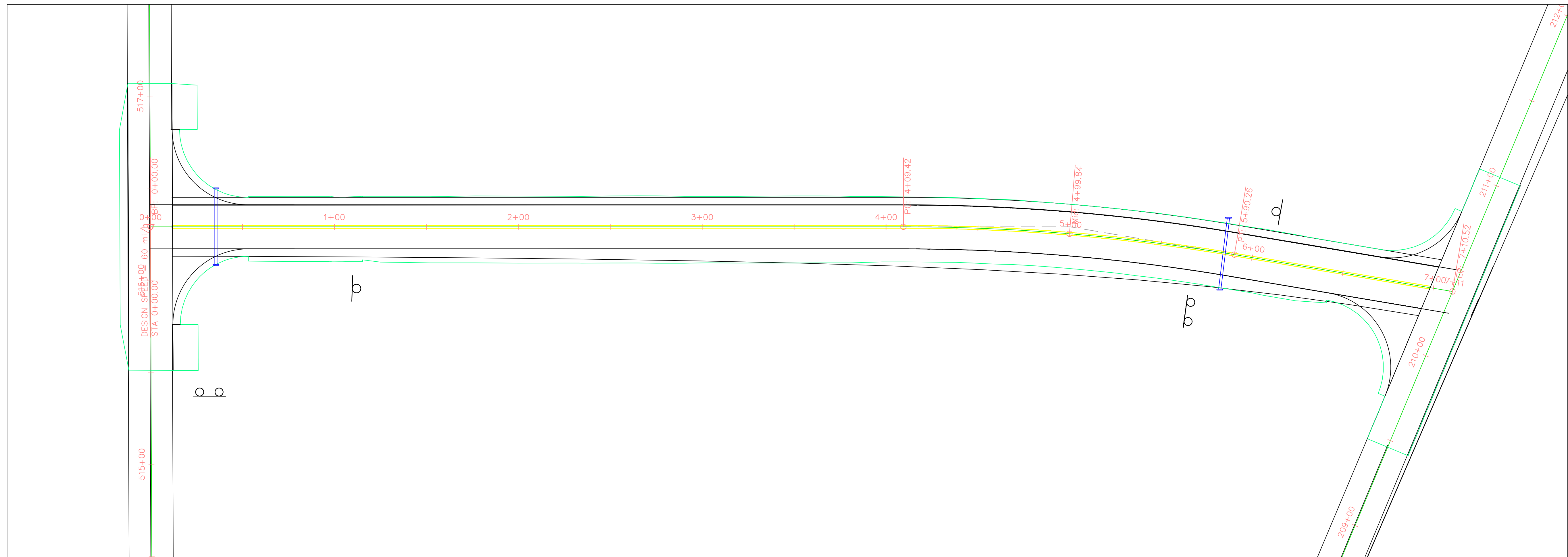
EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign
 Early Stagecoach Road
 Manchester, Iowa

IOWA
 CIVIL & ENVIRONMENTAL
 ENGINEERING

SHEET NAME
 Plan Sheet
 Staging & Signage

SHEET NO.
J2



190-50
4/9/2021

MATERIALS FOR TYPE 'B' SIGNS

NUMBER	SIGN NUMBER					DIR OF TRAVEL	SIGN LOCATION MILEPOST	FAB INFO	SIGN WIDTH FT	SIGN HEIGHT FT	NEW AREA SF	WOOD POSTS 4X6			PERFORATED SQUARE STEEL TUBE					INSSTALLATION			SEE SIGNING NOTES	REMARKS	
	ROUTE	COUNTY	EXIT NUMBER	ROAD ID M, R, S	SEQ. NO.							L FT	M FT	R FT	L FT	M FT	R FT	ANCHOR			TYPE	DIM 'X' FT			DIM 'Y' FT
																		CONC	SOIL	SLIP					
1						West	515+35	Reinstall	4	4	16				11		11		x		1	12	7		
2						North	5+70	New	4	4	16				11		11		x		1	12	7		

190-51
4/9/2021

MATERIALS FOR TYPE 'A' SIGNS

TYPE A SIGNING TYPICALS	SIGN NUMBER	DIR OF TRAVEL	SIGN LOCATION STATION	WOOD POSTS 4X6		PERFORATED SQUARE STEEL TUBE					STEEL TECT. TUBE			TYPE A SIGN MOUNTING BRACKETS					INSTALLATION		REMARKS				
				NO. OF POSTS	LEG 1		LEG 2	LEG 3	ANCHOR			NO. OF POSTS	POST LENGTH FT	ANCHORS EACH	ONE POST BRAKET	TWO POST	AUXILIARY	H	F	F1		TYPE	DIM 'X' FT		
					FT	FT			FT	FT	FT													FT	FT
SI-101	1	North	1+10			11						x											1	12	
SI-101	2	South	6+10			11						x											1	12	

190-66
4/8/2021

SUMMARY OF TYPE 'A' SGNS

Sign Number	Quantity	Size		Total Sign Area SF
		EACH	IN	
1	1	24x30	5	5
2	1	24x30	5	5

SIGN-NOTE
4/9/2021

SIGNING NOTES

The existing sign for the Manchester Municipal Airport at the intersection of 210th Street and Early Stagecoach Road will be removed and reinstalled at the northeast corner of the 210th Street and Road A intersection.

PROJECT:	CEE: 4850
DATE :	05/10/2021
DRAWN BY:	CEF
REVISION:	

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu



EDUCATIONAL - NOT FOR CONSTRUCTION

Road Evaluation and ReDesign

Early Stagecoach Road
Manchester, Delaware County, Iowa

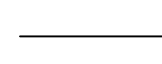


SHEET NAME

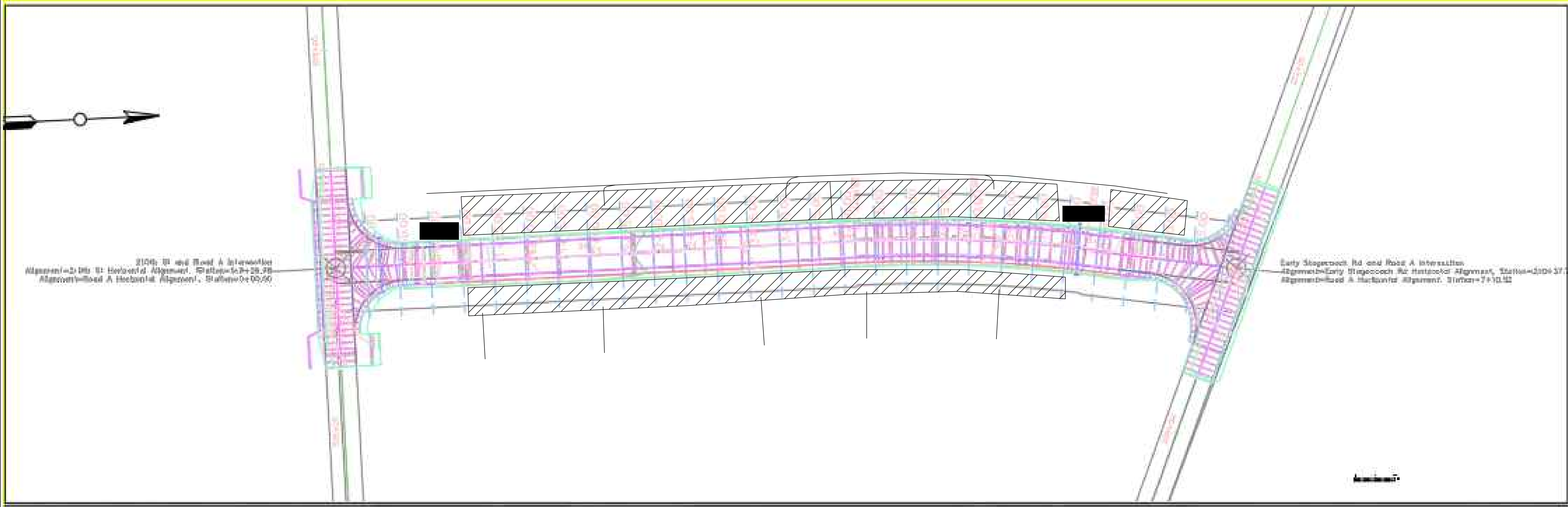
Plan Sheet N1

SHEET NO.

N1

Legend

-  Silt Fence
-  Transition Mat
-  Mulching/Seeding



PROJECT:	CEE: 4850
DATE :	04/09/2021
DRAWN BY:	DWG
REVISION:	

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign

IOWA
 CIVIL & ENVIRONMENTAL
 ENGINEERING

Early Stagecoach Road
 Manchester, Iowa

SHEET NAME
 Plan Sheet
 RR1

SHEET NO.
RR1

Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+00.00	11.58	0.00	0.00	0.00	0.00	0.00
0+25.00	155.58	0.00	77.39	0.00	77.39	0.00
0+50.00	46.28	0.00	93.45	0.00	170.84	0.00
0+75.00	37.05	0.00	38.58	0.00	209.42	0.00
1+00.00	28.21	0.00	30.21	0.00	239.64	0.00
1+25.00	0.00	25.46	13.06	11.79	252.70	11.79
1+50.00	0.00	25.55	0.00	23.61	252.70	35.40
1+75.00	0.03	24.40	0.01	23.12	252.71	58.52
2+00.00	0.00	18.77	0.01	19.98	252.72	78.51
2+25.00	0.78	14.73	0.36	15.51	253.08	94.01
2+50.00	1.56	13.70	1.08	13.16	254.16	107.18
2+75.00	3.50	11.79	2.34	11.80	256.51	118.98
3+00.00	7.05	7.38	4.89	8.88	261.39	127.85
3+25.00	7.33	7.61	6.66	6.94	268.05	134.79
3+50.00	3.97	10.72	5.23	8.48	273.29	143.28
3+75.00	1.40	13.52	2.49	11.22	275.78	154.50
4+00.00	0.08	17.59	0.69	14.40	276.46	168.90
4+09.42	0.06	16.73	0.03	5.99	276.49	174.89
4+25.00	0.05	16.85	0.03	9.69	276.52	184.57
4+50.00	0.08	14.76	0.06	14.48	276.58	199.05
4+75.00	0.11	13.64	0.09	13.00	276.67	212.05
4+99.84	0.57	10.57	0.31	10.99	276.98	223.05
5+00.00	0.58	10.56	0.00	0.06	276.99	223.11
5+25.00	1.29	9.76	0.87	9.27	277.86	232.38
5+50.00	2.04	9.23	1.55	8.66	279.41	241.04
5+75.00	3.33	7.94	2.50	7.83	281.91	248.87
5+90.26	1.09	10.76	1.25	5.29	283.16	254.16
6+00.00	0.08	16.27	0.21	4.88	283.37	259.04
6+25.00	0.00	26.73	0.04	19.91	283.41	278.95
6+50.00	0.00	37.43	0.00	29.70	283.41	308.65
6+75.00	0.00	35.10	0.00	33.58	283.41	342.23
7+00.00	3.72	22.91	1.72	26.86	285.13	369.09
7+10.52	3.16	9.86	1.34	6.38	286.47	375.47

Road A Total Volume Table

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Cut and Fill	1.000	1.000	41679.45 Sq. Ft.	420.93 Cu. Yd.	265.47 Cu. Yd.	155.46 Cu. Yd.<Cut>
Totals			41679.45 Sq. Ft.	420.93 Cu. Yd.	265.47 Cu. Yd.	155.46 Cu. Yd.<Cut>

Cut and Fill Summary for Full Road Construction

PROJECT: CEE: 4850

DATE: 04/23/2021

DRAWN BY: CEF

REVISION:

THE UNIVERSITY OF IOWA

CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAMANS CENTER FOR THE
ENGINEERING ARTS AND SCIENCES

103 S. CAPITOL ST.
IOWA CITY, IOWA 52242

PHONE: 319.335.5647

FAX: 319.335.5660

EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
FOR CONSTRUCTION

Road Evaluation and Redesign



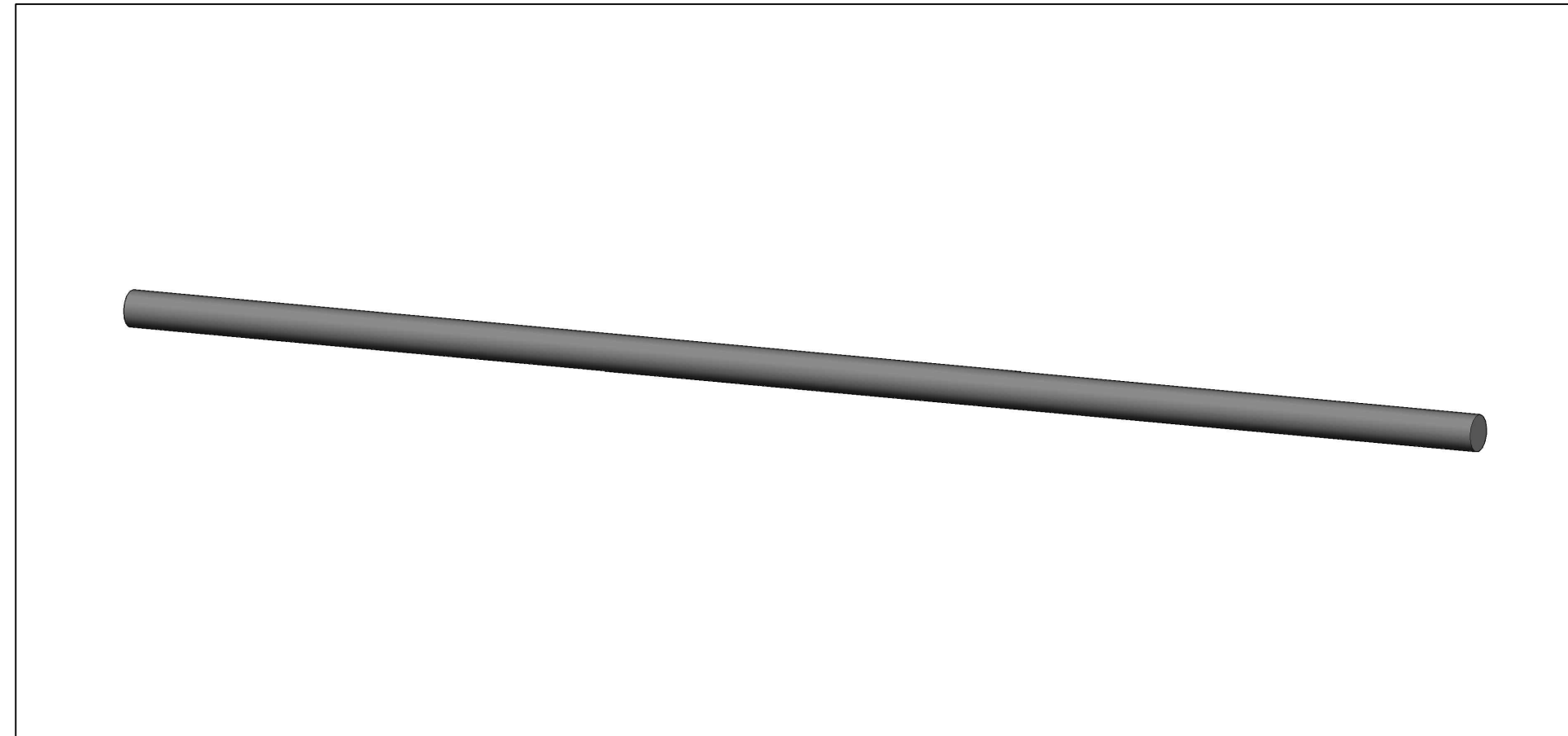
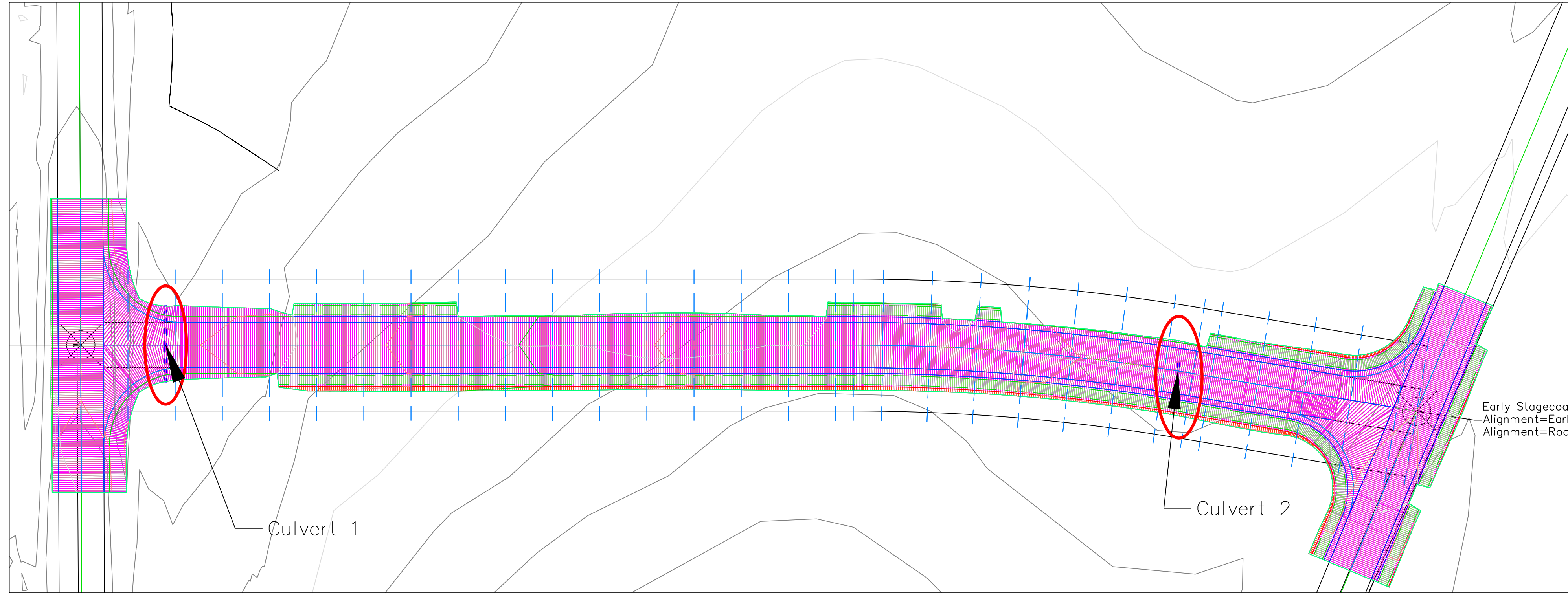
Early Stagecoach Road
Manchester, Iowa

SHEET NAME

Tabulations
Proposed Earthwork

SHEET NO.

T1



Culvert Details							
Number	Material	Thread	Diameter (in)	# Pipes	Length (ft)	Start Sta	End Sta
1	Corrugated Steel	2-2/3" x 1/2"	12	2	40.5	0+45	0+45
2	Corrugated Steel	2-2/3" x 1/2"	12	1	27.2	5+84	5+81

PROJECT: CEE: 4850

DATE : 04/23/2012

DRAWN BY: MMB

REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign



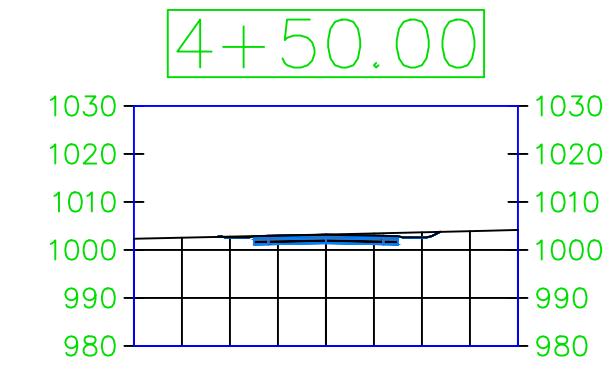
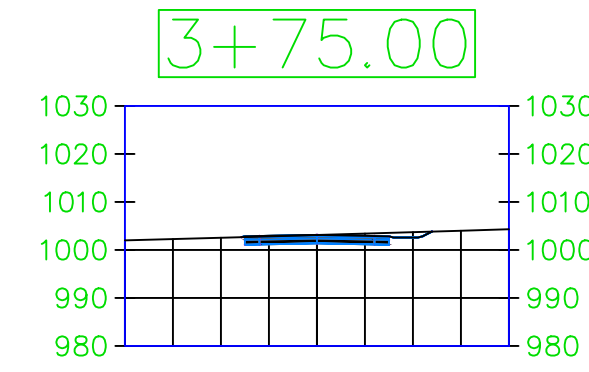
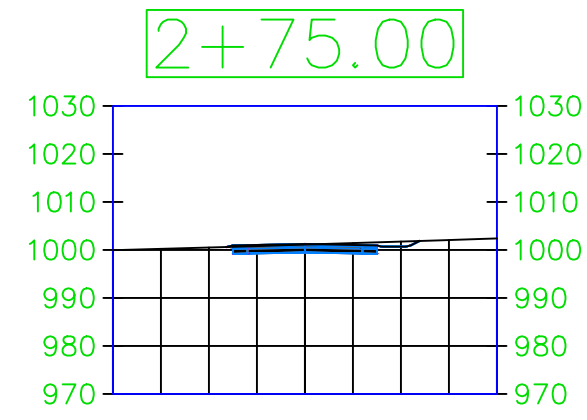
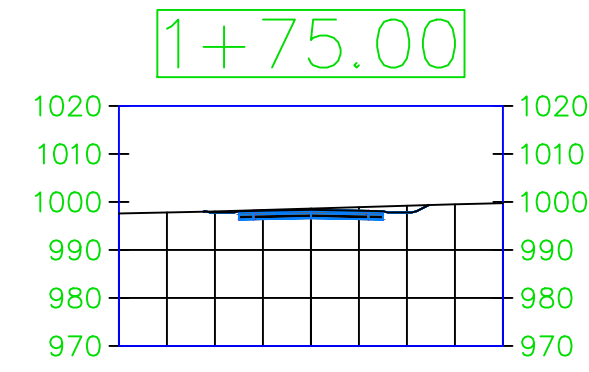
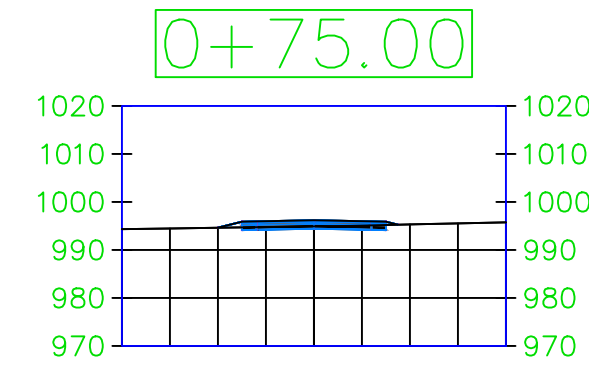
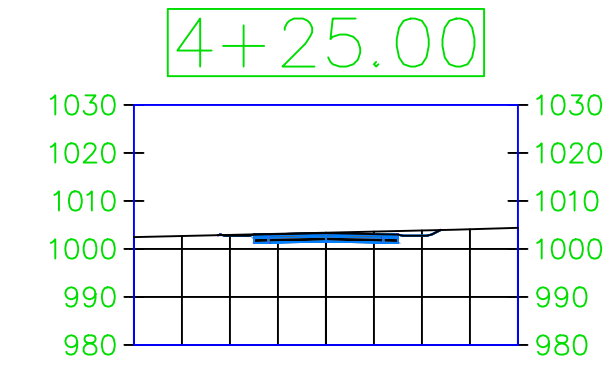
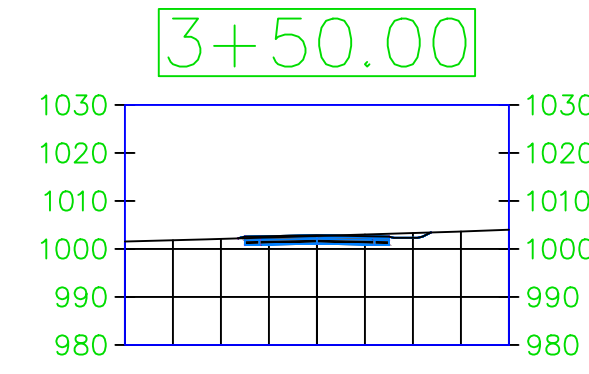
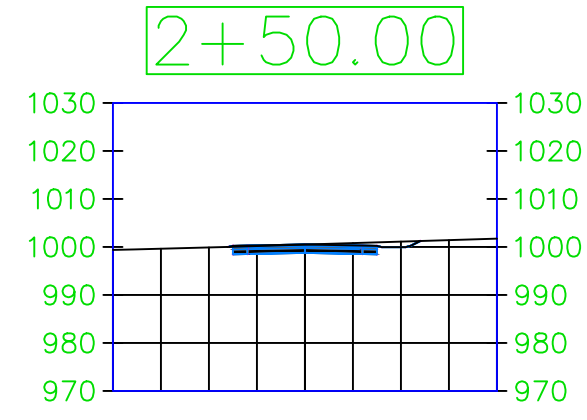
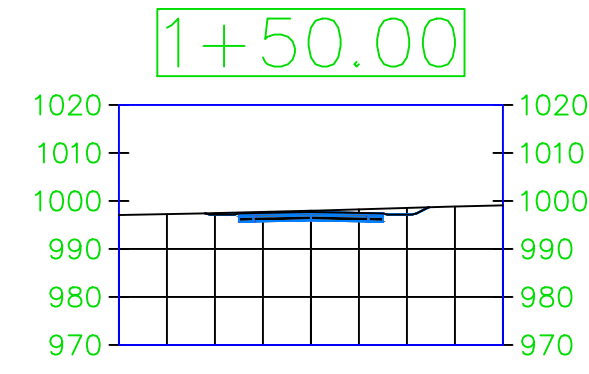
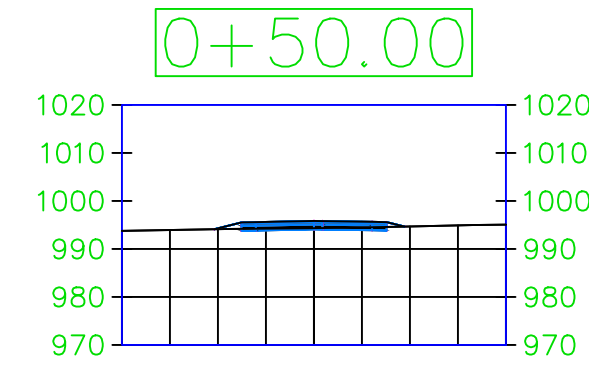
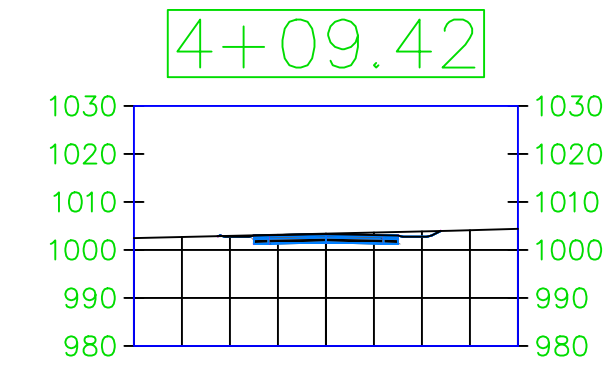
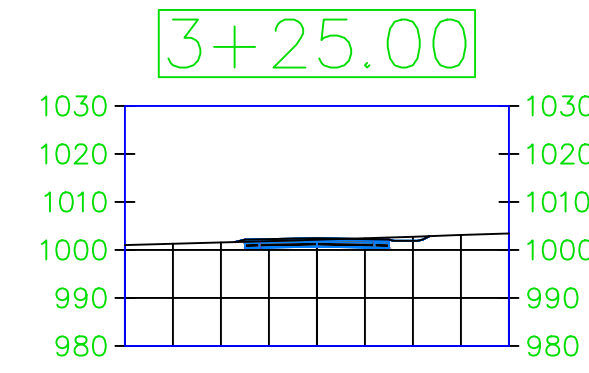
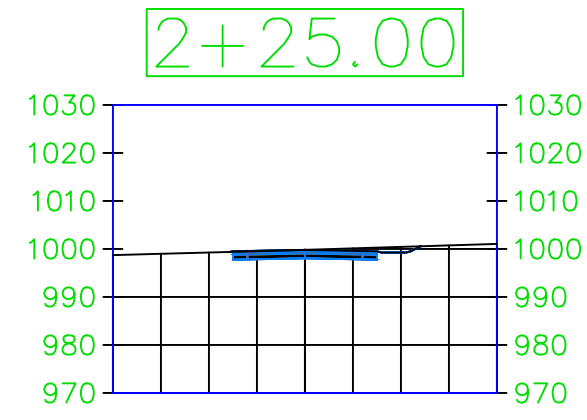
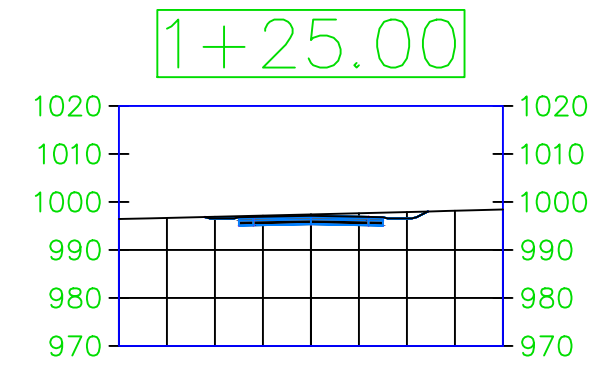
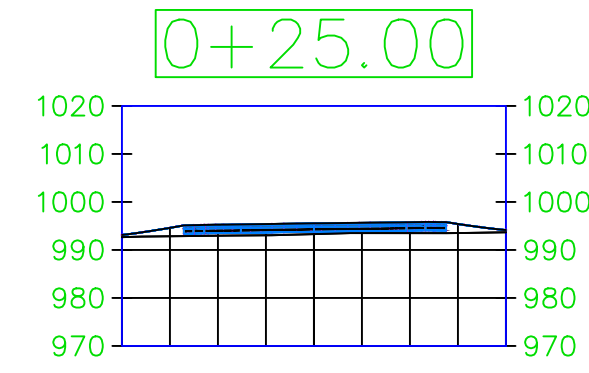
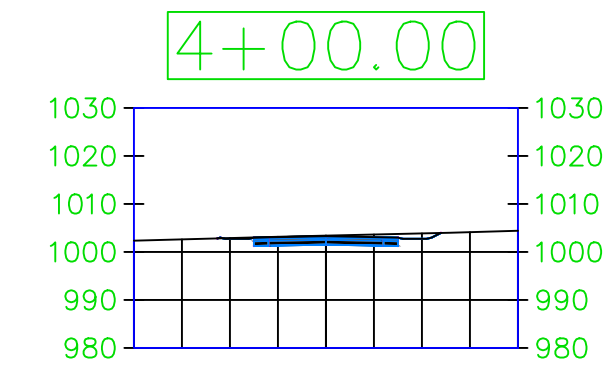
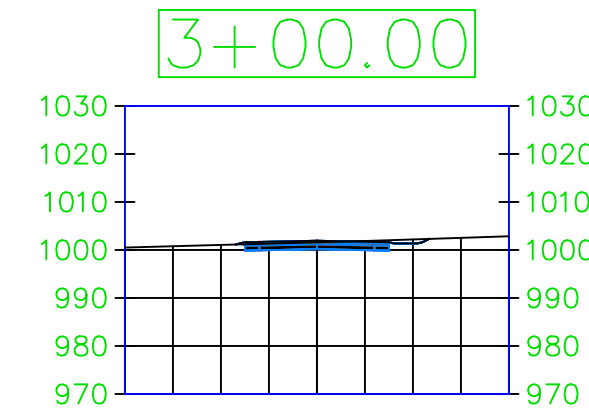
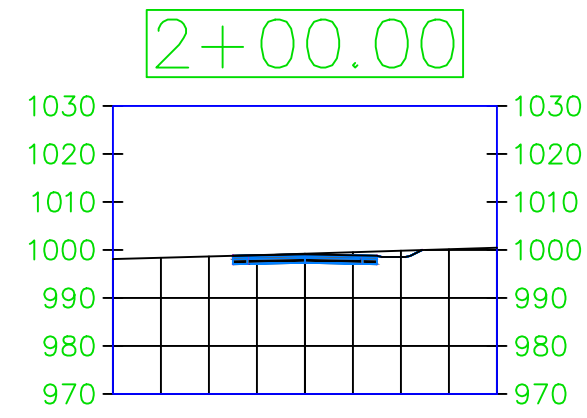
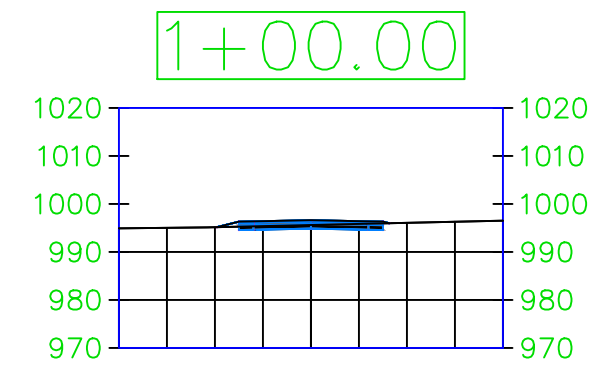
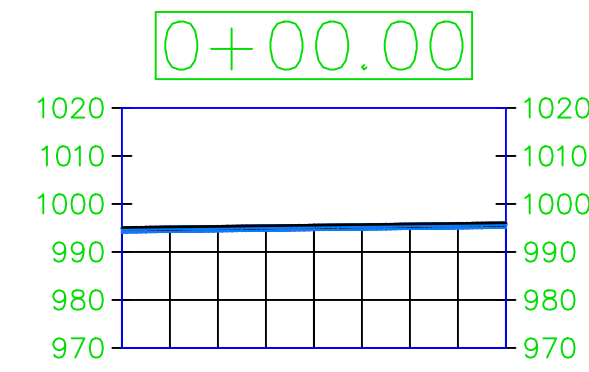
Early Stagecoach Road
 Manchester, Iowa

SHEET NAME

Plan Sheet
 Culvert

SHEET NO.

V1



PROJECT: CEE: 4850

DATE: 04/23/2012

DRAWN BY: CEF

REVISION:

THE UNIVERSITY OF IOWA

CIVIL AND ENVIRONMENTAL ENGINEERING

4105 SEAMANS CENTER FOR THE ENGINEERING ARTS AND SCIENCES

103 S CAPITOL ST

IOWA CITY, IOWA 52242

PHONE: 319.335.5647

FAX: 319.335.5660

EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT FOR CONSTRUCTION

Road Evaluation and Redesign



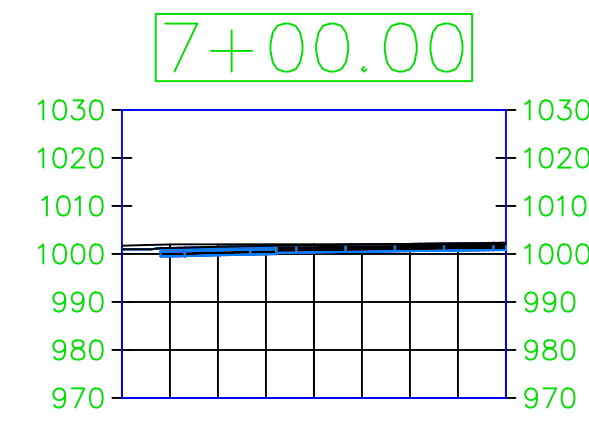
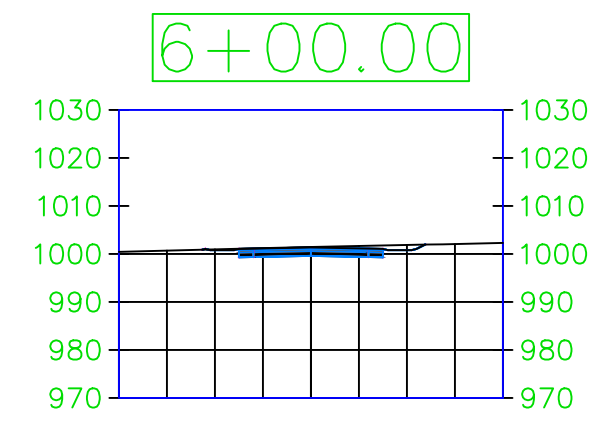
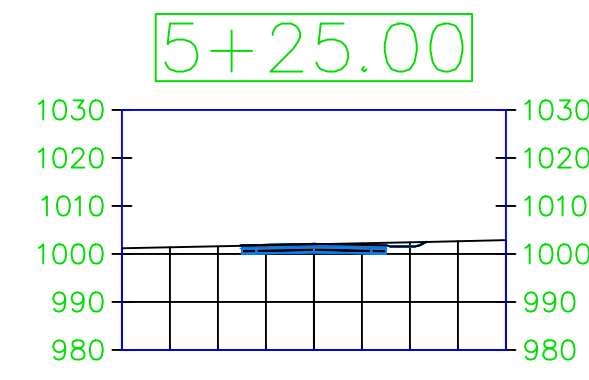
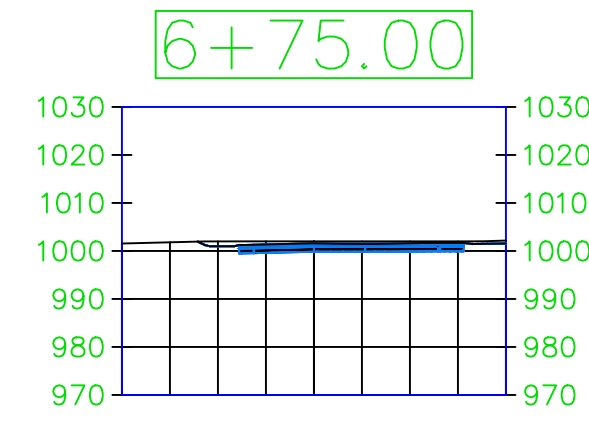
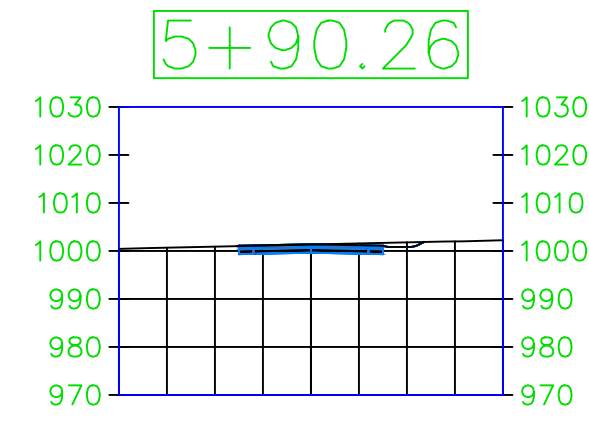
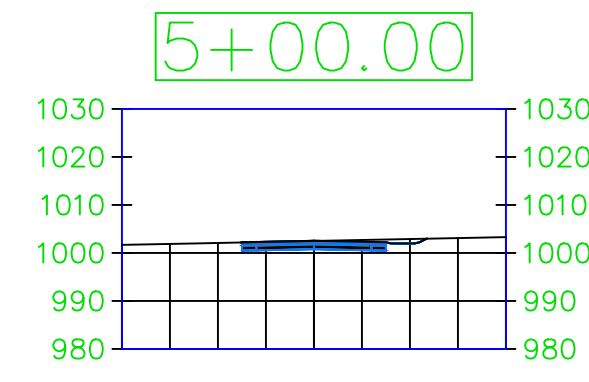
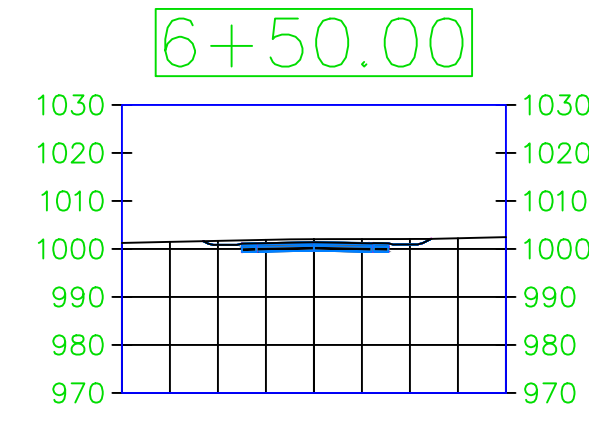
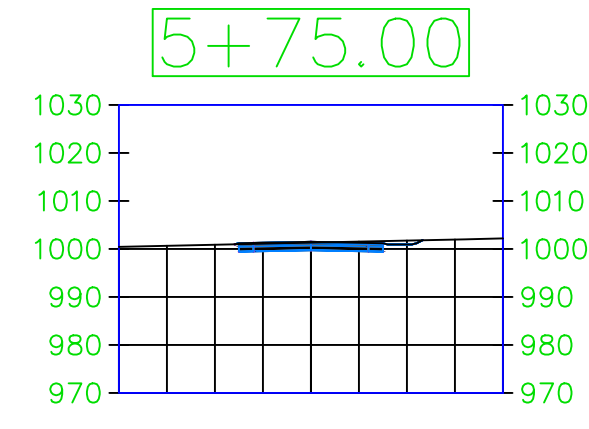
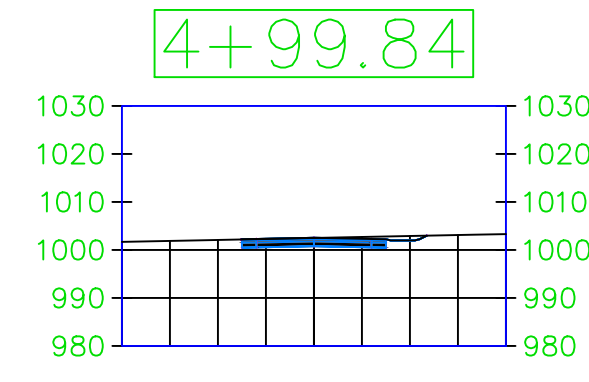
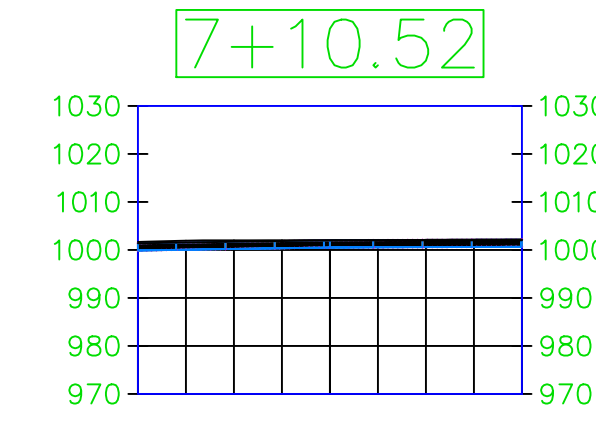
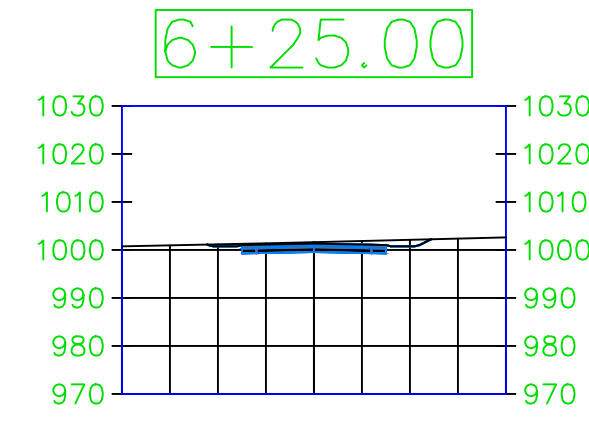
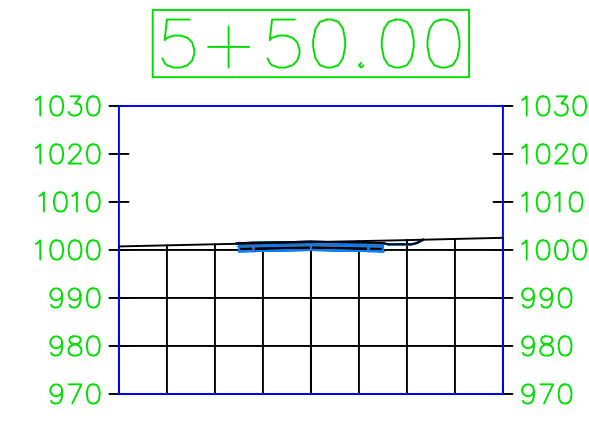
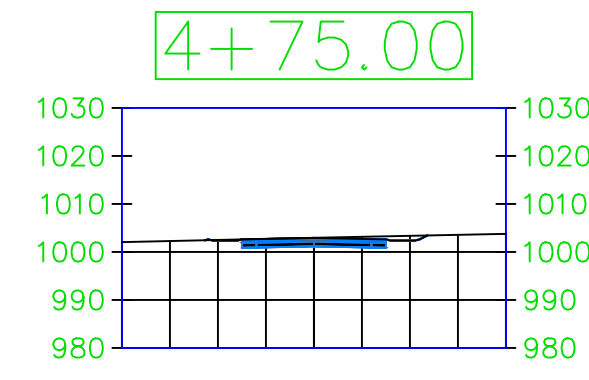
Early Stagecoach Road
Manchester, Iowa

SHEET NAME

Road A Cross Section
Proposed Cross Section

SHEET NO.

W1



PROJECT: CEE: 4850
 DATE: 04/23/2012
 DRAWN BY: CEF
 REVISION:

THE UNIVERSITY OF IOWA
CIVIL AND ENVIRONMENTAL ENGINEERING
 4105 SEAMANS CENTER FOR THE
 ENGINEERING ARTS AND SCIENCES
 103 S CAPITOL ST
 IOWA CITY, IOWA 52242
 PHONE: 319.335.5647
 FAX: 319.335.5660
 EMAIL: civil-hawks@iowa.edu

EDUCATIONAL - NOT
 FOR CONSTRUCTION

Road Evaluation and Redesign
IOWA
 CIVIL & ENVIRONMENTAL
 ENGINEERING
 Early Stagecoach Road
 Manchester, Iowa

SHEET NAME
 Road A Cross Section
 Proposed Cross Section

SHEET NO.
W2