

PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**BLACK HAWK COUNTY**  
**HMA Resurfacing with Widening**  
 Hudson to  
 West US 20 junction  
 -  
 SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

Field Exam: 3/28/2022  
 Mary Kelly, IDOT  
 Tracy Meise, IDOT  
 Kip Siems, IDOT  
 Ron Loecher, IDOT  
 Tyler Kubik, IDOT  
 Jake Hovey, City of Hudson

INDEX OF SHEETS	
No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
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A.2	Location Map Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1 - 6	Typical Cross Sections and Details
<b>C Sheets</b>	<b>Quantities and General Information</b>
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C.1	Estimated Project Quantities
C.1	Estimate Reference Information
C.1	Estimate Reference Information
C.1	Estimate Reference Information
C.1	Standard Road Plans
C.1	Standard Road Plans
C.1	Index of Tabulations
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C.1	General Notes
C.1	Tabulations (beg. with tab. of incidentals if needed)
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L.3	Jointing "Mainline or Side Road Name"
<b>N Sheets</b>	<b>Traffic Signal Sheets</b>
N.1	Traffic Signal Sheets "Mainline or Side Road Name"
<b>S Sheets</b>	<b>Sidewalk Sheets</b>
* S .1	Sidewalk Legend & Symbol Information Sheet
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<b>V Sheets</b>	<b>Bridge and Culvert Situation Plans</b>
V.1	Bridge and Culvert Situation Plans
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1	Cross Sections Legend & Symbol Information Sheet
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	* Color Plan Sheets

REVISIONS

TOTAL
..
PROJECT IDENTIFICATION NUMBER
PROJECT NUMBER
NHSX-058-1(100)--3H-07
R.O.W. PROJECT NUMBER
-
-
-



MILEAGE SUMMARY			
		105-1	
		09-27-94	
Div.	Location	Lin. Ft.	Miles
1	STA 762+35.0 to STA 957+57.7 STA EQ	19,522.7	3.7
	STA 957+57.7 BK=STA 2957+50.0 AH STA 2957+50.0 to STA 2972+99.2 STA EQ	1,549.2	0.29
	STA 2972+99.2 BK= STA 973+01.7 AH STA 973+01.7 to STA 1045+56.0	7,254.3	1.37
	Bridge STA 806+85.25	(261.0)	(0.05)
	Bridge STA 815+20.75	(208.5)	(0.04)
	Bridge STA 1018+18.96	(272.5)	(0.05)
	<b>TOTAL</b>	<b>27,584.2</b>	<b>5.28</b>

INDEX OF SEALS		
	Mary K. Kelly	
N	Michael Jorgensen	Signal
V	Michael Nop	Bridge

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN – Date: 3/28/2022

Field Exam Notes:

No pre-shouldering necessary

Clearing and treatment of stumps, start at 5th Street intersection and go north of the bridge, include foreslope to where foreslope flattens out, not to exceed 85 feet from centerline. ROW here is quite wide and do not need to clean all of ROW, Just enough to improve sight distance at intersection. Include a note to protect the existing USGS Gaging Station. Include note on the plans to indicate power line.

Will need 5 divisions for NHSX project:

- Div 1 - 3R
- Div 2 - Hudson
- Div 3 - Cedar Falls
- Div 4 - Black County
- Div 5 - Non FA Eligible (Stockpile of Guardrail)

Maintenance would like the existing guardrail only (no hardware or posts).

For sideroad paving, Hudson has jurisdiction east of IA 58 and Black Hawk Co. west of IA 58.

City of Hudson has an interest to pave further back on some of their paved side roads in town. They will get back to us which intersections and how far back they would like to go.

Hudson will get for DOT information of valve and manhole locations to be adjusted if affected.

Gave to city a copy of what the Rectangular Rapid Flashing Beacon was. Explained that it would be different than existing pedestrian signal out there today. They would let us know if the City was opposed but did not think Council would be.

Construction will get to design a patching tab.

Use sediment logs for erosion control purposes.

One location coming north out of town on the west side where shoulder is narrow. High fill area, construction will plan on tapering into it.

In PCC section on north end of project, wide granular shoulders will not be narrowed.

At culvert (approximately 1600 LF south of Shaulis Rd) with concrete crossing, riprap will be placed at the inlet. Rip rap will be placed at the outlet the the concrete crossing.

Include surface patching bid item, 5 ton of quantity.

Include call out for station for division between Cedar Falls and DOT.

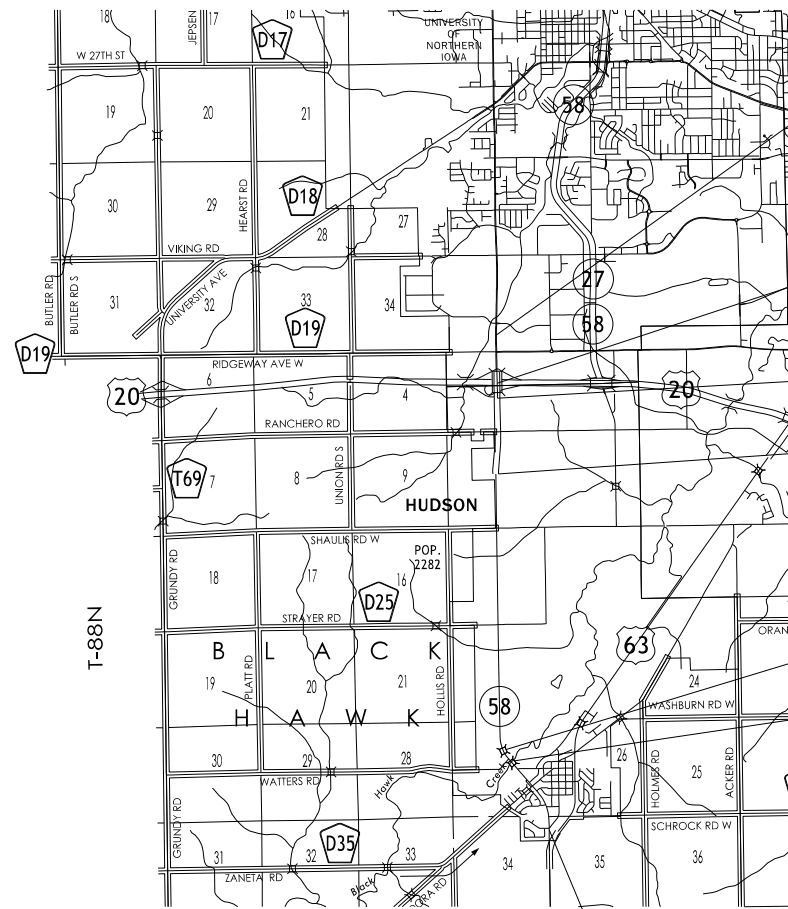
EOP in Cedar Falls - there is a right hand turn lane in PCC in good condition. To avoid it, DOT can mill and fill in the turn lane area to allow the surface to be carried thru.

Stayer Avenue - Radius has been widened because of turning traffic. This is causing a drainage issue because the pipe is plugged, ditch is filled in causing water to overtop the roadway. Need to work with the county on a repair method they are okay with. Possibly to include pulling in the radius and cleaning ditch to the west and north. The pipe needs to be located and either unplugged or replaced.

In city of Hudson, may have to consider 2 feet of widening instead of 4' to make it fit. Needs to be verified.

Filletts in Hudson will be removed with widening, Class 13.

At the intersection in Hudson at Eldora, may have to consider 4 foot wide sidewalk instead of 5 feet to avoid poles.



END CONSTRUCTION  
 STA 1045+56  
 North of existing improvements,  
 West US 20 junction, north ramps

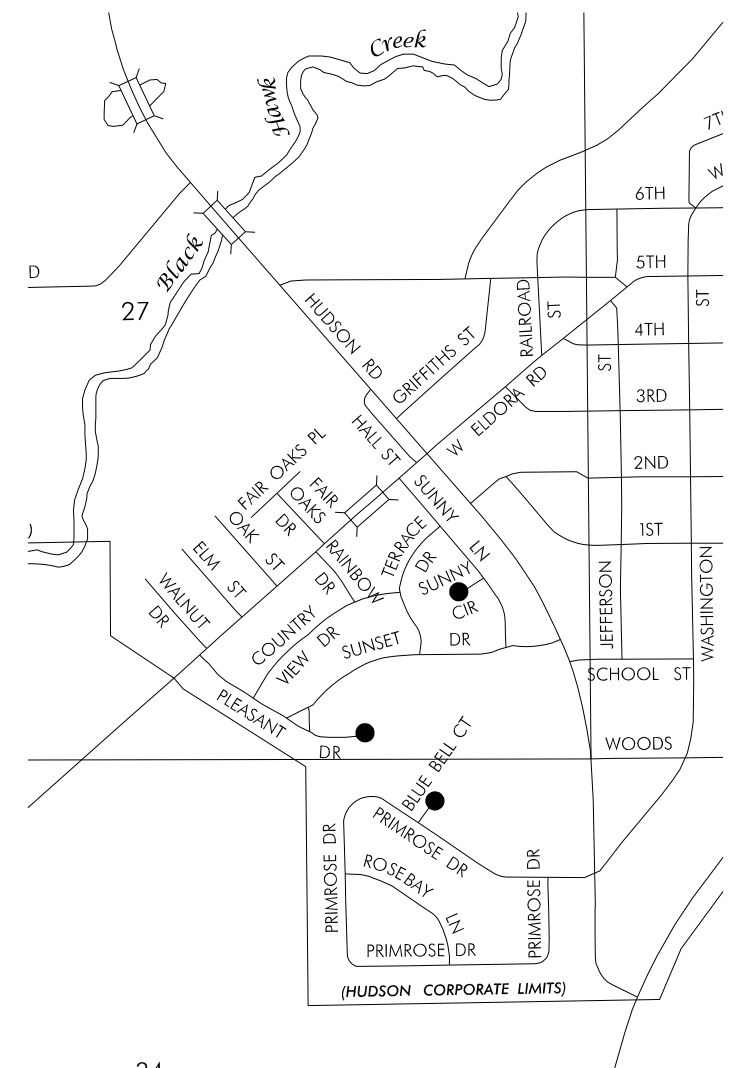
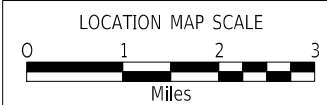
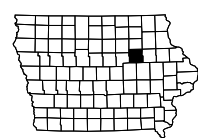
FHWA 605630, 605635

STA EQ  
 2972+99.2 BK=  
 973+01.69 AH  
 STA EQ  
 957+57.68 BK=  
 2957+50.0 AH

FHWA 15041

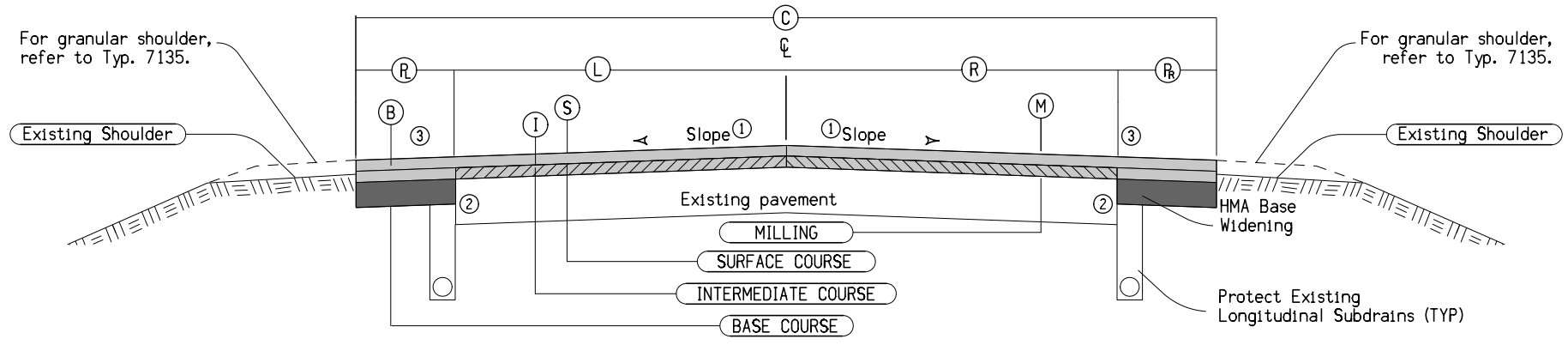
FHWA 15031

BEGIN CONSTRUCTION  
 STA 762+35/ RP 0.1  
 At PCC, north of US 63 int



24

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

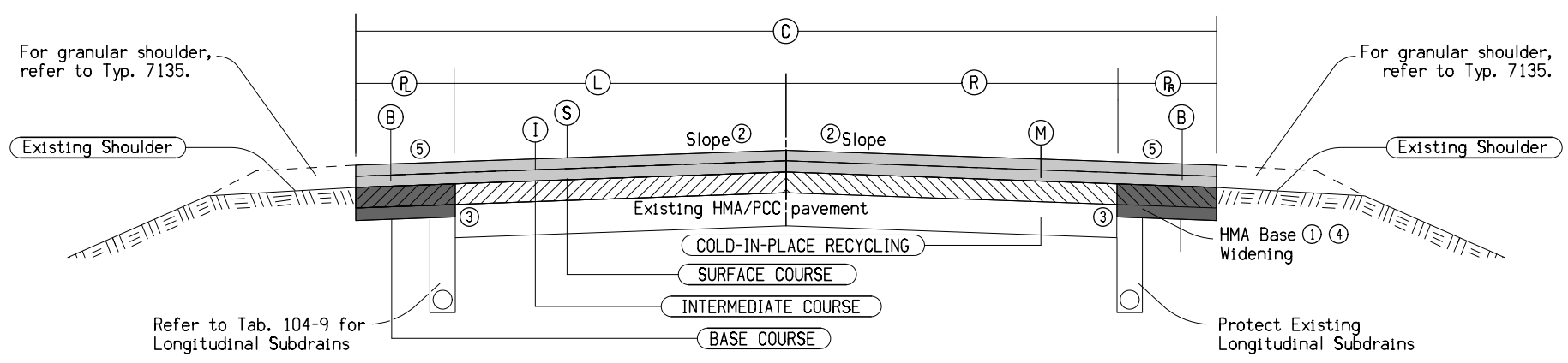


- Notes:
- ① Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping.
  - ② Provide a vertical edge similar to what can be achieved with a milling machine. Incidental to Class 13 Excavation.
  - ③ Paved shoulder cross slope shall match mainline cross slope.
  - ④ Surface and intermediate quantities are shown in Tabulation 100-25. Base quantities area shown in Tabulation 112-9.

Location		Estimated Quantities									Remarks
		(S)	(I)	(C)	(L)	(R)	(M)	(P <sub>L</sub> )	(P <sub>R</sub> )	(B)	
Station To	Station	Inches	Inches	Feet	Feet	Feet	Inches	Feet	Feet	Inches	
762+35.0	762+72.5	1.5	0-1.5	36.0	14.0	14.0	0-1.5	4.0	4.0	5	Runout
762+72.5	802+66.0	1.5	1.5	36.0	14.0	14.0	1.5	4.0	4.0	5	
802+66.0	804+79.75	1.5	1.5	36.0	14.0	14.0	1.5	4.0	4.0	5	
804+79.75	805+54.75	1.5	1.5	24.0	12.0	12.0	1.5-0	0	0	5	Runout
805+54.75	808+15.75	1.5	1.5								Bridge
808+15.75	808+90.75	1.5	1.5	24.0	12.0	12.0	0-1.5	0	0	5	Runout
808+90.75	813+41.25	1.5	1.5	36.0	14.0	14.0	1.5	4.0	4.0	5	
813+41.25	814+16.25	1.5	1.5	24.0	12.0	12.0	1.5-0	0	0	5	Runout Bridge

**TYPICAL HMA RESURFACING WITH BASE WIDENING URBAN SECTION**

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

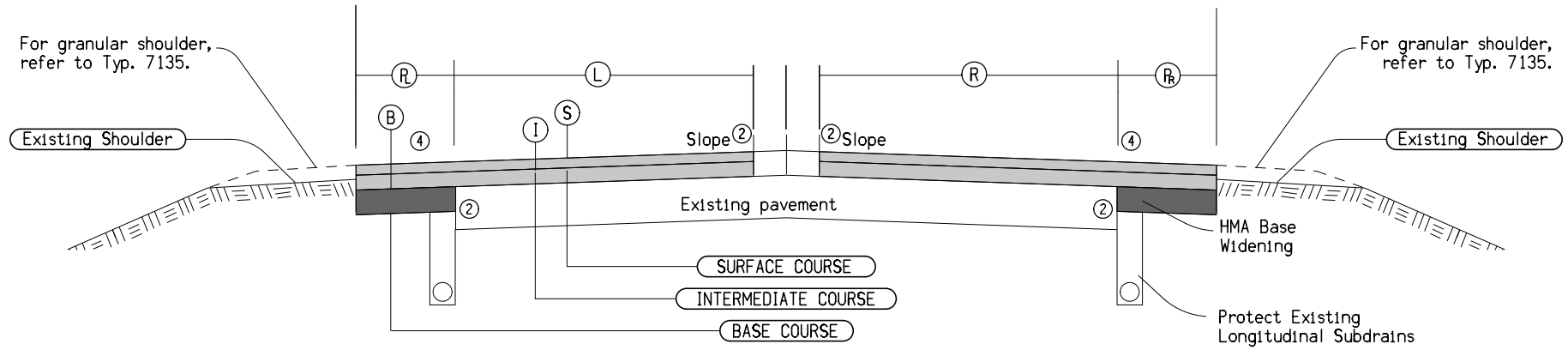


- Notes:
- ① HMA base widening shall be performed prior to Cold-in-Place recycling. The top 3" of the newly placed base widening unit shall be included in the Cold In-Place recycling operation.
  - ② Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping.
  - ③ Provide a vertical edge similar to what can be achieved with a milling machine. Incidental to Class 13 Excavation.
  - ④ Suspend base widening at paved side roads and at turn lanes. Refer to Typical 2620 and 7149 for additional information.
  - ⑤ Paved shoulder cross slope shall match mainline cross slope except in super elevated curves. See PV-301 for additional information.
  - ⑥ Surface and intermediate quantities are shown in Tabulation 100-25. Base quantities area shown in Tabulation 112-9.

Location		Estimated Quantities									Remarks
		(S)	(I)	(C)	(L)	(R)	(M)	(P <sub>L</sub> )	(P <sub>R</sub> )	(B)	
Station To	Station	Inches	Inches	Feet	Feet	Feet	Inches	Feet	Feet	Inches	
816+24.75	817+99.75	1.5	0-1.5	24.0	12.0	12.0	0-4	0	0	7	Runout
817+99.75	955+45.18	1.5	1.5	36.0	14.0	14.0	4	4.0	4.0	7	
955+45.18	957+57.68	1.5	1.5-2.0	36.0	14.0	14.0	4-0	4.0	4.0	7-5	Transition to CIP

**TYPICAL CROSS SECTION COLD IN-PLACE RECYCLING HMA RESURFACING WITH REMOVAL OF EXISTING AND REPLACEMENT BASE WIDENING**

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



- Notes:
- ① 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.
  - ② Provide a vertical edge similar to what can be achieved with a milling machine. Incidental to Class 13 Excavation.
  - ③ Paved shoulder cross slope shall match mainline cross slope.
  - ④ Surface and intermediate quantities are shown in Tabulation 100-25. Base quantities area shown in Tabulation 112-9.

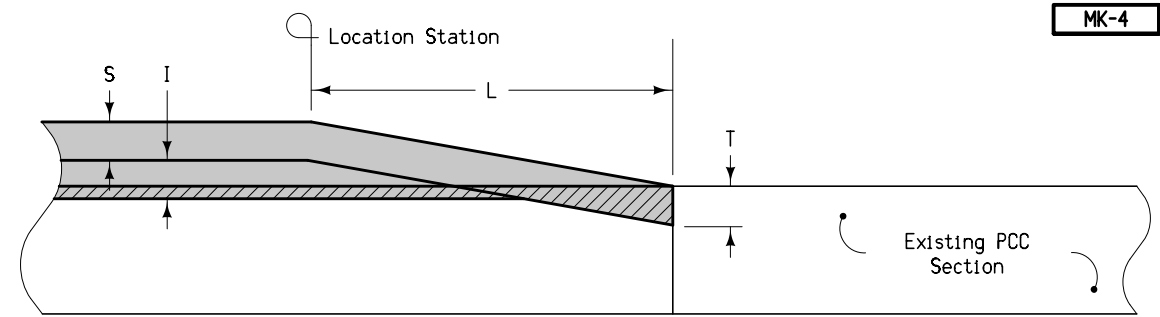
Location		Estimated Quantities					Location		Estimated Quantities						
Station To Station		(S)	(I)	(L)	(R)	(B)	Remarks	Station To Station		(S)	(I)	(R)	(R)	(B)	Remarks
		Inches	Inches	Feet	Feet	Feet				Inches	Inches	Feet	Feet	Feet	
2957+50.0	2968+48.7	2	3	18.0	6.0	5		2957+50.0	2964+57.4	2	3	12.0	6.0	5	
2968+48.7	2972+99.2	2	3	18.0-22.5	6.0	5		2964+57.4	2971+04.9	2	3	12.0-14.5	6.0	5	
							STA EQ	2971+04.9	2972+99.2	2	3	14.5	6.0	5	
973+01.7	1014+32.7	2	3	18.0-30.0	6.0	5		973+01.7	974+95.2	2	3	14.5	6.0	5	STA EQ
1014+32.7	1014+97.3	2	3	72.0	6.0	5		974+95.2	986+26.2	2	3	14.5-26.5	6.0	5	
1014+97.3	1016+82.7	2	3	72.0-58.0	6.0	5	Runout	986+26.2	987+81.0	2	3	26.5	6.0	5	
1016+82.7	1019+55.2	2	3		6.0	5	Bridge	987+81.0	989+01.0	2	3	26.5-34.5	6.0	5	Runout
1019+55.2	1020+07.3	2	3	40.0-32.0	6.0	5		989+01.0	990+51.0	2	3	34.5	6.0	5	
1020+07.3	1020+67.3	2	3	32.0-30.0	6.0	5		990+51.0	991+59.0	2	3	34.0	6.0	5	
1020+67.3	1022+05.2	2	3	30.0	6.0	5		991+59.0	1008+35.0	2	3	24.0	6.0	5	
1022+05.2	1022+80.0	2	3	30.0	6.0	5		1008+35.0	1008+95.0	2	3	24.0	6.0	5	
1022+80.0	1023+25.0	2	3	30.0	6.0	5		1008+95.0	1010+45.0	2	3	24.0-38.0	6.0	5	
1023+25.0	1024+29.5	2	3	40.0	6.0	5		1010+45.0	1011+05.0	2	3	38.0-42.0	6.0	5	
1024+29.5	1025+30.0	2	3	30.0	6.0	5		1011+05.0	1012+25.0	2	3	42.0-50.0	6.0	5	
1024+29.5	1035+00.0	2	3	24.0	0	0	Cedar Falls	1012+25.0	1012+90.0	2	3	50.0-68.0	6.0	5	
1035+00.0	1035+40.0	2	3	24.0	0	0	Cedar Falls	1012+90.0	1014+32.7	2	3	28.0	6.0	5	
1035+40.0	1036+90.0	2	3	36.0	0	0	Cedar Falls	1014+32.7	1016+82.7	2	3	28.0	6.0	5	Runout
1036+90.0	1038+10.0	2	3	36.0-24.0	0	0	Cedar Falls	1016+82.7	1019+55.2						Bridge
1038+10.0	1043+06.0	2	3	24.0	0	0	Cedar Falls	1019+55.2	1021.25.0	2	3	28.0	6.0	5	Runout
1043+06.0	1045+56.0	2	3-0	24.0	0	0	Runout	1021.25.0	1022+05.2	2	3	26.5	6.0	5	
								1022+05.2	1022+45.0	2	3	26.5-38.5	6.0	5	
								1022+45.0	1022+80.0	2	3	38.0	6.0	5	
								1022+80.0	1023+25.0	2	3	36.0	6.0	5	
								1023+25.0	1024+29.5	2	3	36.0	6.0	5	
								1024+29.5	1024+78.4	2	3	36.0-24.0	6.0	5	
								1024+78.4	1032+19.0	2	3	24.0	0	0	Cedar Falls
								1032+19.0	1033+39.0	2	3	24.0-36.0	0	0	Cedar Falls
								1033+39.0	1034+89.0	2	3	36.0	0	0	Cedar Falls
								1034+89.0	1035+52.0	2	3	36.0	0	0	Cedar Falls
								1035+52.0	1043+06.0	2	3	24.0	0	0	Cedar Falls
								1043+06.0	1045+56.0	2	3-0	24.0	0	0	Runout

**TYPICAL HMA RESURFACING  
WITH BASE WIDENING  
RURAL SECTION**

MK-4

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

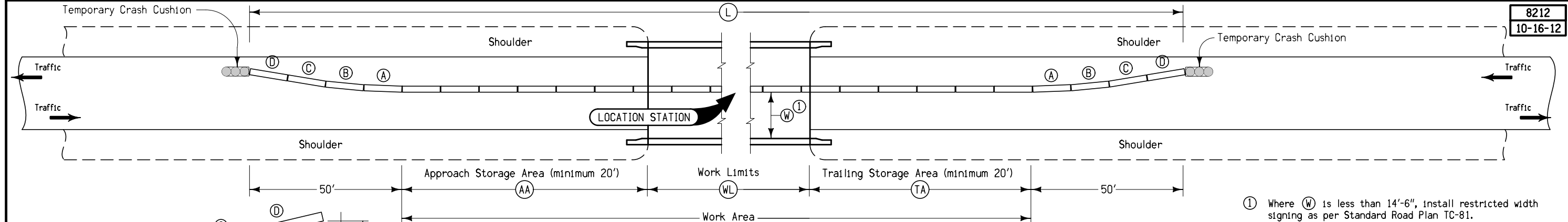
\* Based on turning maneuvers at side roads and intersections.



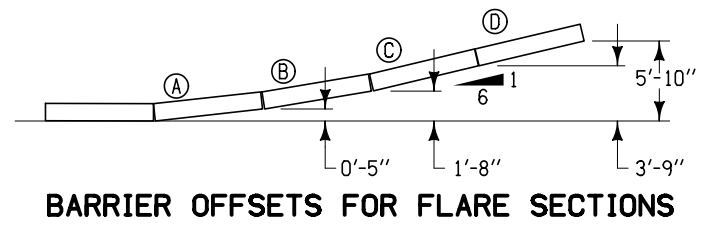
S Surface Course  
 I Intermediate Course  
 M Milling  
 HMA Paving  
 Pavement Scarification

Location Station	L Feet	S Inches	I Inches	T Inches	Remarks
762+72.5	37.5	1.5	1.5	1.5	BEGIN PROJECT

**MAINLINE SURFACE NOTCH - INTERMEDIATE RUNOUT FOR DOUBLE COURSE RESURFACING ALONG MAINLINE PAVEMENT**



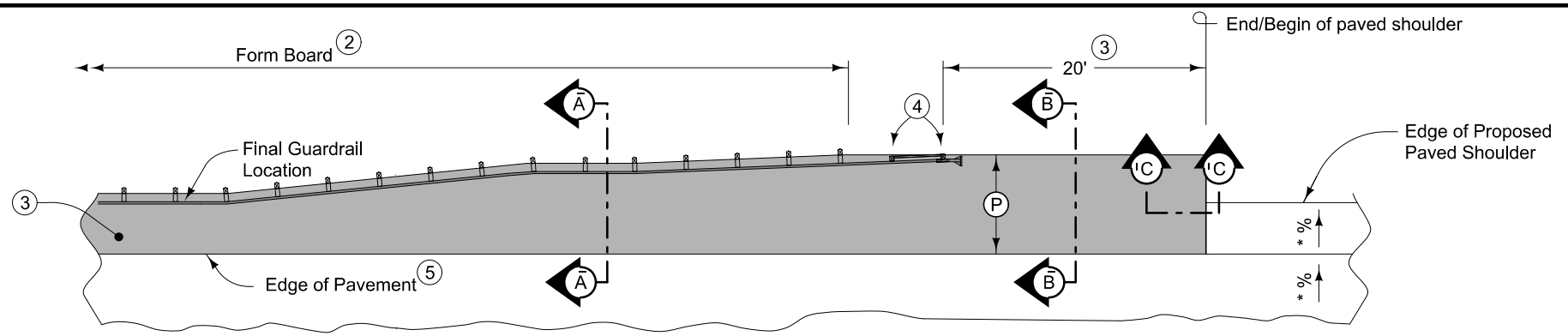
8212  
10-16-12



Station	Side	AA	WL	TA	L	Anchored	W	Remarks
		Feet	Feet	Feet	Feet	X	Ft-Inches	
806+85.25	RT	40	232.5	40	412.5	x	12'	
806+85.25	LT	40	232.5	40	412.5	x	12'	
1018+18.96	RT							
1018+18.96	LT							
1018+18.96	RT							
1018+18.96	LT							

These numbers need to be adjusted to coincide with the notch repair.

**TEMPORARY CONCRETE BARRIER LAYOUT for Two-Way Traffic**



PLAN VIEW

\* Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Transition Paved Shoulder slope to 4.0 % in 20'.

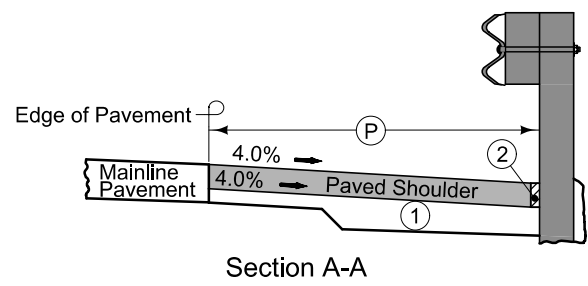
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

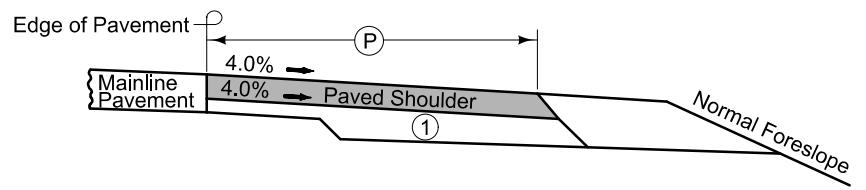
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① For subgrade treatment, refer to other details in the plan.
- ② PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown. Refer to note 4 for final 2 posts.
- ③ Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.
- ④ Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ⑤ 'KT-1 joint for PCC shoulder. 'B' joint for HMA shoulder.

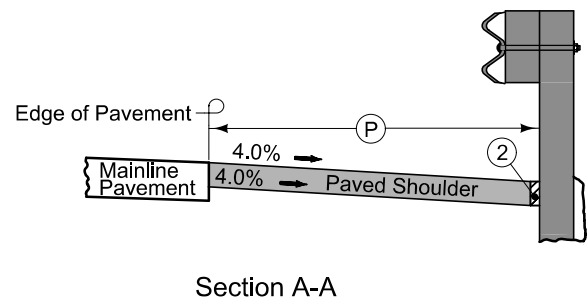


Section A-A

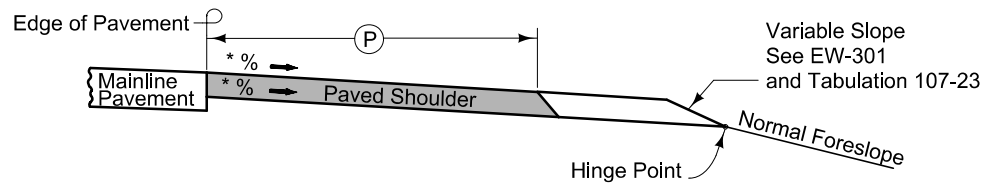


Section B-B

NEW CONSTRUCTION



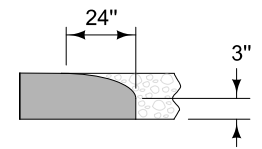
Section A-A



Section B-B

EXISTING SHOULDER

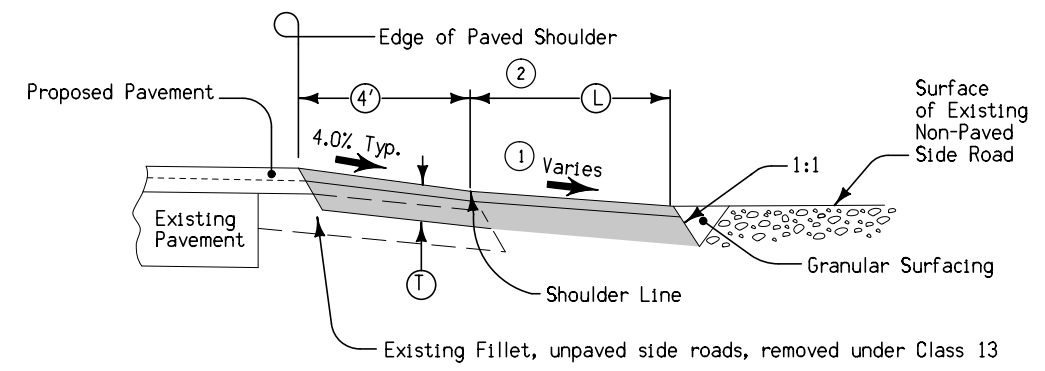
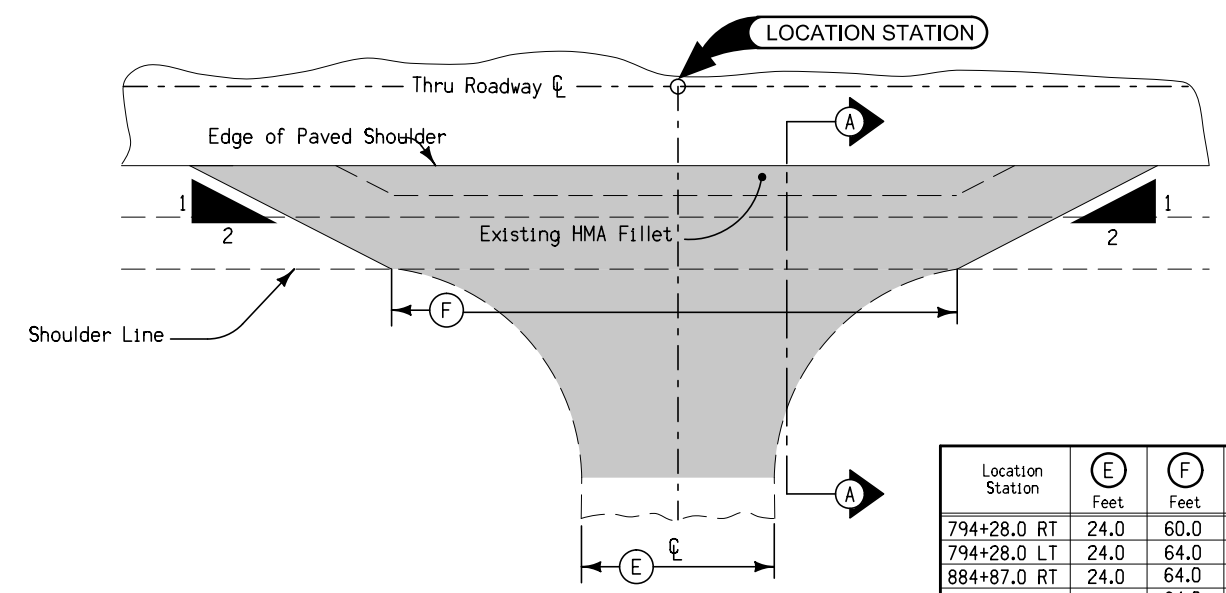
\* Finished slope shall match existing pavement except that the maximum allowable slope is 3.0 %, minimum allowable slope is 2.0 %. Transition Paved Shoulder slope to 4.0 % in 20'.



Section C-C

Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL

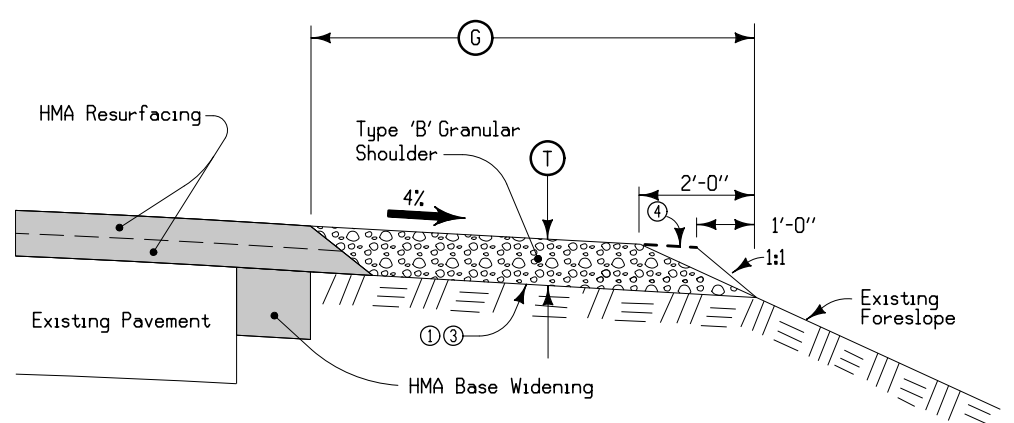


Location Station	E Feet	F Feet	Remarks
794+28.0 RT	24.0	60.0	Battery Park
794+28.0 LT	24.0	64.0	Hall
884+87.0 RT	24.0	64.0	Strayer
883+97.0 LT	24.0	64.0	Strayer
938+00.0 RT	24.0	64.0	W Shaulis
936+96.0 LT	24.0	64.0	W Shaulis

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.
  - ③ See Tab 100-25.
  - ④ Any excavation needed to extend the fillets is considered incidental.
- Ⓣ = 2" Surface Course  
4" Intermediate Course

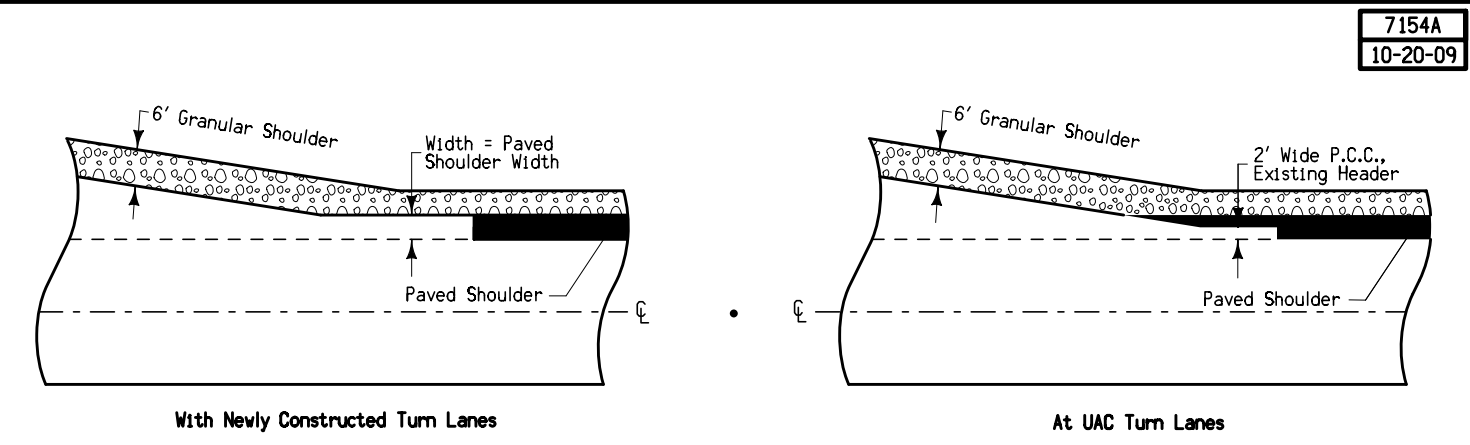
**FILLET FOR NON-PAVED SIDE ROADS**



- Notes:
- ① Existing shoulder surface to be shaped to a uniform cross slope prior to placing granular shoulder material. Shape to ensure the thickness of the granular shoulder material is not less than the thickness of the resurfacing.
  - ② Nominal thickness adjusted to account for existing slopes greater than 4%.
  - ③ Placing granular shoulder material in advance of Class 13 Excavation for Widening and Base Widening shall be performed as part of the "Granular Shoulders, Type B" bid item.
  - ④ 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.

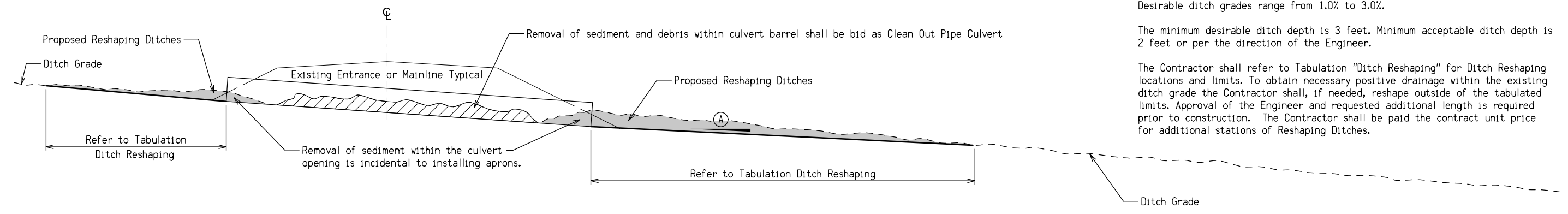
ROAD	STATION TO STATION	SIDE	②		STATION TO STATION	SIDE	④			
			Inches	Feet			Inches	Feet		
IA 58		RT	5	4		LT	5	4		
		RT	5	6		LT	5	6		
		RT	5	4	762+35.0	805+54.8	LT	5	4	
	762+35.0	804+79.8	RT	5	6	805+54.8	808+90.8	LT	5-6	4
	804+79.8	808+15.8	RT	5-6	6	808+15.8	814+16.3	LT	6	4
	808+15.8	955+45.2	RT	6	6	813+41.3	817+99.8	LT	6-5	4
	955+45.2	957+57.7	RT	6	4	816+24.8	957+57.7	LT	5	4
		RT	6-5	4		LT	5-6	4		
	2957+50.0	2971+04.9	RT	5	4	2957+50.0	2972+99.2	LT	6	4
	2971+04.9	2972+99.2	RT			LT	6	4		
		RT	5	4	973+01.7	1014+32.7	LT	6	6	
	973+01.7	1024+29.5	RT	5-6	4	1014+32.7	1016+82.7	LT	6-5	6
	1024+29.5	1024+78.4	RT	6	4	1019+55.2	1022+05.2	LT	5	6
		RT	6-5	4		LT	5	4		
	1024+78.4	1043+06.0	RT	5	4	1024+29.5	1025+30.0			
	1043+06.0	1045+56.0	RT			LT	5	4		
		RT	5	4		LT	5	4		
		RT	5	4						
		RT	5	4						

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



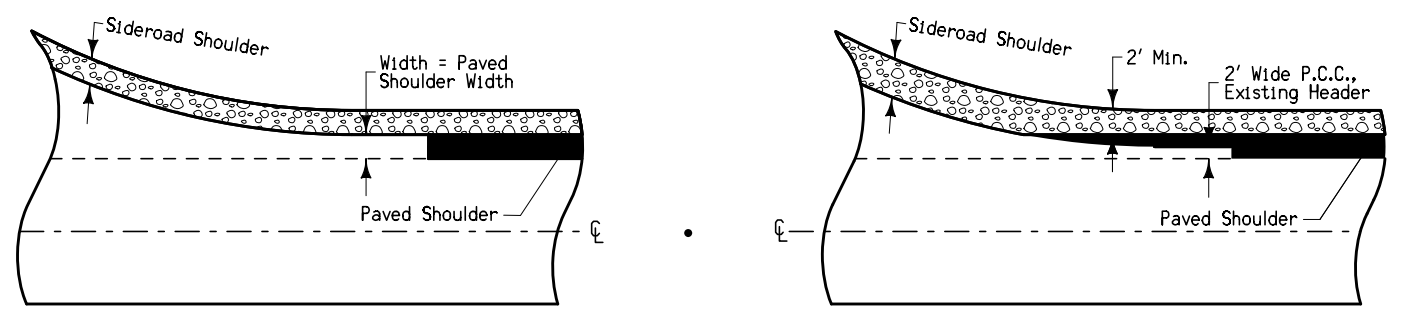
**PAVED SHOULDER DETAIL AT TURN LANES**



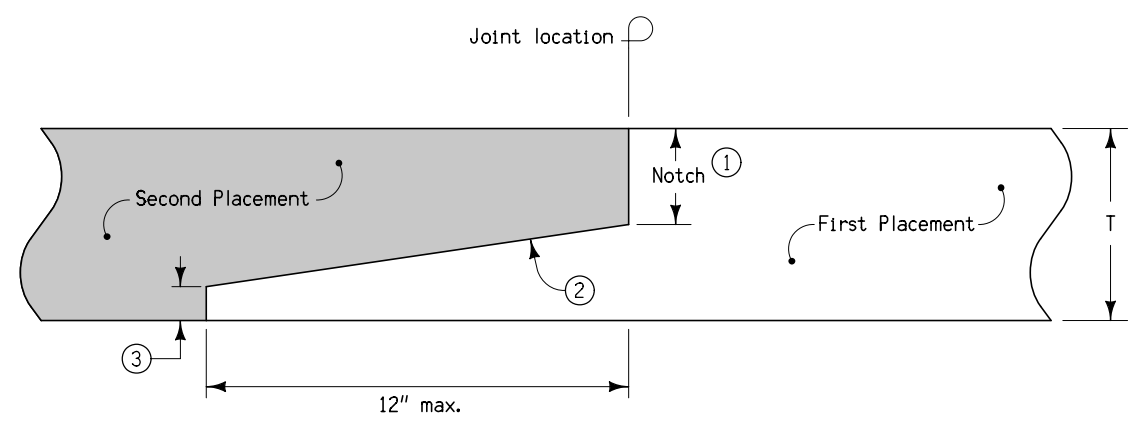


Ⓐ Contractor to reshape ditch from culvert outlet as follows:  
 Minimum acceptable ditch grades range from 0.2% to 1.0%.  
 Desirable ditch grades range from 1.0% to 3.0%.  
 The minimum desirable ditch depth is 3 feet. Minimum acceptable ditch depth is 2 feet or per the direction of the Engineer.  
 The Contractor shall refer to Tabulation "Ditch Reshaping" for Ditch Reshaping locations and limits. To obtain necessary positive drainage within the existing ditch grade the Contractor shall, if needed, reshape outside of the tabulated limits. Approval of the Engineer and requested additional length is required prior to construction. The Contractor shall be paid the contract unit price for additional stations of Reshaping Ditches.

RESHAPING DITCHES TYPICAL



PAVED SHOULDER  
DETAIL AT RETURNS



Notes:  
 ① Notch: Min = nominal maximum aggregate size + 1/4". 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

# ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
1	2101-0850002	CLEARING AND GRUBBING	UNIT	0		"All wood material generated as a result of Clearing and Grubbing must be disposed of according to Iowa Department of Agriculture and Land Stewardship Emerald Ash Borer Quarantine Order. For more information see <a href="http://www.iowatreepests.com">www.iowatreepests.com</a> ." Refer to Tabulation 110-17 for additional information.
2	2102-0425070	SPECIAL BACKFILL	TON	0		Refer to Typical 7156 and Tabulation 112-9 for additional information.
3	2102-2625000	EMBANKMENT-IN-PLACE	CY	0		Refer to Tabulation 104-13 for additional information. 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. Grade to a slope consistent with the existing fore slope.  Material obtained from item 'Excavation, Class 13, Widening" may be used for this work with approval from the Engineer.  Overhaul will not be paid for this item.
4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	0		Strip 12 inches of topsoil within the limits of grading. After excavating to the sub grade elevations, spread the stockpiled topsoil to an 8 inch depth across the grading area. Seed the disturbed topsoil stockpile area as per section 2601.05 of the standard specifications. Seeding of the stockpile areas shall be considered incidental to this bid item.  All disturbed areas not covered by pavement or gravel shall have a minimum of 4 inches of 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 Tabulations 100-34 and 103-10 for additional information.  Removal and replacement of mile markers is considered incidental to this work.
5	2122-5500090	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 9 IN.	SY	0		Refer to Typical 7156 and Tabulation 112-9 for additional information. Item is for guardrail paving.
6	2122-7450080	SHOULDER STRENGTHENING, OPTIONAL HOT MIX ASPHALT MIXTURE OR PORTLAND CEMENT CONCRETE, 8 IN.	SY	0		Refer to U Sheets and Tabulation 112-9. Quantity includes shoulder strengthening on all four sides of bridges with approach work. Install strengthening for one direction approach work with TBR prior to installation for opposite side work.
7	2125-2225050	RESHAPING DITCHES	STA	0		Refer to Typical MK-? and Tabulation 300-1. Ditches shall be graded to a minimum of 1% to provide positive drainage, as determined by Engineer in field.
8	2212-0475095	CLEANING AND PREPARATION OF BASE	MILE	0		This bid item includes: ____ miles of ramps, ____ miles of two lane roadway ____ miles of NB/EB four lane roadway ____ miles of SB/WB four lane roadway
9	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	0		Refer to Tabulation 102-6C for additional information.
10	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	0		
11	2212-5075001	HOT MIX ASPHALT SURFACE PATCHES	TON	0		Placement areas to be determined by Engineer.
12	2214-5145150	PAVEMENT SCARIFICATION	SY	0		Refer to Typical MK-1 and Tabulation 100-25 and 102-16 for additional information.
13	2301-0690203	BRIDGE APPROACH, BR-203	SY	0		Refer to Tabulation 112-6 for additional information.
14	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX	TON	0		Refer to Typicals MK-1, MK-2, MK-3 and 7149 and Tabulations 100-25 and 112-9 for additional information. Estimated project quantities include an additional 5% for irregularities.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
15	2303-1033503	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3	TON	0		
16	2303-1033753	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 3/4 IN. MIX, FRICTION L-3	TON	0		
17	2303-1053503	HOT MIX ASPHALT VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3	TON	0		
18	2303-1133503	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3	SY	0		
19	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	0		
20	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS			
21	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH			
22	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH			
23	2303-9093010	HOT MIX ASPHALT, DRIVEWAY	SY			
24	2315-8275030	SURFACING, DRIVEWAY, CLASS C GRAVEL	TON			
25	2315-8275036	SURFACING, DRIVEWAY, CLASS D CRUSHED STONE	TON			
26	2315-8275055	SURFACING, DRIVEWAY	TON			
27	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH			
28	2318-1001100	COLD IN-PLACE RECYCLED ASPHALT PAVEMENT	SY			
29	2318-1001220	ASPHALT STABILIZING AGENT (FOAMED ASPHALT)	TON			
30	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS		Refer to Tab _____ on Sheet _____. This item shall consist of removal of bridge mounted brackets for type B signs. The locations are shown in tab 190-63. The brackets, angles, and all fasteners shall become the property of the Contractor. Any electric circuit to the bracket shall be removed back to a covered junction box or breaker box. Any stub wires shall be capped and any unused wire removed from the conduit if possible.  Measurement: Lump Sum  Payment: The Contractor shall be paid the lump sum contract price for all the bridge brackets listed in tab 190-63. This payment shall be full compensation for furnishing all material, equipment, and labor for the performance of all work necessary for removal of all the sign support structures from the project.	
31	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY		Refer to Tab. 104-3 on Sheet _____.	
32	2435-0600010	MANHOLE ADJUSTMENT, MINOR	EACH			
33	2435-0600020	MANHOLE ADJUSTMENT, MAJOR	EACH			

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
34	2435-0600110	INTAKE ADJUSTMENT, MINOR	EACH			
35	2435-0600120	INTAKE ADJUSTMENT, MAJOR	EACH			
36	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF			
37	2502-8225010	SUBDRAIN OUTLET, 500-10	EACH			
38	2503-0500402	BRIDGE END DRAIN, DR-402	EACH			
39	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF			
40	2505-4008300	STEEL BEAM GUARDRAIL	LF			
41	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH			
42	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH			
43	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	EACH			
44	2505-4021030	STEEL BEAM GUARDRAIL END ANCHOR, THRIE BEAM	EACH			
45	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH			
46	2505-4021722	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-225	EACH			
47	2507-3250005	ENGINEERING FABRIC	SY			<p>Refer to Tab. 100-23.</p> <p>Use material specified for embankment erosion control according to Article 4196.01, B, 3. Material will be measured in sq. yds. of actual area covered. Refer to details.</p> <p>-----</p> <p>The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion.</p> <p>Engineering fabric shall be material as specified for embankment erosion control in accordance with Article 4196.01,B,3, of the Standard Specifications.Engineering fabric shall be material as specified for embankment erosion control, Article 4196.01C. Material shall be measured in sq. yard of actual area covered. Refer to details on Sheet ____.</p>
48	2507-6800061	REVETMENT, CLASS E	TON			<p>Refer to Tab. 100-23.</p> <p>-----</p> <p>The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion.</p> <p>Estimated at 1.6 ton/cu yd.Class E revetment shall meet requirements of Article 4130. Broken Concrete and granite is not allowed. Refer to details on Sheet B.1 and locations on sheet D.1. Estimated at 1.62 Ton/CY.</p>

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
49	2507-8029000	EROSION STONE	TON			Refer to Tab. 100-23. ----- The tabulation includes estimated locations for placement of "Erosion Stone" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Estimated at 1.6 ton/cu yd. Erosion Stone shall meet the requirements of Article 4130. Broken Concrete and granite is not allowed. Refer to details on Sheet B.1 and locations on sheet D.1.
50	2511-0301600	RECREATIONAL TRAIL, HOT MIX ASPHALT, 6 IN.	SY			See traffic control plan for pedestrian staging or closings
51	2511-7526005	SIDEWALK, P.C. CONCRETE, 5 IN.	SY			See traffic control plan for pedestrian staging or closings.
52	2511-7526008	SIDEWALK, P.C. CONCRETE, 8 IN.	SY			
53	2511-7528101	DETECTABLE WARNINGS	SF			
54	2511-7528150	PEDESTRIAN CHANNELIZER	LF			
55	2512-1725156	CURB AND GUTTER, P.C. CONCRETE, 1.5 FT.	LF			
56	2520-3350010	FIELD LABORATORY	EACH			
<del>57</del>	<del>2520-3350015</del>	<del>FIELD OFFICE</del>	<del>EACH</del>			
58	2524-6765110	REMOVAL OF TYPE A SIGN	EACH			Refer to Tabulation 190-62 for location and details.  Item is for the removal of sheet aluminum, galvanized sheet or plywood sign panel from its support structure ie: wood/steel posts, overhead truss or another sign.  Measurement: Each. The Engineer will count the number of Type A sign panels removed.  Payment: The Contractor will be paid the contract unit price for each Type A sign panel removed.
		Filed lab only. No field office.				
59	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EACH			Refer to Tabulation 190-62 for location and details.  This item for the removal of Type A Sign Assemblies, including the sign panels, sign brackets, supporting structures and hardware. Contractor shall carefully dismantle each sign assembly. Sign posts, brackets and hardware shall become property of the Contractor. Sign panels shall become property of the DOT and shall be delivered to the nearest DOT maintenance facility. All holes resulting from removal of post shall be filled level with the adjacent grade with backfill material conforming to the Standard Specifications.  Measurement: The Engineer will count the number of sign assemblies removed.  Payment: The Contractor will be paid the contract unit price for each sign assembly removed.
60	2524-9081290	CONCRETE FOOTING FOR BREAKAWAY SIGN POST, 2'-8" DIA. X 9'-0"	EACH			Refer to Tabulation(s) 190-50 (and 190-51) for details.
61	2524-9275100	WOOD POSTS FOR TYPE A OR B SIGNS, 4 IN. X 4 IN.	LF			Refer to Tabulation(s) 190-50 (and/or 190-51, and/or 190-61) for locations and details.
62	2524-9276021	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY SOIL INSTALLATION	EACH			Refer to Tabulation(s) 190-50 and/or 190-51 for locations and details.
63	2524-9278046	STEEL BREAKAWAY SIGN POSTS, RECTANGULAR TUBE, 4" X 6"	LF			Refer to Tabulation 190-51 for locations and details.
64	2524-9325001	TYPE A SIGNS, SHEET ALUMINUM	SF			Refer to Tabulation 190-51 and 190-66 for locations and details.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
65	2524-9325150	INSTALL TYPE A SIGN	EACH			<p>Refer to Tabulation 190-51 and the project plans for locations and details.</p> <p>The Contractor shall furnish all necessary hardware to install the Type A signs except where noted otherwise.</p> <p>Method of Measurement: The Engineer will count each Type A sign installed.</p> <p>Basis of Payment: The Contractor shall be paid the contract unit price for each Type A sign installed. Payment is full compensation for erecting the signs complete, except for the required posts and foundations.</p>
66	2525-0000120	REMOVAL OF TRAFFIC SIGNALIZATION	LS			
67	2526-8285000	CONSTRUCTION SURVEY	LS			<p>Refer to TC-283 for traffic control layout.</p> <p>Staking in the S Sheets is incidental to Construction Survey. This staking will be defined as verifying slopes of the form work by using a level, or other means, at the quadrants identified in the S Sheets. This serves as an additional check to verify slopes are within tolerances prior to placing concrete. Survey information provided in project plans is for reference only and should not be used for purposes related to construction survey. Project plans and associated electronic files are not geo-referenced to a standard coordinate system and should not be used to establish construction survey baselines.</p> <p>Prior to construction, perform a survey to lay out the proposed grading design per Section 2526.01. The GPS Machine Control Grading data files as listed in the current standard specifications will be made available at contractor's request. No additional files or formats will be provided. After finished grading and prior to seeding, the Contractor shall prepare a topographic survey, using the established baselines to show conformance to the proposed grades. The survey shall indicate the established baselines and the finished grades shown in 0.5 foot contours. Survey all grading areas. The Contractor shall provide the Engineer and the Office of Location and Environment with the electronic surface files in LandXML format. Provide electronic data and survey copies to Alan Beddow, Mitigation Construction Engineer Iowa Department of Transportation, 800 Lincoln Way, Ames, Iowa, 50010, phone number (515)956-7203, Alan.Beddow@iowadot.us.</p>
68	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA			Refer to Tab. 108-22 on Sheet _____ and Sheet J _____.
69	2527-9263118	PAINTED PAVEMENT MARKINGS,	STA			
70	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA			
71	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH			
72	2527-9263180	PAVEMENT MARKINGS REMOVED	STA			Refer to Tab. 108-22 on Sheet _____ and Sheet J _____.
73	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS	STA			
74	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS	EACH			
75	2528-2518000	SAFETY CLOSURE	EACH			
76	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF			<p>Refer to Sheet J _____ and Tab. 108-33 on Sheet _____.</p> <p>All temporary barrier rail shall be nominal 12'-6 long concrete units.</p> <p>Temporary barrier rail shall be a combination of xx nominal 12'-6 long concrete units and xx nominal 20' long steel units.</p>

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
77	2528-8400256	TEMPORARY TRAFFIC SIGNALS	EACH			Refer to Tab. 108-28 on Sheet _____.
78	2528-8445110	TRAFFIC CONTROL	LS			Refer to Traffic Control Plan on Sheet _____. Refer to Traffic Control Plan on sheet C.2
79	2528-8445113	FLAGGERS	EACH			(Designer should enter a quantity of 0) See Proposal.
80	2528-8445115	PILOT CARS	EACH			
81	2529-2242304	CD JOINT ASSEMBLY	EACH			
82	2529-8174010	SUBBASE (PATCHES)	SY			
83	2529-8174020	SUBBASE PATCH WITH EF JOINT	SY			
84	2529-8174050	PATCH SUBDRAIN	EACH			
85	2533-4980005	MOBILIZATION	LS			--
86	2548-0000310	MILLED CENTERLINE RUMBLE STRIPS, HMA SURFACE	STA			
87	2551-0000110	TEMP CRASH CUSHION	EACH			Winterize sand filled or water filled crash cushions according to the manufacturer's recommendations if they are to remain in place during winter months.
88	2601-2632110	FERTILIZING	ACRE			
89	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE			Seed and fertilize all areas 8 foot adjacent to the shoulder mainline, medians, and side according to Article 2601.03, C, 4, of the Standard Specifications. Use ground driven equipment.
90	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE			Seed and fertilize all urban disturbed areas according to Article 2601.03, C, 2, of the Standard Specifications. Use the Engineer's recommendation for seed and fertilizer rates. Seed and fertilize all urban disturbed areas according to Article 2601.03, C, 4, of the Standard Specifications.
91	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE			Item is included for disturbed areas. Seed and fertilize all disturbed areas according to Article 2601.03, C, 1, of the Standard Specifications. If permanent seeding cannot be placed due to the restrictive planting dates, stabilizing crop will need to be placed on all disturbed areas as temporary erosion control. Preparation and seeding shall be performed in accordance with Section 2601. Stabilizing crop will not be used when the application dates in Section 2601 allows permanent seeding. If stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period. It is not necessary to place stabilizing crop in locations that have be covered by Wood Excelsior Mat.
92	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE			Item is included for disturbed areas as directed by the Engineer. Seed and fertilize all urban disturbed areas according to Article 2601.03, C, 2, of the Standard Specifications.

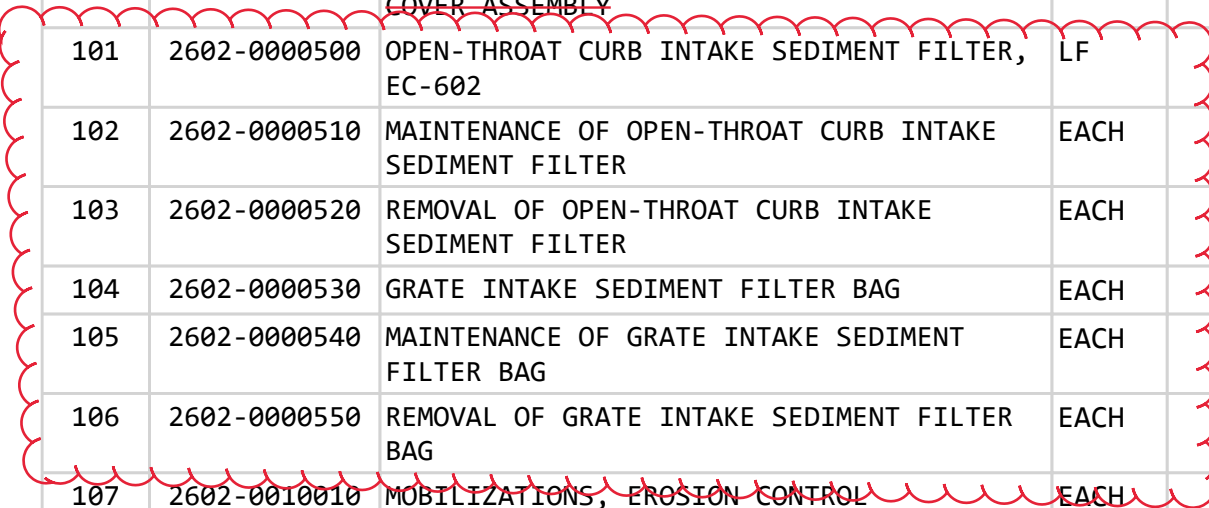
Has the disturbed area been determined to know if a PPP is needed?

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
93	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF			<p>(Grading Projects) Refer to Tab 100-18. The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements.</p> <p>(Paving Projects) Refer to Tab 100-18. The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes tab quantities for the paving project for new locations and 10% of the original tab quantity for the grading project (insert original tab quantity from the grading project) for field adjustments and replacements. See Standard Note 232-10 and Standard Road Plan EC-201. See Sheet X.X for locations. The engineer may adjust silt fence locations to fit field conditions.</p>
94	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF			<p>This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. This item is included for silt fence and silt fence for ditch check removal. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.</p>
95	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF			<p>(Grading Projects) This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.</p> <p>(Paving Projects) This item is included for maintaining the new silt fence and silt fence ditch checks installed for the paving project and existing silt fence and silt fence ditch checks installed as part of the grading project.</p>
96	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF			<p>(Use this note if specific locations have been determined) Refer to Tab. 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.</p> <p>Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior.</p> <p>(Use this note if specific locations have not been determined) Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement.</p> <p>Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior.</p>
97	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF			
98	2602-0000400	TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH			

Where is this proposed?



Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
99	<del>2602-0000410</del>	<del>MAINTENANCE OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY</del>	<del>EACH</del>			
100	<del>2602-0000420</del>	<del>REMOVAL OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY</del>	<del>EACH</del>			
101	2602-0000500	OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602	LF			
102	2602-0000510	MAINTENANCE OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH			
103	2602-0000520	REMOVAL OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH			
104	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG	EACH			
105	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	EACH			
106	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG	EACH			
107	<del>2602-0010010</del>	<del>MOBILIZATIONS, EROSION CONTROL</del>	<del>EACH</del>			
108	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH			



Where are these items proposed?

# ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
1	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON		Refer to Typical 7110 and Tabulation 112-9.  Requires XXX cu. yds. of earth shoulder fill, available within the ROW from Sta. XXX+XX to Sta. XXX+XX OR to be provided by the Contractor, which shall be considered incidental to this bid item.
2	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA		Includes _____ Sta. of _____ ft wide shoulders on mainline, _____ Sta. of _____ ft shoulders on mainline, and _____ Sta. of _____ ft wide shoulders on sideroads. ----- Requires _____ cu. yds. of Class 10 for Earth Shoulder Fill. No payment for overhaul allowed for this material. Material is available from Borrow _____. ----- Requires a minimum of 4 inches of topsoil. Place according to Article 2105.03,B of the Standard Specifications.
3	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY		Refer to Tab. _____ on Sheet _____ and Typical _____ on Sheet _____.
4	2303-1031750	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON		
5	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON		
6	2528-8445113	FLAGGERS	EACH		(Designer should enter a quantity of 0)  See Proposal.
7	2528-8445115	PILOT CARS	EACH		
8	2533-4980005	MOBILIZATION	LS		--
9	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA		
10	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)	GAL		

only 4 feet of the 6 feet paved shoulder will be in HSIPX category. The other 2 feet will be in the NHSX project.

100-1D 10-18-05
<b>PROJECT DESCRIPTION</b>
The NHSX-058-1(100)--3H-07 project includes mill 1.5 feet, nominal 28 feet wide in Hudson, Cold in Place recycling 4 inches nominal 28 feet wide to 4 lane section, 3 inch HMA resurfacing over whole project, patching, culvert repairs, ditch cleaning, longitudinal subdrain, bridge approaches, guardrail and erosion control. The HSIPX-058-1(101)--3L-07 project will add 4 foot wide, 5 inch deep HMA shoulders along with rumble strips on both sides for the length of the project.

262-6 10-18-05
<b>UTILITIES (NOT A POINT 25 PROJECT)</b>
This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

111-25 10-18-11		
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C Sheets		
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100-1U	UTILITIES	C.11
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100-17	TABULATION OF SILT FENCES	C.12
100-18	SILT FENCES FOR DITCH CHECKS	C.12
100-19	PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES	C.12
100-23	ROCK EROSION CONTROL	C.14
100-25	HMA PAVEMENT	C.16 - C.18
100-27	PROPOSED POSTED SPEED LIMIT	C.11
100-34	STORMWATER DRAINAGE BASIN AND STORAGE	C.13
100-36	OPEN-THROAT CURB INTAKE SEDIMENT FILTER	C.12
100-37	GRATE INTAKE SEDIMENT FILTER BAG	C.12
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104-8B	BRIDGE END DRAINS (WITH LETDOWN)	C.20
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110-2	REMOVAL OF EXISTING STRUCTURES	C.15
110-4	CURB REMOVAL	C.15
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113-1A	SIDEWALKS	C.22
190-51	MATERIALS FOR TYPE 'A' SIGNS	C.22
190-61	EXISTING SIGNS TO BE REINSTALLED	C.22
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190-66	SUMMARY OF TYPE 'A' SIGNS	C.22

100-27 04-17-18						
<b>PROPOSED POSTED SPEED LIMIT</b>						
Road Identification	Begin Station	End Station	Proposed Posted Speed Limit			Remarks
			35 or less	40 - 45	over 45	
	762+35.00	804+45.00		x		
	804+45.00	1045+56.00			x	

100-1D 10-18-05	
<b>UTILITIES</b>	

**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	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class			Type
	ack Hawk	IA 58	NB	0	3.43	1940		NA	PCC	7												
						1979		FN-58-1(6)--21-07	BAC	3.5												
						2000		STPN-58-1(78)--2J-07	AAC	1.5	BAC	1.5									Waterloo south, crushed limest	
				3.43	3.9	1985		IX-520-6(38)--3P-07	PCC	9			gran	4							Franta, crushed limestone	
						2000		STPN-58-1(78)--2J-07	AAC	1.5	BAC	1.5									Waterloo south, crushed limest	
				3.9	5.14	1985		IX-520-6(38)--3P-07	PCC	9	ECB	4									Franta, crushed limestone	

100-11  
04-18-17

**EROSION CONTROL FOR INTAKE OR MANHOLE WELL**  
Possible Detail: 570-5

Location Station	Side	Cover Assembly			Remarks
		Installation	Maintenance	Removal	
		EACH	EACH	EACH	

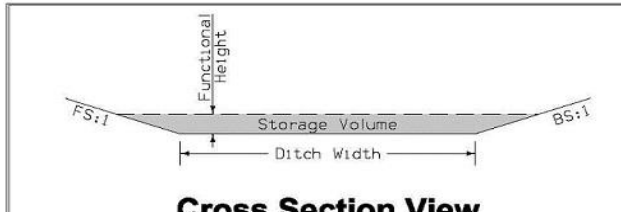
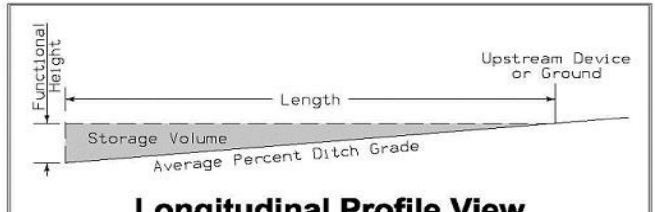
100-37  
04-18-17

**GRATE INTAKE SEDIMENT FILTER BAG**  
Possible Detail: 570-7

Location Station	Side	Installation	Maintenance	Removal	Remarks
		EACH	EACH	EACH	

100-18  
10-16-18

**SILT FENCES FOR DITCH CHECKS**  
Possible Standard: EC-201

\* 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			Foreslope	Backslope	Ditch Width	Avg. % Slope Ditch Grade	Volume* CF	Remarks
		Station	Side	Installation LF	Maintenance LF	Removal LF						

100-36  
10-16-18

**OPEN-THROAT CURB INTAKE SEDIMENT FILTER**  
Possible Standard: EC-602

Location Station	Side	Installation	Maintenance	Removal	Remarks
		LF	EACH	EACH	

100-19  
10-19-21

**PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES**  
Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
Begin Station	End Station	Side	Length of Installation			Length of Installation		
			9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	

100-17  
04-20-10

**TABULATION OF SILT FENCES**  
Refer to EC-201

Location			Length LF	Remarks
Begin Station	End Station	Side		

103-10  
04-18-17

**TOPSOIL STRIPPING AND PLACEMENT**

Location				Topsoil Stripping Thickness	Topsoil Placement Thickness	Remarks
Road Identification	Dir. of Traffic	Begin Station	End Station			
				IN	IN	

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														
	NB	Trees - Clearing and Grubbing																			

### STORMWATER DRAINAGE BASIN AND STORAGE

Refer to EC Standards and 570s Details.  
Summary of Stormwater Storage

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

### INTAKES AND UTILITY ACCESSES

104-5A  
10-15-13

\* Bid Item  
\*\* For SW-545

No.	Location Station	Type or Standard Road Plan*	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes

### REBUILDING OF INTAKES AND UTILITY ACCESSES

104-11  
08-01-08

No.	Location Station	Type	Adjustment

### REMOVAL OF INTAKES AND UTILITY ACCESSES

110-15  
04-16-13

No.	Location/Description	Type	Remarks

### ADJUSTMENT OF FIXTURES

104-10  
08-01-08

No.	Location Station	Type of Fixture	Adjustment
		Manhole	woods st
		water valve	woods st
		water valve	woods st
		water valve	eldora rd
		water valve	eldora rd
		water valve	eldora rd
		water valve	eldora rd

### CURBS AND RAISED ISLANDS

112-4  
10-21-14

Refer to , , and Detail Series.

Point No.	Station	Offset	Island Interior Area (1) SY	Curb and Gutter			Remarks
				Curb Type	Gutter Width FT	Length (1) LF	

**FULL-DEPTH PATCHES**

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

Count	Location			Dimension			PCC Patches				HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint	Patch Subdrain	'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
	Station	Reference Location Sign	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	C R C	Ramp with Dowels										
							PR-103 SY	PR-102 SY	PR-104 SY	PR-105 SY										

**LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE**

Refer to Soils Sheets

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

Line No.	Road or Lane Identification	Location		Side	Depth	Longitudinal Subdrain (DR-303)						Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
		Station to Station				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			
1	NBL	1+00.00	2+00.00	LT	66.0	4.0	160.0						24.7		9706 lf needed	

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

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

\* Not a bid item

Existing Information		New Information		Length of New Const.	Flow Line Elevations	Dimensions				Removal and Reinstallation of Culvert Aprons and Pipes				New Apron No.	Apron Guard* (DR-213)	Type 'C' Connections* (DR-122)	Connected Pipe Joint* (DR-121)	Embank.- In-Place	Class 20	Remarks
Location	Size and Type of Culvert	Size	Type of Culvert			Total (LF)		Extensions (LF)		Aprons		Culvert Sections								
						IN	FT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT							
789+25																				
819+24.3	4'x4'x63' RCB																			
846+32.2	3'x2'x44' extended w 36" RCP																			
856+70.4	5'x3.5'x26.6' extended w 36" RCP																			
866+82	32" x 60' RCP																			
871+38.5	6'x4'x57' RCB																			
871+38.5	6'x4'x57' RCB																			
892+46	2'x2'x70' RCB																			
899+10	24" x 78' RCP																			
902+66.8	3'x3'x73' RCB																			
921+77.8	8'x3'x55' RCB																			
937+46.2	3'x3'x62' RCB																			
938+00	2'x2'x44' extended w 24" RCP																			
951+09.9	2'x2'x65' RCB																			
956+07	2'x2'x69' RCB																			
2963+90	36" x 72' RCP																			
974+48	15"x54'																			
978+05	24" x 61' RCP																			
987+58	24" x 48' RCP																			
991+80	24" x 60' RCP																			
1006+95	36" x 52' RCP																			
1019+25	24" x 60' RCP																			

**DITCH RESHAPING**

No.	Location		Remarks
	Station	Length (STA)	

**ROCK EROSION CONTROL**

Refer to EC-301 and Detail 570-8

Road Identification	Begin Station	End Station	Side	L	W	Rock Erosion Control (REC)					Material Bid Quantities			Remarks						
						Type 1	Type 2	Type 3	Type 4	Type 5	Eng. Fabric	Class E Revetment	Erosion Stone							
															Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection	SY
IA 58	871+38.50		LT																	
	938+00.00		RT																	
	951+09.90		LT																	
	956+07.00		RT																	

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			Pipe Culvert ③			Aprons	Driveway Surface Area		Driveway Surfacing Material	Remarks				
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1 1/2" Dropped Curb	3" Dropped Curb	W	PR	SR		H	Size			Pipe Length	Lt.	Rt.	
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON

102-16  
10-21-14

### NOTCHES AND RUNOUTS FOR RESURFACING

Refer to PR-201 and PR-202.

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

Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement Scarification ①	Remarks
		IN	IN	IN	FT	IN	SY	
		1.5	1.5		37.5	1.5		See MK-x
805+54.75	Type 'N5'	1.5	1.5		75.0	1.5		
808+15.75	Type 'N5'	1.5	1.5		75.0	1.5		
814+16.25	Type 'N5'	1.5	1.5		75.0	1.5		
816+24.75	Type 'N5'	1.5	1.5		175.0			
958+00.00		1.5-2	1.5-3		212.5			See MK-x
1016+82.71	Type 'N3'	2.0	3.0		250.0	0.0	0.0	
1019+55.21	Type 'N3'	2.0	3.0		250.0	0.0	0.0	
1043+06.00	Type 'R2'	2.0	3.0		250.0	0.0		
763+60.20	Type 'R2'	1.5	1.5		20.0	1.0		S. Washington St
764+06.40	Type 'R2'	1.5	1.5		20.0	1.0		Primrose Dr
770+57.00	Type 'R2'	1.5	1.5		20.0	1.0		Wood St
775+67.00	Type 'R2'	1.5	1.5		20.0	1.0		School St
771+17.00	Type 'R2'	1.5	1.5		20.0	1.0		Sunset Dr
785+57.00	Type 'R2'	1.5	1.5		20.0	1.0		2nd St
790+00.00	Type 'R2'	1.5	1.5		20.0	1.0		Eldora Rd
790+04.90	Type 'R2'	1.5	1.5		20.0	1.0		Eldora Rd
792+25.00	Type 'R1'	1.5	1.5		20.0	1.0		Griffin St
794+05.00	Type 'R2'	1.5	1.5		20.0	1.0		Battery Park Ln
802+54.00	Type 'R2'	1.5	1.5		20.0	1.0		5th St
809+95.90	Type 'R2'	1.5	1.5		20.0	1.0		Watters Rd
991+06.80	Type 'R2'	2.0	3.0		50.0	0.0		Ranchero Rd
991+06.80	Type 'R2'	2.0	3.0		50.0	0.0		Ranchero Rd
4584+05.00	Type 'R2'	2.0	3.0		250.0	0.0		NB IA 58 to EB US 20 ramp
6570+80.00	Type 'R2'	2.0	3.0		250.0	0.0		SB IA 58 to WB US 20 ramp
1583+60.00	Type 'R2'	2.0	3.0		66.0	0.0		WB US 20 to NB IA 58
3585+20.00	Type 'R2'	2.0	3.0		250.0	0.0		SB IA 58 to WB US 20 ramp
2585+64.00	Type 'R2'	2.0	3.0		70.7	0.0		WB US 20 to IA 58
								TOTAL

110-13  
04-20-10

### DELIVERY AND STOCKPILING

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks

110-1  
04-16-13

### REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

\* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	

110-2  
04-16-13

### REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks

110-4  
08-01-08

### CURB REMOVAL

Begin Station	End Station	Side	Length	Remarks
			STA	

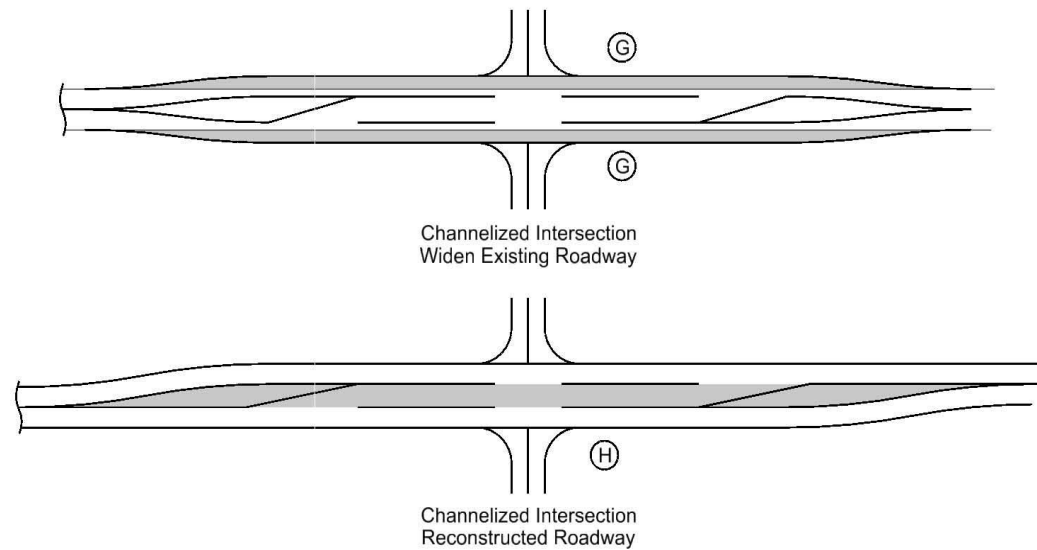
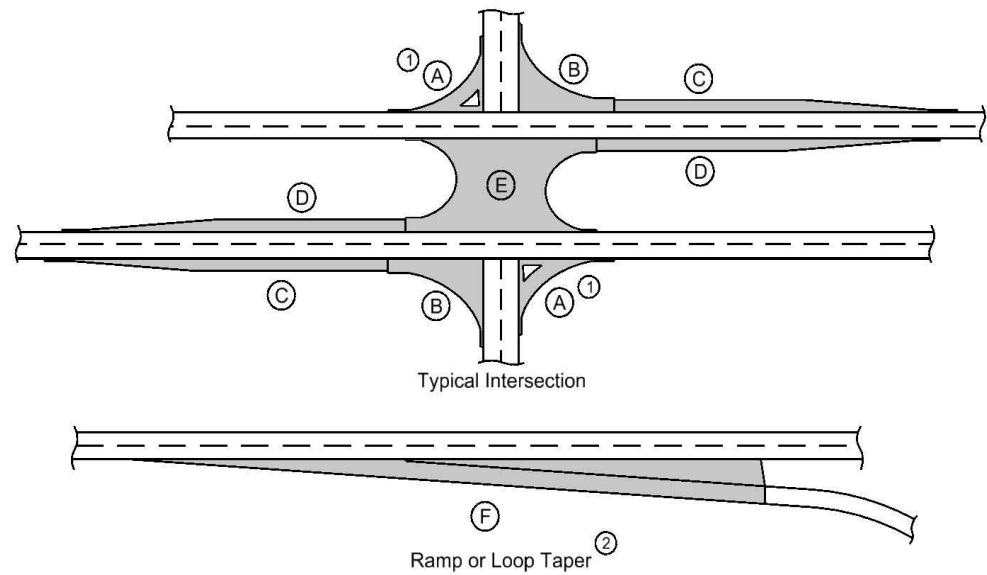
110-5  
10-20-15

### SIDEWALK REMOVAL

\* Not a bid item

Begin Station	End Station	Area	Saw Cut*	Remarks
		SY	LF	

### HMA PAVEMENT



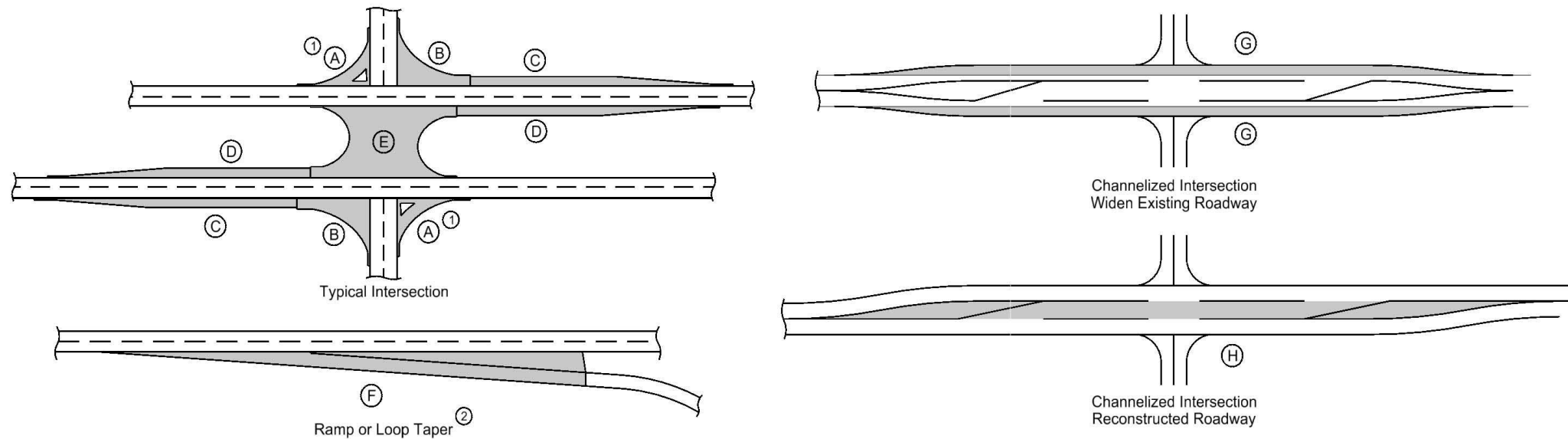
- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

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.

Road Identification	Direction of Travel	Location		Mainline			Area ③						Hot Mix Asphalt Pavement									Remarks						
				Station to Station	Width FT	Length FT	Area SY	A SY	B SY	C SY	D SY	E SY	F SY	G SY	H SY	Surface			Intermediate				Cold-In-Place					
		Surface TONS	SY													Intermediate TONS	SY	Width	SY	Surface TONS	Intermediate TONS		Cold-In-Place TONS	SY	SY	SY	SY	SY
IA 58	B	762+35.0	762+72.5	36.0	37.5	150.0									12.4	150.0	6.2	150.0									150.0	
	B	762+72.5	804+79.8	36.0	4207.3	16829.0									1391.5	16829.0	1391.5	16829.0									16829.0	
	B	804+79.8	805+54.8	24.0	75.0	200.0									16.5	200.0	8.8	200.0									200.0	
	B	805+54.8	808+15.8		261.0																							
	B	808+15.8	808+90.8	24.0	75.0	200.0									16.5	200.0	8.8	200.0									200.0	
	B	808+90.8	813+41.3	36.0	450.5	1802.0									149.0	1802.0	149.0	1802.0									1802.0	
	B	813+41.3	814+16.3	24.0	75.0	200.0									16.5	200.0	8.8	200.0									200.0	
	B	814+16.3	816+24.8		208.5																							
	B	816+24.8	817+99.8	24.0	175.0	466.7									38.6	466.7	20.6	466.7									466.7	
	B	817+99.8	955+45.2	36.0	13745.4	54981.7									4546.3	54981.7	4546.3	54981.7										
	B	955+45.2	957+57.7	36.0	212.5	850.0									82.0	850.0	105.4	850.0										
		957+57.7	2957+50.0																									
	NB	2957+50.0	2964+57.4	18.0	707.4	1414.8									156.0	1414.8	234.0	1414.8	14.0	1100.4	9.4	14.0						
	NB	2964+57.4	2971+04.9	18-20.5	647.5	1384.9									152.7	1384.9	229.0	1384.9	14-16.5	1097.2	9.2	13.7						
	NB	2971+04.9	2972+99.2	20.5	194.3	442.6									48.8	442.6	73.2	442.6	16.5	356.2	2.9	4.4						
	SB	2957+50.0	2968+48.7	18.0	1098.7	2197.4									242.3	2197.4	363.4	2197.4	14.0	1709.1	14.5	21.8						
	SB	2968+48.7	2972+99.2	18-22.5	450.5	1013.6									111.8	1013.6	167.6	1013.6	14-18.5	813.8	6.7	10.1						
		2972+99.2	973+01.7																									
	NB	973+01.7	974+95.2	20.5	193.5	440.8									48.6	440.8	72.9	440.8	16.5	354.8	2.9	4.4						
	NB	974+95.2	986+26.2	20.5-32.5	1131.0	3330.2									367.2	3330.2	550.7	3330.2	6.5-28.5	2827.5	22.0	33.0						
	NB	986+26.2	987+81.0	32.5	154.8	559.0									61.6	559.0	92.5	559.0	28.5	490.2	3.7	5.5						
	NB	987+81.0	989+01.0	32.5-44.5	120.0	513.3									56.6	513.3	84.9	513.3	8.5-40.5	460.0	3.4	5.1						
	NB	989+01.0	990+51.0	44.5	150.0	741.7									81.8	741.7	122.7	741.7	40.5	675.0	4.9	7.4						
	NB	990+51.0	991+59.0	40.0	108.0	480.0									52.9	480.0	79.4	480.0	36.0	432.0	3.2	4.8						
	NB	991+59.0	1008+35.0	30.0	1676.0	5586.7									615.9	5586.7	923.9	5586.7	26.0	4841.8	37.0	55.4						
	NB	1008+35.0	1008+95.0	30.0	60.0	200.0									22.1	200.0	33.1	200.0	26.0	173.3	1.3	2.0						
	NB	1008+95.0	1010+45.0	30-44	150.0	616.7									68.0	616.7	102.0	616.7	26-40	550.0	4.1	6.1						
	NB	1010+45.0	1011+05.0	44-48	60.0	306.7									33.8	306.7	50.7	306.7	40-44	280.0	2.0	3.0						
	NB	1011+05.0	1012+25.0	48-56	120.0	693.3									76.4	693.3	114.7	693.3	44-52	640.0	4.6	6.9						
	NB	1012+25.0	1012+90.0	56-72	65.0	462.2									51.0	462.2	76.4	462.2	52-68	433.3	3.1	4.6						
	NB	1012+90.0	1014+32.7	34.0	142.7	539.1									59.4	539.1	89.2	539.1	30.0	475.7	3.6	5.3						
	NB	1014+32.7	1016+82.7	34.0	250.0	944.4									104.1	944.4	78.1	944.4	30.0	833.3	6.2	4.7						
	NB	1016+82.7	1019+55.2		272.5																							
	NB	1019+55.2	1021+25.0	34.0	169.8	641.4									70.7	641.4	53.0	641.4	30.0	566.0	4.2	3.2						
	NB	1021+25.0	1022+05.2	32.5	80.2	289.6									31.9	289.6	24.0	289.6	28.5	254.0	1.9	1.4						
	NB	1022+05.2	1022+45.0	32.5-44.5	39.8	170.2									18.8	170.2	28.1	170.2	8.5-40.5	152.5	1.1	1.7						
	NB	1022+45.0	1022+80.0	42.0	35.0	163.3									18.0	163.3	27.0	163.3	38.0	147.8	1.1	1.6						
	NB	1022+80.0	1023+25.0	42.0	45.0	210.0									23.2	210.0	34.7	210.0	38.0	190.0	1.4	2.1						
	NB	1023+25.0	1024+29.5	40.0	104.5	464.5									51.2	464.5	76.8	464.5	36.0	418.1	3.1	4.6						
	NB	1024+29.5	1024+78.4	40-30	48.8	189.9									20.9	189.9	31.4	189.9	36-26	168.2	1.3	1.9						
	SB	973+01.7	1014+32.7	18-30	4131.0	11016.1									1214.5	11016.1	1821.8	11016.1	14-26	9180.0	72.9	109.3						
	SB	1014+32.7	1014+97.3	72.0	64.6	516.6									57.0	516.6	42.7	516.6	68.0	487.9	3.4	2.6						
	SB	1014+97.3	1016+82.7	72-58	185.4	1339.1									147.6	1339.1	110.7	1339.1	68-54	1256.7	8.9	6.6						



HMA PAVEMENT

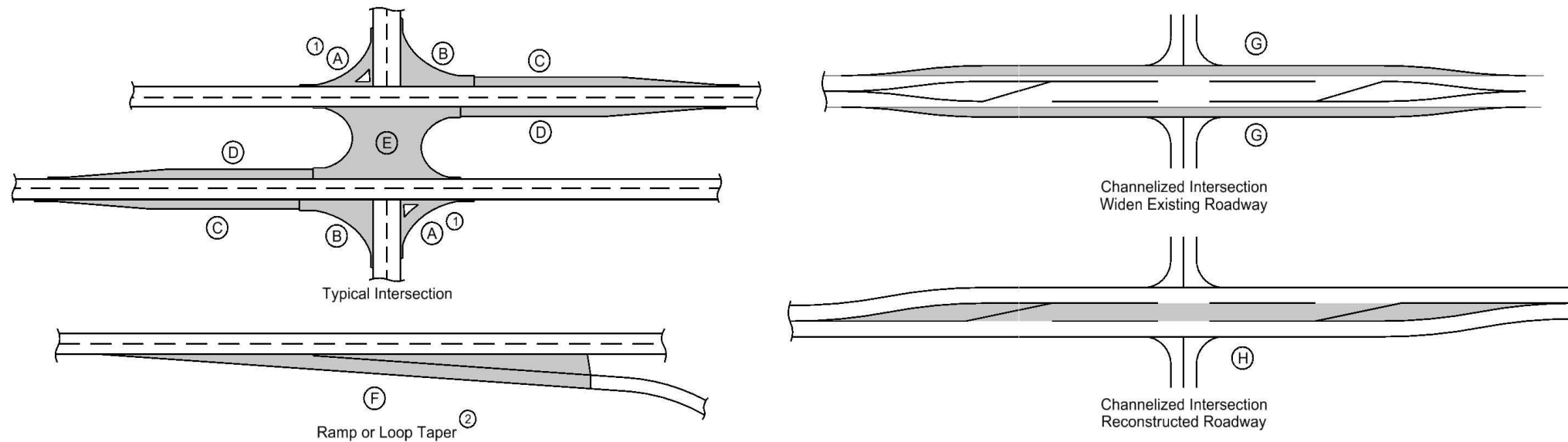


- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

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.

Road Identification	Direction of Travel	Location		Mainline			Area ③						Hot Mix Asphalt Pavement							Binder					Remarks		
		Station to Station		Width	Length	Area	A ①	B	C	D	E	F ②	G	H	Surface			Cold-In-Place		Surface	Intermediate	Foam Asphalt	Special Backfill	Modified Subbase		Granular Subbase	Pavement Scarification
		FT	FT												SY	SY	SY	SY	SY								
		SB	RT																								
	SB	1016+82.7	1019+55.2		272.5																					Bridge	
	SB	1019+55.2	1020+07.3	40-32	52.1	208.4																					
	SB	1020+07.3	1020+67.3	32-30	60.0	206.6																					
	SB	1020+67.3	1022+05.2	30.0	137.9	459.7																					
	SB	1022+05.2	1022+80.0	30.0	74.8	249.3																					
	SB	1022+80.0	1023+25.0	30.0	45.0	150.0																					
	SB	1023+25.0	1024+29.5	40.0	104.5	464.5																					
	SB	1024+29.5	1025+30.0	30.0	100.5	334.9																					
S. Washington	RT	763+60.2		50.0																							
Primrose	LT	764+06.4		50.0																							
Wood	RT	770+57.0		50.0																							
School	RT	775+67.0		50.0																							
Sunset	LT	777+17.0		50.0																							
2nd	RT	785+57.0		50.0																							
Eldora	RT	790+00.0		50.0																							
Eldora	LT	790+04.9		50.0																							
Griffin	RT	792+25.0		50.0																							
Battery Park	RT	794+28.0																									
Hall	LT	794+28.0																									
5th	RT	802+54.0		50.0																							
Watters	LT	809+95.9		50.0																							
Strayer	RT	884+87.0																									
Strayer	LT	883+97.0																									
W Shaulis	RT	938+00.0																									
W Shaulis	LT	936+96.0																									
Ranchero	RT	991+06.4		50.0																							
Ranchero	LT	991+06.8		50.0																							
NB IA 58 to EB US 20		4584+05.0	4586+55.0	26.0	250.0	722.2																					
SB IA 58 to EB US 20		6570+80.0	6573+30.0	28.0	250.0	777.8																					
WB US 20 to NB IA 58		1583+60.0	1584+26.0	62-16	66.0	286.0																					
SB IA 58 to WB US 20		3585+20.0	3582+70.0	106.74-16	250.0	1704.7																					
WB US 20 to IA 58		2585+64.0	2584+93.3	147.74-18	70.7	651.0																					
																										TOTAL	
Battery Park	RT	794+28.0																									
Hall	LT	794+28.0																									
Strayer	RT	884+87.0																									
Strayer	LT	883+97.0																									
W Shaulis	RT	938+00.0																									
W Shaulis	LT	936+96.0																									
																										TOTAL	
	NB	1024+78.4	1032+19.0	24.0	740.6	1975.1																					
	NB	1032+19.0	1033+39.0	24-36	120.0	400.0																					

**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							Hot Mix Asphalt Pavement									Binder					Remarks
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	
														TONS	SY	TONS	SY	Width	SY								
			FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	Width	SY	TONS	TONS	TONS	TONS	CY	SY	SY	
	NB	1033+39.0	1034+89.0	36.0	150.0	600.0									66.2	600.0	99.2	600.0		600.0	4.0	6.0					
	NB	1034+89.0	1035+52.0	36.0	63.0	252.0									27.8	252.0	41.7	252.0		252.0	1.7	2.5					
	NB	1035+52.0	1043+06.0	24.0	754.0	2010.7									221.7	2010.7	332.5	2010.7		2010.7	13.3	20.0					
	NB	1043+06.0	1045+56.0	24.0	250.0	666.7									73.5	666.7	55.1	666.7		666.7	4.4	3.3					
	SB	1024+29.5	1035+00.0	24.0	1070.5	2854.6									314.7	2854.6	472.1	2854.6		2854.6	18.9	28.3					
	SB	1035+00.0	1035+40.0	24.0	40.0	106.7									11.8	106.7	17.6	106.7		106.7	0.7	1.1					
	SB	1035+40.0	1036+90.0	36.0	150.0	600.0									66.2	600.0	99.2	600.0		600.0	4.0	6.0					
	SB	1036+90.0	1038+10.0	36-24	120.0	400.0									44.1	400.0	66.2	400.0		400.0	2.6	4.0					
	SB	1038+10.0	1043+06.0	24.0	496.0	1322.7									145.8	1322.7	218.7	1322.7		1322.7	8.7	13.1					
	SB	1043+06.0	1045+56.0	24.0	250.0	666.7									73.5	666.7	55.1	666.7		666.7	4.4	3.3					
																											TOTAL

**SHOULDERS**

- ① Lane(s) to which the shoulder is adjacent.
- ② See Typ. 7156, 7157, or 7158.
- ③ Bid Item.
- ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ⑤ Bid Item. Typ. 7156, 7157, or 7158.
- ⑥ 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			Side	P	P <sub>SG</sub>	G	L	Quantities															Remarks			
Road Identification	Direction of Traffic	Station to Station						Class 13 Excavation	Hot Mix Asphalt		Binder	Paved Shoulder	Reinforced Paved Shoulder	Special Backfill				Subbase	Granular Shoulder		Earth Shoulder Construction Alternates					
									Width	Width				Length	Length	HMA Alternate			PCC Alternate		TONS	TON/STA		STA	HMA	PCC
			FT	FT ②	FT	FT	CY ③	TON	TON/STA	TONS	SY ③	SY ⑤	SY ③	TON ③	TON/STA	TON ③	TON/STA	CY ③	TON ③	TON/STA	STA ③	CY ⑥	CY ⑥			
IA 58		762+35.00	802+66.00	RT	4.0		2.0	4031.0	248.8	487.079	12.083	29.225	1791.6													40.3
		802+66.00	804+79.80	RT	2.0		2.0	213.8	6.6	12.917	6.042	0.775	47.5													2.1
		808+90.80	813+41.30	RT	2.0		2.0	450.5	13.9	27.218	6.042	1.633	100.1													4.5
		817+99.80	957+57.70	RT	2.0		2.0	13957.9	430.8	843.290	6.042	50.597	3101.8													139.6
		2957+50.00	2972+99.20	RT	6.0		4.0	1549.2	143.4	280.793	18.125	16.848	1032.8													15.5
		973+01.70	1008+35.00	RT	6.0		4.0	3533.3	327.2	640.411	18.125	38.425	2355.5													35.3

### SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② See Typ. 7156, 7157, or 7158.
- ③ Bid Item.
- ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ⑤ Bid Item. Typ. 7156, 7157, or 7158.
- ⑥ 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.

Road Identification	Direction Of Traffic	Location				Quantities																Remarks													
		Station to Station		Side	P Width FT	P <sub>SG</sub> Width FT ②	G Width FT	L Length FT	Class 13 <sup>④</sup> Excavation CY ③	Hot Mix Asphalt		Binder TONS	Paved Shoulder SY ③	" Paved Shoulder at Guardrail SY ⑤	Reinforced Paved Shoulder SY ③	Special Backfill				Subbase CY ③	Granular Shoulder		Earth Shoulder Construction Alternates												
										HMA Alternate						PCC Alternate		TON ③			TON/STA		TON ③	TON/STA	CY ③	TON ③	TON/STA	STA ③	HMA CY ⑥	PCC CY ⑥					
		1008+35.00	1008+95.00	RT	6 to 0		4.0	60.0	1.9	3.625	6.042	0.218	20.0																		0.6				
		1008+95.00	1012+90.00	RT			4.0	395.0	0.0																						4.0				
		1012+90.00	1016+82.70	RT			2.0	392.7	0.0																						3.9				
		1019+55.20	1025+30.00	RT	6.0		4.0	574.8	53.2	104.183	18.125	6.251	383.2																		5.7				
		762+35.00	802+66.00	LT	4.0		2.0	4031.0	248.8	487.079	12.083	29.225	1791.6																		40.3				
		802+66.00	804+79.80	LT	2.0		2.0	213.8	6.6	12.917	6.042	0.775	47.5																		2.1				
		808+90.80	813+41.30	LT	2.0		2.0	450.5	13.9	27.218	6.042	1.633	100.1																		4.5				
		817+99.80	957+57.70	LT	2.0		2.0	13957.9	430.8	843.290	6.042	50.597	3101.8																		139.6				
		2957+50.00	2972+99.20	LT	6.0		4.0	1549.2	143.4	280.793	18.125	16.848	1032.8																		15.5				
		973+01.70	1008+35.00	LT	6.0		4.0	3533.3	327.2	640.411	18.125	38.425	2355.5																		35.3				
		1008+35.00	1008+95.00	LT	6 to 0		4.0	60.0	2.8	5.438	9.063	0.326	20.0																		0.6				
		1008+95.00	1012+90.00	LT			4.0	395.0	0.0																						4.0				
		1012+90.00	1016+82.70	LT			2.0	392.7	0.0																						3.9				
		1019+55.20	1025+30.00	LT	6.0		4.0	574.8	53.2	104.183	18.125	6.251	383.2																		5.7				

107-23  
10-18-11

### GRADING FOR GUARDRAIL INSTALLATIONS

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

Refer to EW-301

No.	Direction Of Traffic	Location			Foreslope at Guardrail	Dimensions (Feet)							Earthwork		Remarks																						
		Station	Side	Station		X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z		Excavation Class 10 CY	Embankment In Place CY																				

108-8A  
10-16-18

### STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

- ① Lane(s) to which the obstacle is adjacent.
- ② Not a bid item. Incidental to guardrail installation.

No.	Direction Of Traffic	Side O = Outside M = Median	Location		Layout Lengths				Long-Span System STATION TYPE	Delineators and Object Markers ②				Bid Items								Remarks																
			Station	Offset FT	BA-250, BA-260, LS-630, or LS-635					SI-211	Delineator SI-172 Type 1	Object Marker SI-173		Bolted End Anchor	Post Adapter	Steel Beam Guardrail	Barrier Transition Section	BA-250 or LS-630					BA-260 or LS-635															
					VT1	VF	VT2	ET				Type 2	Type 3					End Terminal	End Terminal																			
											Type 3		Tangent	Flared	Tangent	Flared	Barrier Transition Section			End Terminal																		
											White	OM2-2	OM3-L	OM3-R	BA-202	BA-210	BA-200	BA-201	BA-205	BA-206	LS-625		LS-626	BA-221	BA-225													

### STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (TWO-WAY PROTECTION)

Possible Standards: BA-200, BA-205, BA-206, BA-210, BA-211, BA-251, LS-625, LS-626, LS-631, SI-172, SI-173, and SI-211.

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

No.	Direction of Traffic	Location		Station	O <sub>L</sub>	D <sub>0</sub>	Layout Lengths BA-251 or LS-631								Long-Span System		Delineators and Object Markers				Bid Items			Remarks		
		Side	Approach Side (A)				Trailing Side (T)				SI-211	SI-172	Object Marker SI-173			Steel Beam Guardrail	End Terminal		Post Adapter							
			ET				VT2 <sub>A</sub>	VF <sub>A</sub>	VT1 <sub>A</sub>	VT1 <sub>T</sub>			VF <sub>T</sub>	VT2 <sub>T</sub>	ET		Type 1	Type 2		Type 3	Standard	Count	BA-210			
					FT	FT	LF	LF	LF	LF	LF	LF	LF	LF	BA-211	STATION	TYPE	TYPE	White	OM2-2	OM3-L	OM3-R	BA-200			BA-210
																			EACH	EACH	EACH	EACH	LF			EACH

### BRIDGE END DRAINS (WITH LETDOWN)

① Refer to Standard Road Plan SW-539

Bridge Station	Bridge Corner	Distance DI-1 or DI-2 ①	Installation Information								Remarks			
			Form Grade	Elevation				Length						
				A	B	C	D	E	L1	L2		L3	L4	

### TEMPORARY TRAFFIC SIGNALS

No.	Location Station	Type			Remarks
		One Lane Traffic	Haul Road	Intersection	

### CRASH CUSHIONS

\* Bid Item  
① Lane(s) to which the installation is adjacent.  
② Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	Direction of Traffic	Location Station	Side	Obstacle Width	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10	Embankment in Place	Permanent	Permanent Severe Use		
										Length	Length	Length	Length	Length						
				FT																

### TEMPORARY BARRIER RAIL

Possible Standard: BA-401 Possible Detail: 560-7

\* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station	Length LF	(Select One)		Anchored* (Y/N)	Modular Glare Screen System (Y/N)	Remarks
			Concrete BA-401	Steel 560-7			

### REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.  
② Includes length of End Terminals and End Anchors.

No.	Direction of Traffic	Location		Removal of Guardrail ② LF
		Station to Station	Side	

### BRIDGE APPROACH SECTION

\* Not a bid item

Bridge Station	End	Location		Approach Pavement					Standard Road Plans BR Series			Subdrain						Remarks			
		Skew Ahead Degrees	Thickness Inches	Pay Length FT	Non-Reinf. Pavement Area SY	Single-Reinf. Pavement Area SY	Double-Reinf. Pavement Area SY	Approach	Fixed or Movable Abutment	Abutting Pavement	Perforated Subdrain 4"	Subdrain Outlet		Porous Backfill CY	Class 'A' Crushed Stone Backfill CY	Modified Subbase TON	Polymer Grid SY		Special Backfill TON		
												LEFT	RIGHT							STA	Side
												LF	LF							STA	Side

## PAVEMENT MARKING LINE TYPES

See PM-110

\*\*\*MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

\*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.

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

Road ID	Station to Station		Dir. of Travel	Location	Marking Type	Side			Length by Line Type (Unfactored)										Remarks								
						L	C	R	BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4													
						STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA		STA	STA	STA	STA				
IA 58	762+35.00	770+57.00	BOTH		Waterborne/Solvent Paint	x	x	x						16.44													
	770+57.00	780+52.40	BOTH		Waterborne/Solvent Paint	x	x	x						19.91													
	780+52.40	787+50.00	BOTH		Waterborne/Solvent Paint	x	x	x						13.95													
	787+50.00	800+24.00	BOTH		Waterborne/Solvent Paint	x	x	x						25.48													
	800+24.00	811+75.00	BOTH		Waterborne/Solvent Paint	x	x	x						23.02													
	811+75.00	817+25.00	BOTH		Waterborne/Solvent Paint	x	x	x						11.00													
	817+25.00	826+15.00	BOTH		Waterborne/Solvent Paint	x	x	x						17.80													
	826+15.00	847+30.00	BOTH		Waterborne/Solvent Paint	x	x	x						42.30													
	847+30.00	588+10.00	BOTH		Waterborne/Solvent Paint	x	x	x						518.40													
	588+10.00	586+10.00	BOTH		Waterborne/Solvent Paint	x	x	x						4.00													
	586+10.00	864+35.00	BOTH		Waterborne/Solvent Paint	x	x	x						556.50													
	864+35.00	877+40.00	BOTH		Waterborne/Solvent Paint	x	x	x						26.10													
	877+40.00	887+30.00	BOTH		Waterborne/Solvent Paint	x	x	x						19.80													
	887+30.00	910+40.00	BOTH		Waterborne/Solvent Paint	x	x	x						46.20													
	910+40.00	919+30.00	BOTH		Waterborne/Solvent Paint	x	x	x						17.80													
	919+30.00	919+95.00	BOTH		Waterborne/Solvent Paint	x	x	x						1.30													
	919+95.00	927+85.00	BOTH		Waterborne/Solvent Paint	x	x	x						15.80													
	927+85.00	943+45.00	BOTH		Waterborne/Solvent Paint	x	x	x						31.20													
	943+45.00	951+25.00	BOTH		Waterborne/Solvent Paint	x	x	x						15.60													
	951+25.00	964+60.00	BOTH		Waterborne/Solvent Paint	x	x	x						26.70													
	964+60.00	966+90.00	BOTH		Waterborne/Solvent Paint	x	x	x						4.60													
	966+90.00	983+75.00	BOTH		Waterborne/Solvent Paint	x	x	x						33.70													
	983+75.00	989+65.00	BOTH		Waterborne/Solvent Paint	x	x	x						11.80													
	989+65.00	994+15.00	BOTH		Waterborne/Solvent Paint	x	x	x						9.00													
	994+15.00	1008+95.00	BOTH		Waterborne/Solvent Paint	x	x	x						29.60													
	1008+95.00	1022+60.00	BOTH		Waterborne/Solvent Paint	x	x	x						27.30													
	1022+60.00	1025+30.00	BOTH		Waterborne/Solvent Paint	x	x	x						5.40													
		1045+56.00	BOTH		Waterborne/Solvent Paint	x	x	x						2091.12													

## PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location																SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT	Groove Cuts	Remarks
	Station	Side																								

## MILLED RUMBLE STRIPS

See PV-12 and PV-13

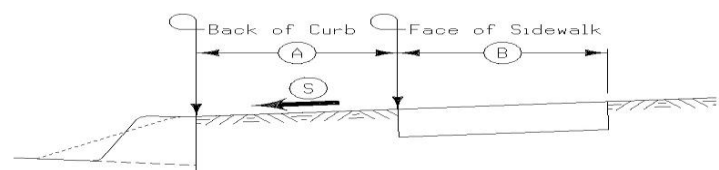
\* Calculated at 18" width for Shoulder.

Road Identification	Station to Station		Location	Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	Installation Length	Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks						
								PCC	HMA	Granular\Earth							
												Shoulder	PCC Paved	HMA Paved			
IN	STA	STA	GAL	FT	FT	FT											
IA 58	762+35.00	957+57.68		HMA	Centerline			195.23				0.0					
	2957+50.00	2972+99.20		HMA	Centerline			15.49				0.0					
	975+01.69	1025+30.00		HMA	Centerline			50.28				0.0					
	762+35.00	957+57.68		HMA	Left Shoulder			195.23				211.5					
	2957+50.00	2972+99.20		HMA	Left Shoulder			15.49				16.8					
	975+01.69	1025+30.00		HMA	Left Shoulder			50.28				54.5					
	762+35.00	957+57.68		HMA	Right Shoulder			195.23				211.5					
	2957+50.00	2972+99.20		HMA	Right Shoulder			15.49				16.8					
	975+01.69	1025+30.00		HMA	Right Shoulder			50.28				54.5					

113-1  
04-16-19

### SIDEWALKS

See MI-220 and S Sheets



Intersection/Road	Quadrant/Side	Length	A	B	S	4" PCC Sidewalk	6" PCC Sidewalk	8" PCC Sidewalk	10" PCC Sidewalk	Detectable Warnings	Remarks
			FT	FT	%	SY	SY	SY	SY	SF	

290-01  
04-15-14

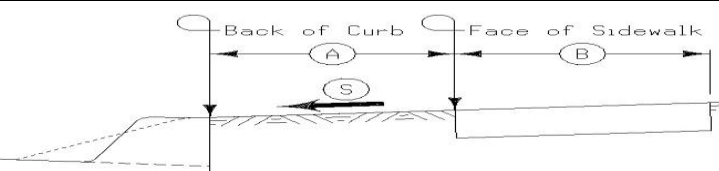
### SIDEWALK CONSTRAINTS

1. Widths:  
Widths listed in the S sheets are minimums.
2. Cross Slopes:  
Construct all sidewalks, curb ramps, and landings/turning spaces at a target cross slope of 1.5%. Cross slopes exceeding 2.0% will not be allowed, except for areas tying into existing pavement. In these areas, transition from existing pavement cross slope to a cross slope of less than 2.0% within one panel at a rate not to exceed 1.0% per foot.
3. Longitudinal Slopes:
  - a. Sidewalk:
    - i. Roadway slope exceeds 5.0%: Sidewalk longitudinal slope exceeding the roadway slope by more than 2.0% will not be allowed.
    - ii. Roadway slope 5.0% or less: Sidewalk longitudinal slope exceeding 5.0% will not be allowed.
  - b. Ramps:
    - i. Ramps 15.0' in length or less: Longitudinal slope exceeding 8.3% will not be allowed.
    - ii. Ramps greater than 15.0' in length: Construct with the longitudinal slope necessary to conform to the design.
4. Landing/Turning Spaces:  
Longitudinal slopes exceeding 2.0% will not be allowed.

113-1A  
04-16-19

### SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station	Side	A	B	S	4" PCC Sidewalk	6" PCC Sidewalk	8" PCC Sidewalk	10" PCC Sidewalk	Detectable Warnings	Remarks
			FT	FT	%	SY	SY	SY	SY	SF	

190-51  
10-15-13

### MATERIALS FOR TYPE 'A' SIGNS

TYPE A SIGNING TYPICALS	SIGN NUMBER	DIR OF TRAVEL	SIGN LOCATION STATION	WOOD POSTS		PERFORATED SQUARE STEEL TUBE					Steel Rect. Tube		TYPE A SIGN MOUNTING BRACKETS					INSTALLATION			REMARKS				
				NO. OF POSTS	4 x 6		LEG 1	LEG 2	LEG 3	ANCHOR		NO. OF POSTS	POST LENGTH	ANCHORS	ONE POST BRACKET	TWO POST	AUXILIARY	H	F	F1		TYPE	DIM 'X' FT	SEE SIGNING NOTES	
					LEG 1	LEG 2				CONC	SOIL							SLIPBASE	FT	EACH					

190-61  
10-15-13

### EXISTING SIGNS TO BE REINSTALLED

SIGN DESCRIPTION	DIRECTION OF TRAVEL	LOCATION STATION	NUMBER OF POSTS	SQUARE TUBE STEEL POSTS	WOOD POSTS		INSTALLATION		SEE SIGNING NOTES
					4" x 4"	4" x 6"	TYPE	DIM 'X'	
					LF	LF			

190-62  
10-15-13

### EXISTING SIGNS TO BE REMOVED

SIGN NUMBER OR DESCRIPTION	LOCATION STATION	DIRECTION OF TRAVEL	TYPE 'A' SIGN ASSEMBLY	TYPE 'B' SIGN ASSEMBLY	REMOVE & REINSTALL EXISTING SIGNS		CONCRETE FOUNDATION	SUPPORT STRUCTURE & FOUNDATION	APPLICABLE SIGNING NOTES	REMARKS
					TYPE 'A'	TYPE 'B'				
			RA	RB	RR	RR	RF	RS		

190-66  
10-21-14

### SUMMARY OF TYPE 'A' SIGNS

Sign Number	Quantity EACH	Size IN	Total Sign Area SF

ESTABLISHED WIDTH OF RIGHT OF WAY \_\_\_\_\_ FT

BLACK TWP T.80N R.14W.

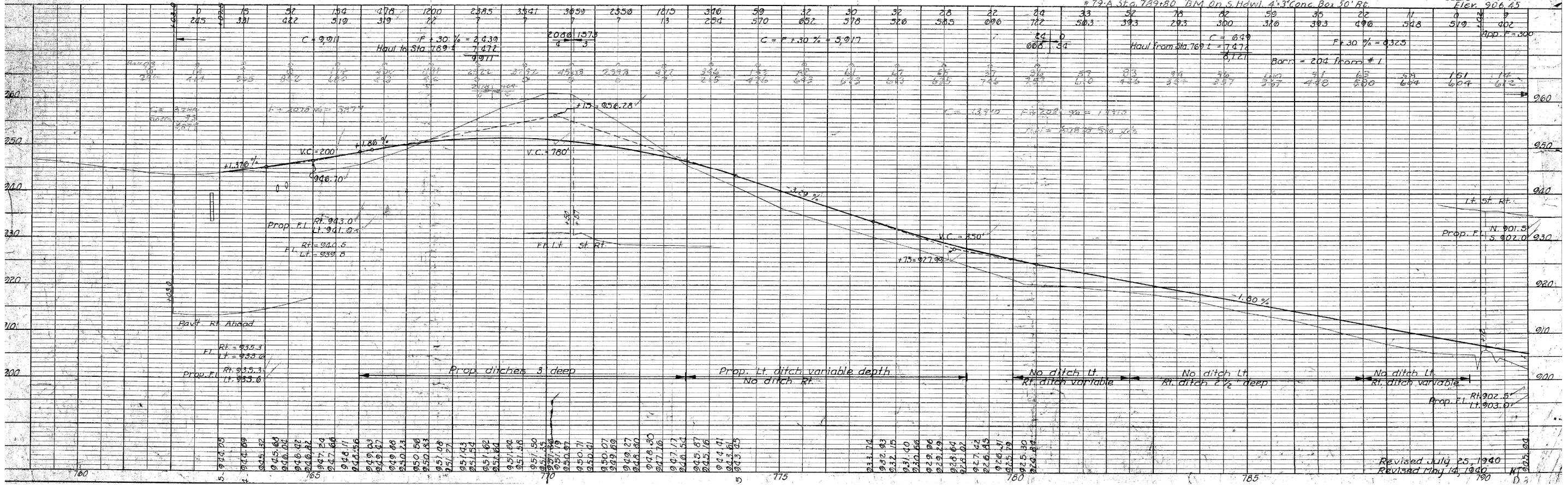
FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IOWA	637 A(1)		7	79

LEUTHERA MAUDE WATERS BROWN  
 Acquired April 25, 1940  
 Title by easement  
 Consideration \$107.50  
 Recorded Book 92 LD Page 281  
 Recorder of Black Hawk Co.

STA. 763 + 07.5  
 BEGINNING OF DIV. 1,  
 SEC. A AND PROJECT  
 START CONSTR. HERE

STA. 770 + 57.0  
 STOP CONSTR. ON DIV. 1  
 BEGINNING OF DIV. 2

BP STA 762+35.0  
 RP 0.1, PCC End



Sta. 762 + 65.0  
 4' x 4' x 35.4' Conc. Box Culv.  
 D.A. = 39 Ac. R.  
 Extend to fit grade  
 Rd. Contr. to clean outlet.  
 Added area of pavement  
 for widening & under-  
 cutting present pavement  
 = 14.3 Sq. Yds.  
 Extended 17.6' Lt.  
 Now 20.4' Rt. = 34.0' Lt.

Sta. 764 + 37.4  
 18" x 32' Corr. Pipe  
 D.A. = 6 Ac. R.  
 Rd. Contr. to remove  
 present pipe, furnish  
 and place 24" x 84"  
 Conc. Pipe Culv.  
 (42' Rt. & 42' Lt.)  
 Skew 45° at Sta. 763 + 00

GEORGE V. LOONAN 0.67 Ac.  
 Acquired April 24 1940  
 Consideration \$ 83.74  
 Recorded Book 91LD Page 585  
 Recorder Black Hawk Co.

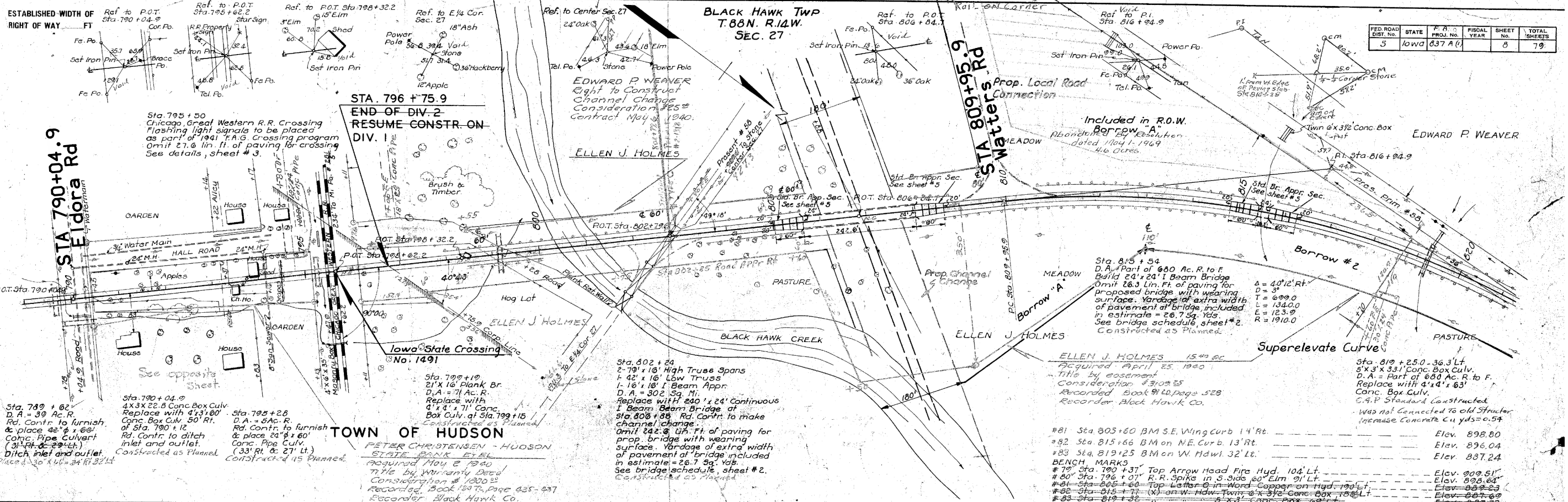
HENRY LAFREZ 0.20 Ac.  
 Acquired April 24 1940  
 Consideration \$ 200.00  
 Recorded Book 91LD Page 778  
 Recorder of Black Hawk Co.

ARTHUR E. HOLLIS 4.23 Ac.  
 Acquired May 11, 1940  
 Title by easement  
 Consideration \$2500.00  
 Recorded Book 91LD Page 319  
 Recorder of Black Hawk Co.

BENCH MARKS BM  
 #77 Sta. 762 + 85 On W. Hdwy. 4' x 4' Conc. Box 34' Lt. Elev. 912.63 938.97  
 #78 Sta. 770 + 80 R. R. Spikes in Power Pole 193' Rt. Elev. 908.35  
 #79 Sta. 790 + 37 Top Arrow Head Fire Hyd. 104' Lt. Elev. 909.51  
 #79A Sta. 729+80 BM on S. Hdwy. 4' x 3' Conc. Box 50' Rt. Elev. 906.45

Revised July 25, 1940  
 Revised May 14, 1940

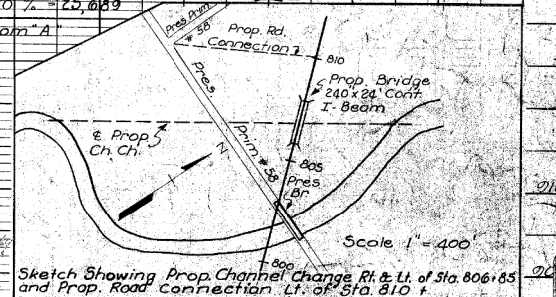
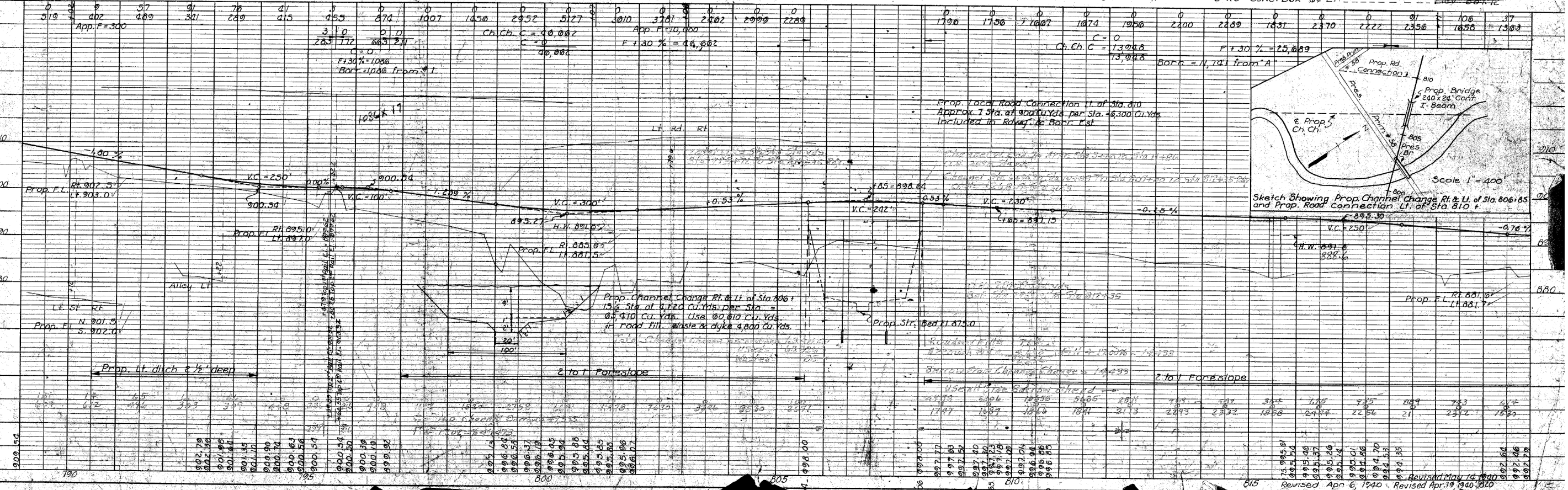
AS-BUILT PLANS, FOR INFORMATION ONLY



FED. ROAD DIST. NO.	STATE	F. R. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	Iowa	837 A(1)		8	79

**TOWN OF HUDSON**

PETER CHRISTENSEN - HUDSON  
 STATE BANK ELEV  
 Acquired May 2 1940  
 Title by Warranty Deed  
 Consideration \$ 1000.00  
 Recorded Book 1007, Page 425-427  
 Recorder Black Hawk Co.



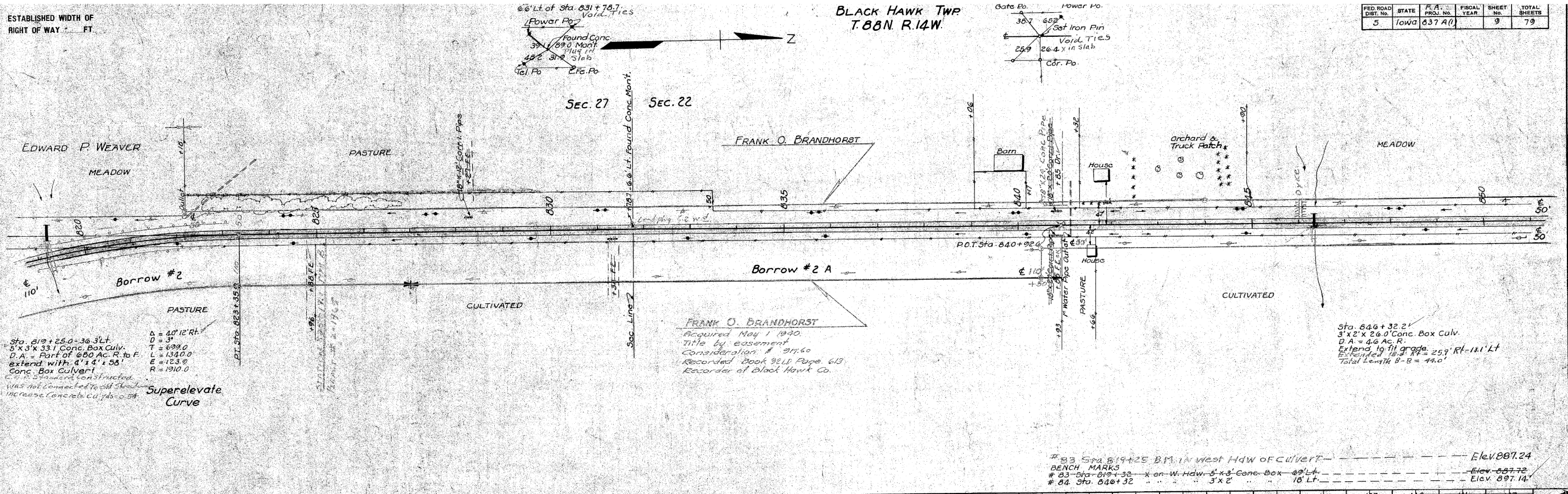
AS-BUILT PLANS, FOR INFORMATION ONLY



ESTABLISHED WIDTH OF RIGHT OF WAY 66 FT

BLACK HAWK TWP  
T.88N R.14W

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IA	637 A(1)		9	79



Sta. 819+25.0-36.3 Lt.  
5' x 3' x 33' Conc. Box Culv.  
D.A. = Part of 600 Ac. R. to F.  
Extend with 6' x 4' x 58'  
Conc. Box Culvert  
Culvert was not constructed.  
Increase Concrete CU 1/45 = 0.58

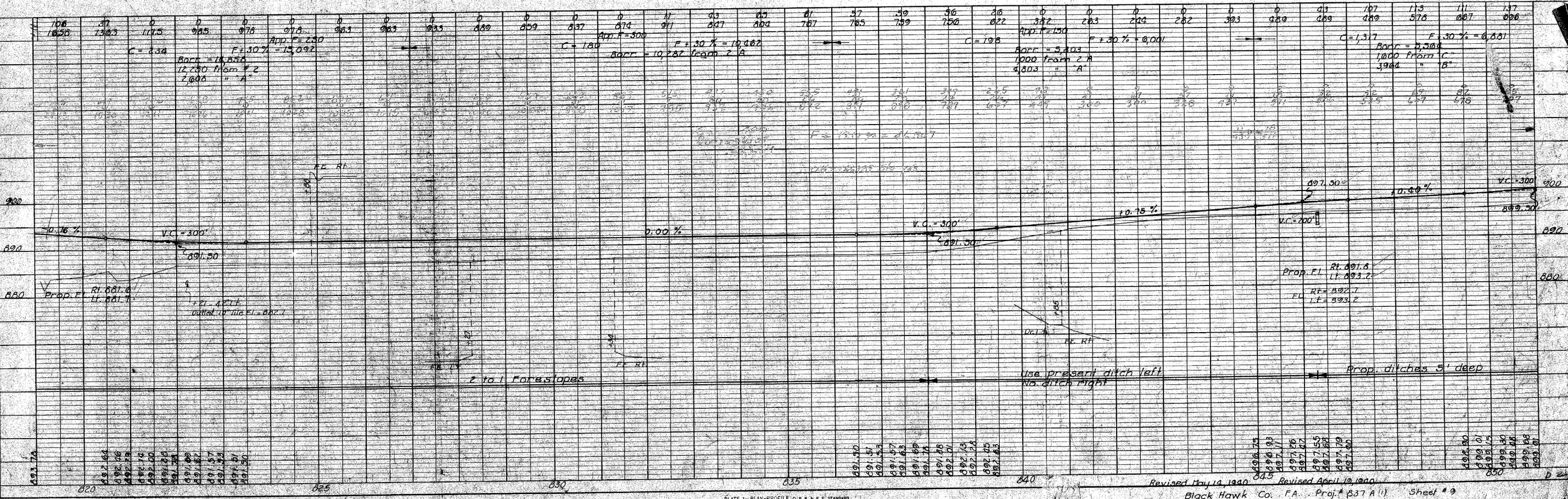
$\Delta = 40'12" R$   
 $D = 3'$   
 $T = 699.0$   
 $L = 1340.0$   
 $E = 1163.9$   
 $R = 1910.0$

Superelevate Curve

FRANK O. BRANDHORST  
Acquired May 1 1940.  
Title by easement  
Consideration \$ 914.60  
Recorded Book 98 LD Page 613  
Recorder of Black Hawk Co.

Sta. 848+32.21  
3' x 2' x 26.0' Conc. Box Culv.  
D.A. = 4.6 Ac. R.  
Extend to fit grade 25.9' Rt - 181' Lt  
Extended 18.3' Rt = 25.9' Rt - 181' Lt  
Total length B-B = 440'

# 83 Sta. 819+25 B.M. in West HdW of Culvert - Elev. 887.24  
BENCH MARK  
# 83 Sta. 819+32 x on W. HdW. 5' x 3' Conc. Box - 60' Lt. - Elev. 887.72  
# 84 Sta. 848+32 " " " " 3' x 2' " " 18' Lt. - Elev. 897.14



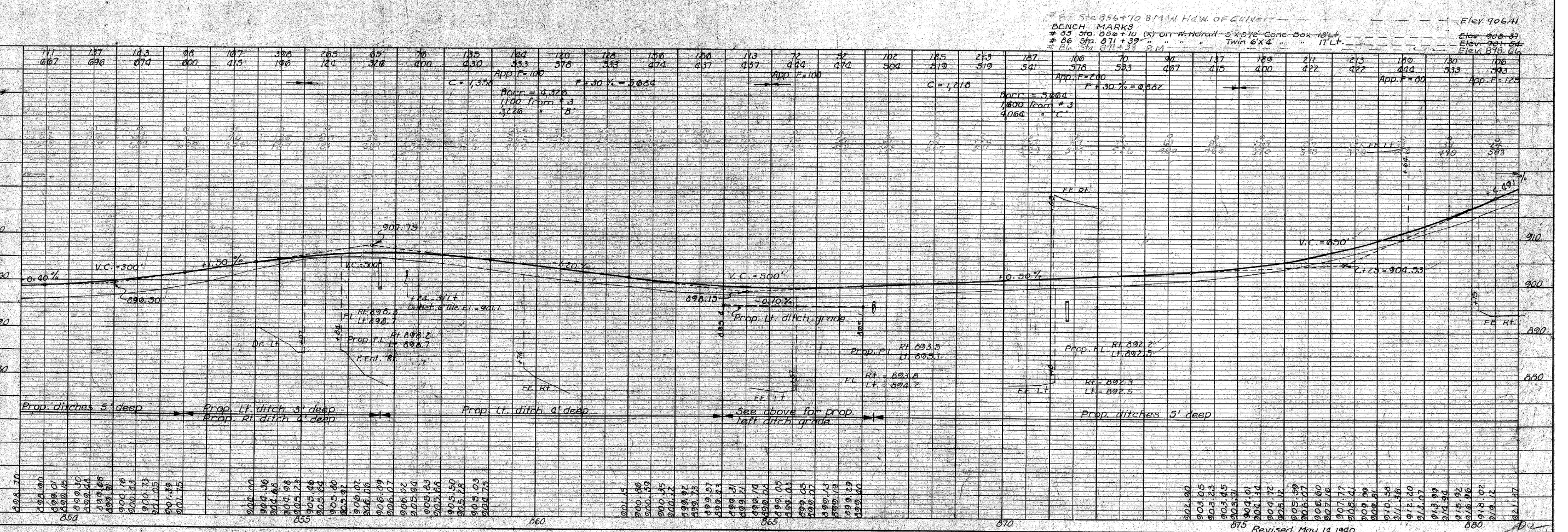
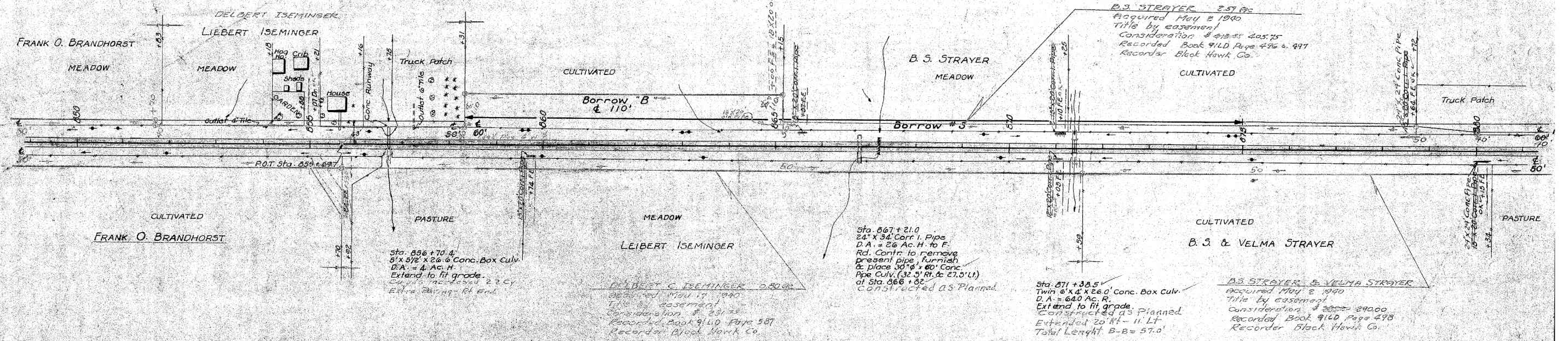
Revised May 19 1940  
Revised April 19 1940  
Black Hawk Co. F.A. Proj. # 637 A (1) Sheet # 9

AS-BUILT PLANS, FOR INFORMATION ONLY

ESTABLISHED WIDTH OF RIGHT OF WAY FT

BLACK HAWK TWP  
T. 88 N. R. 14 W.  
SEC. 22

FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	Iowa	037 A(1)	10	10	79



Black Hawk Co. F.A. Proj. # 037 A(1) Sheet # 10  
AS-BUILT PLANS, FOR INFORMATION ONLY

ESTABLISHED WIDTH OF RIGHT OF WAY FT

# BLACK HAWK TWP T 88N R. 14W

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	Iowa	837 A(1)		11	79

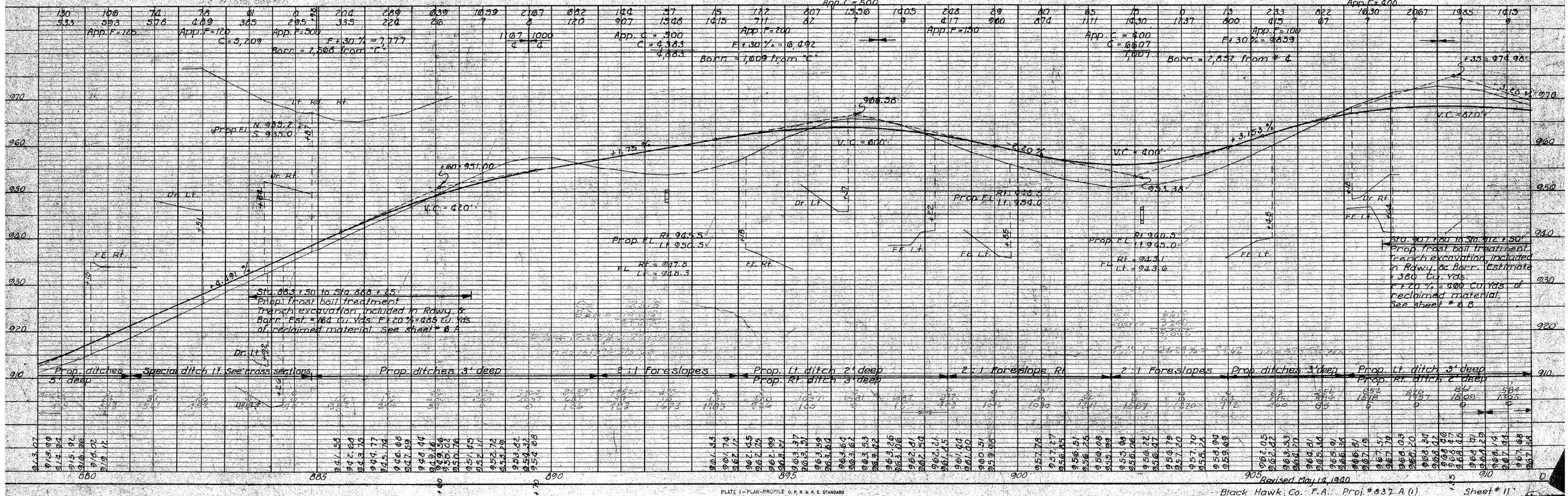
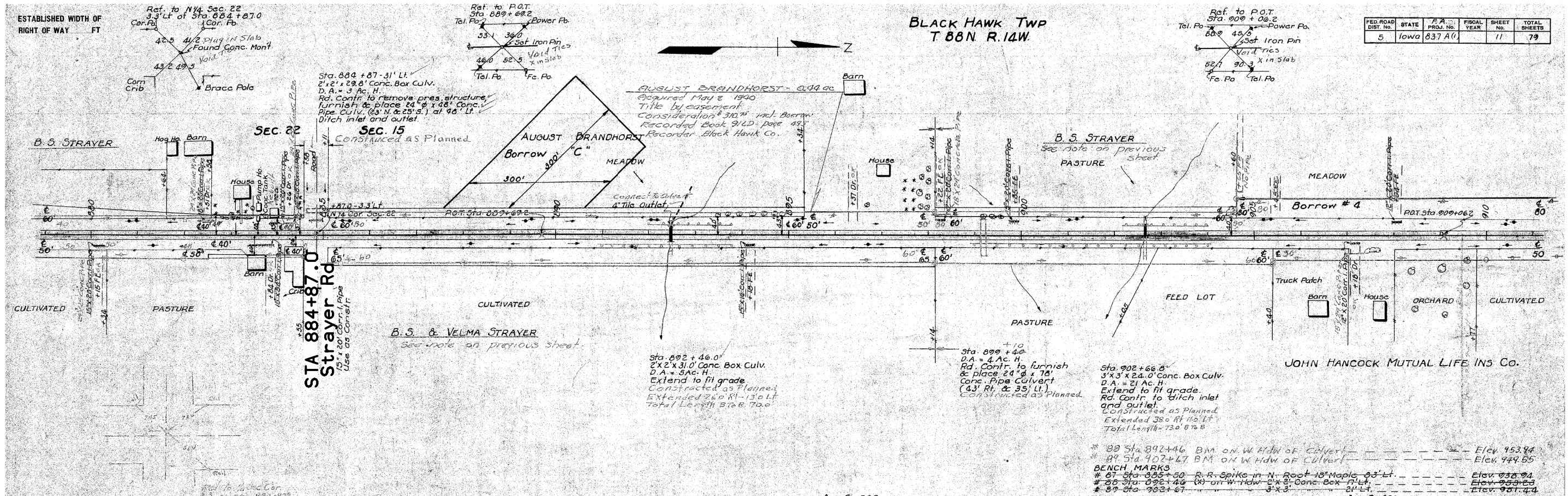


PLATE 1 - PLAN-PROFILE O. P. R. A. E. STANDARD

Revised May 14, 1940

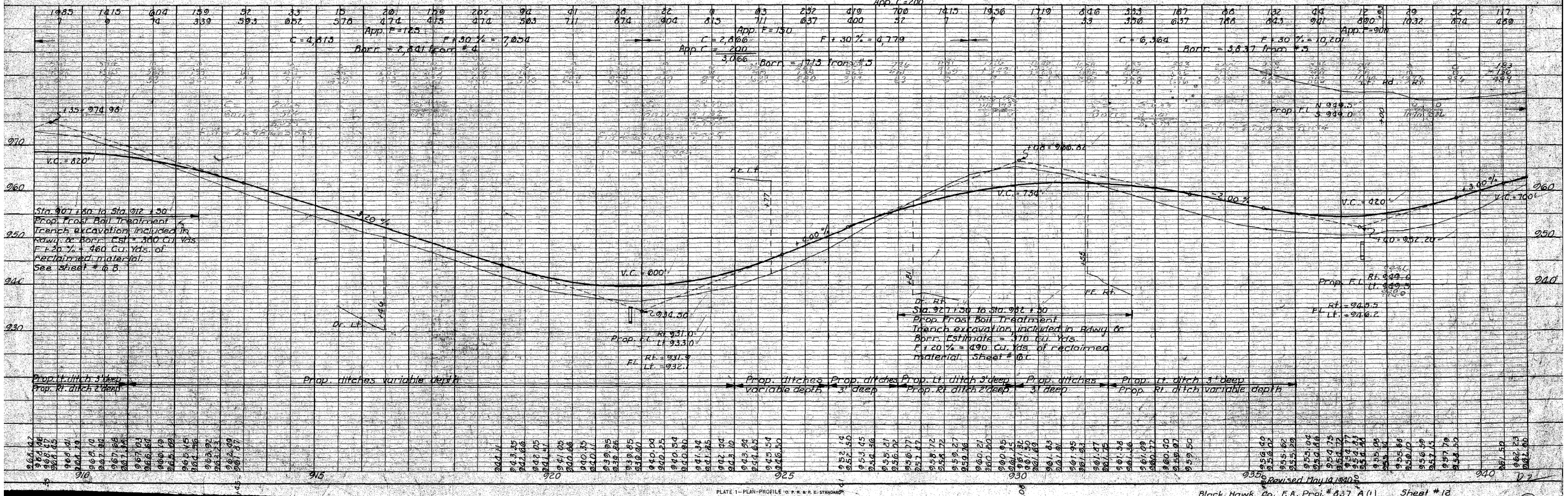
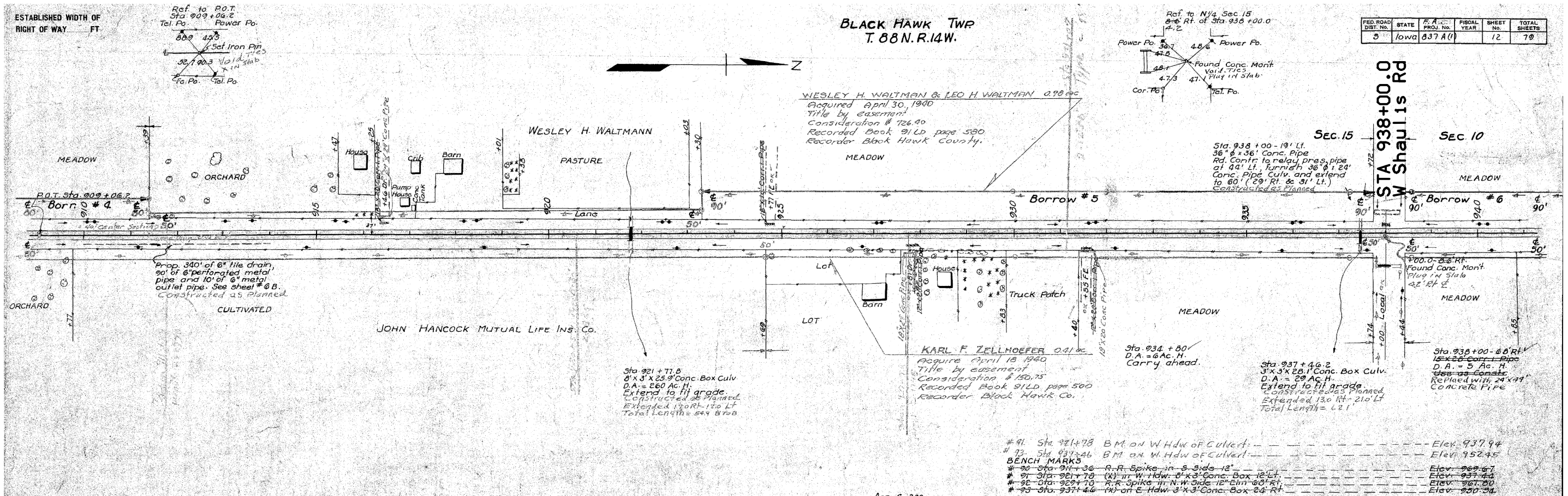
Black Hawk Co., F.A., Proj. # 837 A (1)

Sheet # 11

## AS-BUILT PLANS, FOR INFORMATION ONLY

BLACK HAWK TWP  
T. 88 N. R. 14 W.

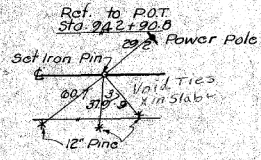
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	Iowa	837 A(1)		12	78



- #91 Sta 921+78 B.M. on W.Hdw of Culvert: --- Elev 937.94  
 #92 Sta 931+46 B.M. on W.Hdw of Culvert: --- Elev 952.45  
**BENCH MARKS**  
 #90 Sta 921+36 R.R. Spike in S Side 12' --- Elev 969.67  
 #91 Sta 921+78 (X) in W.Hdw 8'x3' Conc. Box 12' Lt. --- Elev 957.44  
 #92 Sta 929+70 R.R. Spike in N.W. Side 12' Elm 6' Rt. --- Elev 967.00  
 #93 Sta 931+46 (X) on E.Hdw 3'x3' Conc. Box 24' Rt. --- Elev 950.34

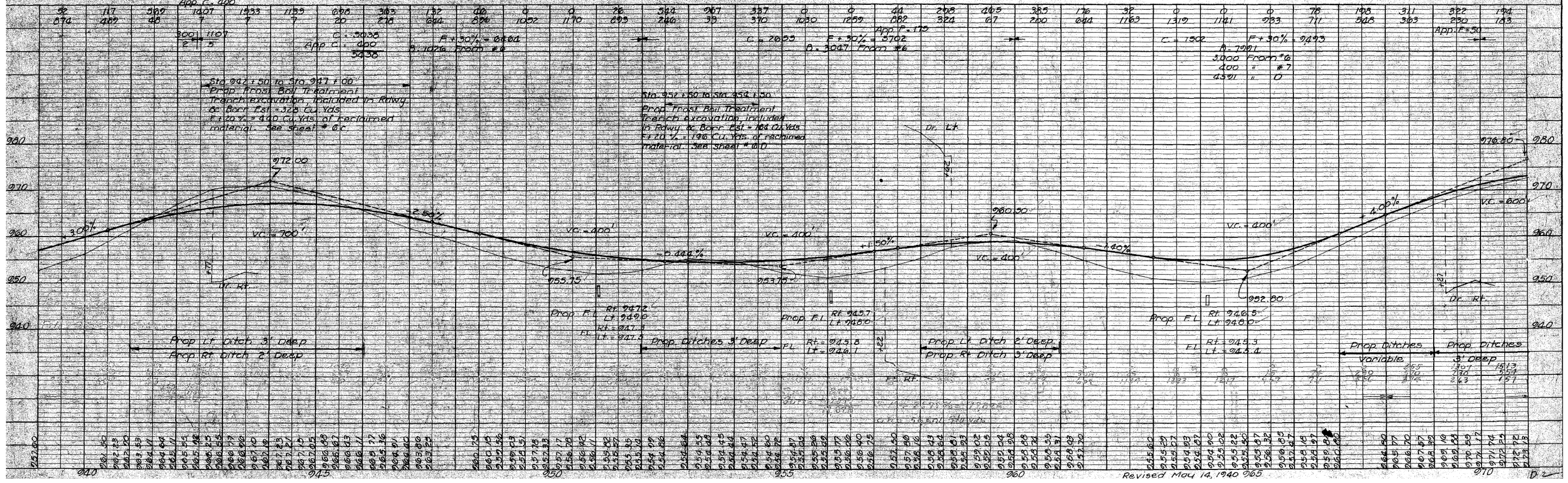
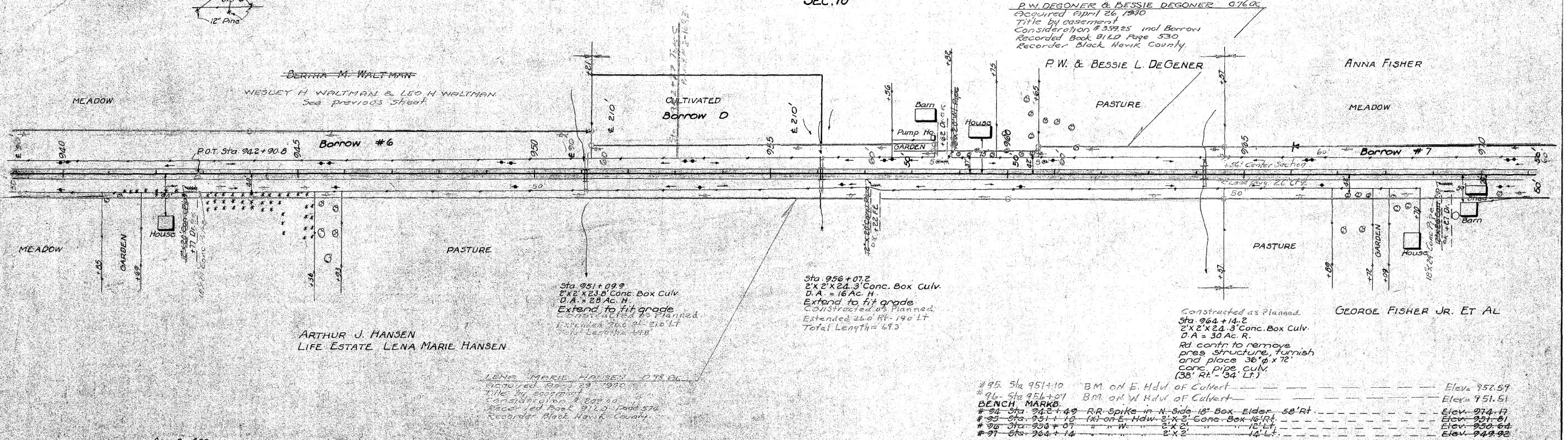
AS-BUILT PLANS, FOR INFORMATION ONLY

ESTABLISHED WIDTH OF RIGHT OF WAY FT



BLACK HAWK TWP T. 88N. R. 14W. SEC. 10

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	Iowa	637 A(4)		13	79



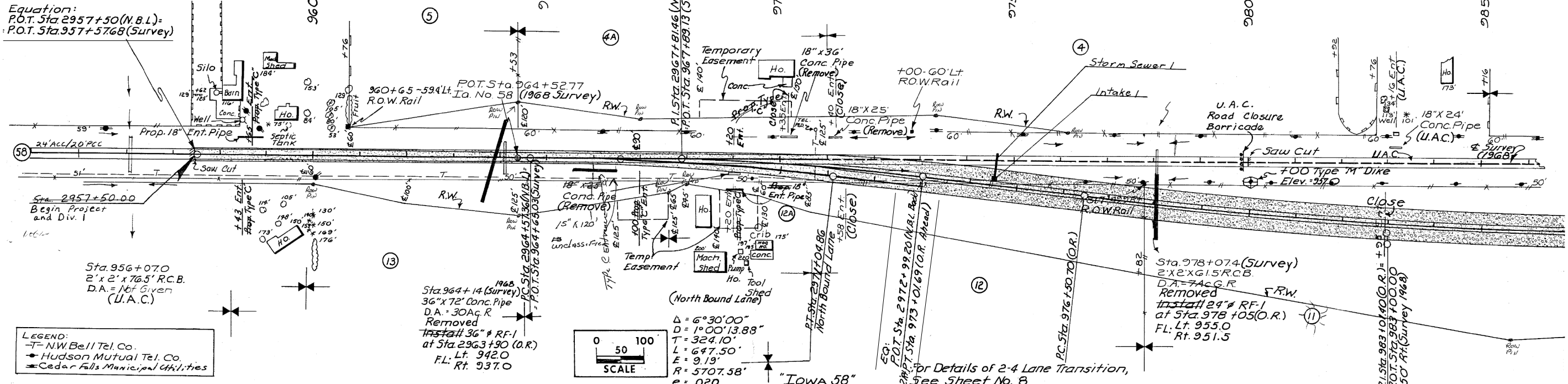
AS-BUILT PLANS, FOR INFORMATION ONLY

Property Owners:  
 4 - Ernest and Vera Lang  
 4A - Jerry and Linda Geisler  
 5 - George and Vivian Bailey  
 11 - Roy R. Wyatt  
 12 - William Davidson  
 12A - Donald and Elenor Wettengel  
 13 - Dean and Mary Wilms

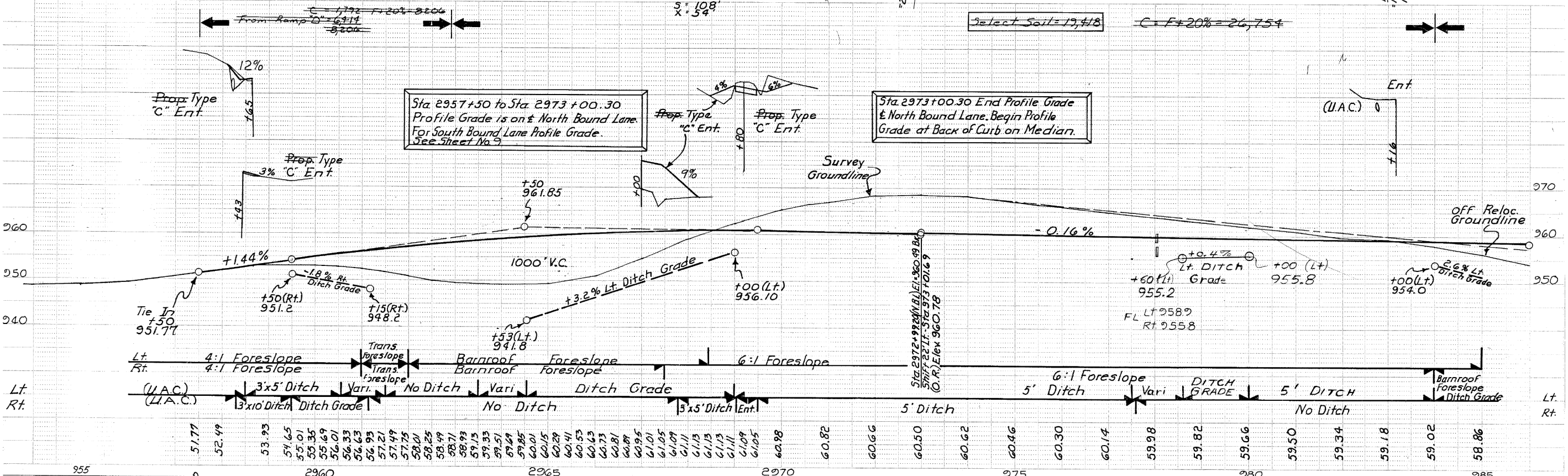
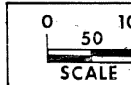
BLACK HAWK TWP.  
 T88N R14W  
 SEC. 10

(± Median)  
 $\Delta = 6^\circ 30' 00''$   
 $D = 0^\circ 30' 00''$   
 $T = 650.70'$   
 $L = 1300.00'$   
 $E = 18.46'$   
 $R = 11,459.16'$   
 $e = N.C.$

Equation:  
 P.O.T. Sta. 2957+50 (N.B.L.)  
 P.O.T. Sta. 957+57.68 (Survey)



LEGEND:  
 - NW Bell Tel. Co.  
 - Hudson Mutual Tel. Co.  
 - Cedar Falls Municipal Utilities



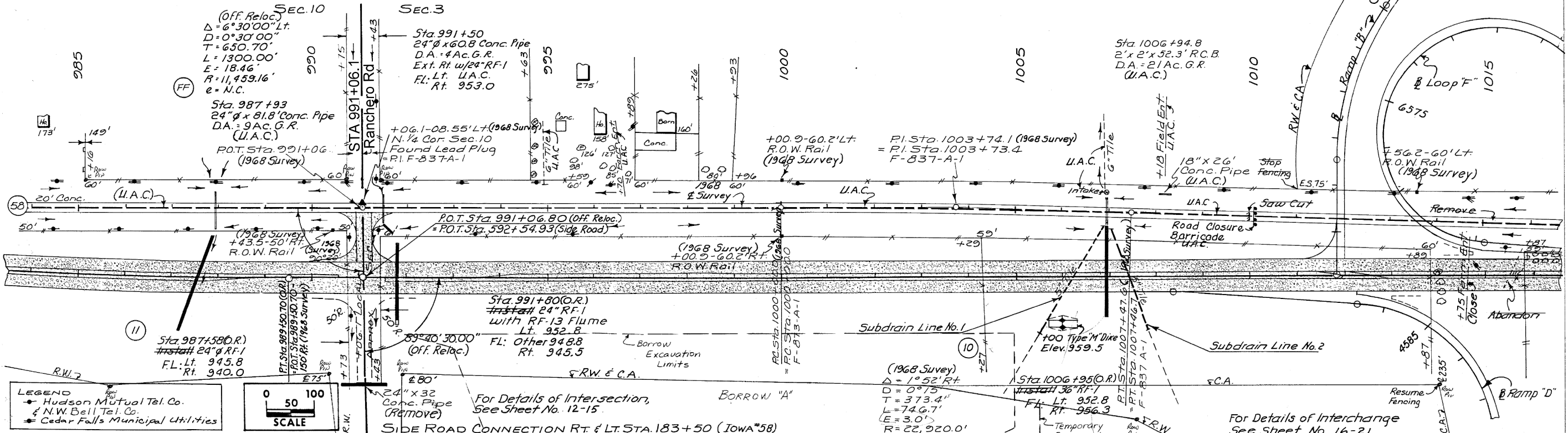
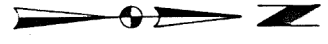
955	960	965	970	975	980	985
51.77	52.49	53.93	54.65	55.01	55.35	55.69
55.61	56.01	56.33	56.63	56.95	57.21	57.49
57.75	58.05	58.44	58.71	58.93	59.13	59.33
59.51	59.85	60.01	60.15	60.29	60.41	60.53
60.63	60.73	60.81	60.89	61.01	61.05	61.07
61.11	61.13	61.13	61.13	61.09	61.05	60.98
60.82	60.66	60.50	60.62	60.46	60.30	60.14
59.98	59.82	59.66	59.50	59.34	59.18	59.02
58.86						

Black Hawk COUNTY PROJECT NUMBER 1X-520-6(3B)--3P-07 STATE IOWA FED. ROAD DIST. NO. 1 FISCAL YEAR SHEET NO. 4 TOTAL SHEETS 52

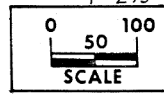
AS-BUILT PLANS, FOR INFORMATION ONLY

Property Owners:  
 3- William Davidson  
 10- Everett L. Rexlers  
 FF- Ernest H. & Vera D. Long  
 11- Roy R. Wyatt

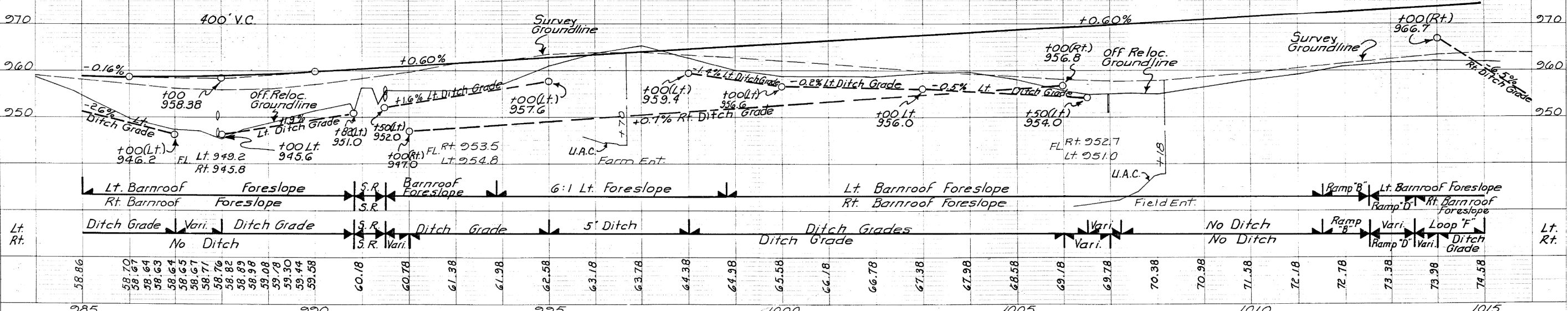
BLACK HAWK TWP For Details of Ranchero Road,  
 T88N R14W See Sheet No. 11



LEGEND  
 • Hudson Mutual Tel. Co.  
 • N.W. Bell Tel. Co.  
 • Cedar Falls Municipal Utilities

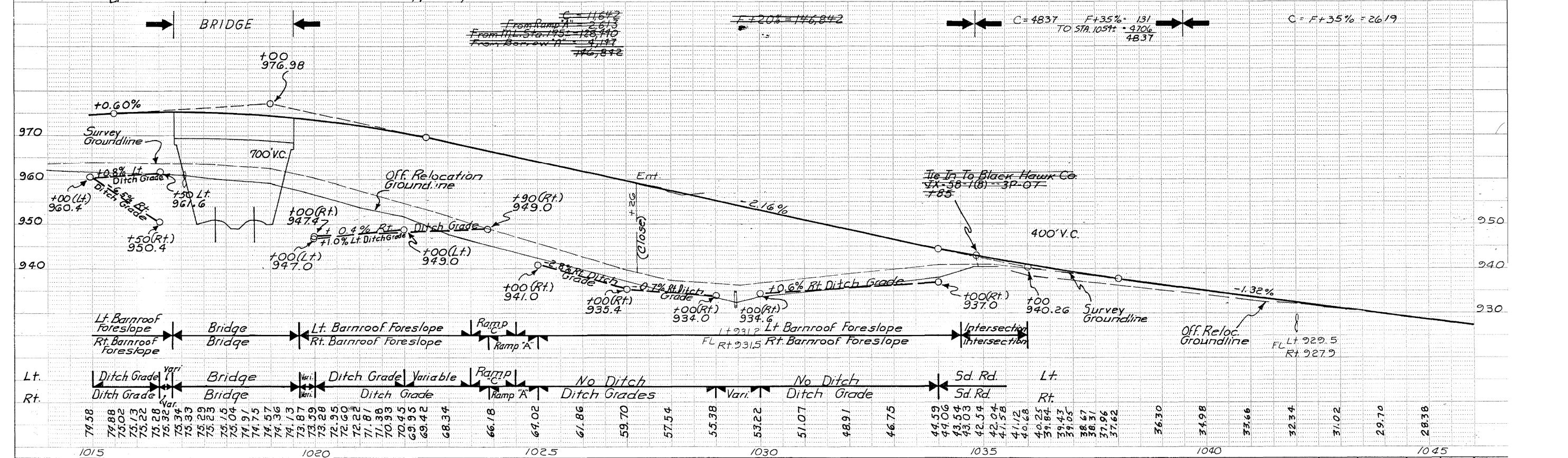
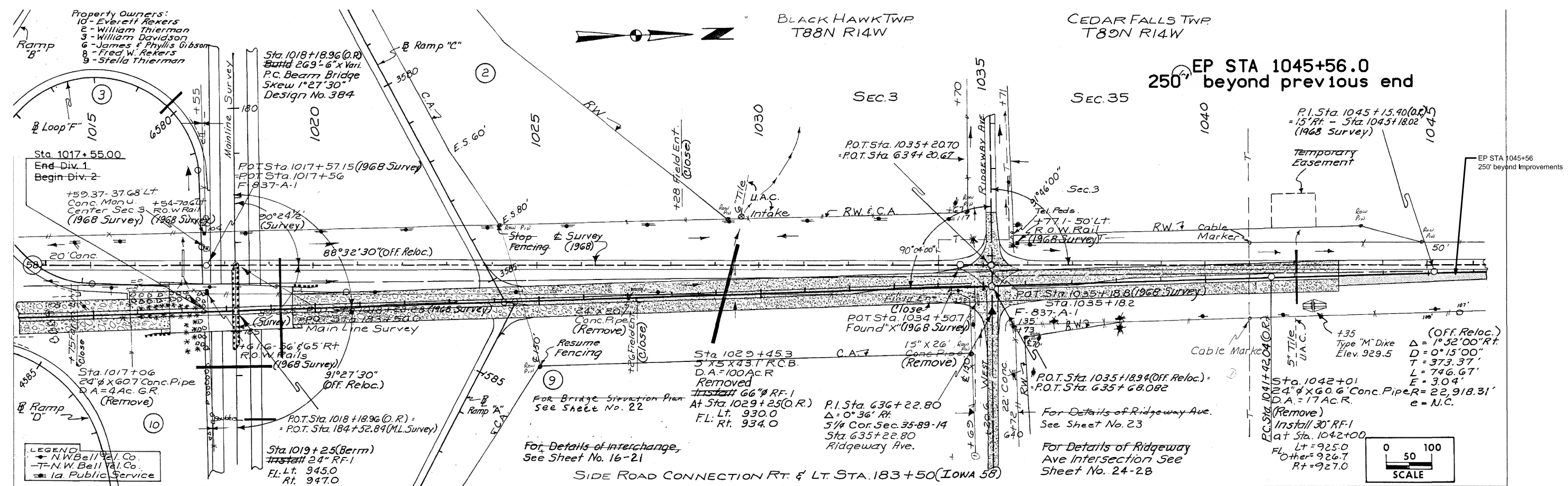


$C=27,489$ $Unsuit.(C-3)C=1,524$ $From Loop F=15,132$ $From Loop F=4,654$ $48,799$	$F+20\%=4,275$ $Unsuit.(C-3)F+20\%=1,524$ $48,799$	$C=14,874$ $Unsuit.(C-3)C=1,946$ $From Loop F=16,468$ $From Borrow 'A'=38,304$ $71,592$	$F+20\%=6,946$ $Unsuit.(C-3)F+20\%=1,946$ $71,592$
--	--	---	--



BLACK HAWK CO.	PROJECT NUMBER 1X-520-6(38)--3P-07	STATE IOWA	FEE ROAD DIST. NO. 5	FISCAL YEAR 2	SHEET NO. 52	TOTAL SHEETS 52	PROJECT NUMBER F-520-6(10)--20-07	STATE IOWA	FEE ROAD DIST. NO. 5	FISCAL YEAR 2	SHEET NO. 74	TOTAL SHEETS 232
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AS-BUILT PLANS, FOR INFORMATION ONLY



1015	1020	1025	1030	1035	1040	1045
74.58	74.88	75.02	75.13	75.22	75.28	75.34
75.33	75.29	75.15	74.97	74.75	74.57	74.36
74.36	74.13	73.87	73.59	73.28	72.95	72.60
72.60	72.22	71.87	71.38	70.93	70.45	69.93
69.42	68.34	66.18	64.02	61.86	59.70	57.54
55.38	53.22	51.07	48.91	46.75	44.59	43.06
43.06	43.54	43.03	42.54	42.04	41.58	41.12
40.68	40.25	39.84	39.43	39.05	38.67	38.31
37.96	37.62	36.30	34.98	33.66	32.34	31.02
29.70	28.38					

BLACK HAWK COUNTY PROJECT NUMBER 1X-520-6(38)--3P-07 STATE IOWA FED. ROAD DIST. NO. FISCAL YEAR SHEET NO. 6 TOTAL SHEETS 52

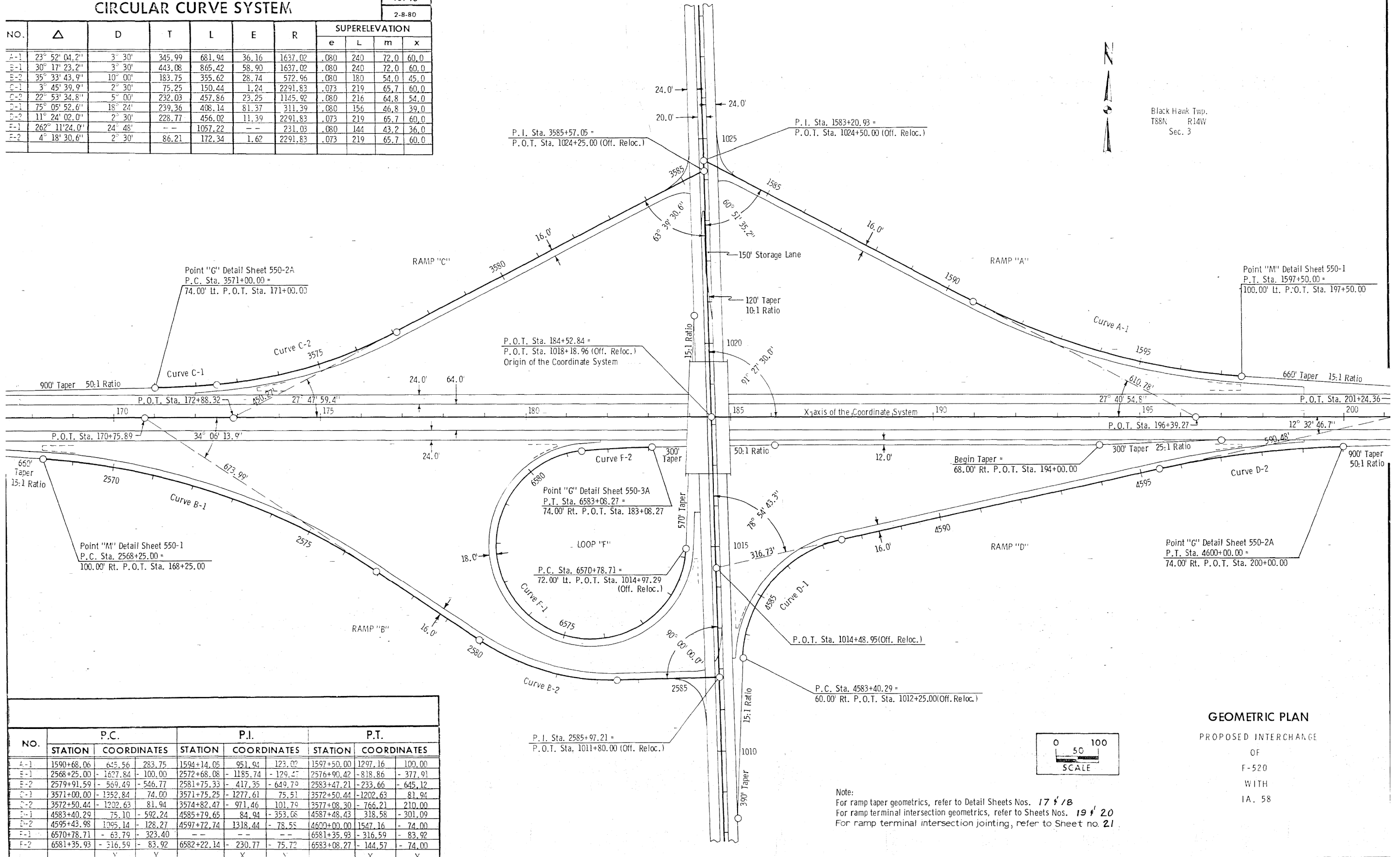
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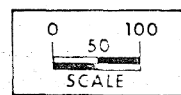
# CIRCULAR CURVE SYSTEM

101-10  
2-8-80

NO.	Δ	D	T	L	E	R	SUPERELEVATION			
							e	L	m	x
A-1	23° 52' 04.2"	3° 30'	345.99	681.94	36.16	1637.02	.080	240	72.0	60.0
E-1	30° 17' 23.2"	3° 30'	443.08	865.42	58.90	1637.02	.080	240	72.0	60.0
E-2	35° 33' 43.9"	10° 00'	183.75	355.62	28.74	572.96	.080	180	54.0	45.0
C-1	3° 45' 39.9"	2° 30'	75.25	150.44	1.24	2291.83	.073	219	65.7	60.0
C-2	22° 53' 34.8"	5° 00'	232.03	457.86	23.25	1145.92	.080	216	64.8	54.0
D-1	75° 05' 52.6"	18° 24'	239.36	408.14	81.37	311.39	.080	156	46.8	39.0
D-2	11° 24' 02.0"	2° 30'	228.77	456.02	11.39	2291.83	.073	219	65.7	60.0
F-1	262° 11' 24.0"	24° 48'	--	1057.22	--	231.03	.080	144	43.2	36.0
F-2	4° 18' 30.6"	2° 30'	86.21	172.34	1.62	2291.83	.073	219	65.7	60.0



Black Hawk Twp.  
T88N R14W  
Sec. 3



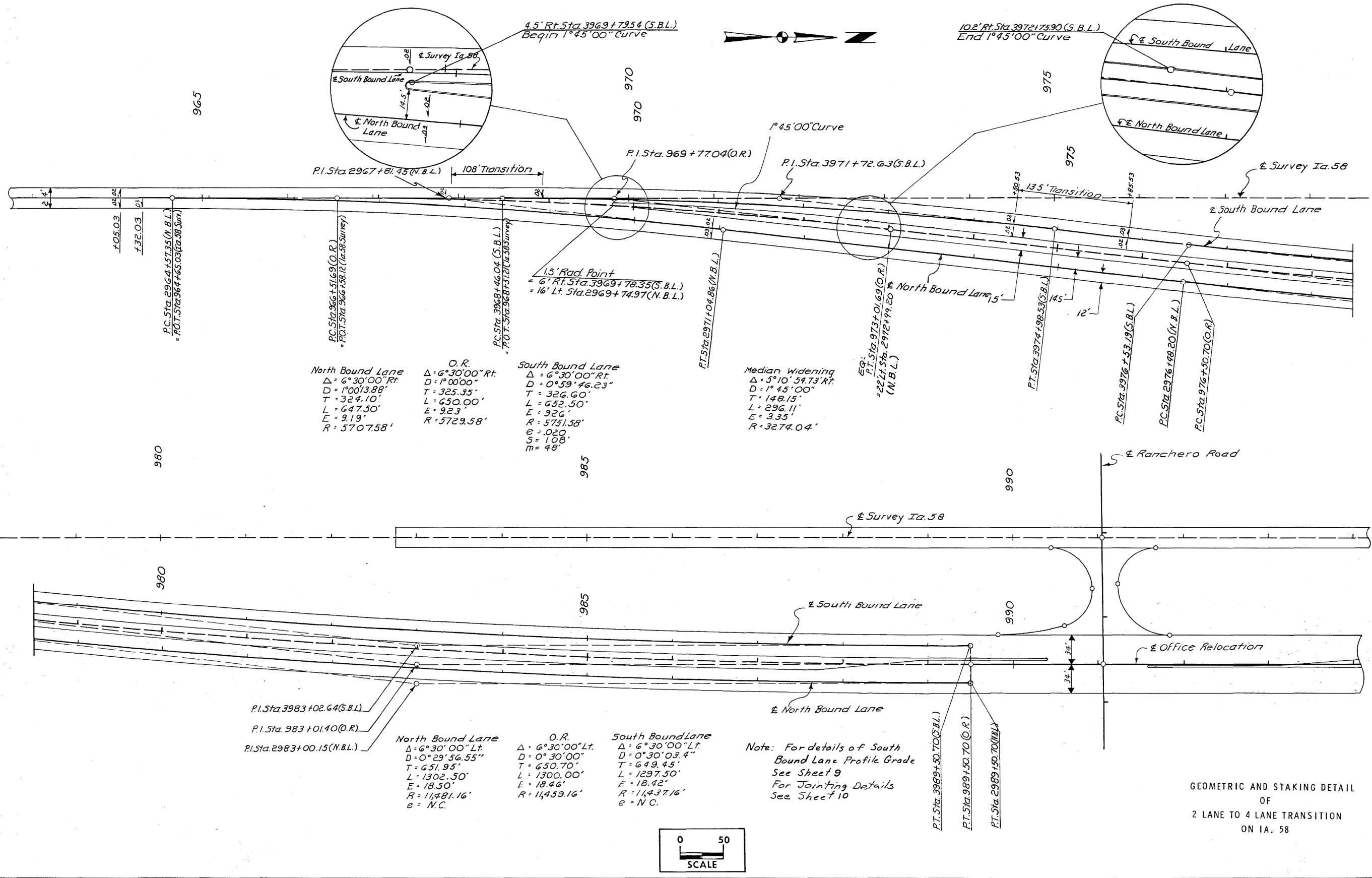
## GEOMETRIC PLAN

PROPOSED INTERCHANGE  
OF  
F-520  
WITH  
IA. 58

Note:  
For ramp taper geometrics, refer to Detail Sheets Nos. 17 & 18  
For ramp terminal intersection geometrics, refer to Sheets Nos. 19 & 20  
For ramp terminal intersection jointing, refer to Sheet no. 21

NO.	P.C.		P.I.		P.T.	
	STATION	COORDINATES	STATION	COORDINATES	STATION	COORDINATES
A-1	1590+68.06	645.56 283.75	1594+14.05	951.94 123.02	1597+50.00	1297.16 100.00
E-1	2568+25.00	-1627.84 -100.00	2572+68.08	-1185.74 -129.47	2576+90.42	-818.86 -377.91
E-2	2579+91.59	-569.49 -546.77	2581+75.33	-417.35 -649.70	2583+47.21	-233.66 -645.12
C-1	3571+00.00	-1352.84 74.00	3571+75.25	-1277.61 75.51	3572+50.44	-1202.63 81.94
C-2	3572+50.44	-1202.63 81.94	3574+82.47	-971.46 101.79	3577+08.30	-766.21 210.00
D-1	4583+40.29	75.10 -592.24	4585+79.65	84.94 -353.68	4587+48.43	318.58 -301.09
D-2	4595+43.98	1095.14 -128.27	4597+72.74	1318.44 -78.55	4600+00.00	1547.16 -74.00
F-1	6570+78.71	-63.79 -323.40	--	--	6581+35.93	-316.59 -83.92
F-2	6581+35.93	-516.59 -83.92	6582+22.14	-230.77 -75.72	6583+08.27	-144.57 -74.00

## AS-BUILT PLANS, FOR INFORMATION ONLY



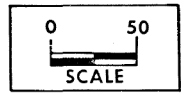
	O.R.	
North Bound Lane	$\Delta = 6^{\circ}30'00''$ Rt.	South Bound Lane
$D = 1^{\circ}00'13.88''$	$D = 1^{\circ}00'00''$	$\Delta = 6^{\circ}30'00''$ Rt.
$T = 324.10'$	$T = 325.35'$	$D = 0^{\circ}59'46.23''$
$L = 647.50'$	$L = 650.00'$	$T = 326.60'$
$E = 9.19'$	$E = 9.23'$	$L = 652.50'$
$R = 5707.58'$	$R = 5729.58'$	$E = 9.26'$
		$R = 5751.58'$
		$E = .020$
		$S = 108'$
		$m = 48'$

Median Widening
$\Delta = 5^{\circ}10'54.73''$ Rt.
$D = 1^{\circ}45'00''$
$T = 148.15'$
$L = 296.11'$
$E = 3.35'$
$R = 3274.04'$

	O.R.	
North Bound Lane	$\Delta = 6^{\circ}30'00''$ Lt.	South Bound Lane
$D = 0^{\circ}29'56.55''$	$D = 0^{\circ}30'00''$	$\Delta = 6^{\circ}30'00''$ Lt.
$T = 651.95'$	$T = 650.70'$	$D = 0^{\circ}30'03.4''$
$L = 1302.50'$	$L = 1300.00'$	$T = 649.45'$
$E = 18.50'$	$E = 18.46'$	$L = 1297.50'$
$R = 11,481.16'$	$R = 11,459.16'$	$E = 18.42'$
$e = N.C.$		$R = 11,437.16'$
		$e = N.C.$

Note: For details of South Bound Lane Profile Grade See Sheet 9  
For Jointing Details See Sheet 10

GEOMETRIC AND STAKING DETAIL OF 2 LANE TO 4 LANE TRANSITION ON IA. 58

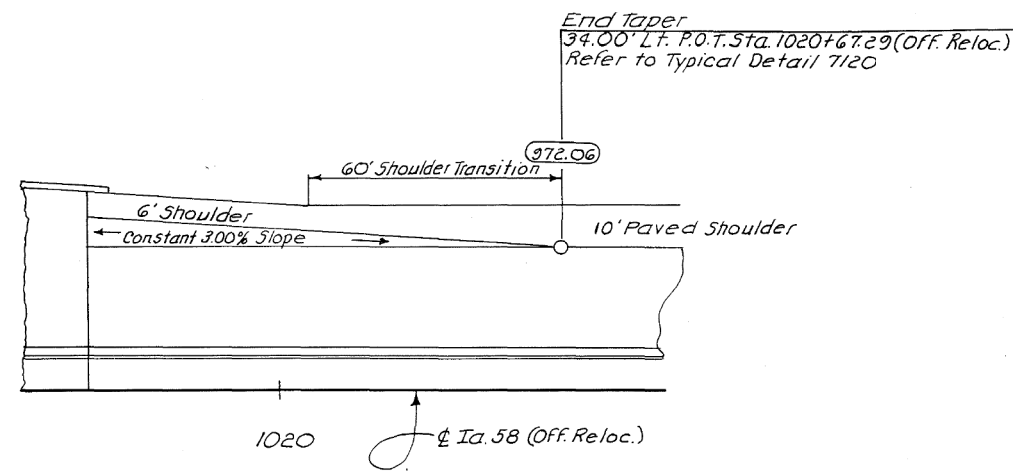
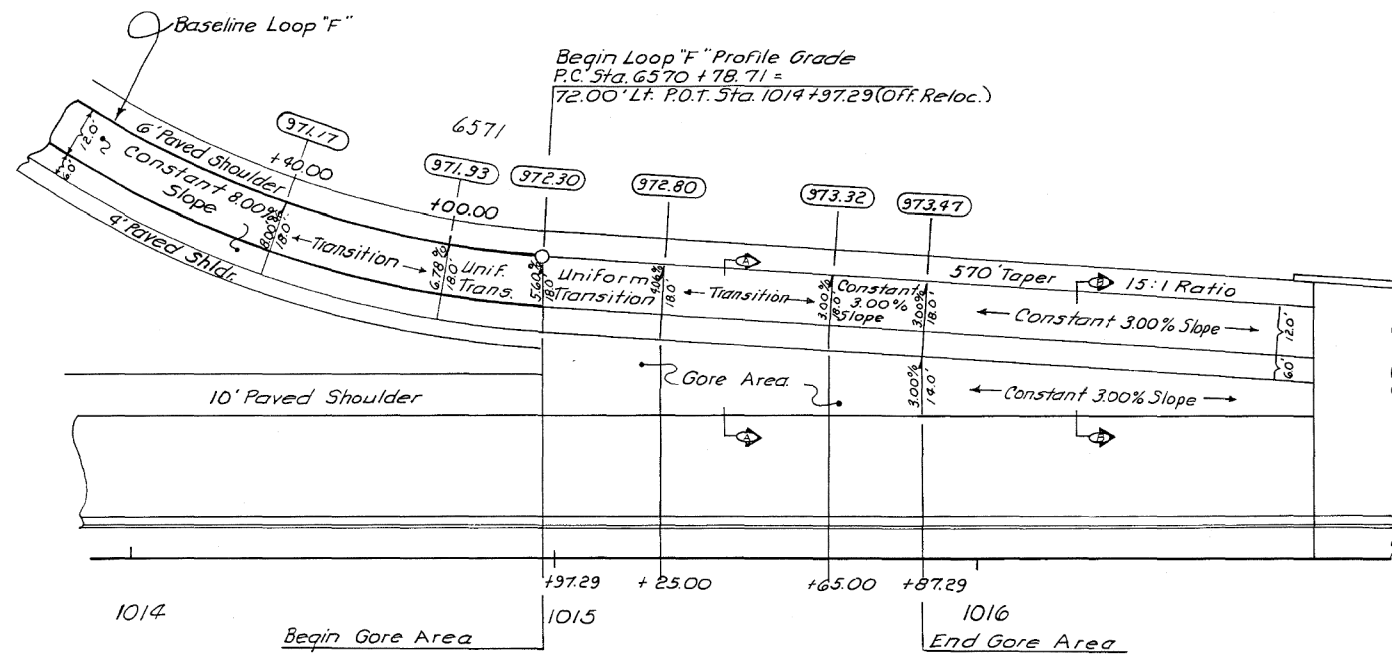


Black Hawk COUNTY

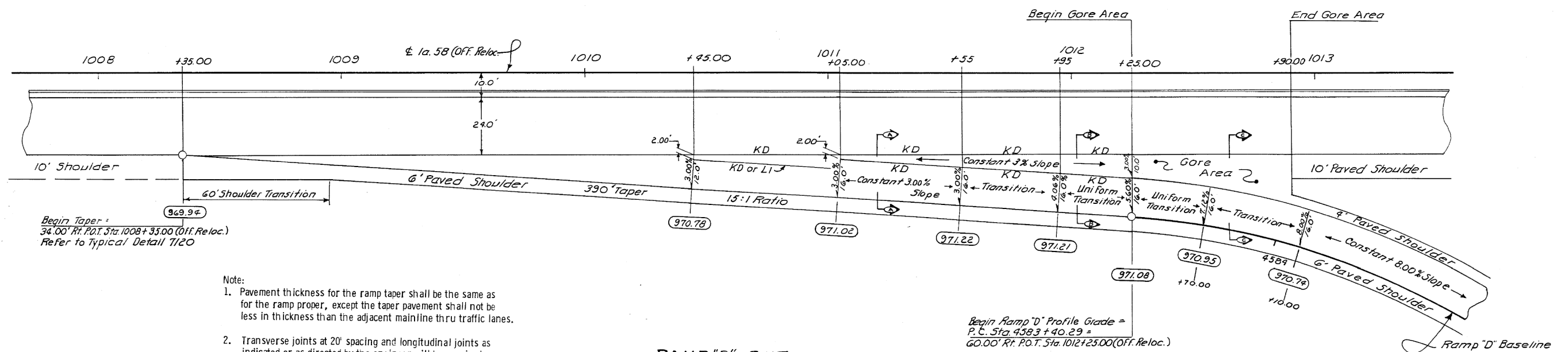
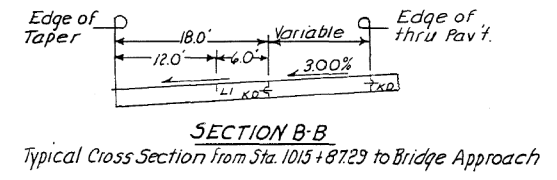
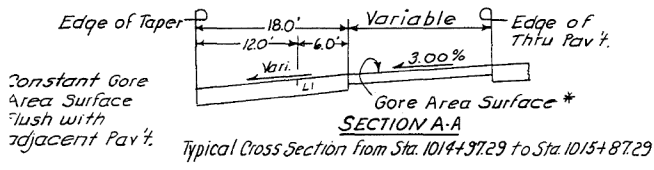
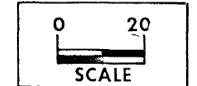
PROJECT NUMBER IX-520-G(38)-3P-07

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	5		8	52

AS-BUILT PLANS, FOR INFORMATION ONLY

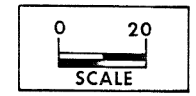


LOOP "F" EXIT  
 STAKING DETAIL



- Note:
1. Pavement thickness for the ramp taper shall be the same as for the ramp proper, except the taper pavement shall not be less in thickness than the adjacent mainline thru traffic lanes.
  2. Transverse joints at 20' spacing and longitudinal joints as indicated or as directed by the engineer will be required. Refer to Sheets No. 31 & 32
  3. Refer to project typical cross sections and appropriate Standard Road Plans for design details and requirements for shoulders.

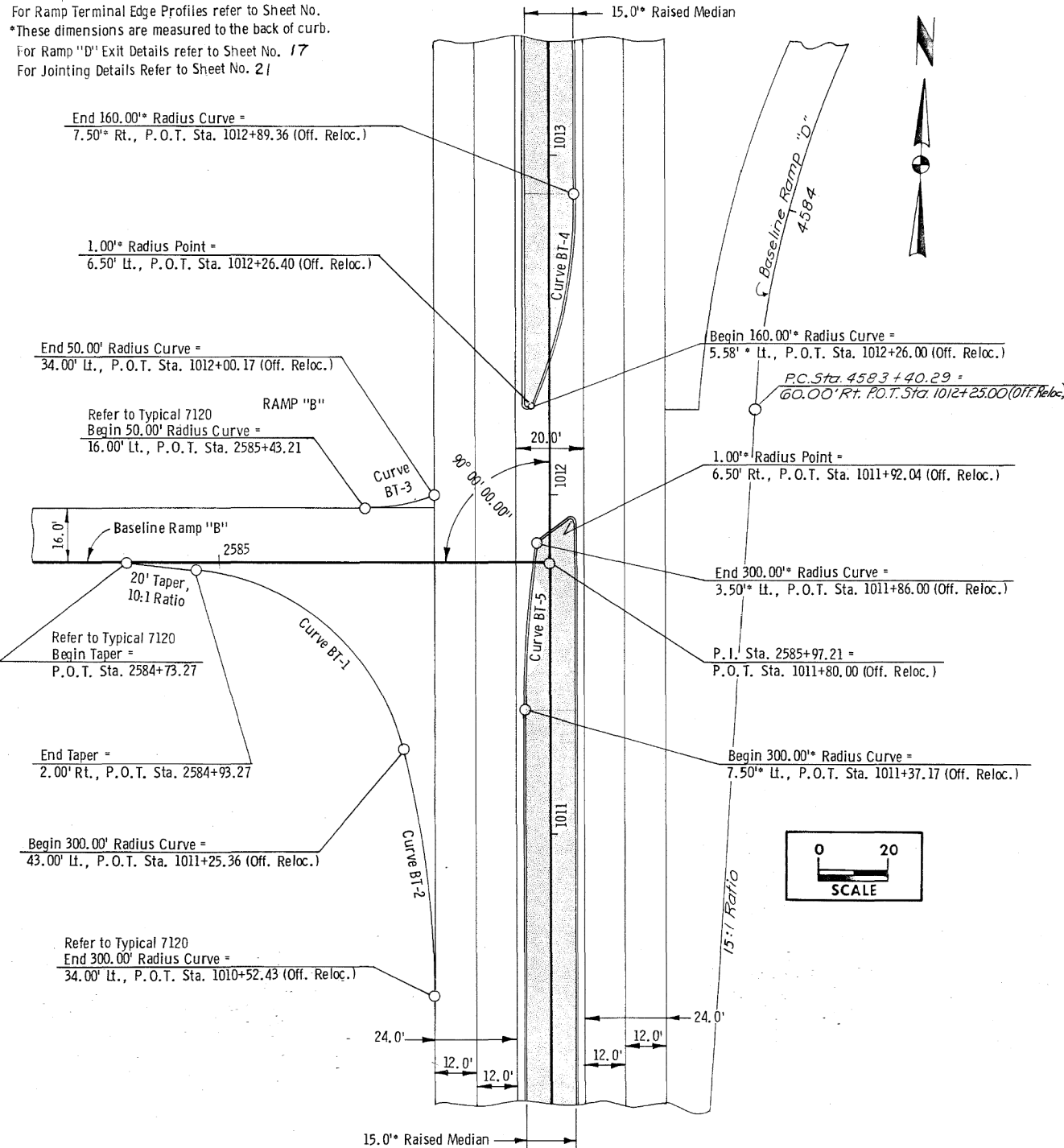
RAMP "D" EXIT  
 STAKING DETAIL



AS-BUILT PLANS, FOR INFORMATION ONLY

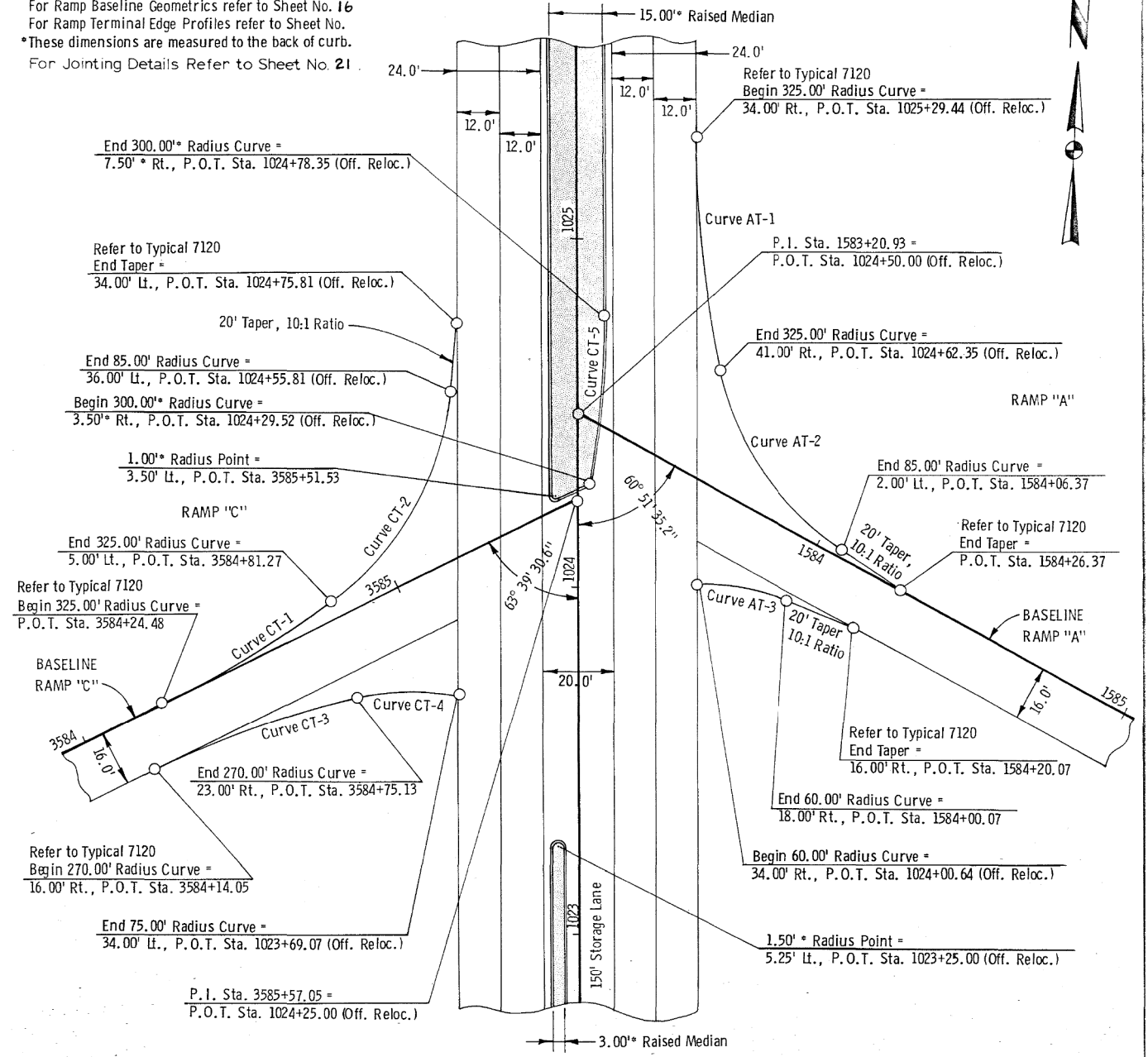
NOTE:  
 For Ramp Baseline Geometrics refer to Sheet No. 16  
 For Ramp Terminal Edge Profiles refer to Sheet No. 17  
 \*These dimensions are measured to the back of curb.  
 For Ramp "D" Exit Details refer to Sheet No. 17  
 For Jointing Details Refer to Sheet No. 21

GEOMETRIC DETAILS



NOTE:  
 For Ramp Baseline Geometrics refer to Sheet No. 16  
 For Ramp Terminal Edge Profiles refer to Sheet No. 17  
 \*These dimensions are measured to the back of curb.  
 For Jointing Details Refer to Sheet No. 21

GEOMETRIC DETAILS



CIRCULAR CURVE SYSTEM						
NO.	Δ	D	T	L	E	R
BT-1	70° 13' 10.3"	81° 51' 04.0"	49.22	85.79	15.57	70.00
BT-2	14° 04' 11.5"	19° 05' 54.9"	37.02	73.67	2.28	300.00
BT-3	23° 34' 41.4"	114° 35' 29.6"	10.44	20.58	1.08	50.00
BT-4	23° 19' 48.1"	35° 48' 35.5"	33.03	65.15	3.37	160.00
BT-5	9° 22' 00.4"	19° 05' 54.9"	24.58	49.04	1.01	300.00

GEOMETRIC AND STAKING PLAN  
 PROPOSED INTERCHANGE  
 OF  
 F-520  
 WITH  
 I.A. #58  
 RAMP "B" TERMINAL

CIRCULAR CURVE SYSTEM						
NO.	Δ	D	T	L	E	R
AT-1	11° 54' 47.4"	17° 37' 46.1"	33.91	67.58	1.76	325.00
AT-2	43° 14' 09.6"	67° 24' 24.5"	33.69	64.14	6.43	85.00
AT-3	25° 49' 03.6"	95° 29' 34.7"	13.75	27.04	1.56	60.00
CT-1	10° 03' 47.8"	17° 37' 46.1"	28.62	57.08	1.26	325.00
CT-2	47° 53' 04.7"	67° 24' 24.5"	37.74	71.04	8.00	85.00
CT-3	13° 04' 30.6"	21° 13' 14.4"	30.94	61.62	1.77	270.00
CT-4	22° 28' 23.6"	76° 23' 39.7"	14.90	29.42	1.47	75.00
CT-5	9° 22' 00.4"	19° 05' 54.9"	24.58	49.04	1.01	300.00

GEOMETRIC AND STAKING PLAN  
 PROPOSED INTERCHANGE  
 OF  
 F-520  
 WITH  
 I.A. #58  
 RAMP "A" & "C" TERMINAL

Black Hawk COUNTY

PROJECT NUMBER  
 IX-520-6(38)--3P-01

STATE IOWA  
 FISCAL YEAR 20  
 SHEET NO. 52

Black Hawk COUNTY

PROJECT NUMBER  
 IX-520-6(38)--3P-07

STATE IOWA  
 FISCAL YEAR 19  
 SHEET NO. 52

AS-BUILT PLANS, FOR INFORMATION ONLY

**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

TRAFFIC CONTROL PLAN		108-23A 08-01-08

STAGING NOTES		108-26A 08-01-08

COORDINATED OPERATIONS		111-01 04-17-12
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	

PEDESTRIAN PATH CLOSURES				113-2 04-16-13
Refer to TC-001.				
*Assumes 6 foot wide barricade. Closures may need to be removed and re-established.				
Location	Side	Type III Barricades* NO.	Remarks	

### SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

### UTILITY LEGEND

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

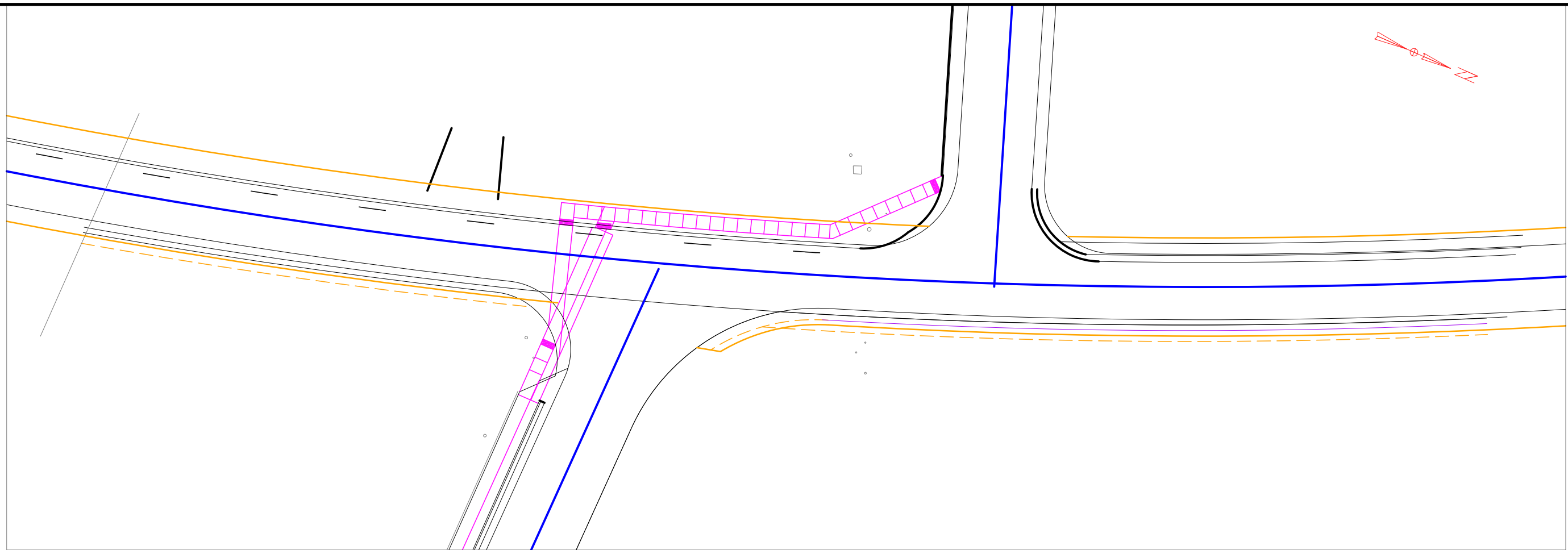
LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading
Magenta	(5)		Detectable Warning
Yellow	(4)		Highlight for Critical Notes or Features
Red	(3)		Delineates Restricted Areas
Lavender	(9)		Temporary Pavement Shading
Gray, Light	(48)		Proposed Pavement Shading
Gray, Med	(80)		Proposed Granular Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading
Brown, Light	(236)		Grading Shading

- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

- #### RIGHT-OF-WAY LEGEND
- Proposed Right-of-Way
  - Existing and Proposed Right-of-Way
  - Easement and Existing Right-of-Way
  - Borrow
  - Easement (Temporary)
  - Easement
  - Excess
  - Access Control

## SIDEWALK LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES S)



113-10A  
04-21-20

**SIDEWALK COMPLIANCE**

See S Sheets

- \* Does not include curb
- ① Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
- ② Refer to tabulation 113-01 for bid quantities.

Point to Point	Sidewalk Designation	" PCC Sidewalk ②	Distance* FT	Δ Elevation FT	Slope %	Acceptable Constructed Range Pos. or Neg.	Staking Required on this Quadrant? ①	Measured Slope %	Initials	Remarks	FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
											Point	Northing	Easting	Elevation
301-302	Ramp Running Slope	6	12.25	-1.11	-9.1%	0.5% to 10.1%					301	154442+46.90	8809204.61	931.62
302-303	Landing/Turning Space	4	5.00	-0.18	-3.6%	0.1% to 4.6%					302	154442+59.15	8809204.61	930.51
303-304	Sidewalk Running Slope	4	10.00	-0.72	-7.2%	0.5% to 8.2%					303	154442+64.15	8809204.61	930.33
301-305	Crosswalk Cross Slope - No Yield Condition	6	12.94	-1.38	-10.7%	0.0% to 11.7%					304	154442+74.15	8809204.61	929.61
305-306	Ramp Running Slope	6	2.08	-0.06	-2.9%	0.5% to 8.3%					305	154442+57.06	8809212.61	930.24
306-307	Landing/Turning Space	4	5.00	-0.46	-9.2%	0.1% to 10.2%					306	154442+59.15	8809212.61	930.18
307-308	Sidewalk Running Slope	4	10.00	-0.30	-3.0%	0.5% to 5.0%					307	154442+64.15	8809212.61	929.72
302-306	Ramp Cross Slope	6	8.00	-0.33	-4.1%	0.1% to 5.1%					308	154442+74.15	8809212.61	929.42
303-307	Landing/Turning Space	4	8.00	-0.61	-7.6%	0.1% to 8.6%								
304-308	Match Existing Cross Slope	4	8.00	-0.19	-2.4%	Match Existing								
401											401			
											402			

