IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:	District 6	**DATE:**	July 5, 2012
ATTENTION:	Jim Schnoebelen	**REF. :**	Scott County IMX-280-8(144)2--02-82
FROM:	Kevin K. Patel		PIN: 08-82-280-010
OFFICE:	Design		
SUBJECT:	Field Exam		

A field exam was held on Thursday, May 31, 2012, to review the proposed plan for reconstructing the westbound lanes of Interstate 280 from 0.8 miles south of U.S. 6 south to the Mississippi River, a distance of approximately 7 miles.

Those present for the field exam included the following: Jason Holst, Kimberly Sumrak, Jean Borton and Kevin Patel from the Office of Design; Ken Yanna, Mark Brandl, Fred Thiede, Steven Flockhart, Doug Rick, Roger Boulet and Heather Gugler from District 6, Patricia Schwarz from the Office of Bridges and Structures and Tom Parham and Mary Burroughs from the FHWA.

Interstate 280 is a service level "A" roadway. The 2013 ADT is estimated to be 24,100 vpd with 25% trucks. The 2033 ADT is estimated to 37,700 vpd with 24% trucks.

The proposed project will involve removing and replacing the existing westbound pavement. The new pavement will consist of 26 ft. wide pavement with 6 ft. and 8 ft. paved shoulders (i.e. 10 ft. effective outside shoulder). The width of the outside shoulder was discussed. The AASHTO Policy on Geometric Design states if the Design Directional Hourly Truck Volumes exceeds 250 vph, 12 ft. wide shoulders should be considered. The DDHV for truck traffic on I-280 is approximately 450 vehicles. However, as the final concept stated 10 ft. shoulders and the previous two projects constructed on I-280 were built with 10 ft. shoulders, it was recommended to continue to proceed with 10 ft. wide shoulders in order to maintain consistency. The Iowa DOT also received concurrence from the FHWA for the 10 ft. shoulder width.

The profile grade of the new pavement will be lowered approximately 5", similar to that of the original pavement. Some adjustments will be required to the profile grade based upon the as-builts and also at the interchanges, mainline bridges and crossover locations to facilitate staging. The existing crest vertical curves will be lengthened to meet the desired "K" value.

The entrance and exit ramps on the westbound side of I-280 at the Locust Street, U.S. 61 and IA 22 interchanges will be resurfaced with 2" of HMA over the ramp and 4 ft. and 6 ft. shoulders. Prior to this resurfacing, the outside shoulder will be cored out 4 ft. wide (in order to provide a 10 ft. wide shoulder) and strengthened with 4" of special backfill and 8" of HMA base material. This shoulder strengthening will begin adjacent to each ramp terminal and will continue for 600 ft. The Iowa DOT received concurrence from the FHWA for the increased shoulder width. These ramps shall remain open at all times during construction (with the exception of the IA 22 exit ramp which will be closed to traffic for a maximum of 10 working days). In order to construct the gore areas it will be

necessary to stage construct by utilizing temporary ramp connections.

Traffic will be maintained via the use of median crossovers. Three sets of crossovers will be used that were installed as part of a previous project.

Patching will be required in the area between the south crossover and the Mississippi River Bridge. Additional patching will also be required in other areas within the project limits prior to being reconstructed.

The bridge approach sections for the Locust St. bridge overhead bridge need to be replaced and the adjacent faulted pavement addressed. However, as these were not addressed in the concept, it was suggested this work be deferred to a future project.

The District Office provided a listing of the culverts that need to be addressed. Many of these pipes involve needing new aprons.

The class 10 needs have not been evaluated; however, if borrow material is required it was recommended to be furnished by the contractor.

A lighting and signing project will be required.

The RCE Office will provide the existing guardrail inventory and recommended that the guardrail become property of the contactor. A bid item for construction survey and a field office was requested.

No plans are included in this submittal; however, plan sheets may be viewed as pdf files on the LAN at W:\projects\8228001008\Design\(144)_PCC_Grade_and _Replace\DesignEvents\D2Submittal\D2_82280144_Plan.pdf

This project is currently scheduled for a November 2014 letting. The estimated cost of construction is $14,800,000. The concept cost estimate was $15,985,200.

KKP:mk

cc:

M. J. Dillavou	M. J. Sankey	S. J. Gent
M. J. Kennerly	D. A. Widick	W. Sorenson
D. L. Maifield	T. L. Gettings	E.C. Wright
J. R. Schoenrock	J. P. Rost	K. D. Nicholson
R. L. Stanley	S. C. Marler	E. J. Ranney
T. Crouch	L.C. Funnell	S. Flockhart
D. R. Tebben	M. D. Masteller	M. A. Swenson
C. B. Brakke	J. W. Smith	J. Vortherms
N. L. McDonald	D. A. Popp	B. Bradley
G. A. Novey	K. Yanna	J. McCollough
D. R. Claman	M. Brandl	J. Borton
D. Rick	F. Thiede	H. Gugler
K. Sumrak	J. Holst	R. Boulet
T. Parham (FHWA)	M. Burroughs (FHWA)	

SCOTT Co. PCC PAVEMENT - GRADE AND REPLACE IMX-280-8(144)2--02-82

LETTING DATE 09/02/2012 — 11/18/2014

INDEX OF SHEETS

105-3
10-18-05

No.	Description
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2 - 3	Location Maps
A.4 - 8	Project Concept
A.9	Field Exam Checklist
B Sheets	**Typical Cross Sections and Details**
B.1 - 7	Typical Cross Sections and Details
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Legend Sheet
* D.2 - 15	Southbound I-280 Plan And Profile Sheets
G Sheets	**Survey Sheets**
G.1	Survey Information and Vertical Control
G.2 - 3	Reference Ties and Bench Marks
J Sheets	**Traffic Control and Staging Sheets**
J.1	Staging Notes Stage
* J.2 - 6	Modified TC-61 Standard Road Plan
J.7 - 12	Ramp Crossover Staging
K Sheets	**Interchange Sheets**
* K.1 - 3	Ramp Detail Sheets
* K.4 - 8	Existing Ramp Construction Detail Sheets
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1 - 8	500 Series, Modified Standards and Detail Sheets
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 6	Bridge Estimate Of Quantities And Details
	* Color Plan Sheets

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM

SCOTT COUNTY

PCC PAVEMENT - GRADE AND REPLACE

I-280 In Davenport From 0.8 Mile South of US 6 South To Mississippi River (WBL)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

REVISIONS

TOTAL
000
PROJECT IDENTIFICATION NUMBER
08-82-280-010
PROJECT NUMBER
IMX-280-8(144)2--02-82
R.O.W. PROJECT NUMBER
N/A

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
1	Rural: Westbound I-280		
	Sta. 108+87.00 To Sta. 147+36.00 (As built plans)	3849.00	
	Equation: Sta. 147+35.30 (As builts Bk.) = Sta. 147+36.00 (Survey Ah.)	-0.70	
	Sta. 147+36.00 to Sta. 514+00.00 (Survey)	36,664.00	
	Omit Bridge At Sta. 120+10.58 (As built plans)	-201.33	
	Omit Bridge At Sta. 154+80.52 (Survey)	-238.41	
	Omit Bridge At Sta. 247+39.96 (Survey)	-162.76	
	Omit Bridge At Sta. 418+24.00 (Survey)	-140.00	
		39769.80	7.53

Jason Holst
Kim Sumrak
Kevin Patel
Jean Borton
Roger Boulet
Ken Yanna
Doug Rick
Heather Gugler
Steve Flockhart
Mark Brandl
Fred Thiede
Tom Parham
Mary Burroughs
Patricia Schwarz

Design
District
FHWA
Prelim Bridge

DLM 6-21-12

For Project Location Map
Refer to Sheets A.2 and A.3

POSSIBLE BORROW NEEDS

Foreslopes

Ramp Median Crossovers

Grading For Guardrail

Ramp Widening For Truck Parking

101-5
04-30-02

DESIGN DATA URBAN

2013 AADT	24,100	V.P.D.
2033 AADT	37,700	V.P.D.
20 DHV		V.P.H.
TRUCKS	24	%
Total Design ESALs		

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	James R. Schoenrock	Primary Signature Block

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - May 31, 2012

ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Cameron | SCOTT COUNTY | PROJECT NUMBER IMX-280-8(144)2--02-82 | SHEET NUMBER A.1

8:26:33 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144A1.sht

I-280 WB over U.S. 61 MP 6.67
Sta. 247+39.56
Maint. No. 8206.6R/L280
FWHA 600730 & 600740
Exist. 159'8" x 39' Pretension
Prestressed Concrete Beam
Design No. 1766

- Construct Ramp Crossovers
- Replace existing Bridge Approaches
- Construct new Paving Notches
- Update Guardrail on Bridge
- I-280 WB Ramps, Ramp B & Ramp D, milled to match new roadway elevation, tapered and resurfaced with 2" HMA

Propsed Design 214

I-280 WB over IA. 22 MP 8.43
Sta. 154+80.76
Maint. No. 8208.4R/L280
FWHA 600710 & 600720
Exist. 233' x 39' Continuous I-Beam
Design No. 1666

- Construct Ramp Crossovers
- Replace existing Bridge Approaches
- Update Guardrail on Bridge
- I-280 WB Entrance Ramp B milled to match new roadway elevation, tapered and resurfaced with 2" HMA

SCALE IN MILES
0 0.1 0.2 0.3 0.4 0.5 0.75 1.0
SCALE IN KILOMETERS
0 0.1 0.2 0.3 0.4 0.5 1.0 1.5 2.0

I-280 Median Crossover
Sta. 300+00.00

Refer to sheet A.3

Bold to be completed as part of this project

Patching Required

BEGIN GRADE AND REPLACE
I-280 Median Crossover
Sta. 149+00.00 MP 8.54

I-280 over IMRL Railroad MP 8.92
Sta. 120+10.58
Maint. No. 8209.1S280
FWHA 600700
Exist. 201'4" x 81' Steel Girder Beam
Design No. 166

- Construct new Paving Notches
- Update Guardrail on Bridge
- Construct New Bridge End Sections

Proposed Design 114

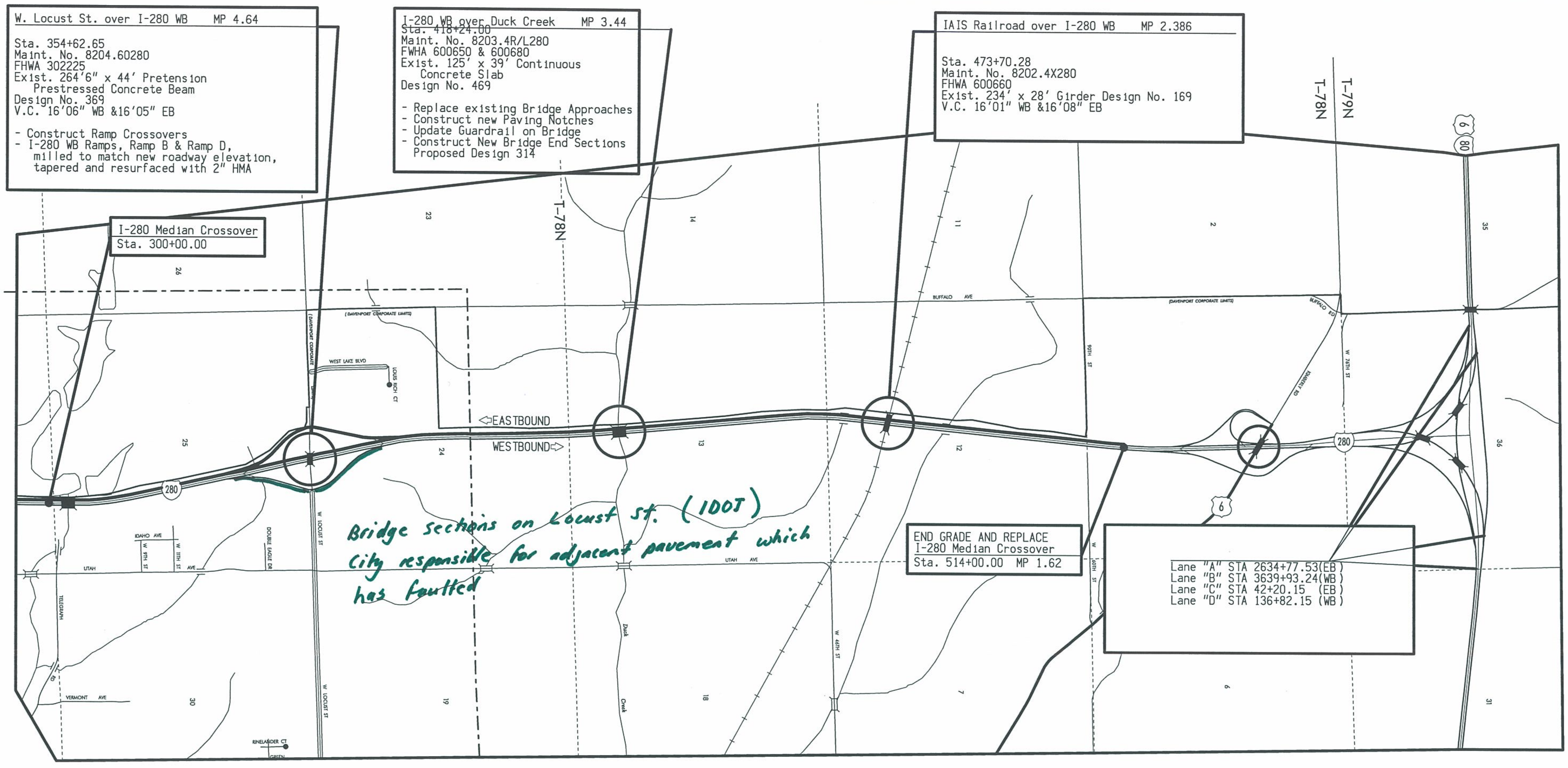
BEGIN PROJECT
Bridge Approach
Sta. 118+84.25 MP 8.94

Refer to Sheet A.3

HIGHWAY AND STREET MAP
OF
DAVENPORT
IOWA

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER A.2

2:02:20 PM 5/30/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144A1.sht


W. Locust St. over I-280 WB MP 4.64
Sta. 354+62.65
Maint. No. 8204.60280
FHWA 302225
Exist. 264'6" x 44' Pretension Prestressed Concrete Beam
Design No. 369
V.C. 16'06" WB &16'05" EB
- Construct Ramp Crossovers
- I-280 WB Ramps, Ramp B & Ramp D, milled to match new roadway elevation, tapered and resurfaced with 2" HMA
I-280 WB over Duck Creek MP 3.44
Sta. 418+24.00
Maint. No. 8203.4R/L280
FWHA 600650 & 600680
Exist. 125' x 39' Continuous Concrete Slab
Design No. 469
- Replace existing Bridge Approaches
- Construct new Paving Notches
- Update Guardrail on Bridge
- Construct New Bridge End Sections Proposed Design 314
IAIS Railroad over I-280 WB MP 2.386
Sta. 473+70.28
Maint. No. 8202.4X280
FHWA 600660
Exist. 234' x 28' Girder Design No. 169
V.C. 16'01" WB &16'08" EB
T-78N
T-79N
I-280 Median Crossover
Sta. 300+00.00
EASTBOUND
WESTBOUND
280
6
80
BUFFALO AVE
DAVENPORT CORPORATE LIMITS
WEST LAKE BLVD
UTAH AVE
IDAHO AVE
VERMONT AVE
TELEGRAPH
W LOCUST ST
Duck Creek
END GRADE AND REPLACE
I-280 Median Crossover
Sta. 514+00.00 MP 1.62
Lane "A" STA 2634+77.53(EB)
Lane "B" STA 3639+93.24(WB)
Lane "C" STA 42+20.15 (EB)
Lane "D" STA 136+82.15 (WB)
Bridge sections on Locust St. (IDOT)
City responsible for adjacent pavement which has faulted
SCALE IN MILES
SCALE IN KILOMETERS

HIGHWAY AND STREET MAP OF

DAVENPORT IOWA

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER	IMX-280-8(144)2--02-82	SHEET NUMBER	A.3

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IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: District 6

ATTENTION: Jim Schnoebelen

FROM: Kevin K. Patel

OFFICE: Design

SUBJECT: 2011/12-4R Project Concept - **FINAL**

DATE: February 18, 2009

REFERENCE: Scott County
IM-280-8(143)0--13-82
IM-280-8(144)0--13-82
IM-280-8(146)0--13-82
PIN: 08-82-280-010

DATE OF REVIEW: July 15, 2008; **PARTICIPANTS**: District 6 - Doug Rick, Newman Abuissa , Roger Boulet; Materials - Scott Schram, Design - Kevin Patel, Chris Brakke, Francis Todey , Ben Behnami and Jean Borton

PROJECT DATA
ROUTE: I-280, from I-80 in Davenport south to the IA 22 interchange just west of the Mississippi River
LENGTH: 9.3 miles
PLANNING CLASSIFICATION: Interstate
MAINTENANCE SERVICE LEVEL: A
TRAFFIC: 2013 --- 24,100 ADT with 25% trucks
2033 --- 37,700 ADT with 24% trucks
PRESENT PAVEMENT SURFACE: PCC
PRESENT PAVEMENT WIDTH: 24 ft.
PRESENT SHOULDER WIDTH: 6 ft. inside and 10 ft. outside paved shoulders.
PRESENT MEDIAN WIDTH: 60 ft.

MP to MP	Dir.	Type	Avg. Str. No.	80% Str. No.	Jt. Str. No.	PCI	IRI	K Value
0.00 - 6.30	EB	PCC	9.01	7.71	---	30	2.03	57
6.30 - 8.53	EB	PCC	7.92	7.03	---	30	2.41	56
8.53 - 9.70	EB	PCC	8.93	8.27	5.15	74	2.20	61
0.00 - 6.30	WB	PCC	10.12	8.45	---	30	1.86	58
6.30 - 8.32	WB	PCC	9.07	7.44	---	30	2.16	52
8.32 - 9.70	WB	PCC	8.70	7.47	4.56	75	2.12	60

PAVEMENT HISTORY:

ORIGINAL PAVEMENT: 24 ft. wide, 8 in. PCC
COARSE AGGREGATE SOURCE: Linwood CLASS: 3
YEAR CONSTRUCTED: 1973
RESURFACED: 1989, 5 in., 24 ft. wide PCC Bonded Overlay

EXISTING CONDITIONS AND CAUSES OF DISTRESS:

I-280 lies north/south in Iowa; however, it is referred to as an east/west route. For example traffic traveling north will be referred to as westbound and traffic traveling south will be referred to as eastbound.

The original pavement is an 8" continuously reinforced concrete pavement over a 4" asphalt treated base, built in 1973. The coarse aggregate is a class 3 dolomite. A 5" bonded PCC overlay was placed EB in 1989 and WB in 1990. The bonded overlay used a class 3 limestone for the coarse aggregate. Tied PCC shoulders were placed with the overlay.

The pavement has been receiving large amounts of patching at the beginning of the project where fast track concrete was used and the overlay was built one lane at a time. There is also considerable patching of pavement failures in areas throughout the eastbound lanes (extensive patching at the beginning of the project in the eastbound lanes) and to a lesser extent in the westbound lanes. The ride is deteriorating due to the number of patches being placed. The only rehabilitation option for this pavement is complete replacement.

SAFETY CONSIDERATION:

BRIDGES:
There are three overhead bridges, three sets of dual mainline bridges, three I-80/I-280 ramp bridges and one single mainline bridge on this project.

Overhead Bridge No. 1 - US 6-Kimberly Road
Sta. 550+14.44, Maintenance No.8200.8S006, FHWA No.46805, 331' x 44' Continuous Welded Girder Bridge, Design No. 569. Vertical clearances for I-280 are 16'01" for the westbound lanes and 16'05" for the eastbound lanes.

Replace the existing guardrail around the median piers with the new wire rope safety barrier installation (RE-56). Replace the existing outside guardrail for the piers on the eastbound lanes with new guardrail. It appears the piers for the westbound lanes are outside the clearzone; therefore, no pier protection should be required.

Overhead Bridge No. 2 - IAIS Railroad
Sta. 473+70.28, Maintenance No. 8202.4X280, FHWA No. 600660, 234' x 28' Girder Bridge, Design No. 169. Vertical clearances for I-280 are 16'01" for the westbound lanes and 16'08" eastbound lanes.

Replace the existing guardrail around the median piers with the new wire rope safety barrier installation (RE-56). The wire rope safety barrier will need to extend to the overhead sign truss as well. Replace the existing outside pier protection for the westbound and eastbound lanes with the concrete barrier and guardrail (RE-74).

Overhead Bridge No. 3 - Local Road - Locust St. / 160th St.
Sta. 354+62.65, Maintenance No.8204.6O280, FHWA No.302225, 264'6"' x 44' Pretensioned Prestressed Concrete Beam Bridge, Design No. 369. Vertical clearances for I-280 are 16'06" for the westbound lanes and 16'05" for the eastbound lanes.

Replace the existing guardrail around the median piers with the new wire rope safety barrier installation (RE-56). It appears the outside piers on the westbound and eastbound lanes are outside the clearzone; therefore, should not require pier protection.

Mainline WB Bridge No. 1- Over Duck Creek
Sta. 418+24.00, Maintenance No. 8203.4R280, FHWA No. 600650, 125' x 39' Continuous Concrete Slab Bridge, Design No. 469.

Replace the paving notches on the bridge. Construct new end sections and replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head. The cost for the new end sections is estimated at $19,000. The cost to replace the paving notches is estimated to be $13,000.

Mainline EB Bridge No. 2- Over Duck Creek
Sta. 418+24.00, Maintenance No. 8203.4L280, FHWA No. 600680, 125' x 39' Continuous Concrete Slab Bridge, Design No. 469.

Replace the paving notches on the bridge. Construct new end sections and replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head. The cost for the new end sections is estimated at $19,000. The cost to replace the paving notches is estimated to be $13,000.

Mainline WB Bridge No. 3- Over US 61
Sta. 247+39.96, Maintenance No. 8206.6R280, FHWA No. 600730, 159'08" x 39' Pretensioned Prestressed Concrete Beam Bridge, Design No. 1766.

Replace the paving notches on the bridge. Replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head. The cost to replace the paving notches is estimated to be $13,000.

Mainline EB Bridge No.4- Over US 61
Sta. 247+39.96, Maintenance No. 8206.6L280, FHWA No. 600740, 159'08" x 39' Pretensioned Prestressed Concrete Beam Bridge, Design No. 1766.

Replace the paving notches on the bridge. Replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head. The cost to replace the paving notches is estimated to be $13,000.

Mainline WB Bridge No. 5- Over IA 22
Sta. 154+80.76, Maintenance No. 8208.4R280, FHWA No. 600710, 233' x 39' Continuous I-Beam Bridge, Design No.1666.

Replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head.

Mainline EB Bridge No. 6- Over IA 22
Sta. 154+80.76, Maintenance No. 8208.4L280, FHWA No. 600720, 233' x 39' Continuous I-Beam Bridge, Design No.1666.

Replace the existing W-beam guardrail with new thrie beam guardrail. Temporary crash cushions on the trailing ends of this bridge will also be installed to accommodate traffic while it is operating head-to-head.

Mainline WB Bridge No. 7- Over IMRL Railroad
Sta. 120+10.58, Maintenance No. 8209.1S280, FHWA No. 600700, 201'4" x 81' Pretensioned Prestressed Concrete Beam Bridge, Design No. 166.

Replace the paving notches on the bridge. Construct new end sections and replace the existing W-beam guardrail with new thrie beam guardrail. The cost for the for the new end sections is estimated at $19,000. The cost to replace the paving notches is estimated to be $21,400.

Ramp bridge No. 1- WB I-280 to WB I-80
Sta. 3628+77.00, Maintenance No. 8289.9A080, FHWA No. 47740, 262' x 30' Steel Girder Beam Bridge, Design No. 359.

Replace the existing guardrail. The existing bridge approaches will be partially removed and replaced to accommodate the replacement of the paving notch. Cost for the new paving notches is approximately $21,400.

Ramp bridge No. 2- WB I-80 to EB I-280 Over Ramp
Sta. 18+59.69, Maintenance No. 8200.09A280, FHWA No. 47750, 196' x 30' Steel Girder Beam Bridge, Design No. 159.

Replace the existing guardrail. The existing bridge approaches will be partially removed and replaced to accommodate the replacement of the paving notch. Cost for the new paving notches is approximately $21,400.

Ramp bridge No. 3- WB I-80 to EB I-280 Over I-80
Sta. 27+63.20, Maintenance No. 8290.1A080, FHWA No. 47760, 236' x 30' Steel Girder Beam Bridge, Design No. 259.

Replace the existing guardrail. The existing bridge approaches will be partially removed and replaced to accommodate the replacement of the paving notch. Cost for the new paving notches is approximately $21,400.

CRASHES:
During the five-year study period from January 1, 2002 through December 31, 2007, there were 385 crashes including, 1 fatal crash, 20 personal injury crashes, 334 property damage crashes (28% of these crashes involved an animal) and 30 possible unknown crashes (6% of these crashes involve an animal). The crash rate is 93/HMVM which is higher than the statewide rural average of 63/HMVM.

RECOMMENDATIONS:

This concept includes reconstruction of 3 projects: a north project (Sta. 515+00 to Sta. 2602+00(EB) and 3601+50 (WB)), a westbound south project (Sta. 149+00 to Sta. 515+00) and a eastbound south project (Sta. 149+00 to Sta. 515+00). A resurfacing project is also proposed to address the I-80/I-280 interchange ramps.

The reconstruction projects will replace the existing roadway with 12 inches of PCC pavement, 26 ft. wide, on top of 1 ft. of special backfill and 6 inches of granular subbase with 8 ft. outside and 6 ft. inside paved shoulders. The vertical alignment will remain similar to that of the existing roadway; however, it is desirable to lower the grade approximately 5" under the U.S. 6 and IAIS Railroad overhead bridges to achieve a vertical clearance of at least 16'6".

Due to the proximity of I-80, the wide median and the U.S. 6 interchange the north project (146) will be stage constructed from the north crossover to the I-80 ramps. The staged construction will involve reducing each direction of travel down to one lane while the adjacent lane is being constructed with the use of temporary barrier rail. The inside shoulders in this area will need to be strengthened due to the placement of concrete barrier rail resulting in the traffic to utilize a portion of the shoulder. The shoulder strengthening on the inside shoulders will need to be completed before the reconstruction phase can begin.

Traffic will operate head-to-head for the two south projects (143 & 144), utilizing the existing median crossovers located at Sta. 149+00, 300+00 and Sta. 514+00. Interchange crossovers will also be constructed at the Locust Street, U.S. 61 and the north IA 22 interchange ramps for the interchanges to remain open during construction.

Replace the existing bridge approaches for all mainline bridges within the reconstruction area. Construct new paving notches on Duck Creek, U.S. 61, and the RR bridges. Update the guardrail on all of the mainline bridges and construct new bridge end sections on the Duck Creek Bridges and the IMRL Railroad Bridge. Replace the pier protection in the center medians with new high tension cable guardrail. The outside piers that are within the clearzone will be replaced with new pier protection.

The installation of new longitudinal subdrains is recommended for the length of the project.

The outside shoulder of the Kimberly Road (U.S.) interchange ramps will be strengthened with 6 ft. wide, 6 inches thick HMA. These ramps along with the inside and outside shoulders will then be resurfaced with 2 inches of HMA. The ramps at the Locust St., U.S. 61 and the westbound exit ramp and east bound entrance ramp of the IA 22 interchanges will be need to be milled to match the new roadway elevation and tapered with a 50':1" taper and then the entire ramp resurfaced with 2 inches of HMA.

ESTIMATED COST; North Project
IM-280-8(146)0--13-82

New PCC Pavement	$ 1,000,000
Granular Subbase	236,500
Special Backfill	386,900
Removal of Pavement	248,100
Class 13 Excavation	330,500
Paved Shoulders	756,100
Special Backfill for Shoulders	84,600
HMA Resurfacing Pavement for U.S. 6 Ramps	163,800
Pavement Scarification on U.S. 6 Ramps	74,000
Shoulder Strengthening on U.S. 6 Ramps includes Excavation	214,900
Remove and Replace Subdrains	103,300
New Guardrail for Bridges and Pier Protection	10,500
Shoulder Strengthening on Mainline includes Excavation	306,100
Milled Rumble Strips	1,300
Temporary Barrier Rail	55,400
Temporary Crash Cushions	29,500
Traffic Control	200,100
Mobilization	200,100
M&C	1,320,500
Total North Project	**$ 5,722,200**

Need page 7

Resurface I-80/I-280 Ramps

It was also proposed to resurface the I-80/I-280 interchange ramps as part of either the north project (146) or a future project. The scheduling of this project will be determined at a later date, depending on available funding. The existing 24 ft. wide ramps and 6 ft. inside and 10 ft. outside paved shoulders will be milled 2 inches and resurfaced with 4 inches of HMA. The existing bridge approaches will be partially removed and replaced to accommodate the replacement of the paving notches at all three bridges. In order to accomplish this work to the paving notches, temporary barrier rail will be required. Update the guardrail for the bridges on these ramps.

Mill the new rumble strips in the outside shoulders of the ramps.

The HMA resurfacing will be accomplished by reducing traffic down to one lane while resurfacing the adjacent lanes.

This would be an additional cost of $2,449,300.

ESTIMATED COST; I-80/I-280 Interchange Ramps

New HMA Pavement	$ 1,299,000
Pavement Scarification	90,200
Paving Notch Repair	128,400
New Guardrail for Bridges	28,800
Milled Rumble Strips	2,200
Temporary Barrier Rail	38,100
Traffic Control	85,600
Mobilization	85,600
M&C	565,200
Total Interchange Ramp Project	**$ 2,449,300**

SPECIAL CONSIDERATIONS:

The above cost have been developed allowing all interchanges to remain open during construction; however, if any of these interchanges could be closed a cost savings would result in approximately $425,300 per interchange.

Right of way is not required.

The Office of Traffic and Safety recommends that no special construction scheduling be used due to high traffic volumes, such as night time work or utilizing a 4 day work week.

This is a Federal Transportation Management Area; therefore, the district will need to have a transportation management plan in place.

Scott County
IM-280-8(143,144&146)0--13-82
PIN: 08-82-280-010
Page 8

Resurface I-80/I-280 Ramps

It was also proposed to resurface the I-80/I-280 interchange ramps as part of either the north project (146) or a future project. The scheduling of this project will be determined at a later date, depending on available funding. The existing 24 ft. wide ramps and 6 ft. inside and 10 ft. outside paved shoulders will be milled 2 inches and resurfaced with 4 inches of HMA. The existing bridge approaches will be partially removed and replaced to accommodate the replacement of the paving notches at all three bridges. In order to accomplish this work to the paving notches, temporary barrier rail will be required. Update the guardrail for the bridges on these ramps.

Mill the new rumble strips in the outside shoulders of the ramps.

The HMA resurfacing will be accomplished by reducing traffic down to one lane while resurfacing the adjacent lanes.

This would be an additional cost of $2,449,300.

ESTIMATED COST; I-80/I-280 Interchange Ramps

New HMA Pavement	$ 1,299,000
Pavement Scarification	90,200
Paving Notch Repair	128,400
New Guardrail for Bridges	28,800
Milled Rumble Strips	2,200
Temporary Barrier Rail	38,100
Traffic Control	85,600
Mobilization	85,600
M&C	565,200
Total Interchange Ramp Project	**$ 2,449,300**

SPECIAL CONSIDERATIONS:

The above cost have been developed allowing all interchanges to remain open during construction; however, if any of these interchanges could be closed a cost savings would result in approximately $425,300 per interchange.

Right of way is not required.

The Office of Traffic and Safety recommends that no special construction scheduling be used due to high traffic volumes, such as night time work or utilizing a 4 day work week.

This is a Federal Transportation Management Area; therefore, the district will need to have a transportation management plan in place.

Project Concept

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER A.7

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FUNDS PROGRAMMED:
This proposed 4R project is in the 2009-2013 program listed at $10,600,000 in 2011 for the eastbound lanes and $10,068,000 in 2012 for the westbound lanes. A schedule of events for plan development will be determined following approval of the Project Concept.

KKP: jmb
cc:

K. M. Mahoney
K. D. Nicholson
F. W. Todey
N. L. McDonald
M. J. Donovan
N. M. Miller
M. J. Sankey
S. J. Gent
C. C. Poole
E. J. Ranney
T. D. Hanson
G. G. Gresslin
A. F. Gourley
M. Grogg, FHWA
T. A. Jerman
M. J. Dillavou
D. E. Ohman
R. L. Stanley
G. A. Novey
R. R. Walton
E. C. Wright
M. A. Swenson
D. E. Sprengeler
S. C. Marler
D. R. Tebben
K. A. Yanna
C. L. Cutler
N. M. Abuissa
S. Banks
J. F. Boyd
M. J. Kennerly
C. B. Brakke
A. A. Welch
J. C. Reutter
J. S. McClain
T. D. Crouch
R. A. Younie
T. M. Welch
S. G. Larson
J. R. Berger
B. A. Kuehl
D. L. Rick
T. M. Storey
T. L. Nicholson

Project Concept

Field Exam Checklist

- ☐ Are any of the following needed:
  - ☐ Contractor or designated Borrow area adjacent to the site? Contractor
  - ☐ Field Laboratory? Field Office
  - ☐ Construction Survey? Yes
  - ☐ Removal and Reinstall Signs? Does the district maintenance crew want to handle this? Or do they prefer the Contractor handle it?
    Remove and reinstall signs as per plan
- ☐ Clearing and Grubbing by area or by unit? If by unit, District to provide count. NA
- ☐ Duration of the project? 1 season
- ☐ Do the shoulders within the construction limits or beyond need to be reconstructed or resurfaced? NA
- ☐ Are there existing drainage problems? Pipe
- ☐ Are there areas adjacent to the project where additional ditching needs done? Yes, if 12 ft shoulders are required
- ☐ Is special erosion control needed (riprap, silt ditches, silt dikes, etc.)?
- ☐ Tile lines? Location? No
- ☐ Note existing subdrain outlets for Soils Design. New subdrains will be placed
- ☐ Note any special features not shown on plan. NA
- ☐ Note condition of existing culverts. Provided by RCE office
- ☐ Note existing guardrail lengths and number of posts. Requested
- ☐ Do any of the utilities need relocated (power/telephone poles) either permanently or temporarily for construction? Lights in the gore

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- ☐ Speed limit 65 mph
- ☐ Speed Limit during construction? 55 mph
- ☐ Is sight distance a problem? No
- ☐ Disposition of existing structure, guardrail, signs, etc...(213-1 or the District Office)? Guardrail property of contractor
- ☐ Any patching need done in the area or do the construction limits need extended? Is the District going to provide locations of patches by milepost?
  Patching will be required
- ☐ Are there any historical items within the project? ?
- ☐ Are there any endangered species within the area? ?
- ☐ Are there any Wetland Impacts or any other Environmental issues? ? No
- ☐ Are rumble strips going to be placed with these projects or a separate project? Yes
- ☐ Are there any special events which need to be noted in the plan? Or is there a contact person who could provide this information closer to letting the project? Yes
- ☐ Length of curb adjacent to reinforced bridge approach on uphill end of bridge. ?
- ☐ Crossover Locations: Refer to 'D' Sheets for locations.

- Anchor lug removal bid by lane
- light pole conflict @ gore areas
- Sign plan
- Paving notch information on E.B lane for Duck Creek was not correct

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- Lighting plan

EXISTING VPI STA.	PROPOSED VPI STA.	LEN CURVE	VPI ELEV.	'K' Value		MIN. 70 MPH PROP VC LEN	K'
136+21.00		700	579.29	188	Sag		
188+67.66		500	729.24	257	Crest		
	188+55.00	815	729.01	407	Crest	70	405
207+96.89		400	746.79	1214	Crest		
	209+00.00	400	747	994	Crest	80	405
229+45.90		600	759.26	6965	Sag		
	230+25.00	600	757.14	1573	Sag	80	245
247+46.60		600	771.26	293	Crest	Bridges 60 MPH	
	247+46.60	780	771.92	340	Crest	Bridges 60 MPH	405
	260+50.00	310	753.64	412	Crest	70	405
263+95.90		400	748.52	516	Sag		
	264+00.00	380	746.38	230		75	245
282+92.98		700	737.08	293	Crest		
	282+50.00	1080	738.6	410	Crest	70	405
292+42.98		800	708.62	269	Sag		
	293+20.00	900	705.9	252	Sag	80	245
	299+90.00	420	709.4	411	Crest	70	405
	311+00.00	1300	703.85	365	Sag	80	245
312+17.98		800	708.14	264	Sag		
327+02.02		1000	752.87	256	Crest		
	327+10.00	1660	753.11	416	Crest	70	405
343+52.02		600	738.02	353	Sag		
	343+60.00	700	737.83	411	Sag	80	245
363+02.02		600	753.62	428	Crest		
	363+10.00	600	753	429	Crest	70	405
394+50.00		700	734.72	295	Crest		
	395+00.00	980	734.08	410	Crest	70	405
416+66.80		1850	668.88	390	Sag		
	416+90.00	1800	668.89	380	Sag	80	181
458+96.60		700	743.81	266	Crest		
	459+00.00	1070	743.2	408	Crest	70	
	477+40.00	600	727.48	403	Sag	80	181
477+46.60		600	727.9	405	Sag		
510+77.13			748.6	315	Crest		
	510+77.13		748.6	315			

Review grades
Actual grades for E.B lanes do not match As builts.

Vertical Curve Data

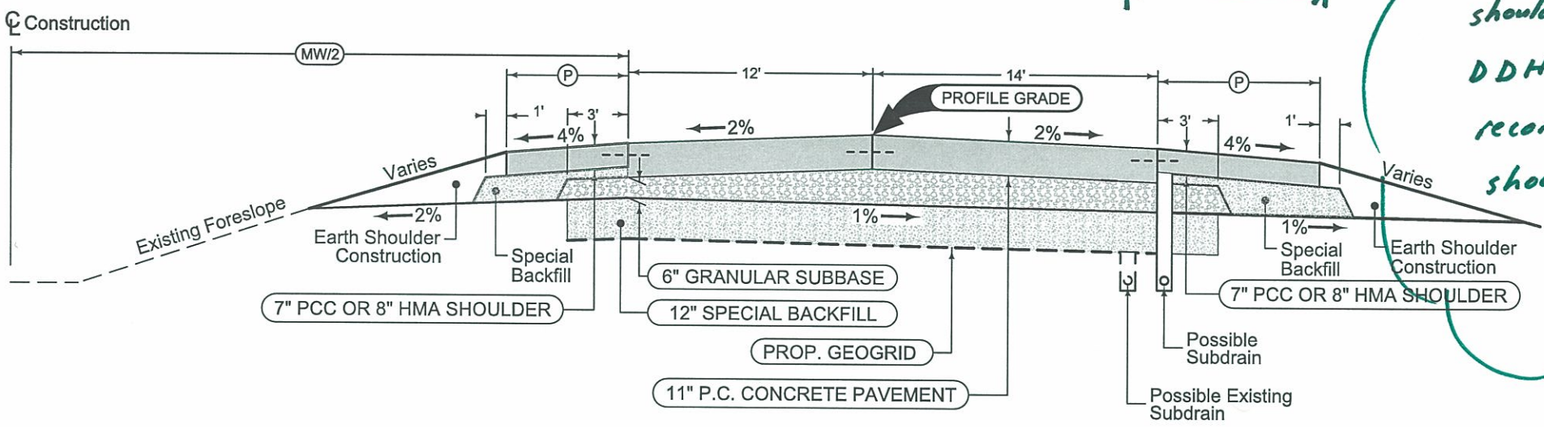
TABULATION OF UTILITIES

102-13A
10-29-02

Status	Project Number	Facility Status	Utility Name	Utility Type	Contact Name	Title	Address 1	Address2	City	State	ZIP Code	Phone	E-Mail
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	A T & T	Local Fiber Optic	P. J. McDermott	Engineer	1425 Oak Street		Kansas City	MO	64106	816-275-4014	
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	CenturyLink	Local Fiber Optic	Steven Parker	Manager Design Engineer	320 2nd Ave. SW		Rochester	MN	55902	507-285-2335	steven.parker4@qwest.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	CenturyLink	Local Fiber Optic	Steven Parker	Manager Design Engineer	390 Commerce Drive		Woodbury	MN	55125-0000	651-714-7541	ross.larson@qwest.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	CenturyLink	Local Fiber Optic	Steven Parker	Manager of Engineering & Construction, Iowa	2103 E. University Ave. 1st Floor		Des Moines	IA	50317	515-265-0968	Steven.Parker4@CenturyLink.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Davenport, City of	Lighting	Brian Ruwe	Traffic Sign Supervisor	1200 East 46th Street		Davenport	IA	52807	563-326-7871	rbm@ci.davenport.ia.us
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Eastern Iowa Light and Power Cooperative	Electric	Dennis Hill	CEO	600 East Fifth Street	Box 3003	Wilton	IA	52778-3003	563-732-2211	dennis.hill@easterniowa.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Iowa American Water Company	Water	Audie Foster	District Supervisor	5201 Grand Avenue		Davenport	IA	52807	563-468-9201	stephen.foster@amwater.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Iowa Department of Transportation	Communication Tower	Annette Dunn		800 Lincoln Way		Ames	IA	50010	515-239-1355	annette.dunn@dot.iowa.gov
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Iowa Department of Transportation	Communication Tower	Annette Dunn		800 Lincoln Way		Ames	IA	50010	515-239-1355	dennis.burkheimer@dot.iowa.gov
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	MCI	Local Fiber Optic	Stephen Bonczkowski	OSP Project Manager	5857 N 60th Street		Omaha	NE	68104	402-573-2043	bob.warman@verizonbusiness.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	MCI	Local Fiber Optic	Stephen Bonczkowski	Outside Plant Manager	501 63rd Street		Downers Grove	IL	60516	630-395-6701	stephen.bonczkowski@verizonbusiness.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	MCI	Local Fiber Optic	Stephen Bonczkowski	Outside Plant Manager	501 63rd Street		Downers Grove	IL	60516	630-395-6701	steven.bonczkowski@verizonbusiness.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	MediaCom	Cable TV	Dennis Jarding	Technical Operations Manager	3900 26th Ave.		Moline	IL	61265	309-743-4750	djarding@mediacomcc.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	MidAmerican Energy Company	Electric Distribution	Jeff Thomas	Electric Distribution Engineer	2811 5th Avenue		Rock Island	IL	61201	309-793-3763	jwthomas@midamerican.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Windstream	Local Fiber Optic	Mike Braughton	OSP Network Supervisor	One Martha's Way		Hiawatha	IA	52233	319-790-7114	michael.braughton@paetec.com
Active	IMX-280-8(144)2--02-82	Facilities- Unknown	Windstream	Local Fiber Optic	Mike Braughton	OSP Network Supervisor	One Martha's Way		Hiawatha	IA	52233	319-790-7114	michael.braughton@windstream.com

Steve to review listing

Tabulation Of Utilities



Tom (FHWA) to review shoulder width. Based upon truck DDHV > 250 vpd. AASHTO recommends a 12' wide shoulder width be considered. Currently 10' wide shoulder is provided.

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	151+12.38	153+61.93	6
WB	156+88.16	246+23.67	6
WB	248+46.13	296+75.72	6
WB	303+24.28	417+40.00	6
WB	419+28.00	510+75.72	6

Section shown in the direction of EB traffic.

Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

Direction of Travel	BEGIN STATION	END STATION	(MW) Feet
WB	149+00.00	154+25.09	60
WB	156+63.49	246+44.02	60
WB	248+06.78	417+60.00	60
WB	418+88.00	514+00.00	60

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	117+91.40	118+85.54	8
WB	121+49.98	121+79.98	8
WB	149+00.00	153+81.93	8
WB	156+88.16	172+40.07	8
WB	182+13.58	225+70.55	8
WB	230+50.84	246+23.67	8
WB	248+46.13	257+66.34	8
WB	267+27.87	334+11.34	8
WB	340+11.07	366+53.30	8
WB	375+83.70	417+40.00	8
WB	419+28.00	470+80.66	8
WB	473+75.85	514+00.00	8

Received e-mail from Tom Parham 6/22/12 stating ~~FHWA~~ 10 ft shoulders are acceptable.

See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

WB I-280 P.C.C. INLAY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER B.1

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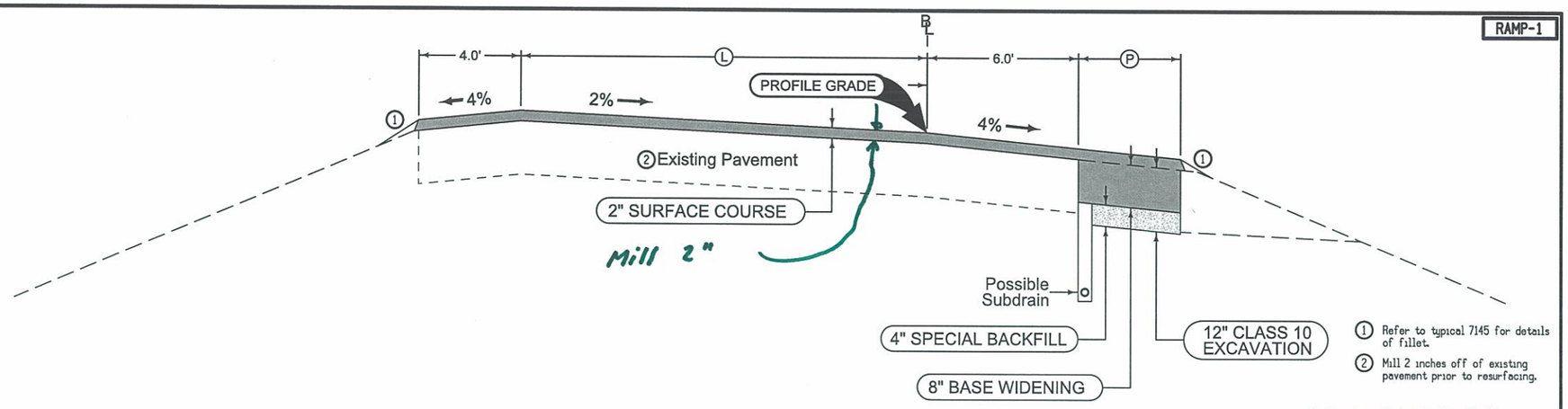
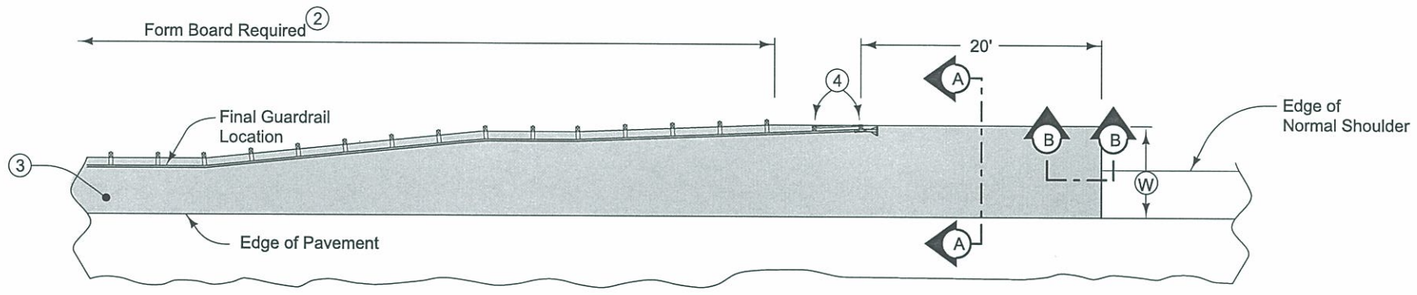
ROADWAY	BEGIN STATION	END STATION	(L) Feet	(P) Feet
IA. 22				
RAMP D	4557+23.62	4564+38.16	16	4
RAMP D	4564+38.16	4564+98.16	16	4 - 0
RAMP D	4564+98.16	4571+46.94	16	0
U.S. 61				
RAMP B	2530+51.16	2538+95.63	16	0
RAMP B	2538+95.63	2339+55.63	16	0 - 4
RAMP B	2339+55.63	2546+14.30	16	4
U.S. 61				
RAMP D	4546+13.00	4552+56.60	16	4
RAMP D	4552+56.60	4553+16.60	16	4 - 0
RAMP D	4553+16.60	4556+67.94	16	0
LOCUST ST.				
RAMP B	2540+08.05	2547+35.03	16	0
RAMP B	2547+35.03	2547+95.03	16	0 - 4
RAMP B	2547+95.03	2554+50.35	16	4
LOCUST ST.				
RAMP D	4552+19.60	4558+84.00	16	4
RAMP D	4558+84.00	4559+44.00	16	4 - 0
RAMP D	4559+44.00	4565+52.69	16	0

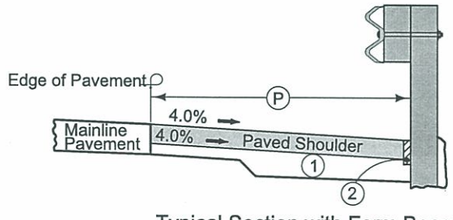
RAMP-1



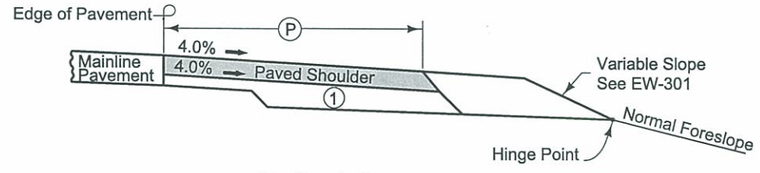
HMA RESURFACING ON RAMPS WITH HMA BASE WIDENING

7156
04-17-12

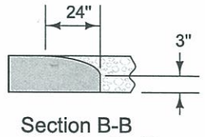




Typical Section with Form Board



Section A-A



Section B-B
Roll down at granular shoulder or earth.

6" HMA Paved Shoulder at guardrail. 7" 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 joints in shoulder at mid-panel of the mainline pavement. Place longitudinal joint at W/2 from edge of mainline pavement when W 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 & reinstallation of guardrail will be allowed with no additional payment.

Refer to Shoulder tabulation (112-9) for quantities.

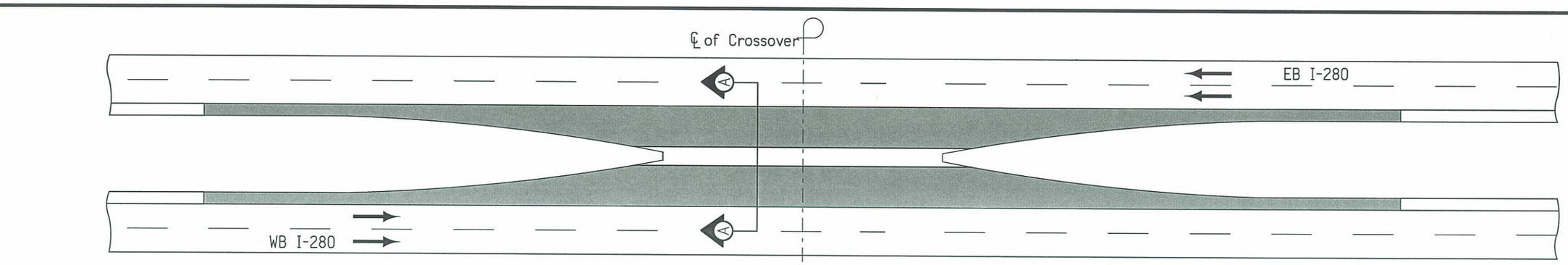
(1) 6" subgrade treatment.

(2) When guardrail posts are installed prior to construction of paved shoulder, nail 1" x 6" untreated form boards along the face of guardrail posts for the length shown. This board is to prevent shoulder material from contacting the sides of the posts and altering the function of the guardrail. Form board not required for final 2 posts.

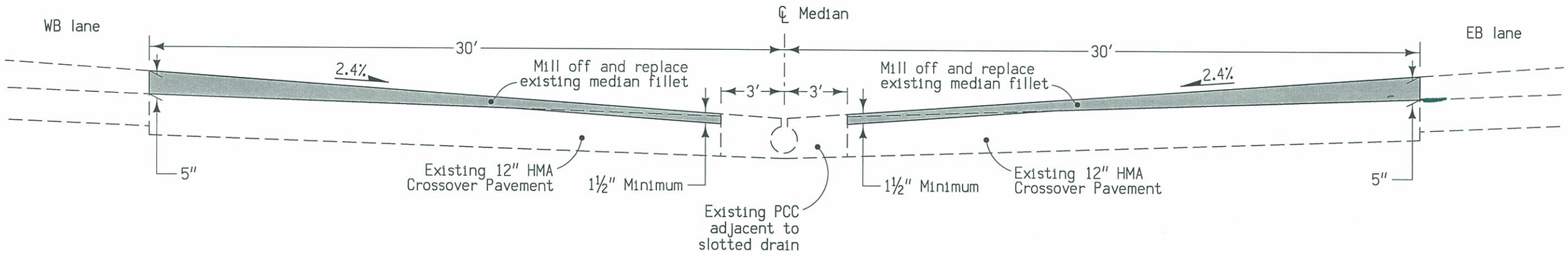
(3) Continue paved shoulder to existing paved shoulder or 20' beyond the end of guardrail.

(4) Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement.

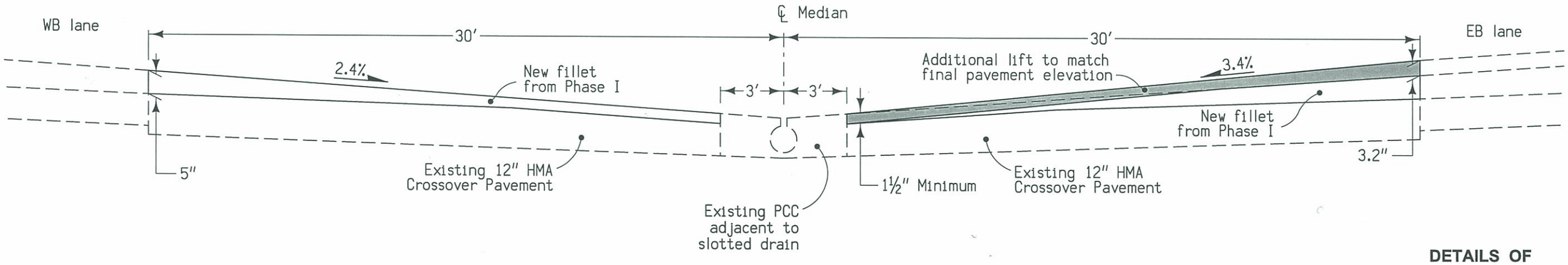
PAVED SHOULDER AT GUARDRAIL



Need to modify for W.B lane only



Section A-A
Phase I - Sta. 149+00, 300+00, 514+00



Section A-A
Phase II - Sta. 300+00

DETAILS OF DUAL MEDIAN CROSSOVERS ON I-280

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER B.3

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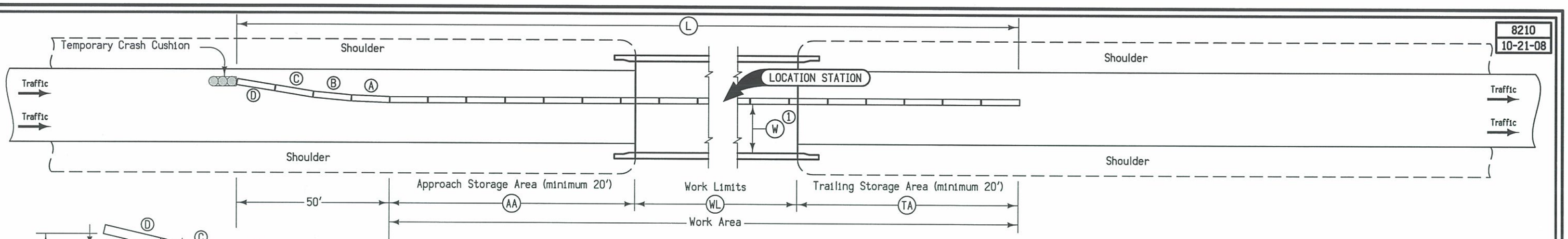
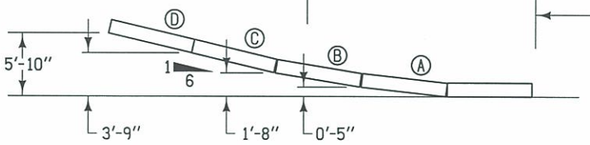
10-21-08





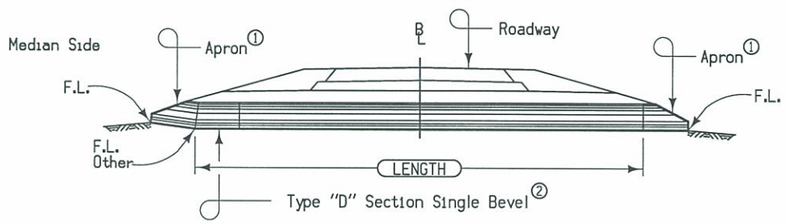
BARRIER OFFSETS FOR FLARE SECTIONS

Station	Side	AA	WL	TA	L	Anchored	W ①	Remarks
		Feet	Feet	Feet	Feet	X	Ft-Inches	
~~109+87~~	~~WB~~	~~50~~	~~125~~	~~50~~	~~275~~		~~18'-0"~~	
120+10	WB	50	475	50	625	X	14'6"	Traffic in median lane
120+10	WB	50	300	50	450	–	18'0"	Traffic in outside lane

① Where (W) = 14'-6" or less, install restricted width signing as per Standard Road Plan TC-81.

TEMPORARY CONCRETE BARRIER LAYOUT for One-Way Traffic

1103
16-18-11



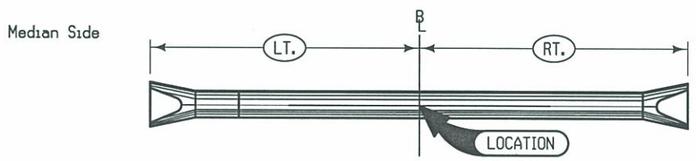
SECTION

Notes:

℄ shall be ℄ of roadway.

① See Standard Road Plan RF-3 for concrete, RF-5 for metal aprons.

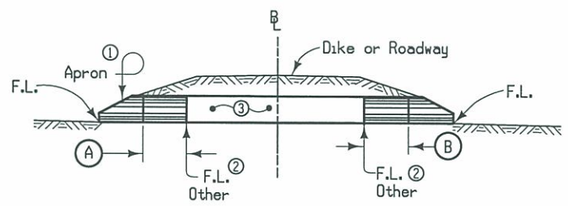
② Type "D" section with single bevel. See Standard Road Plan RF-13 for details.



PLAN

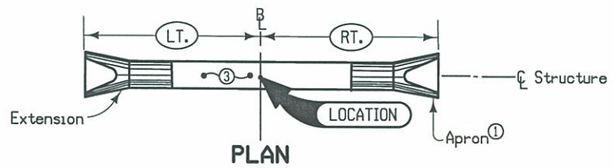
CONCRETE PIPE WITH "D" SECTION

1301
10-03-00



SECTION

A+B =Length



PLAN

Notes:

℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

Extension shall be on line of existing structure to Lt., Rt. or both as specified. Adaptors may be required, see Standard Road Plan RF-2.

Refer to tabular listing and other plans for additional information.

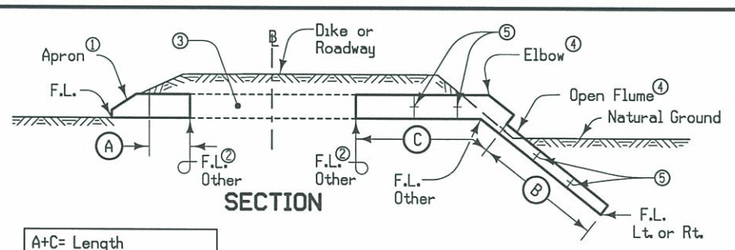
① See Standard Road Plan RF-3 for concrete, RF-5 for metal.

② Optional type "D" section only when specified in tabulation.

③ Existing structure.

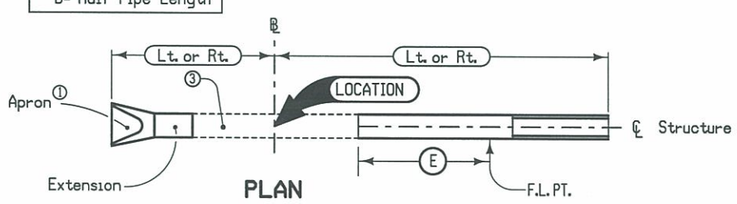
PIPE EXTENSION

1303
10-03-00



SECTION

A+C= Length
B= Half Pipe Length



PLAN

Notes:

℄ shall be ℄ of roadway, dike survey, or other; as detailed on plans.

Extension shall be on line of existing structure to Lt., Rt. or both as specified. Adaptors may be required, see Standard Road Plan RF-2.

Refer to tabular listing and other plans for additional information.

① See Standard Road Plan RF-3 for Concrete or RF-5 for Metal.

② Optional Type "D" Section only when specified in Tabulation.

③ Existing Structure

④ See Standard Road Plan RF-13

⑤ See Standard Road Plan RF-14 for pipe connections.

PIPE EXTENSION WITH FLUME

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER B.4

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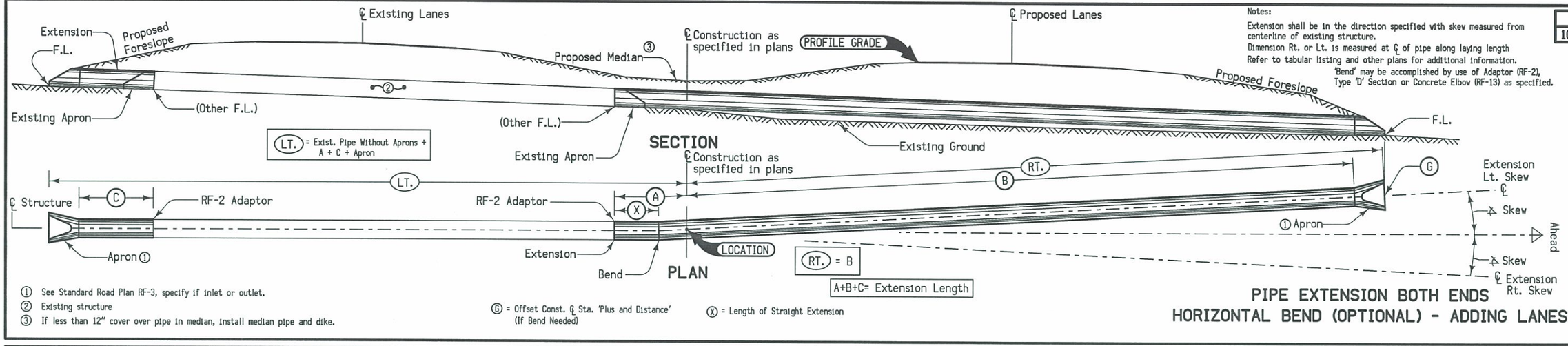
1308
10-03-00



Notes:
Extension shall be in the direction specified with skew measured from centerline of existing structure.
Dimension Rt. or Lt. is measured at ℄ of pipe along laying length
Refer to tabular listing and other plans for additional information.
'Bend' may be accomplished by use of Adaptor (RF-2), Type 'D' Section or Concrete Elbow (RF-13) as specified.

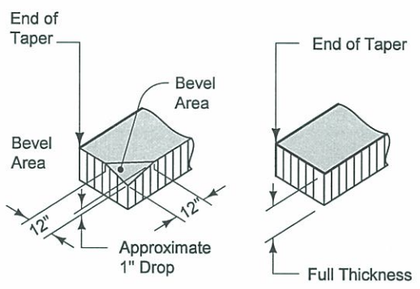
① See Standard Road Plan RF-3, specify if inlet or outlet.
② Existing structure
③ If less than 12" cover over pipe in median, install median pipe and dike.

Ⓖ = Offset Const. ℄ Sta. 'Plus and Distance' (If Bend Needed)

Ⓧ = Length of Straight Extension

PIPE EXTENSION BOTH ENDS HORIZONTAL BEND (OPTIONAL) - ADDING LANES

7101
10-19-10



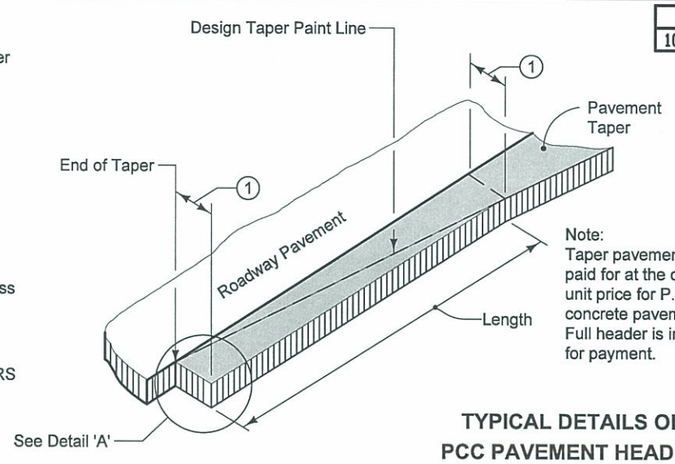
DETAIL 'A'

FOR GRANULAR SHOULDERS

DETAIL 'A'

FOR PAVED SHOULDERS

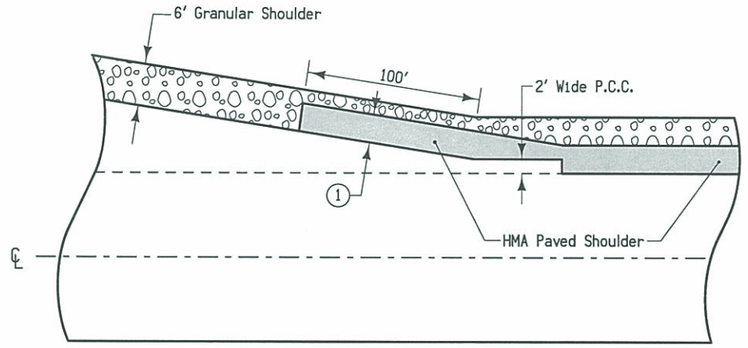
① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

TYPICAL DETAILS OF PCC PAVEMENT HEADER

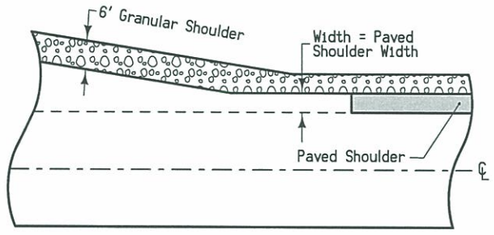
7154
04-20-10



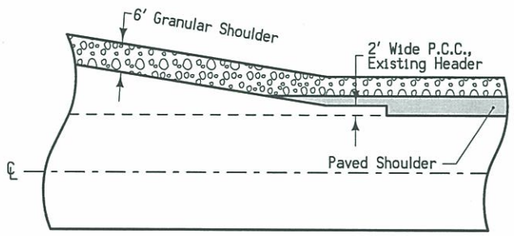
① Width of paved shoulder on taper matches width of paved shoulder on mainline.

PAVED SHOULDER DETAIL AT RAMP TAPERS (Non-Interstate)

7154A
10-20-09



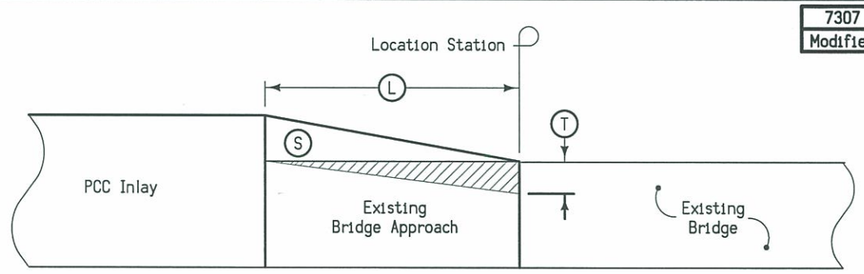
With Newly Constructed Turn Lanes



At UAC Turn Lanes

PAVED SHOULDER DETAIL AT TURN LANES

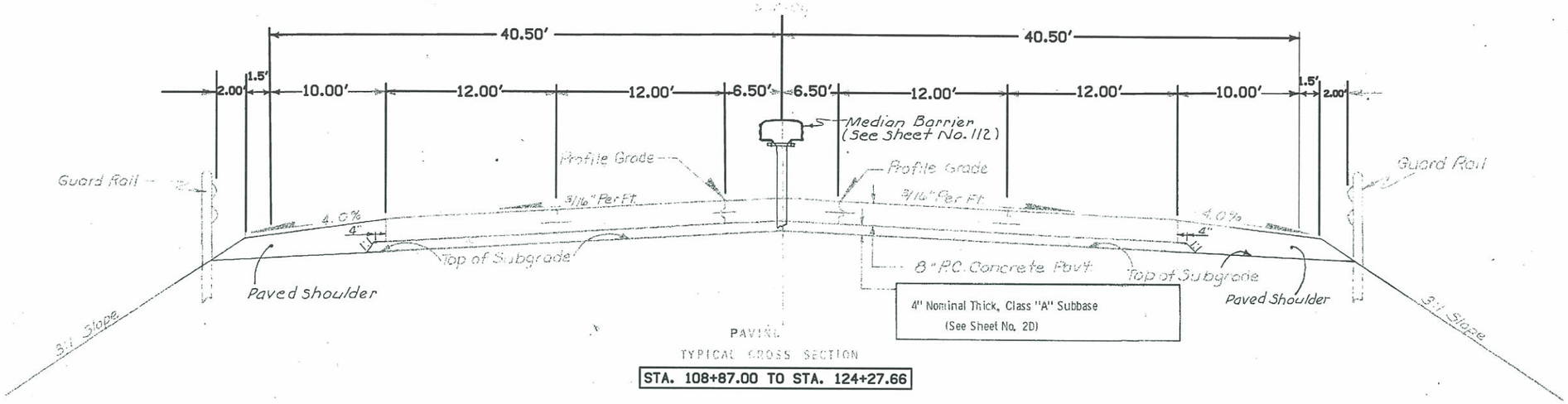
7307
Modified



Ⓢ Surface Course
Ⓣ Milling

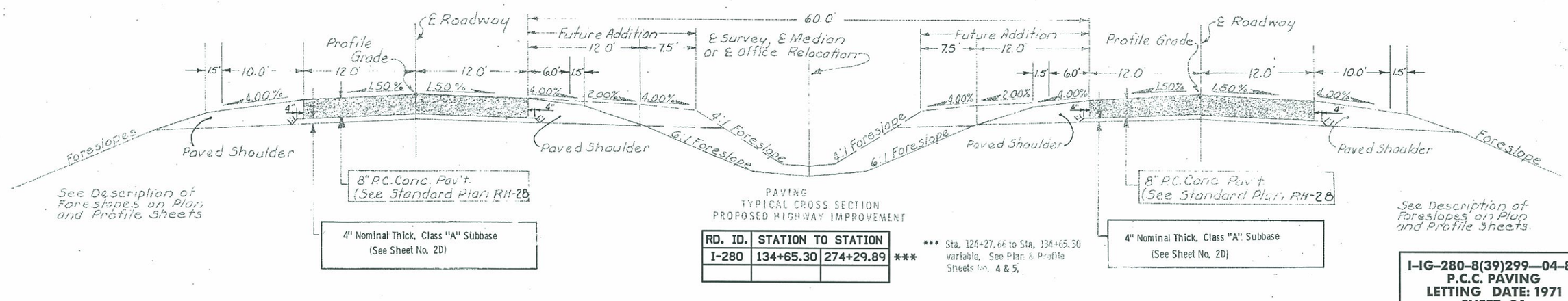
Location Station	Ⓛ Feet	Ⓢ Inches	Ⓣ Inches
417+56.59	70.0	3.24	2.0
418+91.59	70.0	1.92	2.0

SURFACE NOTCH FOR SINGLE COURSE RESURFACING RUNOUT



PAVING
TYPICAL CROSS SECTION

STA. 108+87.00 TO STA. 124+27.66



See Description of Foreslopes on Plan and Profile Sheets

4" Nominal Thick, Class "A" Subbase
(See Sheet No. 2D)

PAVING
TYPICAL CROSS SECTION
PROPOSED HIGHWAY IMPROVEMENT

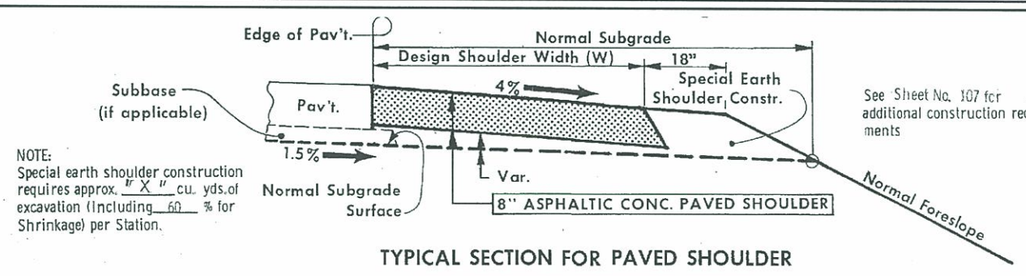
RD. ID.	STATION TO STATION	
I-280	134+65.30	274+29.89 ***

*** Sta. 124+27.66 to Sta. 134+65.30 variable. See Plan & Profile Sheets no. 4 & 5.

4" Nominal Thick, Class "A" Subbase
(See Sheet No. 2D)

See Description of Foreslopes on Plan and Profile Sheets

I-IG-280-8(39)299—04-82
P.C.C. PAVING
LETTING DATE: 1971
SHEET: 2A



NOTE:
Special earth shoulder construction requires approx. "X" cu. yds. of excavation (Including 60 % for Shrinkage) per Station.

See Sheet No. 107 for additional construction requirements

7115
6-25-71

TYPICAL SECTION FOR PAVED SHOULDER
ADJACENT TO P.C. CONCRETE PAVEMENT

	ROAD ID.	STATION TO STATION		W	SIDE	X
TABULATION OF SHOULDER LOCATIONS	I-280	108+87.00	274+29.89	10'	Out	21.79
	I-280	108+87.00	274+29.89	6'	In	26.29
	IA. 22 Ramps	(ALL RAMPS)		6'	Out	28.93
	U.S. 61 Ramps	(ALL RAMPS)		6'	Out	36.74
	IA. 22 Ramps	(ALL RAMPS)		4'	In	27.55
	U.S. 61 Ramps	(ALL RAMPS)		4'	In	33.14

I-IG-280-8(39)299—04-82
P.C.C. PAVING
LETTING DATE: 1971
SHEET: 2C

NOT TO SCALE – FOR INFORMATION ONLY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER B.6

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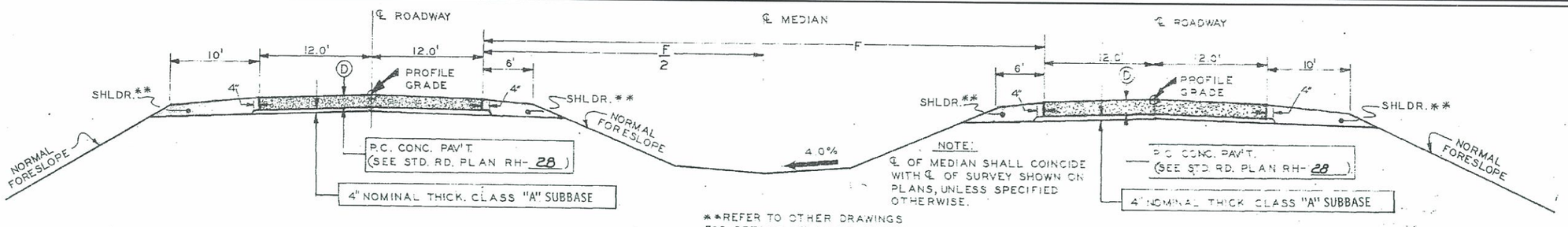


**REFER TO OTHER DRAWINGS FOR DETAILS OF SHLDR. DESIGN AND CONSTRUCTION.

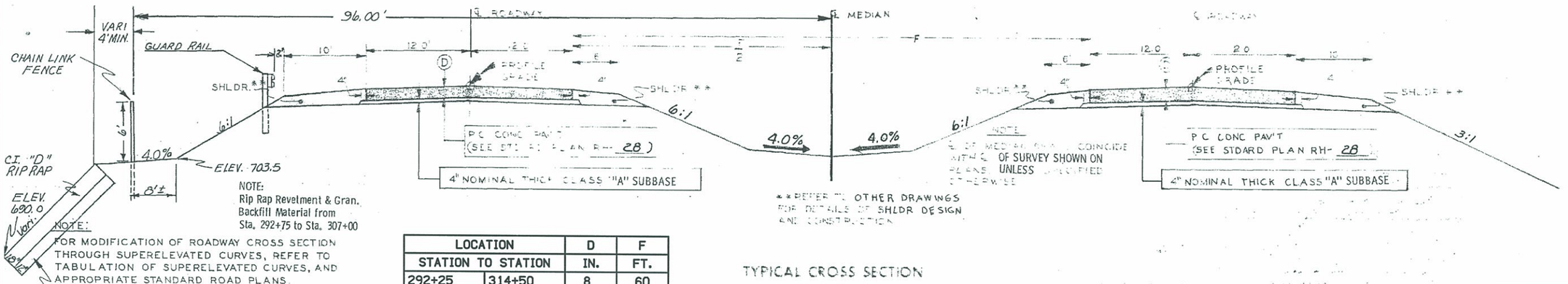
* - Sta. 3590+47.88 to End of Project; See Plan and Profile Sheets 14 & 15 for Details.

NOTE:
FOR MODIFICATION OF ROADWAY CROSS SECTION THROUGH SUPERELEVATED CURVES, REFER TO TABULATION OF SUPERELEVATED CURVES, AND APPROPRIATE STANDARD ROAD PLANS.

LOCATION		D	F
STATION TO STATION		IN.	FT.
274+29.89	292+25	8	60
314+50	514+00	8	60
514+00 *	3604+25.81	8	60

* Station Equation

TYPICAL CROSS SECTION FOR PAVING



NOTE:
Rip Rap Revetment & Gran. Backfill Material from Sta. 292+75 to Sta. 307+00

NOTE:
FOR MODIFICATION OF ROADWAY CROSS SECTION THROUGH SUPERELEVATED CURVES, REFER TO TABULATION OF SUPERELEVATED CURVES, AND APPROPRIATE STANDARD ROAD PLANS.

GRANULAR BACKFILL MATERIAL ART. 4133.

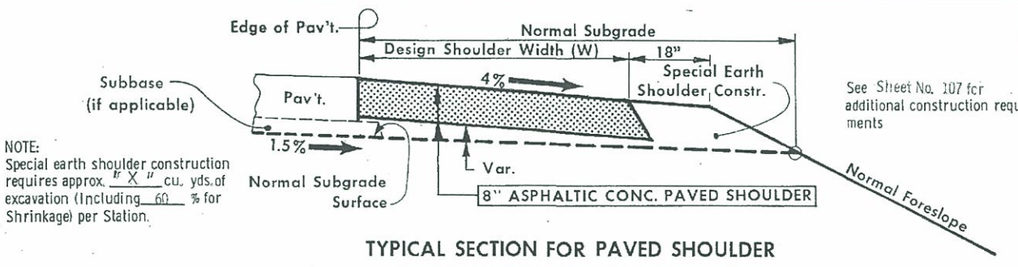
**REFER TO OTHER DRAWINGS FOR DETAILS OF SHLDR DESIGN AND CONSTRUCTION.

LOCATION		D	F
STATION TO STATION		IN.	FT.
292+25	314+50	8	60

TYPICAL CROSS SECTION FOR PAVING

I-IG-280-8(40)294—04-82
P.C.C. PAVING
LETTING DATE: 1971
SHEET: 2C

TABULATION OF SHOULDER LOCATIONS					
ROAD ID.	STATION TO STATION		W	SIDE	X
I-280	274+29.89	514+00.00	10'	Out	26
I-280	274+29.89	514+00.00	6'	In	26
* I-280	514+00.00	3604+25.81	10'	Out	26
* I-280	514+00.00	3604+25.81	6'	In	26
** Co. Rd. "C"	Interchange Ramps		4'	In	12
** Co. Rd. "C"	Interchange Ramps		6'	Out	12
U.S. 61 Ramps	Interchange Ramps		4'	In	33
U.S. 61 Ramps	Interchange Ramps		6'	Out	35
* Station Equation					
** County Road "C" = W. Locust St. (at I-280 Sta. 354+62.65)					



NOTE:
Special earth shoulder construction requires approx. "X" cu. yds. of excavation (Including 60 % for Shrinkage) per Station.

See Sheet No. 107 for additional construction requirements

TYPICAL SECTION FOR PAVED SHOULDER
ADJACENT TO P.C. CONCRETE PAVEMENT

7115
6-25-71

I-IG-280-8(40)294—04-82
P.C.C. PAVING
LETTING DATE: 1971
SHEET: 2E

NOT TO SCALE – FOR INFORMATION ONLY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER B.7

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SURVEY SYMBOLS

- FW Wire Fence
- GPR Guard Post (4 or More Posts)
- GDL Guard Rail Steel
- OUT Tile Outlet
- TDC Tree Deciduous
- TIL Tile Line
- SHR Shrub
- SI Sign
- D Centerline Draw or Stream (Down)
- DU Centerline Draw or Stream (Up)
- EW Edge of Water
- BD Bridge Deck
- WC Wild Card (Misc. Field Shot)
- SOP Size of Pipe or Culvert
- BCL Bridge Centerline
- TW Top of Water
- SBR Size of Bridge

UTILITY LEGEND

See sheet A.11

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.**	
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
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

- Reference Point
- Station
- Survey Line
- 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
- A/C Access Control

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.1

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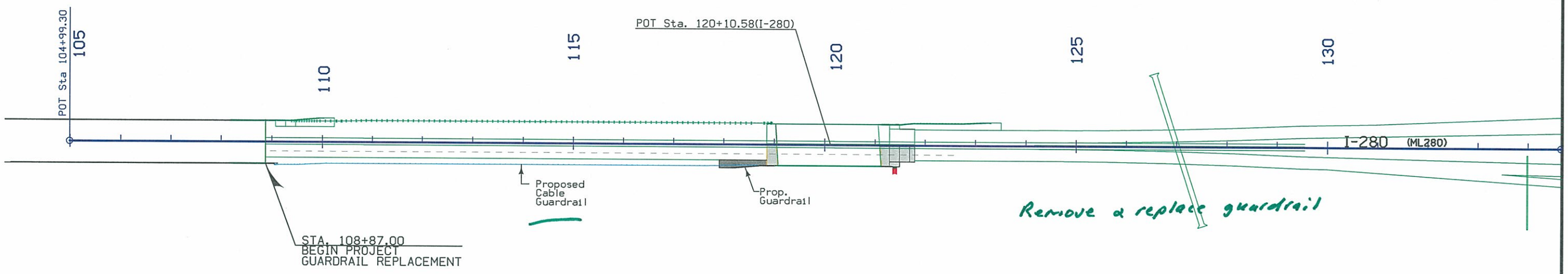
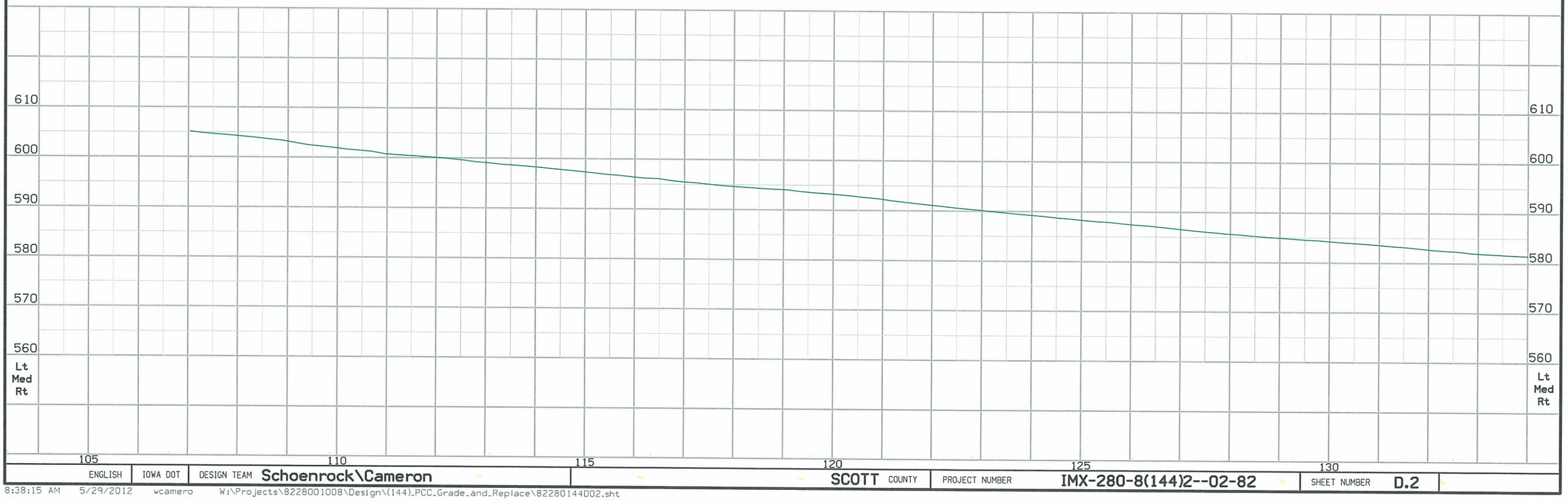
ROCKINGHAM TWP.
T-77N R-3E
SEC. 8



Sta. 127+02
10'x10'x251' RCB
Skew 18° Rt. Ah.
DA= 860 Ac. Equilizer
FL= Lt. 549.5
Rt. 550.0
(U.A.C.)

Sta. 134+00-41.8' Rt.
24" RF-1
FL= Lt. 578.2
Rt. 554.5
Other 554.9
Other 577.0
Replace Rt. Apron
& Apron Guard

0 100
FEET



ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.2

8:38:15 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

ROCKINGHAM TWP.
T-77N R-3E
SEC. 8

Curve Data
Δ = 6° 20' 58.32" (LT)
T = 635.65
L = 1,270.00
R = 11,460.00
E = 17.62

ROCKINGHAM TWP.
T-77N R-3E
SEC. 7

POT Sta 438+86.76

Ramp 'A'

APPROX. SECTION LINE

Ramp 'C'

Ia. 22 NB

Ia. 22 SB

135 140 145 150 155 160 440 445

PC Sta 134+65.30

P.C. Sta. 3539+98.41
72.0' Lt. P.O.C. Sta. 139+98.41

EQUATION:
PT Sta 147+35.30 BK =
Sta 147+36.00 AH

POT Sta. 154+80.52(I-280)
= POT Sta. 443+41.47(Ia. 22)

Prop. Guardrail

U.A.C. Exist.

I-280 (ML280)

Sta. 149+00.00
Dual Crossover

PC Sta 443+96.28

PI Sta 446+89.68

(SUR 1A-22)

P.I. Sta. 4556+29.43(Ramp 'D')
=P.O.S.T. 85.50' From PI
Sta. 447+75.00(Ia. 22)

PI Sta 141+00.95

STA. 149+00.00
BEGIN CONSTRUCTION
PCC INLAY

Ramp 'B'

Ramp 'D'

Sta. 138+00-42' Rt.
18" RF-1
FL= Lt. 581.5
Rt. 583.9
Other 581.8
Replace Lt. and Rt. Aprons
& Apron Guards
Relay one section

Sta. 145+00-42' Lt.
24" RF-1
FL= Lt. 598.4
Rt. 600.9
Replace Lt. and Rt. Aprons
& Apron Guards
Relay one section

0 100 FEET

P.I. Sta. 2556+67.45(Ramp 'B')
=P.O.S.T. Sta. 29.06' From P.I.(Ia. 22)

Review ramp B - Mill 2" place 2" HMA
- Reconstruction @ ramp terminal

BEGIN WB INLAY CONST.
ELEV. =615.34

615.34

Crossover

VPI +63.500
Elv 637.88

+2.952%

+2.886%

Proposed Grade

Ia.22 Bridge
Sta 154+99.7 WB

(Use Existing Ditch)
(Use Existing Ditch)

620 610 600 590 580 570 Lt Med Rt

660 650 640 630 620 610 Lt Med Rt

615.34 616.08 616.82 617.55 618.29 619.03 619.77 620.51 621.24 621.98 622.72 623.46 624.20 624.93 625.67 626.41 627.15 627.89 628.62 629.36 630.10 630.84 631.58 632.32 633.05 633.79 634.53 635.27 636.01 636.74 637.48 638.21 638.93 639.65 640.38 641.10 641.82 642.54 643.26 643.98 644.71 645.43 646.15 646.87 647.59 648.31 649.03 649.76 650.48 651.20 651.92 652.64 653.36 654.09 654.81 655.53 656.25 656.97 657.69 658.41 659.14

135 140 145 150 155 160

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.3

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ROCKINGHAM TWP.
T-77N R-3E
SEC. 7

ROCKINGHAM TWP.
T-77N R-3E
SEC. 6

Curve Data
Δ = 5° 49' 57.40" (LT)
T = 390.40
L = 780.13
R = 7,663.45
E = 9.94

Ramp 'A'

Ramp 'D'

APPROX. SEC. LINE

APPROX. SEC. LINE

PT Sta 192+82.92

PC Sta 185+02.79

I-280 (ML280)

PI Sta 188+93.19

Review existing pipes

STA. 4571+46.94
END RESURFACING
BEGIN RECONSTRUCTION

Sta. 169+50
36" RF-1,
Skew 2 ° Lt. Ah.
DA= 22 Ac V.H.
FL= Lt. 658.2
Rt. 662.0
(U.A.C.)

Sta. 169+75-42' Rt.
24" RF-1
FL= Lt. 671.7
Rt. 669.0
Replace Lt. and Rt. Aprons
& Apron Guards
Relay one section

Sta. 174+50
4'x5' R.C.B.
DA = 49 Ac. VH
FL= Lt. 672.0
Rt. 674.5
(U.A.C.)

0 100
FEET

Sta. 180+00
24" Conc Pipe
FL = Lt. 699.50
Rt. 701.00
Other 700.12
(U.A.C.)

Sta. 190+60
Skew 20° Lt. Ahead
36" RF-1 w/ 36" RF-13
DA= 17 Ac. R.
FL= Lt. 706.5
Rt. 722.0
Other 713.5
(U.A.C.)

Sta. 191+50-42' Rt.
24" RF-1
FL= Lt. 728.0
Rt. 723.5
Replace Rt. Apron
& Apron Guard

VPI +50.000
Elv 703.46
+2.850%

VPI +20.000
Elv 677.03
+2.820%

VPI +70.000
Elv 684.08
+2.850%

+2.886%

Proposed Grade

VPI +55.000
Elv 729.01
Len 815.00 ft
K = 407
+0.879%

+2.880%

+2.880%

+2.676%

VPI +00.000
Elv 710.15

Proposed Grade

(Use Existing Ditch)
(Use Existing Ditch)

Lt
Med
Rt

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.4

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ROCKINGHAM TWP.
T-77N R-3E
SEC. 6

BUFFALO TWP.
T-77N R-2E
SEC. 1

APPROX. SEC. LINE

APPROX. SEC. LINE

195 200 205 210 215 220

+40.50 8" 400#
+08.50 10" 400#

Gas Main, IA-IL Gas & Elec. Co.
Gas Main, IA-IL Gas & Elec. Co.

I-280 (ML280)

PI Sta 216+28.61

TS Sta 214+95.27

SC Sta 216+95.27

Sta. 200+10
5'x5' RCB w/5'x5' RCB Flume Lt.
Skew 40° Rt. Ah.
DA= 69 Ac. R. H.
FL= Lt. 706.0
Rt. 710.0
Flume 698.0
(U.A.C.)

Sta. 205+00-42' Lt.
24" RF-1 w/ 24" C.M.P. letdown
FL= Lt. 723.2
Int. 723.6
Int. 739.4
Rt. 740.2
(U.A.C.)

0 100
FEET

Sta. 216+20
36" Conc. Pipe w/ 36" RF-13
DA=10 Ac. G.R.-R.
FL= Lt. 729.8
Rt. 743.5
Other 733.0
(U.A.C.)

Sta. 217+00-42' Rt.
24" RF-1
FL= Lt. 748.0
Rt. 744.4
Replace Lt. and Rt. Aprons
& Apron Guards
Shoulder Separation

760
750
740
730
720
710

VPI +00.000
Elv 747.00
Len 400.00 ft
K = 994

+0.879%

+0.477%

Proposed Grade

(Use Existing Ditch)
(Use Existing Ditch)

Lt
Med
Rt

734.03 734.25 734.47 734.69 734.91 735.13 735.35 735.57 735.79 736.01 736.23 736.45 736.67 736.89 737.11 737.33 737.55 737.77 737.99 738.21 738.42 738.64 738.86 739.08 739.30 739.52 739.74 739.96 740.18 740.40 740.62 740.84 741.06 741.28 741.50 741.72 741.94 742.16 742.38 742.60 742.82 743.04 743.26 743.48 743.70 743.92 744.14 744.36 744.58 744.80 745.02 745.24 745.46 745.67 745.87 746.07 746.26 746.45 746.63 746.80 746.97 747.13 747.28 747.43 747.57 747.70 747.83 747.95 748.07 748.19 748.31 748.43 748.55 748.67 748.79 748.91 749.03 749.15 749.27 749.39 749.50 749.62 749.74 749.86 749.98 750.10 750.22 750.34 750.46 750.58 750.70 750.82 750.94 751.06 751.17 751.29 751.41 751.53 751.65 751.77 751.89 752.01 752.13 752.25 752.37 752.49 752.61 752.73 752.84 752.96 753.08 753.20 753.32 753.44 753.56 753.68 753.80 753.92 754.04 754.16

195 200 205 210 215 220

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.5

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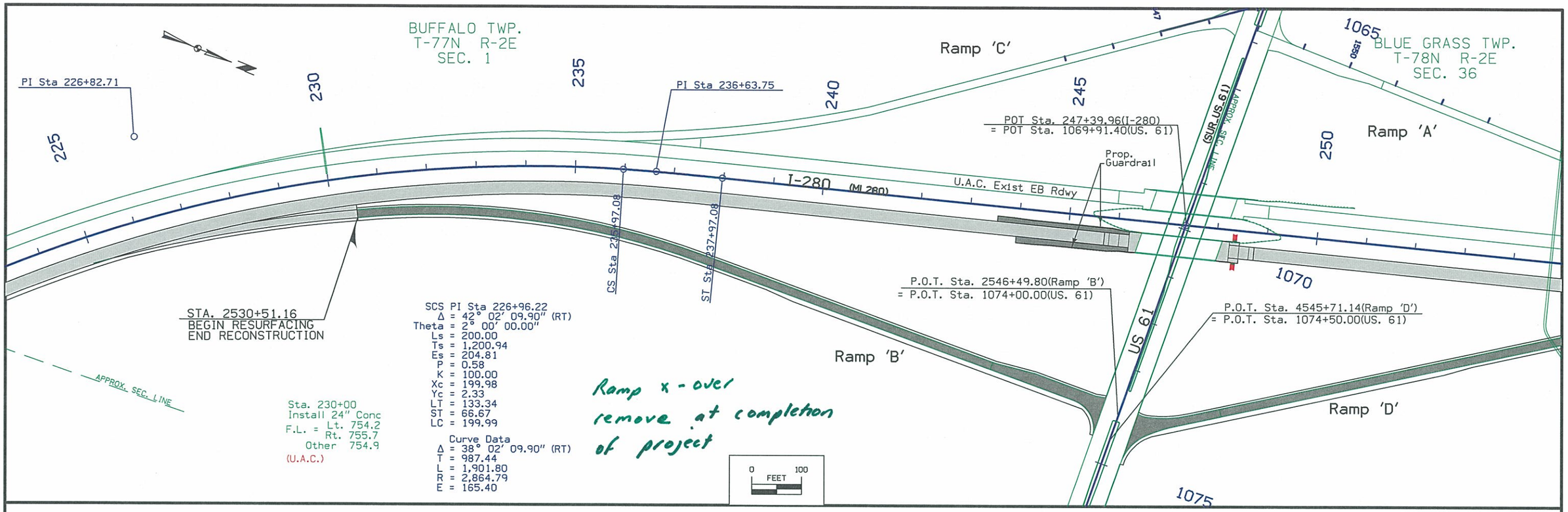

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.6

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BLUE GRASS TWP.
T-78N R-2E
SEC. 36

Ramp 'A'

Ramp 'D'

STA. 4556+67.94
END RESURFACING
BEGIN RECONSTRUCTION

255 260 265 270 275 280

PI Sta 262+65.37
PI Sta 266+53.33
PI Sta 270+38.64

TS Sta 261+32.03
SC Sta 263+32.03
CS Sta 269+71.97
Sta 271+71.97

Update guardrail

I-280 (ML280)

Sta. 254+75
Skew Outlet 40° Rt. Ah.
4'x4' R.C.B. w/ 6'x6' taper inlet
and 4'x4' R.C. Flume
DA= 118 Ac. R.
FL= Flume 702.0
Lt. 730.0
Int. 727.0
Rt. 726.0
(U.A.C.)

Sta. 261+00 -42' Lt.
24" Conc Pipe
F.L. = Lt. 748.5
Rt. 747.9
(U.A.C.)

Sta. 265+10
2'x3' R.C.B. x 255.0/w Stub Flume
DA=22 Ac. R.
FL= Lt. 730.0
Rt. 726.0
Flume 797.93
(U.A.C.)

0 FEET 100

SCS PI Sta 266+55.11
Δ = 16° 47' 55.81" (RT)
Theta = 2° 00' 00.00"
Ls = 200.00
Ts = 523.09
Es = 31.65
P = 0.58
K = 100.00
Xc = 199.98
Yc = 2.33
LT = 133.34
ST = 66.67
LC = 199.99

Curve Data
Δ = 12° 47' 55.81" (RT)
T = 321.31
L = 639.94
R = 2,864.79
E = 17.96

Sta. 274+00-42' Rt.
24" RF-1
FL= Lt. 738.6
Rt. 737.1
Replace Rt. Apron
& Apron Guard
Relay one section

Sta. 284+00-42' Rt.
24" RF-1
FL= Lt. 729.1
Rt. 727.0
Replace Rt. Apron
& Apron Guard
Separations

770
760
750
740
730
720

-1.435%
VPI +65.000
Elv 758.74
-1.324%
-1.324%
VPI +50.000
Elv 753.64
Len 310.00 ft
K = 412
-2.075%
-2.075%
Proposed Grade
VPI +00.000
Elv 746.38
Len 380.00 ft
K = 230
-0.420%
VPI +50.000
Elv 738.60
Len 1,080.00 ft
K = 410
-0.420%
-3.05
Proposed Grade

Lt
Med
Rt

(Use Existing Ditch)
(Use Existing Ditch)

762.18 761.82 761.46 761.11 760.75 760.39 760.03 759.67 759.31 758.95 758.61 758.27 757.94 757.61 757.28 756.95 756.62 756.29 755.96 755.63 755.29 754.93 754.56 754.17 753.77 753.35 752.92 752.47 752.01 751.53 751.04 750.53 750.02 749.53 749.06 748.63 748.22 747.84 747.49 747.16 746.87 746.59 746.35 746.13 745.94 745.78 745.65 745.54 745.43 745.33 745.22 745.12 745.01 744.91 744.80 744.70 744.59 744.49 744.38 744.28 744.17 744.07 743.96 743.86 743.75 743.65 743.54 743.44 743.33 743.22 743.12 743.01 742.91 742.80 742.70 742.59 742.49 742.38 742.28 742.17 742.07 741.96 741.86 741.75 741.65 741.54 741.44 741.33 741.23 741.12 741.02 740.91 740.80 740.68 740.55 740.39 740.23 740.04 739.84 739.63 739.40 739.16 738.90 738.62 738.34 738.03 737.71 737.37 737.02 736.66 736.28 735.88 735.47 735.04 734.60 734.14 733.67 733.18 732.68 732.16

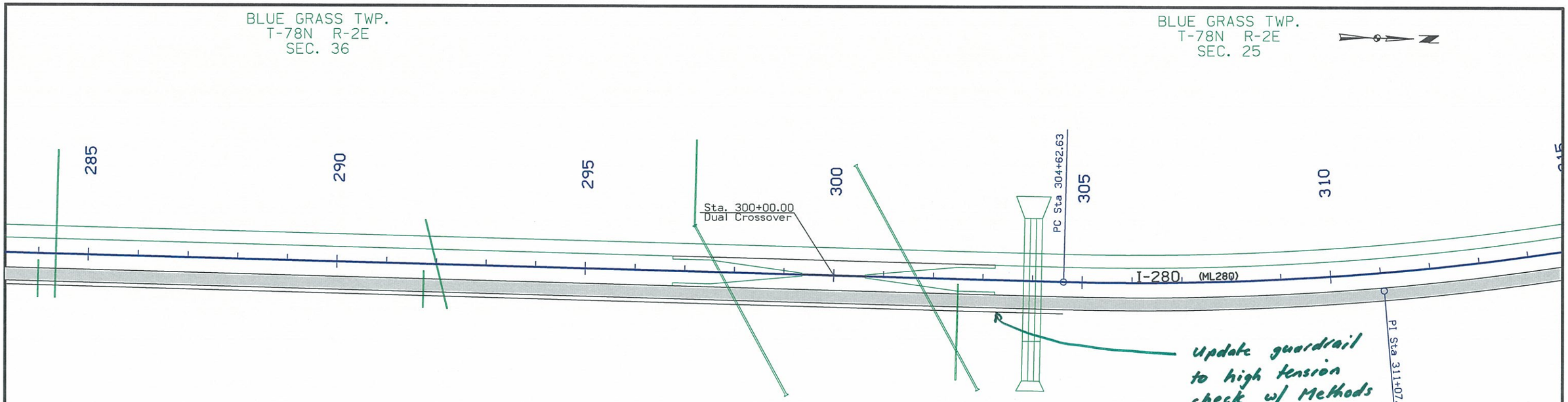
255 260 265 270 275 280

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.7

8:38:19 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 36

BLUE GRASS TWP.
T-78N R-2E
SEC. 25



Sta. 284+35
24" RF-1
DA= 2 Ac. R
FL= Lt. 701.0
Rt. 726.9
Replace Rt. Apron

Sta. 291+75-42' Rt
24" RF-1
FL= Lt. 708.9
Rt. 706.4
Replace Rt. Apron
& Apron Guard

Sta. 292+00
24" RF-1
DA= 3 Ac. H
Skew 15° Rt. Ah.
FL= Lt. 707.4
Rt. 705.5
(U.A.C.)

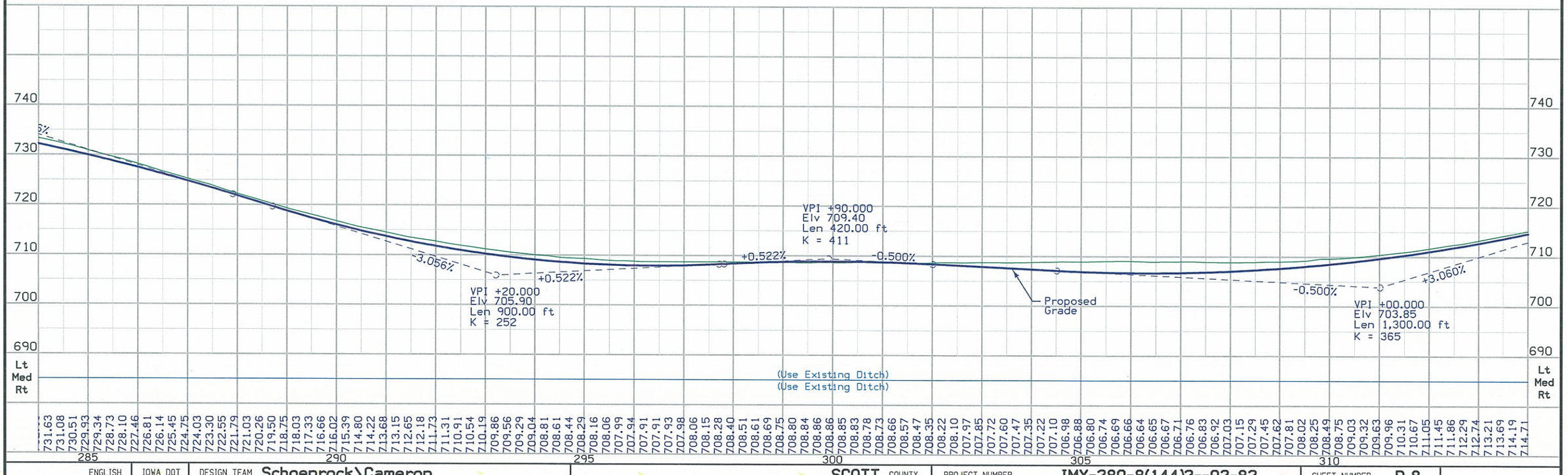
Sta. 297+70.89
Sanitary Sewer
FL= Lt. N/A
Rt. N/A
(U.A.C.)

0 100 FEET

Sta. 301+66.77
3'x3'x500' R.C.B.Sluiceway
w/4'x4' Drop Inlet Structure
w/Rein Conc. Control Tower
Skew 25°18' Rt. Ah.
FL=Lt. 671.0
Rt. 660.3
(U.A.C.)

Sta. 302+50-42' Rt.
24" RF-1 & CMP
FL= Lt. 704.0
Rt. 661.8
Elbow 703.0 & 662.0
Replace Rt. Apron
& Apron Guard

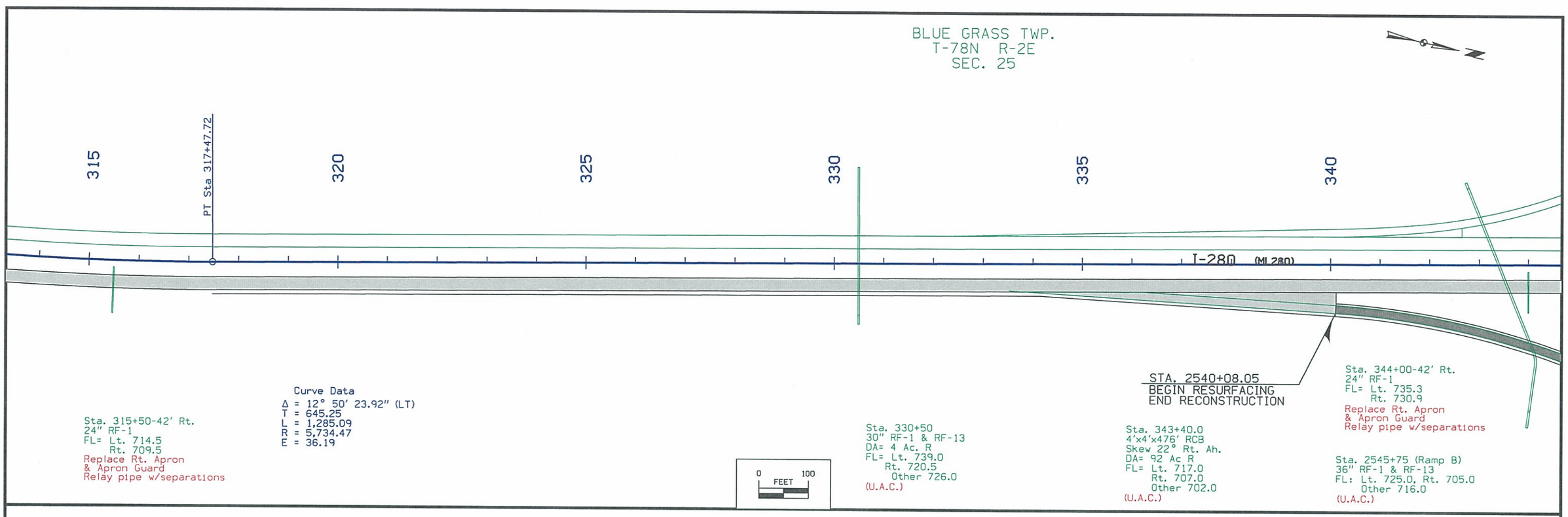
Sta. 304+00
Triple12'x10'x247' R.C.B.
DA=2.75 Sq. Miles
FL=Lt. 695.0
Rt. 677.6
Flume 660.0
(U.A.C.)

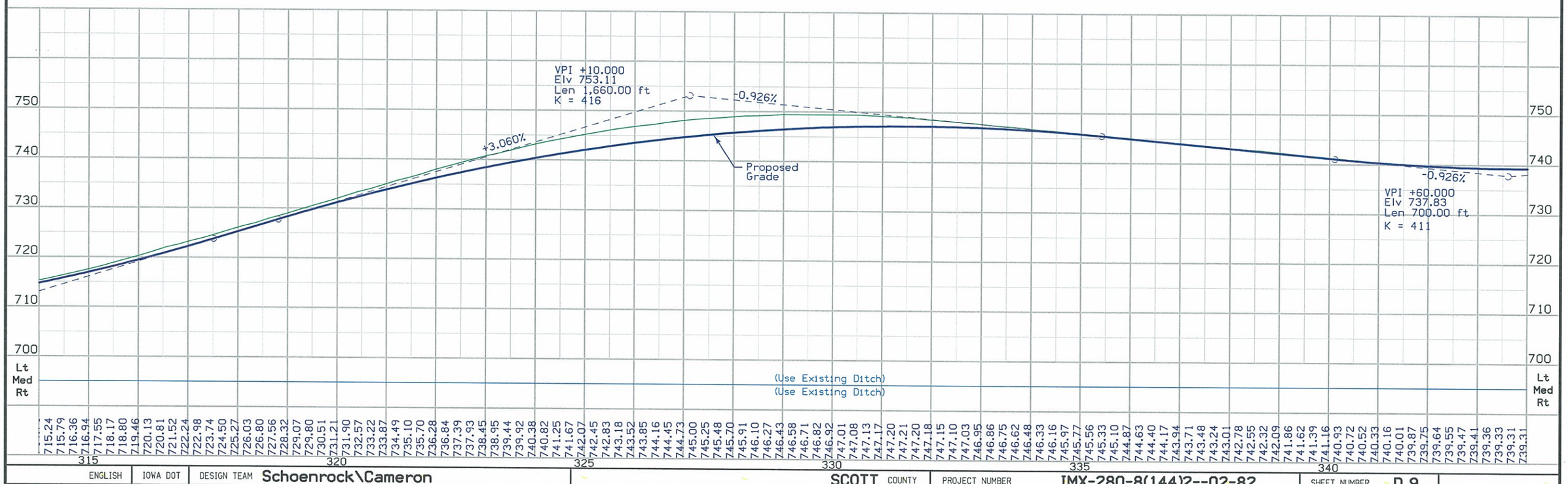


ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.8

8:38:19 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 25





ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.9

8:38:20 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 25

BLUE GRASS TWP.
T-78N R-2E
SEC. 24

Ramp 'C'

Ramp 'A'

Ramp 'B'

Ramp 'D'

1350

1355

POT Sta. 354+62.65(I-280)
= POT Sta. 1354+62.65(County Rd.)

Prop. Cable Guardrail

Locust Street

I-280 (ML280)

STA. 4565+52.69
END RESURFACING
BEGIN RECONSTRUCTION

PC Sta 369+37.22

Bridge approach work (IDOT) and adjacent pavement (city) to be completed as part of seperate project

Sta. 347+00
36" RF-1
Skew 30° Lt. Ah.
DA= 17 Ac. R
FL= Lt. 731.5
Rt. 725.3
(U.A.C.)

Sta. 356+50-42' Rt.
24" RF-1
FL= Lt. 744.5
Rt. 742.4
Replace Rt. Apron & Apron Guard
Relay pipe w/separations

Sta. 365+15
26" RF-1
Skew 20° Rt. Ah.
DA= 20 Ac. F
FL: Lt. 739.6
Rt. 735.5
(U.A.C.)

0 100
FEET

345 350 355 360 365 370

770 760 750 740 730 720

+0.778%

+0.778%

-0.598%

VPI +10.000
Elv 753.00
Len 600.00 ft
K = 436

Proposed Grade

Locust Street
Sta. 354+05.36 WB

Lt
Med
Rt

(Use Existing Ditch)
(Use Existing Ditch)

739.32 739.35 739.39 739.45 739.53 739.62 739.72 739.84 739.98 740.13 740.29 740.47 740.67 740.86 741.06 741.25 741.44 741.64 741.83 742.03 742.22 742.42 742.61 742.81 743.00 743.20 743.39 743.58 743.78 743.97 744.17 744.36 744.56 744.75 744.95 745.14 745.34 745.53 745.72 745.92 746.11 746.31 746.50 746.70 746.89 747.09 747.28 747.48 747.67 747.86 748.06 748.25 748.45 748.64 748.84 749.03 749.23 749.42 749.62 749.81 750.00 750.20 750.39 750.59 750.78 750.96 751.12 751.27 751.41 751.53 751.64 751.73 751.81 751.87 751.92 751.96 751.98 751.99 751.98 751.96 751.92 751.87 751.80 751.72 751.63 751.52 751.40 751.26 751.12 750.97 750.82 750.67 750.52 750.37 750.22 750.07 749.92 749.77 749.62 749.47 749.32 749.17 749.02 748.87 748.72 748.57 748.42 748.27 748.12 747.97 747.83 747.68 747.53 747.38 747.23 747.08 746.93 746.78 746.63 746.48

345 350 355 360 365 370

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.10

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BLUE GRASS TWP.
T-78N R-2E
SEC. 24

Curve Data
Δ = 11° 15' 57.57" (RT)
T = 565.60
L = 1,127.56
R = 5,734.48
E = 27.83

PI Sta 375+02.83
PT Sta 380+64.78
PC Sta 400+36.59

I-280 (ML280)

Sta. 378+45
24" RF-1
Skew 30° Lt. Ah.
DA= 10 Ac. R
FL= Lt. 729.0
Rt. 736.5
(U.A.C.)

Sta. 378+75-42' Rt.
24" RF-1
FL= Lt. 740.2
Rt. 737.0
Replace Rt. Apron
& Apron Guard
Relay pipe w/separations

Sta. 388+75-42' Rt.
24" RF-1
FL= Lt. 734.3
Rt. 732.7
Replace Rt. Apron
& Apron Guard

0 100 FEET

Sta. 389+25
24" RF-1
Skew 15°Lt. Ah.
DA= 3 Ac. R
FL= Lt. 723.0
Rt. 732.6
(U.A.C.)

Sta. 395+50
24" RF-1
Skew 15° Lt. Ah.
DA= 2 Ac. R
FL= Lt. 712.0
Rt. 725.8
(U.A.C.)

Sta. 398+00-42' Rt.
24" RF-1
FL= Lt. 720.4
Rt. 718.9
Replace Rt. Apron
& Apron Guard
Relay pipe w/separations

-0.598%
VPI +25.000
Elv 745.13
-0.589%
VPI +00.000
Elv 734.08
Len 980.00 ft
K = 410
-0.589%
-2.977%
Proposed Grade
(Use Existing Ditch)
(Use Existing Ditch)
Lt Med Rt

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.11

8:38:21 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 24

Curve Data
Δ = 3° 56′ 55.36″ (LT)
T = 790.11
L = 1,579.60
R = 22,920.00
E = 13.61

BLUE GRASS TWP.
T-78N R-2E
SEC. 13

405 410 415 420 425 430

PI Sta 408+26.70

PT Sta 416+16.19

DUCK CREEK

I-280 (ML280)

Prop. Guardrail

POT Sta. 418+24.00(I-280)

sign remove

concrete deck repair to be included with paving notch project (ft²)

Sta. 407+00-42′ Rt.
24″ RF-1
FL= Lt. 693.7
Rt. 691.6
Replace Rt. Apron
& Apron Guard
Relay pipe w/separations

Sta. 407+75
36″ RF-1 w/RCP Ext. Lt.
Skew 30°Lt. Ah.
DA= 16 Ac. R
FL=Lt. 683.0
Rt. 691.5
Relay pipe w/separations

Sta. 417+20-42′ Rt.
24″ RF-1
FL= Lt. 675.6
Rt. 672.5
Replace Rt. Apron
& Apron Guard

0 FEET 100

Sta. 418+24.00 WB
125′x 39′ Cont. Conc.
Slab Bridge
DA= 17.1 Acres
(Remove By Others)

Sta. 418+24.00 WB
Build 140′ x 40′ CCS
Bridge
DA= 17.1 Acres
Design 469
(By Others)

Sta. 419+50-42′ Rt.
24″ RF-1
FL= Lt. 675.2
Rt. 672.0
Replace Rt. Apron
& Apron Guard

Sta. 428+80
24″ RF-1
Skew 10° Lt. Ah.
DA=2 Ac.R
FL= Lt. 685.2
Rt. 680.0
(U.A.C.)

Sta. 429+50-42′ Lt.
24″ RF-1 w/RCP Ext. Lt.
FL= Lt. 686.0
Rt. 687.7
Replace Rt. Apron
& Apron Guard

710 700 690 680 670 660

STOP WB INLAY CONST.
STA. 416+83.75
ELEV. = 679.57
70′ HMA Runout Ahead

Duck Creek
Sta. 418+24.00 WB

RESUME WB INLAY CONST.
STA. 419+64.50
ELEV. = 678.89
70′ HMA Runout Back

-2.977%

+1.765%

VPI +90.000
Elv 668.89
Len 1,800.00 ft
K = 380

Proposed Grade

Lt
Med
Rt

(Use Existing Ditch)
(Use Existing Ditch)

706.55 705.80 705.06 704.31 703.57 702.82 702.08 701.34 700.59 699.85 699.10 698.36 697.61 696.87 696.13 695.38 694.65 693.94 693.24 692.56 691.90 691.25 690.62 690.01 689.41 688.83 688.27 687.72 687.18 686.67 686.17 685.69 685.22 684.77 684.34 683.92 683.52 683.14 682.77 682.42 682.09 681.77 681.47 681.18 680.91 680.66 680.43 680.21 680.01 679.82 679.65 679.50 679.36 679.24 679.14 679.05 678.98 678.92 678.89 678.87 678.86 678.87 678.90 678.94 679.01 679.08 679.18 679.29 679.41 679.56 679.72 679.89 680.09 680.29 680.52 680.76 681.02 681.30 681.59 681.89 682.22 682.56 682.92 683.29 683.68 684.09 684.51 684.95 685.39 685.83 686.27 686.71 687.16 687.60 688.04 688.48 688.92 689.36 689.80 690.25 690.69 691.13 691.57 692.01 692.45 692.89 693.33 693.78 694.22 694.66 695.10 695.54 695.98 696.42 696.86 697.31 697.75 698.19 698.63 699.07

405 410 415 420 425 430

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.12

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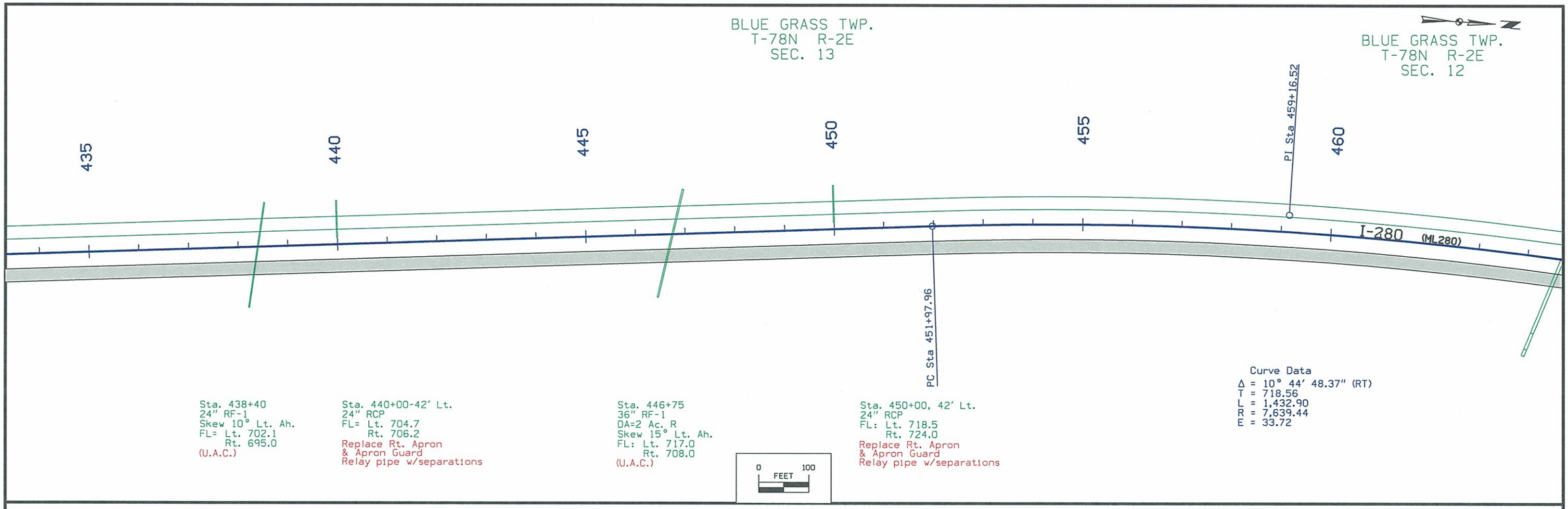
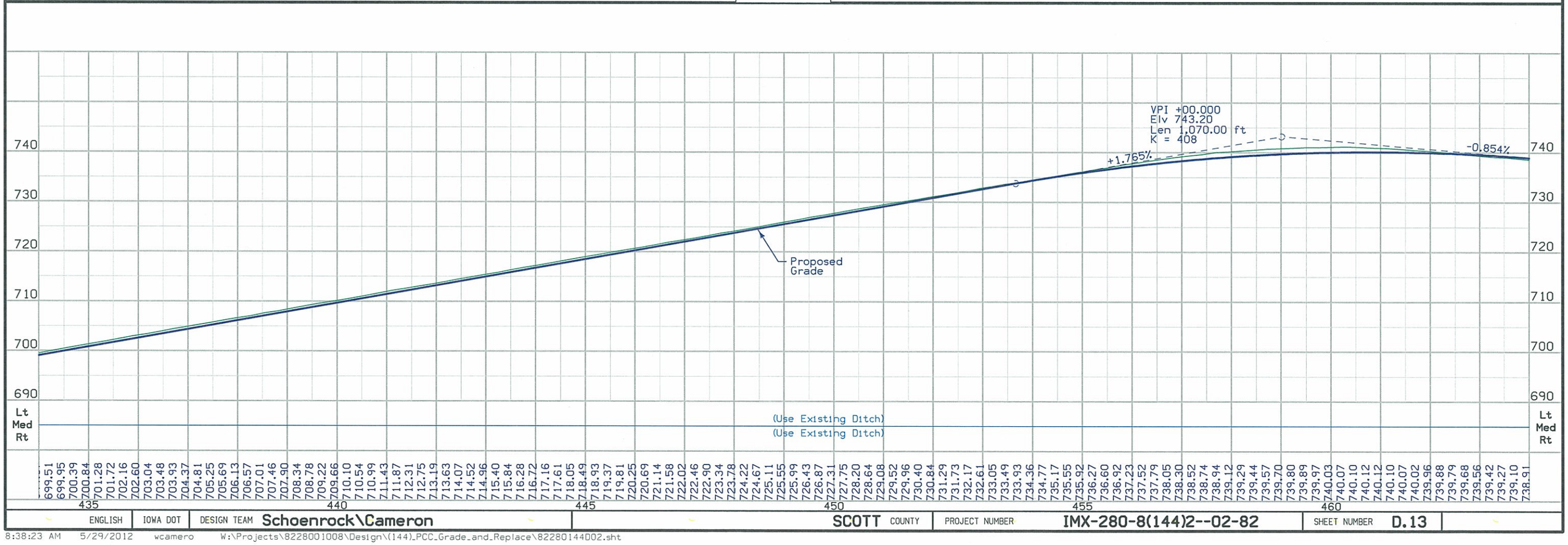




ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.13

8:38:23 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

Sta. 473+50-90' Rt.
RR Berm Pipe
24" x160' RF-1
FL= N 725.2
S 726.2
Relay pipe
w/separations

BLUE GRASS TWP.
T-78N R-2E
SEC. 12

C.R.I. and P.R.R.
Iowa Interstate R.R.

465 470 475 480 485 490

POT Sta. 473+70.28(I-280)
= POT Sta. 1473+70.28(R.R.)

I-280 (ML280)

PT Sta 466+30.87

Proposed Guardrail

Proposed Barrier Wall and reinforced paved shoulder

Proposed Cable Guardrail

Sta. 464+70
6'x5' R.C.B. w/Flume
Skew 15° Lt. Ah.
DA=122 Ac.R
FL= Lt. 719.0
Rt. 716.0
Flume 708.0
(U.A.C.)

Sta. 472+25-42' Rt.
24" RF-1
FL= Lt. 728.5
Rt. 726.5
Replace Rt. Apron
& Apron Guard

Sta. 472+50
24" RF-1
DA=3 Ac. R
FL= Lt. 726.8
Rt. 726.2
(U.A.C.)

Sta. 478+00-42' Rt.
24" RF-1
DA=1.0Ac. R
FL= Lt. 725.0
Rt. 723.3
Replace Rt. Apron
& Apron Guard
Relay pipe w/separations

0 100 FEET

Sta. 482+90
3'x3' R.C.B. w/Stub Flume
Skew 25° Rt. Ah.
DA= 22 Ac R
FL= Lt. 711.0
Rt. 708.0
Flume 698.0
(U.A.C.)

Sta. 486+40
10'x10' R.C.B.
Skew 40° Lt Ah.
DA=1140 Ac. F-R
FL= Lt. 702.0
Rt. 699.0
(U.A.C.)

Sta. 490+25
3'x3'x251' R.C.B. w/Stub Flume
Skew 25° Rt. Ah.
DA= 44 Ac. R
FL=Lt. 712.0
Rt. 731.0
Flume 700.0
(U.A.C.)

Sta. 491+00-42' Rt.
24" RF-1
FL= Lt. 733.1
Rt. 731.0
Replace Rt. Apron
& Apron Guard

750 740 730 720 710 700

-0.854% +0.633%

VPI +40.000
Elv 727.48
Len 600.00 ft
K = 403

Proposed Grade

Lt Med Rt

(Use Existing Ditch)
(Use Existing Ditch)

738.71 738.50 738.29 738.07 737.86 737.65 737.43 737.22 737.01 736.79 736.58 736.37 736.15 735.94 735.72 735.51 735.30 735.08 734.87 734.66 734.44 734.23 734.02 733.80 733.59 733.37 733.16 732.95 732.73 732.52 732.31 732.09 731.88 731.67 731.45 731.24 731.03 730.81 730.60 730.38 730.17 729.96 729.76 729.58 729.41 729.25 729.12 728.99 728.89 728.80 728.72 728.66 728.61 728.59 728.57 728.57 728.59 728.62 728.67 728.74 728.81 728.91 729.02 729.15 729.29 729.44 729.60 729.76 729.92 730.07 730.23 730.39 730.55 730.71 730.87 731.02 731.18 731.34 731.50 731.66 731.82 731.97 732.13 732.29 732.45 732.61 732.76 732.92 733.08 733.24 733.40 733.56 733.71 733.87 734.03 734.19 734.35 734.50 734.66 734.82 734.98 735.14 735.30 735.45 735.61 735.77 735.93 736.09 736.25 736.40 736.56 736.72 736.88 737.04 737.19 737.35 737.51 737.67 737.83 737.99

465 470 475 480 485 490

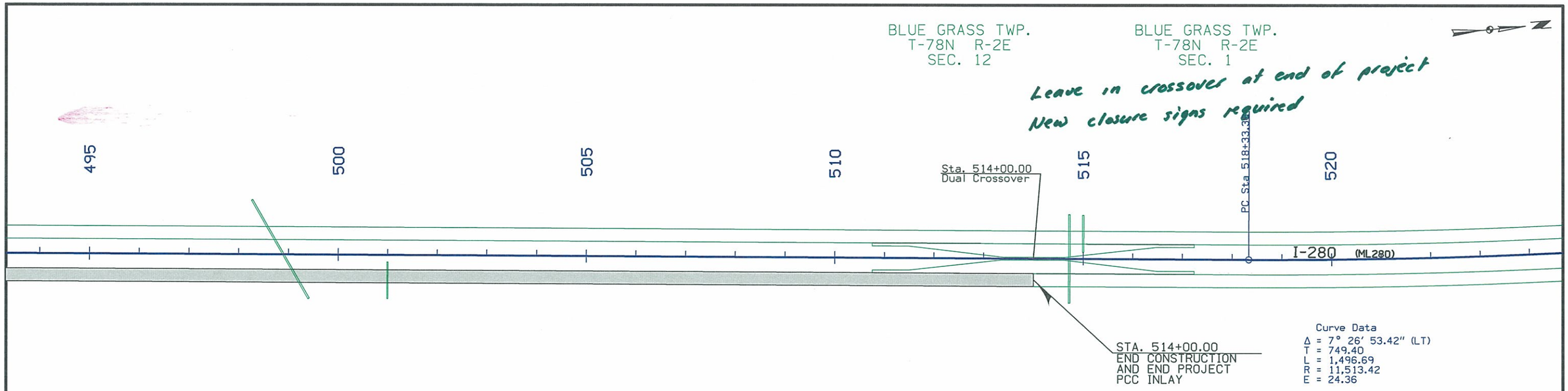
ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER D.14

8:38:23 AM 5/29/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144D02.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 12

BLUE GRASS TWP.
T-78N R-2E
SEC. 1

Leave in crossover at end of project
New closure signs required



Curve Data
Δ = 7° 26' 53.42" (LT)
T = 749.40
L = 1,496.69
R = 11,513.42
E = 24.36

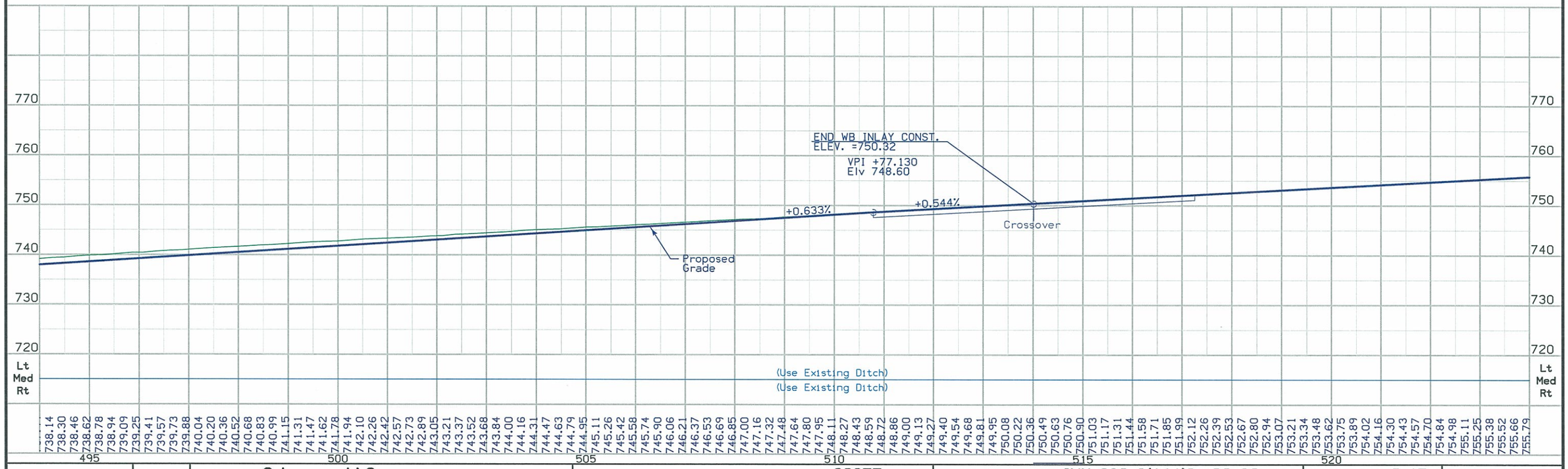
Sta. 498+90
36" RF-1
Skew 30° Rt. Ah.
FL= Lt. 731.0
Rt. 737.0
(U.A.C.)

Sta. 501+00-42' Rt
24" RF-1
FL= Lt. 739.5
Rt. 738.0
Replace Rt. Apron
& Apron Guard
Relay pipe w/separations

0 100
FEET

Sta. 514+72
30" RF-1
FL= Lt. 745.0
Rt. 745.0
(U.A.C.)

Sta. 515+00-42' Lt.
24" RF-1
FL= Lt. 745.3
Rt. 747.0
(U.A.C.)



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Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for design of west bound I 280 from I 80 to the Mississippi River.

Vertical Control

Vertical datum for this survey is relative to Project I-IG-280-8(40)294 15/32 04-82

Horizontal Control

The project coordinate system for this survey is Iowa State Plane South zone NAD83(CORS 96) (EPOCH 2002.00) Reference Frame

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. I-IG-280-8(39)299 15/32 04-82 and No. I-IG-280-8(40)294 15/32 04-82. Survey stationing was equated to the plan at PC Sta. 400+36.59 and run back and ahead without station equation throughout the survey. Alignment was determined from just behind the Ia 22 interchange to just ahead of the US 6 interchange.

As built stationing may be related to the survey stationing throughout the project as follows:

Ia 22 interchange
I 280 (39) As Built plan station 154+80.76 = Sta 443+41.47 Ia 22 equals Survey station 154+80.52 = Sta. 443+41.47 Ia 22 Survey
0.24 ft must be subtracted from (39) as built plan stationing to correlate to survey stationing from sta. 147+36 to sta. 185+00

Sta. 185+00 to sta. 210+00
I 280 (39) As Built plan station 185+05.9 equals Survey station 185+02.79
3.11 ft must be subtracted from (39) as built plan stationing to correlate to survey stationing from sta. 185+00 to sta. 210+00

US 61 interchange
I 280 (39) As Built plan station 247+39.96 = Sta 1069+91.40 US 61 NHS-61-5(83) 15/32 19-82 equals Survey station 247+35.86 = Sta. 1069+91.40 US 63 Survey
4.10 ft must be subtracted from (39) as built plan stationing to correlate to survey stationing from sta. 210+00 to sta. 272+00

Sta. 272+00 to sta. 320+00
I 280 (40) As Built plan station 304+69.65 equals Survey station 304+62.63
7.02 ft must be subtracted from (40) as built plan stationing to correlate to survey stationing from sta. 272+00 to sta. 320+00

Locust St. interchange
I 280 (40) As Built plan station 354+62.65 = Sta 1354+62.65 Locust St equals Survey station 354+64.67 = Sta. 1354+62.65 Locust St. Survey
2.02 ft must be added to (40) as built plan stationing to correlate to survey stationing from sta. 320+00 to sta. 381+00

Sta. 381+00 to sta. 445+00
I 280 (40) As Built plan station 400+36.59 equals Survey station 400+36.59
Survey stationing and (40) as built plan stationing are correlated from sta. 381+00 to sta. 445+00

Sta. 445+00 to sta. 500+00
I 280 (40) As Built plan station 459+19.92 equals Survey station 459+16.52
3.40 ft must be subtracted from (40) as built plan stationing to correlate to survey stationing from sta. 445+00 to sta. 500+00

US 6 interchange
I 280 (40) As Built plan station 550+14.44 = Sta 249+84.07 US 6 equals Survey station 550+08.76 = Sta. 249+84.07 US 6 Survey
5.68 ft must be subtracted from (40) as built plan stationing to correlate to survey stationing from sta. 500+00 to sta. 554+81.29 EOP

VERTICAL CONTROL

US 218

Point	North	East	Elevation	Station	Offset	Feature	Description
504	556313.378	2421023.223	638.960	156+18.05	-64.347	BM	BM PLUG 280/22 OH
505	557729.768	2419173.511	702.866	179+47.77	-63.576	BM	TRANS
506	558342.779	2418570.658	726.900	187+96.74	62.583	BM	TRANS
507	559508.165	2416464.399	748.482	211+97.72	-63.641	BM	BM TRANS
508	562319.008	2414709.613	772.410	246+32.06	64.843	BM	BM PLUG SE COR 61/280 OH
509	562482.087	2414526.557	771.486	248+40.13	-64.819	BM	BM PLUG NW 61 OH
552	568012.756	2413928.858	705.059	304+18.69	-176.294	BM	BM PLUG SPILLWAY
550	569887.113	2413913.447	740.272	323+03.54	62.846	BM	BM TRANSFERED
551	570863.675	2413698.284	747.058	333+03.52	62.650	BM	BM TRANSFERED
530	579346.539	2412637.229	680.900	418+92.91	64.649	BM	CUT X NE CORNER NB BRIDGE
510	579335.212	2412508.915	680.861	418+93.04	-64.164	BM	CUT X NW CORNER SB DUCK CREEK BRIDGE
514	584782.498	2412472.162	755.060	473+64.67	114.700	BM	PLUG NE COR RR BRGE
513	584840.147	2412246.930	755.819	473+99.88	-115.111	BM	NW COR RR BRGE
525	586199.537	2412345.604	714.278	487+62.38	-150.661	BM	PLUG 12X12 BOX CUL WEST ML TRL HOOD
517	586472.173	2412610.073	732.370	490+59.71	85.701	BM	BM PLUG BOX CUL TRL HOOD
519	596575.503	2413170.752	763.869	Off Chain	Off Chain	BM	PLUG NW COR 280 EB
501	553205.907	2424543.191	605.167	Off Chain	Off Chain	BM	BM PK BRIDGE WALL 280/MISS
520	596417.031	2412997.592	765.822	Off Chain	Off Chain	BM	PLUG WINGWALL SW COR EB 280
503	554036.836	2423675.360	594.301	Off Chain	Off Chain	BM	BM PLUG 280/RR OH
526	596649.611	2411628.322	730.344	Off Chain	Off Chain	BM	PLUG 4X4 BOX CUL N OF EB ML
523	596407.988	2412144.561	759.569	Off Chain	Off Chain	BM	NE COR WB BRGE
522	595683.765	2412554.669	765.313	Off Chain	Off Chain	BM	PLUG SW WINGWALL 280 EB OVER 280WB LANES
521	595827.849	2412645.066	767.872	Off Chain	Off Chain	BM	PLUG NE COR 280 EB
502	553950.942	2423885.036	596.269	Off Chain	Off Chain	BM	BM PLUG SE COR RR/280
524	596412.033	2412143.572	756.819	Off Chain	Off Chain	BM	WINGWALL WB

Locust

Point	North	East	Elevation	Station	Offset	Feature	Description
512	572978.776	2413028.549	771.250	1353+19.39	-22.864	BM	BRASS PLUG NW LOCUST

US 6

Point	North	East	Elevation	Station	Offset	Feature	Description
518	592537.753	2412632.930	772.254	251+87.09	22.663	BM	NW COR BRIDGE HWY 6

HORIZONTAL CONTROL

US 218

Point	North	East	Elevation	Station	Offset	Feature	Description
6	557080.895	2420124.548	666.979	167+98.17	-0.940	CP	IP POT 168+00
7	558121.547	2418765.112	715.189	185+10.20	-0.621	CP	IP PC 185+05.9
8	558358.635	2418455.078	725.892	189+00.17	9.568	CP	IP POST 7.34 AH OF OFFICE PI
3	558477.236	2418261.493	730.591	191+26.90	1.204	CP	FENNO
9	558559.902	2418129.156	728.588	192+82.91	0.706	CP	IP PT 192+85.9
4	562183.698	2414830.153	760.617	244+68.26	142.353	CP	FENNO 61/280
5	567089.091	2414007.022	703.871	294+95.63	-91.266	CP	FENNO
12	568055.661	2414104.690	704.177	304+62.90	-0.785	CP	IP PC 304+69.65
13	569330.782	2413971.557	718.926	317+47.72	0.000	CP	IP PT 317+54.65
15	570886.133	2413466.205	752.839	333+75.35	-159.175	CP	FENNO
16	572991.007	2413312.600	768.316	354+64.03	143.307	CP	FENNO NE LOCUST ST BRIDGE
128	574398.514	2412856.039	745.788	369+36.78	0.000	CP	PC REBAR 369+35
101	574912.713	2412881.973	745.070	374+44.10	113.925	CP	FENNO EAST SIDE END ON RAMP LOCUST NB
102	579454.669	2412660.380	673.463	419+98.56	97.321	CP	FENNO NE OF DUCK CREEK BRIDGES
129	587409.808	2412616.787	738.440	499+93.46	0.132	CP	REBAR POT 500+00
121	589240.790	2412797.677	748.913	518+33.36	0.000	CP	REBAR PC STA 518+39
104	589904.464	2412984.278	754.835	525+04.38	140.186	CP	FENNO EAST FENCE STA 525+00 MARKER
120	590735.402	2412848.367	755.370	533+29.85	0.517	CP	REBAR PT STA533+36 BENT
131	592885.770	2412780.200	742.806	554+81.29	0.000	CP	REBAR POT STA 554+87
1	553268.830	2424601.954	601.674	Off Chain	Off Chain	CP	FENNO
105	594840.204	2412884.968	735.438	Off Chain	Off Chain	CP	FENNO EAST FENCE N OF SIGN OH
106	596915.133	2414714.566	740.004	Off Chain	Off Chain	CP	FENNO NE 80/280 SPLIT
107	596967.991	2412876.507	732.279	Off Chain	Off Chain	CP	FENNO CENTER CROSSOVER
108	596763.802	2410712.637	729.114	Off Chain	Off Chain	CP	FENNO N OF DECKER TKG

C.P. STA. 419+98.56, 97.32
CP No. 102, SET FENNO MONUMENT
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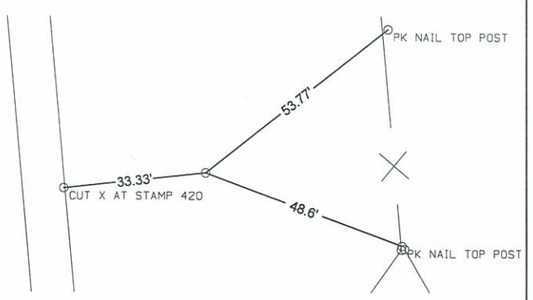

P.C. STA. 400+36.59
CP No. 125, FD REBAR
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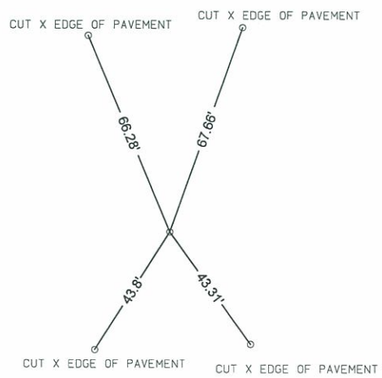

P.I. STA. 408+26.39
CP No. 124, FD REBAR
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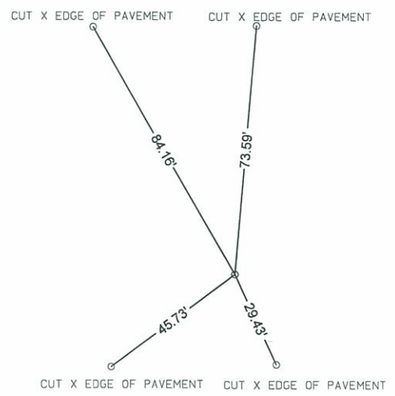

P.C. STA. 45198.09
CP No. 123, FD REBAR
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ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER G.2

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APPROX. STA. 374-375 RT. SIDE
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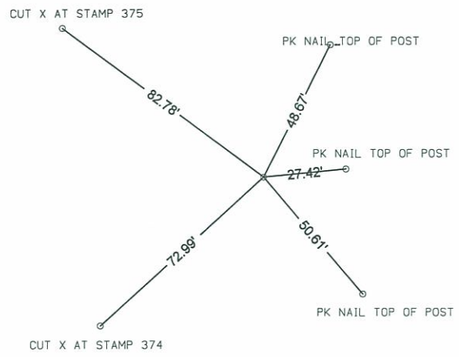

APPROX. STA. 475-476 LT. SIDE
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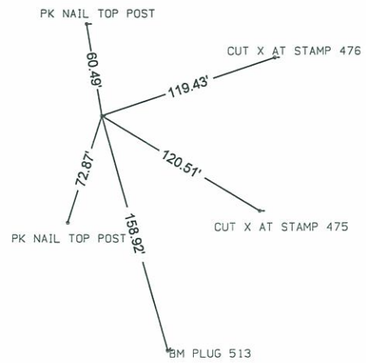

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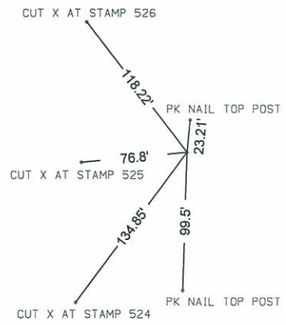

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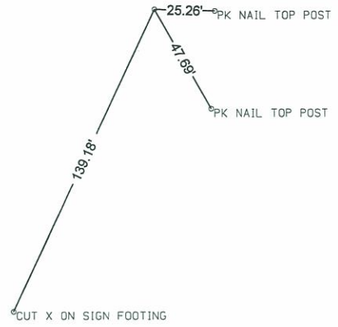

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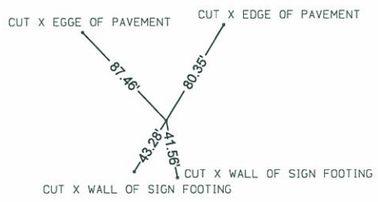

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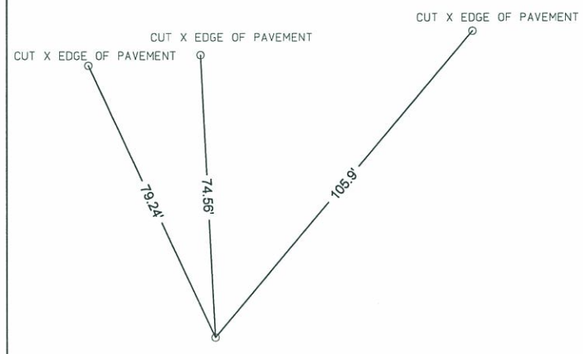

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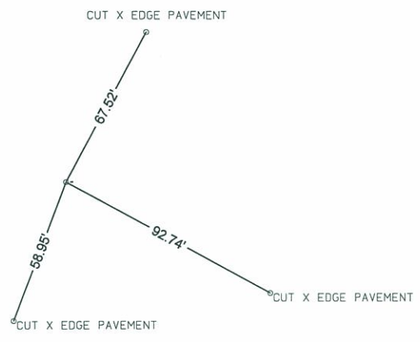

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STAGING NOTES

108-26A
10-29-02

STAGE 1: Traffic

Traffic will operate two lane – two way on the EB I-280 roadway between Sta. 149+00 and Sta. 300+00,

and between Sta. 300+00 and Sta. 514+00 utilizing the three existing median crossovers.

All interchanges are to remain open during construction.

The westbound I-280 entrance and exit ramps will remain open to traffic at all times during the reconstruction of the gore areas.

Existing ramp crossovers built with (143) EB PCC inlay will be utilized to maintain all movements.

STAGE 1: Construction

Construct PCC inlay on the WB I-280 roadway between Sta. 149+00 and Sta. 514+00

Mill, widen, and resurface ramp pavements.

STAGE 2: Traffic

Move traffic on I-280 EB and WB to normal traffic movements and open the newly constructed WB PCC inlay pavement.

STAGE 2: Construction

Remove ramp entrance and exit crossovers.

- Limit contractor from closing entire roadway
- Limit closure time to 10 working days at IA 22 off ramp (B)

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.1

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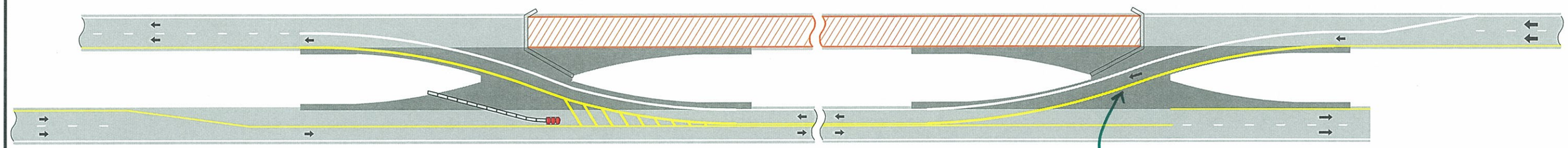

Guidelines on pavement markings

Contractor will be required to paint out curves include this in Construction survey notes

Place Two-Way Traffic symbol and DO NOT PASS signs alternately on both sides of the roadway at a maximum of one-half mile intervals for both directions of travel. Always have signs in sight of motorists.

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Possible Contract Items:

- Painted Symbols and Legends
- Pavement Marking Items
- Pavement Marking Removed
- Safety Closures
- Temporary Barrier Rail
- Temporary Crash Cushions
- Temporary Floodlighting
- Temporary Lane Separator System
- Traffic Control

Possible Tabulations:

108-13A, 108-22, 108-27, 108-29, 108-30, 108-33, 108-35

MODIFIED
STANDARD ROAD PLAN

REVISION 6 04-17-12

TC-61

SHEET 1 of 5

MODIFICATIONS: Changed

TWO-LANE, TWO-WAY OPERATION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.2

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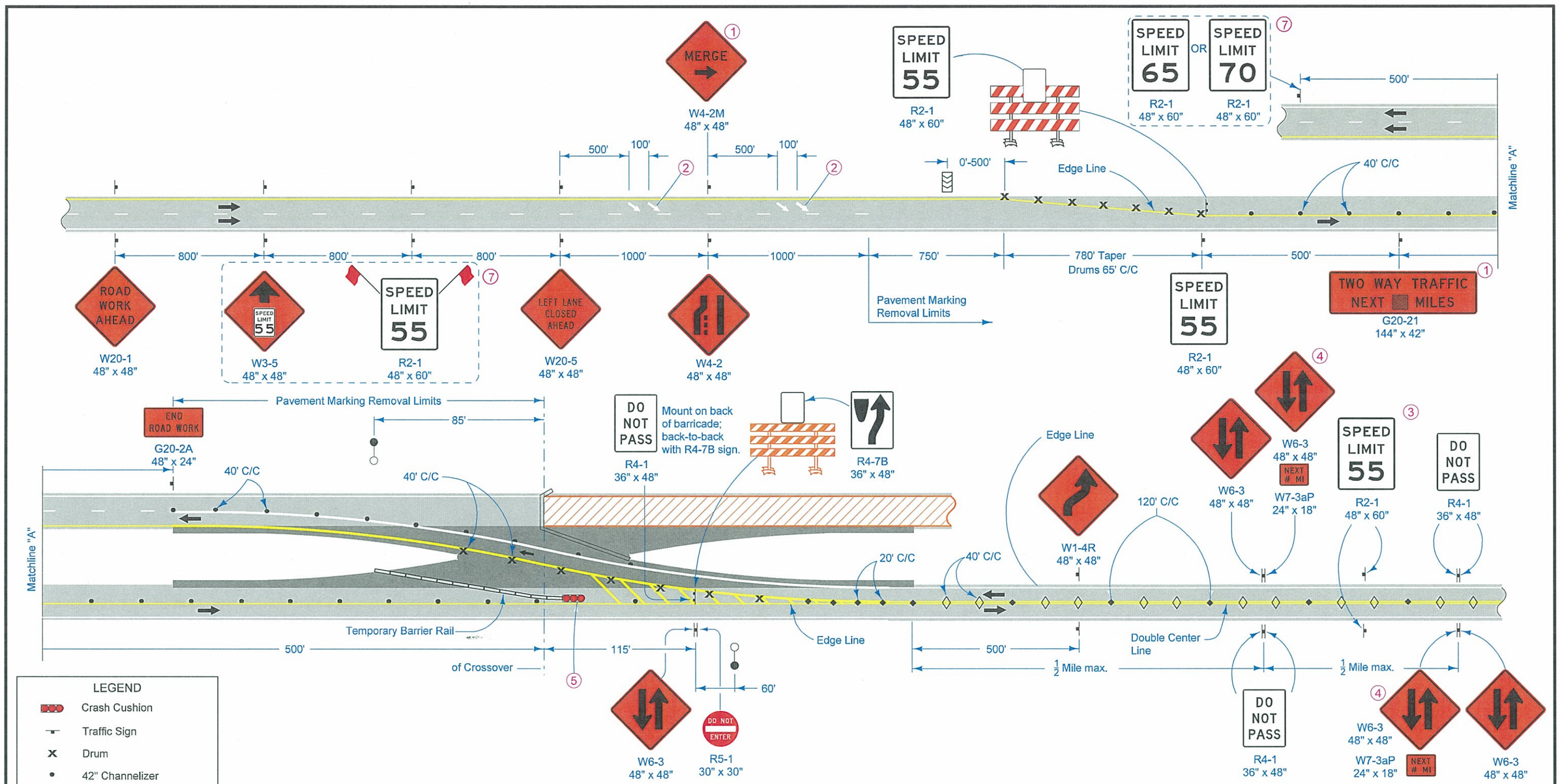

LEGEND

- Crash Cushion
- Traffic Sign
- Drum
- 42" Channelizer
- Channelizer Marker
- Tubular Marker
- Type III Barricade
- Sequencing Arrow
- Safety Closure (Refer to TC-252)
- Temporary Floodlighting
- Work Area
- Direction of Traffic
- Detour Pavement

(1) Refer to SI-881 for sign details.

(2) Refer to PM-111 for arrow details.

(3) Space Speed Limit signs at one-mile intervals.

(4) Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.

(5) Temporary Crash Cushion. Refer to BA-500 for approved sand barrel layouts.

(7) For roadways with a posted speed limit of 60 mph or greater before road work:

Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

MODIFIED STANDARD ROAD PLAN

REVISION	
6	04-17-12

TC-61

SHEET 2 of 5

MODIFICATIONS: Changed

TWO-LANE, TWO-WAY OPERATION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.3

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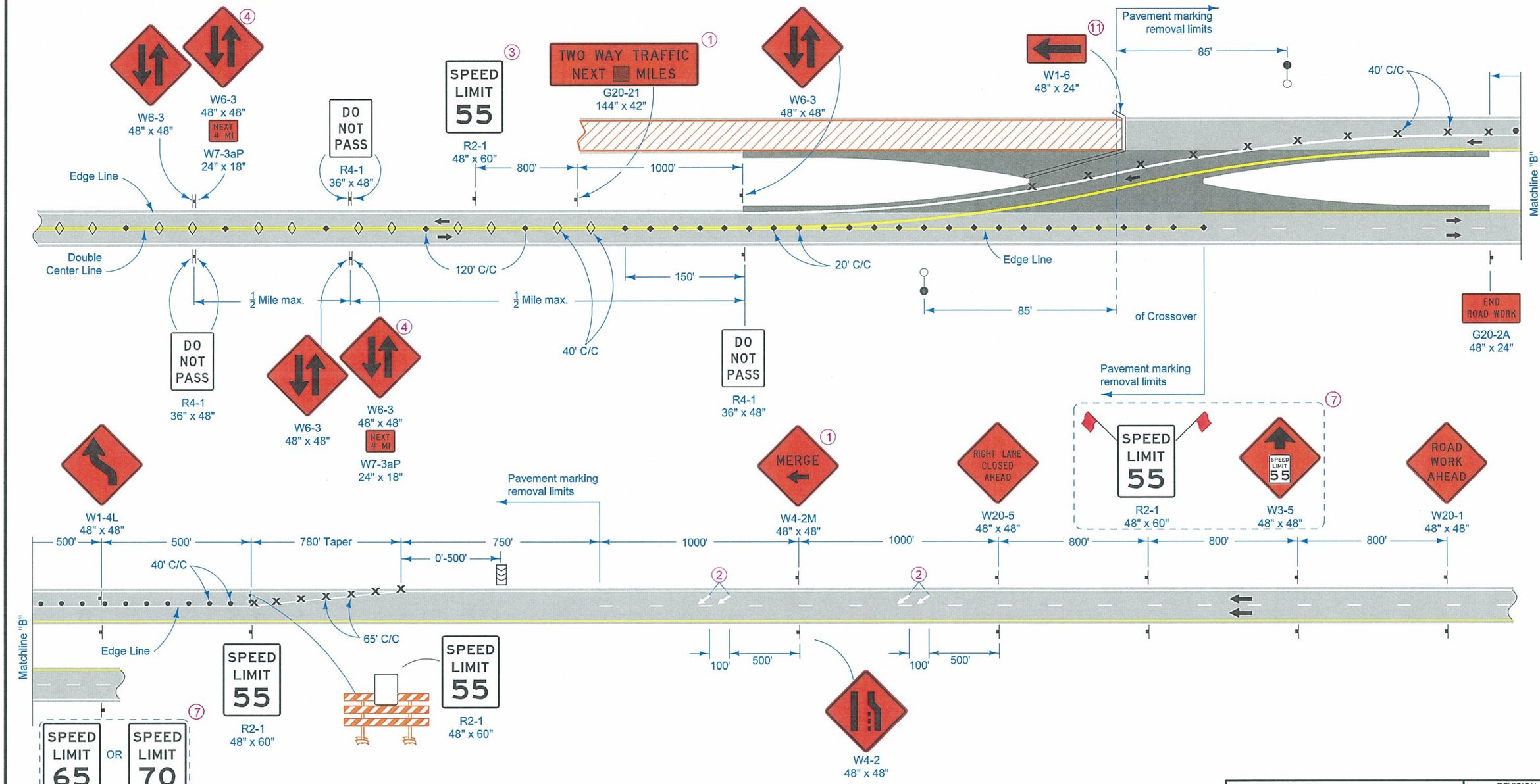


① Refer to SI-881 for sign details.

② Refer to PM-111 for arrow details.

③ Space Speed Limit signs at one-mile intervals.

④ Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.

⑦ For roadways with a posted speed limit of 60 mph or greater before road work:

Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

⑪ Add below R11-2 already included in Safety Closure.

MODIFIED STANDARD ROAD PLAN

REVISION	
6	04-17-12

TC-61

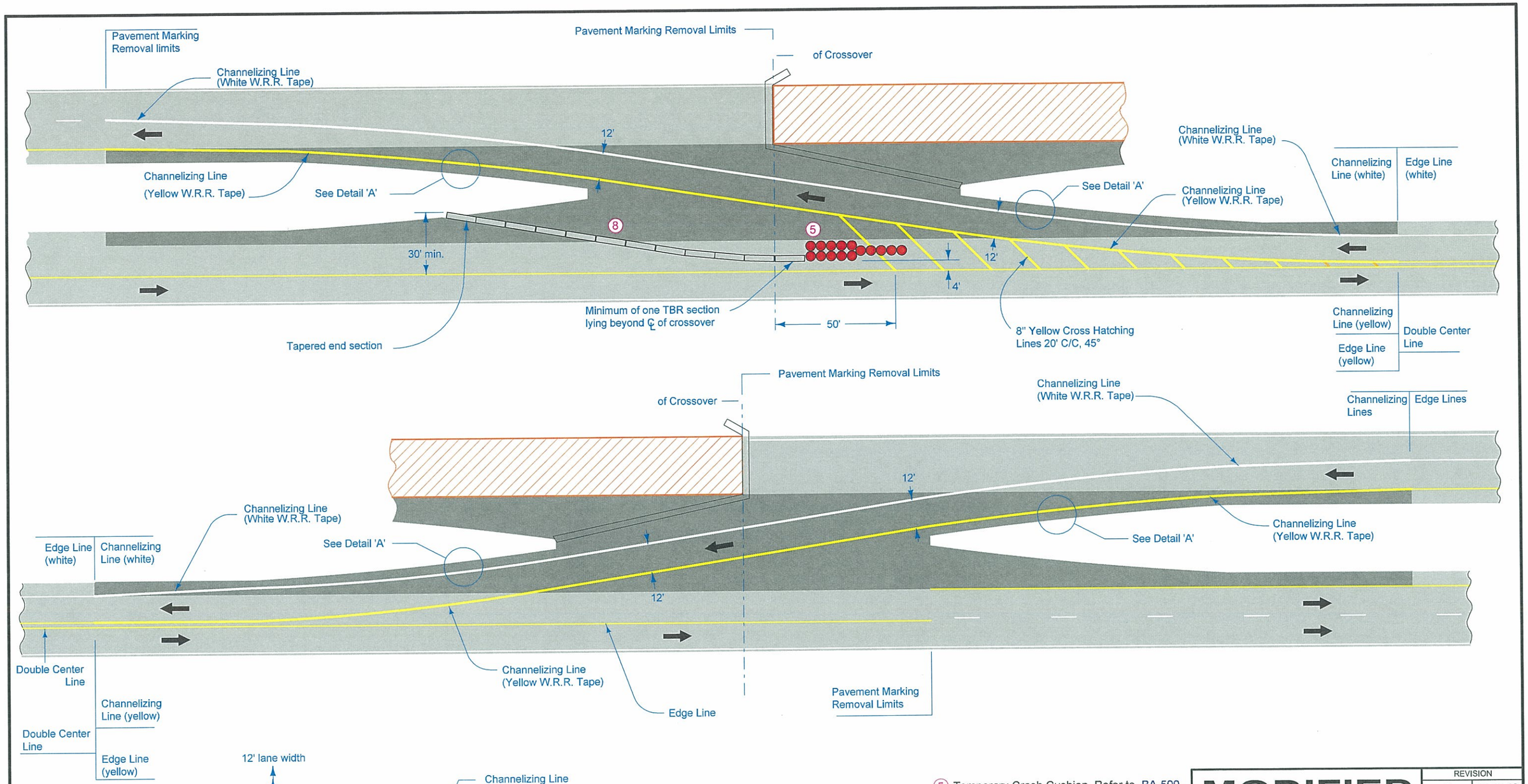
SHEET 3 of 5

MODIFICATIONS: Changed

TWO-LANE, TWO-WAY OPERATION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.4

8:10:01 AM 5/10/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144J1.sht



SUPPLEMENTAL CROSSOVER DRAWINGS (9)

(5) Temporary Crash Cushion. Refer to BA-500 for approved sand barrel layouts.

(8) Number of TBR sections varies based on dimensions of Detour Pavement. Refer to BA-401 and 108-33 for TBR information.

(9) Details shown hereon are intended to provide additional information to the requirements shown on sheets 1 and 2.

MODIFIED STANDARD ROAD PLAN

REVISION	
6	04-17-12

TC-61

SHEET 4 of 5

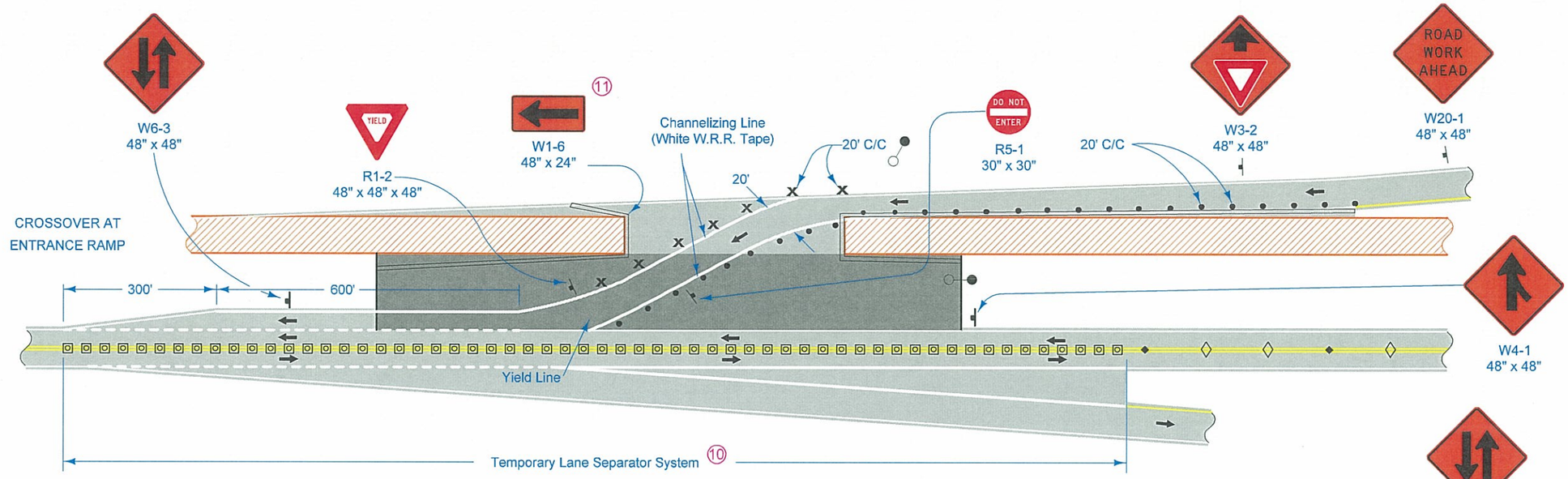
MODIFICATIONS: Changed

TWO-LANE, TWO-WAY OPERATION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.5

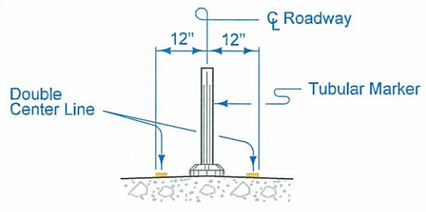
8:10:01 AM 5/10/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144J1.sht

RAMP LOCATIONS



LEGEND

Traffic Sign	Type 'A' Warning Light
Drum	Temporary Floodlighting
42" Channelizer	Work Area
Channelizer Marker	Detour Pavement
Tubular Marker	Direction of Traffic
Type III Barricade	Safety Closure (Refer to TC-252)
Temporary Lane Separator	



PLACEMENT OF
DOUBLE YELLOW CENTERLINE

1. Refer to SI-881 for sign details.
10. Place TLSS from start of ramp gore or start of full width decel lane to end of temporary ramp crossover pavement or end of ramp gore.
11. Add below R11-2 already included in Safety Closure.

MODIFIED
STANDARD ROAD PLAN

REVISION 6 04-17-12

TC-61

SHEET 5 of 5

MODIFICATIONS: Changed

TWO-LANE, TWO-WAY OPERATION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.6

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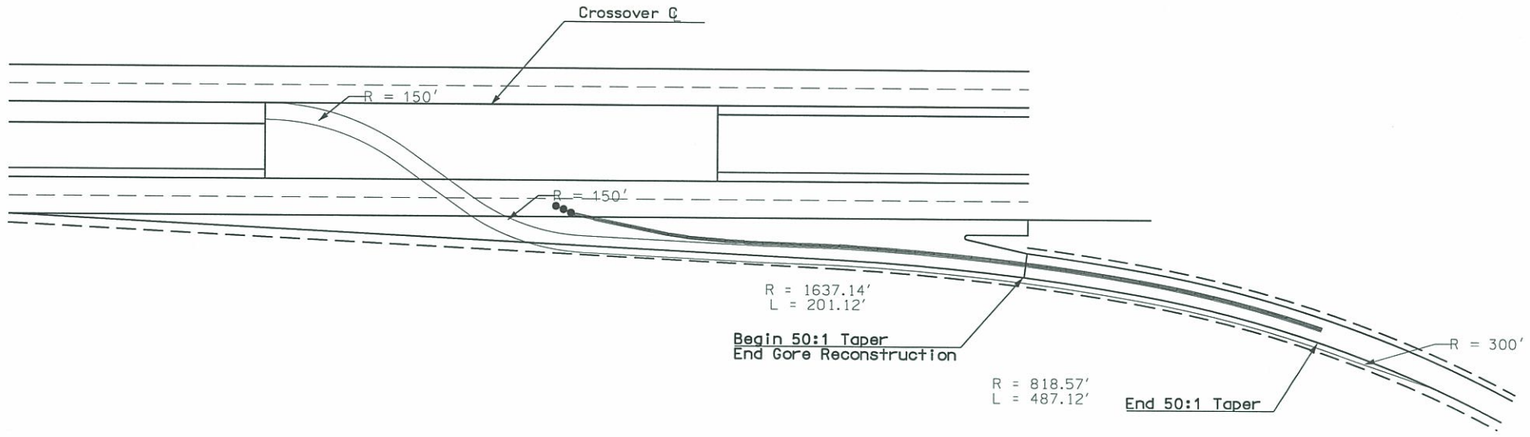

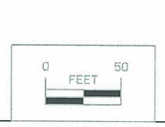

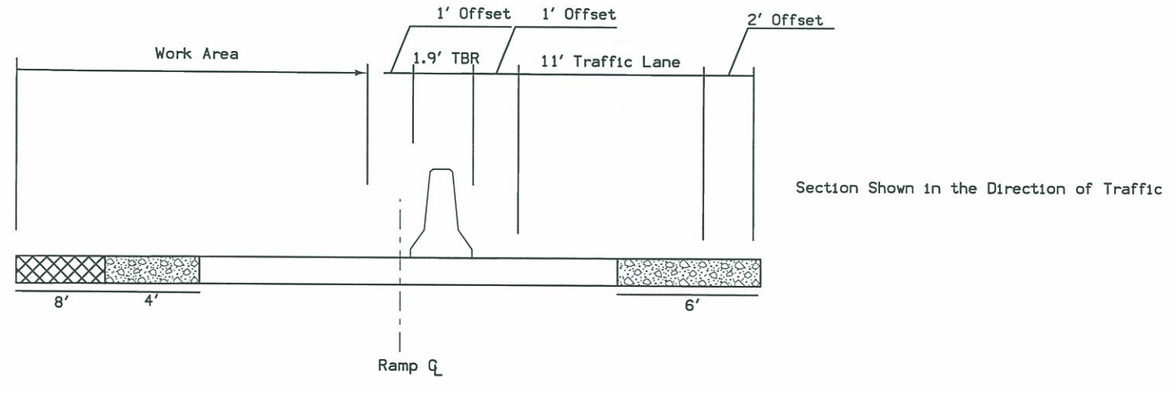

LEGEND

Detour Pavement

SHOULDER WIDENING

STAGE 1
EXIT RAMP

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.7

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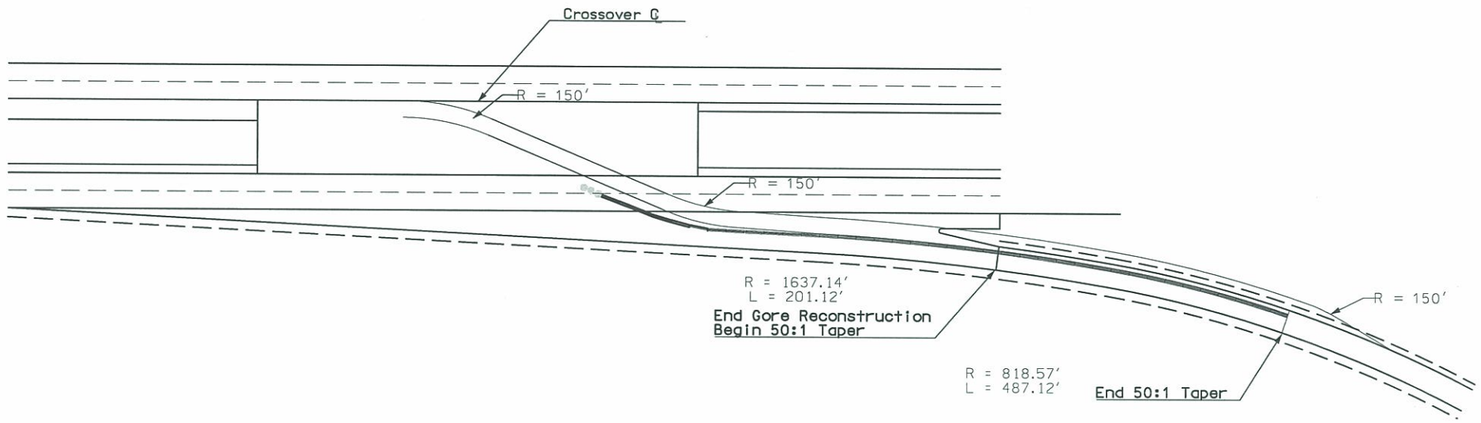

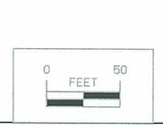

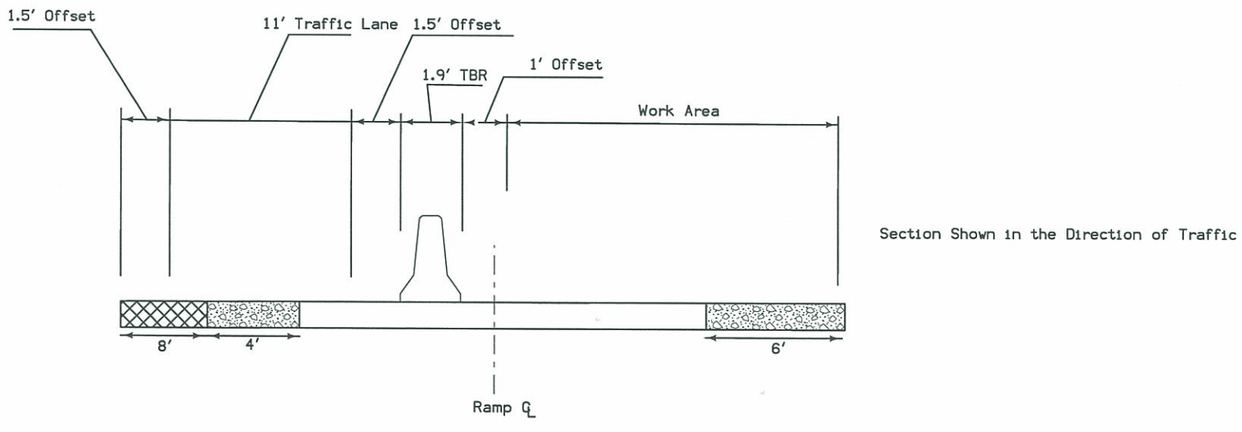

Section Shown in the Direction of Traffic

LEGEND

Detour Pavement

SHOULDER WIDENING

STAGE 2
EXIT RAMP

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.8

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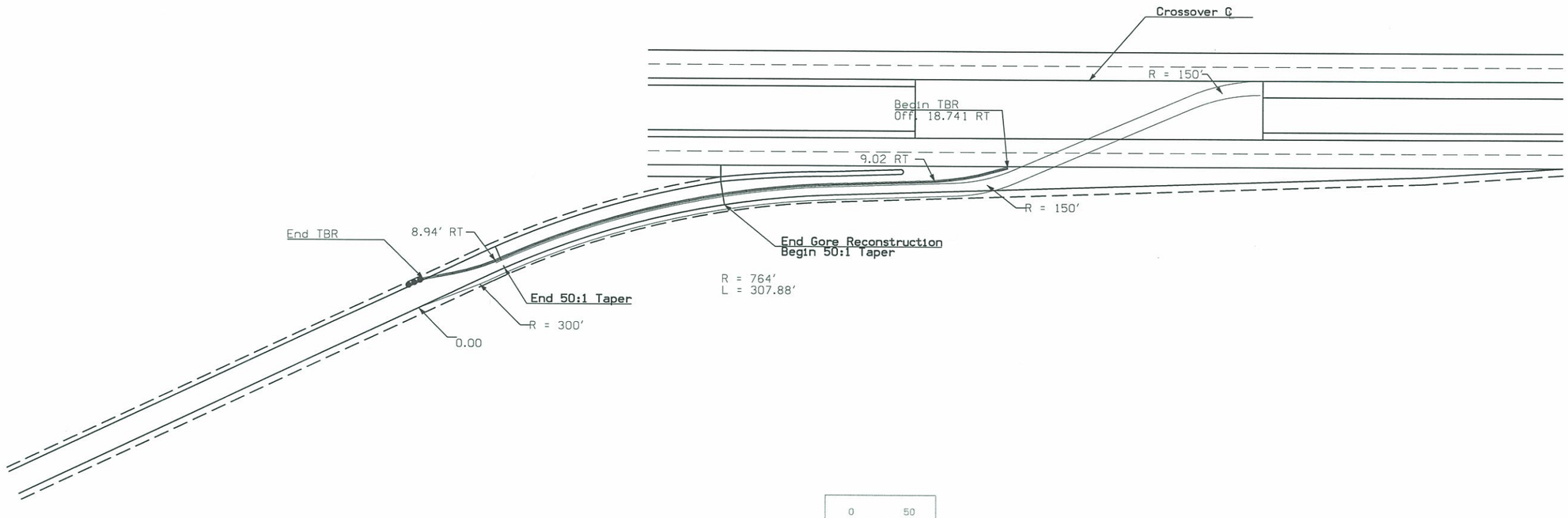
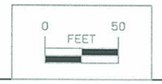
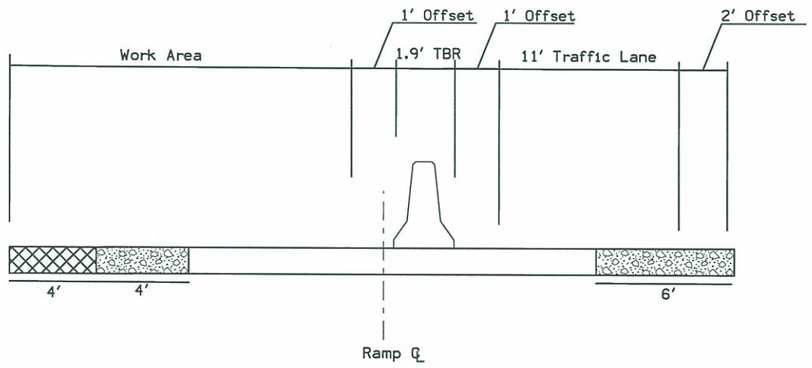






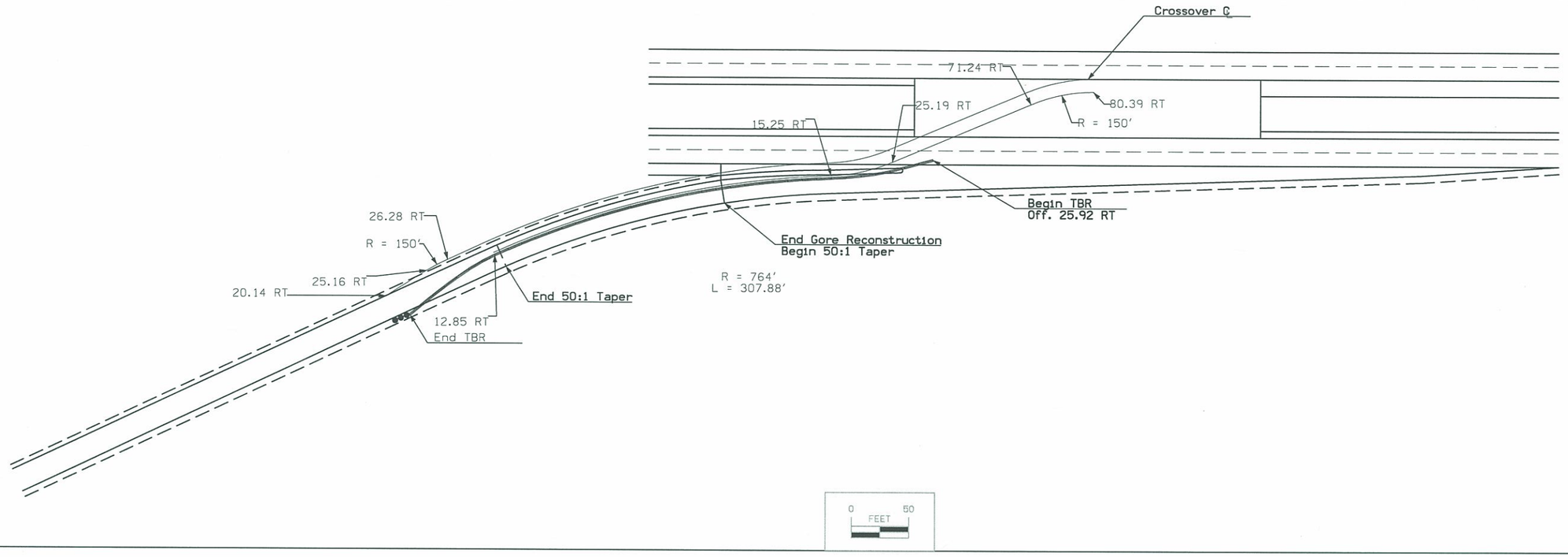
Section Shown in the Direction of Traffic

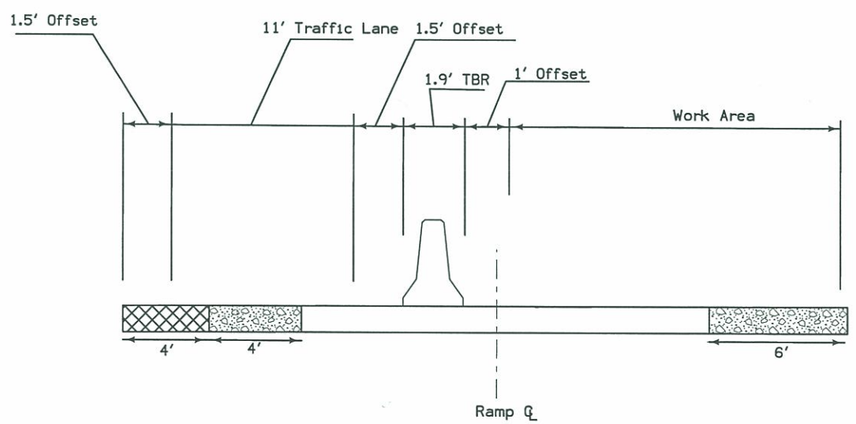
LEGEND

SHOULDER STRENGTHENING

SHOULDER WIDENING

STAGE 1
ENTRANCE RAMP





Section Shown in the Direction of Traffic

LEGEND

SHOULDER STRENGTHENING

SHOULDER WIDENING

STAGE 2
ENTRANCE RAMP

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.10

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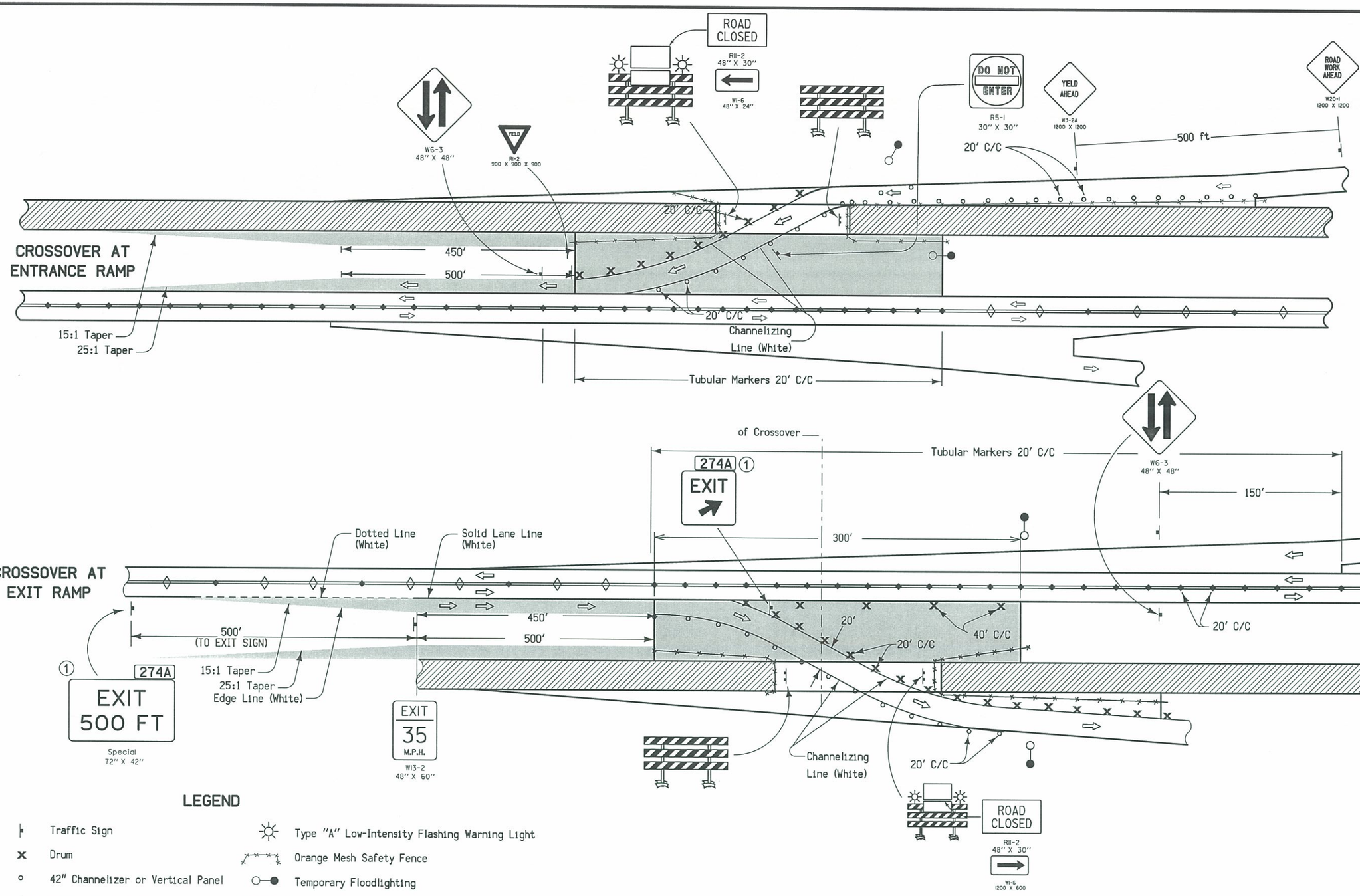

LEGEND

- Traffic Sign
- Drum
- 42" Channelizer or Vertical Panel
- Channelizer Marker
- Tubular Marker
- Type III Barricade
- Type "A" Low-Intensity Flashing Warning Light
- Orange Mesh Safety Fence
- Temporary Floodlighting
- Work Area
- Detour Pavement
- Direction of Traffic

(1) Refer to RD-65 for sign details.

Traffic Control
Entrance and Exit Ramp

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.11

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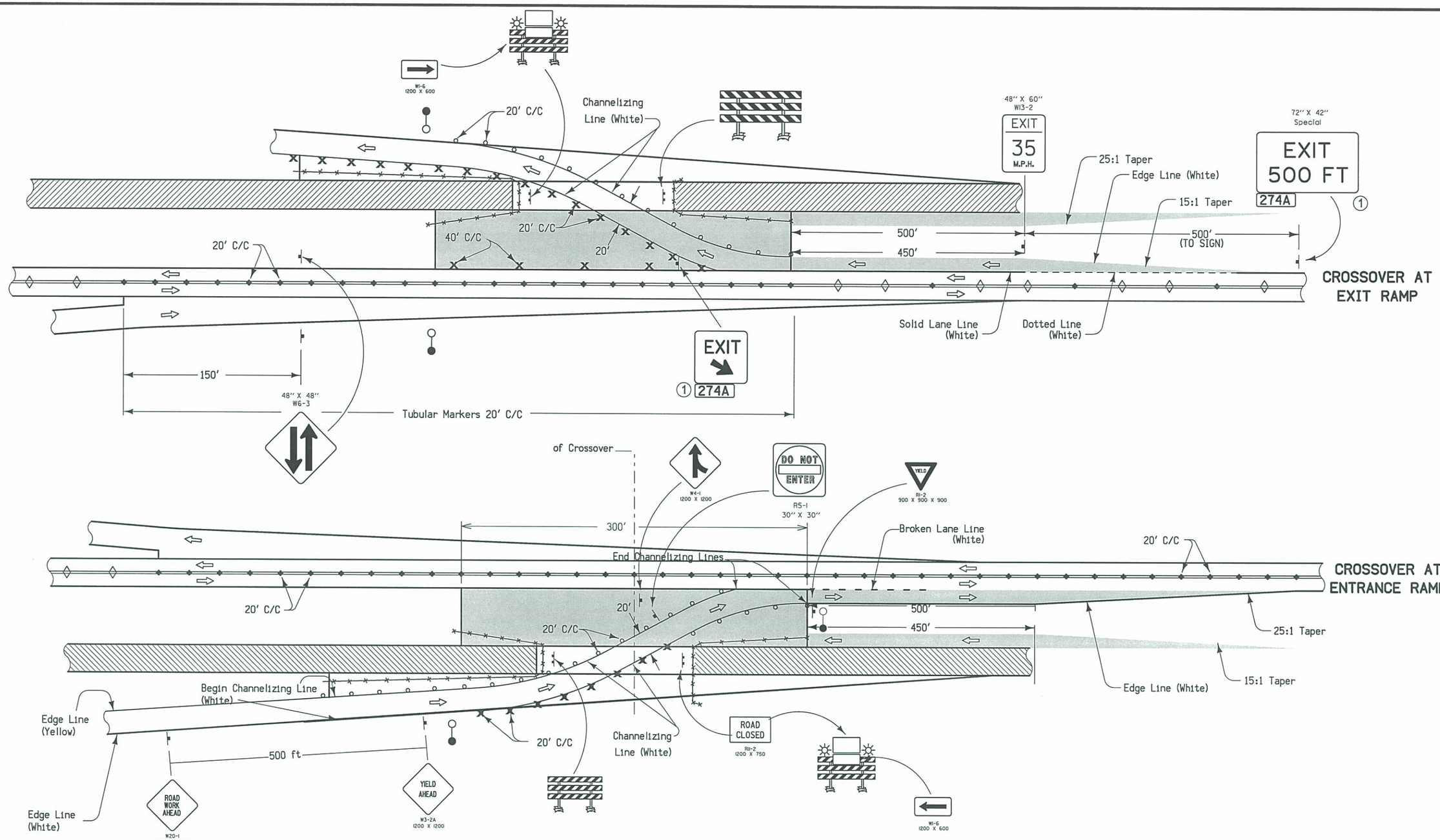

LEGEND

- Traffic Sign
- Drum
- 1050 mm Channelizer
- Channelizer Marker
- Tubular Marker
- Type III Barricade
- Type "A" Low-Intensity Flashing Warning Light
- Orange Mesh Safety Fence
- Temporary Floodlighting
- Work Area
- Detour Pavement
- Direction of Traffic

① Refer to RD-65 for sign details.

Traffic Control
Entrance and Exit Ramp

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER J.12

10:54:49 AM 5/24/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144J1.sht

ROCKINGHAM TWP.
T-77N R-3E
SEC. 8

Curve Data
Δ = 6° 20' 58.32" (LT)
T = 635.65
L = 1,270.00
R = 11,460.00
E = 17.62

130 135 140 145 150 155

PC Sta 134+65.30

P.C. Sta. 3539+98.41
72.0' Lt. P.O.C. Sta. 139+98.41

EQUATION:
PT Sta 147+35.30 BK =
Sta 147+36.00 AH

POT Sta. 154+80.52(I-280)
= POT Sta. 443+41.47(Ia. 22)

Ramp 'C'

Ia. 22 SB

Ia. 22 NB

SEC. LINE

I-280 EB

(ML280)

I-280 WB

PC Sta 443+96.28

PI Sta 141+00.95

2540 2545 2550 2555

STA. 149+00.00
BEGIN CONSTRUCTION
PCC INLAY

Ramp 'B'

P.I. Sta. 2556+67.45(Ramp 'B')
=P.O.S.T. Sta. 29.06' From P.I.(Ia. 22)

Include Milling & resurfacing

0 100
FEET

IA 22 RAMP B

ROCKINGHAM TWP.
T-77N R-3E
SEC. 7

ROCKINGHAM TWP.
T-77N R-3E
SEC. 6

160 165 170 175 180 185

Ramp 'A'

APPROX. SEC. LINE

I-280 (ML280)

I-280 EB

I-280 WB

445

PI Sta 446+89.68

P.I. Sta. 4556+29.43(Ramp 'D')
=P.O.S.T. 85.50' From PI
Sta. 447+75.00(Ia. 22)

30'

26'

15:1

Ramp 'D'

Sta. 4564+98.16
End Taper

600' Shoulder Widening

4560 4565 4570 4575

End Shoulder
Widening
Sta. 4564+38.16

Begin Shoulder
Widening
Sta. 4558+38.16

STA. 4557+23.62
BEGIN CONSTRUCTION
2" HMA Resurfacing

STA. 4571+46.94
END CONSTRUCTION
2" HMA Resurfacing

600' begin 4' shoulder widening

0 100
FEET

IA 22 RAMP D

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron		SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.1

6:18:49 AM 5/8/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144K01.sht

ROCKINGHAM TWP.
T-77N R-3E
SEC. 6

BUFFALO TWP.
T-77N R-2E
SEC. 1

APPROX. SEC. LINE

220

240

245

Ramp 'C'

= POT Sta. 1069+91.40(US. 61)
POT Sta. 247+39.96(I-280)

I-280 EB
(ML280)
I-280 WB

STA. 2530+51.16
BEGIN CONSTRUCTION
2" HMA Resurfacing

2535

26'

15:1

Sta. 2538+95.63
End Taper

P.O.T. Sta. 2546+49.80(Ramp 'B')
= P.O.T. Sta. 1074+00.00(US. 61)

30'

Begin Shoulder
Widening
Sta. 2539+55.63

2540

600' Shoulder Widening

Ramp 'B'

US 61

STA. 2546+14.30
END CONSTRUCTION
2" HMA Resurfacing

End Shoulder
Widening
Sta. 2545+55.63

2545

0 100
FEET

US 61 RAMP B

= POT Sta. 1069+91.40(US. 61)
POT Sta. 247+39.96(I-280)

(SUR_US_61)

APPROX. SEC. LINE

250

Ramp 'A'

255

260

265

BLUE GRASS TWP.
T-78N R-2E
SEC. 36

270

275

(ML280)

I-280 EB

I-280 WB

1070

26'

4560

4555

P.O.T. Sta. 4545+71.14(Ramp 'D')
= P.O.T. Sta. 1074+50.00(US. 61)

US 61

30'

15:1

Sta. 4553+16.60
End Taper

STA. 4556+67.94
END CONSTRUCTION
2" HMA Resurfacing

Ramp 'D'

600' Shoulder Widening

End Shoulder
Widening
Sta. 4552+56.60

4550

Begin Shoulder
Widening
Sta. 4546+56.60

1075

STA. 4546+13.00
BEGIN CONSTRUCTION
2" HMA Resurfacing

0 100
FEET

US 61 RAMP D

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.2

6:18:50 AM 5/8/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144K01.sht

BLUE GRASS TWP.
T-78N R-2E
SEC. 25

POT Sta. 354+62.65(I-280)
= POT Sta. 1354+62.65(County Rd.)

I-280 EB

I-280 (ML280)

I-280 WB

STA. 2540+08.05
BEGIN CONSTRUCTION
2" HMA Resurfacing

2545

26'

Ramp 'B'

15:1

Sta. 2547+35.03
End Taper

Begin Shoulder
Widening
Sta. 2547+95.03

2550

30'

600' Shoulder Widening

POT Sta. 2554+62.14(Ramp'B')
= POT Sta. 1361+10.00(County Rd.)

Locust Street

STA. 2554+50.35
END CONSTRUCTION
2" HMA Resurfacing

End Shoulder
Widening
Sta. 2553+95.03

0 FEET 100

LOCUS ST RAMP B

BLUE GRASS TWP.
T-78N R-2E
SEC. 24

POT Sta. 354+62.65(I-280)
= POT Sta. 1354+62.65(County Rd.)

I-280 EB

I-280 (ML280)

I-280 WB

Locust Street

POT Sta. 4552+19.59(Ramp'D')
= POT Sta. 1361+10.00(County Rd.)

26'

4565

STA. 4565+52.69
END CONSTRUCTION
2" HMA Resurfacing

Ramp 'D'

4560

30'

15:1

Sta. 4559+44.00
End Taper

600' Shoulder Widening

End Shoulder
Widening
Sta. 4558+84.00

4555

Begin Shoulder
Widening
Sta. 4552+84.00

STA. 4552+19.60
BEGIN CONSTRUCTION
2" HMA Resurfacing

0 FEET 100

LOCUS ST RAMP D

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.3

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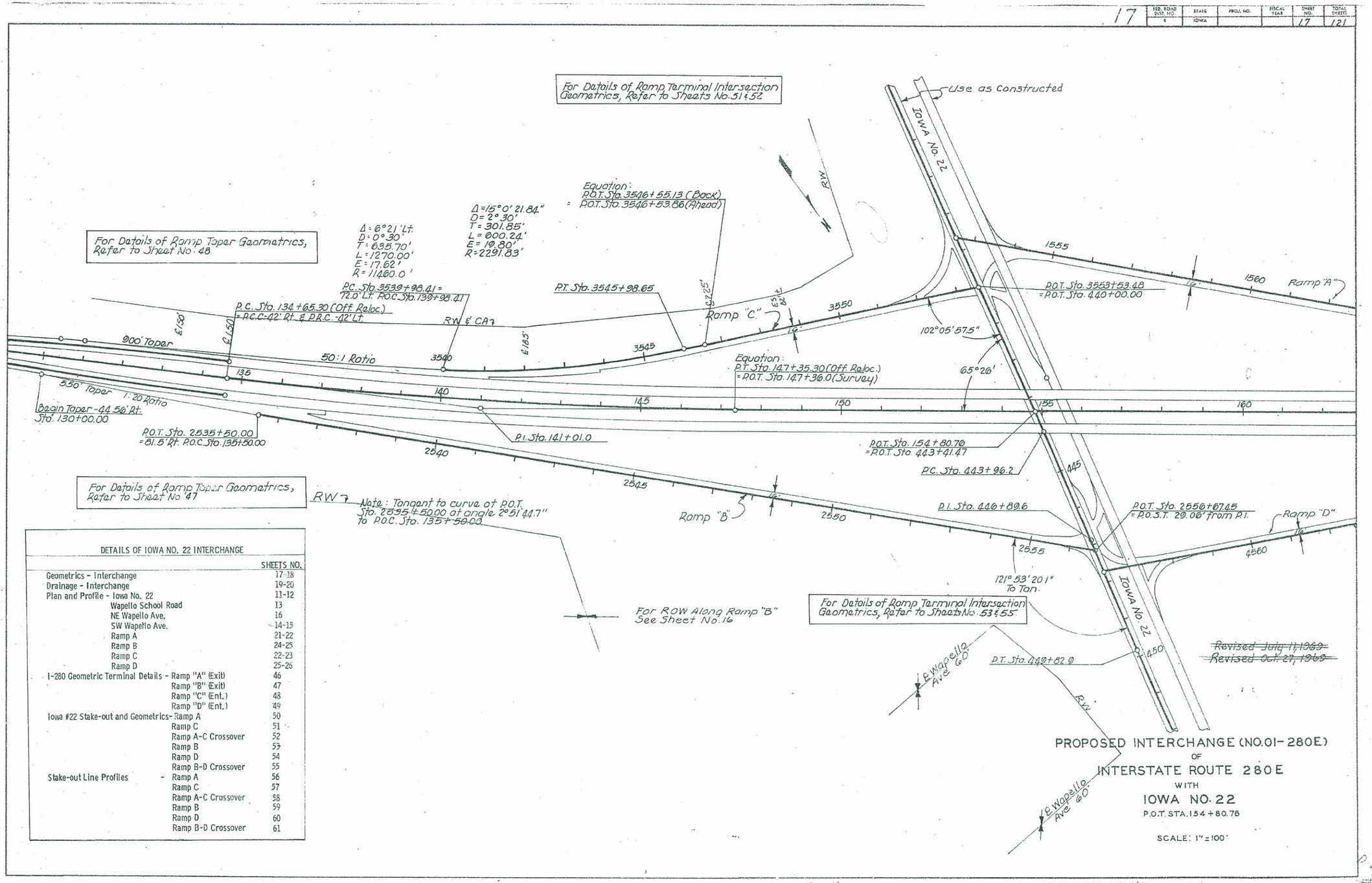


DETAILS OF IOWA NO. 22 INTERCHANGE

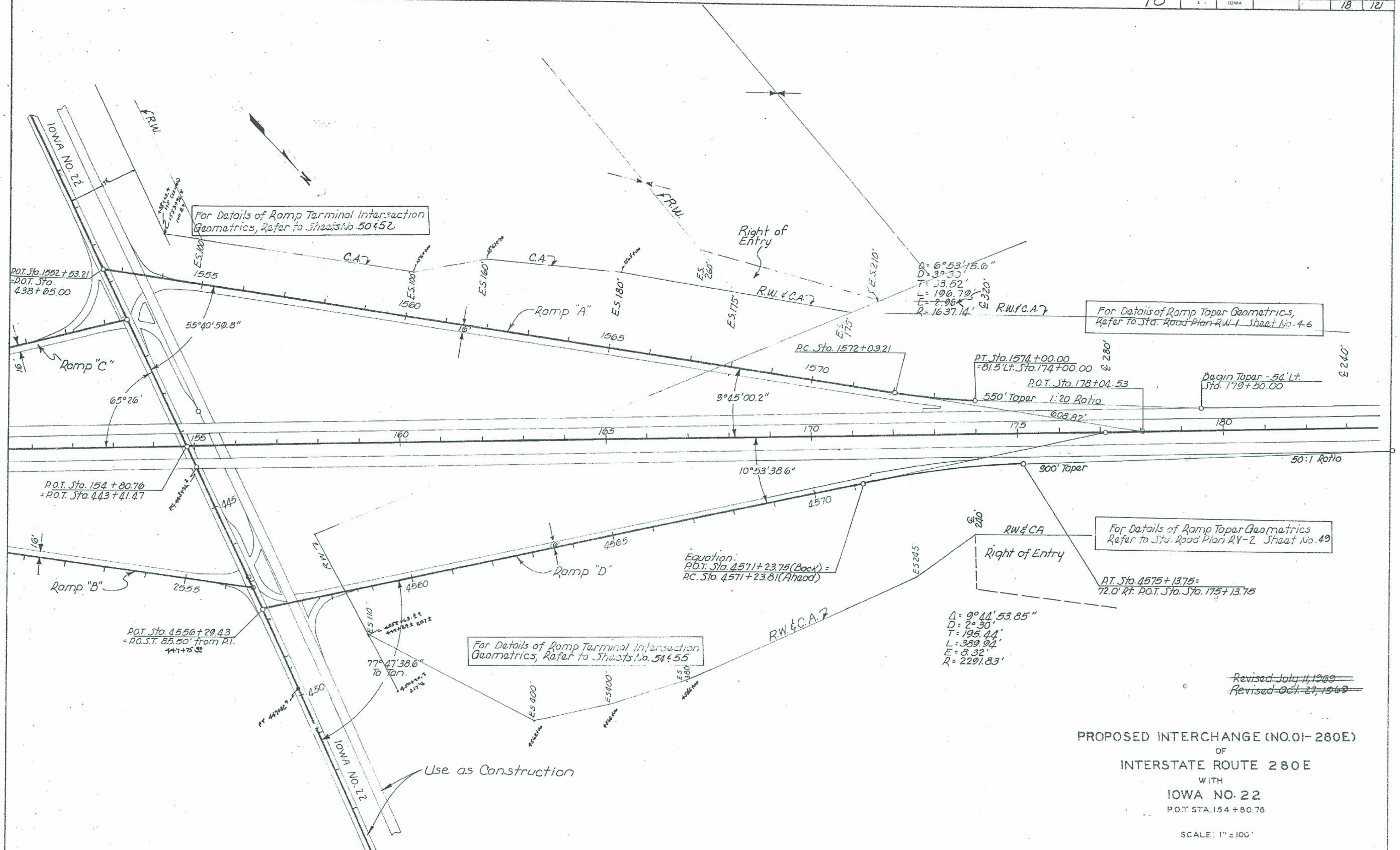
		SHEETS NO.
Geometrics - Interchange		17-18
Drainage - Interchange		19-20
Plan and Profile - Iowa No. 22		11-12
	Wapello School Road	13
	NE Wapello Ave.	16
	SW Wapello Ave.	14-15
	Ramp A	21-22
	Ramp B	24-25
	Ramp C	22-23
	Ramp D	25-26
I-280 Geometric Terminal Details -	Ramp "A" (Exit)	46
	Ramp "B" (Exit)	47
	Ramp "C" (Ent.)	48
	Ramp "D" (Ent.)	49
Iowa #22 Stake-out and Geometrics -	Ramp A	50
	Ramp C	51
	Ramp A-C Crossover	52
	Ramp B	53
	Ramp D	54
	Ramp B-D Crossover	55
Stake-out Line Profiles -	Ramp A	56
	Ramp C	57
	Ramp A-C Crossover	58
	Ramp B	59
	Ramp D	60
	Ramp B-D Crossover	61

Scott COUNTY PROJECT NO. I-IG-280-8(39)209 --04-82 SHEET NO. 17

For Information Only - Not To Scale

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.4

10:05:03 AM 5/8/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144K01.sht



IOWA No. 22
F.R.W.
N
For Details of Ramp Terminal Intersection Geometrics, Refer to Sheets No. 50 & 52
C.A.
Right of Entry
R.W. & C.A.
P.O.T. Sta. 1552 + 53.21 = P.O.T. Sta. 438 + 05.00
55°40'50.8"
Ramp "A"
Ramp "C"
65°26'
Δ = 6°53'15.6"
D = 3°30'
T = 98.52'
L = 196.79'
E = 2.96'
R = 1637.14'
R.W. & C.A.
For Details of Ramp Taper Geometrics, Refer to Std. Road Plan RW-1 Sheet No. 4-6
P.C. Sta. 1572 + 03.21
P.T. Sta. 1574 + 00.00 = 81.5' Lt. Sta. 174 + 00.00
P.O.T. Sta. 178 + 04.53
Begin Taper - 54' Lt. Sta. 179 + 50.00
550' Taper 1:20 Ratio
608.82'
9°45'00.2"
10°53'38.6"
50:1 Ratio
900' Taper
P.O.T. Sta. 154 + 80.76 = P.O.T. Sta. 443 + 41.47
RW & CA
Right of Entry
For Details of Ramp Taper Geometrics Refer to Std. Road Plan RV-2 Sheet No. 49
Equation: P.O.T. Sta. 4571 + 23.75 (Back) = P.C. Sta. 4571 + 23.81 (Ahead)
P.T. Sta. 4575 + 13.75 = 72.0' Rt. P.O.T. Sta. 175 + 13.75
Ramp "D"
Ramp "B"
P.O.T. Sta. 4556 + 29.43 = P.O.S.T. 85.50' from P.I.
For Details of Ramp Terminal Intersection Geometrics, Refer to Sheets No. 54 & 55
R.W. & C.A.
77°47'38.6" To Tan.
Δ = 9°44'53.85"
D = 2°30'
T = 195.44'
L = 389.94'
E = 8.32'
R = 2291.83'
Use as Construction

Revised July 11, 1969

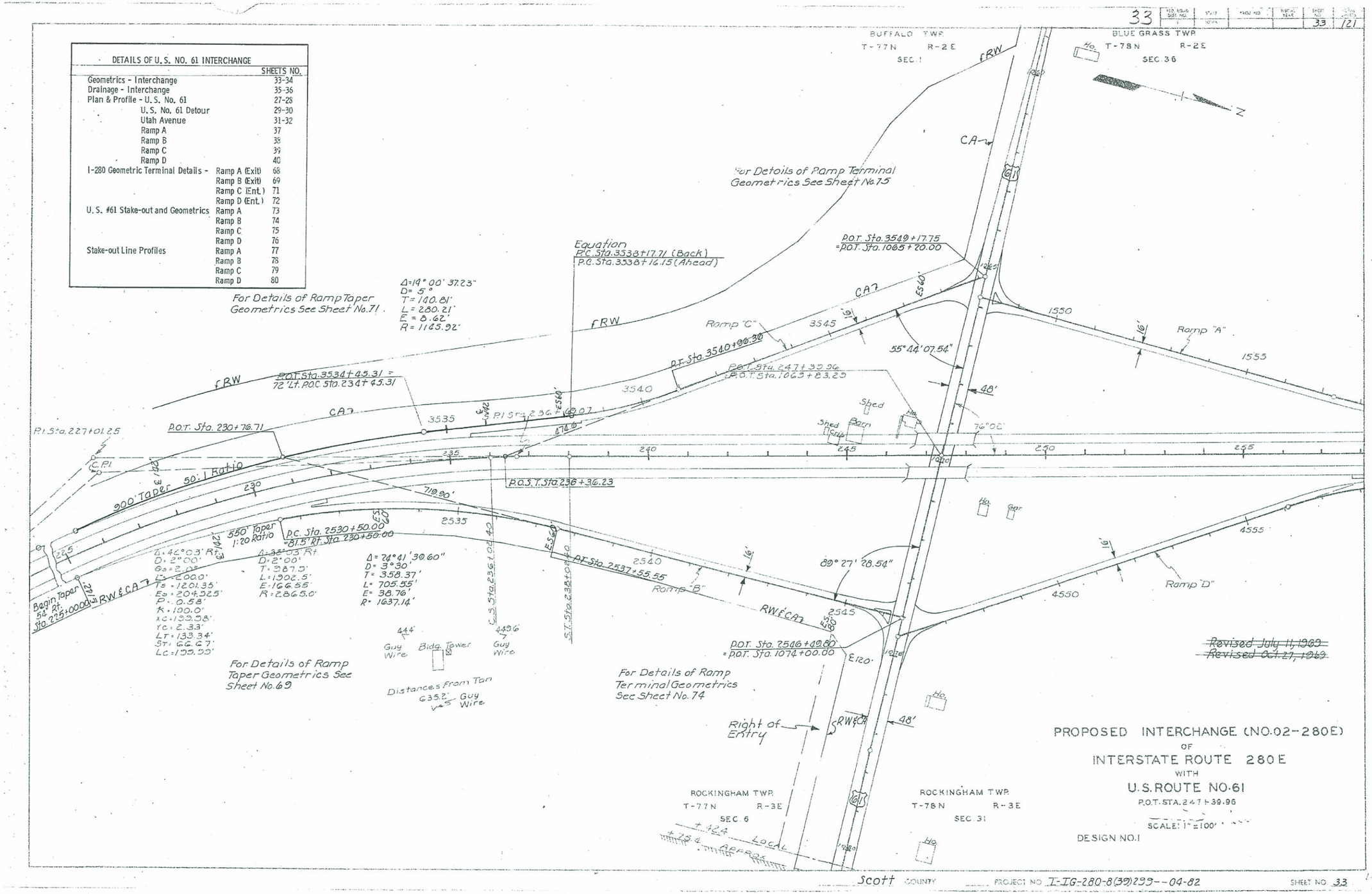
Revised Oct. 27, 1969

PROPOSED INTERCHANGE (NO. 01-280E)
OF
INTERSTATE ROUTE 280E
WITH
IOWA NO. 22
P.O.T. STA. 154 + 80.76

SCALE: 1" = 100'

For Information Only - Not To Scale

DETAILS OF U.S. NO. 61 INTERCHANGE		SHEETS NO.
Geometrics - Interchange		33-34
Drainage - Interchange		35-36
Plan & Profile - U.S. No. 61		27-28
U.S. No. 61 Detour		29-30
Utah Avenue		31-32
Ramp A		37
Ramp B		38
Ramp C		39
Ramp D		40
I-280 Geometric Terminal Details -	Ramp A (Exit)	68
	Ramp B (Exit)	69
	Ramp C (Ent.)	71
	Ramp D (Ent.)	72
U.S. #61 Stake-out and Geometrics	Ramp A	73
	Ramp B	74
	Ramp C	75
	Ramp D	76
Stake-out Line Profiles	Ramp A	77
	Ramp B	78
	Ramp C	79
	Ramp D	80



~~Revised July 11, 1969~~
~~Revised Oct. 27, 1969~~

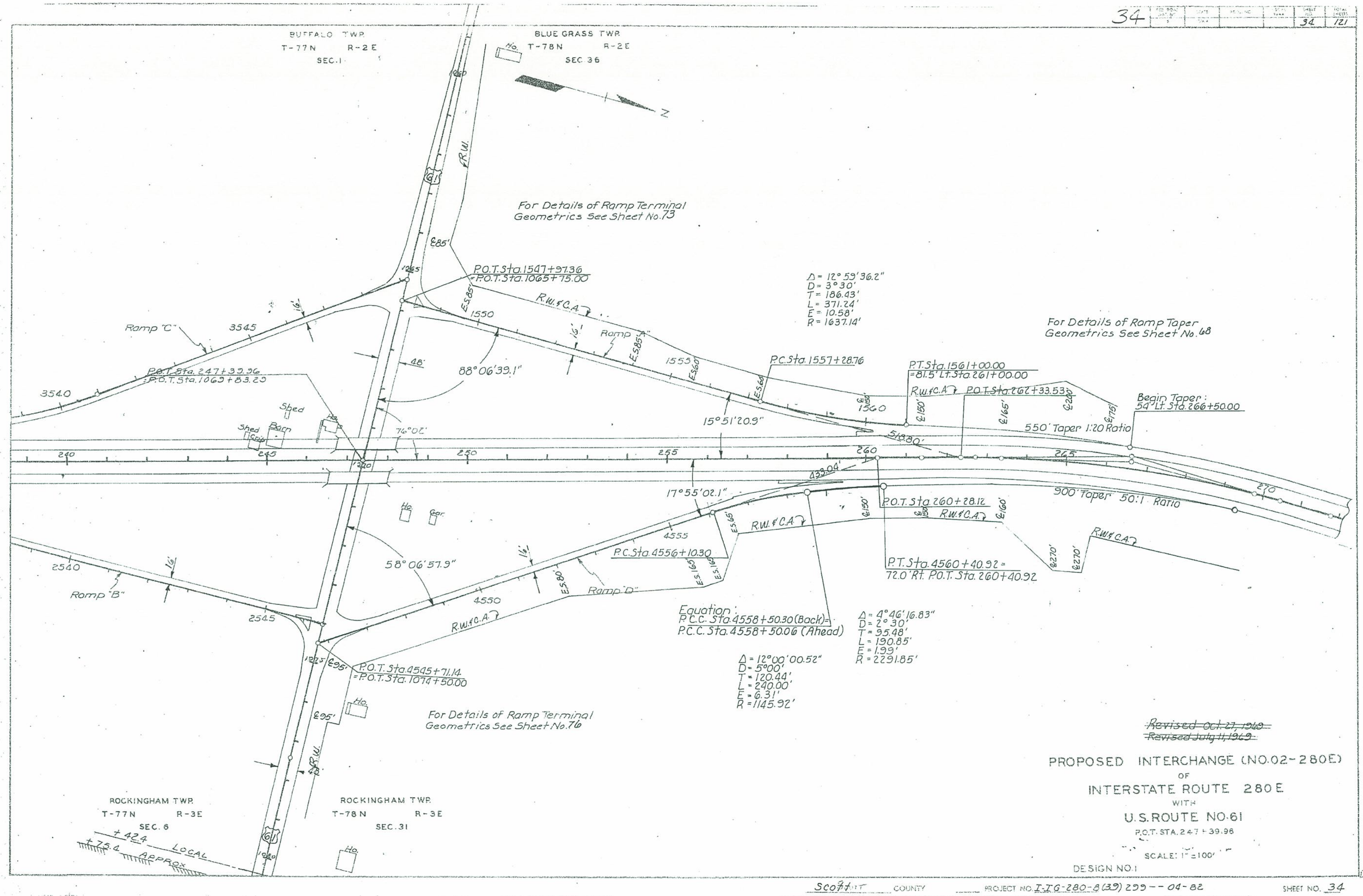
PROPOSED INTERCHANGE (NO. 02-280E)
OF
INTERSTATE ROUTE 280E
WITH
U.S. ROUTE NO. 61
P.O.T. STA. 247+39.96
SCALE: 1" = 100'
DESIGN NO. 1

Scott COUNTY PROJECT NO. I-IG-280-8(39)233--04-82 SHEET NO. 33

For Information Only - Not To Scale

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.6

10:05:55 AM 5/8/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144K01.sht



For Information Only - Not To Scale

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.7

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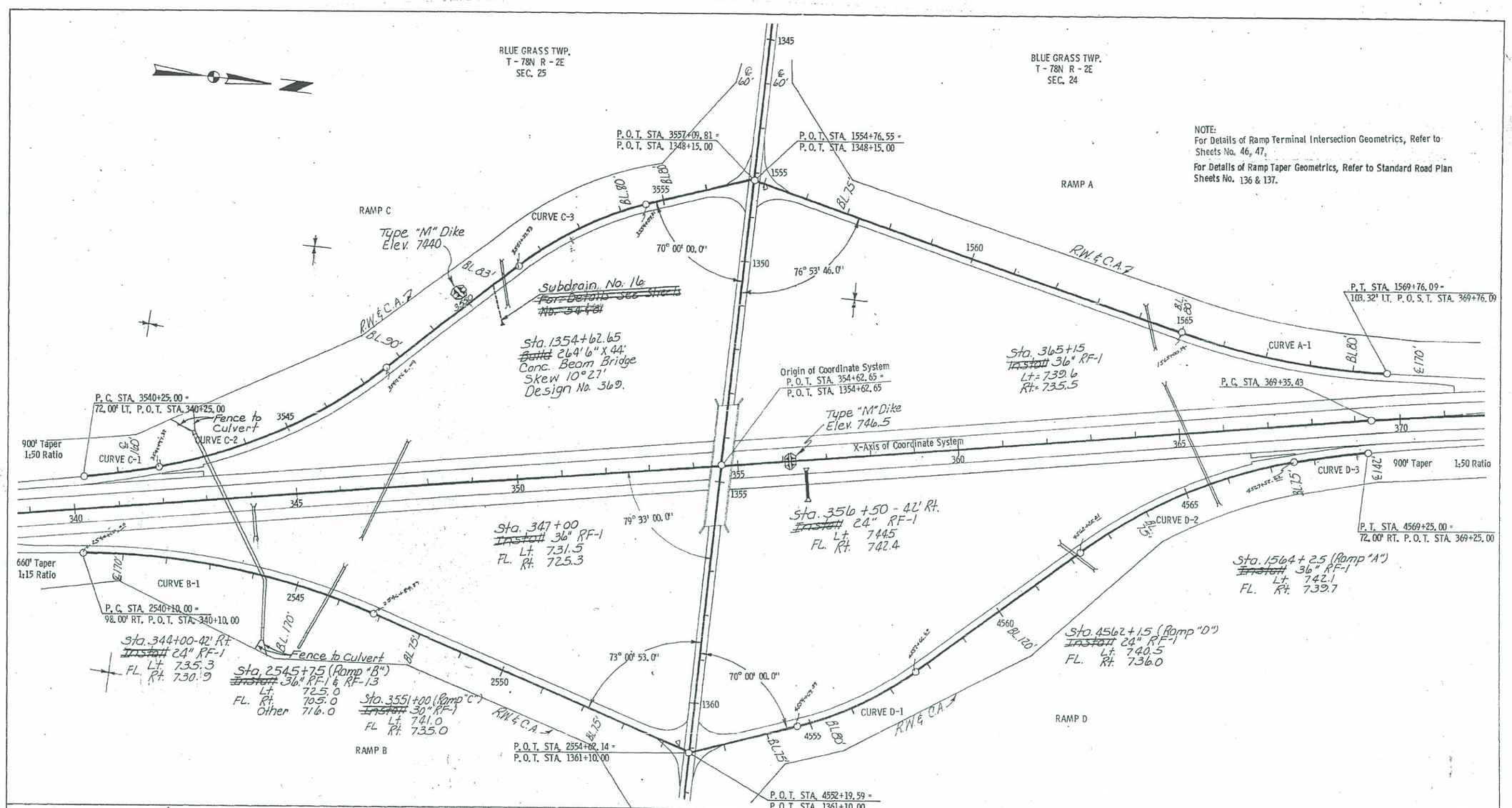

CIRCULAR CURVE SYSTEM

101-10

NO.	P. C. STATION	P. C. COORDINATES X	P. C. COORDINATES Y	P. I. STATION	P. I. COORDINATES X	P. I. COORDINATES Y	P. T. STATION	P. T. COORDINATES X	P. T. COORDINATES Y	Δ	D	T	L	E	R
A-1	1565+00.14	+1055.77	+227.87	1567+39.82	+1275.49	+132.09	1569+76.09	+1513.44	+103.32	16° 39' 29.5"	3° 30'	239.68	475.95	17.45	1637.14
B-1	2540+10.00	-1452.65	- 98.00	2543+52.33	-1111.08	-120.77	2546+84.89	- 807.24	-278.50	23° 37' 16.3"	3° 30'	342.33	674.89	35.41	1637.14
C-1	3540+25.00	-1437.65	+ 72.00	3541+11.24	-1351.43	+ 73.73	3541+97.38	-1265.58	+ 81.92	4° 18' 34.2"	2° 30'	86.24	172.38	1.62	2292.00
C-2	3541+97.38	-1265.58	+ 81.92	3544+85.62	- 978.65	+109.33	3547+62.09	- 738.83	+269.21	28° 14' 08.6"	5° 00'	288.24	564.71	35.69	1146.00
C-3	3551+37.93	- 426.11	+477.70	3553+01.32	- 290.18	+568.33	3554+59.81	- 129.07	+595.43	24° 08' 27.6"	7° 30'	163.38	321.88	17.27	764.00
D-1	4554+69.59	+ 129.12	-595.14	4556+20.00	+ 277.45	-570.18	4557+66.60	+ 405.25	-490.86	22° 16' 31.9"	7° 30'	150.41	297.01	14.67	764.00
D-2	4562+25.21	+ 794.91	-249.03	4564+93.69	+1023.02	-107.48	4567+52.62	+1290.28	- 81.92	26° 22' 12.9"	5° 00'	268.48	527.41	33.08	1146.00
D-3	4567+52.62	+1290.28	- 81.92	4568+38.86	+1376.13	- 73.73	4569+25.00	+1462.35	- 72.00	4° 18' 34.2"	2° 30'	86.24	172.38	1.62	2292.00

DRAINAGE LAYOUT
PROPOSED INTERCHANGE
OF
INTERSTATE ROUTE NO. 280
WITH
COUNTY TRUNK ROAD "C"

SCOTT COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IMX-280-8(144)2--02-82	IOWA	5		21	104

For Information Only - Not To Scale

Locust Street Interchange

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER K.8

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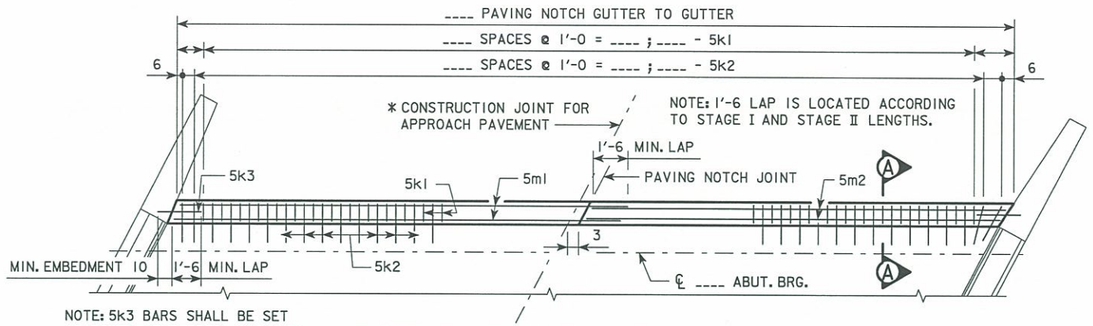
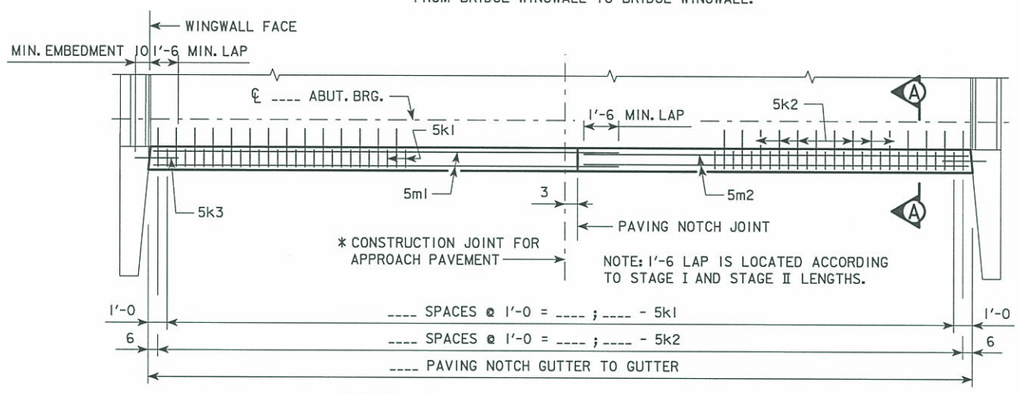


NOTE: 5k3 BARS SHALL BE SET AS DOWELS EMBEDDED 10 INCHES MINIMUM INTO THE EXISTING BRIDGE WINGWALLS AND EXTENDING A MINIMUM OF 1'-6 INTO THE NEW PAVING NOTCH REPLACEMENT.

PART PLAN VIEW AT ABUTMENT

NOTE:
NEW PAVING NOTCH REPLACEMENT SHOULD EXTEND FROM BRIDGE WINGWALL TO BRIDGE WINGWALL.



NOTE: 5k3 BARS SHALL BE SET AS DOWELS EMBEDDED 10 INCHES MINIMUM INTO THE EXISTING BRIDGE WINGWALLS AND EXTENDING A MINIMUM OF 1'-6 INTO THE NEW PAVING NOTCH REPLACEMENT.

PART PLAN VIEW AT ABUTMENT

NOTE:
NEW PAVING NOTCH REPLACEMENT SHOULD EXTEND FROM BRIDGE WINGWALL TO BRIDGE WINGWALL.

* CONSTRUCTION JOINT FOR NOTCH REPAIR TO EXTEND A MINIMUM OF 3 INCHES PAST CONSTRUCTION JOINT FOR PAVEMENT. PROVIDE 1'-6 MINIMUM LAP FOR REINFORCEMENT

DOWEL SETTING NOTE:

THE DEFORMED 5k2 & 5k3 BARS SHALL BE SET AS DOWELS IN DRILLED HOLES. HOLES ARE TO BE 10" DEEP. A POLYMER GROUT SYSTEM SHALL BE USED TO INSTALL THE DEFORMED DOWEL BARS IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 2301.12, CURRENT SUPPLEMENTAL SPECIFICATIONS OF THE IOWA D.O.T. - HIGHWAY DIVISION, AND THE GROUT MANUFACTURER'S RECOMMENDATIONS.

NOTE:
USE RK-20 APPROACH PAVEMENT STANDARD FOR MOVEABLE ABUTMENT.

LOCATION

?
T-?N R-?W
SECTION ?
? TOWNSHIP
? COUNTY
BRIDGE MAINT. NO. ?

PAVING NOTCH REPLACEMENT NOTES:

THE PAVING NOTCH REPLACEMENT IS TO BE CLASS "C" STRUCTURAL CONCRETE.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

THE BID ITEM "PAVING NOTCH REPLACEMENT" LINEAR FEET, SHALL INCLUDE ALL COSTS OF LABOR AND MATERIALS ASSOCIATED WITH EXCAVATION, REMOVING AND DISPOSING OF THE EXISTING PAVING NOTCH AND INSTALLING THE NEW NOTCH. THIS WORK SHALL INCLUDE, CUTTING OF EXISTING #4 BARS, PAINTING THE ENDS OF THE #4 BARS, REMOVING THE CONCRETE FOR THE SHEAR KEYWAYS, DRILLING THE HOLES FOR THE DEFORMED DOWELS AND CONSTRUCTING THE NEW NOTCH TO THE DIMENSIONS SHOWN. THE NEW NOTCH IS ESTIMATED AT 0.07 CUBIC YARDS PER FOOT OF STRUCTURAL CONCRETE AND 16.0 POUNDS OF EPOXY COATED REINFORCING STEEL PER FOOT.

REMOVALS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS.

THESE BRIDGE PLANS LABEL ALL REINFORCING STEEL WITH ENGLISH NOTATION (5a1 IS $\frac{5}{8}$ INCH DIAMETER BAR). ENGLISH REINFORCING STEEL RECEIVED IN THE FIELD MAY DISPLAY THE FOLLOWING "BAR DESIGNATION". THE "BAR DESIGNATION" IS THE STAMPED IMPRESSION ON THE REINFORCING BARS, AND IS EQUIVALENT TO THE BAR DIAMETER IN MILLIMETERS.

ENGLISH SIZE	3	4	5	6	7	8	9	10	11
BAR DESIGNATION	10	13	16	19	22	25	29	32	36

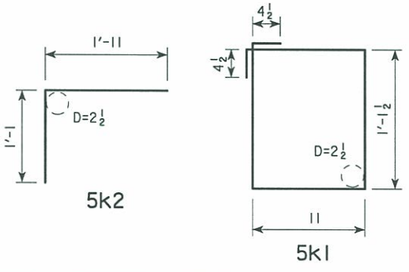
SPECIFICATIONS:

DESIGN: AASHTO SERIES OF 2002.
CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2001, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 2002.
REINFORCING STEEL IN ACCORDANCE WITH SECTION 8, GRADE 60.
CONCRETE IN ACCORDANCE WITH SECTION 8, f'c = 3,500 PSI.

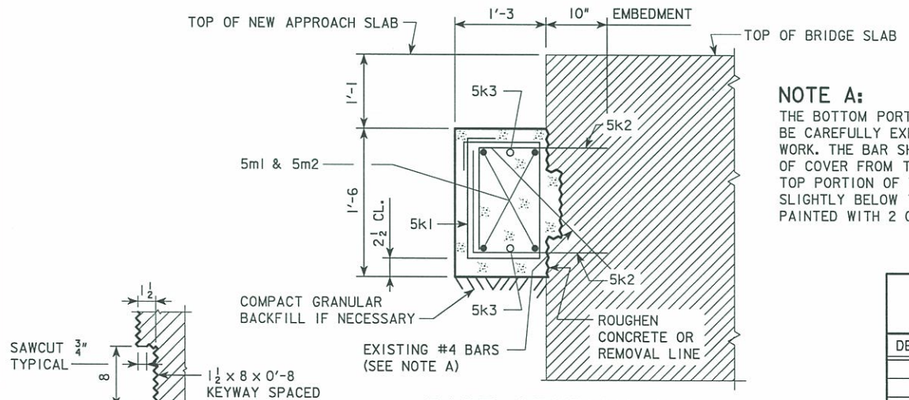
BENT BAR DETAILS



NOTE: ALL REINFORCING IS TO BE EPOXY COATED.

NOTE: ALL DIMENSIONS ARE OUT TO OUT. D=PIN DIAMETER.

NOTE: 5k2 BARS AT 1'-0 CENTERS ARE TO BE PLACED AT THE TOP & BOTTOM OF THE PAVING NOTCH. THE 5k1 BARS AT 1'-0 CENTERS ARE CENTERED BETWEEN THE 5k2 BARS.



PART SECTION A-A

NOTE: DOWELS SHALL BE PLACED TO MISS ANY EXISTING REINFORCING STEEL EXPOSED DURING REMOVALS.

1½" x 8" KEYWAY DETAIL

NOTE A:

THE BOTTOM PORTION OF THE EXISTING #4 BARS SHALL BE CAREFULLY EXPOSED AND INCORPORATED INTO NEW WORK. THE BAR SHALL BE CUT OFF TO PROVIDE 2 INCHES OF COVER FROM THE TOP OF THE NEW PAVING NOTCH. THE TOP PORTION OF THE BAR SHALL BE CUT OFF FLUSH OR SLIGHTLY BELOW THE CONCRETE SURFACE AND THE ENDS PAINTED WITH 2 COATS OF ZINC RICH PAINT.

DESIGN HISTORY AT THIS SITE

DES. NO.	TYPE OF WORK
	ORIGINAL DESIGN

PAVING NOTCH REPLACEMENT DETAILS

For Field Exam Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.1

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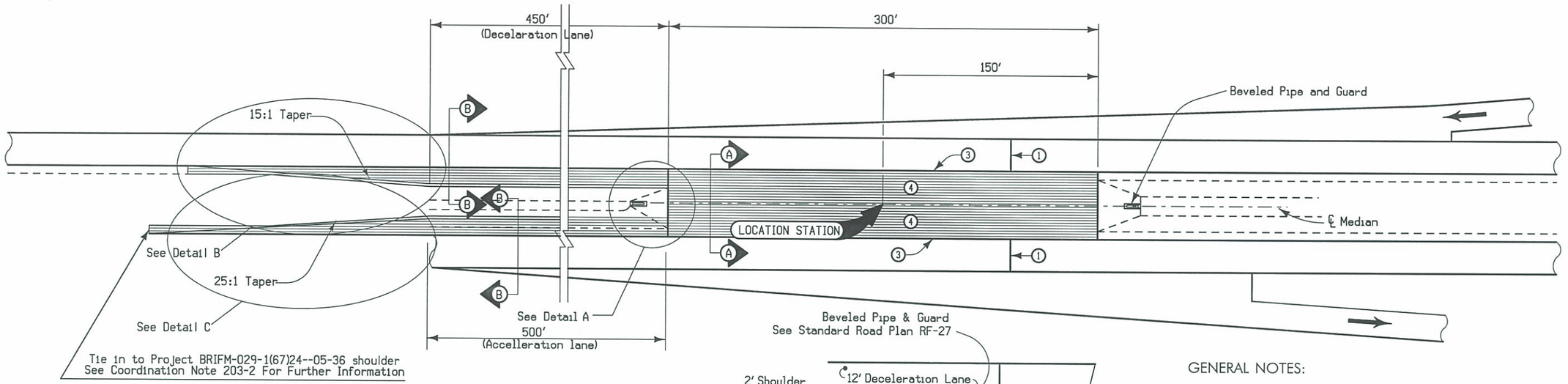
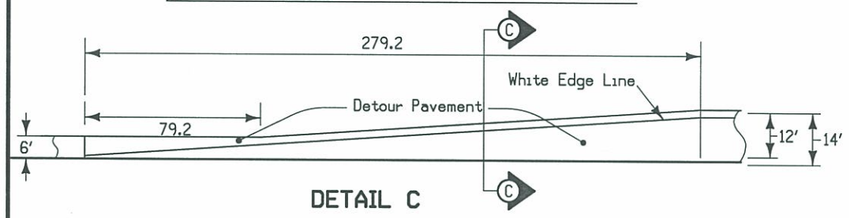
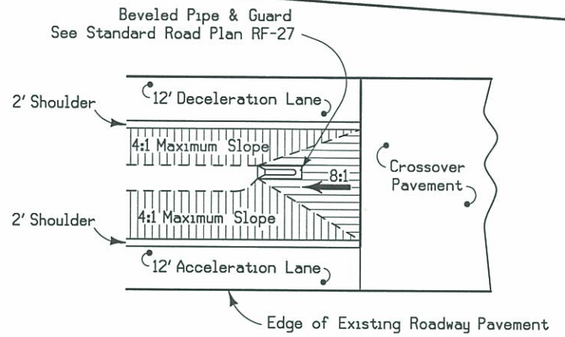
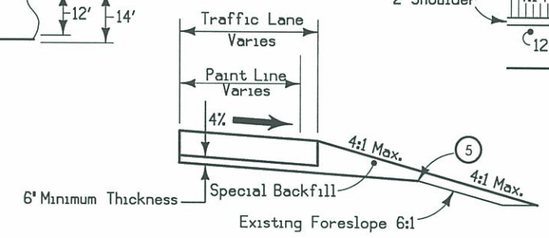




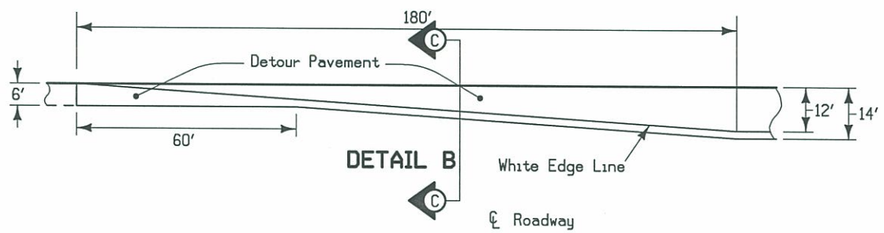
DETAIL C



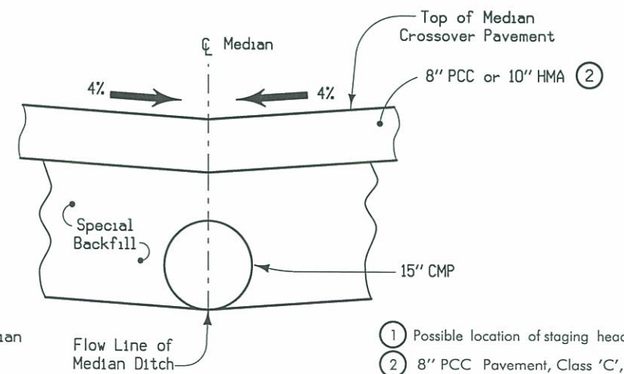
DETAIL A



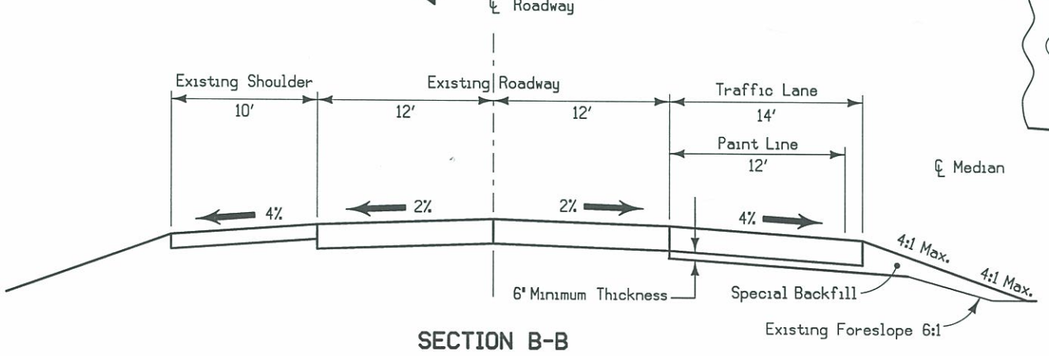
SECTION C-C



DETAIL B



SECTION A-A



SECTION B-B

GENERAL NOTES:

The intent of this plan is to show the construction requirements for a median crossover where the median width is 64′ and located adjacent to ramp tapers.

The Engineer will determine the header location to accommodate the required staging activities.

Price bid for contract items shall be considered full compensation for furnishing all necessary materials and labor to construct the median crossover as detailed hereon.

Contract bid items per Ramp X–over are:	Unit	Amount
Removal of pavement *	Sq. Yds.	1339.5
Special Backfill	Tons	2205 **
Detour Pavement	Sq. Yds.	4059.5
15″ Corrugated Metal Roadway Pipe Culvert	Lin. Ft.	334

* The removal of subbase material is considered incidental to the removal of pavement.

** Quantities are based on the as–build median ditch profile with varying depth to a max of 4′ and foreslopes are 6:1.

(1) Possible location of staging header

(2) 8″ PCC Pavement, Class 'C', with required joints, or 10″ HMA Pavement, HMA mixture (10,000,000 ESAL) Surface Course 1/2″ mix, with PG64–22 binder and Class 1B compaction. The surface lift requires L–4 friction.

(3) 'B' Joint required

(4) Transverse joints not required.

(5) Fill to this point minimum

MODIFIED 531-2
ROAD DESIGN DETAIL

DETAILS OF MEDIAN CROSSOVER (60′ MEDIAN)

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.2

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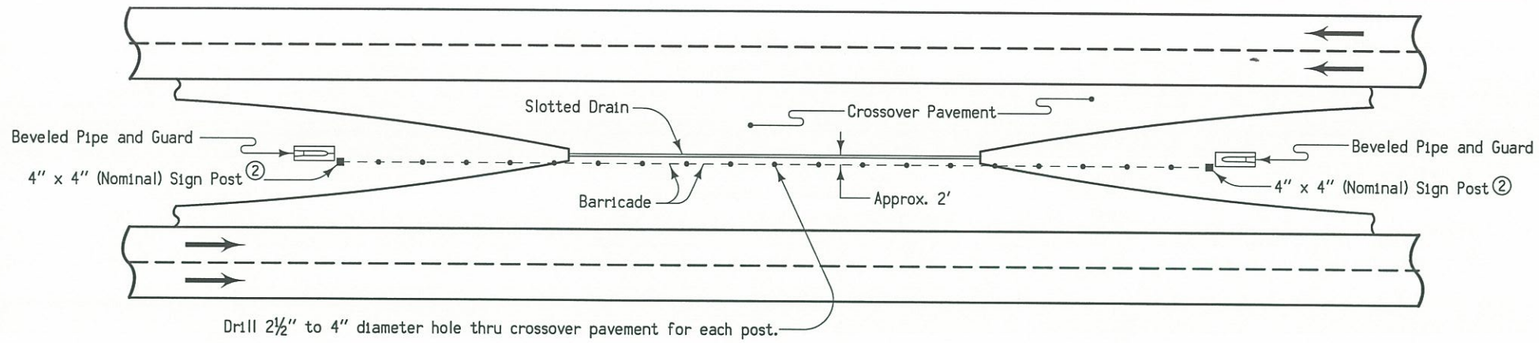
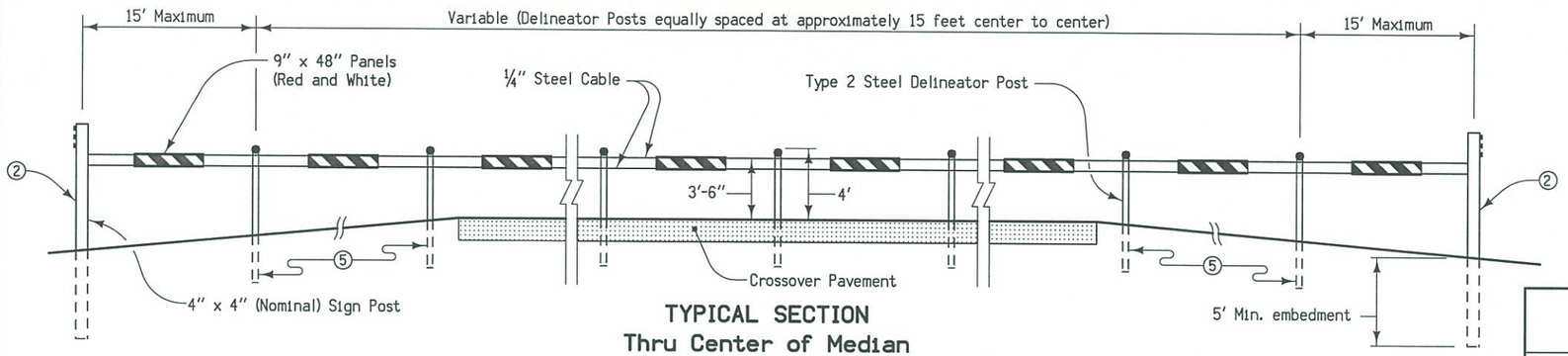


PLAN VIEW



TYPICAL SECTION
Thru Center of Median

GENERAL NOTES:

The price bid for "Crossover Barricade," each, shall be considered full compensation for furnishing all materials and work necessary to construct the barricade as detailed hereon.

① 3 1/4" center mount yellow reflector, attached to sign post with .190 x 1.25 slotted pan head screws.

② Barricade shall extend to within 2 feet from the top end of the concrete collar.

③ 0.125 inch aluminum panel with Type III or IV retroreflective sheeting on both sides.

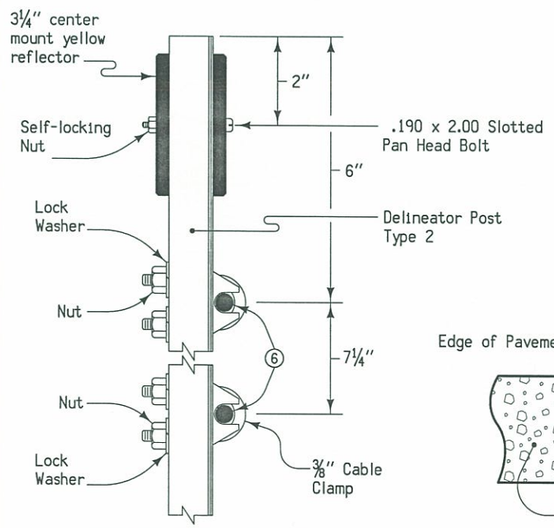
④ Reflectorized red stripes on both sides shall slope from upper left to lower right of panel.

⑤ All delineator posts shall have a minimum embedment of 2'-6".

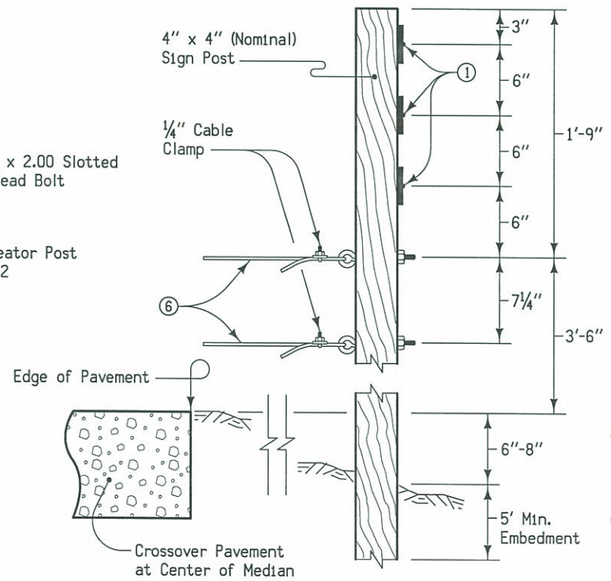
⑥ 1/4" inch diameter steel cable.

List Of Materials For Barricading At Median Crossovers

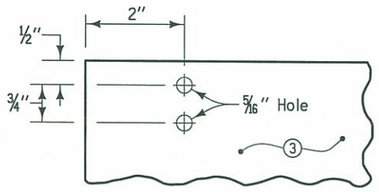
Quantities for Standard Road Plans			Items
RV-12A	RV-13A	RV-14A	
25	19	18	Type 2 Steel Delineator Posts
2	2	2	4" x 4" (Nominal) Sign Post
56	44	42	3¼" Yellow Reflectors, center mounted
25	19	18	.190 x 2.00 slotted pan head bolts and self-locking nuts
6	6	6	.190 x 1.25 slotted pan head screws
26	20	19	9" x 48" Aluminum panels (red on white)
50	38	36	⅜" Cable clamps, lock washers and nuts
104	80	76	¼" Cable clamps, neoprene washers and self-locking nuts
4	4	4	⅜" x 6" Eye bolts, washers and nuts
4	4	4	¼" Cable clamps
820'	640'	610'	Approximate length of ¼" diameter Steel Cable
405'	315'	300'	Distance from Sign Post to Sign Post based on Note ②



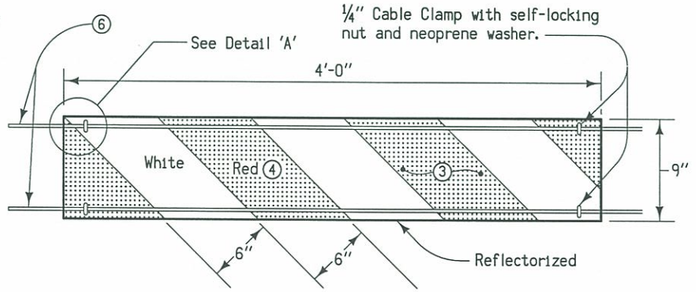
DELINEATOR POST ATTACHMENT DETAILS



SIGN POST ATTACHMENT DETAILS



TYPICAL HOLE LOCATION DETAIL 'A'



PANEL ATTACHMENT DETAILS

Iowa Department of Transportation
Highway Division

DETAIL SHEET 540-13

REVISION:	REVISION NO.	REVISION DATE
Modfied to match changes to Standard Road Plan.	8	04-18-06

DETAILS OF BARRICADE AT CROSSOVER

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.3

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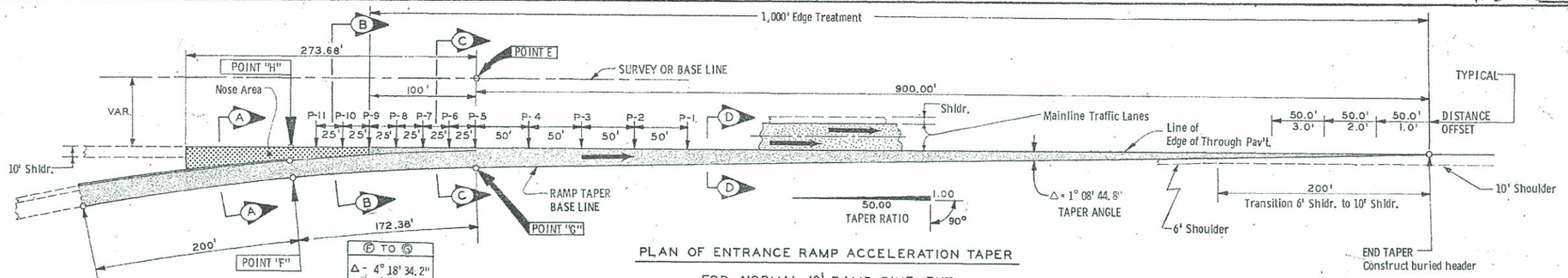
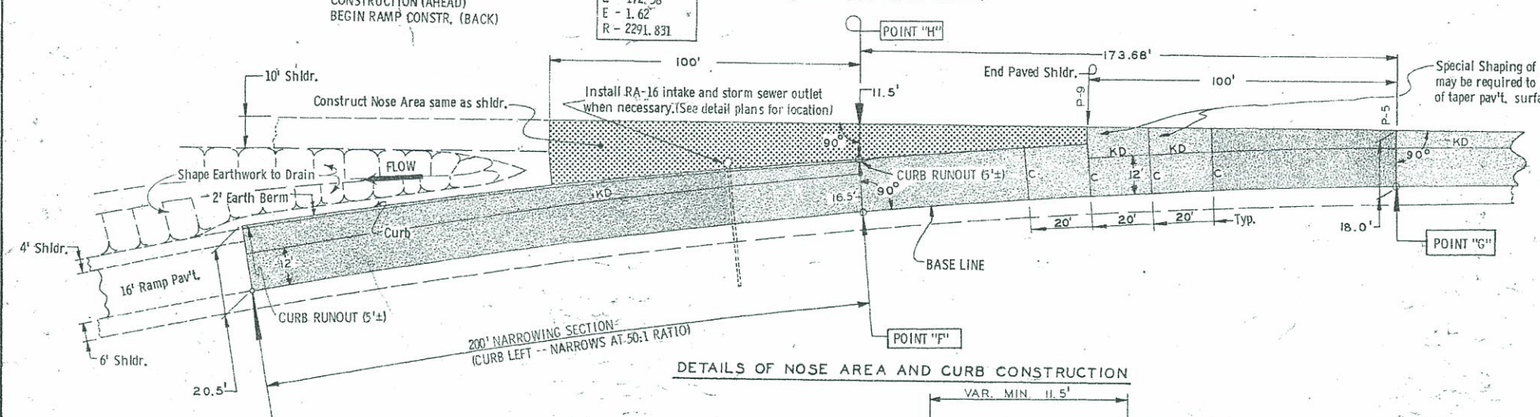


PLAN OF ENTRANCE RAMP ACCELERATION TAPER

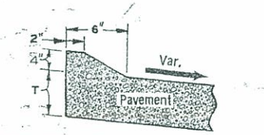
FOR NORMAL 16' RAMP PAVEMENT



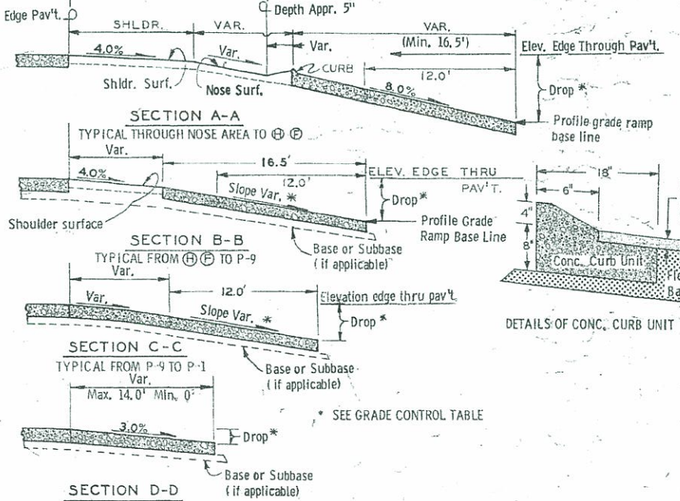
NOTE (EDGE TREATMENT):

1. Where mainline pavement is continuously reinforced P. C. Concrete and ramp pavement is Standard P. C. Concrete, Edge Treatment shall consist of a "B" Joint (See Standard Road Plan RH-2).
2. Where mainline pavement and ramp pavement are both Standard P. C. Concrete, Edge Treatment shall consist of a "KD" Joint (See Standard Road Plan RH-2).
3. Where mainline pavement and ramp pavement are both Asphaltic Concrete, no Edge Treatment is required.

DETAILS OF NOSE AREA AND CURB CONSTRUCTION



DETAILS OF INTEGRAL CURB



GENERAL NOTES: CONSTRUCTION

1. Pavement thickness for the Ramp Taper shall be the same as for the remainder of the Ramp proper, except that taper pavement shall not be less in thickness than the adjacent Mainline through traffic lanes.
2. For P. C. Concrete Pavement:
   Transverse "C" Joints at 20 ft. spacing and Longitudinal Joints as indicated or as directed by the Engineer will be required. Refer to Standard Road Plan RH-2.
3. For Asphaltic Concrete Pavement:
   Concrete curb unit as shown shall be constructed where curb is required.
4. Shoulder Nose Area shall be built in accordance with project plans for normal shoulder. Any special shaping of nose area surface in order to assure proper drainage shall be accomplished by methods approved by the Engineer.
5. Refer to project typical cross sections and appropriate Standard Road Plans for design details and requirements for shoulders.
6. Total surface area of the pavement for the taper as shown from Begin Taper to End Taper is 1,666 sq. yds. (includes 205 lin. ft. of curb). Total surface area of Nose Area (Shoulder) as indicated is 246 sq. yds. when 2°30' curve is used. If other curvatures is used, appropriate modification of area quantity should be made.

GRADE CONTROL TABLE												
Location Point	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10	P-11	Ⓗ Ⓕ
Drop	0.42	0.50	0.64	0.85	1.08	1.18	1.28	1.38	1.48	1.58	1.68	1.78
Slope	3.0%	3.3%	4.0%	5.0%	6.0%	6.5%	7.0%	7.3%	7.6%	7.8%	7.9%	8.0%

NOTE: Edge of pavement elevations from P-1 to end of taper are established by a constant 3% slope for the appropriate pavement width based on the taper ratio of 50:1.

GENERAL REQUIREMENTS			
IDENTIFICATION		EQUIVALENT STATIONS	
INTERCHANGE	RAMP	POINT "E"	POINT "G"
IOWA #22	"D"	175+13.75	4575+13.75

NOTE:
The algebraic difference between profile grade for Ramp Base Line at Point F and relative profile grade of Mainline for Point H is 0.4%

IOWA HIGHWAY COMMISSION		
STANDARD ROAD PLAN		RV-2
RECOMMENDED	Jack C Dalbridge	10-15-68
	ROAD ENGINEER	DATE
	[illegible]	10-18-68
	DESIGN ENGINEER	DATE
APPROVED	R H Bowen	10-18-68
	DEPUTY CHIEF ENGINEER	DATE
(16') ENTRANCE RAMP ACCELERATION TAPER		

DATE: 10-3-69 | NO.: 2 | LAST REVISION: MODIFY GEN. NOTES

Scott COUNTY

PROJECT NUMBER: I-IG-280-8(39)299--04-82 | STATE: IOWA | FED. ROAD DIST. NO. | FISCAL YEAR | SHEET NO. 49 | TOTAL SHEETS 121

FOR GENERAL INFORMATION ONLY
EXISTING DETAILS

Iowa 22 Ramp 'D'

ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Cameron | SCOTT COUNTY | PROJECT NUMBER IMX-280-8(144)2--02-82 | SHEET NUMBER U.4

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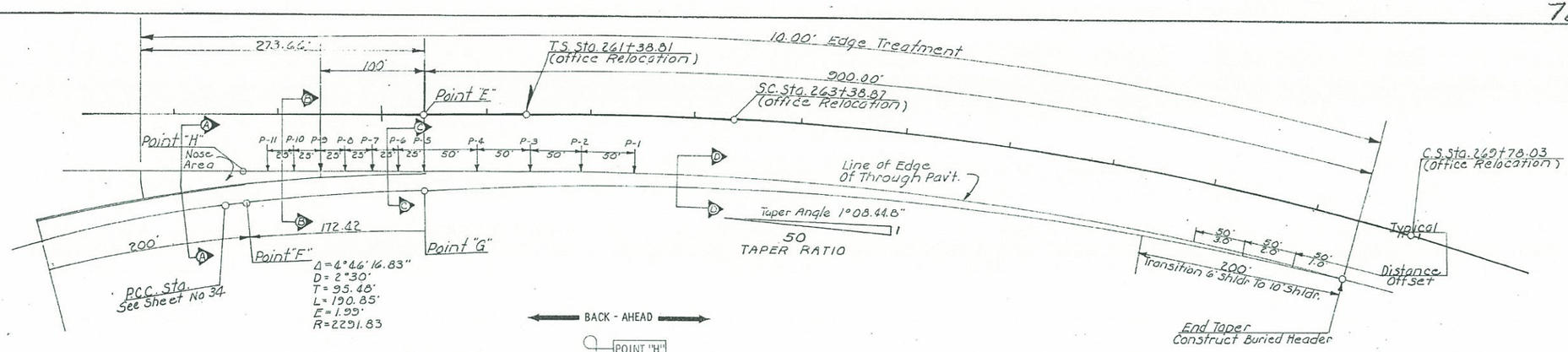
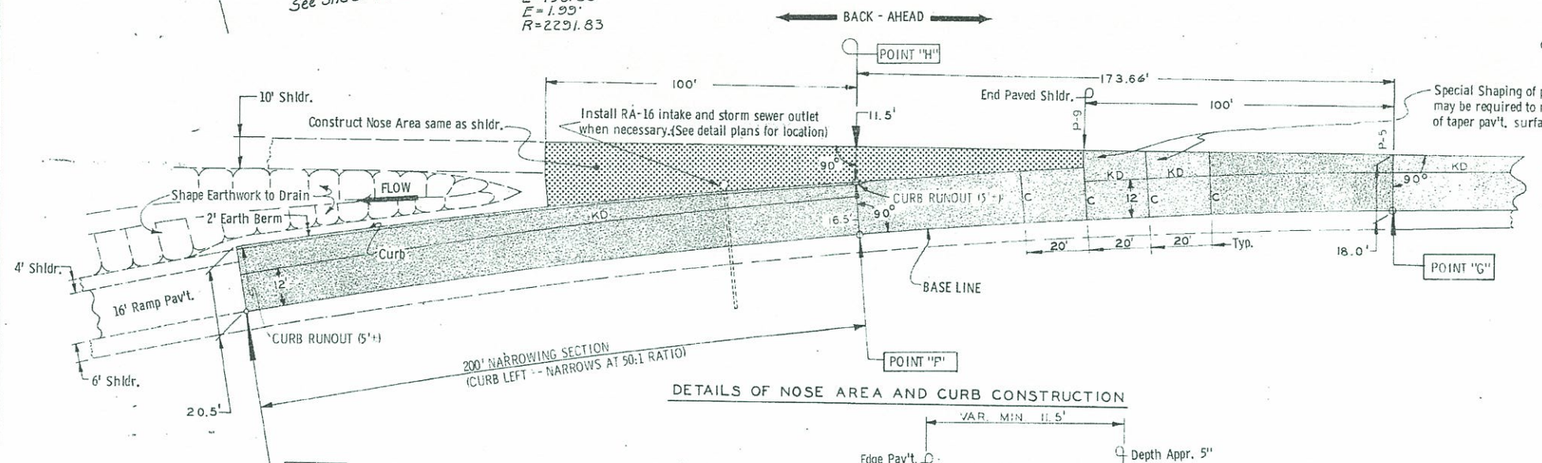




NOTE (EDGE TREATMENT)

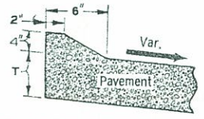
(1.) Where mainline pavement is continuously reinforced P. C. Concrete and ramp pavement is Standard P. C. Concrete, Edge Treatment shall consist of a "B" Joint (See Standard Road Plan RH-2).

(2.) Where mainline pavement and ramp pavement are both Standard P. C. Concrete Edge Treatment shall consist of a "KD" Joint (See Standard Road Plan RH-2).

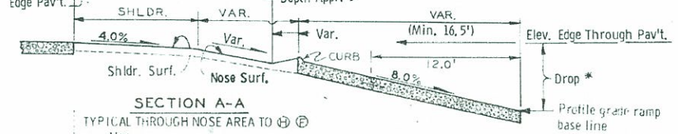
(3.) Where mainline pavement and ramp pavement are both Asphaltic Concrete, no Edge Treatment is required

DETAILS OF NOSE AREA AND CURB CONSTRUCTION

P. O. C. - Begin constr. normal ramp Section (Back). Refer to detail project plans for precise alinement and grade data.

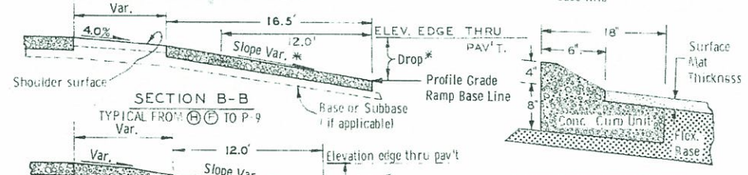


DETAILS OF INTEGRAL CURB



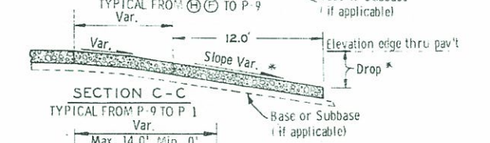
SECTION A-A

TYPICAL THROUGH NOSE AREA TO Ⓗ Ⓕ



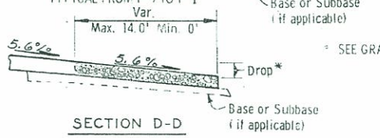
SECTION B-B

TYPICAL FROM Ⓗ Ⓕ TO P-9



SECTION C-C

TYPICAL FROM P-9 TO P-1



SECTION D-D

TYPICAL FROM P-1 TO END TAPER

* SEE GRADE CONTROL TABLE

DETAILS OF CONC CURB UNIT

GRADE CONTROL TABLE												
Location Point	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10	P-11	Ⓗ Ⓕ
Drop	0.78	0.84	0.90	0.95	1.08	1.18	1.28	1.38	1.48	1.58	1.68	1.78
Slope	5.6%	5.6%	5.6%	5.6%	6.0%	6.5%	7.0%	7.3%	7.6%	7.8%	7.9%	8.0%

NOTE. Edge of pavement elevations from P-1 to one of taper are established by a constant 5.6% slope for the appropriate pavement width based on the taper ratio of 50:1

GENERAL REQUIREMENTS			
IDENTIFICATION		EQUIVALENT STATIONS	
INTERCHANGE	RAMP	POINT "E"	POINT "G"
U. S. 61	"D"	260+40.92	4560+40.92

NOTE.
The algebraic difference between profile grade for Ramp Base Line at Point F and relative profile grade of Mainline for Point H is 0.4%.

GENERAL NOTES CONSTRUCTION

1. Pavement thickness for the Ramp Taper shall be the same as for the remainder of the Ramp proper, except that taper pavement shall not be less in thickness than the adjacent Mainline through traffic lanes.
2. For P. C. Concrete Pavement; Transverse "C" Joints at 20 ft. spacing and Longitudinal Joints as indicated or as directed by the Engineer will be required. Refer to Standard Road Plan RH-2.
3. For Asphaltic Concrete Pavement; Concrete curb unit as shown shall be constructed where curb is required
4. Shoulder Nose Area shall be built in accordance with project plans for normal shoulder. Any special shaping of nose area surface in order to assure proper drainage shall be accomplished by methods approved by the Engineer.
5. Refer to project typical cross sections and appropriate Standard Road Plans for design details and requirements for shoulders.
6. Total surface area of the pavement for the taper as shown from Begin Taper to End Taper is 1 666 sq. yds. (includes 205 lin ft of curb) Total surface area of Nose Area (Shoulder) as indicated is 246 sq yds when 2°30' curve is used. If other curvatures is used, appropriate modification of area quantity should be made.

~~Revised October 27, 1969~~

U. S. NO. 61 INTERCHANGE
GEOMETRIC DETAILS
TAPERED MERGING LANE
ENTRANCE RAMP "D"

Scott COUNTY

I-IG-280-8(39)299--04-82 | STATE IOWA | 72 | 127

FOR GENERAL INFORMATION ONLY
EXISTING DETAILS

US 61 Ramp 'D'

ENGLISH | IOWA DOT | DESIGN TEAM Schoenrock\Cameron | SCOTT COUNTY | PROJECT NUMBER IMX-280-8(144)2--02-82 | SHEET NUMBER U.5

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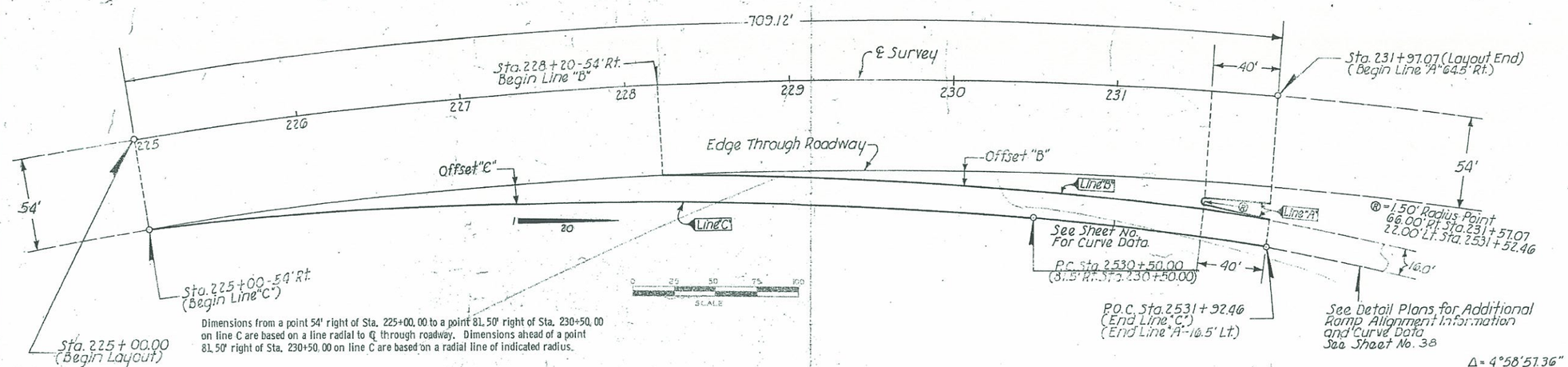
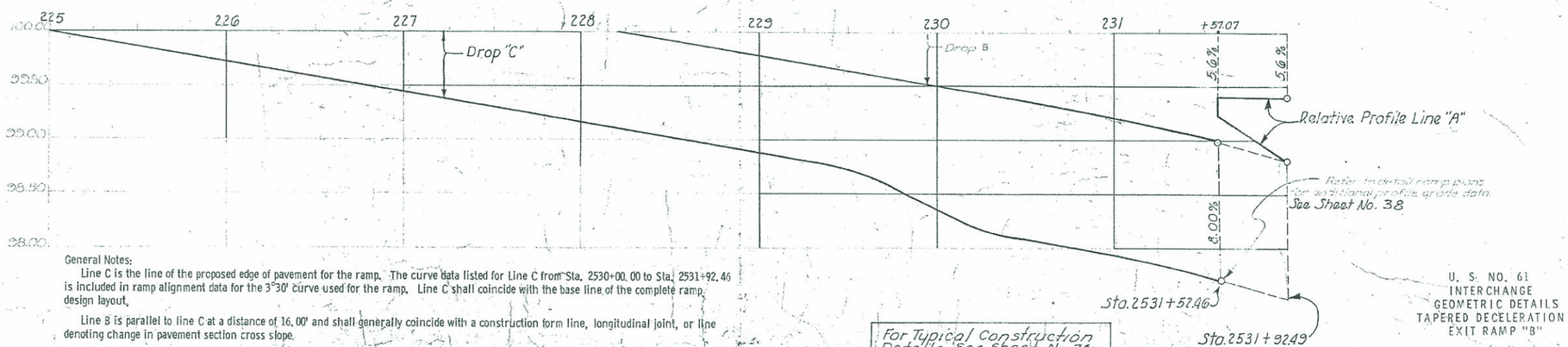


	225	226	227	228	229	230	231	+57.07
Offset B →					2.00 2.75	4.00 5.25	6.50 7.75	9.00 10.25 11.50 12.76 14.26 15.78 17.50 18.00
Offset C →	0.00	1.25	2.50	3.75	5.00 6.25	7.50 8.75	10.00 11.25	12.50 13.75 15.00 16.25 18.00 19.25 20.00 21.25 22.50 23.75 25.00 26.25 27.50 28.76 30.00 31.78 33.50 34.00
Drop B →					0.11 0.15	0.22 0.29	0.36 0.43	0.50 0.57 0.64 0.71 0.80 0.88 0.98 1.01
Drop C →	0.00	0.07 0.14	0.21	0.28	0.35 0.42	0.49 0.56	0.63 0.70	0.77 0.84 0.91 1.01 1.05 1.12 1.19 1.27 1.45 1.65 1.83 1.92 1.99 2.08 2.16 2.26 2.29

+13.43 +57.64 +21.86 +66.37 +52.46

5.6% Slope "A"
5.6% Slope "B"
5.6% 5.6% Transition to 8.00% 8.00% Slope "C"

Profile Edge Of Through Roadway



For Typical Construction Details, See Sheet No. 70

General Notes:

Line C is the line of the proposed edge of pavement for the ramp. The curve data listed for Line C from Sta. 2530+00.00 to Sta. 2531+92.46 is included in ramp alignment data for the 3°30' curve used for the ramp. Line C shall coincide with the base line of the complete ramp design layout.

Line B is parallel to line C at a distance of 16.00' and shall generally coincide with a construction form line, longitudinal joint, or line denoting change in pavement section cross slope.

Line A denotes location of proposed back of curb construction form line and the limits of construction for 6" integral concrete curb.

The offsets indicated are measured from the line of the edge of pavement for the proposed through roadway construction.

The profiles indicated for lines A, B, C are a function of the established profile of the adjacent through traffic lane. These profiles are determined by vertical dimensions shown as a "Drop" from the proposed elevation of the edge of pavement for the through traffic lane.

No 6 Integral concrete curb will be built in this terminal.

U. S. NO. 61
INTERCHANGE
GEOMETRIC DETAILS
TAPERED DECELERATION LANE
EXIT RAMP "B"

Scott COUNTY PROJECT NO. I-IG-280-8(39)299--04-82 SHEET NO. 69

FOR GENERAL INFORMATION ONLY
EXISTING DETAILS

US 61 Ramp 'B'

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.6

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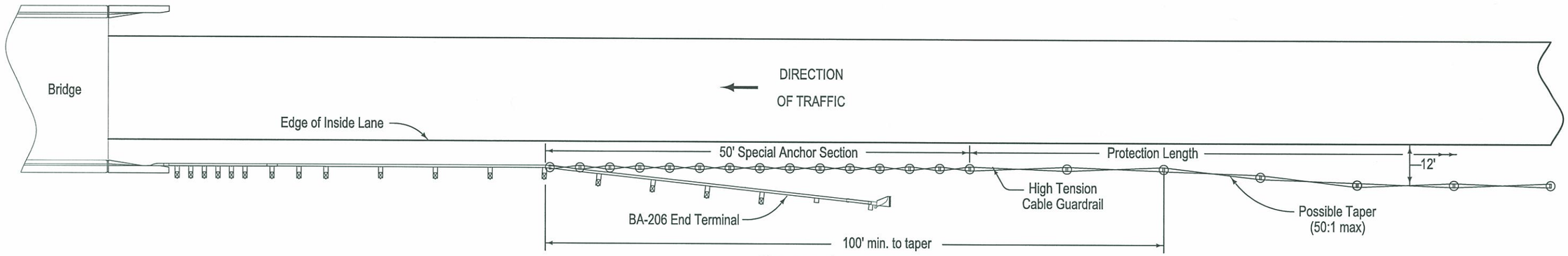

Case 1

(Varible Tangent Layout at Bridge End)

Refer to Tabulation 108–9A in project plans.

Contract Items:

Guardrail, Special Anchor Section

HIGH TENSION CABLE GUARDRAIL
SPECIAL ANCHOR SECTION

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.7

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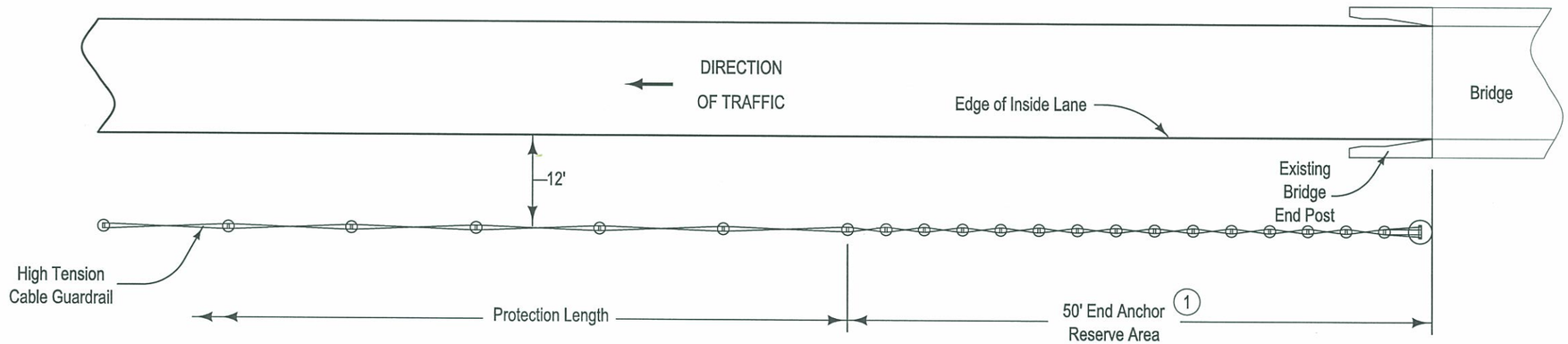

(1) Where supplied end anchor is less than 50 feet, increase protection length in order to align end anchor with bridge end post as shown.

HIGH TENSION CABLE GUARDRAIL,
END ANCHOR
(Behind Bridge End)

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER U.8

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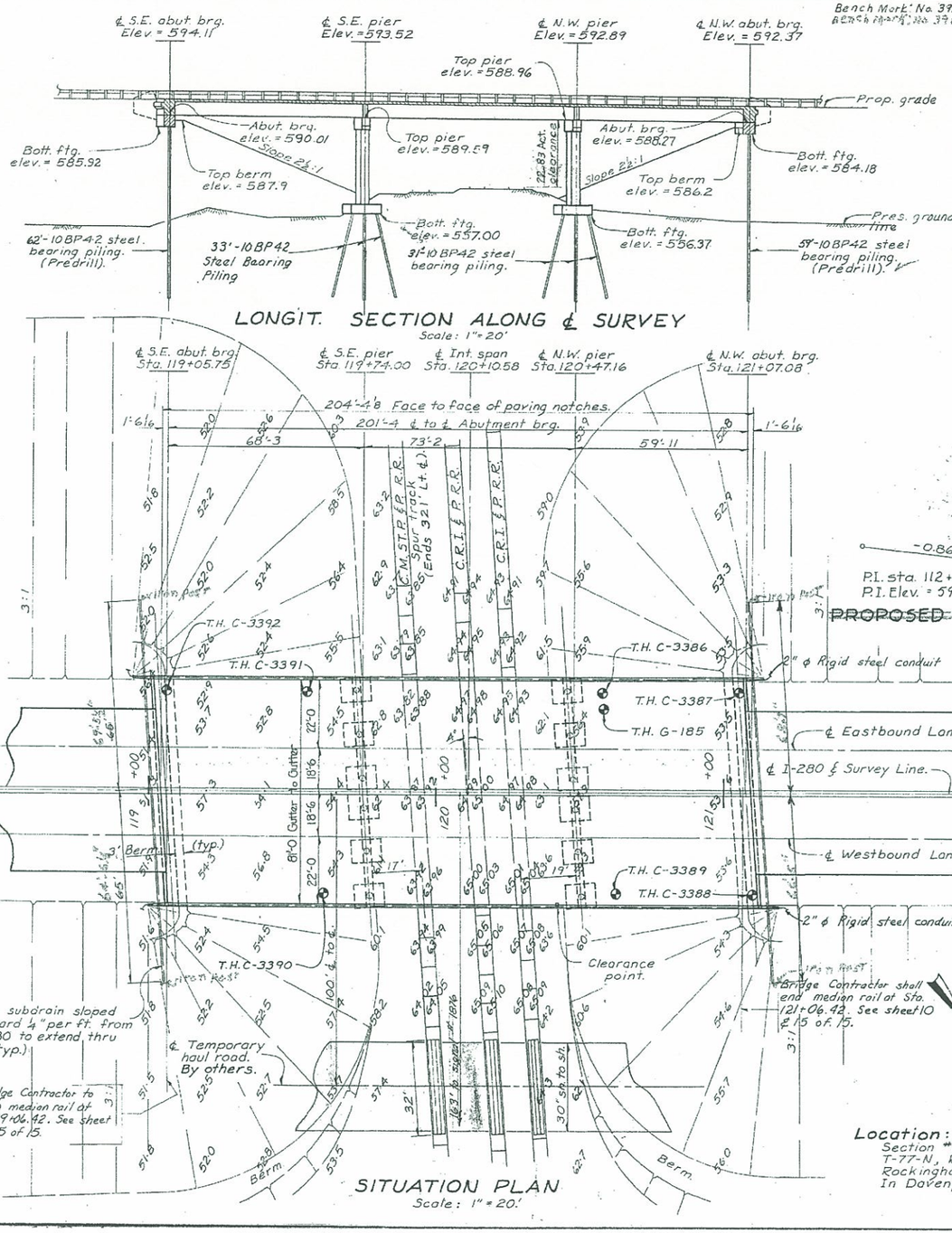
Bench Mark: No. 39A, Sta. 120+05.163' Rt.; Found "x" on N.W. corner of base of Signal No.1876; Elev. = 565.29
Bench Mark: No. 39B Sta. 121+66.1' Rt. (M.C. Bm. Top of Curb) Elev. = 592.88.



LONGIT. SECTION ALONG ℄ SURVEY
Scale: 1" = 20'

SITUATION PLAN
Scale: 1" = 20'

-0.864%
P.I. sta. 112+25.17
P.I. Elev. = 599.98
PROPOSED GRADE I-280

TYP. RDWY. APPROACH
Scale: 1" = 20'

Location:
Section 18, T-77-N, R-3-E
Rockingham Twp.
In Davenport on I-280.

GENERAL NOTES:

This bridge is designed for HS20-44 loading and alternate loading designated in S.P.R.P.P.M. 20-4, Section 4c plus an allowance of 19 lbs. per square foot of roadway for future wearing surface.

Prior to the start of excavation for pier construction, the Bridge Contractor shall provide the Engineer with a print of shoring plans with the Railroad's approval noted thereon. Cost for shoring is considered to be incidental to construction.

The approach fills are not a part of this estimate but are to be in place and compacted before abutment piles are driven. The Northwest approach fill must be in place at least 60 days before the piles for the Northwest abutment are driven. The abutment piles are to be driven in oversize holes drilled through the fill to Elevation 559.2± at the Northwest abutment and to Elevation 560.9± at the Southeast abutment. The minimum diameter of the drilled holes is to be 1'-4. Voids around the piles are to be filled with dry sand to 6 feet below the bottom of the abutment footing. The voids within this 6 feet shall remain open and completely free from any material. No separate payment will be made for drilling holes or filling voids since it is considered incidental to driving of the piles.

The Bridge Contractor is to level off and shape the berms to the elevations and dimensions shown on this sheet.

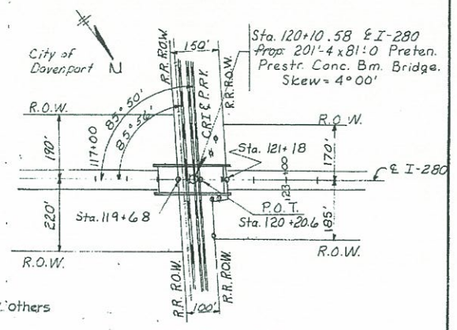
The Bridge Contractor is to install the tile subdrain behind each abutment as shown on this sheet and sheet 7 of 15. The price bid for "4" Tile Subdrain" is to include the excavation necessary for installation.

Pier excavation quantities assume that the grading work will be completed by others prior to the start of pier construction.

The 10BP42 piles are to be driven with a diesel hammer of adequate capacity based on the design load and plan pile lengths. See PIER NOTES and ABUTMENT NOTES.

The Bridge Contractor shall furnish and install the median rail from Sta. 119+06.42 to Sta. 121+06.42. All other median rail outside of the above stations shall be furnished and installed by others, which shall include the splice material at the above stations.

Dressing of slopes outside the bridge area not disturbed by the Bridge Contractor shall be paid for as extra work.



GENERAL PLAN

DESIGN STRESSES:

Design stresses for the following materials are in accordance with A.A.S.H.O. Standard Specifications for Highway Bridges, Series of 1965.
Reinforcing Steel in accordance with Section 1.5.1 "Reinforcement" for Intermediate, Hard, or Rail Steel Grade.
Concrete in accordance with Section 1.5.1 f'c = 3500 p.s.i.
Prestressing steel in accordance with 1.6.7 f's = 270,000 p.s.i.
Prestress concrete in accordance with 1.6.7 f'c = 5000 p.s.i.

SPECIFICATIONS:

Design: A.A.S.H.O. Series of 1965.
Construction: Standard Specifications of the Iowa State Highway Commission, Series of 1964, plus current Supplemental Specifications and Special Provisions.

TOTAL ESTIMATED QUANTITIES

Item		Unit	2 Piers	Super. & 2 Abuts.	Total
Structural concrete *		C.Y.	237.2	609.0	846.2
Reinforcing steel		lbs.	45,952	130,168	176,120
Pretensioned prestressed concrete beam	B59	No.		14	14
	B67	No.		14	14
	B71(special)	No.		14	14
10 BP42 steel bearing piling	Furnish	L.F.	30@93' 31@33'	14@62' 14@59'	361+432 = 793.2
	Drive	L.F.	30@93' 31@33'	14@62' 14@59'	361+432 = 793.2
Aluminum handrail or Steel handrail		L.F.			410.4
Class 20 excavation		C.Y.	~~430~~	155	~~585~~ 540
Granular backfill		C.Y.		202	202
2" ℄ Rigid steel conduit		L.F.			~~442.7~~ 449.2
4" ℄ tile subdrain		L.F.			~~260~~ 267
Median Barrier		L.F.			200.0

*Includes 537.0 cu.yds. of Class "D" in superstructure and integral abutments and 309.2 cu.yds. of Class "C" in piers.

Design For 4° Skew
201'-4 x 81' PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE
68'-3 & 59'-11 End spans. 73'-2 Interior span.

SITUATION PLAN
Sta: 120+10.58 Iowa Crossing No. 12929 Sept. , 1968
SCOTT COUNTY
Iowa State Highway Commission

DESIGN NO. 166
FILE NO. 21252
DES. SH. NO. 2 OF 15

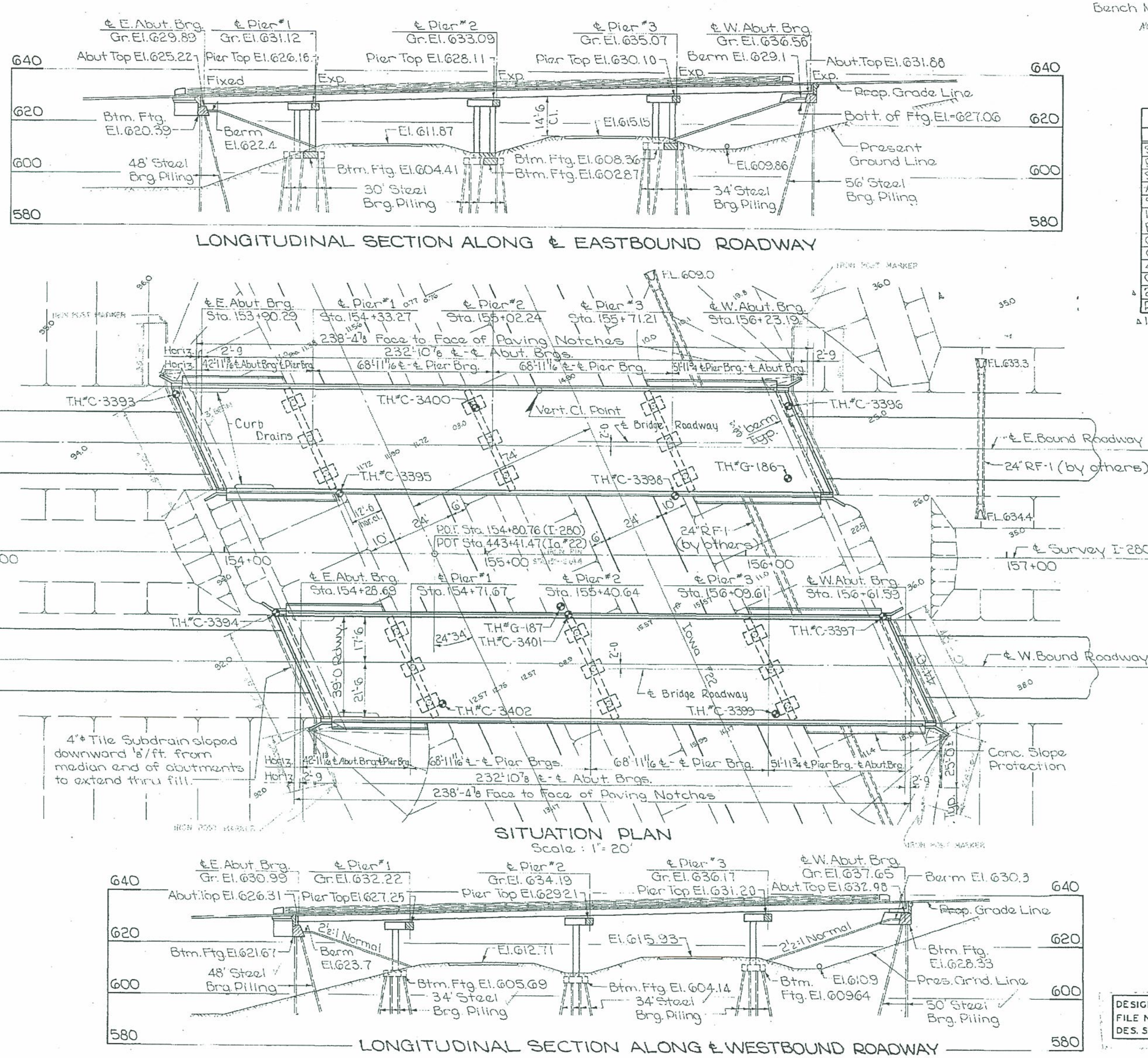
NOT TO SCALE – FOR INFORMATION ONLY

I-IG-280-8(37)299—04-82
LETTING DATE: 1969
SHEET: 24

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.1

8:24:53 AM 4/11/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144V01.sht

Bench Mark #41 – Sta. 157+84, 450' Rt. Found (X) in W. Hdwl. RCB; Elev. 618.63



*Includes 444.4 C.Y. of Class C for Substructures and 574.0 C.Y. of Class D for superstructures.

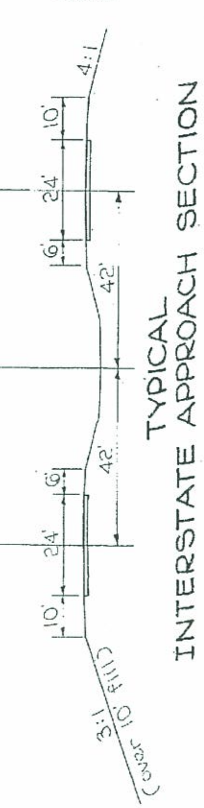
TOTAL ~~ESTIMATED~~ QUANTITIES							
Item		Unit	2 Supers	4 Abuts.	6 Piers	Total	
Structural Concrete*		C.Y.	574.0	200.4	244.0	1,018.4	
Reinforcing Steel		lb.	182,327	22,184	48,236	252,747	
Structural Steel		lb.	485,050	—	—	485,050	
~~Aluminum Handrail~~ or		~~L.F.~~	~~918.67~~	—	—	~~918.67~~	
Steel Handrail		L.F.	~~918.67~~	—	—	or ~~918.67~~	918.71
10BP42 Steel Bearing Pile	Furnish	L.F.	—	16@48'; 9@50' 9@56'	24@30'; 48@34'	~~4,170~~	4059
	Drive	L.F.	—	16@48'; 9@50' 9@56'	24@30'; 48@34'	~~4,170~~	4059
Class 20 Excavation		C.Y.	—	~~284~~	~~359~~	~~643~~	[illegible]
Granular Backfill		C.Y.	—	306	—	306	
4"ϕ Tile Subdrain		L.F.	—	—	—	~~276~~	324
Conc. Slope Protection		sq. yd.	—	—	—	~~880~~	1026.517
△ 2"ϕ Rigid Steel Conduit		L.F.	528	—	—	528	547.3
Preformed Elastic Neoprene Joint, 1¾"		L.F.	103	—	—	103	

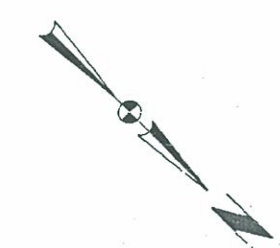
△ Includes ~~503~~ L.F. of 2"ϕ Conduit and ~~25~~ ~~L.F. of~~ 1"ϕ Conduit

500' V.C.
-2.40% +0.848%
P.I. Sta. 440+50
Elev. 609.78

Prop. Rt. Lane Iowa #22
(Lt. Lane 3' higher and parallel)

+2.86%
Sta. 139+96
Elev. 590.02
Prop. I-280 Grade





LOCATION:
Rockingham Twp.
T77N, R3E
Section 7-8
City of Davenport
I-280 over Iowa #22
Scott County

DESIGN NO. 1066
FILE NO. 21252
DES. SH. NO. 1 OF 15

Design for 24°34' Skew
DUAL 233'-0 x 39' CONT. I-BEAM BRIDGES
43'-0 & 52'-0 End Spans 2-69'-0 Interior Spans
SITUATION PLAN
Station 154+80.76 (I-280) September, 1968
SCOTT COUNTY
IOWA STATE HIGHWAY COMMISSION

I-IG-280-8(37)299—04-82
LETTING DATE: 1969
SHEET: 38

NOT TO SCALE – FOR INFORMATION ONLY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.2

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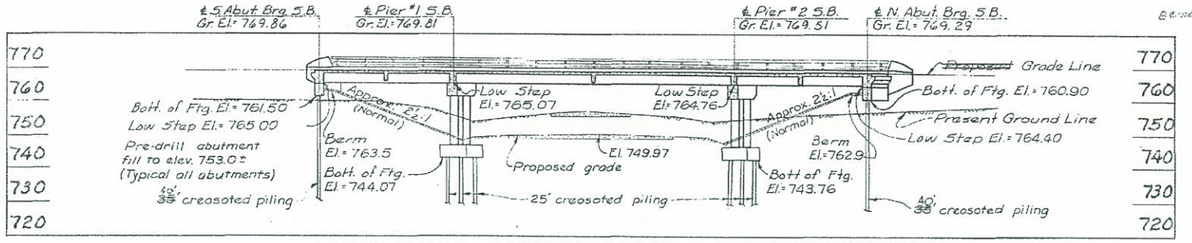
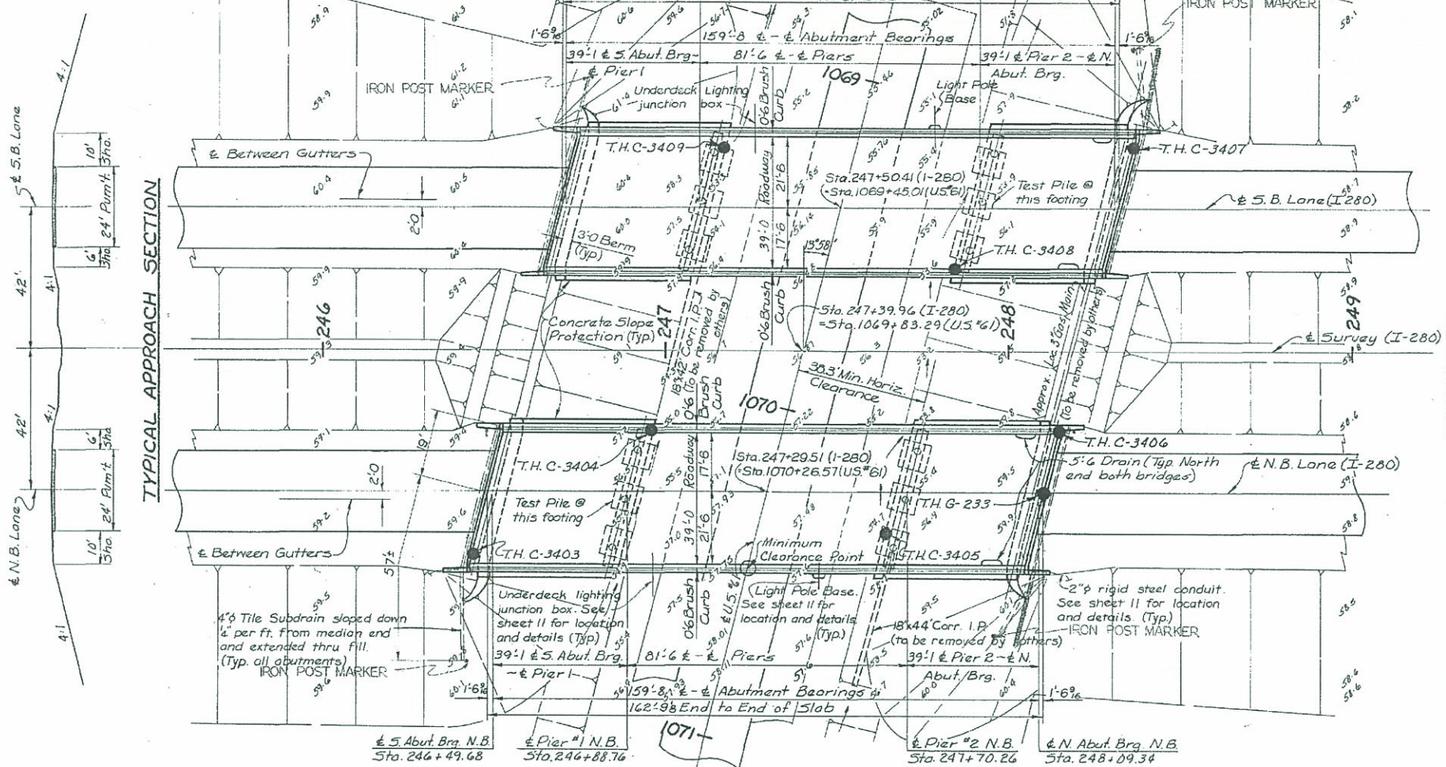
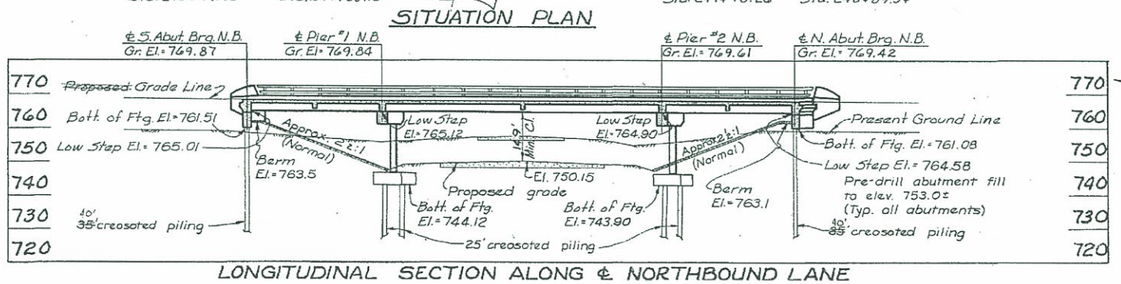


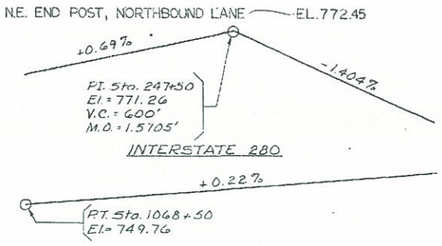
LONGITUDINAL SECTION ALONG ℄ SOUTHBOUND LANE



SITUATION PLAN



LONGITUDINAL SECTION ALONG ℄ NORTHBOUND LANE



~~PROPOSED~~ PROFILE GRADE DATA

TOTAL ~~ESTIMATED~~ QUANTITIES

Item		Unit	2-Superstr. & Integral Abuts.	4-Piers	Total
*Structural Concrete		Cu.Yd.	559.8 219.2	~~215.6~~	~~775.4~~
Reinforcing Steel		Lbs.	122,396 51,102	~~45,908~~	~~168,304~~
Pretensioned Prestressed	C38	Nº	24		24
Concrete Beams	C80	Nº	12		12
Creosoted Piling		Lin.Ft.	48@35'40'	16@~~25'~~ 30'	~~3830~~ 6805
Granular Backfill		Cu.Yd.	228		228
Class 20 Excavation		Cu.Yd.	~~180~~ 156.22	~~340~~ 347.18	~~520~~ 453
~~Aluminum Handrail~~ Steel Handrail		Lin.Ft.			654.4
Concrete Slope Protection		Sq.Yd.			~~960~~ 934.8
4"ϕ Tile Subdrain		Lin.Ft.			~~304~~ 271
2"ϕ Rigid Steel Conduit		Lin.Ft.			~~377~~ 386
Creosoted Test Piling		L.S.		2@35'	Lump Sum

*Includes ~~256~~ 219.2 Cu. Yds. Class "C" concrete and 559.8 Cu. Yds. Class "D" concrete.

Traffic Count 15,230 V.P.D. (1989)

Revised: 3-3-70 Sheet 3A added. Quantities changed on this sheet.

LOCATION:
Scott County
T-77-N R-2-E
Section 1
Buffalo Twp.
Interstate 280
over U.S. "61

Design for 13°58' Skew

DUAL 159'-8 x 39' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

39'-1 End Spans 81'-6 Interior Span

SITUATION PLAN

Station: 247+39.96 (℄ Survey I-280)
Station: 1069+83.29 (U.S. "61)

May, 1969

SCOTT COUNTY
Iowa State Highway Commission

DESIGN NO. 1766
FILE NO. 2.12.52
DES. SH. NO. 1 OF 11

I-IG-280-8(37)299—04-82
LETTING DATE: 1969
SHEET: 53

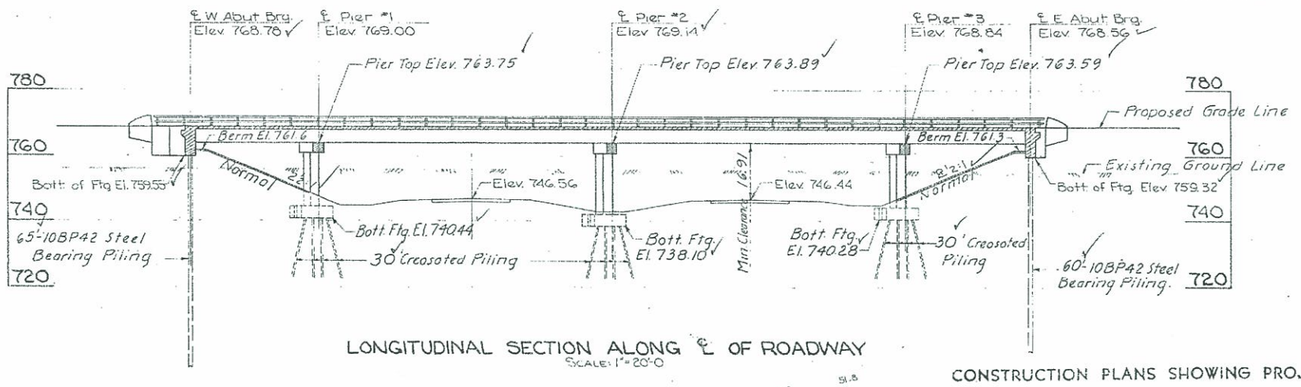
NOT TO SCALE – FOR INFORMATION ONLY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.3

8:25:16 AM 4/11/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144V01.sht

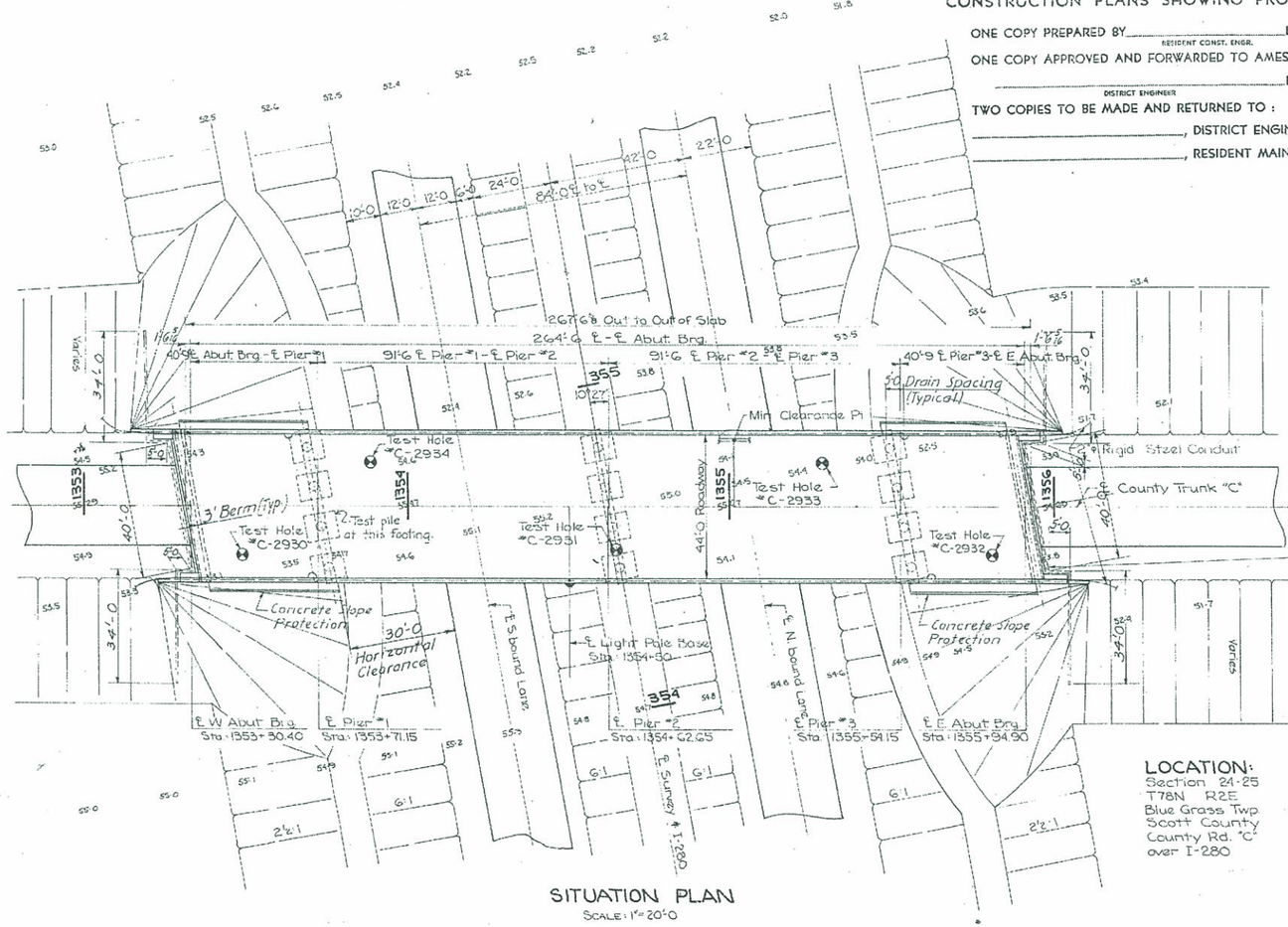
Bench Mark #42, Sta. 352-69, Rt. 223', R.R. Spk. in W Root of 48" Maple, Elev. 754.16

Bench Mark #42B on west end of north curb Elev. 768.60



LONGITUDINAL SECTION ALONG ℄ OF ROADWAY

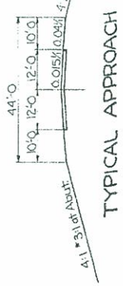
SCALE: 1"=20'-0



SITUATION PLAN

SCALE: 1"=20'-0

TYPICAL APPROACH SECTION



LOCATION:
Section 24-25
T78N R2E
Blue Grass Twp
Scott County
County Rd. "C"
over I-280

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

ONE COPY PREPARED BY _____ DATE _____
RESIDENT CONST. ENGR.

ONE COPY APPROVED AND FORWARDED TO AMES

_____ DATE _____
DISTRICT ENGINEER

TWO COPIES TO BE MADE AND RETURNED TO :

_____, DISTRICT ENGINEER

_____, RESIDENT MAINT. ENGINEER

+0.80%

P.I. Sta. 343+50
P.I. Elev. 737.60

GRADE DATA I-280

+2.0% 800' V.C. -2.30%

P.I. Sta. 1354+75
P.I. Elev. 773.48

VERTICAL CURVE LOCAL ROAD

Note: See Piling Log - Pier I and Pier III back page 54 of 93
- Pier II back page 55 of 93
- Abutments back page 56 of 93

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

ONE COPY PREPARED BY Kenneth A. Hoehn DATE 3-19-23
RESIDENT CONST. ENGR.

ONE COPY APPROVED AND FORWARDED TO AMES

_____ DATE _____
DISTRICT ENGINEER

TWO COPIES TO BE MADE AND RETURNED TO :

Van R. Snyder, DISTRICT ENGINEER

Traffic Count is 30,50 V.P. Paul Fortmeyer, RESIDENT/MAINT. ENGINEER

Constructed as shown or otherwise noted

Design for 10° 27' Skew

264'-6 x 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

40'-9 End Spans 2-91'-6 Interior Spans

SITUATION PLAN

Sta. 1354+62.65 County Rd.
Sta. 354+62.65 I-280

November 1969

SCOTT COUNTY

IOWA STATE HIGHWAY COMMISSION

Des. Sh No. 1 of 16 File No. 21580 Design No. 369

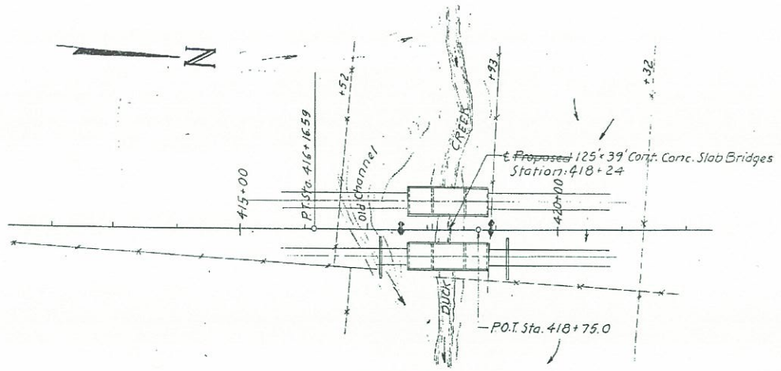
I-IG-280-8(38)294—04-82
LETTING DATE: 1970
SHEET: 53

NOT TO SCALE – FOR INFORMATION ONLY

ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.4

8:25:28 AM 4/11/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144V01.sht

Bench Mark: No 47, Sta. 421+15, Rt. 529' RR spk. in W. Root Cottonwood, Elev. 670.70
No 46B Sta. 417+65 Rt. 22' IHC BM S. end, East curb, N.B. Bridge El. 679.50



GENERAL PLAN
Scale: 1" = 100'

GENERAL NOTES.

These bridges are designed for H S 20-44 loading and alternate loading designated in B.P.R. PPM 20-4, Section 4c, plus an allowance of 20 lb per sq. inch of roadway for future wearing surface.

The Bridge Contractor is to install the 4"ø tile subdrain behind each abutment as shown. The price bid for tile subdrain is to include the excavation necessary for installation.

The approach fills are not part of this contract but are to be in place and compacted before abutment piles are driven. The Bridge Contractor is to level off and shape the berms to the elevations and dimensions shown. Dressing of slopes outside the bridge area not disturbed by the Bridge Contractor shall be paid for as extra work.

The Bridge Contractor shall clear the channel for a distance of 75' on either side of ℄ survey.

Abutment piles are to be driven in oversize holes predrilled to Elev 666.8 S. Abut and to Elev. 666.6 N. Abut. The minimum diameter of the drilled holes is to be 4" greater than the diameter of the pile 3' from the butt. Voids around the piles are not to be filled. No separate payment will be made for drilling holes since it is considered incidental to driving piles.

DESIGN STRESSES.

Design stresses for the following materials are in accordance with A.A.S.H.O. Standard Specifications for Highway Bridges, Series of 1969.

Reinforcing Steel in accordance with Section 1.5.1, f_s = 20,000 psi

Concrete in accordance with Section 1.5.1 f_c = 3500 psi.

SPECIFICATIONS.

Design: A.A.S.H.O. Series of 1969.
Construction: Standard Specifications of the Iowa State Highway Commission Series of 1964, plus current special provisions and supplemental specifications.

FINAL

TOTAL ~~ESTIMATED~~ QUANTITIES

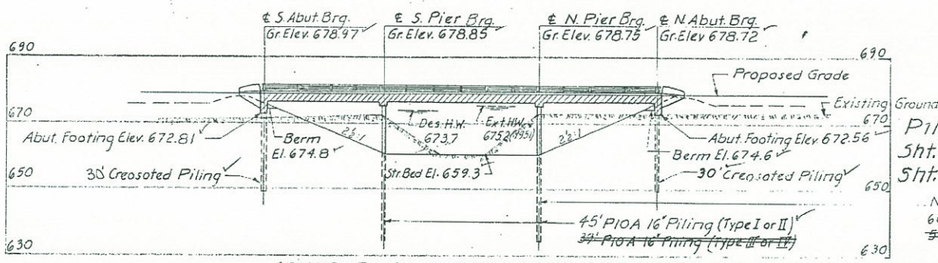
Item		Unit	Total
* Structural Concrete		c.y.	787.8
Reinforcing Steel		lb	173536
Aluminum Handrail		L.F.	515.328
~~Steel Handrail~~		~~L.F.~~	~~519.5~~
16" PIOA Piling	Type I or II Furnish 33@ 45', 11@ 60'	L.F.	2145
	Type I or II Drive or 33@ 45', 11@ 60'	L.F.	~~2145~~
	~~Type I or II 33@ 33', 11@ 53'~~	~~L.F.~~	~~1837~~
Class 20 Excavation		c.y.	~~750~~ 214.05
Creosoted Piling 40@ 30'		L.F.	~~1200~~ 1084.70
Granular Backfill		c.y.	120
4"ø Tile Subdrain	296.4	L.F.	~~336~~
Class 10 Channel Excavation		c.y.	3300
** 2"ø Rigid Steel Conduit		L.F.	~~592~~ 299.5

* 730 c.y. Class C for abutment footings.
The remaining 714.8 c.y. is Class D concrete.
** Quantity includes ~~592~~ L.F. of 2"ø Conduit and 6 L.F. of 1"ø Conduit.

LOCATION
On Interstate 280
Over Duck Creek
Section 13
T 78 N R 2 E
Bluegrass Twp.
Scott County

HYDRAULIC DATA
Drainage Area 16½ sq. Mil.
Design Discharge: 4400 cfs.

Traffic Count 5475 V.P.D. (1975)

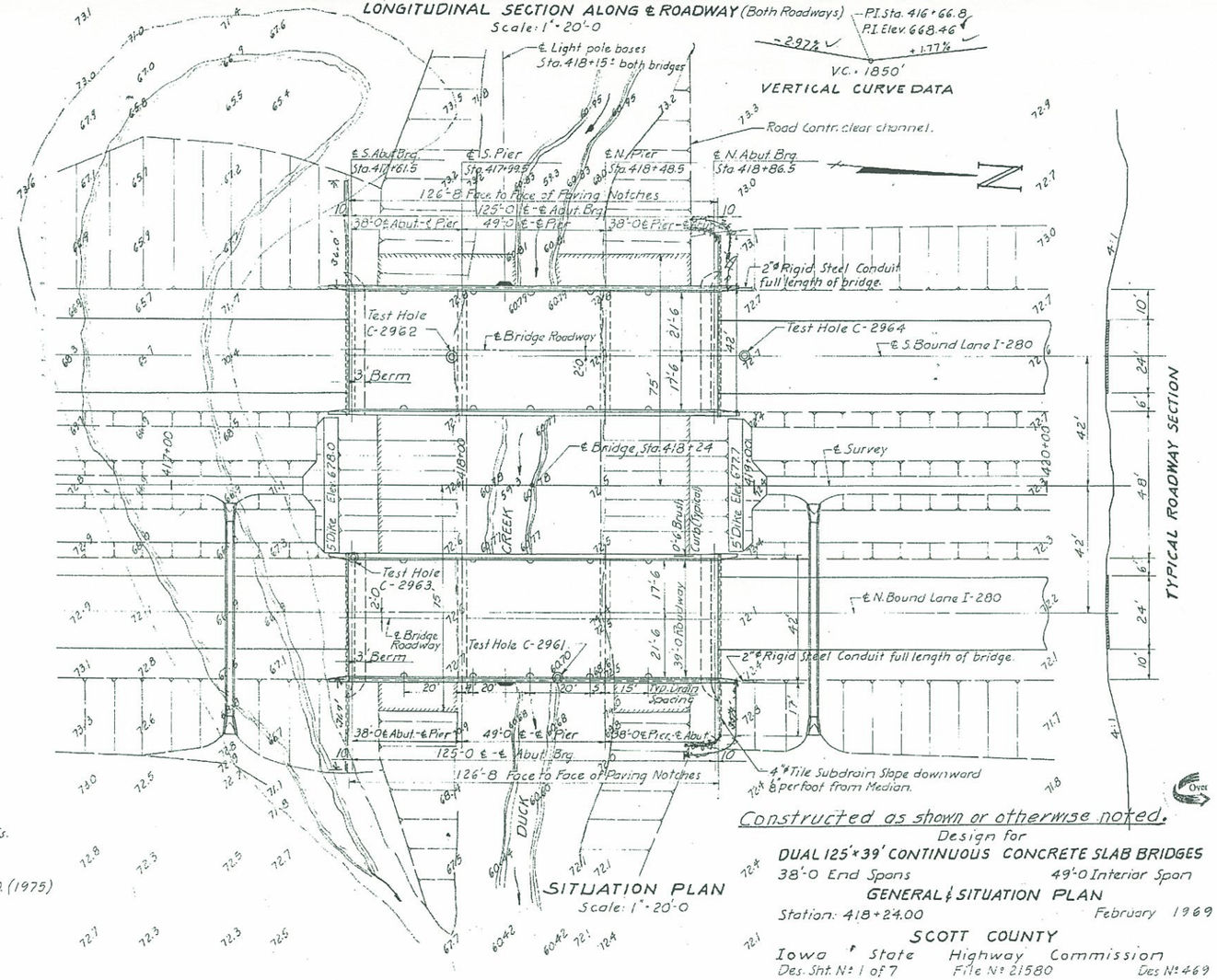


Pile Logs shown on back of:
Sht. 1 of 7 Abutments.
Sht. 2 of 7 Piers.

N. Pier of N. Bound Lane only
60'- PIOA 16" Piling (Type I or II)
~~50'- PIOA 16" Piling (Type II or III)~~

LONGITUDINAL SECTION ALONG ℄ ROADWAY (Both Roadways)
Scale: 1" = 20'-0

P.I. Sta. 416+66.8
P.I. Elev. 668.46
-2.97%
+1.77%
V.C. = 1850'
VERTICAL CURVE DATA



SITUATION PLAN
Scale: 1" = 20'-0

TYPICAL ROADWAY SECTION

Constructed as shown or otherwise noted.
Design for
DUAL 125'x39' CONTINUOUS CONCRETE SLAB BRIDGES
38'-0 End Spans 49'-0 Interior Span
GENERAL & SITUATION PLAN
Station: 418+24.00 February 1969
SCOTT COUNTY
Iowa State Highway Commission
Des. Sht. No: 1 of 7 File No: 21580 Des No: 469

DISTRICT ENGINEER
RESIDENT MAINT. ENGINEER

NOT TO SCALE – FOR INFORMATION ONLY

I-IG-280-8(38)294—04—82
LETTING DATE: 1970
SHEET: 69

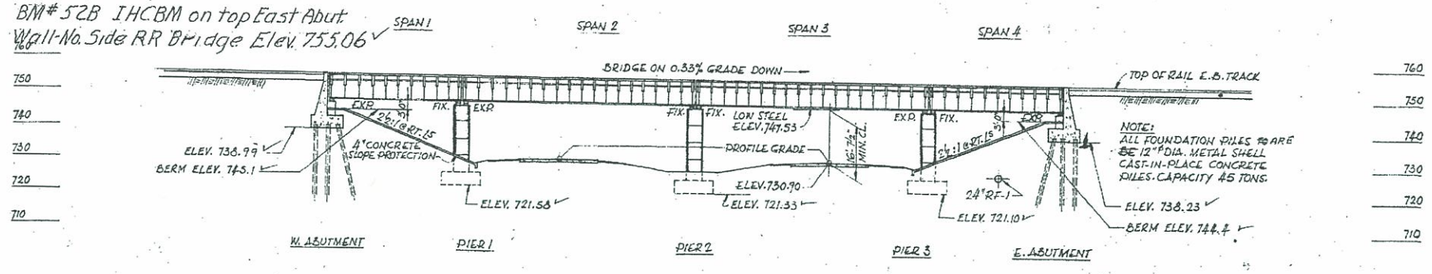
ENGLISH	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.5

8:25:40 AM 4/11/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144V01.sht

BENCH MARK

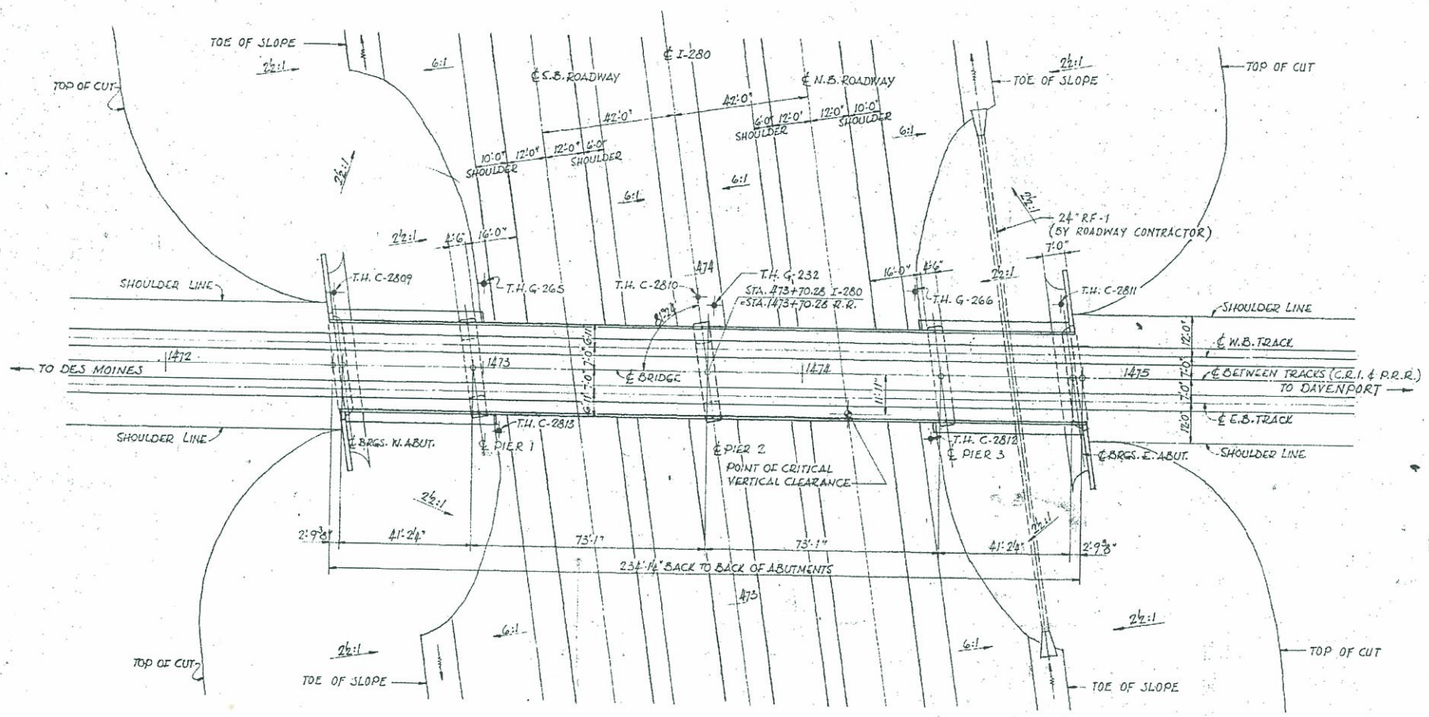
B.M. #52 - STA. 475+49 (235'RT.) R.R. SPIKE IN WEST ROOT OF 18" WALNUT TREE. ELEV. 753.59

BM # 52B IHCBM on top East Abut Wall-No. Side RR Bridge Elev. 755.06



ELEVATION
SCALE: 1"=20'

Note: See Pile Log on back of Sheet 7 of 13.



PLAN
SCALE: 1"=20'

Constructed as shown or otherwise noted.

Revised 1-14-71: Sheet 12A added to Index of Bridge Drawings.

INDEX OF BRIDGE DRAWINGS

SHEET NO.	TITLE
1	GENERAL PLAN AND ELEVATION
2	SOUNDINGS, PROFILES, GENERAL NOTES AND QUANTITIES
3	FRAMING PLAN AND DESIGN DATA
4	GIRDER AND BEARING DETAILS
5	TYPICAL DECK CROSS SECTION
6	FLOOR PLATE PLAN AND DETAILS
7	PIERS 1, 2 AND 3
8	WEST AND EAST ABUTMENT
9	ABUTMENT DETAILS
10	REINFORCEMENT BAR LIST
11	EXCAVATION AND DRAINAGE DETAILS
12	RUNAROUND PLAN AND PROFILE
12A	RUNAROUND PLAN AND PROFILE
13	CONCRETE SLOPE PROTECTION

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

ONE COPY PREPARED BY Frank W. Wheeler (RESIDENT CONST. ENGR.) DATE 3-19-73

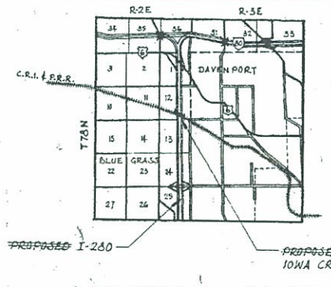
ONE COPY APPROVED AND FORWARDED TO AMES

(DISTRICT ENGINEER) DATE

TWO COPIES TO BE MADE AND RETURNED TO :

DISTRICT ENGINEER

RESIDENT MAINT. ENGINEER



LOCATION PLAT

DESIGN DATA

LIVE LOAD
COOPER E72 WITH DIESEL IMPACT

ALLOWABLE STRESSES

f_s	(TENSION) STRUCTURAL CARBON STEEL (A36)	18,000 P.S.I.
f_s	(TENSION) REINFORCING BARS	20,000 P.S.I.
f'_c	(COMPRESSIVE STRENGTH) CONCRETE	3,500 P.S.I.
f_c	(FLEXURE) CONCRETE	1,400 P.S.I.
n		10

FOUNDATIONS
ABUTMENTS TO BE ON 12" DIAMETER METAL SHELL CAST-IN-PLACE CONCRETE PILES DRIVEN TO A MINIMUM CAPACITY OF 45 TONS. PIERS TO BE ON SPREAD FOOTINGS HAVING AN ALLOWABLE SOIL PRESSURE OF 5,000 P.S.F.

Design 169

REVISED SEPT. 29, 1967

"I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.
SIGNED A. Benesch DATE MAY 12, 1967
A. BENESCH IOWA REG NO 2289

IOWA STATE HIGHWAY COMMISSION
SUBWAY
AT INTERSECTION OF
C.R.I. & P.R.R. WITH I-280
WEST OF DAVENPORT, IOWA SCOTT COUNTY
PROJECT I-IG-280-8(38)294--04-82
CROSSING No. 1583 STATION 473+70.28

GENERAL PLAN & ELEVATION

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
10 So. WABASH AVE. CHICAGO, ILLINOIS

DATE: NOV. 17, 1966
SHEET No. 1 OF 13

NOT TO SCALE – FOR INFORMATION ONLY

I-IG-280-8(38)294—04-82
LETTING DATE: 1967
SHEET: 1 of 13

REVISION	IOWA DOT	DESIGN TEAM Schoenrock\Cameron	SCOTT COUNTY	PROJECT NUMBER IMX-280-8(144)2--02-82	SHEET NUMBER V.6

8:25:52 AM 4/11/2012 wcamero W:\Projects\8228001008\Design\(144)_PCC_Grade_and_Replace\82280144V01.sht