

Kossuth COUNTY

Pipe Culverts
NHSX-218-8(141)--3H-09

LETTING DATE
Oct 19 2021

July 18, 2023

NHSN-018-3(114)--2R-55

FE August 13, 2021
Attendees:
Mary Kelly
Duane Nie
Jason Ruter
Kevin Rauk
Dwayne Berte



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM Kossuth COUNTY

Pipe Culverts

RP 136.2

0.2 mil E of 175th Avenue

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

21-55-018-020

PROJECT NUMBER

NHSX-218-8(141)--3H-09

R.O.W. PROJECT NUMBER

NHSN-018-3(114)--2R-55

INDEX OF SHEETS

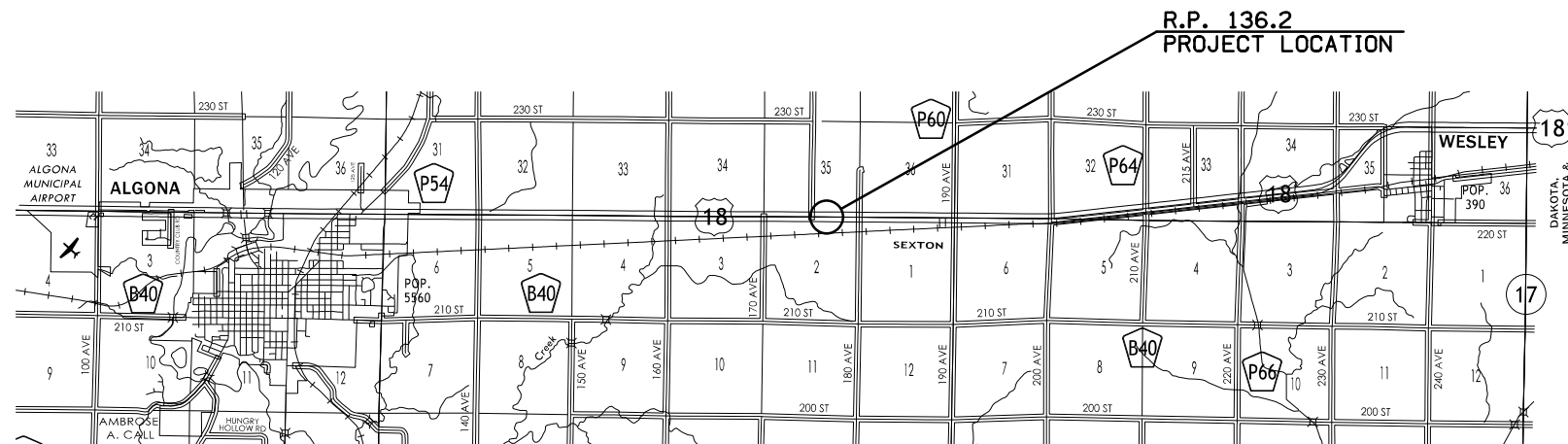
105-3

10-18-05

A.1	Title sheet and Location Map
B.1-B.2	Typical Sections
C.1-C.9	Estimate of Quantities, General Notes and Tabulations
D.1-D.25	Plan and Profile Sheets
J.1	Traffic Control Sheet
U.1-U.17	Detail Sheets

* color sheets

NO PROJECT LENGTH SUMMARY



DESIGN DATA RURAL

get traffic data from interactive traffic map.

20 -- DHV -- V.P.H.
TRUCKS 21 %
Total
Design ESALs --

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block
X	X	X

NHSN-018-3(114)--2R-55

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN -

August 13, 2021

100-1D 10-18-05
PROJECT DESCRIPTION
An 18" x 84 LF RCP and two aprons will be installed by using trenchless construction eliminating the need for a road closure and detour. There will be a need to relocate two intakes, one each side of the roadway.

100-0A 10-28-97					
ESTIMATED ROADWAY QUANTITIES (1 DIVISION PROJECT)					
Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2416-1263018	CULVERT, CONCRETE PIPE, 3000D, TRENCHLESS, 18 IN. DIA.	LF	0	
2	2507-3250005	ENGINEERING FABRIC	SY	0	
3	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF		
4	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	0	
5	2402-2723100	EXCAVATION, CLASS 23, FOR ROADWAY PIPE CULVERT	CY		
6	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	0	
7	2416-1263018	CULVERT, CONCRETE PIPE 3000D, TRENCHLESS, 18 IN. DIA.	LF	0	
8	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	0	
9	2528-8445110	TRAFFIC CONTROL	LS	0	
10	2533-4980005	MOBILIZATION	LS		
11	2526-8285000	CONSTRUCTION SURVEY	LS	0	

100-1D 10-18-05
UTILITIES
<p>Mary Montgomery Real Estate and Right of Way Representative II Alliant Energy (Electric and Gas Distribution, Gas and Fiber Transmission) PO Box 351 Cedar Rapids, IA 52406-9874 (319) 786-4768 MaryMontgomery@alliantenergy.com</p> <p>Mike Broderick Sr. OSP Telecommunications Engineer Iowa Communications Network (Fiber Transmission) 400 E 14th St, Grimes State Office Building Des Moines, IA 50319 (515) 725-4610 Cell: (515) 330-7139 Mike.Broderick@iowa.gov</p> <p>Jeff Anfinson Technical Operations Manager Mediacom Communications Corporation (Cable TV) 1721 N Hwy Blvd Spencer, IA 51301 (712) 330-5198 Ext. 11 janfinson@mediacomcc.com</p>

Add bid item to repair longitudinal subdrain and subdrain outlet.

Add Flagger bid item.

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

100-4A 10-29-02		
ESTIMATE REFERENCE INFORMATION		
Item No.	Item Code	Description
1	2416-1263018	CULVERT, CONCRETE PIPE, 3000D, TRENCHLESS, 18 IN. DIA.
2	2507-3250005	ENGINEERING FABRIC
3	2121-7425020	Refer to Tabulation 100-23 for more information. GRANULAR SHOULDERS, TYPE B Refer to special detail sheet U.1 for additional information. Match existing granular shoulder width. XX' was used for quantity. </p><p>Discretionary amount for granular shoulder repair.
4	2402-2723100	EXCAVATION, CLASS 23, FOR ROADWAY PIPE CULVERT
5	2416-1263018	CULVERT, CONCRETE PIPE 3000D, TRENCHLESS, 18 IN. DIA.
6	2416-0100018	APRONS, CONCRETE, 18 IN. DIA. Refer to Tabulation 104-3 for more information.
7	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.
8	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE Refer to Tabulation 100-19 for more information
9	2528-8445110	TRAFFIC CONTROL
10	2533-4980005	MOBILIZATION
11	2526-8285000	CONSTRUCTION SURVEY

105-4 10-18-11		
STANDARD ROAD PLANS		
The following Standard Road Plans apply to construction work on this project.		
Number	Date	Title
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-121	10-17-17	Connected Pipe Joints
DR-201	04-21-20	Concrete Aprons
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-301	10-18-16	Rock Erosion Control (REC)
PM-110	04-21-20	Line Types
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	10-19-21	Work Within 15 ft of Traveled Way
TC-252	04-21-20	Routes Closed to Traffic

232-3A 10-19-21
EROSION CONTROL (RURAL SEEDING)
Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.
Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:
Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.
Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.
Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

232-11 10-19-21
EROSION CONTROL (STABILIZING CROP SEEDING)
Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.
If outside of permanent seeding dates in Section 2601 of the Standard Specifications, or if required by a storm water permit, place stabilizing crop, fertilizer, and mulch on the disturbed area as follows:
Place seed and fertilize according to the requirements of Article 2601.03,C,1 and Section 4169 of the Standard Specifications.
Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.
Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are incidental to mobilization and will not be paid for separately.

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks	
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class			Type
55	18			131.94	138.36	1922		FA-140	PCC	8												
55	18			131.94	138.36	1960		F-130(5)	AAC	1.5	ACC	1.5										
55	18			131.94	138.36	1974		FN-18-3(29)--2J-55	ASC	1					BRADGATE		C.LST				HOT SAND MIX	
55	18			131.94	138.36	1987		FN-18-3(59)--2J-55	AAC	5.5	AAC	5.5			HODGES		C.LST					

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- * Not a bid item
- ① Diameter or equivalent diameter
- ② UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
- ③ Backfill according to DR-101

Drainage Area ACRE	Location	Type	Size ① IN	Kind Of Pipe ②	Length New Const. LF	Bedding Class	Design Cover (H) FT	Camber* (DR-102) FT	Apron No.		Apron Guard* (DR-213) No.	Elbow* (DR-141) No.	Diaphragm* (DR-501) No.	Tee Section* (DR-142) No.	"D" Section* (DR-141) No.	Reducer* No.	Type 'C' Connections* (DR-122) Type	Connected Pipe Joint* (DR-121) Type	4" Perforated Subdrain* FT	Flow Line Elevations				Dimensions Lin. Ft.		Skew Ahead Degrees	Dike			Class 20 CY	Flowable Mortar CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Remarks						
									IN	OUT										Lt.	Rt.	Other	Other	Lt.	Rt.		Lt.	Rt.	Lt.							Rt.	Lt.	Rt.	Location Station	Top Elevation	Type
									Total	Extensions										Lt.	Rt.	Lt.	Rt.	Lt.	Rt.		Lt.	Rt.	Lt.							Rt.	Lt.	Rt.			

ROCK EROSION CONTROL

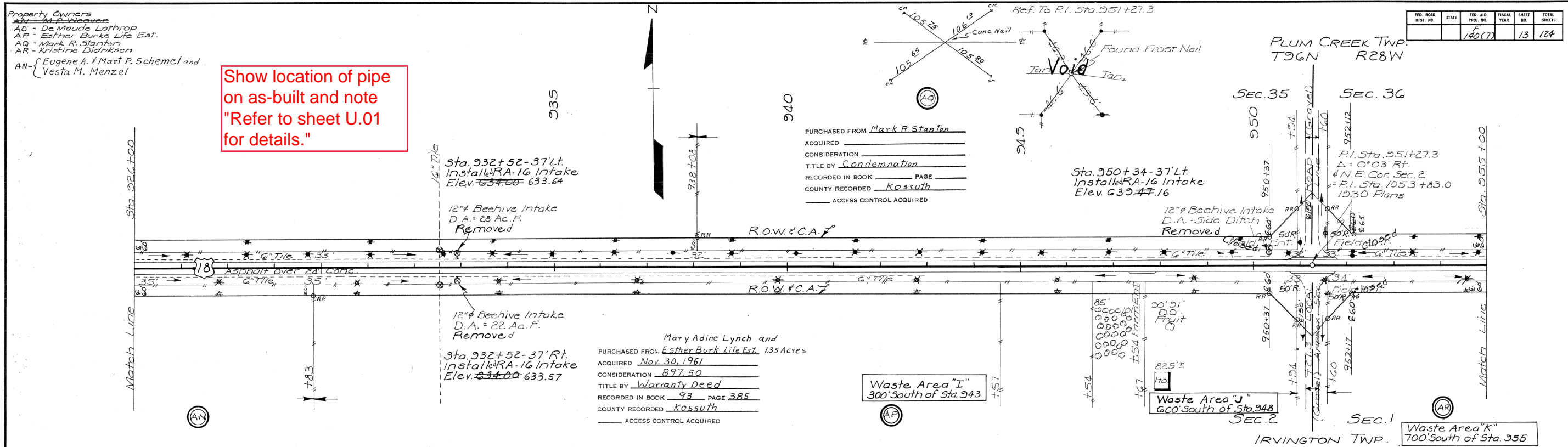
Refer to EC-301 and Detail 570-8

Location		Begin Station	End Station	Side	L	W	Rock Erosion Control (REC)					Material Bid Quantities			Remarks																							
Road Identification							Type 1	Type 2	Type 3	Type 4	Type 5	Eng. Fabric	Class E Revetment	Erosion Stone																								
							Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection					SY	TON	TON																				

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

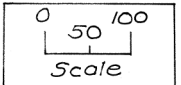
Possible Standards: EC-204

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



Show location of pipe on as-built and note "Refer to sheet U.01 for details."

LEGEND:
 • N.W. Bell Tel. Co.
 ⊕ Iowa Elec. Light & Power Co.



BENCH MARKS: No. 29A Sta. 930+75-60 Rt. R.R. Spk. in N. Side P. Pole EL. 636.76
 No. 29 Sta. 933+77-31 Rt. Set 2-60' Spks. in N. Side P. Pole EL. 636.85
 No. 30 Sta. 951+57-67 Lt. Set 2-60' Spks. in S. Side P. Pole EL. 642.18

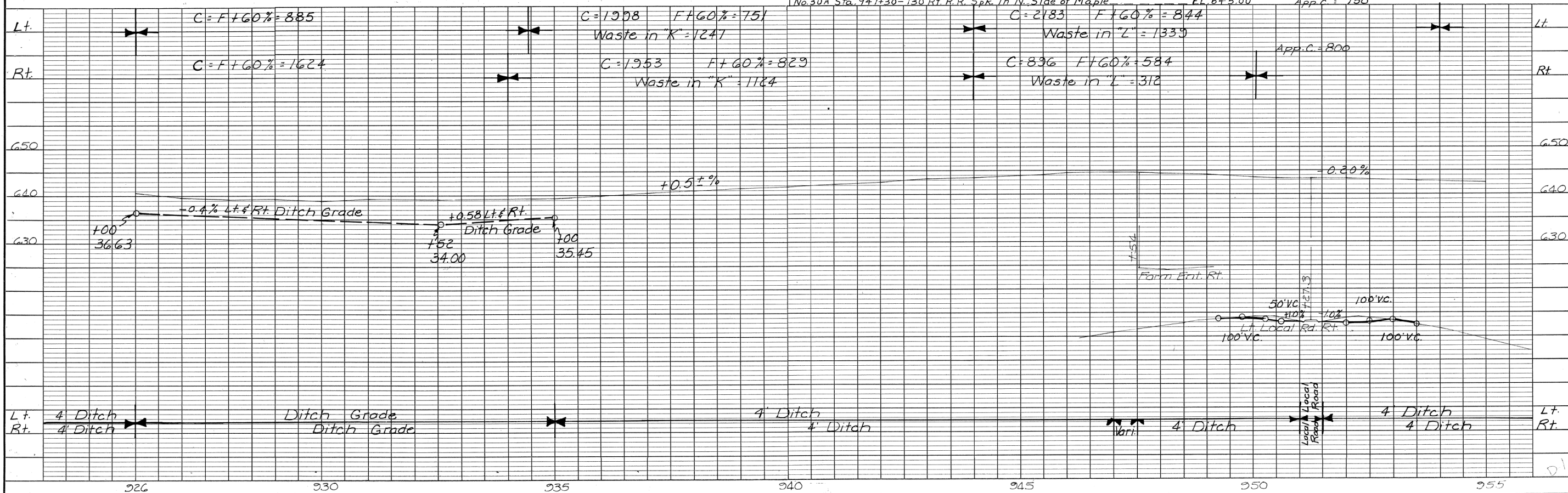


PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
 NO. 131 ARKRIGHT MADE AND PRINTED IN U. S. A.
 EUGENE DIEZDORF CO., CHICAGO

Koss AS-BUILT PLANS, FOR INFORMATION ONLY 13

DATE	
BY	
PLAN	
SUBMITTED	
PLOTTED	
ALIGNED CHECKED	
INT. OF WAY CHECKED	
NOTE BOOK	
NO.	

DATE	
BY	
PROFILE	
SUBMITTED	
PLOTTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK	
NO.	

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			None									

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
NHSN-169-8(65)--2R-55	Pipe Jacking-- Tied Project
	Pipe Culvert

108-23A
08-01-08

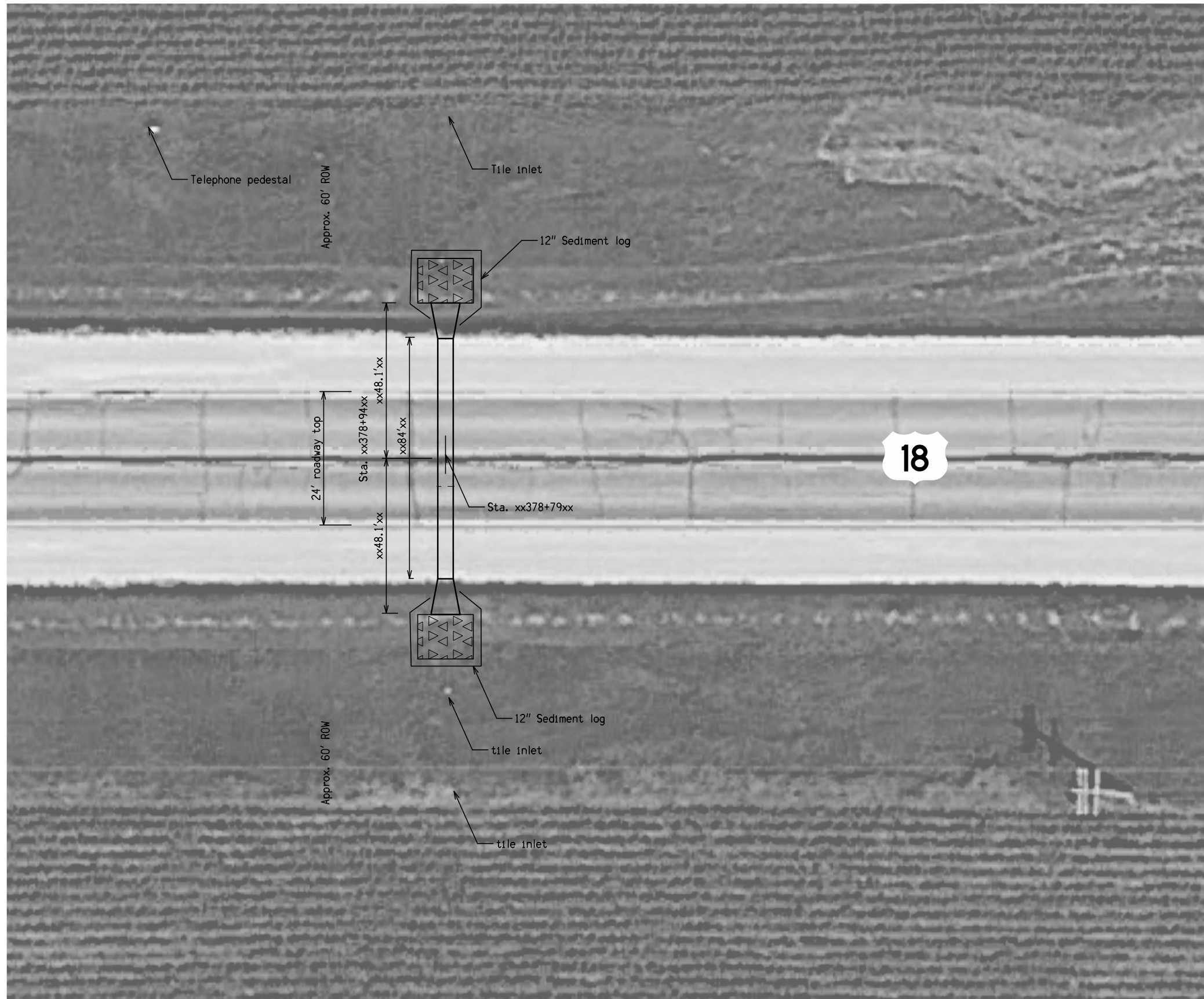
TRAFFIC CONTROL PLAN

Eastbound and Westbound US 18 lanes will be open to traffic during construction.

TC-213 may be used for intermittent lane closures as needed.

Note: All work to be completed within ROW.
No equipment, materials or personnel shall cross the ROW line.

-Show typical cross section.
-Pipe does not look to be to scale.



Benchmark: xxdescriptionxx -
Elevation = xxxx.xx'

Sta. xxx+xx
D.A. = 100 Acres
Install xx" x xx' RCP w/ aprons
Flowline Lt. = xxxx.xx'
Flowline Rt. = xxxx.xx'

Notes: Contractor shall restore and shape shoulders to existing conditions and grade foreslopes per Std. DR-103.

TYPICAL - POST CULVERT CONSTRUCTION

INSTALL NEW CULVERT @ STA 378+79

FILE NO.	ENGLISH	DESIGN TEAM Kelly/Nie/Meise	Kossuth COUNTY	PROJECT NUMBER NHSX-218-8(141)--3H-09	SHEET NUMBER U.1
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