

STA. TO STA. FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

CONTRACT NO. 62897

MOMENT AND REACTION TABLES

INTERIOR GIRL	DER MOMENT TABL	.E
		0.5 Span
Is	(10 mm ⁴)	11171
Ic (n)	(10 mm ⁴)	30779
Ic (3n)	(10 mm ⁴)	20799
Ss	(10 ³ mm ³)	28749
Sc (n)	(10 ³ mm ³)	37944
Sc (3n)	(10 ³ mm ³)	34861
Z	(10 ³ mm ³)	-
DL	(kN/m)	16.60
Mdl	(kN*m)	3194
s DL	(kN/m)	7.48
MsDL	(kN*m)	1439
MLL	(kN*m)	2245
M (Imp)	(kN*m)	442
5/3[MLL + M(Imp)]	(kN*m)	4478
Ма	(kN*m)	11844
Mu	(kN*m)	13603
fs DL non-comp	(MPa)	111
fs DL (comp)	(MPa)	41
fs 5/3[MLL + M(Imp)]	(MPa)	118
fs (Overload)	(MPa)	270
fs (total)	(MPa)	
VR	(kN)	291

INTERIOR	GIRDER RE	ACTION TABLE
		Abut.
RDL	(kN)	472
RLL	(kN)	243
Imp.	(kN)	48
R (Total)	(kN)	763

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Icm and Scm are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Icam and Scam are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38) VR is the maximum Live Load + Impact shear

range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Md (Applied Moment)=1.3[MQ + MsQ + $S_3(ML + M(Imp))].$ The Plastic Moment capacity (Mu) is computed according to

The Fisher Moment Capachy who is compared accordance. AASHTO 10.48.1 and 10.50.1.1. fs (Overload) is the sum of the stresses due to $M\ell + Ms\ell + 5_3(M\ell + M(Imp))$, fs (Total) (Non-compact section) is the sum of the stresses due to $1.3 \Gamma M\ell + Ms\ell + 5_3(M\ell + M(Imp))$].

SHT. S-16 OF S-27

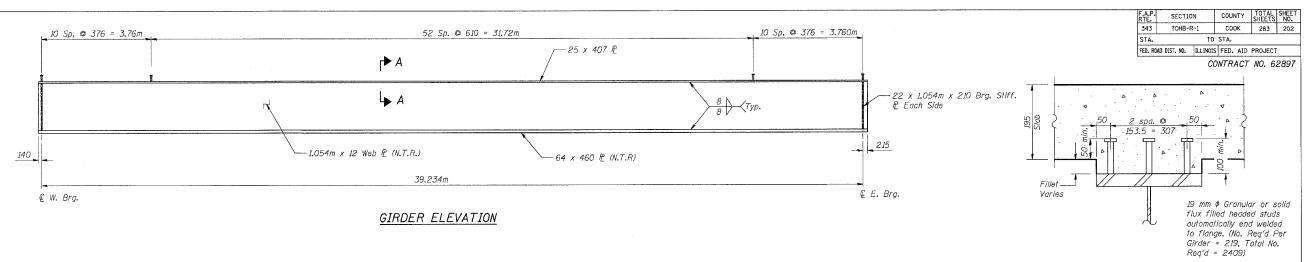
For Girder elevation, diaphragm details, and top of girder elevations see Sht. S-17 of S-27.

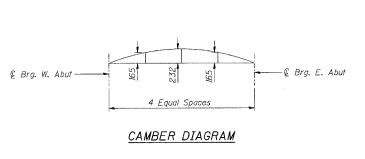
STV Incorporated lingineary/Arubilechip*inmeay/Construction Min.expers 200 W. Monrore Street, Statie 1650 Chiesgo, H., 66606-6915 31(2553-6855, PAX 3172/533-0661)	

ILLINOIS DEPARTMENT OF TRANSPORTATION IL ROUTE 68 OVER US ROUTE 14 F.A.P. ROUTE 343 SECTION 70HB-R-1 COOK COUNTY STATION 10+001.778 STRUCTURE NO. 016-2861

FRAMING PLAN & MOMENT TABLE

DESIGNED: BTO DRAWN: BTO DATE: 10/06 CHECKED: JAN CHECKED: JAN

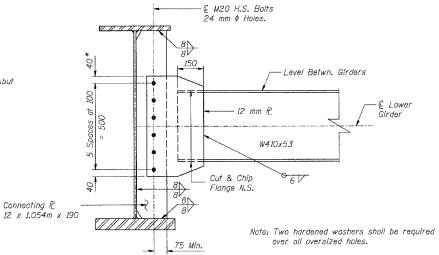




	GIRDER	WEST	EAST
	GIRDER	ABUT. BRG.	ABUT. BRG.
	1	269.590	269.074
	2	269.511	268.982
	3	269.430	268.888
	4	269.349	268.794
	5	269.267	268.700
	6	269.186	268.605
į	7	269.103	268.509
	8	269.020	268.412
	9	268.937	268.315
	10	268.853	268.216
	11	268.768	268.118

TOP OF WEB ELEVATIONS

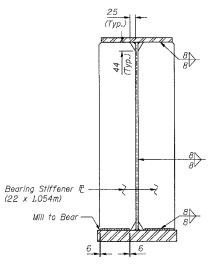
(For Fabrication Use Only)



DIAPHRAGM D1

* Provide 24 mm x 40 mm vertical slotted holes in 12 mm \(\textit{F} \) for diaphragms in stage construction bay, Stage II side. Increase 40 mm dimension to 60 mm in plate in stage construction bay, Stage II side. 8 mm structural plate washers shall be placed over slotted holes. Diaphragm in stage construction bay shall not be installed until after Stage II pour is completed. Slotted hole boits shall be finger-tightened prior to the deck closure pour and fully-tightened after completion of the deck pour.

FOR INFORMATION ONLY.
INCLUDED IN BEAM FABRICATION
CONTRACT EXCEPT STUD
SHEAR CONNECTORS.



BEARING STIFFENER

SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	2409

NOTES:

REVISIONS NAME DATE

- 1. N.T.R. denotes members to which notch toughness requirements are applicable.
- All steel shown for the Girders and Bearing Stiffeners shall be AASHTO M270M Grade 345.
- All steel shown for the Diaphragm, Connecting Plates and Angles shall be AASHTO M270M Grade 250.

SHT. S-17 OF S-27

DRAWN: BTO

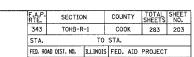
CHECKED: JAN



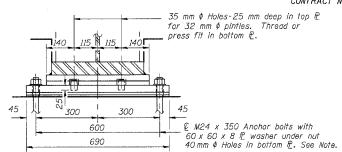
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 68 OVER US ROUTE 14
F.A.P. ROUTE 343 SECTION 70HB-R-1
COOK COUNTY STATION 10+001.778
STRUCTURE NO. 016-2861

GIRDER ELEVATION & STEEL DETAILS

DESIGNED: JAN : 10/06 CHECKED: BTO 0.05-2864\AFA wat zoe een 10/49/2008



CONTRACT NO. 62897



SECTION B-B

FIXED BEARING
(West Abutment)

-- 12 33 x 230 x 510

P 45 x 230 x 690

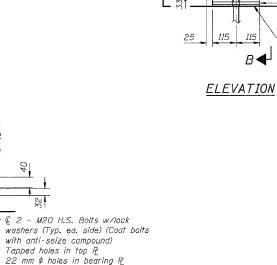
Steel.

-3 mm elastomeric neoprene leveling pad according to Article 1052.02 of the Standard Specifications Cost included with Structural

> 75 mm A 152 32 mm \$

FOR INFORMATION ONLY. BEARINGS FABRICATED UNDER BEAM FABRICATION CONTRACT

<u>PINTLE</u>



ELEVATION AT ABUT.

 $A \blacktriangleleft$

12 178 178

SECTION A-A

— Concrete diaphragm

280

407

180 180

280

50

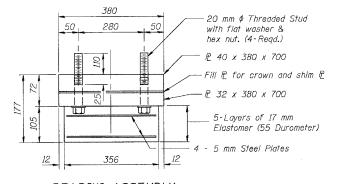
TYPE I ELASTOMERIC EXP. BRG.

-22 mm ¢ Hole in

-Bearing Assembly

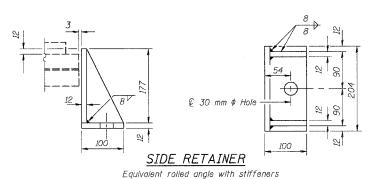
Bott. Flange

(East Abutment)



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



will be allowed in lieu of welded plates. Weight included with Structural Steel.

© M24 x 312 mm Anchor bolts with 60 x 60 x 8 % washer under nut

Item	Unit	Total
Erecting Elastomeric Bearing Assembly, Type I	Each	11

BILL OF MATERIAL

NOTES:

- 1. Structural steel for bearing plates shall be AASHTO M270M, Grade 250.
- 2. Anchor bolts at fixed bearings may be built into the masonry, See sheet S-19 of S-27 for Anchor Bolt installation.

SHT. S-18 OF S-27

STV Incorporated Engineers levelshee Primers Exemption Managers 200 W. Morner Street, Street School Chiesay, II., 6046-605 Chiesay, III., 6046-61, TAX 212-53-6661	

ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 68 OVER US ROUTE 14
F.A.P. ROUTE 343 SECTION 70HB-R-1
COOK COUNTY STATION 10+001.778
STRUCTURE NO. 016-2861

BEARING DETAILS

DESIGNED: BTO DRAWN: BTO
DATE: 10/06 CHECKED: JAN CHECKED: JAN

 F.A.P. RTE.	SECTIO	N	COUNTY	TOTAL SHEETS	SHEET NO.
343	70HB-R	-1	COOK	283	204
STA. TO STA.					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

CONTRACT NO. 62897

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

 With the coil wire in place, the bolf shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolf. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.

2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.

A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Diameter	*Length	Total	Туре
E. Abut.	M24	312	22	ASTM A307
W. Abut.	M24	350	22	ASTM A307

*Length = La

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose

particles shall be removed by the use of compressed air or vacuuming.

The anchor boilts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid exite for "Frenting Structural Steel"

price for "Erecting Structural Steel".

All dimensions are in millimeters (mm) except as noted.

SHT. S-19 OF S-27

DRAWN: BTO

CHECKED: JAN



ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 68 OVER US ROUTE 14

F.A.P. ROUTE 343 SECTION 70HB-R-1

COOK COUNTY STATION 10+001.778

STRUCTURE NO. 016-2861

ANCHOR BOLT DETAILS

DESIGNED: BTO
CHECKED: JAN

be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt. O "D"ø 20 30 33 26 51 Anchor Bolt (See Bearing Details 36 32 54 13 39 for number, size and length.) 51 44 73 64 67 60 86 Top of base plate End of End of groove 4 mm wide x 2 mm deep groove in anchor bolt with 3 mm & coil wire 2 at Bottom PLAN-COIL WIRE 3 mm Notch ″Ε′′ φ

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of

Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and

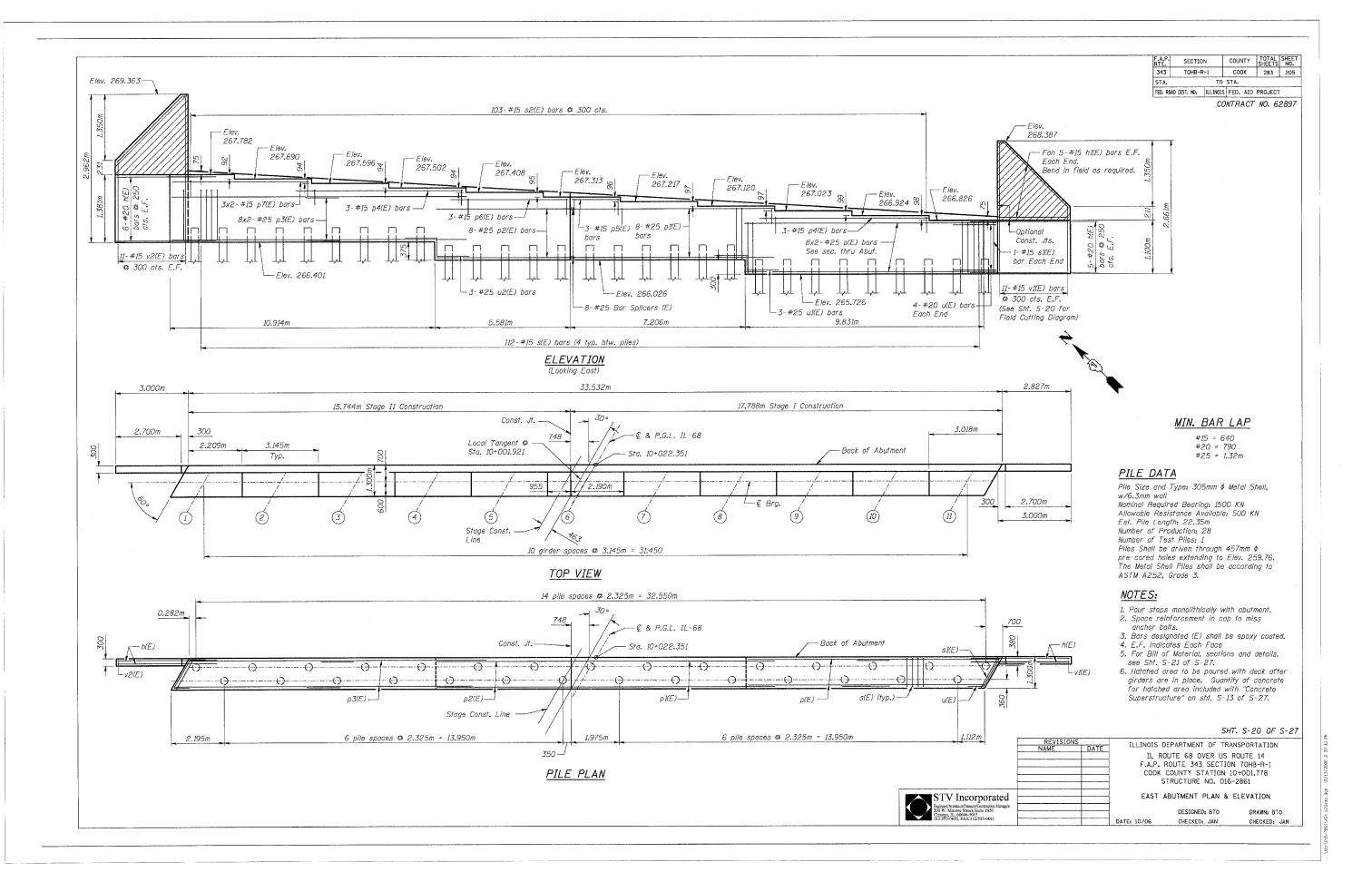
the fabrication of this bolt for use on highway projects

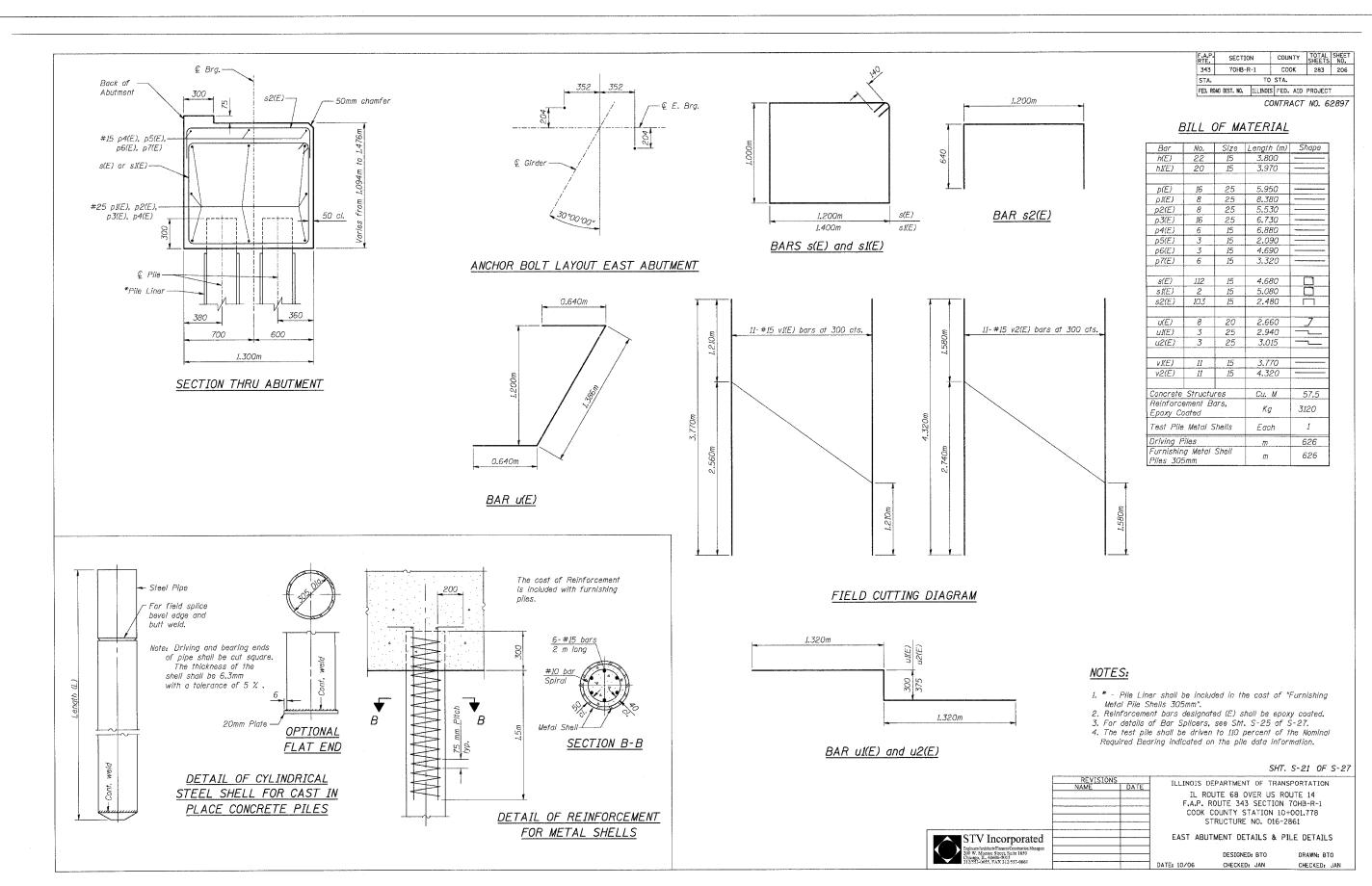
in the State of Illinois shall be permitted and there shall

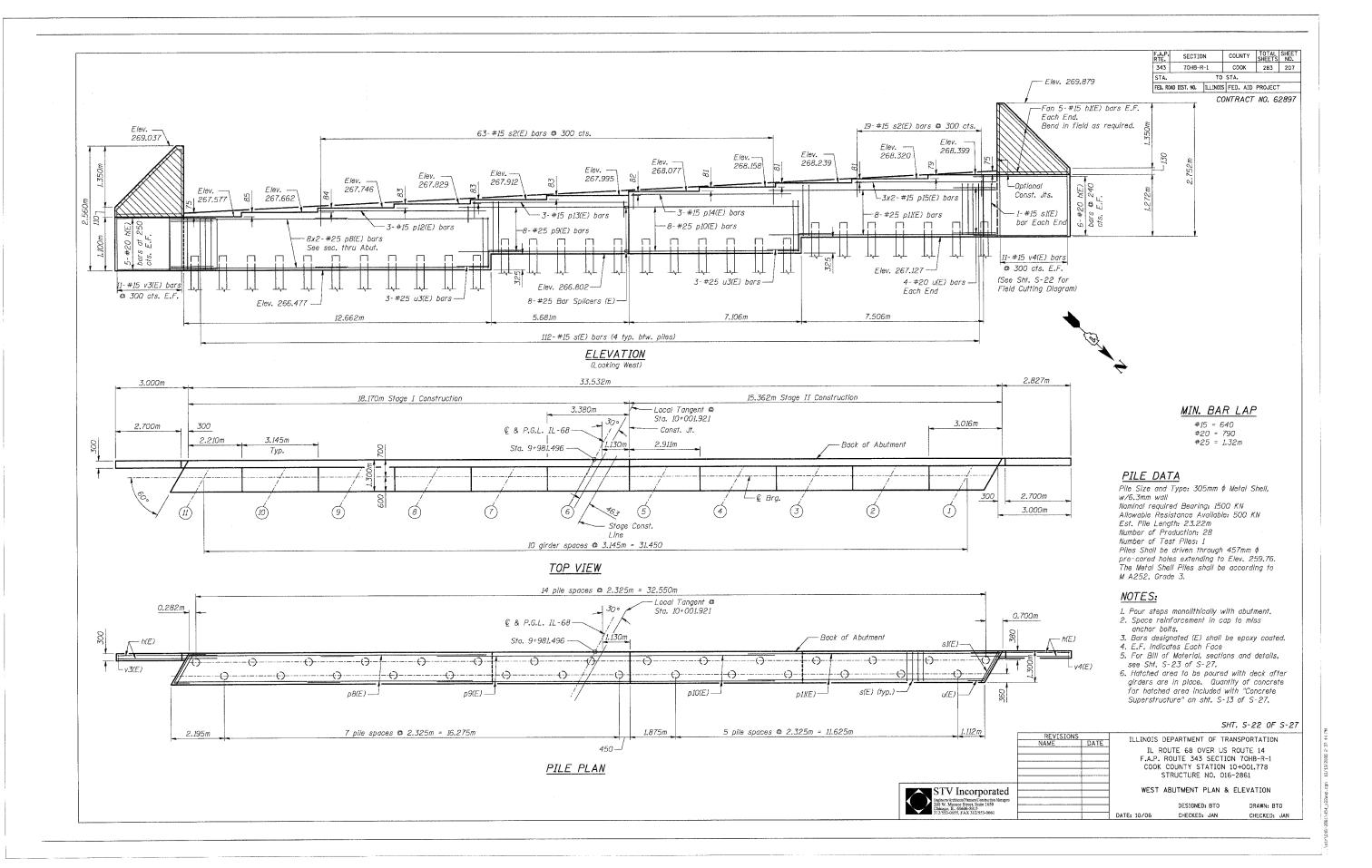
ILLINOIS COIL-LOCK ANCHOR BOLT

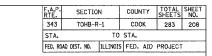
"d" Holes with zerk

for epoxy grout









BILL OF MATERIAL Bar No. Size Length (m) Shape h(E) 22 15 3.800 — h(E) 20 15 3.970 —

p9(E) 8 25 7.000 — p10(E) 8 25 7.050 —

*1*5 6.9**3**0

 p11(E)
 8
 25
 9.580

 p12(E)
 3
 15
 6.930

p13(E) 3 15 6.370 p14(E) 3 15 6.640 p15(E) 6 15 3.350

s(E) 112 15 4.680

 s1(E)
 2
 15
 5.080

 s2(E)
 82
 15
 2.480

 u(E)
 8
 20
 2.660

 u3(E)
 6
 25
 2.965

v4(E) 11 15 3.950

Reinforcement Bars,

Test Pile Metal Shells

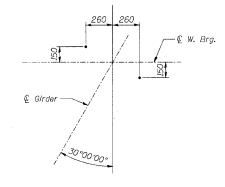
Furnishing Metal Shell

Epoxy Coated

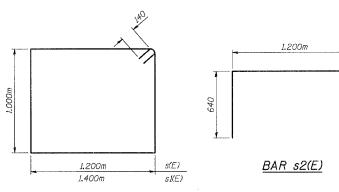
Driving Piles

Piles 305mm

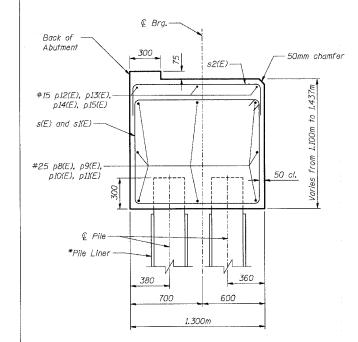
CONTRACT NO. 62897



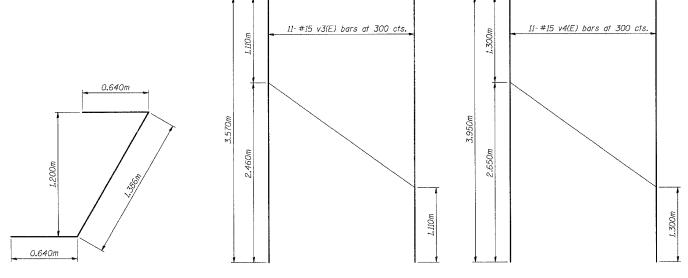
ANCHOR BOLT LAYOUT WEST ABUTMENT



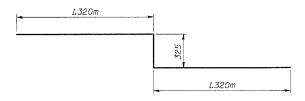
BARS s(E) and s1(E)



SECTION THRU ABUTMENT

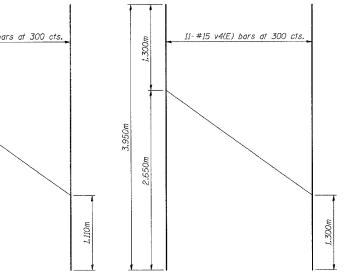


FIELD CUTTING DIAGRAM



BAR U(E)

BAR u3(E)



NOTES:

- 1. * Pile Liner shall be included in the cost of "Furnishing Metal Pile Shells 305mm".
- 2. Reinforcement bars designated (E) shall be epoxy coated. 3. For details of Bar Splicers, see Sht. S-25 of S-27.
- 4. The test pile shall be driven to 110 percent of the Nominal
- Required Bearing indicated in the pile data information.

SHT. S-23 OF S-27

2,990

650

650

Kg

Each

m

m

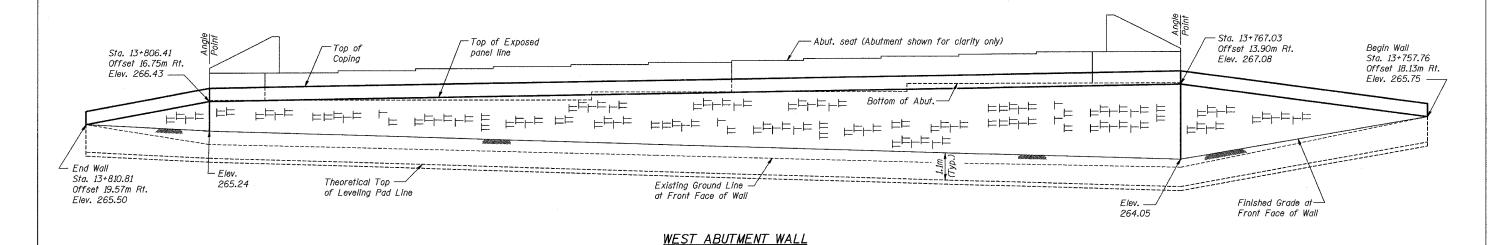


ILLINOIS DEPARTMENT OF TRANSPORTATION IL ROUTE 68 OVER US ROUTE 14 F.A.P. ROUTE 343 SECTION 70HB-R-1 COOK COUNTY STATION 10+001.778 STRUCTURE NO. 016-2861

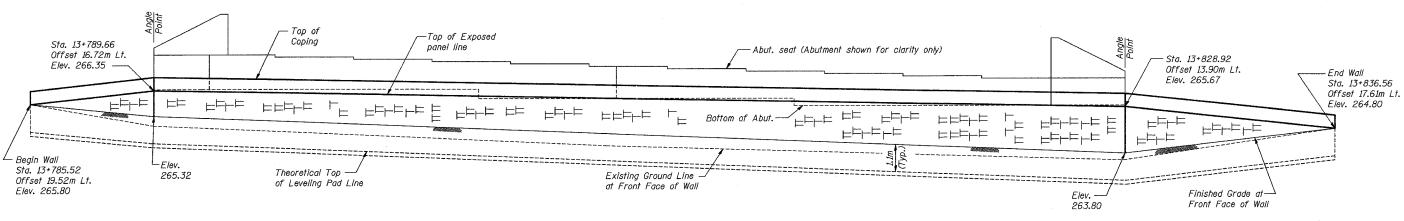
WEST ABUTMENT DETAILS

DESIGNED: BTO DRAWN: BTO DATE: 10/06 CHECKED: JAN CHECKED: JAN

CONTRACT NO. 62897



(Unfolded Elevation View)



EAST ABUTMENT WALL (Unfolded Elevation View)

BILL OF MATERIAL

Item	Unit	Total
Mechanically Stabilized Earth Retaining Wall	SQ M	344

NOTES:

STV Incorporated

Stationing and Offsets from © US 14.

For Plan of Mechanically Stabilized Earth Retaining Wall see sheet S-01 of S-27.

For Section Through MSE Retaining Wall see sheet S-02 of S-27.

Bearing Capacity of soil below MSE wall is 2.15 kPa with a corresponding factor of Safety of 2.5.

SHT. S-24 OF S-27

MECH	
MILCI	
DATE	

ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 68 OVER US ROUTE 14

F.A.P. ROUTE 343 SECTION 70HB-R-1

COOK COUNTY STATION 10+001.778

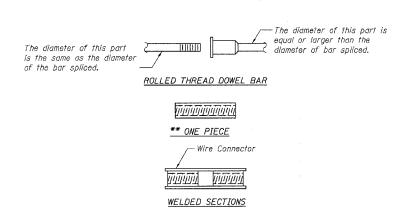
STRUCTURE NO. 016-2861

MECHANICALLY STABILZED EARTH RETAINING WALLS

DESIGNED: BTO

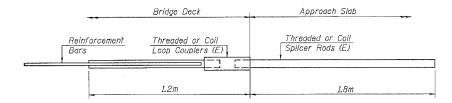
CHECKED: JAN

DRAWN: BTO CHECKED: JAN



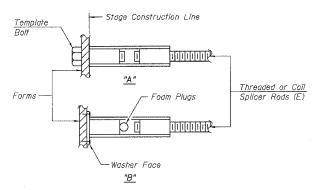
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



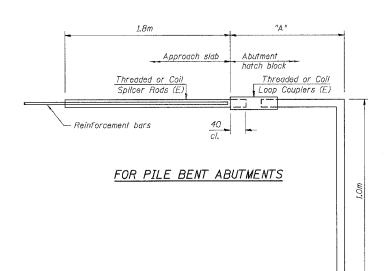
FOR SEMI-INTEGRAL ABUTMENTS

Bar Size	No. Assemblies Required	Location
#15	93	E.Abut.
#15	93	W.Abut.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms. (E): Indicates epoxy coating.



	Bai	- Splice	r for	#15	DC	ir
Min.	Capacity	= 100	kN -	tensi	on	
Min.	Pull-out	Streng	th =	40kN	-	tension

COUNTY TOTAL SHEET NO. SECTION 343 70HB-R-1 COOK 283 210 TO STA. FED. ROAD DIST, NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 62897

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Term or centering the source of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

Minimum Capacity = $1.25 \times 10^{-3} \times \text{fy} \times \text{A}_{t}$ 1

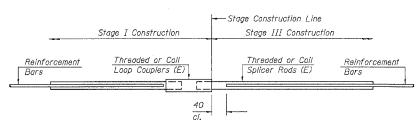
(Tension in kN) = 1.25 x 10 x 17 x 11, Minimum *Pull-out Strength = 1.25 x 10⁻³ x fs_{allow} x A₁

Where fy = Yield strength of lapped reinforcement bars in MPa.

fs_{allaw}= Allowable tensile stress in lapped reinforcement bars in MPa (Service Load) A_t = Tensile stress area of lapped reinforcement bars. * = 28 day concrete

	BAR SPLICER ASSEMBLIES						
D 01 /		Strengt	th Requirements				
be Spliced	Splicer Rod or Dowel Bar Length		Min. Pull-Out Strength kN - tension				
#10	510 mm	70	5.9				
# <i>1</i> 5	610 mm	100	40				
#20	790 mm	150	60				
#25	1.04 m	250	100				
#30	1.37 m	350	140				

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



STANDARD

Bar Size	No. Assemblies Required	Location
#25	8	E.Abut.
#25	8	W.Abut.
#15	522	Deck

BAR SPLICER ASSEMBLY DETAILS

REVISIONS
NAME DATE

SHT. S-25 OF S-27

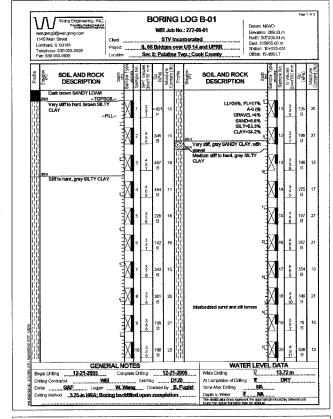
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CTV/ I	
STV Incorporated Engineers/Architects/Planners/Construction Managers	
200 W. Monroe Street, Suite 1650 Chicago, IL. 60606-5015 312/553-0655, FAX 312/553-0661	

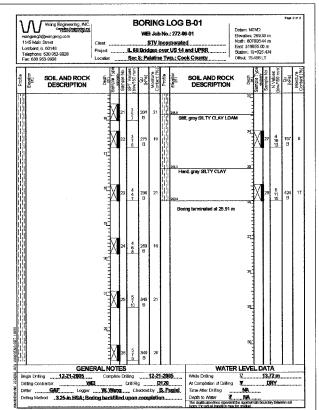
ILLINOIS DEPARTMENT OF TRANSPORTATION IL ROUTE 68 OVER US ROUTE 14 F.A.P. ROUTE 343 SECTION 70HB-R-1 COOK COUNTY STATION 10+001.778 STRUCTURE NO. 016-2861

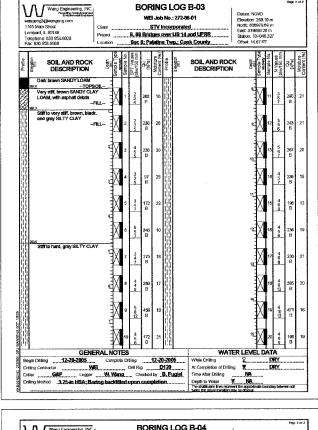
BAR SPLICER ASSEMBLY

DESIGNED: BTO DRAWN: BTO DATE: 10/06 CHECKED: JAN CHECKED: JAN

BSD-1 (M) (updated to 9-01-03)







Wang Engineering, INC- organizations and the control of the contro	Pegs 1 of 2 Defaunt NSWD Elevation 269 30 m North 6006977 fm Each 319776 30 m Station 4 600 369 Children 4 600 369 Children 4 600 369	Wang Engineering, INC.
SOIL AND ROCK OF THE PROPERTY	Bennie Type Bennie Type Bennie Type Bennie Type Bennie Type (Pa) (Pa) Mosture Mosture Cortent (%)	# LEE SOIL AND ROCK 변경 등 1 등 1 등 1 등 1 등 1 등 1 등 1 등 1 등 1 등
1 5 236 15 1 1 2 1 1 2 1 1 2 2	11 4 47 20 1 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21 3 290 19 11 1 22 3 290 20 19 11 1 24 27 5 356 11 11 11 11 11 11 11 11 11 11 11 11 11
3 4 2 208 17 11 11 11 11 11 11 11 11 11 11 11 11	15 3 140 20 8 20 8 20 8 20 8 20 8 20 8 20 8 20	223 4 422 14 11 11 1 2 2 2 3 6 8 377 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
86 Very stiff, gray CLAY LOAM	12 \	20 20 20 11 11 11 11 11 11 11 11 11 11 11 11 11
Sign to hard, gray SILTY CLAY 4	16 4 20 18 18 14 15 5 432 17 15 20 8 275 20	22 5 5 196 11 22 3 3 275 21
GENERAL NOTES Begin Drilling 12-19-2095. Caracterio Drilling 12-19-2095. Drilling Contractor WHI Drilling D129. At Completion of Drilling Drilling Heat Self-Ell Congres WK, Way D. Checkword y, B., Faggiet Ten-Aster Drilling Drilling May 25-5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	FR LEVEL DATA	Complete Create Complete

CONTRACT NO. 62897

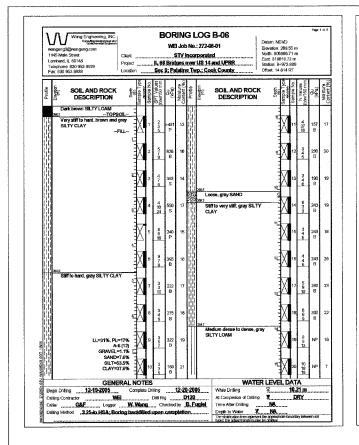
NOTE:

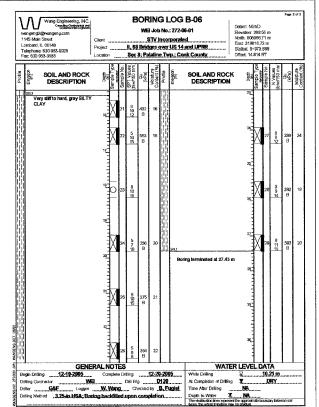
For 1974 Soil Borings, see existing bridge plans for SN 016-2410.

SHT. S-26 OF S-27

		0,,,,	0 20 0. 0 2
REVISIONS NAME DATE	ILLINOIS D	EPARTMENT OF TRANS	PORTATION
NAWL DATE	F.A.P. F COOK	UTE 68 OVER US RO ROUTE 343 SECTION COUNTY STATION 104 FRUCTURE NO. 016-2	70HB-R-1 -001,778
		BORING LOGS	
	DATE: 10/06	DESIGNED: BTO	DRAWN: BTO CHECKED: JAN

1145 Mei Lombard,	, N. 80148 er 630 953-9926	Project	R. 68	WE	Joh STV.! Iges.:	No.	.: 272-06-01 Deturn: NGW. :: 272-06-01 Bevelon: 26 (morated PRR Station: 1946 :: US 14 and UPRR Station: 1946 :: Cook County Offset 14.87	8.19 m 9.59 m 1.28 m 146.321	*	Page 2
Profie (m)	SOIL AND ROCK DESCRIPTION	Depth (m) Semple Type moving Semple No.	SPT Values blw/150 mm	(8 ^Q)	Moisture Content (%)	Profile	SOIL AND ROCK BEEN DESCRIPTION	Sample No.	N Values (b)w/150 mm	(6-G)
		16 21	600	354 B	21		20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
		22	4 6 10	290 B	18		Boring terminated at 24.38 m	27	563	275 B
		111111					*			
		18 23	5 7 7	314 B	21		20			
		24	400	314	21		n			
		2/ 3	_8_	В			28			
		21 7					7			
		25	4 6 8	307 B	20		20			
gar.		2								
WANGENG GOT		28	5 7 11	275 B	22		30 <u>.</u>			
2	OF.	RAL NOTES	l	<u> </u>	1	1	WATER LEVEL	DAT	_	-

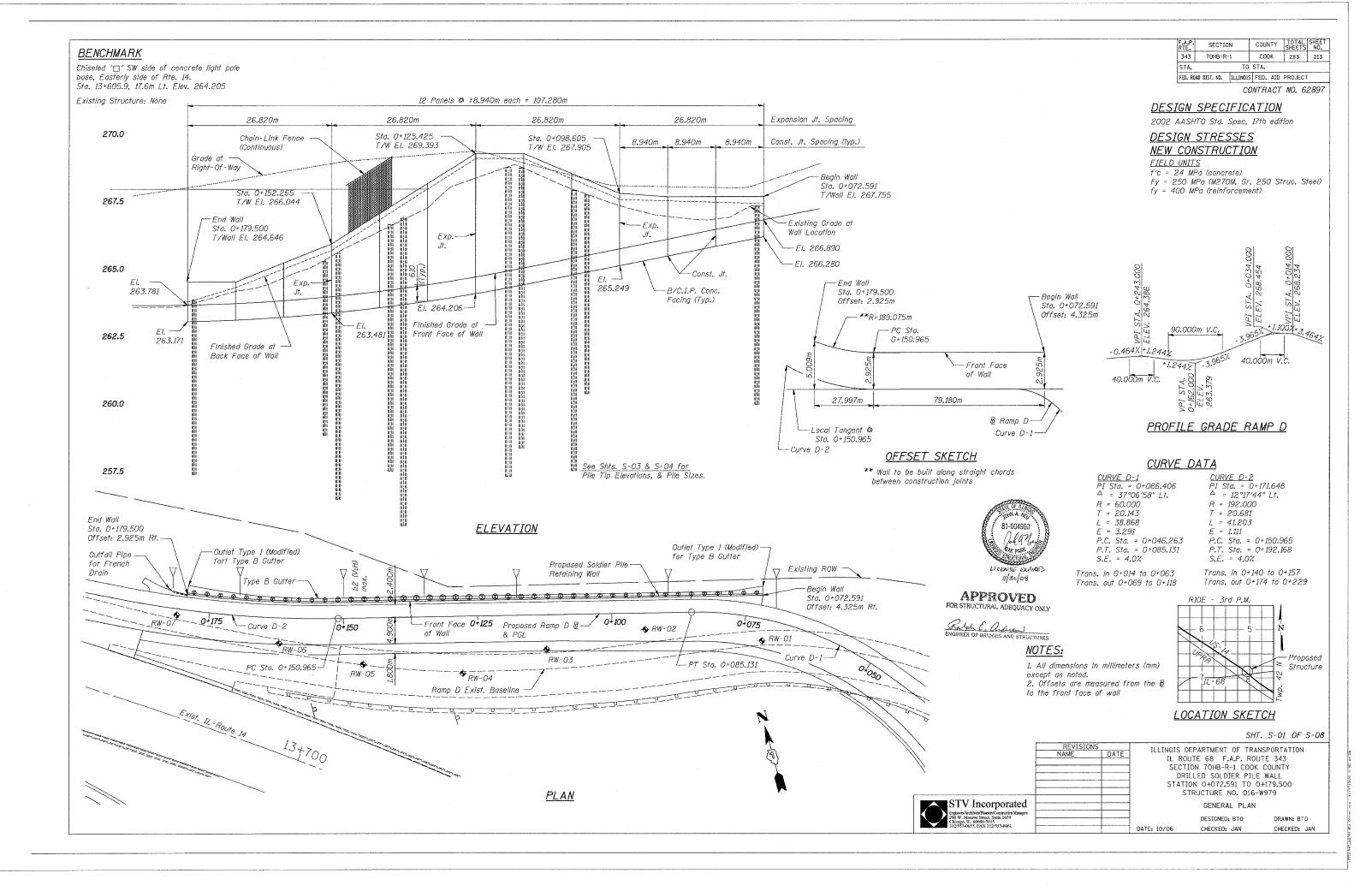




CONTRACT NO. 62897

SHT. S-27 OF S-27

			: -::				
REVISIONS NAME DATE	ILLINOIS (DEPARTMENT OF TRA	NSPORTATION				
		IL ROUTE 68 OVER US ROUTE 14					
	. F.A.P.	ROUTE 343 SECTION	₹ 70HB-R-1				
	COOK	COUNTY STATION 10	0+001.778				
	S	TRUCTURE NO. 016-	2861				
	4						
	-	BORING LOGS					
	†						
	1	DESIGNED: BTO	DRAWN: BTO				
<u> </u>	DATE: 10/06	CHECKED: JAN	CHECKED: JAN				



 F.A.P. RTE.	SECTIO	N	COUNTY	TOTAL	SHEET NO.
343	70HB-R-	1	COOK	283	214
STA.		TO	STA.		
FED. ROA	D DIST. NO.	ILLINOIS	FED. AIC	PROJECT	

CONTRACT NO. 62897

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M31M or, M322M Grade 400.
- The contractor is responsible for the design and performance of the lagging using no less than a 75mm nominal rough sawn thickness and timber with a minimum allowable bending stress, Fb of 6.89 MPa.
- 3. All dimensions are in millimeters (mm) except as noted.
- 4. All exposed corners shall have a 25mm chamfer unless noted.
- 5. All construction joints shall be bonded.

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL QUANTITIES
Structure Excavation	CU M	50.1		50.1
Concrete Structures	CU M	97.1		97.1
Protective Coat	SQ M	400.0		400.0
Stud Shear Connectors	EACH	352		352
Untreated Timber Lagging	SQ M	219.2		219.2
Furnishing Soldier Piles (W Section)	METER	383		383
Reinforcement Bars, Epoxy Coated	KG	6,340		6340
Drilling and Setting Soldier Piles (In Soll)	CU M	249.6		249.6
Geocomposite Wall Drain	SQ M	154		154
Pipe Underdrains for Structures, 100MM	METER	109		109
Chain Link Fence-1.8m Attached to Structure	METER	107		107

INDEX OF SHEETS

S-01 General Plan S-02 General Notes, B.O.M., & Index of Sheets S-03 Soldier Pile Wall Plan & Elevation

S-04 Soldier Pile Wall Plan & Elevation

S-05 Soldier Pile Wall Details S-06 Chain Link Fence Details

S-08 Chain Link re S-07 Boring Logs S-08 Boring Logs

SHT. S-02 OF S-08

DRAWN: BTO

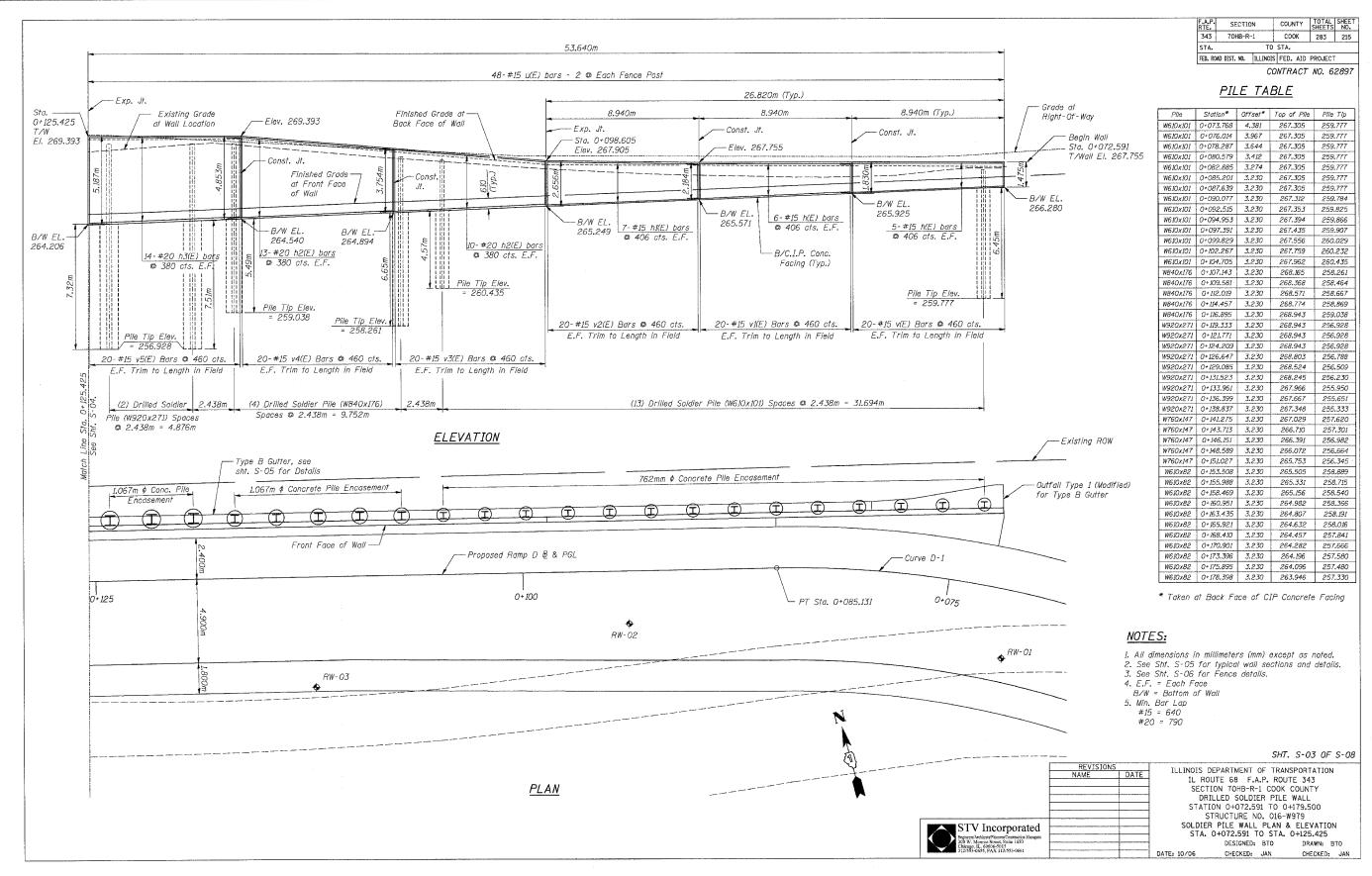
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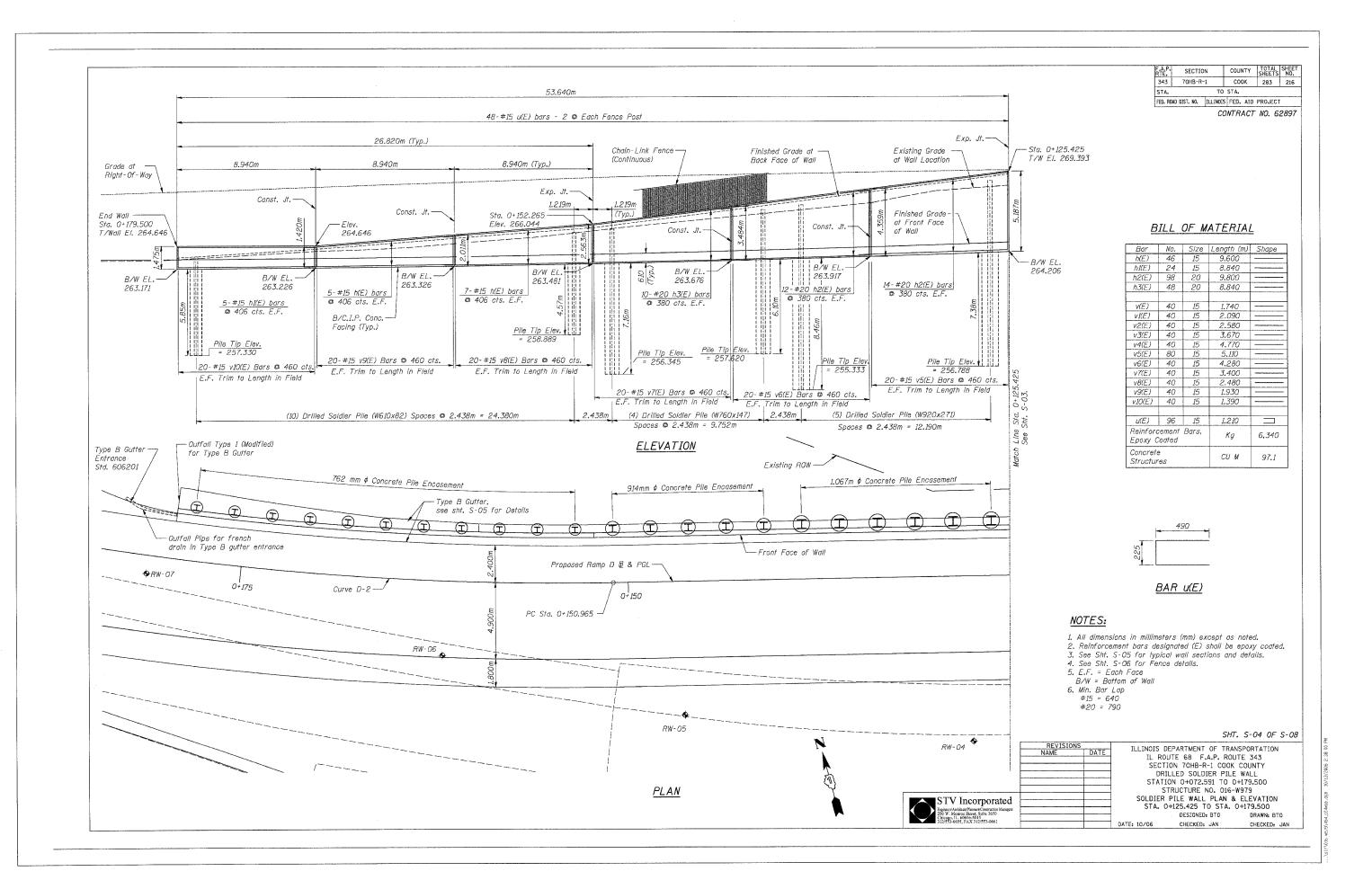
ILLINOIS DEPARTMENT OF TRANSPORTATION
IL ROUTE 68 F.A.P. ROUTE 343
SECTION 70HB-R-1 COOK COUNTY
DRILLED SOLDIER PILE WALL
STATION 0+072.591 TO 0+179.500
STRUCTURE NO. 016-W979

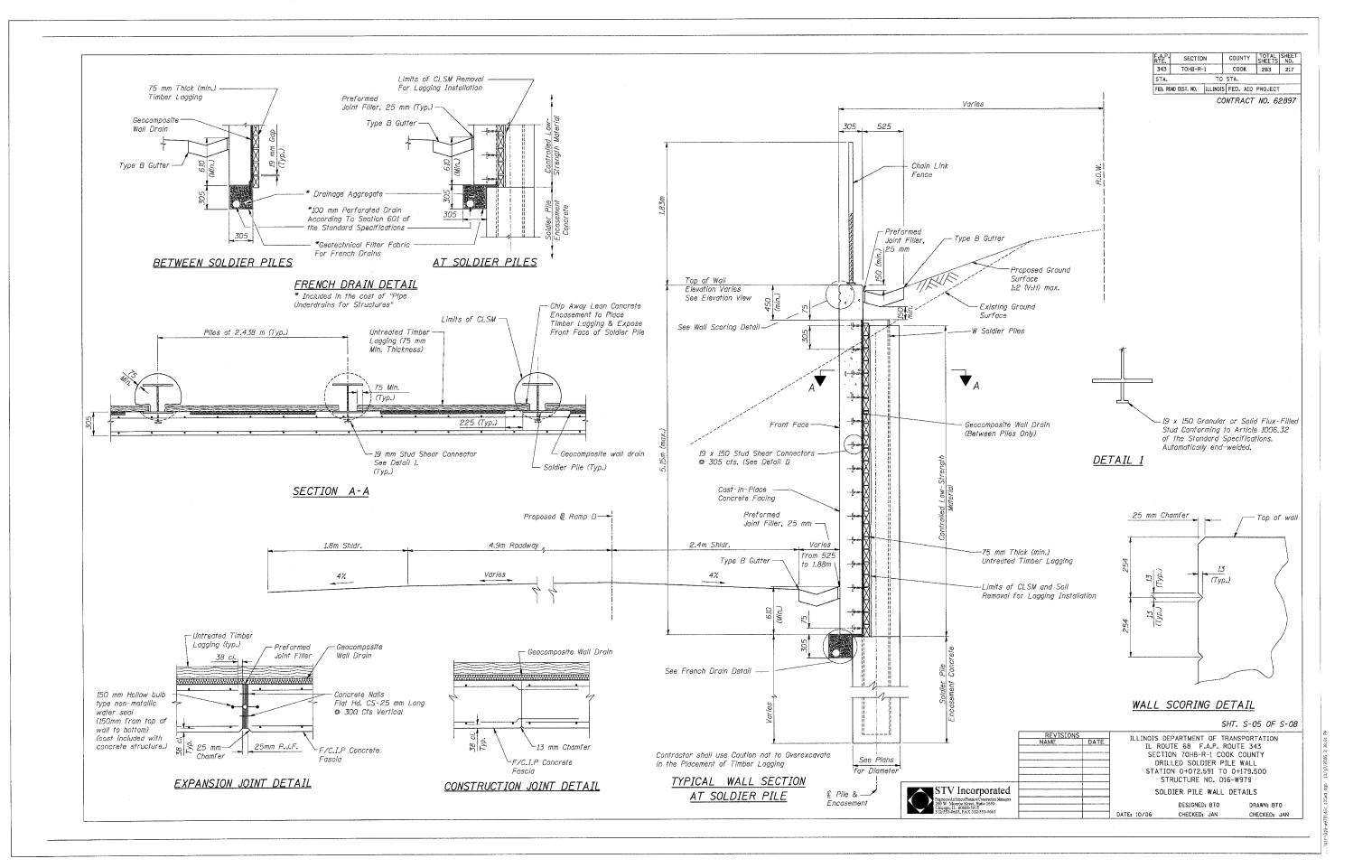
GENERAL NOTES, B.O.M., & INDEX OF SHEETS

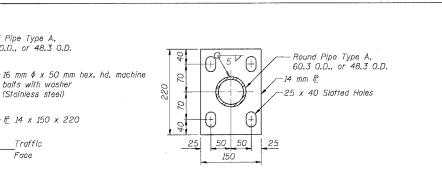
DESIGNED: 8TO CHECKED: JAN



879\454 sqawse dan 49/19/2016 2.37.59 PK







BASE P

ANCHOR BOLT DETAILS

305

-- € Post

102

-Round Pipe Type A,

60.3 O.D., or 48.3 O.D.

bolts with washer

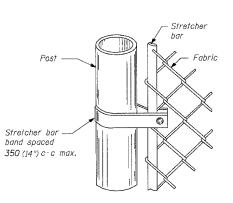
(Stainless steel)

Traffic

Face

P 14 x 150 x 220

(In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting M16 anchor rods. Embedment shall be according to the manufacturer's specifications.)



METHOD OF FASTENING

~—€ Post

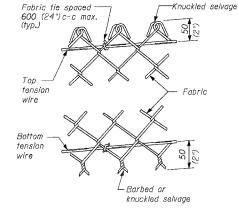
140

-Round Pipe Type A, 60.3 O.D., or 48.3 O.D.

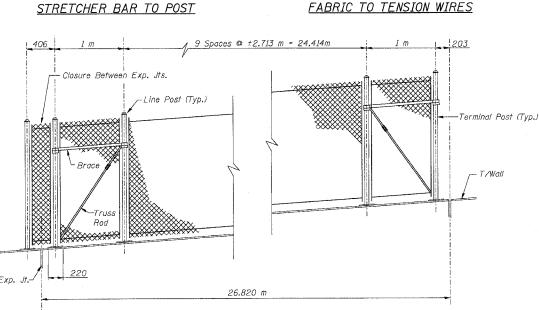
19 mm ¢ XX Pipe-Tap

12 x 40 x 130 Bar

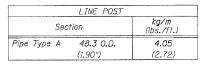
for 16 mm Ø mach, bolts



METHOD OF TYING FABRIC TO TENSION WIRES

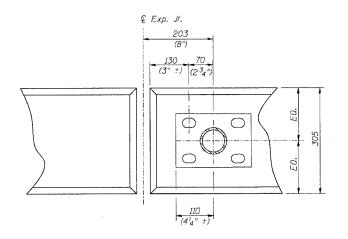


TYPICAL CHAIN LINK FENCE BETWEEN EXPANSION JOINTS



TERMINAL	POST
Section	kg/m (lbs./ft.)
Pipe Type A 60.3 O.D. (2.375")	5.43 (3.65)

	HORIZONTAL BRA	NCES
	Section	kg/m (lbs./ft.)
Pipe Type A		3.38
	(1.66")	(2.27)
Pipe Type B		
	(1.66")	



ANCHOR PLATE PLAN @ EXPANSION JOINT

F.A.P. RTE.	SECTIO	N	COUNT	Y TOTAL SHEETS	SHEET NO.
343	70HB-R-	1	COOK	283	218
STA.		то	STA.		
FED. ROA	D DIST. NO.	ILLINOIS	FED. A	ID PROJECT	

CONTRACT NO. 62897

NOTES

- 1. Posts, chain link fence, and attaching hardware shall be according to Section 1006 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per meter for Chain Link Fence, 1.8m Attached to Structure.
- 2. The 9 gauge (3.759 mm) fabric ties shall be according to Article 1006.27(d) of the Standard Specifications.
- 3. Installation of the chain link fabric shall be according to Section 664 of the Standard Specifications.
- 4. Stretcher bars shall be used at all end posts.
- 5. All other steel shapes and plates shall conform to the requirements of AASHTO M 270M Grade 250.
- 6. The chain link fabric shall be placed along the south side of the posts.
- 7. If the option of drilling and epoxy grouting the anchor rods Is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with premeasured amounts of the adhesive chemical.
- 8. Space reinforcement to miss anchor rods.
- 9. All dimensions are in millimeters (mm) except as noted.
- 10. All posts, rallings, splices, anchor devices, and bent plates shall be galvanized after shop fabriction according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.
- 11. Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.
- 12. The chain link fabric shall conform to the requirements of Article 1006.27(a)(1)a, b or c of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 1.8 Meter Attached to Structure	m	107

SHT. S-06 OF S-08

STV Incorporated

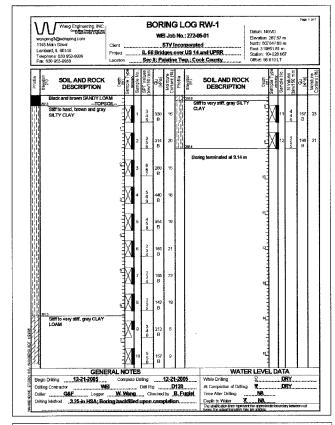
Engineer/Arthitests/Planeers/Construction Managers
200 W. Monroe Street, Suite 1650
Chicaco, Ti. Affords. Colf.

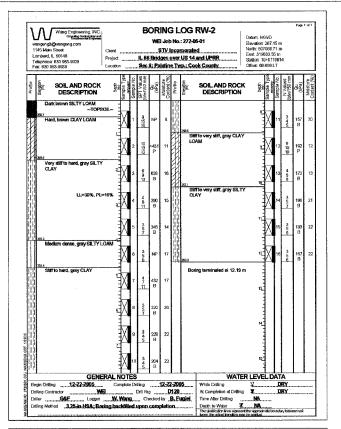
ILLINOIS DEPARTMENT OF TRANSPORTATION IL ROUTE 68 F.A.P. ROUTE 343 SECTION 70HB-R-1 COOK COUNTY DRILLED SOLDIER PILE WALL STATION 0+072.591 TO 0+179.500 STRUCTURE NO. 016-W979

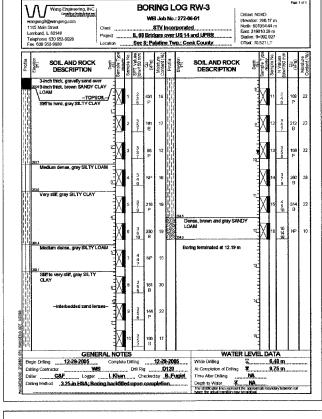
CHAIN LINK FENCE DETAILS

DESIGNED: BTO CHECKED: JAN

DRAWN: BTO CHECKED: JAN







11 Lo	Wang Engineering, INC. Congues Consistence and singsing Community Communit	Project	IL.68	WE	Job STV.	No. ncer	OG RW-4 : 272-06-01 porated US 14 and UPRR p.; Cook County	B	etiam: NGVD levetion: 265.60 i odh: 607058.54 i ast: 319794.26 in testion: 9+990.63; ftset: 78.194 LT	m i	Page	1 07
Profile	SOIL AND ROCK DESCRIPTION	Semple Type Semple Type Semple No	SPT Values (bhv/150 mm	98	Moisture Content (%)	Profie	SOIL AND DESCRIP		Depth (m) Sample Type Ascorat/ Sample No.	N Values (bhwY50 msn	(PB)	Moisture
	Dank gray SILTY LOAM 203 -TOPS SHIT to very stiff, gray CLAY LOAM	OL-	2 2 8	144 P	16					457	275 B	11
	2019		4 5 4	216 P	13				2 X	3 7 10	192 P	2
	Very stiff, gray SILTY CLAY	**************************************	4 7 7	354 B	17					4 4 7	299 B	2
	Shifto hard, gray SILTY CL	* JA4	3 6	149 13	20		2948			3 6 7	168 P	2
	LL=23%, PL	-13% X 5	348	96 P	14		Stiff to hard, gray S LOAM	ALTY CLA		5 8 8	144 P	1
		Ĭ.	2 4 7	196 B	21		2513			4 7 14	393 B	1
		* X	4 7 10	383 P	19		Medium dense, gra	•	DAM 12	8 10 12	NΡ	1
			3 5 7	120 P	21		Very stiff to hard, o	ray SILTY	X,	6 12 16	408 B	1
17,308		Ŋ.	2 4 5	204 B	21					4 7 10	290 B	2
WANGENG OF	LL=23%, PL	₩	3 5 7	120 P	15				15 2	6 10 17	471 B	1
Dr Dr	GENE gin Drilling 12-28-2005 Illing Contractor Willing Contractor Logger Bior G&F Logger	EL	Orilling Drill Ri	g ecked	F	1120 B.F.	White Drilling At Completion Time After Drill	of Drilling	LEVEL DA V NA Rapponensis born	ORY		

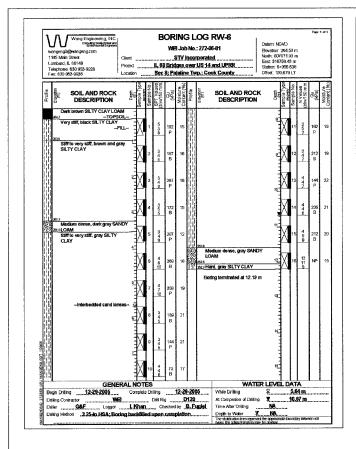
Lo Te	45 Main Imbard, I Rephone	Weng Engineering, INC country controlled (Wenggeng.com) I Street IL 60148 x 630 933-9928 53-9338	Client		JL 68	WE Reig	STY.I	No.	: 272-0 morate US 14	RW-4 d d wind UPRR ok County	Datum: N Elevation: North: 80 East: 319 Station: 9 Offset: 78	265,60 7058,54 794,26 +980,63	m m 32		
Profile	Eleyation	SOIL AND ROCI DESCRIPTION	Dayth (m.) Sample Type	Sample No.	SPT Values (biw/150 mm)	98. 88.	Molsture Content (%)	Profie	Elevation (m)	SOIL AND ROC DESCRIPTION		Sample Type recent	N Values (SW/150 mm	38°	Moisture Content (%)
			X	21	5 8 10	314 B	21								
			X	22	4 7 7	228 B	19								
				23	4 7 9	275 B	21								
	20.3	ing terminated at 16.29	18	24	4 7 10	354 B	20								
	801	शतु स्थानामश्रस्य सः । ७.२७	" =												
			201												
			Junt												
			20												
			22												
			1												
			VERAL NO	TĖS	_	_			*	WAT	ER LEVE			•	•
Be	gin Drilli	ng12-28-2005					12:21	-20	95	While Drilling			DRY		
Dril	lling Cor	ntractor	WEI.							At Completion of Drillin			DRY		
		hod 3.25-in HSA; F									NA.				

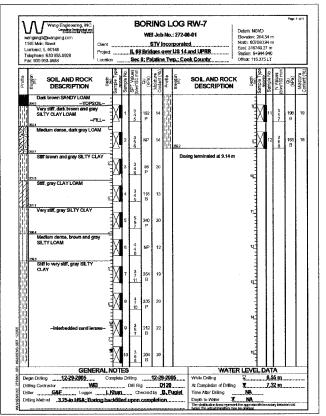
Weng Engineering, INC "wangengs@mengeng.com 1/45 Mein Street Lombard, IL 60148 Telephone 830 963-9628 Fee: 630 963-9636			JL 68	WE	Joh STV.	No USS	: 272-00 morate US 14	RW-5 5-01 d wnd UPRR & County	Datum: N Bevetion: North: 60 East: 319 Station: 9 Offset: 89	264. 7064. 775.0 +966	73 n 16 m .850	n		
SOIL AND ROCK DESCRIPTION	Depth im) Semple Type	Semple No.	SPT Values (blw/150 mm	3g6	Moisture Content (%)	Profile	Eleyation (iii)	SOIL AND ROC DESCRIPTION		Semple Type	Semple No.	N Values (b/w/150 mm	3€ 20€	Moletura Content (%)
Dark brown SANDY LOAM 20,6 TOPS Medium dense, dark brown SANDY LOAM, with gravel at cobbies	-1/4	1	5 9 9	ΝP	11				9	M	11	3 4 7	192 P	19
Loose, brown and gray SILT LOAM		2	5 4	ΝP	11				ā,	M	12	4 4 8	157 B	18
Very staff, brown and gray Si CLAY	" •	з	4 5 8	335 P	16				10	M	13	3 6 7	168 P	20
LL=29%, PU	15%	4	4 4 7	212 B	14					M	14	4 4 5	212 B	22
200 Stiff to hard, gray SILTY CLA		5	3 5 6	192 P	12				n	M	15	4 5 10	290 B	21
San to mad, gray Sill 17 CD		8	5 6 8	330 B	17		2627 Post	ng terminated at 12.19	12	M	16	4 7 9	396 B	14
	X	7	3 6 8	335 P	20			ng within sales en Tax to	13.					
		8	3 5 5	212 B	21				ta:					
		9	3 4 6	240 P	21									
GENE	RAL NOT	10	3 4 5	126 8	16			WAT	ER LEVE			_		ļ
Begin Drilling 12-29-2005					12-2	-20	05	While Drilling	¥					
Drilling Contractor WI Driller GSF Logger Drilling Method 3.25 in HSA: Bo		 D	EMINIRI Ch	g ecked	lby .	1120 B. F	ugiei	At Completion of Drillin Time After Drilling Depth to Water The stratication lines repre- tores the act of transitions	® ₹ NA	,,	,	RY	.,,,,,,,	

RTÉ.	SEC 110	N	COUNTY	SHEETS	NO.
343	70HB-R-	1	COOK	283	219
STA.		TO	STA.		
FED. RO	AD DIST. NO.	ILLINOIS	FED. AID	PROJECT	
		СО	NTRACT	NO. 6	2897

SHT. S-07 OF S-08

REVISIONS NAME DATE	ILLINOIS DEPARTMENT OF TRAN IL ROUTE 68 F.A.P. ROU SECTION 70HB-R-1 COOK DRILLED SOLDIER PILE STATION 0+072.591 TO 0 STRUCTURE NO. 016-1	TE 343 COUNTY WALL +179.500
	BORING LOGS DESIGNED: BTO DATE: 10/06 CHECKED: JAN	DRAWN: BTO CHECKED: JAN



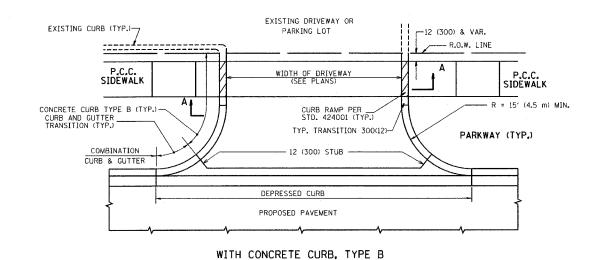


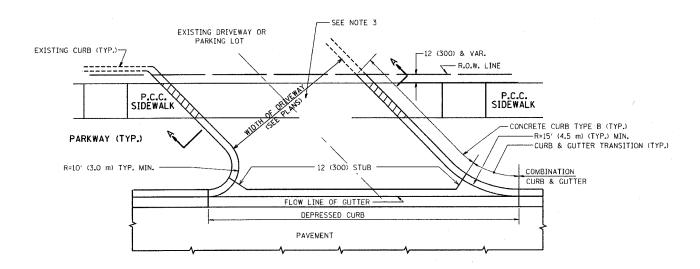
CONTRACT NO. 62897

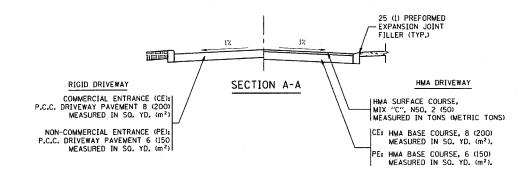
SHT. S-08 OF S-08
REVISIONS ILLINOIS DEPARTMENT OF TRANSPORTATION

	NAME	DATE	IL RO	UTE 68 F.A.P. ROL ION 70HB-R-1 COOK	JTE 343
			DR:	ILLED SOLDIER PILE ION 0+072.591 TO 0	WALL
				TRUCTURE NO. 016-	
*				BORING LOGS	
				DESIGNED: BTO	DRAWN; BTO
		L	DATE: 10/06	CHECKED: JAN	CHECKED: JAN

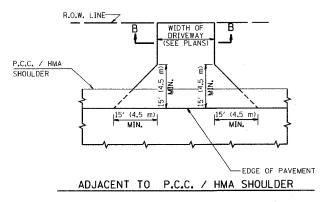
F.A.P. RTE.	SECTION		COUNTY	s	TOTAL HEETS	SHEET NO.		
344	3034N	-1	СООК	Т	283	221		
STA. TO STA.								
FED. ROA	D DIST, NO.	ILLINOIS	FED. A	AID PI	ROJECT			

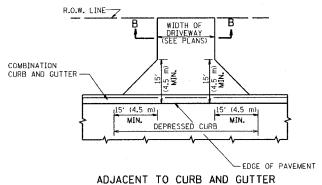


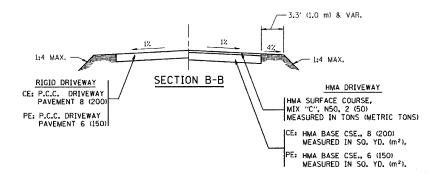




WITH CONCRETE CURB, TYPE B







RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "C", N50, 2 (50) MEASURED IN TONS (METRIC TONS) AGGREGATE BASE CSE., TYPE A 8 (200) MEASURED IN SO. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS
IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND,
UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

REVISIONS		THE THOSE DEDART	MENT OF TRANSPORTATION
NAME	DATE	ILLINOIS DEPART	MENT OF TRANSFORTATION
P. LaFLEUR	04-15-03		WAY DETAILS
R. SHAH	11-04-95		
J. POLLASTRINI	08-12-96	IDISTANCE BE	ETWEEN R.O.W. AND
J. POLLASTRINI	12-14-96		CURB & EDGE OF
A. ABBAS	03-21-97	I ACE OF	SOUND & EDGE OF
T. HOLTZ	04-08-97	I SHOULDER	? >= 15' (4.5 m)
M. GOMEZ	04-06-01		
R. BORO	01-01-07		OD LINE DV
		SCALE: HORIZ.	DRAWN BY

1 - ADDED SHEET 1-3-07

PLOT DATE: 10/31/2006

CHECKED BY BD0156-07 (BD-01) REVISION DATE: 01/01/07

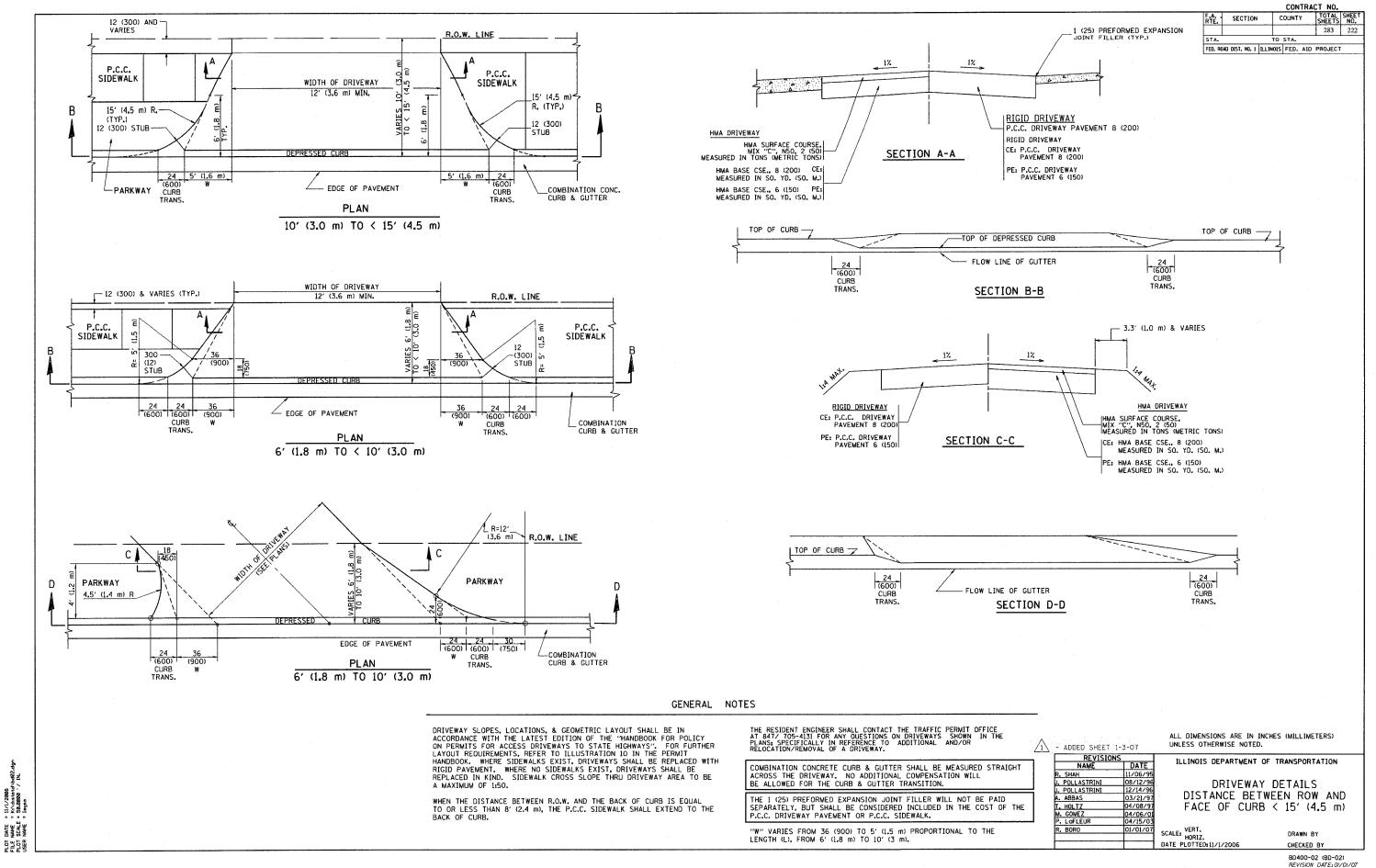
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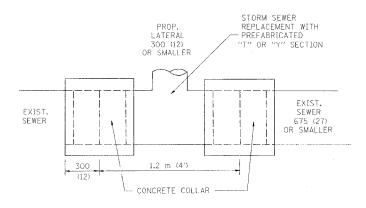
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SCALE = 50.0000 / IN.

NAME = 18930

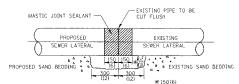
PLOT FILE PLOT USER

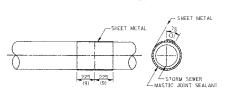


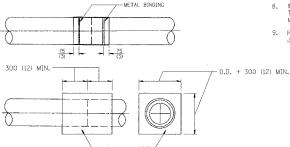


DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER



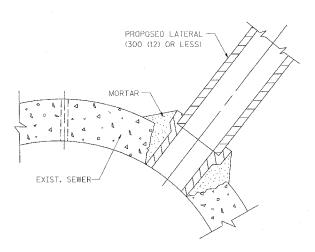




DETAIL "B" CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- 2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 150 (6) OF EACH PIPE.
- 3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 300 × 150 (12 × 6) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- 4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 450 (18) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 75 (3) LONG.
- 6. LAP THE SHEET METAL AT LEAST 75 (3) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- 7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- 8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- 9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- I THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS: A) PROPOSED STORM SEWER CONNECTION TO EXISIING SEWER OF 675 (27) OR SMALLER SEE DETAIL "A" AND "B".
- B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONGRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSE

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

DATE 10/18/2002

1 - ADDED SHEET 1-3-07 REVISIONS NAME

M. DE YONG
M. DE YONG
M. DE YONG
R. SHAH
R. SHAH

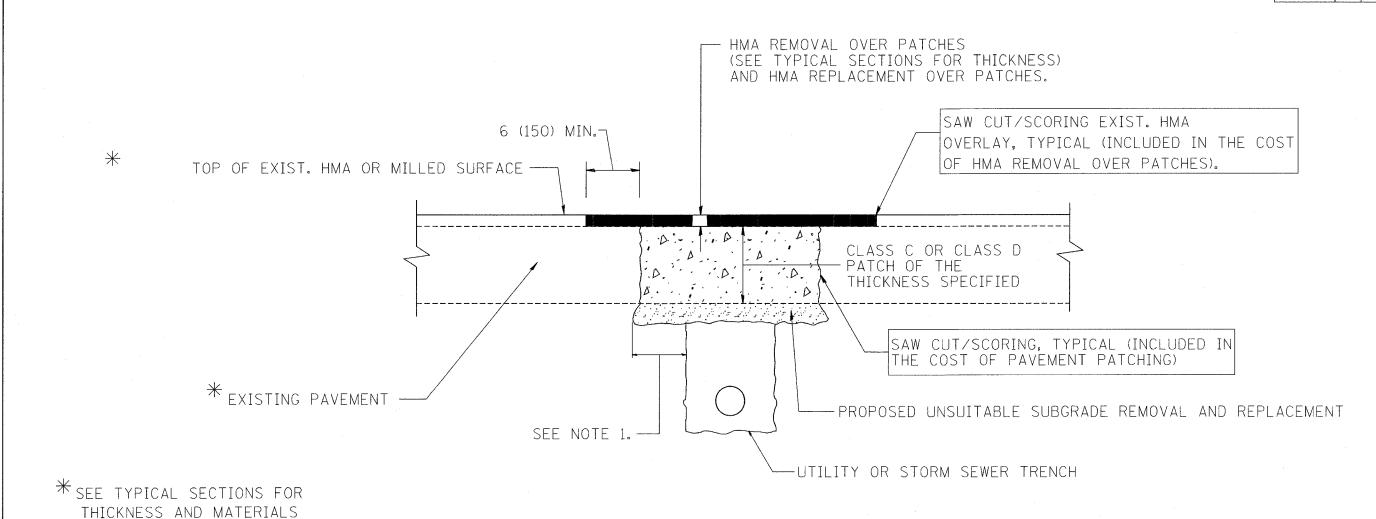
DRAWN BY CADD

CHECKED BY BD500-01 (BD-7) REVISION DATE: 06/12/96

ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

c;\projects\diststd\bd07.dgn VI=BD7

TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



NOTES:

- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

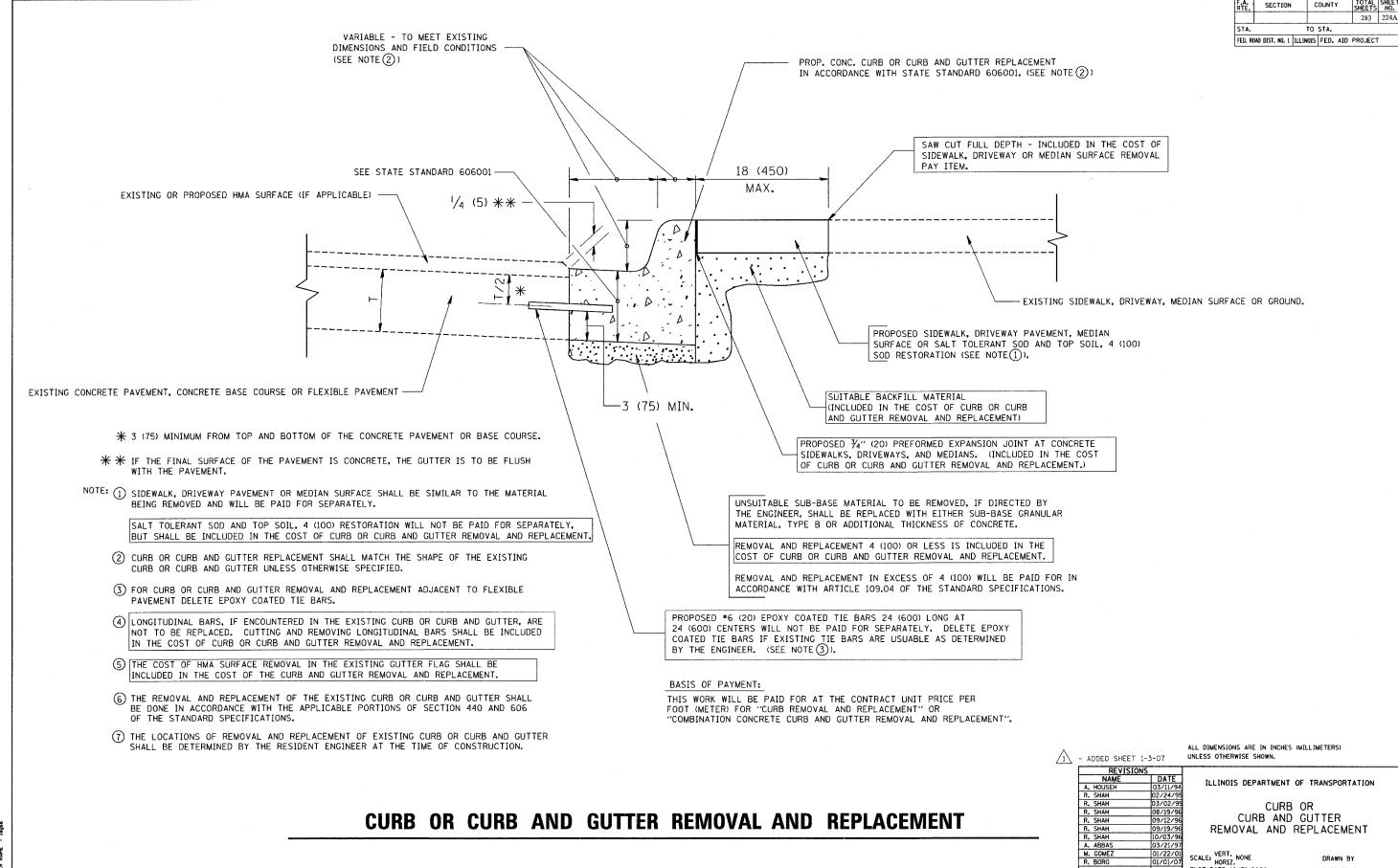
SEQUENCE OF CONSTRUCTION

- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE FULL DEPTH PATCHES
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.



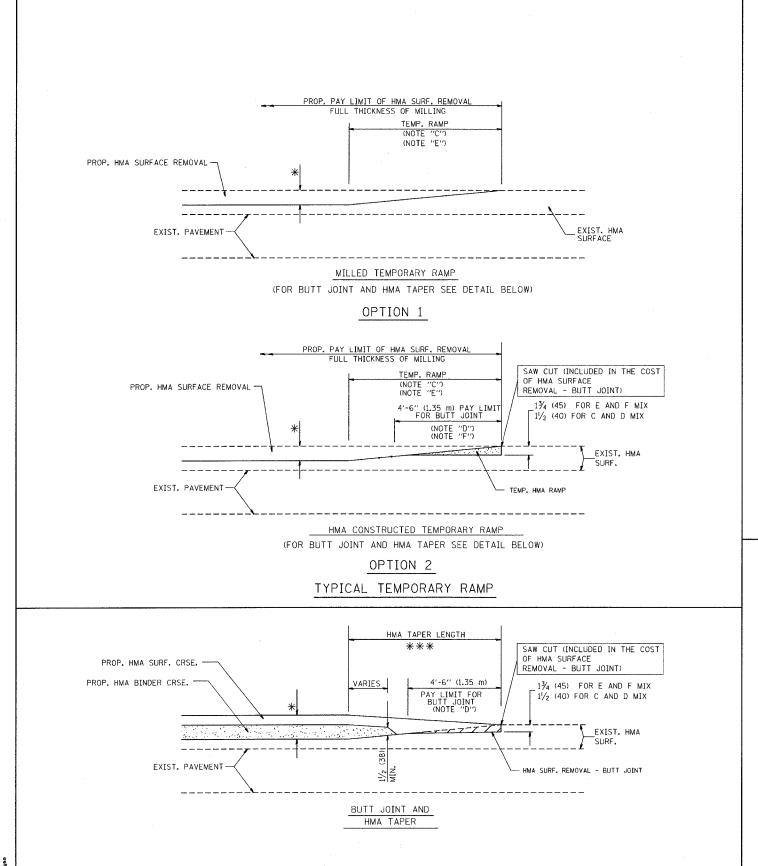
DATE = 18/31/2006 NAME = K:\diststd\bd22.di SCALE = 50.000 / IN, NAME = layso

BD400-04 (BD-22) REVISION DATE: 01/01/07



BD600-06 (BD-24) REVISION DATE: 01/01/07

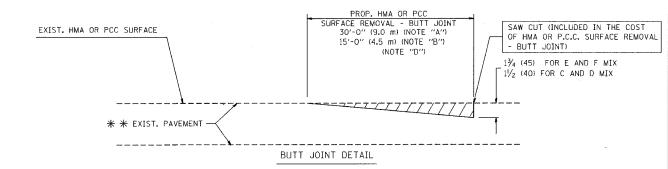
CONTRACT NO.

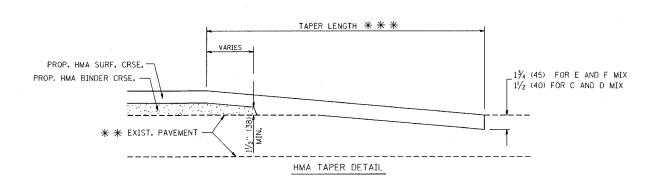


TYPICAL BUTT JOINT AND HMA TAPER

FOR MILLING AND RESURFACING

CONTRACT NO. TOTAL SHEET SHEETS NO. SECTION COUNTY RTE. 283 224B STA. TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT





TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- * * * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3,0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

M. GOMEZ R. BORO 1 - ADDED SHEET 1-3-0

BUTT JOINT AND HMA TAPER DETAILS

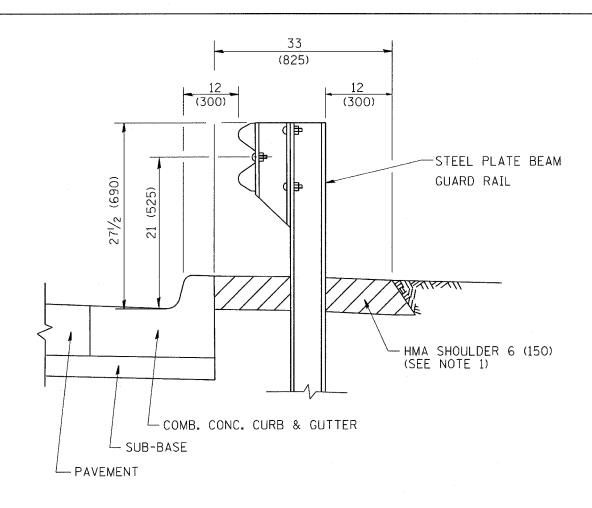
SCALE: VERT. NONE HORIZ. NONE PLOT DATE: 10/31/2006

DRAWN BY CHECKED BY

DATE = 18/31/2006 NAME = Kivalstatavbd32.c SCALE = 50.0000 / ln. NAME = 18930

09/09/9

BD400-05 (VI=BD32)



NOTES: 1. THE HMA SHOULDER SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL

> 2. GUARD RAIL MAY BE PLACED AT THE BACK OF CURB WHEN DIRECTED BY THE ENGINEER.

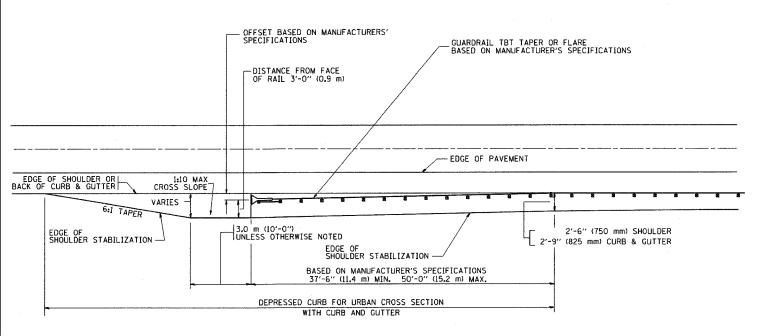
BASIS OF PAYMENT: HMA SHOULDER 6 (150) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDER 6" (150 mm)".

> STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]

CONTRACT NO. COUNTY TOTAL SHEETS NO.

283 224C F.A. SECTION TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



STABILIZATION AT TBT TY. 1 SPL.

TBT = TRAFFIC BARRIER TERMINAL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

1 - ADDED SHEET 1-3-07 M. DE YONG A. ABBAS E. GOMEZ

ILLINOIS DEPARTMENT OF TRANSPORTATION

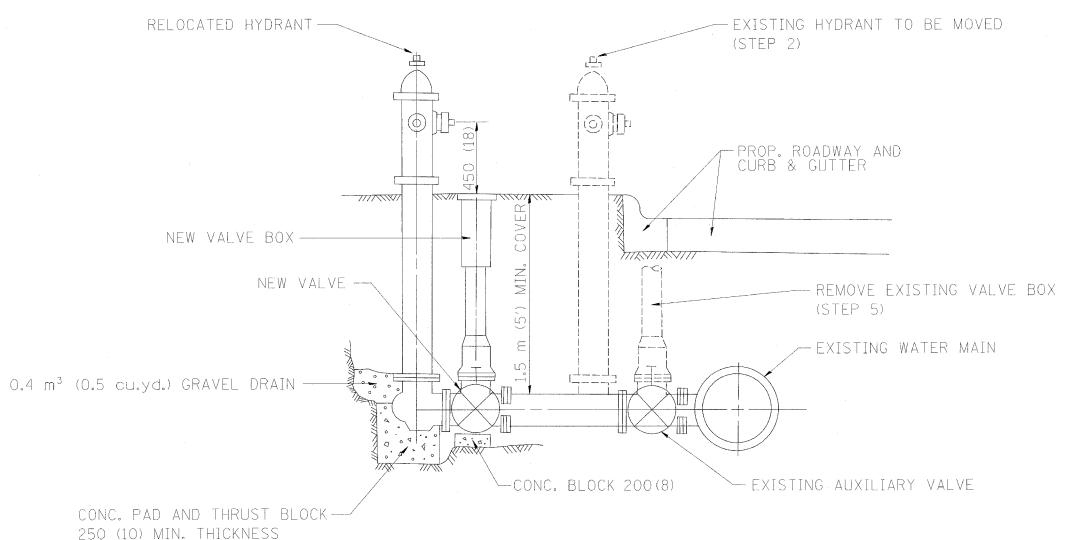
DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER STABILIZATION AT TBT TY 1 SPL.

SCALE: VERT. NONE HORIZ. PLOT DATE: 10/31/2006

CHECKED BY

BD600-10 (BD 34) REVISION DATE: 01/01/07





SEQUENCE OF CONSTRUCTION:

- 1. CLOSE EXISTING VALVE.
- 2. REMOVE EXISTING HYDRANT.
- 3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
- 4. RELOCATE EXISTING HYDRANT.
- 5. OPEN EXISTING VALVE, REMOVE BOX.
- 6. BACKFILL.
- 7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

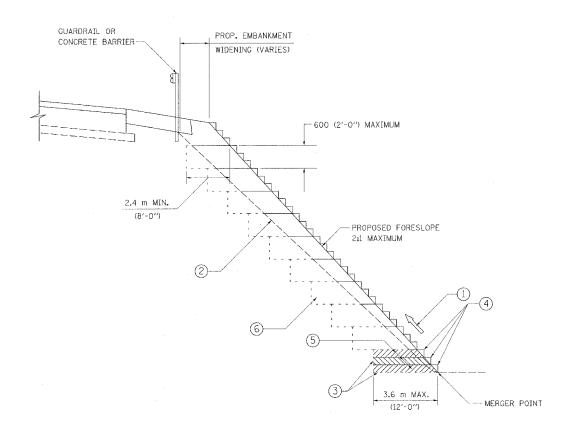
FIRE HYDRANT TO BE MOVED

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN. ILLINOIS DEPARTMENT OF TRANSPORTATION 1 - ADDED SHEET 1-3-07 FIRE HYDRANT TO BE MOVED

SCALE: NONE

CHECKED BY BD500-03 (BD-36)

F. A. SECTION			COUNTY	TOTAL SHEETS	SHEET NO
				283	224E
STA.		TO S	TA.		
FED. BOAD	DIST. NO. T	ILLINOIS	FE	D. AID PROJE	CT



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

- CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS.
- (3) BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- 4 TRIM TO FINAL SLOPE.
- EQUAL 200 (8-INCH) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.06 OF THE STANDARD SPECIFICATIONS.
- EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION (SPECIAL)". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION 1 - ADDED SHEET 1-3-07 REVISIONS BENCHING DETAIL

FOR EMBANKMENT WIDENING

> SCALE: NONE DATE 10/18/2002

DRAWN BY: CADD CHECKED BY: S.E.B. BD-51

REVISION DATE:

SECTION 283 224F STA. TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ROAD TYPE III BARRICADES WITH TWO FLASHING AMBER LIGHTS ON EACH. AHEAD TYPE I OR TYPE II BARRICADES WITH ONE FLASHING AMBER LIGHT ON EACH, OR TYPE III BARRICADES WITH TWO FLASHING 380 (15) 60 m± (200'±)---AMBER LIGHTS ON EACH. DRIVEWAY 60 m± (200'±) (40 COLLECTOR LIMIT>60 km/h (W20-1(0) P ROAD CONSTRUCTION SPEED M6-4(0)-2115 M6-1(0)-2115

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- Q) ONE ROAD CONSTRUCTION AHEAD SIGN 900×900 (36×36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

REVISIONS

NAME DATE
L.HA 6/89
T. RAMMACHER 09/08/94
J. 0BERLE 10/18/95
A. HOUSEH 03/06/96
A. HOUSEH 10/15/96
T. RAMMACHER 01/06/00

SCAL

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION

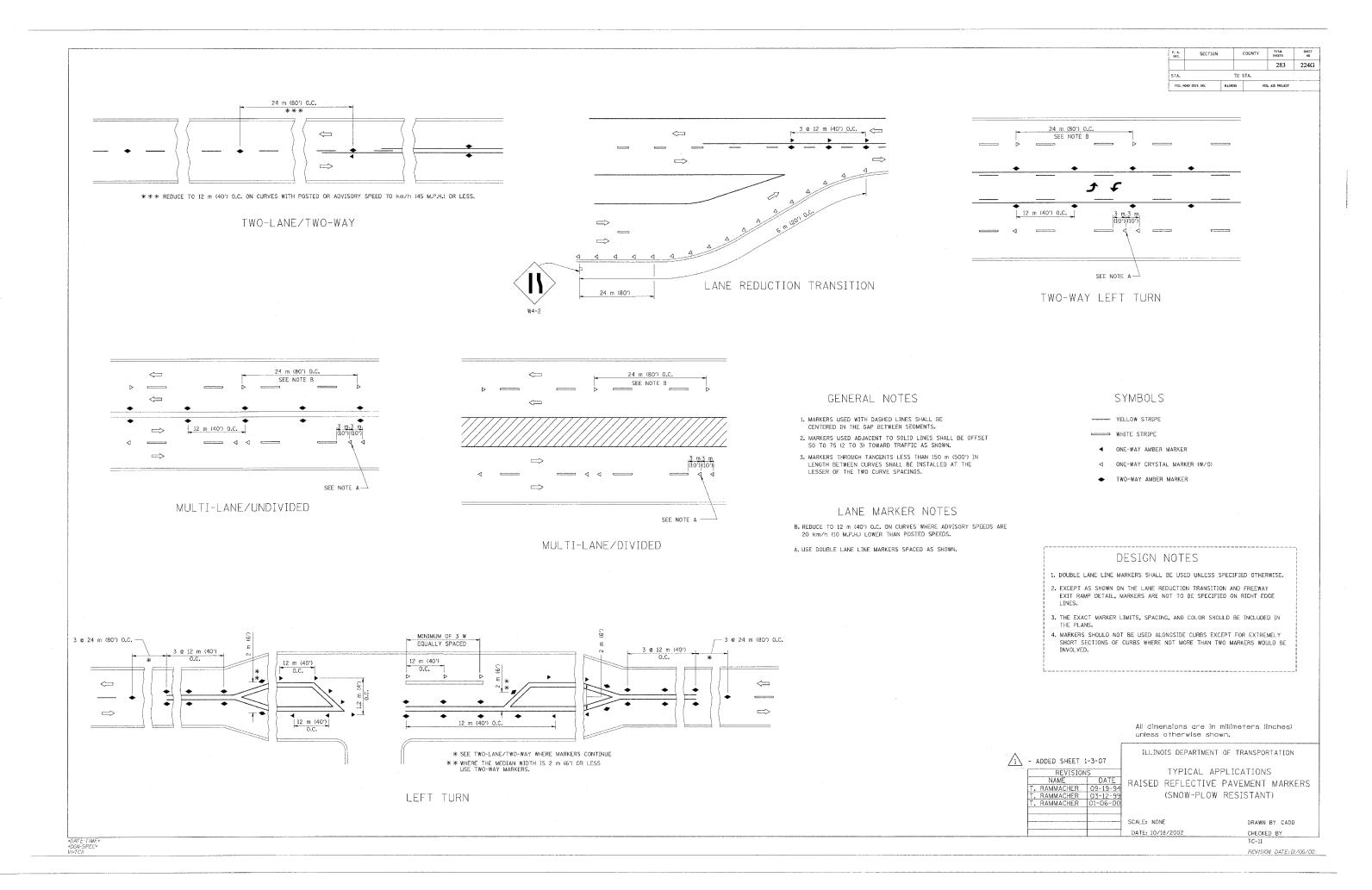
FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: VERT. HORIZ. DATE 10/18/2002

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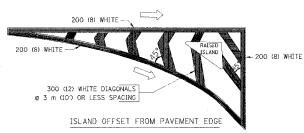
TC-10

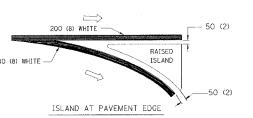
REVISION DATE: 01/06/00





COUNTY TOTAL SHEET NO





TYPICAL ISLAND MARKING

		·		
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5½) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10") LINE WITH 9 m (30") SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE .	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH: 140 (5½) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	2.4 m (8') LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIACONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (35') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH 9 m (30') C-C (OVER 70 km/h (45 MPH)
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m2 (3.6 SQ. FT.) EACH "X"=5.0 m2 (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50°) C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75°) C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH 45 m (150°) C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

1 - ADDED SHEET 1-3-07 NAME

RAMMACHER

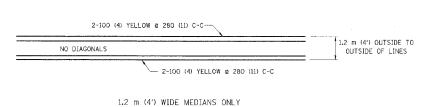
ILLINOIS DEPARTMENT OF TRANSPORTATION

All dimensions are in millimeters (inches)

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

DRAWN BY CADD CHECKED BY TC-13

REVISION DATE: 01/06/00



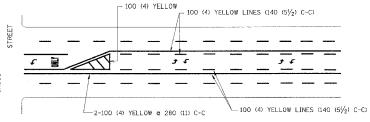
VARIES 300 (12) DIAGONALS -(MINIMUM 5) 2-100 (4) @ 280 (11) C~C-MEDIAN LENGTH FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING

DIAGONAL LINES.

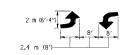
DIAGONAL LINE SPACING: 15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75") C-C (50 km/h (30 MPH) T0 70 km/h (45 MPH)) 45 m (150") C-C (MORE THAN 70 km/h (45 MPH))

MEDIANS OVER 1.2 m (4') WIDE

CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED

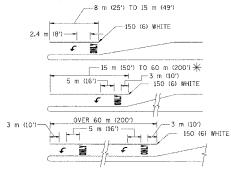


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING



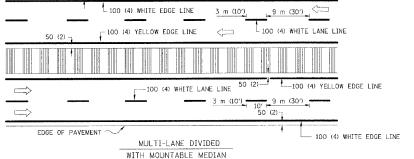
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

 50 (2) TO EDGE OF EDGE LINE $^{-}$ 100 (4) YELLOW NO PASSING ZONE LINE -100 (4) YELLOW ¢ ---100 (4) YELLOW C 3 m (10°) 40 (11/2) (140 (51/2) C-C) \Rightarrow 50 (2) - 100 (4) WHITE EDGE LINE EDGE OF PAVEMENT 2-LANE ROADWAY _50 (2) TO EDGE OF EDGE LINE EDGE OF PAVEMENT ___9 m (30')

--- 100 (4) YELLOW L 100 (4) WHITE LANE LINE 100 (4) WHITE LANE LINE ----280 (11) C-C 100 (4) YELLOW \Longrightarrow 100 (4) WHITE EDGE LINE \Longrightarrow EDGE OF PAVEMENT ~ MULTI-LANE UNDIVIDED

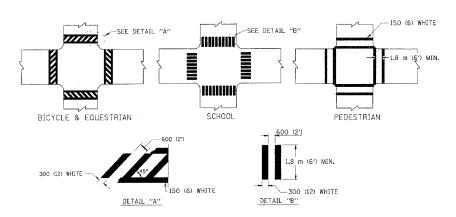
EDGE OF PAVEMENT



NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

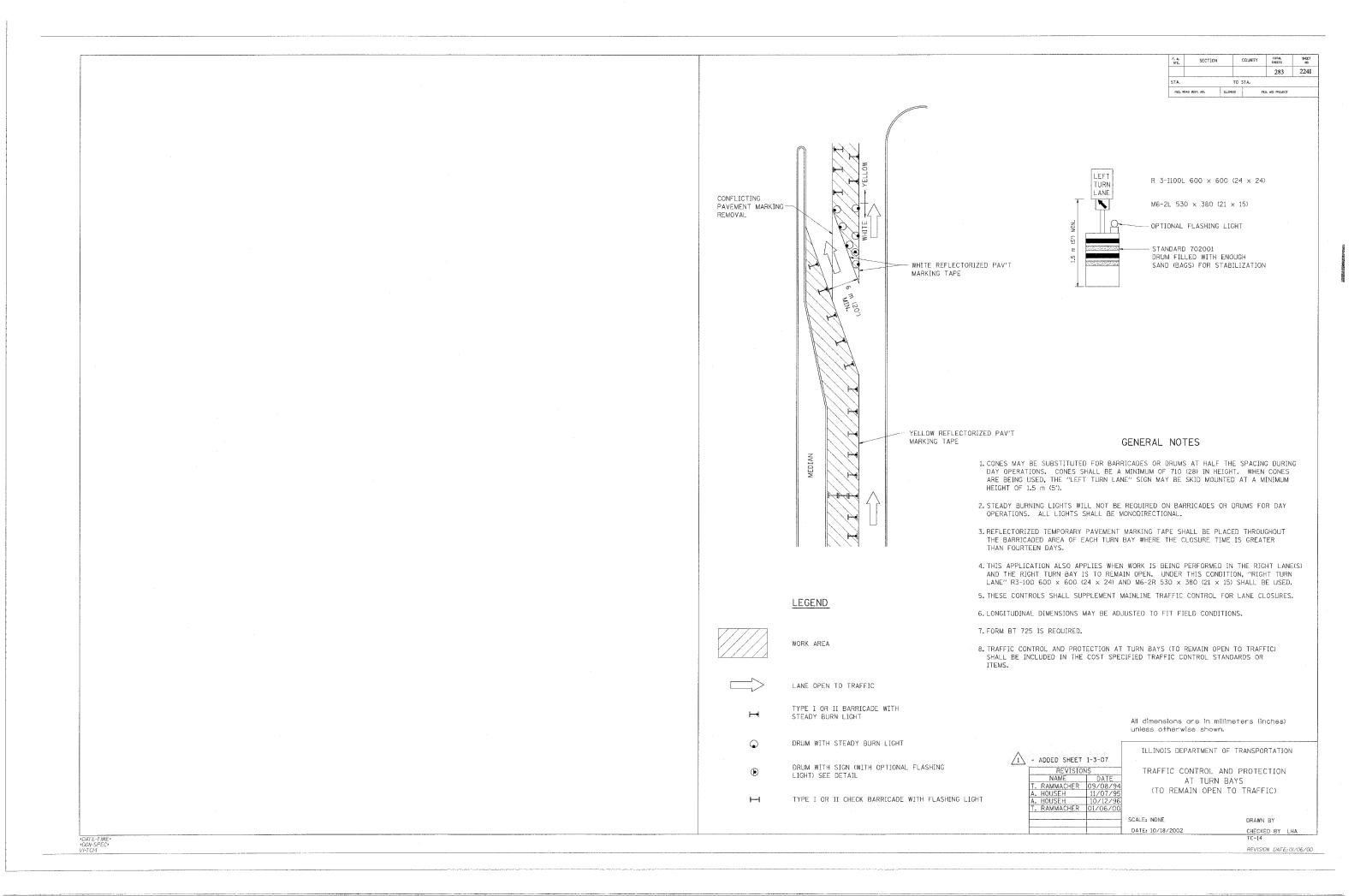
50 (2) 7

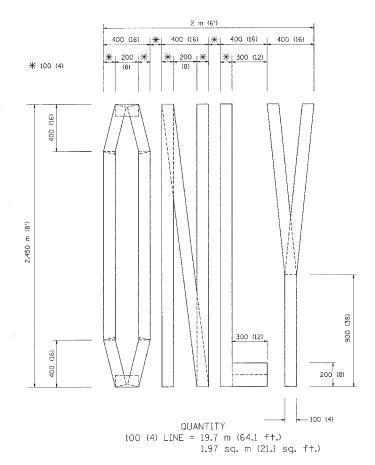
TYPICAL LANE AND EDGE LINE MARKING

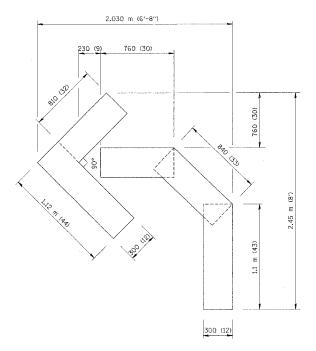


TYPICAL CROSSWALK MARKING

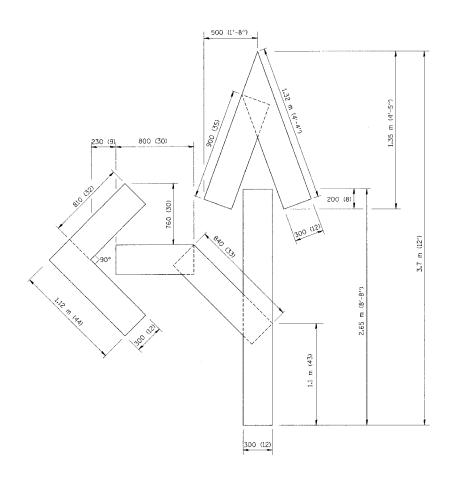
* TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".







QUANTITY 100 (4) LINE = 13.9 m (45.5 ft.) 1.39 sq. m (15.2 sq. ft.)



QUANTITY 100 (4) LINE = 25.3 m (82.5 ft.) 2.53 sq. m (27.5 sq. ft.)

All dimensions are in millimeters (inches) unless otherwise shown.

 ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE

DRAWN BY CADD CHECKED BY TC-16

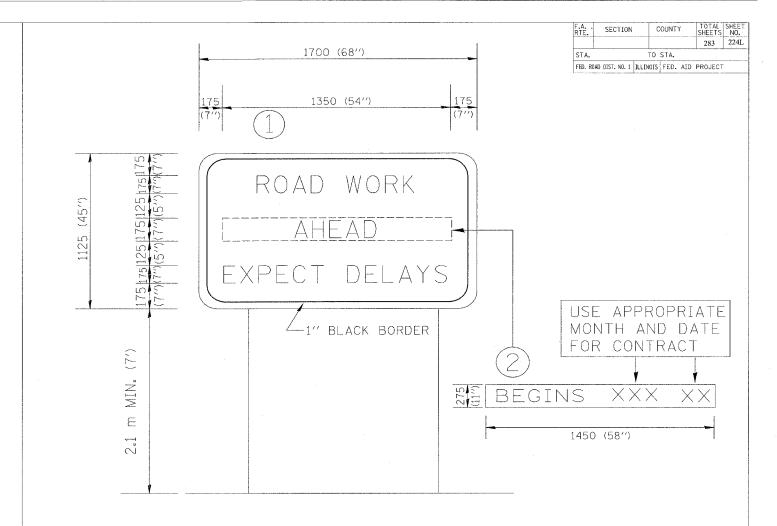
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c:\projects\diststd\tci6.dgn LV=35,63

REVISION DATE: 08/28/00

CONTRACT NO. COUNTY TOTAL SHEET SHEETS NO. F.A. SECTION 283 224K SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS STA. TO STA. FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT WORK ZONE EXIT OPENING — ARROWBOARD TYPE C (FLASHING A BAR OR 4-CORNER) FLAGGER BE PREPARED TO STOP W20-1101(0)-48 W20-7g(0)-48 900 mm x 900 mm 200 mm CAPS 1000 1.5 m (5') MIN. CLEAR HEIGHT FEET - BLACK LEGEND ORANGE REFL. BACKGROUND 150 m (500°) 90 m (300') MIN. DRUMS @ 15 m (50') C-C 0 0 0 **₩** 0 o.I TRAFFIC DIRECTION FLAGGER WITH CONTROL SIGN WORK ZONE ENTRY OPENING TRUCKS (W21-I105) LEAVING HIGHWAY 1.5 m (5') MIN. CLEAR HEIGHT 150 m (500°) 60 m (200°) TRAFFIC DIRECTION - FLAGGER WITH CONTROL SIGN NOTES: 1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases. 2. Work Zone Exit Openings should be a minimum of one half mile apart. 3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN 4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists ILLINOIS DEPARTMENT OF TRANSPORTATION SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS SCALE: NONE DRAWN BY CADD 1 - ADDED SHEET 1-3-07 PLOT FILE PLOT USER DATE: 3/1/2006 CHECKED BY

DATE = 3/1/2006 NAME = Ki-distack/tci8.dgn SCALE = 50.000 / IN.

REVISION DATE: 02/28/06



NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 2.3 SQ. M. (25.70 SQ. FT.)

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES)

UNLESS OTHERWISE SHOWN.

REVISIONS
NAME DATE
R. MIRS 9-15-97
R. MIRS 12-11-97
T. RAMMACHER 2-2-99

T. RAMMACHER 2-2-99

SCALE: DRAWN BY: BUR. OF DESIGN
DATE 10/18/2002 CHECKED BY

TC22

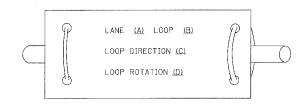
REVISION DATE:02/02/99

Friday October 18, 2002 @ 10:25:17 AM c:\projects\diststd\to22.dgn LV=35,63 VI=1C22

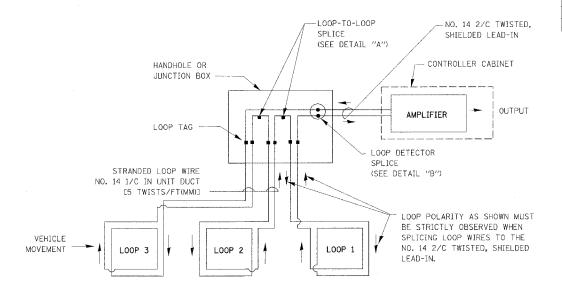
LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE, SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm), UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER.
 ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT
 FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE
 DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

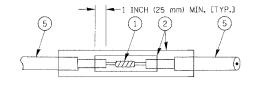


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

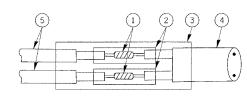


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE,
 THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A" LOOP-TO-LOOP SPLICE



DETAIL "B" LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- 1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH,
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
- (4) NO. 14 2/C TWISTED, SHIELDED CABLE.
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

- ADDED SHEET 1-3-07

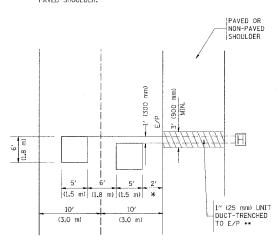
REVISIONS
NAME
CADD
S5/30/00
ADD NOTE NO. 8 11/12/01
BUREAU OF TRAFFIC 1-01-02
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT.
HORIZ. NONE
DATE AD/AB/2002
DETAILS

DRAWN BY: RWP
DESIGNED BY: DAZ
CHECKED BY: DAZ
SHEET 1 0F: 40
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



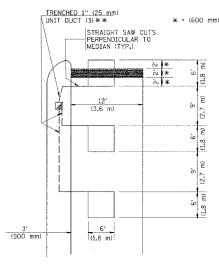
* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

LEFT TURN LANES WITH MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY
VARY DEPENDING ON GEOMETRICS
AND DESIGN OF TRAFFIC SIGNALS,
HEAVY-DUTY HANDHOLES TO BE
USED WHEN THE MEDIAN IS
MOUNTABLE, REFER TO STANDARD
814001 TO ENSURE THAT HANDHOLE
FITS IN MEDIAN.

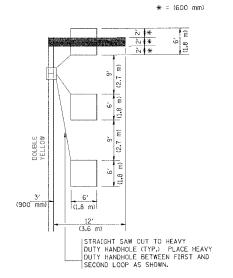


** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

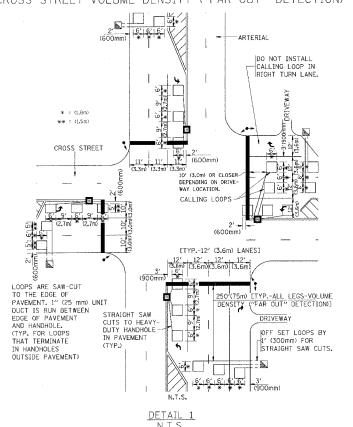
LEFT TURN LANES WITHOUT MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

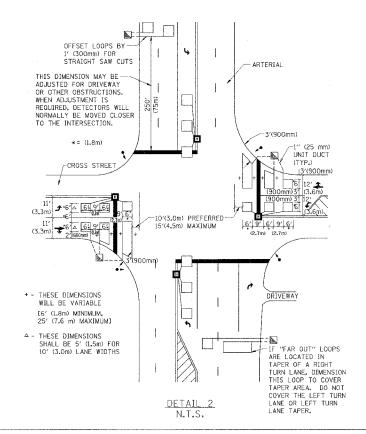


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)



ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)



NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF <u>ALL</u> DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (I.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES, ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON $\underline{\mathsf{ALL}}$ SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTI

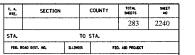
ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.



10/18/2002 c:\projects\diststd\ts07.dg

REVISION DATE.



PANEL EQUIPMENT

		BILL OF MATERIAL				
ITEM	QUANTITY	DESCRIPTION				
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100AMP. FRAME, 100AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.				
В	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.				
С	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME, 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.				
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100AMP, FRAME, 15AMP, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP, AT 240 V.				
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].				
F	1	20 A., 120 V. FUSE.				
G	1	1.5 KVA. SINGLE PHASE. ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT. 60 Hz.				
Н	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,				
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.				
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.				
K	1	COPPER GROUND BUS 6.35 (1/4") X 25.4 (1") X 304.8 mm (12") LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS				
L	1	TOGGLE SWITCHES MOUNTED IN 101.6 (4") X 101.6 mm (4") BOX.				
M	1	COPPER GROUND BUS 6.35 (1/4") X 25.4 (1") X 304.8 mm (12") LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS				

AUXILIARY

0

•

SCREENED AIR VENT-

CONCRETE WORK PAD SEE NOTE 3

3 POINT LOCKING HANDLE WITH PAD LOCK PROVISION

MAIN BREAKER

*2/0

 $^{\otimes}$

(C)

園⑤ **(J**)

(POWER)

0

AUXII TARY -

CONTROL RELAY

(IF NECESSARY)

(K)

BONDING JUMPER-

#6 AWG. 600V GROUND ROD 15.875 (5%")

PANEL WIRING DIAGRAM

25

DIA. × 3.048 m (10') LONG

TWO POSITION TOGGLE SWITCH

TOGGLE SWITCH MOMENTARY —
CONTACT TYPE SPDT 20 A,
240V AC AND TOGGLE SWITCH
20A, 240V, TYPE SPDT

762 (30") MIN.

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63.5 (2½") GALV. STEEL CONDUIT

GROUND LINE-

101 (4") DIA. PVC RACEWAYS

6-MIN. COORD. WITH CKT REQUIREMENTS

mmmilmmmmmmmmmm

NEMA 3R --ENCLOUSERE

CABINET ALUMINUM ALLOY SHEET 3.175 (0.125")

mmmmmm

GROUND ROD-

TYPE 5052-H32

25 (1") DIA. 2 PVC CONDUIT

CIRCUIT BREAKER

6.35 (1/4") MINIMUM NON-ASBESTOS INORGANIC

MOUNTING PANEL.

NONCONDUCTING MATERIAL

-CABINET ENCLOSURE

3-1/C SERVICE ENTRANCE CABLE FROM ELECTRIC

(19") MIN.

ANCHOR RODS, 4 MIN. COORD. WITH CABINET MFR. REQUIREMENTS

minhmin

Ш

UTILITY METER BOX

240/480 VOLT, 10,3 WIRES, 60 CYCLES.

GROUNDING CONDUCTOR #2 AWG.

- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
- 2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- 3. IN FRONT OF CONTROL CABINET DOOR, REMOVE IN FRONT OF CONTROL CABINET DOUR, REMOVE
 VEGETATION AND 50.8 mm (2") TOP SOIL, LEVEL THE
 AREA AND ON TOP, PLACE LENGTH WISE PARALLEL

 12. ALL WIRING WITHIN THE CABINET SHALL BE
 COLOR CODED AS INDICATED. $914.4 \text{ mm} (36") \times 18.288 \text{ m} (60") \times 101 \text{ mm} (4")$ MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- 4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- 5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- 6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 6.35 mm (1/4") DIA. STAINLESS STEEL HINGE PIN.
- 7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- 8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED
- 9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.

- 10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED
- 11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND
- B = BLACK Y = YELLOW G = GREEN
- 13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- 14. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- 15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL"
- 16. 304.8 (12") X 406.4 mm (16") STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED

BE-215 ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER SINGLE DOOR

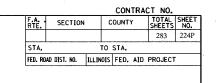
DATE

REVISIONS NAME

SCALE: NONE DATE \$\$DATE\$\$ DRAWN BY JIS CHECKED BY BE-215

1 - ADDED SHEET 1-3-07

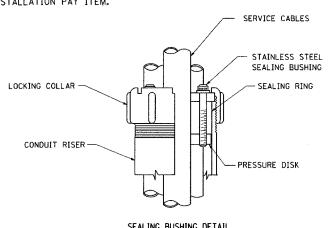
REVISION DATE: 08/20/04



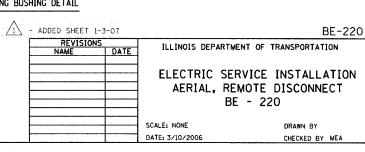
APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

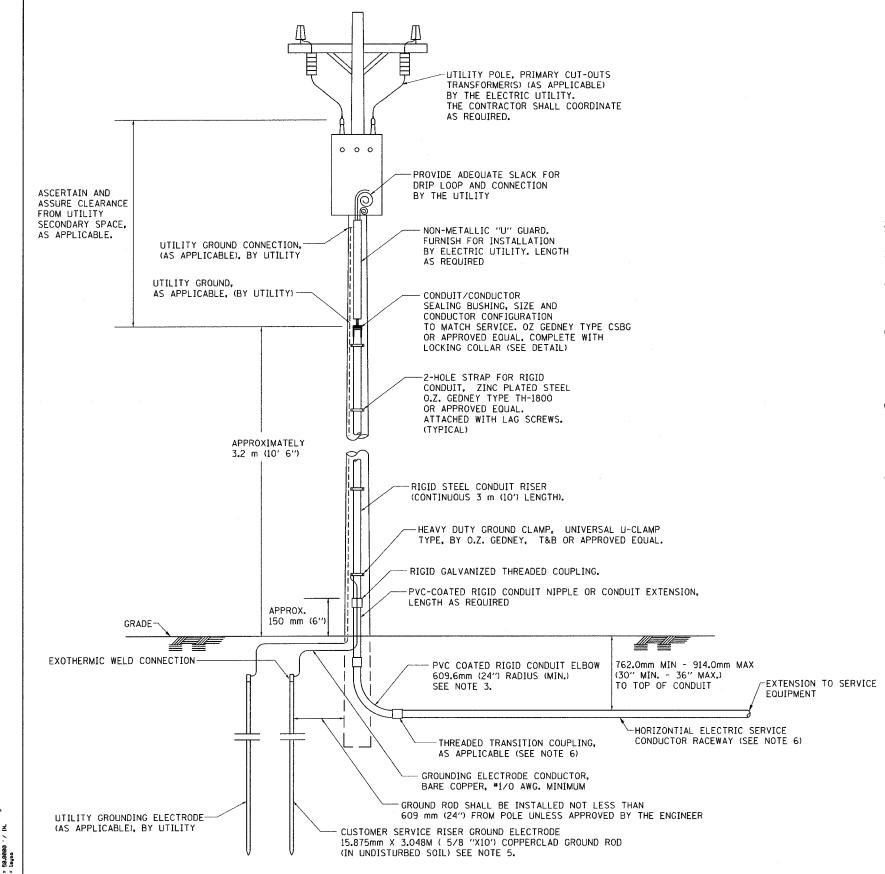
- 1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- 2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- 3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- 4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- 5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- 6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- 7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



SEALING BUSHING DETAIL



REVISION DATE: 03/03/06





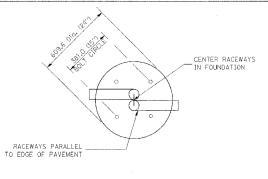
LIGHT POLE FOUNDATION DEPTH TABLE 12.192M (40 FT.) TO 14.478M (47.5 FT.) MOUNTING HEIGHT

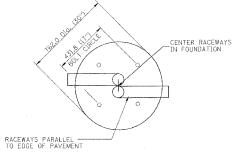
COTI COURTTIONS	DESIGN DEPTH "D" OF FOUNDATION			
SOIL CONDITIONS	SINGLE ARM POLE	TWIN ARM POLE		
SOFT CLAY	3.96M	4.57M		
Qu = 0.375 TON/SQ. FT.	(13'-0'')	(15′-0′′)		
MEDIUM CLAY	2,09M	3,23M		
Qu = 0.75 TON/SQ.FT	(9'-6")	(10'-9'')		
STIFF CLAY	2.13M	2,44M		
Qu = 1.50 TON/SQ. FT.	(7'-0'')	(8'~0'')		
LOOSE SAND	2.74M	3.05M		
Ø = 34°	(9'-0'')	(10′-0′′)		
MEDIUM SAND	2,52M	2,74M		
Ø = 37.5°	(8′-3′′)	(9'-0'')		
DENSE SAND	2,36M	2.74M		
Ø = 40°	(7′-9″)	(9'-0'')		

-RADIUS NOT LESS THAN 4 TIMES NOMINAL ROD DIA

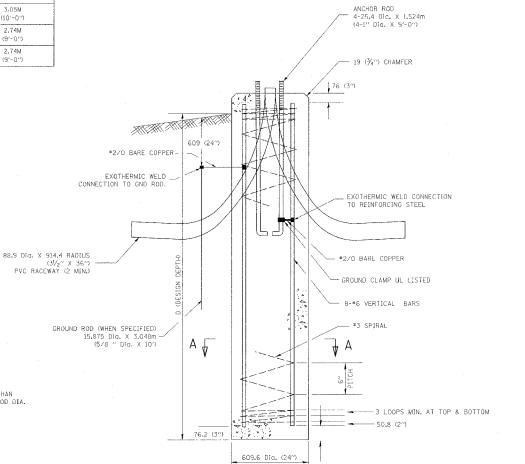
GROUND LINE

TOP OF ANCHOR ROD

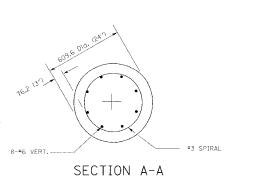


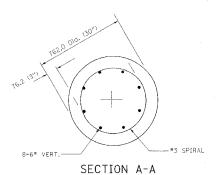


TOP VIEW TOP VIEW



FOUNDATION DETAIL





NOTES

- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
- 2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE
- 3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 15M (60 IN.) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH ASARTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- 4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL, A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED ZOMM (3/4-IN.).
- 6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- 7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED, THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- 8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- 9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- 10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 150 MM (6 INCHES) WITH A MINIMUM OF 75 MM (3 INCHES) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- 11. ANCHOR RODS SHALL PROJECT 69.9MM (2¾/) ABOVE THE TOP OF THE FOUNDATION, IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- 12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 152.4MM (6") PITCH OR MAY SUBSTITUTE #3 TIES AT 304.8MM (12") O.C. WITH THE APPROVAL OF THE ENGINEER.
- 13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- 14. THE RACEWAYS SHALL PROJECT 25.4MM (1") ABOVE THE TOP OF THE FOUNDATION.

TILLINOIS DEPARTMENT OF TRANSPORTATION

REVISIONS
NAME
DATE

12.192M (40') TO 14.478M (471/2') M.H.

381 (15") BOLT CIRCLE

SCALE: NONE
DATE 10/18/2002

DATE 10/18/2002

BE301

DATE-TIME *DGN-SPEC* VI=RE30I 152.4 (62)

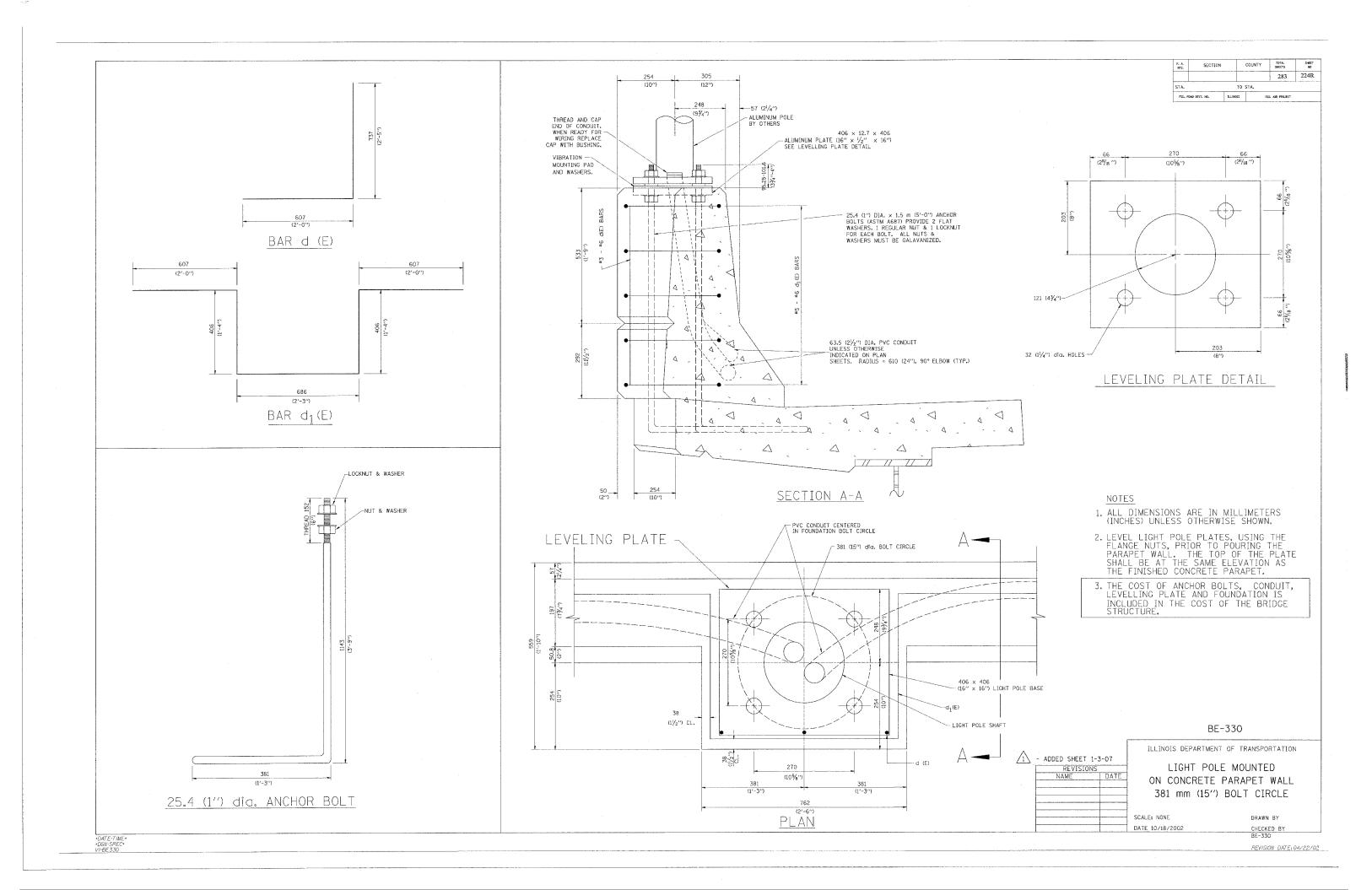
ANCHOR ROD DETAIL

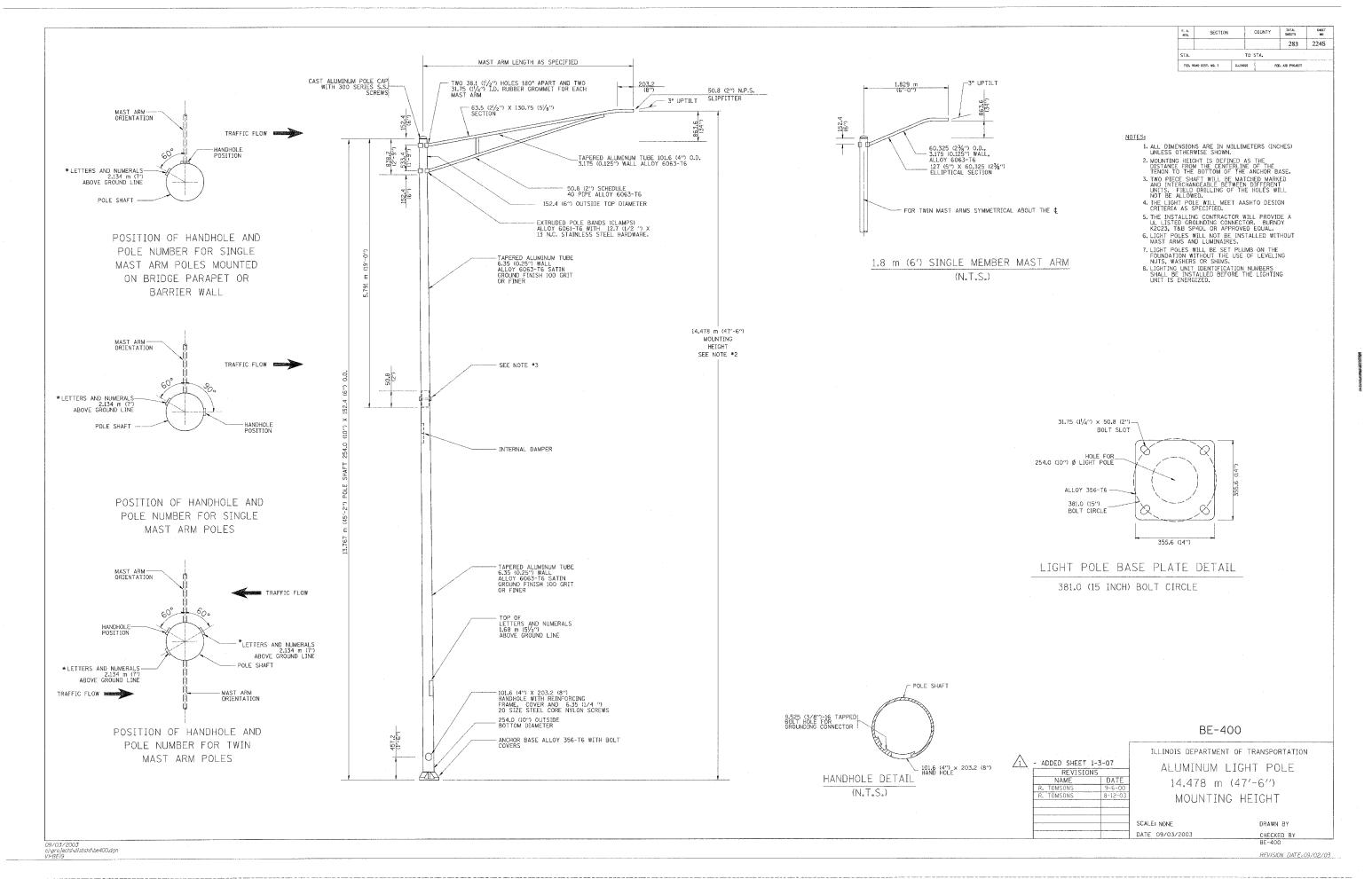
1500 (60")

FOUNDATION EXTENSION DETAIL

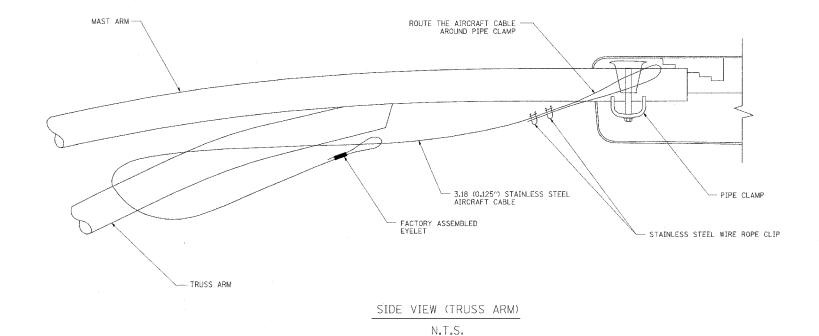
15.87 T. X 101.6 Dia. — (5/6" T. X 4" Dia.) WASHER, TACK WELDED

REVISION DATE: 04/22/02





F.A.	SECTION	(COUNT	Y	SHEETS	SHEET NO.				
					.283_	224T				
STA TO STA										
FED. RO	DAD DIST. NO	ILLINOIS	FED.	AID	PROJECT					



3.18 (O.125") STAINLESS -STEEL AIRCRAFT CABLE -STAINLESS STEEL WIRE ROPE CLIP

> BOTTOM VIEW N.T.S.

NOTES:

- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN
- 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
- 3. THE 3.18 (0.125") STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL
- 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN

760 30" (MAX) MAST ARM - STAINLESS STEEL U-BOLT HAYARD ROUTE THE CABLE ---FACTORY ASSEMBLED -EYELET - 3.18 (0.125") STAINLESS STEEL AIRCRAFT CABLE - PIPE CLAMP MAST ARM - STAINLESS STEEL WIRE ROPE CLIP -S.S. NUT & LOCK WASHER STAINLESS STEEL U-BOLT HAYARD SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

N.T.S.

1 - ADDED SHEET 1-3-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

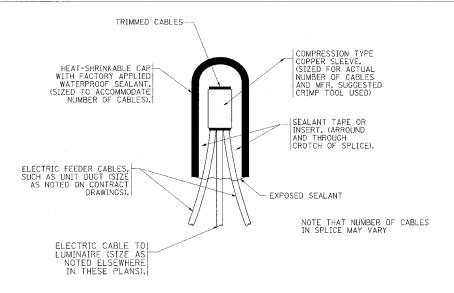
LUMINAIRE SAFETY CABLE ASSEMBLY

SCALE: NONE DATE 05/19/2003

DRAWN BY CHECKED BY

05/19/2003 K:\d1ststd\be70Ldgn

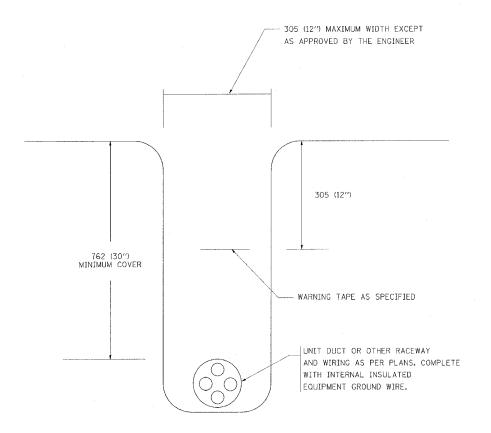
BE-701 REVISION DATE:



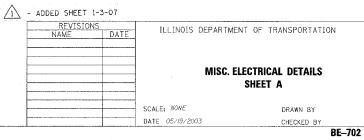
TYPICAL SPLICE DETAIL N.T.S.

2-1/C #10 AWG, 600 V TYPE RHW, -SOLID COLOR CODED CABLES STANDARD-TYPE SMALL DIMENSION DOUBLE POLE FUSEHOLDER WITH INSULATED BOOTS, FUSING AND SOLID NEUTRAL. (SEE SPECS) PHASE CONDUCTORS, 600 V TYPE RHW, SOLID COLOR, SIZE AS SPECIFIED CABLE SPLICE (TYP.) GROUNDING LUG -SPLICE GROUND WIRE AND PIGTAIL SAME SIZE -NEUTRAL CONDUCTOR, 600V TYPE RHW, SOLID COLOR WHITE, SIZE AS SPECIFIED EXTENSION TO POLE GROUNDING LUG INSULATED GROUND WIRE, 600 V TYPE RHW. SOLID COLOR GREEN, SIZE AS SPECIFIED UNIT DUCT (TYP) — POLE WIRING DETAIL

N.T.S.



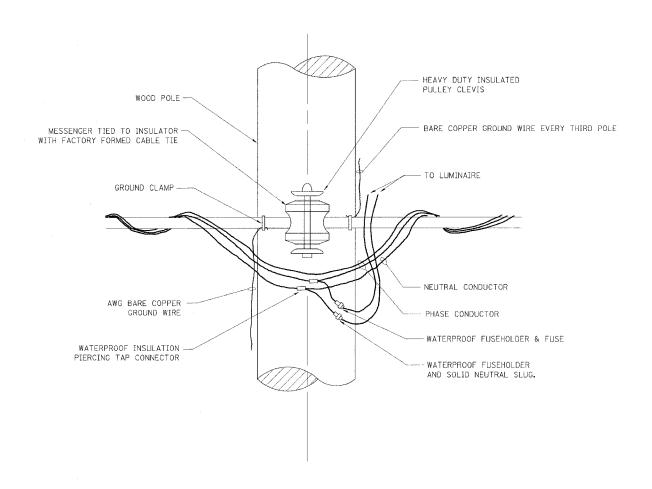
TYPICAL WIRING IN TRENCH DETAIL N.T.S.



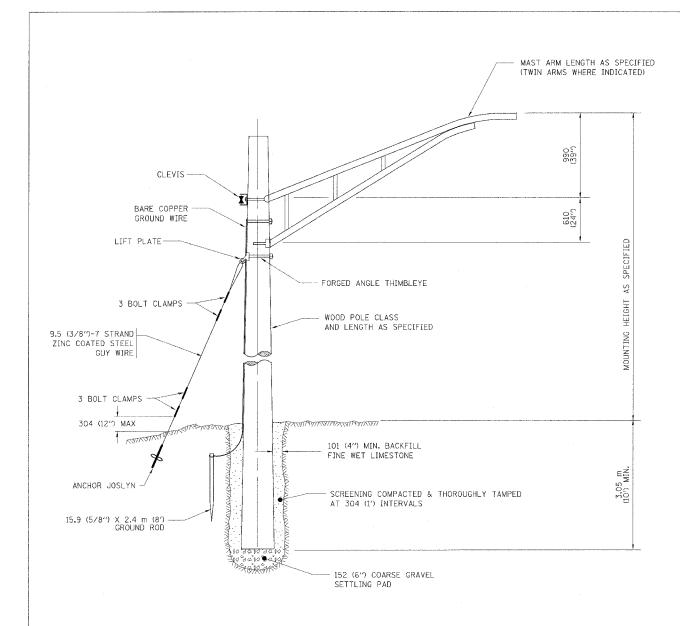
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REVISION DATE:





TEMPORARY LIGHT POLE ATTACHMENT DETAIL



TEMPORARY LIGHT POLE DETAIL

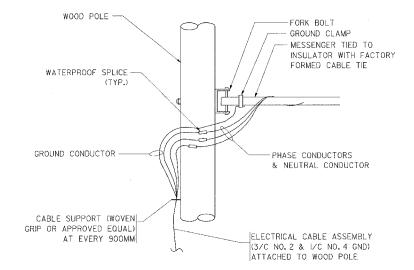
NOTES:

1. ALL DIMENSIONS IN MILLIMETERS (INCHES) UNLESS OTHERWISE INDICATED

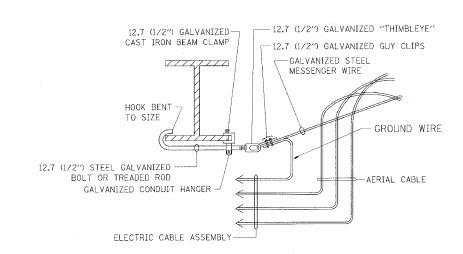
1 - ADDED SHEET 1-3-07 REVISIONS NAME ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY LIGHT POLE DETAILS SCALE: NONE DRAWN BY DATE 05/20/2003 CHECKED BY BE-800

05/20/2003 K:\diststd\be800.dgn

REVISION DATE:



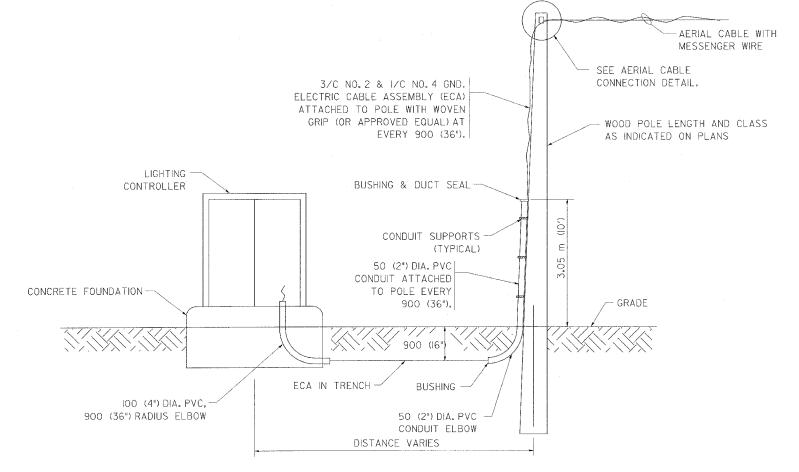
AERIAL CABLE CONNECTION DETAIL



AERIAL CABLE ATTACHED TO STRUCTURE NOT TO SCALE

NOTES:

- 1. ALL DIMENSIONS IN MILLIMETERS (INCHES) UNLESS OTHERWISE INDICATED.
- 2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
- 3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
- 4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.



WOOD POLE TO LIGHTING CONTROLLER
WIRING CONNECTION DETAIL

SCALE: NONE

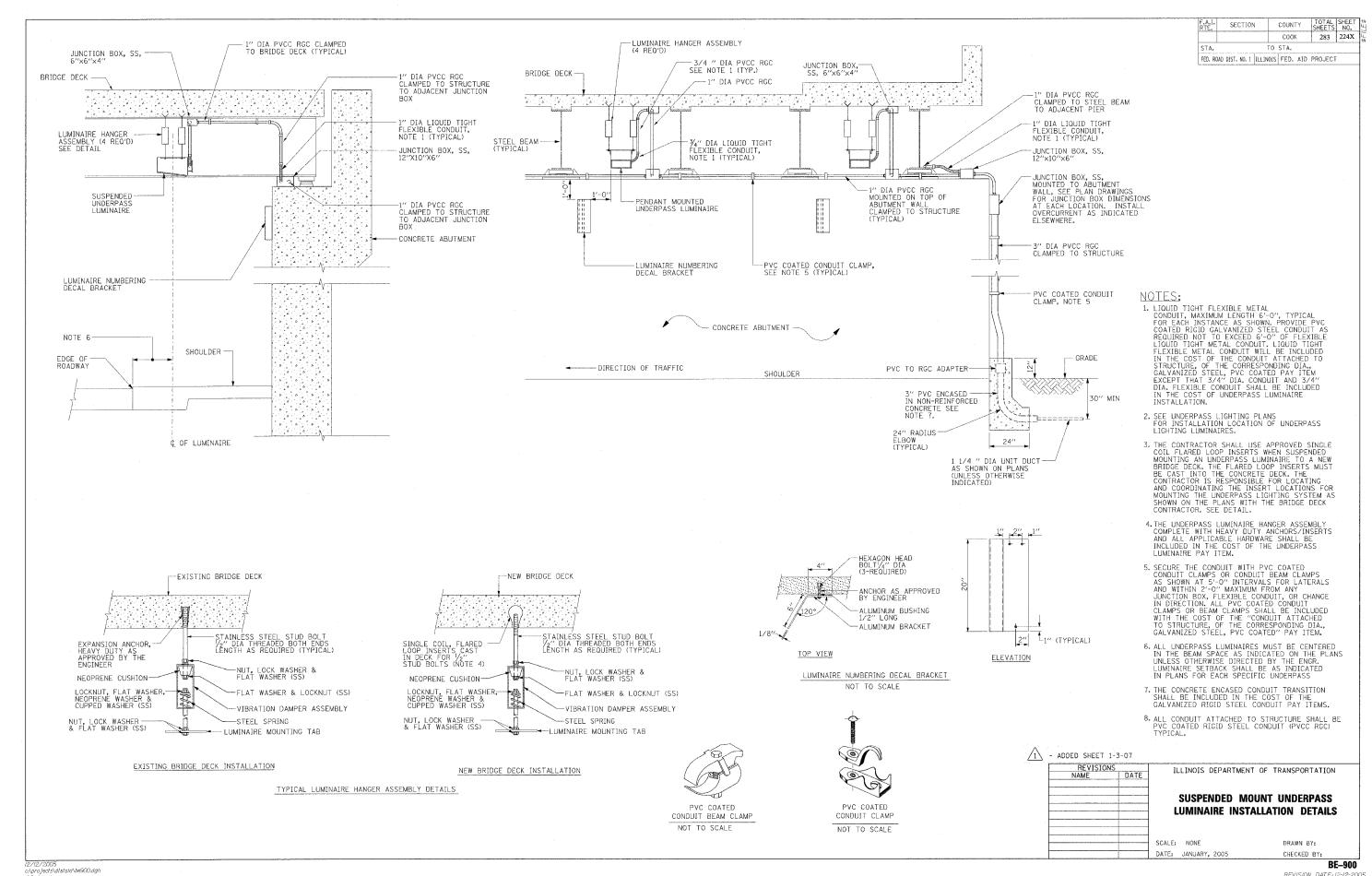
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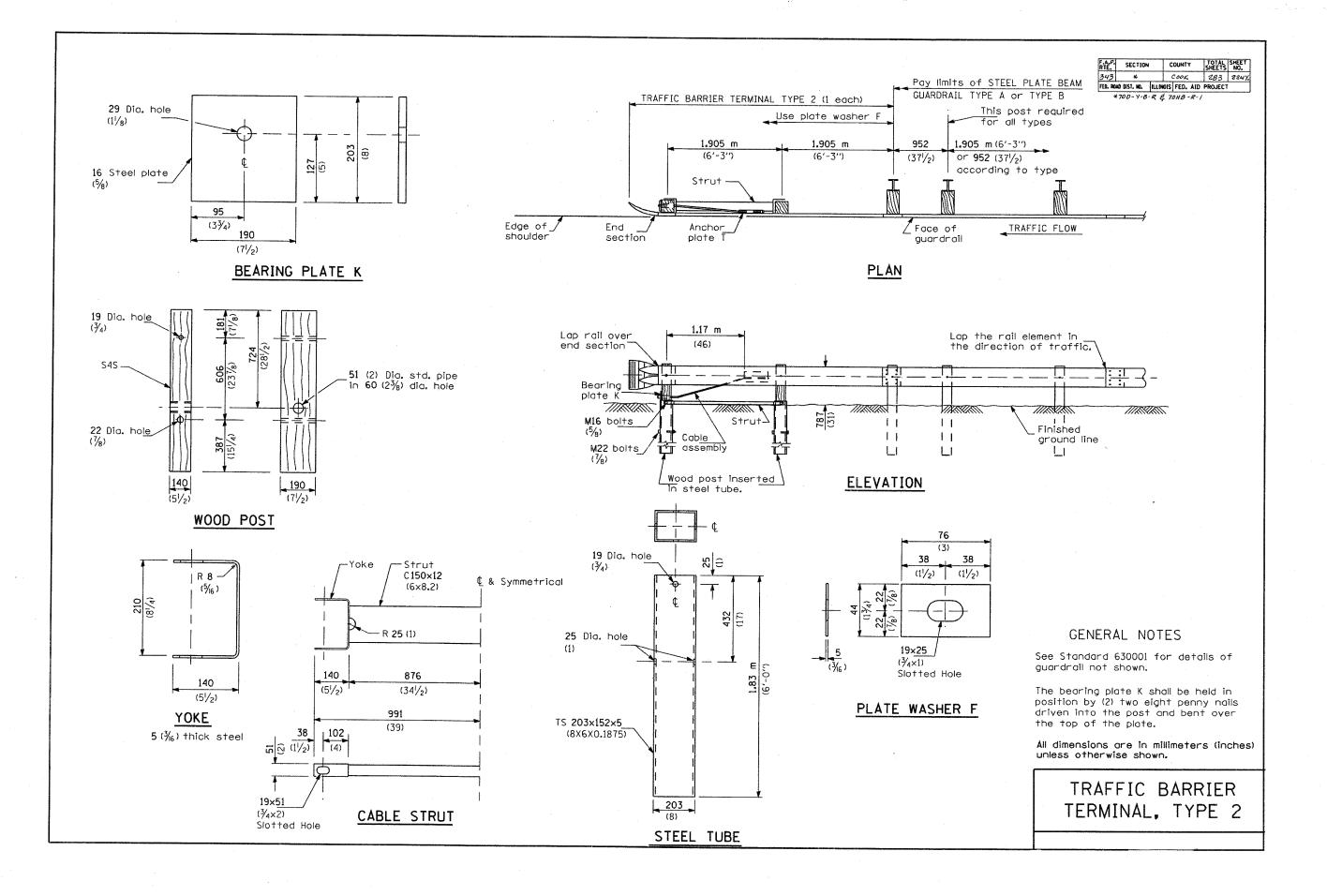
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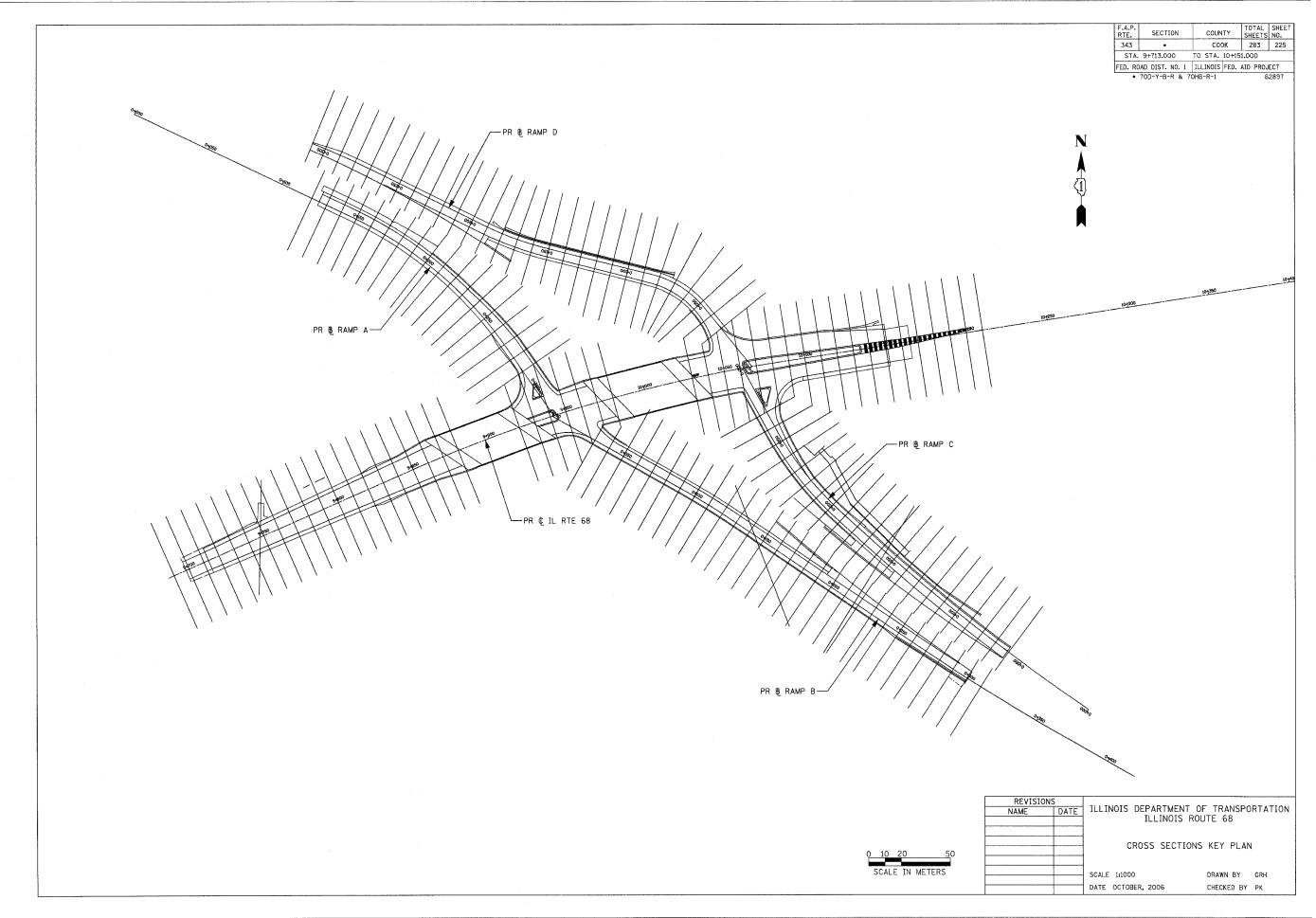
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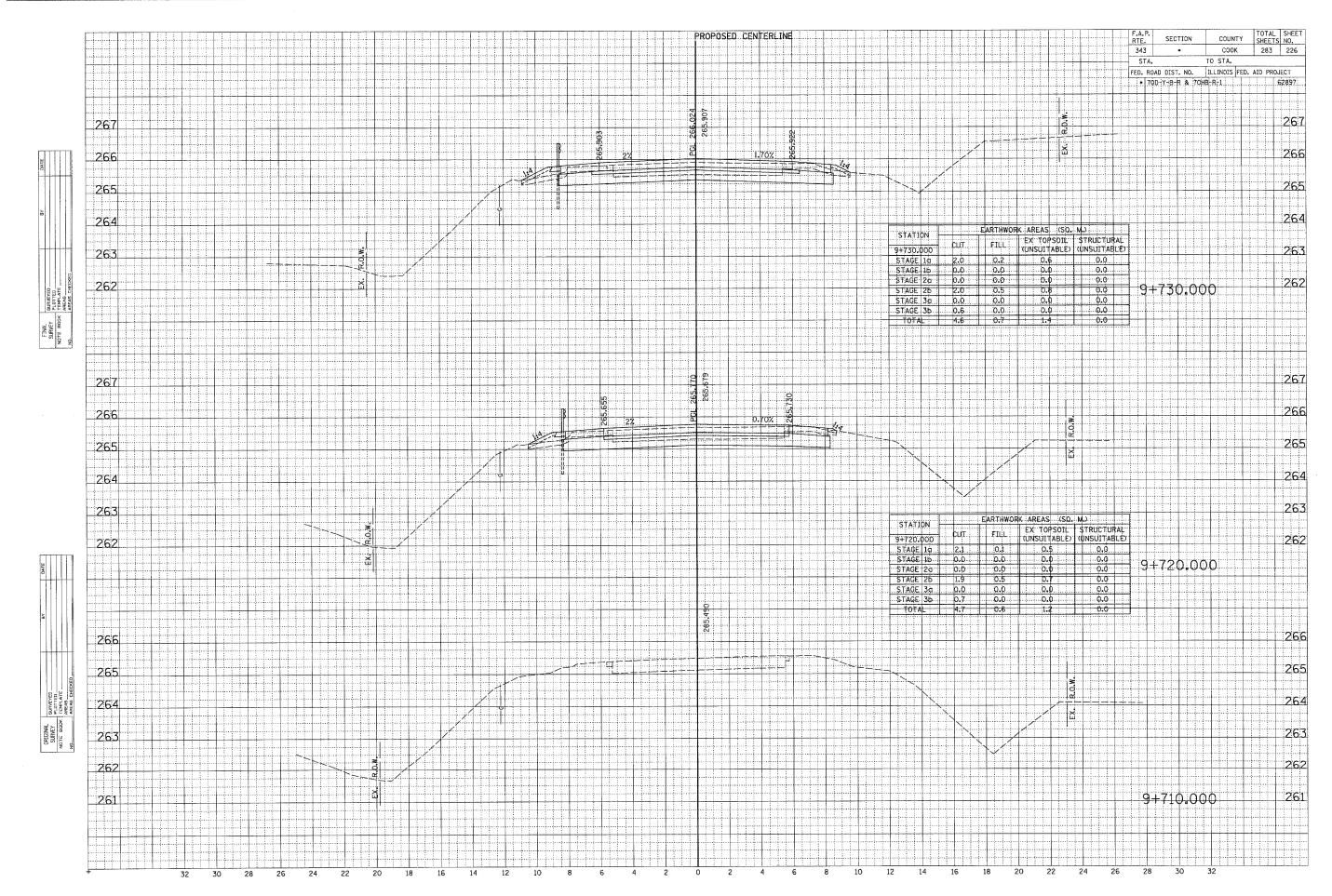


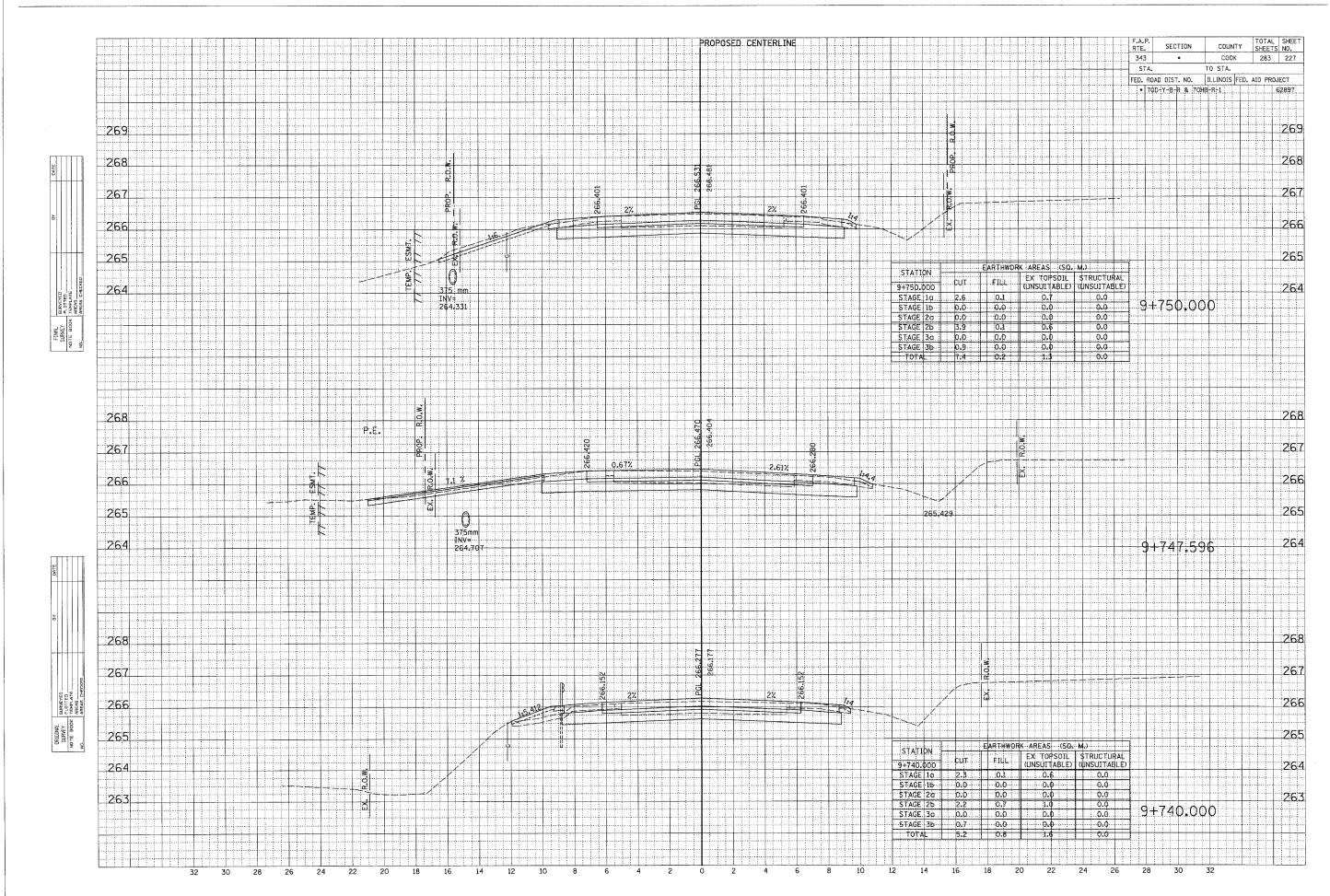
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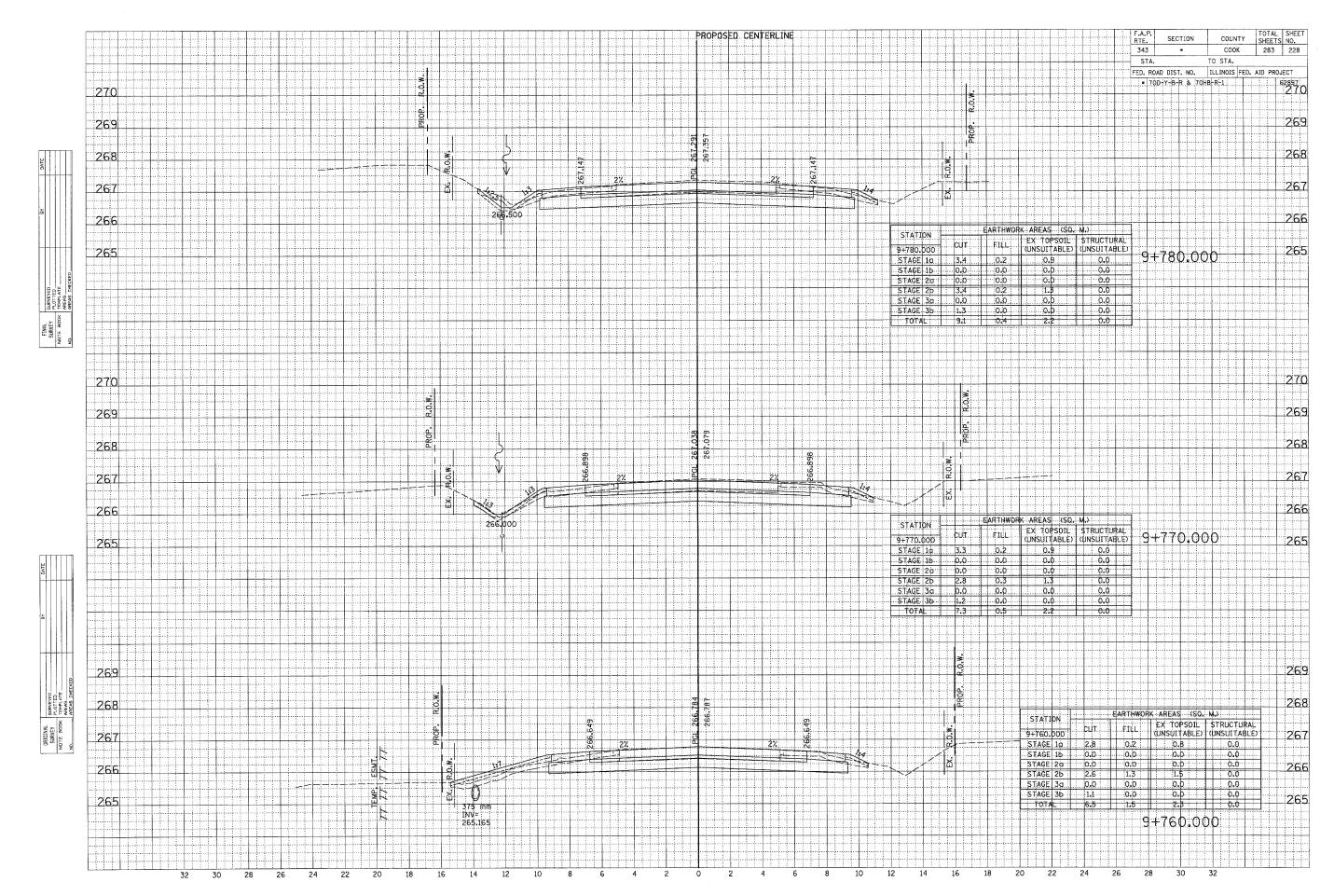


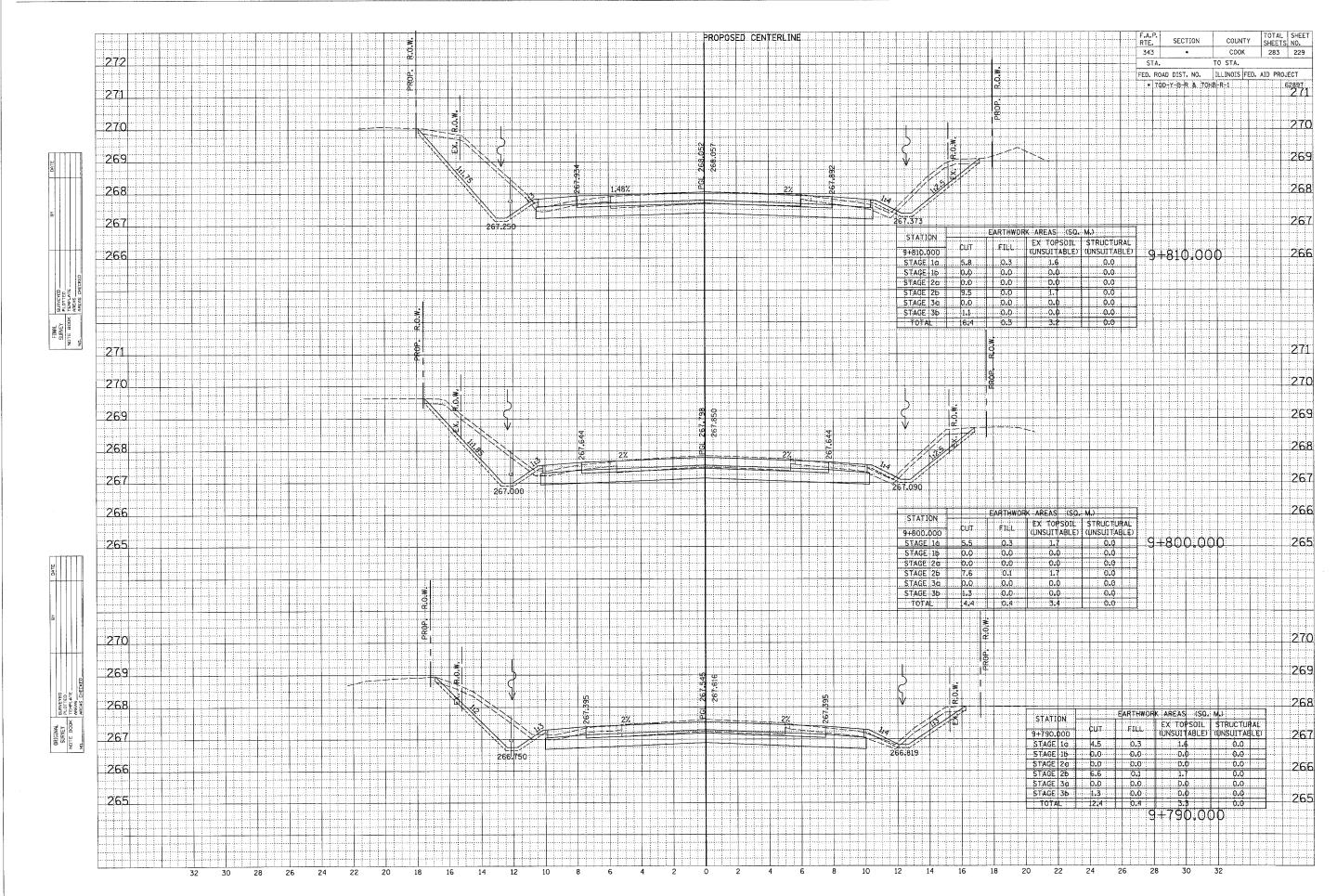


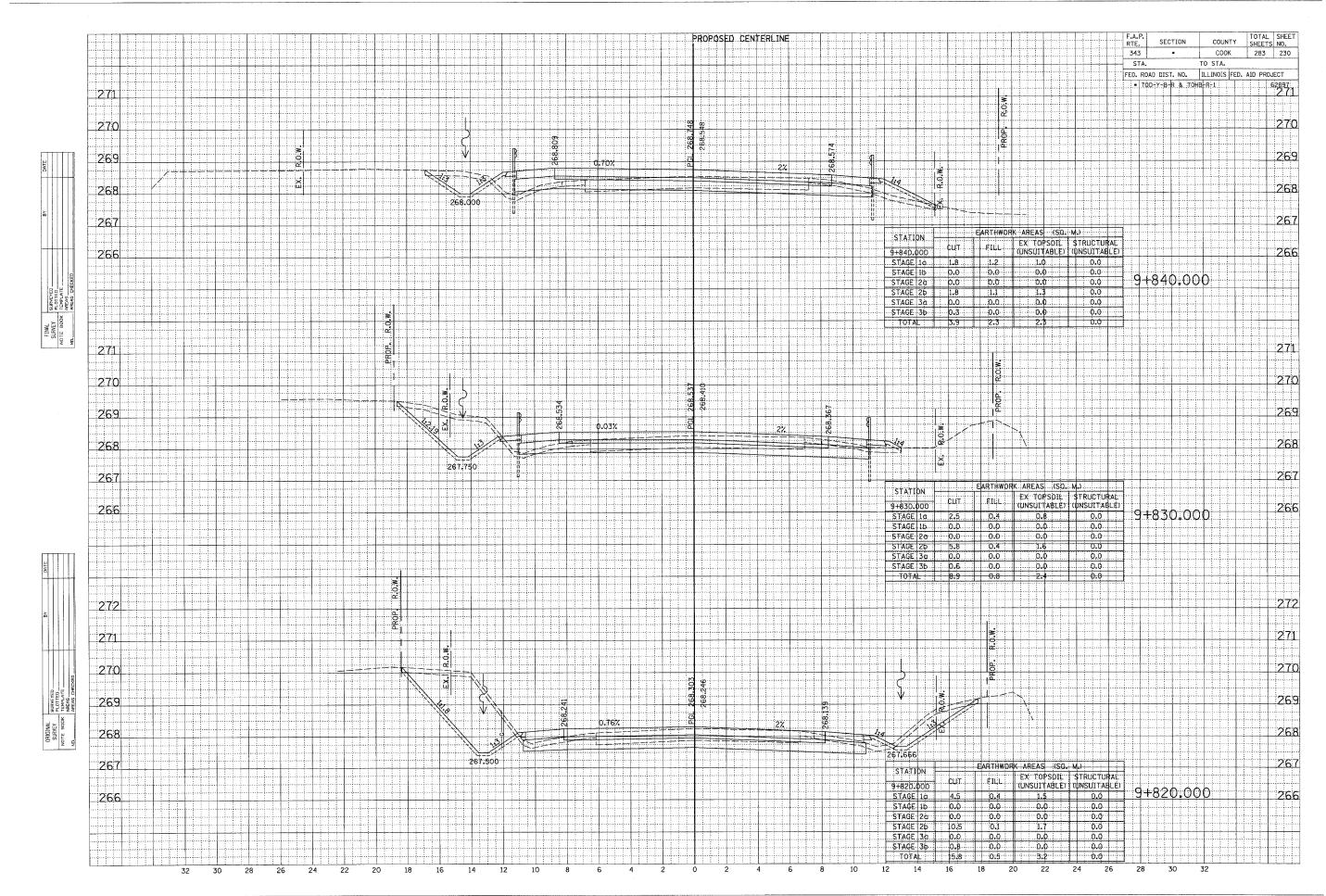
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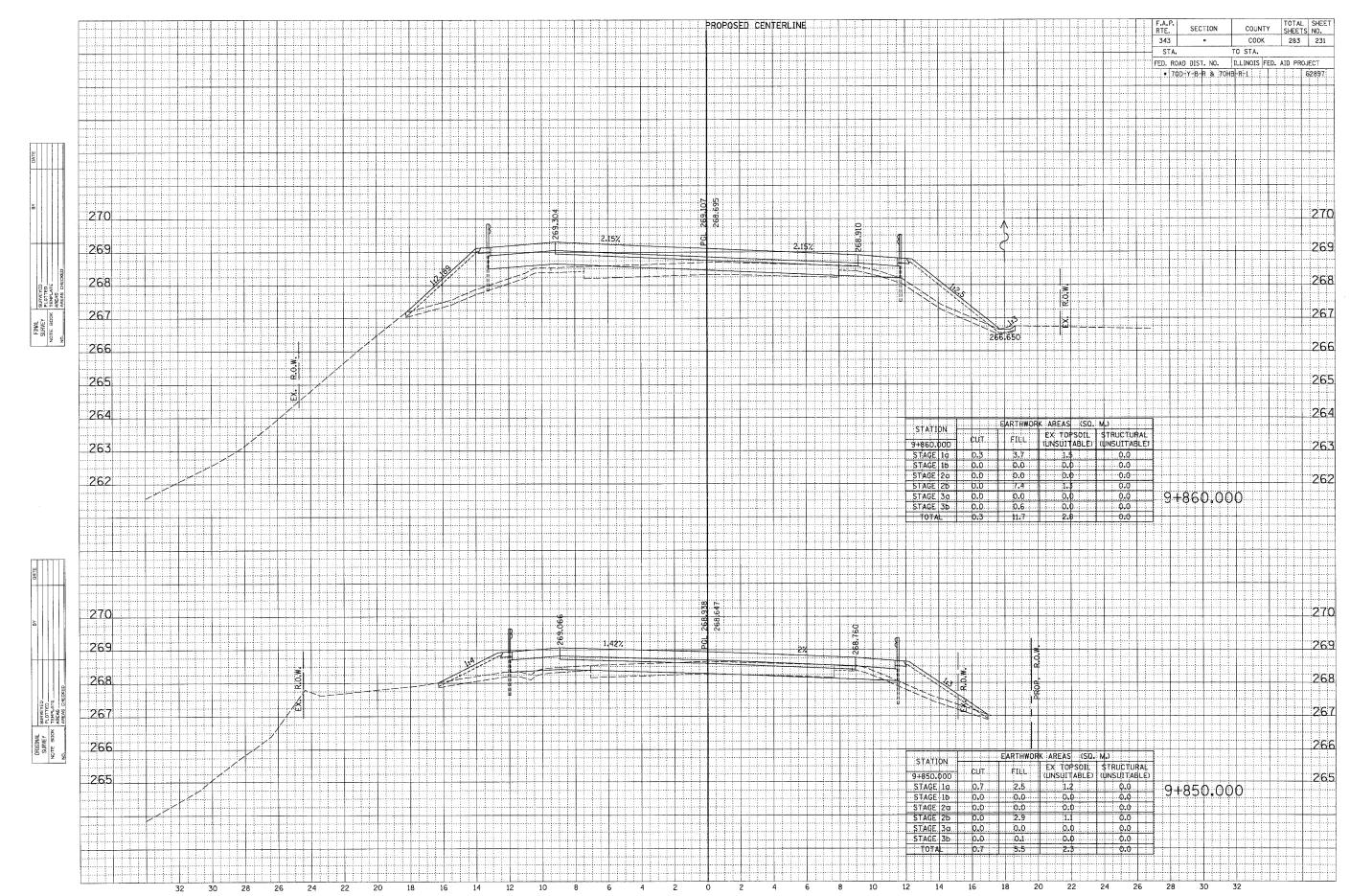


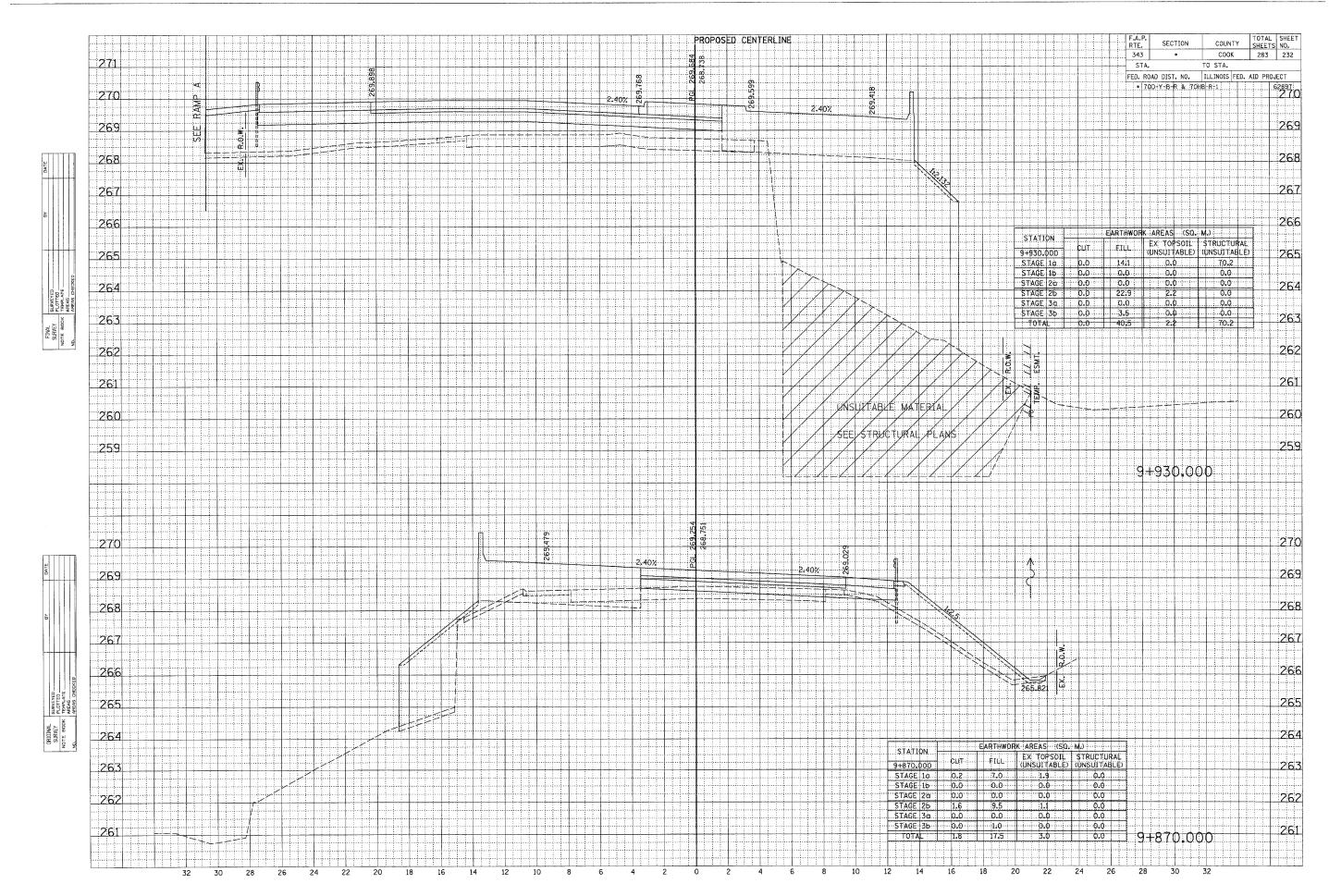


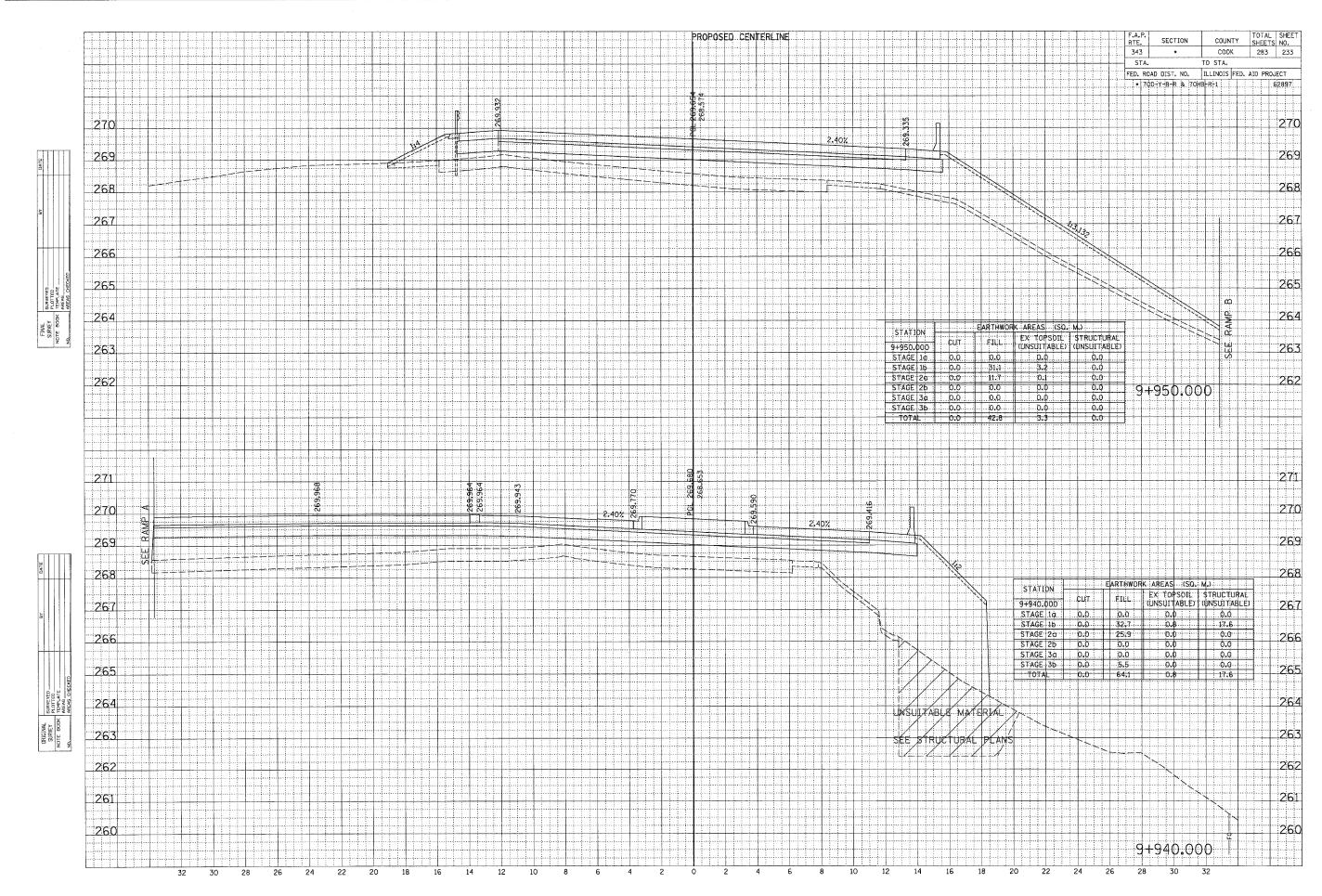


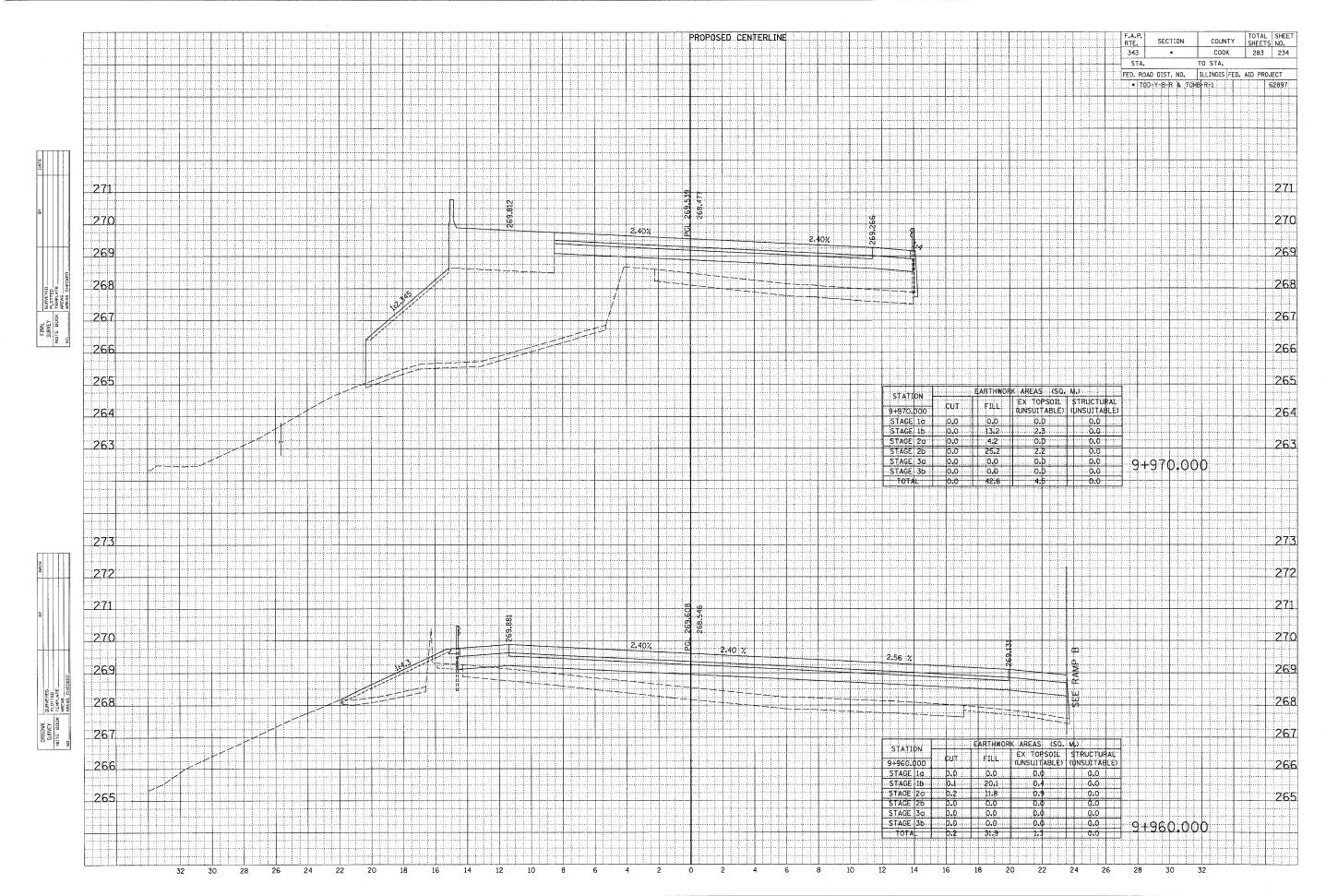


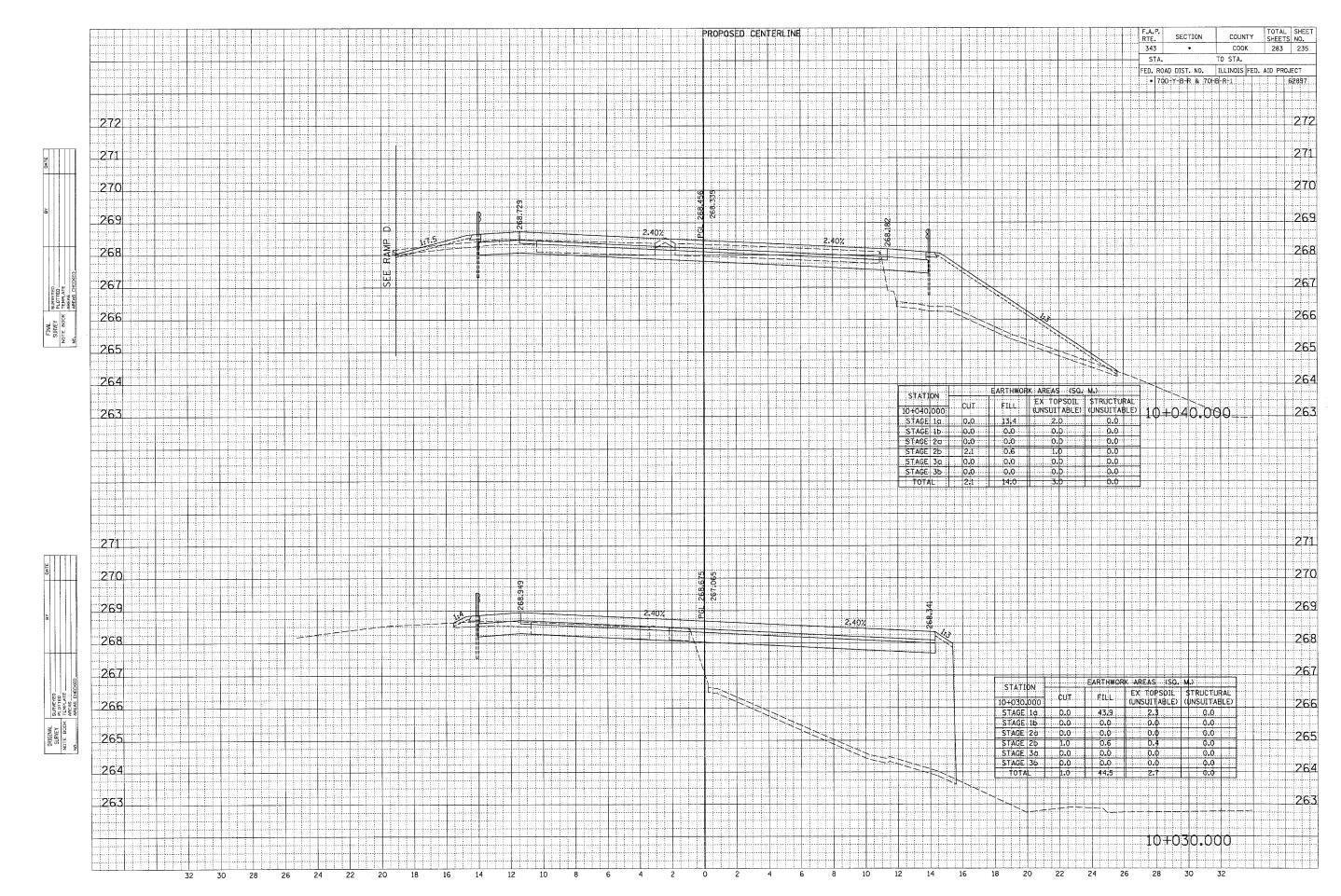


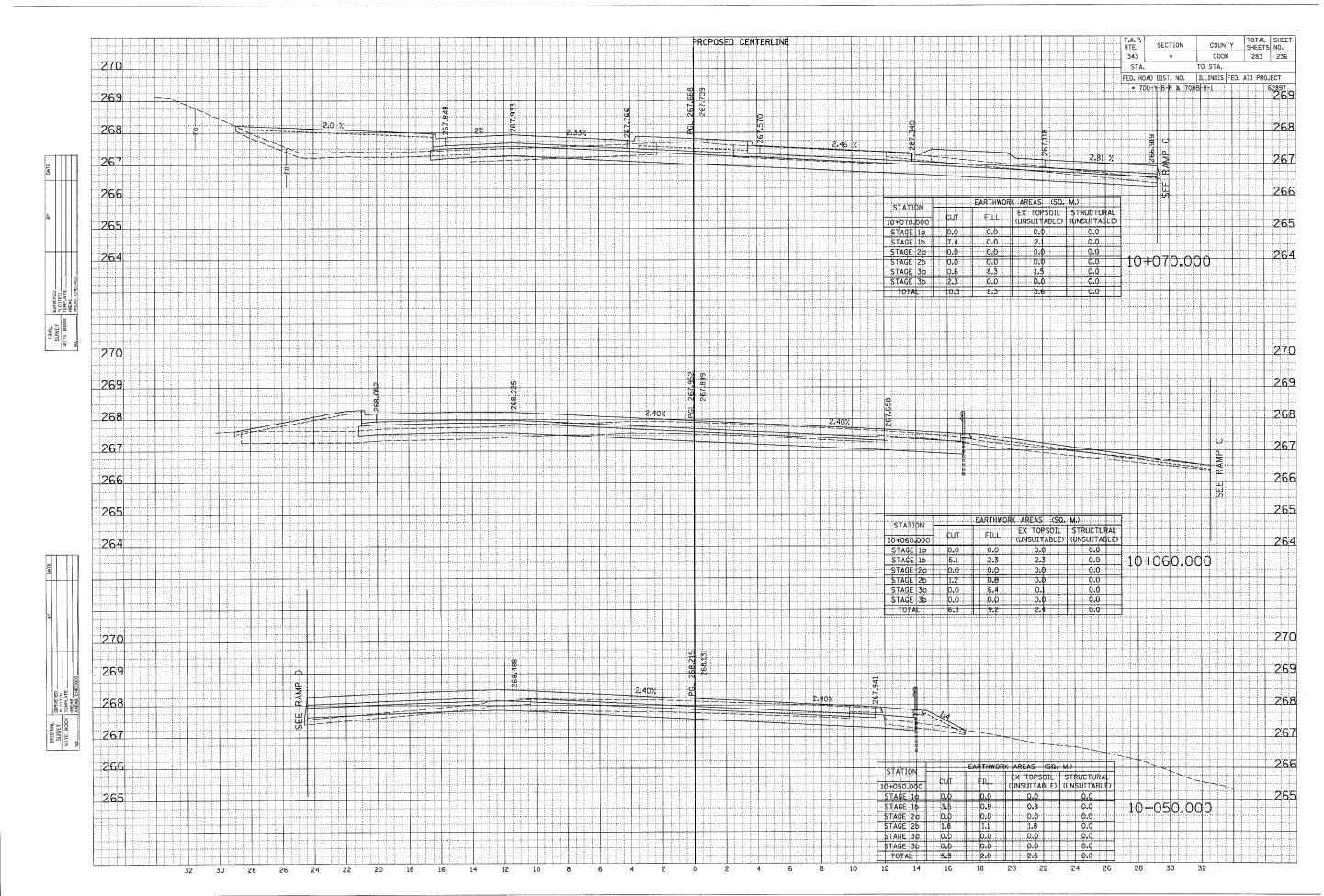


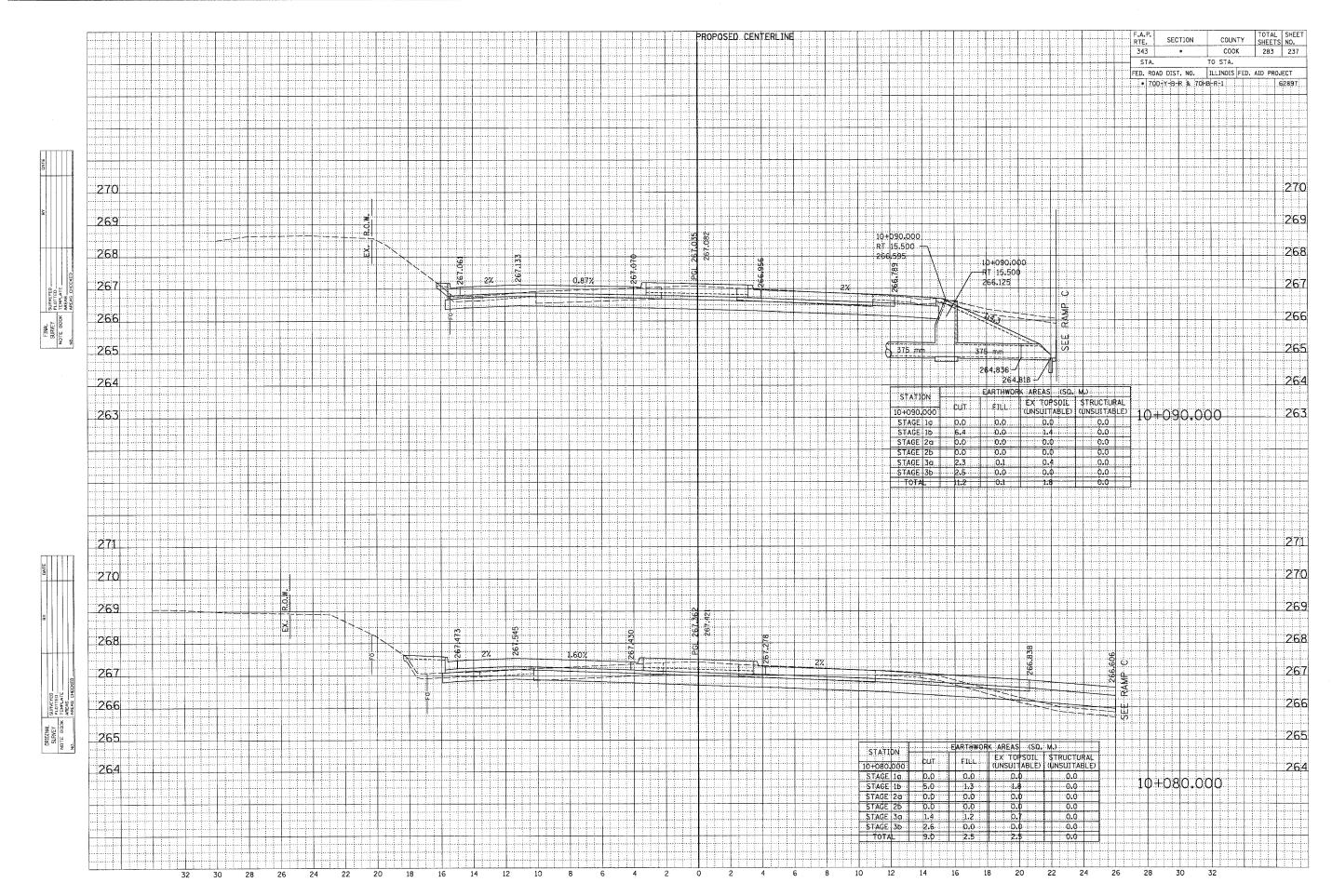


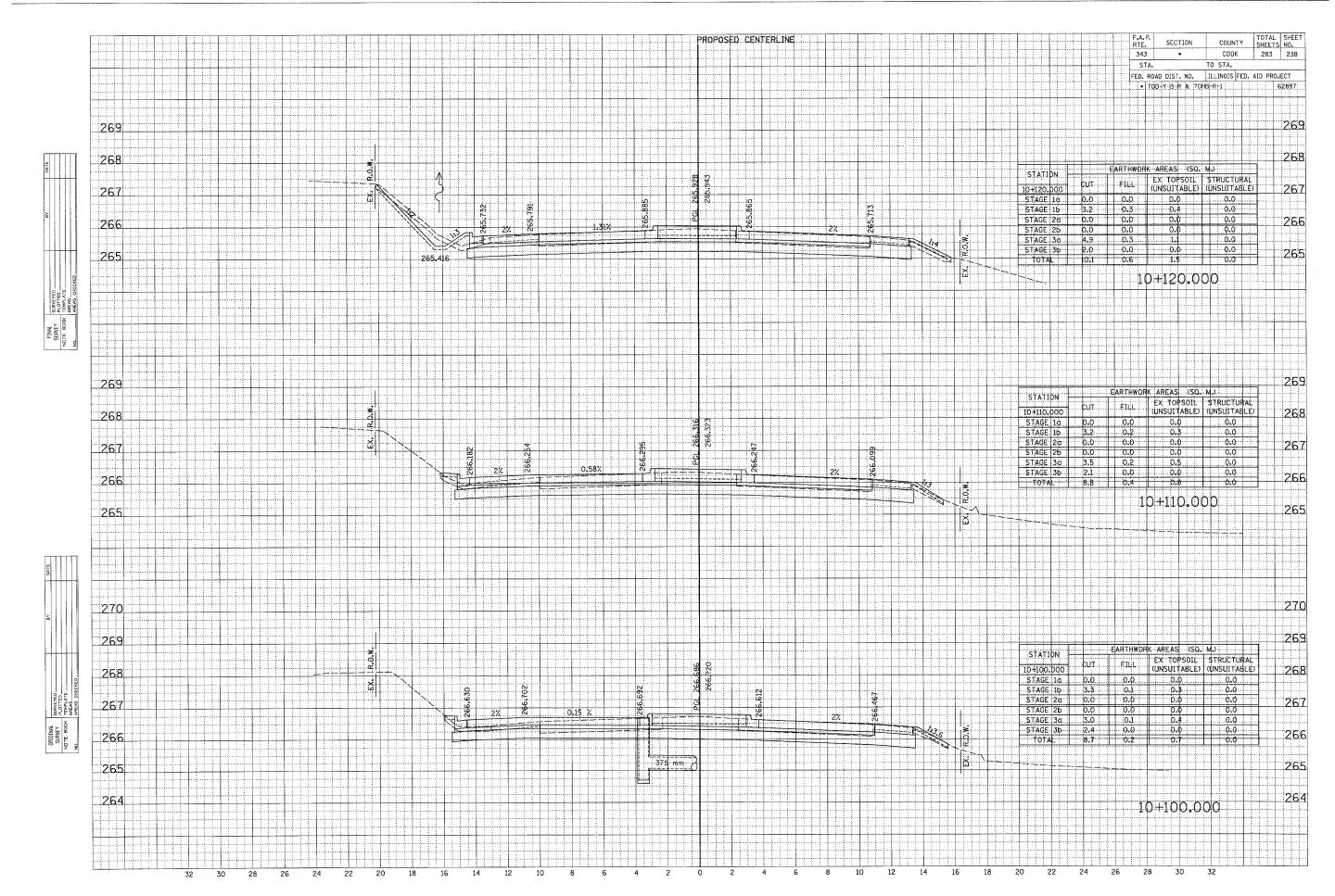


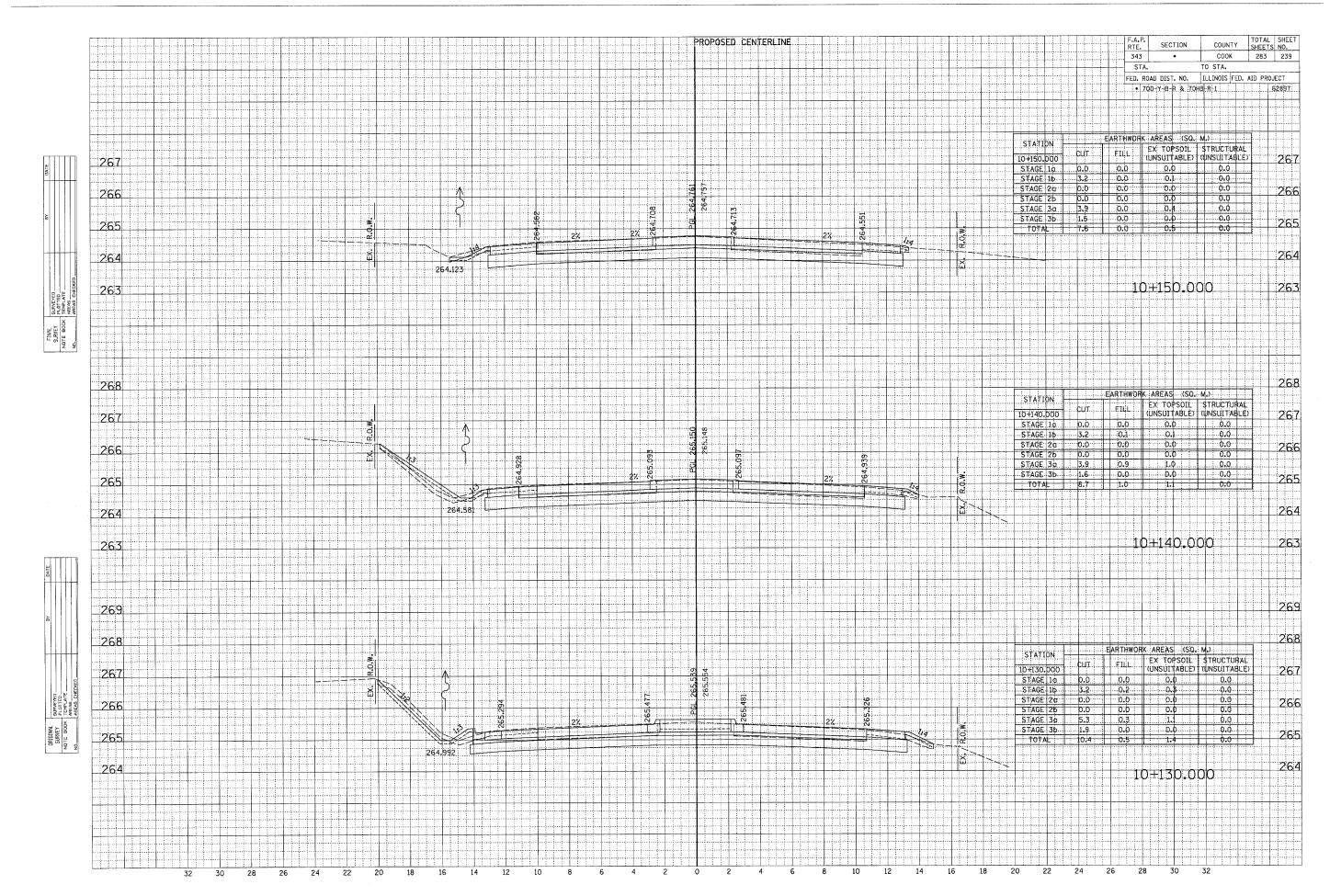


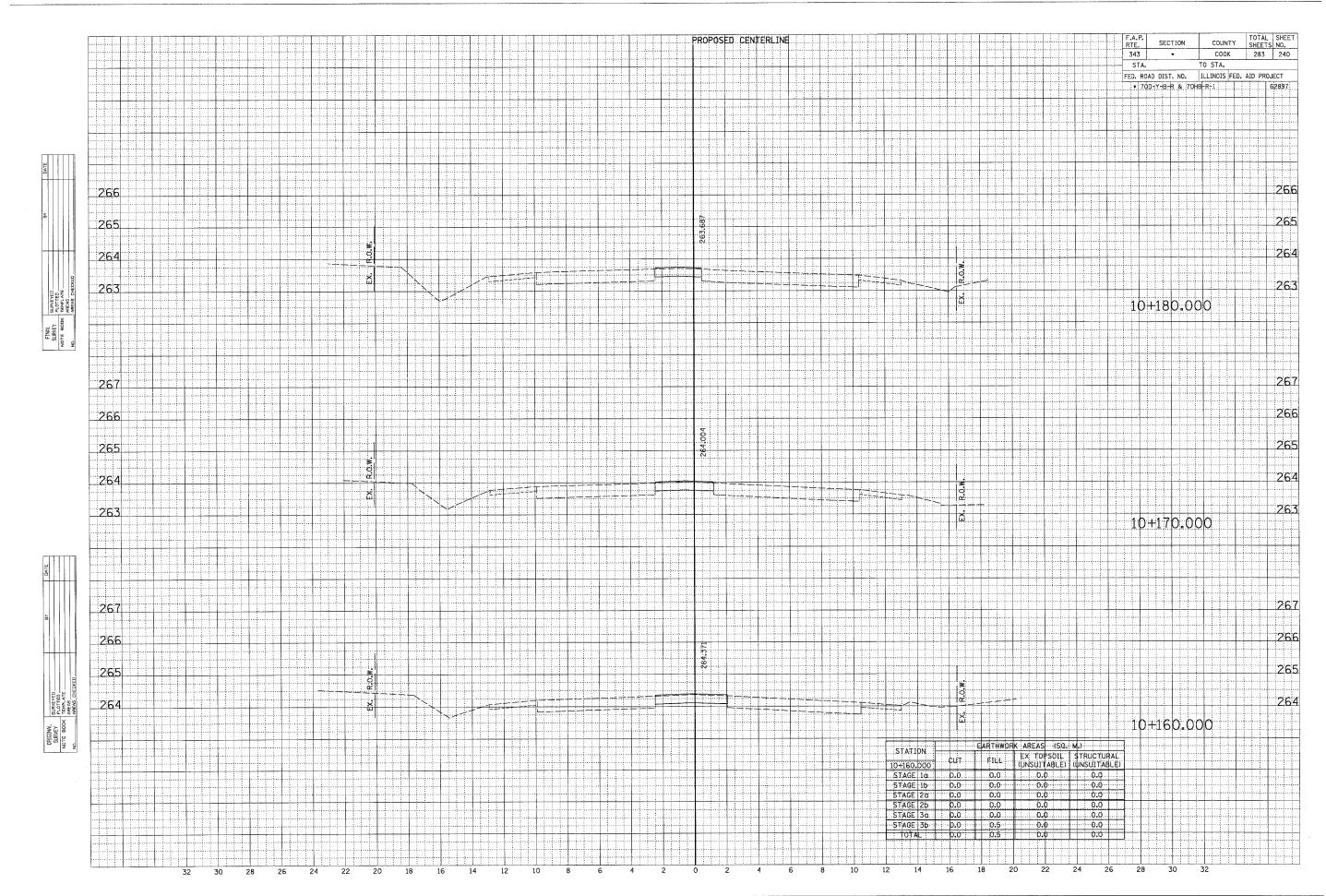


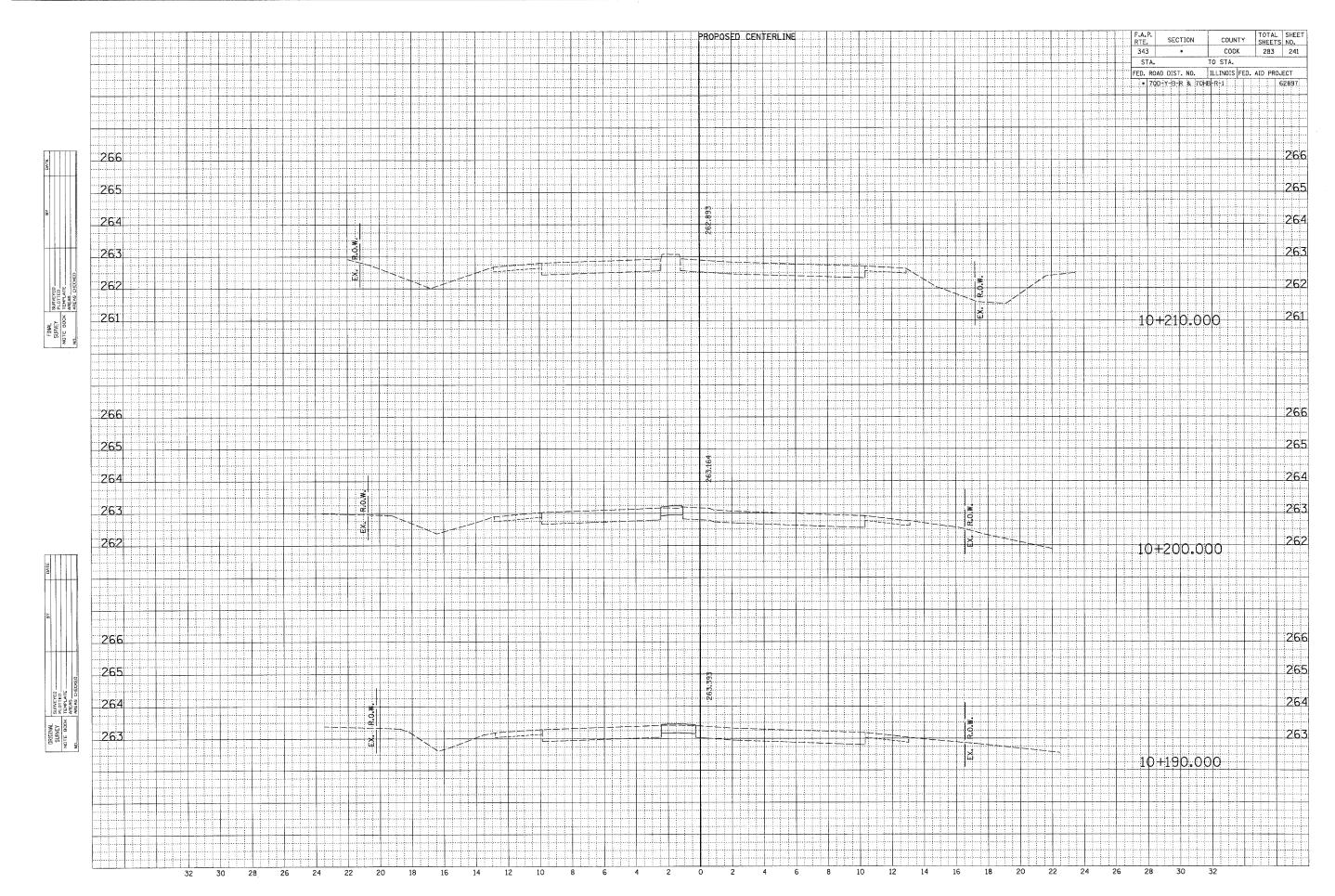


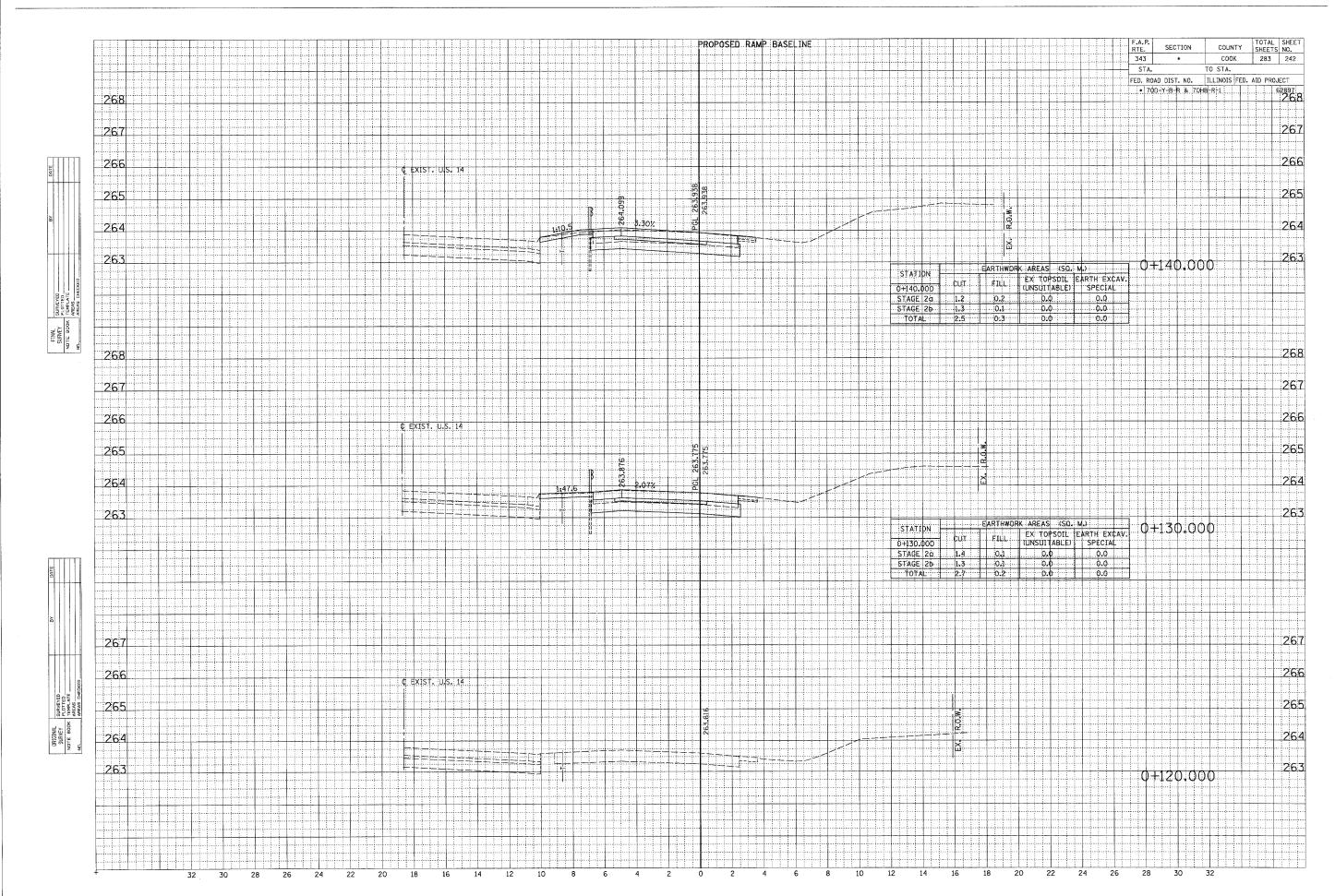


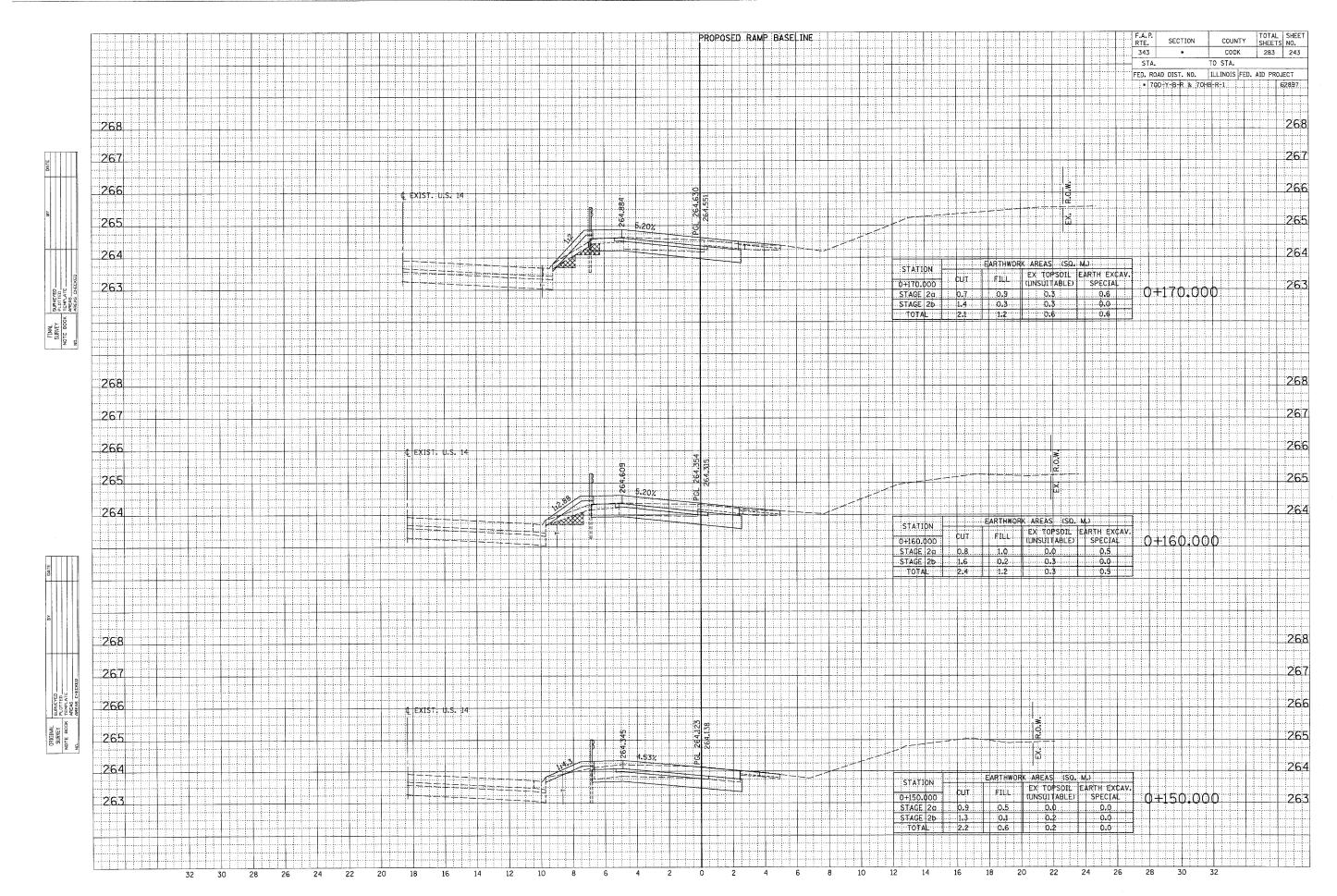


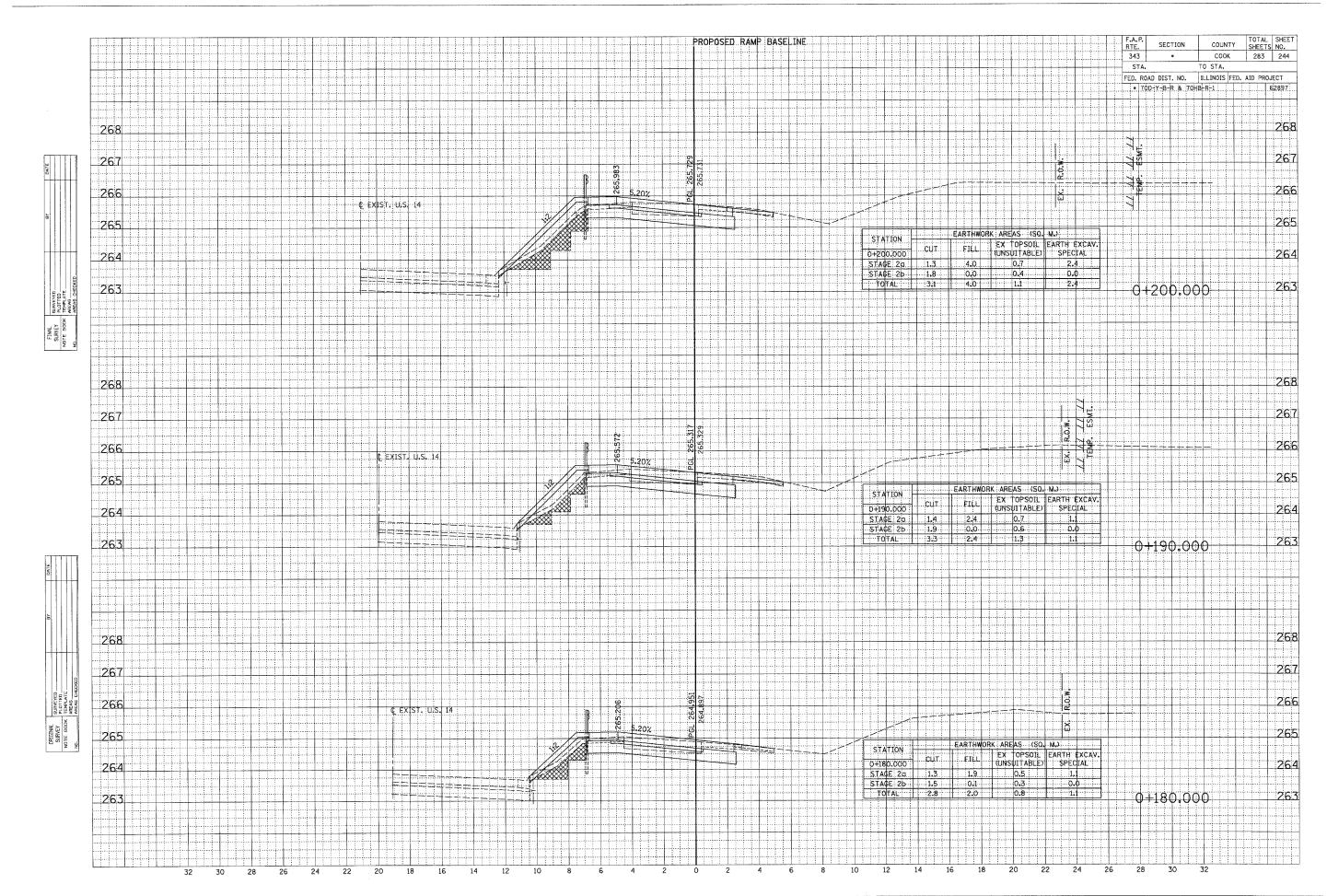


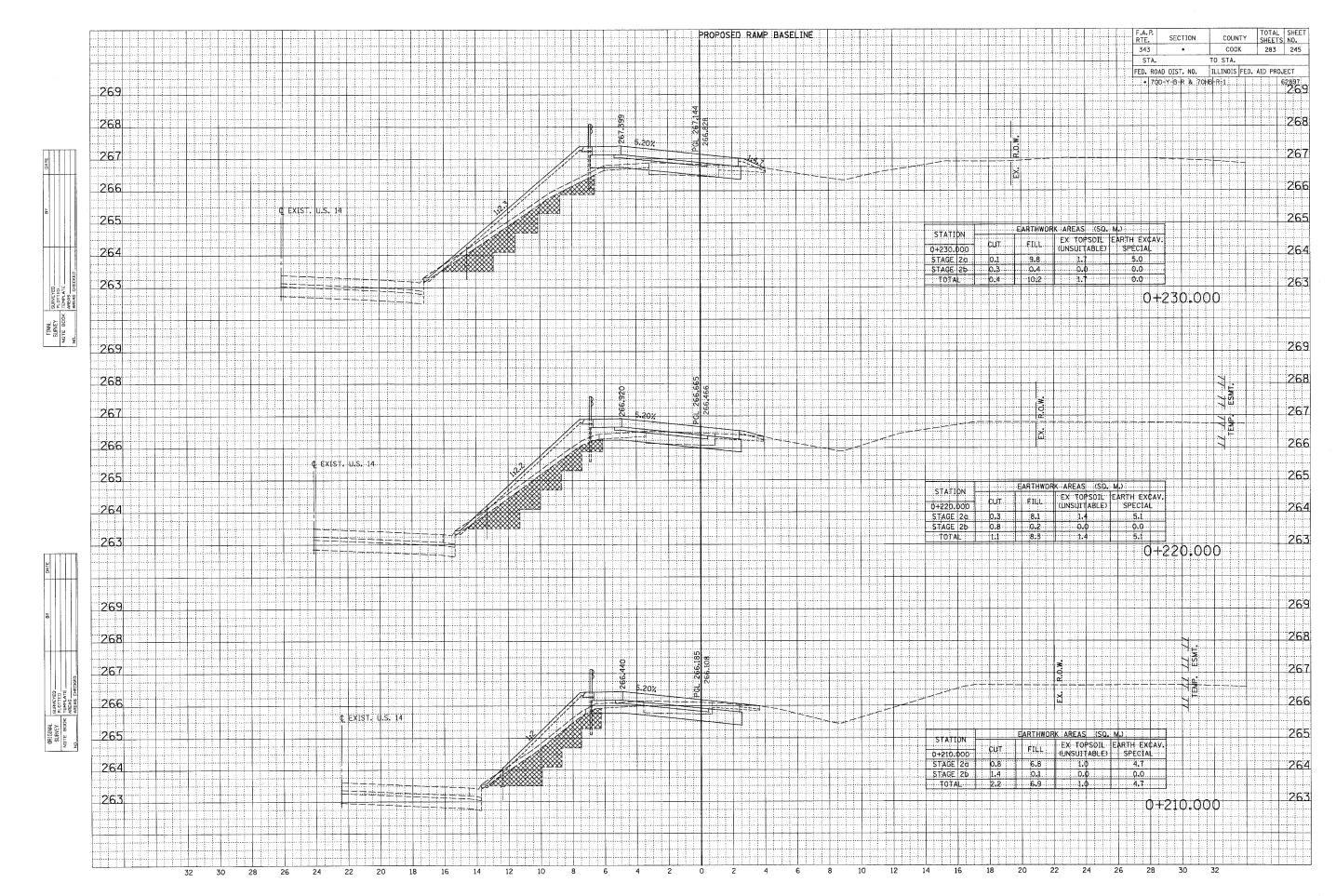


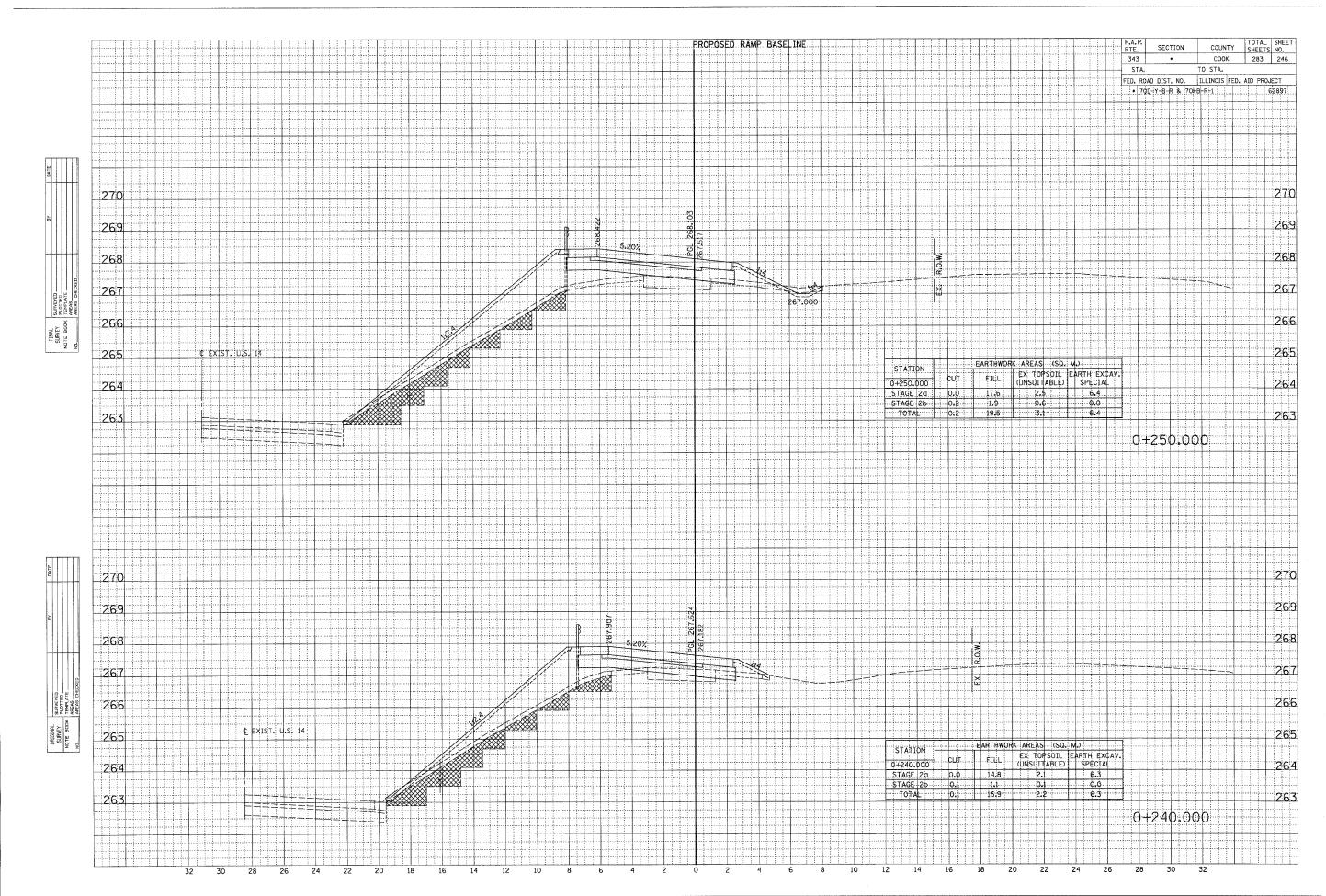


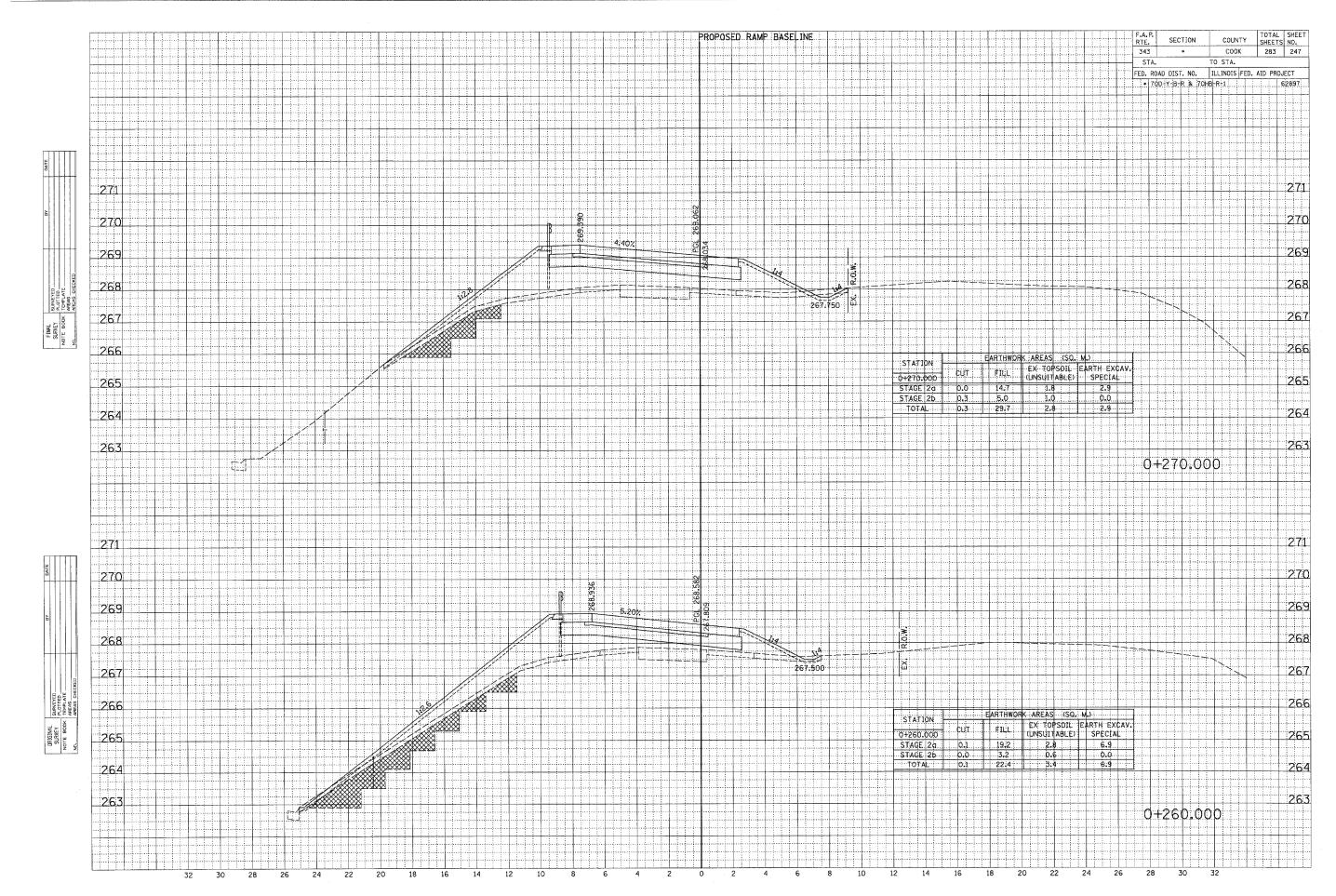


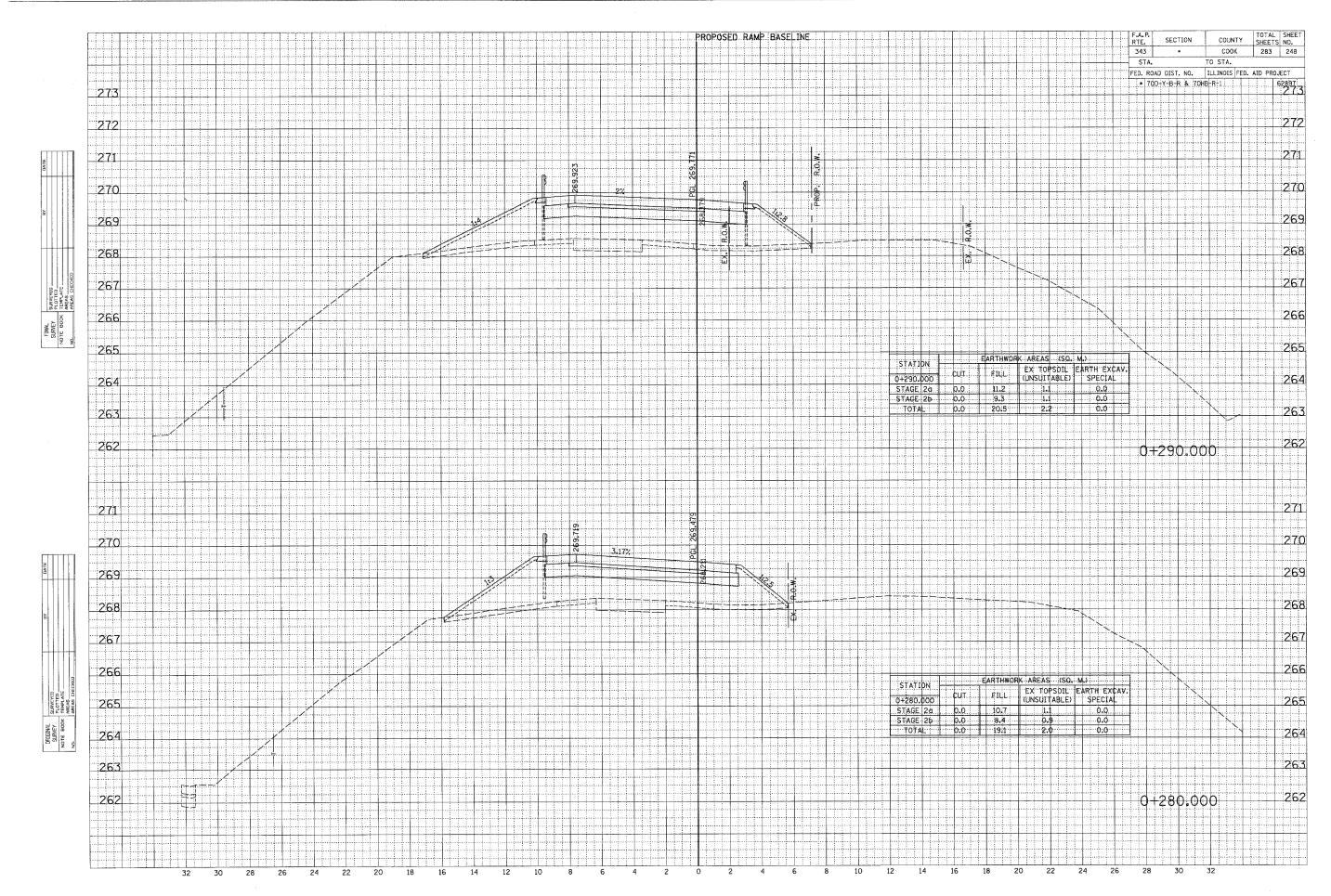


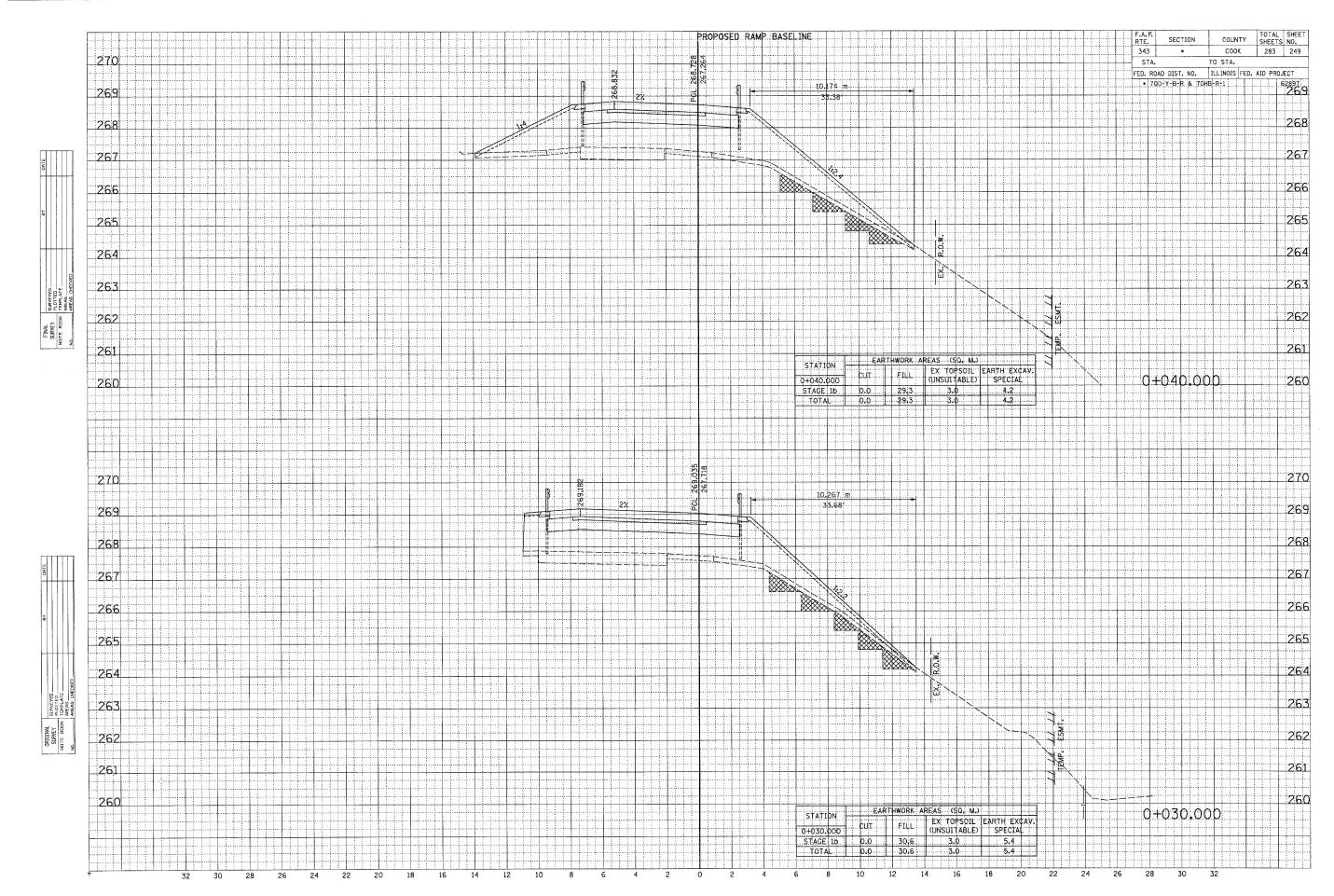


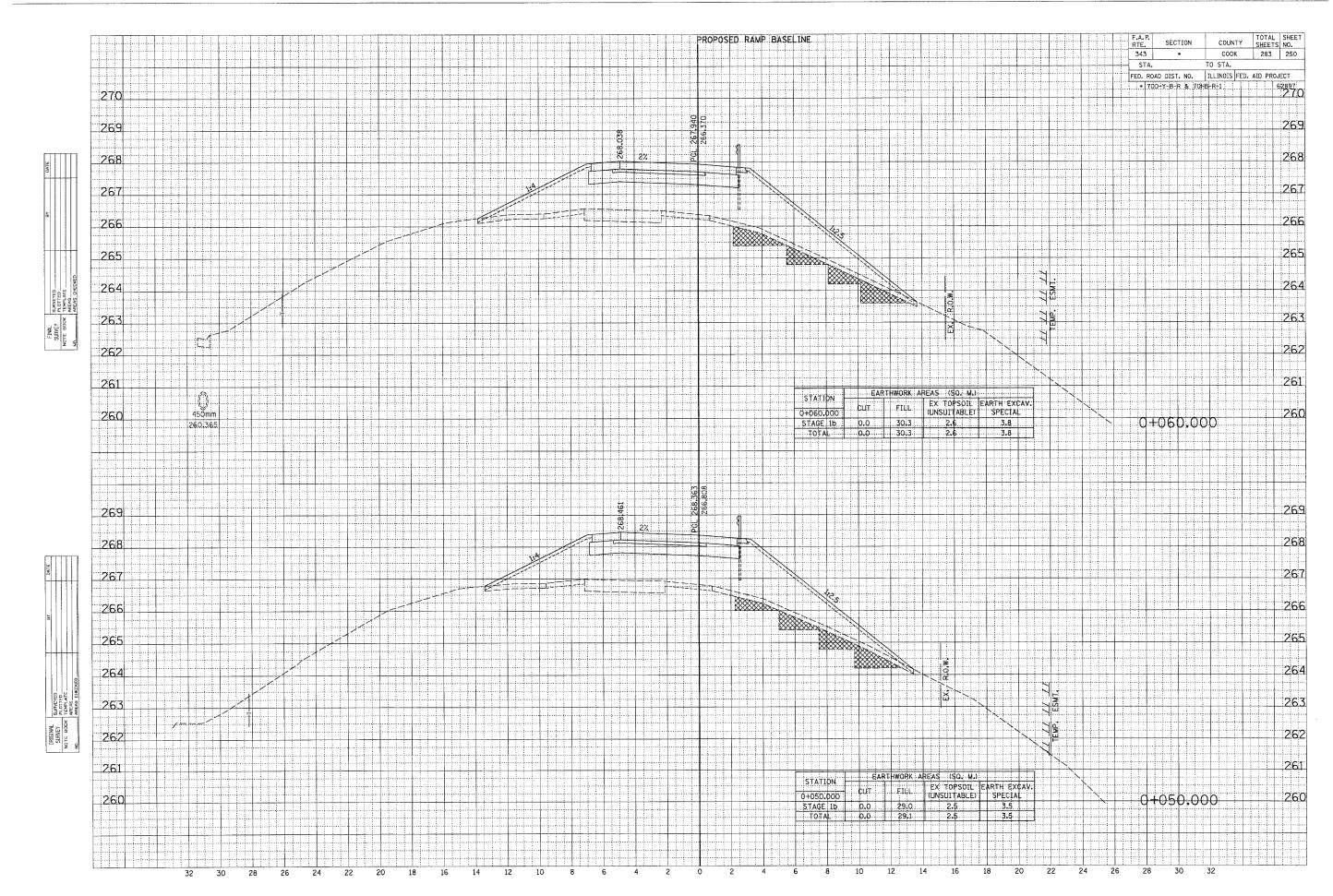


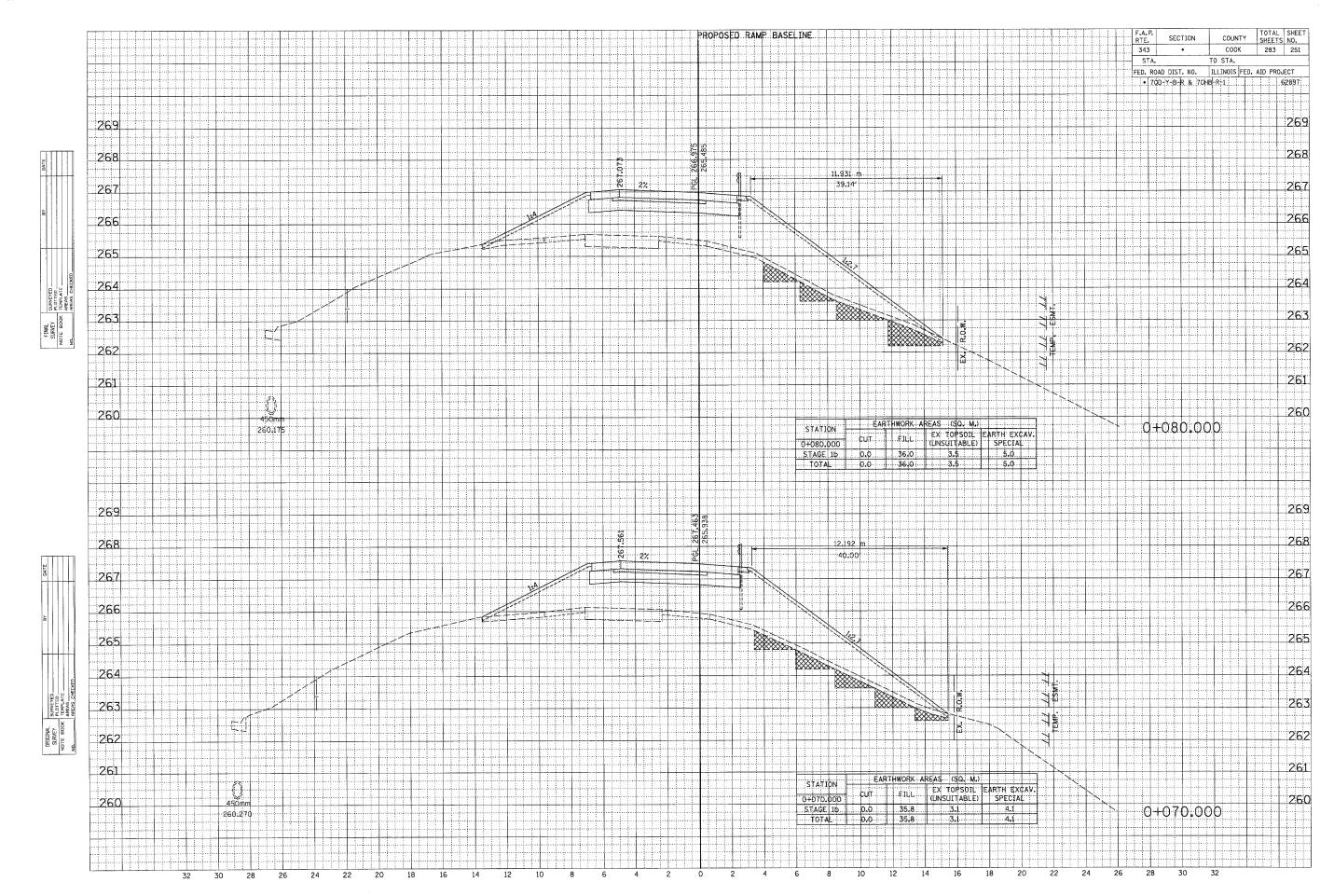


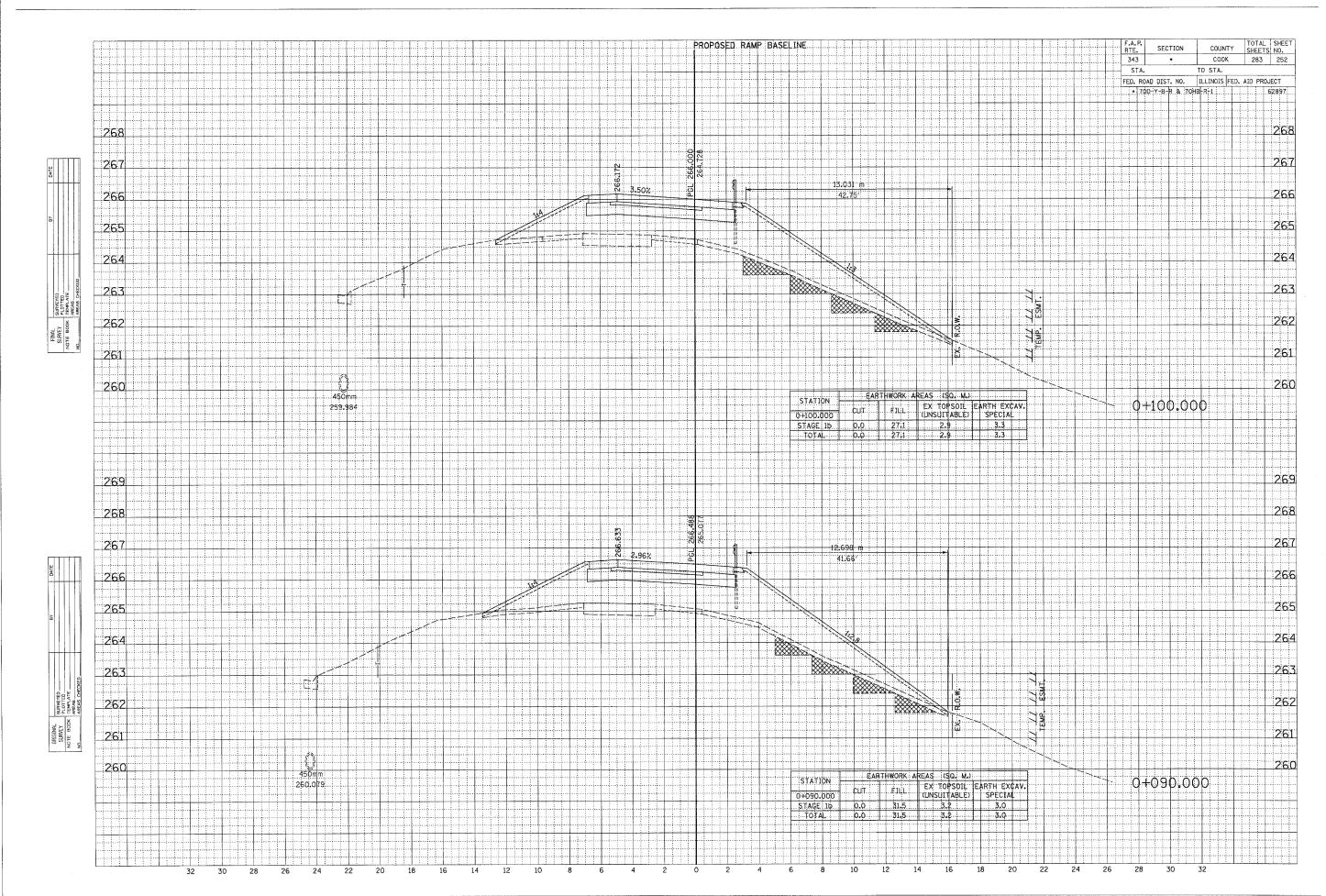


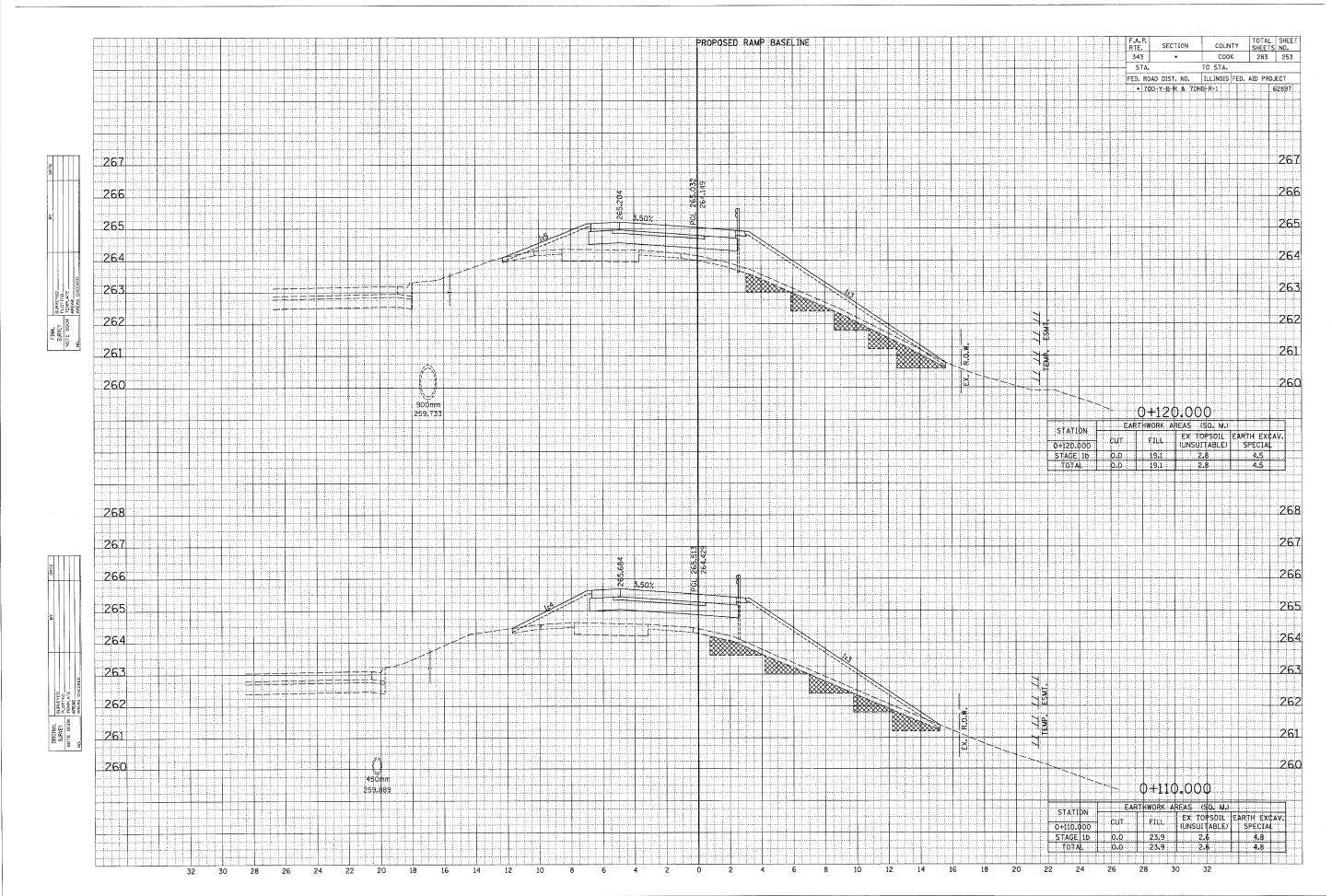


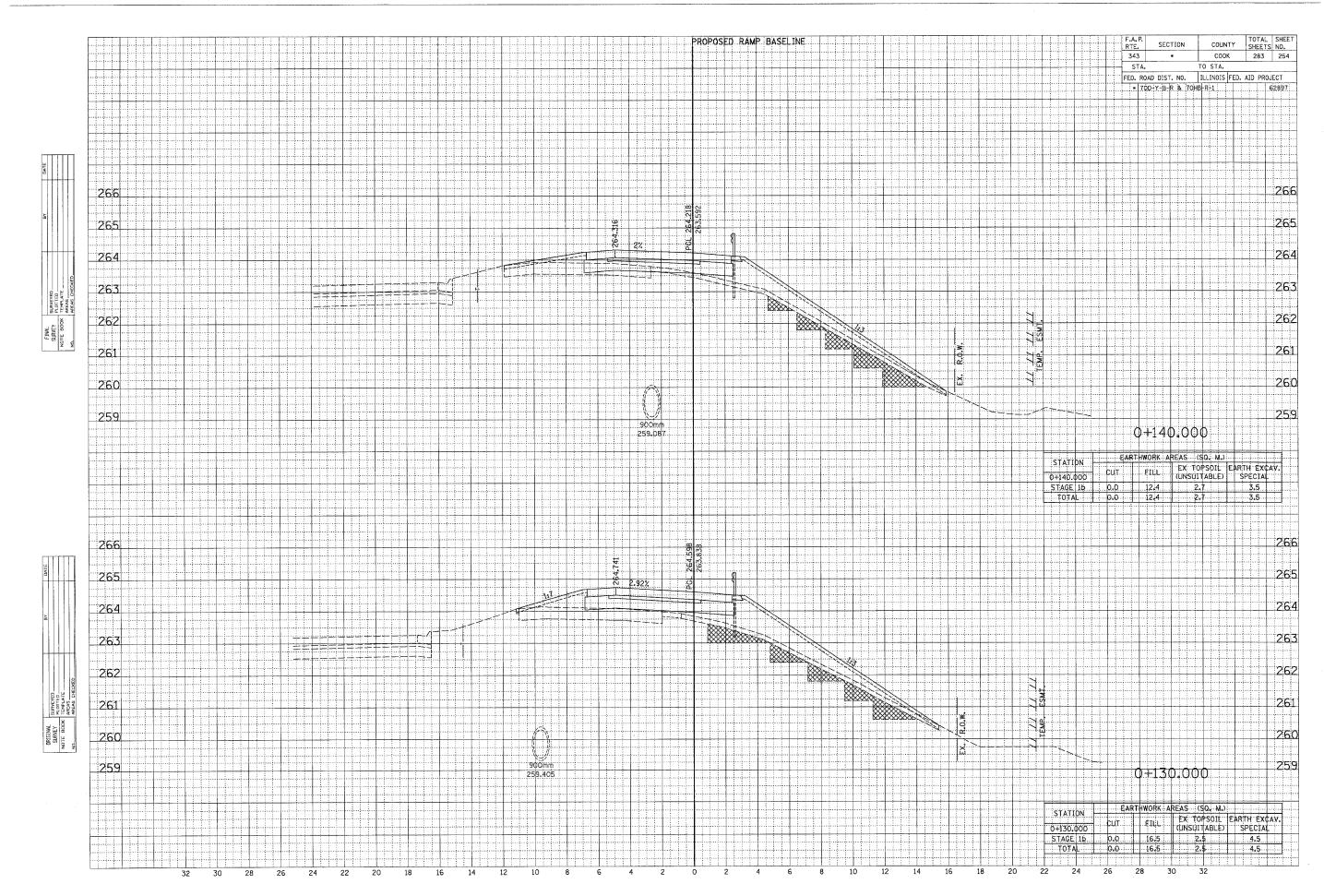


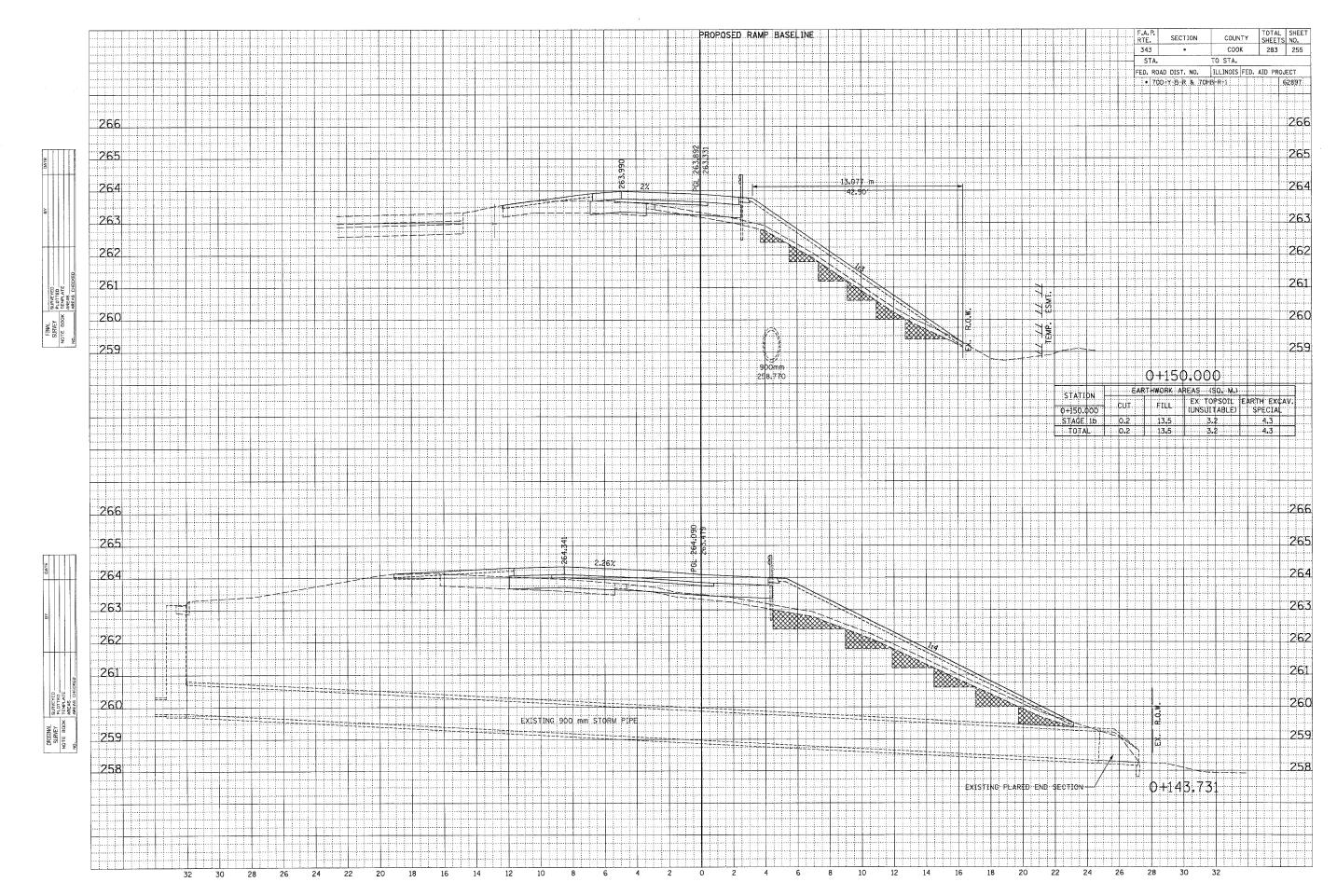


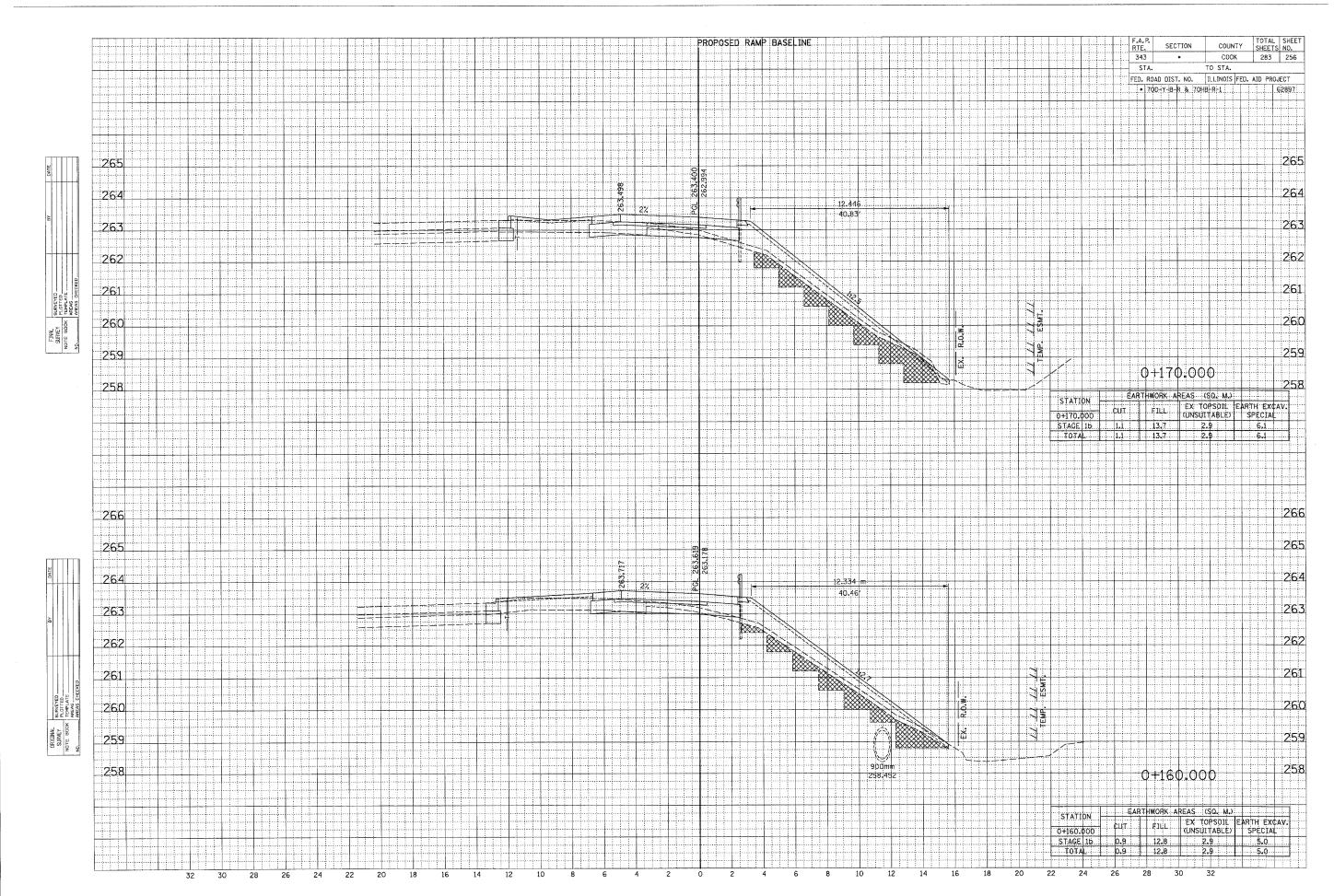


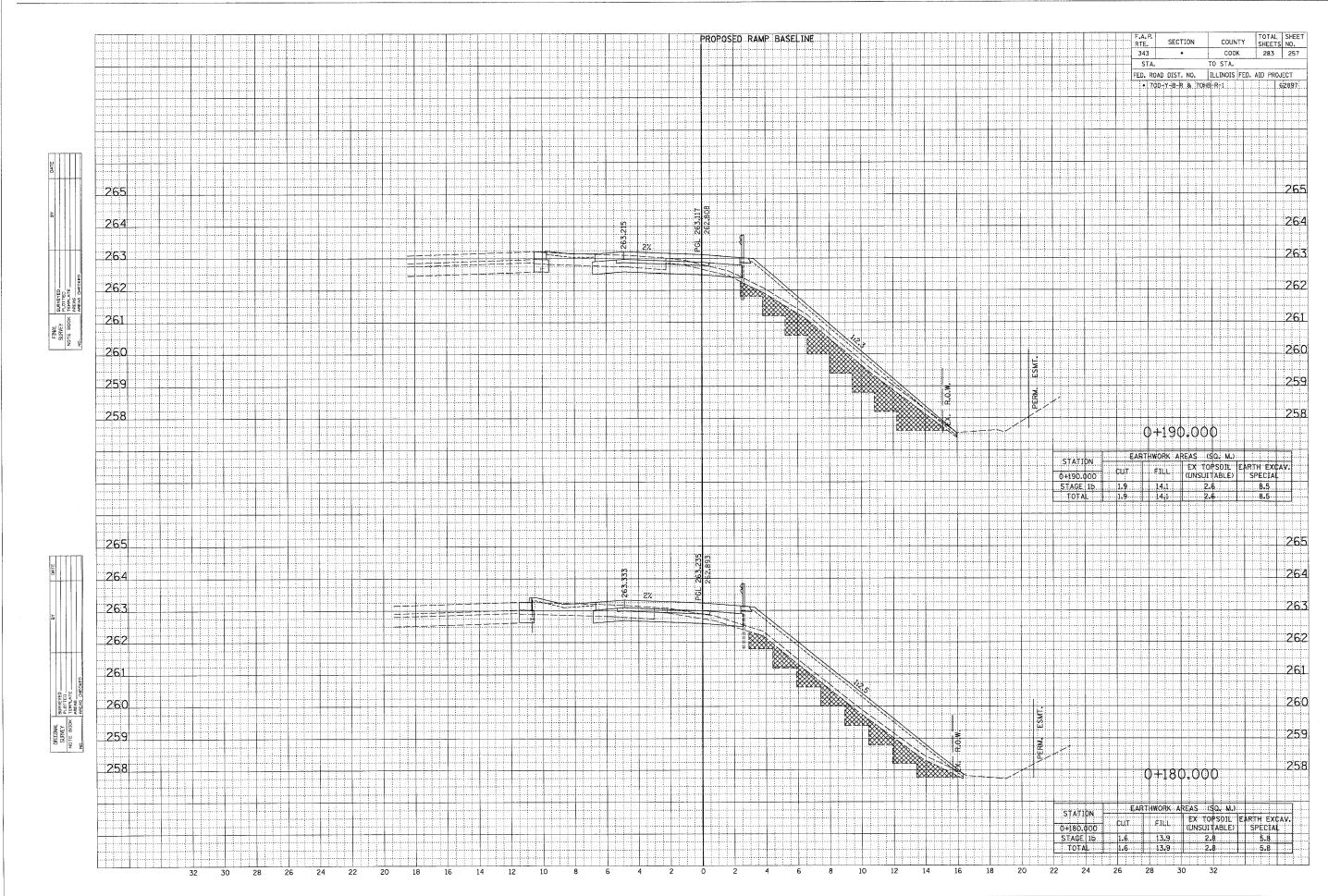


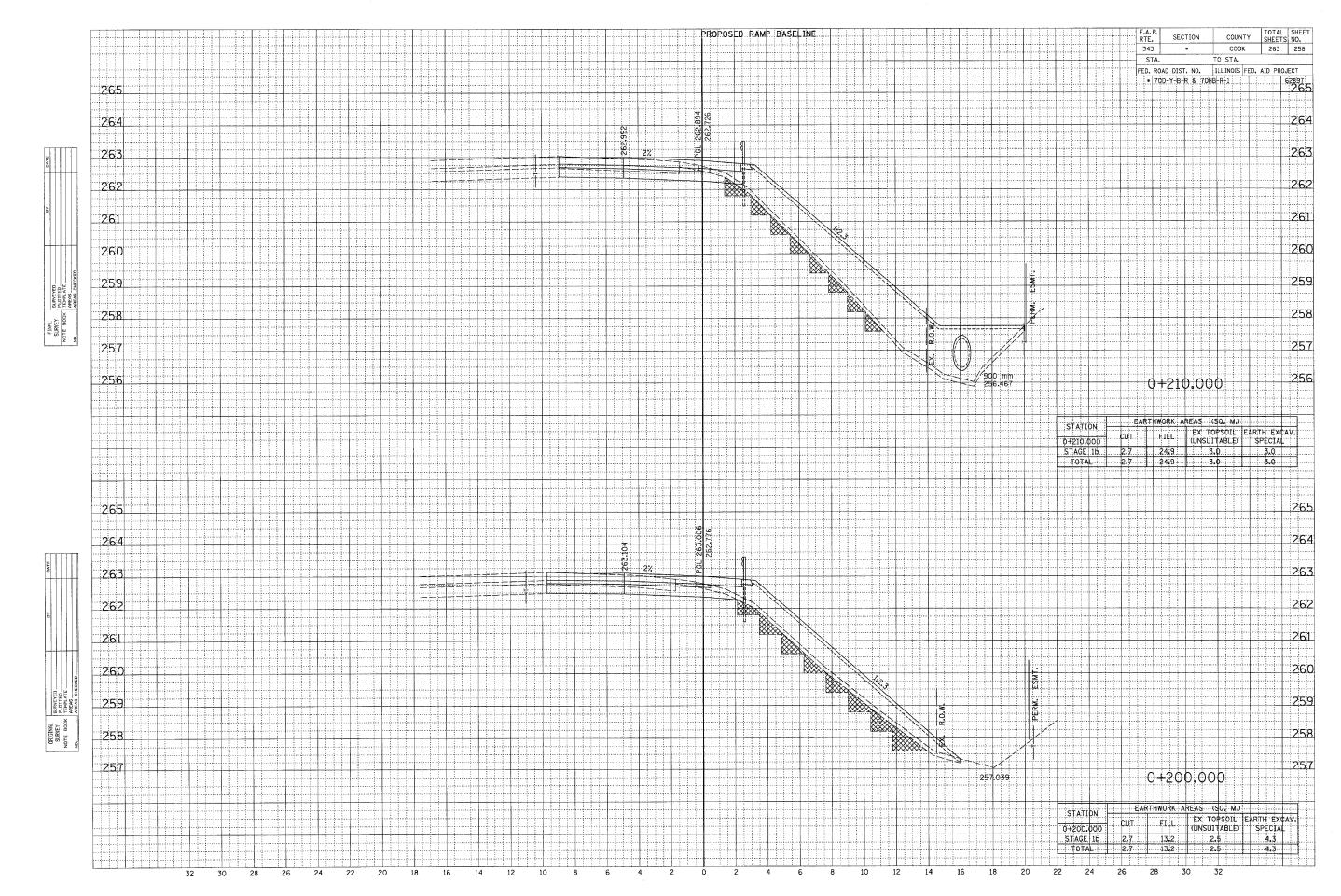


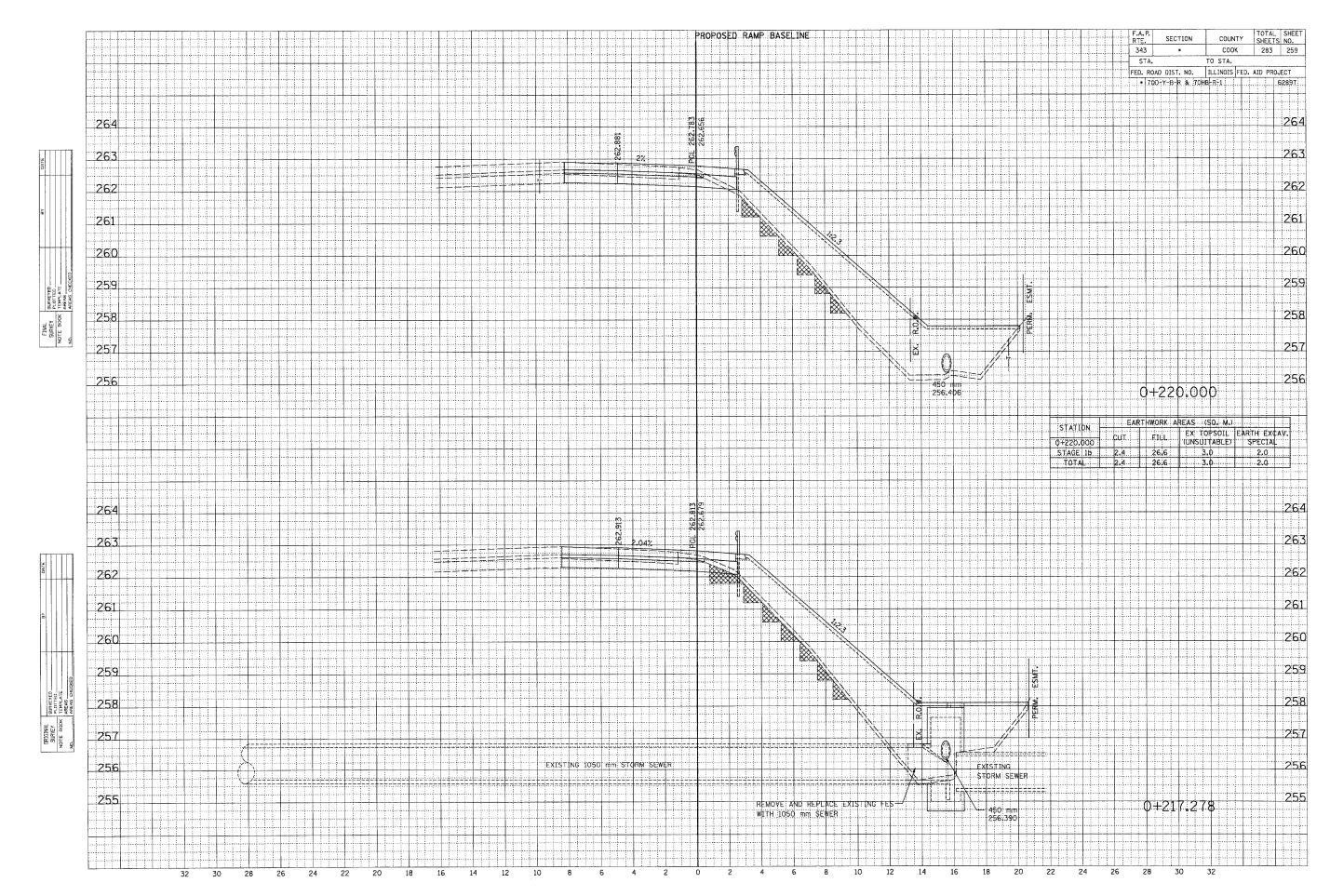


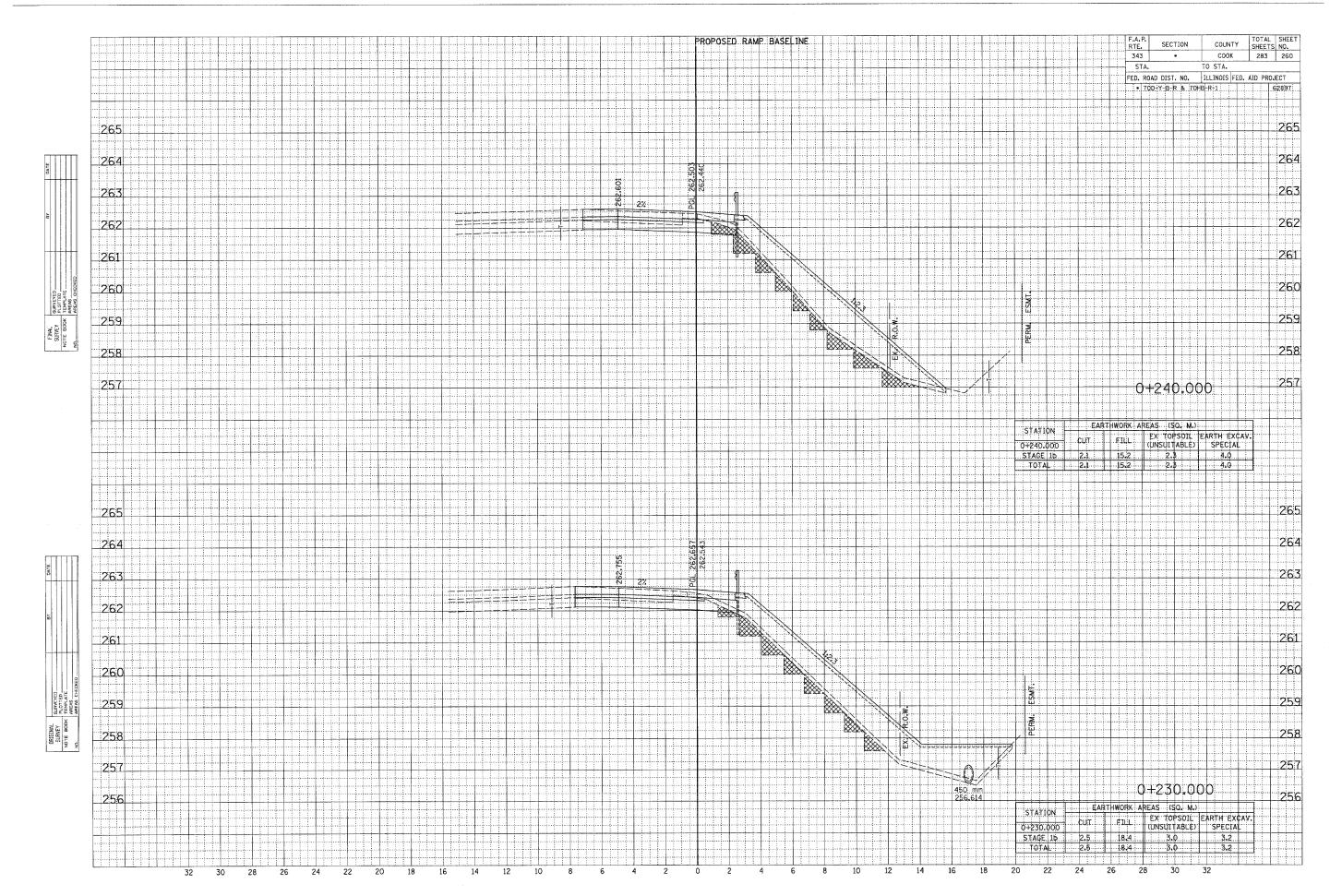


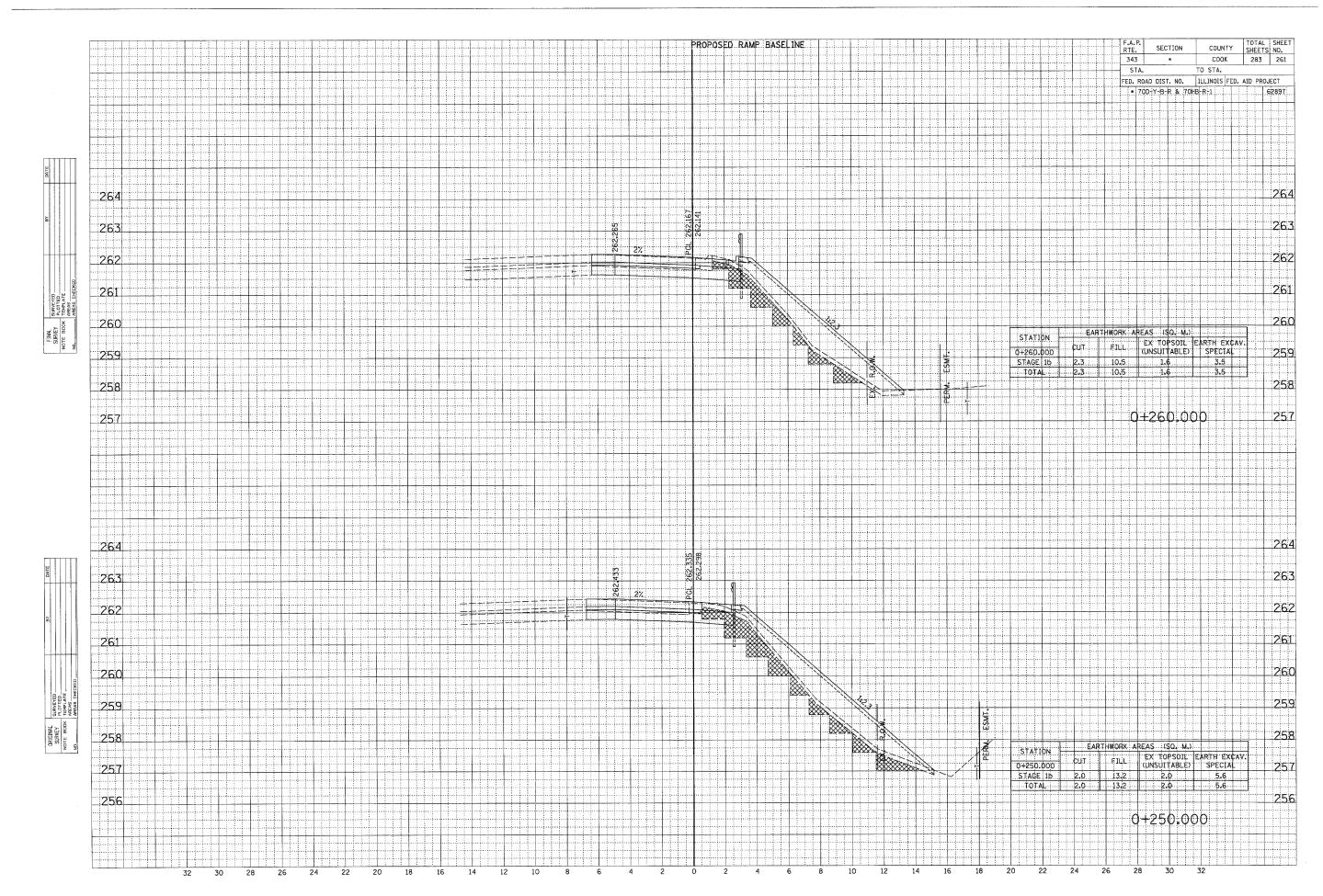


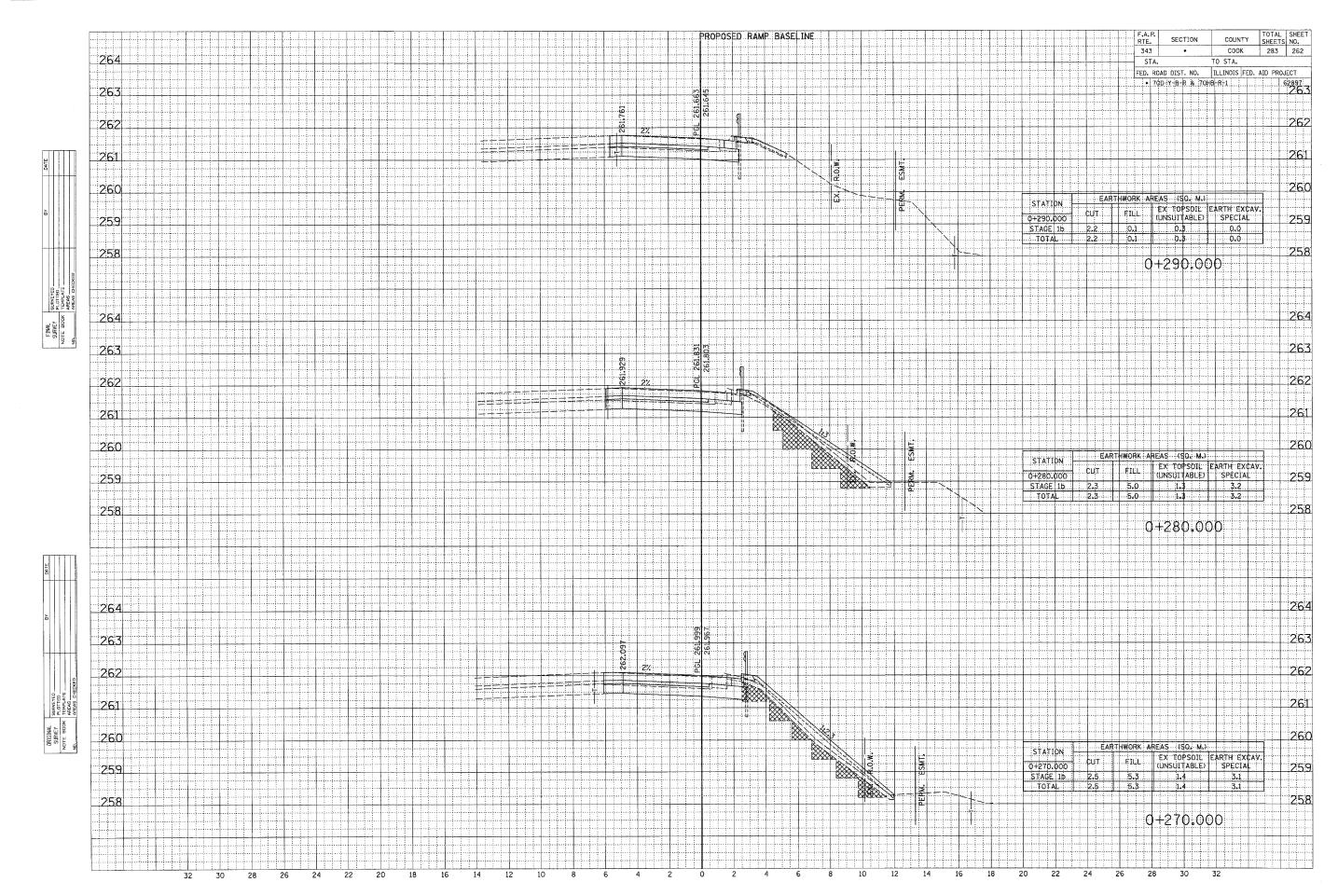


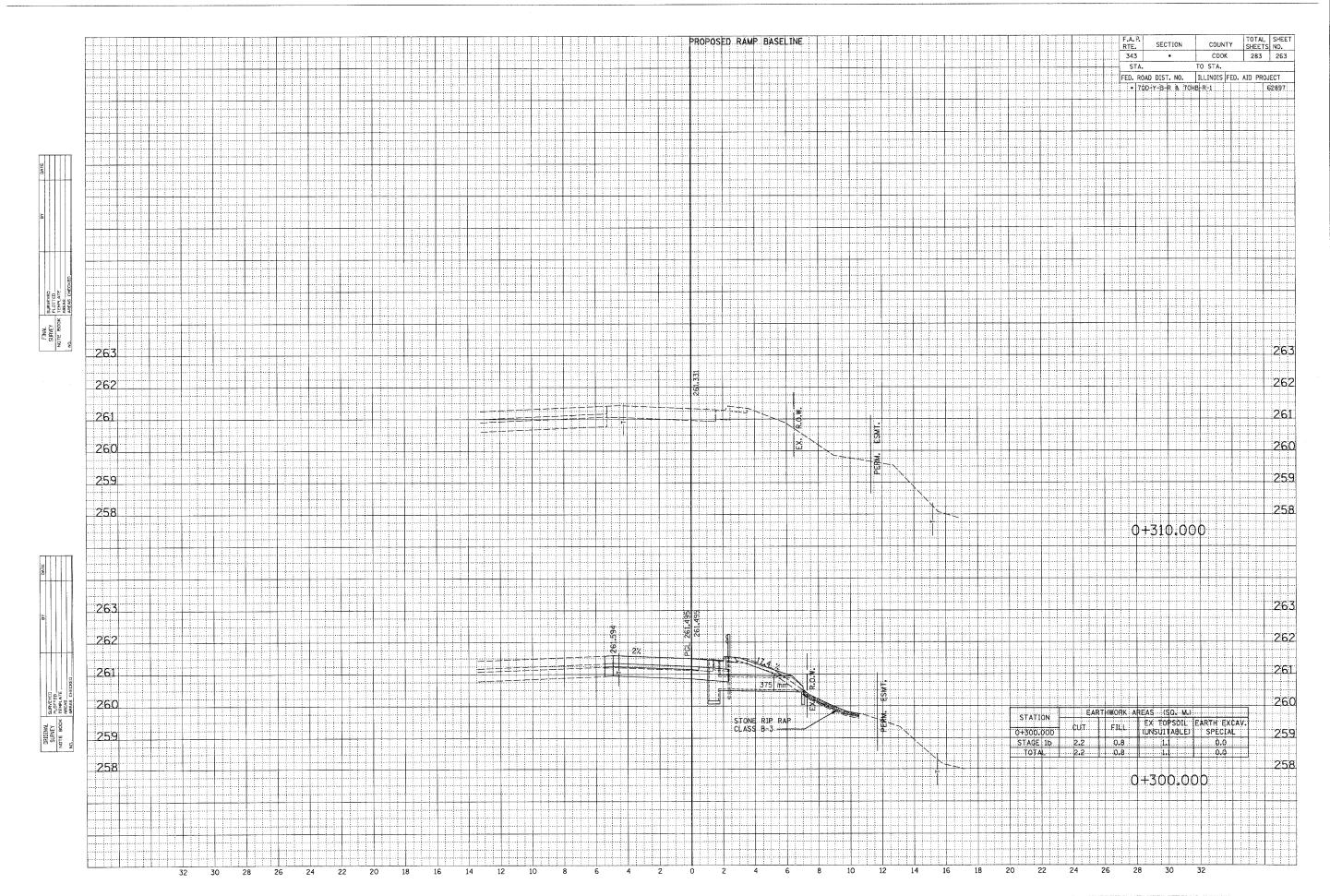


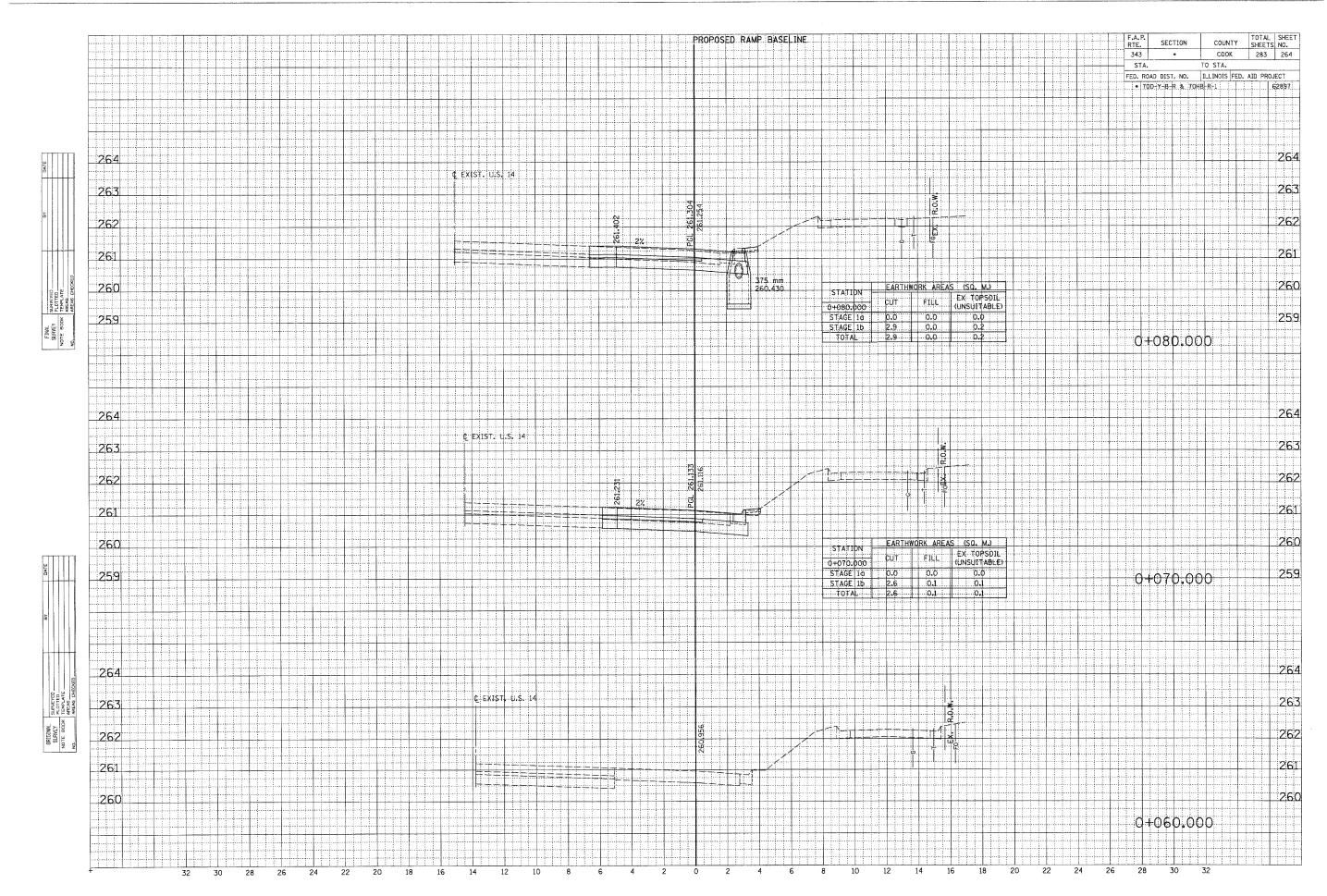


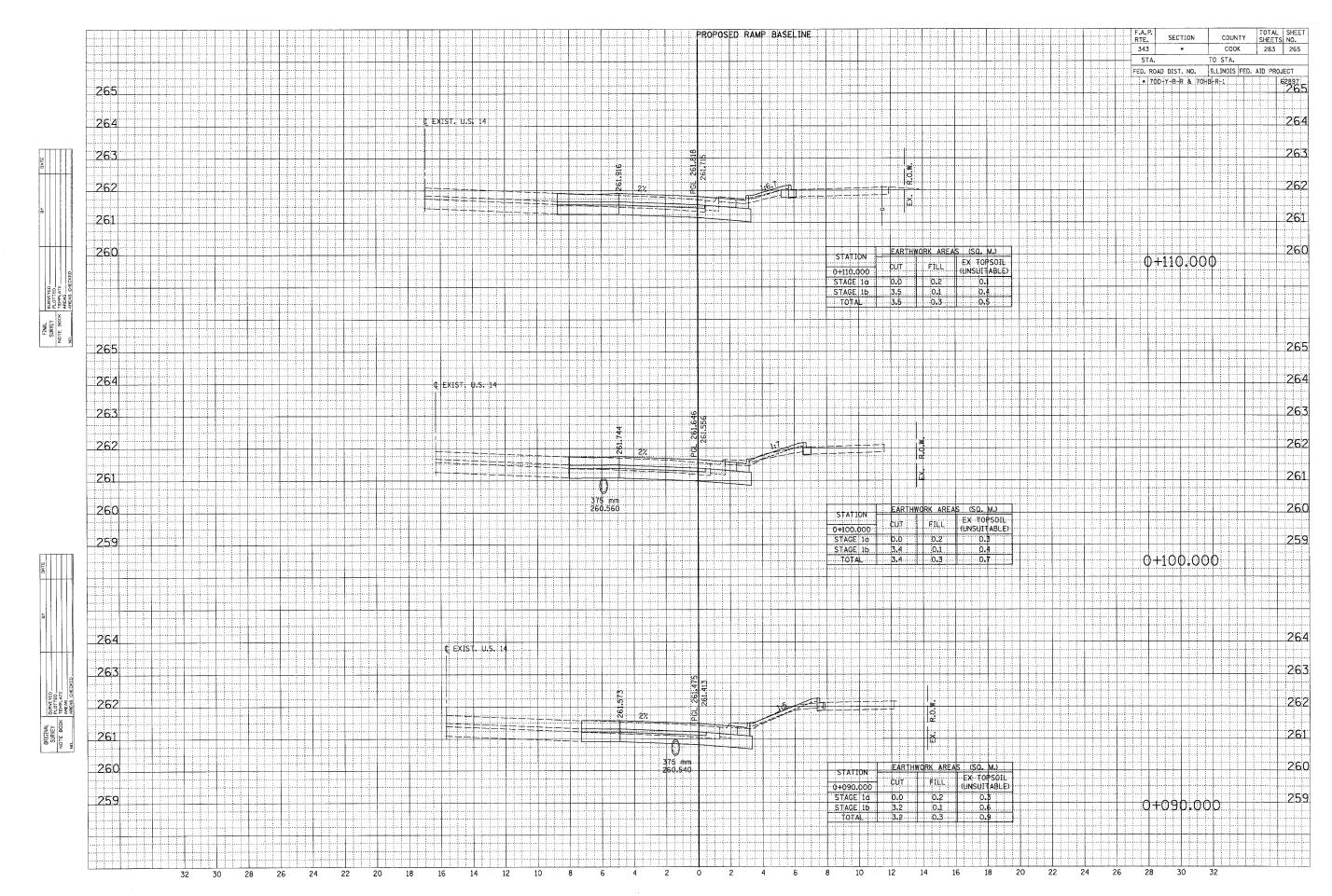


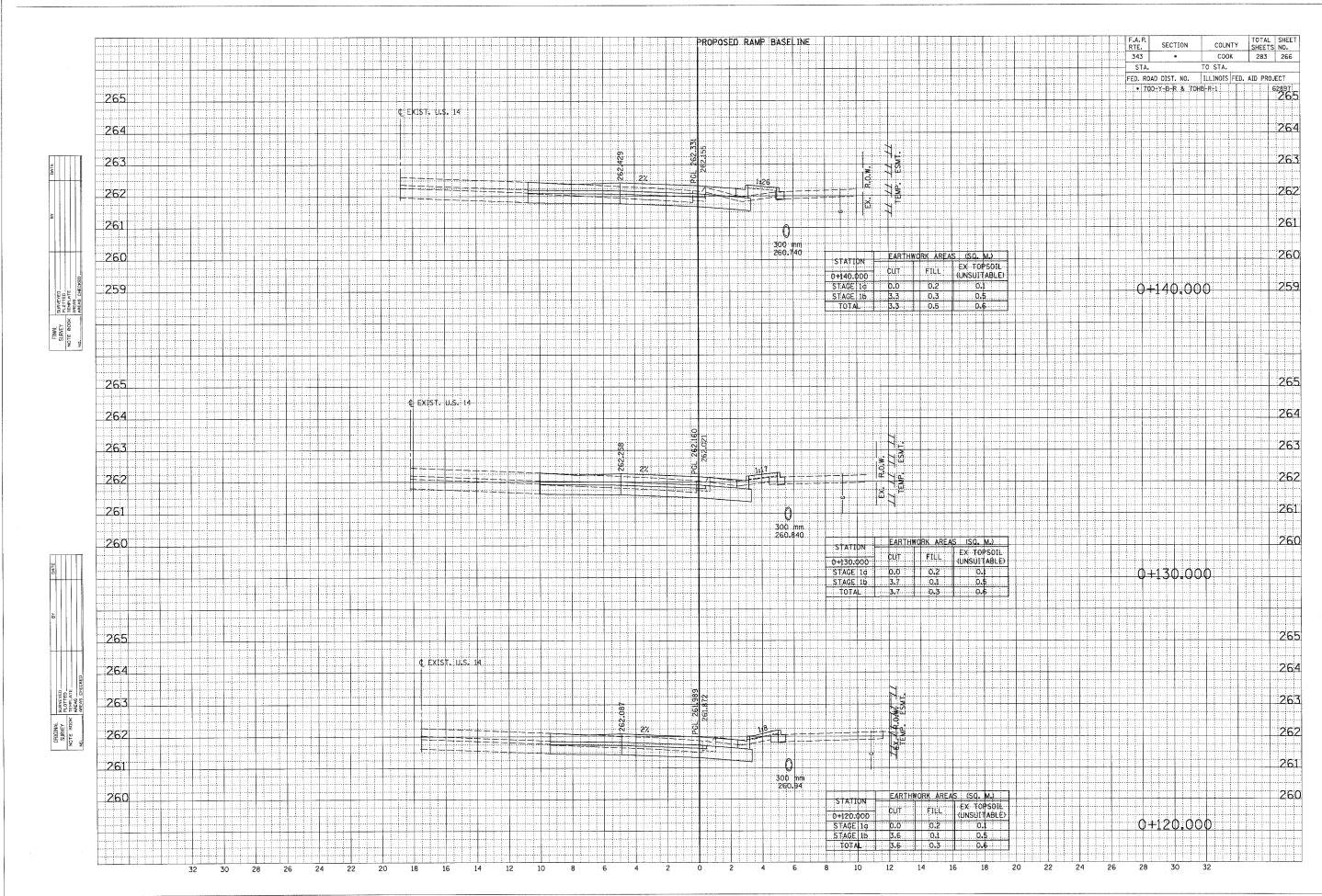


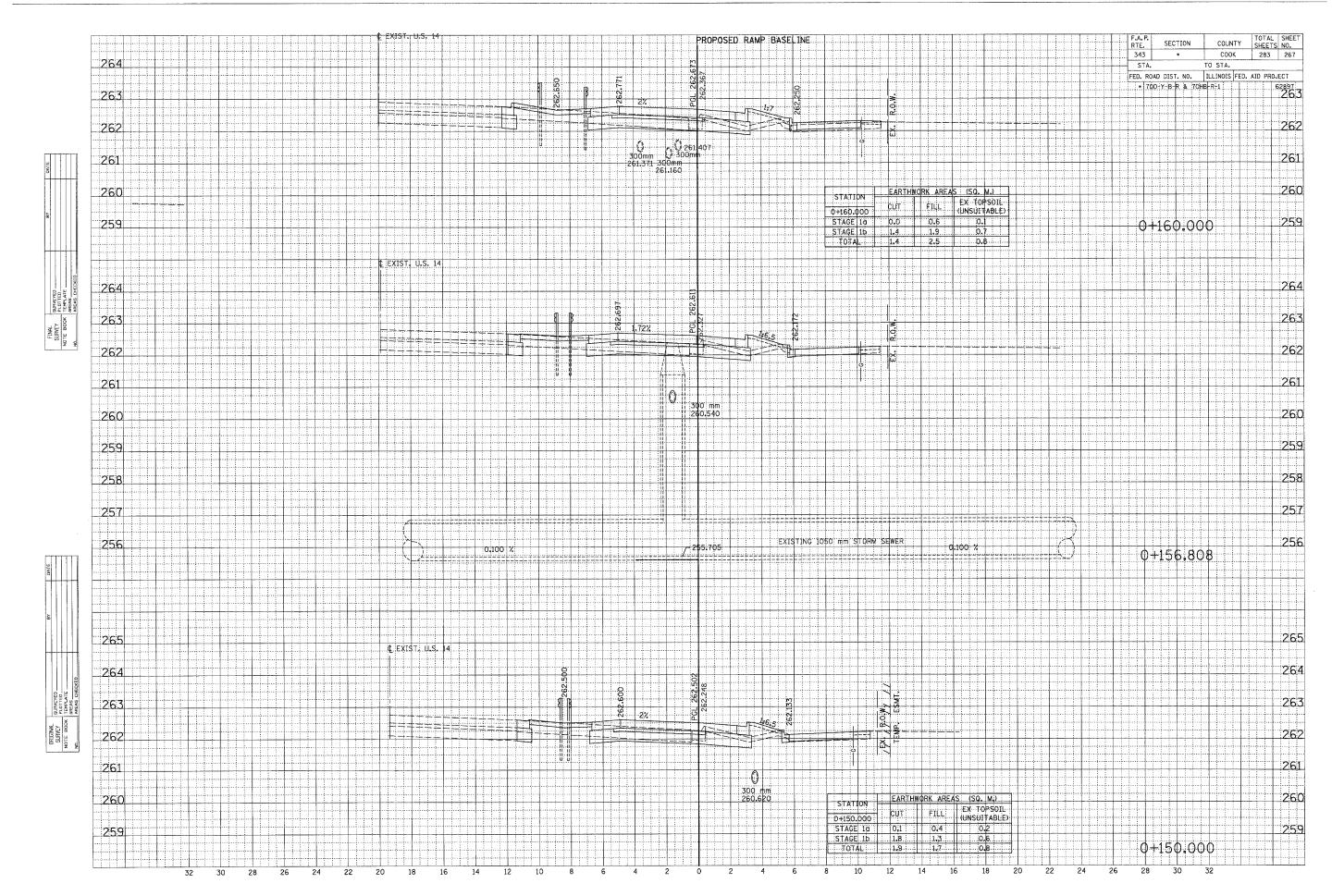


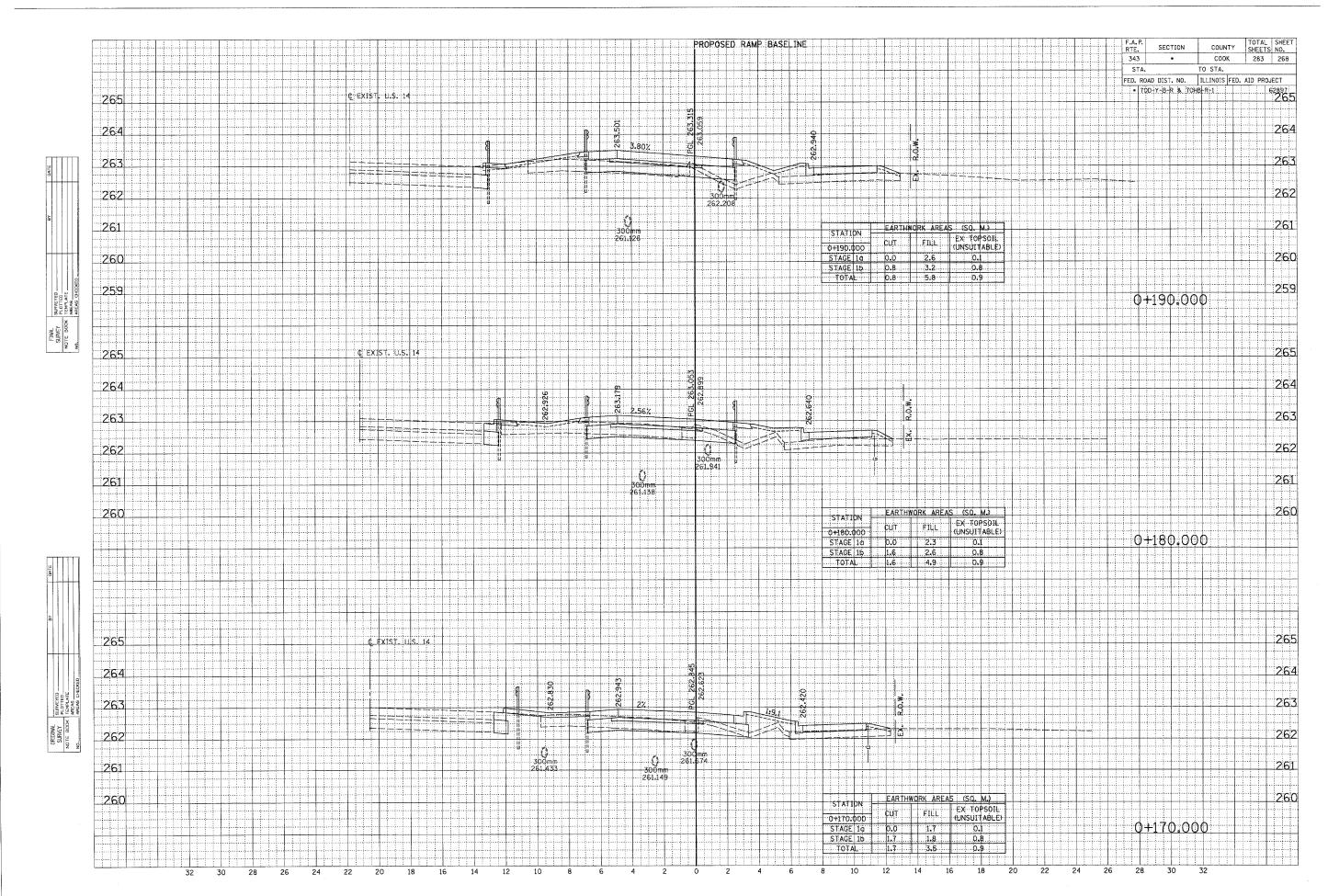


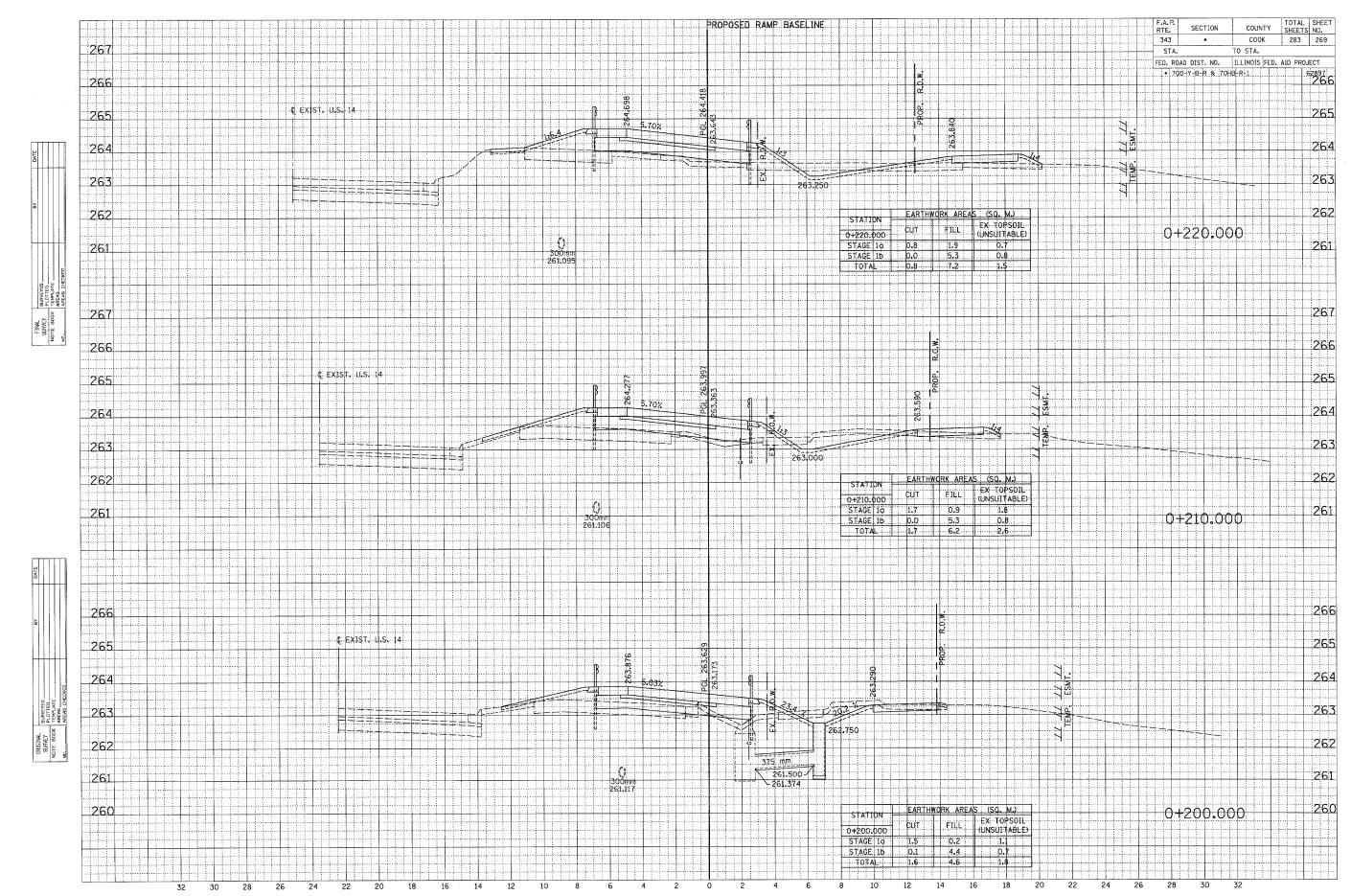












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