

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* 28+1 = 29 TOTAL SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	10B-1; 10B-2	HAMILTON	28	1
ILLINOIS CONTRACT NO. 78498				

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3-5  
FOR STRUCTURAL PAVEMENT DESIGN INFORMATION, SEE SHEET NO. N/A

# PROPOSED HIGHWAY PLANS

FAP ROUTE 885 (IL 14)  
SECTIONS 10B-1; 10B-2  
PROJECT STP-0885(053)  
BOX CULVERT REPLACEMENTS  
HAMILTON COUNTY

C-99-066-15

**TRAFFIC DATA**

SN 033-7009 (E)  
2013 ADT = 2050  
WITH 17% TRUCKS  
SPEED LIMIT: 55 MPH

SN 033-7012 (E)  
2013 ADT = 1900  
WITH 18% TRUCKS  
SPEED LIMIT: 55 MPH

**TOWNSHIP**

SN 033-7009 (E) - CROOK  
SN 033-7012 (E) - CROOK

DESIGN DESIGNATION : NA

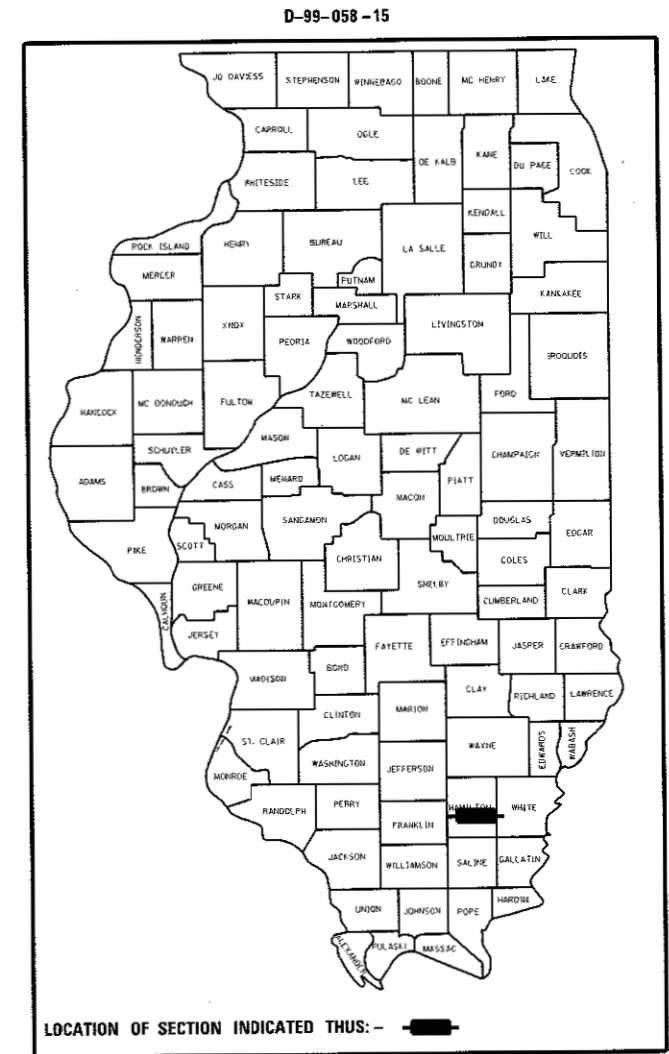
COORDINATE SYSTEM : EAST ZONE  
POSTED SPEED : 55 MPH

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

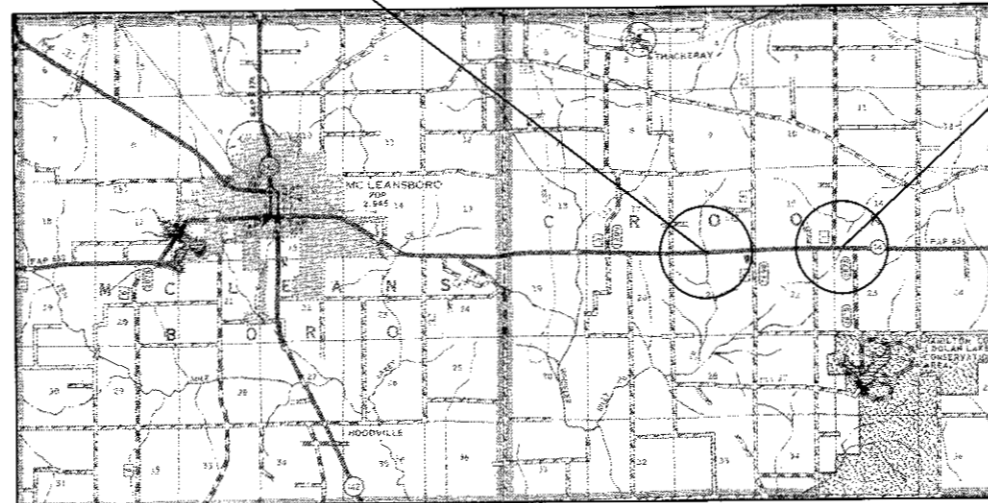
PROJECT ENGINEER: DAVID PICHE (618) 351-5227  
PROJECT DESIGNER: DAVID HOLLMANN (618) 351-5228

CONTRACT NO. 78498

GROSS LENGTH = 95 FT. = 0.2 MILES  
NET LENGTH = 95 FT. = 0.2 MILES



IMPROVEMENT LOCATION  
STRUCTURE 033-7009 (E)  
STRUCTURE 033-7036 (P)  
IL 14 OVER DITCH



IMPROVEMENT LOCATION  
STRUCTURE 033-7012 (E)  
STRUCTURE 033-7037 (P)  
IL 14 OVER DITCH

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 22 20 17

Jeffrey L Keen  
REGION FIVE ENGINEER

Aug 18 20 17  
Margaret M. Addis  
ENGINEER OF DESIGN AND ENVIRONMENT

Aug 18 20 17  
David Piche  
DIRECTOR OF PROGRAM DEVELOPMENT

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OF THE STATE OF ILLINOIS

**GENERAL NOTES**

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU. YD.
ALL AGGREGATE	2.05 TONS/CU. YD.
RIPRAP	1.50 TONS/CU. YD.
EARTH	110 LBS/CU. FT.
LIME	4, 5, OR 6% WEIGHT OF EARTH

AT ALL LOCATIONS WHERE EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

A CALCIUM CHLORIDE ACCELERATOR WILL BE ALLOWED FOR THE PCC PAVEMENT, 10" AND THE PCC SHOULDER, 8". THE CONCRETE SHALL BE CLASS PP-1 OR PP-2 PER ARTICLE 1020 OF THE STANDARD SPECS.

REMOVAL OF EXISTING AGGREGATE SHOULDERS SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

COMMITMENTS: NONE AS OF JUNE 30, 2017.

**INDEX OF SHEETS**

1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS, AND STANDARDS
3-5	SUMMARY OF QUANTITIES
6	PLAN & PROFILE 033-7036
7	EROSION CONTROL AND SHOULDER DETAIL 033-7036
8	LIMITS OF POROUS GRANULAR EMBANKMENT AND TYPICAL SECTION WITHIN PAVEMENT REMOVAL SN 033-7036 (P)
9	TEMPORARY AND FINAL SECTIONS
10-12	CAST IN PLACE CONCRETE BOX CULVERT APRON END SECTION DETAILS SN 033-7036 (P)
13-15	CROSS SECTIONS 033-7036 (P)
16	PLAN & PROFILE 033-7037
17	EROSION CONTROL AND SHOULDER DETAIL 033-7037
18	LIMITS OF POROUS GRANULAR EMBANKMENT AND TYPICAL SECTION WITHIN PAVEMENT REMOVAL SN 033-7037 (P)
19	TEMPORARY AND FINAL SECTIONS
20-22	CAST IN PLACE CONCRETE BOX CULVERT APRON END SECTION DETAILS SN 033-7037 (P)
23-27	CROSS SECTIONS 033-7037 (P)
28	DISTRICT STANDARD; MULCHING SEEDING, TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION
28A	<b>CULVERT TIE DETAILS - STRUCTURE NO. 033-7036 /033-7037</b>

**STANDARDS**

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-08	PAVEMENT JOINTS
420601-06	24' PCC PAVEMENT
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**EARTHWORK SCHEDULE**

LOCATION STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR FOR EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
IL 14 (FAP 885)	CU YD	CU YD	%	CU YD	CU YD	CU YD
<b>033-7036</b>						
STA. 787+02	498	*193	25	373.5	256.25	117.25
<b>033-7037</b>						
STA. 700+03	302	*182	25	226.5	61	165.5
<b>TOTALS</b>	<b>800</b>	<b>*375</b>		<b>600</b>	<b>317.25</b>	<b>282.75</b>

\* Material not to be used as Earth Embankment

Prepared By:		DISTRICT STUDIES & PLANS ENGINEER
Examined By:		DISTRICT LAND ACQUISITION ENGINEER
Examined By:		DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:		DISTRICT OPERATIONS ENGINEER
Examined By:		DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:		DISTRICT CONSTRUCTION ENGINEER
Examined By:		DISTRICT MATERIALS ENGINEER



# SUMMARY OF QUANTITIES - CONT

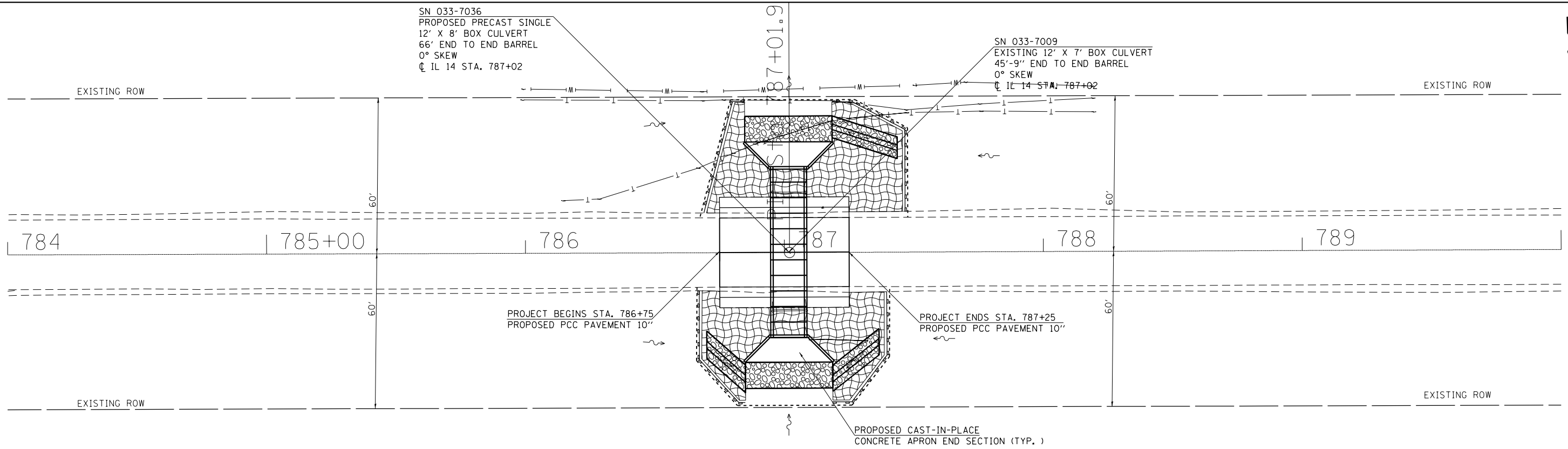
COUNTY:	Hamilton	Hamilton
ROUTE:	IL 14	IL 14
FUNDING:	80% FED / 20% STATE	80% FED / 20% STATE
LOCATION:	RURAL	RURAL
	033-7009	033-7012
	0004	0004

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	033-7009	033-7012
28200200	FILTER FABRIC	SQ YD	220	113	107
42000060	WELDED WIRE REINFORCEMENT	SQ YD	254	134	120
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	254	134	120
44000100	PAVEMENT REMOVAL	SQ YD	254	134	120
48300300	PORTLAND CEMENT CONCRETE SHOULDERS 8"	SQ YD	85	45	40
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	2	1	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5,710	3620	2090
54003000	CONCRETE BOX CULVERTS	CU YD	62.3	37.5	24.8
54011206	PRECAST CONCRETE BOX CULVERTS 12' X 6'	FOOT	60	0	60
54011208	PRECAST CONCRETE BOX CULVERTS 12' X 8'	FOOT	66	66	0
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	1.5	1.5
67100100	MOBILIZATION	LSUM	1.0	0.5	0.5

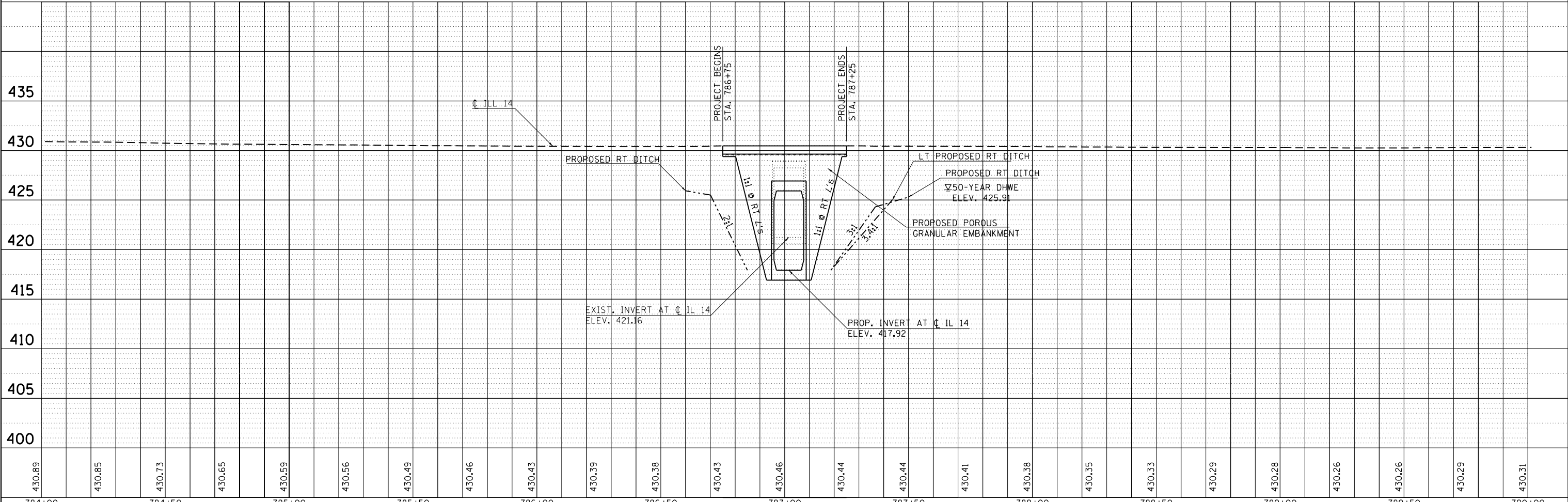


PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
	NO.		
	CHECKED		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	GRADES CHECKED		
	STRUCTURE		
	NOT AT THIS OFFICE		
	NO.		
	CHECKED		
	FILE NAME		



BENCHMARK - BM 3507535, CHISELED "□" IN TOP CENTER OF EXISTING EAST HEADWALL OF SN 033-7009, STA. 787+00, 25' LT. OF CL IL 34, ELEV. 428.939'



FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -	<p align="center"><b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b></p> <p align="center"><b>PLAN &amp; PROFILE 033-7036</b></p>	<p align="center">SCALE:      SHEET      OF      SHEETS      STA.      TO      STA.</p>	F.A.P. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -			855	10B-1; 10B-2	HAMILTON	28	6
		DATE -	REVISED -			CONTRACT NO. 78498				
						ILLINOIS FED. AID PROJECT				



EXISTING ROW

EXISTING ROW

87+01.99

PROJECT BEGINS STA. 786+75  
PROPOSED PCC PAVEMENT 10"

PROJECT ENDS STA. 787+25  
PROPOSED PCC PAVEMENT 10"

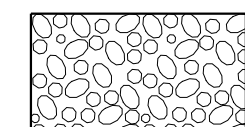
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787

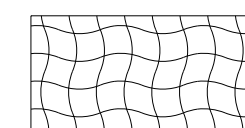
788

Proposed 4' PCC Shoulder  
8" Shoulder

Proposed 4' AGG Shoulder  
6" Shoulder



STONE RIPRAP, CLASS A4



EROSION CONTROL BLANKET



PERIMETER EROSION BARRIER

EXISTING ROW

EXISTING ROW

PROPOSED STONE RIPRAP  
CLASS A4 (TYP.)

FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -
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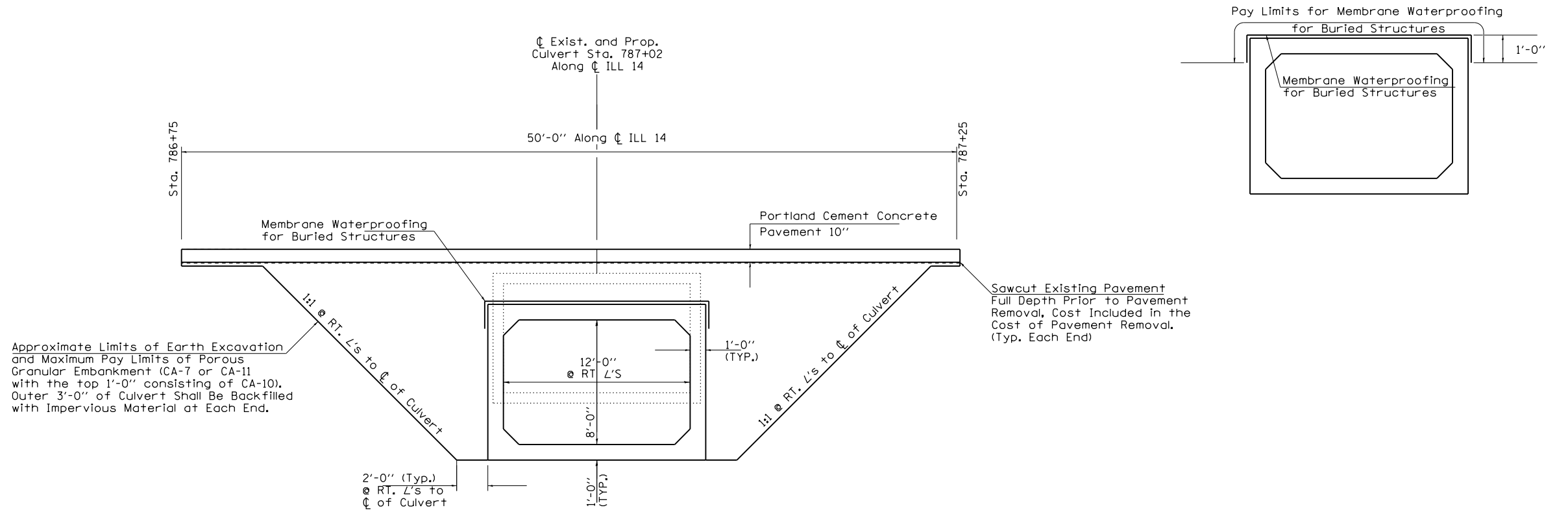
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN**

SCALE: SHEET OF SHEETS STA. TO STA.

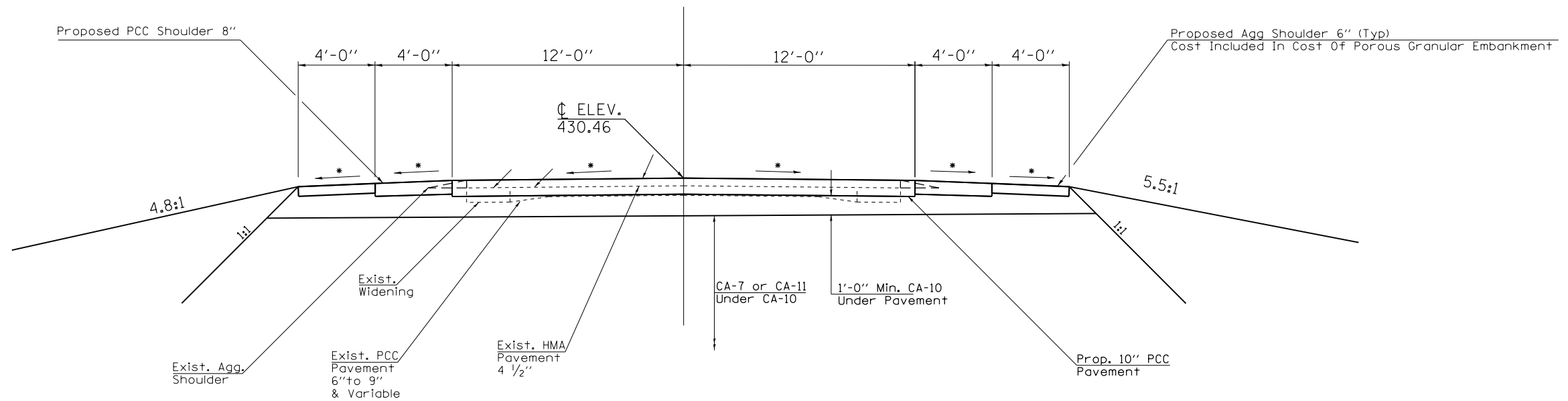
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855	10B-1, 10B-2	HAMILTON	28	7
CONTRACT NO. 78498				
ILLINOIS FED. AID PROJECT				

**TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT**



**TYPICAL SECTION WITHIN PAVEMENT REMOVAL**

\* Match Existing Cross Slopes



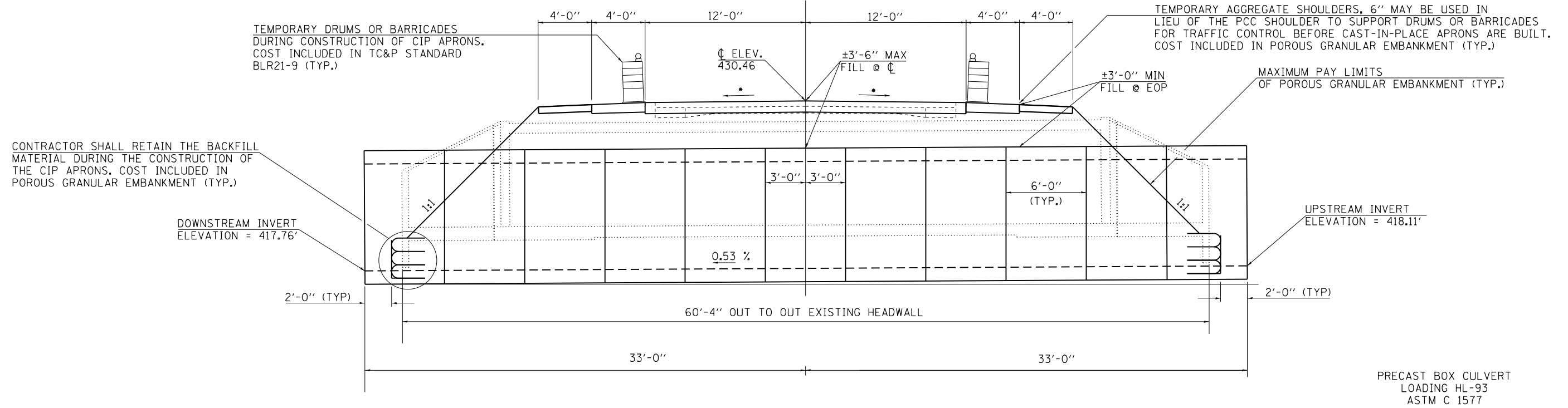
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			CONTRACT NO. 78498					
						ILLINOIS FED. AID PROJECT					



**MINIMUM REQUIREMENTS TO OPEN TO TRAFFIC**

(LOOKING WEST)

SECTIONS LOOKING WEST  
 \* MATCH EXISTING CROSS SLOPES

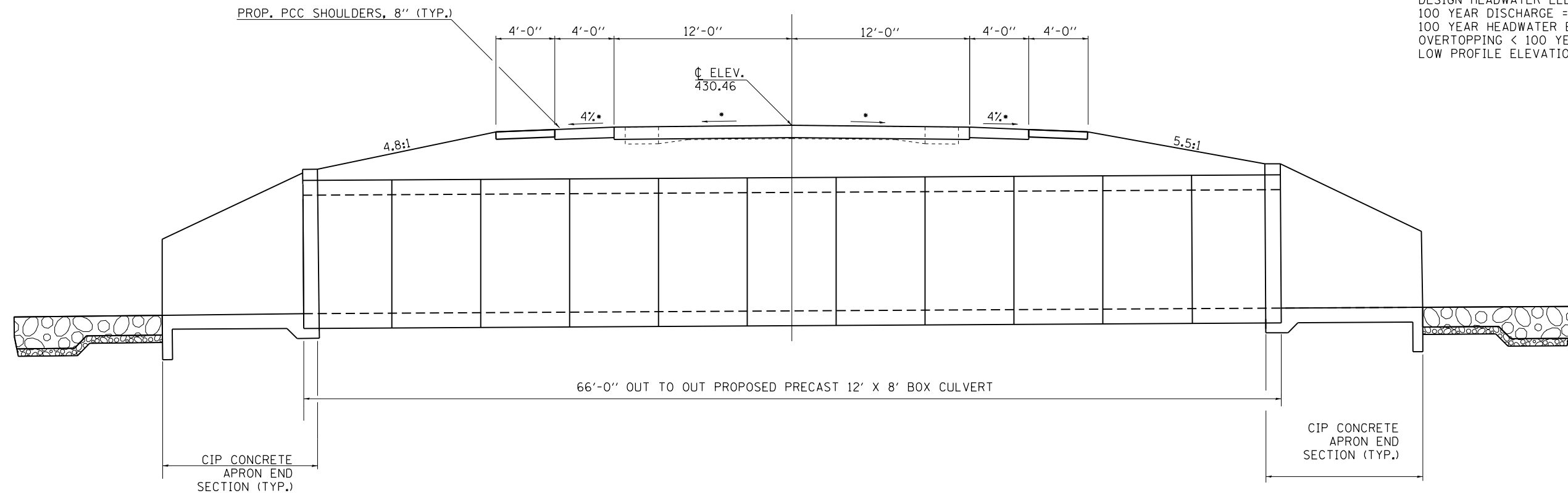


**FINAL SECTION AFTER CONSTRUCTION OF CAST-IN-PLACE APRONS**

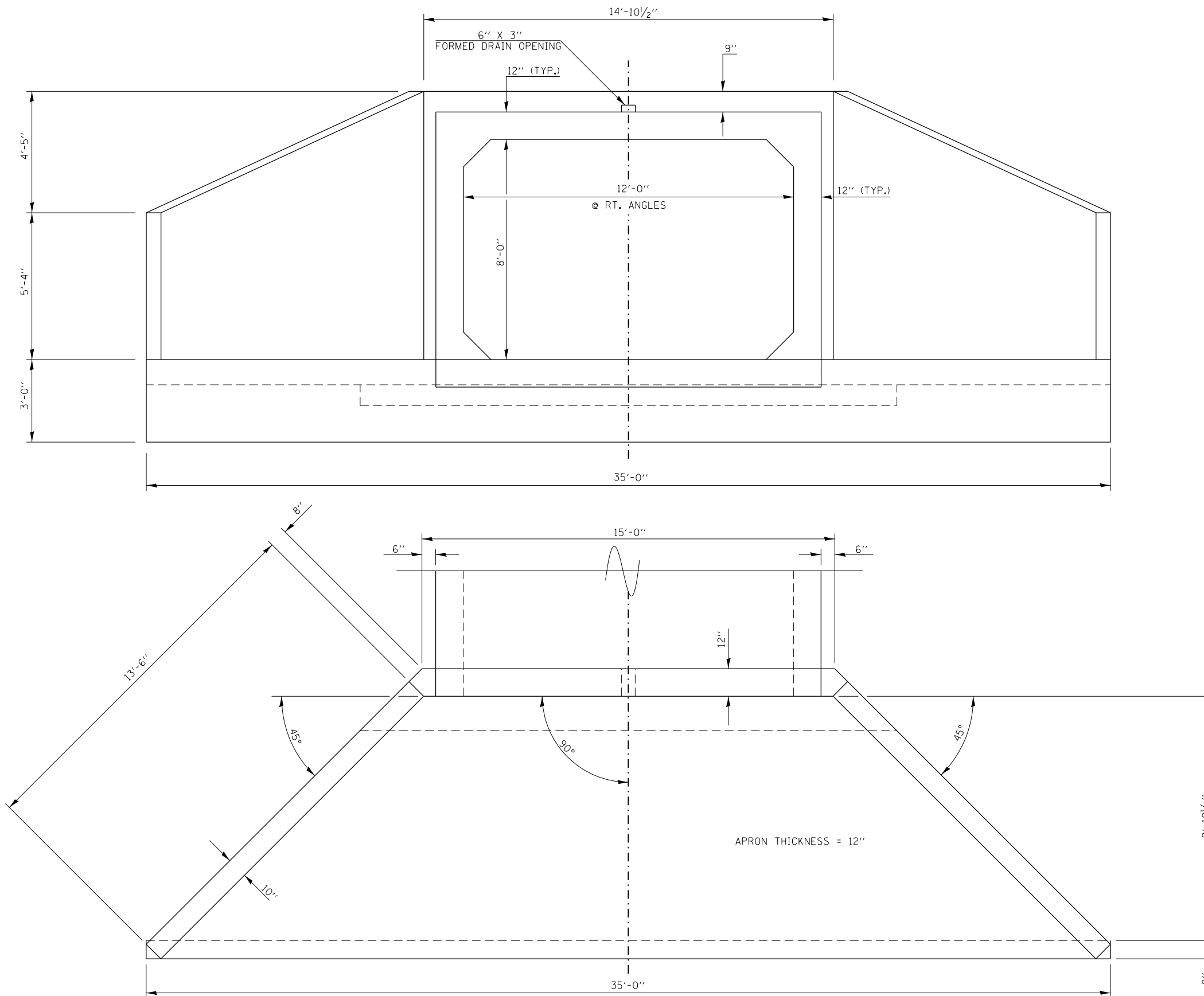
(LOOKING WEST)

**HYDRAULIC DATA (50 YR DESIGN)**

DRAINAGE AREA = 0.96 SQ MI  
 DESIGN WATERWAY OPENING = 96 SQ FT  
 DESIGN DISCHARGE = 1230 CFS  
 DESIGN HEADWATER ELEVATION = 425.91 FT  
 100 YEAR DISCHARGE = 1470 CFS  
 100 YEAR HEADWATER ELEVATION = 426.88 FT  
 OVERTOPPING < 100 YEAR = 2302 CFS  
 LOW PROFILE ELEVATION = 430.46



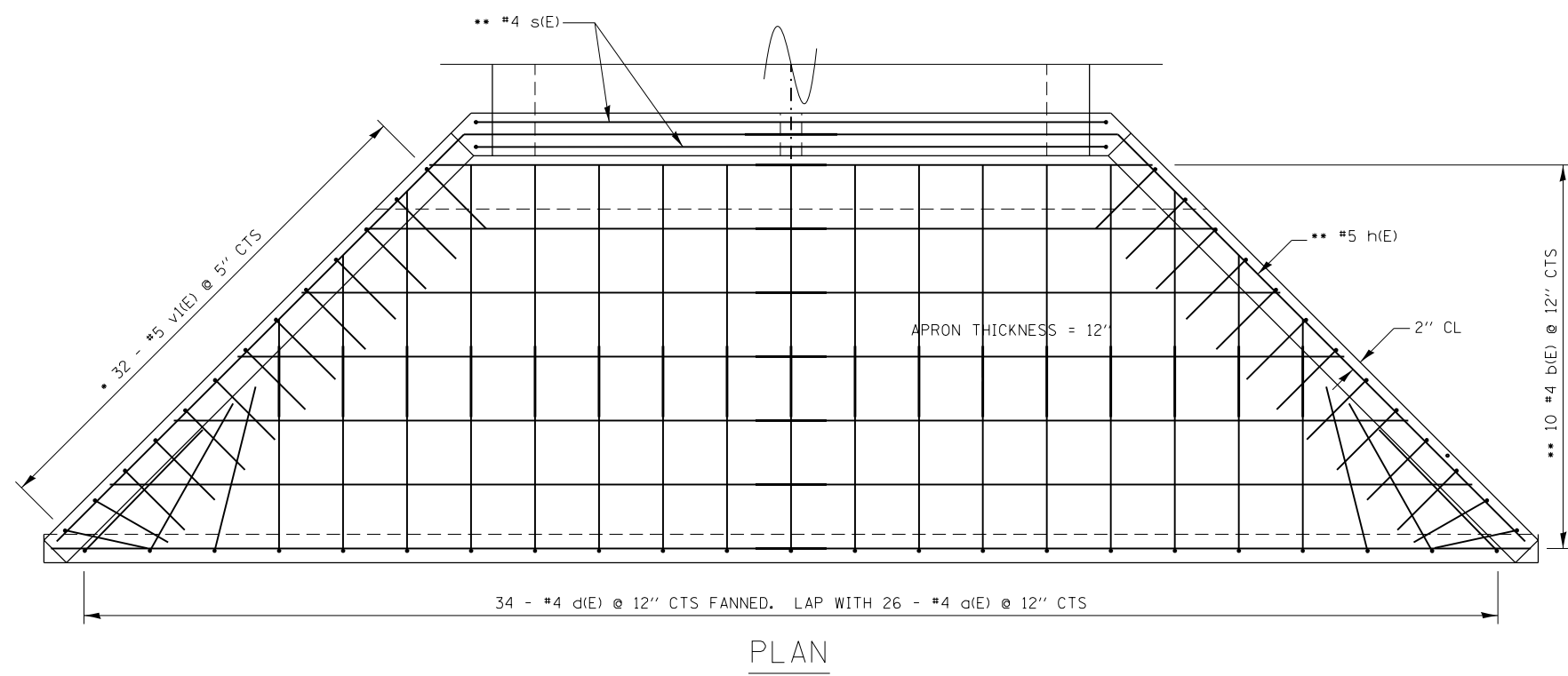
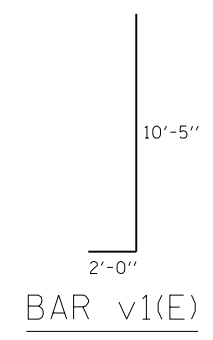
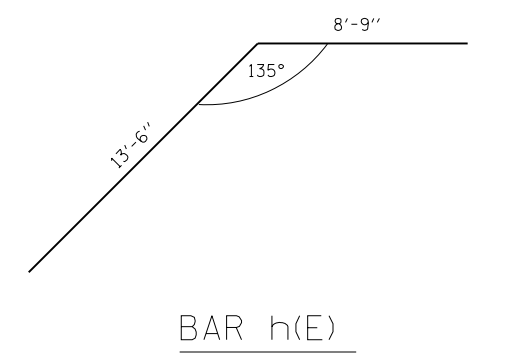
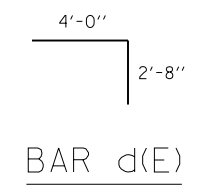
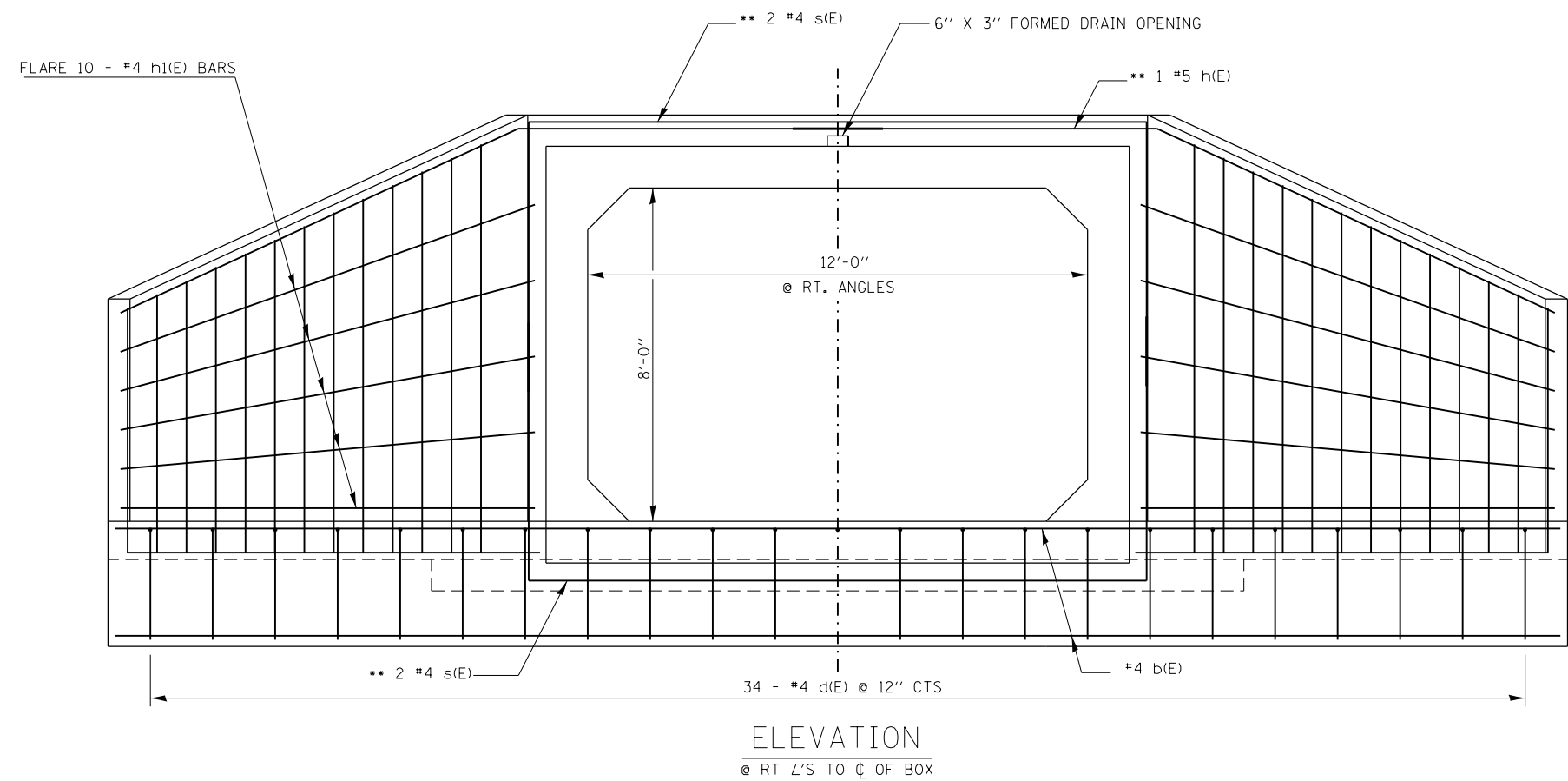
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PLOT SCALE = 8.0000' / in.	CHECKED -	REVISED -	CONTRACT NO. 78498							
Default	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							



## CAST-IN-PLACE CONCRETE APRON END SECTION DETAILS

(TYPICAL EACH END)

FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CAST-IN-PLACE CONCRETE APRON END SECTION DETAILS 033-7036</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default		DATE -	REVISED -			CONTRACT NO. 78498					
						ILLINOIS FED. AID PROJECT					



**BILL OF MATERIAL**

BAR	No.	SIZE	LENGTH	SHAPE	
d(E)	52	#4	6'-8"	—	
b(E)	48	#4	18'-2"	—	
d(E)	68	#4	6'-8"	┌┐	
h(E)	4	#5	22'-3"	└┘	
h1(E)	40	#4	14'-6"	—	
s(E)	8	#4	27'-6"	┌┐	
v1(E)	128	#5	12'-5"	└┘	
CONCRETE BOX CULVERTS				CU. YD.	37.5
REINFORCEMENT BARS EPOXY COATED				POUND	3620

NOTE: BILL OF MATERIAL SCHEDULE IS TOTAL FOR BOTH ENDS

**DESIGN STRESSES**

fy = 60,000 psi  
f'c = 3,500 psi

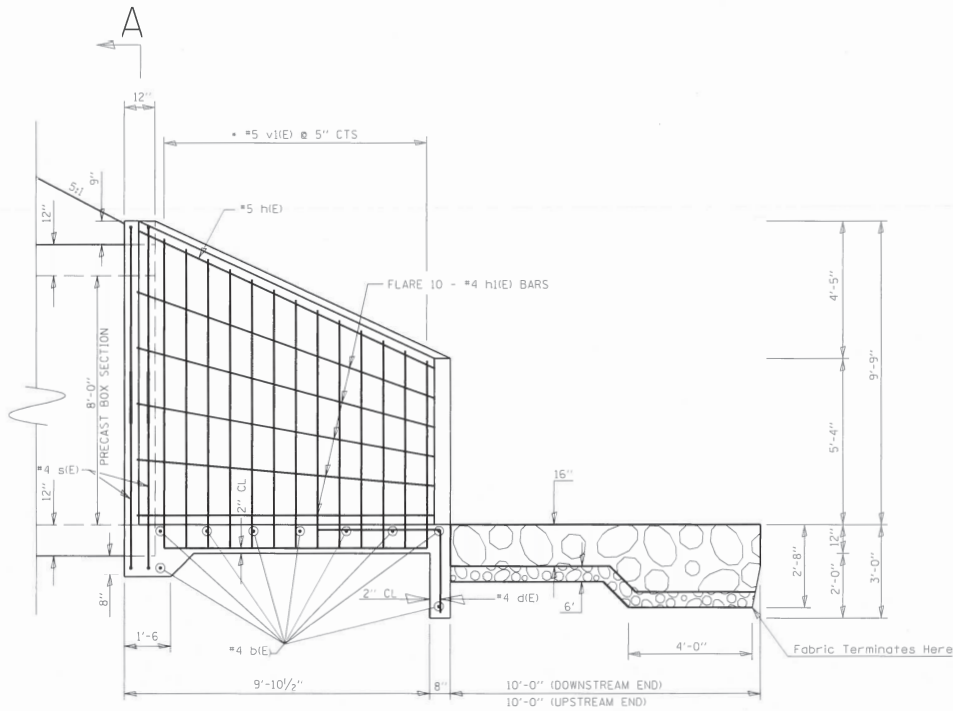
**MINIMUM BAR LAP**

- #4 = 1'-8"
- #5 = 2'-2"
- CUT OR BEND TO FIT IN FIELD
- LAP BARS WHERE NECESSARY

WORK THIS SHEET WITH SHEET 12 OF 28  
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.  
REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GRADE 60.  
EXPOSED EDGES SHALL BE BEVELED 3/4".

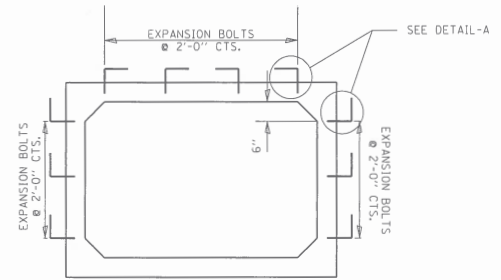
**CAST-IN-PLACE CONCRETE APRON END SECTION REINFORCEMENT DETAILS**  
(TYPICAL EACH END)

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						ILLINOIS FED. AID PROJECT					

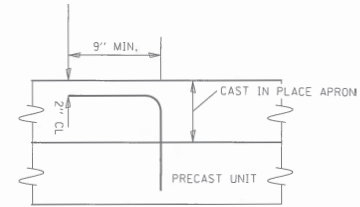


### HALF SIDE ELEVATION

(AT RT ANGLES TO Q ROADWAY)



### SECTION A-A



### DETAIL-A

NOTES: THE CAST-IN-PLACE APRON END SECTION SHALL BE TIED TO THE PRECAST BARREL AT EACH END USING EXPANSION BOLTS SPACED AT 2' CENTERS AS SHOWN IN SECTION A-A. EXPANSION BOLTS SHALL BE 3/4" DIAMETER HOOKED BOLTS. THE HOOKS SHALL BE AS SHOWN IN DETAIL A AND SHALL BE BENT IN THE FIELD AS NEEDED. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

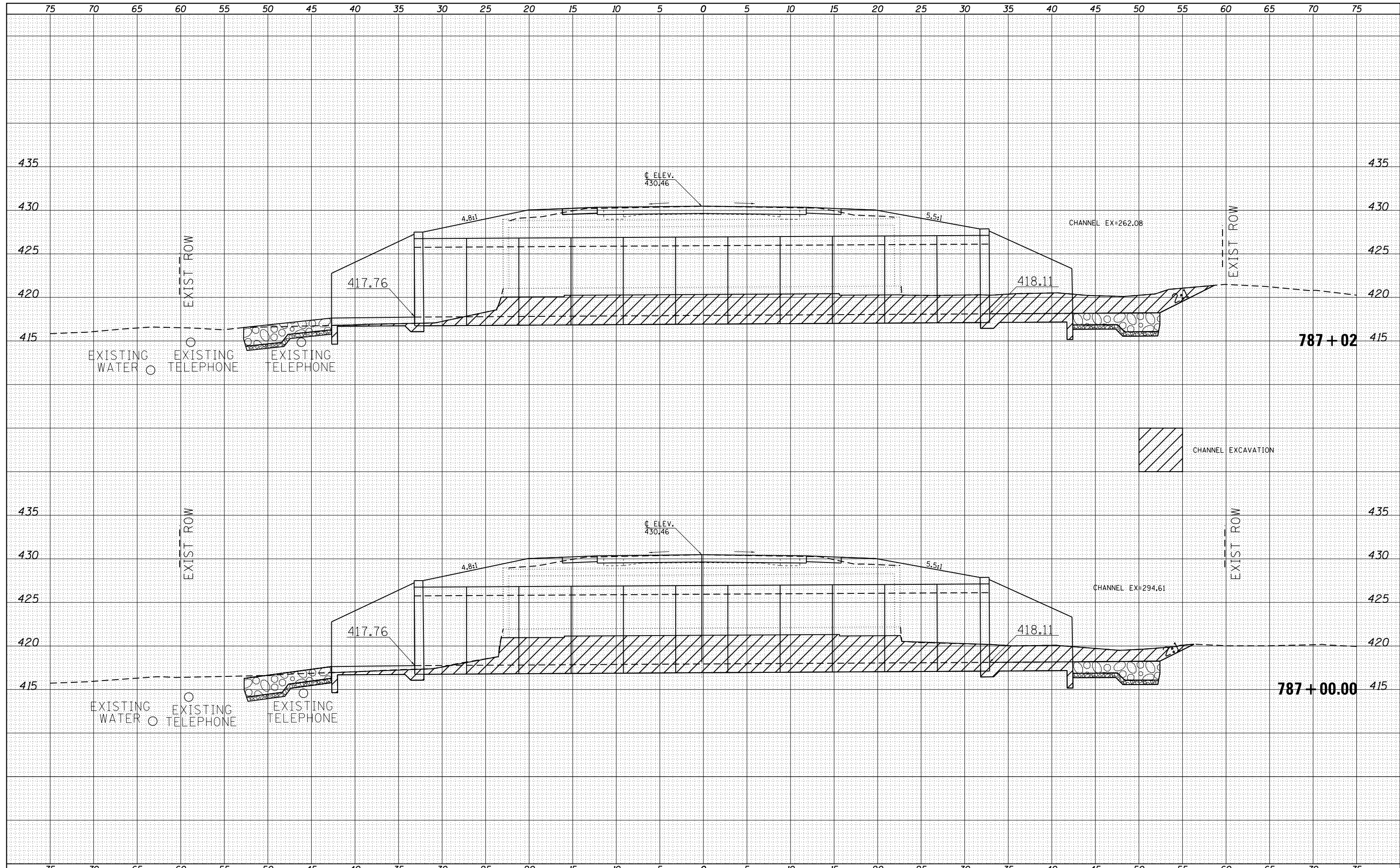
THE LAST TWO PRECAST BARREL SECTIONS AT EACH END SHALL BE TIED TOGETHER USING CULVERT TIES AS SHOWN ON CULVERT TIE DETAILS SHEET. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

FILE NAME	USER NAME = hallmarks	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HALF SIDE ELEVATION 033-7036			F.A.P. RTE. 855	SECTION 10B-11 10B-2	COUNTY HAMILTON	TOTAL SHEETS 28	SHEET NO. 12
PROJECT	PROJECT NO. 78498	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
DATE	DATE	DATE	DATE								CONTRACT NO. 78498	
PLANT	PLANT	PLANT	PLANT									



DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

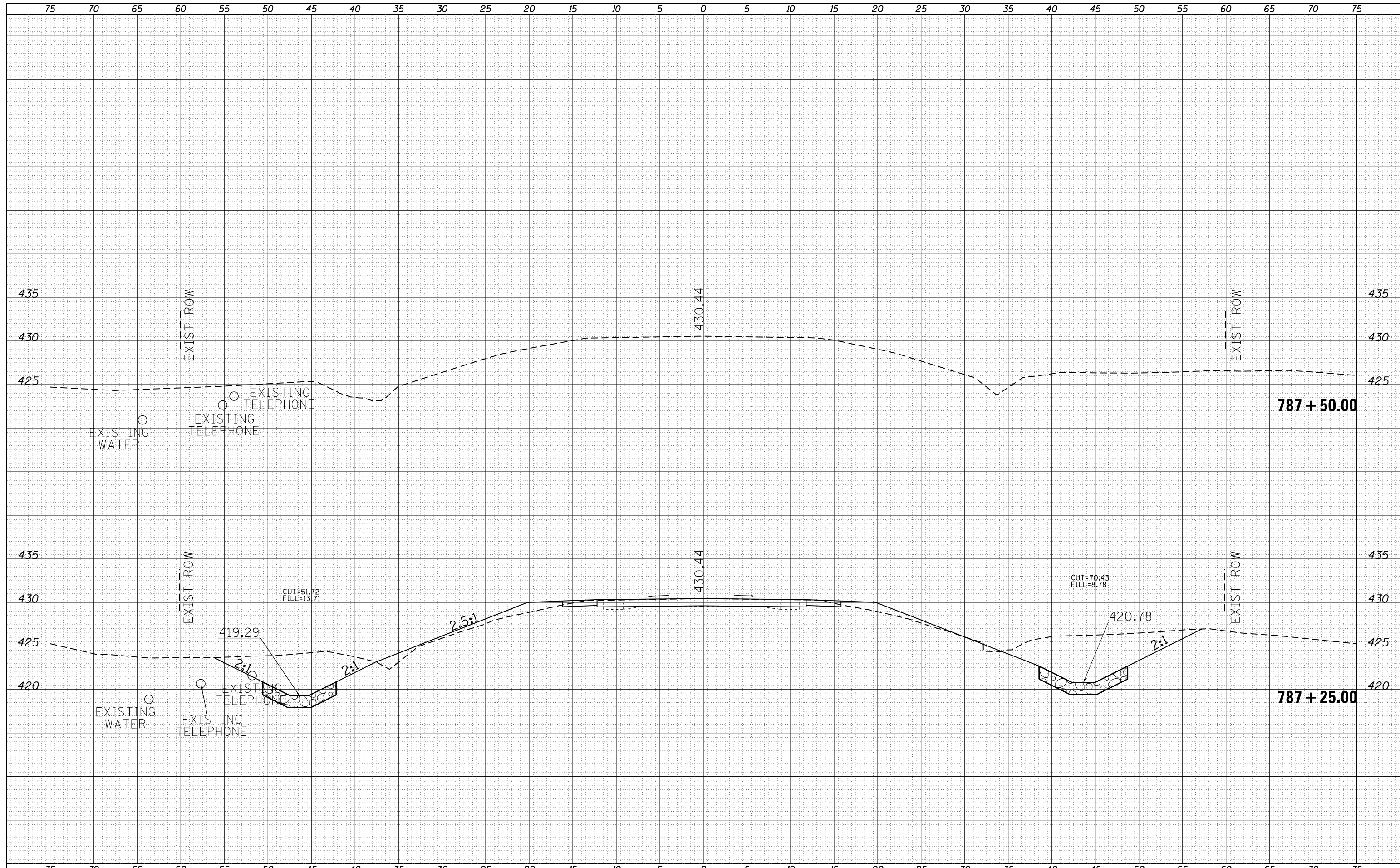
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME =	USER NAME = holimandb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTION 033-7036</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT SCALE = 10.0000' / in.	CHECKED -	REVISED -		SCALE:      SHEET      OF      SHEETS      STA. 787+00.00      TO STA. 787+01.99			CONTRACT NO. 78498				
	PLOT DATE = 6/30/2017	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

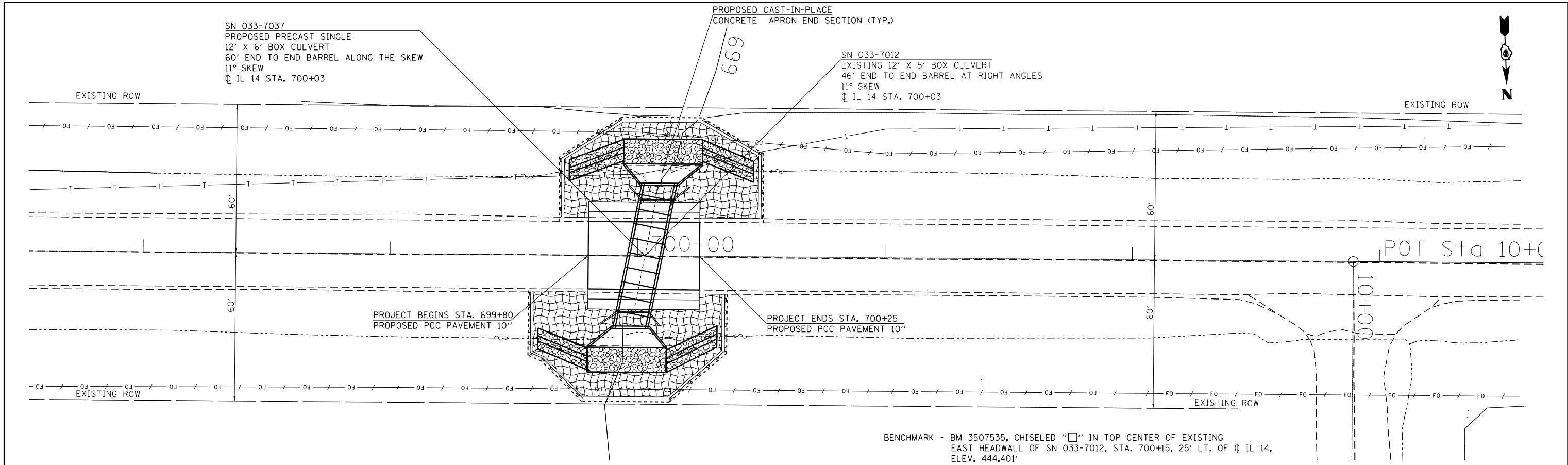
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BY	
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NO.	TEMPLATE
	AREAS CHECKED



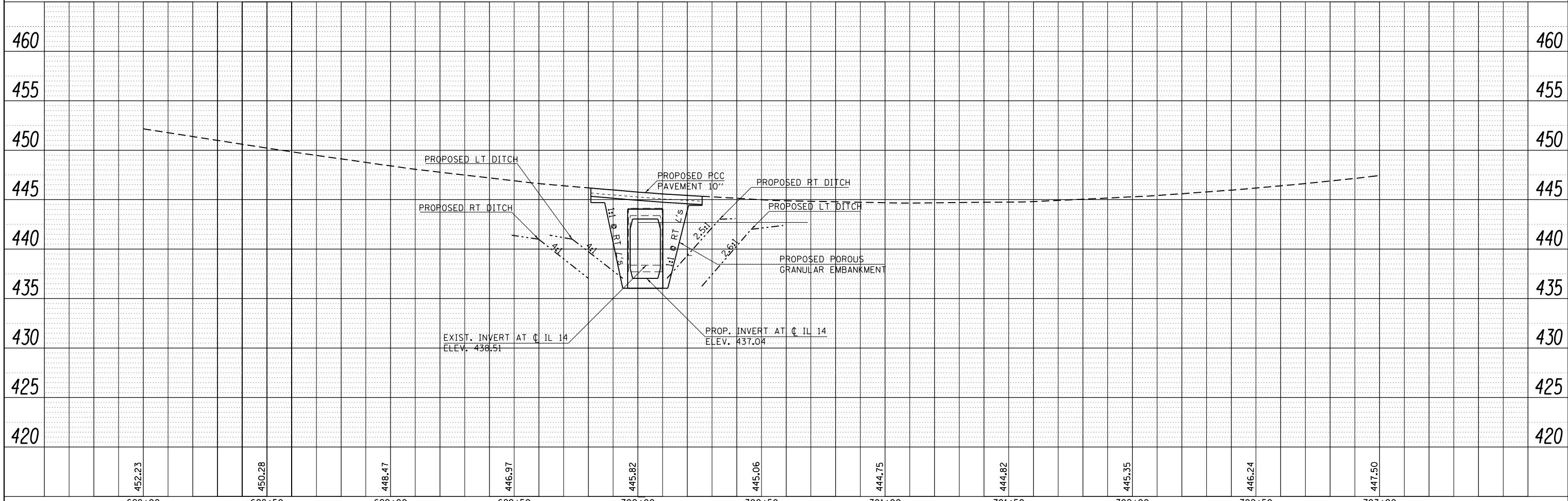
FILE NAME =	USER NAME = holimandb	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTION 033-7036</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	\\IL084EBIDINTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 9\Projects\78498\CADD\Drawings\Drawings\78498-7009_xs-sh1.dgn	REVISIED -	REVISIED -					885	10B-1, 10B-2	HAMILTON	28	15
	PLOT SCALE = 10.0000' / in.	CHECKED -	REVISIED -		CONTRACT NO. 78498			ILLINOIS FED. AID PROJECT				
	PLOT DATE = 6/30/2017	DATE -	REVISIED -		SCALE:	SHEET	OF	SHEETS	STA. 787+25.00	TO STA. 787+50.00		

PLAN	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	
	NO.	



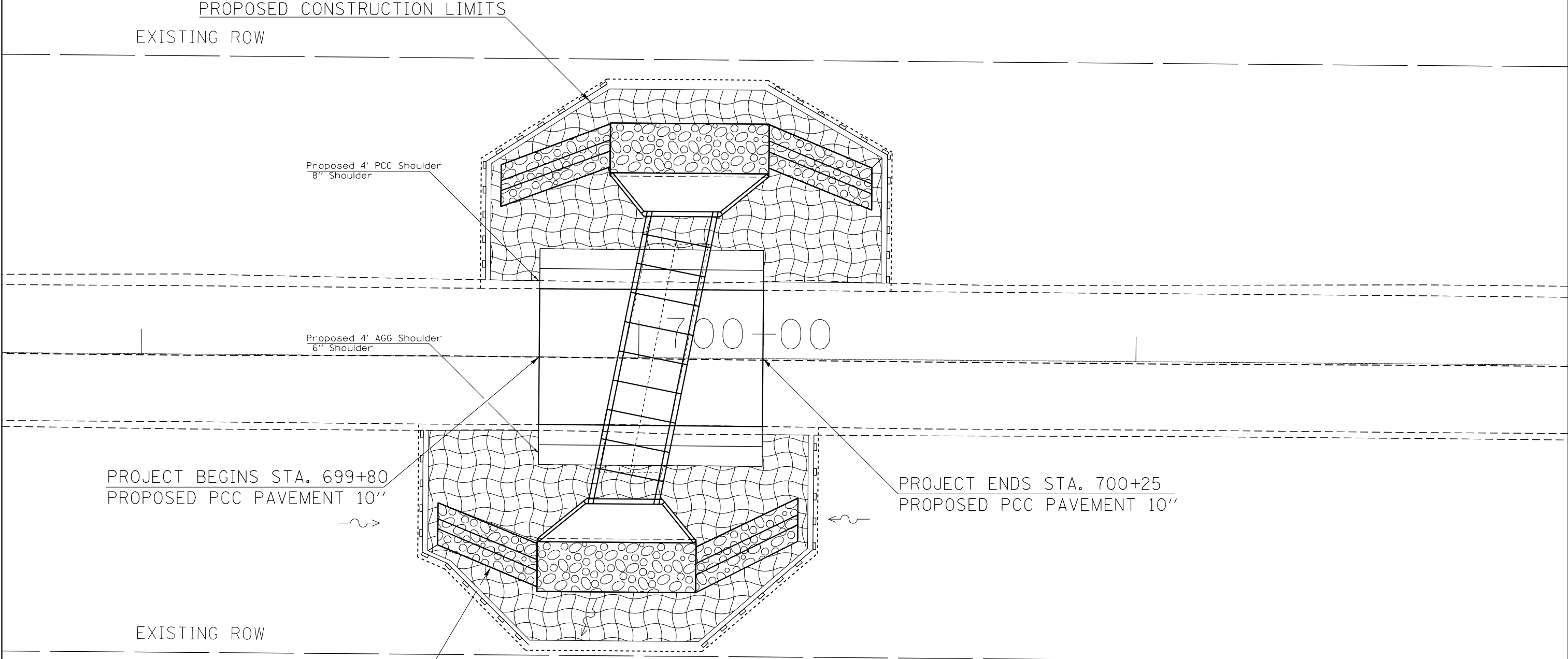
BENCHMARK - BM 3507535, CHISELED "□" IN TOP CENTER OF EXISTING EAST HEADWALL OF SN 033-7012, STA. 700+15, 25' LT. OF C IL 14, ELEV. 444.401'



FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PLAN &amp; PROFILE 033-7037</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default		CHECKED -	REVISED -			855	10B-1; 10B-2	HAMILTON	28	16	
		DATE -	REVISED -			CONTRACT NO. 78498					
						ILLINOIS FED. AID PROJECT					



# EROSION CONTROL PLAN

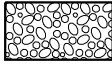
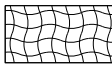



PROJECT BEGINS STA. 699+80  
PROPOSED PCC PAVEMENT 10"

PROJECT ENDS STA. 700+25  
PROPOSED PCC PAVEMENT 10"

EXISTING ROW

PROPOSED STONE RIPRAP  
CLASS A4 (TYP.)

-  STONE RIPRAP, CLASS A4
-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER

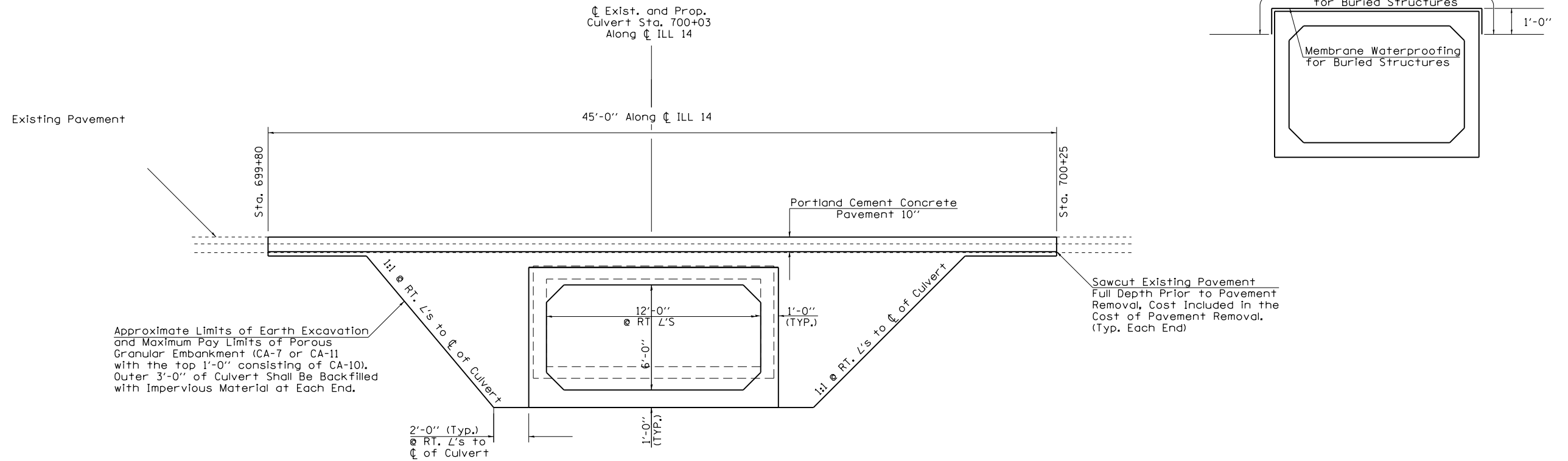
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

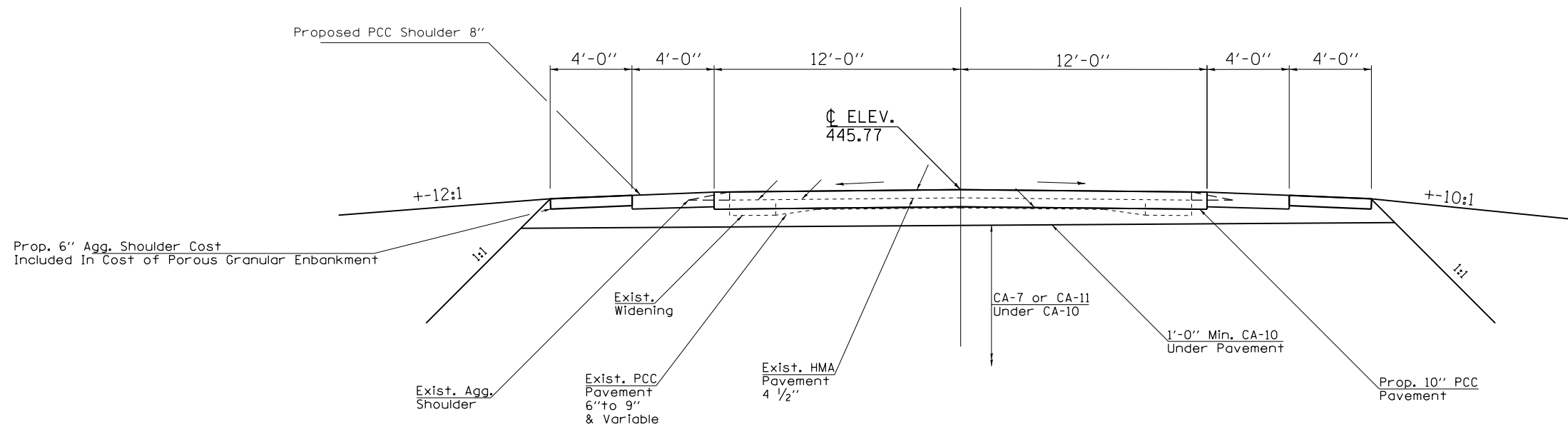
<b>EROSION CONTROL PLAN</b>			
SCALE:	SHEET	OF	SHEETS
	STA.		TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
855	10B-1, 10B-2	HAMILTON	28	17
CONTRACT NO. 78498				
ILLINOIS FED. AID PROJECT				

**LIMITS OF POROUS GRANULAR EMBANKMENT**



**TYPICAL SECTION WITHIN PAVEMENT REMOVAL**



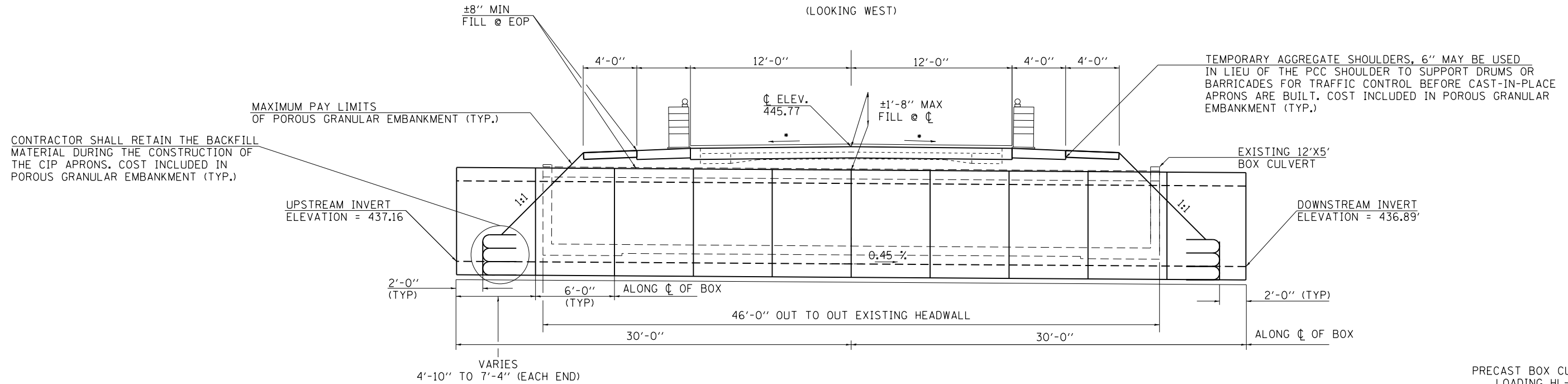
FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIMITS OF POROUS GRANULAR EMBANKMENT AT SN 033-7037 AND SECTION WITHIN PAVEMENT REMOVAL</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -			CONTRACT NO. 78498					
						ILLINOIS FED. AID PROJECT					

**MINIMUM REQUIREMENTS TO OPEN TO TRAFFIC**

DIMENSIONS PERPENDICULAR TO ROADWAY UNLESS OTHERWISE NOTED

(LOOKING WEST)

- MATCH EXISTING CROSS SLOPES
- SECTIONS LOOKING WEST



PRECAST BOX CULVERT  
LOADING HL-93  
ASTM C 1577

**HYDRAULIC DATA (50 YR DESIGN)**

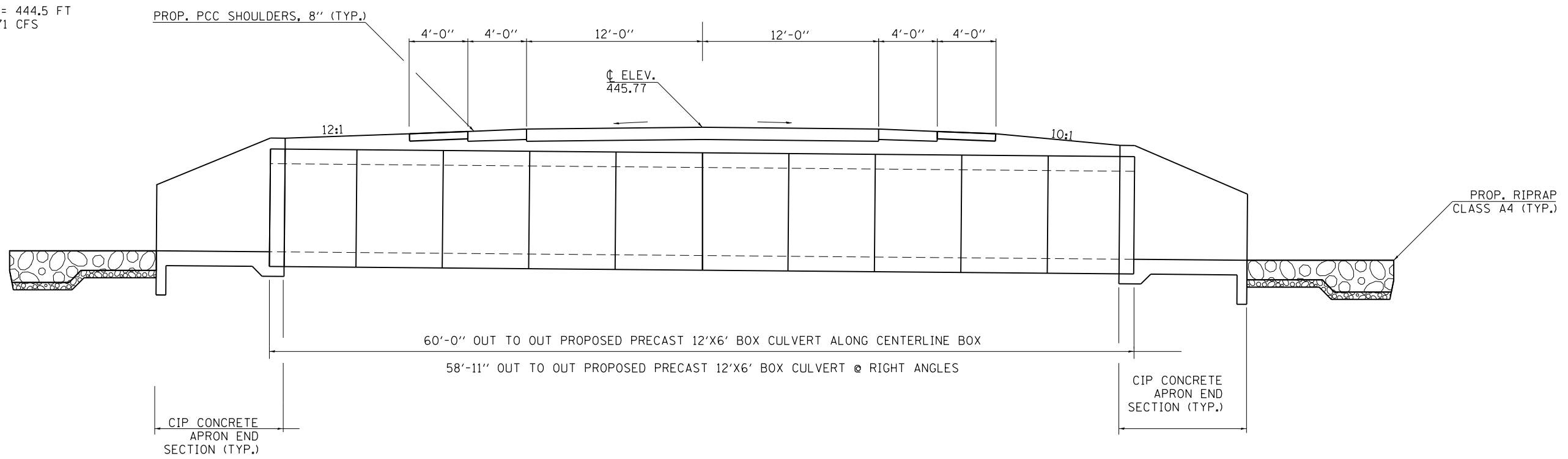
DRAINAGE AREA = 0.56 SQ MI  
 DESIGN WATERWAY OPENING = 72 SQ FT  
 DESIGN DISCHARGE = 579 CFS  
 DESIGN HEADWATER ELEVATION = 443.6 FT  
 100 YEAR DISCHARGE = 690 CFS  
 100 YEAR HEADWATER ELEVATION = 444.5 FT  
 OVERTOPPING < 100 YEAR = 750.71 CFS  
 LOW PROFILE ELEVATION = 444.5

**FINAL SECTION AFTER CONSTRUCTION OF CAST-IN-PLACE APRONS**

DIMENSIONS PERPENDICULAR TO ROADWAY UNLESS OTHERWISE NOTED

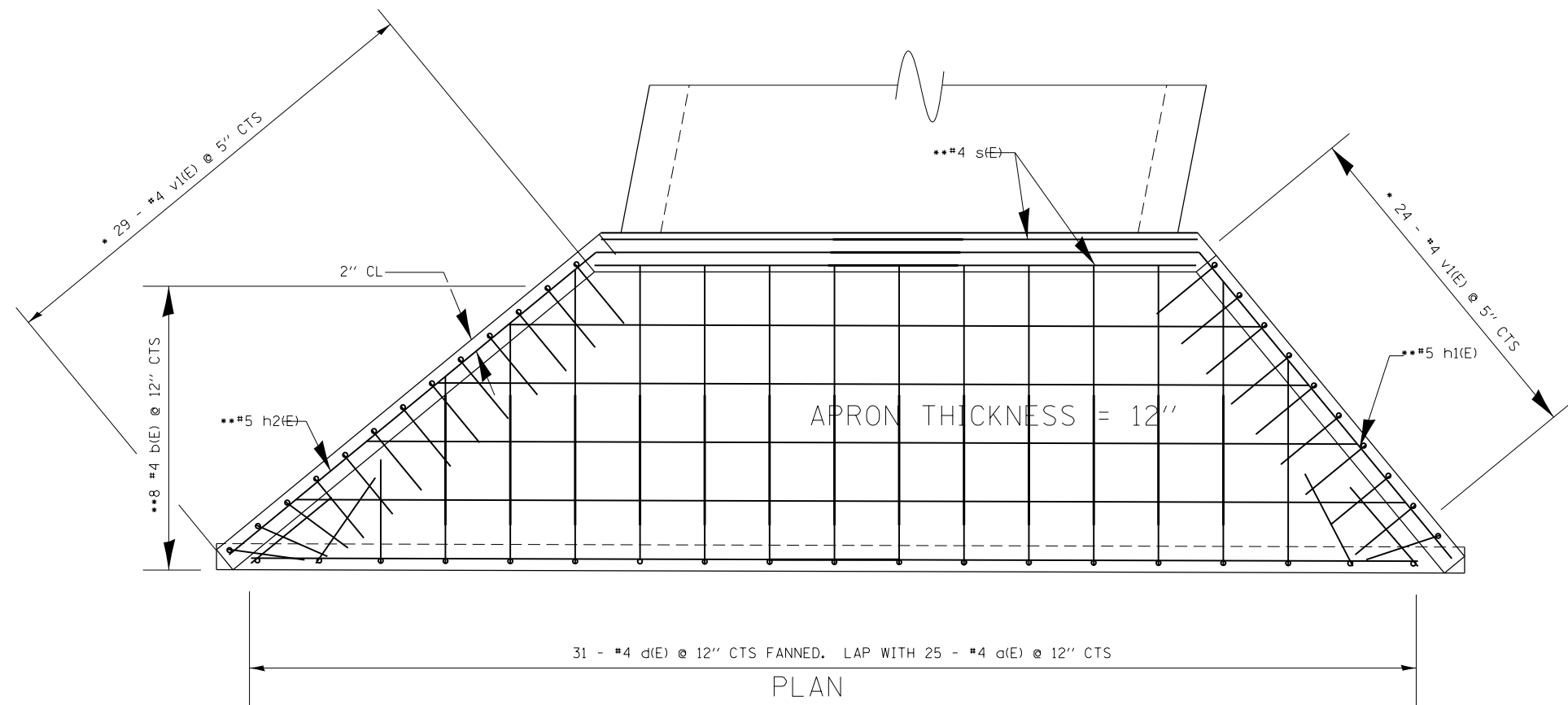
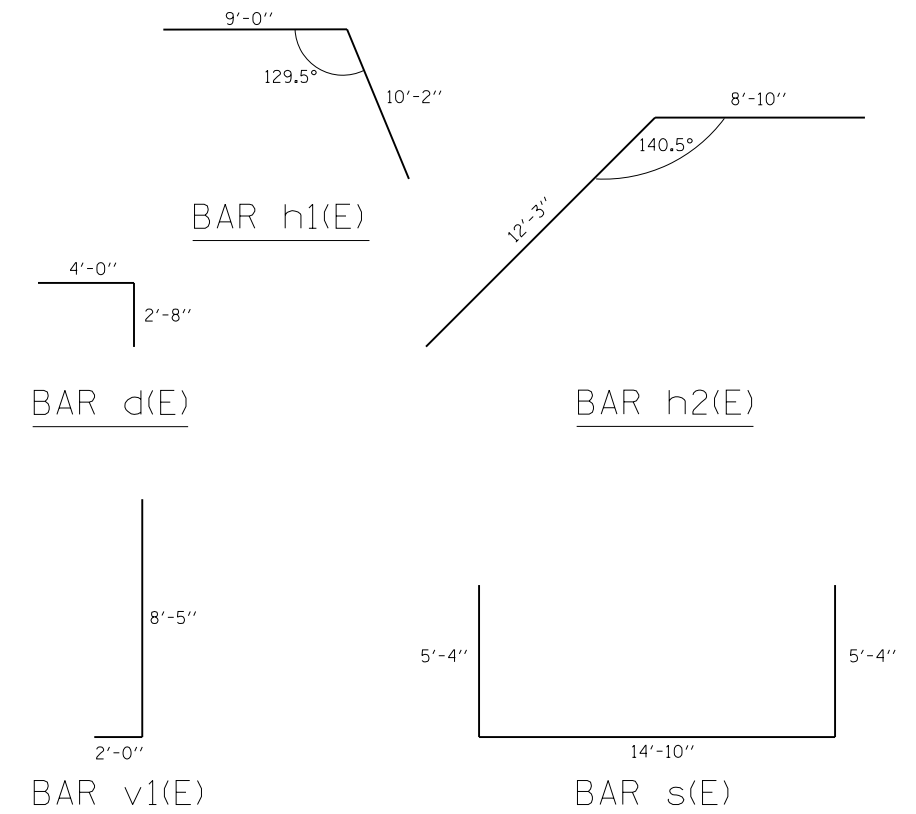
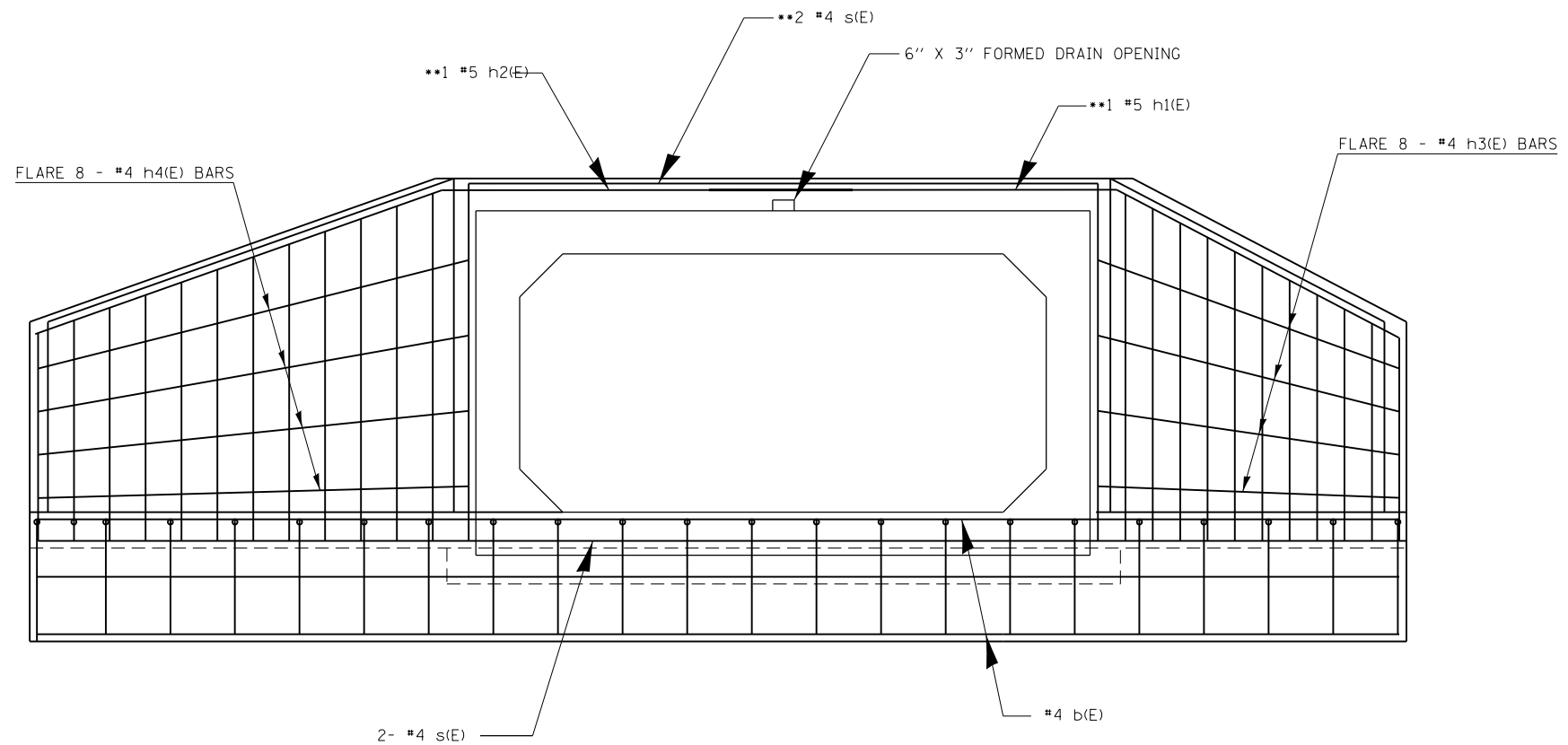
(LOOKING WEST)

- MATCH EXISTING CROSS SLOPES



FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY AND FINAL SECTIONS 033-7037</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE = 6/30/2017	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 78498				
											ILLINOIS FED. AID PROJECT	





**BILL OF MATERIAL**

BAR	No.	SIZE	LENGTH	SHAPE
a(E)	50	#4	4'-10"	—
b(E)	40	#4	16'-8"	—
d(E)	62	#4	6'-8"	└
h1(E)	2	#5	19'-2"	└
h2(E)	2	#5	21'-1"	└
h3(E)	16	#4	10'-6"	—
h4(E)	16	#4	12'-6"	—
s(E)	8	#4	25'-6"	└
v1(E)	106	#4	10'-5"	└
CONCRETE BOX CULVERTS			CU. YD.	24.8
REINFORCEMENT BARS EPOXY COATED			POUND	2090

**DESIGN STRESSES**

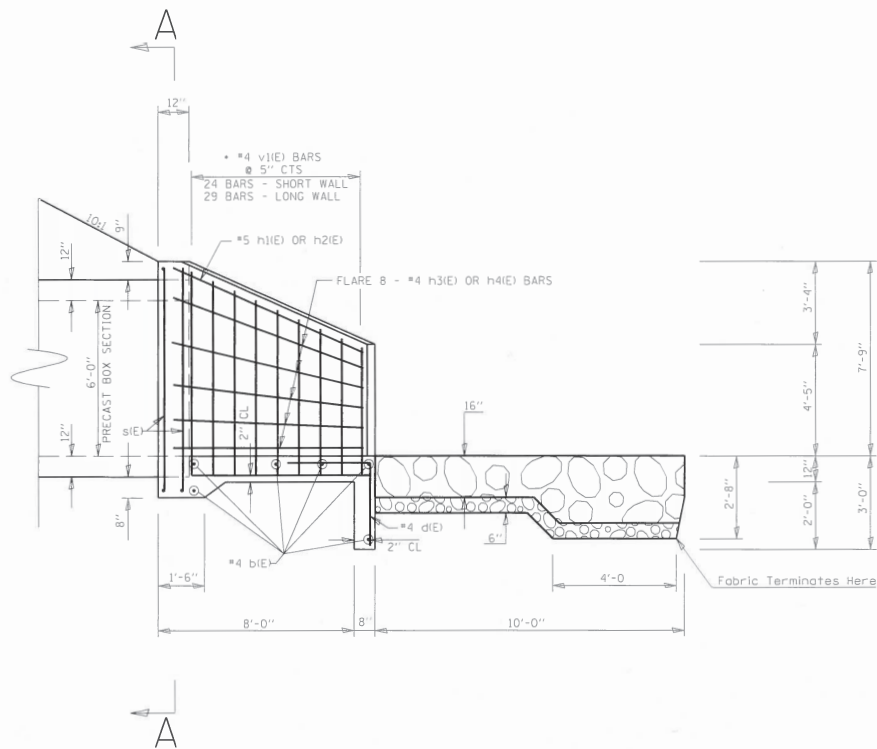
fy = 60,000 psi  
f'c = 3,500 psi

**MINIMUM BAR LAP**

- #4 = 1'-8"
- #5 = 2'-2"
- CUT OR BEND TO FIT IN FIELD
- LAP BARS WHERE NECESSARY

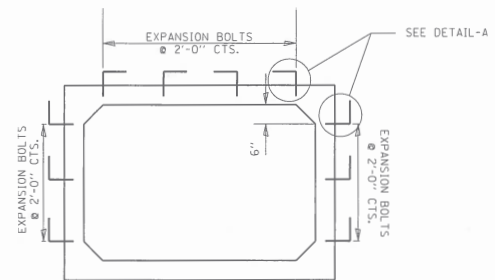
NOTE: BILL OF MATERIAL SCHEDULE IS TOTAL FOR BOTH ENDS

WORK THIS SHEET WITH SHEET 22 OF 28  
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.  
REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GRADE 60.  
EXPOSED EDGES SHALL BE BEVELED 3/4".

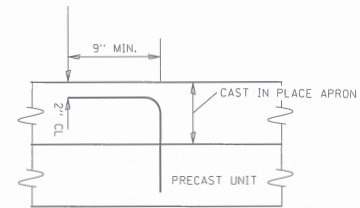


### HALF SIDE ELEVATION

(AT RT ANGLES TO  $\perp$  ROADWAY)



### SECTION A-A



### DETAIL-A

NOTE: THE CAST-IN-PLACE APRON END SECTION SHALL BE TIED TO THE PRECAST BARREL AT EACH END USING EXPANSION BOLTS SPACED AT 2' CENTERS AS SHOWN IN SECTION A-A. EXPANSION BOLTS SHALL BE 3/4" DIAMETER HOOKED BOLTS. THE HOOKS SHALL BE AS SHOWN IN DETAIL A AND SHALL BE BENT IN THE FIELD AS NEEDED. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

THE LAST TWO PRECAST BARREL SECTIONS AT EACH END SHALL BE TIED TOGETHER USING CULVERT TIES AS SHOWN ON CULVERT TIE DETAILS SHEET. COST INCLUDED IN PRECAST CONCRETE BOX CULVERTS OF THE SIZE SPECIFIED IN THE PLANS.

FILE NAME =	USER NAME = hollmndb	DESIGNED -	REVISED -
Documents\DOT Offices\District 9\Projects\7848	DRAWN =	CHECKED -	REVISED -
PLT SCALE = 4.0000 / 1 in.	DATE -	CHECKED -	REVISED -
PLT DATE = 8/16/2017	DATE -	CHECKED -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

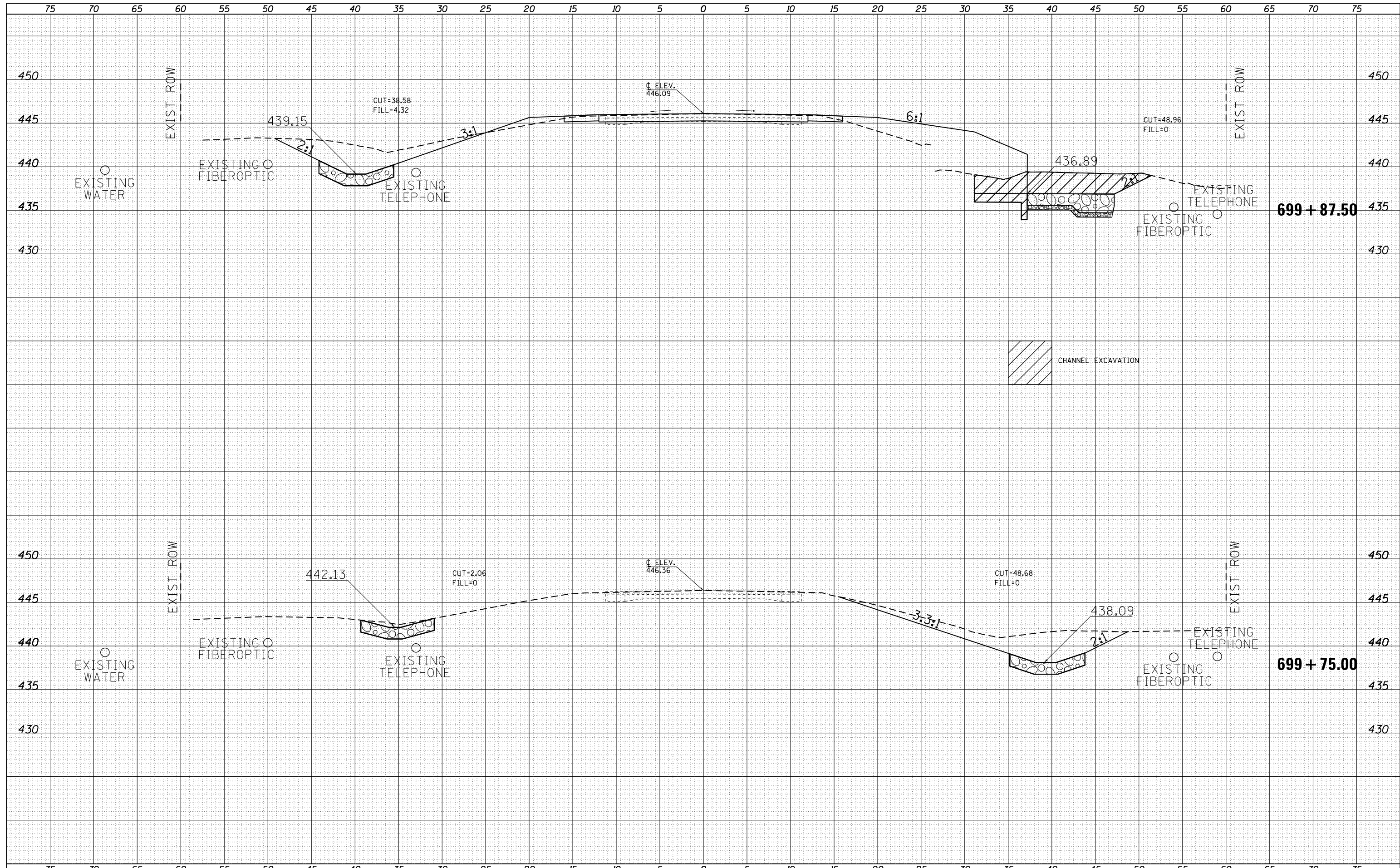
HALF SIDE ELEVATION 033-7037

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	10B-1; 10B-2	HAMILTON	28	22
SCALE: SHEET OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT CONTRACT NO. 78498	



DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
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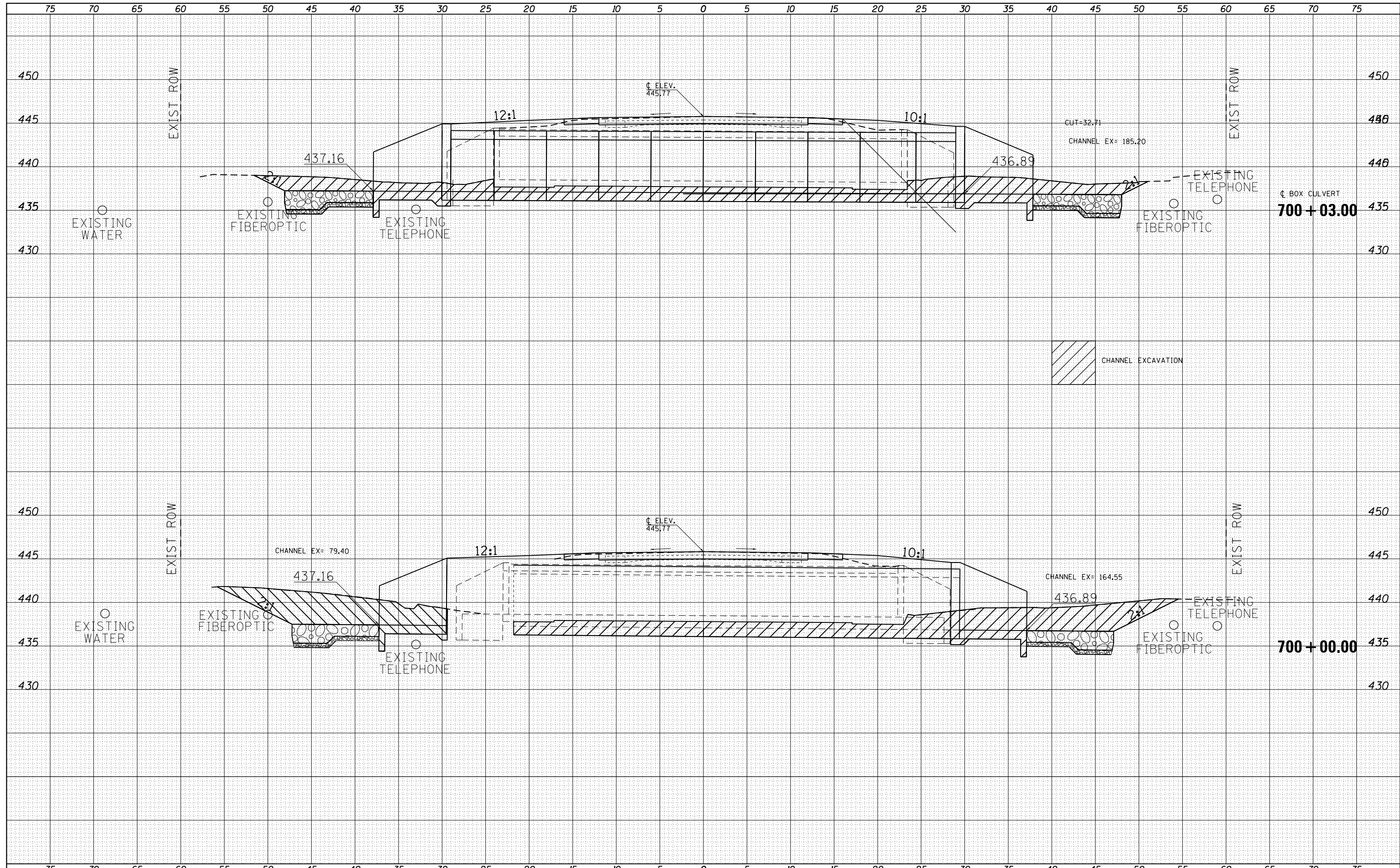


FILE NAME =	USER NAME = holimandb	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS 033-7037</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLLOT DATE = 6/30/2017	DATE -	REVISIED -		SCALE: SHEET OF SHEETS STA. 699+75.00 TO STA. 699+87.50			CONTRACT NO. 78498				
											ILLINOIS FED. AID PROJECT	



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL	
SURVEY	
NOTE BOOK	
NO.	

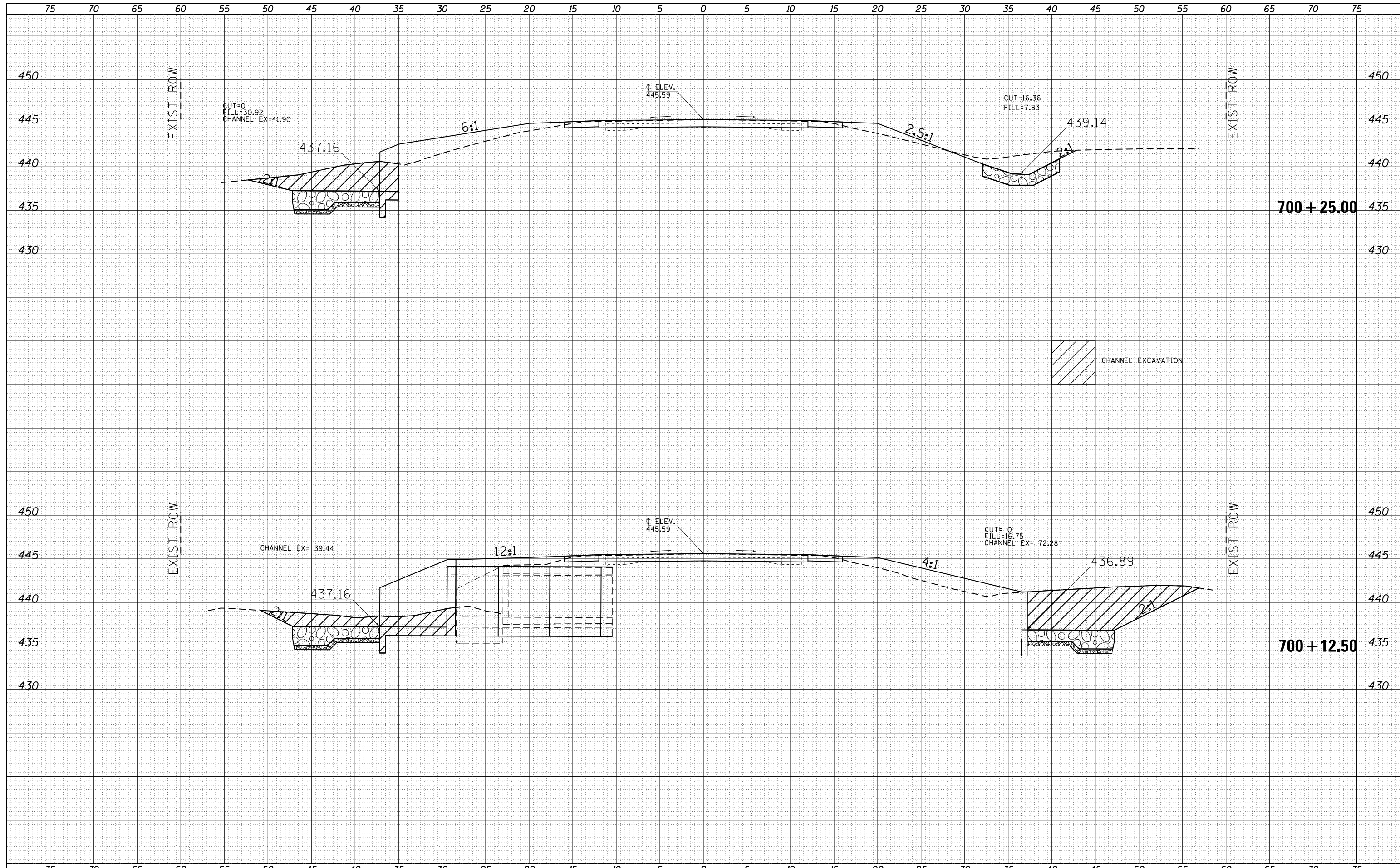
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BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL	
SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS 033-7037</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	\\IL084EBIDINTEG\illinois.gov\PIWIDOT\Documents\DOT Offices\District 9\Projects\78498\CADD\Drawings\78498-7012.xs-sht.dgn	CHECKED -	REVISIED -					885	10B-1, 10B-2	HAMILTON	28	25
	PLOT SCALE = 10.0000 / in.	DATE -	REVISIED -		SCALE: SHEET OF SHEETS STA. 700+00.00 TO STA. 700+03.00			CONTRACT NO. 78498				
	PLOT DATE = 6/30/2017							ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

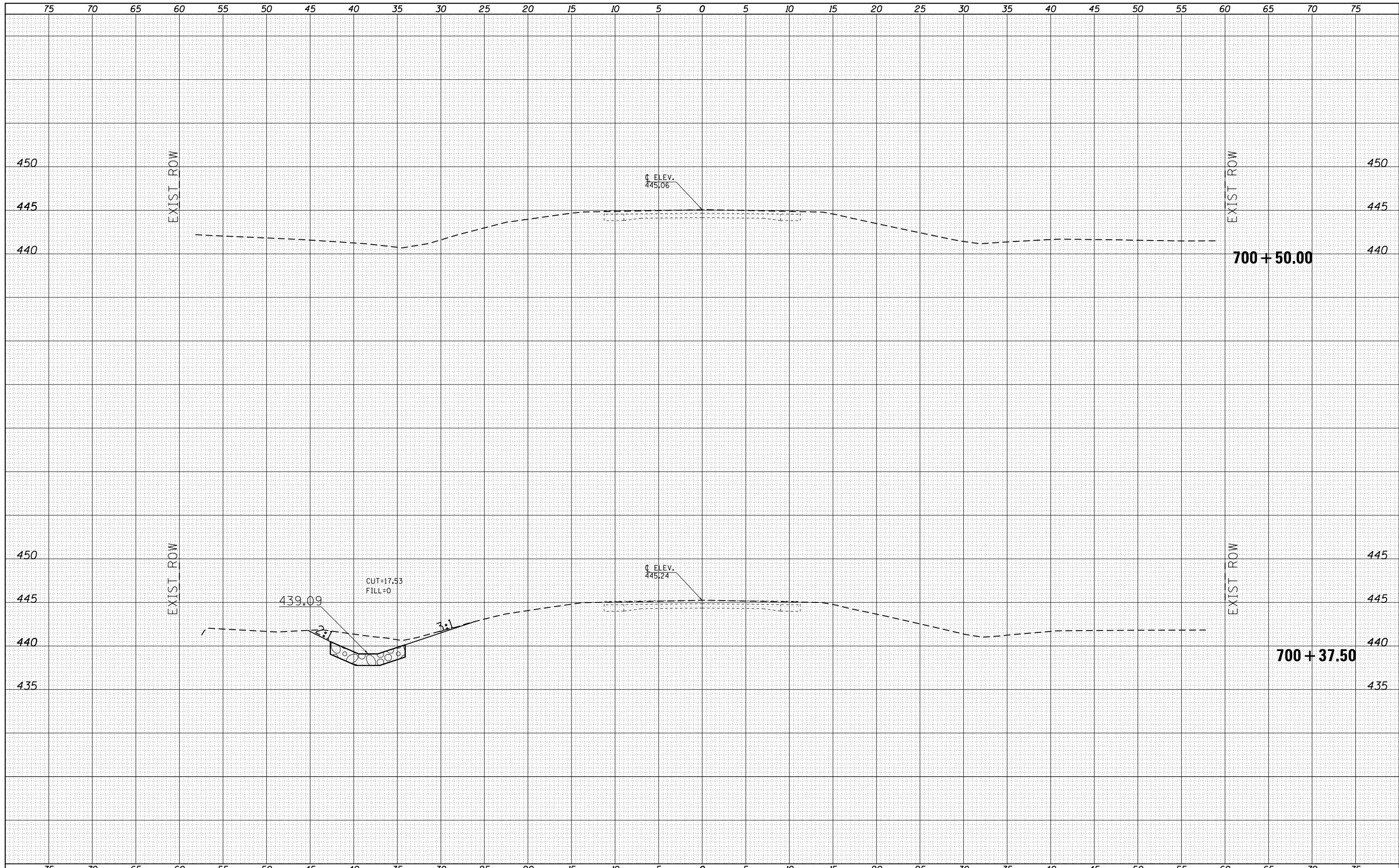
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BY	
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISIED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS 033-7037</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 10.0000' / in.	CHECKED -	REVISIED -			CONTRACT NO. 78498							
Default	PLOT DATE = 6/30/2017	DATE -	REVISIED -		SCALE:	SHEET	OF	SHEETS	STA. 700+12.50 TO STA. 700+25.00	ILLINOIS FED. AID PROJECT		

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



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 DESIGNED -  
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 PLOT DATE = 6/30/2017

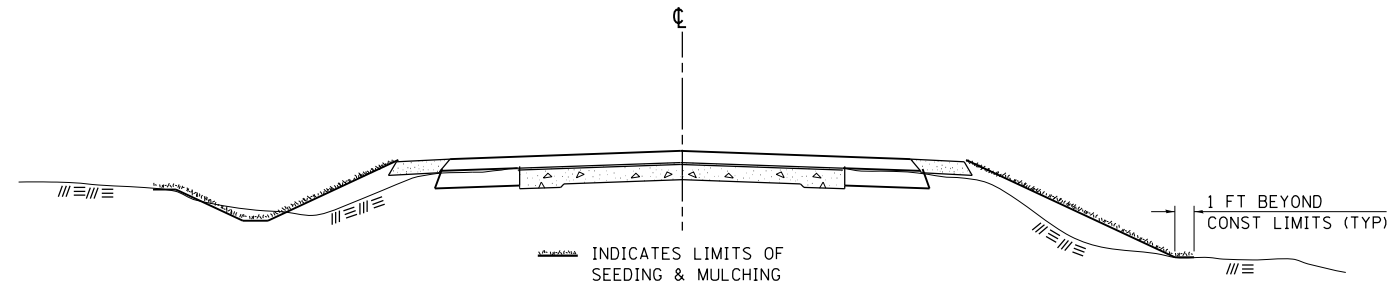
REVISIED -  
 REVISIED -  
 CHECKED -  
 DATE -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS 033-7037**  
 SCALE: SHEET OF SHEETS STA. 700+37.50 TO STA. 700+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	10B-1, 10B-2	HAMILTON	28	27
CONTRACT NO. 78498				
ILLINOIS FED. AID PROJECT				

## SEEDING & MULCHING



### GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

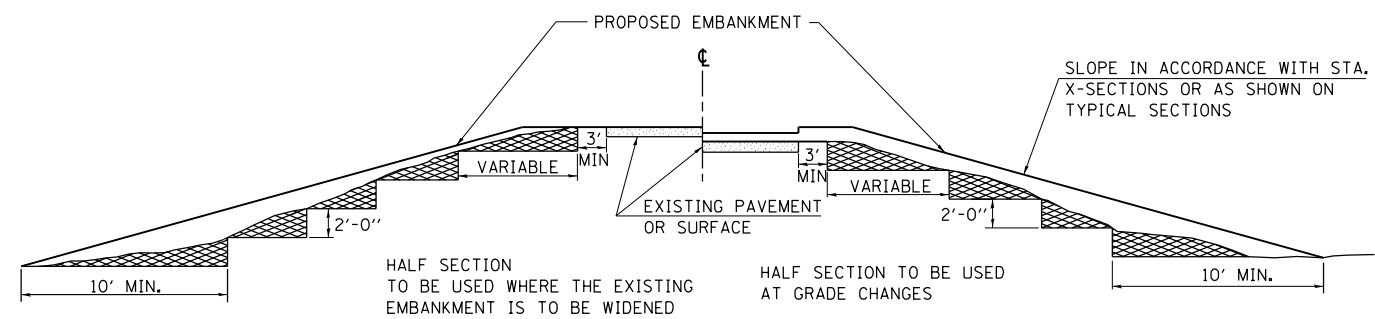
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

## TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

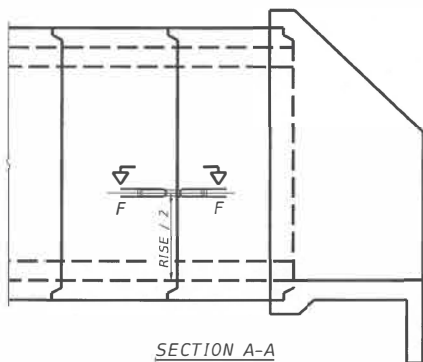


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

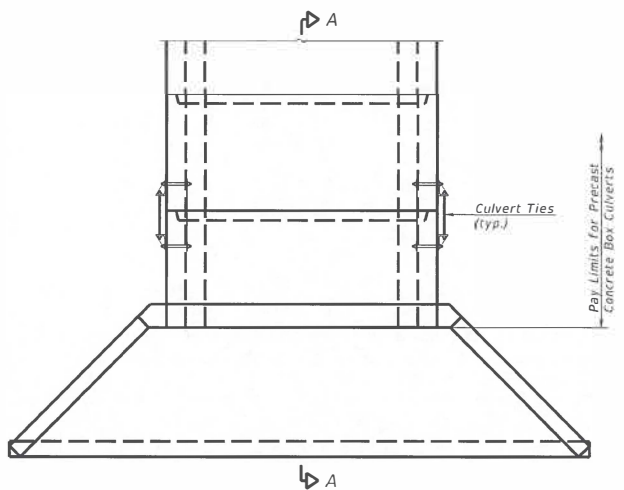
REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

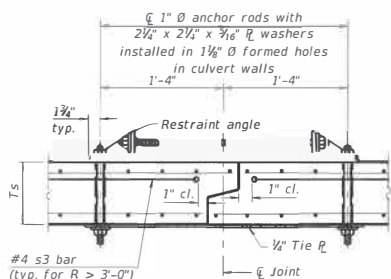
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pw:\IL\084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 9\Projects\78498\Drawings\CADsheets\78498-7012.sht.dgn	DESIGNED -	REVISED -	885			4B-1, 4B-2	HAMILTON	28	28			
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 78498						
	PLOT DATE = 6/30/2017	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
						SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.



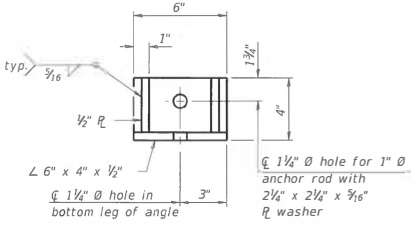
SECTION A-A



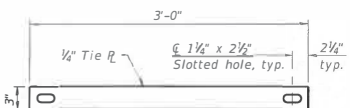
The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor.



SECTION F-F  
(Showing culvert tie details)



RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

Notes:  
 1"  $\varnothing$  anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/2" x 2 1/2" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

DESIGNED	EXAMINED	DATE
CHECKED	ENGINEER OF STRUCTURAL SERVICES	
DRAWN	PASSED	
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CULVERT TIE DETAILS - STRUCTURE NO. 033-7036 /033-7037

F.A.P. RTE. 855	SECTION 10B-14 10B-2	COUNTY HAMILTON	TOTAL SHEETS 28	SHEET NO. 28A
SHEET NO. OF SHEETS			ILLINOIS FED. AID PROJECT CONTRACT NO. T6498	