

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(115)I	LIVINGSTON	20	1
		ILLINOIS	CONTRACT NO. 66870	

INDEX OF SHEETS

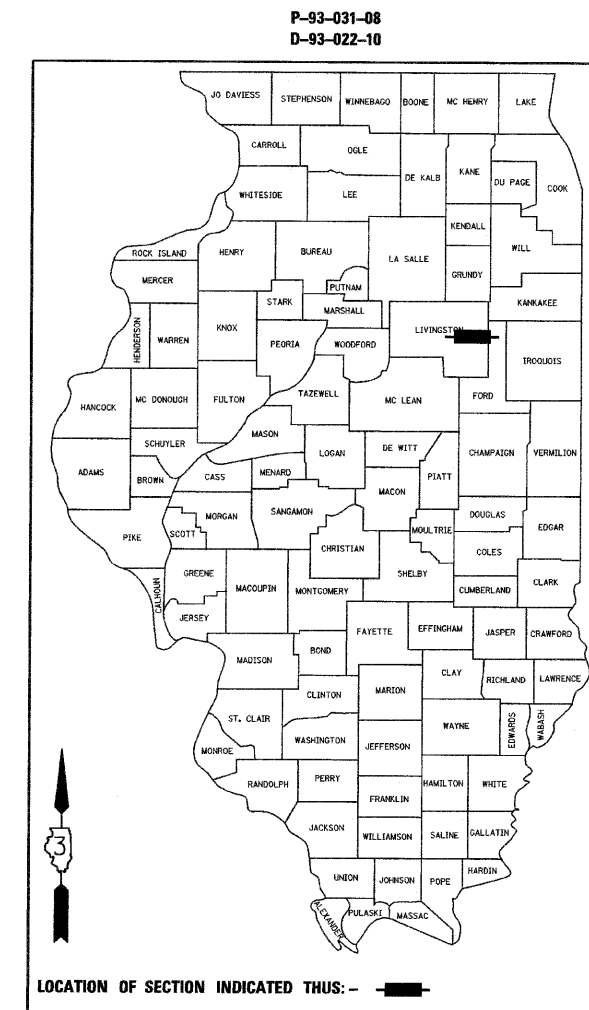
1. COVER SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTIONS
5. SCHEDULE OF QUANTITIES
6. TIE POINTS
7. PLAN & PROFILE
8. STAGE I CONSTRUCTION AND TRAFFIC CONTROL
9. STAGE II CONSTRUCTION AND TRAFFIC CONTROL
- 10-14. CULVERT PLANS
- 15-18. DETAILS
- 19-20. CROSS SECTIONS

HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
442201-03	CLASS C AND D PATCHES
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) AWAY FROM EDGE OF PAVEMENT
701011-02	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

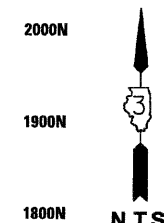
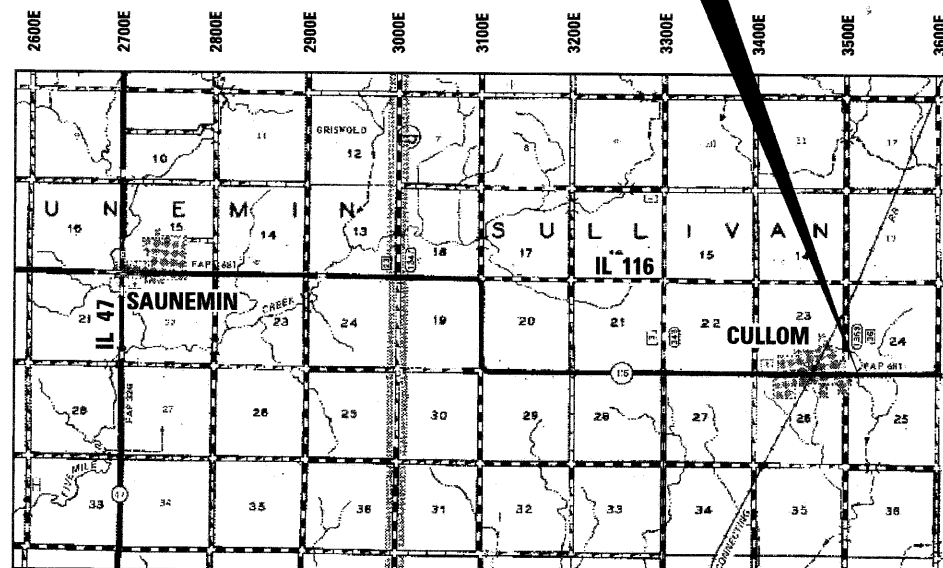
FAP ROUTE 681 (IL 116)
SECTION (115)I
PROJECT ACF-0681(041)
3R CULVERT REPLACEMENT
LIVINGSTON COUNTY

C-93-056-10



PROJECT LOCATION

EXISTING SN 053-2563 - 8' X 3' REINFORCED
 CONCRETE BOX CULVERT
 PROPOSED SN 053-2576 TRIPLE 5' X 3' PRECAST
 CONCRETE BOX CULVERT WITH CAST-IN-PLACE
 REINFORCED CONCRETE END SECTIONS



7/21/10
date

JAMES K. CLINARD
 LICENSED PROFESSIONAL ENGINEER
 NO. 062-041793
 STATE OF ILLINOIS
 expires 11-30-2011

[Signature]
signature

PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

FUNCTIONAL CLASSIFICATION
RURAL MINOR ARTERIAL

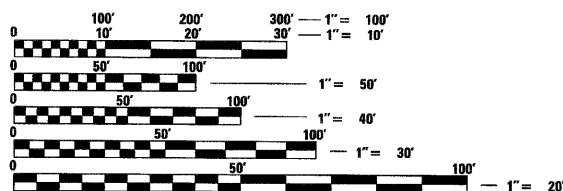
2007 ADT = 1250
 P.V. = 72% S.U. = 10% M.U. = 18%

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED August 16, 2010
George Ryan
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 1, 2010
Scott E. Stitt, P.E.
 acting ENGINEER OF DESIGN AND ENVIRONMENT

October 1, 2010
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: C. REED
UNIT CHIEF: M. JONES
TOWNSHIP: SULLIVAN
CONTRACT NO. 66870

LOCATION MAP

GROSS LENGTH = 400 FT. = 0.076 MILE
 NET LENGTH = 400 FT. = 0.076 MILE

CHAMLIN & ASSOCIATES
 PERU ILLINOIS MORRIS

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES:

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDING WILL BE DETERMINED BY THE ENGINEER.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDING OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
BIT MATERIALS (PRIME COAT) ON AGGREGATE BASES	0.375	GAL / SQ YD
BITUMINOUS MATERIALS (PRIME COAT)	0.08	GAL / SQ YD
POLYMERIZED BIT MATERIALS (PRIME COAT)	0.10	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.08	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.05	GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT / 100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (HAND METHOD)	0.0005	TONS / SQ YD
SUPPLEMENTAL WATERING	3	GAL / SQ YD / APPLICATION
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: FRONTIER COMMUNICATIONS

NON-MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: NONE

THE CONTRACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Don Bennet
ACTING DISTRICT STUDIES & PLANS ENGINEER

DATE: _____

EXAMINED BY: Herbert K. Long, Jr.
DISTRICT CONSTRUCTION ENGINEER

Wayne J. Phillips
DISTRICT MATERIALS ENGINEER

Bruce A. Wheeler
DISTRICT OPERATIONS ENGINEER

FILE NAME = 0366878-SHT-GENNOTE.DGN	USER NAME = ---	DESIGNED - JKC	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A.P. RTE. 681	SECTION (1151)	COUNTY LIVINGSTON	TOTAL SHEETS 20	SHEET NO. 2		
PLOT SCALE = 1"=50'	CHECKED - JKC	DRAWN - NV	REVISED - ---			SCALE: NONE	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 66870		ILLINOIS FED. AID PROJECT	
PLOT DATE = 01/10	DATE - 01/10	REVISER - ---	REVISER - ---									

80% FEDERAL
20% STATE

NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 0040
20200100	EARTH EXCAVATION	CU YD	70	
20400800	FURNISHED EXCAVATION	CU YD	36	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	241	
* 25000210	SEEDING, CLASS 2A	ACRE	0.4	
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36	
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36	
* 25100115	MULCH, METHOD 2	ACRE	0.4	
25100630	EROSION CONTROL BLANKET	SQ YD	73	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	360	
28000305	TEMPORARY DITCH CHECKS	FOOT	48	
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	184	
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	241	
35501342	HOT-MIX ASPHALT BASE COURSE, 14 1/2"	SQ YD	165	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	152	
40600300	AGGREGATE (PRIME COAT)	TON	4	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	0.35	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	64	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SQ YD	346	
40600990	TEMPORARY RAMP	SQ YD	30	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	159	
44000100	PAVEMENT REMOVAL	SQ YD	184	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	90	
50800105	REINFORCEMENT BARS	POUND	6060	
Z0026407	TEMPORARY SHEET PILING	SQ FT	713	

80% FEDERAL
20% STATE

NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 0040
54003000	CONCRETE BOX CULVERTS	CU YD	41.1	
54010503	PRECAST CONCRETE BOX CULVERTS 5' X 3'	FOOT	108	
63200310	GUARDRAIL REMOVAL	FOOT	281	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	
67100100	MOBILIZATION	L SUM	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	75	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	180	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1670	
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	26	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	629	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	362.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	362.5	
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	1160	
* 78005130	EPOXY PAVEMENT MARKING - LINE 6"	FOOT	150	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8	
* 78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	8	
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	76	
X0324043	GRATING FOR CONCRETE HEADWALL	EACH	2	
X5015200	REMOVE EXISTING CULVERTS	EACH	1	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	

* SPECIALTY ITEM

FILE NAME =
0366870-SHT-000.DGN

USER NAME = ---	DESIGNED - JKC	REVISED - ---
DRAWN - NV	CHECKED - JKC	REVISED - ---
PLOT SCALE = 1"=1'	DATE - 01/10	REVISED - ---
PLOT DATE = 01/10		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.P. RTE. 681	SECTION (115)I	COUNTY LIVINGSTON	TOTAL SHEETS 20	SHEET NO. 3
CONTRACT NO. 66870				
ILLINOIS FED. AID PROJECT				

EARTHWORK QUANTITIES				
LOCATION	THEORETICAL		FURNISHED EXCAVATION SHORTAGE (-) OR EXCESS (+)	REMARKS
	CUT	FILL		
	CU YD	CU YD	CU YD	
	(A)	(B)	[(A)0.75]-(B)	
STA. 147+00 TO STA. 151+00, LT. & RT.	70	88	-36	
TOTAL	70	88	-36	
	PAY ITEM	---	PAY ITEM	

PAVEMENT SCHEDULE											
LOCATION	SQ YD	SQ YD	SQ YD	GALLON	TON	TON	TON	TON	TON	SQ YD	SQ YD
	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	HMA BASE COURSE, 8"	HOT-MIX ASPHALT BASE COURSE, 14 1/2"	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	LEVELING BINDER (MACHINE METHOD), N50	HMA SURFACE COURSE, MIX "C", N50	AGGREGATE SHOULDERS, TYPE B	HMA SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP
STA 146+10 TO STA 146+70	--	--	--	--	--	--	--	--	--	173	15
STA 151+30 TO STA 151+90	--	--	--	--	--	--	--	--	--	173	15
STA. 148+98 TO STA. 149+55 (STAGE I)	70	--	60	--	--	--	--	--	--	--	--
STA. 148+98 TO STA. 149+55 (STAGE II)	114	19	105	--	--	--	--	--	4	--	--
LT. STA. 147+60.5 TO STA. 150+94 (STAGE I)	--	111	--	--	--	--	--	--	25	--	--
RT. STA. 147+57 TO STA. 150+90.5 (PRIOR TO STAGE I)	--	111	--	--	--	--	--	--	25	--	--
STA. 146+70 TO STA. 148+98	--	--	--	--	--	0.20	--	--	--	--	--
STA. 149+55 TO STA. 151+30	--	--	--	--	--	0.15	--	--	--	--	--
STA. 146+76 TO STA. 151+24	--	--	--	--	--	--	64	--	--	--	--
STA. 146+10 TO STA. 151+90	--	--	--	152	4	--	--	159	36	--	--
TOTAL	184	241	165	152	4	0.35	64	159	90	346	30

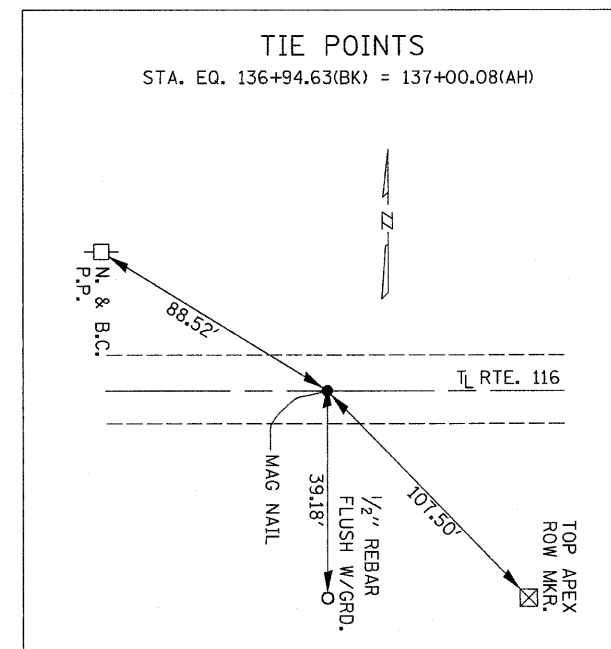
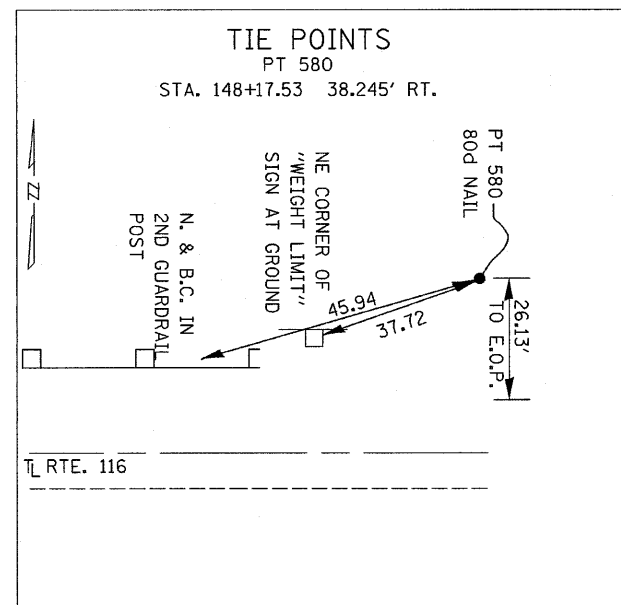
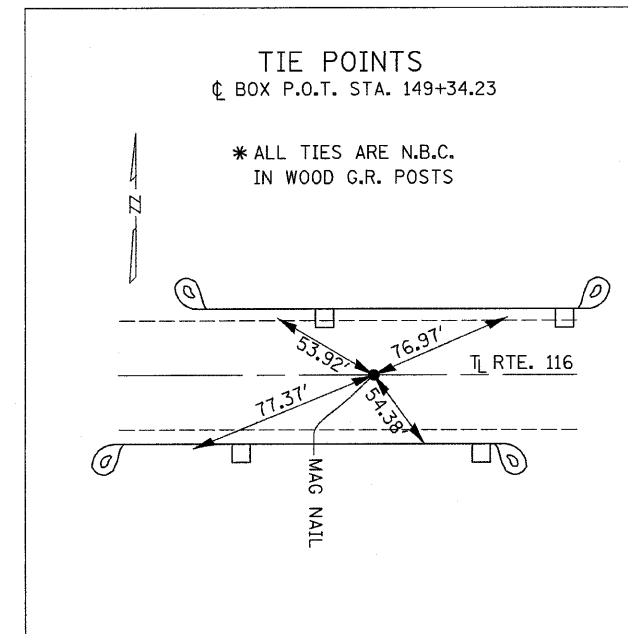
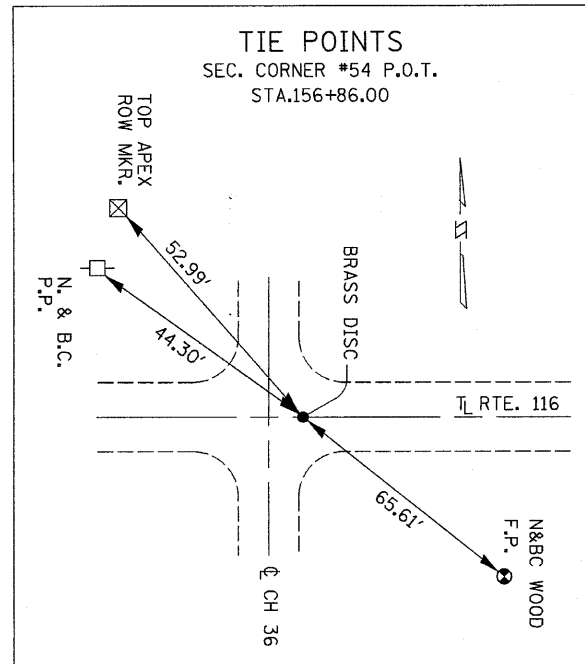
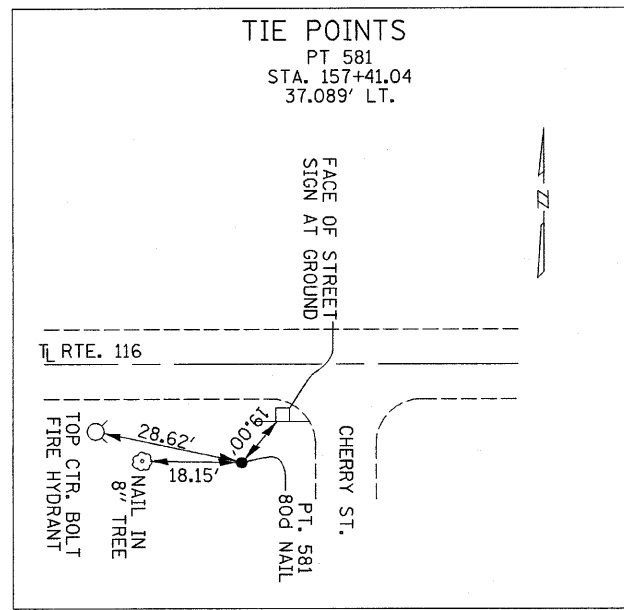
EROSION CONTROL BLANKET	
LOCATION	SQ YD
LT. END OF BOX CULVERT	36.5
RT. END OF BOX CULVERT	36.5
--	--
TOTAL	73

PAVEMENT REMOVAL	
LOCATION	SQ YD
STA. 148+98 TO STA. 149+55 (LT. & RT.)	184
TOTAL	184

TEMPORARY DITCH CHECKS	
LOCATION	FOOT
LT. STA. 149+09	12
LT. STA. 149+65	12
RT. STA. 148+88	12
RT. STA. 149+43	12
TOTAL	48

GUARDRAIL REMOVAL	
LOCATION	FOOT
RT. STA. 148+52.00 TO STA. 149+92.56	141
LT. STA. 148+76.57 TO STA. 150+16.67	140
--	--
TOTAL	281

PAVEMENT MARKING				
LOCATION	FOOT	FOOT	EACH	EACH
	EPOXY PAVEMENT MARKING - LINE 4"	EPOXY PAVEMENT MARKING - LINE 6"	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
STA 146+10 TO STA 151+90	1160	150	8	8
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
TOTAL	1160	150	8	8



FILE NAME = 0366870-SHT-ATB.DGN
USER NAME = ---
PLOT SCALE = 1"=1'
PLOT DATE = 01/10

DESIGNED - JKC	REVISED - ---
DRAWN - NV	REVISED - ---
CHECKED - JKC	REVISED - ---
DATE - 01/10	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

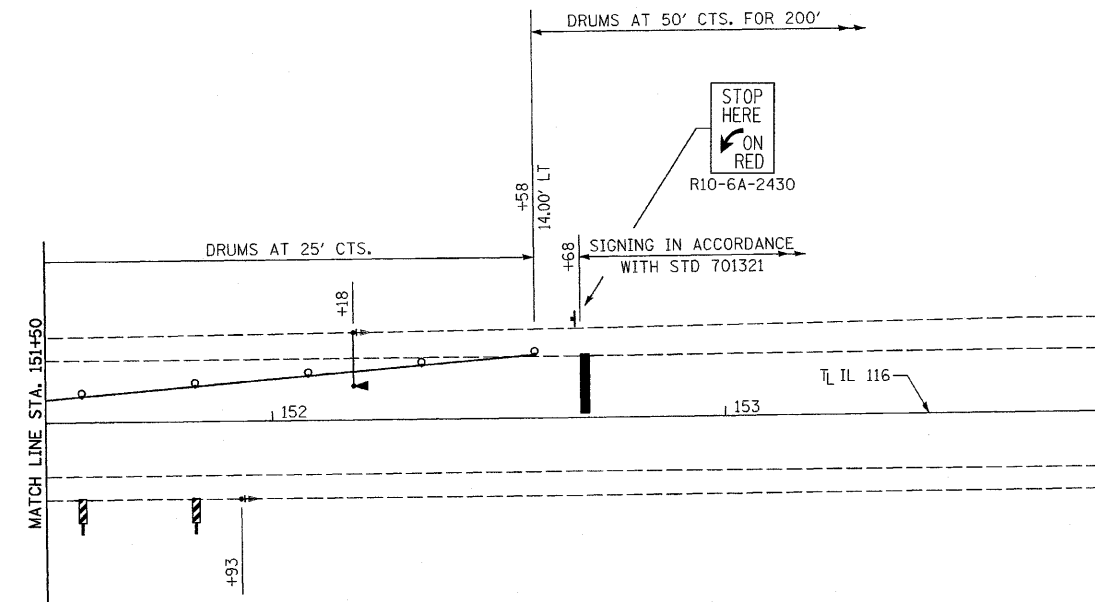
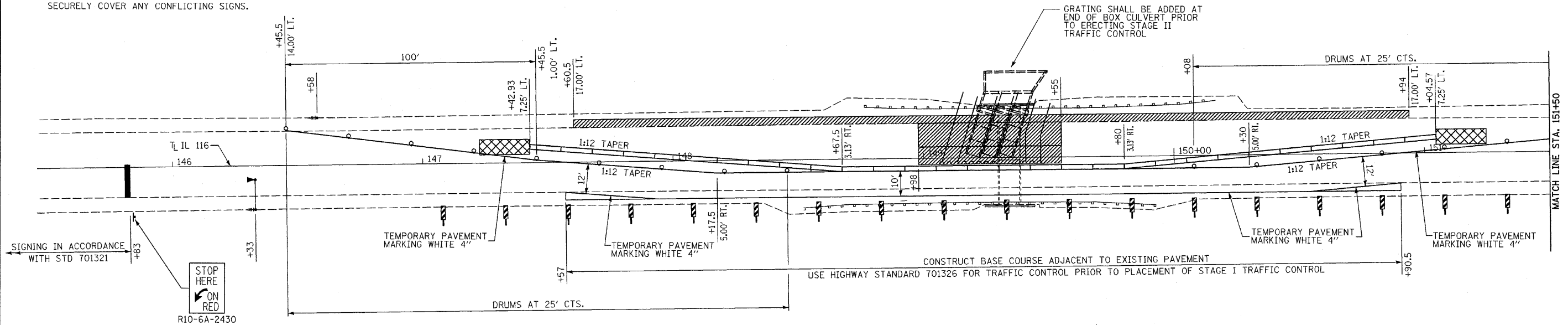
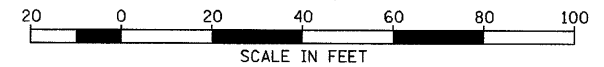
TIE POINTS
SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(115)I	LIVINGSTON	20	6
CONTRACT NO. 66870				
ILLINOIS FED. AID PROJECT				

NOTE:

WIDTH RESTRICTION SIGNS SHALL BE PLACED AT THE INTERSECTION OF IL 116 WITH IL 47 AND THE INTERSECTION OF IL 116 WITH IL 115. SIGNS SHALL BE IN ACCORDANCE WITH THE DETAILS ON SHEET 18. SIGNS SHALL REMAIN IN PLACE UNTIL STAGE II TRAFFIC CONTROL IS REMOVED. THE RESTRICTED WIDTH SHALL BE DENOTED AS 8'-6".

THE CONTRACTOR SHALL BE REQUIRED TO REMOVE, STORE AND REINSTALL OR SECURELY COVER ANY CONFLICTING SIGNS.



TEMPORARY CONCRETE BARRIER	
LOCATION	FOOT
STAGE I	362.5
--	--
--	--
TOTAL	362.5

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	
LOCATION	EACH
STA 147+42.93, 7.25' LT	1
STA 151+04.57, 7.25' LT	1
--	--
TOTAL	2

RELOCATE TEMPORARY CONCRETE BARRIER	
LOCATION	FOOT
STAGE II	362.5
--	--
--	--
TOTAL	362.5

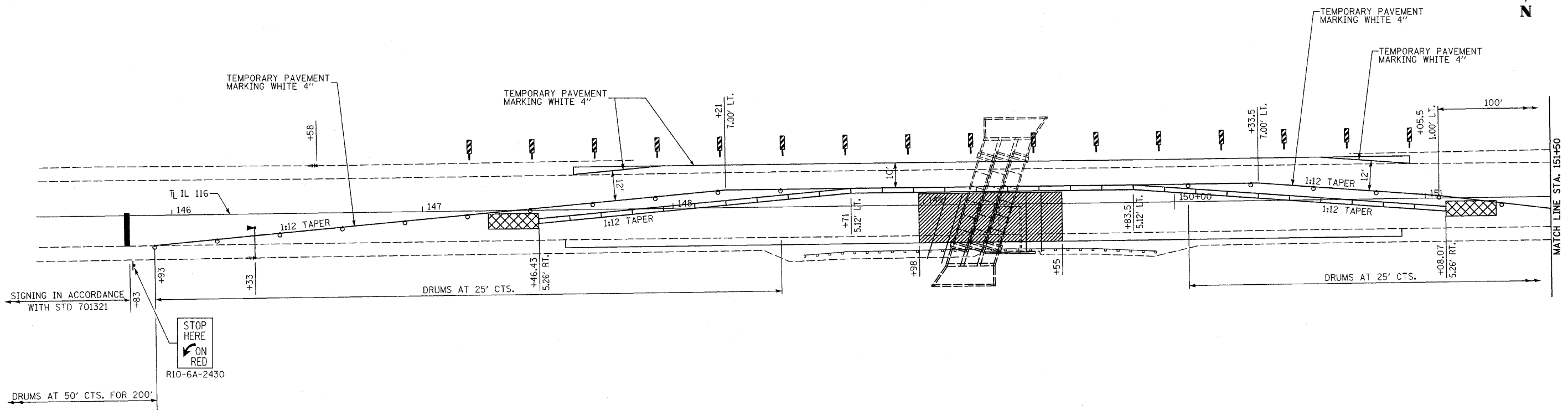
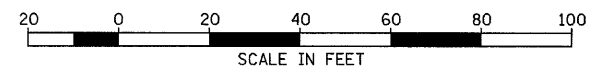
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	
LOCATION	EACH
STA 146+43, 5.26' LT	1
STA 151+08.57, 5.26' LT	1
--	--
TOTAL	2

LEGEND

- SIGN
- MICROWAVE DETECTOR
- IMPACT ATTENUATOR
- TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WITH CRYSTAL BIDIRECTIONAL BARRIER WALL MARKERS AT 25' CTS. SEE STANDARDS 704001 & 635011
- DOUBLE VERTICAL PANELS AT 25' CTS. SEE STANDARD 701321
- WORK AREA

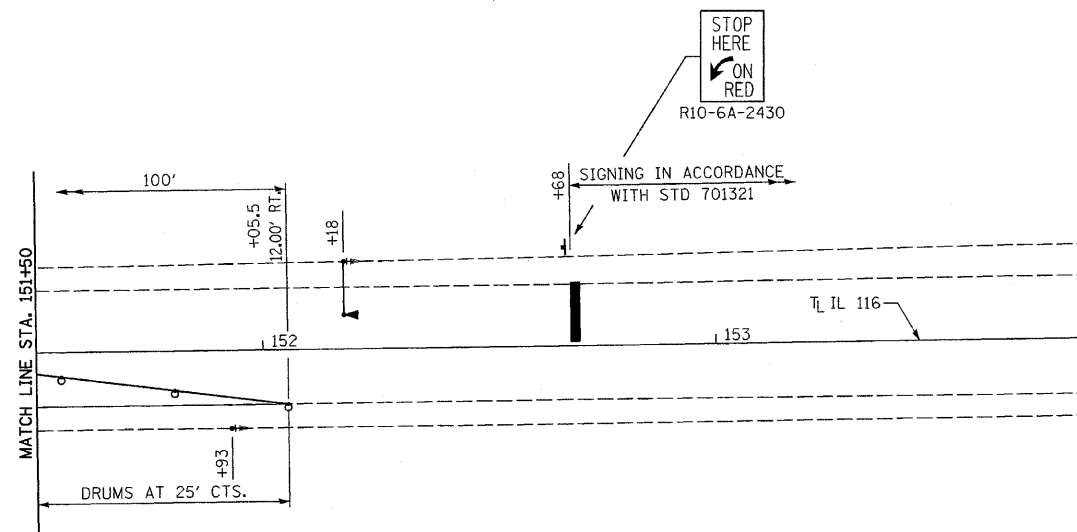
SEE SHEET 9 FOR ADDITIONAL SCHEDULES OF QUANTITIES

FILE NAME = D366878-SHT-STAGINL.DGN	USER NAME = ---	DESIGNED - JKC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I TRAFFIC CONTROL	F.A.P. RTE. = 681	SECTION = (115)I	COUNTY = LIVINGSTON	TOTAL SHEETS = 20	SHEET NO. = 8	
PLOT SCALE = 1"=20'	CHECKED - JKC	REVISOR -	SCALE: 1"=20'			SHEET NO. ___ OF ___ SHEETS	STA. 145+00 TO STA. 154+00	CONTRACT NO. 66870		ILLINOIS FED. AID PROJECT	
PLOT DATE = 04/10	DATE = 04/10	REVISOR -									



PAVEMENT MARKING				
	TEMPORARY PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 24"	SHORT TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL
LOCATION	FOOT	FOOT	FOOT	SQ FT
STAGE I	835	26	--	--
STAGE II	835	--	--	557
STA. 145+81 TO STA. 152+70	--	--	180	72
--	--	--	--	--
TOTAL	1670	26	180	629

SEE SHEET 8 FOR ADDITIONAL SCHEDULES OF QUANTITIES



LEGEND

- SIGN
- MICROWAVE DETECTOR
- IMPACT ATTENUATOR
- TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WITH CRYSTAL BIDIRECTIONAL BARRIER WALL MARKERS AT 25' CTS. SEE STANDARDS 704001 & 635011
- DOUBLE VERTICAL PANELS AT 25' CTS. SEE STANDARD 701321
- WORK AREA

FILE NAME = D366870-SHT-STAGING2.DGN
 USER NAME = ---
 PLOT SCALE = 1"=20'
 PLOT DATE = 04/10

DESIGNED - JKC
 DRAWN - LAG
 CHECKED - JKC
 DATE - 04/10

REVISED - ---
 REVISED - ---
 REVISED - ---
 REVISED - ---

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

SCALE: 1"=20' SHEET NO. ___ OF ___ SHEETS STA. 145+00 TO STA. 154+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(115)I	LIVINGSTON	20	9
				CONTRACT NO. 66870
ILLINOIS FED. AID PROJECT				

BM #1
Chiseled box on east headwall
north side of IL 116 just north of culvert
Sta 149+08.77, 41.85' Rt, Elev 674.16

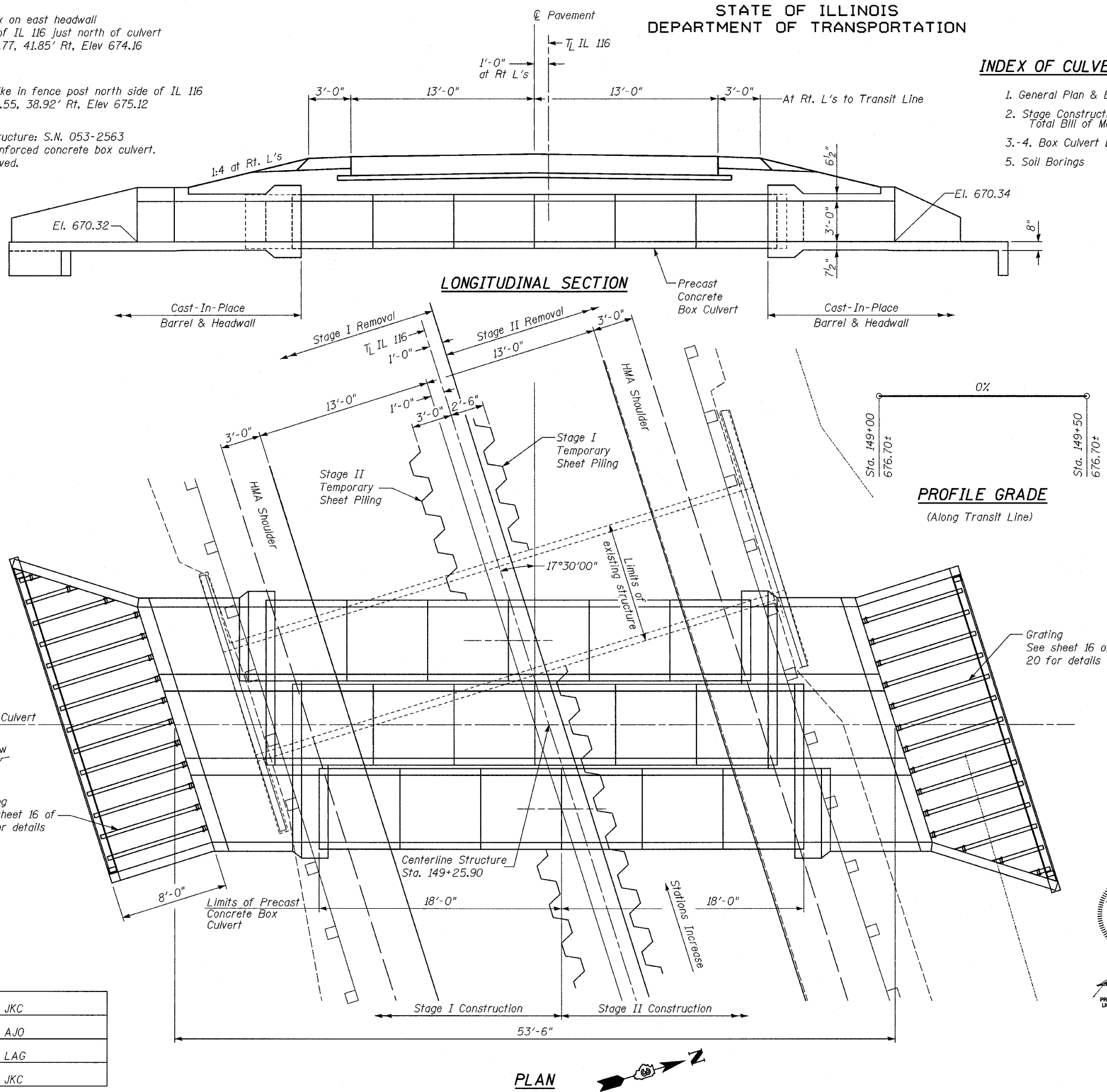
BM #2
Railroad spike in fence post north side of IL 116
Sta 152+46.55, 38.92' Rt, Elev 675.12

Existing Structure: S.N. 053-2563
8' x 3' Reinforced concrete box culvert.
To be removed.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

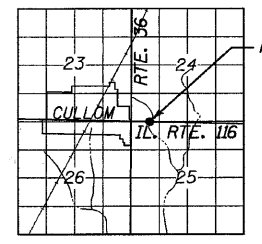
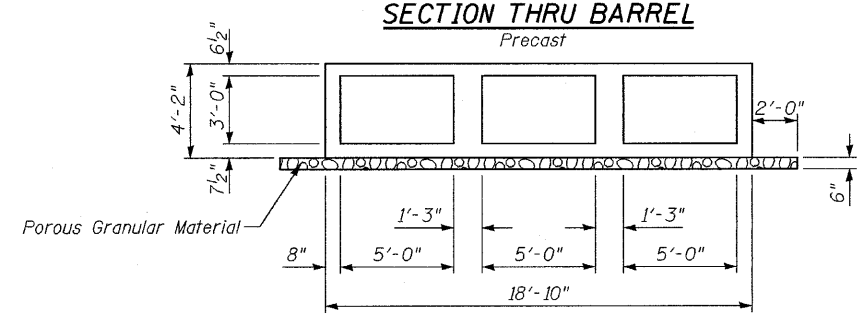
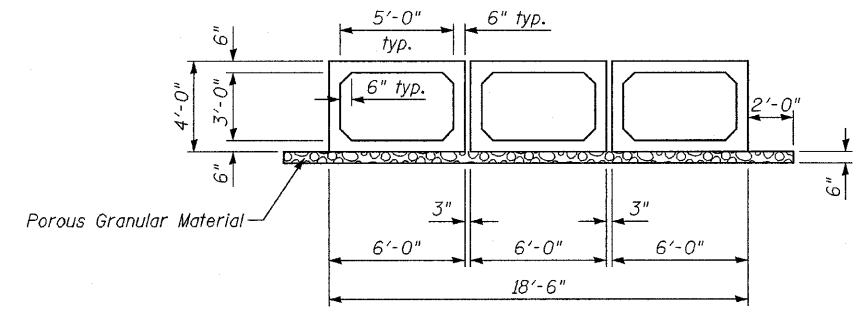
INDEX OF CULVERT PLANS

1. General Plan & Elevation
2. Stage Construction Details & Total Bill of Materials
- 3.-4. Box Culvert Details
5. Soil Borings



GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
3. Other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
4. See sheet 17 of 20 for Backfill Details.
5. See sheet 2 of 5 for Total Bill of Materials.



PROJECT LOCATION
LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

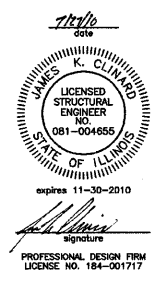
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

WATERWAY INFORMATION

Drainage Area = 0.46 sq. mi. Low Grade Elev. = 676.62 @ Sta. 151+01

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
10	195	24	45	673.3	1.8	0.2	675.1	673.5	
Design	50	325	24	45	673.6	3.0	1.0	676.6	674.6
Base	100	384	24	45	673.7	2.9	1.5	676.6	675.2
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	529	24	45	674.0	2.9	2.5	676.9	676.5

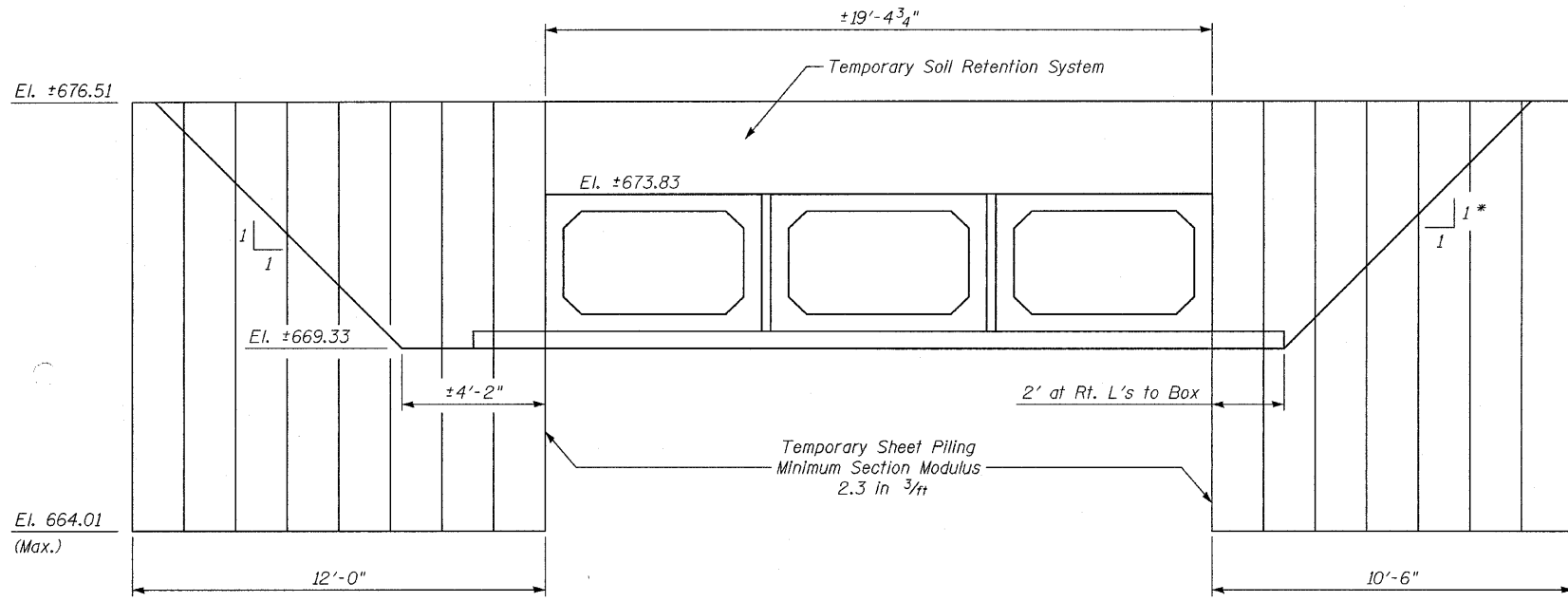
GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 116 OVER DRAINAGE DITCH
F.A.P. RT. 681 SEC. (115)I
LIVINGSTON COUNTY
STATION 149+25.90
STRUCTURE NO. 053-2576



DESIGNED	JKC
CHECKED	AJO
DRAWN	LAG
CHECKED	JKC

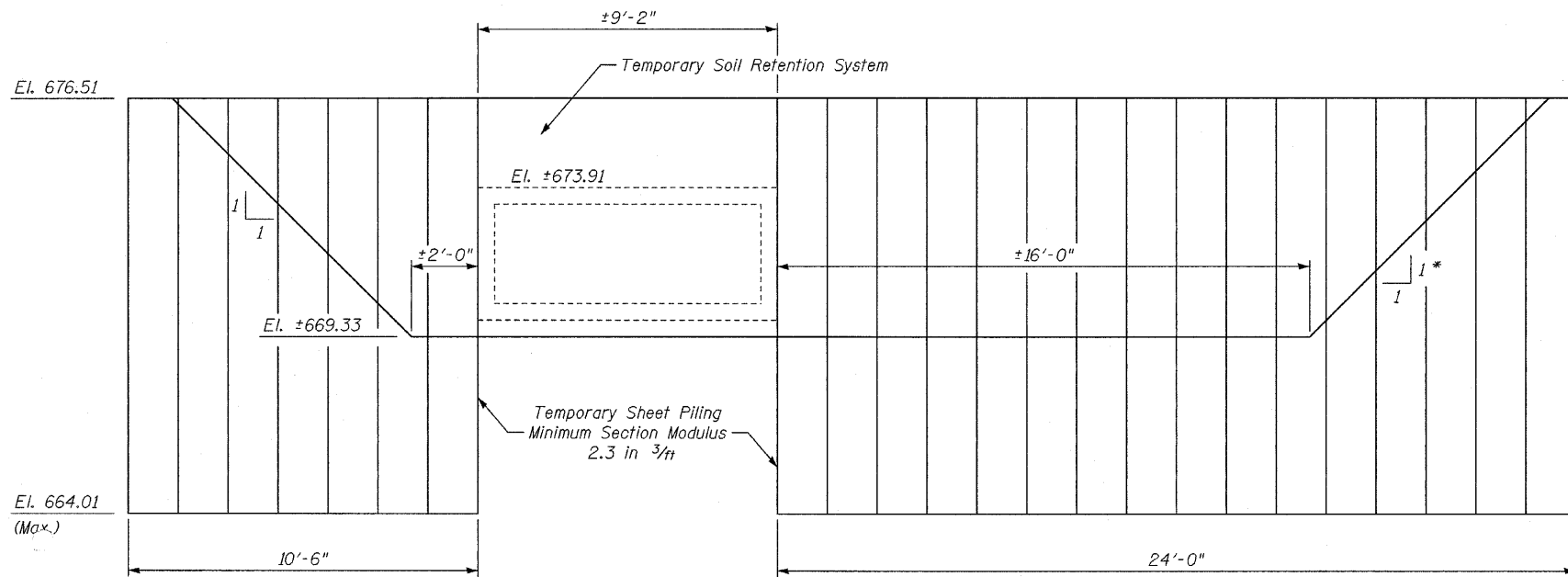
SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	681	(115)I	LIVINGSTON	20	10
5 SHEETS			CONTRACT NO. 66870		
ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



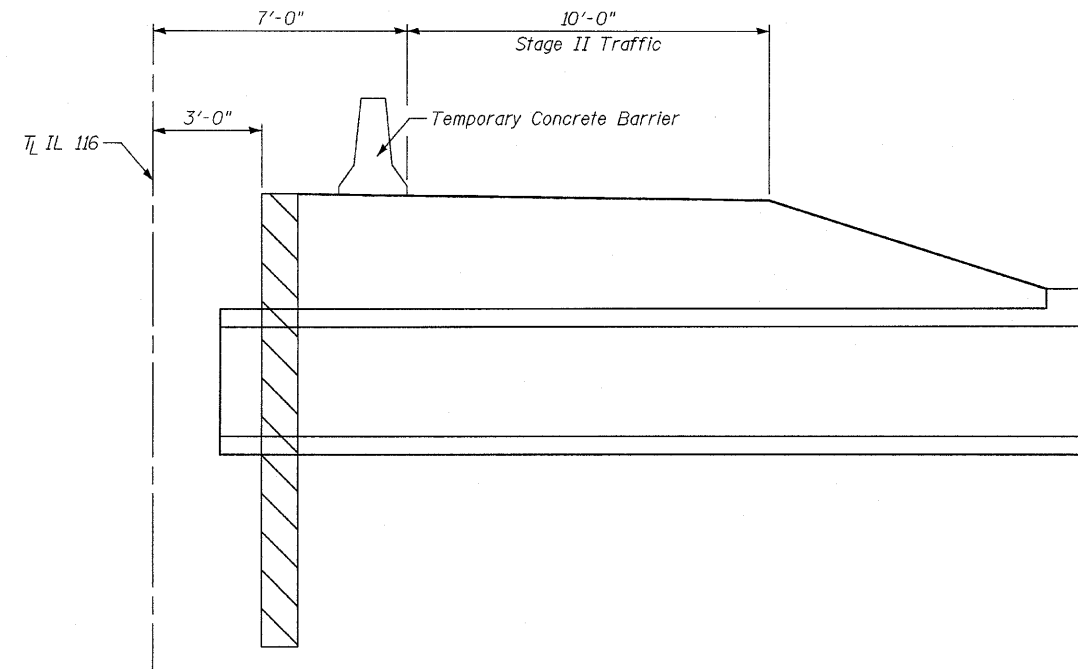
STAGE II TEMPORARY SHEET PILING

* At Rt. L's to new box culvert.

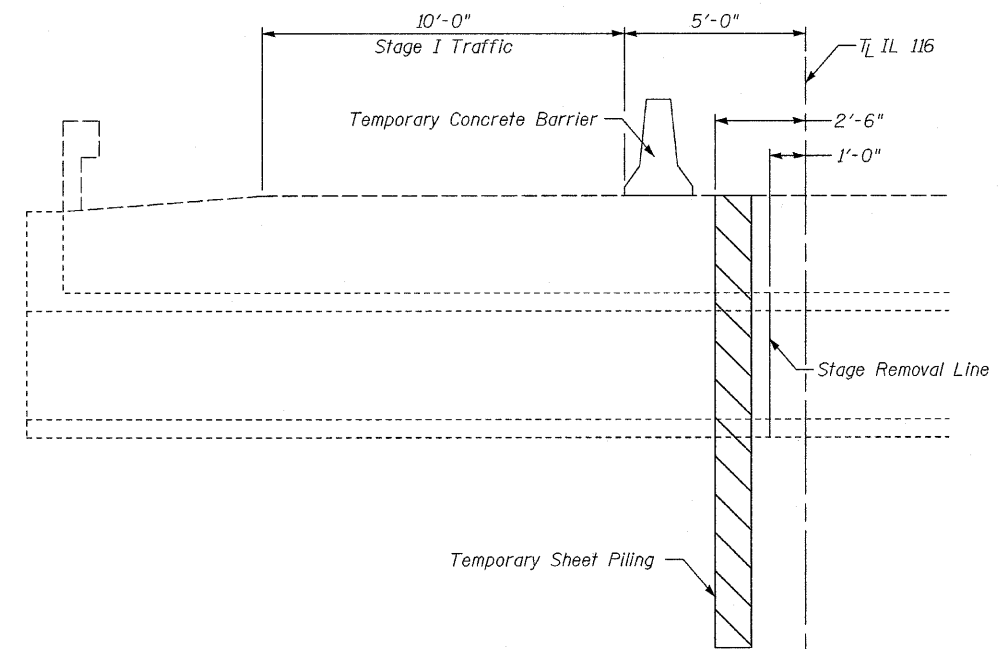


STAGE I TEMPORARY SHEET PILING

* At Rt. L's to new box culvert.



STAGE II
(Looking East)



STAGE I
(Looking East)

SUMMARY OF QUANTITIES FOR BOX CULVERT

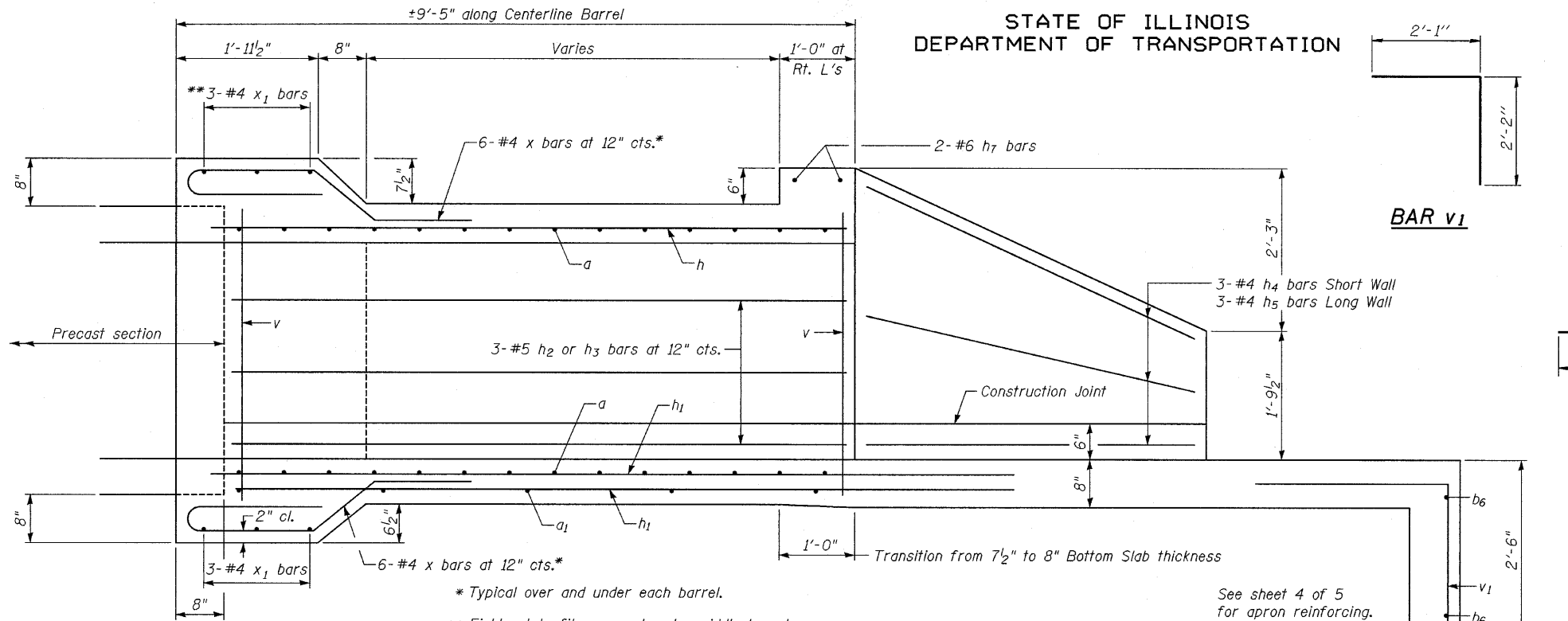
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu Yd	241
Remove Existing Culverts	Each	1
Reinforcement Bars	Pound	6060
Temporary Sheet Piling	Sq Ft	713
Concrete Box Culverts	Cu Yd	41.1
Precast Concrete Box Culvert 5'x3'	Foot	108
Temporary Soil Retention System	Sq Ft	76
Grating for Concrete Headwalls	Each	2

**STAGE CONSTRUCTION DETAILS &
TOTAL BILL OF MATERIALS
STRUCTURE NO. 053-2576**

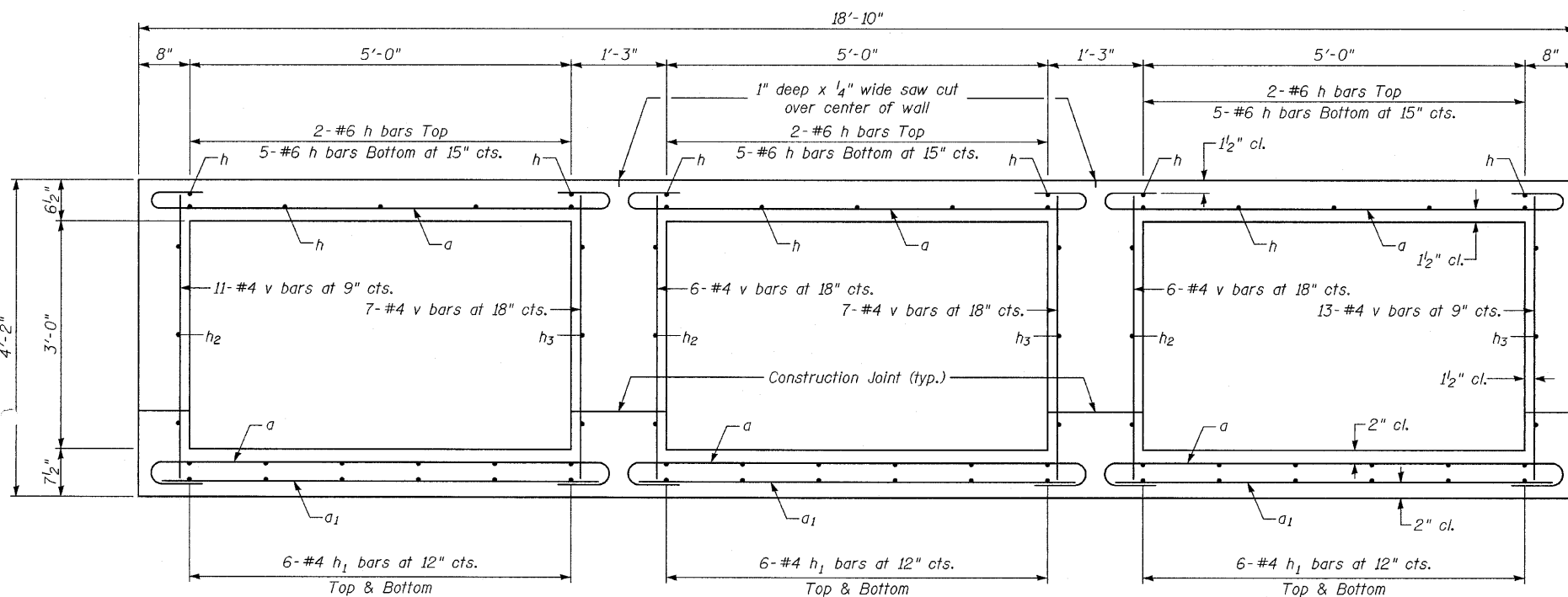
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CHECKED	AJO
DRAWN	LAG
CHECKED	JKC

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	681	(115)I	LIVINGSTON	20	11
5 SHEETS	CONTRACT NO. 66870				
ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

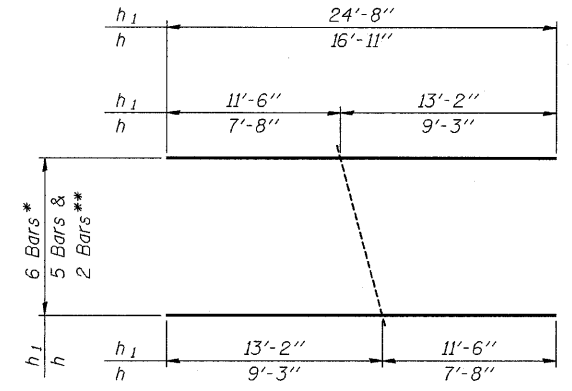
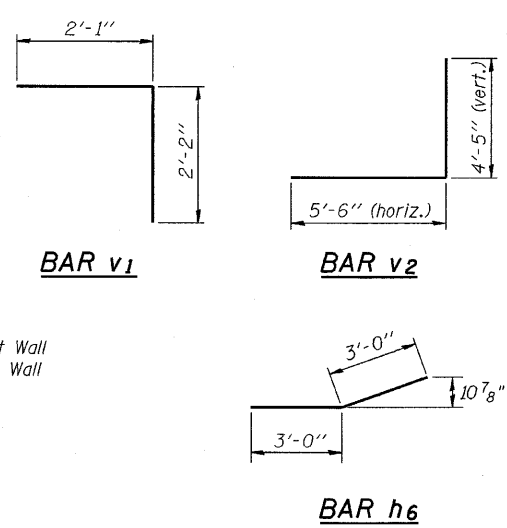


LONGITUDINAL SECTION



SECTION THRU BARREL

(Looking away from roadway)



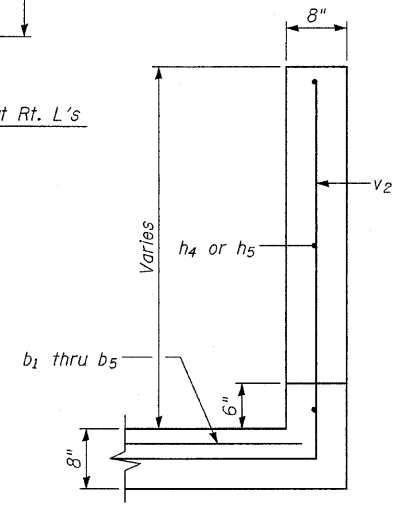
* Repeat 6 times for bottom bars below each barrel.
** Repeat both 3 times for top slab. Use remainder at opposite end of box.

BAR CUTTING DIAGRAM BAR h & h₁

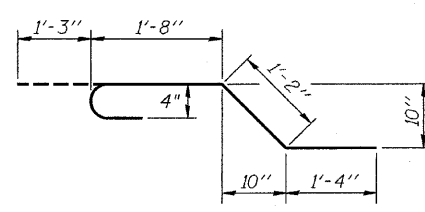
BILL OF MATERIAL
(2 CAST-IN-PLACE ENDS)

Bar	No.	Size	Length	Shape
a	180	#7	7'-4"	U
a ₁	30	#4	5'-8"	—
b ₁	2	#4	19'-7"	—
b ₂	2	#4	20'-8"	—
b ₃	2	#4	21'-8"	—
b ₄	2	#4	22'-9"	—
b ₅	2	#4	23'-10"	—
b ₆	4	#4	24'-6"	—
h	21	#6	16'-11"	—
h ₁	36	#4	24'-8"	—
h ₂	18	#6	7'-8"	—
h ₃	18	#6	9'-3"	—
h ₄	6	#4	8'-0"	—
h ₅	6	#4	9'-6"	—
h ₆	12	#5	6'-0"	—
h ₇	12	#6	6'-0"	—
v	100	#4	3'-10"	—
v ₁	32	#4	4'-3"	—
v ₂	32	#5	9'-11"	L
x	92	#4	5'-5"	—
x ₁	36	#4	6'-4"	—
x ₂	12	#4	5'-0"	—
Concrete Box Culverts			Cu. Yd.	41.1
Reinforcement Bars			Pound	6060

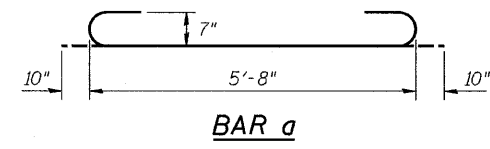
See sheet 4 of 5 for additional details.



SECTION THRU WINGWALL



BARS x



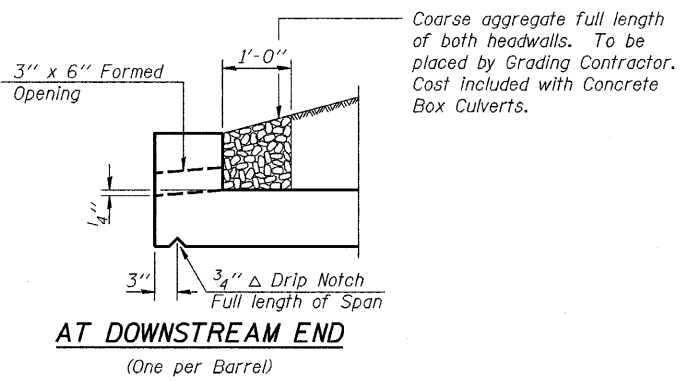
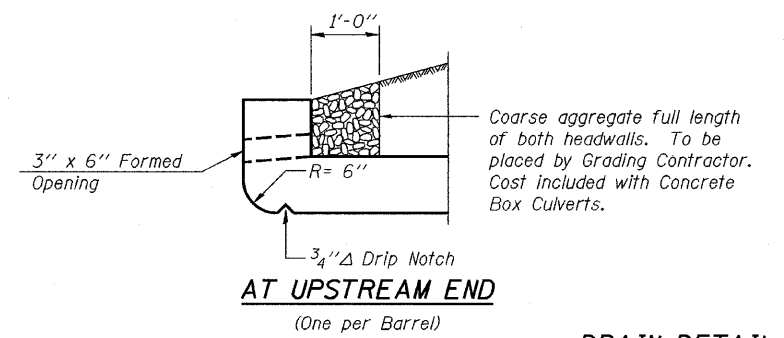
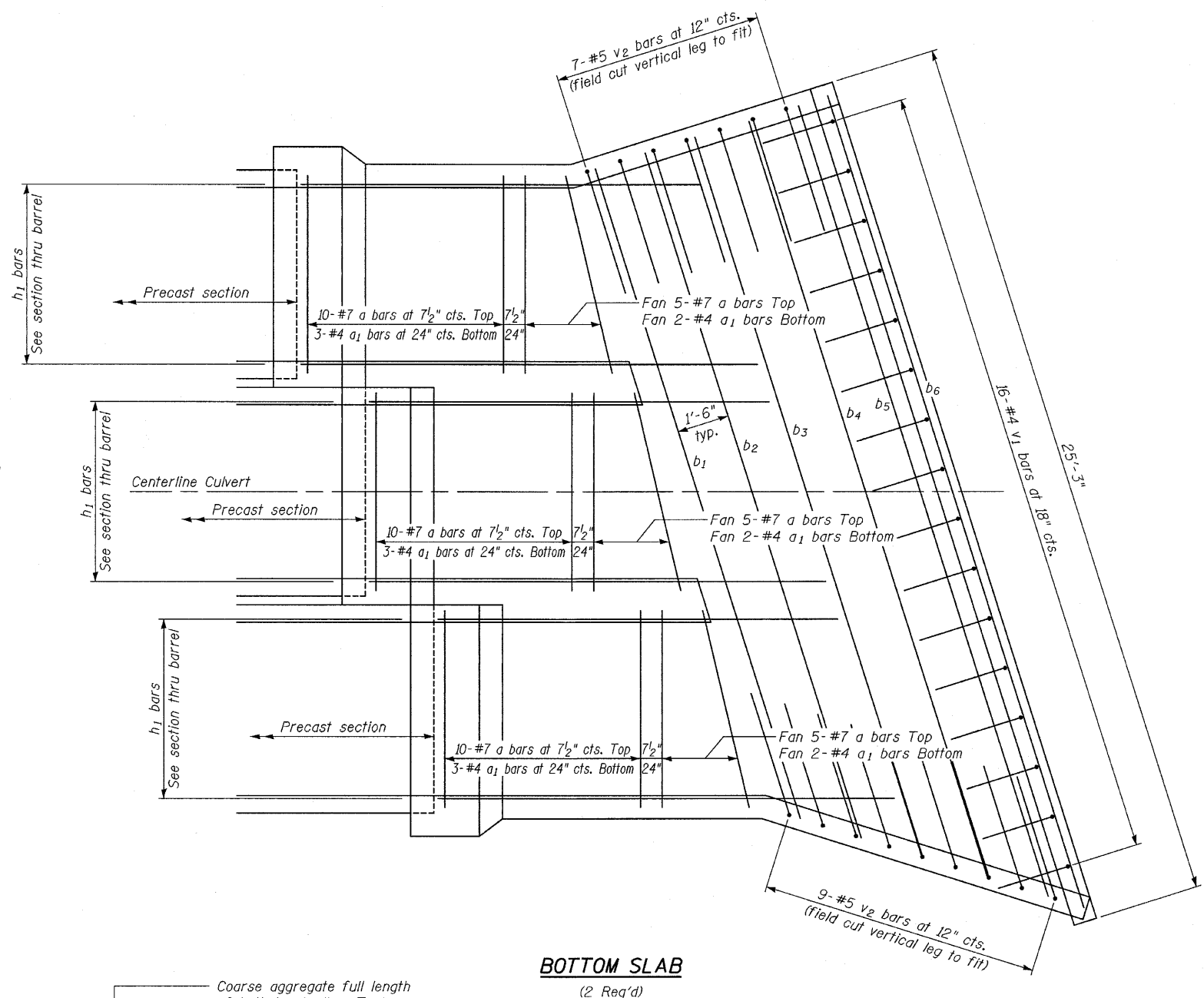
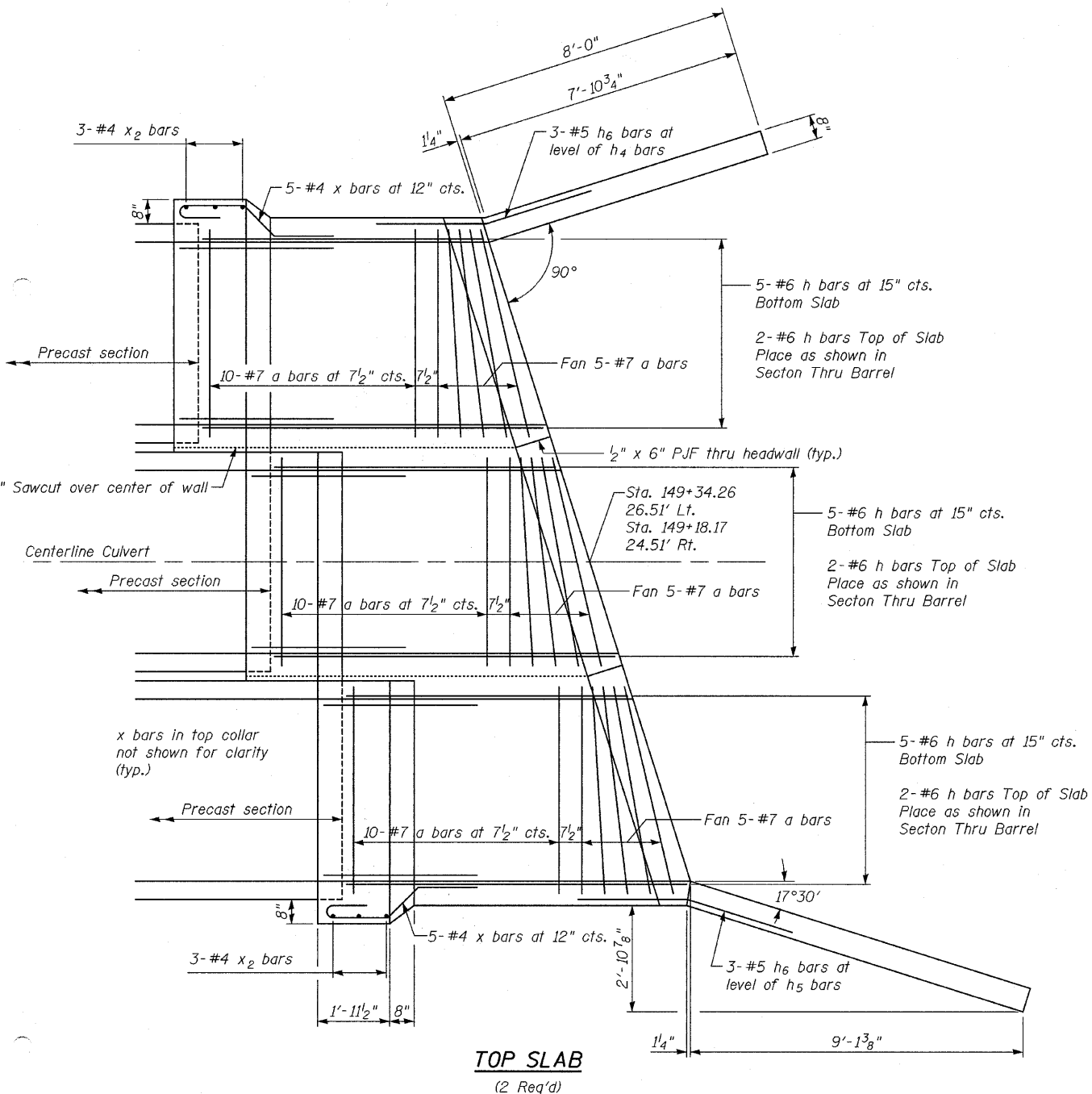
BAR a

BOX CULVERT DETAILS
STRUCTURE NO. 053-2576

DESIGNED	JKC
CHECKED	AJO
DRAWN	LAG
CHECKED	JKC

SHEET NO. 3 5 SHEETS	F.A.P. RTE. 681	SECTION (115)I	COUNTY LIVINGSTON	TOTAL SHEETS 20	SHEET NO. 12
	CONTRACT NO. 66870				
ILLINOIS FED. AID PROJECT					

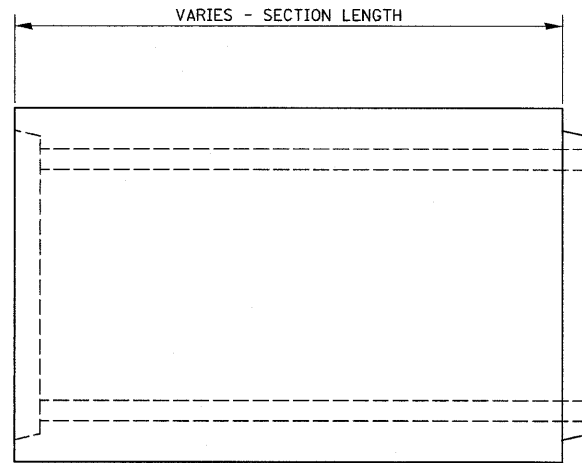
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



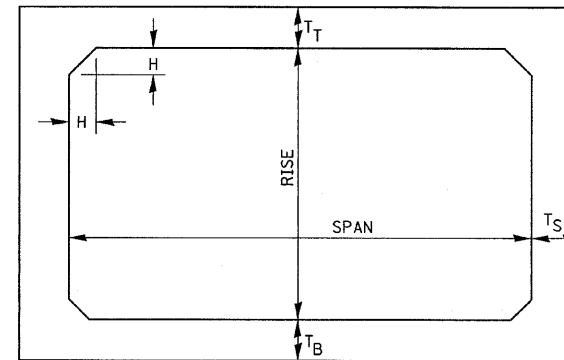
DESIGNED	JKC
CHECKED	AJO
DRAWN	LAG
CHECKED	JKC

BOX CULVERT DETAILS
STRUCTURE NO. 053-2576

SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	681	(115)I	LIVINGSTON	20	13
5 SHEETS	CONTRACT NO. 66870			ILLINOIS FED. AID PROJECT	



ELEVATION



NOTE: THE HAUNCH DIMENSION H, IS EQUAL TO THE WALL THICKNESS T_S.

TYPICAL BOX SECTION

SPAN, FEET	T _T , INCHES		T _B , INCHES		T _S , INCHES	
	M 259	M 273	M 259	M 273	M 259	M 273
3	4	7	4	6	4	4
4	5	7 1/2	5	6	5	5
5	6	8	6	7	6	6
6	7	8	7	7	7	7
7	8	8	8	8	8	8
8	8	8	8	8	8	8
9	9	9	9	9	9	9
10	10	10	10	10	10	10
11	11	11	11	11	11	11
12	12	12	12	12	12	12

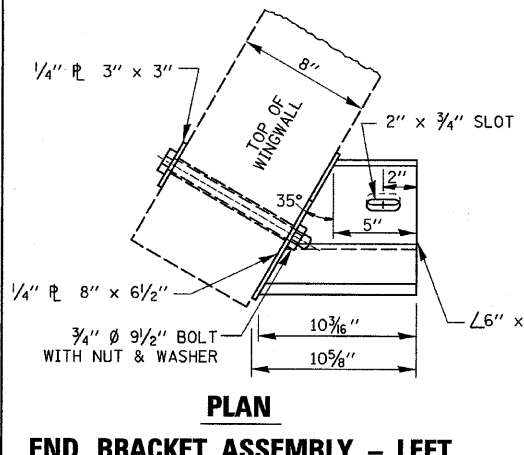
TYPICAL THICKNESSES

GENERAL NOTES:

MINIMUM COVER FOR BOX
CULVERTS SHALL BE 6".

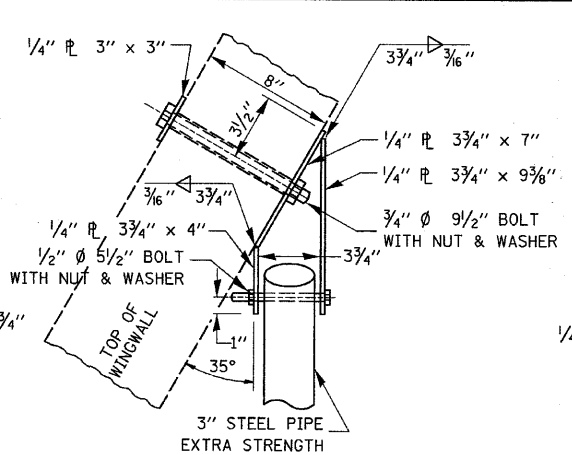
540-15

FILE NAME = 0366870-SHT-DETAILS.DGN	USER NAME = ---	DESIGNED - JKC	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS PRECAST CONCRETE BOX SECTION			F.A.P. RTE. 681	SECTION (115)I	COUNTY LIVINGSTON	TOTAL SHEETS 20	SHEET NO. 15
		DRAWN - NV	REVISED - ---		SCALE: NONE	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 66870				
		CHECKED - JKC	REVISED - ---		ILLINOIS FED. AID PROJECT							
		PLOT DATE = 01/10	REVISED - ---									



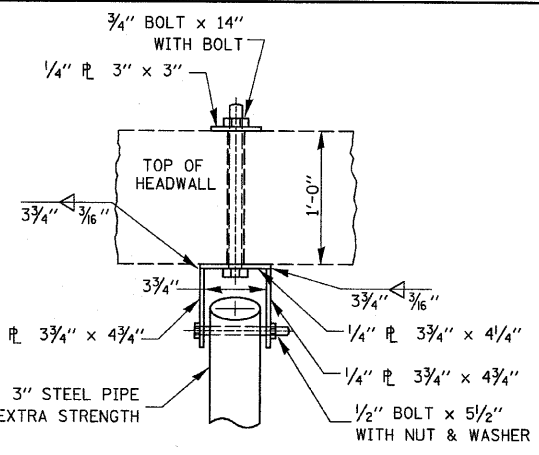
PLAN

END BRACKET ASSEMBLY - LEFT



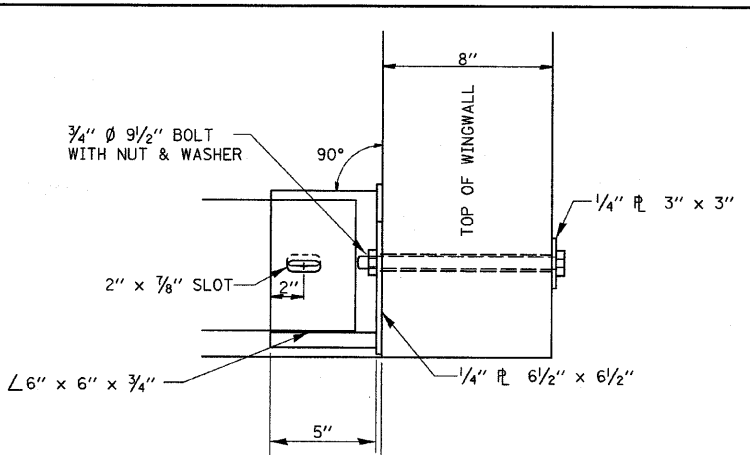
PLAN

WINGWALL BRACKET ASSEMBLY - LEFT



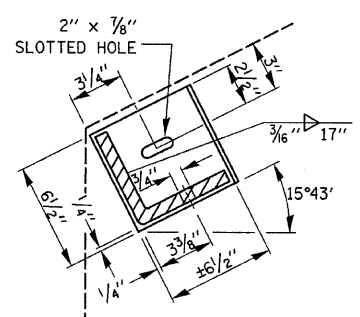
PLAN

HEADWALL BRACKET ASSEMBLY

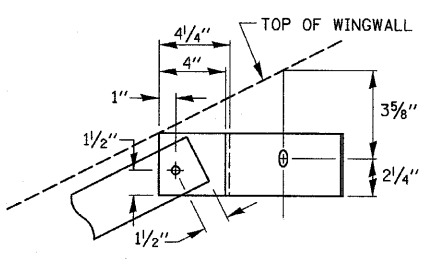


PLAN

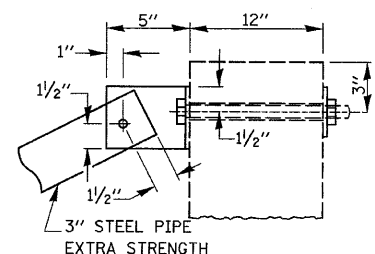
END BRACKET ASSEMBLY - RIGHT



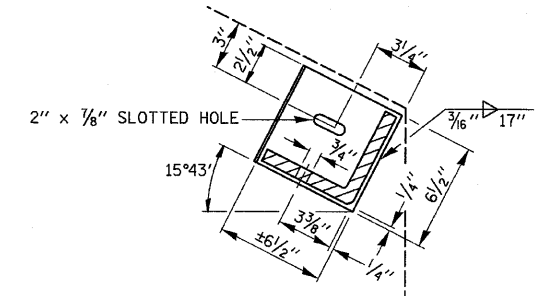
SECTION THRU
DETAIL A



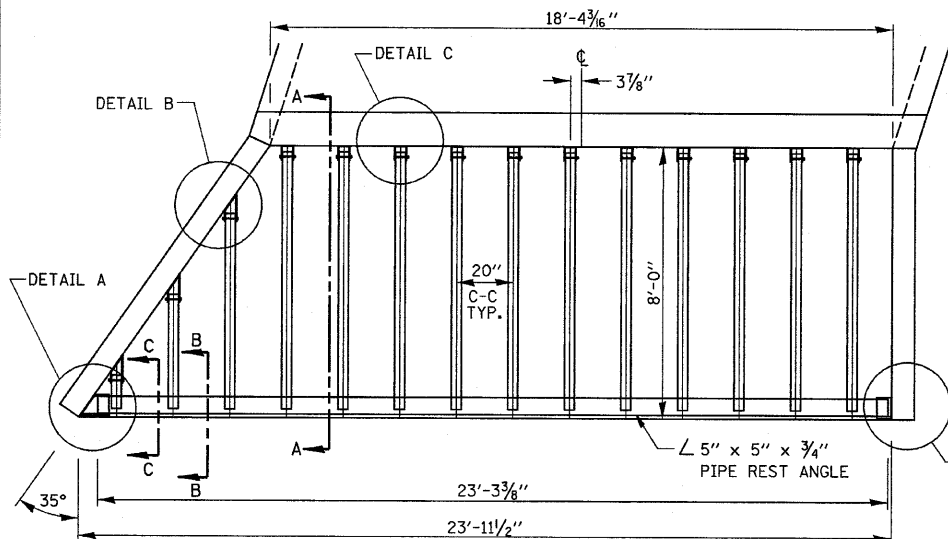
SECTION THRU
DETAIL B



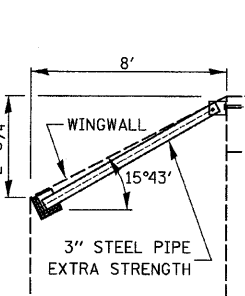
SECTION THRU
DETAIL C



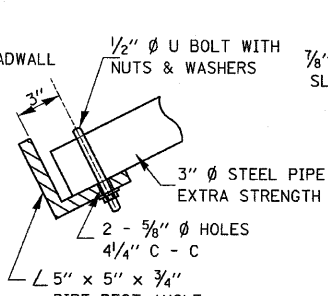
SECTION THRU
DETAIL E



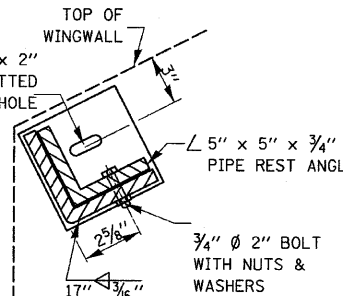
PLAN VIEW



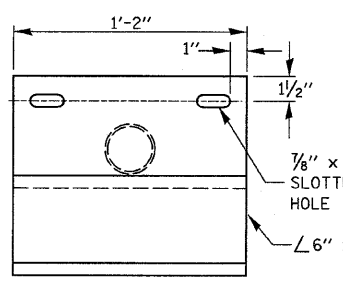
SECTION A-A



SECTION B-B

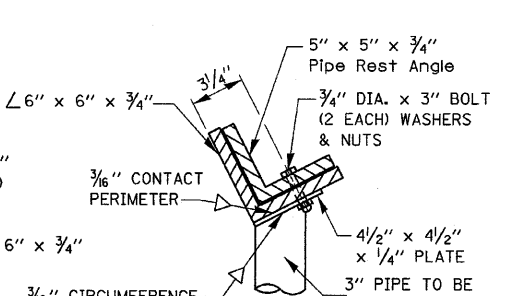


SECTION C-C

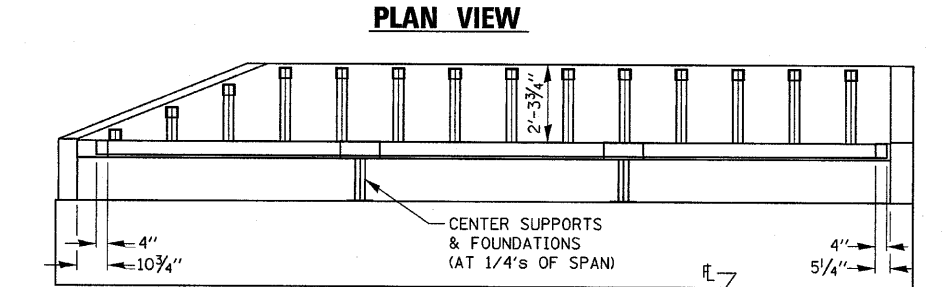


PLAN VIEW OF SUPPORT

3" STEEL PIPE, EXTRA STRENGTH
x 2' LONG TO BE
CUT TO FIT IN THE FIELD



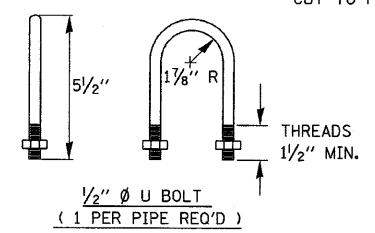
END VIEW OF SUPPORT



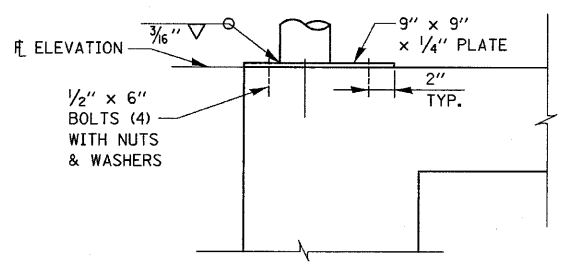
ELEVATION VIEW

GENERAL NOTES

BOLTS AND NUTS SHALL CONFORM TO ASTM A 307.
ALL BOLTS SHALL HAVE WASHERS AT EACH END.
HOLES SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED EXCEPT IN CONCRETE WHICH SHALL BE 1/8" OVERSIZE.
ANGLES AND STEEL PLATES SHALL CONFORM TO AASHTO M183.
STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B OR ASTM A 501.
STEEL PIPES, ANGLES AND PLATES SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF AASHTO M111.
BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF AASHTO M232.
THE APPROXIMATE WEIGHT OF STEEL, 3470 POUNDS, INCLUDES PLATES, ANGLES, AND PIPES. BOLTS, NUTS AND WASHERS ARE NOT INCLUDED.
ALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD.
CUTTING OF THE EXTRA STRENGTH PIPE AND ANGLES TO THE EXACT LENGTHS AND DRILLING HOLES IS TO BE DONE IN THE FIELD.
THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE "EACH" FOR GRATING FOR CONCRETE HEADWALLS IN PLACE, AND SHALL INCLUDE FABRICATION PAINTING, CENTER SUPPORTS WHEN REQUIRED, AND INSTALLATION OF THE GRATING AS DETAILED.

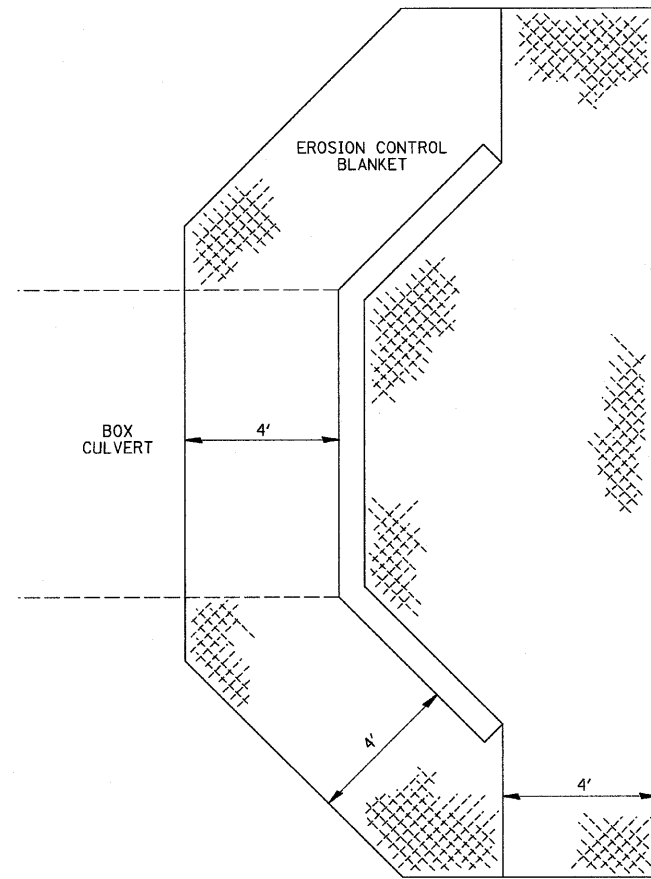


1/2" Ø U BOLT
(1 PER PIPE REQ'D)



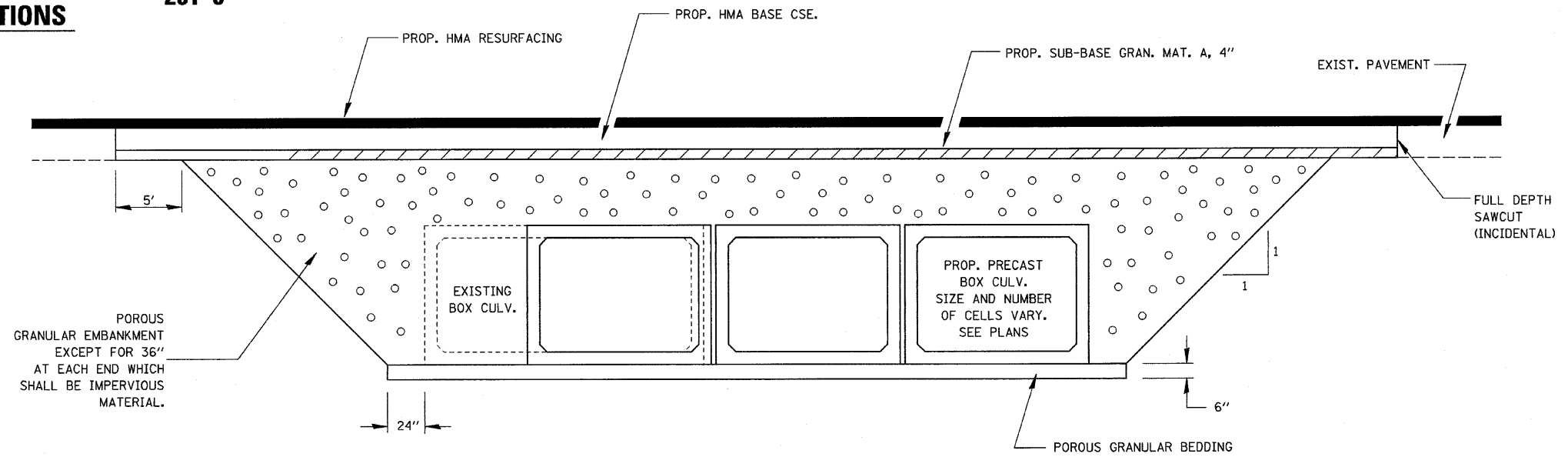
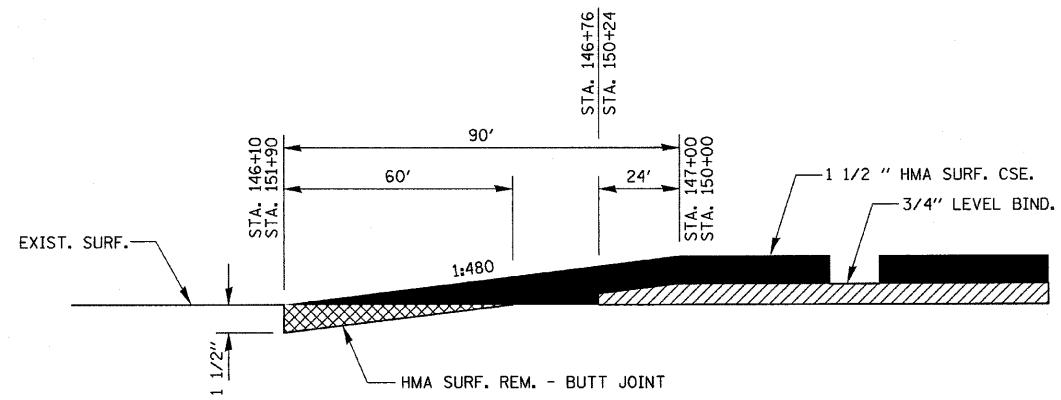
CENTER SUPPORTS

FILE NAME = 0366870-SHT-DETAILS.DGN	USER NAME = ---	DESIGNED - JKC	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS GRATING FOR CULVERTS WITH WINGWALLS		F.A.P. RTE. 681	SECTION (115)I	COUNTY LIVINGSTON	TOTAL SHEETS 20	SHEET NO. 16	
PLOT SCALE = 1"=1'	CHECKED - JKC	DRAWN - NV	REVISED - ---		SCALE: NONE	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 66870		ILLINOIS FED. AID PROJECT		
PLOT DATE = 01/10	DATE - 01/10	REVISOR - ---	REVISED - ---									



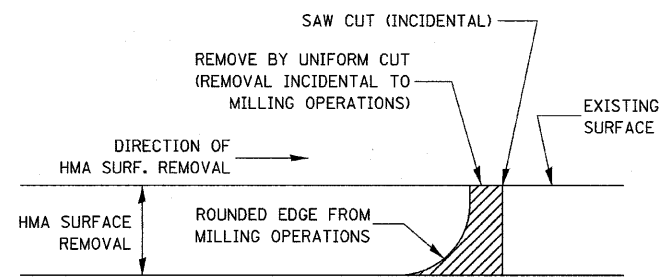
**EROSION CONTROL BLANKET
AT BOX CULVERT END SECTIONS**

251-3



SECTION THROUGH PRECAST BOX CULVERT

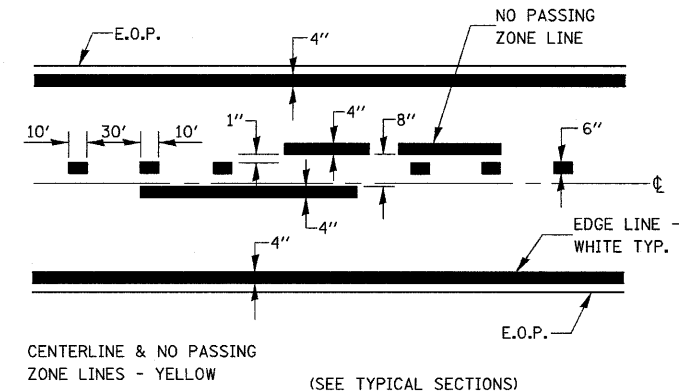
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	PLOT DATE = 01/10	CHECKED - JKC	REVISED - ---			STA. _____ TO STA. _____					
		DATE - 01/10	REVISED - ---								



NOTE:
 WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

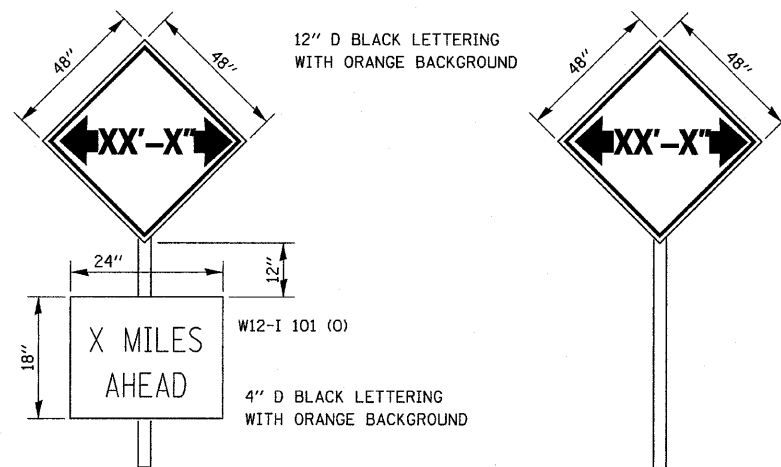
HMA DETAIL AT BUTT JOINTS

406-8



PAVEMENT MARKING

780-8



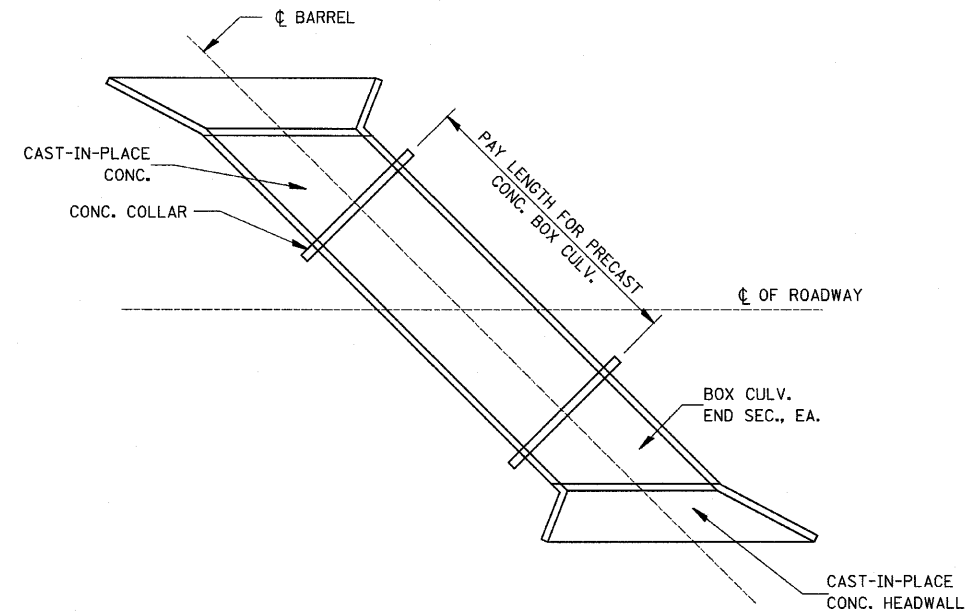
TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

WIDTH RESTRICTION SIGNING DETAILS 701-6



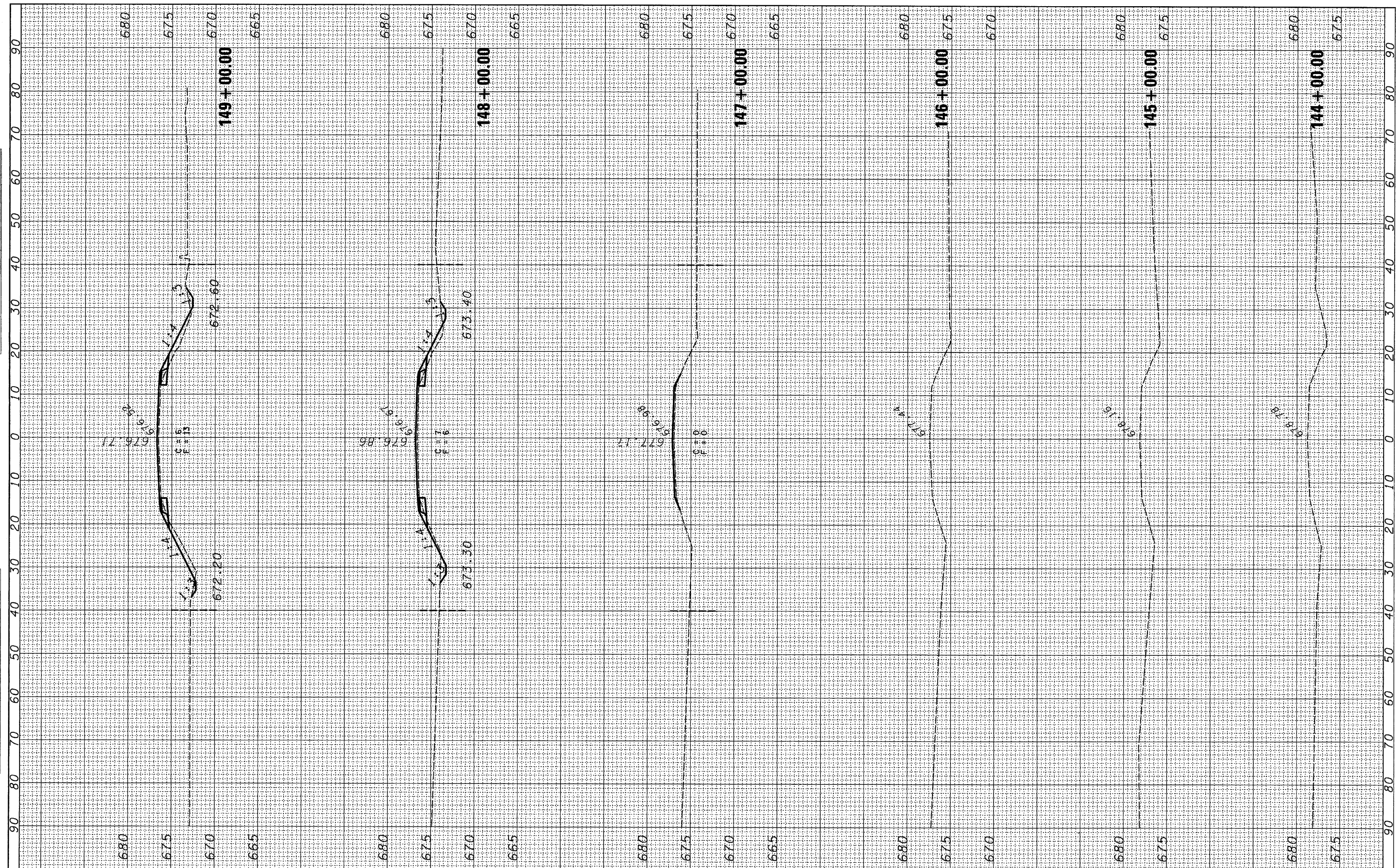
PAY LENGTH FOR PRECAST CONCRETE BOX CULVERT SKEWED WITH ROADWAY

N.T.S.

FILE NAME = 0366878-SHT-DETAILS.DGN	USER NAME = ---	DESIGNED - JKC	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1"=1'	DRAWN - NV	REVISED - ---					681	(115)I	LIVINGSTON	20	18
	PLOT DATE = 01/10	CHECKED - JKC	REVISED - ---		SCALE: NONE SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____			CONTRACT NO. 66870				
		DATE - 01/10	REVISED - ---		ILLINOIS FED. AID PROJECT							

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

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



FILE NAME = D366878-SHT-XSSHT.DGN
 USER NAME = --

DESIGNED - JKC	REVISED -
DRAWN - LAG	REVISED -
CHECKED - JKC	REVISED -
DATE - 04/10	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

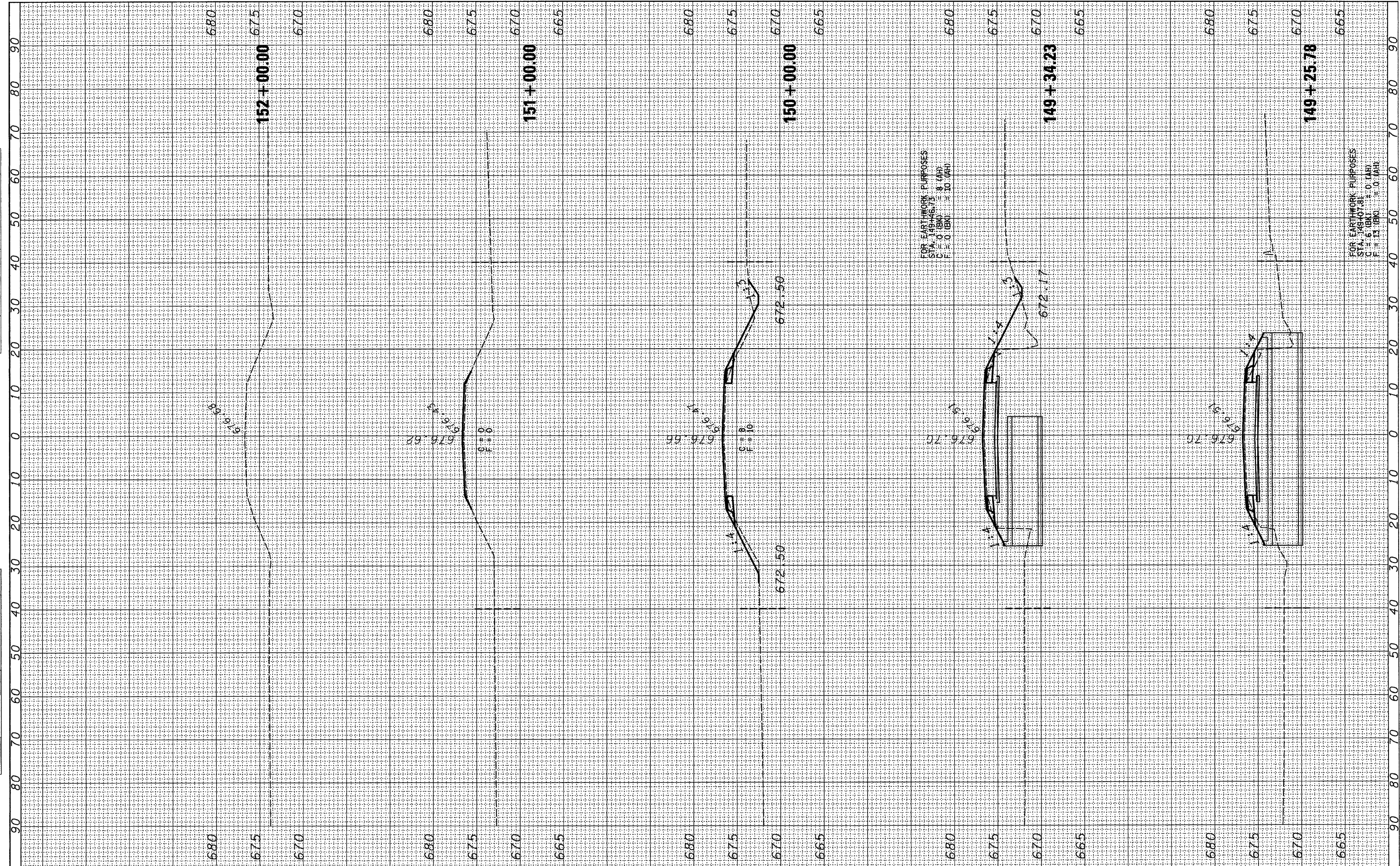
CROSS SECTIONS

SCALE: 1"=10' SHEET NO. 17 OF 19 SHEETS STA. 144+00.00 TO STA. 149+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(115)I	LIVINGSTON	20	19
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66870	

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED



FOR EARTHWORK PURPOSES
 STA. 149+46.73
 C = 0 (BK) = 8 (AH)
 F = 0 (BK) = 10 (AH)

FOR EARTHWORK PURPOSES
 STA. 149+07.81
 C = 6 (BK) = 0 (AH)
 F = 13 (BK) = 0 (AH)

FILE NAME = D366870-SHT-XSSHT.DGN
 USER NAME = ---
 PLOT SCALE = 1"=10'
 PLOT DATE = 04/10

DESIGNED - JKC	REVISED -
DRAWN - LAG	REVISED -
CHECKED - JKC	REVISED -
DATE - 04/10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
 SCALE: 1"=10' SHEET NO. 18 OF 19 SHEETS STA. 149+25.78 TO STA. 152+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(115)I	LIVINGSTON	20	20
CONTRACT NO. 66870				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				