04-28-2017 LETTING ITEM 079

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	1
	ILLINOIS	CONTRACT NO. 66E25		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

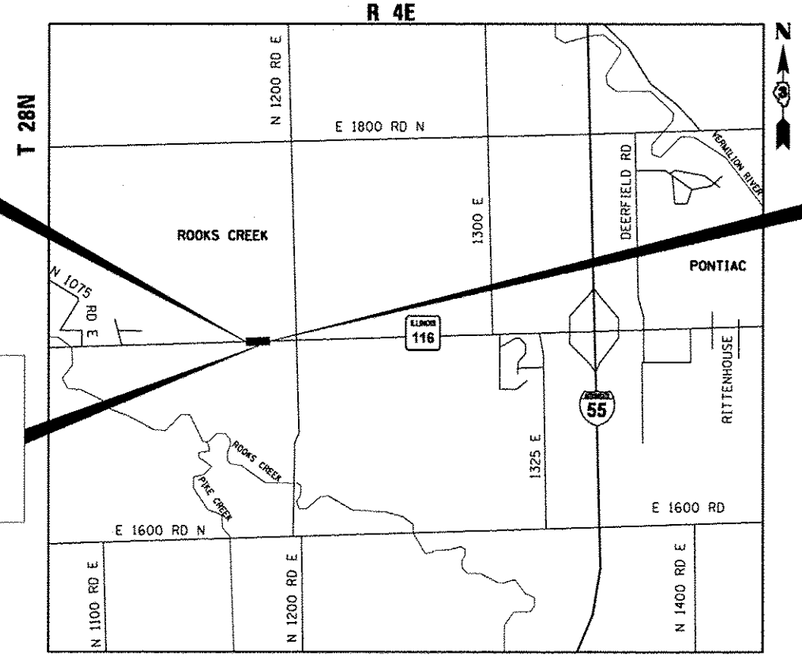
PROPOSED HIGHWAY PLANS

F.A.P. 673 ROUTE (IL 116)
SECTION 112C3
PROJECT STP-0673(028)
REMOVAL AND REPLACEMENT OF BOX CULVERT AND ROADWAY RECONSTRUCTION
LIVINGSTON COUNTY

INDEX OF SHEETS

FOR LIST OF STANDARDS, SEE SHEET NO. 2

C-93-090-16
R 4E



PROJECT BEGINS STA 901+00

PROJECT IS LOCATED ON IL 116, APPROXIMATELY 1.7 MILES WEST OF I-55

STA. 902+57
EX. SN 053-2549
PR. SN 053-2581
7'x2' SINGLE BARREL PRECAST CONCRETE BOX CULVERT

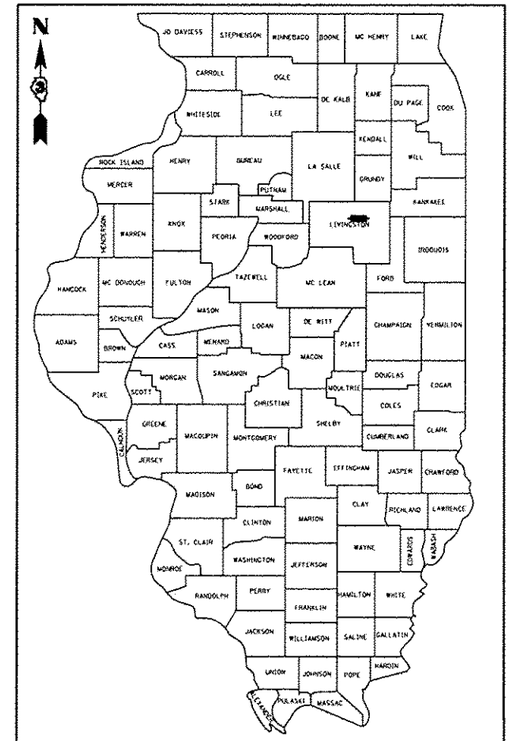
PROJECT ENDS STA 904+00

LOCATION MAP

0 2000' 4000' 6000'

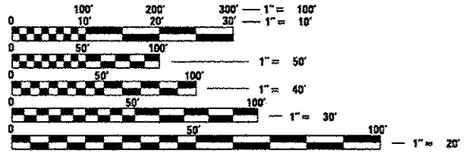
GROSS LENGTH = 300 FT. = 0.057 MILE
NET LENGTH = 300 FT. = 0.057 MILE

P-93-020-15
D-93-045-16



LOCATION OF SECTION INDICATED THUS: –

FUNCTIONAL CLASSIFICATION
MINOR ARTERIAL
(CLASS II TRUCK ROUTE)
2016 ADT=3251
P.V.=85.7% S.U.=7.3% M.U.=7.0%



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 2-3 20 17
Kevin Marchek P.E.
REGIONAL ENGINEER

Mar 24 20 17
Maureen M. Addis P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

Mar 24 20 17
DIRECTOR OF PROGRAM DEVELOPMENT

PROJECT ENGINEER: DAVE ALEXANDER, P.E.
UNIT CHIEF: RUTH GEDYE
DISTRICT 3 NO. (815) 434-6131
CONTRACT NO. 66E25

SDI ENGINEERING CORP.
www.sdiengr.com

OLUFEMI A. OLADEINDE
#062-063701
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS

Signed: Olufemi A. Oladeinde 02-02-2017
OLUFEMI A. OLADEINDE Date
LICENSE EXPIRES 11-30-2017

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV

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.

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

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

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

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID SEPARATELY BUT WILL 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 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 WILL 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
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
AGGREGATE DITCH CHECKS	5	TONS AGGREGATE

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: COM ED AND FRONTIER COMMUNICATIONS.

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

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
542311-06	TRAVERSABLE PIPE GRATE
666001-01	RIGHT-OF-WAY MARKERS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEED ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEED ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY
701901-06	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS MARKERS & DELINEATORS
780001-05	TYPICAL PAVEMENT MARKING
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

COMMITMENTS

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

1. THE RESIDENT ENGINEER SHALL COORDINATE WITH THE LIVINGSTON COUNTY HIGHWAY DEPARTMENT AND MR. JEFF BRESSNER, ROOK CREEK HIGHWAY COMMISSIONER, TO PERFORM AN INSPECTION OF TOWNSHIP ROADS PARALLEL TO ILLINOIS 116 AND WITHIN THE PROJECT VICINITY BEFORE AND AFTER THE DETOUR IS IN EFFECT TO DOCUMENT THE ROAD CONDITION AND TO DETERMINE IF ANY DAMAGE TO THE LOCAL SYSTEM CAN BE ATTRIBUTED TO THE STATE MARKED DETOUR BEING IN PLACE.

2. DISTRICT CONSTRUCTION STAFF WILL COORDINATE THE CLOSURE WITH IDOT REGION 3.

3. THE STATE MARKED DETOUR IS ALLOWED TO BE IN PLACE DURING THE SUMMER PERIOD OF JUNE 15, 2017 THROUGH JULY 31, 2017 WITH A CLOSURE LIMITED TO 10 CONSECUTIVE CALENDAR DAYS.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE
AS BUILT INFORMATION

SUPERVISING CONSTRUCTION FIELD ENGINEER

RESIDENT ENGINEER / TECHNICIAN

START & END DATES OF CONSTRUCTION:

INSPECTORS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: _____
DISTRICT STUDIES & PLANS ENGINEER

DATE: 2-3-17

EXAMINED BY: _____
DISTRICT CONSTRUCTION ENGINEER

_____
DISTRICT MATERIALS ENGINEER

_____
DISTRICT OPERATIONS ENGINEER

FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com

USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - SD	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND HIGHWAY STANDARDS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	2
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

CONSTRUCTION CODE
80120
FED/STATE
BOX CULVERT
0004
S.N. 053-2581

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
20200100	EARTH EXCAVATION	CU YD	190	190
20700220	POROUS GRANULAR EMBANKMENT	CU YD	36	36
20800150	TRENCH BACKFILL	CU YD	21	21
25000210	SEEDING, CLASS 2A	ACRE	0.50	0.50
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	24	24
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	24	24
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	24	24
25100630	EROSION CONTROL BLANKET	SQ YD	1,287	1,287
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	27	27
28000305	TEMPORARY DITCH CHECKS	FOOT	80	80
28100107	STONE RIPRAP, CLASS A4	SQ YD	45	45
28200200	FILTER FABRIC	SQ YD	45	45
31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	55	55
35501318	HOT-MIX ASPHALT BASE COURSE, 8 1/2"	SQ YD	107	107
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	320	320

15

* SPECIALTY ITEM

FILE NAME = $FILE$

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USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - AA	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - QAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
613	112C3	LIVINGSTON	28	3

CONTRACT NO. 66E25

ILLINOIS FED. AID PROJECT

REV

CONSTRUCTION CODE
80/20 FED / STATE
BOX CULVERT
0004
S.N. 053-2581

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	704	704
40600525	LEVELING BINDER (HAND METHOD), N50	TON	0.5	0.5
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	44	44
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	87	87
44000100	PAVEMENT REMOVAL	SQ YD	107	107
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	925	925
44004250	PAVED SHOULDER REMOVAL	SQ YD	36	36
48101200	AGGREGATE SHOULDERS, TYPE B	TON	35	35
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	36	36
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1
51500100	NAME PLATES	EACH	1	1
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2
54010702	PRECAST CONCRETE BOX CULVERT 7' X 2'	FOOT	39	39
54260311	TRAVERSABLE PIPE GRATE	FOOT	47	47
55100300	STORM SEWER REMOVAL, 8"	FOOT	98	98

* SPECIALTY ITEM

FILE NAME = $FILE1$

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USER NAME = $USER$	DESIGNED - JL	REVISED -
	DRAWN - AA	REVISED -
PLOT SCALE = $SCALE$	CHECKED - 040	REVISED -
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	4
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

REV

CONSTRUCTION CODE
80/20 FED / STATE
BOX CULVERT
0009
S. N. 053-2581

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
61100500	EXPLORATION TRENCH 52" DEPTH	FOOT	98	98
61100605	MISCELLANEOUS CONCRETE	CU YD	1.1	1.1
61101011	STORM SEWERS PROTECTED, CLASS A, 10"	FOOT	93	93
61133200	FIELD TILE JUNCTION VAULTS, 3' DIA.	EACH	2	2
63200310	GUARDRAIL REMOVAL	FOOT	294	294
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	8	8
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	2
67100100	MOBILIZATION	L SUM	1	1
72900200	METAL POST - TYPE B	FOOT	14	14
• 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,200	1,200
• 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	160	160
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4
X0322128	MEMBRANE WATERPROOFING FOR BURIED STRUCTURES	SQ YD	53.5	53.5
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
Z0018700	DRAINAGE STRUCTURE TO BE REMOVED	EACH	1	1

15

* SPECIALTY ITEM

FILE NAME = $FILE$

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USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - AA	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - QAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	5
		CONTRACT NO. 66E25		
ILLINOIS FED. AID PROJECT				

REV

CONSTRUCTION CODE
80/20
FED/STATE
BOX CULVERT
0004
S.N. 053-2581

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42	42

* SPECIALTY ITEM

FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com

USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - AA	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

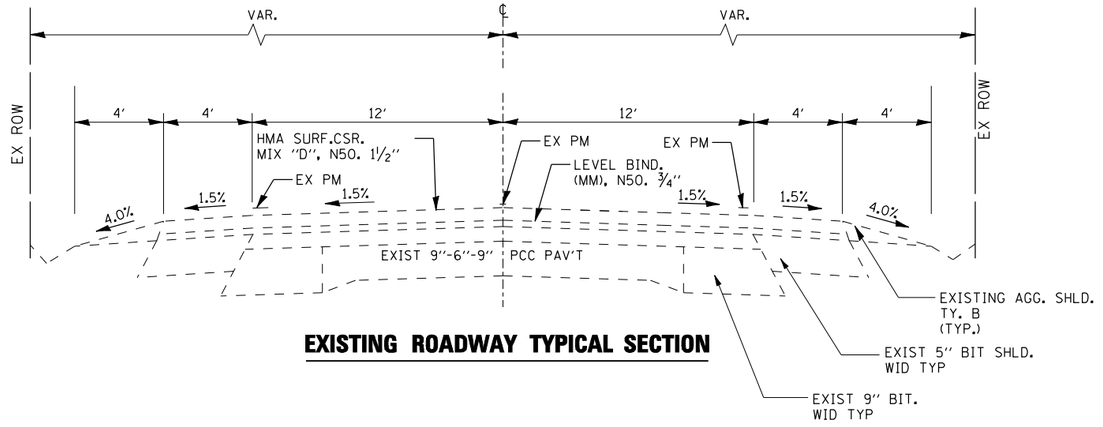
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

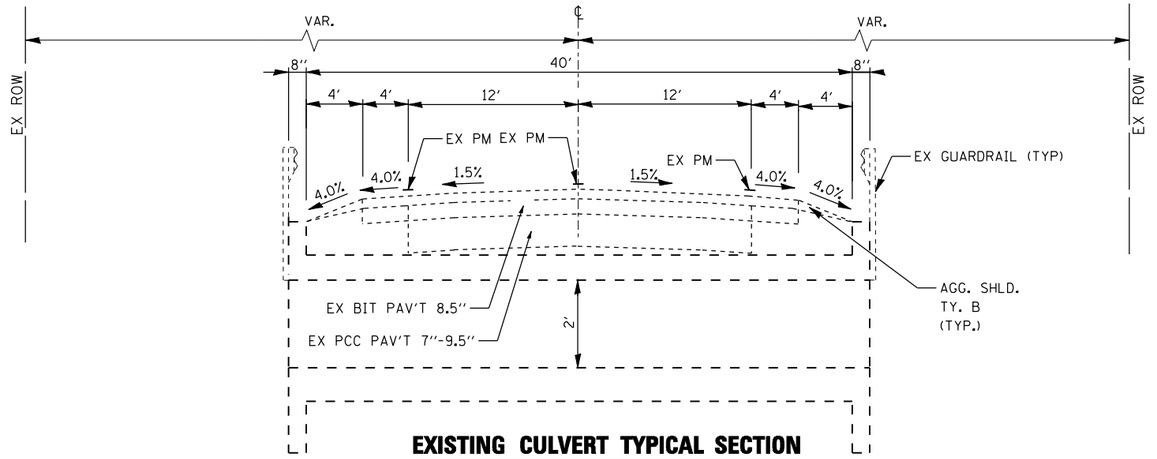
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	6
		CONTRACT NO. 66E25		
ILLINOIS FED. AID PROJECT				

REV

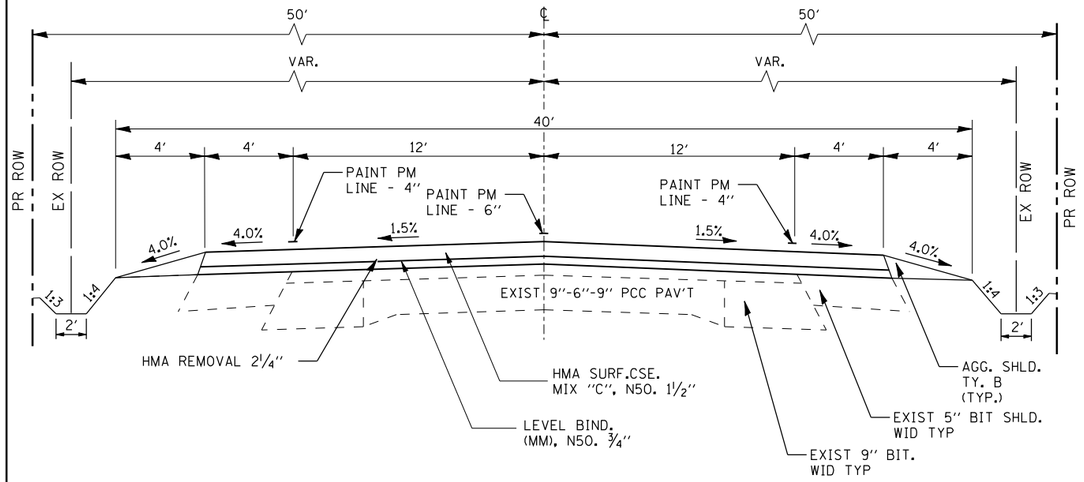


EXISTING ROADWAY TYPICAL SECTION



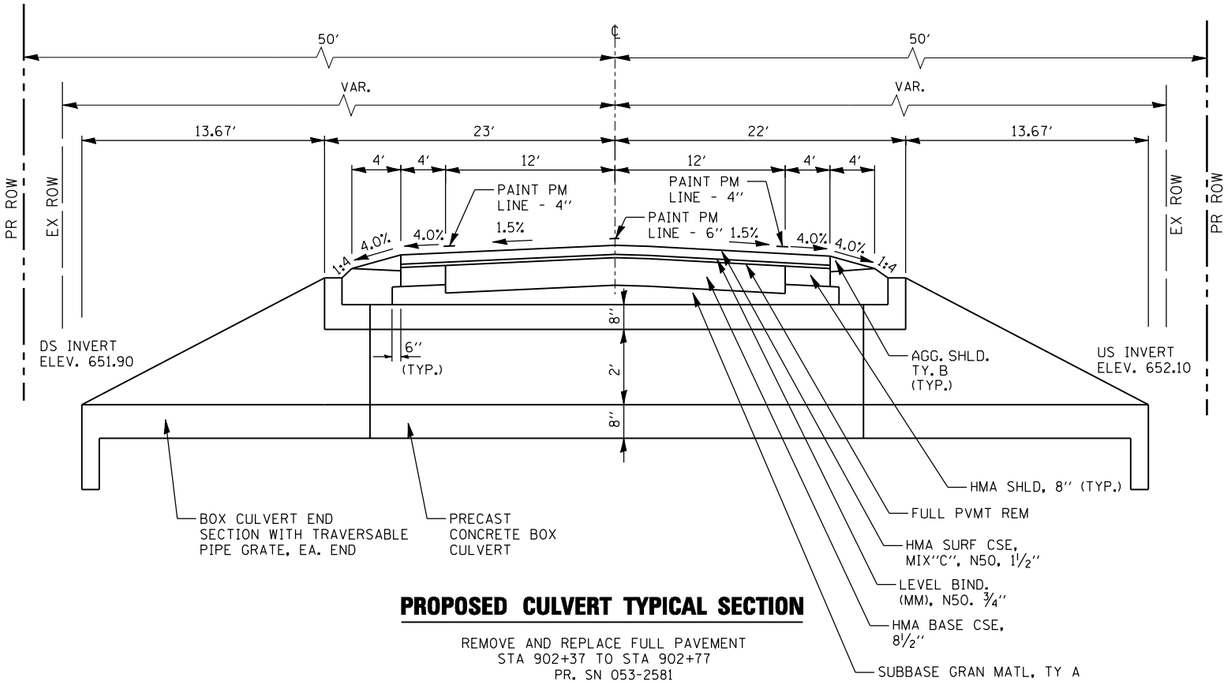
EXISTING CULVERT TYPICAL SECTION

EX. SN 053-2549



PROPOSED ROADWAY TYPICAL SECTION

REMOVE AND REPLACE PAVEMENT SURFACE 2¼"
STA 901+00 TO STA 902+37
STA 902+77 TO STA 904+00



PROPOSED CULVERT TYPICAL SECTION

REMOVE AND REPLACE FULL PAVEMENT
STA 902+37 TO STA 902+77
PR. SN 053-2581

NOTE: SEE SHEET NO. 23 FOR LIMITS OF POROUS GRANULAR EMBANKMENT

HMA MIXTURE REQUIREMENT TABLE

LOCATION(S):	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT
MIXTURE USE(S):	HMA SURFACE COURSE	HMA LEVELING BINDER	HMA SHOULDER BOTTOM LIFT	HMA SHOULDER TOP LIFT	HMA BASE COURSE
BINDER GRADE (PG):	PG64-22	PG64-22	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS:	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5	IL 9.5	IL 19.0	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIXTURE C				
MIXTURE WEIGHT:	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN
QUALITY MANAGEMENT PROGRAM:	QCQA	QCQA	QCQA	QCQA	QCQA
SUBLOT SIZE:	N/A	N/A	N/A	N/A	N/A
DENSITY TEST METHOD:	CORES	SATISFACTION OF THE ENGINEER	CORES	CORES	CORES

FILE NAME = $FILE1$

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USER NAME = $USER$	DESIGNED - JL	REVISED -
	DRAWN - SD	REVISED -
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	7
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

EARTHWORK				
LOCATION	EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR 25% SHRINKAGE	EMBANKMENT	BALANCE WASTE (+) SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
STA 901+00 TO STA 904+00	190	142.5	106	36.5
TOTAL	190	142.5	106	36.5

POROUS GRANULAR EMBANKMENT	
LOCATION	CU YD
STA 902+47.5 TO STA 902+52.8	18
STA 902+61.2 TO STA 902+66.5	18
TOTAL	36

AGGREGATE SHOULDER, TYPE B	
LOCATION	TON
STA 901+00 LT TO STA 904+00 LT	17.5
STA 901+00 RT TO STA 904+00 RT	17.5
TOTAL	35

GUARDRAIL REMOVAL	
LOCATION	FOOT
STA 901+83.5 LT TO STA 903+30.5 LT	147
STA 901+83.5 RT TO STA 903+30.5 RT	147
TOTAL	294

PAVEMENT REMOVAL ITEMS			
LOCATION	PAVEMENT REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	PAVED SHOULDER REMOVAL
	SQ YD	SQ YD	SQ YD
STA 901+00 TO STA 902+37		487	
STA 902+37 TO STA 902+77	107		36
STA 902+77 TO STA 904+00		438	
TOTAL	107	925	36

FURNISHING AND ERECTING RIGHT OF WAY MARKERS		
LOCATION		EACH
STA 901+00	39.81' LT	1
STA 901+50	50' LT	1
STA 903+50	50' LT	1
STA 904+00	40.17' LT	1
STA 901+00	40.19' RT	1
STA 901+50	50' RT	1
STA 903+50	50' RT	1
STA 904+00	39.83' RT	1
TOTAL		8

PAVEMENT MARKINGS				
LOCATION	DESCRIPTION	PAINT PAVEMENT MARKING - LINE 4"	PAINT PAVEMENT MARKING - LINE 6"	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
		FOOT	FOOT	EACH
STA 901+00 LT TO STA 904+00 LT	SOLID WHITE	600		
STA 901+00 RT TO STA 904+00 RT	SOLID WHITE	600		
STA 901+00 CT TO STA 904+00 CT	SKIP-DASH YELLOW		160	4
TOTAL		1200	160	4

NOTE:

PAVEMENT MARKING QUANTITIES ARE FOR TWO SEPARATE APPLICATIONS.

EXISTING PAVEMENT MARKING WILL BE RECORDED BY ENGINEER BEFORE ANY PAVEMENT REMOVAL OR SURFACE REMOVAL AND REPLACED IN THE SAME LOCATION.

PAVING MATERIALS								
LOCATION	SUBBASE GRANULAR MATERIAL, TYPE A	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (TACK COAT)	LEVELING BINDER (HAND METHOD), N50	LEVELING BINDER (MACHINE METHOD), N50	HOT-MIX ASPHALT SHOULDERS, 8"	HOT-MIX ASPHALT BASE COURSE, 8 1/2"	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
	TON	POUND	POUND	TON	TON	SQ YD	SQ YD	TON
STA 901+00 TO STA 902+37			329			21		41
STA 902+77 TO STA 904+00			295			18		36
STA 902+37 TO STA 902+77	55	320	80			5	107	9
STA 901+00 TO STA 904+00				0.5	44			87
TOTAL	55	320	704	0.5	44	44	107	87

LANDSCAPING ITEMS						
LOCATION	SEEDING, CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	TEMPORARY EROSION CONTROL SEEDING	METAL POST - TYPE B
	ACRE	POUND	POUND	POUND	POUND	FOOT
STA 901+00 LT TO STA 904+00 LT	0.25	12	12	12	13	7
STA 901+00 RT TO STA 904+00 RT	0.25	12	12	12	14	7
TOTAL	0.50	24	24	24	27	14

TREATMENT OF EXISTING FIELD TILE SYSTEM							
LOCATION	DRAINAGE STRUCTURE TO BE REMOVED	TRENCH BACKFILL	STORM SEWER REMOVAL 8"	EXPLORATION TRENCH 52" DEPTH	MISCELLANEOUS CONCRETE	STORM SEWERS PROTECTED, CLASS A, 10"	FIELD TILE JUNCTION VAULT, 3' DIA.
	EACH	CU YD	FOOT	FOOT	CU YD	FOOT	EACH
STA 902+59.50		21	98	98	0.55 (36' LT)	93	1 (45' LT)
STA 902+69.50	1 (35' RT)				0.55 (35' RT)		1 (45' LT)
TOTAL	1	21	98	98	1.1	93	2

EROSION CONTROL ITEMS		
LOCATION	EROSION CONTROL BLANKET	TEMPORARY DITCH CHECKS
	SQ YD	FOOT
STA 901+00 LT TO STA 904+00 LT	630	
STA 901+00 RT TO STA 904+00 RT	657	
STA 901+40 32' LT		10
STA 901+40 32' RT		10
STA 902+46 36' LT		10
STA 902+46 36' RT		10
STA 902+68 36' LT		10
STA 902+68 36' RT		10
STA 903+80 32' LT		10
STA 903+80 32' RT		10
TOTAL	1287	80

FILE NAME = $FILE1$

SDI ENGINEERING CORP. www.sdiengr.com

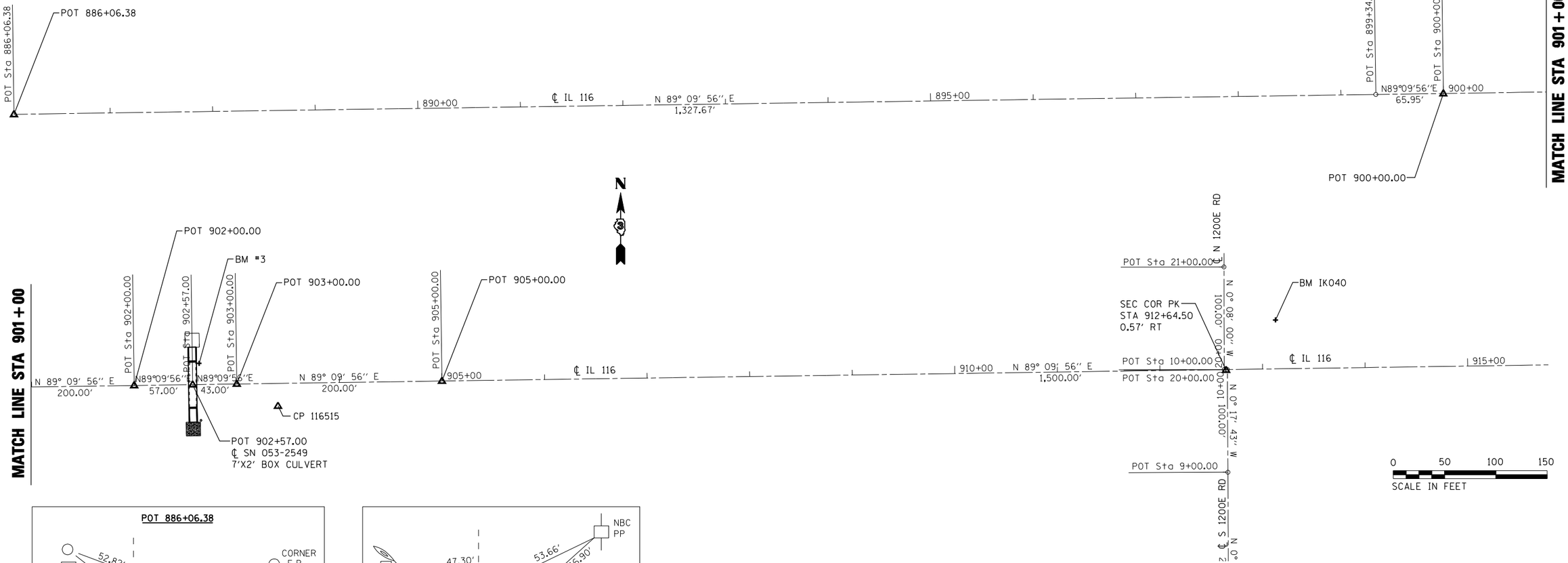
USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - AA/JL	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

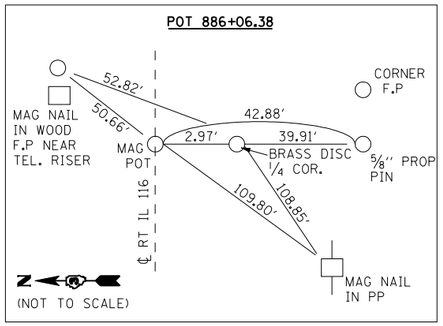
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

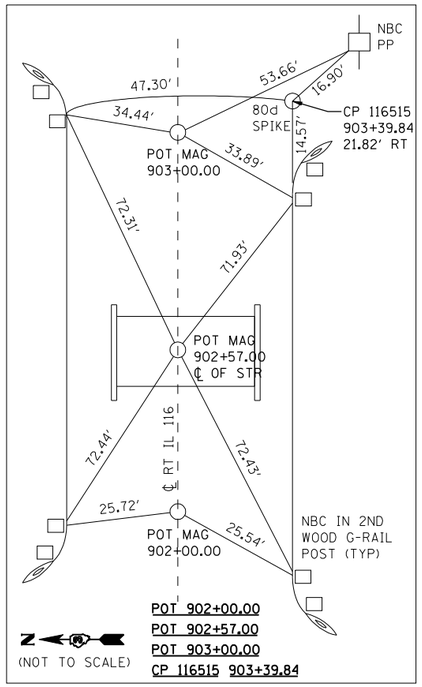
SCHEDULE OF QUANTITIES

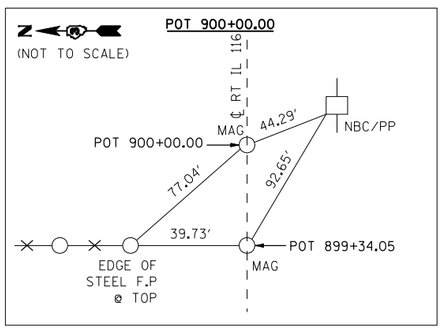
SCALE: | SHEET OF SHEETS | STA. TO STA.

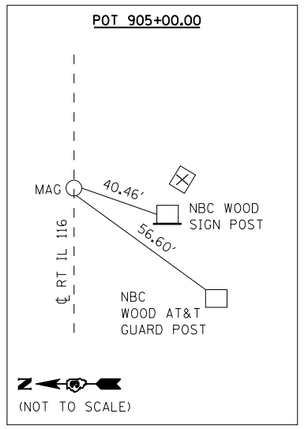
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	8
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

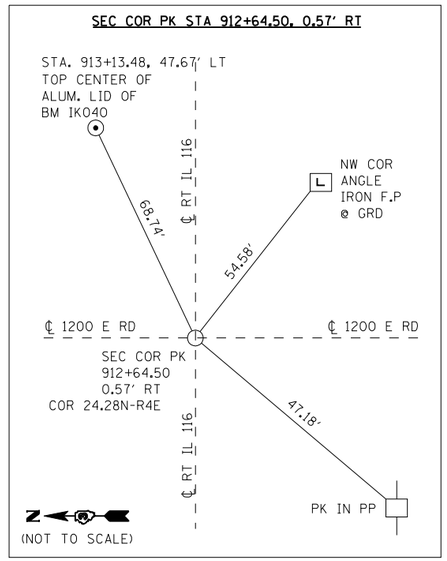












BM #3
STA 902+63.53, 20.58′ LT
CHIS "□" NE QUAD OF WINGWALL
ELEVATION= 655.365

BM IK040
STA 913+13.48, 47.67′ LT
SS ROD UNDER ALUM. CAP
NE QUAD OF IL 116 & 1200E
ELEVATION= 657.034

FILE NAME = $FILE1$

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USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - JL	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	9
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

HMA SURFACE REMOVAL, 2¼"

PAVEMENT REMOVAL

EX GUARDRAIL REMOVAL
PR DITCH ℄
CONSTRUCTION LIMITS
PR AGG SHLD
PR HMA SHLD
901+50 50' LT
901+00 39.81' LT
BEGIN IMPROVEMENT STA 901+00.00
PR ROW
EX FIELD TILE 10"
TRAVERSABLE PIPE GRATE
STORM SEWER REMOVAL 8"
JV-2
METAL POST - TYPE B
PR SS PROTECTED, CLASS A, 10" 93 LF @ 0.75%
903+50 50' LT
904+00 40.17' LT
END IMPROVEMENT STA 904+00.00
EX ROW
EX DITCH ℄
VAR.
4'
12'
EX AND PR ℄ IL 116
900+00
901+00
902+00
903+00
904+00
905+00
BM#3
+37
+77
CP 116515
901+00 40.19' RT
903+50 50' RT
904+00 39.83' RT
METAL POST - TYPE B
℄ EX SN 053-2549
STA 902+57.00
7' X 2' SINGLE BARREL BOX CULVERT
℄ PR SN 053-2581
STA 902+57.00
7' X 2' SINGLE BARREL PRECAST CONC. BOX CULVERT
EX FIELD TILE 5"
JV-1
DRAINAGE STRUCTURE TO BE REMOVED
EX GUARDRAIL REMOVAL

JV-1
PR JUNCTION VAULT, 3' DIA
W/ CLOSE LID
STA 902+71.8, 47' RT
RIM 655.00
INV 652.90 (SE)
INV 650.40 (NW)

JV-2
PR JUNCTION VAULT, 3' DIA
W/ CLOSE LID
STA 902+60.30, 47' LT
RIM 652.20
INV 649.70 (S)
INV 649.50 (N)

N

0 20 40 60
SCALE IN FEET

PLAN
SURVEYED
PLOTTED
CHANGES CHECKED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

BM#3
STA 902+63.53, 20.58' LT
CHIS "□" NE QUAD OF WINGWALL
ELEVATION= 655.365

BEGIN IMPROVEMENT STA 901+00.00
END IMPROVEMENT STA 904+00.00
656.04
655.97
EX P.G.L. ℄
PR P.G.L. ℄
+37
+77
MEET EX DITCH
-0.30%
+0.30%
RT DITCH
LT DITCH
INVERT
US 650.40
DS 649.70
EX SS AND FIELD TILE
PR SS PROTECTED, CLASS A, 10"

660 658 656 654 652 650 648 646 644

	LT DITCH	RT DITCH	EX	PR
900+00	655.95			
900+50		656.00		
901+00			656.04	656.04
901+50			656.07	656.07
902+00			656.10	656.10
902+50			656.14	656.14
903+00			656.05	656.05
903+50			656.01	656.01
904+00			655.97	655.97
904+50			655.97	
905+00			655.97	
905+50			656.02	

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	DRAWN - AA / JL	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

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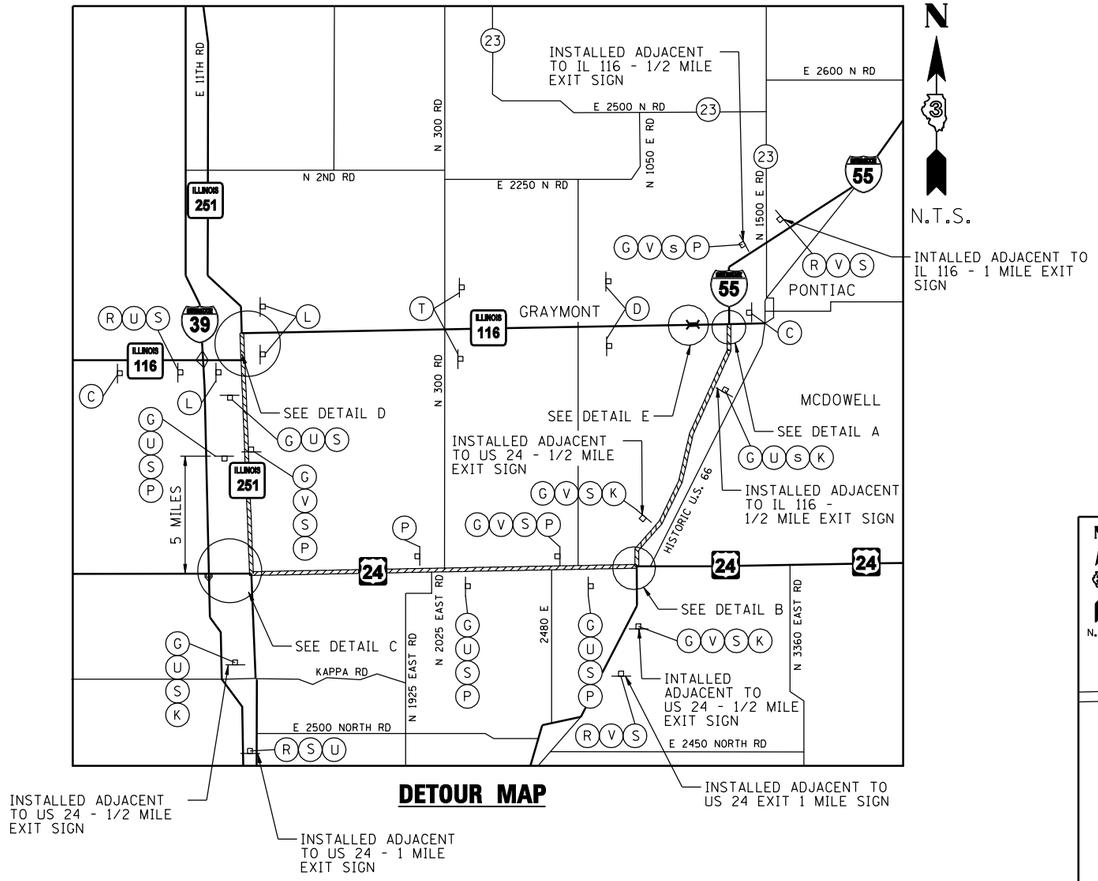
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

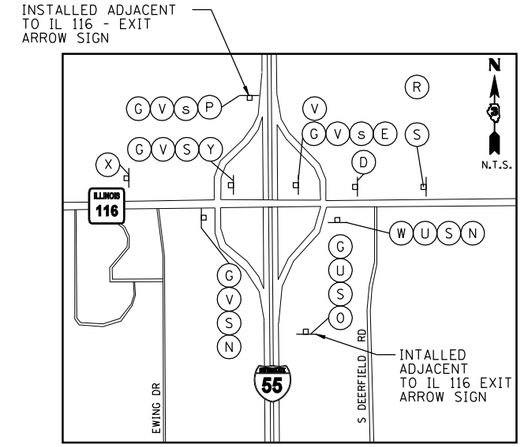
PLAN AND PROFILE SHEET

SCALE: | SHEET OF SHEETS | STA. 900+00.00 TO STA. 905+00.00

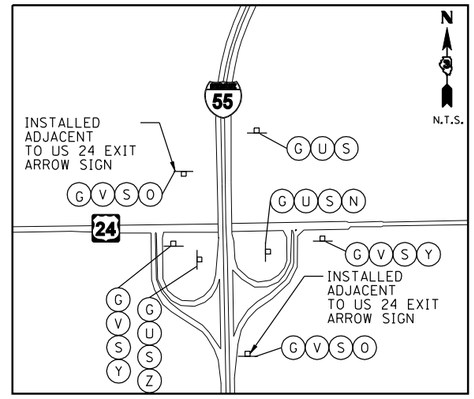
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTONE	28	10
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			



DETOUR MAP



DETAIL A



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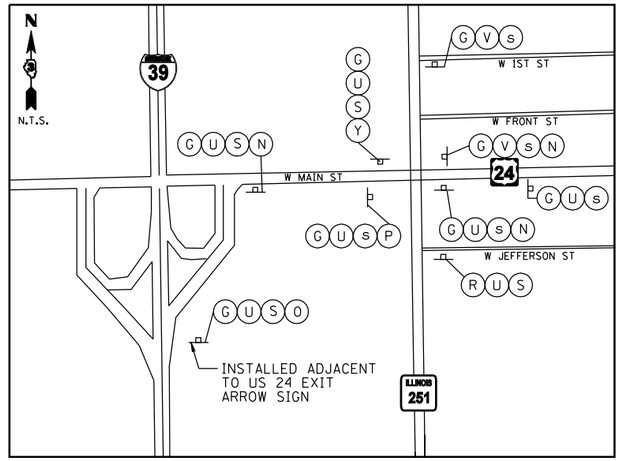
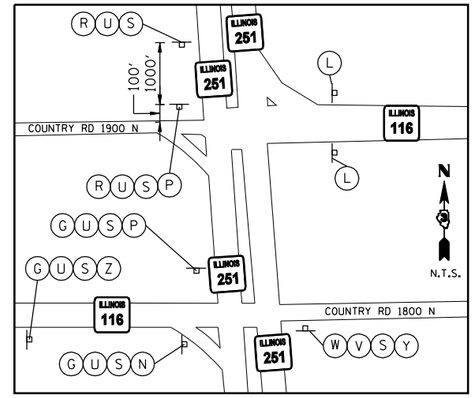
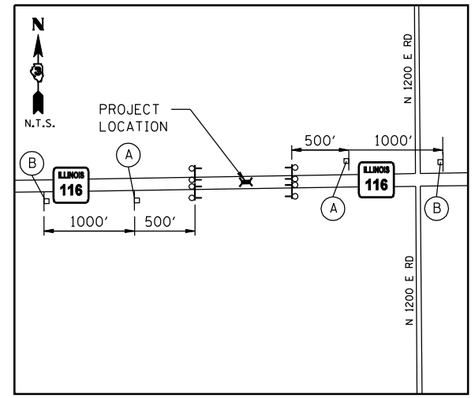


DETAIL C



DETAIL D



DETAIL E

NOTES

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.

ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED. UNLESS OTHERWISE NOTED.

LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.

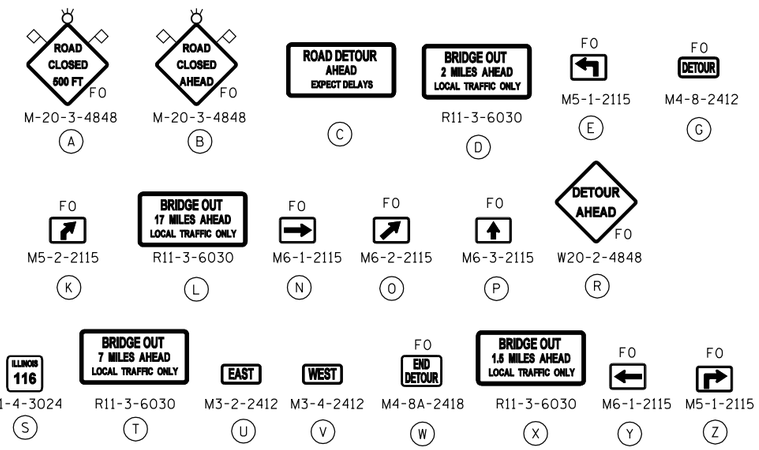
WORK SHALL BE DONE IN ACCORDANCE WITH BLR 21, EXCEPT THAT ALL WARNING SIGNS SHALL BE 48"x48".

COVER OR REMOVE ANY EXISTING CONFLICTING DESTINATION SIGNS (NOTE: NO DRILLING OR TAPE WILL BE ALLOWED ON THE SIGN FACE).

CONFIRMATION DETOUR SIGN ASSEMBLIES SHALL BE PLACED ADJACENT TO THE EXISTING ROUTE ASSEMBLIES

LEGEND

- SIGNS ON PERMANENT SUPPORTS
- TYPE III BARRICADES CONFORMING TO STD 701901 WITH 2 FLASHING LIGHTS PER BARRICADE
- FLASHING LIGHT ABOVE SIGN
- 18" X 18" ORANGE FLAG
- DETOUR ROUTE
- FO FLUORESCENT ORANGE



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		DRAWN - SD	REVISED -
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	PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	11
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

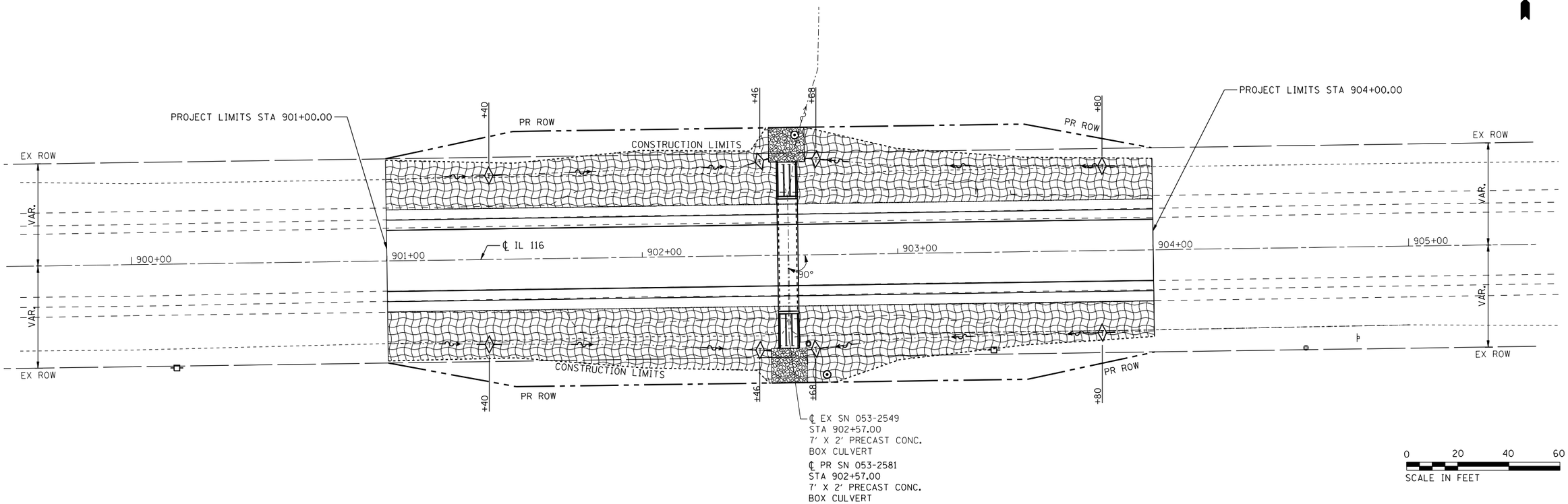
LEGEND

TEMPORARY EROSION CONTROL SEEDING,
EROSION CONTROL BLANKET AND PERMANENT SEEDING CLASS 2A

TEMPORARY DITCH CHECK

PROPOSED DITCH

STONE RIPRAP, CLASS A4



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SDI ENGINEERING CORP.
www.sdiengr.com

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	DRAWN -	SD	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	OAO	REVISED -	
PLOT DATE = $DATE$	DATE -	02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL AND LANDSCAPING PLAN

SCALE: | SHEET OF SHEETS | STA. 900+00.00 TO STA. 905+00.00

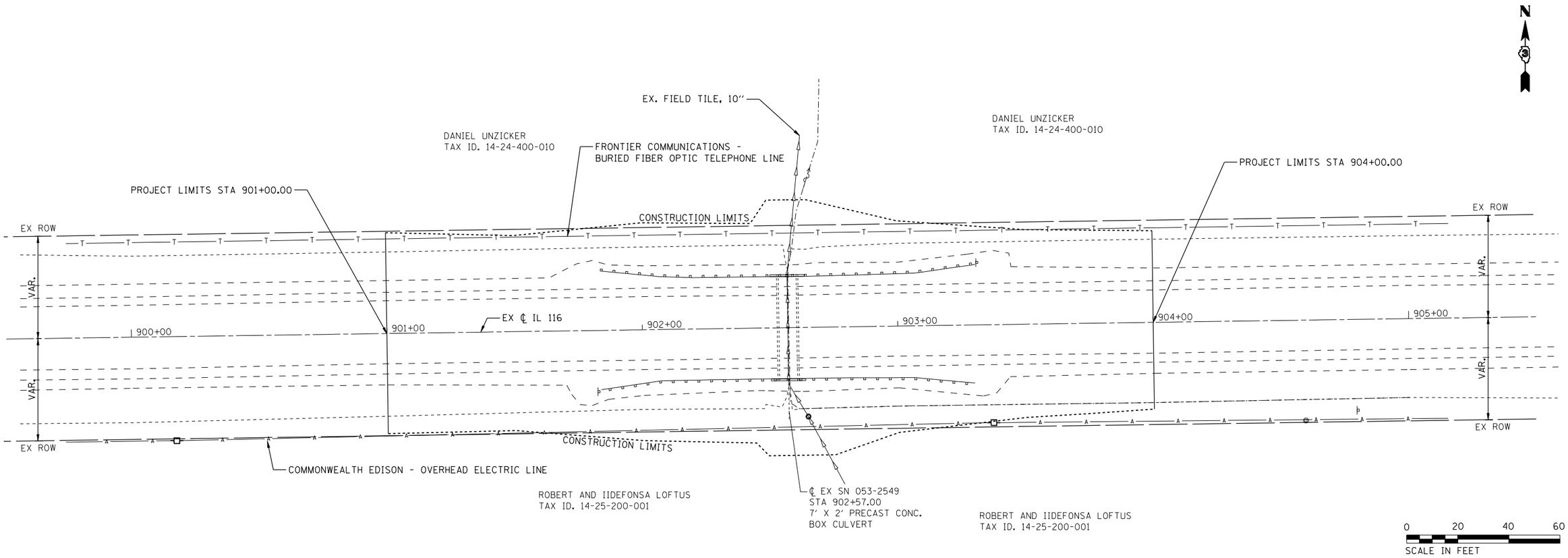
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	12
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

LEGEND

EXISTING ELECTRIC LINE

EXISTING FIBER OPTIC TELEPHONE LINE

EXISTING POWER POLE



EXISITING UTILITIES WITHIN IMPROVEMENT

COMMONWEALTH EDISON - OVERHEAD ELECTRIC LINE

FRONTIER COMMUNICATIONS - BURIED FIBER OPTIC TELEPHONE LINE

FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com

USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - SD	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

UTILITIES

SCALE: | SHEET OF SHEETS | STA. 900+00.00 TO STA. 905+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	13
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

RECORDED AS DOCUMENT NO. ,HIGHWAY PLAT BOOK NO. ,PAGE

SE 1/4 OF SECTION 24, T. 28 N., R. 4 E., 3RD. P.M.

NOTE: EXISTING RIGHT OF WAY LINES 40 FEET OFF OF AND PARALLEL WITH THE SECTION LINE, WHICH IS A STRAIGHT LINE BETWEEN THE SOUTHWEST AND SOUTHEAST CORNERS OF SECTION 24 PER 1927 IDOT SURVEY BOOK NO. 850. A MONUMENT OF RECENT ORIGIN MARKING THE SOUTH QUARTER CORNER OF SECTION 24, RECORDED AS DOC. NO. 05-563177, WAS NOT USED BECAUSE IT DOES NOT FALL ON THE LINE OF THE ORIGINAL SURVEY.

SECTION LINE N.89°05'48"E. 5,314.73'

SECTION CORNER DETAIL

SOUTHWEST CORNER OF SECTION 24,
FOUND BRASS PLAQUE MARKING ORIGINAL
PI STA. 217+58, SET OVER SECTION CORNER
STONE PER IDOT SURVEY BOOK NO. 850, 1927.

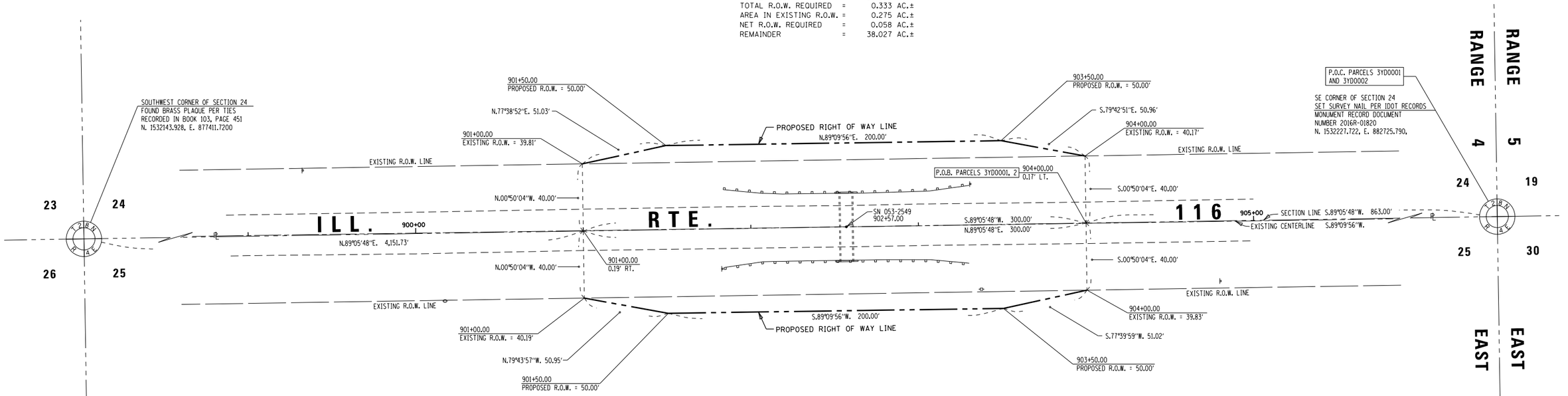
SOUTHEAST CORNER OF SECTION 24,
SET SURVEY NAIL AT ORGINAL PI STA. 164+45,
OVER SECTION CORNER STONE, PER IDOT SURVEY
BOOK NO. 850, 1927.

N

PARCEL 3YD0001

DANIEL J. UNZICKER, et al.

TOTAL HOLDING	=	38.360 AC.±
TOTAL R.O.W. REQUIRED	=	0.333 AC.±
AREA IN EXISTING R.O.W.	=	0.275 AC.±
NET R.O.W. REQUIRED	=	0.058 AC.±
REMAINDER	=	38.027 AC.±



PARCEL 3YD0002

ROBERT M. & ILDEFONSA LOFTUS LIVING TRUST

TOTAL HOLDING	=	158.000 AC.±
TOTAL R.O.W. REQUIRED	=	0.333 AC.±
AREA IN EXISTING R.O.W.	=	0.275 AC.±
NET R.O.W. REQUIRED	=	0.058 AC.±
REMAINDER	=	157.667 AC.±

SURVEYOR'S CERTIFICATE

I, GERRY L. WOLTERING, CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE PLAT DRAWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY DONE BY ME FOR THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN, AND THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED. _____

GERRY L. WOLTERING
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-3491
LICENSE RENEWAL DATE 11-30-2016

GERRY L. WOLTERING 35-3491 PROFESSIONAL LAND SURVEYOR OTTAWA ILLINOIS STATE OF ILLINOIS

NE 1/4 OF SECTION 25, T. 28 N., R. 4 E., 3RD. P.M.

NOTE: GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, (NAD 83, 2011 ADJ.)

ALL AREAS ARE BASED ON GROUND DISTANCES.

GRID TO GROUND COMBINED FACTOR = 1.0000389

TOTAL HOLDINGS TAKEN FROM TAX ASSESSOR OFFICE

SCALE IN FEET

0' 30' 60' 150'

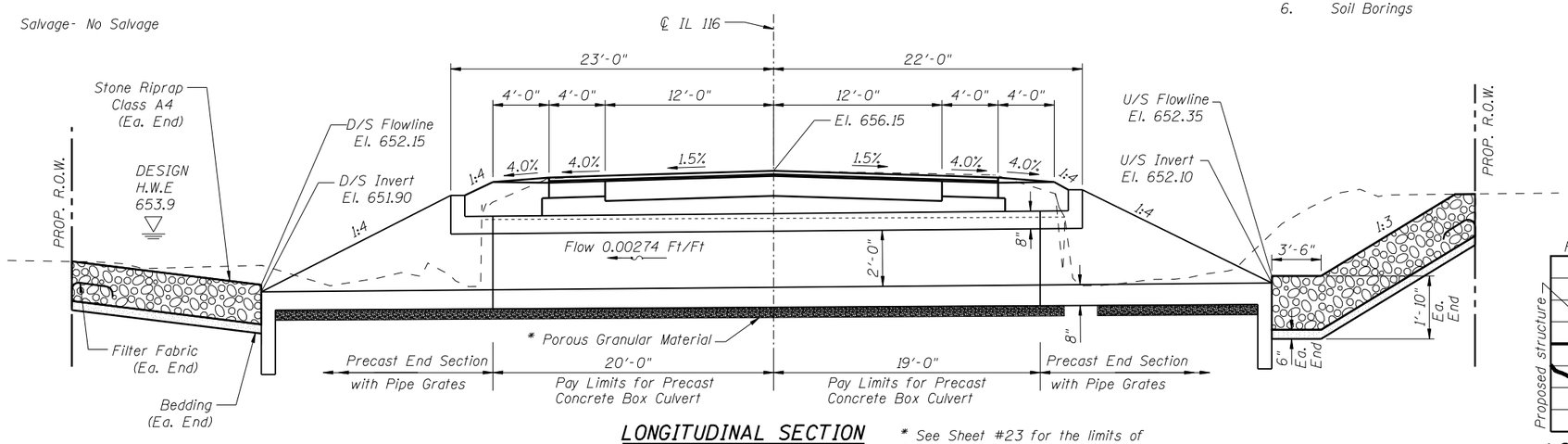
SURVEY BOOK NO.'S 850, 878, 879-3, F.A.P. 673-04-1

FILE NAME	USER NAME = wolteringgl	DESIGNED -	REVISED - 7-18-16 ADDED MON. REC. NUM.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLANS			F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 3\Projects\D3666EDrawingData\LandAcq\D3xxxxx-sht-staging.dgn		DRAWN	REVISED - 7-20-16 REVISED 002 BEARING					673	112C3	LIVINGSTON	28	14
	PLOT SCALE = 60.0000 ' / in.	CHECKED -	REVISED -		PROJECT		JOB NO. R93-007-16	ILLINOIS ROUTE 116		CONTRACT NO. 66E25		
	PLOT DATE = 7/23/2016	DATE -	REVISED -		SCALE: 1" = 30'	SHEET 1 OF 1 SHEETS	STA. 901+00 TO STA. 904+00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M.- BM#3 STA 902+63.53, 20.58' LT Chiseled "□" NE Quad of Wingwall Elevation = 655.365

Existing Structure- The structure was built prior to 1927 and was extended to its current length at that time; it has not received any significant repairs or modifications since then. The structure is a 7' span by 2' rise concrete box culvert, 42' long and perpendicular to the IL 116 centerline, with 90° headwalls.

Salvage- No Salvage



LONGITUDINAL SECTION

* See Sheet #23 for the limits of Porous Granular Material Bedding

INDEX OF SHEETS

GENERAL NOTES

1. The design fill height for this box is 14 in. The precast box culvert sections shall conform to the requirements of ASTM C 1577.
2. The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.
3 Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.
4. See Sheet #23 for the details of Porous Granular Embankment

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 and 2016 Interim Revisions

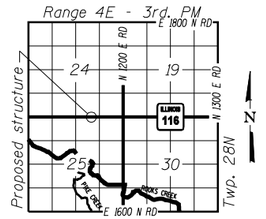
DESIGN STRESSES

PRECAST UNITS

f'_c = 5,000 psi
f_y = 65,000 psi (Welded wire Reinforcement)

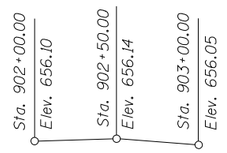
DESIGN FILL HEIGHTS

Max. Fill Height = 18"
Min. Fill Height = 14"



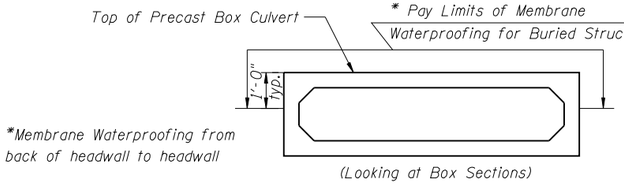
LOCATION SKETCH

LOADING HL-93



PROFILE GRADE

(Along ℄ Roadway IL 116)



*Membrane Waterproofing from back of headwall to headwall

(Looking at Box Sections)

MEMBRANE WATERPROOFING FOR BURIED STRUCTURE LIMITS

STATION 902+57.00
BUILT BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 053-2581

NAME PLATE

See Std. 515001

WATERWAY INFORMATION

Drainage Area = 0.45 Sq. Mi.
Exist. Low Grade Elev. = 655.83 @ Sta. 900+00
Prop. Low Grade Elev. = 655.83 @ Sta. 900+00

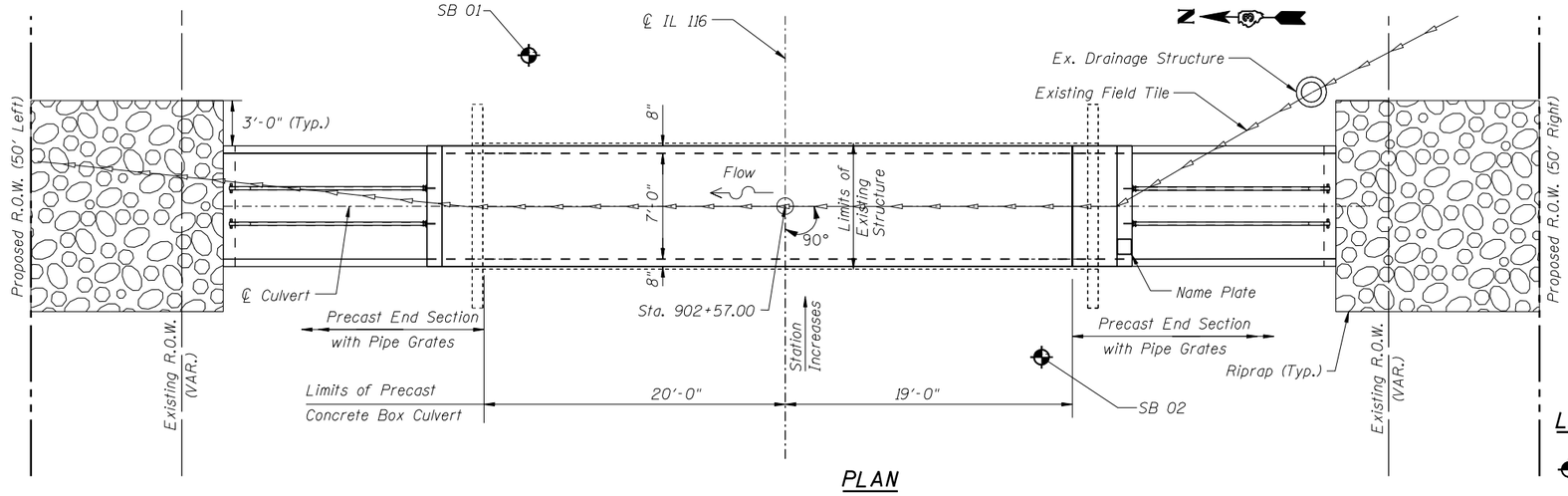
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	24	10	10	653.7	0.1	0.1	653.8	653.8
Hydraulic Design	50	37	11	11	653.9	0.2	0.2	654.1	654.1
Base/Scour Des.	100	44	11	11	653.9	0.3	0.3	654.2	654.2
Scour Check	200	50	11	11	653.9	0.4	0.4	654.3	654.4
Max. Calc.	500	57	11	12	654.0	0.5	0.6	654.5	654.6
Max. Calc.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10-year velocity exist. 1.9 fps
10-year velocity prop. 2.0 fps

TOTAL BILL OF MATERIAL

	Item	Unit	Total
	Stone Riprap, Class A4	Sq Yd	45
	Filter Fabric	Sq Yd	45
*	Porous Granular Embankment	Cu Yd	36
	Removal of Existing Structures	Each	1
	Precast Concrete Box Culverts 7'x2'	Foot	39
	Box Culvert End Sections	Each	2
	Traversable Pipe Grate	Foot	47
	Membrane Waterproofing For Buried Structures	Sq Yd	53.5
	Name Plates	Each	1

* See Schedules



PLAN

LEGEND:

⊕ — Soil Boring Location

GENERAL PLAN & ELEVATION
IL ROUTE 116 OVER
TRIBUTARY TO VERMILION RIVER
F.A.P. RT. 673 SEC. 112C3
LIVINGSTON COUNTY
STATION 902+57.00
EX STRUCTURE NO. 053-2549
PR STRUCTURE NO. 053-2581

FILE NAME = $FILEL$

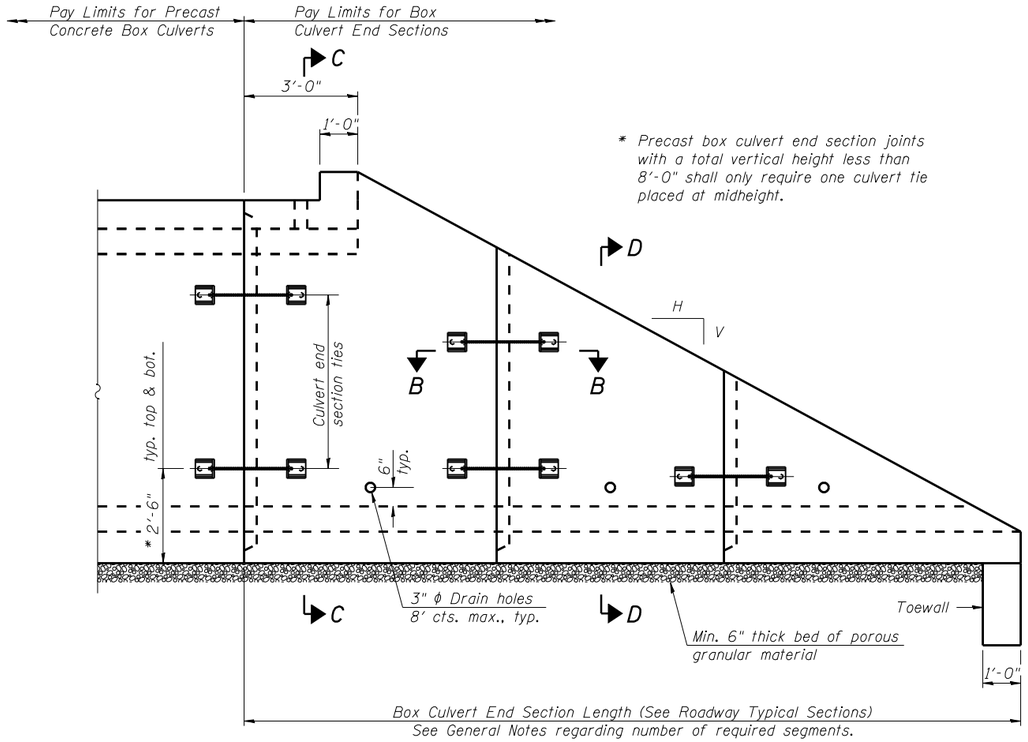
SDI ENGINEERING CORP. www.sdiengr.com

USER NAME = $USER$	DESIGNED - JL	REVISED
	CHECKED - OAO	REVISED
PLOT SCALE = $SCALE$	DRAWN - AA	REVISED
PLOT DATE = $DATE$	CHECKED - OAO	REVISED

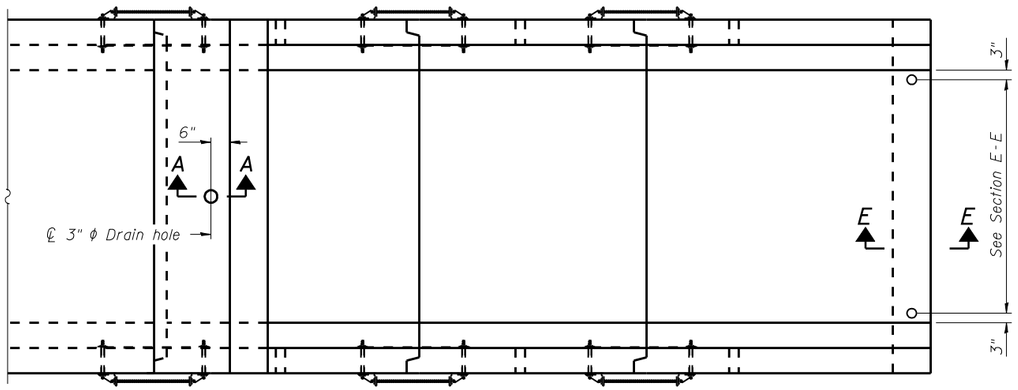
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 053-2581
SHEET NO. 1 OF 6 SHEETS

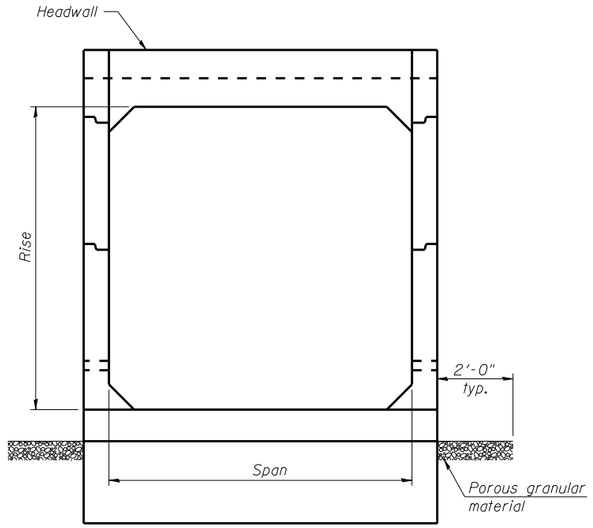
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	15
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			



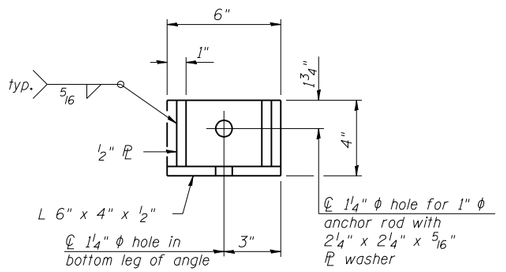
ELEVATION



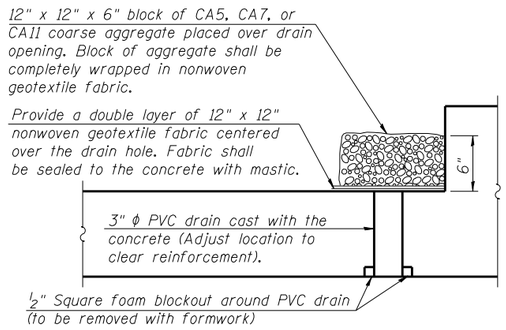
PLAN



END VIEW

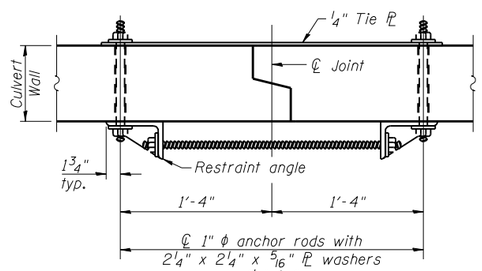


RESTRAINT ANGLE DETAIL



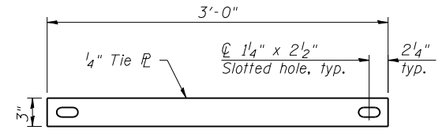
SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION B-B

(Showing end section tie details)



TIE PLATE DETAIL

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" ϕ anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for 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 1/4" x 2 1/4" x 5/16" 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.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

SCB-TES

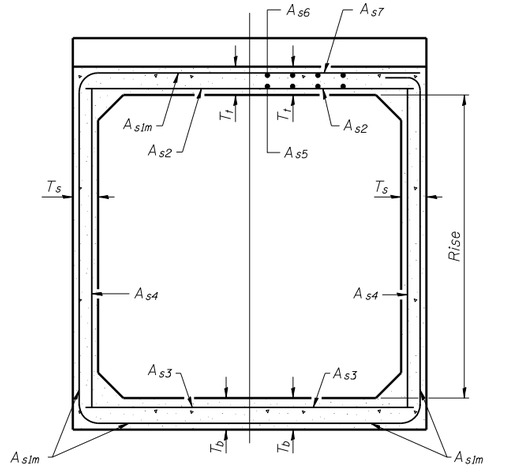
FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com	USER NAME = $USER$	DESIGNED - JL	REVISED
		CHECKED - OAO	REVISED
	PLOT SCALE = $SCALE$	DRAWN - AA	REVISED
	PLOT DATE = $DATE$	CHECKED - OAO	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

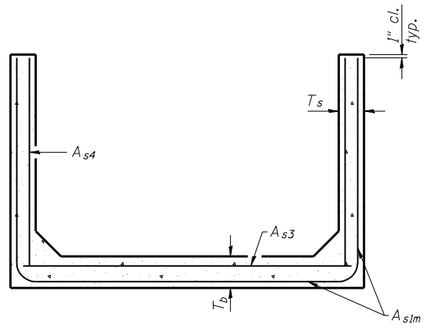
SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO.
SHEET NO. 2 OF 6 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	16
		CONTRACT NO. 66E25		
		ILLINOIS FED. AID PROJECT		

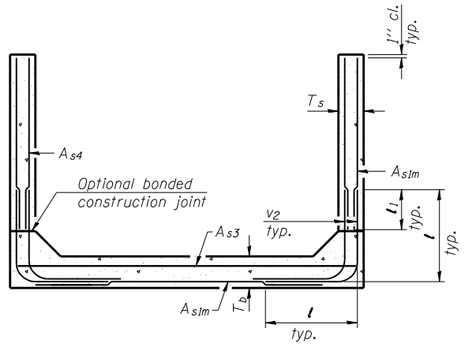


(Design Earth Cover ≥ 2 ft) (Design Earth Cover < 2 ft)

SECTION C-C



SECTION D-D



ALTERNATE SECTION D-D

A_{s1m} REINFORCEMENT

($in.^2$/ ft)

T_s (in.) \ Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17									
5	0.26	0.21	0.18								
6	0.22	0.26	0.23	0.22							
7	0.25	0.33	0.59	0.27	0.28						
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75

(A_{s1m} reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

l_1 DIMENSION

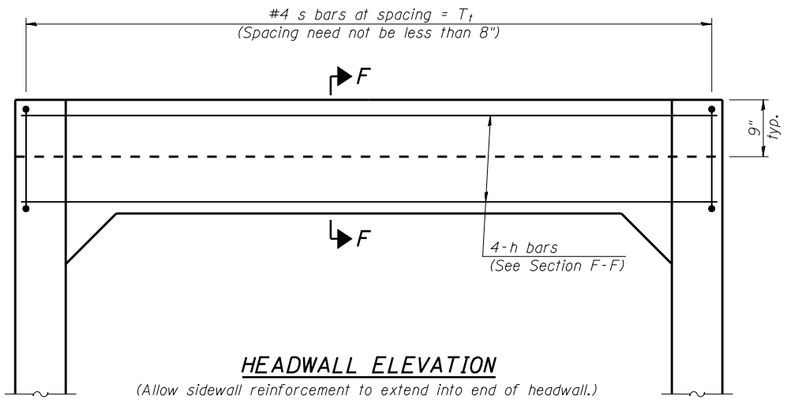
#3 bar = 2'-0"
#4 bar = 2'-8"
#5 bar = 3'-4"
#6 bar = 3'-11"

Notes:

Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.

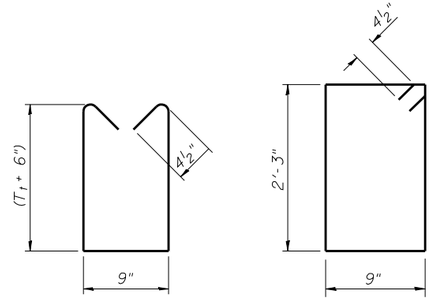
The size and spacing of the v_2 bars shall provide a minimum reinforcement area along each face of the walls (in.2/ft.) equal to 1.10*(A_{s1m}). v_2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.

Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



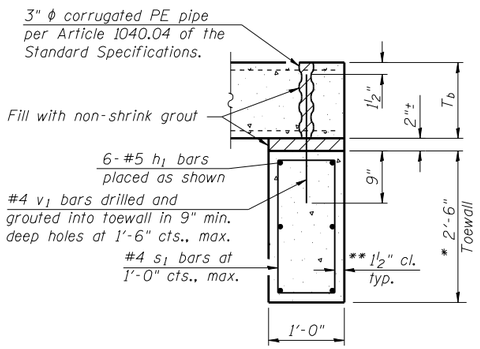
HEADWALL ELEVATION

(Allow sidewall reinforcement to extend into end of headwall.)



BAR s

BAR s_1



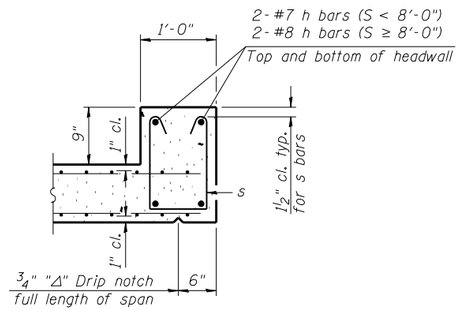
SECTION E-E

TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION F-F

SCB-TES

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		CHECKED - OAO	REVISED
	PLOT SCALE = $SCALE$	DRAWN - AA	REVISED
	PLOT DATE = $DATE$	CHECKED - OAO	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO.
SHEET NO. 3 OF 6 SHEETS

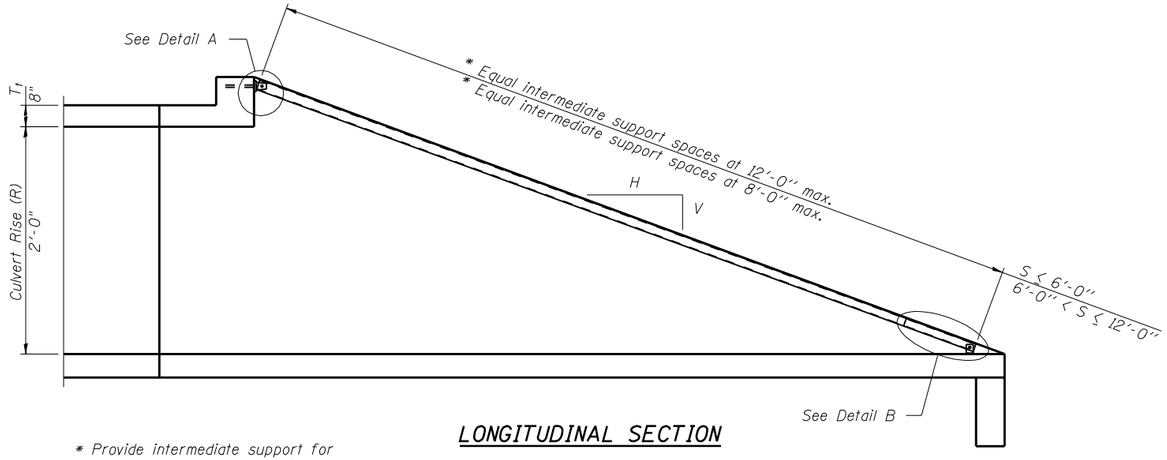
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	17
		CONTRACT NO. 66E25		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be $1\frac{1}{2}''$ unless noted otherwise.

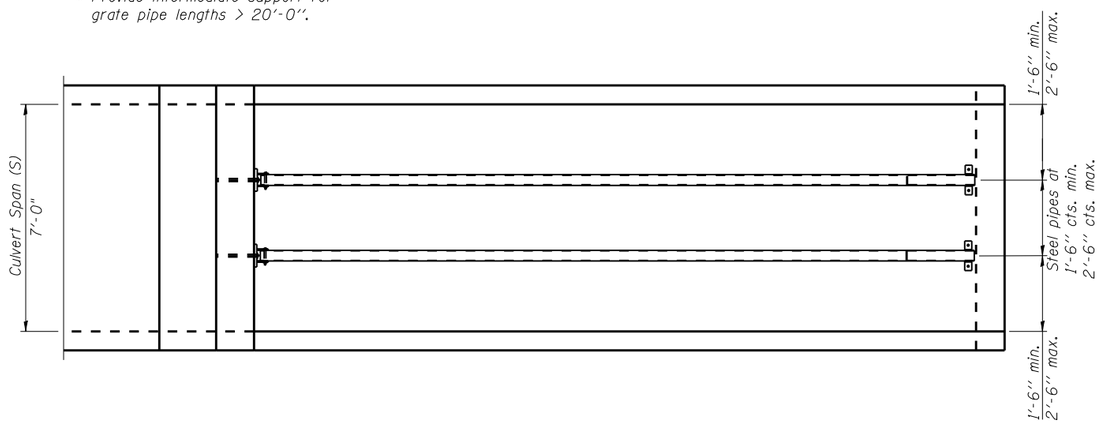
This standard shall only be used on concrete end sections not skewed more than ±15 degrees with roadway.

The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt completely filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.

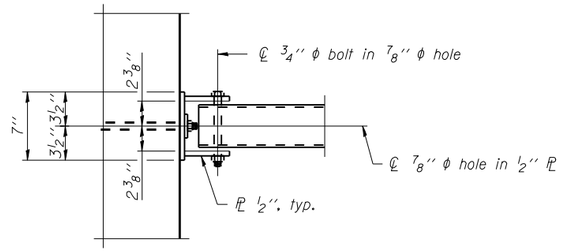


LONGITUDINAL SECTION

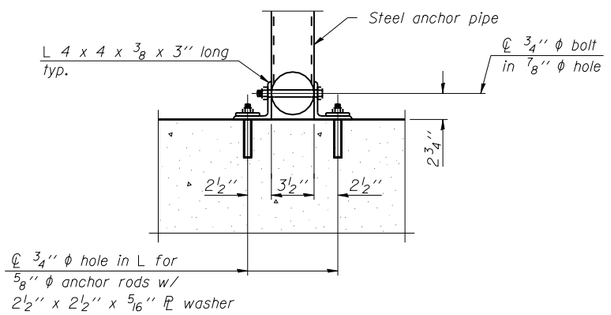
* Provide intermediate support for grate pipe lengths > 20'-0".



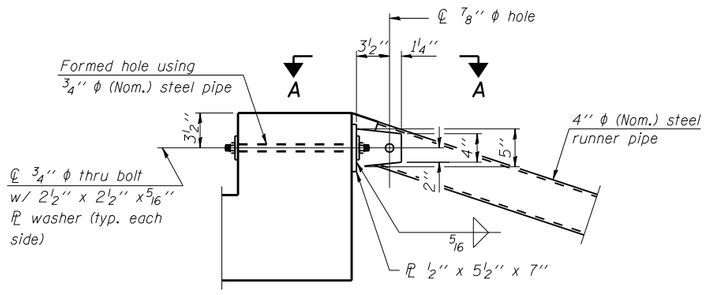
PLAN VIEW



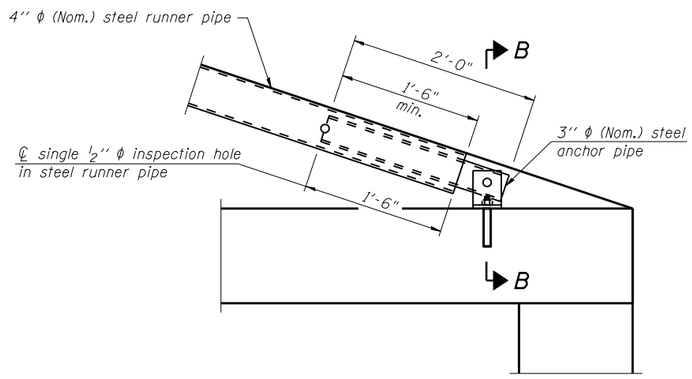
VIEW A-A



SECTION B-B



DETAIL A



DETAIL B

TPGBC-ZS

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		CHECKED - OAO	REVISED
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	PLOT DATE = $DATE$	CHECKED - OAO	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAVERSABLE PIPE GRATE FOR BOX CULVERTS
STRUCTURE NO. 053-2581
SHEET NO. 4 OF 6 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	18
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

PIPE-GRATE SCHEDULE FOR BOX CULVERT END SECTIONS

Precast Box Culvert Dimensions			Slope of End Section								
			1:3			1:4			1:6		
S (ft)	R (ft)	T_1 (in)	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe
4	2	7.5	1 @ 8'-10"	N/A	8'-10"	1 @ 11'-7"	N/A	11'-7"	1 @ 17'-2"	N/A	17'-2"
4	2	5	1 @ 8'-2"	N/A	8'-2"	1 @ 10'-8"	N/A	10'-8"	1 @ 15'-11"	N/A	15'-11"
4	3	7.5	1 @ 12'-0"	N/A	12'-0"	1 @ 15'-8"	N/A	15'-8"	1 @ 23'-3"	1 @ 3'-7"	26'-10"
4	3	5	1 @ 11'-4"	N/A	11'-4"	1 @ 14'-10"	N/A	14'-10"	1 @ 22'-0"	1 @ 3'-7"	25'-7"
4	4	7.5	1 @ 15'-2"	N/A	15'-2"	1 @ 19'-10"	1 @ 3'-7"	23'-5"	1 @ 29'-4"	2 @ 3'-7"	36'-6"
4	4	5	1 @ 14'-6"	N/A	14'-6"	1 @ 18'-11"	N/A	18'-11"	1 @ 28'-1"	2 @ 3'-7"	35'-3"
5	2	8	1 @ 8'-11"	N/A	8'-11"	1 @ 11'-9"	N/A	11'-9"	1 @ 17'-5"	N/A	17'-5"
5	2	6	1 @ 8'-5"	N/A	8'-5"	1 @ 11'-1"	N/A	11'-1"	1 @ 16'-5"	N/A	16'-5"
5	3	8	1 @ 12'-1"	N/A	12'-1"	1 @ 15'-10"	N/A	15'-10"	1 @ 23'-6"	1 @ 4'-7"	28'-1"
5	3	6	1 @ 11'-7"	N/A	11'-7"	1 @ 15'-2"	N/A	15'-2"	1 @ 22'-6"	1 @ 4'-7"	27'-1"
5	4	8	1 @ 15'-3"	N/A	15'-3"	1 @ 20'-0"	1 @ 4'-7"	24'-7"	1 @ 29'-7"	2 @ 4'-7"	38'-9"
5	4	6	1 @ 14'-9"	N/A	14'-9"	1 @ 19'-3"	N/A	19'-3"	1 @ 28'-7"	2 @ 4'-7"	37'-9"
5	5	8	1 @ 18'-5"	N/A	18'-5"	1 @ 24'-1"	2 @ 4'-7"	33'-3"	1 @ 35'-8"	3 @ 4'-7"	49'-5"
5	5	6	1 @ 17'-11"	N/A	17'-11"	1 @ 23'-5"	1 @ 4'-7"	28'-0"	1 @ 34'-8"	2 @ 4'-7"	43'-10"
6	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
6	2	7	2 @ 8'-8"	N/A	17'-4"	2 @ 11'-5"	N/A	22'-10"	2 @ 16'-11"	N/A	33'-10"
6	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	1 @ 5'-7"	52'-7"
6	3	7	2 @ 11'-10"	N/A	23'-8"	2 @ 15'-6"	N/A	31'-0"	2 @ 23'-0"	1 @ 5'-7"	51'-7"
6	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	1 @ 5'-7"	45'-7"	2 @ 29'-7"	2 @ 5'-7"	70'-4"
6	4	7	2 @ 15'-0"	N/A	30'-0"	2 @ 19'-8"	1 @ 5'-7"	44'-11"	2 @ 29'-1"	2 @ 5'-7"	69'-4"
6	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	2 @ 5'-7"	59'-4"	2 @ 35'-8"	3 @ 5'-7"	88'-1"
6	5	7	2 @ 18'-2"	N/A	36'-4"	2 @ 23'-9"	2 @ 5'-7"	58'-8"	2 @ 35'-2"	2 @ 5'-7"	81'-6"
6	6	8	2 @ 21'-7"	1 @ 5'-7"	48'-9"	2 @ 28'-3"	2 @ 5'-7"	67'-8"	2 @ 41'-9"	3 @ 5'-7"	100'-3"
6	6	7	2 @ 21'-4"	1 @ 5'-7"	48'-3"	2 @ 27'-11"	2 @ 5'-7"	67'-0"	2 @ 41'-3"	3 @ 5'-7"	99'-3"
7	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
7	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	2 @ 6'-7"	60'-2"
7	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	2 @ 6'-7"	53'-2"	2 @ 29'-7"	3 @ 6'-7"	78'-11"
7	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	3 @ 6'-7"	67'-11"	2 @ 35'-8"	4 @ 6'-7"	97'-8"
7	6	8	2 @ 21'-7"	2 @ 6'-7"	56'-4"	2 @ 28'-3"	3 @ 6'-7"	76'-3"	2 @ 41'-9"	5 @ 6'-7"	116'-5"
7	7	8	2 @ 24'-9"	3 @ 6'-7"	69'-3"	2 @ 32'-4"	4 @ 6'-7"	91'-0"	2 @ 47'-10"	6 @ 6'-7"	135'-2"
8	2	8	3 @ 8'-11"	N/A	26'-9"	3 @ 11'-9"	N/A	35'-3"	3 @ 17'-5"	N/A	52'-3"
8	3	8	3 @ 12'-1"	N/A	36'-3"	3 @ 15'-10"	N/A	47'-6"	3 @ 23'-6"	2 @ 7'-7"	85'-8"
8	4	8	3 @ 15'-3"	N/A	45'-9"	3 @ 20'-0"	2 @ 7'-7"	75'-2"	3 @ 29'-7"	3 @ 7'-7"	111'-6"
8	5	8	3 @ 18'-5"	N/A	55'-3"	3 @ 24'-1"	3 @ 7'-7"	95'-0"	3 @ 35'-8"	4 @ 7'-7"	137'-4"
8	6	8	3 @ 21'-7"	2 @ 7'-7"	79'-11"	3 @ 28'-3"	3 @ 7'-7"	107'-6"	3 @ 41'-9"	5 @ 7'-7"	163'-2"
8	7	8	3 @ 24'-9"	3 @ 7'-7"	97'-0"	3 @ 32'-4"	4 @ 7'-7"	127'-4"	3 @ 47'-10"	6 @ 7'-7"	189'-0"
8	8	8	3 @ 27'-11"	3 @ 7'-7"	106'-6"	3 @ 36'-6"	4 @ 7'-7"	139'-10"	3 @ 53'-11"	6 @ 7'-7"	207'-3"
9	2	9	3 @ 9'-3"	N/A	27'-9"	3 @ 12'-1"	N/A	36'-3"	3 @ 17'-11"	N/A	53'-9"
9	3	9	3 @ 12'-4"	N/A	37'-0"	3 @ 16'-2"	N/A	48'-6"	3 @ 24'-0"	3 @ 8'-7"	97'-9"
9	4	9	3 @ 15'-6"	N/A	46'-6"	3 @ 20'-4"	2 @ 8'-7"	78'-2"	3 @ 30'-1"	3 @ 8'-7"	116'-0"
9	5	9	3 @ 18'-8"	N/A	56'-0"	3 @ 24'-5"	3 @ 8'-7"	99'-0"	3 @ 36'-2"	4 @ 8'-7"	142'-10"
9	6	9	3 @ 21'-10"	2 @ 8'-7"	82'-8"	3 @ 28'-7"	3 @ 8'-7"	111'-6"	3 @ 42'-3"	5 @ 8'-7"	169'-8"
9	7	9	3 @ 25'-0"	3 @ 8'-7"	100'-9"	3 @ 32'-8"	4 @ 8'-7"	132'-4"	3 @ 48'-4"	6 @ 8'-7"	196'-6"
9	8	9	3 @ 28'-2"	3 @ 8'-7"	110'-3"	3 @ 36'-10"	4 @ 8'-7"	144'-10"	3 @ 54'-5"	6 @ 8'-7"	214'-9"
9	9	9	3 @ 31'-4"	3 @ 8'-7"	119'-9"	3 @ 40'-11"	5 @ 8'-7"	165'-8"	3 @ 60'-6"	7 @ 8'-7"	241'-7"
10	2	10	3 @ 9'-6"	N/A	28'-6"	3 @ 12'-5"	N/A	37'-3"	3 @ 18'-5"	N/A	55'-3"
10	3	10	3 @ 12'-8"	N/A	38'-0"	3 @ 16'-6"	N/A	49'-6"	3 @ 24'-6"	3 @ 9'-7"	102'-3"
10	4	10	3 @ 15'-10"	N/A	47'-6"	3 @ 20'-8"	2 @ 9'-7"	81'-2"	3 @ 30'-7"	3 @ 9'-7"	120'-6"
10	5	10	3 @ 19'-0"	N/A	57'-0"	3 @ 24'-9"	3 @ 9'-7"	103'-0"	3 @ 36'-8"	4 @ 9'-7"	148'-4"
10	6	10	3 @ 22'-1"	2 @ 9'-7"	85'-5"	3 @ 28'-11"	3 @ 9'-7"	115'-6"	3 @ 42'-9"	5 @ 9'-7"	176'-2"
10	7	10	3 @ 25'-3"	3 @ 9'-7"	104'-6"	3 @ 33'-0"	4 @ 9'-7"	137'-4"	3 @ 48'-10"	6 @ 9'-7"	204'-0"
10	8	10	3 @ 28'-5"	3 @ 9'-7"	114'-0"	3 @ 37'-2"	4 @ 9'-7"	149'-10"	3 @ 54'-11"	6 @ 9'-7"	222'-3"
10	9	10	3 @ 31'-7"	4 @ 9'-7"	133'-1"	3 @ 41'-3"	5 @ 9'-7"	171'-8"	3 @ 61'-0"	7 @ 9'-7"	250'-1"
10	10	10	3 @ 34'-9"	4 @ 9'-7"	142'-7"	3 @ 45'-5"	5 @ 9'-7"	184'-2"	3 @ 67'-1"	8 @ 9'-7"	277'-11"
11	2	11	4 @ 9'-9"	N/A	39'-0"	4 @ 12'-9"	N/A	51'-0"	4 @ 18'-11"	N/A	75'-8"
11	3	11	4 @ 12'-11"	N/A	51'-8"	4 @ 16'-11"	N/A	67'-8"	4 @ 25'-0"	3 @ 10'-7"	131'-9"
11	4	11	4 @ 16'-1"	N/A	64'-4"	4 @ 21'-0"	2 @ 10'-7"	105'-2"	4 @ 31'-1"	3 @ 10'-7"	156'-1"
11	6	11	4 @ 22'-5"	2 @ 10'-7"	110'-10"	4 @ 29'-3"	3 @ 10'-7"	148'-9"	4 @ 43'-3"	5 @ 10'-7"	225'-11"
11	8	11	4 @ 28'-9"	3 @ 10'-7"	146'-9"	4 @ 37'-6"	4 @ 10'-7"	192'-4"	4 @ 55'-5"	6 @ 10'-7"	285'-2"
11	10	11	4 @ 35'-0"	4 @ 10'-7"	182'-4"	4 @ 45'-9"	5 @ 10'-7"	235'-11"	4 @ 67'-7"	8 @ 10'-7"	355'-0"
11	11	11	4 @ 38'-2"	4 @ 10'-7"	195'-0"	4 @ 49'-10"	6 @ 10'-7"	262'-10"	4 @ 73'-8"	9 @ 10'-7"	389'-11"
12	2	12	4 @ 10'-0"	N/A	40'-0"	4 @ 13'-1"	N/A	52'-4"	4 @ 19'-5"	N/A	77'-8"
12	3	12	4 @ 13'-2"	N/A	52'-8"	4 @ 17'-3"	N/A	69'-0"	4 @ 25'-6"	3 @ 11'-7"	136'-9"
12	4	12	4 @ 16'-4"	N/A	65'-4"	4 @ 21'-4"	2 @ 11'-7"	108'-6"	4 @ 31'-7"	4 @ 11'-7"	172'-8"
12	6	12	4 @ 22'-8"	2 @ 11'-7"	113'-10"	4 @ 29'-7"	3 @ 11'-7"	153'-1"	4 @ 43'-9"	5 @ 11'-7"	232'-11"
12	8	12	4 @ 29'-0"	3 @ 11'-7"	150'-9"	4 @ 37'-10"	4 @ 11'-7"	197'-8"	4 @ 55'-11"	7 @ 11'-7"	304'-9"
12	10	12	4 @ 35'-4"	4 @ 11'-7"	187'-8"	4 @ 46'-1"	5 @ 11'-7"	242'-3"	4 @ 68'-1"	8 @ 11'-7"	365'-0"
12	12	12	4 @ 41'-8"	5 @ 11'-7"	224'-7"	4 @ 54'-4"	6 @ 11'-7"	286'-10"	4 @ 80'-3"	10 @ 11'-7"	436'-10"

TPGBC-ZS

(Sheet 2 of 2)

FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com

USER NAME = $USER$	DESIGNED - JL	REVISED	
	CHECKED - OAO	REVISED	
PLOT SCALE = $SCALE$	DRAWN - AA	REVISED	
PLOT DATE = $DATE$	CHECKED - OAO	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAVERSABLE PIPE GRATE FOR BOX CULVERTS

SHEET NO. 5 OF 6 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	19
		CONTRACT NO. 66E25		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 9/3/15

ROUTE IL 116 (FAP 673) DESCRIPTION IL 116 over a Stream, 1.7 miles West of I-55 LOGGED BY Larry Myers

SECTION 112 LOCATION SE 1/4, SEC. 24, TWP. 28N, RNG. 4E, 3rd PM,
Latitude 40.87319, Longitude -88.704023

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 053-2549 (Exist.)
Station 902+57.00

BORING NO. 01 (N.E. Quad.)
Station 902+77
Offset 17.0 ft Lt.
Ground Surface Elev. 655.72 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 652.32 ft

Groundwater Elev.:
First Encounter 635.7 ft ▼
Upon Completion 635.7 ft ▽
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Shoulder Stone, Black Silty Clay Loam Fill			
653.22			
Black Silty Clay Loam Fill	1		
	2		
	1		
651.22			
Very Stiff Brown & Gray Silty Clay Loam Till	2		
	3	3.5	16
	3	P	
	2		
	3	3.0	18
	4	P	
-10			
	3		
	3	3.5	15
	5	P	
643.22			
Hard Gray Silty Clay Loam Till with Layers of Silty Loam Till	5		
	7	4.5	12
	9	P	
-15			
	4		
	5	4.0	16
	8	B	
	6		
	8	4.6	15
	10	B	
636.22			
▽ -20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard / Dense mix of Sand & Gravel, Till Pieces, Coal, Potential Cobble / Boulders - some consolidated layers *(continued)*	11		
	11	>4.5	9
	8	P	
	10		
	18	>4.5	9
	22	P	
-25			
	11		
	11	>4.5	12
	16	P	
628.72			
Hard Brown Silty Clay Loam Till	9		
	12	6.1	13
	14	S	
-30			
	7		
	11	6.3	13
	13	S	
624.22			
End of Boring			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 9/3/15

ROUTE IL 116 (FAP 673) DESCRIPTION IL 116 over a Stream, 1.7 miles West of I-55 LOGGED BY Larry Myers

SECTION 112 LOCATION NE 1/4, SEC. 25, TWP. 28N, RNG. 4E, 3rd PM,
Latitude 40.873091, Longitude -88.704151

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 053-2549 (Exist.)
Station 902+57.00

BORING NO. 02 (S.W. Quad.)
Station 902+37
Offset 17.0 ft Rt.
Ground Surface Elev. 655.77 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 652.29 ft

Groundwater Elev.:
First Encounter 638.3 ft ▼
Upon Completion 638.3 ft ▽
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Shoulder Stone, Black Silty Clay Loam Fill and Brown Sand & Gravel Fill			
653.27			
Stiff Black Silty Clay Loam Fill	2		
	2	1.5	34
	2	P	
651.27			
Very Stiff Brown & Gray Silty Clay Loam Till	2		
	2	2.5	19
	2	P	
	2		
	2	2.0	19
	3	P	
-10			
	2		
	3	3.5	18
	4	P	
643.77			
Hard to Very Stiff Gray Silty Clay Loam Till	2		
	4	4.0	16
	7	B	
-15			
	3		
	4	3.4	15
	5	B	
▽			
	4		
	5	3.8	13
	6	B	
636.27			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense / Hard mix of Sand & Gravel, Till Pieces and Layers, Coal Pieces, some consolidated layers - Potential Cobble / Boulders *(continued)*	8		
	11	>4.5	20
	21	P	
	12		
	11	>4.5	16
	12	P	
-25			
	13		
	13	>4.5	12
	12	P	
628.77			
Hard Brown Silty Clay Loam Till	9		
	12	5.7	14
	12	S	
-30			
	10		
	12	6.1	13
	14	S	
624.27			
End of Boring			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING 053-2549.GPJ IL_DOT.GDT 10/12/16

FILE NAME = $FILE1$

SDI ENGINEERING CORP. www.sdiengr.com

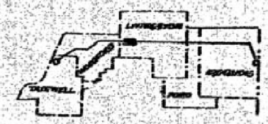
USER NAME = $USER$	DESIGNED - JL	REVISED
	CHECKED - OAO	REVISED
PLOT SCALE = $SCALE$	DRAWN - AA	REVISED
PLOT DATE = $DATE$	CHECKED - OAO	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
STRUCTURE NO. 053-2581
SHEET NO. 6 OF 6 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	20
		CONTRACT NO. 66E25		
	ILLINOIS	FED. AID PROJECT		

" " 2. Standard Cross Sections 1226 & 1230
" " 3 Plans and Profile Sta. 164+45 to 219+00
" " 4 " " " " 219+00 to 279+00
" " 5 " " " " 279+00 to 339+00
" " 6 " " " " 339+00 to 399+00
" " 7 " " " " 399+00 to 459+00
" " 8 " " " " 459+00 to 519+00
" " 9 " " " " 519+00 to 579+00
" " 10 " " " " 579+00 to 588+36
" " 11 to 32 Inclusive Cross Sections
" " 32-A Standard Culvert Design No. 828-1; 1204-2; 1204-3
" " 33 Spec. Culvert Design Sta. 164+45; 174+51; 198+00; 254+02
" " 34 " " " " (304+06; 309+20; 409+57); 339+15
" " 34 " " " " 385+24; (489+00; 546+00; 579+00
" " 35 " Bridge " " 224+70 - Sheet 1 of 2 Sheets
" " 36 " " " " 224+70 " 2 of 2 "
" " 37 " " " " 288+50 " 1 of 2 "
" " 38 " " " " 288+50 " 2 of 2 "
" " 39 Standards 1162, 1178
" " 40 " 845, 1203



ROUTE 116, SECTIONS 112, 112-B and C, LIVINGSTON COUNTY

From a point near the S.E. Corner of Section 24, T.28N., R.4E. of the 3rd. P.M. to a point near the S.W. Corner of Section 23, T.28 N., R.3E. of the 3rd. P.M.

SUMMARY OF QUANTITIES

SECTION 112

62329	Cu. Yds	Class A Excavation
4178	Cu. Yds.	Borrow Excavation
1011	Rods	Hedge Pulling
83154	Sq. Yds.	Pavement
160	Each	Setting Rt. of Way Markers
194.0	Cu. Yds.	Class A Concrete
11590	Lbs.	Reinforcing Steel

SECTION 112-B

192.6	Cu. Yds.	Class A Concrete
37450	Lbs.	Reinforcing Steel
210	Lin. Ft.	Untreated Piles - 10 Ton
1200	Lin. Ft.	Untreated Piles - 15 Ton
1420	Lbs.	Rockers and Plates
1	Each	Name Plate

SECTION 112-C

52.3	Cu. Yds.	Class X Concrete
6700	Lbs.	Reinforcing Steel
108320	Lbs.	Structural Steel
1	Each	Name Plate

SUMMARY OF CONCRETE

SECTION 112

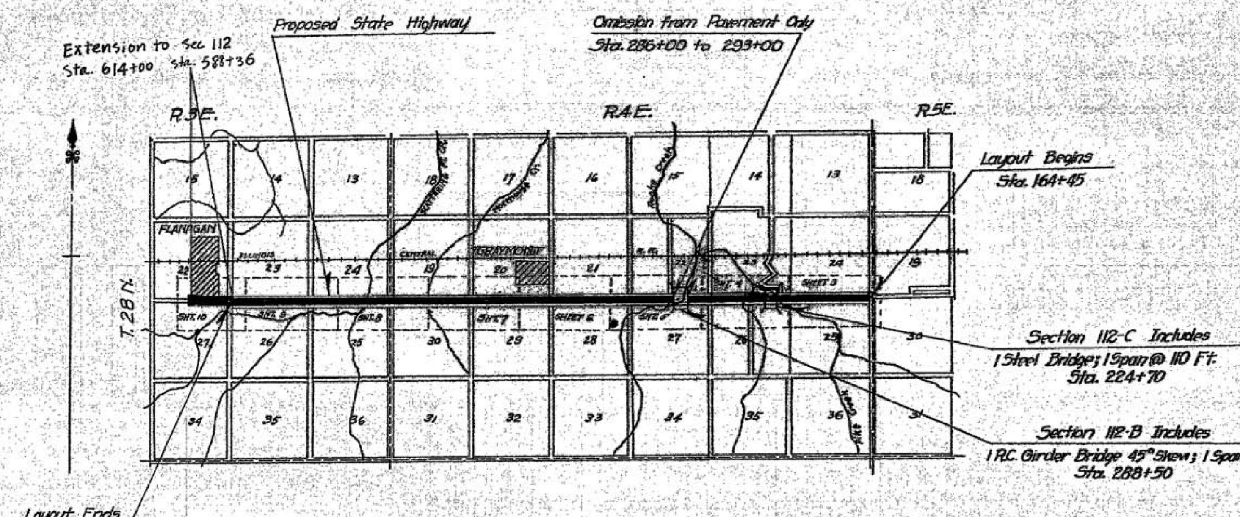
			Class A
26	Standard Culvert Design	No. 828-1-3	- 49.4 Cu. Yds.
6	" " "	" 1204-2-3	- 33.6 " "
1	" " "	" 1204-3-3	- 4.2 " "
1	Special " "	Sta. 164+45	- 4.8 " "
1	" " (Exten) "	" 174+51	- 7.8 " "
1	" " "	" 198+00	- 14.3 " "
1	" " (Exten) "	" 254+02	- 4.3 " "
3	" " "	304+06; 309+20; 409+57	- 11.1 " "
1	" " "	Sta. 339+15	3.9 " "
1	" " "	" 385+24	22.4 " "
3	" "	489+00; 546+00; 579+00	36.3 " "
		Total	192.1 Cu. Yds.

SECTION 112-B

1 Special Bridge Design Sta. 288+50 — Class A 192.6 Cu. Yds.

SECTION 112-C

1 Special Bridge Design Sta. 224+70 — Class X 52.3 Cu. Yds.



LAYOUT
APPROXIMATE SCALE 1 INCH = 1 MILE
NET LENGTH OF LAYOUT: SECTIONS 112, 112B & C: 42391.0 Ft. = 8.029 Mi.

SUMMARY

Station to Station		Width of Pavement	Gross Length Along Transit Line	Corrections for Curves		Corrections for Relocations				Net Length of Layout Along Final Center Line	Omissions			Net Length to be Improved in Feet			Pavement Over Bridges		Sq. Yds of Pavement		
		Feet	Feet	Sta. of P.I.	Feet	Sta.	= Sta.	Feet +	Feet −	Feet	Sta.	to Sta.	Feet		18 Ft.	Total	Sta.	Feet		18 Ft.	Total
164+45	286+00	18	12155							12155					12155	12155	224+70	114		ϕ24082	ϕ24082
286+00	588+36	18	30236							30236	286+00	293+00	*700		30236	30236	288+50	63		59072	59072
TOTAL			42391							42391					42391	42391		177		83154	83154

* Omission From Pavement Only ϕ Does not include item 278.7 Sq. Yds. Pavement in Bridge Floor This is included in Section 112-C as Class X Concrete.

Contract No's
Sec. 112 — 2896
Sec. 112B - 2897
Sec. 112C - 2898

Special Cover Sheet based on Revised Plans as being built.
For Quantities as awarded see Original Cover Sheet.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
Feb. 28 27
M.L. Fleming
6-17 27
6-17 27
6-17 27

C.J. WATERBURY 6-15-27

LIVINGSTON 112, 112 B & C 116

FOR INFORMATIONAL USE ONLY

FILE NAME = $FILEL$

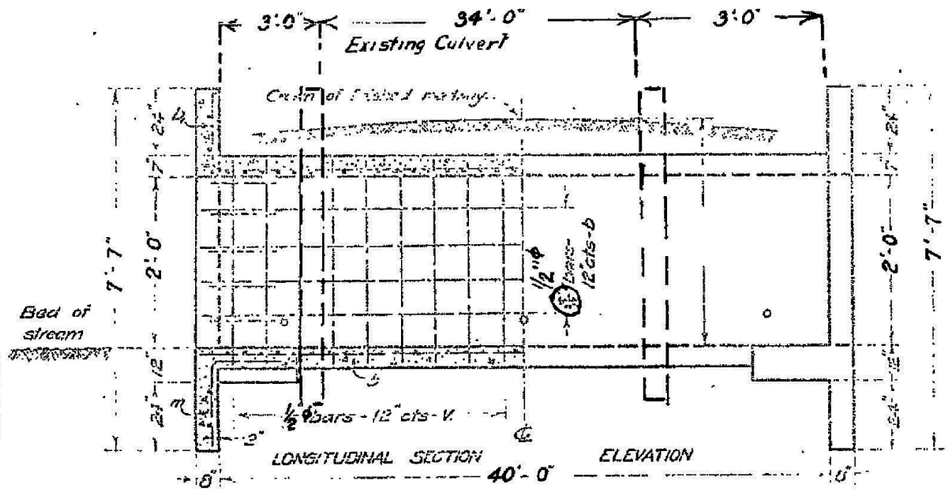
SDI ENGINEERING CORP. www.sdiengr.com	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS STRUCTURE NO. 053-2549
		DRAWN -	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -		
	PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -		SCALE: SHEET E1 OF 2 SHEETS STA. TO STA.

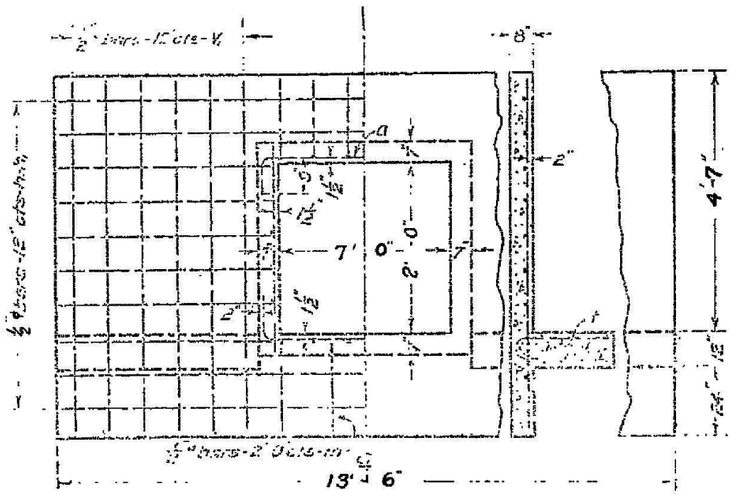
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	21
CONTRACT NO. 66E25				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
STATE HIGHWAY DEPARTMENT

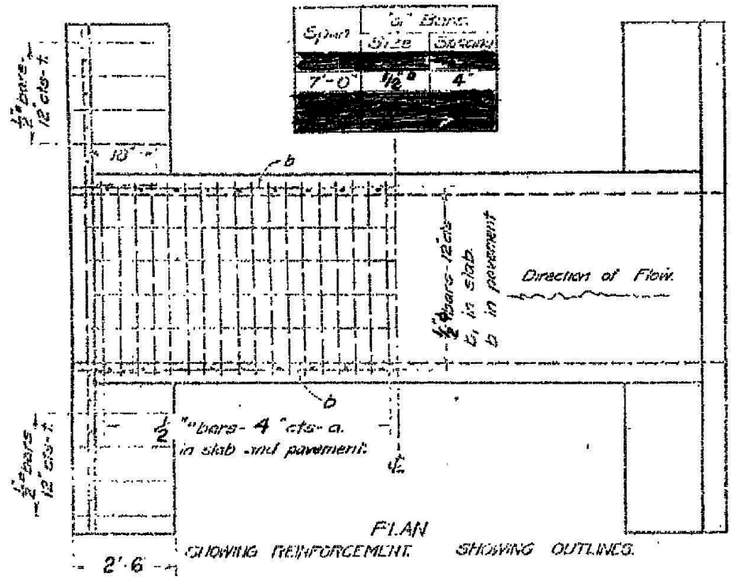
REINFORCED CONCRETE BOX CULVERT

BOND ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.
116	LIVINGSTON	112	40	33





SHOWING REINFORCEMENT. SHOWING OUTLINES.



PLAN
SHOWING REINFORCEMENT. SHOWING OUTLINES.

Note - Use "m" bars in downstream headwall only.
Box is designed for no fill.
Maximum clearance = 7'-6"

Remove old headwalls to top of slab and extend the old steel into the extension where ever possible. At joint between old and new work chip off the surface of the old concrete to a sufficient depth to expose the coarse aggregate, sweep or wash away all loose material and flush with a thin 1:2 mortar before pouring new concrete

ADJUST HEIGHT OF HEAD-WALLS TO BE 12 INCHES ABOVE TANGENT TO CROWN OF PAVEMENT AT CENTER LINE.

BUILD TOPS OF HEAD-WALLS PARALLEL TO GRADE LINE.

BILL OF MATERIAL

Bars	No.	Size	Length
V	12	1/2" ϕ	3'-0"
V1	12	1/2" ϕ	7'-0"
h	8	1/2" ϕ	4'-0"
h1	10	1/2" ϕ	13'-0"
a	44	1/2" ϕ	9'-6"
b	20	1/2" ϕ	3'-6"
b1	16	1/2" ϕ	5'-6"
t	12	1/2" ϕ	3'-0"
m	5	1/2" ϕ	5'-0"
Steel - Lbs.			710
Concrete - Cu. Yds.			7.8

Class A concrete to be used throughout
Proportions 1 - 2½ - 4.

STANDARD	COMPUTED	
	CHECKED	
	DRAWN	
	CHECKED	
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED

PASSED
ENGINEER OF DESIGN.

57a. 174r51
S.B.I. Route 116 - Sec. 112
Livingston Co

619

FOR INFORMATIONAL USE ONLY

FILE NAME = $FILE$

SDI ENGINEERING CORP. www.sdiengr.com

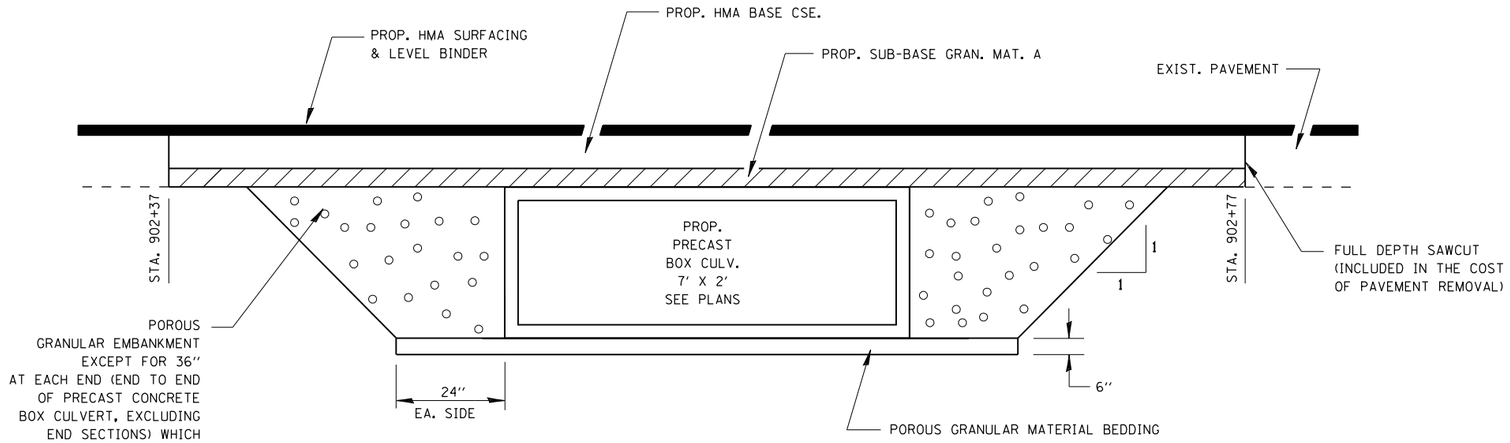
USER NAME = $USER$	DESIGNED -		REVISED -
	DRAWN -		REVISED -
PLOT SCALE = $SCALE$	CHECKED -	0A0	REVISED -
PLOT DATE = $DATE$	DATE -	02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 053-2549

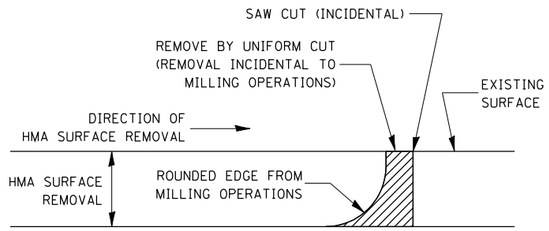
SCALE: | SHEET E2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	22
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			



NOTE:
PAYMENT FOR THE EXCAVATION LIMITS OF
POROUS GRANULAR EMBANKMENT IS INCLUDED IN
PRECAST CONCRETE BOX CULVERT 7' X 2'.

SECTION THROUGH PRECAST BOX CULVERT



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

FILE NAME = $FILE1$

SDI ENGINEERING CORP.
www.sdiengr.com

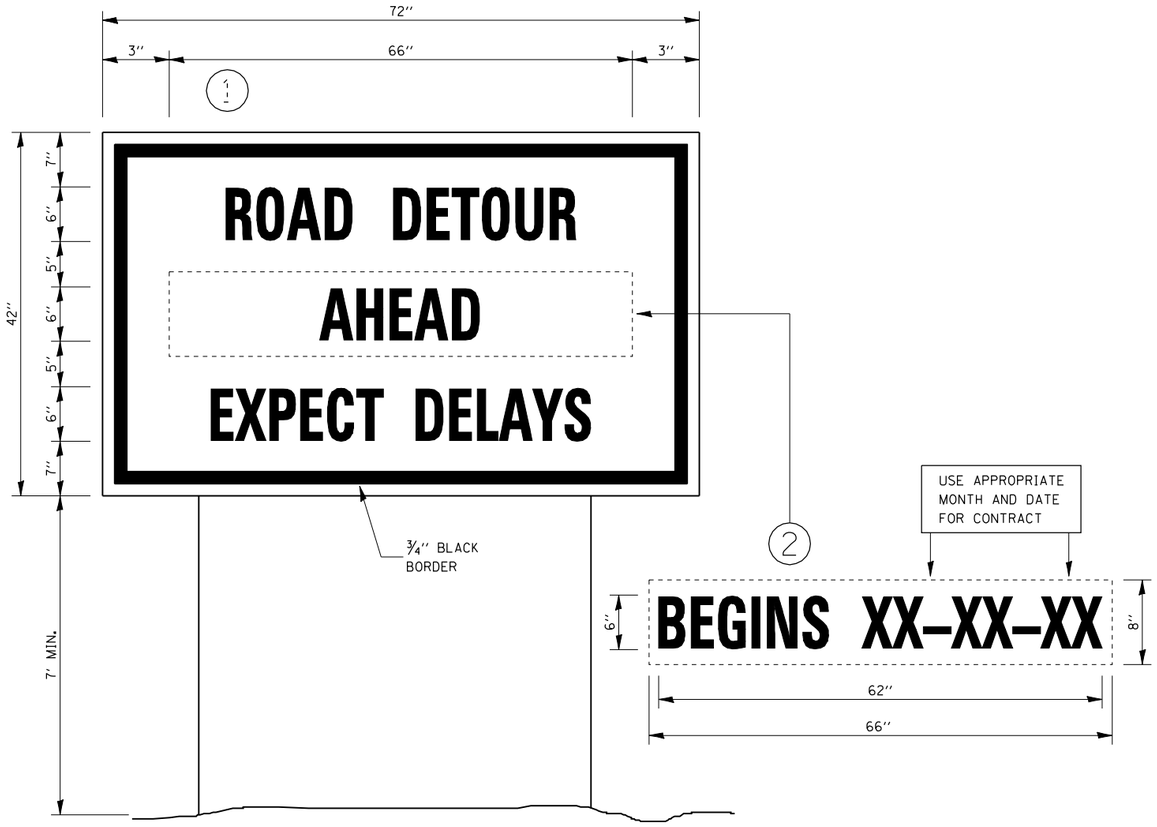
USER NAME = $USER$	DESIGNED - JL	REVISED -	
	DRAWN - AA	REVISED -	
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -	
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

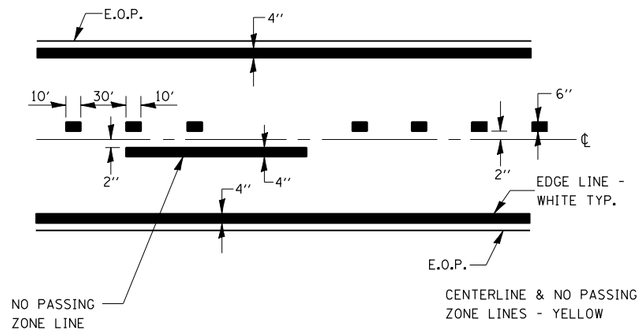
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	23
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			



TEMPORARY INFORMATION SIGNING

NOTES:

1. USE 6'' D BLACK LETTERING ON FLOURESENT ORANGE BACKGROUND.
2. ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE ''ROAD CONSTRUCTION AHEAD'' SIGNS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE DETOUR.
4. REMOVE PANEL (2) ON THAT DATE.
5. SEE SPECIAL PROVISION ''TEMPORARY INFORMATION SIGNING'' FOR ADDITIONAL INFORMATION.
6. WILL BE PAID FOR PER SQ FT AS ''TEMPORARY INFORMATION SIGNING''. EACH SIGN = 21 SQ FT AND THE DATE PANEL (2) WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.



PAVEMENT MARKING

FILE NAME = $FILE$

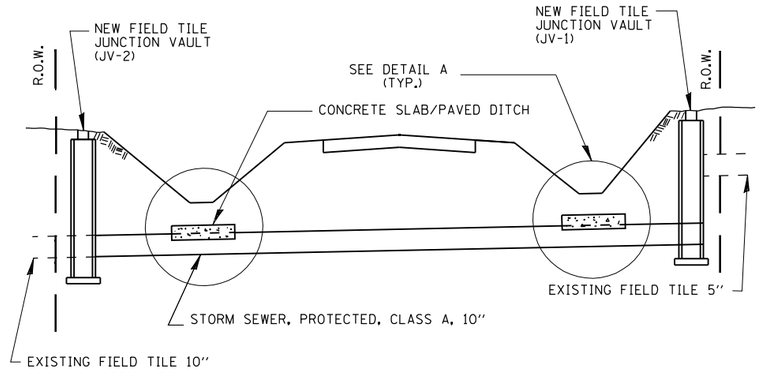
SDI ENGINEERING CORP. www.sdiengr.com	USER NAME = $USER$	DESIGNED - JL	REVISED -
		DRAWN - AA	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -
	PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

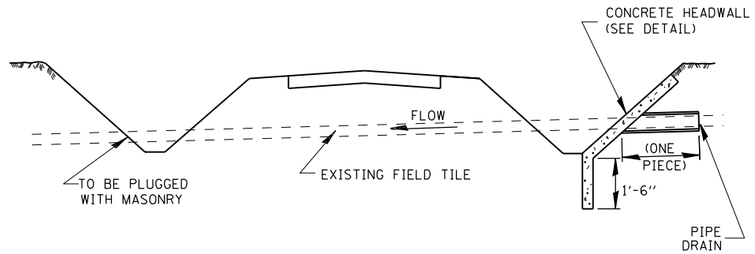
SCALE: | SHEET OF SHEETS | STA. | TO STA.

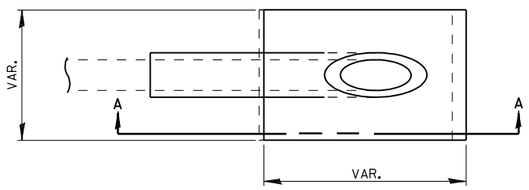
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	24
		CONTRACT NO. 66E25		
		ILLINOIS FED. AID PROJECT		



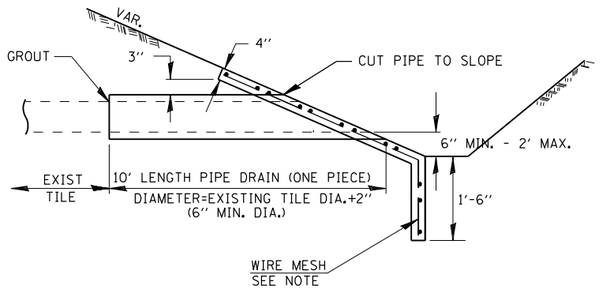
FIELD TILE REPLACEMENT

(LOOKING UPSTATION)



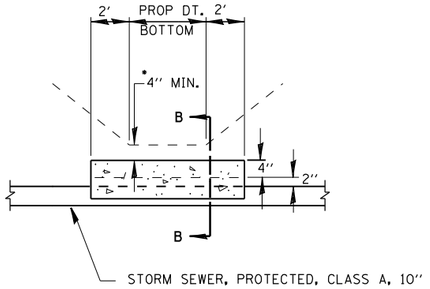


PLAN



SECTION A–A

CLASS SI CONCRETE HEADWALLS



DETAIL A

NO SCALE

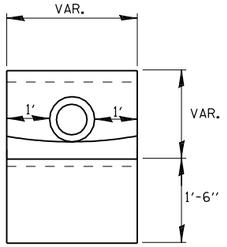
*IF A 4'' COVER CAN NOT BE PROVIDED A PAVED DITCH SHALL BE CONSTRUCTED AS SHOWN IN DETAIL C.

NOTES

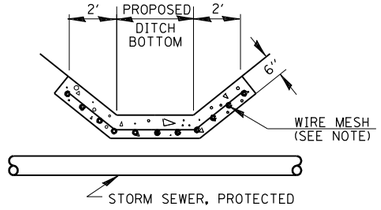
1. WIDTH OF CONCRETE SLAB SHALL BE THE SAME AS THE TRENCH WIDTH IN ACCORDANCE WITH SECTION 550 OF THE STD. SPECIFICATIONS, OR 3' MIN.
2. CONCRETE FOR SLAB, HEADWALL AND PAVED DITCH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR "MISCELLANEOUS CONCRETE."
3. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58* PER 100 SQ. FT.

NOTES

1. ANY STORM SEWER OR FIELD TILE OUTLET INTO A DITCH SHALL HAVE A HEADWALL BUILT IN ACCORDANCE WITH THIS DETAIL.
2. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58* PER 100 SQ. FT.



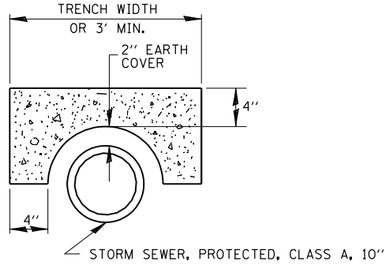
END VIEW



DETAIL C

NO SCALE

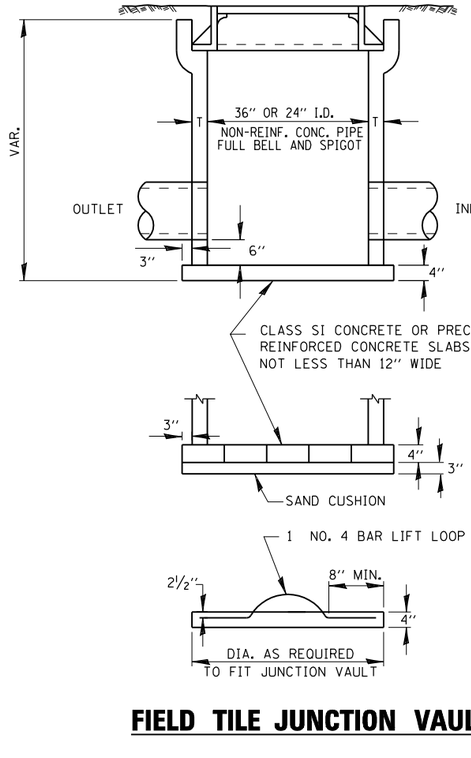
ALTERNATE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE RISERS	4''
CONCRETE MASONRY UNIT	5''
MONOLITHIC CONCRETE	6''
BUILDING BRICK, GRADE SW FROM CLAY OR SHALE	8''
CONCRETE BUILDING BRICK, GRADE A	8''



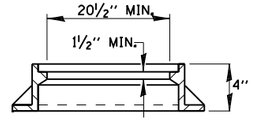
NOTES

1. THE CONTRACT UNIT PRICE FOR FIELD TILE JUNCTION VAULT SHALL INCLUDE THE COST OF FURNISHING AND PLACING THE FRAME AND GRATE OR PRECAST CONCRETE LID AND WHEN REQUIRED, THE SAND CUSHION.
2. ALL FIELD TILE JUNCTION VAULTS SHALL BE 2'-0'' IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.

SECTION B–B



± 145*



SECTION A–A

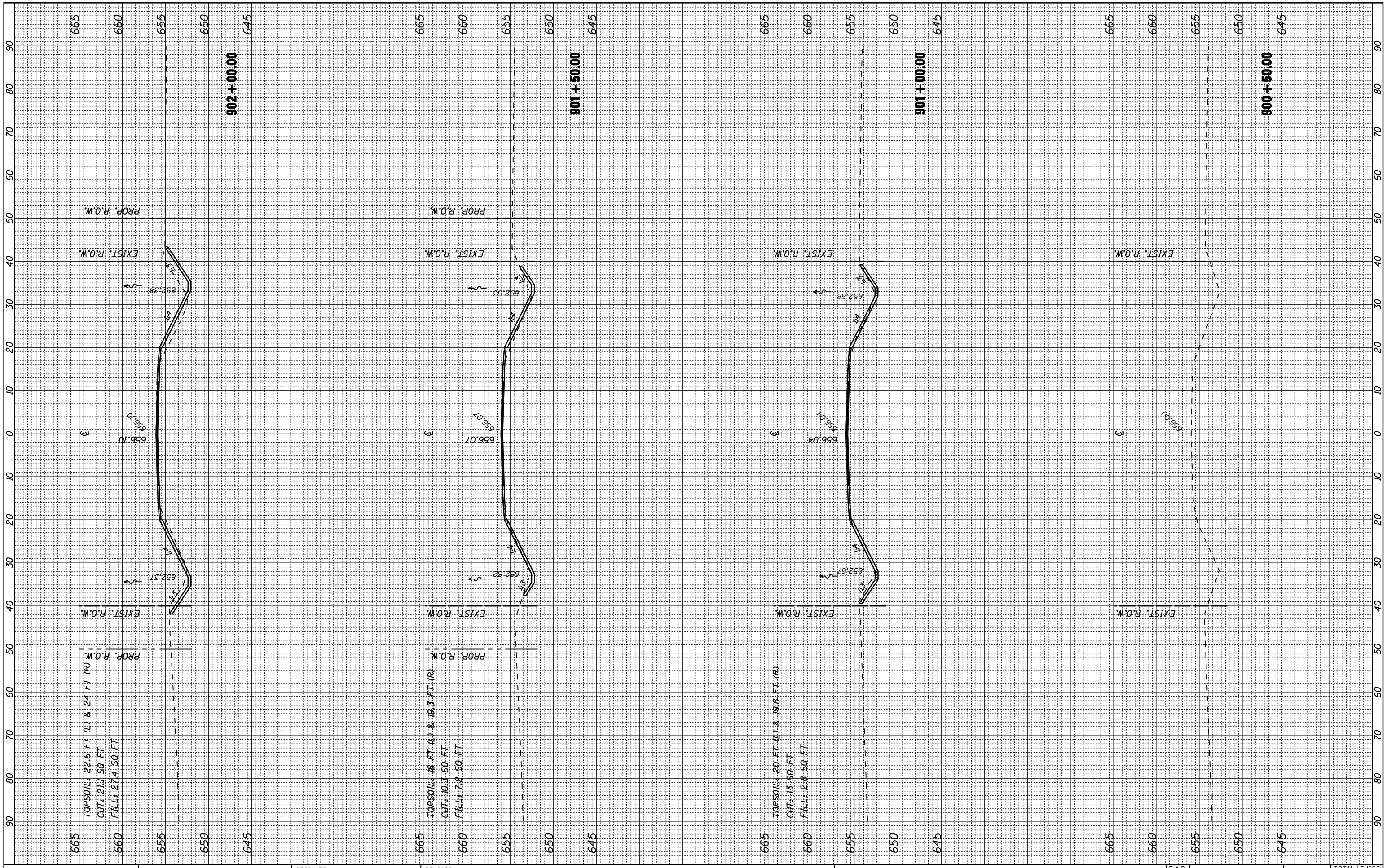
FIELD TILE JUNCTION VAULT

FILE NAME = $FILE1$

SDI ENGINEERING CORP. www.sdiengr.com						
USER NAME = $USER$	DESIGNED - JL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - AA	REVISED -			673	112C3	LIVINGSTON	28	25
PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -					CONTRACT NO. 66E25		
PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

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

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



SDI ENGINEERING CORP. www.sdiengr.com	USER NAME = $USER$	DESIGNED - AA / JL	REVISED -
		DRAWN - AA / JL	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -
	PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 900+50.00 TO STA. 902+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	26
		CONTRACT NO. 66E25		
	ILLINOIS FED. AID PROJECT			

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

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

SDI ENGINEERING CORP.
www.sdiengr.com

USER NAME = $USER$
PLOT SCALE = $SCALE$
PLOT DATE = $DATE$

DESIGNED - AA / JL
DRAWN - AA / JL
CHECKED - OAO
DATE - 02/02/2017

REVISED -
REVISED -
REVISED -
REVISED -

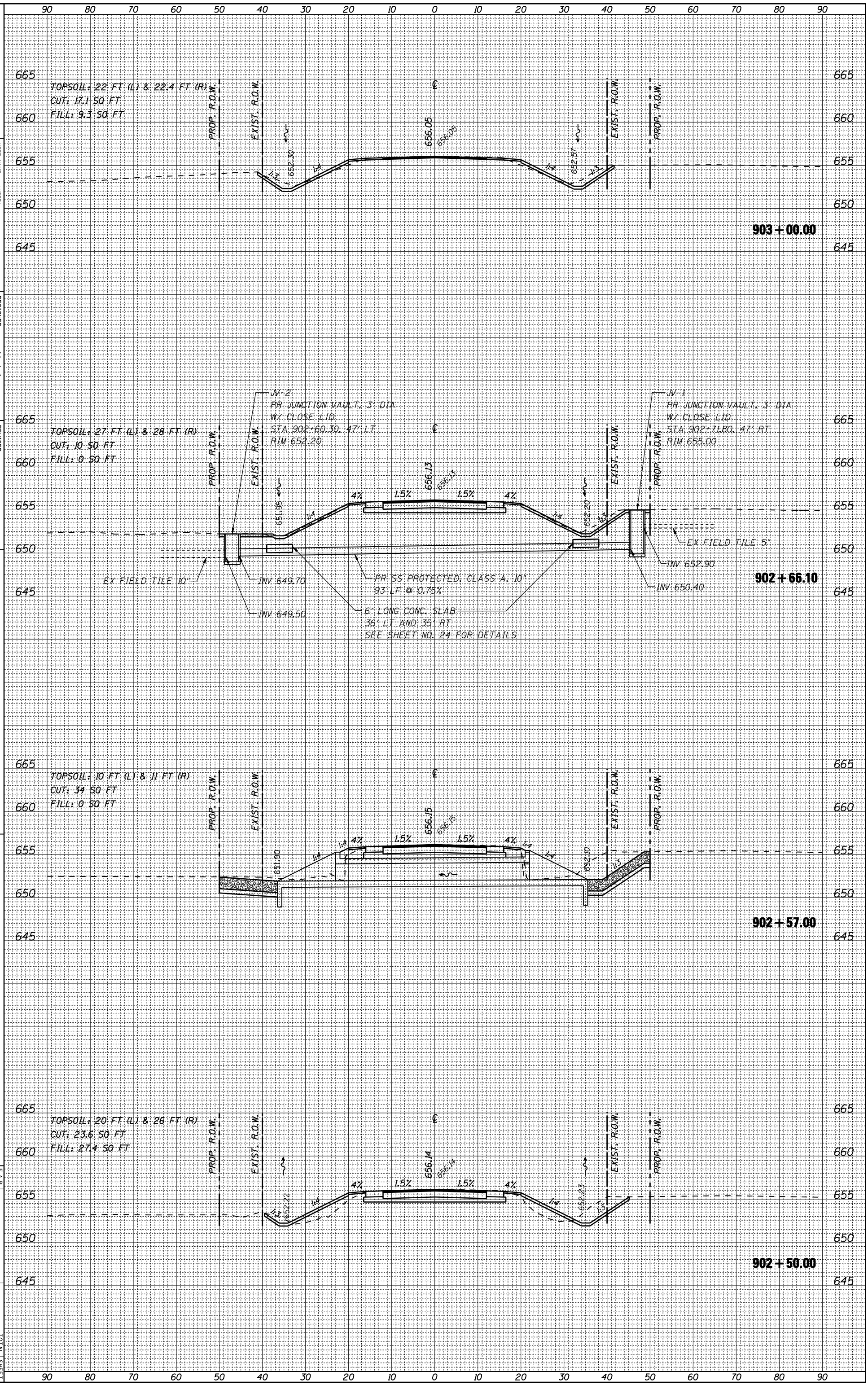
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE:

SHEET OF SHEETS

STA. 902+50.00 TO STA. 903+00.00



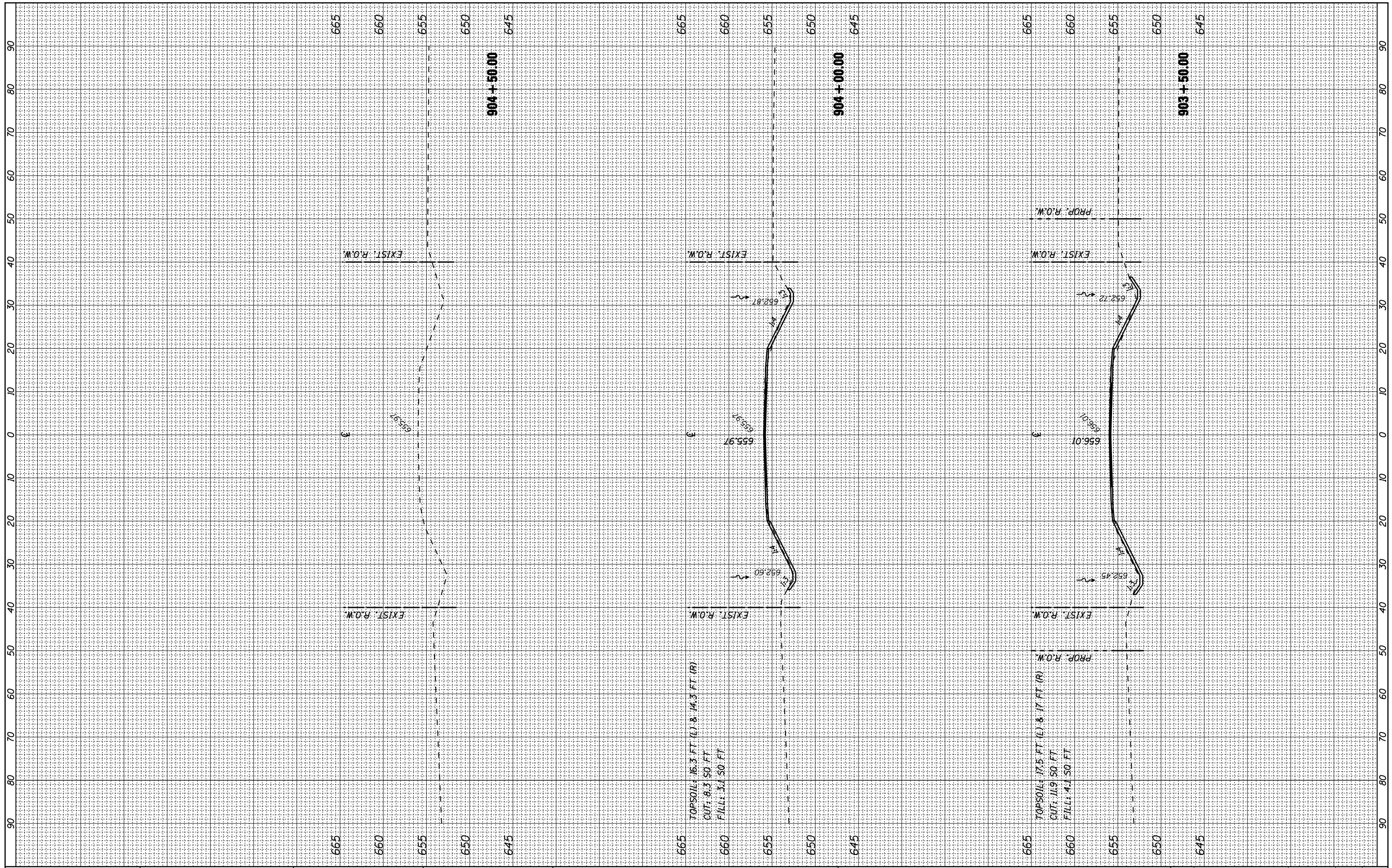
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	27

ILLINOIS FED. AID PROJECT

CONTRACT NO. 66E25

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

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



SDI ENGINEERING CORP. www.sdiengr.com	USER NAME = $USER$	DESIGNED - AA / JL	REVISED -
		DRAWN - AA / JL	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - OAO	REVISED -
	PLOT DATE = $DATE$	DATE - 02/02/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET OF SHEETS | STA. 903+50.00 TO STA. 904+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	112C3	LIVINGSTON	28	28
		CONTRACT NO. 66E25		
		ILLINOIS FED. AID PROJECT		