F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	1

CONTRACT NO. 66609

INDEX OF SHEETS

IDOT STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
482001	BITUMINOUS SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-01	BIT. SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-06	STEEL PLATE BEAM GUARDRAIL
630201-03	PCC/BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631026-02	TRAFFIC BARRIER TERMINAL, TYPE 5 & 5A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
702001-06	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
BLR 21-06	TYPICAL APPLICATIONS OF T.C.D. FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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.

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: DAN DRAPER
UNIT CHIEF: MICHELE LINDEMANN
TOWNSHIP: DWIGHT

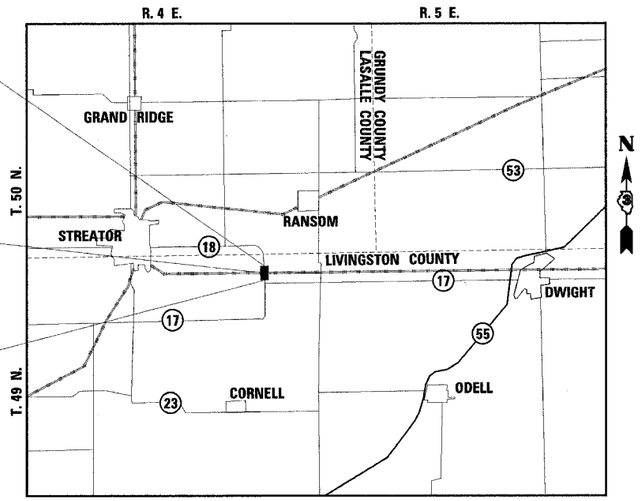
CONTRACT NO. 66609

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY IMPROVEMENT

FAP ROUTE 653 (ILLINOIS ROUTE 18)
SECTION 28VBR
PROJECT BHF-0653(023)
LIVINGSTON COUNTY

C-93-005-06
SUPERSTRUCTURE REPLACEMENT

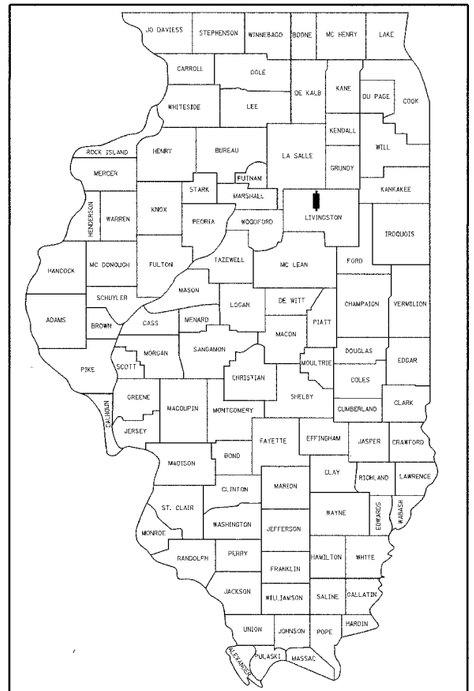


LOCATION MAP
NOT TO SCALE

GROSS & NET LENGTH = 768 FT = 0.15 MILES

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, Il 60187
License # 184-000813

P-93-046-05
D-93-010-06



LOCATION OF SECTION INDICATED THUS:-

FUNCTIONAL CLASSIFICATION - RURAL MINOR ARTERIAL
2006 ADT = 1975
P.V. = 83.5% S.U. = 7.6% M.U. = 8.9%

Michael R Huntsinger 3/15/06 11/30/07
REGISTERED P.E., STATE OF ILLINOIS EXPIRES

William J Vegrzyn 3-15-06 11-30-06
REGISTERED S.E., STATE OF ILLINOIS EXPIRES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 3/28 20 06
Gregory L Moore
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 12, 20 06
Mike Hine P.E.
ENGINEER OF DESIGN AND ENVIRONMENT
May 12, 20 06
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	2
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609

GENERAL NOTES

ENGLISH UNITS OF MEASURE SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

THE THICKNESS OF BITUMINOUS MIXTURES 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 BITUMINOUS MIXTURE IS PLACED.

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

AGGREGATE (PRIME COAT): FA 20 MAY BE USED IN ADDITION TO THE GRADATIONS LISTED IN THE 3RD PARAGRAPH OF ARTICLE 1003.03(c) OF THE STANDARD SPECIFICATIONS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS 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 SEEDED WILL BE DETERMINED BY THE ENGINEER.

ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP 4 INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED 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 LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

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

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MAT PRIME COAT	0.08 0.375	GAL / SQ YD OR GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
BITUMINOUS SURFACING	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

UTILITIES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

ALL DAMAGE TO DEPARTMENT OWNED UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE. THIS SHALL INCLUDE ALL TEMPORARY REPAIRS REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS. SPLICING OF ELECTRIC CABLE SHALL NOT BE ALLOWED. ELECTRIC CABLE SHALL BE REPLACED FROM POLE TO POLE OR CONTROLLER.

THE COST OF MAKING ANY SEWER CONNECTIONS TO AN EXISTING DRAINAGE STRUCTURE OR PIPE SHALL BE INCLUDED IN THE COST OF THE NEW SEWER.

THE QUANTITIES INCLUDED IN THE PLANS FOR BITUMINOUS CONCRETE RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE BITUMINOUS MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Rick Powell
DISTRICT STUDIES & PLANS ENGINEER

DATE: 3-27-06

EXAMINED BY:
DISTRICT CONSTRUCTION ENGINEER

DISTRICT MATERIALS ENGINEER

Bruce A. Buchan
DISTRICT OPERATIONS ENGINEER

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

GENERAL NOTES

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	3
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609

80% FEDERAL 20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 1000-2A	CONSTRUCTION CODE BRIDGE X181-5B
20200100	EARTH EXCAVATION	CU YD	230.0	230.0	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	105.0	105.0	
20400800	FURNISHED EXCAVATION	CU YD	45.0	45.0	
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	61.0		61.0
* 25000210	SEEDING, CLASS 2A	ACRE	0.25	0.25	
* 25100115	MULCH, METHOD 2	ACRE	0.25	0.25	
28000400	PERIMETER EROSION BARRIER	FOOT	1155.0	1155.0	
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	1180.0	1180.0	
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	675.5	675.5	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	29.0	29.0	
42001300	PROTECTIVE COAT	SQ YD	240.0	240.0	
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	240.0	240.0	
44000006	BITUMINOUS SURFACE REMOVAL 1½"	SQ YD	1571.0	1571.0	
44000700	APPROACH SLAB REMOVAL	SQ YD	290.0	290.0	
44004250	PAVED SHOULDER REMOVAL	SQ YD	45.0	45.0	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	62.0	62.0	
48202600	BITUMINOUS SHOULDERS SUPERPAVE 8"	SQ YD	770.0	770.0	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1.0		1.0
50200100	STRUCTURE EXCAVATION	CU YD	61.0		61.0
50300260	BRIDGE DECK GROOVING	SQ YD	493.0		493.0
50300300	PROTECTIVE COAT	SQ YD	496.0		496.0
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	4457.0		4457.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	6580.0		6580.0
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	248.0		248.0

* SPECIALTY ITEMS

80% FEDERAL 20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 1000-2A	CONSTRUCTION CODE BRIDGE X181-5B
51500100	NAME PLATES	EACH	1.0		1.0
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	38		38
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4.0		4.0
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	112.0		112.0
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	675.0	675.0	
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4.0	4.0	
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4.0	4.0	
63200310	GUARDRAIL REMOVAL	FOOT	320.0	320.0	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5.0	5.0	
67100100	MOBILIZATION	L SUM	1.0	1.0	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2527.0	2527.0	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	140.0	140.0	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8.0	8.0	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2.0	2.0	
* 78200410	GUARDRAIL MARKERS - TYPE A	EACH	14.0	14.0	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4.0	4.0	
X0300136	BRIDGE APPROACH SHOULDER REMOVAL	SQ YD	30.0	30.0	
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	132.0	132.0	
X4073116	BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 11¾"	SQ YD	120.0	120.0	
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	495.2		495.2
X6050700	REMOVE INLET BOX	EACH	4.0	4.0	
X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1.0	1.0	
XX005369	TRAFFIC CONTROL & PROTECTION FOR TEMPORARY DETOUR	L SUM	1.0	1.0	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1.0	1.0	
X0325337	PREFORMED JOINT STRIP SEAL, 1"	FOOT	72.0		72.0

* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

SUMMARY OF QUANTITIES

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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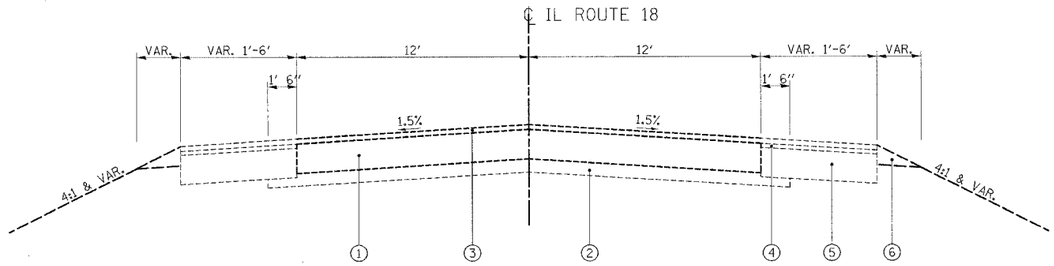
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	4
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

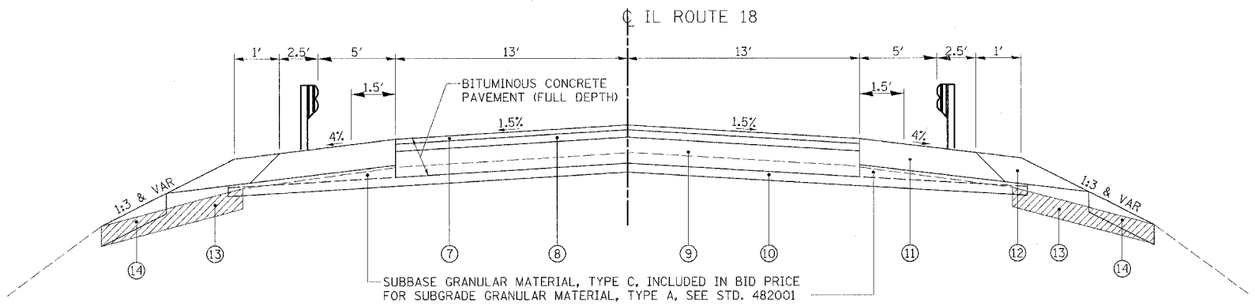
CONTRACT NO. 66609



TYPICAL SECTION – EXISTING

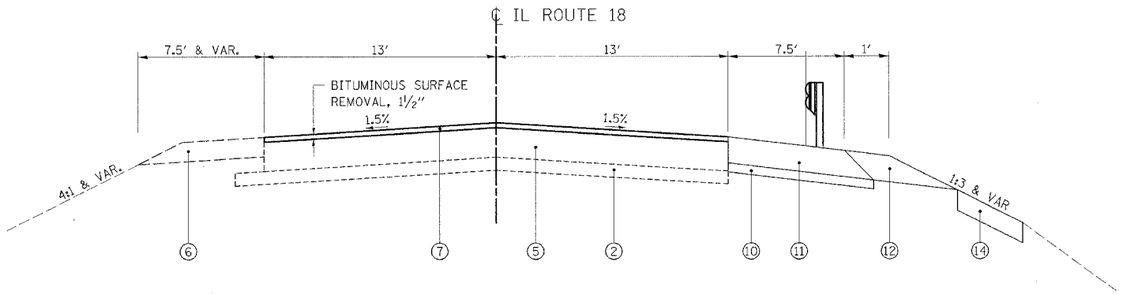
(FULL DEPTH RECONSTRUCTION LIMITS)

STATION 741+73.71 TO STATION 742+23.71
BRIDGE OMISSION STA. 742+23.71 TO STA. 743+47.80
STATION 743+47.80 TO STATION 743+97.80



PROPOSED TYPICAL SECTION – RECONSTRUCTION

STATION 741+73.71 TO STATION 741+93.72
APPROACH SLAB & BRIDGE OMISSION STA. 741+93.72 TO STA. 743+77.80
STATION 743+77.80 TO STATION 743+97.80



PROPOSED TYPICAL SECTION – RESURFACING

STATION 739+01.97 TO STATION 741+73.71
STATION 743+97.80 TO STATION 746+69.55

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

	SUPERPAVE BINDER	SUPERPAVE SHOULDERS	SUPERPAVE SURFACE	SUPERPAVE BASE COURSE
PG GRADE	PG64-22	PG58-22	PG64-22	PG64-22
MAX % RAP ALLOWABLE **	25%	25%	15%	25%
DESIGN AIR VOIDS	4.0% @ N50	2.0% @ N30	4.0% @ N50	2.0% @ N50
MIXTURE COMPOSTION	IL 19.0	BAM	IL 12.5 OR IL 9.5	BAM
FRICTION AGGREGATE			MIXTURE C	
PLANT CONTROL LIMITS	CLASS I	CLASS I	CLASS I	NON-CLASS I
DENSITY CONTROL METHOD	CORES OR NUCLEAR	*	CORES OR NUCLEAR	*

* MATERIAL SHALL BE COMPACTED TO 93-97 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT THE BOTOM LIFT SHALL BE COMPACTED TO A MINIMUM OF 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

1. EXISTING PORTLAND CEMENT CONCRETE APPROACH PAVEMENT (STD 2360-1)
2. EXISTING SUB-BASE GRANULAR MATERIAL, 4"
3. EXISTING BITUMINOUS CONCRETE SURFACE COURSE, 1½"
4. EXISTING BITUMINOUS BINDER COURSE, 1¼"
5. EXISTING BITUMINOUS BASE COURSE, 9"
6. EXISTING AGGREGATE SHOULDER, TYPE A 6"
7. BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50, 1½"
8. BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N50, 2¼"
9. BITUMINOUS BASE COURSE, SUPERPAVE, 8"
10. SUB-BASE GRANULAR MATERIAL, TYPE A, 4"
11. BITUMINOUS SHOULDERS, SUPERPAVE, 8"
12. AGGREGATE SHOULDERS, 8"
13. REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
14. VEGETATION SUSTAINING SOIL, 4"

BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH), SUPERPAVE, 11¾" COMPOSITION:
1½" BITUMINOUS CONCRETE SUPFACE COURSE, SUPERPAVE, MIX "C", N50
2¼" BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N50
8" BITUMINOUS BASE COURSE, SUPERPAVE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

TYPICAL SECTIONS

SCALE: VERT. NOT TO SCALE HORIZ.
DATE: MARCH 15, 2006
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CHECKED BY MRH

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SCHEDULE OF QUANTITIES

STATION	LOCATION	SEEDING, CLASS 2A (ACRE)	MULCH, METHOD 2 (ACRE)	PERIMETER EROSION BARRIER (FT)	PAVED SHOULDER REMOVAL (SQ YD)	AGGREGATE SHOULDERS TYPE B, 8" (TON)	BITUMINOUS SHOULDERS SUPERPAVE, 8" (SQ YD)	STEEL PLATE BEAM GUARDRAIL, TYPE A (FT)	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT) (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 5A (EACH)	GUARDRAIL REMOVAL (FT)	PAINT PAVEMENT MARKING - LINE 4" (FT)	PAINT PAVEMENT MARKING - LINE 6" (FT)	BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX "C", N50 (TON)	BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH), SUPERPAVE, 11 3⁄4" (SQ YD)	REMOVE INLET BOX (EACH)
739+01.97 TO 746+69.55	LT											767.5				
739+01.97 TO 746+69.55	RT											767.5				
739+01.97 TO 742+23.72	RT	0.095	0.095	358		19	250	237.5	1	1	80					
739+01.97 TO 741+73.71	CENTER											272	70	66		
740+39.52 TO 742+23.72	LT	0.034	0.034	215		12	135	100	1	1	80					
741+73.71 TO 741+93.72	CENTER														60	
741+73.71 TO 743+97.80	CENTER											448				
743+77.80 to 743+97.80	CENTER														60	
743+47.80 TO 745+32.00	RT	0.043	0.043	222		12	135	100	1	1	80					
743+97.80 TO 746+69.55	CENTER											272	70	66		
743+47.80 TO 746+69.55	LT	0.078	0.078	360		19	250	237.5	1	1	80					
741+82.98 TO 742+11.10	RT				10											
741+83.55 TO 742+11.01	LT				10											
743+60.41 TO 743+93.99	RT				12											
743+60.48 TO 743+97.42	LT				13											
742+17	RT															1
742+19	LT															1
743+54	RT															1
743+54	LT															1
TOTAL		**0.25**	**0.25**	**1155**	**45**	**62**	**770**	**675**	**4**	**4**	**320**	**2527**	**140**	**132**	**120**	**4**

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (CU YD)	REMOVAL OF UNSUITABLE MATERIAL (CU YD)	EMBANKMENT (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (CU YD)	EARTHWORK BALANCE (+) WASTE (-) SHORTAGE (CU YD)	FURNISHED EXVACATION (CU YD)
STA. 739+01.97 TO STA. 742+23.71	104	45	109	78	(-) 31	31
STA. 743+47.80 TO STA. 746+69.55	126	60	108	95	(-) 14	14

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 653 (IL 18)

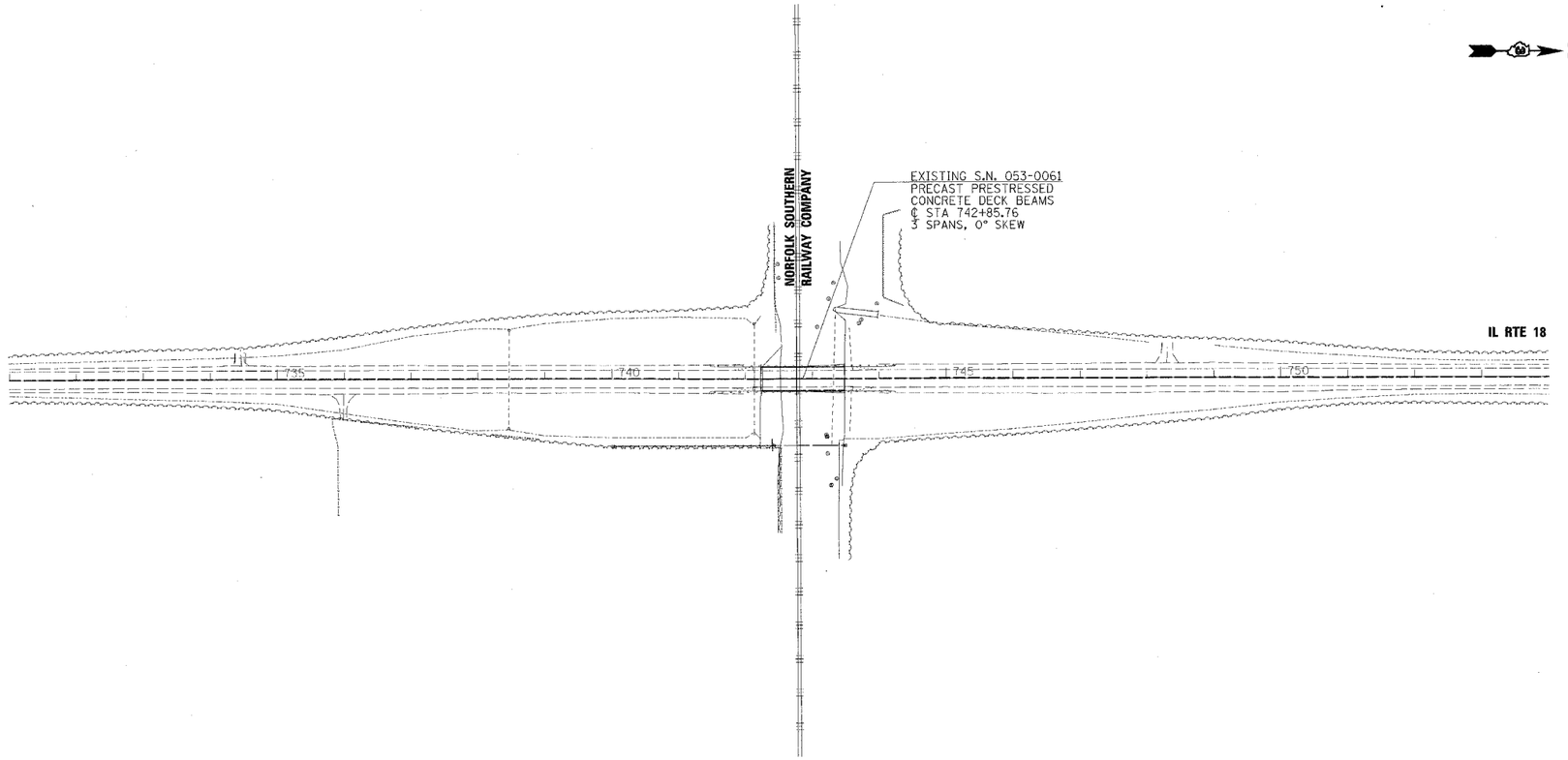
SCHEDULE OF QUANTITIES

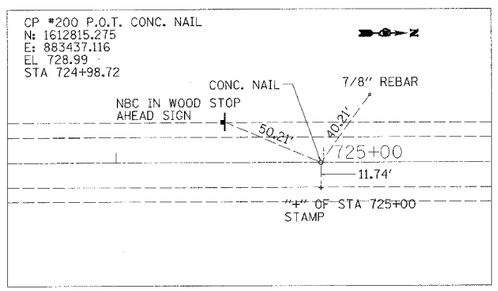
SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

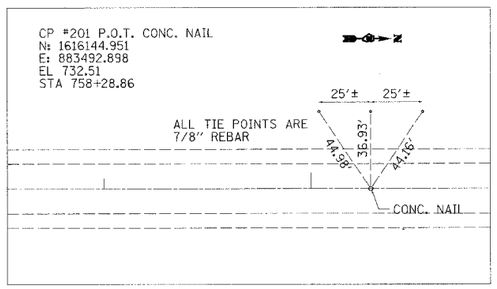
DRAWN BY NEC
CHECKED BY MRH

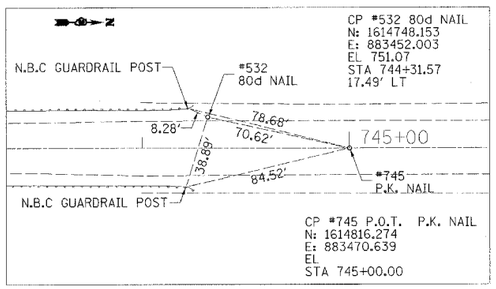
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	6
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

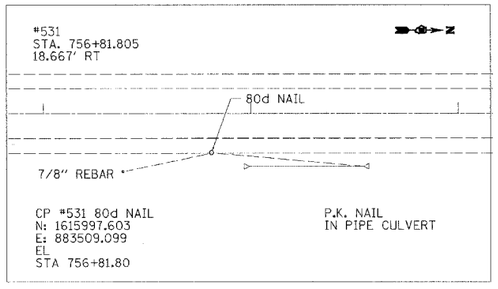
CONTRACT NO. 66609

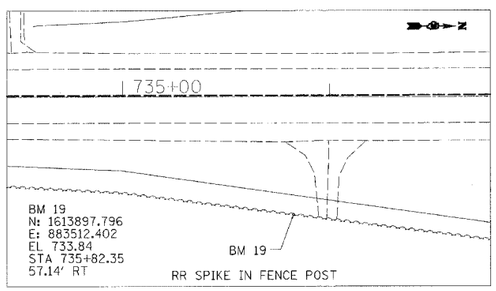


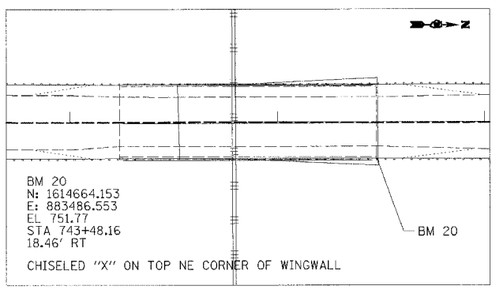












REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

ALIGNMENT, TIES AND BENCHMARKS

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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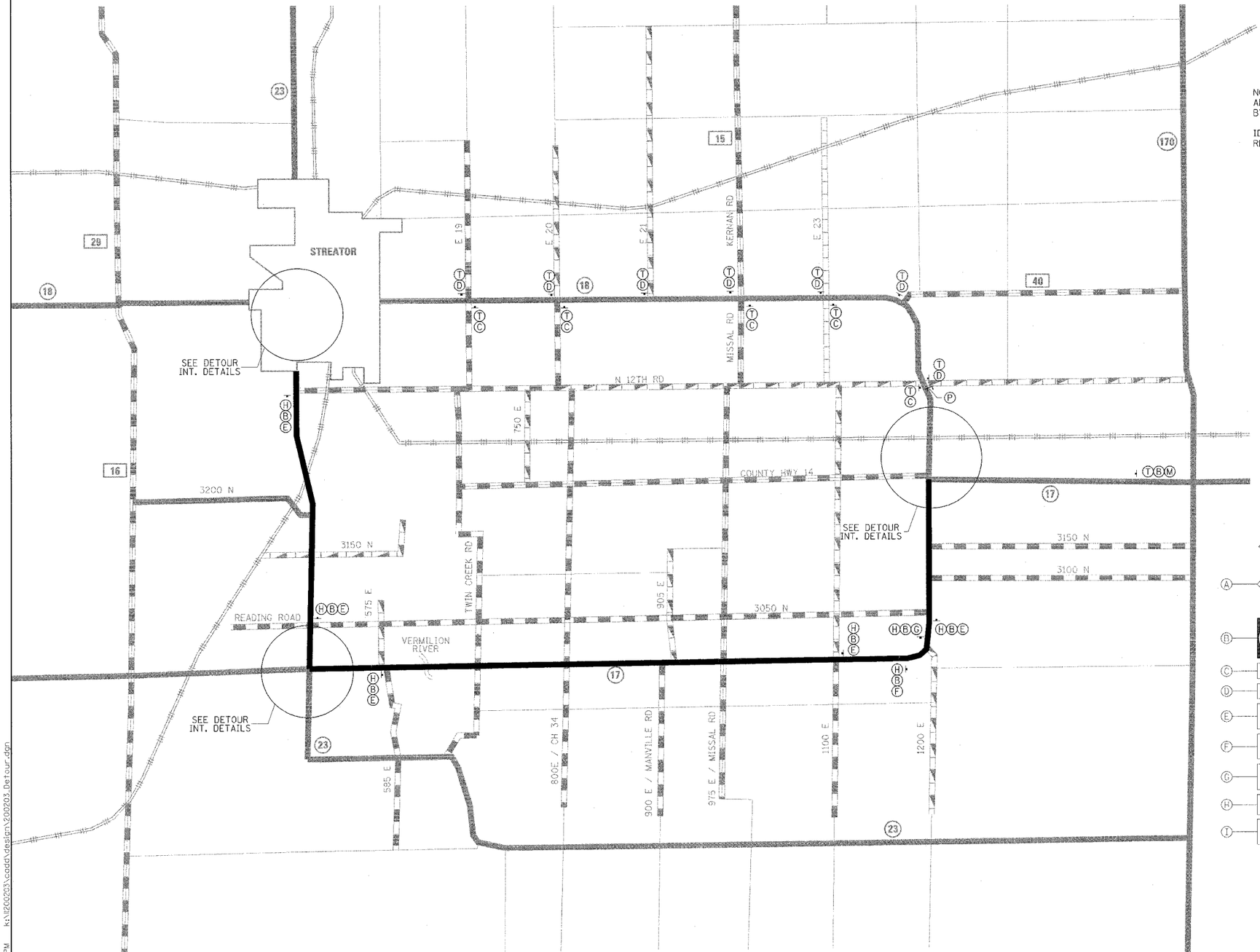
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	7
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609



NOTE:
ALL TRAFFIC CONTROL SIGNING TO BE ERECTED AND MAINTAINED BY CONTRACTOR.

IDOT WILL PROVIDE IL 18 ROUTE MARKERS ONLY - PLEASE CONTACT THE RESIDENT ENGINEER 21 DAYS IN ADVANCE.

N

LEGEND

- MONODIRECTIONAL FLASHING AMBER LIGHT
- DIRECTION OF TRAFFIC
- 1 TYPE III BARRICADE W/STEADY BURNING MONODIRECTIONAL LIGHT
- SIGN
- ORANGE FLAG
- PAVED UNDIVIDED
- BITUMINOUS HIGH TYPE
- BITUMINOUS LOW TYPE
- GRAVEL OR STONE
- SOIL SURFACE
- RAILROAD TRACKS
- NOT KNOWN

SCHEDULE OF DETOUR SIGNS

A	DETOUR 1500 FT	W20-2	48x48
B	18	M1-6	24x24
C	DETOUR	M4-10 (L)	48x18
D	DETOUR	M4-10 (R)	48x18
E		M6-3	21x15
F		M5-1(L)	21x15
G		M5-1 (R)	21x15
H	DETOUR	M4-8	24x12
I	END DETOUR	M6-1 (L)	21x15
J	BRIDGE OUT 8 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	60x30
K	ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY	R11-3a	60x30
L		M6-1 (L)	21x15
M		M6-1 (R)	21x15
N		M6-1	21x15
O	ROAD CLOSED	R11-2	48x30
P	BRIDGE OUT	R11-2	48x30
Q	ROAD CLOSED 500 FT	W20-3	48x48
R	ROAD CONSTRUCTION AHEAD	W20-1	48x48
S	DETOUR 500FT	W20-2	48x48
T	ROAD CLOSED AHEAD	W20-3	48x48
U	EAST	M3-3	24x12
V	WEST	M3-4	24x12

NOTE: DIMENSIONS ARE SHOWN IN INCHES

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

DETOUR PLAN

SCALE: VERT. NOT TO SCALE
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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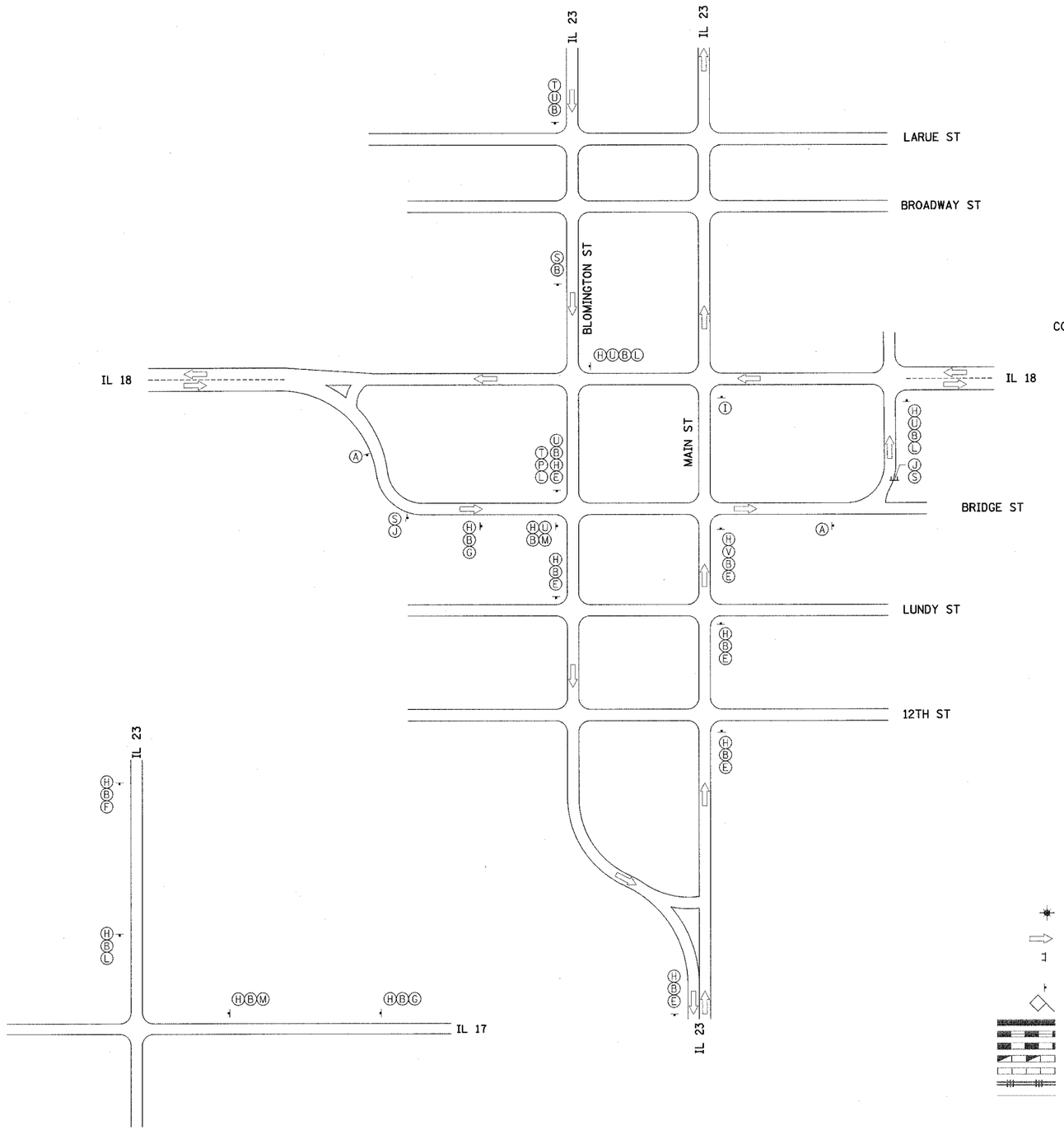
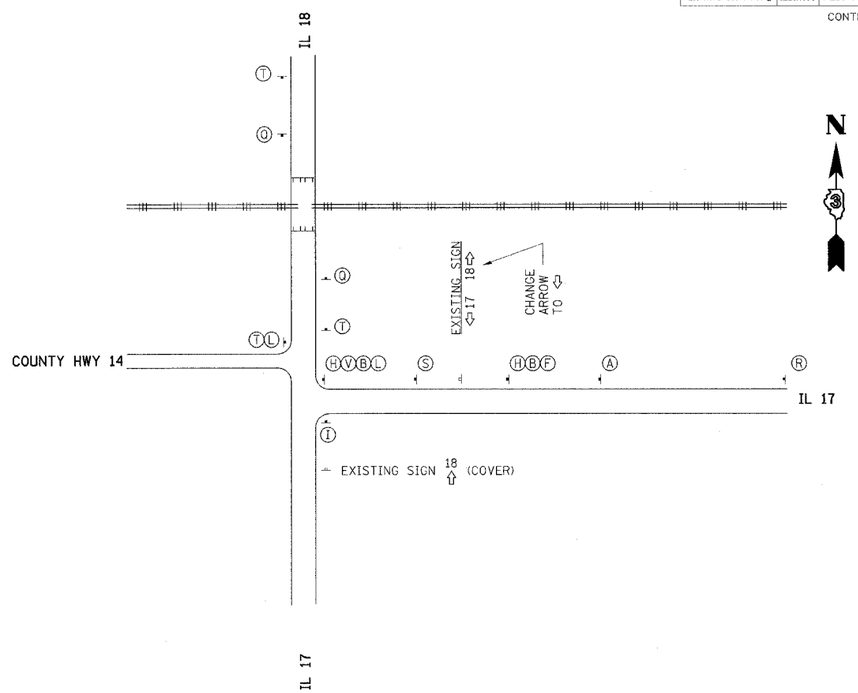
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	8
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609

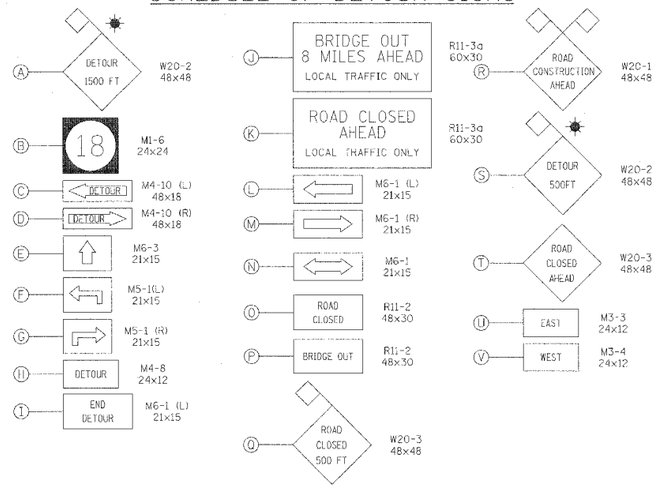




LEGEND

- MONODIRECTIONAL FLASHING AMBER LIGHT
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE W/STEADY BURNING MONODIRECTIONAL LIGHT
- SIGN
- ORANGE FLAG
- PAVED UNDIVIDED
- BITUMINOUS HIGH TYPE
- BITUMINOUS LOW TYPE
- GRAVEL OR STONE
- SOIL SURFACE
- RAILROAD TRACKS
- NOT KNOWN

SCHEDULE OF DETOUR SIGNS



NOTE: DIMENSIONS ARE SHOWN IN INCHES

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

DETOUR PLAN
INTERSECTION DETAILS

SCALE: VERT. HORIZ. NOT TO SCALE
DATE: MARCH 15, 2006
DRAWN BY NEC
CHECKED BY MRH

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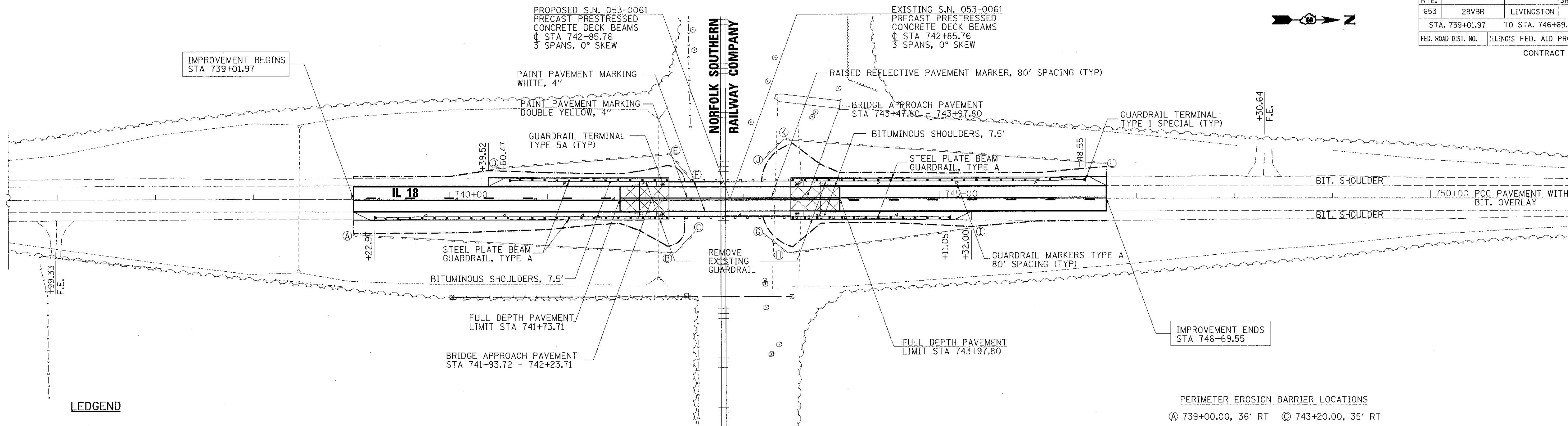
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	9
STA. 739+01.97 TO STA. 746+69.55				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609



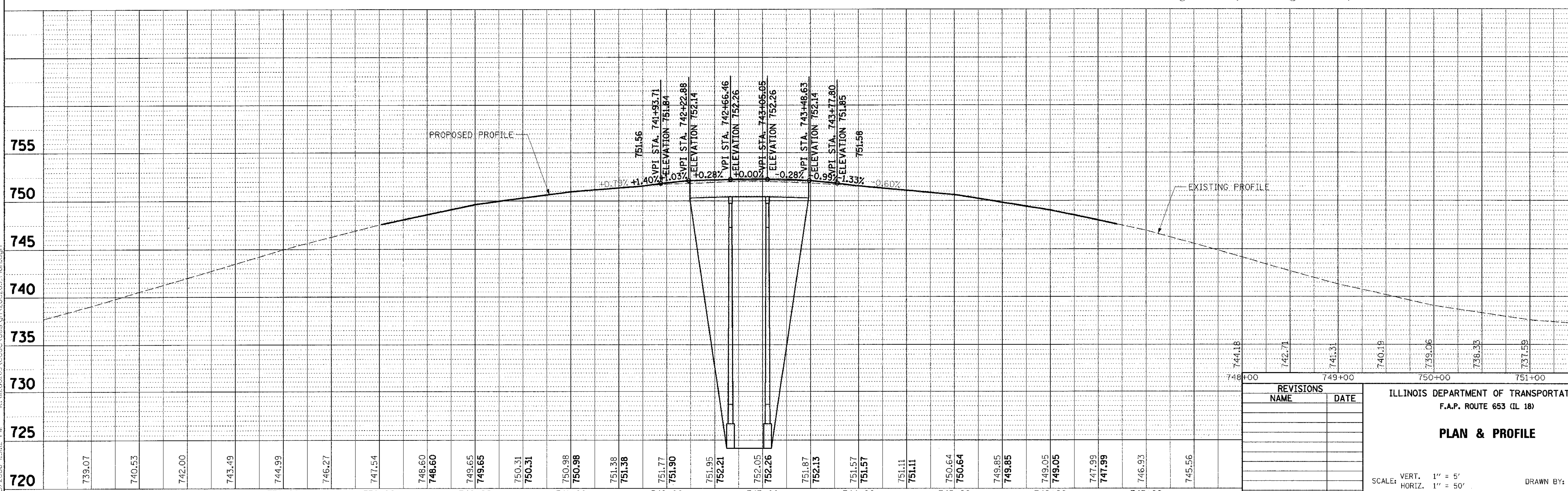
LEDGEND

- PAVEMENT REMOVAL (FULL DEPTH)
- * REMOVE EXISTING APPROACH DRAIN CAP & ABANDON PIPE
- CONSTRUCTION LIMITS
- PERIMETER EROSION BARRIER

PERIMETER EROSION BARRIER LOCATIONS

Ⓐ 739+00.00, 36′ RT	Ⓖ 743+20.00, 35′ RT
Ⓑ 742+30.00, 55′ RT	Ⓗ 743+45.00, 55′ RT
Ⓒ 742+50.00, 33′ RT	Ⓘ 745+32.00, 30′ RT
Ⓓ 740+40.00, 30′ LT	Ⓙ 743+20.00, 40′ LT
Ⓔ 742+25.00, 45′ LT	Ⓚ 743+40.00, 60′ LT
Ⓕ 742+45.00, 20′ LT	Ⓛ 746+70.00, 35′ LT

0 50′ 100′



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 653 (IL 18)

PLAN & PROFILE

SCALE: VERT. 1″ = 5′ HORIZ. 1″ = 50′

DATE: MARCH 15, 2006

DRAWN BY: NEC

CHECKED BY: MRH

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

PROFILE | NOTE BOOK NO. | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTAT'NS CH'KD | BY | DATE

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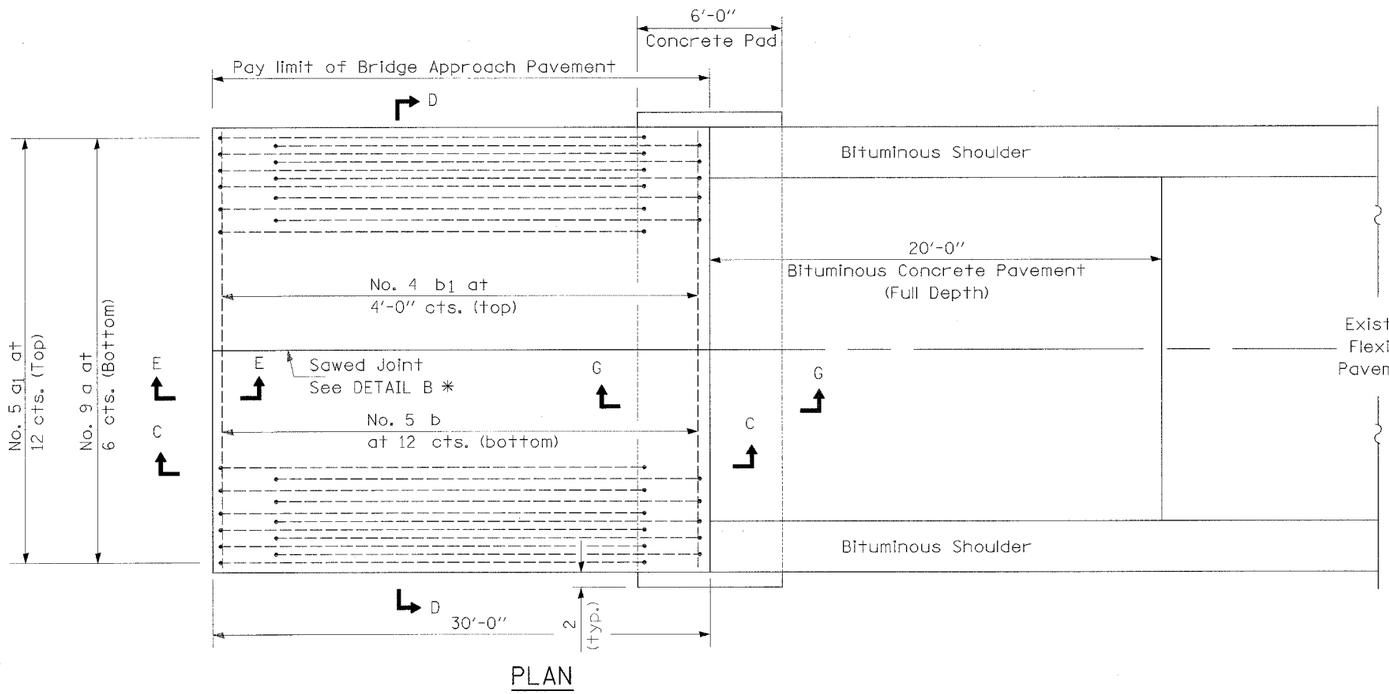
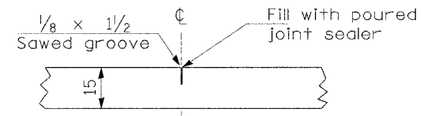
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	10
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66609



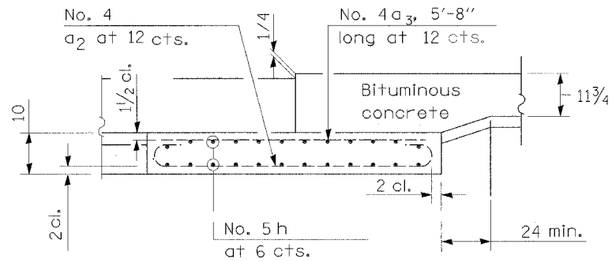
PLAN

* Saw ℄ or lane edge if poured two or more lane widths at a time.



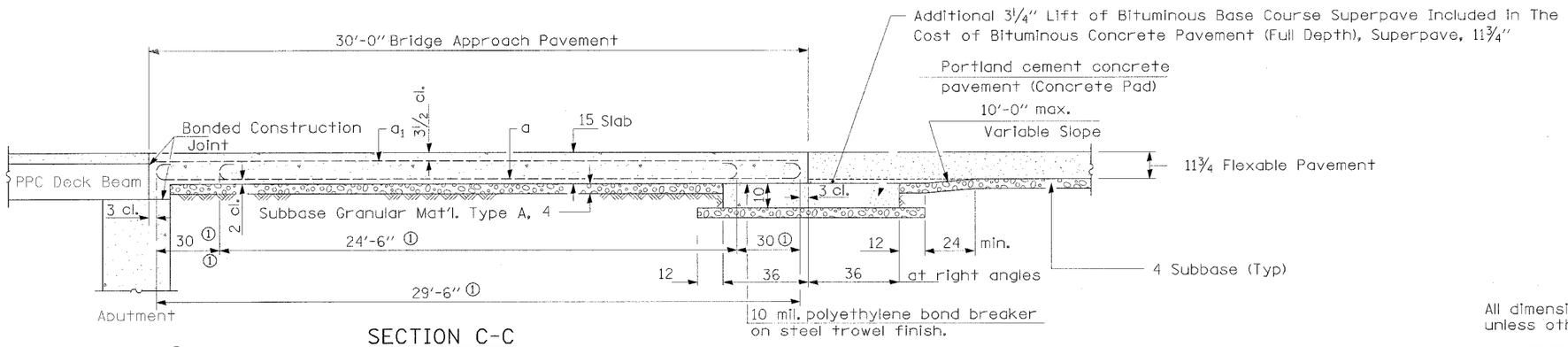
DETAIL B *

(Reinforcement Not Shown)



SECTION G-G - FLEXIBLE PAVEMENT

(Showing reinforcement)



SECTION C-C

① Stagger No. 9 a bars as shown on plan - full width

All dimensions are in inches
unless otherwise shown.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 653 (IL 18)

BRIDGE APPROACH PAVEMENT DETAILS

SCALE: VERT. HORIZ.

DATE: MARCH 15, 2006

DRAWN BY NEC

CHECKED BY MRH

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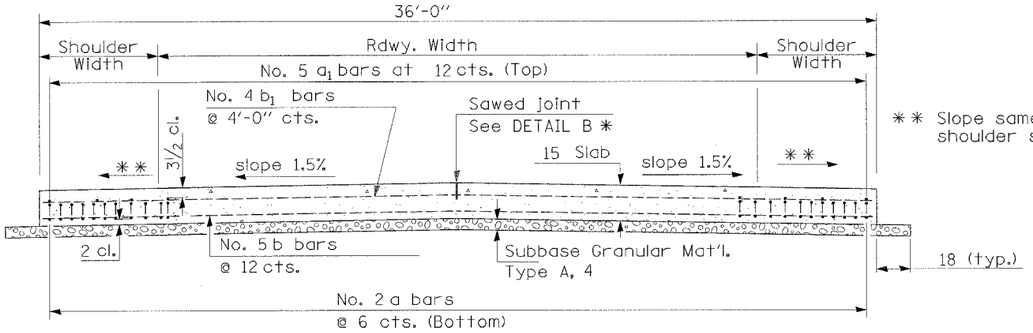
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	11
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

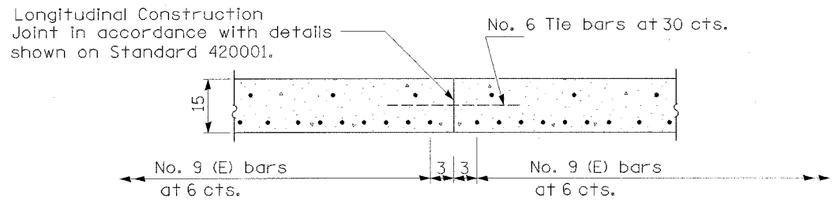
CONTRACT NO. 66609



** Slope same as adjacent shoulder slope.

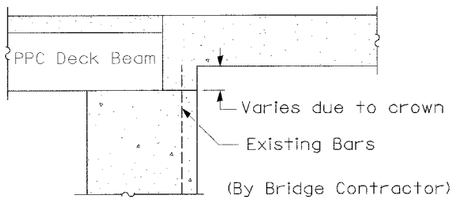
SECTION D-D

(See Plan for Dimensions not shown)
All reinforcement bars shall be epoxy coated.

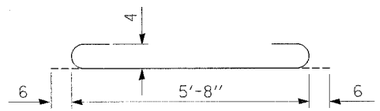


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

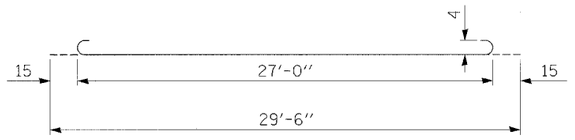
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



SECTION E-E



BAR a_2



BAR a

DESIGN STRESSES

fy = 60,000 p.s.i.
f'c = 3,500 p.s.i.
n = 8.5

All dimensions are in inches unless otherwise shown.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

BRIDGE APPROACH PAVEMENT DETAILS

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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Bench Mark: Chiseled Square on top of Northeast wingwall.
Station 743+48.16. Elevation 751.771

Existing Structure: The existing structure is a three-span PPC deck beam bridge built in 1926 as ILL 18, Section 28VBR. The existing structure was rebuilt in 1965 and 1980. The structure number is 053-0061, Sta 742+85.76. The back to back abutment length is 125'-9" and out to out bridge width is 36'-0". The existing superstructure is to be removed and replaced. Traffic to be detoured.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
9 SHEETS

Contract # 66609

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th ed.

DESIGN STRESSES

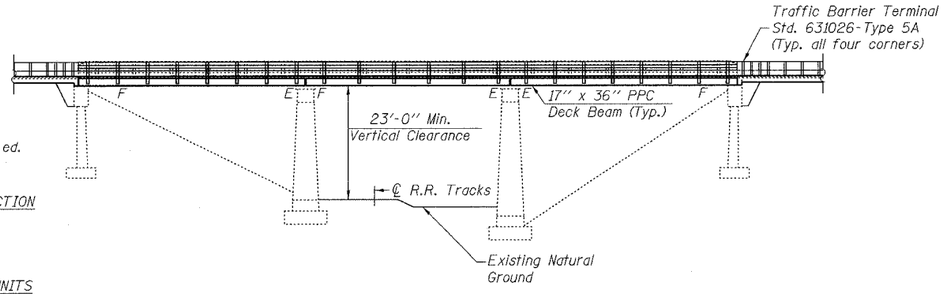
NEW & EXISTING CONSTRUCTION

FIELD UNITS

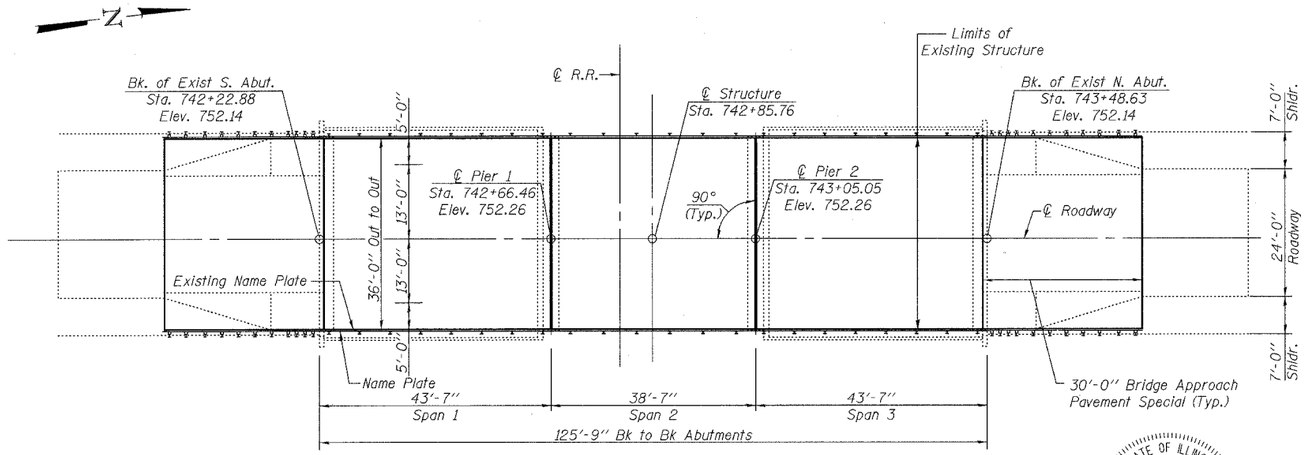
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (1/2" ϕ low relax strands)
f_{si} = 201,960 psi (1/2" ϕ low relax strands)



ELEVATION

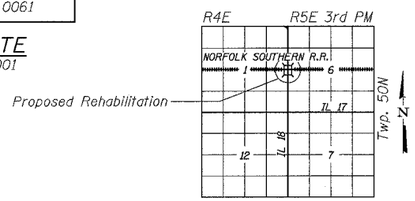


PLAN

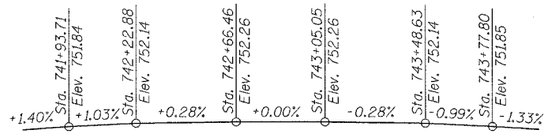
STATION 742+85.76
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 653 SEC. 28 VBR
LOADING HS20
STR. NO. 053-0061

NAME PLATE

See Std. 515001



LOCATION SKETCH



PROFILE GRADE

STATE OF ILLINOIS
WILLIAM J. VEGRZYN
4983
HANOVER PARK
IL
LICENSED STRUCTURAL ENGINEER

William J. Vegrzyn 3-15-06
Expires 11-30-06

INDEX OF SHEETS

GENERAL NOTES

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

All Construction joints shall be bonded.

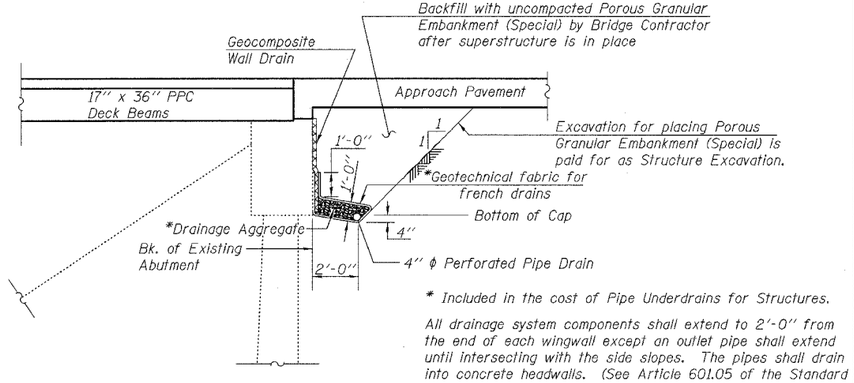
The existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of beams.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	4457		4457
Reinforcement Bars, Epoxy Coated	Pound	6580		6580
Concrete Wearing Surface, 5"	Sq. Yd.	495.2		495.2
Bridge Deck Grooving	Sq. Yd.	493		493
Protective Coat	Sq. Yd.	496		496
Steel Bridge Rail, Type SM	Foot	248		248
Name Plates	Each	1		1
Structure Excavation	Cu. Yd.		61.0	61.0
Porous Granular Embankment (Special)	Cu. Yd.		61.0	61.0
Preformed Joint Strip Seal, 1"	Foot	72.0		72.0
Pipe Underdrains for Structures, 4"	Foot		112	112
Geocomposite Wall Drain	Sq. Yd.		38	38



* Included in the cost of Pipe Underdrains for Structures.

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

SECTION THRU ABUTMENTS

(℄ Rt. L's)

Approach Pavement shall be poured after superstructure wearing surface has been placed.

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, Il 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653-SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

DATE: 3-15-2006

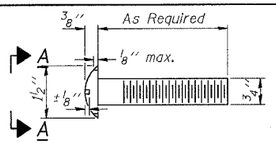
DRAWN BY JMT
CHECKED BY WJV

3/15/2006 k:\11280203\Structure\Final Plans\dgn

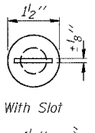
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	13
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
9 SHEETS

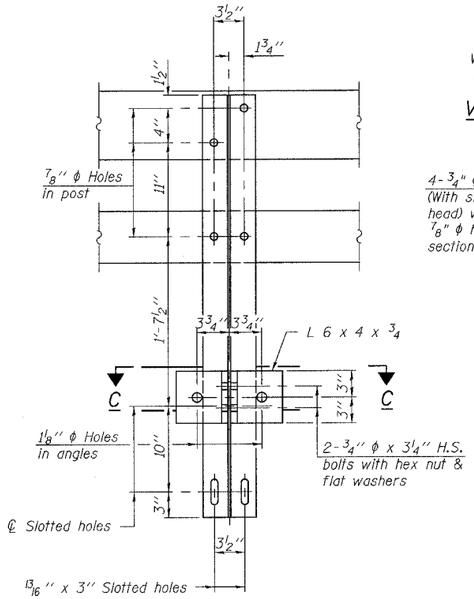
Contract # 66609



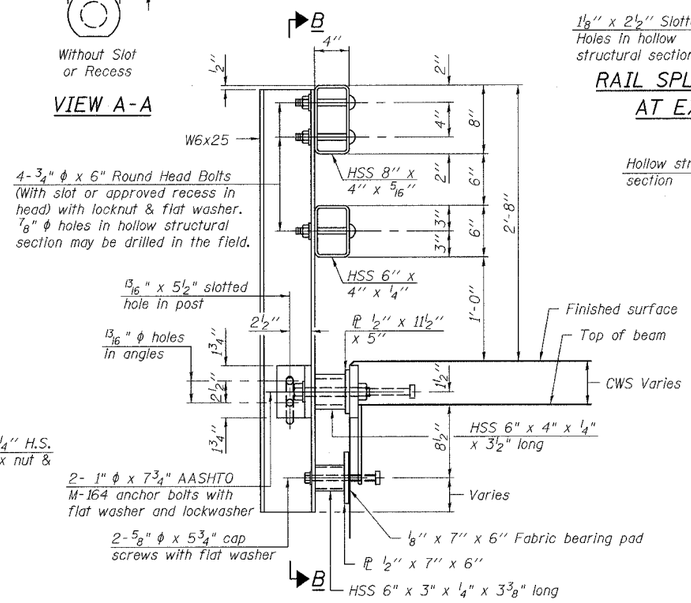
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



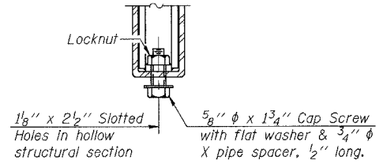
VIEW A-A



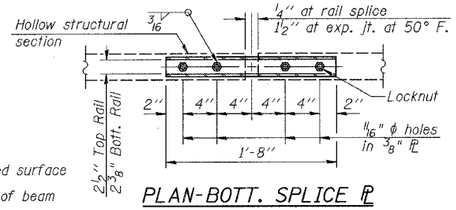
SECTION B-B



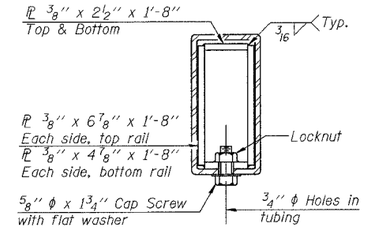
SECTION AT RAIL POST



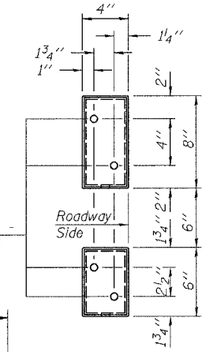
RAIL SPLICE CONNECTION AT EXPANSION JT.



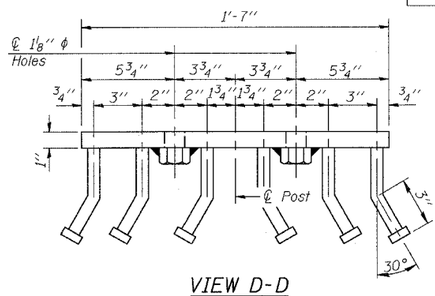
PLAN-BOTT. SPLICE PL TYPICAL



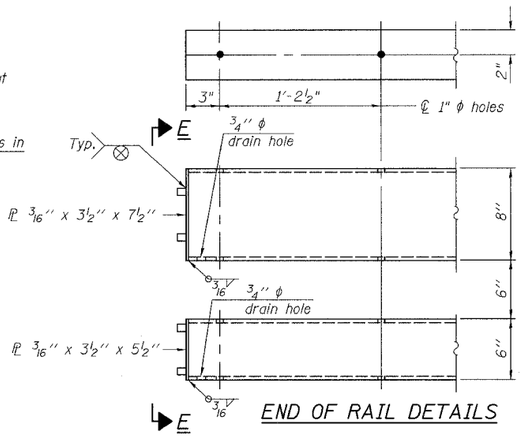
SECTION AT RAIL SPLICE



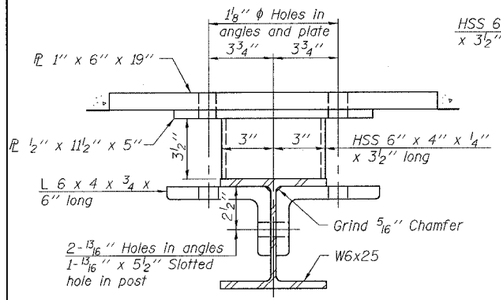
VIEW E-E



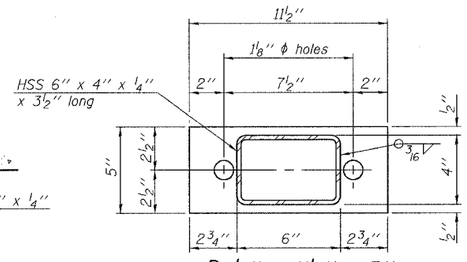
VIEW D-D



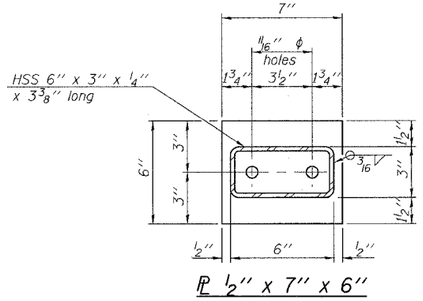
END OF RAIL DETAILS



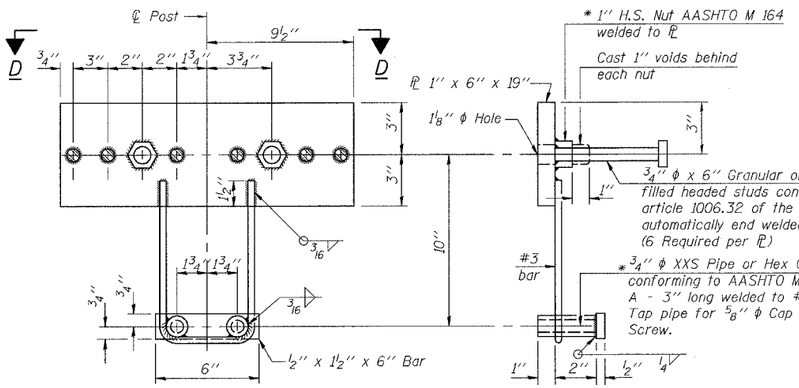
SECTION C-C



PL 1/2" x 11 1/2" x 5"



PL 1/2" x 7" x 6"



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

For rail post spacing see sheet 4 of 9.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	248

R-34CWS 10-28-05 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

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ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPE SM STEEL BRIDGE RAIL SIDE MOUNTED
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

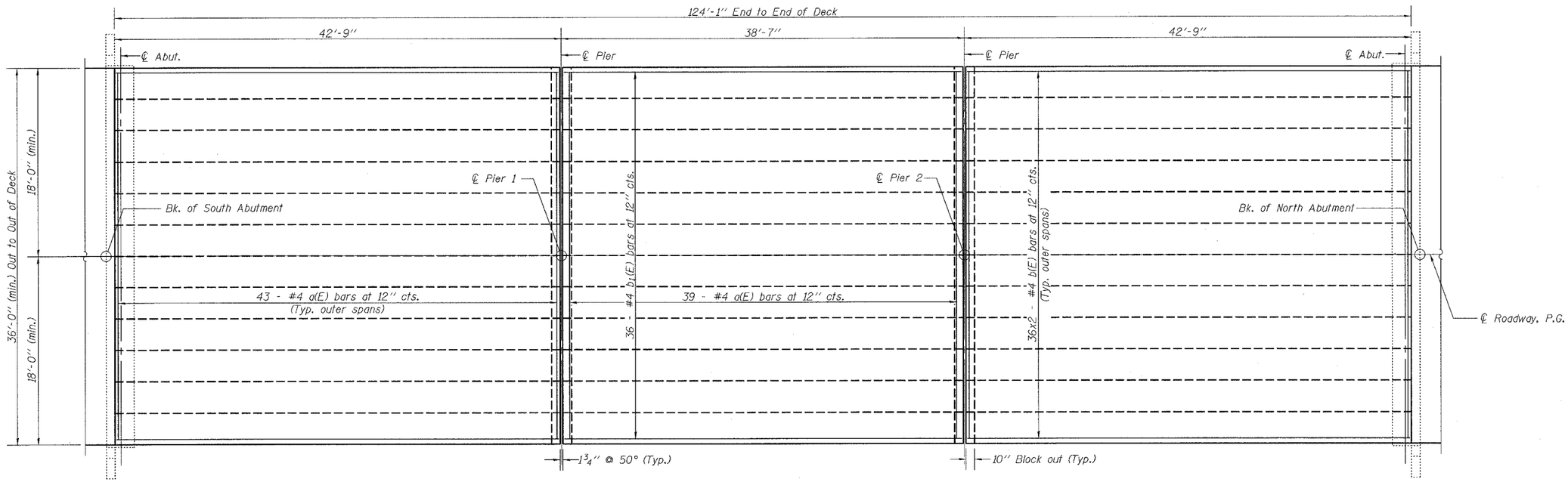
DATE: 3-15-2006 DRAWN BY JMT CHECKED BY WJV

3/15/2006 k:\12002203\Structures\Final Plans\dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	14
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
9 SHEETS

Contract # 66609



PLAN

NOTES

For remainder of superstructure details, See Sheets 4, 5, and 6 of 9.
Reinforcement bars designated (E) shall be epoxy coated.

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

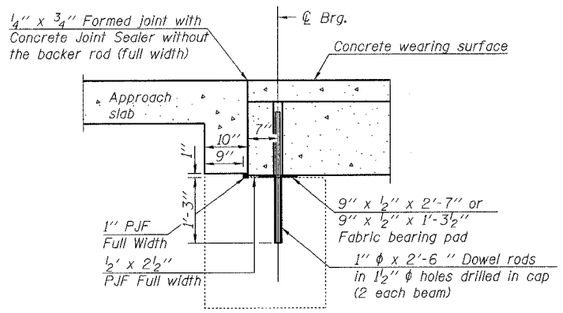
DATE: 3-15-2006
DRAWN BY LCM
CHECKED BY WJV

3/15/2006 H:\11200203\Structure\Final Plans.dgn

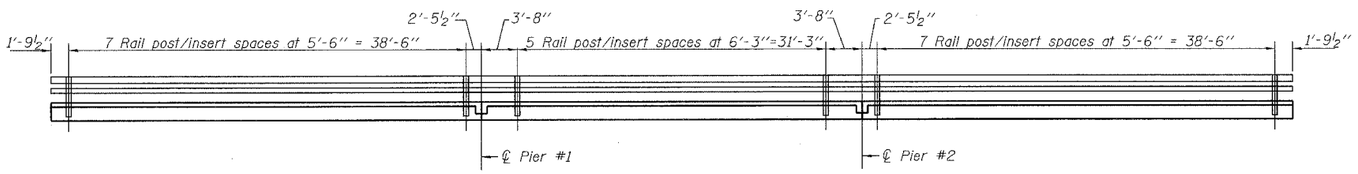
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
9 SHEETS

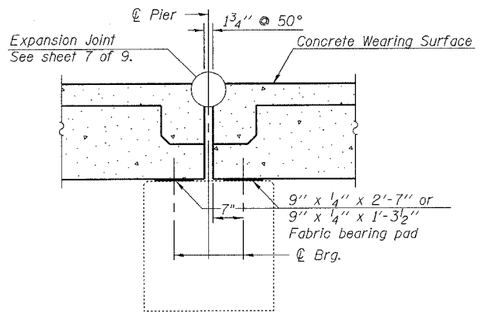
Contract # 66609



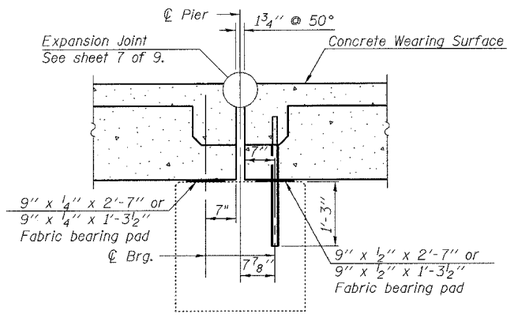
SECTION THRU ABUTMENTS



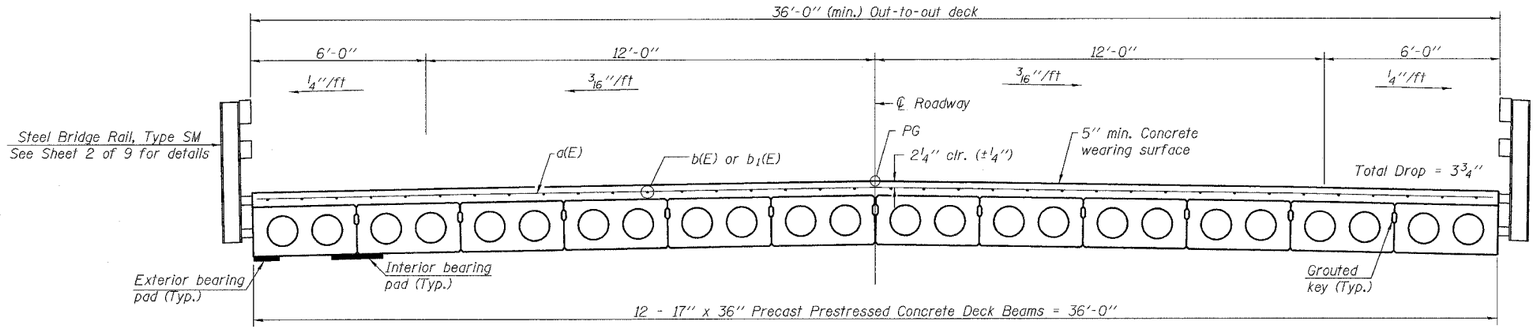
RAIL POST SPACING



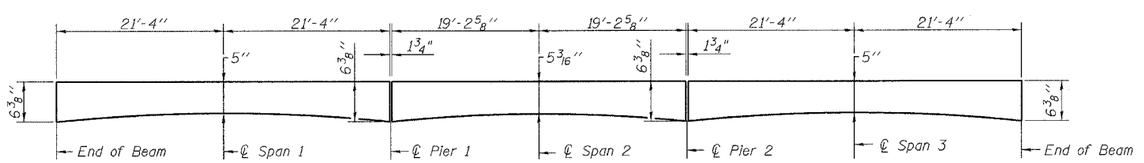
SECTION THRU PIER #2



SECTION THRU PIER #1



CROSS SECTION



REINFORCED CONCRETE WEARING SURFACE PROFILE

(Concrete Wearing Surface at blockout at expansion end of beams not shown.)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	125	#4	36'-8"	
a_1(E)	12	#5	35'-8"	
b(E)	144	#4	22'-4"	
b_1(E)	36	#4	38'-4"	
Reinforcement Bars, Epoxy Coated			Pound	6580
Concrete Wearing Surface, 5"			Sq. Yd.	495.2

Reinforcement bars designated (E) shall be epoxy coated.
Minimum lap length for #5 bars = 2'-2".

Notes :

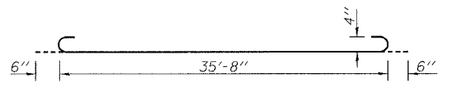
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends. See sheet 5 of 9 for bearing pad details.

Ends of beams shall be aligned at the expansion joints. Any lineal variation in the beam lengths shall be placed at the fixed joint.

Concrete wearing surface (including blockout) to be poured after grouting the shear keys.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (17" Depth)



#4 a(E) bar

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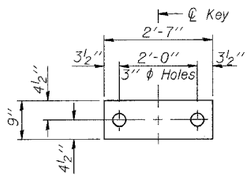
ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

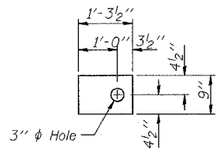
DATE: 3-15-2006

DRAWN BY JMT
CHECKED BY WJV

3/15/2006 k:\11280283\Structure\Final Plans.dgn

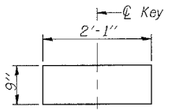


FABRIC BEARING PAD
(Interior)



FABRIC BEARING PAD
(Exterior)

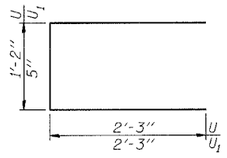
FIXED



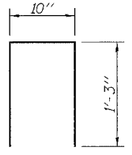
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

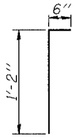
EXPANSION



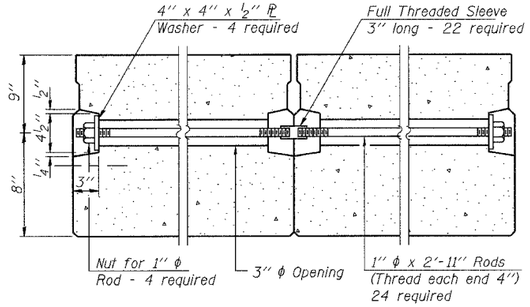
BAR U & U_1



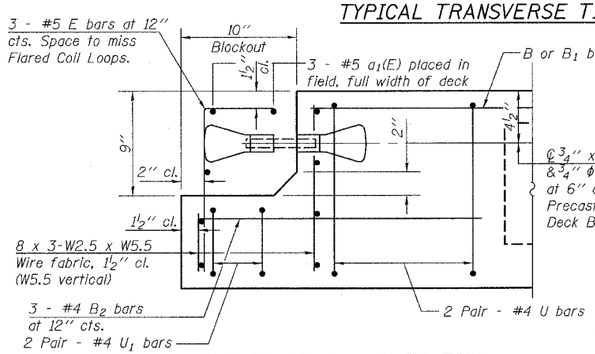
#4 D(E) BAR



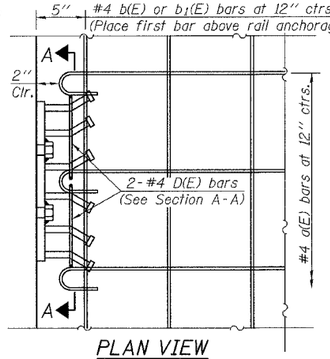
BAR E



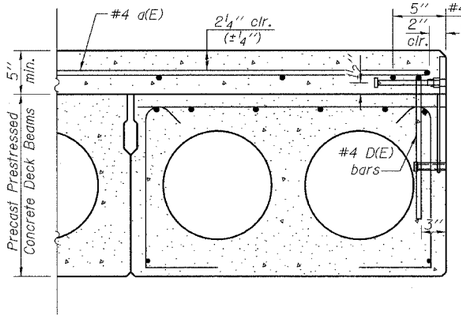
TYPICAL TRANSVERSE TIE ASSEMBLY



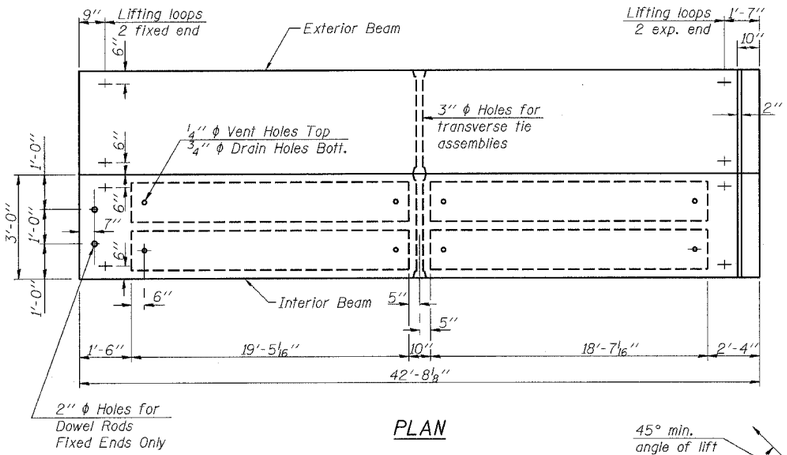
END OF BEAM - ELEVATION
(Expansion End at piers)



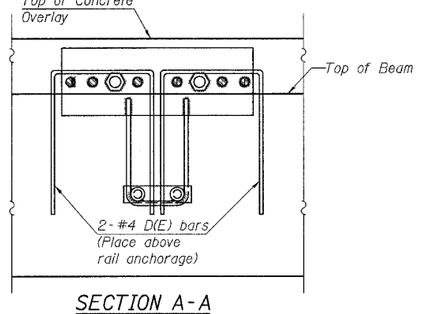
PLAN VIEW
(at each rail post)



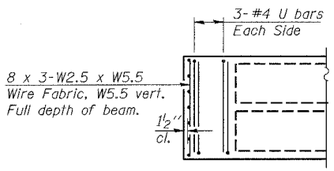
SECTION THRU EXTERIOR BEAMS
See Section Thru Interior Beams for strand pattern, dimensions and bar call outs.



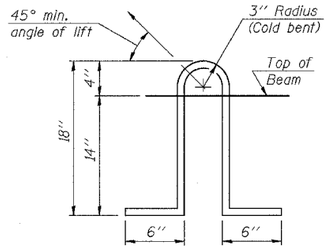
PLAN



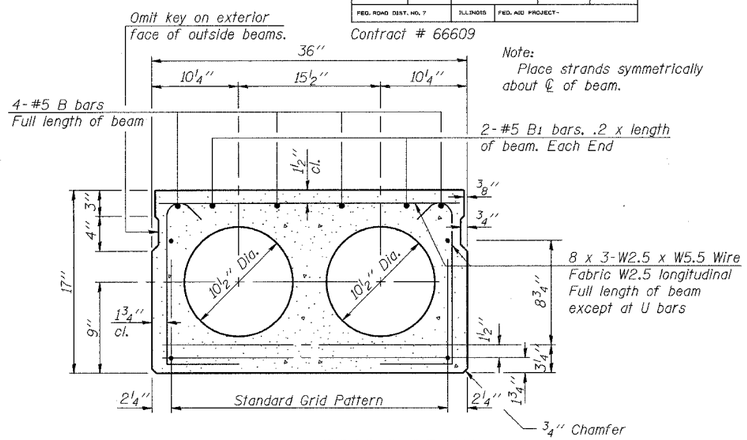
SECTION A-A



END PLAN
(Fixed End at abuts.)



LIFTING LOOP DETAIL



SECTION THRU INTERIOR BEAMS
½" ϕ Strands, Each Strand Stressed to 30.900 Lbs.
9 Strands 1¾" up, 4 Strands 3¼" up, 2 Strands 12" up

Note:
Place strands symmetrically about ℄ of beam.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
Lifting loops shall be 2 - ½" ϕ-270 ksi strands, as shown.
The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4,000 p.s.i.
Bridge rail inserts shall be cast in precast beams.
See sheet 4 of 9 for location of rail inserts.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

BILL OF MATERIAL
(one beam)

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	3073

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	16
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
9 SHEETS

Contract # 66609

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ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS SPANS 1 & 3
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

DATE: 3-15-2006
DRAWN BY LCM
CHECKED BY WJV

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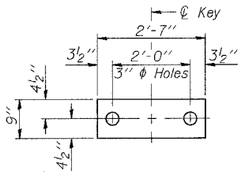
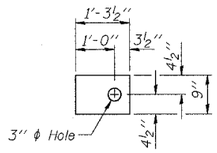
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
9 SHEETS

Contract # 66609



FABRIC BEARING PAD
(Interior)



FABRIC BEARING PAD
(Exterior)

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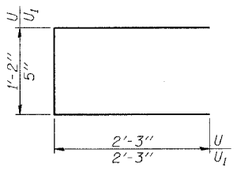
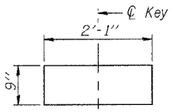


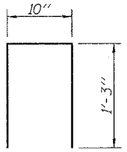
BAR U & U1



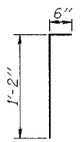
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

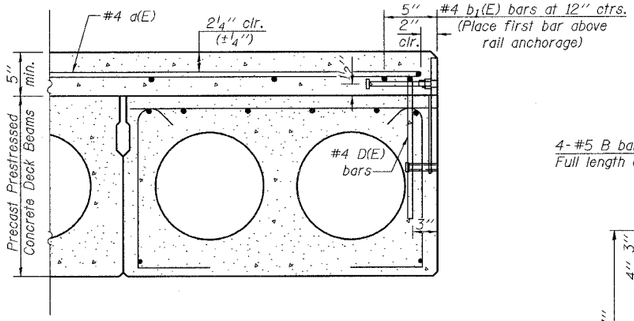
EXPANSION



#4 D(E) BAR

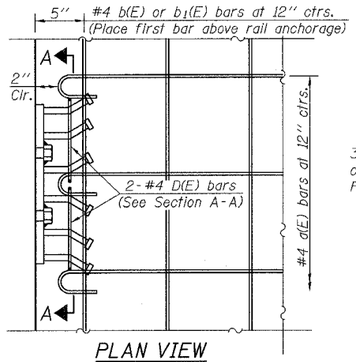


BAR E

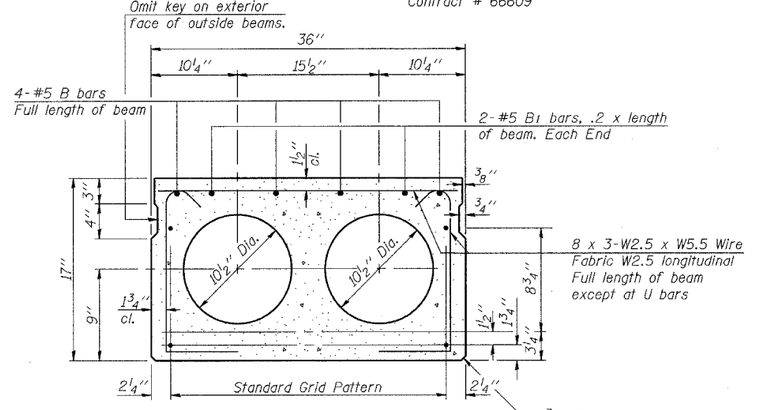


SECTION THRU EXTERIOR BEAMS

See Section Thru Interior Beams for strand pattern, dimensions and bar call outs.



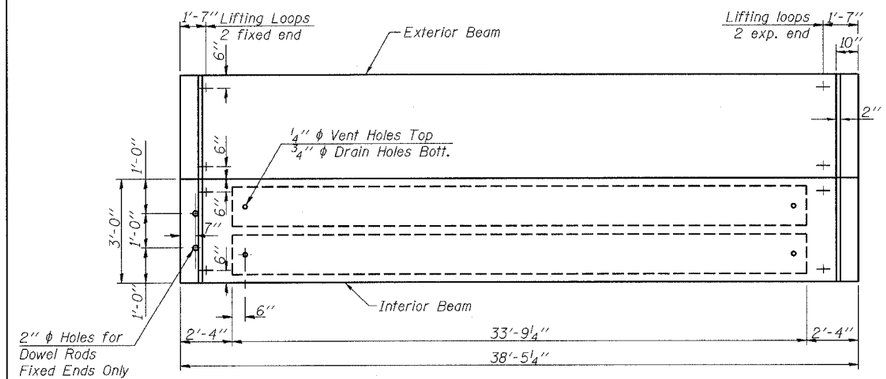
PLAN VIEW
(at each rail post)



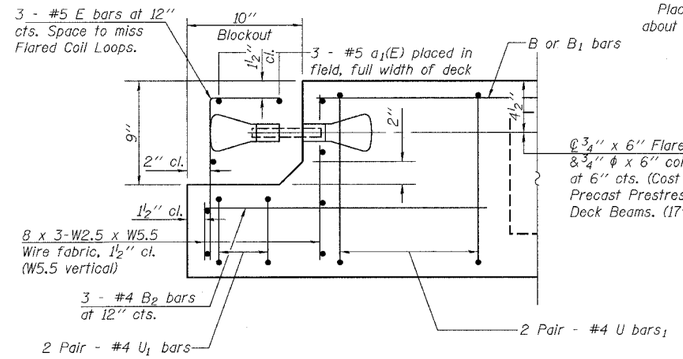
SECTION THRU INTERIOR BEAMS

½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
9 Strands 1¾" up, 4 Strands 3¼" up, 2 Strands 12" up

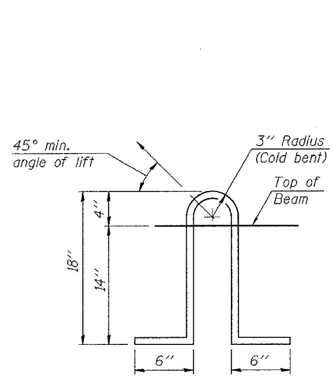
Note:
Place strands symmetrically about ℄ of beam.



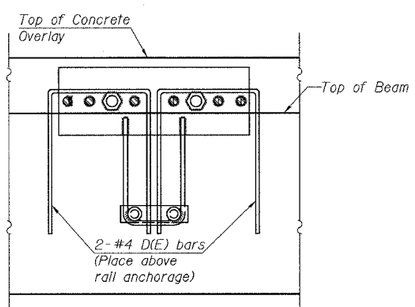
PLAN



END OF BEAM - ELEVATION



LIFTING LOOP DETAIL



SECTION A-A

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
Lifting loops shall be 2 - ½" ϕ-270 ksi strands, as shown.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4,000 p.s.i.
Bridge rail inserts shall be cast in precast beams.
See sheet 4 of 9 for location of rail inserts.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

BILL OF MATERIAL
(one beam)

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1384

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS SPAN 2
IL- 18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

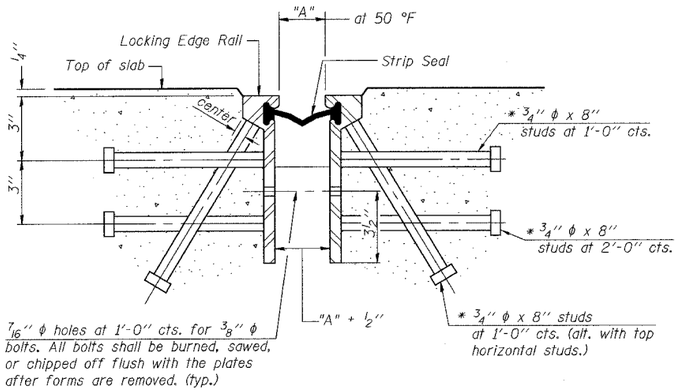
DATE: 3-15-2006
DRAWN BY LCM
CHECKED BY WJV

3/15/2006 k:\1202203\Structure\Final Plans\dgn

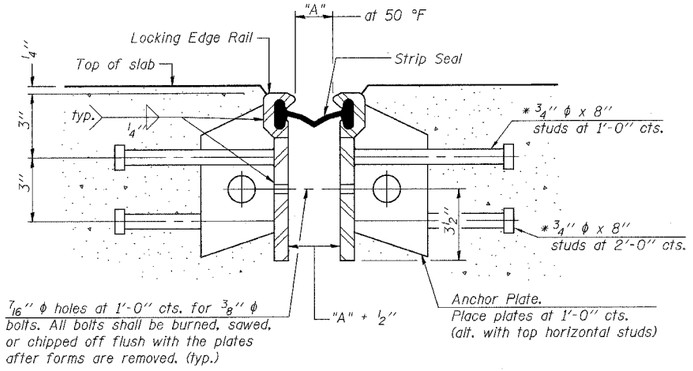
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
9 SHEETS

Contract # 66609



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

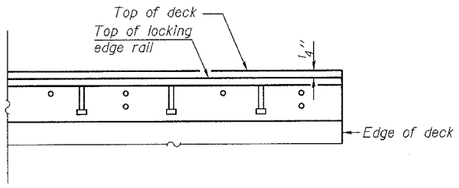
SECTION THRU ROLLED RAIL EXP. JOINT

(360 Studs Required)

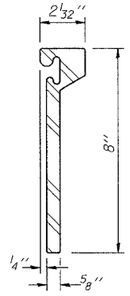
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

SECTION THRU WELDED RAIL EXP. JOINT

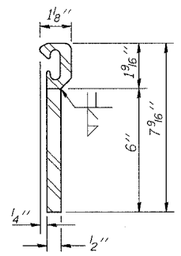
(216 Studs Required)
(144 Anchor Plates Required)



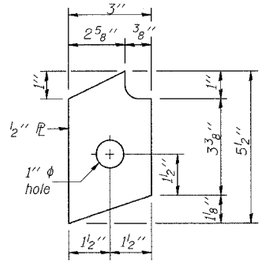
END TREATMENT ELEVATION AT EDGE OF DECK



ROLLED (EXTRUDED) RAIL

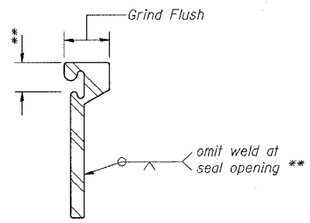


WELDED RAIL



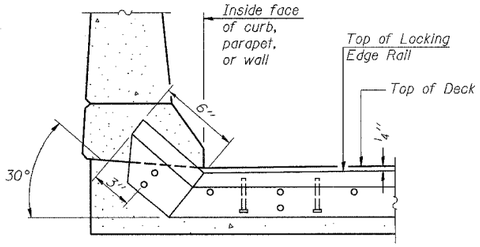
ANCHOR PL
(for welded rail)

LOCKING EDGE RAILS

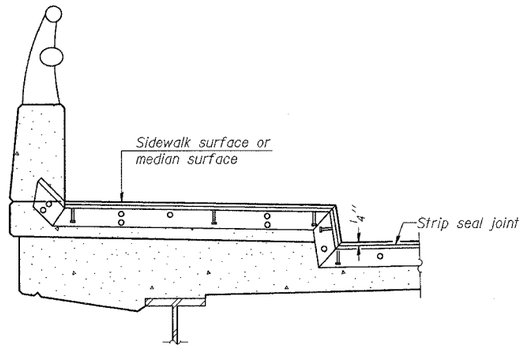


LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal, 1"	foot	72.0

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ILLINOIS DEPARTMENT OF TRANSPORTATION
BRIDGE JOINT SYSTEM-EXPANSION
(ALTERNATE STRIP SEAL)
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

DATE: 3-15-2006
DRAWN BY JMT
CHECKED BY WJV

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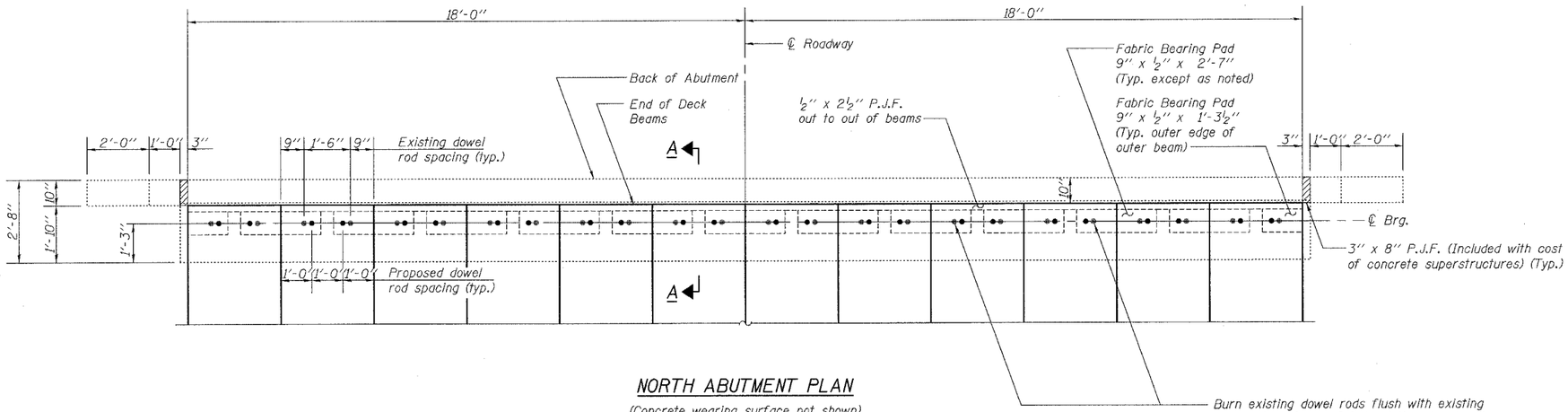
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	19
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

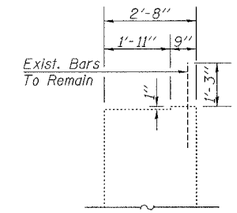
SHEET NO. 8
9 SHEETS

Contract # 66609



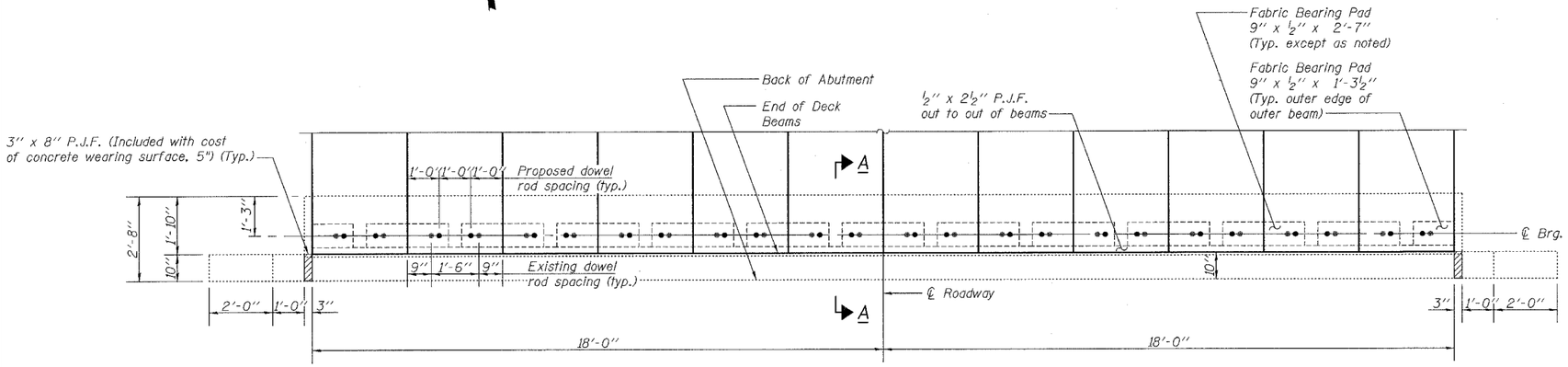
NORTH ABUTMENT PLAN

(Concrete wearing surface not shown)



SECTION A-A

(Concrete Deck Beams, Bearing Pads, and Dowel Bars not shown)



SOUTH ABUTMENT PLAN

(Concrete wearing surface not shown)

NOTES:

Existing Reinforcement Bars extending into the removal area shall be blast cleaned to gray metal and straightened. Blast cleaning and straightening shall be included with the cost of Removal of Existing Superstructures.

Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter, spliced in place. Furnished and placing supplemental epoxy coated reinforcement bars shall be included with the cost of Reinforcement Bars, Epoxy Coated.

Care shall be exercised by the contractor during and following removal operations to ensure that the existing rebar remaining in place are not damaged. All protruding rebar shall be cleaned, straightened, and properly positioned prior to concrete placement. Any rebar damaged during concrete removal shall be repaired or replaced using an approved Bar Splicer or Mechanical System. Cost included with the cost of Removal of Existing Superstructures.

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ILLINOIS DEPARTMENT OF TRANSPORTATION

ABUTMENTS
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

DATE: 3-15-2006

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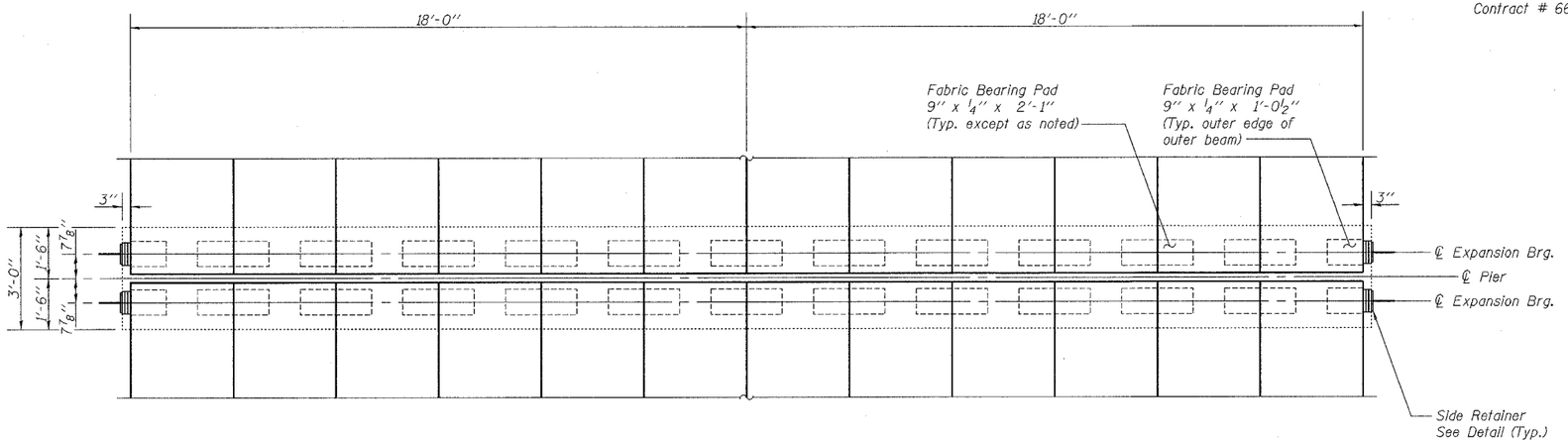
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

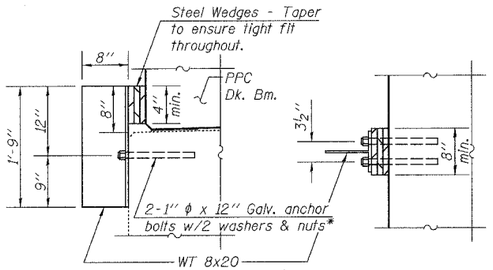
SHEET NO. 9
9 SHEETS

Contract # 66609



PIER 2 PLAN

(Concrete wearing surface not shown)



SIDE RETAINER DETAIL

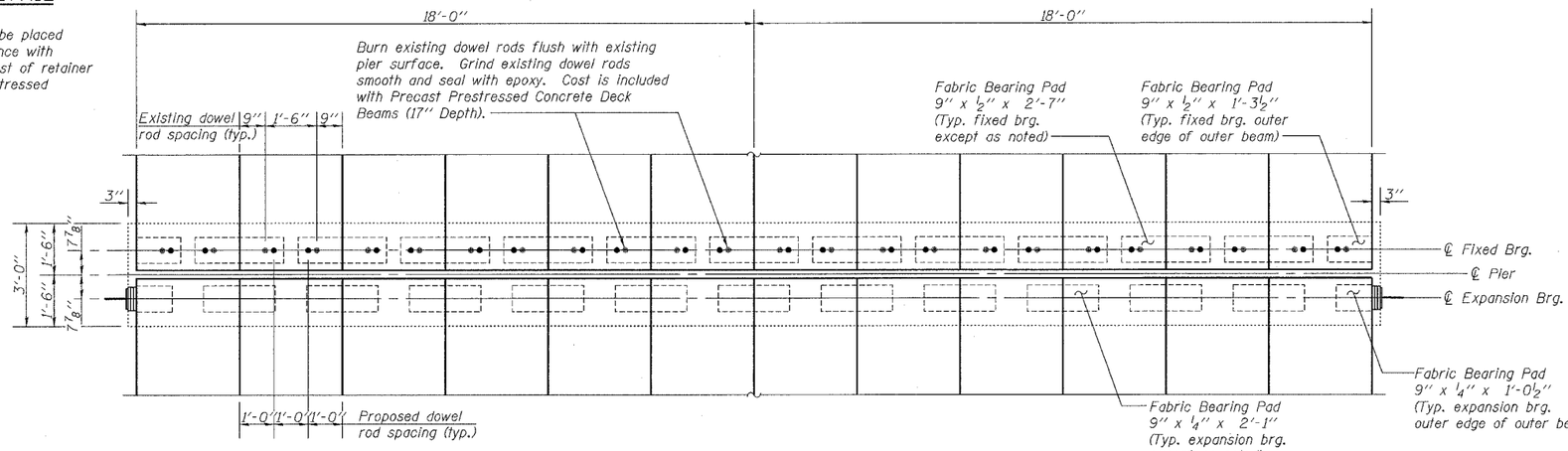
* Anchor bolts or approved threaded rod shall be placed in drilled holes and grouted in place in accordance with Article 584 of the Standard Specifications. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.

NOTES

Install side retainers at each end before grouting the shear keys.

The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385.

After block-outs are poured and cured the retainer WT sections shall be removed. Anchor bolts may be left in place.



PIER 1 PLAN

(Concrete wearing surface not shown)

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ILLINOIS DEPARTMENT OF TRANSPORTATION

PIERS
IL-18 OVER NORFOLK SOUTHERN R.R.
FAP RTE 653 - SECTION 28 VBR
LIVINGSTON COUNTY
STATION 742+85.76
STRUCTURE NO. 053-0061

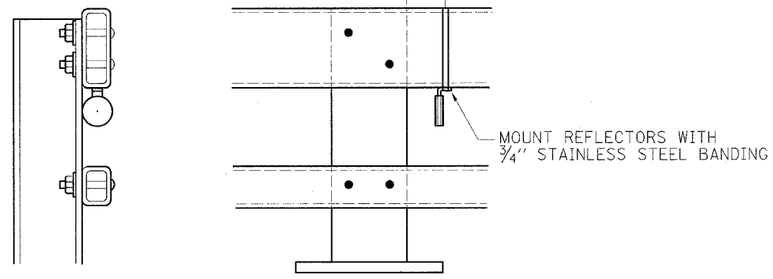
DATE: 3-15-2006

DRAWN BY LCM
CHECKED BY WJV

3/15/2006 H:\112082003\Structure\Final Plans.dgn

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	21
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

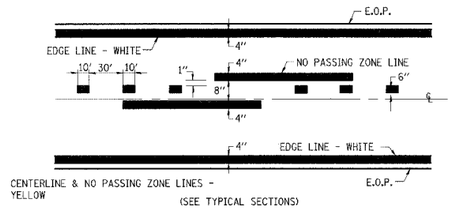
CONTRACT NO. 66609



NOTES:

1. REFLECTORS SHALL MEET THE REQUIREMENTS OF ARTICLE 1097.03 OF THE STANDARD SPECIFICATIONS.
2. FURNISHING AND INSTALLING THE COMPLETE REFLECTOR UNIT WILL BE PAID AT THE CONTRACT UNIT PRICE EACH FOR GUARD RAIL MARKERS.

REFLECTOR MOUNTING
DETAIL FOR STEEL RAIL



PAVEMENT MARKING

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. ROUTE 653 (IL 18)

DETAILS

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

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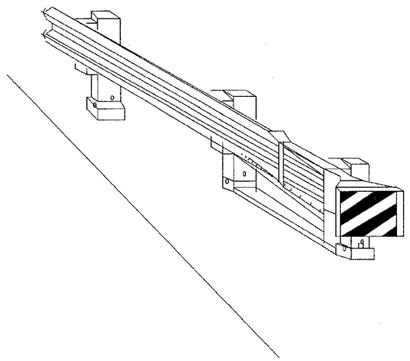
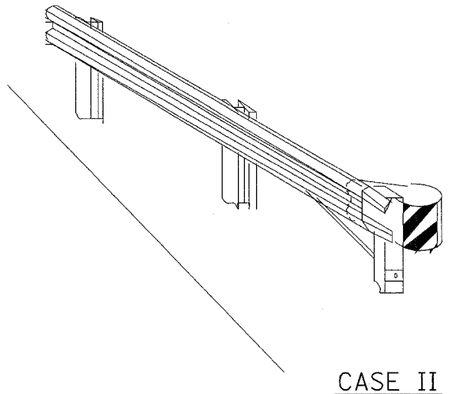
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	22
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

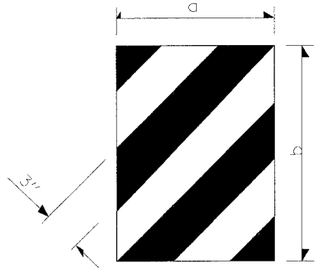
CONTRACT NO. 66609

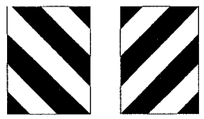


CASE I



CASE II





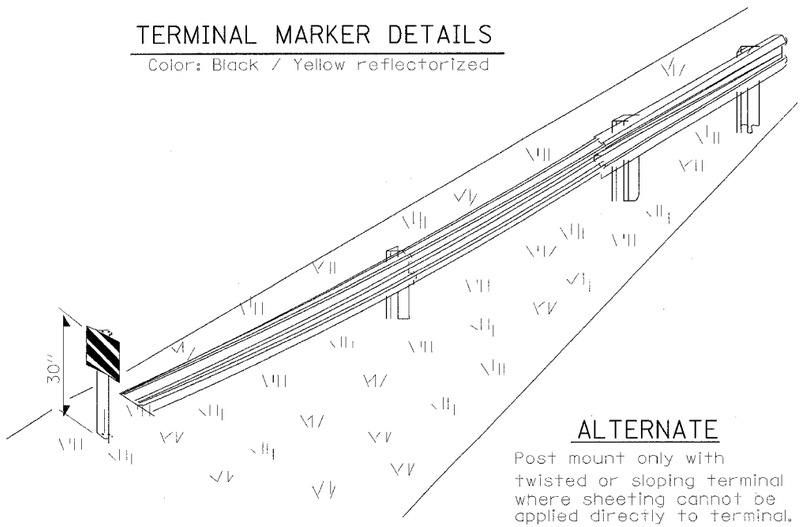
LEFT RIGHT

DIMENSION	CASE I *	CASE II
a	15	18
b	20	16

*Minimum of 300 in^2

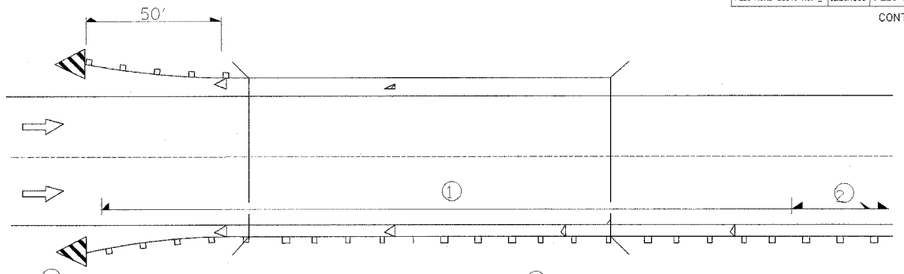
TERMINAL MARKER DETAILS

Color: Black / Yellow reflectorized



ALTERNATE

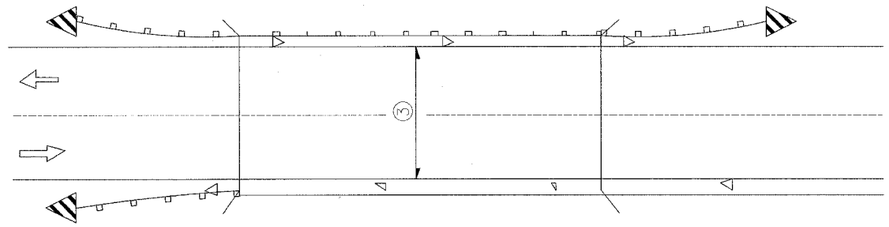
Post mount only with twisted or sloping terminal where sheeting cannot be applied directly to terminal.



① Spacing 80 ft max. for first 400 ft or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft, transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the pavement is less than 24" wider than the pavement approaching the bridge.

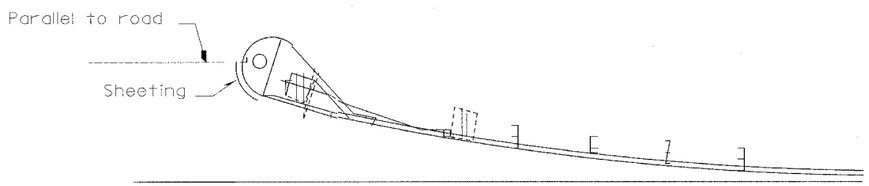
◁ Monodirectional silver

◁ Monodirectional amber

Terminal Marker - Black/Yellow Left or Right as appropriate

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTIORS



SHEETING POSITION: CASE II

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 653 (IL 18)

DETAILS

SCALE: VERT.
HORIZ.
DATE: MARCH 15, 2006

DRAWN BY NEC
CHECKED BY MRH

3/15/2006 1:38:08 PM K:\W2002003\cadd\design\202203_Dist Standards.dgn

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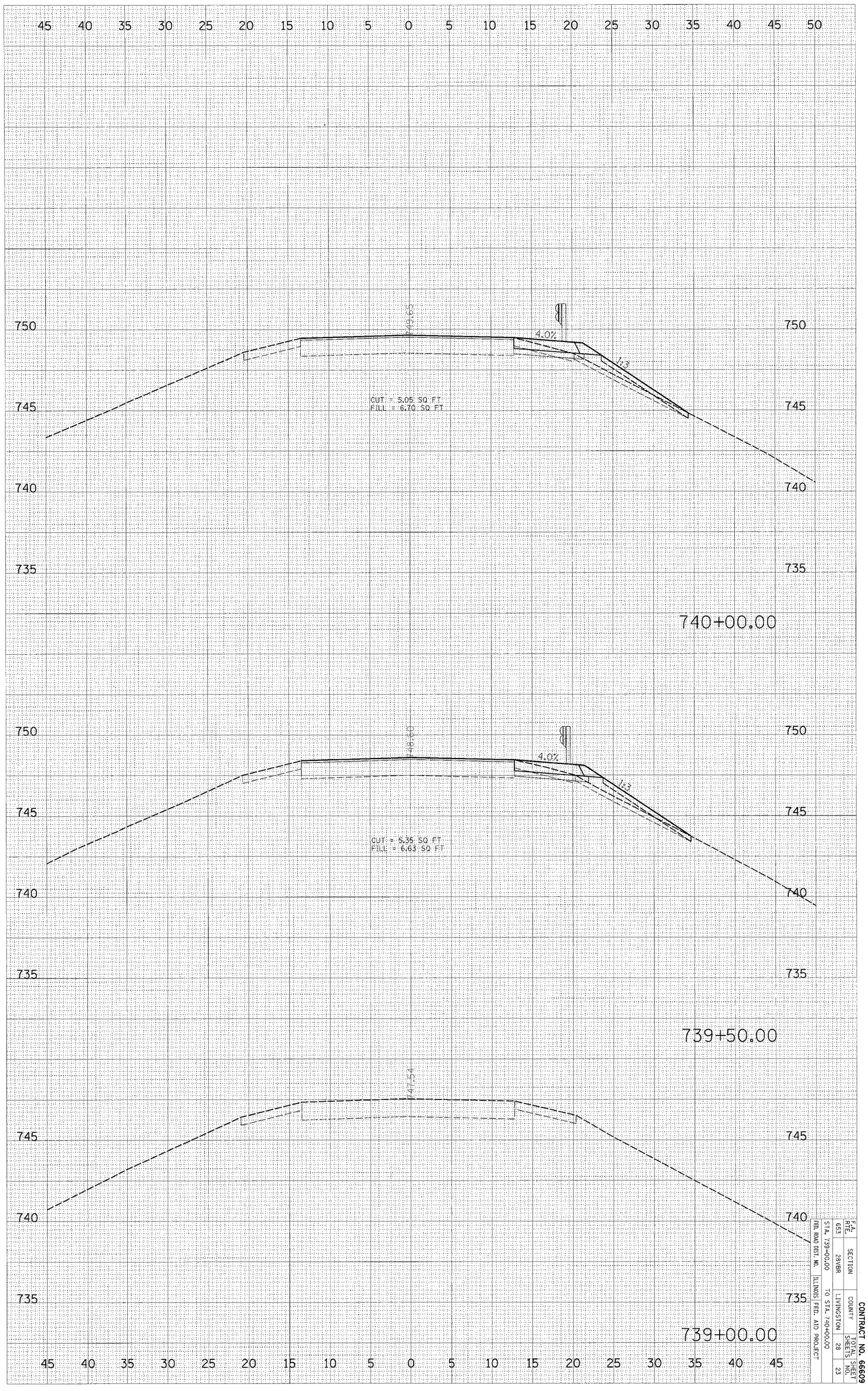
PLOT SCALE = $SCALE$
USER NAME = $USER$

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

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



CONTRACT NO. 66609

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
653	28WBR	LIVINGSTON	28
STA. 739+00.00		TO STA. 740+00.00	SHEETS NO. 23

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

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PLOT SCALE = $SCALE$
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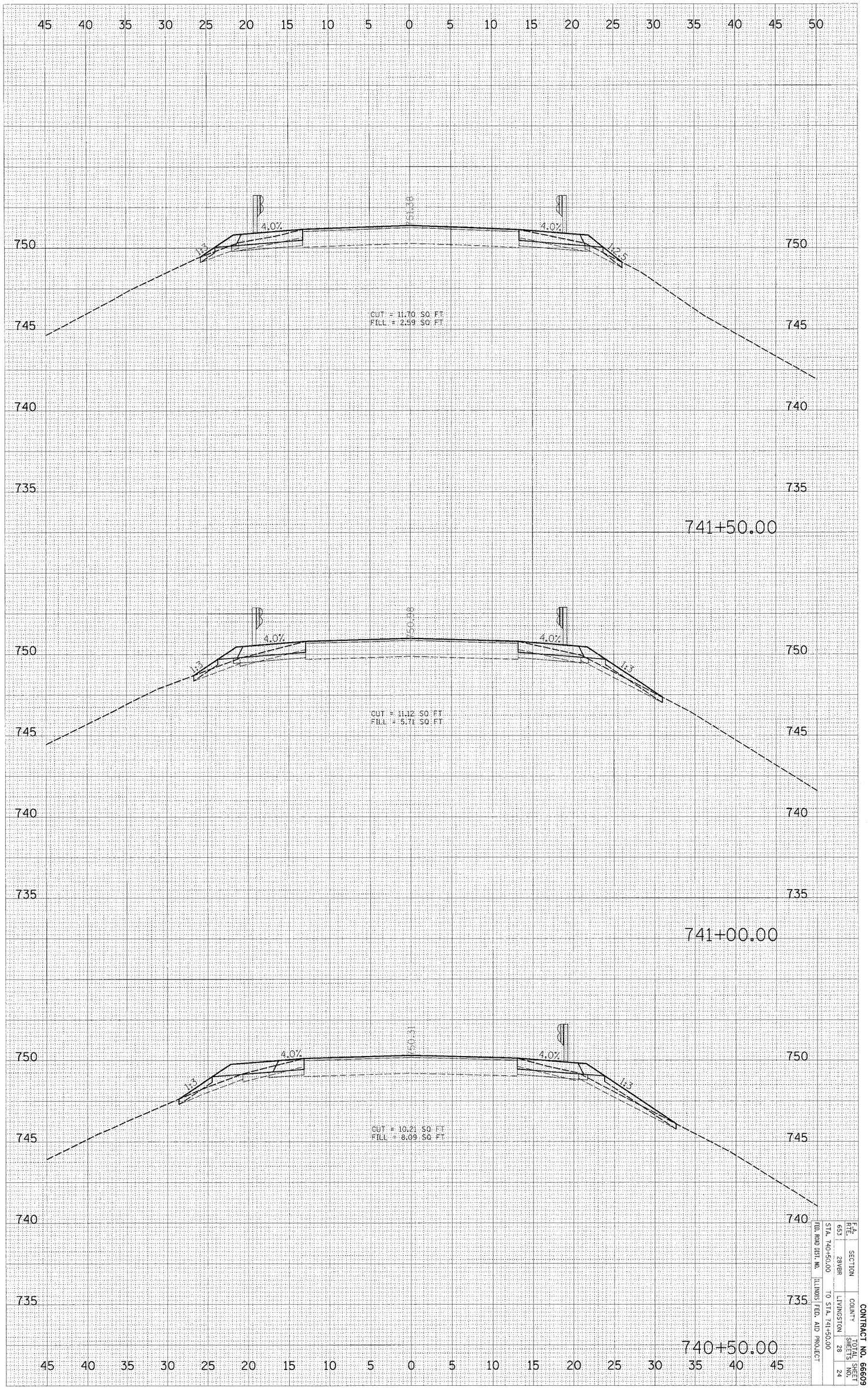
ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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

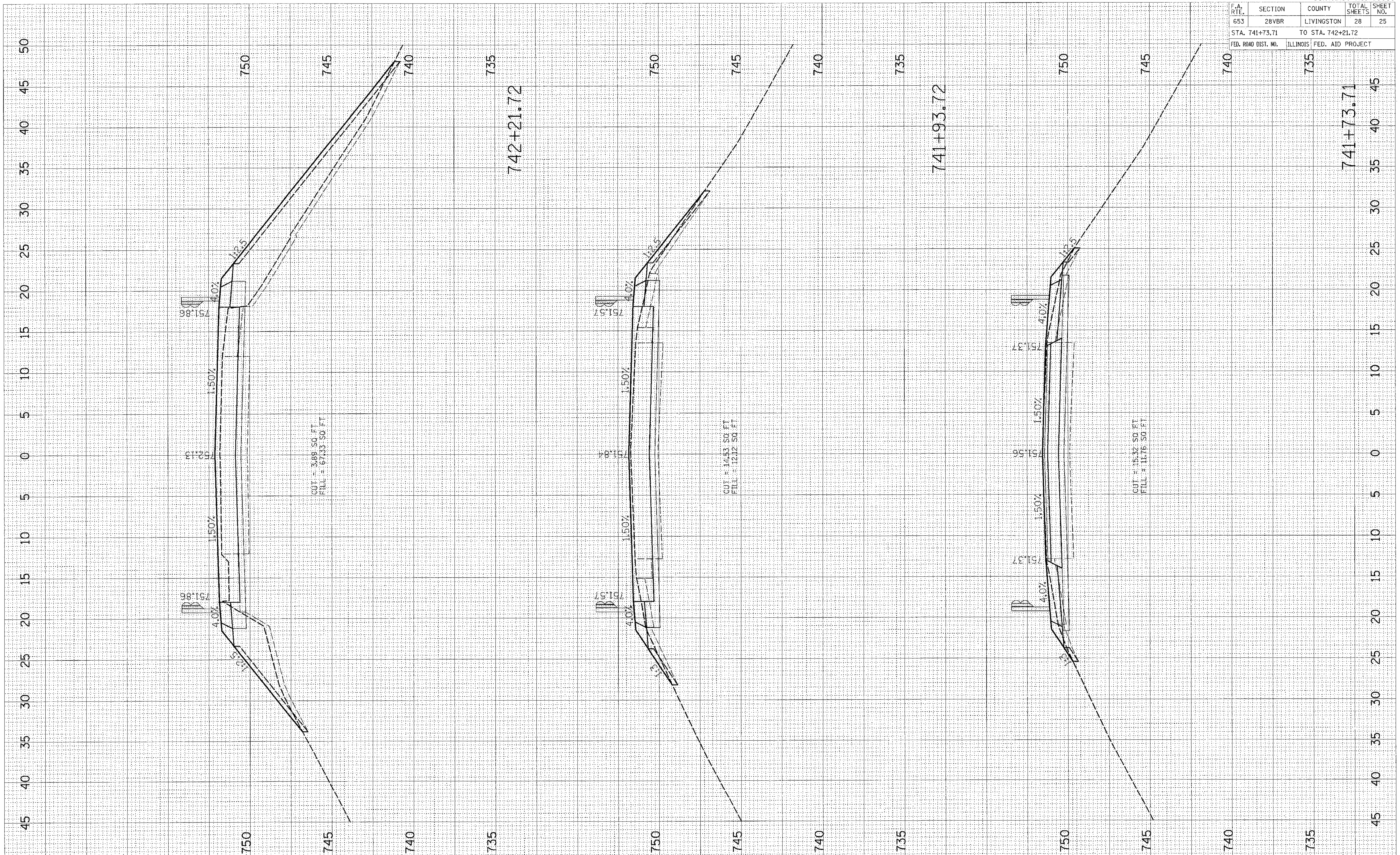


F.A. RTE.	SECTION		TOTAL SHEET NO.
653			24
STA. 740+50.00	28VER	COUNTY	TOTAL SHEETS
TO STA. 741+50.00		LIVINGSTON	28
ILLINOIS FED. AID PROJECT		FED. ROAD DIST. NO.	

CONTRACT NO. 66609

CONTRACT NO. 66609

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	25
STA. 741+73.71	TO STA. 742+21.72			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PLOT SCALE = $SCALE$
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PLOT DATE = 3/15/2006
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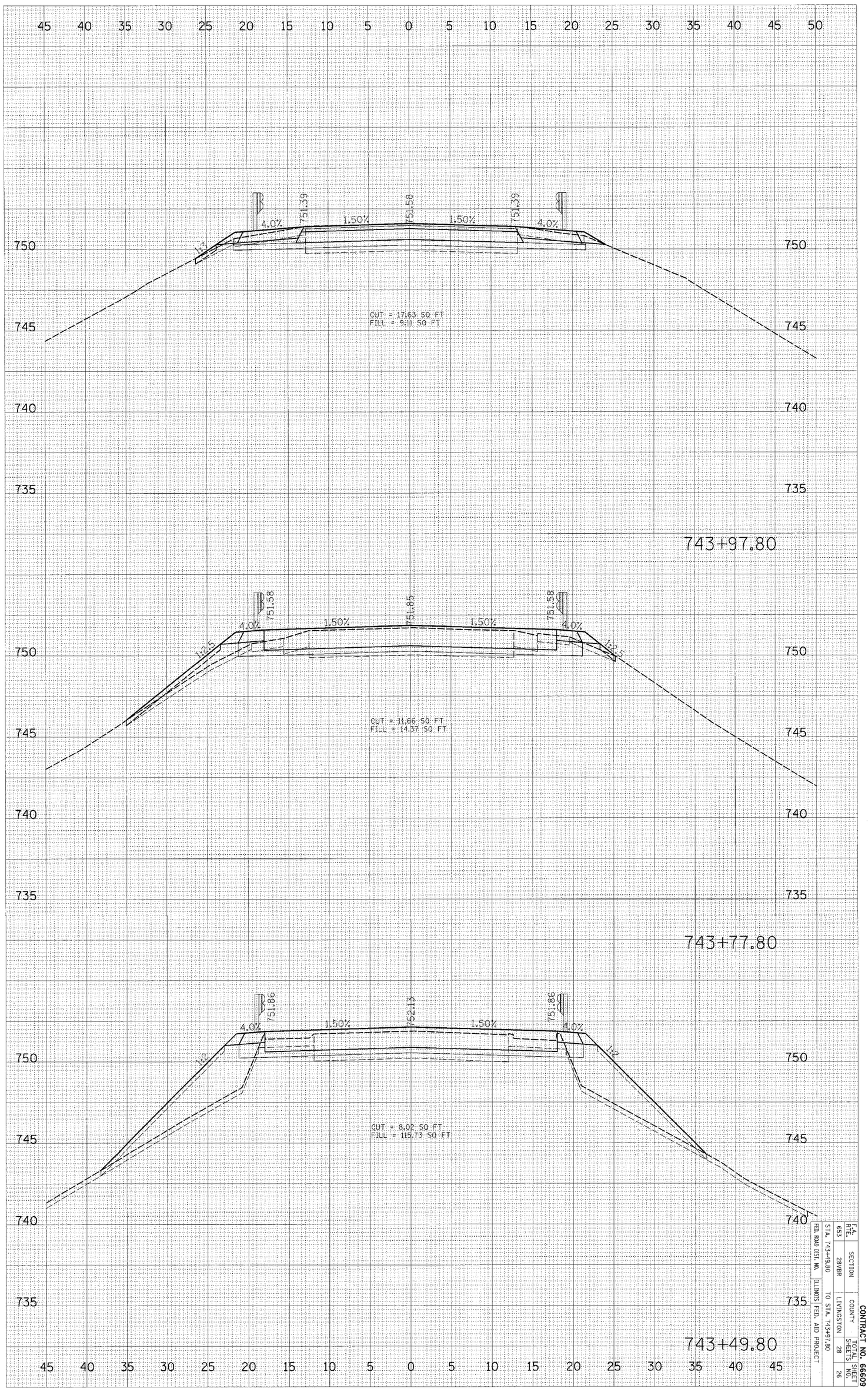
PLOT SCALE = $SCALE$
USER NAME = $USER$

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

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



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	26

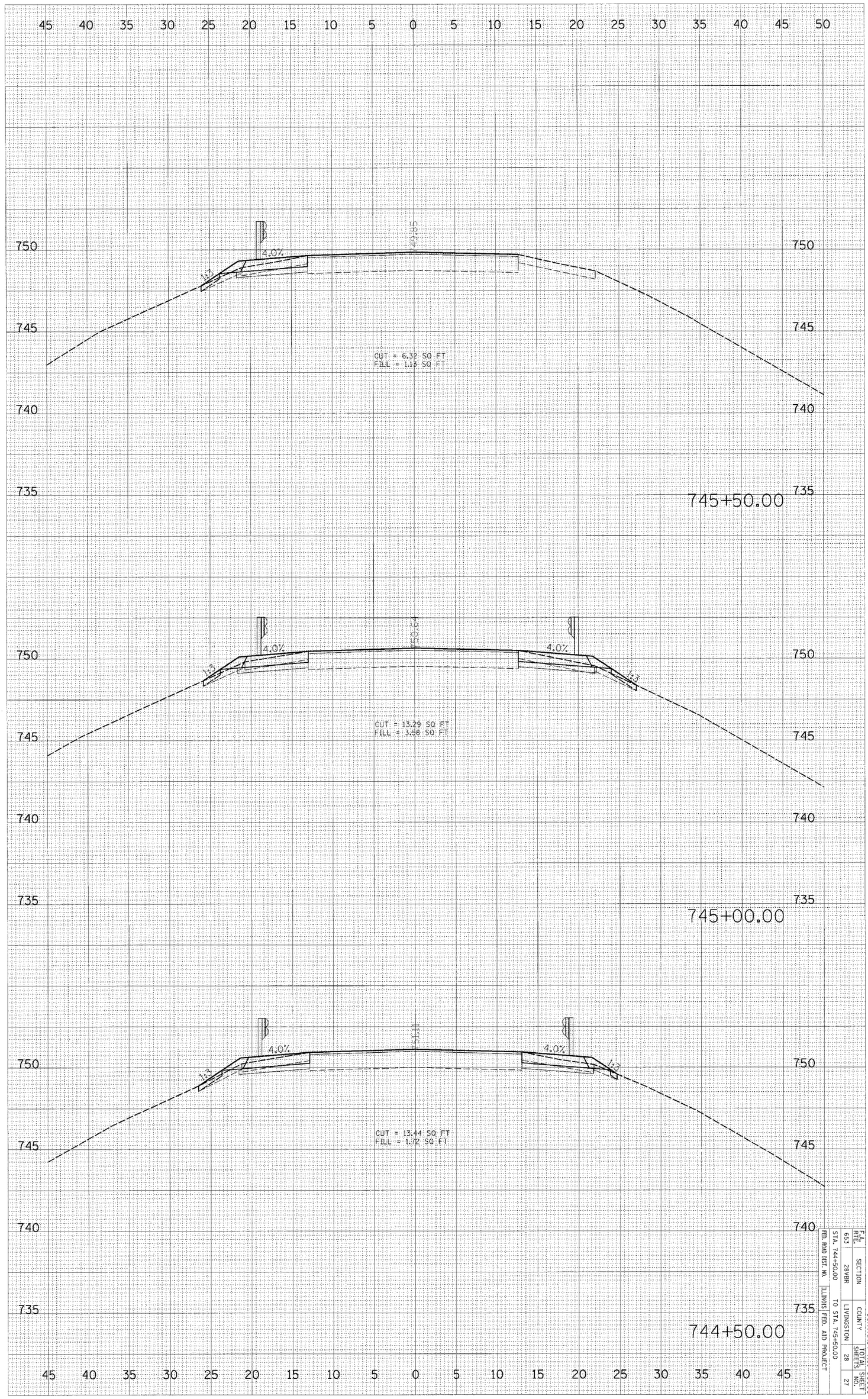
FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT
STA. 743+49.80 TO STA. 743+97.80

CONTRACT NO. 66609

PLOT DATE = 3/15/2006
FILE NAME = #FILEL#
PLOT SCALE = #SCALE#
USER NAME = #USER#

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

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



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	27

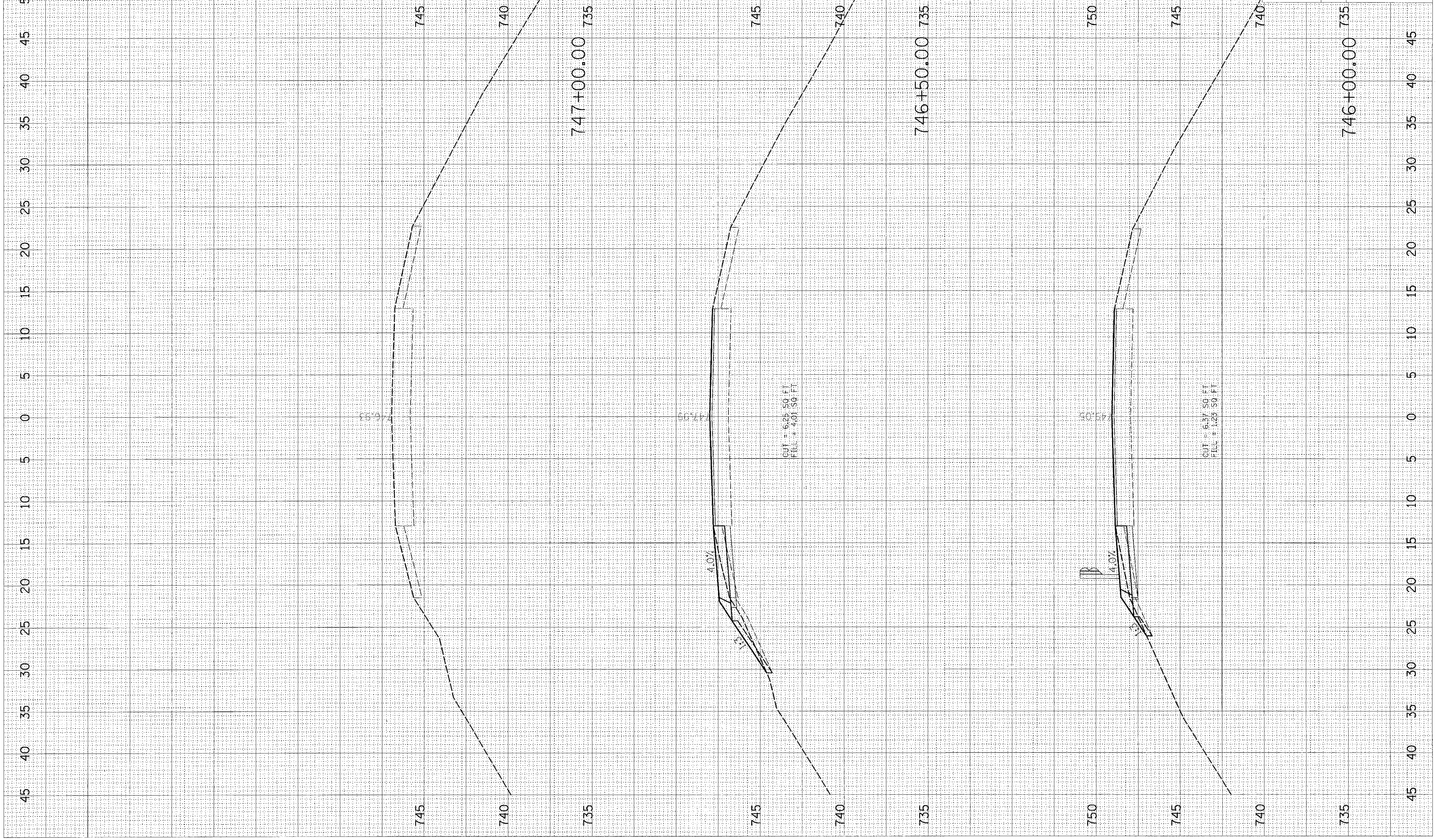
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

STA. 744+50.00 TO STA. 745+50.00

CONTRACT NO. 66609

CONTRACT NO. 66609

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
653	28VBR	LIVINGSTON	28	28
STA. 746+00.00	TO STA. 747+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

PLOT DATE = 3/15/2006
FILE NAME = $FILEL$
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USER NAME = $USER$