F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	1
FED. AID PROJECT	ILLINOIS	CONTRACT NO. 74244		

INDEX OF SHEETS

1-20-2012 LETTING ITEM 173

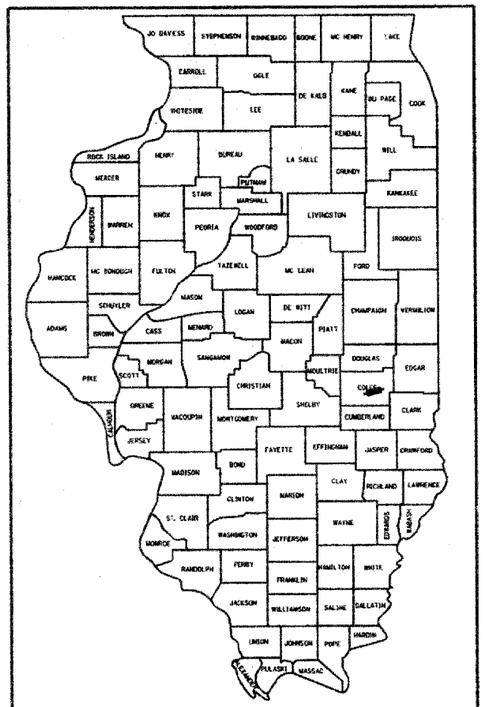
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP 91 IL ROUTE 16
SECTION (5BR)B-1
PROJECT BRF-0091(072)
STRUCTURE REPLACEMENT OVER EMBARRAS RIVER
COLES COUNTY

C-97-064-07

D-07-025-08



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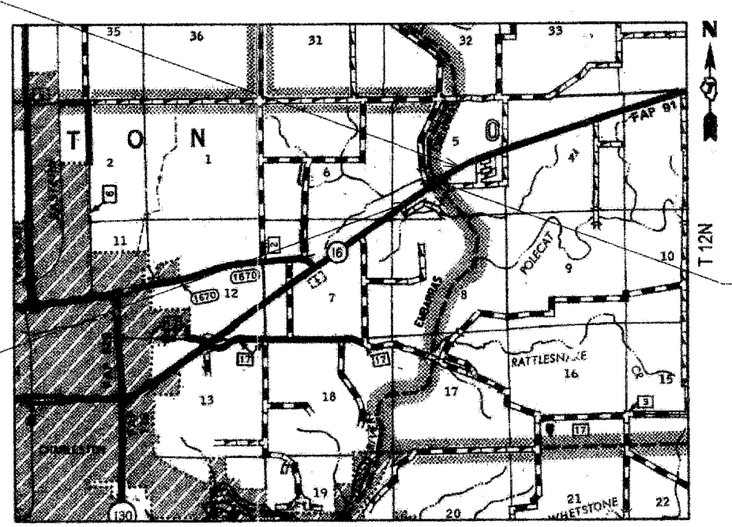

LOCATION MAP

0 1 MILE

GROSS LENGTH = 2100.0 FT = 0.398 MILE
NET LENGTH = 1727.4 FT = 0.327 MILE
ADT = 6200, TRUCK ADT = 450
FUNCTIONAL CLASSIFICATION = RURAL MINOR ARTERIAL

ENGINEERING PLAN SUBMITTAL	
THESE ENGINEERING PLANS AND SUPPORTING DOCUMENTS ARE ISSUED FOR THE FOLLOWING PURPOSE ONLY	
	PRELIMINARY PLAN REVIEW NO.
	PRE-FINAL PLAN REVIEW NO. 1
X	FINAL PLAN REVIEW NO. 2
	PERMIT APPLICATION
	BIDDING
	CONSTRUCTION

DATE: 05-11-2011

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

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

IDOT PROJECT MANAGER – MARK DAUGHERTY
ESI PROJECT ENGINEER – JOE HICKOX, ADAM GROVES
ESI PROJECT MANAGER – DAN FEUERBORN

CONTRACT NO. 74244

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 13 20 11
Ron S. Burkell/sgw
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 14 20 11
Scott E. Stitt, P.E. /a
acting ENGINEER OF DESIGN AND ENVIRONMENT
October 14 20 11
Christine M. Reed /a
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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ESI CONSULTANTS, LTD
753 WINDSOR ROAD
CHARLESTON, IL 61920
(217) 348-1909
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ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184-003655

LICENSED PROFESSIONAL ENGINEER * DANIEL FEUERBORN 62-54001 * STATE OF ILLINOIS *

Daniel Feuerborn 5.12.2011
Daniel Feuerborn Date
License Expires 11-30-2011

PRINTED DATE: 5/11/2011
FILE NAME: c:\projects\idot\pb 145_item 25 - g7 various design\work order 97\cadd\drawings\Sheets\01_Ralls_GS.dgn

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S. MEAN SEA LEVEL DATUM.

2. THE CONTRACTOR SHALL COORDINATE ACTIVITIES WITH ALL UTILITIES WITHIN THE PROJECT LIMITS. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THEIR EXACT LOCATIONS FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION. THE CONTRACTOR IS REQUIRED TO CONTACT J.U.L.I.E. AT, 1-800-892-0123, PRIOR TO PROCEEDING WITH ANY EXCAVATION AND WORK ON THE PROJECT.

3. DURING CONSTRUCTION THE CONTRACTOR MAY ENCOUNTER VARIOUS TYPES OF UNDERGROUND UTILITIES THAT MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL COOPERATE WITH THE ENGINEER AND THE OWNER OF THE UTILITY WHILE THE UTILITY COMPANY ADJUST THEIR FACILITIES IF NECESSARY. IF IT IS DETERMINED THAT THE UTILITY HAS BEEN ABANDONED, THE CONTRACTOR SHALL BE DIRECTED TO REMOVE THE UTILITY LINES THAT CONFLICT WITH HIS WORK AND CAP OR PLUG THE LINES AS DIRECTED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT.

4. CONTRACTOR SHALL CAREFULLY PROTECT ANY TREES OR SHRUBS NOT INCLUDED IN THE CONTRACT FOR REMOVAL. SNOW FENCE SHALL BE ERECTED TWO FEET FROM TREES AND SHRUBS TO REMAIN, THAT ARE IMMEDIATELY ADJACENT TO THE WORK, FOR PROTECTION DURING CLEARING AND CONSTRUCTION OPERATIONS. COST OF THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE OF TREE REMOVAL.

5. ACCESS TO ALL ENTRANCES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES WITH THE EXCEPTION OF 164+00 RT DURING STAGE 1.

6. ALL REMOVAL LIMITS SHALL BE SAW CUT.

7. REMOVAL OF EXISTING DRIVEWAY PAVEMENT SHALL BE INCLUDED WITH VARIOUS DRIVEWAY PAY ITEMS USED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

8. WHERE THE PROPOSED GUTTER JOINS THE EXISTING GUTTER THERE MAY BE A TRANSITION. TRANSITION GUTTER OVER 2' TO MATCH EXISTING GUTTER HEIGHT AND WIDTH. THIS WORK WILL BE CONSIDERED INCLUDED WITH THE CONCRETE GUTTER AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

9. WHERE THE PROPOSED GUTTER TRANSITIONS FROM ABUTTING EXISTING EDGE OF PAVEMENT TO ABUTTING PROPOSED 3' SHOULDER A TRANSITION SHALL BE MADE AS SHOWN IN THE PLANS. THIS WORK WILL BE CONSIDERED INCLUDED WITH THE CONCRETE GUTTER AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

10. GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES AND OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THESE ITEMS. IT IS THE INTENT THAT ITEMS THAT DO NOT NEED TO BE DISTURBED BY THE CONSTRUCTION SHALL BE PRESERVED. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS PAY ITEMS AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

11. THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

12. ALL EXISTING AND PROPOSED RIGHT -OF -WAY LINES SHOWN ON THE PLAN SHEETS ARE GRAPHICAL REPRESENTATIONS AND SHALL NOT BE USED AS A MEANS TO ESTABLISH OWNERSHIP. IN ALL MATTERS RELATING TO RIGHT-OF-WAY, THE PLAT OF HIGHWAYS SHALL BE THE CONTROLLING DOCUMENT.

13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

14. ALL WORK NECESSARY TO ATTACH THE PIPE DRAIN TO THE ABUTMENT DRAIN PIPE, TRENCHING IN THE PIPE DRAINS AND INSTALLING THE PIPE DRAIN TO THE CONCRETE HEADWALLS IS INCLUDED IN THE PAY ITEM OF PIPE DRAINS OF THE DIAMETER SELECTED.

15. THE CONTRACTOR WILL PROVIDE INTERNET ACCESSIBILITY TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT BITUMINOUS PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK SHALL BE INCLUDED IN THE COST OF ALL BITUMINOUS ITEMS.

16. FOR THE PAY ITEM BITUMINOUS MATERIALS (PRIME COAT), THE CONTRACTOR SHALL USE EITHER RC-70, SS-1H, OR SS-1HP APPLIED AT THE RATE DIRECTED BY THE ENGINEER.

17. MATERIAL USED FOR AGGREGATE SURFACE, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE.

18. MATERIAL USED FOR AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE, OR RAP.

19. EXISTING PAVED DITCH SHALL BE BROKEN AND LEFT IN PLACE. THIS WORK SHALL BE INCLUDED WITH EARTHWORK QUANTITIES.

20. CHANNEL EXCAVATION QUANTITY INCLUDES ANY EXCAVATION BETWEEN EXISTING ABUTMENTS.

21. TREE QUANTITIES INCLUDED IN THE PLANS ARE TO REPLACE EXISTING TREES REMOVED WITHIN THE PROJECT. THE LOCATIONS SHALL BE DESIGNATED BY THE ENGINEER.

HIGHWAY STANDARDS

000001-06	**STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS**
001001-02	**AREAS OF REINFORCEMENT BARS**
001006	**DECIMAL OF AN INCH AND OF A FOOT**
280001-05	**TEMPORARY EROSION CONTROL SYSTEMS**
406201-01	**MAILBOX TURNOUT**
420401-08	**BRIDGE APPROACH PAVEMENT CONNECTOR**
515001-03	**NAME PLATE FOR BRIDGES**
542401-01	**METAL END SECTION FOR PIPE CULVERTS**
601101-01	**CONCRETE HEADWALL FOR PIPE DRAIN**
606201-02	**TYPE B GUTTER (INLET, OUTLET & ENTRANCE)**
630001-09	**STEEL PLATE BEAM GUARDRAIL**
630201-06	**PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL**
630301-05	**SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS**
631011-07	**TRAFFIC BARRIER TERMINAL, TYPE 2**
631031-09	**TRAFFIC BARRIER TERMINAL, TYPE 6**
635006-03	**REFLECTOR AND TERMINAL MARKER PLACEMENT**
635011-02	**REFLECTOR MARKER AND MOUNTING DETAILS**
666001-01	**RIGHT OF WAY MARKERS**
701001-02	**OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY**
701006-03	**OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM EDGE OF PAVEMENT**
701011-02	**OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY**
701301-04	**LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS**
701306-03	**LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH**
701311-03	**LANE CLOSURE 2L, 2W, MOVING OPERATIONS-DAY ONLY**
701321-11	**LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER**
701326-04	**LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH**
701901-01	**TRAFFIC CONTROL DEVICES**
704001-06	**TEMPORARY CONCRETE BARRIER**
780001-02	**TYPICAL PAVEMENT MARKINGS**
781001-03	**TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS**
886001-01	**DETECTOR LOOP INSTALLATIONS**
886006-01	**TYPICAL LAYOUTS FOR DETECTION LOOPS**

GENERAL NOTES CONTINUED

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

BITUMINOUS MATERIALS (PRIME COAT)	- 0.08 GAL/SQYD (ON PAVEMENT)
BITUMINOUS MATERIALS (PRIME COAT)	- 0.38 GAL/SQYD (ON AGGREGATE)
HOT-MIX ASPHALT SURFACE / BINDER	- 0.056 TON/SQYD/IN
AGGREGATE SURFACE COURSE, TYPE B	- 1.8 TON/CUYD
AGGREGATE DITCH	- 0.45 TON/SQ YD
MULCH METHOD	- 2.0 TON/ACRE
NITROGEN FERTILIZER NUTRIENT	- 90 LB/ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	- 90 LB/ACRE
POTASSIUM FERTILIZER NUTRIENT	- 90 LB/ACRE
TEMPORARY SEEDING	- 100 LB/ACRE - 2 APPLICATIONS

23. FOR AGGREGATE DITCH, REFER TO THE SCHEDULE ON SHEET 10. THE AGGREGATE THAT SHALL BE USED SHALL BE RR 3.

MIXTURE USE	SURFACE (FULL DEPTH PAVEMENT & REGULAR RESURFACING)	BINDER (FULL DEPTH PAVEMENT & REGULAR RESURFACING)	HOT-MIX ASPHALT SHOULDERS (BOTTOM LIFTS)	HOT-MIX ASPHALT SHOULDERS (TOP LIFTS)	INCIDENTAL HMA SURFACING
AC/PG	PG 64-22	PG 64-22	PG 58-22	PG 58-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ Ndes= 70	4.0% @ Ndes= 70	4.0% @ Ndes= 30	4.0% @ Ndes= 30	4.0% @ Ndes= 70
MIX COMPOSITION	IL-9.5	IL-19.0	IL-9.5L	IL-9.5L	IL-9.5
FRICTION AGGREGATE	MIX D	N/A	N/A	MIX C	MIX C

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PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & HIGHWAY STANDARDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	2
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

0011
80% FED.
20% STATE

PAY CODE	ITEM	UNITS	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	1.00
20200100	EARTH EXCAVATION	CU YD	9835
20200500	EARTH EXCAVATION (WIDENING)	CU YD	90
20300100	CHANNEL EXCAVATION	CU YD	383
20400800	FURNISHED EXCAVATION	CU YD	25374
21000310	GRANULAR EMBANKMENT, SPECIAL	CU YD	91
25000200	SEEDING, CLASS 2	ACRE	4.5
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	405
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	405
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	405
25100115	MULCH, METHOD 2	ACRE	4.5
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	900
28000305	TEMPORARY DITCH CHECKS	FOOT	1242
28000400	PERIMETER EROSION BARRIER	FOOT	4244
28000500	INLET AND PIPE PROTECTION	EACH	4
28100107	STONE RIPRAP, CLASS A4	SQ YD	2098
28200200	FILTER FABRIC	SQ YD	3378
28300400	AGGREGATE DITCH	TON	581
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	110
35102400	AGGREGATE BASE COURSE, TYPE B 12"	SQ YD	4486
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	418
35400520	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 12"	SQ YD	154
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	138
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	660
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	427
40600990	TEMPORARY RAMP	SQ YD	93
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	528
40603340	HOT-MIX ASPHALT SURFACE COURSE,MIX "D", N70	TON	194
40701951	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 13 1/2"	SQ YD	3905
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2062
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	30
50300300	PROTECTIVE COAT	SQ YD	1943

SUMMARY OF QUANTITIES

0011
80% FED.
20% STATE

PAY CODE	ITEM	UNITS	QUANTITY
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	1034
44000151	HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	SQ YD	1202
44000400	GUTTER REMOVAL	FOOT	878
44004250	PAVED SHOULDER REMOVAL	SQ YD	653
44213200	SAW CUTS	FOOT	2021
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	873
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	989
48203051	HOT-MIX ASPHALT SHOULDERS, 13 1/2"	SQ YD	635
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	352
50200100	STRUCTURE EXCAVATION	CU YD	154.9
50300100	FLOOR DRAINS	EACH	10.0
50300225	CONCRETE STRUCTURES	CU YD	213.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	586.6
50300260	BRIDGE DECK GROOVING	SQ YD	1574
50300280	CONCRETE ENCASEMENT	CU YD	5.6
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	5544
50800105	REINFORCEMENT BARS	POUND	14220
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	177260
50800515	BAR SPLICERS	EACH	1774
51201610	FURNISHING STEEL PILES HP12X63	FOOT	448
51202305	DRIVING PILES	FOOT	448
51203610	TEST PILE STEEL HP12X63	EACH	2
51204650	PILE SHOES	EACH	16
51500100	NAME PLATES	EACH	1
51603000	DRILLED SHAFT IN SOIL	CU YD	44
51604000	DRILLED SHAFT IN ROCK	CU YD	14.6
52100520	ANCHOR BOLTS, 1"	EACH	24
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	176
54215559	METAL END SECTIONS 24"	EACH	4

SUMMARY OF QUANTITIES

0011
80% FED.
20% STATE

PAY CODE	ITEM	UNITS	QUANTITY
5421D024	PIPE CULVERTS, CLASS D, TYPE 1 24" (TEMPORARY)	FOOT	71
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	95.6
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4.0
60100905	PIPE DRAINS 4"	FOOT	50
60602800	CONCRETE GUTTER, TYPE B	FOOT	406
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	612.5
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	5
63200310	GUARDRAIL REMOVAL	FOOT	974
63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	62.5
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	6
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	20
67100100	MOBILIZATION	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	2
• 70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1044
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1815
70400100	TEMPORARY CONCRETE BARRIER	FOOT	4306
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	4306
• 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	10660
• 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	63
• 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	5
• 78200410	GUARDRAIL MARKERS, TYPE A	EACH	20
• 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	5
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1096
• A2001310	TREE, ACER SACCHARINUM (SILVER MAPLE) 1-1/4" CALIPER, BALLED AND BURLAPPED	EACH	10
• A2002714	TREE, CARYA OVATA (SHAGBARK HICKORY), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	5

SUMMARY OF QUANTITIES

0011
80% FED.
20% STATE

PAY CODE	ITEM	UNITS	QUANTITY
• A2004616	TREE, GLEDITSIA TRIACANTHOS INERMIS (THORNLESS COMMON HONEYLOCUST), 2" CALIPER, BALLED AND BURLAPPED	EACH	5
• A2005114	TREE, JUGLANS NIGRA (BLACK WALNUT), 1-3/4" CALIPER, BALLED & BURLAPPED	EACH	25
• A2006914	TREE, QUERCUS PALUSTRIS (PIN OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	10
• A2007114	TREE, QUERCUS RUBRA (RED OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	10
• B2001114	TREE, CERCIS CANADENSIS (EASTERN REDBUD),1-3/4" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	15
• B2001366	TREE, CORNUS FLORIDA (FLOWERING DOGWOOD), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	6
• B2005614	TREE, PYRUS CALLERYANA BRADFORD (BRAD FORD CALLERY PEAR), 1-3/4" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	10
• D2C02936	EVERGREEN, PINUS STROBUS (EASTERN WHITE PINE), 3' HEIGHT, CONTAINER	EACH	20
Z0030251	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	160.4
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1
50800530	MECHANICAL SPLICERS	EACH	96
X7010216	TRAFFIC CONTROL & PROTECTION SPECIAL	L SUM	1
• Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	140
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	121
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	7917
● Z0076600	TRAINEES	HOUR	500

• SPECIALTY ITEMS
● 0042

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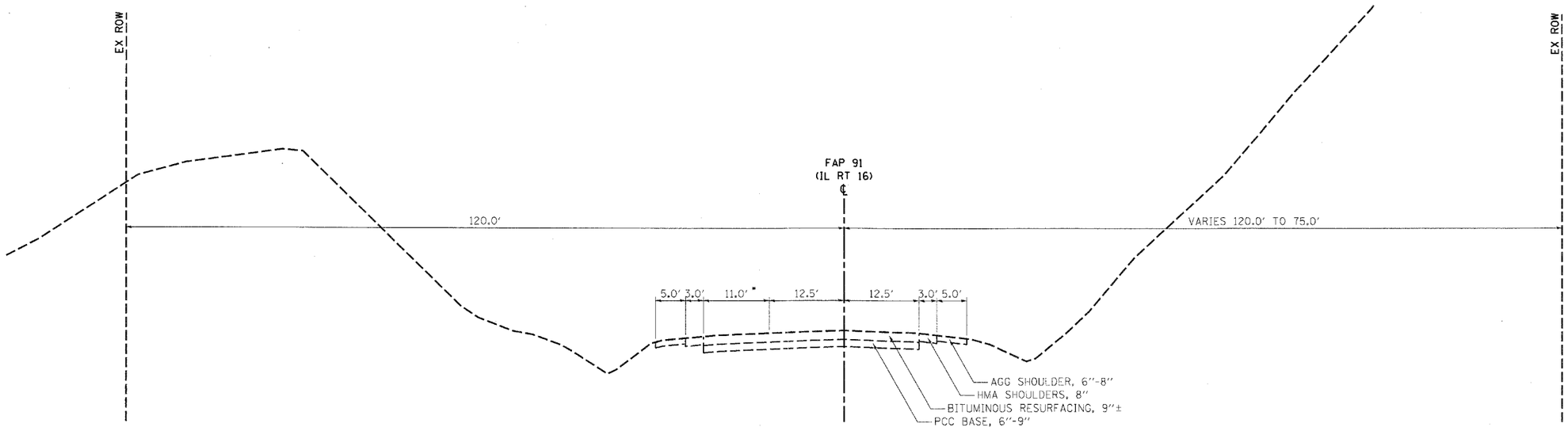
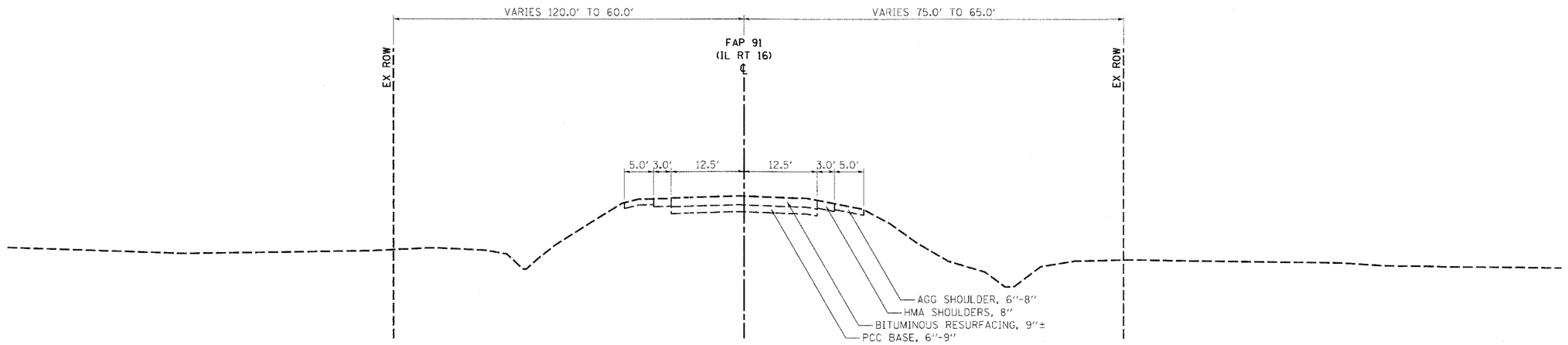


EXISTING TYPICAL SECTION

STA 147+00.00 TO 153+43.20

* VARIES FROM 11.0' TO 0.0' - STA 153+09.60 TO STA 153+43.20



EXISTING TYPICAL SECTION

STA 153+43.20 TO STA 153+63.37
BRIDGE OMISSION
STA 156+54.91 TO STA 164+47.07

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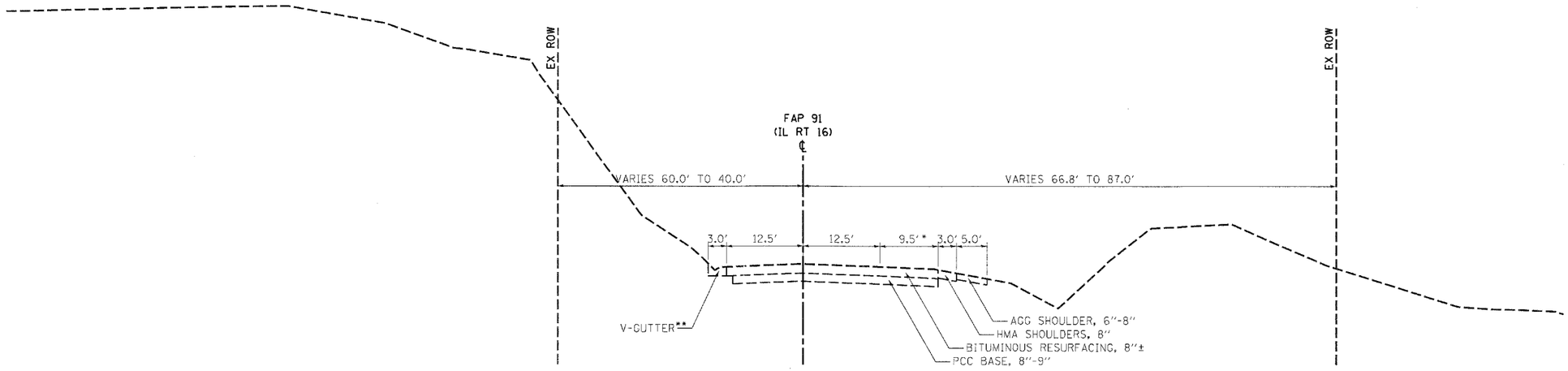
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS

SHEET NO 1 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	5
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



EXISTING TYPICAL SECTION

STA 164+47.07 TO STA 168+00.00

* VARIES FROM 0.0' TO 9.5' - STA 166+00.00 TO STA 167+00.00
** V GUTTER - EXTENDS TO STA 169+50.00 LT

PRINTED DATE: 5/11/2011
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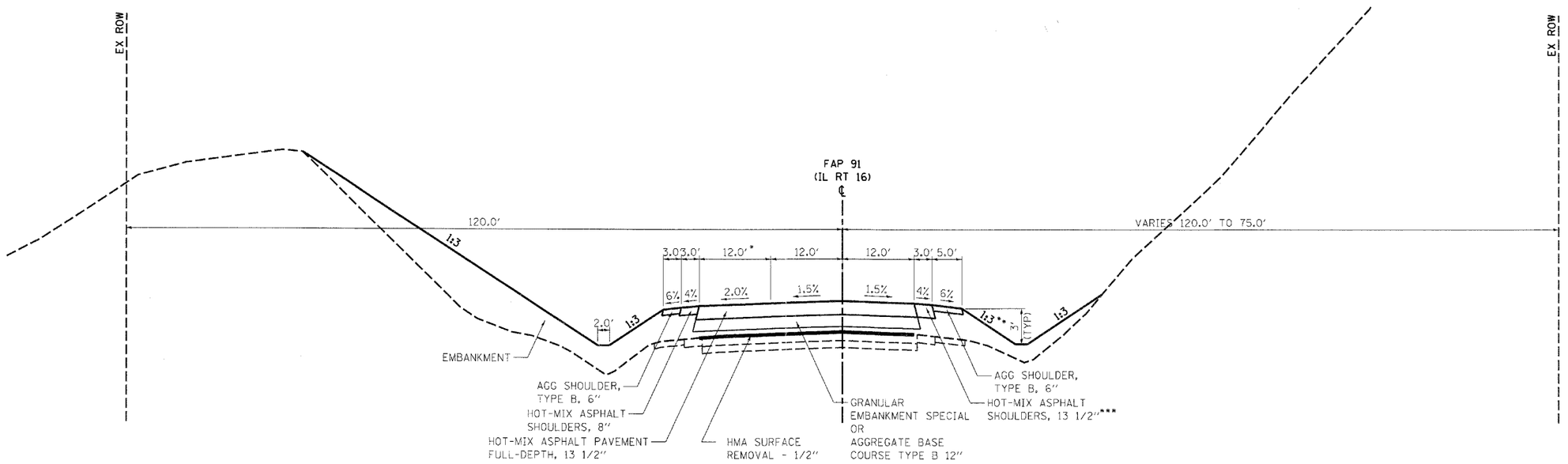
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS

SHEET NO 2 OF 4 SHEETS

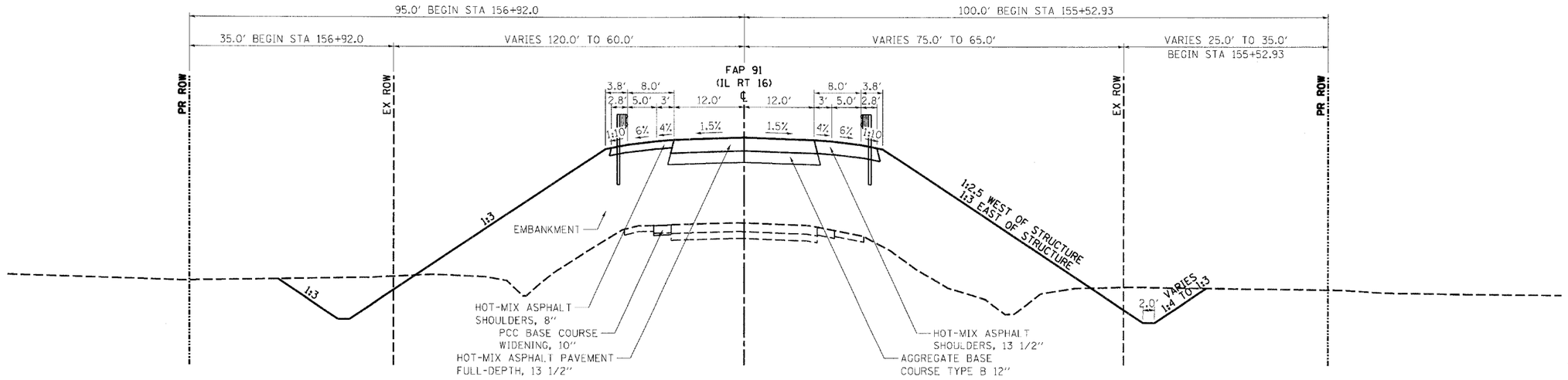
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	6
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



PROPOSED TYPICAL SECTION

STA 147+00.00 TO 153+22.06

* VARIES FROM 12.0' TO 0.0' - STA 152+32.77 TO STA 153+22.06
** 1:2.5 (V:H) - STA 151+00.00 RT TO STA 153+22.06 RT
*** HMA SHOULDERS, 13 1/2" - BEGIN STA 145+99.00 RT
HMA SURFACE REMOVAL 1/2" - STA 147+20.10 TO STA 148+69.10
GRANULAR EMBANKMENT SPECIAL - STA 148+69.10 TO STA 149+29.50
AGGREGATE BASE COURSE, TYPE B 12" - STA 149+29.50 TO STA 153+22.06
HMA BINDER COURSE, VARIABLE DEPTH - STA 147+20.10 TO STA 148+69.10
HMA SURFACE COURSE, 2" - STA 147+00.00 TO STA 148+69.10
HMA PAVEMENT FULL-DEPTH - STA 148+69.10 TO STA 152+63.71



PROPOSED TYPICAL SECTION

STA 153+22.06 TO STA 153+63.71
BRIDGE OMISSION
STA 157+36.29 TO STA 160+50.00

PCC BASE COURSE WIDENING, 10" - STA 153+10.20 LT TO STA 153+63.4 LT & STA 156+55.10 LT TO STA 160+50.00 LT
AGGREGATE BASE COURSE, TYPE B 12" - STA 153+22.06 TO STA 153+60.60 & STA 157+39.40 TO STA 160+50.00
HMA PAVEMENT FULL-DEPTH - STA 158+36.29 TO STA 160+50.00

NOTE:
FOR HMA FULL-DEPTH PAVEMENT 13 1/2" AND HOT MIX ASPHALT SHOULDERS 13 1/2", THE TOP 2" SHALL BE CONSTRUCTED USING HMA SURFACE COURSE AND THE FINAL LIFT OF HMA BINDER COURSE SHALL BE 2 1/2".

SEE HMA PROFILE DETAIL FOR PAVEMENT STRUCTURE DIFFERENCES, SHEET 34.

PRINTED DATE: 5/11/2011
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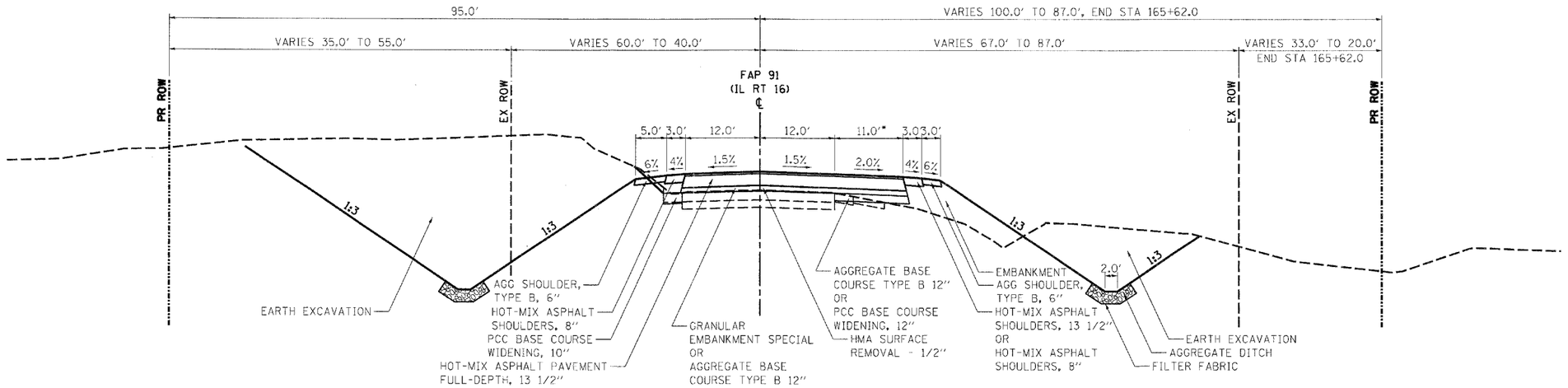
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS
SHEET NO 3 OF 4 SHEETS

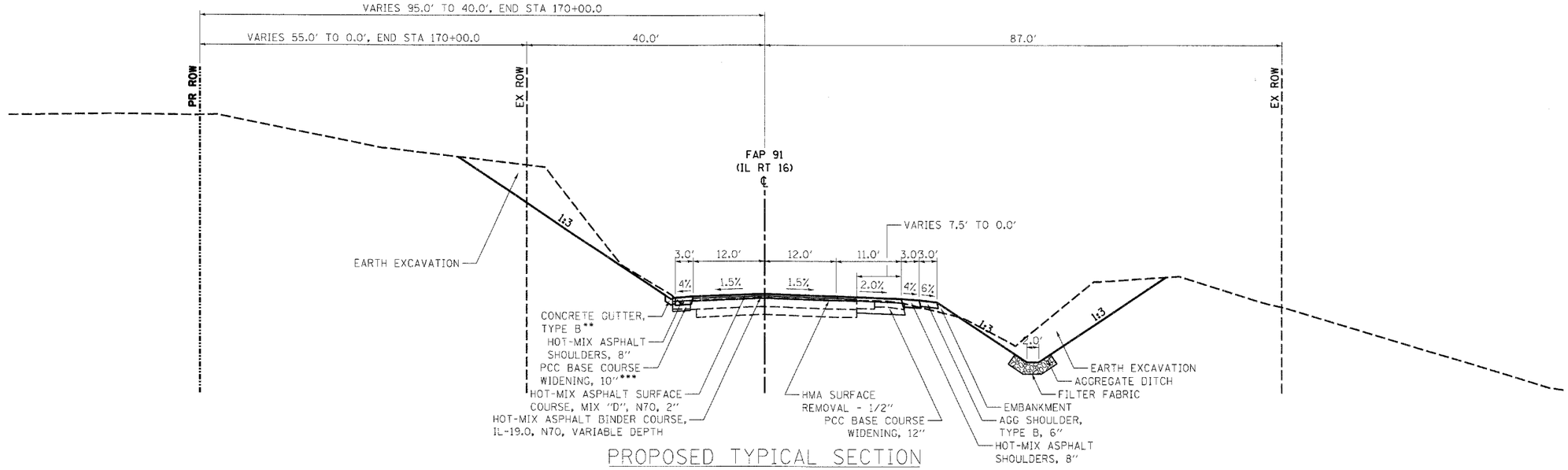
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(58R)B-1	COLES	91	7
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION

STA 160+50.00 TO STA 166+25.00

* VARIES FROM 0' TO 11.0' - STA 160+50.00 TO STA 163+50.00
AGGREGATE BASE COURSE, TYPE B 12" - STA 160+50.00 TO STA 165+05.20
GRANULAR EMBANKMENT SPECIAL - STA 165+05.20 TO STATION 165+49.90
AGGREGATE BASE COURSE, TYPE B 12" - (FOR WIDENING) - STA 165+05.20 TO STATION 165+49.90
PCC BASE COURSE WIDENING, 12" - STA 165+49.90 RT TO STA 166+25.00 RT
HMA PAVEMENT FULL-DEPTH - STA 160+50.00 TO STA 165+49.90
HMA SURFACE REMOVAL 1/2" - STA 165+49.90 TO STA 166+25.00
HMA BINDER COURSE, VARIABLE DEPTH - STA 165+49.90 TO STA 166+25.00
HMA SURFACE COURSE, 2" - STA 165+49.90 TO STA 166+25.00
HMA SHOULDERS 13 1/2" - STA 160+50.00 RT TO STA 161+50.00 RT
HMA SHOULDERS 8" - STA 161+50.00 RT TO STA 166+25.00 RT



PROPOSED TYPICAL SECTION

STA 166+25.00 TO STA 168+00.00

** CONCRETE GUTTER, TYPE B - EXTENDS TO STA 169+50.00 LT
*** PCC BASE COURSE WIDENING, 10" - EXTENDS TO STA 169+50.00 LT
PCC BASE COURSE WIDENING, 12" - STA 166+25.00 TO STA 167+00.00 LT
HMA SURFACE REMOVAL 1/2" - STA 166+25.00 TO STA 167+19.60
HMA BINDER COURSE, VARIABLE DEPTH - STA 166+25.00 TO STA 167+19.60
HMA SURFACE COURSE, 2" - STA 166+25.00 TO STA 168+00.00

NOTE:
FOR HMA FULL-DEPTH PAVEMENT 13 1/2" AND HOT MIX ASPHALT SHOULDERS 13 1/2", THE TOP 2" SHALL BE CONSTRUCTED USING HMA SURFACE COURSE AND THE FINAL LIFT OF HMA BINDER COURSE SHALL BE 2 1/2".

SEE HMA PROFILE DETAIL FOR PAVEMENT STRUCTURE DIFFERENCES, SHEET 34.

PRINTED DATE: 5/11/2011
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS

SHEET NO 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	8
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		

EARTHWORK

LOCATION	EARTH EXCAVATION CU YD	EARTH EMBANKMENT CU YD	FURNISHED EX ADJUSTED, 25% CU YD
ROUTE 16, MAINLINE	6731.7	28765.9	23717.1
AREA BETWEEN PROPOSED ABUTMENTS (EXCLUDING CHANNEL EXCAVATION)	1873.3	738.0	0.0
CE, STA 152+72.9	0.0	1098.5	1098.5
PE, STA 160+71.0	23.9	848.6	830.7
PE, STA 164+18.5	3.9	222.0	219.1
TEMPORARY PE, 165+00.0 CONSTRUCTION	6.0	1073.9	1069.4
TEMPORARY PE, 165+00.0 REMOVAL	1192.6	0.0	0.0
TOTAL	9835	32750	25374

GUARDRAIL REMOVAL

STATION	TO	STATION	SIDE	FOOT
149+04.94		150+07.63	LT	113.2
150+00.52		150+86.42	RT	87.9
150+28.47		152+63.17	LT	250.4
151+12.78		153+64.25	RT	264.6
156+55.00		157+44.23	RT	90.3
153+07.69		153+64.25	LT	76.5
156+55.00		157+44.29	LT	90.4
TOTAL				974

GUTTER REMOVAL

STATION	TO	STATION	SIDE	FOOT
156+54.0		158+08.1	LT	163.2
156+54.1		158+04.3	RT	157.8
163+99.0		169+50.0	LT	557.0
TOTAL				878

CONCRETE GUTTER

STATION	TO	STATION	SIDE	FOOT
165+50.00		169+50.00	LT	405.9
TOTAL				406

HMA SURFACE REMOVAL 1/2"

STATION	TO	STATION	SQ YD
147+20.10		148+69.10	623
165+49.90		167+19.60	579
TOTAL			1202

TREE REMOVAL, ACRES

STATION	TO	STATION	SIDE	ACRE
148+85.00		150+03.00	LT	0.04
148+62.00		151+20.00	RT	0.11
150+62.00		152+39.00	LT	0.08
151+98.00		153+42.00	RT	0.06
152+46.00		152+74.00	LT	0.01
153+95.00		154+28.00	LT	0.02
156+46.00		159+40.00	LT	0.28
156+80.00		157+64.00	RT	0.04
162+37.00		163+17.00	RT	0.02
164+69.00		168+17.00	RT	0.16
165+28.00		166+54.00	LT	0.05
167+22.00		168+00.00	LT	0.05
TOTAL				1.0

BUTT JOINT

STATION	TO	STATION	LENGTH FOOT	DEPTH START, IN	DEPTH FINISH, IN	WIDTH FOOT	BUTT JOINT SQ YD
147+00.00		147+20.10	20.1	2.0	0.5	39	87.10
167+19.60		168+00.00	80.4	0.5	2.0	38	339.47
TOTAL							427

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

STATION	SIDE	OFFSET	EACH
156+75.00	RT	100	1
156+92.00	LT	95	1
164+00.00	RT	100	1
165+26.00	RT	87	1
168+00.00	LT	95	1
170+00.00	LT	40	1
TOTAL			6

PERIMETER EROSION BARRIER

STATION	TO	STATION	SIDE	FOOT
149+50.00		152+88	LT	409
153+14.00		154+41.00	LT	295
150+25.00		154+54.00	RT	510
BRIDGE OMISSION				
156+46.00		160+25.00	LT	692
156+62.00		164+62.00	RT	866
158+05.00		168+65.00	LT	1081
164+79.00		168+50.00	RT	391
TOTAL				4244

GUARD RAIL

STATION	TO	STATION	SIDE	STEEL PLATE BEAM GUARD RAIL, TY A FOOT	STEEL PLATE BEAM GUARD RAIL (SHORT RAD) FOOT	TRAFFIC BARRIER TERM, TY 1 SP TAN EACH	TRAFFIC BARRIER TERMINAL, TY 2 EACH	TRAFFIC BARRIER TERMINAL, TY 6 EACH
150+85.00		151+35.00	LT			1		
151+35.00		151+85.00	LT	50.0				
151+85.00		152+35.00	LT			1		
150+78.42		151+28.42	RT			1		
151+28.42		153+40.92	RT	212.5				
153+40.92		153+86.57	RT					1
1+59.09		1+71.59	LT				1	
1+59.09		153+30.20	LT		62.5			
153+30.20		153+75.85	LT					1
157+13.43		157+59.08	LT					1
157+59.08		159+71.58	LT	212.5				
159+71.58		160+21.58	LT			1		
157+24.15		157+69.80	RT					1
157+69.80		159+07.30	RT	137.5				
159+07.30		159+57.30	RT			1		
TOTAL				612.5	62.5	5	1	4

EXISTING PAVED DITCH

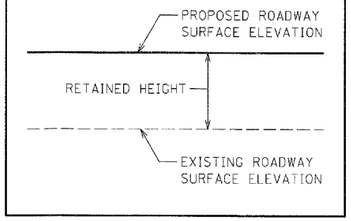
STATION	TO	STATION	SIDE	FOOT
151+29.5		151+71.4	RT	43.5
157+31.6		158+08.5	LT	77.2
158+61.9		164+69.3	LT	607.5
TOTAL				729

TEMPORARY SOIL RETENTION SYSTEM *

STATION	EXISTING ELEVATION	PROPOSED ELEVATION	RETAINED HEIGHT	SQ FT
148+00.00	625.60	626.25	0.00	
				0.0
148+33.72	623.78	624.78	1.00	
				17.7
148+50.00	622.90	624.08	1.18	
				72.2
149+00.00	620.20	621.91	1.71	
				103.2
149+50.00	617.32	619.74	2.42	
				138.7
150+00.00	614.43	617.56	3.13	
				173.0
150+50.00	611.69	615.48	3.79	
				210.0
151+00.00	608.95	613.56	4.61	
				238.7
151+50.00	606.86	611.8	4.94	
				259.5
152+00.00	604.78	610.22	5.44	
				269.5
152+50.00	603.46	608.8	5.34	
				268.7
153+00.00	602.14	607.55	5.41	
				265.3
153+50.00	601.26	606.46	5.20	
				70.9
153+63.71	601.05	606.19	5.14	
BRIDGE				918.5
157+36.29	596.68	602.47	5.79	
				80.1
157+50.00	596.56	602.46	5.90	
				306.5
158+00.00	596.19	602.55	6.36	
				326.5
158+50.00	596.10	602.8	6.70	
				341.5
159+00.00	596.26	603.22	6.96	
				355.3
159+50.00	596.56	603.81	7.25	
				367.8
160+00.00	597.11	604.57	7.46	

TEMPORARY SOIL RETENTION SYSTEM *

STATION	EXISTING ELEVATION	PROPOSED ELEVATION	RETAINED HEIGHT	SQ FT
160+00.00	597.11	604.57	7.46	
				374.5
160+50.00	597.97	605.49	7.52	
				378.5
161+00.00	598.96	606.58	7.62	
				379.0
161+50.00	600.30	607.84	7.54	
				371.3
162+00.00	601.96	609.27	7.31	
				351.2
162+50.00	604.12	610.86	6.74	
				320.3
163+00.00	606.55	612.62	6.07	
				282.2
163+50.00	609.33	614.55	5.22	
				235.0
164+00.00	612.47	616.65	4.18	
				183.7
164+50.00	615.74	618.91	3.17	
				134.8
165+00.00	619.12	621.34	2.22	
				89.8
165+50.00	622.57	623.94	1.37	
				32.7
165+77.58	624.45	625.45	1.00	
				0.0
166+00.00	626.04	626.71	0.00	
			TOTAL	7917



* SEE SPECIAL PROVISIONS

SAW CUTS

STATION	TO	STATION	SIDE	FOOT
145+99.00		148+45.50	RT	101.0
153+10.30		153+63.35	LT	53.0
156+55.10		169+50.00	LT	1295.2
165+05.20		167+02.60	RT	197.8
166+00.00		169+50.00	LT	350.0
2+95.60		2+95.60	LT/RT	23.7
TOTAL				2021

TEMPORARY RAMP

STATION	TO	STATION	SQ YD
147+00.00		147+07.00	28
153+56.71		153+63.71	19
157+36.29		157+43.29	19
167+93.00		168+00.00	27
TOTAL			93

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

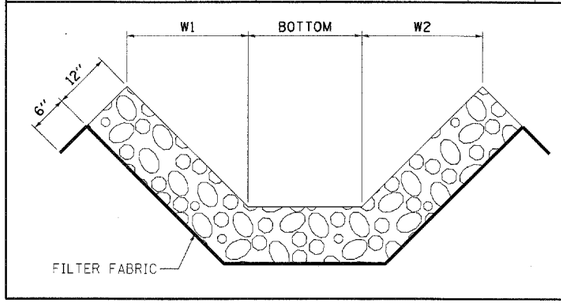
MISCELLANEOUS SCHEDULES

SHEET NO 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	9
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		

AGGREGATE DITCH /FILTER FABRIC

STATION	TO	STATION	SIDE	W1 FOOT	DITCH BOTTOM FOOT	W2 FOOT	AGGREGATE DITCH TON	FILTER FABRIC SQ YD
147+00.00		148+00.00	LT	3	0	3	36	78
148+00.00		149+50.00	LT	2	2	2	52	115
149+50.00		150+90.00	LT	2	2	2	51	113
147+00.00		148+50.00	RT	2	2	2	54	118
148+50.00		150+00.00	RT	2	2	2	52	115
150+00.00		151+00.00	RT	2	2	2	37	81
162+00.00		163+50.00	LT	2	2	2	52	115
163+50.00		165+50.00	LT	2	2	2	70	154
162+00.00		163+50.00	RT	2	2	2	52	115
163+50.00		163+74.00	RT	2	2	2	9	20
164+66.00		168+00.00	RT	2	2	2	116	256
TOTAL							581	1280



SHOULDER WIDENING

STATION	TO	STATION	SIDE	PCC BASE CSE WIDENING 10" SQ YD	PCC BASE CSE WIDENING 12" SQ YD	PAVED SHOULDER REMOVAL SQ YD	EARTH EX (WIDENING) CU YD
145+99.00		148+45.50	RT			83	12.6
153+10.30		153+63.35	LT	18		18	1.0
156+55.10		168+55.00	LT	400		401	22.2
165+05.20		165+49.90	RT			15	10.1
165+49.90		167+00.00	RT		154	51	40.0
166+00.00		168+55.00	LT			85	
TOTAL				418	154	653	90

HOT-MIX ASPHALT

STATION	TO	STATION	HMA SURFACE TON	HMA BINDER TON	FULL DEPTH SQ YD	BIT MATERIALS ON HMA GAL	BIT MATERIALS ON AGGREGATE GAL
147+00.00		148+02.30	4 *			3	
147+20.10		148+02.30		5*		3	
147+00.00		148+69.10	76			55	
147+20.10		148+69.10		247		49	
148+69.10		152+32.80			1452	117	552
152+32.80		152+63.71			123	10	47
BRIDGE OMISSION							
158+36.29		160+50.00			570	46	217
160+50.00		163+50.00			983	79	374
163+50.00		165+49.90			777	63	296
165+49.90		167+19.60		274		54	
165+49.90		168+00.00	110			78	
167+00.00		167+19.60		2*		1	
167+00.00		168+00.00	4 *			3	
TOTAL			194	528	3905	561	1486

* QUANTITY GIVEN TO PAVE 3' WIDE HMA SHOULDERS, VARIABLE DEPTH (UP TO 8") WITH MAINLINE HMA SURFACE.

HMA SHOULDERS

STATION	TO	STATION	SIDE	8" SQ YD	13 1/2" SQ YD	BIT MATERIALS ON HMA ** GAL
148+02.30		152+54.90	LT	274		2.5
145+99.00		150+44.40	RT		143	1.3
150+44.40		152+63.70	RT		261	2.4
152+91.90		153+20.00	LT	21		0.2
158+36.29		160+58.60	LT	260		2.4
158+36.29		159+91.30	RT		184	1.7
159+91.30		161+31.76	RT		47	0.5
160+81.10		169+50.00	LT	258		2.3
161+31.76		164+01.00	RT	89		0.8
164+35.96		167+00.00	RT	87		0.8
TOTAL				989	635	15

** PRIME INCLUDED FOR 2" SURFACE AFTER REMOVAL OF STAGED CONSTRUCTION.

AGGREGATE SHOULDERS, TYPE B 6"

STATION	TO	STATION	SIDE	SQ YD
147+28.00		150+51.00	LT	117
147+00.00		150+44.40	RT	192
159+91.30		164+01.04	RT	157
161+04.00		166+25.07	LT	284
164+35.96		168+00.00	RT	123
TOTAL				873

PAVEMENT MARKING & SHORT TERM PAVEMENT MARKING

STATION	TO	STATION	SIDE	PAINT PVMT MARKING WHITE 4" FOOT	PAINT PVMT MARKING YELLOW 4" FOOT	SHORT TERM PM FOOT	REMARKS
147+00.00		152+33.00	LT	533		44	EDGE LINE
152+33.00		153+22.00	LT	90		8	EDGE LINE
153+22.00		168+55.00	LT	1533		124	EDGE LINE
145+80.00		152+33.00	LT	653		120	LANE LINE
144+37.00		168+43.00	CL		4812	440	CL NO PASSING
173+40.00		175+00.00	CL		320	32	CL NO PASSING
145+80.00		160+50.00	RT	1470		120	EDGE LINE
160+50.00		163+50.00	RT	301		28	EDGE LINE
163+50.00		168+48.00	RT	498		92	LANE LINE
163+50.00		168+00.00	RT	450		36	EDGE LINE
TOTAL				5528	5132	1044	

AGGREGATE BASE COURSE, TYPE B 12"

STATION	TO	STATION	SQ YD
149+29.50		150+00.00	305
150+00.00		151+00.00	433
151+00.00		152+00.00	433
152+00.00		153+00.00	400
153+00.00		153+60.60	185
BRIDGE OMISSION			
157+39.40		158+00.00	182
158+00.00		159+00.00	300
159+00.00		160+00.00	300
160+00.00		161+00.00	305
161+00.00		162+00.00	341
162+00.00		163+00.00	381
163+00.00		164+00.00	417
164+00.00		165+05.20	444
165+05.20		165+49.90	60
TOTAL			4486

PAVEMENT MARKING REMOVAL

STATION	TO	STATION	PM REM SQ FT
153+22.00		168+55.00	511
145+80.00		152+33.00	218
144+37.00		147+00.00	175
168+00.00		168+43.00	29
173+40.00		175+00.00	107
145+80.00		147+00.00	40
168+00.00		168+48.00	16
			1096

WORK ZONE PAVEMENT MARKING REMOVAL

STATION	TO	STATION	STAGE I WHITE 4" SQ FT	STAGE II WHITE 4" SQ FT	WHITE 24" SQ FT
144+37.00					25
145+97.00		147+20.00	41		
144+47.00		147+20.00	91		
168+00.00		168+43.00	14		
173+40.00		174+40.00	33		
144+97.00		168+43.00		782	
173+40.00		174+90.00		50	
145+85.00		168+43.00		753	
175+00.00					25
			180	1585	50

TEMPORARY PAVEMENT MARKING ***

STATION	TO	STATION	STAGE I WHITE 4" FOOT	STAGE II WHITE 4" FOOT	WHITE 24" FOOT
144+37.00					12.5
145+97.00		152+62.00	677		
153+10.00		168+55.00	1545		
144+47.00		168+43.00	2396		
173+40.00		174+40.00	100		
144+97.00		168+43.00		2346	
173+40.00		174+90.00		150	
145+85.00		168+43.00		2258	
175+00.00					12.5
			4718	4754	25

*** INCLUDED FOR CONTRACTOR INFORMATION ONLY. COST TO BE INCLUDED WITH TRAFFIC CONTROL & PROTECTION SPECIAL.

PRINTED DATE= 5/11/2011
FILE NAME= c:\projects\vdot\sab 148.item 25 - d7 various design\work order 87\coldd\drawings\Sheets\V8.R16_Schedules_2.dgn

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USER NAME = $USER$
PLOT SCALE = 1.0000 ' / IN.
PLOT DATE = 5/11/2011

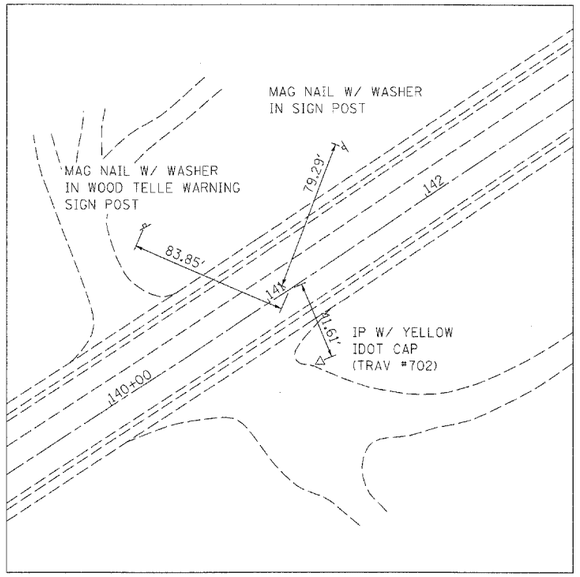
DESIGNED - JEH, ADG
DRAWN - JEH, ADG
CHECKED - DF
DATE - 05-11-2011

REVISED -
REVISED -
REVISED -
REVISED -

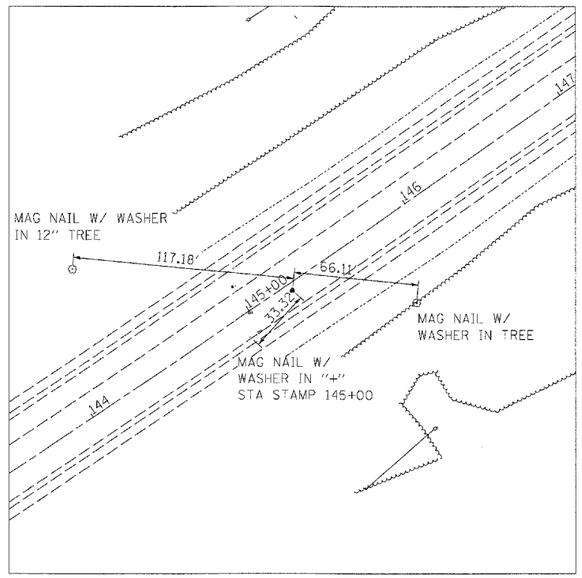
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS SCHEDULES
SHEET NO 2 OF 2 SHEETS

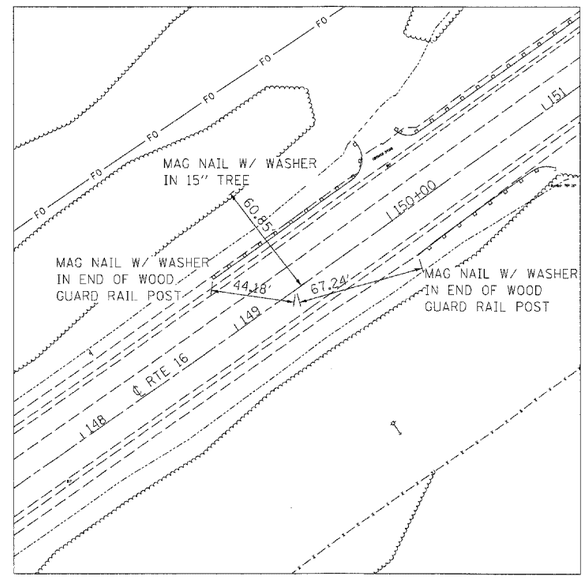
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	10
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



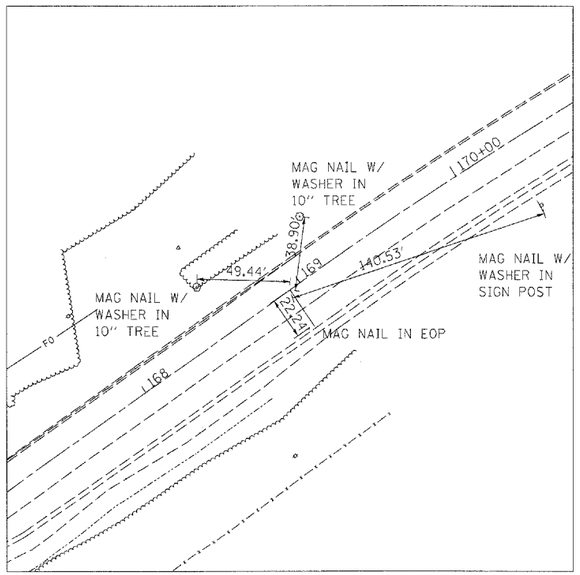
PC STA 141+12.78
MAG NAIL W/ WASHER



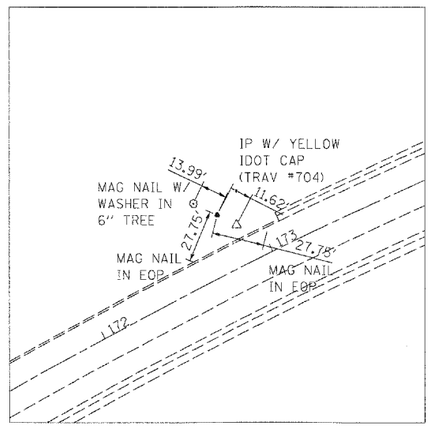
PI STA 145+25.13
MAG NAIL W/ WASHER



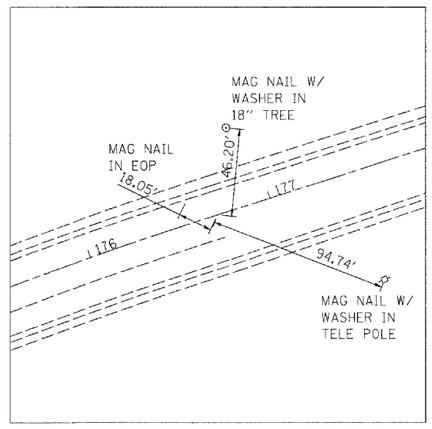
PT STA 149+37.40
MAG NAIL W/ WASHER



PT STA 168+93.53
MAG NAIL W/ WASHER



PT STA 172+85.38
IP W/ YELLOW CAP



PT STA 176+70.96
MAG NAIL

BENCHMARK DATA:

BM1 TO REACH FROM THE INTERSECTION OF IL16 AND MADISON AVE GO EAST ON IL16 FOR 0.45 MILES TO MARK ON THE RIGHT. MARK IS LOCATED IN THE NE QUAD OF 1880E RD AND IL16. SAID MARK IS A CHISELED SQUARE ON THE TOP OF THE NORTH END OF THE EAST HEADWALL OF AR CULVERT. ELEV = 667.444

BM2 TO REACH FROM THE INTERSECTION OF MADISON AVE AND IL16 GO EAST ON IL16 FOR 1.3 MILES TO MARK ON THE LEFT. SAID MARK IS A CHISELED SQUARE LOCATED ON THE TOP OF THE NE WINGWALL OF BRIDGE OVER THE EMBARRASS. ELEV = 597.427

BM3 TO REACH FROM THE INTERSECTION OF IL 16 AND 1990E GO WEST ON IL 16 FOR 150' TO MARK ON
THE LEFT. SAID MARK IS A CHISELED SQUARE LOCATED ON THE NW CORNER OF CONCRETE FOUNDATION OF A TELEPHONE PEDESTAL. 8' NORTH OF A POWER POLE. ELEV = 672.109

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\ptb 146,item 25 - d7 various design\work order 07\addd\drawings\Sheets\IL Ties_Bench.dgn

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USER NAME = $USER$	DESIGNED - JEH	REVISED -	
	DRAWN - JEH	REVISED -	
PLOT SCALE = 40.0000 ' / IN.	CHECKED - PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT TIES AND BENCHMARKS

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	11
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

PARCEL NUMBER 7004103
FIRST NATIONAL BANK OF MARSHALL
LAND TRUST 426

QUARTER SEC

EX ROW

PROJECT BEGINS
STA 147+00.00

℄ IL RT 16

CURVE 1

CURVE 1
PI STA. = 145+25.13
△ = 2° 07′ 50″ (LT)
D = 0° 15′ 30″
R = 22,176.20′
T = 412.36′
L = 824.62′
E = 3.83′
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 141+12.78
P.T. STA. = 149+37.40

PT Sta 149+37.40

CONST LIMITS

PERIMETER EROSION BARRIER

HMA SHOULDERS, VARIABLE DEPTH

HMA SHOULDERS, 8″

AGG SHOULDERS, TY B, 6″

PIPE CULVERT REMOVAL, 27′

ENTRANCE TBR

TRAF BARRIER TERM, TY 1 SP (TANGENT)

HMA SURFACE

HMA SHOULDERS, 13 1/2″

AGG SHOULDERS, TY B, 6″

HMA SHOULDERS, 13 1/2″

PIPE CULVERT REM, 18″, 45′

PERIMETER EROSION BARRIER

MATCHLINE STA 151+00

BLDG

STEPHEN MICHAEL PERNDERGAST

TREE REMOVAL AREA
AGGREGATE DITCH
TEMPORARY DITCH CHECK
INLET & PIPE PROTECTION

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj_geos\ldot\pstb 148_item 25 - df various design\work order 07\cadd\drawings\Sheets\12_R16_Pln_ldgn

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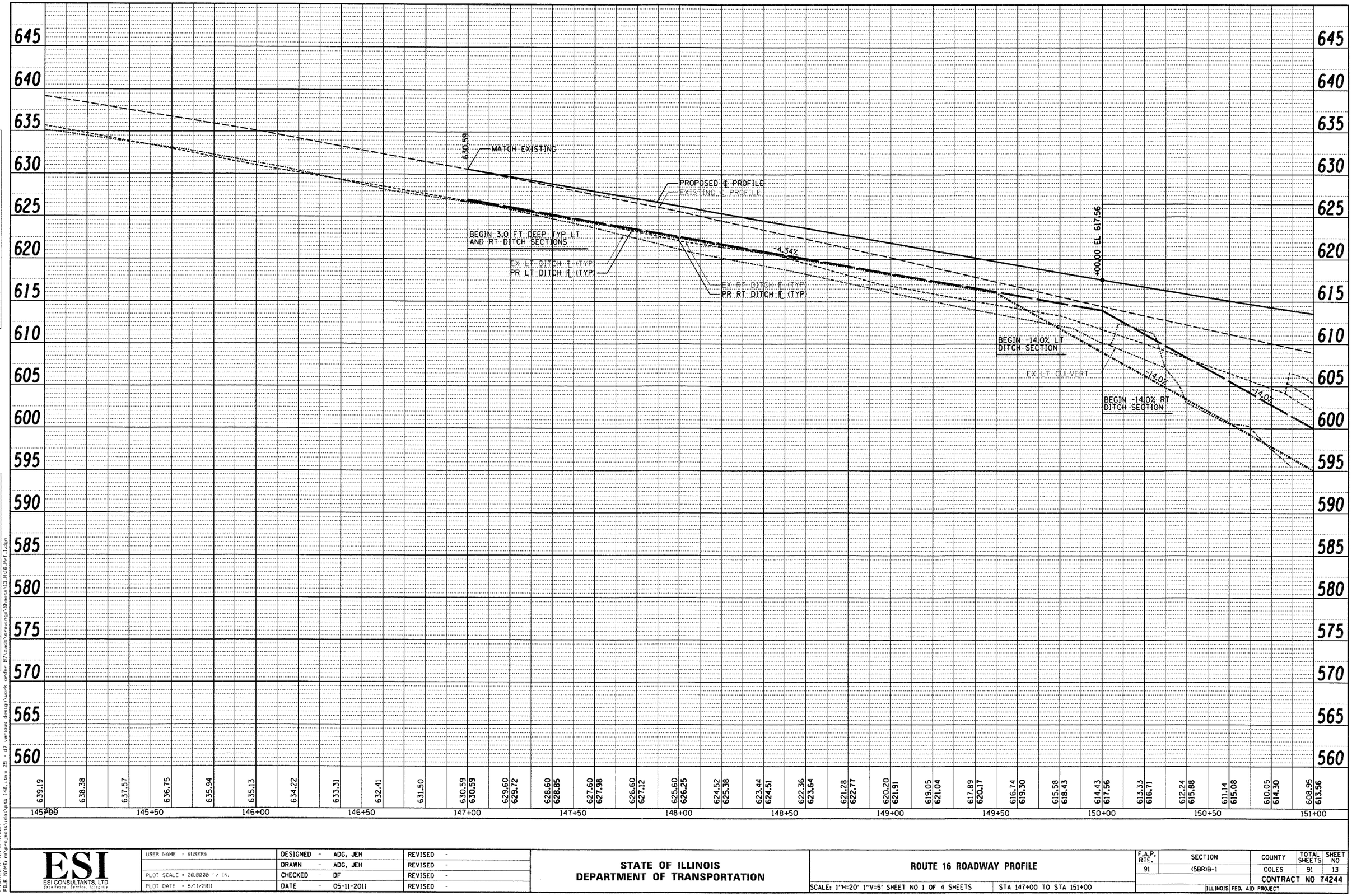
USER NAME = *USER*	DESIGNED - ADG, JEH	REVISED -	
	DRAWN - ADG, JEH	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - ADG, DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PLAN

SCALE: 1"=20' | SHEET NO 1 OF 4 SHEETS | STA 147+00 TO STA 151+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(58R)B-1	COLES	91	12
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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USER NAME = $USER$	DESIGNED - ADG, JEH	REVISED -	
	DRAWN - ADG, JEH	REVISED -	
PLOT SCALE = 20.2020 ' / IN.	CHECKED - DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PROFILE

SCALE: 1"H=20' 1"V=5' | SHEET NO 1 OF 4 SHEETS | STA 147+00 TO STA 151+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	13
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

PR CURVE DRIVE16272.9-1
PI STA = 2+02.91
Δ = 15° 00' 00" (RT)
D = 28° 38' 52"
R = 200.00'
T = 26.33'
L = 52.36'
E = 1.73'
e = -----
T.R. = -----
S.E. RUN. = -----
PC STA = 1+76.58
PT STA = 2+28.94

PR CURVE DRIVE16272.9-2
PI STA = 2+58.19
Δ = 10° 00' 00" (LT)
D = 28° 38' 52"
R = 200.00'
T = 17.50'
L = 34.91'
E = 0.76'
e = -----
T.R. = -----
S.E. RUN. = -----
PC STA = 2+40.70
PT STA = 2+75.60

152+75.00
210.00' LT
TCE
153+40.00
210.00' LT
ENTRANCE ENDS
STA 2+95.60
PARCEL NUMBER 7004103
FIRST NATIONAL BANK OF MARSHALL
LAND TRUST 426
152+30.00
150.00' LT
151+00.00
120.00' LT
EX ROW
AGG SURF
CSE, TY B
CURVE DRIVE
16272.9-1
CURVE DRIVE
16272.9-2
153+50.00
120.00' LT
PERIMETER EROSION
BARRIER
+04.6
30.0'
22.2'
AGG SHOULDERS,
TY B, 6"
TAPER OFFSET FROM
20.9' TO 15.0'
TRAF BARRIER
TERM, TY 2
32'
+71.6
6.7'
HMA SHOULDERS, 8"
13 1/2" HMA SHOULDER
(BRIDGE APPROACH PAVE
CONNECTOR (FLEXIBLE))
RIP RAP
LIMITS
TRAF BARRIER
TERM, TY 6
CONC HEADWALL
+84.0, 41.5' LT
PIPE DRAIN 4"
PIPE UNDERDRAIN
FOR STRUCTURES, 4"
35' R
+49.5
20.9'
15.0'
25.5' R
30' R
HMA
HMA SHOULDERS, 8"
TRAF BARRIER
TERM, TY 1 SP
(TANGENT)
6.0'
9.8'
120.0'
CE
+72.9
85°0'0"
8.0'
11.8'
12.0'
MATCHLINE STA 151+00
151
℄ IL RT 16
152
153
154
155+00
156
℄ IL RT 16
MATCHLINE STA 157+00
HMA SURFACE
HMA SHOULDERS, 13 1/2"
TRAF BARRIER
TERM, TY 6
CONC HEADWALL
+99.6, 40.1' RT
PIPE DRAIN 4"
BRIDGE APPROACH PAVEMENT
CONNECTOR (FLEXIBLE)
℄ PR STRUCTURE
015-0075
STA 155+50.00
ENTRANCE
TBR
75.0'
10.0'
EX ROW
PERIMETER EROSION
BARRIER
STEPHEN MICHAEL PERNDERGAST
EMBARRAS RIVER
PARCEL NUMBER 7004104
DIANNE E. WALKER
156+92.00
95.00' LT
PR ROW
PIPE CULVERT
REMOVAL, 15", 76'
RIP RAP
LIMITS
60.0'
65.0'
PIPE CULVERT
REMOVAL, 15", 18'
155+52.93
100.00' RT
PARCEL NUMBER 7004101
BRIAN L. EVANS & TAMMY L. EVANS
TREE REMOVAL AREA
AGGREGATE DITCH
TEMPORARY DITCH CHECK
INLET & PIPE PROTECTION
1"=20'
SCALE
20 0 20 40
FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\pdb 148,item 25 - d7 various design\work order 07\roadd\drawings\Sheets\14_Rt16_Pln_2.dgn

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PLOT SCALE = 20.0000 ' / IN.	CHECKED - ADG, DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

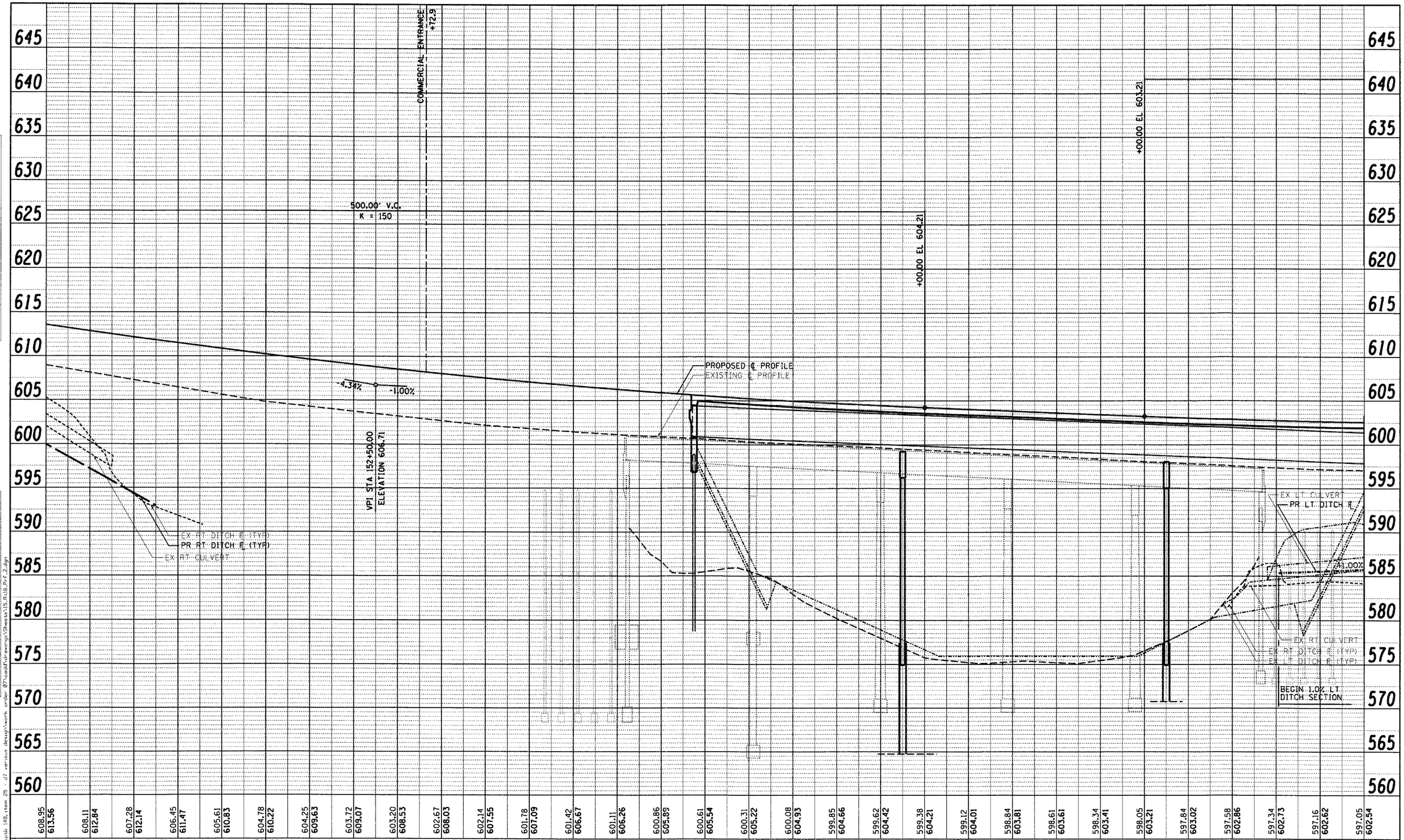
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PLAN

SCALE: 1"=20' | SHEET NO 2 OF 4 SHEETS | STA 151+00 TO STA 157+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	14

CONTRACT NO 74244
ILLINOIS FED. AID PROJECT



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BY

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NOTE BOOK
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DATE
BY

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\vdot\job 148_item 25 - d7 various design\work order 07\cadd\drawings\Sheets\15_Rt16_Prf_2.dgn

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PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PROFILE

SCALE: 1"H=20' 1"V=5' | SHEET NO 2 OF 4 SHEETS | STA 151+00 TO STA 157+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	15
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		

PR CURVE DRIVE16071-1
PI STA = 2+15.00
Δ = 90° 00' 00" (LT)
D = 76° 23' 40"
R = 75.00'
T = 75.00'
L = 117.81'
E = 31.07'
e = -----
T.R. = -----
S.E. RUN. = -----
PC STA = 1+40.00
PT STA = 2+57.81

PARCEL NUMBER 7004104
DIANNE E. WALKER

157+95.00
140.00' LT

ENTRANCE ENDS
STA 4+43.80

TCE

AGG SURF CSE, TY B

TEMPORARY ENTRANCE STA 6+59.34
= ENTRANCE STA 2+52.21

PERIMETER EROSION
BARRIER

CONSTRUCTION LIMITS

℄ TEMPORARY ENTRANCE

PR ROW

157+95.00
95.00' LT

EX ROW

Evergreens

CONC HEADWALL
+00.4, 42.8' LT

PIPE UNDERDRAIN
FOR STRUCTURES, 4"

TREE REMOVAL

PIPE CULVERT
REMOVAL, 24", 54'

CURVE - DRIVE 16071-1

AGG SURF
CSE, TY B
HMA

PIPE CULVERTS, CLASS D, TY 1 24", 83'
STA 160+25.0, 69.9' LT, ELEV 588.98
STA 161+08.0, 69.8' LT, ELEV 589.92
WITH END-SECTIONS

AGGREGATE DITCH

ENTRANCE
TBR

TRAF BARRIER
TERM, TY 1 SP
(TANGENT)

HMA SHOULDERS, 8"

MAILBOX TURNOUT

AGG SHOULDERS, TY B, 6"
HMA SHOULDERS, 8"

MATCHLINE STA 157+00

℄ IL RT 16

MATCHLINE STA 163+00

GUTTER
REMOVAL

HMA SURFACE
HMA SHOULDERS, 13.5"

TRAF BARRIER
TERM, TY 1 SP
(TANGENT)

HMA SURFACE
HMA SHOULDERS, 13.5"
AGG SHOULDERS, TY B, 6"

HMA SHOULDERS, 8"

PIPE DRAIN 4"
CONC HEADWALL
+16.0, 41.5' RT

TRAF BARRIER
TERM, TY 6

BRIDGE APPROACH PAVEMENT
CONNECTOR (FLEXIBLE)

CONST LIMITS

PERIMETER EROSION
BARRIER

PARCEL NUMBER 7004101
BRIAN L. EVANS & TAMMY L. EVANS

PARCEL NUMBER 7004102
JODY L. EVANS & BARBARA A. EVANS

QUARTER SEC

TREE REMOVAL AREA

AGGREGATE DITCH

TEMPORARY DITCH CHECK

INLET & PIPE PROTECTION

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj_acts\cad\rpdb 148, item 25 - d7 various design\work order #7\cadd\drawings\Sheets\16_RTE.Pln.3.dgn

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	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PLAN

SCALE: 1"=20' | SHEET NO 3 OF 4 SHEETS | STA 157+00 TO STA 163+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	16
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

PRIVATE ENTRANCE +71.0

1,100.00' V.C.
K = 149

PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE

-1.00%
+6.31%
+1.00%
+1.13%
+1.00%
+1.00%

EX LT DITCH ℄ (TYP)
PR LT DITCH ℄ (TYP)
EX RT DITCH ℄ (TYP)
PR RT DITCH ℄ (TYP)

EX LT CULVERT
PR LT CULVERT

BEGIN +1.0% RT DITCH SECTION

BEGIN 16.25 FT DEEP TYP RT DITCH SECTION

BEGIN 16.25 FT DEEP TYP LT DITCH SECTION

VPI STA 161+50.00
ELEVATION 597.71

	157+00	157+50	158+00	158+50	159+00	159+50	160+00	160+50	161+00	161+50	162+00	162+50	163+00
EX	597.05	596.85	596.65	596.48	596.34	596.19	596.15	596.11	596.13	596.19	596.26	596.38	596.50
PR	602.54	602.49	602.47	602.47	602.50	602.55	602.63	602.74	602.87	603.04	603.22	603.44	603.68
EX	596.67	596.89	597.11	597.46	597.80	598.17	598.56	598.96	599.49	600.03	600.63	601.29	601.96
PR	603.95	604.25	604.57	604.92	605.29	605.70	606.13	606.58	607.07	607.58	608.11	608.68	609.27
EX	602.82	603.69	604.61	605.58	606.55								
PR	609.89	610.53	611.20	611.90	612.62								

PLAN
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NOTE BOOK
NO. _____
ALIGNMENT CHECKED
RT. OF WAY CHECKED
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DATE

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CROSS CHECKED
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NO. _____
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PRINTED DATE: 5/11/2011
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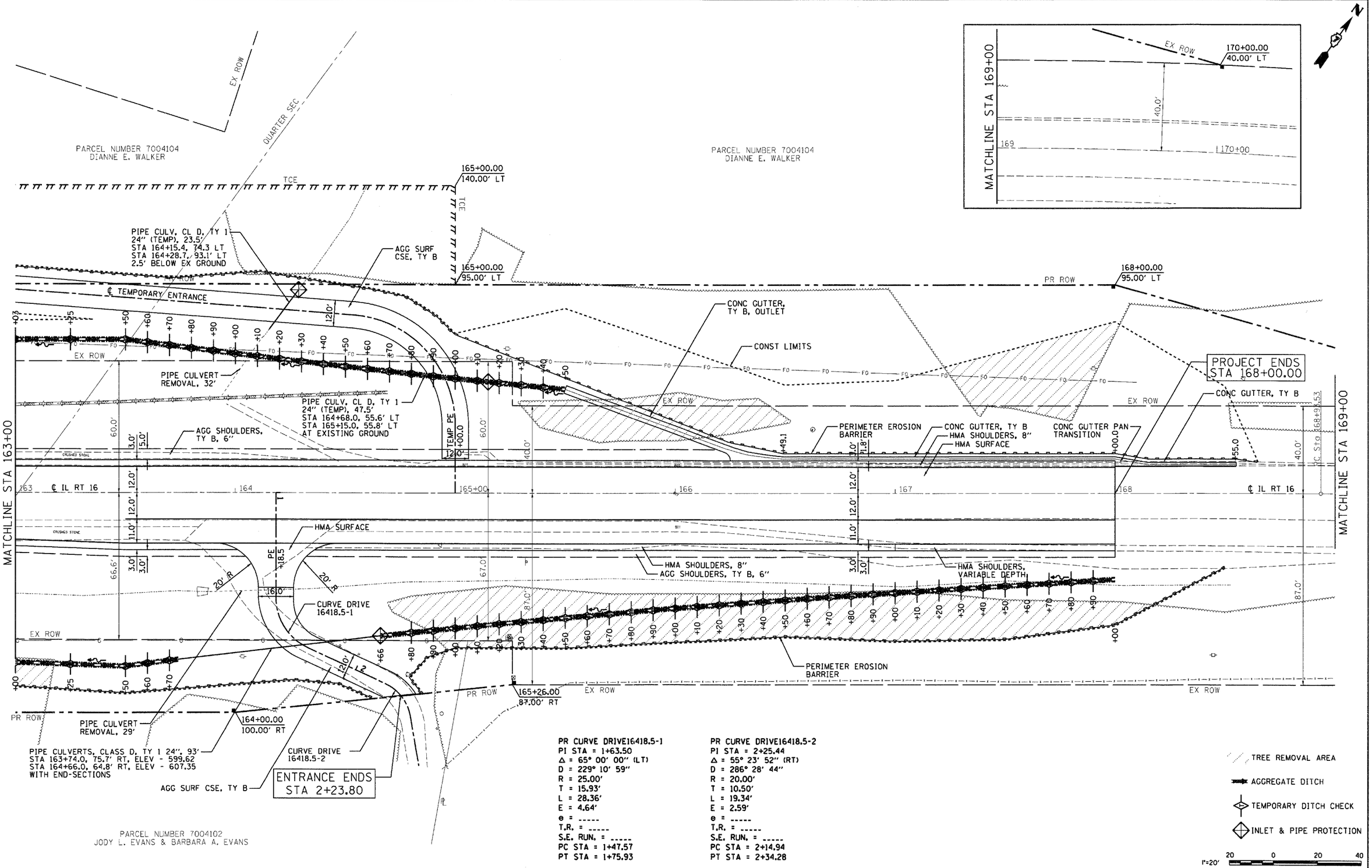
USER NAME = @USER@	DESIGNED - ADG, JEH	REVISED -	
	DRAWN - ADG, JEH	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PROFILE

SCALE: 1"H=20' 1"V=5' | SHEET NO 3 OF 4 SHEETS | STA 157+00 TO STA 163+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	17
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



PR CURVE DRIVE16418.5-1
PI STA = 1+63.50
Δ = 65° 00' 00" (LT)
D = 229° 10' 59"
R = 25.00'
T = 15.93'
L = 28.36'
E = 4.64'
e = -----
T.R. = -----
S.E. RUN. = -----
PC STA = 1+47.57
PT STA = 1+75.93

PR CURVE DRIVE16418.5-2
PI STA = 2+25.44
Δ = 55° 23' 52" (RT)
D = 286° 28' 44"
R = 20.00'
T = 10.50'
L = 19.34'
E = 2.59'
e = -----
T.R. = -----
S.E. RUN. = -----
PC STA = 2+14.94
PT STA = 2+34.28

TREE REMOVAL AREA
AGGREGATE DITCH
TEMPORARY DITCH CHECK
INLET & PIPE PROTECTION

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/17/2011
FILE NAME: n:\projects\idot\rpt\148_item_25 - d7 various design\work order #7\cadd\drawings\Sheets\18_Rt16_Pln_4.dgn

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PLOT DATE = 5/17/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PLAN

SCALE: 1"=20' | SHEET NO 4 OF 4 SHEETS | STA 163+00 TO STA 168+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	18
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

PRIVATE ENTRANCE +18.5

+00.00 EL 632.74

MATCH EXISTING 639.11

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

+9.40%

+9.40%

+9.40%

+9.40%

EX RT DITCH R (TYP)

PR RT DITCH R (TYP)

BEGIN LT GUTTER SECTION

PR LT TEMP CULVERT

EX RT CULVERT

PR RT CULVERT

EX LT CULVERT

BEGIN +9.4% LT AND RT DITCH SECTIONS

EX LT DITCH R (TYP)

PR LT DITCH R (TYP)

645 640 635 630 625 620 615 610 605 600 595 590 585 580 575 570 565 560

606.55	607.66	608.77	609.95	611.21	612.47	613.77	615.08	616.41	617.77	619.12	620.50	621.88	623.25	624.61	626.04	627.35	628.66	629.97	631.28	632.58	633.89	635.19	636.50	637.80	639.11	640.40	641.70	643.00	644.30	645.61
612.62	613.37	614.15	614.96	615.79	616.65	617.53	618.45	619.38	620.35	621.34	622.36	623.41	624.48	625.58	626.71	627.86	629.04	630.25	631.48	632.74	634.01	635.29	636.56	637.84	639.11					

163+00 163+50 164+00 164+50 165+00 165+50 166+00 166+50 167+00 167+50 168+00 168+50 169+00

PLAN | SURVEYED | PLOTTED | DRAWN | CHECKED | R.O.W. CHECKED | R.O.W. MAY CHECKED | CADD FILE NAME | NOTE BOOK | NO. | BY | DATE

PROFILE | SURVEYED | PLOTTED | DRAWN | CHECKED | FINAL NOTED | STRUCTURE NOTATNS CHKD | NOTE BOOK | NO. | BY | DATE

PRINTED DATE: 5/11/2011
FILE NAME: m:\projects\idot\ptb 148,item 25 - d7 various design\work order 07\cadd\drawings\Sheets\19_Rte_Prf_4.dgn

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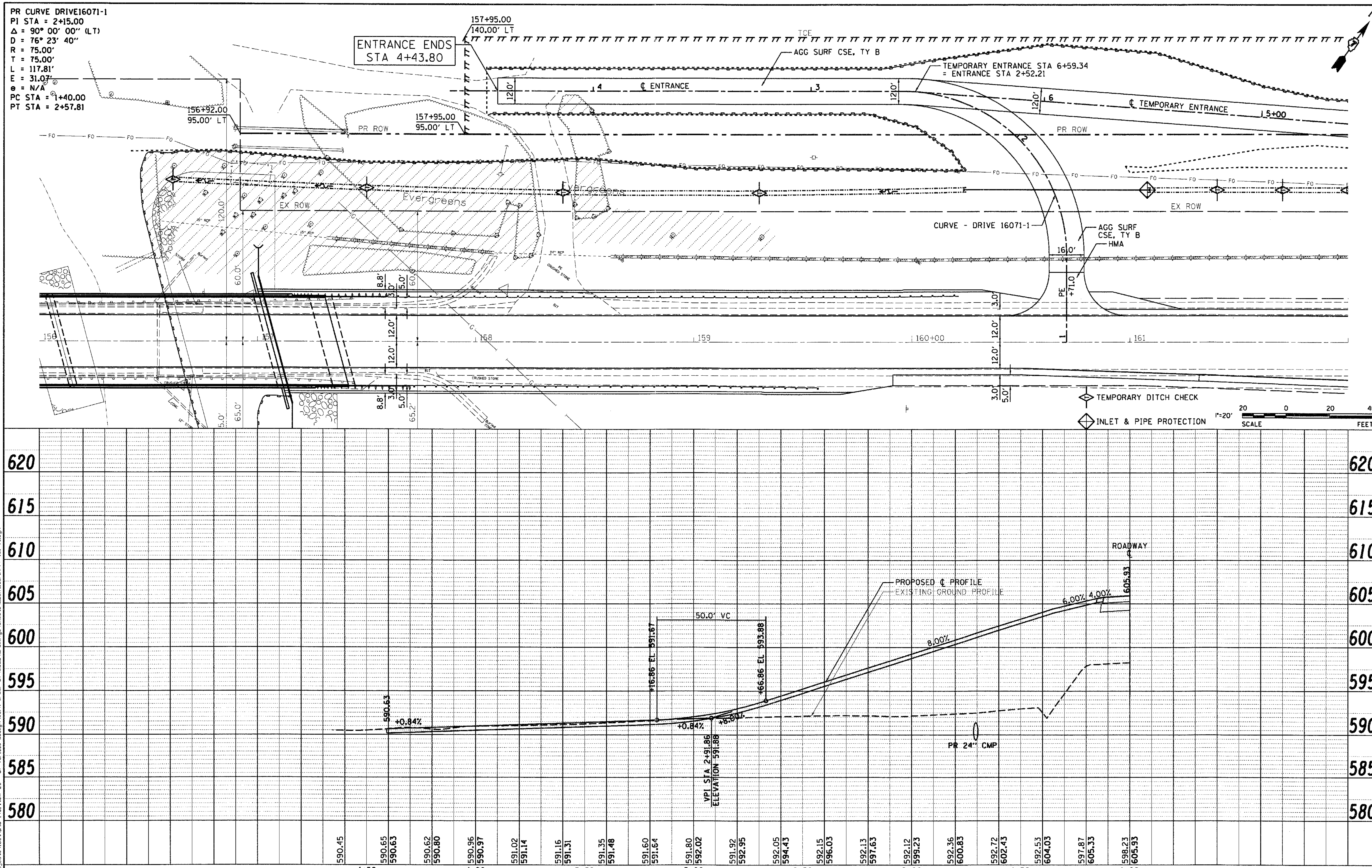
PLOT SCALE = 20.0000 ' / IN.	CHECKED - DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE 16 ROADWAY PROFILE

SCALE: 1"H=20' 1"V=5' | SHEET NO 4 OF 4 SHEETS | STA 163+00 TO STA 168+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	19
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\ptb 148,item 25 - d7 various design\work order 07\cadd\drawings\Sheets\20_Rt16_PlnPrf 161+71.dgn

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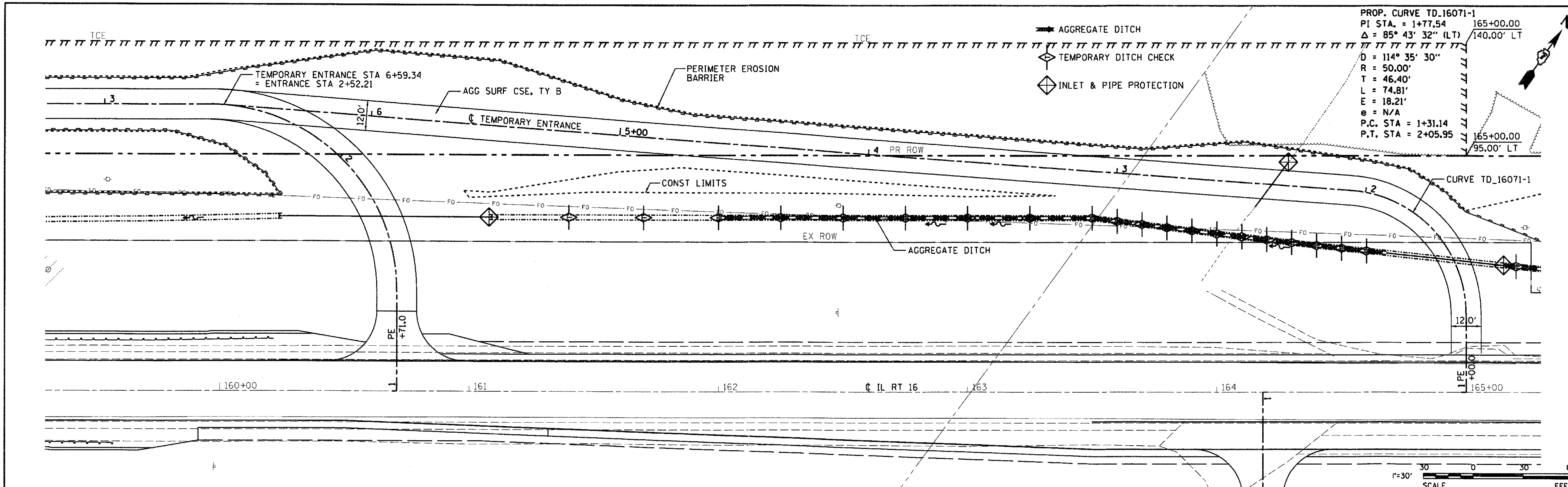
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

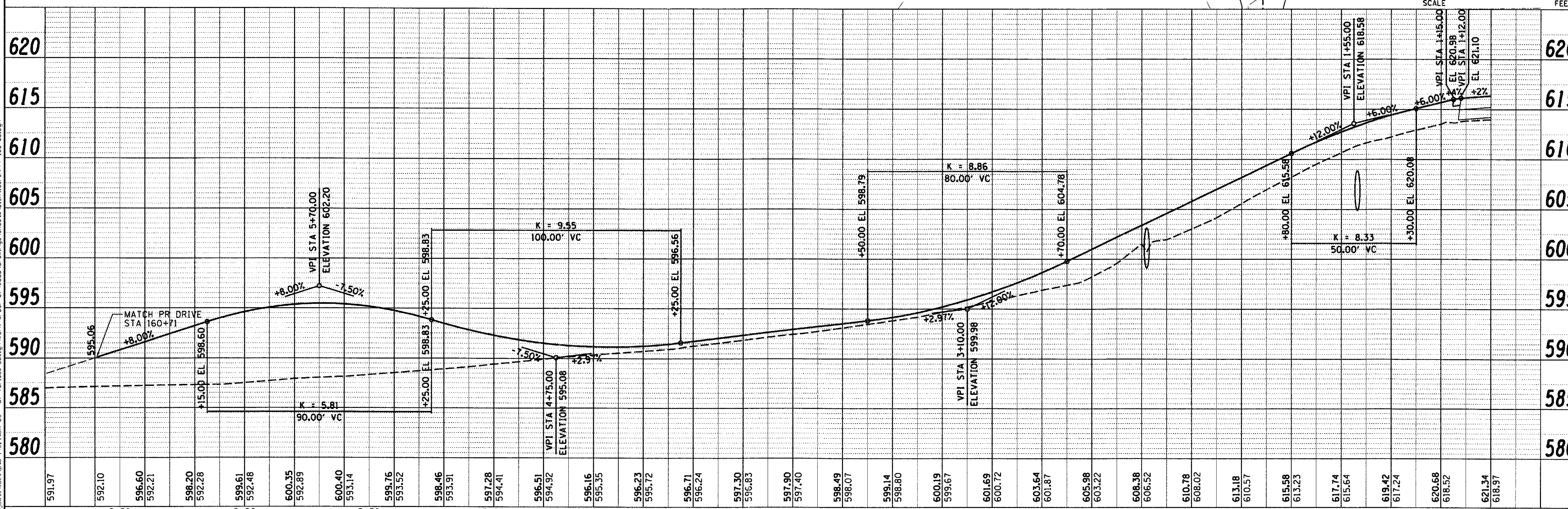
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
ENTRANCE STA 160 + 71.00

SCALE: 1"=20' | SHEET NO 1 OF 1 SHEETS | STA 1+00.00 TO STA 4+43.80

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	20
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		





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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\ptb 148,item 25 - d7 various design\work order 07\cadd\drawings\Sheets\21_Rt16_PlnPrf 165+00.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
TEMPORARY ENTRANCE STA 165+00

SCALE: 1"=30' | SHEET NO 1 OF 1 SHEETS | STA 1+00.0 TO STA 6+59.34

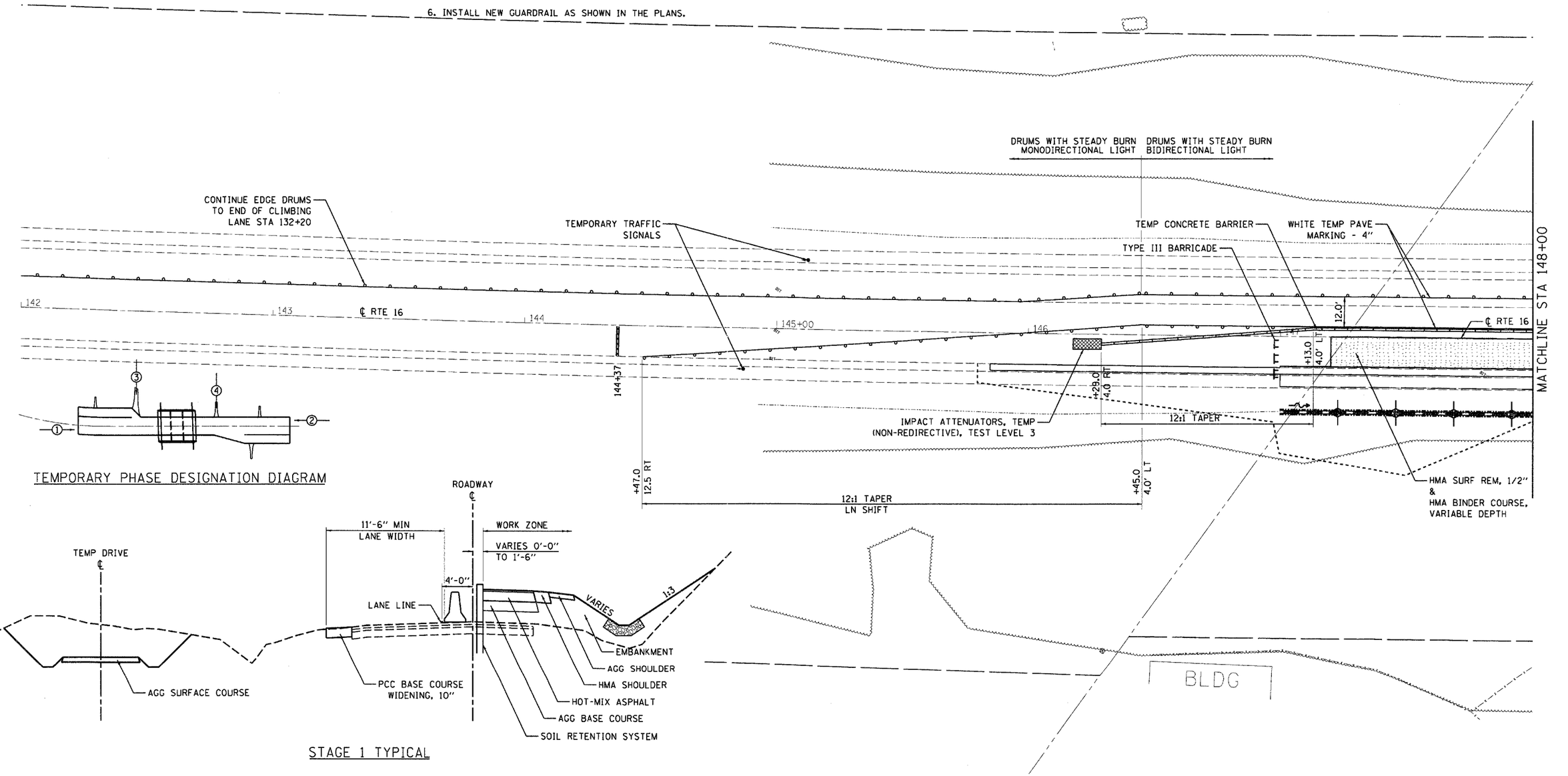
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	21
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		

SUGGESTED PRE-STAGE PROCEDURES

1. CUT FRONT SLOPE TO FINAL GRADE AND INSTALL PERIMETER EROSION BARRIER FROM STATION 165+50 TO STATION 168+55.
2. CONSTRUCT PCC BASE COURSE WIDENING ON NORTH SIDE OF IL RTE 16.
3. INSTALL TEMPORARY TRAFFIC SIGNALS.

SUGGESTED STAGE 1 PROCEDURES

1. ACTIVATE TEMPORARY TRAFFIC SIGNALS.
2. MOVE TRAFFIC OVER TO WEST BOUND LANE.
3. INSTALL TEMPORARY CONCRETE TRAFFIC BARRIER, TEMPORARY IMPACT ATTENUATORS AND TRAFFIC CONTROL DEVICES.
4. REMOVE STAGE I OF THE EXISTING STRUCTURE AND CONSTRUCT SOIL RETENTION SYSTEM AND STAGE 1 OF PROPOSED STRUCTURE.
5. CONSTRUCT STAGE 1 ROADWAY WHICH INCLUDES, BUT NOT LIMITED TO: EMBANKMENT, GRANULAR EMBANKMENT, AGG BASE COURSE, HMA BINDER COURSE, HMA FULL-DEPTH (EXCLUDING 2" SURFACE), SHOULDERS (EXCLUDING 2" SURFACE), DITCHES, TEMPORARY ENTRANCE STA 165+00 AND ENTRANCE STA 164+18.5.
6. INSTALL NEW GUARDRAIL AS SHOWN IN THE PLANS.



TEMPORARY PHASE DESIGNATION DIAGRAM

STAGE 1 TYPICAL

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\pb 148,item 25 - d7 various design\work order 07\cadd\drawings\Sheets\22_Rt16_Stage 1.dgn

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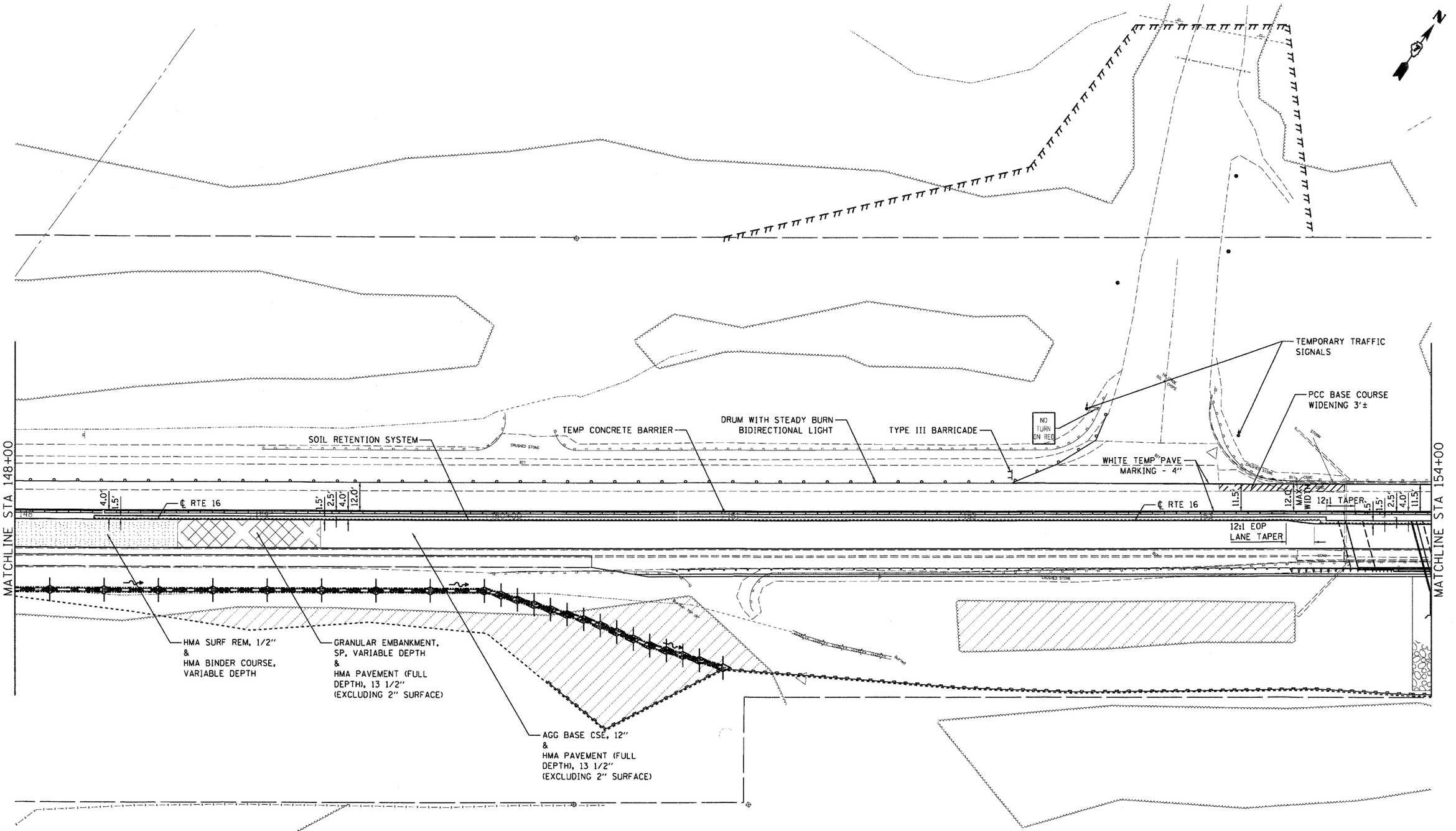
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STAGE CONSTRUCTION
STAGE 1

SCALE: 1"=20' | SHEET NO 1 OF 6 SHEETS | STA 142+00 TO STA 148+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	22
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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STATE OF ILLINOIS
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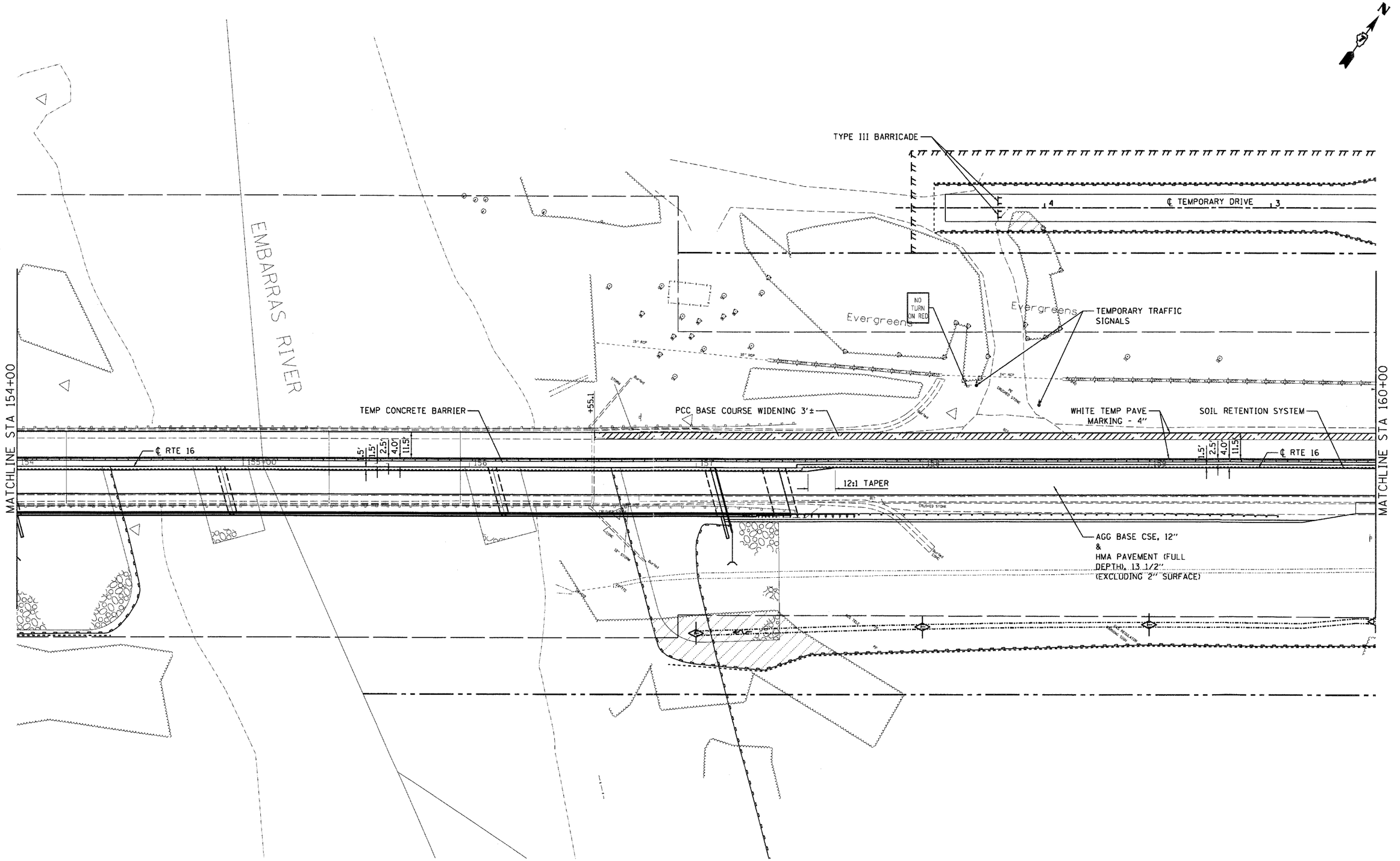
STAGE CONSTRUCTION
STAGE 1

SCALE: 1"=20' | SHEET NO 2 OF 6 SHEETS | STA 148+00 TO STA 152+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	23
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: r:\projects\dot\prsb 148, item 25 - d7 various design\work order 87\caddd\drawings\Sheets\24_Rt16_Stage 1.3.dgn

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	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STAGE 1

SCALE: 1"=20' | SHEET NO 3 OF 6 SHEETS | STA 154+00 TO STA 160+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	24
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

NOTE:
TO KEEP EMBANKMENT AND DEBRIS OUT OF ROADWAY TRAFFIC LANE DURING STAGE I, REMOVE FRONT SLOPE TO FINAL GRADE AND PLACE PERIMETER EROSION BARRIER AS REQUIRED BEFORE CONSTRICTING TRAFFIC TO ONE LANE.

MAINTAIN PERMANENT DRAINAGE FOR DITCH CROSSING

℄ TEMPORARY DRIVE

15+00

PERIMETER EROSION BARRIER

TEMPORARY TRAFFIC SIGNAL

NO TURN ON RED

TYPE III BARRICADE

MATCHLINE STA 160+00

MATCHLINE STA 166+00

WHITE TEMP PAVE MARKING - 4"

SOIL RETENTION SYSTEM

TEMP CONCRETE BARRIER

PCC BASE COURSE WIDENING 3'±

CRUSHED STONE

℄ RTE 16

11.5' 2.5' 4.0' 11.5'

PE +00

PE +18.5

AGG BASE CSE, 12"
&
HMA PAVEMENT (FULL DEPTH), 13 1/2"
(EXCLUDING 2" SURFACE)

HMA SURF REM, 1/2"
&
HMA BINDER COURSE, VARIABLE DEPTH

GRANULAR EMBANKMENT, SP, VARIABLE DEPTH
&
HMA PAVEMENT (FULL DEPTH), 13 1/2"
(EXCLUDING 2" SURFACE)

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\udot\plb 148\item 25 - d7 various design\work order 07\cadd\drawings\Sheets\25-R16-Stage 1-4.dgn

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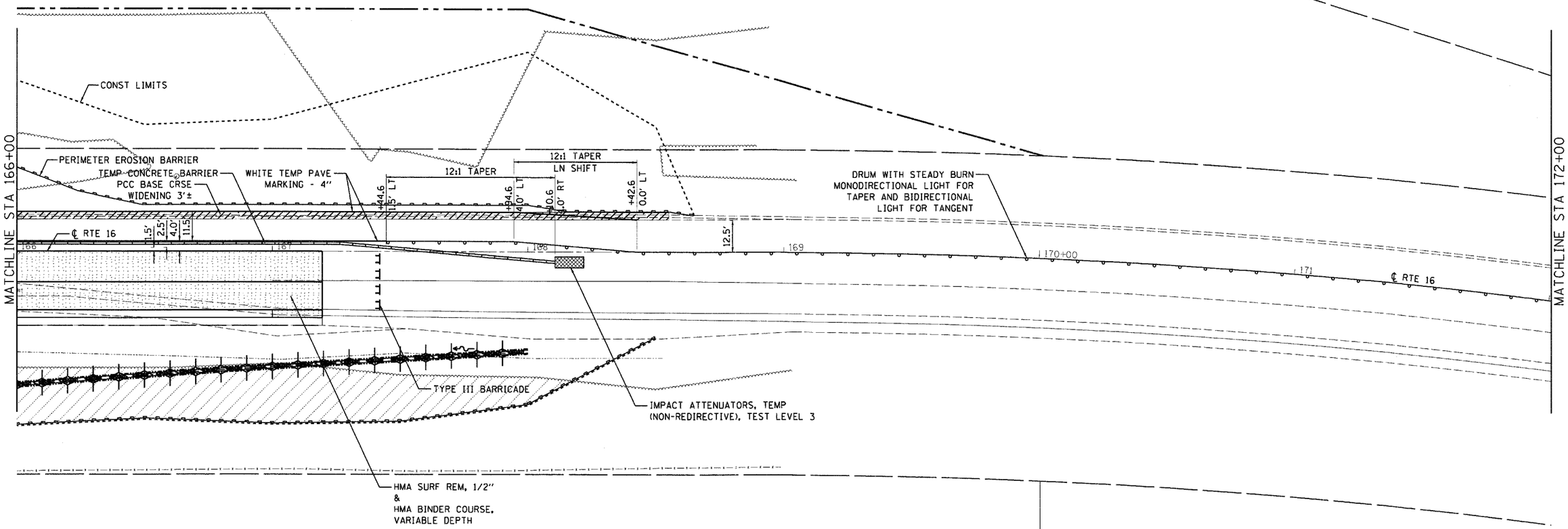
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STAGE 1

SCALE: 1"=20' | SHEET NO 2 OF 6 SHEETS | STA 160+00 TO STA 166+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	25
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

NOTE:
TO KEEP EMBANKMENT AND DEBRIS OUT OF ROADWAY TRAFFIC LANE DURING STAGE 1, REMOVE FRONT SLOPE TO FINAL GRADE AND PLACE PERIMETER EROSION BARRIER AS REQUIRED BEFORE CONSTRICTING TRAFFIC TO ONE LANE.

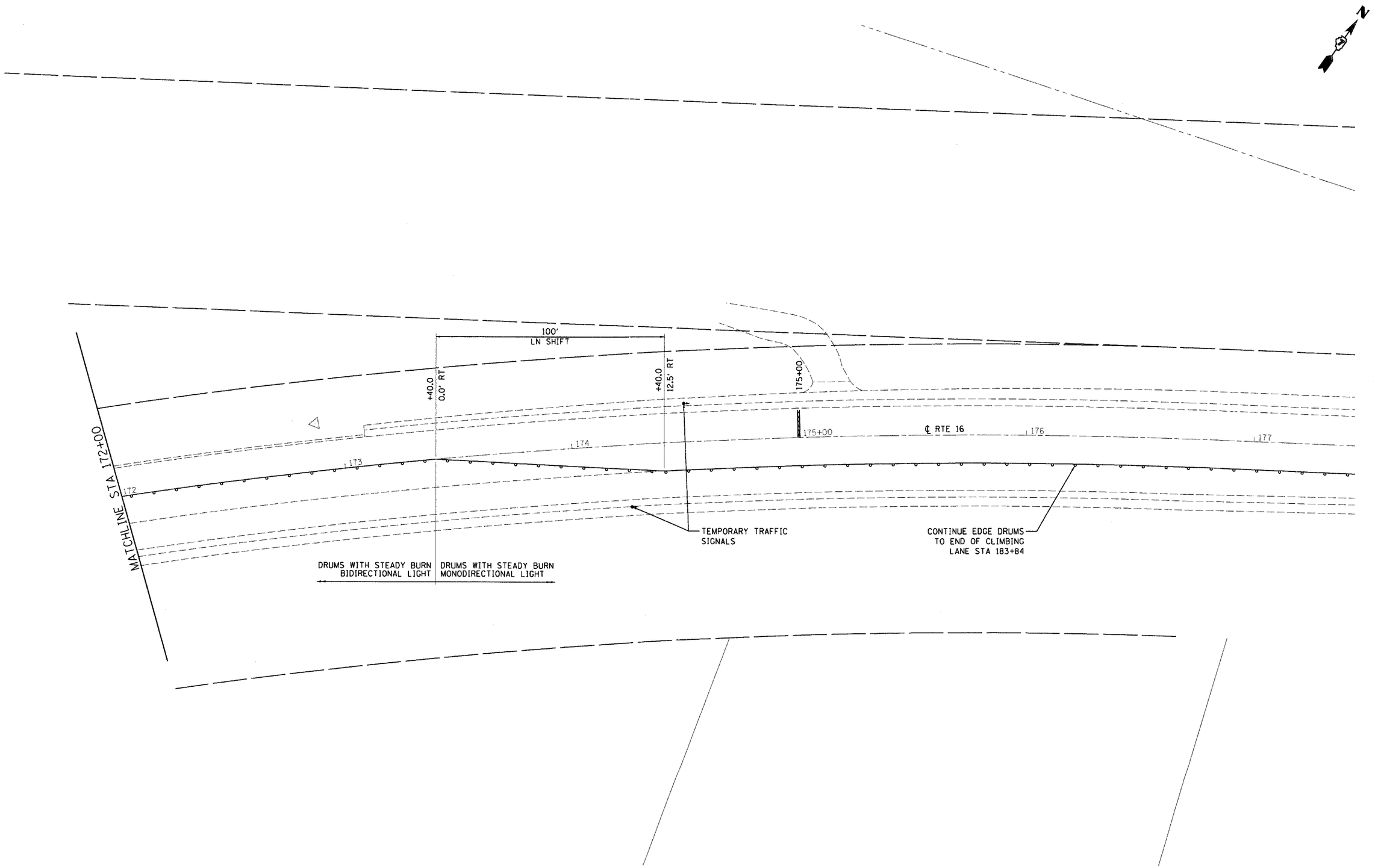


1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\plb 148, item 25 - d7 various design\work order 87\cadd\drawings\Sheets\26.RTE Stage 1.5.dgn

ESI CONSULTANTS, LTD Excellence. Service. Integrity	USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION STAGE 1
		DRAWN - JEH, ADG	REVISED -		
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DF	REVISED -		SCALE: 1"=20' / SHEET NO 5 OF 6 SHEETS / STA 166+00 TO STA 172+00
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	26
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\prb 148, item 25 - d7 various design\work order 07\eadd\drawings\Sheets\27_Rt16_Stage 1_6.dgn

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PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

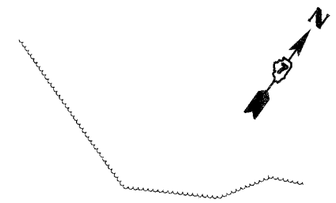
STAGE CONSTRUCTION
STAGE 1

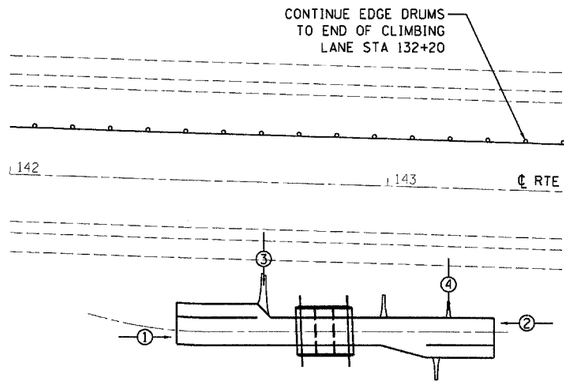
SCALE: 1"=20' | SHEET NO 6 OF 6 SHEETS | STA 172+00 TO STA 177+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	27
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

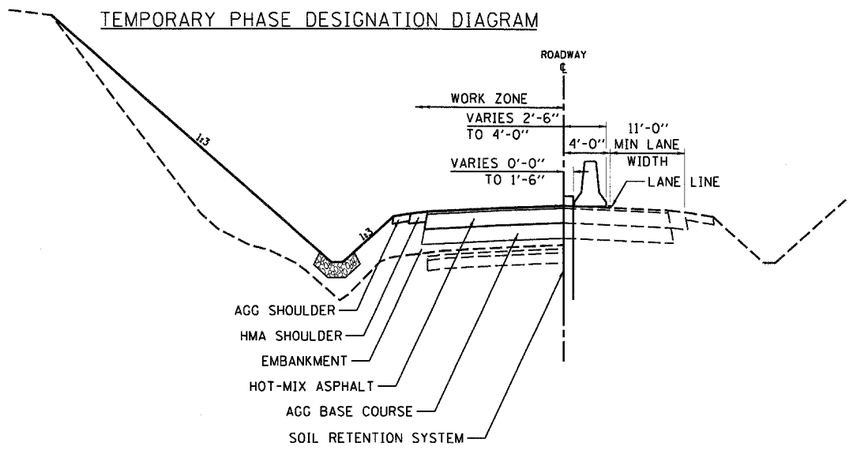
SUGGESTED STAGE 2 PROCEDURES

1. RELOCATE REQUIRED TRAFFIC CONTROL DEVICES.
2. MOVE TRAFFIC OVER TO EAST BOUND LANE.
3. MOVE ENTRANCE 160+71 TRAFFIC OVER TO TEMPORARY ENTRANCE AND BUILD UP ENTRANCE 152+72.9 AS REQUIRED TO REOPEN WITHIN TWO WEEKS OF CLOSURE.
4. REMOVE REMAINING PORTION OF THE EXISTING STRUCTURE AND CONSTRUCT STAGE 2 OF PROPOSED STRUCTURE.
5. CONSTRUCT STAGE 2 ROADWAY WHICH INCLUDES, BUT NOT LIMITED TO: EMBANKMENT, GRANULAR EMBANKMENT, AGG BASE COURSE, HMA BINDER COURSE, HMA FULL-DEPTH (EXCLUDING 2" SURFACE), SHOULDERS (EXCLUDING 2" SURFACE), DITCHES AND ENTRANCES.
6. INSTALL NEW GUARDRAIL AS SHOWN IN THE PLANS.
7. REMOVE TRAFFIC SIGNALS, CONCRETE BARRIER WALL, AND PLACE SHORT-TERM PAVEMENT MARKING.
8. REMOVE TEMPORARY ENTRANCES AND SHAPE EMBANKMENT TO FINAL GRADE.
9. MILL BUTT JOINTS AND CONSTRUCT SURFACE COURSE.





TEMPORARY PHASE DESIGNATION DIAGRAM



STAGE 2 TYPICAL

1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\ude1\plb 148_item 25 - d7 various design\work order 07\cadd\drawings\Sheets\28_Rt16_Stage 2.1.dgn

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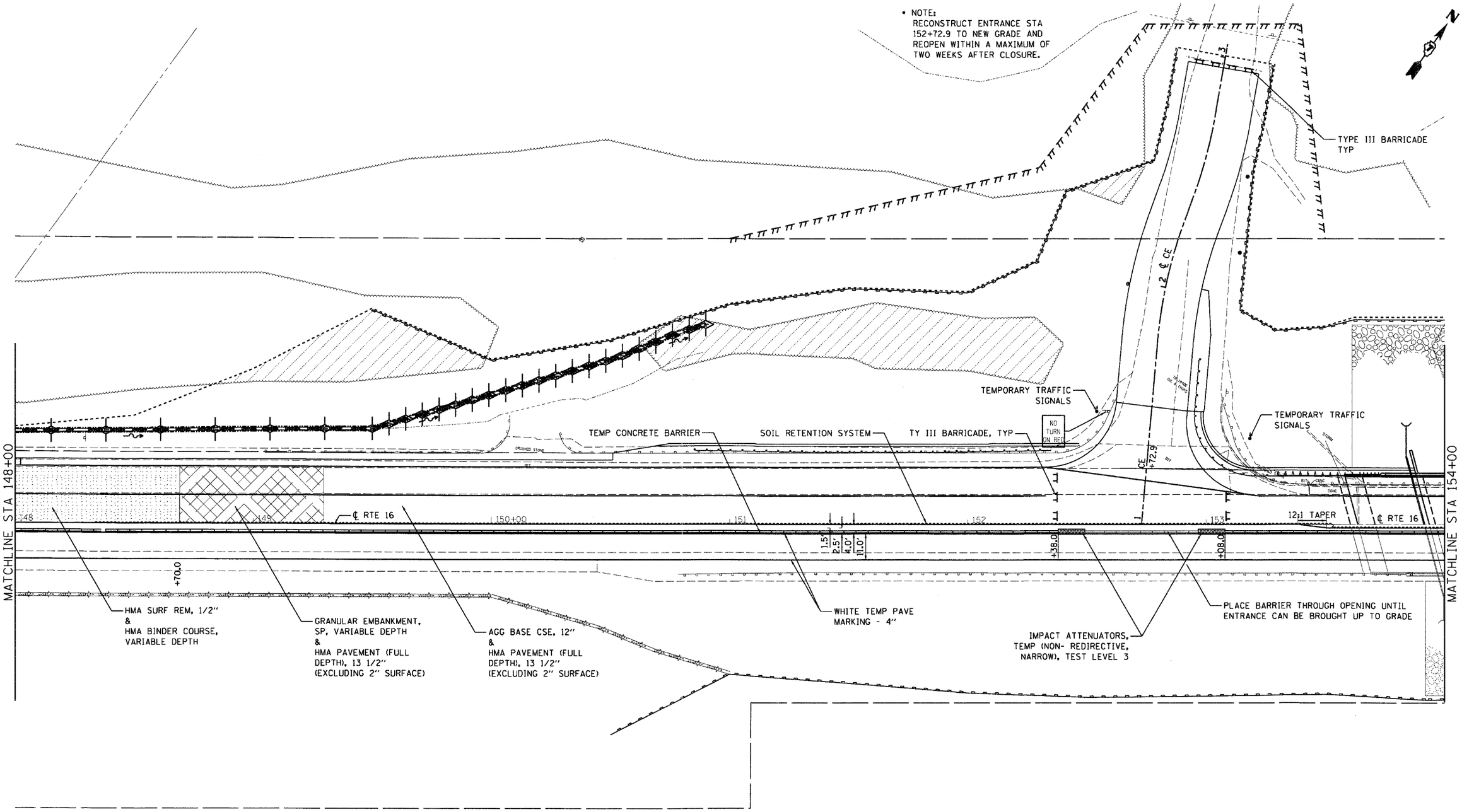
STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 1 OF 6 SHEETS | STA 142+00 TO STA 148+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	28
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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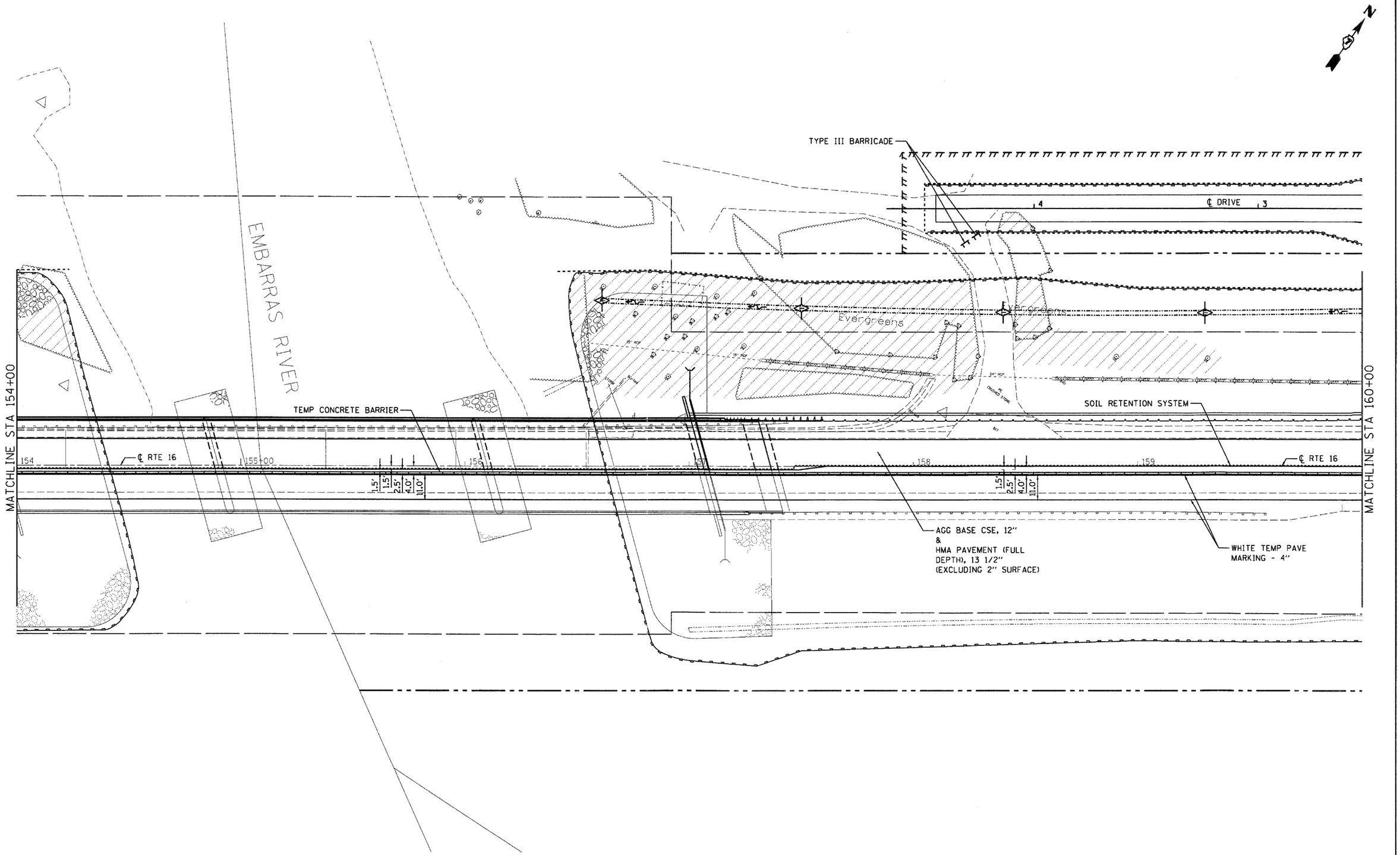
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 2 OF 6 SHEETS | STA 148+00 TO STA 154+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	29
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		



PRINTED DATE: 5/11/2011
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USER NAME = *USER*	DESIGNED - ADG	REVISED -	
	DRAWN - ADG	REVISED -	
PLOT SCALE = 20.0000 ' / IN.	CHECKED - DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
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STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 3 OF 6 SHEETS | STA 154+00 TO STA 160+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	30
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

TYPE III BARRICADE TYP

℄ TEMPORARY DRIVE

15+00

TEMPORARY TRAFFIC SIGNAL

NO TURN ON RED

SOIL RETENTION SYSTEM

TEMP CONCRETE BARRIER

PCC BASE COURSE WIDENING 3'±

CRUSHED STONE

MATCHLINE STA 160+00

MATCHLINE STA 166+00

160+00 ℄ RTE 16

161

162

163

164

℄ RTE 16

166+00

PE +71

PE +00

PE +18.5

+70.0

+30.0

1.5'

2.5'

4.0'

11.0'

AGG BASE CSE, 12" & HMA PAVEMENT (FULL DEPTH), 13 1/2" (EXCLUDING 2" SURFACE)

WHITE TEMP PAVE MARKING - 4"

TYPE III BARRICADE

IMPACT ATTENUATORS, TEMP (NON- REDIRECTIVE, NARROW), TEST LEVEL 3

HMA SURF REM, 1/2" & HMA BINDER COURSE, VARIABLE DEPTH

GRANULAR EMBANKMENT, SP, VARIABLE DEPTH & HMA PAVEMENT (FULL DEPTH), 13 1/2" (EXCLUDING 2" SURFACE)

TYPE III BARRICADE

1"=20'

20 0 20 40

SCALE FEET

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\tdot\pth 148, item 25 - d7 various design\work order 07\coddr\drawings\Sheets\31_Rt16_Stage 2_4.dgn

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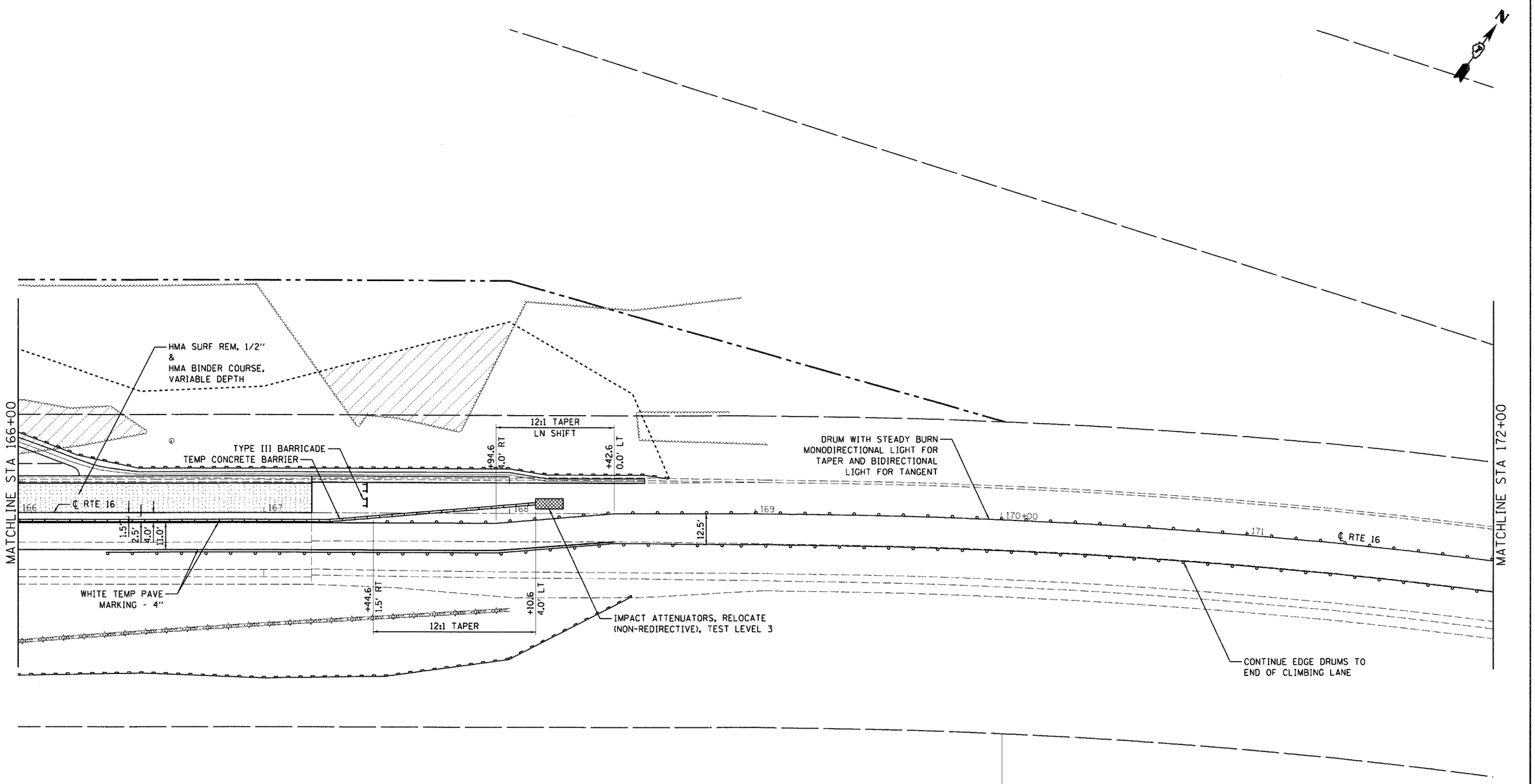
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 4 OF 6 SHEETS | STA 160+00 TO STA 166+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	31
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
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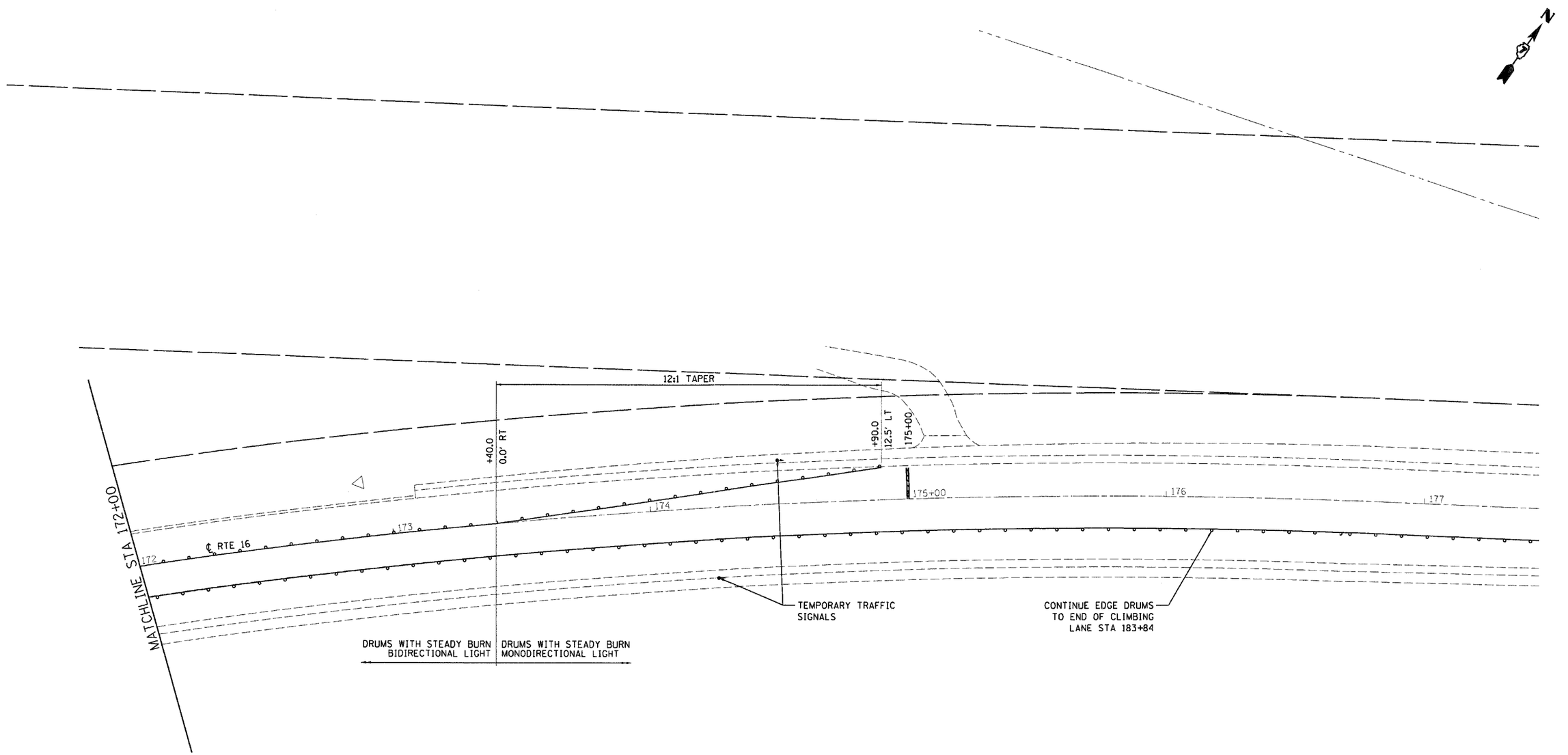
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 5 OF 6 SHEETS | STA 166+00 TO STA 172+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	32
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



1"=20' SCALE 20 0 20 40 FEET

PRINTED DATE: 5/11/2011
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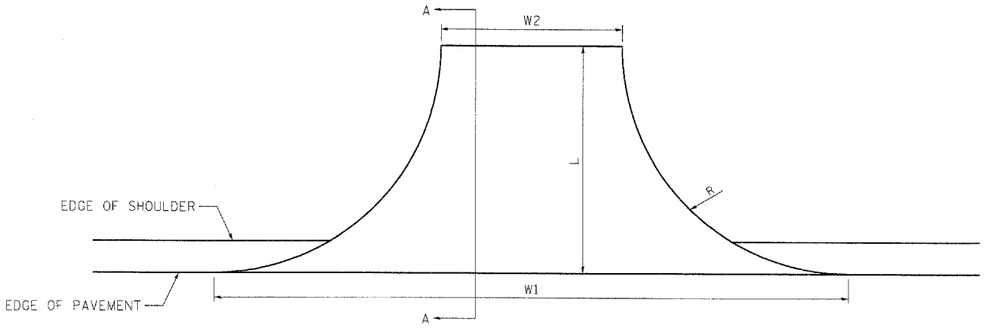
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

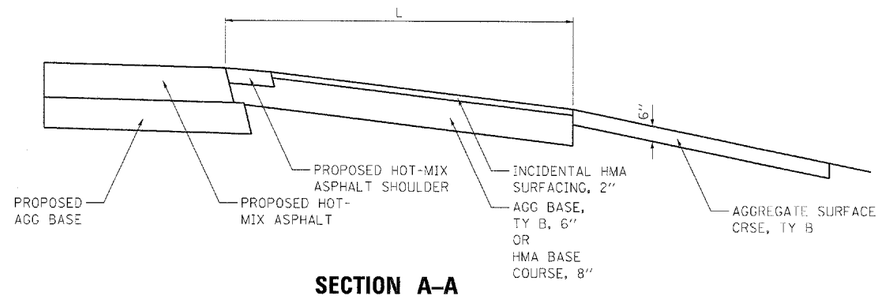
STAGE CONSTRUCTION
STAGE 2

SCALE: 1"=20' | SHEET NO 6 OF 6 SHEETS | STA 172+00 TO STA 177+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	33
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		



ENTRANCE AND SIDE ROAD DETAIL

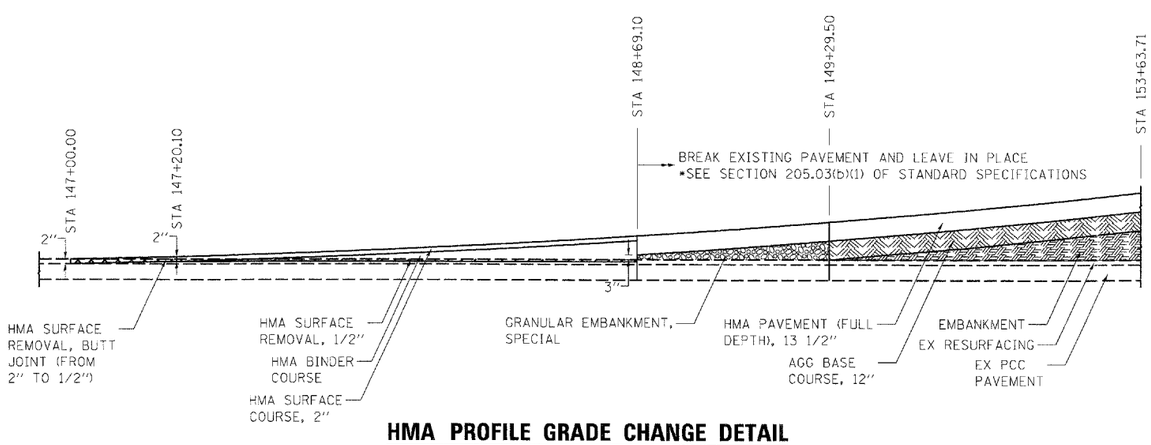


SECTION A–A

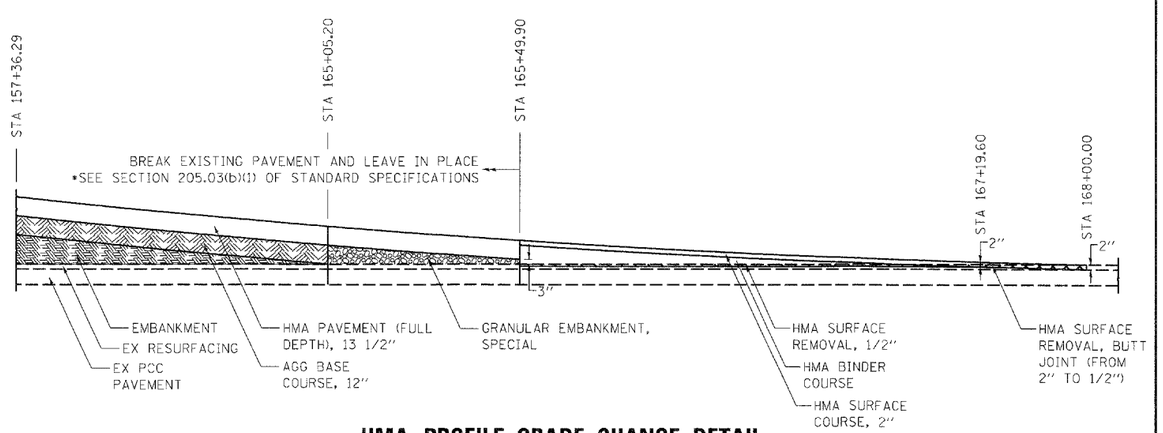
ENTRANCE AND SIDE ROAD SCHEDULE

STATION	SIDE	W1 FOOT	W2 FOOT	L FOOT	R FOOT	AGG SURFACE CSE, TY B TON	INCIDENTAL HMA RESURFACING 2" TON	AGG BASE CSE, TB, 6" SQ YD	HMA BASE CSE, 8" SQ YD
152+72.90	LT	80	35.9	26	35 / 30	154	16		138
152+72.90	LT	30		18		76.5*			
160+71.00	LT	56	16	20	20	141	7	55	
164+18.50	RT	56	16	20	20	37	7	55	
165+00.00	LT	42	12	15	15	37.2*			
165+00.00	LT					214			
TOTAL						660	30	110	138

*QUANTITY TO CONSTRUCT TEMPORARY ACCESS ACROSS STAGE CONSTRUCTION FOR ENTRANCES AND SIDE ROADS.



HMA PROFILE GRADE CHANGE DETAIL
WEST END



HMA PROFILE GRADE CHANGE DETAIL
EAST END

NOTE:
FOR HMA FULL-DEPTH PAVEMENT 13 1/2", THE TOP 2" SHALL BE CONSTRUCTED USING HMA SURFACE COURSE AND THE FINAL LIFT OF HMA BINDER COURSE SHALL BE 2 1/2".

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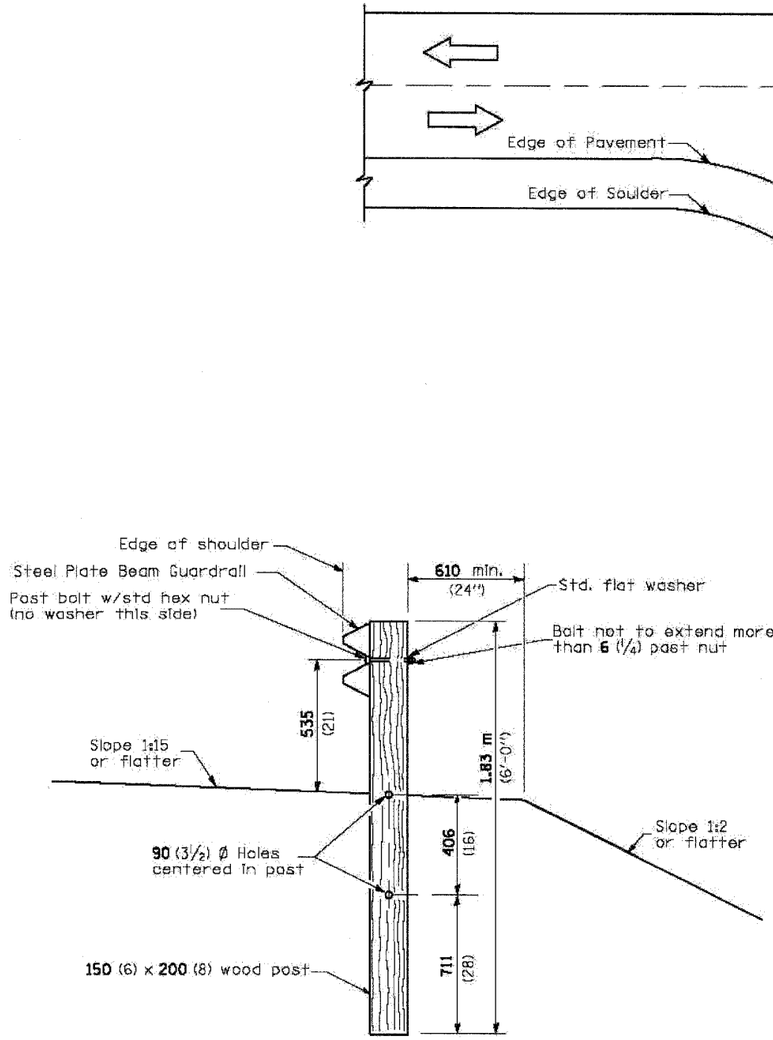
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

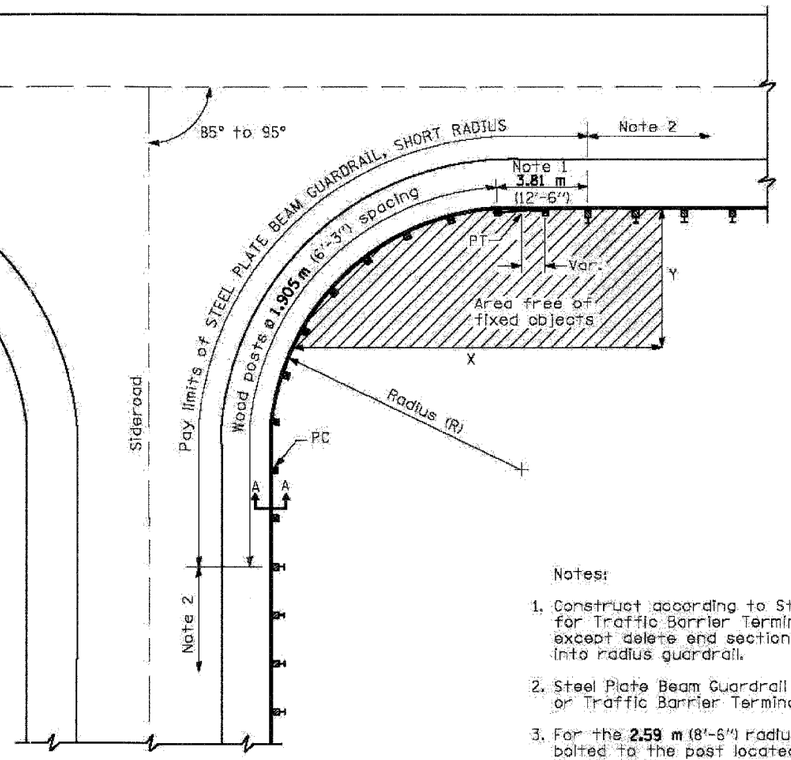
DETAILS

SCALE: NTS | SHEET NO 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	34
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



SECTION A-A



PLAN

INSTALLATION CHARACTERISTICS PER DESIGN RADIUS (R)			
R	NO. OF WOOD POSTS	X	Y
2.59 (8'-6")	5 (Note 3)	7.6 m (25')	4.6 (15')
5.18 (17'-0")	6	9.1 m (30')	4.6 (15')
7.77 (25'-6")	8	12.2 m (40')	6.1 (20')
10.67 (35'-0")	11	15.2 m (50')	6.1 (20')

Notes:

1. Construct according to Standard 631011 for Traffic Barrier Terminal Type 2, except delete end section and splice into radius guardrail.
2. Steel Plate Beam Guardrail Type A, Type B, or Traffic Barrier Terminal as specified.
3. For the 2.59 m (8'-6") radius, the rail is not bolted to the post located at the midpoint of the curve.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

DATE	REVISIONS

STEEL PLATE BEAM GUARDRAIL, SHORT RADIUS

BDE Memo 36-03 Attachment A

STEEL PLATE BEAM GUARDRAIL, SHORT RADIUS TYPICAL DETAIL

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PLOT SCALE = 1.0000 ' / IN.	CHECKED - DF	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

SCALE: NTS | SHEET NO 1 OF 2 SHEETS

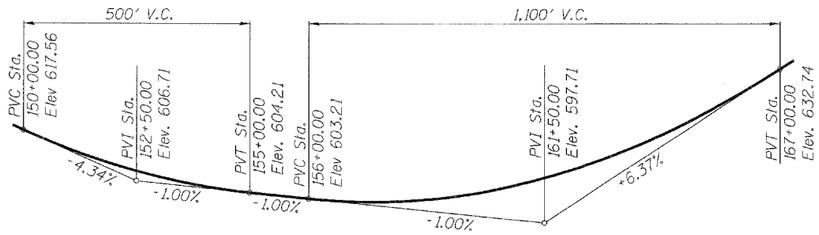
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	35
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Chiseled square on N.E. wingwall Sta. 156+53.86, 18.23' LT. Elev. 597.43

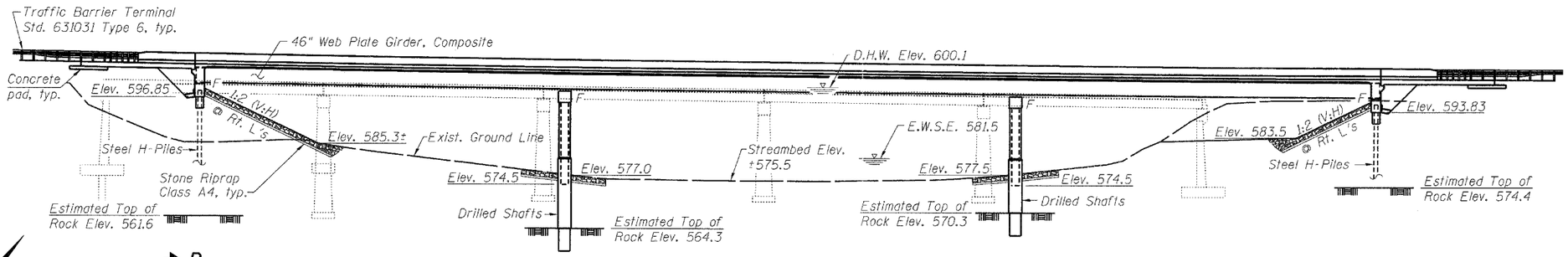
Existing Structure: S.N. 015-0019 built in 1924 as FAP Route 91, Section 5-B; widened in 1956; superstructure replaced in 1984. Existing superstructure consists of five simple spans of precast prestressed concrete deck beams. The superstructure is supported by one concrete closed abutment on a pile supported spread footing, one solid wall reinforced concrete pier on a pile supported spread footing, three solid wall reinforced concrete piers supported on spread footings bearing on rock, and one concrete closed abutment supported on a spread footing bearing on rock. Steel WF beams were placed under deficient precast beams in 2008 (not shown below). The back-to-back abutment dimension is 289'-7½" while the out-to-out width measures 34'-0". Structure to be removed and replaced.

Traffic Control: Staged construction will be utilized by maintaining one lane of traffic during construction.

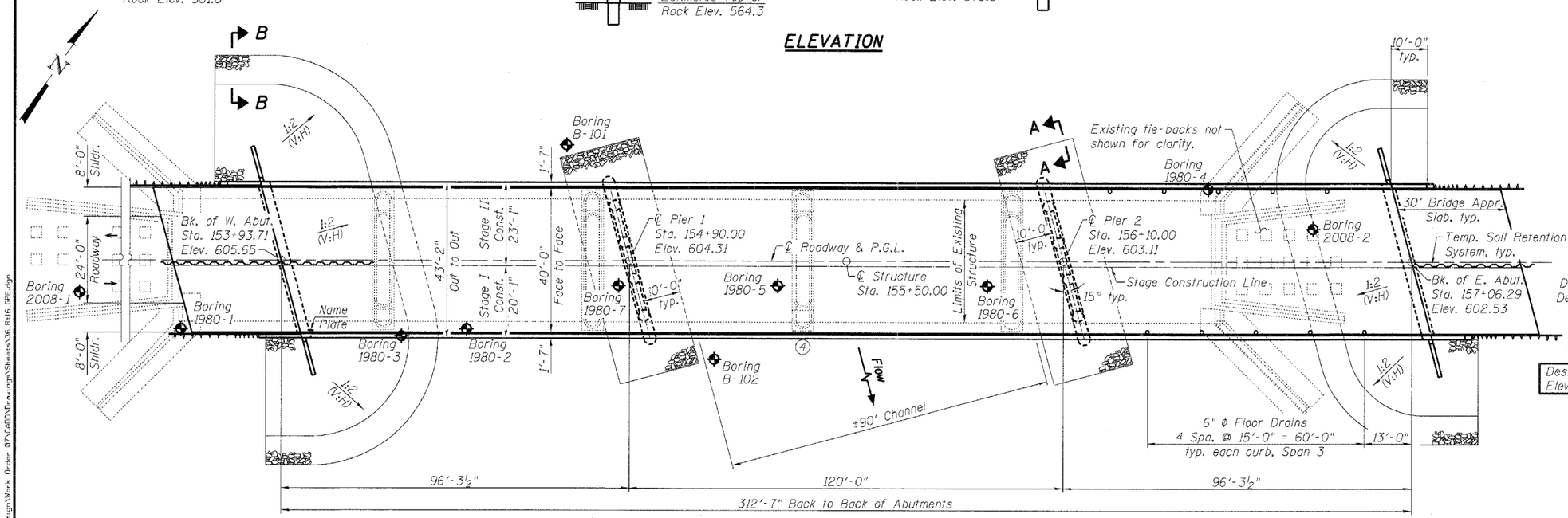
Salvage: The steel WF beams supporting deficient PPC deck beams shall be salvaged in accordance with Section 501.02 of the Standard Specifications for reuse by IDOT. The beams shall be removed, delivered to the IDOT Mattoon Maintenance Yard, and unloaded at the yard by the Contractor. Cost included with Removal of Existing Structures.



PROFILE GRADE
(Along ℄ Roadway)



ELEVATION



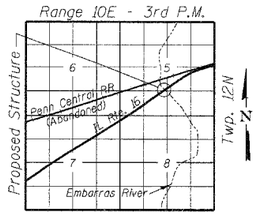
PLAN

WATERWAY INFORMATION

Drainage Area = 728.0 sq. mi. Prop. Low Grade Elev. 602.5 @ Sta. 157+50

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.
Overtop	<10		3,506					596.0	
	10	14,800	3,506	4,732	597.5	0.1	0.1	597.6	597.6
Design	50	21,200	3,506	5,191	600.1	0.2	0.1	600.3	600.2
Base	100	23,900	3,506	5,214	601.0	0.1	0.1	601.1	601.1
Overtopping	400	28,700		5,214	602.3		0.2		602.5
Max. Calc.	500	30,200	3,506	5,214	602.7	0.1	0.2	602.8	602.9

Notes:
1. Portions of the existing abutments which are to be removed shall be removed during Stage II Removal only. The Contractor shall retain an Illinois Licensed Structural Engineer to design and detail the method for any partial removal of the existing abutment. The design shall be submitted to Engineer for review and approval.
2. See sheet 2 of 24 for Section A-A and Section B-B.
3. The gage station located on the existing pier shall be removed and relocated as directed by the Engineer. Cost included with Removal of Existing Structures.



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

STATION 155+50.0
BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. RT. 91 SEC. (5BR)B-1
LOADING HL-93
STRUCTURE NO. 015-0075

NAME PLATE
See Std. 515001

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M 270 Grade 50W)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.12g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.26g
Soil Site Class = C

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	596.9	564.3	570.3	593.8

LICENSED STRUCTURAL ENGINEER ★ DANIEL FEUERBORN 81-5933 ★ STATE OF ILLINOIS

Daniel Feuerborn
License Expires 11-30-2012
10/12/2011
Date

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 16 OVER EMBARRAS RIVER
F.A.P. RTE. 91 - SEC. (5BR)B-1
STATION 155+50.00
STRUCTURE NO. 015-0075

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PLOT DATE = 10/11/2011

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 01 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	36
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

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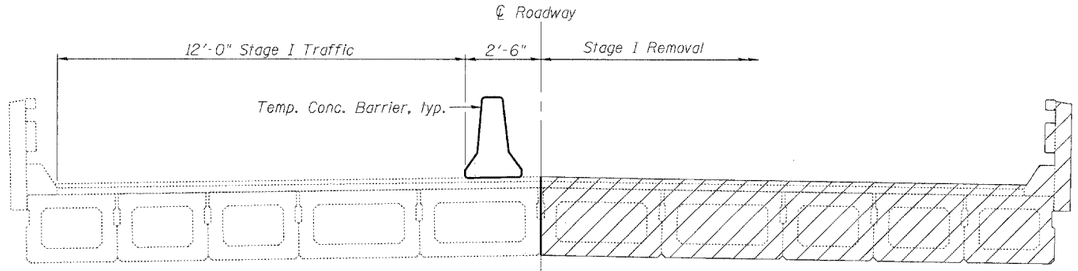
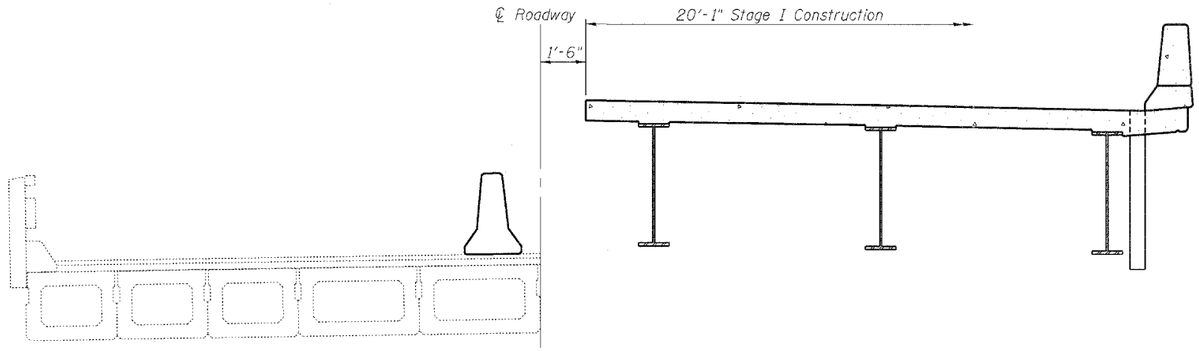
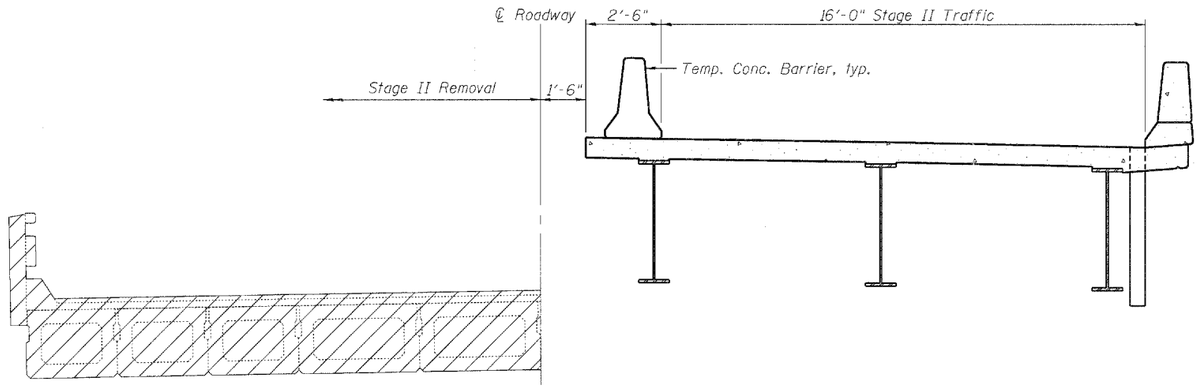


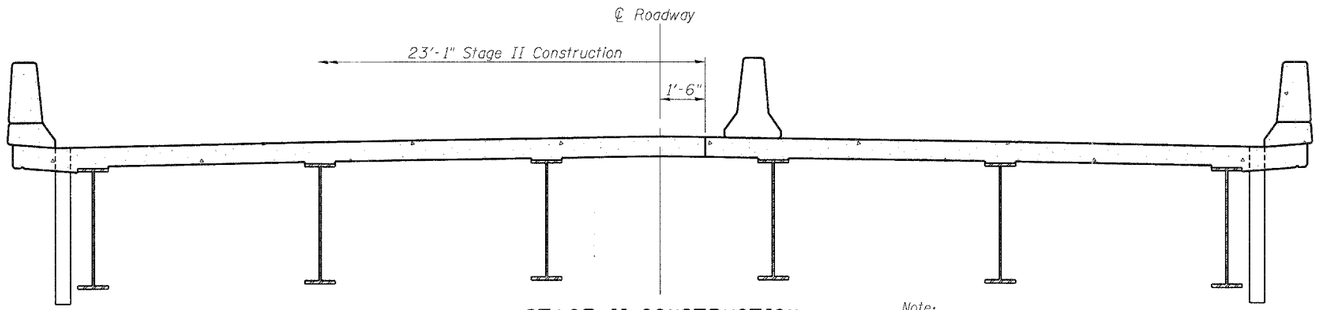
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

(All staging cross sections are looking east.)

Note:
Hatched area indicates Removal of Existing Structures.
For quantitiy of Temporary Concrete Barriers see Roadway Plans.

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 7/8-in. Φ, holes 15/16-in. Φ, unless otherwise noted.

Calculated weight of Structural Steel = 381,100 lbs.

All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

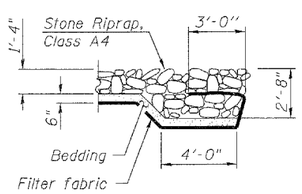
The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

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

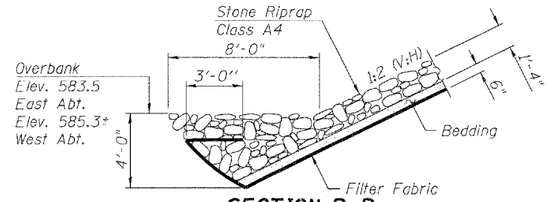
Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	-	154.9	154.9
Floor Drains	Each	10	-	10
Concrete Structures	Cu. Yd.	-	213.0	213.0
Concrete Superstructure	Cu. Yd.	586.6	-	586.6
Bridge Deck Grooving	Sq. Yd.	1,574	-	1,574
Porous Granular Embankment (Special)	Cu. Yd.	-	160.4	160.4
Concrete Encasement	Cu Yd	-	5.6	5.6
Protective Coat	Sq. Yd.	1,943	-	1,943
Stone Riprap, Class A4	Sq. Yd.	-	-	2,098
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	5,544	-	5,544
Reinforcement Bars	Pound	-	14,220	14,220
Reinforcement Bars, Epoxy Coated	Pound	151,650	25,610	177,260
Bar Splicers	Each	1,432	342	1,774
Filter Fabric	Sq. Yd.	-	-	2,098
Furnishing Steel Piles HP 12x63	Foot	-	448	448
Driving Piles	Foot	-	448	448
Test Pile Steel HP 12x63	Each	-	2	2
Pile Shoes	Each	-	16	16
Name Plates	Each	-	-	1
Drilled Shaft in Soil	Cu. Yd.	-	44.0	44.0
Removal of Existing Structures	Each	-	-	1
Drilled Shaft in Rock	Cu. Yd.	-	14.6	14.6
Anchor Bolt 1"	Each	-	24	24
Anchor Bolt 1¼"	Each	-	24	24
Geocomposite Wall Drain	Sq. Yd.	-	95.6	95.6
Pipe Underdrains for Structures, 4"	Foot	-	121.0	121.0
Underwater Structure Excavtion Protection, Location 1	Each	-	1	1
Underwater Structure Excavtion Protection, Location 2	Each	-	1	1
Temporary Soil Retention System	Sq. Ft.	-	-	918.5
Mechanical Splicers	Each	-	96	96
Asbestos Bearing Pad Removal	Each	140	-	140



SECTION A-A



SECTION B-B

(Sheet 1 of 2)

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DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA & STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 02 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	37
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

Notes:

Portions of the existing abutments which are to be removed shall be removed during Stage II Removal only. The Contractor shall retain an Illinois Licensed Structural Engineer to design and detail the method for any partial removal of the existing abutment. The design shall be submitted to Engineer for review and approval.

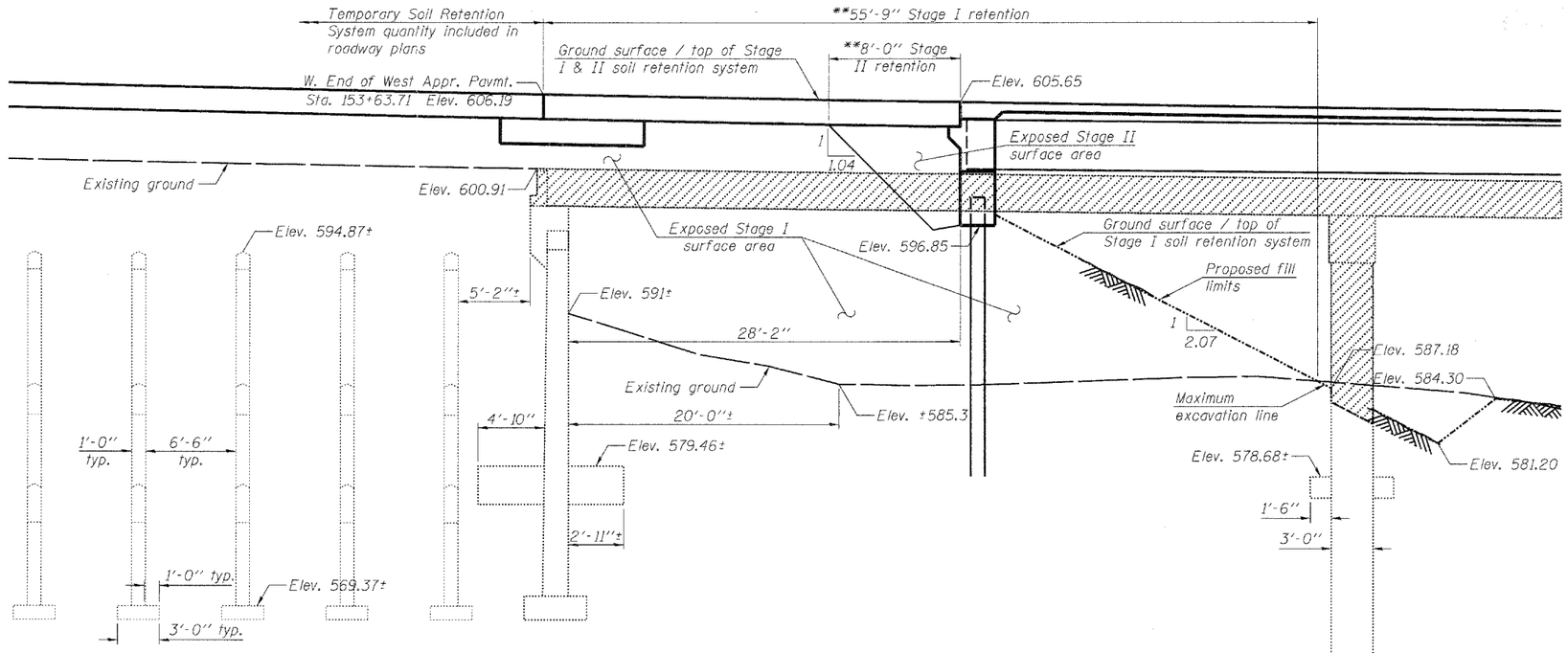
The Contractor's Temporary Soil Retention System shall be designed and installed in such a manner that does not damage or require partial removal of the existing abutment or tie-back system.

Dimensions and elevations relative to existing abutment tie-back systems are taken from existing plans and are subject to nominal construction variations. The Contactor shall field verify the locations of the tie-backs and make necessary adjustments to the Temporary Soil Retention System design prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

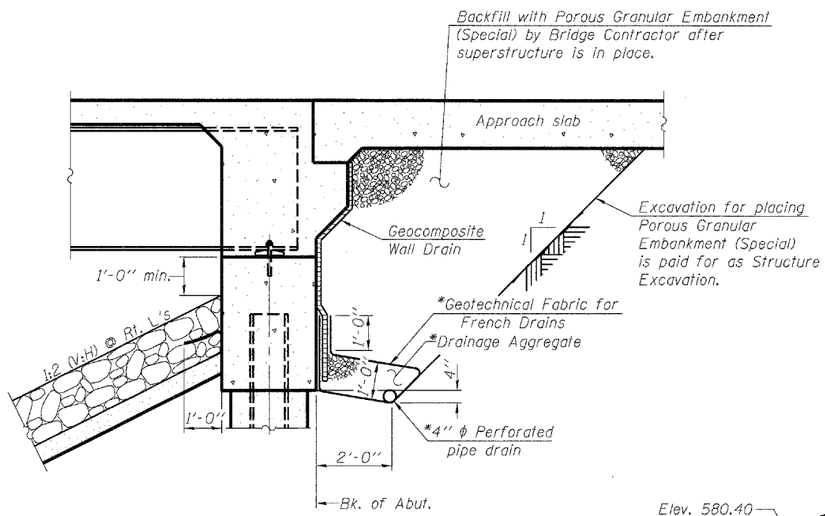
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

See existing bridge plans for additional details of existing abutments.



TEMPORARY SOIL RETENTION SYSTEM

(at West Abutment)



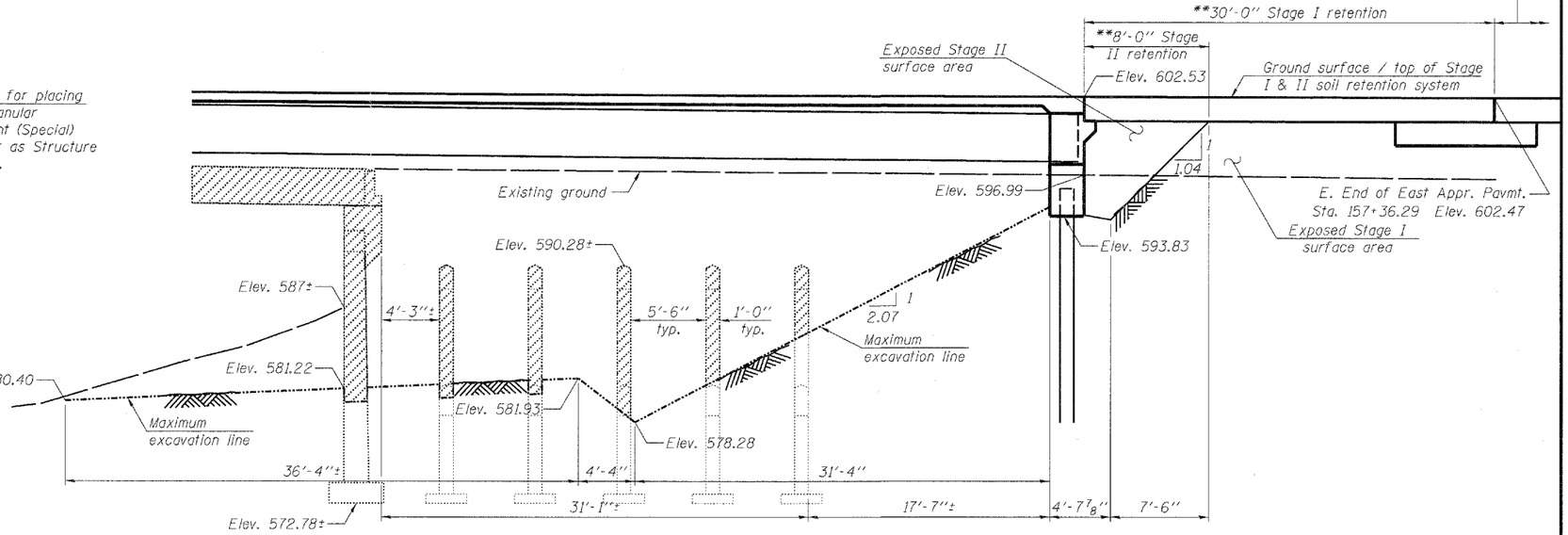
SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures, 4".

Note:

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).



TEMPORARY SOIL RETENTION SYSTEM

(at East Abutment)

Structure removal area

**Included in bridge plan quantities.

(Sheet 2 of 2)

PRINTED DATE: 10/11/2011
FILE NAME: N:\PROJECTS\IDOT\FTB 148, Item 25 - 07 Various Design\Work Order 07\CADD\Drawings\Sheets\38.Rt16.DPE.3.dgn

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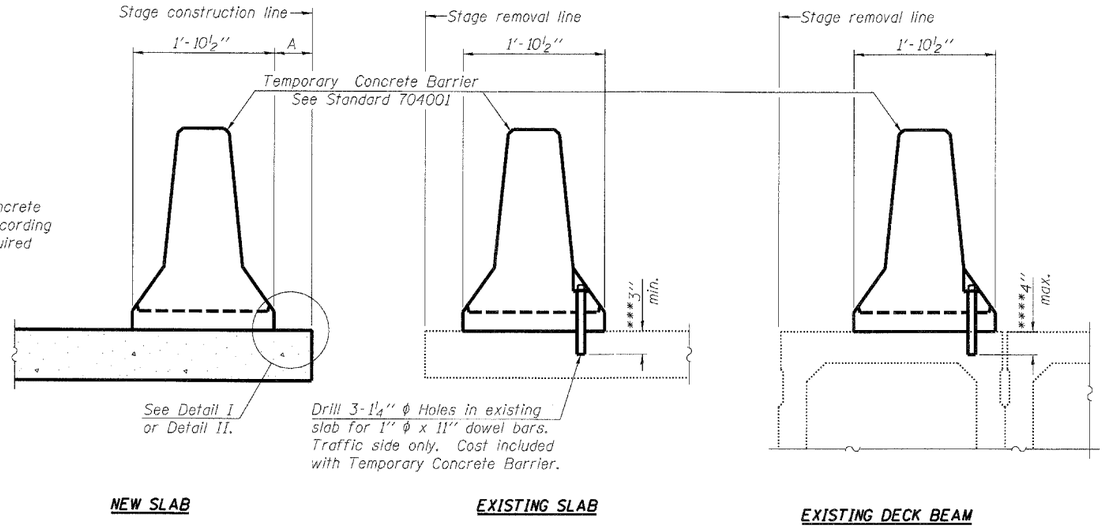
PLOT DATE = 10/11/2011	DESIGNED - DF	REVISED -	
	CHECKED - ADG, SA	REVISED -	
	DRAWN - ADG	REVISED -	
	CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA & STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 03 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	38
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | **EXISTING SLAB** | **EXISTING DECK BEAM**

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

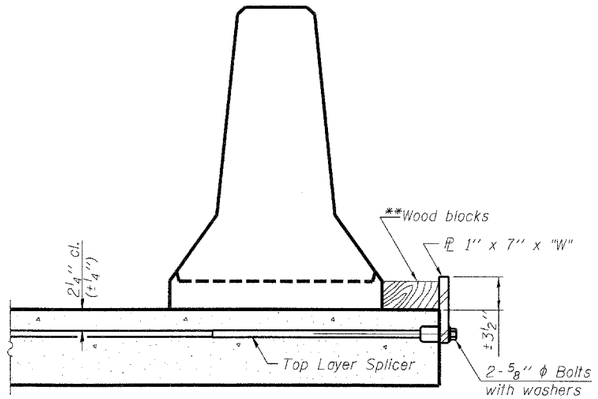
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

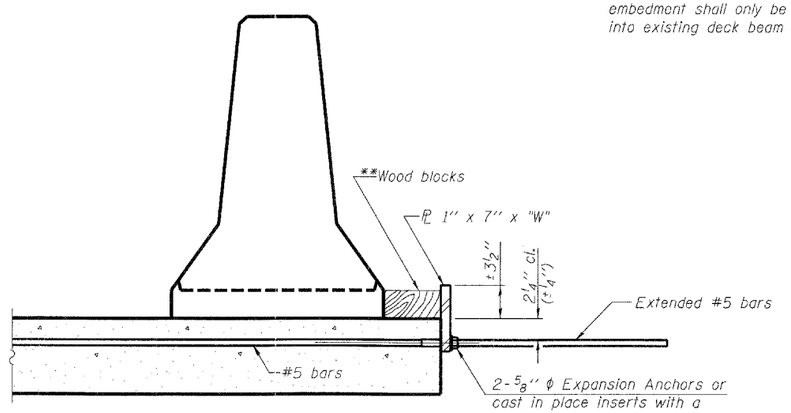
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



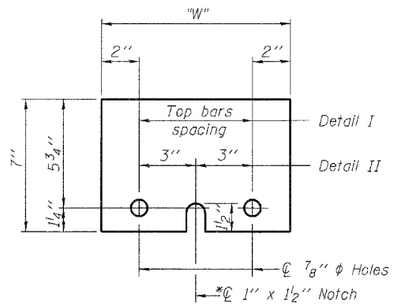
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER ℄ 1" x 7" x "W"

* Required only with Detail II

R-27 7-1-10

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PLOT DATE = 5/11/2011	CHECKED - ADG, SA	REVISED -	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 015-0075
	DRAWN - ADG	REVISED -	SHEET NO. 04 OF 24 SHEETS
	CHECKED - DF	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	39
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

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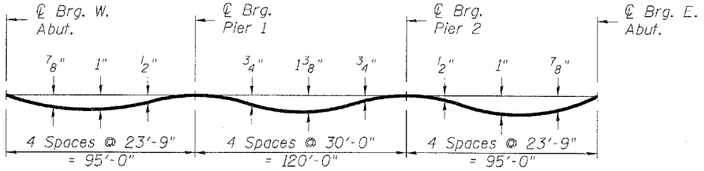
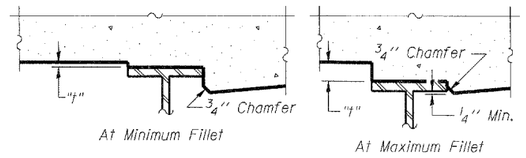


DEAD LOAD DEFLECTION DIAGRAM

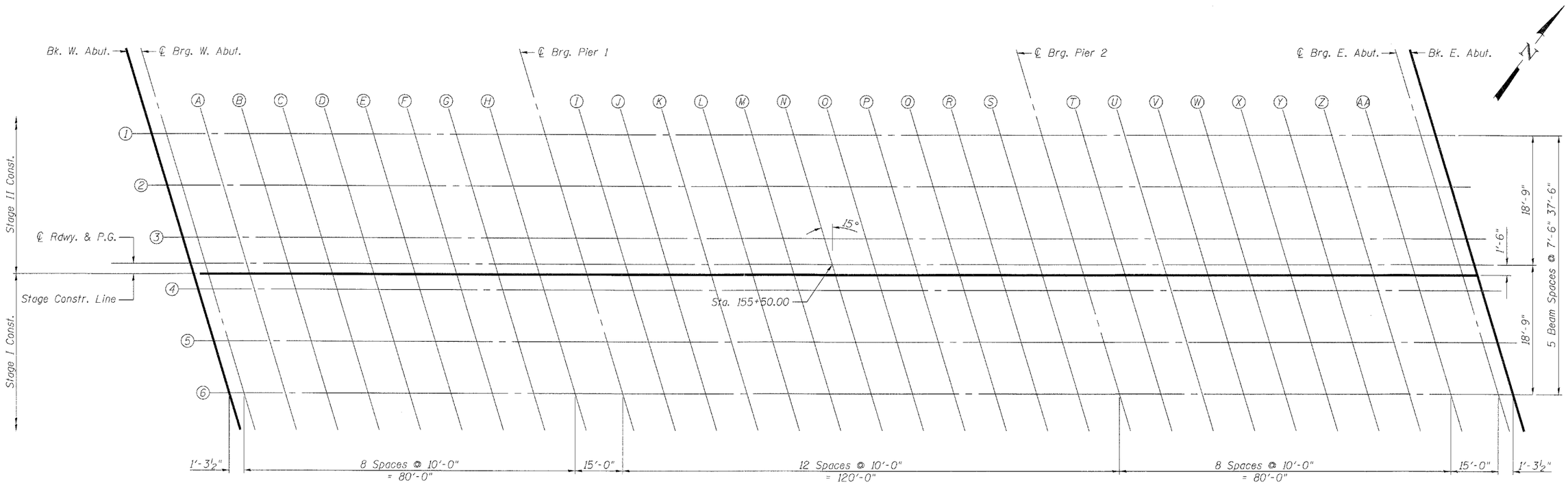
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheets 6 and 7 or 24, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

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CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 015-0075
SHEET NO. 05 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	40
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+88.69	-18.75	605.41	605.41
CL Brg. W. Abut	153+89.98	-18.75	605.39	605.39
A	153+99.98	-18.75	605.22	605.25
B	154+09.98	-18.75	605.05	605.12
C	154+19.98	-18.75	604.90	604.98
D	154+29.98	-18.75	604.75	604.84
E	154+39.98	-18.75	604.60	604.69
F	154+49.98	-18.75	604.47	604.53
G	154+59.98	-18.75	604.34	604.38
H	154+69.98	-18.75	604.21	604.23
CL Brg. Pier 1	154+84.98	-18.75	604.04	604.04
I	154+94.98	-18.75	603.93	603.94
J	155+04.98	-18.75	603.83	603.87
K	155+14.98	-18.75	603.73	603.80
L	155+24.98	-18.75	603.63	603.72
M	155+34.98	-18.75	603.53	603.64
N	155+44.98	-18.75	603.43	603.54
O	155+54.98	-18.75	603.33	603.44
P	155+64.98	-18.75	603.23	603.32
Q	155+74.98	-18.75	603.13	603.20
R	155+84.98	-18.75	603.03	603.07
S	155+94.98	-18.75	602.93	602.94
CL Brg. Pier 2	156+04.98	-18.75	602.83	602.83
T	156+14.98	-18.75	602.74	602.76
U	156+24.98	-18.75	602.65	602.69
V	156+34.98	-18.75	602.57	602.64
W	156+44.98	-18.75	602.50	602.59
X	156+54.98	-18.75	602.43	602.54
Y	156+64.98	-18.75	602.37	602.48
Z	156+74.98	-18.75	602.32	602.42
AA	156+84.98	-18.75	602.27	602.35
CL Brg. E. Abut	156+99.98	-18.75	602.22	602.22
Bk E. Abut	157+01.27	-18.75	602.21	602.21

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+90.70	-11.25	605.53	605.53
CL Brg. W. Abut	153+91.99	-11.25	605.50	605.50
A	154+01.99	-11.25	605.34	605.37
B	154+11.99	-11.25	605.17	605.24
C	154+21.99	-11.25	605.02	605.11
D	154+31.99	-11.25	604.87	604.96
E	154+41.99	-11.25	604.73	604.81
F	154+51.99	-11.25	604.59	604.66
G	154+61.99	-11.25	604.46	604.51
H	154+71.99	-11.25	604.34	604.36
CL Brg. Pier 1	154+86.99	-11.25	604.17	604.17
I	154+96.99	-11.25	604.06	604.08
J	155+06.99	-11.25	603.96	604.00
K	155+16.99	-11.25	603.86	603.93
L	155+26.99	-11.25	603.76	603.85
M	155+36.99	-11.25	603.66	603.77
N	155+46.99	-11.25	603.56	603.68
O	155+56.99	-11.25	603.46	603.57
P	155+66.99	-11.25	603.36	603.45
Q	155+76.99	-11.25	603.26	603.33
R	155+86.99	-11.25	603.16	603.20
S	155+96.99	-11.25	603.06	603.08
CL Brg. Pier 2	156+06.99	-11.25	602.97	602.97
T	156+16.99	-11.25	602.87	602.89
U	156+26.99	-11.25	602.79	602.83
V	156+36.99	-11.25	602.71	602.78
W	156+46.99	-11.25	602.64	602.73
X	156+56.99	-11.25	602.57	602.68
Y	156+66.99	-11.25	602.51	602.62
Z	156+76.99	-11.25	602.46	602.56
AA	156+86.99	-11.25	602.42	602.50
CL Brg. E. Abut	157+01.99	-11.25	602.36	602.36
Bk E. Abut	157+03.28	-11.25	602.36	602.36

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+92.71	-3.75	605.61	605.61
CL Brg. W. Abut	153+94.00	-3.75	605.59	605.59
A	154+04.00	-3.75	605.42	605.46
B	154+14.00	-3.75	605.26	605.33
C	154+24.00	-3.75	605.10	605.19
D	154+34.00	-3.75	604.96	605.05
E	154+44.00	-3.75	604.82	604.90
F	154+54.00	-3.75	604.68	604.75
G	154+64.00	-3.75	604.55	604.60
H	154+74.00	-3.75	604.43	604.45
CL Brg. Pier 1	154+89.00	-3.75	604.27	604.27
I	154+99.00	-3.75	604.16	604.17
J	155+09.00	-3.75	604.06	604.10
K	155+19.00	-3.75	603.96	604.02
L	155+29.00	-3.75	603.86	603.95
M	155+39.00	-3.75	603.76	603.87
N	155+49.00	-3.75	603.66	603.77
O	155+59.00	-3.75	603.56	603.67
P	155+69.00	-3.75	603.46	603.55
Q	155+79.00	-3.75	603.36	603.42
R	155+89.00	-3.75	603.26	603.30
S	155+99.00	-3.75	603.16	603.17
CL Brg. Pier 2	156+09.00	-3.75	603.06	603.06
T	156+19.00	-3.75	602.97	602.99
U	156+29.00	-3.75	602.89	602.93
V	156+39.00	-3.75	602.81	602.88
W	156+49.00	-3.75	602.74	602.83
X	156+59.00	-3.75	602.68	602.78
Y	156+69.00	-3.75	602.62	602.73
Z	156+79.00	-3.75	602.57	602.67
AA	156+89.00	-3.75	602.53	602.61
CL Brg. E. Abut	157+04.00	-3.75	602.47	602.47
Bk E. Abut	157+05.29	-3.75	602.47	602.47

℄ RDWY. & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+93.71	0.00	605.65	605.65
CL Brg. W. Abut	153+95.00	0.00	605.63	605.63
A	154+05.00	0.00	605.46	605.50
B	154+15.00	0.00	605.30	605.37
C	154+25.00	0.00	605.15	605.24
D	154+35.00	0.00	605.00	605.09
E	154+45.00	0.00	604.86	604.95
F	154+55.00	0.00	604.73	604.79
G	154+65.00	0.00	604.60	604.64
H	154+75.00	0.00	604.48	604.50
CL Brg. Pier 1	154+90.00	0.00	604.31	604.31
I	155+00.00	0.00	604.21	604.22
J	155+10.00	0.00	604.11	604.14
K	155+20.00	0.00	604.01	604.07
L	155+30.00	0.00	603.91	604.00
M	155+40.00	0.00	603.81	603.92
N	155+50.00	0.00	603.71	603.82
O	155+60.00	0.00	603.61	603.72
P	155+70.00	0.00	603.51	603.60
Q	155+80.00	0.00	603.41	603.47
R	155+90.00	0.00	603.31	603.35
S	156+00.00	0.00	603.21	603.22
CL Brg. Pier 2	156+10.00	0.00	603.11	603.11
T	156+20.00	0.00	603.02	603.04
U	156+30.00	0.00	602.94	602.98
V	156+40.00	0.00	602.86	602.93
W	156+50.00	0.00	602.79	602.88
X	156+60.00	0.00	602.73	602.84
Y	156+70.00	0.00	602.67	602.78
Z	156+80.00	0.00	602.62	602.73
AA	156+90.00	0.00	602.58	602.66
CL Brg. E. Abut	157+05.00	0.00	602.53	602.53
Bk E. Abut	157+06.29	0.00	602.53	602.53

E-S

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CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 015-0075
SHEET NO. 06 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	41
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+94.11	1.50	605.62	605.62
CL Brg. W. Abut	153+95.40	1.50	605.60	605.60
A	154+05.40	1.50	605.43	605.47
B	154+15.40	1.50	605.27	605.34
C	154+25.40	1.50	605.12	605.21
D	154+35.40	1.50	604.97	605.07
E	154+45.40	1.50	604.83	604.92
F	154+55.40	1.50	604.70	604.77
G	154+65.40	1.50	604.57	604.61
H	154+75.40	1.50	604.45	604.47
CL Brg. Pier 1	154+90.40	1.50	604.29	604.29
I	155+00.40	1.50	604.18	604.19
J	155+10.40	1.50	604.08	604.12
K	155+20.40	1.50	603.98	604.05
L	155+30.40	1.50	603.88	603.97
M	155+40.40	1.50	603.78	603.89
N	155+50.40	1.50	603.68	603.80
O	155+60.40	1.50	603.58	603.69
P	155+70.40	1.50	603.48	603.57
Q	155+80.40	1.50	603.38	603.44
R	155+90.40	1.50	603.28	603.32
S	156+00.40	1.50	603.18	603.19
CL Brg. Pier 2	156+10.40	1.50	603.09	603.09
T	156+20.40	1.50	603.00	603.01
U	156+30.40	1.50	602.91	602.95
V	156+40.40	1.50	602.84	602.90
W	156+50.40	1.50	602.77	602.86
X	156+60.40	1.50	602.70	602.81
Y	156+70.40	1.50	602.65	602.76
Z	156+80.40	1.50	602.60	602.70
AA	156+90.40	1.50	602.56	602.63
CL Brg. E. Abut	157+05.40	1.50	602.50	602.50
Bk E. Abut	157+06.69	1.50	602.50	602.50

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+94.71	3.75	605.57	605.57
CL Brg. W. Abut	153+96.00	3.75	605.55	605.55
A	154+06.00	3.75	605.39	605.42
B	154+16.00	3.75	605.23	605.30
C	154+26.00	3.75	605.07	605.16
D	154+36.00	3.75	604.93	605.02
E	154+46.00	3.75	604.79	604.87
F	154+56.00	3.75	604.66	604.72
G	154+66.00	3.75	604.53	604.57
H	154+76.00	3.75	604.41	604.43
CL Brg. Pier 1	154+91.00	3.75	604.24	604.24
I	155+01.00	3.75	604.14	604.15
J	155+11.00	3.75	604.04	604.08
K	155+21.00	3.75	603.94	604.00
L	155+31.00	3.75	603.84	603.93
M	155+41.00	3.75	603.74	603.85
N	155+51.00	3.75	603.64	603.75
O	155+61.00	3.75	603.54	603.65
P	155+71.00	3.75	603.44	603.53
Q	155+81.00	3.75	603.34	603.40
R	155+91.00	3.75	603.24	603.28
S	156+01.00	3.75	603.14	603.15
CL Brg. Pier 2	156+11.00	3.75	603.05	603.05
T	156+21.00	3.75	602.96	602.97
U	156+31.00	3.75	602.87	602.91
V	156+41.00	3.75	602.80	602.86
W	156+51.00	3.75	602.73	602.82
X	156+61.00	3.75	602.67	602.77
Y	156+71.00	3.75	602.61	602.72
Z	156+81.00	3.75	602.56	602.66
AA	156+91.00	3.75	602.52	602.60
CL Brg. E. Abut	157+06.00	3.75	602.47	602.47
Bk E. Abut	157+07.29	3.75	602.46	602.46

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+96.72	11.25	605.42	605.42
CL Brg. W. Abut	153+98.01	11.25	605.40	605.40
A	154+08.01	11.25	605.24	605.27
B	154+18.01	11.25	605.08	605.15
C	154+28.01	11.25	604.93	605.02
D	154+38.01	11.25	604.78	604.88
E	154+48.01	11.25	604.64	604.73
F	154+58.01	11.25	604.51	604.58
G	154+68.01	11.25	604.39	604.43
H	154+78.01	11.25	604.27	604.29
CL Brg. Pier 1	154+93.01	11.25	604.11	604.11
I	155+03.01	11.25	604.00	604.01
J	155+13.01	11.25	603.90	603.94
K	155+23.01	11.25	603.80	603.87
L	155+33.01	11.25	603.70	603.79
M	155+43.01	11.25	603.60	603.71
N	155+53.01	11.25	603.50	603.62
O	155+63.01	11.25	603.40	603.51
P	155+73.01	11.25	603.30	603.39
Q	155+83.01	11.25	603.20	603.27
R	155+93.01	11.25	603.10	603.14
S	156+03.01	11.25	603.00	603.02
CL Brg. Pier 2	156+13.01	11.25	602.91	602.91
T	156+23.01	11.25	602.82	602.84
U	156+33.01	11.25	602.74	602.78
V	156+43.01	11.25	602.67	602.73
W	156+53.01	11.25	602.60	602.69
X	156+63.01	11.25	602.54	602.64
Y	156+73.01	11.25	602.48	602.59
Z	156+83.01	11.25	602.43	602.54
AA	156+93.01	11.25	602.39	602.47
CL Brg. E. Abut	157+08.01	11.25	602.34	602.34
Bk E. Abut	157+09.30	11.25	602.34	602.34

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	153+98.73	18.75	605.24	605.24
CL Brg. W. Abut	154+00.02	18.75	605.22	605.22
A	154+10.02	18.75	605.05	605.09
B	154+20.02	18.75	604.90	604.96
C	154+30.02	18.75	604.75	604.83
D	154+40.02	18.75	604.60	604.70
E	154+50.02	18.75	604.47	604.55
F	154+60.02	18.75	604.34	604.40
G	154+70.02	18.75	604.21	604.25
H	154+80.02	18.75	604.09	604.11
CL Brg. Pier 1	154+95.02	18.75	603.93	603.93
I	155+05.02	18.75	603.83	603.84
J	155+15.02	18.75	603.73	603.77
K	155+25.02	18.75	603.63	603.69
L	155+35.02	18.75	603.53	603.62
M	155+45.02	18.75	603.43	603.54
N	155+55.02	18.75	603.33	603.44
O	155+65.02	18.75	603.23	603.34
P	155+75.02	18.75	603.13	603.22
Q	155+85.02	18.75	603.03	603.10
R	155+95.02	18.75	602.93	602.97
S	156+05.02	18.75	602.83	602.84
CL Brg. Pier 2	156+15.02	18.75	602.74	602.74
T	156+25.02	18.75	602.65	602.67
U	156+35.02	18.75	602.57	602.61
V	156+45.02	18.75	602.50	602.57
W	156+55.02	18.75	602.43	602.52
X	156+65.02	18.75	602.37	602.48
Y	156+75.02	18.75	602.32	602.43
Z	156+85.02	18.75	602.27	602.37
AA	156+95.02	18.75	602.23	602.31
CL Brg. E. Abut	157+10.02	18.75	602.19	602.19
Bk E. Abut	157+11.31	18.75	602.18	602.18

E-S

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DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 015-0075
SHEET NO. 07 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	42
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	152+58.35	-20.00	605.94
A1	153+68.35	-20.00	605.75
A2	153+78.35	-20.00	605.57
E. End West Appr. Pavmt.	153+88.35	-20.00	605.39
W. End East Appr. Pavmt.	157+00.93	-20.00	602.19
A3	157+10.93	-20.00	602.16
A4	157+20.93	-20.00	602.14
E. End East Appr. Pavmt.	157+30.93	-20.00	602.12

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	153+60.49	-12.00	606.07
A1	153+70.49	-12.00	605.88
A2	153+80.49	-12.00	605.69
E. End West Appr. Pavmt.	153+90.49	-12.00	605.52
W. End East Appr. Pavmt.	157+03.07	-12.00	602.35
A3	157+13.07	-12.00	602.32
A4	157+23.07	-12.00	602.30
E. End East Appr. Pavmt.	157+33.07	-12.00	602.29

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	153+63.71	0.00	606.19
A1	153+73.71	0.00	606.01
A2	153+83.71	0.00	605.82
E. End West Appr. Pavmt.	153+93.71	0.00	605.65
W. End East Appr. Pavmt.	157+06.29	0.00	602.53
A3	157+16.29	0.00	602.50
A4	157+26.29	0.00	602.48
E. End East Appr. Pavmt.	157+36.29	0.00	602.47

STAGE CONSTRUCTION JOINT

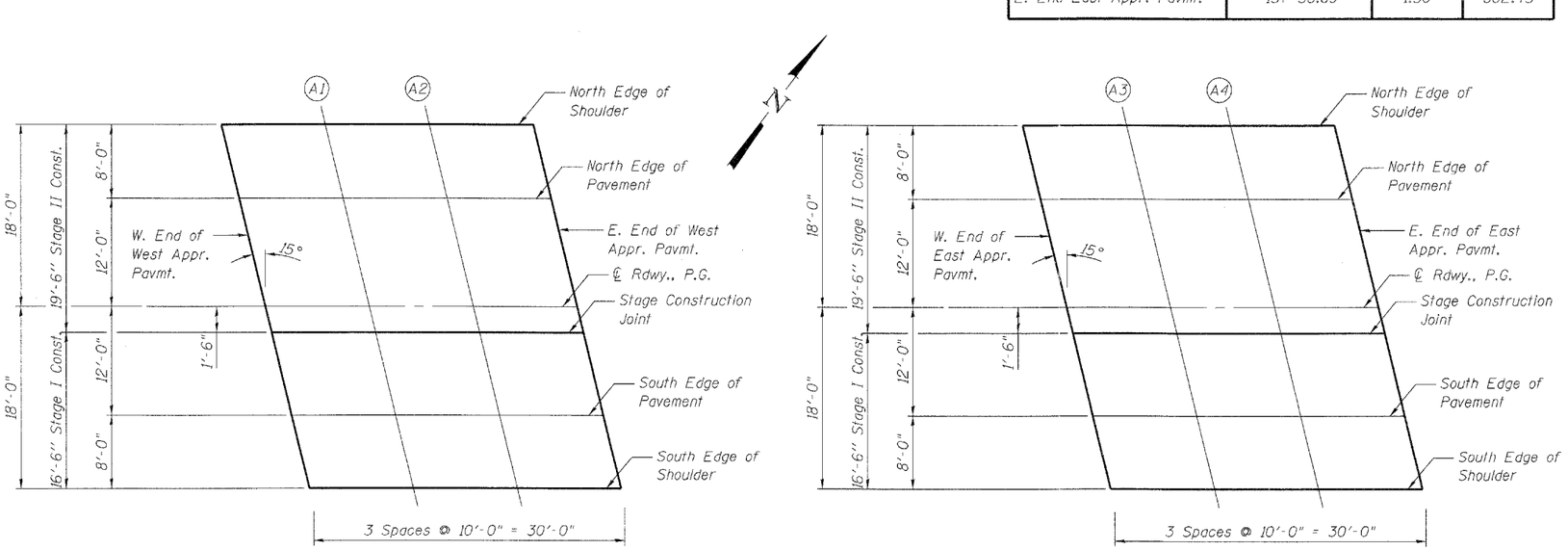
Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	153+64.11	1.50	606.16
A1	153+74.11	1.50	605.97
A2	153+84.11	1.50	605.79
E. End West Appr. Pavmt.	153+94.11	1.50	605.62
W. End East Appr. Pavmt.	157+06.69	1.50	602.50
A3	157+16.69	1.50	602.48
A4	157+26.69	1.50	602.46
E. End East Appr. Pavmt.	157+36.69	1.50	602.45

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	153+66.93	12.00	605.94
A1	153+76.93	12.00	605.76
A2	153+86.93	12.00	605.58
E. End West Appr. Pavmt.	153+96.93	12.00	605.41
W. End East Appr. Pavmt.	157+09.51	12.00	602.33
A3	157+19.51	12.00	602.31
A4	157+29.51	12.00	602.29
E. End East Appr. Pavmt.	157+39.51	12.00	602.28

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Pavmt.	153+69.07	20.00	605.74
A1	153+79.07	20.00	605.55
A2	153+89.07	20.00	605.38
E. End West Appr. Pavmt.	153+99.07	20.00	605.21
W. End East Appr. Pavmt.	157+11.65	20.00	602.16
A3	157+21.65	20.00	602.14
A4	157+31.65	20.00	602.12
E. End East Appr. Pavmt.	157+41.65	20.00	602.11



PLAN

E-AS

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\pb 148, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\43_Rif6_ASlabElev.dgn

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		DRAWN - ADG	REVISED -
		CHECKED - DF	REVISED -

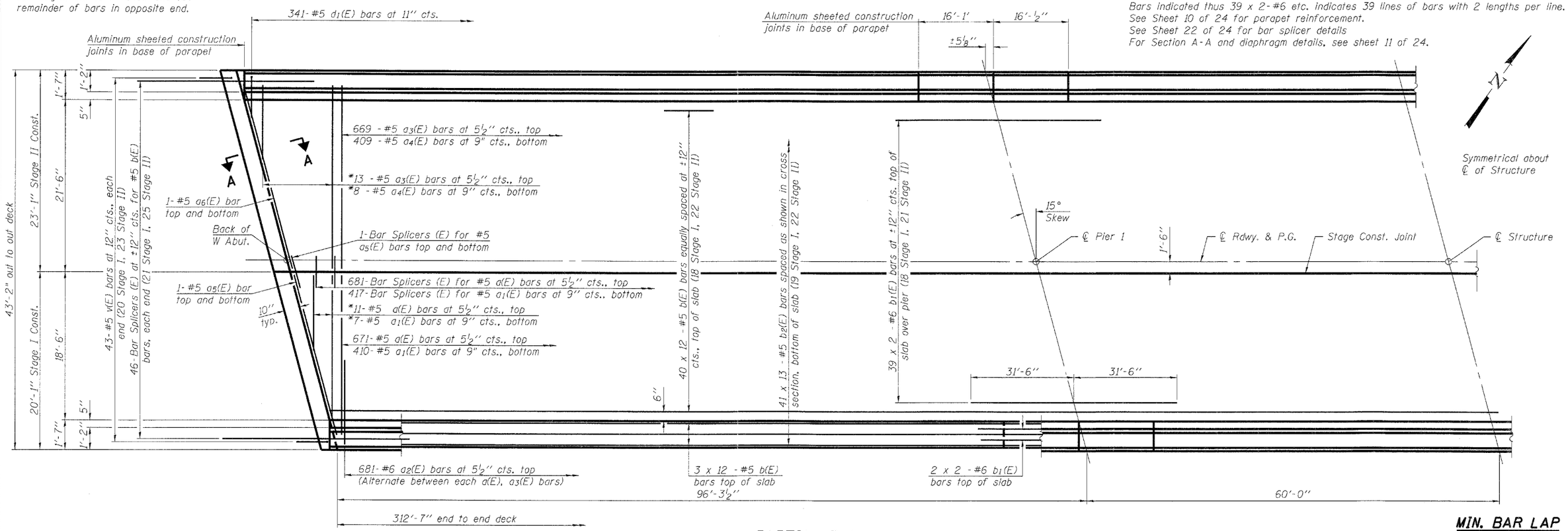
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 015-0075
SHEET NO. 08 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	43
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

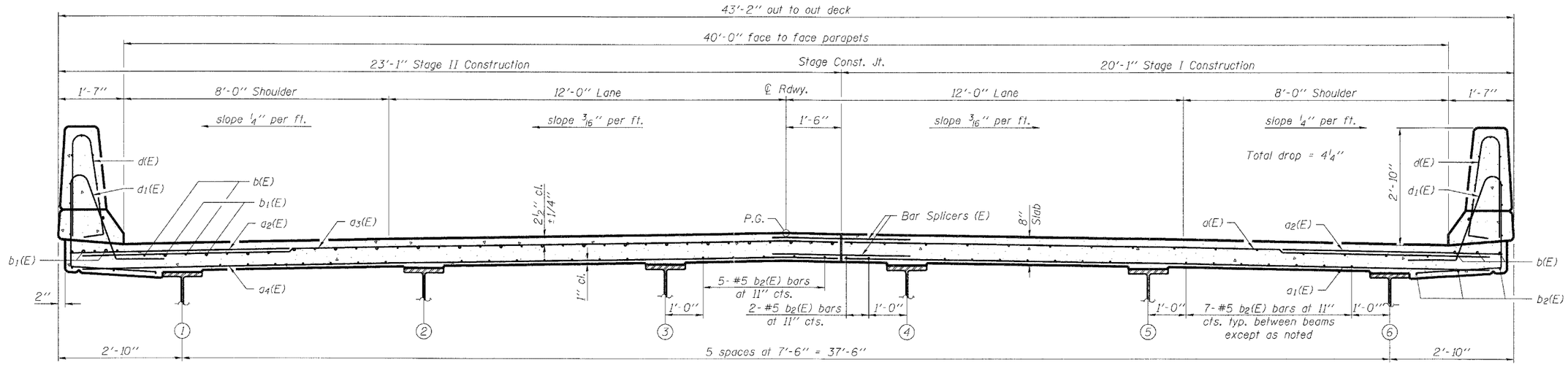
* Order a(E), a_1(E), a_3(E) and a_4(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:
See Sheet 10 of 24 for superstructure details and Bill of Material.
Bars indicated thus 39 x 2-#6 etc. indicates 39 lines of bars with 2 lengths per line.
See Sheet 10 of 24 for parapet reinforcement.
See Sheet 22 of 24 for bar splicer details
For Section A-A and diaphragm details, see sheet 11 of 24.



PARTIAL PLAN

MIN. BAR LAP
(Slab)
#5 Bar = 2'-7"
#6 Bar = 3'-1"



NEAR PIER

NEAR MIDSPAN

CROSS SECTION
(Looking East)

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj_accs\dot\pltb 148, item 25 - 97 various design\work order 07\addd\drawings\Sheets\X44_Rt16_SuperPlan.dgn

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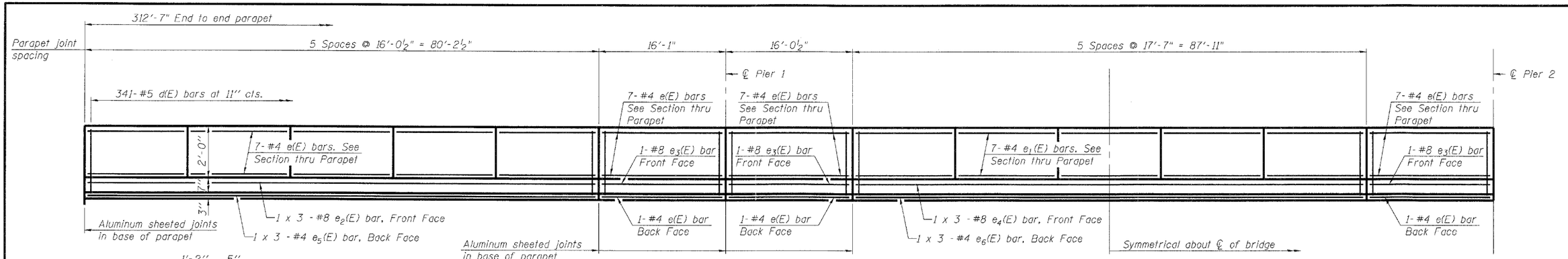
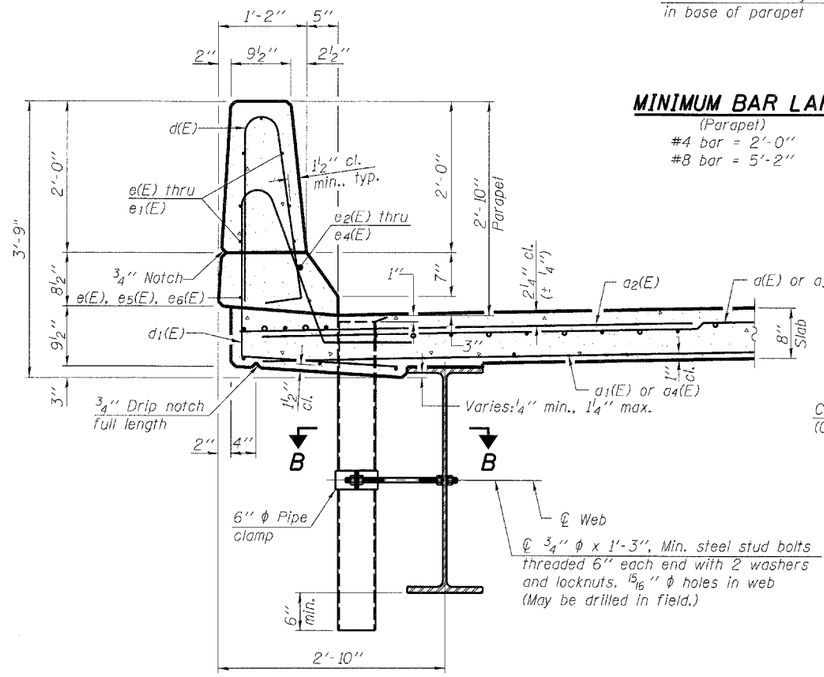
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 015-0075
SHEET NO. 09 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	44
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



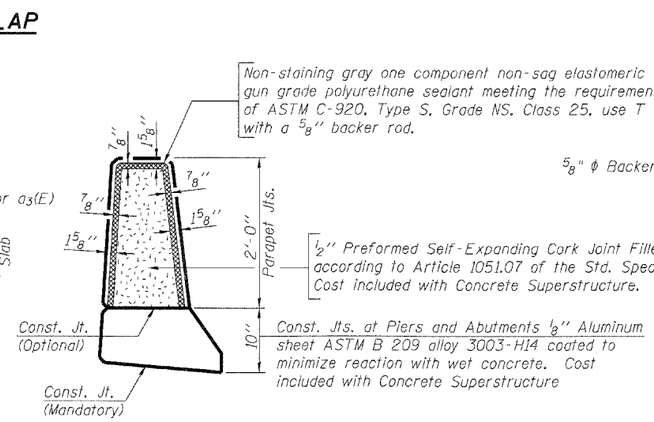
INSIDE ELEVATION OF PARAPET



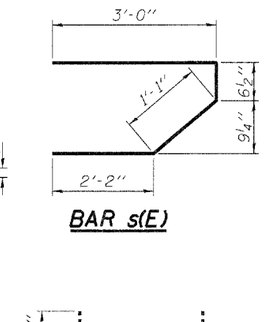
SECTION THRU PARAPET

MINIMUM BAR LAP

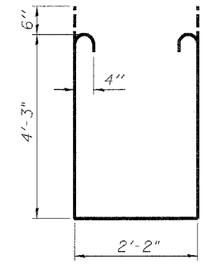
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



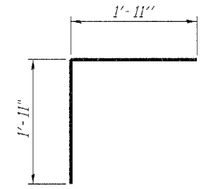
PARAPET JOINT DETAILS



BAR s(E)



BAR s1(E)



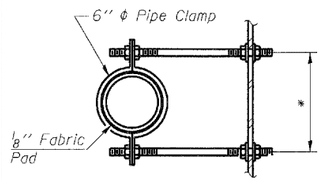
BAR v(E)

Notes:
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Floor drains need not be painted.

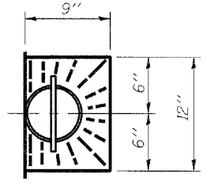
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	682	#5	19'-8"	
a1(E)	417	#5	19'-2"	
a2(E)	1362	#6	6'-6"	
a3(E)	682	#5	22'-8"	
a4(E)	417	#5	22'-2"	
a5(E)	4	#5	20'-6"	
a6(E)	4	#5	23'-7"	
b(E)	552	#5	28'-5"	
b1(E)	172	#6	33'-1"	
b2(E)	533	#5	26'-5"	
d(E)	682	#5	5'-7"	
d1(E)	682	#5	7'-4"	
e(E)	204	#4	15'-9"	
e1(E)	70	#4	17'-4"	
e2(E)	12	#8	30'-2"	
e3(E)	8	#8	15'-9"	
e4(E)	6	#8	32'-8"	
e5(E)	12	#4	28'-0"	
e6(E)	6	#4	30'-7"	
m(E)	10	#6	20'-6"	
m1(E)	12	#6	9'-1"	
m2(E)	8	#6	7'-5"	
m3(E)	4	#6	2'-7"	
m4(E)	2	#6	2'-0"	
m5(E)	10	#6	23'-6"	
m6(E)	12	#6	10'-1"	
m7(E)	2	#6	5'-1"	
s(E)	94	#5	6'-10"	
s1(E)	72	#4	11'-9"	
v(E)	86	#5	3'-10"	
Reinforcement Bars, Epoxy Coated			Pound	118,200
Concrete Superstructure			Cu. Yds.	458.2
Floor Drains			Each	10

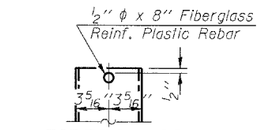
Bars indicated thus 1 x 3 -#5 etc. indicates 1 line of bars with 3 lengths per line.



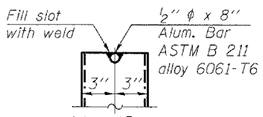
SECTION B-B
*Dimension as required by Pipe Clamp



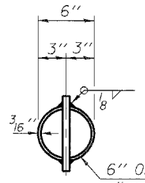
TOP PLAN



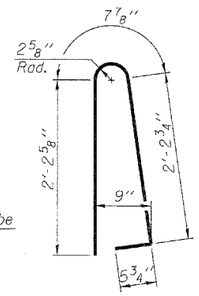
FIBERGLASS PIPE



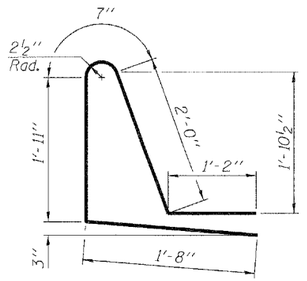
ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)



BAR d(E)



BAR d1(E)

S-I-D 7-1-10

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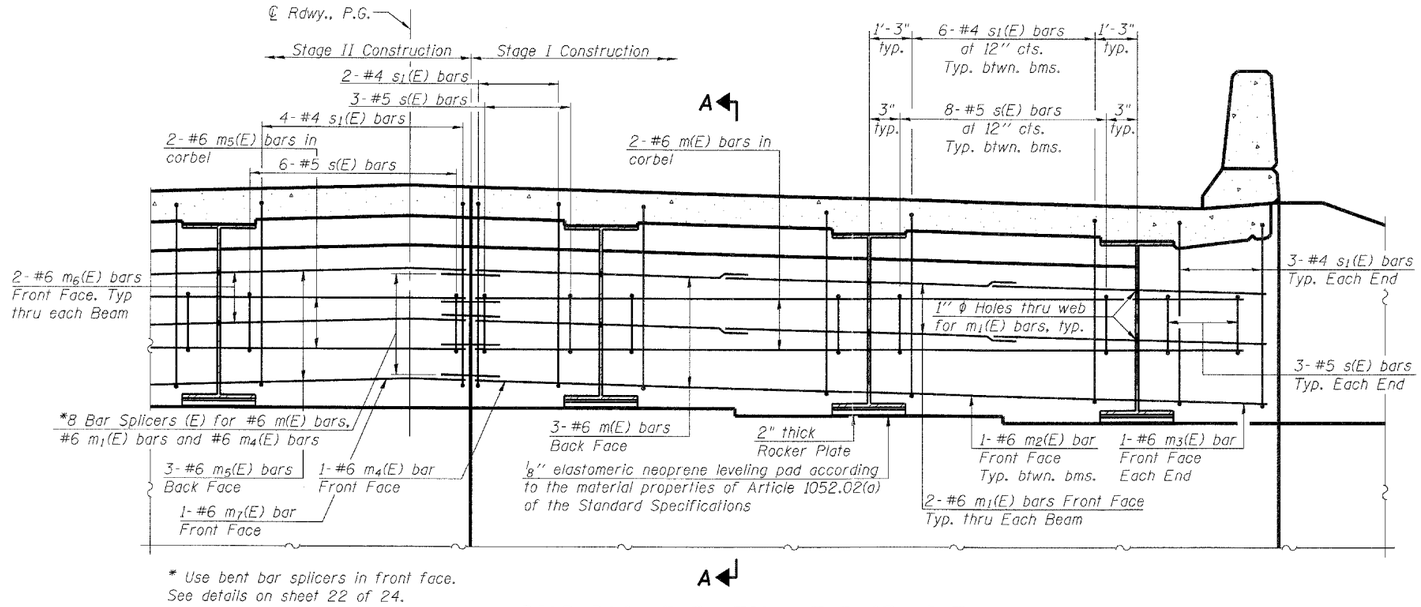
PLOT DATE = 5/11/2011	CHECKED - ADG, SA	REVISED -	SUPERSTRUCTURE DETAILS STRUCTURE NO. 015-0075
	DRAWN - ADG	REVISED -	SHEET NO. 10 OF 24 SHEETS
	CHECKED - DF	REVISED -	

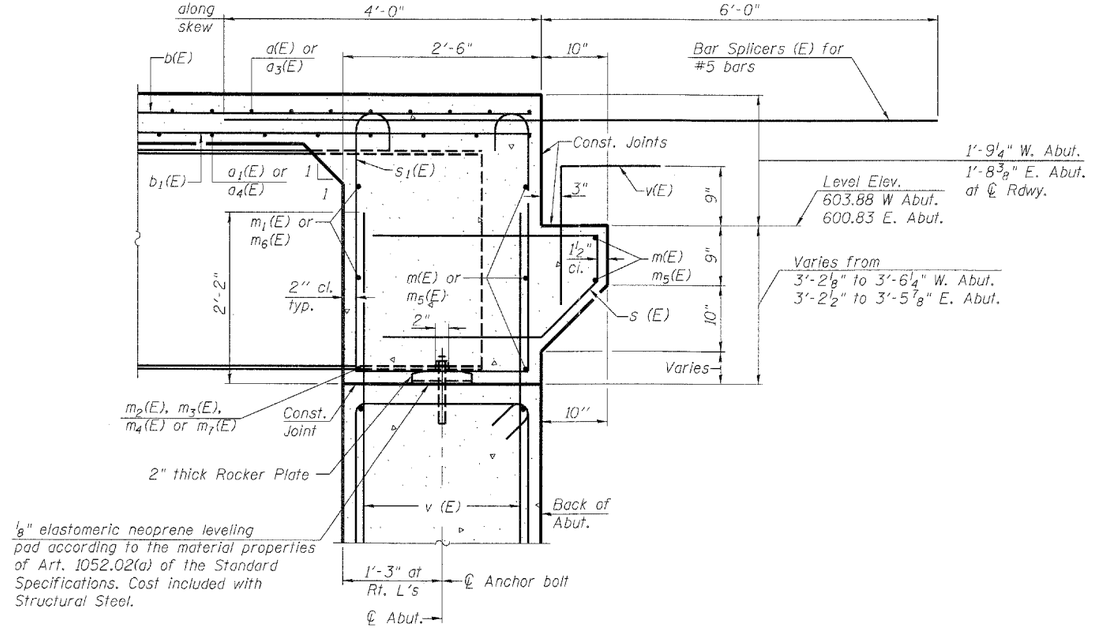
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	45
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		



* Use bent bar splicers in front face. See details on sheet 22 of 24.

DIAPHRAGM ELEVATION AT EAST ABUTMENT

(Looking East - West Abut. similar)



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 24.

Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 24.

For details of bars s(E), s1(E) & v(E) see sheet 10 of 24.

The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

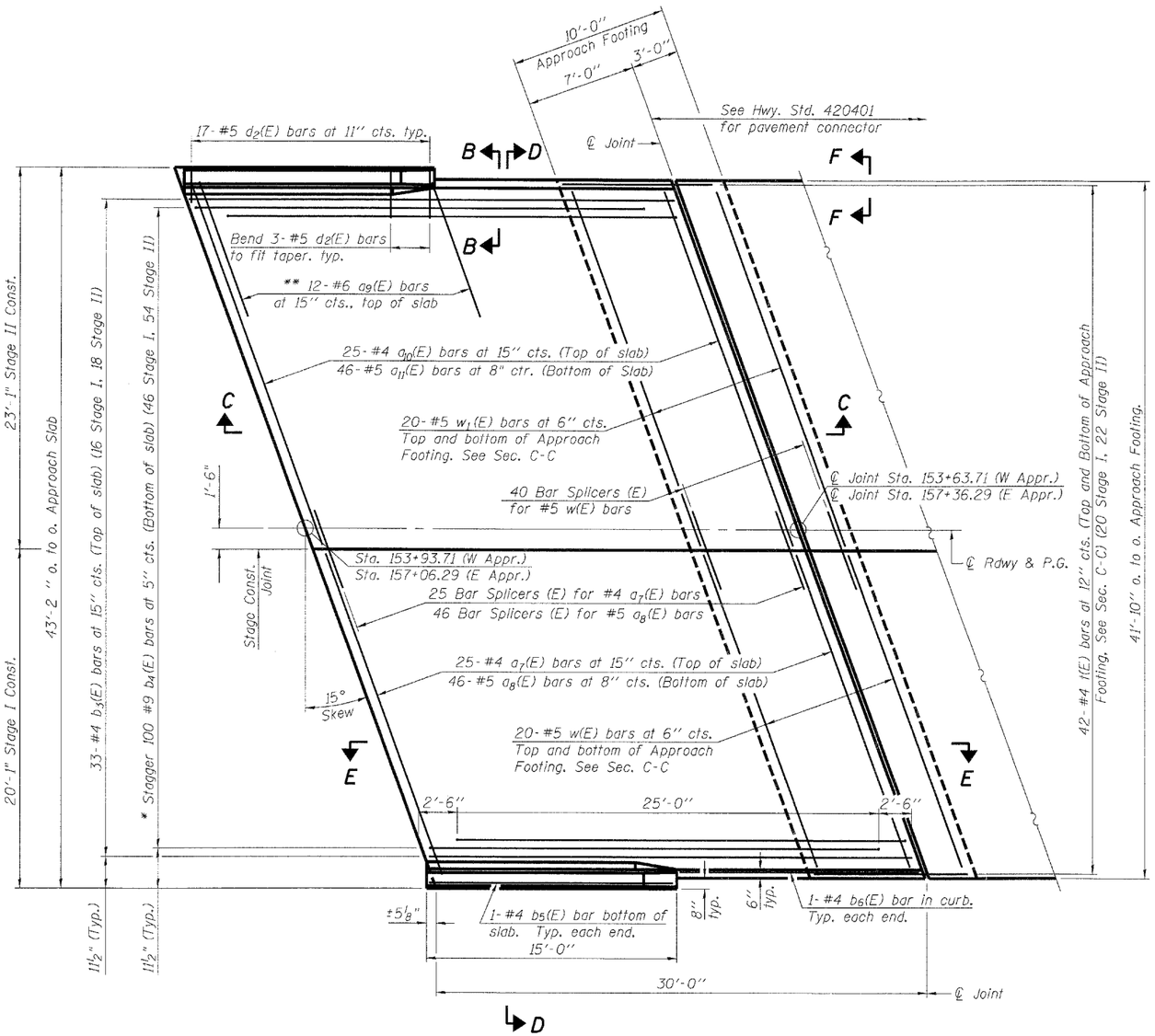
#6 bar = 3'-4"

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\kpb 148, sec 25 - d7 various design\work order 07\caddd\drawings\Sheets\48_Rt16_DiaDet.dgn

ESI CONSULTANTS, LTD. Excellence, Service, Integrity	PLOT DATE = 5/11/2011	DESIGNED - DF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTEGRAL ABUTMENT DIAPHRAGM DETAILS STRUCTURE NO. 015-0075 SHEET NO. 11 OF 24 SHEETS
		CHECKED - ADG, SA	REVISED -		
		DRAWN - ADG	REVISED -		
		CHECKED - DF	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	46
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

Notes:
See sheet 13 of 24 for Sections C-C & D-D and View E-E.
a_7(E), a_8(E), a_{10}(E) and a_{11}(E) bar spacings measured along ℄ Rdwy.

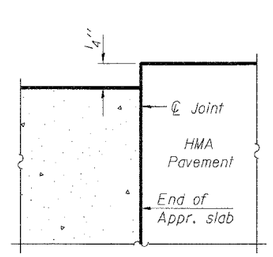


PLAN

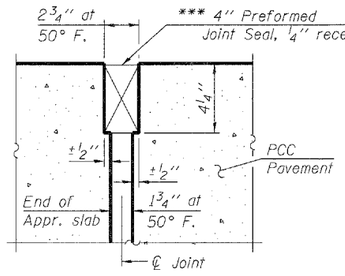
(East Abutment, West Abutment Similar)

* Tilt #9 b_4(E) bars as required to maintain clearance.
** Space between a_7(E) bars, typ. each parapet.

*** Cost included with Concrete Superstructure.

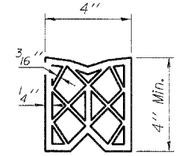


FLEXIBLE PAVEMENT

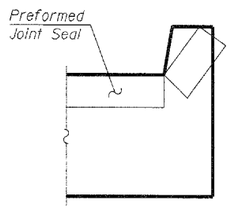


RIGID PAVEMENT

DETAIL A

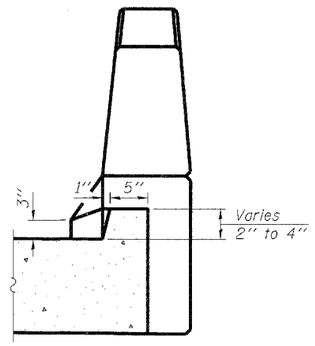


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

(Sheet 1 of 2)

ESI CONSULTANTS, LTD Excellence, Service, Integrity	PLOT DATE = 5/11/2011	DESIGNED - DF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 015-0075 SHEET NO. 12 OF 24 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - ADG, SA	REVISED -			91	(5BR)B-1	COLES	91	47
		DRAWN - ADG	REVISED -					CONTRACT NO. 74244		
		CHECKED - DF	REVISED -			FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

PRINTED DATE: 5/11/2011
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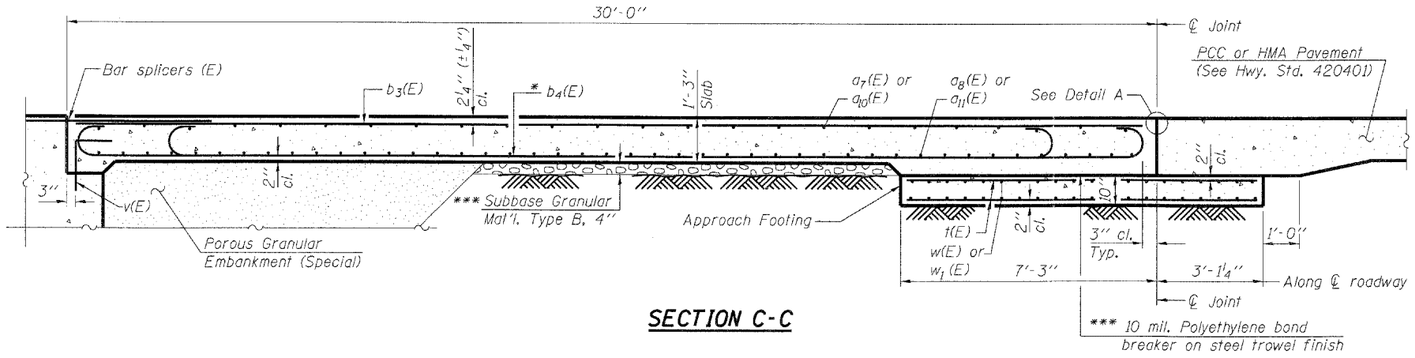
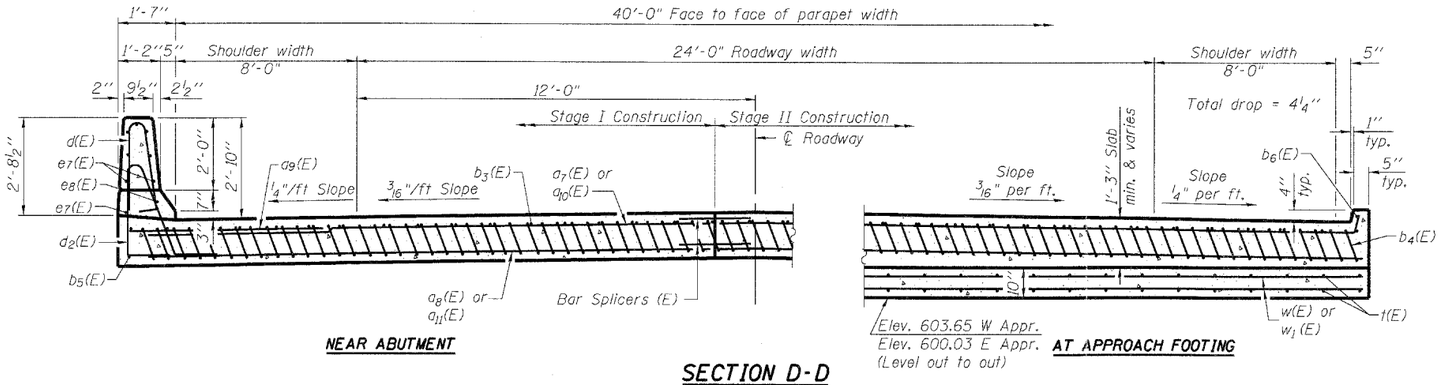
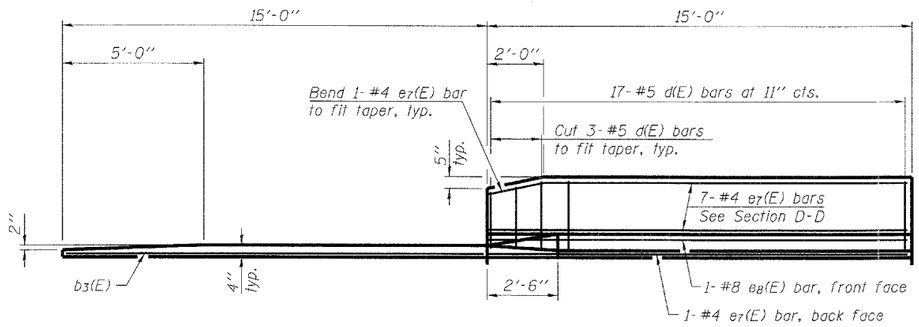


SECTION C-C

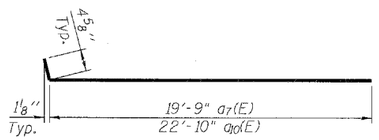


SECTION D-D

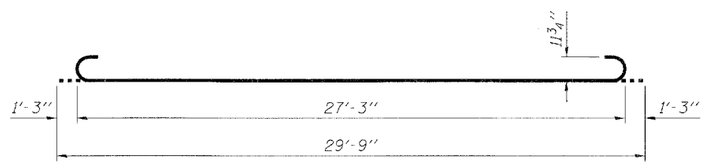
(See Plan for dimensions not shown)



VIEW E-E



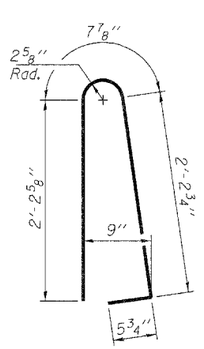
BAR a7(E) & a9(E)



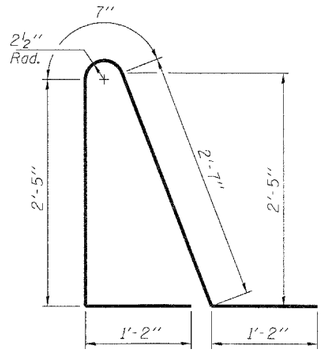
BAR b4(E)

Notes:

See sheet 12 of 24 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 10 of 24.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 22 of 24.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 3 of 24.
For additional parapet details, see sheet 10 of 24.
For Bar Splicer details, see sheet 22 of 24.



BAR d(E)



BAR d2(E)

* Tilt #9 b4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a7(E)	50	#4	20'-2"	
a8(E)	92	#5	19'-10"	
a9(E)	48	#6	6'-6"	
a10(E)	50	#4	23'-3"	
a11(E)	92	#5	22'-11"	
b3(E)	68	#4	29'-8"	
b4(E)	200	#9	29'-9"	
b5(E)	4	#4	14'-8"	
b6(E)	4	#4	14'-5"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e7(E)	32	#4	14'-8"	
e8(E)	4	#8	14'-8"	
t(E)	168	#4	6'-11"	
w(E)	80	#5	19'-10"	
w1(E)	80	#5	22'-11"	
Concrete Superstructure			Cu. Yd.	128.4
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	33450

BA-R 7-1-10

(Sheet 2 of 2)

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FILE NAME: n:\projects\vdot\pb 148, item 25 - 07 various design\work order #7\cadd\drawings\Sheets\v8_R15_ASlabDet_2.dgn

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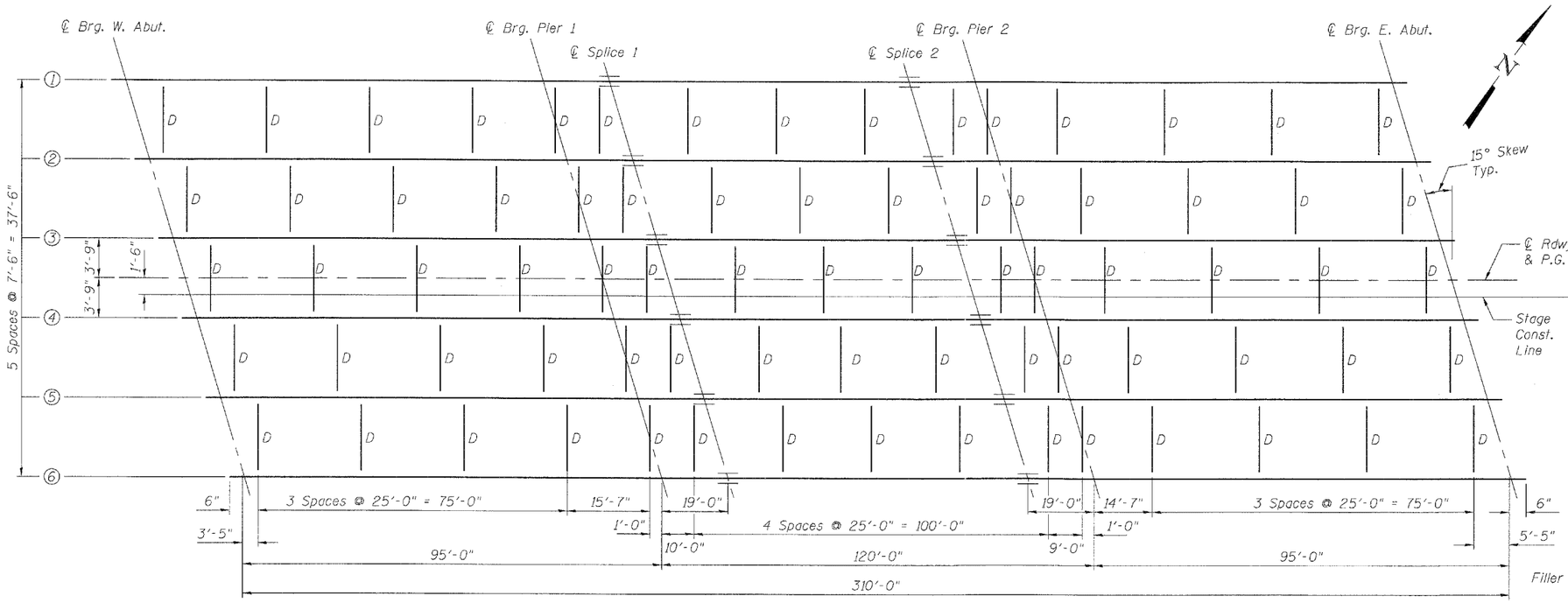
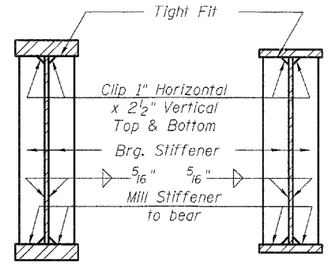
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 13 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	48
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

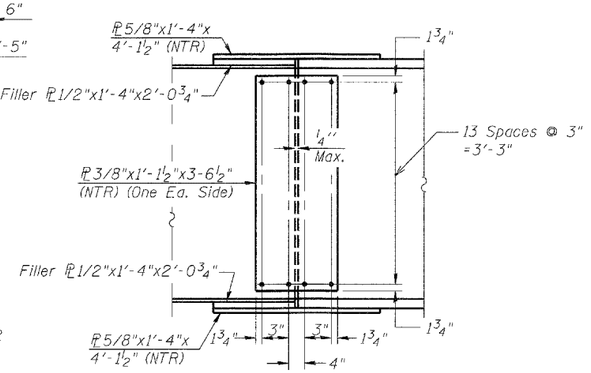


FRAMING PLAN

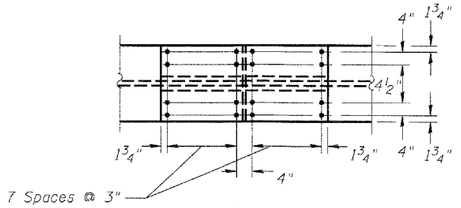


SECTION AT PIER

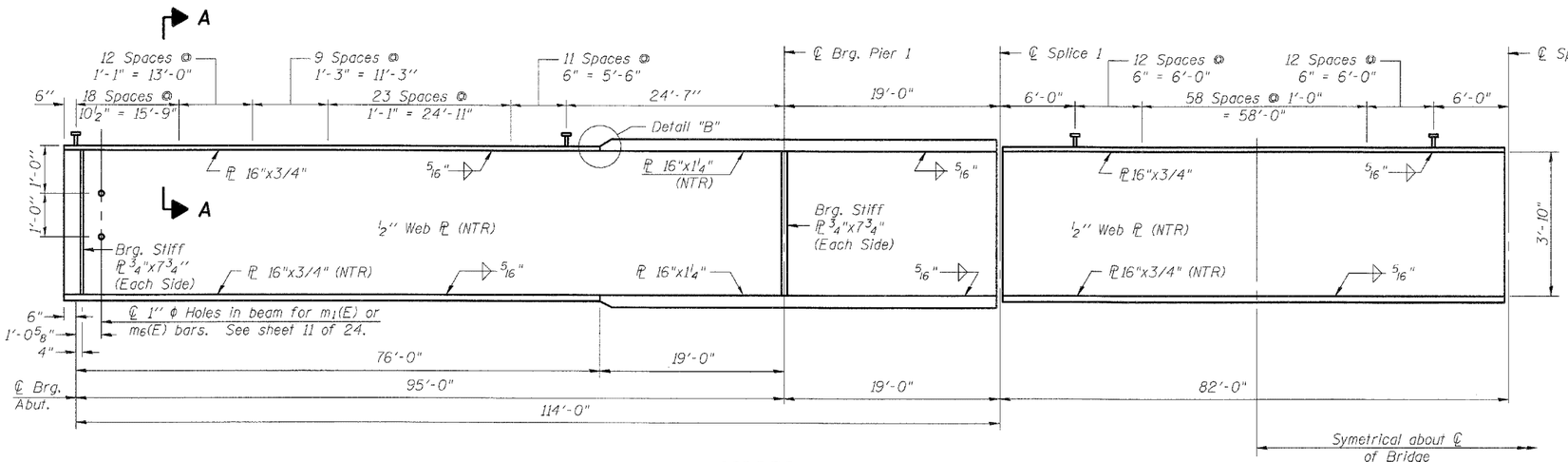
SECTION AT ABUTMENT



ELEVATION



PLAN (TOP AND BOTTOM FLANGE)



GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

Note:
For section A-A, see sheet 15 of 24.
For Detail "B", see sheet 15 of 24.
All structural steel shall be AASHTO M 270 Grade 50W.
See sheet 15 of 24 for diaphragm D details.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

FIELD SPLICE DETAIL - SPLICES 1 &2

G-1

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\pdb 148, item 25 - d7 various design\work order 07\cadd\drawings\Shauso\149_Rd6_Structs\Steel_1.dgn

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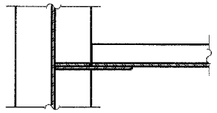
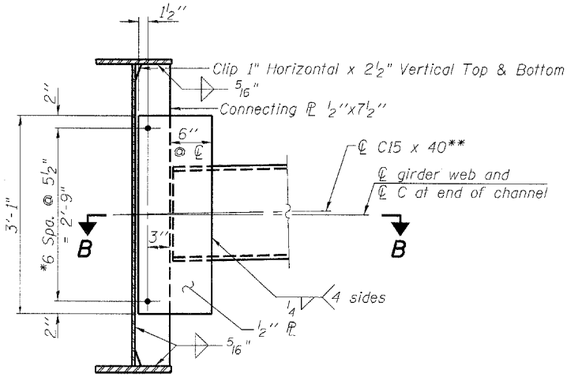
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 015-0075
SHEET NO. 14 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	49
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		



SECTION B-B



INTERIOR DIAPHRAGM (D)

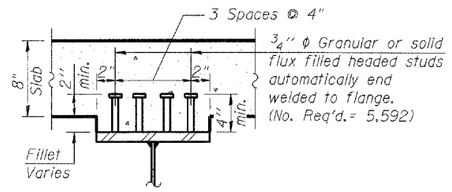
Note:
Two hardened washers required for each set of oversized holes.
*¾" ϕ HS bolts, 15/16" ϕ holes. 13/16" vertical slotted holes in bracing and main member connection plates on the south side of Beam 3. Provide 5/16" plate washers for slotted holes. The bolts for the slotted holes shall be finger tightened prior to the deck slab pouring of Stage II Construction and fully tightened after completion of stage II pour. Position slotted holes in connection plates so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement.
** Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized shall be provided at no extra cost to the department.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_a	(in^4)	17170	26386	17170
$I_c(n)$	(in^4)	40396	---	40396
$I_c(3n)$	(in^4)	30414	---	30414
S_s	(in^3)	723	1088	723
$S_c(n)$	(in^3)	980	---	980
$S_c(3n)$	(in^3)	900	---	900
Z	(in^3)	---	1210	---
DC1	(k/')	0.959	1.022	0.959
M_{DC1}	('k)	547	1239	499
DC2	(k/')	0.150	0.150	0.150
M_{DC2}	('k)	99	159	111
DW	(k/')	0.333	0.333	0.333
M_{DW}	('k)	220	353	246
M_{L+IM}	('k)	1327	1243	1406
M_u (Strength I)	('k)	3460	4452	3592
**** $\phi_f M_n$, $\phi_f M_{nc}$	('k)	5189	5040	5189
f_s DC1	(ksi)	9.1	13.7	8.3
f_s DC2	(ksi)	1.3	1.8	1.5
f_s DW	(ksi)	2.9	3.9	3.3
f_s 1.3(L+IM)	(ksi)	21.1	17.8	22.4
f_s (Service II)	(ksi)	34.4	37.2	35.5
f_s (Total)(Strength I)	(ksi)	---	---	---
***** V_f	(k)	19.8	---	22.2

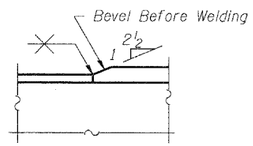
**** Compact sections
***** Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	32.6	118.4
R_{DC2}	(k)	5.5	17.8
R_{DW}	(k)	12.1	39.5
R_{L+IM}	(k)	92.4	135.7
R_{Total}	(k)	142.6	311.4

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in^4 and in^3).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in^4 and in^3).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in^4 and in^3).
Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in^3).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\,M_{L+IM}$
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION A-A



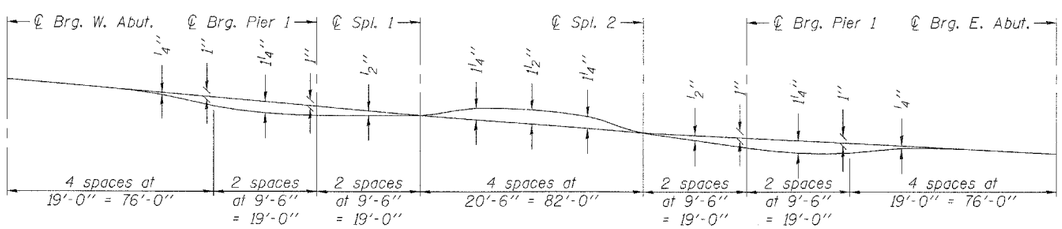
DETAIL "B"

Note:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

***TOP OF WEB ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. W. Abut.	604.59	604.71	604.80	604.76	604.61	604.42
℄ Pier 1	603.19	603.32	603.42	603.39	603.25	603.08
℄ Splice 1	603.01	603.14	603.24	603.22	603.08	602.91
℄ Splice 2	602.19	603.32	602.42	602.40	602.26	602.09
℄ Pier 2	601.98	602.11	602.21	602.20	602.06	601.89
℄ Brg. E. Abut.	601.43	601.57	601.68	601.68	601.55	601.40

*** For Fabrication only.



CAMBER DIAGRAM

Note:
All structural steel shall be AASHTO M 270 Grade 50W.

PRINTED DATE: 5/11/2011
FILE NAME: m:\proj_gets\cad\pb 148, item 25 - d7 various design\work order #7\cadd\drawings\Sheets\50_Rdwy_Details\Structure Steel 2.dgn

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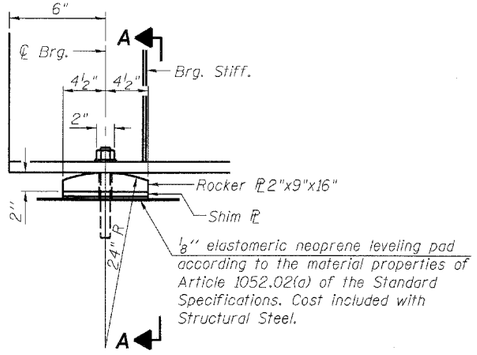
CHECKED	DF	REVISED -

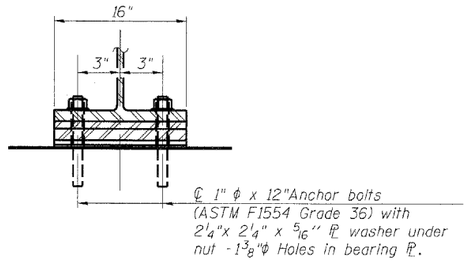
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 15 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	50
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

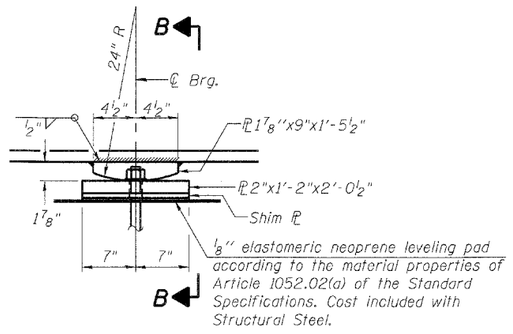


ELEVATION AT ABUTMENT

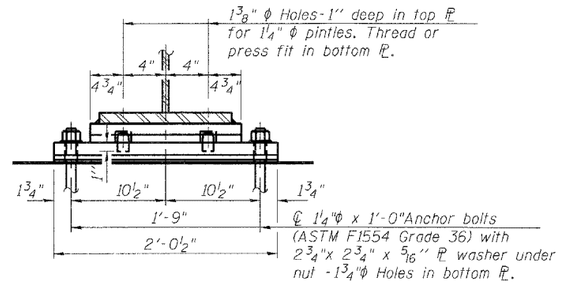


SECTION A-A

FIXED BEARING



ELEVATION AT PIER



SECTION B-B

FIXED BEARING

Notes:

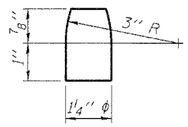
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

All structural steel shall be AASHTO M 270 Grade 50W.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



PINTLE

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	24
Anchor Bolts, 1¼"	Each	24

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DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 16 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	51
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

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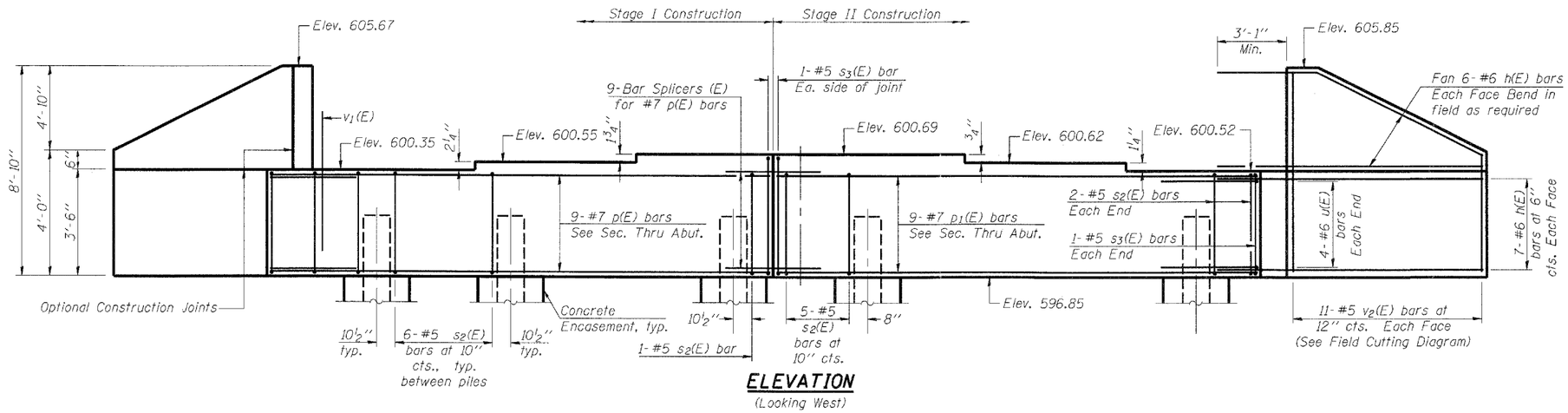
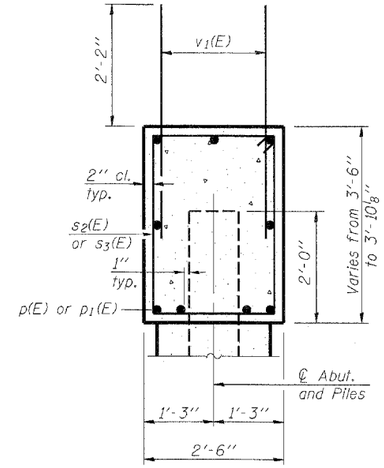
FILE NAME: n:\projects\dot\rpts 140, tsm 25 - d7 various design\work order #7\caddd\drawings\Sheets\SI_Rte16_Brgdet.dgn

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.



ELEVATION
(Looking West)



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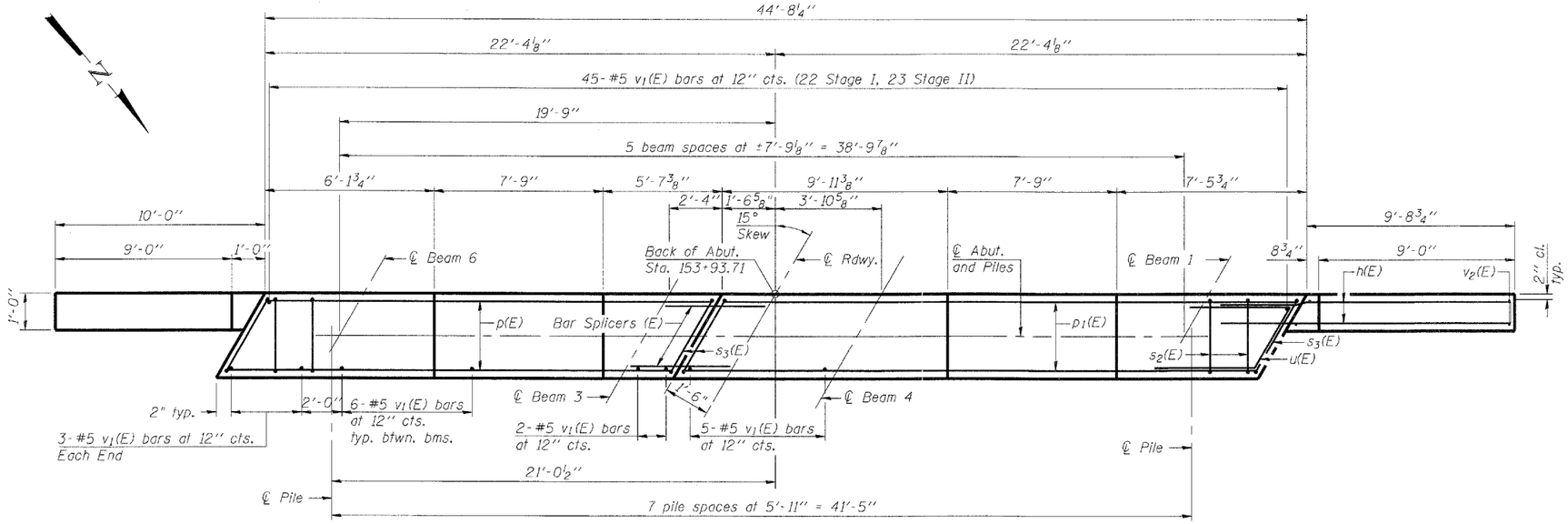


PLAN

BILL OF MATERIAL

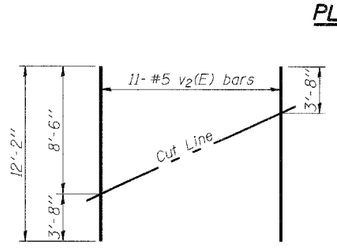
Bar	No.	Size	Length	Shape
h(E)	52	#6	14'-10"	——
p(E)	9	#7	20'-6"	——
p1(E)	9	#7	23'-6"	——
s2(E)	39	#5	11'-7"	⌐
s3(E)	4	#5	11'-9"	⌐
u(E)	8	#6	9'-3"	⌐
v1(E)	81	#5	4'-4"	——
v2(E)	22	#5	12'-2"	——
Structure Excavation		Cu. Yd.	73.5	
Concrete Structures		Cu. Yd.	20.0	
Reinforcement Bars, Epoxy Coated		Pound	3250	
Furnishing Steel Piles HP 12x63		Foot	280	
Driving Piles		Foot	280	
Test Pile Steel HP 12x63		Each	1	
Concrete Encasement		Cu. Yd.	2.8	
Pile Shoes		Each	8	

For details of Bar Splicers, see sheet 22 of 24.
For details of piles and Concrete Encasement, see sheet 21 of 24.

PILE DATA

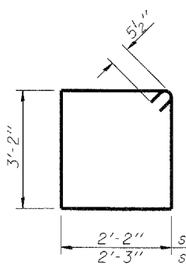
Type: Steel-HP 12x63, with pile shoes
Nominal Required Bearing: 497 kips
Factored Resistance Available: 249 kips
Est. Length: 40', includes 2' of penetration into rock
No. Production Piles: 7
No. Test Piles: 1
Estimated Top of Rock Elev.: 561.6

Note:
Piles shall be driven through - diameter precored holes extending to elevation - according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

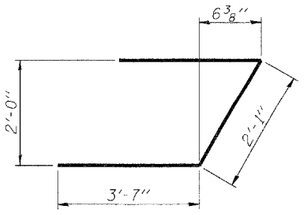


FIELD CUTTING DIAGRAM

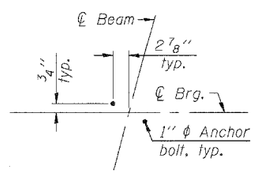
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)



ANCHOR BOLT LAYOUT

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj_gesa\cdo\rptb 148, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\B2-Rt16-Abut_Wes.dgn

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PLOT DATE = 5/11/2011

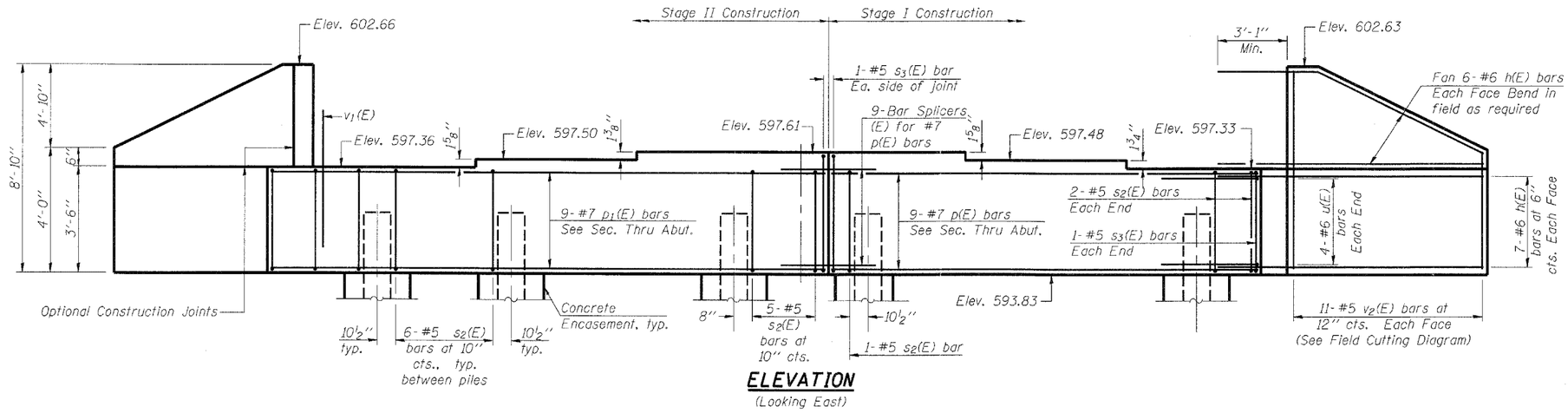
DESIGNED - DF		REVISED -
CHECKED - ADG, SA		REVISED -
DRAWN - ADG		REVISED -
CHECKED - DF		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

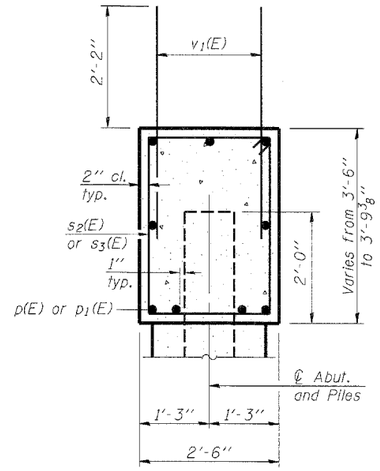
WEST ABUTMENT
STRUCTURE NO. 015-0075
SHEET NO. 17 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	52
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.



ELEVATION
(Looking East)



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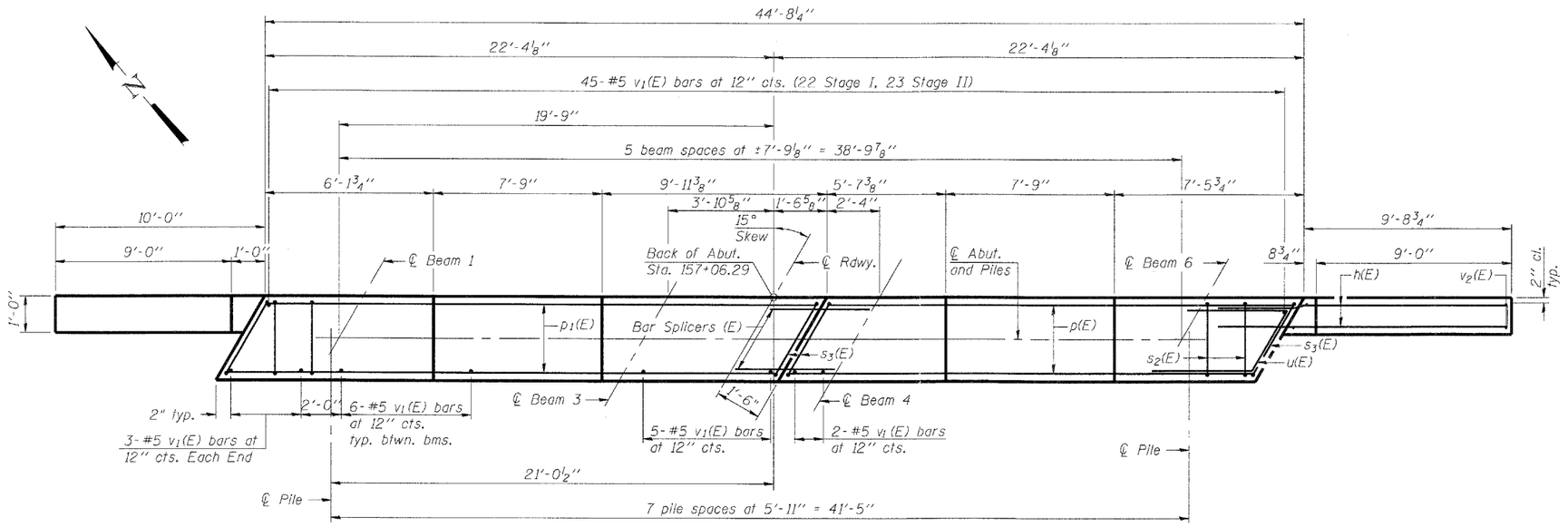


PLAN

BILL OF MATERIAL

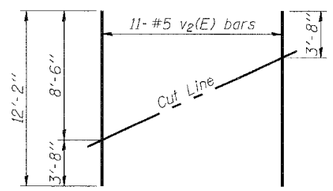
Bar	No.	Size	Length	Shape
h(E)	52	#6	14'-10"	
p(E)	9	#7	20'-6"	
p1(E)	9	#7	23'-6"	
s2(E)	39	#5	11'-7"	
s3(E)	4	#5	11'-9"	
u(E)	8	#6	9'-3"	
v1(E)	81	#5	4'-4"	
v2(E)	22	#5	12'-2"	
Structure Excavation		Cu. Yd.	81.4	
Concrete Structures		Cu. Yd.	20.0	
Reinforcement Bars, Epoxy Coated		Pound	3250	
Furnishing Steel Piles HP 12x63		Foot	168	
Driving Piles		Foot	168	
Test Pile Steel HP 12x63		Each	1	
Concrete Encasement		Cu. Yd.	2.8	
Pile Shoes		Each	8	

For details of Bar Splicers, see sheet 22 of 24.
For details of piles and Concrete Encasement, see sheet 21 of 24.

PILE DATA

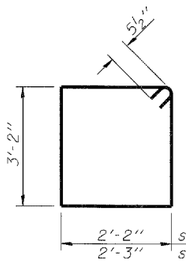
Type: Steel-HP 12x63, with pile shoes
Nominal Required Bearing: 497 kips
Factored Resistance Available: 249 kips
Est. Length: 24', includes 2' of penetration into rock
No. Production Piles: 7
No. Test Piles: 1
Estimated Top of Rock Elev.: 574.4

Note:
Piles shall be driven through - diameter precored holes extending to elevation - according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

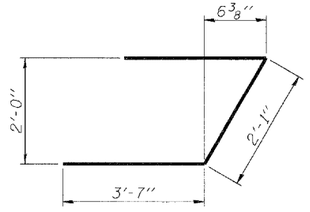


FIELD CUTTING DIAGRAM

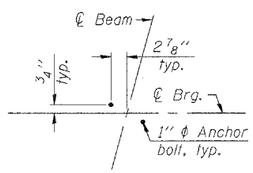
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)



ANCHOR BOLT LAYOUT

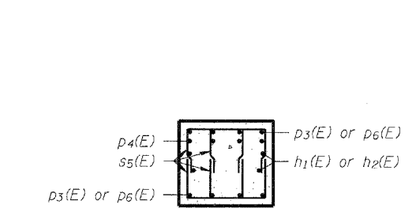
ESI CONSULTANTS, LTD Excellence, Service, Integrity		DESIGNED - DF	REVISED -
		CHECKED - ADG, SA	REVISED -
		DRAWN - ADG	REVISED -
	PLOT DATE = 5/11/2011	CHECKED - DF	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

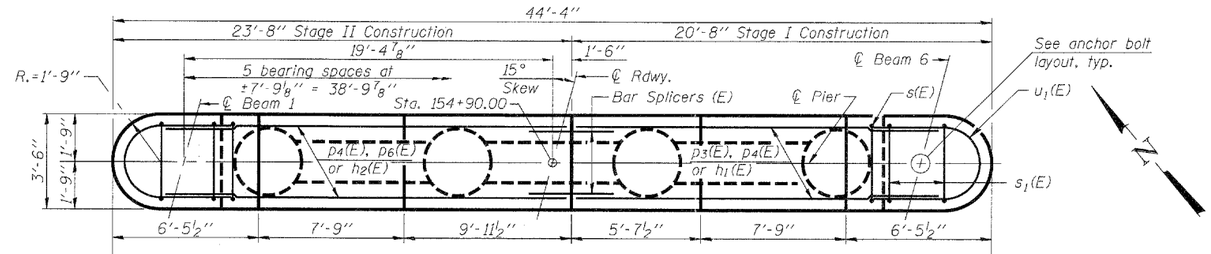
EAST ABUTMENT
STRUCTURE NO. 015-0075
SHEET NO. 18 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	53
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

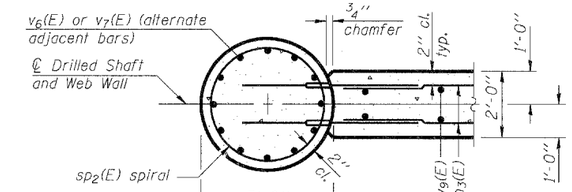
PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\pb 148, item 25 - d\ various design\work order 07\coddl\drawings\Sheets\53_Rt6 Abut. East.dgn



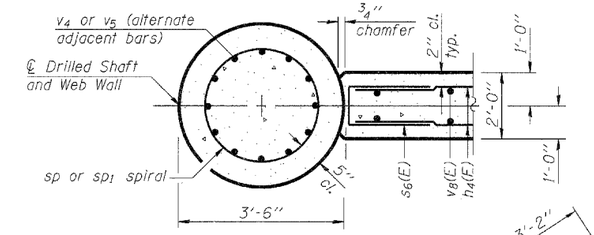
SECTION D-D



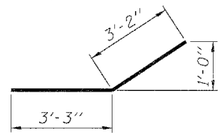
TOP PLAN



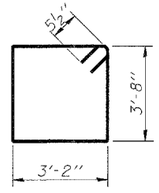
SECTION A-A



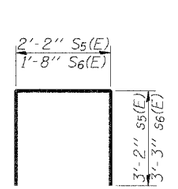
SECTION B-B



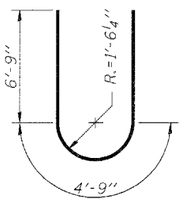
BAR p5(E)



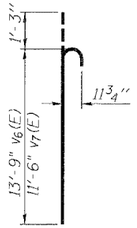
BAR s4(E)



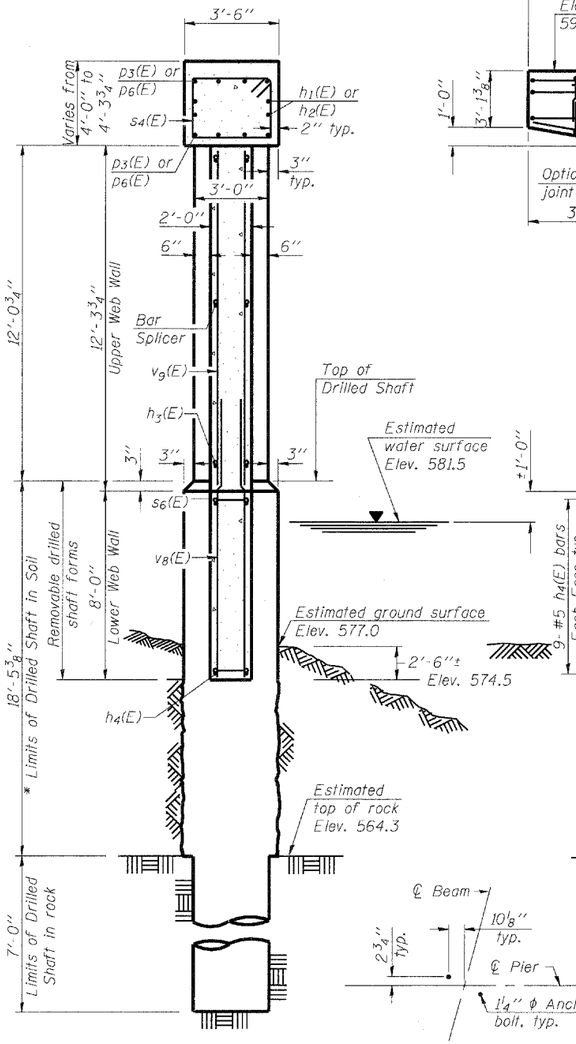
BARS s5(E) & s6(E)



BAR u1(E)



BAR v6(E), v7(E)



SECTION C-C

ANCHOR BOLT LAYOUT

ELEVATION
(Looking East)

When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1 1/2 extra turns at then ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

Construction Sequence for Web Wall:

1. Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
2. Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
3. If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
4. Construct Columns.
5. Construct upper web walls.

Note: Middle web wall to be constructed during Stage II.

BILL OF MATERIAL

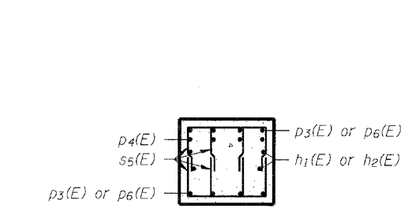
Bar	No.	Size	Length	Shape
h1(E)	4	#5	18'-9"	—
h2(E)	4	#5	21'-9"	—
h3(E)	78	#5	8'-4"	—
h4(E)	54	#5	7'-10"	—
p3(E)	8	#8	18'-9"	—
p4(E)	8	#8	9'-11"	—
p5(E)	8	#8	6'-5"	—
p6(E)	8	#8	21'-9"	—
s4(E)	46	#5	14'-7"	⊐
s5(E)	24	#5	8'-6"	⊔
s6(E)	54	#5	8'-2"	⊔
** sp	4	#5	9'-3"	∧∧∧
** sp1	4	#5	16'-3"	∧∧∧
** sp2(E)	4	#5	13'-7"	∧∧∧
u1(E)	6	#8	18'-3"	⊃
v4	24	#9	25'-11"	—
v5	24	#9	28'-2"	—
v6(E)	24	#9	15'-0"	⊃
v7(E)	24	#9	12'-9"	⊃
v8(E)	54	#5	10'-0"	—
v9(E)	54	#5	11'-11"	—
Concrete Structures		Cu. Yd.	75.1	
Reinforcement Bars		Pound	7800	
Reinforcement Bars, Epoxy Coated		Pound	9790	
Underwater Structure Excavation Protection Location 1		Each	1	
Drilled Shaft in Soil		Cu. Yd.	26.3	
Drilled Shaft in Rock		Cu. Yd.	7.3	

Cast steps monolithically with cap
Space cap reinforcement to miss anchor bolts.
** Length is height of spiral.
For details of the bar splicers and mechanical splicers, see sheet 22 of 24.

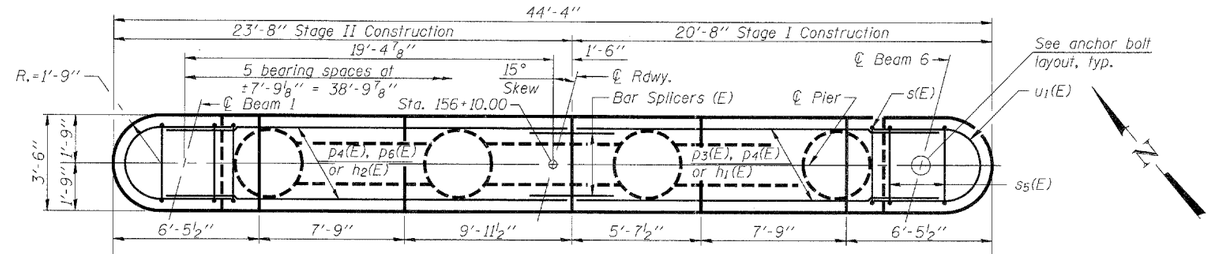
PRINTED DATE: 10/11/2011
FILE NAME: N:\PROJECTS\IDOT\PTB 148, Item 25 - 07 Various Design\Work Order- 07\C4000\Drawings\Sheets\S4_Rd6_Pier_Ldgn

ESI CONSULTANTS, LTD Excellence, Service, Integrity	DESIGNED - DF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT DATE = 10/11/2011	CHECKED - ADG, SA	REVISED -	PIER 1 STRUCTURE NO. 015-0075
	DRAWN - ADG	REVISED -	SHEET NO. 19 OF 24 SHEETS
	CHECKED - DF	REVISED -	

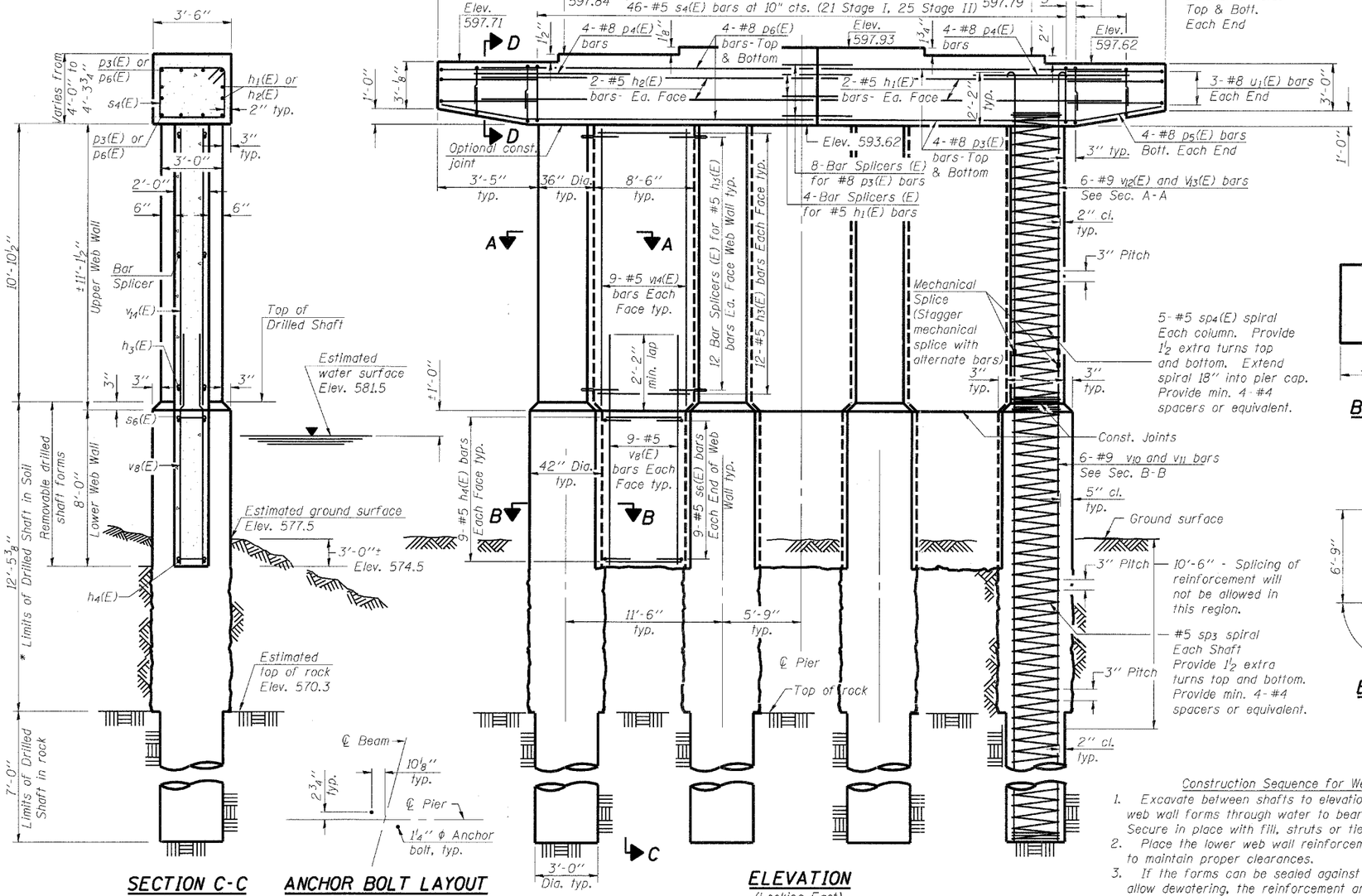
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	54
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



SECTION D-D



TOP PLAN



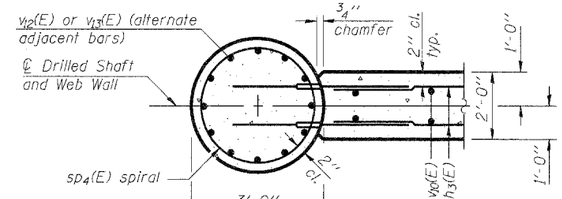
SECTION C-C

ANCHOR BOLT LAYOUT

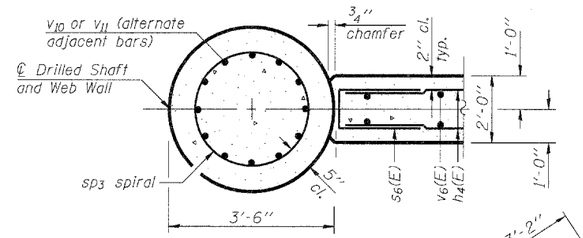
ELEVATION
(Looking East)

When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1 1/2 extra turns at then ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

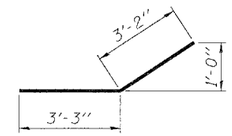
* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.



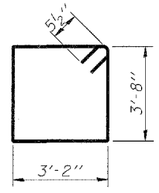
SECTION A-A



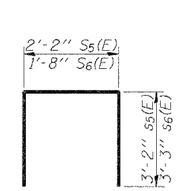
SECTION B-B



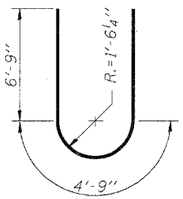
BAR p5(E)



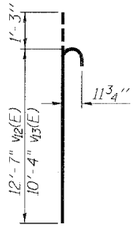
BAR s4(E)



BARS s5(E) & s6(E)



BAR u1(E)



BAR v9(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_1(E)$	4	#5	18'-9"	—
$h_2(E)$	4	#5	21'-9"	—
$h_3(E)$	72	#5	8'-4"	—
$h_4(E)$	54	#5	7'-10"	—
$p_3(E)$	8	#8	18'-9"	—
$p_4(E)$	8	#8	9'-11"	—
$p_5(E)$	8	#8	6'-5"	—
$p_6(E)$	8	#8	21'-9"	—
$s_4(E)$	46	#5	14'-7"	⊐
$s_5(E)$	24	#5	8'-6"	⊔
$s_6(E)$	54	#5	8'-2"	⊔
** sp_3	4	#5	19'-6"	∧∧∧
** $sp_4(E)$	4	#5	12'-5"	∧∧∧
$u_1(E)$	6	#8	18'-3"	⊃
$v_8(E)$	54	#5	10'-0"	—
v_{10}	24	#9	19'-11"	—
v_{11}	24	#9	22'-2"	—
$v_{12}(E)$	24	#9	13'-10"	⊃
$v_{13}(E)$	24	#9	11'-7"	⊃
$v_{14}(E)$	54	#5	10'-9"	—
Concrete Structures		Cu. Yd.	71.2	
Reinforcement Bars		Pound	6420	
Reinforcement Bars, Epoxy Coated		Pound	9320	
Underwater Structure Excavation Protection Location 2		Each	1	
Drilled Shaft in Soil		Cu. Yd.	17.7	
Drilled Shaft in Rock		Cu. Yd.	7.3	

Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
** Length is height of spiral.
For details of the bar splicers and mechanical splicers, see sheet 22 of 24.

Construction Sequence for Web Wall:

1. Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
2. Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
3. If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
4. Construct Columns.
5. Construct upper web walls.

Note: Middle web wall to be constructed during Stage II.

PRINTED DATE: 10/11/2011
FILE NAME: N:\PROJECTS\IDOT\FTB 148, Item 25 - 07 Various Design\Work Order 07\CADD\Drawings\Sheets\S5_Rd6_Pier_2.dgn

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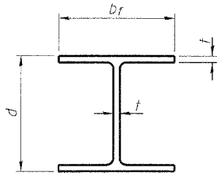
PLOT DATE = 10/11/2011

DESIGNED - DF	REVISED -	
CHECKED - ADG, SA	REVISED -	
DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

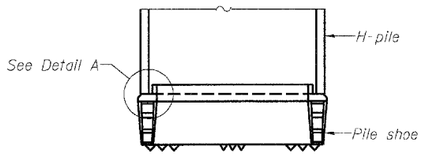
PIER 2
STRUCTURE NO. 015-0075
SHEET NO. 20 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	55
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

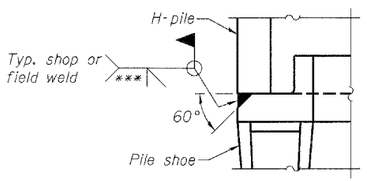


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''

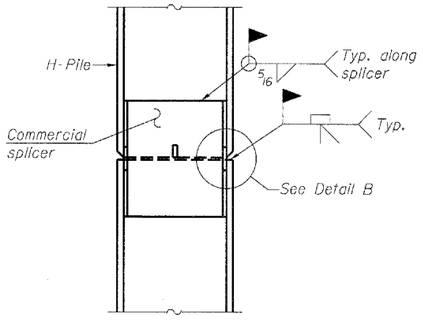


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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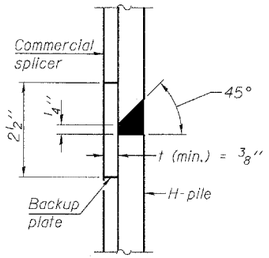
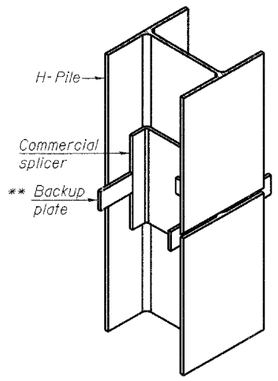
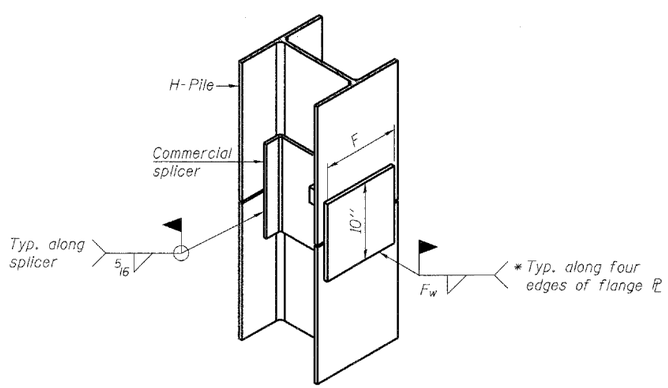


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



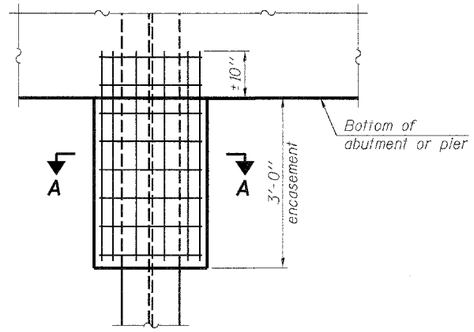
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

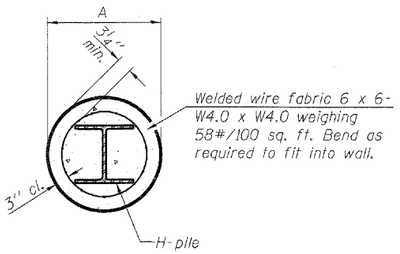
* Interrupt welds $\frac{1}{4}''$ from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



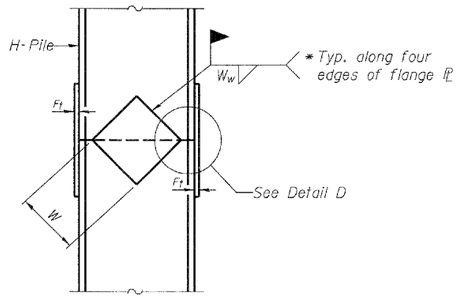
ELEVATION



Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT



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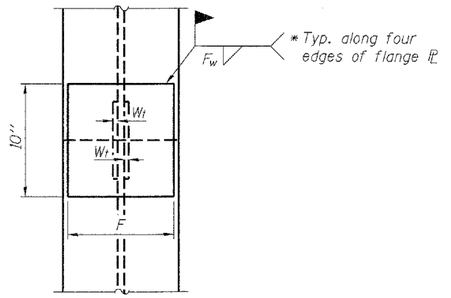
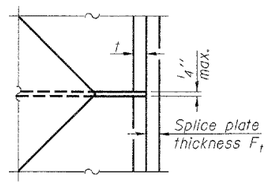


END VIEW



DETAIL D

Designation	F	F_f	F_w	W	W_f	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 7-1-10

ESI CONSULTANTS, LTD
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PLOT DATE = 5/11/2011

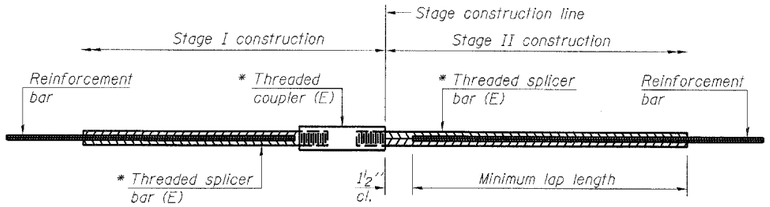
DESIGNED - DF	REVISED -	
CHECKED - ADG, SA	REVISED -	
DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 21 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	56
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\ydot\ydp 148, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\S6-R16-PileDetails.dgn



STANDARD BAR SPLICER ASSEMBLY

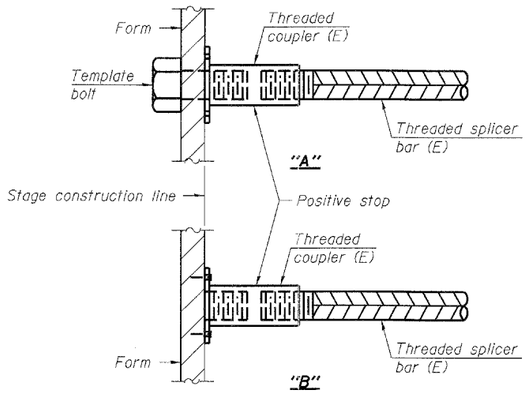
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1½" + thread length

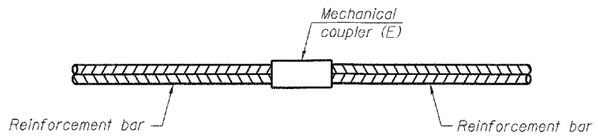
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	1194	3
Abutments	#7	18	4
Abut. Diaph.	#6	16	5
Approach Slabs	#4	50	3
Approach Slabs	#5	172	3
Piers	#5	308	4
Piers	#8	16	4



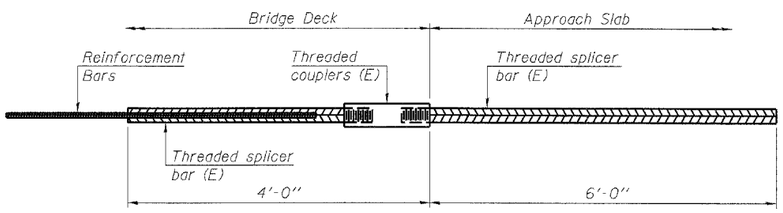
INSTALLATION AND SETTING METHODS

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



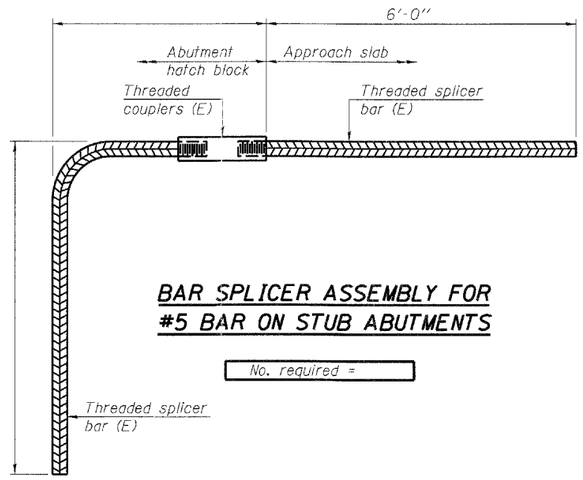
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Piers	#9	96



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 92



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

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PLOT DATE = 5/11/2011

DESIGNED - DF	REVISED -	
CHECKED - ADG, SA	REVISED -	
DRAWN - ADG	REVISED -	
CHECKED - DF	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 015-0075
SHEET NO. 22 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	57
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\pub 148, item 25 - d7 various design\work order 07\caddd\drawings\Sheets\S7 R16 Bar Spl Bsd.dgn

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 8/18/06

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140lb

STRUCT. NO. 015-0019
Station 155+09

BORING NO. 1 (2006) W Abut
Station 153+36
Offset 9.00ft Rt
Ground Surface Elev. 601.12 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
7" asphalt on 12" concrete pavement.			
599.62			
Very stiff, damp, brown, SANDY CLAY TILL.	2		
	6	3.1	11
	6	5	
596.62			
Soft, very damp, brown, SANDY LOAM.	-5 2		
	3	0.3	20
	3	5	
594.12			
Soft, damp, gray, SILTY LOAM.	1		
	2	0.3	14
	3	8	
591.12	-10 0		
Soft to medium, damp, gray marbled red, CLAY LOAM.	2	0.5	16
	3	8	
589.12			
Soft, damp, brown/gray, SANDY CLAY LOAM.	0		
	2	0.4	13
	3	8	
	-15 0		
	1	0.3	14
	2	8	
583.62			
Stiff, damp, gray, SANDY CLAY LOAM TILL.	0		
	0	2.1	12
	3	8	
581.62			
Soft, damp, gray, CLAY LOAM.	-20 0		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Surface Water Elev. 580.51 ft Stream Bed Elev. 576.11 ft Groundwater Elev.: First Encounter 586.6 ft Upon Completion 582.6 ft After 48 Hrs. 586.0 ft			
Soft, damp, gray, CLAY LOAM, *(continued)*	580.62		
Very soft, damp, dark gray, SANDY LOAM.	0	0.3	18
	2	B	
	0	0.1	18
	C	B	
Soft, damp, gray, CLAY LOAM.	-25 0		
	0	0.1	16
	0	B	
** 50/1", 50/0", 50/0"	-30 0		
	1	0.2	19
	3	B	
* Very dense, moist, gray, LIMESTONE. Borehole continued with rock coring.	-35 0		
	5	0.1	12
	10	B	
	0		
Dense, damp, gray, SANDY LOAM w/ Gravel.	-45 14		16
	22		
	-50		
551.62			
Borehole continued with rock coring.	-55		

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 2 of 2

Date 8/18/06

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 015-0019
Station 155+09

CORING BARREL TYPE & SIZE NW, Conv Dbl
Rbs, Split Inner

BORING NO. 1 (2006) W Abut
Station 153+36
Offset 9.00ft Rt
Ground Surface Elev. 601.12 ft

Core Diameter 2.06 in
Top of Rock Elev. 551.62 ft
Begin Core Elev. 551.12 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray, LIMESTONE.	551.12				
	B1C1	98	67	2.1	
Gray, SANDY CLAY SHALE.	-45 558.12				
Gray, LIMESTONE. *Severely weathered area.* *Rock core B1C1 at depth 44.1' to 44.8' depth = 1102 tsf Qu.*					
	B1C2	68	70	1.7	
	-50				
Dark gray, moderately weathered, SILTY CLAY SHALE.	554.92				
Rock core B1C2 from 47.9' to 48.5' depth = 5.3 tsf Qu.					
Light gray, soft, SANDY CLAY SHALE.	552.62				
Extent of exploration.	-55 551.12				
Benchmark: BM 4733-2 chiseled square on NE wingwall of existing structure = 597.43' elevation. Provided by Program Development.					
	-60				

Color pictures of the cores Available on request
Cores will be stored for examination until 03/18/09
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 8/19/06

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140lb

STRUCT. NO. 015-0019
Station 156+09

BORING NO. 2 (2006) E Abut
Station 156+79
Offset 9.00ft Lt
Ground Surface Elev. 596.88 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
14" asphalt pavement.			
596.68			
Stiff to medium, damp, brown, CLAY LOAM.	2		
	3	1.3	11
	4	B	
	-5 2		
	3	0.8	15
	4	B	
590.88			
Very soft, very damp, brown, SILTY LOAM.	0		
	0	0.1	16
	1	B	
587.38	-10 1		
Very soft, very damp, brown mottled gray, SANDY LOAM.	2	0.2	13
	2	S	
	2		
	2	0.2	14
	2	S	
582.38	-15 0		
Very loose, wet, brown, fine grained, SAND. *9% passing #200 sieve.*	0		24
	0		
579.88			
Very soft, wet, brown, SANDY LOAM w/ some fine gravel.	3		
	2	0.1	17
	3	S	
577.38	-20 1		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Surface Water Elev. 580.51 ft Stream Bed Elev. 576.11 ft Groundwater Elev.: First Encounter 582.4 ft Upon Completion 586.2 ft After 24 Hrs. 581.6 ft			
Soft, damp, brown marbled gray, SILTY LOAM w/ some medium gravel. *(continued)*	3	0.4	19
	3	S	
	574.88		
Very dense, wet, brown, fine grained, SAND. *9% passing #200 sieve.*	574.38 50		
	50/2"		3
	50/1"		
Very dense, moist, gray, LIMESTONE fragments.	-25 50/2"		7
	571.68 50/1"		
Borehole continued with rock coring.	50/0"		
	-30		
	-35		
	-40		
	-45		

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 2 of 2

Date 8/19/06

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY E. Sandschafer

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles CORING METHOD Rotary, Surf Set Diamond Bit

STRUCT. NO. 015-0019
Station 156+09

CORING BARREL TYPE & SIZE NW, Conv Dbl
Rbs, Split Inner

BORING NO. 2 (2006) E Abut
Station 156+79
Offset 9.00ft Lt
Ground Surface Elev. 596.88 ft

Core Diameter 2.06 in
Top of Rock Elev. 574.38 ft
Begin Core Elev. 571.88 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray, moderate to severe weathered, LIMESTONE.	571.88				
	B2C1	80	38	1.5	
	570.38				
Grey, severely weathered, LIMESTONE fragments and chips.	570.06				
Gray, slightly weathered, LIMESTONE.					
Rock core B2C1 at depth 28.6' to 29.1' = 1365 tsf Qu.	-30				
Gray, moderately weathered, LIMESTONE. *Rock core B2C2 at depth 30.0' to 30.5' = 630 tsf Qu.*	568.88				
	B2C2	95	29	1.2	
	-35				
Alternating layers of gray, LIMESTONE and light gray, SANDY CLAY SHALE.	564.28				
Gray, SILTY CLAY SHALE.	563.28				
Extent of exploration.	-40 551.88				
Benchmark: BM 4733-2 chiseled square on NE wingwall of existing structure = 597.43' elevation. Provided by Program Development.					
	-45				

Color pictures of the cores Available on request
Cores will be stored for examination until 08/19/09
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 8/9/80

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 015-0019
Station 155+09

BORING NO. 1 (1980) W Abut
Station 153+80
Offset 18.00ft Rt
Ground Surface Elev. 584.2 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Black, SANDY CLAY LOAM, alluvium.			
	6	0.8	15
		S	
	-10		20
578.80			
Black, fine, organic, SANDY CLAY LOAM with SAND Lens and Water.	4	0.4	16
	-15	B	
574.00			
Brown, SAND & GRAVEL.	10		
571.80			
Coarse, cobbley, GRAVEL.	23		
	-25		
	100		
	-30		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter N/A ft Upon Completion N/A ft After Hrs. N/A ft			
Coarse, cobbley, GRAVEL. *(continued)*	554.30		
Grey, SHALE	75		
	-35		
Extent of exploration.	550.30		
	-40		
Augered to 550.3, no Limestone encountered.			
	-45		
	-50		
	-55		
	-60		

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/9/80

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 015-0019
Station 156+09

BORING NO. 2 (1980)
Station 154+45
Offset 18.00ft Rt
Ground Surface Elev. 584.00 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Black, SANDY LOAM, alluvium w/ water.			
	-5 5		
578.00			
Soft, black, SANDY CLAY LOAM, alluvium.	2		
575.50			
Loose, fine, brown, SAND.	-10 2		
573.00			
Brown, coarse, SAND & GRAVEL.	13		
570.50			
Brown, GRAVEL.	-15 21		
LIMESTONE.	100/0"		
567.50			
Extent of exploration.	-20 566.50		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter N/A ft Upon Completion N/A ft After Hrs. N/A ft			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/9/80

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 015-0019
Station 155+09

BORING NO. 3 (1980) P1
Station 154+27
Offset 21.00ft Lt
Ground Surface Elev. 584.2 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Black, SANDY CLAY LOAM, alluvium.			
	-5 6		14
577.20			
Fine, dark gray, SANDY LOAM, alluvium w/ water.	-10 2		
572.20			
Coarse, GRAVEL.	-15 26		
569.20			
Boulders - GRAVEL.	118		
564.70			
LIMESTONE.	-30		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Extent of exploration.			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/9/80

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 015-0019
Station 156+09

BORING NO. 4 (1980) E Abut
Station 158+50
Offset 22.00ft Lt
Ground Surface Elev. 583.3 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark gray, SANDY CLAY LOAM to CLAY LOAM, alluvium.			
	-5 5	0.4	19
		B	
575.30			
Weathered, broken, SHALE.	48		
572.80	-10		
Gray, SHALE w/ Limestone lens.	100/0"		
570.30			
LIMESTONE.	-15 100/0"		
Extent of exploration.	568.30		
	-20		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter N/A ft Upon Completion N/A ft After Hrs. N/A ft			

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, from 137 (Rev. 8-99)

(Sheet 1 of 2)

PRINTED DATE: 5/11/2011
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PLOT DATE = 5/11/2011

DESIGNED	-	DF
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DRAWN	-	ADG
CHECKED	-	DF

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 015-0075
SHEET NO. 23 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	58
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/10/09

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 016-0019
Station 155+09

BORING NO. 5 (1980) P3
Station 155+31
Offset 7.00ft Rt
Ground Surface Elev. 586.60 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Air.			
-5			
-10			
-15			
-20			
Air. (continued)			
Alluvium. 574.10			
-25			
-30			
LIMESTONE. 571.20			
Extent of exploration. 571.10	100/1		
-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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/10/09

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 016-0019
Station 155+09

BORING NO. 6 (1980) P4
Station 155+69
Offset 7.00ft Rt
Ground Surface Elev. 587.5 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Air.			
-5			
-10			
-15			
-20			
Air. (continued)			
Alluvium. 574.00			
-25			
-30			
LIMESTONE. 571.60			
Extent of exploration. 570.30	100/5		
-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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/10/09

ROUTE FAP 91 (IL 16) DESCRIPTION Embarras River LOGGED BY Baker

SECTION 5 BR LOCATION SW 1/4, SEC. 5, TWP. 12 N, RNG. 10 E, 3 PM

COUNTY Coles DRILLING METHOD HAMMER TYPE

STRUCT. NO. 016-0019
Station 155+09

BORING NO. 7 (1980) P2
Station 154+87
Offset 7.00ft Rt
Ground Surface Elev. 589.40 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter N/A ft
Upon Completion N/A ft
After Hrs. N/A ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Air.			
-5			
-10			
-15			
-20			
Air. (continued)			
Alluvium. 576.60			
-25			
-30			
LIMESTONE. 570.00			
Extent of exploration. 569.40	100/4		
-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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 1 of 1

Date 10/8,9,10/2009

ROUTE FAP 91 (IL 16) DESCRIPTION Bridge Replacement - IL 16 over Embarras River LOGGED BY SCI

SECTION 5BR LOCATION Charleston Township: SW1/4, SEC. 5, TWP. 12N, RNG. 10E

COUNTY Coles DRILLING METHOD Diedrich D-50 - Barge mounted HAMMER TYPE Cat-head

STRUCT. NO. 016-0019
Station 155+09

BORING NO. B-101
Station 154+70
Offset 26.5 ft Lt
Ground Surface Elev. 577.8 ft

Surface Water Elev. 590.6 ft
Stream Bed Elev. 577.8 ft

Groundwater Elev.:
First Encounter - ft
Upon Completion - ft
After Hrs. - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY LOAM: Gray, fine to medium, some gravel (A-2)	1		
SPT tests were 24 inches in length (4 N-values obtained).	1		
Becomes gray, trace fine to medium gravel	2		
Becomes brown, some limestone fragments	3		
Becomes brown, trace fine to medium gravel, no limestone fragments	6		
Some limestone fragments	7		
-5	24		
569.8	10		
GRAVEL: Fine to coarse, trace fine sand, silt (A-1)	10		
-10	9		
	7		
	50/2"		
Becomes fine to medium (SPT test at 13.5 feet with N-value 83/1")	564.3		
Borehole continued with rock coring.			
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

ROCK CORE LOG

Page 1 of 1

Date10/8,9,10/2009

ROUTE FAP 91 (IL 16) DESCRIPTION Bridge Replacement - IL 16 over Embarras River LOGGED BY SCI

SECTION 5BR LOCATION Charleston Township: SW1/4, SEC. 5, TWP. 12N, RNG. 10E

COUNTY Coles CORING METHOD Rotary, surface set diamond bit

STRUCT. NO. 016-0019
Station 155+09

BORING NO. B-101
Station 154+70
Offset 26.5 ft Lt
Ground Surface Elev. 577.8 ft

CORING BARREL TYPE & SIZE NQ2 wireline
Core Diameter 1.9 in
Top of Rock Elev. 564.3 ft
Begin Core Elev. 564.3 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
LIMESTONE: Gray, hard, very fine to finely crystalline, slightly weathered, thinly bedded, fractured 564.3	1	60	0	4.8		
-15	2	92	19	3.8	1108.0	
Weathered seams with sandy clay in joints and fractured areas.	3	69	28	3.7		
559.5						
CLAY & WEATHERED LIMESTONE: No recovery in this cored interval. Soft materials, then weathered limestone, gray, hard encountered with seams filled with greenish gray, sandy clay. 554.3						
-20 LIMESTONE: Gray, very fine to finely crystalline, slightly weathered, with shale seam/inclusions near soft layer					1087.0	
Shale not observed	4	100	100	3.3		
553.8						
Boring terminated at 24.0 ft.						
-25						
-30						
-35						

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

SOIL BORING LOG

Page 1 of 1

Date 10/10/09

ROUTE FAP 91 (IL 16) DESCRIPTION Bridge Replacement - IL 16 over Embarras River LOGGED BY SCI

SECTION 5BR LOCATION Charleston Township: SW1/4, SEC. 5, TWP. 12N, RNG. 10E

COUNTY Coles DRILLING METHOD Diedrich D-50 - Barge mounted HAMMER TYPE Cat-head

STRUCT. NO. 016-0019
Station 155+09

BORING NO. B-102
Station 155+18
Offset 24.0 ft Rt
Ground Surface Elev. 576.8 ft

Surface Water Elev. 590.6 ft
Stream Bed Elev. 576.8 ft

Groundwater Elev.:
First Encounter - ft
Upon Completion - ft
After - Hrs. - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY GRAVEL: Fine to coarse gravel, fine to coarse sand, trace silt (A-1)	5		
	8		
	11		
	9		
-5	50/0.5"		
Slightly weathered 568.8			
Borehole continued with rock coring.			
-10			
-15			
-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
SCI Engineering, Inc.

ROCK CORE LOG

Page 1 of 1

Date 10/10/09

ROUTE FAP 91 (IL 16) DESCRIPTION Bridge Replacement - IL 16 over Embarras River LOGGED BY SCI

SECTION 5BR LOCATION Charleston Township: SW1/4, SEC. 5, TWP. 12N, RNG. 10E

COUNTY Coles CORING METHOD Rotary, surface set diamond bit

STRUCT. NO. 016-0019
Station 155+09

BORING NO. B-102
Station 155+18
Offset 24.0 ft Rt
Ground Surface Elev. 576.8 ft

CORING BARREL TYPE & SIZE NQ2 wireline
Core Diameter 1.9 in
Top of Rock Elev. 570.3 ft
Begin Core Elev. 568.8 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
LIMESTONE: Gray, hard, very fine to finely crystalline, weathered, thinly bedded 568.8	1	95	18	2.5		
Seams of highly weathered and weak limestone					1635.0	
567.5 -20						
1/4-inch seam of sandy clay	2	91	45	2.5	616.0	
CLAYEY SHALE: Gray, low hardness to soft 563.0						
LIMESTONE: Gray, hard, very fine to finely crystalline, slightly weathered to fresh, thinly bedded 561.8 -25						
Boring terminated at 15.0 ft.						
-30						
-35						

Color pictures of the cores Yes
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

(Sheet 2 of 2)

PRINTED DATE: 5/11/2011
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PLOT DATE = 5/11/2011

DESIGNED -	DF	REVISED -
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DRAWN -	ADG	REVISED -
CHECKED -	DF	REVISED -

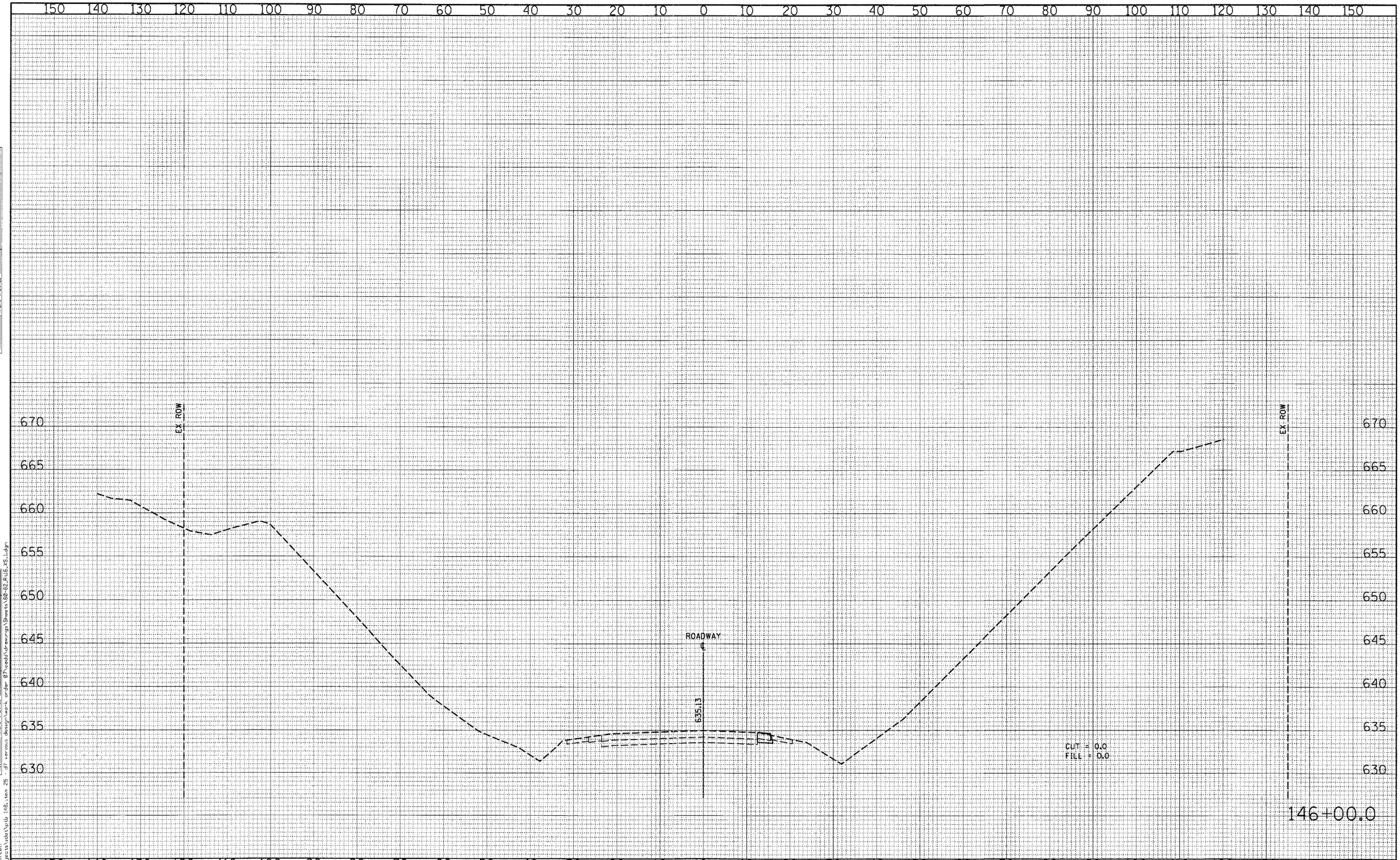
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 015-0075
SHEET NO. 24 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	59
		CONTRACT NO. 74244		
FED. ROAD DIST. NO. .	ILLINOIS	FED. AID PROJECT		

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		



PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\ydot\ptb 148, item 25 - d7 various design\work order 07\coad\drawings\Sheets\60-82,R16,XS.dgn

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	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.2000 ' / IN.	CHECKED - DF, PAT	REVISED -	
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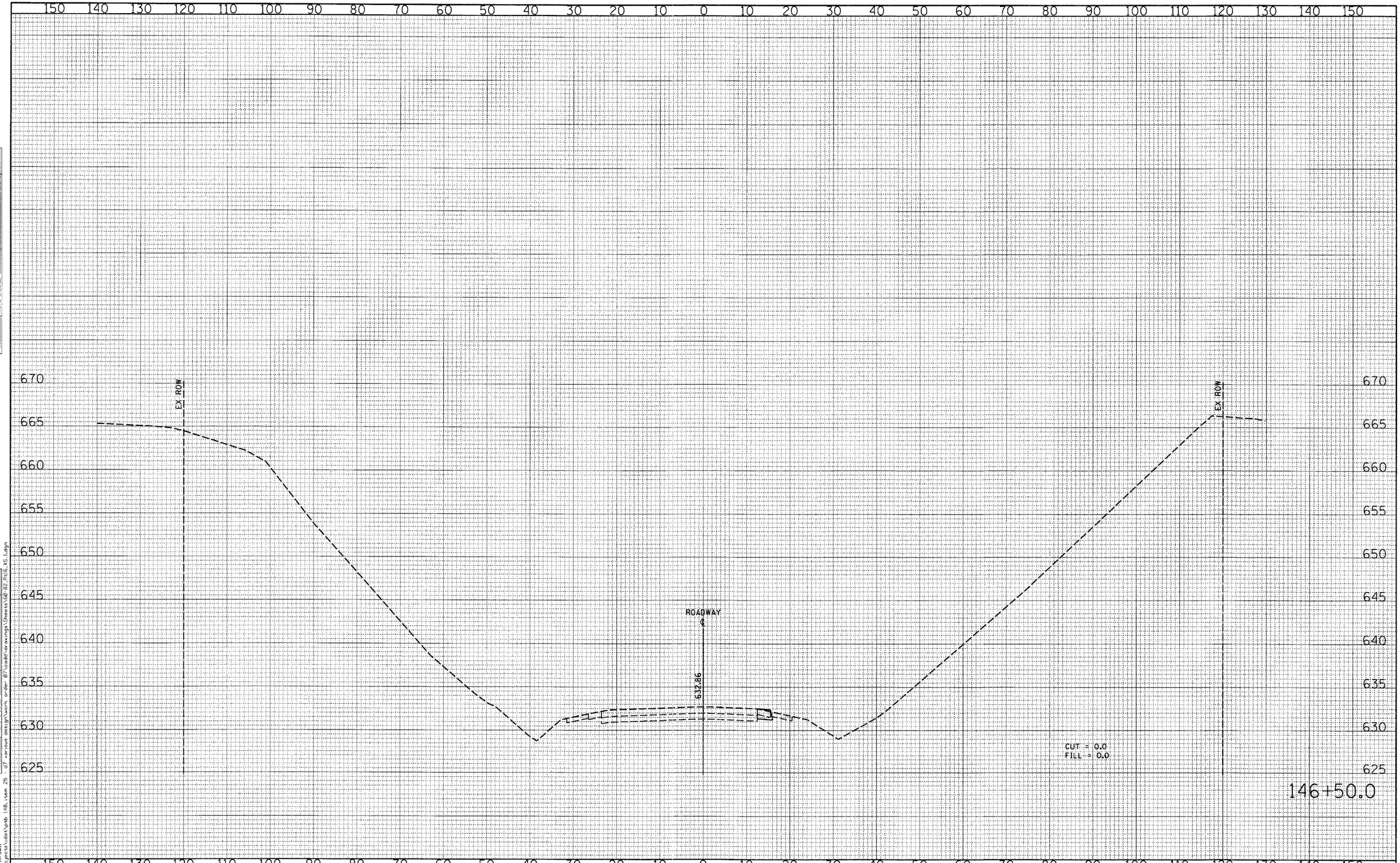
CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 1 OF 23 SHEETS | STA 146+00.0 | TO STA 146+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	60
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
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CROSS SECTIONS
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SCALE: 1"H=10' 1"V=5' | SHEET NO 2 OF 23 SHEETS | STA 146+50.0 | TO STA 146+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	61
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

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

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FILE NAME: H:\projects\idot\ptb 148, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\60-82_Rte_XS_1.dgn

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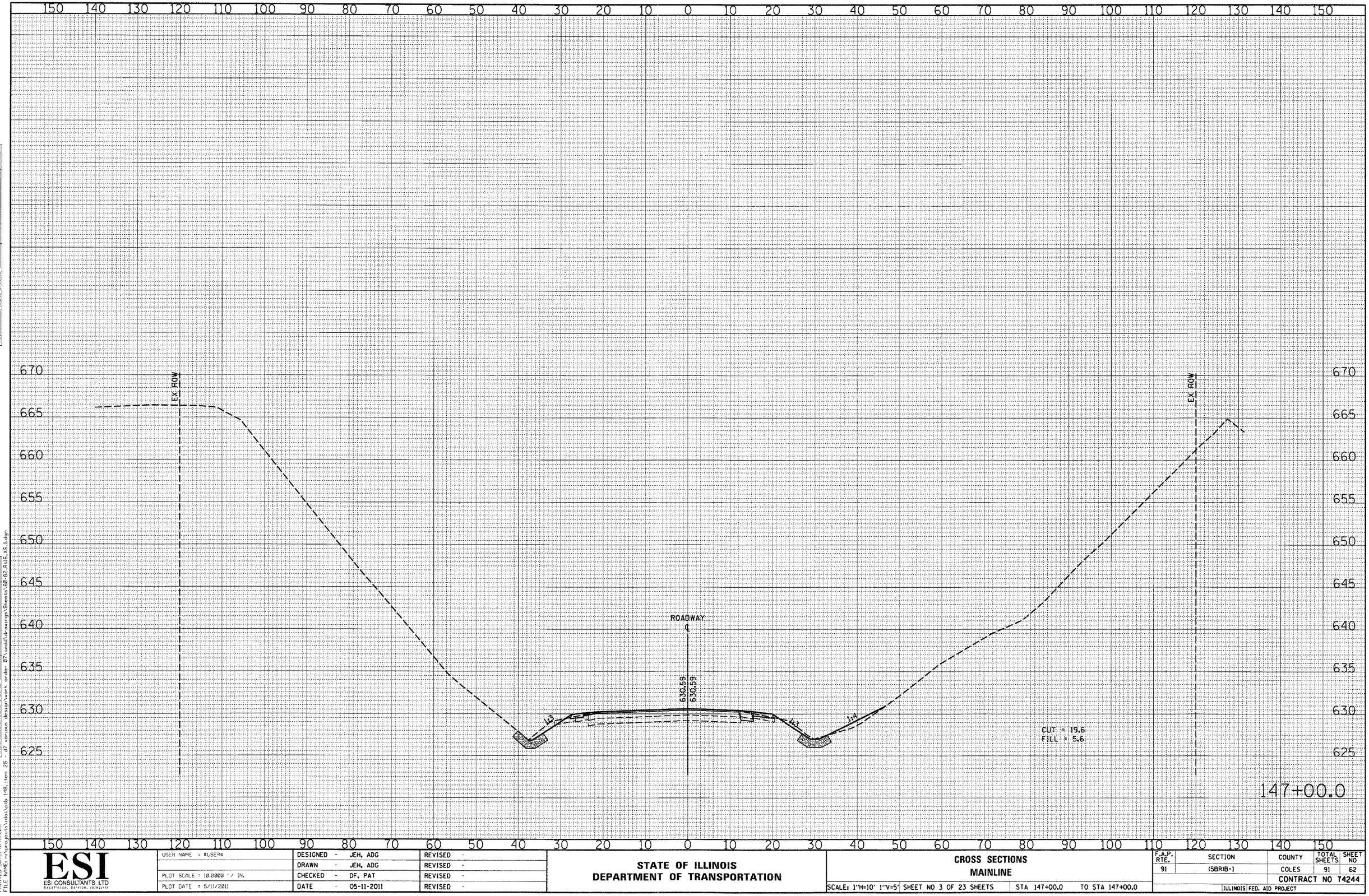
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

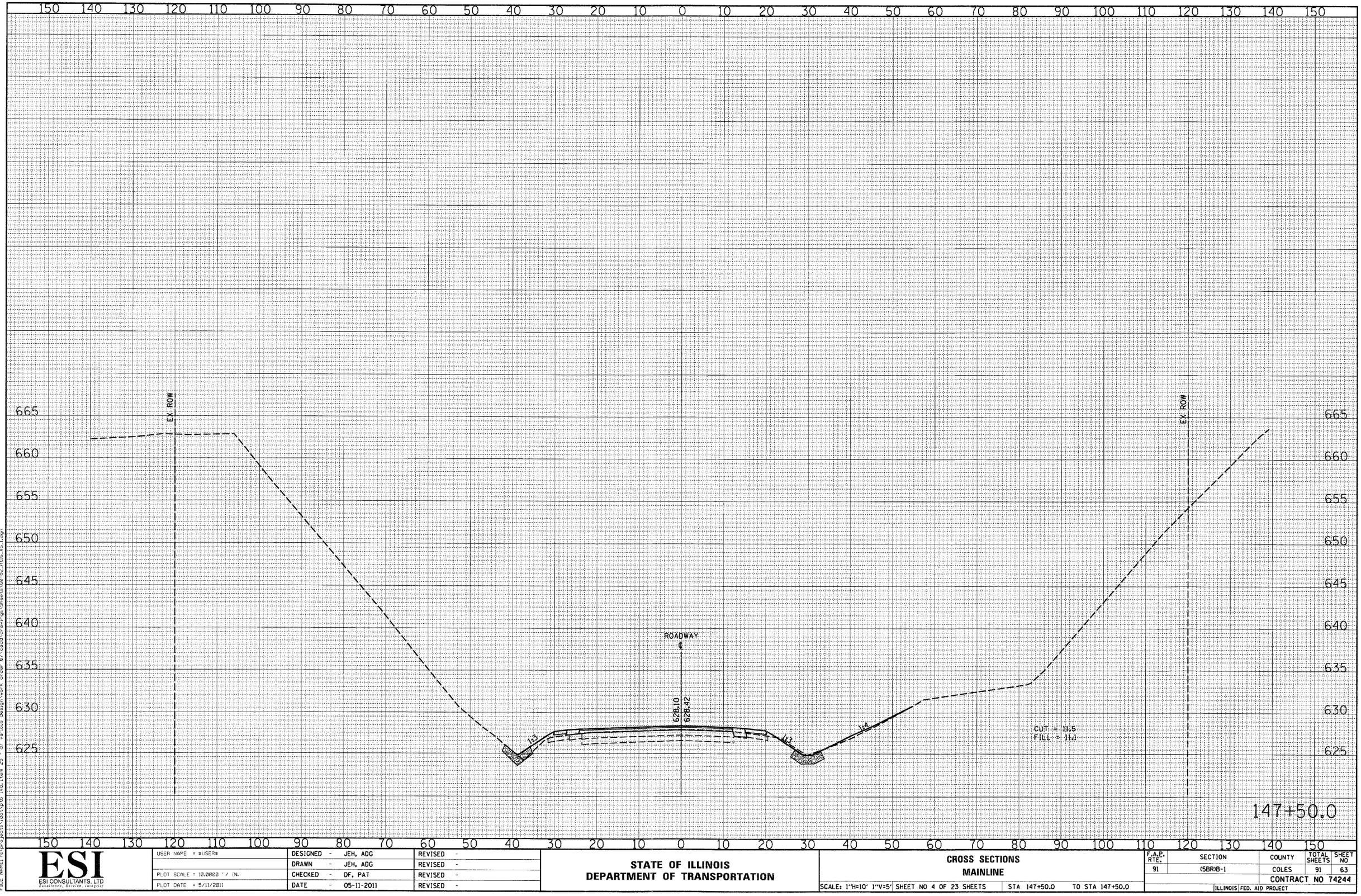
CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 3 OF 23 SHEETS | STA 147+00.0 | TO STA 147+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	62
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

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



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	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

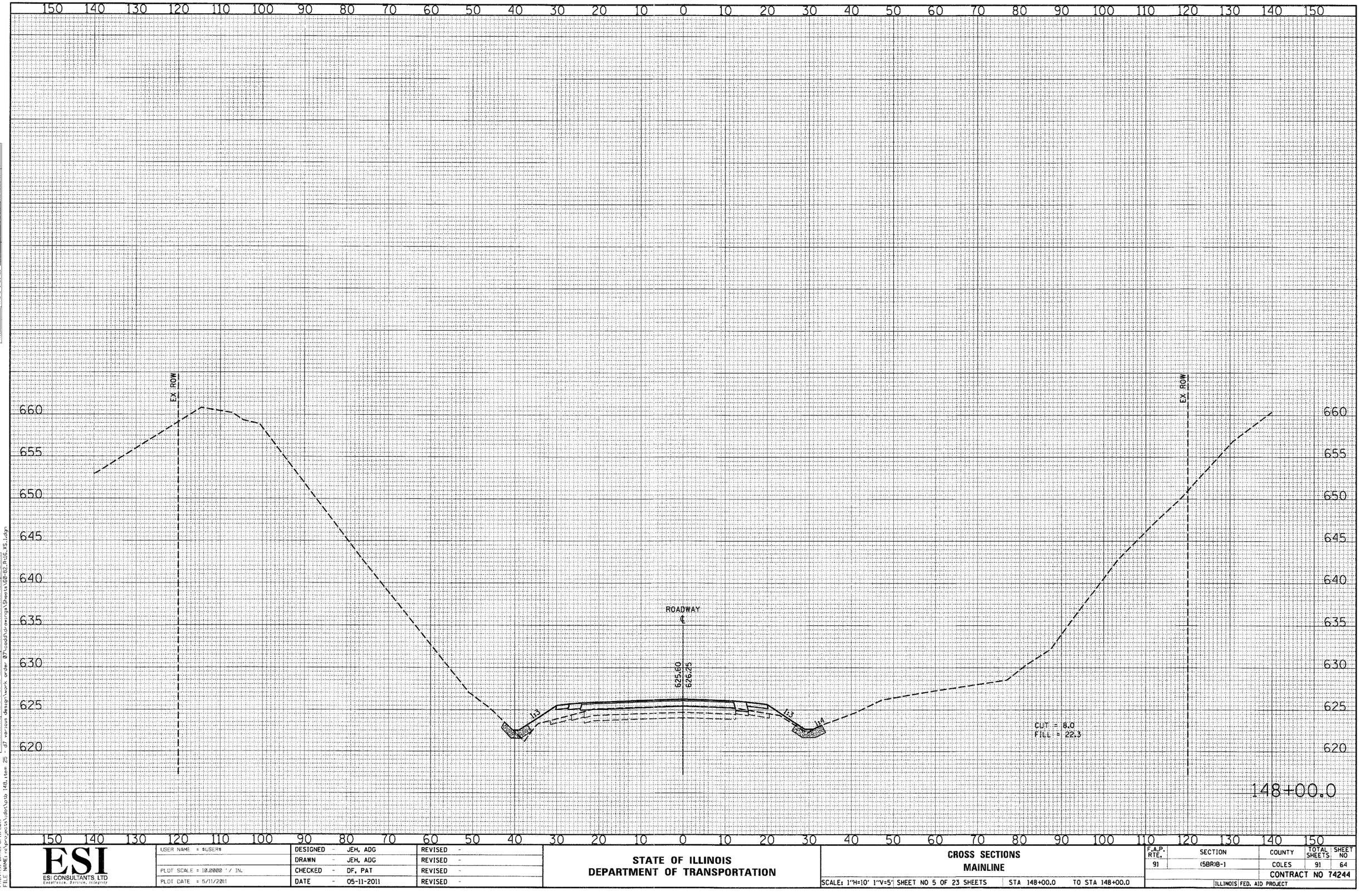
CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 4 OF 23 SHEETS | STA 147+50.0 | TO STA 147+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	63
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

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



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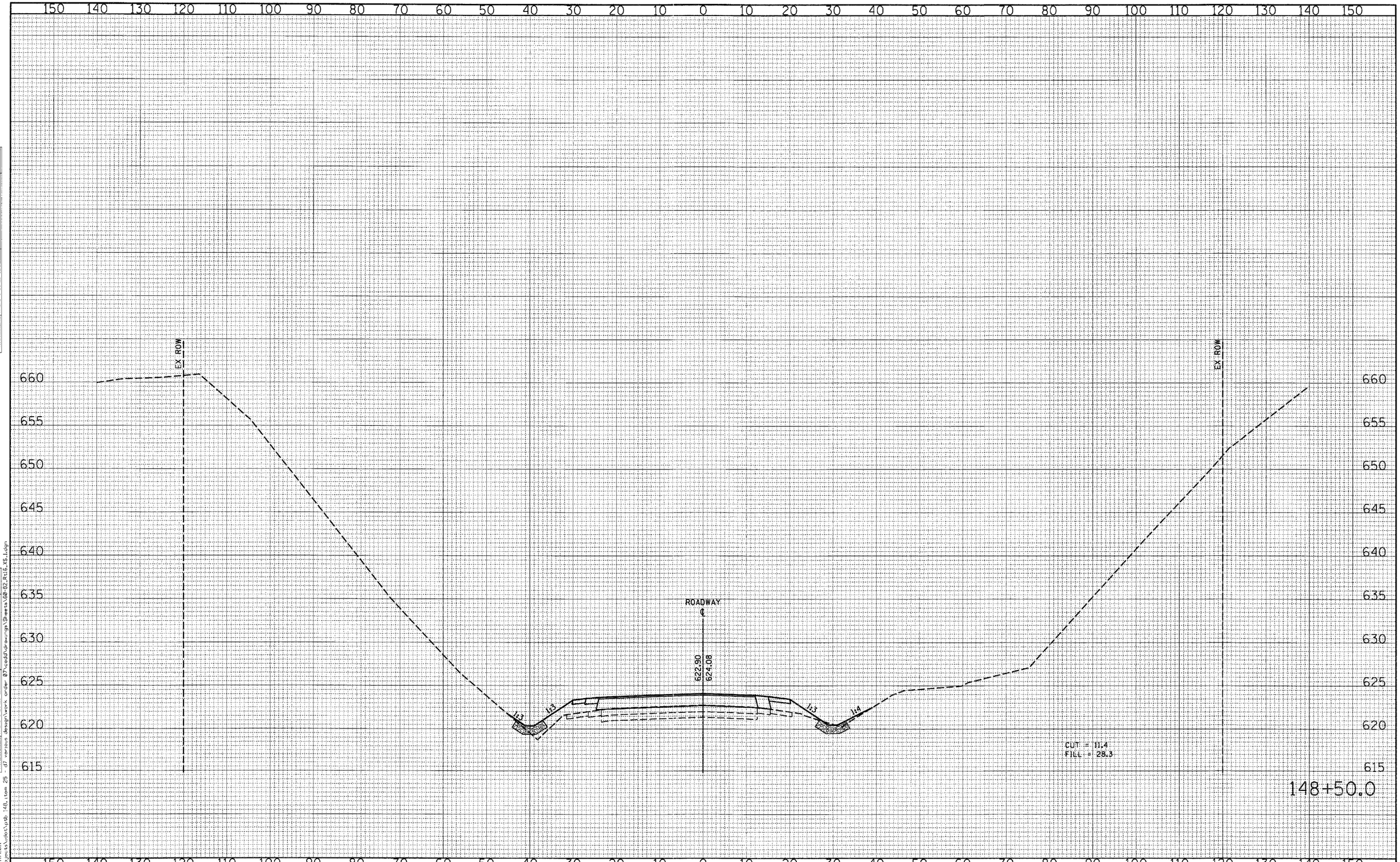
		DRAWN - JEH, ADG	REVISED -	
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' SHEET NO 5 OF 23 SHEETS STA 148+00.0 TO STA 148+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(58R)B-1	COLES	91	64
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



ESI CONSULTANTS LTD Excellence, Service, Integrity	USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -
		DRAWN - JEH, ADG	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

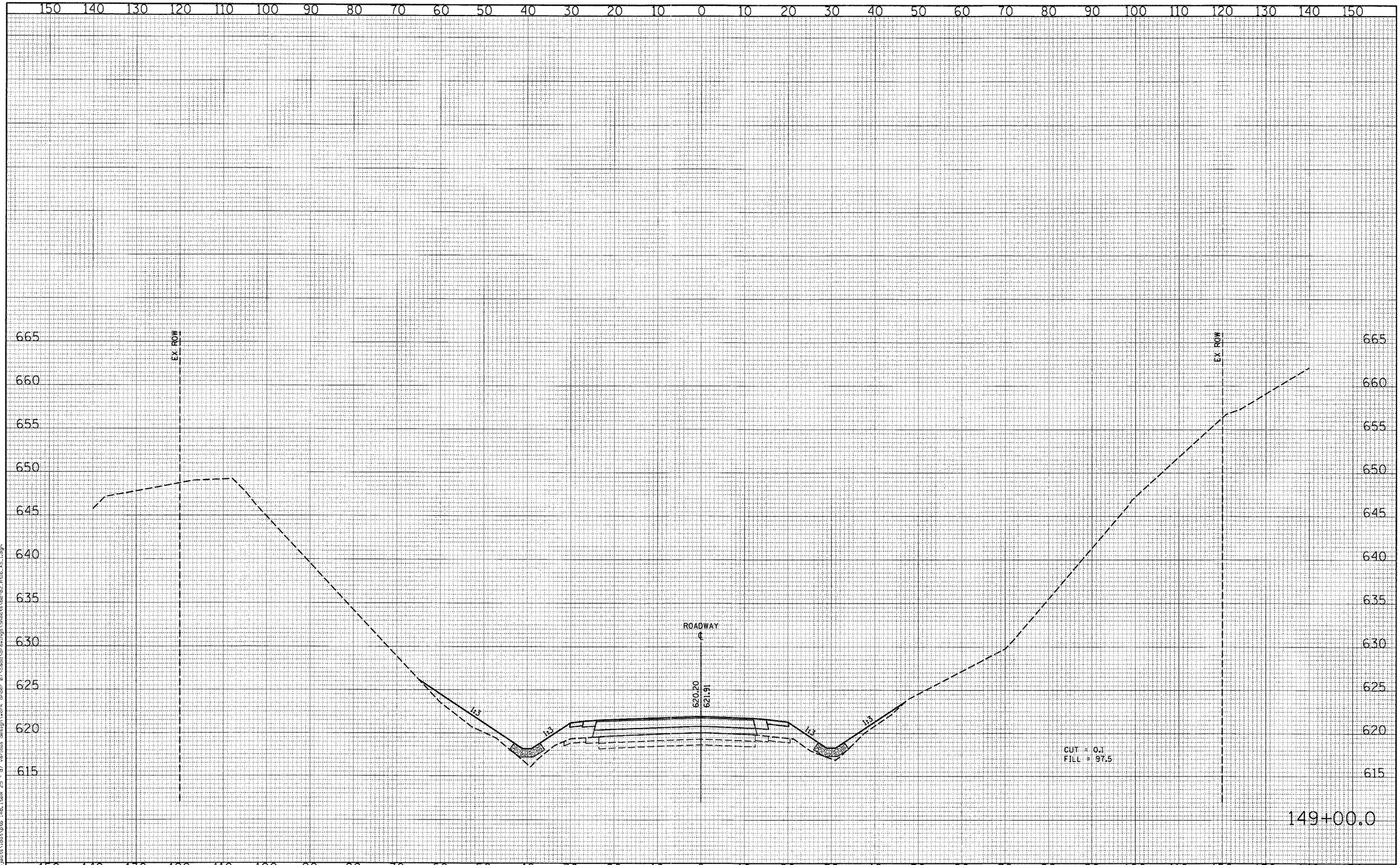
CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 6 OF 23 SHEETS | STA 148+50.0 | TO STA 148+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	65
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\ydot\pb 148, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\G82,R16_XS.dgn



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

BY	DATE

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

BY	DATE

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\pb 148, item 25 - dj various design\work order 07\cadd\drawings\Sheets\60-82_Rd6_XS_1.dgn

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USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 7 OF 23 SHEETS | STA 149+00.0 | TO STA 149+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	66
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

665
660
655
650
645
640
635
630
625
620
615
610

EX ROW

EX ROW

ROADWAY

1:3

1:3

1:3

1:3

617.32
619.74

CUT = 0.0
FILL = 211.8

149+50.0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\jobs\job 148_item 25 dot version design\cross sections\87\roadd\drawings\Sheets\87rd02.R1.E1.XS.1.dgn

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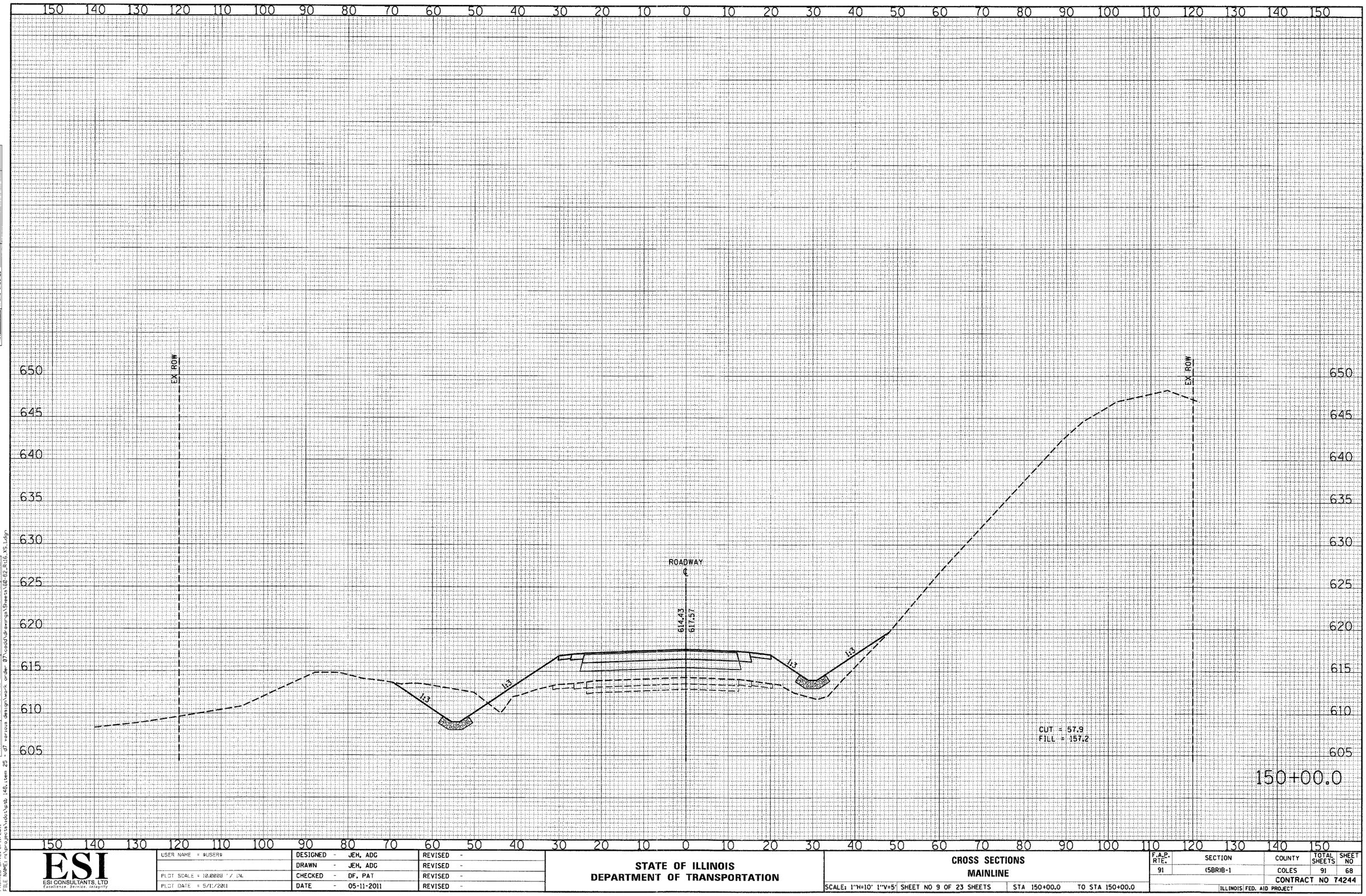
USER NAME = @USER@	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 8 OF 23 SHEETS | STA 149+50.0 | TO STA 149+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	67
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

PRINTED DATE: 5/11/2011
FILE NAME: c:\projects\idot\plb 145.item 25 - 07 various design\work order 07\coddu\drawings\Sheets\60-82-R16_XS_1.dgn

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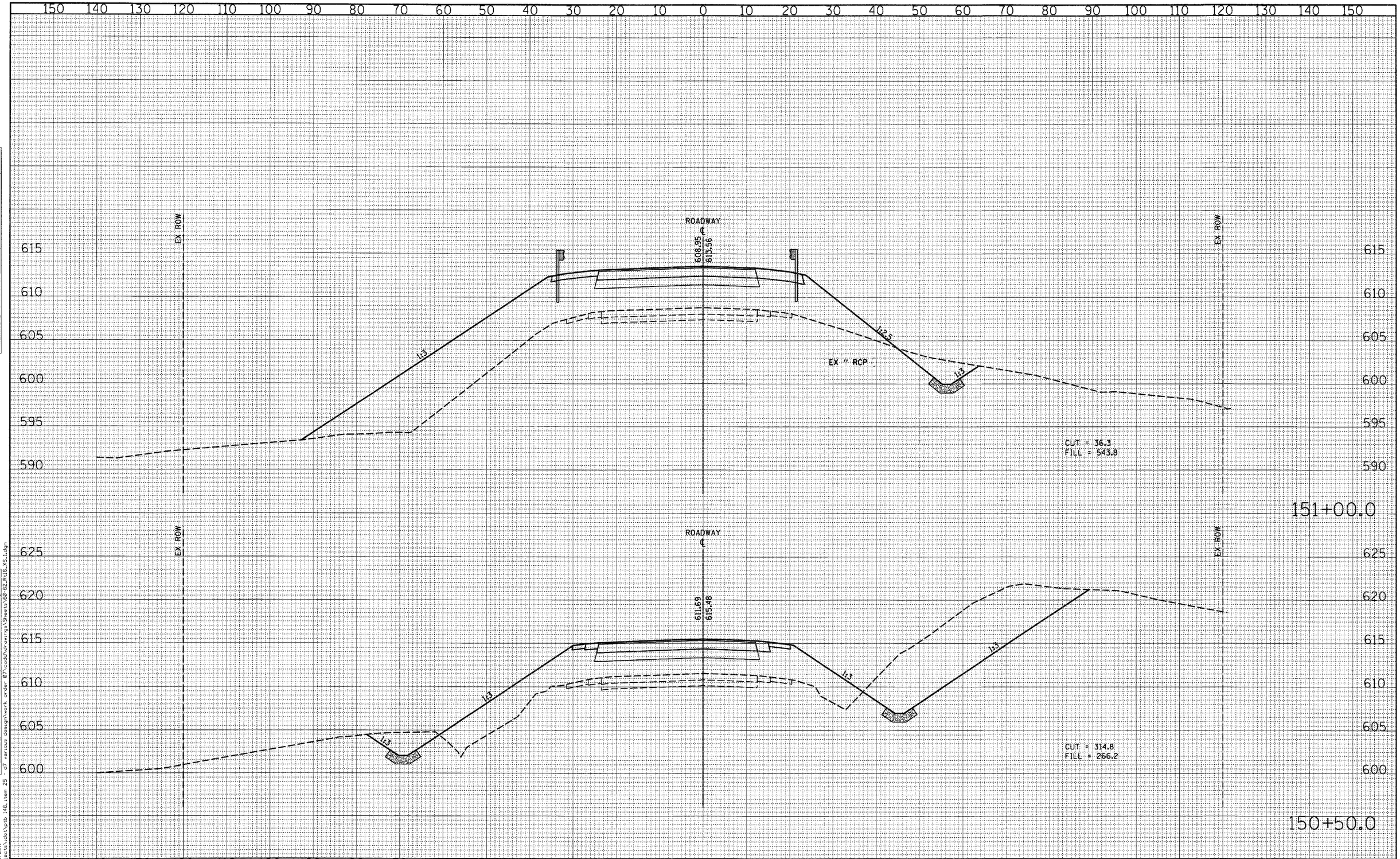
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 9 OF 23 SHEETS | STA 150+00.0 | TO STA 150+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	68
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\pb 146, item 25 - d7 various design\work order- 07\road\drawings\Sheets\60-82_R16_XS_1.dgn

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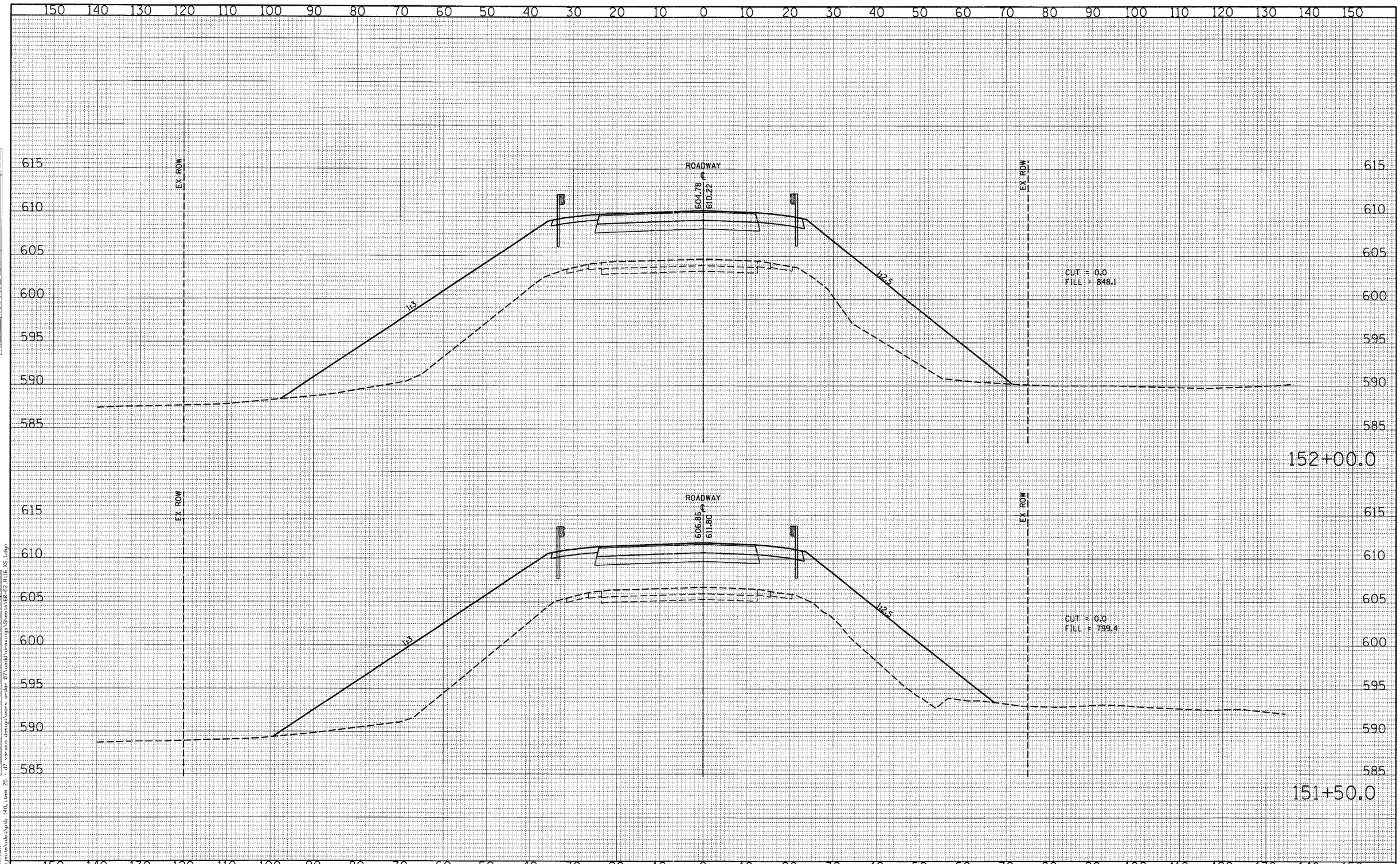
USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 10 OF 23 SHEETS | STA 150+50.0 | TO STA 151+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	69
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
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USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 11 OF 23 SHEETS | STA 151+50.0 | TO STA 152+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(58R)B-1	COLES	91	70
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

610
605
600
595
590
585

EX ROW

ALONG CENTER OF DRIVE

8.00%

6.00%

3.98%

1.99%

1.49%

℄

ROADWAY

602.86 ℄

608.20

5° SKEW ⊥ AHEAD

152+72.9

EX ROW

ROADWAY

603.46 ℄

608.80

1:3

1:2.5

EX ROW

CUT = 0.0
FILL = 637.8

152+50.0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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	

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\sdot\pb 148, item 25 - d7 various design\work order #7\sdd\drawings\Sheets\60-82_Rt6_XS.dgn

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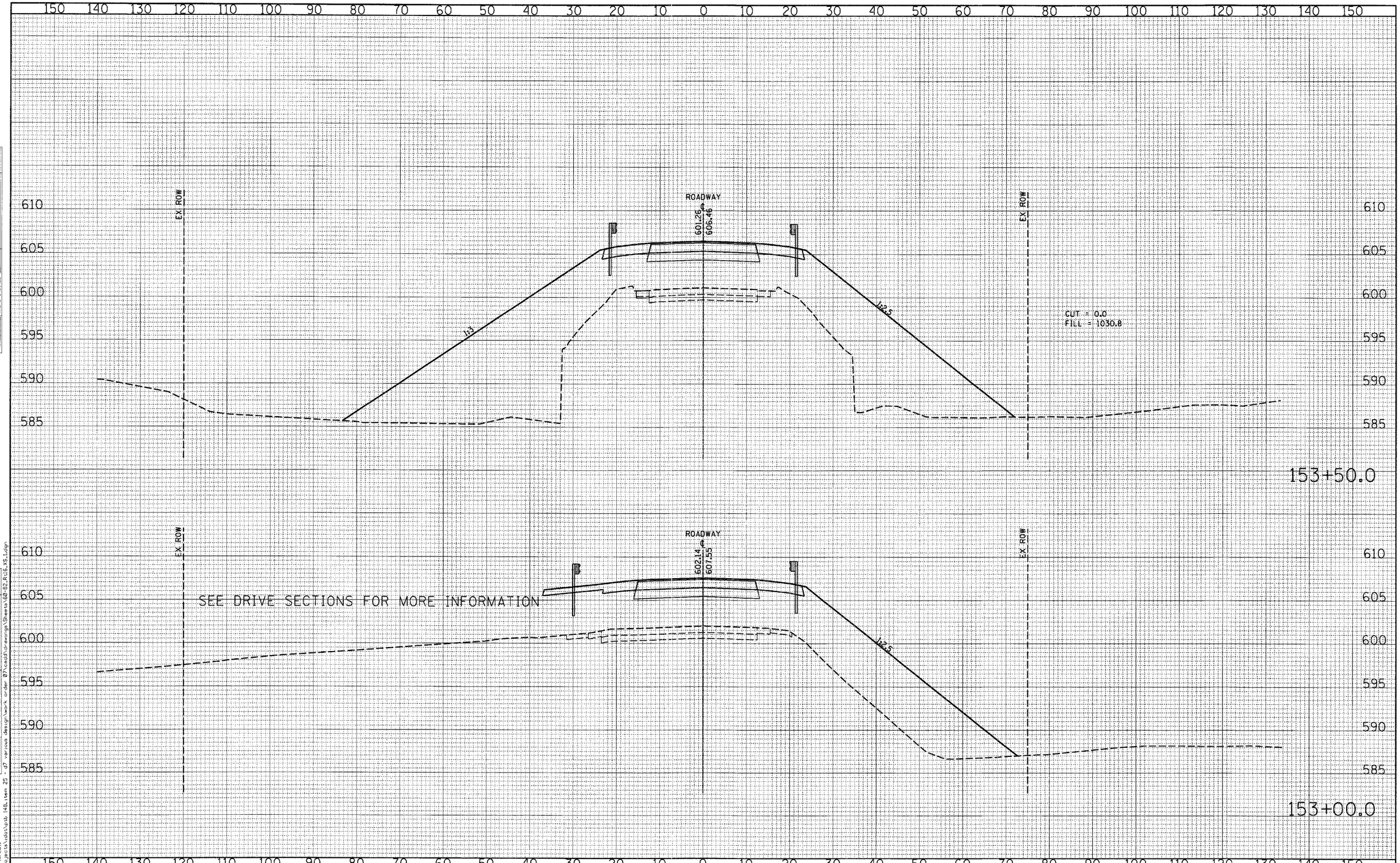
USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 12 OF 23 SHEETS | STA 152+50.0 | TO STA 152+72.9

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	71
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\ida\prb 148_item 25 - d7 various design\work order 07\cadd\drawings\Sheets\60-82.R15_XS.dgn

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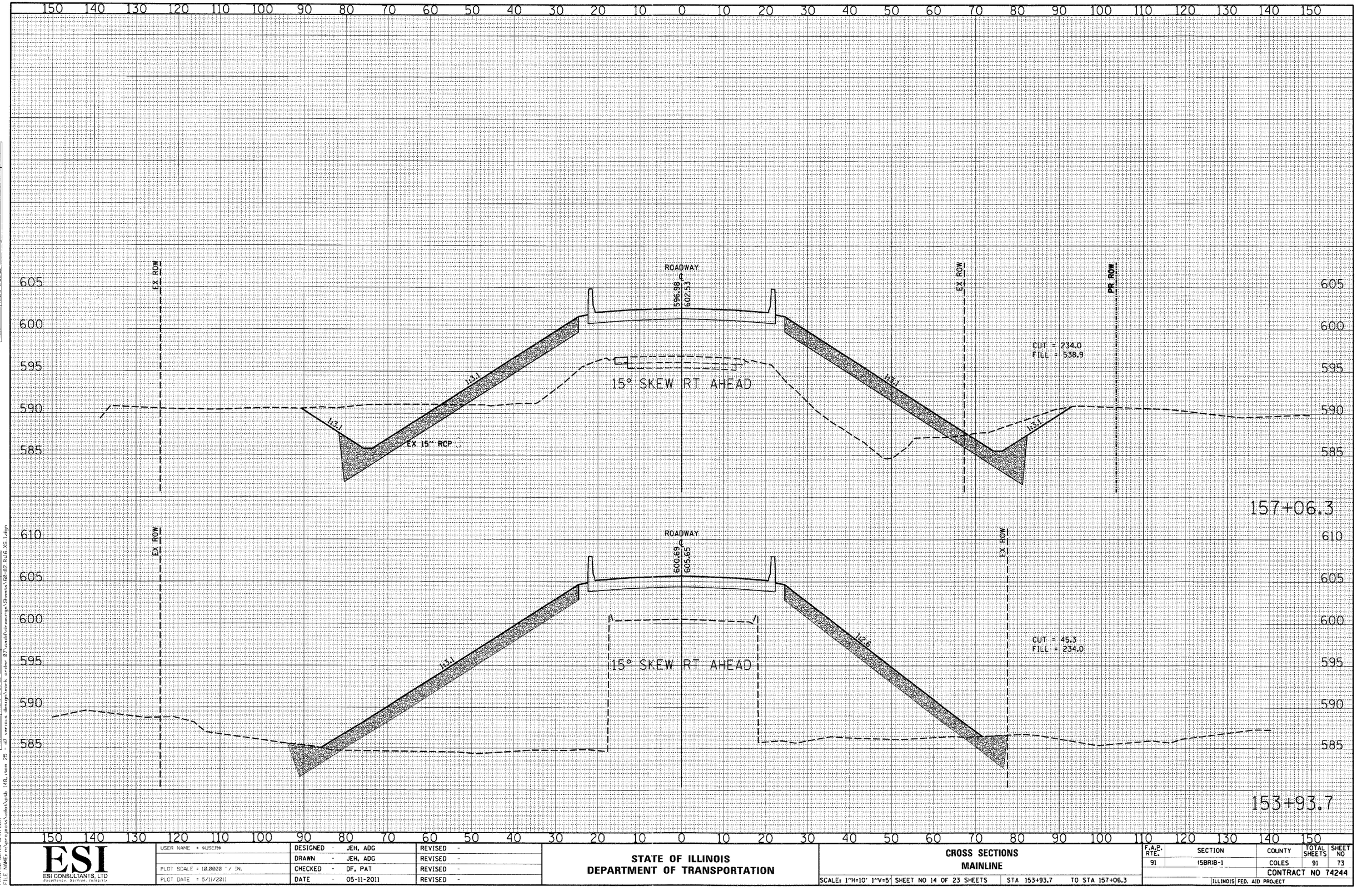
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 13 OF 23 SHEETS | STA 153+00.0 | TO STA 153+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	72
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		



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	

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\prb 148, item 25 - d7 various design\work order #7\roadway drawings\Sheets\60-82_Rt6_XS.dgn

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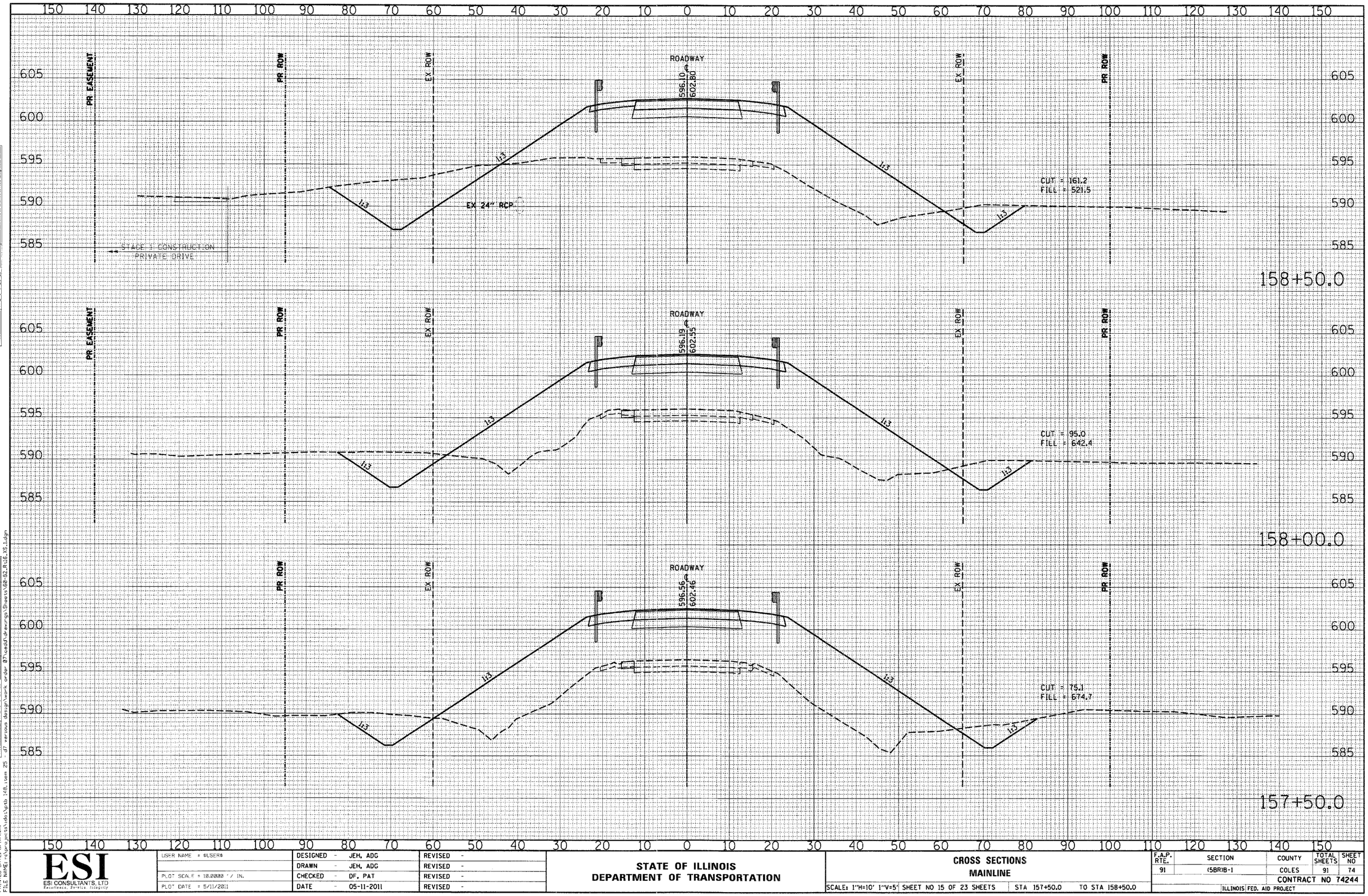
USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 14 OF 23 SHEETS | STA 153+93.7 | TO STA 157+06.3

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	73
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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	

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\rdwy\xptb 148_item 25 - d7 various design\work order- 07\roadd\drawings\Sheets\60-82_R15_XS_1.dgn

USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 15 OF 23 SHEETS | STA 157+50.0 | TO STA 158+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	74
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

610 605 600 595 590 585

PR EASEMENT | PR ROW | EX ROW | EX ROW | PR ROW

ROADWAY

597.11
604.57

1:3 1:3 1:3 1:3

STAGE II CONSTRUCTION
PRIVATE DRIVE

CUT = 74.0
FILL = 662.8

160+00.0

ROADWAY

596.56
603.81

1:3 1:3 1:3 1:3

STAGE II CONSTRUCTION
PRIVATE DRIVE

CUT = 78.4
FILL = 675.5

159+50.0

ROADWAY

596.26
603.23

1:3 1:3 1:3 1:3

STAGE II CONSTRUCTION
PRIVATE DRIVE

CUT = 76.4
FILL = 642.6

159+00.0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj\esi1\dot\pnb 149_item 25 - d7 various design\work order 87\cadd\drawings\Sheets\68-82.R15JS.1.dgn

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USER NAME = #USER#		DESIGNED - JEH, ADG		REVISED -	
		DRAWN - JEH, ADG		REVISED -	
PLOT SCALE = 10.0000 ' / IN.		CHECKED - DF, PAT		REVISED -	
PLOT DATE = 5/11/2011		DATE - 05-11-2011		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 16 OF 23 SHEETS | STA 159+00.0 | TO STA 160+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	75

CONTRACT NO 74244

ILLINOIS FED. AID PROJECT

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

610 605 600 595 590 585

PR EASEMENT | PR ROW | EX ROW | EX ROW | PR ROW

SEE DRIVE SECTIONS FOR MORE INFORMATION

ROADWAY
598.96
606.58

1:3 1:4 1:3

PR 24" CMP

STAGE 1 CONSTRUCTION
TEMPORARY DRIVE

CUT = 79.3
FILL = 660.3

161+00.0

ROADWAY
597.97
605.49

SEE ENTRANCE 160+71
FOR EARTHWORK

STAGE 1 CONSTRUCTION
TEMPORARY DRIVE

PR 24" CMP

CUT = 43.4
FILL = 651.4

160+50.0

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

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

PRINTED DATE: 5/11/2011
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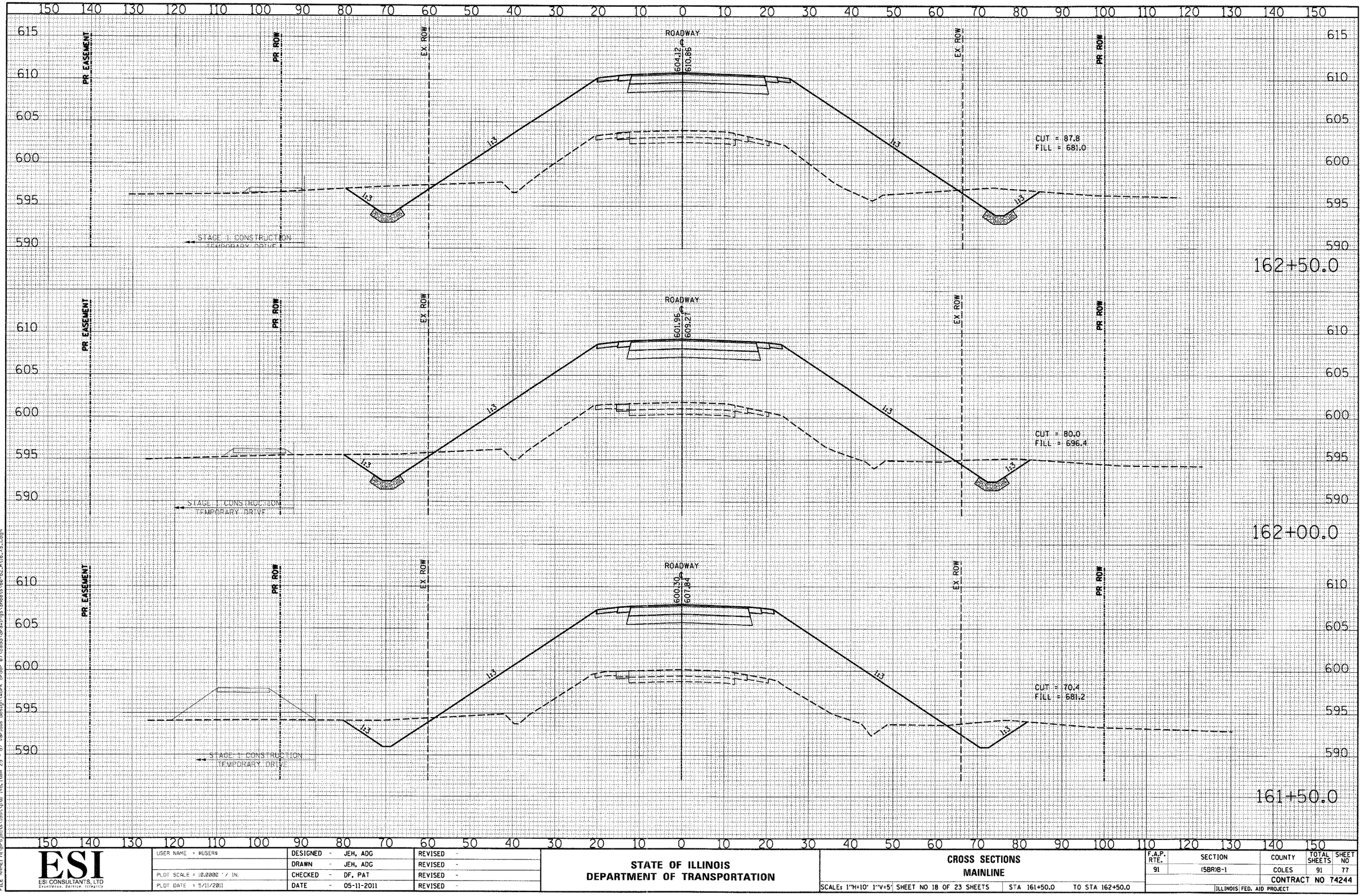
USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 2.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 17 OF 23 SHEETS | STA 160+50.0 | TO STA 161+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	76
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\p18 148_item 25 - 07 various design\work order 07\cadd\drawings\Sheets\16862_R116_XS.dgn

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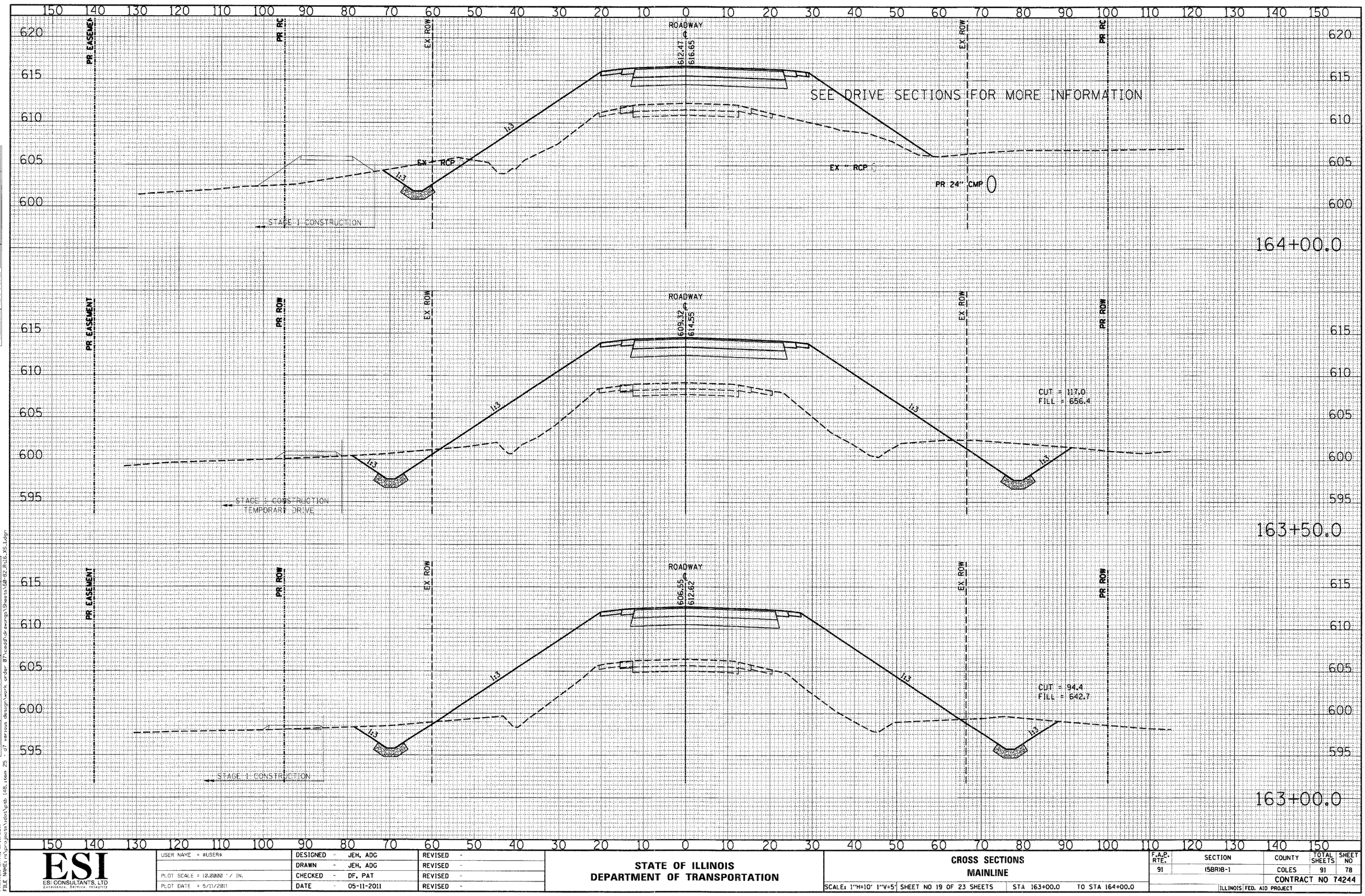
USER NAME = @USER@	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 18 OF 23 SHEETS | STA 161+50.0 | TO STA 162+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	77
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		



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

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

BY	DATE

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\vdot\vdot 148_item 25 - d7 various design\work order 07\cadd\drawings\Sheets\168-82-R16-XS_1.dgn

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USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -
	DRAWN - JEH, ADG	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 19 OF 23 SHEETS | STA 163+00.0 | TO STA 164+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	78
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

625
620
615
610

PR EASEMENT
PR ROW
EX ROW
ROADWAY
619.42 ℄ 621.34
1:3
1:3
1:3
CUT = 219.0
FILL = 102.4
EX ROW
PR ROW

165+00.0

620
615
610
605

PR EASEMENT
PR ROW
EX ROW
ROADWAY
615.73 ℄ 618.91
1:3
1:3
1:3
PE
PR 24" CMP
CUT = 60.8
FILL = 272.1
STAGE 1 CONSTRUCTION
TEMPORARY DRIVE
EX ROW
PR ROW

164+50.0

620
615
610
605
600

ROADWAY
613.68 ℄ 617.47
PE
4.00%
6.00%
8.00%
6.00%
ALONG CENTER OF DRIVE
40.0' VERTICAL CURVE
EX ROW
PR ROW
EX " RCP
PR 24" CMP

164+18.5

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\idot\pb 48, item 25 - d7 various design\work order 07\cadd\drawings\Sheets\60-82_Rt6_XS_1.dgn

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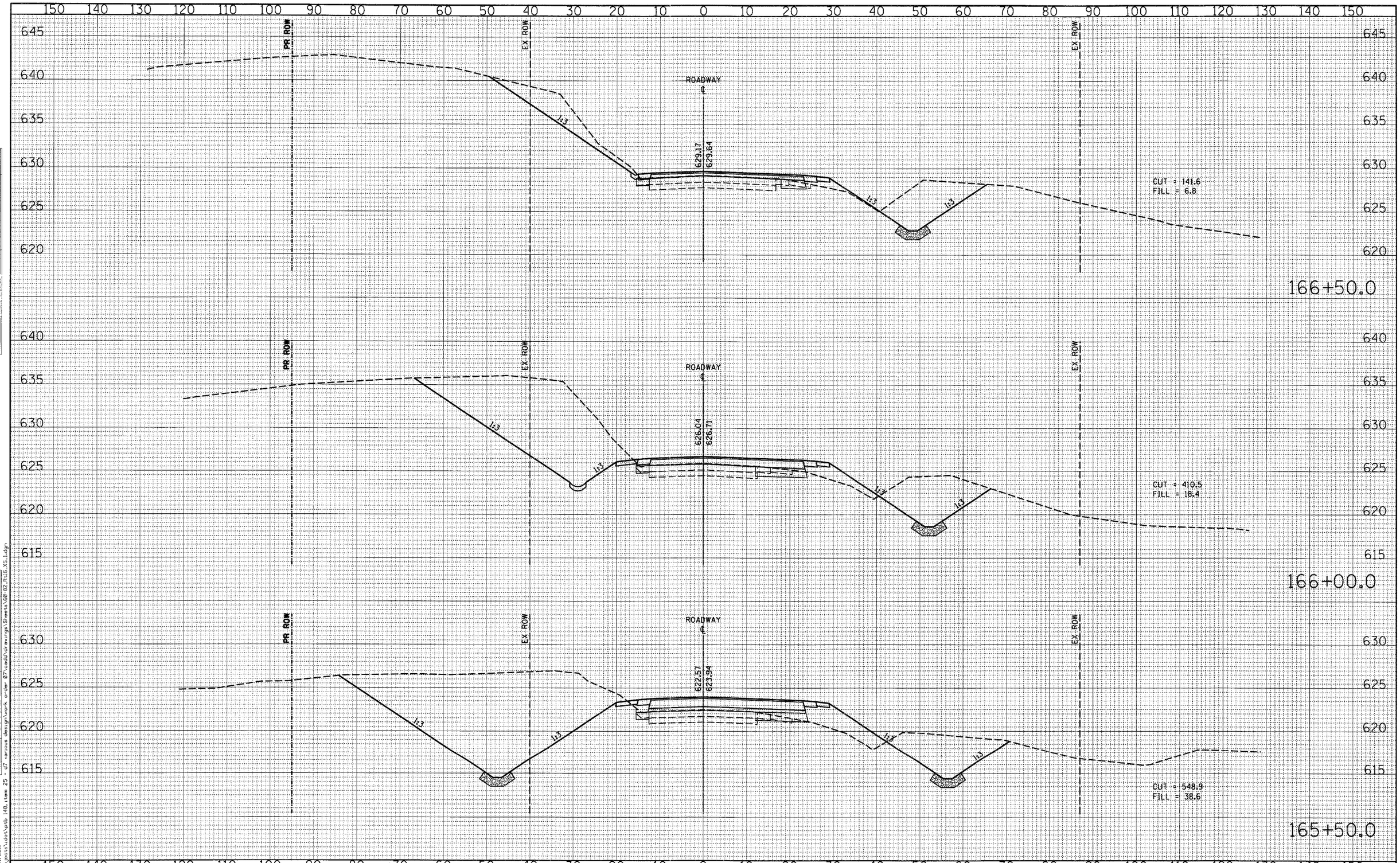
USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 20 OF 23 SHEETS | STA 164+18.5 | TO STA 165+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	79
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
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USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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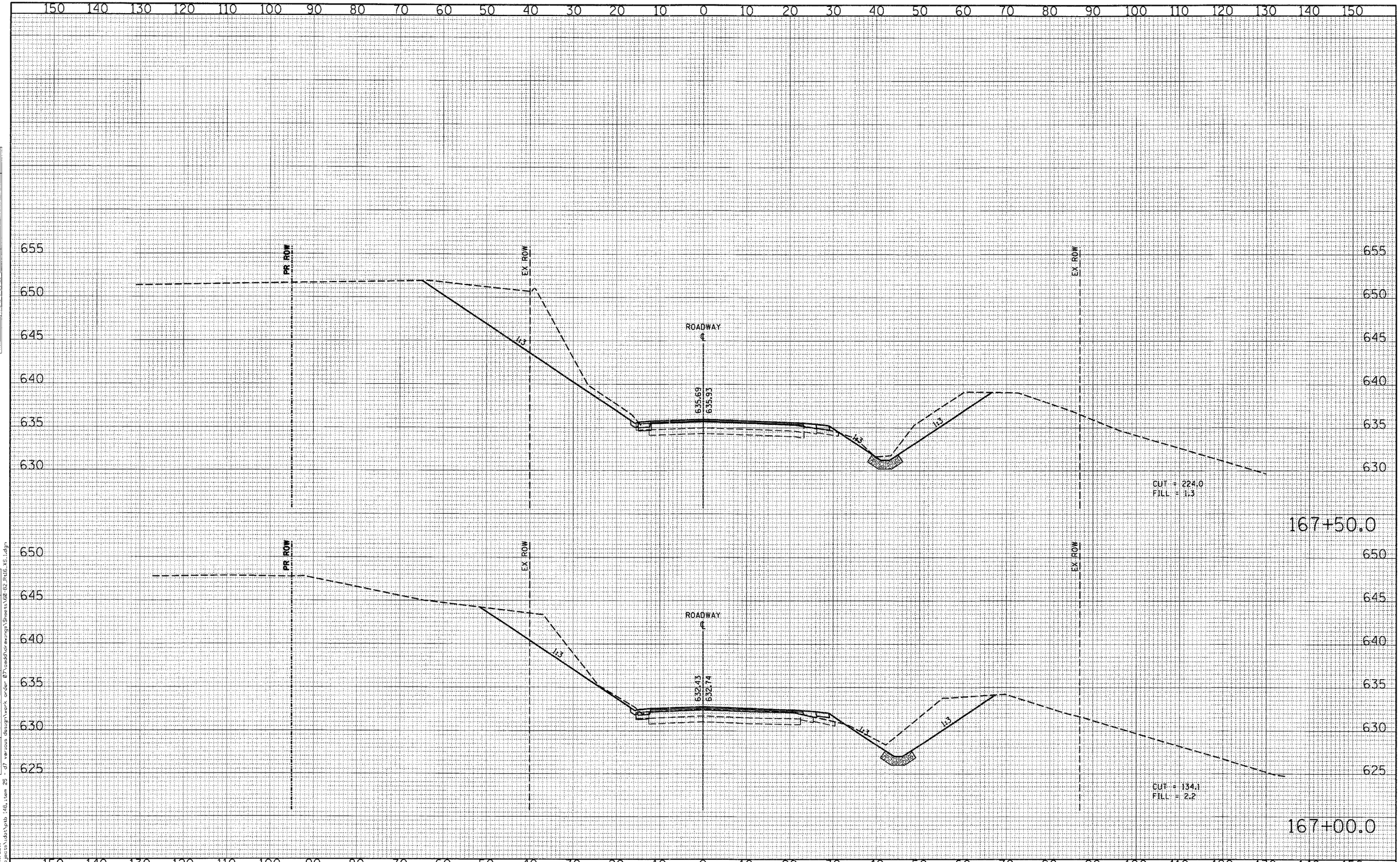
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 21 OF 23 SHEETS | STA 165+50.0 | TO STA 166+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	80
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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



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

PRINTED DATE: 5/11/2011
FILE NAME: c:\projects\dot\pds 148_item 25 of various design\work order 87\road\drawings\Sheets\X88-82.PNG, MS, Ldgn

ESI CONSULTANTS, LTD	USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -
Excellence. Service. Integrity		DRAWN - JEH, ADG	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 22 OF 23 SHEETS | STA 167+00.0 | TO STA 167+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	81
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

660 655 650 645 640 635

PR ROW
EX ROW
ROADWAY
645.61
CUT = 0.0
FILL = 0.0
169+00.0

PR ROW
EX ROW
ROADWAY
642.34
CUT = 0.0
FILL = 0.0
168+50.0

PR ROW
EX ROW
ROADWAY
639.11
639.11
13
13
13
CUT = 233.6
FILL = 1.3
168+00.0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

PRINTED DATE: 5/11/2011
FILE NAME: n:\proj\ests\ads\plb 140_item 25 - d7 various design\work order 07\cadd\drawings\Sheets\68-82_Rte16_XS_1.dgn

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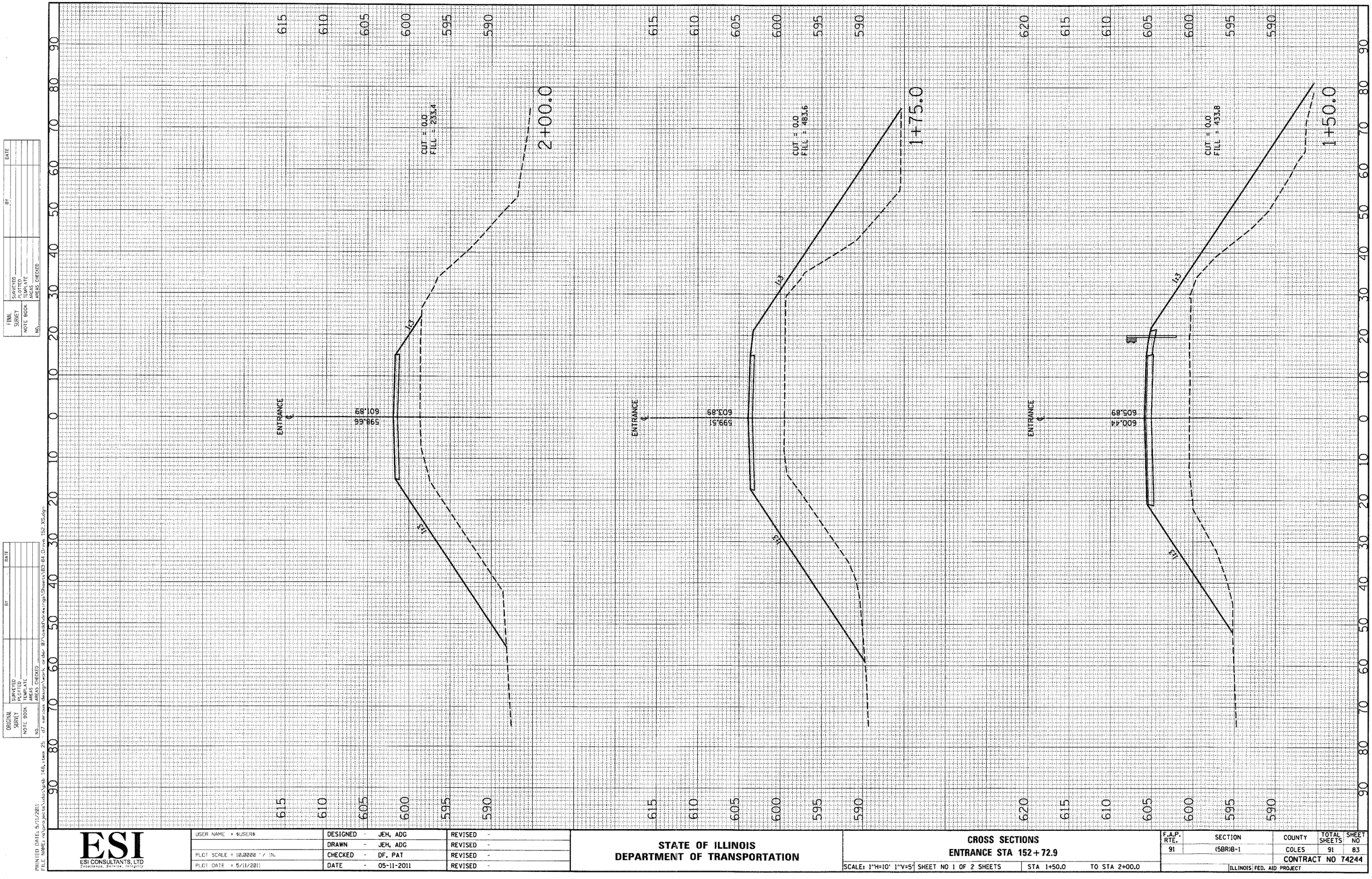
USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
MAINLINE

SCALE: 1"H=10' 1"V=5' | SHEET NO 23 OF 23 SHEETS | STA 168+00.0 | TO STA 169+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	82
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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

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

PRINTED DATE: 5/11/2011
FILE NAME: c:\projects\dfo\ysab 148, item 25 df 7 version\design work order 8\Threaded\drawings\Sheets\BD-84, D-new 152 XS.dgn

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USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
ENTRANCE STA 152+72.9

SCALE: 1"H=10' 1"V=5' | SHEET NO 1 OF 2 SHEETS | STA 1+50.0 | TO STA 2+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	83
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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

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

PRINTED DATE: 5/11/2011
FILE NAME: c:\projects\dot\pb 148, item 25 - d\ various design\work order #7\coadd\dr awings\Sheets\63-84 Drive 152_XS.dgn

2+95.6

CUT = 0.0
FILL = 0.0

ENTRANCE ℄

594.25

2+75.0

CUT = 0.4
FILL = 7.9

ENTRANCE ℄

595.10

595.89

1:3

2+50.0

CUT = 0.0
FILL = 40.8

ENTRANCE ℄

596.30

597.89

1:3

2+25.0

CUT = 0.3
FILL = 132.4

ENTRANCE ℄

597.42

599.89

1:3

USER NAME = #USER#	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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CROSS SECTIONS
ENTRANCE STA 152+72.9

SCALE: 1"H=10' 1"V=5' | SHEET NO 2 OF 2 SHEETS | STA 2+25.0 | TO STA 2+95.6

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	84
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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		

PRINTED DATE: 5/11/2011
FILE NAME: n:\projects\dot\ptb 148,item 25 - d7 various design\work order 07\cadd\drawings\Sheets\95-86-D-rive 168.XS.dgn

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		DRAWN - JEH, ADG	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
ENTRANCE STA 160+71.00

SCALE: 1"H=10' 1"V=5' | SHEET NO 1 OF 2 SHEETS | STA 1+50.0 | TO STA 2+25.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	85
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

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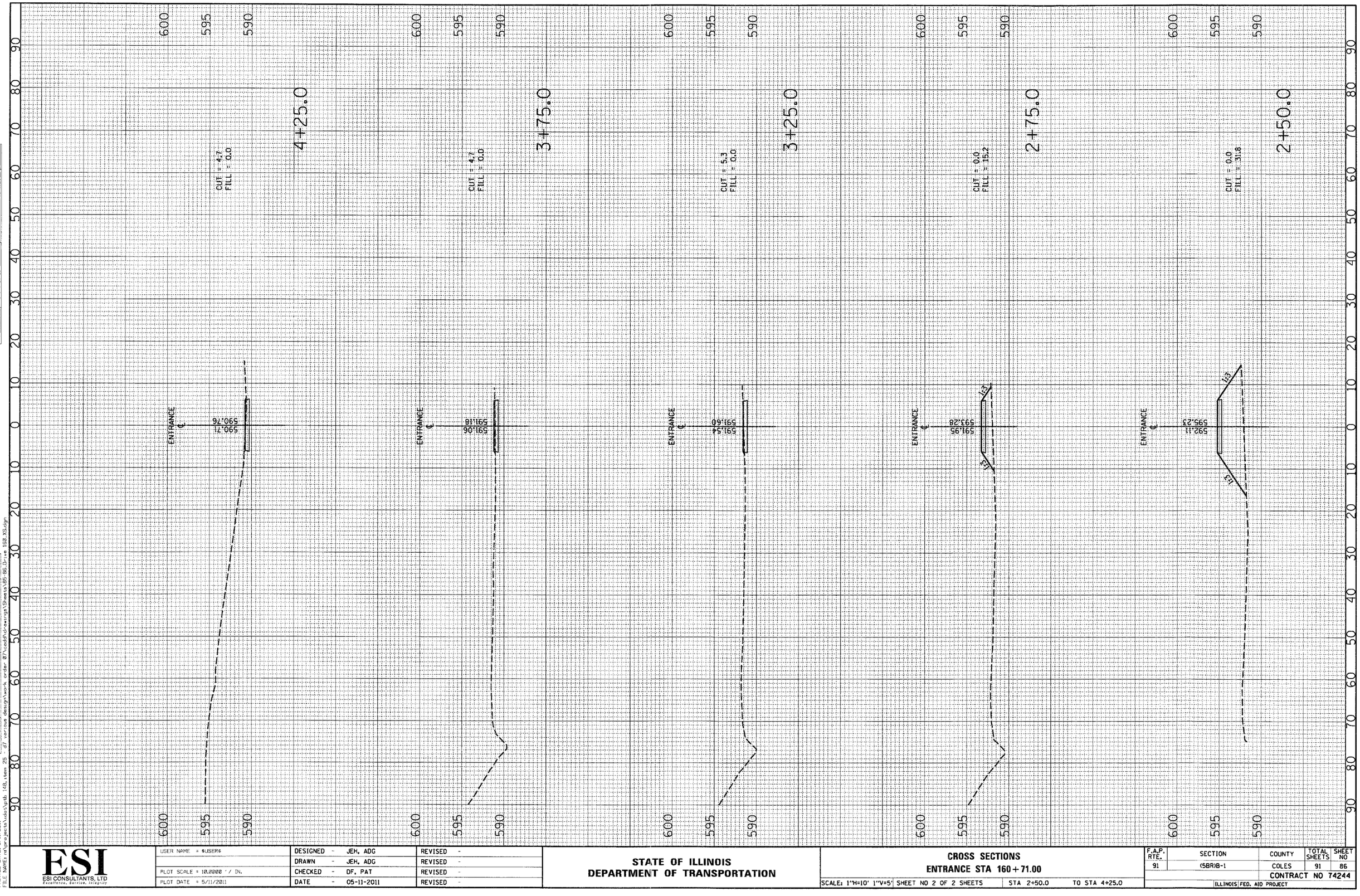

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

PRINTED DATE: 5/11/2011
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USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -	
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
ENTRANCE STA 160+71.00

SCALE: 1"H=10' 1"V=5' | SHEET NO 2 OF 2 SHEETS | STA 2+50.0 | TO STA 4+25.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	86
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		

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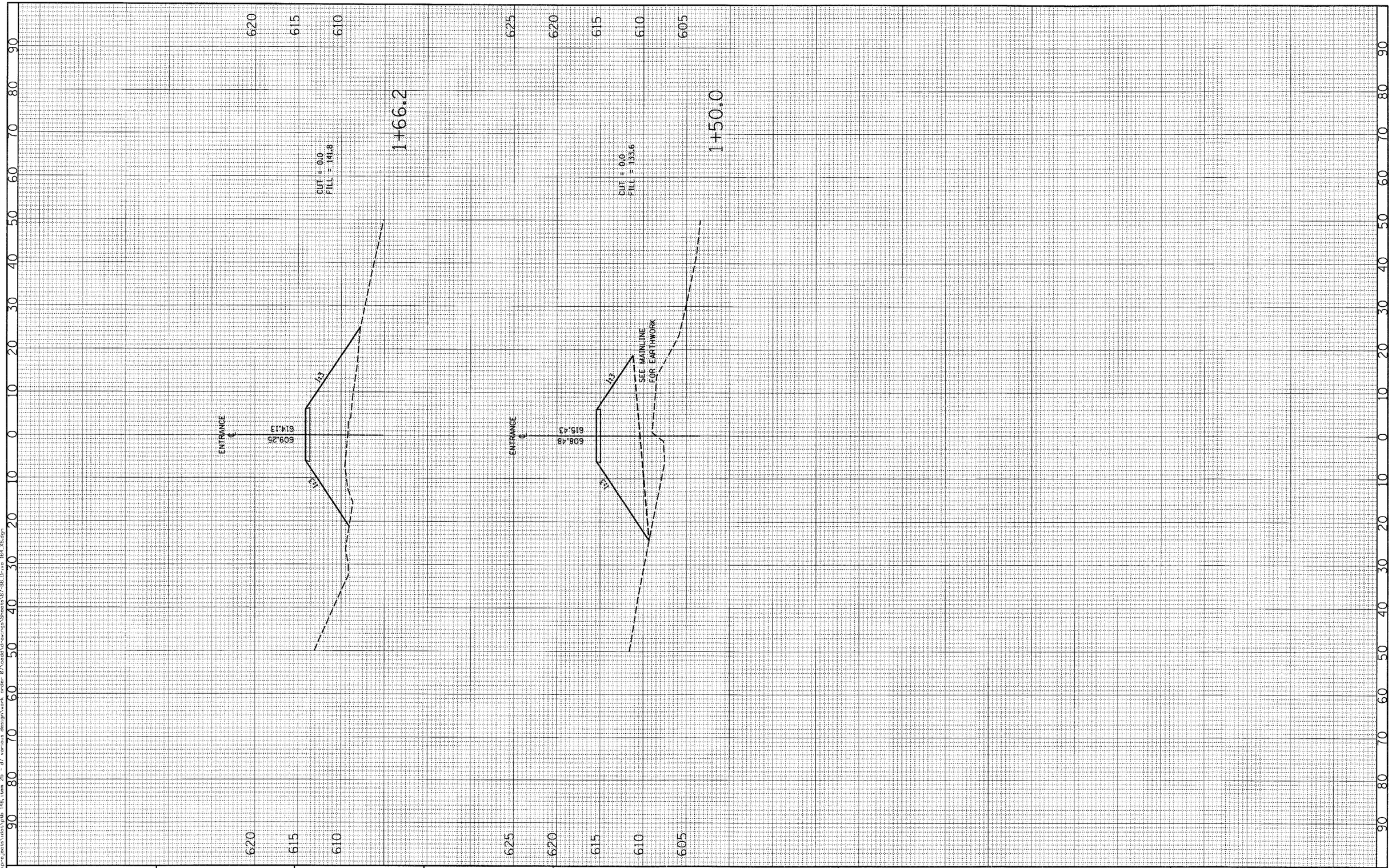

ESI CONSULTANTS, LTD	USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -
Excellence, Service, Integrity		DRAWN - JEH, ADG	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
ENTRANCE STA 164+18.50

SCALE: 1"H=10' 1"V=5' | SHEET NO 1 OF 2 SHEETS | STA 1+00.0 | TO STA 1+66.2

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	87
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
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PRINTED DATE: 5/11/2011
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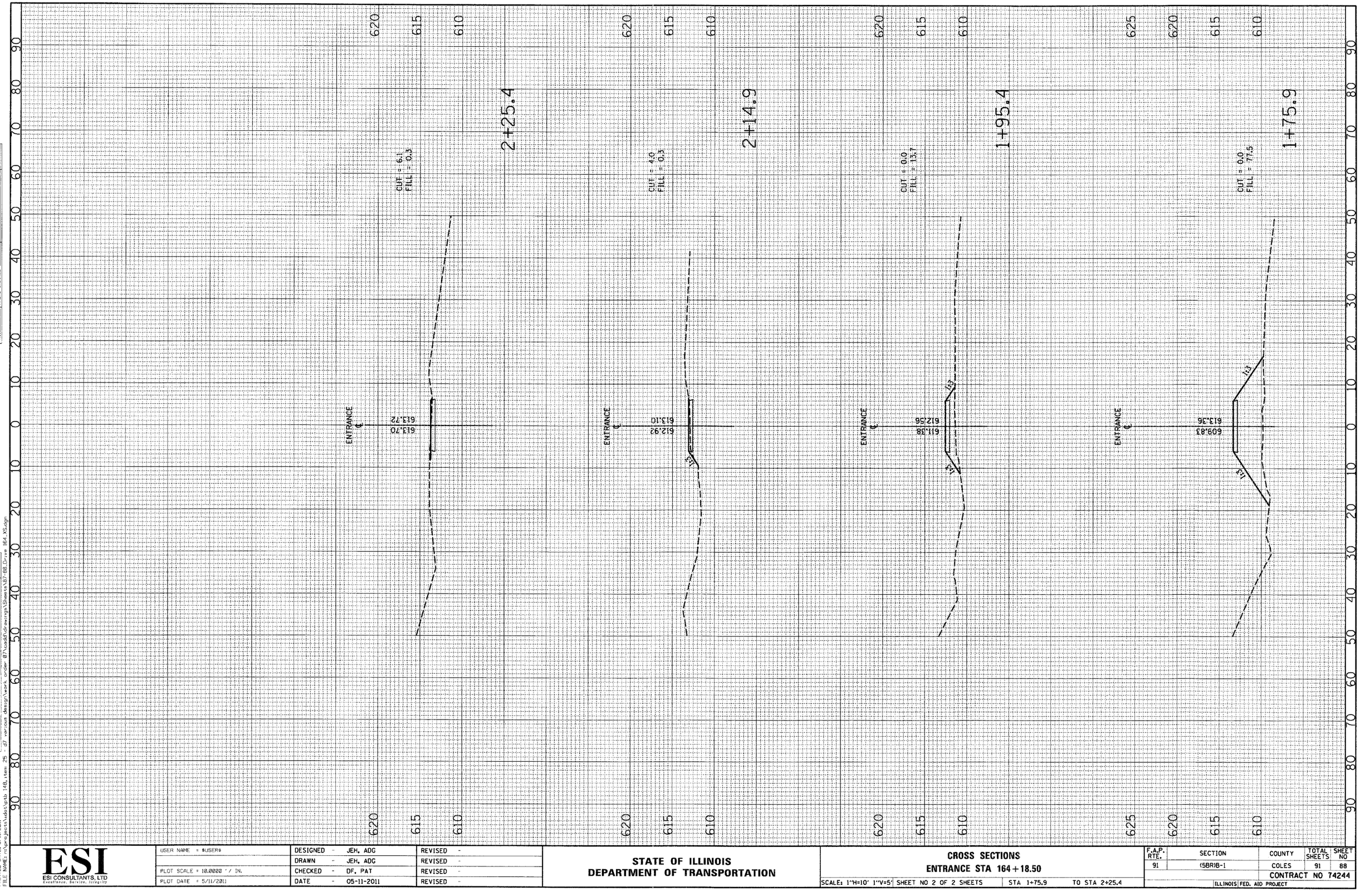

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	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

PRINTED DATE: 5/11/2011
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USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
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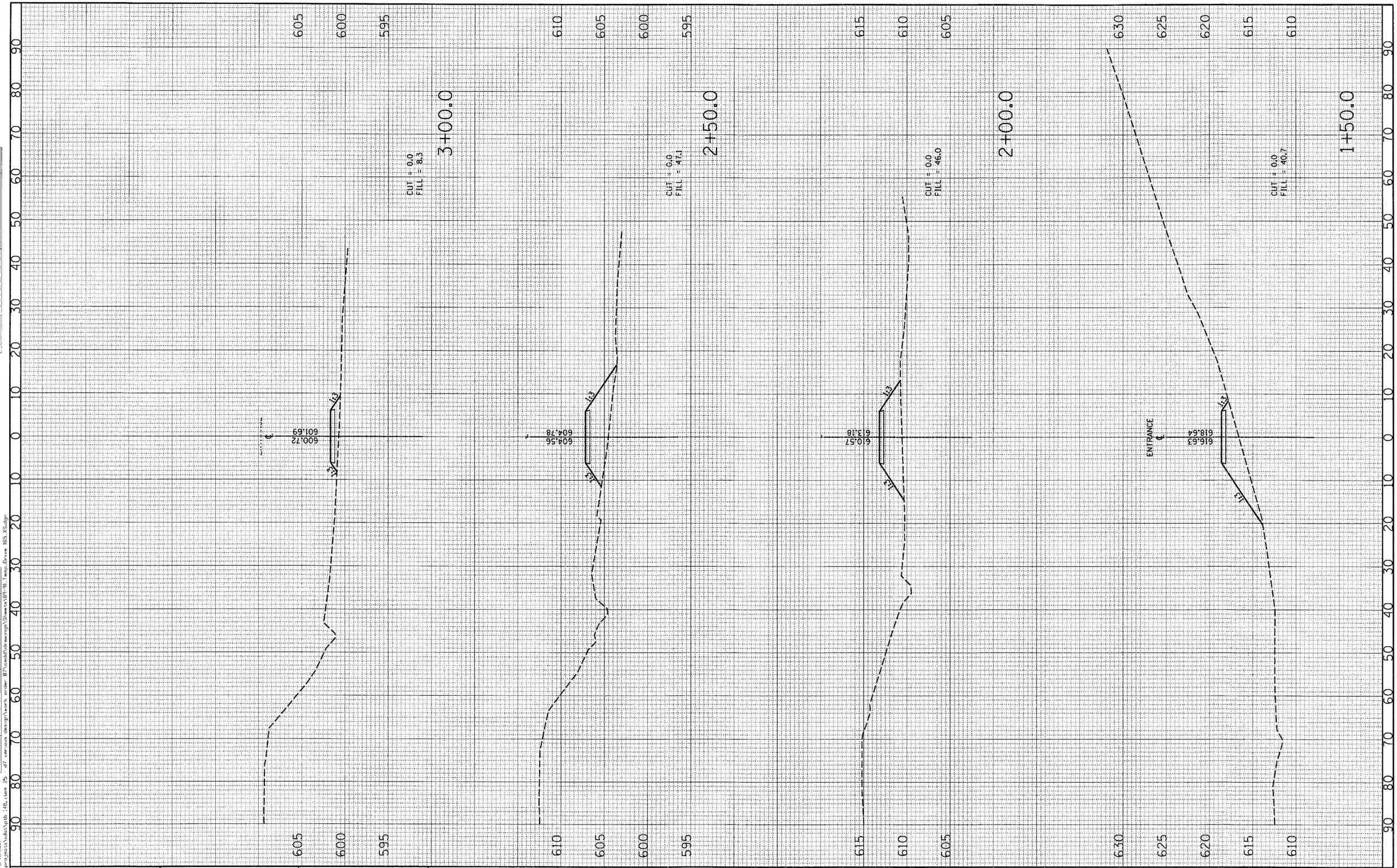
PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
ENTRANCE STA 164+18.50

SCALE: 1"H=10' 1"V=5' | SHEET NO 2 OF 2 SHEETS | STA 1+75.9 | TO STA 2+25.4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	88
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			



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NOTE BOOK	PLOTTED		
NO.	AUTO TEMPLATE		
	AREAS		
	AREAS CHECKED		

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

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USER NAME = $USER$	DESIGNED - JEH, ADG	REVISED -	
	DRAWN - JEH, ADG	REVISED -	
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PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
TEMPORARY ENTRANCE STA 165+00.00

SCALE: 1"H=10' 1"V=5' | SHEET NO 1 OF 3 SHEETS | STA 1+50.0 | TO STA 3+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	89
		CONTRACT NO 74244		
	ILLINOIS	FED. AID PROJECT		

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

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

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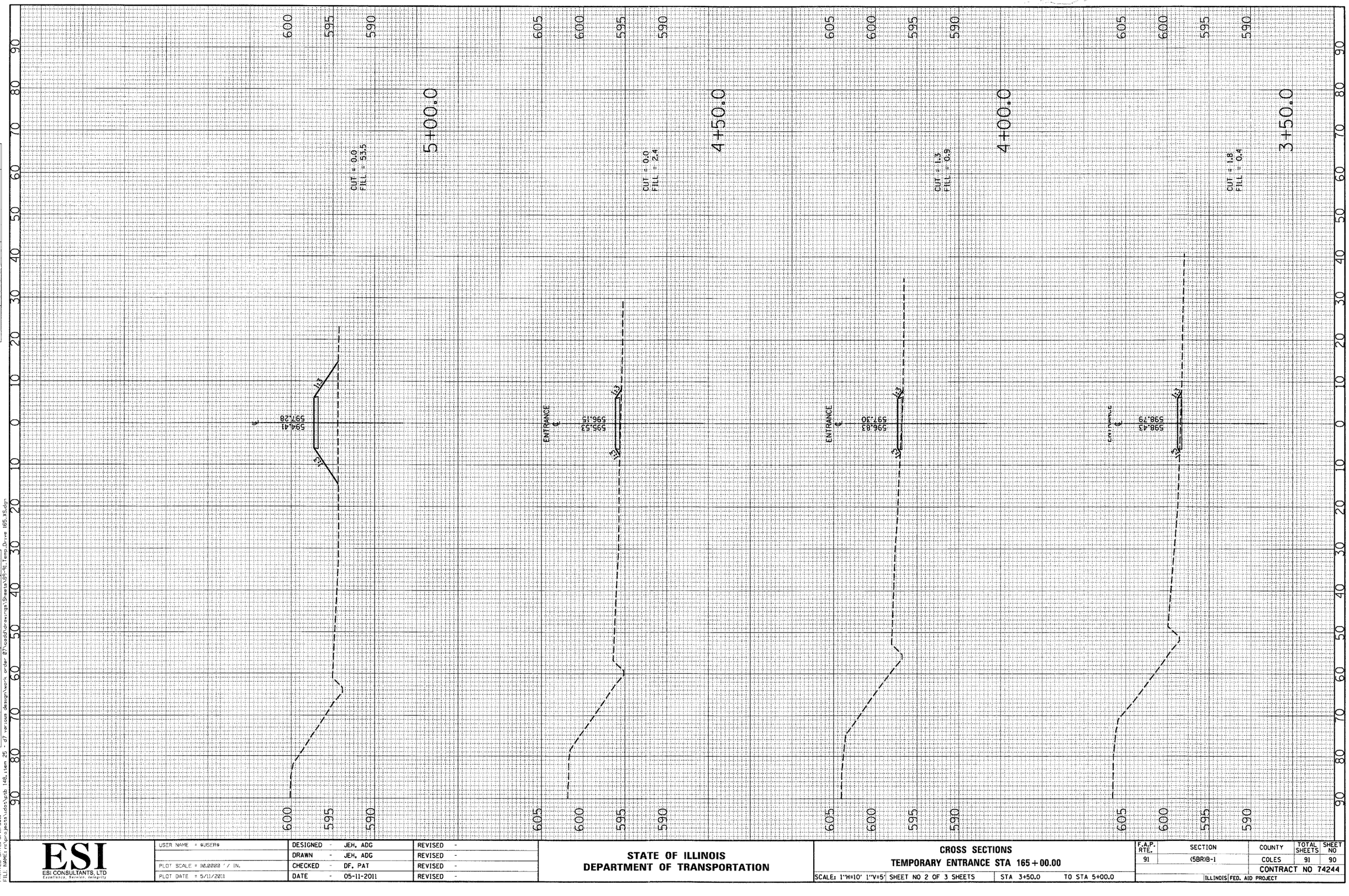

ESI CONSULTANTS, LTD *Excellence, Service, Integrity*	USER NAME = @USER@	DESIGNED - JEH, ADG	REVISED -
		DRAWN - JEH, ADG	REVISED -
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - DF, PAT	REVISED -
	PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
TEMPORARY ENTRANCE STA 165+00.00

SCALE: 1"H=10' 1"V=5' | SHEET NO 2 OF 3 SHEETS | STA 3+50.0 | TO STA 5+00.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	90
		CONTRACT NO 74244		
		ILLINOIS FED. AID PROJECT		

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

ORIGINAL SURVEY		BY	DATE
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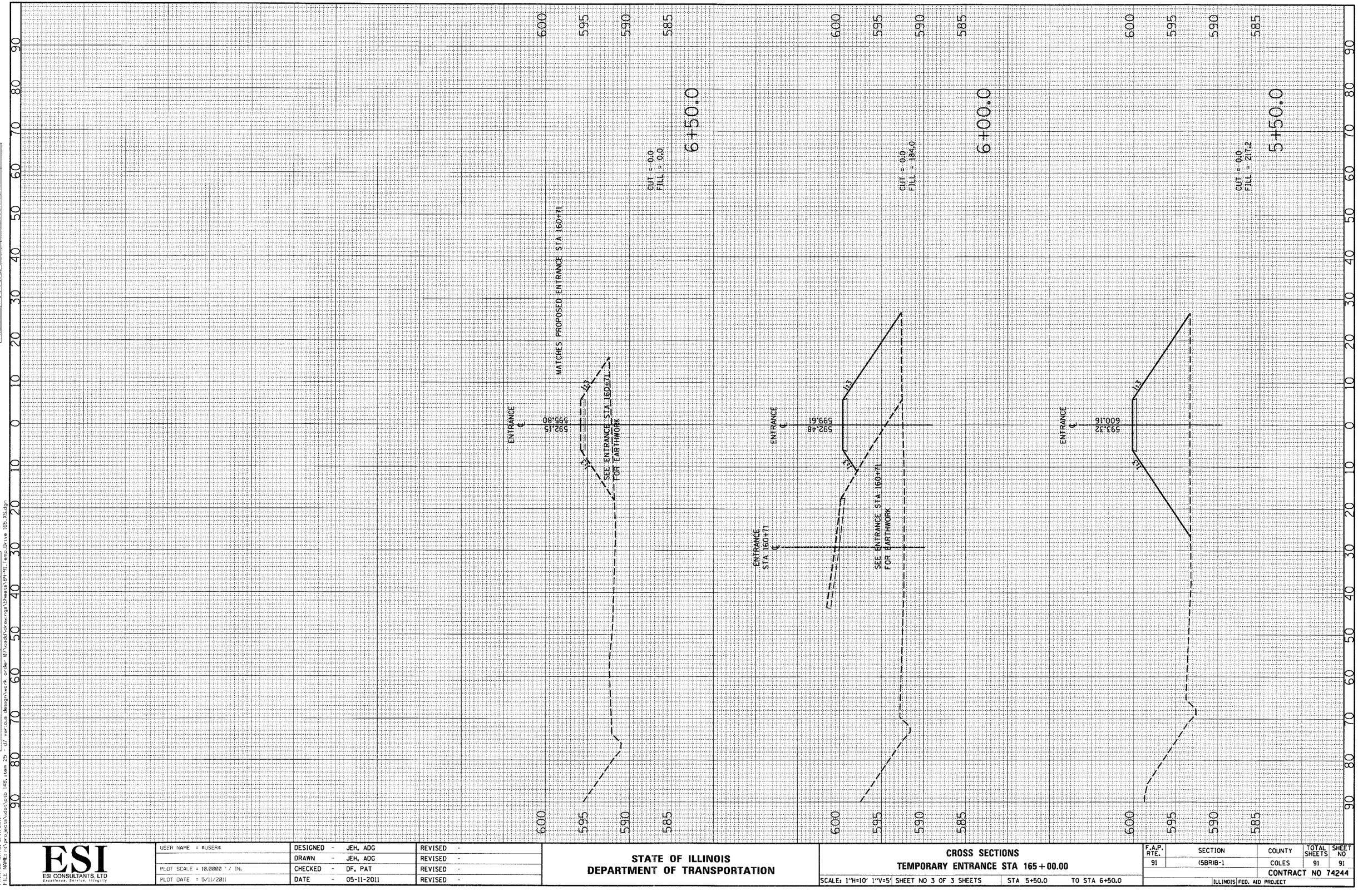
NO.	AREAS CHECKED		



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PLOT DATE = 5/11/2011	DATE - 05-11-2011	REVISED -	

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CROSS SECTIONS
TEMPORARY ENTRANCE STA 165+00.00

SCALE: 1"H=10' 1"V=5' | SHEET NO 3 OF 3 SHEETS | STA 5+50.0 | TO STA 6+50.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
91	(5BR)B-1	COLES	91	91
		CONTRACT NO 74244		
	ILLINOIS FED. AID PROJECT			