

PROJECT ENGINEER: M. ADDIS (309) 671-3454

68619

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	D4 CULVERT EXT. 2004-01	FULTON	19	1

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

F.A.P. ROUTE 685 (IL. ROUTE 9)
 SECTION: D4 CULVERT EXTENSION 2008
 FULTON COUNTY

C-94-153-06

INDEX OF SHEETS

- COVER SHEET
- GENERAL NOTES AND COMMITMENTS
- SUMMARY OF QUANTITIES
- SCHEDULE OF QUANTITIES
- PLAN SHEETS
- EROSION CONTROL PLAN
- DISTRICT CADD STANDARDS
- CROSS SECTIONS

HIGHWAY STANDARDS

- 342001-701005-03
- 666001-01701201-03
- 701001-02701901-01

DISTRICT STANDARDS

- 205001-D4
- 280001-D4
- 281001-D4
- 542001-D4

DESCRIPTION OF WORK: THIS PROJECT CONSISTS OF CULVERT EXTENSIONS AT TWO LOCATIONS. WORK INCLUDES EARTH EXCAVATION AND RIPRAP.

DESIGN DESIGNATION

- ADT = 1050
- MU = 150
- SU =

SCALES

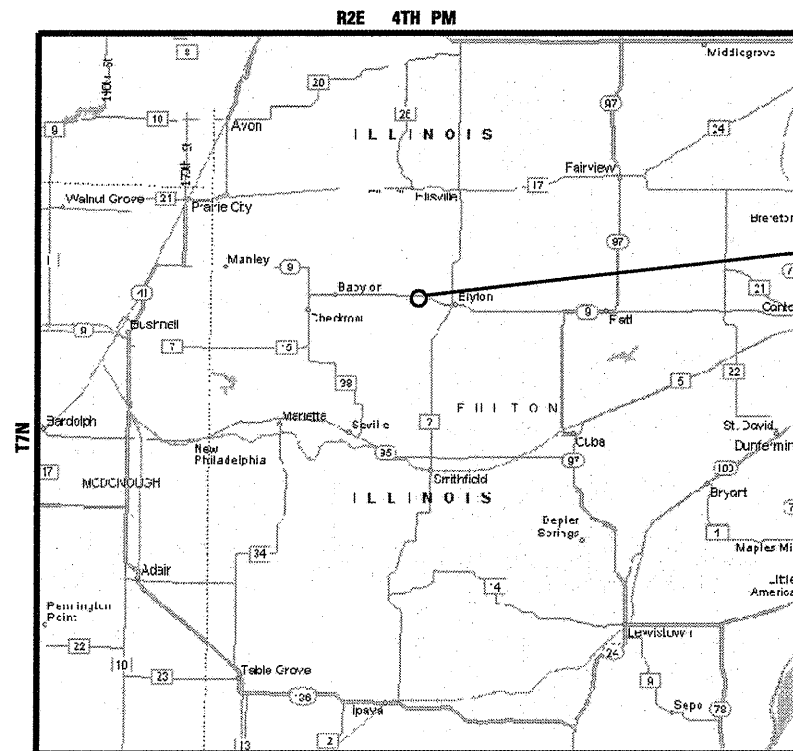
SEE INDIVIDUAL SHEETS

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

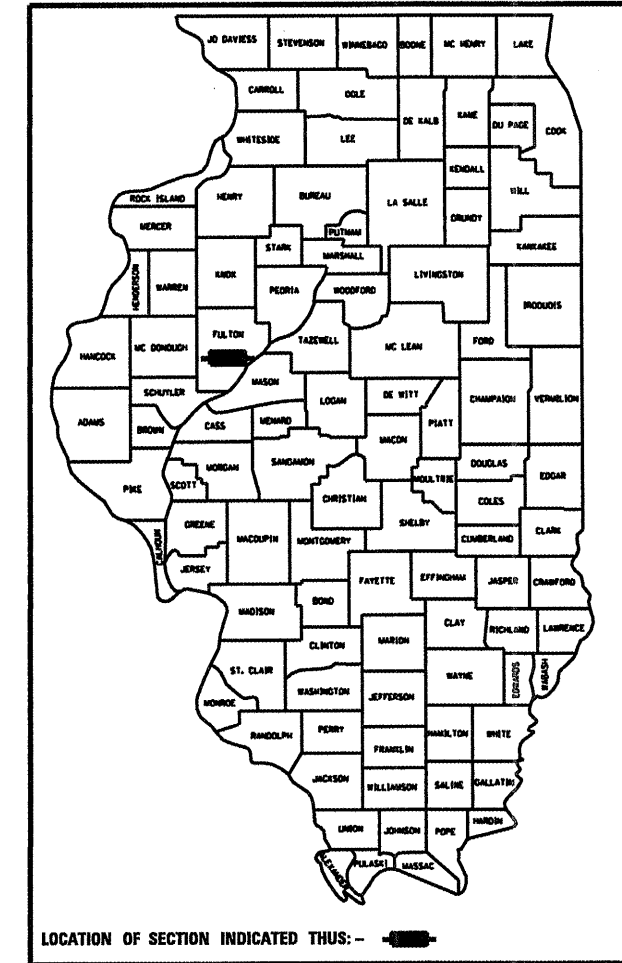
CONTRACT NO. 68619
 CATALOG NO. 032682-00D

Bruner, Cooper & Zuck, Inc.
 Consulting Engineers Structural Engineers Land Surveyors
 Phone (309) 343-8282 188 East Simmons Street
 Fax (309) 343-8232 P.O. Box 1919
 E-Mail: bczi@bczinc.com Galesburg, Illinois 61402-1919
 PROFESSIONAL DESIGN FIRM
 LICENSE NO. 014-002833



LOCATION MAP (NO SCALE)

GROSS LENGTH OF IMPROVEMENT = 425.00 FEET = 0.08 MILES
 NET LENGTH OF IMPROVEMENT = 425.00 FEET = 0.08 MILES



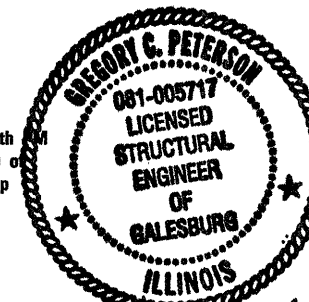
LOCATION OF SECTION INDICATED THUS: - [Symbol]

PROJECT LOCATION

PROPOSED IMPROVEMENT BEGINS STA. 198 + 25
 F.A.P. ROUTE 685

PROPOSED IMPROVEMENT ENDS STA. 202 + 25.00
 F.A.P. ROUTE 685.

T7N, R2E of the 4th
 Sections 19 & 30 of
 Deerfield Township
 in Fulton County



Gregory Peterson
 GREGORY C. PETERSON
 ILLINOIS REGISTERED
 PROFESSIONAL ENGINEER
 NO. 048387
 EXPIRES NOV. 30, 2009

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED May 5, 2009

[Signature]
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

 20

 ENGINEER OF DESIGN AND ENVIRONMENT

 20

 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS

F.A.S. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	2
STA. 198+00		TO STA. 202+25		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* D4 CULVERT EXT. 2008				

GENERAL NOTES

UTILITIES - LOCATIONS INFORMATION ON PLANS

THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRICAL POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN - ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

CLEARING

AT LOCATIONS WHERE CLEARING IS INDICATED ON THE PLANS BEYOND THE LIMITS OF THE PROPOSED EXCAVATION OR EMBANKMENT, THE CONTRACTOR SHALL RESTORE THE DISTURBED EARTH BY BLADING AND SHAPING TO BLEND WITH ADJACENT GROUND. THE CLEARING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. RESEEDING OR RESODDING WILL BE AS PROVIDED IN THE PLANS.

TREE REMOVAL

THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS LOCATIONS INCLUDED IN THE PLANS.

AGGREGATE SHOULDERS, TYPE B

AGGREGATE SHOULDERS, TYPE B SHALL BE REQUIRED FOR ALL GRANULAR CONSTRUCTION OF SIDE ROADS, ENTRANCES, AND MAILBOX TURNOUTS, WHETHER OR NOT PORTIONS OF THE SURFACES THUS CONSTRUCTED ARE TO BE COVERED WITH A BITUMINOUS SURFACE, EXCEPT WHERE NOTED DIFFERENTLY ON THE PLANS.

ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS

THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOXPIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS AS REQUIRED PRIOR TO ORDERING THESE ITEMS.

COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

STATUS OF UTILITIES

<u>STATION</u>	<u>OFFSET</u>	<u>ITEM</u>	<u>SURVEY NOTES</u>	<u>CONFLICT WITH</u>
199+46.25	50' RT	FO		PROPOSED MANHOLE
200+90.65	50' RT	FO		PROPOSED MANHOLE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND COMMITMENTS

SCALE: VERT. NONE
HORIZ. NONE
DATE: 09/19/2008

DRAWN BY: BALSER
DESIGNED BY: PETERSON
CHECKED BY: BRUNER

SUMMARY OF QUANTITIES

P.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685		FULTON	19	3
STA. 198+00		TO STA. 202+25		
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		
* D4 CULVERT EXT.2008				

100% STATE

SUMMARY OF QUANTITIES		UNIT	CONSTRUCTION TYPE CODE	
CODE NO.	ITEM		TOTAL QTY	SFTY 2A
20100500	TREE REMOVAL, ACRES	ACRE	0.9	0.9
20200100	EARTH EXCAVATION	CU YD	4548	4548
21101625	TOPSOIL, FURNISH AND PLACE, 6"	SQ YD	3753	3753
25000200	SEEDING, CLASS 2	ACRE	0.8	0.8
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	72	72
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	72	72
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	72	72
25100630	EROSION CONTROL BLANKET	SQ YD	3753	3753
28000300	TEMPORARY DITCH CHECKS	EACH	15	15
28000400	PERIMETER EROSION BARRIER	FOOT	203	203
28100227	STONE RIPRAP, CLASS B4	TON	60	60
28200200	FILTER FABRIC	SQ YD	90	90
48101200	AGGREGATE SHOULDERS, TYPE B	TON	58	58
50800105	REINFORCEMENT BARS	POUND	50	50
52102965	ANCHOR BOLTS, 3/4"	EACH	16	16
54202965	PIPE CULVERTS, TYPE 4, RCCP 30"	FOOT	64	64
54202977	PIPE CULVERTS, TYPE 4, RCCP 42"	FOOT	68	68
54213675	PRECAST REINFORCED CONCRETE FLARED END SECTION, 30"	EACH	1	1
54213687	PRECAST REINFORCED CONCRETE FLARED END SECTION, 42"	EACH	1	1
54248510	CONCRETE COLLAR	CU YD	1.0	1.0
63200310	GUARDRAIL REMOVAL	FOOT	338	338
66500105	WOVEN WIRE FENCE, 4'	FOOT	571	571
66502300	WOVEN WIRE FENCE REMOVAL	FOOT	425	425
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	4	4
67100100	MOBILIZATION	L. SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L. SUM	1	1

REVISIONS	
NAME	DATE
M.M.A., K.K.K.	04/30/2009

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE

DATE: 09/19/2008

DRAWN BY: BALSER
 DESIGNED BY: PETERSON
 CHECKED BY: BRUNER

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685		FULTON	19	4
STA. 198+00		TO STA. 202+25		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* D4 CULVERT EXT. 2008				

SCHEDULES OF QUANTITIES

MOBILIZATION	
LOCATION	L. SUM
JOBSITE	1
TOTAL=	1

EARTHWORK SCHEDULE					
LOCATION	EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	TOPSOIL, FURNISH AND PLACE, 6"
	CU YD	CU YD	CU YD	CU YD	SQ YD
STA. 198+25.00 TO STA. 202+00.00, RT.	4548	3411	2761	650 (+)	3753
TOTAL=	4548	3411	2761	650 (+)	3753

SHRINKAGE FACTORS: EARTH EXCAVATION 25%

NITROGEN FERTILIZER NUTRIENT	
LOCATION	QTY. (POUND)
STA. 198+25 TO STA. 202+00	72
TOTAL=	72

TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	
LOCATION	L. SUM
JOBSITE	1
TOTAL=	1

PERIMETER EROSION BARRIER	
LOCATION	QTY. (FOOT)
199+46.00, 120' RT. TO STA. 199+85.00, 190' RT.	80
STA. 199+85.00, 190' RT. TO STA. 200+25.00, 180' RT.	41
STA. 200+25.00, 180' RT. TO STA. 200+75.00, 115' RT.	82
TOTAL=	203

TOPSOIL, FURNISH AND PLACE, 6"	
LOCATION	QTY. (SQ YD)
198+25 TO STA. 202+00	3753
TOTAL=	3753

POTASSIUM FERTILIZER NUTRIENT	
LOCATION	QTY. (POUND)
STA. 198+25 TO STA. 202+00	72
TOTAL=	72

PHOSPHORUS FERTILIZER NUTRIENT	
LOCATION	QTY. (POUND)
STA. 198+25 TO STA. 202+00	72
TOTAL=	72

EROSION CONTROL BLANKET	
LOCATION	QTY. (SQ YD)
STA. 198+25 TO STA. 202+00	3753
TOTAL=	3753

TEMPORARY DITCH CHECKS	
LOCATION	QTY. (EACH)
STA. 200+50 RT. TO STA. 202+00 RT.	15
TOTAL=	15

SEEDING, CLASS 2	
LOCATION	QTY. (ACRE)
STA. 198+25 TO STA. 202+00	0.8
TOTAL=	0.8

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

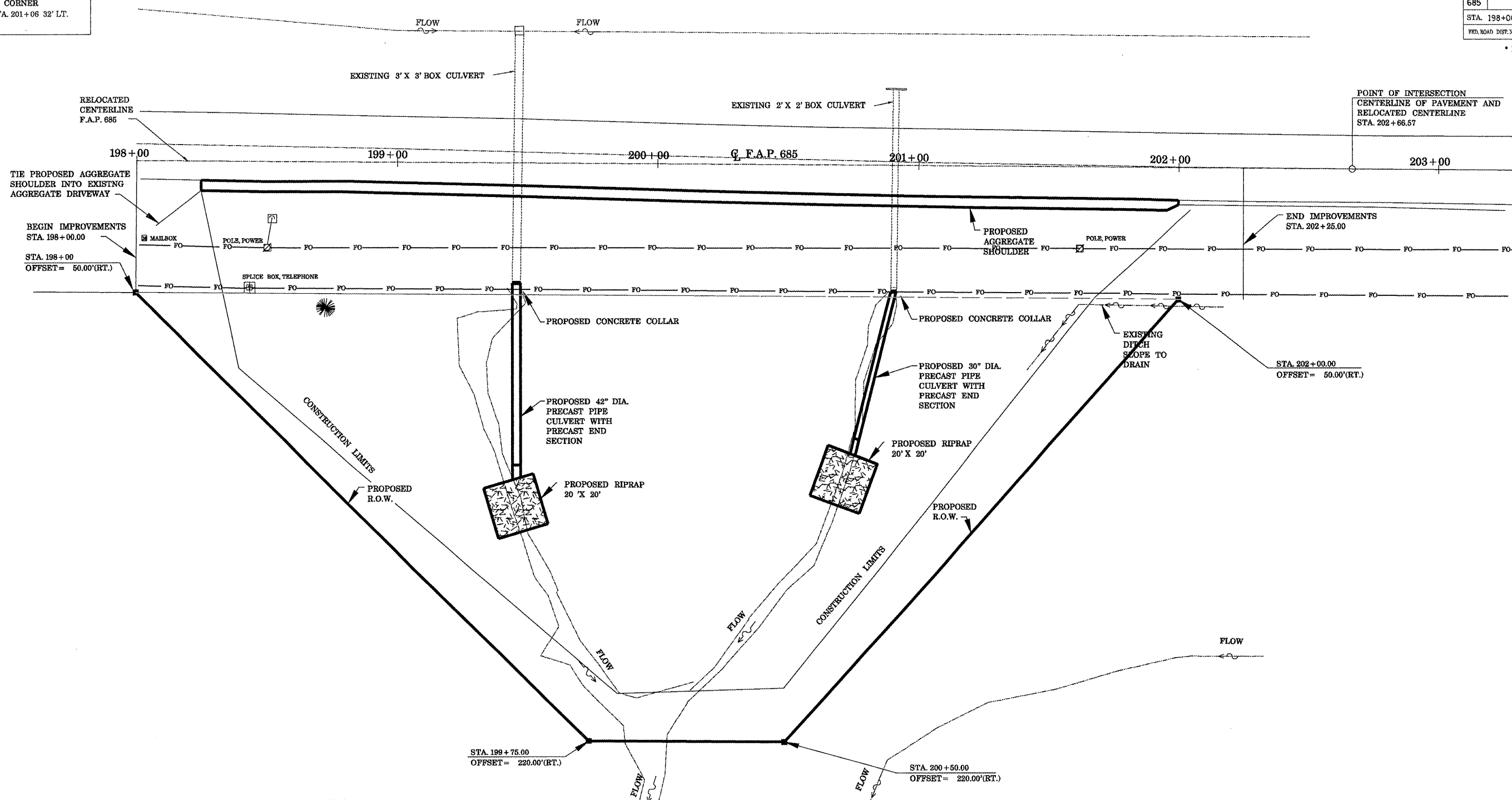
SCALE: NONE
DATE: 09/19/2008

DRAWN BY: BALSER
DESIGNED BY: PETERSON
CHECKED BY: BRUNER

BENCHMARK:
CHIS. "C" NW CORNER
HEADWALL STA. 201+06 32' LT.
ELEV. 597.12

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	5
STA. 198+00		TO STA. 202+25		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

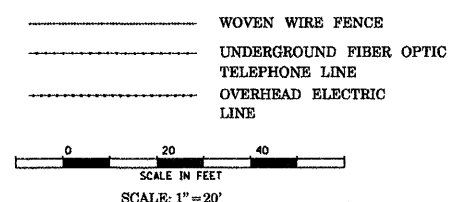
* D4 CULVERT EXT. 2008



RONALD FORMHALS, TR. & GARY FORMHALS, TR.

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS LOCATION STA. 198+00.00, 50' RT. STA. 199+75.00, 220' RT. STA. 200+75.00, 220' RT. STA. 202+25.00, 50' RT. TOTAL=	EACH 1 1 1 1 1	AGGREGATE SHOULDERS, TYPE B LOCATION STA. 198+25.00 TO STA. 202+00.00 TOTAL=	TON 58.0 58.0
PIPE CULVERT, TYPE 4 RCCP, 30" LOCATION STA. 200+90.65, TOTAL=	FOOT 64 64	STONE RIPRAP, CLASS B4 LOCATION STA. 199+46.25, 120' RT. STA. 200+75.00, 115' RT. TOTAL=	TON 30 30 60
PRECAST REINFORCED CONCRETE FLARED END SECTION, 30" LOCATION STA. 200+75.00, 115' RT. TOTAL=	EACH 1 1	FILTER FABRIC LOCATION STA. 199+46.25, 120' RT. STA. 200+75.00, 115' RT. TOTAL=	50 YD 45 45 90
PIPE CULVERT, TYPE 4 RCCP, 42" LOCATION STA. 199+46.25 RT. TOTAL=	FOOT 68 68	CONCRETE COLLAR LOCATION STA. 199+46.25 RT. STA. 200+90.65 TOTAL=	CU YD 0.50 0.50 1.0
PRECAST REINFORCED CONCRETE FLARED END SECTION, 42" LOCATION STA. 199+46.25, 120' RT. TOTAL=	EACH 1 1	REINFORCEMENT BARS LOCATION STA. 199+46.25 RT. STA. 200+90.65 TOTAL=	POUND 25.0 25.0 50.0
		EXPANSION BOLTS, 3/4" LOCATION STA. 199+46.25 RT. STA. 200+90.65 TOTAL=	EACH 8 8 16

LEGEND



ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED PLAN OF IMPROVEMENTS

SCALE: AS SHOWN
DATE: 09/19/2008

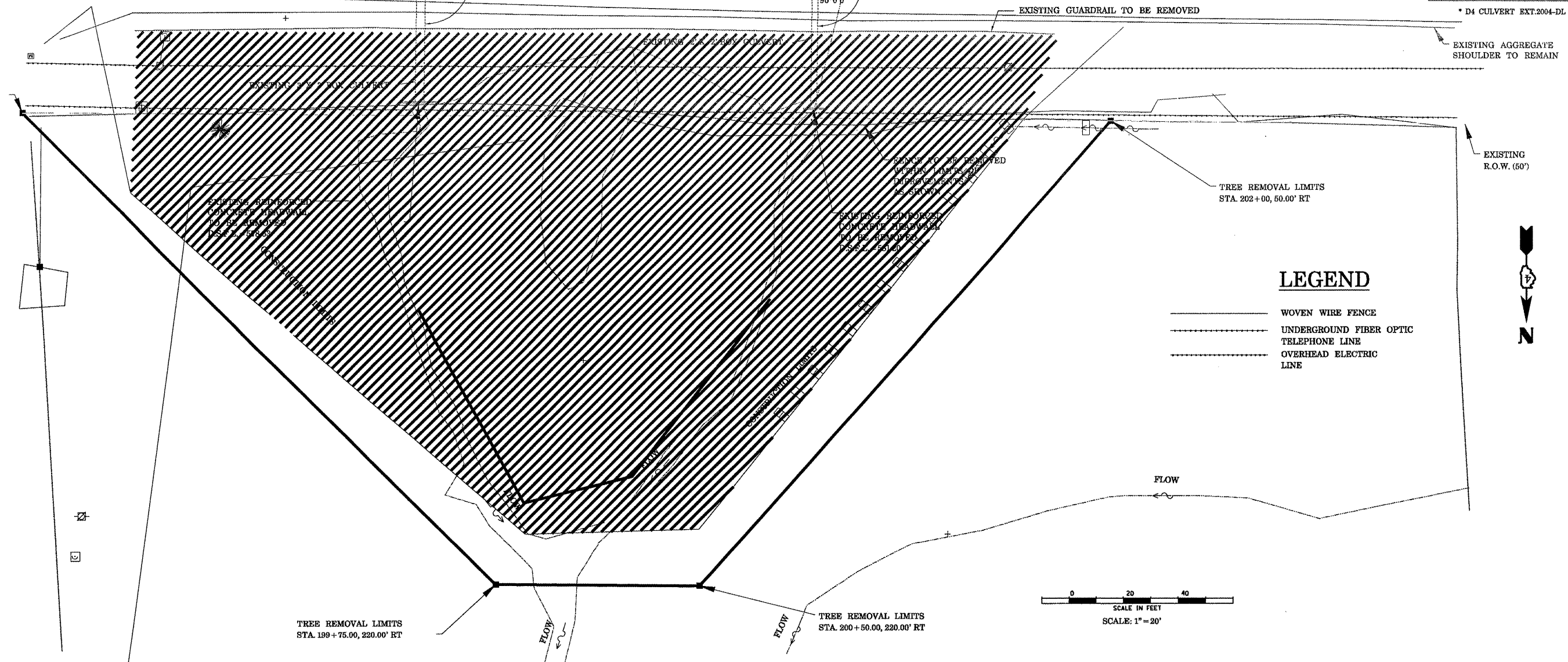
DRAWN BY: BALSER
DESIGNED BY: PETERSON
CHECKED BY: BRUNER

BENCHMARK:
CHIS. " NW CORNER
HEADWALL STA. 201+06 32' LT.
ELEV. 597.12

198+00 199+00 200+00 G. F.A.P. 685 201+00 202+00 203+00

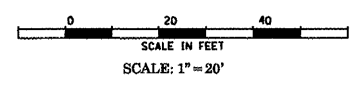
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	32	6
STA. 198+00		TO STA. 202+25		
ILLINOIS		FED. AID PROJECT		

TREE REMOVAL LIMITS
STA. 198+00.00, 50.00' RT



LEGEND

- WOVEN WIRE FENCE
- - - UNDERGROUND FIBER OPTIC TELEPHONE LINE
- · · OVERHEAD ELECTRIC LINE



RONALD FORMHALS, TR. & GARY FORMHALS, TR.

ILLINOIS DEPARTMENT OF TRANSPORTATION

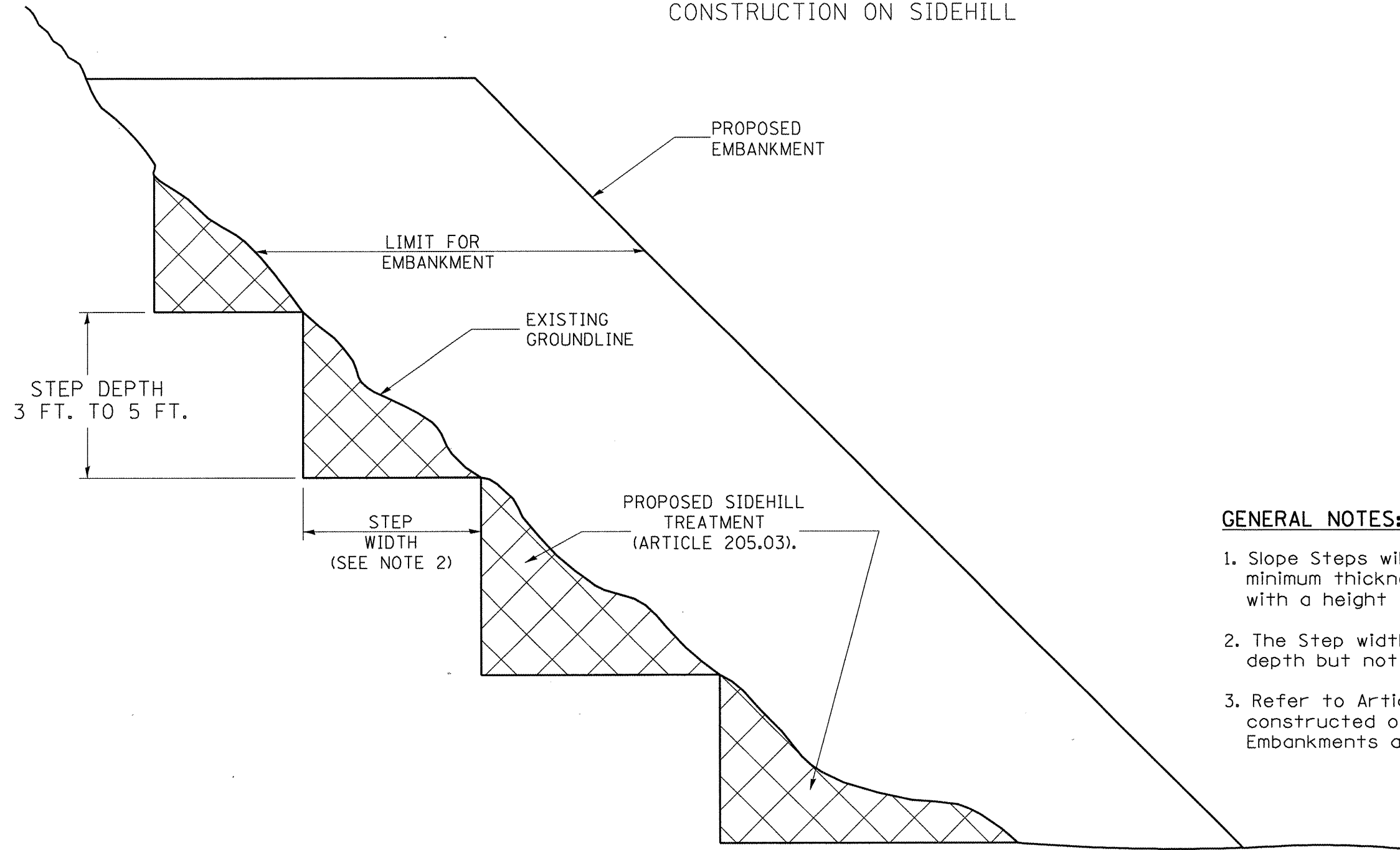
EROSION CONTROL PLAN

SCALE: AS SHOWN
DATE: 09/19/2008

DRAWN BY: BALSER
DESIGNED BY: PETERSON
CHECKED BY: BRUNER

SLOPE STEPS DETAIL

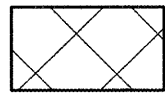
TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

DESIGNER NOTE:

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

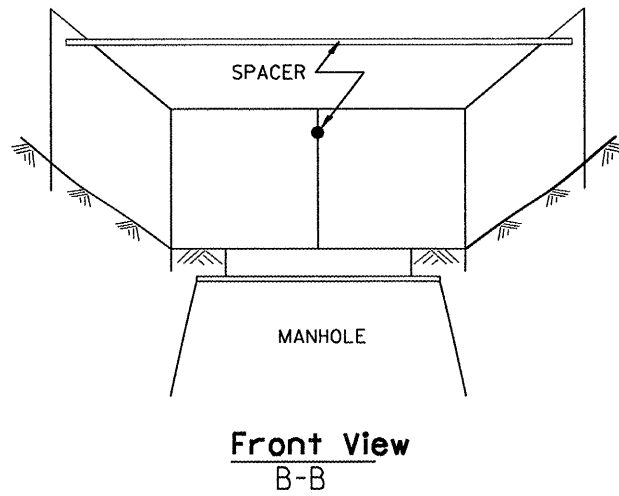
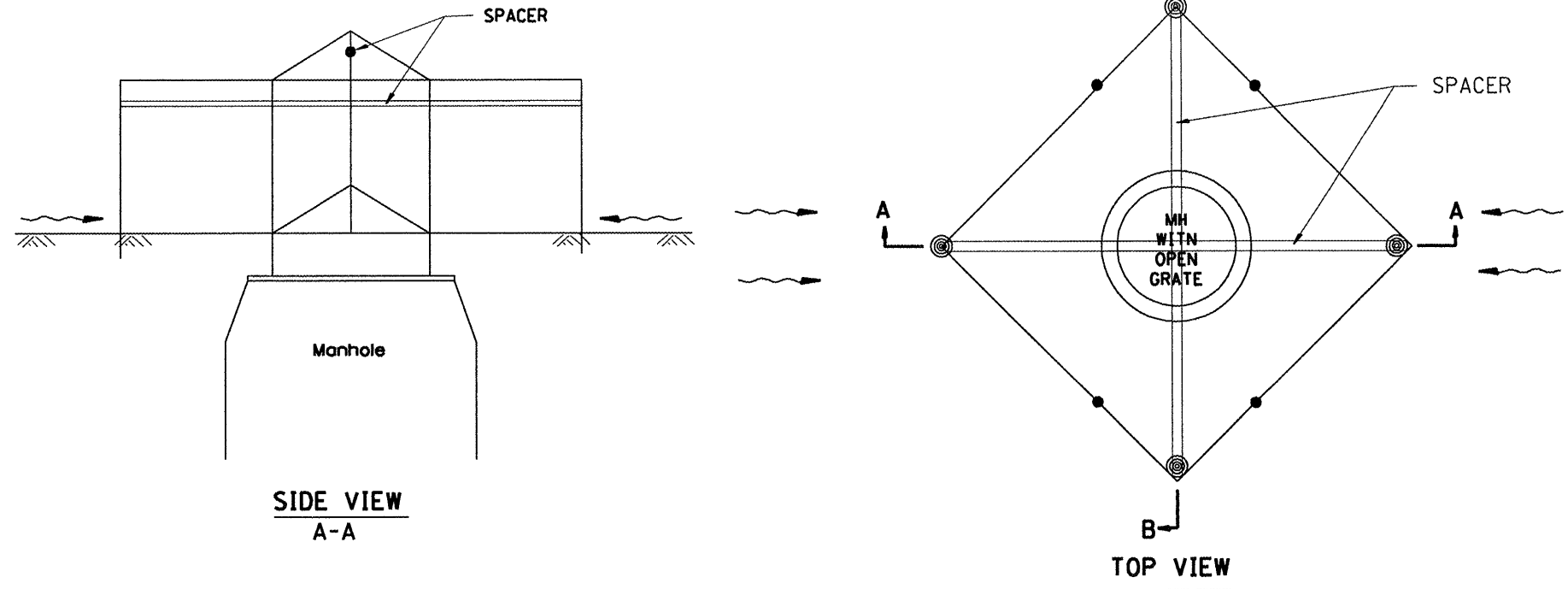
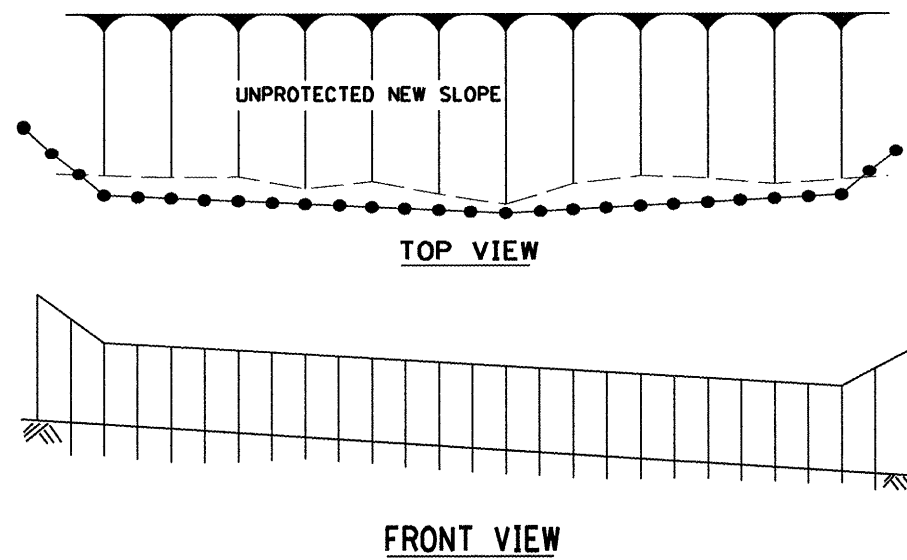
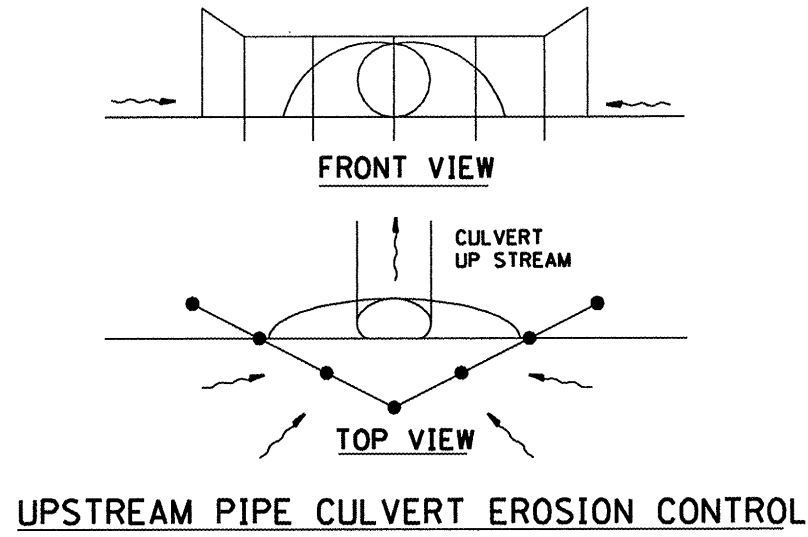
NOT TO SCALE

SLOPE STEPS DETAIL

CADD STD. 205001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	D4 CULVERT EXT. 2008	FULTON	19	7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68619	

Designer NOTES:
 1. Designer to modify this Special Detail sheet, as needed, for inclusion in plans.
 2. Include Highway Standard 280001 "TEMPORARY EROSION CONTROL SYSTEM."



GENERAL NOTES:

1. This work shall be performed in accordance with Sections 280 & 1081, of the Standard Specifications.
2. Additional Timber or Metal Post shall be installed, as needed.

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

1-1-97		T.P.
3-11-03	ELIMINATED SILT FENCE DITCH CHECK	M.A.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL APPLICATION OF SILT FILTER FENCE

NOT TO SCALE

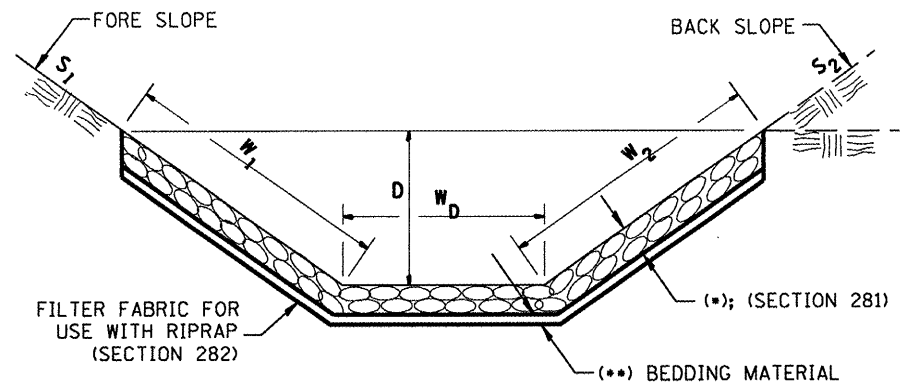
CADD STD. 280001-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	32	8
CONTRACT NO.				

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

Designer NOTES:
 1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.
 2. (*) Designer to specify pay item including material, quality, and gradation.
 3. (**) Designer to specify thickness of bedding material.
 4. Include District Special Provision if needed.

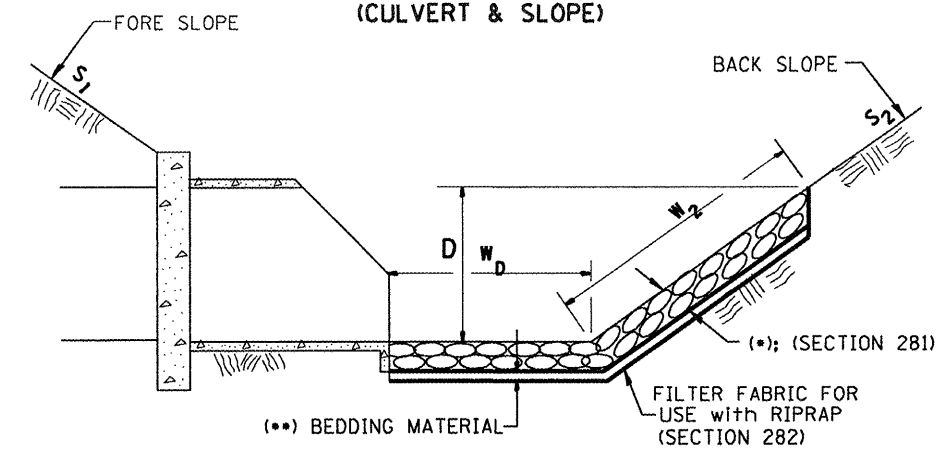
**CASE 1
(DITCH)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
TOTAL				

(1) WIDTH = $W_1 + W_2 + W_D$

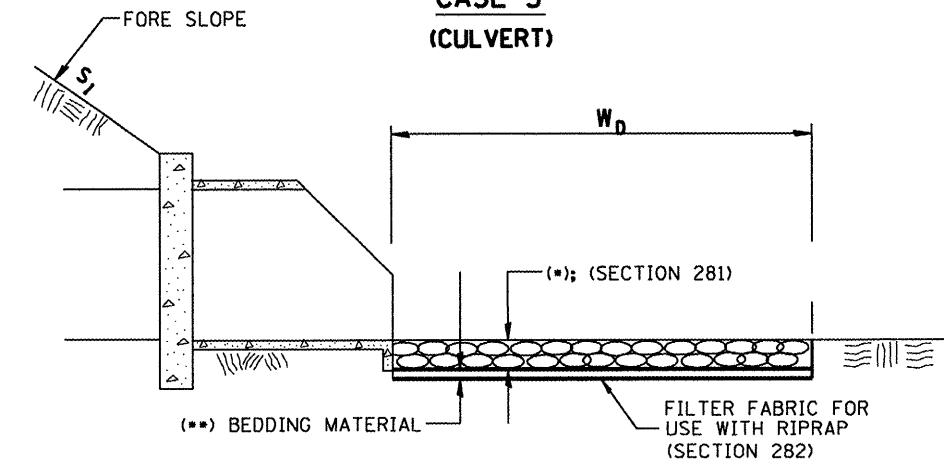
**CASE 2
(CULVERT & SLOPE)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
TOTAL				

(1) WIDTH = $W_2 + W_D$

**CASE 3
(CULVERT)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m ²)
STA. 199+46.25, 120' RT	20	20	30	45
STA. 200+75.00, 115' RT	20	20	30	45
TOTAL				

(1) WIDTH = W_D

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
 All dimensions are in inches (millimeters) unless otherwise noted.

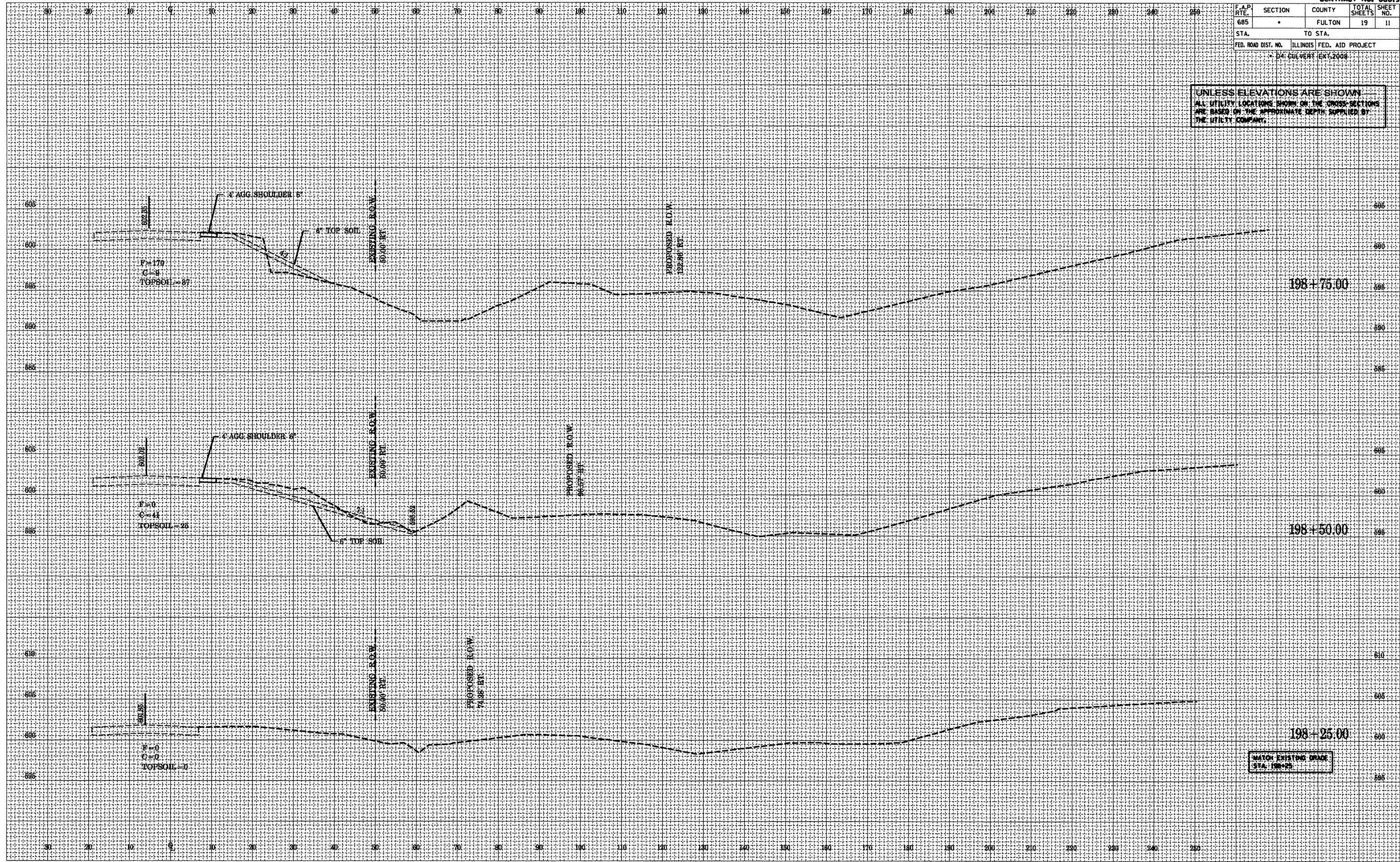
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* D4: CULVERT EXT. 2008				

UNLESS ELEVATIONS ARE SHOWN
ALL UTILITY LOCATIONS SHOWN ON THE CROSS-SECTIONS
ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY
THE UTILITY COMPANY.

DATE	BY

DATE	BY

PLOT DATE = 8/1/2008
 FILE NAME = 68619-11.dwg
 PLOT SCALE = 84.5400 / IN.
 REFERENCE = REF#



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	12
STA. 198+00		TO STA. 202+25		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* 54' CULVERT EXT. 2008				

UNLESS ELEVATIONS ARE SHOWN
ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS
ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY
THE UTILITY COMPANY.

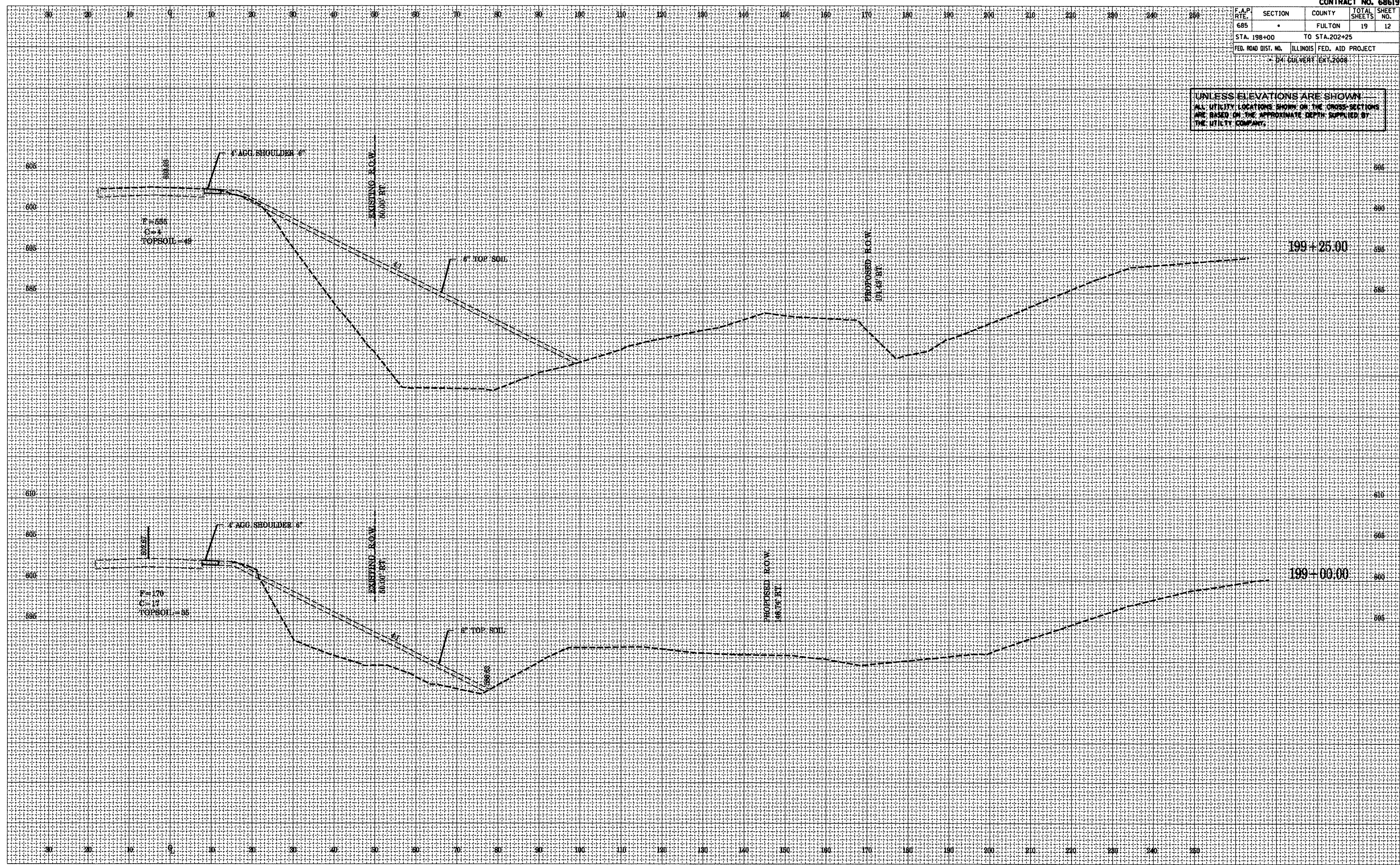
BY	DATE

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	REVISIONS

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	REVISIONS

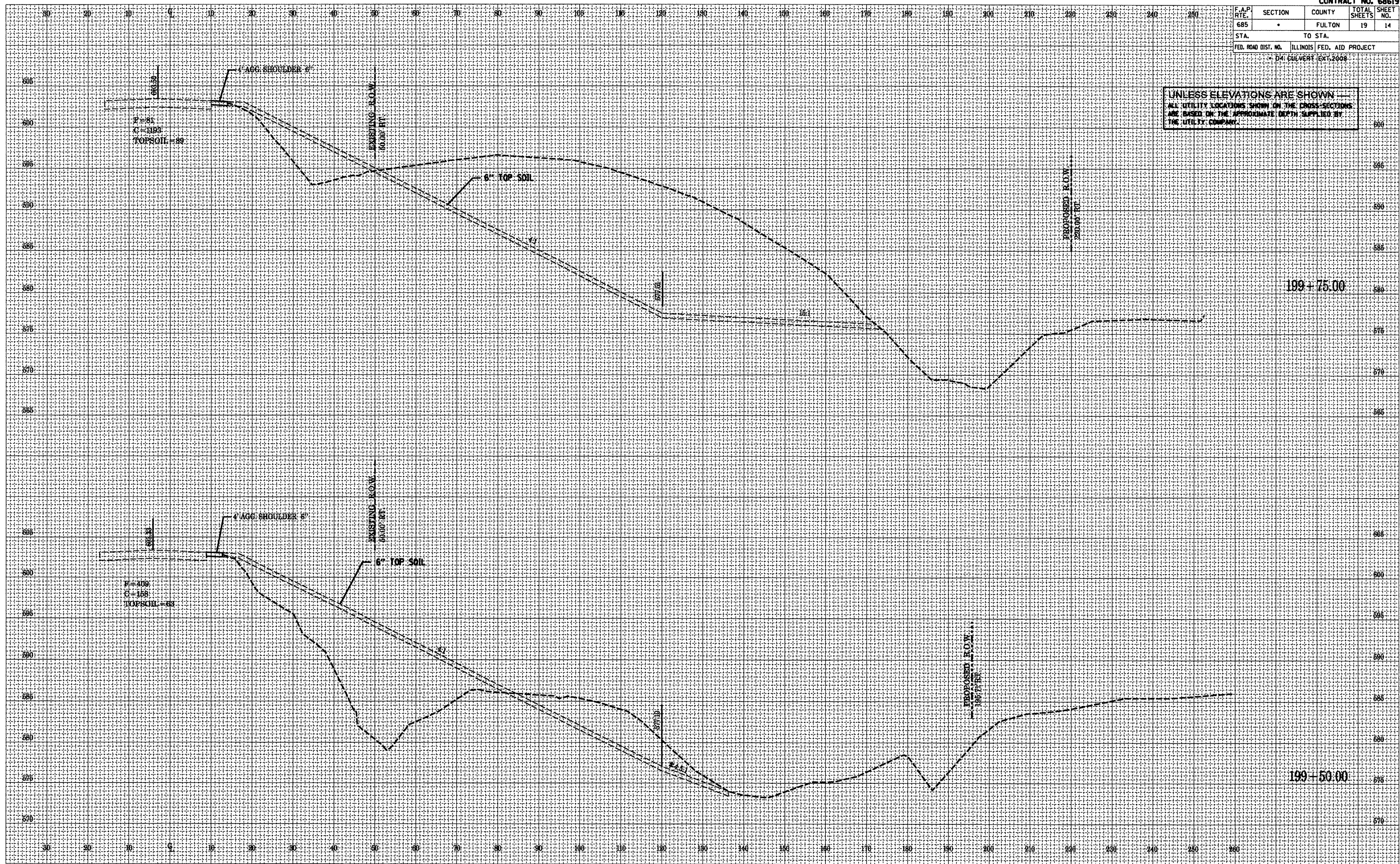
PLAT DATE = 5/1/2009
PLAT SCALE = 1" = 40'
REFERENCE = SHEET #



F.A.P. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

D4: CULVERT EXT. 2008

UNLESS ELEVATIONS ARE SHOWN
ALL UTILITY LOCATIONS SHOWN ON THE CROSS-SECTIONS
ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY
THE UTILITY COMPANY.



DATE	BY

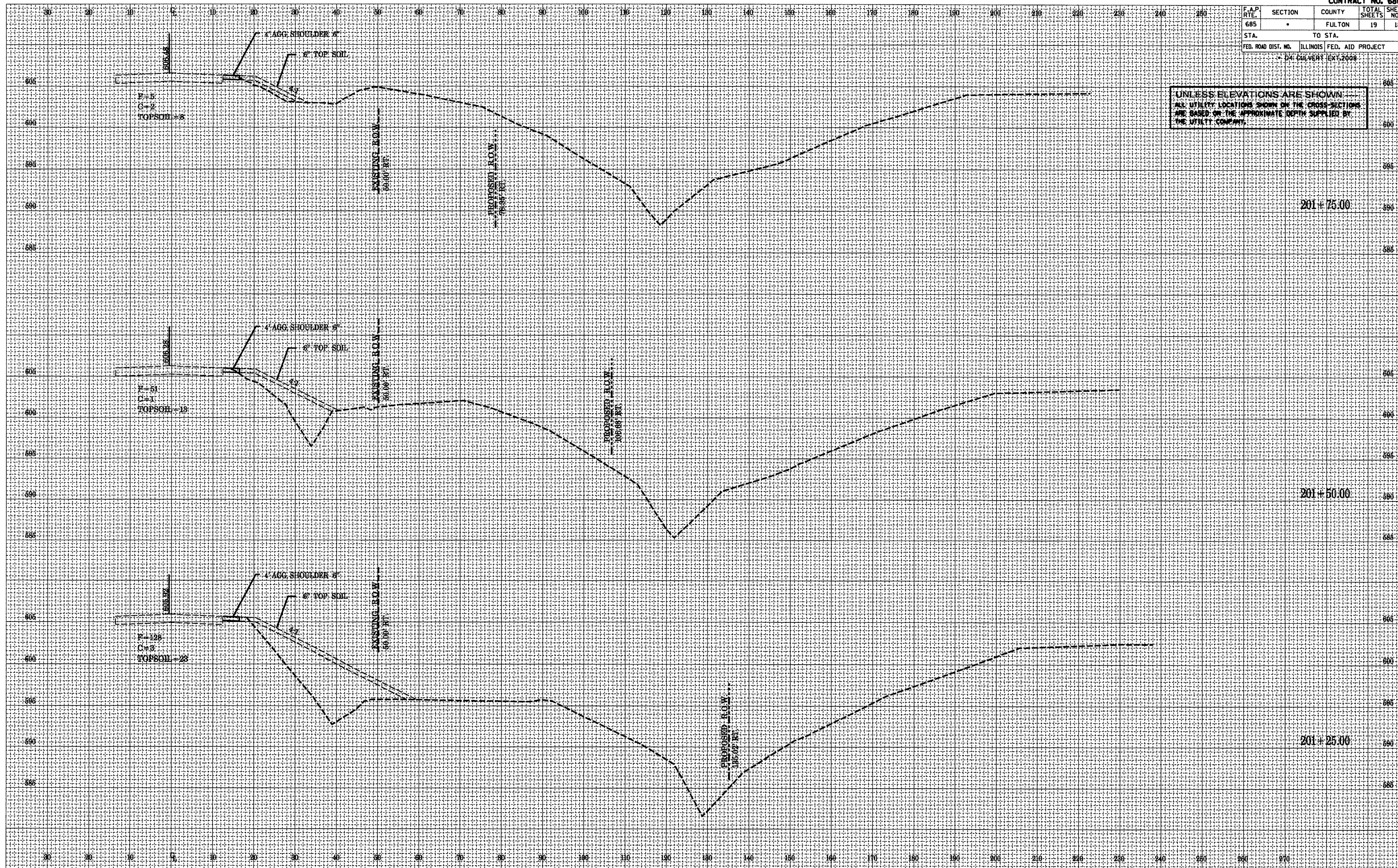
DATE	BY

PLOT DATE = 5/1/2008
FILE NAME = 68619.plt
PLOT SCALE = 84.9468 / IN.
REFERENCE = REF#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	*	FULTON	19	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

D4: CULVERT EXT. 2008

UNLESS ELEVATIONS ARE SHOWN
ALL UTILITY LOCATIONS SHOWN ON THE CROSS-SECTIONS
ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY
THE UTILITY COMPANY.



DATE	BY

DATE	BY

PLOT DATE = 5/1/2008
FILE NAME = 68619.plm.dwg
PLOT SCALE = 84.8480 / IN.
REFERENCE = REF#

