



**TRANSPORTATION CABINET**

Frankfort, Kentucky 40622  
www.transportation.ky.gov/

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

November 2, 2012

CALL NO. 206  
CONTRACT ID NO. 121354  
ADDENDUM # 2

Subject: Trigg-Marshall Counties, 121GR12D054-BRO  
Letting November 16, 2012

- (1) Revised - Plan Sheets - R1, R2A, R2B, R7, R8, R13, R14, R31, R32, R33, R35, R36, R38, R40, R41, R83, R85, X14, X15, X16, X18, X20, X21, & X26
- (2) Deleted - Plan Sheets - R25, R26, & R86 through R90
- (3) Revised - Front Page of Proposal
- (4) Revised - Completion Date - Page 4 of 177
- (5) Added - Dynamic Pile Testing - Pages 78(a)-78(c) of 177
- (6) Added - Static & Pseudo-Static Pile Testing - Page 96(a) of 177
- (7) Revised - Material Summary - Pages 130-132(a) of 177
- (8) Revised - Bid Items - Pages 173-175 of 177

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

Plan revisions are available at <http://www.lynnimaging.com/kytransportation/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in blue ink that reads "Ryan Griffith".

Ryan Griffith  
Director  
Division of Construction Procurement

RG:ks  
Enclosures



An Equal Opportunity Employer M/F/D

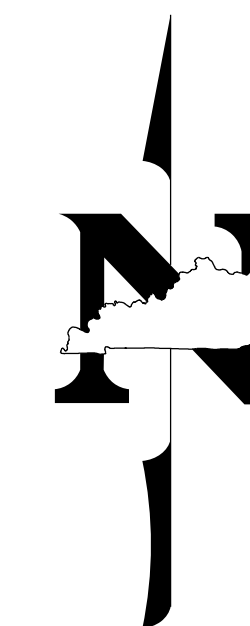
COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL / TRIGG	1-180.75	RI

# Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS

## PLANS OF PROPOSED PROJECT

### MARSHALL / TRIGG COUNTY

BRO 0801 (093)  
RECONSTRUCT US 68 / KY 80  
GRADE & DRAIN PLANS



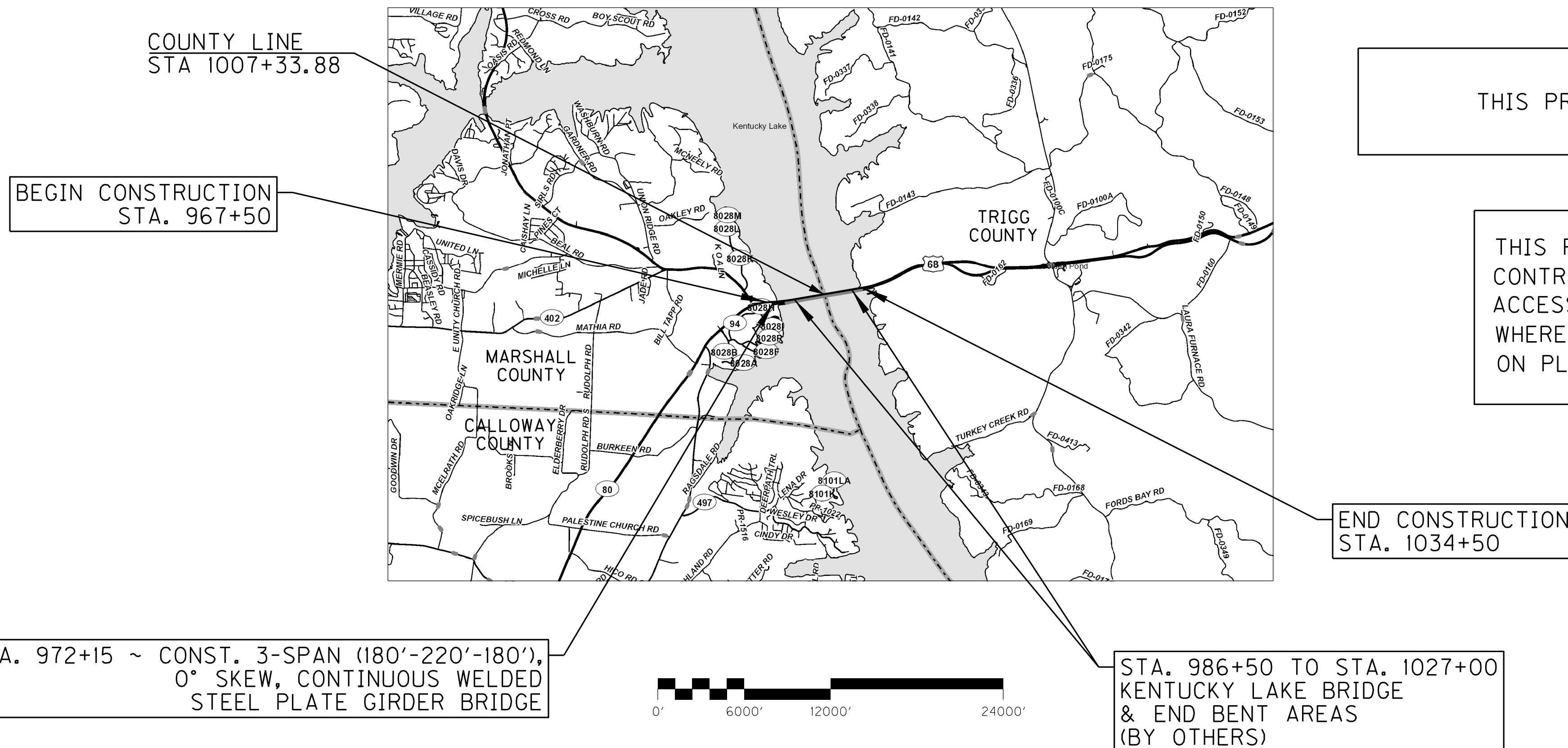
#### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2-R2A	TYPICAL SECTIONS
R2B	SUMMARY OF QUANTITIES
R2C	GENERAL AND SPECIAL NOTES
R3-R16	PLAN AND PROFILE SHEETS
R17	RIGHT OF WAY SUMMARY SHEETS
R18-R21	RIGHT OF WAY STRIP MAP SHEETS
R22-R29	DETAIL SHEETS
R30-R32	TRAFFIC CONTROL SHEETS
R33-R36	EROSION CONTROL SHEETS
R37	COORDINATE CONTROL SHEETS
R38-R85	GEOTECHNICAL SHEETS
S1-S60	STRUCTURE PLANS
X1-X26	CROSS SECTION SHEETS

SHEETS NOT INCLUDED IN TOTAL SHEETS  
R2A, R2B, R2C, R25, R26

#### STANDARD DRAWINGS

NUMBER			
RBI-001-10	RDD-040-04	RDX-210-02	TTC-100-03
RBI-002-06	RDI-001-09	RDX-215	TTC-135-01
RBI-003-08	RDI-002-04	RDX-220-04	TTD-110-01
RBI-004-04	RDI-020-08	RDX-225	TTD-120-01
RBR-001-11	RDI-021	RGS-001-06	TTD-125-01
RBR-010-05	RDI-025-04	RGS-002-05	
RBR-015-04	RDI-026	RGX-001-05	
RBR-016-04	RDI-035-01	RGX-010-03	
RBR-020-05	RDP-001-05	RGX-200	
RBR-035-10	RDP-010-08	RRE-002-04	



THIS PROJECT IS ON THE NH SYSTEM

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE PROVIDED ONLY WHERE SPECIFICALLY INDICATED ON PLANS.

END CONSTRUCTION STA. 1034+50

STA. 972+15 ~ CONST. 3-SPAN (180'-220'-180'), 0° SKEW, CONTINUOUS WELDED STEEL PLATE GIRDER BRIDGE

STA. 986+50 TO STA. 1027+00 KENTUCKY LAKE BRIDGE & END BENT AREAS (BY OTHERS)

### LAYOUT MAP

#### DESIGN CRITERIA

CLASS OF HIGHWAY	RURAL ARTERIAL
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	55 MPH
REQUIRED NPSD	495'
REQUIRED PSD	N/A
LEVEL OF SERVICE	
ADT PRESENT ( 2009 )	2,650
ADT FUTURE ( 2035 )	12,600
DHV (2035)	1,260
D %	N/A
T %	15% (ADT)

#### GEOGRAPHIC COORDINATES

LATITUDE 36 DEGREES 46 MINUTES 21 SECONDS NORTH  
LONGITUDE 88 DEGREES 07 MINUTES 18 SECONDS WEST

#### DESIGNED

% RESTRICTED SD	0%
LEVEL OF SERVICE	
MAX. DISTANCE W/O PASSING	N/A

LENGTH	FOR EQUALITIES	NOT INCLUDED	RAILROAD CROSSINGS NO.	BRIDGES
2065.96 LIN. FT. 0.391 MILES	0 LIN. FT.			584.04 - LAGOON BRIDGE 3610.00 - LAKE BRIDGE (BY OTHERS) 440.00 - LAKE BRIDGE END BENT AREAS (BY OTHERS)

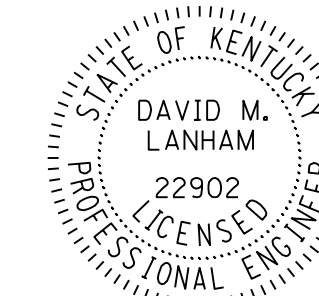
Commonwealth of Kentucky  
DEPARTMENT OF HIGHWAYS  
COUNTY OF  
**MARSHALL / TRIGG**

ITEM NO. 1-180.75  
PROJECT NUMBER: FD52 079 0068 027-028 / FD52 III 0068 000-001  
LETTING DATE: 11-16-2012

RECOMMENDED BY: MICHAEL MCGREGOR 10-30-2012  
PROJECT MANAGER DATE:  
PLAN APPROVED BY: STATE HIGHWAY ENGINEER DATE:



**Palmer**  
ENGINEERING  
3403 STONY SPRING CIR  
LOUISVILLE, KENTUCKY 40220  
(502) 491-2411



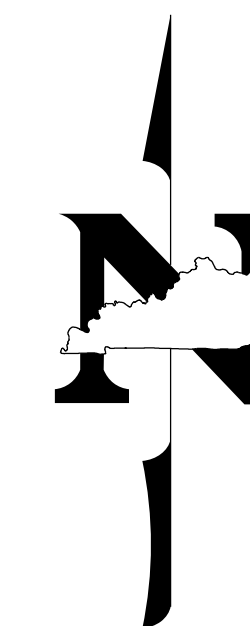
David M. Lanham  
10-30-2012

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\000100LS.DGN  
USER: dav/dh  
DATE PLOTTED: October 30, 2012  
E-SHEET NAME: 000100LS  
MicroStation v8.11.9.292



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL / TRIGG	1-180.75	RI

REVISD 10-31-12



# Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS

## PLANS OF PROPOSED PROJECT

### MARSHALL / TRIGG COUNTY

BRO 0801 (093)  
RECONSTRUCT US 68 / KY 80  
GRADE & DRAIN PLANS

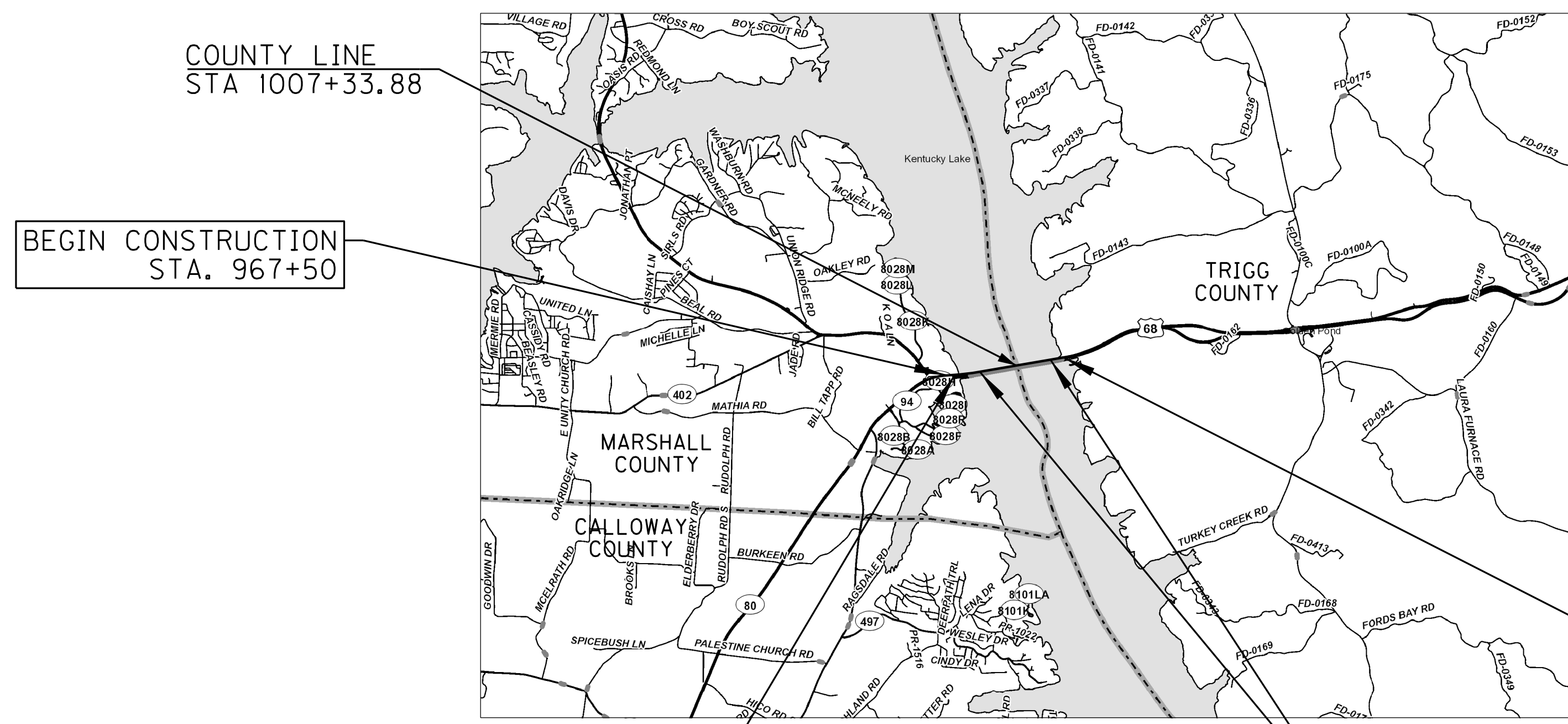
#### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2-R2A	TYPICAL SECTIONS
R2B	SUMMARY OF QUANTITIES
R2C	GENERAL AND SPECIAL NOTES
R3-R16	PLAN AND PROFILE SHEETS
R17	RIGHT OF WAY SUMMARY SHEETS
R18-R21	RIGHT OF WAY STRIP MAP SHEETS
R22-R29	DETAIL SHEETS
R30-R32	TRAFFIC CONTROL SHEETS
R33-R36	EROSION CONTROL SHEETS
R37	COORDINATE CONTROL SHEETS
R38-R85	GEOTECHNICAL SHEETS
SI-S60	STRUCTURE PLANS
X1-X26	CROSS SECTION SHEETS

SHEETS NOT INCLUDED IN TOTAL SHEETS  
R2A, R2B, R2C, R25, R26

#### STANDARD DRAWINGS

NUMBER			
RBI-001-10	RDD-040-04	RDX-210-02	TTC-100-03
RBI-002-06	RDI-001-09	RDX-215	TTC-135-01
RBI-003-08	RDI-002-04	RDX-220-04	TTD-110-01
RBI-004-04	RDI-020-08	RDX-225	TTD-120-01
RBR-001-11	RDI-021	RGS-001-06	TTD-125-01
RBR-010-05	RDI-025-04	RGS-002-05	
RBR-015-04	RDI-026	RGX-001-05	
RBR-016-04	RDI-035-01	RGX-010-03	
RBR-020-05	RDP-001-05	RGX-200	
RBR-035-10	RDP-010-08	RRE-002-04	



THIS PROJECT IS ON THE NH SYSTEM

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE PROVIDED ONLY WHERE SPECIFICALLY INDICATED ON PLANS.

END CONSTRUCTION STA. 1034+50

STA. 986+50 TO STA. 1027+00 KENTUCKY LAKE BRIDGE & END BENT AREAS (BY OTHERS)



#### DESIGN CRITERIA

CLASS OF HIGHWAY	RURAL ARTERIAL
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	55 MPH
REQUIRED NPSD	495'
REQUIRED PSD	N/A
LEVEL OF SERVICE	
ADT PRESENT ( 2009 )	2,650
ADT FUTURE ( 2035 )	12,600
DHV (2035)	1,260
D %	N/A
T %	15% (ADT)

#### GEOGRAPHIC COORDINATES

LATITUDE 36 DEGREES 46 MINUTES 21 SECONDS NORTH  
LONGITUDE 88 DEGREES 07 MINUTES 18 SECONDS WEST

#### DESIGNED

% RESTRICTED SD	0%
LEVEL OF SERVICE	
MAX. DISTANCE W/O PASSING	N/A

LENGTH	LIN. FT.	MILES	FOR EQUALITIES	LIN. FT.	MILES	FOR EQUALITIES	LIN. FT.	MILES	FOR EQUALITIES	LIN. FT.	MILES
ADDED	2065.96	0.391	0								
DEDUCTED			NOT INCLUDED			NOT INCLUDED			NOT INCLUDED		
RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.		
BRIDGES	584.04		BRIDGES			BRIDGES			BRIDGES		
	3610.00										
	440.00										

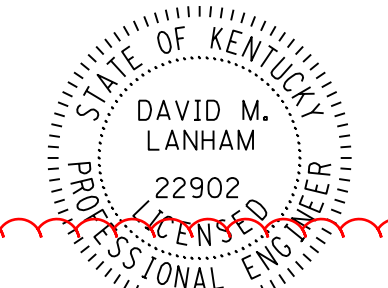
### LAYOUT MAP

Commonwealth of Kentucky  
DEPARTMENT OF HIGHWAYS  
COUNTY OF  
**MARSHALL / TRIGG**

**Palmer**  
ENGINEERING  
3403 STONY SPRING CIR  
LOUISVILLE, KENTUCKY 40220  
(502) 491-2411

ITEM NO. 1-180.75  
PROJECT NUMBER: FD52 079 0068 027-028 / FD52 III 0068 000-001  
LETTING DATE: 11-16-2012

RECOMMENDED BY: MICHAEL MCGREGOR PROJECT MANAGER DATE: 10-30-2012  
PLAN APPROVED BY: STATE HIGHWAY ENGINEER DATE:



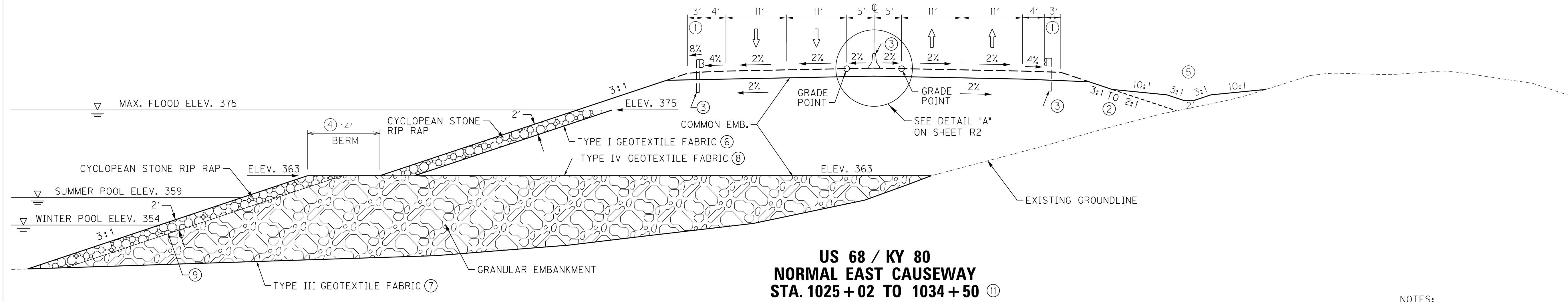
David M. Lanham  
10-30-2012

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROAD001.S.DGN  
USER: dav/dh  
DATE PLOTTED: October 30, 2012  
E-SHEET NAME: ROAD001.S  
MicroStation v8.11.9.292

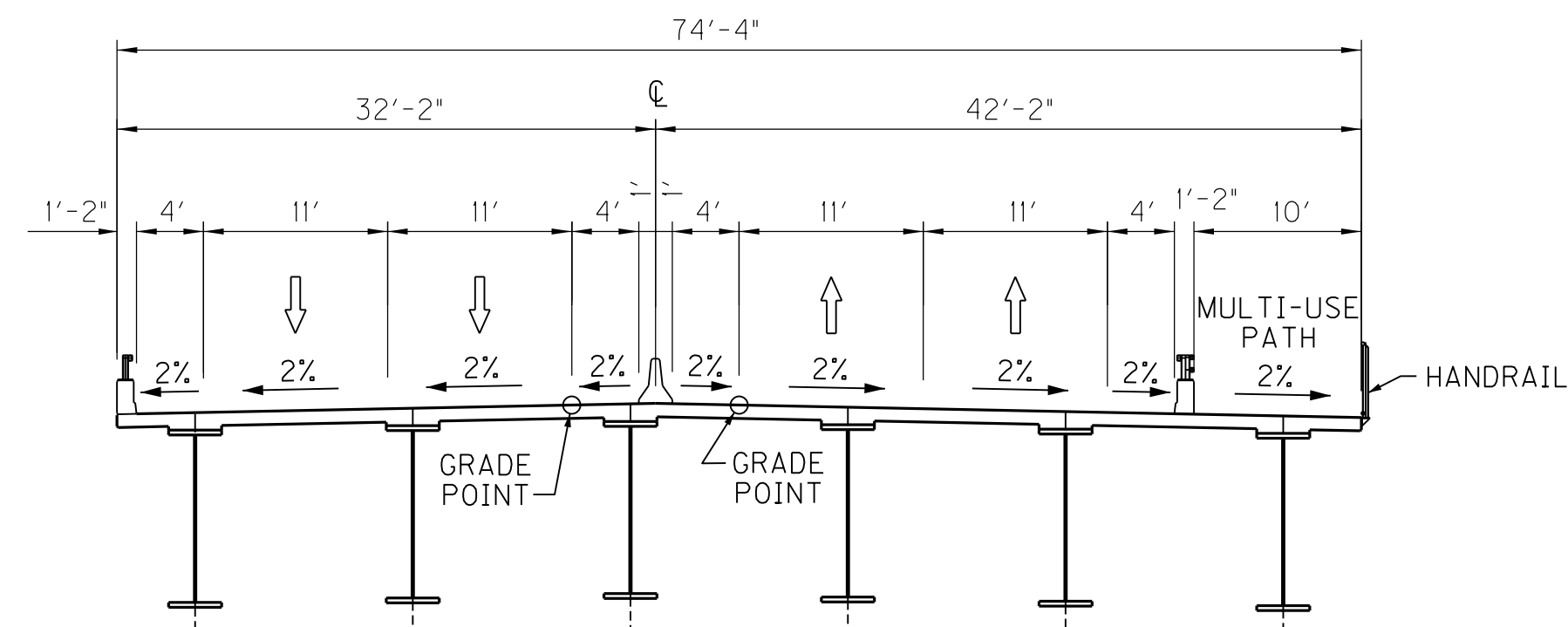
COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	R2A

# TYPICAL SECTIONS

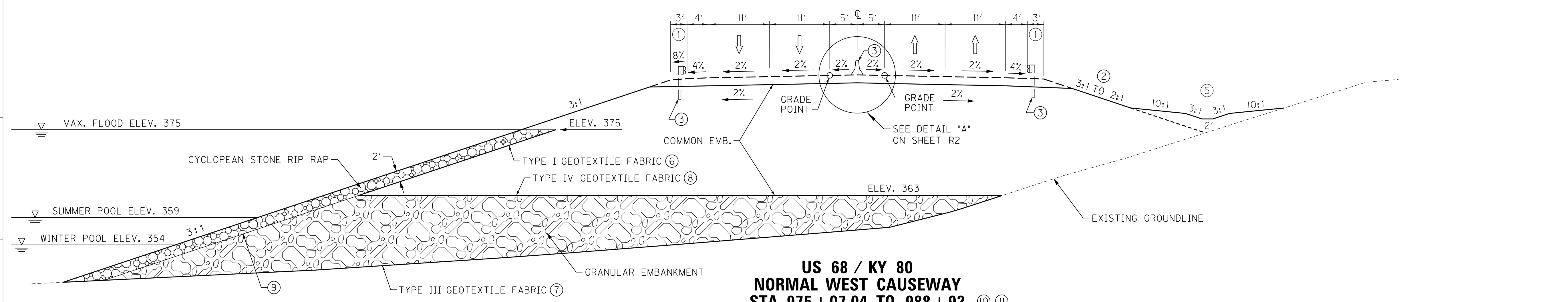
## MAINLINE



**US 68 / KY 80  
NORMAL EAST CAUSEWAY  
STA. 1025 + 02 TO 1034 + 50 ⑩**



**US 68 / KY 80  
BRIDGE TYPICAL SECTION  
STA. 988 + 92 TO 1025 + 02  
(BY OTHERS)**



**US 68 / KY 80  
NORMAL WEST CAUSEWAY  
STA. 975 + 07.04 TO 988 + 92 ⑩ ⑪**

- NOTES:**
- ① WIDEN SHOULDER 3 FEET WHERE INSTALLING GUARDRAIL
  - ② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER
  - ③ BY OTHERS
  - ④ FUTURE MULTI-USE PATH SURFACING BY OTHERS
  - ⑤ SEE CROSS SECTIONS FOR DITCH DETAILS
  - ⑥ TYPE I GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE COMMON EMBANKMENT AND THE CYCLOPEAN STONE RIP RAP, ABOVE ELEV. 363.
  - ⑦ TYPE III GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND EXISTING GROUNDLINE
  - ⑧ TYPE IV GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND THE COMMON EMBANKMENT
  - ⑨ TYPE I GEOTEXTILE FABRIC SHALL NOT BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND THE CYCLOPEAN STONE RIP RAP, BELOW ELEV. 363.
  - ⑩ SEE STRUCTURE PLANS FOR APPROACH SLAB DETAILS - STA. 975+07.04 TO STA. 975+32.04
  - ⑪ WEST CAUSEWAY STA. 986+50 TO STA. 988+92 AND EAST CAUSEWAY STA. 1025+02 TO STA. 1027+00 - BY OTHERS

SCALE: 1" = 10' HORIZONTAL  
1" = 10' VERTICAL

TYPICAL SECTIONS

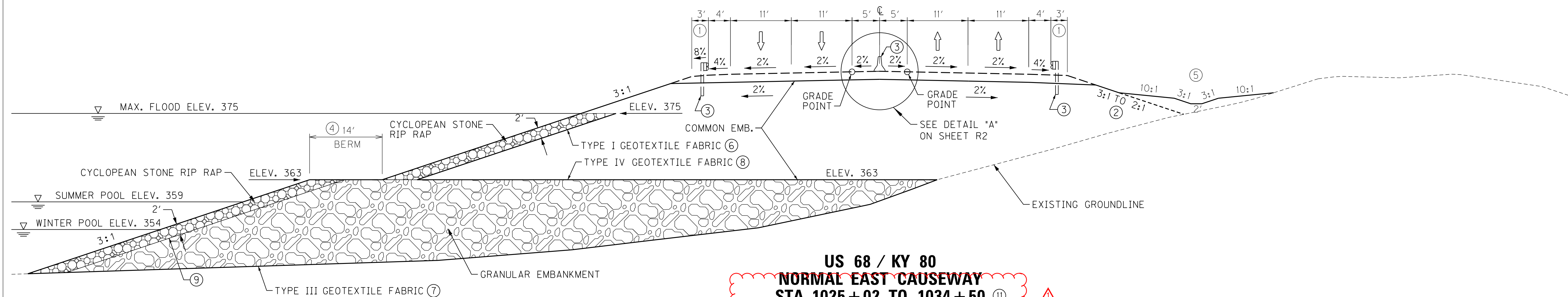
FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROAD20A15.DGN  
 USER: daw/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROAD20A15  
 MicroStation v8.11.9.292



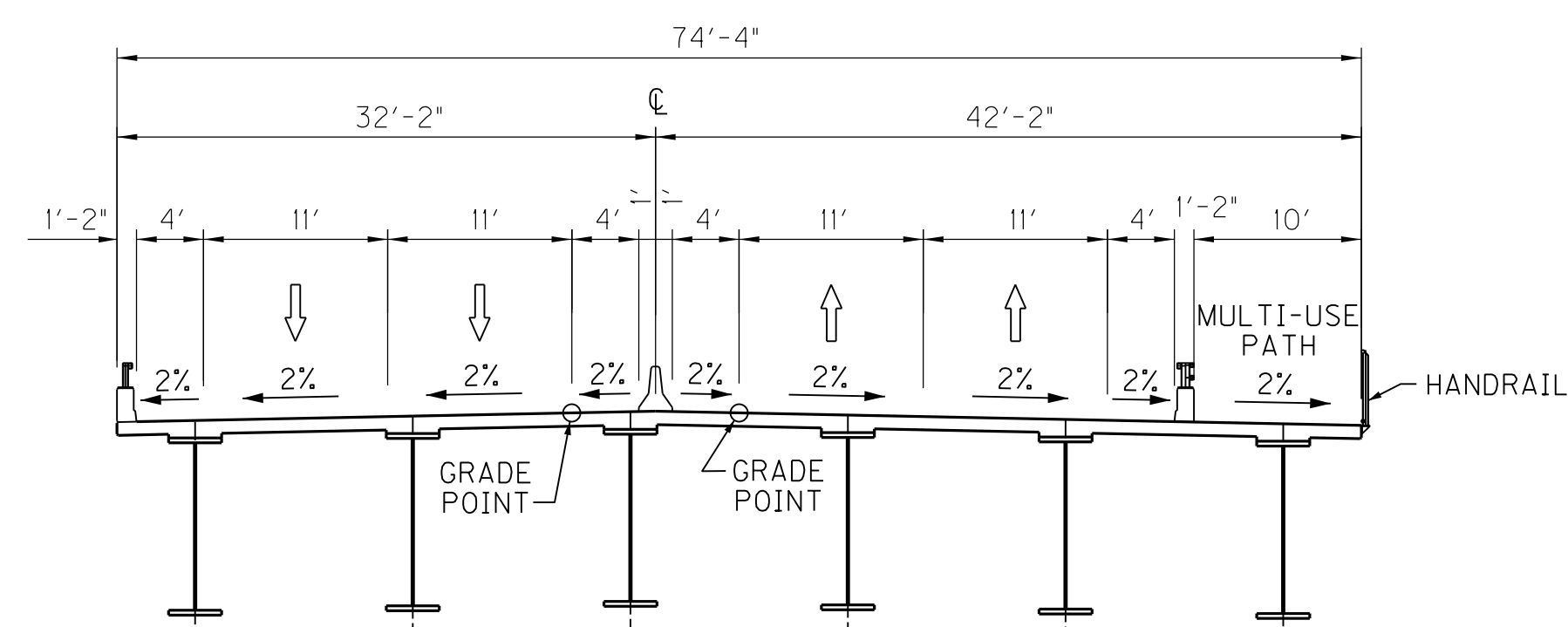
COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/ TRIGG	1-180.75	R2A

REVISD 10-31-12

# TYPICAL SECTIONS MAINLINE

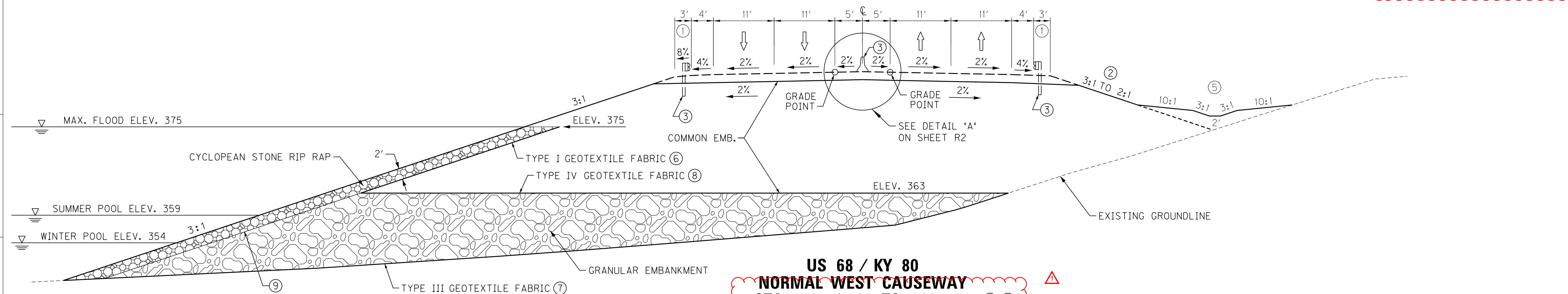


**US 68 / KY 80  
NORMAL EAST CAUSEWAY  
STA. 1025 + 02 TO 1034 + 50**



**US 68 / KY 80  
BRIDGE TYPICAL SECTION  
STA. 988 + 92 TO 1025 + 02  
(BY OTHERS)**

- NOTES:
- ① WIDEN SHOULDER 3 FEET WHERE INSTALLING GUARDRAIL
  - ② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER
  - ③ BY OTHERS
  - ④ FUTURE MULTI-USE PATH SURFACING BY OTHERS
  - ⑤ SEE CROSS SECTIONS FOR DITCH DETAILS
  - ⑥ TYPE I GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE COMMON EMBANKMENT AND THE CYCLOPEAN STONE RIP RAP, ABOVE ELEV. 363.
  - ⑦ TYPE III GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND EXISTING GROUNDLINE
  - ⑧ TYPE IV GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND THE COMMON EMBANKMENT
  - ⑨ TYPE I GEOTEXTILE FABRIC SHALL NOT BE PLACED BETWEEN THE GRANULAR EMBANKMENT AND THE CYCLOPEAN STONE RIP RAP, BELOW ELEV. 363.
  - ⑩ SEE STRUCTURE PLANS FOR APPROACH SLAB DETAILS - STA. 975+07.04 TO STA. 975+32.04
  - ⑪ WEST CAUSEWAY STA. 986+50 TO STA. 988+92 AND EAST CAUSEWAY STA. 1025+02 TO STA. 1027+00 - BY OTHERS



**US 68 / KY 80  
NORMAL WEST CAUSEWAY  
STA. 975 + 07.04 TO 988 + 92**

SCALE: 1" = 10' HORIZONTAL  
1" = 10' VERTICAL

TYPICAL SECTIONS

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROAD20A15.DGN  
 USER: daw/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROAD20A15  
 MicroStation v8.11.9.292

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/ TRIGG	1-180.75	R2B

ITEM	DESCRIPTION	UNIT	US 68/KY 80 MARSHALL COUNTY	US 68/KY 80 TRIGG COUNTY															TOTAL PROJECT
443	ENTRANCE PIPE - 24 IN	LF	64	0															64
1982	DELINEATOR FOR GUARDRAIL M/W	EACH	18	15															33
2014	BARRICADE-TYPE III	EACH	1	0															1
2159	TEMP DITCH	LF	1,892	748															2,640
2160	CLEAN TEMP DITCH	LF	3,784	1,496															5,280
2204	SPECIAL EXCAVATION (3) (4)	CU YD	4,574	2,097															6,671
2223	GRANULAR EMBANKMENT (B)	CU YD	88,650	33,241															121,891
2230	EMBANKMENT IN PLACE (A) (B)	CU YD	98,229	40,201															138,430
2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	1,687.5	1,462.5															3,150
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	2	0															2
2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	1	0															1
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	0	1															1
2545	CLEARING AND GRUBBING (1)	LS	1	1															2
2562	SIGNS (2)	SO FT	99.5	89.5															189
2568	MOBILIZATION	LS	1	1															1
2569	DEMObILIZATION	LS	1	1															1
2596	FABRIC-GEOTEXTILE TYPE I	SO YD	8,069	3,993															12,062
2598	FABRIC-GEOTEXTILE TYPE III	SO YD	30,673	12,723															43,396
2599	FABRIC-GEOTEXTILE TYPE IV	SO YD	16,633	7,209															23,842
2650	MAINTAIN AND CONTROL TRAFFIC	LS	1	1															2
2653	LANE CLOSURE	EACH	1	1															2
2701	TEMP SILT FENCE	LF	3,784	1,496															5,280
2703	SILT TRAP TYPE A	EACH	9	3															12
2704	SILT TRAP TYPE B	EACH	9	3															12
2706	CLEAN SILT TRAP TYPE A	EACH	27	9															36
2707	CLEAN SILT TRAP TYPE B	EACH	27	9															36
2709	CLEAN TEMP SILT FENCE	LF	7,568	2,992															10,560
2726	STAKING	LS	1	1															2
5950	EROSION CONTROL BLANKET	SO YD	3,534	879															4,413
5952	TEMP MULCH	SO YD	39,138	14,832															53,970
5953	TEMP SEEDING AND PROTECTION	SO YD	39,138	14,832															53,970
5966	TOPDRESSING FERTILIZER	TON	1.5	0.5															2.0
5985	SEEDING & PROTECTION	SO YD	28,644	10,386															39,030
8019	CYCLOPEAN STONE RIP RAP	TON	21,431	8,469															29,900
8020	CRUSHED AGGREGATE SLOPE PROTECTION	TON	130	0															130
20209EP69	GRANULAR PILE CORE	CU YD	973	0															973
24554ED	WET SOIL MIXING (3)	CU YD	12,500	0															12,500

NOTES:

(A) EMBANKMENT IN PLACE INCLUDES:  
 MARSHALL COUNTY 96,685 CY COMMON EMBANKMENT  
 TRIGG COUNTY 39,375 CY COMMON EMBANKMENT  
 1,544 CY EMBANKMENT BENCHING  
 826 CY EMBANKMENT BENCHING  
 98,229 40,201 TOTAL EMBANKMENT IN PLACE

(B) SEE GEOTECHNICAL PLANS FOR SPECIFICATIONS.

ESTIMATES OF EARTHWORK QUANTITIES ARE FOR DESIGN ONLY. THE CONTRACTOR IS ADVISED THAT THE EARTHWORK CALCULATIONS ARE FOR INFORMATION ONLY. ASSUMPTIONS FOR SHRINKAGE AND SWELL FACTORS ARE THE CONTRACTOR'S RESPONSIBILITY.

(1) APPROXIMATELY 5.29 ACRES IN MARSHALL COUNTY AND 2.20 ACRES IN TRIGG COUNTY.

(2) FOR MAINTENANCE OF TRAFFIC.

(3) SEE GEOTECHNICAL PLANS FOR DETAILS.

(4) FOR REMOVAL, RELOCATION AND/OR STOCKPILING OF EXISTING STONE RIPRAP SLOPE PROTECTION.

MicroStation v8.11.9.292 E-SHEET NAME: R0020BSU USER: ddy/dh DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\_FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY R0020BSU.DGN



# GENERAL SUMMARY

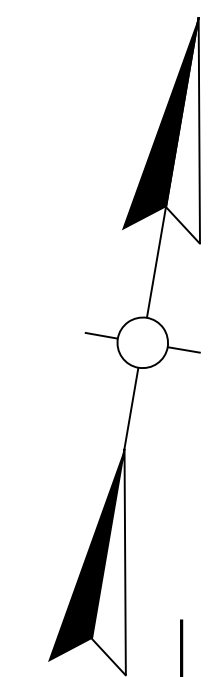
COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/ TRIGG	1-180.75	R2B

△ REVISED 10-31-12

ITEM	DESCRIPTION	UNIT	US 68/KY 80 MARSHALL COUNTY	US 68/KY 80 TRIGG COUNTY																TOTAL PROJECT	
443	ENTRANCE PIPE - 24 IN	LF	64	0																	64
1982	DELINEATOR FOR GUARDRAIL M/W	EACH	18	15																	33
2014	BARRICADE TYPE III	EACH	1	0																	1
2159	TEMP DITCH	LF	1,892	748																	2,640
2160	CLEAN TEMP DITCH	LF	3,784	1,496																	5,280
2204	SPECIAL EXCAVATION	CU YD	4,574	2,097																	6,671
2223	GRANULAR EMBANKMENT	CU YD	88,650	33,241																	121,891
2230	EMBANKMENT IN PLACE	CU YD	98,229	40,201																	138,430
2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	1,687.5	1,462.5																	3,150
2367	GUARDRAIL END TREATMENT TYPE I	EACH	2	0																	2
2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	1	0																	1
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	0	1																	1
2545	CLEARING AND GRUBBING	LS	1	1																	2
2562	SIGNS	SO FT	99.5	89.5																	189
2568	MOBILIZATION	LS	1	1																	1
2569	DEMobilIZATION	LS	1	1																	1
2596	FABRIC-GEOTEXTILE TYPE I	SO YD	8,069	3,993																	12,062
2598	FABRIC-GEOTEXTILE TYPE III	SO YD	30,673	12,723																	43,396
2599	FABRIC-GEOTEXTILE TYPE IV	SO YD	16,633	7,209																	23,842
2650	MAINTAIN AND CONTROL TRAFFIC	LS	1	1																	2
2653	LANE CLOSURE	EACH	1	1																	2
2701	TEMP SILT FENCE	LF	3,784	1,496																	5,280
2703	SILT TRAP TYPE A	EACH	9	3																	12
2704	SILT TRAP TYPE B	EACH	9	3																	12
2706	CLEAN SILT TRAP TYPE A	EACH	27	9																	36
2707	CLEAN SILT TRAP TYPE B	EACH	27	9																	36
2709	CLEAN TEMP SILT FENCE	LF	7,568	2,992																	10,560
2726	STAKING	LS	1	1																	2
5950	EROSION CONTROL BLANKET	SO YD	3,534	879																	4,413
5952	TEMP MULCH	SO YD	39,138	14,832																	53,970
5953	TEMP SEEDING AND PROTECTION	SO YD	39,138	14,832																	53,970
5966	TOPDRESSING FERTILIZER	TON	1.5	0.5																	2.0
5985	SEEDING & PROTECTION	SO YD	28,644	10,386																	39,030
8019	CYCLOPEAN STONE RIP RAP	TON	21,431	8,469																	29,900
8020	CRUSHED AGGREGATE SLOPE PROTECTION	TON	130	0																	130
20209EP69	GRANULAR PILE CORE	CU YD	973	0																	973
24554ED	WET SOIL MIXING	CU YD	12,500	0																	12,500

- NOTES:**
- △ (A) EMBANKMENT IN PLACE INCLUDES:  
MARSHALL COUNTY    TRIGG COUNTY  
96,685    39,375    CY COMMON EMBANKMENT  
1,544    826    CY EMBANKMENT BENCHING  
98,229    40,201    TOTAL EMBANKMENT IN PLACE
  - △ (B) SEE GEOTECHNICAL PLANS FOR SPECIFICATIONS.
  - △ ESTIMATES OF EARTHWORK QUANTITIES ARE FOR DESIGN ONLY. THE CONTRACTOR IS ADVISED THAT THE EARTHWORK CALCULATIONS ARE FOR INFORMATION ONLY. ASSUMPTIONS FOR SHRINKAGE AND SWELL FACTORS ARE THE CONTRACTOR'S RESPONSIBILITY.
  - △ (1) APPROXIMATELY 5.29 ACRES IN MARSHALL COUNTY AND 2.20 ACRES IN TRIGG COUNTY.
  - △ (2) FOR MAINTENANCE OF TRAFFIC.
  - △ (3) SEE GEOTECHNICAL PLANS FOR DETAILS.
  - △ (4) FOR REMOVAL, RELOCATION AND/OR STOCKPILING OF EXISTING STONE RIPRAP SLOPE PROTECTION.

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROO20BSU.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROO20BSU  
 MicroStation v8.11.9.292

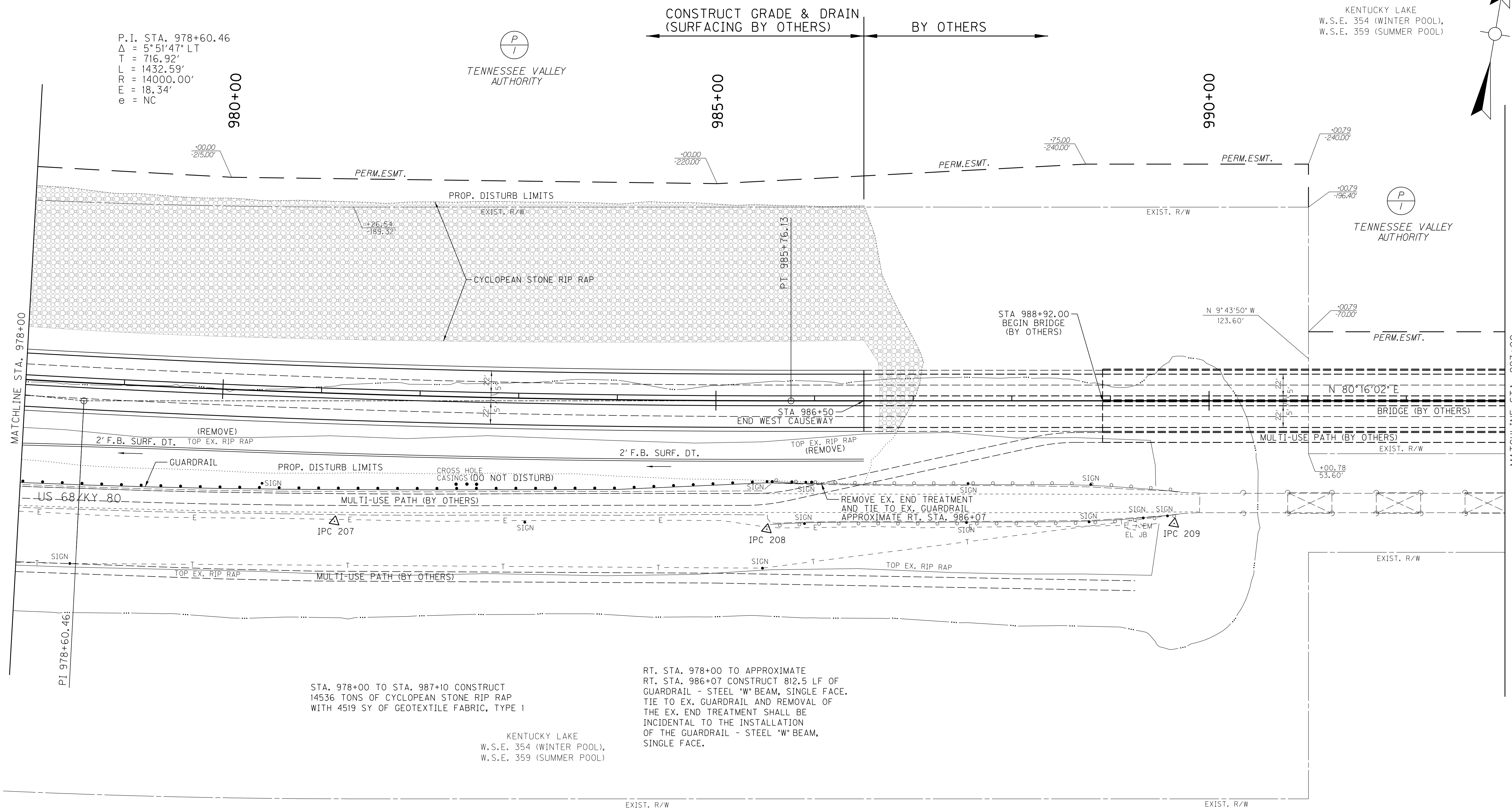


KENTUCKY LAKE  
W.S.E. 354 (WINTER POOL),  
W.S.E. 359 (SUMMER POOL)

P.I. STA. 978+60.46  
Δ = 5° 51' 47" LT  
T = 716.92'  
L = 1432.59'  
R = 14000.00'  
E = 18.34'  
e = NC

  
TENNESSEE VALLEY  
AUTHORITY

CONSTRUCT GRADE & DRAIN  
(SURFACING BY OTHERS) ← BY OTHERS →



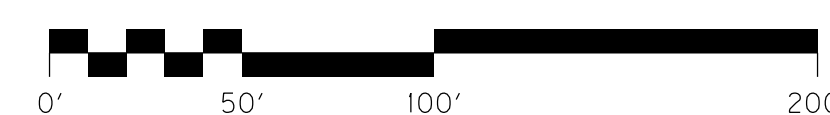
STA. 978+00 TO STA. 987+10 CONSTRUCT  
14536 TONS OF CYCLOPEAN STONE RIP RAP  
WITH 4519 SY OF GEOTEXTILE FABRIC, TYPE 1

RT. STA. 978+00 TO APPROXIMATE  
RT. STA. 986+07 CONSTRUCT 812.5 LF OF  
GUARDRAIL - STEEL "W" BEAM, SINGLE FACE.  
TIE TO EX. GUARDRAIL AND REMOVAL OF  
THE EX. END TREATMENT SHALL BE  
INCIDENTAL TO THE INSTALLATION  
OF THE GUARDRAIL - STEEL "W" BEAM,  
SINGLE FACE.

KENTUCKY LAKE  
W.S.E. 354 (WINTER POOL),  
W.S.E. 359 (SUMMER POOL)

  
TENNESSEE VALLEY  
AUTHORITY

DITCH CONSTRUCTION CHART							
LT	RT	MED	LIMITS STA. TO STA.	CHANNEL LINING			SIZE/TYPE
				TYPE	QUANTITY	DEPTH	
X			978+00 TO 986+50	ECB	1039 SY	1.50'	2' F.B. SURF.



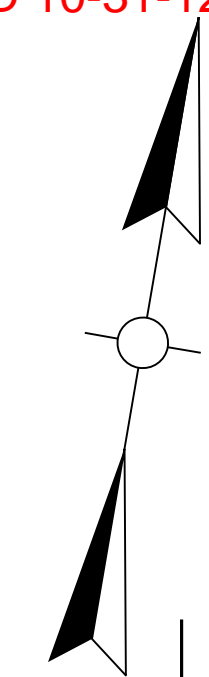
US 68/KY 80  
STA. 978+00 TO STA. 993+00  
PLAN SHEET

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROOT00PL.DGN  
 USER: dav/dh-  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROOT00PL  
 MicroStation v8.11.9.292



REVISD 10-31-12

KENTUCKY LAKE  
W.S.E. 354 (WINTER POOL),  
W.S.E. 359 (SUMMER POOL)

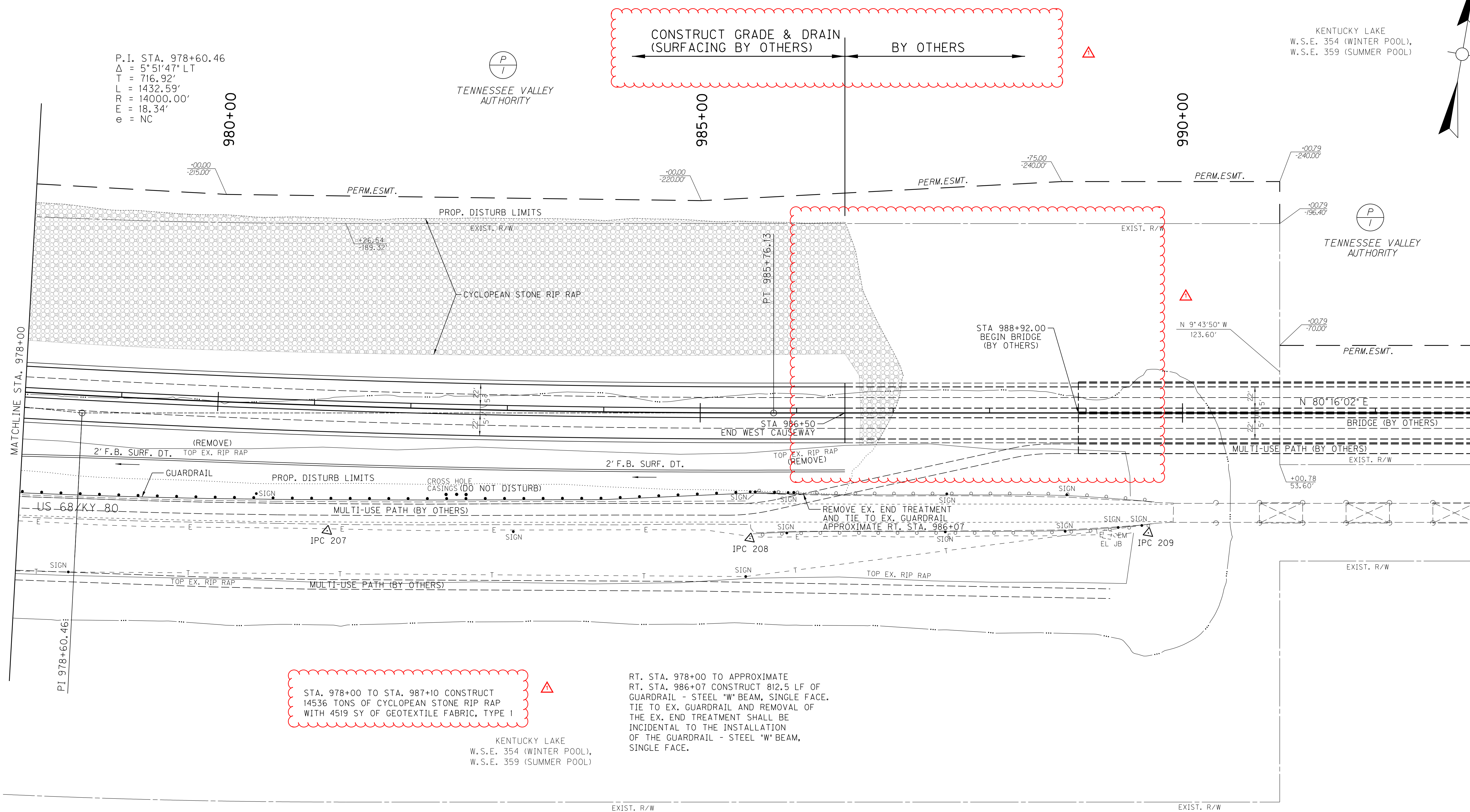


P.I. STA. 978+60.46  
Δ = 5° 51' 47" LT  
T = 716.92'  
L = 1432.59'  
R = 14000.00'  
E = 18.34'  
e = NC

TENNESSEE VALLEY  
AUTHORITY

CONSTRUCT GRADE & DRAIN  
(SURFACING BY OTHERS)

BY OTHERS



STA. 978+00 TO STA. 987+10 CONSTRUCT  
14536 TONS OF CYCLOPEAN STONE RIP RAP  
WITH 4519 SY OF GEOTEXTILE FABRIC, TYPE 1

RT. STA. 978+00 TO APPROXIMATE  
RT. STA. 986+07 CONSTRUCT 812.5 LF OF  
GUARDRAIL - STEEL "W" BEAM, SINGLE FACE.  
TIE TO EX. GUARDRAIL AND REMOVAL OF  
THE EX. END TREATMENT SHALL BE  
INCIDENTAL TO THE INSTALLATION  
OF THE GUARDRAIL - STEEL "W" BEAM,  
SINGLE FACE.

KENTUCKY LAKE  
W.S.E. 354 (WINTER POOL),  
W.S.E. 359 (SUMMER POOL)

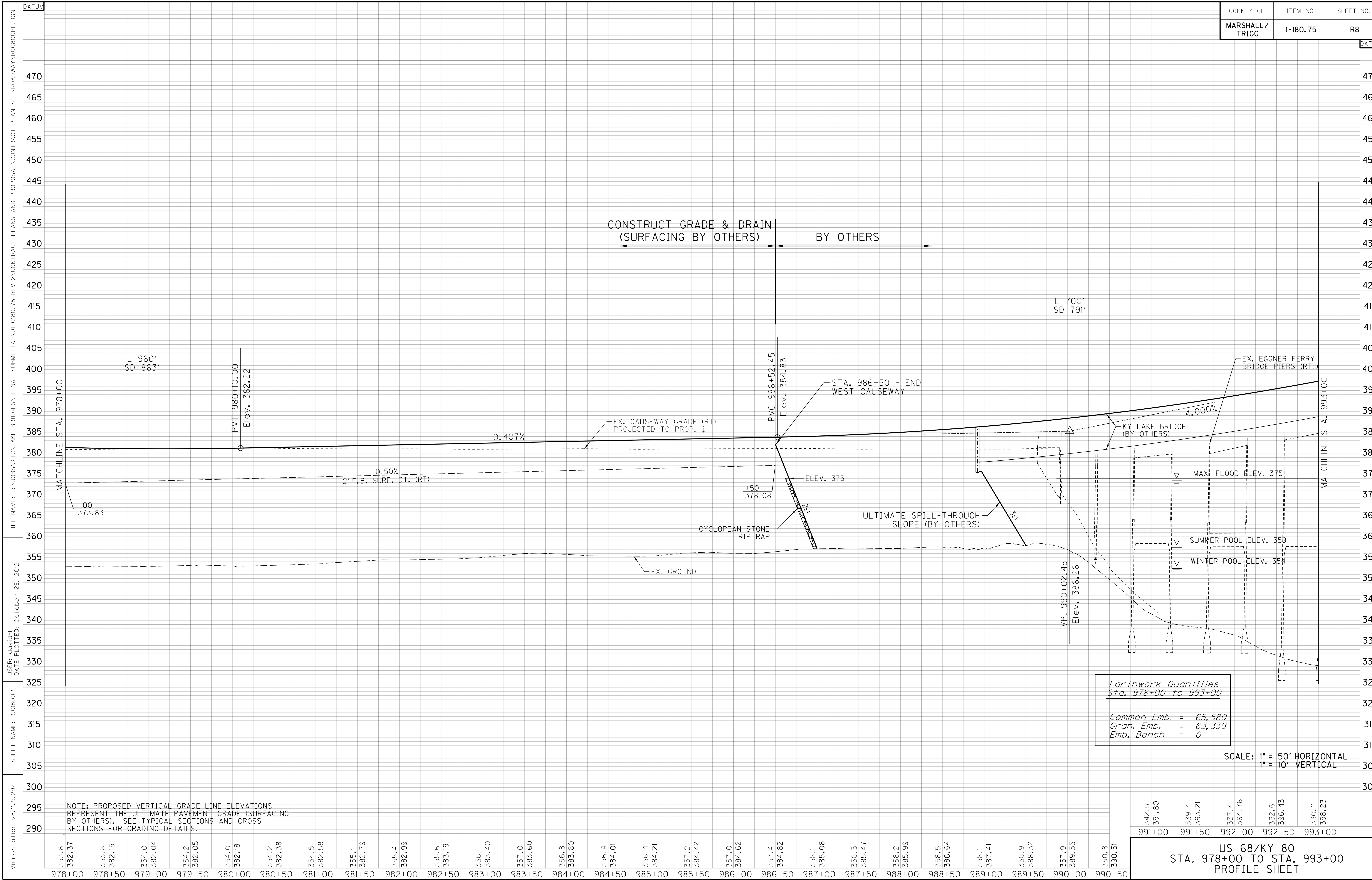
LIMITS		CHANNEL LINING			SIZE/TYPE
LT	RT	QUANTITY	DEPTH	THICKNESS	
X		1039 SY	1.50'	-	2' F.B. SURF.

TENNESSEE VALLEY  
AUTHORITY



US 68/KY 80  
STA. 978+00 TO STA. 993+00  
PLAN SHEET

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROOT00PL.DGN  
 USER: dav/dh-  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROOT00PL  
 MicroStation v8.11.9.292



Earthwork Quantities  
Sta. 978+00 to 993+00

Common Emb.	=	65,580
Gran. Emb.	=	63,339
Emb. Bench	=	0

SCALE: 1" = 50' HORIZONTAL  
1" = 10' VERTICAL

342.5	339.4	337.4	332.6	330.2
391.80	393.21	394.76	396.43	398.23
991+00	991+50	992+00	992+50	993+00

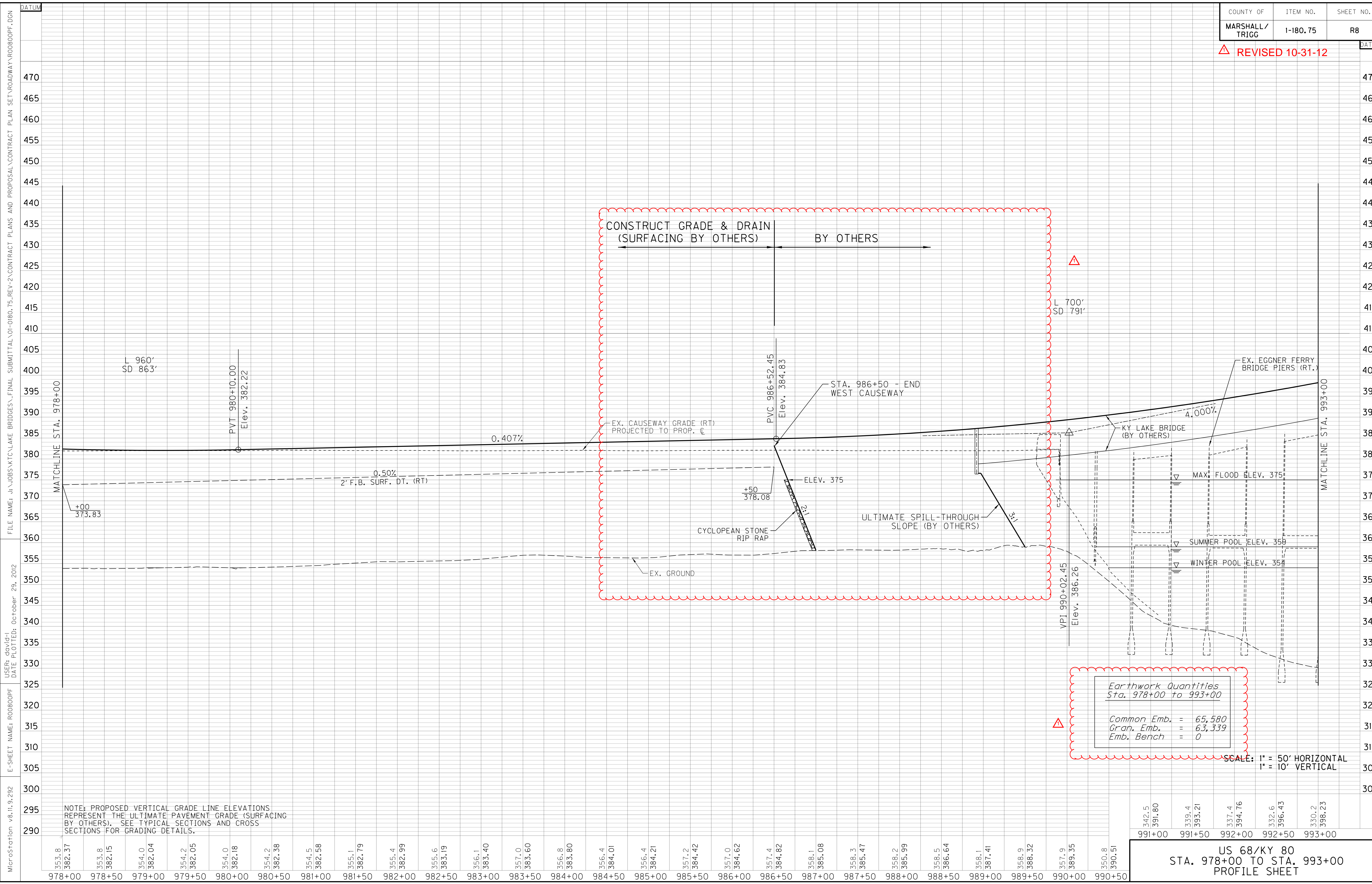
US 68/KY 80  
STA. 978+00 TO STA. 993+00  
PROFILE SHEET

MicroStation v8.11.9.292 E-SHEET NAME: R00800PF USER: dwd/h DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KY\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R00800PF.DGN

353.8	382.37	353.8	382.15	354.0	382.04	354.2	382.05	354.0	382.18	354.2	382.38	354.5	382.58	355.1	382.79	355.4	382.99	355.6	383.19	356.1	383.40	357.0	383.60	356.8	383.80	356.4	384.01	356.4	384.21	357.2	384.42	357.0	384.62	357.4	384.82	358.1	385.08	358.3	385.47	358.2	385.99	358.5	386.64	358.1	387.41	358.9	388.32	357.9	389.35	350.8	390.51
978+00	978+50	979+00	979+50	980+00	980+50	981+00	981+50	982+00	982+50	983+00	983+50	984+00	984+50	985+00	985+50	986+00	986+50	987+00	987+50	988+00	988+50	989+00	989+50	990+00	990+50	991+00	991+50	992+00	992+50	993+00																					



△ REVISED 10-31-12

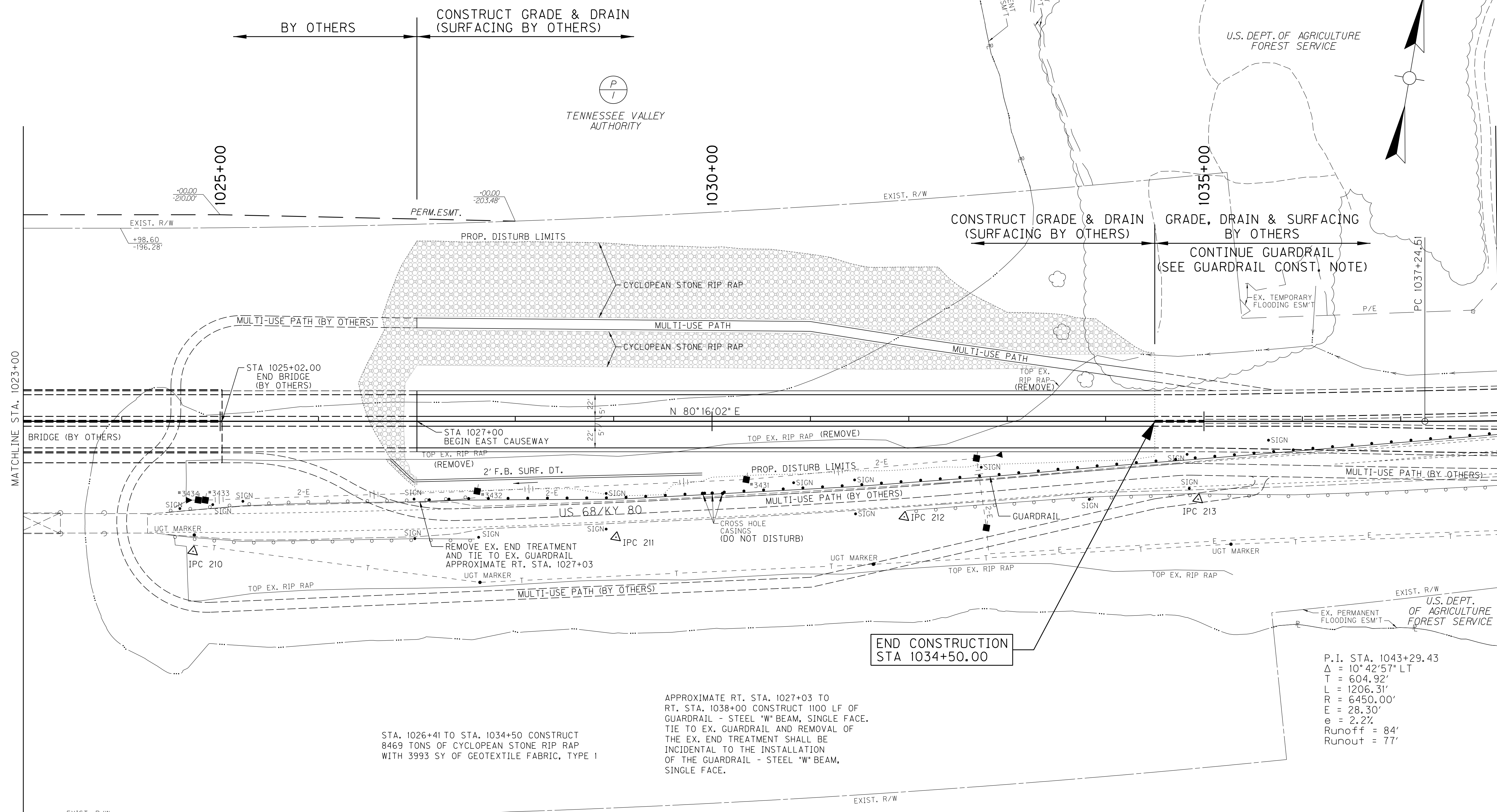


MicroStation v8.11.9.292 E-SHEET NAME: R00800PF USER: dwd/h- DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KY\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R00800PF.DGN

342.5	341.80	339.4	337.4	332.6	330.2
991+00	991+50	992+00	992+50	993+00	

US 68/KY 80  
 STA. 978+00 TO STA. 993+00  
 PROFILE SHEET

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R01300PL-DGN  
 USER: daw/dh-  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R01300PL  
 MicroStation v8.11.9.292



J/T	RT	MED	LIMITS STA. TO STA.	CHANNEL LINING			SIZE/TYPE	
				TYPE	QUANTITY	DEPTH		
X			1026+74 to 1027+00	*	*	1.00'	2.00'	2' F.B. SURF.
X			1027+00 to 1030+00	ECB	367 SY	1.50'	-	2' F.B. SURF.
X			1030+00 to 1032+50	ECB	375 SY	1.50'	-	SPEC. "V"

\* - USE CYCLOPEAN STONE RIP RAP AS CHANNEL LINING. QUANTITY USED FOR CHANNEL LINING IS INCLUDED IN THE CYCLOPEAN STONE RIP RAP BID ITEM. TIE TO EXISTING RIP RAP SLOPE PROTECTION AT RT. STA. 1026+74.

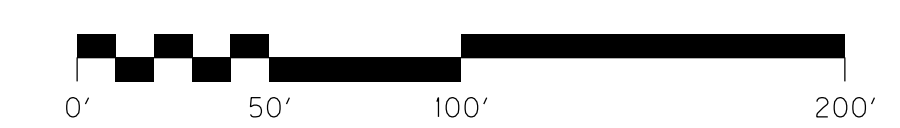
STA. 1026+41 TO STA. 1034+50 CONSTRUCT 8469 TONS OF CYCLOPEAN STONE RIP RAP WITH 3993 SY OF GEOTEXTILE FABRIC, TYPE 1

APPROXIMATE RT. STA. 1027+03 TO RT. STA. 1038+00 CONSTRUCT 1100 LF OF GUARDRAIL - STEEL "W" BEAM, SINGLE FACE. TIE TO EX. GUARDRAIL AND REMOVAL OF THE EX. END TREATMENT SHALL BE INCIDENTAL TO THE INSTALLATION OF THE GUARDRAIL - STEEL "W" BEAM, SINGLE FACE.

END CONSTRUCTION STA 1034+50.00

P.I. STA. 1043+29.43  
 $\Delta = 10^\circ 42' 57''$  LT  
 $T = 604.92'$   
 $L = 1206.31'$   
 $R = 6450.00'$   
 $E = 28.30'$   
 $e = 2.2\%$   
 $Runoff = 84'$   
 $Runout = 77'$

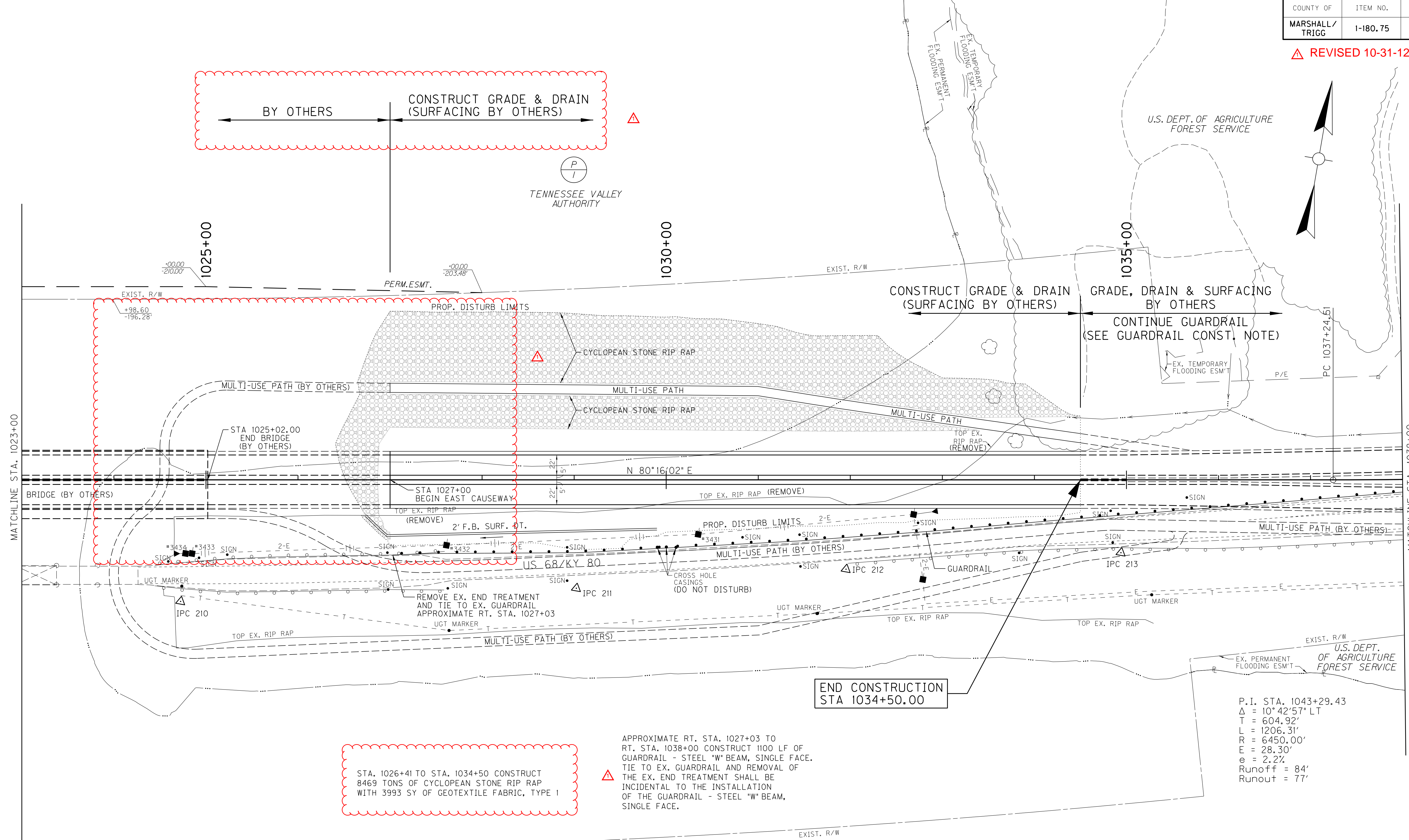
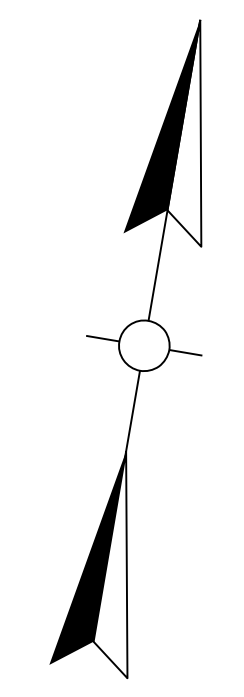
  
 TENNESSEE VALLEY  
 AUTHORITY



US 68/KY 80  
 STA. 1023+00 TO 1038+00  
 PLAN SHEET



▲ REVISED 10-31-12



**DITCH CONSTRUCTION CHART**

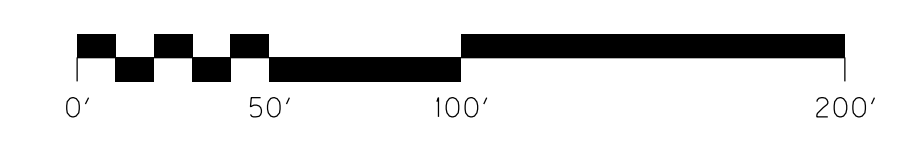
L/T	RT	MED	LIMITS STA. TO STA.	CHANNEL LINING			SIZE/TYPE
				TYPE	QUANTITY	DEPTH	
X			1026+74 to 1027+00	*	*	1.00'	2' F.B. SURF.
X			1027+00 to 1030+00	ECB	367 SY	1.50'	2' F.B. SURF.
X			1030+00 to 1032+50	ECB	375 SY	1.50'	SPEC. "V"

\* - USE CYCLOPEAN STONE RIP RAP AS CHANNEL LINING. QUANTITY USED FOR CHANNEL LINING IS INCLUDED IN THE CYCLOPEAN STONE RIP RAP BID ITEM. TIE TO EXISTING RIP RAP SLOPE PROTECTION AT RT. STA. 1026+74.

▲ STA. 1026+41 TO STA. 1034+50 CONSTRUCT 8469 TONS OF CYCLOPEAN STONE RIP RAP WITH 3993 SY OF GEOTEXTILE FABRIC, TYPE I

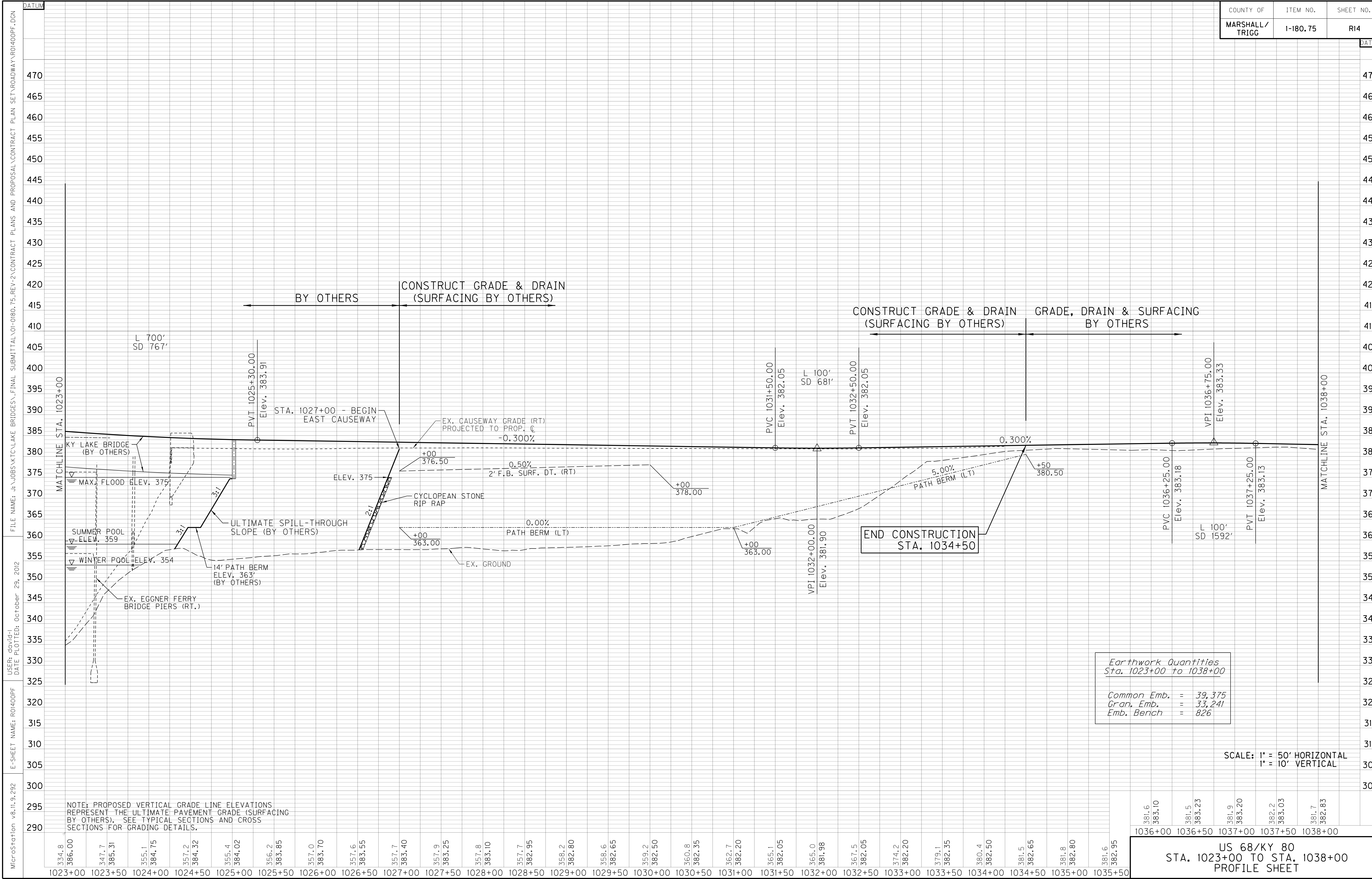
▲ APPROXIMATE RT. STA. 1027+03 TO RT. STA. 1038+00 CONSTRUCT 1100 LF OF GUARDRAIL - STEEL "W" BEAM, SINGLE FACE. TIE TO EX. GUARDRAIL AND REMOVAL OF THE EX. END TREATMENT SHALL BE INCIDENTAL TO THE INSTALLATION OF THE GUARDRAIL - STEEL "W" BEAM, SINGLE FACE.

P.I. STA. 1043+29.43  
 $\Delta = 10^\circ 42' 57" \text{ LT}$   
 $T = 604.92'$   
 $L = 1206.31'$   
 $R = 6450.00'$   
 $E = 28.30'$   
 $e = 2.2\%$   
 $\text{Runoff} = 84'$   
 $\text{Runout} = 77'$



US 68/KY 80  
 STA. 1023+00 TO 1038+00  
 PLAN SHEET

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\RO1300PL-DGN  
 USER: daw/dh-  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: RO1300PL  
 MicroStation v8.11.9.292



NOTE: PROPOSED VERTICAL GRADE LINE ELEVATIONS REPRESENT THE ULTIMATE PAVEMENT GRADE (SURFACING BY OTHERS). SEE TYPICAL SECTIONS AND CROSS SECTIONS FOR GRADING DETAILS.

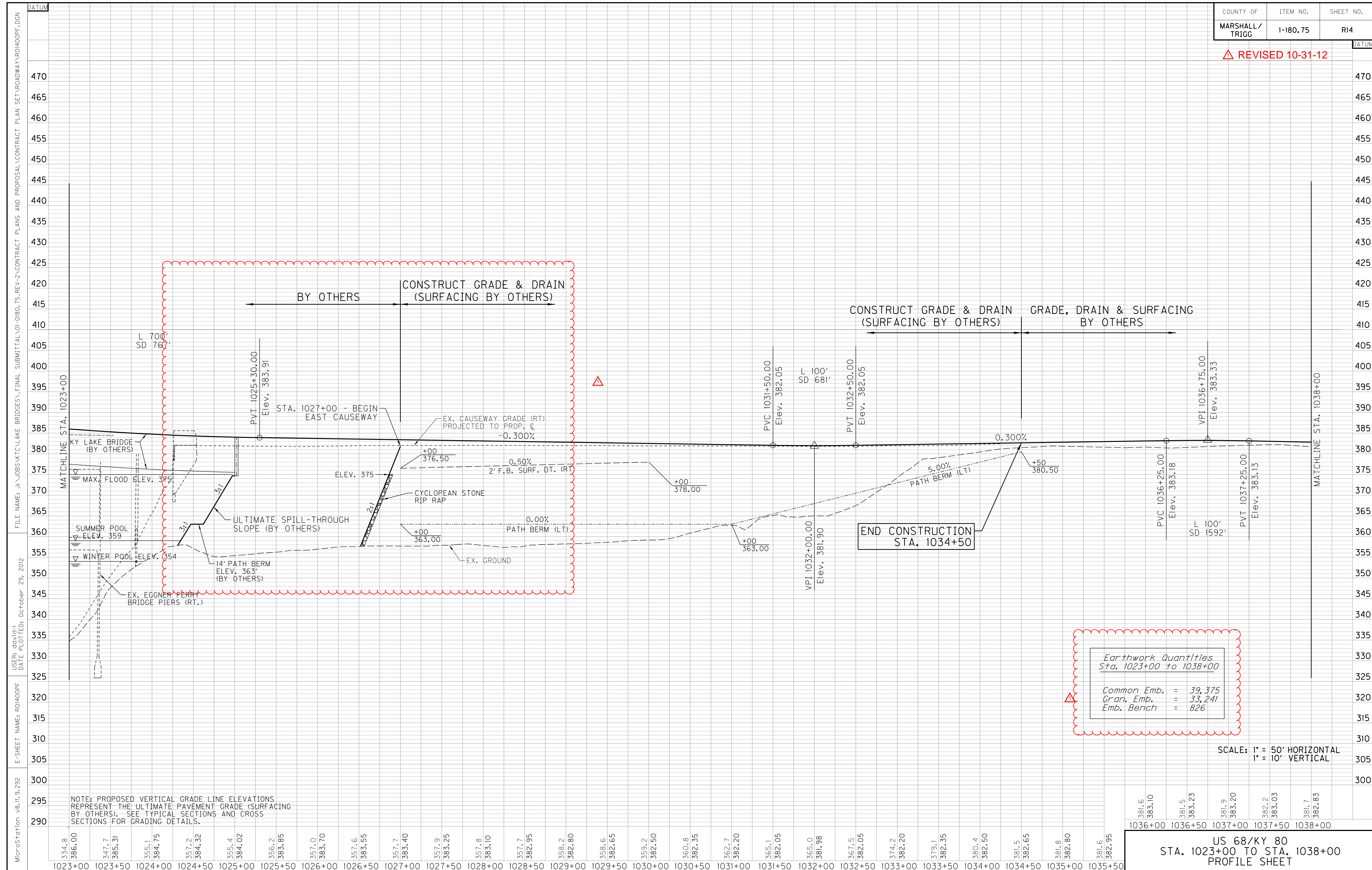
381.6	383.10	381.5	383.23	381.9	383.20	382.2	383.03	381.7	382.83
1036+00	1036+50	1037+00	1037+50	1038+00					

US 68/KY 80  
STA. 1023+00 TO STA. 1038+00  
PROFILE SHEET

MicroStation v8.11.9.292 E-SHEET NAME: R01400PF USER: daw/dh-1 DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KY\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R01400PF.DGN



△ REVISED 10-31-12



SCALE: 1" = 50' HORIZONTAL  
1" = 10' VERTICAL

381.6	383.10	381.5	383.23	381.9	383.20	382.2	383.03	381.7	382.83
1036+00	1036+50	1037+00	1037+50	1038+00					

US 68/KY 80  
STA. 1023+00 TO STA. 1038+00  
PROFILE SHEET

MicroStation v8.11.9.292 E-SHEET NAME: R01400PF USER: dwd/dh-1 DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KY\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R01400PF.DGN

NOTE: PROPOSED VERTICAL GRADE LINE ELEVATIONS REPRESENT THE ULTIMATE PAVEMENT GRADE (SURFACING BY OTHERS). SEE TYPICAL SECTIONS AND CROSS SECTIONS FOR GRADING DETAILS.

DATUM

334.8  
386.00  
347.7  
385.31  
355.1  
384.75  
357.2  
384.32  
355.4  
384.02  
356.2  
383.85  
357.0  
383.70  
357.6  
383.55  
357.7  
383.40  
357.9  
383.25  
357.8  
383.10  
357.7  
382.95  
358.2  
382.80  
358.6  
382.65  
359.2  
382.50  
360.8  
382.35  
362.7  
382.20  
365.1  
382.05  
365.0  
381.98  
367.5  
382.05  
374.2  
382.20  
379.1  
382.35  
380.4  
382.50  
381.5  
382.65  
381.8  
382.80  
381.6  
382.95

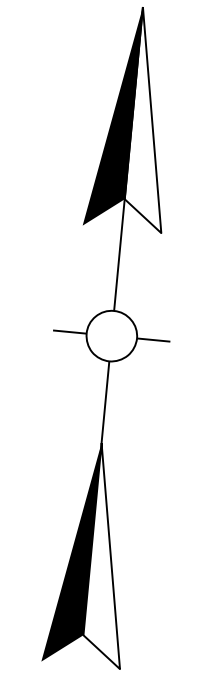
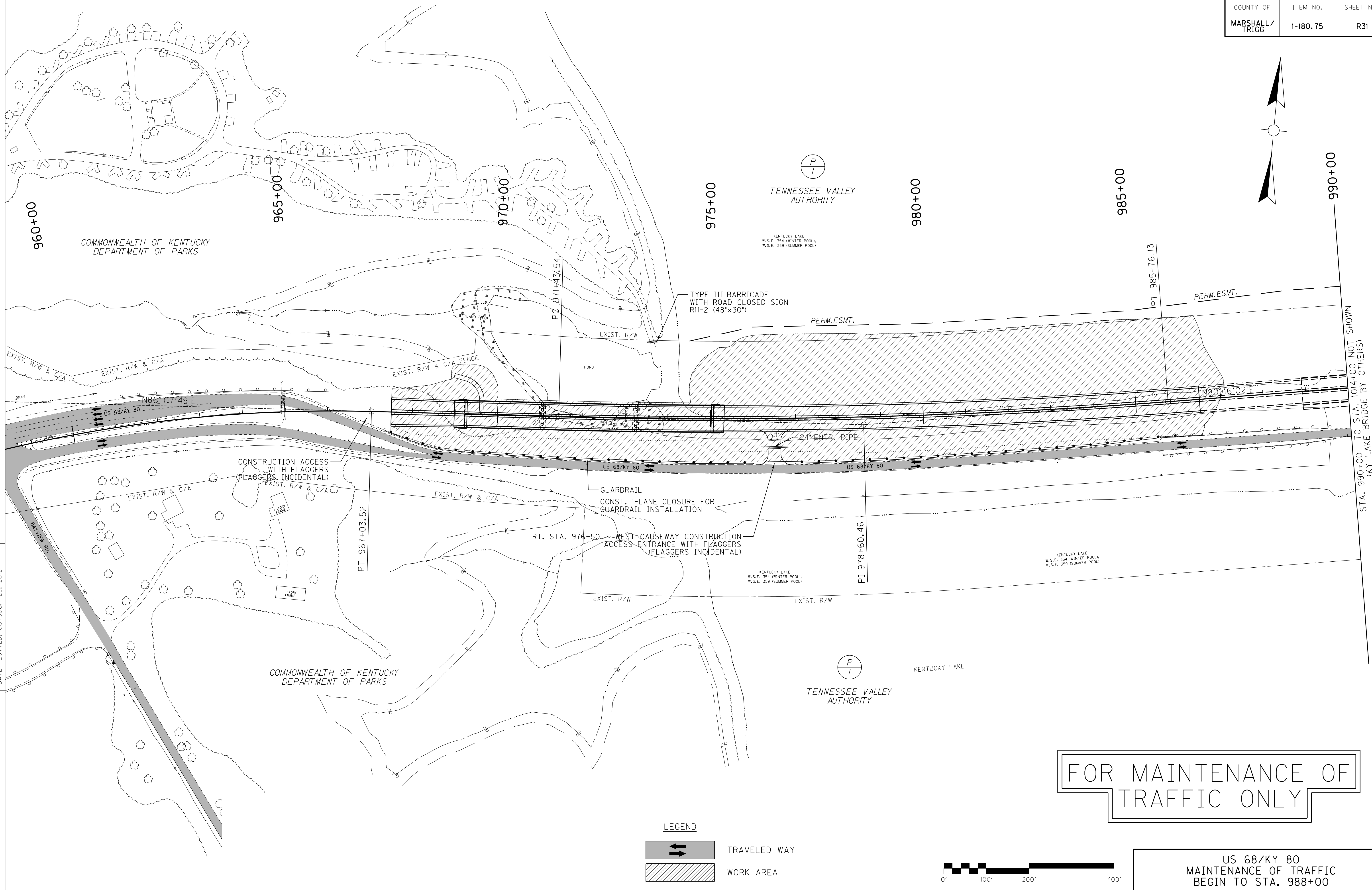
470  
465  
460  
455  
450  
445  
440  
435  
430  
425  
420  
415  
410  
405  
400  
395  
390  
385  
380  
375  
370  
365  
360  
355  
350  
345  
340  
335  
330  
325  
320  
315  
310  
305  
300

1023+00 1023+50 1024+00 1024+50 1025+00 1025+50 1026+00 1026+50 1027+00 1027+50 1028+00 1028+50 1029+00 1029+50 1030+00 1030+50 1031+00 1031+50 1032+00 1032+50 1033+00 1033+50 1034+00 1034+50 1035+00 1035+50

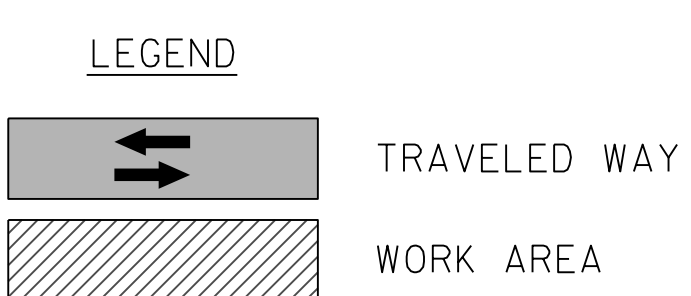


COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	R31

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03100MT.DGN  
 USER: dcv/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03100MT  
 MicroStation v8.11.9.292



FOR MAINTENANCE OF  
 TRAFFIC ONLY



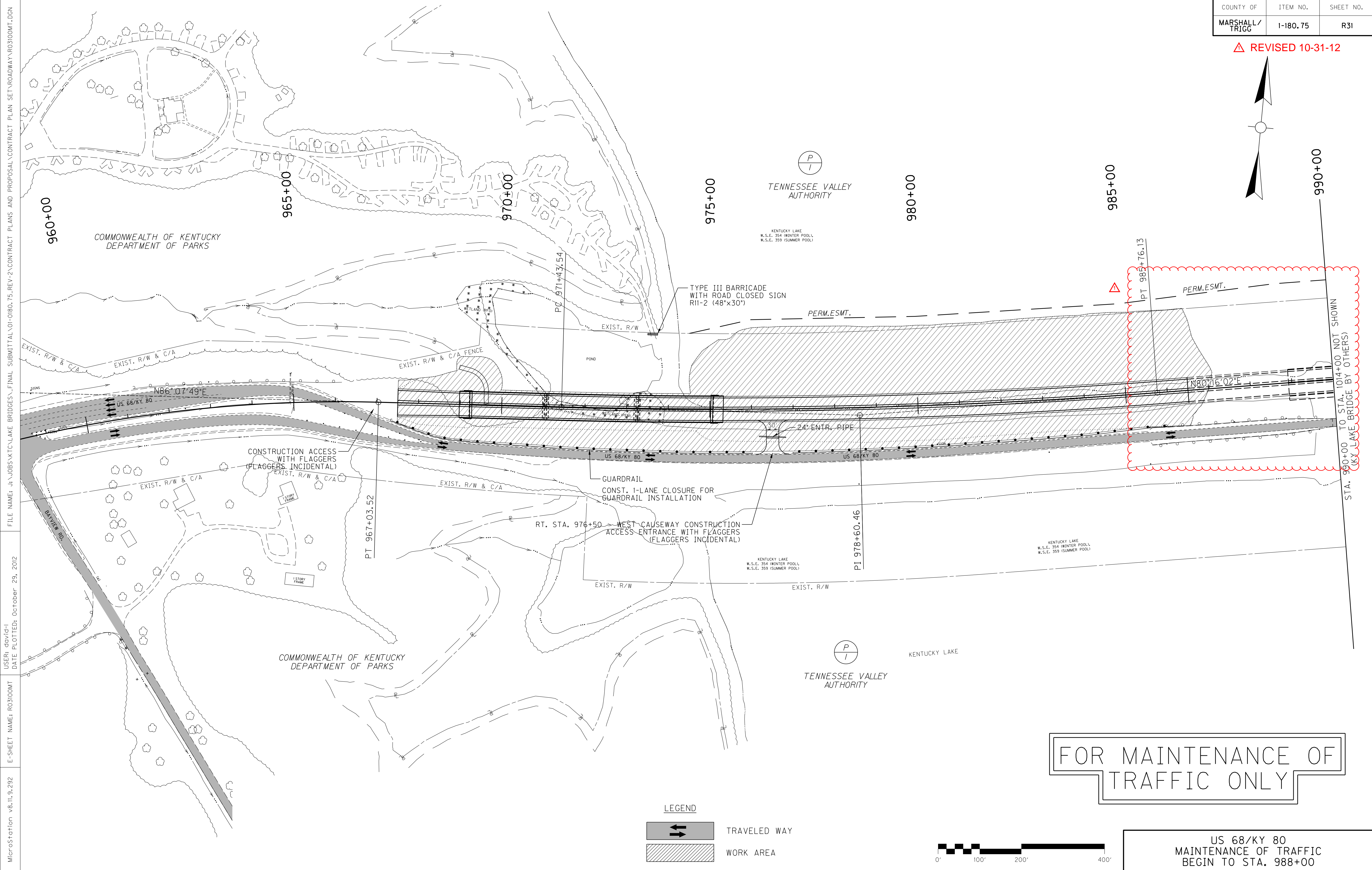
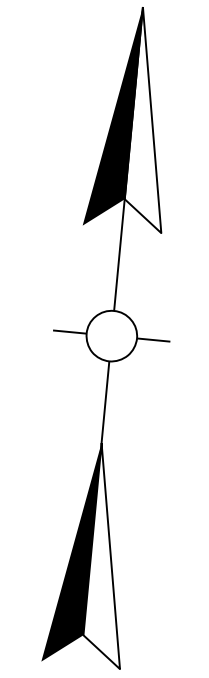
US 68/KY 80  
 MAINTENANCE OF TRAFFIC  
 BEGIN TO STA. 988+00

STA. 990+00 TO STA. 1014+00 NOT SHOWN  
 (KY LAKE BRIDGE BY OTHERS)



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	R31

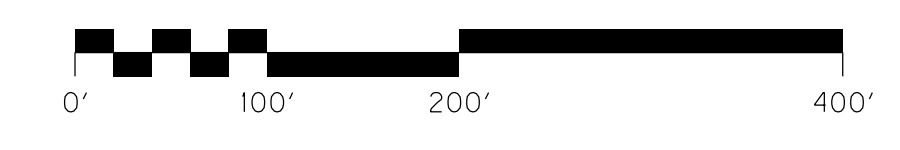
△ REVISED 10-31-12



FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03100MT.DGN  
 USER: dcv/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03100MT  
 MicroStation v8.11.9.292

LEGEND

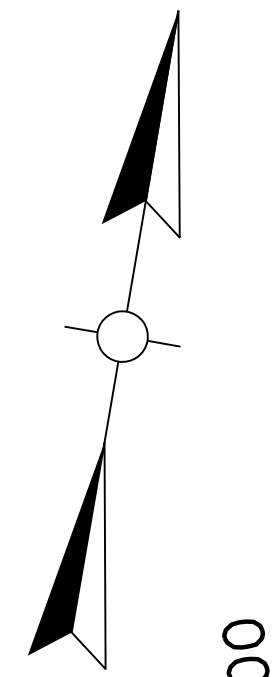
- TRAVELED WAY
- WORK AREA



FOR MAINTENANCE OF TRAFFIC ONLY

US 68/KY 80  
 MAINTENANCE OF TRAFFIC  
 BEGIN TO STA. 988+00

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	R32



1045+00

Delta = 10° 42' 57"  
 T = 604.92'  
 L = 1206.31'  
 R = 6450.00'  
 E = 28.30'

U.S. DEPARTMENT OF AGRICULTURE,  
 FOREST SERVICE

CLOSE ACCESS TO  
 PUBLIC BEACH DURING  
 CONSTRUCTION

CONSTRUCTION ACCESS  
 WITH FLAGGERS  
 (FLAGGERS' INCIDENTAL)

GUARDRAIL  
 CONST. 1-LANE CLOSURE FOR  
 GUARDRAIL INSTALLATION

U.S.D.A.  
 FOREST SERVICE

STA. 990+00 TO STA. 1014+00 NOT SHOWN  
 (KY LAKE BRIDGE BY OTHERS)

1015+00

1020+00

1025+00

1030+00

1035+00

1040+00

TENNESSEE VALLEY  
 AUTHORITY

TENNESSEE VALLEY  
 AUTHORITY

KENTUCKY LAKE  
 W.S.E. 354 (WINTER POOL),  
 W.S.E. 359 (SUMMER POOL)

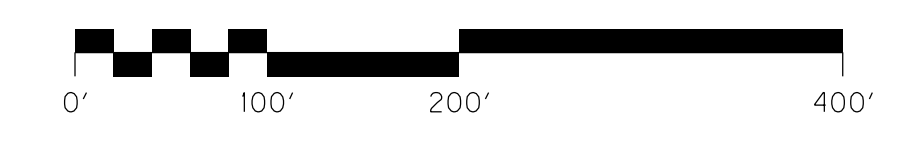
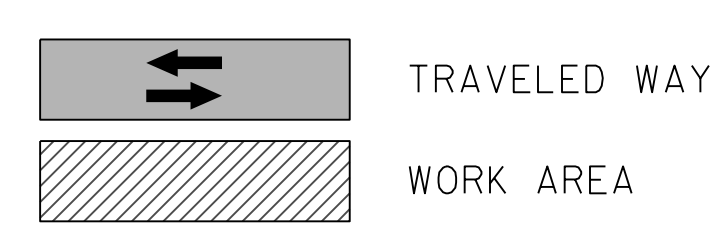
COMMONWEALTH  
 OF KENTUCKY

KENTUCKY LAKE

KENTUCKY LAKE

FOR MAINTENANCE OF  
 TRAFFIC ONLY

LEGEND



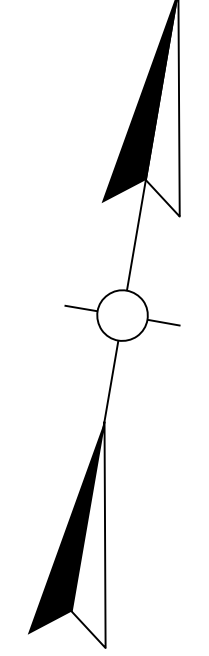
US 68/KY 80  
 MAINTENANCE OF TRAFFIC  
 STA. 1014+00 TO END

MicroStation v8.11.9.292 E-SHEET NAME: R03200MT USER: ddy/dh-1 DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03200MT.DGN



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	R32

△ REVISED 10-31-12



1045+00

Delta = 10° 42' 57"  
 T = 604.92'  
 L = 1206.31'  
 R = 6450.00'  
 E = 28.30'

U.S. DEPARTMENT OF AGRICULTURE,  
 FOREST SERVICE

(P/I)  
 TENNESSEE VALLEY  
 AUTHORITY

1025+00

1030+00

1035+00

1040+00

1015+00

1020+00

STA. 990+00 TO STA. 1014+00 NOT SHOWN  
 (KY LAKE BRIDGE BY OTHERS)

KENTUCKY LAKE  
 W.S.E. 354 (WINTER POOL),  
 W.S.E. 359 (SUMMER POOL)

CLOSE ACCESS TO  
 PUBLIC BEACH DURING  
 CONSTRUCTION

CONSTRUCTION ACCESS  
 WITH FLAGGERS  
 (FLAGGERS' INCIDENTAL)

PERM. ESMT.

EXIST. R/W

PC 1037+24.51

PERM. ESMT.

N80° 16' 02" E

EXIST. R/W

EXIST. R/W

US 68/KY 80

GUARDRAIL  
 CONST. 1-LANE CLOSURE FOR  
 GUARDRAIL INSTALLATION

U.S.D.A.  
 FOREST SERVICE

KENTUCKY LAKE

COMMONWEALTH  
 OF KENTUCKY

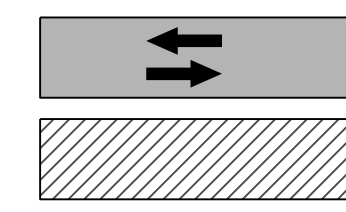
(P/I)  
 TENNESSEE VALLEY  
 AUTHORITY

KENTUCKY LAKE

KENTUCKY LAKE

FOR MAINTENANCE OF  
 TRAFFIC ONLY

LEGEND



TRAVELED WAY

WORK AREA



US 68/KY 80  
 MAINTENANCE OF TRAFFIC  
 STA. 1014+00 TO END

MicroStation v8.11.9.292 E-SHEET NAME: R03200MT USER: ddy/dh-1 DATE PLOTTED: October 29, 2012 FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03200MT.DGN

**EROSION CONTROL NOTES**

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

- UP GRADIENT AREAS NOT DISTURBED (ACRES).
- UP GRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH.(ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES). AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B SHALL ALWAYS BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXIST, A SILT FENCE OR OTHER FILTER DEVICES MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE AFOREMENTIONED SILT BASIN OR TRAPS.

THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND RESIDENT ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE OCTOBER, 2004 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES ACCORDING TO SECTION 213.03.05 OF THE STANDARD SPECIFICATIONS, OR WHEN DIRECTED BY THE ENGINEER, AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE ENGINEER. WHEN ADDITIONAL CLEAN-OUTS ARE PERFORMED AS DIRECTED BY THE ENGINEER, PAYMENT WILL BE ACCORDING TO SECTION 213.04 OF THE STANDARD SPECIFICATIONS.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE RESIDENT ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

CONSTRUCTION IN AND NEAR THE WATERS OF KENTUCKY LAKE

DISTURBANCE WITHIN THE WATERS OF KENTUCKY LAKE, INCLUDING THE LAGOON UNDER THE LAGOON BRIDGE, SHALL BE MINIMIZED TO LIMIT THE POTENTIAL IMPACTS TO AQUATIC LIFE.

IN THOSE INSTANCES WHERE WORK WITHIN THE WATERS OF KENTUCKY LAKE IS UNAVOIDABLE, THEN IT SHALL BE PERFORMED IN SUCH A MANNER AND DURATION AS TO MINIMIZE RE-SUSPENSION OF SEDIMENTS AND DISTURBANCE TO SUBSTRATES AND BANK OR RIPARIAN VEGETATION.

TO THE MAXIMUM EXTENT PRACTICABLE, ALL WORK SHALL BE PERFORMED DURING LOW FLOW CONDITIONS.

ALL EARTHWORK OPERATIONS SHALL BE CARRIED OUT IN SUCH A WAY THAT SEDIMENT RUNOFF AND SOIL EROSION TO KENTUCKY LAKE ARE CONTROLLED AND MINIMIZED.

SPOIL MATERIALS SHALL NOT BE DUMPED INTO KENTUCKY LAKE, AS SPECIFIED UNDER SECTION 404 GUIDELINES OF THE CLEAN WATER ACT.

EQUIPMENT CLEANING/STAGING AREAS WILL BE LOCATED SUCH THAT RUNOFF FROM THESE AREAS WILL NOT DIRECTLY ENTER THE WATER. FILTRATION OF EFFLUENT FROM EQUIPMENT CLEANING/STAGING AREAS WILL BE LOCATED SUCH THAT EFFLUENT WILL BE FILTERED THROUGH VEGETATED AREAS AND/OR PROPER SEDIMENT CONTROL STRUCTURES LOCATED BETWEEN THE STAGING AREA AND THE WATER; THEREFORE, MINIMIZING THE POTENTIAL FOR IMPACTS SUCH AS SEDIMENTATION AND POLLUTION.

CONTRACTOR COORDINATION - EROSION CONTROL DEVICES

EROSION CONTROL DEVICES THAT ARE IN PLACE, FUNCTIONING, AND APPROVED BY THE ENGINEER AT THE TIME OF PROJECT COMPLETION SHALL REMAIN IN PLACE FOR USE BY OTHERS UNDER THE SUBSEQUENT KY LAKE BRIDGE REPLACEMENT PROJECT AND BECOME THE PROPERTY OF THE DEPARTMENT. PRIOR TO TRANSFER OF OWNERSHIP, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES ACCORDING TO SECTION 213.03.05 OF THE STANDARD SPECIFICATIONS AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE ENGINEER. PAYMENT FOR FINAL CLEAN-OUT WILL BE ACCORDING TO SECTION 213.04 OF THE STANDARD SPECIFICATIONS.

THE DEPARTMENT WILL THEN BE RESPONSIBLE FOR MAINTENANCE AND CLEANING OF THESE EROSION CONTROL DEVICES UNTIL SUCH TIME THAT OWNERSHIP CAN BE TRANSFERRED TO THE LAKE BRIDGE CONTRACTOR.

SILT FENCE PHASING ON PROPOSED CAUSEWAYS

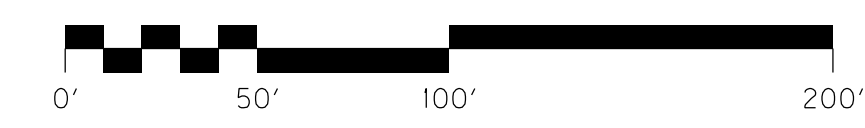
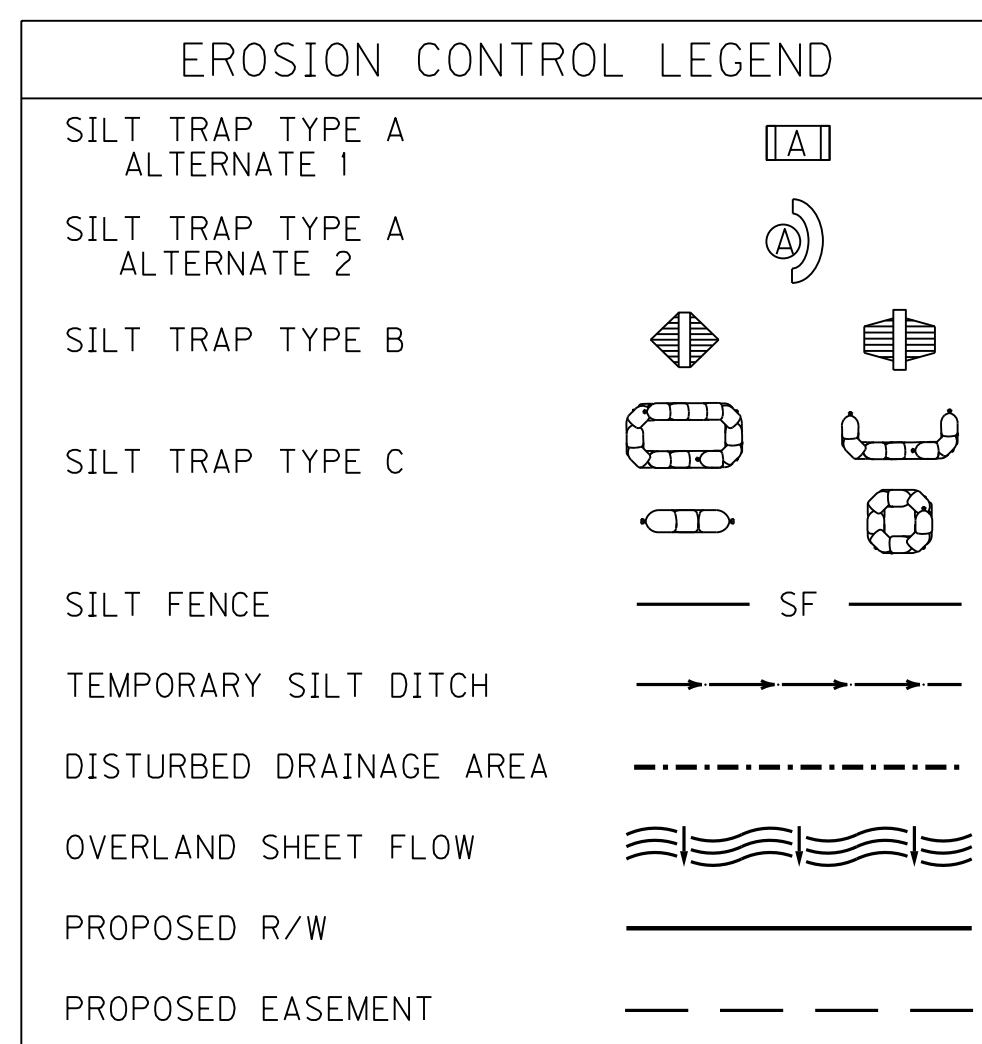
PHASE 1: DURING CONSTRUCTION OF COMMON EMBANKMENT AND UNTIL SUCH TIME THAT THE RIP RAP SLOPE PROTECTION CAN BE CONSTRUCTED TO PROTECT THE COMMON EMBANKMENT, CONSTRUCT SILT FENCE AT THE BOTTOM OF THE COMMON EMBANKMENT, ELEVATION 363.

PHASE 2: REMOVE SILT FENCE CONSTRUCTED IN PHASE 1 AS THE RIP RAP SLOPE PROTECTION IS CONSTRUCTED. CONSTRUCT SILT FENCE AT THE TOP OF THE RIP RAP SLOPE PROTECTION, ELEVATION 375.

DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#1	2.56	9,216
DDA#2	2.92	10,512
DDA#3	2.61	9,396
DDA#4	1.84	6,624
DDA#5	1.23	4,428

EROSION CONTROL SUMMARY		
Erosion Control Device	Units	Quantities
TEMPORARY MULCH	SQ YD	53,970
SILT TRAP TYPE A	EACH	12
CLEAN SILT TRAP TYPE A	EACH	36
SILT TRAP TYPE B	EACH	12
CLEAN SILT TRAP TYPE B	EACH	36
TEMPORARY SILT FENCE	LIN FT	5,280
CLEAN TEMPORARY SILT FENCE	LIN FT	10,560
TEMPORARY DITCH	LIN FT	2,640
CLEAN TEMPORARY DITCHES	LIN FT	5,280
*EROSION CONTROL BLANKET	SO YD	2,290
SEEDING AND PROTECTION	SO YD	39,030
TOPDRESSING FERTILIZER	TON	2.0
TEMPORARY SEED AND PROTECT	SO YD	53,970

\*NOTE: QUANTITY SHOWN TO STABILIZE 2:1 SLOPES. QUANTITY TO LINE PERMANENT DITCHES IS SHOWN ON PLAN SHEETS.



FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03300EC.DGN  
 USER: dav/d-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03300EC  
 MicroStation v8.11.9.292



△ REVISED 10-31-12

### EROSION CONTROL NOTES

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

- UP GRADIENT AREAS NOT DISTURBED (ACRES).
- UP GRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH.(ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES). AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B SHALL ALWAYS BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXIST, A SILT FENCE OR OTHER FILTER DEVICES MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE AFOREMENTIONED SILT BASIN OR TRAPS.

THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND RESIDENT ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE OCTOBER, 2004 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES ACCORDING TO SECTION 213.03.05 OF THE STANDARD SPECIFICATIONS, OR WHEN DIRECTED BY THE ENGINEER, AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE ENGINEER. WHEN ADDITIONAL CLEAN-OUTS ARE PERFORMED AS DIRECTED BY THE ENGINEER, PAYMENT WILL BE ACCORDING TO SECTION 213.04 OF THE STANDARD SPECIFICATIONS.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE RESIDENT ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

### CONSTRUCTION IN AND NEAR THE WATERS OF KENTUCKY LAKE

DISTURBANCE WITHIN THE WATERS OF KENTUCKY LAKE, INCLUDING THE LAGOON UNDER THE LAGOON BRIDGE, SHALL BE MINIMIZED TO LIMIT THE POTENTIAL IMPACTS TO AQUATIC LIFE.

IN THOSE INSTANCES WHERE WORK WITHIN THE WATERS OF KENTUCKY LAKE IS UNAVOIDABLE, THEN IT SHALL BE PERFORMED IN SUCH A MANNER AND DURATION AS TO MINIMIZE RE-SUSPENSION OF SEDIMENTS AND DISTURBANCE TO SUBSTRATES AND BANK OR RIPARIAN VEGETATION.

TO THE MAXIMUM EXTENT PRACTICABLE, ALL WORK SHALL BE PERFORMED DURING LOW FLOW CONDITIONS.

ALL EARTHWORK OPERATIONS SHALL BE CARRIED OUT IN SUCH A WAY THAT SEDIMENT RUNOFF AND SOIL EROSION TO KENTUCKY LAKE ARE CONTROLLED AND MINIMIZED.

SPOIL MATERIALS SHALL NOT BE DUMPED INTO KENTUCKY LAKE, AS SPECIFIED UNDER SECTION 404 GUIDELINES OF THE CLEAN WATER ACT.

EQUIPMENT CLEANING/STAGING AREAS WILL BE LOCATED SUCH THAT RUNOFF FROM THESE AREAS WILL NOT DIRECTLY ENTER THE WATER. FILTRATION OF EFFLUENT FROM EQUIPMENT CLEANING/STAGING AREAS WILL BE LOCATED SUCH THAT EFFLUENT WILL BE FILTERED THROUGH VEGETATED AREAS AND/OR PROPER SEDIMENT CONTROL STRUCTURES LOCATED BETWEEN THE STAGING AREA AND THE WATER; THEREFORE, MINIMIZING THE POTENTIAL FOR IMPACTS SUCH AS SEDIMENTATION AND POLLUTION.

### CONTRACTOR COORDINATION - EROSION CONTROL DEVICES

EROSION CONTROL DEVICES THAT ARE IN PLACE, FUNCTIONING, AND APPROVED BY THE ENGINEER AT THE TIME OF PROJECT COMPLETION SHALL REMAIN IN PLACE FOR USE BY OTHERS UNDER THE SUBSEQUENT KY LAKE BRIDGE REPLACEMENT PROJECT AND BECOME THE PROPERTY OF THE DEPARTMENT. PRIOR TO TRANSFER OF OWNERSHIP, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES ACCORDING TO SECTION 213.03.05 OF THE STANDARD SPECIFICATIONS AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE ENGINEER. PAYMENT FOR FINAL CLEAN-OUT WILL BE ACCORDING TO SECTION 213.04 OF THE STANDARD SPECIFICATIONS.

THE DEPARTMENT WILL THEN BE RESPONSIBLE FOR MAINTENANCE AND CLEANING OF THESE EROSION CONTROL DEVICES UNTIL SUCH TIME THAT OWNERSHIP CAN BE TRANSFERRED TO THE LAKE BRIDGE CONTRACTOR.

### SILT FENCE PHASING ON PROPOSED CAUSEWAYS

PHASE 1: DURING CONSTRUCTION OF COMMON EMBANKMENT AND UNTIL SUCH TIME THAT THE RIP RAP SLOPE PROTECTION CAN BE CONSTRUCTED TO PROTECT THE COMMON EMBANKMENT, CONSTRUCT SILT FENCE AT THE BOTTOM OF THE COMMON EMBANKMENT, ELEVATION 363.

PHASE 2: REMOVE SILT FENCE CONSTRUCTED IN PHASE 1 AS THE RIP RAP SLOPE PROTECTION IS CONSTRUCTED. CONSTRUCT SILT FENCE AT THE TOP OF THE RIP RAP SLOPE PROTECTION, ELEVATION 375.

DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#1	2.56	9,216
DDA#2	2.92	10,512
DDA#3	2.61	9,396
DDA#4	1.84	6,624
DDA#5	1.23	4,428

△

EROSION CONTROL SUMMARY		
Erosion Control Device	Units	Quantities
TEMPORARY MULCH	SQ YD	53,970
SILT TRAP TYPE A	EACH	12
CLEAN SILT TRAP TYPE A	EACH	36
SILT TRAP TYPE B	EACH	12
CLEAN SILT TRAP TYPE B	EACH	36
TEMPORARY SILT FENCE	LIN FT	5,280
CLEAN TEMPORARY SILT FENCE	LIN FT	10,560
TEMPORARY DITCH	LIN FT	2,640
CLEAN TEMPORARY DITCHES	LIN FT	5,280
*EROSION CONTROL BLANKET	SO YD	2,290
SEEDING AND PROTECTION	SO YD	39,030
TOPDRESSING FERTILIZER	TON	2.0
TEMPORARY SEED AND PROTECT	SO YD	53,970

\*NOTE: QUANTITY SHOWN TO STABILIZE 2:1 SLOPES. QUANTITY TO LINE PERMANENT DITCHES IS SHOWN ON PLAN SHEETS.

EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	



US 68/KY 80  
EROSION CONTROL NOTES

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03300EC.DGN

USER: dav/d-1  
DATE PLOTTED: October 29, 2012

E-SHEET NAME: R03300EC

MicroStation v8.11.9.292



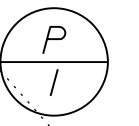
DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#2	2.92	10,512
DDA#3	2.61	9,396

DDA FOR CAUSEWAY WIDENING EXCLUDES GRANULAR EMBANKMENT AREA (BELOW ELEV. 363)

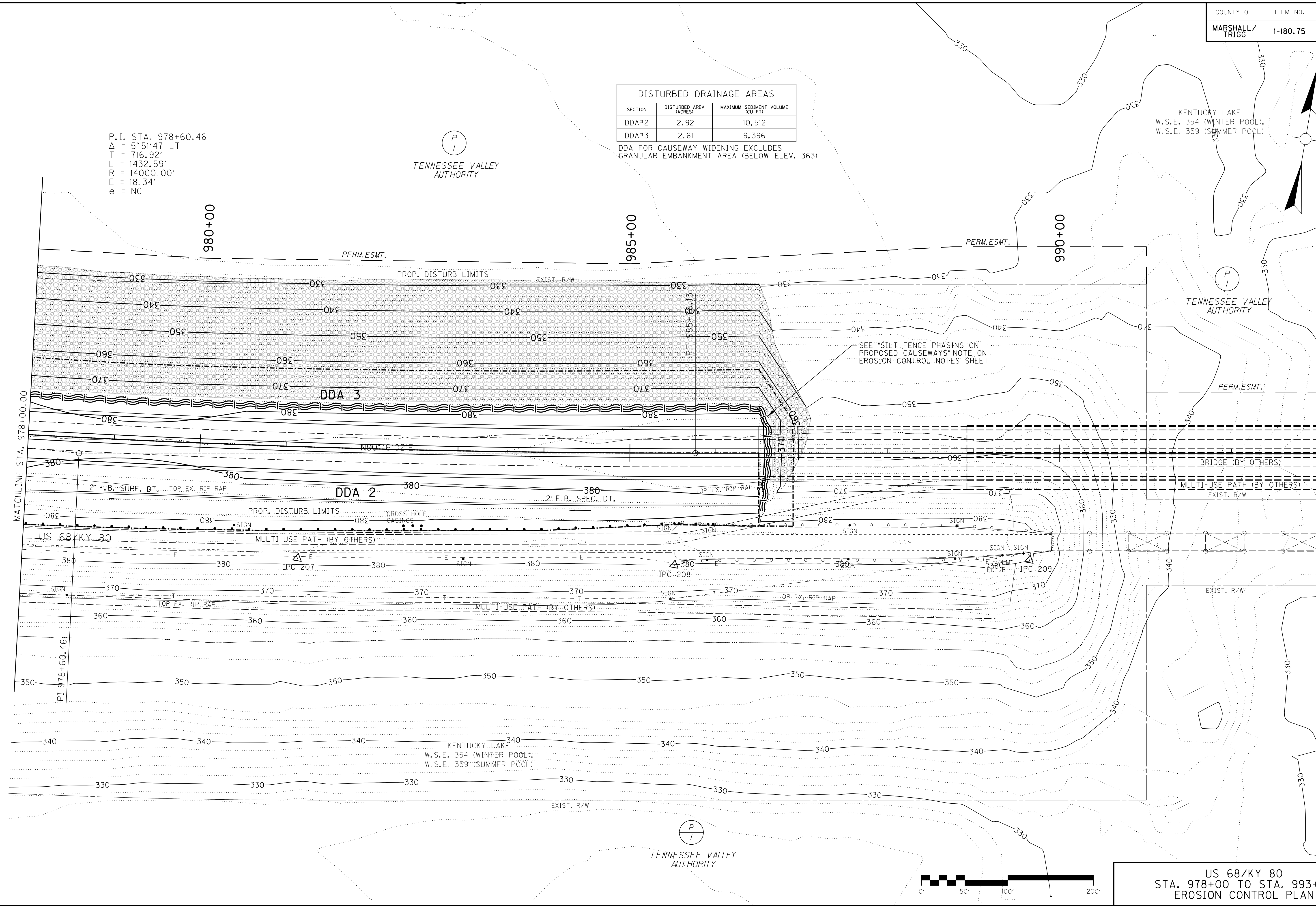
P.I. STA. 978+60.46  
 $\Delta = 5^{\circ}51'47''$  LT  
 $T = 716.92'$   
 $L = 1432.59'$   
 $R = 14000.00'$   
 $E = 18.34'$   
 $e = NC$

  
 TENNESSEE VALLEY  
 AUTHORITY

KENTUCKY LAKE  
 W.S.E. 354 (WINTER POOL),  
 W.S.E. 359 (SUMMER POOL)

  
 TENNESSEE VALLEY  
 AUTHORITY

  
 TENNESSEE VALLEY  
 AUTHORITY

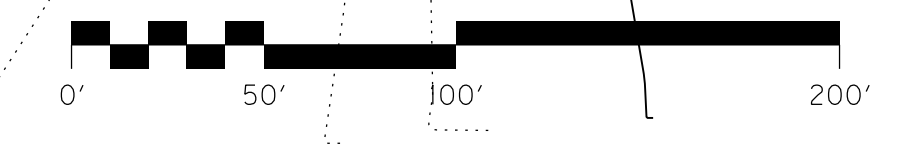


SEE "SILT FENCE PHASING ON PROPOSED CAUSEWAYS" NOTE ON EROSION CONTROL NOTES SHEET

BRIDGE (BY OTHERS)

MULTI-USE PATH (BY OTHERS)

EXIST. R/W



US 68/KY 80  
 STA. 978+00 TO STA. 993+00  
 EROSION CONTROL PLAN

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03500EC.DGN  
 USER: dcv/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03500EC  
 MicroStation v8.11.9.292

STA. 993+00.00 TO STA. 1023+00.00 NOT SHOWN  
 KY LAKE BRIDGE BY OTHERS



△ REVISED 10-31-12

**DISTURBED DRAINAGE AREAS**

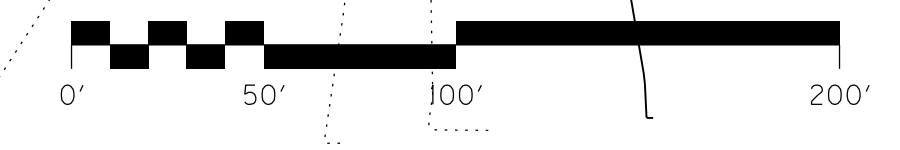
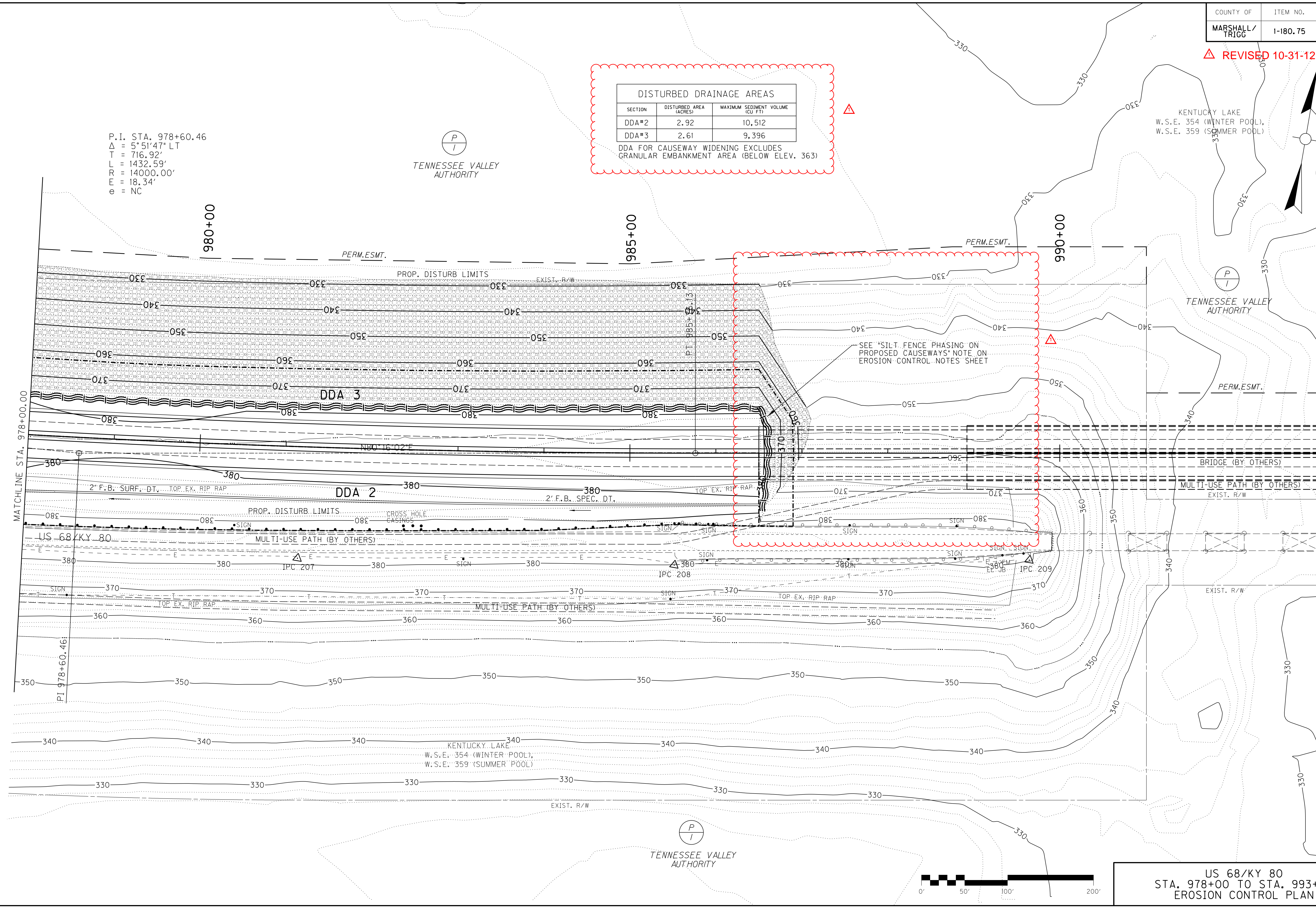
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#2	2.92	10,512
DDA#3	2.61	9,396

DDA FOR CAUSEWAY WIDENING EXCLUDES GRANULAR EMBANKMENT AREA (BELOW ELEV. 363)

P.I. STA. 978+60.46  
 Δ = 5° 51' 47" LT  
 T = 716.92'  
 L = 1432.59'  
 R = 14000.00'  
 E = 18.34'  
 e = NC

TENNESSEE VALLEY AUTHORITY

KENTUCKY LAKE  
 W.S.E. 354 (WINTER POOL),  
 W.S.E. 359 (SUMMER POOL)



US 68/KY 80  
 STA. 978+00 TO STA. 993+00  
 EROSION CONTROL PLAN

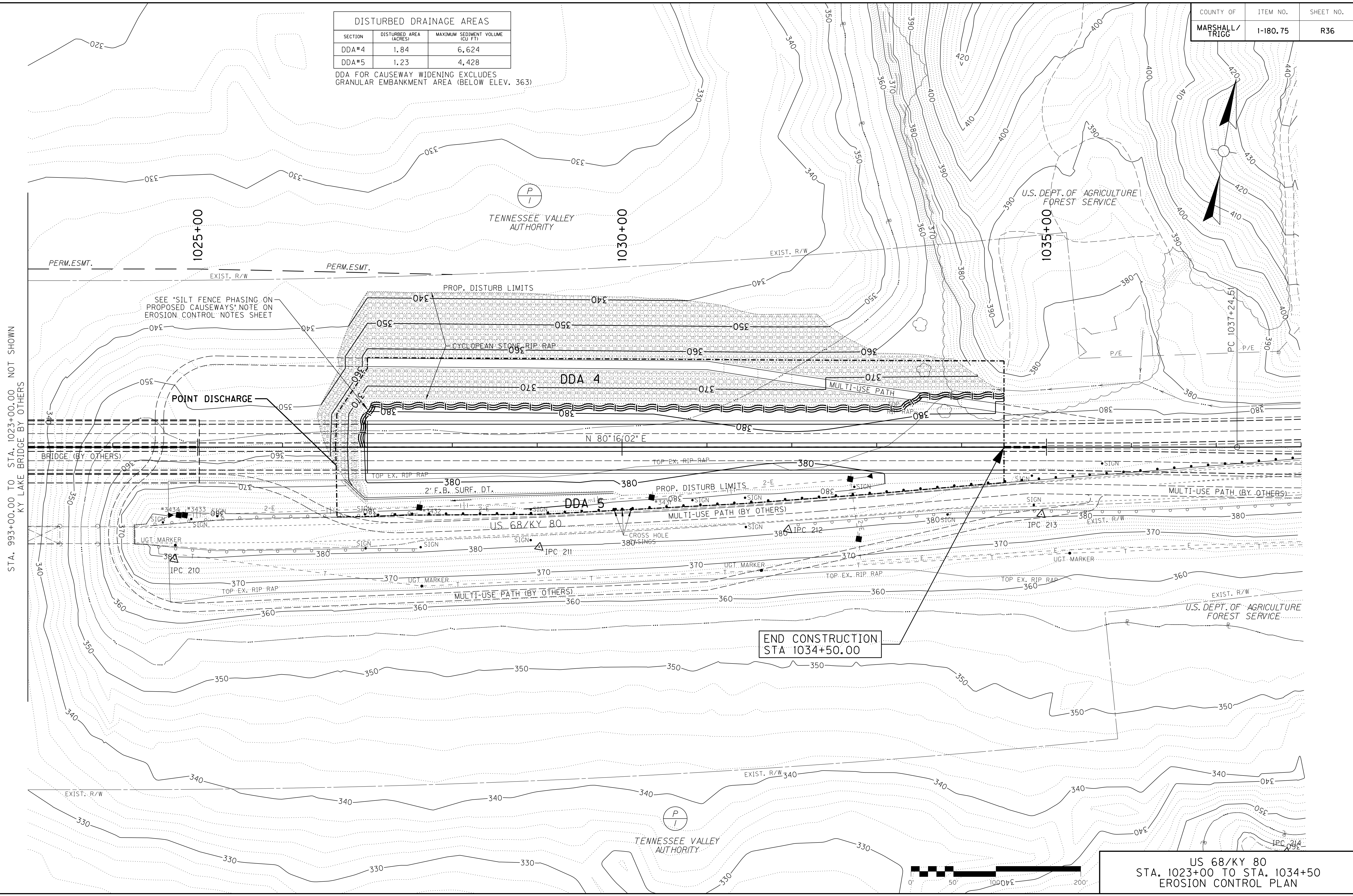
FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03500EC.DGN  
 USER: dcv/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03500EC  
 MicroStation v8.11.9.292

STA. 993+00.00 TO STA. 1023+00.00 NOT SHOWN  
 KY LAKE BRIDGE BY OTHERS



DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#4	1.84	6,624
DDA#5	1.23	4,428

DDA FOR CAUSEWAY WIDENING EXCLUDES GRANULAR EMBANKMENT AREA (BELOW ELEV. 363)



STA. 993+00.00 TO STA. 1023+00.00 NOT SHOWN  
KY LAKE BRIDGE BY OTHERS

END CONSTRUCTION  
STA 1034+50.00

US 68/KY 80  
STA. 1023+00 TO STA. 1034+50  
EROSION CONTROL PLAN

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03600EC.DGN  
 USER: dav/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03600EC  
 MicroStation v8.11.9.292

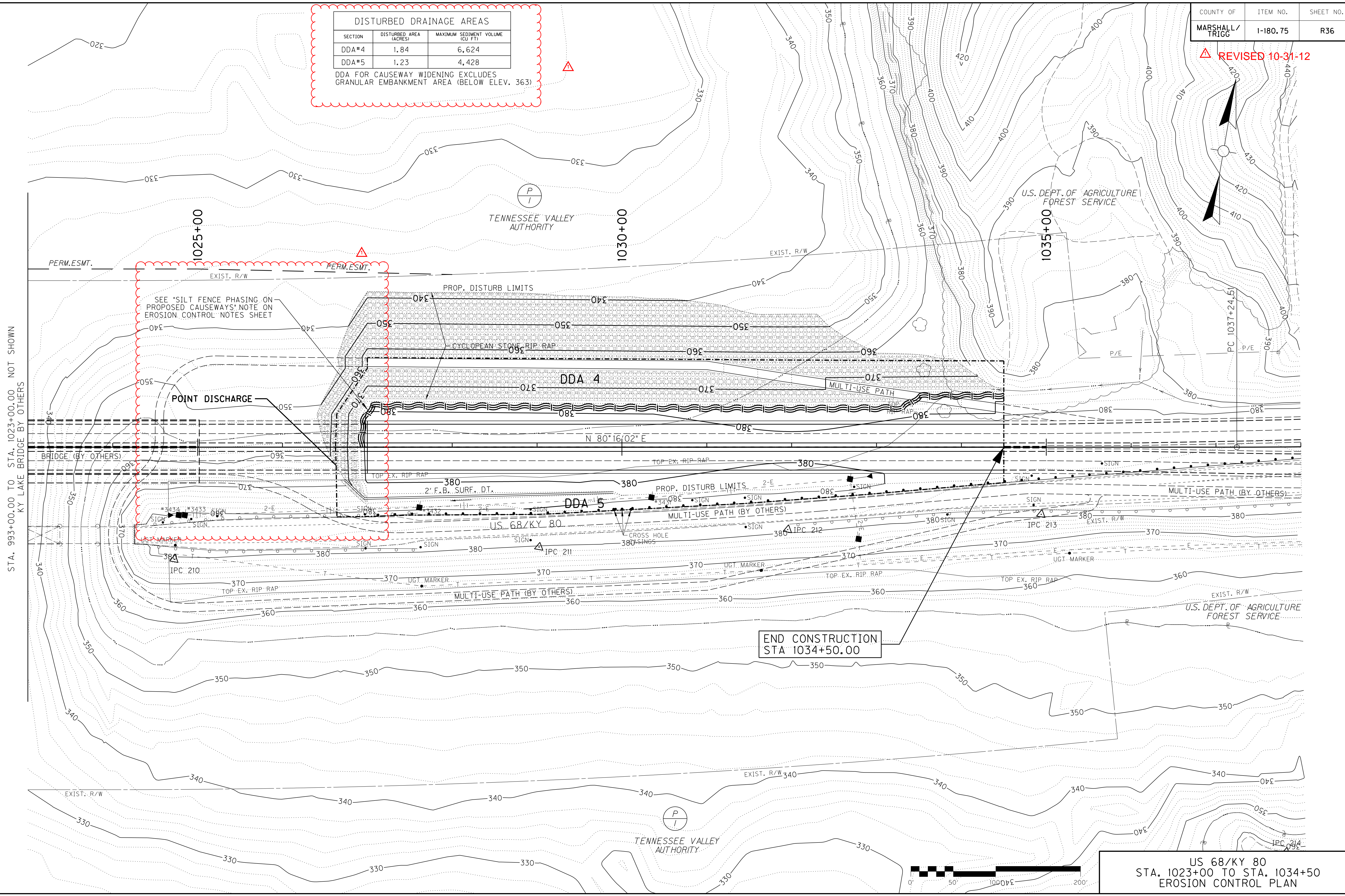


REVISED 10-31-12

**DISTURBED DRAINAGE AREAS**

SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA#4	1.84	6,624
DDA#5	1.23	4,428

DDA FOR CAUSEWAY WIDENING EXCLUDES GRANULAR EMBANKMENT AREA (BELOW ELEV. 363)



STA. 993+00.00 TO STA. 1023+00.00 NOT SHOWN  
KY LAKE BRIDGE BY OTHERS

SEE "SILT FENCE PHASING ON PROPOSED CAUSEWAYS" NOTE ON EROSION CONTROL NOTES SHEET

POINT DISCHARGE

DDA 4

DDA 5

END CONSTRUCTION  
STA 1034+50.00

US 68/KY 80  
STA. 1023+00 TO STA. 1034+50  
EROSION CONTROL PLAN

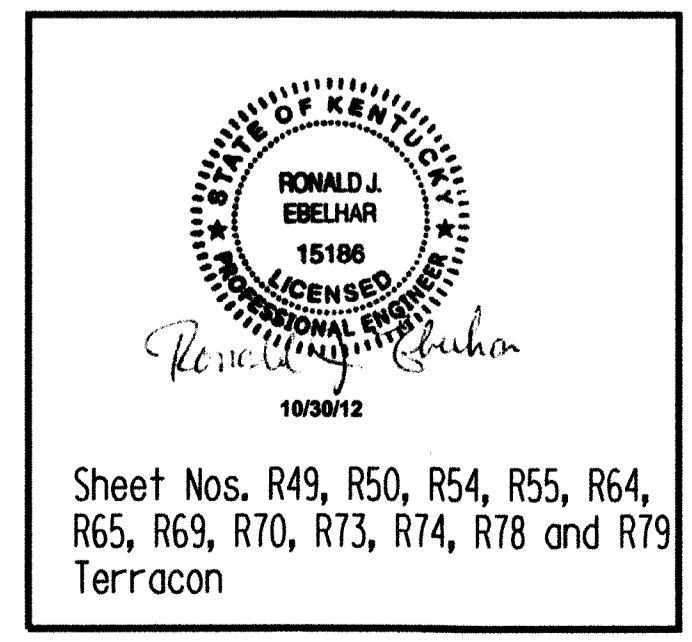
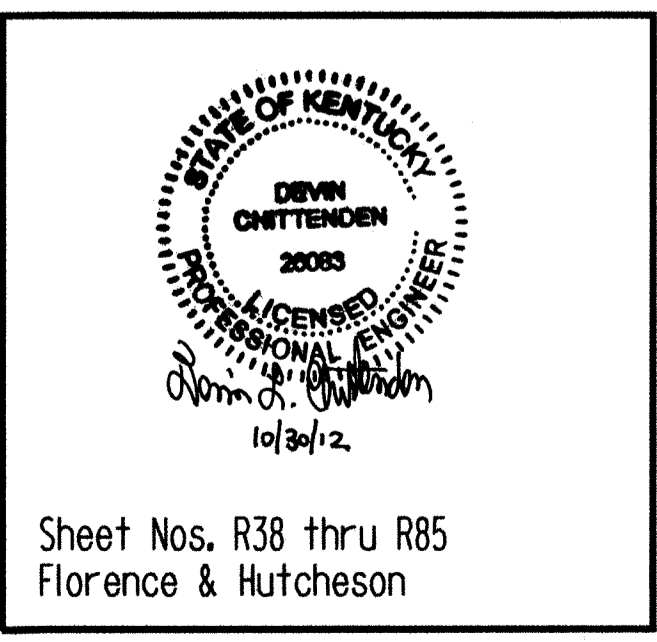
FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\_FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\R03600EC.DGN  
 USER: dav/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: R03600EC  
 MicroStation v8.11.9.292



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R38

# INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
R38	Geotechnical Index Sheet
R39	Geotechnical Symbol Sheet
R40	Geotechnical Notes
R41	Geotechnical Notes
R42	Kentucky Lake West Causeway Profile
R43	Kentucky Lake West Causeway Profile
R44	Kentucky Lake East Causeway Profile
R45	Lagoon Bridge End Bent 1 Slope Stability
R46	Kentucky Lake Cross Sections
R47	Lagoon Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R48	Lagoon Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R49	Lagoon Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R50	Lagoon Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R51	Kentucky Lake Cross Sections (Sheet 1 of 3)
R52	Kentucky Lake Cross Sections (Sheet 2 of 3)
R53	Kentucky Lake Cross Sections (Sheet 3 of 3)
R54	Kentucky Lake Cross Sections (Sheet 1 of 2)
R55	Kentucky Lake Cross Sections (Sheet 2 of 2)
R56	Kentucky Lake Cross Sections
R57	Kentucky Lake Cross Sections
R58	Kentucky Lake Cross Sections
R59	Kentucky Lake Cross Sections
R60	Kentucky Lake Cross Sections
R61	Kentucky Lake Cross Sections
R62	Lagoon Bridge End Bent 1 Slope Stability (Sheet 1 of 2)
R63	Lagoon Bridge End Bent 1 Slope Stability (Sheet 2 of 2)
R64	Kentucky Lake Bridge End Bent 1 Slope Stability (Sheet 1 of 2)
R65	Kentucky Lake Bridge End Bent 1 Slope Stability (Sheet 2 of 2)
R66	Kentucky Lake Cross Sections (Sheet 1 of 3)
R67	Kentucky Lake Cross Sections (Sheet 2 of 3)
R68	Kentucky Lake Cross Sections (Sheet 3 of 3)
R69	Kentucky Lake Cross Sections (Sheet 1 of 2)
R70	Kentucky Lake Cross Sections (Sheet 2 of 2)
R71	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R72	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R73	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R74	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R75	Kentucky Lake Cross Sections (Sheet 1 of 3)
R76	Kentucky Lake Cross Sections (Sheet 2 of 3)
R77	Kentucky Lake Cross Sections (Sheet 3 of 3)
R78	Kentucky Lake Cross Sections (Sheet 1 of 2)
R79	Kentucky Lake Cross Sections (Sheet 2 of 2)
R80	Kentucky Lake Cross Sections
R81	Kentucky Lake Cross Sections
R82	Kentucky Lake Cross Sections
R83	Soil Cement Columns
R84	Lagoon Bridge End Bent 2 Ground Modification
R85	Lagoon Bridge End Bent 2 Ground Modification



REVISION		DATE
DATE: OCTOBER 2012	CHECKED BY	
DESIGNED BY:		
DETAILED BY:		
<b>Commonwealth of Kentucky</b>		
<b>DEPARTMENT OF HIGHWAYS</b>		
COUNTY		
<b>TRIGG AND MARSHALL</b>		
ROUTE	CROSSING	
<b>US 68/80</b>	<b>KENTUCKY LAKE</b>	
<b>GEOTECHNICAL INDEX SHEET</b>		
PREPARED BY	SHEET NO.	
<b>Florence &amp; Hutcheson</b>		
An <b>ICAF</b> Company	DRAWING NO.	

ITEM NUMBER
<b>1-180.75</b>

Microstation v8.11.9.29  
 E-SHEET NAME: R03800GT  
 USER: david-1  
 DATE PLOTTED: September 10, 2012  
 FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\GEOTECH\PLANS\KY LAKE ADV\DRAWING INDEX.DGN

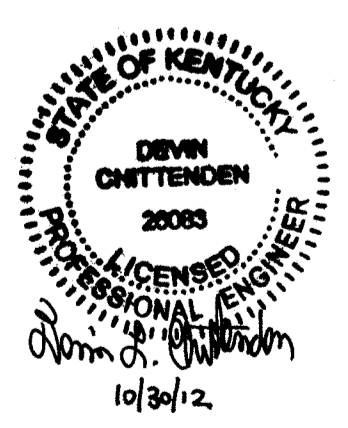


COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R38

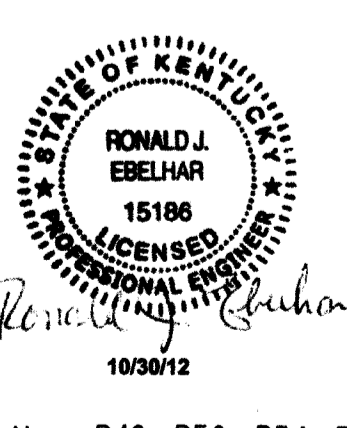
△ REVISED 10-31-12

# INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
R38	Geotechnical Index Sheet
R39	Geotechnical Symbol Sheet
R40	Geotechnical Notes
R41	Geotechnical Notes
R42	Kentucky Lake West Causeway Profile
R43	Kentucky Lake West Causeway Profile
R44	Kentucky Lake East Causeway Profile
R45	Lagoon Bridge End Bent 1 Slope Stability
R46	Kentucky Lake Cross Sections
R47	Lagoon Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R48	Lagoon Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R49	Lagoon Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R50	Lagoon Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R51	Kentucky Lake Cross Sections (Sheet 1 of 3)
R52	Kentucky Lake Cross Sections (Sheet 2 of 3)
R53	Kentucky Lake Cross Sections (Sheet 3 of 3)
R54	Kentucky Lake Cross Sections (Sheet 1 of 2)
R55	Kentucky Lake Cross Sections (Sheet 2 of 2)
R56	Kentucky Lake Cross Sections
R57	Kentucky Lake Cross Sections
R58	Kentucky Lake Cross Sections
R59	Kentucky Lake Cross Sections
R60	Kentucky Lake Cross Sections
R61	Kentucky Lake Cross Sections
R62	Lagoon Bridge End Bent 1 Slope Stability (Sheet 1 of 2)
R63	Lagoon Bridge End Bent 1 Slope Stability (Sheet 2 of 2)
R64	Kentucky Lake Bridge End Bent 1 Slope Stability (Sheet 1 of 2)
R65	Kentucky Lake Bridge End Bent 1 Slope Stability (Sheet 2 of 2)
R66	Kentucky Lake Cross Sections (Sheet 1 of 3)
R67	Kentucky Lake Cross Sections (Sheet 2 of 3)
R68	Kentucky Lake Cross Sections (Sheet 3 of 3)
R69	Kentucky Lake Cross Sections (Sheet 1 of 2)
R70	Kentucky Lake Cross Sections (Sheet 2 of 2)
R71	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R72	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R73	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 1 of 2)
R74	Kentucky Lake Bridge End Bent 2 Slope Stability (Sheet 2 of 2)
R75	Kentucky Lake Cross Sections (Sheet 1 of 3)
R76	Kentucky Lake Cross Sections (Sheet 2 of 3)
R77	Kentucky Lake Cross Sections (Sheet 3 of 3)
R78	Kentucky Lake Cross Sections (Sheet 1 of 2)
R79	Kentucky Lake Cross Sections (Sheet 2 of 2)
R80	Kentucky Lake Cross Sections
R81	Kentucky Lake Cross Sections
R82	Kentucky Lake Cross Sections
R83	Soil Cement Columns
R84	Lagoon Bridge End Bent 2 Ground Modification
R85	Lagoon Bridge End Bent 2 Ground Modification



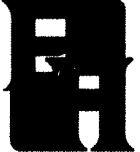
Sheet Nos. R38 thru R85  
Florence & Hutcheson



Sheet Nos. R49, R50, R54, R55, R64,  
R65, R69, R70, R73, R74, R78 and R79  
Terracon



ITEM NUMBER
1-180.75

REVISION		DATE
DATE: OCTOBER 2012	CHECKED BY	
DESIGNED BY:		
DETAILED BY:		
<b>Commonwealth of Kentucky</b>		
<b>DEPARTMENT OF HIGHWAYS</b>		
COUNTY		
<b>TRIGG AND MARSHALL</b>		
ROUTE	CROSSING	
US 6880	KENTUCKY LAKE	
<b>GEOTECHNICAL INDEX SHEET</b>		
PREPARED BY		SHEET NO.
 <b>Florence &amp; Hutcheson</b>		
An <b>ICAF</b> Company		DRAWING NO.

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\GEOTECH\PLANS\KY LAKE ADV\DRAWING INDEX.DGN  
 USER: david-1  
 DATE PLOTTED: September 10, 2012  
 E-SHEET NAME: R03800GT  
 Microstation v8.11.9.292

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R40

# GEOTECHNICAL NOTES

- Clearing and grubbing of embankment areas shall be completed in accordance with Section 202 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- Removal of existing structures and other obstructions shall be completed in accordance with Section 203 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- Based upon available soil testing performed along this project, some soil horizons are considered to be erodible. Procedures shall be performed as required to control erosion and water pollution in accordance with Sections 212 and 213 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- All water wells and/or cisterns within the limits of construction, whether shown on the plans or not, shall be plugged in accordance with Section 708 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- All channel changes and special ditches shall be constructed prior to placement of any embankment materials adjacent to them in accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Materials excavated from these areas may be utilized in construction of the embankments, but may require aeration to the proper moisture contents prior to compaction operations. No extra payment shall be permitted for re-handling, hauling, stockpiling and/or manipulating these materials.
- In accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, the moisture content of embankment and subgrade materials shall not vary from the optimum moisture content, as determined by KM 64-511, by more than plus or minus two percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment and subgrade construction. Embankment materials that are constructed above Elevation 363 feet shall be compacted to at least 95 percent of the standard proctor maximum dry density as determined by KM 64-511. Refer to the family of curves for moisture-density relationships.
- The Contractor is responsible for conducting any operations necessary to excavate the cut areas to the required typical sections. These operations shall be incidental to Embankment in Place.
- All soils, whether from roadway excavation or borrow, may require manipulation to obtain proper moisture contents prior to compaction. Direct payment shall not be permitted for re-handling, hauling, stockpiling and/or manipulating soils.
- Existing stone riprap in the footprint of the proposed embankment above Elevation 359 feet shall be removed and/or stockpiled prior to any embankment construction or ground improvement being performed. In addition, all existing stone riprap below Elevation 359 feet shall be relocated or removed prior to performing ground improvement in the limits provided in Geotechnical Note Number 10 and the Soil Cement Columns Layout Sheet (R83 in the Roadway Plans). The pay item for removing the riprap shall be "Special Excavation" (CY). Also, a "DOT Type II Floating Turbidity Curtain" will be required when relocating or removing the existing stone riprap below the waterline. This turbidity curtain will be incidental to the bid price for Wet Soil Mixing.
- Ground Improvement shall be constructed in accordance with the "Special Note for Wet Deep Soil Mixing." Construct Wet Deep Soil Mixing at the following station interval:  
  
Station 974+60 to Station 976+04
- The embankment from the existing ground line to a minimum elevation of 363 feet shall be constructed of Granular Embankment meeting the requirements of Section 805.10 of the Standard Specifications for Road and Bridge Construction, current edition. Also, the Granular Embankment will be limited to a gradation size of No. 2 stone or larger up to a maximum size of 12" in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction. This portion shall be constructed by end-dumping and grading the material (in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction) into the lakes edge until a firm working platform is constructed above the water upon which normal embankment construction can take place. As per Section 805.03.04 of the Standard Specifications for Road and Bridge Construction, the granular embankment shall be non-erodible and stable material and is required to be quarry-processed limestone. The outside geometry of this portion of embankment should be such that the toe of the construction berm should extend to the approximate location of the projected roadway embankment toe, resulting in an effective geometry from top of slope to toe of slope. Prior to placement of granular embankment, Type III geotextile fabric shall be placed beneath the granular embankment, and at the interfaces of the granular embankment and existing ground line. Also, in accordance with Section 214.03.03 of the Standard Specifications for Road and Bridge Construction, it will be required to limit the drop height of the lowest 2 feet of granular embankment to

no greater than 3 feet to avoid damaging the Type III geotextile fabric. Prior to placement of the embankment materials above Elevation 363 feet and after placement of the granular embankment, Type IV geotextile fabric shall be placed on the granular embankment to serve as a separator. Both Type III and Type IV geotextile fabrics shall be in accordance with Section 214 and 843 of the current Kentucky Department of Highways Standard Specifications. This work shall be done as shown on the project cross-sections and as directed by the Engineer.

- All fill slopes shall be protected with a minimum two feet of Cyclopean Stone Riprap meeting the requirements of Section 805 of the Standard Specifications for Road and Bridge Construction, current edition. The riprap shall be placed as an integral part of the embankment and not as an additional thickness on the outside face of final embankment geometries. The riprap shall extend from the toe of the embankments upwardly to Elevation 375 feet. The riprap shall be placed in accordance with Section 703 of the current standard specifications for Road and Bridge Construction and as directed by the Engineer. A Type I Geotextile Fabric, meeting the requirements of Sections 214 and 843 of the Standard Specifications for Road and Bridge Construction, current edition, shall be placed between the embankment above Elevation 363 feet and the slope protection.
- A Pile Load Testing Program is being conducted on this project. This program includes the Approach Span Pile Load Tests. Coordination between the load test contractor and the ground improvement contractor will be required. Refer to the "Special Note for Pile Load Testing Program" for specific details, locations, and required coordination with roadway construction.
- The Contractor is allowed to construct portions of the embankments on this project prior to and/or concurrently with pile load testing, end bent construction and the ground improvement that is being constructed in the interval mentioned in the Geotechnical Note Number 10, if desired. These embankment areas include the following:

Beginning of Project to Station 968+75  
Station 978+00\* to Station 984+00\*  
Station 1026+50 to End of Project

\*The contractor may work outside this interval mentioned above if acceptable coordination is submitted and approved by the Engineer

- Materials used for embankment construction above Elevation 363 feet shall have the following minimum effective strength parameters:

Cohesion (c') = 50 PSF  
Friction Angle ( $\phi$ ) = 30°

The friction angle of 30° as shown above is an absolute minimum for the embankment materials above Elevation 363 feet. Also, if the cohesion of the embankment materials is found to have a cohesion value less than 50 PSF, then the friction angle has to be a minimum of 32°. These minimum strength parameters shall be verified through the use of laboratory tests on collected samples to obtain source approval. The Contractor is responsible for obtaining the necessary samples through the use of either test pits or auger borings, performing the required laboratory tests and presenting these results in advance for KYTC's approval prior to beginning construction of the embankment above Elevation 363 feet. Laboratory testing on these samples shall include Consolidated Undrained (CU) triaxial in accordance with AASHTO T297 for determining the material's strength. Prior to performing the CU triaxial tests, the lab samples are to be compacted to a minimum of 95% standard proctor maximum dry density as determined by KM 64-511. Also, the moisture content of the lab samples shall not vary from the optimum moisture content, as determined by KM 64-511, by more than plus or minus two percent. It is required that all necessary CU triaxial tests be performed and approved by KYTC prior to beginning construction of the embankment above Elevation 363 feet. A minimum of one (1) set of triaxial tests shall be completed for up to 50,000 cubic yards of embankment or for every change in either material type or borrow source. One (1) CU set constitutes three (3) individual triaxial tests or points. After completion of the CU triaxial tests, index testing shall also be performed on each of the samples. These index tests will include Atterberg Limits in accordance with AASHTO T89 and T90 and Gradation in accordance with AASHTO T88. Soils that classify as non-plastic (NP) will not require Atterberg Limits. Laboratory testing needs to be performed by a firm pre-qualified by KYTC for Geotechnical Laboratory Testing and AASHTO Materials Reference Laboratory (AMRL) Accredited for AASHTO T297, T88, T89 and T90. Prior to beginning testing, consult the Geotechnical Branch to ensure that a lab is accredited or certified. The cost of obtaining the samples and performing the laboratory tests shall be incidental to the unit price for Embankment in Place.

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\RD4000GT.DGN  
 USER: davis/dh  
 DATE PLOTTED: October 30, 2012  
 E-SHEET NAME: RD4000GT  
 MicroStation v8.11.9.292



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R40

△ REVISED 10-31-12

# GEOTECHNICAL NOTES

1. Clearing and grubbing of embankment areas shall be completed in accordance with Section 202 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
2. Removal of existing structures and other obstructions shall be completed in accordance with Section 203 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
3. Based upon available soil testing performed along this project, some soil horizons are considered to be erodible. Procedures shall be performed as required to control erosion and water pollution in accordance with Sections 212 and 213 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
4. All water wells and/or cisterns within the limits of construction, whether shown on the plans or not, shall be plugged in accordance with Section 708 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
5. All channel changes and special ditches shall be constructed prior to placement of any embankment materials adjacent to them in accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Materials excavated from these areas may be utilized in construction of the embankments, but may require aeration to the proper moisture contents prior to compaction operations. No extra payment shall be permitted for re-handling, hauling, stockpiling and/or manipulating these materials.
6. In accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, the moisture content of embankment and subgrade materials shall not vary from the optimum moisture content, as determined by KM 64-511, by more than plus or minus two percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment and subgrade construction. Embankment materials that are constructed above Elevation 363 feet shall be compacted to at least 95 percent of the standard proctor maximum dry density as determined by KM 64-511. Refer to the family of curves for moisture-density relationships.
7. The Contractor is responsible for conducting any operations necessary to excavate the cut areas to the required typical sections. These operations shall be incidental to Embankment in Place.
8. All soils, whether from roadway excavation or borrow, may require manipulation to obtain proper moisture contents prior to compaction. Direct payment shall not be permitted for re-handling, hauling, stockpiling and/or manipulating soils.

9. Existing stone riprap in the footprint of the proposed embankment above Elevation 359 feet shall be removed and/or stockpiled prior to any embankment construction or ground improvement being performed. In addition, all existing stone riprap below Elevation 359 feet shall be relocated or removed prior to performing ground improvement in the limits provided in Geotechnical Note Number 10 and the Soil Cement Columns Layout Sheet (R83 in the Roadway Plans). The pay item for removing the riprap shall be "Special Excavation" (CY). Also, a "DOT Type II Floating Turbidity Curtain" will be required when relocating or removing the existing stone riprap below the waterline. This turbidity curtain will be incidental to the bid price for Wet Soil Mixing.
10. Ground Improvement shall be constructed in accordance with the "Special Note for Wet Deep Soil Mixing." Construct Wet Deep Soil Mixing at the following station interval:  
  
Station 974+60 to Station 976+04
11. The embankment from the existing ground line to a minimum elevation of 363 feet shall be constructed of Granular Embankment meeting the requirements of Section 805.10 of the Standard Specifications for Road and Bridge Construction, current edition. Also, the Granular Embankment will be limited to a gradation size of No. 2 stone or larger up to a maximum size of 12" in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction. This portion shall be constructed by end-dumping and grading the material (in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction) into the lakes edge until a firm working platform is constructed above the water upon which normal embankment construction can take place. As per Section 805.03.04 of the Standard Specifications for Road and Bridge Construction, the granular embankment shall be non-erodible and stable material and is required to be quarry-processed limestone. The outside geometry of this portion of embankment should be such that the toe of the construction berm should extend to the approximate location of the projected roadway embankment toe, resulting in an effective geometry from top of slope to toe of slope. Prior to placement of granular embankment, Type III geotextile fabric shall be placed beneath the granular embankment, and at the interfaces of the granular embankment and existing ground line. Also, in accordance with Section 214.03.03 of the Standard Specifications for Road and Bridge Construction, it will be required to limit the drop height of the lowest 2 feet of granular embankment to

no greater than 3 feet to avoid damaging the Type III geotextile fabric. Prior to placement of the embankment materials above Elevation 363 feet and after placement of the granular embankment, Type IV geotextile fabric shall be placed on the granular embankment to serve as a separator. Both Type III and Type IV geotextile fabrics shall be in accordance with Section 214 and 843 of the current Kentucky Department of Highways Standard Specifications. This work shall be done as shown on the project cross-sections and as directed by the Engineer.

12. All fill slopes shall be protected with a minimum two feet of Cyclopean Stone Riprap meeting the requirements of Section 805 of the Standard Specifications for Road and Bridge Construction, current edition. The riprap shall be placed as an integral part of the embankment and not as an additional thickness on the outside face of final embankment geometries. The riprap shall extend from the toe of the embankments upwardly to Elevation 375 feet. The riprap shall be placed in accordance with Section 703 of the current standard specifications for Road and Bridge Construction and as directed by the Engineer. A Type I Geotextile Fabric, meeting the requirements of Sections 214 and 843 of the Standard Specifications for Road and Bridge Construction, current edition, shall be placed between the embankment above Elevation 363 feet and the slope protection.
13. A Pile Load Testing Program is being conducted on this project. This program includes the Approach Span Pile Load Tests. Coordination between the load test contractor and the ground improvement contractor will be required. Refer to the "Special Note for Pile Load Testing Program" for specific details, locations, and required coordination with roadway construction.

14. The Contractor is allowed to construct portions of the embankments on this project prior to and/or concurrently with pile load testing, end bent construction and the ground improvement that is being constructed in the interval mentioned in the Geotechnical Note Number 10, if desired. These embankment areas include the following:

Beginning of Project to Station 968+75  
Station 978+00\* to Station 984+00\*  
Station 1026+50 to End of Project

\*The contractor may work outside this interval mentioned above if acceptable coordination is submitted and approved by the Engineer

15. Materials used for embankment construction above Elevation 363 feet shall have the following minimum effective strength parameters:

Cohesion (c') = 50 PSF  
Friction Angle ( $\phi'$ ) = 30°

The friction angle of 30° as shown above is an absolute minimum for the embankment materials above Elevation 363 feet. Also, if the cohesion of the embankment materials is found to have a cohesion value less than 50 PSF, then the friction angle has to be a minimum of 32°. These minimum strength parameters shall be verified through the use of laboratory tests on collected samples to obtain source approval. The Contractor is responsible for obtaining the necessary samples through the use of either test pits or auger borings, performing the required laboratory tests and presenting these results in advance for KYTC's approval prior to beginning construction of the embankment above Elevation 363 feet. Laboratory testing on these samples shall include Consolidated Undrained (CU) triaxial in accordance with AASHTO T297 for determining the material's strength. Prior to performing the CU triaxial tests, the lab samples are to be compacted to a minimum of 95% standard proctor maximum dry density as determined by KM 64-511. Also, the moisture content of the lab samples shall not vary from the optimum moisture content, as determined by KM 64-511, by more than plus or minus two percent. It is required that all necessary CU triaxial tests be performed and approved by KYTC prior to beginning construction of the embankment above Elevation 363 feet. A minimum of one (1) set of triaxial tests shall be completed for up to 50,000 cubic yards of embankment or for every change in either material type or borrow source. One (1) CU set constitutes three (3) individual triaxial tests or points. After completion of the CU triaxial tests, index testing shall also be performed on each of the samples. These index tests will include Atterberg Limits in accordance with AASHTO T89 and T90 and Gradation in accordance with AASHTO T88. Soils that classify as non-plastic (NP) will not require Atterberg Limits. Laboratory testing needs to be performed by a firm pre-qualified by KYTC for Geotechnical Laboratory Testing and AASHTO Materials Reference Laboratory (AMRL) Accredited for AASHTO T297, T88, T89 and T90. Prior to beginning testing, consult the Geotechnical Branch to ensure that a lab is accredited or certified. The cost of obtaining the samples and performing the laboratory tests shall be incidental to the unit price for Embankment in Place.

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\RD4000GT.DGN  
 USER: davis/dh  
 DATE PLOTTED: October 30, 2012  
 E-SHEET NAME: RD4000GT  
 MicroStation v8.11.9.292

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R41

# GEOTECHNICAL NOTES

16. In addition to the required CU triaxial testing, index testing shall also be performed on the proposed materials used for embankment construction above Elevation 363 feet. These index tests shall include Atterberg Limits in accordance with AASHTO T89 and T90 and Gradation in accordance with AASHTO T88. Soils which classify as non-plastic (NP) will not require Atterberg Limits. A minimum of one (1) set of index testing shall be completed per 10,000 cubic yards of embankment or for every change in either material type or borrow source. The Contractor shall randomly sample from the borrow source and the samples for index testing must come from the 10,000 cubic yards of embankment that the samples represent. If the embankment material is placed prior to receiving the results of the index testing and the index tests show that the material is unacceptable, then the Contractor may have to remove that material at no expense to the Department. Soils that classify in accordance with the Unified Soil Classification System as GW, GP, GM, GC, SW, SP, SM, SC, CL or ML will be accepted as embankment material above Elevation 363 feet. Also, in accordance with the Unified Soil Classification System, soils that classify as CH, MH, OH, OL or Pt will not be accepted to be used as embankment material above Elevation 363 feet. If the classification of the samples is different than the classifications of the triaxial samples, additional CU triaxial testing may be required at the discretion of the Department and at no additional cost to the Department. In addition, CU triaxial and index testing may be waived on embankment materials above Elevation 363 feet if granular embankment meeting the requirements in Geotechnical Note Number 11 is utilized higher than the required minimum elevation. Laboratory testing needs to be performed by a firm pre-qualified by KYTC for Geotechnical Laboratory Testing and AASHTO Materials Reference Laboratory (AMRL) Accredited for AASHTO T88, T89 and T90. Prior to beginning testing, consult the Geotechnical Branch to ensure that a lab is accredited or certified. The cost of obtaining the samples and performing the laboratory tests shall be incidental to the unit price for Embankment in Place.
  
17. The bridge approach embankments shall include 'granular pile cores' to facilitate installation of the foundation systems. Construction of the pile cores shall be in accordance with KYTC Special Provision No. 69, Standard Drawing Nos. RGX-100 and RGX-105 (with the exceptions described below), and Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Erodible materials shall not be used in construction of pile cores. An exception to the KYTC Standard Drawings RGX-100 and RGX-105 is the structure granular backfill. Behind the abutment of the Lagoon Bridge End Bents, this structure granular backfill shall extend 8 feet horizontally back into the embankment from the bottom of the pile cap then extend up a 1H:1V slope vertically away from the abutment. This shall be done as shown in the project plans. Another exception to the KYTC Standard Drawings RGX-100 and RGX-105 is near End Bent 2 of the Lagoon Bridge. At this End Bent, it is required that the pile foundations be installed after the granular embankment with the granular pile core is constructed to the Elevation 363 feet and before any additional embankment soils are constructed. Refer to the structure plans for the Lagoon Bridge for detailed construction sequence requirements.

MicroStation v8.11.9.292  
 E-SHEET NAME: R04100GT  
 USER: dav/d-1  
 DATE PLOTTED: October 30, 2012  
 FILE NAME: J:\JOBS\KYTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\_R04100GT.DGN



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R41

△ REVISED 10-31-12

# GEOTECHNICAL NOTES

16. In addition to the required CU triaxial testing, index testing shall also be performed on the proposed materials used for embankment construction above Elevation 363 feet. These index tests shall include Atterberg Limits in accordance with AASHTO T89 and T90 and Gradation in accordance with AASHTO T88. Soils which classify as non-plastic (NP) will not require Atterberg Limits. A minimum of one (1) set of index testing shall be completed per 10,000 cubic yards of embankment or for every change in either material type or borrow source. The Contractor shall randomly sample from the borrow source and the samples for index testing must come from the 10,000 cubic yards of embankment that the samples represent. If the embankment material is placed prior to receiving the results of the index testing and the index tests show that the material is unacceptable, then the Contractor may have to remove that material at no expense to the Department. Soils that classify in accordance with the Unified Soil Classification System as GW, GP, GM, GC, SW, SP, SM, SC, CL or ML will be accepted as embankment material above Elevation 363 feet. Also, in accordance with the Unified Soil Classification System, soils that classify as CH, MH, OH, OL or Pt will not be accepted to be used as embankment material above Elevation 363 feet. If the classification of the samples is different than the classifications of the triaxial samples, additional CU triaxial testing may be required at the discretion of the Department and at no additional cost to the Department. In addition, CU triaxial and index testing may be waived on embankment materials above Elevation 363 feet if granular embankment meeting the requirements in Geotechnical Note Number 11 is utilized higher than the required minimum elevation. Laboratory testing needs to be performed by a firm pre-qualified by KYTC for Geotechnical Laboratory Testing and AASHTO Materials Reference Laboratory (AMRL) Accredited for AASHTO T88, T89 and T90. Prior to beginning testing, consult the Geotechnical Branch to ensure that a lab is accredited or certified. The cost of obtaining the samples and performing the laboratory tests shall be incidental to the unit price for Embankment in Place.

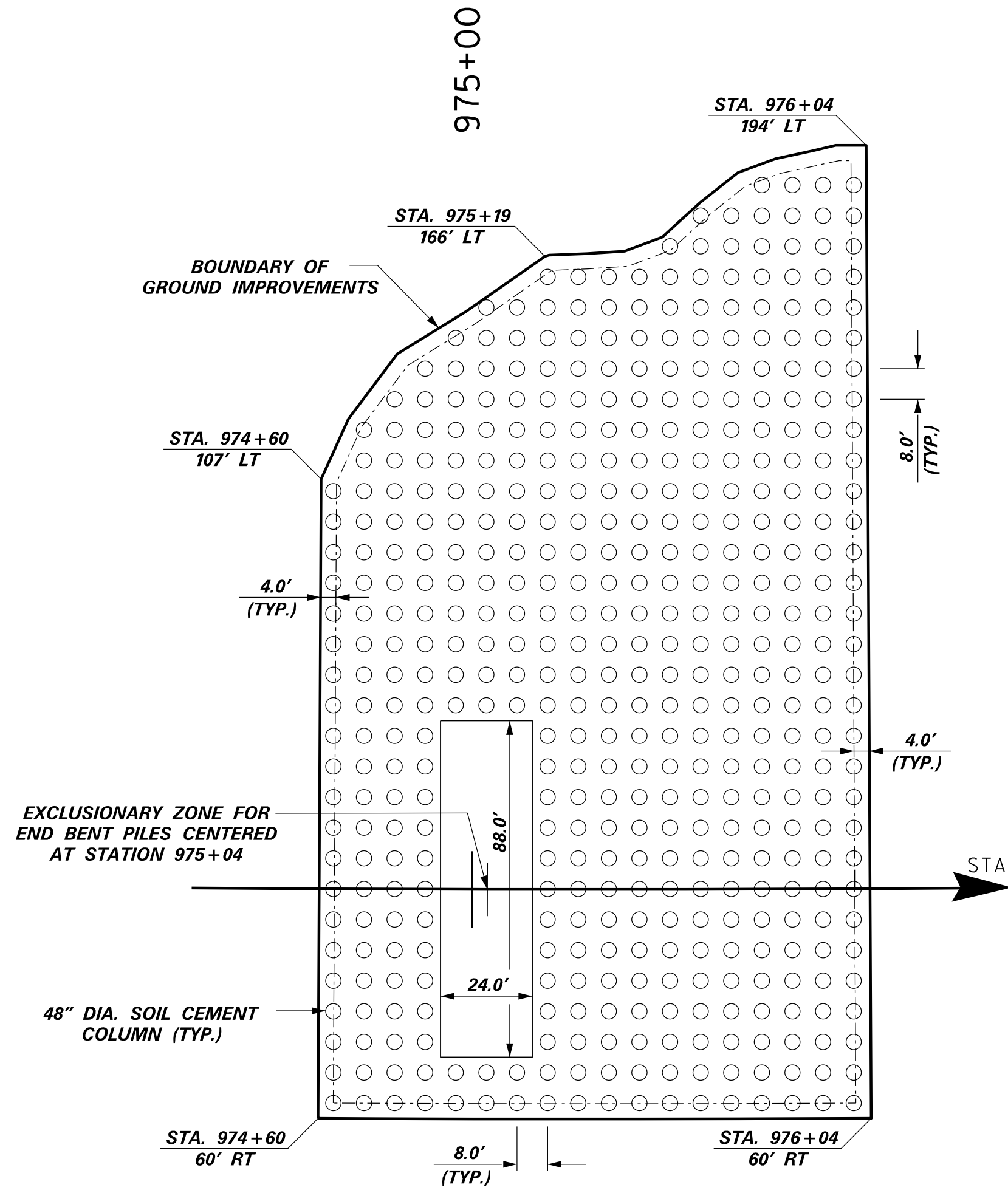
17. The bridge approach embankments shall include 'granular pile cores' to facilitate installation of the foundation systems. Construction of the pile cores shall be in accordance with KYTC Special Provision No. 69, Standard Drawing Nos. RGX-100 and RGX-105 (with the exceptions described below), and Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Erodible materials shall not be used in construction of pile cores. An exception to the KYTC Standard Drawings RGX-100 and RGX-105 is the structure granular backfill. Behind the abutment of the Lagoon Bridge End Bents, this structure granular backfill shall extend 8 feet horizontally back into the embankment from the bottom of the pile cap then extend up a 1H:1V slope vertically away from the abutment. This shall be done as shown in the project plans. Another exception to the KYTC Standard Drawings RGX-100 and RGX-105 is near End Bent 2 of the Lagoon Bridge. At this End Bent, it is required that the pile foundations be installed after the granular embankment with the granular pile core is constructed to the Elevation 363 feet and before any additional embankment soils are constructed. Refer to the structure plans for the Lagoon Bridge for detailed construction sequence requirements.



MicroStation v8.11.9.292  
 E-SHEET NAME: R04100GT  
 USER: dav/d-1  
 DATE PLOTTED: October 30, 2012  
 FILE NAME: J:\JOBS\KYTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\_R04100GT.DGN

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	I-180.75	R83

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROB300GT.DGN  
 USER: d0v1d-1  
 DATE PLOTTED: October 30, 2012  
 E-SHEET NAME: ROB300GT  
 MicroStation v8.11.9.292



**LAGOON BRIDGE - END BENT 2**  
**ESTIMATED QUANTITY = 10,000 C.Y.**

**CONTINGENCY QUANTITY = 2,500 C.Y.**  
**TOTAL PLAN QUANTITY = 12,500 C.Y.**

REVISION	DATE
DATE: OCTOBER 2012	CHECKED BY:
DESIGNED BY:	
DETAILED BY:	

**Commonwealth of Kentucky**  
**DEPARTMENT OF HIGHWAYS**  
COUNTY  
**TRIGG AND MARSHALL**

ROUTE **US 6880** CROSSING **KENTUCKY LAKE**

**SOIL CEMENT COLUMNS**

PREPARED BY **Florence & Hutcheson** SHEET NO.  
 An **ICA** Company DRAWING NO.

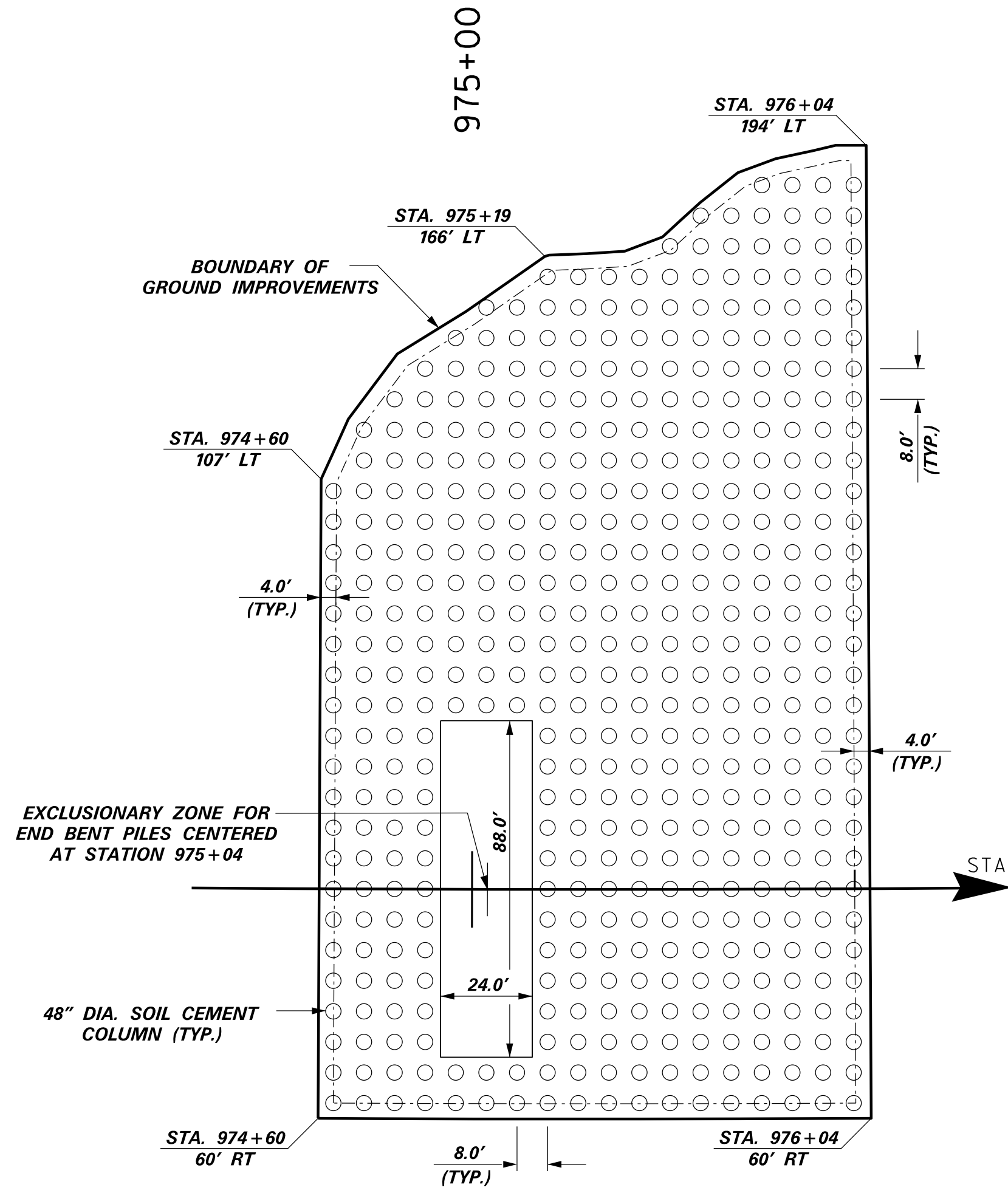


ITEM NUMBER
1-180.75



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	I-180.75	R83

△ REVISED 10-31-12




**LAGOON BRIDGE - END BENT 2**  
**ESTIMATED QUANTITY = 10,000 C.Y.**

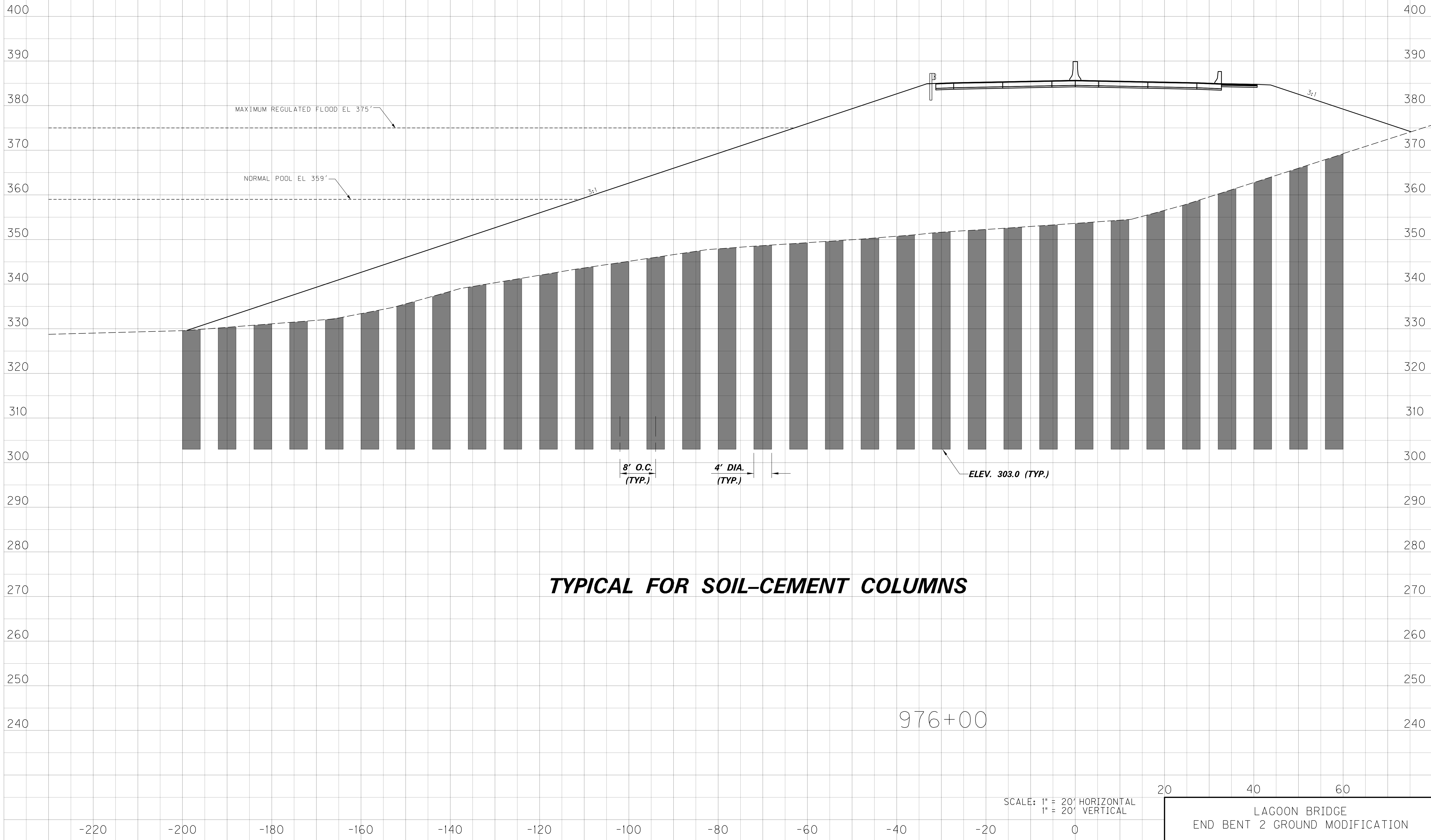
**CONTINGENCY QUANTITY = 2,500 C.Y.**  
**TOTAL PLAN QUANTITY = 12,500 C.Y.**

△

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROB300GT.DGN  
 USER: d0v1d-1  
 DATE PLOTTED: October 30, 2012  
 E-SHEET NAME: ROB300GT  
 MicroStation v8.11.9.292

REVISION		DATE
DATE: OCTOBER 2012	CHECKED BY	
DESIGNED BY:		
DETAILED BY:		
<b>Commonwealth of Kentucky</b> <b>DEPARTMENT OF HIGHWAYS</b> <small>COUNTY</small>		
<b>TRIGG AND MARSHALL</b>		
ROUTE <b>US 6880</b>	CROSSING <b>KENTUCKY LAKE</b>	
<b>SOIL CEMENT COLUMNS</b>		
ITEM NUMBER	PREPARED BY	SHEET NO.
1-180.75	 <b>Florence &amp; Hutcheson</b> An <b>ICA</b> Company	
	DRAWING NO.	

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R85



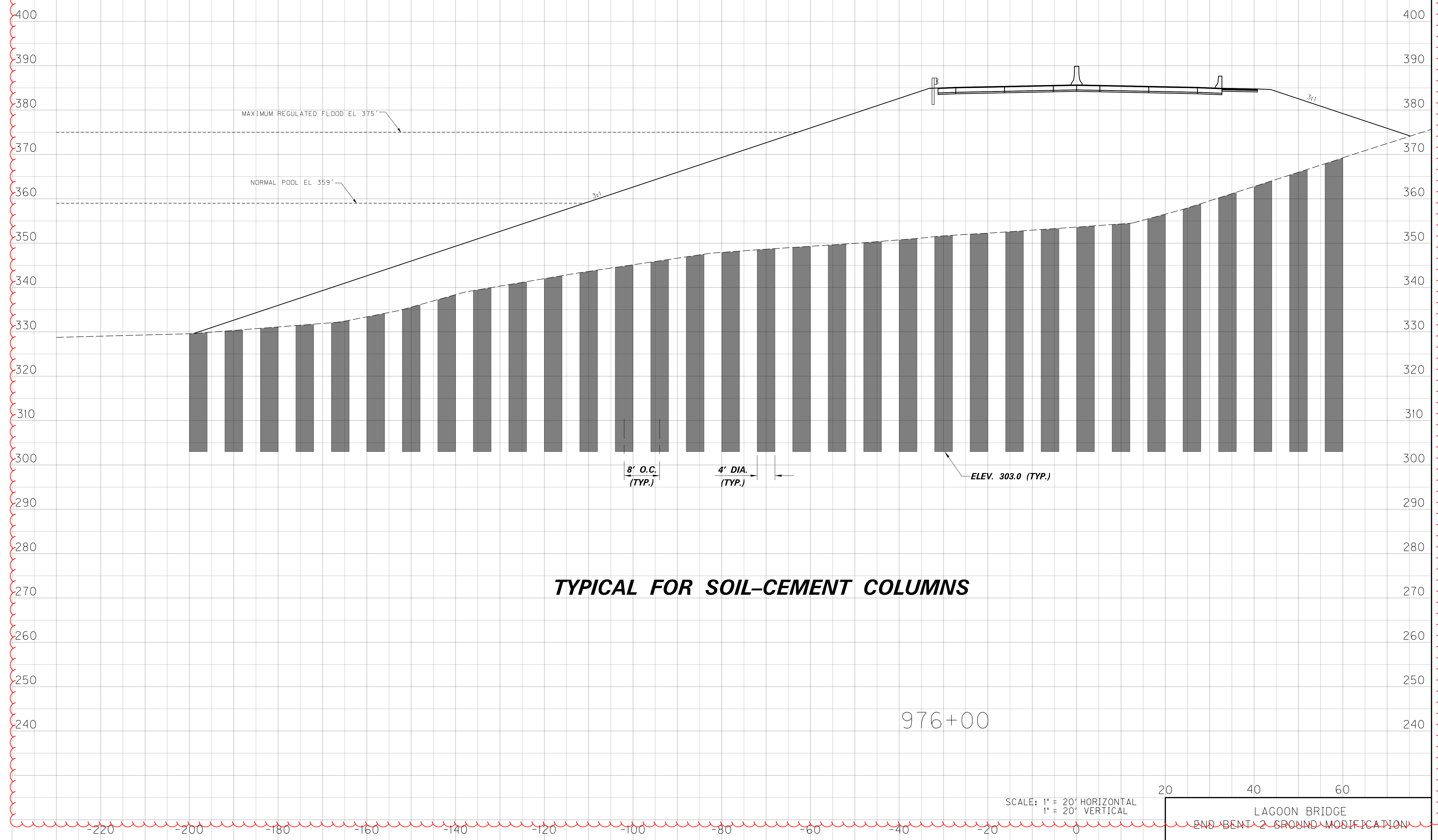
**TYPICAL FOR SOIL-CEMENT COLUMNS**

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROB500GT.DGN  
 USER: dwd/dw  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROB500GT  
 MicroStation v8.11.9.292



COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	R85

△ REVISED 10-31-12



**TYPICAL FOR SOIL-CEMENT COLUMNS**

976+00

SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

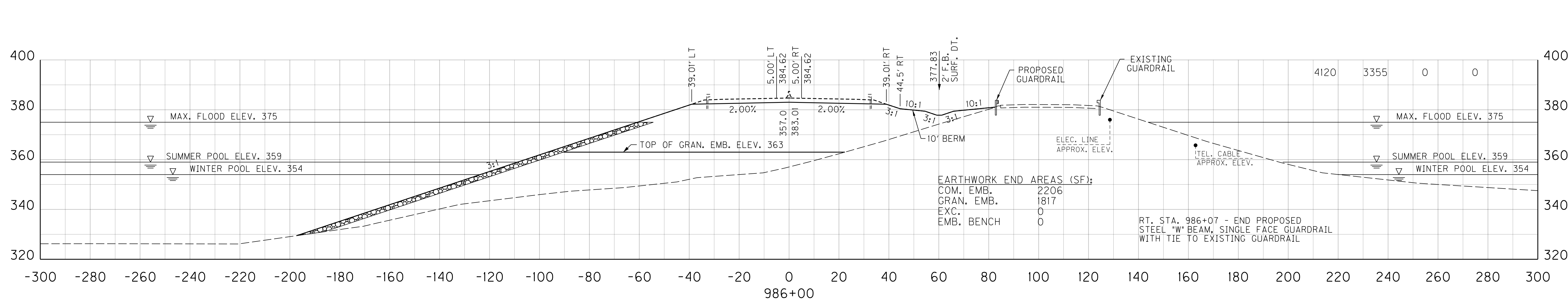
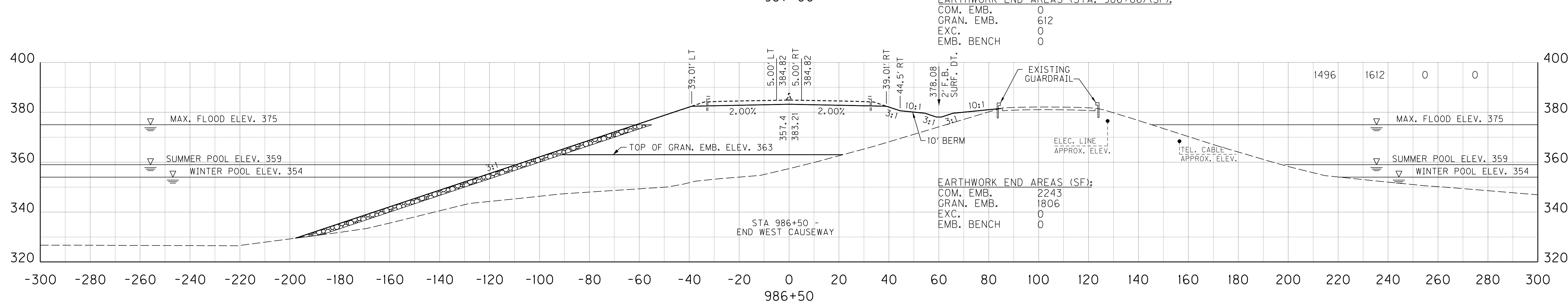
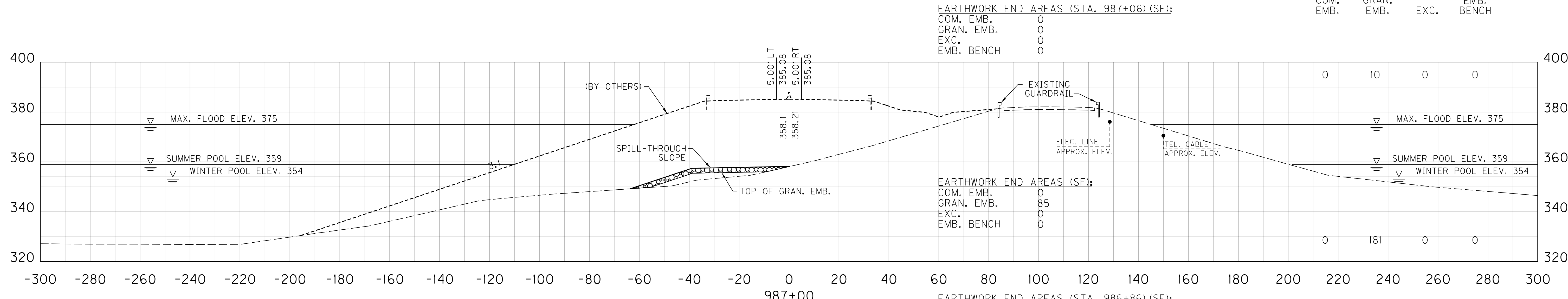
20 40 60

LAGOON BRIDGE  
END BENT 2 GROUND MODIFICATION

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\ROB500GT.DGN  
 USER: dcv/dcl  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: ROB500GT  
 MicroStation v8.11.9.292

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	10	0	0



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA. 986+00 TO STA. 987+00

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN  
 USER: dwd/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01000XS  
 MicroStation v8.11.9.292

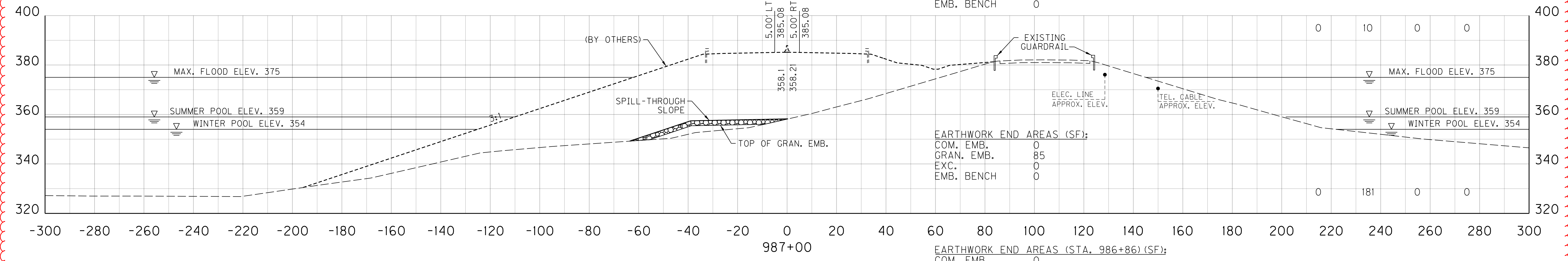


EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	10	0	0

EARTHWORK END AREAS (STA. 987+06) (SF):

COM. EMB.	0
GRAN. EMB.	0
EXC.	0
EMB. BENCH	0



EARTHWORK END AREAS (SF):

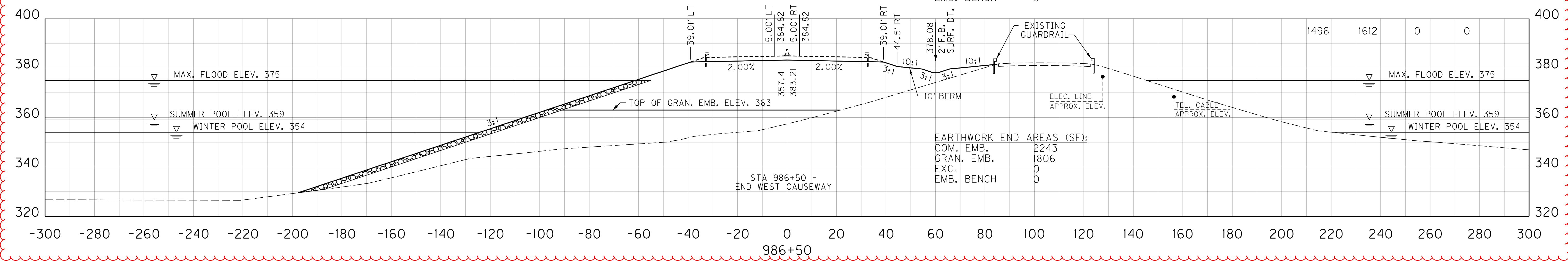
COM. EMB.	0
GRAN. EMB.	85
EXC.	0
EMB. BENCH	0

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	181	0	0

987+00

EARTHWORK END AREAS (STA. 986+86) (SF):

COM. EMB.	0
GRAN. EMB.	612
EXC.	0
EMB. BENCH	0



STA 986+50 - END WEST CAUSEWAY

986+50

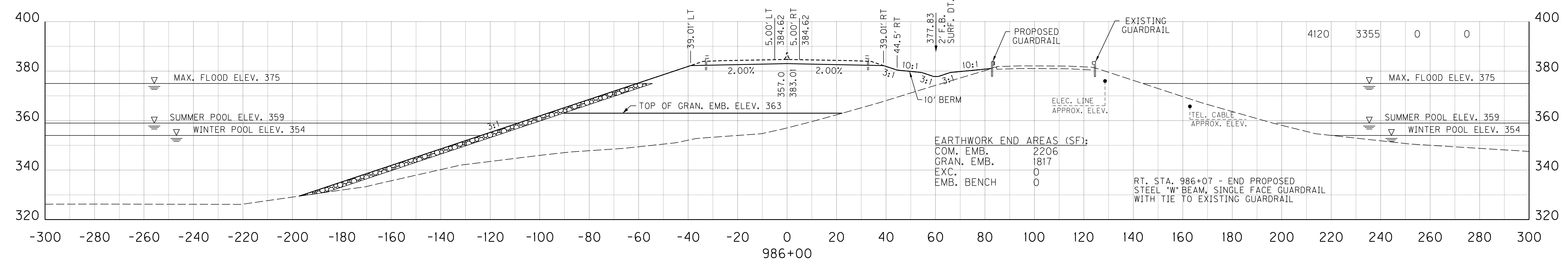
EARTHWORK END AREAS (SF):

COM. EMB.	2243
GRAN. EMB.	1806
EXC.	0
EMB. BENCH	0

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
1496	1612	0	0

EARTHWORK END AREAS (SF):

COM. EMB.	2206
GRAN. EMB.	1817
EXC.	0
EMB. BENCH	0



RT. STA. 986+07 - END PROPOSED STEEL "W" BEAM, SINGLE FACE GUARDRAIL WITH TIE TO EXISTING GUARDRAIL

986+00

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
4120	3355	0	0

SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

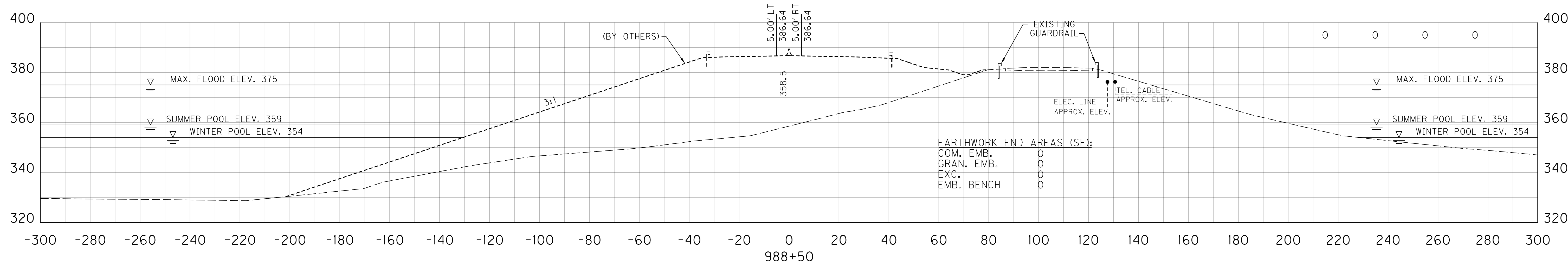
US 68/KY 80  
STA. 986+00 TO STA. 987+00

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01000XS  
 MicroStation v8.11.9.292

STA 988+92 -  
BEGIN KENTUCKY LAKE BRIDGE  
(BY OTHERS)

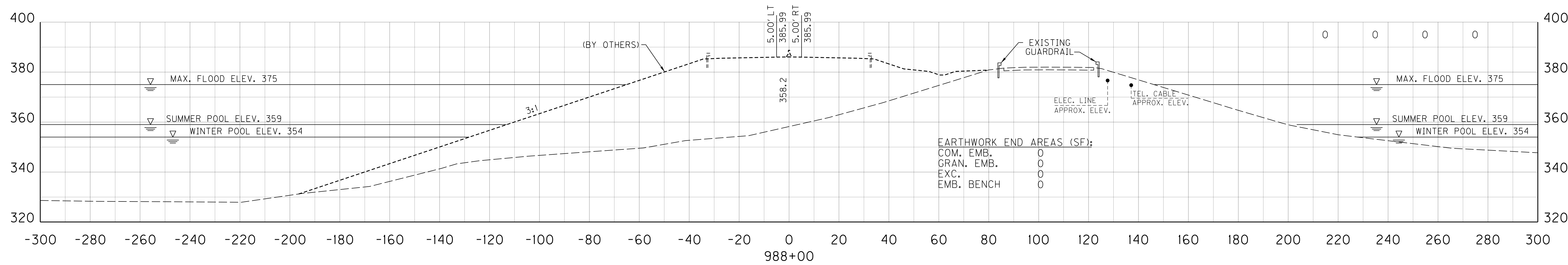
EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0



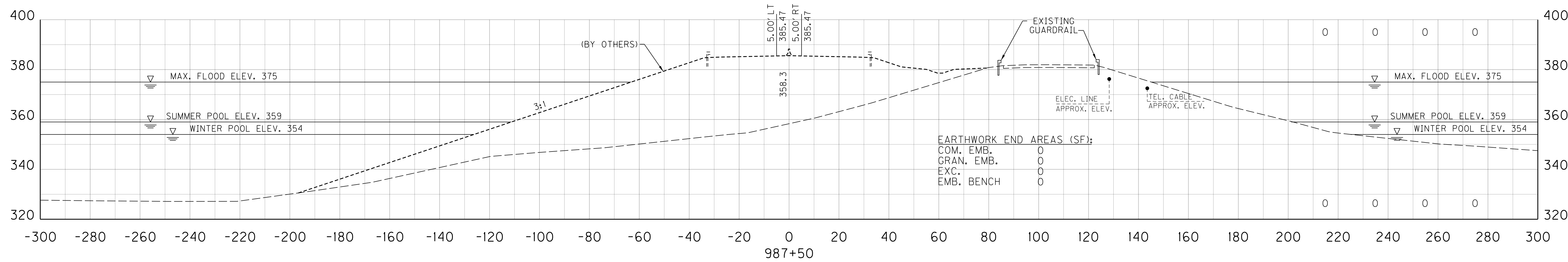
EARTHWORK END AREAS (SF):

COM. EMB.	0
GRAN. EMB.	0
EXC.	0
EMB. BENCH	0



EARTHWORK END AREAS (SF):

COM. EMB.	0
GRAN. EMB.	0
EXC.	0
EMB. BENCH	0



EARTHWORK END AREAS (SF):

COM. EMB.	0
GRAN. EMB.	0
EXC.	0
EMB. BENCH	0

SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA.987+50 TO STA.988+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X00100XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01500XS  
 MicroStation v8.11.9.292



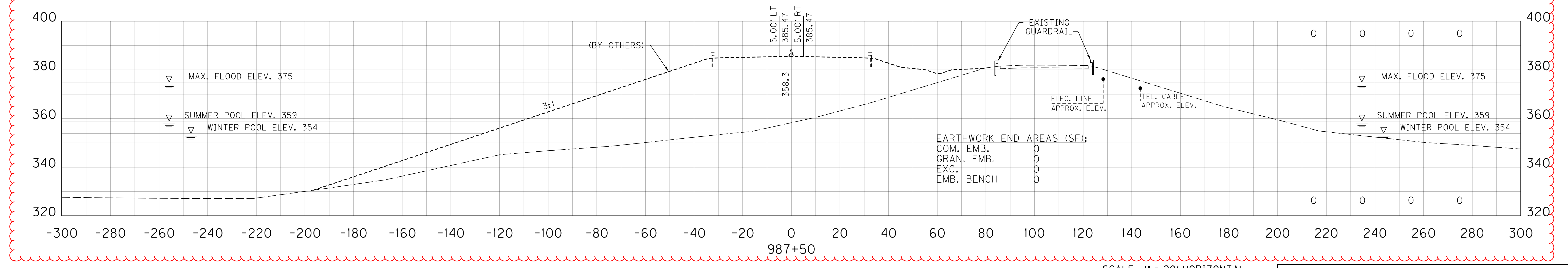
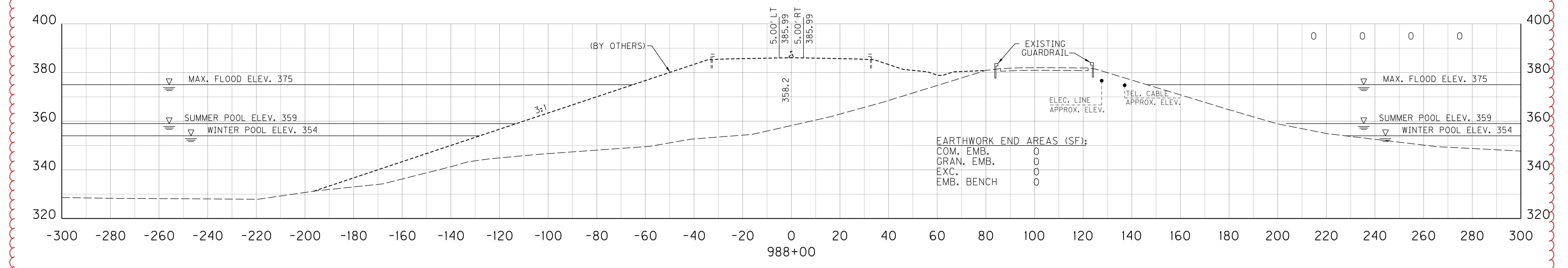
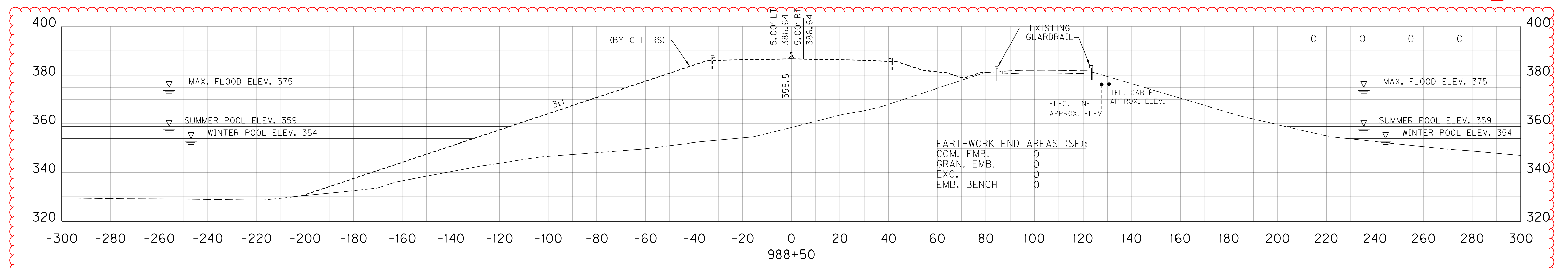
REVISION: REVISED 10-31-12

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X15

STA 988+92 -  
BEGIN KENTUCKY LAKE BRIDGE  
(BY OTHERS)

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA.987+50 TO STA.988+50

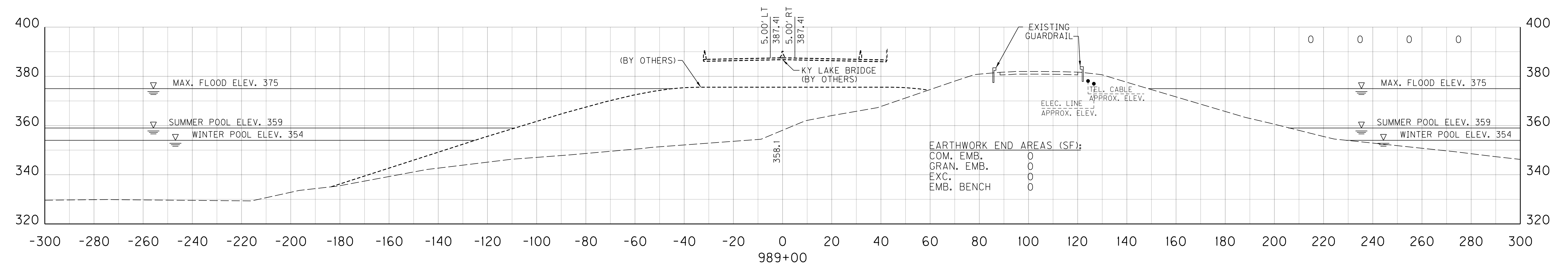
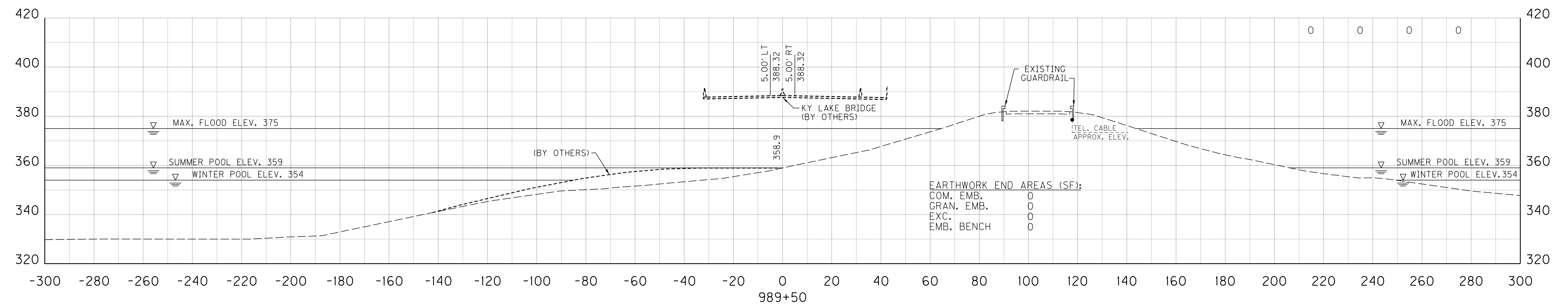
FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X00100XS.DGN  
USER: ddy/dh  
DATE PLOTTED: October 29, 2012  
E-SHEET NAME: X01500XS  
MicroStation v8.11.9.292

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X16

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01000XS  
 MicroStation v8.11.9.292



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA. 989+00 TO STA. 989+50



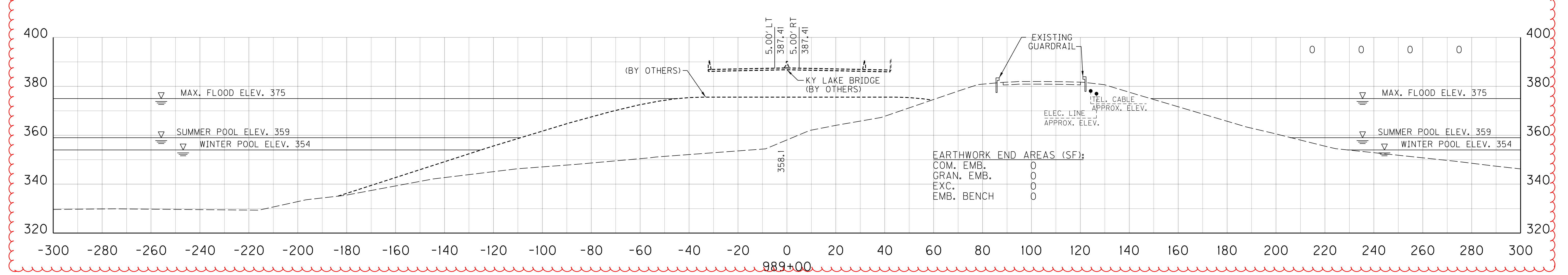
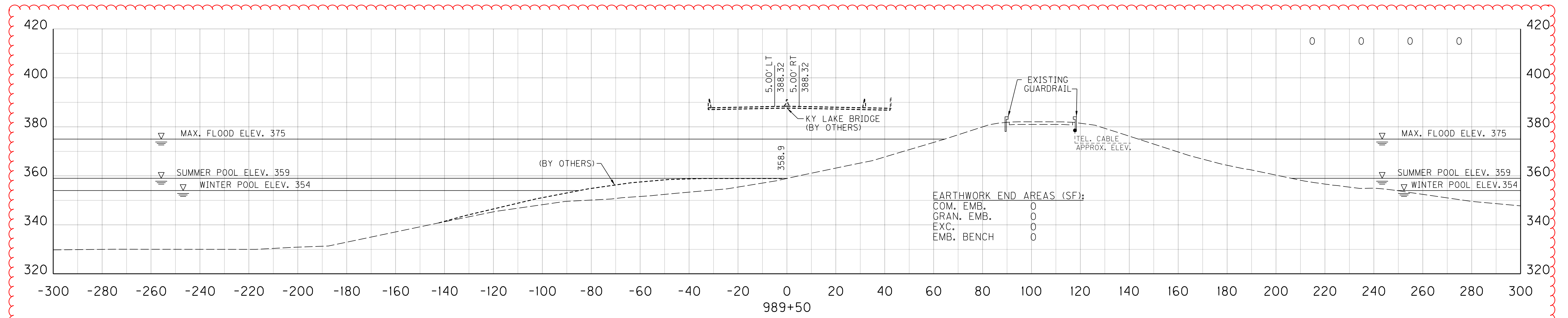
△ REVISED 10-31-12

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X16

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01000XS  
 MicroStation v8.11.9.292



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

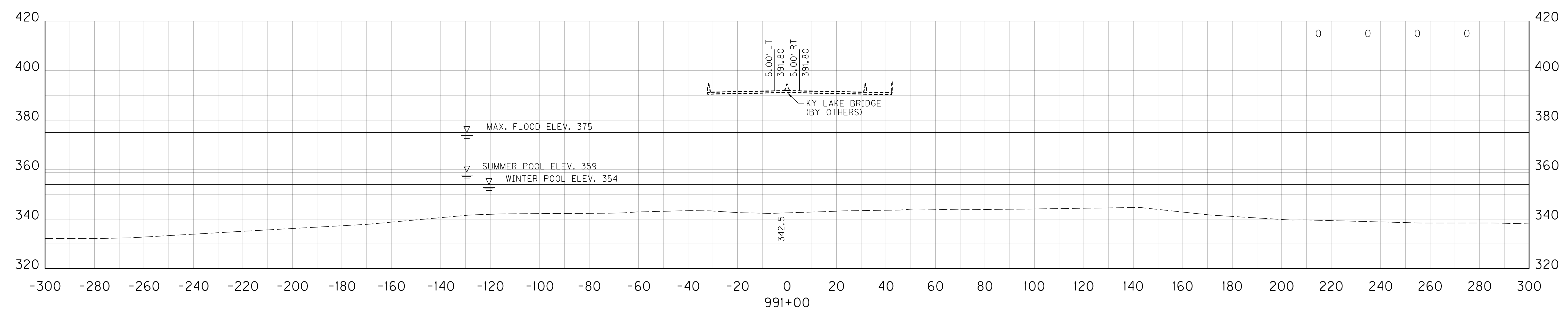
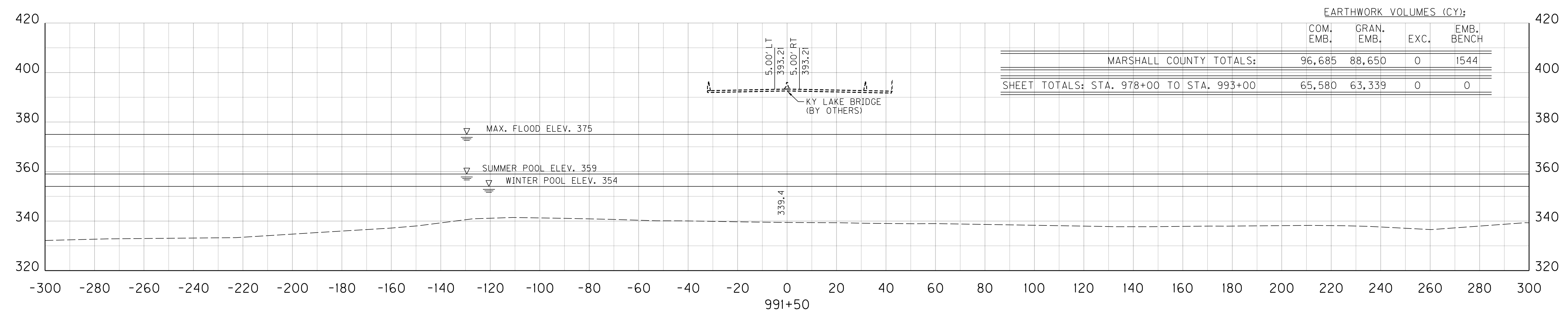
US 68/KY 80  
STA. 989+00 TO STA. 989+50

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X18

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
-----------	------------	------	------------

CROSS SECTIONS FOR  
 STA. 992+00 TO STA. 1022+50 NOT SHOWN  
 (KY LAKE BRIDGE BY OTHERS)



SCALE: 1" = 20' HORIZONTAL  
 1" = 20' VERTICAL

US 68/KY 80  
 STA. 991+00 TO STA. 991+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X01000XS  
 MicroStation v8.11.9.292



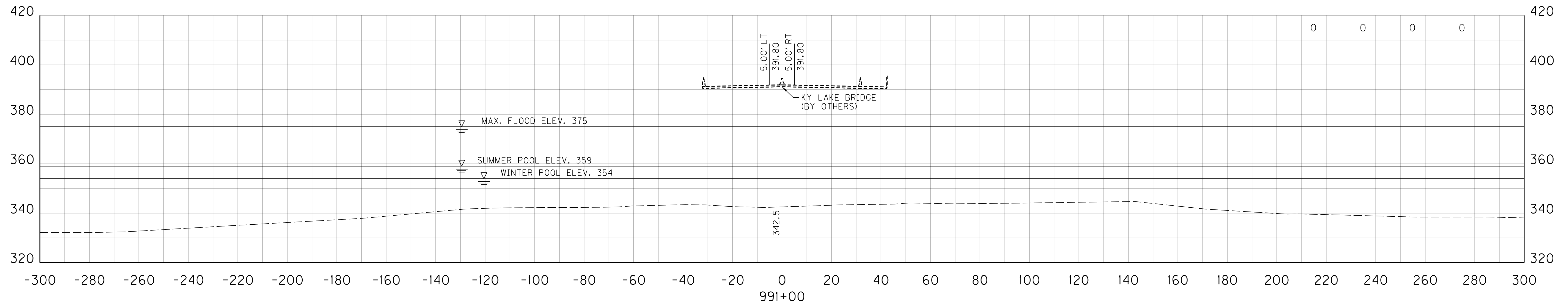
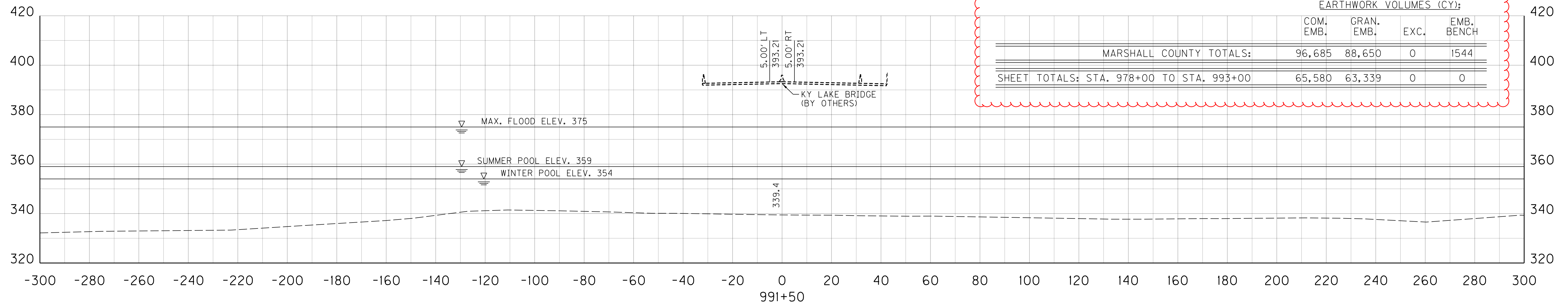
△ REVISED 10-31-12

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X18

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
-----------	------------	------	------------

CROSS SECTIONS FOR  
STA. 992+00 TO STA. 1022+50 NOT SHOWN  
(KY LAKE BRIDGE BY OTHERS)



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA. 991+00 TO STA. 991+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01000XS.DGN

USER: ddy/dh  
DATE PLOTTED: October 29, 2012

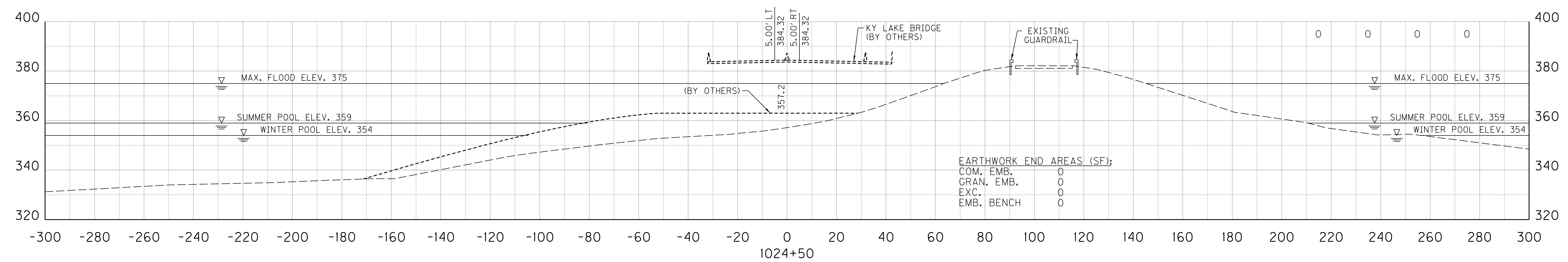
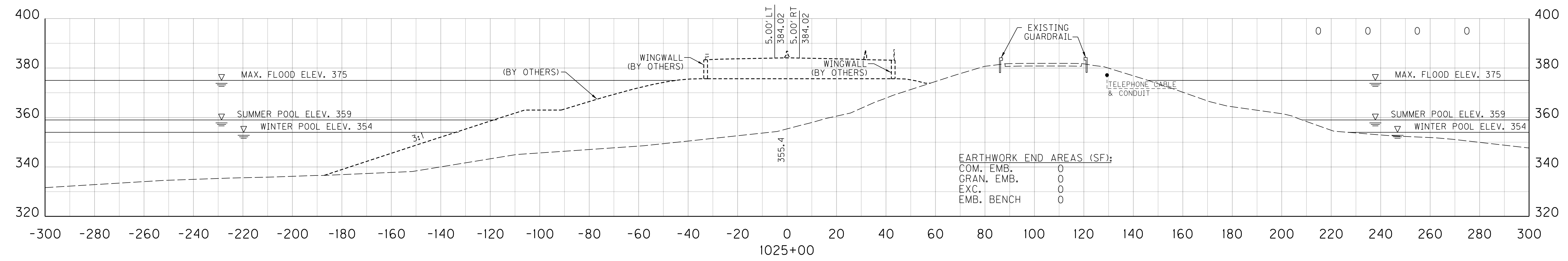
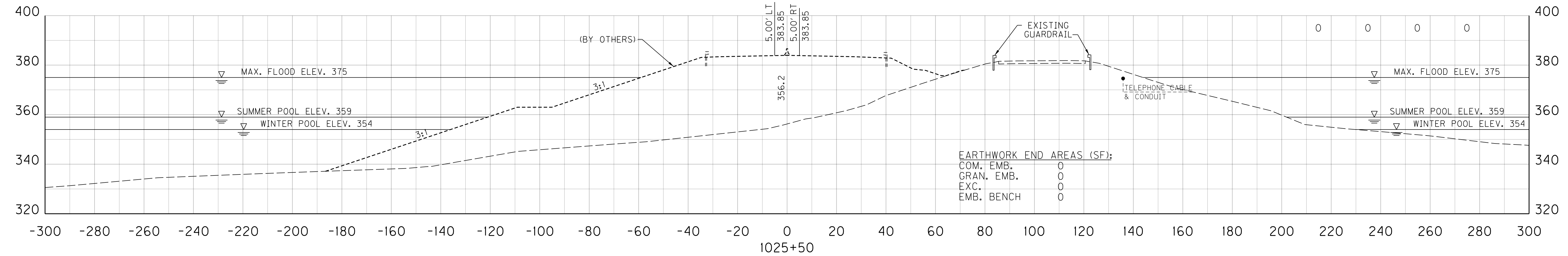
E-SHEET NAME: X01000XS

MicroStation v8.11.9.292

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X20

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA.1024+50 TO STA.1025+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X02000XS  
 MicroStation v8.11.9.292

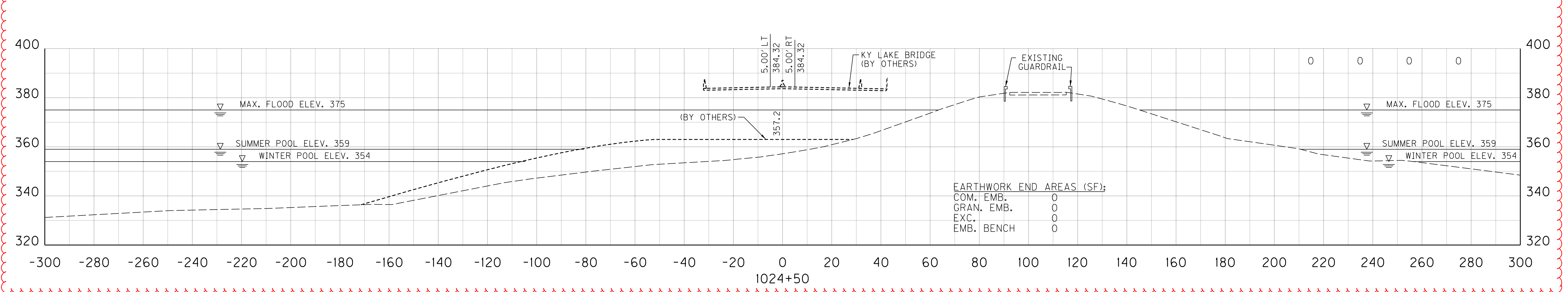
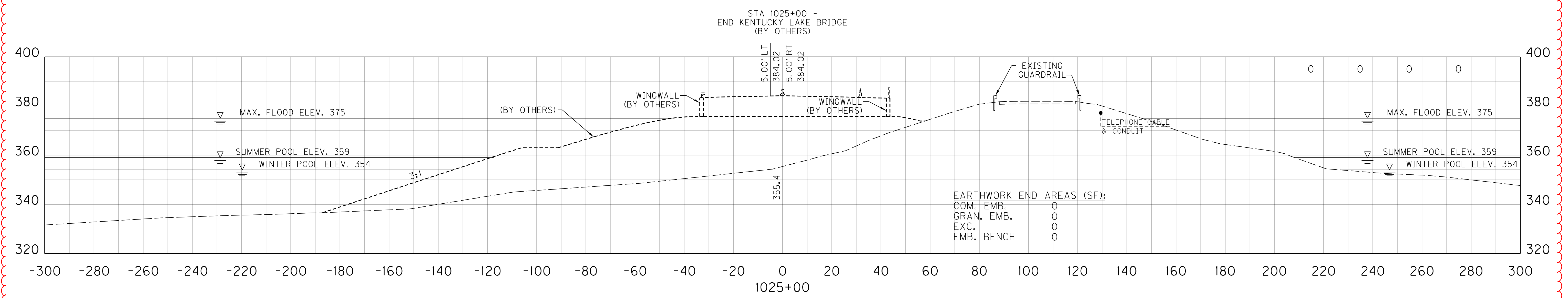
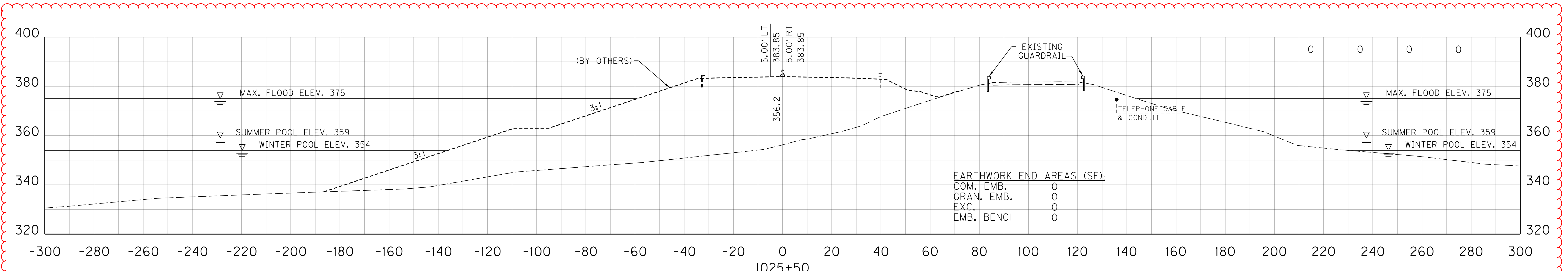


REVISD 10-31-12

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X20

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
0	0	0	0



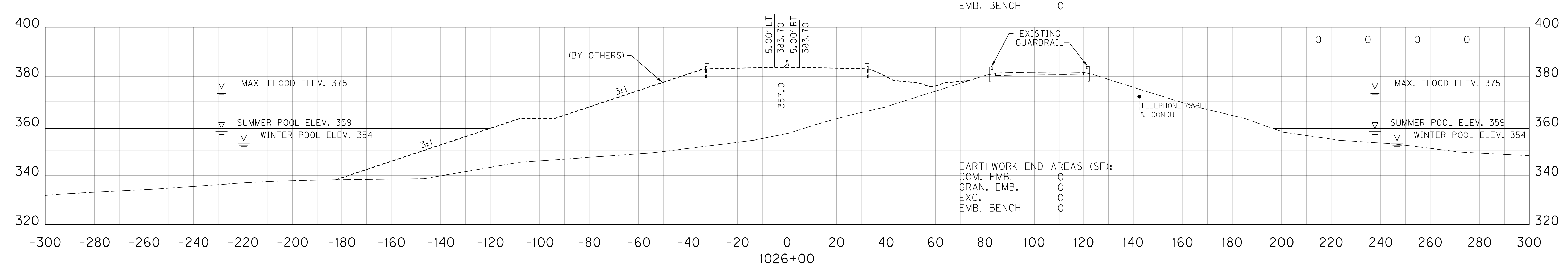
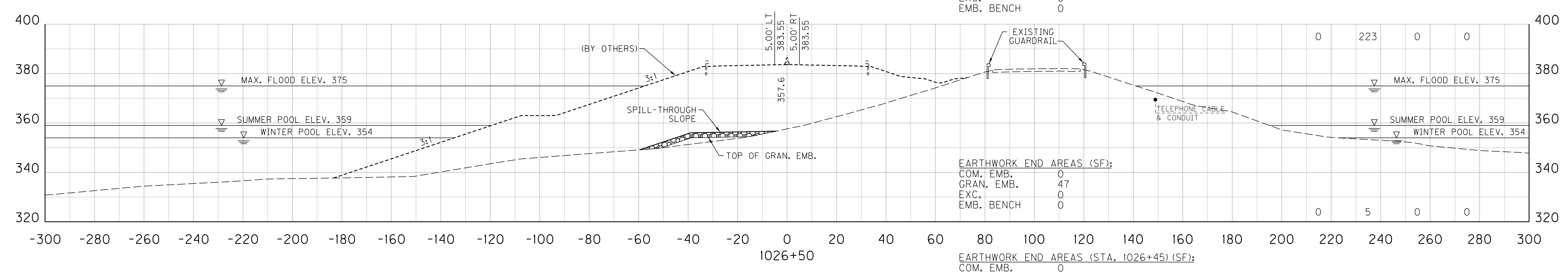
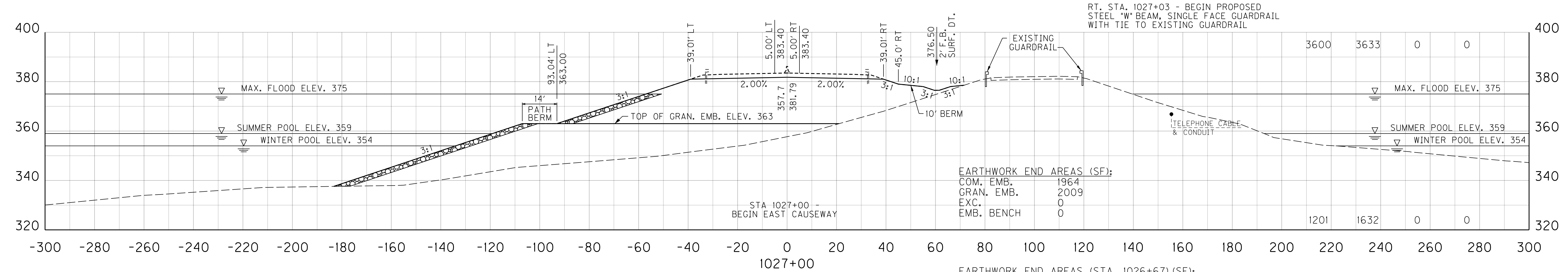
SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA.1024+50 TO STA.1025+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
USER: ddy/dh  
DATE PLOTTED: October 29, 2012  
E-SHEET NAME: X02000XS  
MicroStation v8.11.9.292

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
-----------	------------	------	------------



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA. 1026+00 TO STA. 1027+00

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
 USER: ddy/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X02100XS  
 MicroStation v8.11.9.292

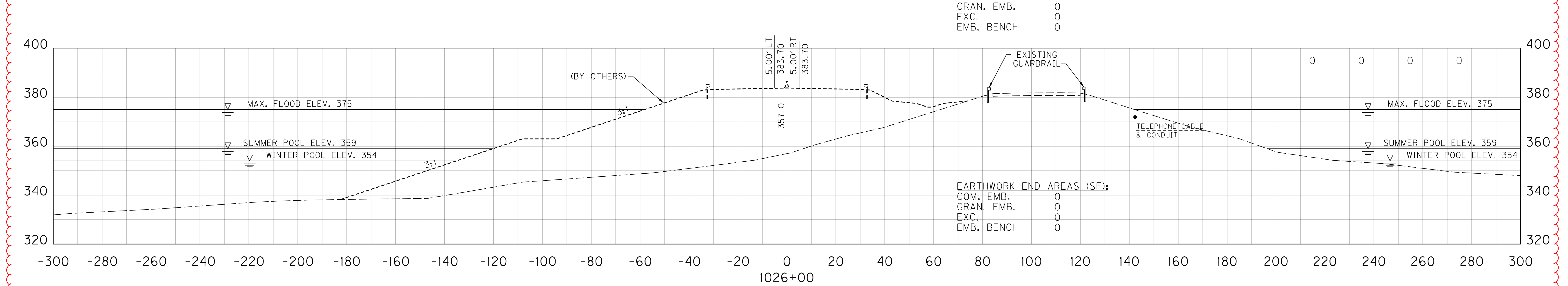
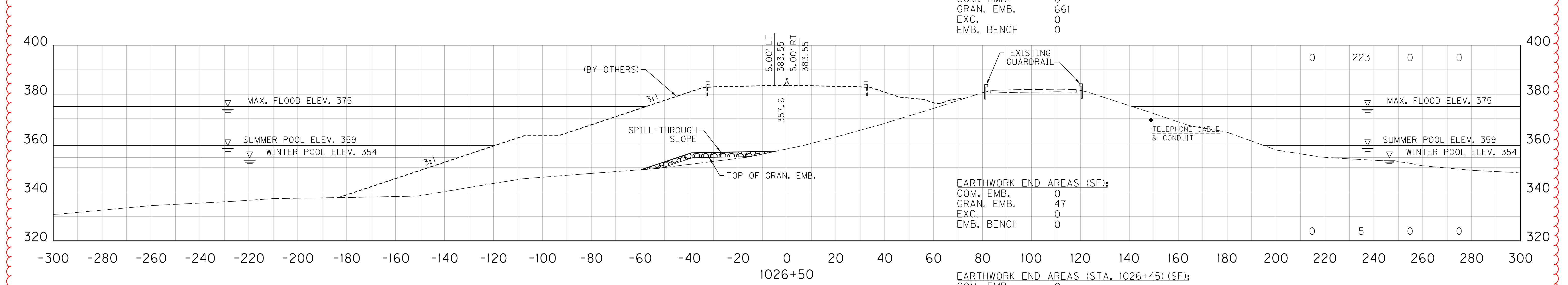
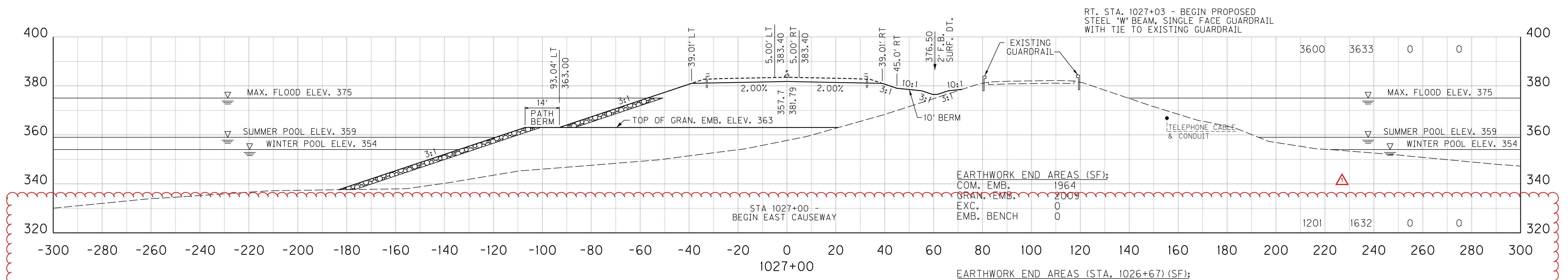


REVISD 10-31-12

COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL/TRIGG	1-180.75	X21

EARTHWORK VOLUMES (CY):

COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
-----------	------------	------	------------



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

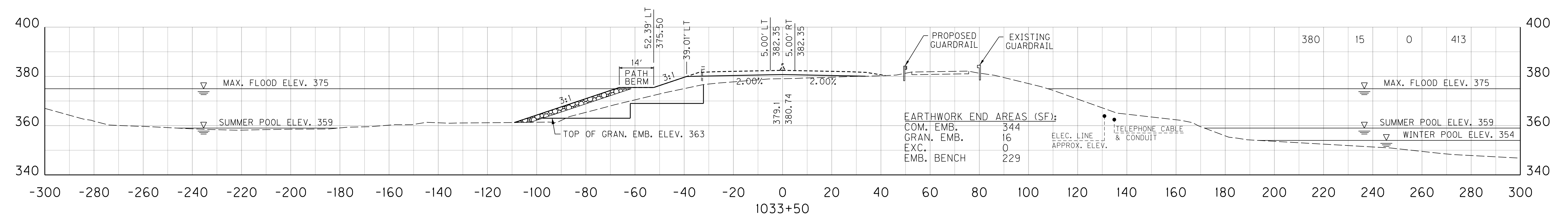
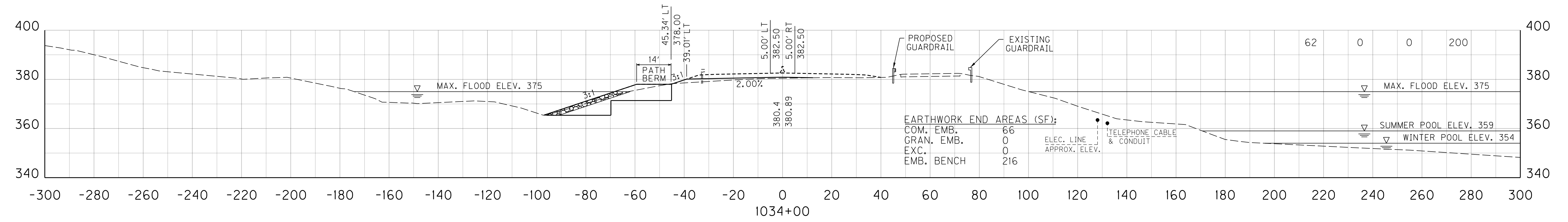
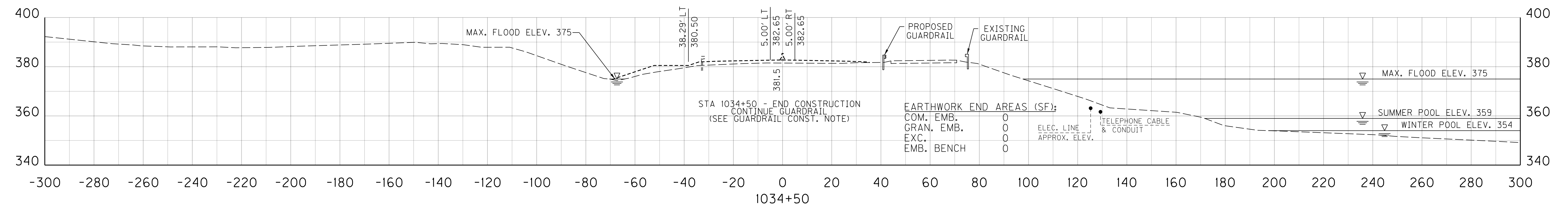
US 68/KY 80  
STA. 1026+00 TO STA. 1027+00

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-080.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
 USER: dcv/dh  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X02100XS  
 MicroStation v8.11.9.292

EARTHWORK VOLUMES (CY):

	COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
PROJECT TOTALS:	136,060	121,891	0	2,370
SHEET TOTALS (TRIGG CO. TOTALS): STA. 1023+00 TO END	39,375	33,241	0	826

CONTINUE PROPOSED GUARDRAIL:  
 RT. STA. 1042+00 - END PROPOSED  
 STEEL "W" BEAM, SINGLE FACE  
 GUARDRAIL WITH END TREATMENT TY 4A



SCALE: 1" = 20' HORIZONTAL  
 1" = 20' VERTICAL

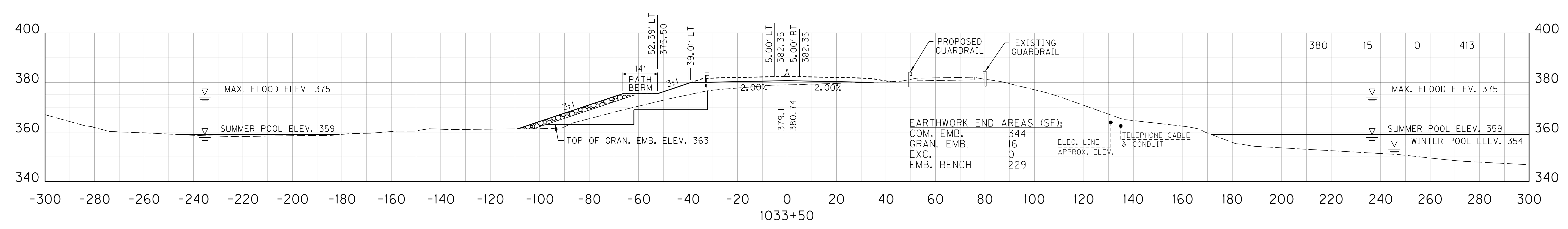
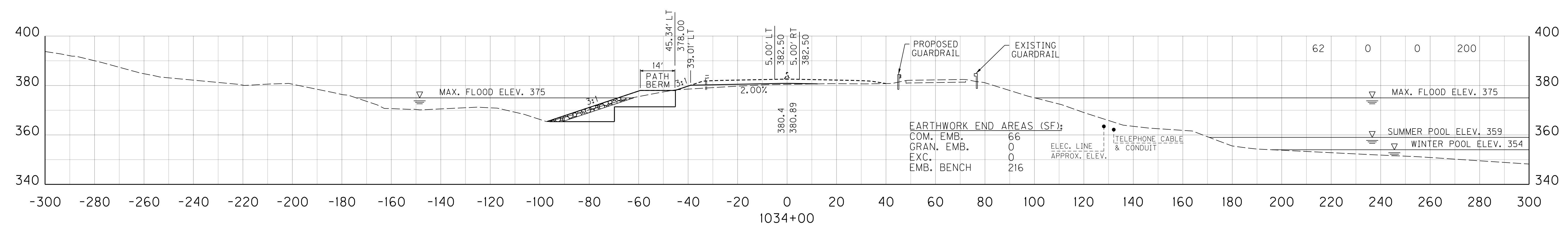
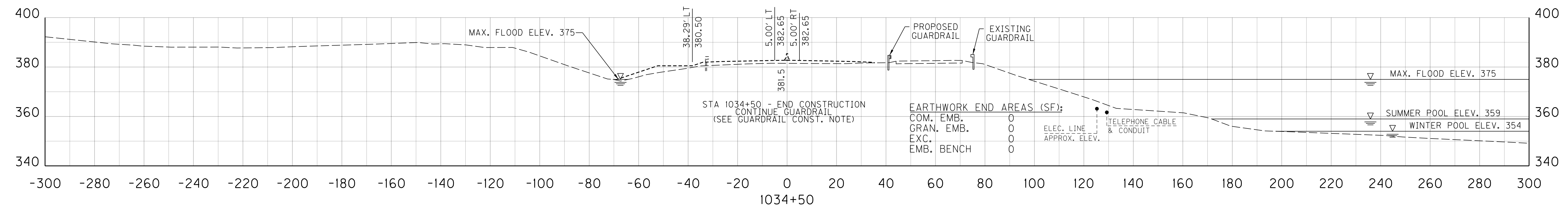
US 68/KY 80  
 STA. 1033+50 TO STA. 1034+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
 USER: ddy/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X02600XS  
 MicroStation v8.11.9.292



EARTHWORK VOLUMES (CY):				
	COM. EMB.	GRAN. EMB.	EXC.	EMB. BENCH
PROJECT TOTALS:	136,060	121,891	0	2,370
SHEET TOTALS (TRIGG CO. TOTALS): STA. 1023+00 TO END	39,375	33,241	0	826

CONTINUE PROPOSED GUARDRAIL:  
RT. STA. 1042+00 - END PROPOSED  
STEEL "W" BEAM, SINGLE FACE  
GUARDRAIL WITH END TREATMENT TY 4A



SCALE: 1" = 20' HORIZONTAL  
1" = 20' VERTICAL

US 68/KY 80  
STA. 1033+50 TO STA. 1034+50

FILE NAME: J:\JOBS\KTC\LAKE BRIDGES\FINAL SUBMITTAL\01-0180.75-REV-2\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\ROADWAY\X01900XS.DGN  
 USER: ddy/dh-1  
 DATE PLOTTED: October 29, 2012  
 E-SHEET NAME: X02600XS  
 MicroStation v8.11.9.292



**CALL NO. 206**

**CONTRACT ID. 121354**

**TRIGG - MARSHALL COUNTIES**

**FED/STATE PROJECT NUMBER 121GR12D054-BRO**

**DESCRIPTION CADIZ-AURORA ROAD (US 68-KY 80)**

**WORK TYPE GRADE & DRAIN WITH BRIDGE**

**PRIMARY COMPLETION DATE 455 CALENDAR DAYS**

**LETTING DATE: November 16,2012**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME November 16,2012. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

**PLANS AVAILABLE FOR THIS PROJECT.**

**DBE CERTIFICATION REQUIRED - 2%**

**REQUIRED BID PROPOSAL GUARANTY:** Not less than 5% of the total bid.

## ADMINISTRATIVE DISTRICT - 01

**CONTRACT ID - 121354**

**121GR12D054-BRO**

**COUNTY - MARSHALL, TRIGG**

**PCN - DE07900681254**

**BRO 0801 (093)**

CADIZ-AURORA ROAD (US 68-KY 80) BRIDGE OVER LAGOON WEST OF KY LAKE AND KY LAKE CAUSEWAY  
RECONSTRUCT, WIDENING AND IMPROVEMENTS, A DISTANCE OF 0.48 MILES.GRADE & DRAIN WITH BRIDGE  
SYP NO. 01-00180.75.

GEOGRAPHIC COORDINATES LATITUDE 36:46:21.00 LONGITUDE 88:07:18.00

**PCN - DE11100681254**

**BRO 0801 (093)**

CADIZ-AURORA ROAD (US 68-KY 80) BRIDGE OVER LAGOON WEST OF KY LAKE AND KY LAKE CAUSEWAY  
RECONSTRUCT, WIDENING AND IMPROVEMENTS, A DISTANCE OF 0.48 MILES.GRADE & DRAIN WITH BRIDGE  
SYP NO. 01-00180.75.

GEOGRAPHIC COORDINATES LATITUDE 36:46:21.00 LONGITUDE 88:07:18.00

COMPLETION DATE(S):

455 CALENDAR DAYS

APPLIES TO ENTIRE  
CONTRACT

---



## ADDENDUM NO. 1 TO SPECIAL NOTE FOR DYNAMIC PILE TESTING

Marshall/Trigg Counties Item No. 1-180.75  
Lagoon and Kentucky Lake Bridge

### **DYNAMIC PILE LOAD TESTING – SUBMITTALS**

Contrary to Section 1.5 of this Special Note, the Department will respond to the Contractor regarding acceptability of “Submittal No. 1” in Table 1 of Section 1.5 within 10 business days rather than 5 business days.

### **SECTION 2.1 IS REVISED TO READ AS FOLLOWS - *CHANGES HAVE BEEN ITALICIZED.***

#### Section 2.1 Preconstruction Wave Equation Analyses

At least 30 calendar days before beginning pile driving submit to the Department the completed Pile and Driving Equipment Data Form (Figure 1 of this Special Note) and preconstruction wave equation analyses performed by the Dynamic Pile Testing Consultant in accordance with Table 2 in this Special Note and a summary report of the results. The required resistance and driving criteria is outlined in section 1.4.1 and 1.4.2 of the Special Note for Pile Load Test Program.

*Prior to bidding, additional wave equation analyses may be performed by the contractor to select the appropriate driving system. Bidders are advised to retain an engineering consultant to perform independent wave equation analyses in order to select hammer(s) that meets the specified requirements for this project. This engineering consultant should meet the criteria for “Wave Equation and Pile Driving Analyses” in Section 1.3.2 of the this Special Note and have extensive experience performing wave equation analyses, dynamic pile testing and signal matching analyses on projects with pile and hammer sizes similar to those to be used on this project.*

The purpose of the wave equation analyses is to assess the ability of all proposed pile driving systems to install piles per the outlined driving criteria. *The pile hammers for the 72-inch and 96-inch diameter piles shall be selected based upon the initial driving criteria described below. The Lagoon Bridge pile hammers shall be selected based upon the initial driving criteria described below. However, the 48-inch diameter test pile hammers shall be selected based upon the extended driving criteria described below.*

Marshall/Trigg Counties Item No. 1-180.75  
Kentucky Lake and Lagoon Bridges

Hammers selected shall have the following characteristics:

- Initial Driving
  - Will be capable of producing 0.5 to 0.1 inches of set (2 to 10 blows per inch) when verifying the target nominal axial resistance at the end of initial drive and after setup, and
  - Produce driving stresses not exceeding 90% of the yield stress of the steel based on wave equation analysis.
- Extended Driving
  - Will be capable of producing 1/16 inch of set (15 blows per inch) when verifying the approximate nominal axial resistance at the end of extended drive, and
  - Produce driving stresses not exceeding 110% of the yield stress of the steel based on wave equation analysis.

*During actual pile driving the “extended drive” criteria given above will apply to the 48-, 72-, and 96-diameter piles.* The extended driving will include driving the piles in a plugged condition and significant additional effort and time will be required. Wave equation analysis will be performed as outlined in the Special Note for Dynamic Testing. **Do not mobilize hammer(s) to site until the wave equation analysis and hammer selection has been reviewed and accepted by the Department.**

In the Wave Equation Summary Report, include:

- drivability graph relating pile resistance (i.e. capacity), blow count and driving stresses to depth;
- bearing graph relating the pile resistance (i.e. capacity) to the pile driving resistance which indicates blow count versus resistance (i.e. capacity) and stroke; and
- constant resistance (i.e. capacity) analysis or inspectors chart to assist the Department in determining the required driving resistance at other field-observed strokes.
- discussion and interpretation of the results.

2.1.1 Approval by the Department of the proposed pile driving system will be based upon the wave equation analyses indicating that the proposed system can meet the driving criteria outlined in Section 1.4.2 of the Special Note for Pile Load Test Program.

Marshall/Trigg Counties Item No. 1-180.75  
Kentucky Lake and Lagoon Bridges

2.1.2 If any changes or modifications are made to the approved pile driving system, additional wave equation analyses in accordance with Section 2.1 of this Special Note will be required.



## **ADDENDUM NO. 1 TO SPECIAL NOTE FOR STATIC AND PSEUDO-STATIC PILE TESTING**

Marshall/Trigg Counties Item No. 1-180.75  
Lagoon and Kentucky Lake Bridge

### **PSEUDO-STATIC LATERAL PILE LOAD TESTING – MAXIMUM TEST LOAD**

The Lateral Pile Load Test for the Kentucky Lake Load Testing Program will be tested to a maximum lateral load of 500 kips. A minimum of four test loads should be applied at incrementally increasing levels up to the maximum lateral test load. The magnitude of the increments will be proposed by the Contractor or the Contractor's testing firm and should be included in Submittal No. 2 as outlined in Section 3.1.5 of the Special Note for Static and Pseudo-Static Pile Testing.

### **STATIC PILE LOAD TESTING – SUBMITTALS**

Contrary to Section 1.1.4 of this Special Note, the Department will respond to the Contractor regarding acceptability of "Submittal Nos. 1 and 2" in Table 1 of Section 1.1.4 within 10 business days rather than 5 business days.

### **PSEUDO-STATIC PILE LOAD TESTING – SUBMITTALS**

Contrary to Section 2.1.5 of this Special Note, the Department will respond to the Contractor regarding acceptability of "Submittal Nos. 1 and 2" in Table 1 of Section 2.1.5 within 10 business days rather than 5 business days.

### **PSEUDO-STATIC LATERAL PILE LOAD TESTING – SUBMITTALS**

Contrary to Section 3.1.5 of this Special Note, the Department will respond to the Contractor regarding acceptability of "Submittal Nos. 1 and 2" in Table 1 of Section 3.1.5 within 10 business days rather than 5 business days.

# MATERIAL SUMMARY

**CONTRACT ID: 121354**

**121GR12D054-BRO**

**DE07900681254**

CADIZ-AURORA ROAD (US 68-KY 80) BRIDGE OVER LAGOON WEST OF KY LAKE AND KY LAKE CAUSEWAY RECONSTRUCT, WIDENING AND IMPROVEMENTS GRADE & DRAIN WITH BRIDGE, A DISTANCE OF .48 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0010	00443	ENTRANCE PIPE-24 IN	64.00	LF
0020	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	18.00	EACH
0030	02014	BARRICADE-TYPE III	1.00	EACH
0040	02159	TEMP DITCH - (REVISED: 11-2-12)	1,892.00	LF
0050	02160	CLEAN TEMP DITCH - (REVISED: 11-2-12)	3,784.00	LF
0060	02204	SPECIAL EXCAVATION - (ADDED: 11-2-12)	4,574.00	CUYD
0070	02223	GRANULAR EMBANKMENT - (REVISED: 11-2-12)	88,650.00	CUYD
0080	02230	EMBANKMENT IN PLACE - (REVISED: 11-2-12)	98,229.00	CUYD
0090	02351	GUARDRAIL-STEEL W BEAM-S FACE	1,687.50	LF
0100	02367	GUARDRAIL END TREATMENT TYPE 1	2.00	EACH
0110	02369	GUARDRAIL END TREATMENT TYPE 2A	1.00	EACH
0120	02545	CLEARING AND GRUBBING - (5.93 ACRES IN MARSHALL COUNTY)	1.00	LS
0130	02562	SIGNS	99.50	SQFT
0140	02596	FABRIC-GEOTEXTILE TYPE I - (REVISED: 11-2-12)	8,069.00	SQYD
0150	02598	FABRIC-GEOTEXTILE TYPE III - (REVISED: 11-2-12)	30,673.00	SQYD
0160	02599	FABRIC-GEOTEXTILE TYPE IV - (REVISED: 11-2-12)	16,633.00	SQYD
0170	02650	MAINTAIN & CONTROL TRAFFIC - (MARSHALL COUNTY)	1.00	LS
0180	02653	LANE CLOSURE	1.00	EACH
0190	02701	TEMP SILT FENCE - (REVISED: 11-2-12)	3,784.00	LF
0200	02703	SILT TRAP TYPE A - (REVISED: 11-2-12)	9.00	EACH
0210	02704	SILT TRAP TYPE B - (REVISED: 11-2-12)	9.00	EACH
0220	02706	CLEAN SILT TRAP TYPE A - (REVISED: 11-2-12)	27.00	EACH
0230	02707	CLEAN SILT TRAP TYPE B - (REVISED: 11-2-12)	27.00	EACH
0240	02709	CLEAN TEMP SILT FENCE - (REVISED: 11-2-12)	7,568.00	LF
0250	02726	STAKING - (MARSHALL COUNTY)	1.00	LS
0260	05950	EROSION CONTROL BLANKET - (REVISED: 11-2-12)	3,534.00	SQYD
0270	05952	TEMP MULCH - (REVISED: 11-2-12)	39,138.00	SQYD
0280	05953	TEMP SEEDING AND PROTECTION - (REVISED: 11-2-12)	39,138.00	SQYD
0290	05966	TOPDRESSING FERTILIZER - (REVISED: 11-2-12)	1.50	TON
0300	05985	SEEDING AND PROTECTION - (REVISED: 11-2-12)	28,644.00	SQYD
0310	08019	CYCLOPEAN STONE RIP RAP - (REVISED: 11-2-12)	21,431.00	TON
0320	08020	CRUSHED AGGREGATE SLOPE PROT	130.00	TON
0330	20209EP69	GRANULAR PILE CORE - (REVISED: 11-2-12)	973.00	CUYD
0340	24554ED	WET SOIL MIXING - (REVISED: 11-2-12)	12,500.00	CUYD
0350	02231	STRUCTURE GRANULAR BACKFILL	640.00	CUYD
0360	02998	MASONRY COATING	2,472.00	SQYD
0370	03299	ARMORED EDGE FOR CONCRETE	129.00	LF
0380	08001	STRUCTURE EXCAVATION-COMMON	851.00	CUYD
0390	08033	TEST PILES - (HP 18 X 157)	485.00	LF
0400	08033	TEST PILES - (30 IN PILE)	475.00	LF

## MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0410	08039	PRE-DRILLING FOR PILES - (HB 18 X 157)	1,043.00	LF
0420	08039	PRE-DRILLING FOR PILES - (30 IN PIPE PILE)	1,002.00	LF
0430	08040	LOADING TESTS - (STATIC HP 18 X 157)	1.00	EACH
0440	08040	LOADING TESTS - (STATIC 30 IN PIPE PILE)	1.00	EACH
0450	08100	CONCRETE-CLASS A	724.00	CUYD
0460	08104	CONCRETE-CLASS AA	1,400.00	CUYD
0470	08150	STEEL REINFORCEMENT	127,819.00	LB
0480	08151	STEEL REINFORCEMENT-EPOXY COATED	428,248.00	LB
0490	08160	STRUCTURAL STEEL - (1,565,339 LBS)	1.00	LS
0500	08170	SHEAR CONNECTORS - (10,332 LBS)	1.00	LS
0510	08500	APPROACH SLAB	358.00	SQYD
0520	23233EC	DYNAMIC PILE TESTING - (ON LAND INITIAL)	10.00	EACH
0530	23233EC	DYNAMIC PILE TESTING - (ON LAND RESTRIKE)	14.00	EACH
0540	23699EC	STEEL ENCASMENT PIPE-30 IN	100.00	LF
0550	24532ED	EXPANSION DAM-3 1/2 IN NEOPRENE	129.00	LF
0560	24533ED	PILES-STEEL HP18X157	1,155.00	LF
0570	24534ED	PIPE PILE-30"	1,510.00	LF
0580	24535ED	PILE PREPROBING - (HP 18 X 157)	794.00	LF
0590	24535ED	PILE PREPROBING - (30 IN PIPE PILE)	765.00	LF
0600	24536ED	PILE POINTS-18"	19.00	EACH
0610	24537ED	OPEN END INSIDE FIT CUTTING SHOE-30"	25.00	EACH
0620	24538ED	RAIL SYSTEM TYPE 11	1,268.00	LF
0630	24544EC	REMOVE - (SOIL PLUG 30 IN PIPE PILES)	500.00	LF
0640	24545EC	BACKFILL - (PIPE PILE)	141.00	TON
0650	08033	TEST PILES - (FURNISH-48 IN PIPE-1 IN)	185.00	LF
0660	08033	TEST PILES - (FURNISH-48 IN PIPE-1.5 IN)	370.00	LF
0670	08033	TEST PILES - (FURNISH-72 IN PIPE-1.5 IN)	185.00	LF
0680	08033	TEST PILES - (FURNISH-72 IN PIPE-2 IN)	185.00	LF
0690	08033	TEST PILES - (INSTALL-48 IN PIPE-1 IN)	150.00	LF
0700	08033	TEST PILES - (INSTALL-48 IN PIPE-1.5 IN)	300.00	LF
0710	08033	TEST PILES - (INSTALL-72 IN PIPE-1.5 IN)	150.00	LF
0720	08033	TEST PILES - (INSTALL-72 IN PIPE-2 IN)	150.00	LF
0730	08040	LOADING TESTS - (STATIC-48 IN PIPE)	1.00	EACH
0740	23233EC	DYNAMIC PILE TESTING - (ON WATER-INITIAL)	15.00	EACH
0750	23233EC	DYNAMIC PILE TESTING - (ON WATER-RESTRIKE)	20.00	EACH
0760	24548EC	FURNISH EQUIPMENT FOR PILE TEST PROGRAM - (MARSHALL COUNTY)	1.00	LS
0770	24549EC	PSEUDO-STATIC LOAD TEST - (AXIAL-48 IN PIPE)	1.00	EACH
0780	24549EC	PSEUDO-STATIC LOAD TEST - (AXIAL-72 IN PIPE)	1.00	EACH
0790	24549EC	PSEUDO-STATIC LOAD TEST - (LATERAL-72 IN PIPE)	1.00	EACH
0800	24550EC	VIBRATION MONITORING - (MARSHALL COUNTY)	1.00	LS
0810	24552EC	SPLICE TEST PILE - (48 IN PIPE-1 IN)	1.00	EACH
0820	24552EC	SPLICE TEST PILE - (48 IN PIPE-1.5 IN)	4.00	EACH
0830	24552EC	SPLICE TEST PILE - (72 IN PIPE-1.5 IN)	1.00	EACH
0840	24552EC	SPLICE TEST PILE - (72 IN PIPE-2 IN)	3.00	EACH
0850	02568	MOBILIZATION	1.00	LS
0860	02569	DEMOBILIZATION	1.00	LS
0870	02742	TRAINEE PAYMENT REIMBURSEMENT - 1 IRONWORKER	1,400.00	HOUR
0880	02742	TRAINEE PAYMENT REIMBURSEMENT - 1 EQUIPMENT OPERATOR GROUP 1	1,600.00	HOUR



# MATERIAL SUMMARY

**CONTRACT ID: 121354**

**121GR12D054-BRO**

**DE11100681254**

CADIZ-AURORA ROAD (US 68-KY 80) BRIDGE OVER LAGOON WEST OF KY LAKE AND KY LAKE CAUSEWAY RECONSTRUCT, WIDENING AND IMPROVEMENTS GRADE & DRAIN WITH BRIDGE, A DISTANCE OF .48 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0010	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	15.00	EACH
0020	02159	TEMP DITCH - (REVISED: 11-2-12)	748.00	LF
0030	02160	CLEAN TEMP DITCH - (REVISED: 11-2-12)	1,496.00	LF
0040	02204	SPECIAL EXCAVATION - (ADDED: 11-2-12)	2,097.00	CUYD
0050	02223	GRANULAR EMBANKMENT - (REVISED: 11-2-12)	33,241.00	CUYD
0060	02230	EMBANKMENT IN PLACE - (REVISED: 11-2-12)	40,201.00	CUYD
0070	02351	GUARDRAIL-STEEL W BEAM-S FACE	1,462.50	LF
0080	02391	GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH
0090	02545	CLEARING AND GRUBBING - (2.72 ACRES IN TRIGG COUNTY)	1.00	LS
0100	02562	SIGNS	89.50	SQFT
0110	02596	FABRIC-GEOTEXTILE TYPE I - (REVISED: 11-2-12)	3,993.00	SQYD
0120	02598	FABRIC-GEOTEXTILE TYPE III - (REVISED: 11-2-12)	12,723.00	SQYD
0130	02599	FABRIC-GEOTEXTILE TYPE IV - (REVISED: 11-2-12)	7,209.00	SQYD
0140	02650	MAINTAIN & CONTROL TRAFFIC - (TRIGG COUNTY)	1.00	LS
0150	02653	LANE CLOSURE	1.00	EACH
0160	02701	TEMP SILT FENCE - (REVISED: 11-2-12)	1,496.00	LF
0170	02703	SILT TRAP TYPE A - (REVISED: 11-2-12)	3.00	EACH
0180	02704	SILT TRAP TYPE B - (REVISED: 11-2-12)	3.00	EACH
0190	02706	CLEAN SILT TRAP TYPE A - (REVISED: 11-2-12)	9.00	EACH
0200	02707	CLEAN SILT TRAP TYPE B - (REVISED: 11-2-12)	9.00	EACH
0210	02709	CLEAN TEMP SILT FENCE - (REVISED: 11-2-12)	2,992.00	LF
0220	02726	STAKING - (TRIGG COUNTY)	1.00	LS
0230	05950	EROSION CONTROL BLANKET - (REVISED: 11-2-12)	879.00	SQYD
0240	05952	TEMP MULCH - (REVISED: 11-2-12)	14,832.00	SQYD
0250	05953	TEMP SEEDING AND PROTECTION - (REVISED: 11-2-12)	14,832.00	SQYD
0260	05966	TOPDRESSING FERTILIZER - (REVISED: 11-2-12)	.50	TON
0270	05985	SEEDING AND PROTECTION - (REVISED: 11-2-12)	10,386.00	SQYD
0280	08019	CYCLOPEAN STONE RIP RAP - (REVISED: 11-2-12)	8,469.00	TON
0290	08033	TEST PILES - (FURNISH-72 IN PIPE-2 IN)	210.00	LF
0300	08033	TEST PILES - (FURNISH-96 IN PIPE-2 IN)	210.00	LF
0310	08033	TEST PILES - (INSTALL-72 IN PIPE-2 IN)	120.00	LF
0320	08033	TEST PILES - (INSTALL-96 IN PIPE-2 IN)	120.00	LF
0330	23233EC	DYNAMIC PILE TESTING - (ON WATER-INITIAL)	6.00	EACH
0340	23233EC	DYNAMIC PILE TESTING - (ON WATER-RESTRIKE)	8.00	EACH
0350	24548EC	FURNISH EQUIPMENT FOR PILE TEST PROGRAM - (TRIGG COUNTY)	1.00	LS
0360	24550EC	VIBRATION MONITORING - (TRIGG COUNTY)	1.00	LS
0370	24552EC	SPLICE TEST PILE - (72 IN PIPE-2 IN)	1.00	EACH
0380	24552EC	SPLICE TEST PILE - (96 IN PIPE-2 IN)	1.00	EACH
0390	02568	MOBILIZATION	1.00	LS

## MATERIAL SUMMARY

<b>Project Line No</b>	<b>Bid Code</b>	<b>DESCRIPTION</b>	<b>Quantity</b>	<b>Unit</b>
0400	02569	DEMOBILIZATION	1.00	LS

**PROPOSAL BID ITEMS**

121354

Page 1 of 3

Report Date 11/2/12

**Section: 0001 - ROADWAY**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00443		ENTRANCE PIPE-24 IN	64.00	LF		\$	
0020	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	33.00	EACH		\$	
0030	02014		BARRICADE-TYPE III	1.00	EACH		\$	
0040	02159		TEMP DITCH(REVISED: 11-2-12)	2,640.00	LF		\$	
0050	02160		CLEAN TEMP DITCH(REVISED: 11-2-12)	5,280.00	LF		\$	
0060	02204		SPECIAL EXCAVATION(ADDED: 11-2-12)	6,671.00	CUYD		\$	
0070	02223		GRANULAR EMBANKMENT(REVISED: 11-2-12)	121,891.00	CUYD		\$	
0080	02230		EMBANKMENT IN PLACE(REVISED: 11-2-12)	138,430.00	CUYD		\$	
0090	02351		GUARDRAIL-STEEL W BEAM-S FACE	3,150.00	LF		\$	
0100	02367		GUARDRAIL END TREATMENT TYPE 1	2.00	EACH		\$	
0110	02369		GUARDRAIL END TREATMENT TYPE 2A	1.00	EACH		\$	
0120	02391		GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH		\$	
0130	02545		CLEARING AND GRUBBING(2.72 ACRES IN TRIGG COUNTY)	1.00	LS		\$	
0140	02545		CLEARING AND GRUBBING(5.93 ACRES IN MARSHALL COUNTY)	1.00	LS		\$	
0150	02562		SIGNS	189.00	SQFT		\$	
0160	02596		FABRIC-GEOTEXTILE TYPE I(REVISED: 11-2-12)	12,062.00	SQYD		\$	
0170	02598		FABRIC-GEOTEXTILE TYPE III(REVISED: 11-2-12)	43,396.00	SQYD		\$	
0180	02599		FABRIC-GEOTEXTILE TYPE IV(REVISED: 11-2-12)	23,842.00	SQYD		\$	
0190	02650		MAINTAIN & CONTROL TRAFFIC(TRIGG COUNTY)	1.00	LS		\$	
0200	02650		MAINTAIN & CONTROL TRAFFIC(MARSHALL COUNTY)	1.00	LS		\$	
0210	02653		LANE CLOSURE	2.00	EACH		\$	
0220	02701		TEMP SILT FENCE(REVISED: 11-2-12)	5,280.00	LF		\$	
0230	02703		SILT TRAP TYPE A(REVISED: 11-2-12)	12.00	EACH		\$	
0240	02704		SILT TRAP TYPE B(REVISED: 11-2-12)	12.00	EACH		\$	
0250	02706		CLEAN SILT TRAP TYPE A(REVISED: 11-2-12)	36.00	EACH		\$	
0260	02707		CLEAN SILT TRAP TYPE B(REVISED: 11-2-12)	36.00	EACH		\$	
0270	02709		CLEAN TEMP SILT FENCE(REVISED: 11-2-12)	10,560.00	LF		\$	
0280	02726		STAKING(TRIGG COUNTY)	1.00	LS		\$	
0290	02726		STAKING(MARSHALL COUNTY)	1.00	LS		\$	
0300	05950		EROSION CONTROL BLANKET(REVISED: 11-2-12)	4,413.00	SQYD		\$	
0310	05952		TEMP MULCH(REVISED: 11-2-12)	53,970.00	SQYD		\$	
0320	05953		TEMP SEEDING AND PROTECTION(REVISED: 11-2-12)	53,970.00	SQYD		\$	
0330	05966		TOPDRESSING FERTILIZER(REVISED: 11-2-12)	2.00	TON		\$	
0340	05985		SEEDING AND PROTECTION(REVISED: 11-2-12)	39,030.00	SQYD		\$	



121354

**PROPOSAL BID ITEMS**

Report Date 11/2/12

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0350	08019		CYCLOPEAN STONE RIP RAP(REVISED: 11-2-12)	29,900.00	TON		\$	
0360	08020		CRUSHED AGGREGATE SLOPE PROT	130.00	TON		\$	
0370	20209EP69		GRANULAR PILE CORE(REVISED: 11-2-12)	973.00	CUYD		\$	
0380	24554ED		WET SOIL MIXING(REVISED: 11-2-12)	12,500.00	CUYD		\$	

**Section: 0002 - BRIDGE**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0390	02231		STRUCTURE GRANULAR BACKFILL	640.00	CUYD		\$	
0400	02998		MASONRY COATING	2,472.00	SQYD		\$	
0410	03299		ARMORED EDGE FOR CONCRETE	129.00	LF		\$	
0420	08001		STRUCTURE EXCAVATION-COMMON	851.00	CUYD		\$	
0430	08033		TEST PILES(HP 18 X 157)	485.00	LF		\$	
0440	08033		TEST PILES(30 IN PILE)	475.00	LF		\$	
0450	08039		PRE-DRILLING FOR PILES(HB 18 X 157)	1,043.00	LF		\$	
0460	08039		PRE-DRILLING FOR PILES(30 IN PIPE PILE)	1,002.00	LF		\$	
0470	08040		LOADING TESTS(STATIC HP 18 X 157)	1.00	EACH		\$	
0480	08040		LOADING TESTS(STATIC 30 IN PIPE PILE)	1.00	EACH		\$	
0490	08100		CONCRETE-CLASS A	724.00	CUYD		\$	
0500	08104		CONCRETE-CLASS AA	1,400.00	CUYD		\$	
0510	08150		STEEL REINFORCEMENT	127,819.00	LB		\$	
0520	08151		STEEL REINFORCEMENT-EPOXY COATED	428,248.00	LB		\$	
0530	08160		STRUCTURAL STEEL(1,565,339 LBS)	1.00	LS		\$	
0540	08170		SHEAR CONNECTORS(10,332 LBS)	1.00	LS		\$	
0550	08500		APPROACH SLAB	358.00	SQYD		\$	
0560	23233EC		DYNAMIC PILE TESTING(ON LAND INITIAL)	10.00	EACH		\$	
0570	23233EC		DYNAMIC PILE TESTING(ON LAND RESTRIKE)	14.00	EACH		\$	
0580	23699EC		STEEL ENCASEMENT PIPE-30 IN	100.00	LF		\$	
0590	24532ED		EXPANSION DAM-3 1/2 IN NEOPRENE	129.00	LF		\$	
0600	24533ED		PILES-STEEL HP18X157	1,155.00	LF		\$	
0610	24534ED		PIPE PILE-30"	1,510.00	LF		\$	
0620	24535ED		PILE PREPROBING(HP 18 X 157)	794.00	LF		\$	
0630	24535ED		PILE PREPROBING(30 IN PIPE PILE)	765.00	LF		\$	
0640	24536ED		PILE POINTS-18"	19.00	EACH		\$	
0650	24537ED		OPEN END INSIDE FIT CUTTING SHOE-30"	25.00	EACH		\$	
0660	24538ED		RAIL SYSTEM TYPE 11	1,268.00	LF		\$	
0670	24544EC		REMOVE(SOIL PLUG 30 IN PIPE PILES)	500.00	LF		\$	
0680	24545EC		BACKFILL(PPIPE PILE)	141.00	TON		\$	

**PROPOSAL BID ITEMS**

Report Date 11/2/12

**Section: 0003 - PILE LOAD TESTING**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0690	08033		TEST PILES(FURNISH-72 IN PIPE-2 IN)	395.00	LF		\$	
0700	08033		TEST PILES(FURNISH-96 IN PIPE-2 IN)	210.00	LF		\$	
0710	08033		TEST PILES(INSTALL-72 IN PIPE-2 IN)	270.00	LF		\$	
0720	08033		TEST PILES(INSTALL-96 IN PIPE-2 IN)	120.00	LF		\$	
0730	08033		TEST PILES(FURNISH-48 IN PIPE-1 IN)	185.00	LF		\$	
0740	08033		TEST PILES(FURNISH-48 IN PIPE-1.5 IN)	370.00	LF		\$	
0750	08033		TEST PILES(FURNISH-72 IN PIPE-1.5 IN)	185.00	LF		\$	
0760	08033		TEST PILES(INSTALL-48 IN PIPE-1 IN)	150.00	LF		\$	
0770	08033		TEST PILES(INSTALL-48 IN PIPE-1.5 IN)	300.00	LF		\$	
0780	08033		TEST PILES(INSTALL-72 IN PIPE-1.5 IN)	150.00	LF		\$	
0790	08040		LOADING TESTS(STATIC-48 IN PIPE)	1.00	EACH		\$	
0800	23233EC		DYNAMIC PILE TESTING(ON WATER-INITIAL)	21.00	EACH		\$	
0810	23233EC		DYNAMIC PILE TESTING(ON WATER-RESTRIKE)	28.00	EACH		\$	
0820	24548EC		FURNISH EQUIPMENT FOR PILE TEST PROGRAM(TRIGG COUNTY)	1.00	LS		\$	
0830	24548EC		FURNISH EQUIPMENT FOR PILE TEST PROGRAM(MARSHALL COUNTY)	1.00	LS		\$	
0840	24549EC		PSEUDO-STATIC LOAD TEST(AXIAL-48 IN PIPE)	1.00	EACH		\$	
0850	24549EC		PSEUDO-STATIC LOAD TEST(AXIAL-72 IN PIPE)	1.00	EACH		\$	
0860	24549EC		PSEUDO-STATIC LOAD TEST(LATERAL-72 IN PIPE)	1.00	EACH		\$	
0870	24550EC		VIBRATION MONITORING(TRIGG COUNTY)	1.00	LS		\$	
0880	24550EC		VIBRATION MONITORING(MARSHALL COUNTY)	1.00	LS		\$	
0890	24552EC		SPLICE TEST PILE(72 IN PIPE-2 IN)	4.00	EACH		\$	
0900	24552EC		SPLICE TEST PILE(96 IN PIPE-2 IN)	1.00	EACH		\$	
0910	24552EC		SPLICE TEST PILE(48 IN PIPE-1 IN)	1.00	EACH		\$	
0920	24552EC		SPLICE TEST PILE(48 IN PIPE-1.5 IN)	4.00	EACH		\$	
0930	24552EC		SPLICE TEST PILE(72 IN PIPE-1.5 IN)	1.00	EACH		\$	

**Section: 0004 - TRAINEES**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0940	02742		TRAINEE PAYMENT REIMBURSEMENT1 IRONWORKER	1,400.00	HOUR		\$	
0950	02742		TRAINEE PAYMENT REIMBURSEMENT1 EQUIPMENT OPERATOR GROUP 1	1,600.00	HOUR		\$	

**Section: 0005 - MOBILIZATION / DEMOBILIZATION**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0960	02568		MOBILIZATION	1.00	LS		\$	
0970	02569		DEMOBILIZATION	1.00	LS		\$	