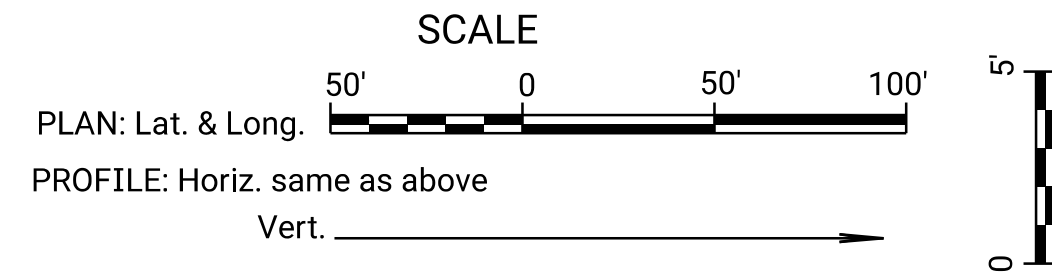


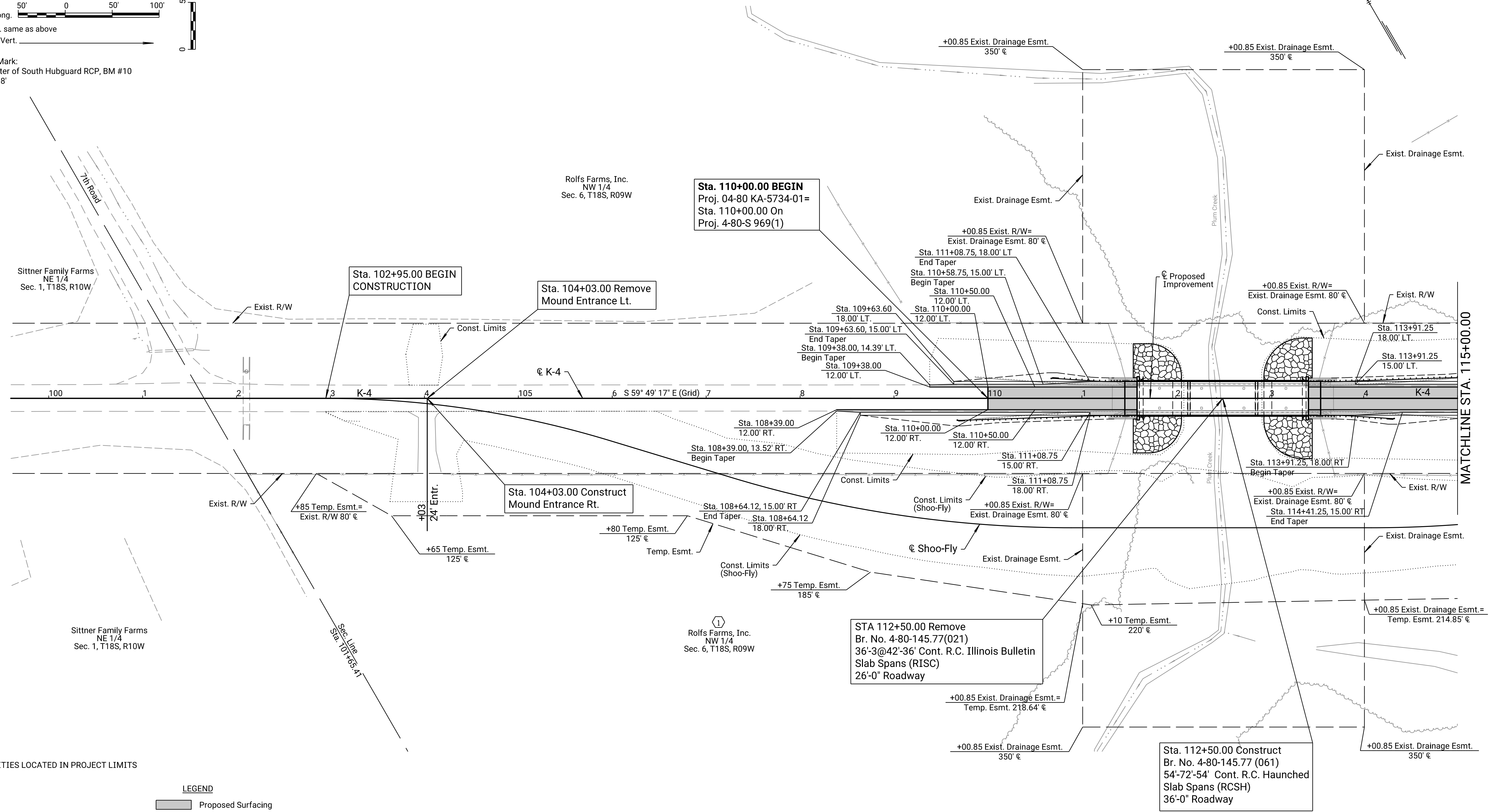
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	04-80 KA-5734-01	2024	7	117

PROJECT SURVEY CONTROL
Horizontal Project Datum
NAD83(2011) KRCS Zone 6 Beloit
Vertical Datum:
North American Vertical Datum = NAVD88 (GEOID 18 B)



Datum Bench Mark:
"□" cut in Center of South Hubguard RCP, BM #10
Elev. = 1751.08'

DATE	BY
12/2021	R. MORTON
2/2024	A. MEYER



NO UTILITIES LOCATED IN PROJECT LIMITS

LEGEND

	Proposed Surfacing
	Slope Protection/Ditch Lining

BM #10 "□" Cut in Center of South Hubguard of RCP 22.84' Rt. @ Sta. 94+92.57 Elev. 1751.08	BM #11 "□" Cut in Center of North Hubguard of RCB 28.56' Lt. @ Sta. 102+10.44 Elev. 1743.79	BM #12 "□" Cut on SW Cor. of Bridge Abutment 18.16' Rt. @ Sta. 111+36.31 Elev. 1744.39	BM #13 "□" Cut on NE Cor. of Bridge Abutment 18.35' Lt. @ Sta. 113+63.78 Elev. 1744.67
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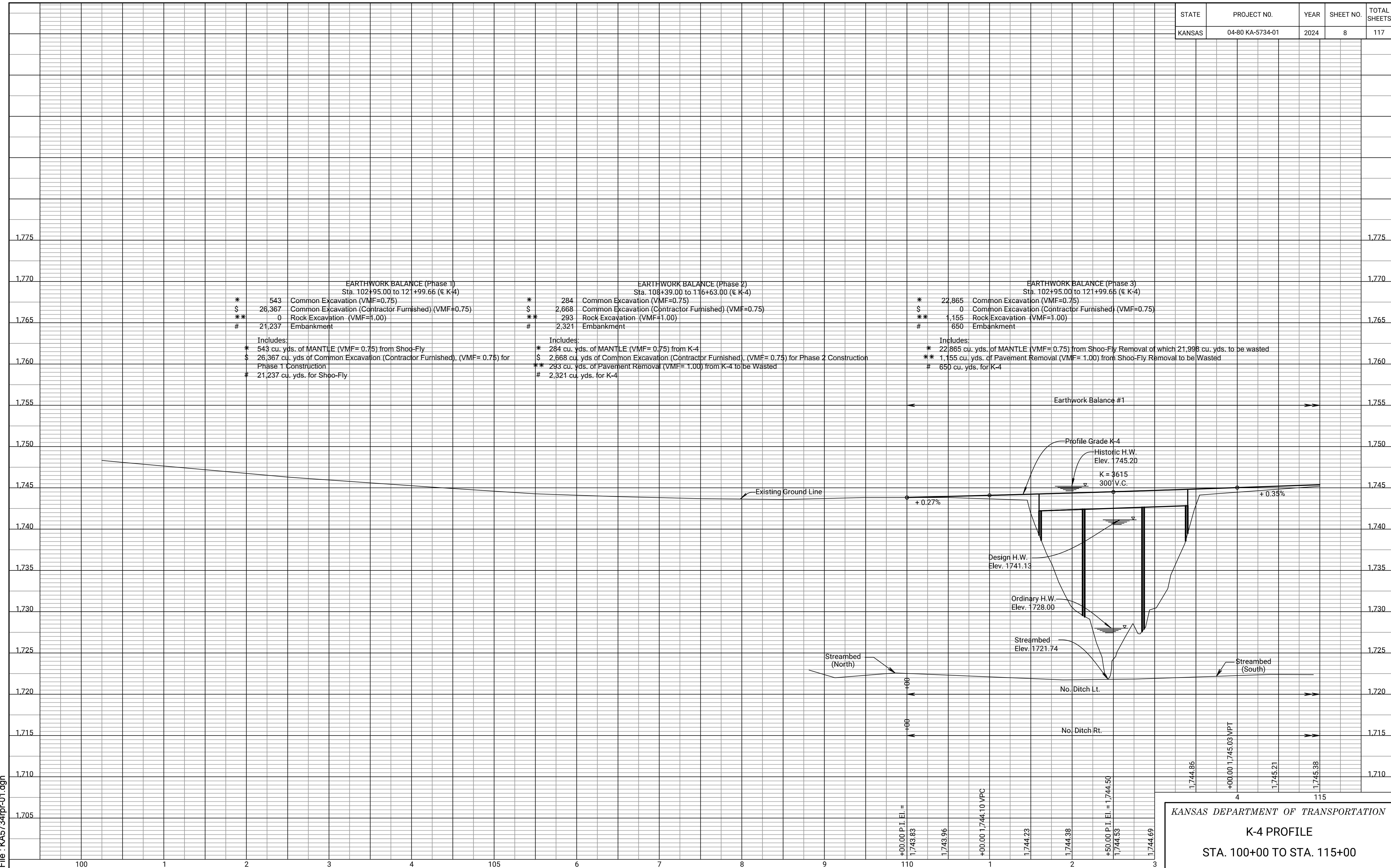
Note: For Alignment and Section Corner References,
See Survey Reference Sheet

KANSAS DEPARTMENT OF TRANSPORTATION

PLAN
STA. 100+00 TO STA. 115+00

Drawn By : AAMEYER
File : KA5734rpl-01.dgn
Plotted : 2/20/2024

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	04-80 KA-5734-01	2024	8	117



EARTHWORK BALANCE (Phase 1)
Sta. 102+95.00 to 121+99.66 (K-4)

* 543	Common Excavation (VMF=0.75)
\$ 26,367	Common Excavation (Contractor Furnished) (VMF=0.75)
** 0	Rock Excavation (VMF=1.00)
# 21,237	Embankment

Includes:
 * 543 cu. yds. of MANTLE (VMF= 0.75) from Shoo-Fly
 \$ 26,367 cu. yds. of Common Excavation (Contractor Furnished), (VMF= 0.75) for Phase 1 Construction
 # 21,237 cu. yds. for Shoo-Fly

EARTHWORK BALANCE (Phase 2)
Sta. 108+39.00 to 116+63.00 (K-4)

* 284	Common Excavation (VMF=0.75)
\$ 2,668	Common Excavation (Contractor Furnished) (VMF=0.75)
** 293	Rock Excavation (VMF=1.00)
# 2,321	Embankment

Includes:
 * 284 cu. yds. of MANTLE (VMF= 0.75) from K-4
 \$ 2,668 cu. yds. of Common Excavation (Contractor Furnished), (VMF= 0.75) for Phase 2 Construction
 ** 293 cu. yds. of Pavement Removal (VMF= 1.00) from K-4 to be Wasted
 # 2,321 cu. yds. for K-4

EARTHWORK BALANCE (Phase 3)
Sta. 102+95.00 to 121+99.66 (K-4)

* 22,865	Common Excavation (VMF=0.75)
\$ 0	Common Excavation (Contractor Furnished) (VMF=0.75)
** 1,155	Rock Excavation (VMF=1.00)
# 650	Embankment

Includes:
 * 22,865 cu. yds. of MANTLE (VMF= 0.75) from Shoo-Fly Removal of which 21,998 cu. yds. to be wasted
 ** 1,155 cu. yds. of Pavement Removal (VMF= 1.00) from Shoo-Fly Removal to be Wasted
 # 650 cu. yds. for K-4

Drawn By : AAMEYER
 File : KA5734rpr-01.dgn
 Plotted : 2/20/2024

KANSAS DEPARTMENT OF TRANSPORTATION

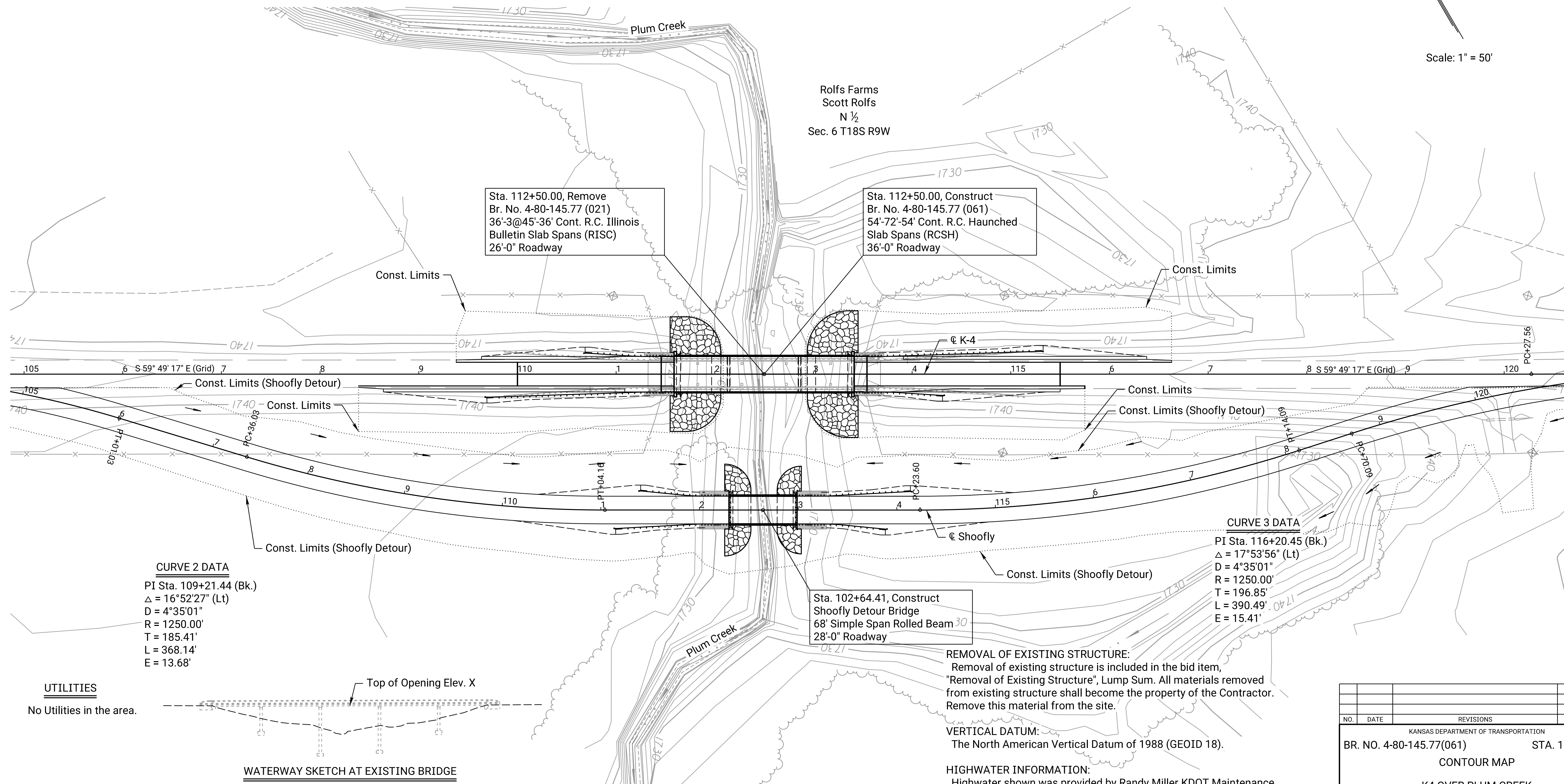
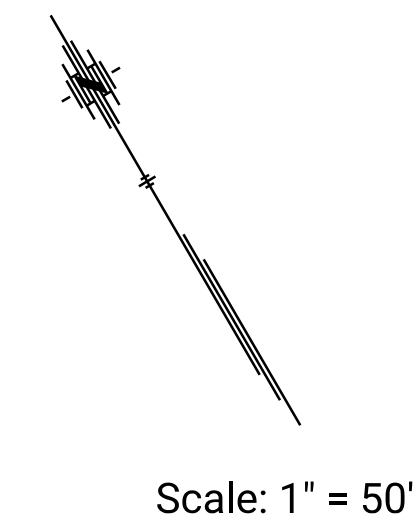
K-4 PROFILE

STA. 100+00 TO STA. 115+00

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	4-80 KA-5734-01	2024	32	117

P.O.T. @ K-4 Sta 105+00.00
 N: 370907.071 E: 6437486.578
 1. Set 1/2" Rebar 2" Below Surface.
 2. Spike & Washer in East Brace Post 108.2' W
 3. Spike & Washer in Top Fence Post 87.7' S
 4. Top Conc. R/W Mon. 144.8' SE
 5. Top Conc. R/W Mon. 140.4' E

P.O.T. @ K-4 Sta 115+00.00
 N: 370404.375 E: 6438351.041
 1. Set 1/2" Rebar 2" Below Surface.
 2. Top Center of End Guardrail Post 26.6' SE
 3. Top Center of End Guardrail Post 26.7' NE
 4. 1/2" Rebar (CP#7) 137.0' W



Sta. 112+50.00, Remove
 Br. No. 4-80-145.77 (021)
 36'-3"@45'-36' Cont. R.C. Illinois
 Bulletin Slab Spans (RISC)
 26'-0" Roadway

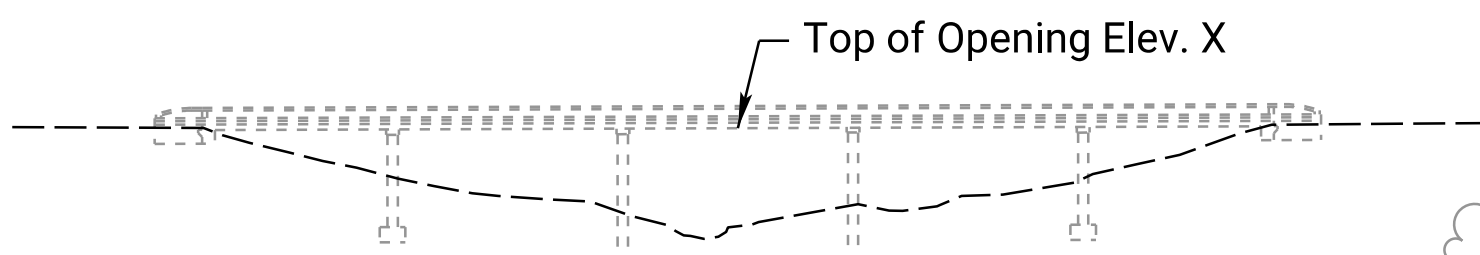
Sta. 112+50.00, Construct
 Br. No. 4-80-145.77 (061)
 54'-72'-54' Cont. R.C. Haunched
 Slab Spans (RCSH)
 36'-0" Roadway

Sta. 102+64.41, Construct
 Shoofly Detour Bridge
 68' Simple Span Rolled Beam
 28'-0" Roadway

CURVE 2 DATA
 PI Sta. 109+21.44 (Bk.)
 $\Delta = 16^\circ 52' 27''$ (Lt)
 $D = 4^\circ 35' 01''$
 $R = 1250.00'$
 $T = 185.41'$
 $L = 368.14'$
 $E = 13.68'$

CURVE 3 DATA
 PI Sta. 116+20.45 (Bk.)
 $\Delta = 17^\circ 53' 56''$ (Lt)
 $D = 4^\circ 35' 01''$
 $R = 1250.00'$
 $T = 196.85'$
 $L = 390.49'$
 $E = 15.41'$

UTILITIES
 No Utilities in the area.



WATERWAY SKETCH AT EXISTING BRIDGE
 BR. NO. 4-80-145.77 (021)
 36'-3"@45'-36' Cont. R.C. Illinois Bulletin Slab Spans (RISC)
 Total Waterway Area = 2690 sq. ft.

REMOVAL OF EXISTING STRUCTURE:
 Removal of existing structure is included in the bid item, "Removal of Existing Structure", Lump Sum. All materials removed from existing structure shall become the property of the Contractor. Remove this material from the site.

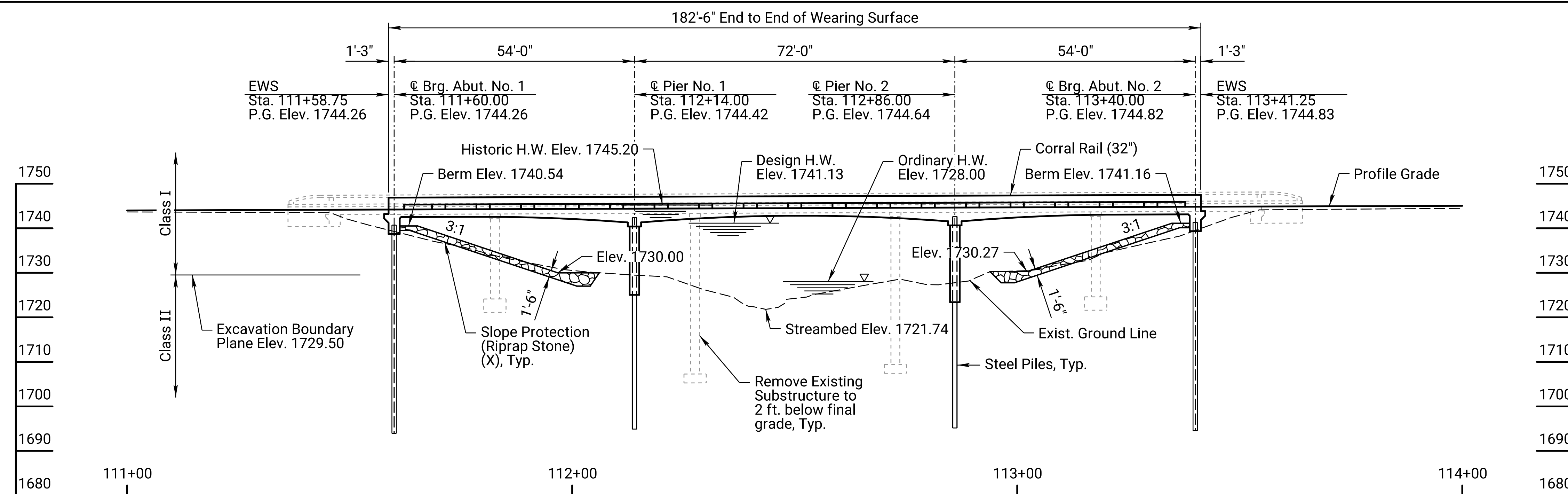
VERTICAL DATUM:
 The North American Vertical Datum of 1988 (GEOID 18).

HIGHWATER INFORMATION:
 Highwater shown was provided by Randy Miller KDOT Maintenance Supervisor. Water overtopped K4 in May 2007 for two days. Water was 2 feet deep. Elevation is lowest point on bridge plus 2 feet. Elevation = 1745.20

NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
BR. NO. 4-80-145.77(061)			STA. 112+50.00	
CONTOUR MAP				
PROJ. NO. 4-80 KA-5734-01			RICE CO.	
SHEET NO.	OF	SCALE	APPD	
DESIGNED	AS	DETAILED	PMY	QUANTITIES
DESIGN CK.	CMH	DETAIL CK.	CMH	QUAN. CK.
				CADD
				CADD CK.

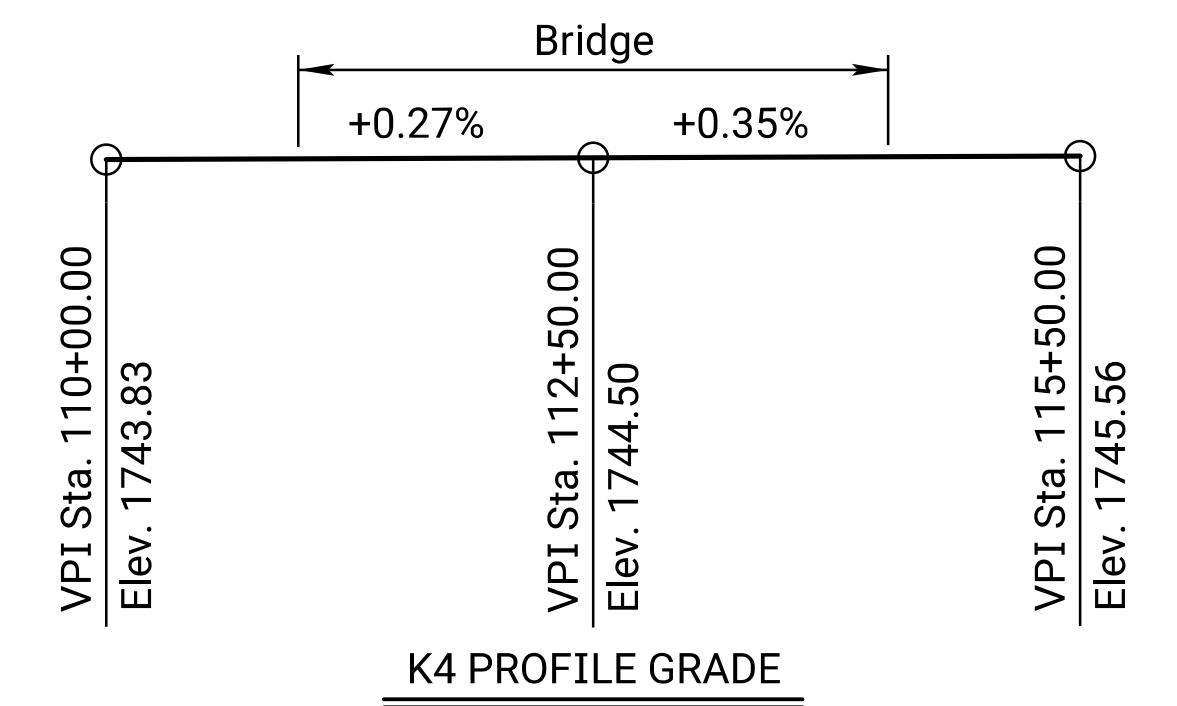
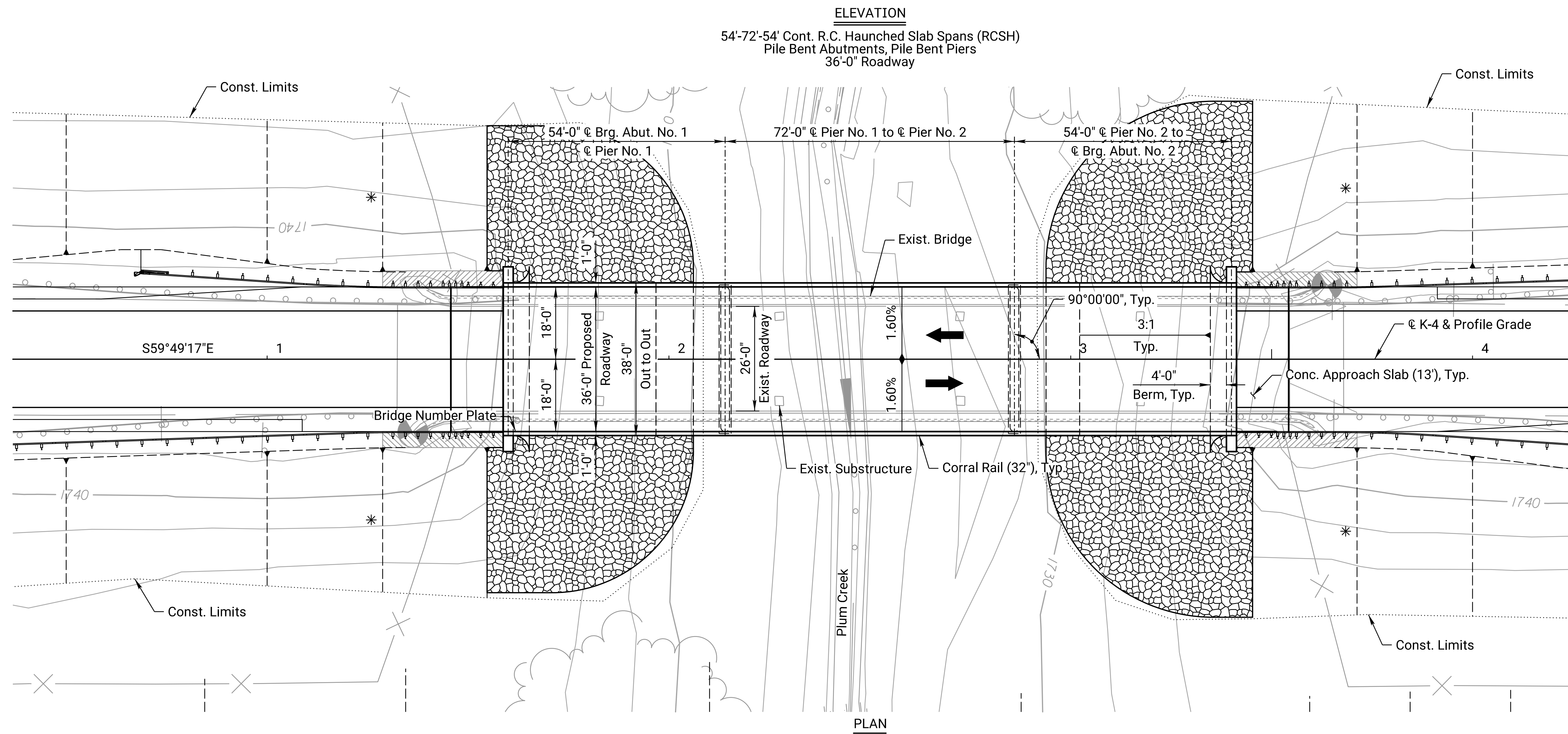
Drawn By: AAMEYER
 File: ka573401bbr061-cm-01
 Plotted: 2/20/2024

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	4-80 KA-5734-01	2024	33	117



DRAINAGE DATA

Drainage Area	63.8 sq. mi.
Design Frequency	50 yrs
Design Discharge (Q ₅₀)	10,911 cfs
Design High Water Elevation	1741.13
Change in Design Backwater	0.33 ft.
Design Backwater Elevation	1741.13 ft.
Overtopping Elevation (Sta. 110+86.00)	1744.50
Overtopping Discharge	17,802 cfs
Overtopping Frequency	200 yrs
Discharge at Q ₁₀₀	14,382 cfs
Change in Backwater at Q ₁₀₀	0.25 ft.
Backwater Elevation at Q ₁₀₀	1742.89
Historic High Water Elevation	1745.20
Ordinary High Water Elevation	1728
Total Waterway Provided	2044 sq. ft.
Design Waterway Provided	1706 sq. ft.
Estimated Ordinary High Water Discharge	200 cfs
Change in Waterway Opening	-646 sq. ft.



Drawn By: AAMEYER
 File: ka573401bbr061-cl01
 Plotted: 2/20/2024

BM #12 "□" Cut on SW Corner of Bridge Abutment.
 ¢ K-4 Sta. 111+36.31, 18.16' Rt. Elev. 1744.39
 Sea Level Datum of NAVD 1988

* For transition to normal section see Cross-Sections.

BM #13 "□" Cut on NE Corner of Bridge Abutment.
 ¢ K-4 Sta. 113+63.78, 18.35' Rt. Elev. 1744.67
 Sea Level Datum of NAVD 1988

NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
BR. NO. 4-80-145.77(061)			STA. 112+50.00	
CONSTRUCTION LAYOUT				
K4 OVER PLUM CREEK				
PROJ. NO. 4-80 KA-5734-01			RICE CO.	
SHEET NO.	OF	SCALE	APPD	
DESIGNED	AS	DETAILED	PMY	QUANTITIES
DESIGN CK.	CMH	DETAIL CK.	CMH	QUAN. CK.
			X.X.X.	CADD
			X.X.X.	CADD CK.
			X.X.X.	X.X.X.