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STA. 258+68.55 END Proj. 75-63 KA-5699-01= Sta. 158+68.49 on Proj. 75-63 DF-063-1(6)

STA. 251+86.52 Br. No. 75-63-2.69 (106) 58'-84'-58' Spans Prestressed Conc. Beam Continuous (PBMC) 44'-0" Roadway

STA. 244+62.67 BEGIN Proj. 75-63 KA-5699-01 = Sta. 144+62.67 on Proj. 75-63 DF-063-1(6)

DESIGN DESIGNATION

AADT (2024)	5 200
AADT (2044)	7 000
DHV	10%
D	55%
Т	10.0%
V	70 MPH
C of A	PARTIAI
Clear Zone	34 FT

CONVENTIONAL SIGNS

COUNTY LINE		CENTER LINE OF PROJECT	50	/
CITY LIMITS		TERRACE		
STATE OR NATIONAL LINE		CULVERTS		
TOWNSHIP, SECTION or GRANT LINE		DROP INLET & STORM SEWER		7
PROPERTY LINE	- <u>R</u>	ACCESS CONTROL		
HIGHWAY FENCE		POWER POLE	. 🔺	
EXISTING FENCE	××	TELEPHONE POLE	•	
GUARDRAIL		MARSH		
CONSTRUCTION LIMITS		HEDGE	·	
RIGHT OF WAY LINE		TREES	$\mathbb{D}\mathbb{D}\mathbb{D}$	2.18
TRAVELED WAY	ヨミシ	PROFILE ELEVATION		117.
RAILROADS		STREAM or CREEK	<u> </u>	
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Ō <u>*</u> DATE 2021 2023 2023 2023

JEO/P. TOBABEN (BRIDGE)-KDOT D)/ P. KULSETH (BRIDGE) - KDO

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SOMMEF GLAVIN ROSA (I TANKIN(

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SURV CADD DESIG

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rawn By : jmarburger ile : KA569901rti01.dg



NET LENGTH OF PROJECT NET LENGTH OF BRIDGES NET LENGTH OF ROAD

1405.88 FT. 0.266 MILES 203.00 FT. 0.038 MILES 1202.88 FT. 0.228 MILES

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	STATE	PROJECT NO.	YEAR	SHEET NO	TOTAL SHEETS						
	KANSAS	75-63 KA-5699-01	2023	1	122						
PROJ. NO. 75-63 KA-5699-01 FED. PROJ. NO. BRF-A569(901)											
GRAI BRIC SEEC SIGN	DING OGE DING NING	AND SURFACIN	NG (A T MA	ASPHA ARKIN	LT) G						

T 35 S TO TYRO Scale: $1'' = \frac{1}{2}$ Mile

KANSAS / MONTGOMERY CO. OKLAHOMA / WASHINGTON CO.

Note: Traffic to be carried through staged construction. See Construction Sequence sheets for details.





JEO CONSULTING GROUP INC



KANSAS DEPARTMENT OF TRANSPORTATION

KDOT Graphics Certified 04-02-2024

			STATEPROJECT NO.YEARSHEET NO.TOTAL SHEETSKANSAS75-63KA-5699-0120232122
19792 4/2/2024 BONNAL ENGINEERING	Apr 04, 2024		
Name: Jonathan P. Marburger Co. Name: JEO Consulting Group, Inc. Sheet Range: 1-29, 60-122	Name: Peter Tobaben Co. Name: KDOT - Bridge Design Sheet Range: 30-59		
			Image: Constraint of the second state of the second sta
			FHWA APPROVALAPP'D.Scott W. KingDESIGNEDDETAILEDQUANTITIESTRACEDDESIGN CK.DETAIL CK.QUAN.CK.TRACE CK.

15:52 -APR-2024 Plotted : 02

Drawn By : jmarburger File : KA569901rti02.dgn

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		KANSAS DEPARTI	MENT OF TRANSPORTATI	ON										
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NOTES

* 4" (Min.) to 8" (Max.) from rebar to witness post. (<u>USE CAUTION</u>, <u>DO NOT DISTURB THE</u> REBAR WHEN SETTING A POST). The witness post shall be set radial or perpendicular to the project centerline from the rebar. The "open face" of the U-post shall face the project centerline with the sign attached to the "open face". This exhibit is a side view, except for the sign, which is shown as turned for the purpose of illustrating content only. (See Sign Detail).

+ Drill or punch holes. Attach 2 flat washers, 1 lock washer, and 1 nut per bolt.

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75-63 KA-5699-01	2023	8	122
GENERAL NOTE					

The post shall be U-shaped (6' minimum length) and factory painted the color of persian red (KDOT Orange) by an electronically powder-coated oven-baked process.

All installations shall have proper identification cap for the party installing it (See Exhibit).

Monument(s) shall be set in accordance with the standard specifications and as shown on this drawing. Removal and disposal of existing concrete R/W markers shall not be paid for directly but shall be Subsidiary to other items of the contract.

In an urban area, the witness post may be omitted as directed by the Engineer.

The R/W survey monuments shall be paid for under the bid item "Right-of-Way Survey Monuments (Each)"

and be included in the plan quantities. It the table shown on this sheet is intended for additional monu-

ments set in the field and will be filled out by the contracted survey company.

Mount R/W survey monument signs facing the road.

🕸 Additional	R/W Survey Mor	numents set by	Contractor	🛛 🗘 🌣 Additi	onal R/W Survey Monuments set by Contractor				
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07-27-2022

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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	9	122
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GENERAL NOTE

Special Concrete Bridge Approach shall be paid for as Sq. Yds. of Concrete Pavement (11" Unif.)(AE)(Br. App.) and includes all work and materials required to construct the approach slab as shown on this sheet.

All work and materials required for installation of joint material shall be subsidiary to this bid item.

At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated. See Standard Drawing RD711 for details of joints and edge curb. Clearance from the face of concrete for all reinforcing steel shall be 2 inches. Standard reinforcing bar hooks in accordance with the latest ACI specifications shall be used throughout.



 \triangle See construction sequence and bridge sheets for location of construction joint. Crown pavement at centerline (not shown).



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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	10	122

GENERAL NOTES

All work shall be done in conformity with the Standard Specifications applicable to the project.

The cost of all bars and joint material shown on this sheet is to be included in the bid price for Concrete Pavement.

At each planned transverse joint location, a 4 to 6 inch wide strip of the pavement surface shall be protected from the texturing operation to provide a transverse textureless surface centered over the joint sawcut.

All sawed joints on this project shall be filled with sealant in accordance with Standard Specifications.

The 4 inch edge curb shall be constructed integral with the approach slab shoulder.

All materials and work required for this construction shall be subsidiary to the concrete approach slab.

Tie bars shall be evenly spaced along the length of the slab and no tie bars shall be within 12" of contraction joint.



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		KANSAS	75-63 KA-569	9-01	2023	11	122
Variable slope	Flume Inlets shall be p (Stone or Concrete) shall Reinforcing steel & welde Flume Inlet and Slope Dr Flume Inlets will be co locations noted in plans o of guide vanes, when req "Flume Inlet ".	GENERAL N aid for by ur be paid for ed wire reinf ain. nstructed w or as directe uired, shall b	NOTE hit price per eacl by unit price per orcement are <u>su</u> ithout Guide Var ed by the Engine be <u>subsidiary</u> to	h. Slope linear f ibsidiar nes exce er. Cons the bid	e Drains foot. y to ept at struction item	1	
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orcement	Aggregate for the Slop stone for Aggregate Ditcl noted on the plans. The C top of slope to produce a ial sizes. Placement, mea Standard Specifications. Slope Drain (STONE) sl meets the KDOT Standar geotextile fabric shall be	e Drain (STC h Lining and Contractor s well graded surement, a hall be unde d Specificat subsidiary t	ONE) shall meet have a D₅o of 4" hall place stone and payment sha rlain with geotex ion. All work and o the Slope Drai	the requ ' unless from bo segrega all confo d mater n (STON	otherw otherw ottom to tion of orm to k oric that ials for NE).	s of ise o the mater- (DOT the	
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YEAR SHEET NO. SHEETS

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04-18-2022





STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEET:
KANSAS	75-63 KA-5699-01	2023	14	122
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Scale: 1"=20'

ALL POINTS MEASURED FROM € US-75 TO THE FACE OF THE POST					
POINT	STATION	OFFSET	SIDE		
	250+41.88	23.23'	LT		
2	250+60.72	23.23'	LT		
3	250.54.40	23.23'	LT		
4	253+24.83	22.94'	LT		
5	253+48.17	89.61'	LT		
6	250+45.08	23.23'	RT		
7	250+51.33	23.23'	RT		
8	250+60.72	23.23'	RT		
9	253+12.32	23.23'	RT		
10	253+34.11	23.85'	RT		
11	253+40.33	24.27'	RT		
12	253+90.21	26.85	RT		



<u>LEGEND:</u> 4" HMA Commercial Grade 4" Pavement Edge Wedge (Rock) MGS-SRT or MGS-FLEAT SRT or FLEAT

KANSAS DEPARTMENT OF TRANSPORTATION

STA.247+00 TO STA.258+00

GUARDRAIL LAYOUT

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Sh. No.14

KDOT Graphics Certified 05-23-2023

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NCHRP 350	Yes	Yes	Yes	Road Systems	40'-7½"	
NCHRP 350	Yes	Yes	No	Trinity Industries	40'-7½"	
MASH	Yes	No	Yes	Road Systems	46'-10½"	
MASH	Yes	No	Yes	Trinity Industries	46'-10½"	
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ESTING ERIA	STEEL POST DESIGN AVAILABLE	WOOD POST DESIGN AVAILABLE	ENERGY ABSORBING	MANUFACTURER	DESIGN LENGTH	MANUFA
P 350	Yes	Yes	Yes	Road Systems	37'-6"	
P 350	Yes	Yes	No	Trinity Industries	37'-6"	
P 350	Yes	Yes	Yes	Road Systems	50'-0"	

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nt, or			STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
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a' Detail	Use approv end terminal p	red steel (preferred) or wood	posts pro of the po	vided by the Manufactu	urer. Th Iainder	ne guardra of the	il
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	guardrail end t	terminal blockout size and typ	be may be	independent of the blo	ockout	size and ty	/pe
	and thrie-bean	n portion of the installation s	e the det	ails shown on KDOT's '	Guardr	ail Post De	etails'
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	Tighten all	cable anchor assemblies as p n and thrie-beam quardrail sr	per the Ma	anufacturer's Installation	on Mar	iual. fic even w	vhere
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	configuration. The minim	um length of w-beam quardra	il required	between the thrie-bea	m tran	sition and	the
	guardrail end t	terminal is 12'-6" for all install	ations; ur	less otherwise stated	in the N	Aanufactu	rer's
n t	Where pave	ement with a thickness less t	nan or equ	ual to 8" is encountered	l during	g installatio	on,
	use the details	s shown on KDOT's 'Guardrail nt for the guardrail posts Wh	Post Deta	ails' Standard Drawings ment with a thickness o	to pro	vide openi than 8" or	ngs
	geologic rock	is encountered during installa	ition, follo	w the Manufacturer's	Installa	ation Manu	
	thickness grea	ater than 8" or geologic rock, (contact th	ne manufacturer for ins	ss pav tructio	ns or insta	ll the
	guardrail posts All work and	s as directed by the Engineer. d materials required for w-bea	am and th	rie-bean guardrail insta	allation	s are paid	for
	under the appr	ropriate bid items for either C	GS or MG	S guardrail depending	on the	type of	
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Sh. No.16

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05-11-2022







Note: Low Strength Grout must have a 28-day compressive strength of 120 psi or less. All work and materials related to posts in pavement are subsidiary to other guardrail bid items. Rectangular geometry shown in Posts in Pavement detail. Circular geometry, as shown on this sheet, may be used at the Contractor's option.



С



<u>Oval</u> shoulder

GUARDRAIL POST DETAILS					ics Certified
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KDOT Graphics Certified 08-01-2022 Sh. No.17					

REVISIONS

BY APP'D

NO. DATE



Lap guardrail splices, including terminal connector, in the direction of traffic. Where traffic is temporarily carried

in the opposite direction of final configuration, lap rail splices in the direction of permanent traffic.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	18	122

GENERAL NOTES (Steel Posts)

Use grade of steel for steel posts that meet the requirements of the standard specifications.

Hot dip galvanize the posts after fabrication, see standard specifications.

Wood blockouts may be used through the 25'-0" thrie-beam section with wood or polymer blockouts used throughout the remainder of the w-beam installation. The blockout size and material used in the guardrail end terminal may be independent from the remainder of the installation. For wood/polymer blockout requirements see standard specifications.

Use S4S rectangular blockouts for Thrie-Beam/W-Beam installation.

Set guardrail posts by digging or by driving. Use post caps to protect the post from crushing during driving operations.

Contractor must notify Engineer at the earliest time when a non-removable manmade object (footing, pipe, etc.) is encountered that prevents installation of a full length post.

All dimensions are nominal and are subject to manufacturing tolerances. Excavation including rock, shale, and other materials for erection of Guardrail is <u>subsidiary</u> to various bid items for which payment is made.



DETAIL OF PLACEMENT AT CURB

///≋

to curb.

Note: Measure height of rail from the pavement surface at the curb/pavement joint as shown. A special design is needed when guardrail is not located as detailed. A Type II (laydown) curb & gutter is preferred when guardrail is adjacent



Specifications.

BOLT SIZE SCHEDULE		
Bolt	Ĺ	
А	10"	
В	1¼"	
С	18"	
D	14"	
E	22"	

BOLT & NUT DETAILS

				· · · •	
05	09-24-15	Separated Steel/V	Vood Post Details	S.W.K.	S.W.K.
04	11-08-12	Revised Detail, Po	osts in Pavement	S.W.K.	J.O.B.
03	08-01-12	Revised Note	e to Designer	S.W.K.	J.O.B.
NO.	DATE	REVIS	SIONS	BY	APP'D
		KANSAS DEPARTMENT	OF TRANSPORTATION		
GUARDRAIL POST (STEEL) (MGS) DETAILS					
		01.00.14			
FHW.	A APPROVAL	L <u>01-29-16</u>		Scot	t W. King
DESI	GNED		QUANTITIES	TRACED	
DESI	GN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.	0

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S	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KA	ANSAS	75-63 KA-5699-01	2023	19	122

GENERAL NOTES (Wood Posts)

Give all wood posts and wood blocks a preservative treatment, see standard specifications. Thoroughly saturate all cuts, injuries and bolt holes on wood posts and blocks with preservative. Use only one type of preservative treatment on a project.

Set guardrail posts by digging or by driving. Use post caps to protect the post from crushing during driving operations.

Wood blockouts may be used through the 25'-0" thrie-beam section with wood or polymer blockouts used throughout the remainder of the w-beam installation. The blockout size and material used in the guardrail end terminal may be independent from the remainder of the installation. For wood/polymer blockout requirements see standard specifications.

Use S4S rectangular posts/blockouts for Thrie Beam/W-Beam installation. See standard specifications for additional information.

Contractor must notify Engineer at the earliest time when a non-removable manmade object (footing, pipe, etc.) is encountered and prevents installation of a full length post.

Ăll dimensions are nominal and are subject to manufacturing tolerances. Excavation including rock, shale, and other materials for erection of Guardrail

is subsidiary to various bid items for which payment is made.



AT CURB

Note: Measure height of rail from the pavement surface at the curb/pavement joint as shown. A special design is needed when guardrail is not located as detailed. A Type II (laydown) curb & gutter is preferred when guardrail is

All bolts,nuts, and washers shall be galvanized in accordance with the Standard Specifications.

	BOLT SIZE SCHEDULE				
	Bolt	L			
_	А	10"			
	В	1¼"			
	С	18"			
	D	14"			
	E	22"			
Button head					

✓ Oval shoulder

76

 $(\bigcirc$

174

%" dia.

₹76" |

7/32

BOLT & NUT DETAILS

04	09-24-15			Initial R	elease		T.T.R.	S.W.K.		
NO.	DATE		ł	REVIS	IONS	1 I	BY	APP'D		
KANSAS DEPARTMENT OF TRANSPORTATION										
r										
(MGS) DETAILS										
			``							
	1611D							-		
RL	DOLLB									
FHW	A APPROVAI	L		01-29-16	APP'D.		Scott	t W. King		
DESIGNED D		DETAILED		QUANTITIES	T	RACED	H			
DESI	GN CK.		DETAIL CK.		QUAN.CK.	Т	RACE CK.			
								<u>`</u>		
KDC	KDOT Graphics Certified 05-11-2022 Sh. No.19									

etermine guardrail length of need using either <u>KDOT's Length of Need Equation</u> or a graphic design neasured from the edge of the area of concern to the P.I. of the curved guardrail section. Combine widening in the plan quantities. Notes to Designer: Dewith an L1 distance m materials for asphalt

<u>a</u>

5:54

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	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75-63 KA-5699-01	2023	20	122
length of 25'-0" when guardrail f 2a:b and curve length of 12'-6" ne shy line.					
		ع			
3:1 or flatter		4:1 or variabl			
Line of normal slope change					
5 5 100-0"					
nd 4:1 or flatter					
- 10:1 or flatter					
✓ ☆ (MGS-FLEAT or MGS-SRT) End Terminal		Shoulder	line /	$\left.\right\}$	
		Edge of Traveled V	Way 🖌		
→					

ALTERNATE TREATMENT - TWO LANES (Flare Rate = 2a:b)

	04	06-05-18	Removed Flare-b	beyong-the-Flare	A.L.R.	T.T.R.
	03	05-15-17	Removed	d X-LITE	A.L.R.	S.W.K.
d Drawings	02	06-07-12	Revised Note	e to Designer	S.W.K.	J.O.B.
	NO.	DATE	REVIS	IONS	BY	APP'D
nformation			KANSAS DEPARTMENT	OF TRANSPORTATIC	DN	
pe drain is constructed. See	THRIE BEAM GUARDRAIL (MGS) BRIDGE APPROACH TRANSITION TYPICAL ALIGNMENTS (FLARED)					
	R	0612C			· · · · · · · · · · · · · · · · · · ·	
al and any transition	FHW DES	<u>A APPROVAL</u> IGNED	. 06-19-18 DETAILED	APP'D. QUANTITIES	Scott	. W. King
	DESI	GN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.	
	KDO	OT Graphic	cs Certified 08-21	-2022	Sh. No	o.20



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	75-63 KA-5699-01	2023	21	122	







KANSAS 75-63 KA-5699-01 2023 23 122	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75-63 KA-5699-01	2023	23	122



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	24	122

₿ Eill S es of CSP, ACSP, o this are noted in ments of Drainage aximum/minimum estricted uses ceptions to t ection, "Elem gauges, max or ad. pipe Roa S, si s guidance in identifying the prohibited al ions of the same type and coating as the KDOT Design Manual, Volume I (Part C), information which includes: corrugation provides and section ar to the l e design OOT Pipe Policy pr & RCP. Provide end cifications. Refer t or structural pipe d es of pipe. ner: KDC CAP & F d Specif ign" for classes lote to Design PEP, PVCP, the Standar Culvert Desi heights and

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02

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Plotted



onnecting band of spiral (Helical)
rrugation or dimpled band (shown)
 One annular corrugation rolled into pipe after fabrication

I	
6	Bolted or riveted
•	
•	
۰	
°	
1	
	Pipe stub of spiral

Pipe	CS, ACS		Dimer	nsions in	Inches		Approx
Dia.	CA	А	В	Н	L	W	
(In.)	Gauge	(min.)	(max.)	(min.)	(±2")	(min.)	
12"	16	5	7	6	21	22	2½:1
15"	16	6	8	6	26	28	2½:1
18"	16	7	10	6	31	34	21/2:1
21"	16	8	12	6	36	40	21/2:1
24"	16	9	13	6	41	46	21/2:1
30"	14	11	16	8	51	55	2½:1
36"	14	13	19	9	60	70	2½:1
42"	12	15	25	10	69	82	2½:1
48"	12	17	29	12	78	88	21/4:1
54"	12	17	33	12	84	100	21/4:1
60"	12/10	17	36	12	87	112	2:1
66"	12/10	17	39	12	87	118	2: 1
72"	12/10	17	44	12	87	120	2: 1
78"	12/10	17	48	12	87	130	1½:1
84"	12/10	17	52	12	87	136	1½:1
90"	12/10	17	58	12	87	142	1½:1
96"	12/10	17	58	12	87	144	1½:1

Bid	Nom. w w	Pipe Arch	Dimer	Dimensions in Inches $2\frac{2}{3}$ " x $\frac{1}{2}$ " Corrugations						nsions ir	n Inches	: 3" x 1" c	or 5" x 1"	Corr.	Approx
Designation Sq. Ft.	Area Sq. Ft.	Span & Rise	CS, ACS or CA Gauge	A (min.)	B (max.)	H (min.)	L (±2")	W (min.)	CS, ACS or CA Gauge	A (min.)	B (max.)	H (min.)	L (±2")	W (min.)	Slope
1.0	1.1	17" x 13"	16	5	9	6	20	28							21/2:1
1.5	1.6	21" x 15"	16	6	11	6	24	34							21/2:1
2.0	2.2	24" x 18"	16	7	12	6	28	40							21/2:1
2.5	2.9	28" x 20"	16	7	16	6	32	46							21/2:1
3.0 or 4.0	4.5	35" x 24"	14	9	16	6	39	58							21/2:1
5.0 or 6.0	6.5	42" x 29"	14	11	18	7	46	73							21/2:1
7.0 or 8.5	8.9	49" x 33"	12	12	21	9	53	82							21/2:1
10.0 or 11.0	11.7	53" x 41"							12	17	26	12	63	88	2:1
10.0 or 11.0	11.6	57" x 38"	12	16	26	12	62	88							2:1
12.5 or 14.0	15.6	60" x 46"							12	17	36	12	70	100	2:1
12.5 or 14.0	14.7	64" x 43"	12	17	30	12	69	100							2:1
16.5	19.3	66" x 51"							12/10	17	36	12	70	112	1½:1
16.5	18.1	71" x 47"	12/10	17	36	12	77	112							1½:1
21.0	23.2	73" x 55"							12/10	17	36	12	77	124	1½:1
21.0	21.9	77" x 52"	12/10	17	36	12	77	124							1½:1
25.0	27.4	81" x 59"							12/10	17	44	12	77	136	1½:1
25.0	26.0	83" x 57"	12/10	17	44	12	77	130							1½:1
32.0	32.1	87" x 63"							12/10	17	44	12	77	136	1½:1
36.0	37.0	95" x 67"							12/10	17	44	12	87	160	1½:1
42.0	42.4	103" x 71"							12/10	17	44	12	87	172	1½:1
47.0	48.0	112" x 75"							12/10	17	44	12	87	172	1½:1

	\circledast	Minimu	um Gaug	ge of Rou	and Pipe	
2" Corr.	3" x 1	" Corr.	5" x 1	" Corr.	2⅔"x ½" Corr.	3" x 1" Corr.
r ACSP	CSP o	r ACSP	CSP o	r ACSP	CAP	CAP
4					16	
4					16	
4					16	
4					16	
4					16	
4					14	
4					14	16
4					12	16
2	14	16	14	16	12	16
2	14	16	14	16	12	16
0	14	16	14	16	10	16
0	14	16	14	16	8	16
0	14	16	14	16	8	16
3	14	14	14	14		14
3	14	14	14	14		12
	14	14	14	14		12
	12	12	12	12		12
	12	12	12	12		10
	12	12	12	12		10
	12	12	12	12		8
	10	10	10	10		8

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
section	KANSAS	75-63 KA-5699-01	2023	25	122

GENERAL NOTE for END SECTIONS

End section material shall follow KDOT Pipe Policy for geographic location. Location shall govern use of CS (Galvanized), ACS (Aluminized) or CA (Aluminum) (Type I) End Section. Pipe material and End Section material shall be the same with no mixing of types per location.

Toe plate extension, when specified, is an accessory and shall be the same gauge and metal as end section. Toe plate shall be punched to match holes in apron lip and attached with furnished 3#8" diameter nuts & bolts. W + 10" for 12" to 30" diameter pipes inclusive.

W + 20" for 36" to 84" diameter pipes inclusive.

 $W + 10^{"}$ for pipe-arches with a rise of 13" to 29" inclusive.

W + 20" for pipe-arches with a rise of 33" to 59" inclusive.

Multiple panel end sections may contain dual gauges of like metal and shall have lap seams which are tightly joined with rivets or bolts. For 60" and larger diameter round pipe end sections and 77"x52" arch pipe end sections, the reinforced edges are supplemented with stiffener angles. The angles are attached with nuts and bolts. Angle reinforcement may be required uder the center panel seams of 73"x55" and larger arch pipe end sections depending on manufacturer.

Other approved designs may be used in lieu of type shown.

Connection of end sections by welding will not be permitted.

mui	m Gauge of Arch	Pipe	
r.	5" x 1" Corr.	2⅔"x ½" Corr.	3" x 1" Corr.
SP	CSP or ACSP	CAP	CAP
		16	
		16	
		16	
		14	
		14	
		12	
		12	
		10	
			14
		10	
			14
		8	
			14
	12		12
	12		12
	12		12
	12		10
	12		8
	10		
	10		
	10		

GENERAL NOTE for METAL PIPE

Culvert "Type" listed may be CSP, ACSP, CAP, RCP, PVCP & PEP within guidelines of KDOT Pipe Policy for geographic location. More than one pipe "Type" may be acceptable for a design location with allowable types listed for each site.

There shall be no payment for gain in pipe length due to fit of pipe at connecting band.

When Hugger Bands are used, the H-7 Hugger Band may be used on circular pipes 36" diameter and smaller or pipe arches 42"x 29" and smaller. The H-10 Hugger Band may be used on 12" thru 120" pipe. The H-12 or H-13 Hugger Band are for pipe sizes larger than 36" diameter or 42"x29" arch pipe.

Pipe gauge listed in the tables on this sheet are minimum for E'=750 p.s.i. soil. Pipe gauge will be determined for each site based on the Design Manual Volume I- Part C Fill Height Tables and shall shall be listed in the Pipe Culvert Summary. Gauges shown on this Standard Drawing are KDOT minimum and may not be industry minimum gauge.

In geographic areas that allow CSP (24" or smaller arched or round pipe) for entrance and side road installation with less than 3,000 ÅÅDT, 16 gauge ACSP may be substituted for 14 gauge CSP.

Aluminum or aluminized pipes or end sections shall be coated with an asphaltic paint when in contact with fresh concrete in accordance with the Standard Specifications.

04	09-10-09	Rev. Round and Arch tables, add. Alum.	S.W.K.	J.O.B.					
03	01-20-09	Rev. Round and Arch tables, add. Alum.	S.W.K.	J.O.B.					
02	04-18-08	Rev. layout, details, tables and notes	S.W.K.	J.O.B.					
NO.	DATE	REVISIONS	BY	APP'D					
KANSAS DEPARTMENT OF TRANSPORTATION									
METAL END SECTION FOR ROUND &									

ARCH METAL CULVERTS (TYPE I) & PIPE GAUGE TABLES RD660 FHWA APPROVA

12-16-09 APP'D James O. Brewer QUANTITIE DETAILED TRACE DETAIL CK. TRACE CK. QUAN.CK Sh. No.25 05-16-2022

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SIGNE



Diam 24" 30" 36" 42" 48" 54" 60" 72" 84"

2"

2 1⁄4"

2 ½"

3"

3 ½"

4"

4 ½"

5"

5 ½"

6"

7"

8"

equal to I

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D

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G



	SIDE TAPERED INLET SECTION (TYPE III)-NOMINAL DIMENSIONS												
•	Min. W.W. X Area Sq. Ft.	F	G	н	Ι	J	К	R	Т				
	4.5	4'-3"	2'-3"	1'-5 1⁄8"	2'-8"	1 1/2"	8"	1'-0"	3"				
	7.0	4'-9 ½"	2' - 9 ½"	1'-9 ½"	3'-4"	2"	10"	1'-3"	3 ½"				
	10.1	5'-4"	3'-4"	2'-1 ½"	4'-0"	2"	1'-0"	1'-6"	4"				
	13.7	5'-10 ½"	3'-10 ½"	2'-5 7⁄8"	4'-8"	2 ½"	1'-2"	1'-9"	4 1⁄2"				
	17.9	6'-5"	4'-5"	2'-10 ½"	5'-4"	3"	1'-4"	2'-0"	5"				
	22.7	6'-11 ½"	4'-11 ½"	3'-2 ½"	6'-0"	3 ½"	1'-6"	2'-3"	5 ½"				
	28.0	7'-6"	5'-6"	3'-6 7⁄8"	6'-8"	4"	1'-8"	2'-6"	6"				
	40.3	8'-7"	6'-7"	4'-3 %"	8'-0"	5"	2'-0"	3'-0"	7"				
	54.8	9'-8"	7'-8"	5'-0 <u>%</u> "	9'-4"	6"	2'-4"	3'-6"	8"				

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05-16-2022



Minimur C	n Road onstruc	Embankr tion Load	nent for Is			Minimun Co	n Road onstruct	Embankn tion Load	nent for s			
Pipe Dia.		Axle Loa	ad (Tons)			Pipe Dia.	Axle Load (Tons)					
(Inside Diameter)	<25	25-37.5	37.5-55 55-7	55-75		(Inside Diameter)	<25	25-37.5	37.5-55	55-75		
≤ 15"	2'-0"	3'-0"	4'-6"	6'-0"		72"	1'-0"	2'-0"	3'-6"	4'-0"		
18"	2'-0"	3'-0"	4'-0"	6'-0"		66" - 84"	1'-0"	2'-0"	3'-0"	4'-0"		
21" - 24"	1'-6"	2'-6"	4'-0"	6'-0"		90"	1'-0"	2'-0"	3'-6"	4'-6"		
27"	1'-6"	2'-6"	4'-0"	5'-6"		96"	1'-0"	2'-6"	3'-6"	4'-6"		
30"	1'-0"	2'-6"	4'-0"	5' - 6"		102"	0'-6"	2'-6"	3'-6"	5'-0"		
33"	1'-0"	2'-0"	4'-0"	5' - 6"		108"	0'-6"	2'-0"	3'-6"	5'-0"		
36"	1'-0"	1'-6"	4'-0"	5' - 6"		114"	0'-6"	2'-0"	4'-0"	5'-0"		
42"	1'-0"	1'-6"	3'-6"	5'-6"		120" - 132"	0'-6"	2'-0"	4'-0"	5'-6"		
48" - 54"	1'-0"	1'-6"	2'-6"	5'-6"		144"	1'-0"	2'-6"	4'-6"	5'-6"		
60" - 66"	1'-0"	2'-0"	2'-6"	5'-6"								
Minimum Dood Embonlymont beight abouid be no loop than the value in the provided table												

GENERAL NOTES

Do not drop, drag or otherwise handle pipe sections in a manner the line and grade before and during placement of compacted back For trench installations place pipe in the center of the excavated When installing pipe, place the uncompacted backfill and compa area to grade, install pipe to grade, place and compact the haunch pipe and complete the backfill as specified in KDOT's Standard Spector the contract documents.

B_c for horizontal elliptical pipe, vertical elliptical pipe, arch pipe, a box structures will be measured along the horizontal axis; similar on this sheet.

The spring line is a line along the side of the culvert where the ta

It occurs at the widest point in the culvert. Material used for the roadway embankment may be used in lieu

as approved by the Engineer. The backfill load transmitted to the pipe is directly dependent or trench widths are not indicated in any of the contract documents, t as possible with side clearance adequate enough to ensure proper sides of the pipe. The trench width formulas provided can be used

	Trench Constuct	ion s	STATE	PROJECT N	O. YE	AR SHEET NO.	TOTAL SHEETS
xisting		K/	ANSAS	75-63 KA-56	99-01 20	23 27	122
roundline In Cut	Section In Em	bankmen	t Sect	ion			
Grading Grading Template Road Embankm cavated enchline	Road Embankment (min.) Over Pipe for Construction Loads		R	Profile Grade Pr	roposed Im	nprovement	
Tropols Midd			B _C ₄ + 6	" (min.)			
Spring Line	n TE B _c		4				
eckfill (Haunch)							
<u>Compacted Backfill</u> (Bedding Material)	B	^C / <u>3 Uncor</u> (Bedd	<u>Bacl</u> <u>mpact</u> ling Ma	<u>kfill (Haunch)</u> ed Backfill aterial)	\Existing G	roundline	
	THERMOPLA	ASTIC F	PIPE				
Backfill (Bedding) Thickn	ess: When over s of PB-2 or F When over i with PB-2 o	soil, use ½ 2B-3. rock, exca r PB-3.	∕₂ in./ft avate 6	:. of fill over pip 5" below the bo	be (min. of 4 ttom of the	4" & max. of e pipe and rep	24") place
Backfill Mate	erial: See KDOT's for Backfill	Standarc in Divisio	d Spec n 1100	ifications, Agg).	regates		
Compacted Backfill Mate	erial: Use Type B	compact	ion.				
Compact	tion: Hand-held of compacting is greater th equipment when the fil of pipe insta under the p pipe bottom	or walk be fill direct nan or equ is permitt ll over the allation is ipe haunc n and fill v	ehind c tly abc ual to e d for e pipe i to ma ches, to voids u	compaction equ ove the pipe on 12". The use of compacting fi s greater than anipulate and c o achieve full c under the pipe.	uipment is p ly when the f ride-on co ll directly al or equal to ompact em ontact of th	permitted whe fill over the mpaction bove the pipe 36". A prime bedment ma ne material w	en pipe only goal aterial ith the
Road Embankm	ent: For compac	ction See & Compac	KDOT	Road Standard	l Drawing, F	oundation	
Trench Wi	dth: The minimu The maximi	um require um trench	ed trer n widtł	the midth is 1.5 The first state is $1.575 \times B_{c}$ +	50 x B _C + 12" 12½"		
	B _C : Outside Pip	e Diameto	er	C			
	Thermoplasti Embankment	ic Pipe: M for Const	inimu ructio	n Road n Loads			
	Pipe Dia. (Inside Diameter) <2	Axle L	oad (1	Tons) 7.5-55 55-75			
	<u>42" - 48"</u> 3'-	-0 2-0 -0" 3'-0	ע שייין (שייין (3'-6" 4'-0"			
ا Minim	<u>54" - 60" 3'</u> ium Road Embankm	<u>-u" 3'-0</u> 1ent heigh	nt shou	<u>ז־ס־ 4'-0" </u> Ild be no less t	han		
the va	lue in the provided t	table or th	ne mar	nufacturer's sp	ecification.		
er which may cause damage ckfill and uncompacted bac ed trench.	. Inspect kfill materials.						
h area up to the spring line of pecifications unless otherwi	of the se noted in	01 0)5-09-22	Init		A.L.F	R. T.T.R.
and non bridge-sized concr to the dimension shown for	ete ⁻ circular pipe	<u> NU. </u>	DAIE	RE KANSAS DEPARTM	ENT OF TRANSPO	<u> ВҮ</u> RTATION	I AAA.D
angent to the culvert wall is	vertical.		P]	PE INSTAL	LATION	DETAILS	
u of compacted backfill mat	erial						
, trench width. Where i , trench widths should be as er compaction of backfill ma ed as a general guide.	a narrow a terial at the	RD6 FHWA A DESIGN DESIGN	158 APPROVAL NED NCK.	DETAILED DETAIL CK.	-22 APP'D. QUANTITIES QUAN.CK.	S TRACED	(.
		KDOT	Graphic	cs Certified 06	5-10-2022	Sh. I	No 27



Note to Designer: KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVCP, PPP SRPE, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume I (Part C), Road Section, "Elements of Drainage & Culvert Design" for structural pipe design information which includes: corrugations, sizes, gauges, maximum/minimum fill heights and classes of pipe.

15:54 4 02 Ņ Ċ 02 Plotted : I σ -rd659. Drawn By : jmarburger File : KA569901rss659

	PIPE CULVERT SUMMARY																				
	Station	Туре	Size or Bid Designation	Crown Grade	Flow	/ Line	Floo	r Elev.	Horiz Roa	zontal dway	Degree of	Length of Pipe	n l e	Lin. Ft. of	Height of Fill (max.)	Concrete Pipe AASHTO	Pipe Gauge 🛇		Pipe Cor	rugations	Remarks
			Sq. Ft.	Elev.	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Rotation	Lt.	Rt.	Pipe	Ft.	Class No.	Steel	Alum.	Steel	Alum.	
	US-75 Sta 253+64 00		48"	745 39	734 67	726.68	<u> </u>		53 50'	63.95	None	53 74' 64	1 26'	118'	12 67'	TIT		10		3 x 1 in	Broken Back - See RD668
	(Under Sideroad Lt.)			7-0.05	(North)	(South))		(North)(South) (1 1 0110	(North)(So	outh)	110	12.07						
	· · · ·																				
											_										
											_										
									-			+									
L				I		1	1	ļ		1		11			I			1	1		

Unless otherwise noted, minimum pipe gauge & corrugations to be as shown in RD660. See Summary of Quantities for End Section information.

X Only include floor elevations for embedded pipes. See RD668 for details. For structures not embedded, the floor elevations may be omitted.

		ALL	OWABLE L	OCATION			
Туре	Mainlina	Side	Entropoo	Storm Sewer			
	wannie	Road	Entrance	Under ML	Not Under ML		
☆ PVCP							
PEP							
PPP							
∻ SRPE							
CSP							
ACSP							
CAP	Х	Х					
RCP	X	Х					

Turne	ALLOWABLE END SECTIONS											
Гуре	∲ CS	♦ ACS	CA	RC								
PVCP				Ψ								
PEP												
PPP												
SRPE												
RCP				Х								
ACSP CAP CSP	Provide End Sections of the same material and coating type as the pipe.											

x When inside diameter of pipe is 36" or less.

A Unless otherwise specified in the plans. Some pipe types may not be allowed at a location if the fill height exceeds the maximum allowable or is less than the minimum allowable cover.

 \square When inside diameter of pipe is 60" or less.

 \approx For inside diameter: \geq 30"

 \diamond Type IV End Sections are only made of CS or ACS. artheta Submit Shop Drawing of connection for review



KDOT Graphics Certified

	_					1	1	SUMMAR	Y OF QUANTITIES						1		STATE	PRUJECT NO.	
Item	Excavation		rete	Reinforc	cing Steel	Prestressed	* Piles	Pre-drilled	Drilled Shaft Son	nic Test Co	ore Holes	Bridge	Abutment	Bridge	†Slope	Temporary	KANSAS	75-63 KA-5699-0I	2024 3
	CIASS I	Grade 4.0 (AF)(SA)	Grade 4.U (AF)	(Grade 60) Fpoxy Coated	(Grade 60)	(K-4)	1 (Steel) (HPI2X53)	Pile Holes	(48") (Drille (Cased) (Se	ea Snatt)(Inv t Price)	/estigative)	Deck Groovina	Aggregate Drain	Prot. System	(Riprap Stone)	Snoring		INDEX TO BRI	DGE DRAWING
ocation	Cu. Yd.	Cu. Yd.	Cu. Yd.	Lbs.	Lbs.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Lin. Ft.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Lump Sum	Shee	t No. Dr	awing
outment No. I	128	**	25.3	**			152	/36					69	53	224		30-	-31 General Notes and	d Quantities
er No. I		**	39.2		5,810				//3		34						3	2 Contour Map	t
er No. 2		**	39.2		5,810				108		33						3	4 Engineering Geolo	oav oav
outment No. 2	128	**	25.3	**			/36						69	53	455		35-	-36 Construction Pha	sing
ubetr Total	256		120.0		11.620		288	136	221	,	67		130	106	670		37-	-39 Abutment Details	
iperstr Total	230	400.0	129.0	105 4 30	11,020	1/94	200	150		1	07	902	150	700	019		4	0 Abutment Aggrega	ite Drain Det
Total	256	400.0	129.0	105,430	11,620	1,194	288	/36	221	/	67	902	/38	106	679	/	4	Drilled Shaft Det	ails
				**Quantities the Supers	are included str. Total Quan	in tity.	*NOTE: On sh	ly steel pile HP all be used on	12X53 this project.			† Gradai	tion shall meet	the requirement	s of 200 Lb cld	<i>ISS</i> .	42-	4 Temporary Diaphr and Framing Pla	ragm In Details
]						FACTORS						4 4 4	5 Standard Prestre 6 K–4 Beam Detail 7 Pier Diaphragm	essea Beam s Details
		3		FILES						Ratina) 					48-	-50 Slab Details	
			PILES (S	STEEL)(HPT2X	531		I (2024)	5,200		Level Inv	ventory	Operatina	De	esign Leve	el Inventory	Operating	5	Typical Section	
		Abutment No.	/	8 @ /9'-0"			1 (2044)	7,000	Truck		/ 207			ad 🔨			5	2 Auxiliary Slab De	etails
									HS-20		1.321	2.216	н	L-93 Loading	1.227	2.087	53-	-54 Corral Rail Details	5 a Ctarl
		Abutment No	2	8 @ /7'-0"				25/45	I ype HEI	(1101)		1.214			Dridan Frederic		55-	-56 and Rendina Dia	y Sieel arams
								10%	LZUUZ LFD P	nuing. I (IN E	_union AAS			υτι Manual FOF Ε	ועש בvuiudTiOl	1		Sta	ndards
																	5	7 Bridge Excavation	n
CONTRACTO	RCONSTRUCT	TION STAKING.	Contractor C	onstruction													5	8 Standard Pile De	etails
Staking	for clear span	n bridges requi	ires two inde	pendent													5	9 Supports and Sp 9 for Reinforcing S	acers Steel
surveys.	. See KDOT ['] S	Specifications.						GE	ENERAL NOTES									TOT NOTHIUTCHIY S	
DRILLED SHA the tempo granular PILING: Drive Sandstone the Engin piling to Abutment Abutment As a min pile to the pile be di Driving L pile dama occurs si Engineer equipment CONSTRUCTIO new sub- during the during the	AFT BACKFIL orary casing an material as de all piling to pe e Formation. L neer additional the Pile Drivin No. 1 87.8 No. 2 87.8 No. 2 87.8 No. 2 87.8 No. 2 87.8 nimum for pile riven to more f load. At any lo age is suspected ignificantly abo may request the t be used. DN LOADS: Lin deck, one-cour for curing period to curing period	L: Backfill the a and the permanent of ined in the KL enetrate or bear Driving shall store driving may da ang Formula Loa B Tons B Tons B Tons at Abutment No. Internation, but in than 110% of F potention where pri- bod the design pro- that the Pile Drive the design pro- that the Pile Drive the design pro- that the Pile Drive and traffic is a see KDOT	nnular space nt casing with DOT Specifica r upon the Ch op when in the mage the pilin and of: No case shal Pile Driving F roblems are e Driving Formu- bile tip eleva ving Analyzer permitted on concrete over posed deck we Specification	between ations. heyenne Creek he opinion of ng. Drive all ge each lithe formula experienced, ula Load tion, the (PDA) the rlay et s	Te co di bia Cc bo ele Ge Dr sh If ca im co ele If (C PRE-D pr on	esting, casings, i mplete the shaf rected by KDOT d item "Drilled oncrete in the d thom of the dri evation shown u cologist. fill an Investigat own on the plan the location of sing cannot be opurities, provide ncrete in the si evation of the to the permanent of MP) then it will or the permanent of MP) then it will or the confirm of the confirm of	labor, and incid t as shown on Specification Shafts (48")". Frilled shaft be p Inless otherwis the top of the overtopped to e extra casing haft and chip op of the shaft casing is to be be galvanized. competent sand ore-drilling (1)	dentals necesso the details and os shall be inclu Use Grade 4.0 In no case shall blaced higher the se directed by the shaft is such remove concrete length to over- back to the plan t. e corrugated m files shall be the stone. Pile drive nce nile are set	ary to d as ided in the O I the han the the KDOT s) that the e -pour the n etal pipe all be apped only ving is not to the holes	PEA TEN GEC	Price). If Concrete in first sonic responsible Report test No work w without the RMANENT (MPORARY S includes a shoring at temporary Maintain th authorizes to be desig Engineer. to the Fiel is schedul Engineer (DTECHNICAL includes s	the sonic tes the sonic tes the shaft, the test for pays for subseque results direct results direct results dene if be done at approval of the castNG: See SHORING: The difference of the location bracing of the the location bracing of the the location bracing of the the location bracing of the the location bracing of the difference construction bracing of the construction bracing of the const	ting indicates the Engineer w ment, and the lent sonic test offy to KDOT's bove the top of the Chief Geol KDOT Specifi KDOT Specifi the Chief Geol KDOT Specifi The tempora shown on the shoring until The tempora aled by a region of review 6 Work shall no val.	defective ill measure the Contractor is ing of that shaft S Chief Geologists f drilled shaft ogist. cations. ications. ications. istered Shoring the Engineer ry shoring plans istered Professions istered Professions istered Professions istered Professions istered Shoring plans istered Shoring plans	t. ion. s are onal lans ork mber 2021) eport	HL-93 Design Dead Load future wearing su UNIT STRESSES: Concrete (Grade Concrete (Grade Concrete (Grade Prestressed Bea Prestressing Str Reinforcing Stee Steel Piling (Gr. LRFD DESIGN PILE I Design Loading of Abutment No. 1 Abutment No. 2 LRFD DESIGN DRILLE Design Loading of All Piers	includes an rface. 4.0) 4.0)(AE) 4.0)(AE)(SA) m Concrete ands I (Grade 60) 50) LOAD: (Tons/Pile) ED SHAFT LO (Tons/Shaft)	allowance of 15 psf fo f'c = f'c = f'c = f'c = 0.6" Ø Gra unco low fy = fy = Strength I Serv 87.8 59. 87.8 59. DAD: Strength I Service I 286.0 193.6	or a 4 ksi 4 ksi 4 ksi 5 ksi 5 ksi de 270 ated 7-wire relaxation s 60 ksi 50 ksi 50 ksi 50 ksi 50 ksi 50 ksi Phi End Bear Side Frici
Section 7 information	710 Tables 710 on.)−1 & 710-2 fo	or additional		sh the	all be backfilled en loose sand f	d with 3 feet of top of hole.	of commercial g	rade concrete		geotechnico information by qualifie Eisenhowe	al information n available. ed bidders at er State Offic	shown on th The report is the State Bri e Building, 70	e plans is the b available for ins dge Office, KDO O SW Harrison,	est spection T, , Topeka, KS.		Proj.	ATE REVISION KANSAS DEPARTMENT OF D. 75-63-2.69 (106) GENERAL NOTES AN US-75 over Chey 75-63 KA-5699-01	vs TRANSPORTA Sta. ND QUANTI Jenne Cre Montg

•	STATE		PROJECT NO.	YEAR	SHEET NO.	TOTA							
K	ANSAS		75-63 KA-5699-0I	2024	30	122							
			INDEX TO BRIDGE	DRA	WINGS								
	Shee	et No.	Drawir	ng									
	30	-3/	General Notes and Qu	antitie	<i>ЭS</i>								
	3	2	Contour Map										
	m)	3	Construction Layout										
	3	4	Engineering Geology										
	35	-36	Construction Phasing										
	37-	-39	Abutment Details										
	4	0	Abutment Aggregate D	Drain	Details								
	4	1/	Drilled Shaft Details										
	42 [.]	-43	Pier Details										
	4	!4	Temporary Diaphragm										
			and Framing Plan Details										
	4	5	Standard Prestressed Beam Details										
	4	6	K-4 Beam Details										
	4	.7	Pier Diaphragm Deta	er Diaphragm Details									
	48-	-50	Slab Details										
	5	5/	Typical Section										
	5	2	Auxiliary Slab Details	5									
	53.	-54	Corral Rail Details										
	55.	Bill of Reinforcing Steel											
		50	and Bending Diagram	าร									
			Standar	ds									
	5	7	Bridge Excavation										
	5	8	Standard Pile Details	5									
	5	9	Supports and Spacer	S									
			tor Reintorcing Steel										

	ERECTION ELEVATION CHECKS: After the abutment and pier concrete has cured and before setting any prestressed beams, present verification to the Engineer that the elevations at the bearings match plan elevation (±1/4").	PRESTR selec Prov strei
	ABUTMENT AGGREGATE DRAIN: See the General Notes on the "Abutment Aggregate Drain" sheet.	Rese
	BRIDGE BACKWALL PROTECTION SYSTEM: See the General Notes	CAMBER: varyi for
	BACKFILL COMPACTION: Compact backfill at the abutments.	if ne beam
	EMBANKMENT: Complete the embankment at the abutments as shown on the Bridge Excavation sheet prior to driving the abutment piling or commencing with the abutment footing excavation.	takir betw defle the c floor minin
	SLOPE PROTECTION (Riprap Stone): Place "Slope Protection (Riprap Stone)" to the limits and thicknesses shown on the plans or as directed by the Engineer. Use Light Series 200 Lb. Gradation as described in Division 1100 placed to the limits shown on the plans.	inche grea camb pland
	Place a 10 foot wide mat of geotextile under the rock/rubble embankment on the berm and berm slopes and centered on the drip lines of the slab.	The fillet in th requ
	FALSEWORK PLANS AND SHOP DRAWINGS: Use the U.S. Customary system of units on falsework plans and shop drawing details.	TEMPOR. angle and
	CONCRETE: Superstructure concrete is bid as Concrete (Grade 4.0)(AE)(SA). Substructure concrete is bid as Concrete (Grade 4.0)(AE). If desired, the Contractor may use Concrete (Grade 4.0) in the footings and in the abutments below the construction joint. Bevel all exposed edges of all concrete with a $\frac{3}{4}$ " triangular molding, except where noted on the plans. Construction joints are optional, but if used, place only at locations shown, or at locations approved by the Engineer.	strue Galve with over slotte eleme are in th Leav diap the L
	REINFORCING STEEL: All reinforcing steel dimensions are to the centerline of bars unless otherwise noted. All reinforcing steel, except the spiral bars, shall conform to the requirements of ASTM A615, Grade 60. Spiral bars may meet the requirements of either ASTM A615 (Gr. 40 or 60) or AASHTO M32, and are included in the bid item "Reinforcing Steel (Gr. 60)". Where non-coated bars come in contact with epoxy coated bars, they need not be coated.	an a nuts, Conti diapi diapi the i the l be <u>s</u>
File: <i>kab69901bbr0106-002.dgn</i> Plot Date: 02-APR-2024 18:36	BRIDGE DECK GROOVING: After the bridge deck has cured, transversely groove the deck in accordance with KDOT Specifications. For phased construction groove each completed phase before opening to traffic. Align the grooves from each adjacent phase across the bridge deck without jogs or discontinuities. For skewed bridges all grooving will be perpendicular to the centerline of the bridge.	ERECTIO detai Bure begii subn Prof the L No s erect

Plotted: Jake.Pfannenstiel@ks.gpMot Location:

GENERAL NOTES CONTINUED

RESSED BEAM CONCRETE: Use air entrained concrete with ect course aggregate as specified in the KDOT Special evisions. The release strength and 28 day ength requirements shall be as noted on the plans. omit mix designs to the Bureau of Materials and search for approval.

R: Construct the finished deck to plan grade by ying the depth of the fillet over the beam to provide prestress camber, concrete dead load deflection and, necessary, vertical curvature. After the prestressed ms are erected measure the camber in the field by ing a profile of each beam. Correct any variation ween the actual camber and concrete dead load flection shown in the plans by varying the depth of concrete fillets over the beam so that the finished or is constructed to the theoretical grade. The imum depth of the slab over the beam shall be $9^{1/2}$ hes. Prior to shipping, the camber shall be no ater than the design camber plus $1^{1/2}$ ". The design mber is equal to the 50 day camber shown in the ms.

e theoretical amount of concrete required for the ets is 13.9 C.Y. This amount of concrete is included the Summary of Quantities. Any additional concrete uired to construct the fillets will be <u>subsidiary</u>.

RARY DIAPHRAGMS: Use ASTM A709 Gr. 36 steel for all les and channels for temporary diaphragms. All bolts, nuts, washers for fasteners shall conform to the heavy hex uctural requirements of ASTM F3125 Gr. A325, Type 1. vanize the angles, bolts, nuts, and washers in accordance the KDOT Specifications. Use hardened steel washers any oversized holes. Use $\frac{5}{16}$ " plate washers over any ed holes along with hardened washers under the turned nents. Use the turn-of-the-nut tightening method. DTI's not required. Install the temporary diaphragms, as shown the details, prior to placing any superstructure concrete. ive the temporary diaphragms in place until the concrete phragms and deck have cured. Remove the angles from beams and fill the holes in the prestressed beams with approved epoxy grout. The bent plate diaphragms, angles, bolts, and washers shall remain the property of the tractor. Submit shop drawings of the temporary phragms to the KDOT Bridge Section for review and proval. The material, equpiment, and labor necessary for installation of the temporary diaphragms, including filling bolt holes, shall not be paid for directly, but shall <u>subsidiary</u> to the bid item "Prestressed Concrete Beams".

ON PLANS: This is a Category B Structure. Submit ailed Erection Plans to the State Bridge Office (or reau of Local Projects) at least 4 weeks before inning the erection process. Portions of the pmitted details shall bear the seal of a licensed of essional Engineer. Identify, on the Erection Plans, Erection Supervisor required by KDOT Specifications. structural erection work will begin without approved ction plans. DEMOLITION PLANS: This is a Category B Demolition. Su detailed Demolition Plans to the Field Engineer at lea 2 weeks before the demolition meeting. Identify, on the plans, the Demolition Supervisor meeting the requirements of the KDOT Specifications. No Demoliti work will begin without approved Demolition Plans. A Licensed Professional Engineer is not required.

TEMPERATURE: The design temperature for all dimension 60 °F.

QUANTITIES: Items not listed separately in the Summary of Quantities are <u>subsidiary</u> to other items in the proposal.

CAUSEWAY: If the Contractor chooses to build a causeway for bridge construction purposes, the Contractor shall obtain any required U.S. Army Corps of Engineers Se 404 Permit, Kansas State Board of Agriculture Permi Kansas Department of Health and Environment Section Permit, Kansas Department of Wildlife Parks, and Tour Permit, or any other permit required by law for cause construction. Obtain the permit in a timely manner so as not to delay the completion of the project.

CONCRETE PLACING SEQUENCE: The sequence of placing concrete in the slab and curbs shall be as shown, or the Contractor may submit an alternate placing sequen for review. Submit the alternate placing sequence to the Engineer at the Preconstruction Conference. Inclu the proposed rate of concrete placement in C.Y./h, the plant capacity, placement direction, construction joint location, a description of the equipment used in placing the concrete, proposed admixtures, and the quantity of concrete in each placing segment. Any additional cost for the Contractor's alternate plan of placing concrete including admixtures, shall be at the Contractor's expense and shall be considered subsidiary to the bia item, "Concrete (Grade 4.0)(AE)(SA)". Approval of the Contractor's alternate sequence is required prior to placement of concrete in the deck.

Place and hand vibrate all concrete for the pier diaphragms and the abutments above the construction joints to the bottom of the deck just prior to the normal paving train operations. Do this work in a manner to avoid a cold joint in either the abutments or in the diaphragms.

		STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
		KANSAS	75-63 KA-5699-0I	2024	31	122
ubmit 1st	CONSTRUCTION JOINTS: Th	e constru	uction joints shown are)		
he	optional with the Contrac	ctor. If	used, place the	-		
tion	locations approved by th	he Engin				
	EXISTING STRUCTURE: Pla	ns of th	e existing structure are	on		
ns is	file and available for ir at the State Bridae Offi	nspection ce, KD01	n by qualified bidders F, Eisenhower State			
	Office Building, 700 SW	l Harris	son, Topeka, KS.			
f	REMOVAL OF EXISTING ST	RUCTU	RES: Removal of existing			
	Existing Structures", Lu	i ing dic Imp Sum	All materials removed	-		
/	trom the existing struction the Contractor. Remove	cture sha this ma	all become the property of terial from the site.	•		
ection			rafaanianal Engineering t	1		
it, 1 401	ralsewurk Plans: A lice design the falsework de	ensea Pr etails. D	Details shall bear the	1		
rism	seal of a licensed Profe electronic plans conform	essional mina to S	Engineer. Submit Section 105 of the			
ЭWДУ	Standard Specification	with der	tails in compliance with			
	πουτ σρεστισαποπό Το	1110 I 10	IG LIIGIIIGEI I UI TEVIEW.			
g	FALSEWORK INSPECTION: 7	his pro	ject has falsework plan red "Category 2" by KDOT	-		
nce	specifications. If falsev	vork def	ficiencies or variations			
ıde	trom the approved and falsework design Engin	sealed eer of F	pians are tound,the Record will provide writte	n		
)	approval of the changes. Contractor the falsewor	. If for k become	the convenience of the es "Category I" by the use	;		
ng	of non-typical supports;	then the	inspection and review			
f` -	at no cost to the State.	"Categor	y 2" falsework			
е,	inspection is not paid f to other bid items.	or direc	tly, but is <u>subsidiary</u>			
1		chaur	on the design stars			
	horizontal dimensions u	nless off	nerwise noted. Make			
	necessary allowances fo	or roadw	ay grade and cross slop) C.		
	ASBESTOS INFORMATION: S	Samples	of this structure were			
	tested to determine the Materials (ACM) present	amount of	of Asbestos Containing	are		
	listed below:		00000000000000000000000000000000000000			
	Concrete 0%					
	Date of Report I	1/09/20	021			
	For any result above an	eater the	an 1%, abatement shall he	perfo	rmed	
	according to KDOT Spe	cificatio	ns. Results less than 1%	requ	lire	
	Ę	3				
	-	2 NO. DA1	TE REVISIONS		BY	APP'D
	Ĺ		ANSAS DEPARTMENT OF TRA			
			GENERAI NUT	ST FS	u. 201+8	0.JZ
		ι	JS-75 over Cheyen	ne C	reek	
	ا ا	Proj. 7	5-63 KA-5699-01 OF SCALE	Mont	gomer	yCo.
		DESIGNED DESIGN CK.	CEM DETAILED CEM QUANTITI CFB DETAIL CK. CFB QUAN.CK	ES CE	M CADD B CADD CK.	KMS CFB
	I	KDOT Gra	phics Certified 04-02-2024	5	Sheet No.	3/



							STATE	PROJECT NO.	YEAR SHEET NO	D. TOTAL SHEETS
153+30.00 21	P.1. € Sta. 257+33.9 ∧ = 1°∩3′ 50″ (RT)	92 (Bk.) = 🖻 Sta. 157+33.86	P.O.T. ₱ Sta. 16 N 105 815 282	52+99.99 = © Sta. 2 F 19511153.243	262+00.00		KANSAS	75-63 KA-5699-0I	2024 32	122
	N 105,349.157 E	19,511,151.410	1. Set 5/8"x 12" r	rebar	0.3' Deep					
	1. # 0ffset 0.00 2. Not Set		2.578" rebar (1F 3. North-south fe	nce line	48.8' SE 60.0' E					
			4. North-south fe	nce line	59.3′W					
a. 155+99.25	P.T. € Sta. 258+68.	.55 = B Sta. 158+68.49			AE OO = R Sta IEO AE			PAA+CPCZ = POCR	Sta 111+62 6	7
2	N 105,483.791 E 19 1. B Offset 0.00'	9,5/1,/5/.939		N 104,660.284	=45.02 = 4 510.150+43 E 19,511,153.700	N /	C. & STA. Z 04,077.977	E 19,511,147.390	510. 144+02.01	/
	2. Not Set			1. B Offset 5.00' 2 Not Set	Rt.	/.橙 2 M	Offset 0.00	0' Rt.		
				2. 101 301		<u> </u>	01 301			
		John. C. I	Braum	P.R.C. & Sta. 24	7+96.27 = & Sta. 147+9 - 19511150588	96.26				
		TOL L	ot I, S RIJE	1. B Offset 2.87'	Rt.					
			S, MISE	2. Not Set						
<u>)6 Exist. Perm. Esmt./</u> 93′@		+50.02 Exist. Perm. Esmt.						Scale	/" = 50'	
		₹ 305.00° €			Casey A	. Lair, et al.				
		+05.02		+99.34 Exist. R/	<u>W =</u> 70L Sec. 36,	_ 3E'/4, T34S, RI3E				
6.50 REMOVE		€ Exist. Perm. 205.00' €	Esmt.	/ 100.00 \$						
8–2.69 (001) Reinf. Conc. Deck	Б - +50.02 Exist. R/W		A A A A A A A A A A A A A A A A A A A							
& Haunched (RDGH)	Exist. Perm. Esmt.	$\square \square $	ap in in	+10.52 E	xist. R/W					
	Ĵ //0.00 €			89.18 4	+00.00 R/W	+01.40 Exist.	R/W_			
	Ę.				120.00′€	/ 72.47′ €		+00 31 E	ivict D/W	
X	······································	Telephone Cable AT&				Construction			<u>XISI. I\7 W</u>	
9.68 Exist. R/W = / ist. Perm. Esmt.					×		mits		740	
9.93' ¢		L L Running	+0	0.02 Exist R/W	Exi	st. R/₩-		Telephone Cable AT&T		
in man man man	man (1)			J.00 ¥				+6	740 68.49. R =	
<u>ge Exist. US-75-</u>	.250		3 .4	.2	556				58.55 Q	
				Prop. Project = 🖉 B	ridge-				<u> </u>	
				+63	.33 Exist. R/W			8.55 68.4		
				75.	61' 2 0	<u>></u>			7 <i>40</i>	
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25 Exist R/W				AT PUN -	Const	ruction Limits				
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+80.02 Exist. R/W Exist. Perm. Esmt.		eut.	⊂ 75.00′€				59.02' 4	\mathbb{E}		
75.00′ €	te			+00.00 R/W			- 04			
© Sta. 25/+86.52 CONS		a Jue		/40.00′€	Durguna E Maganar T	Fuct				
Br. No. 75-63-2.69 (106	E Co	Peri	+00.02	2 R/W = T	$OL Lot 4 \& W'/_2 SE'/_4$	$SW^{1}/_{4}, \qquad \underline{\mathcal{Q}}$	CURVE DAT	<u><u> 4</u> <u><u>4</u> <u>CU</u></u></u>	RVE DATA	
Concrete Beam Continuou		vist.	Exist.	Perm. Esmt.	Sec. 31,T34S,R14	E PI St	a. 254+64.60	6 (Bk.) = Pl Sta.	257+33.92 (B	3k.) =
(PBMC) 44' Roadway	<i>st. F</i>		140.00			_ =	253+30.0 1°03′ 50″ (LT	$\Delta = / %$	255+99.29(A) 03150"(RT)	.hd.)
						R = T =	14,500.00' 134.63'	R = 14 T = 13	¹ ,500.00' 34 63'	
		73(73)	73(73)		PROJECT UTILITY OWN	VERS L = .	269.26	L = 26	;9.26′	
					AT&T Distribution	E = Sune	0.63' r = N.C.	E = 0. Super :	63' = N.C.	
					800-778-9140	,		Serlevel	 Datum NAVD I	988
							२			
					HISTODIO UIOUNNATED		2			
					Mike Dovle who has 15	Vears knowledge	NO. DATE		BY BY	APP'D
					of the site, stated that t	he has never	Br. No. 7	5-63-2.69 (106)	Sta. 251+	86.52
74 Sec. 6, 1355, R14E ,485.888		N 174 COR. Sec. 1,1355, RI3E N 104,985.066 E 19,508,524.842			seen water over the hig bridge site. In 2007 or	nway at the 2008, water		CONTOUR M	IAP	Q
n PEC LS 65 ID Cap	0.2' Deep	I. Found US Army COE 4" Brass D 2 2 625 12/1t (West) of R Stall	<i>isc</i> 5.3+64.34 NW X= 9∩°	0.5' Deep 06'26'	did come over the high	Vay		STID OVER UNEYE	Manter	
ss road	11.0' SE	3. 60d nail and whiskers in 36" he	Ige tree	22.9' N	of the bridge.		SHEET NO. O			
cess road crossing	150.0′ NE	4.60d nail and whiskers in 36" had	CKDERTY TREE	25.3 5	E	lev. = 746.0	DESIGN CK.	CFB DETAIL CK. CFB QUAN.	CK. CFB CADD CK	K. CFB
							KDOI Graph	iics cei uneu 04-02-202	T Sheet No	• 32



		<u>PILING</u> Once t achiev determ	he required in the required in the second se	resistance and hould cease to field based or	l penetration avoid dama observed L	n on firm sand age to the pile. blow counts an	lstone of the Final pile ti d bearing f	e Cheyenne Cr p elevations s `ormula calcule	eek Sandstor hould be ations.		
		All H-p elevati sandsi comme to the	pile will be ur on 725.2. wit tone. After H- rcial grade co required res	ncased. On Abb th no driving pile placement pncrete and th istance.	utment #1 th necessary. (t the pre-dr. nen loose sa	he H-pile is to Only tapping the illed hole shoul and to the top c	be placed at e H-pile once d be backfi of hole. Abut	fter pre-drilli e to confirm lled with 3.0 ment #2 will i	ng to an on competent feet of be driven		
					FE US	5-75	250				
					= Q	Prop. Project					
		DRILL Excave cause will ne overbu ground	ED SHAFTS: ations for dr caving and c ed to be set irden, and gro dwater is not	illed shafts w collapse of the into bedrock a cundwater doe sufficiently so	ill need to L excavation maximum s not enter ealed off or	be cased. Water walls. Casing w of 1.0 foot, les the rock socker if there is wo	movement w will be requi s if possible t. A wet pou ater flowing	vithin the man red for drille e, to reduce th r may be anti into the exca	tle could ed shafts. Ca ne risk that cipated if vation.		
	Note ti clean ready	hat the shafts and relatively to pour.	have end bed flat. Allow n	aring compo o loose mate	nents and it is erial within the	important ti footing whe	hat the bottom en the footing	socket be is considere			
	Shale Place excavo	Shale in the Cheyenne Creek Sandstone could degrade rapidly in the presence of air and water. Place the reinforcing steel and concrete no more than eight (8) hours from completion of the JC excavation of the shaft to minimize the exposure time of the shale to air and groundwater.									
									To El		
		740									
		710		Cheyenne Creek Sandstone Member							
t Location: <i>Bridge</i>		680		Captain Creek Limestone Member							
						2	50				
s.goMo			21			STA	NDARD	GEOLOGIC	SYMB		
otted: Jake.Pfannenstiel@ks le: <i>ka569901bbr0106-008.dgn</i> ot Date: 02-APR-2024 18:36	024 18:36		Clay or Underclay		Caliche		Weathered Shale		Limestone		
	02-APR-2		Silty Clay		Silty or Clayey Shale		Sandstone		Cherty Limestone		
	lot Date:		Silt] Limy] Shale		Shaly Sandstone		Shaly Limestone		
	Pl.		Sand		Black or Fissile Shale		Gypsum bed	·····	Sandy Limestone		
			Gravel		Sandy Shale		Dolomite		Bentonite		
		Boulders		Gypsiferous Shale		Cross-bedded Sandstone		Loess			







KDOT Graphics Certified 04-02-2024 Sheet No. 36


ELEVATIONS									
	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Elev. H	Elev. J
Abutment #I	741.99	745.45	745.57	745.71	743.99	751.25	750.88	750.67	748.67
Abutment #2	739.42	742.88	743.01	743.14	741.42	748.68	748.31	748.10	746.10

<u>1</u> <u>1</u> <u>1</u> Locat tiel@ks.gpMot ..dgn 18.37 Plotted: Jake.Pfannenstie File: *ka569901bbr0106-021.a* Plot Date: 02-07218





Plotted: Jake.Pfannenstiel©ks.gp&lot Location: *Bridge* File: *ka569901bbr0106-022.dgn* Plot Date: 02-APR-2024 18:36

Reinforcing in Top

PLAN

Edg

							1
lge clearance is 2" unless otherwise noted.	STATE		PROJECT	NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75	-63 KA-	5699-01	2024	38	122
<u> </u>							
re /)							
$\frac{1}{14} = \frac{1}{14} $	ו 4A5 (Тур.)					
		#	<i>±5A/5</i>				
╴╫╶╒╪╔╡╒╞╗╴┫╶╻┥╺╪╪╪╪ ╴╫╶┧┽╷╧╽╶┽╷╼╏╺╸╏╸╴┥╴╸╷╼╶┝╴╴┥╴╸╎╸╻┥╸╵╸ <mark>┽╶╞╡</mark>		<u>#5A/7</u>	<u>(Typ.)</u>				
		71	<u> </u>				
		3 Ea.	Spa				
		= 2	2'-2"				
-8" '-4" 8 Spa. @ ¹ /2" = 7'-8" '-4"		2"					
12'-0"							
			<u>5</u>				
. # .	4A.5 (Tvn.)	utme				
		<u>≠5A6</u>		•			
	+ + + +	<u>#5A8</u> #5 <u>7</u> 7 −					
		<u>≠5A9</u>		2 			
		3 Eq.	Spa				
		= 2'-	21/2"				
8" 1'-4" 8 Spa. @ 1/2" = 7'-8" 1'-4"		2"					
9'-0" 3'-0)" 🗲						
	>						
	3						
	2 NO			REVICIONIC		RV	
Ĺ		KANSA	S DEPART	MENT OF TH	ANSPOR		
l l	sr.No	5. (5-6	o3-2 . 69	9 (106)	S+0	a . 251+8	6.52
			ABUT	MENT DE	ΓAILS		
ł	Proj.	75-63	KA-56	599-0I	Mont	gomer	yCo.
	DESIGNED	CEM CEM CFB	DETAILED DETAIL CK.	CEM QUANT	TIES CEN CK. CFI	A CADD B CADD CK.	KMS CFB

KDOT Graphics Certified 04-02-2024 Sheet No. 38

Gra



Plotted: Jake.Pfannenstiel©ks.gp&lot Location: *Bridge* File: *ka569901bbr0106-023.dgn* Plot Date: 02-APR-2024 18:37

Note: Elastomeric Bearing Pads (Durometer Hardness 60) and Preformed Expansion Joint Filler (Type B) shall be included in the unit price bid for "Prestressed Concrete Beams".

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	75-63 KA-5699-0I	2024	39	122	

† 4"x 4" fillet

	#5A/6 or #5A/7
	#5A/8, #5A22, #5A25 (in pairs), or #5A42
	#5A/9, #5A23, #5A26, #5A27, #5A43, or #5A45
#8ADI	+5A20, #5A23, #5A26, #5A27, #5A43, or #5A45
	#5A21, #5A24, #5A25 (in pairs), or #5A44
#8A2 (Phase I #8A32 (Phase I #8A33 (Phase I #8A33 (Phase I	mechanical coupler) 2) 2 mechanical coupler)
#5A7 or #5A9	
#8AI (Phase I)	
#8A2 (Phase #8A32 (Phase #8A33 (Phase	mechanical coupler) 2) 2 mechanical coupler)
#8A2 (Phase 1 #8A32 (Phase 1 #8A33 (Phase 1 THRU ABUTMENT	mechanical coupler) 2) 2 mechanical coupler)
#8A2 (Phase 1) #8A32 (Phase 1) #8A33 (Phase 1) THRU ABUTMENT Beams)	mechanical coupler) 2) 2 mechanical coupler)
#8A2 (Phase 1 #8A32 (Phase 1 #8A33 (Phase 1 #8A33 (Phase 1 #8A33 (Phase 1	mechanical coupler) 2 mechanical coupler)
#8A32 (Phase / #8A33 (Phase / #8A33 (Phase / Beams)	mechanical coupler) 2) 2 mechanical coupler)
#8A2 (Phase , #8A32 (Phase , #8A33 (Phase , Beams)	mechanical coupler) 2) 2 mechanical coupler)
#8A32 (Phase , #8A33 (Phase , #8A33 (Phase , Beams)	mechanical coupler) 2 mechanical coupler)
#8A32 (Phase , #8A33 (Phase , #8A33 (Phase , Beams)	mechanical coupler) 2) 2 mechanical coupler)

KDOT Graphics Certified 04-02-2024 Sheet No. 39



CENERAL NOTES	STA	re	PROJECT NO.		YEAR	SHEET NO.	TOTAL SHEETS
	KANS	AS	75-63 KA-5699	-01	2024	40	122
h KDOTSpecificationABUTMENTAGGRfabric.Place the Class 2to the limits scompacted materialcompact & graal so that the topcompact & graompletely enclose thealternating layn pipe and couple toas shown. Placenon-perforated pipe toGuide post andnon-perforated pipe toGuide post andnon-perforated pipe toGuide post andnon-perforated pipe toGuide post andnon-perforated and that theDrain with theck fill to the elevationBRIDGE BACKWALch methods.BRIDGE BACKWALKDOTSpecifications	EGATE shown c ade the ckwall p vers of ace the d coars d coars Slope P e geote LL PRO ective S s in acc s recom	DRAIN on the B cohesiv rotection aggrege outlet pi ce aggre rotection xtile TECTIO System 1 cordance on the d	: The Bridge ridge Excavat e soil to the li n, geofoam, geo ate and base pe, the CMP, a gate are <u>subs</u> gate are <u>not</u> r n. Enclose the of the approac e with KDOT	Contract tion She mits sho ptextile, course f course f co	tor sh et. Ba own. H perfor reinfo backfi backfi o this if th Abutm Abutm ations ents a	all excav ackfill, Place ated pip rcement ill. bid iten e CMP ent Aggro adutmen abutmen and wing	ate ne, n. egate ridge ts e s
at no charge i	to the s	tate.		any aan	luge t		
ITOD or approved material. Compact the a	butment	backfili	. See the KDC)T Spec	ificati	ions.	
polyethylene tu	pe and Ibing co	non-per onformir	forated outlet og to the KDO	t pipe sh T Specit	nall be ficatio	corruga ons.	ted
M D6817 EPS 12. Fit the CMP end this material recommended by the Fit the CMP end to prevent the the outlet pipe Place Coarse	end sec entranc and th aggrege	tion wit ce of ro ne end s ate at th	h 1/4" galvani dents. Seal the section with a ne outlet end a	zed mes e joint b joint se is showr	sh sci betwee ealer. n.	reen en	
e Prequalified COHESIVE SOILS:	Grade	the both	tom surface c	of the ex	cavat	ed	
ification type of soil. T ompact of CL, CH, ML System with o	as sho he soil or MH a minim	wn. Bac will hav accora oum pla	ckfill this area e a Unified S ing to ASTM sticity index c	i with a coil Class D2487. of 13. Co	cohe sificat Class ompact	sive tion sification t	
nd use non-perforated the material to index cannot index	b Type , be met a ind com	A, MR-90 add ana paction	<i>Specification of mix Bentonit so that the Pi</i>	ns. If th te, to the !≥ 3.	e plas soil _l	sticity prior	
<u>EWS</u>				01-	0	Cutaur	
Top of Slab Rest Image: Slab Rest	Soil Co Soil Co International Solution	p Li Ag Class Geosyn Min. Min. Min. Class Clas	and a second sec	Dra n. vp. <u>vation</u> <u>e Draina</u> <u>eosynthe</u> above pi	n <u>age</u> h <u>tics</u> pe	e Geosynti	hetics
OF QUANTITIES (2 Abutments) e Drain 138 Cu.Yds.	7 6 5	12/11/18 2/4/15	Corrected std.t Modified Per 201 Removed SB-3	oase file r 5 Specific	name ation	MLL JPJ	JPJ CER CER
rotection System 106 Sq. Yds.		4/7/14	Current Release Geofoam Type C	hange		JPJ JPJ	CER
s <u>subsidiary</u> to Abutment Aggregate Drain ipe 128 Lin. Ft.	2	8/20/13 7/23/12	Geofoam Dimensi Added SoliCap to	on Change o Summary)	JPJ JPJ	TLF TLF
20 Lin. Ft. 16 Lin. Ft.	NO. 	DATE KANS	RE AS DEPARTMENT	VISIONS F OF TRA	NSPOR	BY	APP'D
32 Cu. Yds.55 2 Subsurface Drainage)515 Sq. Yds.56 Course Reinforcement)413 Sq. Yds.44 Cu. Yds.	Br.	No. 75	-63-2.69(106 ABUT AGGREGA (Stream, 5-63 KA-56	5) FMENT ATE DR Drip-L	S ⁻ AIN .ine)	ta.251+8	36 . 52
<u>subsidiary</u> to Slope Protection	SHEET DESIGN	J. INO. (NO. OF ED J	J-OJ NA-DO SCALE PJ DETAILED JP				yuu. Raa
282 Sq.Yds.	KD01	ск. Graphic	IDETAIL CK. s Certified 04-0	1 QUAN. CK . 02-2024	 	icadd ck.	40







 $(\frac{3}{8}" \emptyset \text{ smooth or deformed bar})$

Spiral reinforcing shall meet the requirements of ASTM A615 Grade (60 or 40) or ASTM A82.

Spiral Spacer Bars:

- 1) Minimum section modulus = 0.008 in.³



2) 4 required per spiral

TABLE OF ELEVATIONS								
-	Top of	Exist. Ground	Top of	Bottom of	Bottom of	Drilled Shaft	Top of Exist.	
	Shaft Elev.	Line Elev.	Rock Elev.	Casing Elev.	Shaft Elev.	Length (ft)	Footing Elev.	
D. /	731.91	730.27	726.3	7/3.7	703.66	28'-3"	715.46	
. 2	730.83	731.60	716.8	714.1	704.00	26'-10"	713.54	

L OF REINFORCING STEEL Grade 60 Non-Epoxy alfor Pier #Land Pier #2 sidiary to Drilled Shafts wn for Information Only								
k	Size	Number	Length					
2	8	48	28'-0"					
3	8	48	26′-7″					
	7	96	6′-9″					
1	3/8"Ø	4	<i>† †</i>					
5	3/8"Ø	4	<i>† †</i>					
5	3/8"Ø	8	<i>++</i>					

tt See Bending Diagram

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-0I	2024	41	122

DRILLED SHAFTS: Construct the drilled shafts using the cased method. A permanent casing is required. All excavation, concrete, reinforcing steel, pipes for Sonic Testing, casings, labor, and incidentals necessary to complete the shaft as shown on the details and as directed by KDOT Specifications shall be included in the bid item "Drilled Shafts (48")(Cased)". Use Grade 4.0 Concrete in the drilled shaft. In no case shall the bottom of the drilled shaft be placed higher than the elevation shown unless otherwise directed by the KDOT Geologist.

Drill an Investigative Core Hole at the locations shown on the plans. See KDOT Specifications.

If the location of the top of the shaft is such that the casing cannot be overtopped to remove concrete impurities, provide extra casing length to over-pour the concrete in the shaft and chip back to the plan elevation of the top of the shaft.

If the permanent casing is to be corrugated metal pipe (CMP) then it will be galvanized.

- BOTTOM OF TEMPORARY CASING ELEVATION: Bottom of casing Elevation shown is an approximation but is anticipated to penetrate at least one foot into the rock. Elevation to be determined in the field by the Engineer.
- ROCK SOCKET LENGTH: Provide a minimum Rock Socket Length below the bottom of casing as shown. Contact the KDOT Bridge Design Section if not able to provide the minimum Rock Socket Length.

DRILLED SHAFT BACKFILL: Backfill the annular space between the temporary casing and the permanent casing with granular material as defined in the KDOT Specifications.

SONIC TESTING: Equip all drilled shafts with piping to allow sonic testing to be done. Install pipes at locations shown on the plans. All wet pours will be tested. Also, the Engineer has the option to require sonic, non-destructive, integrity testing at any location of concern. Sonic testing shall be paid for at the unit price set for "Sonic Test" (Drilled Shaft) (Set Price). If the sonic testing indicates defective concrete in the shaft, the Engineer will measure the first sonic test for payment, and the Contractor is responsible for subsequent sonic testing of that shaft. Report test results directly to KDOT's Chief Geologist. No work will be done above the top of drilled shaft without the approval of the Chief Geologist.

3							
2							
1							
NO.	DATE		REVISIONS			BY	APP'D
	KANS	AS DEPART	MENT OF 1	TRANS	PORTA	TION	
Br.	No. 75	-63-2.69	(106)		Sta.	251+8	36.52
		DRILLED	SHAFT	DET	AILS		
Pro	oj.75-6	53 KA-56	99-01	Мс	ontga	omer	yCo.
SHEET	NO. OF	SCALE)			
DESIGN	NED CE		CER QUAN				KMS CEB
KDO	T Graphic	s Certified	04-02-202	24	She	et No.	4/



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	ELEVATION TABLE						
	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E		
Pier I	731.91	732.91	739.91	740.91	744.65		
Pier 2	730.83	731.83	738.83	739.83	743.58		

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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-0I	2024	45	122

GENERAL NOTES

Fabricate the precast prestressed beams in accordance with the KDOT Specifications. Submit shop drawings in accordance with the KDOT Specifications except nine sets are required.

Use air entrained concrete. The KDOT Materials Section shall approve the mix design. Unless otherwise shown on the plans, f'c = 5,000 psi and f'c at

Use reinforcing steel conforming to the requirements of ASTM A615, Grade 60. The reinforcing steel shown shall be uncoated unless otherwise indicated.

Use 0.6" nominal diameter (unless otherwise indicated), uncoated, seven-wire, low relaxation prestressingtendons conforming to the requirements of ASTM A416.

Use bolts having an ultimate strength 50% in excess of the manufacturer's safe load. All items (except the tendons) cast-in or inserted in prestressed beams shall be epoxy coated or galvanized. Show Formed Holes on shop drawings. All bolts, nuts and washers shall be subsidiary to the bid item, "Prestressed Concrete Beams".

Show on the shop drawings any hardware, holes or other appurtenances that are required to be incorporated into the girder to construct the girder or for any temporary works needed to construct the bridge (e.g. safety railing pockets).

After beams are in the final position, remove lifting devices. See "Lifting Device" detail below. Removal of the lifting devices, coating and grouting shall be subsidiary to the bid item: "Prestressed Concrete Beams".

Use elastomeric bearing pads conforming to the KDOT Specifications. Bearing pads and Type B expansion joint material shall be subsidiary to the bid item. "Prestressed Concrete Beams"

The beam lengths shown on the design plans are net lengths measured horizontally along the beam centerline. The beam manufacturer shall make necessary allowances for grade, and for shortening due to elastic shortening,

The beams shall reasonably conform to the lines and dimensions shown on the design plans and be within the tolerances specified in the latest edition of Prestressed Concrete Institute's, "Manual for Quality Control for Plants and Production of Structural Precast Concrete Products", except as modified by this sheet or the KDOT Specifications.

Bevel all exposed edges of beams except the tops and ends with a $\frac{3}{4}$ " triangular molding or round the edges to $a^{3}/4$ " radius. Round the angle of intersection between the web and the flanges.

Apply an initial force of 1,000 to 3,000 pounds to each strand to take up any slack in the cables. Unless otherwise noted on the plans, apply a force of 31,000 pounds to each strand. Stress harped strands to a magnitude such that they are tensioned to 31,000 pounds after they are in position.

Strike off level and apply a wire brush or stiff broom finish to the tops of the beams. Apply the finish transverse to the length of the beam.

(Note: When using precast panels for deck construction, the outside 5" on each side of the top flange shall be finished smooth with a steel trowel.) At approximately the time of initial set, brush the top of the beam transversely with a coarse wire brush to remove all laitance.

Fill trapped air holes and surface voids on the exterior face of the exterior beams with an approved concrete masonry coating. This work shall conform to KDOT Specifications. This work shall be subsidiary to the bid item, "Prestressed Concrete Beams".

Detension strands in a sequence which minimizes lateral eccentricity. Show the method and sequence of strand release on the shop drawings. Use extreme care when lifting, handling, storing and transporting beams. Use the lifting system shown or an alternate system approved by the Engineer. Keep the beam in an upright position at all times. Support the beam on bearing points positioned directly below the designated lifting points or designated bearing

Do not place the bridge slab before the beams are 28 days old. Pour diaphragms as detailed in the bridge plans.

Stencil with paint the following information on the webs approximately 5'-0" from one end of the beam: date of concrete placement, date of strand release,

6	8/16/18	Note Updat	е		MLL	JPJ
5	5 6/4/15 Define Beam Protection					CER
4	2/21/12	Change Bec	iring 🗈 Thickn	1855	JPJ	TLF
3	9/22/10	Prepare fo	or WWF option		JPJ	TLF
2	7/22/08	Revision fo	or Formed Hole	es only	JPJ	KFH
I	2/28/07	Seperated	Beam Section	S	JPJ	KFH
NO.	DATE		REVISIONS		BY	APP'D
Br.	Kans No. 75- STA	as departi -63-2.69 NDARD F	ment of tr (106) PRESTRES	ANSPORTAT Sta. S DETAI	110N 251+8 LS	86 . 52
Prc	oj. 75-6	63 KA-56	599-01	Montgo	mer	yCo.
SHEET	NO. OF	SCALE	APP'D			
DESIGN	NED CEI N CK. CF	M DETAILED B DETAIL CK.	CEM QUANTIT	K. CFB CA	ADD CK.	KMS CFB
KDO	T Graphics	s Certified	04-02-2024	Shee	et No.	<u> </u>



Bridge Location: 1 iel@ks.gpMot .dgn fannensti -0106-017.. ted: Jake.Pf *ka569901bbr*(

Weld	ed Wir	e Fab	ric Ec	quivaler	רר זר
Size	3"	6"	9"	12"	
#3	0.440	0.220	0.147	0.110	0
#4	0.800	0.400	0.267	0.200	0
#5	1.234	0.617	0.4//	0.308	0
#6	1.761	0.880	0.587	0.440	0
	Weld Size #3 #4 #5 #6	Welded Wir Size 3" #3 0.440 #4 0.800 #5 1.234 #6 1.761	Welded Wire FabSize3"#30.4400.220#40.8000.400#51.2340.617#61.7610.880	Welded Wire Fabric EdSize3"6"9"#30.4400.2200.147#40.8000.4000.267#51.2340.6170.411#61.7610.8800.587	Welded Wire Fabric EquivalerSize3"6"9"12"#30.4400.2200.1470.110#40.8000.4000.2670.200#51.2340.6170.4110.308#61.7610.8800.5870.440

BILL OF MATERIAL
Item
Prestressed concrete beams (K4) End spans
Prestressed concrete beams (K4) Interior spans
The following quantities are given for information only and shall not paid for directly but shall be made <u>subsidiary</u> to the bid item "Prestressed Concrete Beams"
Beam concrete (f'c= 5,000 PSI) (per end span beam)
Beam concrete (f'c= 5,000 PSI) (per interior span beam)
Approx. Wt. per 58'-0" beam
Approx. Wt. per 83'-0" beam
0.6" Ø Prestressing strand (270 KSI low relaxation fy= 243 KSI)
Epoxy reinforcing steel (fy=60,000 PSI)
Reinforcing steel (fy=60,000 PSI)
Elastomeric Brg. pads (¾ x 8" xl'-10")
l"Ø Formed Hole
Lifting devices
Bearing plates (\$x 15" x 1′−10")
Substructure Waterproofing Membrane









Plotted: Jake.Pfannenstiel©ks.gp&lot Location: *Bridge* File: *ka569901bbr0106-047.dgn* Plot Date: 02-APR-2024 18:36



			203'-0"						
			0.2				58'-()"	
	24 01							, 	
/./.	3'-2"	<	4'-4"	2'-5"	10'-3"		2'-5"	≺	
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98 Spa. @ I'-0" = 98'-0" (#5SI Spliced to #5S2 (Phase I) & #5S3 Spliced to #5S4 (Phase II))

97 Spa. @ I'-O" = 97'-O" (#4S5 Spliced to #4S6 (Phase I) & #4S7 Spliced to #4S8 (Phase II))

PLAN- BOTTOM OF SLAB



KDOT Graphics Certified 04-02-2024 Sheet No. 50



CAMBER: Construct the finished deck to plan grade by varying the depth of the fillet over the beam to provide for prestress camber, concrete dead load deflection and, if necessary, vertical curvature. After the prestressed beams are erected measure the camber in the field by taking a profile of each beam. Correct any variation between the actual camber and concrete dead load deflection shown in the plans by varying the depth of the concrete fillets over the beam so that the finished floor is constructed to the theoretical grade. The minimum depth of the slab over the beam shall be $9!_2$ " inches. Prior to shipping, the camber shall be no greater than the design camber plus $\frac{1}{2}$ ". The design camber is equal to the 50 day camber shown in the Dead Load Deflection plans. (8[|]/2" slab & rail) The theoretical amount of concrete required for the or Abutment #2 fillets is 13.9 C.Y. This amount of concrete is included Vertical curve haunch in the Summary of Quantities. Any additional concrete required to construct the fillets will be subsidiary. Profile Grade 8/2" <u>Slab</u> _____ Erection Camber minus I" Min. Dead Load Deflection Fillet Mid-Span VARIABLE FILLET DIAGRAM (Along ∉ of Girder) 0.033 000 000 069 Beam Camber at Release [©] 1 0.038 0.035 0.054 0.022 0.055 0.072 0.049 0.000 0.040 0.040 0.057 0.047 0.0/8 0.072 0.102 0.120 0.102 0.116 0.116 Beam Camber at 50 days [©] (Erection Camber) Location: Bridge 0.022 0.005 0.000 0.006 0.010 0.044 0.062 0.073 0.073 0.062 0.044 0.022 000 0.0/8 0.015 0.014 0.077 0.017 0.017 0.011 Dead Load Deflections® [©] $(8^{I}_{2}"$ Deck, Fillet & Rail) Plotted: Jake.Pfannenstiel©ks.gpMot File: ka569901bbr0106-048.dgn Plot Date: 02-APR-2024 18:37 10 Spaces @ 5.8'= 58'-0" 10 Spaces @ 8.4'= 84'-0" © Bearing Pier No. I BEAM CAMBER AND DEAD LOAD DEFLECTION Beam Concre ' `'c -c Note: Ordinates are in feet. • Note: Dead Load Deflections are downward.







25'-0" ^{>hase ||} 21'-0" Phase

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-0I	2024	52	122



* Includes superstructure portion of abutment concrete

CONCRETE PLACING SEQUENCE: Segmental, combined or continuous pours are allowed by an approved alternate placing sequence. Any discontinuous pour must stop at a construction joint short of a pier.

The Contractor may place the corral rail continuously from one end of the bridge to the other.

Place and hand vibrate all concrete for the pier diaphragms and the abutments above the construction joints to the bottom of the deck just prior to the normal paving train operations. Do this work in a manner to avoid a cold joint in either the abutments, deck, or in the diaphragms.

3												
2												
I												
NO.	DATE		REVI	SIONS	BY	APP'D						
	KANSAS DEPARTMENT OF TRANSPORTATION											
Br.	No. 75	-63-2.69	(106	5)	Sta. 251+	-86 . 52						
	DECK AUXILIARY DETAILS											
Prc	oj. 75-6	63 KA-50	699-	OI Mo	ontgome	ryCo.						
SHEET	NO. OF	SCALE										
DESIGN	NED CE NCK. CF	B DETAIL CK.		QUAN. CK.	CFB CADD C	K. CFB						
KD0	T Graphic	s Certified	04-02	2-2024	Sheet No	. 52						



Sheet No. 53



ISAS 75-63 KA-5699-01 2024 54 122	KANSAS



(With Curb)



NF= Near Face 3 2 NO. DATE REVISIONS BY APP'D KANSAS DEPARTMENT OF TRANSPORTATION Br. No. 75-63-2.69 (106) Sta. 251+86.52 🚆 32" KANSAS CORRAL RAIL Proj. 75-63KA-5699-01MontgomerySHEET NO.OFSCALEAPP'DDESIGNEDCEMDETAILEDCEMQUANTITIESCEMDESIGN CK.CFBDETAIL CK.CFBQUAN.CK.CFBCADD Montgomery Co. KDOT Graphics Certified 04-02-2024 Sheet No. 54



	:	STATE		PR	ROJE	CT NO.		YEAR	SHEE	HEET NO. TOT			
	K	ANSAS		75-63	KA	4-5699-0		2024	5	55	12	2	
	<u>L_</u>	BIL	L OI	- REII	NF	ORCING	STEF	EL			<u> </u>		
		E	DOX	y Co	n bat	end (Gr	- . 60)						
Sti	raiat	דר 1+ B	ars	<u> </u>			Rent	Bar					
lark	Size	Nur	nber	Lengt	h	Mark	Size	Nur	ber	Lend	1th		
A/	#8		6	29'-8	3"	AIO	#8	/	6	9'-	0"		
A//	#8	6	3	23'-3	3"								
A32	#8		6	33′-8	3"	RI	#7	2	28	9'-	3"		
A36	#8	6	3	27'-3	3"	R2	#7		4	5′-	7"		
PDI7	#8	8	3	19′-5	,"	R3	#7		812	7'-	7"		
PD20	#8	6	3	23'-5	5″								
						A6	#5		44	7'-	6"		
SI2	#7	/	22	59′-	0"	A7	#5		108	15'-	-8"		
						A8	#5		24	//′-	-9"		
RH	#6		24	8′-6'	"	A9	#5		12	*	-		
RI2	#6		2/6	9′-8′	"	A/5	#5		24	6′-	10"		
PDI	#6	/	68	4′-6′	"	A/6	#5		104	///-	· <i>O</i> ″		
S/5	#6	/	00	40'-	0"	A/7	#5		16	*			
						A25	#5	(8	4'-	0"		
A3	#5	/	6	29′-8	3"	A30	#5	(80	3'-9	9″		
A/2	#5		2	25'-1	/"	A3/	#5		104	5′-	2"		
A/3	#5		2	28'-3	3"	R5	#5	(8	6′-	6"		
A/4	#5	8	3	29′-8	3"	<i>R6</i>	#5	(8	10'-	-8"		
A18	#5		1	6′-11″	'	PD2	#5	(84	4'-	-4"		
A/9	#5		1	10'-0	"	PD6	#5	_	16	5′-	5"		
A20	#5	/	2	'-4"	,	PD7	#5		16	5′-	9"		
A21	#5		1	10′-8	"	PD8	#5		24	6'-1	, ,,		
A22	#5	6	3	5′-8″		PD9	#5		8	5′-	8"		
A23	#5		32	7'-/"		PDIO	#5		8	6′-	0"		
A24	#5	8	3	5′-9″		PDII	#5		12	6'-4	4"		
A27	#5	6	3	'-4"		SPI	#5		/90	4'-5	5″		
A34	#5	/	6	33′-8	3"	S/I	#5		122	40'-	-2"		
A37	#5		2	29'-1	/"	S14	#5		100	23'	-0"		
A38	#5	2	2	32'-3	3"								
A39	#5	6	3	33′-8	3"								
A42	#5		2	4′-8″									
A43	#5	8	3	5′-4″									
A44	#5		2	4'-10'	"								
PD3	#5		32	5′-8″									
PD4	#5		32	6′-8″									
PD5	#5	4	18	7'-/"									
DI4	#5	8	3	4′-8″		A5	#4	Ĺ	52	6'-7	711		
D15	#5	8	3	5'-2"		C/	#4		48	3′-	5"		
DI6	#5	/	2	5′-4″		R4	#4		812	4'-	-2"		
SI	#5		396	20'-8	3"	R7	#4		4	10'	-8"		
S3	#5		396	24'-8	3"								
S/3	#5	E	5/	21'-8)II	<i>R8</i>	#3	5	544	4'-	-4"		
						R9	#3	2	256	4'	-6"		
A28	#4		2	21'-2)//	RIO	#3	7	6	4'	-6"		
A40	#4		2	25'-2	2"								
C2	#4	8	3	<u>22'</u> -8	3"								
PD21	#4	4	4	19′-5	"								
PD24	#4	4	1	23'-5	5″								
S5	#4		392	20'-8	3"								
S7	#4		392	24'-8	3"								
S9	#4		304	45′-0)"								
sio I	#4	7	<i>'</i> 6	32'-4	<i>1</i> "								
		3											
		2											
<u>ı</u>				-		REVIS	IONS			BY	APP	′D	
		10.	DAIE										
		10.	KAN	ISAS DE	PAI	RTMENT	OF TRA	NSPOR	TAT		·~ -	• ~	
	Br	. Nc	KAN 6. 75	isas de 5-63-2	раі 2.6	rtment (59 (106)	OF TRA	NSPOR S†	TAT D. 2	10N 251+8	86.5	52	
	Br	r. Nc	KAN 0. 75	REINF	2.6	rtment (59 (106) RCING A	ND B	NSPOR S† ENDII	TATI a. 2 NG	DIAG	86 . 5 Rai	52 M	
	Br E P	r.Nc BILL	KAN 0. 75 OF 75-	REINF	2.6 0F	rtment (59 (106) RCING A 5699-0	ND B	INSPOR St ENDII Mont	TATI d. 2 NG	DIAG	86.5 RAI	52 M	
<u>'</u>	Br E P	r. No BILL roj.	KAN 0. 75 OF 75-	REINF		RTMENT (59 (106) RCING A 5699-0	OF TRA	NSPOR St ENDII Mont	TATI D. 2 NG <u>- </u> <u></u> <u></u> <u></u> <u></u> <u></u>	DIAG	86.5 RAI <u>y Co</u>	52 M D.	

Sheet No. 55



						STATE		PROJECT NO.	YEAR	SHEET NO
						KANSAS	75-6	53 KA-5699-0I	2024	56
		BILL (DF REIN	IFORCIN	G STEE]		
			(Gi	- . 60)	0 0122					
C.	traiat	t Bar	<u> </u>		Bopt	Pars				
 Mark		Numbe	r Lengt	h Mark	Size	Number	Lenath			
PCI	#7	96	///-9"	PBI	#7	8	20'-5"			
				PB2	#7	20	21'-8"			
PW/	#6	16	4'-10"	PBI	<u>) #7</u>	8	24'-6"			
PW2	#6	24	8'-8"	PB	/ #/	20	25'-8"			
PW3	#6	16	/'-/0"		 #5	28	7/ 0"			
PR4	#5	20	20'-4	<u> </u>	#5	8	8'-7"			
PBI.	3 #5	20	24'-6'	PB8	#5	8	8'-11"			
				PB9	#5	196	9'-0"			
PW4	#4	56	4'-10'	/						
PW5	#4	84	8'-8"	<i>PW7</i>	#4	120	3′-8″			
PW6	#4	56	7'-10		3/ 11 0			-		
FWO	#4	120	6'-6"	- P51	<u> </u>	8	*			
]		
Leng show	r <u>th of Bar</u> n in Table E	pled Reb	Dar	Coup	led End	gth of Bar wn in Table] Rebar	as			
Leng show	n in Table Cou, (Plac Con THF	as pled Reb e in Pha struction READED	oar ise II) REBAF	Coup (Plac Con SPLIC	led End e in Pha stuction) E SYST	gth of Bar of wn in Table Rebar se I EM				
Leng	th of Bar in in Table Cou (Plac Con THF	as pled Reb e in Pha struction READED Threa	ar se II) REBAF ded Re (Grad	Coup (Plac Con SPLIC e 60)	led End e in Pha stuction) E SYST	gth of Bar wn in Table Rebar se I EM				
Leng show	th of Bar in in Table Cou (Plac Con THF	as pled Reb e in Pha struction READED Thread ed Bar	ar se II) REBAF ded Re (Grad	Coup (Plac Con SPLIC e 60)	ed End e in Pha stuction) E SYST plices	gth of Bar wn in Table Rebar se I EM Bars				
Leng show	th of Bar in in Table Cou, (Plac Con THF nread Size	as pled Reb e in Pha struction READED Thread ed Bar	ar se II REBAR ded Re (Grad	Coup (Plac Con SPLIC e 60) Mark	Len show ed End e in Pha stuction) E SYST plices coupled Size N	gth of Bar wn in Table Rebar se I EM Bars Jumber L	ength			
Leng show TI Mark PB12	nread Size #7	as pled Reb e in Pha struction READED Thread ed Bar Number 28	ar se II REBAF ded Re (Grad s Length 2'-9"	Coup (Plac Con SPLIC e 60) d Mark PB3	Len show e d End e in Pha stuction) E SYST plices coupled Size N #7	gth of Bar wn in Table Rebar se I EM Bars Jumber L 28	^{⊴s} →→ ength 2′-9″			
Leng show TI Mark PB12 PB14	th of Bar in in Table Cou, (Plac Con THF nread Size #7 #5	as pled Reb e in Pha struction READED Threa ed Bar Number 28 20	ar Ise II REBAR ded Re (Grad 's Length 2'-9"	Coup (Plac Con SPLIC e 60) e 60) Mark PB3 PB5	Len show ed End e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar wn in Table Rebar se I EM Bars lumber L 28	25 ength 2'-9" 2'-0"			
Leng show Th Mark PB12 PB14	th of Bar in in Table Cou, (Plac Con THF nread Size #7 #5	as pled Reb e in Pha struction READED Thread ed Bar Number 28 20	nar Ise II REBAR ded Re (Grad s Length 2'-9"	Coup (Plac Con SPLIC ebar S e 60) Mark PB3 PB5	Len show ed End e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar wn in Table Rebar se I EM Bars umber L 28 20	as ength 2'-9" 2'-0"			
Leng show TI Mark PB12 PB14	th of Bar in in Table Cou, (Plac Con THF nread Size #7 #5	as pled Reb e in Pha struction READED Threa ed Bar Number 28 20	ar Ise II REBAR ded Re (Grad 's Length 2'-9" 2'-0"	Coup (Plac Con SPLIC Dar S e 60) C Mark PB3 PB5	Len show ed End e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar wn in Table Rebar se I EM Bars lumber L 28 20	as ength 2'-9" 2'-0"			
Leng show TI Mark PB12 PB14	nread Size #7 #5	as pled Reb e in Pha struction READED Thread ed Bar Number 28 20	ar se II REBAR ded Re (Grad 's Length 2'-9" 2'-0"	Coup (Plac Con SPLIC ebar S e 60) Mark PB3 PB5	Len show ed End e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar of wn in Table Rebar se I EM Bars lumber L 28 20	as ength 2′−9″ 2′−0″			
Leng show TI Mark PB12 PB14	th of Bar in in Table Cou, (Plac Con THF hread Size #7 #5	as pled Reb e in Pha struction READED Threa ed Bar Number 28 20	ar Ise II REBAR ded Re (Grad 's Length 2'-9" 2'-0"	Coup (Plac Con SPLIC Dar S e 60) C Mark PB3 PB5	Len show e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar wn in Table Rebar se I EM Bars lumber L 28 20	as			
Leng show	th of Bar in in Table Cou, (Plac Con THF Size #7 #5	as pled Reb e in Pha struction READED Thread ed Bar Number 28 20 10 10 10 10 10 10 10 10 10 1	ar Ise II REBAR ded Re (Grad 's Length 2'-9" 2'-0"	Coupled Couple (Plac Con SPLIC e 60) Mark PB3 PB5	Len show ed End e in Pha stuction) E SYST plices coupled Size N #7 #5	gth of Bar wn in Table Rebar se I EM Bars umber L 28 20	a_{2} ength 2'-9'' 2'-0''	\circ the		
Leng show	th of Bar in in Table Cou, (Plac Con THF Size #7 #5 #5 #5	as pled Reb e in Pha struction READED Thread ad Bar Number 28 20 10 10 10 10 10 10 10 10 10 1	ar se II REBAF ded Re (Grad s Length 2'-0" 2'-0" 2'-0"	Coupled mechanic of Steel	Len show led End e in Pha stuction) E SYST plices Size N #7 #5 #5 #5 #5	gth of Bar of wn in Table Rebar se I EM Bars umber L 28 20 20 20 4 20 4 20 4 20 4 20 4 20 4	as ength 2'-9" 2'-0" addional	n the requirements o material & labo	of the KD or shall b	oOT e
Leng show	th of Bar in in Table Cou, (Plac Con THF Size #7 #5 #5 #5	as pled Reb e in Pha struction READED Thread ad Bar Number 28 20 20 1 1 1 1 1 1 1 1 1 1 1 1 1	ar se II REBAF ded Re (Grad S Length 2'-9" 2'-0" 2'-0" a and a sistant" sistant"	Coupled Cou	Len show ded End e in Pha stuction) E SYST plices Size N #7 #5 #5 #5 (Gr. 60).	gth of Bar wn in Table Rebar Se I EM Bars umber L 28 20 20 vill be ir ers. The	as ength 2'-9" 2'-0" 2'-0" boluded in addional	n the requirements o material & labo	of the KD or shall b	ooT e
Leng show	th of Bar in in Table Cou, (Plac Con. THF THF aread Size #7 #5 t of the orcing for "Fa he bid	as pled Reb e in Pha struction READED Thread ad Bar Number 28 20 10 10 10 10 10 10 10 10 10 1	ar se II REBAF ded Re (Grad s Length 2'-0" 2'-0" 2'-0"	Coupled mechanic of Steel	Len show led End e in Pha stuction) E SYST plices Size N #7 #5 #5 #5 (Gr. 60).	gth of Bar wn in Table N Rebar Se I EM Bars umber 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	as ength 2'-9" 2'-0" addional	n the requirements o material & labo	of the KD or shall b	

Proj.7	5-63	KA-56	599-0	DI Mo	onto	gomer	yCo.	Gran
SHEET NO.	OF	SCALE		APP'D				[
DESIGNED	CEM	DETAILED	CEM	QUANTITIES	CEM	CADD	KMS	Ы
DESIGN CK.	CFB	DETAIL CK.	CFB	QUAN. CK.	CFB	CADD CK.	CFB	١ŏ
				*				J⊻
KDOT Gra	phics	Certified	04-02	2-2024	Sh	eet No.	56	

Br. No. 75-63-2.69 (106)

BILL OF REINFORCING AND BENDING DIAGRAM

Sta. 25I+86.52 🚆



KDOT Graphics Certified 04-02-2024

Sheet No. 57



in accordance with the Manufacturer's reco

methods" given in the notes on "Alternate Me steel is used for attachment, the area shall b

All bars shall extend into pile head and prop

grouted dowel bars of same size and length

TEST PILES: Drive test piles where called The test piles located within the limits of the

MEASUREMENT AND PAYMENT: Measuren piles shall comply with the Standard Specif

The following items are covered in Division



	NTES	STATE		PROJECT	NO.	YEAR	SHEET NO.	TOTAL SHEETS
		KANSAS	7	5-63 KA-5	699-01	2024	58	122
sed concrete pile splices mmendations subject to	SPECIFICATIONS: S Construction as cur Transportation. The the Standard Specis	Standa rently follow ficatic	rd Sp used ving it ons:	ecification by the Ka ems are c	ns for State Insas Depai Provered in	e Road rtment Divisi	d and Br of on 700 c	ridge of
y be by any of the thods. If mild reinforcing be no less than that used	CONCRETE: Concrete Concrete for prestr	te for essed	cast-i shall	n-place si be f'c = 5	hall be f'c 5,000 PSI.	= 3,50	00 PSI	
ent of a nile to build-up	WELDING: All field Standard Specifica	weldii itions.	ng sha	ill meet the	e requireme	ents of	f the	
minimum of 2'-0"	Use only Shielded I pile splices.	Metal A	Arch W	lelding SN	IAW (stick	weldi	ng) for	
d into pile head. ject from pile	Use only low hydro (electrode) for all w General Notes or pr	ogen E velding roper d	7018, appli storage	7016, or 7 cations du e of weldi	015 series uring pile s ng rod. we	s weld splicin elding	ing rod ng. See filler	
l) for installation of 8 n as in 2.	New electrode are	to be	purche	ng ot splic ased for e	ces. each KDOT actory bern	proj netical	ect. The	
nd of pile or build-up the Engineer.	containers opened engineer. The label number. If the cont	and la shall i ainer	ibeled nclude seal is	with inde the curre questione	lible ink in ent date an able or sho	froni d the ws sig	f seared f of the project gns _o f	
for on the bridge plans. the substructure will	damage the electroc at a temperature of	de is 1 700°1	to be a = to &	dried in a 300°F.	in oven af i	least c	ne hour	
conform to the Standard	Upon removalfrom the drying oven the with a minimum te	intact e elect mperat	herme rode i ture of	etically sea s to be pla f 250°F.	aled factor aced in a	y pack storag	aging or ne oven	
ment and payment for all fications.	When electrodes ar or storage oven and hours place into the removing for use.	e rem d exp e stor	oved f osed f age ov	rom the t o the atmo en for at	nermetically osphere for least 4 hou	seale less urs be	d contair than 4 efore	ner
n 1000 of the	If algotrada is avo	acad t	a tha	atmacabar	o for 1 bo	ure of	moro	
nforming to ASTM e either plain or	(or 9 hours for mo R in their labeling at a temperature of	isture) then ~ 450°	e resis electr F to S	otant electr ode can b 550°F.	odes desig de dried in	inated a dry	with an ving oven	
in trace relieved	If the electrode is a second time or th	expose he rod	ed to i I becol	the atmosp mes wet di	phere for 4 iscard rod	^ı hour	s or mor	е
ven-wire stress relieved forming to ASTM A416,Gr. ► ,	CAST-IN-PLACE S shall conform to the All piles driven	HELL requ witho Piles	S: Ste iremer out a n	el shells fo hts of the handrel sho n with a	or cast-in- Standard all be of th mandrel sh	place Specif e mini	piles Tications. Tmum	
RT +	sufficient strength injury and to resis soil pressure after Remove, replace	and th t harm the ma e or ca	nicknes nful dis andrel prrect	ss to with stortion ar is remove to the sati	stand drivi nd/or buck d. isfaction of	ing wi ling a f the l	thout ue to Enaineer	
	improperly driven, b Otherwise drive an The Contractor	roken additi shall	or oth onal pi mainta	erwise de ile at no e in a light	fective pipe xtra cost. suitable fo	e piles or visu	s. Jal	
Pipe Section	during the filling o	f the ,	nie jo. pipe.			u ana		
$ \begin{array}{c} $	STEEL PILE: Steel Standard Specificat	pile si tions.	מסו רמר	ntorm to i	the require	ments	of the	
-A BG	PILE POINTS: Pile and to requirements	points s of tl	s shall he Stal	'conform ndard Spe	to the dime ecifications	ension	s shown	
	PAINT: All paint sho as specified on the	ill com e plans	oly wit s.	th the Sta	ndard Spec	cificat	ions, or	
stion	MILL TEST REPOR test reports shall co	RTS: S Smply v	Steel pi	les test re ne Standar	eports and d Specific	steel ations	shell	
	-	4 08 3 09 2 06 I I-5	-16-18 -15-15 -18-12 -09	<u>Add splice w</u> <u>Clarify Note</u> <u>Clarify f6,r</u> Pile Splice L	<u>eb section, cl</u> s od type, use ocation and V	and we	IOTE MLL JPJ Id JPJ st JPJ	JPJ CER TLF KFH
	ſ	NO.	KANSA	AS DEPARTM	REVISIONS	ANSPOR	BY TATION	APP'D
" <i>8</i> "			ST	ANDARI) PILE	DET	AILS	
Section A-A	l E	BRIIO						
(I hru web) TAILS		FHWA API DESIGNED DESIGN C	PROVAL JPu K.	IO- I DETAILED DETAIL CK.	-04-12 APP'D QUANTITI QUAN.CK	ES	Terry CADD CADD CK.	L. Fleck RAA
	<u> </u> 	(DOT G	raphics	Certified	04-02-2024	S	Sheet No.	58



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-0I	2024	59	122

KDOT Graphics Certified 04-02-2024

Sheet No. 59

REMOVAL OF EXISTING STRUCTURES (FOR INFORMATION ONLY)

LOCATION	STATION	DESCRIPTION
US-75	251+86.52	Br. No. 75-63-2.69 (001)
US-75	252+92.65, Lt.	Catch Basin & Pipe
US-75	252+92.79, Rt.	Catch Basin & Pipe
US-75	253+64.41, Lt.	Exist. 48" x 77' CSP & Hdwls.
US-75	254+57.00, Rt.	Exist. 42" x 54.5' CSP & Hdwls.

NOTE:

The listing shown may not be complete. Payment for structures or obstructions not listed, but whose removal is required by the construction, as determined by the Engineer, will not be paid for directly, but will be included in the bid item, "Removal of Existing Structures", LS.

SALVAGED TOPSOIL

STATION TO STATION	SIDE	SQ. YDS.
236+15.05 to 258+68.55	LT	5,914.0
237+30.49 to 258+68.55	RT	10,486.0
TOTALS		16,400.0

GUARDRAIL, REMOV	'AL O	F STEEL PLATE
STATION TO STATION	SIDE	LENGTH (FT)
236+09.12 to 251+16.42	LT	1527.35
237+26.46 to 251+16.68	RT	1410.45
252+56.61 to 253+42.71	LT	114.41
252+56.78 to 254+38.64	RT	203.15
TOTALS		3255.36

	C	GUARD	RAIL, S	TEEL P	PLATE			
STATION TO STATION	SIDE	CGS	MGS	END	END	END	END	END
		LENGTH	LENGTH	TERM.	TERM.	TERM.	TERM.	TERM.
		(FT)	(FT)	SRT	FLEAT	CGS	MGS-SRT	MGS-FLEAT
				(ALT. 1)	(ALT. 2)	TYPE II	(ALT. 1)	(ALT. 2)
				(EA.)	(EA.)	(EA.) △	(EA.)	(EA.)
236+16.78 to 236+33.15	LT	43.75			-	1		
236+33.15 to 250+85.02	LT		1453.13		-			
252+88.02 to 253+48.77	LT	81.25		1	1			
237+30.85 to 237+44.84	RT	43.75			—	1		
237+44.84 to 250+85.02	RT		1340.63		-			
252+88.02 to 253+49.76	RT		62.50		_		1	1
TOTALS		168.75	2856.26	1	1	2	1	1

 \triangle For Info Only, Included in pay length of Guardrail

AGGREGATE DITCH LINING (6")

STATION TO STATION	SIDE	DITCH WIDTH (FT)	"D" (FT)	"W" (FT)	"T" (IN)	QUANTITY (TON)	REMARKS
252+79.75 to 253+00.00	LT	5	4.0	20	18	31.9	Warp Around Pipe Outlet
TOTALS						31.9	

15:54 4 02 P-2 AP 02 Drawn By : jmarburger Plotted : File : KA569901rpq01-rd050.dgn

	DRAINAGE STRUCTURES											
STATION	SIDE	SIZE	TYPE	Gr. 4.0 CONC.	REINF. STEEL	FOUND. STAB.	GRANULAR BACKFILL	CROSS ROAD PIPE (FT.)	END SEC (EAC	CTIO CH)	NS	REMARKS
				(CU. YDS.)	(LBS.)	(CU. YDS.)	WINGWALLS	RCP, CAP	٢	TYF	PEI	
							(CU. YDS.)	48"	48"	LT	RT	
253+64.00	LT	48"	CRP (RCP, CAP)					118	2	2		Under Side Road Lt.
TOTALS	DTALS 118 2											

• NOTE: See Pipe Culvert Summary Sheet for allowable End Section types.

FLUME INLET (CONCRETE)									
STATION	SIDE	FLUME INLET (EACH)	REMARKS						
253+10.48	LT	1	N. Appr. Bridge (106)						
253+19.02	RT	1	N. Appr. Bridge (106)						
TOTALS		2							

SLOPE DRAIN (STONE)									
STATION	SIDE	"D" (FT)	"W" (FT)	LENGTH (LF)	VOLUME (CU. YD.) Ψ	REMARKS			
253+10.48	LT	1.5	5	43.3	10.8	N. Appr. Bridge (106)			
253+19.02	RT	1.5	5	64.0	16.0	S. Appr. Bridge (106)			
TOTALS				107.3	26.8				

artheta For information only.

CONCRETE PAVT. (BRIDGE APPR.)						
STATION TO STATION	SIDE	11" UNIF.	GRANULAR	REMARKS		
		(AE)	BASE			
		(BR. APP.)	(6")			
		(SY)	(SY)			
250+72.02 to 250+85.02	Ę	65.0	65.0	S. Appr. Bridge (106)		
252+88.02 to 253+01.02	<u>¢</u>	65.0	65.0	N. Appr. Bridge (106)		
TOTALS		130.0	130.0			

NOTE: Place 6" Granular Base under concrete pavement.

						EAF	RTHWOF	K						
		E	EXCAVATIC	N		C	COMPACTION			NOT SUBGRADED				
STATION to STATION	Сомма	N	ROCI	<	CONTR. FURN	TYPE AA MR-5-5	TYPE A MR-5-5		СОММ	TYPE AA MR-5-5			SFTTI F-	SELECT SOIL
	CU.YDS.	VMF	CU.YDS.	VMF	CU.YDS.	CU.YDS.	CU.YDS.		CU.YDS.	CU.YDS.		CONSOL.	MENT	CU.YDS.
ASE I														
36+00 to 259+00	4422	0.78	856	1.00	470	78	3738		1158	1158				
ASE II														
36+00 to 259+00	1608	0.78	1161	1.00		26	1169		1316	1316				
TOTALS	6030		2017		470	104	4907		2474	2474				

 \star Subsidiary (see General Note).

	STATE		PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS		
	KANSAS	7	5-63 KA-5699-01	2023	60	122		
RECAPI	ITULATIO	N C	OF BRIDGE QUA	NTIT	IES			
BRIDGE NUMBER	STATION		SEE SI	HEET NC).			
			20					
75-63-2.69 (106)	251+86.52	2	30					
-								

ITEM actor Construction Staking Office and Laboratory (Type A) dation Stabilization (Set Price) ization ization ization (DBE) val of Existing Structures enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	QUANTITYLump Sum1Lump SumLump SumLump SumLump SumLump Sum1Lump Sum48,504470	UNIT Lump Sum Each Cu. Yd. Lump Sum Lump Sum Lump Sum Cu. Yd. Lump Sum Lump Sum
actor Construction Staking Office and Laboratory (Type A) lation Stabilization (Set Price) ization ization ization (DBE) val of Existing Structures enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	Lump Sum 1 Lump Sum Lump Sum Lump Sum Lump Sum Lump Sum Lump Sum 8,504 470	Lump Sum Each Cu. Yd. Lump Sum Lump Sum Lump Sum Cu. Yd. Lump Sum Lump Sum Cu. Yd.
Office and Laboratory (Type A) dation Stabilization (Set Price) ization ization ization (DBE) val of Existing Structures enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	11Lump SumLump SumLump Sum1Lump Sum1Lump Sum8,504470	Each Cu. Yd. Lump Sum Lump Sum Lump Sum Cu. Yd. Lump Sum Lump Sum Cu. Yd.
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ization ization (DBE) val of Existing Structures enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	Lump Sum Lump Sum Lump Sum Lump Sum Lump Sum Lump Sum 8,504 470	Lump Sum Lump Sum Lump Sum Cu. Yd. Lump Sum Lump Sum Cu. Yd.
ization (DBE) val of Existing Structures enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	Lump Sum Lump Sum Lump Sum Lump Sum Lump Sum 8,504 470	Lump Sum Lump Sum Cu. Yd. Lump Sum Lump Sum Cu. Yd.
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enance and Restoration of Haul Roads (Set Price) rete for Seal Course (Set Price) g Environment ng and Grubbing non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	Lump Sum 1 Lump Sum Lump Sum 8,504 470	Lump Sum Cu. Yd. Lump Sum Lump Sum Cu. Yd.
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non Excavation (Rural Small) non Excavation (Contractor Furnished) Excavation	8,504 470	Cu. Yd.
non Excavation (Contractor Furnished) Excavation	470	-
Excavation		Cu. Yd.
	2,017	Cu. Yd.
action of Earthwork (Type AA)(MR-5-5)	2,578	Cu. Yd.
paction of Earthwork (Type A)(MR-5-5)	4,907	Cu. Yd.
Grading)(Set Price)	1	M. Gal.
ged Topsoil	16,400	Sq. Yd.
Road Pipe (48")	118	Ln. Ft.
ection (48")	2	Each
Irail, Steel Plate	168.75	Lin. Ft.
Irail, Steel Plate (MGS)	2,856.25	Lin. Ft.
Irail End Terminal (SRT) - Alt. 1	1	Each
Irail End Terminal (FLEÁT) - Alt. 2	1	Each
Irail End Terminal (MGS-SRT) - Alt. 1	1	Each
Irail End Terminal (MGS-FLEÁT) - Alt. 2	1	Each
Irail, Removal of Steel Plate	3,255.50	Lin. Ft.
egate Ditch Lining (6")	32	Tons
Drain (Stone)	107	Lin. Ft.
e Inlet (Concrete)	2	Each
orary Surfacing Material (Aggregate)(Set Price)	1	Cu. Yd.
al Barrier System	2	Each
cement Modules (IBS)	15	Each
ete Safety Barrier (Type F3)(Temporary)	1,938	Lin. Ft.
ete Safety Barrier (Type F3)(Temporary - Relocate)	1,938	Lin. Ft.
ete Pavement (11" Uniform)(AE)(BR APP)	130	Sq. Yd.
ılar Base (6")	130	Sq. Yd.
(Granular Base)(Set Price)	1	M. Gal.
of-way Survey Monument	6	Each
	Grading)(Set Price) ged Topsoil Road Pipe (48") ection (48") Irail, Steel Plate Irail, Steel Plate (MGS) Irail End Terminal (SRT) - Alt. 1 Irail End Terminal (FLEAT) - Alt. 2 Irail End Terminal (MGS-SRT) - Alt. 1 Irail End Terminal (MGS-FLEAT) - Alt. 2 Irail, Removal of Steel Plate Irail, Removal of Steel Plate Irail, Removal of Steel Plate Irain (Stone) e Inlet (Concrete) orary Surfacing Material (Aggregate)(Set Price) al Barrier System cement Modules (IBS) rete Safety Barrier (Type F3)(Temporary) rete Safety Barrier (Type F3)(Temporary - Relocate) rete Pavement (11" Uniform)(AE)(BR APP) Ilar Base (6") (Granular Base)(Set Price) of-way Survey Monument	(Grading)(Set Price) 1 ged Topsoil 16,400 Road Pipe (48") 118 ection (48") 2 Irail, Steel Plate 168.75 Irail, Steel Plate (MGS) 2,856.25 Irail End Terminal (SRT) - Alt. 1 1 Irail End Terminal (FLEAT) - Alt. 2 1 Irail End Terminal (MGS-SRT) - Alt. 1 1 Irail End Terminal (MGS-FLEAT) - Alt. 2 1 Irail End Terminal (MGS-FLEAT) - Alt. 2 1 Irail, Removal of Steel Plate 3,255.50 gate Ditch Lining (6") 32 Drain (Stone) 107 e Inlet (Concrete) 2 orary Surfacing Material (Aggregate)(Set Price) 1 al Barrier System 2 cement Modules (IBS) 15 ete Safety Barrier (Type F3)(Temporary) 1,938 ete Safety Barrier (Type F3)(Temporary - Relocate) 1,938 ete Pavement (11" Uniform)(AE)(BR APP) 130 Iar Base (6") 1300 (Granular Base)(Set Price) 1 of-way Survey Monument 6

ally Non-participating

For Surfacing Quantities, See Sh. No. 61 For Erosion Control Quantities, See Sh. No. 62 For Seeding Quantities, See Sh. No. 71 For Signing Quantities, See Sh. No. 81 For Pavement Marking Quantities, See Sh. No. 90 For Traffic Control Quantities, See Sh. No. 102 For Temporary Barrier Summary Table, See Sh. No. 108 For Inertial Barrier Summary Table, See Sh. No. 109

ightarrow See General note.

02	01-14-08	Rem. Drainage St	S.W.K.	J.O.B.				
01	01-09-91	Detailed	on CADD	R.J.S.	J.O.B.			
NO.	DATE	REVIS	IONS	BY	APP'D			
		KANSAS DEPARTMENT	OF TRANSPORTATION			7		
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		SUMMARY OF	OUANTITI	IFS				
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ПГ						2		
KL	KDU5U							
FHWA APPROVAL 05-28-08 APP'D. James O. Brewe						Ì		
DESI	DESIGNED DETAILED QUANTITIES TRACED B.N				B.N.B.	c		
DESIGN CK. DETAIL CK. QUAN.CK. TRACE CK. S.V					S.W.K.	È		

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Sh. No.60

GENERAL NOTE:

On surfacing projects, the 6" of Compaction Type AA, shown for the center portion on the roadbed, is for the purpose of restoring the original Compaction Type AA which may have been lost since grading operations. The exact locations of this Compaction Type AA, which will be required, is to be determined by the Engineer at the time of construction. This work shall be paid under the bid item "Compaction of Earthwork (Type AA)(MR-5-5)".

Over all structures, unless otherwise directed by the Engineer, where the top of the hubguard is level with or above the finished shoulder grade, the earth cover over the structure slab shall be removed and backfilled with <u>Common</u> material as directed by the Engineer. The removal of this material will be subsidiary.

_____ material used to backfill over the structure shall be The Common paid for at the prices shown in the contract.

The earth shoulders shall be compacted full depth (Type A)(MR-5-5) except, when ordered by the Engineer, the top 3" shall be left uncompacted for seeding.

All side roads and house entrances shall be surfaced with 11" HMA (Comm. Gr.)(Cl. A) + 6" AB-3 to the R/W line as indicated on the detail. All side roads and house entrances with existing asphalt surface shall be surfaced with 11" HMA (Comm. Gr.)(Cl. A) + 6" AB-3 at least to the R/W line or to the end of construction, as directed by the Engineer. Each mailbox turnout (ON PROJECTS WHERE STABILIZED SHOULDERS ARE NOT SPECIFIED) shall be surfaced with 11" HMA (Comm. Gr.)(Cl. A) + 6" AB-3 to the limits shown on the detail.

Surfacing material (AB-3) shall be used for surfacing house entrances and side roads (0.167 C.Y./SQ. YD.) beyond the limits of the asphalt surface to the limits of construction as determined by the Engineer.

The thickness of side road and entrance surfacing may be increased to the same thickness as the stabilized shoulder within the approximate limits of the shoulder.

On projects which specify both asphalt base and surface course materials, side roads, house entrances and mailbox turnouts may be surfaced with both materials

at the contractors option, with the approval of the Engineer. Quantities for aggregate for shoulders, AS-1, are calculated on the basis of 150 Ibs. per cu. ft. Quantities for stabilized base course, AB-3, are calculated on the basis

of 1 56 lbs. per cu. ft. Weight/cu. ft. includes moisture allowed by specification. The base course shall be constructed to the plan thickness as shown.

Thicknesses indicated for all construction which is paid for on a weight or volume basis are approximate and may vary to correct for unevenness in the foundations or for other normal unevenness encountered in placement operations.

A tack coat of SS-1HP shall be provided between each lift of all base courses and surface courses and under the first lift of base or surface courses when they are placed on an existing asphalt, brick, or concrete surface, when so ordered by the Engineer and at the rate designated by him. Quantities are included for these tacks calculated at the rate of 0.06 gal. /sq. yd.

Asphalt Material quantities are calculated on the basis of 8.328 lbs. per gal. Shoulder rumble strips will not be constructed as part of this project.



TYPICAL PROFILE AT GRADE CONTROL POINTS

The Contractor shall cut the subgrade in accordance with this profile at all grade control points, i.e.; existing pavements, grade bridges and R.R. crossings, also at changes in thickness of base or surface courses. Corresponding dimensions of "D" and "L" shall be as given in the table below. The work of cutting the subgrade and disposing of excess excavated material shall be subsidiary to other items in the contract.

	TABLE OF DIMENSIONS										
D	L	D	L	D	L	D	L	D	L	D	L
1"	25'	3"	75'	5"	125'	7"	175'	9"	225'	11"	275'
2"	50'	4"	100'	6"	150'	8"	200'	10"	250'	12"	300'



5:54 4 σ d051. rawn By : jmarburge le : KA569901rsq01·

SUMMARY OF QUANTITIES							
ITEM	PHASE I	PHASE II	OTHER	TOTAL	UNITS	REMARKS	
Aggregate Base (AB-3)(6")	2971.7	3206.4		6178.1	SQ. YD.		
Surfacing Material (AB-3)	_	17.4		17.4	TONS	1800 Road Tie-in (6" Thick)	
Pavement Edge Wedge (Rock)	220.2	197.3		417.5	TONS		
HMA - Commercial Grade (Class A)	1729.6	1869.3	8.4 🛇	3607.3	TONS		

PHASE I: Construct east side of US-75 PHASE II: Construct west side of US-75

Guardrail Pads ۲

	RATES OF APPLICATION	
IIT	ITEM	
CF	Surfacing Material (AB-3)	
CF	Pavement Edge Wedge (Rock)	
CF	HMA - Commercial Grade (Class A)	

<u></u>	
RECAPITULATI	ON OF
ITEM	
Field Office and Laboratory (Type A)	
Aggregate Base (AB-3)(6")	
Water (Aggregate Base)(Set Price)	
Surfacing Material (AB-3)	
Pavement Edge Wedge (Rock)	
Water (Earthwork Compaction) (Set Price)	
HMA - Commercial Grade (Class A)	

^{††} Computed at the rate of





15:54 4 \sim Ċ 02 vlotted : (.dgn a852 Drawn By : jmarburger File : KA569901eec852

CLT = Construction Limit Tract. This area is defined by the entire disturbed area of the project that requires seeding and erosion control measures to be placed. Any impervious areas (i.e. pavement, gravel, riprap, etc.) shall not be included in this

Slope = Defined by the area of the project that requires Class 1 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if

Channel = Defined by the area of the project that requires Class 2 erosion control material to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. Drilling seed is preferred, however, broadcasting is acceptable if

	S	UMMA	RY OF	SEEDING / EROSION CONTROL QUA	NTITIES	
P.L.S. RA	TE/ ACRE	AC	RES			
ALL	SL/CH	ALL	SL/CH	BIDITEM	QUANTITY	
	150		3.39	Temporary Fertilizer (15-30-15)	508.5	LB
				Temporary Seed (Canada Wildrye Grass Seed)		IB
				Temporary Seed (Grain Oats)		I B
				Temporary Seed (Sterile Wheatgrass) (Regreen/Ouick Guard)		LB
	109.9		3.39	Soil Erosion Mix	372.6	LB
				Erosion Control (Class 1, Type C)	16.400	SO YD
				Frosion Control (Class X, Type Y)		SO YD
				Sediment Removal (Set Price)	1	
				Synthetic Sediment Barrier		LF
				Temporary Berm (Set Price)	1	LF
				Temporary Ditch Check (Rock)		CU YD
				Temporary Inlet Sediment Barrier		EACH
				Temporary Sediment Basin		CU YD
				Temporary Slope Drain		LF
				Biodegradable Log (9")	581	LF
				Biodegradable Log (12")	774	LF
				Biodegradable Log (20")	1337	LF
				Filter Sock (12")	581	LF
				Filter Sock (18")	1031	LF
				Geotextile (Erosion Control)	2000	SQ YD
				Silt Fence	921	LF
				SWPPP Design †	Lump Sum	LS
				SWPPP Inspection †	53	EACH
				Water Pollution Control Manager †	53	EACH
900 lbs / a	acre			Mulch Tacking Slurry		LB
2 tons / a	cre			Mulching		TON
				Water (Erosion Control) (Set Price)	1	MGAL

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. See Permanent Seeding Summary of Seeding Quantities sheet LA850 for further details.

Geotextile (Erosion Control) shall be removed prior to placement of permanent slope protection.

Regreen and Quick Guard are the approved sterile wheatgrass products.

† If the total disturbed area of the project, not just the seeding area, is 1 acre or more, then these bid items must be included.

******* List size of material.

The amount of mulch and mulch tacking slurry in the bid quantities is estimated. (Acres of Seeding X 1.5 X 2 Tons/Acre). The estimated quantity includes mulching associated with both temporary and permanent seeding operations. The total mulch and mulch tacking slurry required shall be determined in the field. The bid item for mulching and mulch tacking slurry shall be paid for according to the Standard Specifications.

Quantities for all erosion control items are estimated to give full flexibility for compliance with the NPDES permit. Final quantities will be determined in the field.

SOIL EROSION MIX								
ACRES	NAME	QTY (lb)						
3.39	Blue Grama (Lovington)	1.70						
3.39	Buffalograss (Treated)	15.26						
3.39	Perennial Ryegrass	152.55						
3.39	Prairie Junegrass	8.81						
3.39	Side Oats Grama (El Reno)	21.36						
3.39	Tall Fescue (Endophyte Free)	152.55						
3.39	Western Wheat (Barton)	20.34						
	Total (lb)	372.56						
	ACRES 3.39 3.39 3.39 3.39 3.39 3.39 3.39 3.3	ACRESNAME3.39Blue Grama (Lovington)3.39Buffalograss (Treated)3.39Perennial Ryegrass3.39Prairie Junegrass3.39Side Oats Grama (El Reno)3.39Tall Fescue (Endophyte Free)3.39Western Wheat (Barton)						

Fertilizer for Soil Erosion Mix is included and shown on the Summary of Seeding/Erosion Control chart above.

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KANSAS	75-63 KA-5699-01	2023	62	122

The Soil Erosion Mix is to be placed under the Class 1 and/or Class 2 erosion control material.

The Soil Erosion Mix consists of the Shoulder Area of the Permanent Seed Mix used on the project.

03 08-03-20 Added Note M.R.D. M.L.							M.L.		
02	02 12-01-17 Revised Standard M.R.D. S.H.S.								
01	06-01-17			Revised S	Standard	M.R.D.	S.H.S.		
NO.	DATE			REVIS	IONS	BY	APP'D		
LA	KANSAS DEPARTMENT OF TRANSPORTATION TEMPORARY EROSION AND POLLUTION CONTROL								
FHW	A APPROV	AL	(01-26-18	APP'D.	Scott H	l. Shields	Ē	
DESI	<u>GNED</u>	1.R.D.	DETAILED	M.R.D.	QUANTITIES	TRACED		Ċ	
DESI	DESIGN CK. S.H.S. DETAIL CK. S.H.S. QUAN.CK. TRACE CK.						Ē		

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Sh. No.62

EROSION CONTROL- CLASS 1, TYPE C									
STATION TO STATION	SIDE	LENGTH	WIDTH	SQ YARD					
CL									
236+15.05 to 250+85.02	Lt	1469.97	8.49	1387					
237+30.49 to 250+85.02	Rt	1354.53	22.94	3453					
250+85.02 to 252+88.02	Lt	203.00	27.92	630					
250+85.02 to 252+88.02	Rt	203.00	76.08	1716					
252+88.02 to 258+68.55	Lt	580.53	60.42	3897					
252+88.02 to 258+68.55	Rt	580.53	82.43	5317					
TOTAL EROSION CONTROL (CL	ASS 1, TYPE	E C) = 16,400 Sq. `	r Yds.	I					

Drawn By : jmarburger Plotted : 02-APR-2024 15:54 File : KA569901eec852a-ec-la852a-ec.dgn

	STATE	PR	OJECT NO.		YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	5 75-63	KA-5699	-01	2023	63	122
					· · ·		
NO			DEVIC			BV	
		KANSAS		F OF TRAN	NSPORTAT	ION	
		ER	OSION	CON	ITRO	L	
		SE	EDING	-SOE	DIN	G	
	A852A	-EC		1 . = - :			
FHV DES DES	VA APPROV SIGNED N SIGN CK.	AL M.R.M. DETAIL S.H.S. DETAIL	ED M.R.M. . CK. S.H.S.	APP'D. QUANTI QUAN.C	ITIES K.	Scott TRACED TRACE CK.	H. Shields M.R.M. S.H.S.
KD	OT Grapl	nics Certified	d 07-14	4-2022		Sh. N	0.63





KDOT Graphics Certified





KDOT Graphics Certified 07-14-2022

Sh. No.66



15:55 PR-2024 AP Drawn By : jmarburger Plotted : 02[.] File : KA569901eec852d-la852d.dgn

SILT FENCE:

- 1. Stakes shall be 4'
- a. Hardwood 1 $^3\!\!\!\!\!\!^{\,3}\!\!\!_{16}$
- b. Southern Pine (No
- c. Steel U, T, L, or C
- d. Synthetic same
- 2. Attach fence fabric Alternate attachme
- 3. Use of high flow ma
- 4. Refer to plan sheet

BIODEGRADABLE LOG OR

- 1. Place biodegradab
- 2. Wood stakes shall
- 3. Refer to plan sheet
- 4. Each log or sock (e
- minimum of 25% of
- prepared ground wit
- 5. Length of stakes sh with minimum groun

Geotextile fabric 3' wide 4' min. length post at Tire compaction zone 4' max. spacing Plastic zip ties, or other material Direction approved by the field engineer, (50 lb. tensile strength) located in top 8". of Flow 2' min. post embedment Machine slice 6" - 12" depth

SECTION B-B

Biodegradable Log or Filter Sock Slope Interruptions

	PRODUCT					BIODE	GRADABLE LOG MATERIAL
		9" Sediment Log	12" Sediment Log	12" Sediment Log 20" Sediment Log		LOW FLOW	HIGH FLOW
		or 8" Filter Sock	or 12" Filter Sock	or 18" Filter Sock	9"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
		(ft)	(ft)	(ft)	12"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
nt	≤4H:1V	40	60	80	18"-20"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
bradie	3H:1V	30	45	60			
ope G							
S							

Deviations should be approved by the Field Engineer.

GENERAL NOTES _____

- 1) Slope interruptions shall be placed along contour lines, with a short section turned upgrade at each end of the barrier.
- 2) The maximum length of the slope interruptions shall not exceed 250 feet, and the barrier ends need to be staggered.
- 3) Interruptions damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired immediately by Contractor at no additional cost to KDOT.
- 4) Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

- Stakes (typ.) → A TYPICAL ELEVATION

BIODEGRADABLE LOG SLOPE INTERRUPTIONS

OR Filter Sock

INSTALLATION NOTES		PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
		75-63 KA-5699-01	2023	67	122
(min.) long and of one of the following materials: ' x 1 ³ / ₁₆ "; o. 2) - 2 ⁵ / ₈ " x 2 ⁵ / ₈ "; Section95 lbs. per 1'-0"; or strength as wood stakes. c with 3 zip ties within the top 8" of the fence ent methods may be approved by the Engineer on aperf laterial is acceptable. ts to estimate the length of silt fence required.	ormanc	e basis.			
R FILTER SOCK					
le logs or filter sock tightly together minimum overlap of 18". be 2" x 2" (nom.). ts to estimate length of biodegradable log and filter sock required. except compost filter socks) should be keyed into the ground at a ¹ its height. Compost filter socks should be placed on smooth ith no gaps between the sock and soil. hould be 2 times the height of the log at a minimum nd embedment equal to the height of the log / sock.					

03	06-28-16			Revised S	Standard		R.A.	S.H.S.
02	03-01-15			Revised S	Standard		R.A.	S.H.S.
01	06-01-13			Revised S	Standard		M.R.M.	S.H.S.
NO.	DATE			REVIS	IONS		BY	APP'D
LA	KANSAS DEPARTMENT OF TRANSPORTATION TEMPORARY EROSION AND POLLUTION CONTROL SLOPE INTERRUPTIONS BIODEGRADABLE LOG / SILT FENCE LA852D							
<u>FHW</u>	A APPROV			09-14-16	APP'D.		Scott H	. Shields
DES		<u>S.H.S.</u> сце		R.A.		<u>s</u>		
DE3.		5.11.3.	DETAIL OK.		QUAN.UK.		TRACE CR.	
KDO	OT Graph	nics C	Certified	06-18	-2022		Sh. No	0.67



GENERAL NOTES

 The choice of ditch check methods is at the option of the Contractor.

NO SCALE

- Use only rock checks in situations where the ditch slope is 6 percent or greater.
- Ditch checks damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired by Contractor at no extra cost to KDOT.

20" BI CHECK S	20" BIOLOG CHECK SPACING		
DITCH @ SLOPE (%)	SPACING INTERVAL (FEET)		
1.0	125		
2.0	60		
3.0	40		
4.0	30		
5.0	25		
NOTE: Use this spacing for all except Rock Ditch Checks.			

STATE	E PROJECT NO. YEAR SHEET NO.	TOTAL SHEETS
KANSAS	AS 75-63 KA-5699-01 2023 68	122

18" FILTER SOCK CHECK SPACING			
DITCH © SLOPE (%)	SPACING INTERVAL (FEET)		
1.0	110		
2.0	55		
3.0	35		
4.0	25		
5.0	20		
NOTE: Use this spacing for all except Rock Ditch Checks.			

03	08-10-16			Revised	Standard		R.A.A.	S.H.S.
02	06-28-16		Revised Standard		Standard		R.A.A.	S.H.S.
01	06-01-13			Revised S	Standard		M.R.M.	S.H.S.
NO.	DATE			REVIS	IONS		BY	APP'D
	KANSAS DEPARTMENT OF TRANSPORTATION TEMPORARY EROSION AND POLLUTION CONTROL DITCH CHECKS							
LA	A852E							
FHW	A APPROV	AL	•	09-14-16	APP'D.		Scott H	. Shields
DESI	GNED	S.H.S.	DETAILED	R.A.A.	QUANTITIES	TF	RACED	R.A.A.
DESI	GN CK.	S.H.S.	DETAIL CK.	S.H.S.	QUAN.CK.		RACE CK.	S.H.S.
	T Crap		Cortified	06 10	2022		Ch No	60
KDUT Graphics Certified 06-18-					211. INC	7.00		



TEMPORARY ROCK DITCH CHECK SPACING			
DITCH @ SLOPE (%)	SPACING INTERVAL (FEET)		
5.0	60		
6.0	50		
7.0	43		
8.0	36		
9.0	33		
10.0	29		
NOTE: Use this spacing for Rock Ditch Checks only.			

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL		
	KANSAS	75-63 KA-5699-01	2023	69	122		
					<u> </u>		
ROCK D	ITCH CHECK N	IOTES					
1 Rock shall be clear	aggregate D5	N-6" and aggregate fill	er				
 Place rock in such r ditch check. 	nanner that wa	iter will flow over, not	around				
3. Do not use rock dite	ch checks in cle	ear zone.					
 Excavation: The ditareas. Prior to placer excavated to the dimminimum depth of 6" backfill and compact This work shall be su Check (Rock). 	ch area shall b ment of the roc ensions of the (150mm). Afte any over-excav bsidiary to the	e reshaped to fill any e k, the ditch shall be Rock Ditch Check and er placement of the ro vated soil to ditch grac bid item Temporary Di	roded to a ck, le. tch				
5. Aggregate excavate the 6" rock, if approve	ed on site may ed by the Engine	be used as an alternat eer.	e to				
6. The Engineer may a the downstream port their use.	pprove the use ion of the chec	of larger aggregates k when conditions wai	for trant				
7. When the use of lar be placed between th filler	ger rock is app le larger aggreg	roved, D50-6" rock will jate and the aggregate	è				
8. Aggregate filler will ditch check. Aggrega	be placed on t ate filler will cor	he upstream face of th nply with Filter Course	ne e				
Type I, Division 1114.							
	RIODECDAL						
		JABLE LOG DITCH CH		<u>JIE3</u>			
	1. Use as ma necessary t end of ditch	any biodegradable log o ensure water does n i check.	sectior ot flow	ns as around			
	2. Overlap se	ections a minimum of	18".				
18" (min.) diameter Biodegradable Log Section Downstream Apron	3. Stakes sh 2114 of the stakes shal the log.	all be wood or steel ac Standard Specificatio I be a minimum of 2 x	cordine ns. Lei the dia	g to Sectic ngth of meter of	n		
	4. Use Erosi downstrear	on Control (Class 1) (T n apron when required	⁻ ype C) l.	as the			
₩ ₩	 A downstream apron is required when directed by the Engineer. Apron material will be paid at the contract unit price. 						
TION B - B 18" (min.) diameter Biodegradable Log Section	6. Each log o should be k 25% of its h placed on s between the	or sock (except compo eyed into the ground a eight. Compost filter mooth prepared grour e sock and soil.	ost filte It a min socks s Id with	r socks) imum of should be no gaps			
Downstream Apron							
Alternative Staking	03 11-19-20	Revised Standard	k	M.R.D.	M.L.		
(Optional)	02 08-10-16 01 10-21-15	Revised Standard	<u>د</u> 	R.A.A. R.A.A.	S.H.S.		
. DETAIL	NU. DATE						
IIUNAL		POLLUTION C		i and OL			
		ROCK DITCH (CHECI	KS			
	BIODE LA852G	GRADABLE LOG	DITC	H CHEC	KS		
	FHWA APPROVAL DESIGNED	- 11-19-20 APP'D. M.L. DETAILED D.K. QUAN	TITIES	M TRACED	ervin Lare R.A.A.		
	DESIGN CK.	VI.L. DETAIL CK. M.L. QUAN.	СК.	I IRACE CK.	<u>к.А.А.</u>		

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NATIV	YE WILDFLOWER M	IX 1
PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Common Milkweed	
0.3	Black Eyed Susan	
0.5	Blanket Flower	
0.5	False Sunflower	
0.5	Lance-Leaf Coreopsis	
0.2	Maximilian Sunflower	
0.1	New England Aster	
0.2	Pinnate Prairie Coneflower	
0.2	Plains Coreopsis	
0.3	Purple Coneflower	
0.3	Upright Prairie Coneflower	
0.3	Dames Rocket	
0.3	Lemon Mint	
0.2	Pitcher Sage	
0.2	Wild Bergamot	
1.0	Illinois Bundleflower	
0.2	Common Evening Primrose	
0.1	Hoary Verbena	
0.8	Purple Prairie Clover	
0.3	Roundhead Lespedeza	
3.0	Showy Partridge Pea	
0.2	White Prairie Clover	
10.3	Total (lb)	

NATIV	'E WILDFLOWER M	IX 2
PLS RATE	NAME	QTY (lb)
0.3	Butterfly Milkweed	
0.3	Black Eyed Susan	
0.5	Black Sampson Coneflower	
1.0	Blanket Flower	
0.2	Maximilian Sunflower	
0.2	Plains Coreopsis	
0.2	Upright Prairie Coneflower	
0.2	Western Yarrow	
0.3	Lemon Mint	
0.4	Pitcher Sage	
1.5	Illinois Bundleflower	
0.2	Common Evening Primrose	
1.0	Blue Wild Indigo	
0.4	Leadplant	
0.4	Purple Prairie Clover	
0.3	White Prairie Clover	
7.4	Total (lb)	

Package and deliver the wildflower seed separately from the grass seed mix. Package and deliver the Tall Drop Seed separately from the grass seed and the wildflower mix. Place the grass seed (except Tall Drop Seed) in the large seed box and drill (cover) seed $\frac{1}{8}$ " - $\frac{1}{4}$ ". Place the wildflower seed in a separate seed box and drill (cover) seed $\frac{1}{16}$ " maximum. Place the Tall Drop Seed in a separate (third) seed box and place the seed (using the seed drill) òn thé soil surface.

OPTION: Broadcast Tall Drop Seed on the soil surface.

WARM SEASON GRASSES & WILDFLOWERS
November 15 thru June 1
SPECIES
Bermuda Grass
Big Bluestem
Blue Grama
Buffalo Grass
Indiangrass
Little Bluestem
Sand Bluestem
Sand Dropseed
Sand Lovegrass
Side Oats Grama
Switchgrass
Wildflower Mixes

When the area to be seeded is 1 acre or more, if Cool Season grasses are mixed with Warm Season grasses, seed the area during the Warm Season.

When the area to be seeded is less than 1 acre, seed the area any time of the year.

SODDING SEASONS

	COOL SEASON GRASSES	WARM SEASON GRASSES
	March 1 thru April 15 September 1 thru November 15	May 15 thru September 1
	SPECIES	SPECIES
	Bluegrass Sod	Buffalo Grass Sod
Fescue Sod		

If the soil is workable, the Engineer may allow placement of sod between November 15 and March 1. If sod is placed during this time, maintain the sod until 20 days after the beginning of the spring sodding season.

SUMMARY OF SEEDING QUANTITIES P.L.S. ACRES RATE/ACRE SHLDR OTHER SHLDR OTHER

SHLDR = Seeded with the Shoulder Mix. Typically 15 feet for 2-lane roads and 30 for outside roadsides, turfed portions of shoulders, and turfed portion of the median.

OTHER = Seeded with the "Other" Mix. Designated as all other turf areas, except th Wildflower Mix.

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. All dist fertilized and mulched at the listed rate per acre. The acres are estimated.

Refer to the Standard Specifications, Division 900, Section 904 'Seeding', and Secti and sodding seasons.

* See LA852A for mulching quantity. The quantity of mulch is estimated (Acres of The total mulch required shall be determined in the field. The bid item for mulching the Standard Specifications.

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEET:		
	KANSAS	75-63 KA-5699-01	2023	71	122		
GENERAL The entire disturbed area, excepting the paved or surfaced areas, so native sod or other desirable vegetation shall be fertilized (limed w Soil preparation shall conform to the Standard Specifications excert All borrow areas shown on the plans are to be fertilized, seeded, and	NOTES steep rock /hen require pt as note	= y slopes and areas of undistr red), seeded and mulched. ed below. d. However, operation in bor	urbed	15			
where crops are growing may be omitted when requested by the owner.							

If temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it may be necessary to regrade the area, resulting in bare ground.

FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5 , K_2O_5 listed in Summary of Seeding Quantities will be acceptable.

MULCHING: Mulch shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching material is generally as follows:

 $1\frac{3}{4} - 2\frac{1}{4}$ Tons per Acre = $1\frac{1}{2}$ " loose depth spread uniformly over acre.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

Other vegetative mulches are acceptable only with the Engineer's concurrence.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

BID ITEM	QUANTITY	UNIT
This project is entirely blanketed and seeded with		
permanent seeding operations. See LA852A for		
further information.		
Mulching *		

Foot for A lang roads Includes	02	11-25-20	Updated Seeding / So	dding Periods Charts	M.R.D.	M.L.			
eet for 4-lane roads. Includes	01	08-03-20	Revised	Standard	M.R.D.	S.H.S.			
	NO.	DATE	REVIS	IONS	BY	APP'D			
he Shoulder. Usually includes a Native			KANSAS DEPARTMENT	OF TRANSPORTATION			τ		
							ţ		
sturbed areas shall be seeded,		PERMANENT SEEDING							
ion 907 'Sodding', for the seeding		$\begin{bmatrix} 30101101ART OF SEEDING QUANTITIES \\ \underline{8} \end{bmatrix}$							
							2		
of Seeding X 1 5 X 2 Tons/Acre)		\$850					20		
g shall be paid for according to	FHW	A APPROVAL	05-06-19	APP'D.	Me	rvin Lare	ر ۲		
9 9	DESI	GNED	DETAILED	QUANTITIES	TRACED		Ċ		
	DESI	GN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.				
	KD	OT Graph	nics Certified 05-0	8-2023	Sh. No	D.71	-		

KDOT Graphics Certified 05-08-2023

SYMBOL KEY

	REMOVE SIGN
\bigcirc	REMOVE POST
	REMOVE FOOTING
\bigcirc	REMOVE SIGN & POST
$\textcircled{\bullet}$	REMOVE POST & FOOTING
$\textcircled{\bullet}$	REMOVE SIGN, POST, & FOOTING
▼	MOUNT ON WOOD POST IN CONCRETE FOOTING
$\mathbf{\overline{V}}$	MOUNT ON WOOD POST IN SOIL
$\mathbf{\nabla}$	MOUNT ON STEEL BEAM BREAKAWAY POST
\checkmark	MOUNT ON STEEL U-POST
\bigtriangledown	MOUNT ON PSST POST
\bigtriangledown	MOUNT ON EXISTING POST
\mathbf{V}	MOUNT ON VERTICAL SUPPORT
	SHOULDER MOUNTED INSTALLATION
	OFFSET MOUNTED INSTALLATION
	EXISTING SIGN
	EXISTING SIGN TO BE OVERLAID
	SIGN IS NOT PART OF PROJECT
	TYPE 'A' DELINEATOR (RIGID)
	TYPE 'A' DELINEATOR (RIGID) (BK-BK)
F	TYPE 'B' DELINEATOR (RIGID)
□ − °	TYPE 'A' DELINEATOR (FLEXIBLE)
°°	TYPE 'A' DELINEATOR (FLEXIBLE) (BK-BK)
□ □ ○	TYPE 'B' DELINEATOR (FLEXIBLE)
2	TYPE 2 OBJECT MARKER
3	TYPE 3 OBJECT MARKER
33	TYPE 3 OBJECT MARKER (BK-BK)

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GENERAL NOTES	IN
In order to expedite the completion of the project for traffic service, the signing and delineator work shall be sequenced with any other contract work such that the phases of construction may proceed and be completed at the same time.	72 73 74
New signs erected on the project which are in conflict with existing signing are to be completely covered until the existing signs are removed or the new signing is applicable. The existing signs that are being replaced, removed, or do not follow the current MUTCD signing standards are to be removed when the project is completed or as determined by the Engineer.	75 - 76 77 78 79 80
The Contractor shall exercise caution at all times when installing sign supports in and around areas where utilities exist, either underground or overhead, and will be held responsible for any damage incurred to the system. The installation of sign supports shall include the excavation, drilling, or driving the support footing and the erection of the sign support. The contractor shall exercise caution when working around any existing signs that are to remain and will be held responsible for any damage to the signs, supports, or footings. The Contractor shall exercise care when working around shrubbery while removing or installing signs or sign supports.	81 82 83 84 - 85
An existing sign post installation shall be plumb and the compaction of the backfill soil shall comply with the specifications after the removal and resetting of a sign, the removal and replacement of a sign, or the installation of a new sign.	86
The Contractor shall provide mounting bolts that are of a length that does not extend more than a nominal 1 inch beyond the sign post. The Contractor shall not make any field modifications to the mounting bolt prior to or after the sign is installed.	
Specific service (LOGO) signs that are to be removed shall have the business logo plaques removed and transported to location determined by KDOT, at which time the plaques become the property of KDOT. The Contractor will be assessed a replacement cost for any damage to a business logo plaque prior to the plaque becoming the property of KDOT.	

The materials and fabrication for signing and delineation work shall conform to the Standard Specifications for State Road and Bridge Construction (2015 edition) and Special Provisions.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	72	122

DEX OF SHEETS

SIGNING INDEX, SYMBOLS, & GENERAL NOTES POST SPACING & SIGN ANGLE DETAILS HEIGHT & LATERAL DISTANCE FOR ERECTION POSITIONING, DESIGN, & MOUNTING OF DELINEATORS POSITIONING, DESIGN, & MOUNTING FOR OBJECT MARKERS (TYPE 2 & 3) POSITIONING FOR CHEVRON (W1-8) SIGNS PLAN SHEETS (INSTALLATIONS & REMOVALS) QUANTITIES SHEETS (INSTALLATIONS) QUANTITIES SHEET (DELINEATORS & OBJECT MARKERS) SUMMARY SHEET (INSTALLATIONS & REMOVALS) SUMMARY SHEET (REMOVAL & RESET) RECAPITULATION SHEET STANDARD STRUCTURAL SIGN SUPPORTS (WOOD & STEEL POSTS) MOUNTING OF SIGNS ON WOOD POSTS MOUNTING OF FLAT SHEET SIGNS ON STEEL I-BEAM POSTS MOUNTING OF REINFORCED PANEL SIGNS ON I-BEAM POSTS DETAILS FOR FLAT SHEET SIGN BLANKS DETAILS FOR PROCESSED SIGNS DETAILS FOR REINFORCED PANELS DETAILS FOR GUIDE SIGN LEGEND DETAILS FOR GUIDE SIGNS DETAILED SIGN SPECIFICATIONS

2 10/01/19 Changed symbols, notes, & index								.G.	E.W.N.	1
	1	7/23/10	Changed	Changed General Notes and Spec Book Date					D.B.	1
	NO.	DATE		REVISION	IS		B	Y	APP'D	
	KANSAS DEPARTMENT OF TRANSPORTATION SIGNING SYMBOL KEY GENERAL NOTES AND INDEX									phics Certified
	TE402 7/1/03							Gra		
F	HWA AP	PROVAL	10	/01/2019 APP'	5 5	Steven A. Buckley	y			┣
۵	ESIGNE	D.D.G.	DETAILED	W.S.B. QUAI	VTITIE	S	TRACED			10
D	ESIGN C	K. S.A.B.	DETAIL CK.	D.D.G. QUAI	۱. CK.		TRACE CK			<u>10</u>
	KD0 ⁻	T Graphics	s Certified	12-17-2	019)	Sh.	No	o.72	


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TWO POST SPACING

Wood Post				
A B		W		
6" (Min.)	¾ W (Min.)	NA		

Steel Beam Post (Width less than or equal to 13'-0")				
A B W				
12" (Min.)	8'	10'-0" (Min.)		

Steel Beam Post (Width greater than 13'-0")					
A B W					
32" (Min.)	8' (Min.) 13'-6" (N				

Spacing Pattern: A+B+A W= Sign Width A= ⅓ W B= ⅔ W

to the centerline of the posts.

POST SPACING FOR REINFORCED PANEL SIGNS

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	73	122
<u> </u>		I		•



THREE POST SPACING

W
9'-0" (Min.)

Steel Beam Post (Width less than or equal to 21'-0")					
C D W					
12" (Min.)	8'	18'-0" (Min.)			

Steel Beam Post (Width greater than 21'-0")				
C D W				
32" (Min.)	8' (Min.)	21'-6" (Min.)		

Spacing Pattern: C+D+D+C

W= Sign Width C= ½ W D= ¾ W

NOTE: All spacing dimensions are measured

1	10/01/19	Cha	anged the post s	pacing tal	oles and notes	D.D.	.G. E.V	V.N.
NO.	DATE		REV	/ISIONS		B۱	/ AP	'P'D
	ŀ	KANSAS DEF POS REINF(AND	PARTMENT ST SPA DRCED ANGLI	CIN CIN PAN E OF	G FOR IEL SIGN SIGNS	ion S		
TE4	04						7/1/0	03
FHWA APP	PROVAL		10/01/2019	APP'D	Steven A. Buckley			
DESIGNED	D.C	D.G. DETAILED	W.S.B.	QUANTI	TIES	TRACED		
DESIGN C	K. S.A	A.B. DETAIL CK.	D.D.G.	QUAN. C	СК.	TRACE CK.		
				7 20	10			
KDU	i Graph	ics certifie	ea 12-1	./-20	19	Sh.	No.73	3



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	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75-63 KA-5699-01	2023	74	122
6" (Max.)					
12' (Min.) 6' 6' 9'	12' (Min.) 6' (Mi 6' (Mi 6'-6" (Ni 6'-6" (Ni 6'-6" (Ni 6'-6" (Ni 6'-6" (Ni 10) 10) 10) 10) 10) 10) 10) 10) 10) 10)	in.)			
	TE407	KANSAS DEPARTMENT OF TR OUNTING HEIGHT & L FOR CONVENTIONAL SIDE ROADS, MEDIAN GORES, AND URBAN	ATERAL ATERAL HIGHV NS, ISLA ROADW	UAYS, NDS, AYS 10/0	<u>аррур</u> Г)1/19

KDOT Graphics Certified 12-17-2019

ESIGN CK. E.W.N. DETAIL CK. E.W.N. QUAN. CK.

Sh. No.74

TRACE CK.

Graphics





LONGITUDINAL F

NOTE: The lateral offset is measured from the centerline of the object markers.



STRUCTURE A WITHOUT GU

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	75-63 KA-5699-01	2023	75	122
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- <u> </u>					
PLACEMENT					
APPROACH	NO. DATE	REVISIONS		BY	APP'D
JARDRAIL		KANSAS DEPARTMENT OF TRA	NSPORTAT	ION	
		DESIGN DETAI	LS FC)R = 2 8 2)	:
	FOR	STRUCTURES WI		$\Delta RAPET$	s ^ľ
	TE415			10-(<u>)</u> 1-19
	FHWA APPROVAL DESIGNED D.	L 10-01-19 APP'D. D.G. DETAILED D.D.G. QUANT	ITIES	Eric TRACED	W. Nichol
	KDOT Graphi	cs Certified 05-25-2022		Sh. N	0.75



COLORS: Yellow Background (Reflective) Black Stripes (Non-reflective)







COLOR: Yellow Background (Reflective)

TYPE 2 OBJECT MARKER

DELINEATOR POST (1.1 lb/ft "U" Post)









MOUNTING DETAILS



TYPE 3 OBJECT MARKER

DIMENSIONS A 3 1/8 B 1¹⁷/₃₂ 1 1⁄4 C (Dimensions are nominal)

2 lb/ft "U" POST











PUNCHING DETAILS

MOUNTING DETAILS

PUNCHING DETAILS

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS	
KANSAS	75-63 KA-5699-01	2023	76	122	

|Object Marker

GENERAL NOTE: See flat sheet sign blank standard sheets for the 6" x 12" and 12" x 36" sign blank details.

The object markers shall be covered with Type XI High Intensity yellow retroreflective sheeting.

All dimensions are in inches unless otherwise noted. See standard plan sheet TE590 for detailed specifications.						
NO.	DATE	REVISIONS		BY	APP'D	
		KANSAS DEPARTMENT OF TRANSP	ORTATION			
DESIGN DETAILS FOR OBJECT MARKERS TYPE 2 AND TYPE 3						ics Certified
ТЕ	416			10-0	1-19	aph
FHW	A APPROVA	L 10-01-19 APP'D.		Eric V	V. Nichol	Ū
DESI DESI	GNED D GN CK. E.	.D.G. DETAILED D.D.G. QUANTITIE W.N. DETAILCK. E.W.N. QUAN.CK.	ES TR. TR.	ACED ACE CK.		
KDC	KDOT Graphics Certified 07-07-2022 Sh. No.76					



IO. SHEETS	YEAR SHEET NO.	PROJECT NO. YEAR	STATE
122	023 77	75-63 KA-5699-01 2023	KANSAS
	· · · ·		

SCALE 1" = 100'

KANSAS DEPAR	RTMENT OF TRANSPO	RTATION	rtified					
PERM	ANENT SIGNI PLAN	NG	phics Cel					
REMOVALS AND INSTALLATIONS								

KDOT Graphics Certified 05-08-2023

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			CATI TON				F/		DN	WO	OD	STEEL	Σ	U-PC		S	STEEL BE						(F	PSST) POS	TS	.	0.4.(0)	C		TE FOO	TINGS	_					F		
		NC	LISC			T BER					-		INU			W6x9) W1	0x12	W10	Jx22	1 3/4			2"	2 1/4	·	2 1/2"				AM POS	$\frac{51}{1}$				_	BE BE		VE G NATJ
	PLAN SHEET NUMBER	PLAN STATIO NUMBER	CENTERLINE / INSTALL PC	SIGN DESIGNATION	SIGN SIZE	SIGN LAYOU SHEET NUME	FLAT SHEET	REINFORCED PANEL	OVERLAY	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAI TUBING	3I2.25 ALUM BEAM	2 LB PER FT	3 LB PER FT	A36 A572 (A1 T)	A5/2 (ALI) A36	A572 (ALT)	A36	A572 (ALT)	POST FOOTING	BRACKET	POST	FOOTING BRACKET	POST	FUOLING	POST FOOTING	18" DIA.	24" DIA.	36 30" DIA.	24" (A DIA. D	30" DIA.	OVERHEAD		BUTTERFLY BRIDGE MOL	MAST ARM	SINGLE TAPERED TU	MOUNT	MOUNT ABO
	77	247+30	RT/S	W2-2L	30" x 30"		X			1																											_		
	77	253+40	LT/S	R1-1	36" x 36"		X			1																											_		
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CENTERLINE LOCATION R or RR - Right of Centerline INSTALL POSITION S - Shoulder Mount C - On the Centerline NOTE: See standard plan sheet TE590 for detailed specifications. Image: Centerline detailed specification detailed																																							
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CENTERLINE LOCATION INSTALL POSITION L or LL - Left of Centerline S - Shoulder Mount M - Median Mount O - Offset Mount O - Offset Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount O - Offset Mount O + Overhead Mount O + Overhead Mount D - O. O. D. O. D. O. D. O. D. O. D. O. O. D. O. O. D. O.																																							
CENTERLINE LOCATION INSTALL POSITION L or LL - Left of Centerline S - Shoulder Mount M - Median Mount R or RR - Right of Centerline O - Offset Mount M - Overhead Mount G - Gore Mount M - Overhead Mount M - Overhead Mount G - On the Centerline O - Offset Mount M - Overhead Mount M - Destine M - Overhead Mount M - Overhead Mount M - Destine M - Overhead Mount M - Overhead Mount M - Destine M - Destine NO DATE No DATE ReVISIONS NO DATE																																							
$\frac{10000000}{1000000000000000000000000000$	CENTE L or LL - R or RR	ERLINE LOCAT - Left of Centerline - Right of Centerlin	FION e ne	INST S - Sho O - Off	FALL POSITION oulder Mount M - M fset Mount OH - G	1edian Mount Overhead Moi	unt			NC	DTE: S	See stan	dard p	lan sh	eet TE59	C			[02 10-0)1-19 Ad	ded Tapered 1	Tube. Rer	moved Couplers.	D.D.G.	E.W.N.	[<u> </u>		<i>Ά</i> Ι	10 0	חים א 1-10)	Ctor	/en A Du	cklev				
	C - On th	he Centerline		G - Go	re Mount		-				†	or detail	ea spe	ecifica	UONS.				-	01 07-2 NO. DA	23-10 Add	ed Coupler an R	nd Coupler REVISION	/Footing Quantity S	D.D.G. BY	D.B. APP'D	DE	SIGNED SIGN CK.	D.D.G. DET. S.A.B. DET.	AILED AIL CK. D.	K.S. QUAN	ITITIES I.CK.		<u>CK.</u>	D.B. TE43		8-2022)7-01-(

ATE PROJECTINO. YEAR SHEET NO. SHEETS	STATE
SAS 75-63 KA-5699-01 2023 78 122	KANSAS

Sh. No.78

						TY
			WF	ITE	WH (BACK T	ITE O BACK)
BEGINNING STATION	ENDING STATION	LOCATION DESCRIPTION	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT
250+85.02	250+85.02	Br. (106) LT & RT Railing				
252+88.02	252+88.02	Br. (106) LT & RT Railing				

Drawn By : jmarburger Plotted : 02-APR-2024 15:56 File : KA569901pss07-te436.dgn

QUANTITIES SHEET

DELINEATORS AND OBJECT MARKERS

R	IGID DEL	INEATOF	RS					FLEXIBLE								
'A'		-			TYP	PE 'B'				_	TYP	PE 'A'		_		
YEL	LOW	YEL (BACK T	LOW O BACK)	wн	ITE	YELI	_OW	WH	ITE	WH (BACK T	ITE O BACK)	YEL	LOW			
'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR			
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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	79	122

LINEATORS							OBJECT MARKERS					
			TYP	'E 'B'		TYPE 2		TYF	PE 3			
YELLOW (BACK TO BAC	:к)	WH	ITE	YELI	LOW		LEFT	RIGHT	CENTER	BACK TO BACK		
TYPE I ANCHOR TYPE III	ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	'U' POST	'U' POST	'U' POST	'U' POST	'U' POST		
						2						

			1		8						
01	10-09-2	21	Added de	lineator &	object marker typ	oes	D.D.G.	E.W.N.			
NO.	DATE			REVIS	IONS		BY	APP'D			
			KANSAS DEF	ARTMENT	OF TRANSPORT	ATION					
	QUANTITIES SHEET DELINEATORS & OBJECT MARKERS										
TE	436						07-0	1-03			
FHW	A APPRC	VAL		10-01-19	APP'D.	1	Steven A.	Buckley	Ċ		
DESI	GNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	Т	RACED				
DESI	GN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN.CK.	T	RACE CK.		2		
		1		0 - 14				- 70	Ľ		
KDC) i Gra	onics (certified	05-11	-2022		Sh. No)./9			

SIGNS									
TYPE	NUMBER	SQUARE FEET							
FLAT SHEET	2	13.71							
REINFORCED PANEL									
OVERLAY									

DELINEA	DELINEATORS									
	FLEX DELIN	IBLE EATOR	RI(DELIN	GID EATOR						
TYPE	TYPE I ANCHOR	TYPE III ANCHOR	"U" POST	BRACKET MOUNT						
TYPE 'A' WHITE										
TYPE 'A' YELLOW										
TYPE 'B' WHITE										
TYPE 'B' YELLOW										
TYPE 'A' WHITE (BACK TO BACK)										
TYPE 'A' YELLOW (BACK TO BACK)										

OB	OBJECT MARKERS									
	NUMBER									
TYPE 2 ("U" POS ⁻	4									
TYPE 3 ("U" POS ⁻	TYPE 3 ("U" POST)									
	OM3-L									
INFORMATION ONLY	OM3-R									
TYPE 3 ("U" POS										

NU	NUMBER & LENGTHS OF POSTS & ALUMINUM BEAMS (INFORMATION ONLY)															
	4"	x 6" PO	ST				(GALVAN	IZED ST	EEL BE	AM POS	Т	PEI	RFORAT	ED SOU	ARE
	WC	OD	STEEL	M	"U" F	POST	We	5x9	W10	W10x12		W10x22		TEEL TU	BE (PSS	ST)
LENGTH OF POST OR BEAM	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAL TUBING	3I2.25 ALUMIN BEAM	2 LBS/FT	3 LBS/FT	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	1-3/4"	2"	2-1/4"	2-1/2"
2.1' - 4'																
4.1' - 6'																
6.1' - 8'																
8.1' - 10'																
10.1' - 12'																
12.1' - 14'																
14.1' - 16'	2															
16.1' - 18'																
18.1' - 20'																
20.1' - 22'																
22.1' - 24'																
24.1' - 26'																
26.1' - 28'																
28.1' - 30'																
30.1' - 32'																

Drawn By : jmarburger Plotted : 02-APR-2024 15:56 File : KA569901pss08-te439.dgn

SUMMARY OF QUANTITIES

	POSTS AND ALUMINUM BEAMS															
	4	" x 6" POS	Т		GALVANIZED STEEL BEAM POST						Р	PERFORATED SOUARE				
	WO	OD	STEEL	MU	"U" P	POST	We	5x9	W10)x12	W10)x22	STEEL TUBE (PSST)			
	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAL TUBING	3I2.25 ALUMIN BEAM	2 LBS/FT	3 LBS/FT	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	1-3/4"	2"	2-1/4"	2-1/2"
NUMBER	2															
FEET	32															

	POST FOOTINGS AND BRACKETS												
		CONCRE	TE FOOTII	NG (DIA.)		PERFORATED SQUARE STEEL							
				A572	STEEL		TUBE F	OOTING		BRAG	CKET		
	WOOD	A36 S	STEEL	(Al	(ALT)								
	18"	24"	30"	24"	30"	1-3/4"	2"	2-1/4"	2-1/2"	1-3/4"	2"		
NUMBER													
FEET						\triangleright	\ge				\searrow		

BASE PLATE	S AN	D STI	JB PO	DSTS	
	We	5x9	W10	W1	
	A36 STEEL	A572 STEEL	A36 STEEL	A572 STEEL	A36 STEEL
BREAKAWAY BASES		(ALT)		(ALT)	
BASE PLATE (TOP)					
STUB POST WITH BASE PLATE					
NON-BREAKAWAY BASES					
BASE PLATE					
	•	•			

SIGN STRUCTURES											
TYPF	NFW	MODIFIED	REMOVE AND RESET	RESET							
OVERHEAD STRUCTURE											
CANTILEVER STRUCTURE											
BUTTERFLY STRUCTURE											
BRIDGE MOUNT ATTACHMENT											
MAST ARM SIGN SUPPORT											
SINGLE TAPERED TUBE SIGN SUPPORT											

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	80	122



REMOVALS									
TYPE	NUMBER								
SIGNS	2								
POSTS	2								
FOOTINGS									
SIGN STRUCTURES									

			·	i i								
02	10-01-19		Revised	Tables	D.D.G.	E.W.N.						
01	07-23-10		Revised	Tables	D.D.G.	D.B.						
NO.	DATE		REVIS	IONS	BY	APP'D						
	KANSAS DEPARTMENT OF TRANSPORTATION											
	SUMMARY OF QUANTITIES FOR INSTALLATIONS AND REMOVALS											
TE	TE439 07-01-03											
FHWA APPROVAL 10-01-19 APP'D. Steven A. Buckley												
DESI	DESIGNED D.D.G. DETAILED K.D.S. QUANTITIES TRACED											
DESI	GN CK.	S.A.B. DETAIL CK.	D.D.G.	QUAN.CK.	TRACE CK.							
KDC	KDOT Graphics Certified 05-25-2022 Sh. No.80											

DOT Graphics Certified

BID ITEMS	APPROX QUAN ⁻	KIMATE FITIES	UNITS
SIGN (FLAT SHEET) (HIGH PERFORMANCE)	13	.71	SQUARE FO
SIGN (REINFORCED PANEL) (HIGH PERFORMANCE)			SQUARE FO
SIGN (OVERLAY) (HIGH PERFORMANCE)			SQUARE FC
SIGN POST (4" x 6" WOOD) (FLAT SHEET SIGN)	3	32	LINEAR FO
SIGN POST (4" x 6" WOOD) (REINFORCED PANEL SIGN)			LINEAR FO
SIGN POST (2 LB/FT "U" STEEL)			LINEAR FC
SIGN POST (3 LB/FT "U" STEEL)			LINEAR FC
SIGN POST (1-3/4" PERFORATED SQUARE STEEL TUBE)			LINEAR FC
SIGN POST (2" PERFORATED SQUARE STEEL TUBE)			LINEAR FC
SIGN POST (2-1/4" PERFORATED SQUARE STEEL TUBE)			LINEAR FC
SIGN POST (2-1/2" PERFORATED SQUARE STEEL TUBE)			LINEAR FC
SIGN POST (4" X 6" STRUCTURAL STEEL)			LINEAR FC
SIGN POST (3 I 2.25 ALUMINUM)			LINEAR FC
	A36	A572(ALT)	
SIGN POST (W6X9 STEEL BEAM)			LINEAR FC
SIGN POST (W10X12 STEEL BEAM)			LINEAR FC
SIGN POST (W10X22 STEEL BEAM)			LINEAR FC
SIGN POST STUB WITH BREAKAWAY BASE PLATE (W6X9)			EACH
SIGN POST STUB WITH BREAKAWAY BASE PLATE (W10X12)			EACH
SIGN POST STUB WITH BREAKAWAY BASE PLATE (W10X22)			EACH
SIGN POST BREAKAWAY BASE PLATE (W6X9)			EACH
SIGN POST BREAKAWAY BASE PLATE (W10X12)			EACH
SIGN POST BREAKAWAY BASE PLATE (W10X22)			EACH
SIGN POST FOOTING (24" Dia. CONCRETE)(STEEL BEAM POST)			LINEAR FC
SIGN POST FOOTING (30" Dia. CONCRETE)(STEEL BEAM POST)			LINEAR FC
SIGN POST FOOTING (18" Dia. CONCRETE)(WOOD POST)			LINEAR FC
SIGN POST FOOTING (1-3/4" PERFORATED SQUARE STEEL TUBE)			EACH
SIGN POST FOOTING (2" PERFORATED SQUARE STEEL TUBE)			EACH
SIGN POST FOOTING (2-1/4" PERFORATED SQUARE STEEL TUBE)			EACH
SIGN POST FOOTING (2-1/2" PERFORATED SQUARE STEEL TUBE)			EACH
SIGNING OBJECT MARKER (TYPE 2)		4	EACH
SIGNING OBJECT MARKER (TYPE 3)			EACH
SIGNING DELINEATOR (TYPE A)(WHITE RIGID, "U" POST)			EACH
SIGNING DELINEATOR (TYPE A)(YELLOW RIGID, "U" POST)			EACH
SIGNING DELINEATOR (TYPE B)(WHITE RIGID, "U" POST)			EACH
SIGNING DELINEATOR (TYPE B)(YELLOW RIGID, "U" POST)			EACH
SIGNING DELINEATOR (TYPE A)(WHITE FLEXIBLE)(TYPE I ANCHOR)			EACH
SIGNING DELINEATOR (TYPE A)(YELLOW FLEXIBLE)(TYPE I ANCHOR)			EACH
SIGNING DELINEATOR (TYPE B)(WHITE FLEXIBLE)(TYPE I ANCHOR)			EACH
SIGNING DELINEATOR (TYPE B)(YELLOW FLEXIBLE)(TYPE I ANCHOR)			EACH
SIGNING DELINEATOR (TYPE A)(WHITE FLEXIBLE)(TYPE 3 ANCHOR)			EACH
SIGNING DELINEATOR (TYPE A)(YELLOW FLEXIBLE)(TYPE 3 ANCHOR)			EACH
SIGNING DELINEATOR (TYPE B)(WHITE FLEXIBLE)(TYPE 3 ANCHOR)			EACH
SIGNING DELINEATOR (TYPE B)(YELLOW FLEXIBLE)(TYPE 3 ANCHOR)			EACH

15:56 PR-2024 AP Drawn By : jmarburger Plotted : 02 File : KA569901pss09-te450.dgn

DECADITIN ATION OF SIGNING &

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
A DELINEATION BID ITEMS	KANSAS	75-63 KA-5699-01	2023	81	122
BID ITEMS	APP QU	ROXIMATE ANTITIES		JNITS	

Note: The contract bid for steel beam posts, stub posts, base plates, and footings will be based on A36 Grade steel quantities. When furnishing the A572 Grade alternate steel, the payment will be based on the equivalent A36 steel unit prices in the contract.

02	10-01-1 07-23-1	ə D	Removed PSS Changed Bio	ST coupler I Items as	and changed the per Spec Book (e tables (2007)	D.D.G. D.D.G.	E.W.N. D.B.			
NO.	DATE			REVIS	IONS		BY	APP'D			
	KANSAS DEPARTMENT OF TRANSPORTATION										
	RECAPITULATION OF SIGNING & DELINEATION BID ITEMS										
TE	TE450 07-01-03										
FHW	FHWA APPROVAL 10-01-19 APP'D. Steven A. Buckley										
DESI		D.D.G.	DETAILED	K.D.S.	QUANTITIES		TRACED		0		
		U.A.D.	DETAIL ON.	D.D.O.					Y		
KDC	KDOT Graphics Certified 05-26-2022 Sh. No.81										





CONCRETE FOOTING

NOTE TO THE ENGINEER:

The intent of the "AASHTO Roadside Design Guide" and these plans is to have a 4" or less projection above the finished ground line after impact.

BREAKAWAY CLEARANCE

SOIL



WOOD POST IN SOIL

SIGN MOUNTING HOLES

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	82	122

GENERAL NOTES

The post sleeve shall be formed from 10 gauge sheet steel to meet the requirements of ASTM A653 and zinc coated to meet the requirements of coating designation A123. If galvanized sheet steel is used, no other galvanization is required. It is permissible to close the bottom of the sleeve with a metal plate. Basis of acceptance shall be visual inspection of the finished sleeve and determination of zinc thickness by magnetic gage.

All sign mounting holes in the wood posts shall be drilled prior to treating.

Breakaway holes, field drilled sign mounting holes, and field cuts shall be treated in accordance with the preservative treatment specifications.

Prior to sealing the opening between the wood post and the top of the concrete footing, secure the post by placing 3" wide by 2" long wood wedges into the opening on two adjacent sides of the post. The wedges are be flush with up to a maximum of $\frac{3}{8}$ " sticking up above the top of the footing.

Commercial grade concrete may be substituted for sign support footings.



SIGN POST

All dimensions in inches unless otherwise noted

01	10-01-1	9	Ch	ange deta	ils and note		D.D.G.	E.W.N.				
NO.	DATE		ł	BY	APP'D							
	KANSAS DEPARTMENT OF TRANSPORTATION											
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TE	460						07-0	1-03	2			
FHW	A APPRO	VAL		10-01-19	APP'D.		Steven A.	Buckley	Ľ			
DESI	GNED	D.D.G.	DETAILED	A.A.D.	QUANTITIES	-	TRACED					
DESI	GN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN.CK.	-	TRACE CK.		2			
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KDC	KDOT Graphics Certified 05-26-2022 Sh. No.82											



07 otted Drawn By : jmarburger File : KA569901pss12-te481

TYPICAL MOUNTING OF REINFORCED PANEL SIGNS







D



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	83	122



1 ¾"

| Post Clip, Post Clip Bolt, Flat Washer, and ESNA Stop Nut (Nylon Fiber)

– 3 Lbs/Ft "U" Post



Bolt, Flat Washer, and Reg. Hex Nut

NOTES:

The top of the post shall not extend above the top of the sign.

When signs are mounted back to back, the signs shall be mounted at their prescribed height. In general installations, the bottom holes of the signs should be aligned. In order to prevent having to drill holes in the signs or posts, the sign on the back should be raised and positioned such that the holes are aligned. When a sign is mounted on the back of the R1-1 (Stop) sign, that sign is to be centered vertically on the R1-1 sign. When a sign is mounted on the back of the R1-2 (Yield) sign, the top holes of the signs should be aligned.

The primary sign and supplemental sign are to be mounted at their prescribed height, but under no circumstances shall the signs overlap each other. If the primary sign cannot be mounted without overlapping, then it shall be raised above the supplemental sign.

Any additional mounting holes, either through the sign or post, shall be drilled by the contractor. All holes drilled in the post shall be treated with a perservative. All holes drilled in the sign shall be free of any defects and the sheeting around the hole shall not be damaged.

A nylon washer shall be placed against the sheeting when a nut is to be tightened against the sign face.

The 3 lb/ft steel "U" post used for reinforced panel sign installations is to be included in the bid item 'SIGN POST (4" x 6" WOOD) (REINFORCED PANEL SIGN)'.

When the 2 lb/ft steel "U" post is used for the route marker assemblies attachment, it shall be subsidiary to the bid item 'SIGN POST (4" x 6" WOOD) (FLAT SHEET SIGN)'.

The aluminum post clip bolt may have a rectangular head if the smaller dimension is equal to the square head dimension.

Bolt, Flat Washer, and Reg. Hex Nut

- 3 Lbs/Ft "U" Post - Reinforced Panel Sign

All dimensions are in inches

01	01 10-01-19 Revised drawings and notes D.D.G. E.W.N.												
NO.	NO. DATE REVISIONS BY APP'D												
KANSAS DEPARTMENT OF TRANSPORTATION													
DETAILS FOR MOUNTING SIGNS ON WOOD POST FLAT SHEET AND REINFORCED PANEL													
ΤE	481						07-0	1-03					
FHW	A APPROVA	۱L		10-01-19	APP'D.	•	Steven A.	Buckley					
DESI	GNED D).D.G.	DETAILED	A.A.D.	QUANTITIES	TR	ACED						
DESI	GN CK. S	S.A.B.	DETAIL CK.	D.D.G.	QUAN.CK.	TR	ACE CK.						
KDC	KDOT Graphics Certified 05-26-2022 Sh. No.83												



SIGN SIZE	A	В	С	D	E	F	G	Т	AREA
48 X 48	48	48	12	24	9	30	24	0.100	13.25





SIGN SIZE	A	В	С	D	E	Т	AREA
30 X 30	30	30	3	24	15	0.080	5.18
36 X 36	36	36	6	24	18	0.080	7.46

Drawn By : jmarburger Plotted : 02-APR-2024 15:56 File : KA569901pss13-te503.dgn

(1)







SIGN SIZE	А	В	С	D	E	Т	AREA
48 X 48	48	3	12	18	3	0.080	6.93
60 X 60	60	3	18	18	4	0.100	10.83



SIGN SIZE	А	В	С	Т	AREA
18 X 18	18	6	1 ½	0.080	2.25
24 X 24	24	12	1 ½	0.080	4.00
30 X 30	30	12	1 7⁄8	0.080	6.25
36 X 36	36	18	2 1⁄4	0.080	9.00



SIGN SIZE	А	В	С	D	Т
48 X 48	48	12	15	3	0.10

STA	TE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANS	SAS	75-63 KA-5699-01	2023	84	122



SIGN SIZE	А	В	С	D	E	Т	AREA
48 X 36	48	36	9	14 ¾	2 1⁄4	0.125	5.56

NOTE: All holes are 3/8 " square unless otherwise noted.

The dimension "t" is the thickness of the aluminum blank.

1 Center hole is required.



All dimensions are in inches.

01	10-01-19	D.D.G.	E.W.N.									
N0.	NO. DATE REVISIONS BY APP'D											
	KANSAS DEPARTMENT OF TRANSPORTATION											
	SIGN BLANK DETAILS FOR											
			FLAT	SHE	ET SIGNS	S			Č			
									с С			
							07.0	1 00	40			
	:503						07-0	1-03	гэ			
FHW	A APPROV	AL		10-01-19	APP'D.		Steven A	Buckley	C			
DESI	GNED	D.D.G.	DETAILED	A.A.D.	QUANTITIES	TR/	ACED					
DESI	GN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN.CK.	TR/	ACE CK.		Ĕ			
							<u> </u>		JΥ			
KDC	KDOT Graphics Certified 05-26-2022 Sh. No.84											



D

A B C

E | T | AREA

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SIGN SIZE

	3 X 8	3	8	1	6	3⁄8	0.040	0.17
	6 X 12	6	12	3	6	3/8	0.063	0.50
	12 X 6	12	6	1 ½	3	3⁄4	0.063	0.50
	12 X 9	12	9	1 ½	6	1 ½	0.063	0.75
	12 X 18	12	18	3	12	1 ½	0.063	1.50
	12 X 24	12	24	3	18	1 ½	0.080	2.00
	12 X 36	12	36	6	24	1 ½	0.080	3.00
	12 X 48	12	48	6	36	1 ½	0.080	4.00
	18 X 6	18	6	1 ½	3	1 1/2	0.063	0.75
	18 X 18	18	18	3	12	1 1/2	0.063	2.25
	18 X 30	18	24	3	24	1 1/2	0.080	3.75
	18 X 36	18	24	6	24	1 1/2	0.080	4.50
	18 X 42	18	24	6	30	1 1/2	0.080	5.25
	18 X 48	18	24	6	36	1 1/2	0.080	6.00
	21 X 15	21	15	1 ½	12	1 ½	0.080	2.19
	24 X 6	24	6	1 ½	3	1 ½	0.080	1.00
	24 X 12	24	12	3	6	1 ½	0.080	2.00
	24 X 18	24	18	3	12	1 ½	0.080	3.00
	24 X 24	24	24	3	18	1 ½	0.080	4.00
	24 X 30	24	30	3	24	1 ½	0.080	5.00
	24 X 36	24	36	6	24	1 ½	0.080	6.00
	30 X 12	30	12	3	6	1 7⁄8	0.080	2.50
	30 X 15	30	15	1 ½	12	1 7⁄8	0.080	3.13
	30 X 18	30	18	3	12	1 7⁄8	0.080	3.75
	30 X 21	30	21	1 ½	18	1 ½	0.080	4.38
	30 X 24	30	24	3	18	1 7%	0.080	5.00
	30 X 30	30	30	3	24	1 7⁄8	0.080	6.25
	30 X 36	30	36	6	24	1 7⁄8	0.080	7.50
	36 X 12	36	12	3	6	1 1/2	0.080	3.00
	36 X 18	36	18	3	12	1 1/2	0.080	4.50
	36 X 24	36	24	3	18	1 ½	0.080	6.00
	36 X 30	36	30	3	24	2 1⁄4	0.080	7.50
	36 X 36	36	36	6	24	2 1⁄4	0.080	9.00
3	45 X 36	45	36	3	30	2 1⁄4	0.100	11.25

Drawn By : jmarburger Plotted : 02-APR-2024 15:56 File : KA569901pss13a-te506.dgn



	SIGN SIZE	А	В	С	D	E	F	G	Т	AREA
	36 X 12	36	12	3	6	3	30	1 ½	0.080	3.00
	36 X 30	36	30	3	24	3	30	2 1⁄4	0.080	7.50
	36 X 48	36	48	9	30	6	24	0	0.100	12.00
	36 X 60	36	60	12	36	6	24	0	0.100	15.00
2)	36 X 72	36	72	6	60	6	24	0	0.100	18.00
	42 X 12	48	12	3	6	6	30	1 ½	0.080	3.50
	42 X 18	48	18	3	12	6	30	1 ½	0.080	5.25
	42 X 24	48	24	6	12	6	30	1 7⁄8	0.080	7.00
	42 X 36	48	36	6	24	6	30	0	0.100	10.50
	48 X 12	48	12	3	6	9	30	1 1/2	0.080	4.00
	48 X 18	48	18	3	12	9	30	1 ½	0.080	6.00
	48 X 24	48	24	6	12	9	30	1 7⁄8	0.080	8.00
	48 X 30	48	30	6	18	9	30	0	0.100	10.00
	48 X 36	48	36	6	24	9	30	0	0.100	12.00
	48 X 42	48	42	6	30	9	30	0	0.100	14.00
	48 X 48	48	48	9	30	9	30	0	0.100	16.00
	48 X 60	48	60	12	36	9	30	0	0.100	20.00
2)	48 X 72	48	72	6	60	9	30	0	0.100	24.00
2)	48 X 96	48	96	12	72	9	30	0	0.100	32.00
	60 X 12	60	12	3	6	12	36	0	0.100	5.00

NOTE:

All holes are $rac{3}{8}$ " square, unless otherwise noted.

The dimension "T" is the thickness of the aluminum blank.

- 1 Holes shall be $\frac{5}{16}$ " diameter.
- 2 Dimension "D" requires a center hole.
- 3 Additional hole 12" below top hole.

						STATE		PROJECT	NO.	YEAR	SHEET NO.	TOTAL SHEETS
		- 0				KANSA	s 75	5-63 KA-5	699-01	2023	85	122
ſ	SIGN SIZE	A	В	С	D	E	F	G	Т	AREA		
	60 X 18	60	18	3	12	12	36	0	0.100	7.50		
	60 X 24	60	24	6	12	12	36	0	0.100	10.00		
	60 X 30	60	30	6	18	12	36	0	0.100	12.50		
	60 X 36	60	36	6	24	12	36	0	0.100	15.00		
	60 X 42	60	42	6	30	12	36	0	0.100	17.50]	
	60 X 48	60	48	9	30	12	36	0	0.100	20.00]	
	72 X 12	72	12	3	6	15	42	0	0.100	6.00		
	72 X 18	72	18	3	12	15	42	0	0.100	9.00		
	72 X 24	72	24	6	12	15	42	0	0.100	12.00]	
	72 X 30	72	30	6	18	15	36	0	0.100	15.00		
	72 X 36	72	36	6	24	15	42	0	0.100	18.00		
	72 X 42	72	42	6	30	15	42	0	0.100	21.00		
	72 X 48	72	48	9	30	15	42	0	0.100	24.00		
	84 X 12	84	18	3	6	18	48	0	0.100	7.00		
_	84 X 18	84	18	3	12	18	48	0	0.100	10.50		
_	84 X 24	84	24	6	12	18	48	0	0.100	14.00		
	84 X 30	84	30	6	18	18	48	0	0.100	17.50]	
	84 X 36	84	36	6	24	18	48	0	0.100	21.00]	
	84 X 42	84	42	6	30	18	48	0	0.100	24.50]	
F	84 X 48	84	48	9	30	18	48	0	0.100	28.00	1	

All dimensions are in inches.

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	10.01.0								
01	10-01-1	19	Updated sig	in blank de	tails and dimensions		D.D.G.	E.W.N.	
NO.	DATE			REVIS	IONS		BY	APP'D	
	KANSAS DEPARTMENT OF TRANSPORTATION								
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		SI	GN BL	ANK	DFTATI S I	FOF	2		ŧ
		01				01	•		Ē
			FLAI	SHE	ET SIGNS				0
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ΙΤΕ	506						07-0	1-03	200
FHW	A APPRC	VAL		10-01-19	APP'D.		Steven A	Buckley	Ŀ
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DESI	GN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN.CK.	TR	ACE CK.		Ξ
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KDC	DT Gra	ohics (Certified	05-26	5-2022		Sh. No	0.85	

DETAILED SPECIFICATIONS FOR FLAT SHEET SIGNS AND OVERLAY PANELS

All new flat sheet sign blanks shall be of the fabrication and thickness shown on the flat sheet blank detail sheets, unless other details are shown in the plans.

Flat sheet blanks shall be used for signs that are less than or equal to 7'-0" in length and/or less than or equal to 4'-0" in height, unless other details are shown in the plans. Flat sheet blanks shall also be used for signs that are 4'-0" in length and less than or equal to 8'-0" in height, unless other details are shown in the plans.

The design details for signs (color, letter height, and letter series) shall be as shown in the FHWA Standard Highway Signs and Markings book (2004 edition and supplements), unless other details are shown in the plans. All sign faces shall be covered with Type IV high intensity retroreflective sheeting, unless otherwise noted in the plans.

The sheeting used for the direct applied legend and borders shall be Type IV high intensity retroreflective sheeting, unless otherwise noted in the plans.

The school warning signs, the "SCHOOL" portion of the S5-1 sign, S4-3p plaque, and any supplemental plaques used with these warning signs shall have a fluorescent yellow-green background, unless otherwise noted in the plans.

The type of adhesive used for retroreflective sheeting or lettering film shall be heat activated or pressure sensitive.

DETAILED SPECIFICATIONS FOR REINFORCED PANEL SIGNS

All new reinforced sign panels shall be of the fabrication and thickness shown on the reinforced panel detail sheets. If extrusheet fabricated sign panels are used, they shall be of the length, width and in the position shown. If extrusheet fabricated panel dimensions are not shown, a line of legend should be placed entirely on one panel. If extruded fabricated sign panels are used, either 1'-0" or 6" panels shall be used. The 6" panels shall be used only at the top or bottom of signs.

Reinforced panels shall be used for signs that are greater than 7'-0" in length or greater than 4'-0" in height, unless other details are shown in the plans.

All sign faces shall be covered with Type IV high intensity retroreflective sheeting, unless otherwise noted in the plans.

KANSAS 75-63 KA-5699-01 2023 86 122		T NO.	PROJECT NO.	PROJECT	PROJEC	JECT NO	NO.		YEAR	s	HEET NO	TOT SHE	⁻ AL ETS
)1	5699-01	3 KA-5699	75-63 KA-5	3 KA-	A-569	699-0	-01	2023		86	12	22

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The sheeting used for the direct applied legend and borders shall be Type IV high intensity retroreflective sheeting, unless otherwise noted in the plans.

The type of adhesive used for retroreflective sheeting or lettering film shall be heat activated or pressure sensitive.

Letters and numbers on reinforced panel signs are modified Series "E" unless otherwise shown.

Spacing table dimensions are in inches.

02	10-01-19		Change	d notes		D.D.G.	E.W.N.		
01	07-23-10	Change	ed Notes ar	nd Sheeting Type		D.D.G.	D.B.		
NO.	DATE		REVIS	IONS		BY	APP'D		
	KANSAS DEPARTMENT OF TRANSPORTATION								
		DETAILS	SPE	CIFICATIO	DNS	S			
FOR REINFORCED SIGN PANELS									
	FUR REINFURGED SIGN PANELS								
		AND FL	AT SI	HEET SIGN	1S				
TE	590					07-0	1-03		
FHW	A APPROVA	L	10-01-19	APP'D.		Steven A.	Buckley		
DESI	GNED D	D.D.G. DETAILED K.D.S. QUANTITIES TRACED							
DESI	GN CK. S	A.B. DETAIL CK.	D.D.G.	QUAN.CK.	TR/	ACE CK.			
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KDC)T Graph	ics Certified	05-24	-2022		Sh. No	0.86		





PP'D		ſ			
ESIGNED	DETAILED		DESIGN CK.	DETAIL CK.	
COT Graphics	Certified	05-0	8-2023	Sh N	0



4" TYPICAL SPACING FOR NO PASSING LINES UNLESS OTHERWISE NOTED ON PLANS



TYPICAL SPACING FOR BROKEN LINES UNLESS OTHERWISE NOTED ON PLANS



TYPICAL SPACING FOR LANE DROP. UNLESS OTHERWISE NOTED ON PLANS.

TYPICAL SPACING FOR DOTTED EXTENSION LINES, UNLESS OTHERWISE NOTED ON PLANS.



- 6" BROKEN WHITE LANE LINE

300'

6" WHITE LANE DROP LINE

KDOT Graphics Certified 07-17-2018

Sh. No.89

SUMMARY OF PA						F PAV	EI	
LOCATION	4" Solid WHITE Edge Line	6" Solid WHITE Edge Line	6" Broken WHITE Lane Line	6" Broken WHITE Lane Line (PCP)	6" Dotted WHITE Extension Line	6" Broken WHITE Lane Drop Line	6" Solid WHITE Lane Line	B W Lar
MAINLINE US-75:								
STA. 107+84 TO STA. 167+00 STA 167+00 TO STA 195+68		11,652				1,436		<u> </u>
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TOTALS		17,388				359		

					S	UMM	ARY C
LOCATION	₽	4	1	4	4	Ŀ	STOP
TOTALS							

NOTE: FOR SPECIFIC PAVEMENT MARKING DETAILS AND DIMENSIONS SEE PLAN SHEETS

NOTE: ALL TOTALS REFLECT ACTUAL QUANTITY OF PAVEMENT MARKING MATERIALS REQUIRED.

S þ Plott. gn e311 Drawn By : jmarburger File : KA569901mss02

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														STATE PF	OJECT NO.	YEAR	SHEET NO
EMEN	IT MA	RKING	GS											kansas 75-63	KA-5699-01	2023	90
8" Broken	8" Solid	8" Dotted	12" Solid	12" Solid	12" Solid WHITE	24" Solid WHITE	24" Solid	4" Solid	4" Solid	4" Solid	4" Broken	6" Solid	12" Solid				
WHITE Lane Drop Line	WHITE Gore Line	WHITE Extension Line	WHITE Diagonal Line	WHITE Chevron Line	Type I Crosswalk Line	Type II Crosswalk Line	WHITE Stop Line	YELLOW Edge Line	YELLOW Double Line	YELLOW Line	YELLOW Line	YELLOW Edge Line	YELLOW Diagonal Line	RECAPITULATION OF QUA	NTITIES		
									1 786	740	3 950			ITEMS	TOTAL		UNITS
									1,700	710	2,868			PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(4")			FT
											,			PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(6")	17,747		FT
														PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(8")			FT
														PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(12")			FT
														PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(4")	6,017		FT
													+	PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(6")			FT
														PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(12")			FT
														DAVEMENT MARKING (THERMORIASTIC)(WHITE)(4")			
														PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(4')			
														PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(0')			FI
														PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(8)			FI
														PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(12)			FI
																	FI
													+	PAVEMENT MARKING (THERMOPLASTIC)(TELLOW)(6)			
														PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(12")			FI
														PAVEMENT MARKING (EPOXY)(WHITE)(4")			FT
														PAVEMENT MARKING (EPOXY)(WHITE)(6")			FT
														PAVEMENT MARKING (EPOXY)(WHITE)(8")			FT
														PAVEMENT MARKING (EPOXY)(WHITE)(12")			FT
														PAVEMENT MARKING (EPOXY)(YELLOW)(4")			FT
														PAVEMENT MARKING (EPOXY)(YELLOW)(6")			FT
														PAVEMENT MARKING (EPOXY)(YELLOW)(12")			FT
														PAVEMENT MARKING (INTERSECTION GRADE)(WHITE)(12")			FT
														PAVEMENT MARKING (INTERSECTION GRADE)(WHITE)(24")			FT
														PAVEMENT MARKING (INTERSECTION GRADE)(YELLOW)(12")			FT
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)()			EACH
													<u> </u>	PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(WHITE)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(US-SHIELD)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(K-SHIELD)()			EACH
														PAVEMENT MARKING SYMBOL (INTERSECTION GRADE)(I-SHIELD)()			EACH
														PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(6")			+ ſ
											+			PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(8")			
														PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(12")			FT
														PAVEMENT MARKING REMOVAL	17 126		FT
									3,572	740	1,705				1 1,120		

OF WORD & SYMBOL MARKINGS

								I .	1.	Γ.	Г.,	T	1
ONLY	X-ING	SCHOOL	10	435	24	400	18	5	5	\$	\$	1	



NOTE: WORDS & SYMBOLS SHALL CONFORM TO THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" PRINTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

PRIOR TO COMMENCEMENT OF PAVEMENT MARKING WORK THE ENGINEER WILL ESTABLISH THE LIMITS FOR "NO PASSING" ZONES. THESE LIMITS SHALL BE USED FOR THE LOCATION OF "NO PASSING" LINES AND FOR THE COMPUTATION OF ACTUAL MARKING QUANTITIES FOR THIS LINE TYPE.

2	5/25/12	2 A	dded Line Types	, Symbols,	and Shields	B.A.	H. B.D.(G.	
1	7/26/05	5	New FHWA	Approval I	Date	J.F.	F. B.D.(G.	
NO.	DATE		REV	'ISIONS		BY	APP	D	
TE3	KANSAS DEPARTMENT OF TRANSPORTATION TE311								
FHWA APF	PROVAL		5/25/2012	APP'D	Brian D. Gower			ŀ	
DESIGNED) J	J.F.F. DETAILED	J.F.F.	QUANTIT	IES	TRACED			
DESIGN C	К. В	.D.G. DETAIL CK.	B.D.G.	QUAN. CK	, 	TRACE CK.			
KDOT	Graph	nics Certifie	ed 07-1	7-201	8	<u> </u>			

Sh. No.90

PHASE I	CONSTRUCTION NOTES
1	Install Phase I Temporary Concrete Safety Barriers, Inertial Barrier and Temporary Traffic
2	Remove and reconstruct East side Bridge 75-63-2.69 (106)
3	Remove and reconstruct East side roadway between full depth reconstruction limits.
	This work will also include embankment widening & guardrail installation on the East side o
	no more than 1 week. Do not leave a blunt end exposed at any time.
PHASE II	CONSTRUCTION NOTES
1	Relocate Temporary Concrete Safety Barrier to Phase II Layout
2	Remove and reconstruct West half of Bridge 75-63-2.69 (106)
3	Remove and reconstruct West half of roadway between full depth reconstruction limits. Th
	Guardrail located beyond temporary concrete safety barrier shall be removed and reinstalle
4	Remove Temporary Concrete Safety Barrier, Inertial Barrier and Temporary Traffic Signals.







TYPICAL SECTION DURING CONSTRUCTION (PHASE II)

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Drawn By:jmarburger File:KA569901rcs01.dgn

Construction Sequence Notes

I Temporary Traffic Signals.

on on the East side of the roadway. Guardrail located beyond temporary concrete safety barrier shall be removed and reinstalled i

nstruction limits. This work will also include embankment widening and guardrail installation on the West side of the roadway. moved and reinstalled in no more than 1 week. Do not leave a blunt end exposed at any time.



For Bridge Details See Sh. Nos. 30-56. For Temporary Concrete Barrier (Type F3) Layout See Sh. No. 103-104. For Inertial Barrier Details See Sh. No. 109. See RD622B For Barrier Anchorage Requirements.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	5 75-63 KA-5699-01	2023	91	122

	Traffic Handling
	Two-Way, One-Lane (On West side of US-75), Temporary Traffic Signal
	Two-Way, One-Lane (On West side of US-75), Temporary Traffic Signal
	Two-Way, One-Lane (On West side of US-75), Temporary Traffic Signal
n	

Traffic Handling
Two-Way, One-Lane with flagging (as needed) (On East side of US-75)
Two-Way, One-Lane (On East side of US-75)
Two-Way, One-Lane (On East side of US-75)
Two-Way, One-Lane with flagging (as needed) (On East side of US-75)

KANSAS DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SEQUENCE



1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) sign. A W8-15p motorcycle plaque shall be used to supplement the W8-15 or W8-7 signs. All signs shall be displayed as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.

SPEED (MPH) *	A	В	
URBAN (40 MPH OR LOWER)	100	100	,
URBAN (45 MPH OR HIGHER)	350	350	
RURAL (55 MPH OR LOWER)	500	500	
RURAL (60 MPH OR HIGHER)	750	750	
EXPRESSWAY/FREEWAY	1000	1500	2

* Posted speed prior to work starting The minimum spacing between signs shall be no

The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

SPEED (MPH) *	20	25	30	35	40	45
LENGTH (ft)	115	155	200	250	305	360

* Posted speed prior to work starting

space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to separate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.

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TE700						Grap
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(4) Daytime operations only.

02 Drawn By : jmarburger Plotted : File : KA569901css02-te702.dgn

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R-2

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TUBULAR MARKER Striping as shown for up to 42".

DIRECTION INDICATOR BARRICADE

The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

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	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL
	KANSAS	75-63 KA-5699-01	2023	94	122
		70 00 10 0000 01	2020		122
Orange —	I				
White —					
) 4"			
	6"				
36"	2"				
Min.	4"				
TRAFFIC CON	F				
	L				
Hand Trailing Edge					
·					
2" Max.					
32 Min. Support 38" Max. Device					
Detection					
Plate					
	A	8" Min.			
2" Max	V	Height			
T					
PEDESTRIAN CHANN	JELIZE	R			
1. Support device shall not project beyond t	the detecti	on plate			
into the pathway.					
2. Hand trailing edges and detection plates	are optior	al for			
continuous walls.	provont d:	anlagoment			
and to provide continuous quidance throug	h or aroun	spiacement d work			
4. Alternate pathways shall be firm, stable.	and slip re	sistant.			
5. Treat height differentials > 1/2" in the su	rfaces of a	lternate			
paths with a firm, stable, and slip resistant	temporary	ramp			
having a slope of 12:1 or flatter and having	a width ec	jual to			

the alternate path.

6. Use alternating orange/white on interconnected devices.

NO.	DATE		·	REVIS	IONS		BY	APP'D	
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TE	TRAFFIC CONTROL CHANNELIZING DEVICES					anhine Partifiad			
		///		06-01-15			Kristina	Frickson	Š
DEST	GNFD		DETAILED	RWB	OUANTITIES		ACFD	LITERSET	F
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- 201	0 014								Z
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ROAD CLOSED GENERAL NOTES

completely close the roadway.

the R11-3a or R11-4 sign where applicable.

Drawn By : jmarburger Plotted : 02-APR-2024 1 File : KA569901css04-te705.dgn

5:56

Drawn By : jmarburger Plotted : 02-APR-2024 File : KA569901css05-te710.dgn

15:56

RURAL

1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.

2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.

URBAN

1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.

2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.

3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.

4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.

5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

* 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.

When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

In the case of hitting rock when driving posts

- 1. Shift the sign location. Do not violate minimum sign spacing.
- 2. With the engineer's approval, use acceptable alternative sign stands.

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23.0 D	
11.0 D	
4.0 D	

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	97	122

Sign Number	GIVE EM A BRAKE
Width x Height	4'-0" x 4'-0"
Border Width	1.0"
Corner Radius	4.0"
Stripe Width	3.0"
Mounting	Ground
Background	Type: Non-Reflective
	Color: Black
Legend/Border	Type: Reflective
	Color: White
Legend Font	Dutch 801 Roman SWC 25 Degree Slant
Stripes	Type: Reflective
	Color: Orange

KI-104a

Sign Number	FINES DOUBLE
Width x Height	4'-0" x 3'-0"
Border Width	0.9"
Corner Radius	3.0"
Mounting	Ground
Background	Type: Reflective
	Color: White
Legend/Border	Type: Non-Reflective
	Color: Black

Spacings are to start of next letter

Dimensions in inches

LETTER SPACINGS н LEN I N E S 🗡 F 8.0 9.7 6.4 3.2 7.3 6.4 5.4 9.7 28.6 DOUBLE 8.0 3.9 6.9 7.5 7.3 7.3 6.4 4.9 3.9 40.3 N 🖂 W O R K 🖂 Z O N E S 4.0 3.1 1.6 2.7 3.2 4.3 3.8 3.6 2.8 3.2 3.4 3.8 3.6 3.2 2.7 3.1 41.8

Notes:

Typically, there are two sets of informational signs installed per project: one for each direction of traffic.

Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.

The informational signs are not to interfere with the traffic control signs for the project.

NO.	DATE			REVIS	IONS		BY	APP'D
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TRAFFIC CONTROL SIGN INFORMATION								
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FHW	A APPRC	VAL		06-01-15	APP'D.		Kristina	Ericksen
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GENERAL NOTES

The engineer in charge of construction will need to approve all locations for traffic signals to be installed. Final positions & aiming of signal faces to be determined in the field.

Trailer mounted portable traffic signals may be substituted for span wire signals.

The traffic signal system shall conform to and be operated according to the requirements of the M.U.T.C.D.

Contact local utility companies to advise them of installation and coordinate power hook-up if needed.

All wiring installed shall conform to the national electrical code and local ordinances & requirements.

The power supply and the operation & maintenance of the signal system shall be the responsibility of the contractor.

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Note: See TE734 for additional information.

۲ c f i a a f s	The control equipment shall be designed in such a manner that the normal dwell condition shall be an all red" signal display. Upon receipt of a detector actuation from one approach, the signals facing that approach shall cycle to a green ndication for a minimum period (minimum green). Subsequent detector actuations from the same direction shall result in additional green time being allocated to that movement (unit extension). In the event that an actuation exists for the direction of travel not having the right of way, a maximum green time setting shall provide a preset time limit for the direction having the right of way.
۲ e	The control equipment shall provide for different clearance sequences, one for each required phase.
I a t r -	If the green indication has been displayed to one approach to the zone, no vehicle actuation exists on the opposite approach and another actuation occurs during the yellow display to the approach just serviced, the display shall proceed to an all red display for a period of time (red revert) to prevent the display of green - yellow green indications to the motorist.
I	If the right of way is to be transferred to another approach, an all red indication shall be provided so that opposing traffic does not meet within the one way zone.
F t F a	Response to a vehicle actuation from another approach shall be immediate if all imings have expired. In the event that all time settings have not expired at the point at which a vehicle actuation occurs, the system shall continue to provide the appropriate clearance interval timings before acting upon an actuation input.
	Vehicle actuations received from the detector at approaches other than that which last received a green indication shall have preference over additional actuations received from the end which last had the right of way in the event that any clearance interval timings have not expired when the actuation(s) occurs. If all timings have expired, response shall be on a first come, first served basis.
4 6 7 8	All time settings shall be user adjustable and shall be accomplished from the equipment front panel by way of a keyboard and menu screen format. All applicable portions of the KDOT standard specifications for vehicle actuation shall apply except that a standard NEMA conflict monitor shall be acceptable.
	Signals shall be capable of actuation. On asphalt roadways, detection loops may be sawed into the road. Commercially made loop mats may also be used. Do not cut loops into concrete pavement. Other types of detection may be used if approved prior to installation by the Engineer. Do not use microwave detection systems in urban areas. Detector shall be set to operate in the locking mode.
I (If used, detection loops shall be 6' by 6' and have three turns of wire (see detail). Center loops in the lane of traffic and locate 100' behind the stop line. Cut slots in pavement for loops $\frac{5}{16}$ " wide with 1"
r (U V	minimum depth. Fill slots with asphalt or an approved elastic epoxy sealant (concrete pavement) to within $\frac{1}{8}$ " of pavement surface. Other than a "western union" type splice or approved connector at their junction, feeder cable and loop wire shall be of continuous run with no splices. The loop and the feeder cable connection shall be twisted 2 turns per foot.

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SIGNAL PHASING AND TIMING

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Phase	Minimum Green	Maximum Green	Yellow	All Red		Phase		Stationing
1	10	60	4	57		NB	Stopline	137+86
2	10	60	4	57	-	NB	Signal	138+36
						SB	Signal	165+17
						SB	Stopline	165+67

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All times in seconds. Normal dwell shall be "all red". Unit extension shall be 3.0 seconds.

Red revert shall be 5.0 seconds.

NOTE: Stationing is based on ℝ US-75.

LOOP DETECTOR DETAIL

KANSAS 75-63 KA-5699-01 2023 101 122	SHEET	SHEET NO.	YEAR	PROJECT NO.	STATE
	122	101	2023	75-63 KA-5699-01	KANSAS

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SUMMARY OF TRAFFIC CONTROL DEVICES (EACH)

Work Zone Sign (Special)							
Sign No.	16.25 Sq.Ft. & Less	16.26 Sq.Ft. & Over					

15:57 APR-2024 Drawn By : jmarburger Plotted : 02 File : KA569901css10-te795.dgn

SUMMARY OF TRAFFIC CONTROL DEVICES (EACH PER DAY)

* Quantity most used on the project at any one time

Work Zone Signs 🛛 🛞					
Sign No.	0-9.25	Size - Sq.Ft. 9.26-16.25	16.26 & Over		
W20-7		2			
W20-1		2			
W20-4		2			
W3-5		2			
W3-3		2			
R2-1	4				
KM4-20	2				
W3-4		2			
R10-6	2				
W1-4R		1			
W1-4L		1			
W13-1	2				
KG20-2	2				
W14-3	2				
R11-2		2			
W20-3		2			
R11-3A		1			
KI-104a		2			
KI-105a		2			
	1				

Barrio	cades *	Cha	nnelizing Dev	vices *
Type 3 (4' to 12')	Pedestrian	Fixed	Portable	Pedestrian
21			100	

Lighted Devices *	
Work Zone Warning Light (Type "A" Low Intensity)	13
Work Zone Warning Light (Red Type "B" High Intensity)	
Arrow Display	
Portable Changeable Message Sign	

ItemWork Zone Signs (0 to 9.25 Sq.Ft.)Work Zone Signs (9.26 to 16.25 Sq.Ft.)Work Zone Signs (16.26 Sq.Ft. & Over)Work Zone Barricades (Type 3 - 4' to 12')Work Zone Barricades (Pedestrian)Channelizer (Fixed)Channelizer (Portable)Channelizer (Portable)Work Zone Warning Light (Type "A" Low Intensity)Work Zone Warning Light (Red Type "B" High Intensity)Arrow DisplayPortable Changeable Message SignPavement Marking (Temporary)	Quantity 4,760 7,140 7,140 7,140 34,000	Unit Each Per Day Each Per Day Each Per Day Each Per Day Each Per Day
Work Zone Signs (0 to 9.25 Sq.Ft.) Work Zone Signs (9.26 to 16.25 Sq.Ft.) Work Zone Signs (16.26 Sq.Ft. & Over) Work Zone Barricades (Type 3 - 4' to 12') Work Zone Barricades (Pedestrian) Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	4,760 7,140 7,140 7,140 34,000	Each Per Day Each Per Day Each Per Day Each Per Day Each Per Day
Work Zone Signs (9.26 to 16.25 Sq.Ft.) Work Zone Signs (16.26 Sq.Ft. & Over) Work Zone Barricades (Type 3 - 4' to 12') Work Zone Barricades (Pedestrian) Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	7,140 7,140 34,000	Each Per Day Each Per Day Each Per Day Each Per Day
Work Zone Signs (16.26 Sq.Ft. & Over) Work Zone Barricades (Type 3 - 4' to 12') Work Zone Barricades (Pedestrian) Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	7,140	Each Per Day Each Per Day Each Per Day
Work Zone Barricades (Type 3 - 4' to 12') Work Zone Barricades (Pedestrian) Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	7,140	Each Per Day Each Per Day
Work Zone Barricades (Pedestrian) Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	34,000	Each Per Day
Channelizer (Fixed) Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	34,000	
Channelizer (Portable) Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	34,000	Each Per Day
Channelizer (Pedestrian) Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)		Each Per Day
Work Zone Warning Light (Type "A" Low Intensity) Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)		Each Per Day
Work Zone Warning Light (Red Type "B" High Intensity) Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)	4,420	Each Per Day
Arrow Display Portable Changeable Message Sign Pavement Marking (Temporary)		Each Per Day
Portable Changeable Message Sign Pavement Marking (Temporary)		Each Per Day
Pavement Marking (Temporary)		Each Per Day
4" Solid (Type I)	223.3	Sta./Line
4" Solid (Type II)		Sta./Line
4" Broken (8.0') (Type I)		Sta./Line
4" Broken (8.0') (Type II)		Sta./Line
$\frac{1}{4^{"}} \operatorname{Broken}(30^{"})(\operatorname{Type I})$		 Sta /I ine
$\frac{1}{4^{\prime\prime}} \operatorname{Broken}(3,0^{\prime\prime}) (\operatorname{Type II})$		Sta./Line
4" Dotted Extension (Type I)		Sta./Line
4" Dotted Extension (Type II)		Sta./Line
Solid (Line Macking Tape)		Sta./Line
Broken (Line Masking Tape)		Sta./Line
Broken (Line Masking Tape)		
Symbol (Type I)		Each
Symbol (Type II)		
Flexible Raised Pavement Marker (4° Broken (8.0))		Sta./Line
Flexible Raised Pavement Marker (4" Broken (3.0'))	(750	Sta./Line
Pavement Marking Removal	6750	Lin. Ft.
Work Zone Sign (Special) (16.25 Sq. Ft. & Less)		Each
Work Zone Sign (Special) (16.26 Sq. Ft. & More)		Each
Rigid Raised Pavement Marker (Type I)	44	Each
Rigid Raised Pavement Marker (Type II)		Each
Traffic Signal Installation (Temporary)	Lump Sum	Lump Sum
Traffic Control (Initial Set Up)	Lump Sum	Lump Sum
Traffic Control		Lump Sum
Flagger (Set Price)	1	Hour

KANSAS 75-63 KA-5699-01 2023 102 122	STATE
	KANSAS

NO.	DATE			REVIS	IONS		BY	APP'D		
	KANSAS DEPARTMENT OF TRANSPORTATION									
	SUMMARY OF DEVICES									
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FHW	A APPROV	'AL		06-01-15	APP'D.		Kristina	Ericksen	C	
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KDOT Graphics Certified 05-08-2023 Sh. No.

104

GENERAL NOTES:

MATERIAL: Use ASTM A615, Grade 60 reinforcing bars, except for the loop bars $(d_1, d_2 \text{ and } d_3)$. The loop bars (d₁, d₂ and d₃) shall be $\frac{3}{4}$ " smooth steel bars with a minimum yield of 60 ksi, a tensile strength of not less than 1.25 times the yield strength but a minimum of 80 ksi, a minimum 14% elongation in 8 inches, and passing a 180 degree bend test using a 3.5 D pin bend diameter. The loops shall be installed within $\frac{1}{8}$ " of the plan dimensions.

Use air-entrained concrete with f'c = 5,000 p.s.i.

SECTION: The section furnished must generally comply with dimensions shown. Requests for minor variations in section geometry and attachments may be submitted to the Engineer for approval.

LIFTING SLOTS: Lifting slots shall be constructed where specified on the plans to facilitate the drainage of water after installation on the roadway.

TEMPORARY CONCRETE SAFETY BARRIER: Furnishing and placing of all materials when required and all labor and equipment required to position the temporary barrier shall be included in the Contract unit price bid for "Concrete Safety Barrier (Type F3)(Temporary)". Any relocation of the barrier required for the project shall be paid in accordance with the Special Provisions under the bid item "Concrete Safety Barrier (Type F3) (Temporary-Relocate)". Unless otherwise noted on the Plans, the Temporary Concrete Safety Barrier shall become the property of the Contractor and shall be removed from the site upon acceptance of the completed project. Approximate weight of one unit equals 2.7 tons.

PLACEMENT: Barrier shall be placed on a paved surface. All loose dirt and sand shall be removed from the roadway surface just prior to placement of the barrier.

After the barrier is placed and the connection pin is inserted, tension or pull the barrier such that the installation is taut and the connection pin cannot freely move vertically. If the connection pin or loop bar assembly are damaged during the tensioning process, it is the responsibility of the Contractor to repair the damaged area or replace the temporary barrier section.

MARKING: The left end (†) of each barrier shall be permanently marked by stamping or forming into the barrier the following information:

- Type F3

12"

- Manufacturer code (as specified by KDOT Bureau of Const. & Maint.)

- Date manufactured (month and year)

DELINEATION: Delineators shall be spaced on 50' centers, except through curves where they shall be spaced on 25' centers. See Standard Drawing RD610 for additional details. The delineation shall be mounted on the side of the Temporary Concrete Safety Barrier with two delineators at each location. Each delineator shall have a minimum height-to-width ratio of 1.75, and a minimum reflective surface area of 7 sq. in.. The delineators shall be affixed to the Temporary Concrete Safety Barrier as recommended by the manufacturer.

Delineators shall be attached to bridge rail or other structures in construction zones when roadway is narrowed and traffic is adjacent to the structure. The method and location of placement shall be similar to permanent barrier delineation.

When traffic flow is in one direction, the delineators shall be yellow when used on the left, white when used on the right. When traffic flow is in both directions delineators shall be placed back-to-back, and shall correspond to the color of the edge line.

The work and materials required for the installation of delineators as mentioned shall be subsidiary to the bid item "Concrete Safety Barrier (Type F3) (Temporary).

If necessary, include Standard Drawing RD622A for Taper Section, Standard drawing RD622B for anchor and tie down details, Standard Drawing RD622C for Bridges with thermal expansion of $1\frac{1}{2}$ " or greater and Standard Drawing RD622D for Barrier Layouts.

The Contractor shall be responsible for maintaining a clear area, shown as dimension "A" on Standard Drawing RD622B. The clear area is located behind the Temporary Concrete Safety Barrier and shall be kept free of any equipment, material stockpiles or other obstacles. For non-anchored roadway applications, dimension "A" shall be a minimum of 2'-0".

	Void Area
	for Lifting
1"	
DETAIL 'B'	
LIFTING SLOT DETAIL	
(1" Chamfer to prevent spalling)

NOTE: At no time shall the barriers be lifted, moved, etc. by use of the loop bars: d_1 , d_2 or d_3 .

07	09-11-17	Revised	Markers	A.L.R.	S.W.K.				
06	07-17-17	Revised Ge	eneral Note	A.L.R.	S.W.K.				
05	08-27-15 Added Note, Pay Length K.E.K. S.W								
NO.	DATE REVISIONS BY APP'D								
	KANSAS DEPARTMENT OF TRANSPORTATION								
	TEMPORARY CONCRETE SAFETY BARRIER TYPE F3								
RD	RD622								
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corridor da all cc ing". igner igner sh anchori dge Desi use on Haunched slab bridges, the Road Designer Inforcing steel layout to accommodate barrier igner shall coordinate barrier layout with Brid er: F the ad ₽ë⊼

										STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
				SU	MMARY OF QUANTITIES					KANSAS	75-63 KA-5699-01	2023	108	122
					E SAFETY BARRIER (TYPE F3)									
LOCATION (ROUTE)	STATION (OR STATION RANGE)	SIDE	FLARE RATE (WHERE APPLICABLE)	TEMPORARY	TEMPORARY-RELOCATE	TEMPORARY-INSTALL ONLY	UNIT	COMMENTS						
US-75	241+69.11 to 261+52.86	Varies	See Barrier Layout Sheets	1,937.50			FT	PHASE 1						
<u>US-75</u>	241+69.31 to 261+52.82	Varies	See Barrier Layout Sheets		1,937.50		FT	PHASE 2						
	TOTAL			1,937.50	1,937.50									
The quantit See the Sur	ty reported does not include the mary of Quantities on Sheet	he 3%' t No. 6	' gap between 12'-6" section 0 for Recan of Temporary C	s of barrier. The	3%" gap will not be included in tl arrier and End Treatments	he pay length for Concrete Safety E	arrier (Type F3)	(Temporary).						
					Design Parameters									
					Speed Rate (mph) (a:b)									
					70 15:1									
					60 14:1 55 12:1									
					50 11:1 45 10:1									
					40 8:1 30 7:1									
					Noto: The flore rotes lie	, , , , , , , , , , , , , , , , , , , ,								
					safety barrier installatio	ons. See temporary concrete	e safety barri	er						
					rates may be used as a	plans for variations. Typical pproved by the Engineer.	alternate fla	e						
									01	02-11-15	Initial Release		K.E.K	. S.W.K.
									NO.	DATE	REVISIONS KANSAS DEPARTMENT OF TRA	VSPORTATI(DN BY	APP'D
										(SUMMARY OF QU	ANTI	ΓIES	
										TEI	MPORARY CONC	ETE S	SAFET	
										BAF	KRIER AND END T	KEAT	VIENTS	S
									R FH1	DU52 NA APPROVAI	09-16-15 APP'D.		James	s O. Brewer
									DES DES	IGNED JIGN CK.	DETAILED QUANT DETAIL CK. QUAN.	.TIES K.	TRACED TRACE CK	
									KD	OT Graphi	cs Certified 07-18-2022		Sh N	<u>vo 108</u>

Design Parameters						
Design Speed (mph)	Flare Rate (a:b)					
70	15:1					
60	14:1					
55	12:1					
50	11:1					
45	10:1					
40	8:1					
30	7:1					


INERTIAL BARRIER SYSTEM						
Station	Side	Design Speed	Comments			
241+69.11	RT.	70 mph	Phase 1			
261+52.86	RT.	70 mph	Phase 1			
241+69.31	LT.	70 mph	Phase 2			
261+52.82	LT.	70 mph	Phase 2			



STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	75-63 KA-5699-01	2023	109	122

GENERAL NOTE

This drawing details general configurations for Inertial Barrier Systems. Some project specific conditions may require variations which are designed to meet prevailing criteria. Use Inertial Barrier System consisting of the units as

shown for the specified design speed, all hardware and attachments.

Install Inertial Barrier System on a flat, stable base with cross-slope no steeper than 10: 1. See Manufacturer's recommendations for module materials and method of installation. See standard specifications for mixture to fill modules re-

quirements.

Provide a 6" spacing between modules and one foot between the end of concrete barrier or other rigid object.

When installed as part of project traffic control, the bid item "Inertial Barrier" includes the original installation and required relocations.

Keep available replacement modules to replace any size module used on site, Engineer's direction.

Inertial Barrier System modules damaged by the Contractor during relocation of Inertial Barrier System are replaced at the Contractor's expense.

Module weights shown are in pounds.

Install 270 square inches of Type II High Performance (vertical, rectangular or diamond shape) reflective sheeting on first module of Inertial Barrier System facing traffic.

Where sufficient space is available the Inertial Barrier System may be aligned at an angle, not to exceed 10°, in the direction of approach traffic.

No portion of the system shall encroach into the approach

























