STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	1	251

STATE OF KANSAS

DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED

STATE HIGHWAY

FEDERAL AID PROJECT

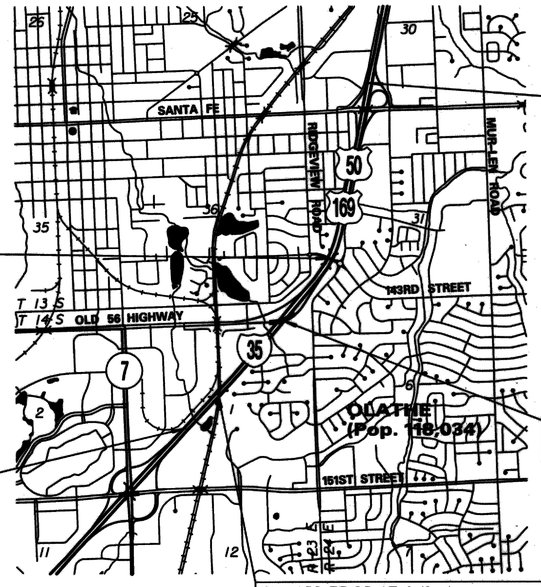
JOHNSON COUNTY

I-35

Proj. No. 35-46 KA-3560-01
Fed. Proj. No. NHPP-0353(418)

SURFACING
BRIDGE
PAVEMENT MARKING

INDEX OF SHEETS



STA. 285+99.74 END
Proj. 35-46 KA-3560-01=
Sta. 285+99.74 On
Proj. 35-46 KA-4088-01

Scale: 1"=2000'

Sta. 235+44.12 (Existing)
Br. No.35-46-15.27(318) S.Bd.
Br. No.35-46-15.28(319) N.Bd.
70.25'-106'-70.25' Twin Continuous Curved
Steel Plate Girder Spans
71'-7½" Roadway (N.Bd.) & 71'-7½" Roadway (S.Bd.)

Sta. 213+03.43 (Existing)
Br. No. 35-46-14.86(317)
90'-127'-192'-127'-84'-84' Continuous Curved
Steel Plate Girder Spans, 28.0' Roadway

STA. 172+88.81 BEGIN
Proj. 35-46 KA-3560-01=
Sta. 172+88.81 On
Proj. 35-46 K-4088-02

Sta. 186+58.08 (Existing)
Br.No.35-46-14.34(315) N.Bd.
Br.No.35-46-14.35(316) S.Bd.
Twin 37.5'-58'-87'-58'-37.5' Steel Plate Girder Spans
59'-5½" Roadway (N.Bd.) & 67'-5½" Roadway (S.Bd.).
Skew 50°30'24" Rt.

Traffic will be carried through construction on existing roadway and on crossovers or roadway widenings at each end of the project.

DESIGN DESIGNATION

AADT	86,700 (2014)
AADT	130,000 (2034)
DHV	9%
D	54%
T	10%
V	70 M.P.H.
C of A	Full
Clear Zone	30'

CONVENTIONAL SIGNS

COUNTY LINE		CENTER LINE OF PROJECT	50 1
CITY LIMITS		TERRACE	
STATE OR NATIONAL LINE		CULVERTS	
TOWNSHIP, SECTION or GRANT LINE		DROP INLET & STORM SEWER	
PROPERTY LINE	℄	ACCESS CONTROL	
HIGHWAY FENCE		POWER POLE	
EXISTING FENCE		TELEPHONE POLE	
GUARDRAIL		MARSH	
CONSTRUCTION LIMITS		HEDGE	
RIGHT OF WAY LINE		TREES	
TRAVELED WAY		PROFILE ELEVATION	1172.18
RAILROADS		STREAM or CREEK	

GROSS LENGTH OF PROJECT	11,310.93 FT. (Includes Equations)		
EXCEPTIONS	0.00		
NET LENGTH OF PROJECT	11,310.93 FT.	2.142 MILES	
NET LENGTH OF BRIDGES	1228.50 FT.	0.233 MILES	
NET LENGTH OF ROAD	10,082.43 FT.	1.909 MILES	

ROBERT W. MILLER — LICENSED — 13600 — 10-31-14 — KANSAS — PROFESSIONAL ENGINEER

TIMOTHY C. HOPPE — 14944 — 10-31-14 — KANSAS — PROFESSIONAL ENGINEER

Shts. 85-92

TranSystems

Approved 10-21-14
Date

State Transportation Engineer

By: Scott W. King

Chief, Bureau of Road Design

KANSAS DEPARTMENT OF TRANSPORTATION

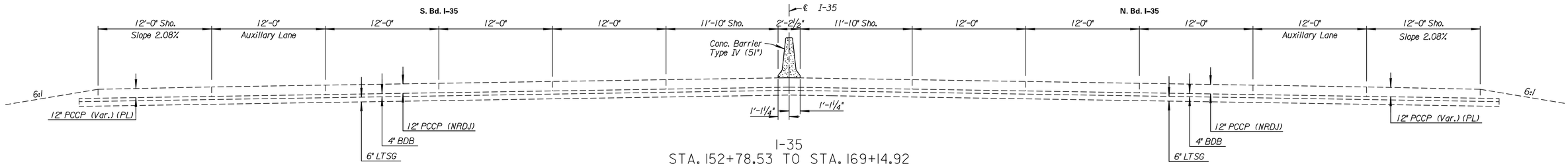
KDOT Graphics Certified 10-20-2014

KDOT Graphics Certified

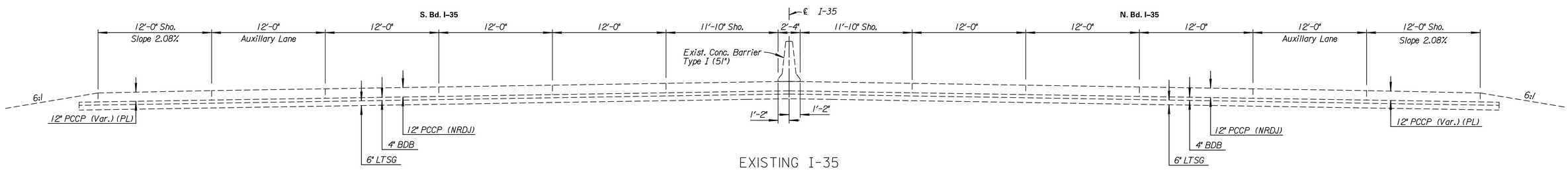
	BY	DATE
SURVEY	TRANSYSTEMS - K. BALDWIN	2014
CADD TECHNICIAN	TRANSYSTEMS - A. MEYER	2014
DESIGNERS	TRANSYSTEMS - J. CONDON	2014
SQUAD	Sc. KING (ROAD) M. HOPPE (BRIDGE)	2014

Drawn By : jogood
Plotted : 10/20/2014
File : G:\KC13\0356\Road\dgn\ka356001rh-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	2	251



I-35
STA. 152+78.53 TO STA. 169+14.92
STA. 286+44.84 TO STA. 298+99.34



EXISTING I-35
TYPICAL SECTION

Remove the existing pavement and subbase outside the sawcut location.
Replace all subgrade material lost during removal of pavement.

DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC130356\Road\dgn\ka356001rts-01.dgn
Plotted : 10/16/2014

KANSAS DEPARTMENT OF TRANSPORTATION

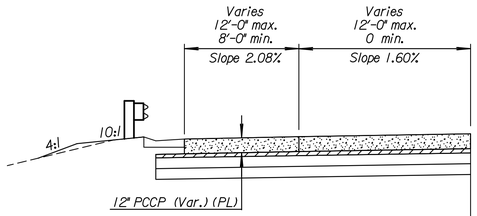
TYPICAL SECTION
I-35

KDOT Graphics Certified 10-15-2014

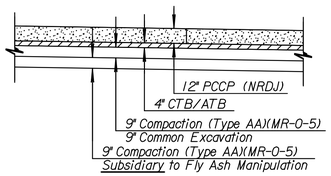
Sh. No. 2

KDOT Graphics Certified

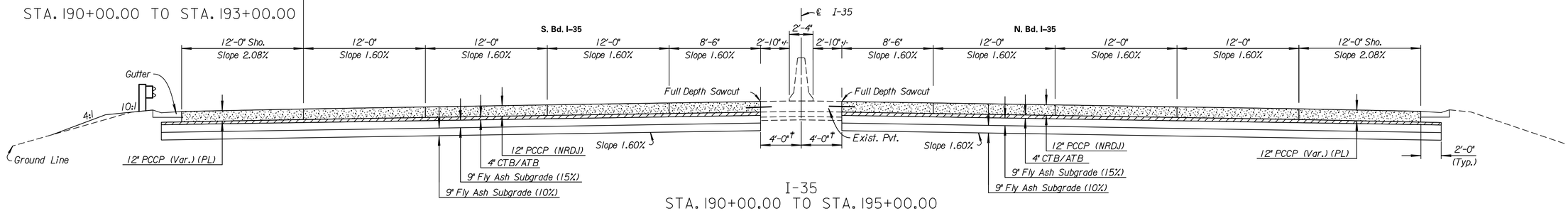
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	3	251



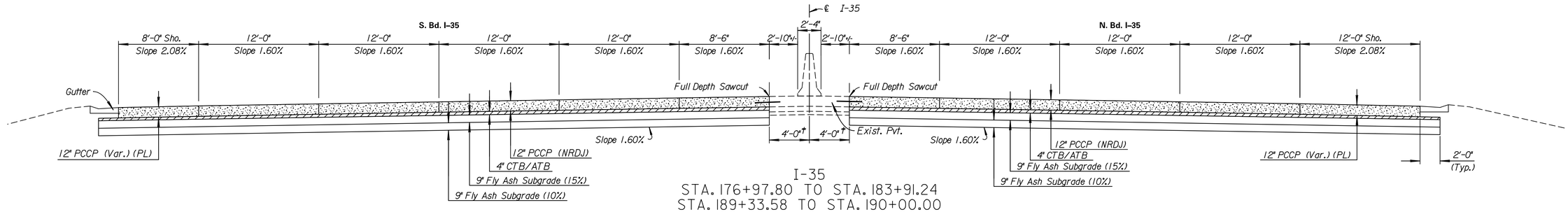
STA. 190+00.00 TO STA. 193+00.00



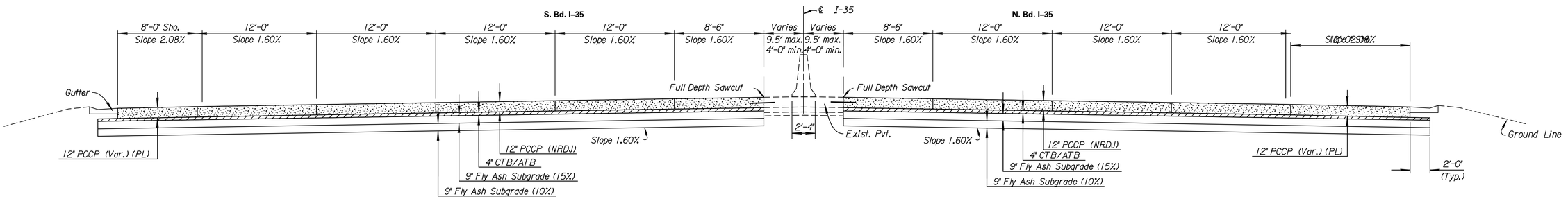
SUBGRADE COMPACTION
(Typical throughout project limits)



I-35
STA. 190+00.00 TO STA. 195+00.00



I-35
STA. 176+97.80 TO STA. 183+91.24
STA. 189+33.58 TO STA. 190+00.00



I-35
STA. 172+88.8 TO STA. 176+97.80

Remove the existing pavement and subbase outside the sawcut location. Replace all subgrade material lost during removal of pavement.

For joint details between existing and proposed pavement See Sh. No. 59

* *Dimensions and slopes for standard ditches and fills. See plan and cross-sections for variations.*

** *Varies See Roadway Plans and Cross Sections.*

† *Full Depth Sawcut to match existing longitudinal joint or 4' from centerline unless otherwise noted in plans.*

Note: Intersection of all slope lines shall be softened and rounded for pleasing appearance.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
I-35

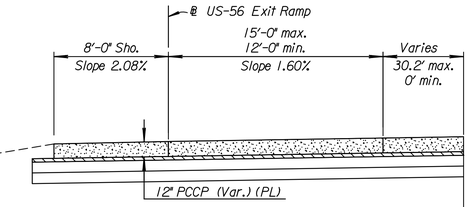
KDOT Graphics Certified 10-15-2014 *Sh. No. 3*

KDOT Graphics Certified

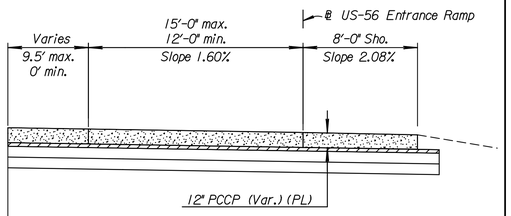
DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Roaddgn\ka356001rts-02.dgn

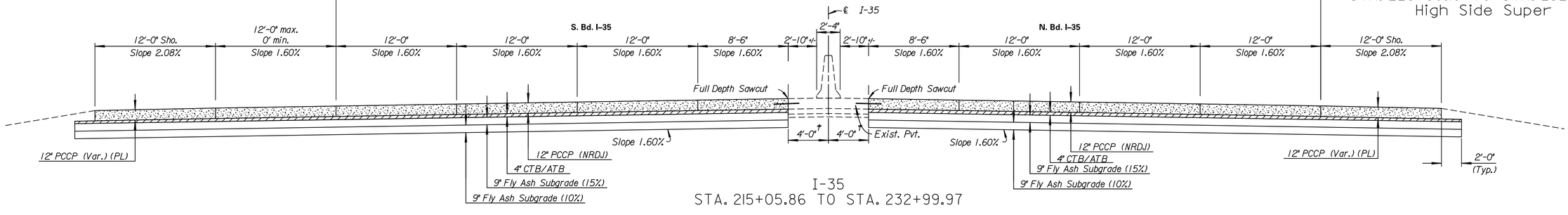
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	4	251



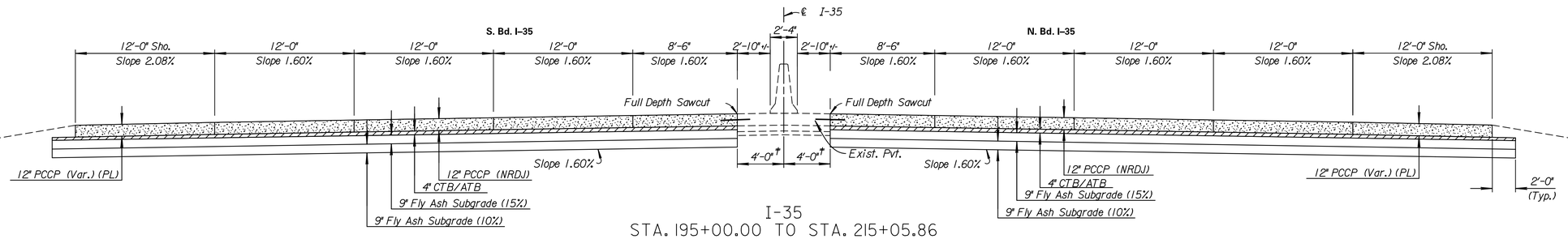
STA. 215+05.86 TO STA. 226+93.23



I-35
STA. 228+86.10 TO STA. 232+99.97
High Side Super



I-35
STA. 215+05.86 TO STA. 232+99.97



I-35
STA. 195+00.00 TO STA. 215+05.86

† Full Depth Sawcut to match existing longitudinal joint or 4' from centerline unless otherwise noted in plans.

Remove the existing pavement and subbase outside the sawcut location. Replace all subgrade material lost during removal of pavement.

For joint details between existing and proposed pavement See Sh. No. 59

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 4

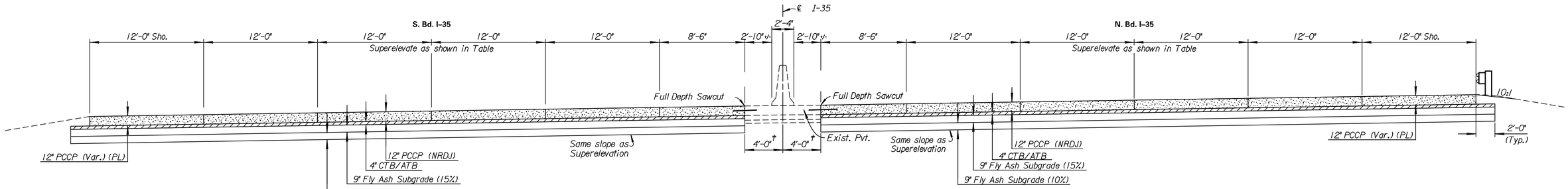
KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rts-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	5	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

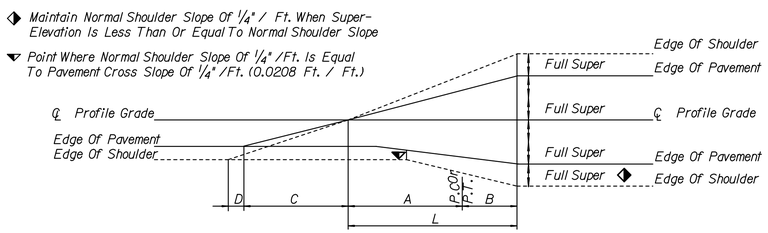


TYPICAL SUPERELEVATED SECTION (8 LANE SECTION)

† Full Depth Sawcut to match existing longitudinal joint or 4' from centerline unless otherwise noted in plans.

Remove the existing pavement and subbase outside the sawcut location. Replace all subgrade material lost during removal of pavement.

For joint details between existing and proposed pavement See Sh. No. 59



PROFILE SHOWING METHOD OF ATTAINING SUPERELEVATED SECTION

Sta. P.I. Curve	Radius	Design Speed	Super %	Transition - (Lin.Ft.)				
				L	A	B	C	D
197+52.88	16,487.99'	70	N.C.	N/A	N/A	N/A	N/A	N/A
236+61.46 (Begin Curve)	2,864.79'	70	7.0	840	560	280	190	47
236+61.46 (End Curve)	2,864.79'	70	7.0	840	560	280	190	94

KANSAS DEPARTMENT OF TRANSPORTATION

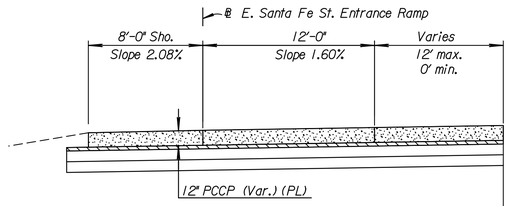
SUPERELEVATED TYPICAL SECTION I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 5

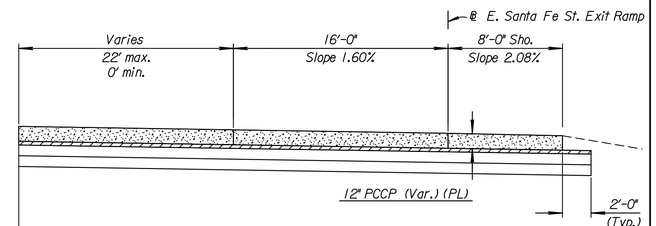
KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rts-04.dgn

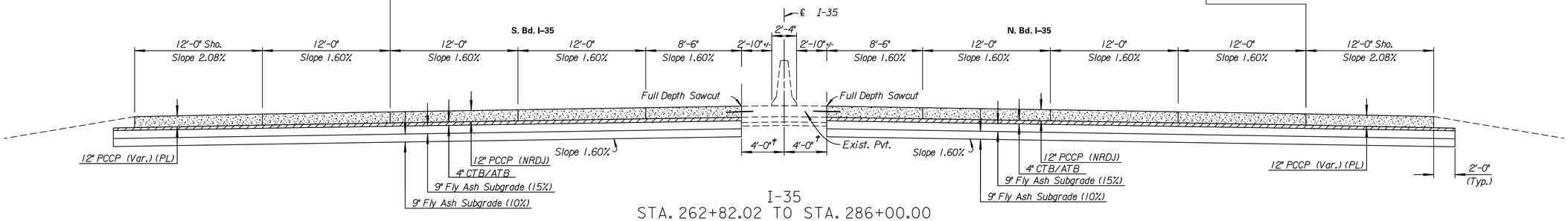
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	6	251



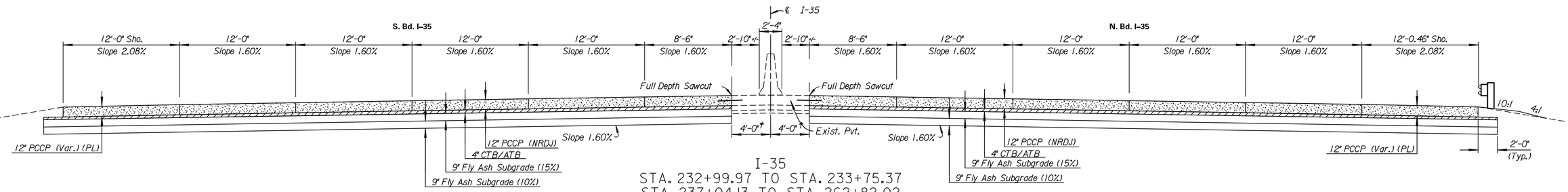
I-35
STA. 269+57.24 TO STA. 272+05.58



I-35
STA. 268+82.02 TO STA. 268+73.79



I-35
STA. 262+82.02 TO STA. 286+00.00



I-35
STA. 232+99.97 TO STA. 233+75.37
STA. 237+04.13 TO STA. 262+82.02

† Full Depth Sawcut to match existing longitudinal Joint or 4' from centerline unless otherwise noted in plans.

Remove the existing pavement and subbase outside the sawcut location. Replace all subgrade material lost during removal of pavement.

For joint details between existing and proposed pavement See Sh. No. 59

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 6

KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rts-05.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	7	251

GENERAL NOTE

THE GEOLOGICAL INFORMATION SHOWN ON THESE PLANS IS FROM STUDIES MADE IN THE FIELD AND REPRESENTS THE BEST INFORMATION AVAILABLE TO THE KANSAS DEPARTMENT OF TRANSPORTATION.

AT BORROW AREA LOCATIONS ADJACENT TO THE RIGHT OF WAY, UTILITY POLES MAY BE SET AT THE PERMANENT LOCATIONS PRIOR TO CONSTRUCTION AS APPROVED BY THE ENGINEER PROVIDED A MINIMUM VERTICAL CLEARANCE, IN ACCORDANCE WITH THE NATIONAL ELECTRICAL SAFETY CODE, IS OBTAINED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND THESE POLES TO COMPLETE THE WORK.

ALL BORROW TO BE OBTAINED FROM AREAS PROVIDED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER, BOTH AS TO SUITABILITY OF MATERIAL AND SITE LOCATION. LOCATIONS WHICH, IN THE OPINION OF THE ENGINEER, CONTAIN UNSUITABLE MATERIAL OR WILL LEAVE AN UNSIGHTLY APPEARANCE ON THE PROJECT WILL NOT BE APPROVED.

EMBANKMENT QUANTITIES FOR INITIAL CONSOLIDATION AND SETTLEMENT SHOWN IN THE EARTHWORK QUANTITIES ARE SUBSIDIARY TO OTHER EARTHWORK ITEMS. MATERIAL FOR THE EMBANKMENT IS INCLUDED IN THE EXCAVATION QUANTITIES.

EXCAVATION REQUIRED FOR PLACING SELECT SOIL IS INCLUDED IN THE COMMON EXCAVATION QUANTITIES.

EXCAVATION SHOWN TO BE WASTED SHALL BE WASTED ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.

ALL SOIL USED IN THE TOP 18 INCHES OF THE EMBANKMENT SHOULD CONFORM TO THE FOLLOWING REQUIREMENTS: $10 \leq PI \leq 35$ AND $20 \leq LL \leq 55$. SOILS WHICH CONTAIN SUBSTANTIAL ORGANIC MATERIAL, SUCH AS THOSE CLASSIFIED AS OL OR OH ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) SHOULD NOT BE USED TO CONSTRUCT THE EMBANKMENT OR SUBGRADE. THE ORGANIC MATERIAL MAY BE USED AS SELECT SOIL TO CAP THE SIDESLOPES OF THE EMBANKMENT.

THE TOP 18" OF SUBGRADE IS WET AND WILL NOT SUPPORT CONSTRUCTION LOADS AND WILL NEED TO BE STABILIZED. IT IS RECOMMENDED DOING THIS WITH TWO 9" LIFTS, THE LOWER LIFT WILL CONTAIN 10% FLY ASH AND THE UPPER LIFT WILL CONTAIN 15% FLY ASH.

THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING THE DEPTH OF MEDIAN INLETS AND CROSS ROAD STRUCTURES AND AVOIDING THEM DURING THE SUBGRADE STABILIZATION EFFORTS.

EXISTING GUARDRAIL WILL BE STOCKPILED ON-SITE FOR REMOVAL BY KDOT FORCES.

EDGE WEDGE WILL NOT BE USED ON THIS PROJECT. GRADING ASSOCIATED WITH SHOULDER CONSTRUCTION AND RECOMPACTING THE FORESLOPE SHOULD BE TO A TYPE AA COMPACTION (MR-0-5) AND SHALL BE SUBSIDIARY TO THE PAVING BID ITEMS.

MINOR GRADING ASSOCIATE WITH GUARDRAIL REPLACEMENT SHALL BE SUBSIDIARY TO GUARDRAIL, STEEL PLATE (MGS).

DATE	BY	
6/2014	A. MEYER	REFERENCES NOTED
7/2014	R. MILLER	REFERENCES CHECKED

SCALE

50' 0 50' 100'

PLAN: Lat. & Long.

PROFILE: Horiz. same as above

Vert.

DATUM BENCHMARKS

Project Survey Control

Horizontal Project Datum
Kansas State Plane Coordinate System (NAD83)
Kansas North Zone
Project Ground Distance Coordinates x 0.999927053 Scaled About NGS Horizontal Control Moonument (ZKC B) PID AA5899 - NAD 83 Kansas State Plane Coordinates, Kansas North Zone U.S. Survey Feet

Vertical Project Datum
NGVD 1929 - from KDOT plans (35-46 K-4088-02)

UTILITIES

COMMUNICATION
Owner: AT&T
Contact: Operations Center
Phone: 866-861-7678

ELECTRICAL
Owner: Westar Energy
Contact: Operations Center
Phone: 800-778-9140

CABLE TV
Owner: Comcast
Contact: Operations Center
Phone: 800-778-9140

Owner: KCP&L
Contact: Operations Center
Phone: 800-778-9140

GAS
Owner: Atmos Energy
Contact: Operations Center
Phone: 866-322-8667

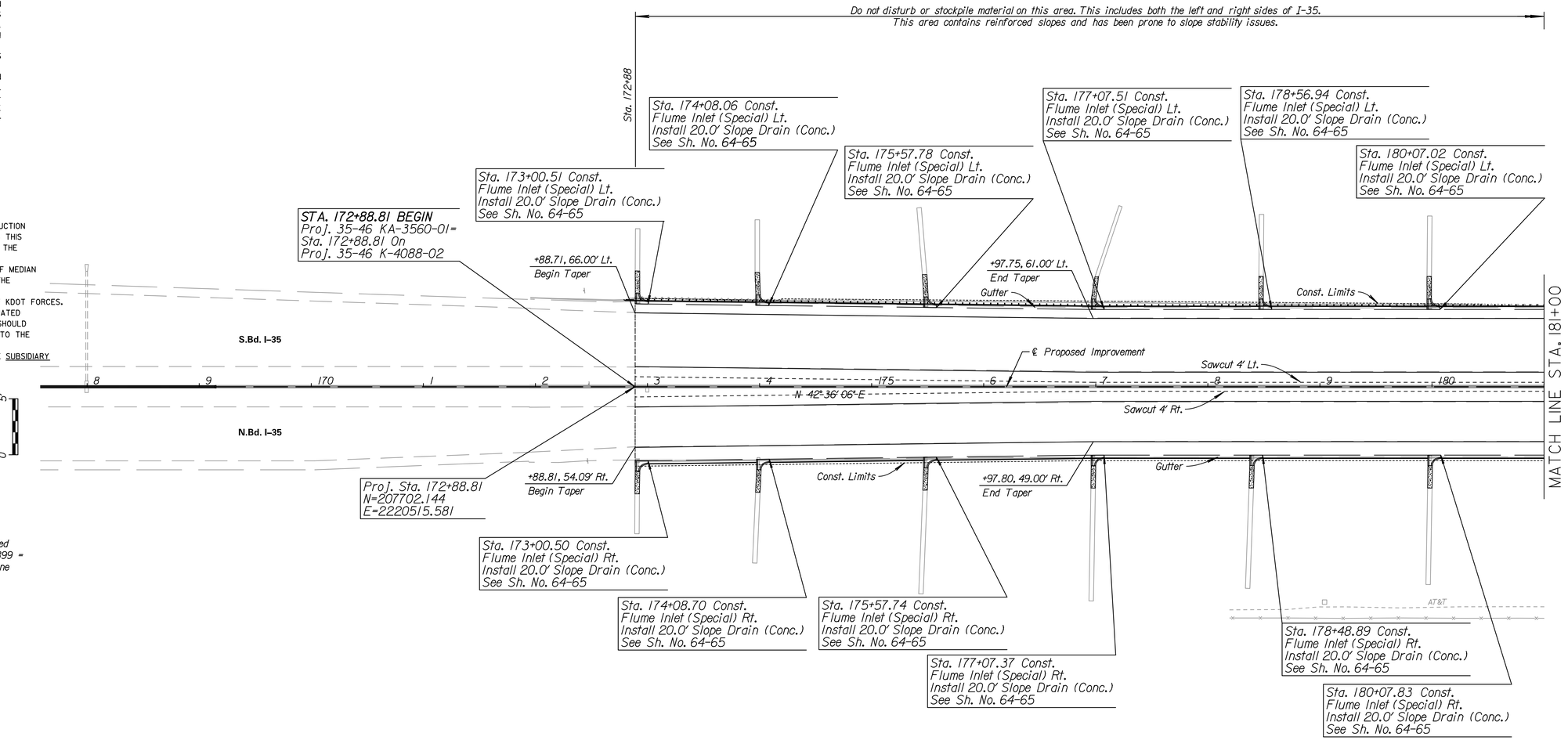
STORM WATER MANAGEMENT
Owner: City of Olathe, Kansas
Contact: Storm Water Service
Phone: 913-971-9311

SANITARY SEWER
Owner: City of Olathe, Kansas
Contact: Sanitary Sewer Service
Phone: 913-971-9311

WATER
Owner: City of Olathe, Kansas
Contact: Water Service
Phone: 913-971-9311

P.O.T. ℄ I-35 Sta. 171+00.00, 100.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±9' deep.
2) Found top center fiber optic marker post. 92.08' NE
3) Found east right-of-way fence. 51.50' E
4) Set "+" cut on NW bolt of highway light (BM#10A). 71.93' S
5) Set "+" cut on east edge east shoulder northbound I-35. 30.30' W

P.O.T. ℄ I-35 Sta. 171+00.00, 100.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8' deep.
2) Found "Mile 216" sign post at base. 144.75' NNE
3) Found west edge west shoulder southbound I-35. 18.88' E
4) Set "U" cut on concrete base of highway sign (BM#10B). 171.45' SSW
5) Found post in west right-of-way P.I. 65.35' W



All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #10B	B.M. #10A	B.M. #11A	B.M. #11B
Set "U" cut on inside edge of concrete base of "Exit 215" overhead sign for southbound I-35. ℄ I-35 Sta. 169+28.9, 108.6' Lt. Elev. 1061.283	Set "+" cut on northeast bolt of highway light base for light just north of acceleration lane from on-ramp for 151st Street interchange. ℄ I-35 Sta. 170+29.6, 114.5' Rt. Elev. 1057.826	Set "T" post ±1' west of east R/W fence and just southeast of area inlet in ditch flowline. ℄ I-35 Sta. 170+03.9' 205.8' Rt. Elev. 1053.997	Set "□" cut on west edge of concrete junction box lid near west R/W ±1100' south of I-35 bridge over BNSF railroad tracks. ℄ I-35 Sta. 176+26.2, 165.0' Lt. Elev. 1054.962

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

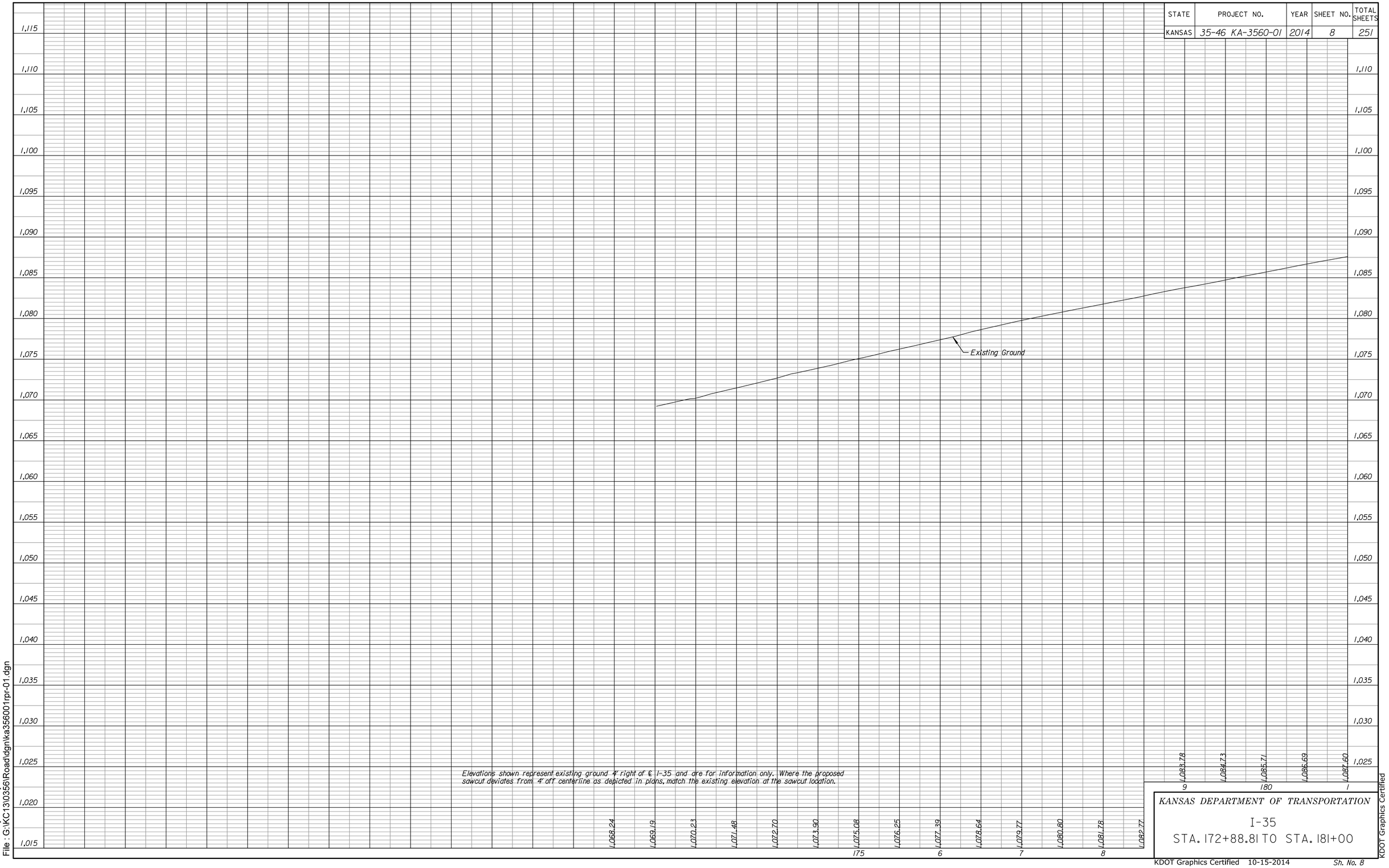
STA. 172+88.81 TO STA. 181+00

KDOT Graphics Certified 10-15-2014 Sh. No. 7

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Roadldgn\ka3560001rpl-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	8	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 172+88.81 TO STA. 181+00

KDOT Graphics Certified 10-15-2014

Sh. No. 8

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Road\dgn\ka356001rpr-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	9	251

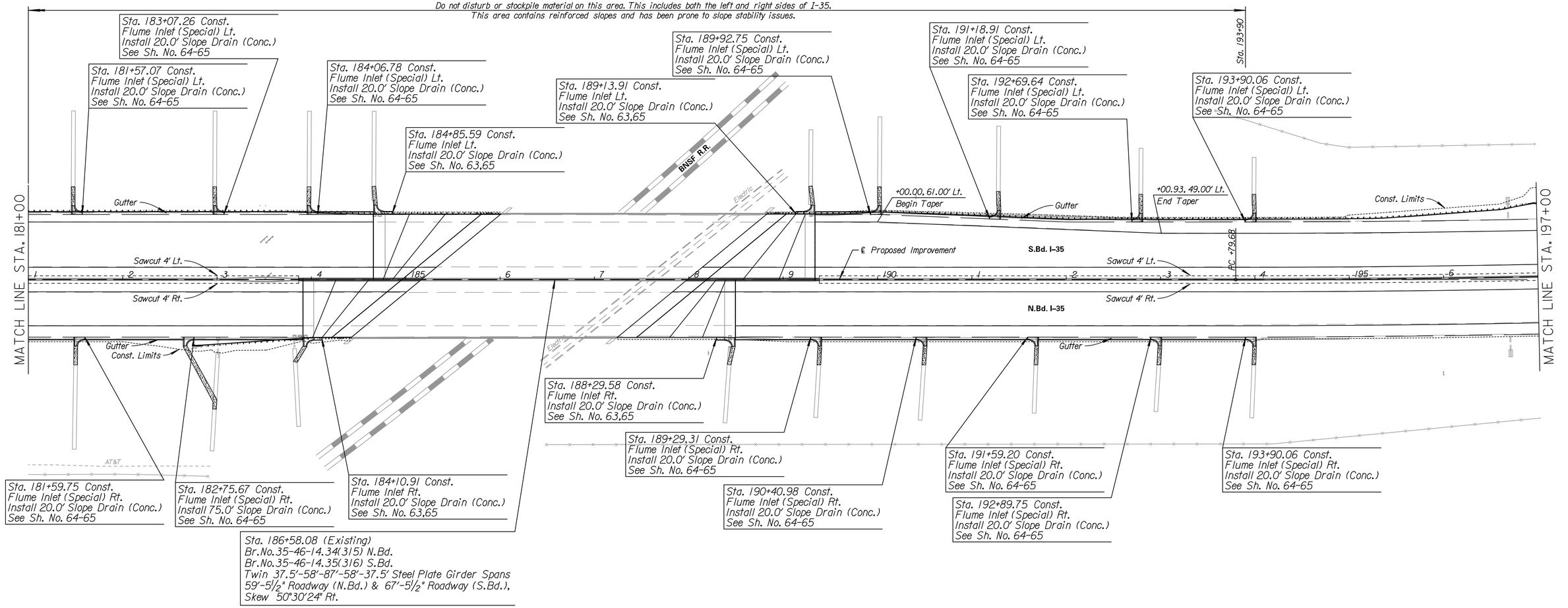
P.O.T. ℄ I-35 Sta. 182+00.00, 100.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Set mag nail and shiner 2nd post from south end guardrail. 85.22' N
3) Found north edge of concrete flume. 48.3' SSW
4) Found top center east end 15" RCP outflow pipe. 54.35' SW
5) Set "+" cut near east edge east shoulder northbound I-35. 37.21' NW

P.O.T. ℄ I-35 Sta. 182+00.00, 100.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±9" deep.
2) Found southwest corner of west concrete base of highway sign. 147.00' NE
3) Found back of curb west side southbound I-35. 29.71' SE
4) Found northerly corner grate inlet west side southbound I-35. 58.41' S
5) Found vertical P.I. at north edge of concrete flume. 50.09' SSW

P.C. ℄ I-35 Sta. 193+79.68, 100.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PC" ±8" deep.
2) Found top center flared end section of 15" outflow pipe. 30.40' N
3) Set "+" cut on south edge of concrete flume. 17.82' NE
4) Set "+" cut on north edge of concrete flume. 79.97' SW
5) Found top center flared end section of 15" outflow pipe. 84.66' W

P.C. ℄ I-35 Sta. 193+79.68, 100.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PC" ±8" deep.
2) Found northerly of (2) P.I.s in west of west right-of-way. 125.45' N
3) Found southerly edge of concrete flume. 18.90' NNE
4) Set mag nail with shiner in concrete curb under guardrail southbound I-35. 38.26' SSE
5) Found post in west right-of-way P.I. 125.47' W

BY	DATE
A. MEYER	6/2014
R. MILLER	7/2014
REFERENCES NOTED	
REFERENCES CHECKED	



UTILITIES

AT&T
Electric

All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #12B Set "D" cut on southwest wingwall of I-35 bridge over BNSF railroad tracks.
℄ I-35 Sta. 186+03.0, 70.6' Lt. Elev. 1091.828

B.M. #12A Set "D" cut on northeast wingwall of I-35 bridge over BNSF railroad tracks.
℄ I-35 Sta. 187+21.7, 62.9' Rt. Elev. 1092.103

B.M. #13A Set "T" post ±2' northwest of westerly post of highway sign "Exit 218 Attractions Lodging" for northbound I-35.
℄ I-35 Sta. 195+97.7, 90.9' Rt. Elev. 1076.795

KANSAS DEPARTMENT OF TRANSPORTATION

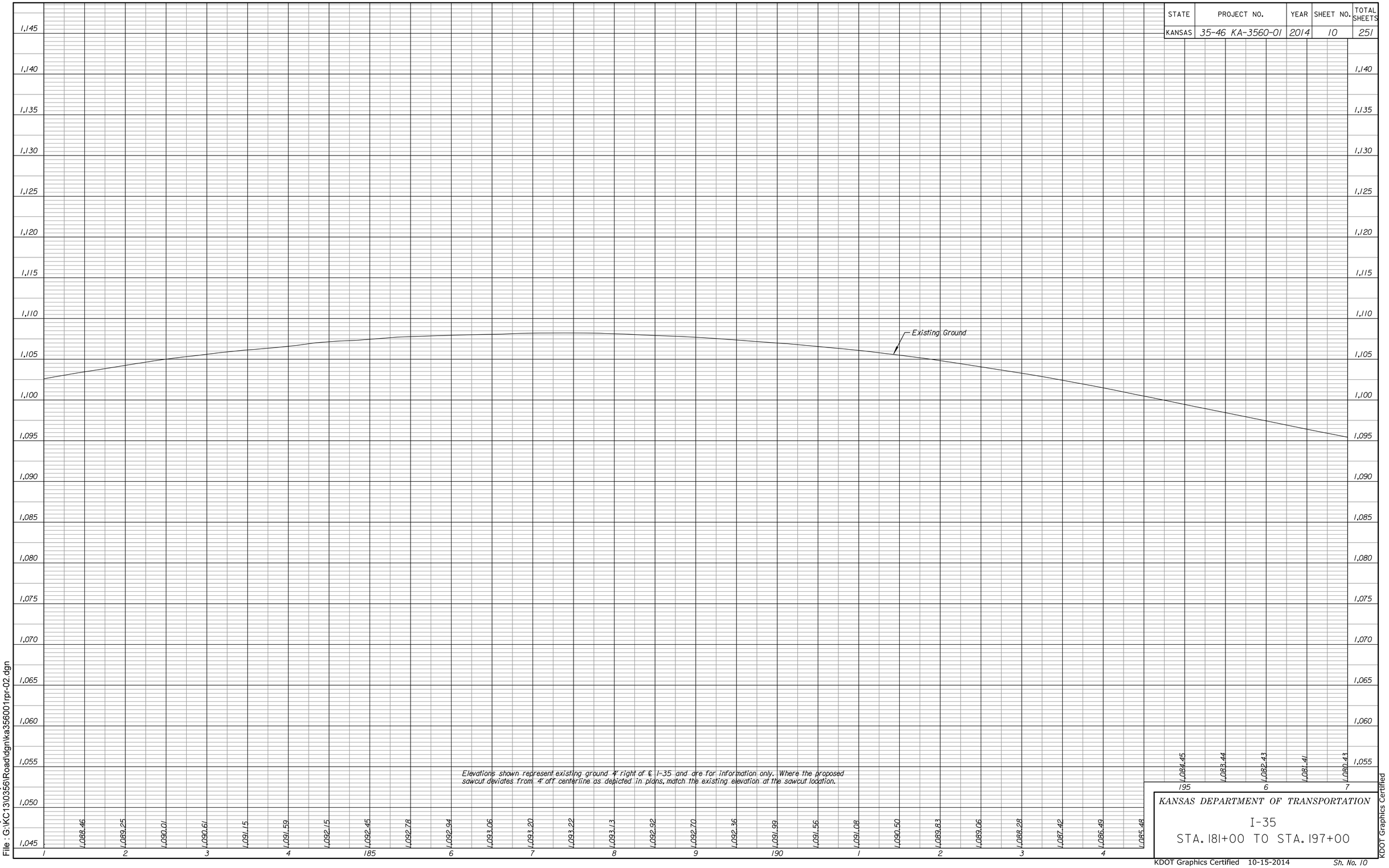
I-35
STA. 181+00 TO STA. 197+00

KDOT Graphics Certified 10-15-2014 Sh. No. 9

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka3560001rpl-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	10	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 181+00 TO STA. 197+00

KDOT Graphics Certified 10-15-2014

Sh. No. 10

KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rpr-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	11	251

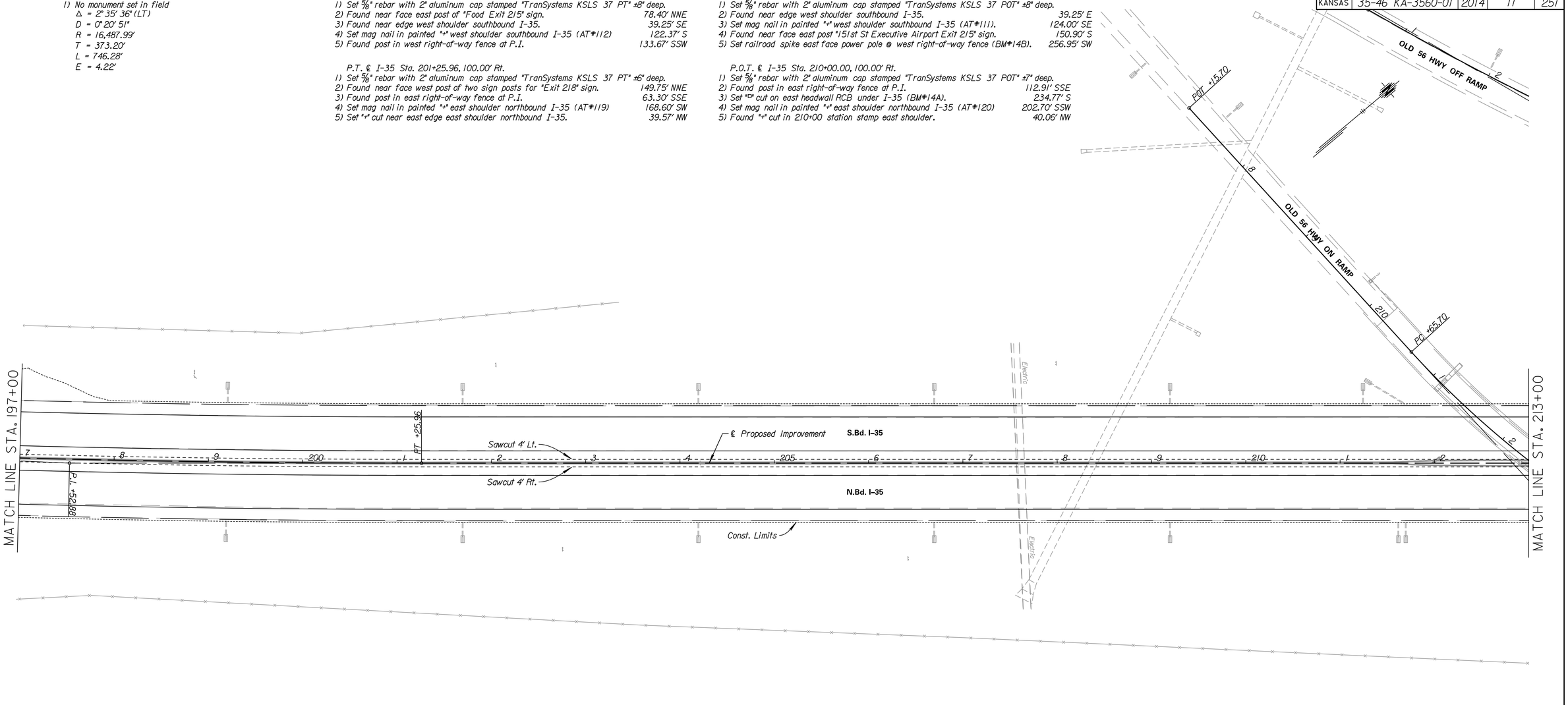
P.I. ℄ I-35 Sta. 197+52.88 (Bk.)=197+52.76 (Ahd.)
1) No monument set in field
Δ = 2° 35' 36" (LT)
D = 0° 20' 51"
R = 16,487.99'
T = 373.20'
L = 746.28'
E = 4.22'

P.T. ℄ I-35 Sta. 201+25.96, 100.00' Lt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PT" ±8" deep.
2) Found near face east post of "Food Exit 215" sign. 78.40' NNE
3) Found near edge west shoulder southbound I-35. 39.25' SE
4) Set mag nail in painted "+" west shoulder southbound I-35 (AT#112) 122.37' S
5) Found post in west right-of-way fence at P.I. 133.67' SSW

P.T. ℄ I-35 Sta. 201+25.96, 100.00' Rt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PT" ±6" deep.
2) Found near face west post of two sign posts for "Exit 218" sign. 149.75' NNE
3) Found post in east right-of-way fence at P.I. 63.30' SSE
4) Set mag nail in painted "+" east shoulder northbound I-35 (AT#119) 168.60' SW
5) Set "+" cut near east edge east shoulder northbound I-35. 39.57' NW

P.O.T. ℄ I-35 Sta. 209+50.00, 100.00' Lt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Found near edge west shoulder southbound I-35. 39.25' E
3) Set mag nail in painted "+" west shoulder southbound I-35 (AT#111). 124.00' SE
4) Found near face east post "151st St Executive Airport Exit 215" sign. 150.90' S
5) Set railroad spike east face power pole @ west right-of-way fence (BM#14B). 256.95' SW

P.O.T. ℄ I-35 Sta. 210+00.00, 100.00' Rt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±7" deep.
2) Found post in east right-of-way fence at P.I. 112.91' SSE
3) Set "D" cut on east headwall RCB under I-35 (BM#14A). 234.77' S
4) Set mag nail in painted "+" east shoulder northbound I-35 (AT#120) 202.70' SSW
5) Found "+" cut in 210+00 station stamp east shoulder. 40.06' NW



UTILITIES

Electric

All station and offset callouts are to ℄ I-35 unless noted otherwise.

DATE	BY	
6/2014	A. MEYER	REFERENCES NOTED
7/2014	R. MILLER	REFERENCES CHECKED

B.M. #13B Set "T" post flush with ground ±1' southeasterly of P.I. in west R/W fence of I-35 north of I-35 bridge over BNSF railroad tracks. ℄ I-35 Sta. 197+59.6, 137.7' Lt. Elev. 1064.059

B.M. #14B Set railroad spike in east face of power pole near west R/W fence in southwest quad of intersection with Old U.S. 56 highway. ℄ I-35 Sta. 207+49.4, 259.9' Lt. Elev. 1047.386

B.M. #14A Set "D" cut on ± ℄ of east headwall 9'x5' RCB under I-35 just south of Old U.S. 56 highway bridge on-ramp. ℄ I-35 Sta. 207+68.2, 136.3' Rt. Elev. 1048.641

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

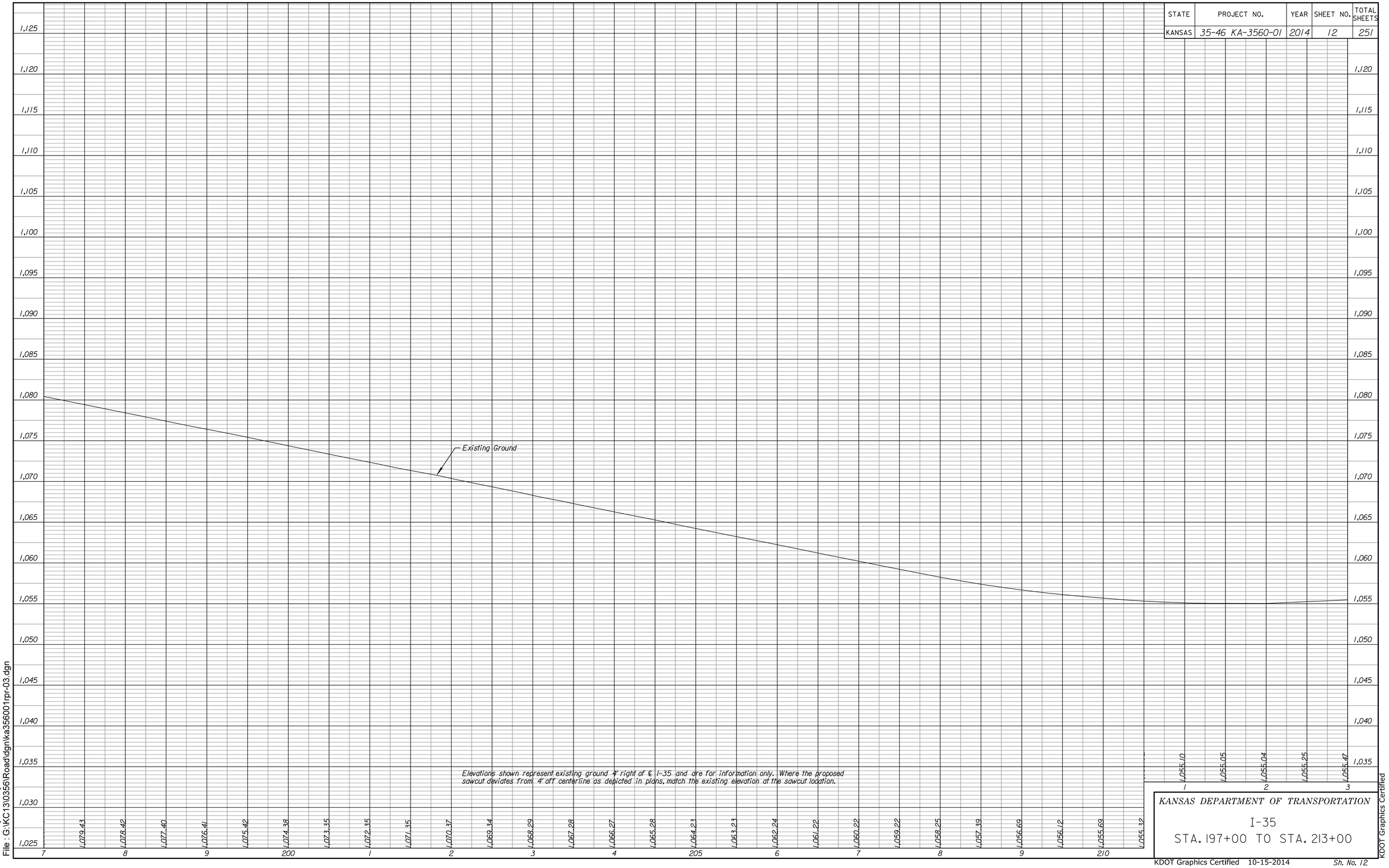
STA. 197+00 TO STA. 213+00

KDOT Graphics Certified 10-15-2014 Sh. No. 11

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpl-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	12	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 197+00 TO STA. 213+00

KDOT Graphics Certified 10-15-2014 Sh. No. 12

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Road\dgn\ka356001rpr-03.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	13	251

P.O.T. ℄ I-35 Sta. 213+00.00, 90.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Set "O" cut on easterly concrete base for "Hospital Spring Hill Exit 215" sign (BM#15B). 150.55' NNE
3) Found west edge of west shoulder southbound I-35. 29.10' E
4) Found northeast corner of westerly concrete pier of Old 56 Ramp over I-35. 81.72' S

P.O.T. ℄ I-35 Sta. 220+50.00, 90.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±9" deep.
2) Found near edge of west shoulder southbound I-35. 27.13' E
3) Found "+" in 220+00 station stamp west shoulder southbound I-35. 58.43' S
4) Found near edge east shoulder ramp southbound I-35 to Old 56 Highway. 17.45' NW
5) Found near face east post "Exit 217" sign. 178.56' NNE

P.O.T. ℄ I-35 Sta. 220+50.00, 100.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±6" deep.
2) Set "+" cut near west edge west shoulder Old 56 Ramp to northbound I-35. 78.63' E
3) Found near face east post highway sign. 36.56' S
4) Found "+" cut in station 220+00 stamp. 65.18' SW
5) Set "+" cut near east edge east shoulder northbound I-35. 39.15' NW

DATE	BY	
6/2014	A. MEYER	REFERENCES NOTED
7/2014	R. MILLER	REFERENCES CHECKED

Old 56 Hwy Off Ramp
Curve Data

P.I. Sta. 218+93.12 (Bk.)
Δ = 30°02' 43" (LT)
D = 1°50' 00"
R = 3,125.22'
T = 838.73'
L = 1,638.84'
E = 110.59'
Super = 0.050 ft/ft

Sta. 213+03.43 (Existing)
Br. No. 35-46-14.86(317)
90'-127'-192'-127'-84'-84' Continuous Curved Steel Plate Girder Spans, 28.0' Roadway

+74.95, 61.00' LT
Begin Sho. Taper

+74.95, 49.00' LT
Begin Taper

+94.91, 61.00' LT
End Sho. Taper

Const. Limits

P.I. +93.12

+14.95, 61.00' LT
End Taper

+36.70, 73.00' LT
Begin Sho. Taper

+94.56, 73.00' LT
End Sho. Taper

PT Sta. 226+93.23
Sta. 226+94.56, 61.00' Lt. ℄ I-35

OLD 56 HWY OFF RAMP

S.Bd. I-35

℄ Proposed Improvement

Sawcut 4' Lt.

Sawcut 4' Rt.

N.Bd. I-35

N 40° 00' 30" E

MATCH LINE STA. 213+00

MATCH LINE STA. 229+00

Const. Limits

N 32° 43' 22" E

PT +21.45

OLD 56 HWY ON RAMP

P.I. +83.93

Old 56 Hwy On Ramp
Curve Data

P.I. Sta. 215+83.93 (Bk.)
Δ = 54° 57' 20" (LT)
D = 5° 45' 00"
R = 996.45'
T = 518.23'
L = 955.75'
E = 126.70'
Super = 0.08 ft/ft

All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #15B Set "O" cut on east concrete sign base of "Hospital Spring Hill Exit 215" for southbound I-35.
℄ I-35 Sta. 214+50.4, 82.8' Lt. Elev. 1053.182

B.M. #15A Set railroad spike in west face of power pole at east R/W fence directly east of north abutment of Old U.S. 56 Hwy on-ramp bridge.
℄ I-35 Sta. 217+72.1, 302.5' Rt. Elev. 1065.938

B.M. #16B Set "U" cut on west concrete sign base of overhead highway sign for "Exit 215 south U.S. 169/K7" and " Exit 217 Old HWY 56 Exit only" for southbound I-35.
℄ I-35 Sta. 225+34.6, 95.2' Lt. Elev. 1072.349

B.M. #16A Set "T" post ±1' west of east R/W fence ±1000' south of Sheridan Ave. bridge.
℄ I-35 Sta. 227+28.8, 231.9' Rt. Elev. 1064.698

KANSAS DEPARTMENT OF TRANSPORTATION

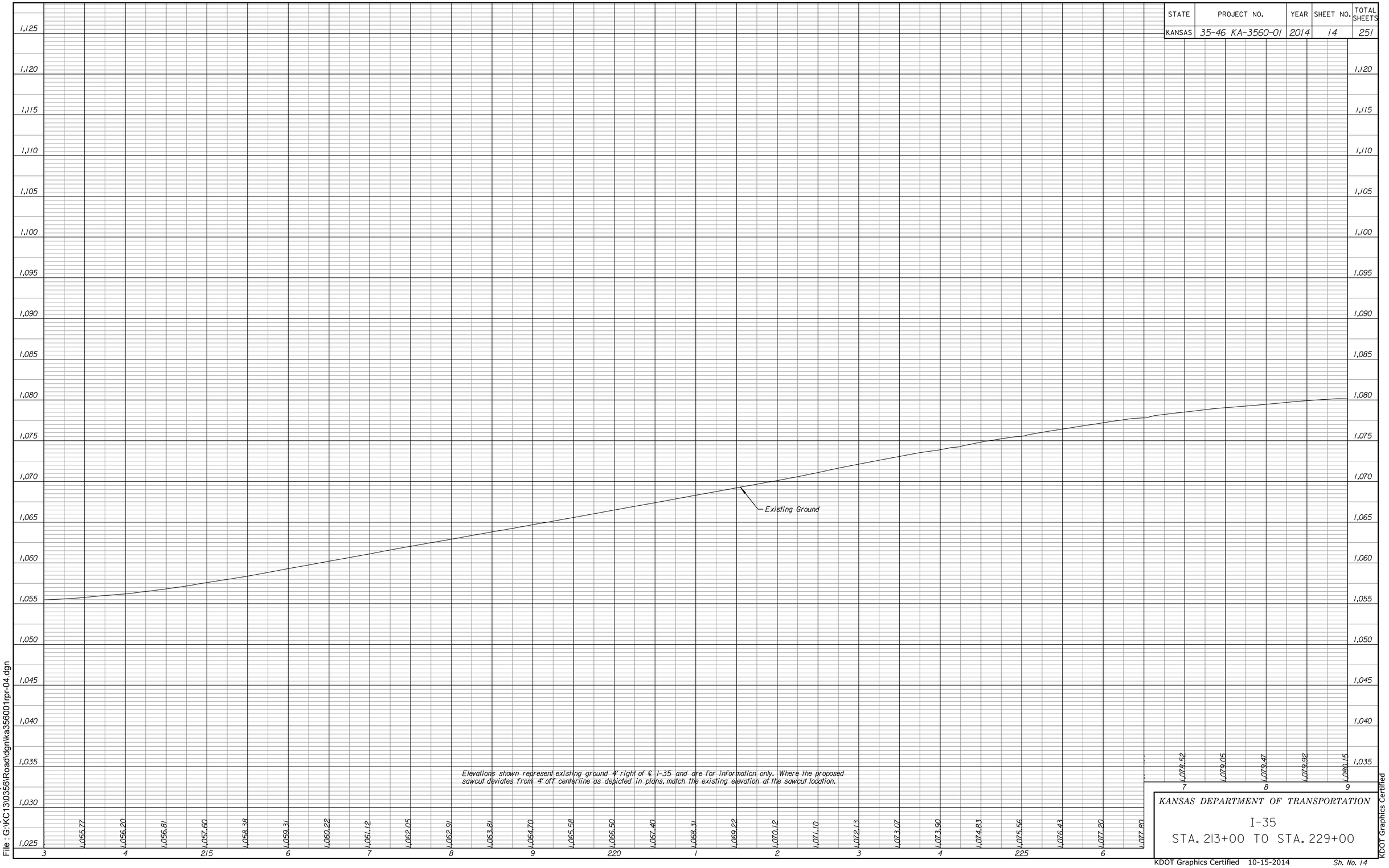
I-35
STA. 213+00 TO STA. 229+00

KDOT Graphics Certified 10-15-2014 Sh. No. 13

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1310356\Roadv\dgn\ka3560011rpl-04.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	14	251



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KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 213+00 TO STA. 229+00

KDOT Graphics Certified 10-15-2014

Sh. No. 14

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpr-04.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	15	251

P.C. ℄ I-35 Sta. 229+35.08, 90.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PC" ±6" deep.
2) Found post in west of right-of-way fence at P.I. 128.07' N
3) Set "+" cut near west edge west shoulder southbound I-35. 18.25' E
4) Found northeast corner of concrete pad for electric pedestal near west right-of-way fence. 102.18' W

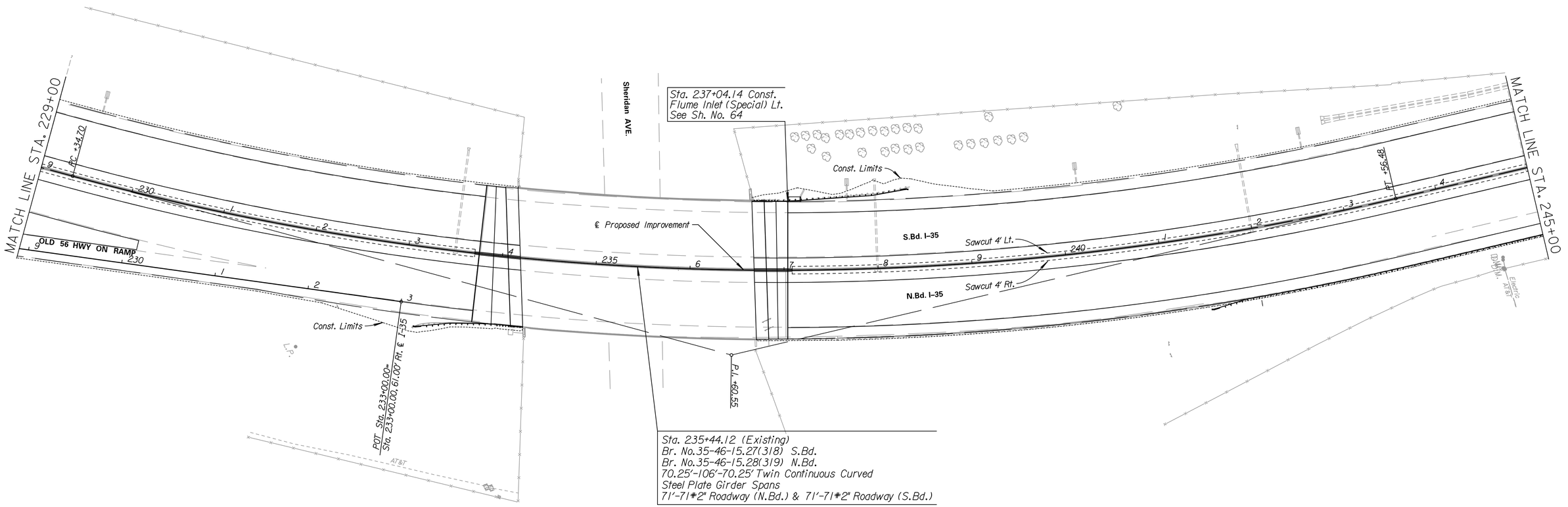
P.C. ℄ I-35 Sta. 229+35.08, 100.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PC" ±6" deep.
2) Found "+" cut in station 230+00 stamp. 79.85' N
3) Found post in east right-of-way fence at P.I. 123.71' SSE
4) Set "+" cut near east edge east shoulder Old 56 highway ramp to northbound I-35. 38.57' SW
5) Set "+" cut near east edge east shoulder Old 56 highway ramp to northbound I-35. 17.20' W

P.I. ℄ I-35 Sta. 236+60.55 (Bk.)=236+30.63 (Ahd.)
1) No monument set in field
Δ = 28° 26' 08" (LT)
D = 2° 00' 00"
R = 2,864.79'
T = 725.85'
L = 1,421.78'
E = 90.52'

Curve Data
P.I. Sta. 236+60.55 (Bk.)
Δ = 28° 26' 08" (LT)
D = 2° 00' 00"
R = 2,864.79'
T = 725.85'
L = 1,421.78'
E = 90.52'
Super = 0.070 ft/ft

P.T. ℄ I-35 Sta. 243+56.51, 90.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PT" ±8" deep.
2) Set "+" cut near west edge west shoulder southbound I-35. 35.90' NE
3) Set "+" cut near west edge west shoulder southbound I-35. 17.11' E
4) Found top center of easterly of (2) 24" RCPs running north parallel to I-35. 58.40' S
5) Found post in west right-of-way fence at P.I. 34.50' WSW

P.T. ℄ I-35 Sta. 243+56.51, 90.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 PT" ±8" deep.
2) Set nail with shiner west face guy pole at east right-of-way fence. 95.45' NNE
3) Found post in east right-of-way fence at P.I. 27.57' NE
4) Set mag nail with shiner in top of asphalt curbline east edge east shoulder northbound I-35. 27.15' SW
5) Set mag nail with shiner in top of asphalt curbline east edge east shoulder northbound I-35. 17.80' W



UTILITIES

AT&T
Electric

All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #17B Found NGS 3" brass disk stamped "J328 reset 1995" set in southwest wingwall of I-35 bridge over Sheridan Street. ℄ I-35 Sta. 234+10.5, 75.3' Lt. Elev. 1074.255

B.M. #17A Set "U" cut on west side of concrete sign base of "Exit 218 Santa Fe Exit Only" highway sign for northbound I-35. ℄ I-35 Sta. 236+79.4, 78.2' Rt. Elev. 1081.838

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 229+00 TO STA. 245+00

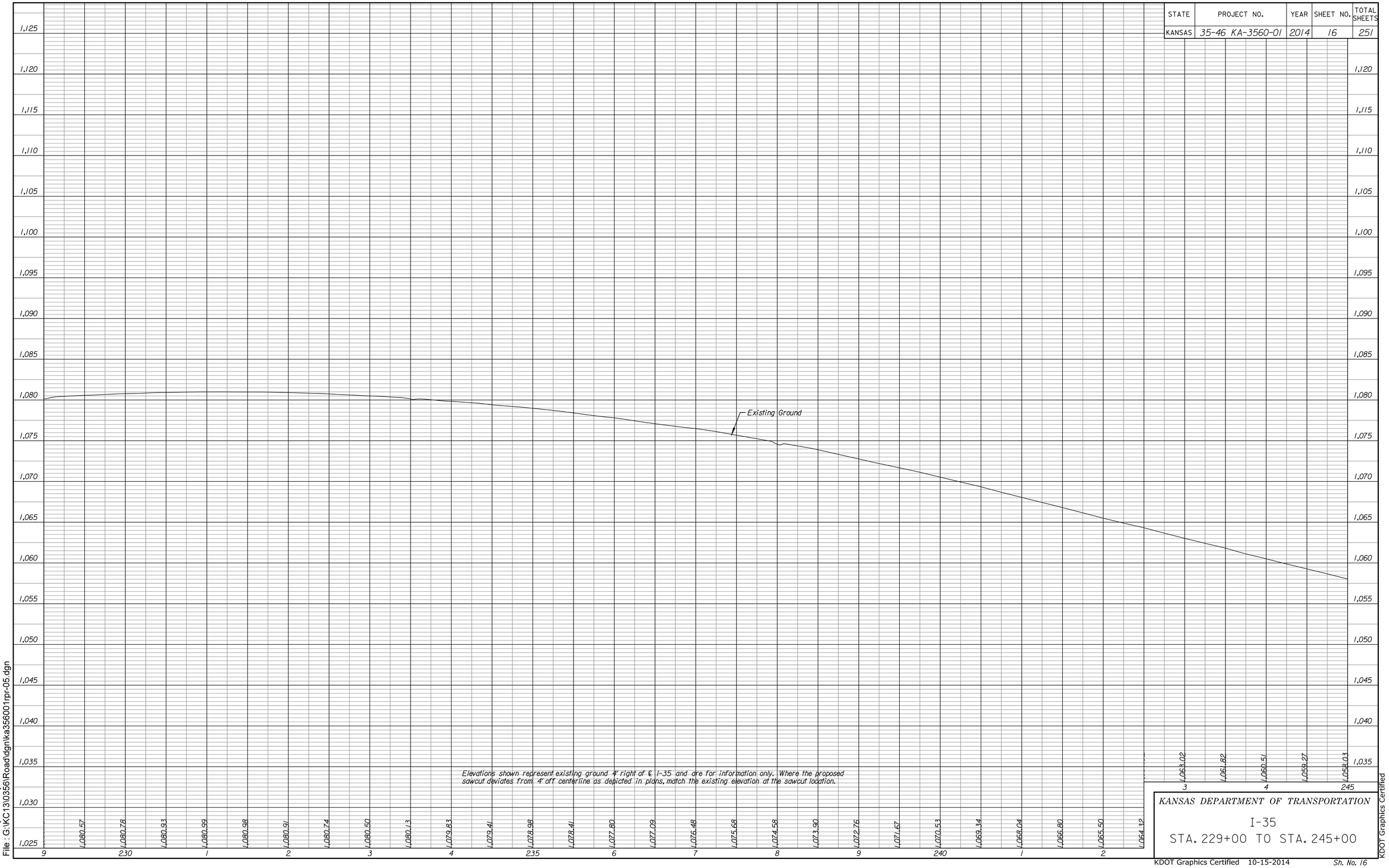
	BY	DATE
REFERENCES NOTED	A. MEYER	6/2014
REFERENCES CHECKED	R. MILLER	7/2014

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpl-05.dgn
Plotted : 10/16/2014

KDOT Graphics Certified 10-15-2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	16	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 229+00 TO STA. 245+00

KDOT Graphics Certified 10-15-2014

Sh. No. 16

KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka3560016rpr-05.dgn

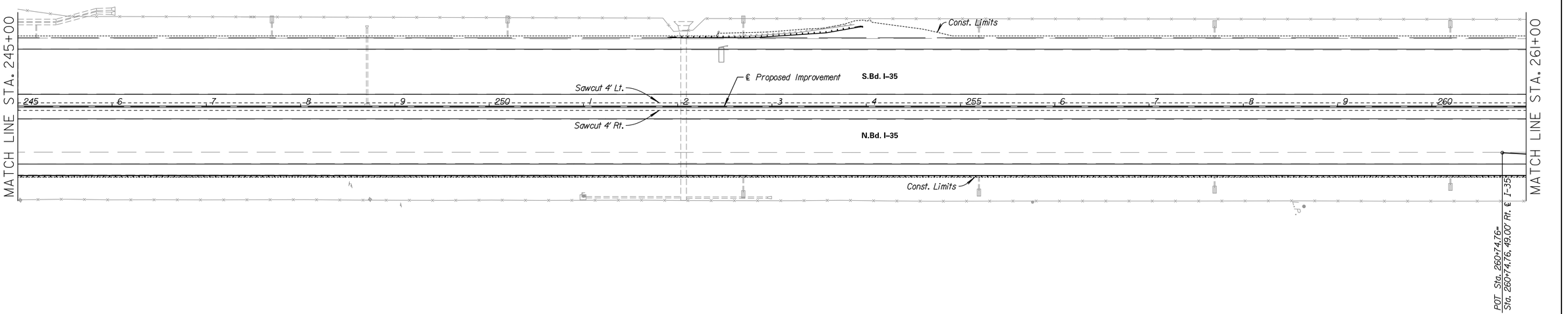
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	17	251

P.O.T. ℄ I-35 Sta. 255+00.00, 90.00' Rt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Set mag nail in painted "+" east shoulder northbound I-35 (AT #126). 168.10' N
3) Set "T" post just east of east right-of-way fence (BM #19A). 77.50' NNE
4) Found east right-of-way fence. 10.35' E
5) Found near edge east shoulder northbound I-35. 17.30' W

P.O.T. ℄ I-35 Sta. 255+00.00, 90.00' Lt.
1) Set 5/8" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±9" deep.
2) Set "T" post just east of west right-of-way fence (BM #19B). 200.65' N
3) Set mag nail in painted "+" west shoulder southbound I-35 (AT #105). 232.22' NNE
4) Found "+" in 255+00 station stamp west shoulder I-35, 18.45' E
5) Found center post of three line set reinforcement post in west right-of-way fence. 58.80' S

BY	DATE
A. MEYER	6/2014
R. MILLER	7/2014

REFERENCES NOTED
REFERENCES CHECKED



All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #18B Set "T" post ±1' east of west R/W fence at P.I. in fence near intersection of S. Fir St. and E. Ridgeway Drive west of southbound I-35. ℄ I-35 Sta. 246+08.2, 92.8' Lt. Elev. 1051.067	B.M. #18A Set railroad spike in northwest face of power pole east side of Rogers Road in front of 640 Rogers Road. ℄ I-35 Sta. 246+19.6, 148.2' Rt. Elev. 1053.980	B.M. #19A Set "T" post just east of east right of way fence at transition from 6' to 3' chainlink fence in front of 400 Rogers Road. ℄ I-35 Sta. 255+76.5, 101.5' Rt. Elev. 1041.964	B.M. #19B Set "T" post ±1' east of west R/W fence of southbound I-35 in front of 305 S. Fir Street (Olathe Ford Commercial Sales) ℄ I-35 Sta. 257+00.7, 92.0' Lt. Elev. 1045.124

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

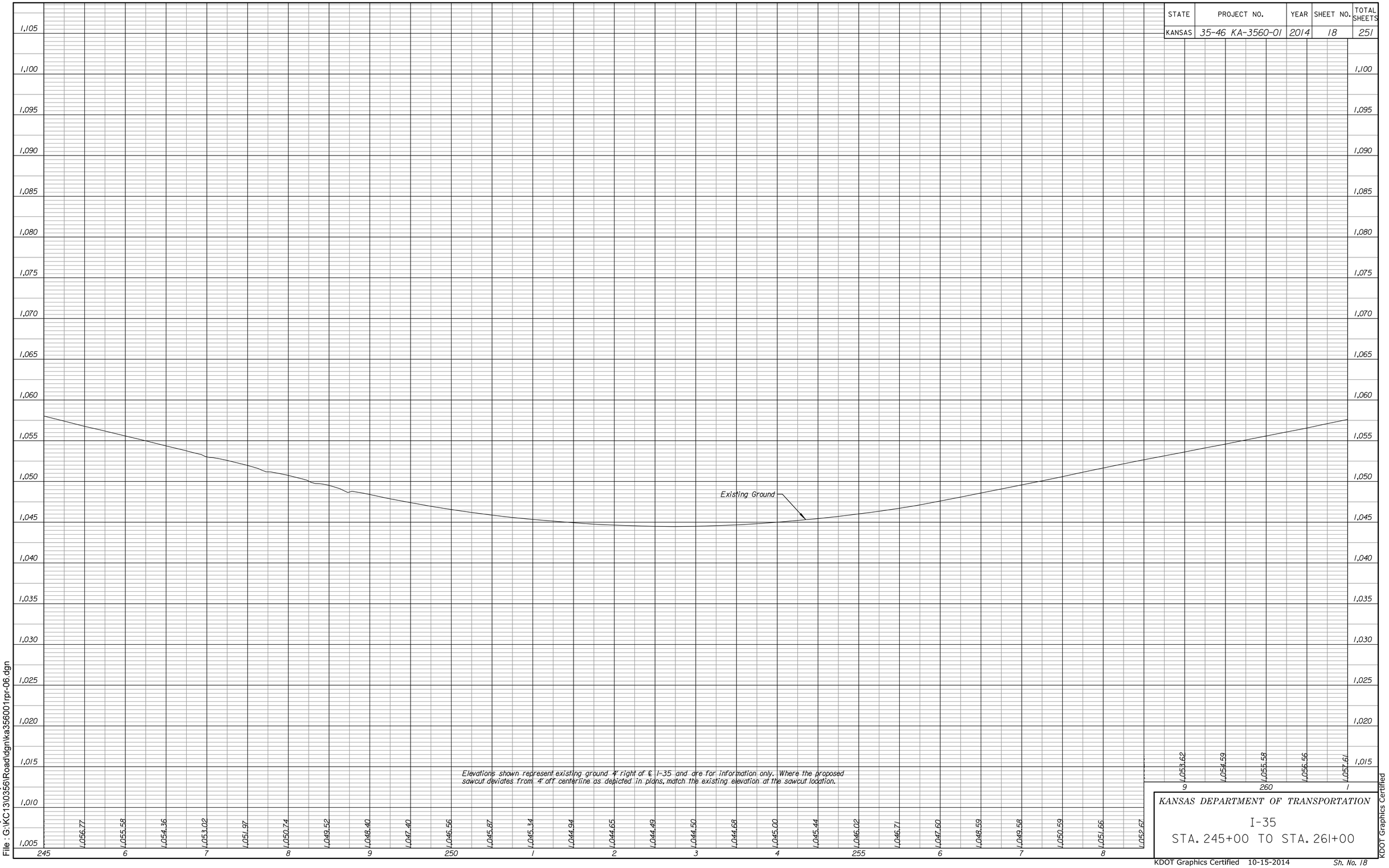
STA. 245+00 TO STA. 261+00

KDOT Graphics Certified 10-15-2014 Sh. No. 17

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpl-06.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	18	251



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KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 245+00 TO STA. 261+00

KDOT Graphics Certified 10-15-2014

Sh. No. 18

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpr-06.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	19	251

BY	DATE
A. MEYER	6/2014
R. MILLER	7/2014
REFERENCES NOTED	
REFERENCES CHECKED	

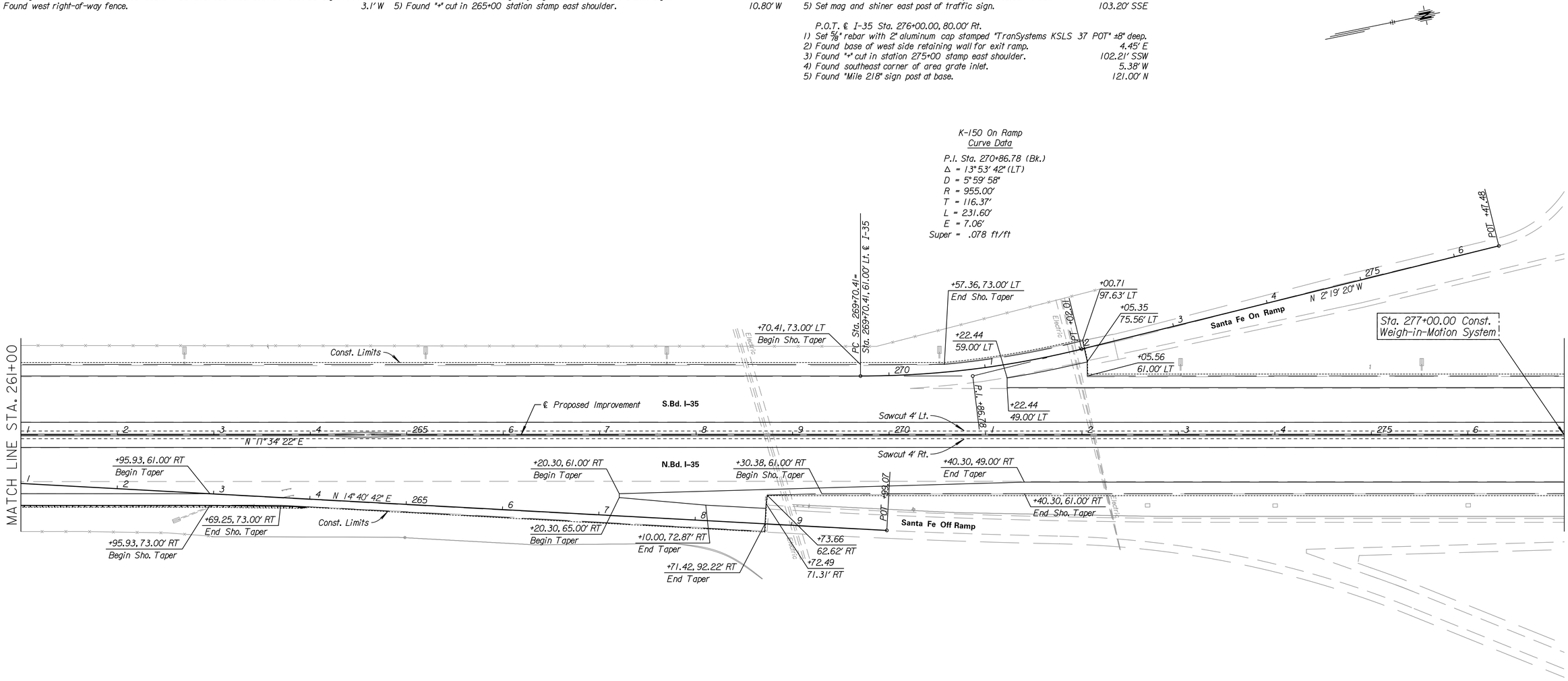
P.O.T. ℄ I-35 Sta. 265+00.00, 90.00' Lt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Set mag nail in painted "+" west shoulder southbound I-35 (AT #104). 44.85' NE
3) Found west edge west shoulder of southbound I-35. 17.40' E
4) Set mag nail with shiner east face "South I-35 U.S. 169 West U.S. 50 U.S. 56" sign. 144.25' S
5) Found west right-of-way fence. 3.1' W

P.O.T. ℄ I-35 Sta. 265+00.00, 90.00' Rt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±7" deep.
2) Set mag nail in painted "+" east shoulder northbound I-35 (AT #127). 47.18' N
3) Set "□" cut on retaining wall just west of barrier curb for Rogers Road (BM #20A). 16.69' E
4) Found northeast bolt of highway sign base for Santa Fe Exit sign. 127.46' S
5) Found "+" cut in 265+00 station stamp east shoulder. 10.80' W

P.O.T. ℄ I-35 Sta. 276+00.00, 90.00' Lt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±6" deep.
2) Found "Mile 218" sign post at base. 122.72' NNE
3) Found west edge west shoulder of southbound I-35. 29.30' E
4) Found "+" cut in 275+00 station stamp west shoulder I-35. 106.10' SSE
5) Set mag and shiner east post of traffic sign. 103.20' SSE

P.O.T. ℄ I-35 Sta. 276+00.00, 80.00' Rt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Found base of west side retaining wall for exit ramp. 4.45' E
3) Found "+" cut in station 275+00 stamp east shoulder. 102.21' SSW
4) Found southeast corner of area grate inlet. 5.38' W
5) Found "Mile 218" sign post at base. 121.00' N

K-150 On Ramp
Curve Data
P.I. Sta. 270+86.78 (Bk.)
Δ = 13° 53' 42" (LT)
D = 5° 59' 58"
R = 955.00'
T = 116.37'
L = 231.60'
E = 7.06'
Super = .078 ft/ft



UTILITIES
Electric

All station and offset callouts are to ℄ I-35 unless noted otherwise.

B.M. #20A Set "□" cut on retaining wall east of station stamp "265+00" east of northbound I-35.
℄ I-35 Sta. 264+98.2, 106.5' Rt. Elev. 1063.500

B.M. #20B Set "+" cut on southeast bolt of light pole #10622 base of intersection highway light just south of on-ramp to southbound I-35 from Santa Fe.
℄ I-35 Sta. 266+99.6, 93.5' Lt. Elev. 1060.104

B.M. #21A Set "□" cut on west side of 36" diameter concrete sign base for "Santa Fe West/East" sign over I-35 exit at Santa Fe.
℄ I-35 Sta. 273+45.1, 135.2' Rt. Elev. 1063.062

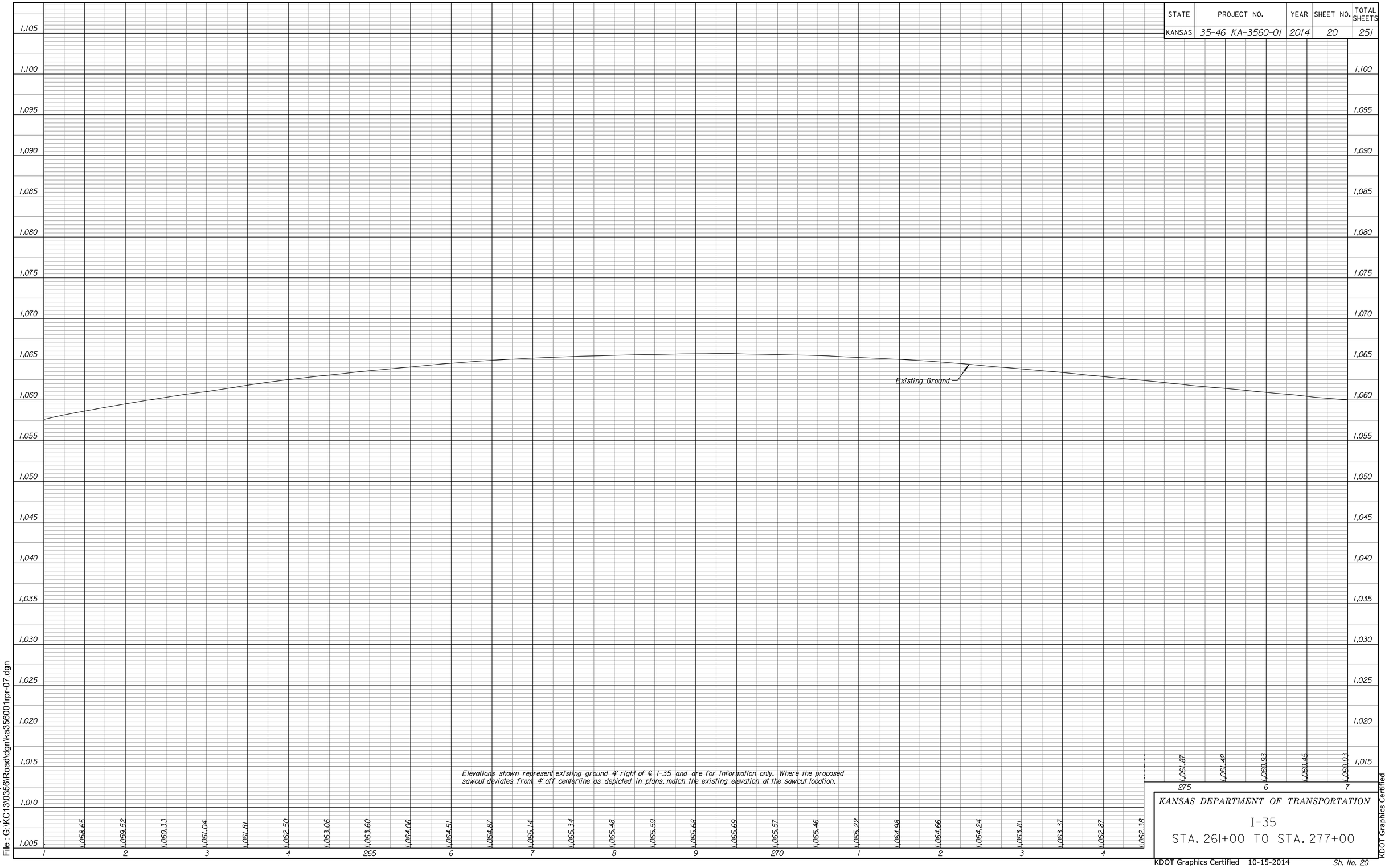
KANSAS DEPARTMENT OF TRANSPORTATION
I-35
STA. 261+00 TO STA. 277+00

KDOT Graphics Certified 10-15-2014 Sh. No. 19

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpl-07.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	20	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 261+00 TO STA. 277+00

KDOT Graphics Certified 10-15-2014

Sh. No. 20

KDOT Graphics Certified

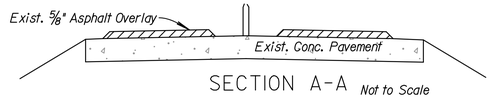
Drawn By : aameyer
File : G:\KC130356\Road\dgn\ka356001rpr-07.dgn
Plotted : 10/16/2014

	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
	KANSAS	35-46 KA-3560-01	2014	21	251

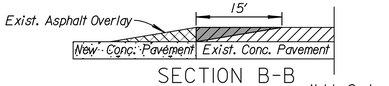
P.O.T. ℄ I-35 Sta. 287+00.00, 110.00′ Lt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±6" deep.
2) Found southeast corner of concrete area grate inlet. 88.05′ N
3) Set "+" cut near west edge west shoulder southbound I-35 ramp to Santa Fe. 12.00′ E
4) Set mag nail in concrete joint west edge west shoulder southbound I-35 ramp to Santa Fe. 39.70′ SSE
5) Found west right-of-way fence. 14′ W

P.O.T. ℄ I-35 Sta. 287+00.00, 80.00′ Rt.
1) Set ⅝" rebar with 2" aluminum cap stamped "TranSystems KSLS 37 POT" ±8" deep.
2) Set nail in west post of merging lane sign for Santa Fe on ramp. 99.47′ N
3) Found top centerline at west end of southerly pipe of (2) two under Santa Fe on ramp. 103.28′ NNE
4) Set "+" cut on southwest bolt of highway light pole base (BM #23A). 60.49′ ENE
5) Set "+" cut on east shoulder of northbound I-35 ±2′ west of east edge shoulder. 20.23′ W

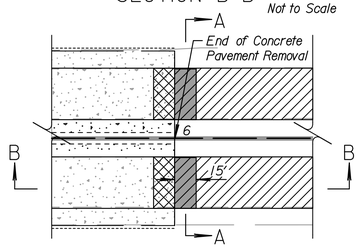
LEGEND
- Exist. Asphalt Overlay
- Milling
- Removal of Asphalt Overlay



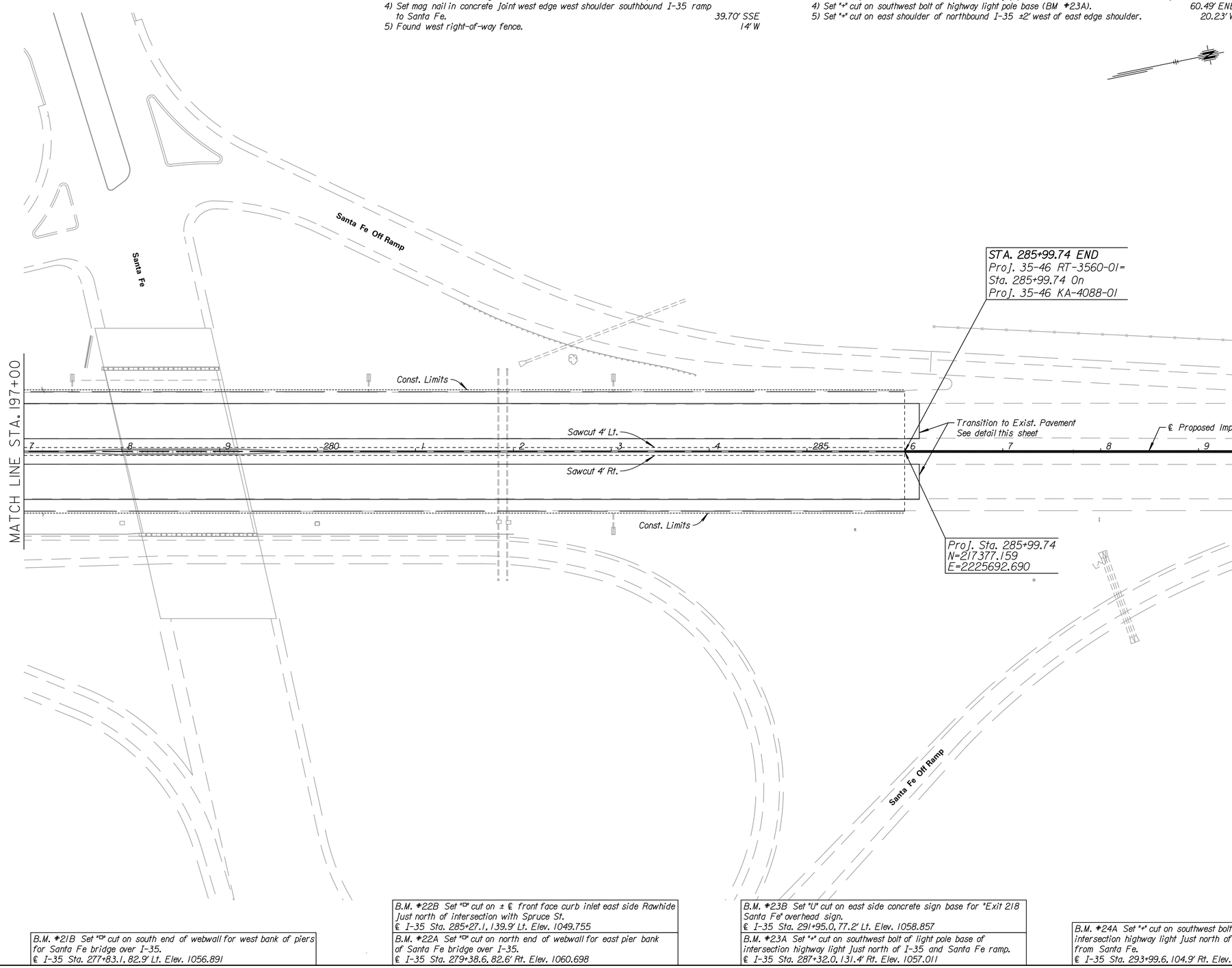
SECTION A-A Not to Scale



SECTION B-B Not to Scale



PLAN
TRANSITION TO EXISTING PAVEMENT



B.M. #21B Set "D" cut on south end of webwall for west bank of piers for Santa Fe bridge over I-35.
℄ I-35 Sta. 277+83.1, 82.9′ Lt. Elev. 1056.891

B.M. #22B Set "D" cut on ± ℄ front face curb inlet east side Rawhide just north of intersection with Spruce St.
℄ I-35 Sta. 285+27.1, 139.9′ Lt. Elev. 1049.755

B.M. #22A Set "D" cut on north end of webwall for east pier bank of Santa Fe bridge over I-35.
℄ I-35 Sta. 279+38.6, 82.6′ Rt. Elev. 1060.698

B.M. #23B Set "U" cut on east side concrete sign base for "Exit 218 Santa Fe" overhead sign.
℄ I-35 Sta. 291+95.0, 77.2′ Lt. Elev. 1058.857

B.M. #23A Set "+" cut on southwest bolt of light pole base of intersection highway light just north of I-35 and Santa Fe ramp.
℄ I-35 Sta. 287+32.0, 131.4′ Rt. Elev. 1057.011

B.M. #24A Set "+" cut on southwest bolt of light pole #10627 base of intersection highway light just north of on-ramp to northbound I-35 from Santa Fe.
℄ I-35 Sta. 293+99.6, 104.9′ Rt. Elev. 1061.213

All station and offset callouts are to ℄ I-35 unless noted otherwise.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 277+00 TO STA. 293+00

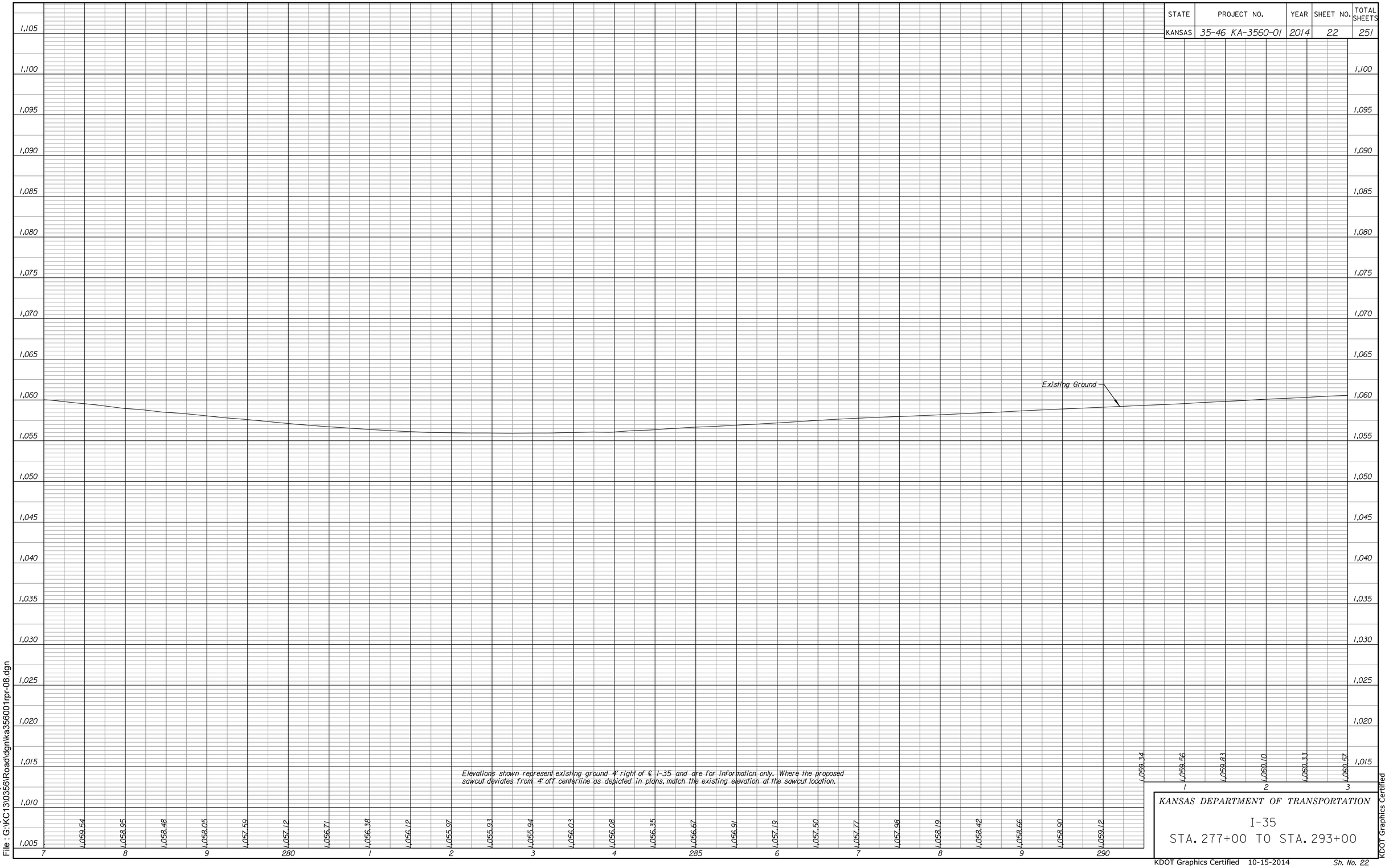
	BY	DATE
REFERENCES NOTED	A. MEYER	6/2014
REFERENCES CHECKED	R. MILLER	7/2014

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Road\dgn\ka356001rpl-08.dgn

KDOT Graphics Certified 10-15-2014 Sh. No. 21

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	22	251



Elevations shown represent existing ground 4' right of ℄ I-35 and are for information only. Where the proposed sawcut deviates from 4' off centerline as depicted in plans, match the existing elevation at the sawcut location.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

STA. 277+00 TO STA. 293+00

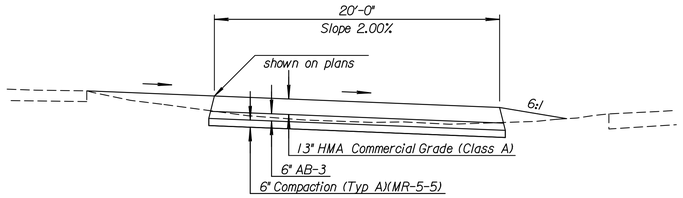
KDOT Graphics Certified 10-15-2014

Sh. No. 22

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Road\dgn\ka356001rpr-08.dgn
Plotted : 10/16/2014

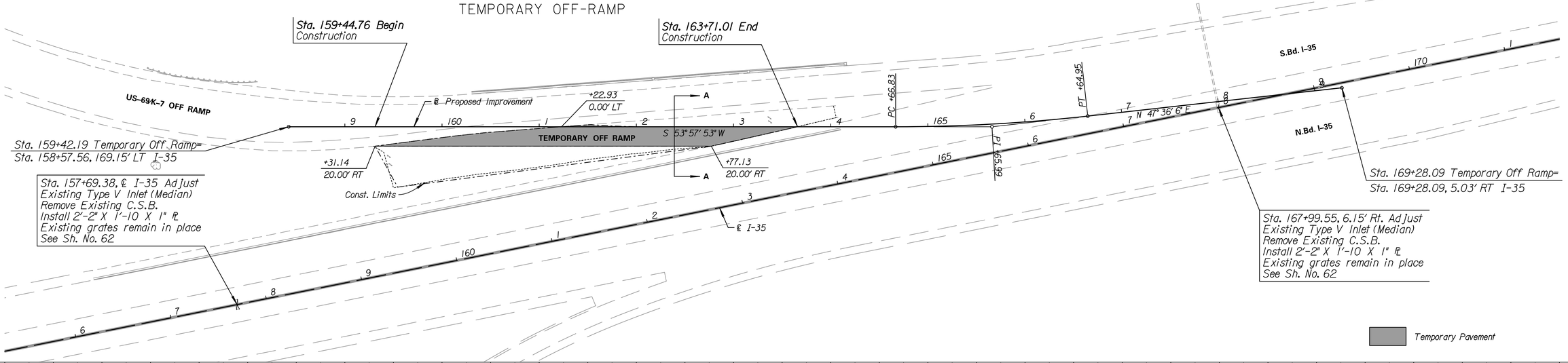
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	23	251

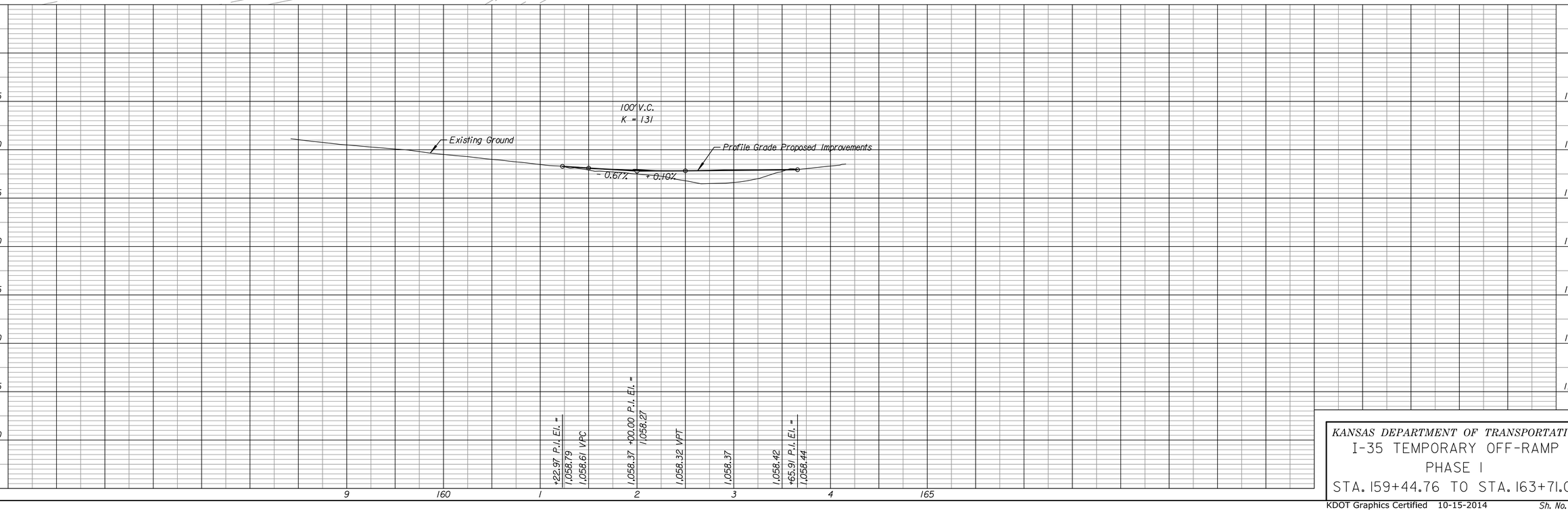


SECTION A-A
TEMPORARY OFF-RAMP

Curve Data
P.I. Sta. 165+65.99 (Bk.)
P.I. Sta. 165+65.79 (Ahd.)
Δ = 6°21' 47" (LT)
D = 3°12' 42"
R = 1,784.00'
T = 99.16'
L = 198.12'
E = 2.75'
Super = 2.0%

Scale: 1"=50'





KANSAS DEPARTMENT OF TRANSPORTATION
I-35 TEMPORARY OFF-RAMP
PHASE I
STA. 159+44.76 TO STA. 163+71.01

KDOT Graphics Certified 10-15-2014 Sh. No. 23

KDOT Graphics Certified

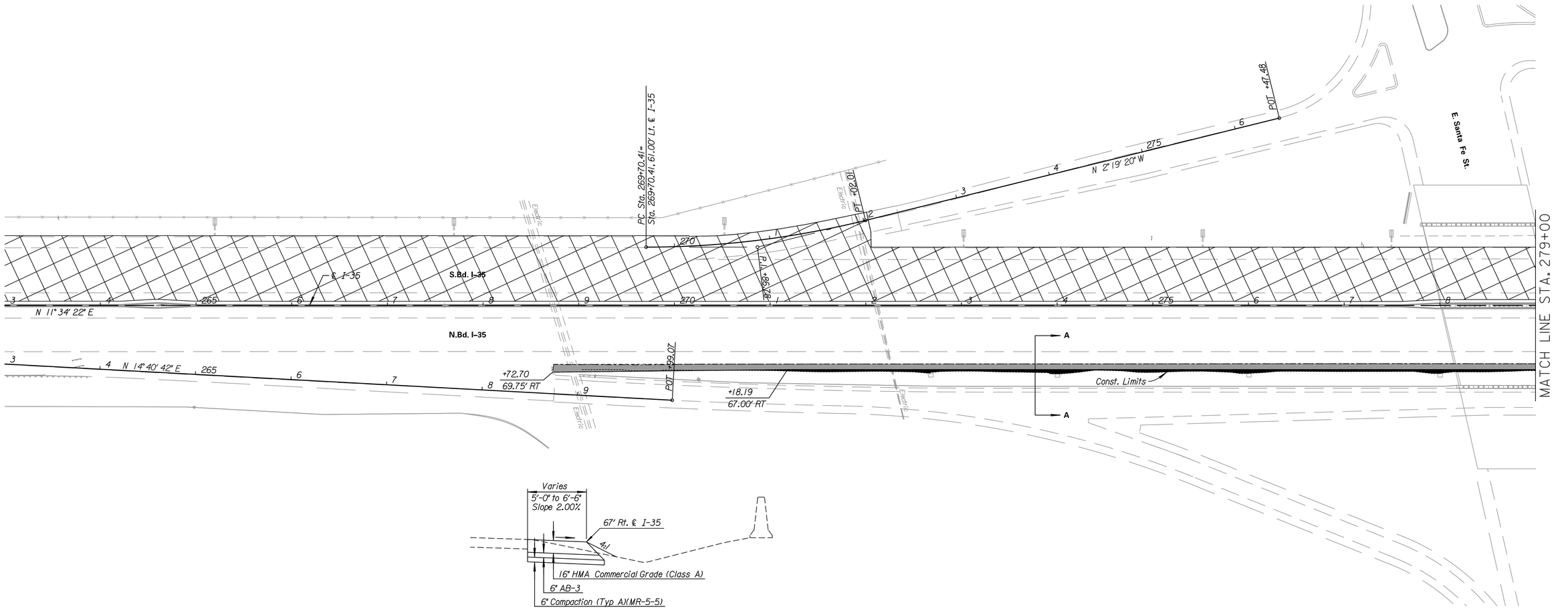
DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rdt-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	24	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Scale: 1"=50'



SECTION A-A
I-35

UTILITIES

Electric

Work Area

Temporary Pavement

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 SHOO-FLY DETOUR - NORTH
PHASE I
STA. 268+73.07 TO STA. 279+00

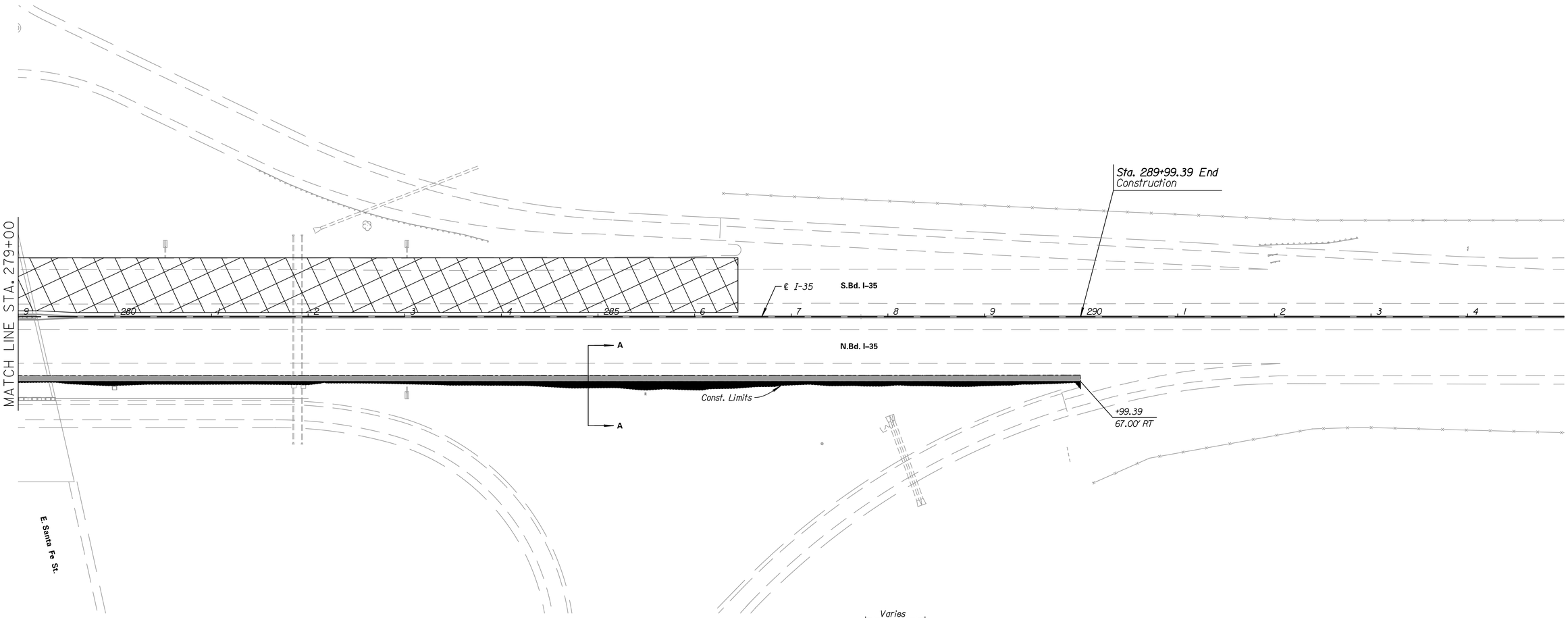
KDOT Graphics Certified 10-15-2014 *Sh. No. 24*

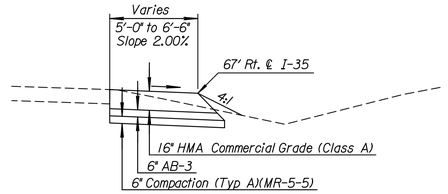
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rdt-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	25	251

Scale: 1"=50'





SECTION A-A
I-35

Work Area

Temporary Pavement

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 SHOO-FLY DETOUR - NORTH
PHASE I
STA. 279+00 TO STA. 289+99.39

KDOT Graphics Certified 10-15-2014 *Sh. No. 25*

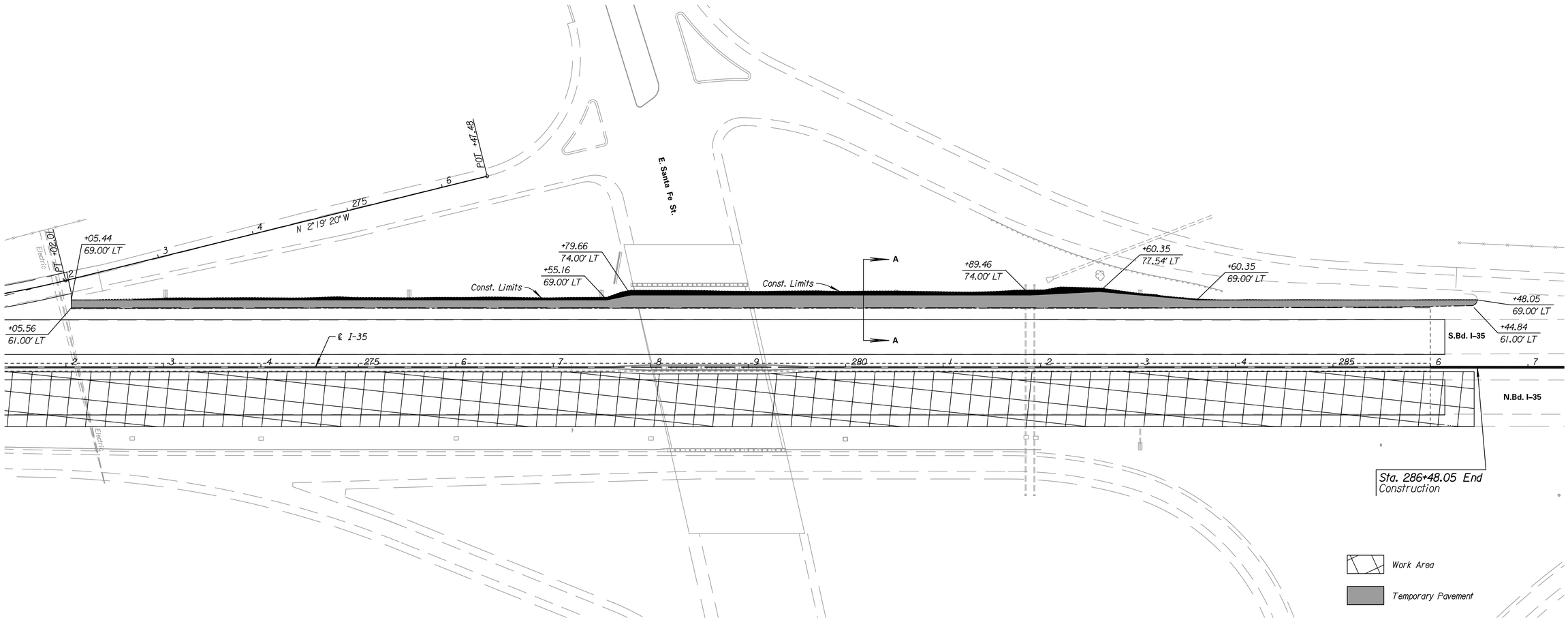
KDOT Graphics Certified

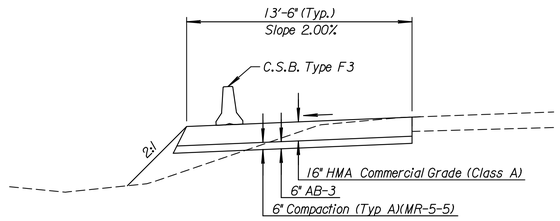
BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka3560001rdt-04.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	26	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED





SECTION A-A
I-35

KANSAS DEPARTMENT OF TRANSPORTATION
I-35 SHOO-FLY DETOUR - NORTH
PHASE 2
STA. 272+05.44 TO STA. 272+05.44

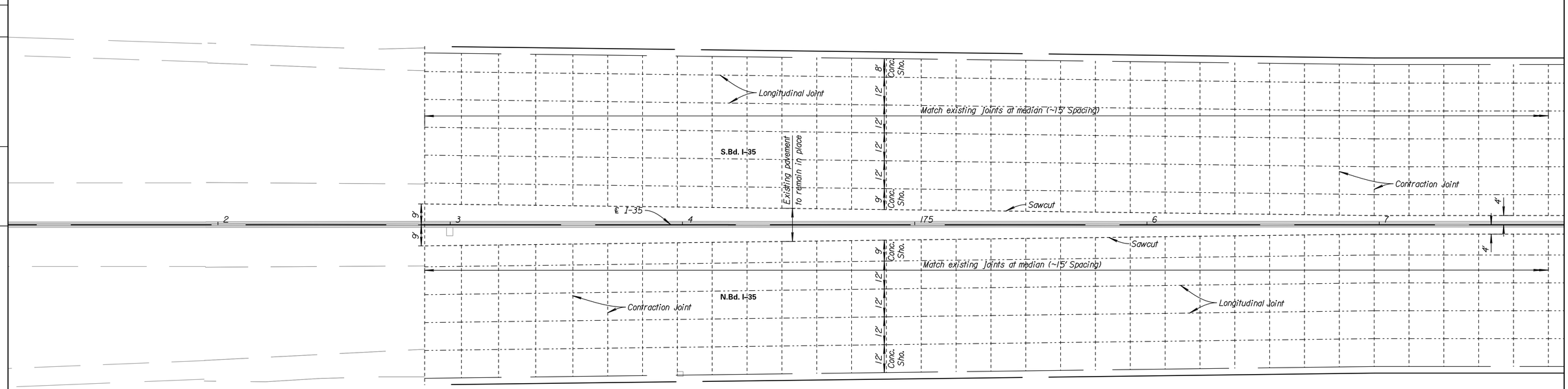
KDOT Graphics Certified 10-15-2014 Sh. No. 26

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rdt-05.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	27	251

Scale: 1"=20'



LEGEND

---------- Contraction Joint

– · – · – · – Longitudinal Joint

✳ 2' min.

KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

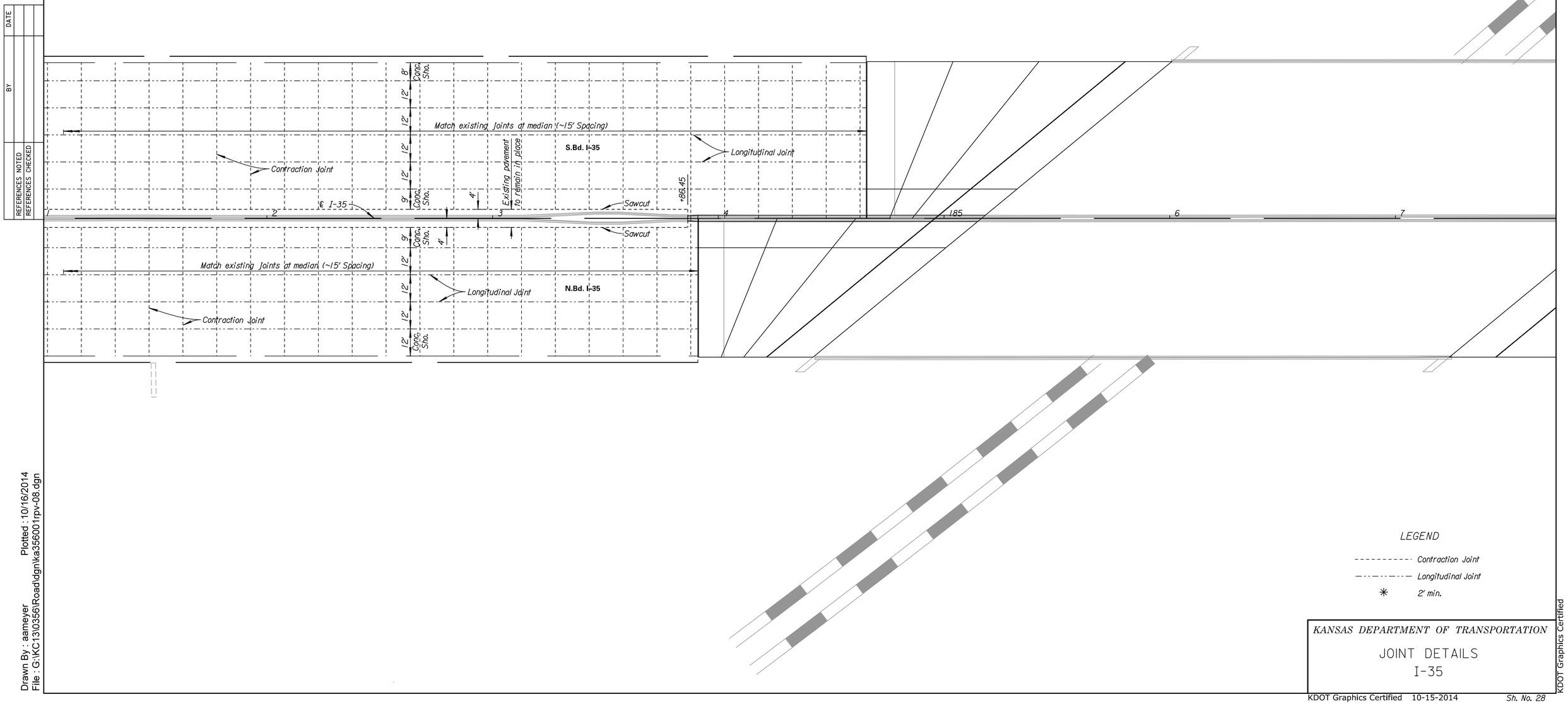
KDOT Graphics Certified 10-15-2014 Sh. No. 27

KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-07.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	28	251



KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 28

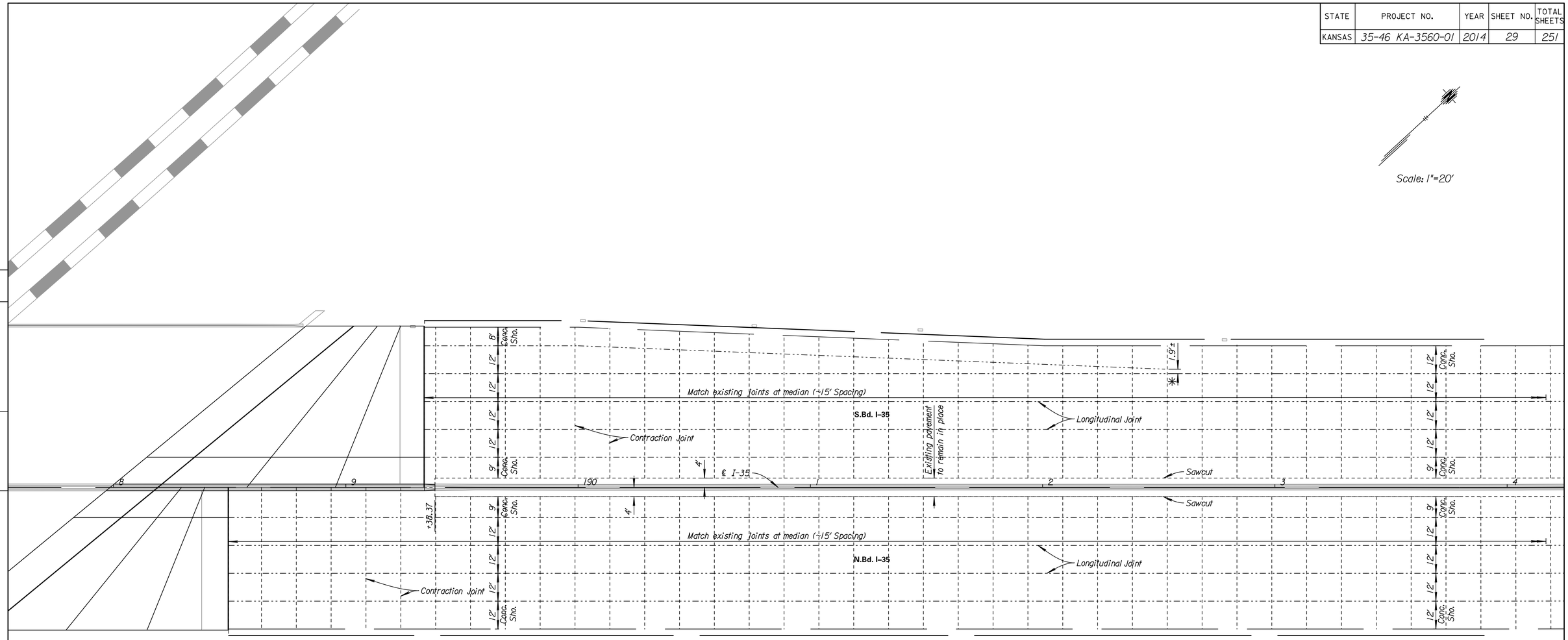
KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-08.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	29	251

DATE
BY
REFERENCES NOTED
REFERENCES CHECKED



LEGEND

---------- Contraction Joint

—·—·—·— Longitudinal Joint

✳ 2' min.

KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 29

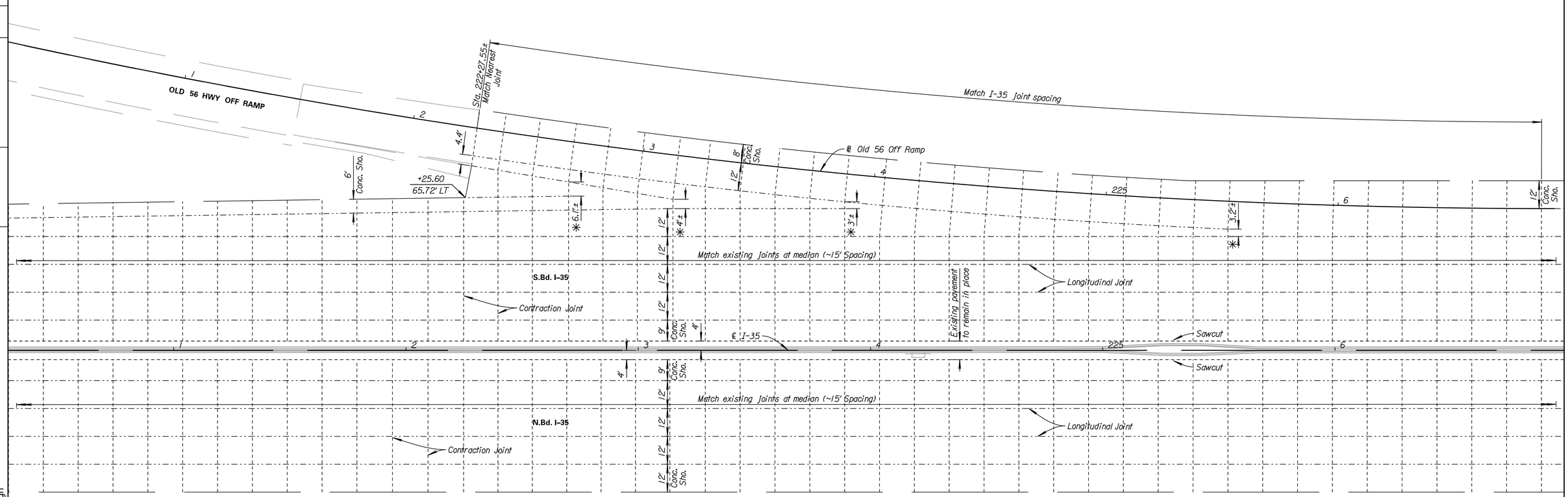
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpv-09.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	30	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Scale: 1"=20'



LEGEND

---------- Contraction Joint

-·-·-·-·- Longitudinal Joint

✳ 2' min.

KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

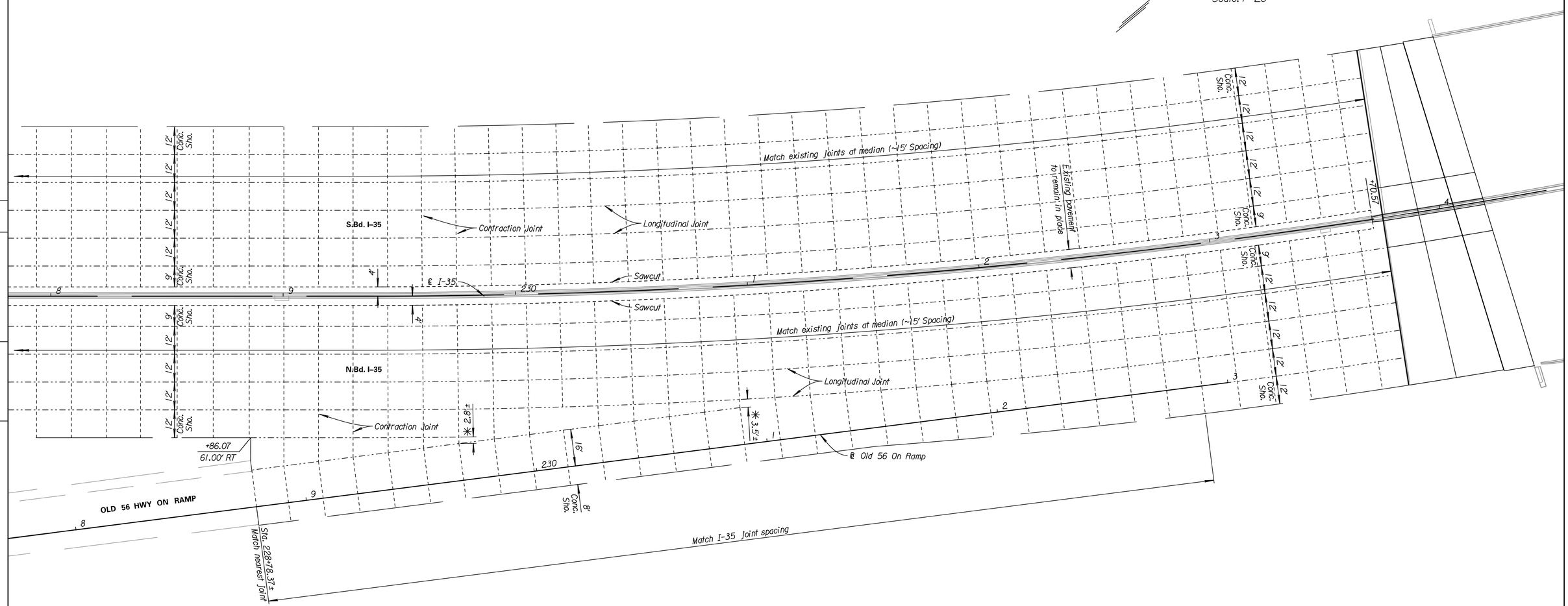
KDOT Graphics Certified 10-15-2014 Sh. No. 30

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-10.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	31	251

Scale: 1"=20'



LEGEND

---------- Contraction Joint

—·—·—·— Longitudinal Joint

✳ 2' min.

KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 31

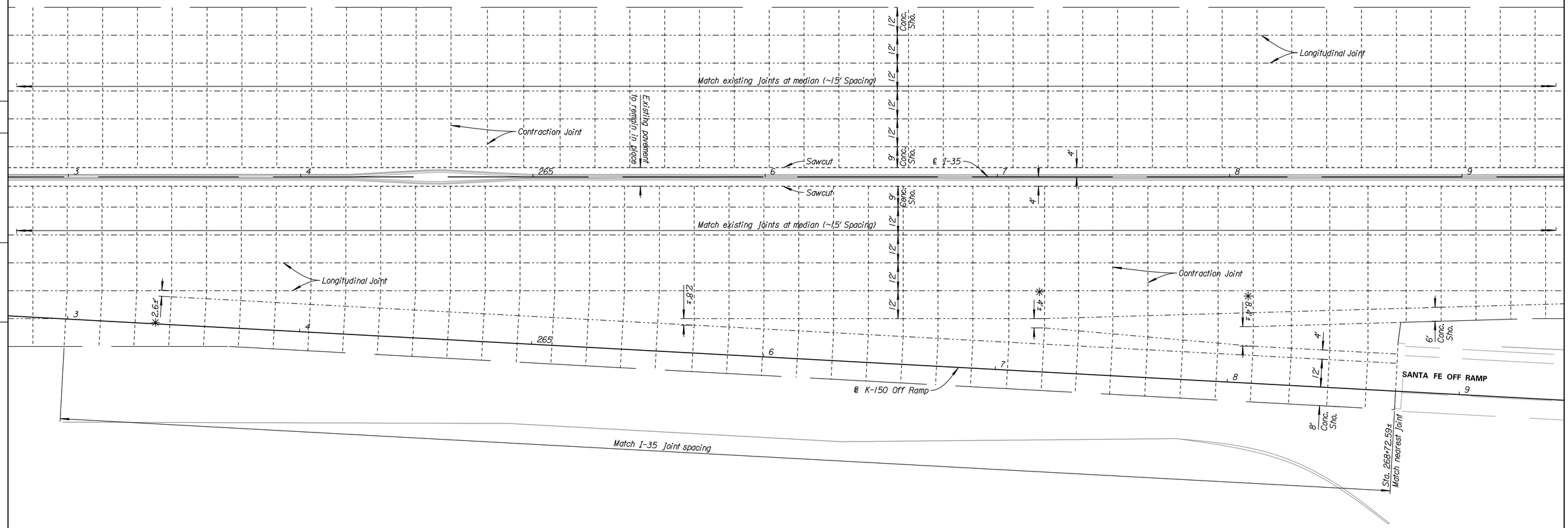
KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-11.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	32	251

Scale: 1"=20'



LEGEND

- Contraction Joint
- Longitudinal Joint
- ✳ 2' min.

KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 32

KDOT Graphics Certified

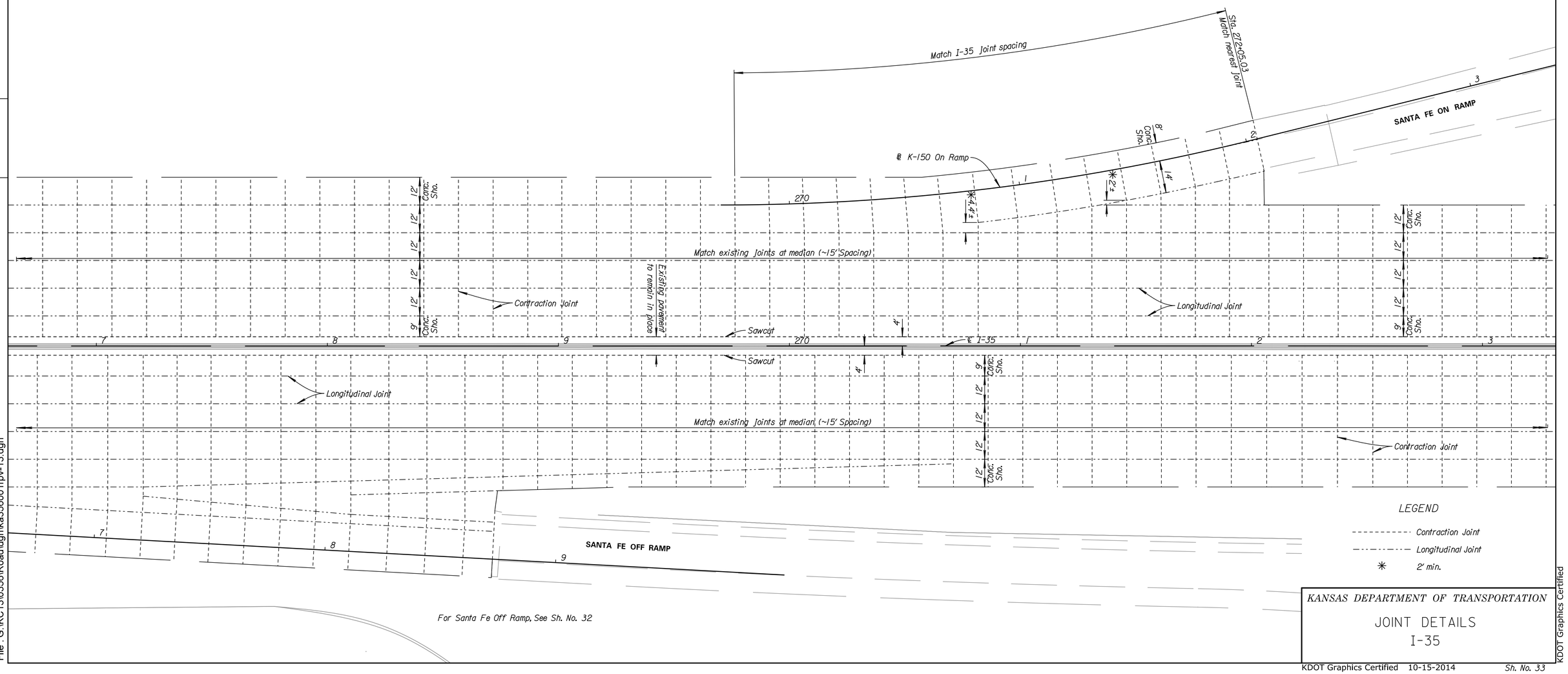
DATE	BY	REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-12.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	33	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Scale: 1"=20'



KANSAS DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
I-35

KDOT Graphics Certified 10-15-2014

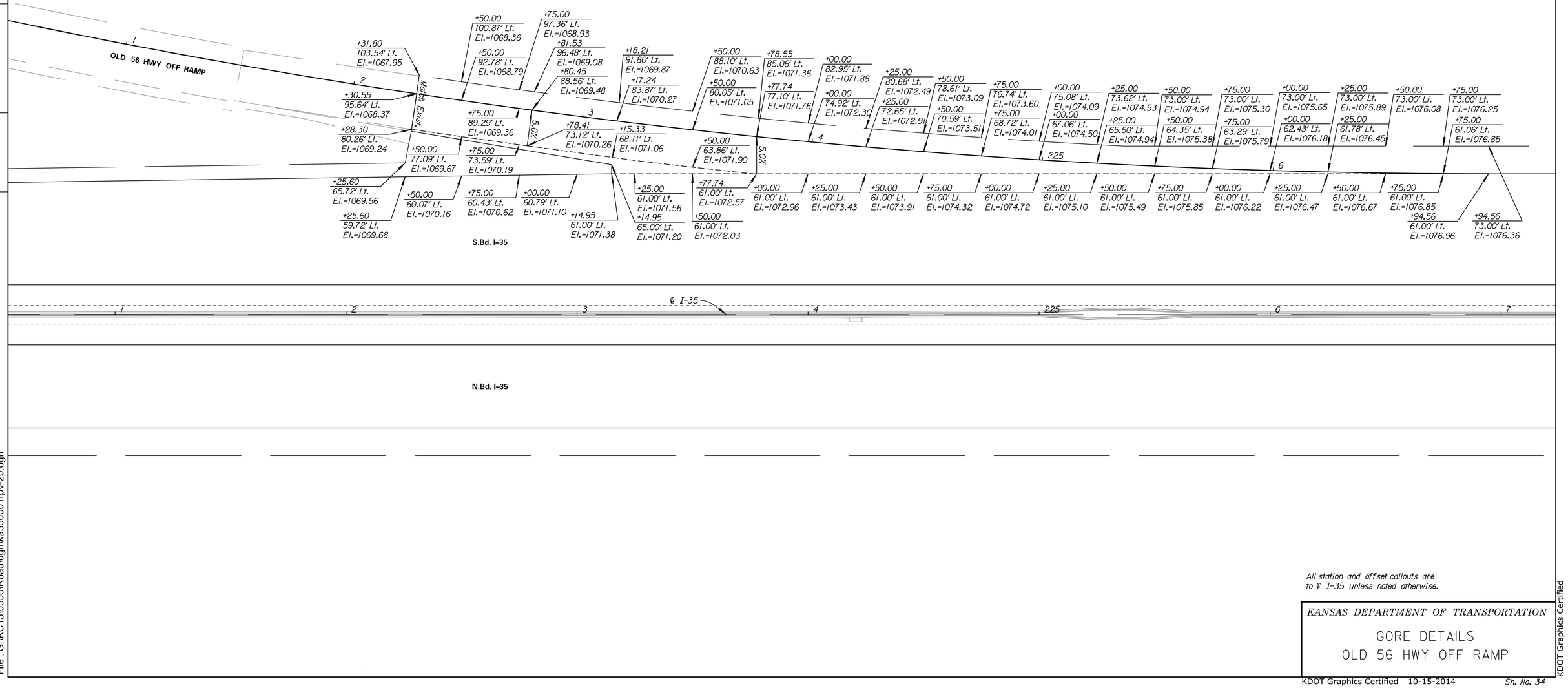
Sh. No. 33

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpv-13.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	34	251

Scale: 1"=20'



All station and offset callouts are to ℄ I-35 unless noted otherwise.

KANSAS DEPARTMENT OF TRANSPORTATION

GORE DETAILS
OLD 56 HWY OFF RAMP

KDOT Graphics Certified 10-15-2014 Sh. No. 34

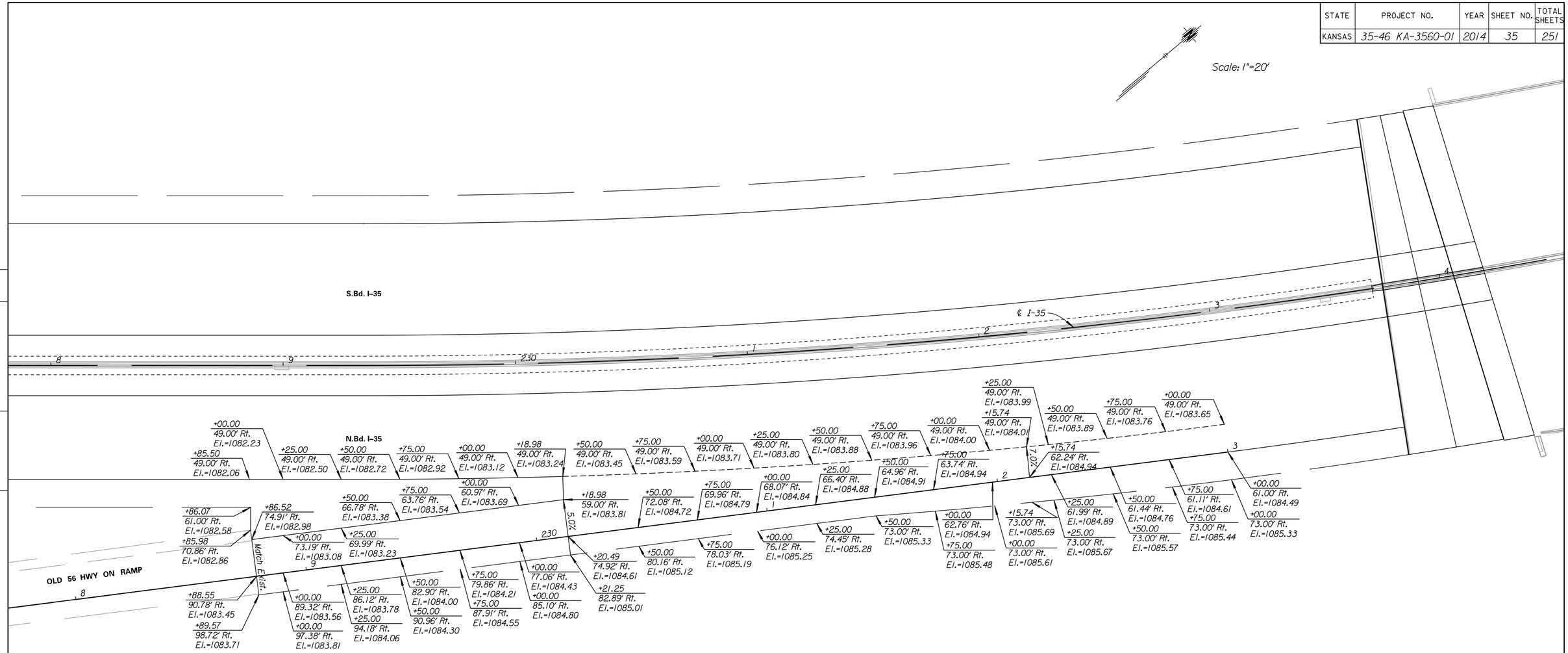
KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-20.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	35	251

Scale: 1"=20'



All station and offset callouts are to ℄ I-35 unless noted otherwise.

KANSAS DEPARTMENT OF TRANSPORTATION

GORE DETAILS
OLD 56 HWY ON RAMP

KDOT Graphics Certified 10-15-2014 Sh. No. 35

KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rpv-21.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	36	251

Scale: 1"=20'

S.Bd. I-35

℄ I-35

3 4 265 6 7 8 9

N.Bd. I-35

+00.00 49.00' Rt. El.=1060.34
+25.00 49.00' Rt. El.=1060.72
+50.00 49.00' Rt. El.=1061.11
+75.00 49.00' Rt. El.=1061.47
+00.00 49.00' Rt. El.=1061.79
+25.00 49.00' Rt. El.=1062.09
+50.00 49.00' Rt. El.=1062.36
+75.00 49.00' Rt. El.=1062.62
+00.00 49.00' Rt. El.=1062.89
+25.00 49.00' Rt. El.=1063.12
+50.00 49.00' Rt. El.=1063.35
+75.00 49.00' Rt. El.=1063.59
+00.00 49.00' Rt. El.=1063.80
+25.00 49.00' Rt. El.=1063.99
+50.00 49.00' Rt. El.=1064.16
+75.00 49.00' Rt. El.=1064.30
+00.00 49.00' Rt. El.=1064.44
+20.30 49.00' Rt. El.=1064.53
+50.00 49.00' Rt. El.=1064.64
+75.00 49.00' Rt. El.=1064.71
+00.00 49.00' Rt. El.=1064.78
+25.00 49.00' Rt. El.=1064.85
+50.00 49.00' Rt. El.=1064.89
+73.66 49.00' Rt. El.=1064.94
+73.66 56.62' Rt. El.=1064.82

+00.00 61.22' Rt. El.=1060.15
+25.00 62.58' Rt. El.=1060.50
+50.00 63.93' Rt. El.=1060.88
+75.00 65.29' Rt. El.=1061.22
+00.00 66.65' Rt. El.=1061.52
+25.00 68.00' Rt. El.=1061.79
+50.00 69.36' Rt. El.=1062.04
+75.00 70.72' Rt. El.=1062.29
+00.00 72.07' Rt. El.=1062.53
+25.00 73.43' Rt. El.=1062.74
+50.00 74.79' Rt. El.=1062.95
+75.00 76.14' Rt. El.=1063.16
+00.00 77.50' Rt. El.=1063.36
+25.00 78.85' Rt. El.=1063.53
+50.00 80.21' Rt. El.=1063.67
+75.00 81.57' Rt. El.=1063.80
+20.30 61.00' Rt. El.=1064.34
+20.30 65.00' Rt. El.=1064.28
+50.00 60.15' Rt. El.=1064.46
+50.00 67.61' Rt. El.=1064.35
+75.00 69.80' Rt. El.=1064.38
+00.00 71.99' Rt. El.=1064.46
+75.00 59.44' Rt. El.=1064.55
+00.00 58.72' Rt. El.=1064.63
+25.00 58.01' Rt. El.=1064.71
+50.00 57.29' Rt. El.=1064.76
+73.66 62.62' Rt. El.=1064.69
+72.24 76.25' Rt. El.=1064.55
+71.42 92.22' Rt. El.=1064.47
+70.98 100.21' Rt. El.=1064.39

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+50.00 73.00' Rt. El.=1060.69
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+00.00 82.92' Rt. El.=1063.91
+00.00 90.94' Rt. El.=1063.74
+20.30 84.02' Rt. El.=1063.98
+20.30 92.04' Rt. El.=1063.81
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+50.00 93.65' Rt. El.=1063.90
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+25.00 73.68' Rt. El.=1064.52
+50.00 91.06' Rt. El.=1064.41
+50.00 99.07' Rt. El.=1064.33
+50.00 75.04' Rt. El.=1064.54

Match Exist.

SANTA FE OFF RAMP

All station and offset callouts are to ℄ I-35 unless noted otherwise.

KANSAS DEPARTMENT OF TRANSPORTATION

GORE DETAILS
I-35 & SANTA FE OFF RAMP

KDOT Graphics Certified 10-15-2014 Sh. No. 36

KDOT Graphics Certified

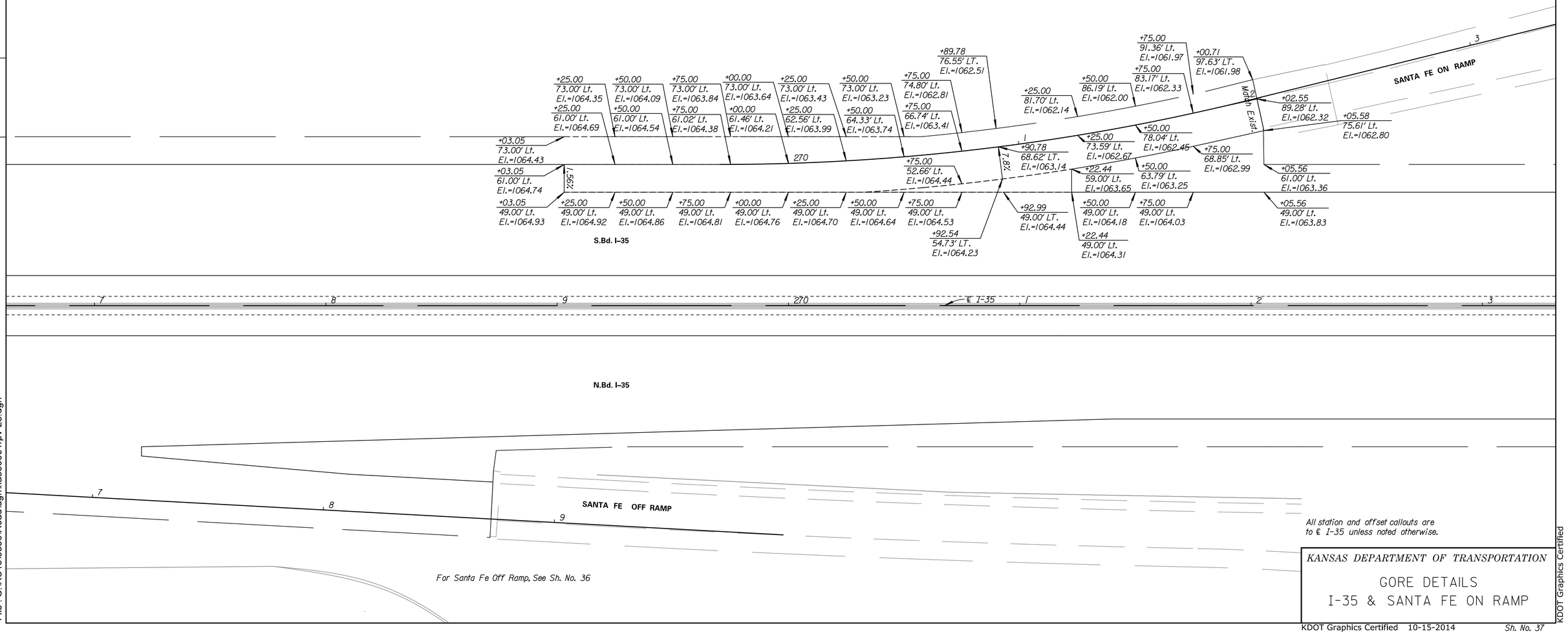
DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rpv-22.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	37	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Scale: 1"=20'



All station and offset callouts are to ℄ I-35 unless noted otherwise.

KANSAS DEPARTMENT OF TRANSPORTATION

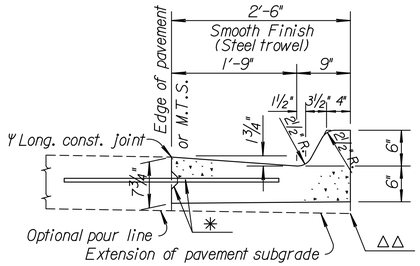
GORE DETAILS
I-35 & SANTA FE ON RAMP

KDOT Graphics Certified 10-15-2014

Sh. No. 37

KDOT Graphics Certified

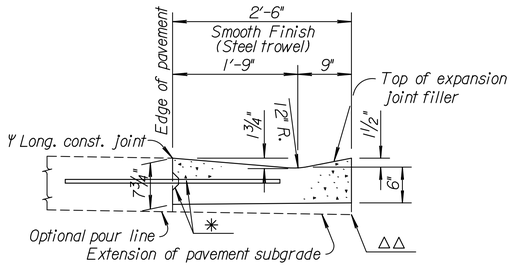
Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rpv-23.dgn



TYPICAL SECTION

Note: Conc. C.&G. I contains 0.060 cu. yds. Conc. Grade 3.0 (AE) per lin.ft.

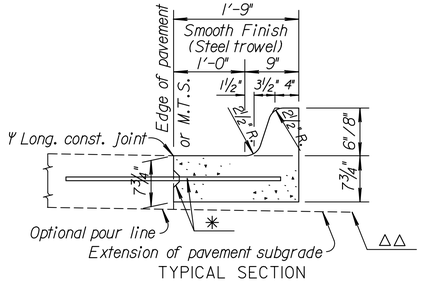
COMBINED CURB & GUTTER - TYPE I (2'-6" WIDTH)



TYPICAL SECTION

Note: Conc. C.&G. II contains 0.053 cu. yds. Conc. Grade 3.0 (AE) per lin.ft.

COMBINED CURB & GUTTER - TYPE II (2'-6" WIDTH)



TYPICAL SECTION

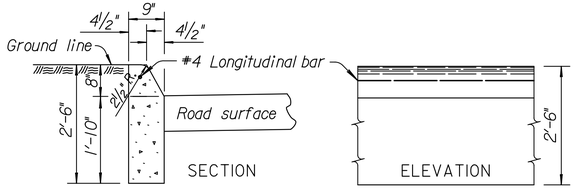
Note: Conc. C.&G. III contains 0.054 (8") & 0.051 (6") cu. yds. Conc. Grade 3.0 (AE) per lin. ft.

COMBINED CURB & GUTTER - TYPE III (1'-9" WIDTH)

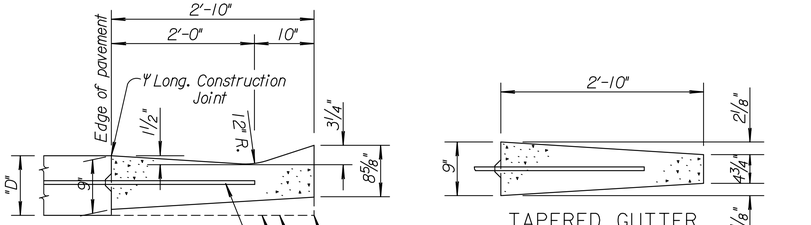
✳ *Longitudinal construction joint and #4 x 3'-0" bars @ 2'-6" ctrs., where concrete pavement is constructed.*

ΔΔ *Contractor has the option of thickening the curb and gutter as shown.*

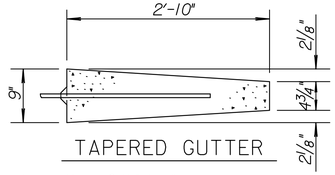
Note: Use Concrete Grade 3.0 (AE) throughout.
All exposed edges shall be finished with an edging tool.
Place a 1" Preformed Expansion Joint Filler (Nonextruding, Type B) at a spacing not to exceed 250'.



PROTECTION CURB 8"



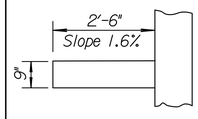
DETAIL OF GUTTER
(Normal section)



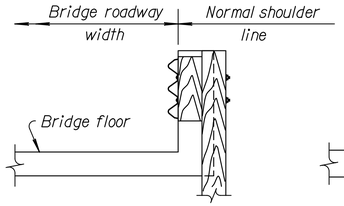
TAPERED GUTTER

Note: Concrete gutter contains 0.065 cu. yds. Concrete Grade 3.0 (AE) per lin. ft..

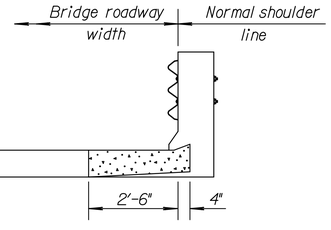
GUTTER



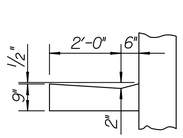
SECTION B-B



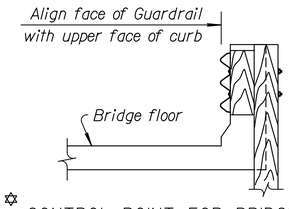
CONTROL POINT FOR FULL WIDTH ROADWAY BRIDGE



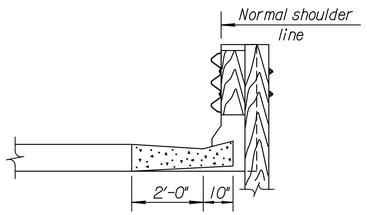
GUTTER NEAR E.W.S.



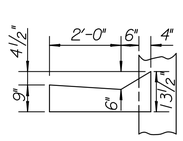
SECTION C-C



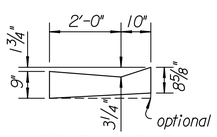
✡ CONTROL POINT FOR BRIDGE WITH SAFETY TYPE CURB



FULL GUTTER SECTION

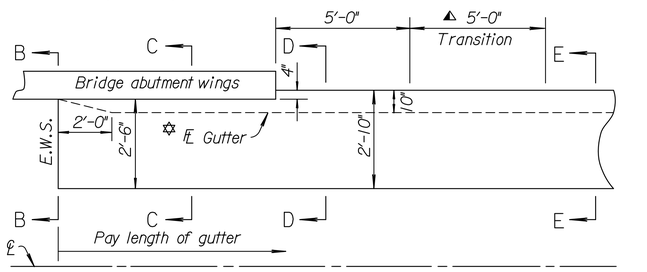


SECTION D-D



SECTION E-E

At locations where the centerline grade is relatively flat and the pavement grade is such that the gutter will direct drainage onto the bridge, the flowline depth may be reduced as directed by the Engineer to facilitate drainage.

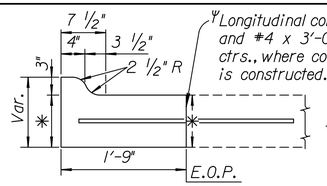


TYPICAL GUTTER @ BRIDGE ENDS
(Drawn for down grade end and "U" Type Abutments)

Note: Shaping of gutter is to be Subsidiary to "Gutter (AE)".

▲ *Transition gutter to standard 2'-10" gutter section.*

FOR RETROFIT OF BRIDGE APPROACHES WITH GUTTER



✳ *Note: Thickness to match adjacent pavement.*

COMBINED CURB AND GUTTER (SPECIAL) (1'-9" WIDTH)

GENERAL NOTE

Combined curb and gutter or gutter adjoining concrete pavement may, at the contractor's option, be constructed either monolithically or separately, using either the mix used in the concrete pavement or Concrete Grade 3.0 (AE). The combined curb and gutter or gutter shall have the same section as shown on the plans. If constructed monolithically, the longitudinal joint and tie bars shall be omitted from the combined curb and gutter or gutter. Pavement Joints shall be continued through curb or gutter and no other planes of weakness will be required. Joints in the combined curb and gutter or gutter are to be filled with the same material as used for the pavement joints.

Expansion Joints in the combined curb and gutter are to be placed opposite expansion Joints in the pavement.

Where combined curb and gutter or gutter does not abut concrete pavement or concrete base course, omit tie bars and place a 1" Preformed Expansion Joint Filler (Type B) cut to the dimensions of the combined curb and gutter or gutter, at a spacing not to exceed 250' and at the ends of curb returns. Planes of weakness shall be constructed at 10'-0" intervals.

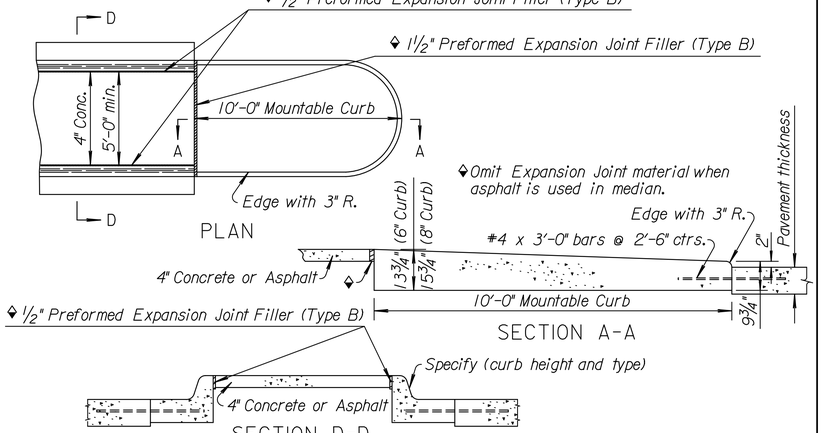
A 4' length of transition from normal gutter section to the tapered gutter section shall be used at the ends of each run of gutter except where the gutter abuts a curb, such as at the end of a bridge. Inlets shall be located so as not to fall within this transition section.

Where pressure relief joint is placed across the pavement, and gutter or curb and gutter is continued on for more than 10', use 4"x4" membrane sealant installed with bonding adhesive through gutter section, shaped to fit gutter or curb and gutter. See Std. Drawing RD712.

For expansion Joint treatment where combined curb and gutter or gutter abuts a bridge wing on a U-type abutment see bridge drawings.

Longitudinal Joints shall be sawed and sealed with Joint sealant, see Standard Specifications.

℄ *If constructed monolithically, the longitudinal Joint is not required.*



Note: Expansion Joints shall be placed in concrete median as follows. In long runs expansion Joints shall be ½" Preformed Expansion Joint Filler (Type B) installed flush with the surface.

Expansion Joints in the median shall match expansion Joints in the curb and gutter with a maximum spacing of 125'. Plane of weakness in the median shall match plane of weakness in curb and gutter.

TYPICAL NOSE DETAILS FOR RAISED MEDIANS

Note: Additional Concrete Grade 3.0 (AE) needed to complete median nose shall be subsidiary to the bid item "Combined Curb & Gutter".

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	38	251

NO.	DATE	REVISIONS	BY	APP'D
19	1-29-13	Added Detail, Comb. C&G (Sp.)	S.W.K.	J.O.B.
18	8-13-12	Revised General Note	S.W.K.	J.O.B.
17	7-2-09	Rev. nose details, jt. sealant& retro.	S.W.K.	J.O.B.
16	1-10-07	Changed bituminous to asphalt	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CURB, GUTTER AND COMBINED CURB & GUTTER

RD635

FHWA APPROVAL	5-21-2013	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

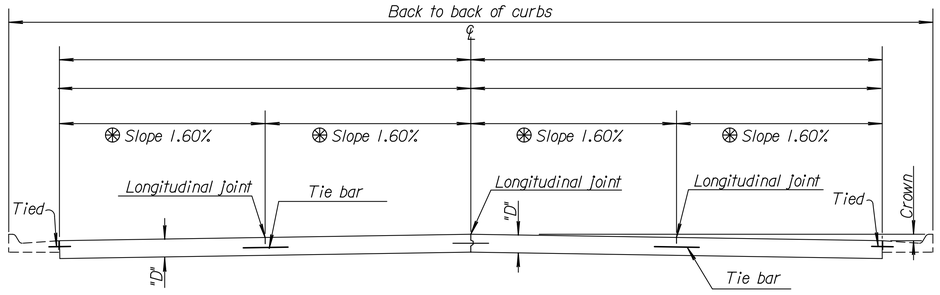
KDOT Graphics Certified 06-06-2013 Sh. No. 38

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rss635-01.dgn

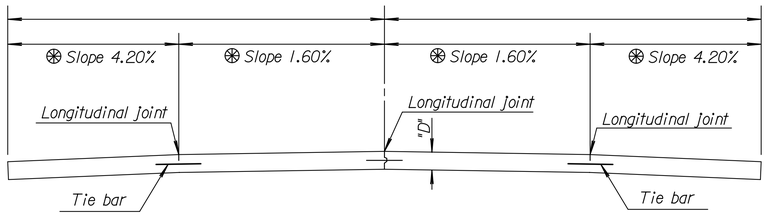
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	39	251

Note: Designer to add applicable dowel sizes.



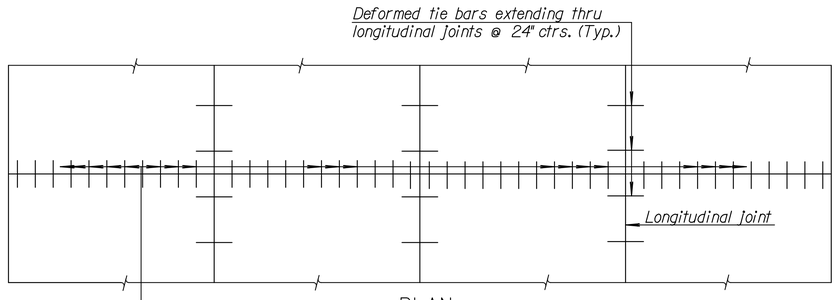
For Curb & Gutter details
See Standard Drawing RD635.

TRANSVERSE SECTION
(4 - LANE WITH CURB & GUTTER)

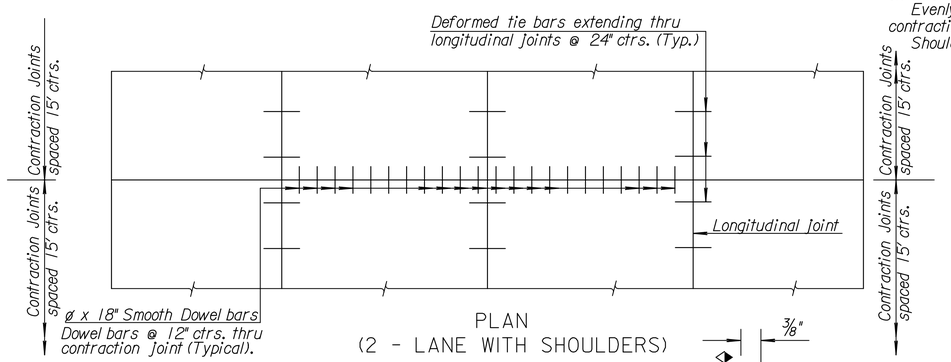


TRANSVERSE SECTION
(2 - LANE WITH SHOULDERS)

Slope Normal cross slopes. See Typical Section or Cross Sections for variations.



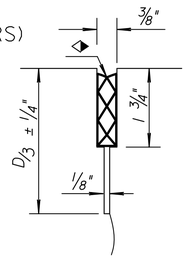
PLAN
(4 - LANE WITH CURB & GUTTER)



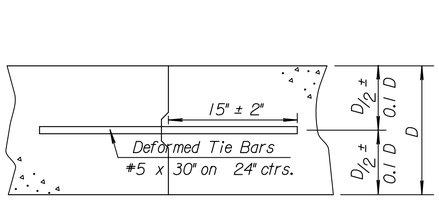
PLAN
(2 - LANE WITH SHOULDERS)

DOWEL SIZE	
D (in.)	Diameter
6 < D < 9	1"
9 ≤ D < 11	1 1/4"
D ≥ 11	1 1/2"

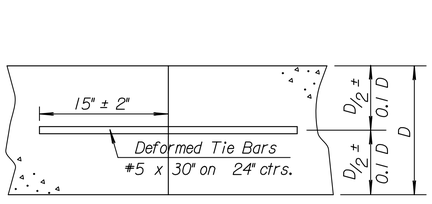
PAVEMENT DEPTH
D= 12"



Tied Non-Keyed



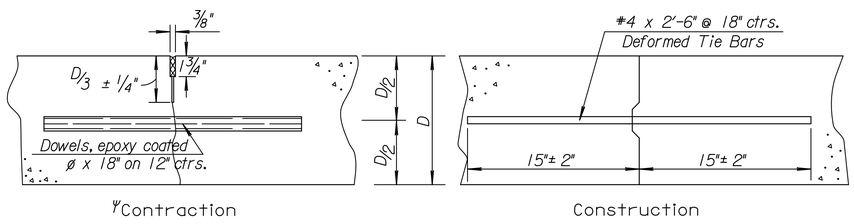
Tied Keyed Construction



Tied Butt Construction

Note: For longitudinal construction joints the contractor has the option of using either the keyed or butt type. Place deformed tie bars mid-depth of the shoulder.

LONGITUDINAL JOINTS

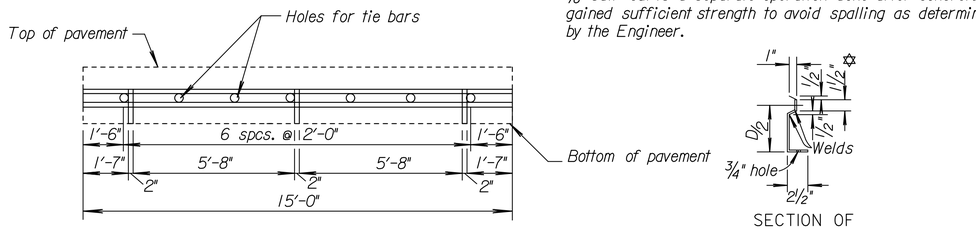


Ψ Contraction

Construction

TRANSVERSE JOINTS

Note: Construct contraction joints at plan locations or at the Engineer's direction.
When necessary to interrupt continuous placement for a substantial length of time or at the end of a day's paving, the Contractor has the option of ending placement at a contraction joint or with a construction joint located a minimum of five (5) feet from a contraction joint. Construct either joint type by placing a header at the end of the pour or by paving past the joint location. After the concrete has hardened, saw joint and drill holes for tie bars or dowels.



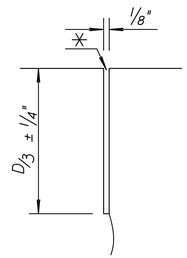
METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT

To be used only against forms, do not extend through contraction joints.
For automated placement tie bars are spaced at uniform 24" centers.
✡ Use snap-in leg or other approved design in lieu of welded leg.

SECTION OF
RECESSED
FORM LEG

Ψ DETAIL OF SEALED CONTRACTION JOINT SAWCUT

Make an initial 1/8" saw cut ($D/3 \pm 1/4$" depth); the second 3/8" saw cut is a separate operation done after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.



Ψ DETAIL OF NON-SEALED CONTRACTION JOINT SAWCUT

Make only the initial 1/8" saw cut after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.

GENERAL NOTE

Epoxy coat all deformed tie bars. Patch any damage to the epoxy coating in accordance with the Standard Specifications.

Use billet steel Grade 40 reinforcing for deformed tie bars that require bending, may or may not be epoxy coated.

Place pressure relief joint at the end of the bridge approach pavement slab (no bars through joint). For details of pressure relief joint see Standard Drawing RD712.

Use load transfer devices as shown in details at all construction joints on mainline pavement unless otherwise noted. Shoulder contraction joints have no dowels unless specifically shown on the plans.

✡ Fill all sawed joints on the project in accordance with the Standard Specifications with the exception of those joints in pavement constructed over Cement or Asphalt Treated Base.

✳ Use single saw cut, 1/8" wide, joint in pavement constructed over Cement or Asphalt Treated Base (Non-Sealed Contraction Joint Sawcut). See detail this sheet.

Shape all keyed joints similar to section of recessed form leg as shown on this sheet.

Evenly space tie bars along the length of slab with no tie bar within 12" of contraction joint. All longitudinal joints are tied.

Shoulder rumble strips will not be constructed as part of this project.

NO.	DATE	REVISIONS	BY	APP'D
19	5-17-13	Revised Note, Longitudinal Joints	S.W.K.	J.O.B.
18	3-21-12	Revised Table, Dowel Size	S.W.K.	J.O.B.
17	1-9-12	Added Detail, Non Sealed Joint	S.W.K.	J.O.B.
16	8-18-10	Revised Dowel Size & Notes	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT DOWEL JOINTED NON-REINFORCED

RD708

FHWA APPROVAL	10-23-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 02-13-2014

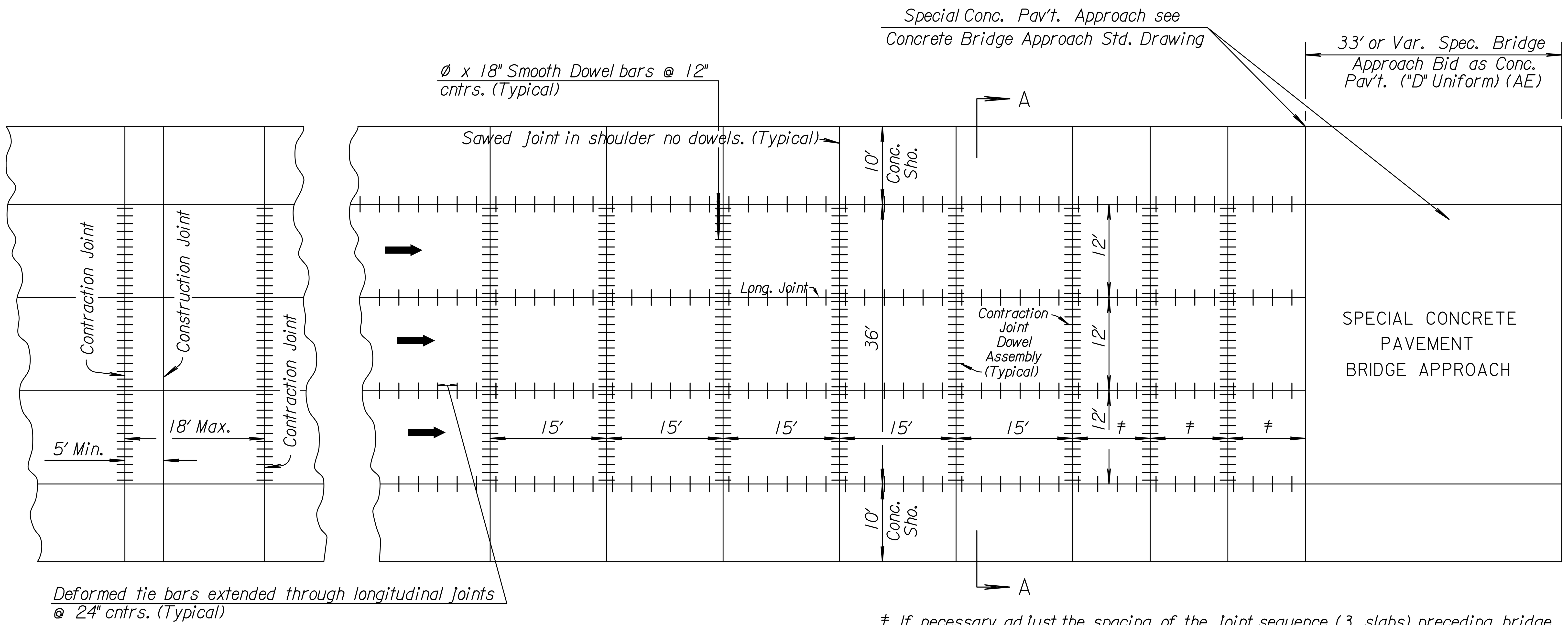
Sh. No. 39

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1310356\Road\dgn\ka3560011rss708-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	40	251

Note to Designer: Designer will add applicable dowel sizes and pavement depth "D".



† If necessary adjust the spacing of the joint sequence (3 slabs) preceding bridge approach pavement in order to establish slab lengths of no less than 10 ft.

GENERAL NOTE

Epoxy coat all deformed tie bars. Patch any damage to the epoxy coating in accordance with the Standard Specifications.

Use billet steel Grade 40 reinforcing for deformed tie bars that require bending, may or may not be epoxy coated.

Place pressure relief joint at the end of the bridge approach pavement slab (no bars thru joint). For details of pressure relief joint see Standard Drawing RD712.

Use load transfer devices as shown in details at all contraction joints on mainline pavement unless otherwise noted. Shoulder contraction joints have no dowels unless specifically shown on the plans.

◆ Fill all sawed joints on this project in accordance with the Standard Specifications with the exception of those joints in pavement constructed over Cement or Asphalt Treated Base.

✱ Use single saw cut 1/8" wide, joint in pavement constructed over Cement or Asphalt Treated Base (Non-Sealed Contraction Joint Sawcut). See details this sheet.

Shape all keyed joints similar to section of recessed form leg as shown on this sheet.

Evenly space tie bars along the length of the slab with no tie bar within 12" of contraction joint. All longitudinal joints are tied.

Shoulder rumble strips will not be constructed as part of this project.

DOWEL SIZE	
D (in.)	Diameter
6 < D < 9	1"
9 ≤ D < 11	1 1/4"
D ≥ 11	1 1/2"

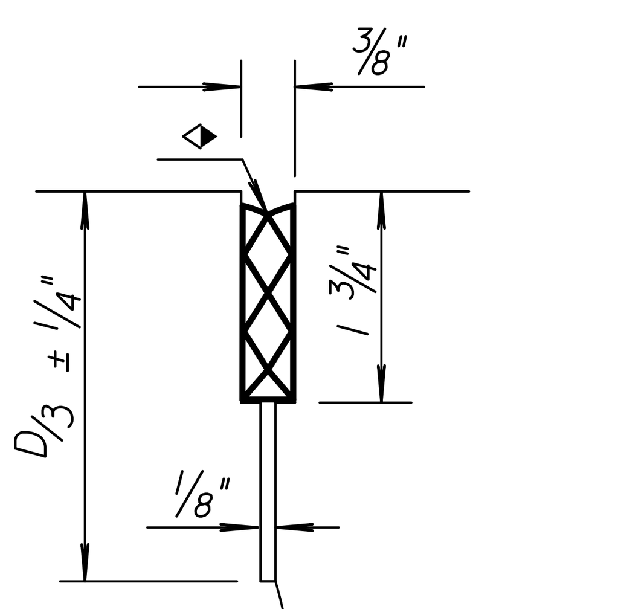
PAVEMENT DEPTH

D= 12"

JOINT LEGEND

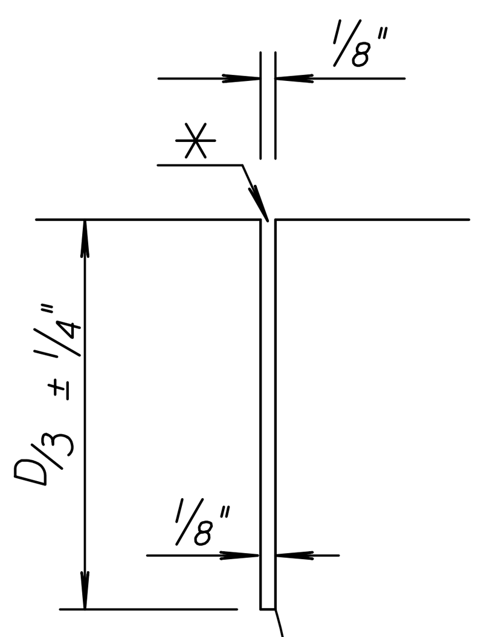
Tied Butt

Tied Keyed



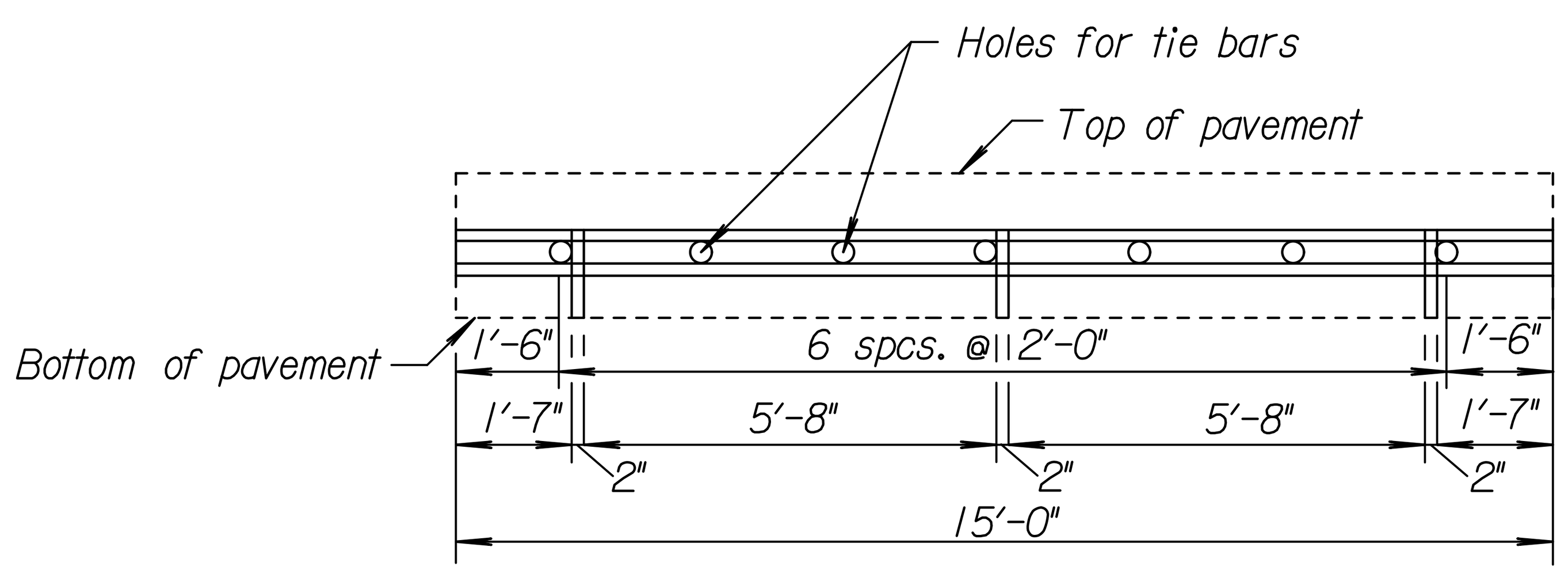
ᴪ DETAIL OF CONTRACTION JOINT SAWCUT

Make an initall 1/8" saw cut (D/3 ± 1/4" depth); the second 3#8" saw cut is a separate operation done after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.



ᴪ DETAIL OF NON-SEALED CONTRACTION JOINT SAWCUT

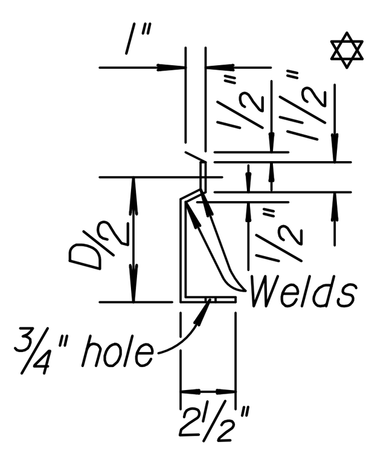
Make only the initial 1/8" saw cut after concrete has gained sufficient strength to avoid spalling as determined by the Engineer.



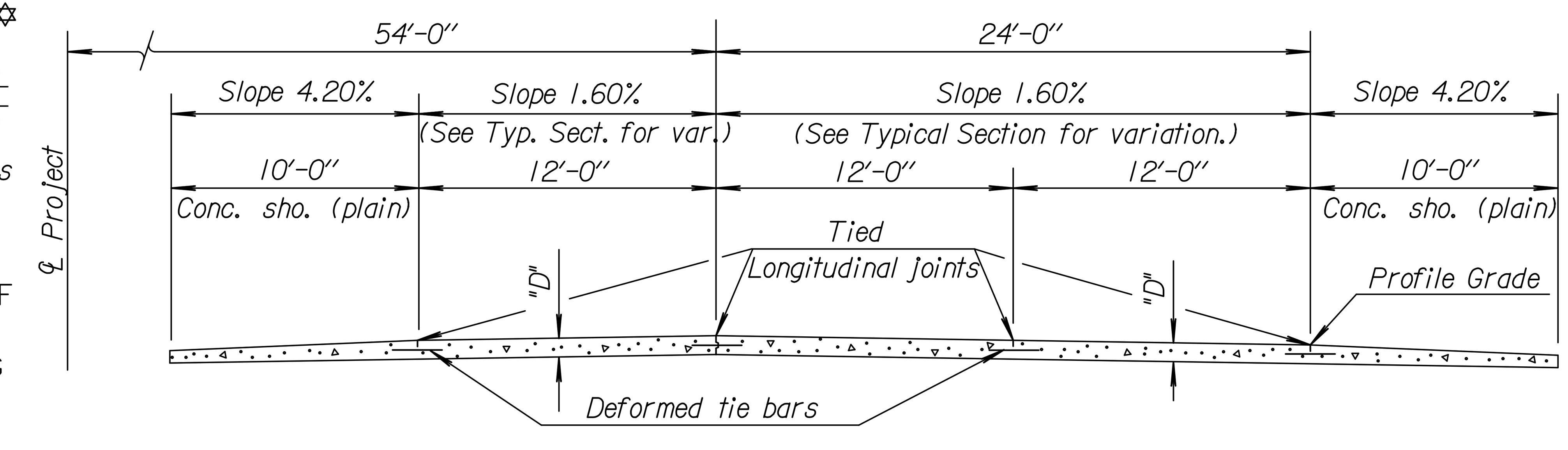
METAL STRIP FOR LONGITUDINAL KEYED CONSTRUCTION JOINT

To be used only against forms, do not extend through contraction joints.

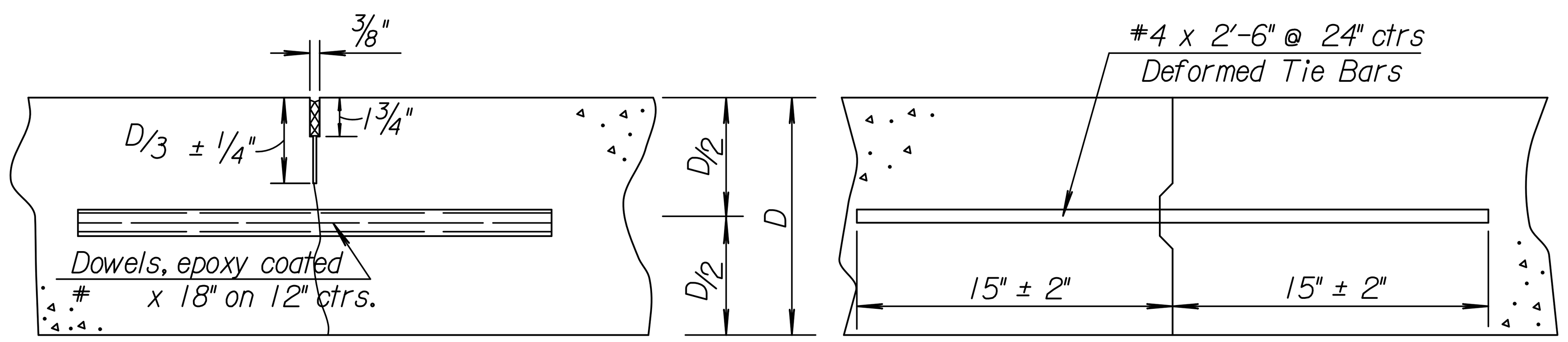
✡ Use snap-in leg or other approved designs in lieu of welded leg.



SECTION OF RECESSED FORM LEG

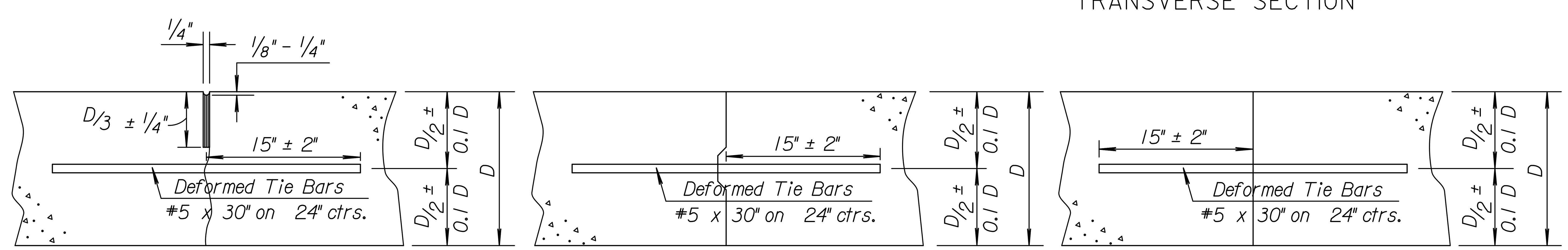


SECTION A-A
TRANSVERSE SECTION



TRANSVERSE JOINTS

Note: Construct contraction joints at plan locations or at the Engineer's direction.
When necessary to interrupt continuous placement for a substantial length of time or at the end of a day's pour, the Contractor has the option of ending placement at a contraction joint or with a construction joint located a minimum of five (5) feet from a contraction joint. Construct either joint type by placing a header at the end of the pour or by paving past the joint location. After the concrete has hardened, saw joint and drill holes for tie bars or dowels.



LONGITUDINAL JOINTS

Note: For longitudinal construction joints the contractor has the option of using either the keyed or butt type. Place deformed tie bars mid-depth of the shoulder.

NO.	DATE	REVISIONS	BY	APP'D
11	5-17-13	Revised Note, Longitudinal Joints	S.W.K.	J.O.B.
10	3-21-12	Rev. Table & Add. Det., Non-Seal. Joint	S.W.K.	J.O.B.
9	8-18-10	Revised Dowel Sizes & Notes	S.W.K.	J.O.B.
8	8-24-09	Rev. Joint Note, Rem. Rumble Strips	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

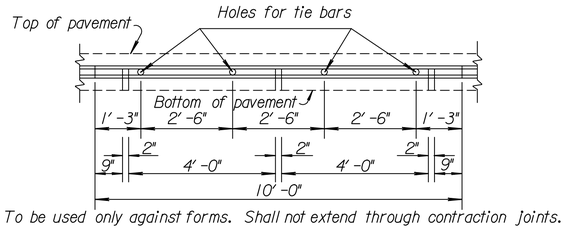
CONCRETE PAVEMENT (NRDJ) MULTI-LANE with CONCRETE SHOULDERS

RD709

FHWA APPROVAL	10-23-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

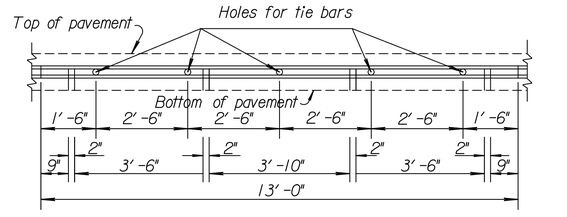
KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	41	251



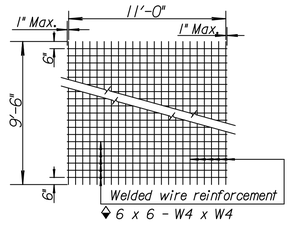
To be used only against forms. Shall not extend through contraction joints.

METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT (10'-0")



To be used only against forms. Shall not extend through contraction joints.

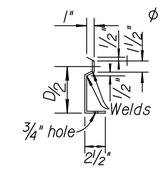
METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT (13'-0")



♦ 6 x 6 - W4 x W4

TYPICAL SHEET OF WELDED WIRE REINFORCEMENT
FOR SPECIAL BRIDGE APPROACH PAVEMENT

♦ Note: Epoxy coated #3 bars longitudinally @ 12" ctrs. & #3 bars transversely @ 18" ctrs. may be substituted for each layer of epoxy coated welded wire reinforcement.



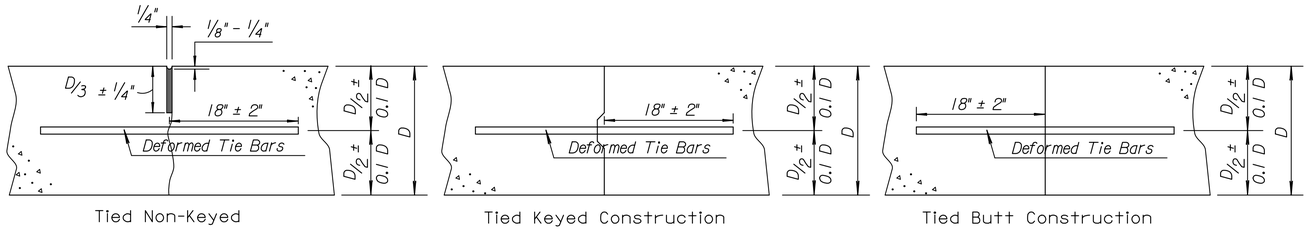
SECTION OF RECESSED
FORM LEG

ϕ Snap-in leg or other approved designs may be used in lieu of welded leg.

DETAIL OF LAP FOR WELDED WIRE REINFORCEMENT

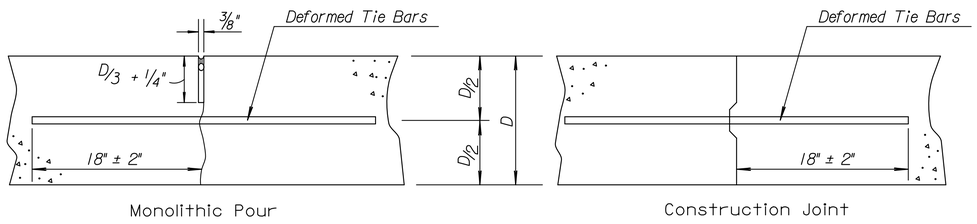
The lap shall extend beyond the first transverse or bag wire of each sheet.

The sheet shall be wired securely at the edges and at intervals not to exceed 2'-6" for the full width of the sheet. Approximate weight of welded wire reinforcement = 58 lbs. per 100 sq. ft. Other methods for fastening the sheets of welded wire reinforcement at the laps may be used with the approval of the Engineer.



LONGITUDINAL JOINTS

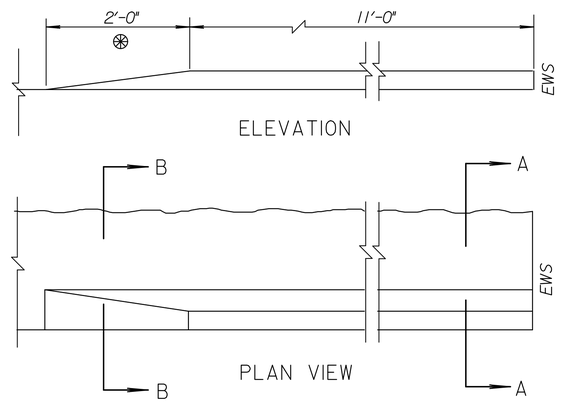
Note: For longitudinal construction joints the contractor has the option of using either the keyed or butt type. Place deformed tie bars mid-depth of the shoulder.



TRANSVERSE JOINTS

Note: A construction joint is required when the concrete placement has been interrupted for a substantial length of time or at the end of a day's placement.

⊛ No 4" Curb transition when adjacent to Flume Inlet.



ELEVATION

PLAN VIEW

4" EDGE CURB DETAIL

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.

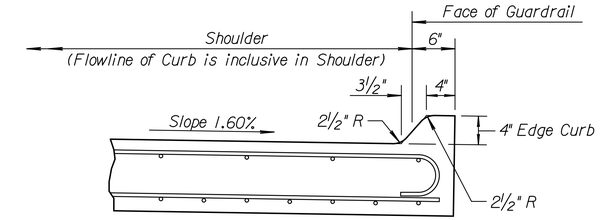
At each planned transverse joint location, a 4 to 6 inch wide strip of the pavement surface shall be protected from the texturing operation to provide a transverse textureless surface centered over the joint sawcut.

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

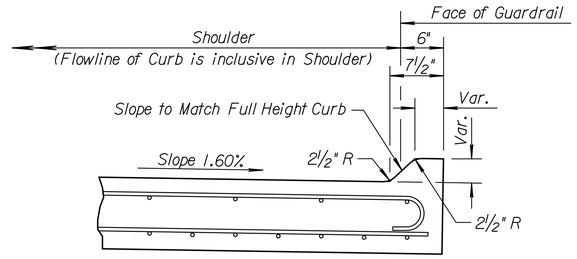
The 4 inch edge curb shall be constructed integral with the approach slab shoulder.

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.



SECTION A-A



SECTION B-B

NO.	DATE	REVISIONS	BY	APP'D
13	5-17-13	Revised Note, Longitudinal Joints	SWK	JOB
12	5-14-09	Pres. Relief Jt. to RD712/tie bar lab.	SWK	JOB
11	10-23-08	Revised Sec. A-A and Sec. B-B	SWK	JOB
10	10-3-07	Add. manufacturer jt. size recom'd.	SWK	JOB

KANSAS DEPARTMENT OF TRANSPORTATION

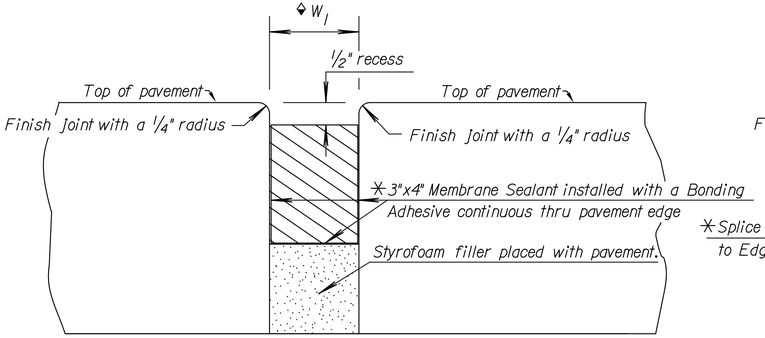
MISCELLANEOUS DETAILS
FOR CONCRETE
BRIDGE APPROACH PAVEMENT

RD711

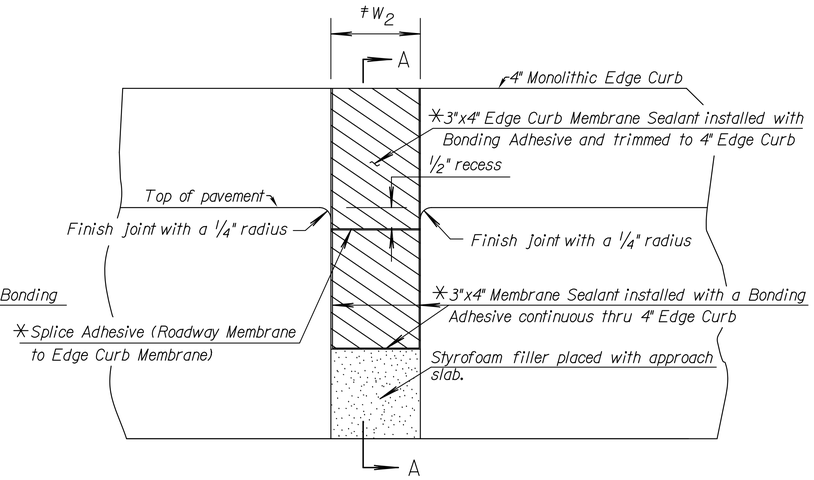
FHWA APPROVAL	10-23-13	APP'D	James O. Brewer
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK. King

Plotted By: aamyer | Plot Location:
File: G:\KC13\0356\Bridge\Dgn\ka356001rss711.dgn
Plot Date: 10/16/2014

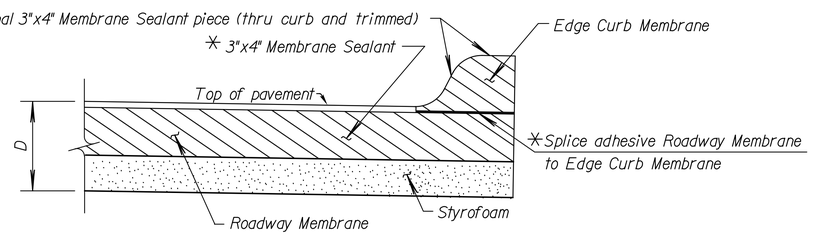
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	42	251



ELEVATION PRESSURE RELIEF JT.

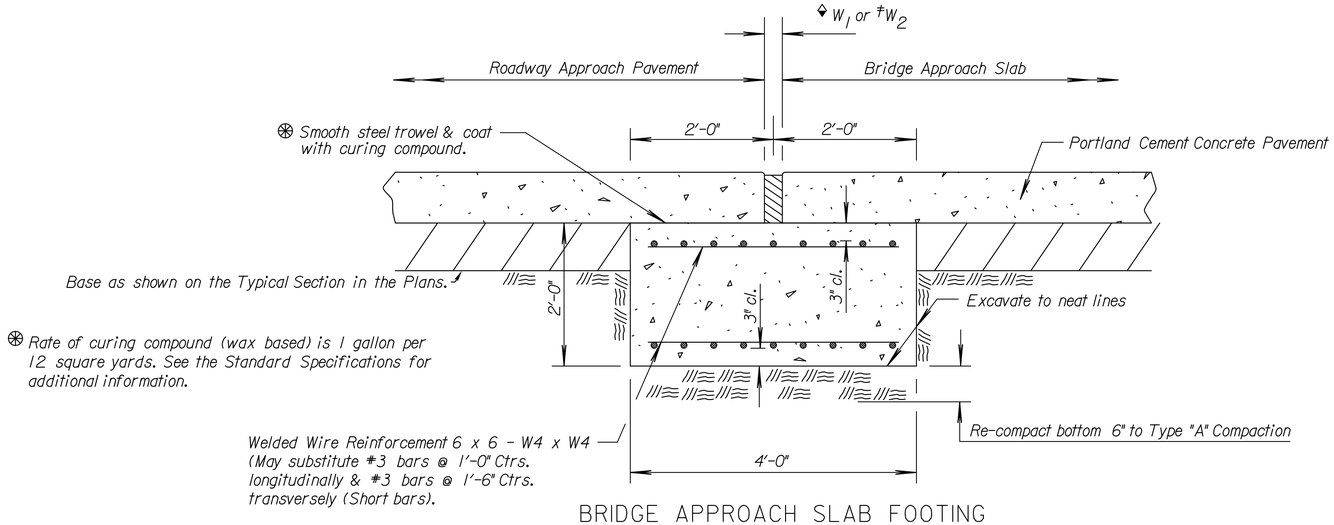


ELEVATION EXPANSION JT.



SECTION A-A

(See Std. Drawing RD711 for details of 4" Edge Curb.)



BRIDGE APPROACH SLAB FOOTING

GENERAL NOTES

EXPANSION/PRESSURE RELIEF JOINTS

See Concrete Bridge Approach Pavement standard drawings for location of expansion and pressure relief joints.

The joint opening shall be formed prior to placement of the pavement approach. The material used to form the joint opening shall be removed after the pavement approach has been in place for a minimum of six days.

Cleaning and construction of the joint shall not begin until the concrete in the approach slab has cured a minimum of 7 days.

The joint shall be thoroughly cleaned by sandblasting and by high pressure air blast to remove all laitance and contaminants from the joint. When any part of the joint is shaped by saw cutting in lieu of forming, a water blast shall preceed sandblasting and air cleaning.

Sandblasting shall be accomplished in two passes to clean each face of the joint (one pass for each face). The nozzle shall be held at an angle to the joint face and within 1 to 2 inches of the face.

Any contaminants such as oil, curing compound, etc. shall be removed by sandblasting to the satisfaction of the Engineer. Solvents, wire brushing, or grinding shall not be permitted.

The joint shall be air blasted just prior to installation of Membrane Sealant. The air compressor used for joint cleaning shall be equipped with trap devices capable of providing moisture-free and oil-free air at a recommended pressure of 90 psi. The joint shall be spot checked to ensure residual dust or dirt has been removed. It is required that the Engineer inspect the joint immediately prior to installation of the joint material.

✳ See KDOT Standard Specifications for Membrane Sealant, Bonding Adhesive and Splice Adhesive.

Traffic shall not be allowed on the joint for a minimum of 3 hours unless otherwise directed by the Engineer.

Splices will use materials & methods recommended by the Manufacturer.

All work and materials necessary for the preparation, construction, and installation of the joint will be subsidiary to the concrete approach pavement.

BRIDGE APPROACH SLAB FOOTING

Payment for the Bridge Approach Slab Footing shall be at the unit price bid per cubic yard for "Bridge Approach Slab Footing". This price shall be full compensation for furnishing all materials and labor including Concrete Grade 4.0 (AE) Pavement, Reinforcing Steel (Gr. 60) (Epoxy Coated), excavation, Type "A" Compaction and materials used to prevent bonding of concrete. At the contractor's option, the concrete for the slab footing may be concrete Grade 4.0 (AE) or the mix used in the concrete pavement.

◆PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)							
¥ Temperature (F°)	40°	50°	60°	70°	80°	90°	100°
Formed Concrete Opening Size	4.0"	3 3/4"	3 1/2"	3 1/4"	3.0"	2 3/4"	2 1/2"

¥ Average Ambient Temperature over previous 24 hours.

‡EXPANSION JOINT WIDTH DETAILS (W_2)
See bridge construction layout sheet for details.

NO.	DATE	REVISIONS	BY	APP'D
8	4-4-13	Rev. Joint Width Det. Table	SWK	JOB
7	7-10-09	Adjusted Expansion Joint table	SWK	JOB
6	5-13-09	Therm. width jt. & membrane sealant	SWK	JOB
5	8-8-07	Added Ins. Gap Temp. Corr. table note	SWK	JOB

KANSAS DEPARTMENT OF TRANSPORTATION

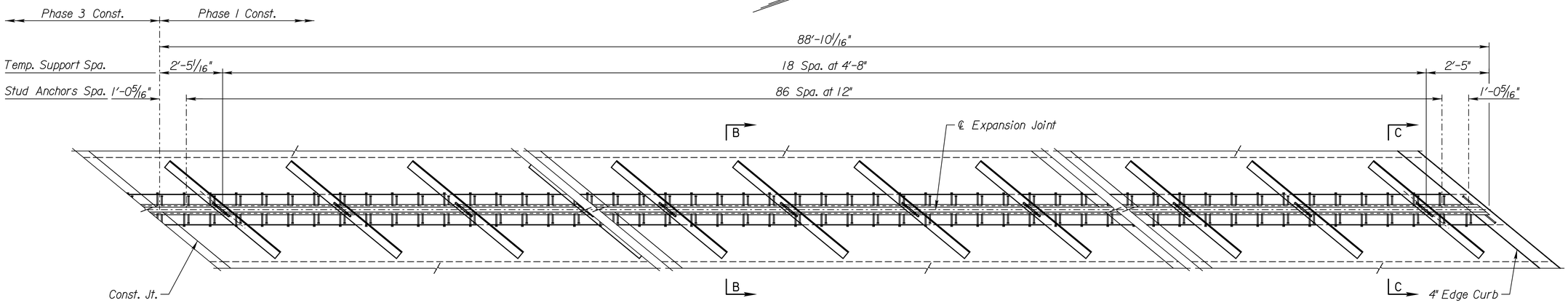
BRIDGE APPROACH SLAB DETAILS
EXPANSION/PRESSURE RELIEF JOINT/
BRIDGE APPROACH SLAB FOOTING

RD712

FHWA APPROVAL	5-21-2013	APP'D	James O. Brewer
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK. King

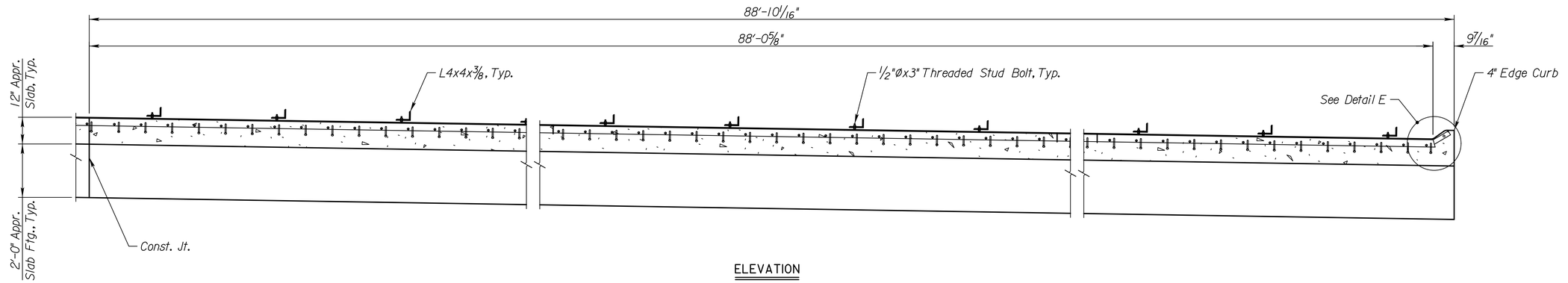
Plotted By: dameyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\Ka356001rss712.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	43	251



PLAN

(S. Bd. Departure Joint shown, S. Bd. Approach Joint similar.)



ELEVATION

Note:
For Sections B-B, C-C and Detail E, see Sheet 46.

Notes:

The strip seal extrusions in the approach pavement shall be a "Wabo Type R" (only) steel shape as detailed or approved equivalent. Material for the extrusions shall be solid extruded or hot rolled steel. No weathering steel or aluminum will be allowed. Blast and prime-coat with an inorganic zinc/water borne acrylic paint all surfaces of the extrusion assemblies except the gland cavity. The Strip Seal gland shall accommodate a total movement of at least 5". The gland shall be factory molded for horizontal bends of 15° or more. All welds on the extrusion shall be 1/4" continuous fillet welds, unless otherwise noted.

All items shown on the Strip Seal Details sheets are included in the bid item "Expansion Joint (Strip Seal Assembly)".

The erection angles shall be securely bolted to the extrusion. The extrusion shall be in the same plane and recessed 3/8" below the top of the roadway. The erection angles shall be removed as soon as the new concrete will support the assembly without allowing any settlement or tilting. Following the removal of the erection angles, remove the stud bolts on the extrusions and grind flush. The stud bolts, nuts, washers and extrusion angles, labor and materials used to install and remove the erection angles shall be subsidiary to the bid item "Expansion Joint (Strip Seal Assembly)".

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
BR. NO. 35-46-14.35(316)(SB) 37' LT. STA. 187+02.95

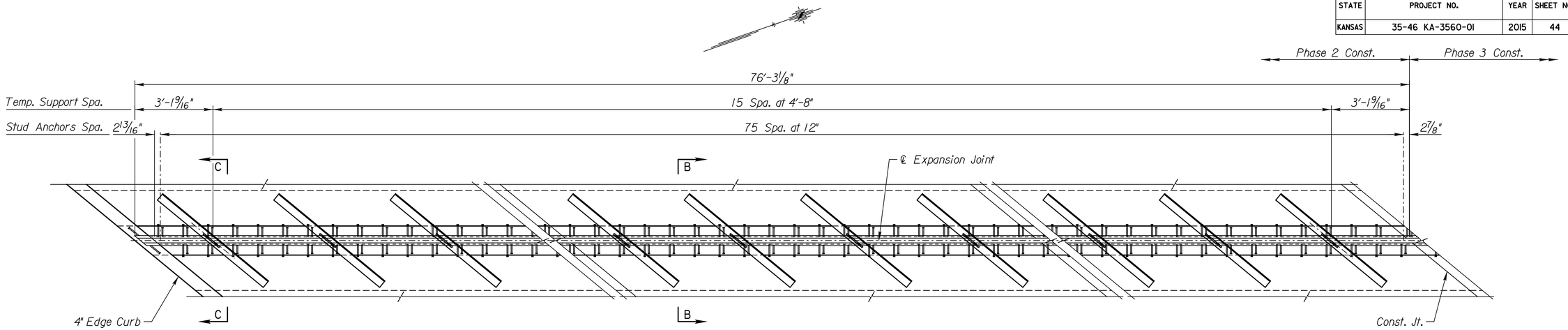
STRIP SEAL DETAILS PHASE 1

I-35 OVER THE BNRR
PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED PMY	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

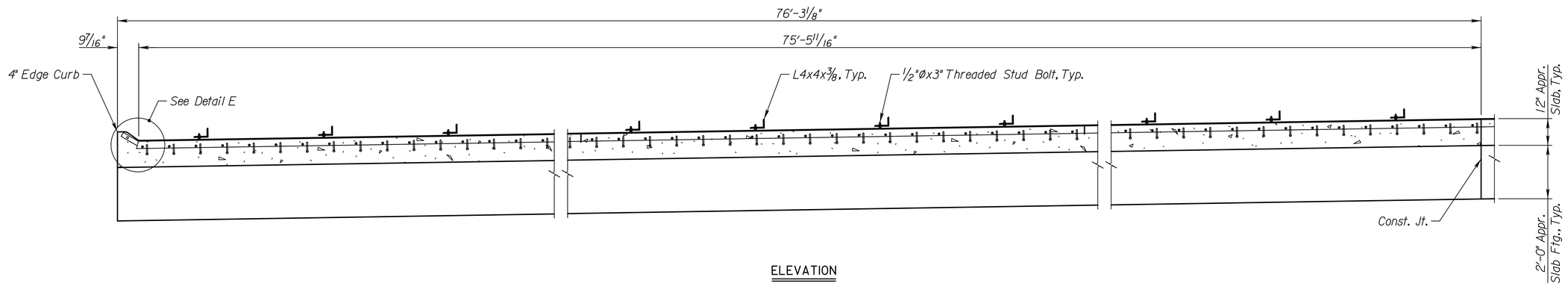
Plotted By: ameyer | Plot Location:
File: G:\KC\3\0356\Bridge\Dgn\ka356001\brp3158316-ex-01-1.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	44	251



PLAN

(N. Bd. Approach joint shown, N. Bd. Departure joint similar.)



ELEVATION

Notes:
For Sections B-B, C-C and Detail E, see Sheet 46.
For Notes, see Sheet 43.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.34(315)(NB) 31' RT. STA. 186+20.44

STRIP SEAL DETAILS PHASE 2

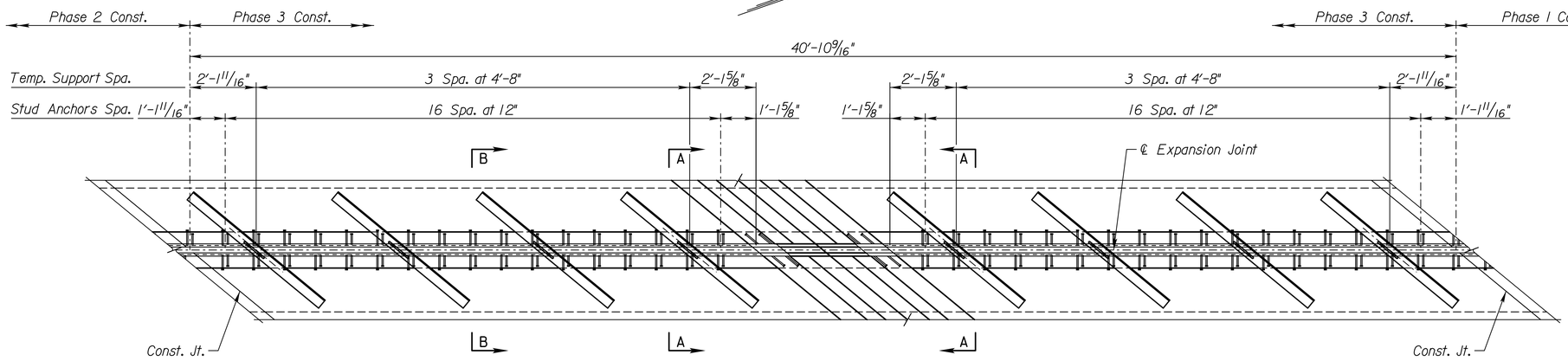
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D
DESIGNED	DETAILED PMY	QUANTITIES CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK. CADD CK.

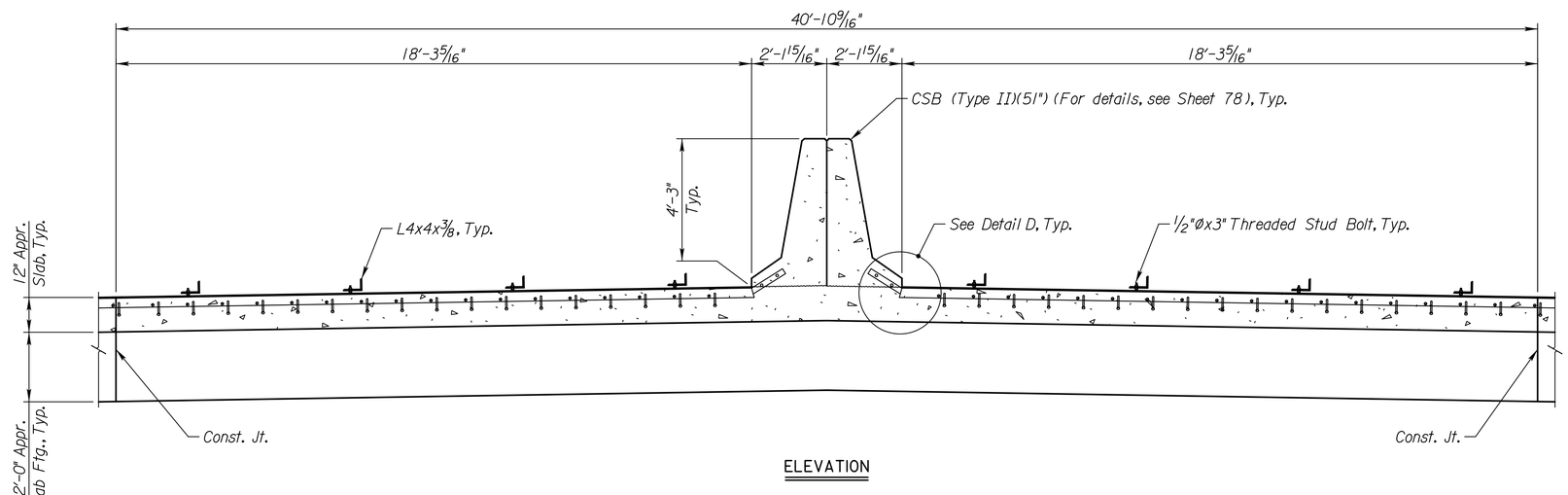
Plotted By: ameyer | Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp315&316-ex-01-2.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	45	251



PLAN

(South Approach Joint shown, North Approach Joint similar.)



ELEVATION

Notes:

For Sections A-A, B-B and Detail D, see Sheet 46.
For Notes, see Sheet 43.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.34(315)(NB) 31' RT. STA. 186+20.44
BR. NO. 35-46-14.35(316)(SB) 37' LT. STA. 187+02.95

STRIP SEAL DETAILS PHASE 3

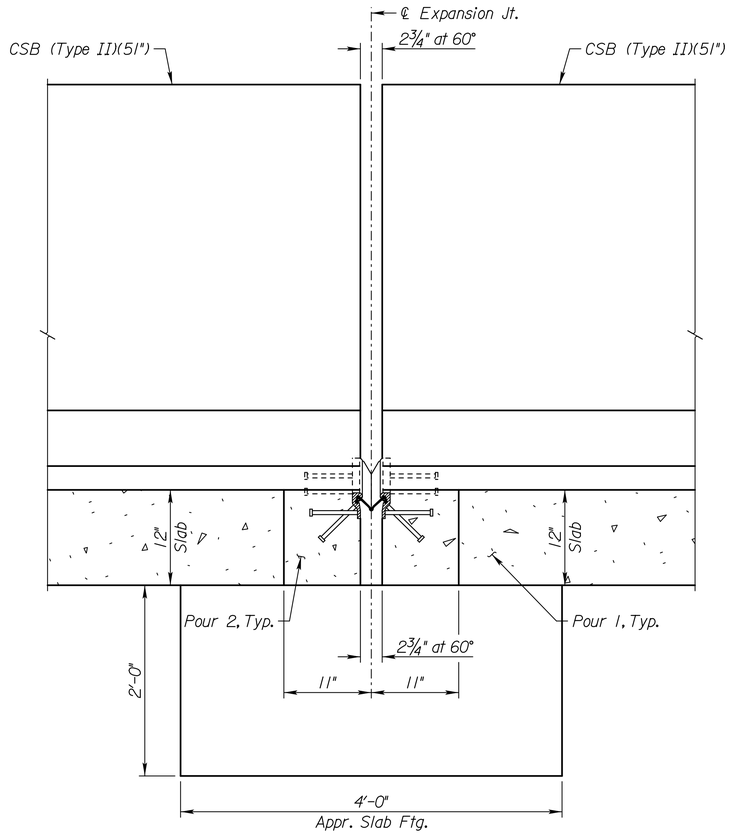
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

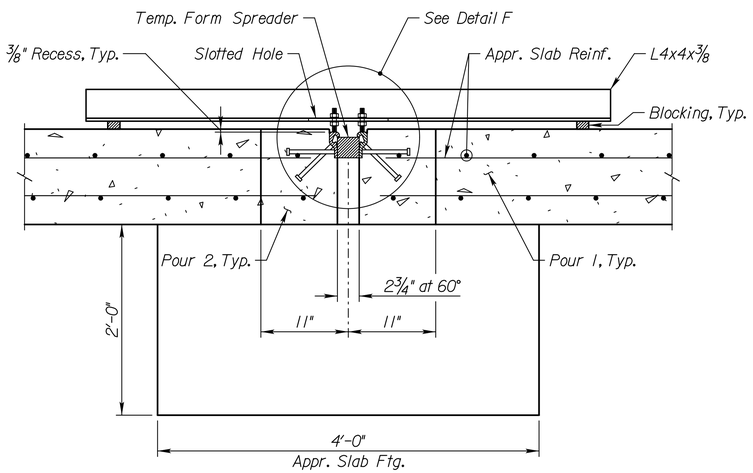
SHEET NO. OF	SCALE		APP'D	
DESIGNED	DETAILED	PMY	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	REP	QUAN.CK.	CADD CK.

Plotted By: ameyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp315&316-ex-01-3.dgn
Plot Date: 10/16/2014

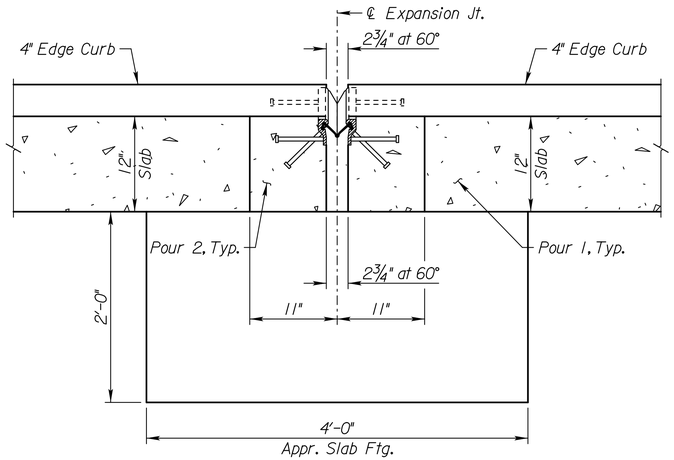
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	46	251



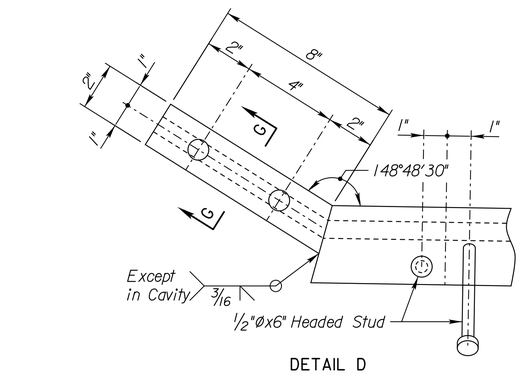
SECTION A-A



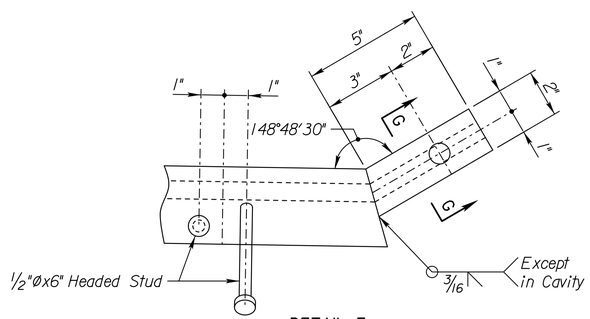
SECTION B-B
(Two Concrete Pours w/Block Out is Required)



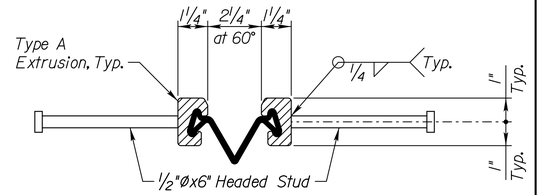
SECTION C-C



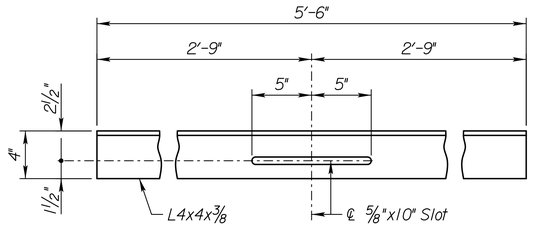
DETAIL D



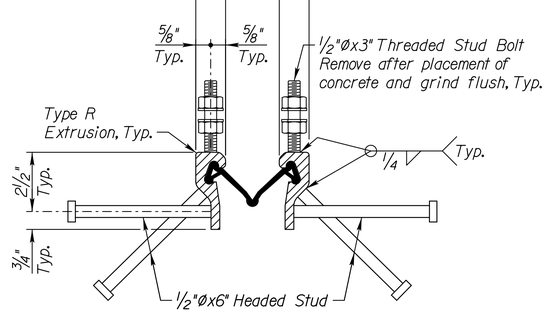
DETAIL E



SECTION G-G



ERECTION ANGLE



DETAIL F

Notes:
For location of Sections A-A, B-B & C-C and Details D & E, see Sheets 43 thru 45 .
For CSB Details, see Sheet 78.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

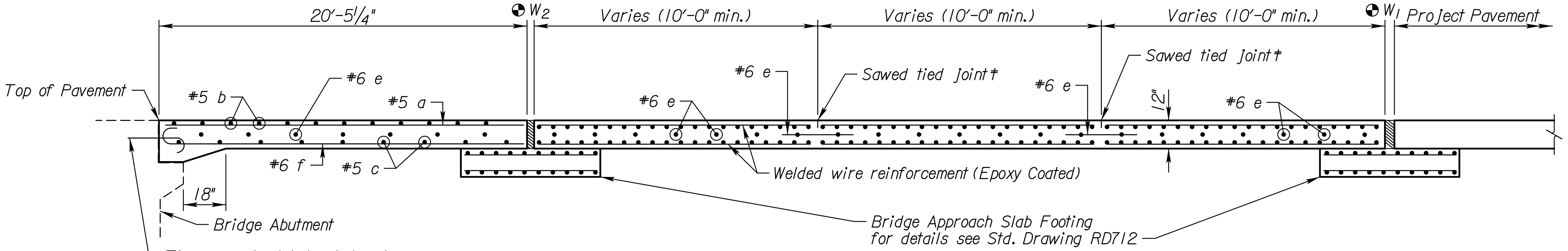
STRIP SEAL DETAILS

I-35 OVER THE BNRR
PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

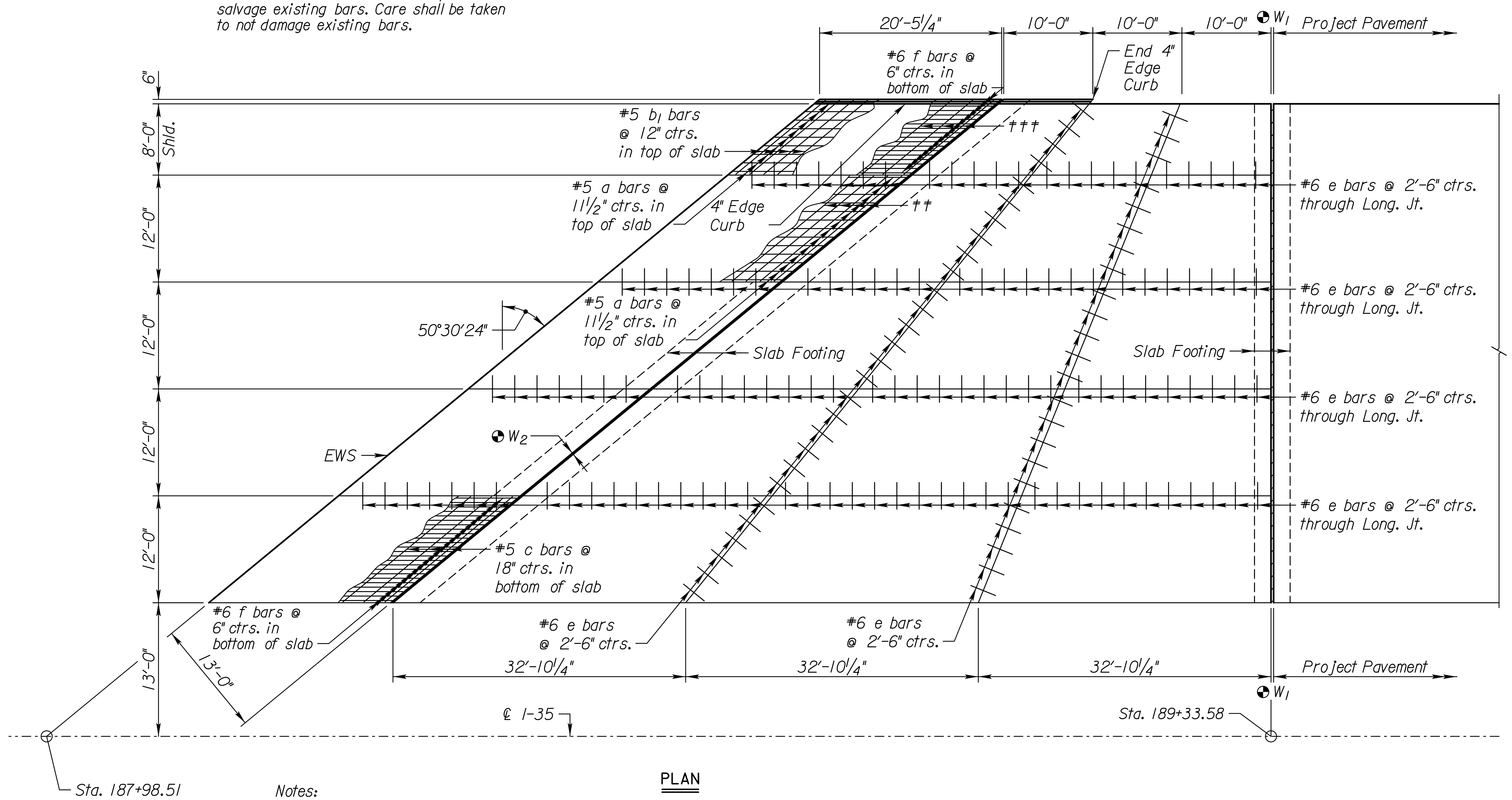
SHEET NO. OF	SCALE	APP'D	
DESIGNED PMY	DETAILED PMY	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:
File: G:\KC_3\0356\Bridge\Dgn\ka356001brp3158316-ex-02.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	47	251

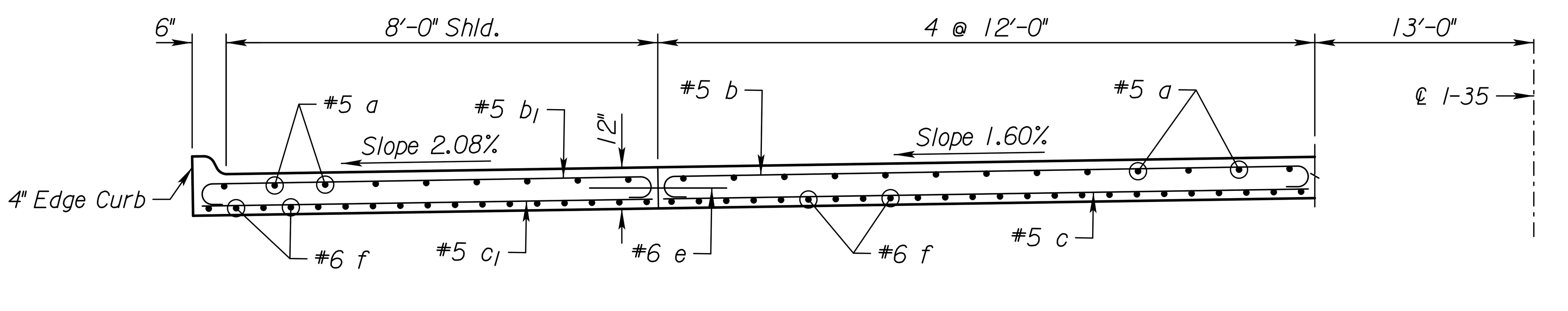


LONGITUDINAL SECTION



PLAN

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.
†† #5 b bars @ 12" ctrs. in top of slab.
††† #5 c_1 bars @ 18" ctrs. in bottom of slab.



TYPICAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint details see Sheet 43.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

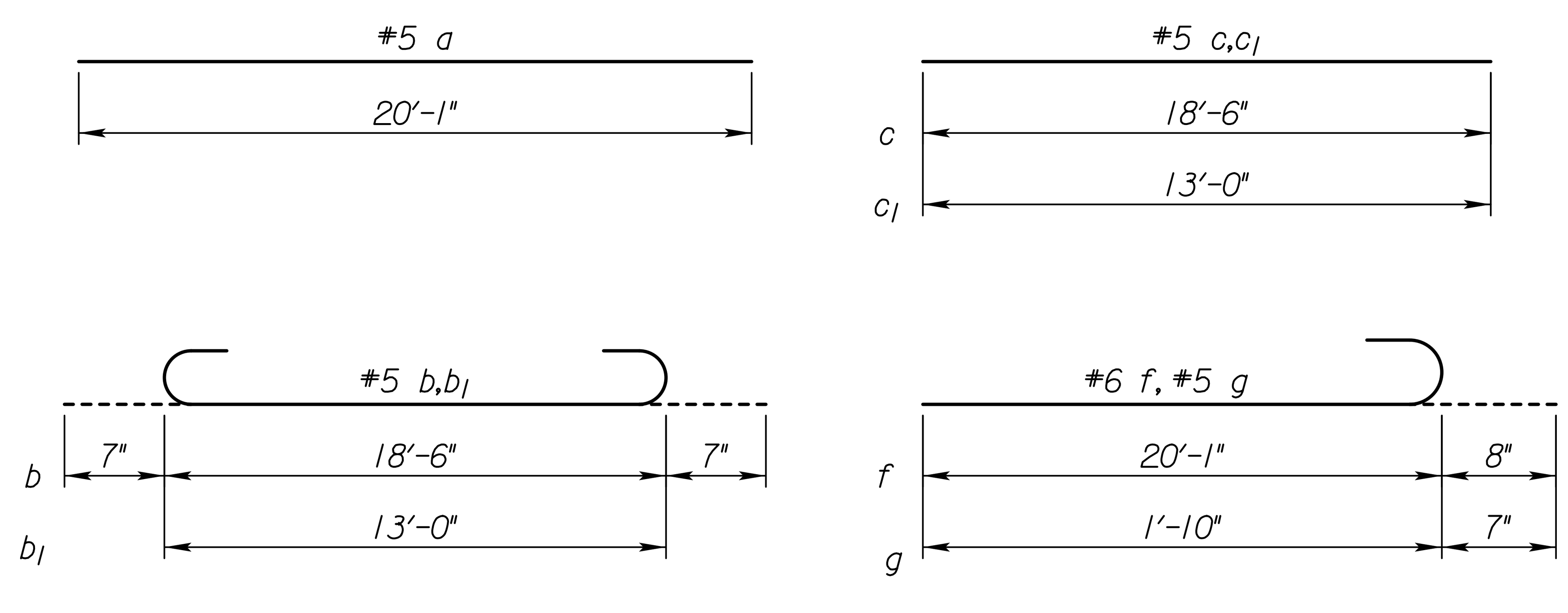
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, 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 specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3¾"	3½"	3¼"	3"	2¾"

Ψ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2⅜"	2⅜"	2¼"	2⅛"	2"	1⅞"

Ψ Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	b_1	c	c_1	e	f	g		
No.	61	80	20	56	14	172	113	89		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	20'-1"	19'-8"	14'-2"	18'-6"	13'-0"	3'-0"	20'-9"	2'-5"		
Reinforcing Steel (Grade 60) (Epoxy Coated)								9010		Lbs.
Concrete Pavement (12" Unif.) (AE)								531		Sq. Yds.
Drilling & Grouting								89		Each
Expansion Jt. (Strip Seal Assembly)								89		Lin. Ft.
Pressure Relief Jt. Membrane Sealant								56		Lin. Ft.
Bridge Approach Slab Footing								42.9		Cu. Yds.

Note: Reinforcing steel and pressure relief joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

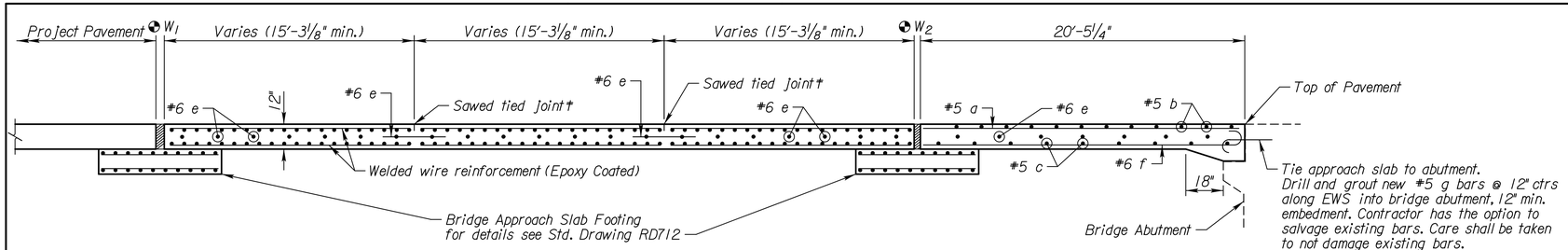
CONCRETE BRIDGE APPROACH PAVEMENT - S. BD. APPROACH PHASE 1

I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

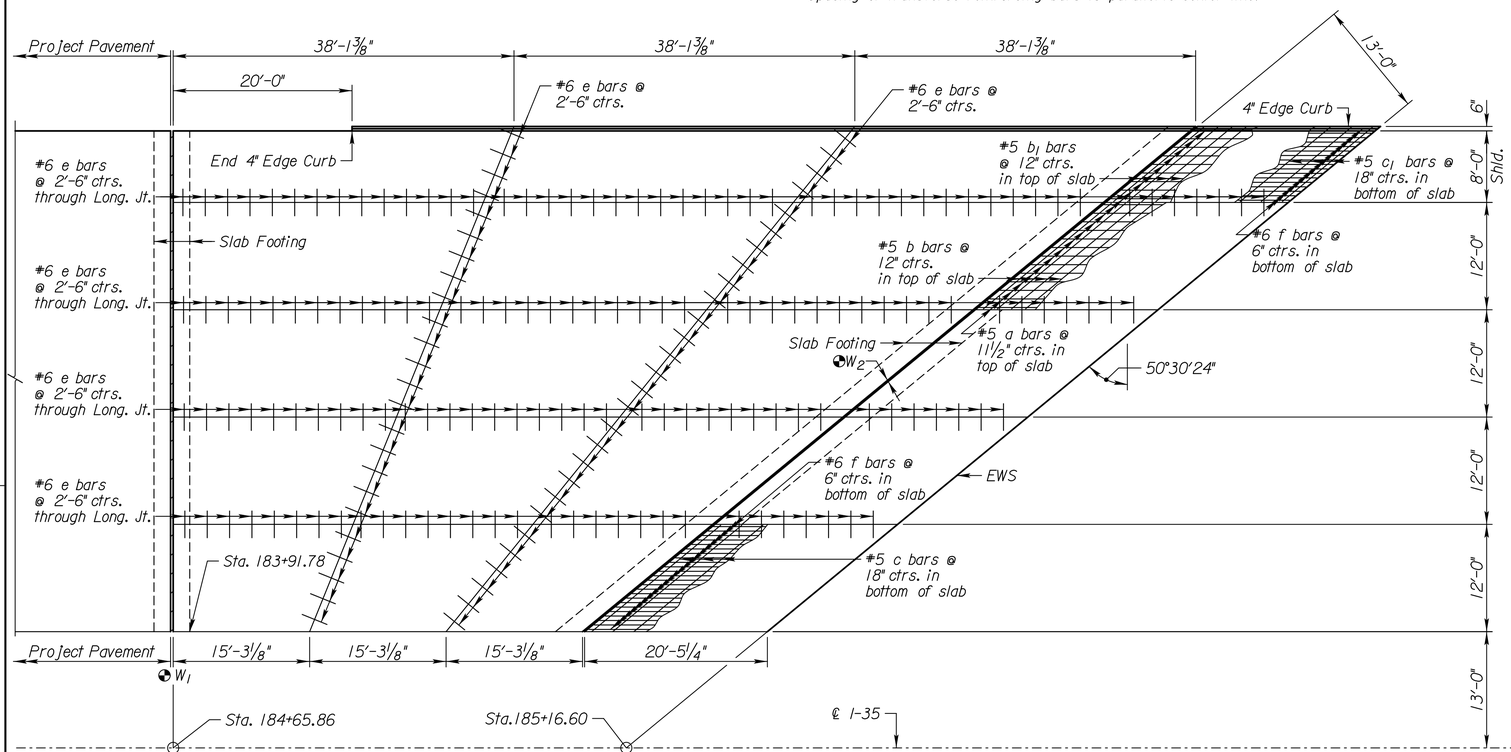
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	48	251

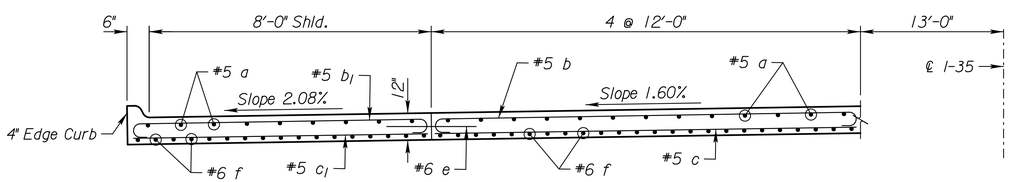


LONGITUDINAL SECTION

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



PLAN



TYPICAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint Details, see Sheet 43.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

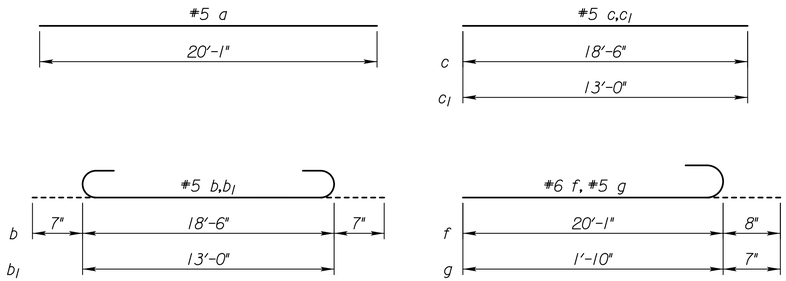
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of Joints, welded wire reinforcement, 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 specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

Ψ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 3/8"	2 3/8"	2 1/4"	2 1/8"	2"	1 7/8"

Ψ Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS

Bar Schedule

Bar	a	b	b1	c	c1	e	f	g		
No.	61	80	20	56	14	206	113	89		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	20'-1"	19'-8"	14'-2"	18'-6"	13'-0"	3'-0"	20'-9"	2'-5"		

Reinforcing Steel (Grade 60) (Epoxy Coated)	9160	Lbs.
Concrete Pavement (12" Unif.) (AE)	631	Sq. Yds.
Drilling & Grouting	89	Each
Expansion Jt. (Strip Seal Assembly)	89	Lin. Ft.
Pressure Relief Jt. Membrane Sealant	56	Lin. Ft.
Bridge Approach Slab Footing	42.9	Cu. Yds.

Note: Reinforcing steel and pressure relief joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - S. BD. DEPARTURE PHASE I

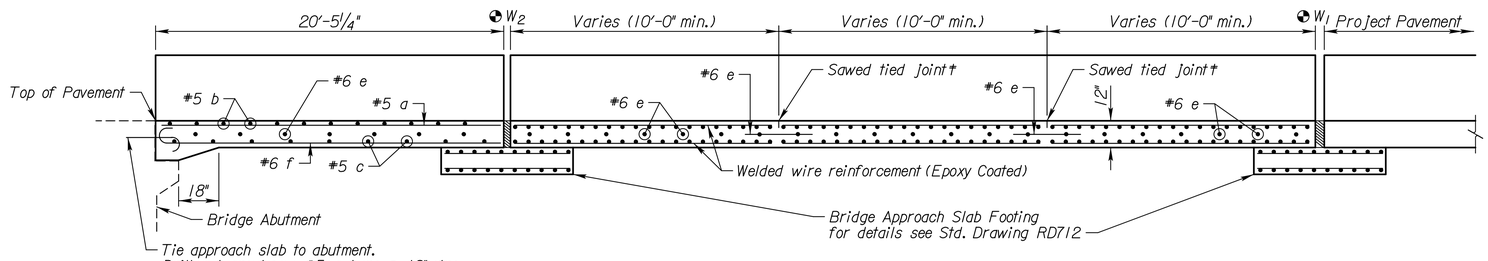
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: admeyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp3158316-ap-01-1.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	49	251



LONGITUDINAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint details see Sheet 45.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

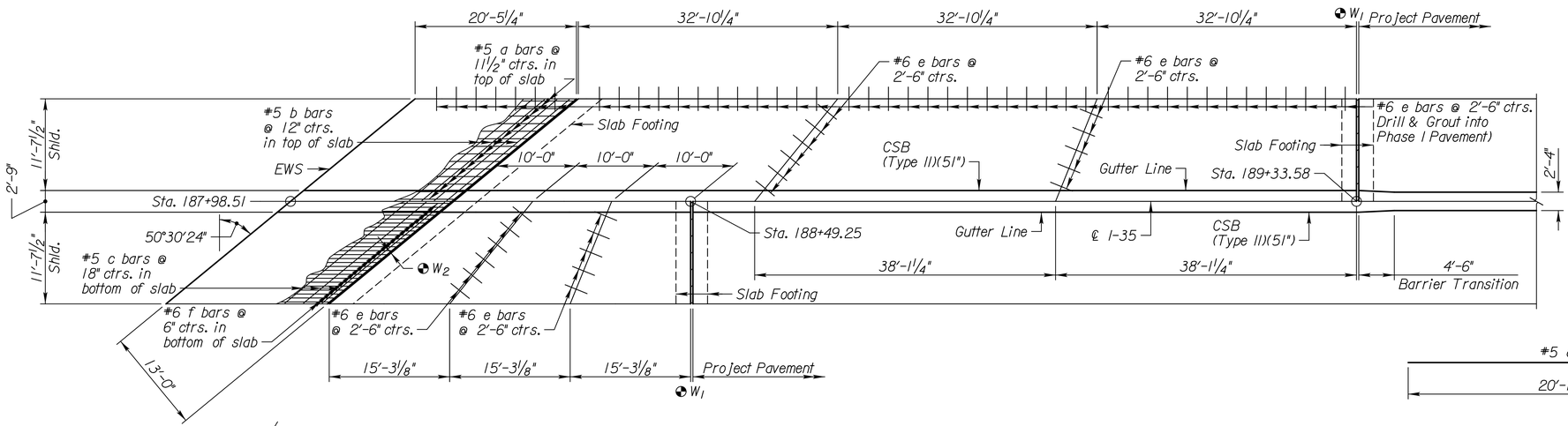
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, 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 specification shall be used throughout.



PLAN

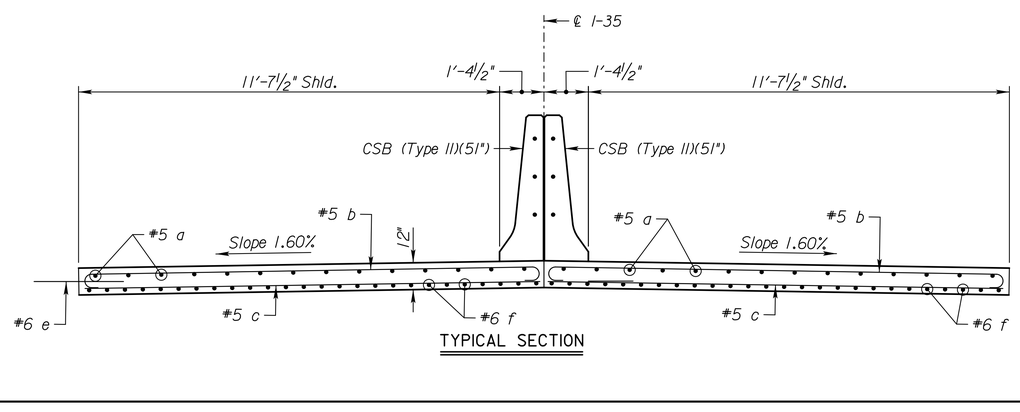
Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3¾"	3½"	3¼"	3"	2¾"

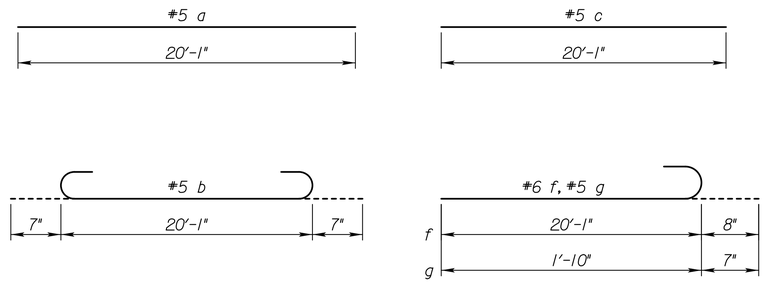
Ψ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2⅜"	2⅜"	2¼"	2⅛"	2"	1⅞"

Ψ Average Ambient Temperature over previous 24 hours.



TYPICAL SECTION



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise.

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	c	e	f	g				
No.	28	40	28	67	52	4I				
Size	#5	#5	#5	#6	#6	#5				
Length	20'-1"	2I'-3"	20'-1"	3'-0"	20'-9"	2'-5"				
Reinforcing Steel (Grade 60) (Epoxy Coated)								4090	Lbs.	
Concrete Pavement (12" Unif.) (AE)								268	Sq. Yds.	
Drilling & Grouting								86	Each	
Expansion Jt. (Strip Seal Assembly)								4I	Lin. Ft.	
Pressure Relief Jt. Membrane Sealant								26	Lin. Ft.	
Bridge Approach Slab Footing								19.8	Cu. Yds.	

Note: Reinforcing steel and pressure relief joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
I				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. DEPARTURE & S. BD. APPROACH - PHASE 3

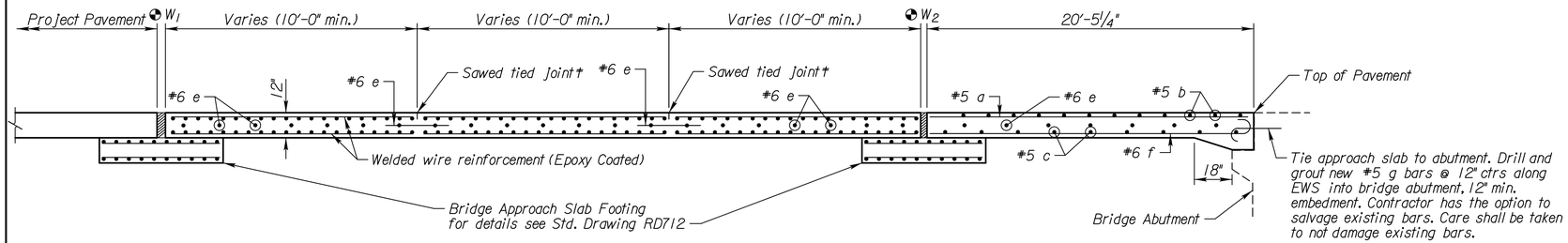
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

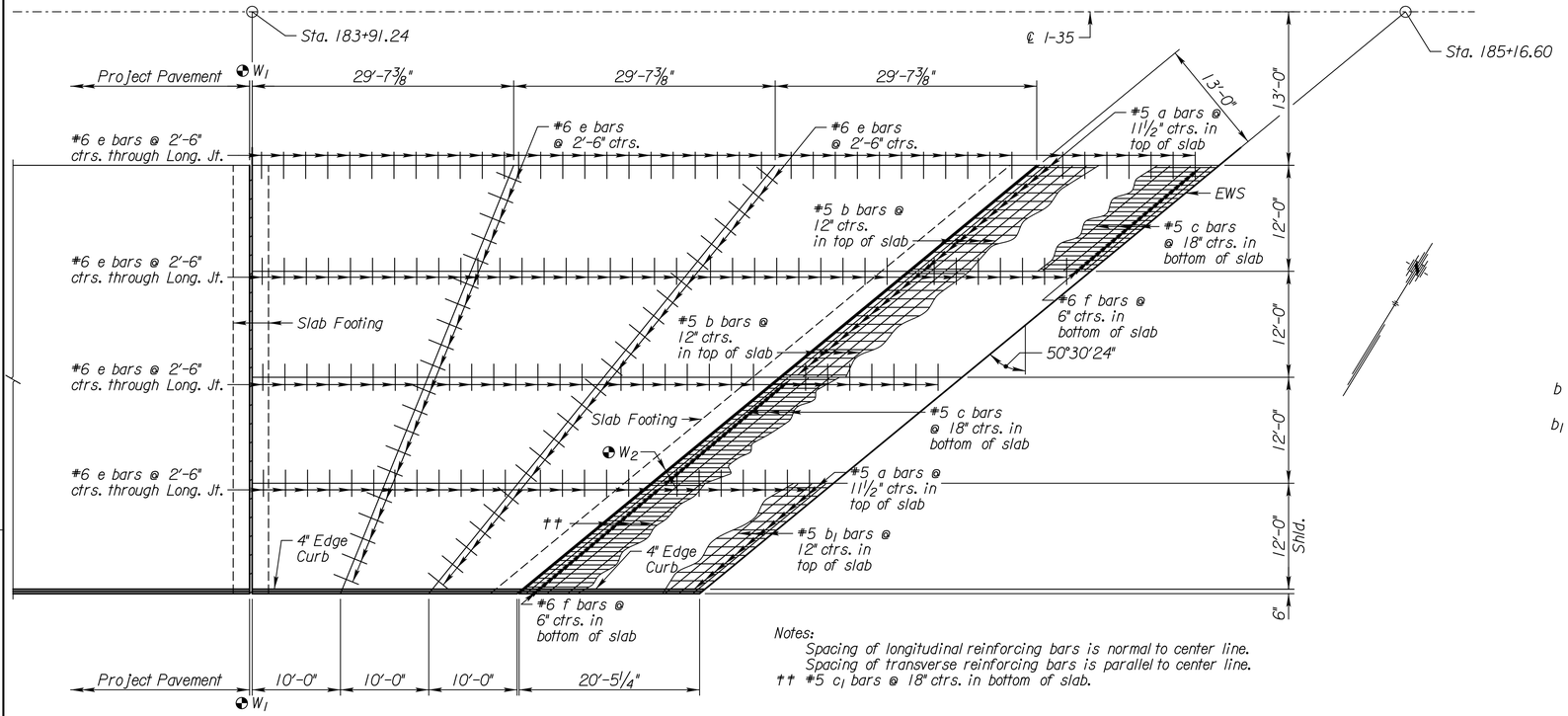
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: ameyer
Plot Location:
File: G:\KC\3\0356\Bridge\Dgn\ka356001brp3158316-gp-02-3.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	50	251

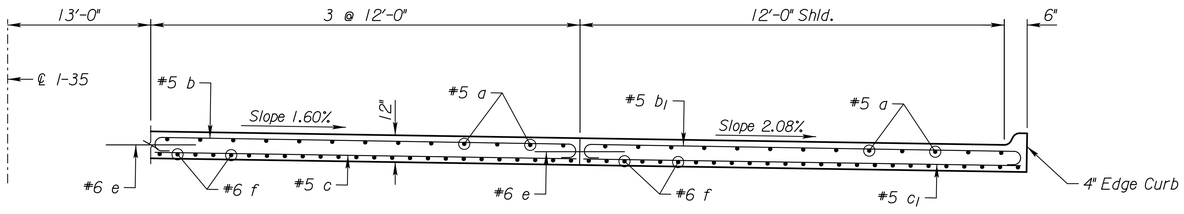


LONGITUDINAL SECTION



Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.
†† #5 c_1 bars @ 18" ctrs. in bottom of slab.

PLAN



TYPICAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint Details, see Sheet 44.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

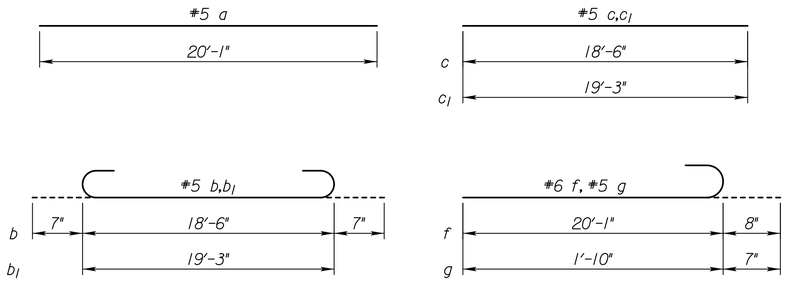
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, 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 specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
℄ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

℄ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
℄ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 3/8"	2 3/8"	2 1/4"	2 1/8"	2"	1 7/8"

℄ Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS

Bar Schedule

Bar	a	b	b_1	c	c_1	e	f	g		
No.	52	60	20	42	14	175	97	76		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	20'-1"	19'-8"	20'-5"	18'-6"	19'-3"	3'-0"	20'-9"	2'-5"		

Reinforcing Steel (Grade 60) (Epoxy Coated)	7840	Lbs.
Concrete Pavement (12" Unif.) (AE)	430	Sq. Yds.
Drilling & Grouting	76	Each
Expansion Jt. (Strip Seal Assembly)	76	Lin. Ft.
Pressure Relief Jt. Membrane Sealant	49	Lin. Ft.
Bridge Approach Slab Footing	37.0	Cu. Yds.

Note: Reinforcing steel and pressure relief joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. APPROACH PHASE 2

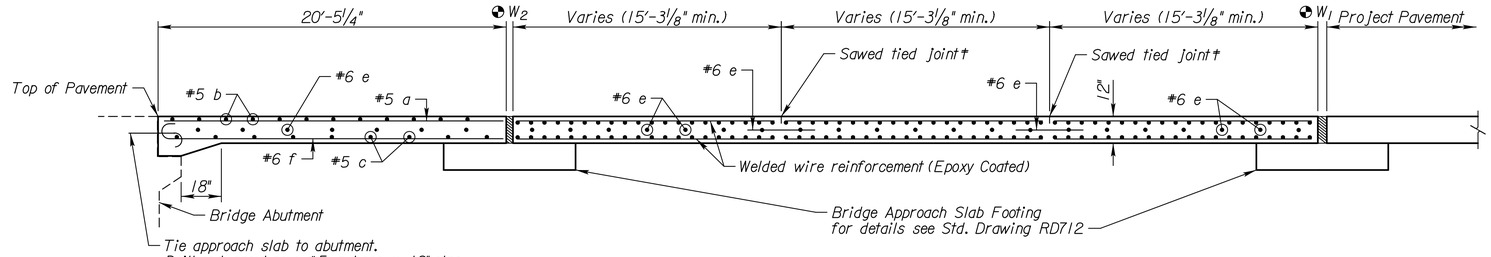
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

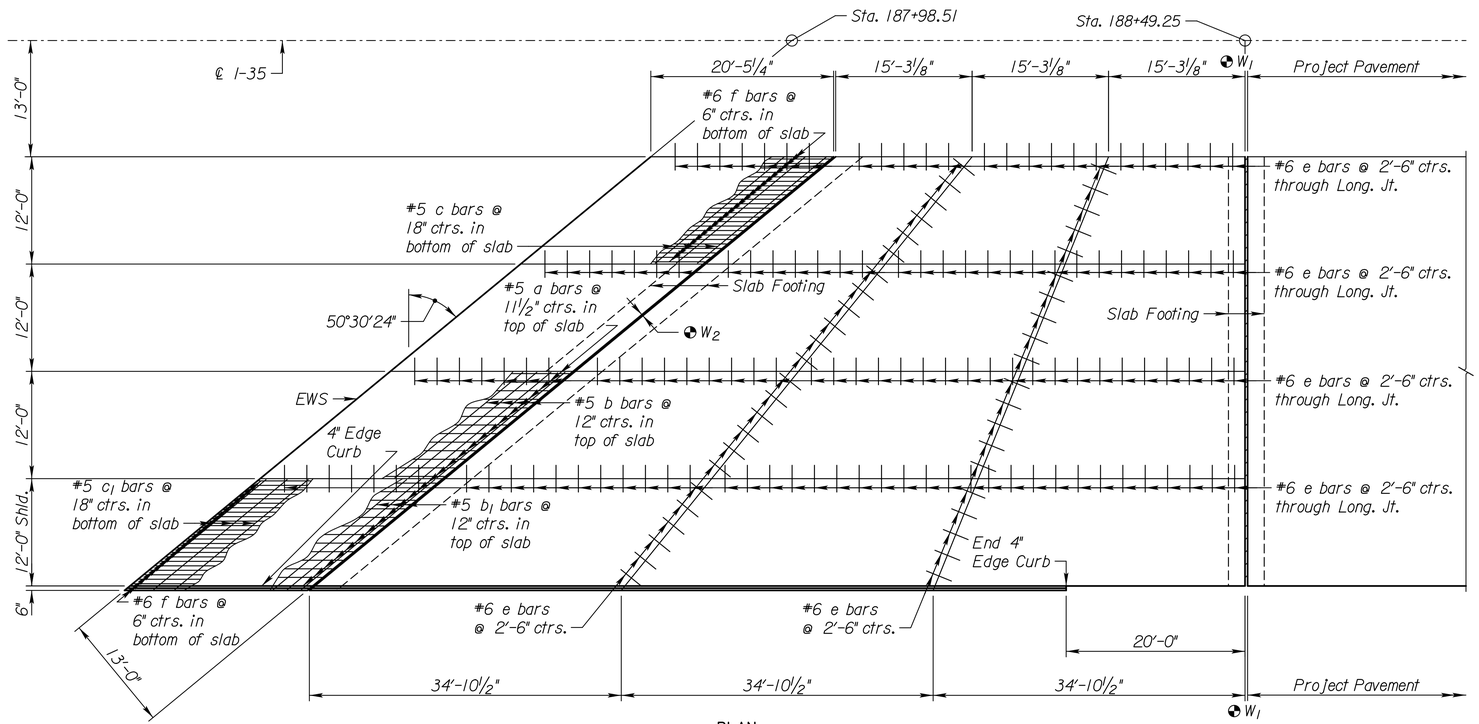
Plotted By: aameyer
Plot Location:
File: G:\KC\3\03560\Bridge\Dgn\ka356001brp3158316-ap-01-2.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	51	251

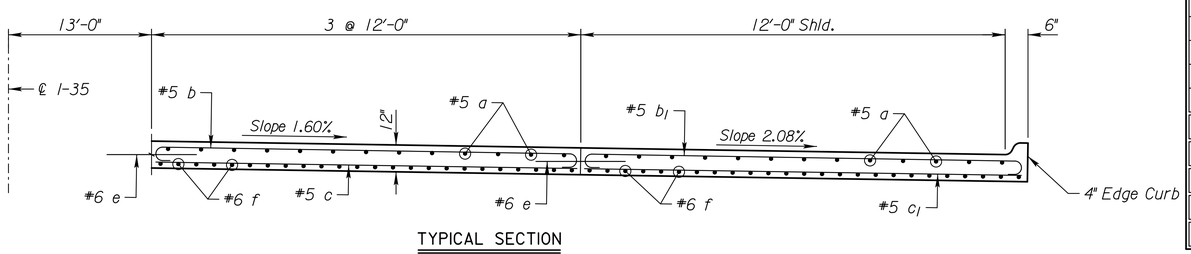


LONGITUDINAL SECTION

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



PLAN



TYPICAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint details see Sheet 44.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

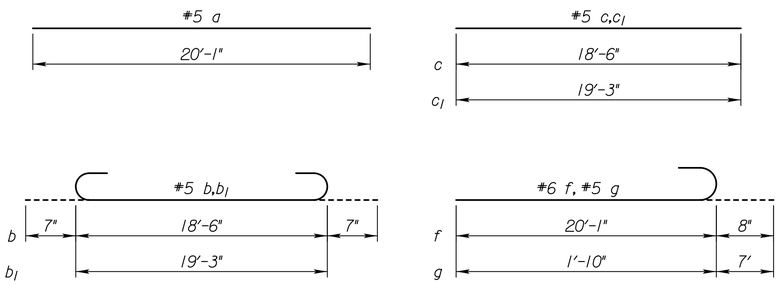
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, 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 specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3¾"	3½"	3¼"	3"	2¾"

Ψ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2⅜"	2⅜"	2¼"	2⅛"	2"	1⅞"

Ψ Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	b1	c	c1	e	f	g		
No.	52	60	20	42	14	176	97	76		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	20'-1"	19'-8"	20'-5"	18'-6"	19'-3"	3'-0"	20'-9"	2'-5"		
Reinforcing Steel (Grade 60) (Epoxy Coated)								7850	Lbs.	
Concrete Pavement (12" Unif.) (AE)								514	Sq. Yds.	
Drilling & Grouting								76	Each	
Expansion Jt. (Strip Seal Assembly)								76	Lin. Ft.	
Pressure Relief Jt. Membrane Sealant								48	Lin. Ft.	
Bridge Approach Slab Footing								36.8	Cu. Yds.	

Note: Reinforcing steel and pressure relief joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. DEPARTURE PHASE 2

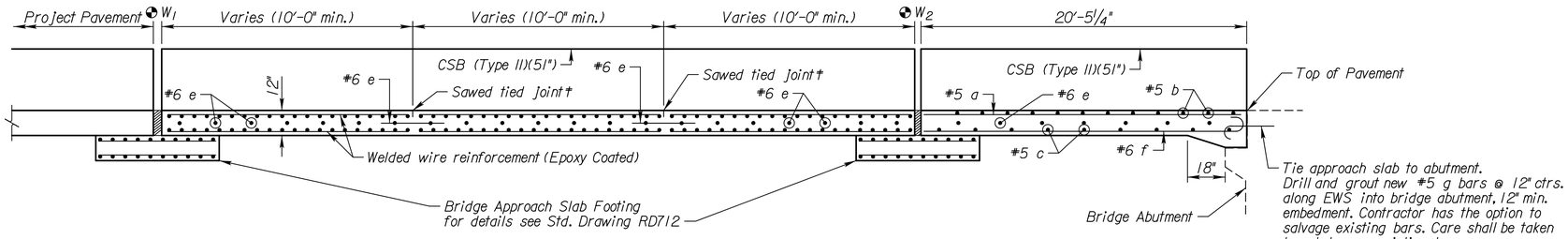
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer
Plot Location:
File: GXKCI3V0356\Bridge\Dgn\ka356001brp3158316-qp-02-2.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	52	251



LONGITUDINAL SECTION

W1 For Pressure Relief Joint details see Standard Drawing RD712.
W2 For Strip Seal Joint Details, see Sheet 45.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints 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.

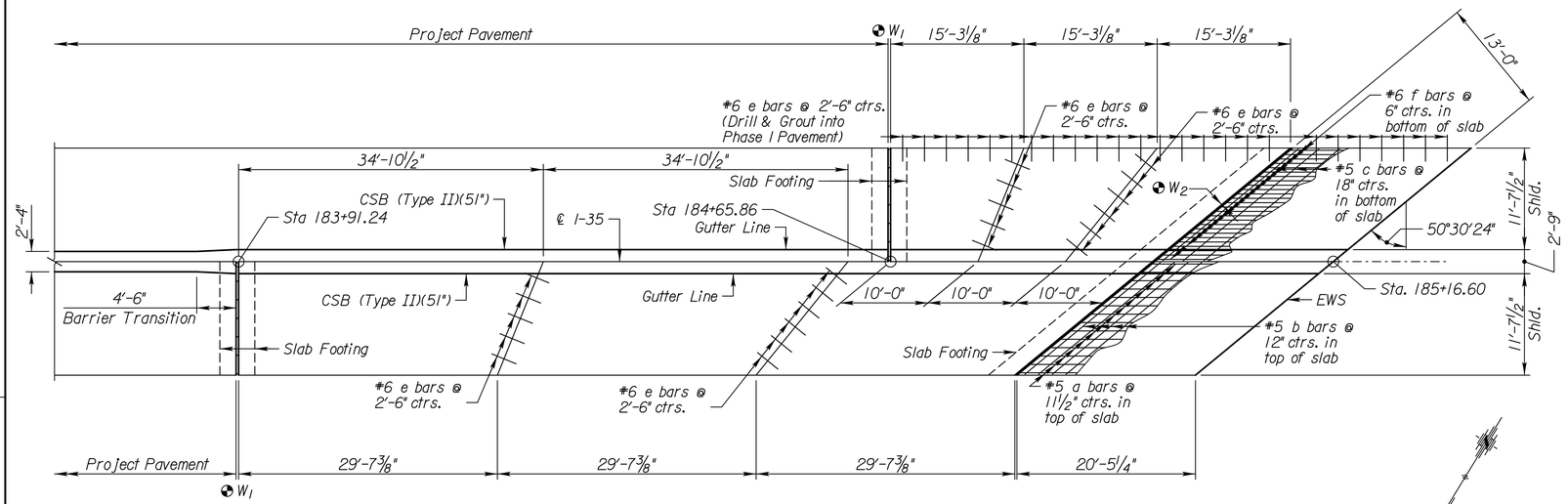
All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints and welded wire reinforcement.

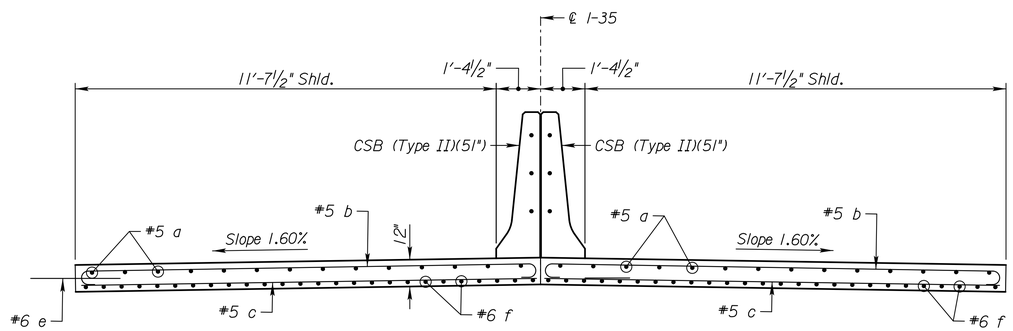
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.

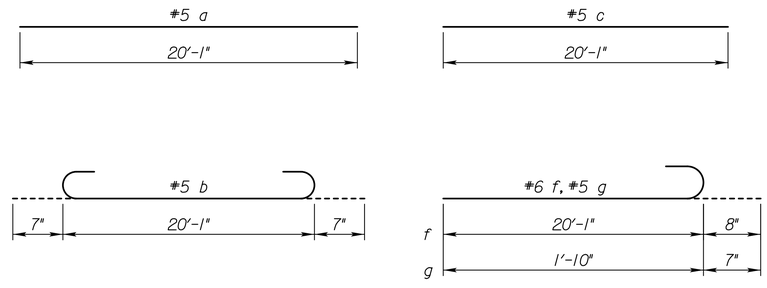
Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



PLAN



TYPICAL SECTION



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
Y Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3¾"	3½"	3¼"	3"	2¾"

Y Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
Y Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2⅜"	2⅜"	2¼"	2⅛"	2"	1⅞"

Y Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	c	e	f	g				
No.	28	40	28	47	52	41				
Size	#5	#5	#5	#6	#6	#5				
Length	20'-1"	21'-3"	20'-1"	3'-0"	20'-9"	2'-5"				
Reinforcing Steel (Grade 60) (Epoxy Coated)								4000	Lbs.	
Concrete Pavement (12" Unif.) (AE)								254	Sq. Yds.	
Drilling & Grouting								66	Each	
Expansion Jt. (Strip Seal Assembly)								41	Lin. Ft.	
Pressure Relief Jt. Membrane Sealant								26	Lin. Ft.	
Bridge Approach Slab Footing								19.8	Cu. Yds.	

Note: Reinforcing steel and pressure relief Joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD APPROACH & S. BD. DEPARTURE - PHASE 3

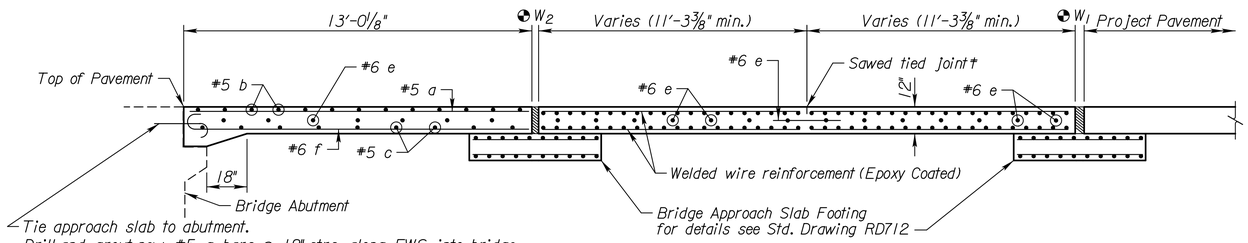
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

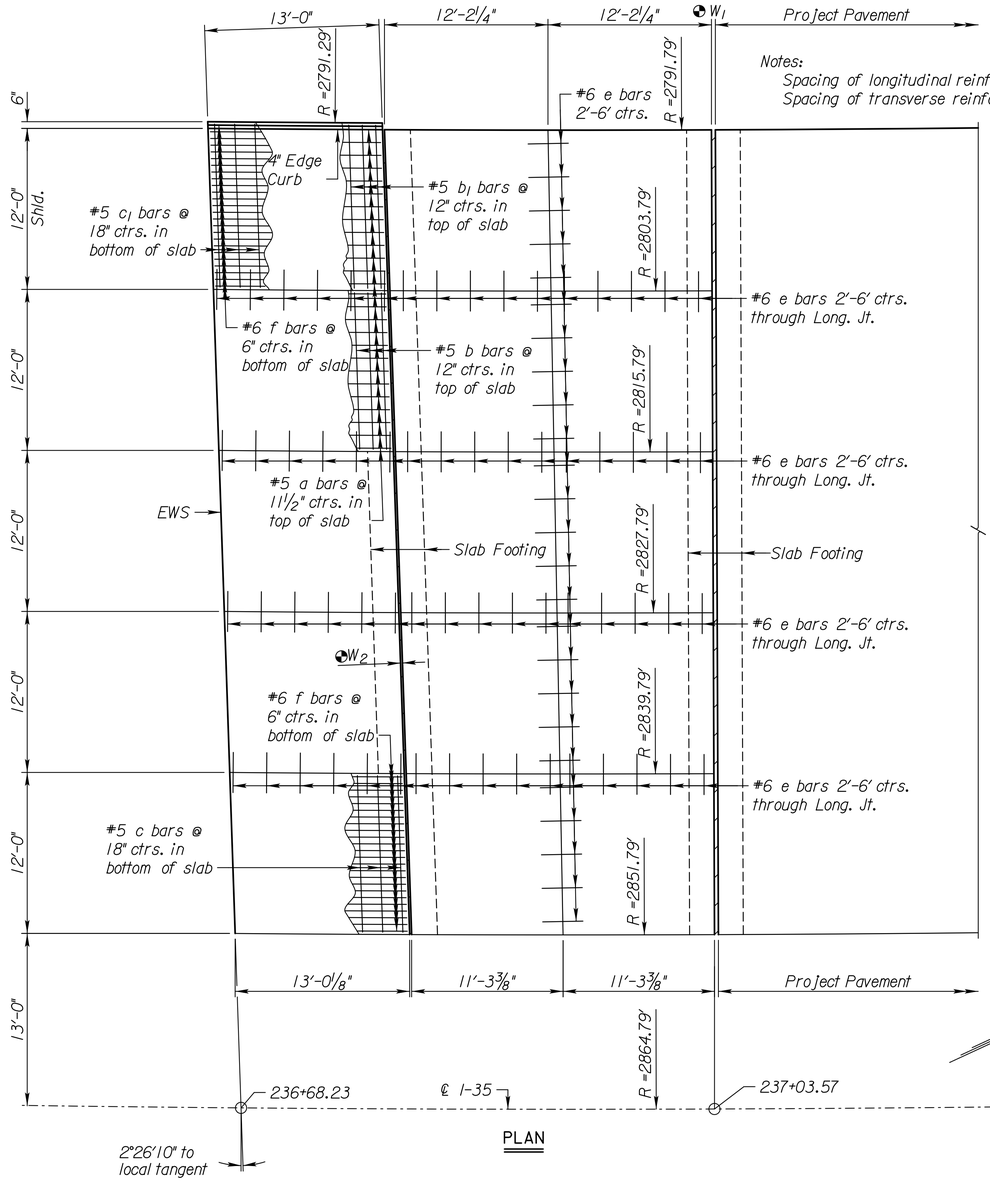
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: dameyer
Plot Location:
File: G:\KC\13\0356\BridgeDgn\ka356001brp3158316-dp-01-3.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	53	251



LONGITUDINAL SECTION



PLAN

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

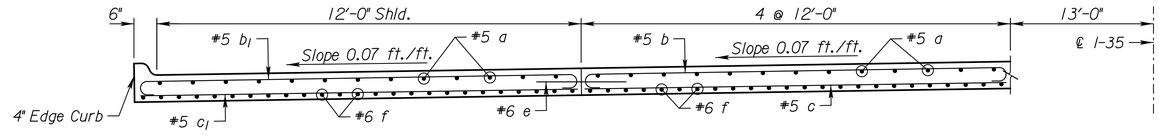
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

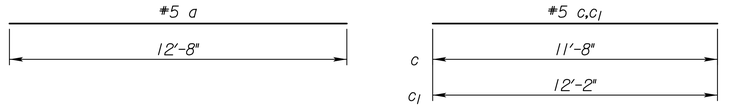
See Standard Drawing RD711 for details of joints, welded wire reinforcement, and edge curb.

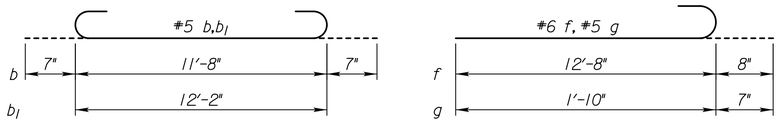
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.



TYPICAL SECTION





BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	b1	c	c1	e	f	g		
No.	65	52	13	36	9	89	121	61		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	12'-8"	12'-10"	13'-4"	11'-8"	12'-2"	3'-0"	13'-4"	2'-5"		
Reinforcing Steel (Grade 60) (Epoxy Coated)									5270	Lbs.
Concrete Pavement (12" Unif.) (AE)									244	Sq. Yds.
Drilling & Grouting									61	Each
Expansion Jt. Membrane Sealant									61	Lin. Ft.
Pressure Relief Jt. Membrane Sealant									60	Lin. Ft.
Bridge Approach Slab Footing									35.7	Cu. Yds.

Note: Reinforcing steel and joint lengths shown for information only.

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
¥ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

¥ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
¥ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 1/4"	2 1/8"	2 1/8"	2"	1 7/8"	1 3/4"

¥ Average Ambient Temperature over previous 24 hours.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - S. BD. APPROACH PHASE I

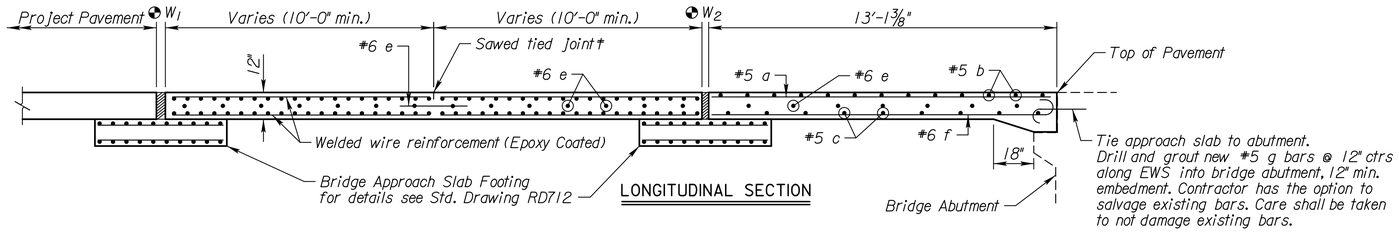
I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: ameyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp318&319-ap-02-1.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	54	251



LONGITUDINAL SECTION

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

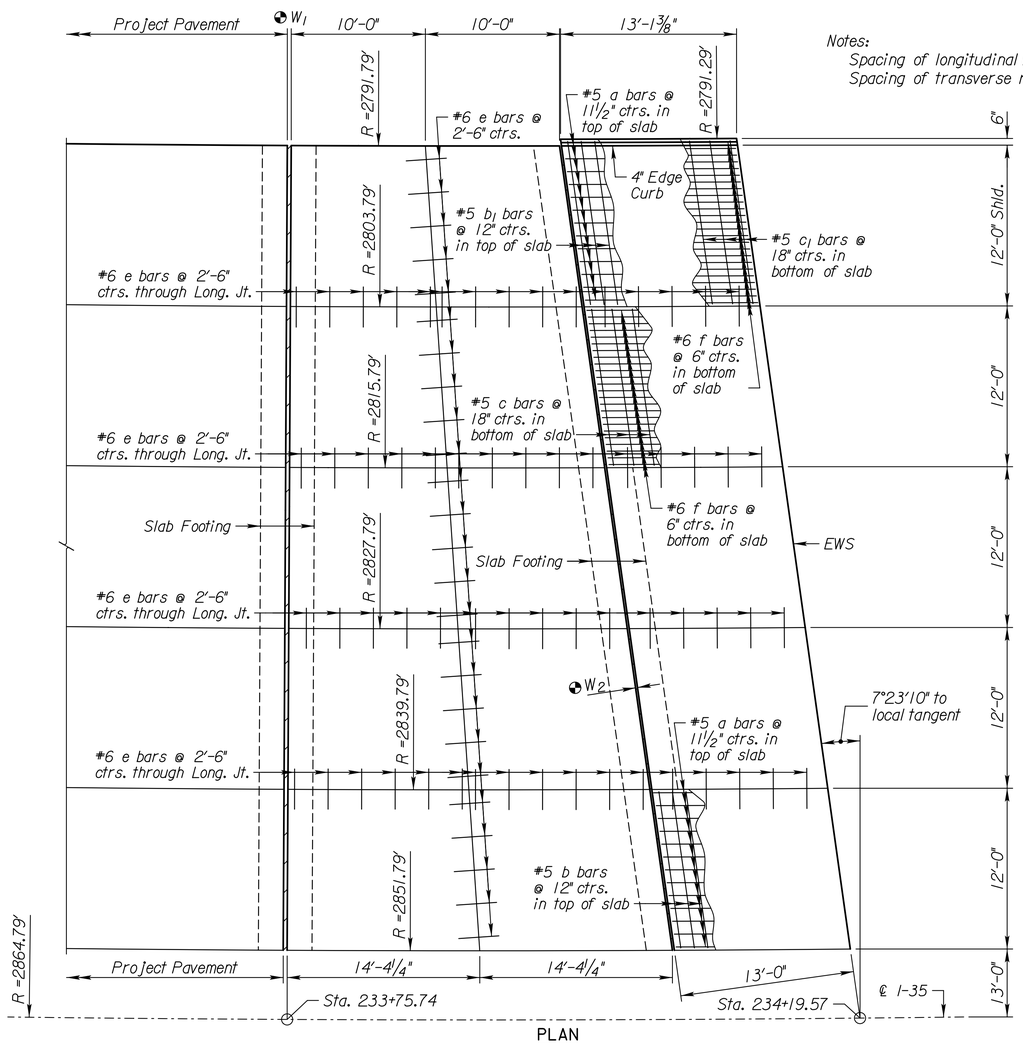
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, and edge curb.

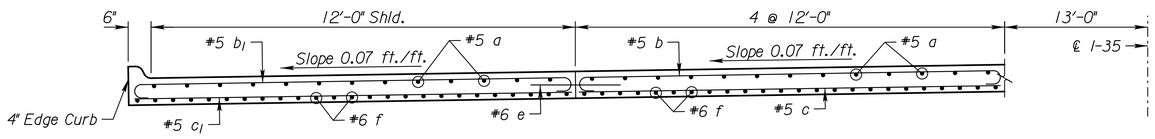
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.

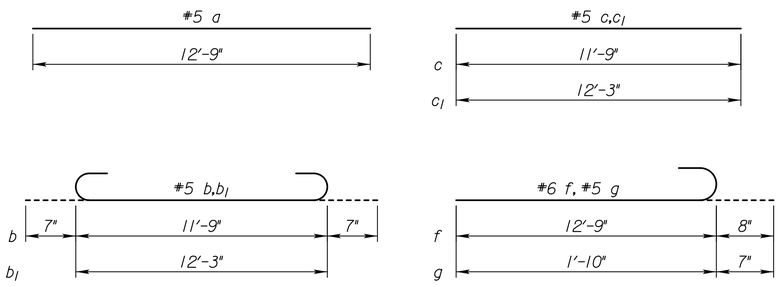


PLAN

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



TYPICAL SECTION



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

BILL OF MATERIALS										
Bar Schedule										
Bar	a	b	b1	c	c1	e	f	g		
No.	65	52	13	36	9	87	121	61		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	12'-9"	12'-11"	13'-5"	11'-9"	12'-3"	3'-0"	13'-5"	2'-5"		
Reinforcing Steel (Grade 60) (Epoxy Coated)							5290		Lbs.	
Concrete Pavement (12" Unif.) (AE)							251		Sq. Yds.	
Drilling & Grouting							61		Each	
Expansion Jt. Membrane Sealant							61		Lin. Ft.	
Pressure Relief Jt. Membrane Sealant							60		Lin. Ft.	
Bridge Approach Slab Footing							35.9		Cu. Yds.	

Note: Reinforcing steel and joint lengths shown for information only.

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
†Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

†Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
†Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 1/4"	2 1/8"	2 1/8"	2"	1 7/8"	1 3/4"

†Average Ambient Temperature over previous 24 hours.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - S. BD. DEPARTURE PHASE I

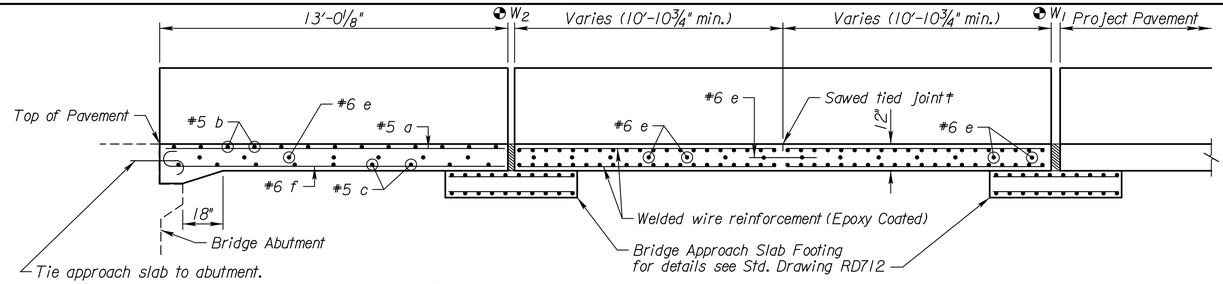
I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

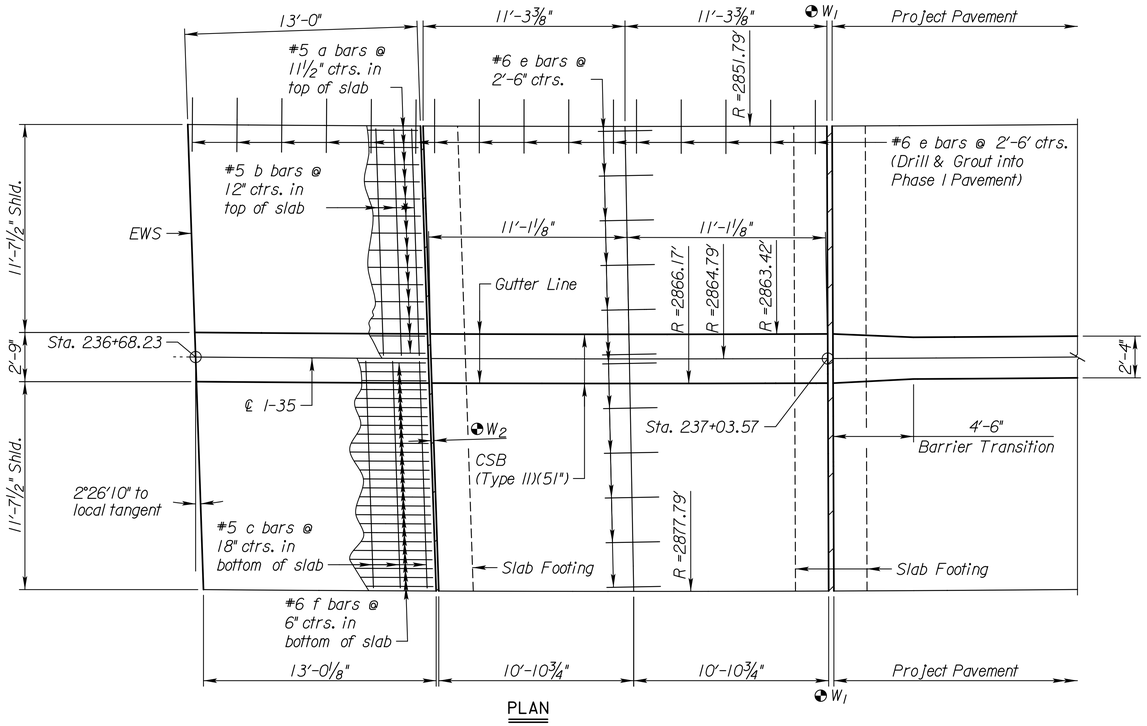
Plotted By: aameyer | Plot Location:
File: G:\KC1\310356\Bridge\Dgn\ka35600\brp3188319-gp-01-1.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	55	251

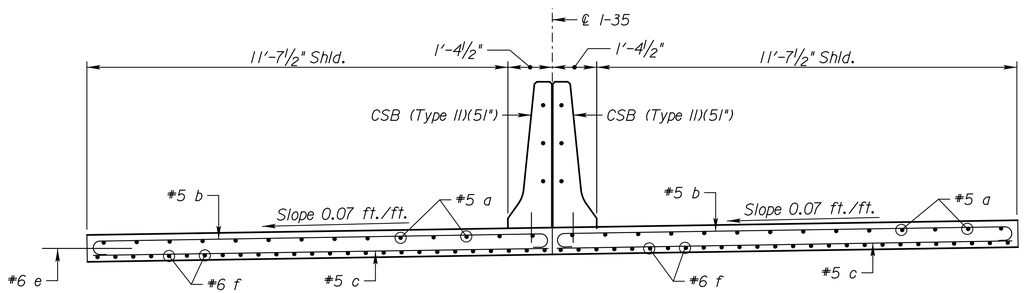


LONGITUDINAL SECTION

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



PLAN



TYPICAL SECTION

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

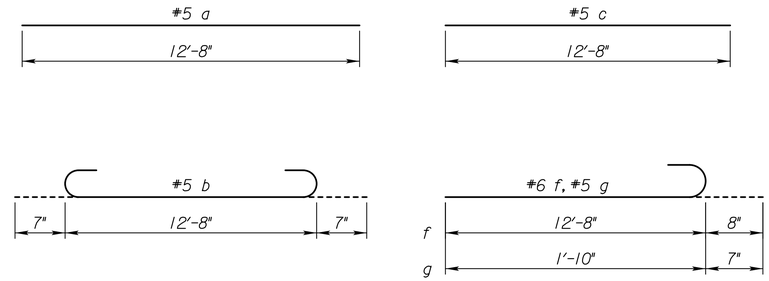
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, 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 specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

Ψ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
Ψ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 1/4'	2 1/8"	2 1/8"	2"	1 7/8"	1 3/4"

Ψ Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS

Bar Schedule

Bar	a	b	c	e	f	g				
No.	28	26	18	28	52	26				
Size	#5	#5	#5	#6	#6	#5				
Length	12'-8"	13'-10"	12'-8"	3'-0"	13'-4"	2'-5"				

Reinforcing Steel (Grade 60) (Epoxy Coated)	2220	Lbs.
Concrete Pavement (12" Unif.) (AE)	102	Sq. Yds.
Drilling & Grouting	42	Each
Expansion Jt. Membrane Sealant	26	Lin. Ft.
Pressure Relief Jt. Membrane Sealant	26	Lin. Ft.
Bridge Approach Slab Footing	15.4	Cu. Yds.

Note: Reinforcing steel and joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. DEPARTURE & S. BD. APPROACH - PHASE 3

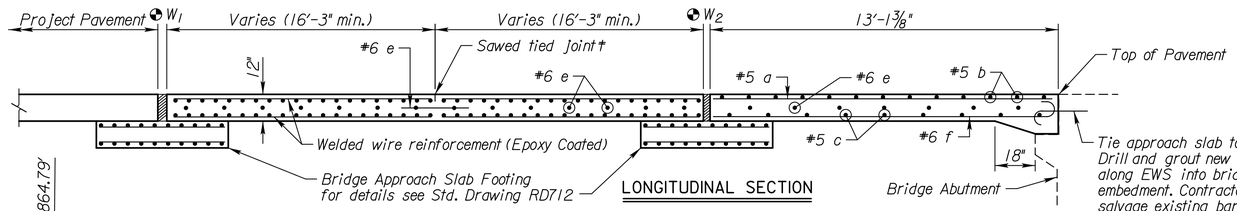
I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

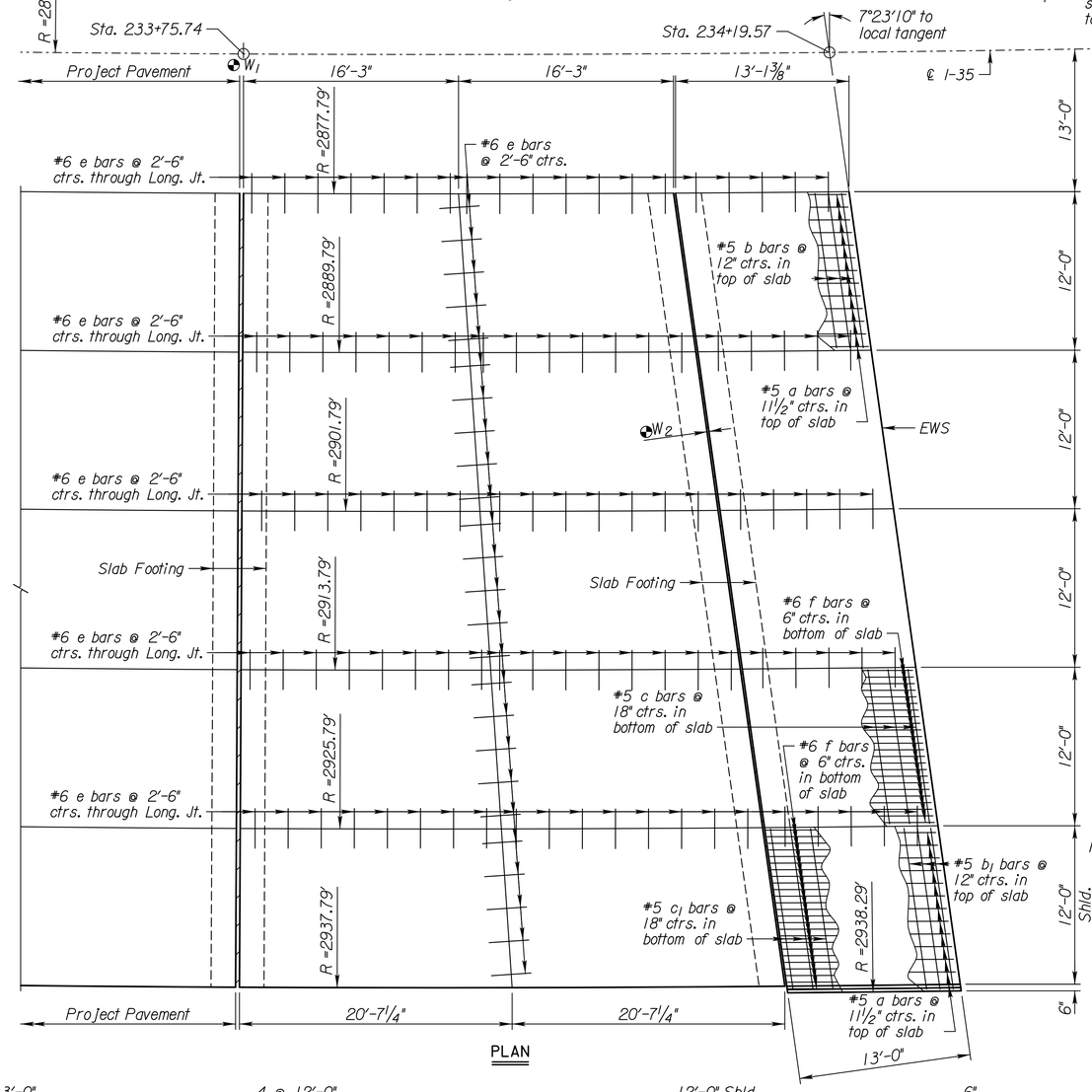
SHEET NO. OF	SCALE	APP'D
DESIGNED	DETAILED ABB	QUANTITIES
DESIGN CK.	DETAIL CK. REP	QUAN.CK.
		CADD
		CADD CK.

Plotted By: dameyer
Plot Location:
File: G:\KC\310356\BridgeDgn\ka356001brp3188319-ap-02-3.dgn
Plot Date: 10/16/2014

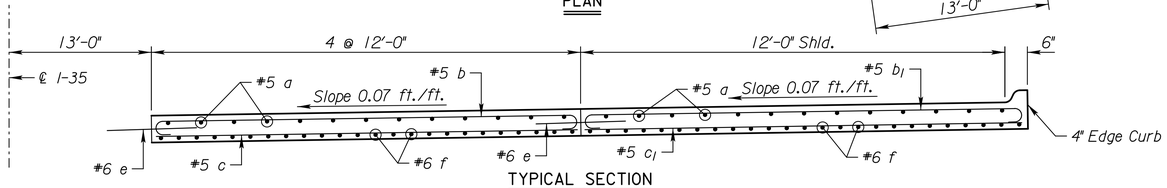
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	56	251



LONGITUDINAL SECTION



PLAN



TYPICAL SECTION

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

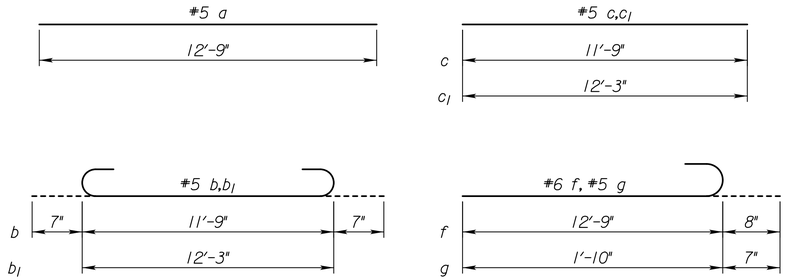
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, and edge curb.

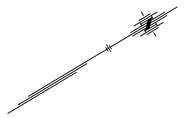
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.



BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise



Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.

BILL OF MATERIALS

Bar Schedule

Bar	a	b	b_1	c	c_1	e	f	g		
No.	65	52	13	36	9	124	121	61		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	12'-9"	12'-11"	13'-5"	11'-9"	12'-3"	3'-0"	13'-5"	2'-5"		

Reinforcing Steel (Grade 60) (Epoxy Coated)	5450	Lbs.
Concrete Pavement (12" Unif.) (AE)	334	Sq. Yds.
Drilling & Grouting	61	Each
Expansion Jt. Membrane Sealant	61	Lin. Ft.
Pressure Relief Jt. Membrane Sealant	60	Lin. Ft.
Bridge Approach Slab Footing	35.9	Cu. Yds.

Note: Reinforcing steel and joint lengths shown for information only.

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
°F Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

°F Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
°F Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 1/4"	2 1/8"	2 1/8"	2"	1 7/8"	1 3/4"

°F Average Ambient Temperature over previous 24 hours.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. APPROACH PHASE 2

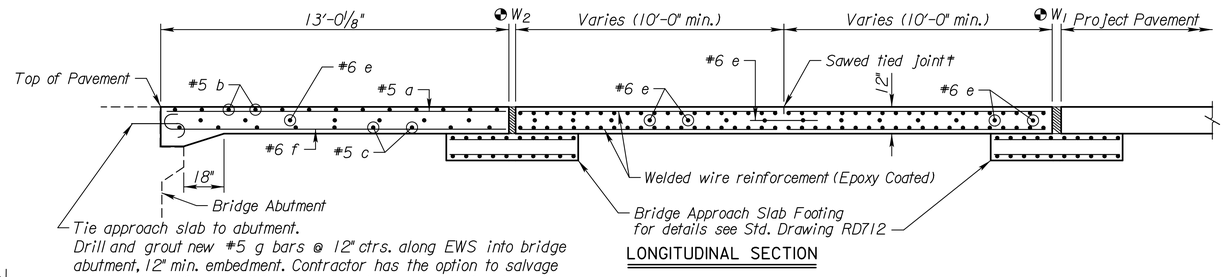
I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: dameyer | Plot Location:
File: G:\KC\13\0356\Bridge\Dgn\ka356001brp3188.319-qp-01-2.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	57	251



LONGITUDINAL SECTION

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints 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.

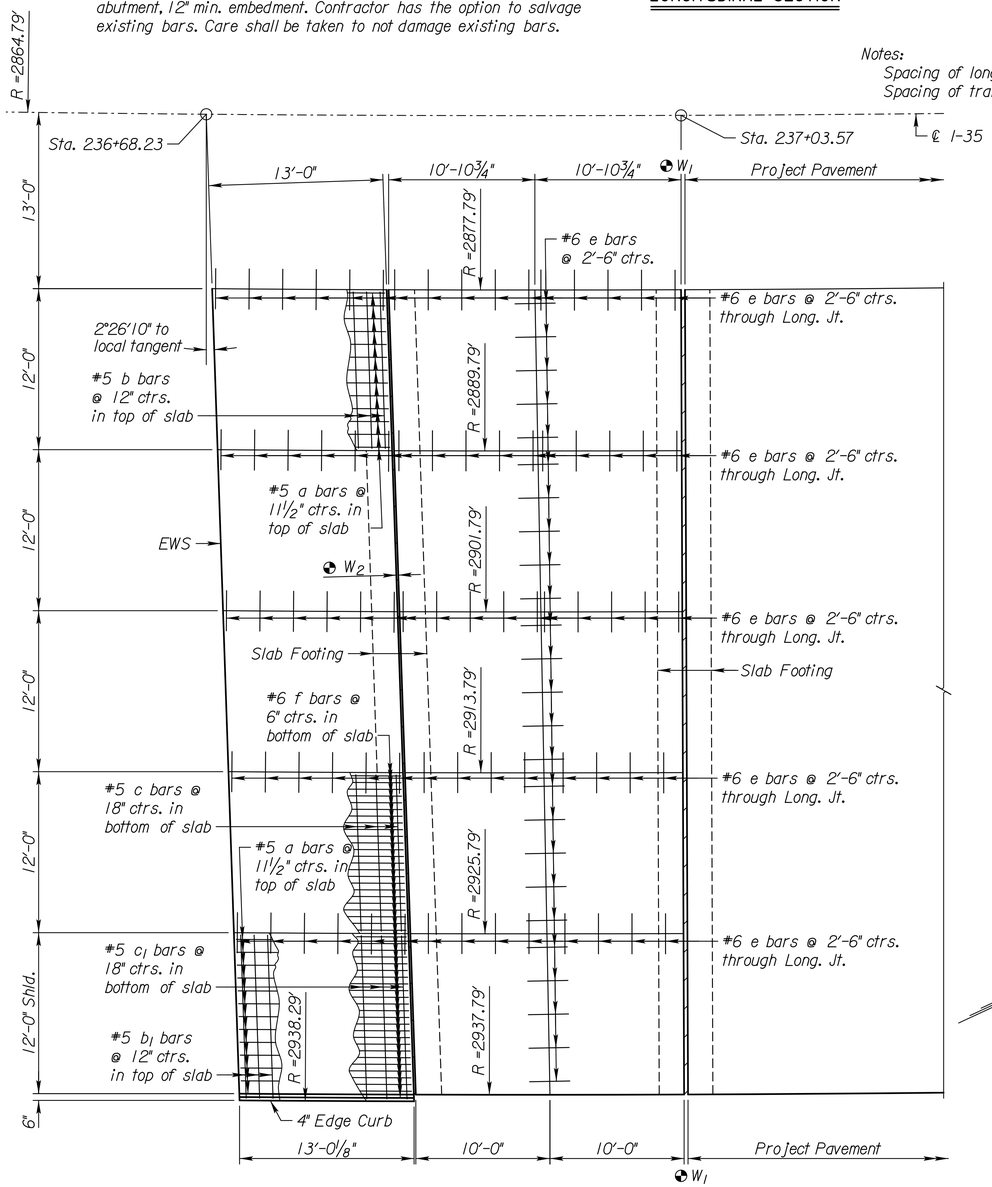
All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of joints, welded wire reinforcement, and edge curb.

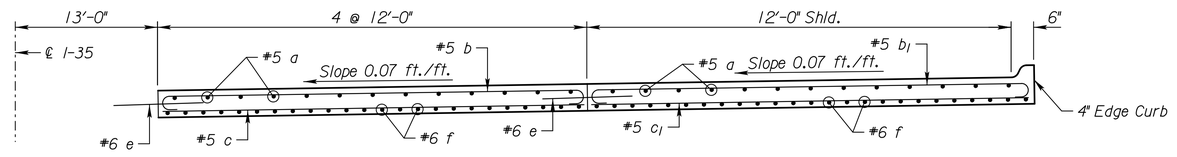
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.

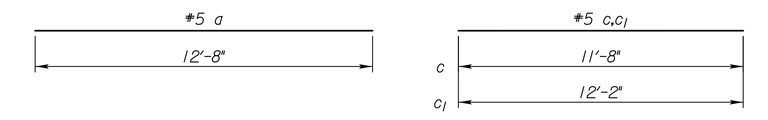
Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.

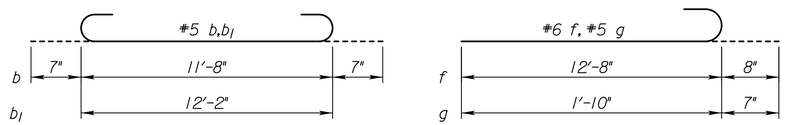


PLAN



TYPICAL SECTION





BENDING DIAGRAMS

All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)						
°F Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"

°F Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W_2)						
°F Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2 1/4"	2 1/8"	2 1/8"	2"	1 7/8"	1 3/4"

°F Average Ambient Temperature over previous 24 hours.

BILL OF MATERIALS

Bar Schedule

Bar	a	b	b_1	c	c_1	e	f	g		
No.	65	52	13	36	9	101	121	61		
Size	#5	#5	#5	#5	#5	#6	#6	#5		
Length	12'-8"	12'-10"	13'-4"	11'-8"	12'-2"	3'-0"	13'-4"	2'-5"		

Reinforcing Steel (Grade 60) (Epoxy Coated)	5320	Lbs.
Concrete Pavement (12" Unif.) (AE)	227	Sq. Yds.
Drilling & Grouting	61	Each
Expansion Jt. Membrane Sealant	61	Lin. Ft.
Pressure Relief Jt. Membrane Sealant	60	Lin. Ft.
Bridge Approach Slab Footing	35.7	Cu. Yds.

Note: Reinforcing steel and joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

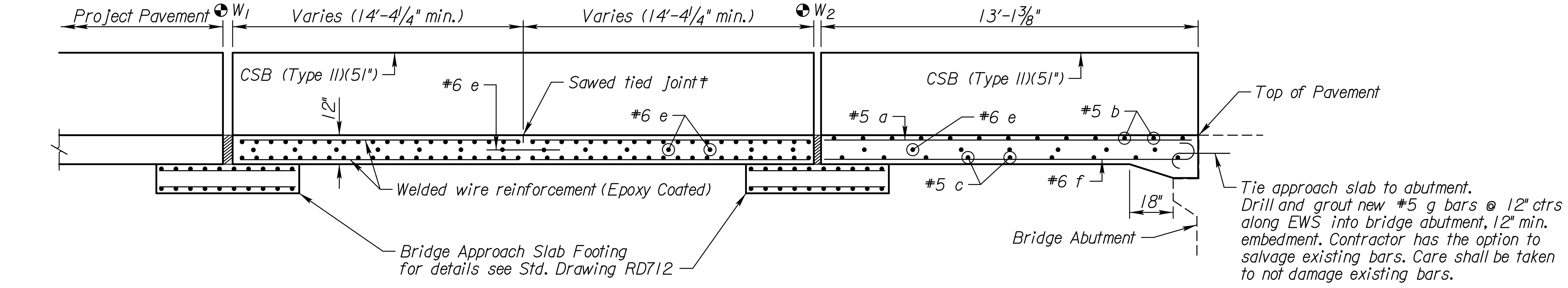
CONCRETE BRIDGE APPROACH PAVEMENT - N. BD. DEPARTURE PHASE 2

I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:
File: G:\KDC\3\0356\BridgeDgn\ka356001\brp3188319-qp-02-2.dgn
Plot Date: 10/16/2014



LONGITUDINAL SECTION

W1 and W2 For Expansion/Pressure Relief Joint details see Standard Drawing RD712.
† Contractor has the option of substituting a Tied Keyed Construction Joint.

GENERAL NOTES

Special Concrete Bridge Approach shall be paid for as Sq. Yd. of Concrete Pavement (12" Unif.) (AE) 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 expansion joints and pressure relief joints shall be subsidiary to this bid item.

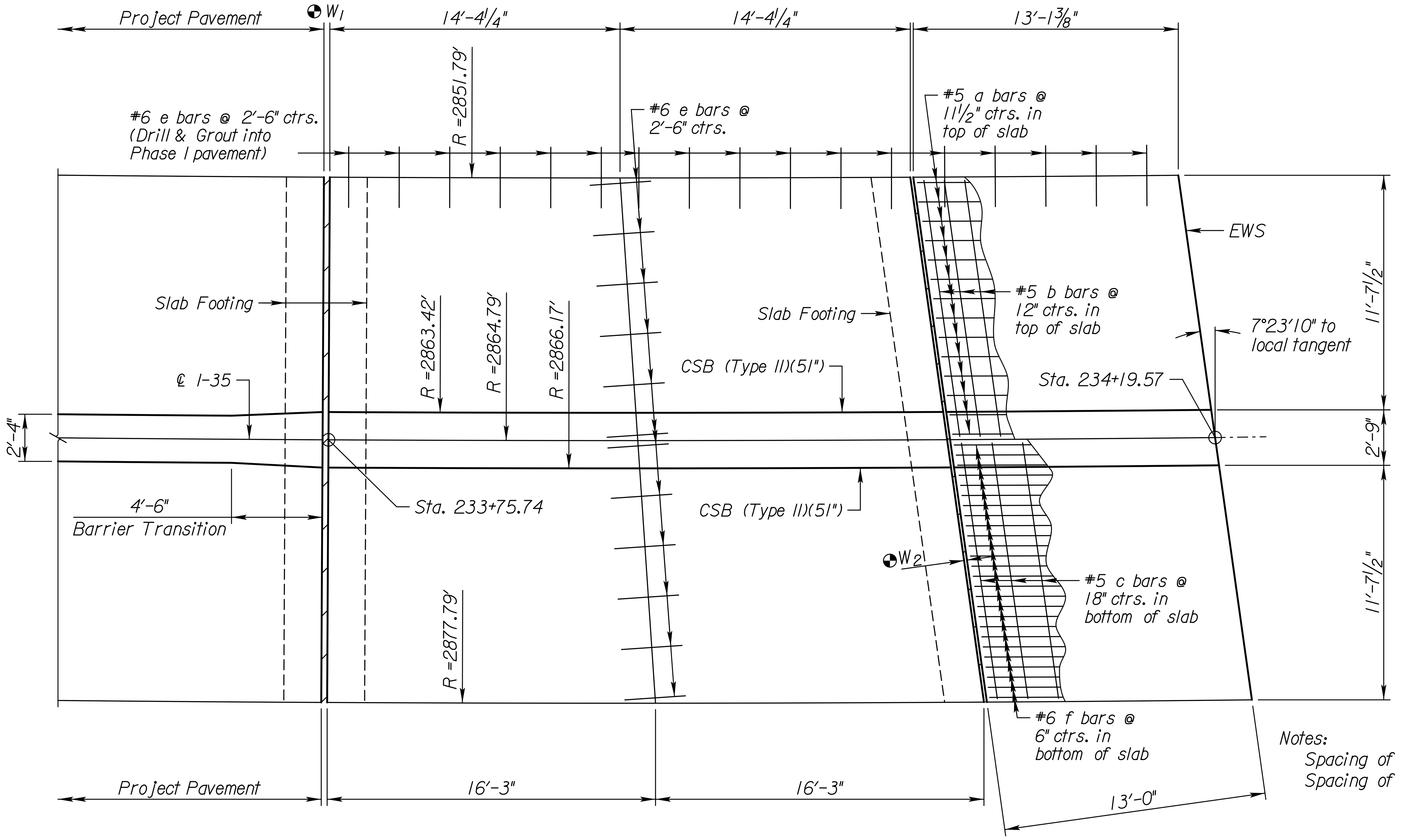
At the Contractor's option #4x3'-0" tie bars @ 15" centers may be substituted for the #6 e bars at 2'-6" centers.

All reinforcing steel shall be epoxy coated.

See Standard Drawing RD711 for details of Joints and welded wire reinforcement.

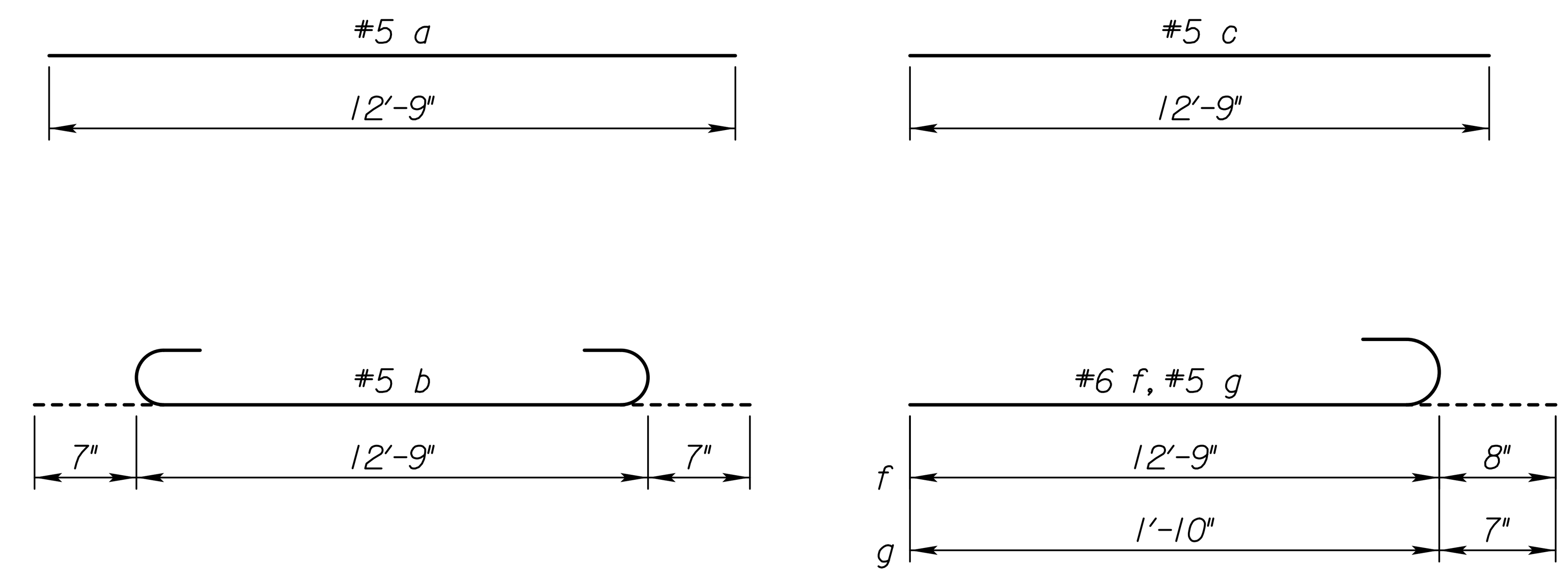
Clearance from the face of concrete for all reinforcing steel shall be 2 inches.

Standard reinforcing bar hooks in accordance with the latest ACI specification shall be used throughout.



PLAN

Notes:
Spacing of longitudinal reinforcing bars is normal to center line.
Spacing of transverse reinforcing bars is parallel to center line.



BENDING DIAGRAMS

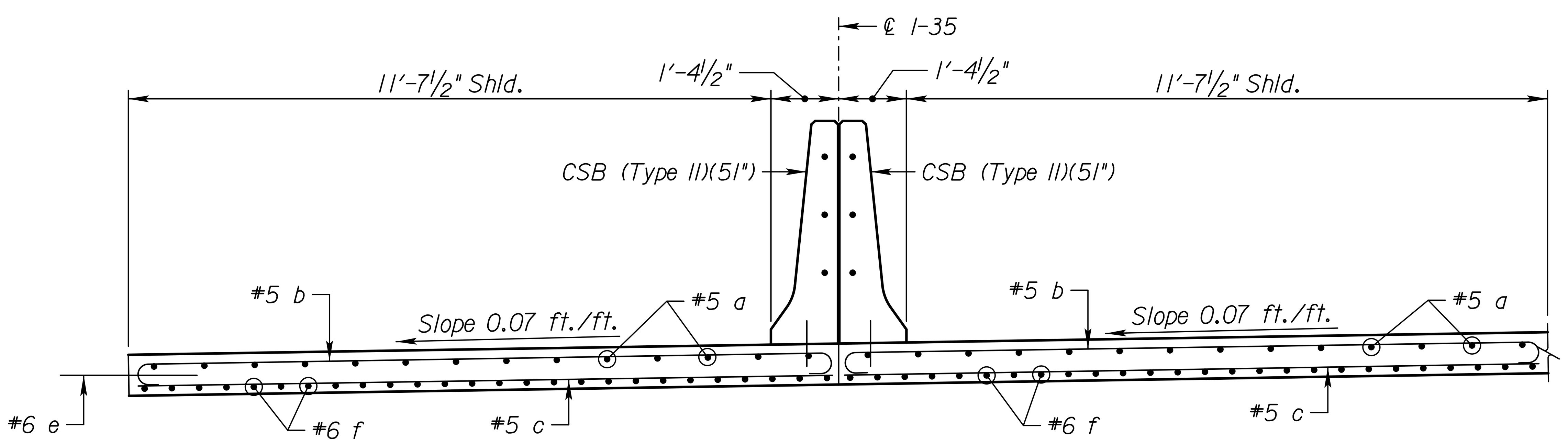
All dimensions are out to out on bars unless noted otherwise

PRESSURE RELIEF JOINT WIDTH DETAILS (W1)						
¥ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	4"	3¾"	3½"	3¼"	3"	2¾"

¥ Average Ambient Temperature over previous 24 hours.

EXPANSION JOINT WIDTH DETAILS (W2)						
¥ Temperature °F	40°	50°	60°	70°	80°	90°
Formed Concrete Opening Size	2¼"	2⅛"	2⅛"	2"	1⅞"	1¾"

¥ Average Ambient Temperature over previous 24 hours.



TYPICAL SECTION

BILL OF MATERIALS							
Bar Schedule							
Bar	a	b	c	e	f	g
No.	28	26	18	29	52	26
Size	#5	#5	#5	#6	#6	#5
Length	12'-9"	13'-11"	12'-9"	3'-0"	13'-5"	2'-5"
Reinforcing Steel (Grade 60) (Epoxy Coated)					2230	Lbs.
Concrete Pavement (12" Unif.) (AE)					126	Sq. Yds.
Drilling & Grouting					43	Each
Expansion Jt. (Strip Seal Assembly)					26	Lin. Ft.
Pressure Relief Jt. Membrane Sealant					26	Lin. Ft.
Bridge Approach Slab Footing					15.5	Cu. Yds.

Note: Reinforcing steel and Joint lengths shown for information only.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE APPROACH PAVEMENT - S. BD. DEPARTURE & N. BD. APPROACH - PHASE 3

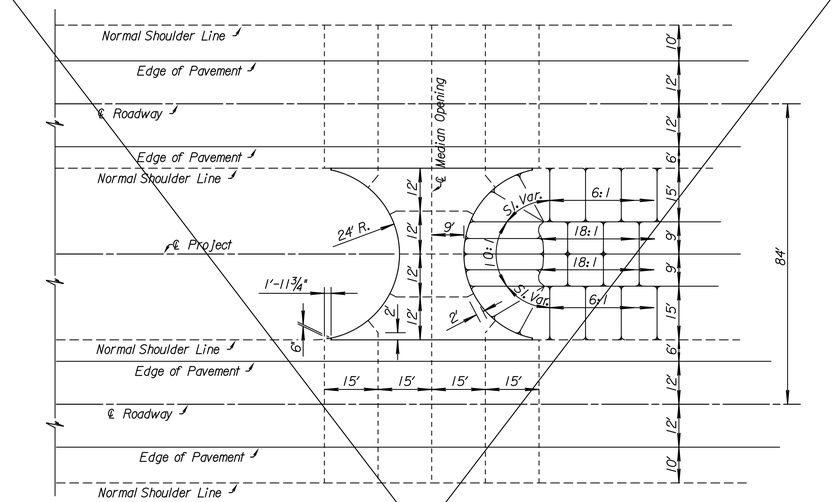
I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

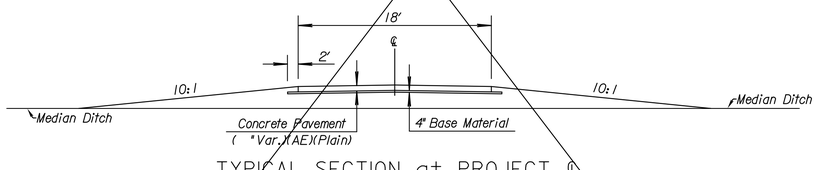
SHEET NO. OF	SCALE		APP'D	
DESIGNED	DETAILED	ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:
File: G:\KC\3\0356\Bridge\Dgn\ka35600\brp318&319-ap-01-3.dgn
Plot Date: 10/16/2014

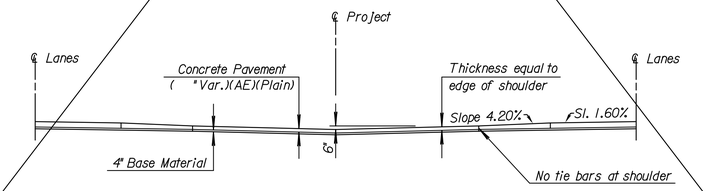
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	59	251



U-TURN MEDIAN OPENING - FOUR LANES (DIVIDED)

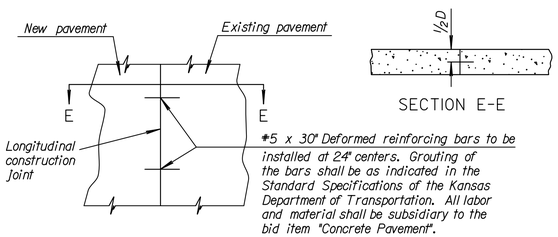


TYPICAL SECTION at PROJECT ℄



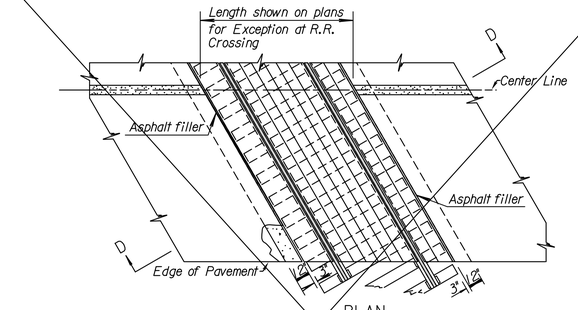
TYPICAL SECTION at ℄ of CROSSOVER

Note: The U-Turn Median Opening constructed to the dimensions shown shall be paid as 150 sq. yds. of Concrete Pavement (in. Var.) (AE) (Plain).



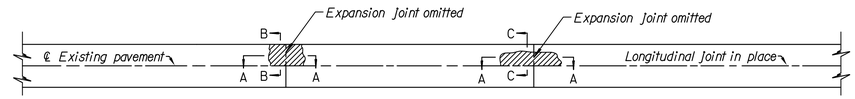
METHOD OF TYING PAVEMENT TO EXISTING PAVEMENT

PAVEMENT WIDENING

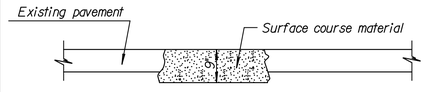


CONCRETE HEADER AT RAILROAD CROSSINGS

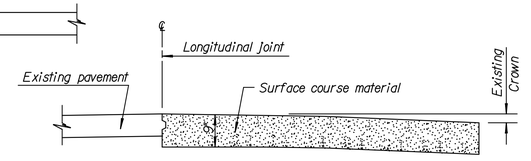
NOTE: Header to be paid for as additional area of concrete pavement, to be computed by adding two (2) feet times the width parallel to R.R. track for each header.



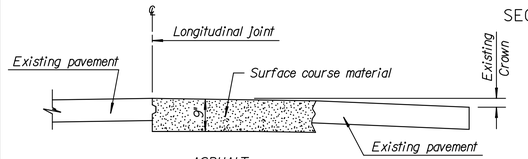
TYPICAL PLAN



ASPHALT
SECTION A-A

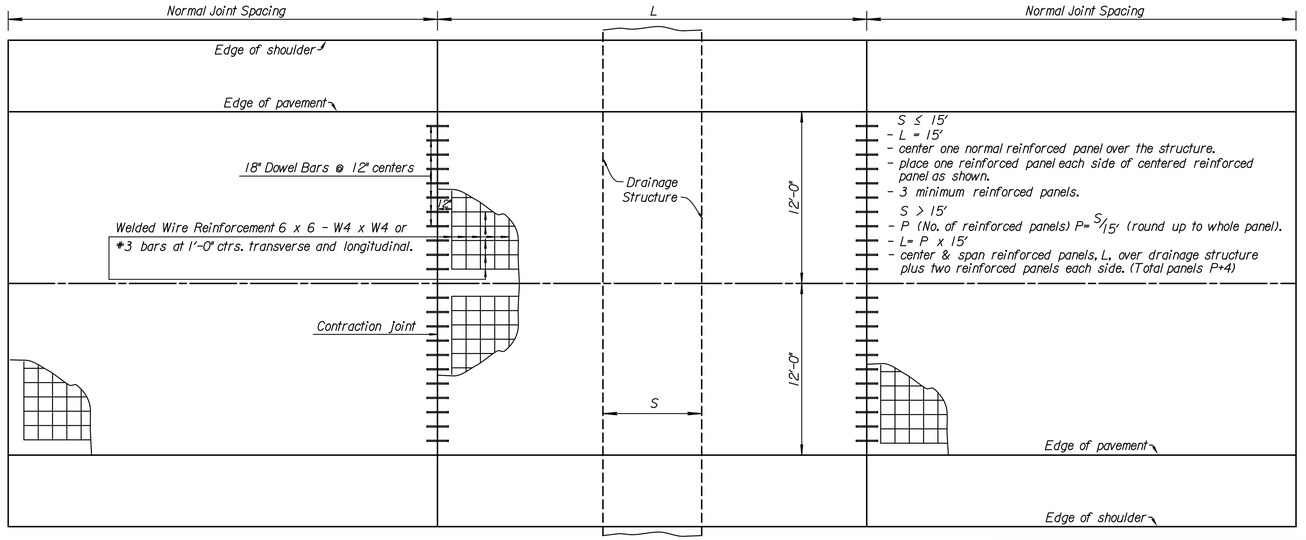


ASPHALT
SECTION B-B



ASPHALT
SECTION C-C

ASPHALT PAVEMENT PATCHING



OPTIONAL REINFORCED PCCP PANEL OVER DRAINAGE STRUCTURES

(Example shown with drainage structure less than normal slab width.)

GENERAL NOTE:

This procedure is to be used to mitigate interpanel cracking in PCCP panels being placed over drainage structures. Welded wire reinforcement or #3 rebar may be used to reinforce the pavement.

Welded wire reinforcement should be a minimum size of 6 x 6 - W4 x W4. Material placement is 9" from centerline/shoulder joint and 12" from contraction joints. The depth of placement is half the depth of the pavement, +/- a tenth of that depth.

When #3 bars are used the spacing is a 12" x 12" grid with 12" spacing from centerline/shoulder joint and 12" from contraction joints. The depth of placement is half the depth of the pavement, +/- a tenth of that depth.

See typical sections and pavement standard drawings for normal panel details. The contractor may elect to extend the reinforced panels to any distance or reinforce other locations where potential pavement cracking may occur as coordinated with the engineer.

All work and material required for reinforcing PCCP panel over drainage structure or other locations not specified in the plans shall be subsidiary. See the KDOT Standard Specifications for additional details.

NO.	DATE	REVISIONS	BY	APP'D
9	1-10-07	Changed bituminious to asphalt	S.W.K.	J.O.B.
8	3-30-05	Revised reinforcing wire callout	S.W.K.	J.O.B.
7	6-15-04	Added reinf. panel over drain. struct	S.W.K.	J.O.B.
6	5-12-98	Add. Median Crossover pay quantity	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT AUX. DETAILS
REIN. PANEL OVER STRUCTURE
& PAVEMENT PATCHING DETAILS

RD720

FHWA APPROVAL	6-13-05	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seltz

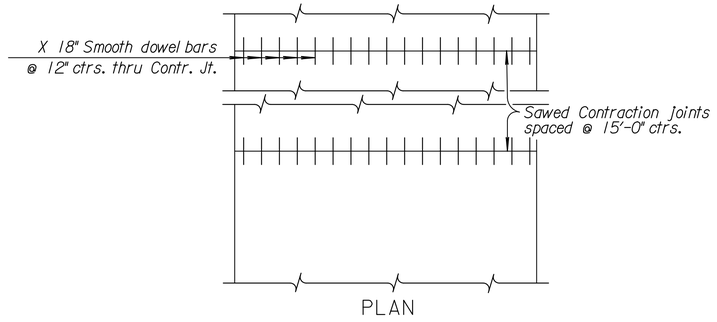
KDOT Graphics Certified 07-22-2010

Sh. No. 59

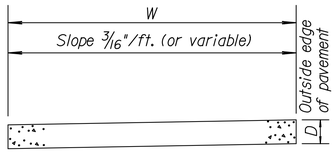
KDOT Graphics Certified

Drawn By: aameyer Plotted: 10/16/2014
File: G:\KC13\0356\Road\dgn\ka356001rss720-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	60	251



PLAN



TRANSVERSE SECTION

D= _____

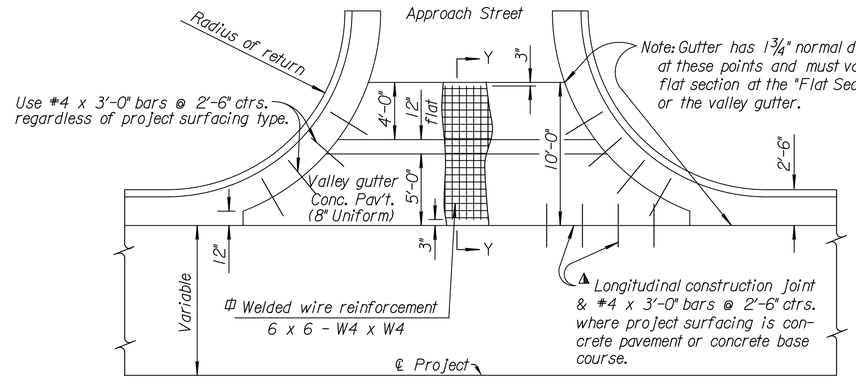
W= _____

Note: For contraction joint detail and other notes and details, see Standard Drawing RD708.

RAMP CONCRETE PAVEMENT

NOTE: Use 8" uniform thickness valley gutter concrete pavement with welded wire reinforcement. Approximate weight of welded wire reinforcement = 58 lbs. per per 100 sq. ft. .

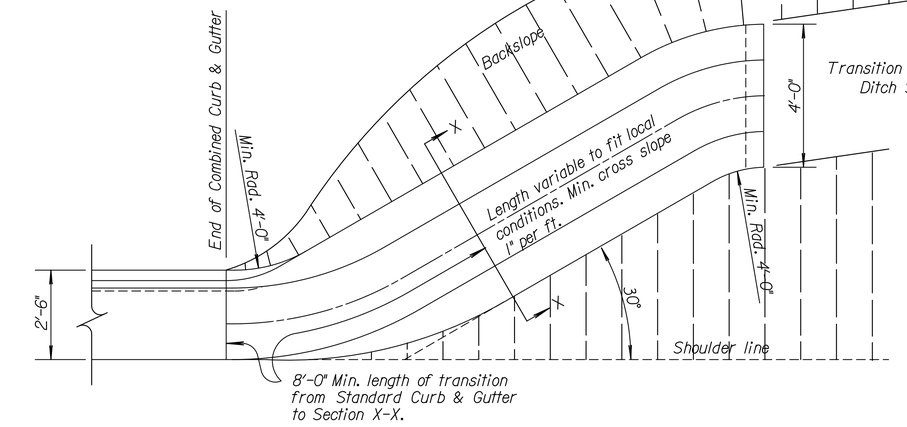
Where valley gutter, alley, and/or entrance pavement is the only pavement on the project, Concrete Grade 3.0 (AE) may be used.



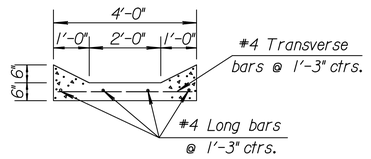
PLAN

▲ Where the valley gutter does not abut concrete pavement or concrete base course, omit tie bars and Longitudinal construction Joint.

◫ Welded wire can be substituted with a macro fiber. See standard specifications for macro fiber and dosage requirements.



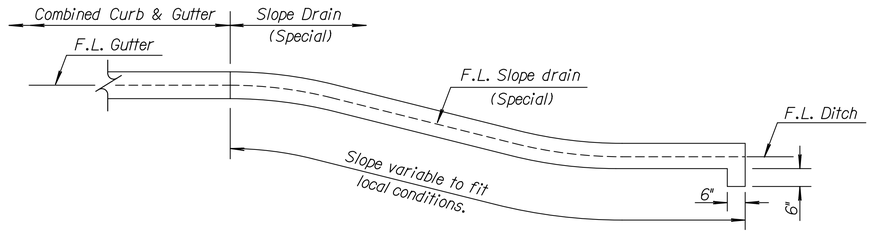
TYPICAL PLAN



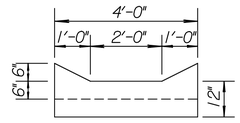
SECTION X-X

Note: Use Concrete Grade 3.0 (AE) throughout. The entire area of the Slope Drain (Special) below the curbs, to be poured and struck off with a uniform thickness of 6". The curbs are to be applied in the same manner and using the same methods as for edge curb.

Reinforcing steel to be deformed #4 bars.

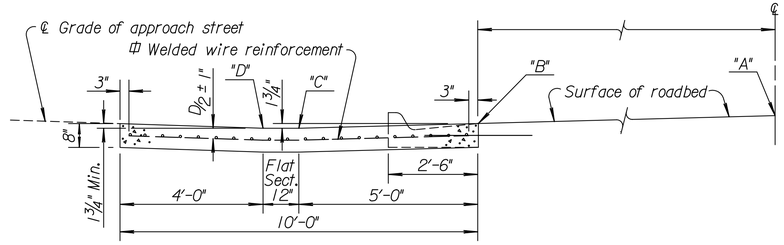


TYPICAL ELEVATION



END ELEVATION
(Downstream end)

SLOPE DRAIN (SPECIAL)



SECTION Y-Y

VALLEY GUTTER SUMMARY

Street	Station	Side	Elev. Pt. "A"	Elev. on ℄ of Approach Str. Pt."B"	"C" & "D"	Appr. Str. Grade	Sq. Yds. Conc. pavt. (8" Uniform)	

VALLEY GUTTER

NO.	DATE	REVISIONS	BY	APP'D
13	10-20-10	Added macro fiber option	S.W.K	J.O.B.
12	1-28-05	Changed Class to Grade conc. rel	S.W.K	J.O.B.
11	10-31-01	Removed sho. corrugation details	S.W.K	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT AUXILIARY DETAILS-II

RD722

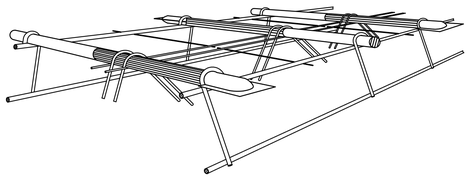
FHWA APPROVAL	6-01-11	APP'D.	James O. Brewer
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 06-02-2011 Sh. No. 60

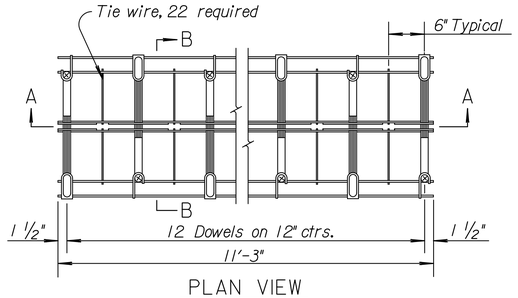
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rss722-01.dgn

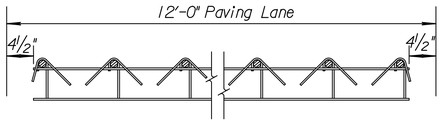
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	61	251



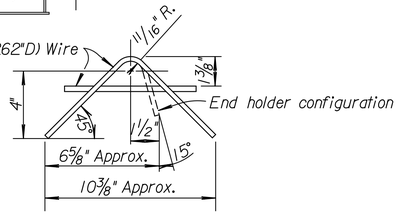
PERSPECTIVE VIEW

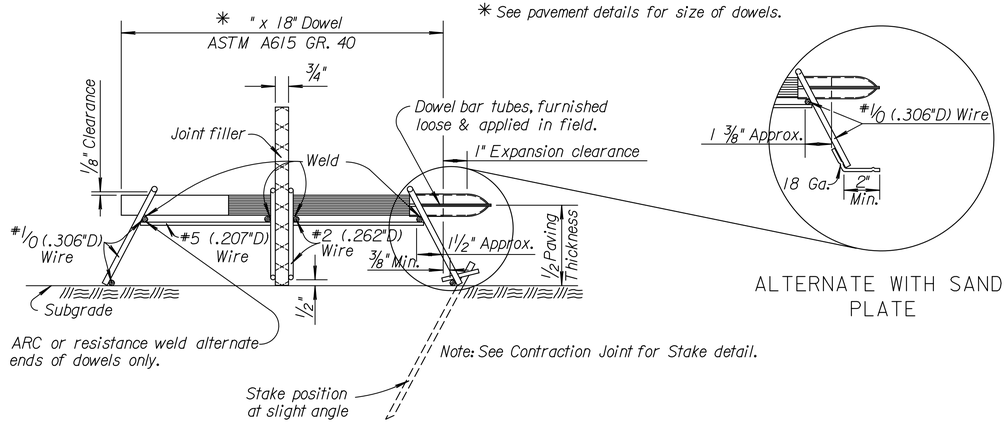


PLAN VIEW



SEC. A-A



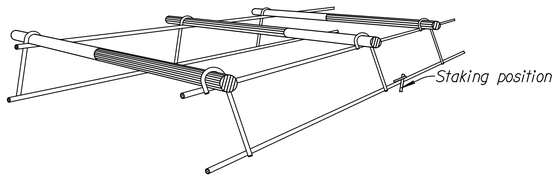


SEC. B-B

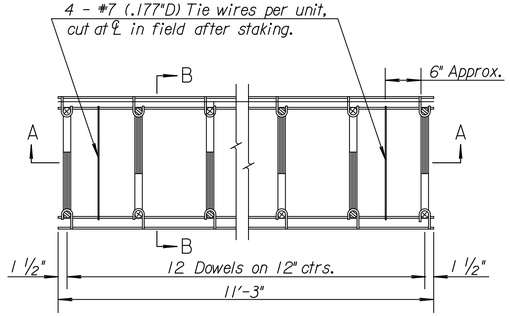
* See pavement details for size of dowels.

ALTERNATE WITH SAND PLATE

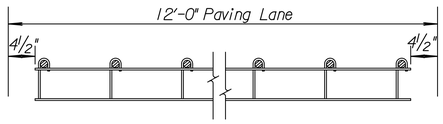
EXPANSION JOINT



PERSPECTIVE VIEW

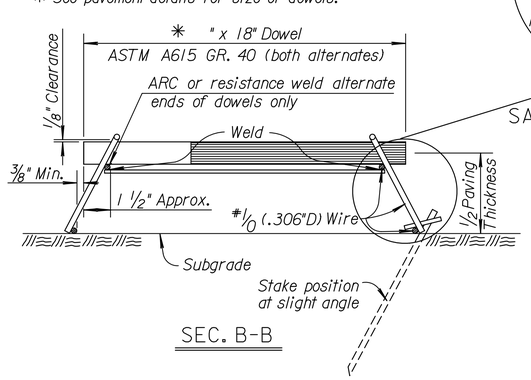


PLAN VIEW

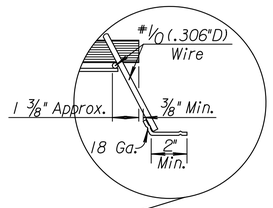


SEC. A-A

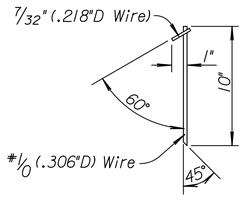
* See pavement details for size of dowels.



SEC. B-B



SAND PLATE (Alt. 1)



STAKE DETAIL

(6 Pieces minimum required)

CONTRACTION JOINT

Note: Wire sizes shown are minimum required.

Sides held together with tie wire, allowing quick separation of sides & insertion of expansion material, provided in field.

One length of Preformed Expansion Joint filler (Type B), or other approved material, cut to fit crown and subgrade shall be used for each lane of pavement as expansion joint filler.

A string line shall be stretched between the pavement forms along the center line of the joint.

Each dowel bar shall be coated with an epoxy coating that meets the standard specifications. The coating material shall be a powdered epoxy resin approved by the Chief, Bureau of Materials and Research and shall be uniformly applied according to accepted practices and the resin manufacturer's recommendations. For Alt. I the coating need not be applied to the end faces of the bars and will not be required within 2" of the end which will be fixed in the supporting basket by welding.

In order to identify the location of the bond breaker application, the working end of dowel and the supporting leg shall receive a light application of red paint at the place of fabrication. The bond breaker to be applied in the field prior to concrete placement shall consist of coating approximately three-fifths of the length of each dowel bar with hard grease at the working end identified by the red paint.

The cutting to length of the dowel bars shall be done in such a manner to result in no appreciable deformation of the ends.

The entire joint assembly shall be carefully leveled up so that the dowels are parallel to the slab surface and free to slide in the dowel holders. Any grease scraped off the dowels in assembling the joint shall be replaced. Any excess grease on the dowel holders shall be removed.

After the complete expansion joint is assembled, it shall be checked to be certain that the vertical plane of the joint will be perpendicular to the finished surface of the slab and at a right angle with the center line of the slab. The dowels shall be checked to be certain that they are level and will remain in a position parallel with the finished surface of the slab.

Concrete shall be placed over and adjacent to the joint in accordance with the requirements of the Specifications.

To finish the joint after completion of machine finishing, floating and straight edging of the surface. the concrete over the filler shall be carefully removed and the joint edged with an edger of the proper size.

Expansion Joint material is to be installed in the field.

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

GENERAL NOTE

Dowel bar insertion may be by mechanical dowel placers regardless of the joint spacing.

Each dowel bar shall be coated with an epoxy coating that meets the standard specifications. The coating material shall be a powdered epoxy resin approved by the Chief, Bureau of Materials and Research and shall be uniformly applied according to accepted practices and the resin manufacturer's recommendations. For Alt. I the coating need not be applied to the end faces of the bars and will not be required within 2" of the end which will be fixed in the supporting basket by welding.

The cutting to length of the dowel bars shall be done in such a manner to result in no appreciable deformation of the ends.

Alt. 1 (Baskets)

Wire sizes shown are minimum required.

Basket to be staked to sub-grade, as shown. Ramset or similar type fastener with clip to be used when subgrade condition requires it.

A string line shall be stretched between the pavement forms along the center line of the joint. The position of the joint shall be carefully marked so that the saw cut will coincide with the center line of the joint.

In order to identify the location of the bond breaker application, the working end of dowel and the supporting leg shall receive a light application of red paint at the place of fabrication. The bond breaker to be applied in the field prior to concrete placement shall consist of coating approximately three-fifths of the length of each dowel bar with hard grease at the working end identified by the red paint.

The entire joint assembly shall be carefully leveled so that the dowels are parallel to the slab surface and free to slide in the dowel holders. Any coating scraped off the dowels in assembling the joint shall be replaced.

After the complete contraction joint is assembled, it shall be checked to be certain that the vertical plane of the joint will be perpendicular to the finished surface of the slab and at a right angle with the center line of the slab unless shown otherwise on the plans. The dowels shall be checked to be certain that they are level and will remain in a position parallel with the finished surface of the slab.

Concrete shall be placed over and adjacent to the joint in accordance with the requirements of the Specifications.

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

Alt. 2 (Mechanical placement)

Joint spacing shall be normal to centerline.

The pavement shall be placed and consolidated to full depth prior to insertion of the dowel bars.

The dowel bars shall be coated with a bond breaking agent prior to insertion into the plastic concrete.

The dowel bars shall be inserted into the plastic concrete ahead of the finishing beam or screed.

The installing device shall consolidate the concrete around the dowel bars such that no voids exist, without the supplemental use of hand held vibrators.

The dowel bars shall be located within one inch of the planned transverse location and within the range of depth of D/2 ± 0.1 D measured from mid depth and mid length of the bar where D represents the pavement thickness.

The dowel bars shall be located within two inches of the planned longitudinal location.

The dowel bars shall be parallel to the pavement surface and centerline within a tolerance of one half inch in 18 inches in both the vertical and horizontal direction.

The forward movement of the finishing beam or screed shall not be interrupted by the inserting of the dowel bars.

A positive method of marking the locations of the transverse joints shall be provided.

NO.	DATE	REVISIONS	BY	APP'D
8	2-15-06	Chg. Grade 60 to Grade 40 Steel	S.W.K.	J.O.B.
7	5- 5-04	Revision on Epoxy coating	S.W.K.	J.O.B.
6	4- 9-03	Rev. General Note on Epoxy coating	S.W.K.	J.O.B.
5	4-24-90	Revised notes, added Alt.1&2 Cont.Jt.	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONTRACTION & EXPANSION JT. DOWEL ASSEMBLIES

RD735

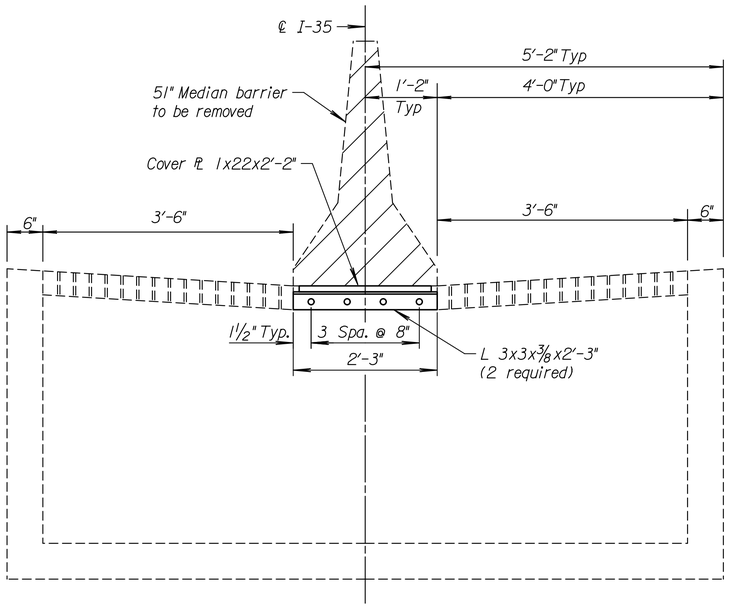
FHWA APPROVAL	4-20-06	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Hecht

KDOT Graphics Certified 07-22-2010 Sh. No. 61

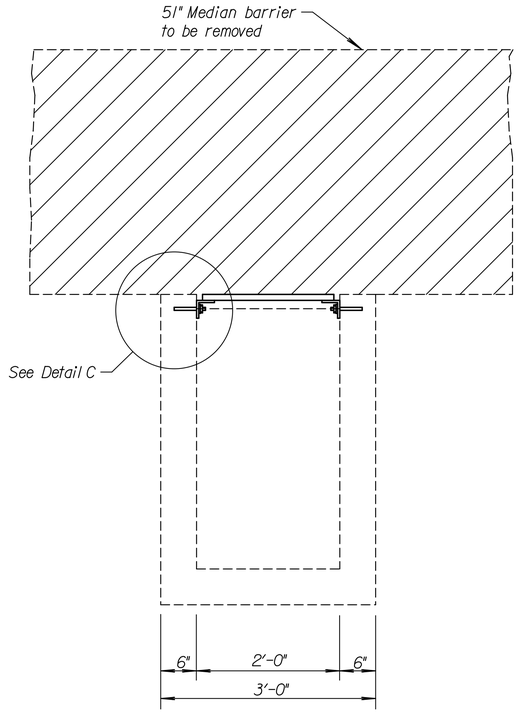
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka3560001rss735-01.dgn

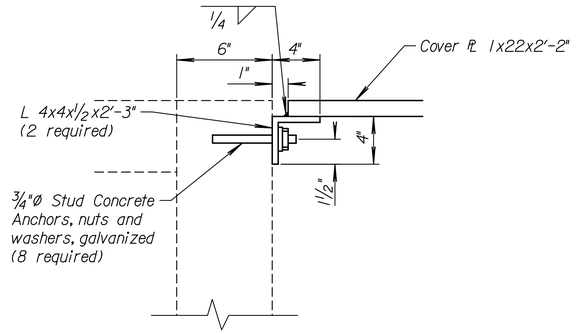
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	62	251



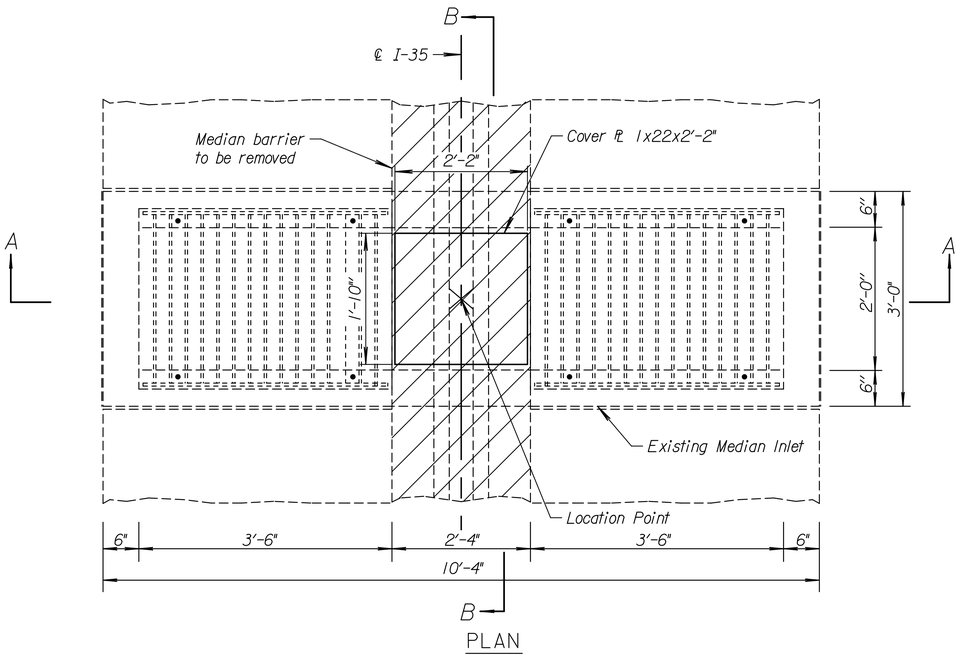
SECTION A-A



SECTION B-B



DETAIL C



PLAN

Notes:

Cover plate and angles shall conform to ASTM A709 (Grade 36). Stud anchor embedment depth shall conform to manufacturers recommendations for the specific anchor system for embedment into 4000 psi concrete and a minimum factored tensile load of 8,000 pounds. Tensile resistance of the anchors shall be determined in accordance with AASHTO LRFD Specifications. Concrete anchor breakout and pullout resistance shall be determined in accordance with strength design provisions of ACI 318-05, Appendix D. The contractor shall submit verification from the anchor system manufacturer that the anchor systems is adequate to resist the specified factored load. The bid item "Adjustment of Existing Structures" includes all labor and materials required to install the stud anchors, support angles and steel cover plates and other incidentals required to complete the work.

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rdd-01.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

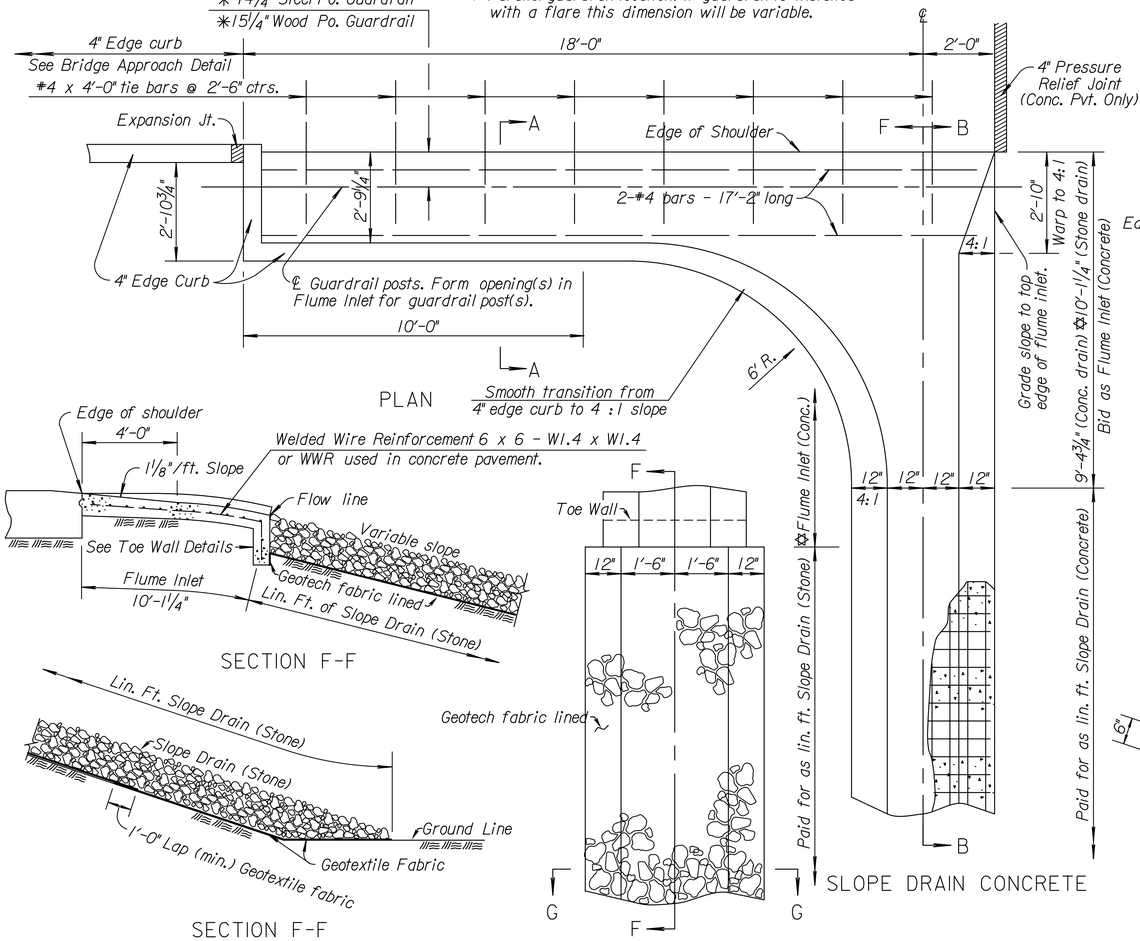
TYPE V INLET (MEDIAN) MODIFICATIONS

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	63	251

✳ $14\frac{1}{4}$" Steel Po. Guardrail
✳ $15\frac{1}{4}$" Wood Po. Guardrail

✳ Parallel guardrail location. If guardrail is installed with a flare this dimension will be variable.



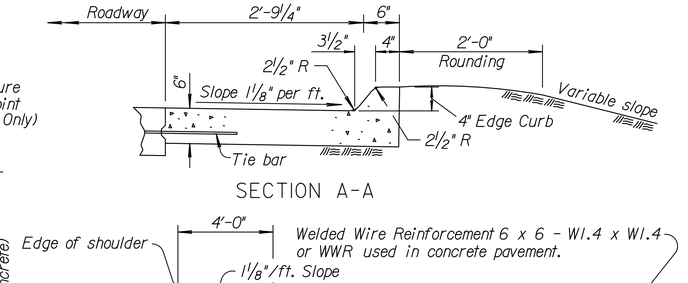
PLAN

SECTION F-F

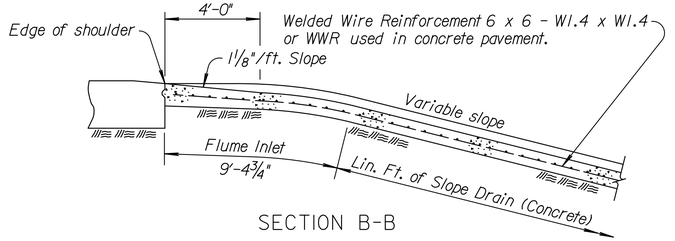
SECTION F-F

SLOPE DRAIN STONE

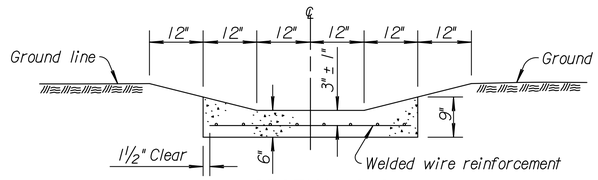
SLOPE DRAIN CONCRETE



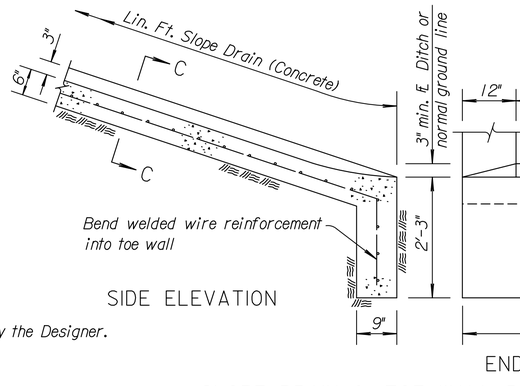
SECTION A-A



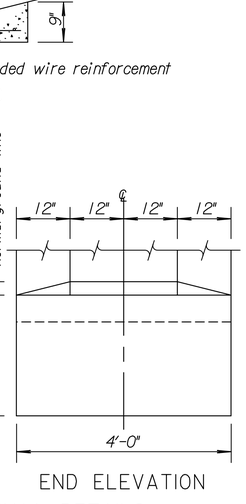
SECTION B-B



SECTION C-C



SIDE ELEVATION



END ELEVATION

Slope Drain is shown with (STONE) or (CONCRETE) option, type to be determined by the Designer.

SLOPE DRAIN & TOE WALL DETAILS

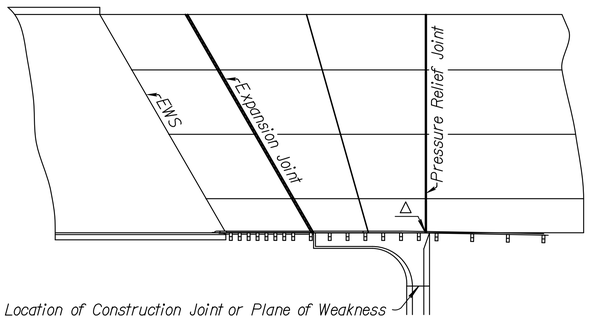
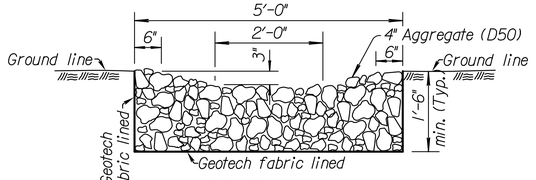
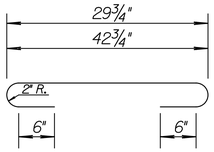


DIAGRAM of FLUME INLET at PRESSURE RELIEF JOINT

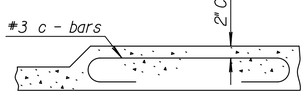
△ *On projects with concrete paved shoulders where, due to skew of the bridge, the flume inlet extends beyond the 4" pressure relief joint of the special concrete bridge approach, the portion of inlet or gutter extending beyond the pressure relief joint shall not be tied to the concrete shoulder with tie bars.*



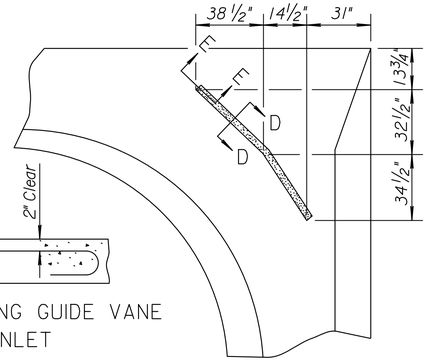
SECTION G-G



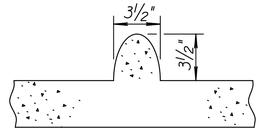
#3 c - bars
Bending Diagram
(Bend one bar each length)



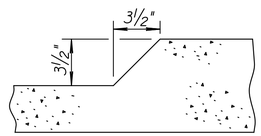
METHOD of CONNECTING GUIDE VANE to FLUME INLET



PARTIAL PLAN with GUIDE VANE



SECTION D-D
(Guide Vane formed monolithic)



SECTION E-E
(Typical both ends of vane)

GENERAL NOTE

Flume Inlets shall be paid for by unit price per each. Slope Drains (Stone or Concrete) shall be paid for by unit price per linear foot.

Reinforcing steel & welded wire reinforcement are subsidiary to Flume Inlet and Slope Drain.

Flume Inlets will be constructed without Guide Vanes except at locations noted in plans or as directed by the Engineer. Construction of guide vanes, when required, shall be subsidiary to the bid item "Flume Inlet".

The entire area of the Flume Inlet & Slope Drain shall be placed monolithic and struck off with a uniform thickness of 6 inches.

Guide Vanes may be formed monolithic with the Flume Inlet or tied to the Flume Inlet in the manner shown if constructed separately. Alternate methods of constructing Guide Vanes may be used with approval of the Engineer.

Concrete Grade 3.0 (AE) shall be used in Flume Inlet and Slope Drain. On concrete pavement projects, the contractor may substitute the mix used in concrete pavement.

Transverse expansion and contraction joints of same type in pavement are to extend through the flume inlet and 4" edge curb, omitting load transfer devices. The edge curb section will be made continuous through any expansion joint by using a filler material approved by the Engineer to fill the void to the full height of the curb. Joints will not extend into the Slope Drain.

All exposed edges shall be finished with an edging tool.

For details of 4" edge curb see Standard Drawing RD711.

No adjustment of guardrail post spacing will be permitted.

Flume inlet shall only be constructed adjacent to concrete pavement. Flume inlet shall be tied to the pavement with #4 x 4'-0" tie bars at 2'-6" centers. Tie bars shall be subsidiary to the Flume Inlet.

Shape of guide vane shown is approximate and may be altered slightly to simplify construction. Height and width dimension shall be as shown regardless of shape.

Aggregate for the Slope Drain (STONE) shall meet the reqirements of stone for Aggregate Ditch Lining and have a D_{50} of 4" unless otherwise noted on the plans. The Contractor shall place stone from bottom to the top of slope to produce a well graded mass without segregation of material sizes. Placement, measurement, and payment shall conform to KDOT Standard Specifications.

Slope Drain (STONE) shall be underlain with geotextile fabric that meets the KDOT Standard Specification. All work and materials for the geotextile fabric shall be subsidiary to the Slope Drain (STONE).

QUANTITIES (For information only)

SLOPE DRAIN (CONCRETE)

Flume Inlet Concrete:
1.9 cu. yds. Concrete ✡
42 lbs. reinf. steel and WWR
Slope Drain (CONCRETE):
0.0833 cu. yds. Concrete per lin. ft.
0.79 lbs. WWR per lin. ft.
Toe wall shall be paid for as 1.5 lin. ft. of Slope drain.

SLOPE DRAIN (STONE)

Flume Inlet & Toe Wall Concrete:
2.2 cu. yds. Concrete ✡
44 lbs. reinf. steel and WWR
Slope Drain (STONE): 4" Aggregate (D50)
0.25 cu. yds. 4" Agg. (D50) per lin. ft.
0.90 sq. yds. Geotextile fabric per lin. ft.

✡ *Does not include guide vanes.*

NO.	DATE	REVISIONS	BY	APP'D
5	9-12-07	Reorg. sheet, add. slope drain stone	S.W.K.	J.O.B.
4	1-28-05	Chg. Class to Grade conc., reinf.	S.W.K.	J.O.B.
3	7-26-04	Revised guard fence to guardrail	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

FLUME INLET and SLOPE DRAIN (CONCRETE/STONE)

RD628

FHWA APPROVAL	11-20-07	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

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Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rss628-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
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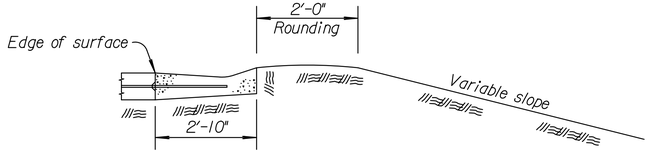
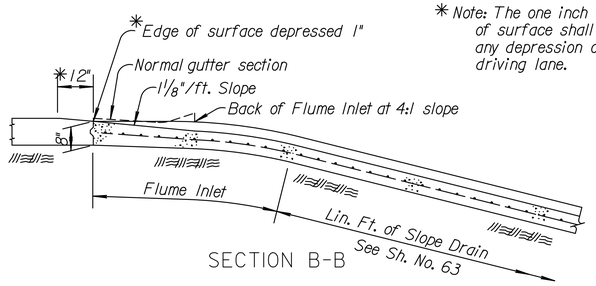
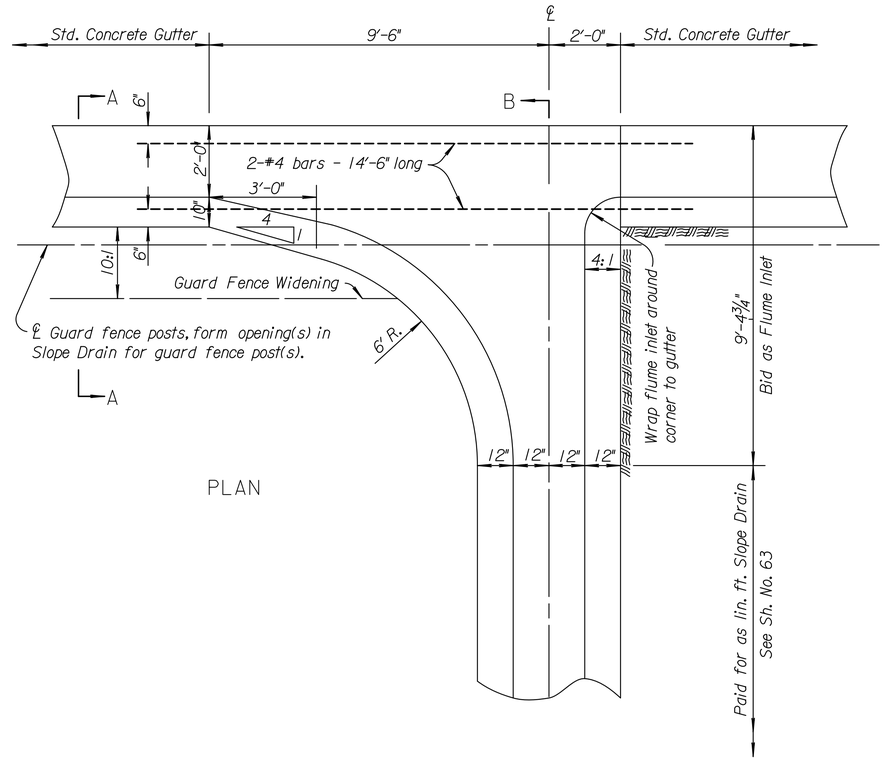


SECTION A-A



SECTION B-B

*Note: The one inch depression of the edge of surface shall be adjusted to prevent any depression of the surface in the driving lane.



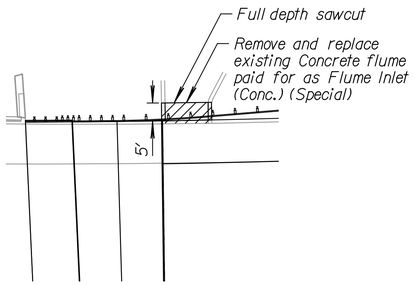
PLAN

GENERAL NOTE

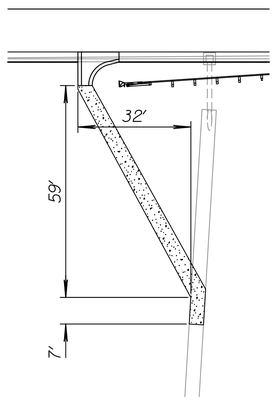
Flume Inlets shall be paid for by unit price per each.
Reinforcing steel & wire mesh are subsidiary to Flume Inlet
The entire area of the Flume Inlet & Slope Drain shall be poured monolithic and struck off with a uniform thickness of 6 inches.
Class "A" Concrete (AE) shall be used in Flume Inlet and Slope Drain. On concrete pavement projects, the contractor may substitute the mix used in concrete pavement.
No pavement expansion or contraction joints shall be placed within the limits of the Flume Inlet & Slope Drain. Transverse expansion and contraction joints of same type as pavement are to extend through gutter. Omit load transfer devices.
All exposed edges shall be finished with an edging tool.
For details of concrete gutter see Std. No. 635.
Location of Flume Inlet shall be adjusted as necessary in order that no more than one guard fence post is located within it. No adjustment of guard fence post spacing will be permitted to accomplish this.
When installed adjacent to concrete pavement, flume inlet shall be tied to the pavement with #4 x 4'-0" Gutter tie bars at 2'-6" centers.

QUANTITIES
(For information only)

Flume Inlet:
1.46 cu. yds. Concrete
31 lbs. reinf. steel and mesh



FLUME INLET (SPECIAL)
STA. 237+04.14 LT.



SLOPE DRAIN AT
STA. 182+75.67 RT.

DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Drawn By : jcgood
File : G:\KC13\0356\Road\dgn\ka356001rmi-03.dgn
Plotted : 10/20/2014

KANSAS DEPARTMENT OF TRANSPORTATION

FLUME INLET (CONC.) (SPECIAL)

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Sh. No. 64

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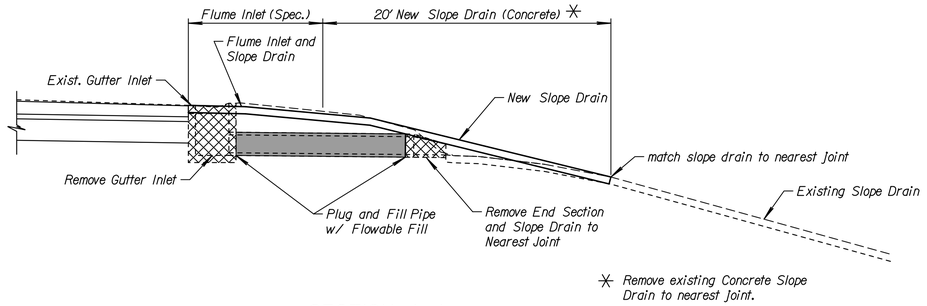
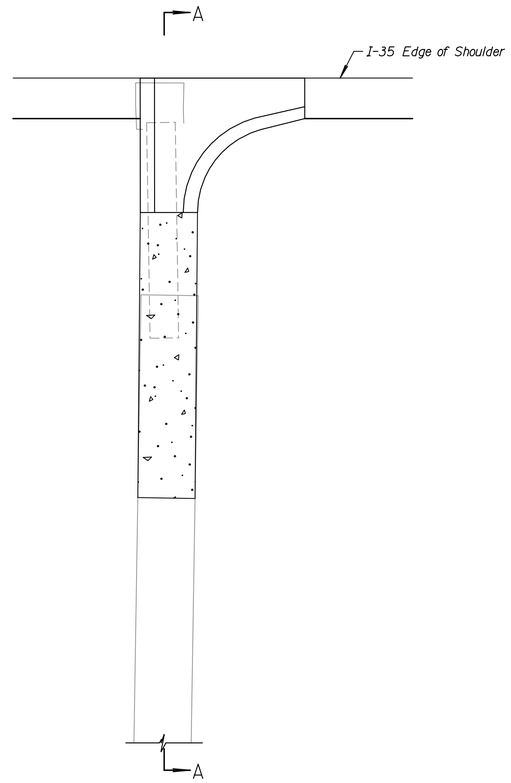
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	65	251

DATE	BY	REFERENCES NOTED
		REFERENCES CHECKED



SECTION A-A



PLAN

KANSAS DEPARTMENT OF TRANSPORTATION

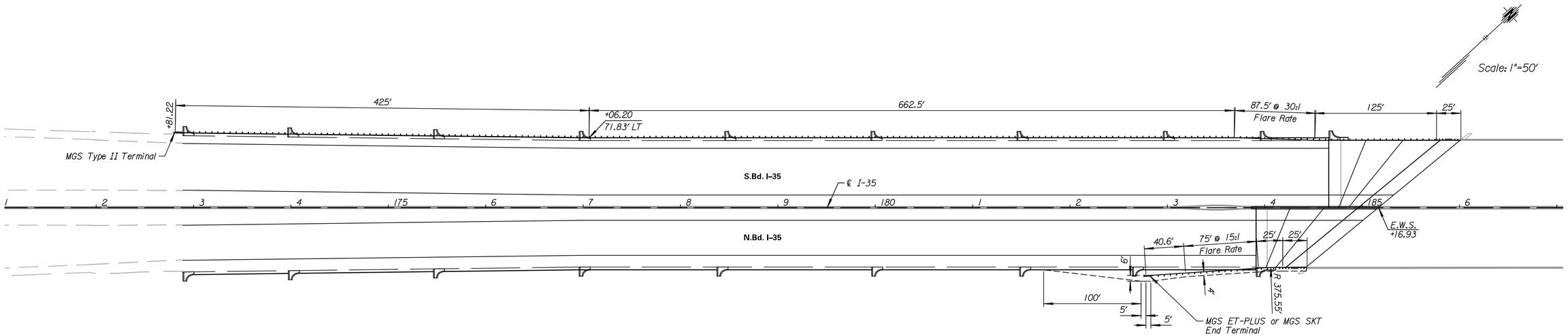
FLUME INLET (CONC.) (SPECIAL), SLOPE DRAIN DETAILS AND GUTTER INLET REMOVAL

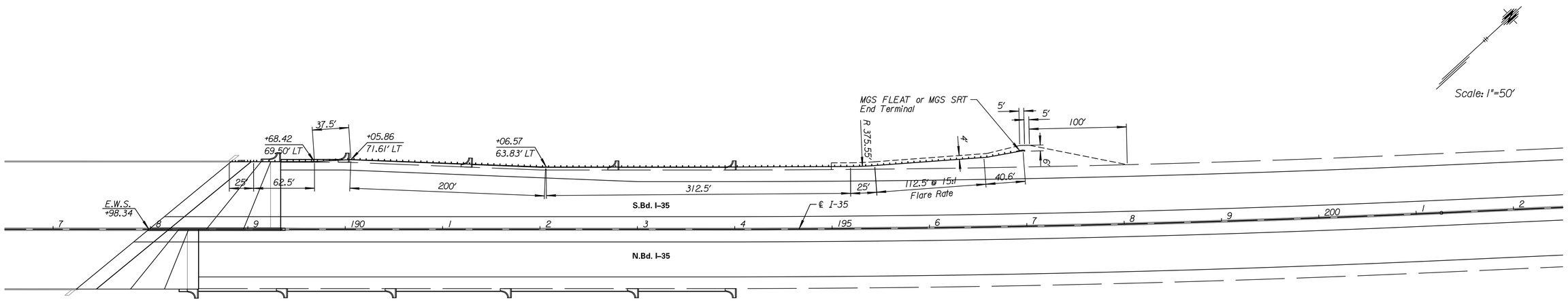
KDOT Graphics Certified 10-20-2014 *Sh. No. 65*

KDOT Graphics Certified

Drawn By : jcgood Plotted : 10/20/2014
File : G:\KC1\30356\Road\dgn\ka356001rmi-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	66	251





DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rgr-01.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

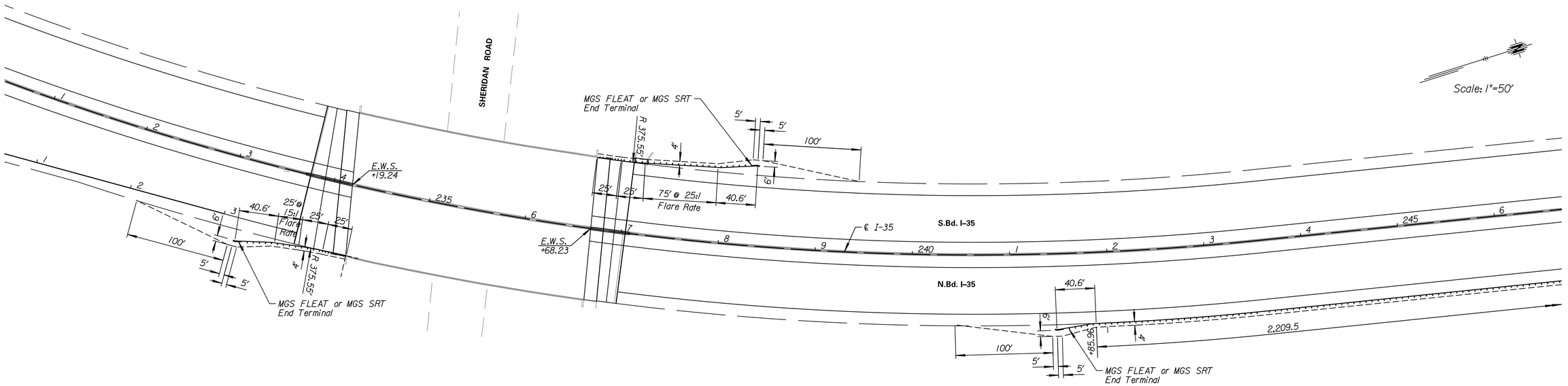
GUARDRAIL DETAILS
I-35

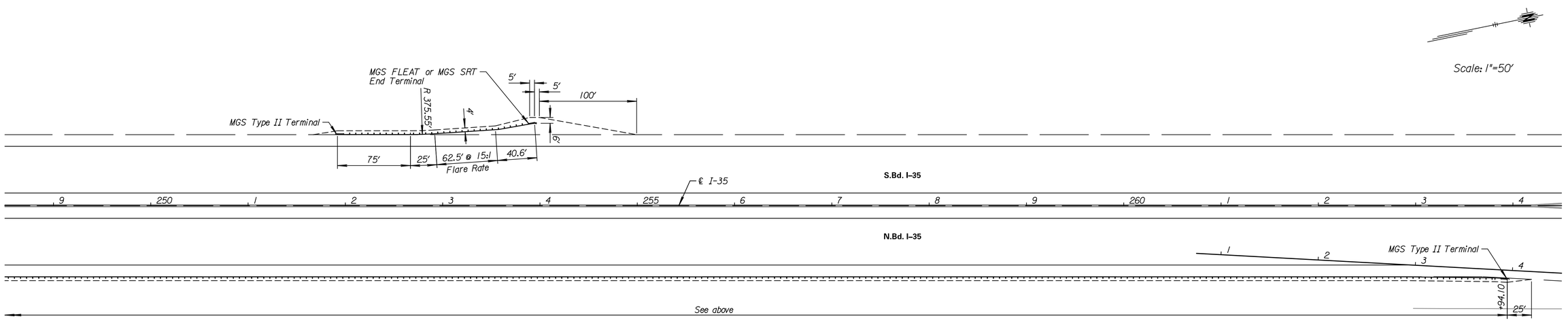
KDOT Graphics Certified 10-15-2014

Sh. No. 66

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	67	251





DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rgr-02.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL DETAILS
I-35

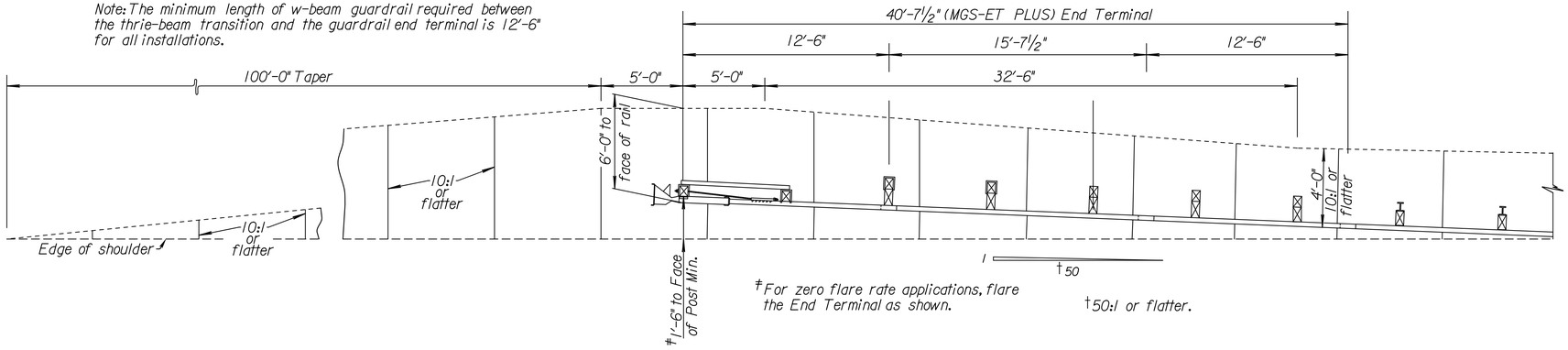
KDOT Graphics Certified 10-15-2014

Sh. No. 67

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	68	251

Note: The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations.



‡For zero flare rate applications, flare the End Terminal as shown.

†50:1 or flatter.

Note to Designer: 25:1 or flatter flare per manufacturer guidance can be used depending on design and site parameters. If a flare other than 50:1 or flatter (Typical) is used revise this sheet and all supporting sheets.

"Parallel" installations are flared at a rate of 50:1. "Zero Flare" installations follow the edge of shoulder.

GENERAL NOTE

Use approved wood (shown & described) or steel posts ① through ⑥ on the (MGS-ET PLUS) provided by the manufacturer. Terminal post type used is independent of post type used on the remainder of the installation. No mixing of post types allowed in guardrail run.

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.

Drive the steel soil tubes with an approved driving head. Do not drive steel tubes with wood post in the tube. Backfill and satisfactorily compact around steel tubes placed in drilled holes to prevent tube settlement.

The soil tubes should not protrude more than 4" above ground (measured along a 5'-0" cord). If necessary grade the site to meet this requirement.

Apply retroreflective sheeting as shown on the face of the extruder prior to installation. Thoroughly clean and dry extruder prior to applying sheeting.

Galvanize all steel parts after fabrication.

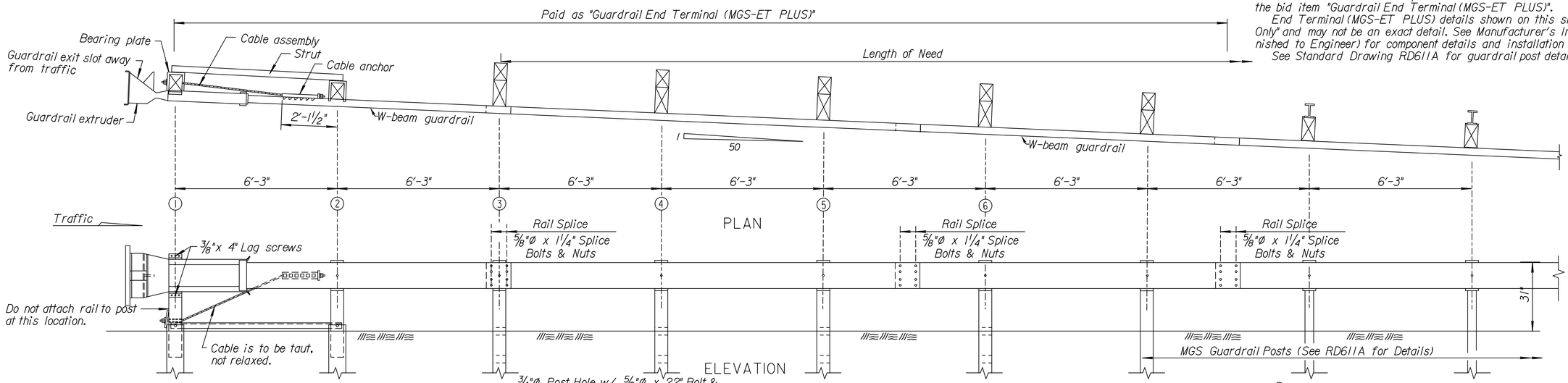
The cable anchor assembly must be taut. Use a locking device, (vice grips or channel lock pliers) to prevent the cable from twisting when tightening the nuts.

When rock is encountered during installation, see Manufacturer's Installation Manual for procedure.

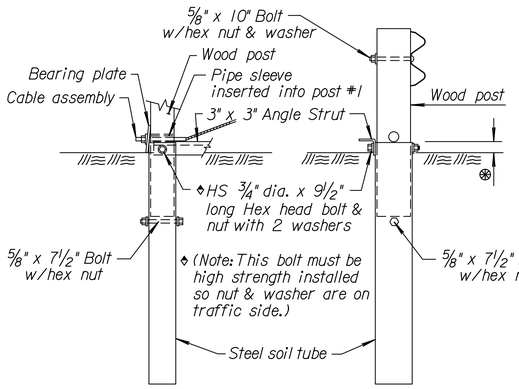
All work and materials required for installation of this terminal are paid under the bid item "Guardrail End Terminal (MGS-ET PLUS)".

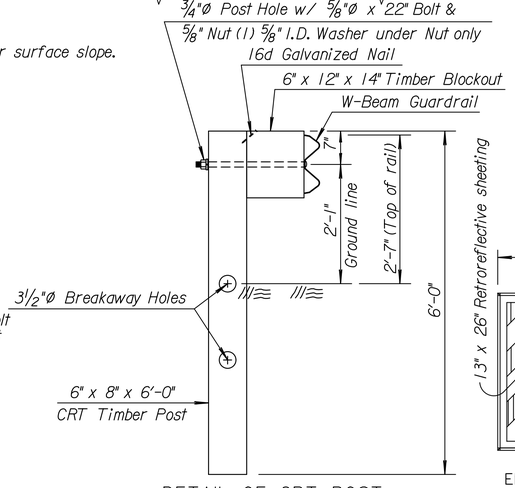
End Terminal (MGS-ET PLUS) details shown on this sheet are for "Information Only" and may not be an exact detail. See Manufacturer's Installation Manual (furnished to Engineer) for component details and installation instructions.

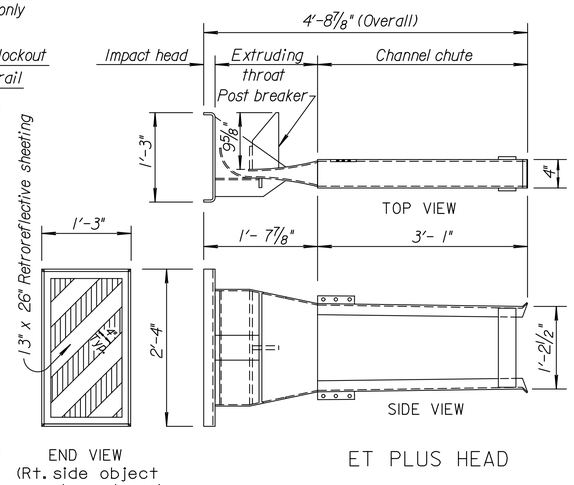
See Standard Drawing RD611A for guardrail post details.

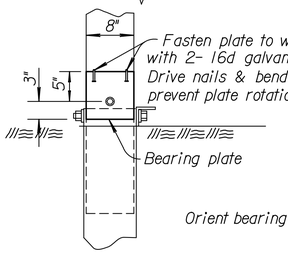


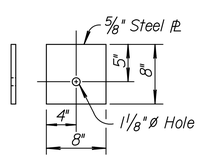
❀ 4" maximum projection of the steel tube above the 10:1 or flatter surface slope.





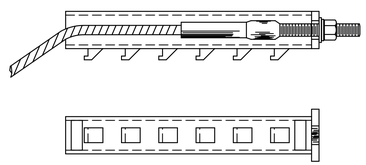






BEARING PLATE

Orient bearing plate as shown with the hole 5" from the top.



CABLE ANCHOR ASSEMBLY

NO.	DATE	REVISIONS	BY	APP'D
3	6-13-13	Revised Post, Post No. 7	S.W.K.	J.O.B.
2	5-21-12	Revised Offset, End Term.	S.W.K.	J.O.B.
1	1-23-12	Revised Dimension, End Term.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (MGS-ET PLUS) PARALLEL

RD606D

FHWA APPROVAL	10-18-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

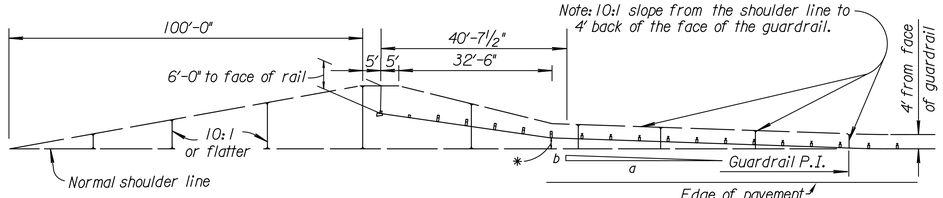
KDOT Graphics Certified 10-28-2013 Sh. No. 68

KDOT Graphics Certified

Drawn By: aameyer Plotted: 10/16/2014
File: G:\KC13\0356\Road\dgn\ka3560001rss606d-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	69	251

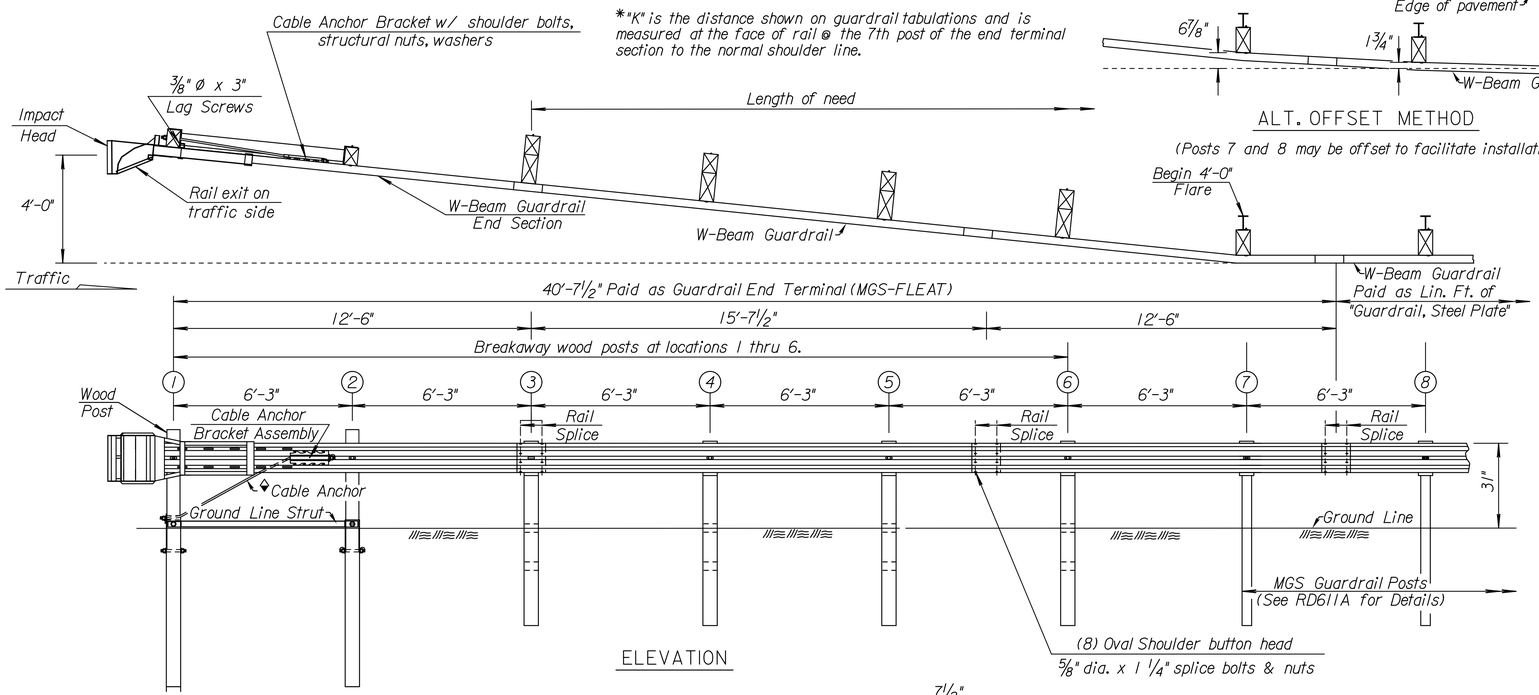
Note: The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations.



*"K" is the distance shown on guardrail tabulations and is measured at the face of rail @ the 7th post of the end terminal section to the normal shoulder line.

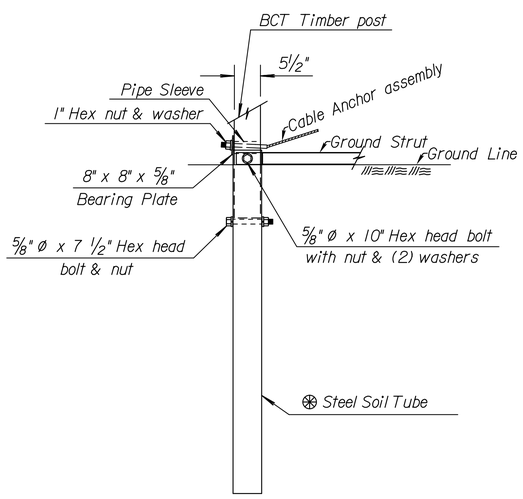
ALT. OFFSET METHOD

(Posts 7 and 8 may be offset to facilitate installation)

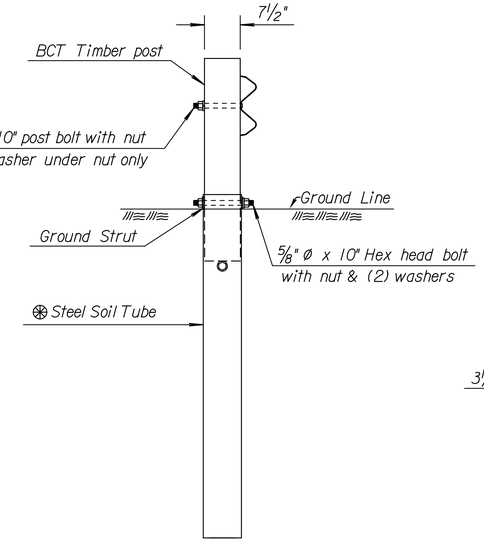


ELEVATION

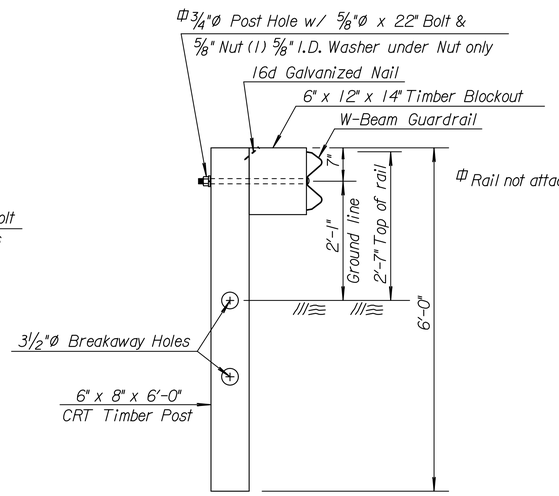
♦ After final assembly recheck cable to be taut.



PARTIAL VIEW OF POST 1



DETAIL OF POST #2



DETAIL OF CRT POST

(#3 through #6)

Optional 4'-6" or 5'-0" tube w/soil plate may be used as per the manufacturer's specifications.

GENERAL NOTES

Use approved wood (shown & described) or steel posts ① through ⑥ on the (MGS-FLEAT) provided by the manufacturer. Terminal post type used is independent of post type used on the remainder of the installation. No mixing of post types allowed in guardrail run.

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.

Drive the steel soil tubes with an approved driving head. Do not drive steel tubes with wood post in the tube. Backfill and satisfactorily compact around steel tubes placed in drilled holes to prevent tube settlement.

The soil tubes should not protrude more than 4" above ground (measured along a 5'-0" cord). If necessary grade the site to meet this requirement. When rock is encountered during installation, see Manufacturer's Installation Manual for procedure.

The cable anchor assembly must be taut. Use a locking device, (vice grips or channel lock pliers) to prevent the cable from twisting when tightening the nuts.

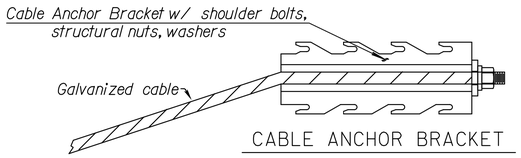
Apply retroreflective sheeting as shown on the face of the impact head prior to installation. Thoroughly clean and dry steel prior to applying sheeting.

Galvanize all steel parts after fabrication.

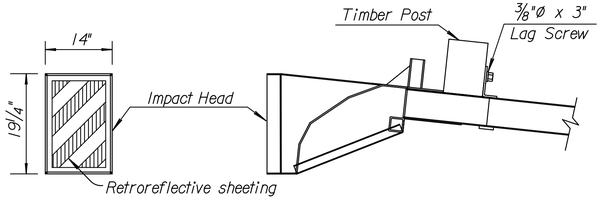
All work and materials required for installation of this terminal are paid under the bid item "Guardrail End Terminal (MGS-FLEAT)".

End Terminal (MGS-FLEAT) details shown on this sheet are for "Information Only" and may not be an exact detail. See Manufacturer's Installation Manual (furnished to Engineer) for component details and installation instructions.

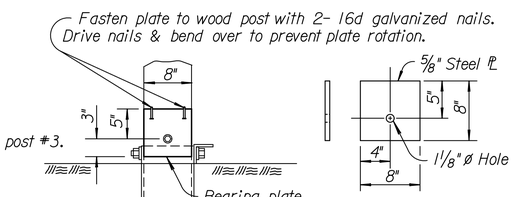
See Standard Drawing RD611A for guardrail post details.



CABLE ANCHOR BRACKET



IMPACT HEAD CONNECTING DETAIL



BEARING PLATE

Orient bearing plate as shown with the hole 5" from the top.

NO.	DATE	REVISIONS	BY	APP'D
2	1-29-13	Revised Offset Method, End Term.	S.W.K.	J.O.B.
1	1-24-12	Revised Dimension, End Term.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (MGS-FLEAT) FLARED

RD606E

FHWA APPROVAL	5-21-2013	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

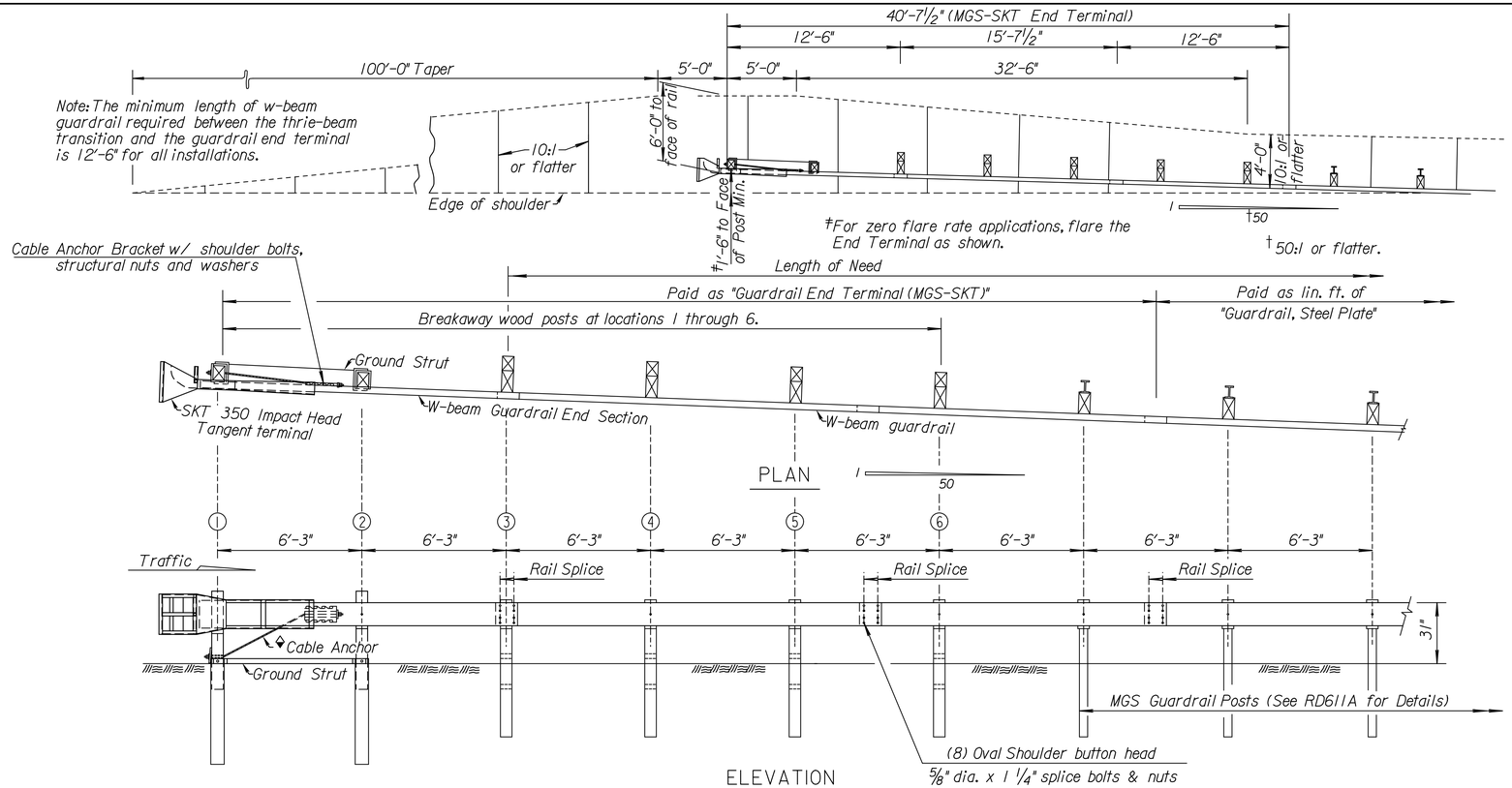
KDOT Graphics Certified 06-06-2013 Sh. No. 69

KDOT Graphics Certified

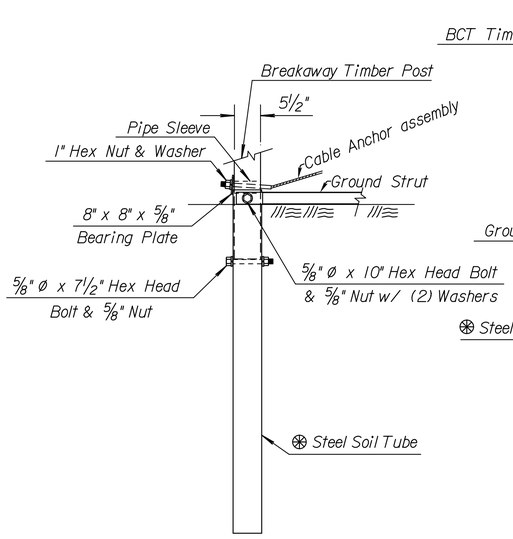
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Road\dgn\ka3560011rss606e-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	70	251

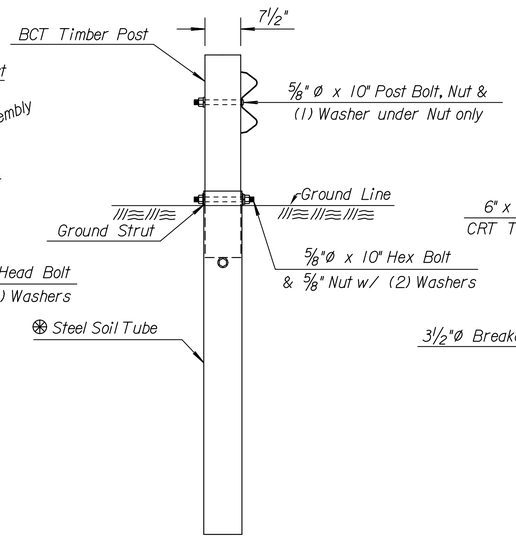
Note to Designer: 25:1 or flatter flare per manufacturer guidance can be used depending on design and site parameters. If a flare other than 50:1 or flatter (Typical) is used revise this sheet and all supporting sheets "Parallel" installations are flared at a rate of 50:1. "Zero Flare" installations follow the edge of shoulder.



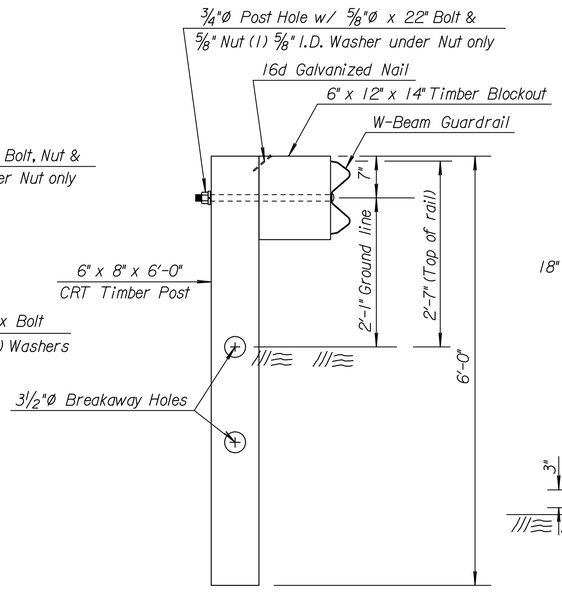
♦ After final assembly recheck cable to be taut.



PARTIAL VIEW OF POST #1



DETAIL OF POST #2



DETAIL OF CRT POST (#3 through #6)

◈ Optional 4'-6" or 5'-0" tube w/soil plate may be used as per the manufacturer's specifications.

GENERAL NOTES

Use approved wood (shown & described) or steel posts ① through ⑥ on the (MGS-SKT) provided by the manufacturer. Terminal post type used is independent of post type used on the remainder of the installation. No mixing of post types allowed in guardrail run.

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.

Galvanize all steel parts after fabrication.

Apply retroreflective sheeting as shown on the face of the impact head prior to installation. Thoroughly clean and dry steel prior to applying sheeting.

The cable anchor assembly must be taut. Use a locking device, (vice grips or channel lock pliers) to prevent the cable from twisting when tightening the nuts.

The soil tubes should not protrude more than 4" above ground (measured along a 5'-0" cord). If necessary grade the site to meet this requirement.

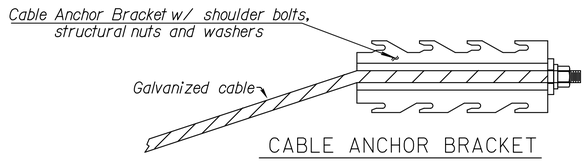
Drive the steel soil tubes with an approved driving head. Do not drive steel tubes with wood post in the tube. Backfill and satisfactorily compact around steel tubes placed in drilled holes to prevent tube settlement.

When rock is encountered during installation, see Manufacturer's Installation Manual for procedure.

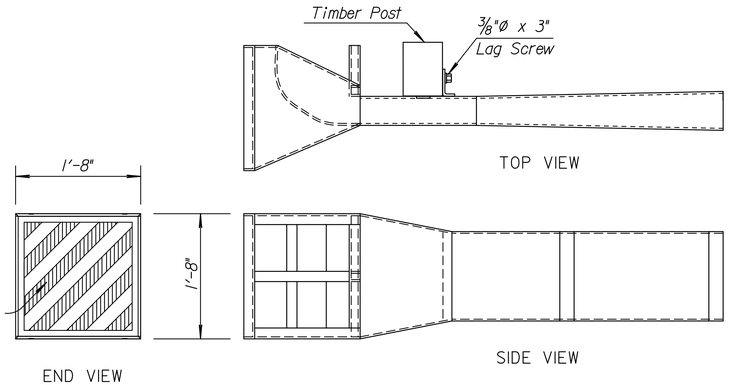
All work and materials required for installation of this terminal are paid under the bid item "Guardrail End Terminal (MGS-SKT)".

End Terminal (MGS-SKT) details shown on this sheet are for "Information Only" and may not be an exact detail. See Manufacturer's Installation Manual (furnished to Engineer) for component details and installation instructions.

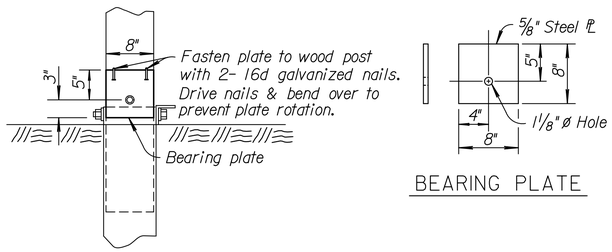
See Standard Drawing RD611A for guardrail post details.



CABLE ANCHOR BRACKET



DETAILS OF IMPACT HEAD



BEARING PLATE

Orient bearing plate as shown with the hole 5" from the top.

NO.	DATE	REVISIONS	BY	APP'D
2	5-21-12	Revised Offset, End Term.	S.W.K.	J.O.B.
1	1-24-12	Revised Dimension, End Term.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (MGS-SKT) PARALLEL

RD606F

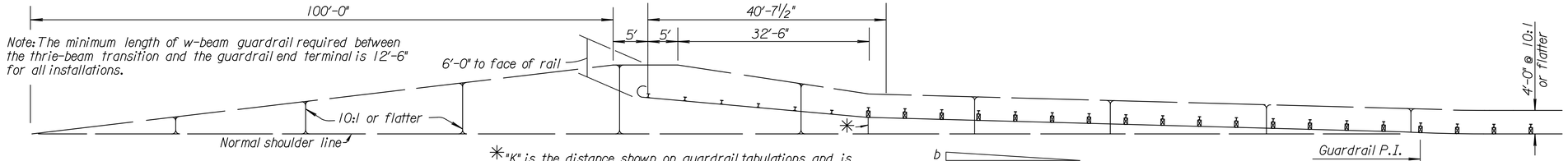
FHWA APPROVAL	7-9-12	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 07-13-2012 Sh. No. 70

KDOT Graphics Certified

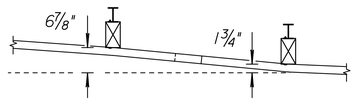
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rss606f-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	71	251



Note: The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations.

✳"K" is the distance shown on guardrail tabulations and is measured at the face of rail @ the 7th post of the end terminal section to the normal shoulder line.



ALT. OFFSET METHOD

(Posts 7 and 8 may be offset to facilitate installation)

GENERAL NOTE

Use approved steel (shown & described) or wood posts ① through ⑥ on the (MGS-SRT) provided by the manufacturer. Terminal post type used is independent of post type used on the remainder of the installation. No mixing of post types allowed in guardrail run.

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.

The cable anchor assembly must be taut. Use a locking device, (vice grips or channel lock pliers) to prevent the cable from twisting when tightening the nuts.

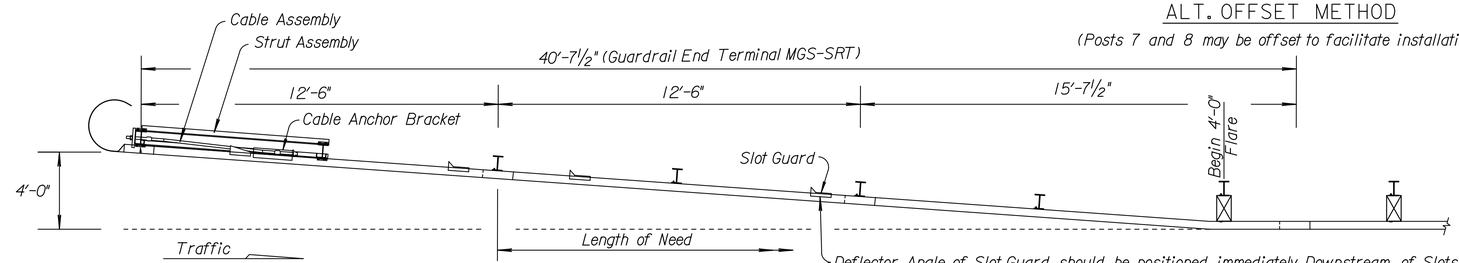
When rock is encountered during installation, see Manufacturer's Installation Manual for procedure.

End Terminal (MGS-SRT) details shown on this sheet are for "Information Only" and may not be an exact detail. See Manufacturer's Installation Manual (furnished to Engineer) for component details and installation instructions.

All work and materials required for installation of this terminal are paid under the bid item "Guardrail End Terminal (MGS-SRT)".

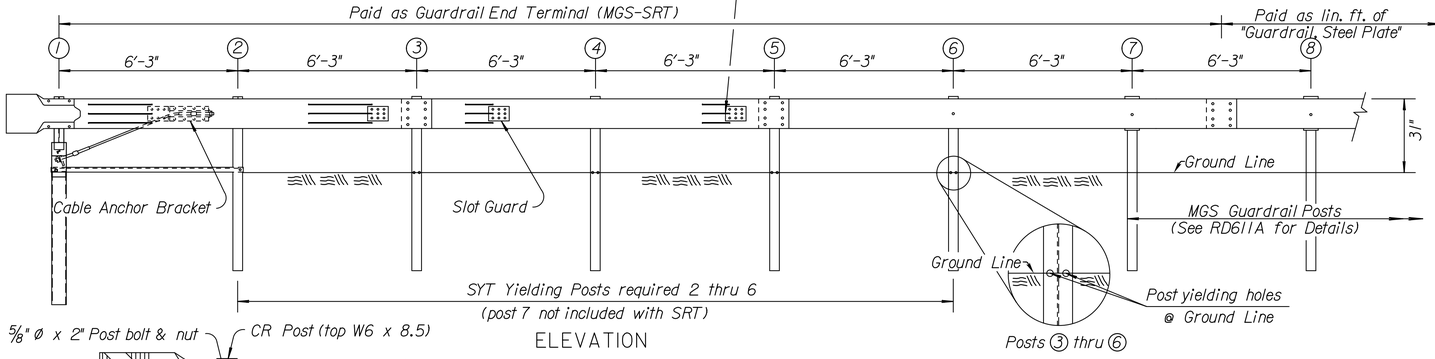
Galvanize all steel parts after fabrication.

See Standard Drawing RD611A for guardrail post details.

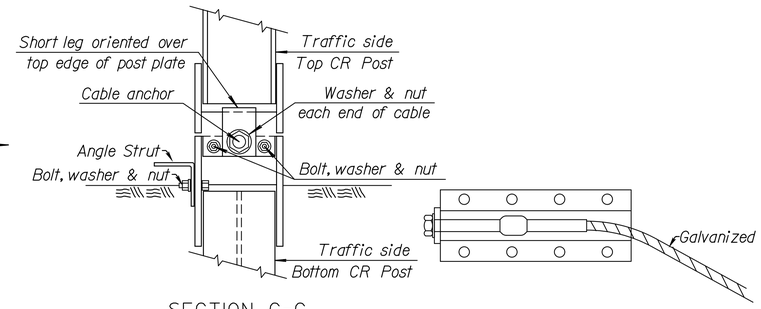


PLAN

Deflector Angle of Slot Guard should be positioned immediately Downstream of Slots.

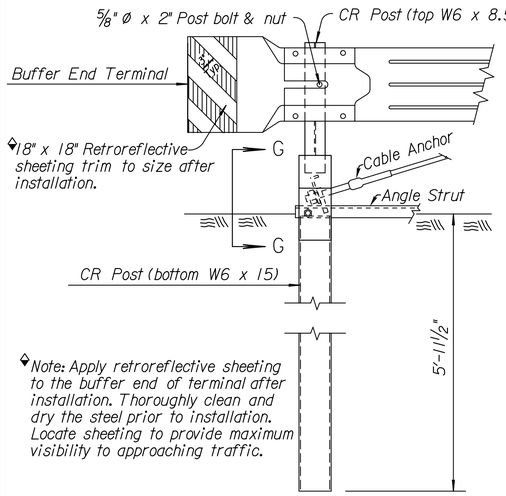


ELEVATION



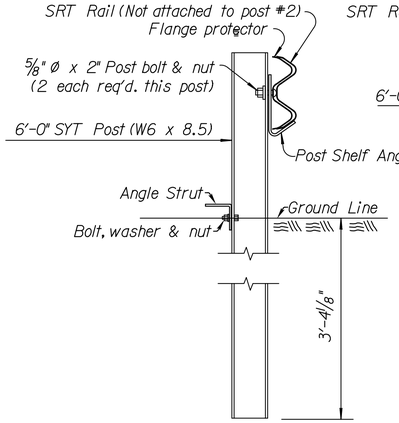
SECTION G-G (Post #1)

CABLE ANCHOR BRACKET

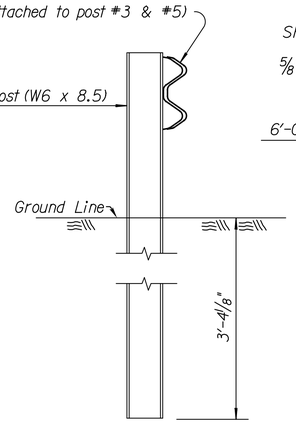


◆Note: Apply retroreflective sheeting to the buffer end of terminal after installation. Thoroughly clean and dry the steel prior to installation. Locate sheeting to provide maximum visibility to approaching traffic.

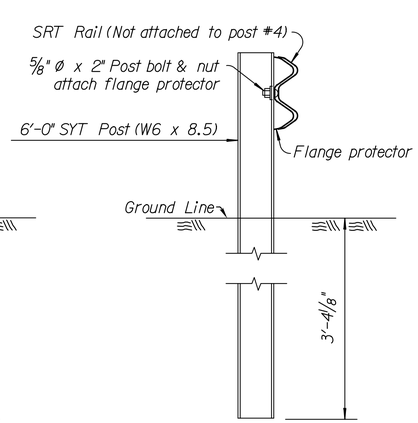
DETAIL of POST #1



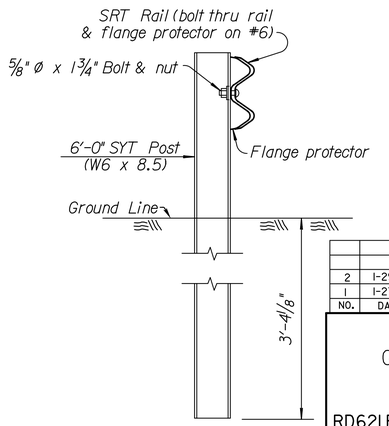
DETAIL OF POST #2



DETAIL OF POST #3 & #5



DETAIL OF POST #4



DETAIL OF POST #6

NO.	DATE	REVISIONS	BY	APP'D
2	1-29-13	Revised Offset Method, End Term.	S.W.K.	J.O.B.
1	1-27-12	Revised Dimensions, End Term.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (MGS-SRT) FLARED

RD621B

FHWA APPROVAL	5-21-2013	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 06-06-2013

Sh. No. 71

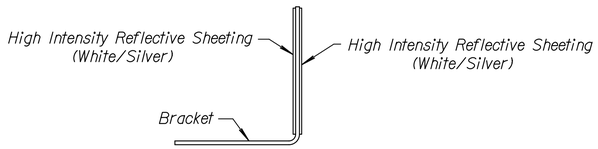
KDOT Graphics Certified

Drawn By: aameyer
Plotted: 10/16/2014
File: G:\KC13\0356\Road\dgn\ka356001rss621b-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	72	251

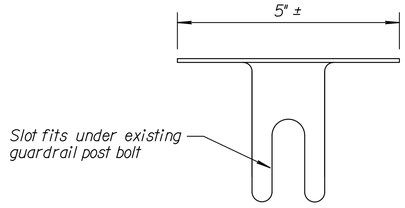
Side View

Flexible Guardrail Marker
One-Way Traffic

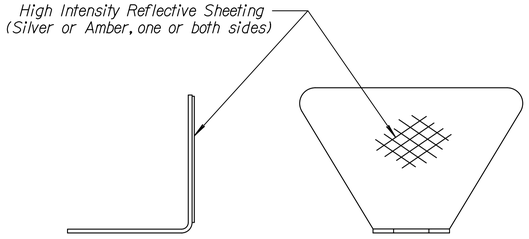


Side View

Flexible Guardrail Marker
Two-Way Traffic



Top View



Side View Front View

Flexible Guardrail Marker

(High Impact Polycarbonate approx. .085" thick, 5¼" x 3")

General Notes

Install markers on the traffic side of all guardrail installations. Do not exceed 25 foot spacing on markers. No marker is installed between the head and post #5 when the guardrail is terminated with a crashworthy end terminal. Install flexible markers on a post behind guardrail bolt head.

Install flexible markers on the top of bridge rails at a spacing not to exceed 50' except for long bridges (greater than 200' long) where spacing may increased to 100'.

On two-way roadways use flexible markers with white/silver high intensity reflective sheeting on both sides.

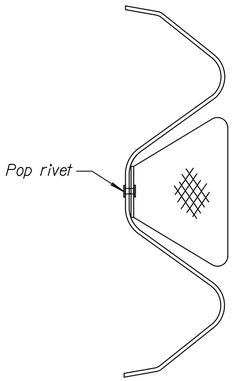
On one-way or divided roadways use flexible markers installed on the approach traffic side of bracket only. Use marker color yellow/amber on the left side of roadway and white/silver on the right side of the roadway.

Use High Impact Polycarbonate Flexible Guardrail Marker with High Intensity Reflective Sheeting AKT Marker or approved equivalent marker, see Standard Specifications.

Use zinc or cadmium plated fasteners that complies with Standard Specifications.

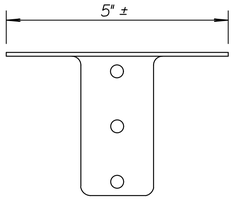
Work and materials required for installation of markers on guardrail/bridge rail are Subsidiary to the bid item "Steel Plate Guardrail".

Install flexible markers for the final (permanent) traffic configuration on projects with staged construction. For example a divided highway with one side closed and two-way traffic during construction.)



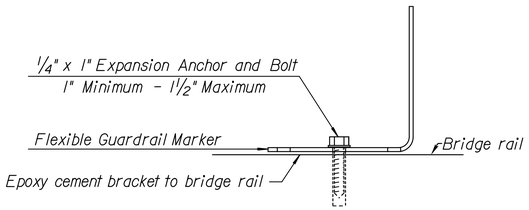
Typical Mounting on W-Beam

Pop rivet attachment to Guardrail when necessary.



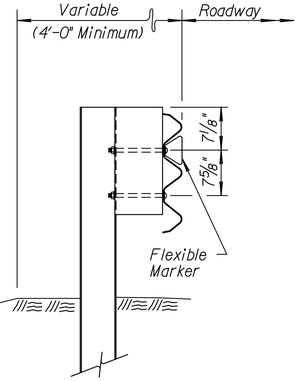
Top View

Barrier/Bridges

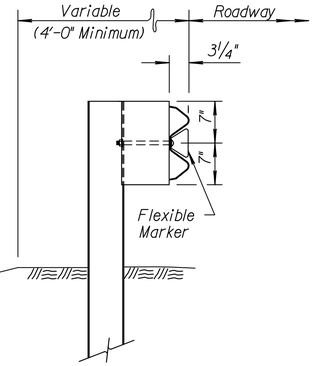


Side View

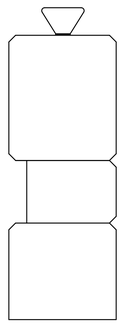
Method of Attaching Flexible Guardrail Marker to Bridge Rail



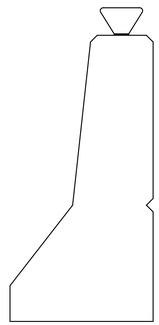
Flexible Marker Mounting
on Thrie Beam Guardrail



Flexible Marker Mounting
on W-Beam Guardrail



Typical Mounting on
Corral Rail



Typical Mounting on
Barrier Curb Bridge Rail

NO.	DATE	REVISIONS	BY	APP'D
8	11-15-10	Revised notes	S.W.K.	J.O.B.
7	12-21-08	AKT marker or approved equal	S.W.K.	J.O.B.
6	3-10-09	Add. Flexible rem. Button delne	S.W.K.	J.O.B.
5	7-20-04	Changed Guard Fence to Guardrail	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

MARKER DETAILS FOR GUARDRAIL AND BRIDGE RAILS

RD610

FHWA APPROVAL	1-11-11	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

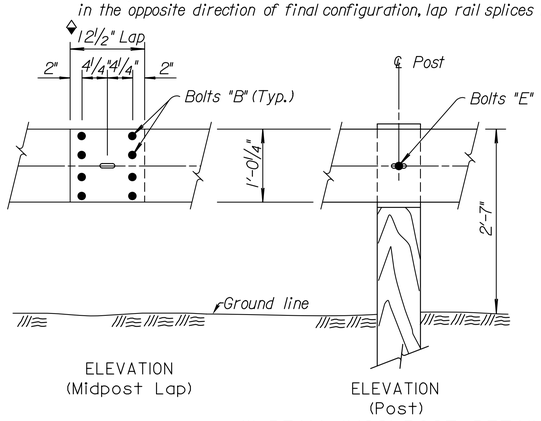
KDOT Graphics Certified 02-03-2011 Sh. No. 72

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rss610-01.dgn

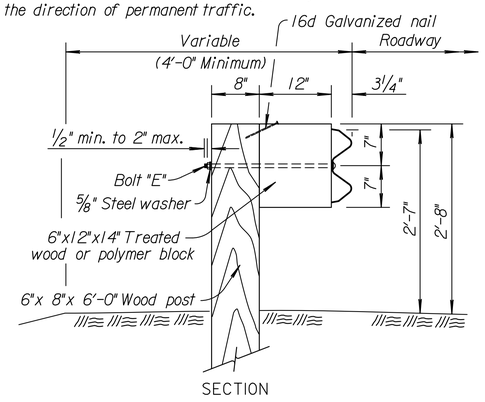
Notes to Designer: For posts installed in pavement thicker than 8" or posts installed in rock formations refer to AASHTO's Roadside Design Guide for details then revise this drawing and all supporting drawings appropriately.

♦ 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.



ELEVATION (Midpost Lap)

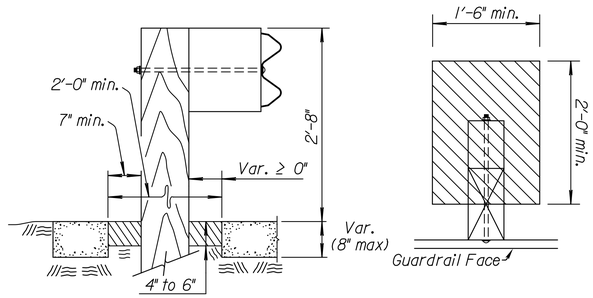
ELEVATION (Post)



SECTION

W-BEAM (MGS) POST DETAILS

WOOD POSTS



SECTION

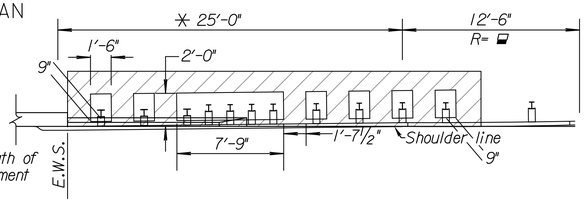
PLAN

POSTS IN PAVEMENT

▨ Slurry Grout (Low Strength) See KDOT's Standard Specifications

▩ Pavement (Concrete or Asphalt)

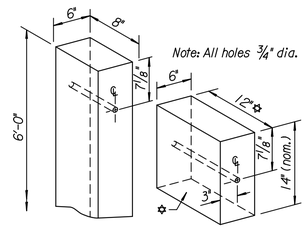
Note: Low Strength Grout must have a 28-day compressive strength of 120 psi or less. All work and materials related to posts in pavement are subsidiary to other guardrail bid items.



POSTS IN PAVEMENT

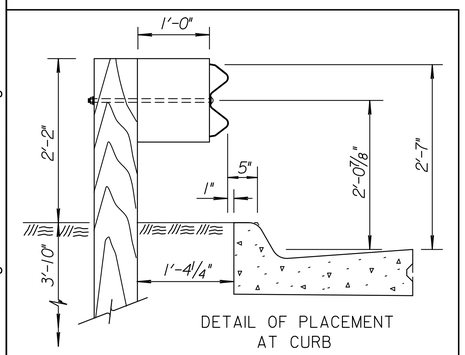
(Not to Scale)

✡ Non-Metallic (Polymer) or Treated Wood Block



"W" BEAM (Wood)

HOLE PUNCHING DETAILS



DETAIL OF PLACEMENT 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 adjacent to curb.

WOOD POSTS

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.

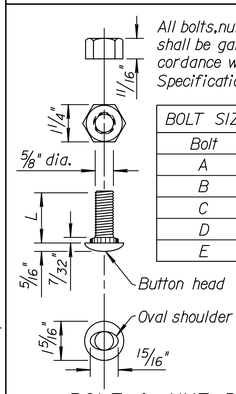
Set guardrail posts by digging or by driving. Use post caps to protect the post from crushing during driving operations.

Use only one post/blockout type within MGS Guardrail run, this excludes the guardrail end terminals. 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 man-made object (footing, pipe, etc.) is encountered and 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 subsidiary to various bid items for which payment is made.

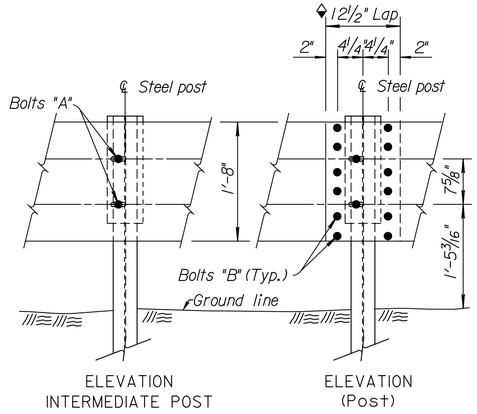


BOLT SIZE SCHEDULE	
Bolt	L
A	10"
B	1¼"
C	18"
D	14"
E	22"

BOLT & NUT DETAILS

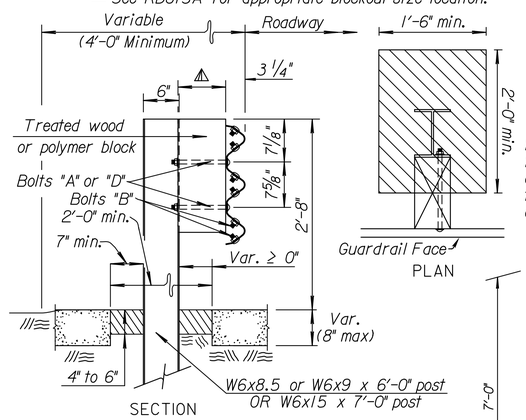
♦ Lap guardrail splices, including terminal connector, in the direction of traffic. Where traffic is temporarily carried in the opposite direction of final configuration, lap rail splices in the direction of permanent traffic.

⚠ See RD613A for appropriate blockout size location.



ELEVATION INTERMEDIATE POST

ELEVATION (Post)



SECTION

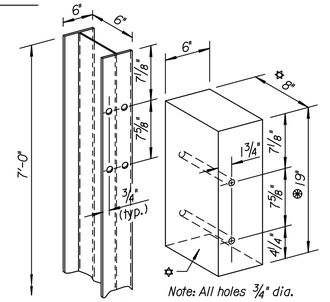
PLAN

▨ Slurry Grout (Low Strength) See KDOT's Standard Specifications

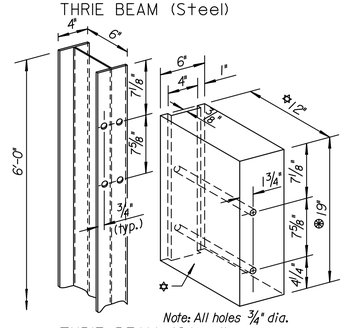
▩ Pavement (Concrete or Asphalt)

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.

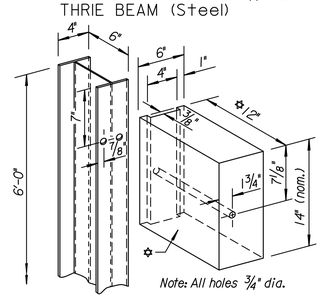
THRIE BEAM POST DETAILS/POSTS IN PAVEMENT



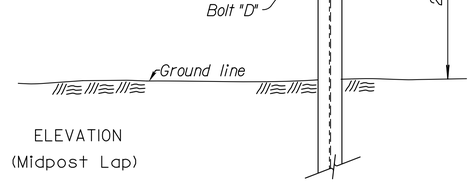
THRIE BEAM (Steel)



THRIE BEAM (Steel)



"W" BEAM (Steel)



ELEVATION (Midpost Lap)

ELEVATION (Post)

SECTION

W-BEAM (MGS) POST DETAILS

✡ See Standard Drawing RD613A for Thrie Beam Transition Section Blockout hole pattern.

✡ Non-Metallic (Polymer) or Treated Wood Block

STEEL POSTS

GENERAL NOTES (Steel Posts)

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

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

Use only one post/blockout type within MGS Guardrail run, this excludes the guardrail end terminals. For wood/polymer blockout requirements see standard specifications.

Approved polymer blockouts may be substituted for wood blockouts. Only one type of blockout is permitted on each guradrail installation, this excludes the guardrail end terminals.

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 subsidiary to various bid items for which payment is made.

NO.	DATE	REVISIONS	BY	APP'D
4	11-8-12	Revised Detail, Posts In Pavement	S.W.K.	J.O.B.
3	8-1-12	Revised Note to Designer	S.W.K.	J.O.B.
2	5-24-12	Revised Detail, Posts In Pavement	S.W.K.	J.O.B.
1	12-22-11	Added Detail, Posts In Pavement	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL POST (MGS) DETAILS

RD611A

FHWA APPROVAL	1-3-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

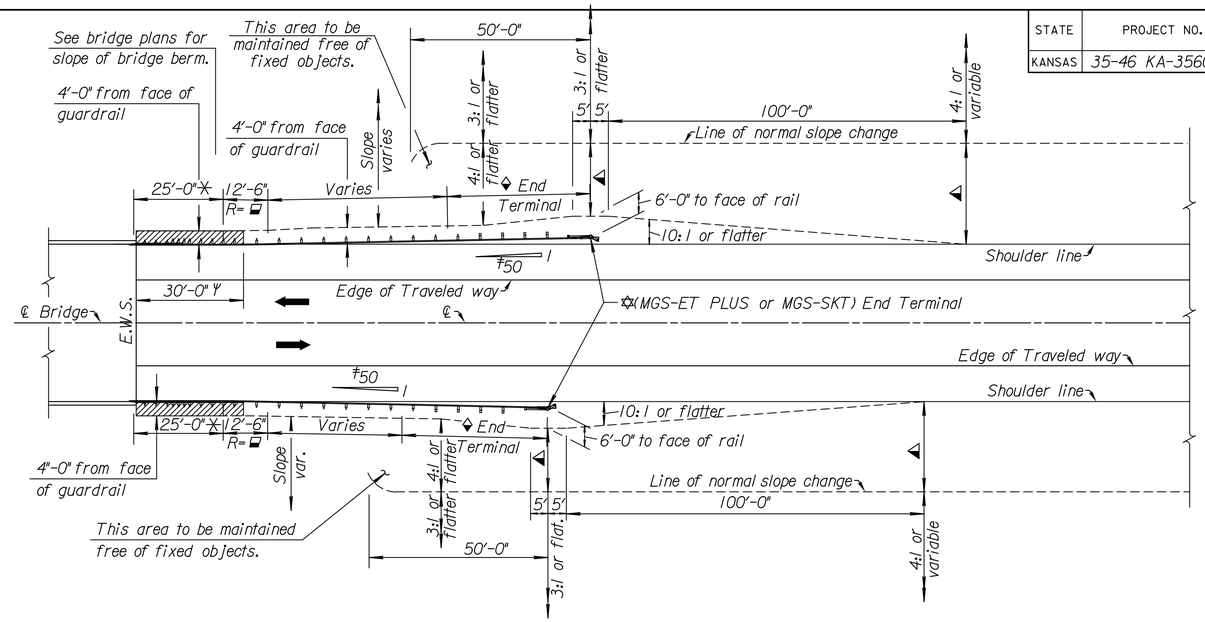
KDOT Graphics Certified 10-18-2013 Sh. No. 73

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	73	251

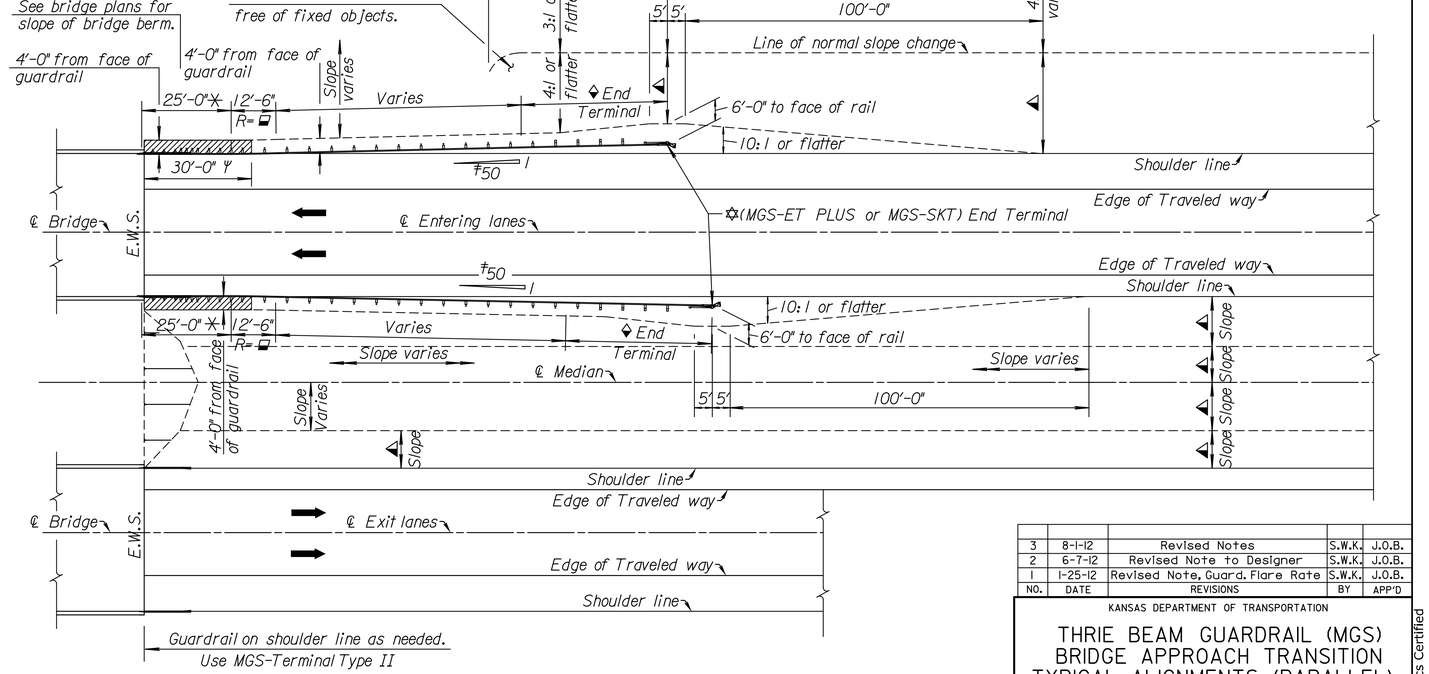
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1310356\Road\dgn\ka356001rss611a-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	74	251



THRIE BEAM TRANSITION - TWO LANES



THRIE BEAM TRANSITION - FOUR LANES (DIVIDED)

✳ Thrie Beam Transition. See Std. Drawing RD613A for details and general note.

◘ Radius= 625.08'

◭ Normal project side slope. See typical sections.

◆ See appropriate end terminal details.

ɣ 4" Asphalt material placed on 4'-0" embankment widening unless flume inlet and slope drain is constructed. See RD611A for "Post in Pavement" details.

ǂ For zero flare rate applications, flare the End Terminal as shown on Standard Drawings RD606D and RD606F.

✡ The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations.

Notes to Designer: Determine the guardrail length of need using either KDOT's Length of Need Equation or a graphic design approach with an L_i distance measured from the edge of the area of concern to the P.I. of the curved guardrail section. Combine material for asphalt widening in the plan quantities.

"Parallel" installations are flared at a rate of 50:1. "Zero Flare" installations follow the edge of shoulder.

NO.	DATE	REVISIONS	BY	APP'D
3	8-1-12	Revised Notes	S.W.K.	J.O.B.
2	6-7-12	Revised Note to Designer	S.W.K.	J.O.B.
1	1-25-12	Revised Note, Guard. Flare Rate	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

THRIE BEAM GUARDRAIL (MGS) BRIDGE APPROACH TRANSITION TYPICAL ALIGNMENTS (PARALLEL)

RD612B

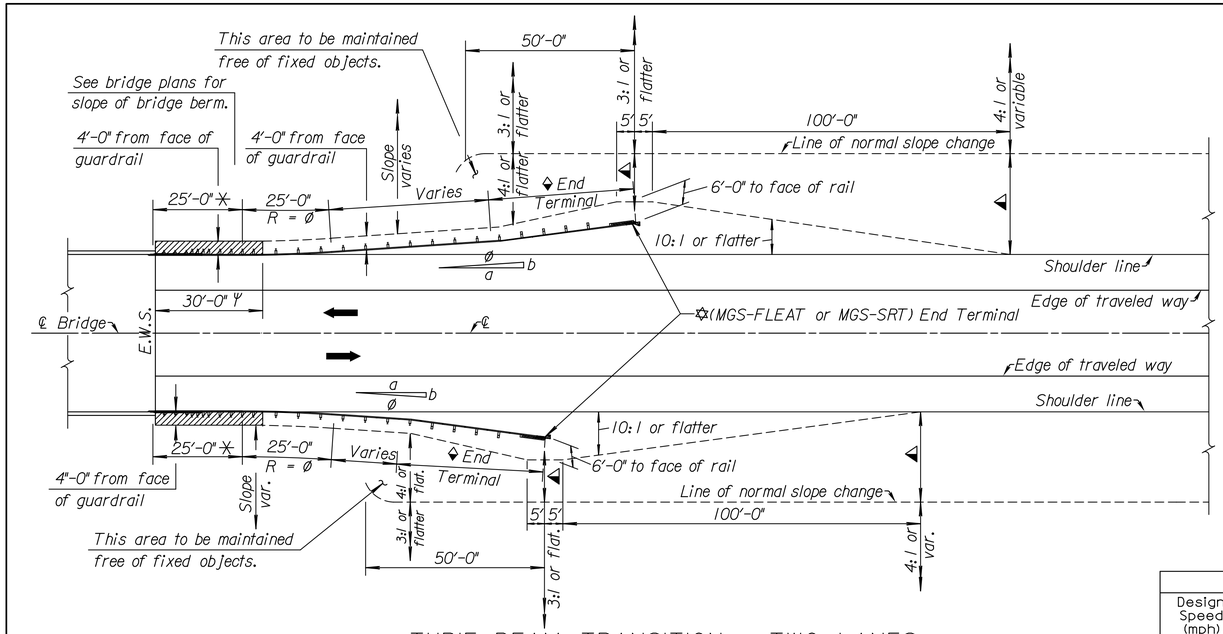
FHWA APPROVAL	9-10-12	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 09-11-2012 Sh. No. 74

KDOT Graphics Certified

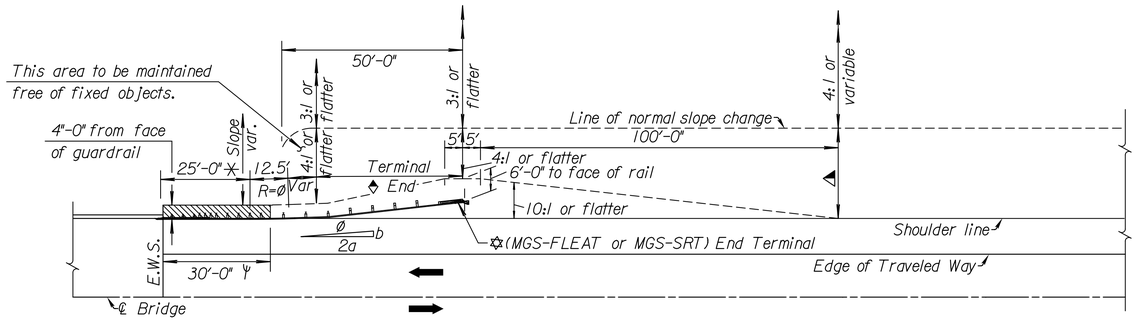
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rss612b-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	75	251



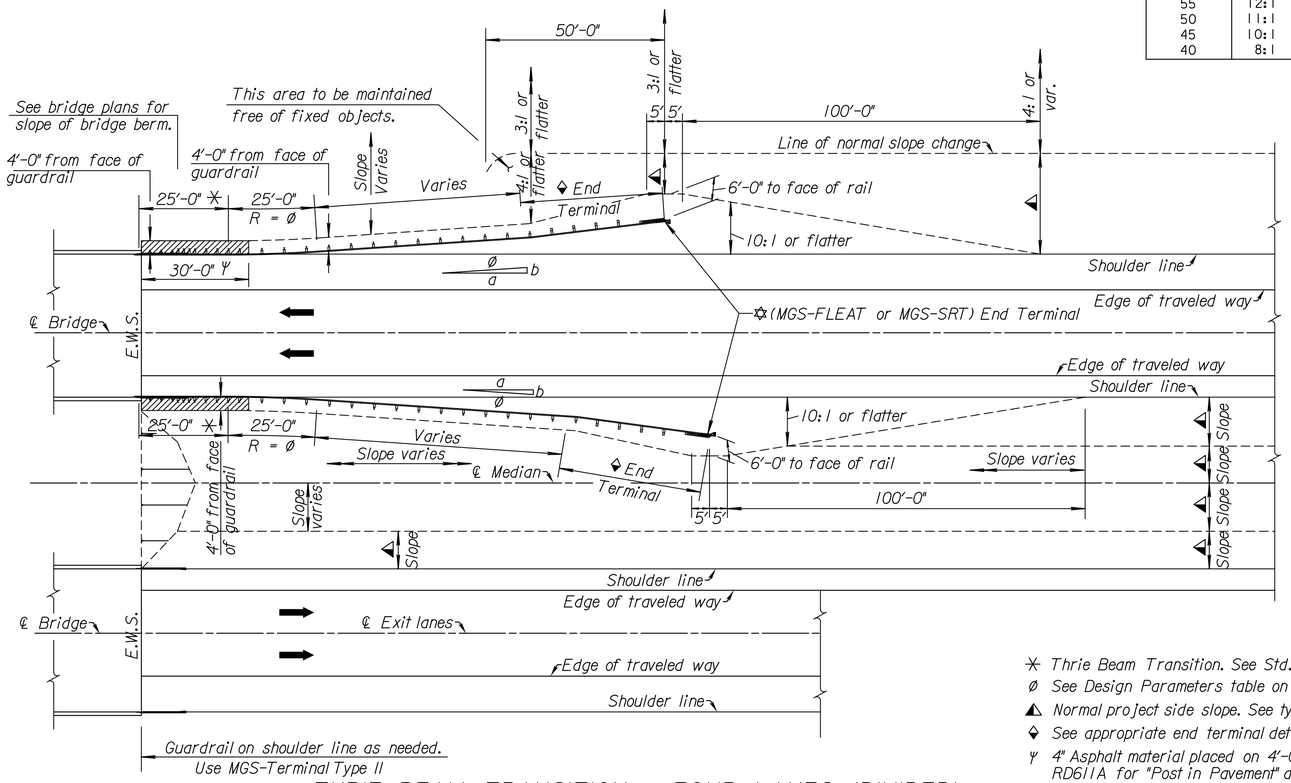
THRIE BEAM TRANSITION - TWO LANES

Note: Use flare rate of a:b and curve length of 25'-0" when guardrail is beyond shyline. Use flare rate of 2 a:b and curve length of 12'-6" when guardrail is located inside the shy line.



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

Design Parameters				
Design Speed (mph)	Flare Rate (a:b)	Radius (R)	Flare Rate (2a:b)	Radius (R)
70	15:1	375.55'	30:1	375.14'
60	14:1	350.59'	26:1	325.16'
55	12:1	300.69'	24:1	300.17'
50	11:1	275.76'	21:1	262.70'
45	10:1	250.83'	18:1	225.23'
40	8:1	201.04'	16:1	200.26'



THRIE BEAM TRANSITION - FOUR LANES (DIVIDED)

✳ Thrie Beam Transition. See Std. Drawing RD613A for details and general note.

ø See Design Parameters table on this sheet for radius, length of curve and flare rate information.

◭ Normal project side slope. See typical sections.

⧫ See appropriate end terminal details.

ψ 4" Asphalt material placed on 4'-0" embankment widening unless flume inlet and slope drain is constructed. See RD611A for "Post in Pavement" details.

✡ The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations.

Notes to Designer: Determine guardrail length of need using either KDOT's Length of Need Equation or a graphic design approach with an L_1 distance measured from the edge of the area of concern to the P.I. of the curved guardrail section. Combine materials for asphalt widening in the plan quantities.

Optional: If approach side is within the shyline, use a flare rate of 2a:b for all quadrants.

NO.	DATE	REVISIONS	BY	APP'D
2	6-7-12	Revised Note to Designer	S.W.K.	J.O.B.
1	1-25-12	Revised Layout, End Term.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

THRIE BEAM GUARDRAIL (MGS) BRIDGE APPROACH TRANSITION TYPICAL ALIGNMENTS (FLARED)

RD612C

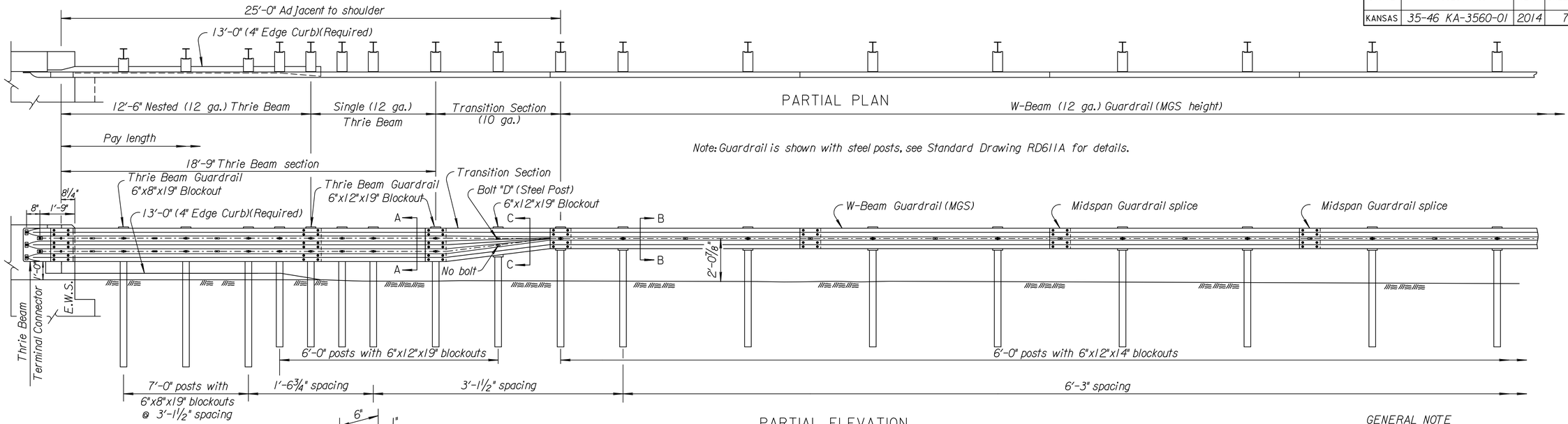
FHWA APPROVAL	7-9-12	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified

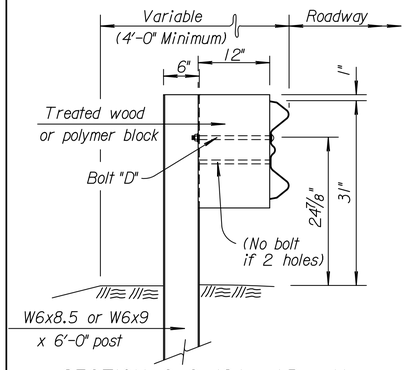
KDOT Graphics Certified 07-13-2012 Sh. No. 75

Drawn By: aameyer Plotted: 10/16/2014
File: G:\KC13\0356\Road\dgn\ka3560001rss612c-01.dgn

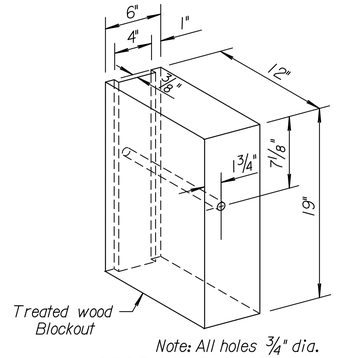
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	76	251



Note: Guardrail is shown with steel posts, see Standard Drawing RD611A for details.

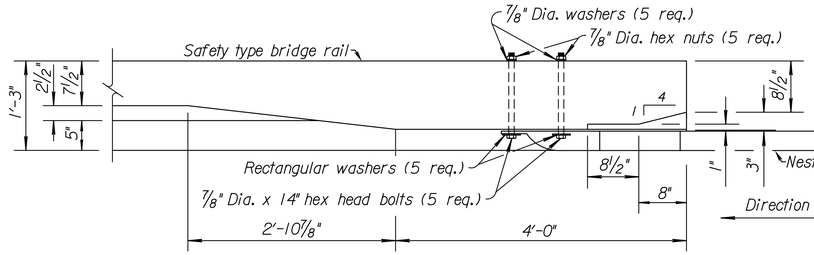


SECTION C-C (Steel Post)



Note: All holes ¾" dia.

SECTION C-C (Blockouts)



PLAN VIEW
GUARDRAIL ATTACHMENT
TO SAFETY SHAPE BRIDGE RAIL

PARTIAL ELEVATION

GENERAL NOTE

Use galvanized 12 gauge steel rail elements unless otherwise noted.

Use galvanized anchor bolts and post rail fittings, see Standard Specifications. Supply guardrail parts that are interchangeable with similar parts regardless of source or manufacturer.

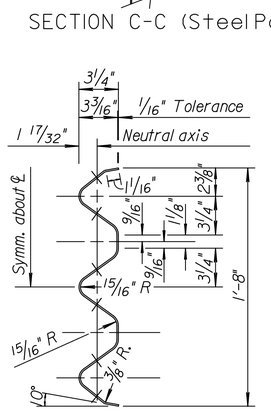
Fabricate Terminal Connector from 10 gauge steel, see Standard Specification. The connector has the same section as thrie beam guardrail. Terminal connector is subsidiary to the bid item "Guardrail, Steel Plate".

Shop curve rails when radius is less than 150'.

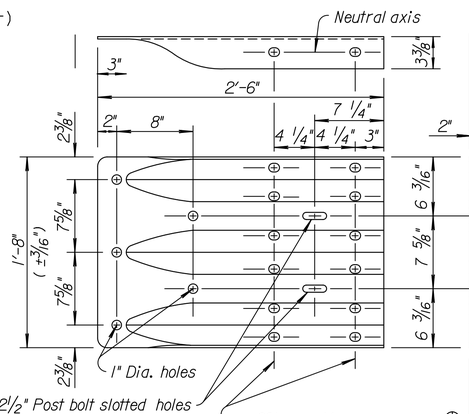
Lap guardrail splices, including terminal connector, in the direction of traffic. Where traffic is temporarily carried in the opposite direction of final configuration, lap rail splices in the direction of permanent traffic.

Bridge to guardrail transition consists of 1- 18'-9" thrie-beam with 1- 12'-6" thrie-beam section nested in back of 18'-9" section (See Layout), 1- Thrie beam to W-beam Asymmetrical transition section, use associated hardware with post sizes and location shown. For the remainder of installation use (MGS) W-beam guardrail with only one post/blockout type used within (MGS) guardrail run.

All material and work required for this construction are included in the bid item "Guardrail, Steel Plate".

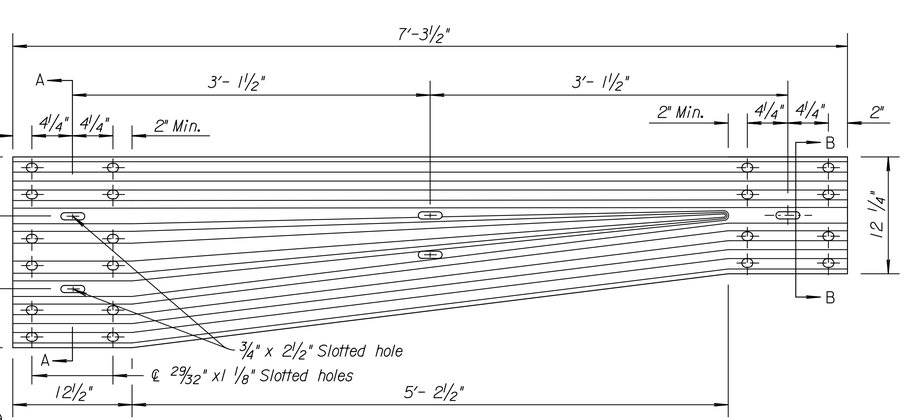


SECTION A-A
THRU RAIL ELEMENT
TYPICAL THRIE BEAM

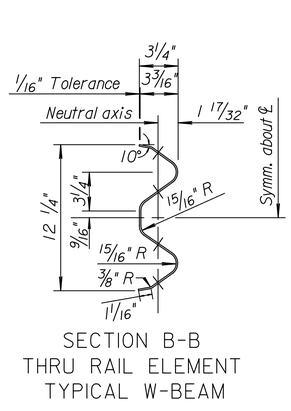


TERMINAL CONNECTOR

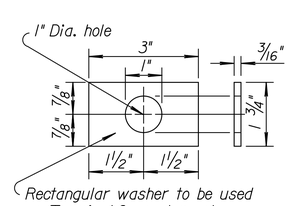
⊛ Optional 29/32" x 1¾" Slotted holes Rotated 50° (Typical) (12 req'd.)



ELEVATION
ASYMMETRICAL TRANSITION SECTION
(From Thrie Beam to W-Beam rail)



SECTION B-B
THRU RAIL ELEMENT
TYPICAL W-BEAM



RECTANGULAR WASHER
(Other approved washer may be used.)

NO.	DATE	REVISIONS	BY	APP'D
2				
1	1-25-12	Revised Details, Thrie-Beam	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS OF THRIE BEAM to (MGS) GUARDRAIL TRANSITION

RD613A

FHWA APPROVAL	4-25-12	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 02-19-2014 Sh. No. 76

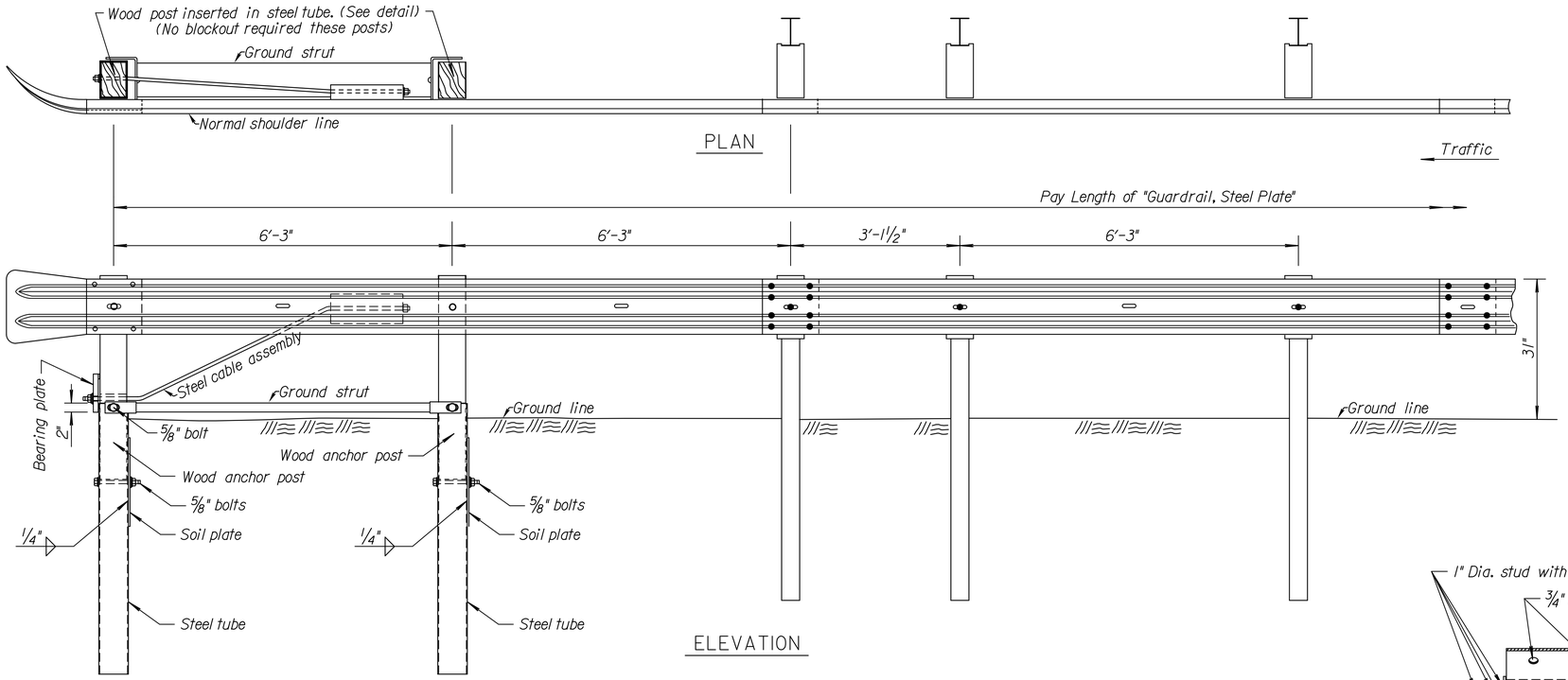
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Roaddgn\ka3560001rss613a-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	77	251

Notes to Designer: Use Guardrail End Terminal, MGS Type II on the traffic departing end of barriers where end on impacts are not a consideration and at the end of entrance return.

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC1310356\Roaddgn\ka356001rss618a-01.dgn



GENERAL NOTE

Terminal end posts consist of a wood post inserted into a steel tube see details on this sheet.

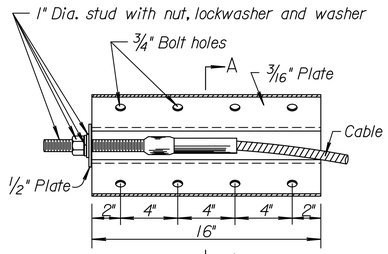
Steel soil tubes may be driven with an approved driving head. Set steel tube and soil plate before installing wood anchor post assembly. Do not drive steel soil tubes with wood post in the tube. Backfill and satisfactorily compact around steel soil tubes placed in drilled holes to prevent tube settlement.

Galvanize all steel parts after fabrication.

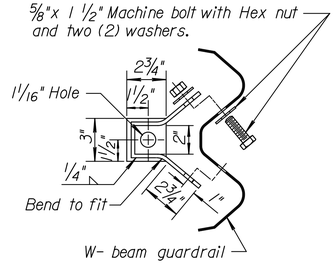
Lap guardrail splices, including terminal connector, in the direction of traffic. Where traffic is temporarily carried in the opposite direction of final configuration, lap rail splices in the direction of the permanent traffic.

All work and materials required for the installation of Barrier Terminal Type II are considered subsidiary to the bid item "Steel Plate Guardrail".

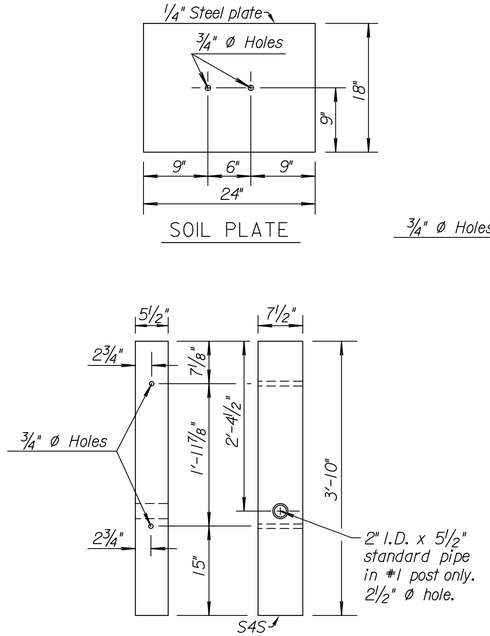
Include MGS Type II end terminal in pay length of "Guardrail, Steel Plate".



ANCHOR PLATE

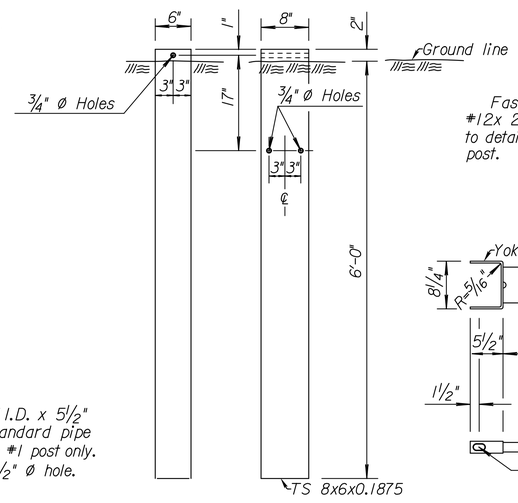


MODIFIED SECTION A-A

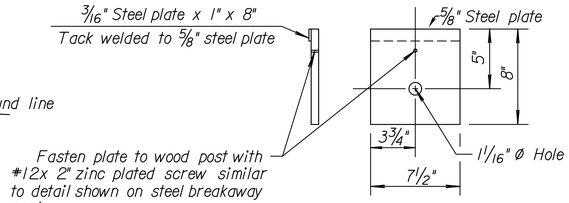


SOIL PLATE

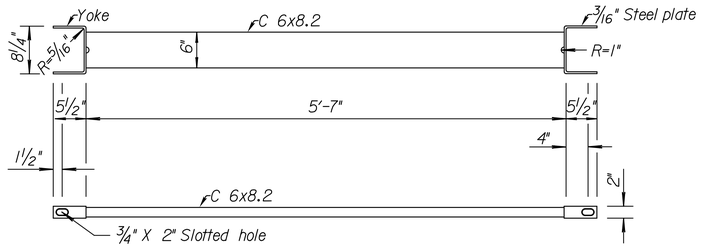
BCT (MGS) WOOD POST



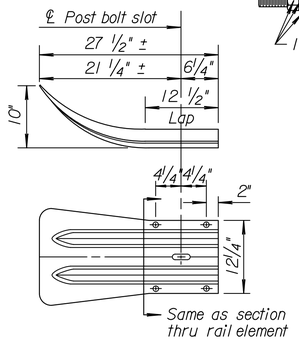
STEEL TUBE



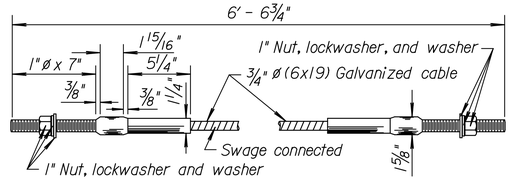
BEARING PLATE



GROUND STRUT
(Strut dimensions shown are typical)



STANDARD END SECTION
(1 each)
(Subsidiary to Steel Plate Guardrail)



CABLE ASSEMBLY (1 each)
(40,000 lbs. min. breaking strength)
Tighten cable to taut tension.

NO.	DATE	REVISIONS	BY	APP'D
1	1-25-12	Revised Dimension, End Terminal	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

GUARDRAIL END TERMINAL (MGS) TYPE II

RD618A

FHWA APPROVAL	4-25-12	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Kling

KDOT Graphics Certified 04-26-2012

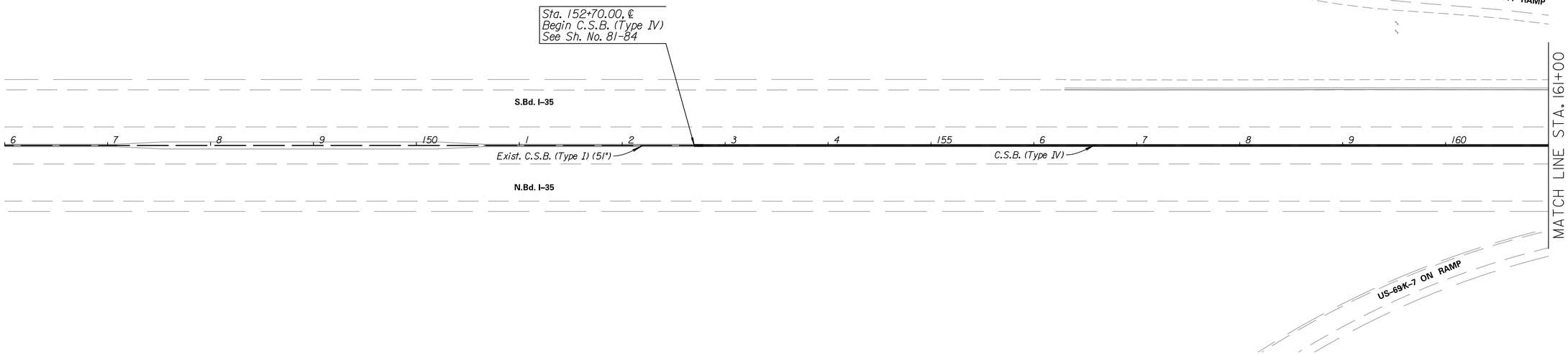
Sh. No. 77

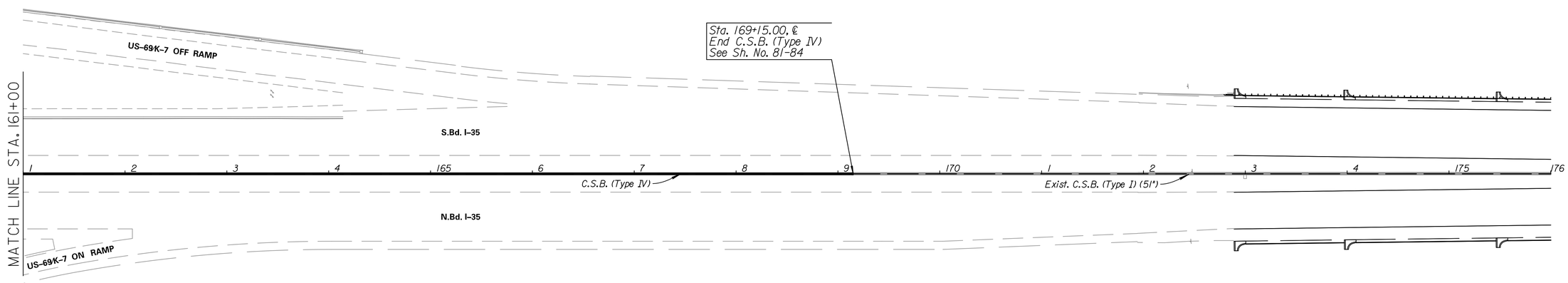
KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	78	251

DATE	BY	REFERENCES NOTED
		REFERENCES CHECKED

Scale: 1"=50'





KANSAS DEPARTMENT OF TRANSPORTATION

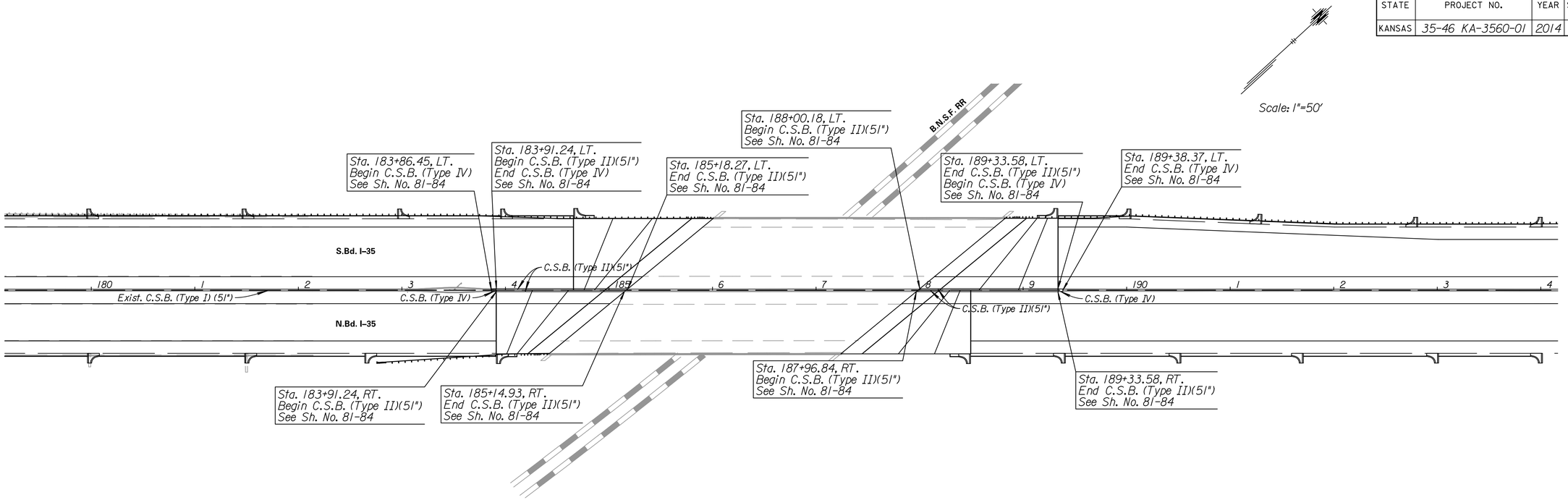
CONCRETE SAFETY BARRIER
I-35

KDOT Graphics Certified 10-15-2014 *Sh. No. 78*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rsb-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	79	251



DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rsb-05.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE SAFETY BARRIER
I-35

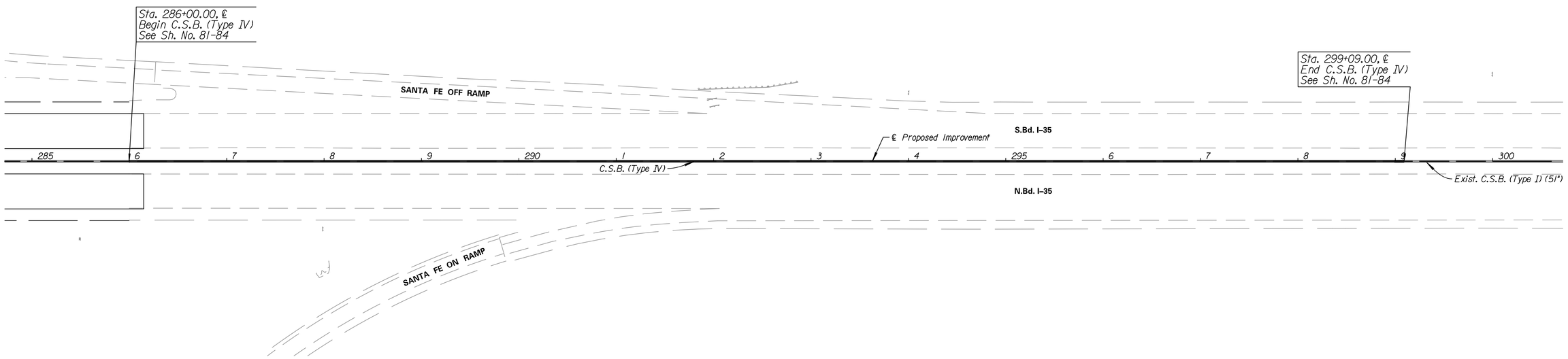
KDOT Graphics Certified 10-15-2014

Sh. No. 79

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	80	251

Scale: 1"=50'



DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rsb-02.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

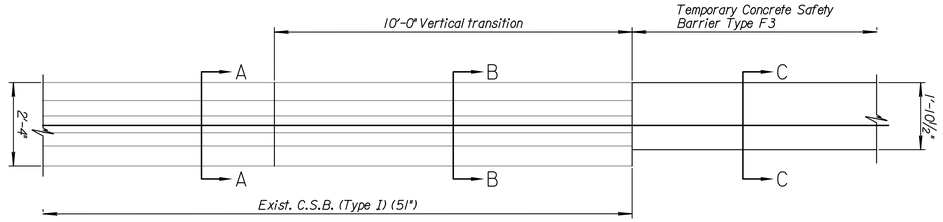
CONCRETE SAFETY BARRIER
I-35

KDOT Graphics Certified 10-15-2014 Sh. No. 80

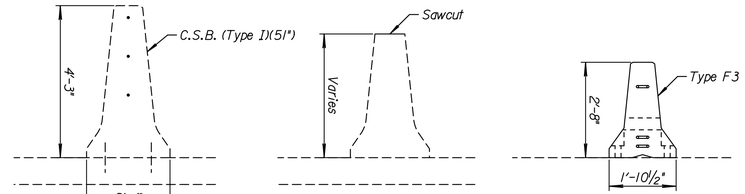
KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	81	251

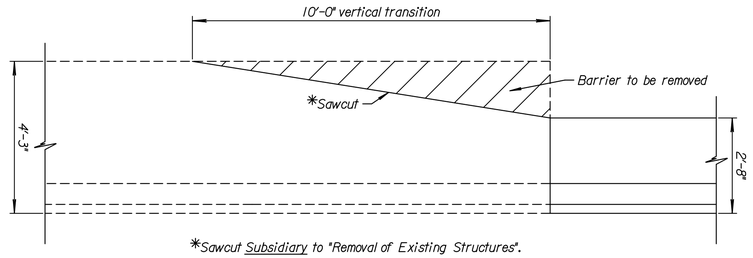
DATE	BY	
	REFERENCES NOTED	
	REFERENCES CHECKED	



PLAN



SECTION A-A SECTION B-B SECTION C-C



*Sawcut Subsidiary to "Removal of Existing Structures".

ELEVATION

TEMPORARY BARRIER TRANSITION

Note:
Transition at south end shown,
trasnsition at north end mirrored

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE SAFETY BARRIER TRANSITION

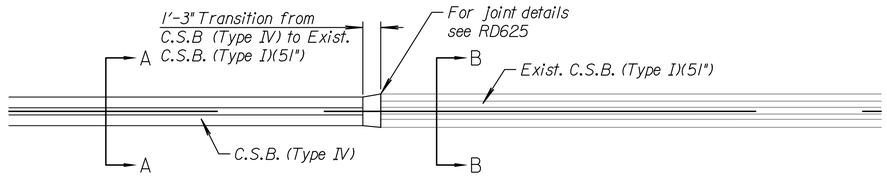
KDOT Graphics Certified 10-15-2014 Sh. No. 81

KDOT Graphics Certified

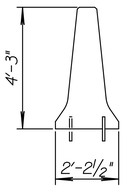
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC130356\Road\dgn\ka356001rsb-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	82	251

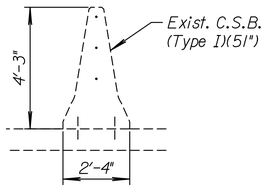
DATE	BY	REFERENCES NOTED	REFERENCES CHECKED



PLAN

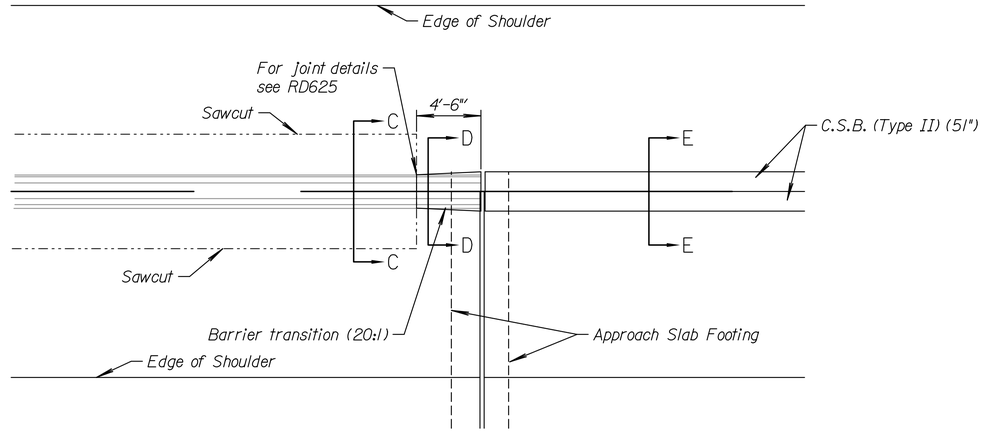


SECTION A-A

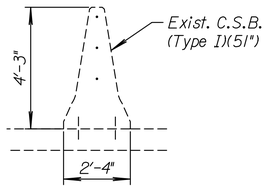


SECTION B-B

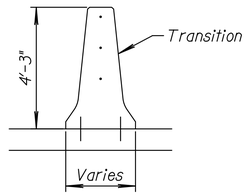
TYPICAL C.S.B. TRANSITION AT
BEGIN AND END OF PROJECT



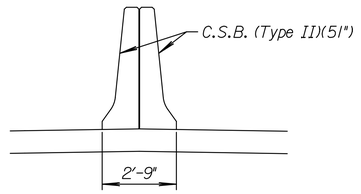
PLAN



SECTION C-C

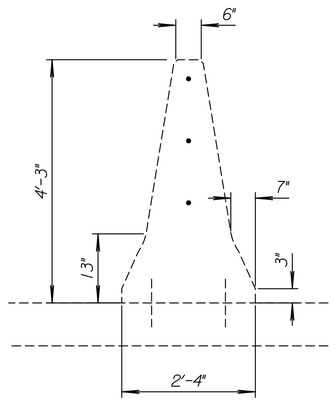


SECTION D-D

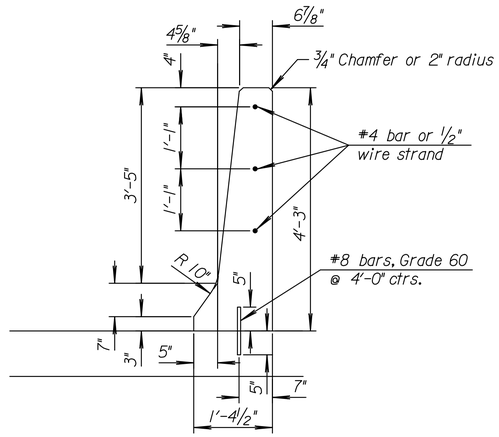


SECTION E-E

TYPICAL C.S.B. TRANSITION
AT BRIDGE APPROACH SLAB



EXISTING C.S.B. (TYPE I) (5I")



C.S.B. (TYPE II) (5I")

KANSAS DEPARTMENT OF TRANSPORTATION

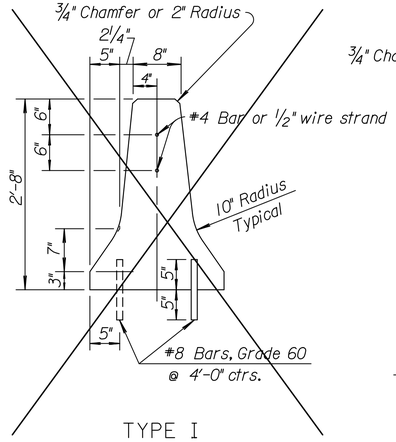
CONCRETE SAFETY BARRIER
TRANSITIONS AND DETAILS

KDOT Graphics Certified 10-15-2014 *Sh. No. 82*

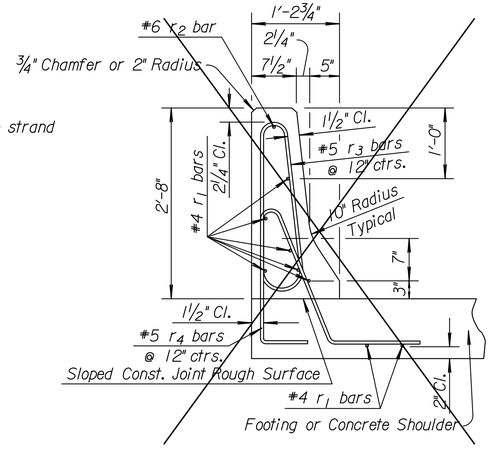
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1\30356\Road\dgn\ka356001rsb-04.dgn
Plotted : 10/16/2014

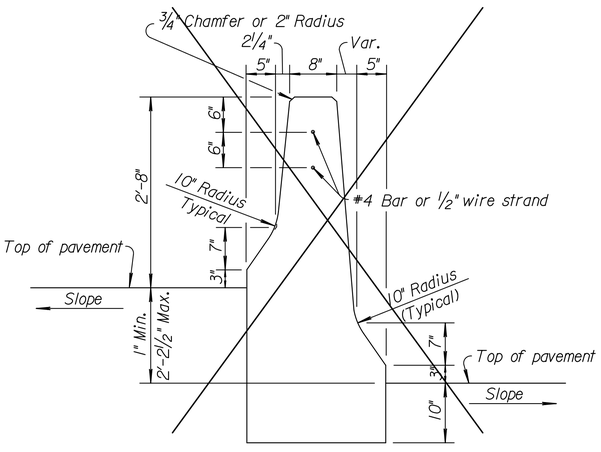
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	83	251



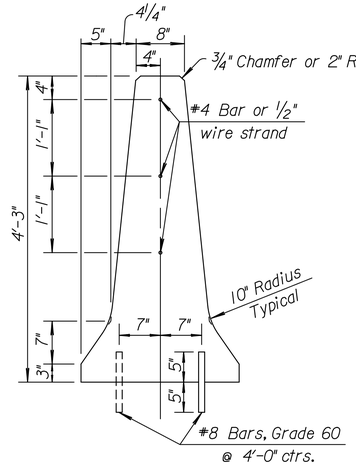
TYPE I



TYPE II

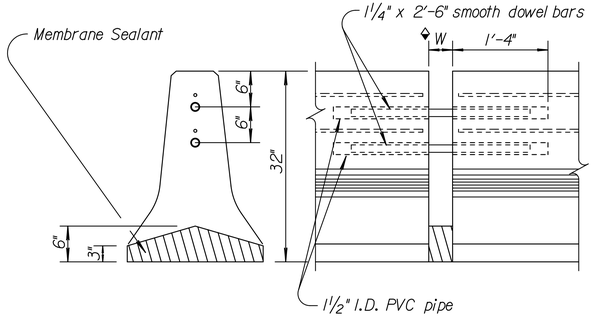


TYPE III



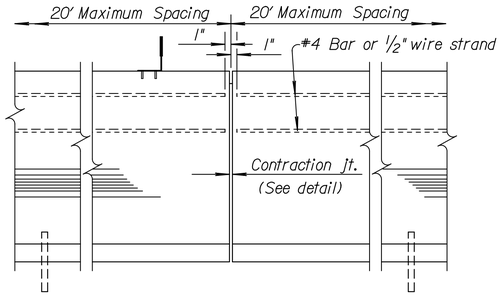
TYPE IV

♦ W= Formed Concrete Opening Size - See "Temperature Expansion/Pressure Relief Joint Width Table", Standard Drawing RD712.

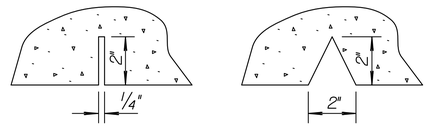


PRESSURE RELIEF/EXPANSION JOINT (Bridge Ends)

Pressure relief joint will match relief joint in bridge approach slab. Dowel bar placement shown (Type I) is typical to all barrier types. Adjust reinforcing steel at barrier ends to avoid PVC pipe and smooth dowel location.



CONTRACTION JOINT DETAIL



OPTION A

OPTION B

CONTRACTION JOINT DETAIL

GENERAL NOTE

Use Concrete Grade 3.0 (AE) or Concrete Pavement Mix (Contractor's Option).

Construct drainage slots where specified in the plans, inlet locations or Engineer's direction.

Use epoxy coated reinforcing steel, Grade 60. See details for spacing, keep a minimum reinforcing steel clear distance of 1 1/2".

Payment for all reinforcing bars, joint material, median barrier filler material, reflectors and supporting materials, associated work, etc., is Subsidiary.

The section furnished must generally comply with the dimensions shown. Requests for minor variations in section geometry may be submitted for review.

Permanent Concrete barriers are cast in place or slip formed construction only. Precast barriers are not permitted.

CONSTRUCTION JOINTS

Place Joint Material (Nonextruding, Type B) where shown for structures and at the end of day construction joint.

CONTRACTION JOINTS

Form or saw Contraction Joints on 20' centers maximum. Where barrier is on or adjacent to concrete pavement space joints to match contraction joints and definite transverse cracks in the pavement. Contraction joints not to exceed 20' centers.

BARRIER BASE

Where barrier is not paved full width, place barrier on a 10"x2'-0" bed of Concrete Grade 3.0, or the mix used in concrete pavement or asphalt base course (Contractor's option, Engineer approval) to assure proper alignment.

APPROACH SLAB EXPANSION/PRESSURE RELIEF JOINT

Install Membrane Sealant expansion Joint material with a lubricant adhesive, cut to the shape shown. Construct joint to match pressure relief joint of concrete pavement approach slabs.

See Standard Drawing RD712 for Expansion/Pressure Relief Joint details.

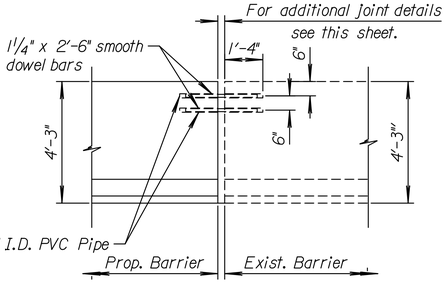
See standard specifications to cut and epoxy coat dowel bars.

Coat approximately three- fifths length of each dowel bar with hard grease prior to installation.

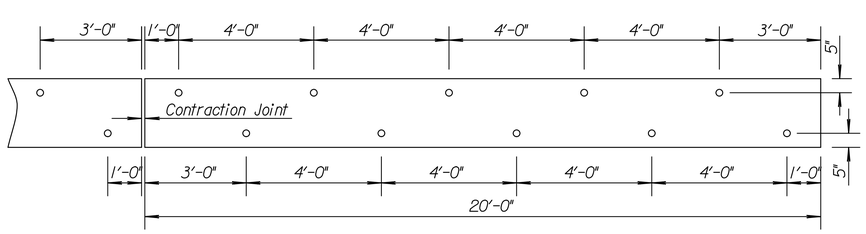
Work and materials required for installation of Joint material is subsidiary to Concrete Safety Barrier and conforms to standard specifications.

DELINEATION

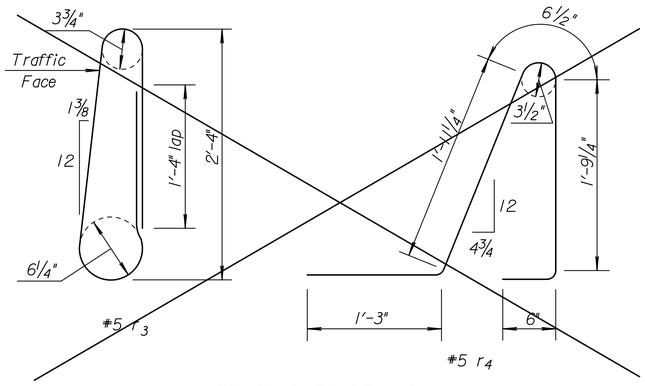
See Standard Drawing RD624 for details of barrier delineation.



CONNECTION TO EXISTING CONCRETE SAFETY BARRIER



DOWEL PLACEMENT DETAIL
(TYPE I & IV)



BENDING DIAGRAMS

Note: All dimensions are out to out of bars.

NO.	DATE	REVISIONS	BY	APP'D
5	4-28-11	Rev. I,II,III & IV dimen. & notes	S.W.K	J.O.B.
4	5-28-09	Revised Type III dimensions	S.W.K	J.O.B.
3	1-10-07	Changed bituminous to asphalt	S.W.K	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

PERMANENT CONCRETE SAFETY BARRIER TYPE I,II,III &IV (F-SHAPE)

~~RD625~~

FHWA APPROVAL	5-26-11	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 06-01-2011 Sh. No. 83

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
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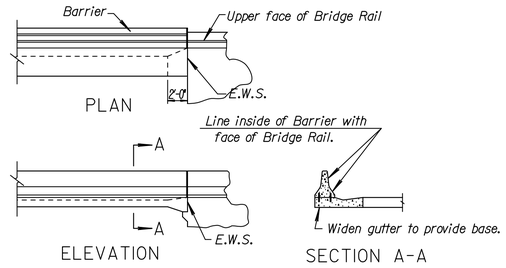
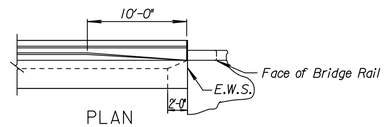
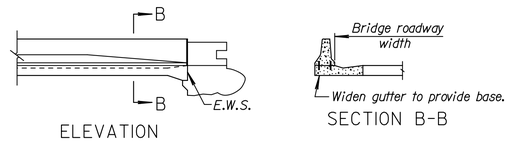
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	84	251



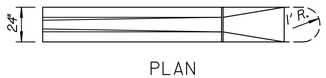
DETAIL FOR BRIDGE
WITH SAFETY TYPE RAIL

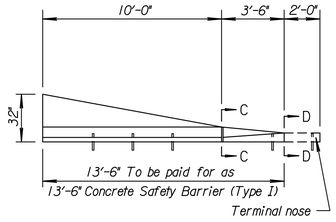




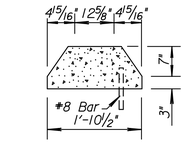
DETAIL FOR BRIDGE
WITHOUT SAFETY TYPE RAIL

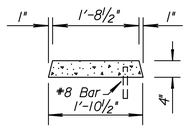
TRANSITION AT BRIDGE END

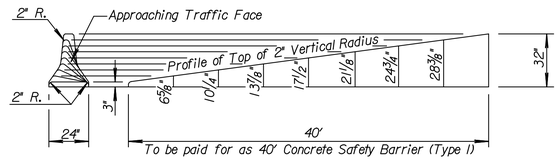




TYPE B BARRIER

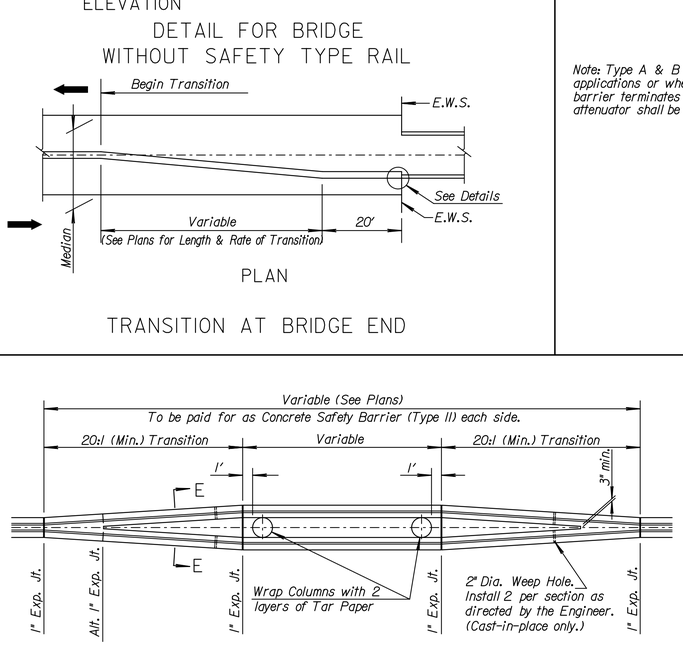




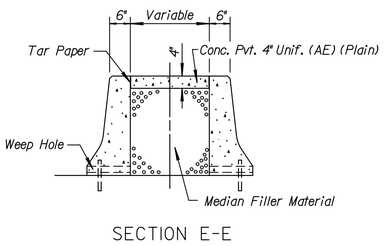


TYPE A BARRIER
BARRIER TERMINAL TRANSITIONS

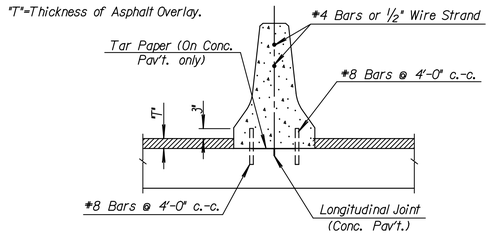
Note: Type A & B barrier transitions shall be used only for low speed (40 mph or less) applications or where a barrier terminates beyond the roadway clear zone. Where a barrier terminates within the clear zone of a high speed roadway, an appropriate impact attenuator shall be installed on the approach end.



TRANSITION AT BRIDGE COLUMNS OR SIGN SUPPORTS

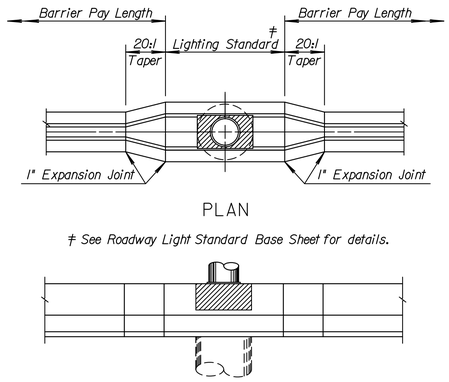


SECTION E-E

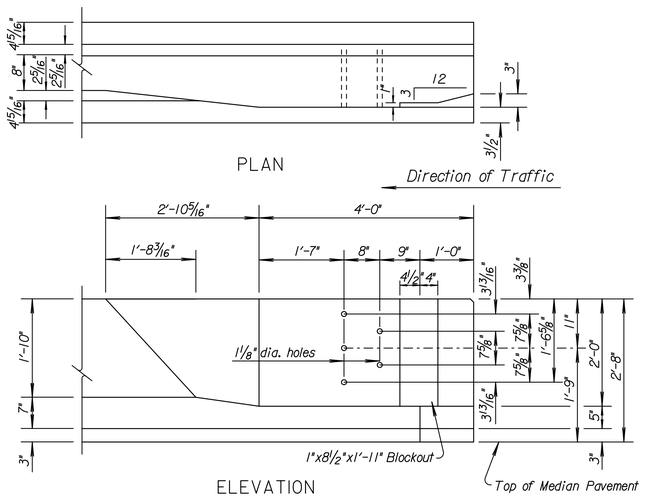


Note: All #8 Bars may be omitted when a 1" Min. thickness of Bituminous Overlay is to be placed adjacent to both sides of the Barrier.

DETAILS FOR PLACING
ON EXISTING PAVEMENT



TRANSITION AT ROADWAY LIGHT STANDARD BASE



GUARDRAIL ATTACHMENT TO
SAFETY BARRIER (TYPE I)

NO.	DATE	REVISIONS	BY	APP'D
3				
2	1-10-07	Changed bituminous to asphalt	S.W.K.	J.O.B.
1	7-23-04	Revised guard fence to guardrail	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE SAFETY BARRIER AUXILIARY DETAILS

RD625A

FHWA APPROVAL	11-02-04	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seitz

KDOT Graphics Certified 07-22-2010 Sh. No. 84

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Road\dgn\ka356001rss625a-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	85	251

GENERAL NOTES

The following five existing bridges will have bridge repairs made as part of this project.
See Sheets 86 thru 92 for details.

** I-35 over the B.N.R.R Br. No. 35-46-14.34(315) N.Bd.
I-35 over the B.N.R.R Br. No. 35-46-14.35(316) S.Bd.
Old 56 Hwy. on Ramp over I-35 Br. No. 35-46-14.86(317)
I-35 over Sheridan Drive Br. No. 35-46-15.27(318) S.Bd.
I-35 over Sheridan Drive Br. No. 35-46-15.28(319) N.Bd.

CONSTRUCTION SPECIFICATIONS:
Kansas Department of Transportation, Standard Specifications for State Road and Bridge Construction, 2007 Edition, and Special Provisions.

UNIT STRESSES:

Concrete (Grade 4.0)(AE)(SA)	f'c = 4.0 ksi
Reinforcing Steel (Grade 60)	Fy = 60 ksi

EXISTING STRUCTURE:
Plans of the existing structures are on file and available for inspection by qualified bidders at the State Bridge Office, KDOT, Eisenhower State Office Building, 700 SW Harrison, Topeka, KS.

CONCRETE:
Concrete used for patches in the bridge deck will be Concrete (Grade 4.0)(AE)(SA).

REINFORCING STEEL:
All new reinforcing steel shall conform to the requirements of ASTM A615, Grade 60 and shall be epoxy coated.

CONCRETE PATCHING:
Patching for this project is to be limited to the spalled surface of the deck, or impending spalls, as determined by the Engineer. A significant portion of the existing concrete overlay may be debonded or cracked, but is not to be removed unless spalling is imminent. No Full Depth Patching is expected, but a set quantitiy price is to be provided in the contract.

Thoroughly clean and brush all areas to be repaired. Apply an approved concrete bonding agent to all existing concrete surfaces which will contact new formed concrete in accordance with the Standard Specifications under Repair (Structures).

AREA PREPARED FOR PATCHING:
This item shall consist of removing unsound concrete and bituminous patches from the bridge deck, cleaning reinforcing bars, filling the removed patched areas with concrete and preparing the entire area of the deck for a polymer overlay. Quantity shown is an estimate of the areas involved. The exact areas shall be determined by tapping, before, during, and after chipping operation to assure that all unsound concrete has been removed. See KDOT Specifications. Areas to be patched will be determined by the Engineer.

FULL DEPTH PATCHING:
Forms shall be provided to enable placement of concrete in areas of full depth removal of bridge slab. The forms may be suspended from existing reinforcing bars by wire ties or a method approved by the Engineer may be used. See KDOT Specifications for method of measurement and basis of payment.

REINFORCING IN BRIDGE DECK:
Care should be exercised to prevent cutting, stretching, or damaging exposed reinforcing steel. Extreme care should be exercised to avoid breaking the bond between the reinforcing steel and concrete where bars are partially exposed yet remain anchored in sound concrete. Reinforcing steel damaged, cut, or deteriorated shall be replaced as directed by the Engineer. See table for replacement bar size and minimum splice length required. Replacement of bars damaged by the Contractor shall be subsidiary to "Area Prepared for Patching".

POLYMER OVERLAY:
After patching the existing bridge deck, prepare the surface per the specifications. When the date and temperature requirements of the specifications are met, profile grind, place a polymer overlay, and apply permanent pavement markings on the bridge deck. When the date and temperature requirements are not met, complete any required profile grinding and apply temporary pavement markings. Apply the polymer overlay according to the next available date(s) and temperature allowed per the current specifications. Apply polymer overlay to the vertical face of the bridge barrier to the first break in geometry.

DIMENSIONS:
All dimensions shown on the design plans are horizontal dimensions unless otherwise noted. Make necessary allowances for roadway grade and cross slope.

BRIDGE DRAINAGE SYSTEM:
The bid item "Bridge Drainage System" includes all labor and materials necessary to install the fiberglass drainage pipes and fittings, and to adjust existing steel catch pan, pipe supports, anchor rods, and other incidentals necessary to complete the work. See Special Provisions.

The Contractor shall clean out the bridge drainage system at Pier 4 on Bridge No. 35-46-14.86(317).

EXISTING DIMENSION VERIFICATION:
Dimensions of the existing structure are based on old plans. Verify, by field measurement, the asbuilt dimensions of the existing structure and submit such verification in writing to the Engineer. The verification will include sketches, drawings, photographs, and descriptions as needed to clearly define the asbuilt dimensions that will be incorporated in the new construction.

DRILLING AND GROUTING:
This item shall consist of grouting reinforcing steel, anchor bolts, tie bars, or dowel bars into the existing concrete, where required by the Engineer, with an epoxy grout. Follow KDOT Specifications 842 and any associated Special Provisions. Follow the manufacturer's directions for mixing, application, and curing. The tools, materials, labor, and incidentals necessary to complete the work shall be paid per each by the bid item "Drilling and Grouting"

REPLACE EXISTING BEARINGS:
The existing bearing devices at Abutment No. 1 of Bridge No. 317 shall be replaced in accordance with KDOT Standard Specifications and as detailed within. The existing finger joint plates will be removed for through clearout and, while removed, the end of the span shall be raised by Jacks and supported as a unit on approved falsework. Any damage to the structure or riprap due to the neglegence of the Contractor shall be repaired to the satisfaction of the Engineer at the Contractor's expense. All work and materials will be subsidiary to the bid item "Jacking of Existing Structure", Lump Sum.

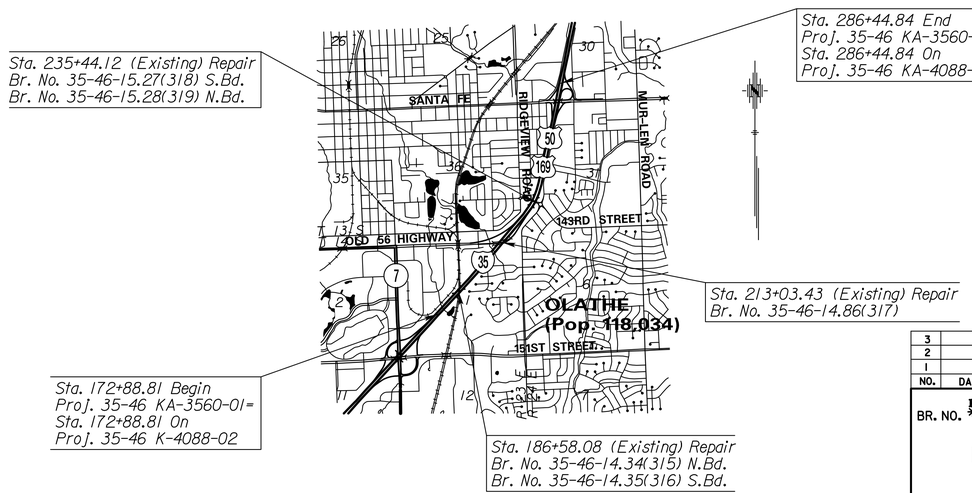
FALSEWORK INSPECTION:
This project has falsework plan requirements which are considered "Catagory 1" by KDOT specifications. The falsework designer of record will conduct an inspection of the as-built falsework. The bid item "Falsework Inspection" is full compensation for all materials, labor and equipment. See KDOT specifications.

FALSEWORK PLANS:
A licensed Proessional Engineer shall design the falsework details. Details shall bear the seal of a licensed Professional Engineer. See the Bridge Design Manual, Section 16.1 "Review and Approval of Falsework Plans", for a listing of items to be included on the falsework plan. Submit electronic plans conforming to 105.10(b) of the Standard Specification with details in compliance with KDOT Specifications to the State Bridge Office for review.

SUMMARY OF QUANTITIES

Item	Units	Quantity					
		Br. No. 315	Br. No. 316	Br. No. 317	Br. No. 318	Br. No. 319	Total
Area Prepared for Patching	Sq. Yds.	10	10	10	10	10	50
Area Prepared for Patching (Full Depth)	Sq. Yds.	5	5	5	5	5	25
Reinforcing Steel Epoxy (Grade 60)(Repair)(Set Price)	Lbs.	1	1	1	1	1	1
Reinforcing Steel Epoxy (Grade 60)	Lbs.	1200	1350	--	960	960	4470
Multi-Layer Polymer Concrete Overlay	Sq. Yds.	1868	2118	2183	1982	1982	10,133
Bearing (Pot)	Each	--	--	4	--	--	4
*Drilling and Grouting	Each	193	289	16	181	148	*827
Bridge Drainage System	L.S.	--	--	1	--	--	1
†Expansion Joint (Strip Seal Assembly)	Lin. Ft.	193	219	--	--	--	412
Jacking of Existing Structure	L.S.	--	--	1	--	--	1
Falsework Inspection	L.S.	--	--	1	--	--	1

† Approach Slab Joint
* Includes bars drilled and grouted into approach slabs for phased construction.



NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
BR. NO. **

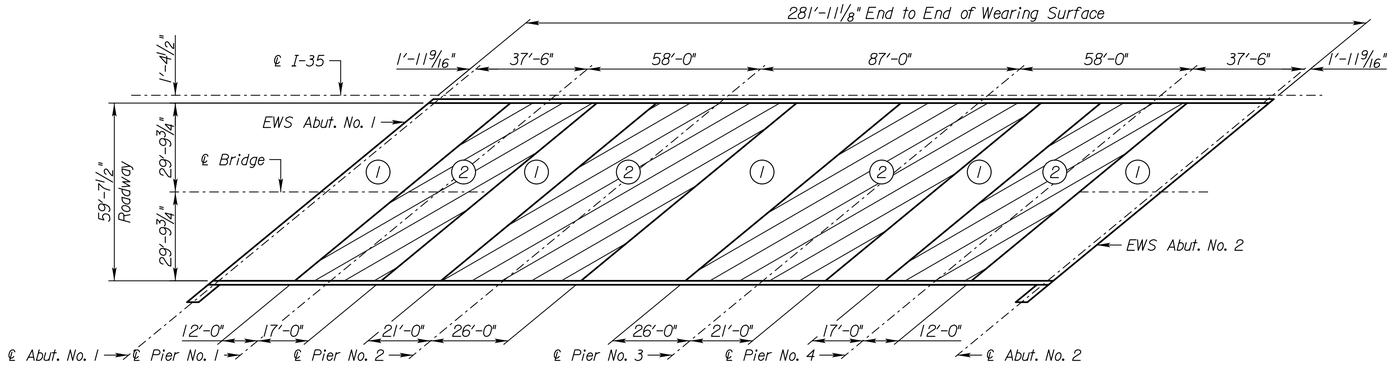
EXISTING BRIDGE REPAIRS

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF		SCALE		APP'D	
DESIGNED		DETAILED	ABB	QUANTITIES	CADD
DESIGN CK.		DETAIL CK.	REP	QUAN.CK.	CADD CK.

Plotted By: dameyer | Plot Location:
File: G:\KC\13\0356\Bridge\Dgn\ka35600\brp-gn-01.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	86	251

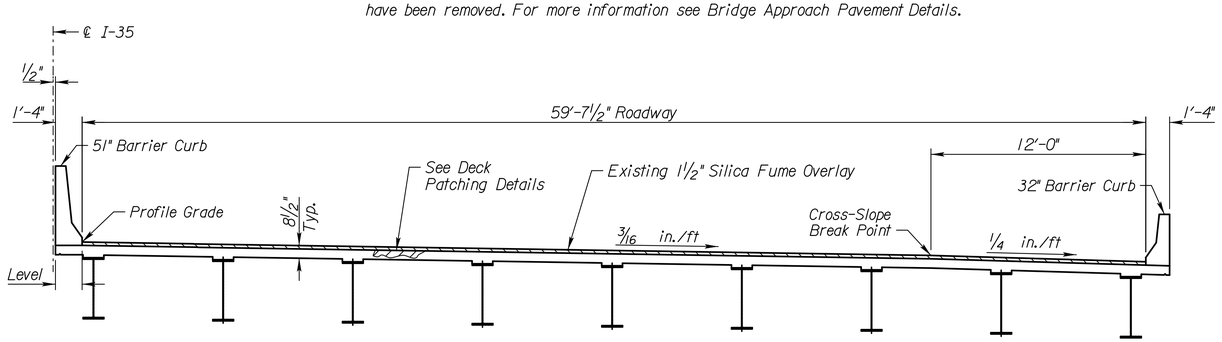


PATCHING SEQUENCE

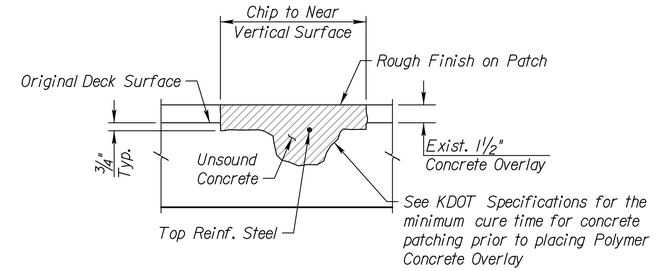
Notes:

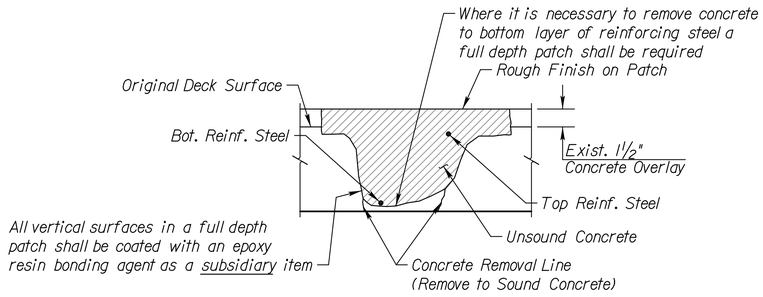
Patching for this project is to be limited to the spalled surfaces of the deck or impending spalls, as determined by the Engineer. A significant portion of the existing concrete overlay may be debonded or cracked, but it is not to be removed unless spalling is imminent. No Full Depth patching is anticipated, but a quantity is included in the contract to establish a price for the bid item.

#5 dowel bars shall be drilled and grouted into abutment after approach slabs have been removed. For more information see Bridge Approach Pavement Details.



TYPICAL SECTION





DECK PATCHING DETAILS

✳ *See GENERAL NOTES*

PATCHING SEQUENCE: The concrete removal shall be completed in stages, beginning with removal of deteriorated concrete in Area ①. If more than 15 longitudinal bars in Area ① are debonded for a distance of greater than 4 feet along the bars, the concrete removal shall stop and the patch area filled with Gr. 4.0 Concrete (AE)(SA). The patch shall cure a minimum of 3 days before concrete removal resumes in that area. Following the completion of work in Area ①, concrete removal may begin in Area ②. Concrete removal shall not begin in an Area ② until the patching concrete in adjacent Area ① has cured a minimum of 3 days. The maximum size of any full depth patch shall be limited to 4'x8' in any direction. Fully debonded bars in Area ① shall be limited to the same 4'x8' maximum patch size. All patching concrete shall cure according to the Specifications prior to allowing traffic on that lane.

◪MINIMUM SPLICE LENGTHS

Bar Size #	Bars Gr. 60 ksi
4	16"
5	20"
6	24"
7	30"
8	39"
9	49"
10	62"
11	77"

◪ *Lap lengths are based on a Class B splice. If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.*

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.34(315)(NB) 31' RT. STA. 186+20.44

BRIDGE DECK PATCHING DETAILS

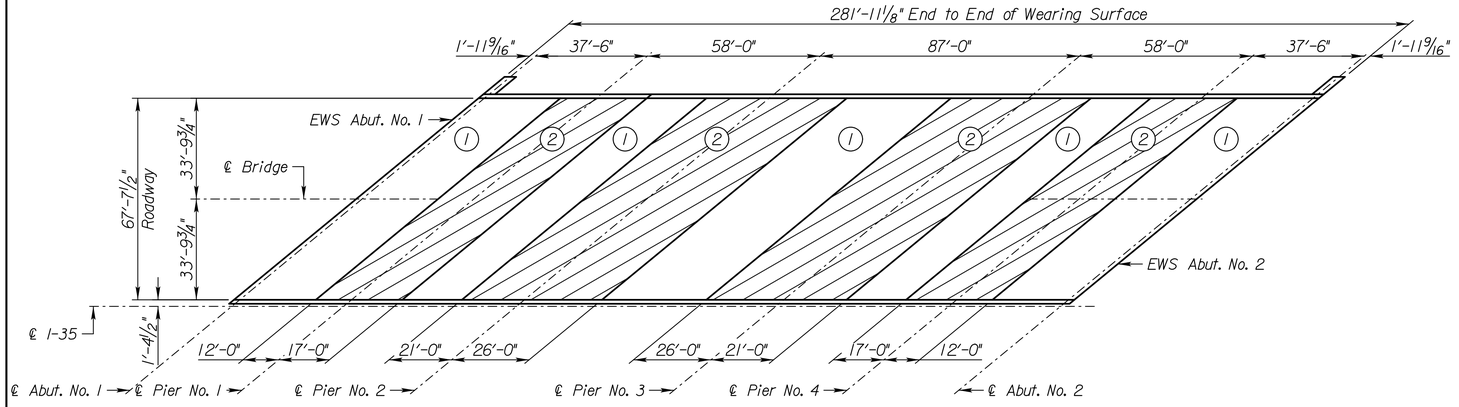
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE		APP'D	
DESIGNED	DETAILED	ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	REP	QUAN.CK.	CADD CK.

Plotted By: ameyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp315-ss-01.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	87	251



PATCHING SEQUENCE

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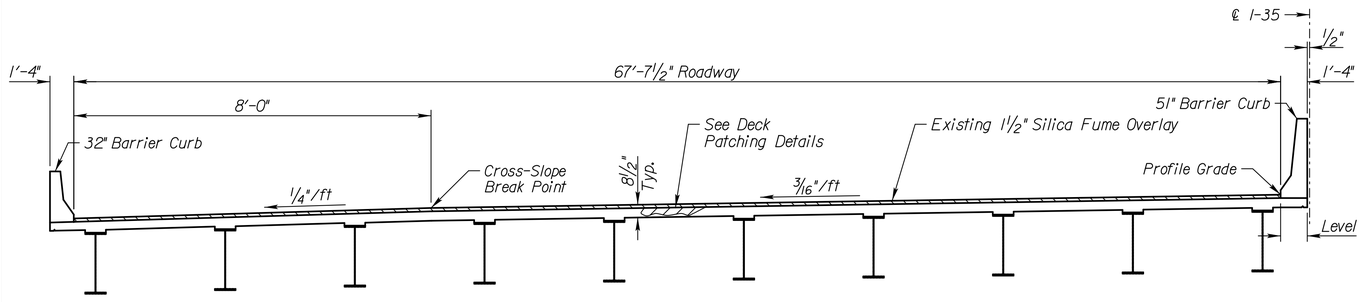
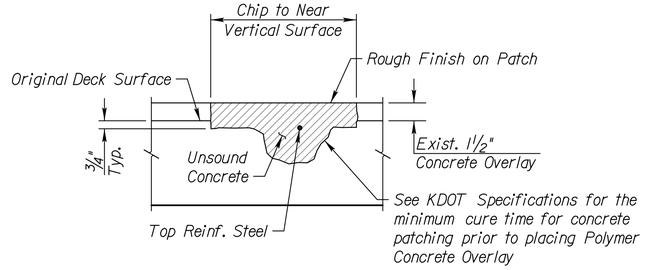
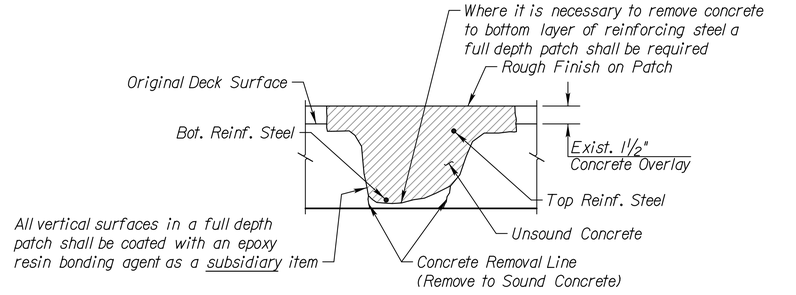


TYPICAL SECTION





DECK PATCHING DETAILS

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◪ *Lap lengths are based on a Class B splice. If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.*

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.35(316)(SB) 37' LT. STA. 187+02.95

BRIDGE DECK PATCHING DETAILS

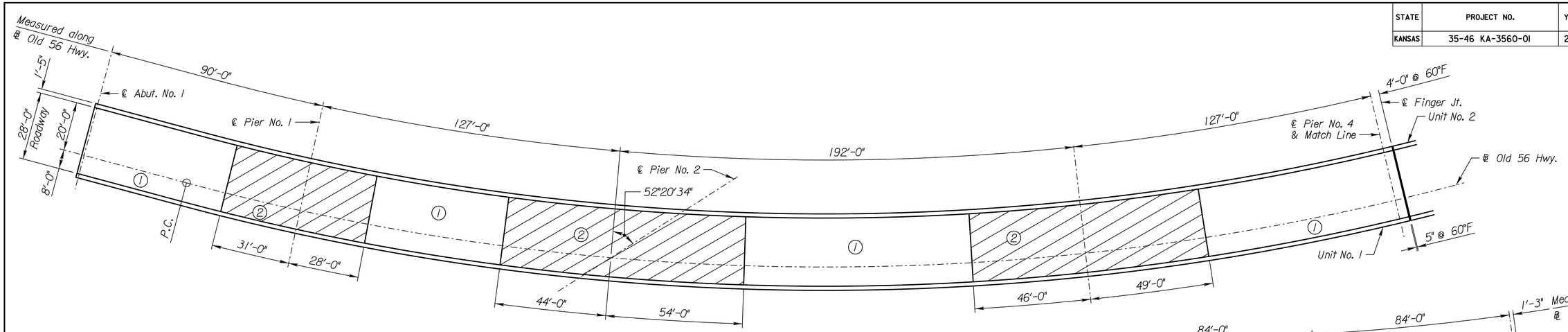
I-35 OVER THE BNRR

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

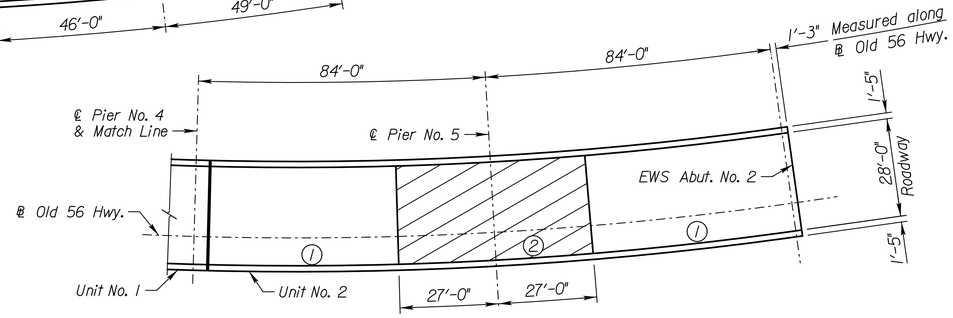
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp316-ss-01.dgn
Plot Date: 10/16/2014

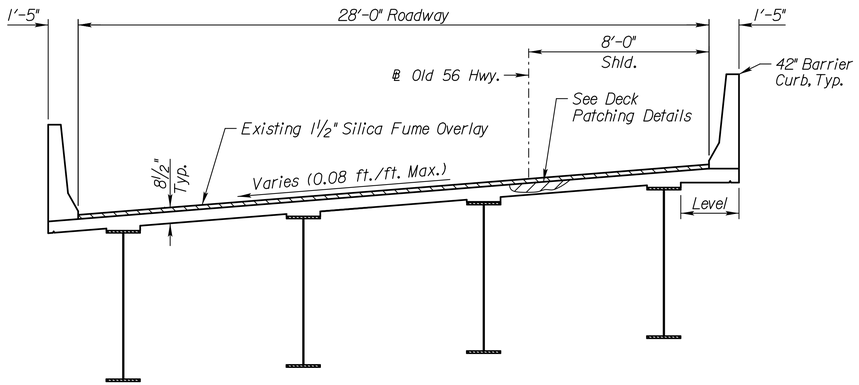
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	88	251



PATCHING SEQUENCE-UNIT NO. 1



PATCHING SEQUENCE-UNIT NO. 2



TYPICAL SECTION

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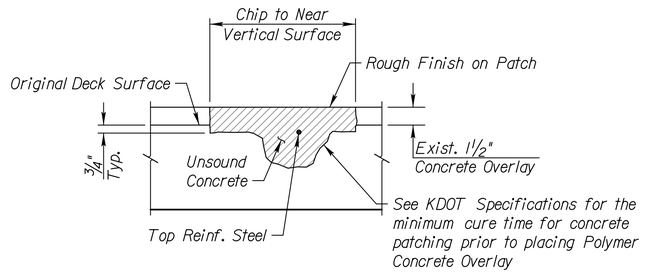

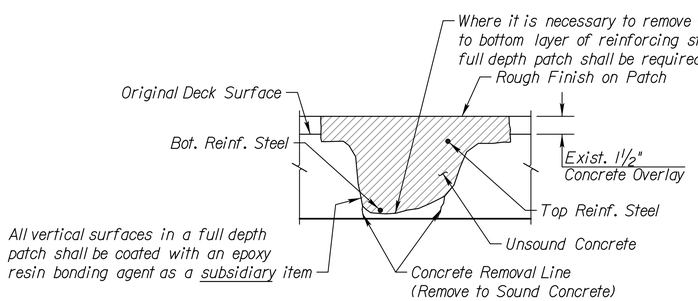

DECK PATCHING DETAILS

✳ See GENERAL NOTES

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10	62"
11	77"

◪ Lap lengths are based on a Class B splice. If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
BR. NO. 35-46-14.86(317) STA. 213+74.00

BRIDGE DECK PATCHING DETAILS

OLD 56 HWY. ON RAMP OVER I-35
PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

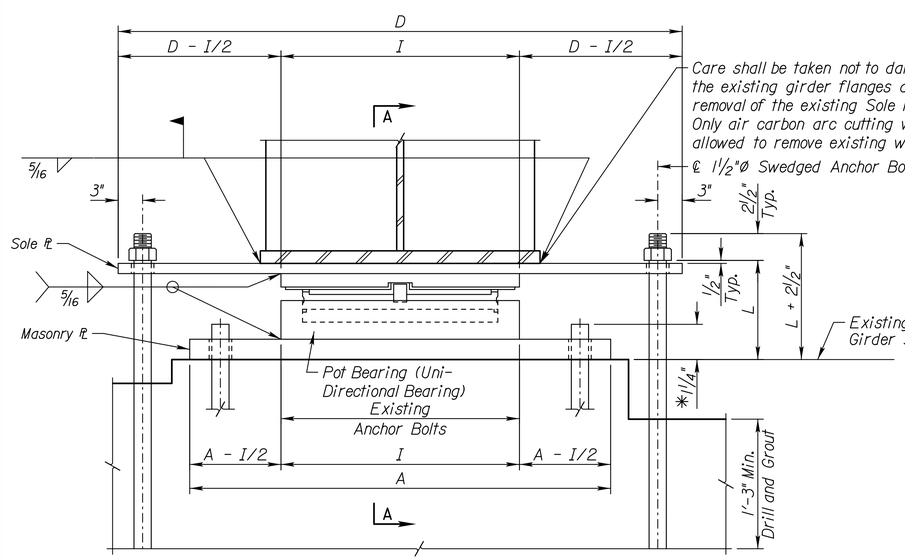
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: admeyer
Plot Location:
File: G:\KC\310356\Bridge\Dgn\ka356001brp317-ss-01.dgn
Plot Date: 10/16/2014

BEARINGS DESIGN PARAMETERS			
Location	Vertical Load		Movement
	Maximum (kip)	Minumum (kip)	Y (in)
Abut. No. 1	116.3	37.2	1.5

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	89	251

UNI-DIRECTIONAL POT BEARINGS													
Location	A	B	C	D	E	F	F'	G	H	I	J	K	L
Abut. No. 1	2'-0"	1'-3"	1"	3'-8"	1'-4"	1"	1 3/8"	2"	5"	10"	1'-2"	4"	6 1/2"

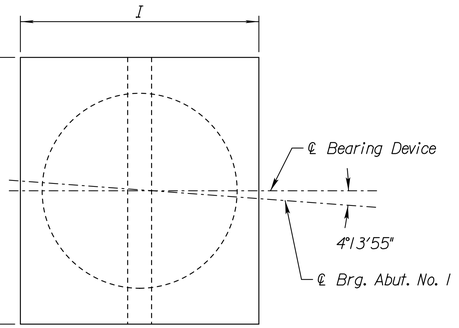


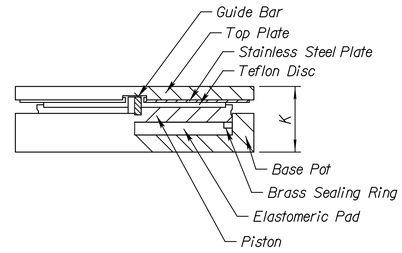
Care shall be taken not to damage the existing girder flanges during removal of the existing Sole Plate. Only air carbon arc cutting will be allowed to remove existing welds

℄ 1 1/2"Ø Swedged Anchor Bolt

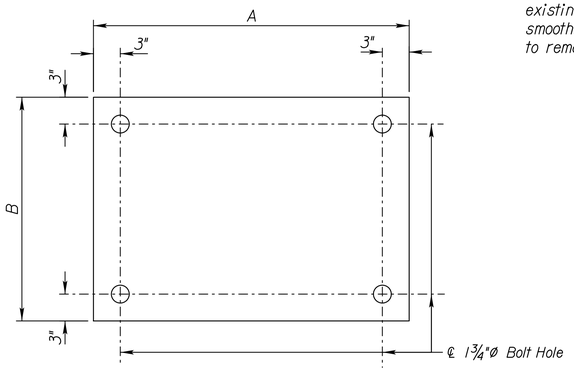
ELEVATION

*Cut existing anchor bolts 1/4" above existing Masonry Plate and grind smooth. Lower portion of anchor bolt to remain in place, Typ.

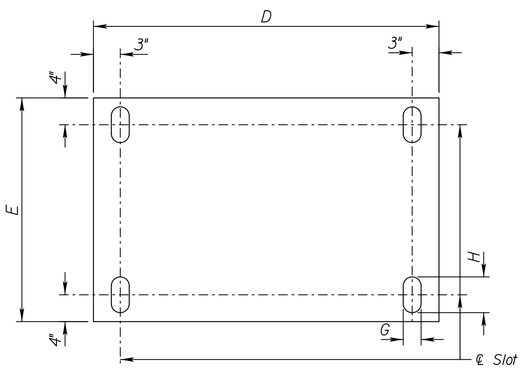




UNI-DIRECTIONAL POT BEARING

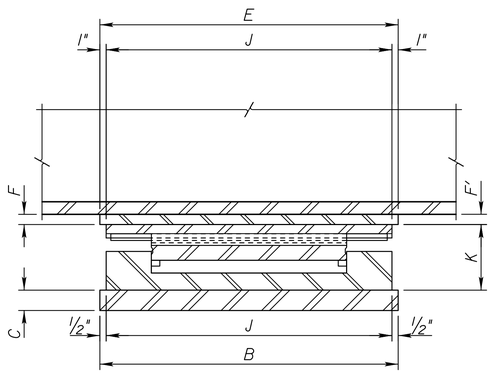


PLAN OF MASONRY PLATE

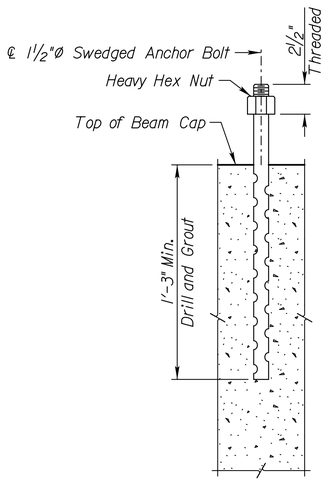


PLAN OF SOLE PLATE

SECTION THRU SOLE PLATE



SECTION A-A



SWEDGED ANCHOR BOLTS FOR POT BEARINGS

POT BEARING DEVICE:

Dimensions of the Pot Bearing, Sole Plate, and Masonry Plate shown on these details are approximate. The bearings shall be manufactured pot bearings, designed for the load and movement capabilities indicated in the Bearing Tables. The manufacturer's fabrication shop drawings must be submitted to the Engineer for approval prior to beginning fabrication of the pot bearing devices. Th shop drawing submittal must include design calculations sealed by a licensed professional engineer indicating conformance with design load and material criteria as specified in the contract plans.

Pot bearing devices will adhere to KDOT Standard Specification Sections 706 and 1701 and KDOT Special Provisions.

If actual dimensions of the Pot Bearings differ from these plan dimensions, the Contractor will be responsible for making corresponding dimension adjustments for the Sole Plate and Masonry Plate. No additional payment will be made as a result of any necessary dimension changes. All changes to plan dimensions and elevations must be shown on the shop drawings.

The Pot Bearing, Sole Plate, Masonry Plate, anchor bolts, washers, and any other appurtenances included in the fabrication and installation of the Pot Bearing Device shall be subsidiary to the bid item "Bearing (Pot)".

The contractor, in coordination with the bearing manufacturer, shall be responsible for sizing the pot bearing based on the load and movement capacities indicated in the Bearing Tables.

Steel for Pot Bearings shall conform to ASTM A709, Grade 50 and shall be metallized and sealed with a top coat. See Special Provisions. Steel for the Sole Plate and Masonry Plate shall be ASTM A709, Grade 50.

Anchor bolts will adhere to KDOT Standard Specification Section 1600 (Grade 55). The anchor bolts shall be swedged and shall have a minimum diameter of 1 1/2" and extend a minimum of 1'-3" into the concrete. Washers shall conform to ASTM F436.

Certified mill test reports, conforming to the requirements of the specifications, for the metals of the Pot Bearing, Sole Plate, Masonry Plate, and anchor bolts shall be submitted to the Engineer.

The Pot Bearing shall be assembled in the shop.

All exposed surfaces of the Sole Plate and Masonry Plate shall be painted with an inorganic zinc primer and water borne acrylic top coat.

Jacking force required to lift the superstructure at Abut. No. 1 is 250,000 lbs. minimum.

PLACEMENT:

Center the Sole Plate at the intersection of ℄ Girder and ℄ Bearing stiffener. Reset the Masonry Plate to its original position using the existing anchor bolts as guides. The Pot Bearing between the Masonry Plate and Sole Plate will be rotated as shown to accomodate the predicted movement of this curved bridge.

DESIGN CRITERIA:

The materials, fabrication and installation of the Pot Bearings shall be in accordance with Article 18.3, Division II of the AASHTO 1992 Standard Specifications for Highway Bridges and latest interims.

Design parameters shall be in accordance with Section 19.2 of the 1992 AASHTO Standard Specifications for Highway Bridges and latest interims.

The Contractor of fabricator shall submit to the Engineer shop drawings conforming to Section 706 of the KDOT Standard Specifications for State Road and Bridge Construction.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.86(317) STA. 213+74.00

BEARING DEVICE DETAILS

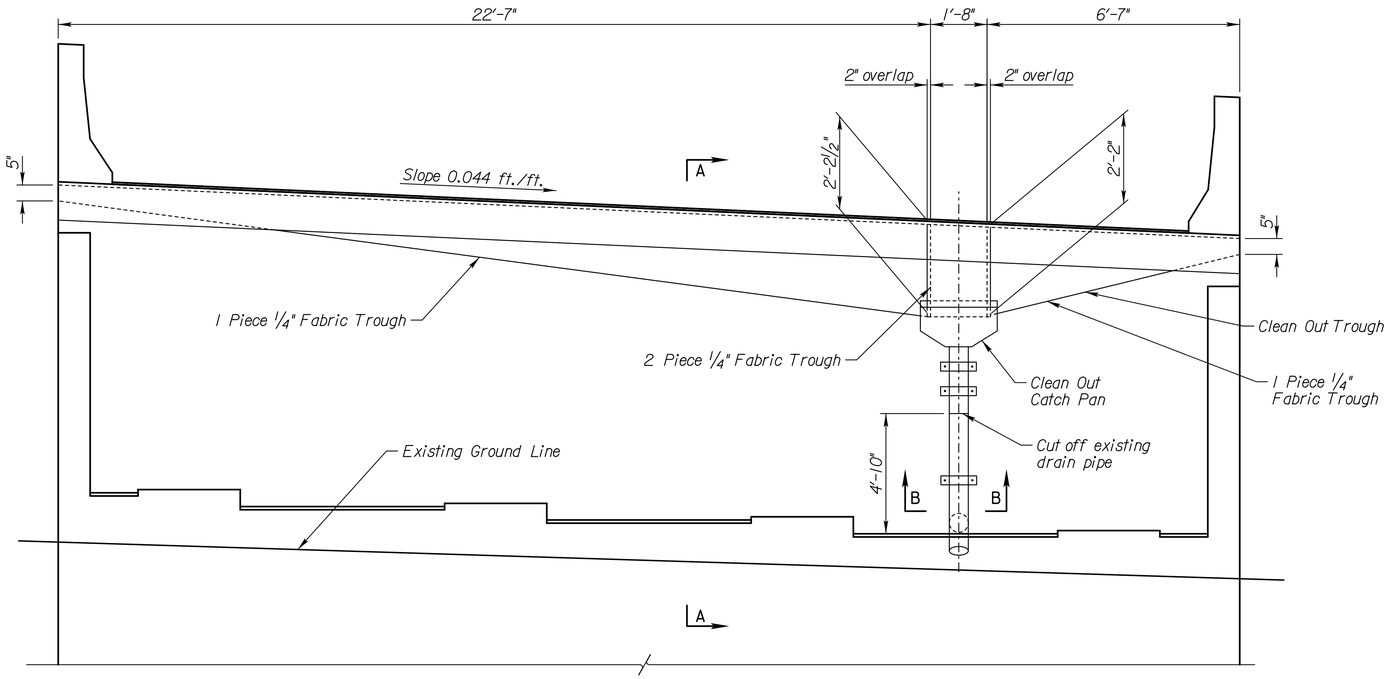
OLD 56 HWY. ON RAMP OVER I-35

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

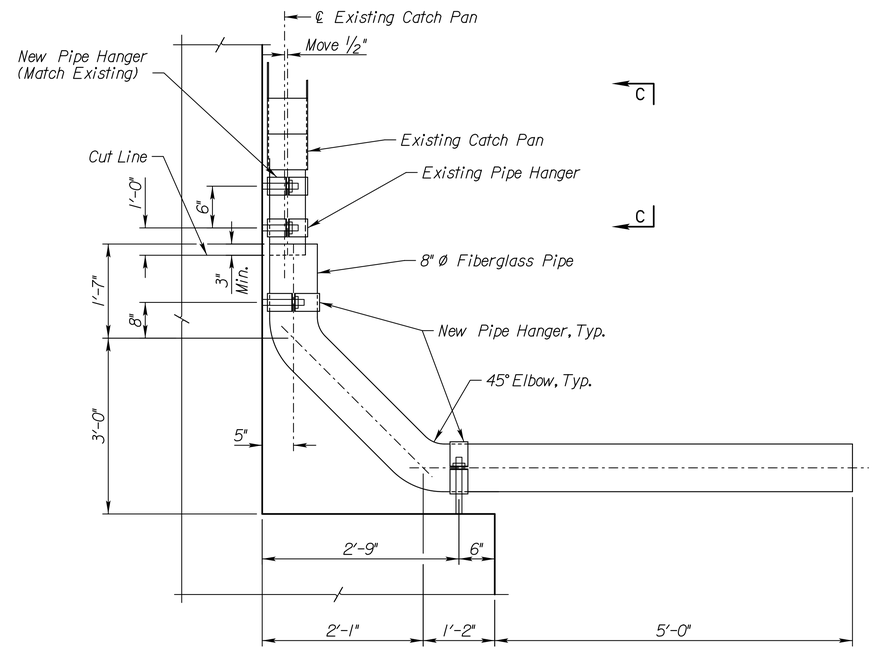
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:
File: G:\KCI_3\0356\Bridge\Dgn\ka356001brp317-bd-01.dgn
Plot Date: 10/16/2014

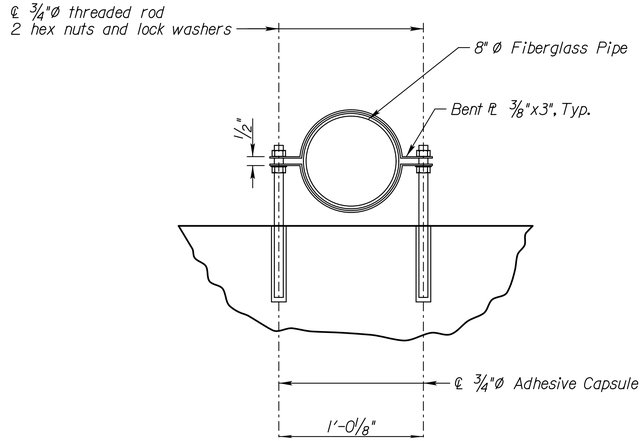
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	90	251



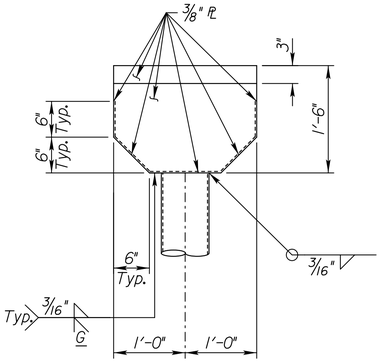
ELEVATION OF FABRIC TROUGH ABUTMENT NO. 1



SECTION A-A



SECTION B-B



VIEW C-C

Existing catch pan for information only

Notes:

Clean out existing fabric trough after finger plates have been removed. The Contractor shall also clean out the bridge drainage system at Pier 4. After clean out, if it is determined by the Engineer the fabric needs to be replaced due to its condition, replace the fabric to the original geometry and specifications.

All material for pipe hangers shall conform to the requirements of ASTM A709 (Gr. 36) and shall be galvanized. The fiberglass pipe and fittings shall conform to the requirements of ASTM D 2996 RTRP.

After fabrication, galvanize the pipe hangers in accordance with ASTM A123.

Field verify all dimensions prior to fabrication of drainage system.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-14.86(317) STA. 213+74.00

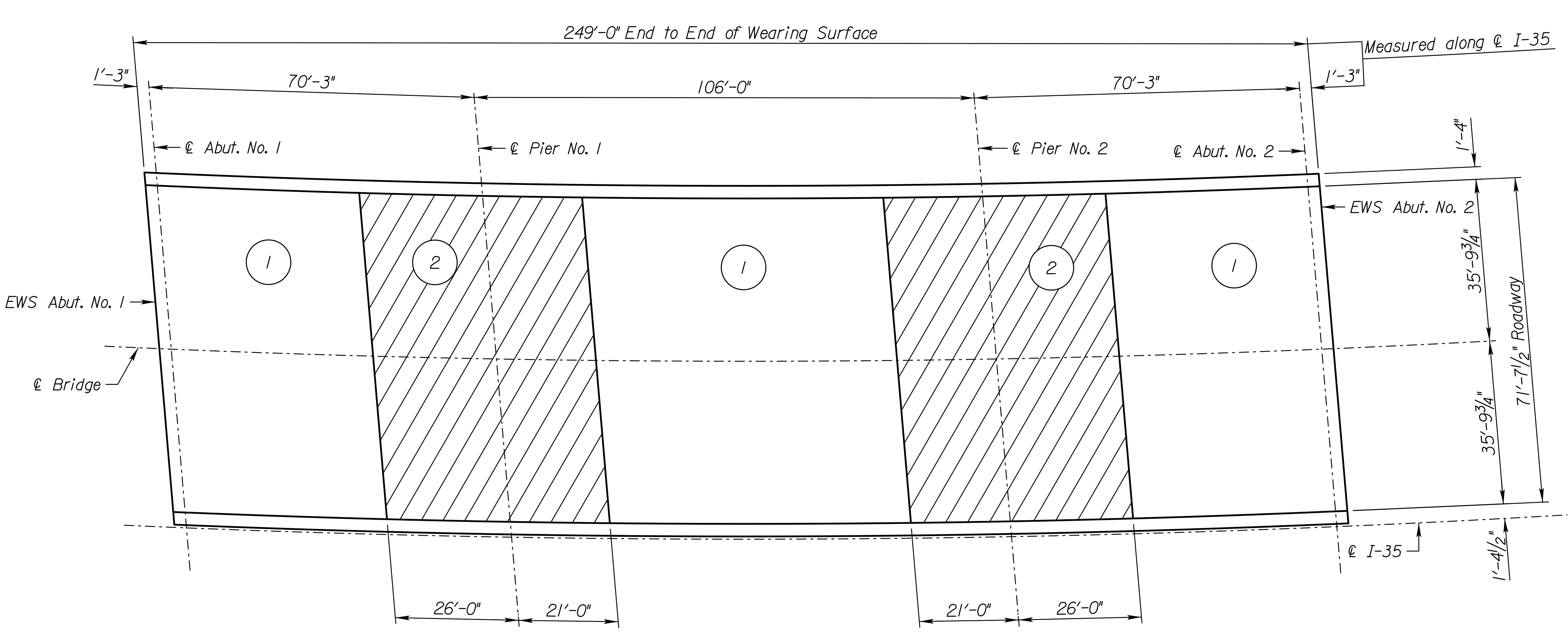
DRAIN DETAILS

OLD 56 HWY. ON RAMP OVER I-35

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:
File: G:\KCI\3\0356\Bridge\Dgn\ka356001brp317-dr-01.dgn
Plot Date: 10/16/2014

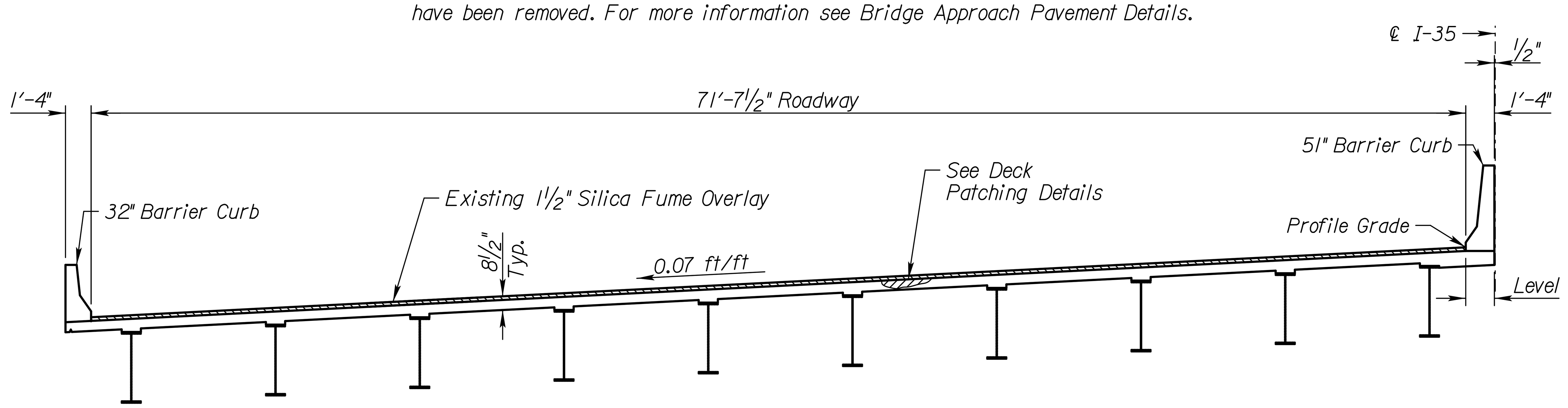


PATCHING SEQUENCE

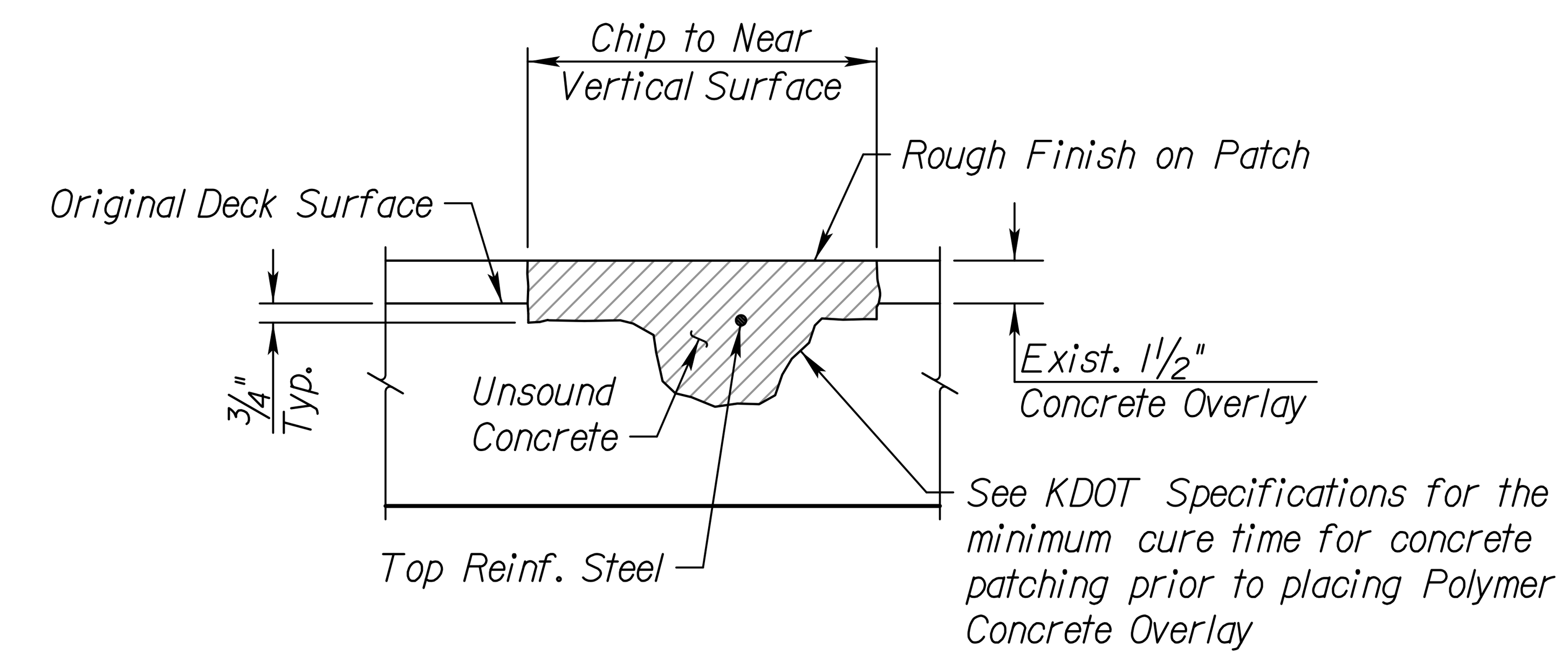
Notes:

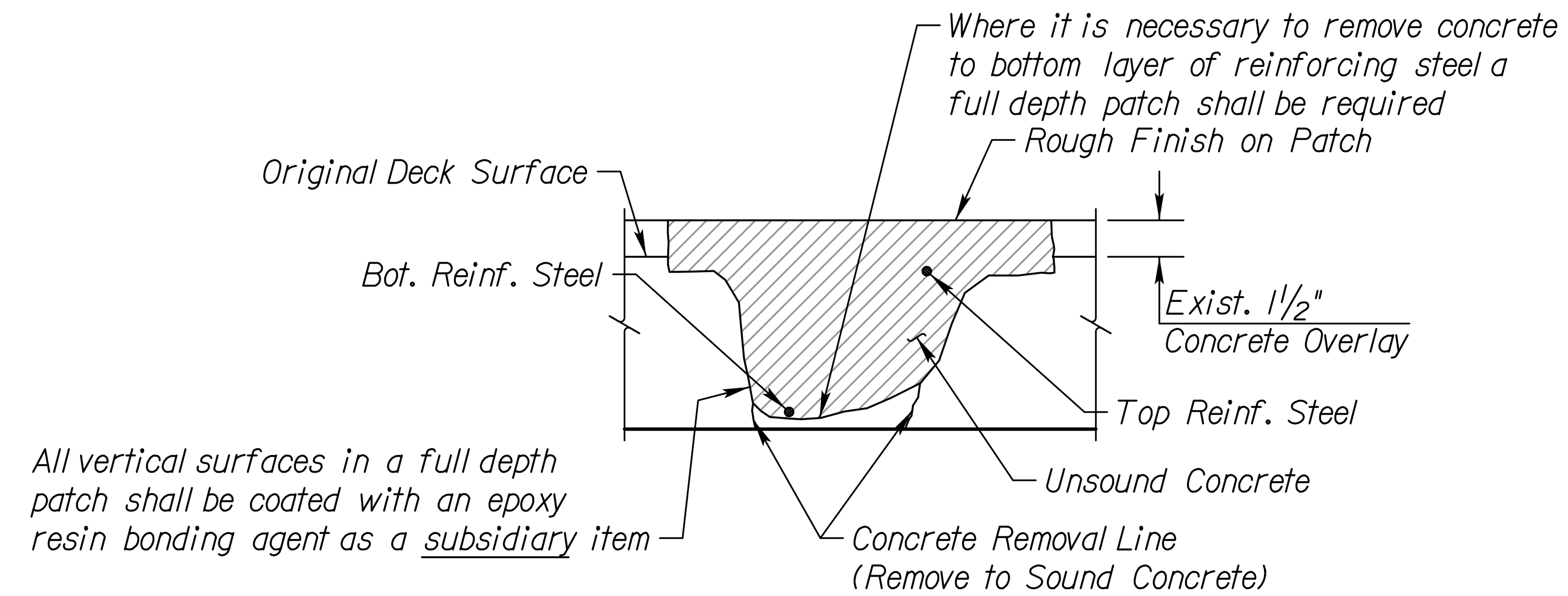
Patching for this project is to be limited to the spalled surfaces of the deck or impending spalls, as determined by the Engineer. A significant portion of the existing concrete overlay may be debonded or cracked, but it is not to be removed unless spalling is imminent. No Full Depth patching is anticipated, but a quantity is included in the contract to establish a price for the bid item.

#5 dowel bars shall be drilled and grouted into abutment after approach slabs have been removed. For more information see Bridge Approach Pavement Details.



TYPICAL SECTION





DECK PATCHING DETAILS

✳ See GENERAL NOTES

PATCHING SEQUENCE: The concrete removal shall be completed in stages, beginning with removal of deteriorated concrete in Area ①. If more than 15 longitudinal bars in Area ① are debonded for a distance of greater than 4 feet along the bars, the concrete removal shall stop and the patch area filled with Gr. 4.0 Concrete (AE)(SA). The patch shall cure a minimum of 3 days before concrete removal resumes in that area. Following the completion of work in Area ①, concrete removal may begin in Area ②. Concrete removal shall not begin in an Area ② until the patching concrete in adjacent Area ① has cured a minimum of 3 days. The maximum size of any full depth patch shall be limited to 4'x8' in any direction. Fully debonded bars in Area ① shall be limited to the same 4'x8' maximum patch size. All patching concrete shall cure according to the Specifications prior to allowing traffic on that lane.

◪MINIMUM SPLICE LENGTHS	
Bar Size ✳	Bars Gr. 60 ksi
4	16"
5	20"
6	24"
7	30"
8	39"
9	49"
10	62"
11	77"

◪ Lap lengths are based on a Class B splice. If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-15.27(318)(SB) STA. 235+45.26

BRIDGE DECK PATCHING DETAILS

I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

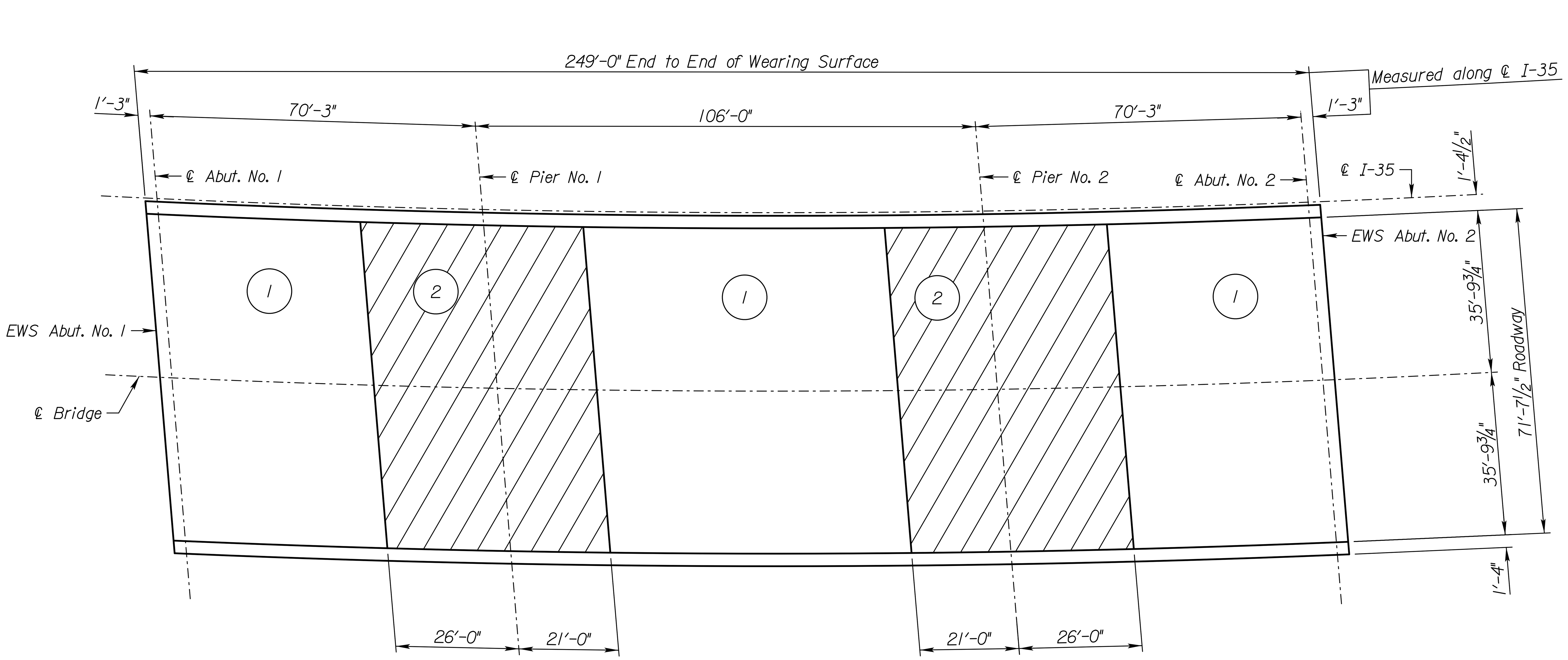
SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

Plotted By: aameyer | Plot Location:

File: G:\KC\13\0356\Bridge\Dgn\ka3560\brp318-ss-01.dgn

Plot Date: 10/16/2014

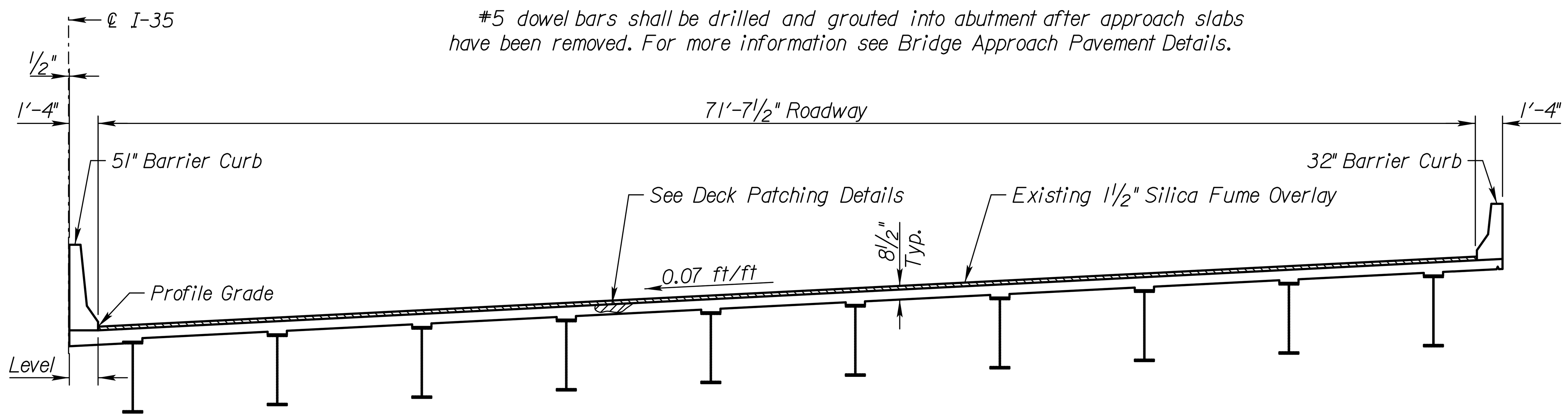
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2015	92	251



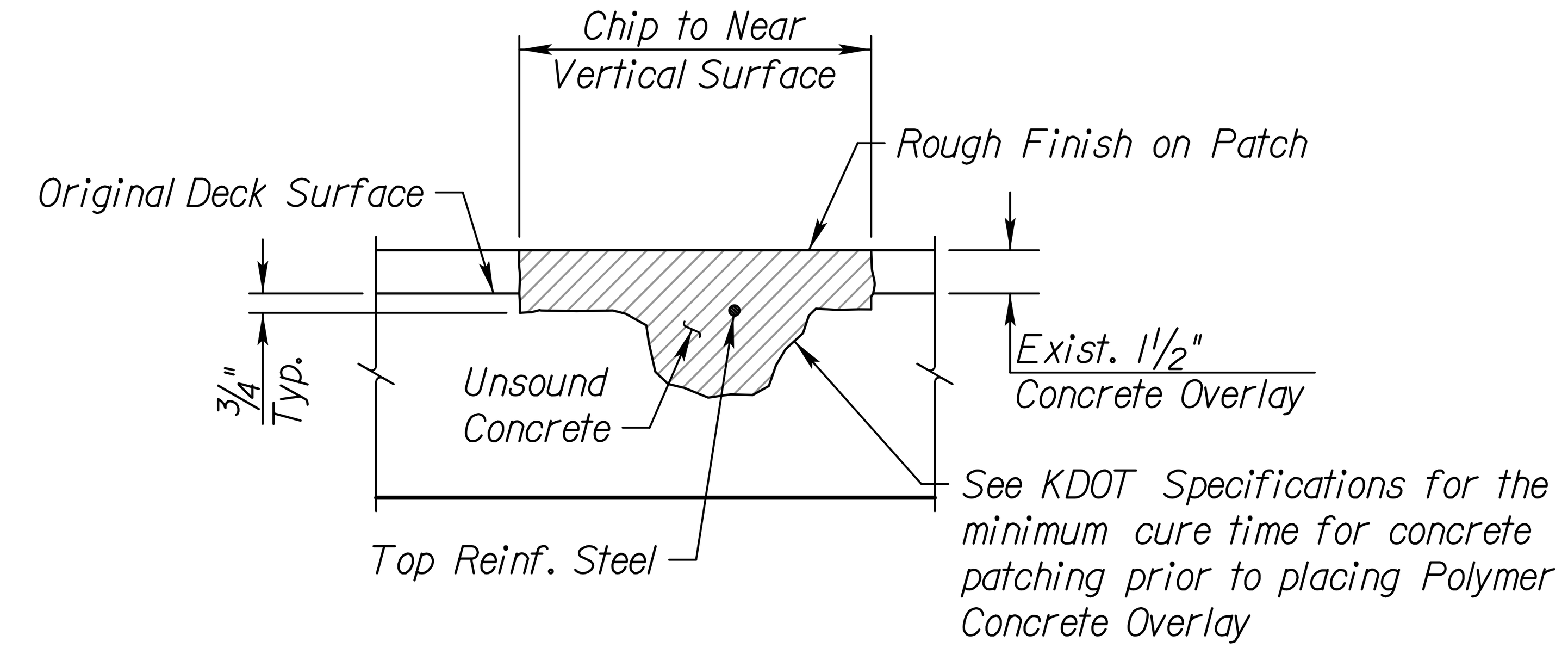
PATCHING SEQUENCE

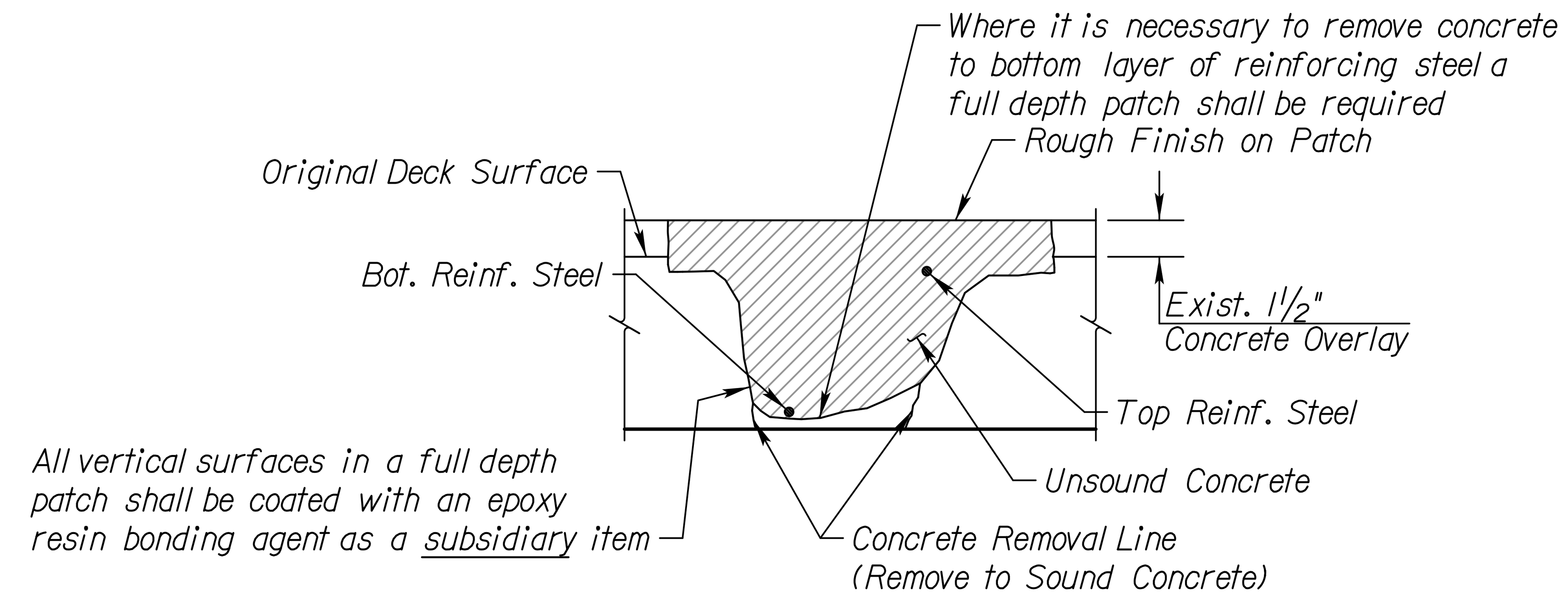
Notes:
Patching for this project is to be limited to the spalled surfaces of the deck or impending spalls, as determined by the Engineer. A significant portion of the existing concrete overlay may be debonded or cracked, but it is not to be removed unless spalling is imminent. No Full Depth patching is anticipated, but a quantity is included in the contract to establish a price for the bid item.

#5 dowel bars shall be drilled and grouted into abutment after approach slabs have been removed. For more information see Bridge Approach Pavement Details.



TYPICAL SECTION





DECK PATCHING DETAILS

∗ See GENERAL NOTES

PATCHING SEQUENCE: The concrete removal shall be completed in stages, beginning with removal of deteriorated concrete in Area ①. If more than 15 longitudinal bars in Area ① are debonded for a distance of greater than 4 feet along the bars, the concrete removal shall stop and the patch area filled with Gr. 4.0 Concrete (AE)(SA). The patch shall cure a minimum of 3 days before concrete removal resumes in that area. Following the completion of work in Area ①, concrete removal may begin in Area ②. Concrete removal shall not begin in an Area ② until the patching concrete in adjacent Area ① has cured a minimum of 3 days. The maximum size of any full depth patch shall be limited to 4'x8' in any direction. Fully debonded bars in Area ① shall be limited to the same 4'x8' maximum patch size. All patching concrete shall cure according to the Specifications prior to allowing traffic on that lane.

◪MINIMUM SPLICE LENGTHS	
Bar Size ∗	Bars Gr. 60 ksi
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5	20"
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11	77"

◪ Lap lengths are based on a Class B splice. If splicing epoxy coated reinforcing steel, increase the above splice lengths by 20%.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 35-46-15.28(319)(NB) STA. 235+45.26

BRIDGE DECK PATCHING DETAILS

I-35 OVER SHERIDAN DRIVE

PROJ. NO. 35-46 KA-3560-01 JOHNSON CO.

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED ABB	QUANTITIES	CADD
DESIGN CK.	DETAIL CK. REP	QUAN.CK.	CADD CK.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	93	251

DATE	BY	
	REFERENCES NOTED	
	REFERENCES CHECKED	

CONCRETE PAVEMENT 12" (UNIFORM) (AE) (NRDJ) - CONCRETE PAVEMENT 12" (VARIABLE) (AE) (PLAIN) - CONCRETE PAVEMENT 12" (UNIFORM) (AE) (PLAIN) - 4" CEMENT TREATED BASE/ASPHALT TREATED BASE - 9" FLY ASH TREATED SUBGRADE - FLY ASH

Station to Station		Location	Concrete Pavement			Base	Subgrade		Remarks
			Concrete Pavement 12" (Uniform) (AE)(NRDJ) S.Y.	Concrete Pavement 12" (Variable) (AE)(PL) S.Y.	Concrete Pavement 12" (Uniform) (AE) S.Y.	4" CTB/ATB S.Y.	Fly Ash Treated Subgrade (2-9" Lifts) S.Y.	† Fly Ash Tons	
172+89.00	183+91.01	I-35 Rt.	5,510.2	1,469.4					
172+89.00	184+65.64	I-35 Lt.	7,485.3	1,045.9					
172+89.00	185+16.60	I-35 Rt.				7,838.6	15,677.2	754.0	
172+89.00	186+01.05	I-35 Lt.				9,542.1	19,084.2	917.8	
183+91.24	185+16.60	I-35			254.0				
183+91.24	185+00.82	I-35 Rt.			430.0				
184+65.86	185+32.37	I-35 Lt.			631.0				
187+24.24	188+49.25	I-35 Rt.			514.0				
187+82.74	189+33.58	I-35			268.0				
188+14.89	189+33.58	I-35 Lt.			531.0				
188+49.47	233+75.08	I-35 Rt.	23,321.7	5,544.4					
189+33.80	233+75.08	I-35 Lt.	24,753.5	5,947.1					
187+23.89	234+28.79	I-35 Rt.				31,294.0	62,588.0	3,010.1	
187+98.51	234+19.24	I-35 Lt.				31,980.9	63,961.8	3,076.2	
233+75.37	234+17.53	I-35 Lt.			251.0				
233+75.37	234+20.93	I-35			126.0				
233+75.37	234+28.54	I-35 Rt.			334.0				
236+65.04	237+03.88	I-35 Lt.			244.0				
236+67.67	237+03.88	I-35			102.0				
236+68.78	237+03.79	I-35 Rt.			227.0				
237+04.13	285+99.74	I-35 Lt & Rt	58,423.8	12,602.3					
236+68.23	285+99.74	I-35 Lt & Rt				73,900.5	147,801.0	7,108.3	
222+27.55	223+14.99	Old 56 Hwy Off Ramp	170.3	145.7		337.8	675.6	32.5	
228+78.37	230+13.64	Old 56 Hwy On Ramp	240.5	224.7		494.6	989.2	47.6	
267+20.22	268+72.59	Santa Fe Off Ramp	285.8	261.6		581.2	1,162.4	55.9	
271+20.86	272+04.81	Santa Fe On Ramp	131.2	137.8		288.4	576.8	27.7	
Totals			120,322.3	27,378.9	3,912.0	156,258.1	312,516.2	15,030.1	

† Computed at the rate of 15% of weight of Soil (114 lbs/cu. ft.) for the top 9" lift and at the rate of 10% of weight of Soil (114 lbs/cu. ft.) for the bottom 9" lift

GUARDRAIL, STEEL PLATE

Station to Station		Location	Side	Length (ft)	End Terminal (MGS FLEAT) (Alternate 1A) (each)	End Terminal (MGS SRT) (Alternate 2A) (each)	End Terminal (MGS ET-PLUS) (Alternate 1B) (each)	End Terminal (MGS SKT) (Alternate 2B) (each)	Remarks
172+81.22	186+01.41	I-35	Lt.	1,325.0					Thrie Beam Included in Pay Length
183+18.62	184+43.44	I-35	Rt.	125.0			1	1	Thrie Beam Included in Pay Length
188+80.98	196+57.05	I-35	Lt.	775.0	1	1			Thrie Beam Included in Pay Length
233+56.12	234+29.07	I-35	Rt.	75.0	1	1			Thrie Beam Included in Pay Length
236+65.04	237+92.67	I-35	Lt.	125.0	1	1			Thrie Beam Included in Pay Length
241+85.96	263+94.08	I-35	Rt.	2,212.5	1	1			
251+91.55	253+54.28	I-35	Lt.	162.5	1	1			
Totals				4,800.0	5	5	1	1	

BRIDGE APPROACH SLAB FOOTING

Station	Location	C.Y.
183+91.24	I-35	37.0
183+91.24	I-35	19.8
184+65.86	I-35	42.9
187+23.89	I-35	36.8
187+82.74	I-35	19.8
188+14.29	I-35	42.9
233+75.37	I-35	35.9
233+75.37	I-35	35.9
233+75.37	I-35	15.5
236+65.04	I-35	35.7
236+67.67	I-35	15.4
236+68.78	I-35	35.7
Total		373.3

GUTTER SUMMARY

Station to Station		Side	Location	Gutter L.F.	Remarks
173+00.53	173+97.24	Rt.	I-35	96.70	
173+00.82	173+96.60	Lt.	I-35	95.80	
174+08.11	175+46.31	Lt.	I-35	138.20	
174+08.75	175+46.28	Rt.	I-35	137.50	
175+57.78	176+95.88	Rt.	I-35	138.10	
175+57.83	176+96.02	Lt.	I-35	138.20	
177+07.38	178+37.39	Rt.	I-35	130.00	
177+07.52	178+45.44	Lt.	I-35	137.90	
178+48.89	179+96.33	Rt.	I-35	147.40	
178+56.98	179+95.52	Lt.	I-35	138.50	
180+07.07	181+45.57	Lt.	I-35	138.50	
180+07.83	181+48.25	Rt.	I-35	140.40	
181+57.07	182+95.76	Lt.	I-35	138.70	
181+59.75	182+64.17	Rt.	I-35	104.40	
182+75.67	183+51.70	Rt.	I-35	76.00	
183+07.26	183+95.28	Lt.	I-35	88.00	
183+51.70	183+80.94	Rt.	I-35	29.30	
183+80.94	183+91.01	Rt.	I-35	10.10	
184+06.78	184+45.84	Lt.	I-35	39.10	
184+45.84	184+65.64	Lt.	I-35	19.80	
188+49.47	189+04.86	Rt.	I-35	55.40	
189+04.86	189+29.31	Rt.	I-35	24.40	
189+33.80	189+65.56	Lt.	I-35	31.80	
189+40.81	190+40.98	Rt.	I-35	100.20	
189+65.56	189+92.70	Lt.	I-35	27.20	
190+04.20	191+19.02	Lt.	I-35	114.90	
190+52.48	191+59.20	Rt.	I-35	106.70	
191+30.51	192+00.84	Lt.	I-35	70.40	
191+70.70	192+89.75	Rt.	I-35	119.10	
192+00.84	192+69.64	Lt.	I-35	68.80	
192+81.14	193+90.06	Lt.	I-35	108.90	
193+01.25	193+90.06	Rt.	I-35	88.80	
			Total	2,999.2	

EARTHWORK

Location	Station to Station		Excavation: Common		Excavation: Rock *		Excavation: Common (Contractor Furnished)		Compaction: Type A (MR-5-5) Cu. Yds.	Compaction: Type AA (MR-0-5) Cu. Yds.	Through Cuts Not Subgraded: Common Excavation Cu. Yds.	Through Cuts Not Subgraded: Type A (MR-5-5) Cu. Yds.	Through Cuts Not Subgraded: Type AA (MR-0-5) Cu. Yds.	Remarks
			Cu. Yds.	VMF	Cu. Yds.	VMF	Cu. Yds.	VMF ††						
I-35 ≈	175+88.81	285+99.74	17,362	0.75	50,538	1.00	-	0.75	-	-	39,065		39,065	
Shoofly † ⛟	159+44.76	163+71.01	566	0.75	249	1.00	278	0.75	605	-	115	115		
I-35 Temp. Widening ** †	268+73.07	289+99.39	1,729	0.75	1,392	1.00	2,936	0.75	2,269	-	522	522		
Totals			19,657		52,179		3,214		2,874		39,702	637	39,065	

* To be Wasted on Sites Provided by the Contractor.
≈ Includes 17,362 Cu. Yds. Waste.
⛟ Includes 38 Cu. Yds. Waste.
** Includes 1,639 Cu. Yds. Waste.
† Volumes Include Earthwork to Construct and Remove Temp Improvements.
†† Assumed VMF for Contractor Furnished Excavation.

PCCP PATCHING (FULL DEPTH) (12") (SOUND)

Location	Area S.Y.	Remarks
Old 56 Hwy. On Ramp	85.0	
Old 56 Hwy. Off Ramp	65.0	
Total	150.0	

PCCP JOINT AND CRACK PATCHING (PARTIAL DEPTH)

Location	Area S.Y.	Remarks
Old 56 Hwy. On Ramp	30.0	
Old 56 Hwy. Off Ramp	25.0	
Total	55.0	

CONCRETE SAFETY BARRIER

Station to Station		Location	Side	Type II (51") Lin. Ft.	Type IV Lin. Ft.	Remarks
152+70.00	169+15.00	I-35	Cl.		1,645.0	
183+86.45	183+91.24	I-35	Cl.		4.8	
183+91.24	185+18.27	I-35	Lt.	127.0		
183+91.24	185+14.93	I-35	Rt.	123.7		
187+96.84	189+33.58	I-35	Rt.	136.7		
188+00.18	189+33.58	I-35	Lt.	133.4		
189+33.58	189+38.37	I-35	Cl.		4.8	
233+70.58	233+75.36	I-35	Cl.		4.8	
233+75.36	234+19.06	I-35	Lt.	43.7		
233+75.38	234+19.41	I-35	Rt.	44.0		
236+68.17	237+03.85	I-35	Lt.	35.7		
236+68.29	237+03.83	I-35	Rt.	35.5		
237+03.83	237+08.63	I-35	Cl.		4.8	
286+00.00	299+09.00	I-35	Cl.		1,309.0	
			Total	679.7	2,973.2	

MILLING

Station to Station		Location	Side	Sq. Yds.	Remarks
285+99.74	286+14.74	I-35	Lt.	60.0	
285+99.74	286+14.74	I-35	Rt.	60.0	
			Total	120.0	

ADJUSTMENT OF EXISTING STRUCTURES - FOR INFORMATION ONLY

Station	Location	Side	Remarks
157+69.38	I-35	℄	
167+99.55	I-35	6.15' Rt.	

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

KDOT Graphics Certified 10-17-2014 Sh. No. 93

KDOT Graphics Certified

Drawn By : jcgood Plotted : 10/17/2014
File : G:\KC13\0356\Roaldgn\ka3560001rpq-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	94	251

FLUME INLET SUMMARY

Station	Side	Location	Flume Inlet (Concrete) Each	Flume Inlet (Concrete) (Special) Each ✡	Remarks
173+00.50	Rt.	I-35		1	
173+00.51	Lt.	I-35		1	
174+08.06	Lt.	I-35		1	
174+08.70	Rt.	I-35		1	
175+57.74	Rt.	I-35		1	
175+57.78	Lt.	I-35		1	
177+07.37	Rt.	I-35		1	
177+07.51	Lt.	I-35		1	
178+48.89	Rt.	I-35		1	
178+56.94	Lt.	I-35		1	
180+07.02	Lt.	I-35		1	
180+07.83	Rt.	I-35		1	
181+57.07	Lt.	I-35		1	
181+59.75	Rt.	I-35		1	
182+75.67	Rt.	I-35		1	
183+07.26	Lt.	I-35		1	
184+10.91	Rt.	I-35	1		
184+85.59	Lt.	I-35	1		
188+29.58	Rt.	I-35	1		
189+13.91	Lt.	I-35	1		
189+29.31	Rt.	I-35		1	
189+92.75	Lt.	I-35		1	
190+40.98	Rt.	I-35		1	
191+18.91	Lt.	I-35		1	
191+59.20	Rt.	I-35		1	
192+69.64	Lt.	I-35		1	
192+89.75	Rt.	I-35		1	
193+90.06	Lt.	I-35		1	
193+90.06	Rt.	I-35		1	
237+04.14	Lt.	I-35		1	For flume detail See Sh. No. 64
		Subtotal	4	26	
		Total	30		

✡ To be paid for as "Flume Inlet (Concrete)"

SLOPE DRAIN (CONCRETE)

Station	Side	Location	Lin. Ft.	Remarks
173+00.50	Rt.	I-35	20.0	
173+00.51	Lt.	I-35	20.0	
174+08.06	Lt.	I-35	20.0	
174+08.70	Rt.	I-35	20.0	
175+57.74	Rt.	I-35	20.0	
175+57.78	Lt.	I-35	20.0	
177+07.37	Rt.	I-35	20.0	
177+07.51	Lt.	I-35	20.0	
178+48.89	Rt.	I-35	20.0	
178+56.94	Lt.	I-35	20.0	
180+07.02	Lt.	I-35	20.0	
180+07.83	Rt.	I-35	20.0	
181+57.07	Lt.	I-35	20.0	
181+59.75	Rt.	I-35	20.0	
182+75.67	Rt.	I-35	75.0	
183+07.26	Lt.	I-35	20.0	
184+10.91	Rt.	I-35	20.0	
184+85.59	Lt.	I-35	20.0	
188+29.58	Rt.	I-35	20.0	
189+13.91	Lt.	I-35	20.0	
189+29.31	Rt.	I-35	20.0	
189+92.75	Lt.	I-35	20.0	
190+40.98	Rt.	I-35	20.0	
191+18.91	Lt.	I-35	20.0	
191+59.20	Rt.	I-35	20.0	
192+69.64	Lt.	I-35	20.0	
192+89.75	Rt.	I-35	20.0	
193+90.06	Lt.	I-35	20.0	
193+90.06	Rt.	I-35	20.0	
		Total	635.0	

REMOVAL OF EXISTING STRUCTURES - FOR INFORMATION ONLY

Station	Side	Location	Remarks
152+70.00	Cl.	I-35	1730' Concrete Safety Barrier ◔
172+91.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
172+91.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
173+98.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
173+99.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
175+48.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
175+48.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
176+97.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
176+98.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
178+39.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
178+48.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
179+97.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
179+98.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
181+48.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
181+49.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
182+98.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
183+00.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
183+81.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
183+86.00	Cl.	I-35	130' Concrete Safety Barrier ◔
183+88.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
183+94.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
183+98.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
184+66.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
184+72.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
187+98.00	Cl.	I-35	140' Concrete Safety Barrier ◔
188+43.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
189+29.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
189+39.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
190+02.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
190+49.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
191+28.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
191+69.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
192+79.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
192+99.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
193+99.00	Lt.	I-35	Gutter Inlet and end section (Pipe to remain)
193+99.00	Rt.	I-35	Gutter Inlet and end section (Pipe to remain)
196+75-283+00	Rt. & Lt.	I-35	50 Edge drain outlets and pipes
233+70.00	Cl.	I-35	49' Concrete Safety Barrier ◔
236+68.00	Cl.	I-35	40' Concrete Safety Barrier ◔
237+04	Lt.	I-35	9 sq. yds. existing concrete flume inlet
285+99	Cl.	I-35	1310' Concrete Safety Barrier ◔

◔ Trim existing dowels flush with existing pavement surface

GUARDRAIL, REMOVAL OF STEEL PLATE

Station to Station		Location	Side	Length (ft)	Remarks
172+88.00	186+00.00	I-35	Lt.	1,312	Remove Guardrail and Thrie Beam
182+72.00	184+42.00	I-35	Rt.	170	Remove Guardrail, Thrie Beam and End Terminal
188+81.00	196+90.00	I-35	Lt.	809	Remove Guardrail, Thrie Beam and End Terminal
233+14.00	234+31.00	I-35	Rt.	117	Remove Guardrail, Thrie Beam and End Terminal
236+63.00	238+37.00	I-35	Lt.	174	Remove Guardrail, Thrie Beam and End Terminal
236+71.00	263+86.00	I-35	Rt.	2,715	Remove Guardrail, Thrie Beam and End Terminal
252+30.00	253+87.00	I-35	Lt.	157	Remove Guardrail and End Terminal
			Total	5,454	

RECAPITULATION OF QUANTITIES

	DESCRIPTION	QUANTITY	UNIT
	Contractor Construction Staking	lump sum	lump sum
	Field Office and Laboratory (Type A)	1	each
	Mobilization	lump sum	lump sum
	Mobilization (DBE)	lump sum	lump sum
	Removal of Existing Structures	lump sum	lump sum
	Clearing and Grubbing	lump sum	lump sum
	Common Excavation	59,359	cu yd
	Common Excavation (Contractor Furnished)	3,214	cu yd
	Rock Excavation	52,179	cu yd
	Compaction of Earthwork (Type A)(MR-5-5)	3,511	cu yd
	Compaction of Earthwork (Type AA)(MR-0-5)	39,065	cu yd
	Water (Grading)(Set Price)	1	m gal
	Flowable Fill (Low Strength)	16	cu yd
	Guardrail, Steel Plate (MGS)	4800.00	ln ft
	Guardrail End Terminal (MGS-FLEAT)(Alternate 1A)	5	each
	Guardrail End Terminal (MGS-SRT)(Alternate 2A)	5	each
	Guardrail End Terminal (MGS-ET PLUS)(Alternate 1B)	1	each
	Guardrail End Terminal (MGS-SKT)(Alternate 2B)	1	each
	Gutter (AE)	2,999	ln ft
	Slope Drain (Concrete)	635	ln ft
	Flume Inlet (Concrete)	30	each
	Concrete Safety Barrier (Type III)(51")	680	ln ft
	Concrete Safety Barrier (Type IV)	2 973.2	ln ft
	Concrete Pavement (12" Uniform)(AE)(NRDJ)	120,322	sq yd
	Concrete Pavement (12" Variable)(AE)(Plain)	27,379	sq yd
	Concrete Pavement (12" Uniform)(AE)	3,912	sq yd
	PCCP Patching (Full Depth)(12")(Sound)	150	sq yd
	PCCP Joint and Crack Patching (Partial Depth)	55	sq yd
	Bridge Approach Slab Footing	373.3	cu yd
	Quality Control Testing (PCCP)	151,613	sq yd
	Concrete Pavement Smoothness	lump sum	lump sum
	Concrete Pavement Composite Pay Adjustment	lump sum	lump sum
	Concrete Core (Set Price)	1	each
	Cement Treated Base (Alternate 1C)	156,258	sq yd
	Quality Control Testing (CTB) (Alternate 1C)	156,258	sq yd
	Fly Ash	15,030	tons
	Manipulation (Fly Ash Treated Subgrade)	312,516	sq yd
	Milling	120	sq yd
	Water (Treated Subgrade)(Set Price)	1	m gal
	Adjustment of Existing Structures	lump sum	lump sum
	Guardrail (Removal of Steel Plate)	5,454	ln ft
✳	Maintenance and Restoration of Haul Roads (Set Price)	lump sum	lump sum
	Asphalt Treated Base (Alternate 2C)	156,258	sq yd
	Quality Control Testing (HMA) (Alternate 2C)	33,986	tons
	Field Office Laboratory (Type A) (Alternate 2C)	1	each
	Asphalt Core (Set Price) (Alternate 2C)	1	each
	Asphalt Air Void Pay Adjustment (Alternate 2C)	lump sum	lump sum
	Asphalt Density Pay Adjustment (Alternate 2C)	lump sum	lump sum
	Extra Work Saw Cuts (Set Price)	1	ln ft
	Weigh-in-Motion System	lump sum	lump sum
✳	Trainees Highway Construction (Set Price)	1,990	hour

For Bridge Quantities, see Sh. No. 85
For Temporary Erosion Control Quantities, see Sh. No. 96
For Permanent Seeding Quantities, see Sh. No. 106
For Pavement Marking Quantities, see Sh. No. 127
For Signing Quantities, see Sh. No. 137
For Surfacing Quantities, see Sh. No. 95
For Traffic Control Quantities, see Sh. No. 226

✳ Non-Participating

DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

Drawn By : jcgood
File : G:\KC1\30356\Road\dgn\ka356001rpq-02.dgn
Plotted : 10/20/2014

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

KDOT Graphics Certified 10-20-2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	95	251

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-)".

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_____material as directed by the Engineer. The removal of this material will be subsidiary.

The_____material used to backfill over the structure shall be paid for at the prices shown in the contract.

The earth shoulders shall be compacted full depth (Type -MR) 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_____ to the R/W line as indicated on the detail. All side roads and house entrances with existing asphalt surface shall be surfaced with_____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_____to the limits shown on the detail.

Surfacing material (SA-_____) shall be used for surfacing house entrances and side roads (_____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 lbs. per cu. ft. Quantities for stabilized base course, AB-3, are calculated on the basis of 156 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 0.05 gal./sq. yd.

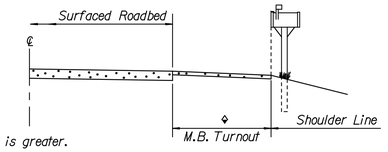
Asphalt Material quantities are calculated on the basis of 8.328 lbs. per gal.

Shoulder rumble strips will not be constructed as part of this project.

SUMMARY OF QUANTITIES

ITEM	Shoofly	N.Bd. Widening	S.Bd. Widening	TOTAL	UNITS
Hot Mix Asphalt (Commercial Grade)(Class A) *	486.7	1,283.0	1,441.2	3,210.9	tons
Aggregate Base (AB-3)(6")	688.5	1,474.6	1,656.5	3,819.6	sq yd

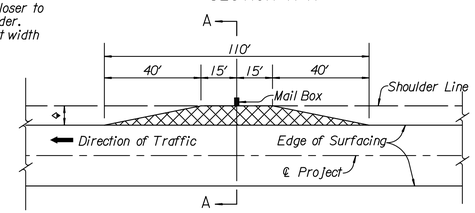
*Calculated at a rate of 145 lbs/cu ft



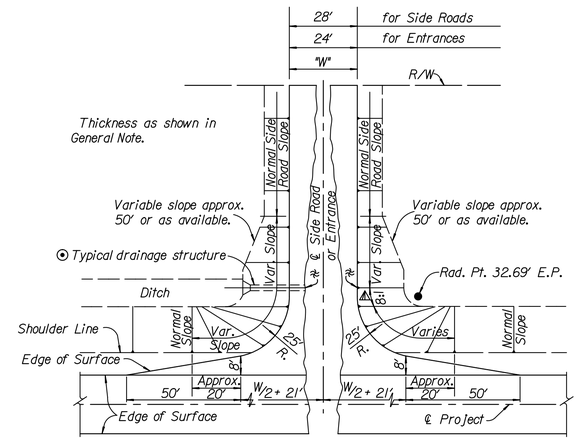
◆ Width shall be 8' or shoulder width, whichever is greater.

SECTION A-A

Note: The face of Mail Box should be no closer to the roadway than the edge of the shoulder. Align with edge of turnout when turnout width is greater than shoulder width.

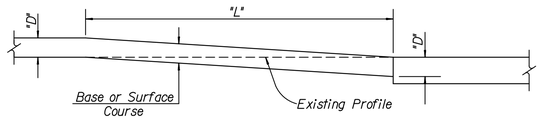


DETAIL FOR SURFACING OF MAIL BOX TURNOUTS



WITH DRAINAGE STRUCTURE MOUND ENTRANCE OR SIDE ROAD

DETAIL FOR SURFACING OF SIDE ROADS & HOUSE ENTRANCES



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'

RATES OF APPLICATION

RATE	UNIT	ITEM		

† Computed at the rate of

†† Computed at the rate of

RECAPITULATION OF QUANTITIES

ITEM				TOTAL	UNIT
Hot Mix Asphalt (Commercial Grade)(Class A)				3,211	tons
Aggregate Base (AB-3)(6")				3,820	sq yd
Water (Aggregate Base)(Set Price)				1	MGal

⚠ 8:1 Slope at the appropriate clear zone shall apply to all mound entrances and mound side roads to 10' fill height. Normal Slope (but not steeper than 6:1) for over 10' fill height.

⊙ Normal Slope (but not steeper than 6:1) at approximate ℄ Structure or appropriate clear zone width.

* On side roads and entrances which slope toward the highway, a low point approx. 6" deep shall be constructed to divert surface drainage into the highway ditch, unless otherwise shown on the plans.

NO.	DATE	REVISIONS	BY	APP'D
12	1-10-07	Changed bituminous to asphalt	S.W.K.	J.O.B.
11	8-30-06	Changed tack type/rate	S.W.K.	J.O.B.
10	3-24-05	Revised compaction, tack type/rate	S.W.K.	J.O.B.
9	6-12-02	Added low point off shoulder.	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (Surfacing)

RD051

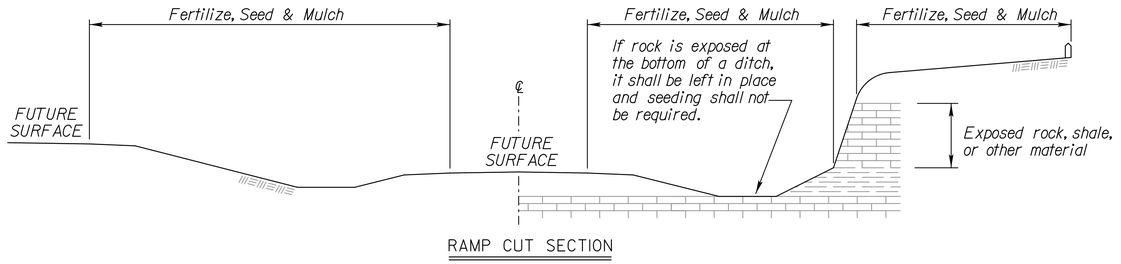
FHWA APPROVAL	9-06-06	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Hecht

KDOT Graphics Certified 08-06-2014 Sh. No. 95

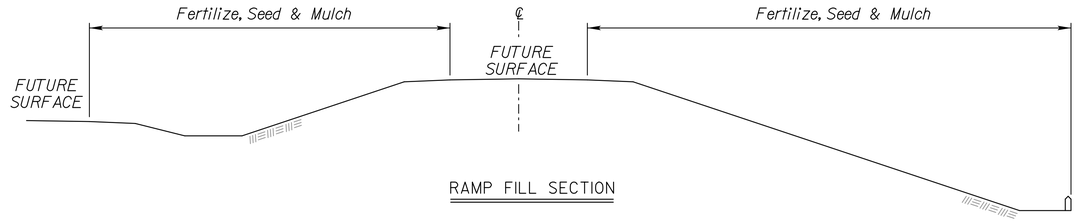
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rss051-01.dgn

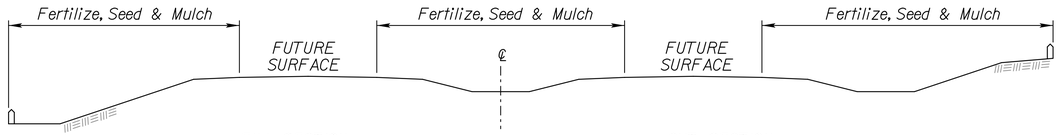
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	96	251



RAMP CUT SECTION



RAMP FILL SECTION



TYPICAL SECTION - DUAL PAVEMENT

FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P_2O_5, K_2O listed in Summary of Quantities will be acceptable.

- * - N = Nitrogen Rate of Application
- ** - P_2O_5 = Phosphorous Rate of Application
- *** - K_2O = Potassium Rate of Application

The Contractor will be required to finish areas of excavation, borrow and embankment in accordance with the specifications. Areas that require installation or construction of temporary water pollution control items will be finished in reasonable close conformity to the alignment, grade and cross section shown on the plans or as established by the Engineer.

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 measurement.

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 drilling is not possible.

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 drilling is not possible.

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded, and mulched. Soil preparation shall conform to the Standard Specifications.

Temporary seeding shall be done during any time of the year that the soil can be cultivated. After the temporary seeding has been completed on the entire project, a permanent seeding shall be done by another project during the normal seeding season.

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 materials is as follows:

1¾ - 2¼ Tons per Acre = 1½" 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.

The amount of mulch and mulch tacking slurry in the bid quantities is estimated. 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 Standard Specification Section 904.

SUMMARY OF SEEDING QUANTITIES

P.L.S. RATE/ ACRE		ACRES		BID ITEM	QUANTITY	UNIT
CLT	SL/CH	CLT	SL/CH			
150		6.8		Temporary Fertilizer (15 - 30 - 15)	1020	LB
20		6.8		Temporary Seed (Canada Wildrye)	136	LB
45		6.8		Temporary Seed (Grain Oats)	306	LB
45		6.8		Temporary Seed (Sterile Wheatgrass)	306	LB
	109.9		0.1	Soil Erosion Mix	11	LB
				Agricultural Limestone		TON
				Temporary Berm (Set Price)	1	LF
				Temporary Slope Drain		LF
				Temporary Stream Crossing		EACH
				Temporary Inlet Sediment Barrier	7	EACH
				Silt Fence	250	LF
				Biodegradable Log (9")	10945	LF
				Biodegradable Log (12")	10945	LF
				Biodegradable Log (20")	250	LF
				Temporary Ditch Check (Rock)		CU YD
				Temporary Sediment Basin		CU YD
				Sediment Removal (Set Price)	1	CU YD
				SWPPP Design †	Lump Sum	LS
				SWPPP Inspection †		EACH
				Water Pollution Control Manager †		EACH
				Erosion Control (Class 1, Type C)	528	SQ YD
				Erosion Control (Class 2, Type Y)		SQ YD
900 lbs / acre		6.8		Mulch Tacking Slurry	6120	LB
2 tons / acre		6.8		Mulching (Temporary)	13.6	TON
				Water (Erosion Control) (Set Price)	1	MGAL

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

† These Bid Items will not be included when the project is less than 1 acre.

Regreen and Quick Guard are the approved sterile wheatgrass products.

***** List size of material.*

SOIL EROSION MIX

PLS RATE	NAME	QTY (lb)
0.5	Blue Grama (Lovington)	0.1
4.5	Buffalograss (Treated)	0.5
45	Perennial Ryegrass	4.5
2.6	Prairie Junegrass	0.3
6.3	Side Oats Grama (El Reno)	0.6
45	Tall Fescue(Endophyte Free)	4.5
6	Western Wheat (Barton)	0.6
109.9	Total (lb)	11

The Soil Erosion Mix is to be placed under the Class 1 and Class 2 (if used) erosion control material.

NO.	DATE	REVISIONS	BY	APP'D
3	6/11/13	Revised Standard	MRM	SHS
2	6/01/13	Revised Standard	MRM	SHS
1	3/01/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

LA852A

FHWA APPROVAL		5/14/2013	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES	MRM
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	SHS
				CADD	MRM
				CADD CK.	SHS

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Sheet No. 96

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Std. Base File:
Plotted By: dameyer
Plot Location:
File: ka35600\eec852c01.dgn
Plot Date: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	97	251

EROSION CONTROL- CLASS I, TYPE C

STATION TO STATION	SIDE	LENGTH	WIDTH	SQ YARD
272+50.00 to 282+00.00	Lt	950	5	528
TOTAL EROSION CONTROL (CLASS I, TYPE C) = 528 Sq. Yds				

Std. Base File:	
Plotted By: *ameyer*	Plot Location:
File: *ka356001aec852a-ec-01.dgn*	
Plot Date: *10/16/2014*	

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
SEEDING-SODDING

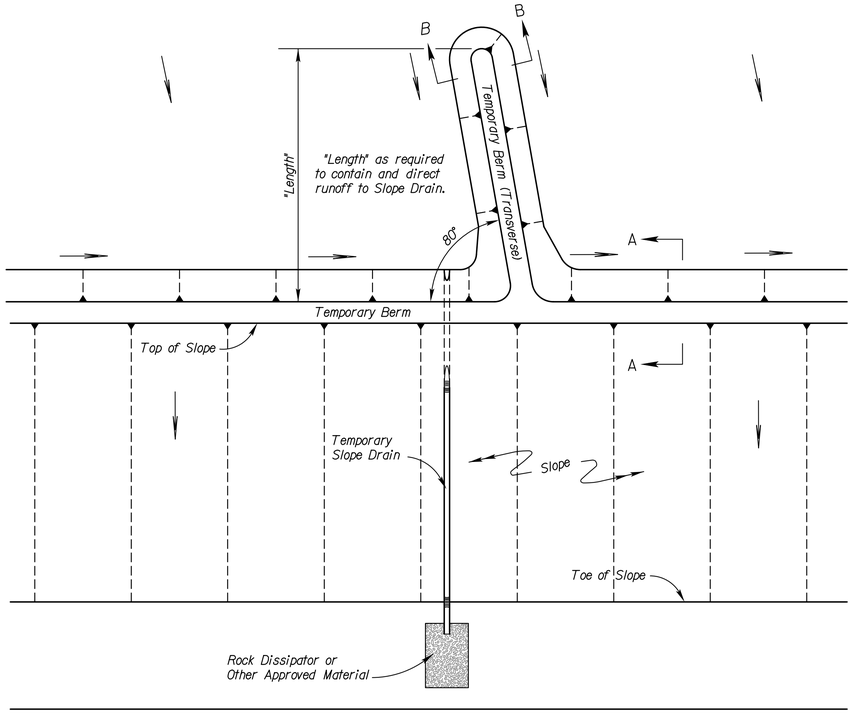
LA852A-EC

FHWA APPROVAL		1/04/2006		APP'D		Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES		CADD	MRM
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.		CADD CK.	SHS

KDOT Graphics Certified 10-15-2014

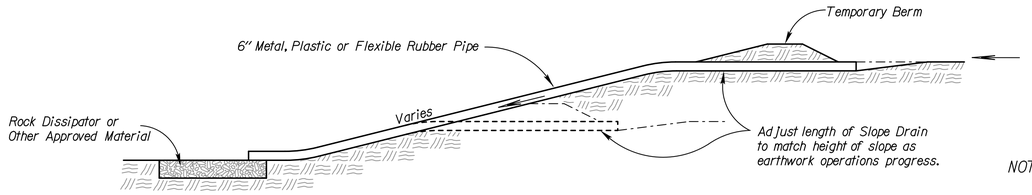
KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	98	251



TYPICAL PLAN VIEW OF TEMPORARY BERM AND TEMPORARY SLOPE DRAIN

NO SCALE



TYPICAL PROFILE OF TEMPORARY SLOPE DRAIN

NO SCALE

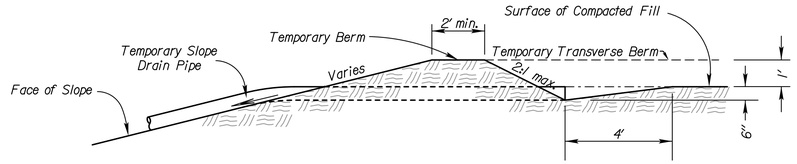
NOTES:

1) Temporary Slope Drain and Temporary Berm may be used on either project foreslopes or project backslopes.

2) Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.

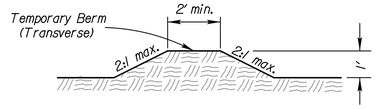
3) Pipe shall be secured in place as approved by Engineer.

4) Temporary Berms under 2,000 feet shall be bid by Set Price.



SECTION A-A

NO SCALE

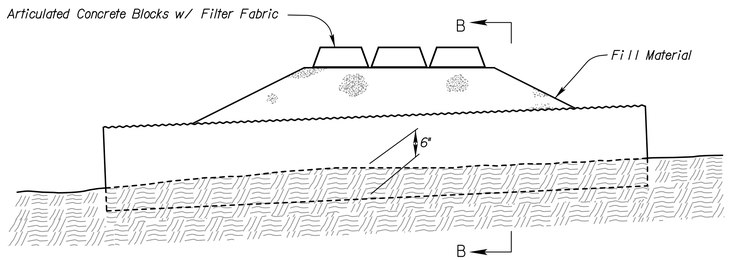


SECTION B-B

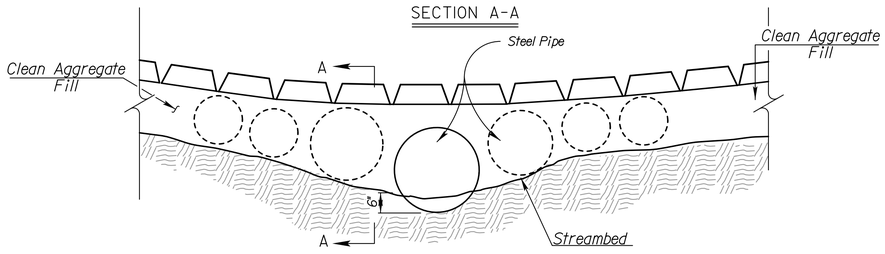
NO SCALE

TYPICAL PROFILE OF TEMPORARY BERM

NO SCALE



SECTION A-A



SECTION B-B

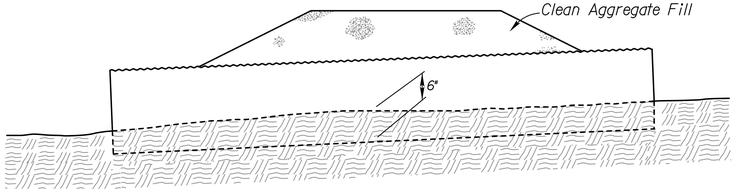
TEMPORARY STREAM CROSSING (ARTICULATED CONCRETE BLOCKS)

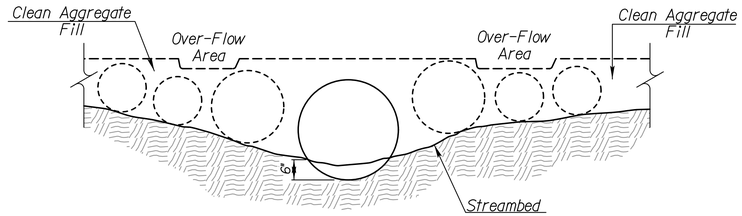
NO SCALE

Pipe size may vary

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing.

See KDOT Specifications for more information





SECTION B-B

TEMPORARY STREAM CROSSING (AGGREGATE)

NO SCALE

Pipe size may vary

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing.

See KDOT Specifications for more information

NO.	DATE	REVISIONS	BY	APP'D
3	6/11/13	Revised Standard	MRM	SHS
2	11/01/10	Revised Standard	MRM	SHS
1	10/15/10	Revised Standard	WCL	RDR

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

TEMPORARY SLOPE DRAIN

TEMPORARY STREAM CROSSING (AGGREGATE)

TEMP. STREAM CROSS. (ARTC. CONC. BLOCKS)

LA852B

FHWA APPROVAL		11/08/2010	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED	QUANTITIES	CADD	
DESIGN CK.	SHS	DETAIL CK.	QUAN.CK.	CADD CK.	

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Sheet No. 98

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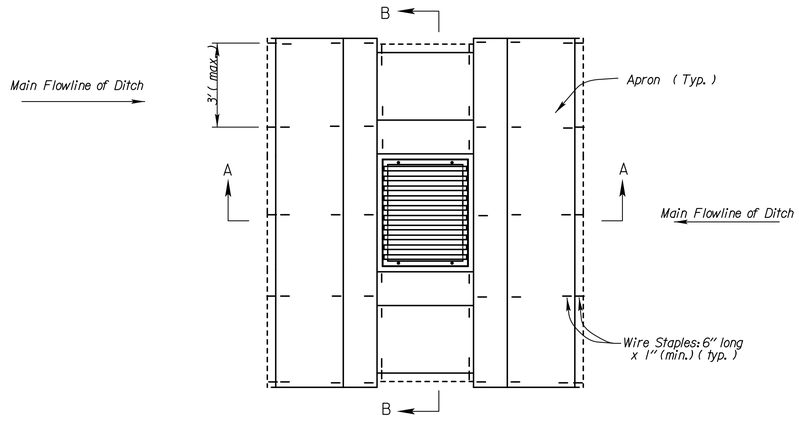
Std. Base File:
Plotted By: dameyer
File: ka356001eec852b-01.dgn
Plot Date: 10/16/2014
Plot Location:

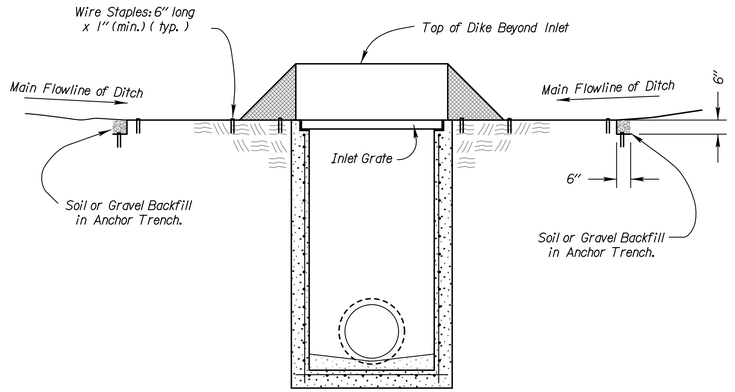
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	99	251



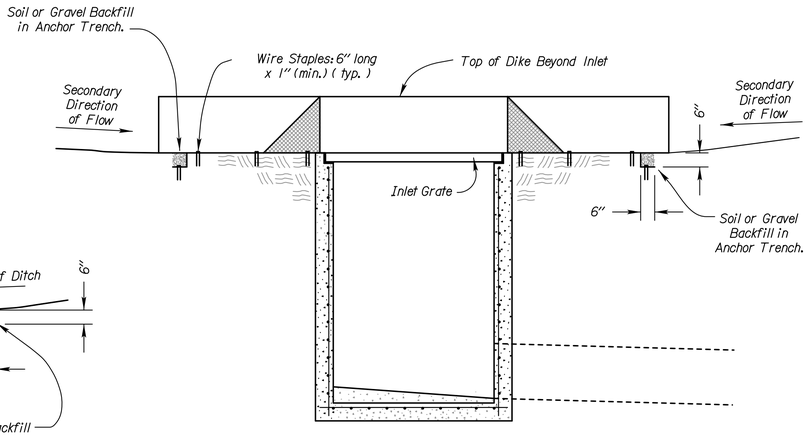
PLAN

TEMPORARY INLET SEDIMENT BARRIER
(TRIANGULAR SILT DIKE METHOD)

NO SCALE

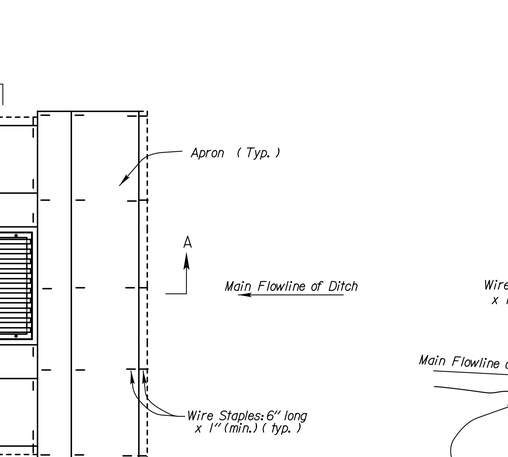


SECTION A - A



SECTION B - B

PLAN



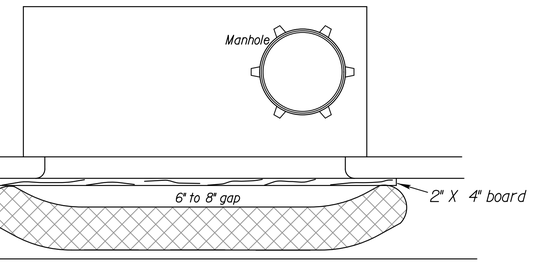
SECTION C - C

TEMPORARY INLET SEDIMENT BARRIER
(SILT FENCE METHOD)

NO SCALE

SILT FENCE:

1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1 3/16" x 1 3/16";
   b. Southern Pine (No. 2) - 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section - 1.25 lbs. per 1'-0"; or
   d. Synthetic - same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.

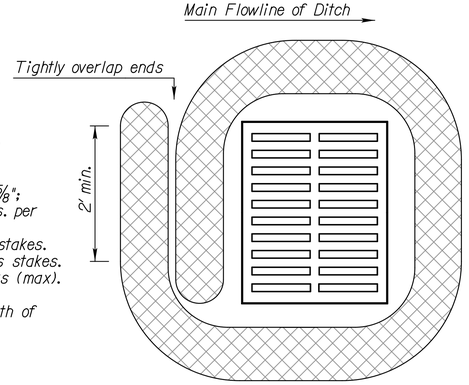


CURB INLET PROTECTION

Bags = synthetic net (3mm mesh) or burlap bags

Rock = approximately 1" to 2" diameter

1. If multiple gravel bags are required, place them in such a way that no gaps are evident.
2. Height of bags (8" minimum diameter) must not be above top of curb.
3. Alternative products may be used other than gravel bags such as the "Gutter Buddy". Products must be approved by the Engineer.
4. Curb inlet protection will be measured and paid for as Filter Sock.



Drop inlet use
1'-6" TO 1'-8" diameter log

BIODEGRADABLE LOG/FILTER SOCK
DROP INLET PROTECTION

Note: 25% of log shall be keyed into ground during installation.

Stake every 4'

Material Requirements
Use 100% shredded mulch or other non-compost biodegradable material as fill for logs.
No compost or fines.
No hay or straw.
Do not use material which prohibits water infiltration.
Log Mesh: Use mesh with 1/4" openings or larger. Mesh must allow water infiltration but also hold fill materal in place.

NO.	DATE	REVISIONS	BY	APP'D
3	6/01/13	Revised Standard	MRM	SHS
2	3/01/13	Revised Standard	MRM	SHS
1	8/01/08	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

TEMP. INLET SEDIMENT BARRIER (SILT FENCE)
TEMP. INLET SEDIMENT BARRIER (T.S.D.)
CURB INLET PROTECTION
DROP INLET PROTECTION

LA852C

FHWA APPROVAL		5/14/2013	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES	CADD
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK.

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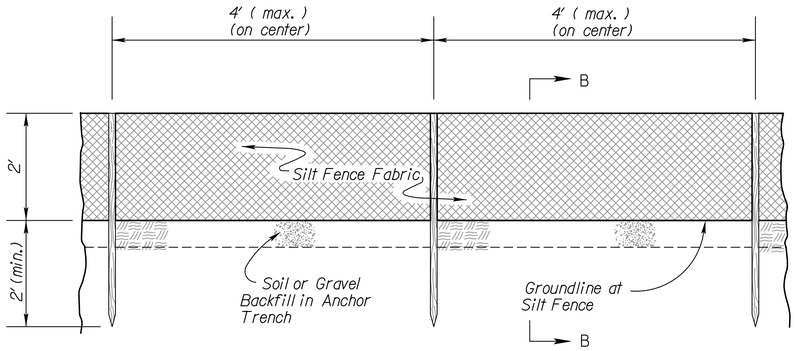
Std. Base File:
Plotted By: dameyer | Plot Location:
File: ka35600\lec852c-01.dgn
Plot Date: 10/16/2014

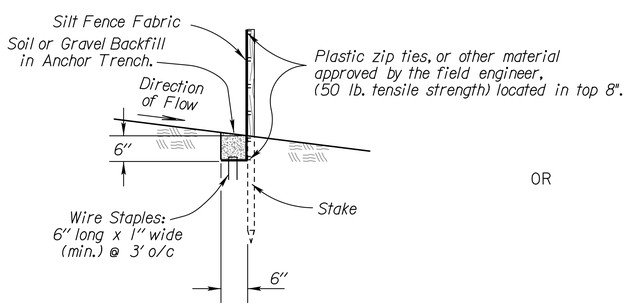
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	100	251



TYPICAL ELEVATION

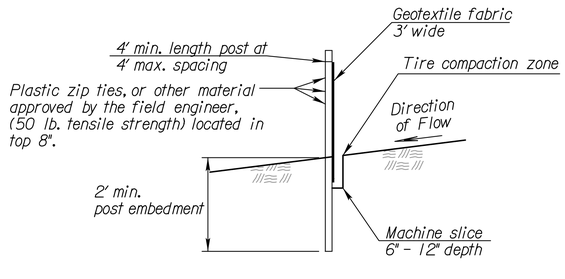
SILT FENCE SLOPE BARRIER

NO SCALE

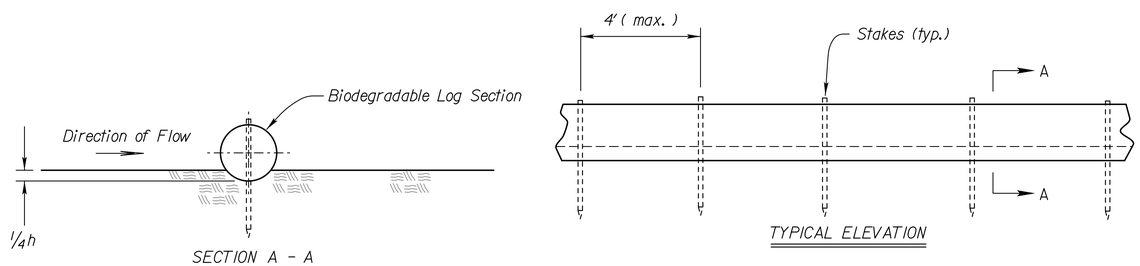


SECTION B-B

OR



SECTION B-B



SECTION A - A

TYPICAL ELEVATION

BIODEGRADABLE LOG SLOPE BARRIER

NO SCALE

INSTALLATION NOTES

SILT FENCE:

1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1 3/16" x 1 3/16";
   b. Southern Pine (No. 2) - 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section - 1.25 lbs. per 1'-0"; or
   d. Synthetic - same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.

BIODEGRADABLE LOG BARRIERS

1. Place biodegradable logs tightly together.
2. Wood stakes shall be 2" x 2" (nom.).
3. Wire staples shall be 6" long x 1" wide (min.) and placed on 4' (max.) centers.
4. Refer to plan sheets to estimate length of biodegradable log barriers required.
5. Logs should be keyed into the ground at a minimum of 25% of its height.
6. Length of stakes should be 2 times the height of the log at a minimum.

Biodegradable Logs, Straw Wattles & Sediment Logs

Slope Gradient	PRODUCT: 9" Sediment Log & 9" Straw Wattle (ft)	12" Sediment Log & 12" Straw Wattle (ft)	20" Sediment Log & 20" Straw Wattle (ft)
≤4H:1V	40	60	80
3H:1V	30	45	60
2H:1V	20	30	40
1H:1V	10	15	20

9" and 12" material should only be used in areas which have been seeded and mulched. 20" material should be used in all other areas. Deviations should be approved by the Field Engineer.

	BIODEGRADABLE LOG MATERIAL: LOW FLOW	HIGH FLOW
9"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
12"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber
18"-20"	Straw/Compost	Excelsior / Wood Chips / Coconut Fiber

GENERAL NOTES

1) The slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2) At culverts, the Silt Fence shall be placed over the culvert, not through the streambed flowline.
3) Barriers 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.

NO.	DATE	REVISIONS	BY	APP'D
3	6/01/13	Revised Standard	MRM	SHS
2	3/01/13	Revised Standard	MRM	SHS
1	9/01/10	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

SILT FENCE SLOPE BARRIERS
BIODEGRADABLE LOG SLOPE BARRIERS

LA852D

FHWA APPROVAL		5/14/2013	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED MRM	QUANTITIES	CADD	
DESIGN CK.	SHS	DETAIL CK.	QUAN.CK.	CADD CK.	

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Sheet No. 100

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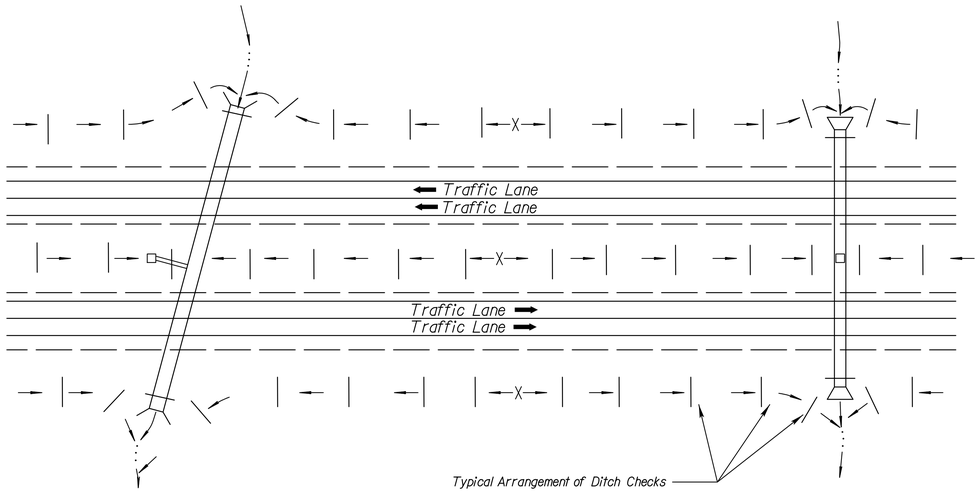
Std. Base File:
Plotted By: aameyer
File: ka35600\eec852d-01.dgn
Plot Date: 10/16/2014
Plot Location:

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	101	251



TYPICAL DITCH CHECK LAYOUT PLAN

NO SCALE

TEMPORARY DITCH CHECK SPACING	
DITCH ℄ SLOPE (%)	SPACING INTERVAL (FEET)
1.0	*200*
2.0	*100*
3.0	*65*
4.0	*50*
5.0	*40*
6.0	*33*
NOTE: Use this spacing for all except Rock Ditch Checks.	

GENERAL NOTES

1) *The choice of ditch check methods is at the option of the Contractor.*
2) *Use only rock checks in situations where the ditch slope exceeds 6 percent.*
3) *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.*

Std. Base File:	
Plotted By: *dameyer*	Plot Location:
File: *ka356001aec852e-01.dgn*	
Plot Date: *10/16/2014*	

NO.	DATE	REVISIONS	BY	APP'D
3	6/01/13	Revised Standard	MRM	SHS
2	9/10/07	Revised Standard	MRM	SHS
1	6/16/05	Revised Standard	WCL	RDR

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

DITCH CHECKS

LA852E

FHWA APPROVAL	5/14/2013	APP'D	Scott H. Shields		
DESIGNED	MRM	DETAILED	MRM	QUANTITIES	CADD MRM
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK. SHS

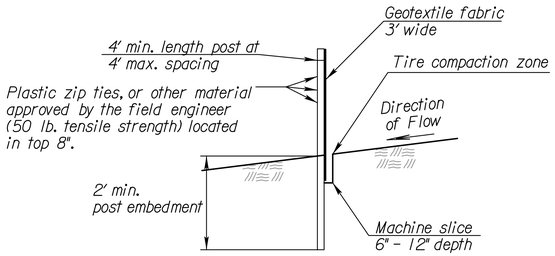
KDOT Graphics Certified 10-15-2014

KDOT Graphics Certified

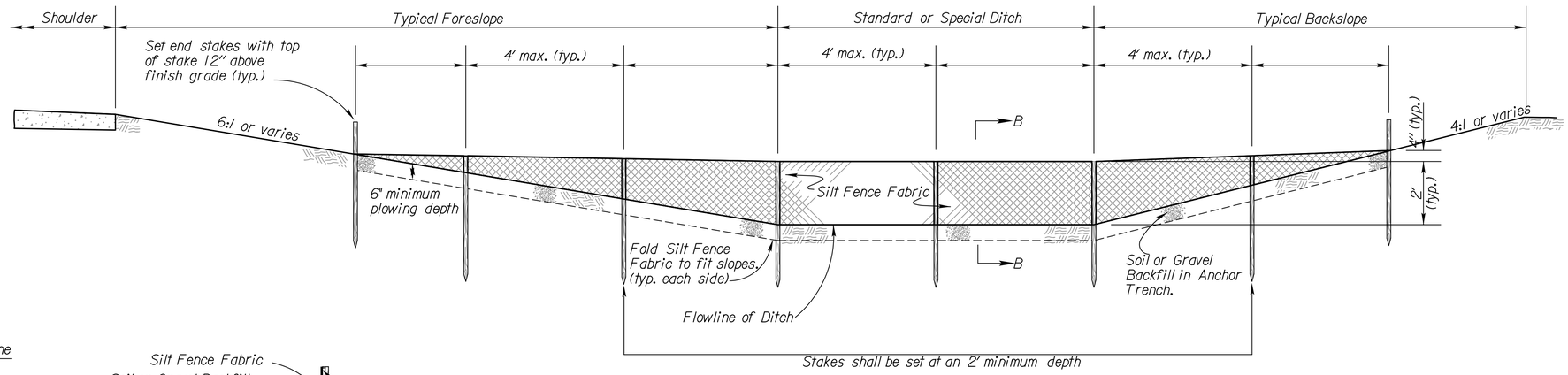
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	102	251

SILT FENCE:

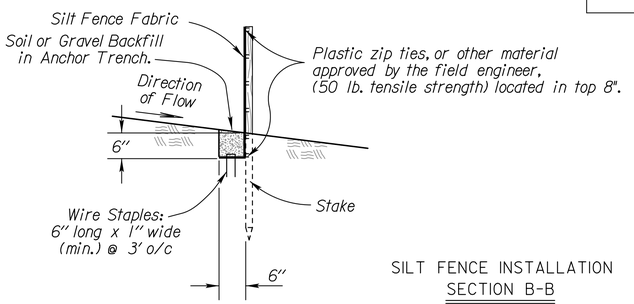
1. Stakes shall be 4' (min.) long and one of the following materials:
   a. Hardwood - 1 3/16" x 1 3/16";
   b. Southern Pine (No. 2) - 2 5/8" x 2 5/8";
   c. Steel U, T, L, or C Section - 1.25 lbs. per 1'-0";
   d. Synthetic - same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence plowing is acceptable at a 6" minimum depth. Trenching is acceptable in certain cases.



SILT FENCE INSTALLATION
SECTION B-B



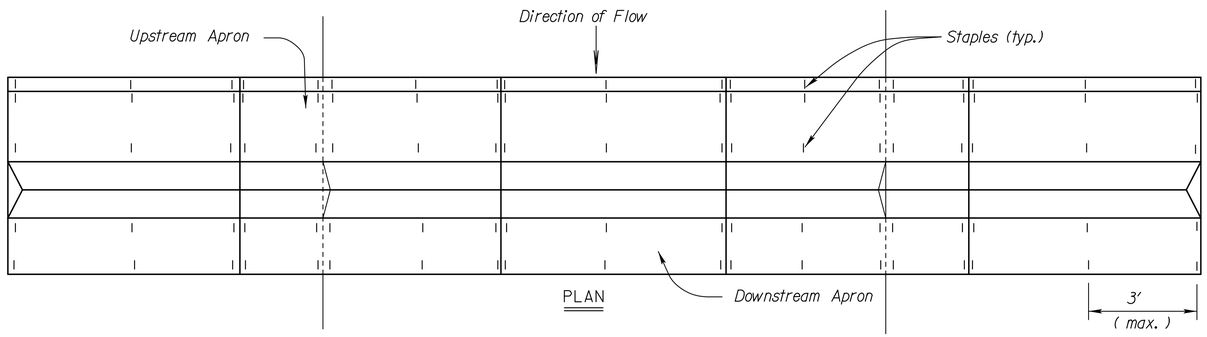
TYPICAL ELEVATION



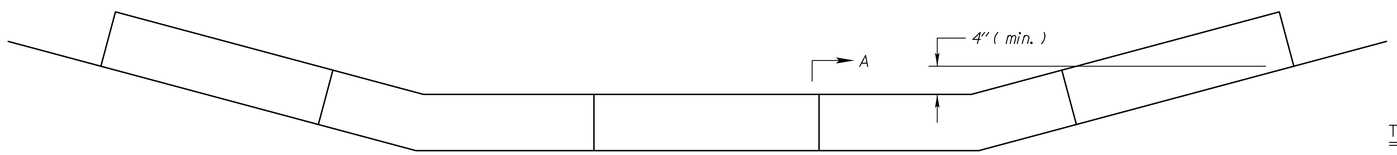
SILT FENCE INSTALLATION
SECTION B-B

SILT FENCE DITCH CHECK

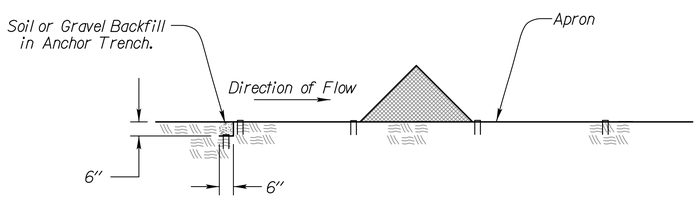
NO SCALE



PLAN



TYPICAL ELEVATION



SECTION A - A

TRIANGULAR SILT DIKE:
1. Place triangular silt dike sections tightly together with apron material overlapping end-to-end by 6".
2. Wire staples shall be 6" long by 1" wide (min).
3. Use as many triangular silt dike sections as necessary to ensure water does not flow around end of ditch check.

TRIANGULAR SILT DIKE DITCH CHECK

NO SCALE

NO.	DATE	REVISIONS	BY	APP'D
3	7/24/13	Revised Standard	MRM	SHS
2	6/01/13	Revised Standard	MRM	SHS
1	3/01/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION
TEMPORARY EROSION AND POLLUTION CONTROL
SILT FENCE DITCH CHECKS
TRIANGULAR SILT DIKE DITCH CHECKS

LA852F

FHWA APPROVAL			5/14/2013	APP'D		Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES		CADD	
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.		CADD CK.	

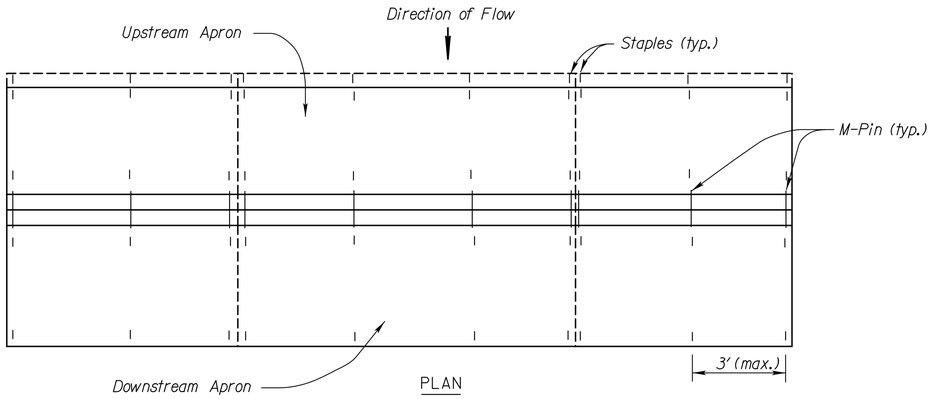
KDOT Graphics Certified 10-15-2014

Sheet No. 102

KDOT Graphics Certified

Std. Base File:
Plotted By: ameyer
File: ka35600\lec852f-01.dgn
Plot Date: 10/16/2014
Plot Location:

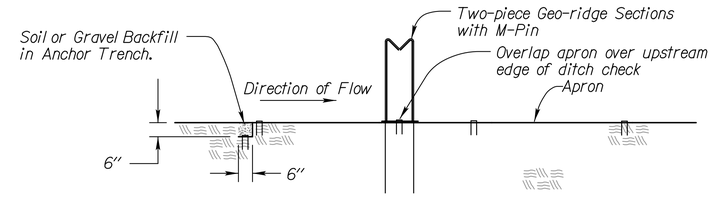
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	103	251



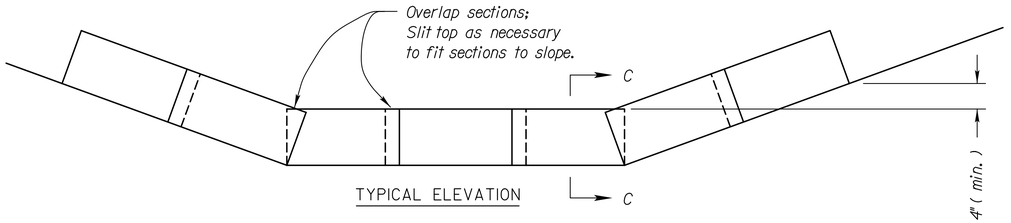
PLAN

GEO-RIDGE PERMEABLE BERM NOTES

1. Overlap Geo-ridge Berm sections and apron material by 6".
2. Use M-Pins supplied by manufacturer to secure geo-ridge Berm sections.
3. Use as many Geo-ridge Berm sections as necessary to insure water does not flow around end of ditch check.
4. Use silt fence material as the apron to prevent scour above and below the ditch check.
5. Wire Staples shall be 6" long by 1" wide, minimum.



SECTION C - C



TYPICAL ELEVATION

GEO-RIDGE PERMEABLE BERM DITCH CHECK

NO SCALE

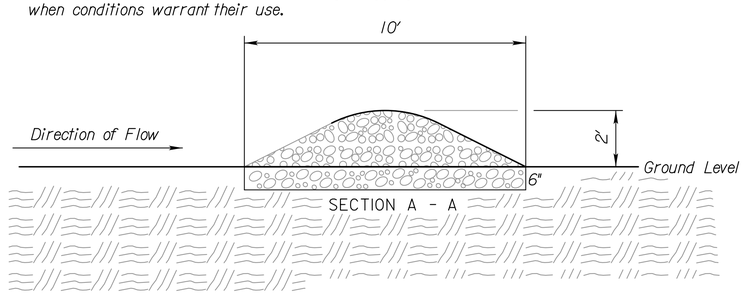
ROCK DITCH CHECK NOTES

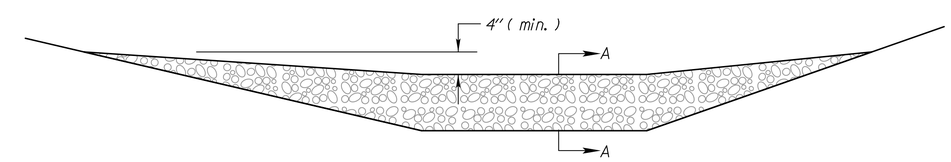
1. Rock shall be clean aggregate, D50 = 6".
2. Place rock in such manner that water will flow over, not around ditch check.
3. Do not use rock ditch checks in clear zone.
4. Excavation: The ditch area shall be reshaped to fill any eroded areas. Prior to placement of the rock, the ditch shall be excavated to the dimensions of the Rock Ditch Check and to a minimum depth of 6" (150mm). After placement of the rock, backfill and compact any over excavated soil to ditch grade. This work shall be subsidiary to the bid item Temporary Ditch Check (Rock) (Set Price).
5. Aggregate excavated on site may be used as an alternate to the 6" rock, if approved by the Engineer.
6. The Engineer may approve the use of larger aggregates when conditions warrant their use.

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 only for Rock Ditch Checks.

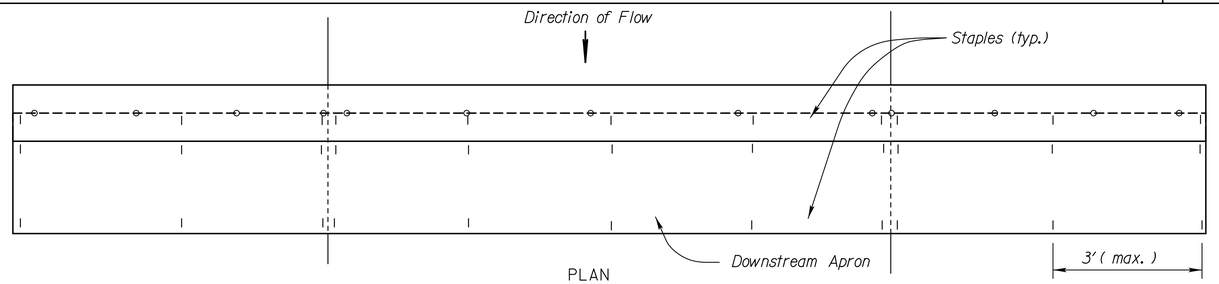




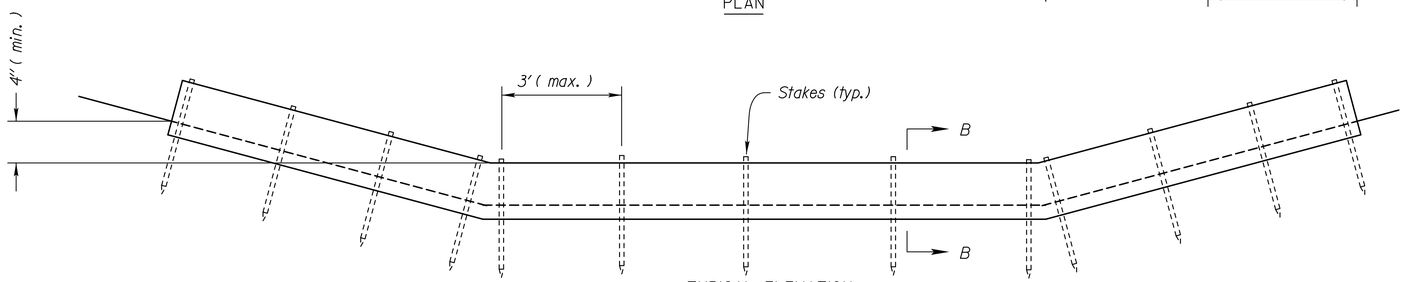
TYPICAL ELEVATION

ROCK DITCH CHECK

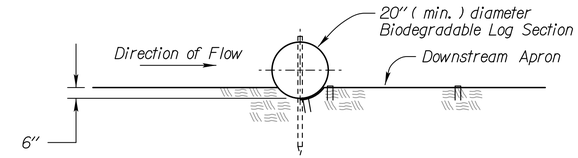
NO SCALE



PLAN



TYPICAL ELEVATION



SECTION B - B

BIODEGRADABLE LOG DIKE NOTES

1. Place biodegradable logs tightly together, with apron material overlapping end-to-end by 6".
2. Wire staples shall be 6" long by 1" wide, minimum.
3. Use as many biodegradable log sections as necessary to insure water does not flow around end of ditch check.
4. Wood stakes shall be 2" x 2" (nom.) x 4' (min.) long.
5. Use silt fence material as the downstream apron to prevent scour below the ditch check.

BIODEGRADABLE LOG DITCH CHECK

NO SCALE

NO.	DATE	REVISIONS	BY	APP'D
	9/01/10	Revised Standard	MRM	SHS
2	12/31/09	Revised Standard	MRM	SHS
1	5/03/06	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

ROCK DITCH CHECKS

BIODEGRADABLE LOG DITCH CHECKS

GEO-RIDGE PERMEABLE BERM DITCH CHECKS

LA852G

FHWA APPROVAL		9/21/2010	APP'D	Scott H. Shields	
DESIGNED	MRM	DETAILED	MRM	QUANTITIES	CADD
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK.

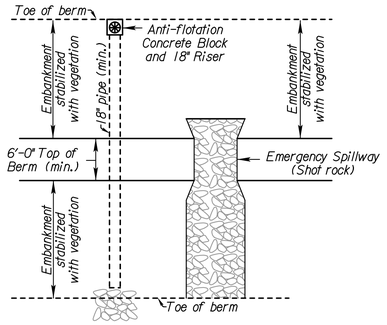
KDOT Graphics Certified 10-15-2014

Sheet No. 103

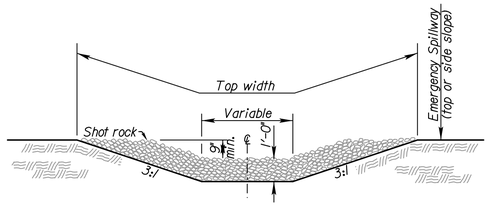
KDOT Graphics Certified

Std. Base File: la852g.dgn
Plotted By: dameyer
File: ka356001eee852g-01.dgn
Plot Date: 10/16/2014
Plot Location:

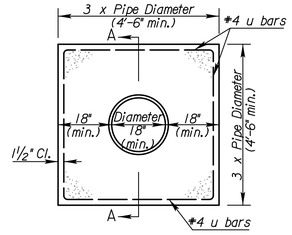
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	104	251



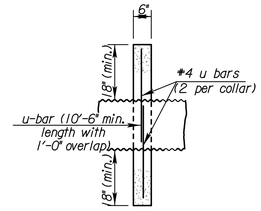
SEDIMENT STORAGE BASIN (PLAN)



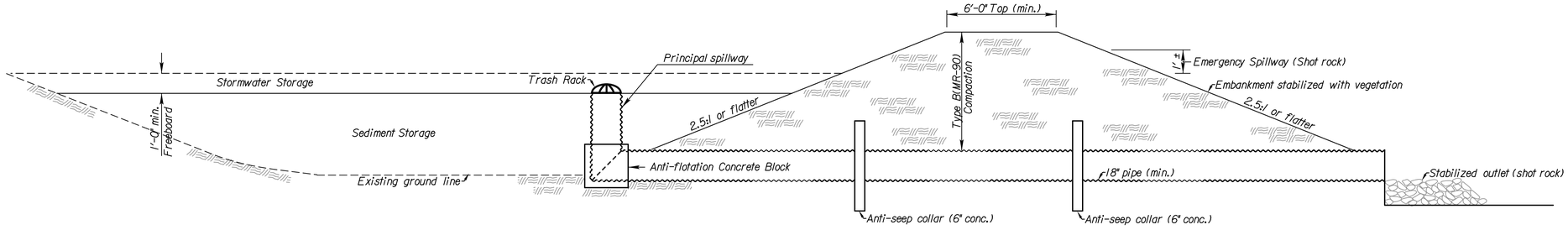
CROSS SECTION (EMERGENCY SPILLWAY)



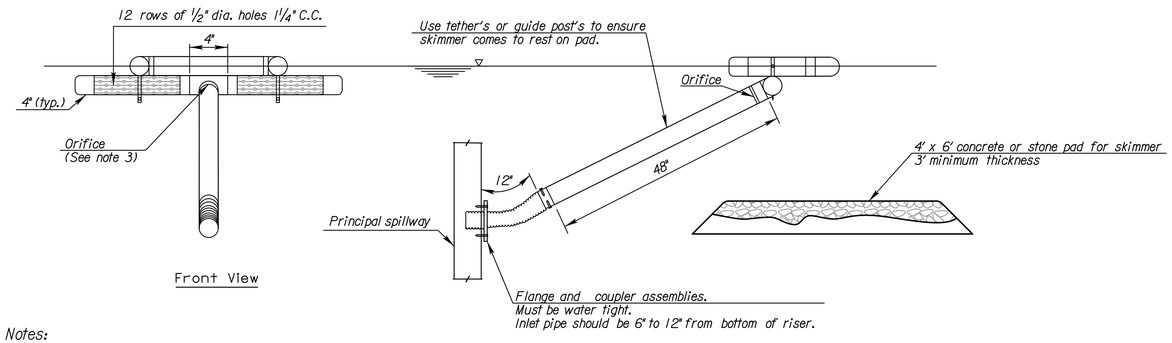
CONCRETE ANTI-SEEP COLLAR



SECTION A-A



SEDIMENT STORAGE BASIN (ELEVATION)



Notes:

1. All P.V.C. pipes are to be schedule 40.
2. HDPE flexible drain pipes is to be attached to the pond outlet structure with water-tight connections.
3. The orifice shall be sized of to provide drawdown time to 2 to 5 days and approved by the engineer.
4. Other skimmer designs maybe used that dewaters from the surface at a controlled rate. The design must be approved by the engineer.

SKIMMER DEWATERING DEVICE

NOTES:

1) Temporary Sediment Basins shall be constructed at locations as directed by the Engineer or as approved in the SWPPP Schedule. All work and materials necessary, including but not limited to, the fill material, compaction, drainage pipes, aggregates and all other incidentals necessary to construct the basin, shall be paid as "Temporary Sediment Basin".
2) Lengths and top dimensions shall be determined in the field by the Engineer.
3) Skimmer dewatering device required and must be used reguardless the size of the drainage area.

SEDIMENT STORAGE BASIN LOCATIONS

STATION TO STATION	SIDE	REQUIRED STORAGE CAPACITY

NO.	DATE	REVISIONS	BY	APP'D
3				
2	9/3/13	Added Skimmer Dewatering Device	MRM	SHS
1	7/17/13	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND POLLUTION CONTROL

SEDIMENT STORAGE BASIN

LA852H

FHWA APPROVAL	09/24/2013	APP'D	Scott H. Shields		
DESIGNED	BB	DETAILED	BB	QUANTITIES	CADD BB
DESIGN CK.	SHS	DETAIL CK.	SHS	QUAN.CK.	CADD CK. SHS

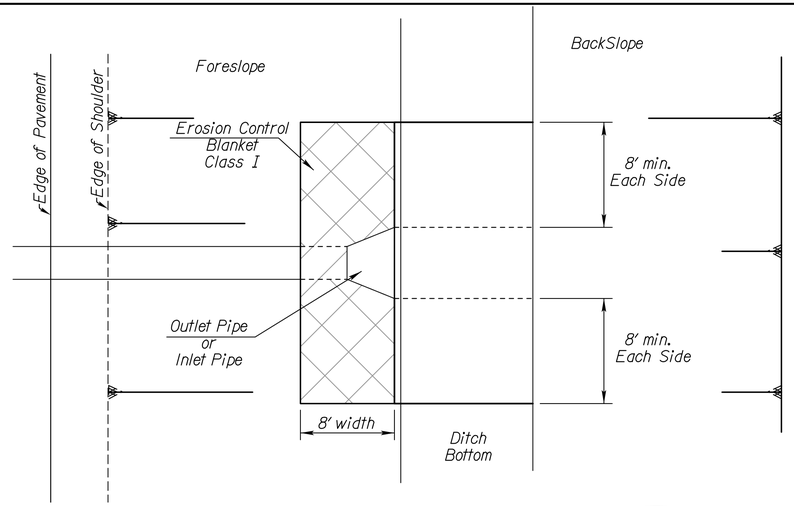
KDOT Graphics Certified 10-15-2014

Sheet No. 104

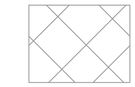
KDOT Graphics Certified

Std. Base File:
Plotted By: amayer
File: ka35600lea852h-01.dgn
Plot Date: 10/16/2014
Plot Location:

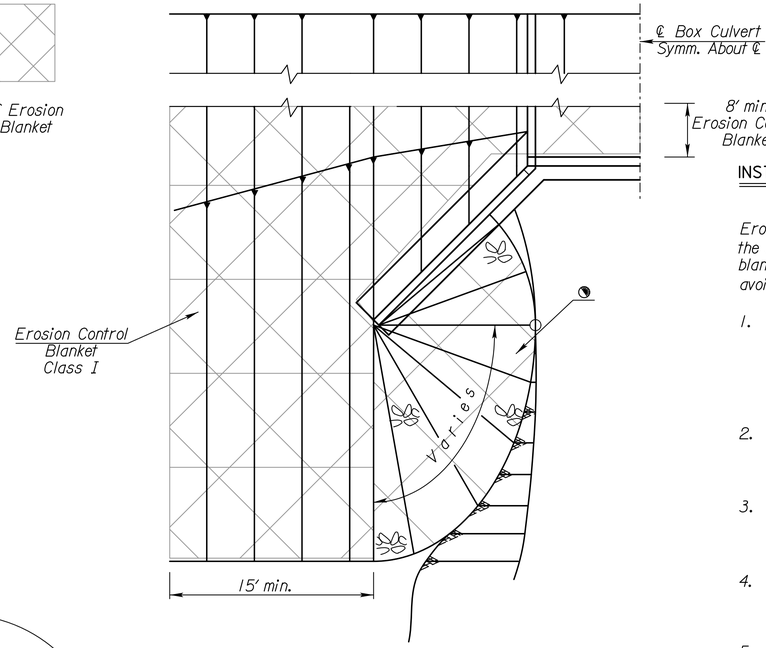
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	105	251



PARTIAL PLAN PIPE



Limits of Erosion Control Blanket



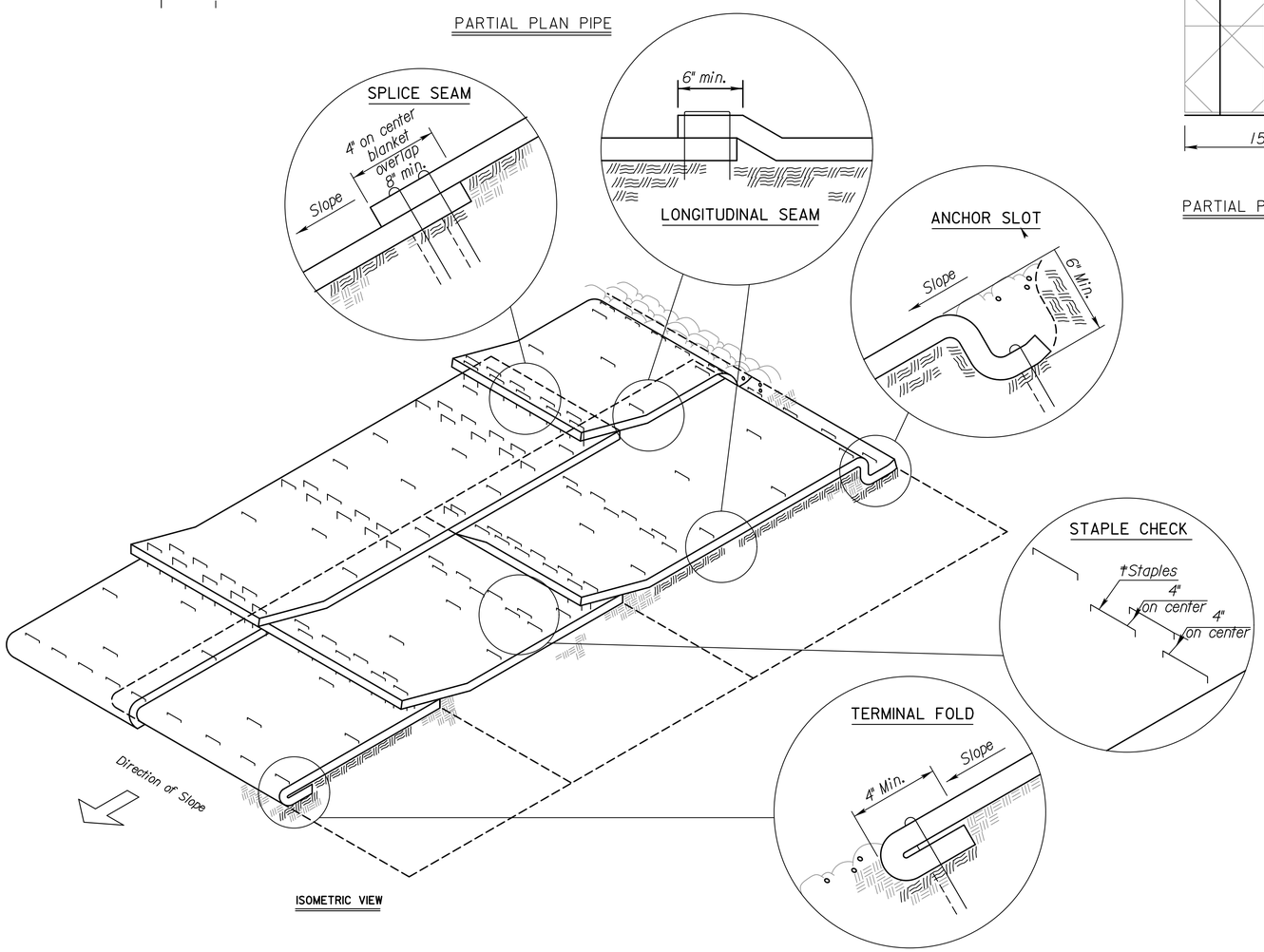
PARTIAL PLAN BOX CULVERT

◔ *Erosion Control Class I may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans).*

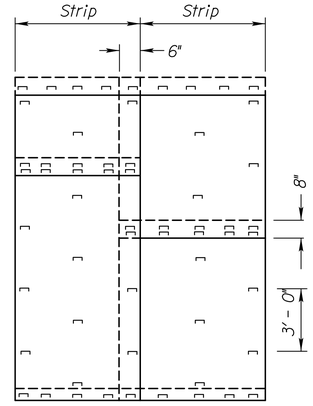
INSTALLATION DETAILS FOR EROSION CONTROL CLASS I

Erosion Control Blankets shall be laid loosely in the direction of the slope, beginning at the bottom of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.

1. *ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.*
2. *LONGITUDINAL SEAMS: The edges of the blanket should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.*
3. *SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.*
4. *TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.*
5. *TYPICAL ANCHORS: Anchor design shall be as recommended by the manufacturer.*
6. *STAPLE CHECK: †Establish Staples in 2 rows 4" on center apart. Staple Checks - shall be 30' apart.*



ISOMETRIC VIEW



PLAN VIEW - ANCHORING DIAGRAM

NOTE:
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.

Single post ring and shank staple is acceptable.

NO.	DATE	REVISIONS	BY	APP'D
3	2/12/14	Revised Standard	MRM	SHS
2	9/10/07	Revised Standard	MRM	SHS
1	6/16/05	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

INSTALLATION DETAIL
EROSION CONTROL CLASS I
SLOPE PROTECTION

LA855

FHWA APPROVAL	2/18/2014	APP'D	Scott H. Shields		
DESIGNED	SHS	DETAILED	RAA	QUANTITIES	CADD RAA
DESIGN CK.		DETAIL CK.		QUAN.CK.	CADD CK. RAA

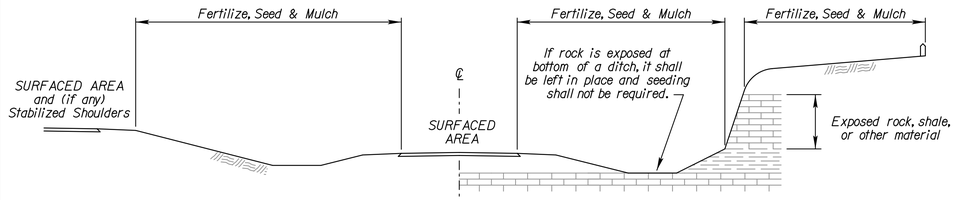
KDOT Graphics Certified 10-15-2014

Sheet No. 105

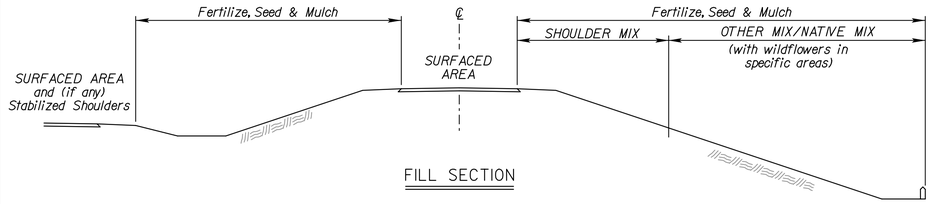
KDOT Graphics Certified

Std. Base File:	la855.dgn
Plotted By:	ameyer
File:	ka35600\lec855-01.dgn
Plot Date:	10/16/2014
Plot Location:	

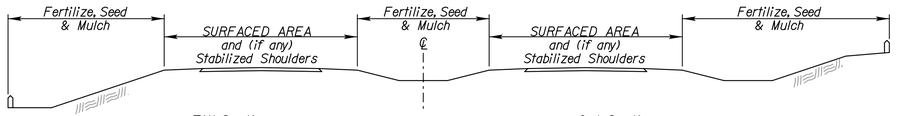
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	106	251



CUT SECTION



FILL SECTION



TYPICAL SECTION - DUAL PAVEMENT

SEEDING PERIODS

COOL SEASON February 15 to April 20 and August 15 to Sept. 30	WARM SEASON November 15 to June 1
SPECIES	SPECIES
Bluegrasses	Big Bluestem
Bromegrasses	Blue Grama
Canada Wildrye	Buffalograss
Fescues	Eastern Gamagrass
Prairie Junegrass	Indiangrass
Reed Canarygrass	Little Bluestem
Ryegrasses	Sand Bluestem
Sterile Wheatgrass	Sand Dropseed
Tall Dropseed	Sand Lovegrass
Western Wheatgrass	Side Oats Grama
	Switchgrass
	Wildflower Mixes

When "Cool Season" species are mixed with "Warm Season" species, in areas of 1 acre or more, the mixture shall be seeded during the "Warm Season". In areas of less than 1 acre, the mixture of "Cool Season" and "Warm Season" species may be seeded during the "Warm or Cool Seasons".

SODDING PERIODS
March 1 to April 15 and September 1 to November 15

GENERAL NOTES

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded, and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

All borrow areas shown on the plans are to be fertilized, seeded, and mulched. However, operation in borrow areas where crops are growing may be omitted when requested by the owner.

It shall not be required to till the area to bare ground prior to permanent seeding. 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 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 as follows:

1¾ - 2¼ Tons per Acre = 1½" 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.

The amount of mulch in the quantities is estimated. The total mulch required shall be determined in the field. The bid item for mulching shall be paid for according to Standard Specification Section 904.

NATIVE WILDFLOWER MIX 1

PLS RATE	NAME	QTY (lb)
0.1	Black Eyed Susan	0.68
1.8	Illinois Bundleflower	12.24
0.15	Maximilian Sunflower	1.02
0.4	Purple Prairie Clover	2.72
2.9	Showy Partridge Pea	19.72
0.1	Upright Prairie Coneflower	0.68
0.3	Butterfly Milkweed	2.04
0.1	Stiff Goldenrod	0.68
0.05	Pinnate Prairie Coneflower	0.34
0.1	Lance-leaf Coreopsis	0.68
0.05	New England Aster	0.34
0.2	Pale Purple Coneflower	1.36
0.05	Plains Coreopsis	0.34
0.05	Hoary Verbena	0.34
0.3	Roundhead Lespedeza	2.04
0.4	Thickspike Gayfeather	2.72
0.05	Wild Bergamot	0.34
0.2	Smooth Oxeye	1.36
0.05	Lemon Mint	0.34
7.35	Total (lb)	50

NATIVE WILDFLOWER MIX 2

PLS RATE	NAME	QTY (lb)
0.1	Black Eyed Susan	
1.8	Illinois Bundleflower	
0.15	Maximilian Sunflower	
0.4	Purple Prairie Clover	
2.9	Showy Partridge Pea	
0.1	Upright Prairie Coneflower	
0.3	Butterfly Milkweed	
0.4	Dotted Blazing Star	
0.4	Annual Gaillardia	
0.05	Stiff Goldenrod	
0.05	New England Aster	
0.3	Missouri Evening Primrose	
0.05	Plains Coreopsis	
0.15	White Prairie Clover	
0.3	Roundhead Lespedeza	
0.05	Lemon Mint	
0.15	Pitcher Sage	
7.65	Total (lb)	

NATIVE WILDFLOWER MIX 3

PLS RATE	NAME	QTY (lb)
0.15	Black Eyed Susan	
1.9	Illinois Bundleflower	
0.15	Maximilian Sunflower	
0.05	Western Yarrow	
0.5	Black Sampson Echinacea	
0.05	Upright Prairie Coneflower	
0.3	Butterfly Milkweed	
0.4	Dotted Blazing Star	
0.75	Annual Gaillardia	
0.05	Stiff Goldenrod	
0.05	New England Aster	
0.4	Pitcher Sage	
0.01	Plains Coreopsis	
0.15	White Prairie Clover	
0.2	Purple Prairie Clover	
0.4	Leadplant	
0.02	White Heath Aster	
1	Blue Wild Indigo	
0.05	Lemon Mint	
6.58	Total (lb)	

NATIVE WILDFLOWER MIX 4

PLS RATE	NAME	QTY (lb)
1.9	Illinois Bundleflower	
0.4	Maximilian Sunflower	
0.05	Western Yarrow	
1	Black Sampson Echinacea	
0.1	Upright Prairie Coneflower	
0.1	Scarlet Globemallow	
0.4	Dotted Blazing Star	
1.1	Annual Gaillardia (Firewheel)	
0.1	Hoary Vervain	
0.3	White Prairie Clover	
0.4	Purple Prairie Clover	
0.4	Perennial Gaillardia (Blanket Flower)	
0.02	White Heath Aster	
0.05	Lemon Mint	
6.32	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 1/8" - 1/4". Place the wildflower seed in a separate seed box and drill (cover) seed 1/16" maximum. Place the Tall Drop Seed in a separate (third) seed box and place the seed (using the seed drill) on the soil surface.
OPTION: Broadcast Tall Drop Seed on the soil surface.

SUMMARY OF SEEDING QUANTITIES

P.L.S. RATE/ACRE SHLDR	P.L.S. RATE/ACRE OTHER	ACRES SHLDR	ACRES OTHER	BID ITEM	QUANTITY	UNIT
	80		6.8	Fertilizer (15 - 30 - 15)	544	Lbs
	2		6.8	Seed (Big Bluestem Grass Seed (Kaw))	13.6	Lbs
	10		6.8	Seed (Canada Wildrye Grass Seed)	68	Lbs
	2		6.8	Seed (Indiangrass Seed (Osage))	13.6	Lbs
	2		6.8	Seed (Little Bluestem Grass Seed (Aldous))	13.6	Lbs
	6.3		6.8	Seed (Side Oats Grama Grass Seed (El Reno))	42.8	Lbs
	10		6.8	Seed (Sterile Wheatgrass)	68	Lbs
	0.7		6.8	Seed (Switchgrass Seed (Blackwell))	4.8	Lbs
	0.5		6.8	Seed (Tall Dropseed)	3.4	Lbs
	4		6.8	Seed (Western Wheatgrass Seed (Barton))	27.2	Lbs
	7.35		6.8	Seed (Native Wildflower Mix 1)	50	Lbs
				Mulching (Permanent) (Set Price)	1	TON

SHLDR = Shoulder Turf Mix: Includes a 30 foot wide strip along the stabilized shoulder on each side of each traveled way, plus all median areas less than 60 feet wide.

OTHER = All other turf areas except Shoulder, Guardrail, and Native areas usually include the Native Wildflower Mix.

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

NO.	DATE	REVISIONS	BY	APP'D
4	6/01/13	Revised Standard	MRM	SHS
3	3/01/13	Revised Standard	MRM	SHS
2	2/24/12	Revised Standard	MRM	SHS
1	6/01/10	Revised Standard	MRM	SHS

KANSAS DEPARTMENT OF TRANSPORTATION

PERMANENT SEEDING
SUMMARY OF SEEDING QUANTITIES

LA850

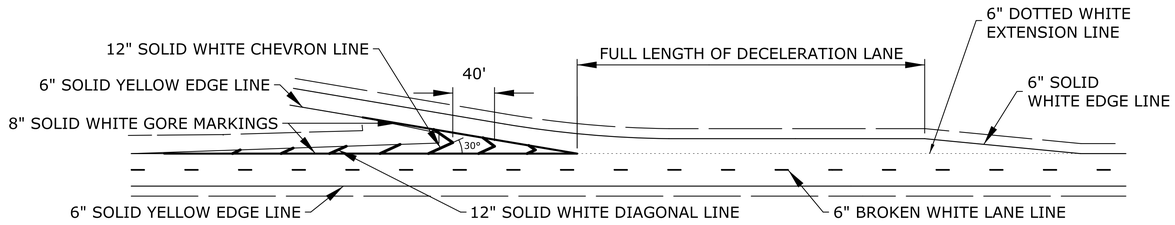
FHWA APPROVAL	5/14/2013	APP'D	Scott H. Shields
DESIGNED MRM	DETAILED MRM	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN.CK.	CADD CK.

KDOT Graphics Certified 10-15-2014

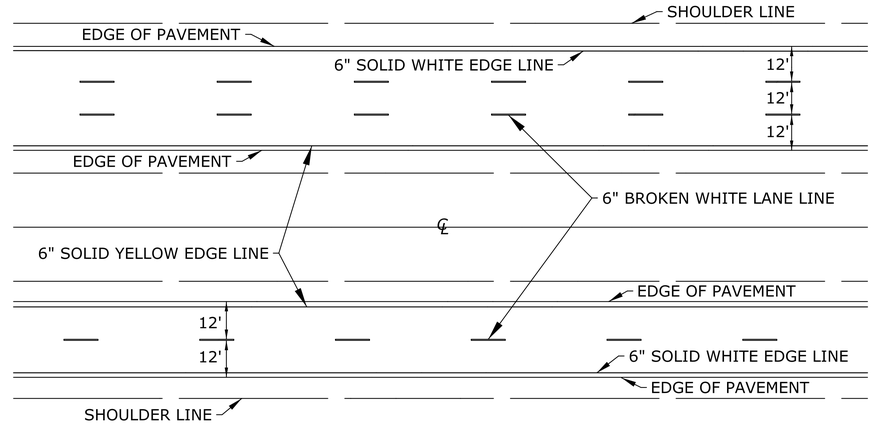
Sheet No. 106

Std. Base File:
Plotted By: dameyer
Plot Location:
File: ka356001epc850-01.dgn
Plot Date: 10/16/2014

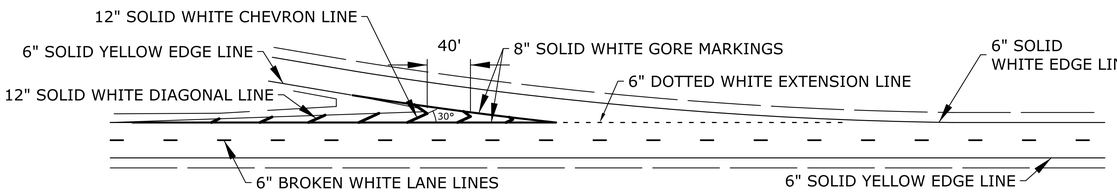
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	107	251



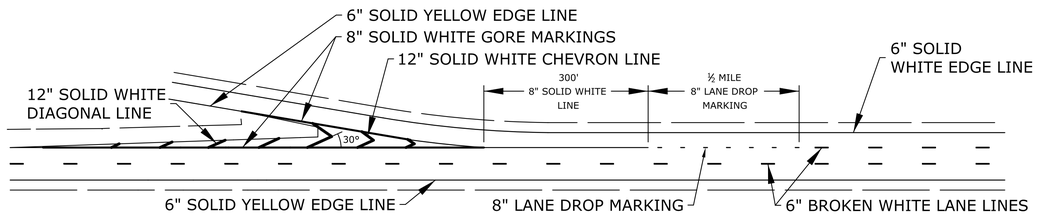
TYPICAL DECELERATION EXIT RAMP



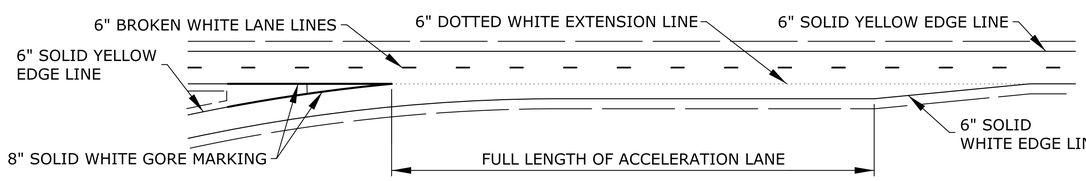
TYPICAL LANE LINE AND EDGE LINE MARKINGS FOR FOUR LANE AND SIX LANE DIVIDED HIGHWAYS



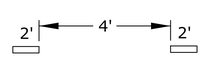
TYPICAL TAPERED EXIT RAMP



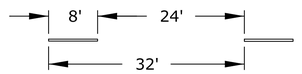
TYPICAL LANE DROP



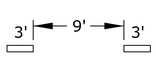
TYPICAL ACCELERATION RAMP



TYPICAL SPACING FOR DOTTED EXTENSION 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.

NOTE:
LONGITUDINAL PAVEMENT MARKING LINES SHALL BE OFFSET A MINIMUM OF 2" FROM LONGITUDINAL PAVEMENT JOINTS.

NOTE:
AT RAMP TERMINALS WITH CROSS-ROADS, WRAP 6" EDGE LINES AROUND RADII.

NOTE:
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED. 6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.

NO.	DATE	REVISIONS	BY	APP'D
2	5/25/12	Dotted Extension Lines and Lane Drop Lines	B.A.H.	B.D.G.
1	7/26/05	New FHWA Approval Date	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKING DETAILS FOR MULTI-LANE DIVIDED ROADWAYS

TE307

FHWA APPROVAL		5/25/2012	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

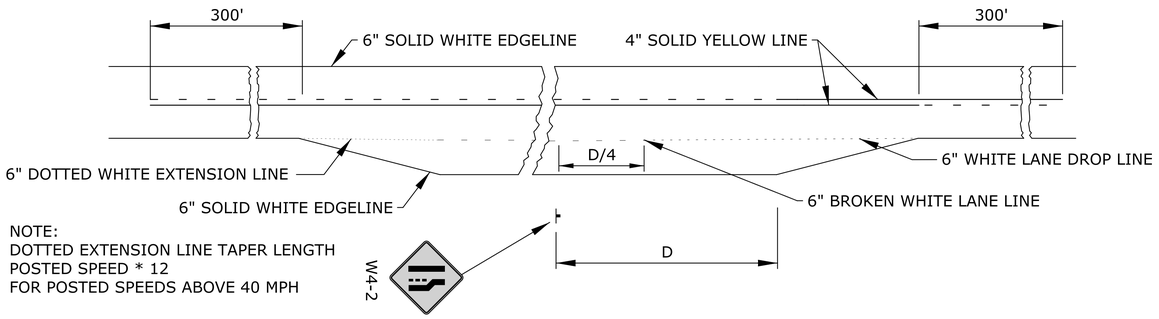
KDOT Graphics Certified 06-20-2012

Sh. No. 107

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001mss307-01.dgn
Plotted : 16-OCT-2014 11:28

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	108	251

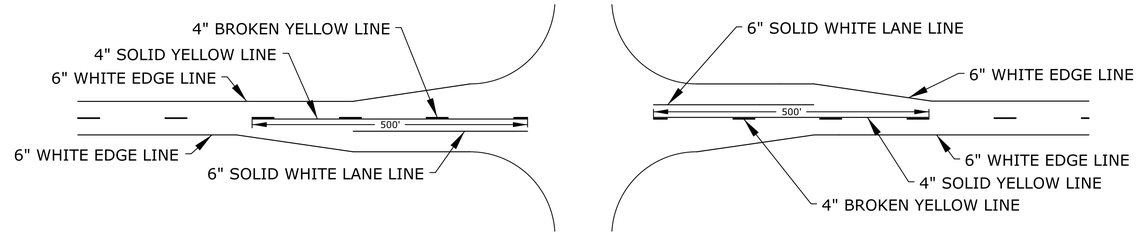


NOTE:
DOTTED EXTENSION LINE TAPER LENGTH
POSTED SPEED * 12
FOR POSTED SPEEDS ABOVE 40 MPH

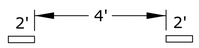
TYPICAL MARKING FOR AUXILIARY PASSING LANE

NOTE:
ALL PAVEMENT MARKINGS SHALL BE BROKEN AT CROSS ROADS.

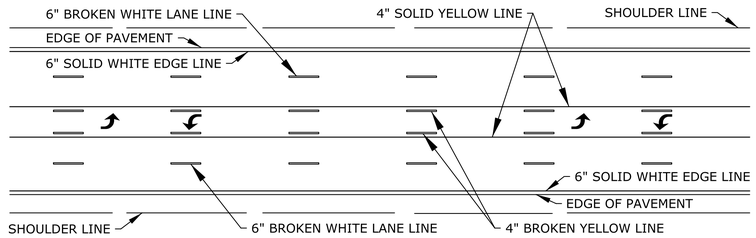
FOR HIGHWAY JUNCTIONS THE NO PASSING ZONE WILL EXTEND 1000' FROM INTERSECTION.



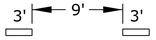
TYPICAL ROAD JUNCTION MARKINGS WITH BYPASS LANES



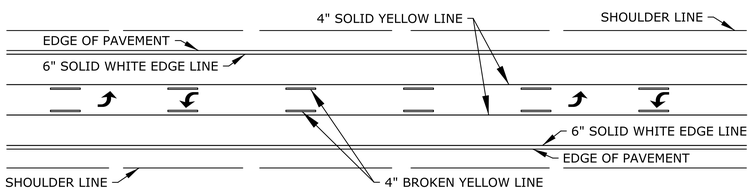
TYPICAL SPACING FOR DOTTED EXTENSION LINES, UNLESS OTHERWISE NOTED ON PLANS.



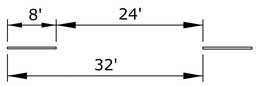
TWO-WAY LEFT TURN DETAIL FOR FIVE LANE ROADWAY



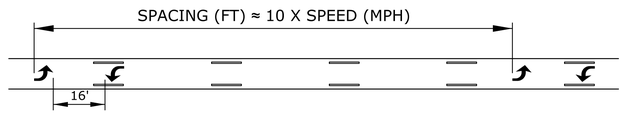
TYPICAL SPACING FOR LANE DROP. UNLESS OTHERWISE NOTED ON PLANS.



TWO-WAY LEFT TURN DETAIL FOR THREE LANE ROADWAY

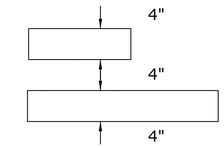


TYPICAL SPACING FOR BROKEN LINES UNLESS OTHERWISE NOTED ON PLANS

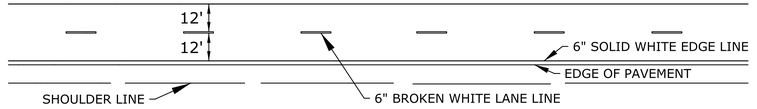


TWO-WAY LEFT TURN ARROW SPACING DETAIL

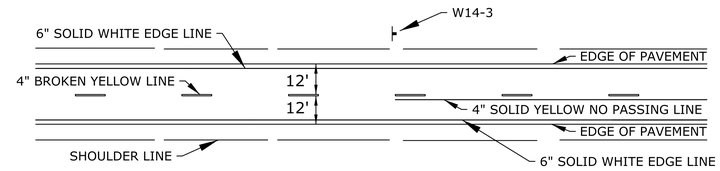
NOTE:
IF ARROWS ARE USED SPACE THE ARROWS AS SHOWN IN THE SPACING DETAIL.



TYPICAL SPACING FOR NO PASSING LINES UNLESS OTHERWISE NOTED ON PLANS



TYPICAL MARKINGS FOR FOUR LANE ROADWAY



TYPICAL TWO LANE MARKINGS

NOTE:
LONGITUDINAL PAVEMENT MARKING LINES SHALL BE OFFSET A MINIMUM OF 2" FROM LONGITUDINAL PAVEMENT JOINTS.

NOTE:
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.
6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.

NO.	DATE	REVISIONS	BY	APP'D
3	5/25/12	Added Dotted Extension and Lane Drop Lines	B.A.H.	B.D.G.
2	9/20/05	Removed Aux. Passing Lane Dotted Ext. Line	J.F.F.	B.D.G.
1	7/26/05	New FHWA Approval Date	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKING DETAILS FOR UNDIVIDED ROADWAYS

TE308

FHWA APPROVAL		5/25/2012	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 06-20-2012

Sh. No. 108

KDOT Graphics Certified

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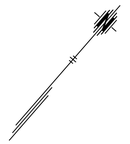
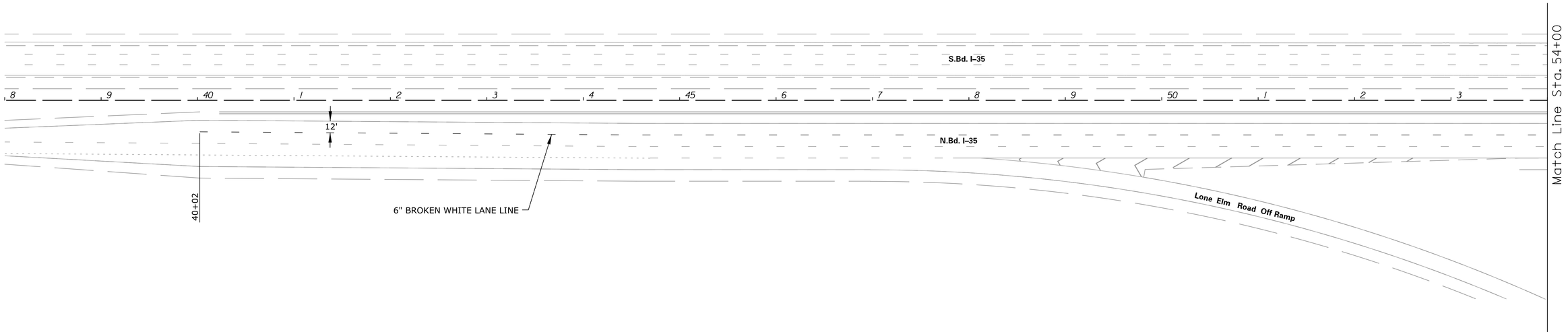
Drawn By : aameyer
File : ka356001mss308-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	109	251



SCALE 1" = 50'

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 38+00 TO STA. 54+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 109*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-101.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	110	251

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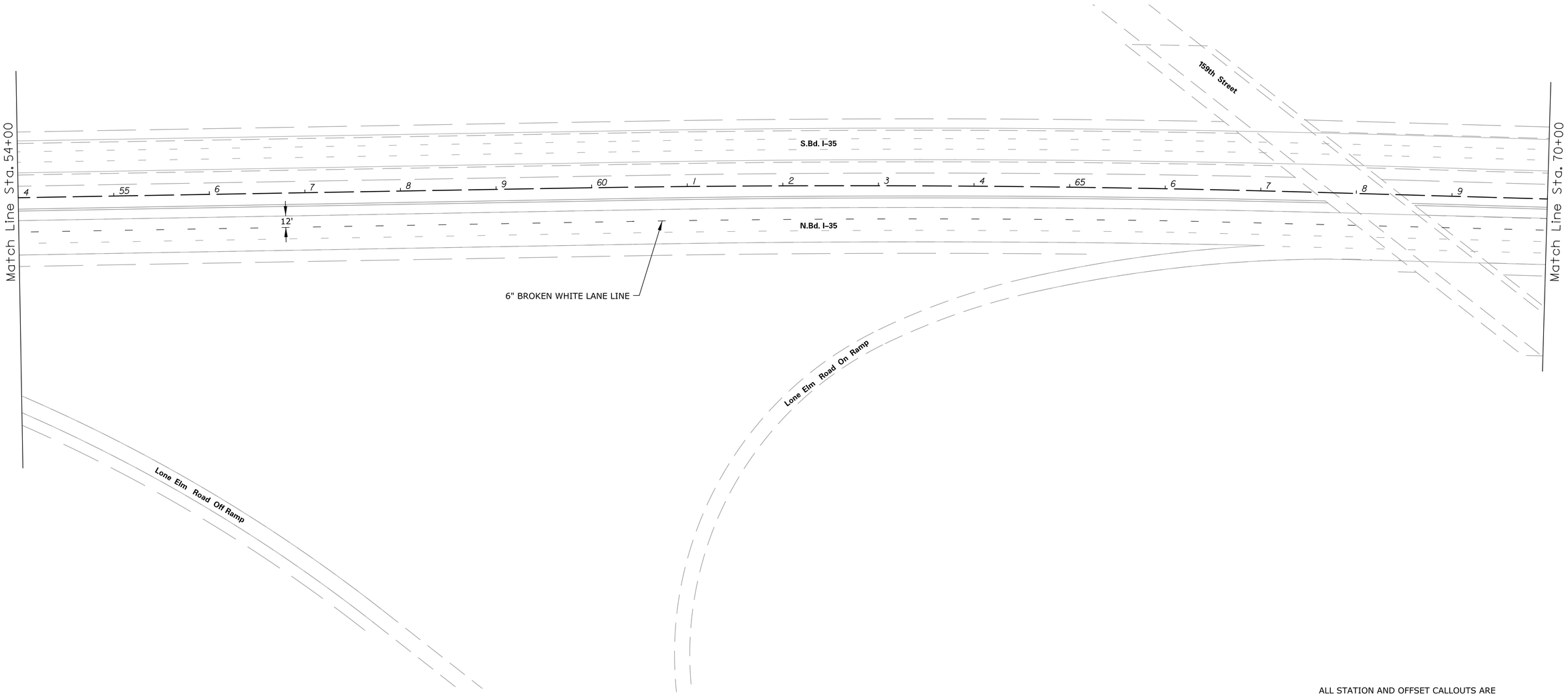

ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 54+00 TO STA. 70+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 110*

KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
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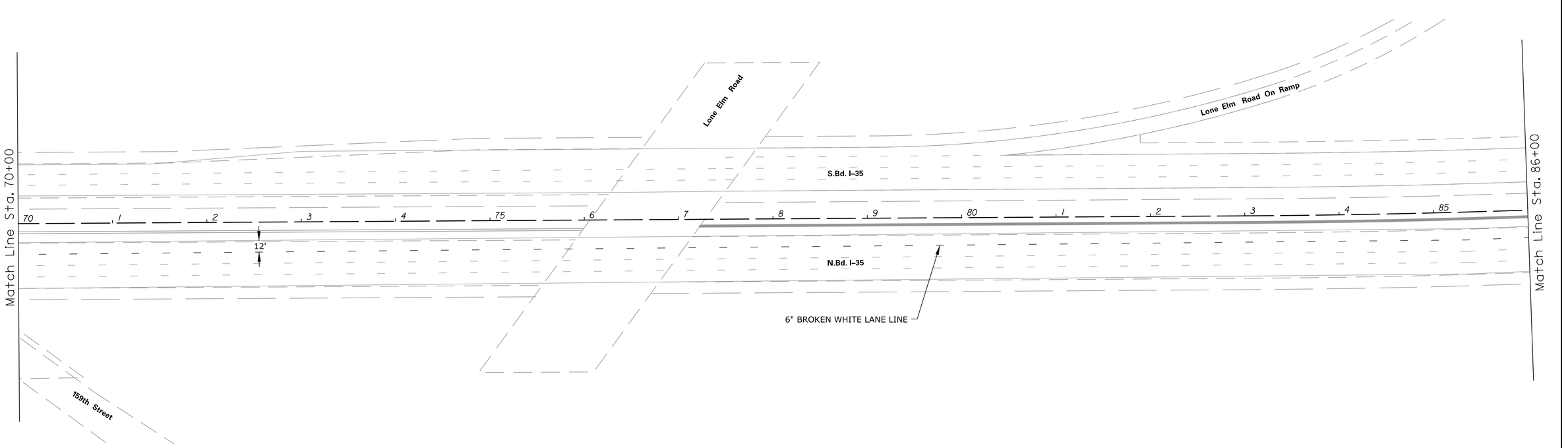
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	111	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 70+00 TO STA. 86+00

KDOT Graphics Certified 10-03-2014

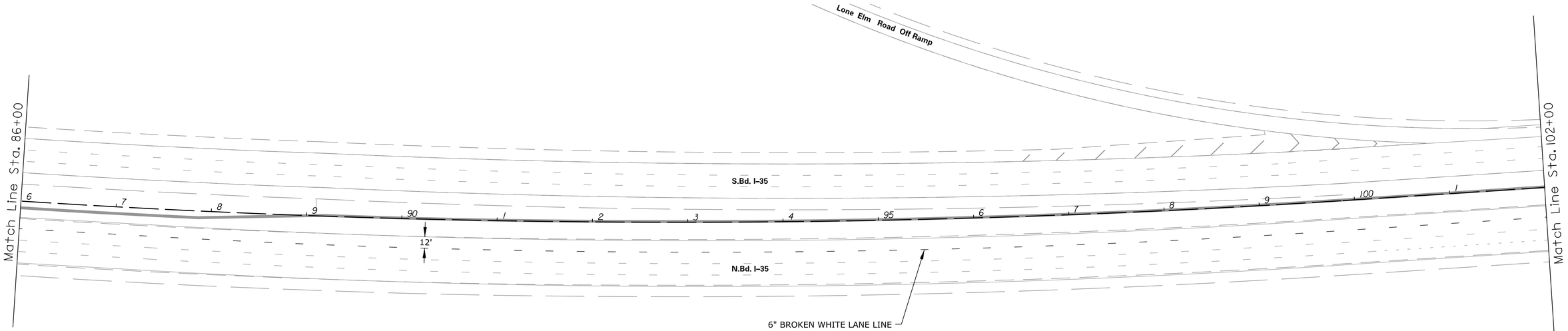
Sh. No. 111

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-103.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	112	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 86+00 TO STA. 102+00

KDOT Graphics Certified 10-03-2014

Sh. No. 112

KDOT Graphics Certified

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer Plotted : 10/16/2014
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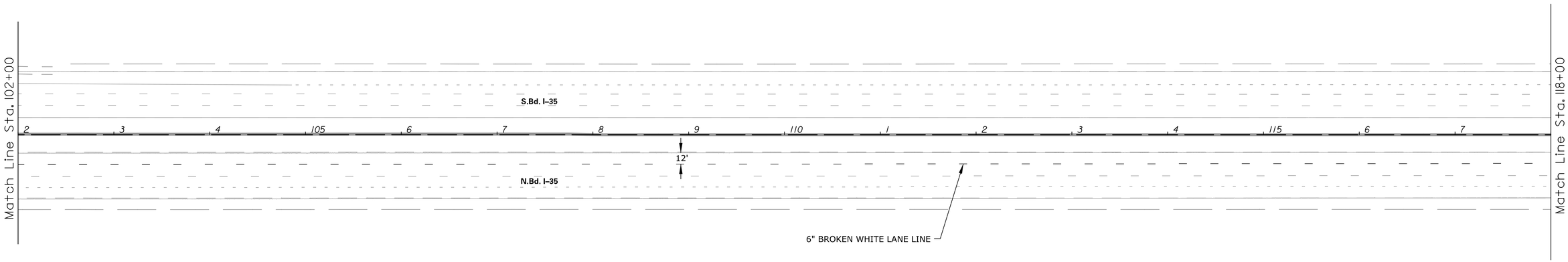
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	113	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 102+00 TO STA. 118+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 113*

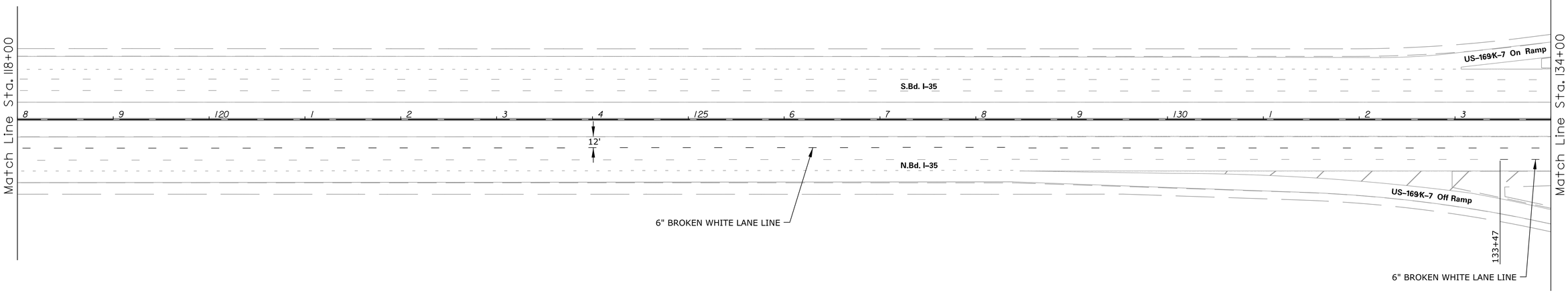
KDOT Graphics Certified

Drawn By: : aameyer Plotted :10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-105.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	114	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 118+00 TO STA. 134+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 114*

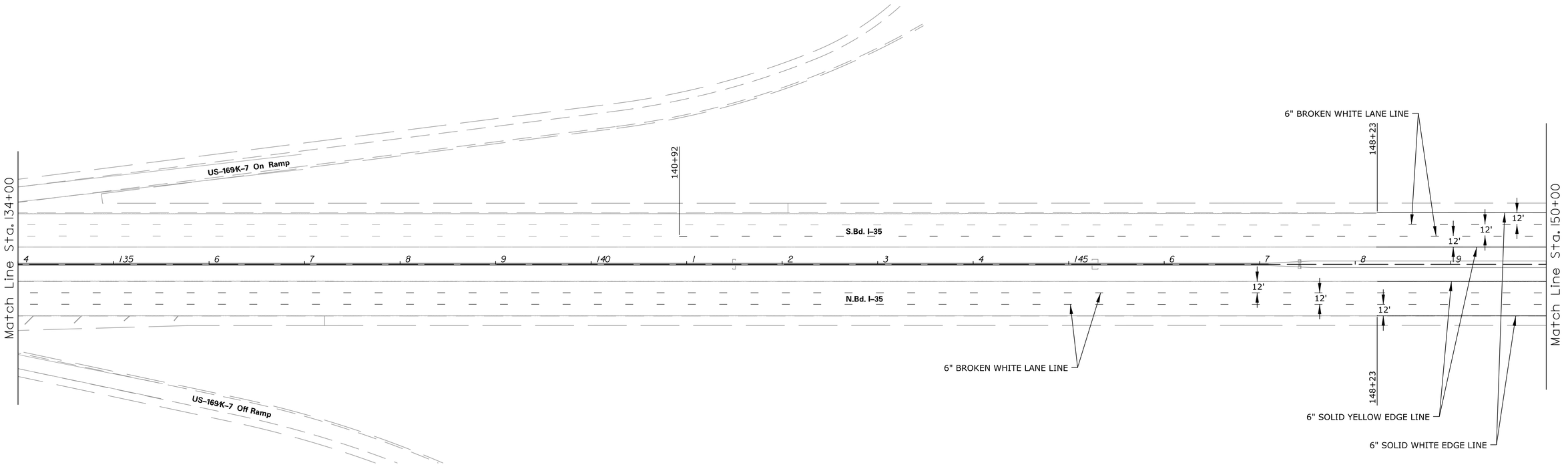
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-106.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	115	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 134+00 TO STA. 150+00

KDOT Graphics Certified 10-03-2014

Sh. No. 115

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-107.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	116	251

CONCRETE BARRIER MOUNTING DETAIL FOR EMERGENCY REFERENCE MARKERS

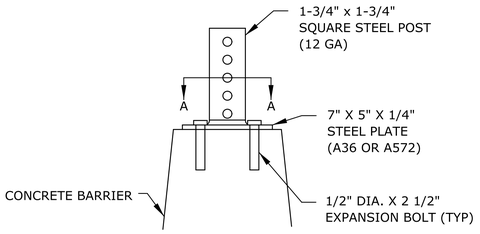
PSST IS PERFORATED SQUARE STEEL TUBE POST

THE BRACKET SHALL BE GALVANIZED AFTER FABRICATION TO MATCH THE REQUIREMENTS OF THE SQUARE STEEL POST SPECIFICATION.

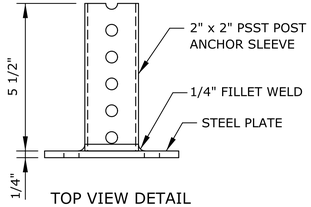
THE EXPANSION BOLT SHALL BE A325M STEEL. ZINC COATED TO FEDERAL SPECIFICATION 00-Z-325.

THE CONTRACTOR SHALL REUSE THE EXISTING PSST SIGN POST AND BARRIER BRACKET FOR THE REFERENCE MARKERS. ALL WORK AND MATERIALS ASSOCIATED WITH THE REFERENCE MARKERS SHALL BE PAID FOR UNDER THE BID ITEM "SIGN (REMOVE AND RESET)".

PSST BARRIER BRACKET MOUNTING DETAIL

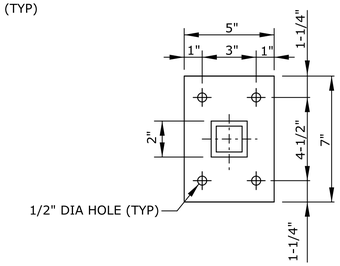


PSST BARRIER BRACKET DETAIL

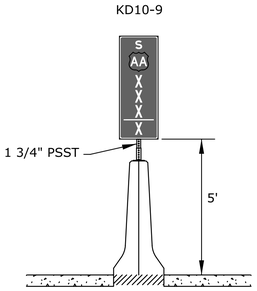


SECTION A-A

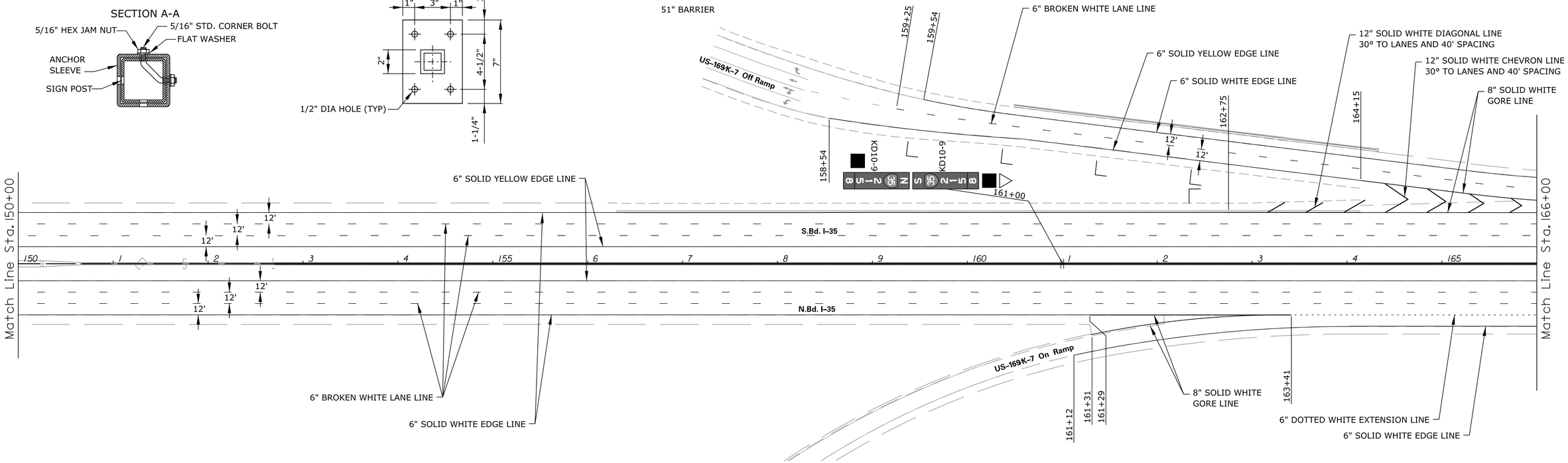
TOP VIEW DETAIL



KD10-9



SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 150+00 TO STA. 166+00

KDOT Graphics Certified 10-03-2014

Sh. No. 116

KDOT Graphics Certified

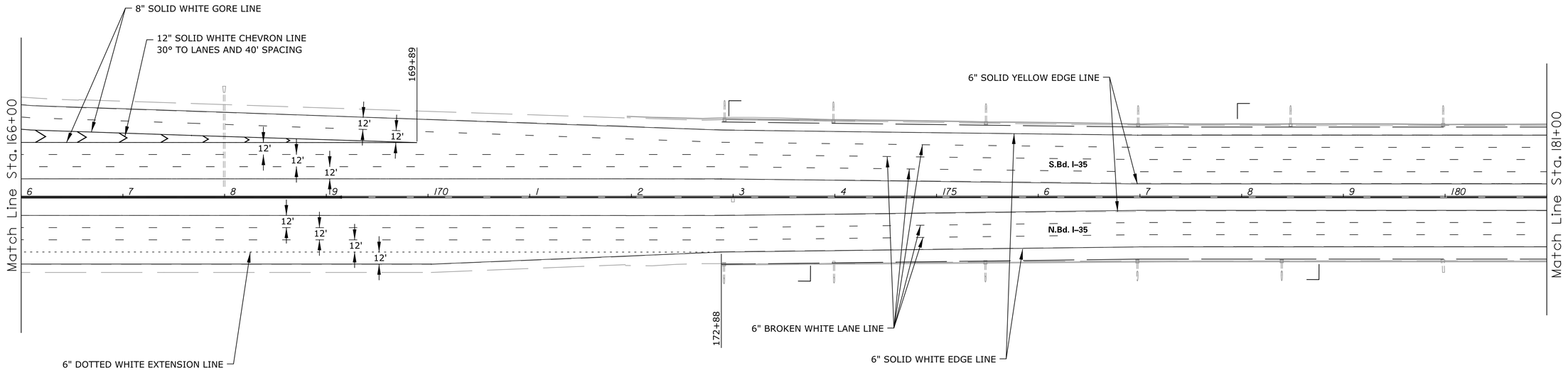
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-108.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	117	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 166+00 TO STA. 181+00

KDOT Graphics Certified 10-03-2014

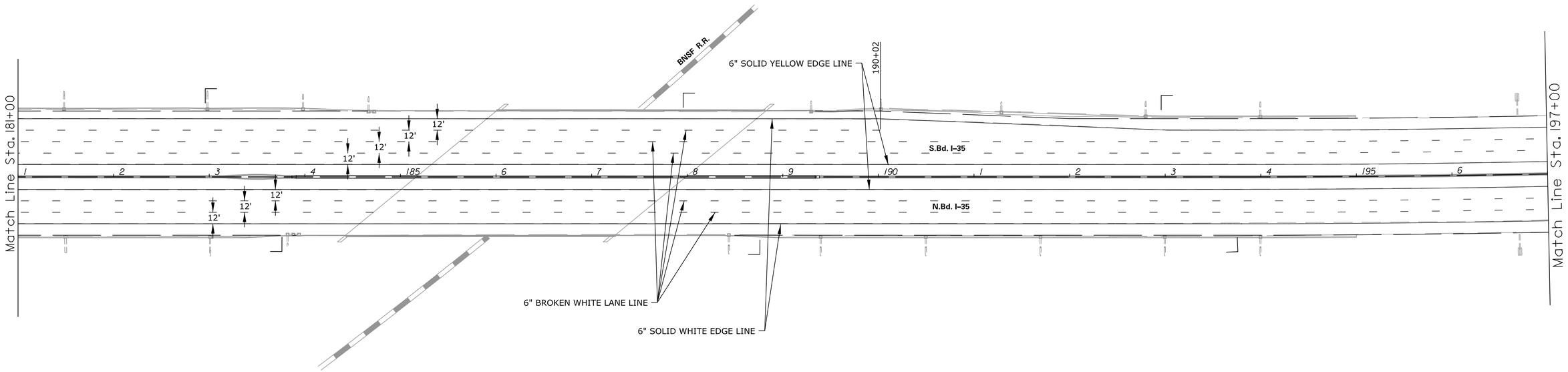
Sh. No. 117

KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-109.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	118	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 181+00 TO STA. 197+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 118*

KDOT Graphics Certified

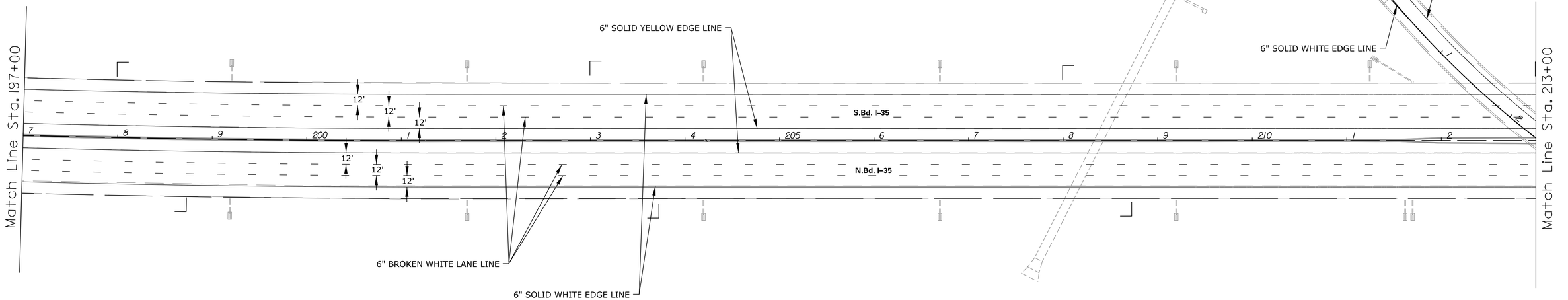
BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001mpl-110.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	119	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 197+00 TO STA. 213+00

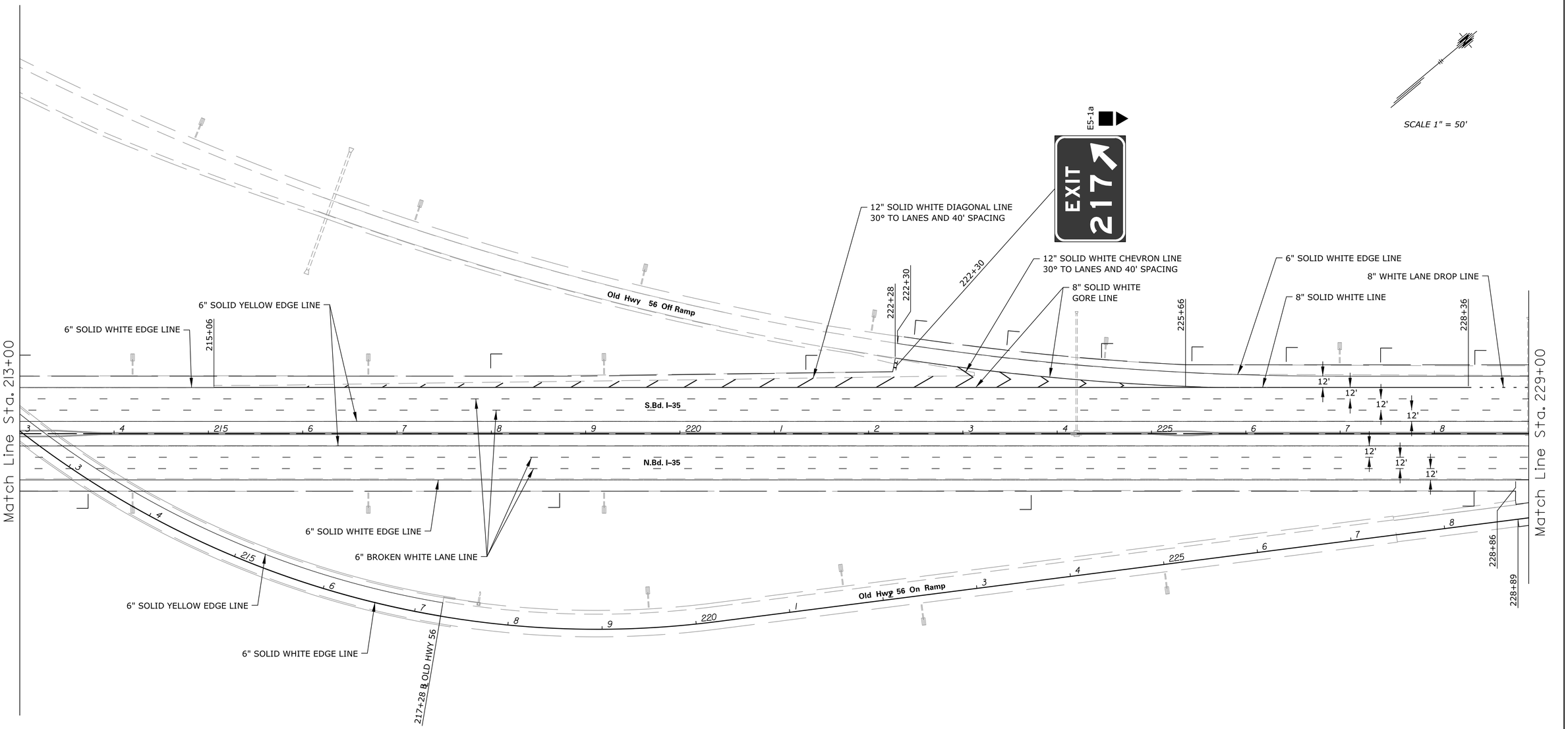
KDOT Graphics Certified 10-03-2014 *Sh. No. 119*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001mpl-111.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	120	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 213+00 TO STA. 229+00

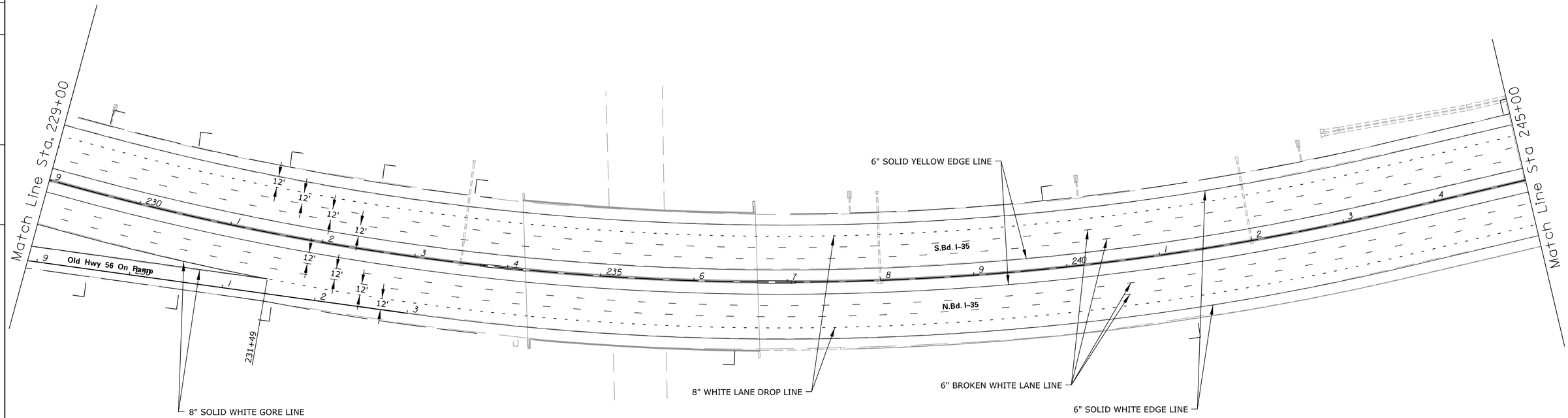
KDOT Graphics Certified 10-03-2014 *Sh. No. 120*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-112.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	121	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 229+00 TO STA. 245+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 121*

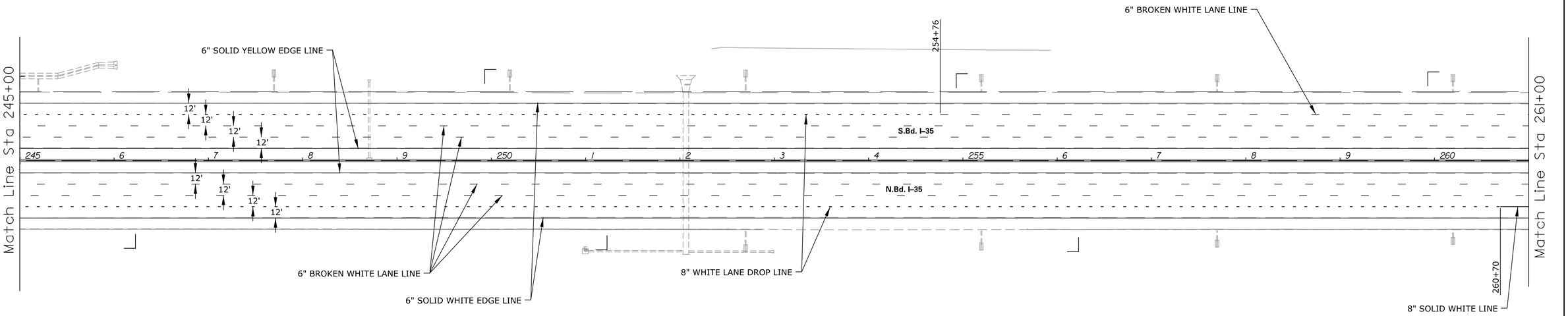
KDOT Graphics Certified

DATE	BY	REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001mpl-113.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	122	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 245+00 TO STA. 261+00

KDOT Graphics Certified 10-03-2014

Sh. No. 122

KDOT Graphics Certified

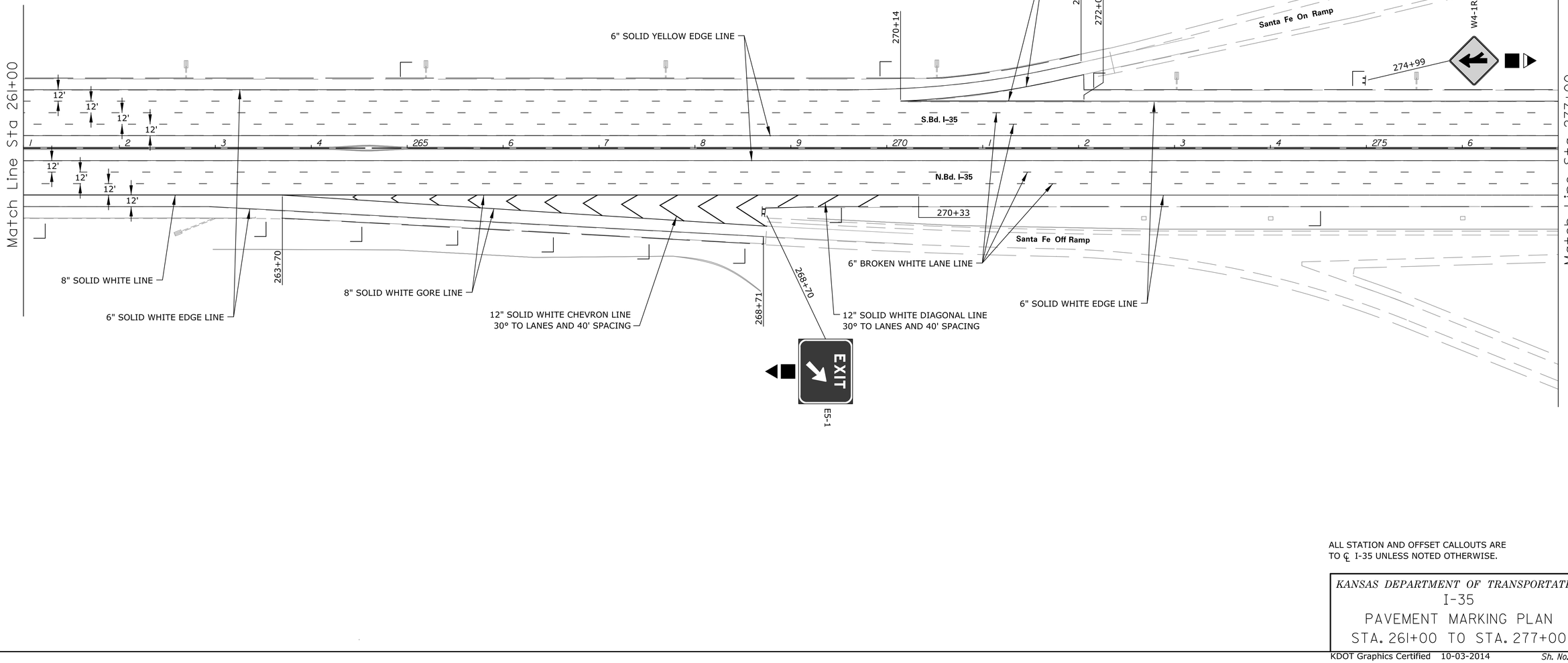
BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-114.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	123	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 261+00 TO STA. 277+00

KDOT Graphics Certified 10-03-2014

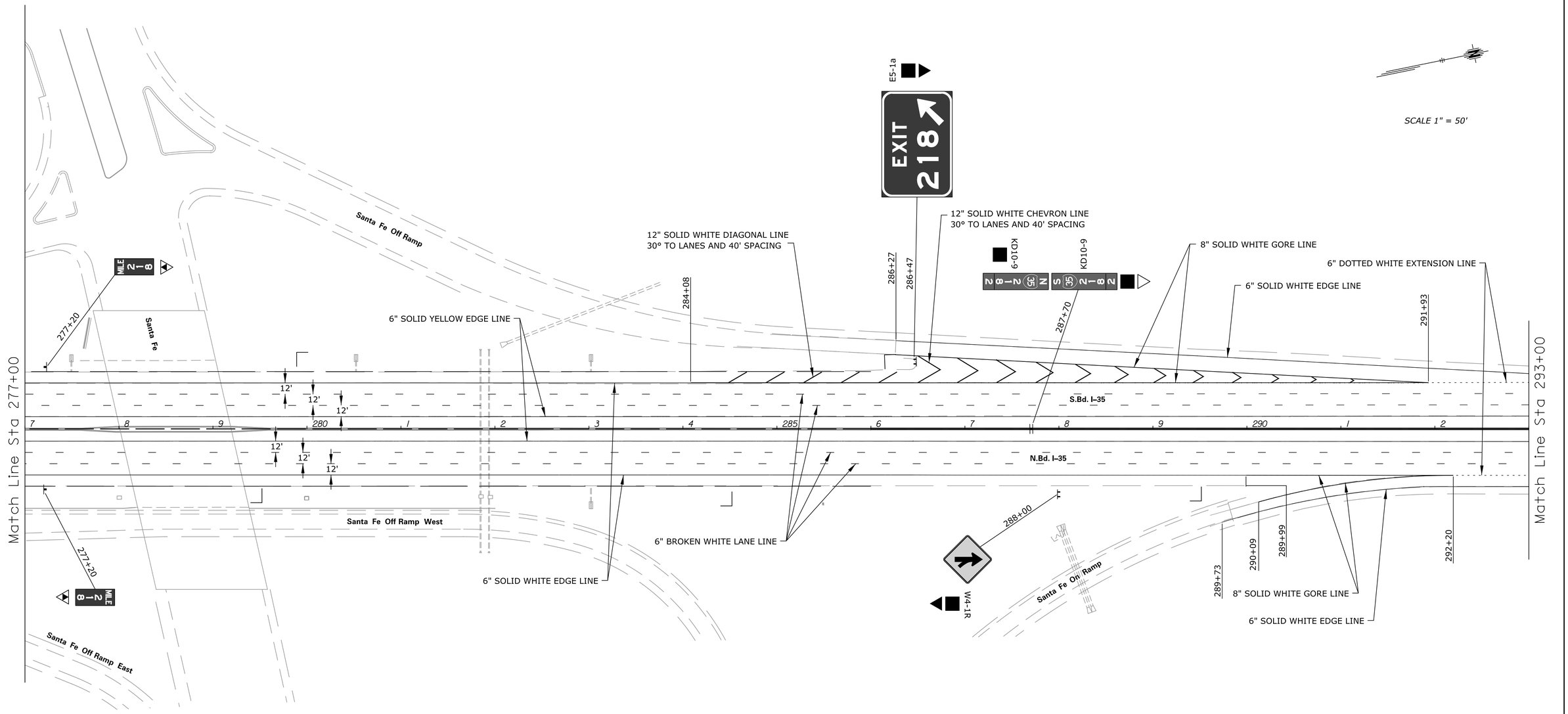
Sh. No. 123

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Traffic\Sheets\ka356001mpl-115.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	124	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 277+00 TO STA. 293+00

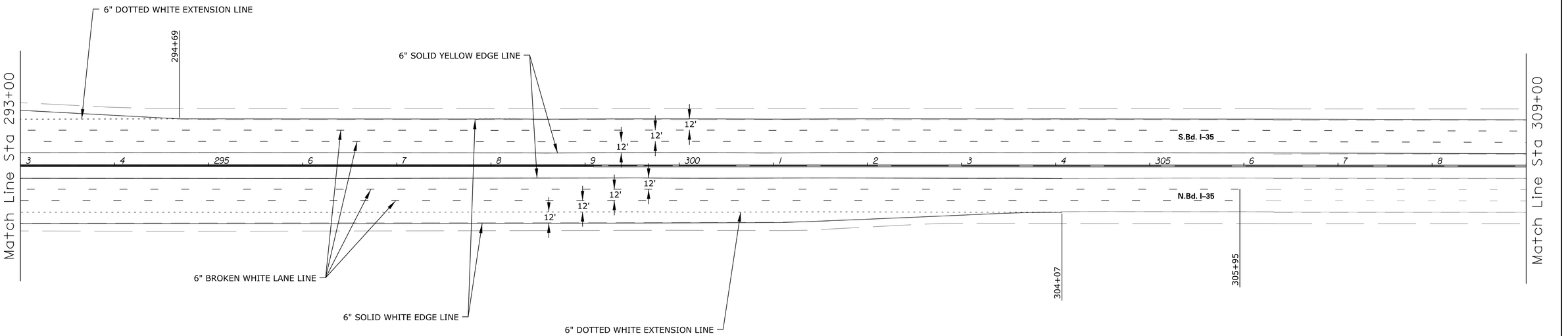
KDOT Graphics Certified 10-03-2014 *Sh. No. 124*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001mpl-116.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	125	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35

PAVEMENT MARKING PLAN

STA. 293+00 TO STA. 309+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 125*

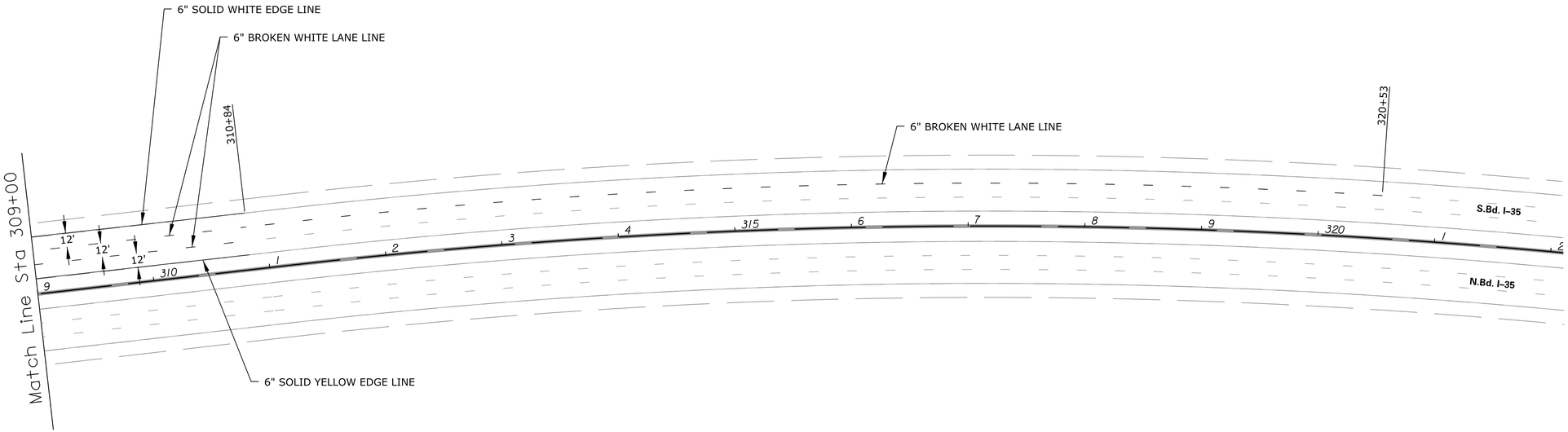
KDOT Graphics Certified

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001mpl-117.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	126	251

SCALE 1" = 50'



ALL STATION AND OFFSET CALLOUTS ARE TO ℄ I-35 UNLESS NOTED OTHERWISE.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35
PAVEMENT MARKING PLAN
STA. 309+00 TO STA. 322+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 126*

KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001mpl-118.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	127	251

SUMMARY OF PAVEMENT MARKINGS

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	8" Broken WHITE Lane Drop Line	8" Solid WHITE Gore Line	8" Dotted WHITE Extension Line	12" Solid WHITE Diagonal Line	12" Solid WHITE Chevron Line	12" Solid WHITE Type I Crosswalk Line	24" Solid WHITE Type II Crosswalk Line	24" Solid WHITE Stop Line	4" Solid YELLOW Edge Line	4" Solid YELLOW Double Line	4" Solid YELLOW Line	4" Broken YELLOW Line	6" Solid YELLOW Edge Line	12" Solid YELLOW Diagonal Line
NB I-35																					
40+02 to 305+95		15506	10976		712			732	2862		72	395								15591	
SB I-35																					
140+92 to 320+53		15616	9720		92			654	4938		412	793								16826	
OLD HWY 56 ON RAMP																					
210+22 to 217+28		707																		698	
TOTALS		31829	20696		804			1386	7800		484	1188								33115	

RECAPITULATION OF QUANTITIES

ITEMS	TOTAL	UNITS
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(4")		FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(6")	53329	FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(8")	9186	FT
PAVEMENT MARKING (MULTI-COMPONENT)(WHITE)(12")	1672	FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(4")		FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(6")	33115	FT
PAVEMENT MARKING (MULTI-COMPONENT)(YELLOW)(12")		FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(4")		FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(6")		FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(8")		FT
PAVEMENT MARKING (THERMOPLASTIC)(WHITE)(12")		FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(4")		FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(6")		FT
PAVEMENT MARKING (THERMOPLASTIC)(YELLOW)(12")		FT
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
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")		FT
PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(8")		FT
PAVEMENT MARKING (PATTERNED COLD PLASTIC)(WHITE)(12")		FT
PAVEMENT MARKING REMOVAL		FT

SUMMARY OF WORD & SYMBOL MARKINGS

LOCATION	STOP	ONLY	X-ING	SCHOOL	70	435	24	400	18
TOTALS									

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

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

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.

NO.	DATE	REVISIONS	BY	APP'D
2	5/25/12	Added Line Types, Symbols, and Shields	B.A.H.	B.D.G.
1	7/26/05	New FHWA Approval Date	J.F.F.	B.D.G.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY AND RECAPITULATION OF PAVEMENT MARKING QUANTITIES

TE311

FHWA APPROVAL		5/25/2012	APP'D	Brian D. Gower	
DESIGNED	J.F.F.	DETAILED	J.F.F.	QUANTITIES	TRACED
DESIGN CK.	B.D.G.	DETAIL CK.	B.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 06-20-2012

Sh. No. 127

KDOT Graphics Certified

Drawn By : aarneyer
File : ka356001mss311-01.dgn
Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	128	251

SYMBOL KEY

- REMOVE SIGN
- REMOVE POST
- REMOVE FOOTING
- REMOVE SIGN & POST
- REMOVE POST & FOOTING
- REMOVE SIGN, POST, & FOOTING
- MOUNT ON WOOD POST IN CONCRETE FOOTING
- MOUNT ON WOOD POST IN SOIL
- MOUNT ON STEEL BEAM BREAKAWAY POST
- MOUNT ON STEEL U-POST
- MOUNT ON PSST POST
- MOUNT ON PSST POST WITH COUPLER
- MOUNT ON PSST POST WITH COUPLER AND FOOTING
- MOUNT ON EXISTING POST
- 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 'B' DELINEATOR (RIGID)
- TYPE 'A' DELINEATOR (FLEXIBLE)
- TYPE 'B' DELINEATOR (FLEXIBLE)
- TYPE 2 OBJECT MARKER
- TYPE 3 OBJECT MARKER

GENERAL NOTES

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.

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.

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.

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.

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 (2007 EDITION) AND SPECIAL PROVISIONS.

INDEX OF SHEETS

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Changed General Notes and Spec Book Date	D.D.G.	D.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SIGNING SYMBOL KEY
GENERAL NOTES
AND INDEX

TE402 7/1/03

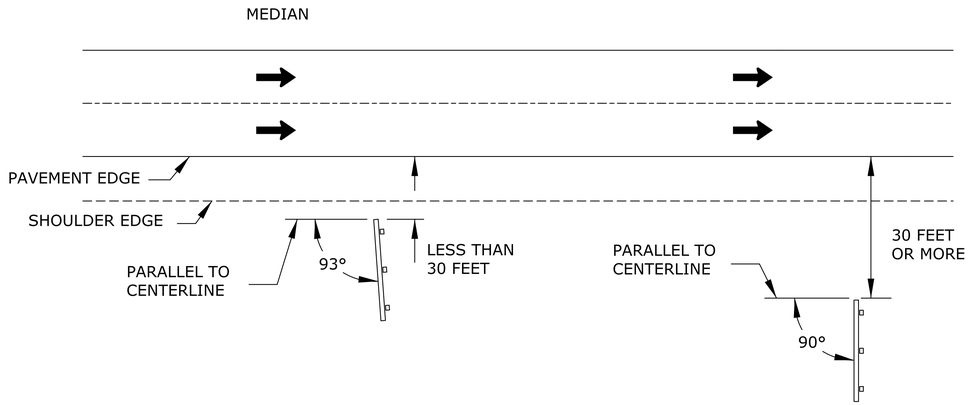
FHWA APPROVAL			7/23/2010	APP'D	Steven A. Buckley		
DESIGNED	D.D.G.	DETAILED	W.S.B.	QUANTITIES		TRACED	
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.		TRACE CK.	

KDOT Graphics Certified 01-18-2011 Sh. No. 128

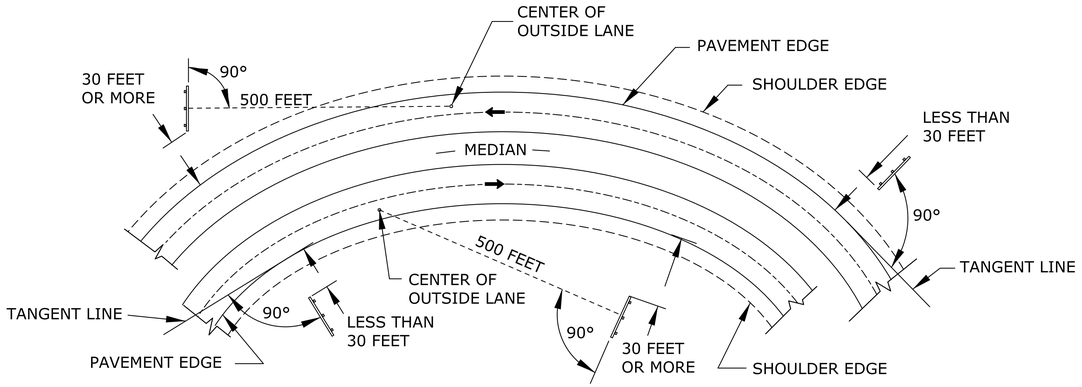
KDOT Graphics Certified

Plotted : 16-OCT-2014 11:29
Drawn By : aameyer
File : ka356001pss402-01.dgn

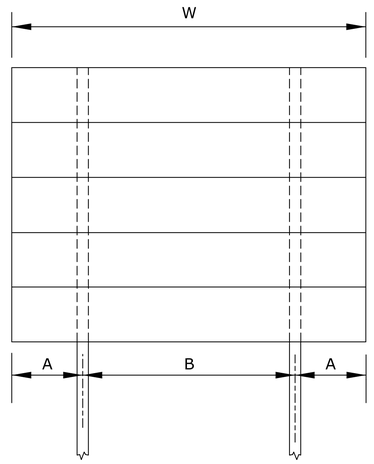
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	129	251



ANGLE OF SIGNS ERECTED ON STRAIGHT ROADWAY



ANGLE OF SIGNS ERECTED ON CURVED ROADWAY

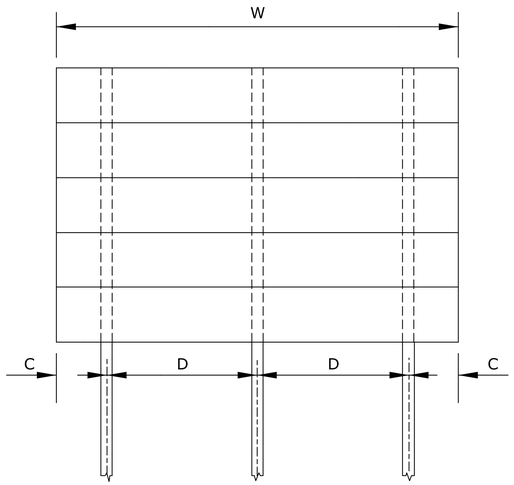


TWO POST SPACING

TYPICAL SPACING PATTERN = A + B + A

2 POST SPACING (MINIMUM DIMENSION)			
	A	B	W
WOOD	6" ✳	-	-
STEEL	12"	8'	10'

✳ STRUCTURAL PANEL SIGNS



THREE POST SPACING

TYPICAL SPACING PATTERN = C + D + D + C

3 POST SPACING (MINIMUM DIMENSION)			
	C	D	W
WOOD	6"	4'	9'
STEEL	12"	8'	18'

W= WIDTH OF SIGN
A = 1/5W
B = 3/5W
C = 1/8W
D = 3/8W

NOTE: ALL SPACING DIMENSIONS ARE MEASURED TO THE CENTERLINE OF THE POSTS. THE TYPICAL SPACING PATTERN SHALL NOT BE USED IF THE MINIMUM DISTANCE BETWEEN POSTS CANNOT BE OBTAINED.

GENERAL NOTE:
GORE AND MEDIAN SIGNS SHALL NORMALLY BE ERECTED SUCH THAT THE SIGN FACE IS TRULY VERTICAL AND ROTATED 93 DEGREES AWAY FROM THE CENTER OF THE LANE WHICH THE SIGN SERVES. ALL ANGLES ARE MEASURED TO THE FACE OF THE SIGN.

POST SPACING FOR REINFORCED PANEL SIGNS

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

POST SPACING FOR
REINFORCED PANEL SIGNS
AND ANGLE OF SIGNS

TE404 7/1/03

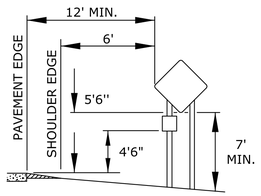
FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	W.S.B.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 129

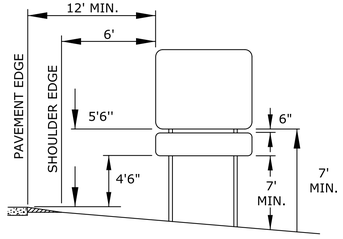
KDOT Graphics Certified

Drawn By : aarneyer Plotted : 16-OCT-2014 11:29
File : ka356001pss404-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	130	251

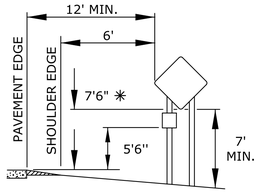


SHOULDER MOUNT



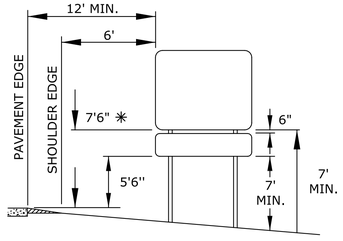
SHOULDER MOUNT

CONVENTIONAL ROADWAY



* - 8'6" WITH SECONDARY SIGN

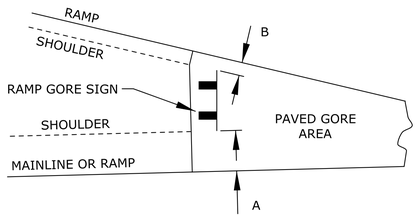
SHOULDER MOUNT



* - 8'6" WITH SECONDARY SIGN

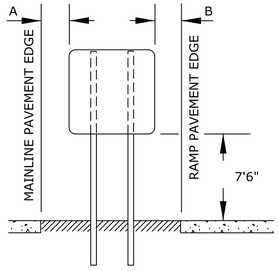
SHOULDER MOUNT

FREEWAY AND EXPRESSWAY ROADWAY
RAMPS AND SIDE ROADS

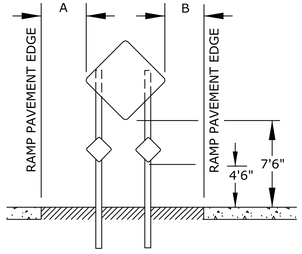


GORE TYPE	A (FT)	B (FT)
MAINLINE/ RAMP	6	3
RAMP/RAMP	3	3

(DIMENSIONS ARE MINIMUMS)



GORE INSTALLED SIGN
(MAINLINE/RAMP)



GORE INSTALLED SIGN
WITH TWO T1/OM'S
(RAMP/RAMP)

NOTES:

THE OUTER EDGE OF THE SIGN, ON EXPRESSWAYS AND FREEWAYS, SHALL BE A MINIMUM OF 10 FEET FROM THE RIGHT OF WAY LINE.

IN BUSINESS, COMMERCIAL, OR RESIDENTIAL DISTRICTS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL CLEARANCE OF 2 FEET WITH A 7'6" MINIMUM MOUNTING HEIGHT MAY BE USED.

WHEN SIGNS ARE MOUNTED BEHIND GUARD FENCE, THE NEAR EDGE OF THE SIGN SHALL NOT EXTEND BEYOND THE BACK SIDE OF THE GUARD FENCE AND THE NEAREST SIGN POST SHALL BE A MINIMUM OF 5 FEET FROM THE FACE OF THE GUARD FENCE. THERE SHALL NOT BE ANY SHOULDER MOUNTED SIGNS LOCATED BETWEEN 100 FEET IN ADVANCE OF AND 50 FEET BEYOND THE NOSE OF THE GUARD FENCE.

WHEN SIGNS ARE MOUNTED IN A MEDIAN, THE LATERAL PLACEMENT SHOULD BE THE SAME AS A SHOULDER MOUNT. IF THE MEDIAN IS TOO NARROW FOR THIS PLACEMENT THE SIGN MAY BE PLACED A MINIMUM OF 2 FEET FROM THE BACK OF THE CURB, BUT IN NO CASE SHALL THE SIGN EDGE EXTEND BEYOND THE BACK EDGE OF THE CURB. SIGNS LOCATED AT THE MEDIAN NOSE SHOULD BE SET THE SAME DISTANCE FROM THE BACK OF THE CURB AS THE RADIUS OF THE MEDIA NOSE, BUT SHOULD NOT EXCEED THE DISTANCE OF THE SHOULDER MOUNT OR BE CLOSER THAN 2 FEET FROM THE BACK OF THE CURB.

THE GORE SIGN SHALL BE INSTALLED IN THE FOOTING BLOCKOUT IN THE PAVED GORE AREA. IF NO BLOCKOUT IS PROVIDED, THEN LOCATE THE GORE SIGN AT THE PLAN STATION. THE EDGES OF THE GORE SIGN SHALL NOT EXTEND BEYOND THE SHOULDER EDGE. THE MINIMUM DISTANCE FROM THE POST CENTERLINE TO THE BACK EDGE OF THE PAVED GORE AREA IS 3 FEET.

ADJUSTMENTS:

SIGNS MAY BE MOVED LATERALLY OR LONGITUDINALLY IF IT WILL IMPROVE THE VISIBILITY OF THE SIGN OR OTHER SIGNS AND IF IT WILL PROTECT THE SIGN MORE.

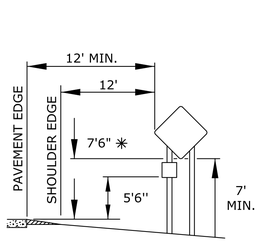
THE MAXIMUM ALLOWABLE LONGITUDINAL ADJUSTMENTS OF SIGNS ARE:

- ADVANCE GUIDE - 1320 FEET
- SUPPLEMENTAL GUIDE - 1320 FEET
- MOTORIST SERVICE - 1320 FEET
- EXIT DIRECTION - 100 FEET
- MILEAGE - 2640 FEET
- MERGE OR ANY SIGNS IN AN INTERCHANGE - 50 FEET
- MILEPOST - 50 FEET

IF ANY SIGN WITH A DISTANCE IS LONGITUDINALLY ADJUSTED, THE DISTANCE TO THE DESTINATION SHALL BE CHECKED AND MODIFIED AS NEEDED.

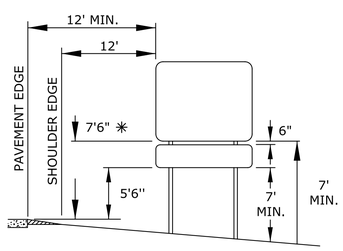
THE MINIMUM SPACING BETWEEN GUIDE SIGNS ON AN EXPRESSWAY OR FREEWAY IS 800 FEET.

THE MINIMUM SPACING BETWEEN SIGNS ON A RAMP OR CONVENTIONAL ROADWAY IS 100 FEET.



* - 8'6" WITH SECONDARY SIGN

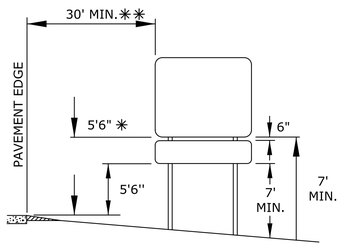
SHOULDER MOUNT



* - 8'6" WITH SECONDARY SIGN

SHOULDER MOUNT

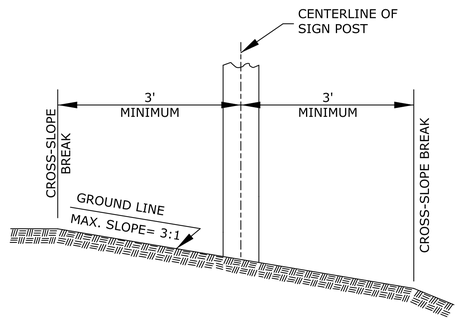
FREEWAY AND EXPRESSWAY ROADWAY



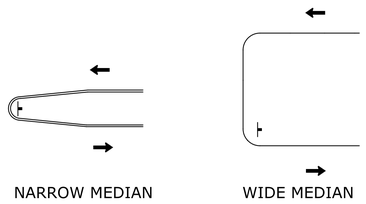
* - 8'6" WITH SECONDARY SIGN
** - 60' MAX.

OFFSET MOUNT

FREEWAY AND EXPRESSWAY ROADWAY

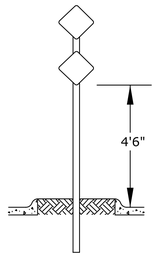


POST PLACEMENT CRITERIA
(CROSS-SLOPE BREAK)

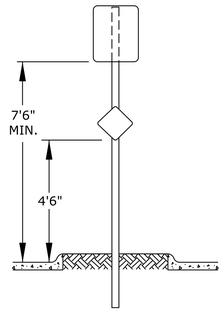


NARROW MEDIAN WIDE MEDIAN

TYPICAL MEDIAN SIGN LOCATION



ONE OR TWO OM1-3



PRIMARY SIGN WITH OM1-3

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR MOUNTING HEIGHTS LATERAL OFFSETS AND LONGITUDINAL ADJUSTMENTS

TE406 7/1/03

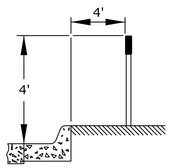
FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	W.S.B.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 130

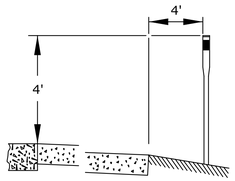
KDOT Graphics Certified

Drawn By : aameyer
File : ka356001pss406-01.dgn
Plotted : 16-OCT-2014 11:29

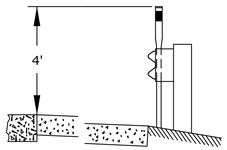
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	131	251



CURB SECTION

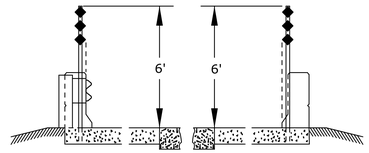


SHOULDER SECTION

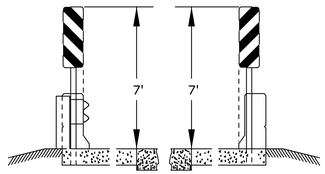


GUARD FENCE SECTION

TYPICAL DELINEATOR LOCATION FOR ROADSIDE MOUNTING

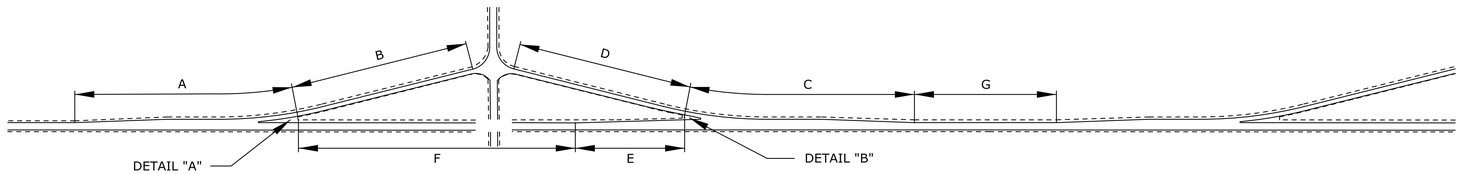


TYPE 2 OBJECT MARKERS
SHOULDER WIDTH 6 FT OR GREATER



TYPE 3 OBJECT MARKERS
SHOULDER WIDTH LESS THAN 6 FT

TYPICAL OBJECT MARKER LOCATION FOR BRIDGE AND CULVERT STRUCTURES



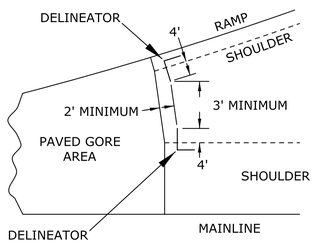
DELINEATION SPACING TABLE

	BEGINNING POINT	ENDING POINT	TYPICAL SPACINGS(1)	DELINEATOR TYPE AND COLOR	
				RIGHT EDGE	LEFT EDGE
A	END OF ACCELERATION LANE TAPER	PERPENDICULAR TO ENTRANCE RAMP GORE	100 FEET	"B" WHITE	"B" YELLOW
B	PERPENDICULAR TO ENTRANCE RAMP GORE	RAMP TERMINAL RADIUS	100 FEET	"A" WHITE	"A" YELLOW
C	END OF DECELERATION LANE TAPER	PERPENDICULAR TO EXIT RAMP GORE SIGN	100 FEET	"B" WHITE	"B" YELLOW
D	PERPENDICULAR TO EXIT RAMP GORE SIGN	RAMP TERMINAL RADIUS	100 FEET	"A" WHITE	"A" YELLOW
E	PERPENDICULAR TO EXIT RAMP GORE SIGN	END OF EXIT GORE TAPER	75-100 FT	"A" WHITE	"A" YELLOW
F	END OF EXIT GORE TAPER	ENTRANCE RAMP GORE	400-500 FT	"A" WHITE	"A" YELLOW
G	END OF ACCELERATION OR DECELERATION LANE TAPER	END OF ACCELERATION OR DECELERATION LANE TAPER	528 FT	"A" WHITE	"A" YELLOW
	BEGINNING OF CURVE FOR DIRECTION OF TRAVEL	END OF CURVE FOR DIRECTION OF TRAVEL	20-300 FT (2)	"A" WHITE	"A" YELLOW

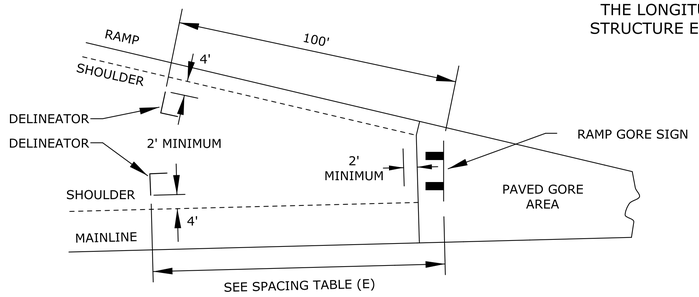
(1) SPACINGS SHALL BE CONTINOUS AND UNIFORM.

(2) SPACING IS ROUNDED TO NEAREST FOOT USING THE FORMULA:

SPACING = 3 X $\sqrt{(\text{RADIUS} - 50)}$



DETAIL "A"



DETAIL "B"

NOTE:
SEE 'DELINEATION SPACING' AND 'PATTERN OF DELINEATION' TABLES AND/OR PLAN SHEET FOR TYPE, COLOR, AND SPACING OF DELINEATION. THE COLOR OF DELINEATION SHALL MATCH THE COLOR OF THE PAVEMENT MARKING EDGELINE.

DELINEATION SHALL BE LOCATED ON THE OUTSIDE EDGE OF MAINLINE, ACCELERATION LANES, DECELERATION LANES, RAMPS, AND CURVES. DELINEATION SHALL NOT BE USED ON CURVES OR LOOPS WHEN CHEVRONS (W1-8 SIGNS) ARE USED, EXCEPT AT THE ENTRANCE AND EXIT GORE AREAS. WHEN CHANGING FROM DELINEATING ONE EDGE OF THE ROADWAY TO THE OTHER EDGE, THE DELINEATION ON BOTH EDGES SHALL OVERLAP THE TYPICAL SPACING SHOWN IN THE DELINEATION SPACING TABLE.

WHEN DELINEATING A CURVE, THE FIRST DELINEATOR SHOULD BE LOCATED AT THE BEGINNING OF THE CURVE. THE SPACING ON THE CURVE SHALL NOT EXCEED THE TYPICAL SPACING FOR THE ROAD TYPE.

ALL DELINEATION USED WITHIN 100 FEET IN ADVANCE OF THE NOSE OF GUARD FENCE AND THROUGHOUT THE AREA WITH GUARD FENCE SHALL BE FLEXIBLE POST MOUNTED.

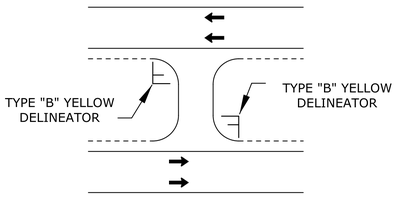
DELINEATION LOCATED ON A MEDIAN BETWEEN THE ENTRANCE AND EXIT RAMPS SHOULD BE INSTALLED ACCORDING TO MEDIAN WIDTH:

MEDIAN WIDTH LESS THAN 6 FT: DELINEATION INSTALLED BACK-TO-BACK ON A SINGLE POST ALONG THE MEDIAN CENTERLINE.

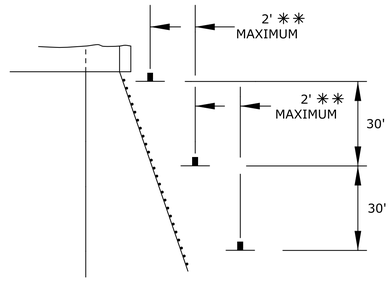
MEDIAN WIDTH GREATER THAN OR EQUAL TO 6 FT: DELINEATION INSTALLED AS SHOWN FOR THE TYPICAL DELINEATOR LOCATIONS.

THE SPACING SHALL BE AS SHOWN IN THE DELINEATION SPACING TABLE.

THE LONGITUDINAL LOCATION OF THE OBJECT MARKERS FROM THE STRUCTURE END SHALL BE A MAXIMUM SPACING OF 42"



TYPICAL DELINEATOR LOCATION FOR MEDIAN CROSS-OVER



TYPICAL PLACEMENT OF TYPE 3 OBJECT MARKERS

** - GUARD FENCE OR BARRIER

TYPE 3 OBJECT MARKERS USAGE		
TWO-WAY ROADWAY (TWO LANES)		
WIDTH OF STRUCTURE	LEFT	RIGHT
LESS THAN 20 FT	3 (1)	3 (1)
20 FT TO LESS THAN 25 FT	1	3 (1)
25 FT TO LESS THAN 28 FT	1	3 (1)
28 FT TO LESS THAN 30 FT	1	3 (1)
30 FT TO LESS THAN 33 FT	1 (2)	1
ONE-WAY ROADWAY (ONE LANE)		
WIDTH OF STRUCTURE	LEFT	RIGHT
LESS THAN 25 FT	3 (1)	3 (1)
ONE-WAY ROADWAY (TWO LANES)		
WIDTH OF STRUCTURE	LEFT	RIGHT
LESS THAN 20 FT	-	-
20 FT TO LESS THAN 25 FT	3 (1)	3 (1)
25 FT TO LESS THAN 28 FT	3 (1)	3 (1)
28 FT TO LESS THAN 30 FT	3 (1)	3 (1)
30 FT TO LESS THAN 33 FT	1 (2)	1

NOTES:
THE TYPE 3 OBJECT MARKERS USAGE TABLE IS BASED ON BOTH SHOULDERS BEING EQUAL WIDTH. IF ONE SHOULDER WIDTH IS GREATER THAN OR EQUAL TO 6 FT, THEN INSTALL A TYPE 2 OBJECT MARKER ON THAT SIDE AND INSTALL A TYPE 3 OBJECT MARKER ON THE OTHER SIDE.
(1) - THE FIRST TWO TYPE 3 OBJECT MARKERS NOT REQUIRED IF THE GUARD FENCE HAS DELINEATION.
(2) - THE LEFT TYPE 3 OBJECT MARKER NOT REQUIRED IF STRUCTURE LESS THAN 10 FEET LONG.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

DESIGN DETAILS FOR POSITIONING OF DELINEATORS & OBJECT MARKERS (TYPES 2 & 3)

TE409 7/1/03

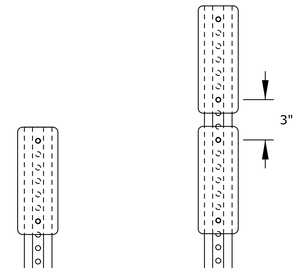
FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	W.S.B.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 131

KDOT Graphics Certified

Plotted : 16-OCT-2014 11:29
Drawn By : aameyer
File : ka356001pss409-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	132	251

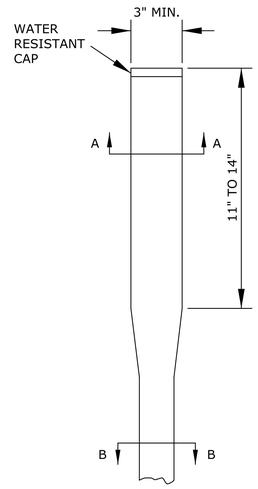


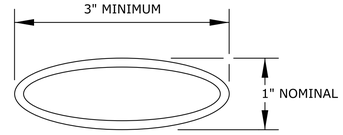
TYPE "A" TYPE "B"

TYPICAL DELINEATOR ASSEMBLY POSITIONS FOR STEEL POST MOUNTING

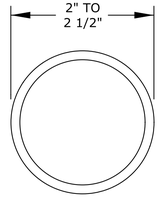
FLAT SHEET DELINEATORS:
SEE FLAT SHEET SIGN BLANK DETAIL SHEETS FOR THE REQUIRED ALUMINUM ALLOYS AND THICKNESS.

THE 3 IN X 8 IN DELINEATOR SIGN FACE SHALL BE COVERED WITH TYPE IV HIGH INTENSTIY WHITE OR YELLOW RETROREFLECTIVE SHEETING.

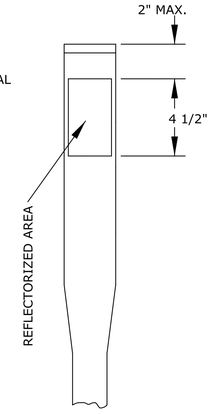




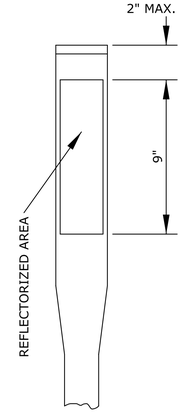
SECTION A-A



SECTION B-B



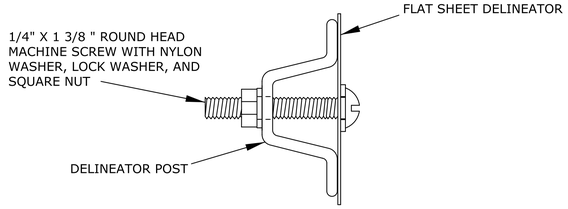
TYPE "A"



TYPE "B"

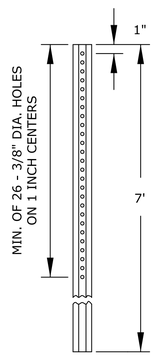
TYPICAL REFLECTORIZED AREA POSITIONING FOR FLEXIBLE POST MOUNTING

FLEXIBLE DELINEATOR POST DETAILS

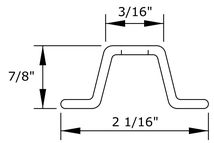


FLAT SHEET DELINEATOR MOUNTING

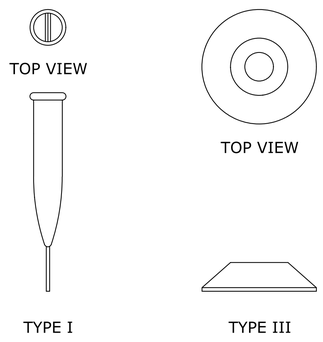
DETAILS FOR ATTACHING DELINEATORS TO STEEL DELINEATOR POSTS



PUNCHING DETAILS



POST DIMENSIONS
(ALL DIMENSIONS SHOWN ARE NOMINAL)



ANCHORING DEVICES FOR FLEXIBLE DELINEATORS

STEEL DELINEATOR POST DETAILS

FLEXIBLE DELINEATOR POSTS AND ANCHORING DEVICES:
THE TOTAL LENGTH OF THE FLEXIBLE POST SHALL BE DETERMINED BY THE CONTRACTOR, AS PER LOCATION AND ANCHORING DEVICE.

REFLECTORIZATION:
THE REFLECTORIZED AREA SHALL BE TYPE IV HIGH INTENSITY WHITE OR YELLOW RETROREFLECTIVE SHEETING. THE REFLECTORIZED AREA SHALL BE 3" MINIMUM IN WIDTH.

DELINEATION NOTE:
SEE THE "DESIGN DETAILS FOR POSITIONING OF DELINEATORS' AND/OR PLAN SHEETS FOR THE DELINEATION SPACING, TYPE, AND COLOR.

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Changed Sheeting Type	D.D.G.	D.B.

KANSAS DEPARTMENT OF TRANSPORTATION
DELINEATOR DESIGN DETAILS
STEEL POST MOUNT &
FLEXIBLE POST MOUNT

TE412 7/1/03

FHWA APPROVAL			7/23/2010	APP'D	Steven A. Buckley		
DESIGNED	D.D.G.	DETAILED	W.S.B.	QUANTITIES		TRACED	
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.		TRACE CK.	

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File : ka356001pss412-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	133	251

QUANTITIES SHEET

SIGNS, POSTS, & FOOTINGS TO BE INSTALLED ON PROJECT

PLAN SHEET NUMBER	PLAN STATION NUMBER	(CL) LOCATION / LATERAL POSITION	SIGN DESIGNATION	SIGN SIZE	SIGN LAYOUT SHEET NUMBER	TYPE OF SIGN			4" X 6" POSTS			312.25 ALUMINUM BEAM	U-POSTS		GALVANIZED STEEL BEAM POSTS						PERFORATED SQUARE STEEL TUBE (PSST) POSTS								CONCRETE FOOTINGS					TYPE OF SIGN STRUCTURE OR SUPPORT MOUNT						MOUNT ABOVE SIGN DESIGNATION
									WOOD		STEEL				W6x9		W10x12		W10x22		1 3/4"		2"		2 1/4"				2 1/2"		WOOD POST	STEEL BEAM POST									
																															A36		A572 (ALT)							
						FLAT SHEET	REINFORCED PANEL	OVERLAY	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAL TUBING		2 LB PER FT	3 LB PER FT	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	POST	FOOTING	POST	FOOTING	POST	FOOTING	COUPLER	COUPLER & FOOTING	POST	FOOTING	18" DIA.	24" DIA.	30" DIA.	24" DIA.	30" DIA.	OVERHEAD	CANTILEVER	BUTTERFLY	BRIDGE MOUNT	MAST ARM	VERT. SUPPORT	
I-35																																								
120	222+30	L/G	E5-1a	96" x 60"		EXISTING				2																			2@3'											
123	268+70	R/G	E5-1	72" x 60"		EXISTING				2																			2@3'											
123	274+99	R/S	W4-1R	48" x 48"		EXISTING			2																															
124	277+20	L/S	D10-6	12" x 48"		X								1																										
124	277+20	R/S	D10-6	12" x 48"		X								1																										
124	286+47	L/S	E5-1a	96" x 60"		EXISTING				2																			2@3'											
124	288+00	R/S	W4-1R	48" x 48"		EXISTING			2																															

CENTERLINE LOCATION
L - LEFT OF CENTERLINE
R - RIGHT OF CENTERLINE
C - ON THE CENTERLINE

LATERAL POSITION
S - SHOULDER MOUNT
O - OFFSET MOUNT
G - GORE MOUNT
M - MEDIAN MOUNT

NOTE: SEE STANDARD PLAN SHEET TE590 FOR DETAILED SPECIFICATIONS.

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Added Coupler and Coupler/Footing Quantity	D.D.G.	D.B.

FHWA APPROVAL		7/23/2010	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.S.	QUANTITIES	TRACED B.B.
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

TE430

7/1/03

KDOT Graphics Certified 01-18-2011

Sh. No. 133

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001pss430-01.dgn
Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	134	251

QUANTITIES SHEET

DELINEATORS AND OBJECT MARKERS

			FLEXIBLE DELINEATORS										RIGID DELINEATORS											
			TYPE "A"						TYPE "B"				TYPE "A"						TYPE "B"				OBJECT MARKERS	
			WHITE		YELLOW		YELLOW (BK-BK)		WHITE		YELLOW		WHITE		YELLOW		YELLOW (BK-BK)		WHITE		YELLOW			
STATION TO STATION		LOCATION	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	TYPE I ANCHOR	TYPE III ANCHOR	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	BRACKET MOUNT	'U' POST	'U' POST
159+36	286+14	NB I-35											31											
173+76	289+51	SB I-35											27											
------	------	US-169/K-7 SB OFF RAMP											1		4									
------	------	OLD HWY 56 SB OFF RAMP											3											
------	------	OLD HWY 56 SB ON RAMP											2											
------	------	SANTA FE NB OFF RAMP											2											
------	------	SANTA FE NB ON RAMP											1											

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

QUANTITIES SHEET
DELINEATORS & OBJECT MARKERS

TE436 7/1/03

FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 134

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001pss436-01.dgn
Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	135	251

SUMMARY OF QUANTITIES

SIGNS

TYPE	NUMBER	SQUARE FEET
FLAT SHEET	2	8
REINFORCED PANEL		
OVERLAY		

OBJECT MARKERS

TYPE	NUMBER
TYPE 2 ("U" POST)	
TYPE 3 ("U" POST)	

SIGN STRUCTURES

TYPE	NEW	MODIFIED
OVERHEAD STRUCTURE		
CANTILEVER STRUCTURE		
BUTTERFLY STRUCTURE		
BRIDGE MOUNT ATTACHMENT		
MAST ARM SIGN SUPPORT		

DELINEATORS

TYPE	FLEXIBLE DELINEATOR		RIGID DELINEATOR	
	TYPE I ANCHOR	TYPE III ANCHOR	"U" POST	BRACKET MOUNT
TYPE 'A' WHITE			67	
TYPE 'A' YELLOW			4	
TYPE 'B' WHITE				
TYPE 'B' YELLOW				
TYPE 'A' WHITE (BACK TO BACK)				
TYPE 'A' YELLOW (BACK TO BACK)				

REMOVALS

TYPE	NUMBER
SIGNS	2
POSTS	12
FOOTINGS	6
SIGN STRUCTURES	

POSTS AND ALUMINUM BEAMS

	4" x 6" POST				"U" POST		GALVANIZED STEEL BEAM POST						PERFORATED SQUARE STEEL TUBE (PSST)			
	WOOD		STEEL				W6x9		W10x12		W10x22					
	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAL TUBING	3I2.25 ALUMINUM 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	4	6				2										
FEET	70	96				26										

POST FOOTINGS AND PSST COUPLERS

	CONCRETE FOOTING (DIA.)					PERFORATED SQUARE STEEL TUBE (PSST)					
	WOOD	A36 STEEL		A572 STEEL (ALT)		PERFORATED SQUARE STEEL TUBE FOOTING				COUPLER	COUPLER WITH FOOTING
	18"	24"	30"	24"	30"	1-3/4"	2"	2-1/4"	2-1/2"		
NUMBER	6										
FEET	18										

BASE PLATES AND STUB POSTS

	W6x9		W10x12		W10x22	
	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)	A36 STEEL	A572 STEEL (ALT)
BREAKAWAY BASES						
BASE PLATE (TOP)						
STUB POST WITH BASE PLATE						
NON-BREAKAWAY BASES						
BASE PLATE						

NUMBER & LENGTHS OF POSTS & ALUMINUM BEAMS (INFORMATION ONLY)

LENGTH OF POST OR BEAM	4" x 6" POST			3I2.25 ALUMINUM BEAM	"U" POST		GALVANIZED STEEL BEAM POST						PERFORATED SQUARE STEEL TUBE (PSST)			
	WOOD		STEEL				W6x9		W10x12		W10x22					
	FLAT SHEET SIGN	REINFORCED PANEL SIGN	STRUCTURAL TUBING		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'						2										
12.1' - 14'																
14.1' - 16'		6														
16.1' - 18'	4															
18.1' - 20'																
20.1' - 22'																
22.1' - 24'																
24.1' - 26'																
26.1' - 28'																
28.1' - 30'																
30.1' - 32'																

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Revised Tables	D.D.G.	D.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES FOR INSTALLATIONS AND REMOVALS

TE439 7/1/03

FHWA APPROVAL		7/23/2010	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011

Sh. No. 135

KDOT Graphics Certified

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Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	136	251

SUMMARY OF QUANTITIES

REMOVAL AND RESETTING OF SIGNS ON PROJECT

EXISTING PLAN STATION NUMBER	NEW PLAN STATION NUMBER	SIGN TYPE	SIGN SIZE
161+00	161+00	KD10-9	12" X 48"
161+00	161+00	KD10-9	12" X 48"
222+27	222+30	E5-1a	96" x 60"
268+72	268+70	E5-1	72" x 60"
274+99	274+99	W4-1R	48" x 48"
286+48	286+47	E5-1a	96" x 60"
287+70	287+70	KD10-9	12" X 48"
287+70	287+70	KD10-9	12" X 48"
287+99	288+00	W4-1R	48" x 48"

EXISTING PLAN STATION NUMBER	NEW PLAN STATION NUMBER	SIGN TYPE	SIGN SIZE

EXISTING PLAN STATION NUMBER	NEW PLAN STATION NUMBER	SIGN TYPE	SIGN SIZE

EXISTING PLAN STATION NUMBER	NEW PLAN STATION NUMBER	SIGN TYPE	SIGN SIZE

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
FOR REMOVAL AND RESETTING
OF SIGNS

TE445 7/1/03

FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011

Sh. No. 136

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001pss445-01.dgn

Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	137	251

RECAPITULATION OF SIGNING & DELINEATION BID ITEMS

BID ITEMS	APPROXIMATE QUANTITIES		UNITS
SIGN (FLAT SHEET) (HIGH PERFORMANCE)	8.0		SQUARE FOOT
SIGN (REINFORCED PANEL) (HIGH PERFORMANCE)			SQUARE FOOT
SIGN (OVERLAY) (HIGH PERFORMANCE)			SQUARE FOOT
SIGN POST (4" x 6" WOOD) (FLAT SHEET SIGN)	70		LINEAR FOOT
SIGN POST (4" x 6" WOOD) (REINFORCED PANEL SIGN)	96		LINEAR FOOT
SIGN POST (2 LB/FT "U" STEEL)			LINEAR FOOT
SIGN POST (3 LB/FT "U" STEEL)	26		LINEAR FOOT
SIGN POST (1-3/4" PERFORATED SQUARE STEEL TUBE)			LINEAR FOOT
SIGN POST (2" PERFORATED SQUARE STEEL TUBE)			LINEAR FOOT
SIGN POST (2-1/4" PERFORATED SQUARE STEEL TUBE)			LINEAR FOOT
SIGN POST (2-1/2" PERFORATED SQUARE STEEL TUBE)			LINEAR FOOT
SIGN POST (4" X 6" STRUCTURAL STEEL)			LINEAR FOOT
SIGN POST (3 I 2.25 ALUMINUM)			LINEAR FOOT
	A36	A572(ALT)	
SIGN POST (W6X9 STEEL BEAM)			LINEAR FOOT
SIGN POST (W10X12 STEEL BEAM)			LINEAR FOOT
SIGN POST (W10X22 STEEL BEAM)			LINEAR FOOT
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 FOOT
SIGN POST FOOTING (30" Dia. CONCRETE)(STEEL BEAM POST)			LINEAR FOOT
SIGN POST FOOTING (18" Dia. CONCRETE)(WOOD POST)	18		LINEAR FOOT
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
SIGN POST FOOTING (SIGN POST SQUARE COUPLER) (2-1/4")			EACH
SIGN POST SQUARE COUPLER (2-1/4")			
SIGNING OBJECT MARKER (TYPE 2)			EACH
SIGNING OBJECT MARKER (TYPE 3)			EACH
SIGNING DELINEATOR (TYPE A)(WHITE RIGID, "U" POST)	67		EACH
SIGNING DELINEATOR (TYPE A)(YELLOW RIGID, "U" POST)	4		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

BID ITEMS	APPROXIMATE QUANTITIES	UNITS
SIGN (REMOVE AND RESET)	LUMP SUM	LUMP SUM

NOTE:
THE QUANTITIES FOR STEEL BEAM POSTS, STUB POSTS, BASE PLATES, AND FOOTINGS IN THE CONTRACT ARE FOR A36 STEEL. WHEN FURNISHING A572 ALTERNATE STEEL BEAM POSTS, STUB POSTS, BASE PLATES, AND FOOTINGS, PAYMENT FOR THESE ITEMS WILL BE BASED ON THE A36 STEEL UNIT PRICES INCLUDED IN THE CONTRACT.

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Changed Bid Items as per Spec Book (2007)	D.D.G.	D.B.

KANSAS DEPARTMENT OF TRANSPORTATION
RECAPITULATION OF SIGNING & DELINEATION BID ITEMS

TE450 7/1/03

FHWA APPROVAL		7/23/2010	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 137

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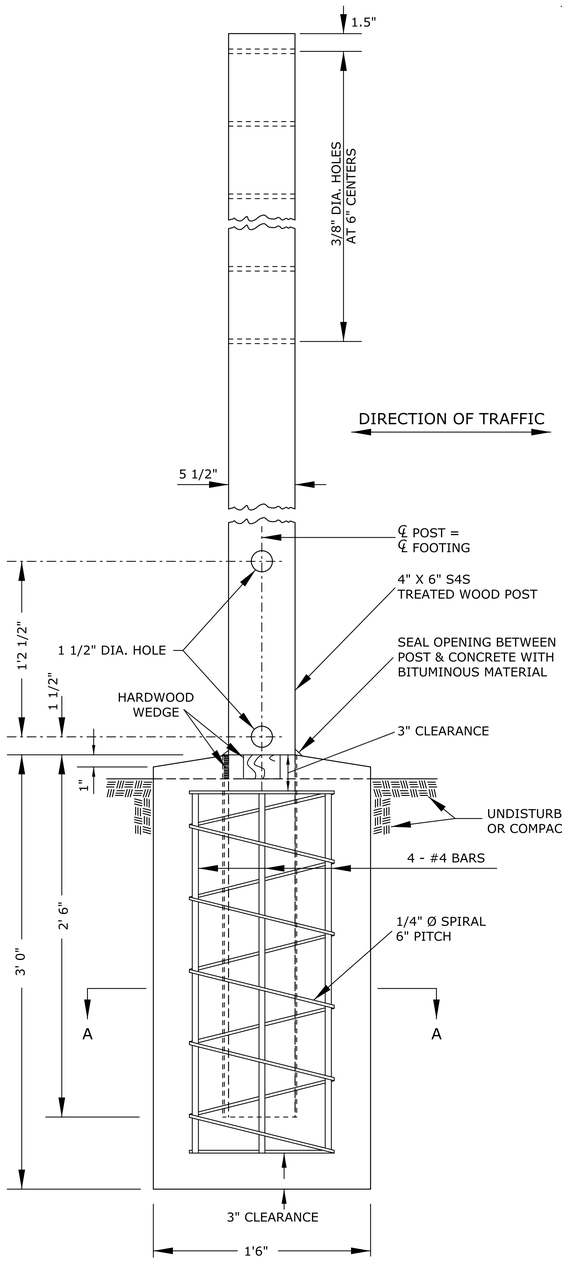
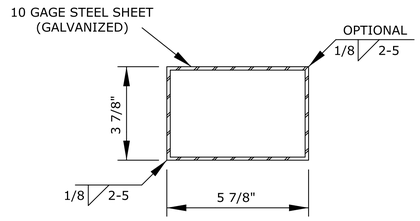
File : ka356001pss450-01.dgn

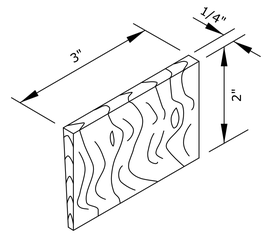
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	138	251



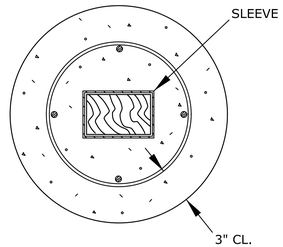
SIDE ELEVATION



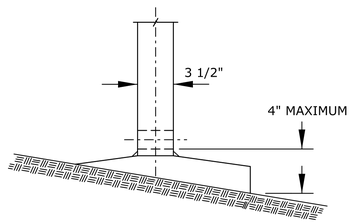
SECTION THRU SLEEVE



HARDWOOD WEDGE



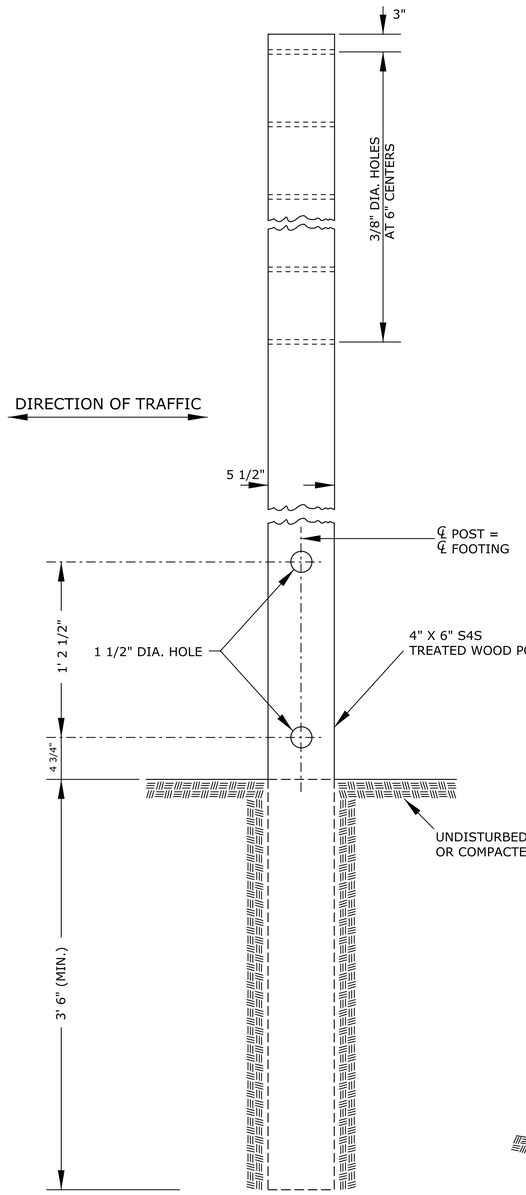
SECTION A-A



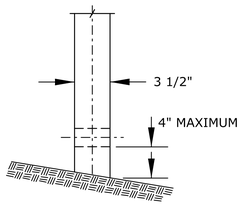
FRONT ELEVATION

NOTE:
COMMERCIAL GRADE CONCRETE MAY BE SUBSTITUTED FOR GRADE 25 CONCRETE FOR SIGN SUPPORT FOOTINGS.

WOOD POST IN CONCRETE FOOTING



SIDE ELEVATION



FRONT ELEVATION

WOOD POST IN SOIL

GENERAL NOTES

DESIGN CONFORMS WITH ASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 2002". FOUNDATION DESIGN CONFORMS WITH "DESIGN PROCEDURE COMPARED TO FULL-SCALE TESTS OF DRILLED SHAFT FOOTINGS", TEXAS TRANSPORTATION INSTITUTE, FEBRUARY 1970.

THE POST SLEEVE SHALL BE FORMED FROM STEEL SHEET WHICH WAS PRODUCED TO MEET THE REQUIREMENTS OF ASTM A653M AND ZINC COATED TO MEET THE REQUIREMENTS OF COATING DESIGNATION A123. 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 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, PLACE TWO HARDWOOD WEDGES INTO THE OPENING ON TWO ADJACENT SIDES OF POST AND FORCE DOWN TO WITHIN 3/8" OF TOP OF FOOTING.

NOTE TO THE ENGINEER:
THE INTENT OF THE "ROADSIDE DESIGN GUIDE" AND THESE PLANS IS TO HAVE A 4" OR LESS PROJECTION ABOVE THE GROUND LINE AFTER IMPACT.

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR WOOD POSTS

TE460 7/1/03

FHWA APPROVAL			7/22/2003	APP'D	Steven A. Buckley		
DESIGNED	D.D.C.	DETAILED	A.A.D.	QUANTITIES		TRACED	
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.C.	QUAN. CK.		TRACE CK.	

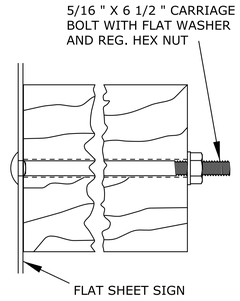
KDOT Graphics Certified 01-18-2011

Sh. No. 138

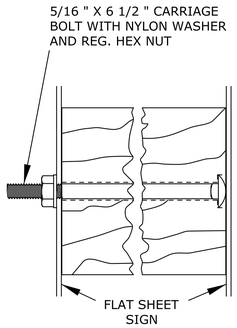
KDOT Graphics Certified

Drawn By: aameyer
File: ka356001pss460-01.dgn
Plotted: 16-OCT-2014 11:29

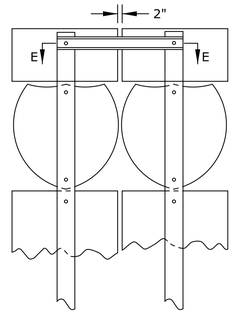
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	139	251

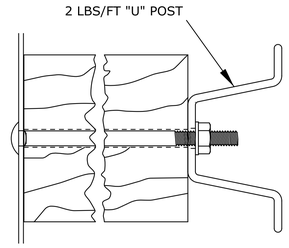


SECTION A-A



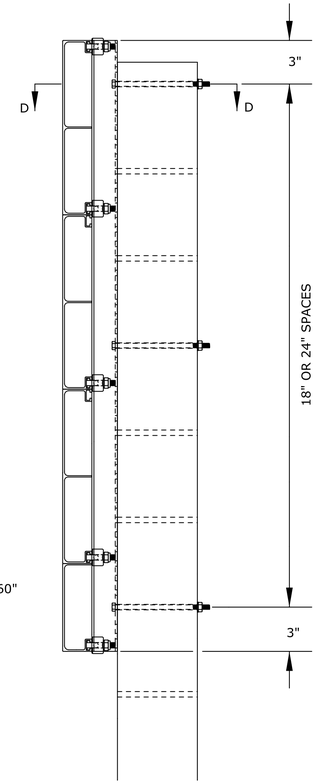
SECTION B-B

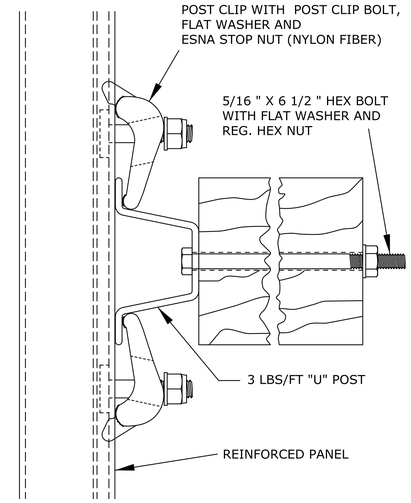




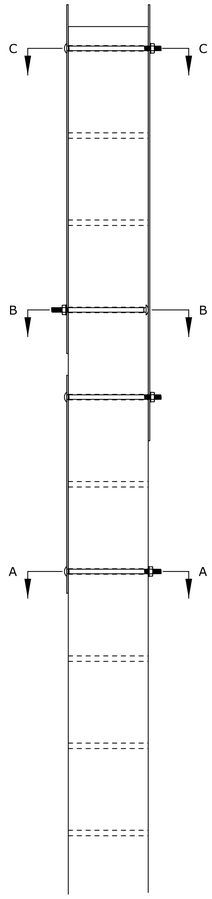
SECTION E-E

ROUTE MARKER ASSEMBLY ATTACHMENT

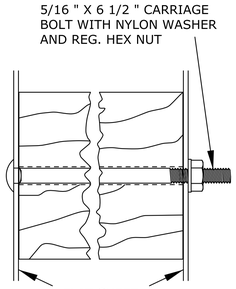




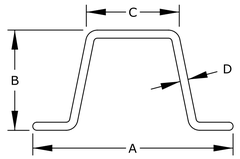
TOP VIEW



TYPICAL MOUNTING OF FLAT SHEET SIGNS



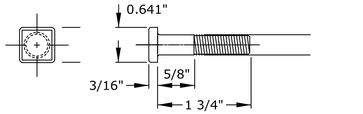
SECTION C-C



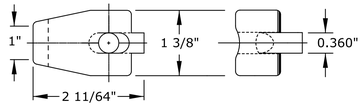
DIM.	2 LBS/FT	3 LBS/FT
A	3 1/8 "	3 1/2 "
B	1 17/32 "	1 3/4 "
C	1 1/4 "	1 5/8 "
D	1/8 "	9/64 "

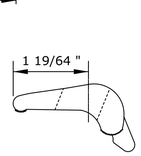
(DIMENSIONS ARE NOMINAL)

'U' POST DIMENSION DETAILS



POST CLIP BOLT





POST CLIP

TYPICAL MOUNTING OF REINFORCED PANEL SIGNS

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 "YIELD" (R1-2) SIGN, THE TOP HOLES OF THE SIGNS SHOULD BE ALIGNED.

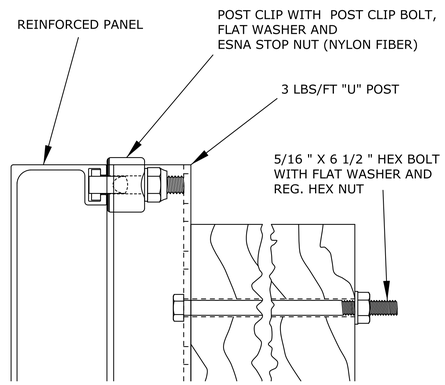
WHEN MOUNTED WITH ANOTHER SIGN (PRIMARY SIGN), THE ADVISORY PLATE, TYPE 1 OBJECT MARKER, OR SECONDARY SIGN, SHALL BE MOUNTED AT THEIR PRESCRIBED HEIGHT. THE PRIMARY SIGN SHALL BE MOUNTED AT THEIR PRESCRIBED HEIGHT, BUT UNDER NO CIRCUMSTANCES SHALL THE SIGNS OVERLAP EACH OTHER.

ADDITIONAL MOUNTING HOLES, EITHER THROUGH THE SIGN OR POST, SHALL BE DRILLED BY THE CONTRACTOR. ALL HOLES DRILL IN THE POST SHALL BE TREATED WITH A PERSERVATIVE. ALL HOLES IN THE SIGN SHALL BE FREE OF ANY DEFECTS AND THE SHEETING AROUND THE HOLE SHALL NOT BE DAMAGED.

A NYLON WASHER SHALL BE USED WHEN A NUT IS TO BE TIGHTENED AGAINST THE SIGN FACE.

WHEN THE 2 LBS/FT STEEL "U" POST IS USED AS A ROUTE MARKER ASSEMBLY ATTACHMENT, IT SHALL BE SUBSIDIARY TO THE BID ITEM '4" X 6" WOOD POST (FLAT SHEET SIGN)'.

THE POST CLIP BOLT MAY HAVE A RECTANGULAR HEAD, IF THE SMALLER DIMENSION IS EQUAL TO THE SQUARE HEAD DIMENSION.



SIDE VIEW

SECTION D-D

ALL DIMENSIONS ARE IN INCHES

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR MOUNTING SIGNS ON WOOD POSTS

FLAT SHEET AND REINFORCED PANEL

TE481 7/1/03

FHWA APPROVAL		7-22-2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	A.A.D.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

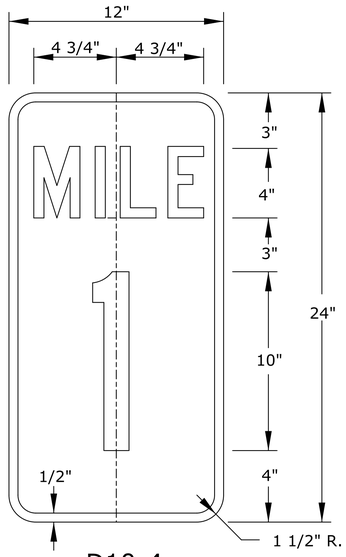
KDOT Graphics Certified 01-18-2011

Sh. No. 139

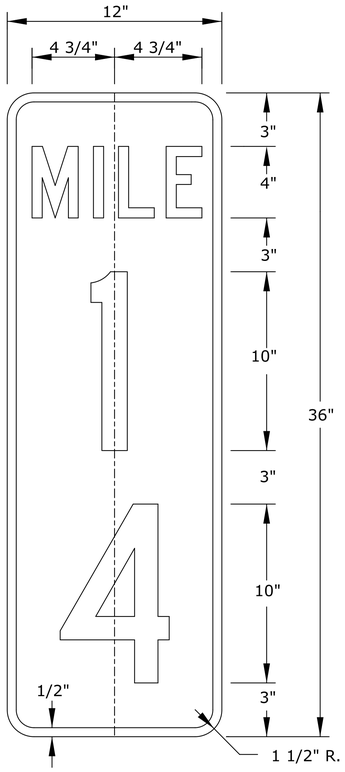
KDOT Graphics Certified

Drawn By : aameyer Plotted : 16-OCT-2014 11:29
File : ka356001pss481-01.dgn

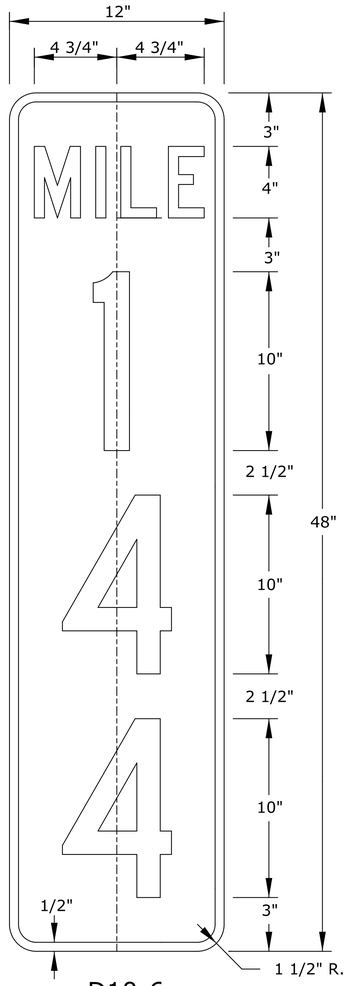
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	140	251



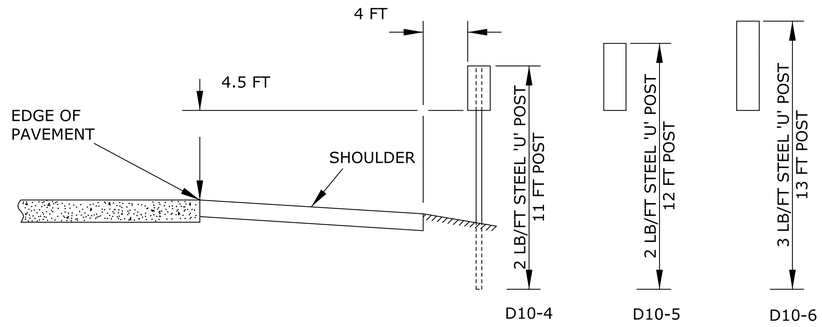
D10-4
12" X 24"



D10-5
12" X 36"



D10-6
12" X 48"



D10-4 D10-5 D10-6

MOUNTING HEIGHT, OFFSET, & POST LENGTHS

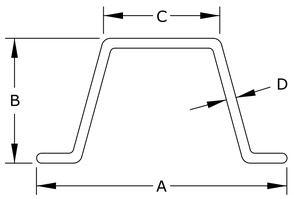
MILEPOST NUMBER	STATION	LT.	RT.
218	277+20	66'	
218	277+20		66'

* STATION ADJUSTED.

GENERAL NOTES:
COLORS:
LEGEND AND BORDER - WHITE (REFLECTIVE)
BACKGROUND - GREEN (REFLECTIVE)

ALL LEGEND SHALL BE SERIES 'C'.
THE NUMERALS SHALL BE OPTICALLY CENTERED ABOUT THE VERTICAL CENTERLINE.
THE LONGITUDINAL ADJUSTMENT OF THE MILEPOST SIGN FROM THE PLAN STATION SHALL NOT EXCEED 50 FT.
MILEPOST SIGNS SHALL BE ELIMINATED IF THE SIGN CANNOT BE INSTALLED AT A PLAN STATION SHOWN AS ADJUSTED.
WHEN THE MILEPOST SIGN IS INSTALLED BEHIND GUARD FENCE, THE POST SHALL NOT BE LOCATED CLOSER THAN 5 FT FROM THE FACE OF THE GUARD FENCE.
MILEPOST SIGNS LOCATED BETWEEN 100 FT IN ADVANCE OF AND 50 FT BEYOND THE NOSE OF THE GUARD FENCE SHALL BE ELIMINATED.

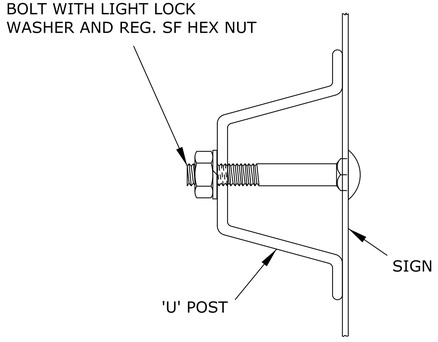
SEE STANDARD PLAN SHEET TE590 FOR DETAILED SPECIFICATIONS



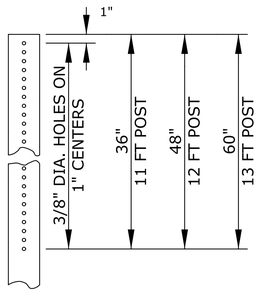
DIM.	2 LB/FT	3 LB/FT
A	3 1/8	3 1/2
B	1 17/32	1 3/4
C	1 1/4	1 5/8
D	1/8	9/64

(DIMENSIONS ARE NOMINAL)
(IN)

'U' POST DIMENSION DETAILS



'U' POST MOUNTING DETAILS



'U' POST PUNCHING DETAILS

ALL DIMENSIONS ARE IN INCHES.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION
PROCESSED SIGN DETAILS
DESIGN, MOUNTING, & POSITIONING
OF MILEPOST (D10-4, 5 & 6) SIGN

TE52I 7/1/03

FHWA APPROVAL		7/22/2003	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.	D.D.G.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011 Sh. No. 140

KDOT Graphics Certified

Drawn By : aameyer Plotted : 16-OCT-2014 11:29
File : ka356001pss521-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	141	251

DETAILED SPECIFICATIONS FOR FLAT SHEET SIGNS

ALL NEW FLAT SHEET SIGN BLANKS SHALL BE OF THE ALUMINUM ALLOY AND THICKNESS SHOWN ON THE FLAT SHEET BLANK DETAIL SHEETS.

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. 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.

THE DESIGN DETAILS FOR SIGNS (COLOR, LETTER HEIGHT, AND LETTER SERIES) SHALL BE AS SHOWN IN THE 'STANDARD HIGHWAY SIGNS' MANUAL (2004 EDITION), UNLESS OTHER DETAILS ARE SHOWN IN THE PLANS.

ALL SIGN FACES WITH BLUE, GREEN, RED, YELLOW, FLUORESCENT YELLOW GREEN, BROWN, OR WHITE BACKGROUND SHALL BE COVERED WITH TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING.

THE TYPE OF ADHESIVE USED FOR RETROREFLECTIVE SHEETING OR LETTERING FILM SHALL BE HEAT ACTIVATED OR PRESSURE SENSITIVE.

THE SIGN FACES SHALL BE DIRECT SCREEN PROCESS, REVERSE SCREEN PROCESS, OR DIRECT APPLIED LEGEND.

DETAILED SPECIFICATIONS FOR STRUCTURAL EXTRUDED PANEL SIGNS

ALL NEW REINFORCED SIGN PANELS SHALL BE OF THE FABRICATION, ALUMINUM ALLOY, 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 1'-0" 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.

ALL SIGN FACES SHALL BE COVERED WITH TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING.

THE RETROREFLECTIVE SHEETING USED FOR THE DIRECT APPLIED LEGEND, AND DIRECT APPLIED BORDERS SHALL BE TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING.

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.

NO.	DATE	REVISIONS	BY	APP'D
1	7/23/10	Changed Notes and Sheeting Type	D.D.G.	D.B.

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS SPECIFICATIONS FOR REINFORCED SIGN PANELS AND FLAT SHEET SIGNS

TE590 7/1/03

FHWA APPROVAL		7/23/2010	APP'D	Steven A. Buckley	
DESIGNED	D.D.G.	DETAILED	K.D.S.	QUANTITIES	TRACED
DESIGN CK.	S.A.B.	DETAIL CK.	D.D.G.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 01-18-2011

Sh. No. 141

KDOT Graphics Certified

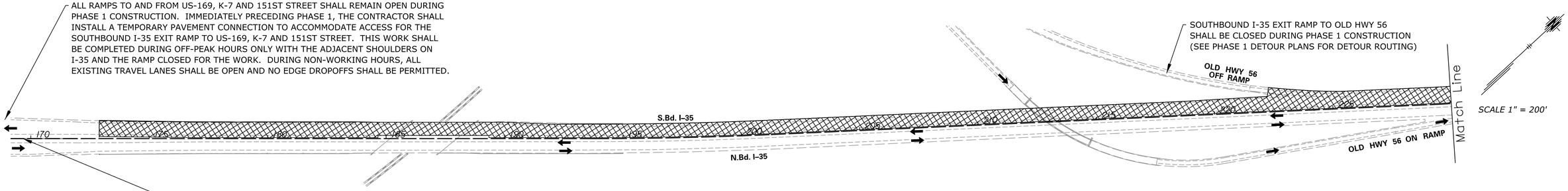
Drawn By : aameyer
File : ka356001pss590-01.dgn

Plotted : 16-OCT-2014 11:29

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	142	251

ALL RAMPS TO AND FROM US-169, K-7 AND 151ST STREET SHALL REMAIN OPEN DURING PHASE 1 CONSTRUCTION. IMMEDIATELY PRECEDING PHASE 1, THE CONTRACTOR SHALL INSTALL A TEMPORARY PAVEMENT CONNECTION TO ACCOMMODATE ACCESS FOR THE SOUTHBOUND I-35 EXIT RAMP TO US-169, K-7 AND 151ST STREET. THIS WORK SHALL BE COMPLETED DURING OFF-PEAK HOURS ONLY WITH THE ADJACENT SHOULDERS ON I-35 AND THE RAMP CLOSED FOR THE WORK. DURING NON-WORKING HOURS, ALL EXISTING TRAVEL LANES SHALL BE OPEN AND NO EDGE DROPOFFS SHALL BE PERMITTED.

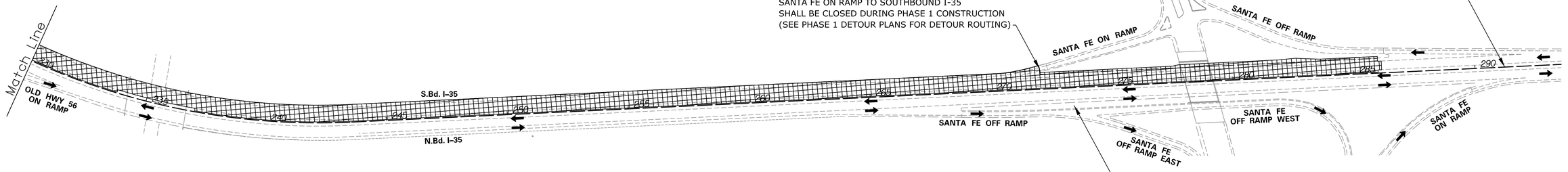
SOUTHBOUND I-35 EXIT RAMP TO OLD HWY 56
SHALL BE CLOSED DURING PHASE 1 CONSTRUCTION
(SEE PHASE 1 DETOUR PLANS FOR DETOUR ROUTING)



AS PART OF THE TRANSITION TO THE INTENDED TEMPORARY LANE CONFIGURATION FOR PHASE 1 WORK, THE CONTRACTOR SHALL REMOVE THE EXISTING MEDIAN BARRIER ALONG I-35 BETWEEN ROUGHLY STA. 152+80 AND STA. 169+15. THIS WORK SHALL BE COMPLETED DURING OFF-PEAK HOURS ONLY WITH THE ADJACENT LANES ON I-35 CLOSED FOR THE WORK. DURING NON-WORKING HOURS, ALL EXISTING TRAVEL LANES SHALL BE OPEN, NO EDGE DROPOFFS SHALL BE PERMITTED, AND EXPOSED BARRIER ENDS (IF ANY) SHALL BE PROTECTED WITH AN INERTIAL BARRIER SYSTEM (65 MPH CONFIGURATION).

AS PART OF THE TRANSITION TO THE INTENDED TEMPORARY LANE CONFIGURATION FOR PHASE 1 WORK, THE CONTRACTOR SHALL REMOVE THE EXISTING MEDIAN BARRIER ALONG I-35 BETWEEN ROUGHLY STA. 286+45 AND STA. 299+00. THIS WORK SHALL BE COMPLETED DURING OFF-PEAK HOURS ONLY WITH THE ADJACENT LANES ON I-35 CLOSED FOR THE WORK. DURING NON-WORKING HOURS, ALL EXISTING TRAVEL LANES SHALL BE OPEN, NO EDGE DROPOFFS SHALL BE PERMITTED, AND EXPOSED BARRIER ENDS (IF ANY) SHALL BE PROTECTED WITH AN INERTIAL BARRIER SYSTEM (65 MPH CONFIGURATION).

SANTA FE ON RAMP TO SOUTHBOUND I-35
SHALL BE CLOSED DURING PHASE 1 CONSTRUCTION
(SEE PHASE 1 DETOUR PLANS FOR DETOUR ROUTING)



IMMEDIATELY PRECEDING PHASE 1, THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT ALONG THE EAST SIDE OF I-35 BETWEEN ROUGHLY STA. 268+73 AND STA. 290+00 TO ACCOMMODATE THE INTENDED LANE CONFIGURATION. THIS WORK SHALL BE COMPLETED DURING OFF-PEAK HOURS ONLY WITH THE ADJACENT LANE ON I-35 CLOSED FOR THE WORK. DURING NON-WORKING HOURS, ALL EXISTING TRAVEL LANES SHALL BE OPEN AND NO EDGE DROPOFFS SHALL BE PERMITTED.

GENERAL TRAFFIC CONTROL NOTES

1. THE TRAFFIC CONTROL PLAN FOR THIS PROJECT INCLUDES THREE MAJOR PHASES OF WORK. THE CONTRACTOR HAS THE OPTION OF DEVELOPING AN ALTERNATE TRAFFIC CONTROL PLAN AND SUBMITTING IT TO THE ENGINEER FOR REVIEW AND APPROVAL (AT LEAST TWO WEEKS PRIOR TO PROPOSED IMPLEMENTATION).
2. THIS TRAFFIC CONTROL PLAN WILL COVER THE MAJORITY OF THE WORK INVOLVED ON THIS PROJECT. WORK SITUATIONS NOT SPECIFICALLY COVERED BY THE TRAFFIC CONTROL PLANS (E.G., TEMPORARY PAVEMENT INSTALLATION AND MEDIAN BARRIER REMOVAL IMMEDIATELY PRECEDING PHASE 1) SHALL BE HANDLED IN ACCORDANCE WITH THE TYPICAL TRAFFIC CONTROL LAYOUTS SHOWN IN THESE PLANS, AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REVIEW ALL PROPOSED TRAFFIC CONTROL LAYOUTS WITH THE ENGINEER IN CHARGE OF CONSTRUCTION PRIOR TO IMPLEMENTATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL KEEP ALL TRAFFIC LANES CLEAR OF MUD AND DEBRIS.
4. UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLANS, TEMPORARY PAVEMENT MARKINGS SHALL BE TYPE I TEMPORARY PAVEMENT MARKING TAPE. THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY PAVEMENT MARKINGS THROUGHOUT THEIR INTENDED SERVICE LIVES.
5. EXISTING SIGNS NECESSARY FOR TRAFFIC DURING CONSTRUCTION SHALL BE ADJUSTED (AND LATER RESET) AS NECESSARY AND AS DIRECTED BY THE ENGINEER IN CHARGE OF CONSTRUCTION TO PROVIDE PROPER VISIBILITY.
6. WHERE AN EXISTING SIGN OR LEGEND IS INDICATED TO BE COVERED, THE CONTRACTOR SHALL COMPLETELY COVER THE SIGN OR SIGN LEGEND USING OPAQUE WATERPROOF MATERIAL. TAPE SHALL NOT BE APPLIED TO THE SIGN FACE. WORK ASSOCIATED WTIH SIGN COVERING SHALL BE CONSIDERED SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS.
7. AS WORK IS COMPLETED, THE CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND MARKINGS AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
8. PLACEMENT OF SIGNS AND OTHER DEVICES SHOWN IN THESE PLANS MAY BE ADJUSTED TO MORE ACCURATELY REFLECT FIELD CONDITIONS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY AND ALL UTILITIES WHEN SETTING SIGN POSTS AND SHALL COORDINATE ACTIVITIES WITH ANY AND ALL UTILITY COMPANIES WHETHER THEIR FACILITY IS SHOWN ON THE PLANS OR NOT. THE ENGINEER IN CHARGE OF CONSTRUCTION WILL APPROVE THE FINAL LOCATION OF ALL TRAFFIC CONTROL DEVICES.
9. ANY WORK REQUIRED FOR HANDLING TRAFFIC DURING CONSTRUCTION THAT IS NOT COVERED BY A SPECIFIC BID ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS.
10. ADDITIONAL NOTES FOR GENERAL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES ARE SHOWN ON THE KDOT STANDARD DETAIL SHEETS INCLUDED IN THESE PLANS.

PHASE 1 NOTES:

PHASE 1 WORK INCLUDES CONSTRUCTION OF:
- RECONSTRUCTION OF THE EXISTING I-35 SOUTHBOUND LANES THROUGHOUT THE PROJECT LIMITS AND OTHER ASSOCIATED IMPROVEMENTS, INCLUDING REPLACEMENT OF GRATES AND GUARDRAIL ALONG THE WEST SIDE OF I-35; SEGMENTS OF THE NEW APPROACH SLABS FOR THE TWO EXISTING SOUTHBOUND I-35 BRIDGES; AND, POLYMER OVERLAYS OF THE TWO EXISTING SOUTHBOUND I-35 BRIDGES
- TEMPORARY PAVEMENT INSTALLATION ALONG THE WEST SIDE OF I-35 BETWEEN ROUGHLY STA. 272+05 AND STA. 286+48 FOR USE IN PHASE 2

TRAFFIC THROUGHOUT PHASE 1 SHALL BE MAINTAINED AS FOLLOWS:
- FOUR OR FIVE LANES ON I-35 CARRIED ON THE EXISTING NORTHBOUND I-35 TRAVELWAY AND TEMPORARY PAVEMENT (SEE THE TRAFFIC CONTROL PLANS FOR SPECIFIC LANE CONFIGURATIONS THROUGHOUT THE CORRIDOR); AT LEAST TWO LANES FOR EACH DIRECTION OF THROUGH TRAFFIC ON I-35 SHALL BE PROVIDED THROUGHOUT THE PROJECT LIMITS (ROUGHLY STA. 172+88 TO STA. 286+00) AT ALL TIMES DURING PHASE 1 CONSTRUCTION
- THE SOUTHBOUND I-35 EXIT RAMP TO OLD HWY 56 AND THE SANTA FE ON RAMP TO SOUTHBOUND I-35 SHALL BE CLOSED DURING PHASE 1 CONSTRUCTION (SEE PHASE 1 DETOUR PLANS FOR DETOUR ROUTING)
- ALL OTHER I-35 EXIT AND ENTRANCE RAMPS SHALL REMAIN OPEN WITH THE EXISTING LANE CONFIGURATIONS (TEMPORARY CONNECTION TO BE USED FOR THE SOUTHBOUND I-35 EXIT RAMP TO US-169, K-7 AND 151ST STREET)

ALL PHASE 1 WORK SHALL BE COMPLETED PRIOR TO BEGINNING PHASE 2.

LEGEND

WORK AREA

DIRECTION OF TRAVEL

KANSAS DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SEQUENCING
PHASE I

KDOT Graphics Certified 10-03-2014

Sh. No. 142

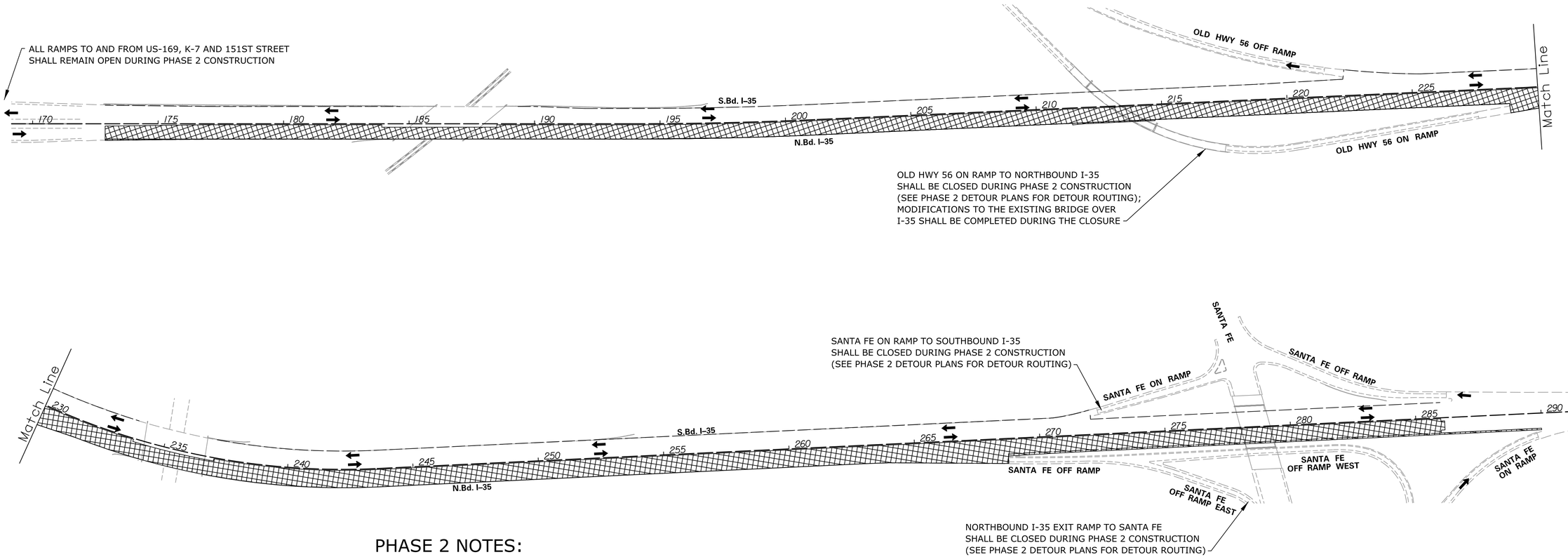
KDOT Graphics Certified

DATE	BY	REFERENCES NOTED / REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001rcs-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	143	251

SCALE 1" = 200'



PHASE 2 NOTES:

PHASE 2 WORK INCLUDES CONSTRUCTION OF:
- RECONSTRUCTION OF THE EXISTING I-35 NORTHBOUND LANES THROUGHOUT THE PROJECT LIMITS AND OTHER ASSOCIATED IMPROVEMENTS, INCLUDING REPLACEMENT OF GRATES AND GUARDRAIL ALONG THE EAST SIDE OF I-35; SEGMENTS OF THE NEW APPROACH SLABS FOR THE TWO EXISTING NORTHBOUND I-35 BRIDGES; AND, POLYMER OVERLAYS OF THE TWO EXISTING NORTHBOUND I-35 BRIDGES
- BRIDGE MODIFICATIONS AND A POLYMER OVERLAY FOR THE OLD HWY 56 BRIDGE OVER I-35
- REMOVAL OF PHASE 1 TEMPORARY PAVEMENT ALONG THE EAST SIDE OF I-35 BETWEEN ROUGHLY STA. 268+73 AND STA. 290+00
- REMOVAL OF PHASE 1 TEMPORARY PAVEMENT CONNECTION FOR THE SOUTHBOUND I-35 EXIT RAMP TO US-169, K-7 AND 151ST STREET.

TRAFFIC THROUGHOUT PHASE 2 SHALL BE MAINTAINED AS FOLLOWS:
- FOUR OR FIVE LANES ON I-35 CARRIED ON THE NEW SOUTHBOUND I-35 TRAVELWAY AND TEMPORARY PAVEMENT (SEE THE TRAFFIC CONTROL PLANS FOR SPECIFIC LANE CONFIGURATIONS THROUGHOUT THE CORRIDOR); AT LEAST TWO LANES FOR EACH DIRECTION OF THROUGH TRAFFIC ON I-35 SHALL BE PROVIDED THROUGHOUT THE PROJECT LIMITS (ROUGHLY STA. 172+88 TO STA. 286+00) AT ALL TIMES DURING PHASE 2 CONSTRUCTION
- THE OLD HWY 56 ON RAMP TO NORTHBOUND I-35, THE NORTHBOUND I-35 EXIT RAMP TO SANTA FE AND THE SANTA FE ON RAMP TO SOUTHBOUND I-35 SHALL BE CLOSED DURING PHASE 2 CONSTRUCTION (SEE PHASE 2 DETOUR PLANS FOR DETOUR ROUTING)
- ALL OTHER I-35 EXIT AND ENTRANCE RAMPS SHALL REMAIN OPEN WITH THE EXISTING LANE CONFIGURATIONS

ALL PHASE 2 WORK SHALL BE COMPLETED PRIOR TO BEGINNING PHASE 3.

LEGEND

WORK AREA

DIRECTION OF TRAVEL

KANSAS DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SEQUENCING
PHASE 2

KDOT Graphics Certified 10-03-2014

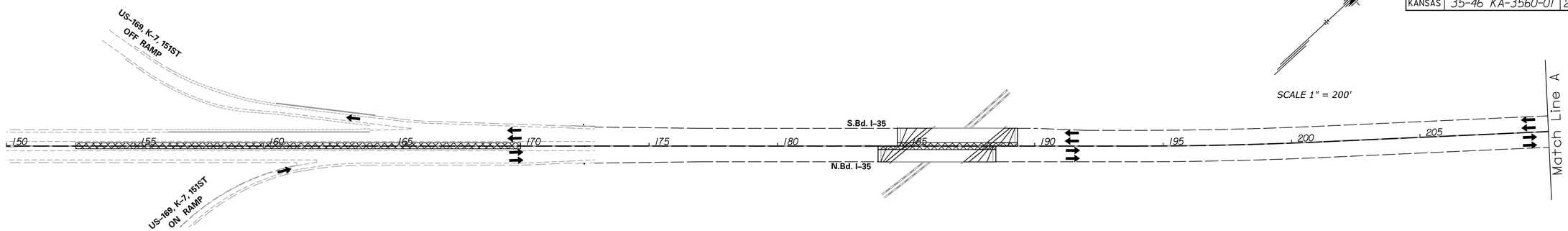
Sh. No. 143

KDOT Graphics Certified

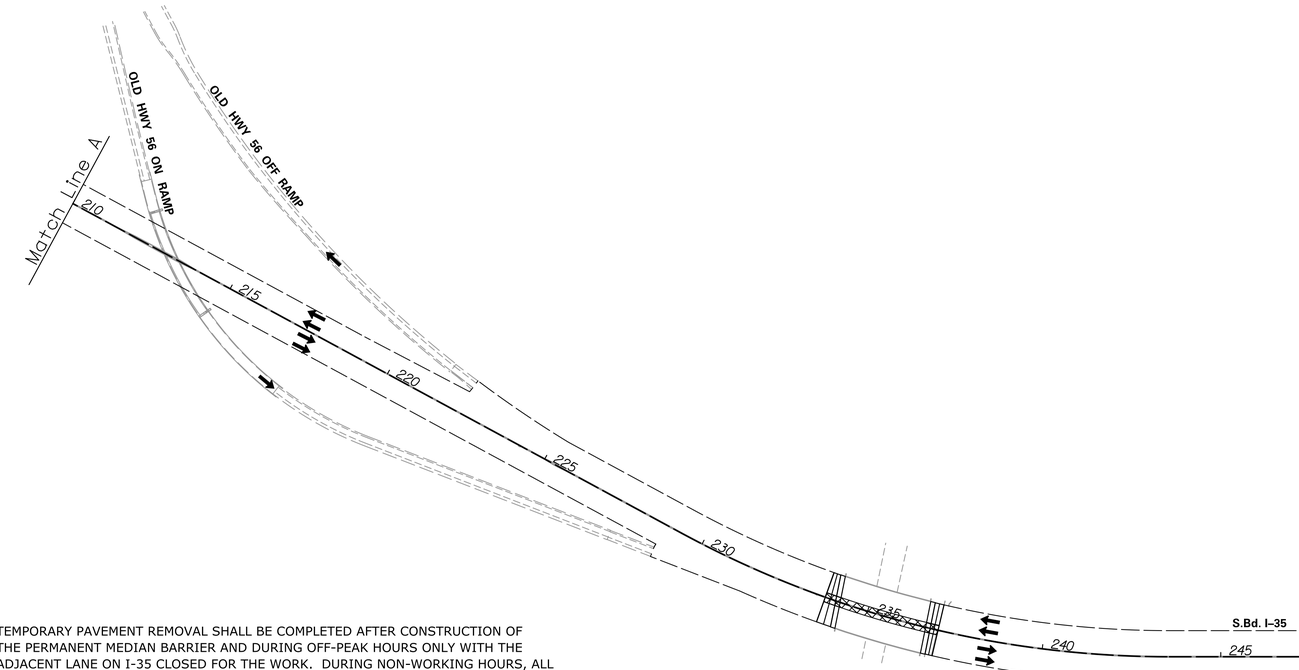
DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001rcs-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	144	251

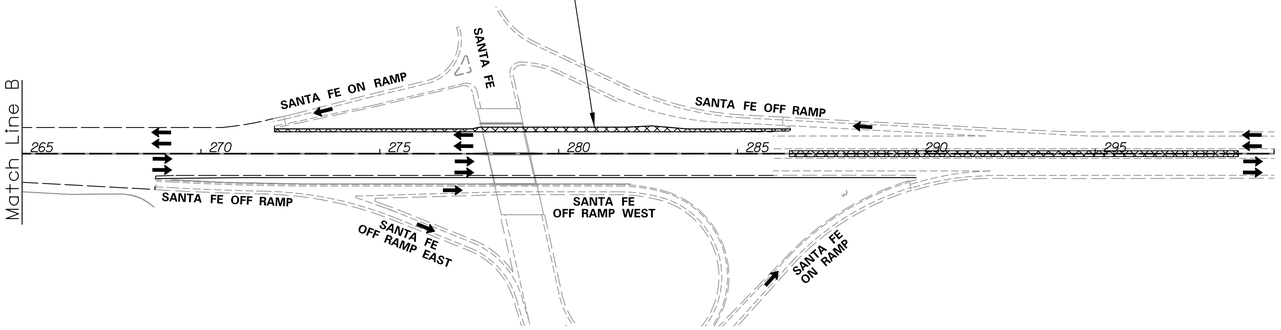


SCALE 1" = 200'



SCALE 1" = 200'

TEMPORARY PAVEMENT REMOVAL SHALL BE COMPLETED AFTER CONSTRUCTION OF THE PERMANENT MEDIAN BARRIER AND DURING OFF-PEAK HOURS ONLY WITH THE ADJACENT LANE ON I-35 CLOSED FOR THE WORK. DURING NON-WORKING HOURS, ALL EXISTING TRAVEL LANES SHALL BE OPEN AND NO EDGE DROPOFFS SHALL BE PERMITTED.



PHASE 3 NOTES:

PHASE 3 WORK INCLUDES CONSTRUCTION OF:
- PERMANENT MEDIAN BARRIER ALONG I-35 (INCLUDES SEGMENTS BETWEEN ROUGHLY 152+70 AND STA. 169+15; AND, STA. 286+00 TO STA. 299+09)
- REMAINING SEGMENTS OF THE NEW APPROACH SLABS FOR THE EXISTING I-35 BRIDGES (INLCUDES ANY REMAINING POLYMER OVERLAY WORK FOR THE THESE BRIDGES)
- REMOVAL OF PHASE 2 TEMPORARY PAVEMENT ALONG THE WEST SIDE OF I-35 BETWEEN ROUGHLY STA. 272+05 TO STA. 286+48

TRAFFIC THROUGHOUT PHASE 3 SHALL BE MAINTAINED AS FOLLOWS:
- TWO OR THREE LANES CARRIED ON THE NEW NORTHBOUND AND SOUTHBOUND I-35 TRAVELWAY (SEE THE TRAFFIC CONTROL PLANS FOR SPECIFIC LANE CONFIGURATIONS THROUGHOUT THE CORRIDOR).
- ALL I-35 EXIT AND ENTRANCE RAMPS SHALL REMAIN OPEN WITH THE EXISTING LANE CONFIGURATIONS

LEGEND

WORK AREA

DIRECTION OF TRAVEL

KANSAS DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SEQUENCING
PHASE 3

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC1\310356\Traffic\Sheets\ka356001rcs-03.dgn

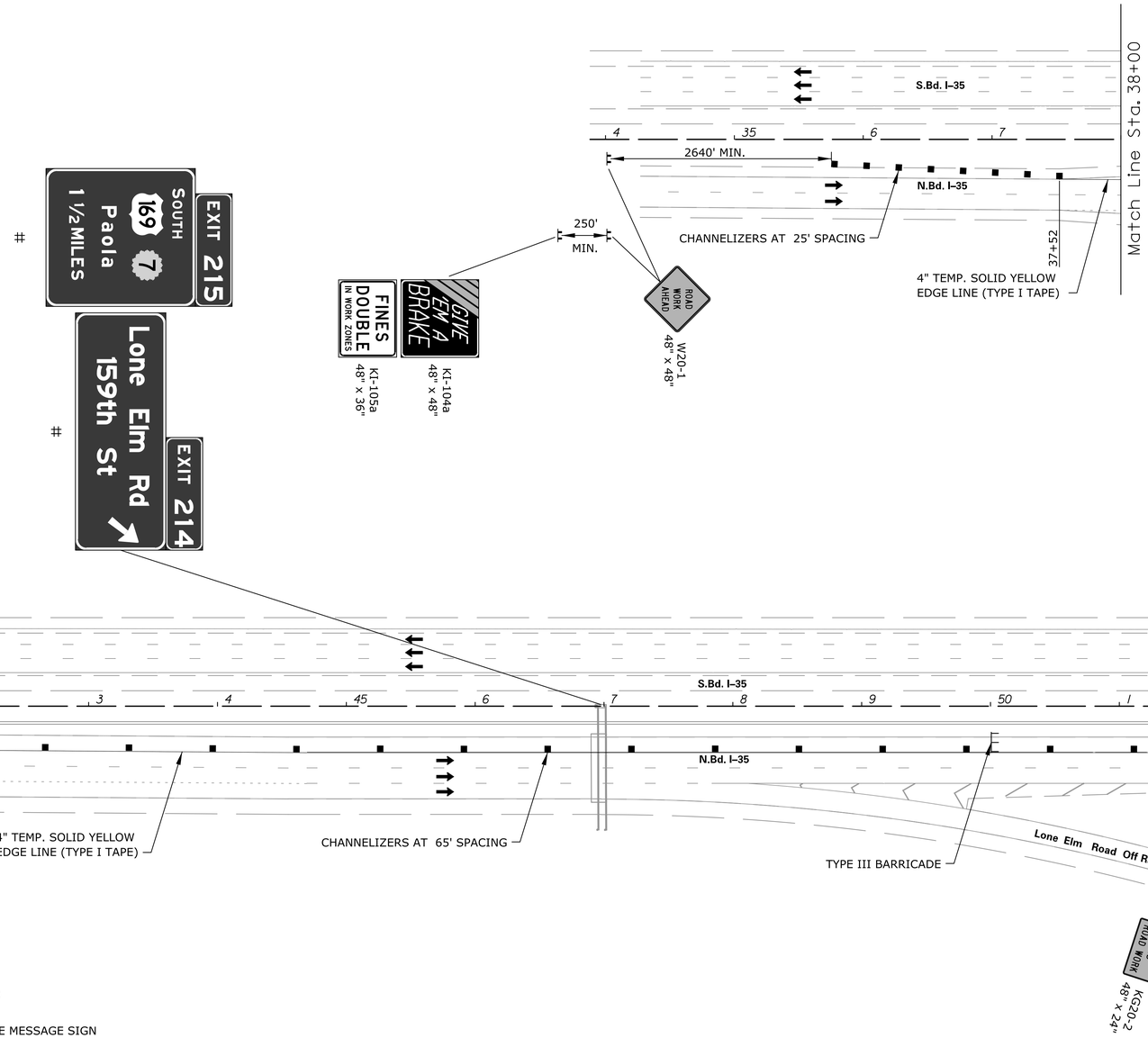
KDOT Graphics Certified 10-03-2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	145	251

REFERENCES NOTED	BY	DATE
REFERENCES CHECKED		

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE I
STA. 35+00 TO STA. 54+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 145*

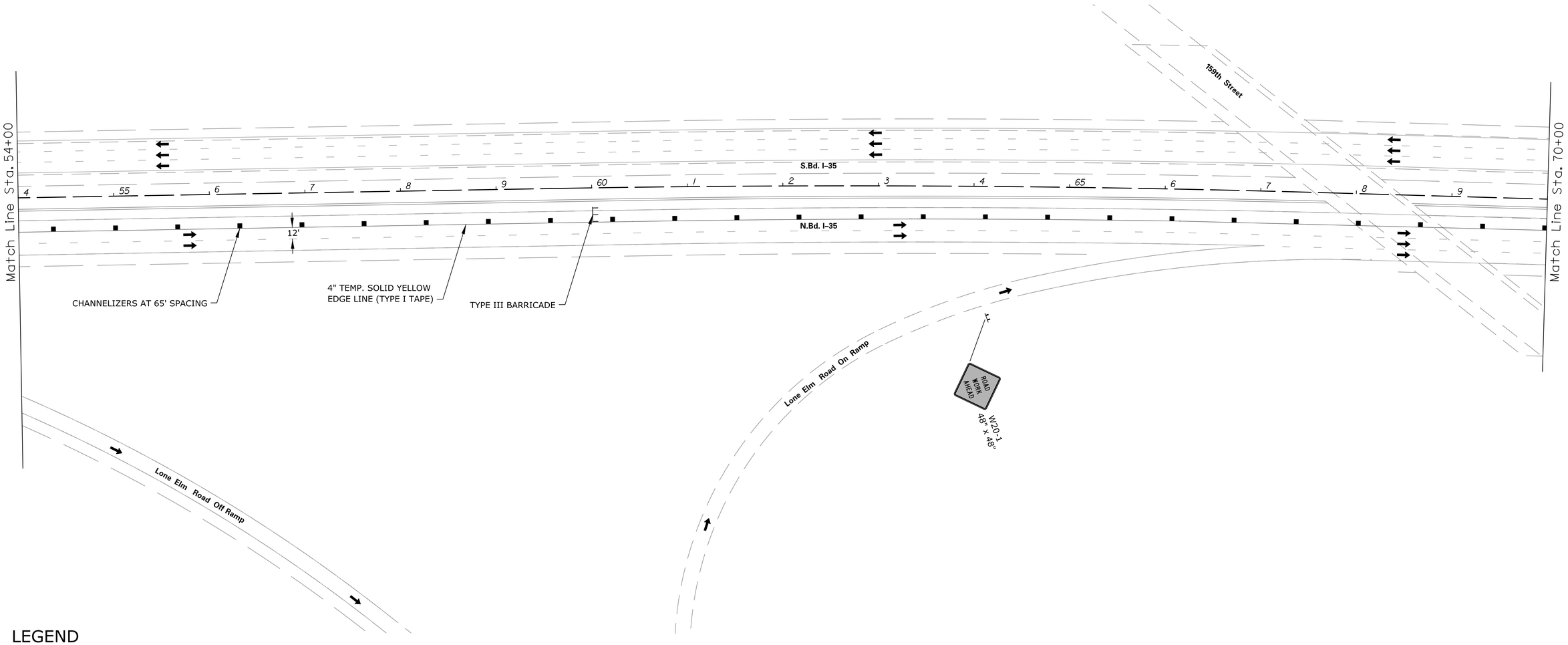
KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-101.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	146	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-102.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE I
STA. 54+00 TO STA. 70+00

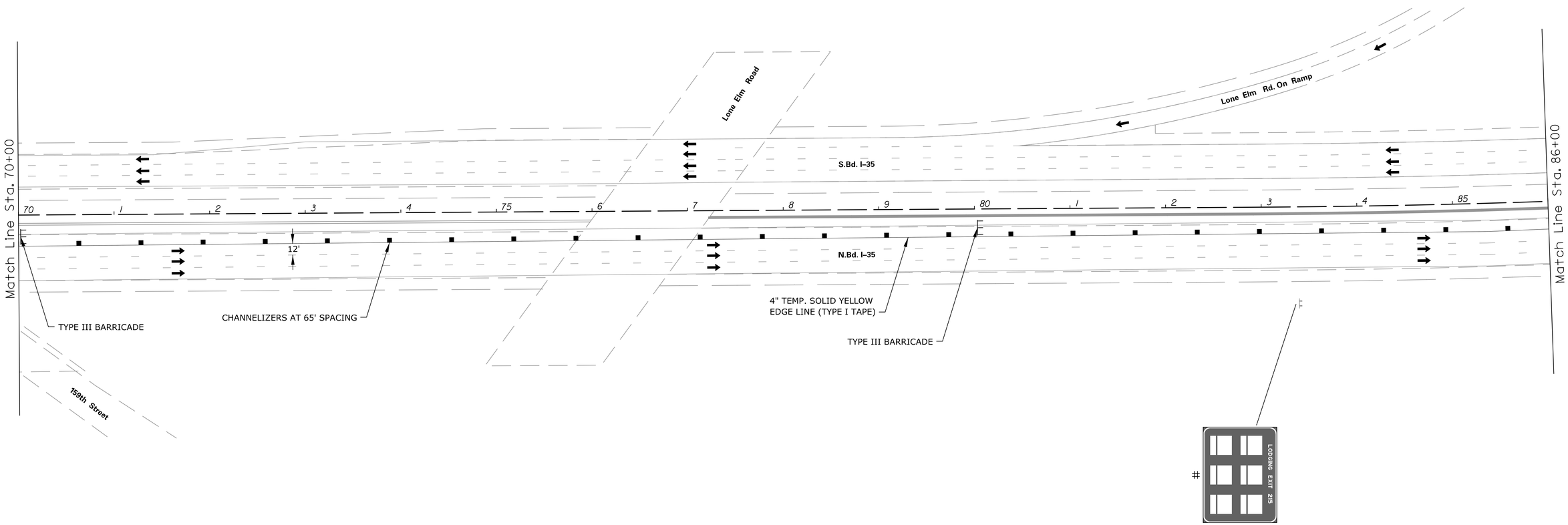
KDOT Graphics Certified 10-03-2014 *Sh. No. 146*

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	147	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 70+00 TO STA. 86+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 147*

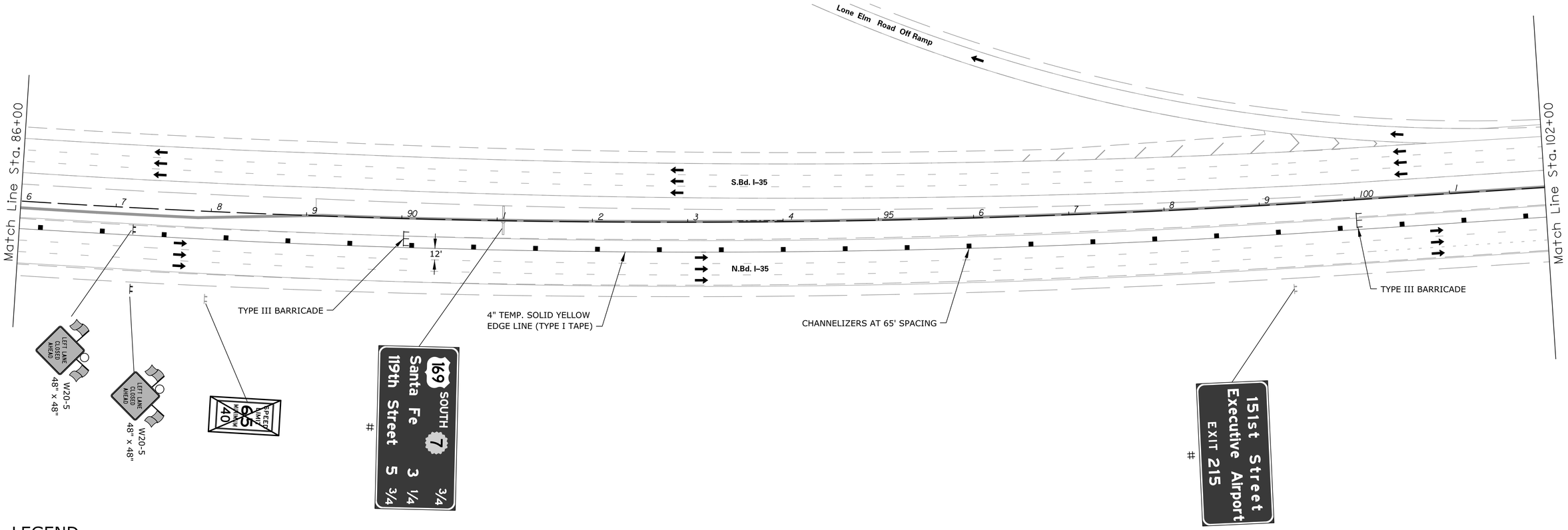
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-103.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	148	251

REFERENCES	BY	DATE
REFERENCES NOTED		
REFERENCES CHECKED		

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 86+00 TO STA. 102+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 148*

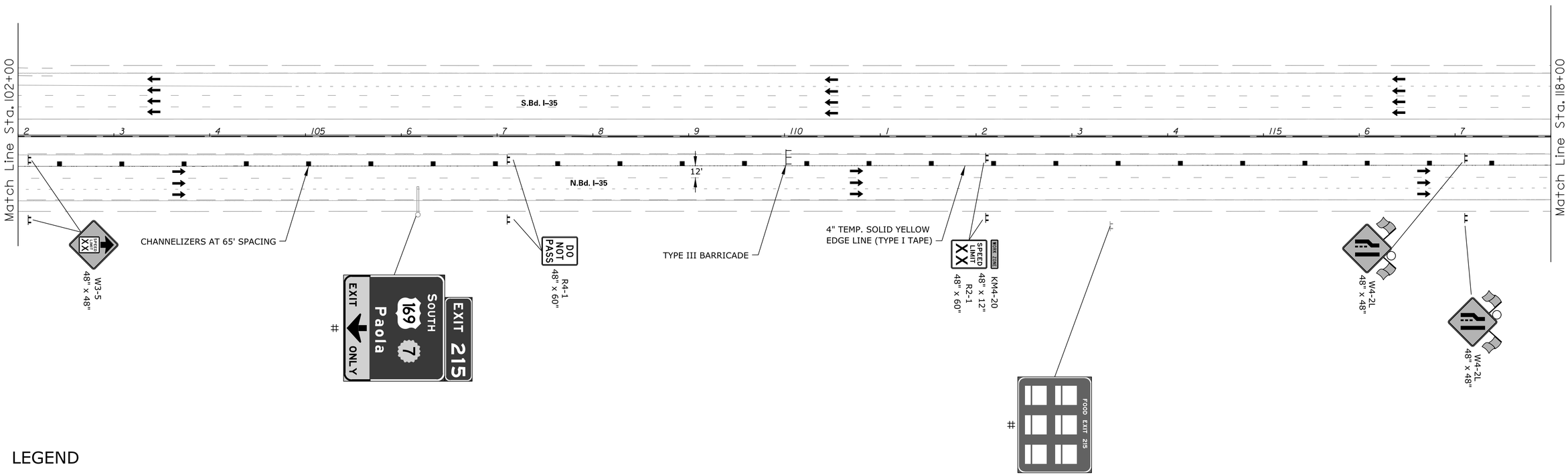
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-104.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	149	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 102+00 TO STA. 118+00

KDOT Graphics Certified 10-03-2014

Sh. No. 149

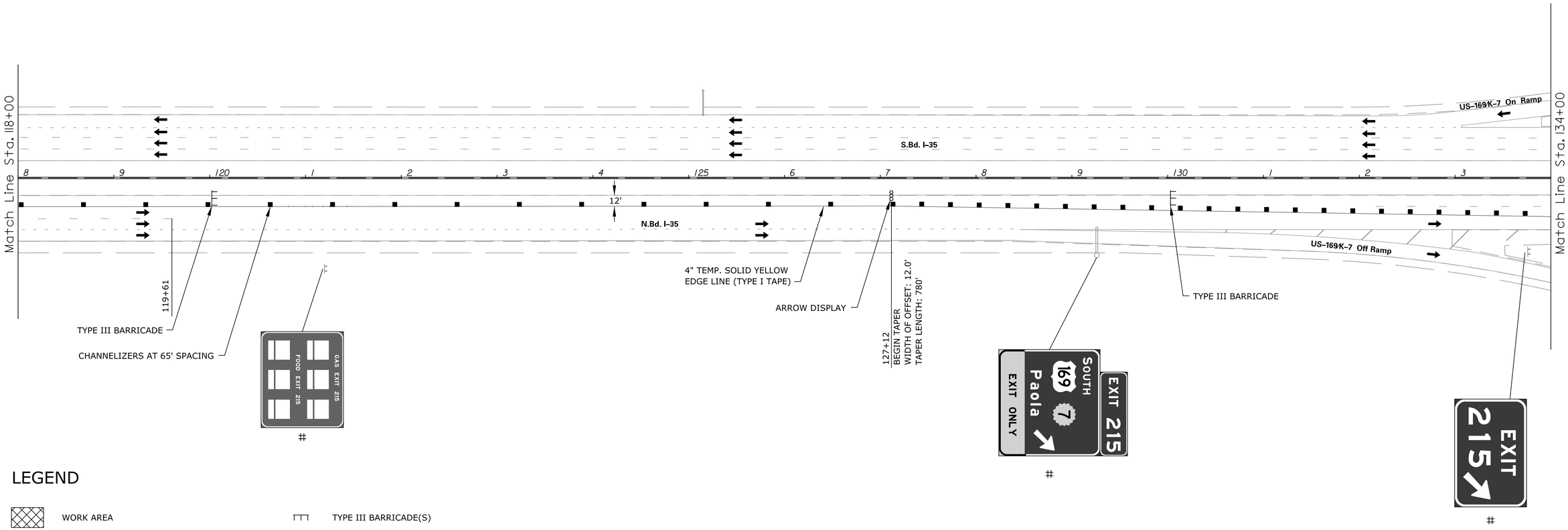
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-105.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	150	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- ARROW DISPLAY
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 118+00 TO STA. 134+00

KDOT Graphics Certified 10-03-2014

Sh. No. 150

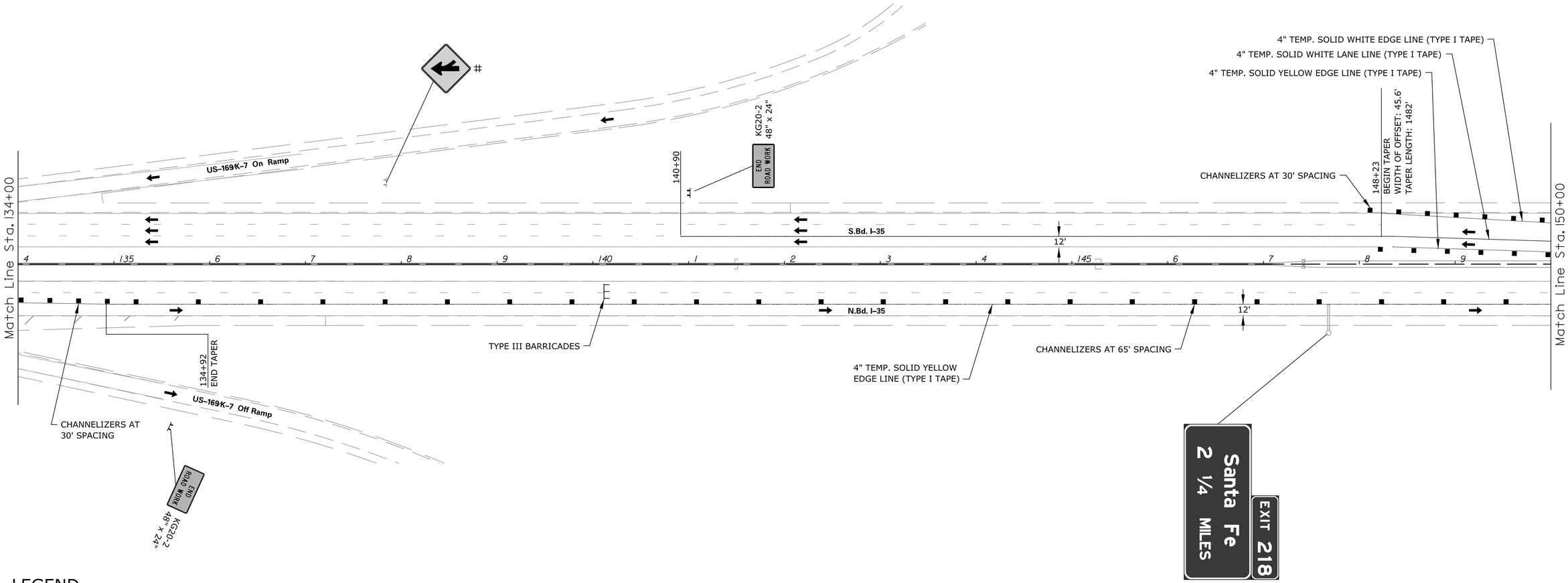
KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-106.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	151	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 134+00 TO STA. 150+00

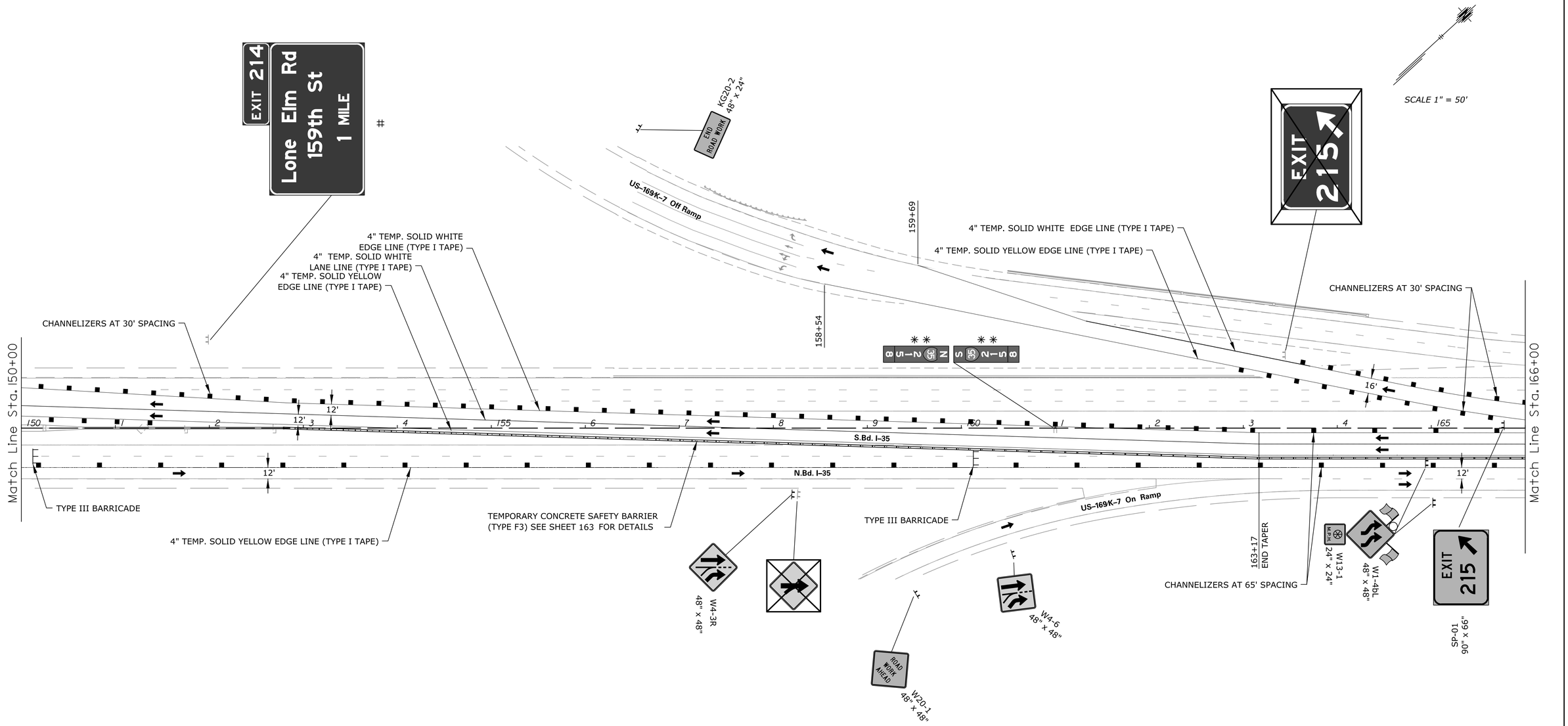
KDOT Graphics Certified 10-03-2014 *Sh. No. 151*

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-107.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	152	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)

KANSAS DEPARTMENT OF TRANSPORTATION
I-35 TRAFFIC CONTROL
PHASE I
STA. 150+00 TO STA. 166+00

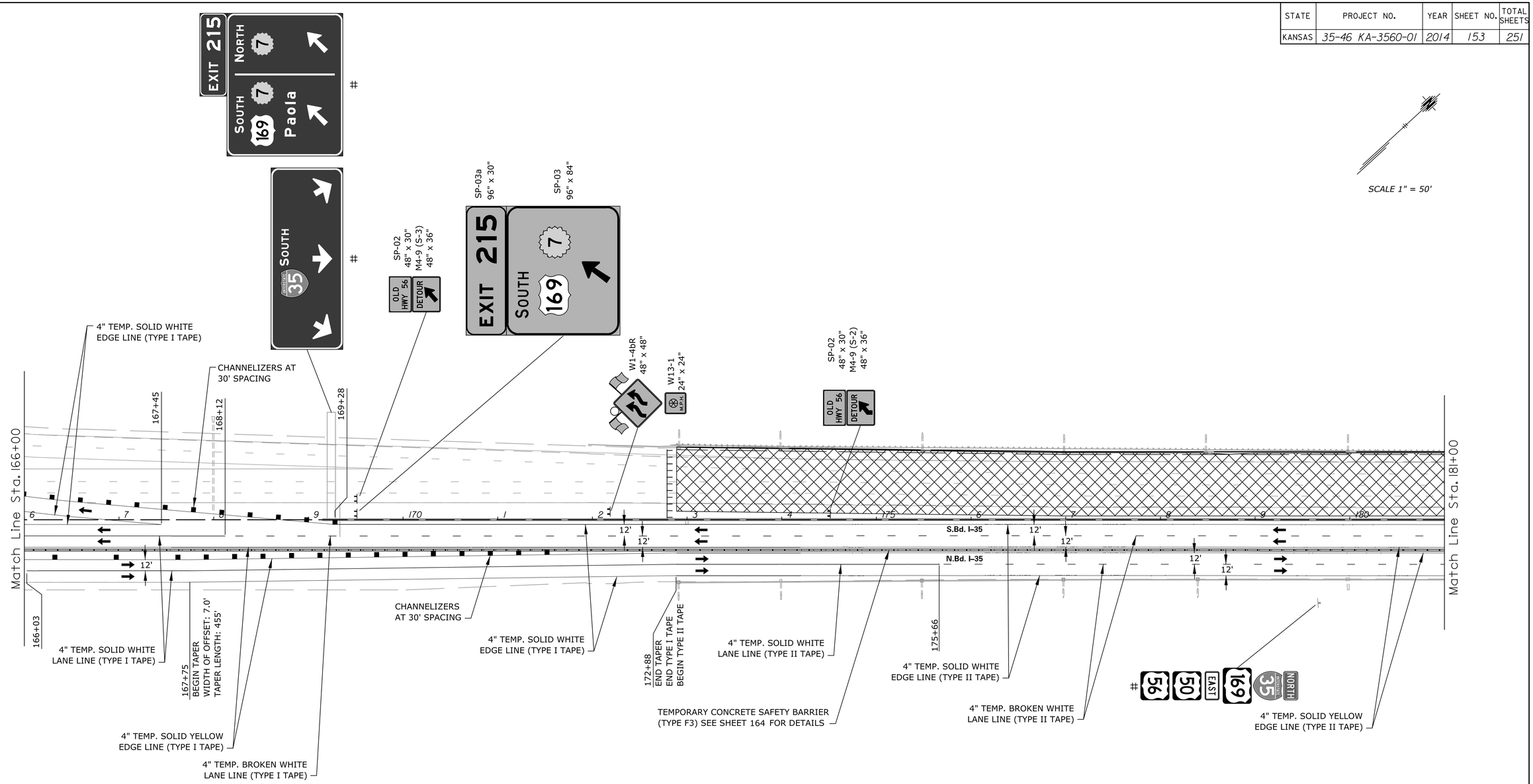
KDOT Graphics Certified 10-03-2014 *Sh. No. 152*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001tcpl-108.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	153	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	



SCALE 1" = 50'

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.
2. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 166+00 TO STA. 181+00

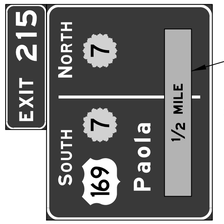
KDOT Graphics Certified 10-03-2014 *Sh. No. 153*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-109.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	154	251

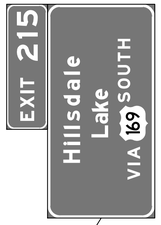
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



COVER EXISTING DOWN ARROWS WITH "1/2 MILE" PLAQUE (SP-04) AS SHOWN

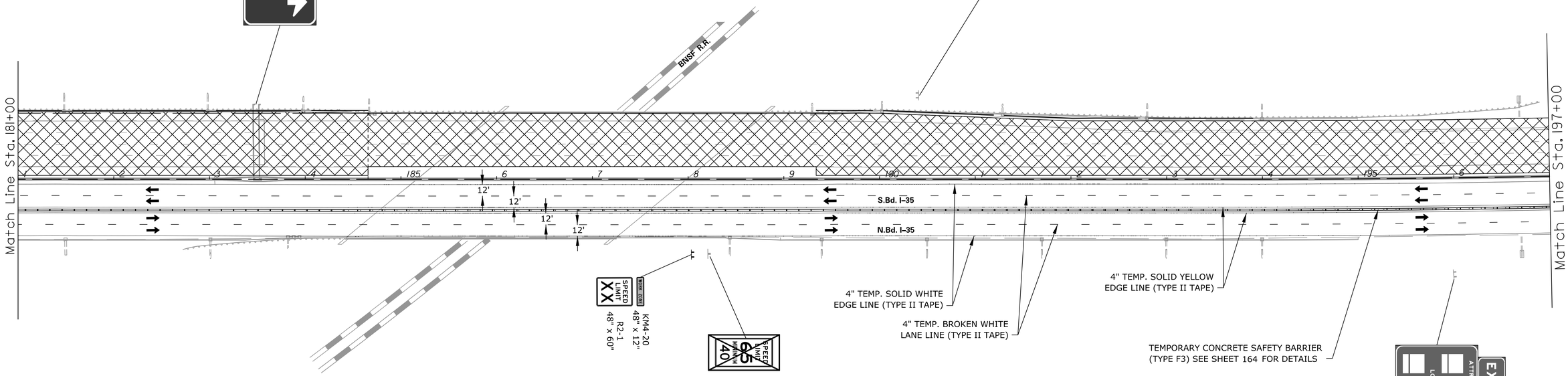
#

#



#

SCALE 1" = 50'

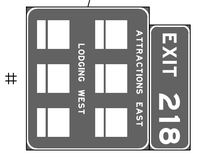


4" TEMP. SOLID WHITE EDGE LINE (TYPE II TAPE)

4" TEMP. BROKEN WHITE LANE LINE (TYPE II TAPE)

4" TEMP. SOLID YELLOW EDGE LINE (TYPE II TAPE)

TEMPORARY CONCRETE SAFETY BARRIER (TYPE F3) SEE SHEET 164 FOR DETAILS



#

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 181+00 TO STA. 197+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 154*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-110.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	155	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'

Line Sta. 197+00

Match Line

Line Sta. 213+00

Match Line

KM4-20
48" x 12"

R2-1
48" x 60"

SPEED LIMIT XX

GAS EXIT 215 FOOD EXIT 215 #

FOOD EXIT 215 #

151st St Executive Airport EXIT 215 #

Santa Fe 1
119th St 3 1/4
435 NORTH
169 5 1/2 #

Old Hwy 56 On Ramp

S.Bd. I–35

N.Bd. I–35

12' 12' 12' 12'

4" TEMP. SOLID YELLOW EDGE LINE (TYPE II TAPE)

4" TEMP. BROKEN WHITE LANE LINE (TYPE II TAPE)

4" TEMP. SOLID WHITE EDGE LINE (TYPE II TAPE)

TEMPORARY CONCRETE SAFETY BARRIER (TYPE F3) SEE SHEET 164 FOR DETAILS

Historic Mahaffie Stagecoach Stop
Deaf Cultural Center
Via Santa Fe WEST
EXIT 218 #

FOOD WEST FOOD EAST EXIT 218 #

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 197+00 TO STA. 213+00

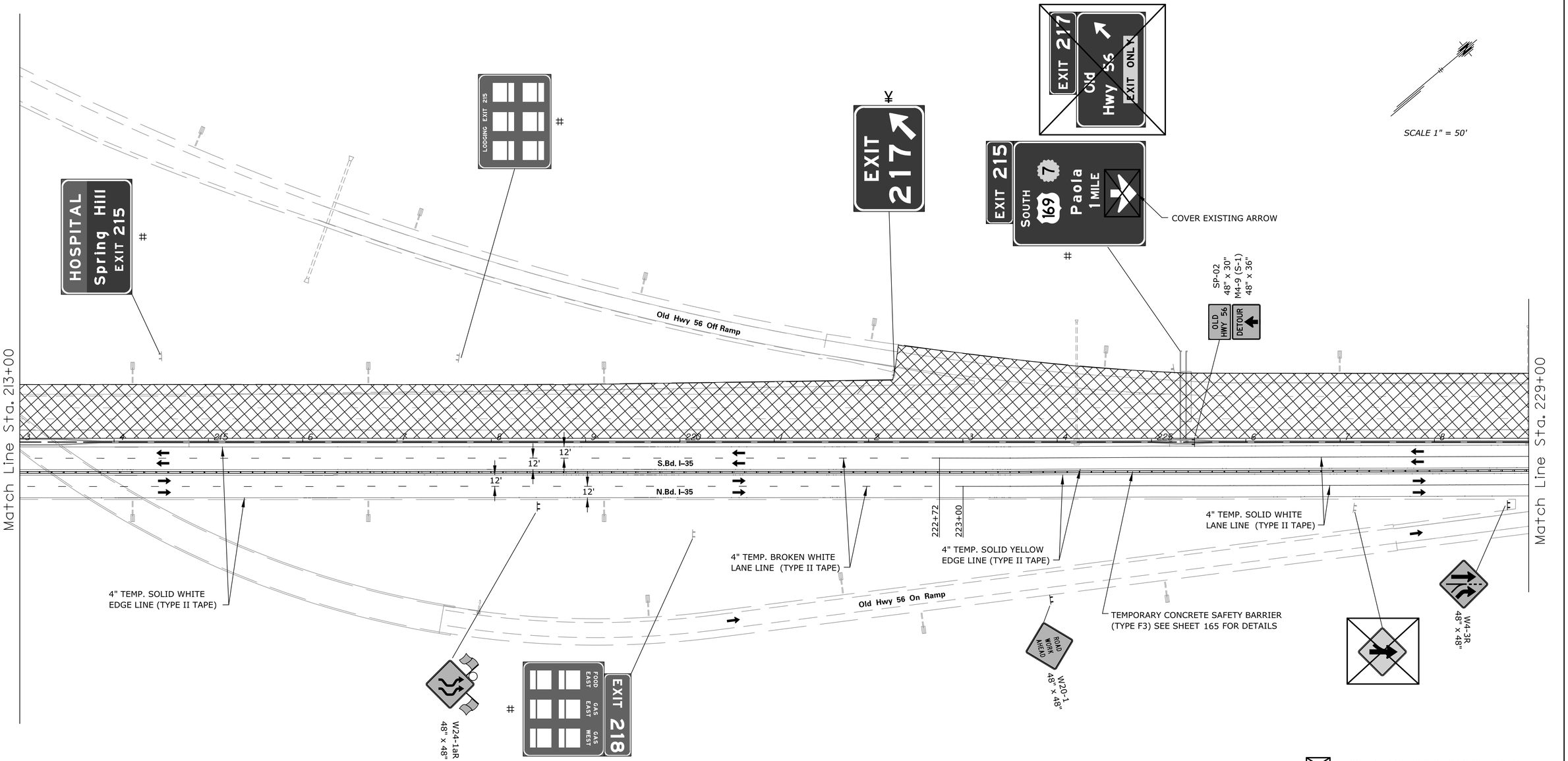
KDOT Graphics Certified 10-03-2014 *Sh. No. 155*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-111.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	156	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



SCALE 1" = 50'

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)
- ¥ EXISTING SIGN (REMOVE AND RESET AFTER PHASE 1 WORK IS COMPLETE)

NOTES:

1. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.
2. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 213+00 TO STA. 229+00

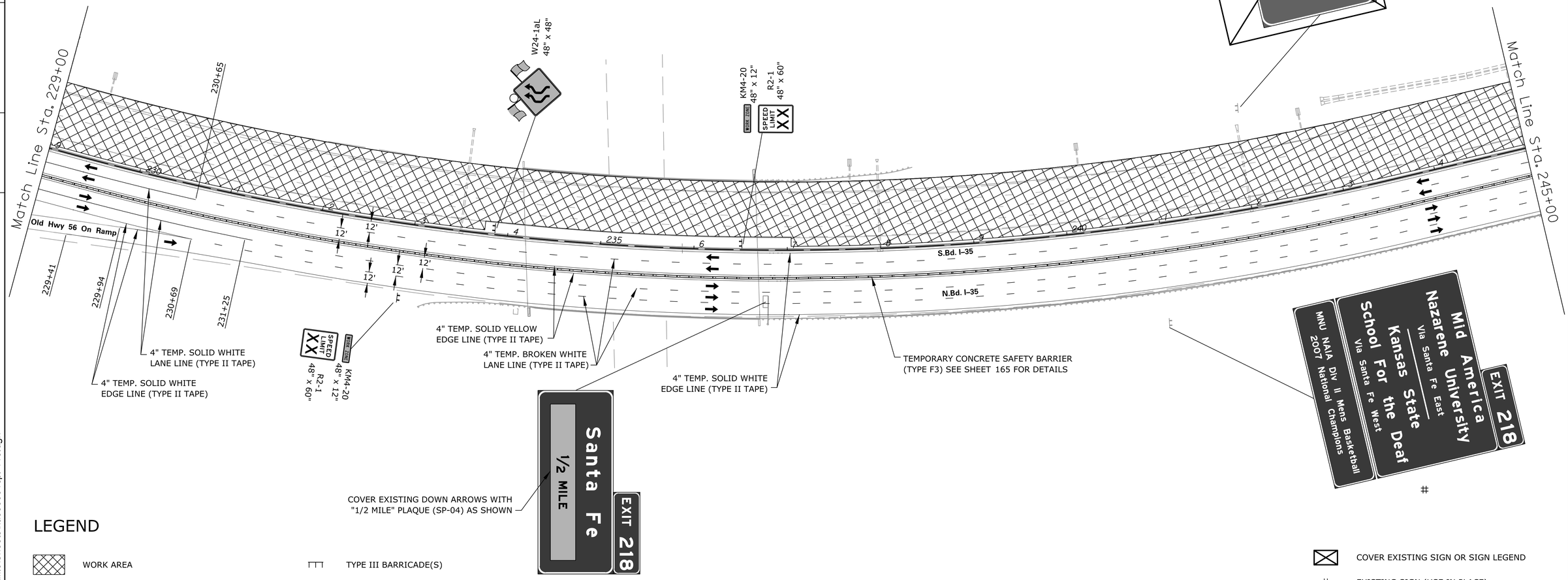
KDOT Graphics Certified 10-03-2014 *Sh. No. 156*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-112.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	157	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



SCALE 1" = 50'

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 229+00 TO STA. 245+00

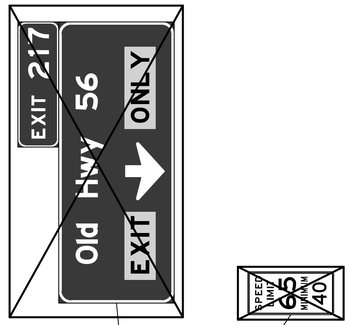
KDOT Graphics Certified 10-03-2014 *Sh. No. 157*

KDOT Graphics Certified

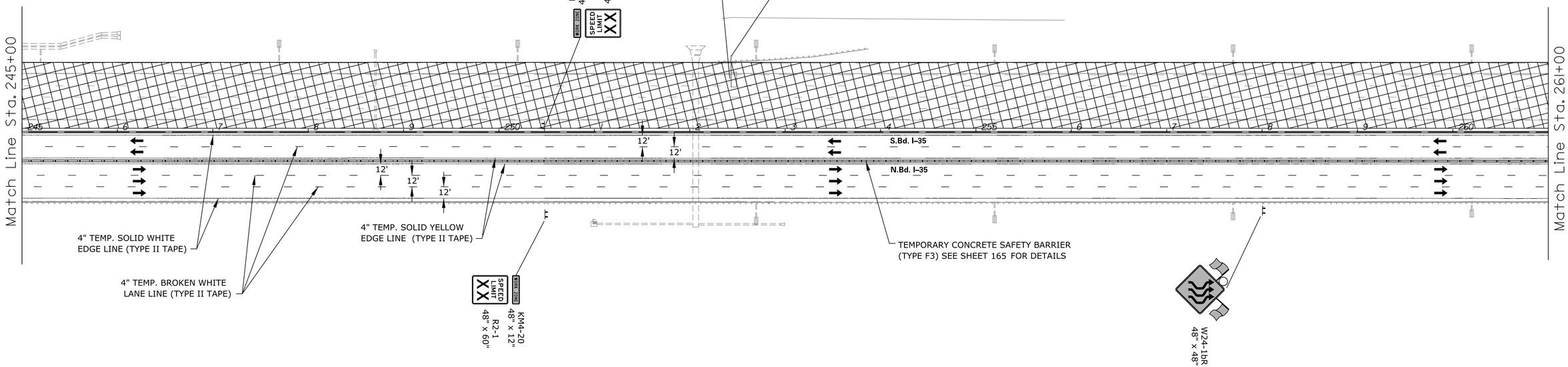
Drawn By : aameyer Plotted :10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001cpl-113.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	158	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 245+00 TO STA. 261+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 158*

KDOT Graphics Certified

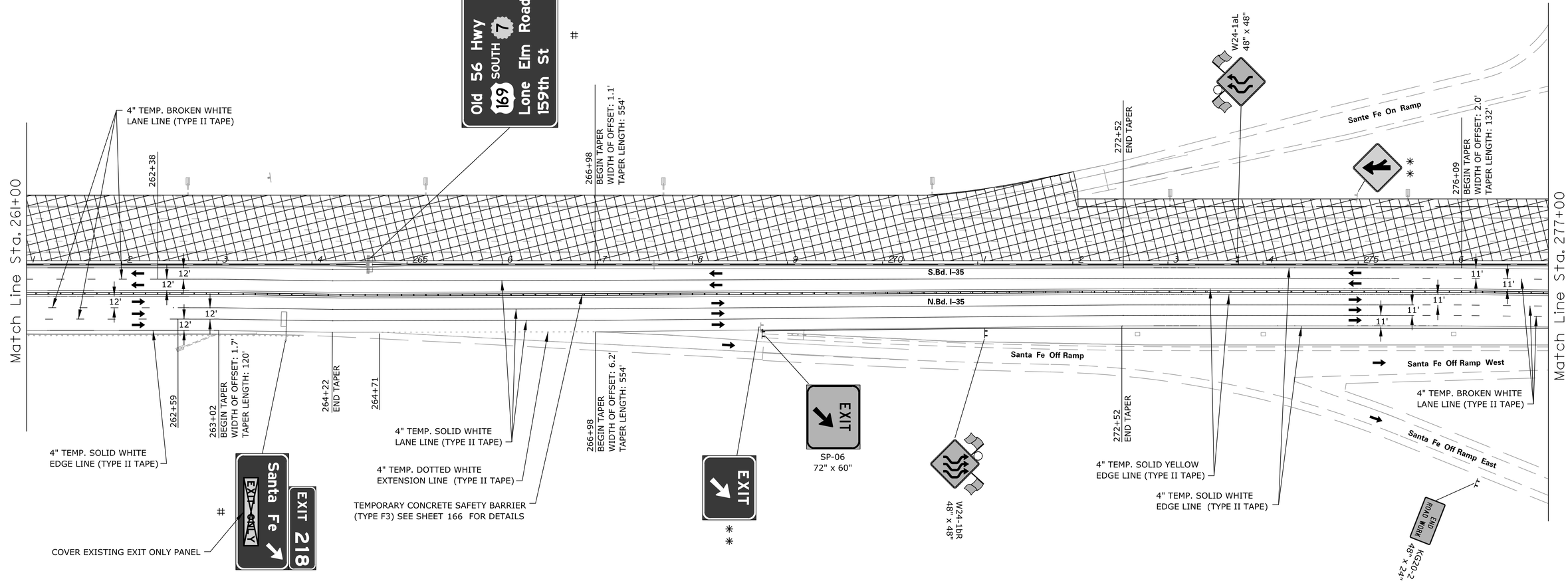
Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-114.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	159	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

COVER EXISTING DISTANCE LEGEND WITH "CLOSED" PLAQUE (SP-05) AS SHOWN

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION
I-35 TRAFFIC CONTROL
PHASE I
STA. 261+00 TO STA. 277+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 159*

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-115.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	160	251

SCALE 1" = 50'
Match Line Sta 277+00
Match Line Sta 293+00
R11-2 48" x 30"
ROAD CLOSED
EXIT 217
Old Hwy 56
1 MILE
Santa Fe Off Ramp
MILE 2 1 8
Santa Fe
277+41 END TAPER
279+60 BEGIN TAPER WIDTH OF OFFSET: 2.2' TAPER LENGTH: 200'
281+60 END TAPER
EXIT 218
276+47
R11-2 48" x 30"
ROAD CLOSED
W24-1aL 48" x 48"
TEMPORARY CONCRETE SAFETY BARRIER (TYPE F3) SEE SHEET 168 FOR LAYOUT
INERTIAL BARRIER SYSTEM (65 MPH CONFIGURATION)
CHANNELIZERS AT 65' SPACING
CHANNELIZERS AT 30' SPACING
4" TEMP. SOLID YELLOW EDGE LINE (TYPE I TAPE)
4" TEMP. SOLID WHITE EDGE LINE (TYPE I TAPE)
289+27 BEGIN TAPER WIDTH OF OFFSET: 33.9' TAPER LENGTH: 1299'
EXIT 218
Santa Fe
291+79
292+66
S.Bd. I-35
N.Bd. I-35
11'
12'
Santa Fe Off Ramp West
4" TEMP. BROKEN WHITE LANE LINE (TYPE II TAPE)
TEMPORARY CONCRETE SAFETY BARRIER (TYPE F3) SEE SHEET 167 FOR DETAILS
4" TEMP. SOLID YELLOW EDGE LINE (TYPE II TAPE)
EXIT 220
119th St
2 MILES
4" TEMP. SOLID WHITE EDGE LINE (TYPE II TAPE)
END ROAD WORK
KG20-2 48" x 24"
W13-1 24" x 24"
W1-4cL 48" x 48"
286+00 END TYPE II TAPE BEGIN TYPE I TAPE
4" TEMP. SOLID YELLOW EDGE LINE (TYPE I TAPE)
4" TEMP. SOLID WHITE LANE LINE (TYPE I TAPE)
W4-1R
W4-1R 48" x 48"
CHANNELIZERS AT 65' SPACING
Santa Fe Off Ramp
ROAD WORK AHEAD
W20-1 48" x 48"
289+27 BEGIN TAPER WIDTH OF OFFSET: 4.7' TAPER LENGTH: 673'
289+73
290+09
291+29
4" TEMP. SOLID WHITE EDGE LINE (TYPE I TAPE)
Santa Fe Off Ramp East

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)
- EXISTING SIGN (REMOVE AND REPLACE AFTER PHASE 3 WORK IS COMPLETE)

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

KANSAS DEPARTMENT OF TRANSPORTATION
I-35 TRAFFIC CONTROL
PHASE I
STA. 277+00 TO STA. 293+00

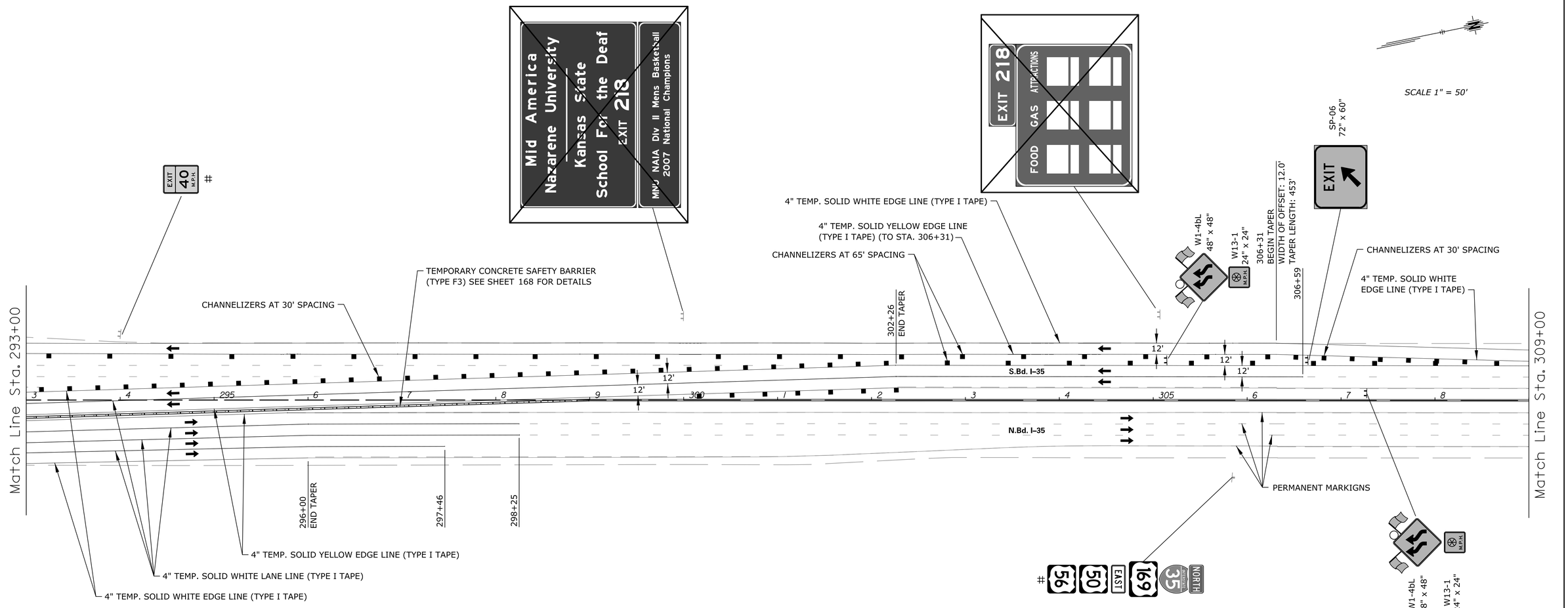
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-116.dgn

KDOT Graphics Certified 10-03-2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	161	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 293+00 TO STA. 309+00

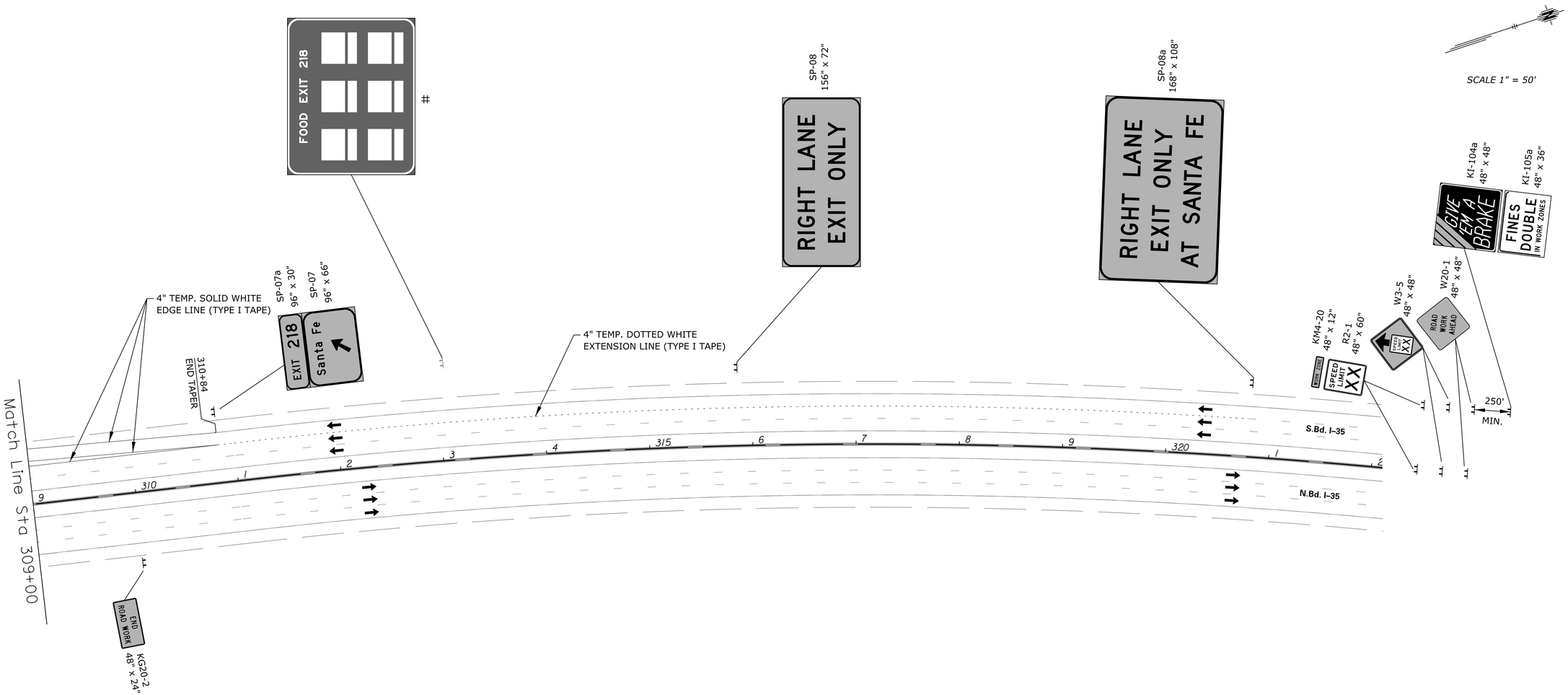
KDOT Graphics Certified 10-03-2014 *Sh. No. 161*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-117.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	162	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

\# EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE I

STA. 309+00 TO STA. 323+00

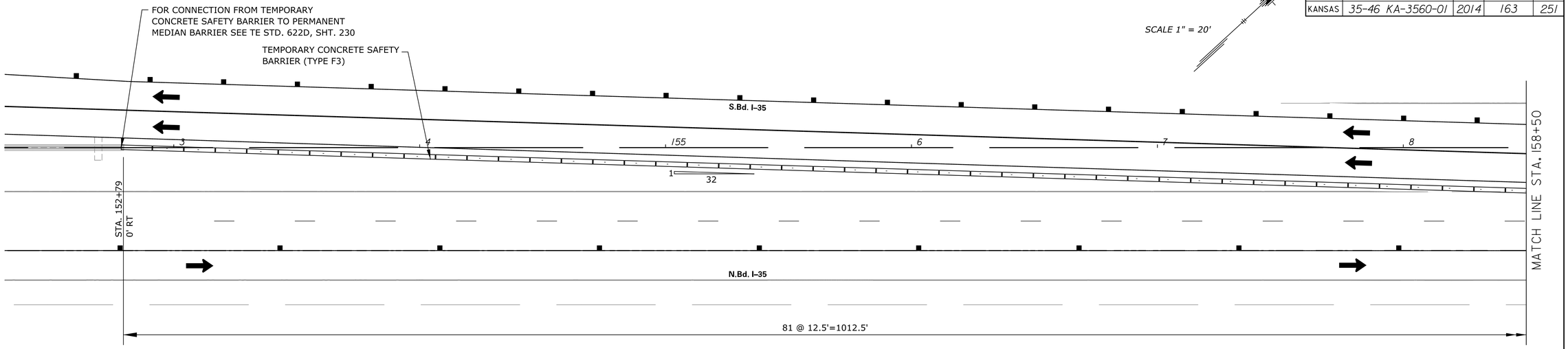
KDOT Graphics Certified 10-03-2014 *Sh. No. 162*

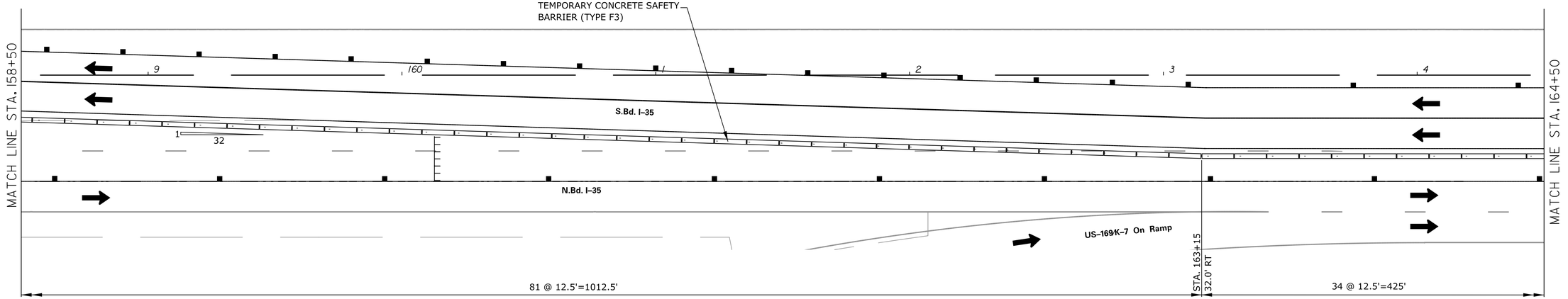
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001cpl-118.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	163	251

SCALE 1" = 20'





NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
STA. 152+80 TO STA. 164+50

KDOT Graphics Certified 10-03-2014 *Sh. No. 163*

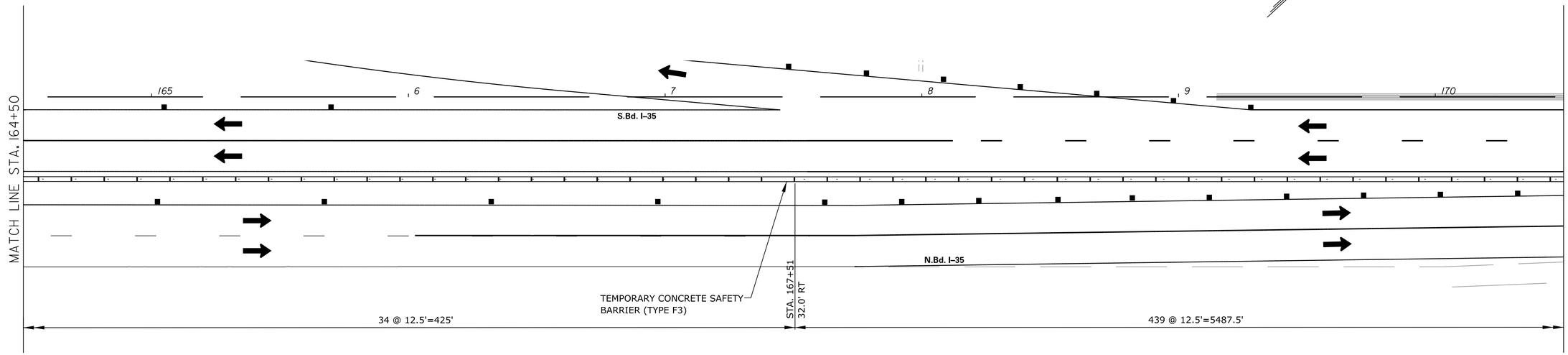
KDOT Graphics Certified

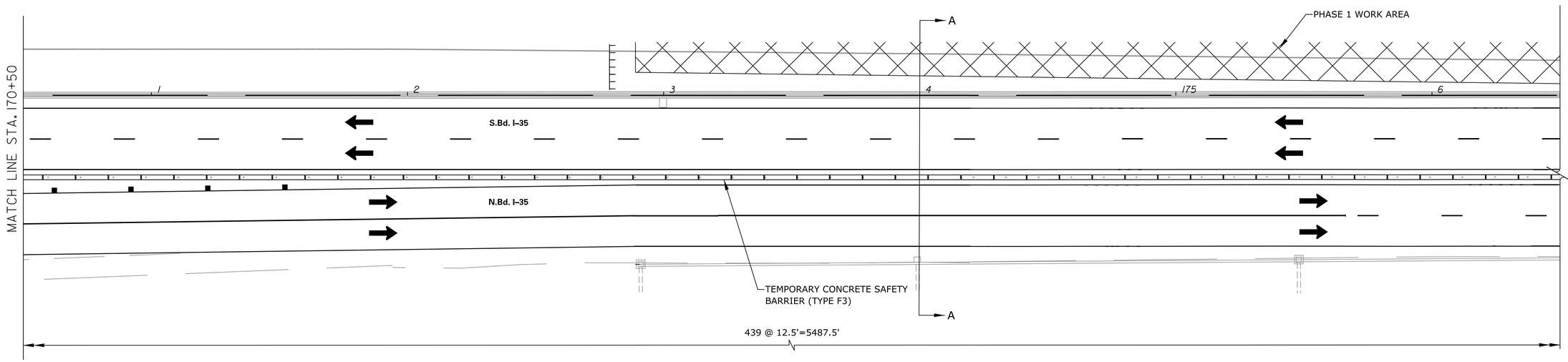
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted :10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-118a.dgn

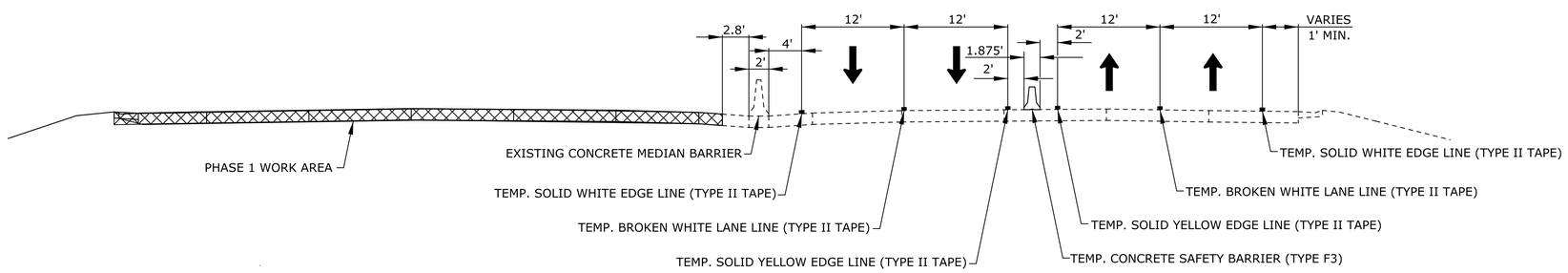
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	164	251

SCALE 1" = 20'





SECTION A-A



NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
STA. 164+50 TO STA. 176+50

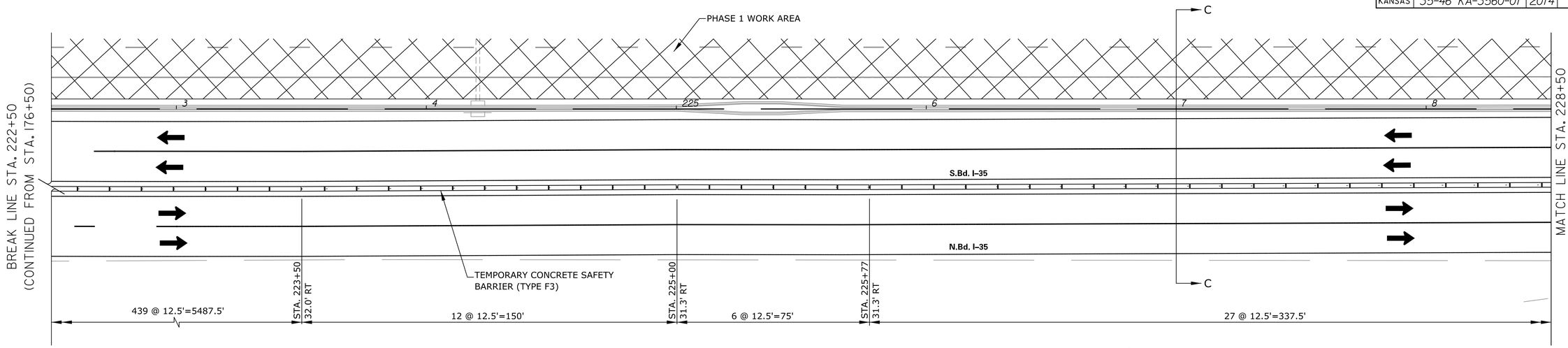
KDOT Graphics Certified 10-03-2014 *Sh. No. 164*

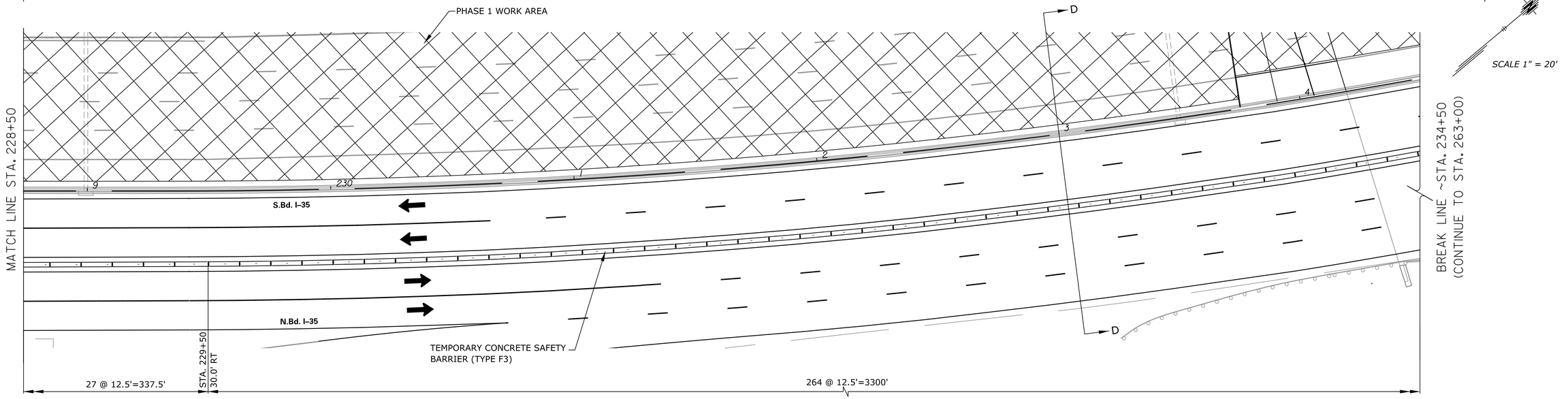
KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted :10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-118b.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	165	251



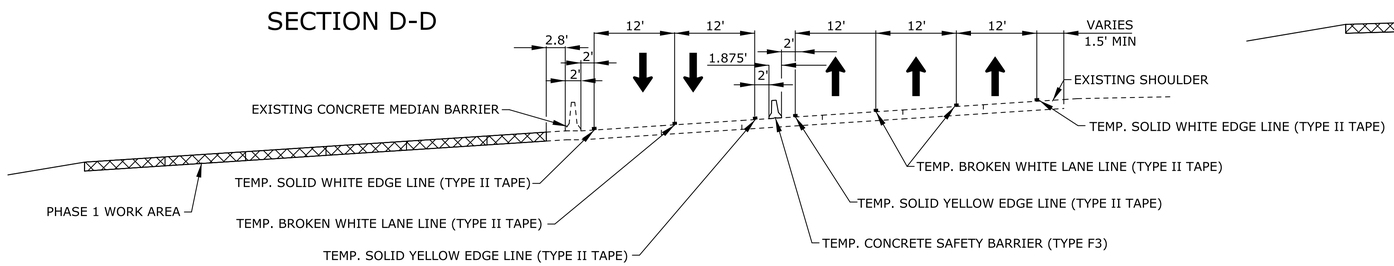


SCALE 1" = 20'

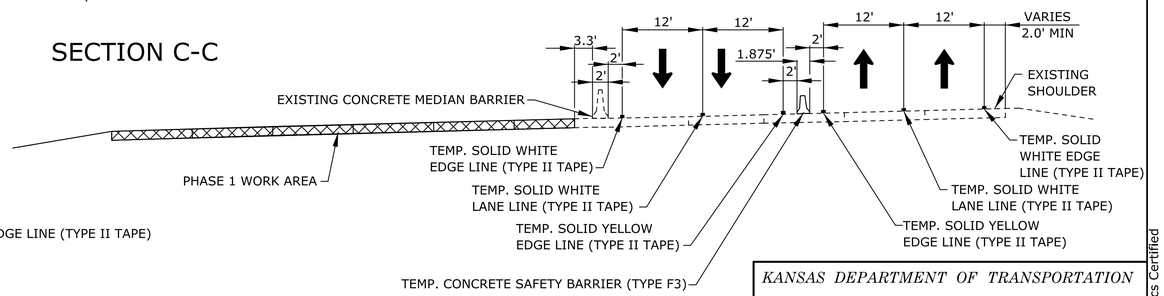
NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

SECTION D-D



SECTION C-C



KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
STA. 222+50 TO STA. 234+50

KDOT Graphics Certified 10-03-2014

Sh. No. 165

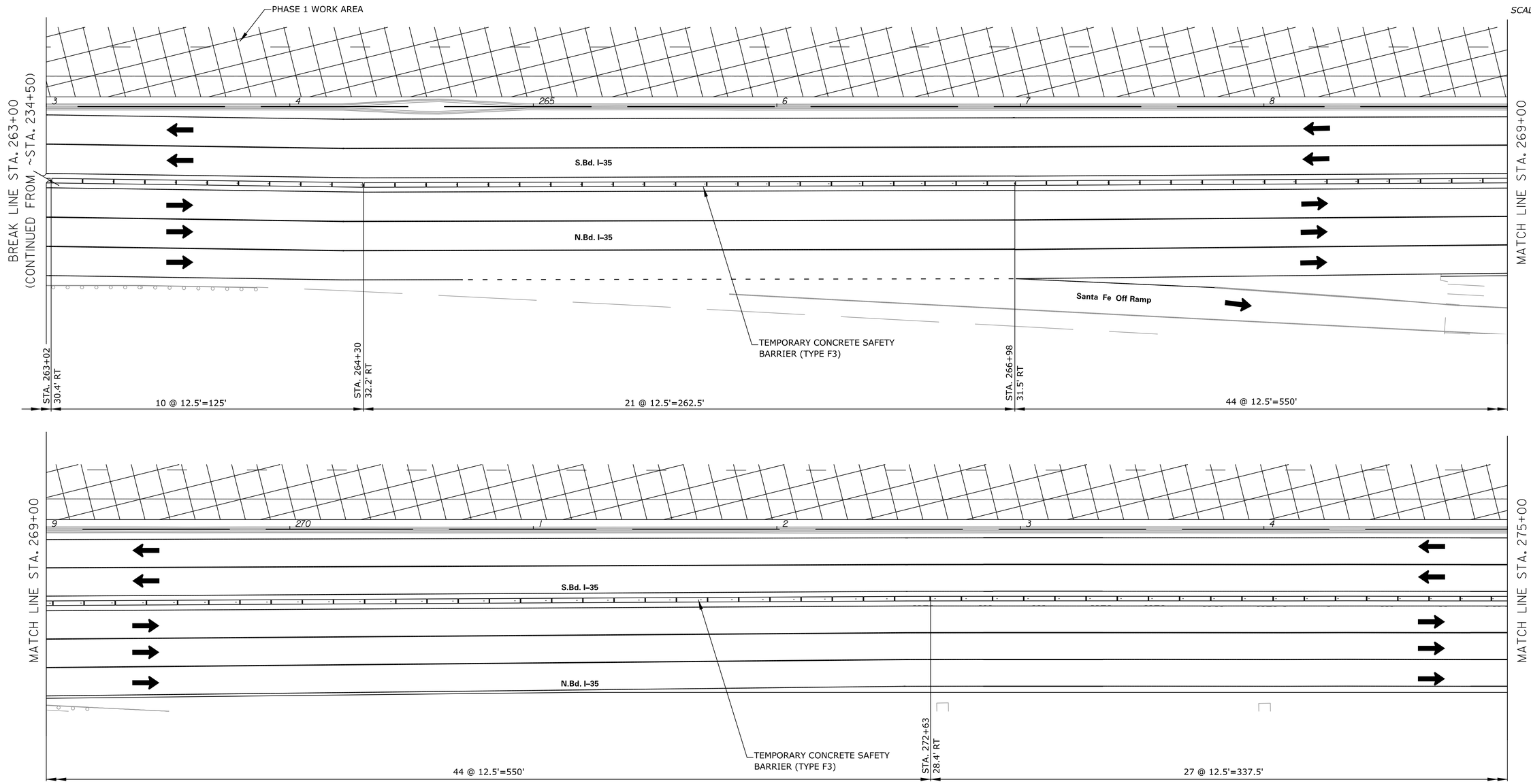
KDOT Graphics Certified

DATE	BY	REFERENCES NOTED / REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-118d.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	166	251

SCALE 1" = 20'



NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
STA. 263+00 TO STA. 275+00

KDOT Graphics Certified 10-03-2014

Sh. No. 166

KDOT Graphics Certified

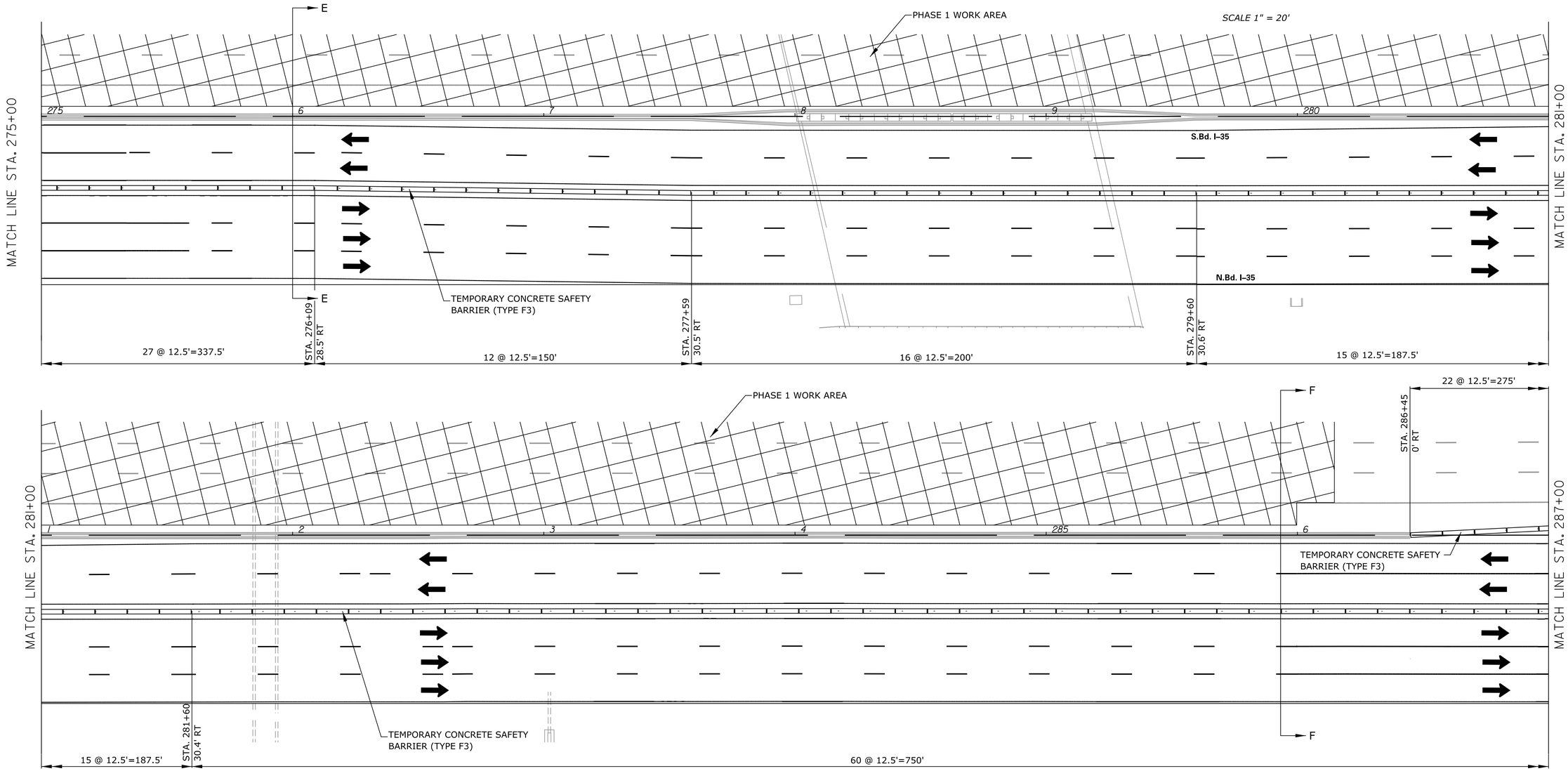
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-118e.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	167	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

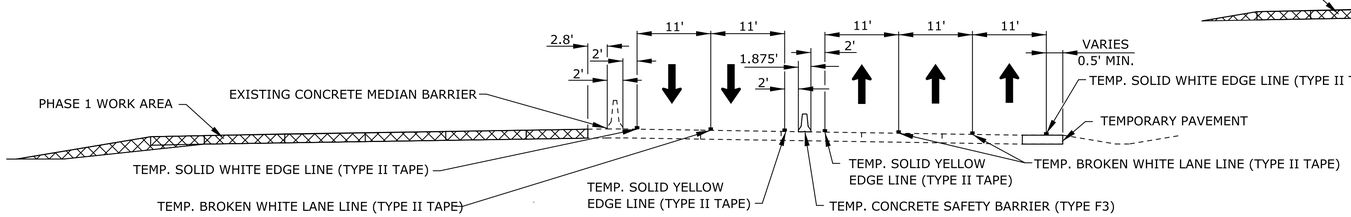
SCALE 1" = 20'



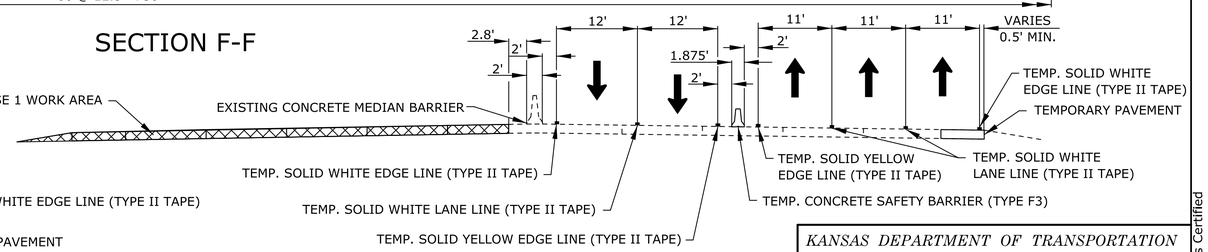
NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

SECTION E-E



SECTION F-F



KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
STA. 275+00 TO STA. 287+00

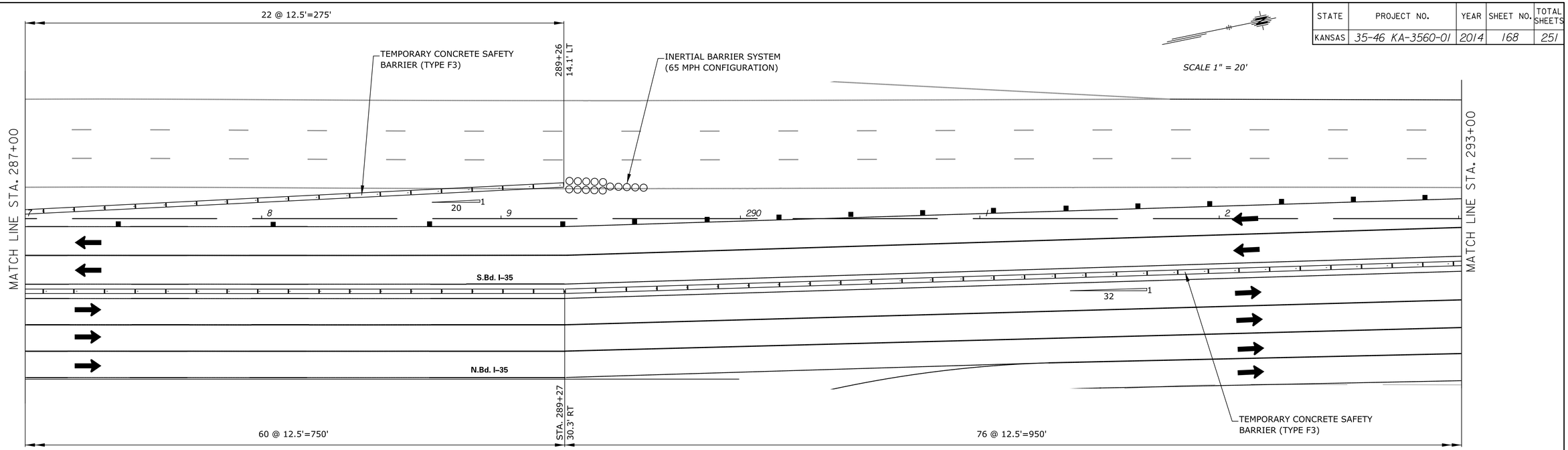
KDOT Graphics Certified 10-03-2014

Sh. No. 167

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-118f.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	168	251



DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-118g.dgn

NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
AND INERTIAL BARRIER SYSTEM
STA. 287+00 TO STA. 299+00

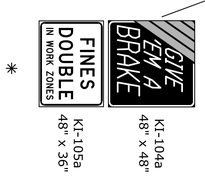
KDOT Graphics Certified 10-03-2014 *Sh. No. 168*

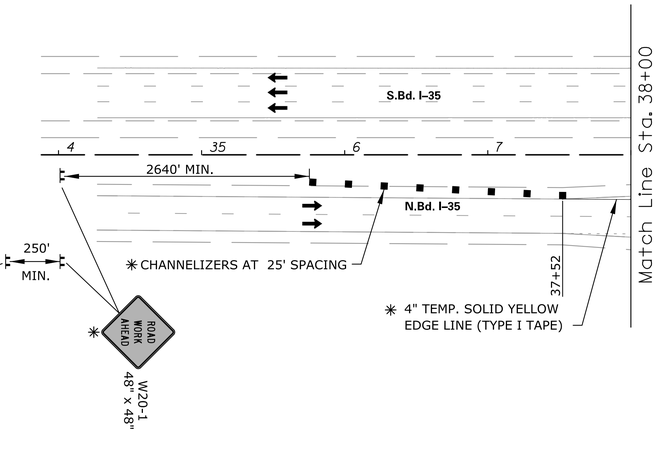
KDOT Graphics Certified

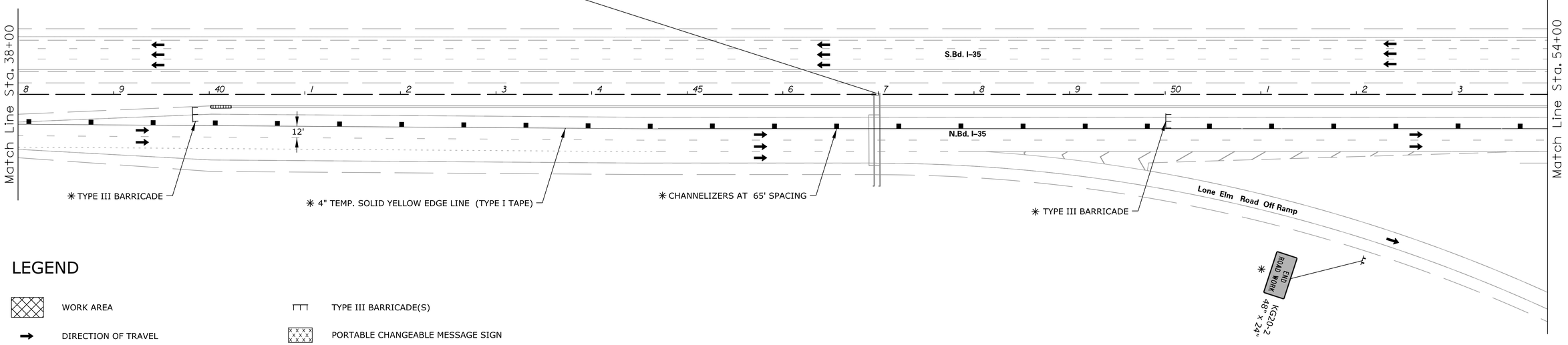
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	169	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'







LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 35+00 TO STA. 54+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 169*

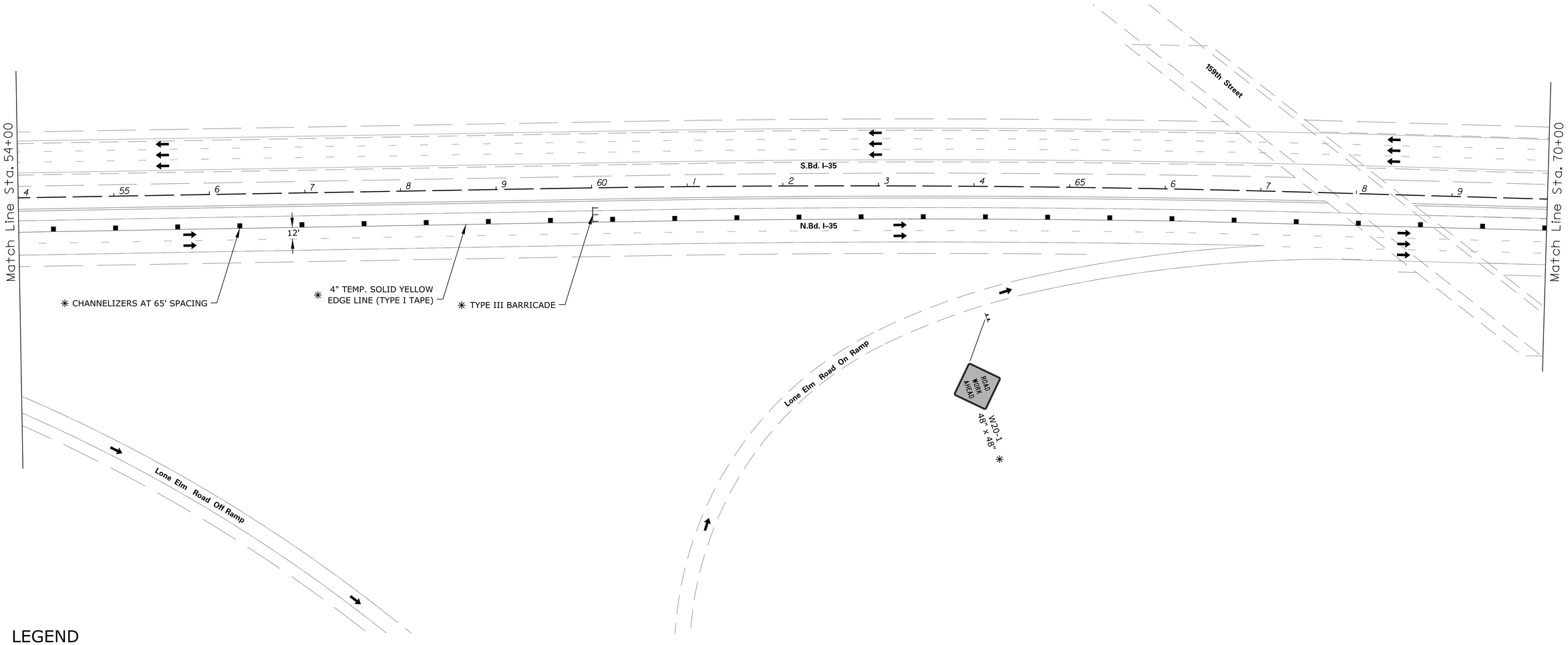
KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-201.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	170	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 54+00 TO STA. 70+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 170*

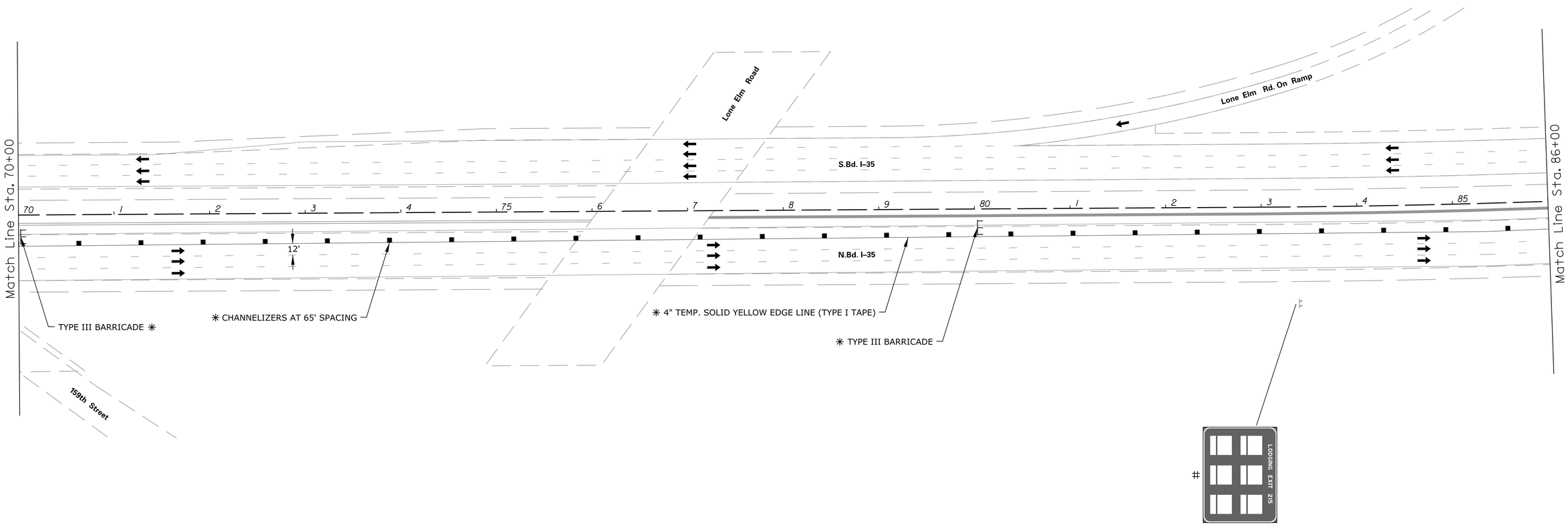
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-202.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	171	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE 2
STA. 70+00 TO STA. 86+00

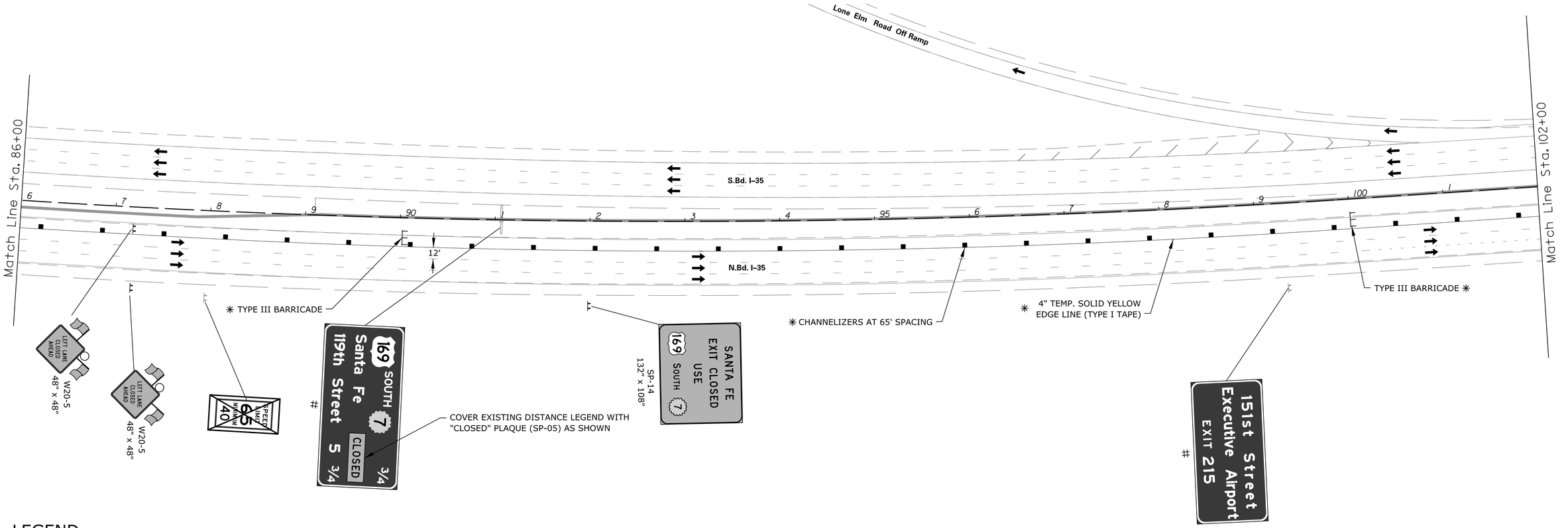
KDOT Graphics Certified 10-03-2014 *Sh. No. 171*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-203.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	172	251

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 86+00 TO STA. 102+00

KDOT Graphics Certified 10-03-2014

Sh. No. 172

KDOT Graphics Certified

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

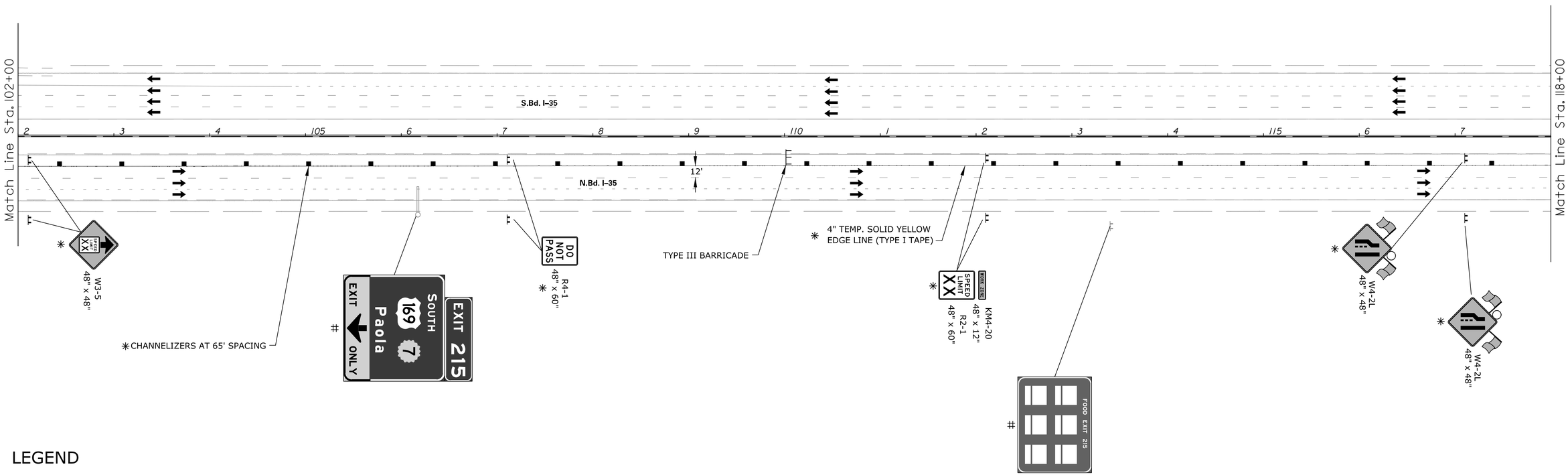
Drawn By : aameyer Plotted : 10/16/2014

File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-204.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	173	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

* MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 102+00 TO STA. 118+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 173*

KDOT Graphics Certified

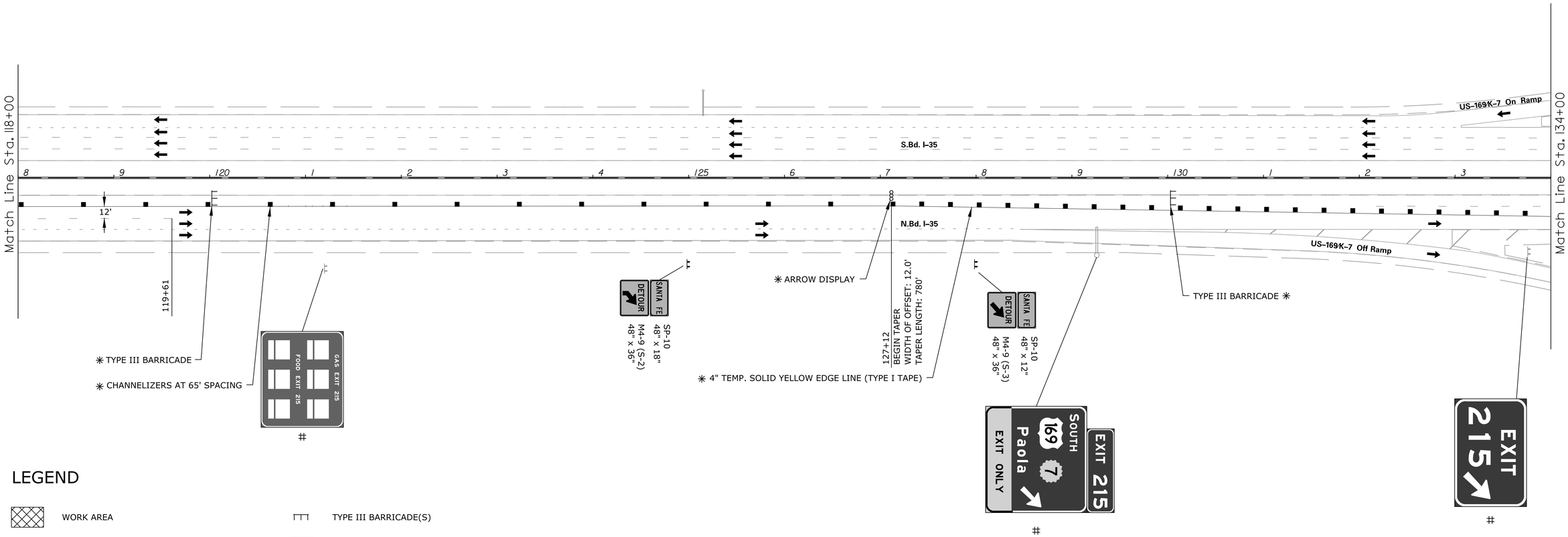
Drawn By: aameyer Plotted: 10/16/2014

File: G:\KC13\0356\Traffic\Sheets\ka356001cpl-205.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	174	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- ARROW DISPLAY
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.
2. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- # EXISTING SIGN (USE IN PLACE)
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 118+00 TO STA. 134+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 174*

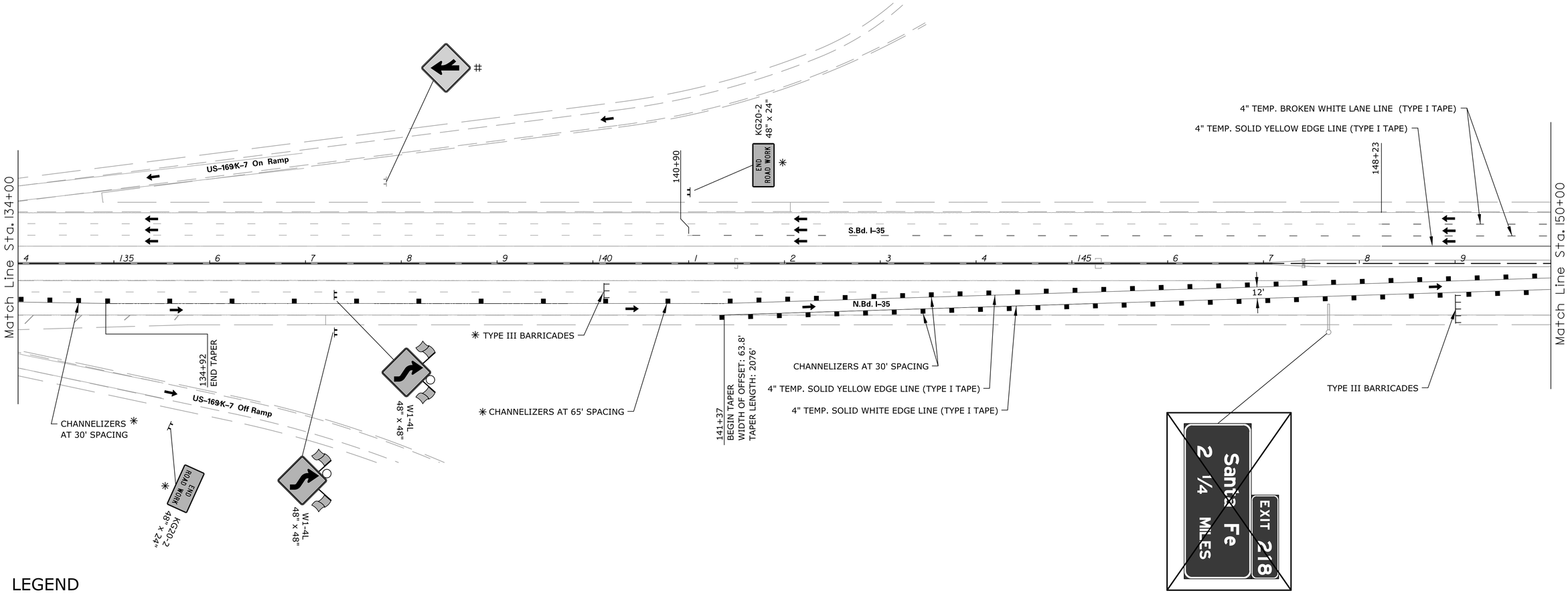
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-206.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	175	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE 2
STA. 134+00 TO STA. 150+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 175*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-207.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	176	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'

EXIT 214
Lone Elm Rd
159th St
1 MILE

EXIT 215

KG20-2
48" x 24"
END ROAD WORK

US-169K-7 Off Ramp

4" TEMP. BROKEN WHITE LANE LINE (TYPE I TAPE)

4" TEMP. SOLID YELLOW EDGE LINE (TYPE I TAPE)

4" TEMP. BROKEN WHITE LANE LINE

4" TEMP. SOLID YELLOW EDGE LINE

REMOVE TEMPORARY PAVEMENT AS PART OF PHASE 2 WORK

4" TEMP. SOLID WHITE EDGE LINE

164+31
BEGIN TAPER
WIDTH OF OFFSET: 17.7'
TAPER LENGTH: 738'

CHANNELIZERS AT 65' SPACING

4" TEMP. SOLID WHITE LANE LINE (TYPE I TAPE)

TEMPORARY CONCRETE SAFETY BARRIER (TYPE F3) SEE SHEET 187 FOR DETAILS

S.Bd. I–35

N.Bd. I–35

Match Line Sta. 150+00

Match Line Sta. 166+00

151+27
153+57
158+54
159+27
160+65
161+23
162+13
163+20

12'

150 1 2 3 4 155 6 7 8 9 160 1 2 3 4 165

CHANNELIZERS AT 30' SPACING

4" TEMP. SOLID WHITE EDGE LINE (TYPE I TAPE)

TYPE III BARRICADES

161+31
162+13
END TAPER

161+12

US-169K-7 On Ramp

16'

W4-3R
48" x 48"

W4-6
48" x 48"

4" TEMP. SOLID WHITE EDGE LINE (TYPE I TAPE)

164+64
BEGIN TAPER
WIDTH OF OFFSET: 4.4'
TAPER LENGTH: 704'

CHANNELIZERS AT 30' SPACING

ROAD WORK AHEAD
W20-1
48" x 48"

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- * MAINTAIN FROM PREVIOUS PHASE
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

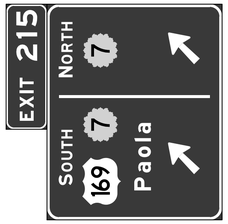
STA. 150+00 TO STA. 166+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 176*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Traffic\Sheets\ka356001cpl-208.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	177	251



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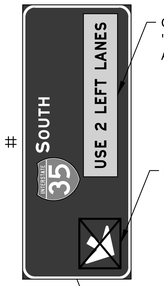
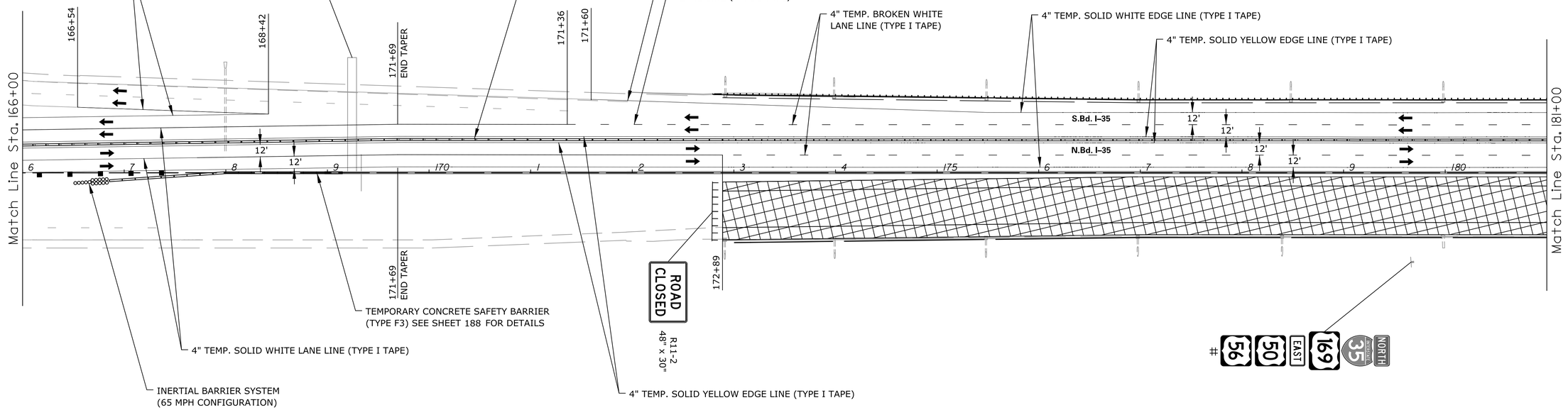


#

COVER EXISTING DOWN ARROWS WITH "USE 2 LEFT LANES" PLAQUE (SP-09) AS SHOWN

COVER EXISTING ARROW

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 166+00 TO STA. 181+00

KDOT Graphics Certified 10-03-2014

Sh. No. 177

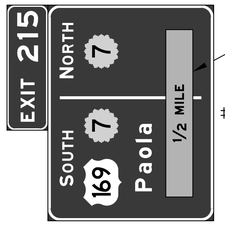
KDOT Graphics Certified

DATE	BY	REFERENCES NOTED / REFERENCES CHECKED

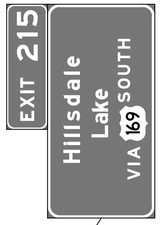
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-209.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	178	251

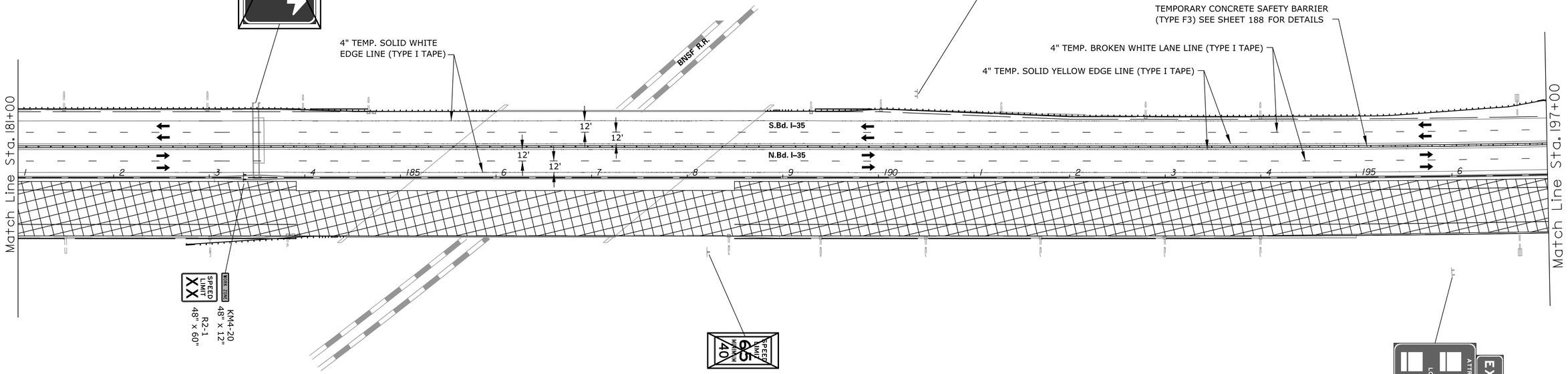
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

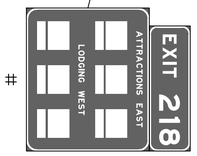


COVER EXISTING DOWN ARROWS WITH "1/2 MILE" PLAQUE (SP-04) AS SHOWN



SCALE 1" = 50'





LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION
I-35 TRAFFIC CONTROL
PHASE 2
STA. 181+00 TO STA. 197+00

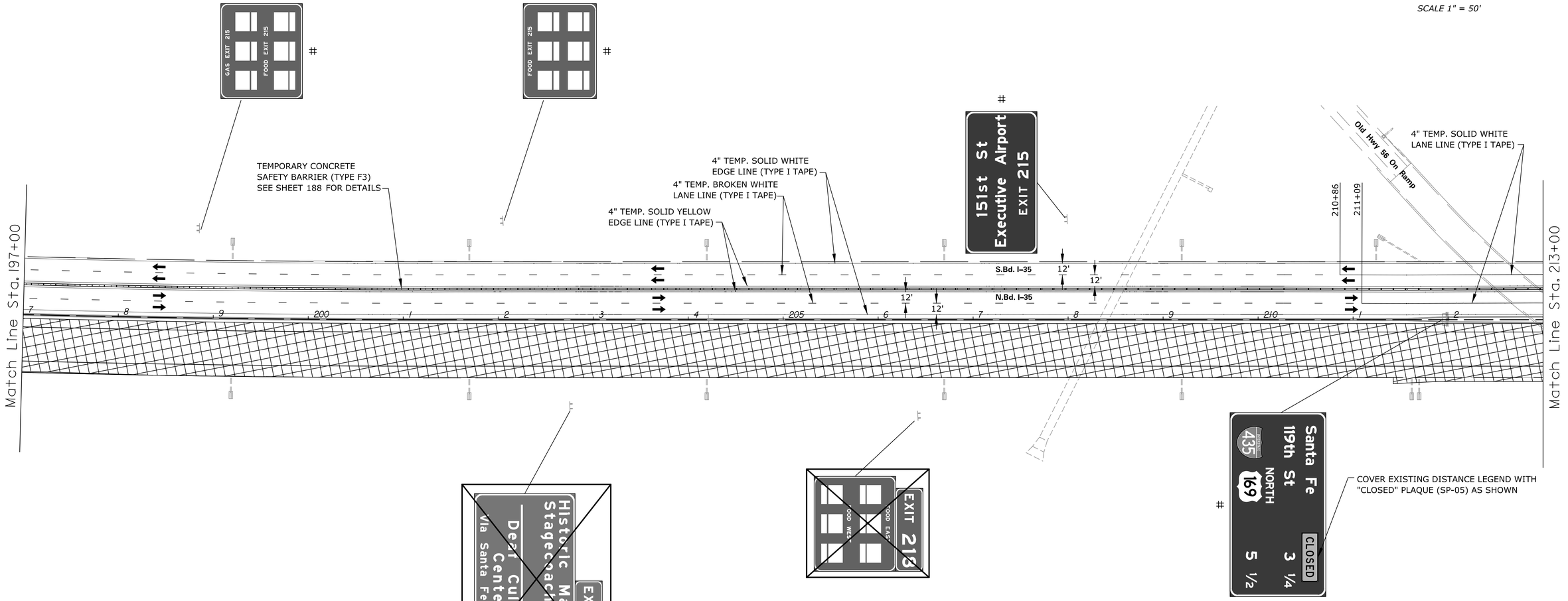
KDOT Graphics Certified 10-03-2014 *Sh. No. 178*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-210.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	179	251

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 197+00 TO STA. 213+00

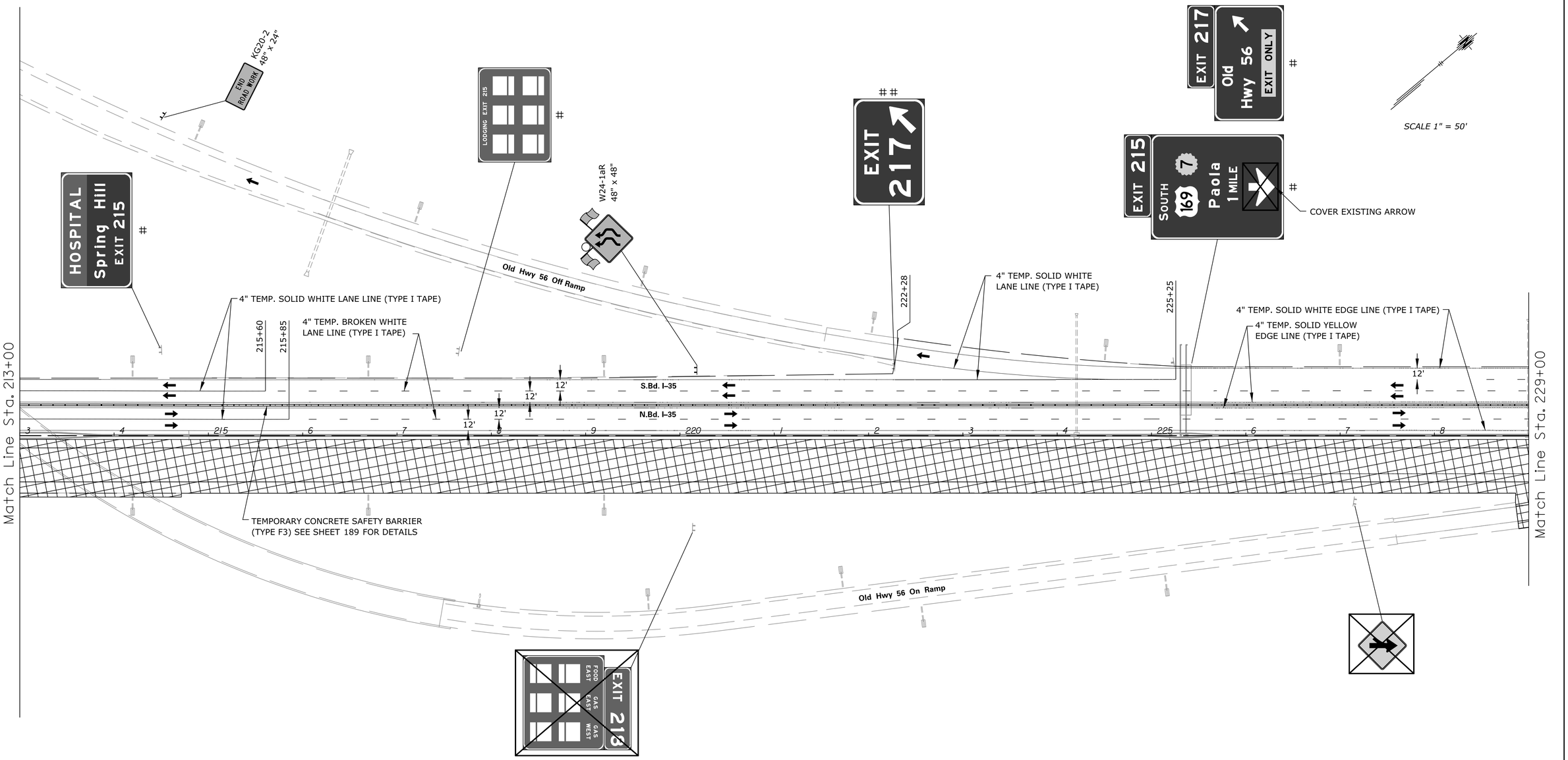
KDOT Graphics Certified 10-03-2014 *Sh. No. 179*

KDOT Graphics Certified

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-211.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	180	251



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ## EXISTING SIGN (RESET)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 213+00 TO STA. 229+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 180*

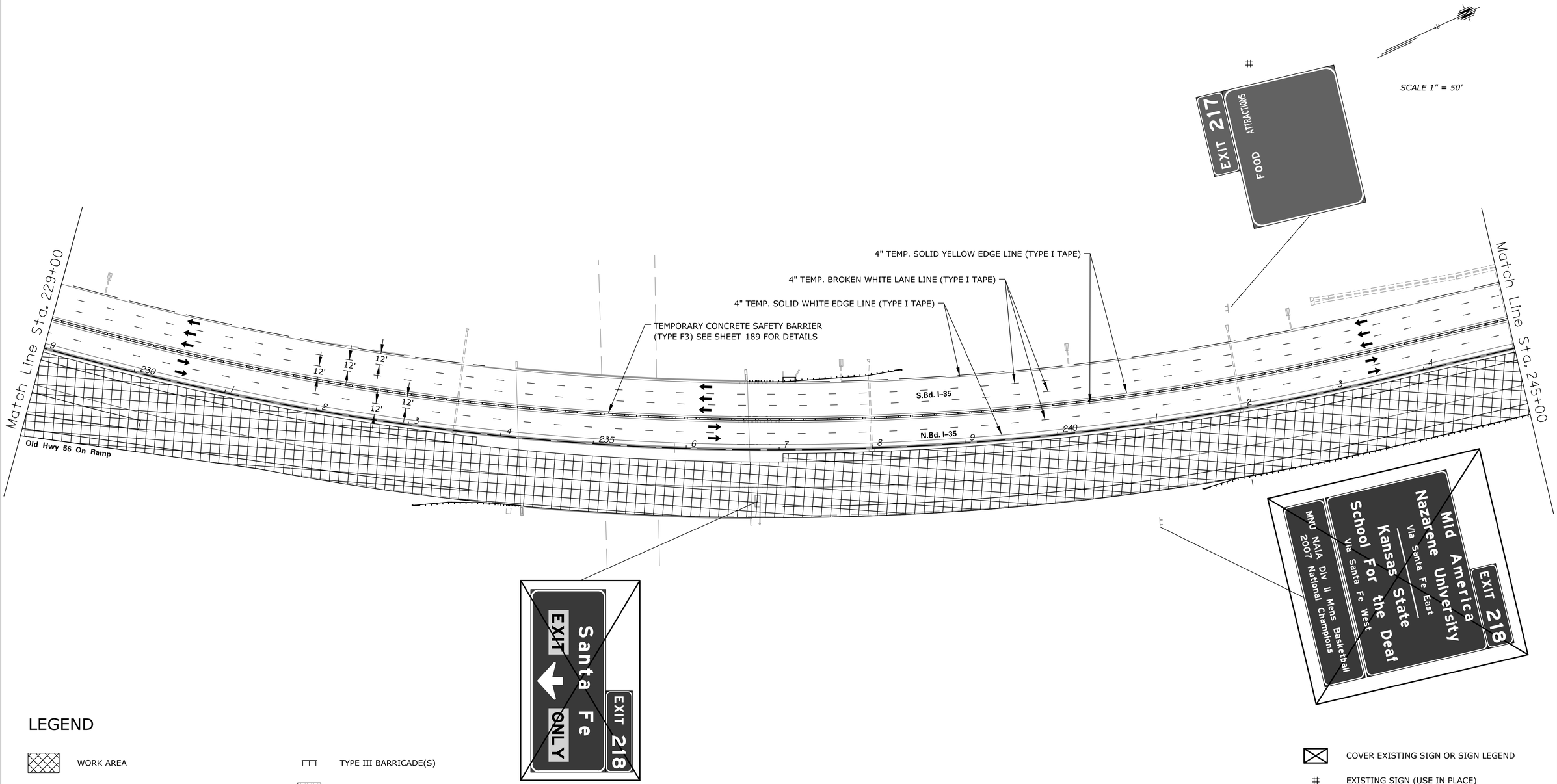
KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-212.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	181	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 229+00 TO STA. 245+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 181*

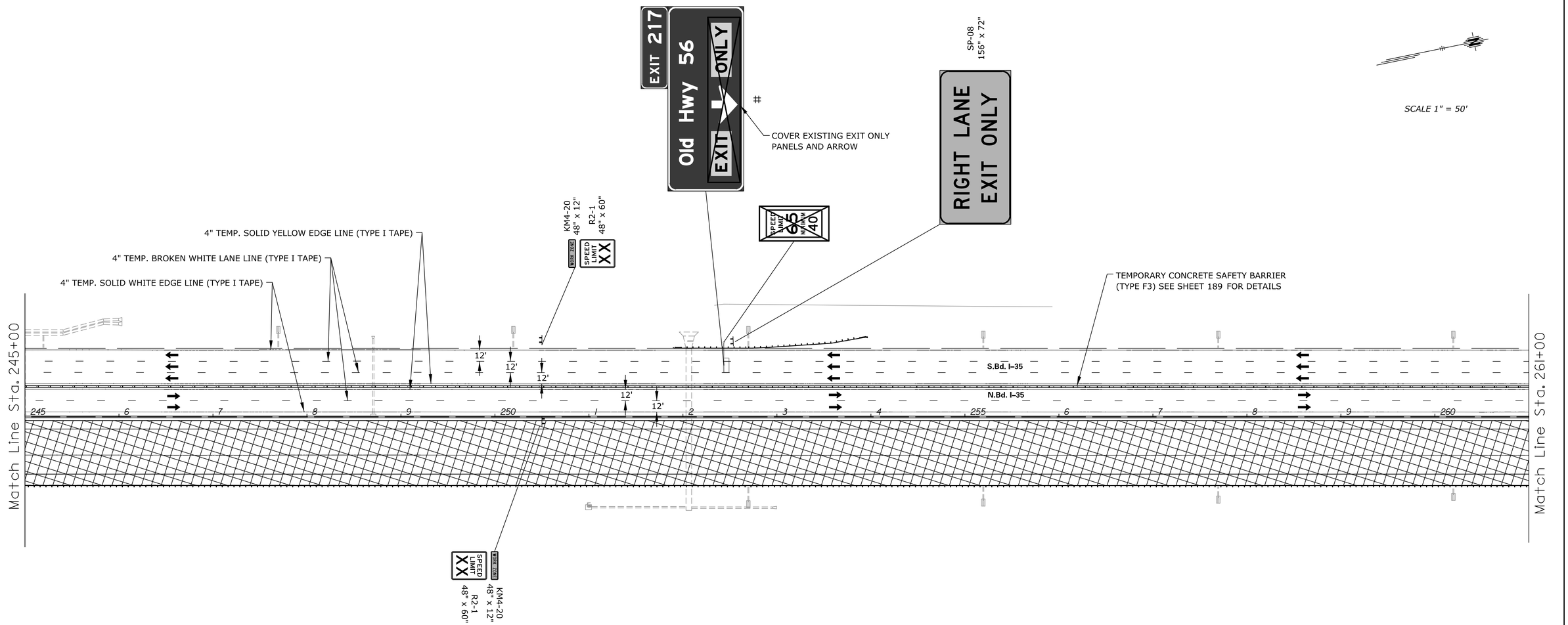
KDOT Graphics Certified

Drawn By : aameyer Plotted :10/16/2014

File : G:\KC13\03561\Traffic\Sheets\ka356001cpl-213.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	182	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 245+00 TO STA. 261+00

KDOT Graphics Certified 10-03-2014

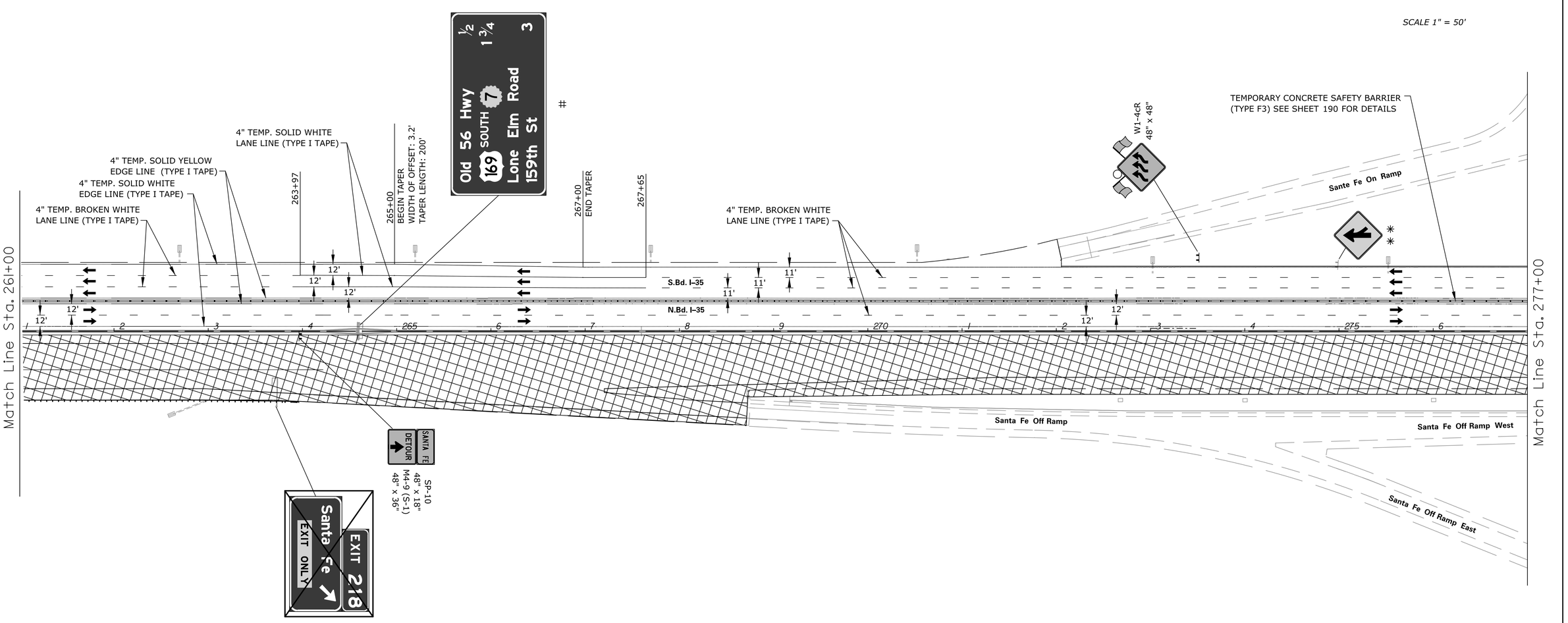
Sh. No. 182

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-214.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	183	251

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)

NOTES:

1. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.
2. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 261+00 TO STA. 277+00

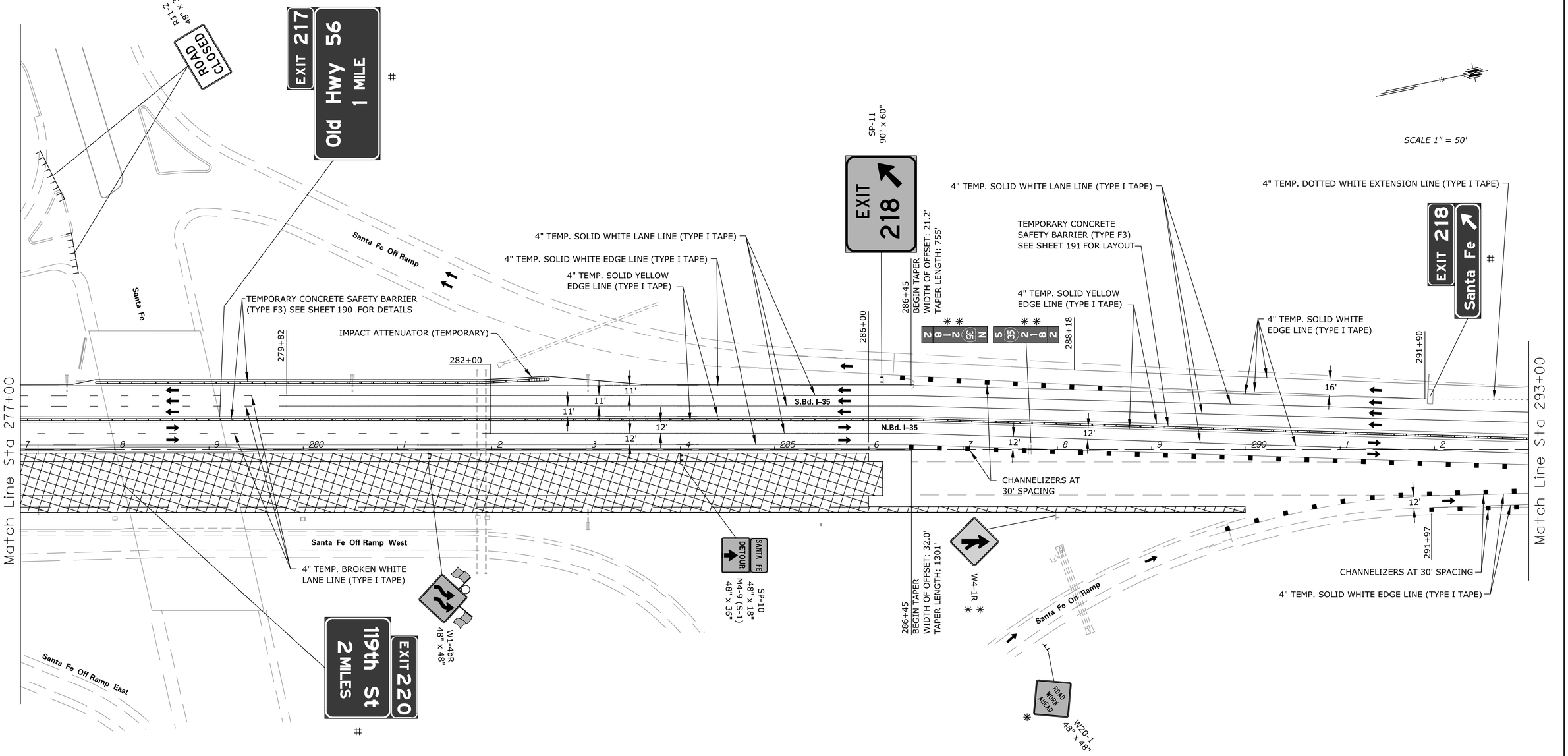
KDOT Graphics Certified 10-03-2014 *Sh. No. 183*

KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-215.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	184	251



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

NOTES:

1. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.
2. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

- # EXISTING SIGN (USE IN PLACE)
- * MAINTAIN FROM PREVIOUS PHASE
- ** EXISTING SIGN (REMOVE AND RESET AFTER PHASE 2 WORK IS COMPLETE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 277+00 TO STA. 293+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 184*

KDOT Graphics Certified

DATE | BY

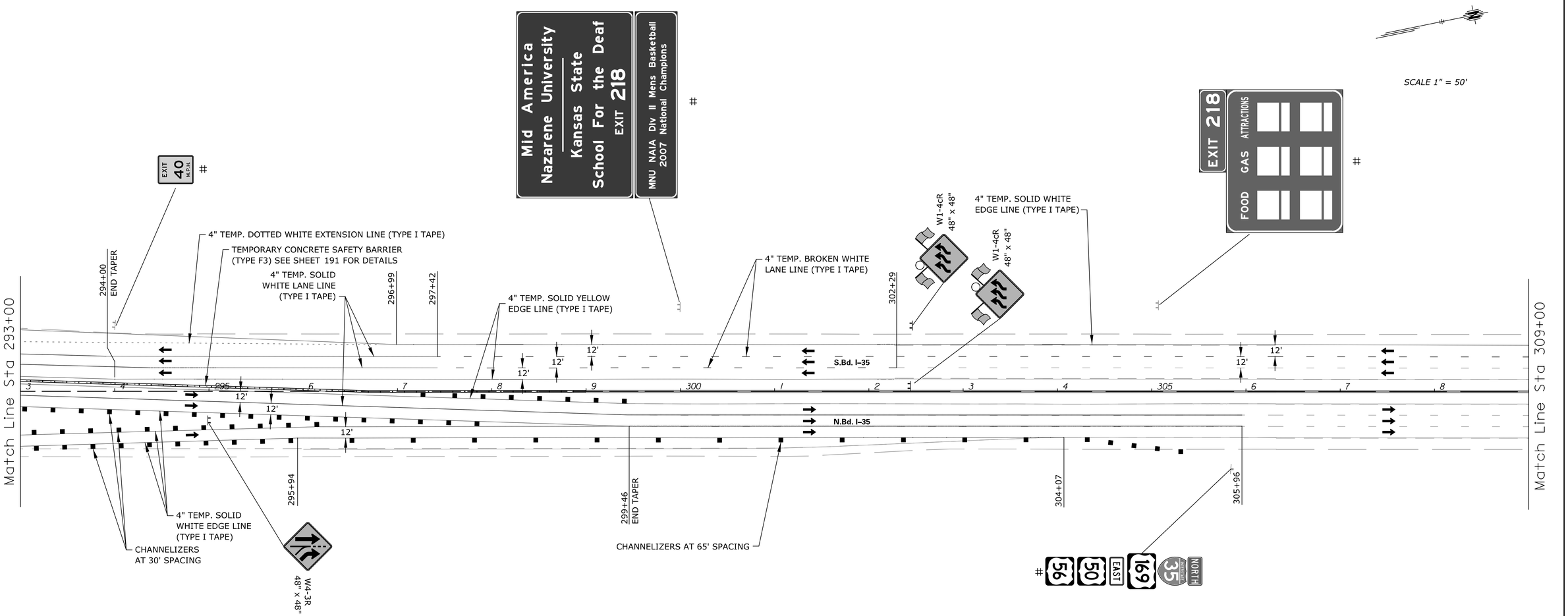
REFERENCES NOTED
REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-216.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	185	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 293+00 TO STA. 309+00

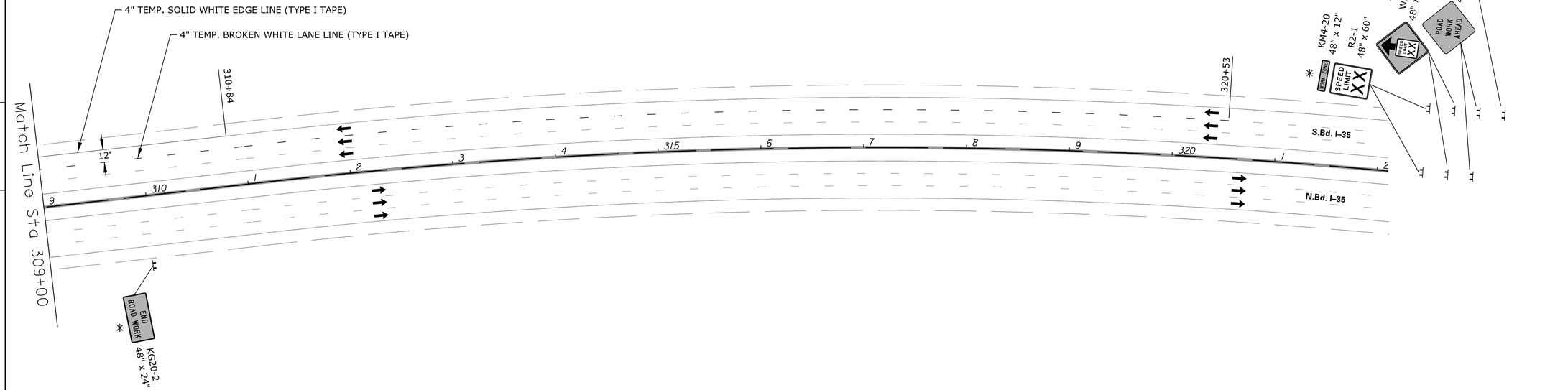
KDOT Graphics Certified 10-03-2014 *Sh. No. 185*

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-217.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	186	251

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

✳ MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 2

STA. 309+00 TO STA. 323+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 186*

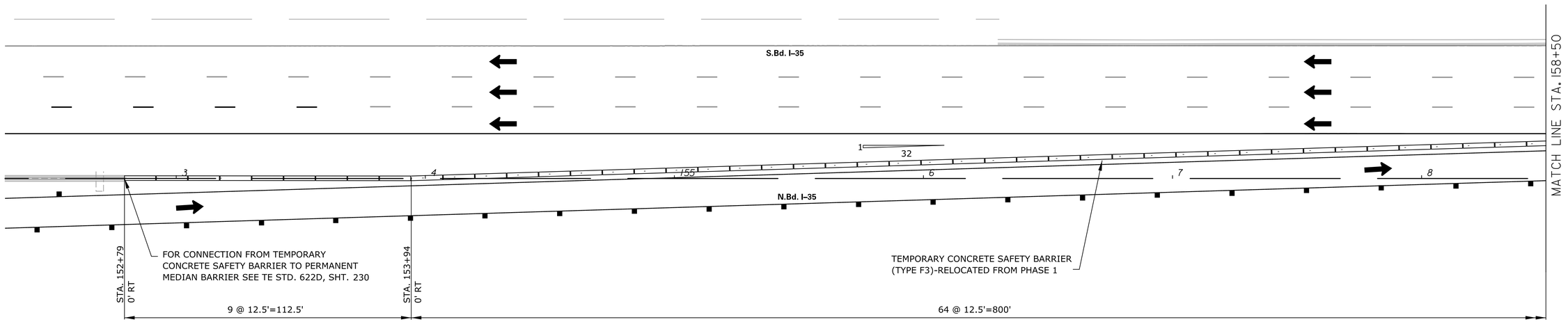
KDOT Graphics Certified

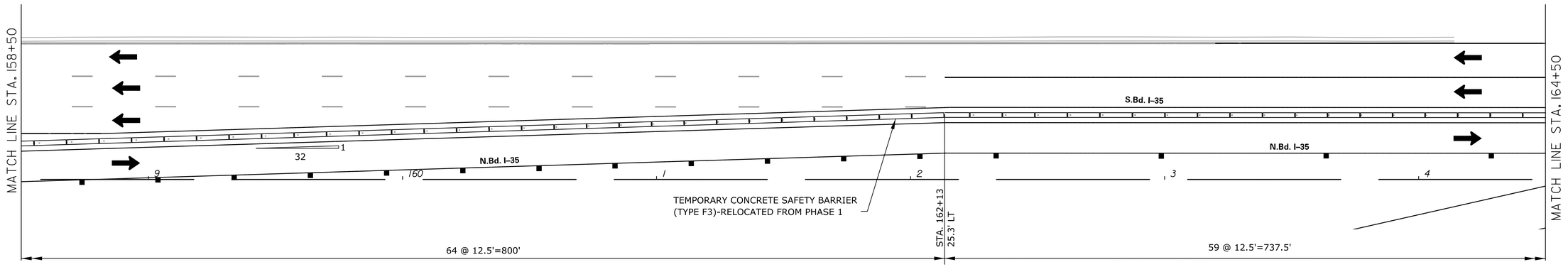
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-218.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	187	251

SCALE 1" = 20'





NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2
TEMPORARY SAFETY BARRIER
STA. 152+00 TO STA. 164+50

KDOT Graphics Certified 10-03-2014

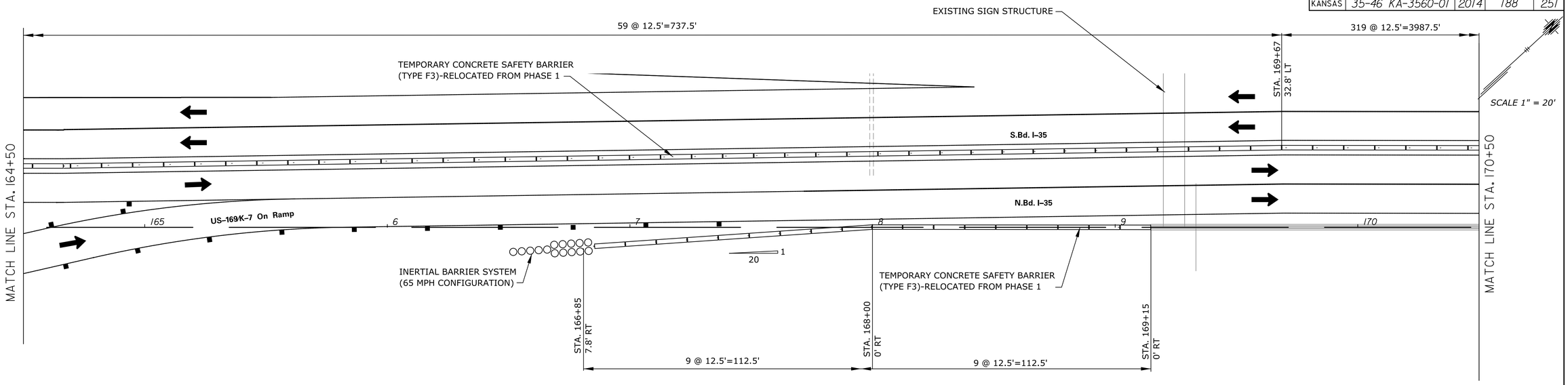
Sh. No. 187

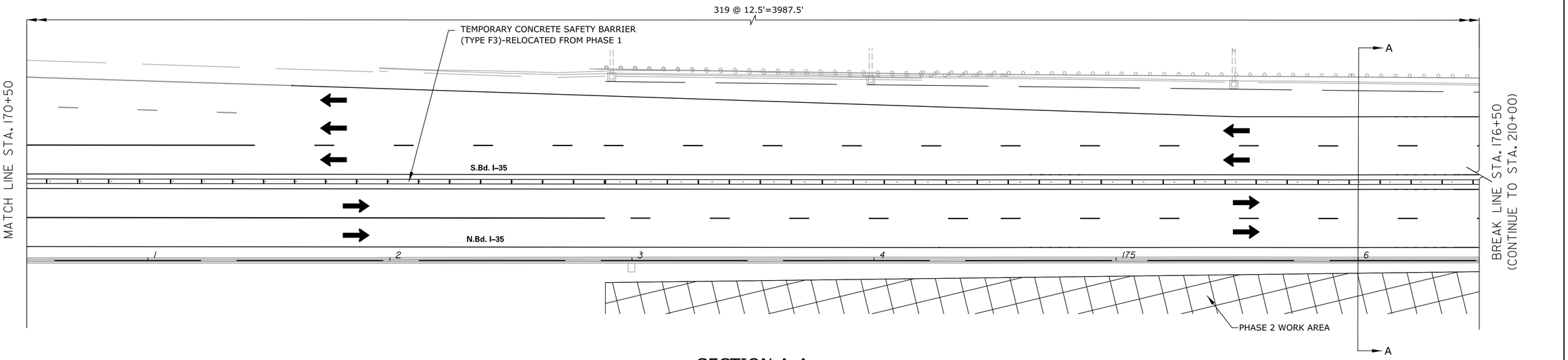
KDOT Graphics Certified

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

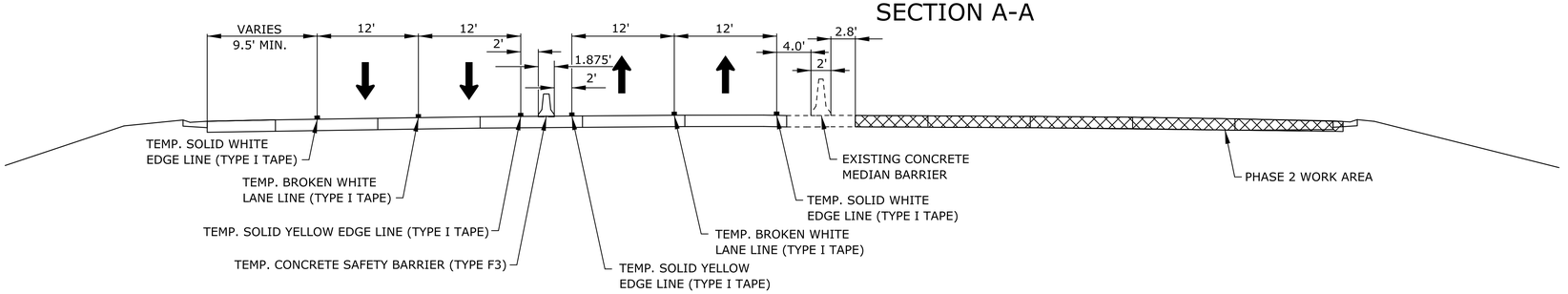
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-218a.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	188	251





SECTION A-A



NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2
TEMPORARY SAFETY BARRIER
STA. 164+50 TO STA. 176+50

KDOT Graphics Certified 10-03-2014

Sh. No. 188

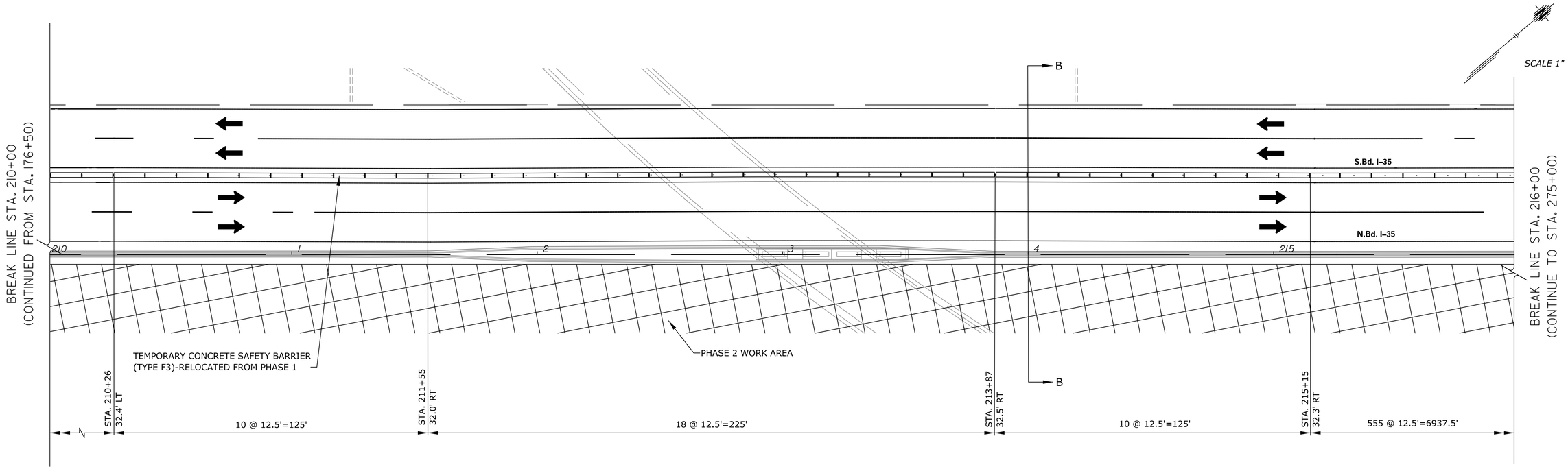
KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

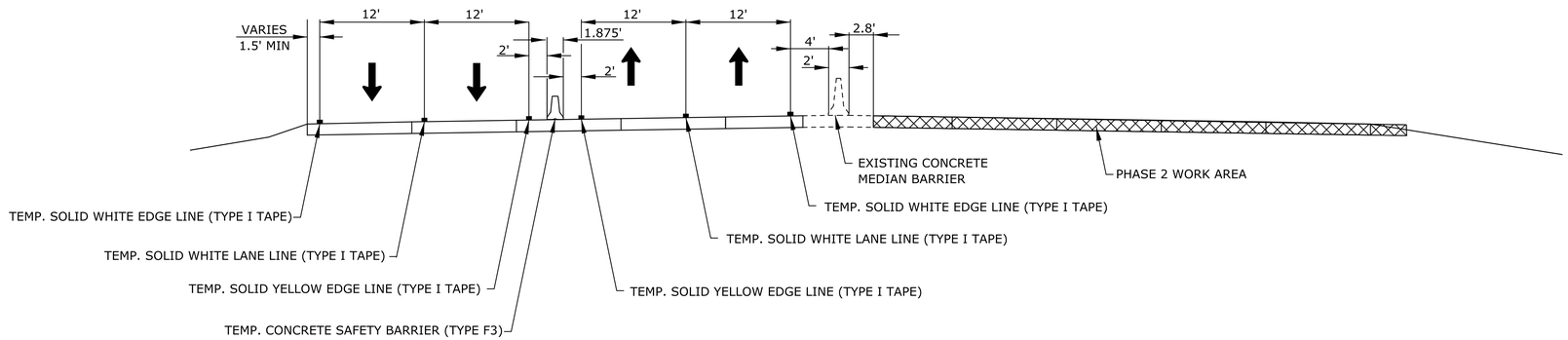
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-218b.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	189	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



SECTION B-B



NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2
TEMPORARY SAFETY BARRIER
AND IMPACT ATTENUATOR
STA. 210+00 TO STA. 216+00

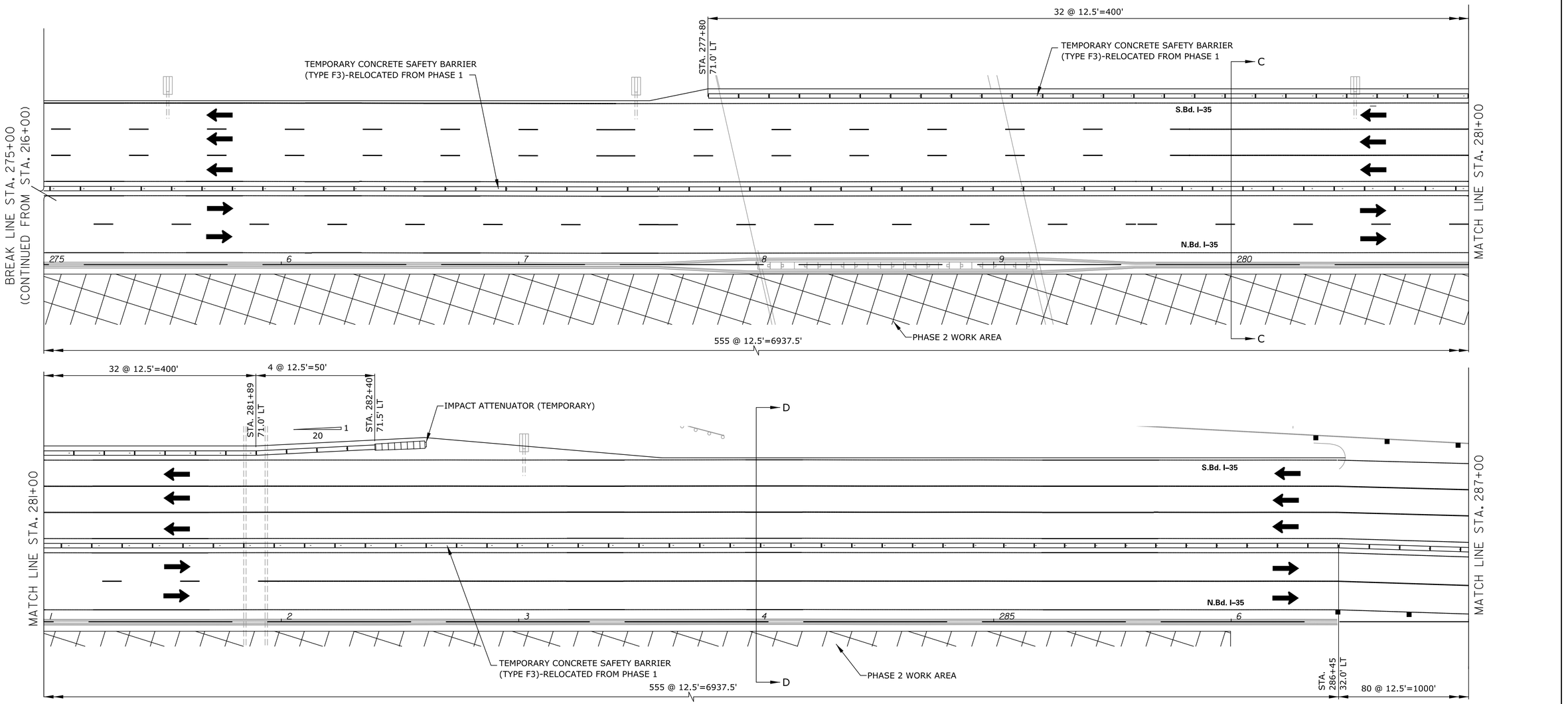
KDOT Graphics Certified 10-03-2014 *Sh. No. 189*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1\30356\Traffic\Sheets\ka356001cpl-218c.dgn

SCALE 1" = 20'

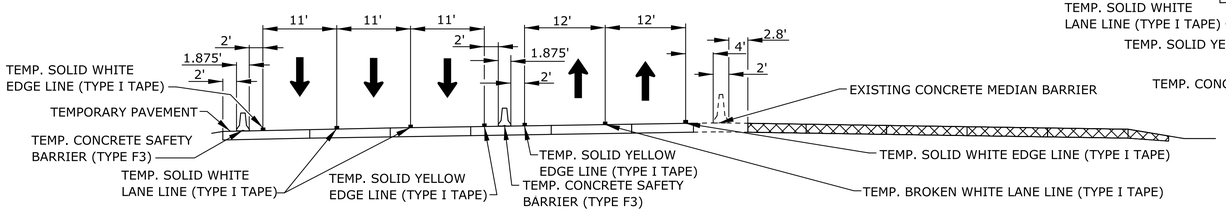
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	190	251



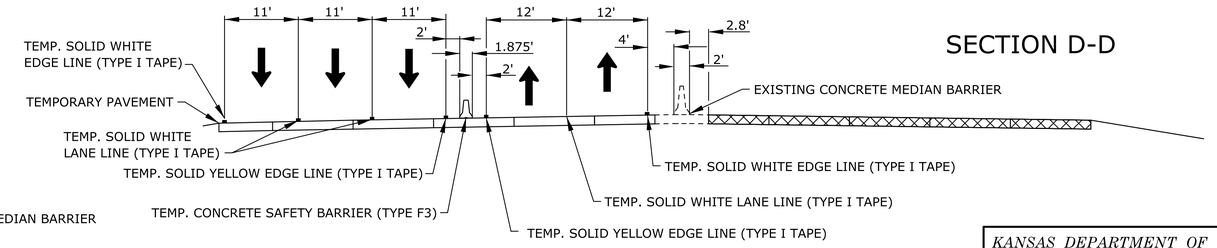
NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

SECTION C-C



SECTION D-D



DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC1310356\Traffic\Sheets\ka356001cpl-218d.dgn
Plotted : 10/16/2014

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2
TEMPORARY SAFETY BARRIER
STA. 275+00 TO STA. 287+00

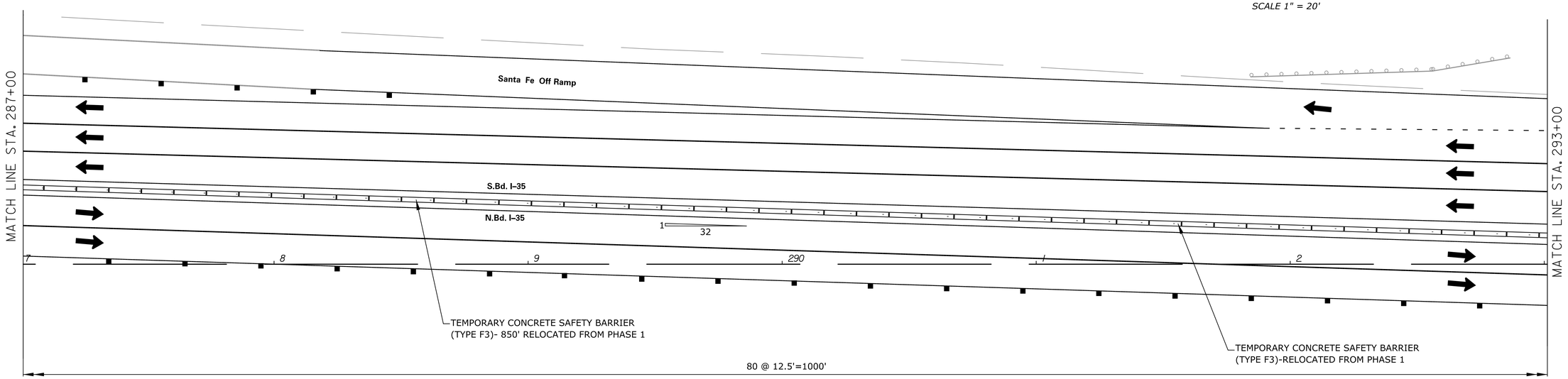
KDOT Graphics Certified 10-03-2014

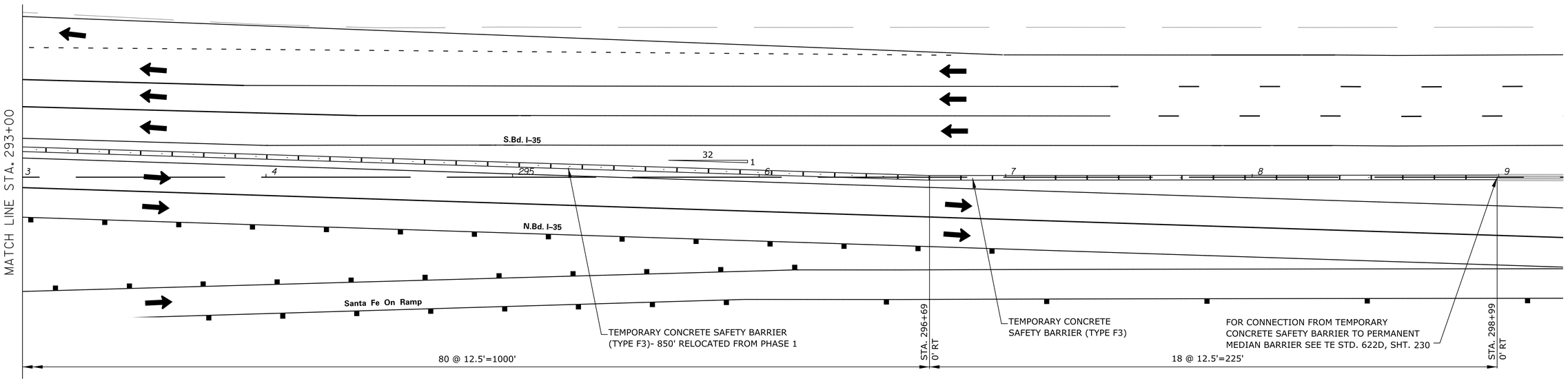
Sh. No. 190

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	191	251

SCALE 1" = 20'





NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2
TEMPORARY SAFETY BARRIER
STA. 287+00 TO STA. 299+00

KDOT Graphics Certified 10-03-2014

Sh. No. 191

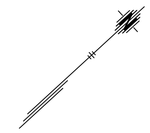
KDOT Graphics Certified

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

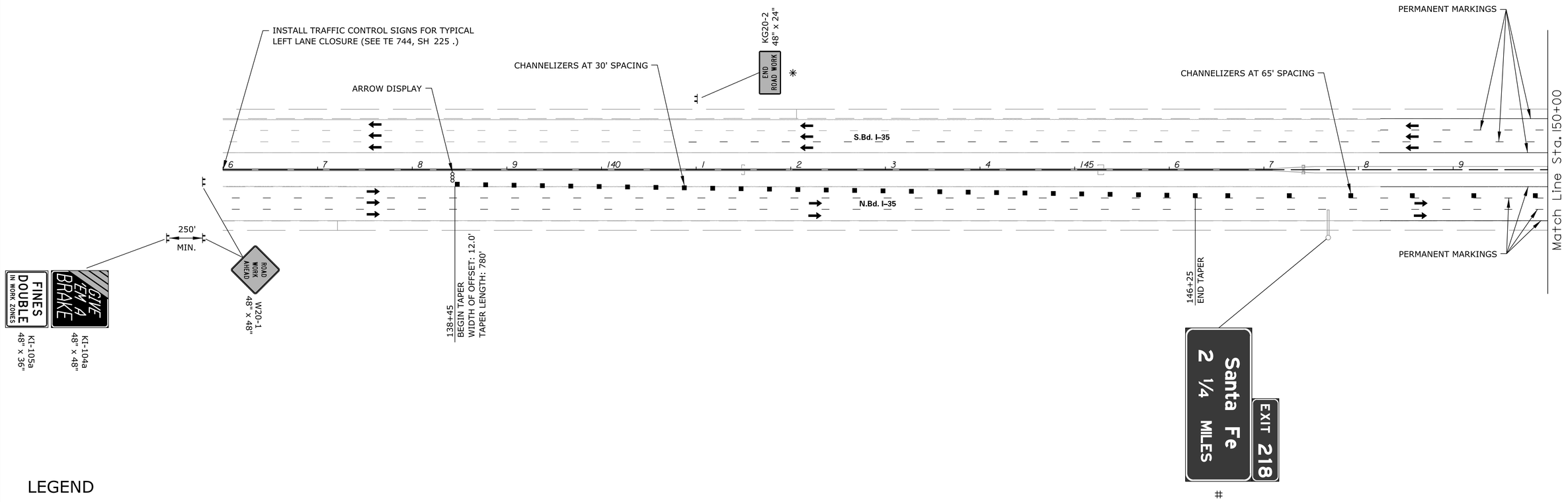
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-218e.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	192	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- * MAINTAIN FROM PREVIOUS PHASE
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 136+00 TO STA. 150+00

KDOT Graphics Certified 10-03-2014

Sh. No. 192

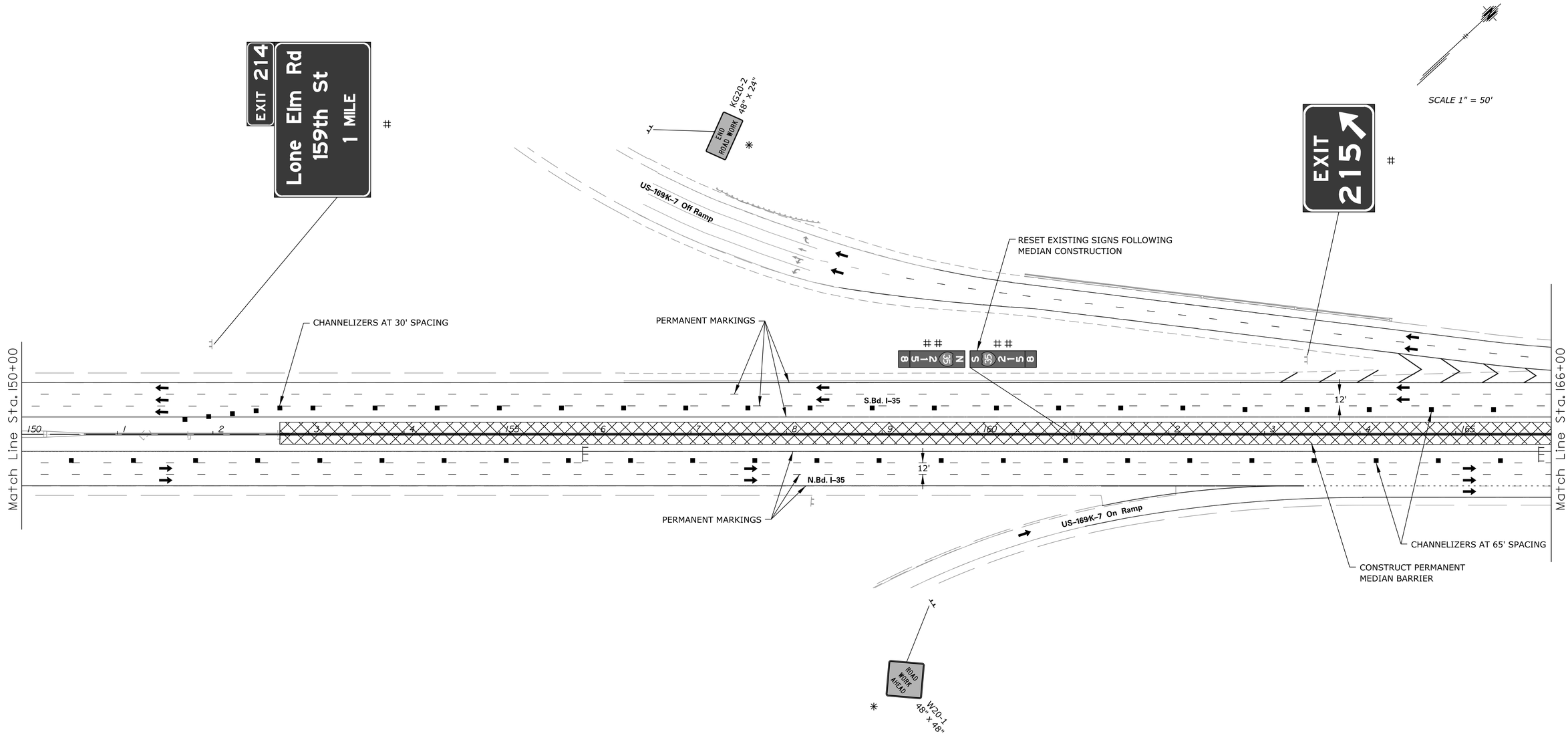
KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014

File : G:\KC1310356\Traffic\Sheets\ka356001cpl-307.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	193	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- # EXISTING SIGN (USE IN PLACE)
- ## EXISTING SIGN (RESET)
- * MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 150+00 TO STA. 166+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 193*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-308.dgn
Plotted : 10/16/2014

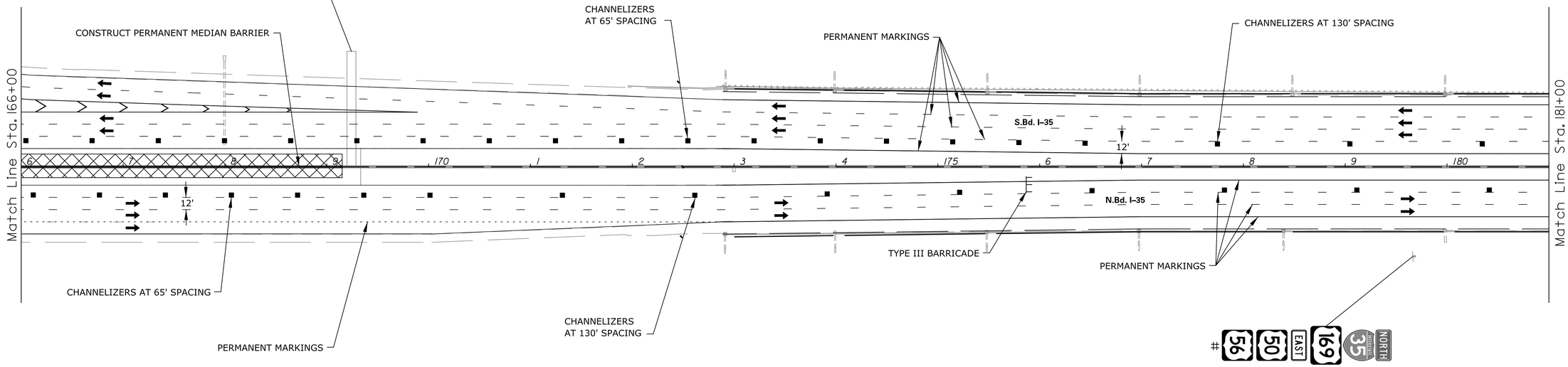
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	194	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

#

#

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 166+00 TO STA. 181+00

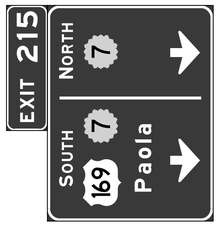
KDOT Graphics Certified 10-03-2014 *Sh. No. 194*

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-309.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	195	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	



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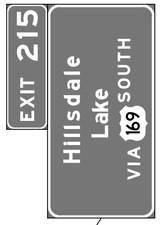

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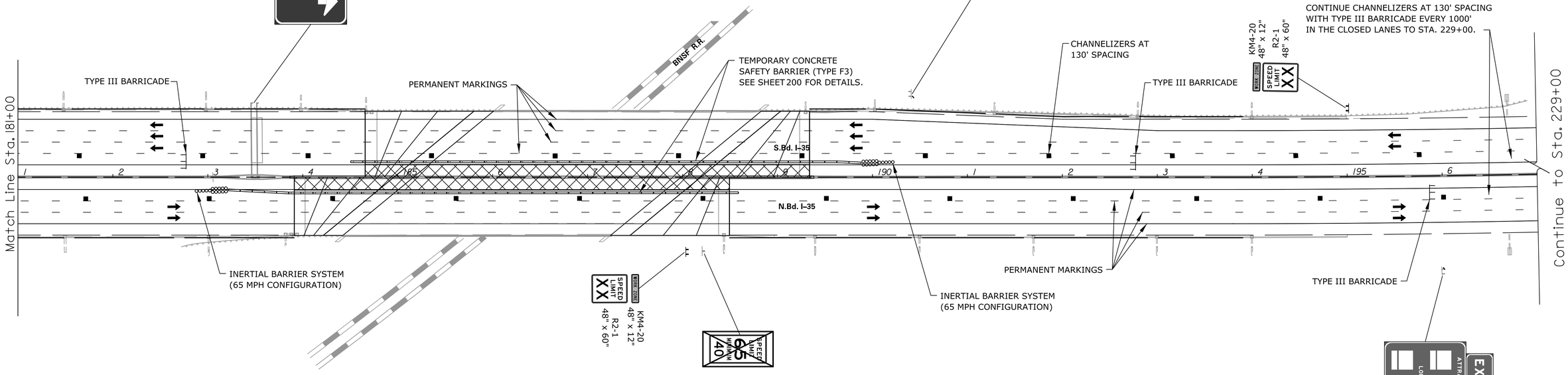
SCALE 1" = 50'



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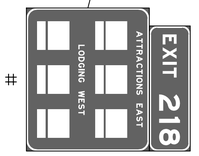


LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 181+00 TO STA. 197+00

KDOT Graphics Certified 10-03-2014

Sh. No. 195

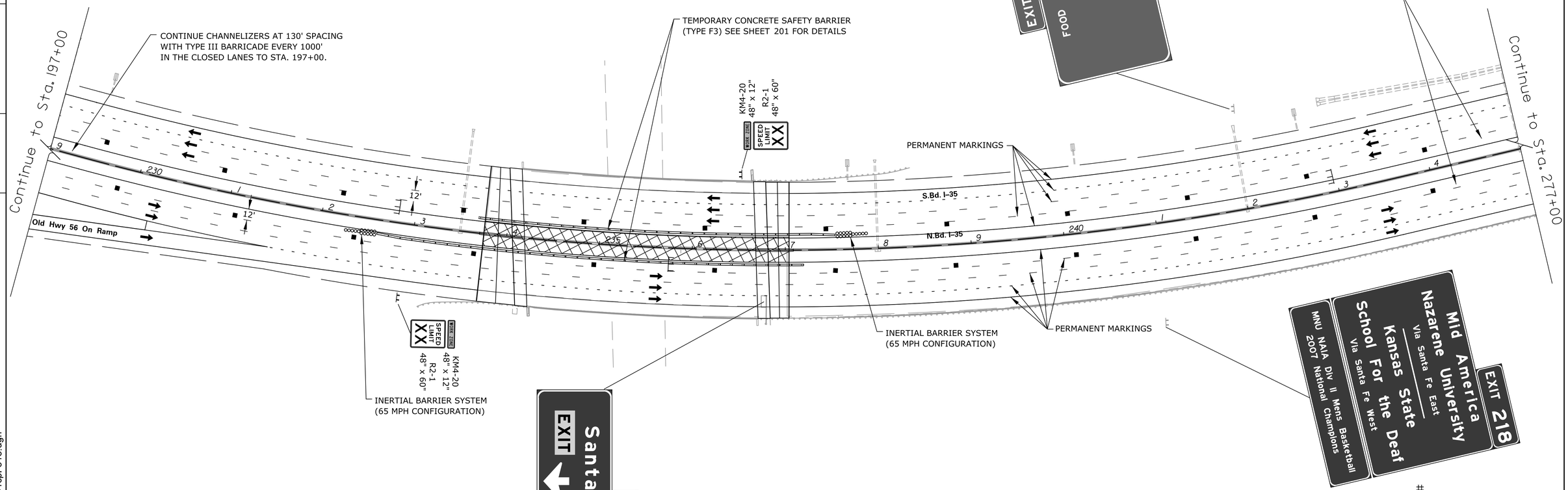
KDOT Graphics Certified

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC130356\Traffic\Sheets\ka356001cpl-310.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	196	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

SCALE 1" = 50'



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE 3
STA. 229+00 TO STA. 245+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 196*

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-313.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	197	251

CONTINUE CHANNELIZERS AT 130' SPACING WITH TYPE III BARRICADE EVERY 1000' IN THE CLOSED LANES TO STA. 245+00.

EXIT 217 Old Hwy 56 1 MILE #

SCALE 1" = 50'

EXIT 218

RESET EXISTING SIGNS FOLLOWING MEDIAN CONSTRUCTION

EXIT 218 Santa Fe #

Santa Fe Off Ramp

Santa Fe

TYPE III BARRICADE

PERMANENT MARKINGS

I-35 N 281 2

I-35 S 218 2

CHANNELIZERS AT 65' SPACING

CHANNELIZERS AT 130' SPACING

PERMANENT MARKINGS

INSTALL PERMANENT MEDIAN BARRIER

Continue to Sta. 245+00

S.Bd. I-35

7 8 9 280 1 2 3 4 285 6 7 8 9 290 1 2

12'

N.Bd. I-35

Match Line Sta. 293+00

PERMANENT MARKINGS

TYPE III BARRICADE

W4-1R

Santa Fe Off Ramp West

CHANNELIZERS AT 65' SPACING

Santa Fe On Ramp

PERMANENT MARKINGS

Santa Fe Off Ramp East

EXIT 220 119th St 2 MILES #

ROAD WORK AHEAD

W20-1 48" x 48"

*

LEGEND

WORK AREA	TYPE III BARRICADE(S)
DIRECTION OF TRAVEL	PORTABLE CHANGEABLE MESSAGE SIGN
RETROREFLECTORIZED CHANNELIZING DEVICE	BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
TRAFFIC CONTROL SIGN (1 POST)	FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
TRAFFIC CONTROL SIGN (2 POSTS)	

#	EXISTING SIGN (USE IN PLACE)
##	EXISTING SIGN (RESET)
*	MAINTAIN FROM PREVIOUS PHASE

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 277+00 TO STA. 293+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 197*

KDOT Graphics Certified

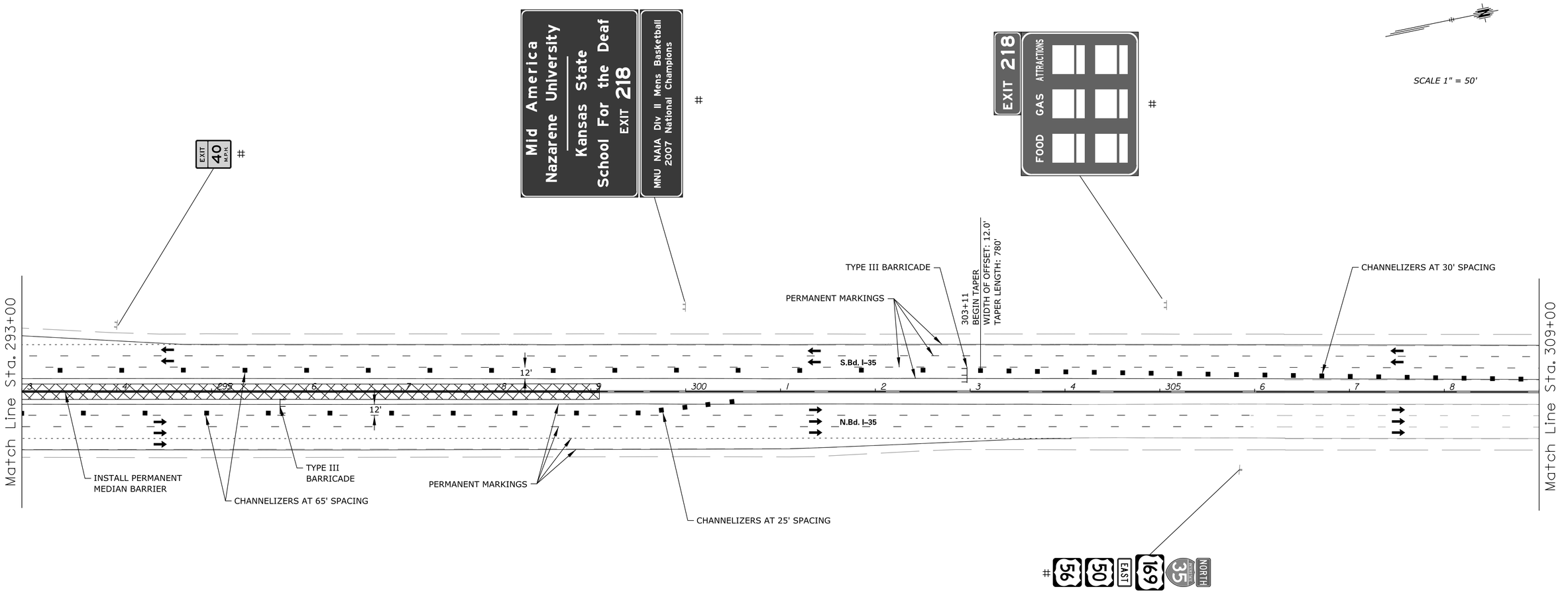
DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014

File : G:\KC1303561Traffic\Sheets\ka356001cpl-316.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	198	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

\# EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL

PHASE 3

STA. 293+00 TO STA. 309+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 198*

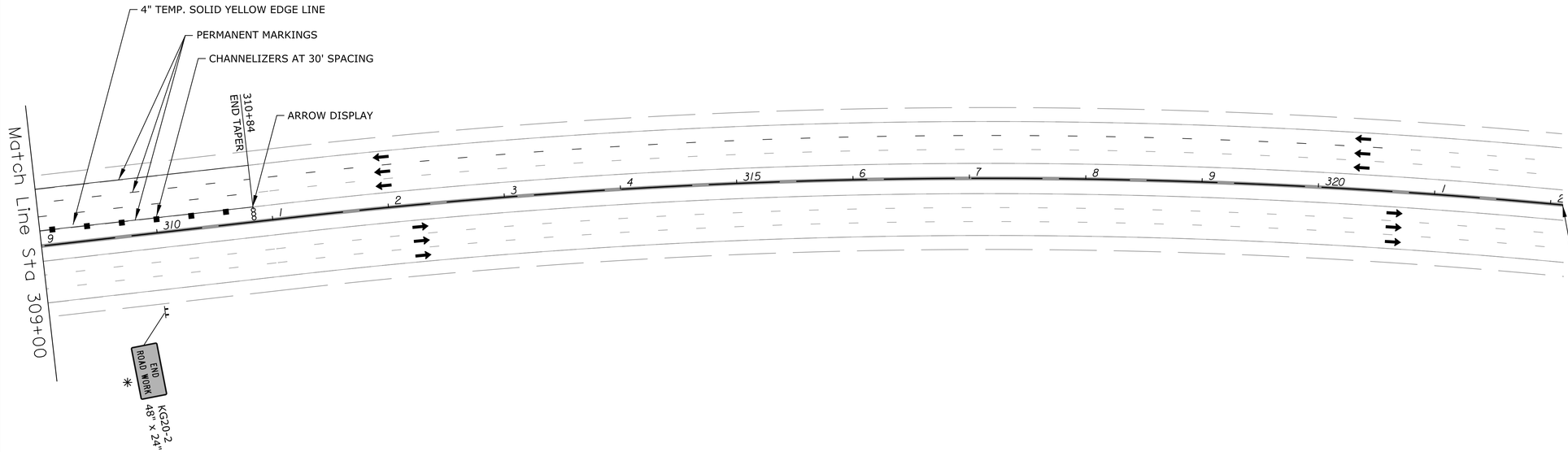
KDOT Graphics Certified

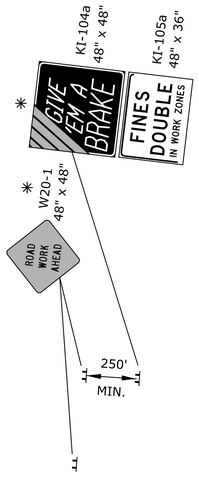
Drawn By : aameyer Plotted : 10/16/2014

File : G:\KC13\03561\Traffic\Sheets\ka356001cpl-317.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	199	251

SCALE 1" = 50'





LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT

✳ MAINTAIN FROM PREVIOUS PHASE

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

KANSAS DEPARTMENT OF TRANSPORTATION

I-35 TRAFFIC CONTROL
PHASE 3
STA. 309+00 TO STA. 323+00

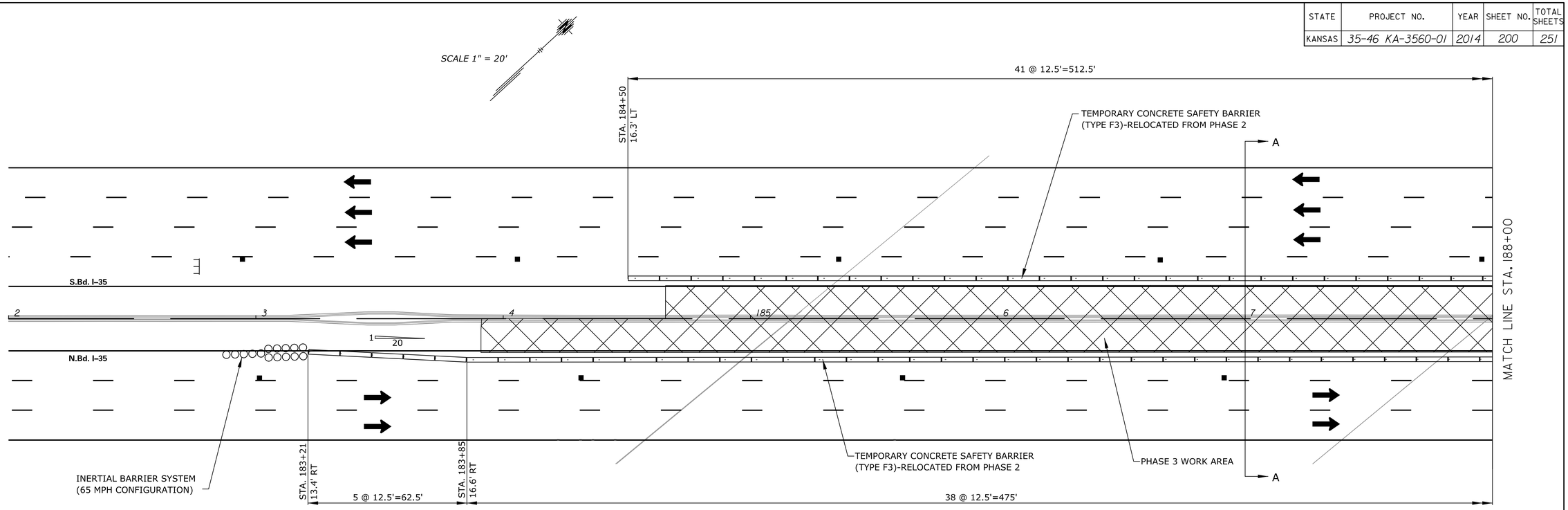
KDOT Graphics Certified 10-03-2014 *Sh. No. 199*

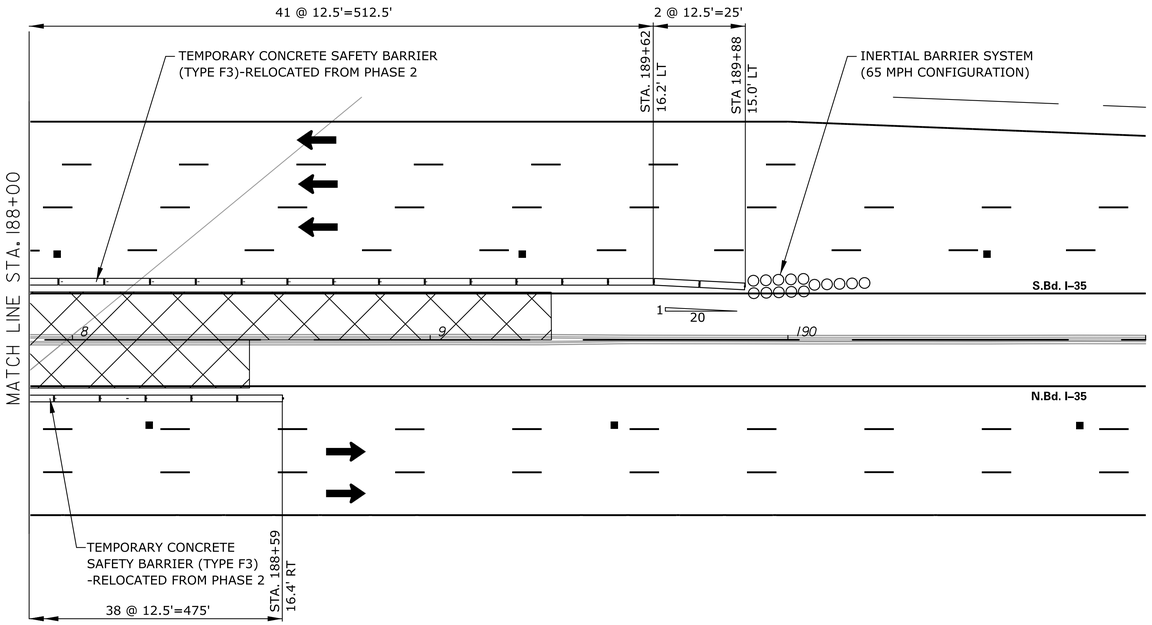
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\03561\Traffic\Sheets\ka356001cpl-318.dgn
Plotted : 10/16/2014

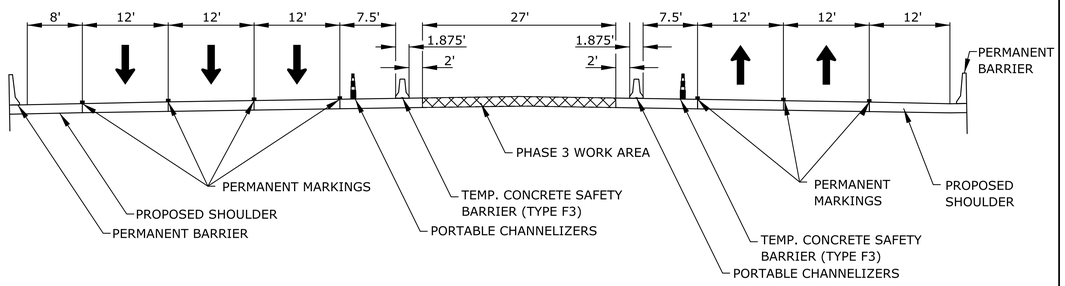
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	200	251

DATE	BY	REFERENCES NOTED / REFERENCES CHECKED





SECTION A-A



NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 3
TEMPORARY SAFETY BARRIER
STA. 182+00 TO STA. 191+00

KDOT Graphics Certified 10-03-2014

Sh. No. 200

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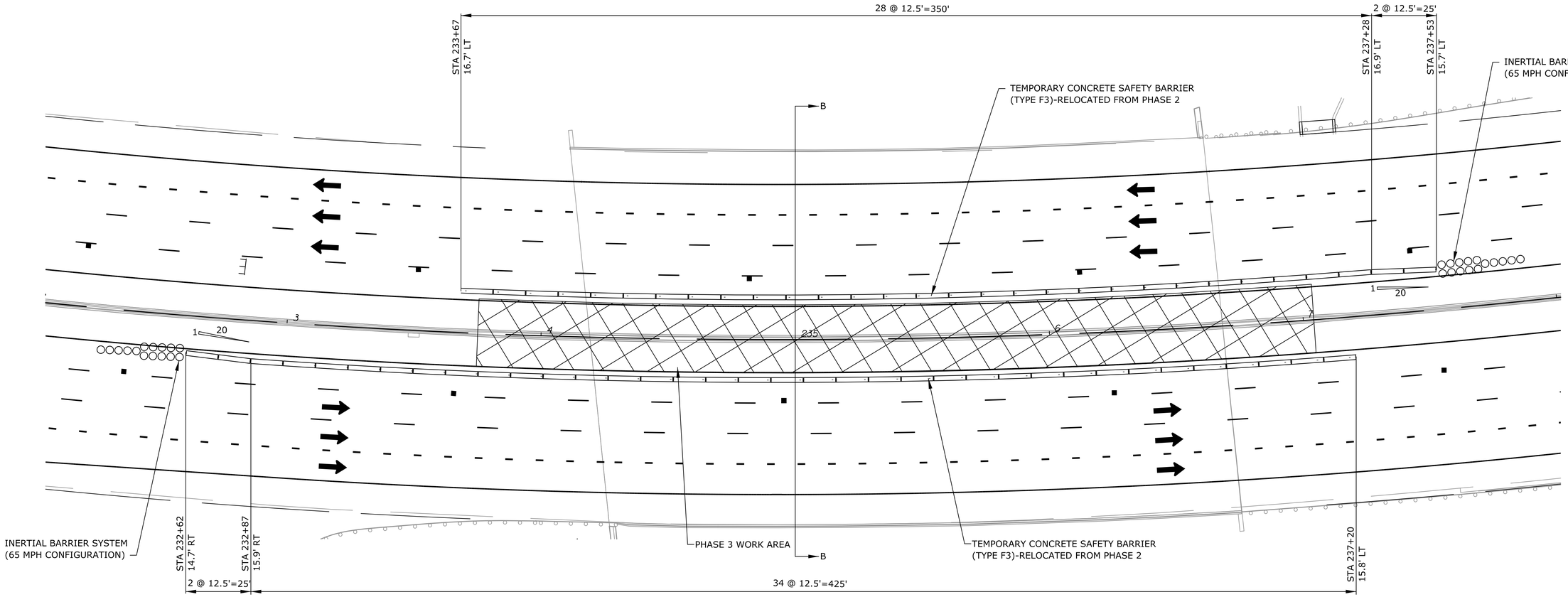
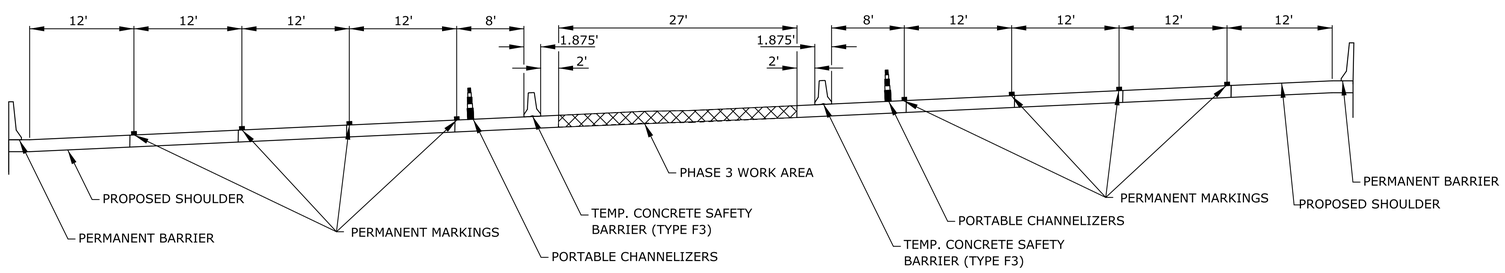
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-318a.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	201	251





NOTES:

ALL STATIONS AND OFFSETS ARE TO THE ℄ OF THE TEMPORARY CONCRETE SAFETY BARRIER.

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 3
TEMPORARY SAFETY BARRIER
STA. 232+00 TO STA. 238+00

KDOT Graphics Certified 10-03-2014 *Sh. No. 201*

KDOT Graphics Certified

DATE	BY	REFERENCES NOTED
		REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-318b.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	202	251

DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

PHASE 1

* TEMPORARY CONCRETE SAFETY BARRIER

STATION TO STATION	SIDE	NUMBER OF UNITS	LINEAR FEET OF BARRIER	REMARKS
152+79 TO 163+15	RT	81	1012.5	TRANSITION
163+15 TO 167+51	RT	34	425	FREESTANDING
167+51 TO 223+50	RT	439	5487.5	FREESTANDING
223+50 TO 225+00	RT	12	150	TRANSITION
225+00 TO 225+77	RT	6	75	FREESTANDING
225+77 TO 229+50	RT	27	337.5	TRANSITION
229+50 TO 263+02	RT	264	3300	FREESTANDING
263+02 TO 264+30	RT	10	125	TRANSITION
264+30 TO 266+98	RT	21	262.5	FREESTANDING
266+98 TO 272+63	RT	44	550	TRANSITION
272+63 TO 276+09	RT	27	337.5	FREESTANDING
276+09 TO 277+59	RT	12	150	TRANSITION
277+59 TO 279+60	RT	16	200	FREESTANDING
279+60 TO 281+60	RT	15	187.5	TRANSITION
281+60 TO 289+27	RT	60	750	FREESTANDING
289+27 TO 298+99	RT	76	950	TRANSITION
286+45 TO 289+26	LT	22	275	TRANSITION
	TOTAL	1166	14575	

PHASE 2

* TEMPORARY CONCRETE SAFETY BARRIER

STATION TO STATION	SIDE	NUMBER OF UNITS	LINEAR FEET OF BARRIER	REMARKS
152+79 TO 153+94	RT	9	112.5	FREESTANDING
153+94 TO 162+13	RT TO LT	64	800	TRANSITION
162+13 TO 169+67	LT	59	737.5	FREESTANDING
169+67 TO 210+26	LT	319	3987.5	FREESTANDING
210+26 TO 211+55	LT	10	125	TRANSITION
211+55 TO 213+87	LT	18	225	FREESTANDING
213+87 TO 215+15	LT	10	125	TRANSITION
215+15 TO 286+45	LT	555	6937.5	FREESTANDING
286+45 TO 296+69	LT	80	1000	TRANSITION
296+69 TO 298+99	LT	18	225	FREESTANDING
166+85 TO 168+00	RT	9	112.5	TRANSITION
168+00 TO 169+15	RT	9	112.5	FREESTANDING
277+80 TO 281+89	LT	32	400	FREESTANDING
281+89 TO 282+40	LT	4	50	TRANSITION
	TOTAL	1196	14950	

PHASE 3

* TEMPORARY CONCRETE SAFETY BARRIER

STATION TO STATION	SIDE	NUMBER OF UNITS	LINEAR FEET OF BARRIER	REMARKS
183+21 TO 183+85	RT	5	62.5	TRANSITION
183+85 TO 188+59	RT	38	475	FREESTANDING
184+50 TO 189+62	LT	41	512.5	FREESTANDING
189+62 TO 189+88	LT	2	25	TRANSITION
232+62 TO 232+87	RT	2	25	TRANSITION
232+87 TO 237+20	RT	34	425	FREESTANDING
233+67 TO 237+28	LT	28	350	FREESTANDING
237+28 TO 237+53	LT	2	25	TRANSITION
	TOTAL	152	1900	

* SEE SHEET 226 FOR RECAPULATION OF QUANTITIES

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I
TEMPORARY SAFETY BARRIER
SUMMARY TABLES

KDOT Graphics Certified 10-03-2014 *Sh. No. 202*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cpl-18a.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	203	251

NOTES:

1. THIS DETOUR PLAN SHALL APPLY THROUGHOUT THE CLOSURE OF THE I-35 SOUTHBOUND EXIT RAMP TO OLD HWY 56 AND THE SANTA FE ENTRANCE RAMP TO SOUTHBOUND I-35 DURING PHASE 1. SEE THE PHASE 1 TRAFFIC CONTROL PLANS FOR THE SPECIFIC CLOSURE AREAS DURING PHASE 1, ADDITIONAL DETOUR SIGNING AND TYPE III BARRICADE PLACEMENT AT CLOSURE AREAS.
2. DETOUR SIGNS SHALL BE PLACED AT THE APPROXIMATE LOCATION SHOWN ON THE PLAN AND SHALL BE FIELD ADJUSTED, IF NECESSARY, TO AVOID CONFLICTS WITH EXISTING SIGNS. THE DESIRED MINIMUM SPACING BETWEEN ADJACENT SIGNS IS 100 FEET. UNLESS OTHERWISE SHOWN, THE TYPICAL PLACEMENT FOR VARIOUS SIGNS SHALL BE AS FOLLOWS:
   - DIRECTIONAL ASSEMBLIES: AT THE NEAR OR FAR RIGHT CORNER OF THE INTERSECTION
   - ADVANCE ROUTE TURN ASSEMBLIES: 150 - 300 FEET IN ADVANCE OF THE DOWNSTREAM DIRECTIONAL ASSEMBLY
   - END DETOUR AND CONFIRMATION ASSEMBLIES: 100 FEET BEYOND THE ADJACENT INTERSECTION
   - DETOUR INFORMATION SIGNS: 300 - 500 FEET IN ADVANCE OF THE DOWNSTREAM DETOUR SIGN
3. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE LOCATED APPROXIMATELY 500 - 1000 FEET IN ADVANCE OF THE INITIAL DETOUR INFORMATION SIGNS ALONG SOUTHBOUND I-35 AND BOTH DIRECTIONS OF SANTA FE (SIGNS TO BE IN PLACE FOR A PERIOD OF AT LEAST TWO WEEKS BEFORE AND AFTER THE DETOUR IMPLEMENTATION). MESSAGES FOR USE ON THE SIGNS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER IN CHARGE OF CONSTRUCTION.
4. SEE SHEET 207 FOR ADDITIONAL DETOUR SIGNING AND TRAFFIC CONTROL DEVICES ALONG SANTA FE NEAR THE I-35 RAMPS
5. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.

LEGEND

- TRAFFIC CONTROL SIGN (1-POST)
- TRAFFIC CONTROL SIGN (2-POST)
- AREA OF ROAD CLOSURE (SEE NOTE 1)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 3)

DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I DETOUR PLANS
I-35 SB EXIT RAMP TO OLD HWY 56
SANTA FE ENT RAMP TO SB I-35

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cdt-01.dgn

KDOT Graphics Certified 10-03-2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	204	251

NOT TO SCALE

COVER EXISTING DISTANCE LEGEND WITH "CLOSED" PLAQUE (SP-05) AS SHOWN

SEE SHEETS 205 , 206 AND 208 FOR THE OLD HWY 56 ENT RAMP TO NB I-35 DETOUR DURING PHASE 2

SEE NOTE 3

SEE NOTE 4

SEE INSET B ON SHEET 209 FOR ADDITIONAL DETOUR SIGNING ON 151ST STREET, K-7 AND THE I-35 RAMPS

COVER EXISTING DISTANCE LEGEND WITH "CLOSED" PLAQUE (SP-05) AS SHOWN

SEE NOTE 3

SEE NOTE 3

SOUTHPARK

OLD HWY 56

KANSAS CITY RD.

SANTA FE AVE.

CHURCH ST.

BURCH ST.

RIDGEVIEW RD.

MAHAFFIE ST.

LINDENWOOD

151ST ST.

143RD ST.

MUR-LEN RD.

139TH ST.

MARTWAY

WINCHESTER

119TH ST.

ROGERS RD.

STRANG LINE RD.

NORTHVIEW

127TH ST.

SANTA FE AVE.

NOTES:

1. THIS DETOUR PLAN SHALL APPLY THROUGHOUT THE CLOSURE OF THE I-35 NORTHBOUND EXIT RAMP TO SANTA FE, AND THE SANTA FE ENTRANCE RAMP TO SOUTHBOUND I-35 DURING PHASE 2. SEE THE PHASE 2 TRAFFIC CONTROL PLANS FOR THE SPECIFIC CLOSURE AREAS DURING PHASE 2, ADDITIONAL DETOUR SIGNING AND TYPE III BARRICADE PLACEMENT AT CLOSURE AREAS.

2. DETOUR SIGNS SHALL BE PLACED AT THE APPROXIMATE LOCATION SHOWN ON THE PLAN AND SHALL BE FIELD ADJUSTED, IF NECESSARY, TO AVOID CONFLICTS WITH EXISTING SIGNS. THE DESIRED MINIMUM SPACING BETWEEN ADJACENT SIGNS IS 100 FEET. UNLESS OTHERWISE SHOWN, THE TYPICAL PLACEMENT FOR VARIOUS SIGNS SHALL BE AS FOLLOWS:
   - DIRECTIONAL ASSEMBLIES: AT THE NEAR OR FAR RIGHT CORNER OF THE INTERSECTION
   - ADVANCE ROUTE TURN ASSEMBLIES: 150 - 300 FEET IN ADVANCE OF THE DOWNSTREAM DIRECTIONAL ASSEMBLIy
   - END DETOUR AND CONFIRMATION ASSEMBLIES: 100 FEET BEYOND THE ADJACENT INTERSECTION
   - DETOUR INFORMATION SIGNS: 300 - 500 FEET IN ADVANCE OF THE DOWNSTREAM DETOUR SIGN

3. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE LOCATED APPROXIMATELY 500 - 1000 FEET IN ADVANCE OF THE INITIAL DETOUR INFORMATION SIGNS ALONG NORTHBOUND I-35 AND BOTH DIRECTIONS OF SANTA FE (SIGNS TO BE IN PLACE FOR A PERIOD OF AT LEAST TWO WEEKS BEFORE AND AFTER THE DETOUR IMPLEMENTATION). MESSAGES FOR USE ON THE SIGNS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER IN CHARGE OF CONSTRUCTION.

4. SEE SHEET 207 FOR ADDITIONAL DETOUR SIGNING AND TRAFFIC CONTROL DEVICES ALONG SANTA FE NEAR THE I-35 RAMPS

5. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON EITHER A 48" x 36" OR 30" x 24" SIGN BLANK BASED ON THE WIDTH OF THE TOP SIGN.

LEGEND

- TRAFFIC CONTROL SIGN (1-POST)
- TRAFFIC CONTROL SIGN (2-POST)
- AREA OF ROAD CLOSURE (SEE NOTE 1)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 3)

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2 DETOUR PLANS
I-35 NB EXIT RAMP TO SANTA FE
SANTA FE ENT RAMP TO SB I-35

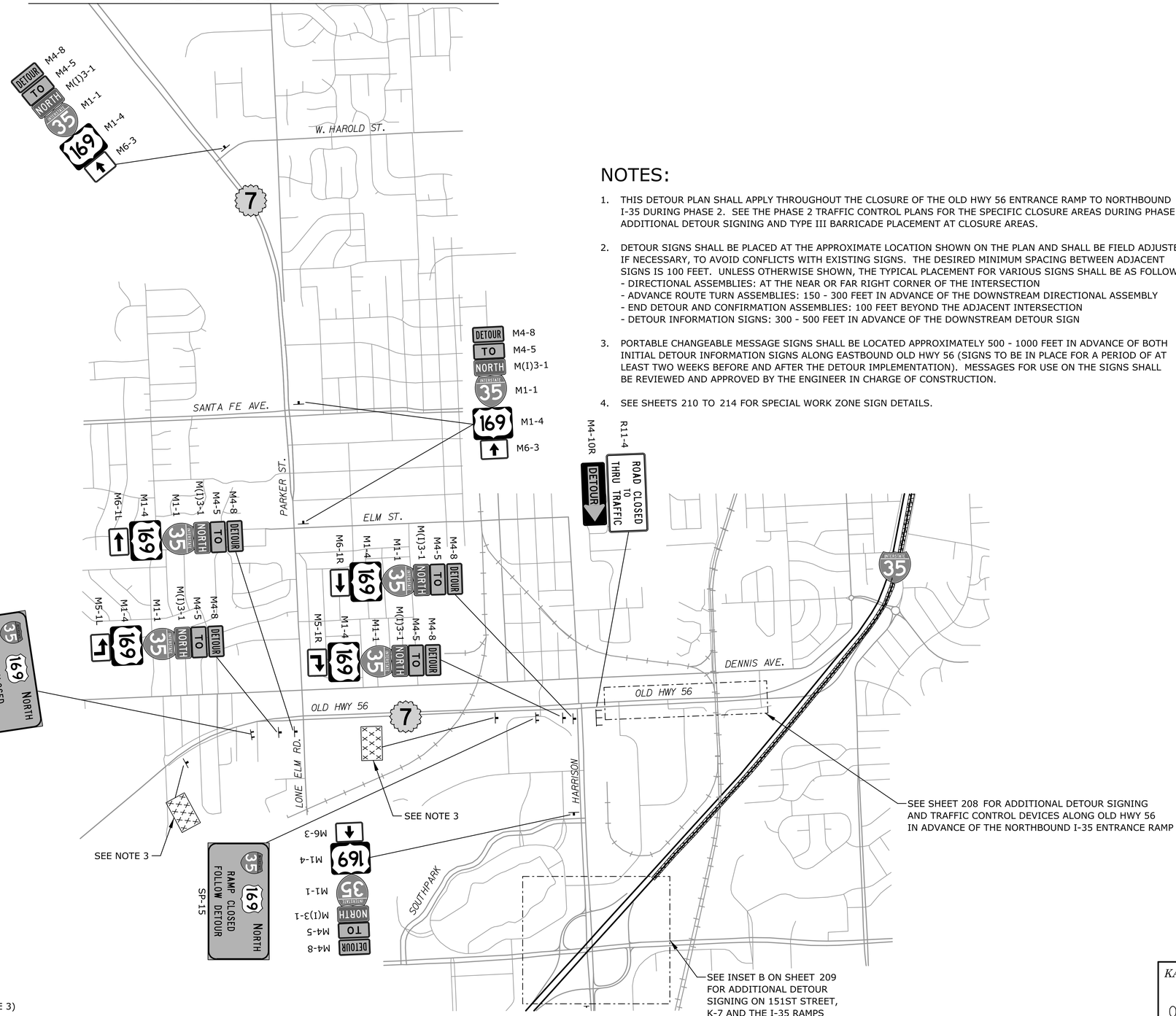
KDOT Graphics Certified 10-03-2014

Sh. No. 204

KDOT Graphics Certified

Drawn By: aameyer Plotted: 10/16/2014
File: G:\KC13\0356\Traffic\Sheets\ka356001cdt-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	205	251



NOT TO SCALE

NOTES:

1. THIS DETOUR PLAN SHALL APPLY THROUGHOUT THE CLOSURE OF THE OLD HWY 56 ENTRANCE RAMP TO NORTHBOUND I-35 DURING PHASE 2. SEE THE PHASE 2 TRAFFIC CONTROL PLANS FOR THE SPECIFIC CLOSURE AREAS DURING PHASE 2, ADDITIONAL DETOUR SIGNING AND TYPE III BARRICADE PLACEMENT AT CLOSURE AREAS.

2. DETOUR SIGNS SHALL BE PLACED AT THE APPROXIMATE LOCATION SHOWN ON THE PLAN AND SHALL BE FIELD ADJUSTED, IF NECESSARY, TO AVOID CONFLICTS WITH EXISTING SIGNS. THE DESIRED MINIMUM SPACING BETWEEN ADJACENT SIGNS IS 100 FEET. UNLESS OTHERWISE SHOWN, THE TYPICAL PLACEMENT FOR VARIOUS SIGNS SHALL BE AS FOLLOWS:
   - DIRECTIONAL ASSEMBLIES: AT THE NEAR OR FAR RIGHT CORNER OF THE INTERSECTION
   - ADVANCE ROUTE TURN ASSEMBLIES: 150 - 300 FEET IN ADVANCE OF THE DOWNSTREAM DIRECTIONAL ASSEMBLY
   - END DETOUR AND CONFIRMATION ASSEMBLIES: 100 FEET BEYOND THE ADJACENT INTERSECTION
   - DETOUR INFORMATION SIGNS: 300 - 500 FEET IN ADVANCE OF THE DOWNSTREAM DETOUR SIGN

3. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE LOCATED APPROXIMATELY 500 - 1000 FEET IN ADVANCE OF BOTH INITIAL DETOUR INFORMATION SIGNS ALONG EASTBOUND OLD HWY 56 (SIGNS TO BE IN PLACE FOR A PERIOD OF AT LEAST TWO WEEKS BEFORE AND AFTER THE DETOUR IMPLEMENTATION). MESSAGES FOR USE ON THE SIGNS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER IN CHARGE OF CONSTRUCTION.

4. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

LEGEND

- TRAFFIC CONTROL SIGN (1-POST)
- TRAFFIC CONTROL SIGN (2-POST)
- AREA OF ROAD CLOSURE (SEE NOTE 1)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 3)

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cdt-02a.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2 DETOUR PLAN
OLD HWY 56 ENT RAMP TO NB I-35
(SHEET 1 OF 2)

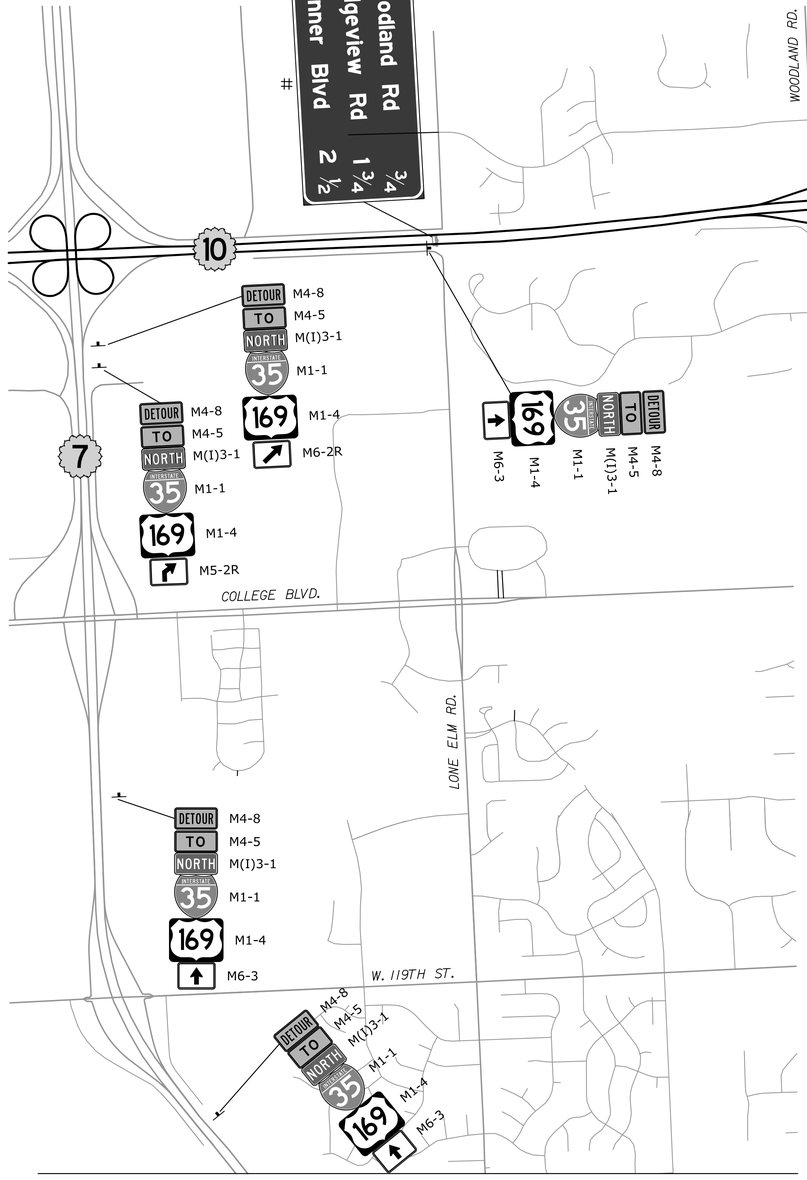
KDOT Graphics Certified 10-03-2014

Sh. No. 205

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	206	251

NOT TO SCALE



MATCHLINE A-A (SEE SHEET 1 OF 2)

NOTES:

1. THIS DETOUR PLAN SHALL APPLY THROUGHOUT THE CLOSURE OF THE OLD HWY 56 ENTRANCE RAMP TO NORTHBOUND I-35 DURING PHASE 2. SEE THE PHASE 2 TRAFFIC CONTROL PLANS FOR THE SPECIFIC CLOSURE AREAS DURING PHASE 2, ADDITIONAL DETOUR SIGNING AND TYPE III BARRICADE PLACEMENT AT CLOSURE AREAS.

2. DETOUR SIGNS SHALL BE PLACED AT THE APPROXIMATE LOCATION SHOWN ON THE PLAN AND SHALL BE FIELD ADJUSTED, IF NECESSARY, TO AVOID CONFLICTS WITH EXISTING SIGNS. THE DESIRED MINIMUM SPACING BETWEEN ADJACENT SIGNS IS 100 FEET. UNLESS OTHERWISE SHOWN, THE TYPICAL PLACEMENT FOR VARIOUS SIGNS SHALL BE AS FOLLOWS:
   - DIRECTIONAL ASSEMBLIES: AT THE NEAR OR FAR RIGHT CORNER OF THE INTERSECTION
   - ADVANCE ROUTE TURN ASSEMBLIES: 150 - 300 FEET IN ADVANCE OF THE DOWNSTREAM DIRECTIONAL ASSEMBLY
   - END DETOUR AND CONFIRMATION ASSEMBLIES: 100 FEET BEYOND THE ADJACENT INTERSECTION
   - DETOUR INFORMATION SIGNS: 300 - 500 FEET IN ADVANCE OF THE DOWNSTREAM DETOUR SIGN

3. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS.

LEGEND

- TRAFFIC CONTROL SIGN (1-POST)
- TRAFFIC CONTROL SIGN (2-POST)
- AREA OF ROAD CLOSURE (SEE NOTE 1)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 3)
- # EXISTING SIGN (USE IN PLACE)

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2 DETOUR PLAN
OLD HWY 56 ENT RAMP TO NB I-35
(SHEET 2 OF 2)

KDOT Graphics Certified 10-03-2014

Sh. No. 206

KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC130356\Traffic\Sheets\ka356001cdt-02b.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	207	251

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

SCALE 1" = 50'

COVER EXISTING SIGN ON MAST ARM

R3-2

Santa Fe Off Ramp

SOUTH 35 Wichita

CHANNELIZERS AT 10' SPACING

M6-3 M1-4 169 M1-1 35 M(1)3-3 SOUTH TO DETOUR M4-8 M4-5

M4-8 M4-5 M(1)3-3 M1-1 M1-4 M6-3 DETOUR TO SOUTH 35 169

COVER EXISTING SIGN ON MAST ARM

Sante Fe On Ramp

Santa Fe Off Ramp West

Santa Fe

CHANNELIZERS AT 30' SPACING

S.Bd. I-35

N.Bd. I-35

Santa Fe Off Ramp West

Santa Fe On Ramp

Santa Fe Off Ramp East

Claireborne Rd

M6-3 M1-4 169 M1-1 35 M(1)3-3 NORTH TO SOUTH M4-5 DETOUR M4-8

ROAD CLOSED R11-2

ROAD CLOSED R11-2

169 35 NORTH

169 35 SOUTH

Kansas City Wichita

EAST 50 56 USE 50 56 WEST USE 35 NORTH SOUTH

COVER DIRECTIONAL INFORMATION FOR WICHITA ON EXISTING SIGN

LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I AND 2 DETOUR PLANS
SANTA FE ENT RAMP TO SB I-35

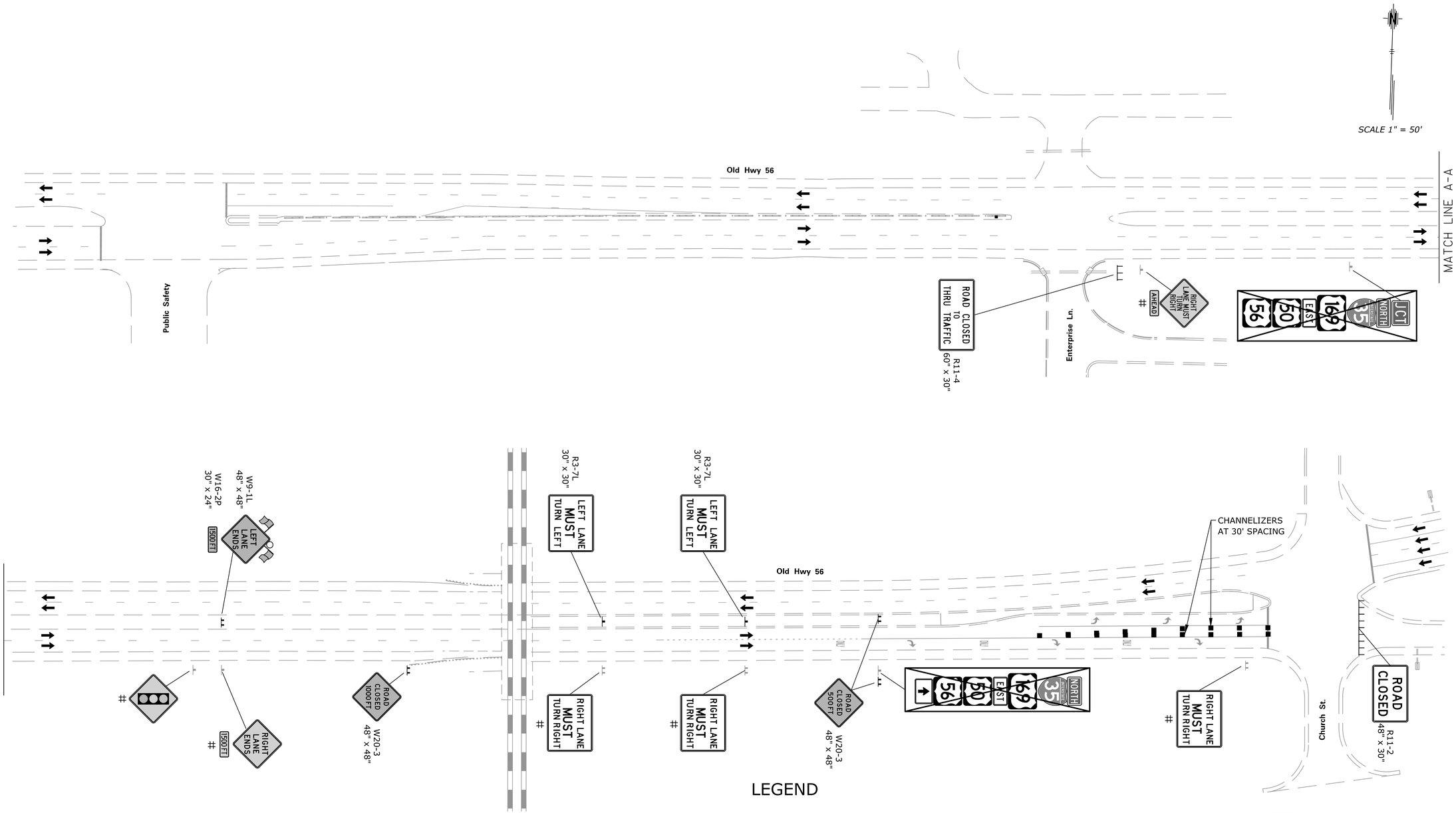
KDOT Graphics Certified 10-03-2014 *Sh. No. 207*

KDOT Graphics Certified

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001cdt-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	208	251

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED



LEGEND

- WORK AREA
- DIRECTION OF TRAVEL
- RETROREFLECTORIZED CHANNELIZING DEVICE
- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POSTS)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN
- BI-DIRECTIONAL TEMP. RAISED PAVEMENT MARKER (TYPE I)
- FLUORESCENT RED-ORANGE FLAGS AND WARNING LIGHT
- COVER EXISTING SIGN OR SIGN LEGEND
- # EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE 2 DETOUR PLAN
OLD HWY 56 ENT RAMP TO NB I-35

KDOT Graphics Certified 10-03-2014

Sh. No. 208

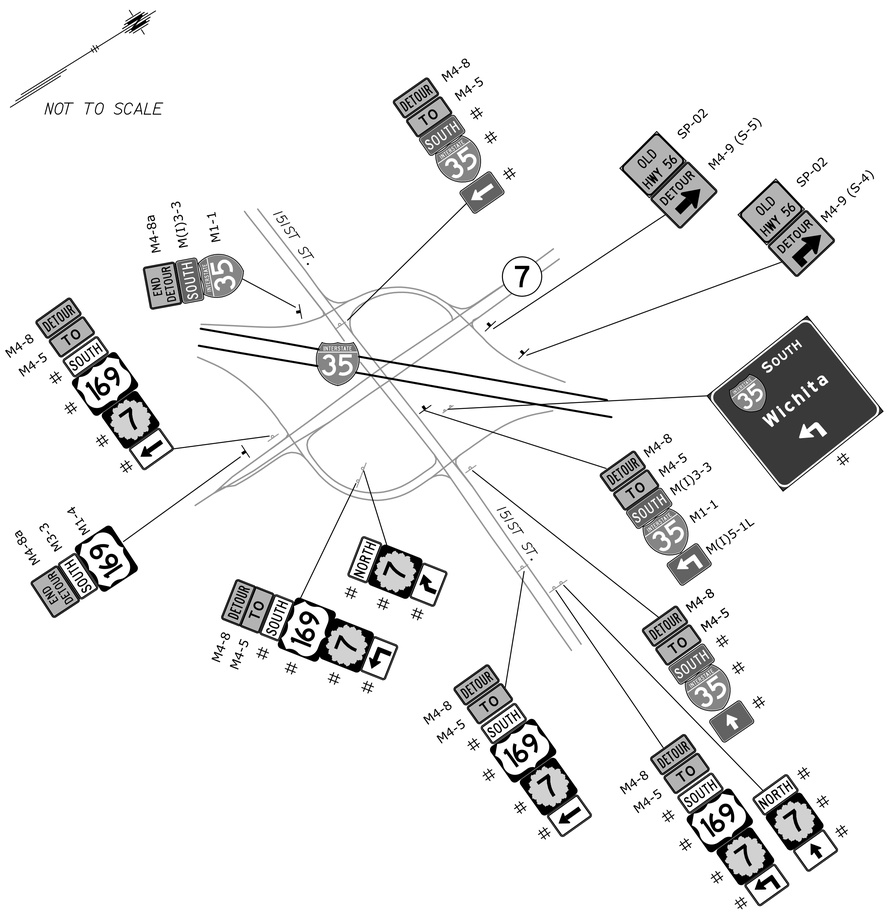
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001cdt-03b.dgn
Plotted : 10/16/2014

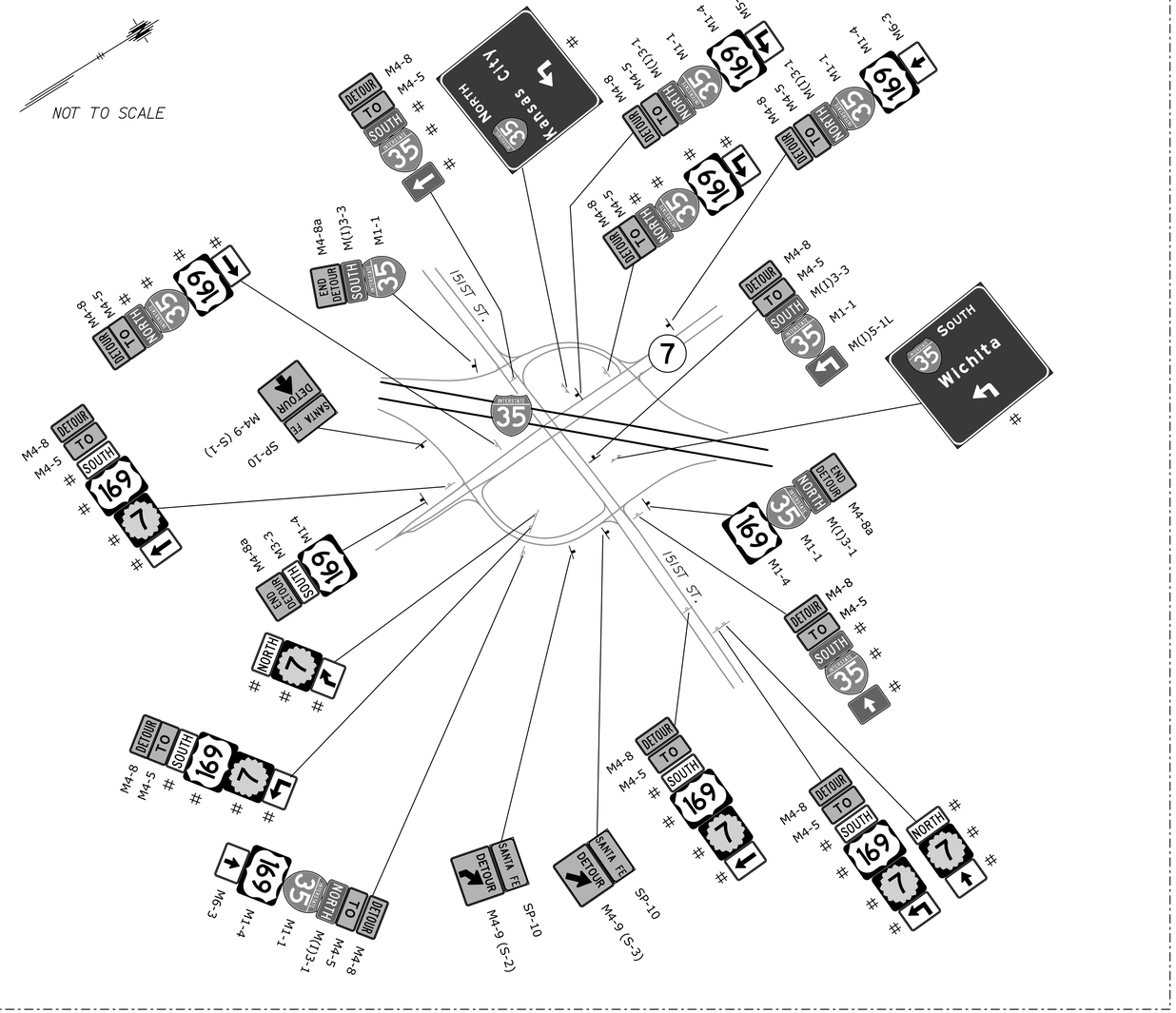
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	209	251

DATE	BY	
REFERENCES NOTED		
REFERENCES CHECKED		

INSET A
PHASE 1 DETOUR PLAN



INSET B
PHASE 2 DETOUR PLAN



LEGEND

- TRAFFIC CONTROL SIGN (1-POST)
- TRAFFIC CONTROL SIGN (2-POST)
- AREA OF ROAD CLOSURE (SEE NOTE 1)
- TYPE III BARRICADE(S)
- PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 3)

NOTES:

1. SEE SHEETS 210 TO 214 FOR SPECIAL WORK ZONE SIGN DETAILS. THE M4-9 SERIES SPECIAL SIGNS SHALL BE DESIGNED TO ACCOMMODATE THE APPROPRIATE ARROW TYPE SHOWN ON A 48" x 36" SIGN BLANK.

EXISTING SIGN (USE IN PLACE)

KANSAS DEPARTMENT OF TRANSPORTATION

PHASE I AND 2 DETOUR PLANS
151ST STREET, K-7 AND I-35 RAMPS

KDOT Graphics Certified 10-03-2014

Sh. No. 209

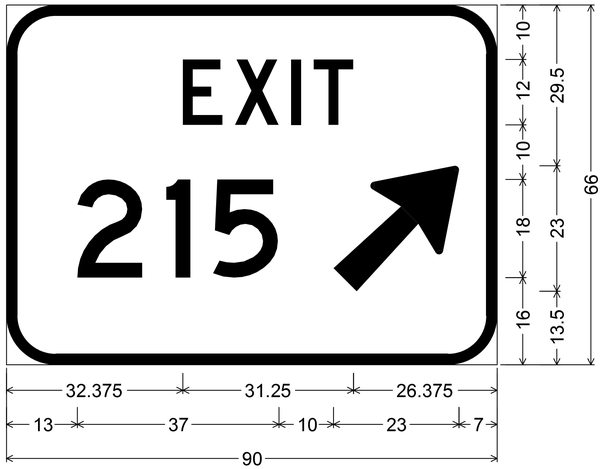
Drawn By : aameyer
File : G:\KC1\10356\Traffic\Sheets\ka356001cdt-04.dgn
Plotted : 10/16/2014

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	210	251

DATE | BY | REFERENCES NOTED | REFERENCES CHECKED

SIGN DETAILS SP-01

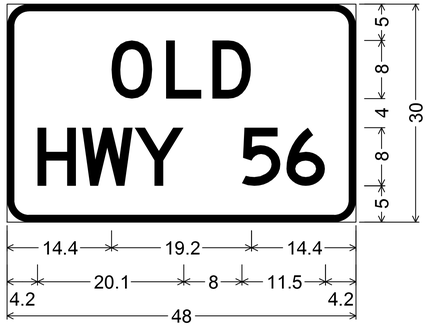


9.000" Radius, 2.000" Border, Black on Orange;
[EXIT] D; [215] D; Arrow A-13.33UC - 29.250" 45°;
Table of distances between letter and object lefts.

	E	X	I	T	
32.375	9.500	10.375	4.125	7.250	26.375

	2	1	5	↗	
13.000	16.250	8.625	22.125	23.000	7.000

SIGN DETAILS SP-02

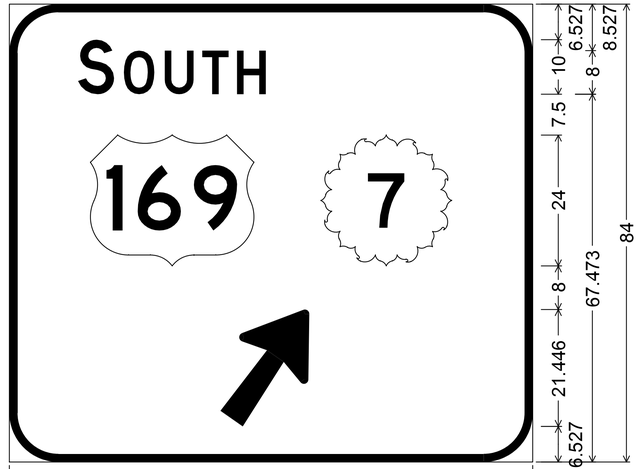


3.0" Radius, 1.0" Border, Black on Orange;
[OLD] D; [HWY 56] D 50% spacing;
Table of distances between letter and object lefts.

	O	L	D	
14.4	7.5	6.4	5.3	14.4

	H	W	Y	5	6	
4.2	6.1	7.3	14.7	6.1	5.4	4.2

SIGN DETAILS SP-03



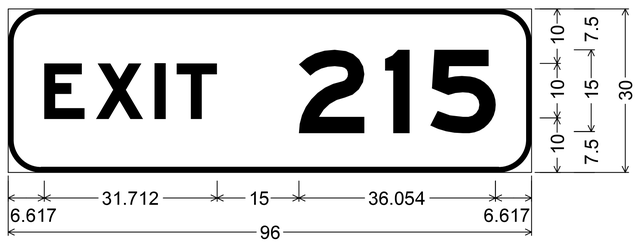
9.000" Radius, 1.500" Border, Black on Orange;
[SOUTH] D; Arrow A-10.67UC - 24.250" 55°;
Table of distances between letter and object lefts.

	S	O	U	T	H	
12.601	8.406	7.501	6.875	6.375	5.375	48.867

	169	7	
14.867	42.266	24.000	14.867

	↗	
38.715	16.304	40.981

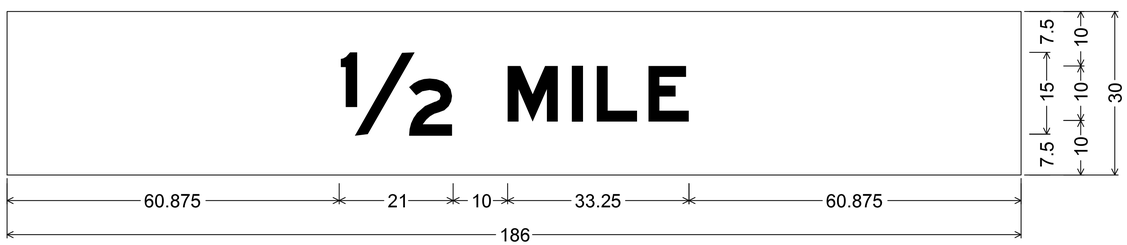
SIGN DETAILS SP-03a



6.000" Radius, 1.000" Border, Black on Orange;
[EXIT 215] E Mod;
Table of distances between letter and object lefts.

	E	X	I	T	2	1	5	
6.617	9.487	10.738	4.062	22.425	15.801	8.300	11.953	6.617

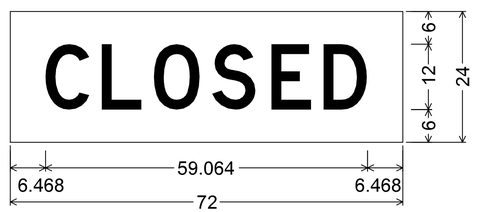
SIGN DETAILS SP-04



No border, Black on Orange;
[½ MILE] Black E Mod;
Table of distances between letter and object lefts.

	½	M	I	L	E	
60.875	31.000	11.750	4.500	9.500	7.500	60.875

SIGN DETAILS SP-05



No border, Black on Orange;
[CLOSED] D;
Table of distances between letter and object lefts.

	C	L	O	S	E	D	
6.468	10.313	9.562	10.688	10.876	9.562	8.063	6.468

Drawn By: aameyer
File: G:\KC13\0356\Traffic\Sheets\ka356001csl-01.dgn
Plotted: 10/16/2014

KANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL WORK ZONE
SIGN DETAILS
(SHEET 1 OF 5)

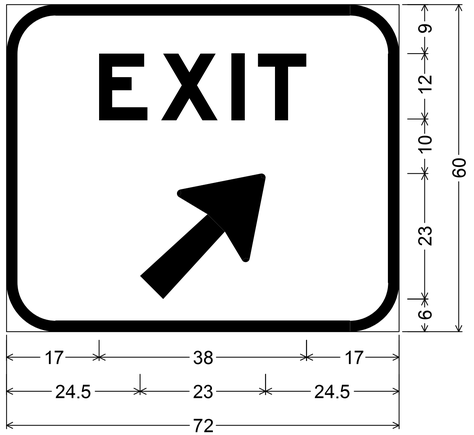
KDOT Graphics Certified 10-03-2014

Sh. No. 210

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	211	251

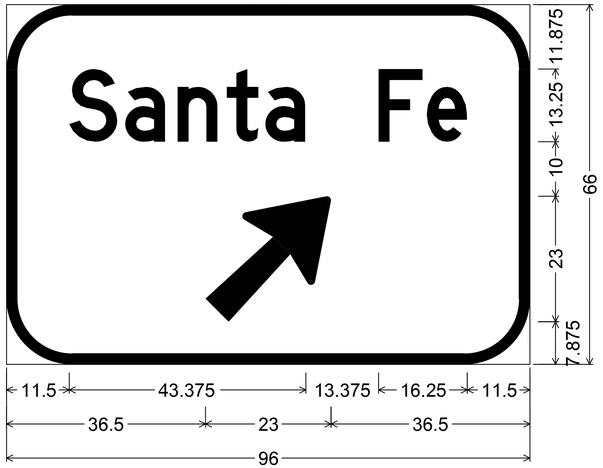
SIGN DETAILS
SP-06



9.000" Radius, 2.000" Border, Black on Orange;
[EXIT] E Mod;
Arrow A-13.33UC - 29.250" 45°;
Table of distances between letter and object lefts.

17.000	E 11.375	X 12.875	I 4.875	T 8.875	17.000
24.500	↗ 23.000	24.500			

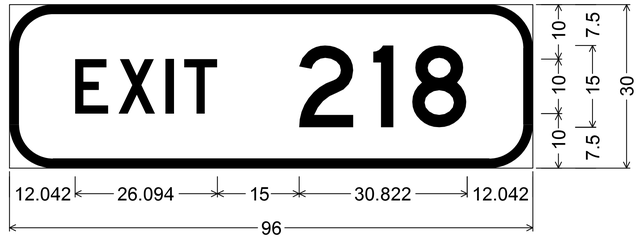
SIGN DETAILS
SP-07



12.000" Radius, 2.000" Border, Black on Orange;
[Santa Fe] D 50% spacing;
Arrow A-13.33UC - 29.250" 45°;
Table of distances between letter and object lefts.

11.500	S 10.250	a 9.625	n 9.000	t 7.125	a 20.750	F 8.875	e 7.375	11.500	
36.500	↗ 23.000	36.500							

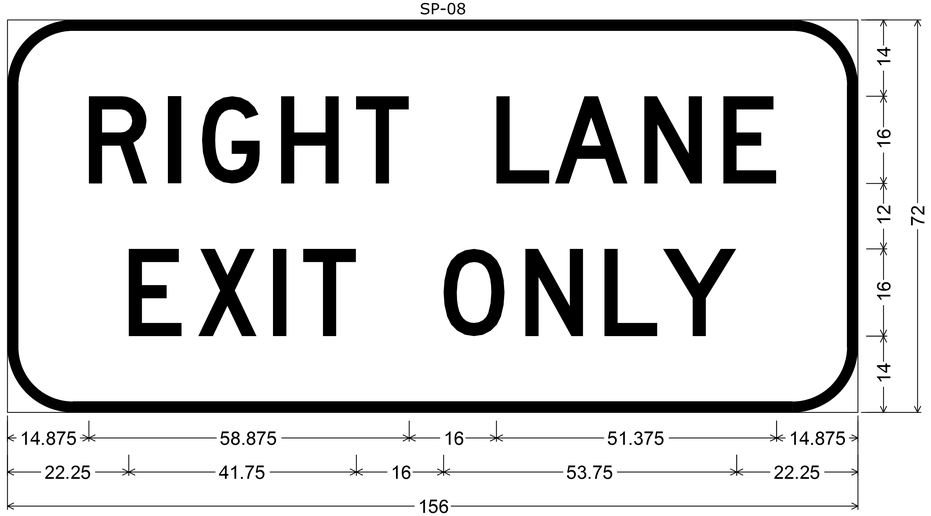
SIGN DETAILS
SP-07a



8.000" Radius, 1.750" Border, Black on Orange;
[EXIT 218] D;
Table of distances between letter and object lefts.

12.042	E 7.969	X 8.593	I 3.438	T 21.094	2 13.594	1 7.150	8 10.078	12.042

SIGN DETAILS
SP-08



12.000" Radius, 2.000" Border, Black on Orange;
[RIGHT LANE] D; [EXIT ONLY] D;
Table of distances between letter and object lefts.

14.875	R 14.500	I 6.375	G 14.500	H 13.750	T 25.750	L 10.750	A 16.375	N 14.500	E 9.750	14.875
22.250	E 12.750	X 13.750	I 5.500	T 25.750	O 15.000	N 14.500	L 10.750	Y 13.500	22.250	

SIGN DETAILS
SP-08a

12.000" Radius, 2.000" Border, Black on Orange;
[RIGHT LANE] D; [EXIT ONLY] D; [AT SANTA FE] D 50% spacing;
Table of distances between letter and object lefts.

20.875	R 14.500	I 6.375	G 14.500	H 13.750	T 25.750	L 10.750	A 16.375	N 14.500	E 9.750	20.875
28.250	E 12.750	X 13.750	I 5.500	T 25.750	O 15.000	N 14.500	L 10.750	Y 13.500	28.250	
14.250	A 13.875	T 25.750	S 12.250	A 14.875	N 12.250	T 10.250	A 29.375	F 11.250	E 9.750	14.125

DATE
BY
REFERENCES NOTED
REFERENCES CHECKED

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Traffic\Sheets\ka356001csl-02.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL WORK ZONE
SIGN DETAILS
(SHEET 2 OF 5)

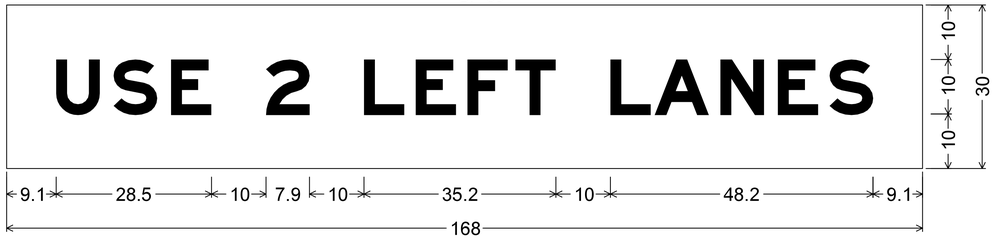
KDOT Graphics Certified 10-03-2014

Sh. No. 211

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	212	251

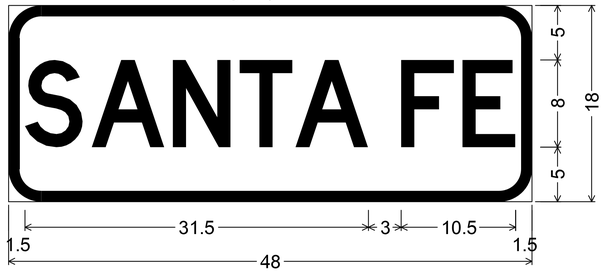
SIGN DETAILS
SP-09



No border, Black on Orange;
[USE 2 LEFT LANES] Black E Mod;
Table of distances between letter and object lefts.

	U	S	E	2	L	E	F	T	L	A	N	E	S	
9.1	10.5	10.6	17.4	17.9	9.5	9.5	8.8	17.4	8.2	12.0	10.6	9.4	8.0	9.1

SIGN DETAILS
SP-10



3.0" Radius, 1.0" Border, Black on Orange;
[SANTA FE] D 50% spacing;
Table of distances between letter and object lefts.

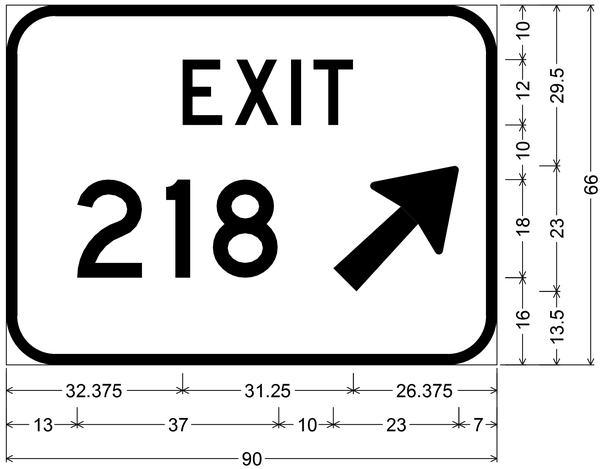
	S	A	N	T	A	F	E	
1.5	6.1	7.5	6.1	5.1	9.7	5.6	4.9	1.5

SIGN DETAILS
SP-10a

3.000" Radius, 0.500" Border, Black on Orange;
[SANTA FE] C 50% spacing;
Table of distances between letter and object lefts.

	S	A	N	T	A	F	E	
1.370	3.788	4.257	3.788	3.170	5.750	3.507	3.000	1.370

SIGN DETAILS
SP-11

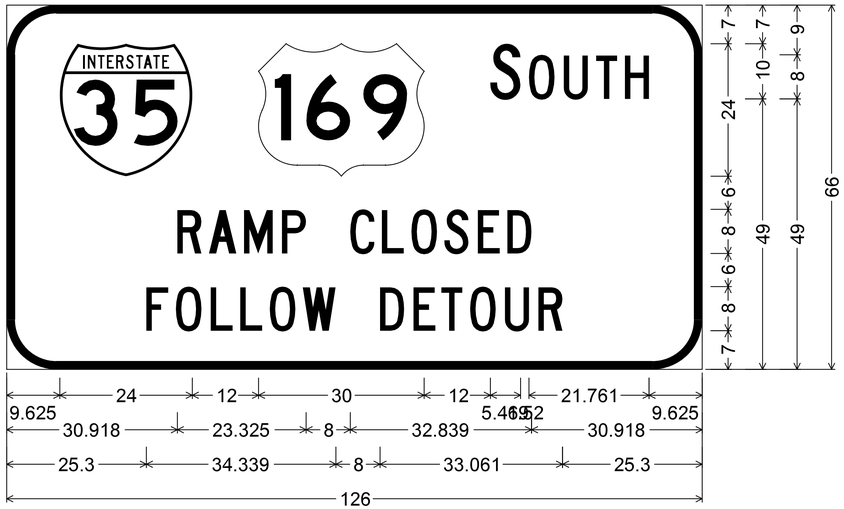


9.000" Radius, 2.000" Border, Black on Orange;
[EXIT] D; [218] D; Arrow A-13.33UC - 29.250" 45°;
Table of distances between letter and object lefts.

	E	X	I	T	
32.375	9.500	10.375	4.125	7.250	26.375

	2	1	8	↗	
13.000	16.250	8.625	22.125	23.000	7.000

SIGN DETAILS
SP-12



9.000" Radius, 1.500" Border, Black on Orange;
[SOUTH] C; [RAMP CLOSED] C; [FOLLOW DETOUR] C;
Table of distances between letter and object lefts.

	35	169	S	O	U	T	H	
9.625	36.000	42.000	6.989	6.309	5.726	5.351	4.375	9.625

	R	A	M	P	C	L	O	S	E	D		
30.918	5.727	6.351	6.872	12.375	5.726	5.351	5.976	6.059	5.352	4.375	30.918	

	F	O	L	L	O	W	D	E	T	O	U	R	
25.300	5.351	6.310	5.351	5.351	5.976	14.000	6.059	4.907	5.351	6.310	6.059	4.375	25.300

DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

Drawn By : aameyer
File : G:\KC13\03561\Traffic\Sheets\ka356001csl-03.dgn
Plotted :10/16/2014

KANSAS DEPARTMENT OF TRANSPORTATION

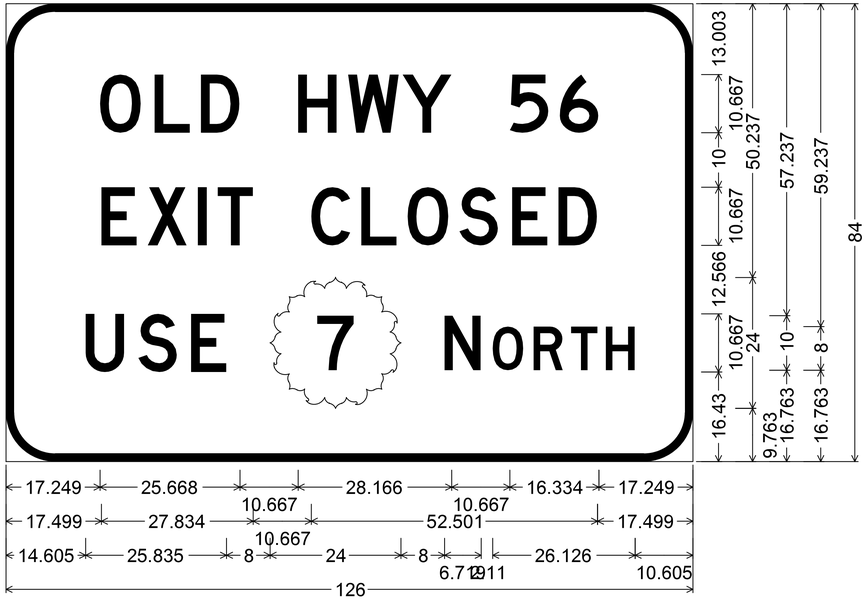
SPECIAL WORK ZONE
SIGN DETAILS
(SHEET 3 OF 5)

KDOT Graphics Certified 10-03-2014 *Sh. No. 212*

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	213	251

SIGN DETAILS
SP-13



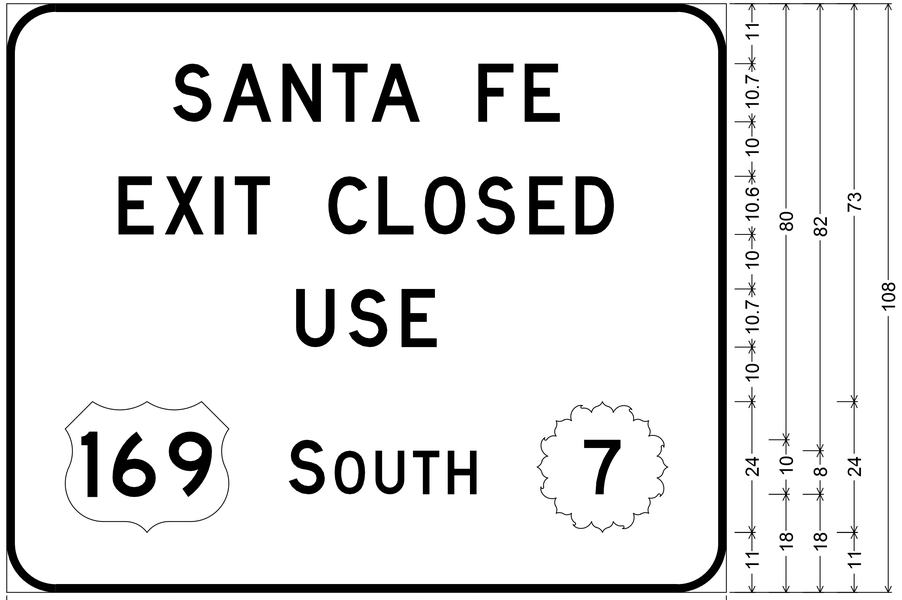
9.000" Radius, 1.500" Border, Black on Orange;
[OLD HWY 56] D; [EXIT CLOSED] D; [USE] D; [NORTH] D;
Table of distances between letter and object lefts.

17.249	O 10.001	L 8.500	D 17.834	H 9.166	W 10.000	Y 19.667	5 9.167	6 7.167	17.249

17.499	E 8.501	X 9.166	I 3.667	T 17.167	C 9.166	L 8.500	O 9.500	S 9.668	E 8.500	D 7.167	17.499

14.605	U 9.668	S 9.667	E 14.500	(7) 32.000	N 8.829	O 7.501	R 6.875	T 6.375	H 5.375	10.605

SIGN DETAILS
SP-14



9.0" Radius, 1.5" Border, Black on Orange;
[SANTA FE] D; [EXIT CLOSED] D; [USE] D; [SOUTH] D;
Table of distances between letter and object lefts.

30.5	S 9.2	A 10.9	N 9.1	T 7.2	A 19.6	F 8.5	E 6.5	30.5	

20.5	E 8.5	X 9.2	I 3.6	T 17.2	C 9.2	L 8.5	O 9.5	S 9.6	E 8.5	D 7.2	20.5

53.1	U 9.6	S 9.7	E 6.5	53.1

10.7	(169) 41.0	S 8.4	O 7.5	U 6.9	T 6.4	H 16.4	(7) 24.0	10.7

DATE	BY	
		REFERENCES NOTED
		REFERENCES CHECKED

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Traffic\Sheets\ka3560001csl-04.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL WORK ZONE
SIGN DETAILS
(SHEET 4 OF 5)

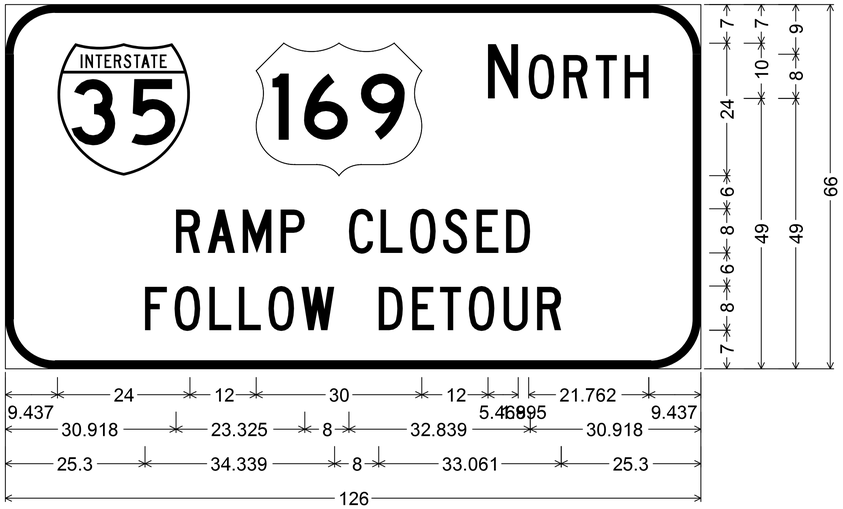
KDOT Graphics Certified 10-03-2014

Sh. No. 213

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	214	251

SIGN DETAILS
SP-15



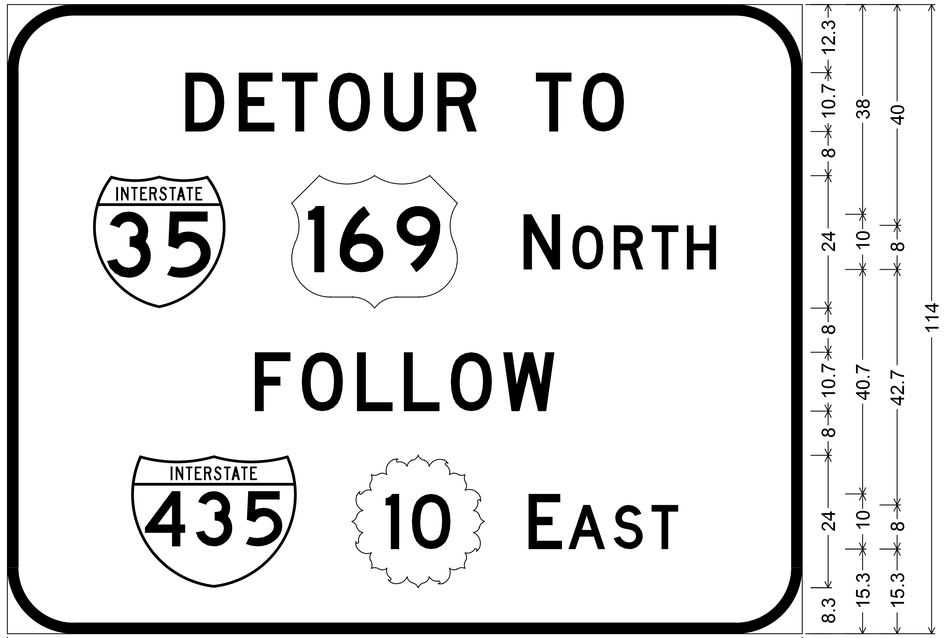
9.000" Radius, 1.500" Border, Black on Orange;
[NORTH] C; [RAMP CLOSED] C; [FOLLOW DETOUR] C;
Table of distances between letter and object lefts.

9.437	35 36.000	169 42.000	N 7.364	O 6.309	R 5.727	T 5.351	H 4.375	9.437

30.918	R 5.727	A 6.351	M 6.872	P 12.375	C 5.726	L 5.351	O 5.976	S 6.059	E 5.352	D 4.375	30.918	

25.300	F 5.351	O 6.310	L 5.351	L 5.351	O 5.976	W 14.000	D 6.059	E 4.907	T 5.351	O 6.310	U 6.059	R 4.375	25.300

SIGN DETAILS
SP-16



12.0" Radius, 2.0" Border, Black on Orange;
[DETOUR TO] D; [NORTH] D; [FOLLOW] D; Interstate 435 10.0" D; [EAST] D;
Table of distances between letter and object lefts.

32.2	D 9.7	E 7.8	T 8.5	O 10.1	U 9.6	R 17.9	T 8.5	O 7.5	32.2

15.5	35 36.0	169 42.0	N 8.9	O 7.5	R 6.8	T 6.4	H 5.4	15.5

44.8	F 8.5	O 10.0	L 8.5	L 8.5	O 9.5	W 9.4	44.8

22.4	435 40.0	10 32.0	E 7.2	A 8.2	S 6.9	T 4.9	22.4

DATE	BY	REFERENCES NOTED	REFERENCES CHECKED

Drawn By: : aameyer Plotted :10/16/2014
File : G:\KC13\03561\Traffic\Sheets\ka356001csl-05.dgn

KANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL WORK ZONE
SIGN DETAILS
(SHEET 5 OF 5)

KDOT Graphics Certified 10-03-2014 *Sh. No. 214*

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	215	251

1. MUTCD COMPLIANCE:

ALL TEMPORARY TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION AND MAINTENANCE SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS WHICH HAS BEEN ADOPTED BY THE SECRETARY OF TRANSPORTATION. WHENEVER THE TEMPORARY TRAFFIC CONTROL STANDARDS CONFLICT WITH THE MUTCD, THE STANDARDS SHALL GOVERN.

2. 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.

3. CLEAR ZONE:

ALL CONSTRUCTION EQUIPMENT (INCLUDING VEHICLES), MATERIALS, AND DEBRIS SHALL BE STORED OUT OF THE CLEAR ZONE. WHERE THIS CANNOT BE ACHIEVED, THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNS, OBJECT IDENTIFIERS, AND/OR BARRICADES AS DESIGNATED BY THE ENGINEER. TEMPORARY TRAFFIC CONTROL DEVICES NEEDED FOR THIS CONDITION SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

4. MINIMUM LANE WIDTHS:

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.

5. FLAGGER:

A MINIMUM OF ONE FLAGGER SHALL BE STATIONED WITHIN EACH MULTI-LANE ROADWAY ACTIVITY AREA WHERE WORK IS IN A CLOSED LANE ADJACENT TO TRAFFIC AND NOT SEPARATED BY A CONCRETE SAFETY BARRIER SYSTEM.

6. PAVEMENT MARKING:

WHEN THE WORK WILL OCCUPY A LOCATION MORE THAN THREE DAYS, ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED OR MASKED AND ALL TRANSITION TAPERS, CROSSOVERS, AND EDGE LINES ALONG CHANNELIZING DEVICES SHALL BE MARKED WITH SOLID 4" WIDE PAVEMENT MARKING.

7. FIRST MODULE OF IBS:

THE FIRST MODULE OF EACH INERTIAL BARRIER SYSTEM (IBS) SHALL HAVE A MINIMUM OF 2 SQ. FT. OF FLUORESCENT ORANGE ASTM TYPE IV SHEETING FACING TRAFFIC. EITHER A VERTICAL RECTANGLE OR DIAMOND SHAPE MAY BE USED.

8. PEDESTRIAN / BICYCLE SAFETY:

WORK ZONE SIGNS SHALL NOT INHIBIT PEDESTRIAN AND BICYCLE TRAFFIC ON SIDEWALKS OR OTHER AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE USE.

CONSIDERATION SHOULD BE MADE TO SEPARATE PEDESTRIAN AND 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 AND BICYCLISTS 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 AND BICYCLISTS ARE NOT CONFRONTED WITH MIDBLOCK WORK SITES THAT WILL INDUCE THEM TO ATTEMPT SKIRTING THE WORK SITE OR MAKING A MIDBLOCK CROSSING.

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.

9. CHANGED STOP CONDITIONS:

ATTACH TWO FLUORESCENT RED-ORANGE FLAGS AND A RED TYPE "B" HIGH INTENSITY WARNING LIGHT TO ANY STOP SIGN THAT CREATES A NEW STOP CONDITION OR MOVES THE STOP CONDITION TO A NEW LOCATION. LEAVE FLAGS AND LIGHTS IN PLACE FOR AT LEAST THE FIRST 30 DAYS. INSTALL W3-1 (SYMBOLIC STOP AHEAD) SIGN IN ADVANCE OF STOP SIGN IF STOP SIGN IS NOT VISIBLE FOR A MINIMUM OF DISTANCE 'A' (SEE CHART ON TE710) OR IF STOP CONDITION IS MOVED TO LESS THAN DISTANCE 'A' FROM AN EXISTING STOP AHEAD SIGN.

10. LUMP SUM BIDDING:

WHEN TRAFFIC CONTROL IS BID LUMP SUM, ADDITIONAL DEVICES WILL BE PAID FOR AS EXTRA WORK.

11. NIGHTTIME LIGHTING:

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHOULD BE USED TO ILLUMINATE FLAGGER STATIONS, EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHTING IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTS BE PERMITTED TO CREATE A DISABLING GLARE FOR THE DRIVER. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

12. NCHRP REPORT 350 CRASHWORTHY REQUIREMENTS:

TRAFFIC CONTROL DEVICES SHALL MEET THE EVALUATION CRITERIA IN NCHRP REPORT 350 OR IN MASH REPORT 2009 AS SUPPLEMENTED BY FHWA MEMORANDUM "IDENTIFYING ACCEPTABLE HIGHWAY SAFETY FEATURES," DATED JULY 25, 1997. AVAILABLE ON THE INTERNET AT http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/policy_memo/

ANY DEVICE NOT ADDRESSED BY THE TE STANDARDS MAY BE APPROVED ON A CASE BY CASE BASIS BY THE ENGINEER. THE DEVICE SHALL BE ACCOMPANIED BY AND INSTALLED ACCORDING TO MASH REPORT 2009. ANY DEVICE ACCEPTED PRIOR TO THE ADOPTION OF MASH REPORT 2009 USING CRITERIA FROM NCHRP REPORT 350 MAY REMAIN IN PLACE AND CONTINUE TO BE USED. ANY TRAFFIC CONTROL DEVICE ACCEPTED USING NCHRP REPORT 350 CRITERIA IS NOT REQUIRED TO BE TESTED UNDER MASH REPORT 2009. HOWEVER, NEW TRAFFIC CONTROL DEVICES NOT PREVIOUSLY EVALUATED MUST UTILIZE MASH REPORT 2009 FOR TESTING AND EVALUATION.

THE CONTRACTOR SHALL:

1) PROVIDE TO THE ENGINEER A COPY OF THE MANUFACTURER'S SELF-CERTIFICATION THAT ANY CATEGORY 1 (i.e. - PLASTIC CONICAL DELINEATORS, TUBULAR MARKERS, DRUMS WITHOUT ATTACHMENTS) AND CATEGORY 2 (i.e. - PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) DEVICES USED ON THE PROJECT ARE NCHRP REPORT 350 OR MASH REPORT 2009 COMPLIANT.

2) PROVIDE TO THE ENGINEER A COPY OF THE ENTIRE FHWA ACCEPTANCE LETTER (WZ-xxx) FOR ANY CATEGORY 2 DEVICE (i.e. - PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) USED ON THE PROJECT. WORK ZONE FHWA ACCEPTANCE LETTERS (WZ-xxx) ARE AVAILABLE ON THE INTERNET AT: http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/

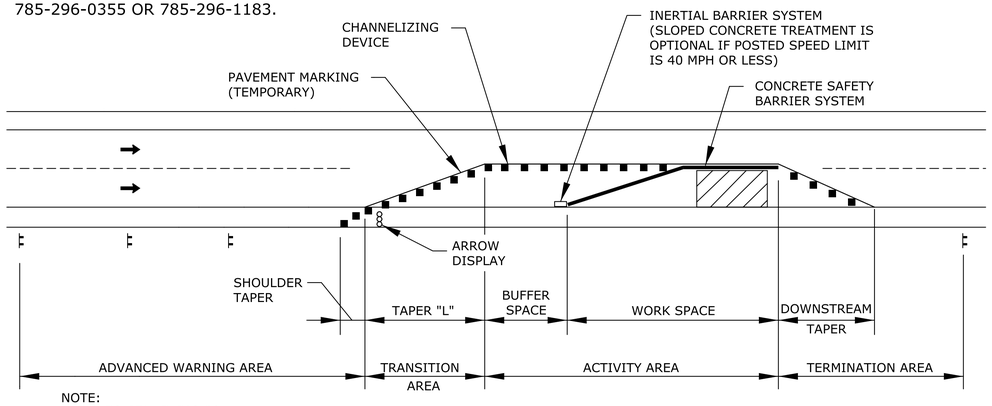
3) CERTIFY THAT THE TRUCK MOUNTED ATTENUATORS (TMA'S) (WHICH ARE DEFINED AS CATEGORY 3 DEVICES BY THE FHWA MEMORANDUM) MEET CURRENT CRASHWORTHY SPECIFICATIONS AS DEFINED ABOVE AND INCLUDE A COPY OF THE ENTIRE FHWA ACCEPTANCE LETTER. ALL CATEGORY 1 & 2 DEVICES SHALL BE NCHRP REPORT 350 OR MASH REPORT 2009 COMPLIANT.

13. LEAD IN CHANNELIZING DEVICES ON CENTERLINE:

TEMPORARY RUMBLE STRIPS MAY BE USED IN LIEU OF LEAD IN CENTERLINE CHANNELIZING DEVICES WHEN THE ROADWAY IS LESS THAN OR EQUAL TO 30' (FEET) INCLUDING PAVED SHOULDERS. WHEN EXTENUATING CIRCUMSTANCES EXIST, THE AREA ENGINEER MAY ELECT TO ELIMINATE BOTH THE LEAD IN CHANNELIZERS AND THE RUMBLE STRIPS.

14. TEMPORARY RUMBLE STRIPS:

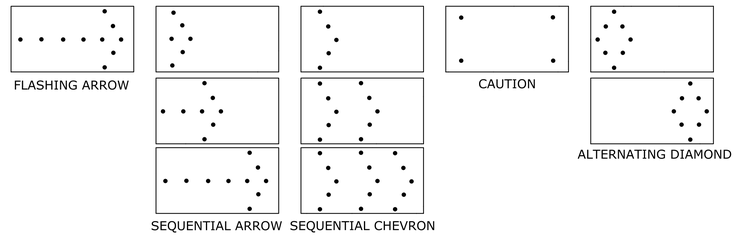
ALTERNATIVE TEMPORARY RUMBLE STRIP OPTIONS MAY BE AVAILABLE. PLEASE CONTACT THE TEMPORARY TRAFFIC CONTROL UNIT FOR MORE INFORMATION AT 785-296-0355 OR 785-296-1183.



NOTE:
REFER TO STD. TE702 FOR TAPER "L" FORMULA.

TYPICAL WORK ZONE COMPONENTS

ARROW DISPLAYS



ARROW DISPLAY ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING FROM THEIR FULL-RATED LAMP VOLTAGE. FULL LAMP VOLTAGE SHOULD BE USED DURING THE DAY AND DIMMED MODE SHALL BE USED AT NIGHT. FOR SHOULDER WORK, ROADSIDE WORK NEAR THE SHOULDER, BLOCKING THE SHOULDER, OR FOR TEMPORARY CLOSING ONE LANE ON A TWO-LANE, TWO-WAY ROADWAY, AN ARROW PANEL SHALL BE USED ONLY IN THE CAUTION MODE.

BUFFER SPACE

SPEED (MPH) ✳	*20*	*25*	*30*	*35*	*40*	*45*	*50*	*55*	*60*	*65*	*70*	*75*
LENGTH (ft)	*115*	*155*	*200*	*250*	*305*	*360*	*425*	*495*	*570*	*645*	*730*	*820*

✳ POSTED SPEED PRIOR TO WORK STARTING

NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIAL SHOULD OCCUR IN THE BUFFER SPACE. WHEN A PROTECTION VEHICLE IS PLACED IN ADVANCE OF THE WORK SPACE, ONLY THE 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.

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Removed Note 13. Added Alternating Diamonds	J.A.M.	K.P.
2	10/4/11	Modified Notes 9,12 & 15. Added Note 15	J.A.M.	K.P.
1	11/30/09	Added Note 14	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

GENERAL TRAFFIC CONTROL

TE700

FHWA APPROVAL		10/16/12	APP'D	Kristina Pyle
DESIGNED B.A.H.	DETAILED B.A.H.		QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 10-23-2012 Sh. No. 215

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Drawn By : aameyer
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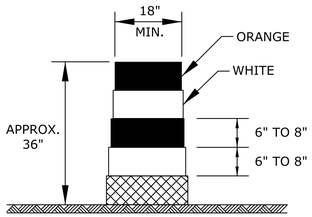
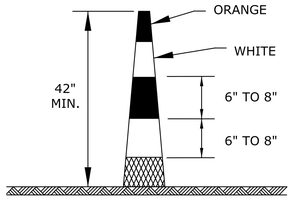
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	216	251



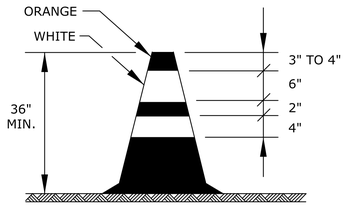
DRUM



CONICAL DELINEATOR

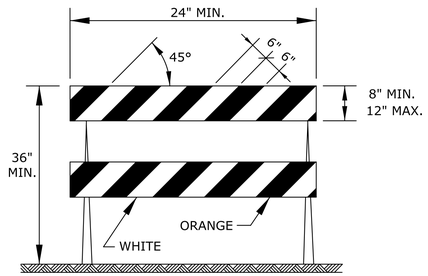
DRUMS AND CONICAL DELINEATORS SHALL HAVE AT LEAST TWO ORANGE AND TWO WHITE 6" TO 8" WIDE RETROREFLECTIVE STRIPES. ADDITIONAL STRIPES MAY BE NON-RETROREFLECTIVE. IF THERE ARE NON-RETROREFLECTIVE SPACES BETWEEN ADJACENT STRIPES, THEY SHALL BE NO MORE THAN 3" WIDE.

ALL RETROREFLECTIVE STRIPES ON DRUMS SHALL BE ASTM TYPE III SHEETING. THE WHITE STRIPES ON CONICAL DELINEATORS SHALL BE ASTM TYPE III SHEETING. ORANGE STRIPES ON ALL CONICAL DELINEATORS SHALL BE FLUORESCENT ORANGE ASTM TYPE IV SHEETING.



TRAFFIC CONE

TRAFFIC CONES MAY BE USED AS CHANNELIZING DEVICES FOR DAYTIME OPERATIONS ONLY. THEY WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. THE ENGINEER MAY REQUIRE THAT TRAFFIC CONES BE SUPPLEMENTED BY OTHER TRAFFIC CONTROL DEVICES IN CERTAIN SITUATIONS.

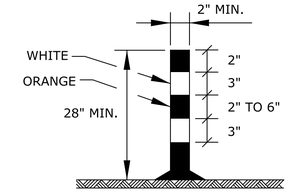


TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.

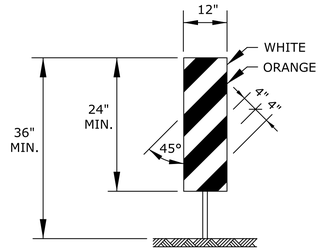
THE ENTIRE AREA OF BARRICADE RAILS, BOTH FRONT AND BACK, SHALL BE ASTM TYPE III SHEETING.

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



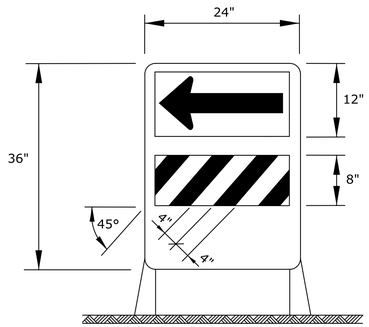
TUBULAR MARKER

THE TWO WHITE RETROREFLECTIVE STRIPES SHALL BE ASTM TYPE III SHEETING. STRIPING AS SHOWN FOR UP TO 42".



VERTICAL PANEL

THE ENTIRE AREA OF VERTICAL PANELS, BOTH FRONT AND BACK, SHALL HAVE ASTM TYPE III SHEETING. THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



DIRECTION INDICATOR BARRICADE

THE ARROW PANEL SHALL BE BLACK ON FLUORESCENT ORANGE ASTM TYPE IV SHEETING. THE STRIPES SHALL BE ORANGE AND WHITE ASTM TYPE III SHEETING SLOPING 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.

THE ARROW PANEL SHOULD NOT BE VISIBLE TO OPPOSING TRAFFIC.

TAPER FORMULAS:

L = WS FOR SPEEDS OF 45 MPH OR MORE

$L = WS^2/60$ FOR SPEEDS OF 40 MPH OR LESS

WHERE: L = MINIMUM LENGTH OF TAPER IN FEET
S = NUMERICAL VALUE OF POSTED SPEED PRIOR TO WORK STARTING IN MPH
W = WIDTH OF OFFSET IN FEET

CHANNELIZER PLACEMENT:

(A) THE SPACING BETWEEN DEVICES IN TRANSITION AREA (TAPER) SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1/2 THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(B) THE SPACING BETWEEN DEVICES IN THE ADVANCED WARNING AREA AND THE ACTIVITY AREA SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO TWO TIMES THE POSTED SPEED LIMIT IN MPH PRIOR TO WORK STARTING.

(C) CHANNELIZING DEVICES SHALL BE PLACED FOR OPTIMUM VISIBILITY, NORMALLY AT RIGHT ANGLES TO THE TRAFFIC FLOW.

(D) CHANNELIZING DEVICES PLACED ALONG SHOULDER EDGES OR IN DROPOFFS SHALL HAVE A MINIMUM OF 24" FROM THE TOP OF THE CHANNELIZING DEVICE TO THE TOP OF THE PAVEMENT.

ITEM / LOCATION		CROSS-OVERS	SHOOFLY DIVERSIONS	TANGENTS	TAPERS	RAMPS	HEAD TO HEAD	OBJECT IDENTIFIER	LEAD IN DEVICES	GORES
PORTABLE										
	DRUMS	YES	YES	YES	YES	YES	(1)	YES	YES	YES
	CONICAL DELINEATORS	YES	YES	YES	YES	YES	(1)	YES	YES	YES
	VERTICAL PANELS	(2)	(2)	(2)	(2)	(2)	(1,2)	YES	(2)	(2)
	DIRECTION INDICATOR BARRICADE	NO	NO	NO	YES	NO	NO	NO	NO	NO
	TYPE II BARRICADE	(2)	(2)	(2)	(2)	NO	NO	YES	NO	NO
FIXED										
	TUBULAR MARKERS	(3)	(3)	(3)	NO	(3)	YES	NO	YES	YES
	VERTICAL PANELS	(3)	(3)	(3)	(3)	(3)	(3)	YES	(2,3)	(2)

(1) NOT ALLOWED ON CENTERLINE DELINEATION ALONG FREEWAYS OR EXPRESSWAYS.

(2) THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

(3) MAY BE USED UPON THE APPROVAL OF THE ENGINEER.

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Added Lead In Devices Into Matrix Table	J.A.M.	K.P.
2	10/4/11	Added Dimension To Tubular Marker Detail	J.A.M.	K.P.
1	4/20/09	Channelizer Placement & Traffic Cone Detail	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

CHANNELIZING DEVICES

TE702

FHWA APPROVAL		10/16/12	APP'D	Kristina Pyle	
DESIGNED	L.E.R.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

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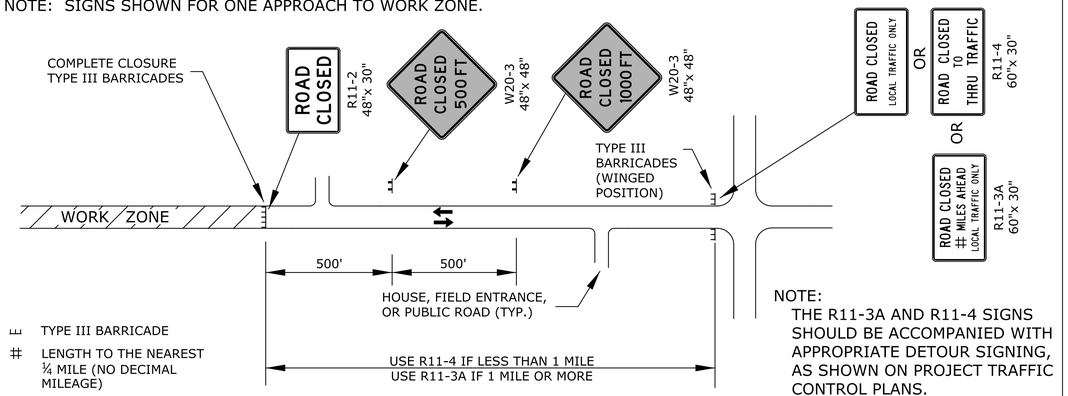
File : ka356001css702-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	217	251

NOTE: SIGNS SHOWN FOR ONE APPROACH TO WORK ZONE.



NOTE:
THE R11-3A AND R11-4 SIGNS SHOULD BE ACCOMPANIED WITH APPROPRIATE DETOUR SIGNING, AS SHOWN ON PROJECT TRAFFIC CONTROL PLANS.

FIGURE 1: TYPICAL SIGNING FOR ROAD CLOSURE

NOTE: SIGNS SHOWN FOR ONE APPROACH TO INTERSECTION (WORK ZONE).

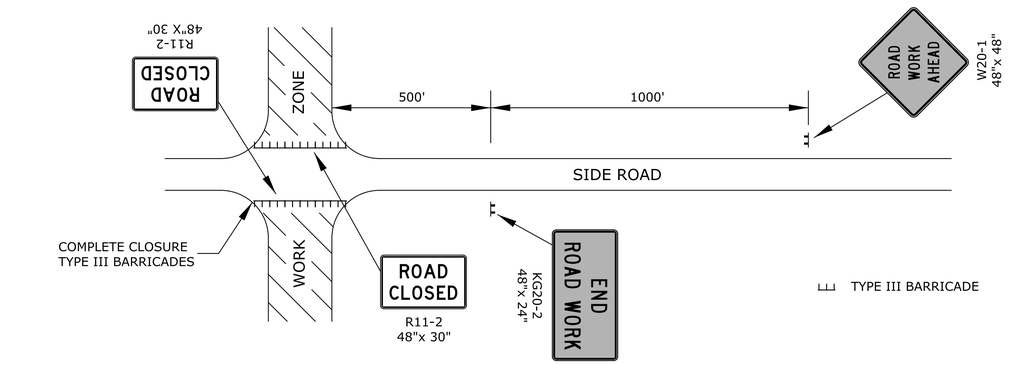


FIGURE 2: TYPICAL SIGNING FOR SIDE ROAD OPEN

NOTE: SIGNS SHOWN FOR ONE APPROACH TO INTERSECTION (WORK ZONE).

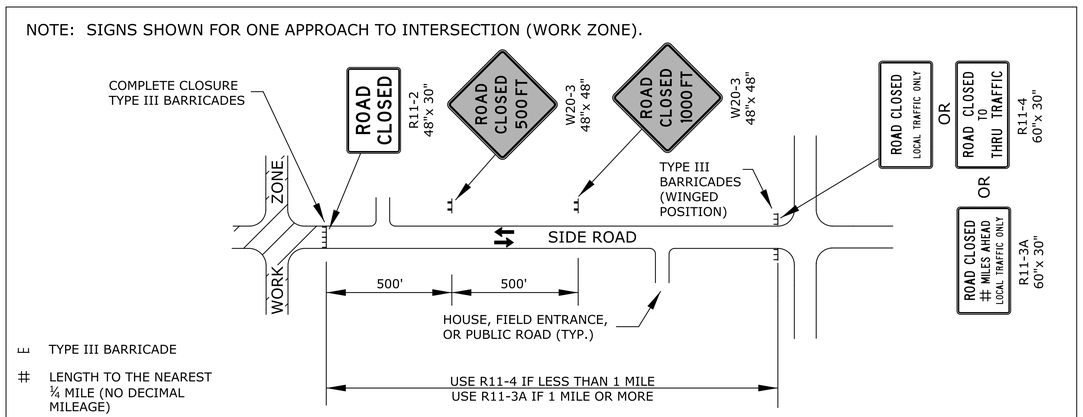


FIGURE 3: TYPICAL SIGNING FOR SIDE ROAD CLOSED

NOTE: SIGNS SHOWN FOR ONE APPROACH TO WORK ZONE.

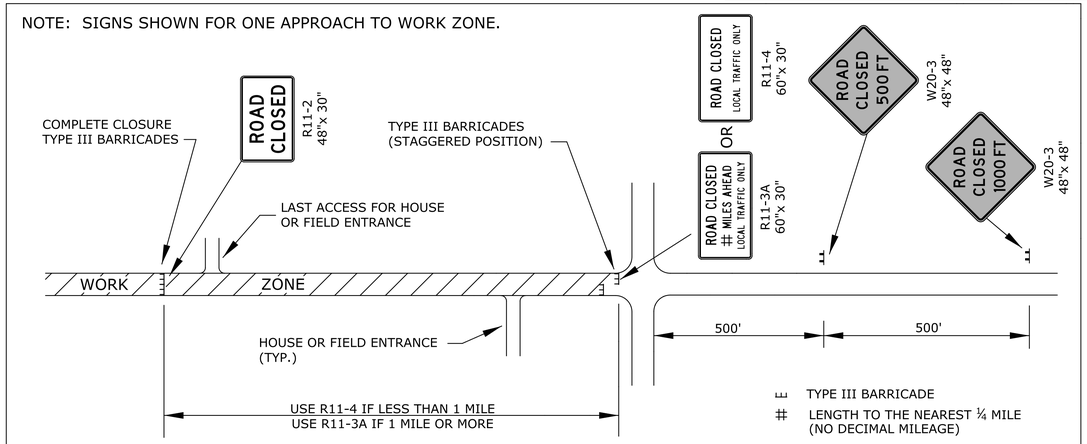


FIGURE 4: TYPICAL SIGNING FOR ROAD CLOSURE - LOCAL TRAFFIC ACCESS

NOTES:

1. SIGNS:

THE R11-4 (ROAD CLOSED TO THRU TRAFFIC OR ROAD CLOSED LOCAL TRAFFIC ONLY) SIGN SHALL BE USED WHEN THE DISTANCE TO THE POINT OF COMPLETE CLOSURE OF THE ROADWAY IS LESS THAN 1 MILE.

THE R11-3A (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) SIGN SHALL BE USED WHEN THE DISTANCE TO THE POINT OF COMPLETE CLOSURE OF THE ROADWAY IS 1 MILE OR GREATER.

THE WORDS "BRIDGE OUT" (OR BRIDGE CLOSED) MAY BE SUBSTITUTED FOR THE WORDS "ROAD CLOSED" ON THE R11-3A OR R11-4 SIGN WHERE APPLICABLE.

2. BARRICADE PLACEMENT:

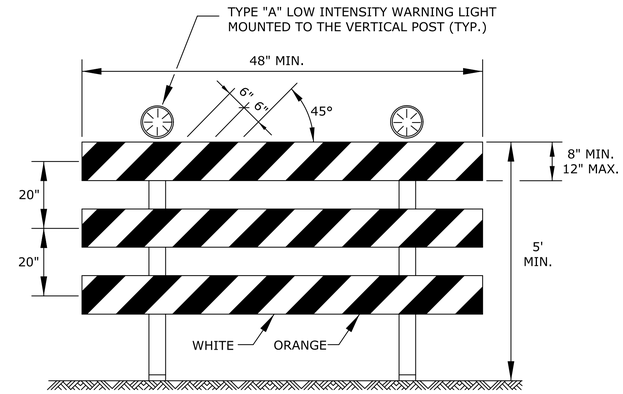
A) COMPLETE ROAD CLOSURE

WHEN A ROADWAY IS CLOSED, TYPE III BARRICADES SHALL BE PLACED END-TO-END TO COMPLETELY COVER THE ROADWAY AND SHOULDERS. WHEN ACCESS MUST BE ALLOWED FOR CONSTRUCTION OR OTHER OFFICIAL/GOVERNMENT VEHICLES, TYPE III BARRICADES SHALL BE LONGITUDINALLY STAGGERED FAR ENOUGH APART FROM ONE ANOTHER TO ALLOW SAFE PASSAGE OF VEHICLES AND MAINTAIN THE APPEARANCE OF A CLOSED ROADWAY. TYPE III BARRICADES SHALL BE REALIGNED AND PLACED END-TO-END TO DENY ANY ACCESS WHEN THE CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY.

B) ROAD CLOSED - LOCAL TRAFFIC

AS SHOWN IN FIGURE 4, WHEN LOCAL TRAFFIC MUST BE ALLOWED ACCESS INTO THE WORK ZONE, TYPE III BARRICADES SHALL BE LONGITUDINALLY STAGGERED TO MAINTAIN THE APPEARANCE OF A CLOSED ROADWAY. A SECOND LINE OF END-TO-END TYPE III BARRICADES SHALL BE PLACED JUST BEYOND THE LAST ACCESS POINT IN THE WORK ZONE, TO COMPLETELY CLOSE THE ROADWAY AS DESCRIBED IN NOTE 2-A.

AS SHOWN IN FIGURE 1 AND FIGURE 3, AT THE POINT WHERE THRU TRAFFIC MUST DETOUR AND LOCAL TRAFFIC CAN PROCEED TO THE LOCATION WHERE THE ROADWAY IS COMPLETELY CLOSED, THE R11-3A (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) OR R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY OR ROAD CLOSED TO THRU TRAFFIC) SIGN SHALL BE USED WITH TYPE III BARRICADES (WINGED POSITION), PLACED ON THE SHOULDERS OF ROADWAY.



TYPE III BARRICADE WITH LIGHTS

THE ENTIRE AREA OF BARRICADE RAILS, BOTH FRONT AND BACK, SHALL HAVE ASTM TYPE III SHEETING.

THE STRIPES SHALL SLOPE DOWNWARD TO THE SIDE TRAFFIC IS TO PROCEED OR TOWARD THE CENTER OF THE ROADWAY AT ROAD CLOSURES.

APPROVED SIGNS MOUNTED ON TYPE III BARRICADES SHOULD NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

WHEN BARRICADES ARE PLACED END-TO-END OR STAGGERED, A TYPE "A" LOW INTENSITY WARNING LIGHT SHALL BE MOUNTED TO THE VERTICAL POST NEAR EACH OUTSIDE CORNER OF THE END BARRICADES.

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Modified Type III Barricade Note	J.A.M.	K.P.
2	8/8/07	Added Position To Type III Barricade	M.B.	A.A.A.
1	12/29/05	Note #1 Modified	M.B.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL
ROAD CLOSURES

TE704

FHWA APPROVAL		10/16/12	APP'D	Kristina Pyle	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

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File : ka356001css704-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	218	251

SIGN LAYOUT INFORMATION

KG20-2

STD. SIZE EXPWY/FREEWAY
6" C
48"x 24"

KG20-5

STD. SIZE EXPWY/FREEWAY
6" C
48"x 24"

KM4-2O

STD. SIZE	EXPWY/FREEWAY
3" C	6" C
24"x 6"	48"x 12"

W7-3a

MILEAGE TO BE DETERMINED BY THE ENGINEER.

W8-11

STD. SIZE EXPWY/FREEWAY
8" D
48"x 48"

W8-17

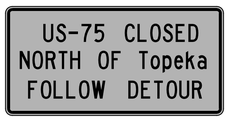
STD. SIZE EXPWY/FREEWAY
48"x 48"

W8-17P
(OPTIONAL)

STD. SIZE EXPWY/FREEWAY
30"x 24"

SP-01
(SPECIAL SIGN)

STD. SIZE	EXPWY/FREEWAY
6" C	10" D



SP-02
(SPECIAL SIGN)

STD. SIZE	EXPWY/FREEWAY
UPPERCASE: 6" C	UPPERCASE: 10" D
LOWERCASE: 4.5" C	LOWERCASE: 8" D

ALL CITY NAMES AND STREET NAMES ON SPECIAL SIGNS AND DESTINATION SIGNS MUST HAVE UPPER AND LOWER CASE LETTERS.

ALL SIGNS SHALL BE BLACK ON ORANGE RETROREFLECTIVE SHEETING.

GENERAL NOTES

1. MAINTENANCE:

THE CONTRACTOR SHALL MAINTAIN ALL SIGNS AND DEVICES IN AN UPRIGHT POSITION. THE CONTRACTOR SHALL CLEAN OR REPLACE ANY DAMAGED OR ILLEGIBLE SIGN OR DEVICE AS DIRECTED BY THE ENGINEER.

2. EXISTING SIGNS:

IF EXISTING SIGNS THAT ARE TO REMAIN (WHETHER DENOTED ON THE PLANS OR NOT) INTERFERE WITH CONSTRUCTION WORK, THE CONTRACTOR SHALL REMOVE, STORE, AND RESET THE SIGNS. THIS SHALL BE SUBSIDIARY TO OTHER TRAFFIC CONTROL BID ITEMS. SIGNING DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3. CONFLICTING SIGNS, SIGNS NOT IN USE, AND TRAFFIC SIGNALS:

SIGNS AND TRAFFIC SIGNALS THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLAN OR DO NOT APPLY TO THE TRAFFIC OPERATIONS SHALL BE IMMEDIATELY REMOVED, TURNED SO NOT VISIBLE TO TRAFFIC FROM ANY DIRECTION, OR COMPLETELY COVERED WITH ADEQUATE OPAQUE BREATHABLE MATERIAL. TAPE SHALL NOT BE APPLIED TO THE FACE OF THE SIGN.

4. PORTABLE AND POST MOUNTED SIGNS:

TEMPORARY TRAFFIC CONTROL SIGNS THAT ARE ANTICIPATED TO REMAIN IN PLACE FOR 3 DAYS OR LESS ARE CONSIDERED "PORTABLE." PORTABLE SIGNS SHALL BE MOUNTED ON AN APPROVED SUPPORT AT A MINIMUM HEIGHT OF 12" ABOVE THE TRAVELED WAY. TRAFFIC CONTROL SIGNS IN PLACE FOR OVER 3 DAYS ARE REQUIRED TO BE MOUNTED ON APPROVED POSTS. A MINIMUM OF 42" OF THE APPROVED POST MUST BE BELOW THE GROUND SURFACE WITH ADEQUATE BACKFILL AND COMPACTION. ALL POSTS AT MINIMUM SHALL EXTEND TO THE TOP EDGE OF THE SIGN AND NO GREATER THAN 6" ABOVE THE SIGN.

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.

"ROLL-UP" SIGNS MAY BE USED FOR PORTABLE WARNING SIGNS. THEY MUST BE FLUORESCENT ORANGE ASTM TYPE IV SIGNS OF OPAQUE MATERIAL. MESH SIGNS ARE NOT ALLOWED.

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.

5. SHEETING:

ALL ORANGE SIGNS SHALL HAVE FLUORESCENT ORANGE ASTM TYPE IV SHEETING. ALL OTHER SIGNS SHALL HAVE ASTM TYPE III SHEETING OF STANDARD COLORS.

6. SIGNS INVOLVING SPEEDS:

THE W3-5 (SPEED REDUCTION) SHOULD BE USED ONLY IF THE ENGINEER DETERMINES THAT A REDUCED SPEED IS REQUIRED ON THE PROJECT.

THE KM4-20 (WORK ZONE) PLAQUE SHALL BE PLACED ABOVE ALL SPEED LIMIT SIGNS, (R2-1), EXISTING AND TEMPORARY. MOUNT THE WORK ZONE PLAQUES TO THE POST. DO NOT OVERLAP THE R2-1 AND KM4-20 SIGNS.

FOR SPEEDS OF 30 MPH OR LESS, THE W1-1(TURN) OR W1-3(REVERSE TURN) SHOULD BE USED. FOR SPEEDS OF 35 MPH OR MORE, THE W1-2(CURVE) OR W1-4(REVERSE CURVE) SHOULD BE USED. THE W13-1(MPH) IS TO BE ELIMINATED IF THE ADVISORY SPEED IS WITHIN 5 MPH OF THE SPEED LIMIT.

7. SIGNS CONTROLLING WORK ZONE:

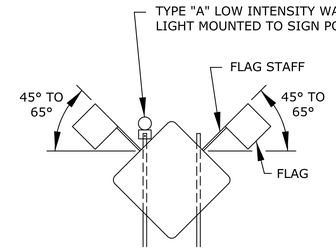
THE KG20-2(END ROAD WORK) SHOULD BE PLACED 500' FROM THE END OF THE ACTUAL WORK SPACE, NOT NECESSARILY AT THE EXTREME LIMITS OF THE PROJECT. THE KG20-2 SHOULD BE MOUNTED ON TWO POSTS. THE KG20-2 MAY BE MOUNTED ON ONE POST IF IN URBAN AREAS WHERE UTILITIES ARE A PROBLEM AND WIND LOADS ARE NOT AN ISSUE.

WHERE TWO WORK ZONES ARE LESS THAN 1 MILE APART IN RURAL AREAS OR ¼ MILE APART IN URBAN AREAS, THE KG20-2(END ROAD WORK) FOR THE FIRST WORK ZONE AND THE W20-1(ROAD WORK) FOR THE SECOND WORK ZONE SHOULD BE ELIMINATED.

8. WARNING LIGHTS ON SIGNS:

A TYPE "A" LOW INTENSITY WARNING LIGHT IS AN L.E.D. BI-DIRECTIONAL FLASHING WORK ZONE WARNING LIGHT. TYPE "A" LOW INTENSITY WARNING LIGHTS SHOULD BE USED WITH ALL CONSTRUCTION ACTION WARNING SIGNS AND SHALL NOT BE USED ON SIGNS MOUNTED LESS THAN 5' HIGH ON TEMPORARY SUPPORTS. ON ALL OTHER CONSTRUCTION WARNING SIGNS, TYPE "A" LOW INTENSITY WARNING LIGHTS ARE TO BE USED AS DIRECTED BY THE ENGINEER.

TYPE "A" LOW INTENSITY WARNING LIGHTS SHALL BE MAINTAINED SO AS TO BE CAPABLE OF BEING VISIBLE ON A CLEAR NIGHT FROM A DISTANCE OF 3000 FT. IF A TYPE "A" LOW INTENSITY WARNING LIGHT HAS A SEPARATE BATTERY CASE, THE BATTERY CASE SHALL BE MOUNTED NO HIGHER THAN 12" ABOVE THE GROUND AND MOUNTED BEHIND THE SIGN POST. A TYPE "A" LOW INTENSITY WARNING LIGHT WHERE THE LENS AND BATTERY ARE ONE UNIT SHALL BE MOUNTED ON THE TEMPORARY SIGN POST NEAREST TO THE TRAVELED WAY. FLAGS SHALL NOT INTERFERE WITH THE VISABILITY OF THE TYPE "A" LOW INTENSITY WARNING LIGHT.



TWO (2) 18" x 18" FLUORESCENT RED-ORANGE FLAGS SHALL BE ATTACHED (IN THE POSITION SHOWN) ON THE W20-2(DETOUR),W1-1(TURN), W1-2(CURVE), W1-3(REVERSE TURN), W1-4(REVERSE CURVE), W3-3(SIGNAL AHEAD), W4-2(LANE REDUCTION), W20-4(ONE LANE ROAD), W20-5(LANE CLOSED), W20-7A(FLAGGER), AND W3-4 (BE PREPARED TO STOP) SIGNS AND ANY OTHER ACTION SIGNS AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. THE FLAGS AND STAFFS ARE TO BE ATTACHED IN SUCH A MANNER THAT THE SIGN WILL NOT BE OBSCURED. THE FLAGS MAY BE EITHER A CLOTH OR VINYL MATERIAL. THE FLAGS SHALL BE SUBSIDIARY TO THE CONSTRUCTION SIGN BID ITEMS.

MINIMUM ADVANCE WARNING SIGN SPACING (IN FEET):

	A	B	C
URBAN (40 MPH OR LOWER)	*100*	*100*	*100*
URBAN (45 MPH OR HIGHER)	*350*	*350*	*350*
RURAL (55 MPH OR LOWER)	*500*	*500*	*500*
RURAL (60 MPH OR HIGHER)	*750*	*750*	*750*
EXPRESSWAY/FREEWAY	*1000*	*1500*	*2640*

THE MINIMUM SPACING BETWEEN SIGNS SHALL BE NO LESS THAN 100', UNLESS DIRECTED BY THE ENGINEER.

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.

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Removed Note 9, Modified Sign Layout Detail	J.A.M.	K.P.
2	10/4/11	Modified Note 3	J.A.M.	K.P.
1	2/24/10	Modified AFAD Note	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGNS

TE710

FHWA APPROVAL			10/16/12	APP'D	Kristina Pyle
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

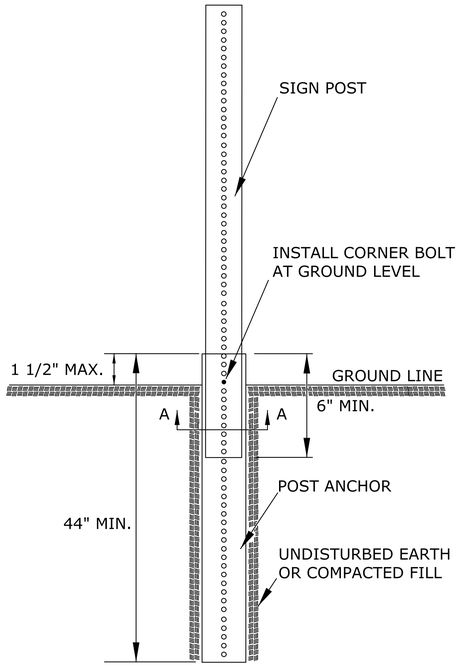
KDOT Graphics Certified 10-23-2012

Sh. No. 218

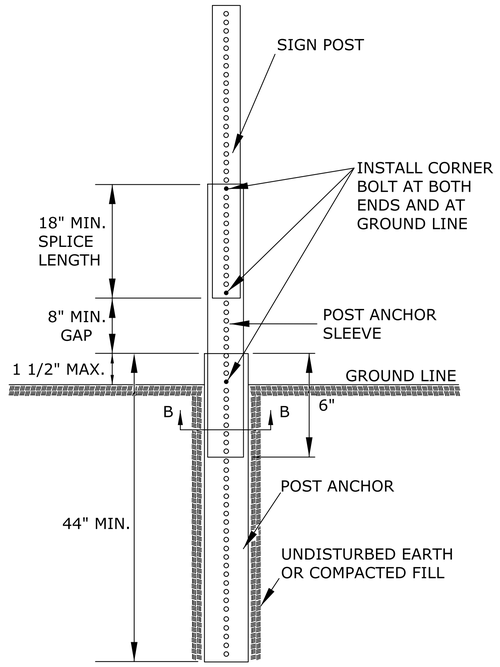
KDOT Graphics Certified

Plotted : 16-OCT-2014 11:40
Drawn By : aameyer
File : ka356001css710-01.dgn

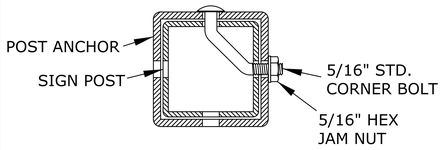
PERFORATED SQUARE STEEL TUBE (P.S.S.T.) POST SETUP



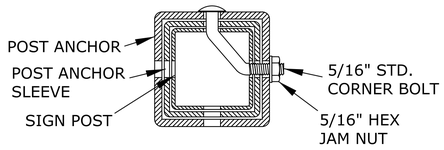
P.S.S.T. DETAIL



TELESCOPING P.S.S.T. DETAIL



SECTION A-A

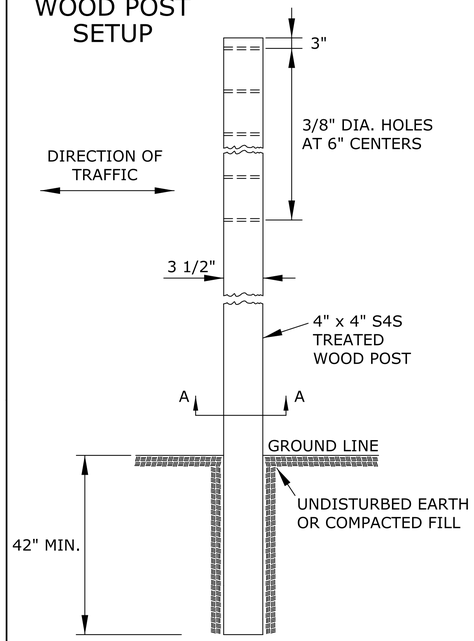


SECTION B-B

DETAILS FOR 2", 2 1/4", OR 2 1/2" SIGN POST

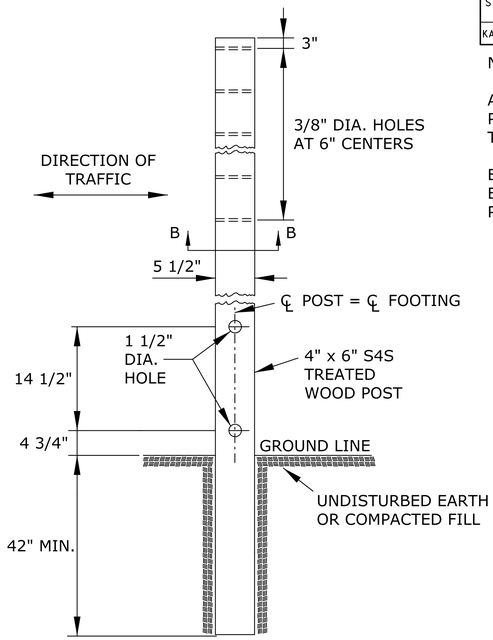
PLACE BOLTS IN THE SAME CORNER ALONG EACH SIGN POST.

WOOD POST SETUP



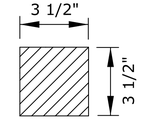
SIDE ELEVATION

4" X 4" WOOD POST IN SOIL

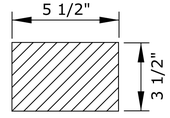


SIDE ELEVATION

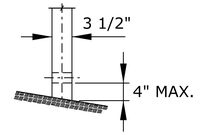
4" X 6" WOOD POST IN SOIL



SECTION A-A



SECTION B-B



FRONT ELEVATION

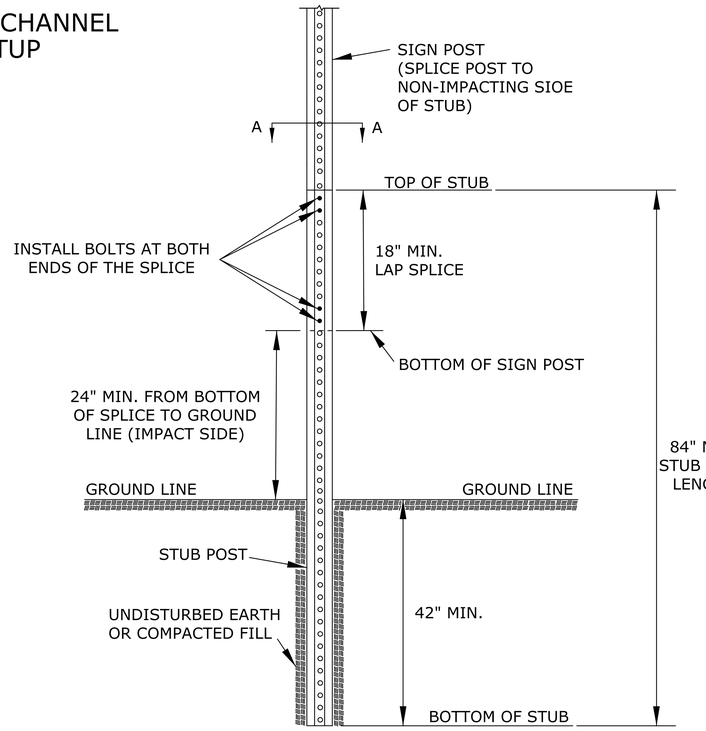
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	219	251

NOTES:

ALL SIGN MOUNTING HOLES IN THE WOOD POSTS SHALL BE DRILLED PRIOR TO TREATING.

BREAKAWAY HOLES AND FIELD CUTS SHALL BE TREATED IN ACCORDANCE WITH THE PRESERVATIVE TREATMENT SPECIFICATIONS.

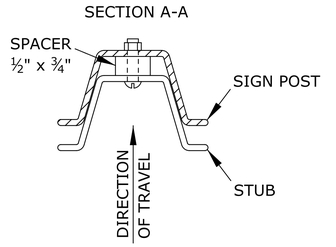
3 LB/F U-CHANNEL SETUP



NOTES:

PLACE TWO BOLTS AT BOTH ENDS OF THE SPLICE THROUGH THE HOLES NEAREST THE ENDS OF THE SPLICE.

SPACERS WILL BE USED OVER THE BOLTS BETWEEN THE SPLICED PIECES OF U-CHANNEL. THREADED OR UNTHREADED SPACERS MAY BE USED. DO NOT SUBSTITUTE PIPE OR OTHER "ITEMS" FOR THE SPACERS.



NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Added Spacer Dimension, Removed PSST Note	J.A.M.	K.P.
2	10/4/11	Removed Washer On PSST Detail	J.A.M.	K.P.
1	6/1/10	Modified Post Anchor Sleeve Dimension	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

APPROVED TEMPORARY POST SETUPS

TE712

FHWA APPROVAL			10/16/12	APP'D	Kristina Pyle
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

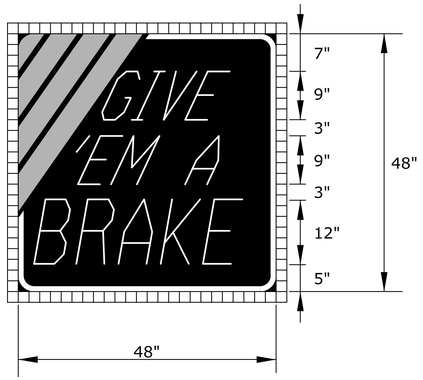
KDOT Graphics Certified 10-23-2012

Sh. No. 219

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001css712-01.dgn
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	220	251

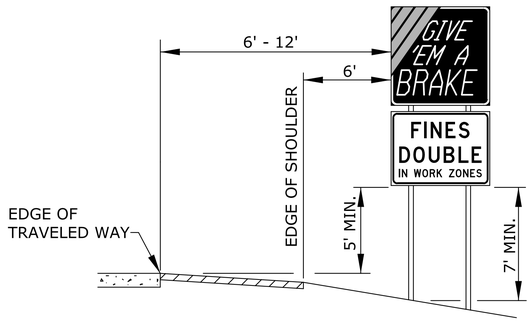


KI-104a

COLORS:
- BACKGROUND - BLACK
- BORDER - WHITE
- LEGEND - WHITE
- STRIPES - ORANGE

BORDER WIDTH - 1"
CORNER RADIUS - 4"
STRIPE WIDTH - 3"

LEGEND:
" GIVE " - DUTCH 801 ROMAN SWC - 25 DEGREE SLANT
" 'EM A " - DUTCH 801 ROMAN SWC - 25 DEGREE SLANT
" BRAKE " - DUTCH 801 ROMAN SWC - 10 DEGREE SLANT



HEIGHT AND LATERAL PLACEMENT

NOTE:
IF THERE IS NO SHOULDER, THE SIGN SHALL BE PLACED 6'- 12' FROM THE EDGE OF TRAVELED WAY AND NOT LESS THAN 6' FROM THE EDGE OF PAVED SHOULDER. SIGNS SHALL NOT OVERLAP EACH OTHER.

NOTES:

THE SIGN BLANK MATERIAL SHALL BE ALUMINUM, WOOD, OR FIBERGLASS REINFORCED PLASTIC.

THE ORANGE PORTION OF THE KI-104a SIGN SHALL BE ASTM TYPE IV SHEETING. THE WHITE PORTION SHALL BE ASTM TYPE III SHEETING.

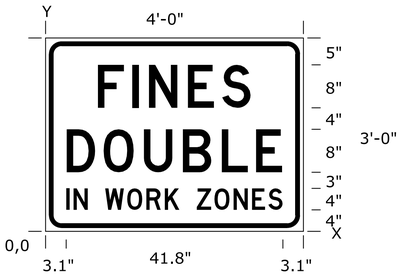
THE KI-105a SIGN FACE SHALL BE COVERED WITH ASTM TYPE III SHEETING.

THE SIGNS ARE TO BE MOUNTED ON CRASHWORTHY SUPPORTS, BRACING, GUY WIRES AND TIE-DOWNS ARE NOT ALLOWED.

TYPICALLY, THERE ARE TWO SETS OF INFORMATIONAL SIGNS INSTALLED PER PROJECT: ONE FOR EACH DIRECTION OF TRAFFIC.

INSTALL SIGNS A MINIMUM OF 250' 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.



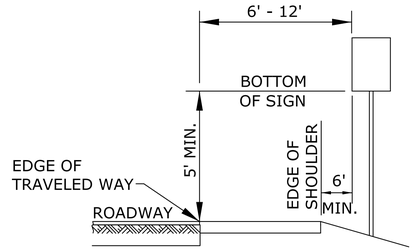
KI-105a

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

DIMENSIONS IN INCHES — SPACINGS ARE TO START OF NEXT LETTER

Y FONT	LETTER SPACINGS																					HT LEN
23.0 D		F	I	N	E	S																8.0
	9.7	6.4	3.2	7.3	6.4	5.4	9.7															28.6
11.0 D		D	O	U	B	L	E															8.0
	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9														40.3
4.0 D		I	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

HEIGHT AND LATERAL DIMENSIONS FOR GROUND MOUNTED SIGNS (SIGNS LEFT IN PLACE OVER 3 DAYS)



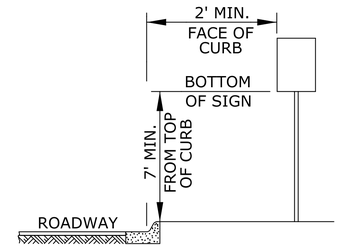
RURAL DISTRICT

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.

4) SIGN SUPPORTS SHALL BE CRASHWORTHY.



URBAN DISTRICT

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.

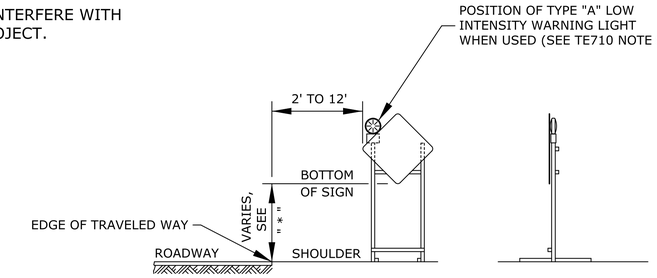
2) NEITHER PORTABLE NOR PERMANENT SIGN SUPPORTS SHOULD BE LOCATED ON SIDEWALKS OR AREAS DESIGNATED FOR PEDESTSRIAN OR BICYCLE TRAFFIC.

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) SIGN SUPPORTS SHALL BE CRASHWORTHY.



(SEE NOTE 4 ON TE710 FOR "ROLL-UP" SIGNS OPTION)

HEIGHT AND LATERAL DIMENSIONS FOR SIGNS MOUNTED ON SKIDS OR OTHER SUPPORTS ON PAVEMENT

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Modified Note 3 & 4 On Ground Mounted Signs	J.A.M.	K.P.
2	10/4/11	Modified Note On Skid Mounted Detail	J.A.M.	K.P.
1	6/1/10	Changed Type A Warning Light Note	J.A.M.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

GROUND AND SKID MOUNTED DETAIL DETAILS FOR "GIVE 'EM A BRAKE" AND "FINES DOUBLE" SIGNS

TE714

FHWA APPROVAL		10/16/12	APP'D	Kristina Pyle	
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

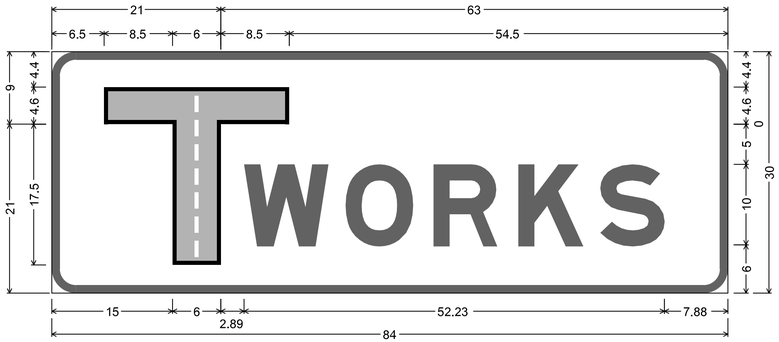
KDOT Graphics Certified 10-23-2012

Sh. No. 220

KDOT Graphics Certified

Plotted : 16-OCT-2014 11:40
Drawn By : aameyer
File : ka356001css714-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	221	251



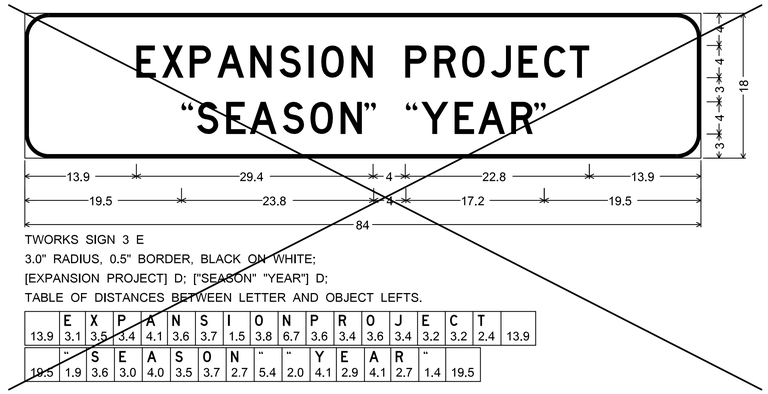
TWORKS SIGN 2
3.00" RADIUS, 1.00" BORDER, BLUE ON WHITE;
[T] ORANGE; .5" BLACK BORDER
LANE LINES: .5"X2.0" WHITE; 1.00" SPACING FROM BOTTOM
[WORKS] E MOD
TABLE OF DISTANCES BETWEEN LETTER AND OBJECT LEFTS.

6.50	T 21.00	54.50				
23.89	W 12.61	O 10.93	R 10.53	K 10.19	S 7.96	7.89

TWORKS SIGN 1
3.0" RADIUS, 1.0" BORDER, WHITE ON BLUE;
[KANSAS] C; [DEPARTMENT OF TRANSPORTATION] C 90% SPACING;
TABLE OF DISTANCES BETWEEN LETTER AND OBJECT LEFTS.

29.2	K 4.0	A 4.7	N 4.6	S 4.3	A 4.7	S 3.3	29.2

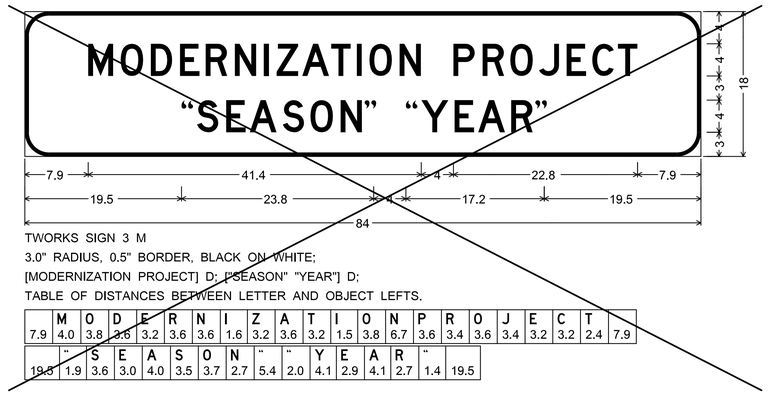
3.5	D 2.9	E 2.6	P 2.8	A 3.1	R 2.8	T 2.6	M 3.4	E 2.6	N 2.8	T 5.6	O 3.1	F 5.6	
T 2.6	R 2.8	A 3.1	N 2.9	S 3.0	P 2.8	O 3.0	R 2.8	T 2.2	A 2.7	T 2.6	I 1.4	O 3.0	N 2.2	3.5



TWORKS SIGN 3 E
3.0" RADIUS, 0.5" BORDER, BLACK ON WHITE;
[EXPANSION PROJECT] D; ["SEASON" "YEAR"] D;
TABLE OF DISTANCES BETWEEN LETTER AND OBJECT LEFTS.

13.9	E 3.1	X 3.5	P 3.4	A 4.1	N 3.6	S 3.7	I 1.5	O 3.8	N 6.7	P 3.6	R 3.4	O 3.6	J 3.4	E 3.2	C 3.2	T 2.4	13.9

19.5	" 1.9	S 3.6	E 3.0	A 4.0	S 3.5	O 3.7	N 2.7	" 5.4	" 2.0	Y 4.1	E 2.9	A 4.1	R 2.7	" 1.4	19.5



TWORKS SIGN 3 M
3.0" RADIUS, 0.5" BORDER, BLACK ON WHITE;
[MODERNIZATION PROJECT] D; ["SEASON" "YEAR"] D;
TABLE OF DISTANCES BETWEEN LETTER AND OBJECT LEFTS.

7.9	M 4.0	O 3.8	D 3.6	E 3.2	R 3.6	N 3.6	I 1.6	Z 3.2	A 3.6	T 3.2	I 1.5	O 3.8	N 6.7	P 3.6	R 3.4	O 3.6	J 3.4	E 3.2	C 3.2	T 2.4	7.9

19.5	" 1.9	S 3.6	E 3.0	A 4.0	S 3.5	O 3.7	N 2.7	" 5.4	" 2.0	Y 4.1	E 2.9	A 4.1	R 2.7	" 1.4	19.5

TWORKS SIGN 3 P
3.0" RADIUS, 0.5" BORDER, BLACK ON WHITE;
[PRESERVATION PROJECT] D; ["SEASON" "YEAR"] D;
TABLE OF DISTANCES BETWEEN LETTER AND OBJECT LEFTS.

9.2	P 3.6	R 3.7	E 3.1	S 3.7	E 3.2	R 3.4	V 3.2	A 3.6	T 3.2	I 1.6	O 3.7	N 6.7	P 3.6	R 3.5	O 3.5	J 3.5	E 3.2	C 3.2	T 2.4	9.2

19.5	" 1.9	S 3.6	E 3.0	A 4.0	S 3.5	O 3.7	N 2.7	" 5.4	" 2.0	Y 4.1	E 2.9	A 4.1	R 2.7	" 1.4	19.5

LEGEND DETAILS:
"SEASON": SPRING, SUMMER, FALL, OR WINTER
"YEAR": THE YEAR THAT THE PROJECT IS TO BE COMPLETED

GENERAL NOTES

THE "TWORKS" SIGN BLANK MATERIAL SHALL BE ALUMINUM, WOOD, OR FIBERGLASS REINFORCED PLASTIC.

THE "TWORKS" SIGN FACES SHALL BE COVERED WITH TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING.

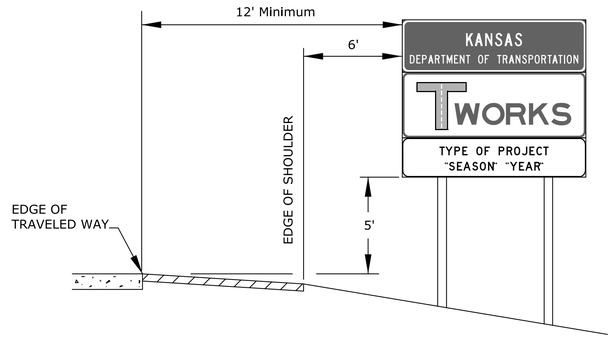
THE "TWORKS" SIGNS SHOULD BE MOUNTED ON TWO (2) 4"X6" WOOD POSTS, AS SHOWN ON TE712, WITHOUT THE USE OF BRACING, GUY WIRES, OR TIE-DOWNS.

THE "TWORKS" SIGNS SHOULD BE INSTALLED IN ADVANCE OF THE FIRST TRAFFIC CONTROL SIGN A DISTANCE OF 500' FOR A TWO-WAY ROADWAY OR 1000' FOR A MULTI-LANE DIVIDED ROADWAY IN A RURAL LOCATION AND 100' TO 350' IN AN URBAN AREA DEPENDING UPON THE SPEED. THE FIRST TRAFFIC CONTROL SIGN IS EITHER THE "ROAD WORK AHEAD" OR THE "GIVE 'EM A BRAKE" SIGN. THE ENGINEER MAY DESIGNATE A MORE APPROPRIATE LOCATION IF CONDITIONS DICTATE.

THE "TWORKS" SIGNS SHALL NOT INTERFERE WITH THE TRAFFIC CONTROL SIGNS FOR THE PROJECT OR WITH ANY OTHER REGULATORY, WARNING, OR GUIDE SIGN THAT IS TO REMAIN IN PLACE DURING CONSTRUCTION.

THE TWORKS SIGN ASSEMBLY CONSISTS OF A TWORKS SIGN 1, TWORKS SIGN 2, AND TWORKS SIGN 3 SHOWING THE TYPE OF PROJECT AND COMPLETION DATE. THE BID ITEM FOR THIS ASSEMBLY IS "TWORKS SIGN ASSEMBLY" WITH A BID UNIT OF "EACH".

THE TWORKS SIGN ASSEMBLY SHOULD REMAIN IN PLACE FOR SIX (6) MONTHS FOLLOWING THE COMPLETION OF THE PROJECT AND BECOME THE PROPERTY OF KDOT.



HEIGHT AND LATERAL PLACEMENT OF TWORKS SIGN ASSEMBLY

NOTE:
IF THERE IS NO SHOULDER, THE SIGNS SHALL BE PLACED 6 FT - 12 FT FROM THE EDGE OF THE TRAVELED WAY. IF THE SIGNS ARE LOCATED IN AN URBAN AREA, THE MINIMUM MOUNTING HEIGHT IS 7' MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF PAVEMENT OR TOP OF CURB. IF THE SIGNS ARE LOCATED IN A BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL CLEARANCE OF 2 FT FROM THE SURFACE EDGE OR CURB WITH A MINIMUM MOUNTING HEIGHT IS 7' MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF PAVEMENT OR TOP OF CURB MAY BE USED.

NO.	DATE	REVISIONS	BY	APP'D
3				
2	10/16/12	Modified General Note	J.A.M.	K.P.
1	9/1/10	Modified Bid Item	J.A.M.	K.P.

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR THE TRANSPORTATION WORKS FOR KANSAS (TWORKS) SIGNS HIGHWAY LARGE

~~TE715A~~

FHWA APPROVAL			10/16/12	APP'D	Kristina Pyle		
DESIGNED	D.G.	DETAILED	D.G.	QUANTITIES		TRACED	
DESIGN CK.	J.A.M.	DETAIL CK.	J.A.M.	QUAN. CK.		TRACE CK.	

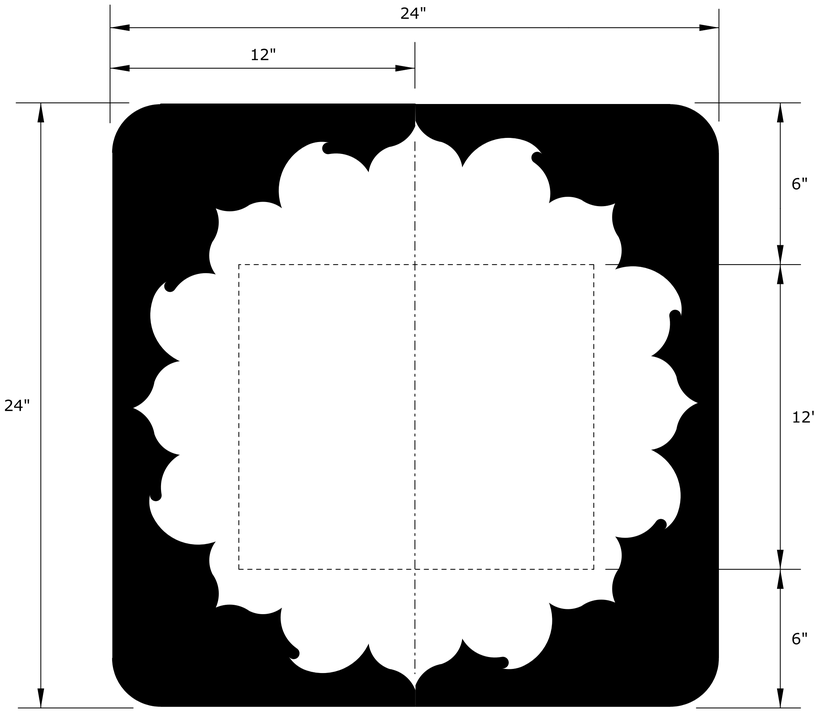
KDOT Graphics Certified 10-23-2012

Sh. No. 221

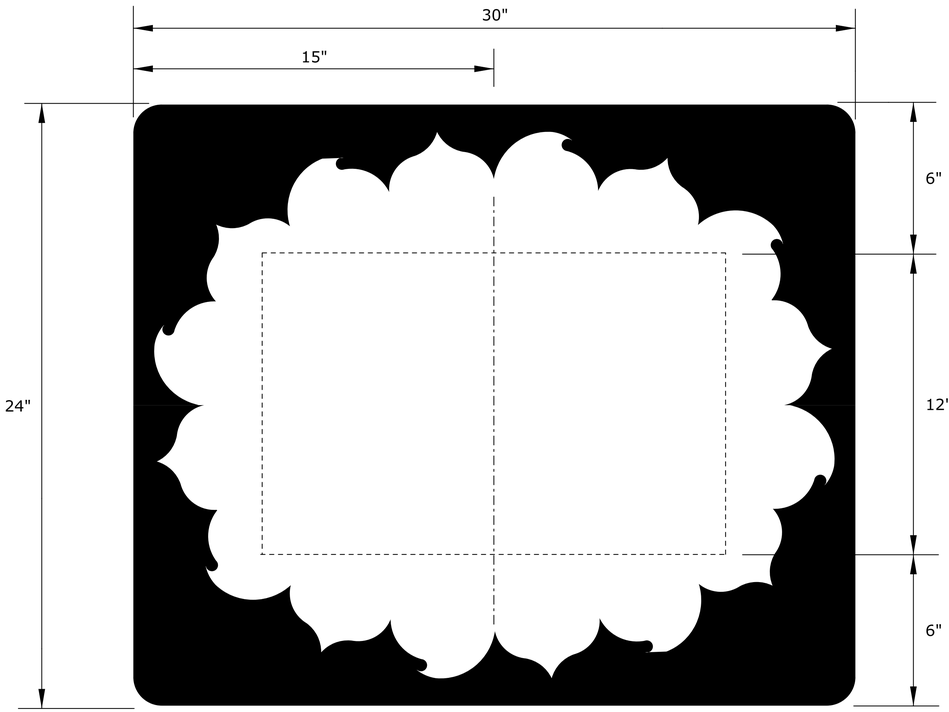
KDOT Graphics Certified

Drawn By : aameyer
File : ka356001css715a-01.dgn
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	222	251



1 or 2 Digit
KM1-5
24"x 24"



3 Digit
KM1-5
30"x 24"

NOTES:

SEE PLAN SHEETS FOR NUMERAL TO BE USED. THE NUMERALS SHALL BE SERIES "D" LEGEND. OPTIMALLY SPACE NUMERALS ABOUT VERTICAL CENTERLINE.

TO OBTAIN THE SUNFLOWER PETAL DETAILS ON THE KANSAS ROUTE MARKER, INCREASE ALL DIMENSIONS AND FEATURES OF THE SHIELD PROPORTIONALLY.

KANSAS ROUTE MARKER SHALL CONSIST OF BLACK NUMERALS ON ASTM TYPE III YELLOW SUNFLOWER SURROUNDED BY A BLACK BACKGROUND.

NO.	DATE	REVISIONS	BY	APP'D
3				
2	8/8/07	MI-5 Changed to KMI-5	M.B.	A.A.A.
1	11/19/03	Changed Border	B.H.	S.A.B.

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR KANSAS ROUTE MARKERS

INDEPENDENT USE

TE716

FHWA APPROVAL	8/8/07	APP'D	Anthony A. Alrobaire
DESIGNED L.E.R.	DETAILED B.A.H.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 10-23-2012

Sh. No. 222

KDOT Graphics Certified

Drawn By: aameyer
File: ka356001css716-01.dgn
Plotted: 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	223	251

REFER TO STD. TE710 FOR ADDITIONAL INFORMATION ON TEMPORARY TRAFFIC CONTROL SIGNS AND SIGN SPACING.
REFER TO STD. TE702 FOR INFORMATION ON TAPERS AND CHANNELIZING DEVICES.
REFER TO STD. TE700 FOR LENGTH OF BUFFER SPACE.

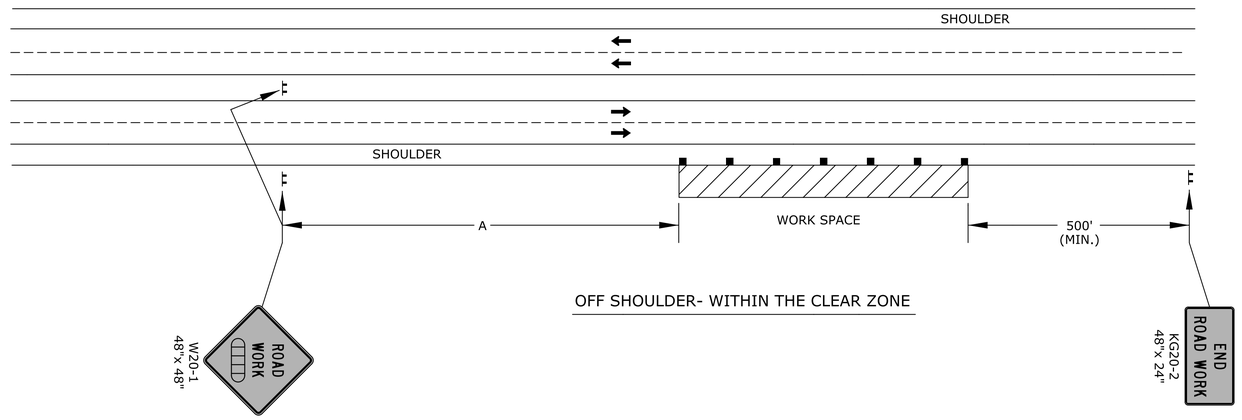
NOTES:

FOR WORK IN THE MEDIAN, INSTALL SIGNS AND CHANNELIZING DEVICES FOR EACH DIRECTION OF TRAFFIC ACCORDING TO THE APPLICABLE TYPICAL DRAWING.

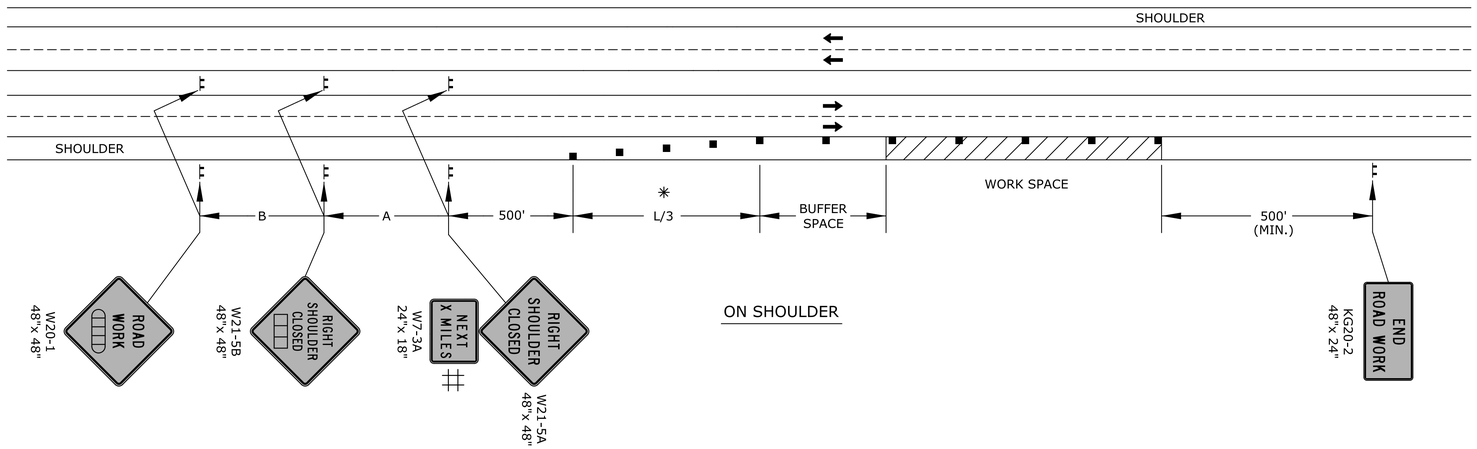
NO TRAFFIC CONTROL IS REQUIRED IF THE WORK SPACE IS LOCATED OUTSIDE OF THE CLEAR ZONE.

FOR OPERATIONS OF 60 MINUTES OR LESS, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH A HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHT IS USED.

WHEN CONCRETE BARRIER SYSTEM IS USED, PORTABLE CHANNELIZING DEVICES ARE NOT NEEDED ALONG THE TANGENT BARRIER SECTION. DELINEATION ON THE BARRIER SYSTEM IS STILL REQUIRED. SEE RD622.



OFF SHOULDER- WITHIN THE CLEAR ZONE



ON SHOULDER

ELIMINATE W7-3A IF SHOULDER IS CLOSED FOR LESS THAN 2 MILES.

✳ OMIT TAPER IF PAVED SHOULDER IS LESS THAN 8' WIDE.

X LENGTH TO THE NEAREST WHOLE MILE
■ CHANNELIZING DEVICE
AHEAD, 1500 FT, OR 1 MILE
AHEAD, 1000 FT, 1500 FT OR ½ MILE

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Modified Shoulder Detail	J.A.M.	K.P.
2	4/20/09	Combined And Moved General Notes	J.A.M.	A.A.A.
1	8/8/07	G20-2 Changed To KG20-2	M.B.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL WORK ON OR NEAR THE SHOULDER DIVIDED HIGHWAY

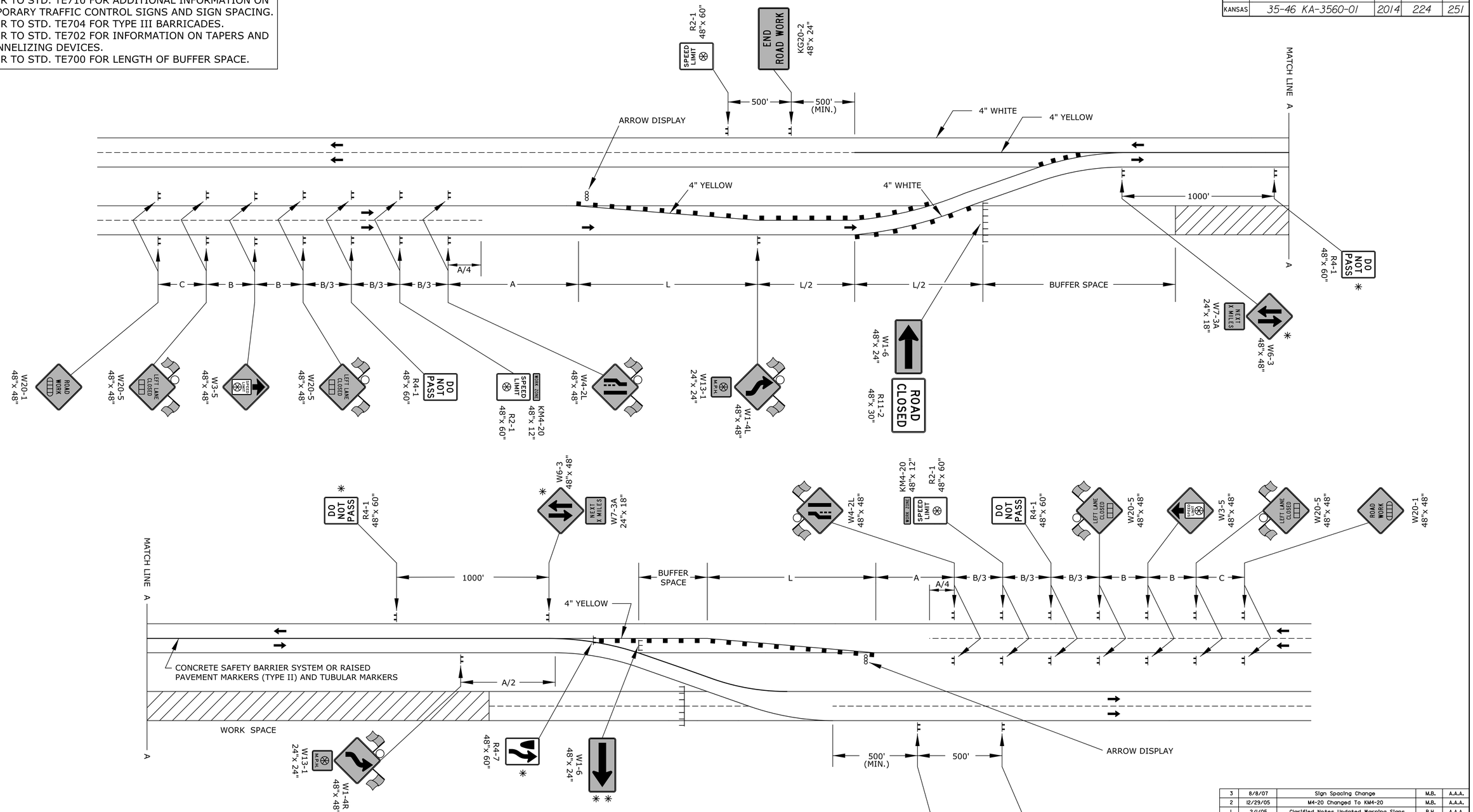
TE722

FHWA APPROVAL		10/16/12	APP'D	Kristina Pyle	
DESIGNED	L.E.R.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 10-23-2012

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	224	251

REFER TO STD. TE710 FOR ADDITIONAL INFORMATION ON TEMPORARY TRAFFIC CONTROL SIGNS AND SIGN SPACING.
REFER TO STD. TE704 FOR TYPE III BARRICADES.
REFER TO STD. TE702 FOR INFORMATION ON TAPERS AND CHANNELIZING DEVICES.
REFER TO STD. TE700 FOR LENGTH OF BUFFER SPACE.



- TYPE III BARRICADES
- X LENGTH TO THE NEAREST WHOLE MILE
- ■ CHANNELIZING DEVICE
- AHEAD, 1500 FT, OR 1 MILE
- AHEAD, 1000 FT, 1500 FT, OR ½ MILE
- SPEED TO BE DETERMINED BY THE ENGINEER
- ○ TYPE "A" LOW INTENSITY WARNING LIGHT

THE W6-3 & R4-1 SIGN COMBINATION MAY BE REQUIRED AT ADDITIONAL LOCATIONS ALONG THE PROJECT. THE SPACING BETWEEN THESE LOCATIONS SHALL BE A MAXIMUM OF 1 MILE. THE W7-3A SIGN SHOULD BE MOUNTED WITH THE W6-3 SIGN AT 2 MILE INCREMENTS ON A PROJECT OF 4 MILES OR LONGER.

* SIGN TO BE ELIMINATED IF CONCRETE SAFETY BARRIER SYSTEM IS USED.

** BARRICADE TO BE ELIMINATED AND SIGN W1-6 TO BE MOUNTED ON SKIDS IF CONCRETE SAFETY BARRIER SYSTEM IS USED.

NO.	DATE	REVISIONS	BY	APP'D
3	8/8/07	Sign Spacing Change	M.B.	A.A.A.
2	12/29/05	M4-20 Changed To KM4-20	M.B.	A.A.A.
1	2/1/05	Clarified Notes, Updated Warning Signs	B.H.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL FOUR-LANE DIVIDED HIGHWAY ONE ROADWAY CLOSED CROSSOVER FROM RIGHT LANE

TE742

FHWA APPROVAL			8/8/07	APP'D	Anthony Alrobaire
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

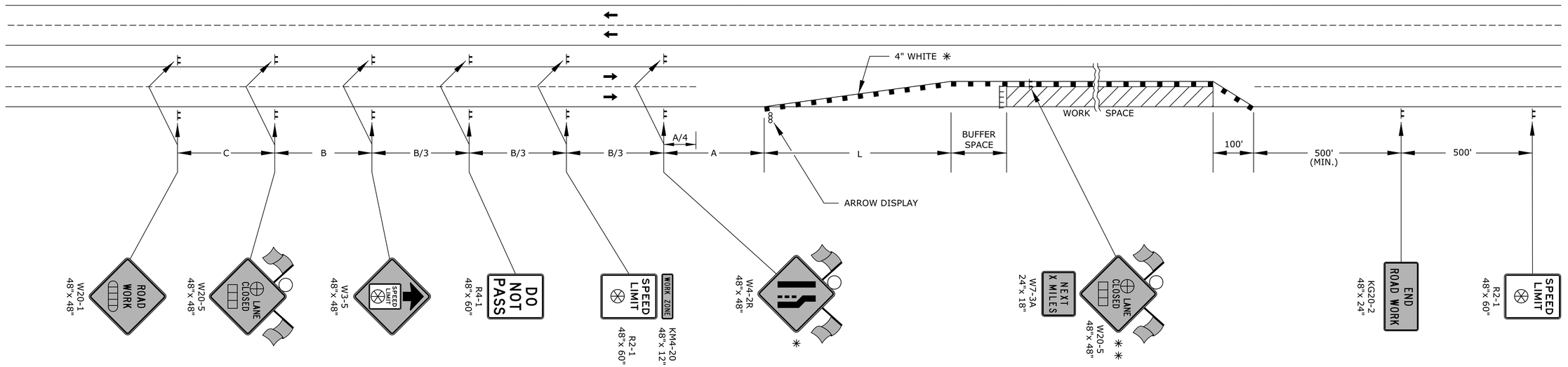
KDOT Graphics Certified 10-23-2012 Sh. No. 224

KDOT Graphics Certified

Drawn By : aameyer
File : ka356001css742-01.dgn
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	225	251

REFER TO STD. TE710 FOR ADDITIONAL INFORMATION ON TEMPORARY TRAFFIC CONTROL SIGNS AND SIGN SPACING.
REFER TO STD. TE704 FOR TYPE III BARRICADES.
REFER TO STD. TE702 FOR INFORMATION ON TAPERS AND CHANNELIZING DEVICES.
REFER TO STD. TE700 FOR LENGTH OF BUFFER SPACE.



LEFT-SIDE SIGNS SHALL BE OMITTED FOR A FOUR-LANE UNDIVIDED HIGHWAY.

✳ FOR LEFT LANE CLOSURES USE W4-2L AND YELLOW EDGE LINE ALONG CHANNELIZING DEVICES.

✳ ✳ THE W20-5 (⊕ LANE CLOSED) AND W7-3A (NEXT X MILES) SIGNS SHOULD BE PLACED AT 2 MILE INCREMENTS ON A PROJECT OF 4 MILES OR LONGER.

- TYPE III BARRICADES
- X LENGTH TO THE NEAREST WHOLE MILE
- ■ CHANNELIZING DEVICE
- AHEAD, 1500 FT, OR 1 MILE
- AHEAD, 1000 FT, 1500 FT, OR ½ MILE
- ⊕ RIGHT OR LEFT
- ⊗ SPEED TO BE DETERMINED BY THE ENGINEER
- ○ TYPE "A" LOW INTENSITY WARNING LIGHT

NO.	DATE	REVISIONS	BY	APP'D
3	8/8/07	Sign Spacing Chnaged	M.B.	A.A.A.
2	12/29/05	M4-20 Changed To KM4-20	M.B.	A.A.A.
1	2/1/05	Clarified Notes, Updated Warning Signs	B.H.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL FOUR-LANE HIGHWAY ONE LANE CLOSED

TE744

FHWA APPROVAL		8/8/07	APP'D	Anthony Alrobaire
DESIGNED	B.A.H.	DETAILED	B.A.H.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN. CK.	TRACE CK.

KDOT Graphics Certified 10-23-2012

Sh. No. 225

KDOT Graphics Certified

Drawn By : aarneyer
File : ka356001css744-01.dgn
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	226	251

IBS REPLACEMENT MODULES	
REPLACEMENT MODULE SIZES	QUANTITY
REPLACEMENT MODULES (F2OO)	7
REPLACEMENT MODULES (F4OO)	4
REPLACEMENT MODULES (F7OO)	3
REPLACEMENT MODULES (F14OO)	2
REPLACEMENT MODULES (F21OO)	4

SUMMARY OF TRAFFIC CONTROL DEVICES (EACH)

WORK ZONE SIGN (SPECIAL)		
SIGN NO.	16.25 SQ.FT. & LESS	16.26 SQ.FT. & OVER
SP-01		1
SP-02	7	
SP-03		1
SP-03a		1
SP-04		2
SP-05	3	
SP-06		2
SP-07		1
SP-07a		1
SP-08		1
SP-08a		1
SP-09		1
SP-10	9	
SP-10a	17	
SP-11		1
SP-12		4
SP-13		2
SP-14		2
SP-15		2
SP-16		2
M4-9 (S-1)	14	
M4-9 (S-2)	2	
M4-9 (S-3)	2	
M4-9 (S-4)	4	
M4-9 (S-5)	4	

SUMMARY OF TRAFFIC CONTROL DEVICES (EACH PER DAY)

✳ QUANTITY MOST USED ON THE PROJECT AT ANY ONE TIME

WORK ZONE SIGNS ✳			
SIGN NO.	SIZE - SQ.FT.		
	0-9.25	9.26-16.25	16.26 & OVER
W20-7		2	
KG20-2	7		
KI-104a		2	
KI-105a		2	
KM4-20	10		
R2-1			10
R3-2	2		
R3-7L	2		
R4-1			4
R11-2		4	
R11-4		2	
M1-1	58		
M1-4	56		
M3-1	22		
M3-3	37		
M4-5	67		
M4-8	67		
M4-8a	8		
M5-1L	4		
M5-1R	6		
M5-2R	2		
M6-1L	3		
M6-1R	6		
M6-2R	2		
M6-2L	1		
M6-3	26		
W1-4L		2	
W1-4bL		4	
W1-4bR		1	
W1-4cL		1	
W1-4cR		3	
W3-5		4	
W4-1R		1	
W4-2L		4	
W4-2R		4	
W4-3R		2	
W4-6		1	
W7-3a	4		
W9-1L		1	
W13-1	5		
W16-2P	1		
W20-1		8	
W20-3		3	
W20-5		8	
W21-5		2	
W21-5A		2	
W21-5B		2	
W24-1aL		3	
W24-1bR		1	
W24-1L		2	

BARRICADES ✳	CHANNELIZING DEVICES ✳	
TYPE III (4' TO 12')	FIXED	PORTABLE
63		524

LIGHTED DEVICES ✳	
WORK ZONE WARNING LIGHT (TYPE "A" LOW INTENSITY)	64
WORK ZONE WARNING LIGHT (RED TYPE "B" HIGH INTENSITY)	
ARROW DISPLAY	2
PORTABLE CHANGEABLE MESSAGE SIGN	6

RECAPITULATION OF QUANTITIES		
ITEM	QUANTITY	UNIT
WORK ZONE SIGNS (O TO 9.25 SQ.FT.)	95040	EACH PER DAY
WORK ZONE SIGNS (9.26 TO 16.25 SQ.FT.)	17040	EACH PER DAY
WORK ZONE SIGNS (16.26 SQ.FT. & OVER)	3360	EACH PER DAY
WORK ZONE BARRICADES (TYPE III - 4' TO 12')	15120	EACH PER DAY
CHANNELIZER (FIXED)		EACH PER DAY
CHANNELIZER (PORTABLE)	125760	EACH PER DAY
WORK ZONE WARNING LIGHT (TYPE "A" LOW INTENSITY)	15360	EACH PER DAY
WORK ZONE WARNING LIGHT (RED TYPE "B" HIGH INTENSITY)		EACH PER DAY
ARROW DISPLAY	480	EACH PER DAY
PORTABLE CHANGEABLE MESSAGE SIGN	1440	EACH PER DAY
PAVEMENT MARKING (TEMPORARY)		
4" SOLID (TYPE I TAPE OR PAINT)	1161.5	STA./LINE
4" SOLID (TYPE II TAPE OR PAINT)	512.8	STA./LINE
4" BROKEN (8.0') (TYPE I TAPE OR PAINT)	74.5	STA./LINE
4" BROKEN (8.0') (TYPE II TAPE OR PAINT)	56.0	STA./LINE
4" BROKEN (8.0') (FLEXIBLE RAISED PAVEMENT MARKER)		STA./LINE
4" BROKEN (3.0') (TYPE I TAPE OR PAINT)		STA./LINE
4" BROKEN (3.0') (TYPE II TAPE PAINT)		STA./LINE
4" BROKEN (3.0') (FLEXIBLE RAISED PAVEMENT MARKER)		STA./LINE
4" DOTTED EXTENSION (TYPE I TAPE OR PAINT)	1.6	STA./LINE
4" DOTTED EXTENSION (TYPE II TAPE OR PAINT)	0.8	STA./LINE
SOLID (LINE MASKING TAPE)		STA./LINE
BROKEN (LINE MASKING TAPE)		STA./LINE
PAVEMENT MARKING REMOVAL	55646	LIN. FT.
CONCRETE SAFETY BARRIER (TYPE F3)(TEMPORARY)	14950	LIN. FT.
CONCRETE SAFETY BARRIER (TYPE F3)(TEMP.-INSTALL ONLY)		LIN. FT.
CONCRETE SAFETY BARRIER (TYPE F3)(TEMP.-RELOCATE)	16475	LIN. FT.
INERTIAL BARRIER SYSTEM	4	EACH
REPLACEMENT MODULES	20	EACH
WORK ZONE SIGN (SPECIAL) (16.25 SQ. FT. & LESS)	62	EACH
WORK ZONE SIGN (SPECIAL) (16.26 SQ. FT. & MORE)	25	EACH
TEMPORARY RAISED PAVEMENT MARKER (TYPE I)		EACH
TEMPORARY RAISED PAVEMENT MARKER (TYPE II)		EACH
TRAFFIC SIGNAL INSTALLATION (TEMPORARY)		LUMP SUM
TRAFFIC CONTROL (INITIAL SET UP)	LUMP SUM	LUMP SUM
TRAFFIC CONTROL		LUMP SUM
FLAGGER (SET PRICE)	1	HOUR
TWORKS SIGN ASSEMBLY	2	EACH
IMPACT ATTENUATOR (TEMPORARY)	1	EACH

NO.	DATE	REVISIONS	BY	APP'D
3	10/16/12	Modified Pavement Marking Requirements	J.A.M.	K.P.
2	10/4/11	Added IBS Quantities, Added TWorks Quanity	J.A.M.	K.P.
1	8/8/07	2007 Spec Revision	M.B.	A.A.A.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF DEVICES AND RECAPITULATION OF QUANTITIES

TE795

FHWA APPROVAL		10/16/12	APP'D
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

KDOT Graphics Certified 12-06-2012

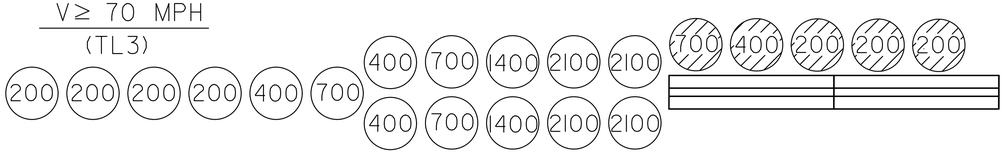
Sh. No. 226

KDOT Graphics Certified

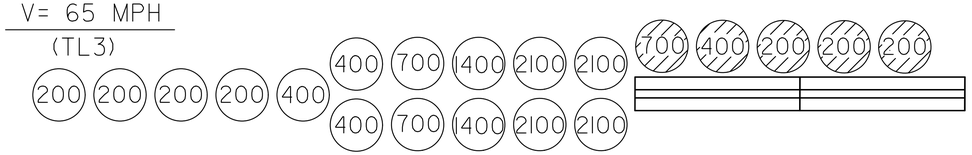
Drawn By : aameyer
File : ka356001css795-01.dgn
Plotted : 16-OCT-2014 11:40

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	227	251

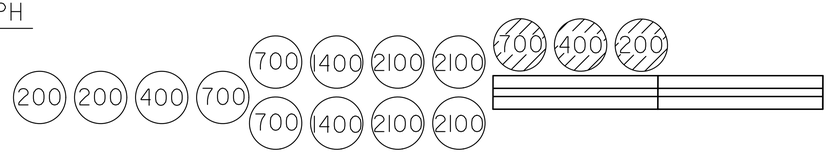
V≥ 70 MPH
(TL3)



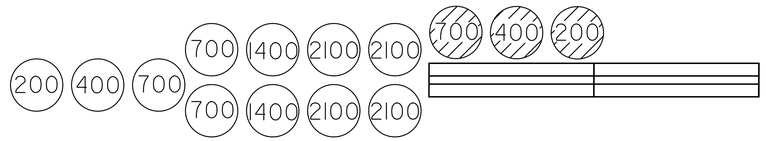
V= 65 MPH
(TL3)



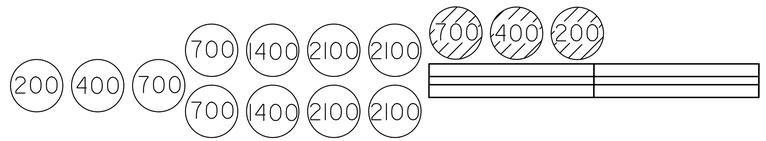
V= 60 MPH
(TL3)



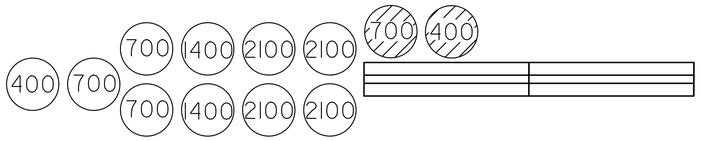
V= 55 MPH
(TL3)



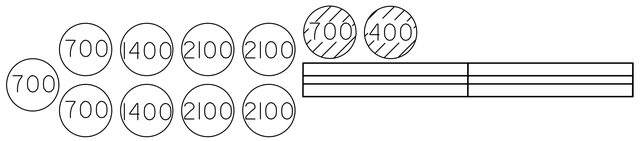
V= 50 MPH
(TL3)



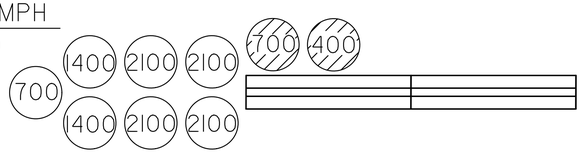
V= 45 MPH
(TL2)



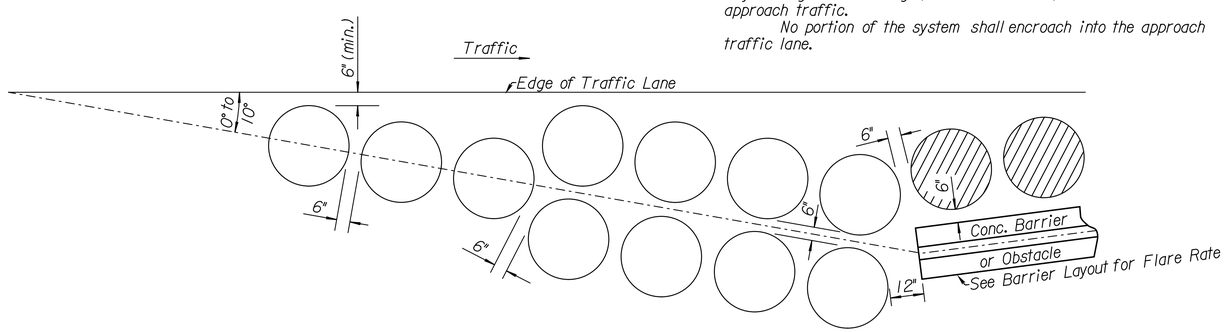
V= 40 MPH
(TL2)



V= 35 MPH
(TL2)



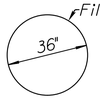
INERTIAL BARRIER SYSTEM			
Station	Side	Design Speed	Comments
152+70	℄	65 MPH	Pre-Phase I (two-way)
169+15	℄	65 MPH	Pre-Phase I (two-way)
285+99	℄	65 MPH	Pre-Phase I (two-way)
299+09	℄	65 MPH	Pre-Phase I (two-way)
289+26	LT	65 MPH	Phase 1
166+85	RT	65 MPH	Phase 2
183+21	RT	65 MPH	Phase 3
189+88	LT	65 MPH	Phase 3
232+62	RT	65 MPH	Phase 3
237+53	LT	65 MPH	Phase 3



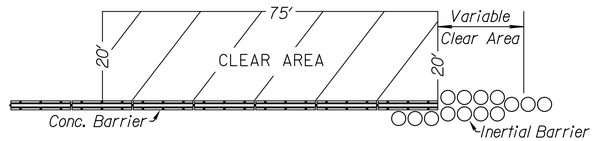
TYPICAL PLAN of INERTIAL BARRIER

When two-way traffic is adjacent to only one side of Concrete Barrier or Obstacle, these additional modules will be placed on the Traffic Side of Concrete Barrier or Obstacle. Traffic adjacent to both sides of the Concrete Barrier or Obstacle requires an additional set of modules each side if approach traffic is exposed to the back portion of the Inertial Barrier. These additional modules are not required along the sides of Concrete Barrier or Obstacle when it's location is outside the Clear Zone or one-way directional traffic.

Fill module to correct weight for its position in array.



PLAN
Replacement Module



PLAN - CLEAR AREA

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 requirements.

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 traffic lane.

NO.	DATE	REVISIONS	BY	APP'D
7	5-17-13	Added Detail, Clear Area	S.W.K.	J.O.B.
6	2-3-12	Revised General Note	S.W.K.	J.O.B.
5	6-27-11	Rdvised notes & Typical Plan detail	S.W.K.	J.O.B.
4	9-10-09	Impact Attenuator to Inertial Barrier	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

INERTIAL BARRIER (TL2 or TL3)

RD620

FHWA APPROVAL	10-18-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

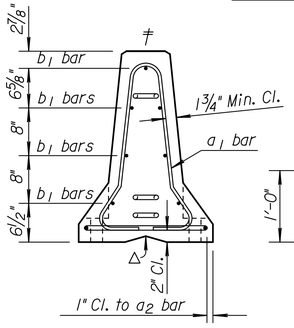
KDOT Graphics Certified 10-28-2013

Sh. No. 227

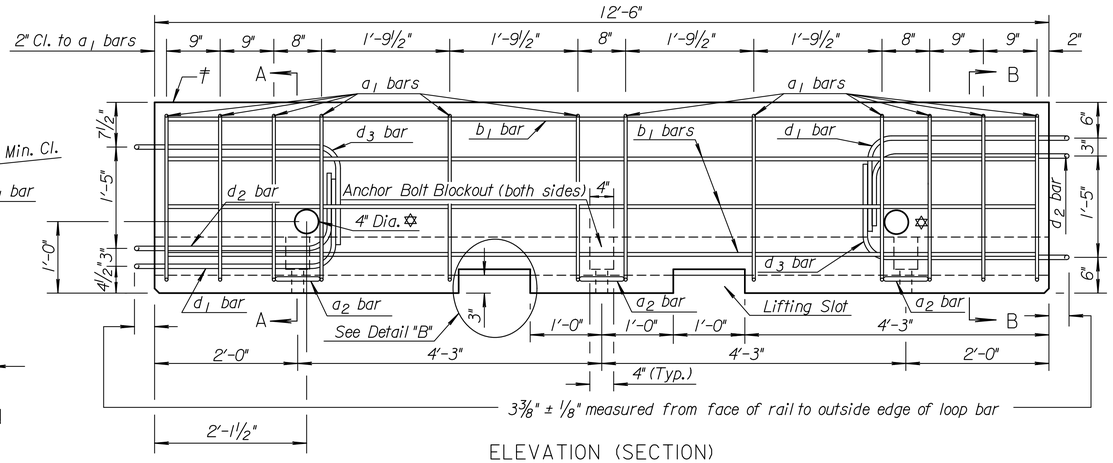
KDOT Graphics Certified

Drawn By : aameyer
File : G:\KC13\03561\Traffic\Sheets\ka356001rss620-01.dgn
Plotted : 10/16/2014

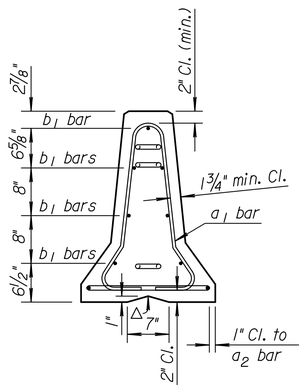
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	228	251



SECTION A-A
TYPICAL SECTION
(Stirrup Placement)

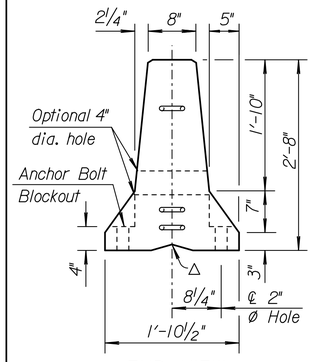


ELEVATION (SECTION)

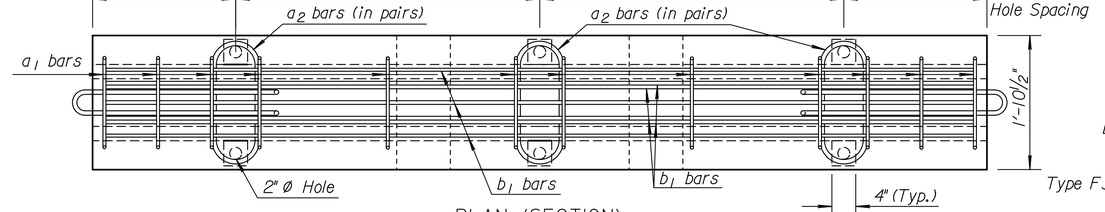


SECTION B-B
TYPICAL SECTION
(Stirrup Placement)

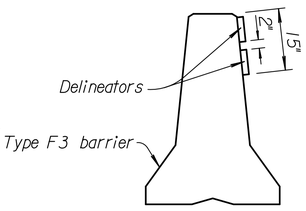
‡ *Marked End*
✡ *4" diameter - 11 gauge steel round mechanical tubing sleeve. These holes are optional.*
△ *V Notch is optional*



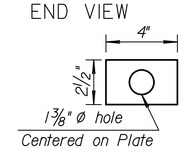
END VIEW



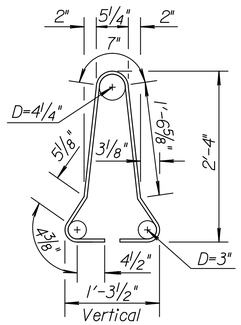
PLAN (SECTION)

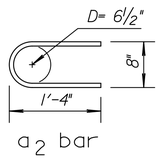


DELINEATOR DETAILS

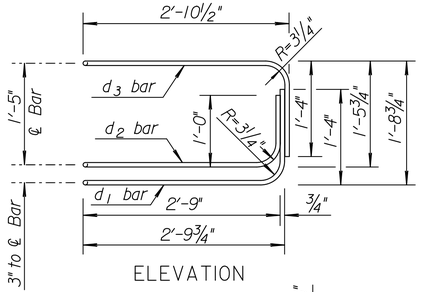


(1/2" Top Plate Detail)

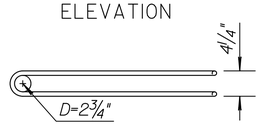




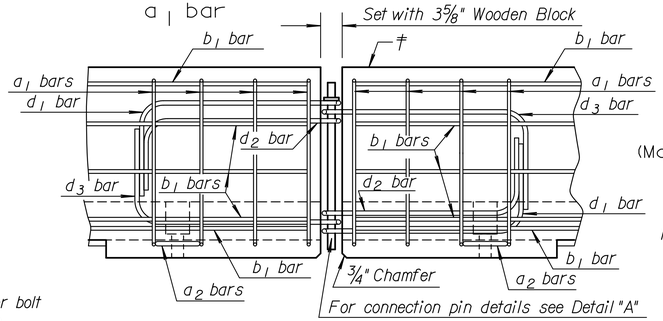
a2 bar



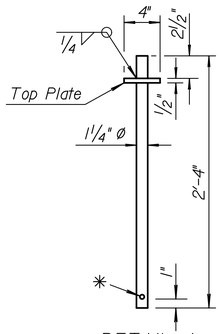
ELEVATION



PLAN
LOOP BAR ASSEMBLY
(Marked end shown, invert for other end)
(Material as stated in General Notes)



DETAILS OF BARRIER CONNECTION



DETAIL A
CONNECTION PIN
(A36 Steel) 10.9 lbs. each

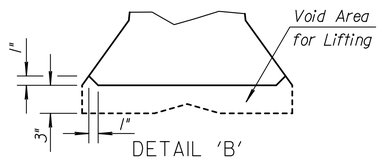
✳ 5/8" Ø hole for retainer bolt. The retainer bolt & nut are installed at Contractor's option.
Note: Retainer bolt & nut required with Tie Down Strap.

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

Per 12'-6" Barrier Section

REINFORCING A615 Gr. 60					
Bar	Bar Size	Shape	No. of Bars	Length Ft.	Weight Lbs.
a_1	#4		12	6'-0"	48.1
a_2	#6		6	2'-11"	26.3
b_1	#5		7	12'-2"	88.8
LOOP ASSEMBLY					
d_1	#6		2	8'-5"	25.3
d_2	#6		2	7'-7"	22.8
d_3	#6		2	8'-6"	25.5

Concrete Quantity = 1.3 C.Y.
(Dimensions are out to out of bars unless otherwise noted.)



DETAIL 'B'
LIFTING SLOT DETAIL
(1" Chamfer to prevent spalling)

GENERAL NOTES:

MATERIAL: Use ASTM A615, Grade 60 reinforcing bars, except for the loop bars (d_1, d_2 and d_3).

The loop bars (d_1, d_2 and d_3) shall be 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 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.

SURFACE PREPARATION: 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.

MARKING: The left end (‡) of each barrier shall be permanently marked by stamping or forming into the barrier the following information:
- Type F3
- 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 having 1900' or greater curvature where they shall be spaced on 25' centers.

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 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".

NO.	DATE	REVISIONS	BY	APP'D
4	5-17-13	Revised General Note, Clear Area	S.W.K.	J.O.B.
3	06-03-12	Revised General Note, Clear Area	S.W.K.	J.O.B.
2	02-06-07	Revised additional sheets note	S.W.K.	J.O.B.
1	01-10-07	Rev. layout & notes, add. Delineation	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE SAFETY BARRIER TYPE F3

RD622

FHWA APPROVAL	10-18-13	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 10-28-2013 Sh. No. 228

KDOT Graphics Certified

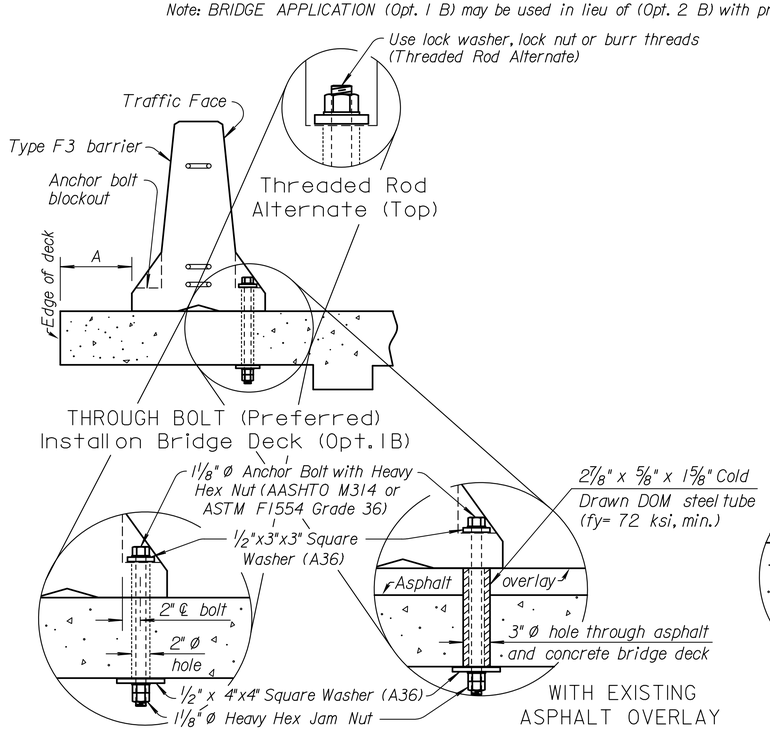
Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\03561\Traffic\Sheets\ka356001rss622-01.dgn

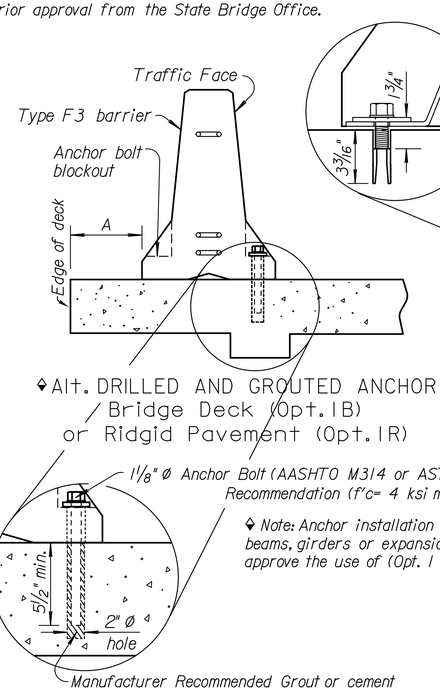
Option	BRIDGE DECK APPLICATION	
1 B	0′ ≤ A < 2′	Anchor each barrier with 3 bolts on traffic face
2 B	△2′ ≤ A < 4′	Anchor with Tie-down strap connector
3 B	A ≥ 4′	No anchorage required unless shown on plans

Option	ROAD PAVEMENT APPLICATION	
1 R	0" ≤ A < 2′	Anchor each barrier with 3-bolts on traffic face
2 R	6" ≤ A < 2′	Anchor with Tie-down Strap or Staked Down (flexible)
3 R	A ≥ 2′	No anchorage required

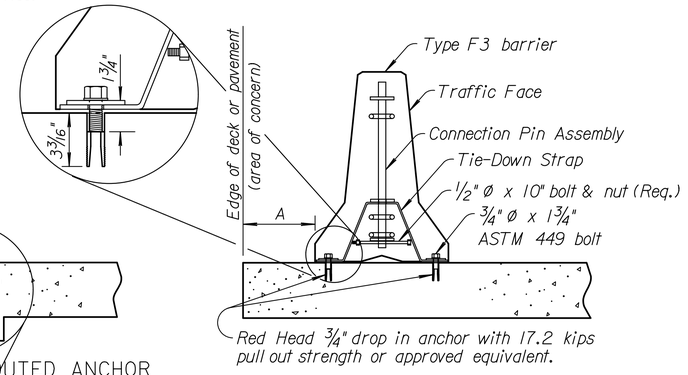
△ *This dimension may be reduced to 1′ on a newly constructed Bridge Deck.*

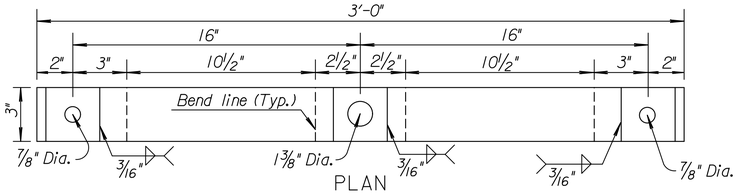
Note: BRIDGE APPLICATION (Opt. 1 B) may be used in lieu of (Opt. 2 B) with prior approval from the State Bridge Office.

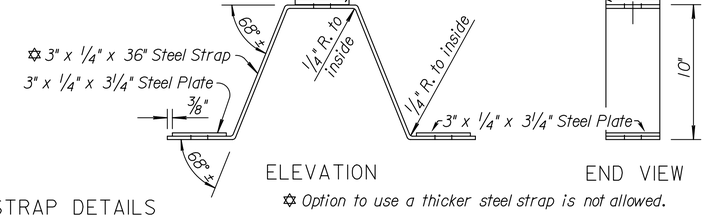




♦ *Note: Anchor installation (Opt. 1 B) avoids damage to the support beams, girders or expansion joint. The State Bridge Office shall approve the use of (Opt. 1 B).*

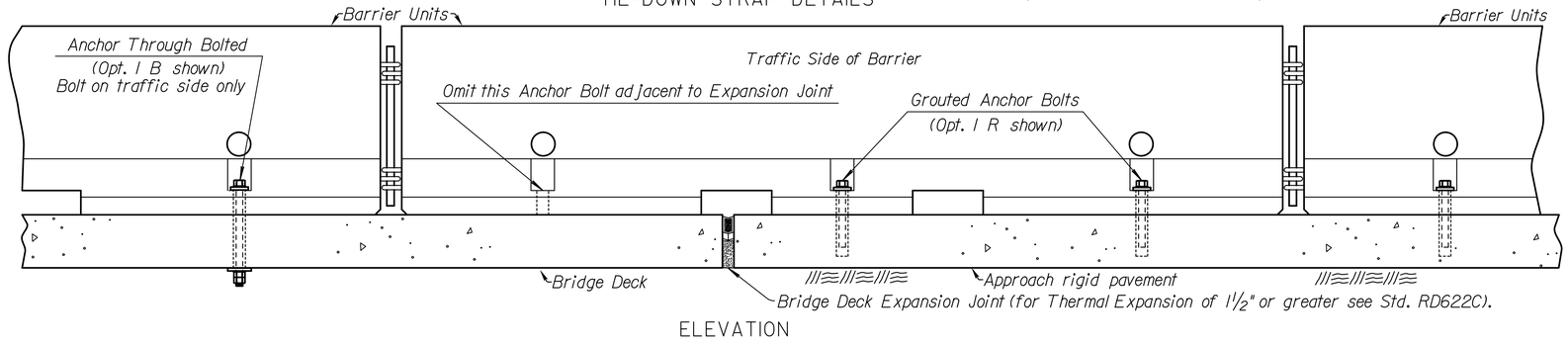




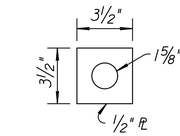


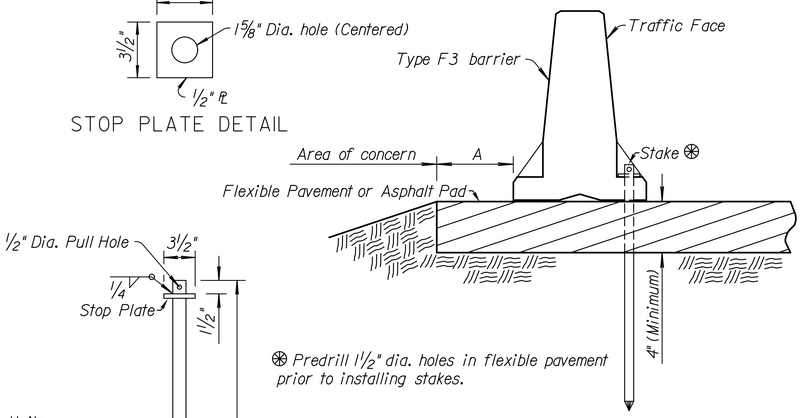
TIE-DOWN STRAP DETAILS

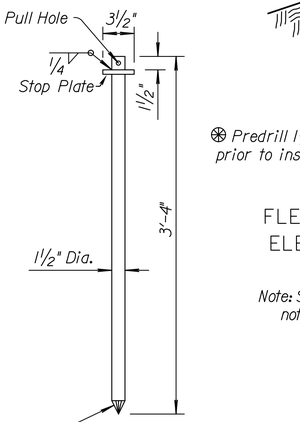
✡ *Option to use a thicker steel strap is not allowed.*



TREATMENT AT BRIDGE DECK EXPANSION JOINT SCHEMATIC (Expansion < 1½")







Note: See Std. Drawing No. RD622 for details and quantities not shown on this sheet.

NO.	DATE	REVISIONS	BY	APP'D
5	6-27-11	Revised General Note	S.W.K.	J.O.B.
4	9-14-10	Add. through bolt with asphalt over.	S.W.K.	J.O.B.
3	2-2-10	Rev. Anchor to Tie-down callout	S.W.K.	J.O.B.
2	10-2-07	Rev. anchor bolt call-out	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE SAFETY BARRIER TYPE F3 ANCHORAGE

RD622B

FHWA APPROVAL	8-30-2011	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 08-31-2011 Sh. No. 229

KDOT Graphics Certified

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	229	251

GENERAL NOTES:

INSTALLATION: Holes into the pavement to anchor the concrete safety barrier may be drilled after positioning barrier. Install barrier with through anchor bolt where possible, use grouted anchor bolts where through bolt can't be used. Do not drill into or otherwise damage support beams, girders, or or expansion joints. All work and materials required for the installation of the anchors are subsidiary to the bid item "Concrete Safety Barrier".

UTILITIES & STRUCTURES (Stakes) Verify buried utilities and structures within stake depth. If conflicts between stake and buried elements exist, up to 2 stakes maximum in a single barrier may be omitted if adjacent barriers have 3 stakes each.

ANCHORAGE: Use galvanized grouted anchor bolts, through anchor bolts, nuts & washers that meet standard specifications.

Install three anchor bolts or asphalt pins per barrier on the traffic side except on transition barrier as shown.

BARRIER REMOVAL: Remove grouted or wedge anchor system by drilling the anchor with a core barrel 2x the diameter of the insert. Core to a depth equal to the installed depth and remove the core, prepare the hole by removing any dust and debris. Fill hole with material that meets KDOT Prequalified "Non-shrink grouts for grouting anchor bolts and reinforcing into previously poured concrete". Follow the manufacturer's procedures for mixing, hole preparation and curing.

To fill through bolt anchor, remove and completely fill the hole using instructions for drop-in anchors except no coring is required.

For removed or relocated barrier on flexible pavement, fill stake holes completely with hot or cold asphalt patch material.

Work and materials required to remove and patch anchor holes is subsidiary to the bid item "Concrete Safety Barrier".

SIGNING: For sign spacing, traffic control device details and reference notes, see Index of Sheets.

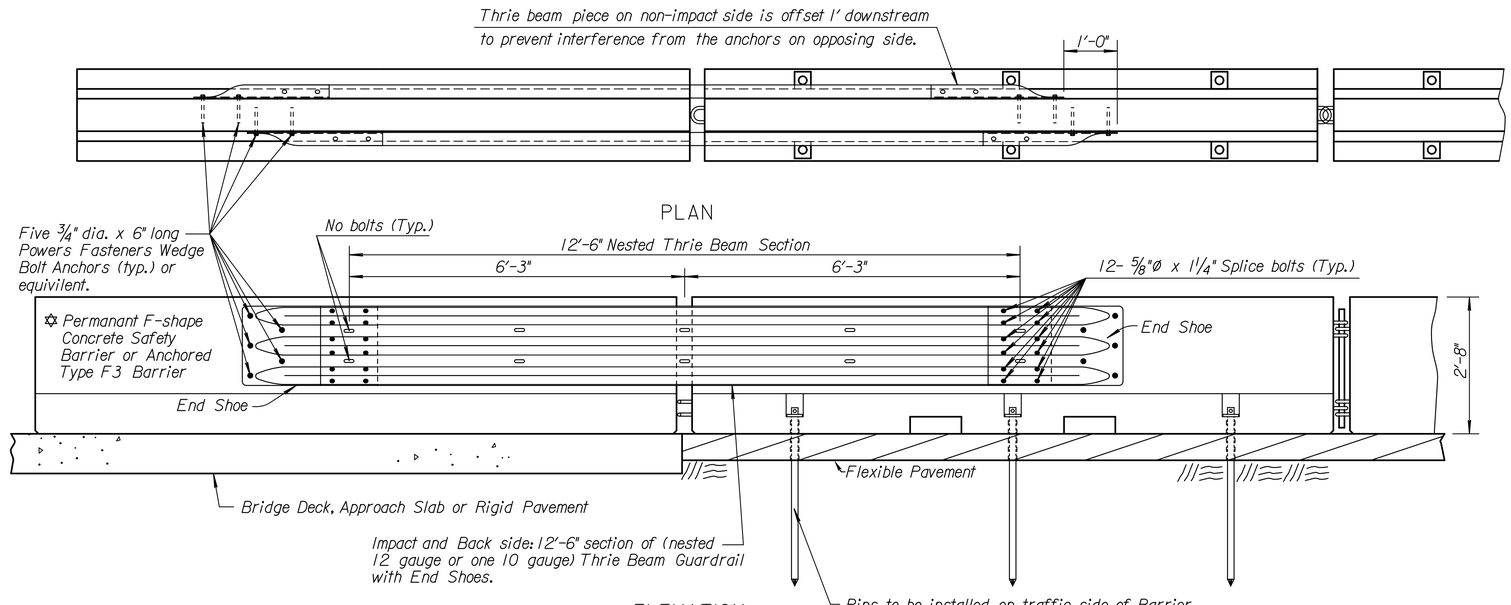
TEMPORARY BARRIERS: Temporary Barriers shown in the details of this drawing are not allowed for permanent installations.

See RD622D for transition details between anchored and free-standing barriers.

Note to Designer: For use on Haunched slab bridges, the Road Designer shall coordinate with the Bridge Designer for "corridor in the reinforcing steel layout to accommodate barrier anchoring". Road Designer shall coordinate barrier layout with Bridge Designer to accomodate for expansion during construction.

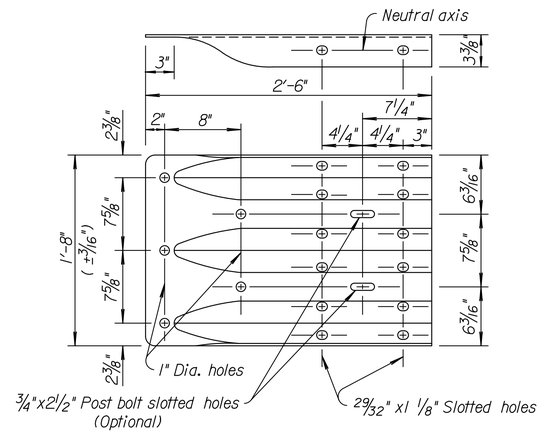
Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Traffic\Sheets\ka356001rss622B-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	230	251

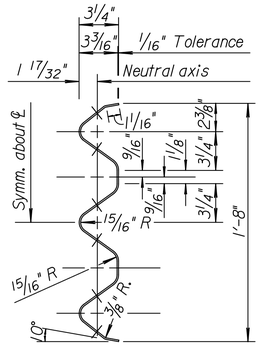


GENERAL NOTES:

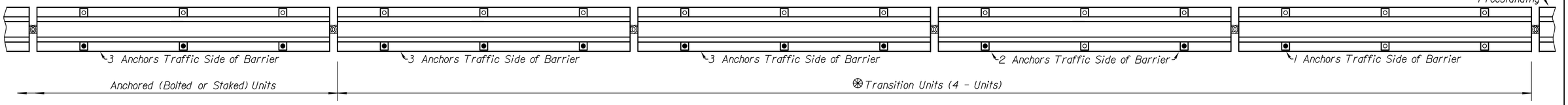
The work and materials required for the installation & removal of the guardrail connection and barrier anchors as shown on this sheet shall be subsidiary to the "Concrete Safety Barrier" bid item.



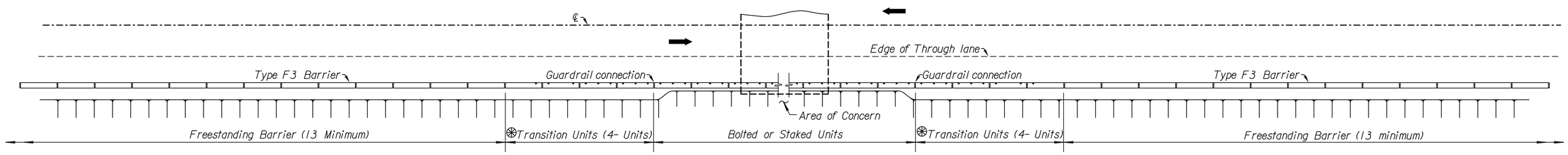
TERMINAL CONNECTOR



THRU RAIL ELEMENT
TYPICAL THRIE BEAM



PLAN (Transition Units)



✡ APPROACH TRANSITION FROM FREESTANDIING TO ANCHORED (BOLTED OR STAKED) TYPE F-3 CONCRETE BARRIER

✡ TYPICAL INSTALLATIONS

1) Type F3 barrier anchored to rigid pavement with bolted connection or bolted to a bridge deck.
   -the transtion between this anchored barrier and the freestanding needs the transition barriers plus guardrail as shown above.
2) Permanent F-shape barrier
   -the transtion between this permanent barrier and the freestanding Type F3 needs the transition barriers plus guardrail as shown above.
3) Type F3 barrier anchored with straps on rigid pavement or a bridge deck
   -the transtion between this anchored barrier and the freestanding needs NO transition barriers or NO guardrail.
4) Type F3 barrier pinned/staked to asphalt pavement
   -the transtion between this anchored barrier and the freestanding needs the transition barriers but NO guardrail.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	1-30-07	Rem. temp. details from perm. barrier	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE SAFETY BARRIER TYPE F3 TRANSITION LAYOUTS

RD622D

FHWA APPROVAL	01-19-07	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

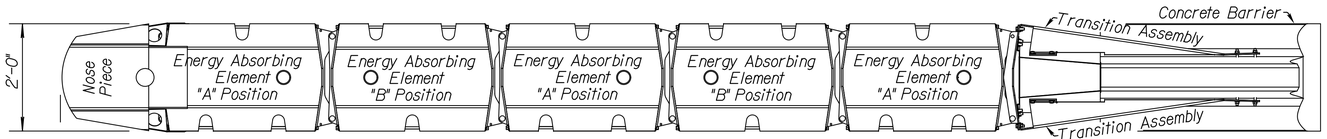
KDOT Graphics Certified 07-22-2010

Sh. No. 230

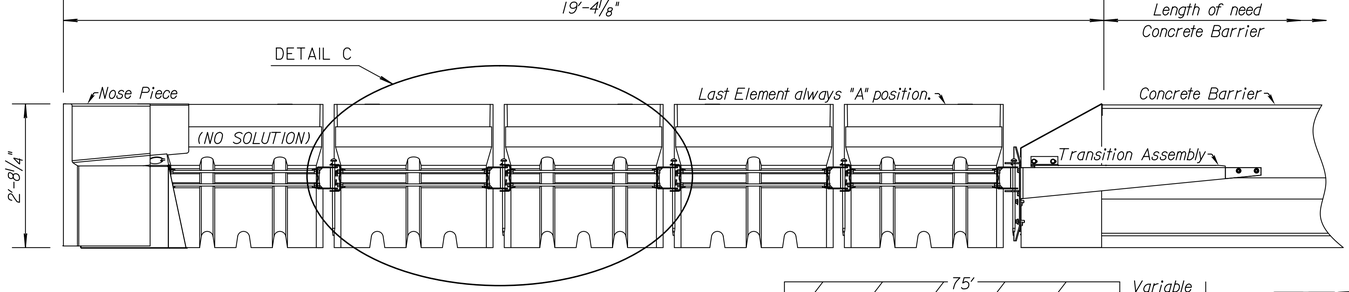
KDOT Graphics Certified

Drawn By: aameyer
File: G:\KC13\03561\Traffic\Sheets\ka356001rss622D-01.dgn
Plotted: 10/16/2014

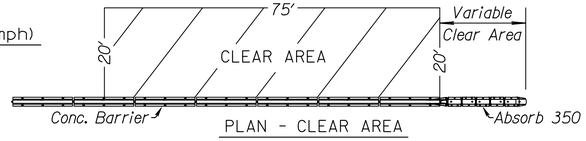
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	231	251



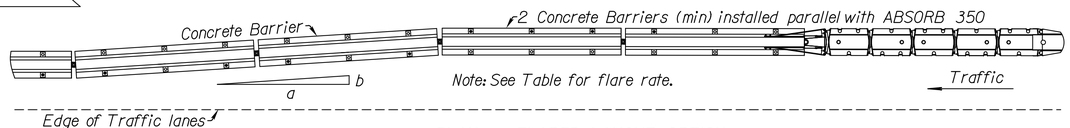
PLAN - ABSORB 350 (TL2 ≤ 45 mph)



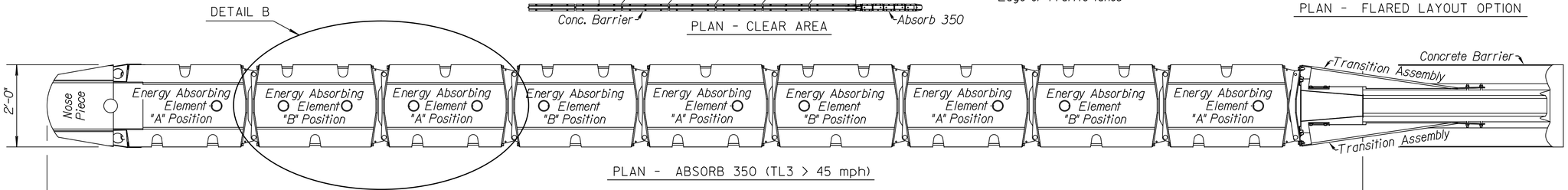
ELEVATION - ABSORB 350 (TL2 ≤ 45 mph)



PLAN - CLEAR AREA

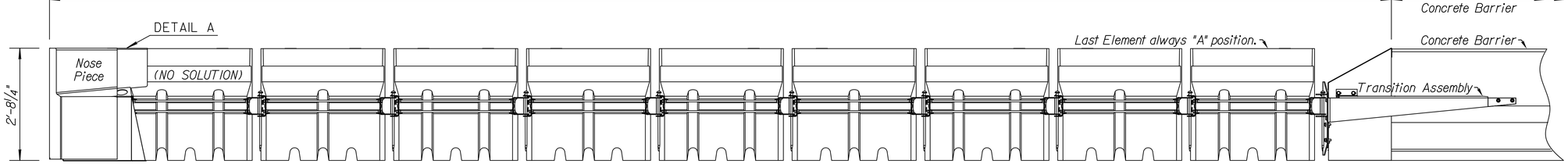


PLAN - FLARED LAYOUT OPTION

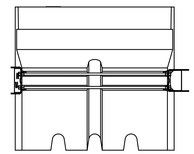


PLAN - ABSORB 350 (TL3 > 45 mph)

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



ELEVATION - ABSORB 350 (TL3 > 45mph)



ELEVATION

Replacement Module ("B" Position shown)

GENERAL NOTES

ABSORB 350 (TL2 or TL3) details shown are for "Information Only" and may not be an exact detail of ABSORB 350. See Engineer's copy of ABSORB 350 (TL2 or TL3) Installation Manual for component details, installation procedure and maintenance.

ABSORB 350 (TL2 or TL3) installation in Kansas requires an antifreeze solution regardless of the time of year. Use an antifreeze solution of Calcium Chloride (CaCl2) 25% by weight, Calcium Magnesium Acetate (CMA) 32% by weight or Potassium Acetate (KAc) 32% by weight. Fill elements within 2" of the top with anti-freeze solution, inspect elements regularly to insure adequate fill levels.

Do not fill FIRST ELEMENT behind the NOSE PIECE with solution but leave empty.

Transport, reused or dispose of antifreeze solution properly when emptying Absorb 350 elements.

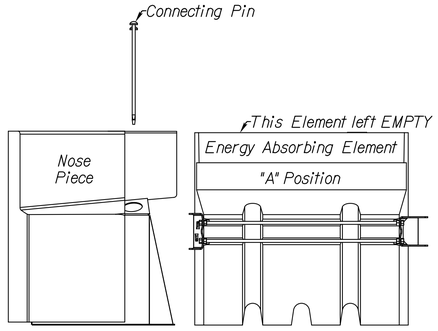
The ABSORB 350 can connect to permanent or temporary F-Shape Barrier. Units shown this sheet abuts barrier up to 24" wide with a Transition Assembly.

Install ABSORB 350 Impact Attenuator on a paved surface with a cross slope of 8% or less.

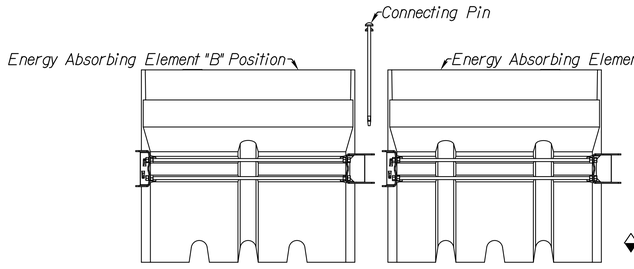
Maintain a clear area free of obstructions behind ABSORB 350 Terminal Assembly. Keep an additional Clear Area 20' parallel from the back of barrier for a distance of 75' behind ABSORB 350 Terminal Assembly.

Do not install Absorb 350 Impact Attenuator in Narrow Medians, on Elevated Structures or where Clear Area can't be achieved.

All work and material required for installation of this Impact Attenuator to be paid under the bid item "Impact Attenuator (Temporary)".

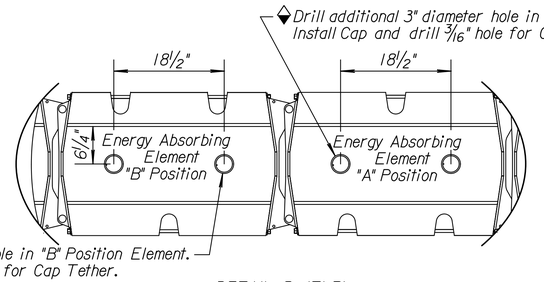


DETAIL A



DETAIL C

◆ *Additional holes required on some higher speed configurations. See ABSORB 350 System Configuration Chart for location of additional vent holes.*



DETAIL B (TL3)

NO.	DATE	REVISIONS	BY	APP'D
2	10-05-10	Rev. notes & flared layout opt.	S.W.K.	J.O.B.
1	11-16-09	Revised Temporary Bid Item	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

IMPACT ATTENUATOR ABSORB 350 (TL2 OR TL3) (for Temporary Installation

RD627B

FHWA APPROVAL	5-26-11	APP'D. James O. Brewer	
DESIGNED	DETAILED RGC	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

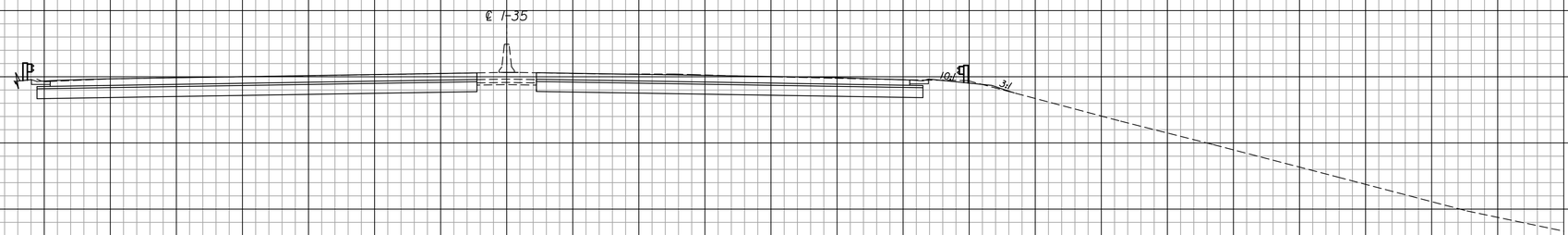
KDOT Graphics Certified 06-01-2011 Sh. No. 231

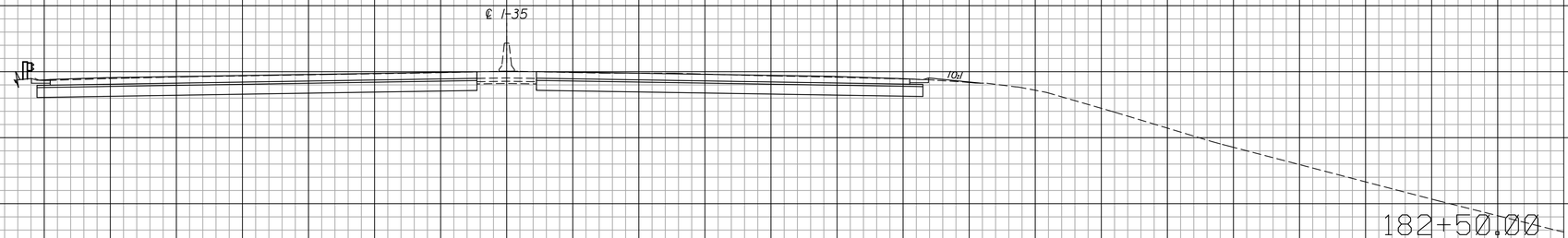
KDOT Graphics Certified

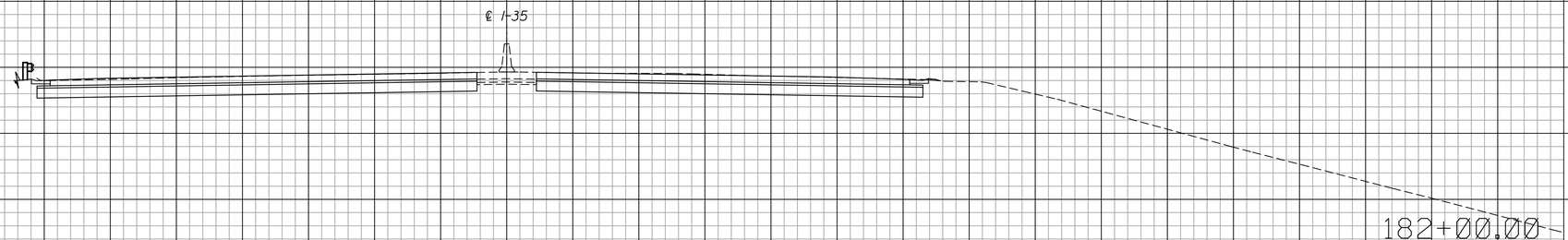
Note to Designer: Where the chance of high angle, high speed impacts are low, Consider using a redirective crash cushion when these types of impacts are likely to occur.

Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC1310356\Traffic\Sheets\ka356001rss627B-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	232	251







I–35
STA. 182 + 00.00 TO STA. 183 + 00.00
Scale = 1:10
KDOT Graphics Certified 10-15-2014

Sht. 232

KDOT Graphics Certified

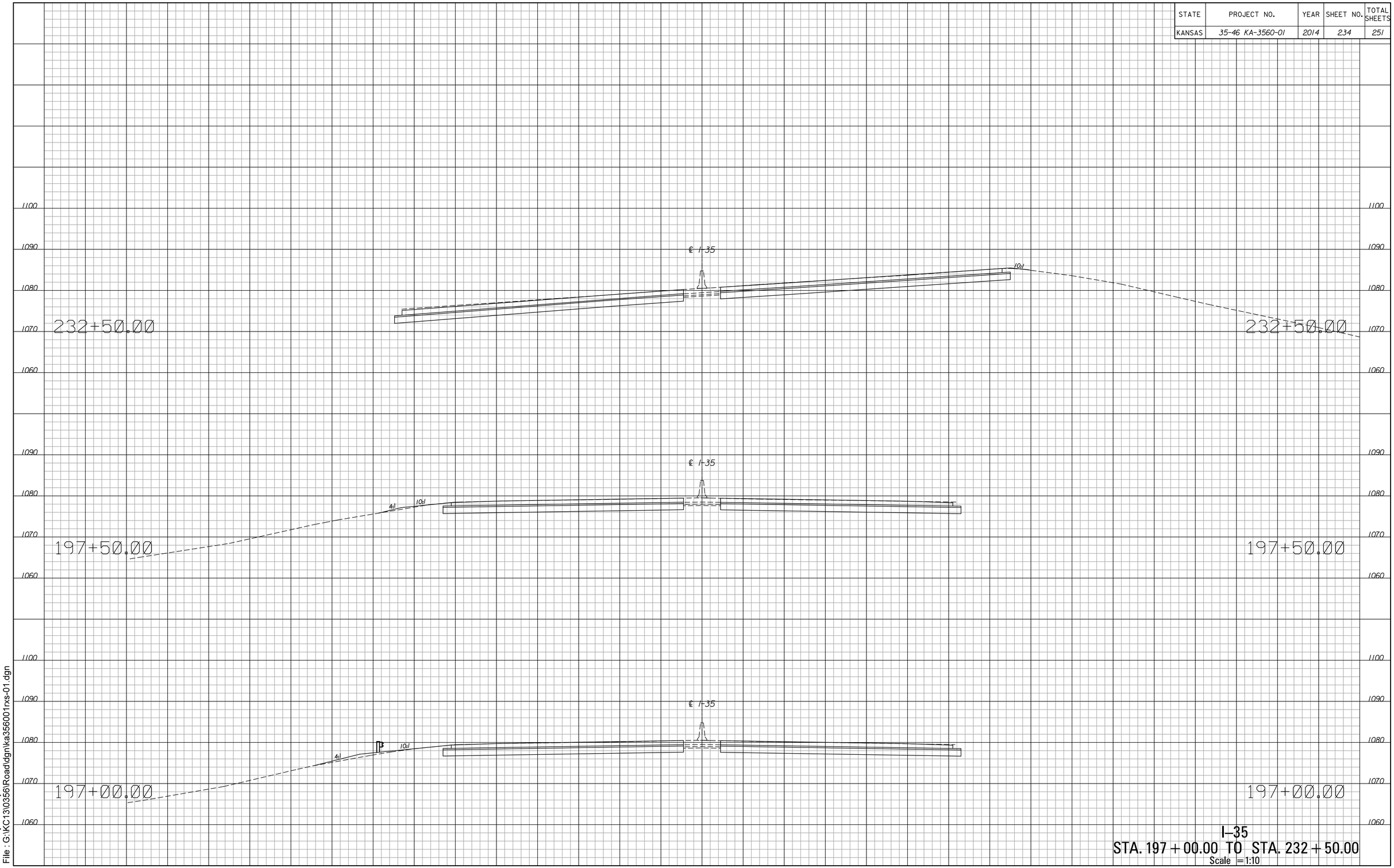
Plotted : 10/16/2014
Drawn By: : aarneyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	233	251

I–35
STA. 183 + 50.00 TO STA. 196 + 50.00
Scale = 1:10

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn

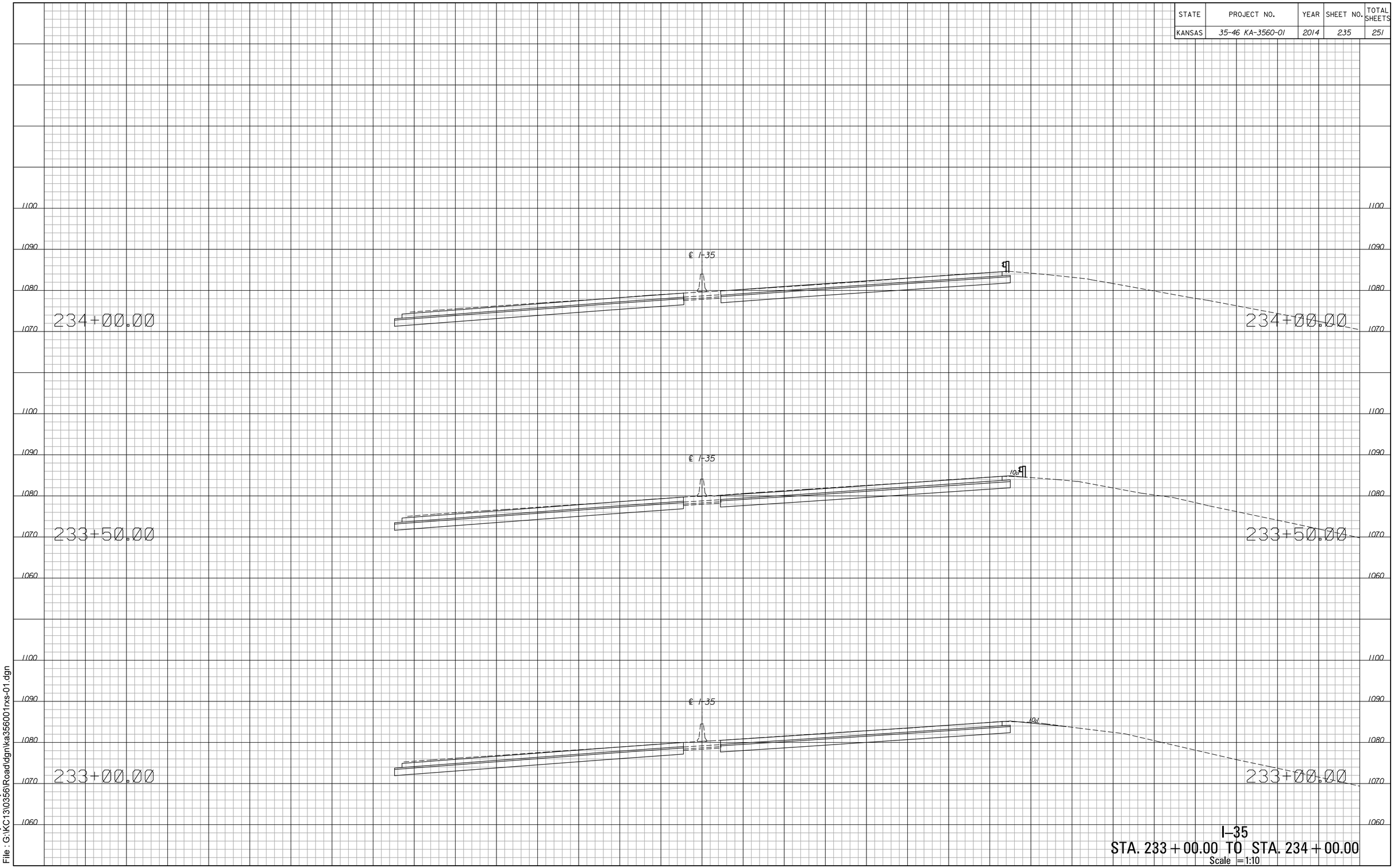
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	234	251



I–35
STA. 197+00.00 TO STA. 232+50.00
Scale =1:10

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn

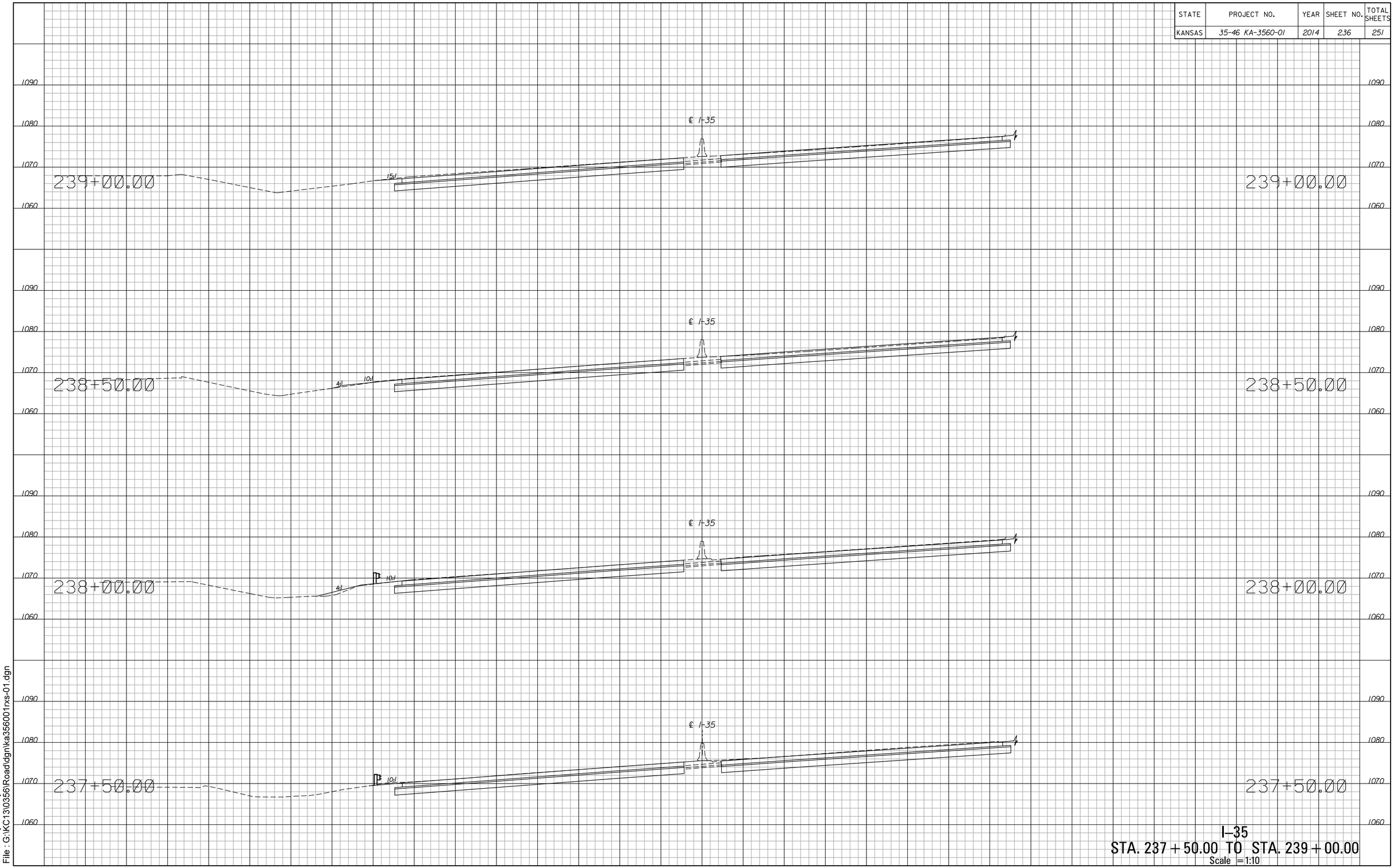
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	235	251



I–35
STA. 233 + 00.00 TO STA. 234 + 00.00
Scale = 1:10

Drawn By: aameyer
File: G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn
Plotted: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	236	251

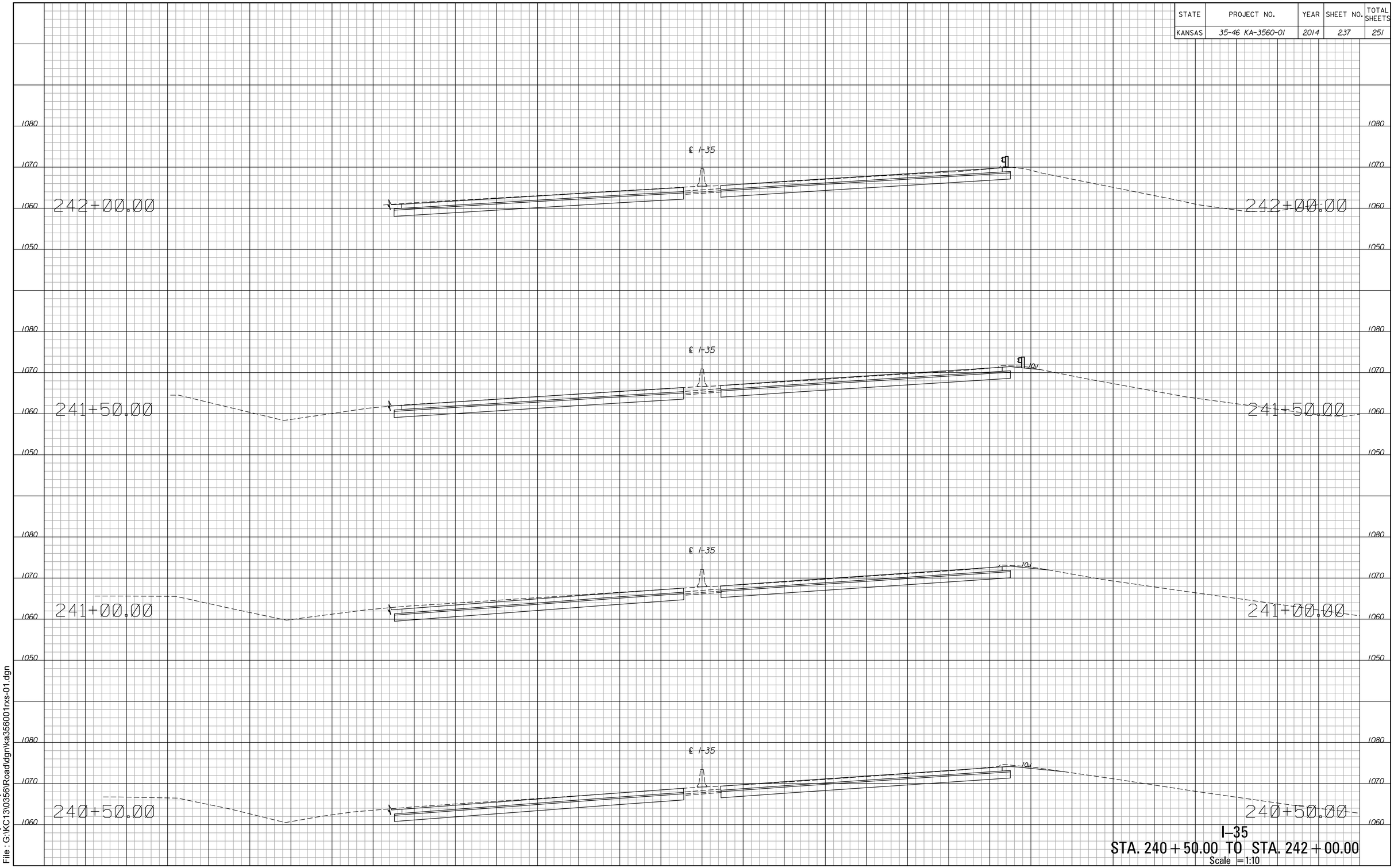


Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn

I-35
STA. 237+50.00 TO STA. 239+00.00
Scale =1:10

Sht. 236

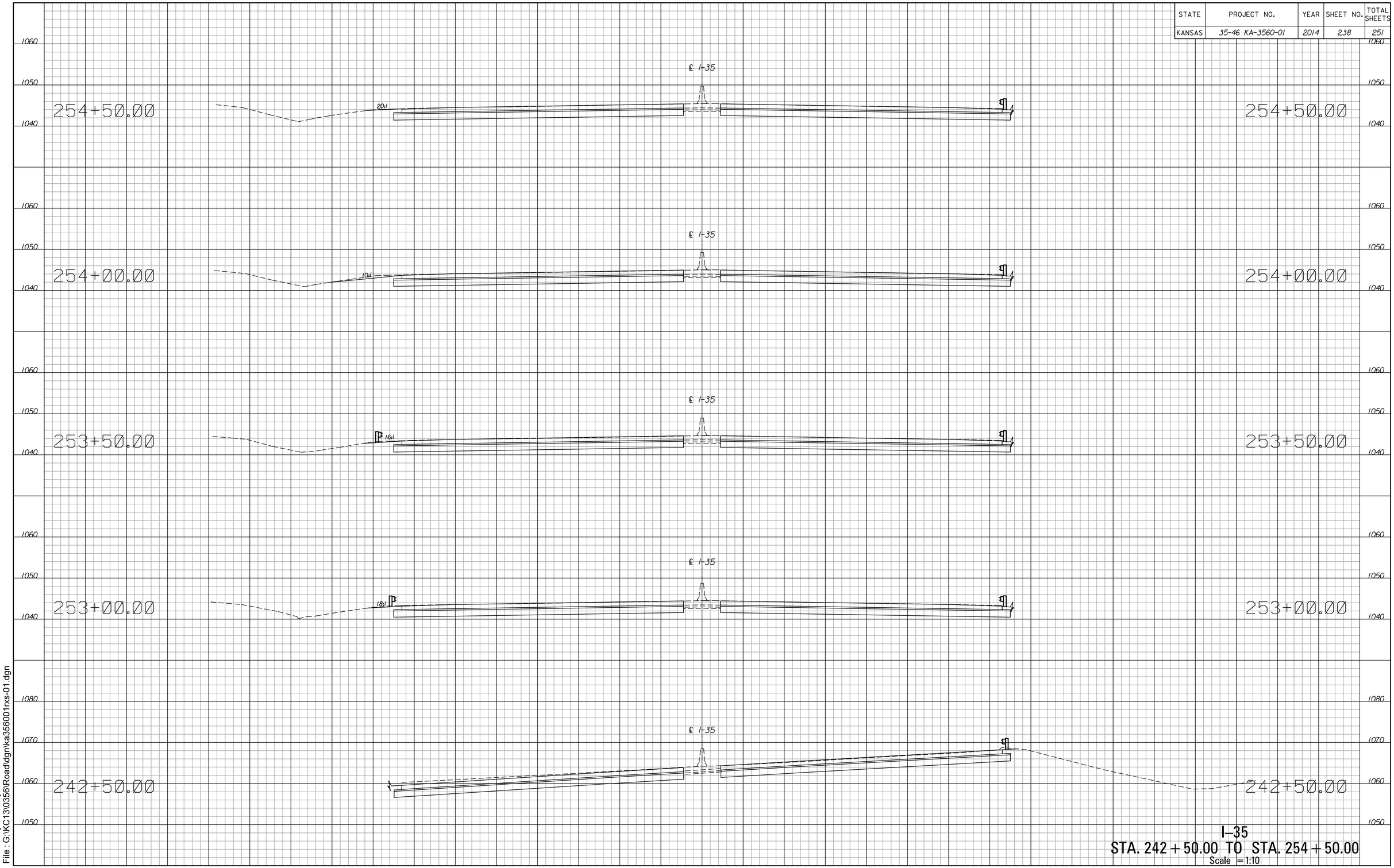
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	237	251



I–35
STA. 240+50.00 TO STA. 242+00.00
Scale =1:10

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn

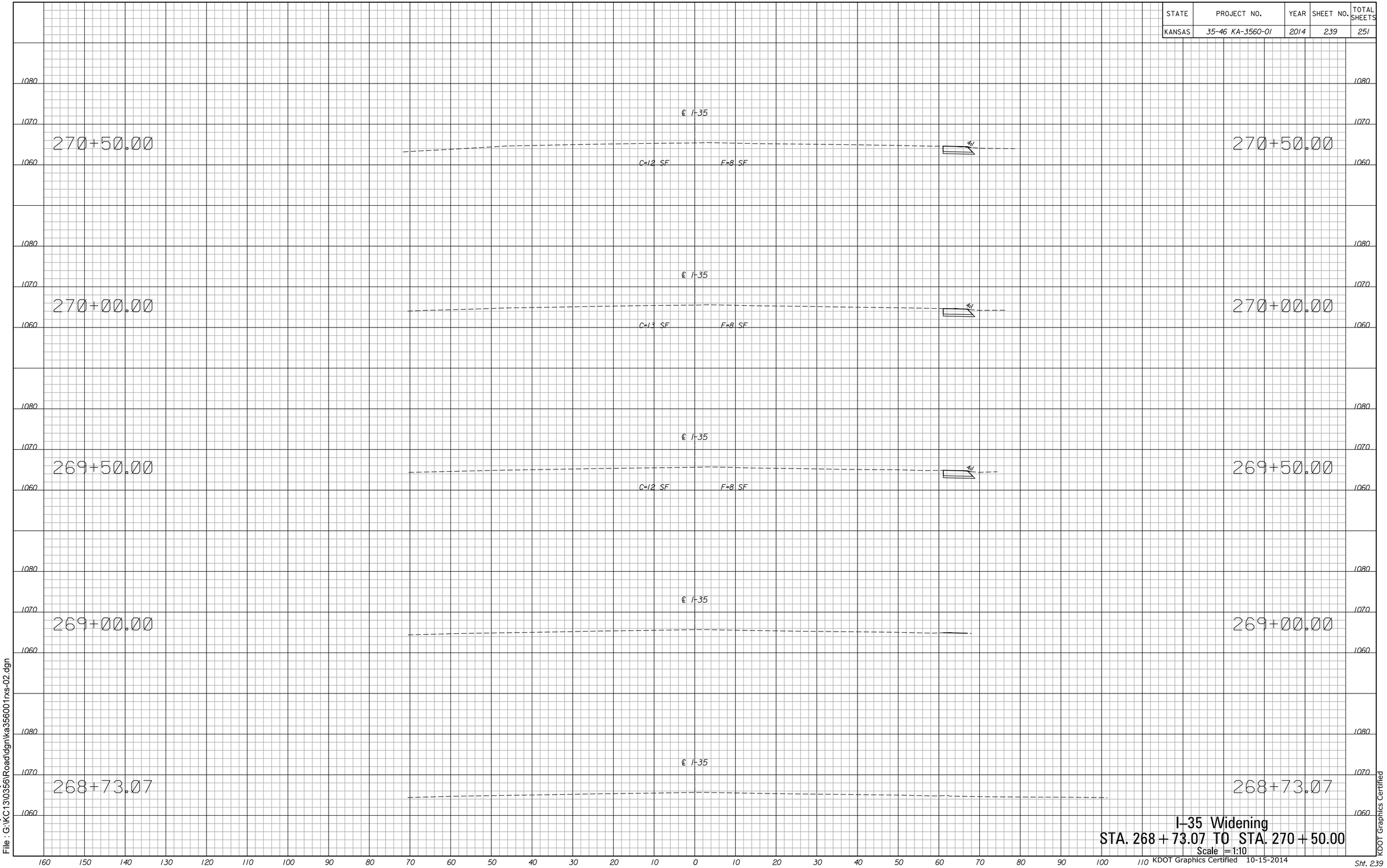
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	238	251



I-35
STA. 242+50.00 TO STA. 254+50.00
Scale =1:10

Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-01.dgn
Plotted : 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	239	251



I-35 Widening
STA. 268+73.07 TO STA. 270+50.00

Scale =1:10

KDOT Graphics Certified 10-15-2014

Sht. 239

KDOT Graphics Certified

Drawn By: aameyer
File: G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn
Plotted: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	240	251

273+00.00

℄ I-35

C=19 SF F=21 SF

272+50.00

℄ I-35

C=18 SF F=37 SF

272+00.00

℄ I-35

C=12 SF F=8 SF

271+50.00

℄ I-35

C=11 SF F=8 SF

271+00.00

℄ I-35

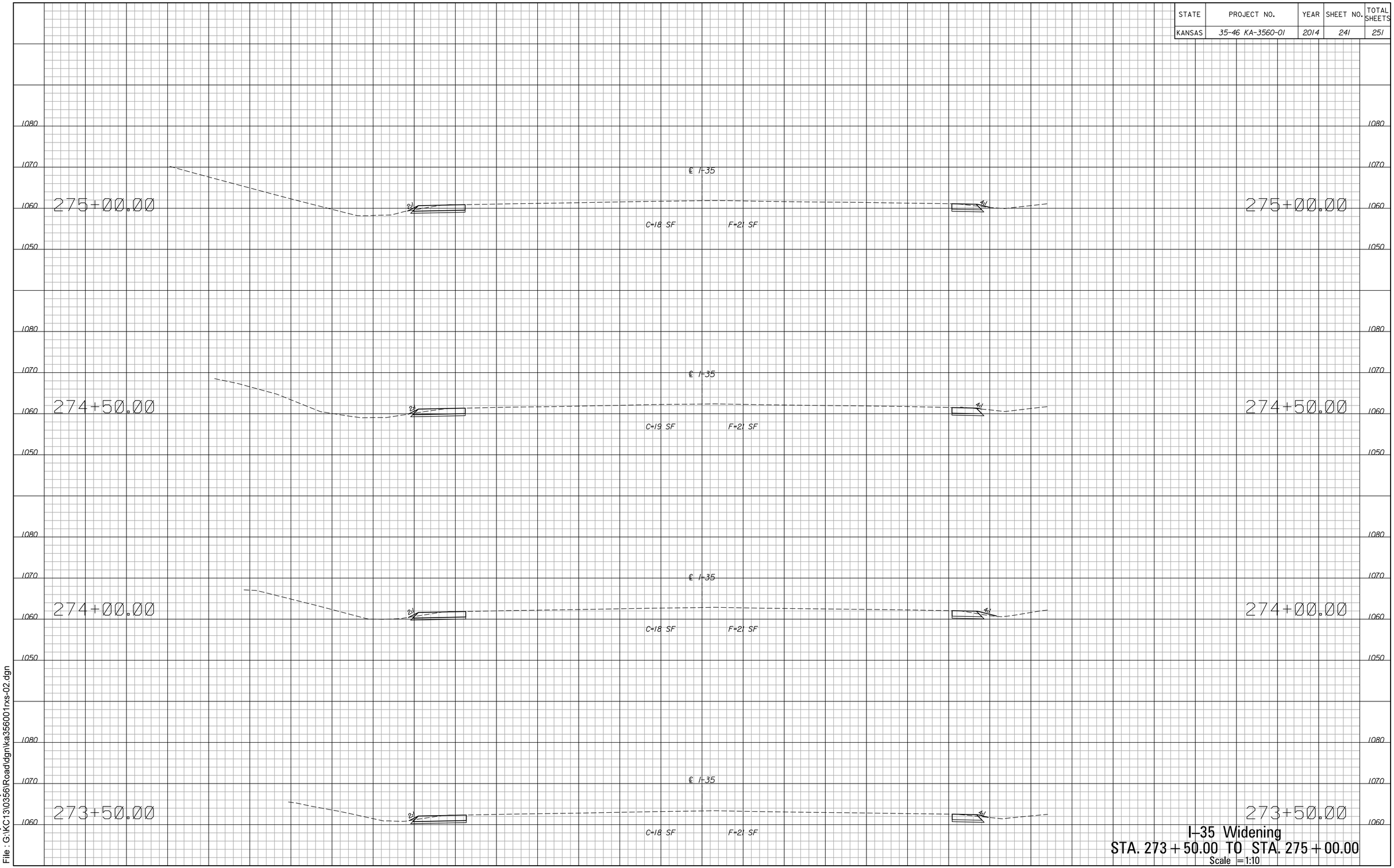
C=12 SF F=8 SF

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

I-35 Widening
STA. 271+00.00 TO STA. 273+00.00
Scale =1:10

Sht. 240

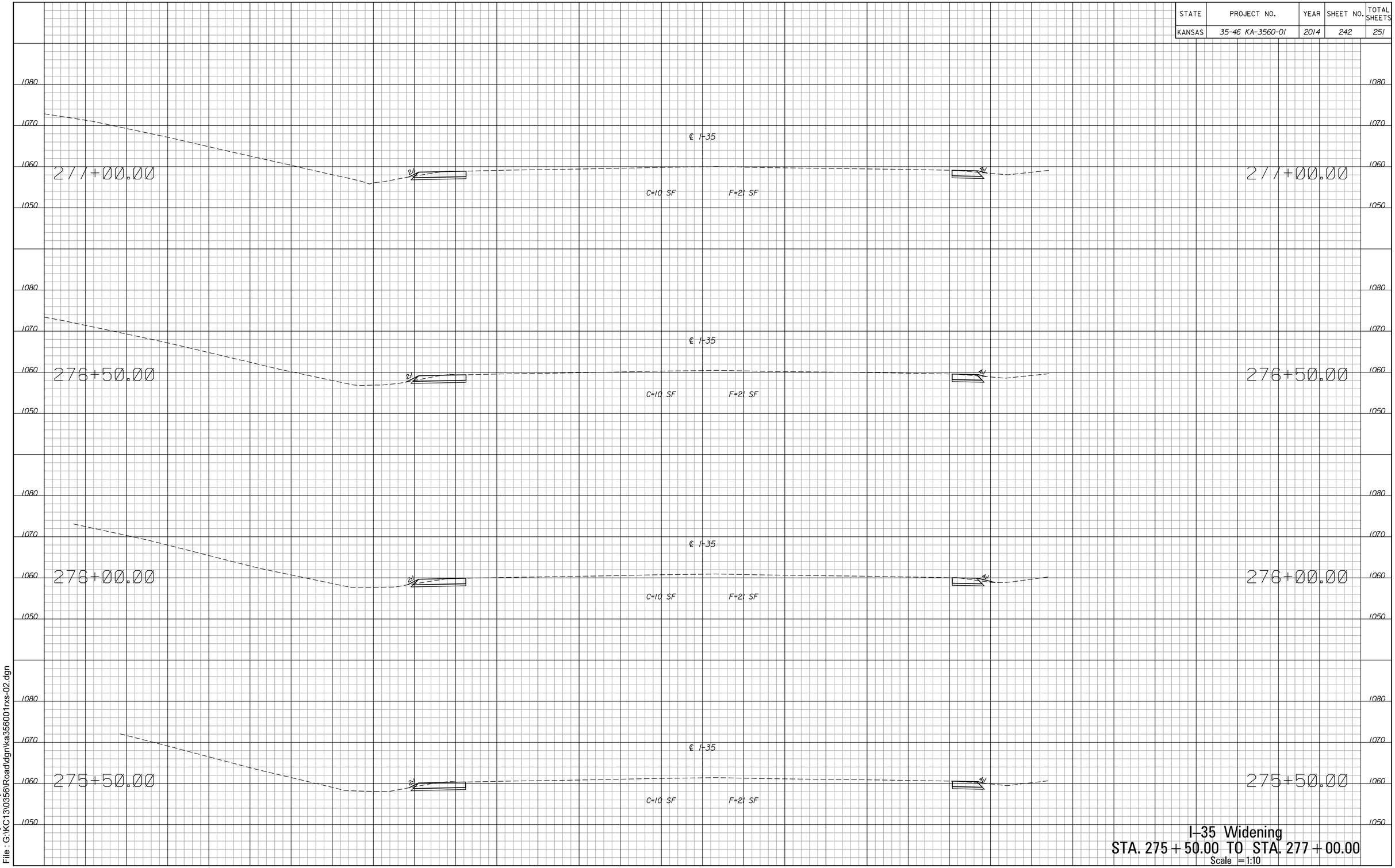
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	241	251



I-35 Widening
STA. 273+50.00 TO STA. 275+00.00
Scale =1:10

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	242	251



Drawn By: aameyer
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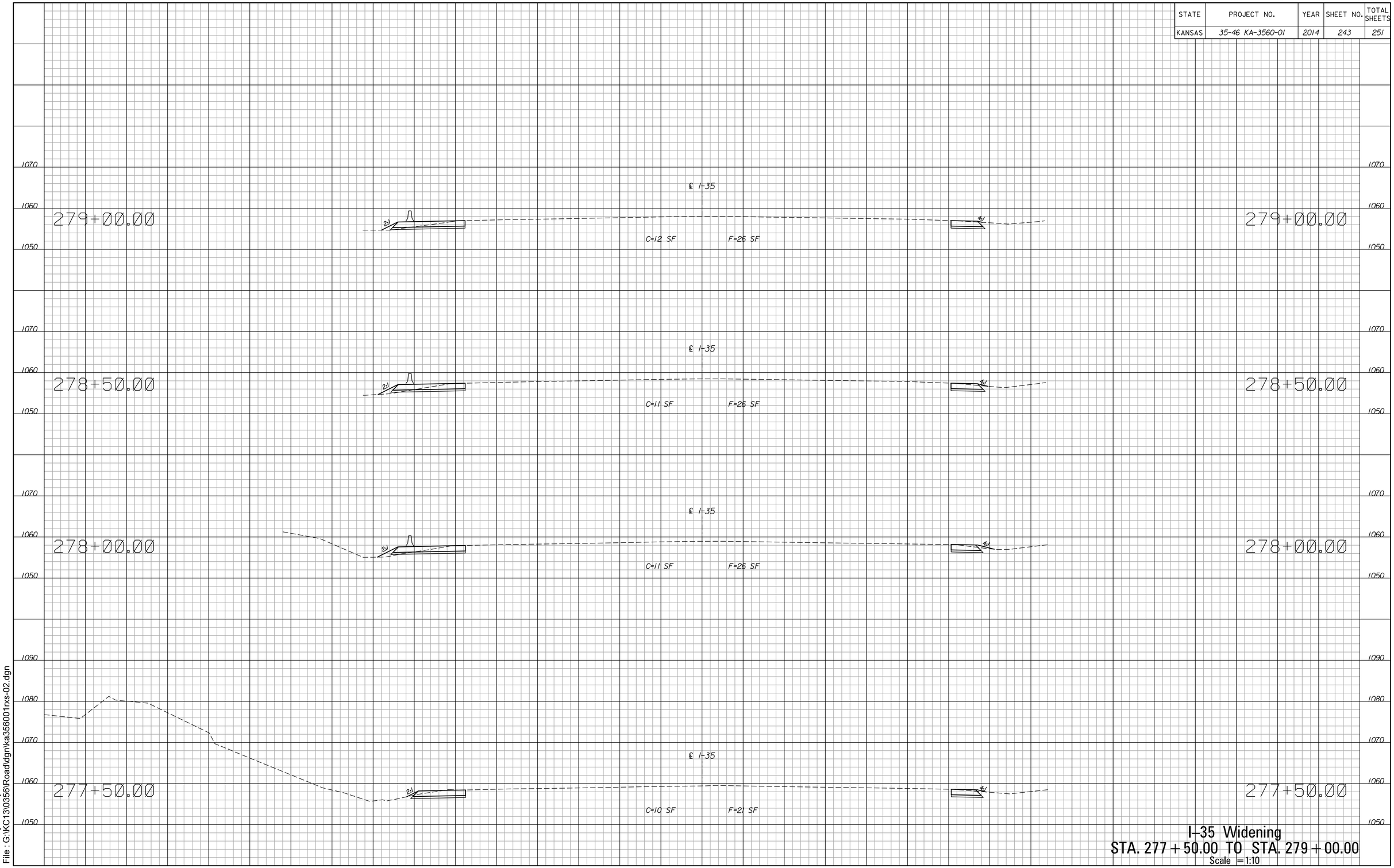
Plotted: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	243	251

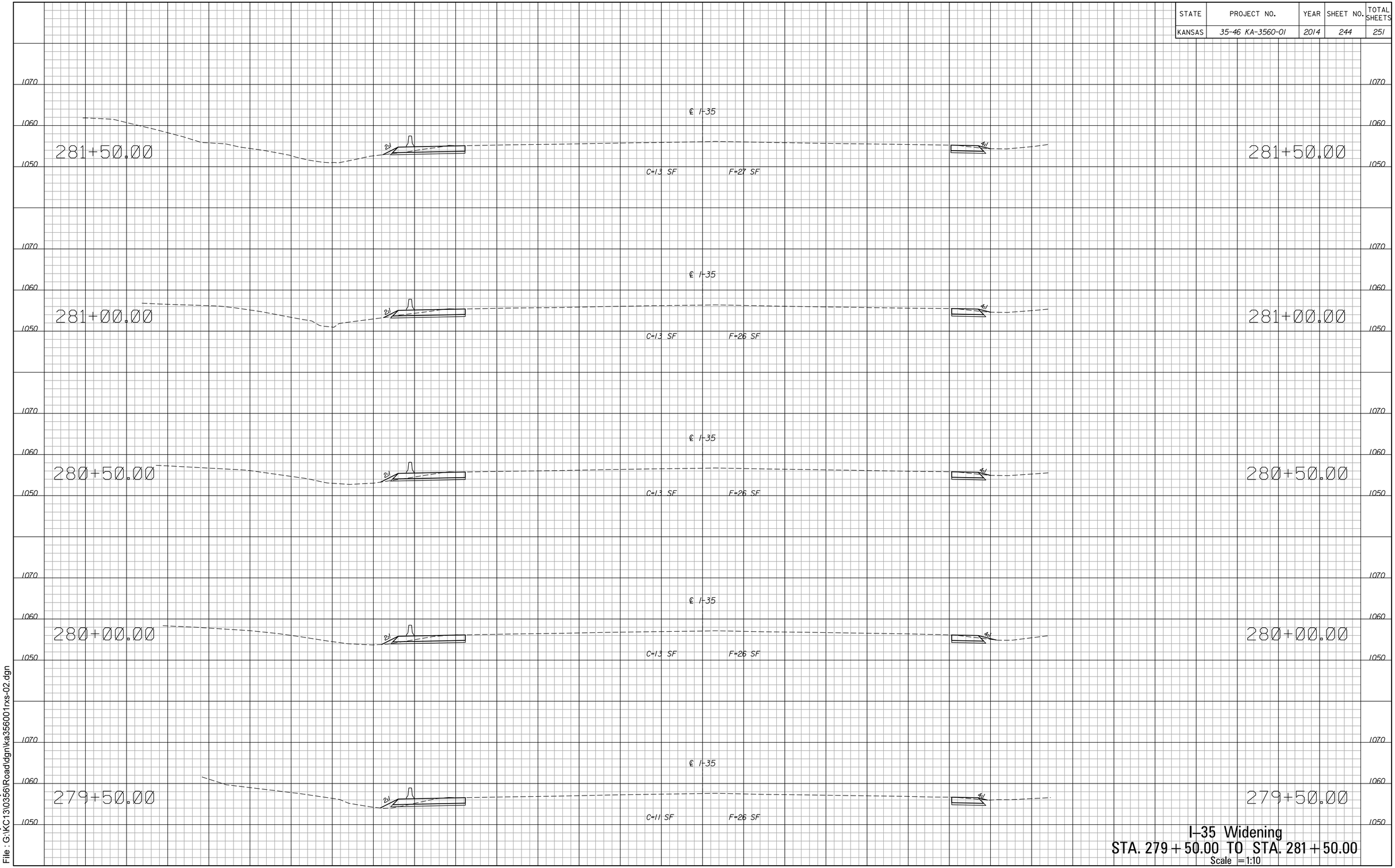


I-35 Widening
STA. 277+50.00 TO STA. 279+00.00
Scale =1:10

Sht. 243

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	244	251



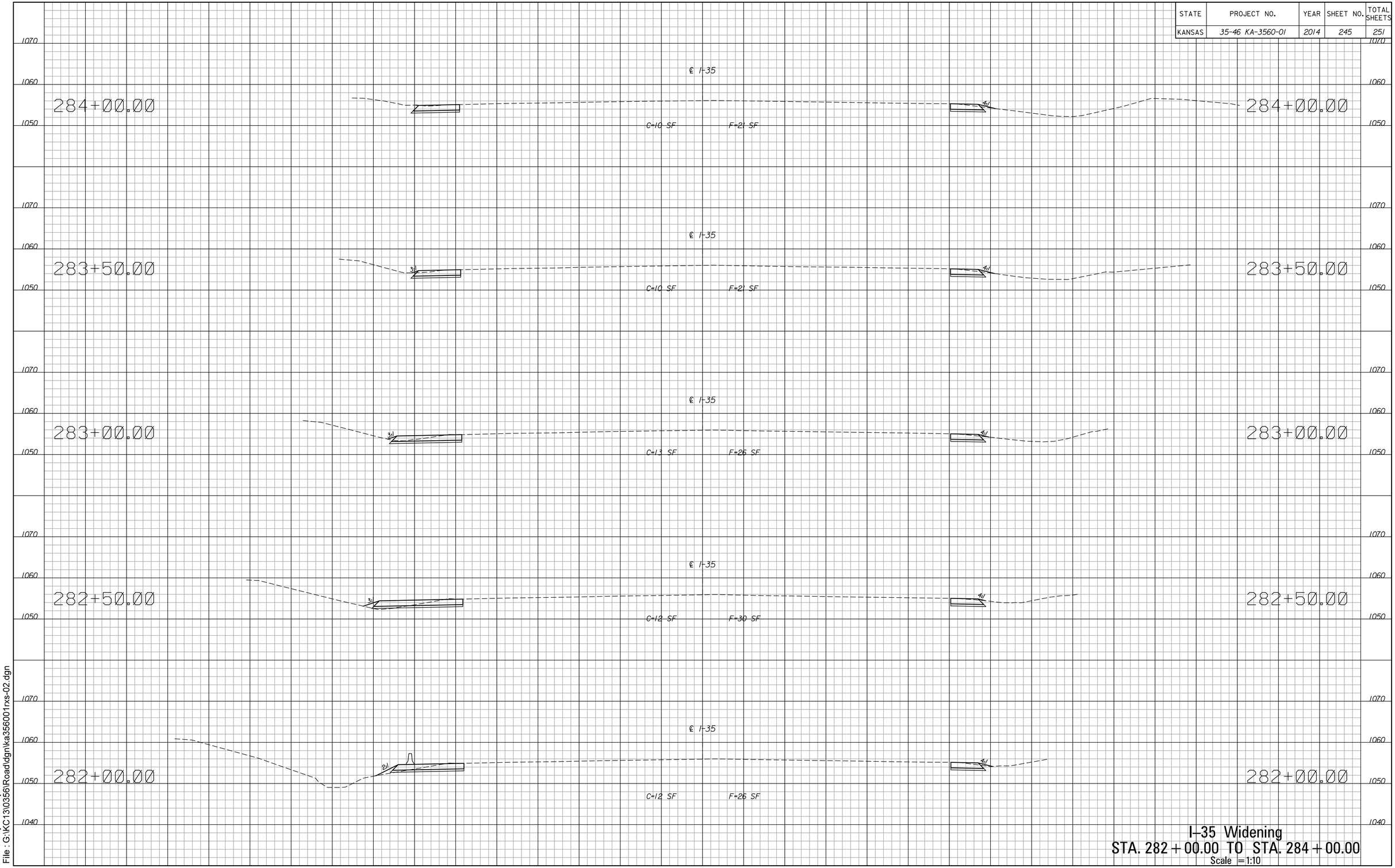
Drawn By: : aarneyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn
Plotted :10/16/2014

I-35 Widening
STA. 279+50.00 TO STA. 281+50.00

Scale =1:10

Sht. 244

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	245	251

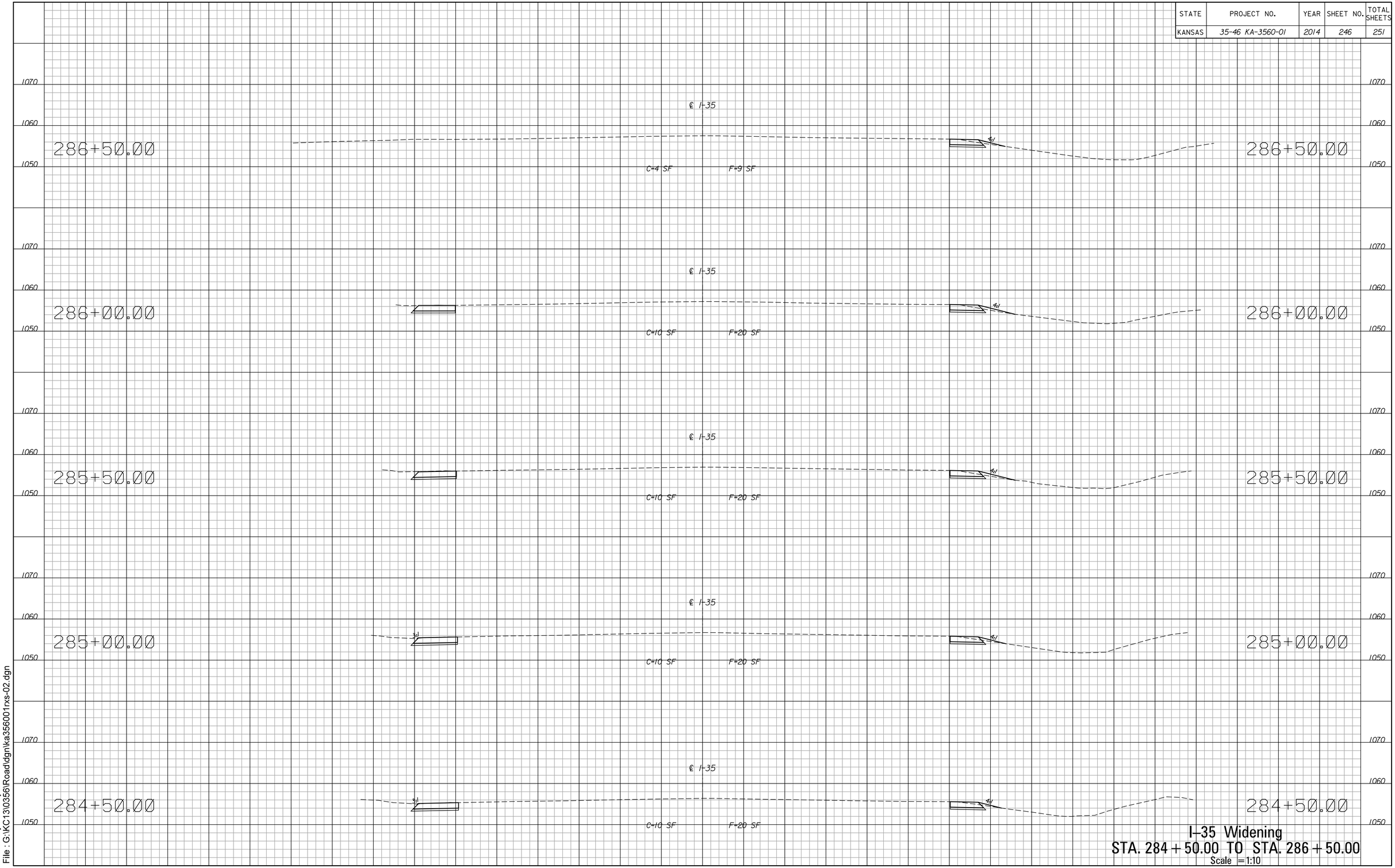


Plotted : 10/16/2014
Drawn By: : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

I-35 Widening
STA. 282+00.00 TO STA. 284+00.00

Scale =1:10

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	246	251



I-35 Widening
STA. 284 + 50.00 TO STA. 286 + 50.00

Scale = 1:10

Drawn By: aarneyer
File: G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn
Plotted: 10/16/2014

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	247	251

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

1070 1060 1050

℄ I-35

289+00.00

C=4 SF F=9 SF

4:1

289+00.00

℄ I-35

288+50.00

C=4 SF F=9 SF

4:1

288+50.00

℄ I-35

288+00.00

C=4 SF F=9 SF

4:1

288+00.00

℄ I-35

287+50.00

C=4 SF F=9 SF

4:1

287+50.00

℄ I-35

287+00.00

C=4 SF F=9 SF

4:1

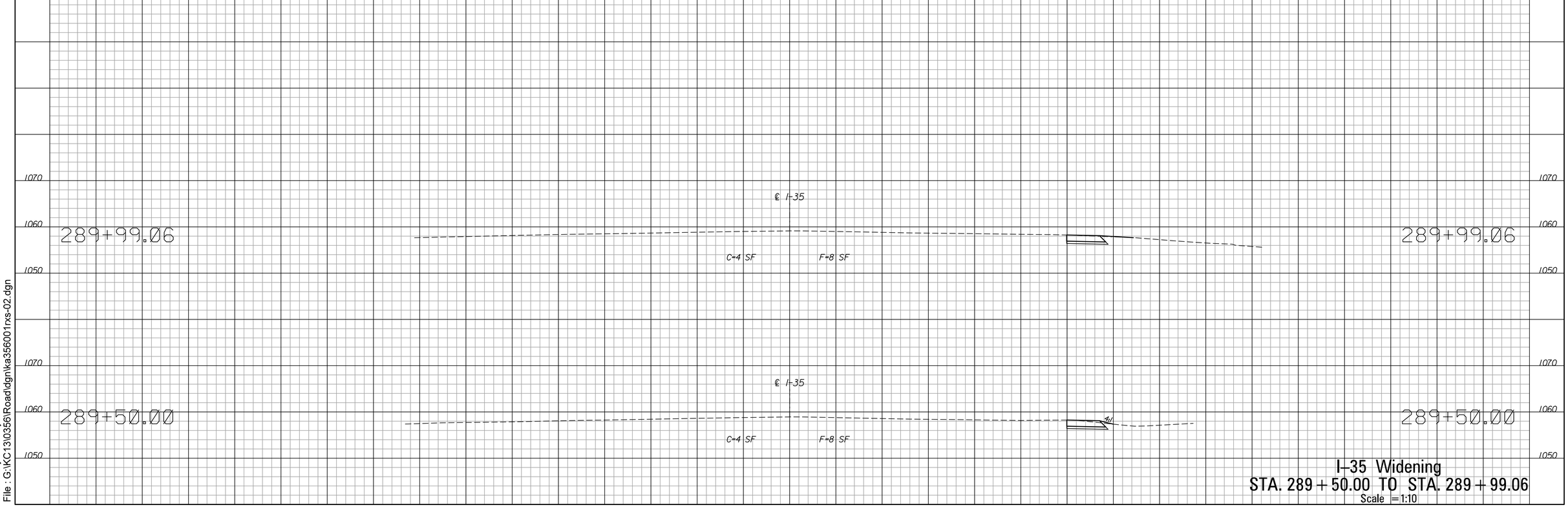
287+00.00

I-35 Widening
STA. 287+00.00 TO STA. 289+00.00

Scale =1:10

Plotted : 10/16/2014
Drawn By: : aarneyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	248	251

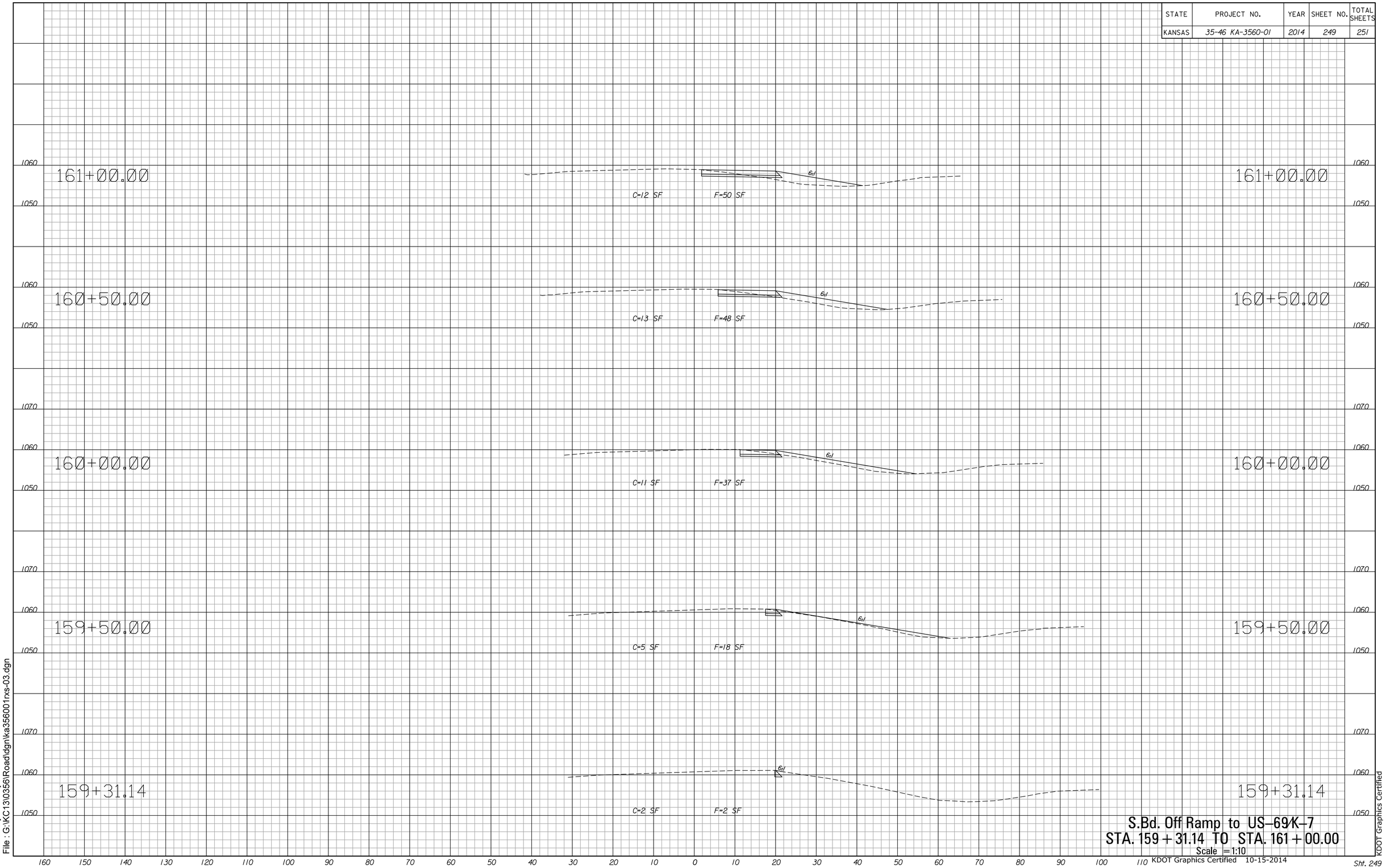


I-35 Widening
STA. 289+50.00 TO STA. 289+99.06
Scale =1:10

Sht. 248

Drawn By : aameyer
Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rxs-02.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	249	251



S.Bd. Off Ramp to US-69/K-7
STA. 159+31.14 TO STA. 161+00.00
Scale =1:10

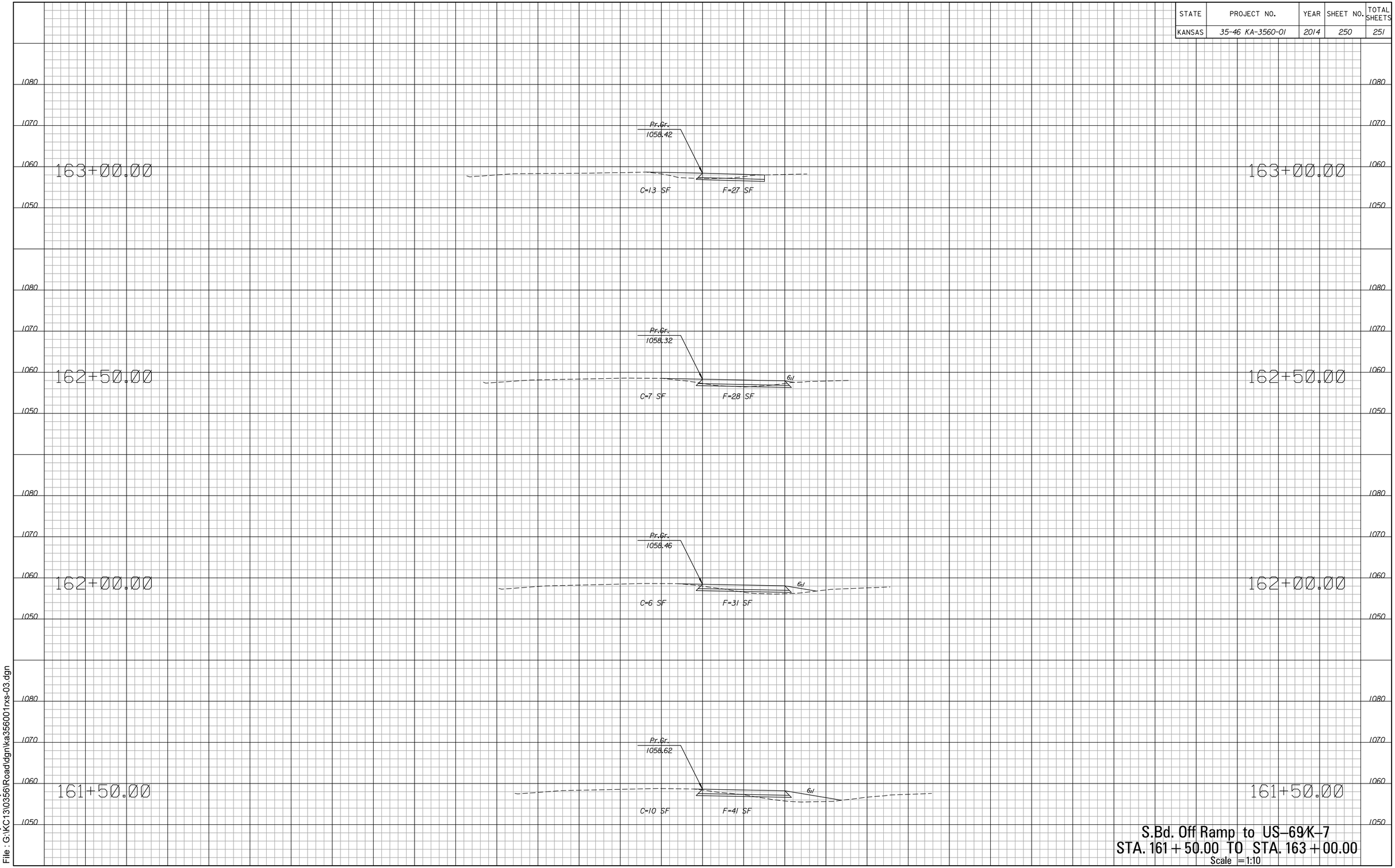
KDOT Graphics Certified 10-15-2014

Sht. 249

KDOT Graphics Certified

Plotted : 10/16/2014
Drawn By : aameyer
File : G:\KC13\0356\Road\dgn\ka356001rxs-03.dgn

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	250	251

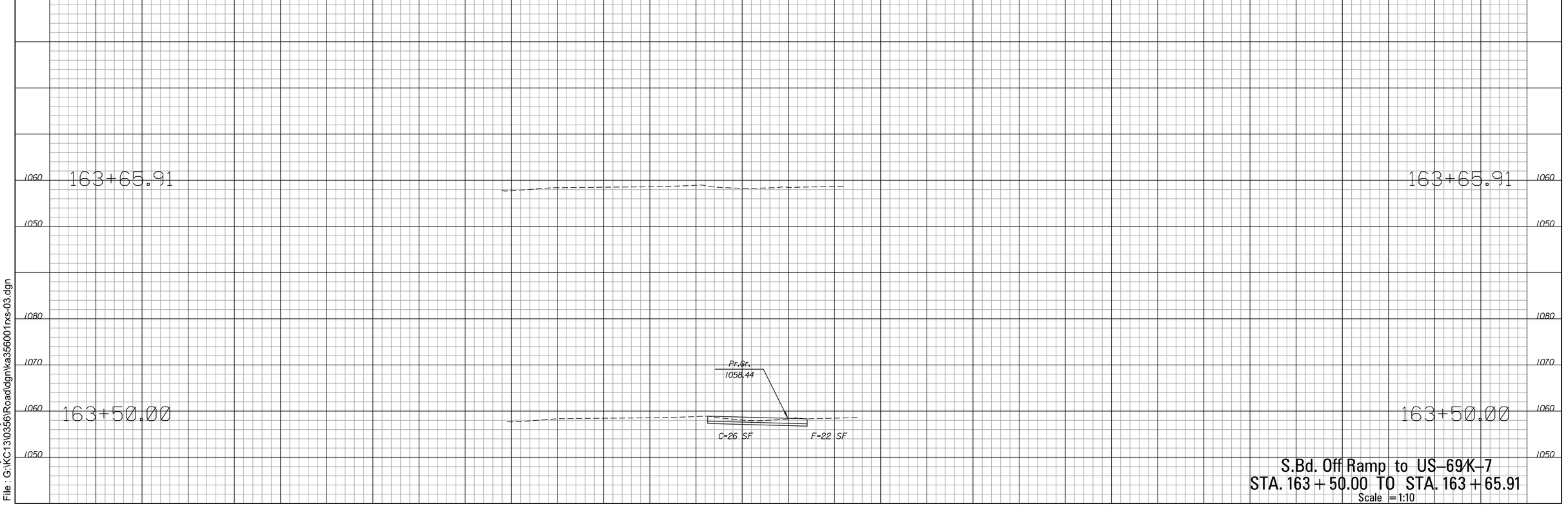


Drawn By : aameyer Plotted : 10/16/2014
File : G:\KC13\0356\Road\dgn\ka356001rxs-03.dgn

S.Bd. Off Ramp to US-69/K-7
STA. 161+50.00 TO STA. 163+00.00
Scale =1:10

Sht. 250

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	35-46 KA-3560-01	2014	251	251



S.Bd. Off Ramp to US-69/K-7
STA. 163+50.00 TO STA. 163+65.91
Scale =1:10

Sht. 251

Drawn By: aameyer
File: G:\KC13\0356\Road\dgn\ka356001rxs-03.dgn
Plotted: 10/16/2014