STATE OF KANSAS

STATE HIGHWAY COMMISSION

PLAN AND PROFILE OF PROPOSED

STATE HIGHWAY

FEDERAL AID PROJECT

SEDGWICK COUNTY

K-226

PUB ROAD SYS NO. 226-87-US 256(3) SHEET NO. 1 SHEETS 31

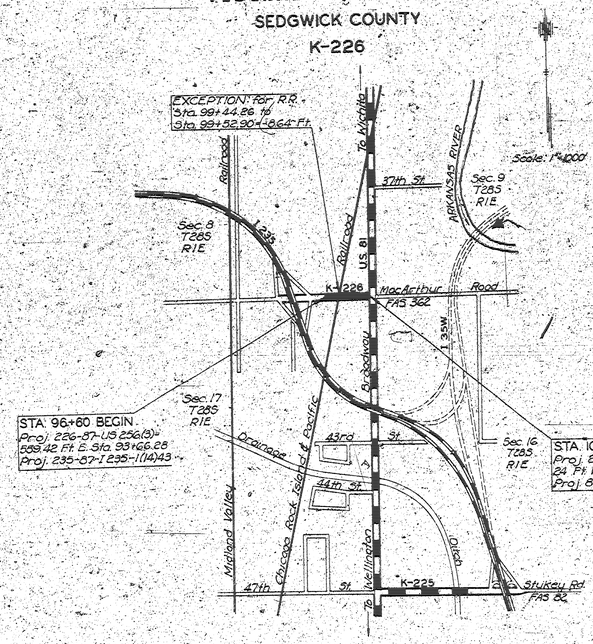
PROJ. NO. 226-87-US 256(3)

GRADING & PAVING

SODDING

INDEX OF SHEETS

Sh. No.		
"	1	Title Sheet
"	2	Typical Sections
"	3-4	Plan Profile Sheets
"	5-6	Intersection Layouts
"	7-13	Pavement Details
"	14-18	Incidental Structures
"	19	Bar Support & Spacer Sheet
"	20	Quantity Sheet
"	21	Seeding Sheet
"	22	Highway Crossing Protection
"	23	Detail of Crossing Signals
"	24	Wiring Diagrams (Sheet No. 25 Deleted)
"	26	Traffic Control
"	27	Construction Identification Signs
"	28	Drainage Areas
"	29-31	Cross Sections



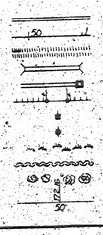
NOTE: TRAFFIC SHALL BE CARRIED THROUGH CONSTRUCTION.

DESIGN DESIGNATION

1961 A.D.T. = 6500
1980 A.D.T. = 15,675
D.H.V. = 12.0%
D = 6%
T = 3.5%
V = 60 m.p.h.
C of A = None

CONVENTIONAL SIGNS

COUNTY LINE	RETAINING WALL
CORPORATE LIMITS	BASE OR SURVEY LINE
STATE OR NATIONAL LINE	LEVEE
TOWNSHIP LINE	CULVERTS
SECTION LINE	DROP INLETS
GRANT LINE	ACCESS CONTROL
FENCE LINE	POWER LINE
GUARD FENCE	TELEPHONE OR TELEGRAPH LINE
UNFENCED PROPERTY	MARSH
RIGHT OF WAY LINE	HEDGE
TRAVELLED WAY	TREES
RAILROADS	GRADE ELEVATION



GROSS LENGTH OF PROJECT 598.48 FT.

EXCEPTIONS (For R.R. Sta. 99+44.26 to Sta. 99+52.90) = 8.64 Ft.

ADDITIONS None

NET LENGTH OF PROJECT	589.84 FT.	0.168	MILES
NET LENGTH OF BRIDGES	0.00 FT.	0.000	MILES
NET LENGTH OF ROAD	589.84 FT.	0.168	MILES

RECOM. FOR APPROVAL DATE [redacted]
ENGINEER OF DESIGN
STATE HIGHWAY COMMISSION OF KANSAS

RECOM. FOR APPROVAL DATE [redacted]
ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

APPROVED DATE [redacted]
STATE HIGHWAY ENGINEER
STATE HIGHWAY COMMISSION OF KANSAS

APPROVED DATE [redacted]
DIVISION ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS	226-87-US 256(3)	1981	3	31

PLAN
NOTE, BOOK NO. ___ PAGE ___
DRAWN ___ CHECKED ___
SUBMITTED ___ APPROVED ___
STRUCTURE NO. (IF ANY) ___

GENERAL NOTE

ENCROACHMENTS SUCH AS FENCES, BUILDINGS, TELEPHONE, TELEGRAPH AND POWER LINES SHALL BE MOVED BY THE OWNERS.

IN THE INTEREST OF PUBLIC SAFETY, ALL GAS, GASOLINE AND OIL LINES SHALL BE MOVED BEYOND THE LIMITS OF THE ROADBED BY THE OWNER UNLESS SPECIAL PROVISION FOR THEIR RETENTION HAS BEEN MADE.

ALL WATER LINES LESS THAN THREE FEET BELOW THE SURFACE OF THE PROPOSED GRADE, OR LINES NOT CONSTRUCTED OF LEAD, COPPER, CAST IRON OR WROUGHT IRON, OR LINES NOT IN GOOD CONDITION SHALL BE LOWERED, REPLACED OR MOVED BEYOND THE LIMITS OF THE ROADBED BY THE OWNERS.

ALL OTHER UNDERGROUND UTILITIES SHALL BE PLACED IN GOOD CONDITION AND ADJUSTED TO FIT THE NEW CONSTRUCTION BY THE OWNERS.

ALL VALVES, BELL BOXES, HYDRANTS, MANHOLES, ETC. SHALL BE MOVED OR ADJUSTED TO THE NEW CONSTRUCTION BY THE OWNERS UNLESS NOTED OTHERWISE ON THE PLANS.

AT PIT 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 OF 12 FEET IS OBTAINED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND THESE POLES TO COMPLETE THE WORK.

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

"CHANNELS SHALL BE CUT AT ALL CULVERTS" UNLESS OTHERWISE NOTED. TO NEW LINE ELEVATIONS AND TO A WIDTH OF ONE FOOT OUTSIDE OF EACH OUTSIDE WALL AND WITH SLOPES 1 TO 1 PRIOR TO CONSTRUCTION OF THE CULVERT. QUANTITIES INCLUDED IN EXCAVATION TOTALS.

ALL TREES TO BE GRUBBED ARE MARKED THUS X. SPARE ALL TREES NOT MARKED (EXCEPTIONALLY GOOD TREES SHALL BE SPARED BY ADJUSTING THE BACKSLOPE LINE DURING CONSTRUCTION.

ALL ADDITIONAL RIGHT-OF-WAY SHALL BE FURNISHED BY THE STATE UNLESS OTHERWISE NOTED.

If it is necessary to remove any existing surfacing on entrances or side streets beyond the limits of the new work as shown on the plans, an equivalent surface shall be replaced by the Contractor, as a subsidiary item.

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 that in the opinion of the Engineer will leave an unsightly appearance on this project will not be approved.

PC Sta. 95+74.98 P.I. Sta. 99+00

Sec. 8, T28S, R1E — Dolese Bros. Co.

Sta. 95+90 Begin Right-of-Way

Sta. 96+50 Const. Spec. Dr. Inlet 50' Lt. Install 50 Lin. Ft. 1.1% CRP(MAC) with End Section See Sheet No. 15

Exist. R/W & Access Control — Const. Limits — Exist. R/W 40'E — R/R R/W — 65'E

Exist. R/W 30'E — Const. Limits — R/W 65'E

℄ MacArthur Road — Sec. Line 1 — 3-2" & 1-4" Gas Lines — 18" H.P. Gas — 24" R.C.P.

Sec. Line — 1438.00 — 1463.00

STA. 96+60 BEGIN
Proj. 226-87-US 256(3) - 559.42 Ft. E. Sta. 93+66.28
Proj. 236-87-1235-1(14)43

Sta. 97+91 Tr&Ins 24"x42" E.P. Rt. Remove Exist. E.P.

Lot 1 — Ha — 400' — & End — R.R. R/W — C.R.L.&P. R.R.

Rock Island Industrial Addition
Sec. 17, T28S, R1E — Don Schmid Motor Co.

Curve Data:
Δ = 1°44' Rt.
D = 0°16'
T = 325.02'
R = 21,485.9'
L = 650.00'
E = 2.46'

SCALE
PLAN: Lot & Long. 0 50' 100'
PROFILE: Horiz. same as above
Vert. 0 5'
Sea Level Datum

BM #102 1" Iron Bar South MacArthur Road 141' Rt. Sta. 92+78 (235-87-1235-1(14)43 Pt 1) El. 1276.09

PROFILE
GRIDLINES (VERTICAL) ___ (HORIZ.) ___
NOTE BOOK ___ PAGE ___
GRADE CHECKED ___ BY ___
NO. ___ STRUCTURE NO. (IF ANY) ___

1280 / 1275 / 1270 / 1265

+0.218% — 20' V.C. — +0.206% — 10' V.C. — +1.56%

West Bound Ramp (Outside Edge)

-0.87% — 20' V.C. — +0.449% — 10' V.C. — +1.56%

West Bound Ramp (Inside Edge)

-0.62% — 300' V.C. — +0.072%

Present Ground Line

Grade at Prop. Topsoil

11° Curve — 50' Dr. Lt. & Rt. +0.39% — 50' Dr. Rt. — 1274.40 — 1274.76 End Dr. Lt. — 1274.95

6'x3' Dr. Lt. — Ramp Lt. — 6'x3' Dr. Lt.

6'x3' Dr. Rt. — 6'x3' Dr. Rt.

STA 96+66.28 ℄ ROAD PROJECT

See next sheet

89 90 91 92 93 94 95 96 97 98 99

PLATE 3 - PLAN AND PROFILE, O.P.R. & V.P. STANDARD

R.T. Sta. 102+24.98 P.C. Sta. 102+47.05 P.I. Sta. 104+00 R.T. Sta. 105+52.93

Curve Data:
Δ = 7°-44' Lt.
D = 0°-34'
T = 132.96'
R = 10,111.1'
L = 305.88'
E = 1.16'

Sec. 8, T28S, R1E

M.H. Cheatum

Sta. 103+19 Begin Type II Comb. Curb and Gutter Lt.

Flashing Light Signals to be removed and replaced by others See Sh. No. 22 to 25

Sta. 100+37 Install 24'x52' EP Lt. Remove 18'x20' EP Lt.

Sta. 102+71 Remove 18'x22' EP Lt.

Sta. 103+30 Install 28'x48' EP Lt.

Sta. 104+35 Const. Type 'B' Inlet Lt. Install 81' 15" SS(E) See Sh. No. 14

Note: Sta. 99+48.58 Install 2 Reflectorized Advance Warning Signs for west-bound traffic. See Sheet No. 17

Sta. 99+48.58 ℄ C.R.I. & P. R.R.

R.R. R/W

60°

Exist. Lt.

R/W 55'

Exist. R/W 40'

Sand Surface

Flashing Light Signal

℄ MacArthur Road

Sec. Line

Exist. R/W 66'

18" H.P. Gas

Exist. R/W 66'

Semaphore

R/W 40'

Const. Limits R/W

Bldg.

Garage

Conc.

Ho

Serv. Sta.

Const. Exmt. 45'

Const. Exmt. 55'

Exist. R/W 55'

Exist. R/W 40'

Const. Exmt. 75'

℄ U.S. 81

4" Gas

18" H.P. Gas

Sta. 105+82.28

2" Gas

Sta. 100+08 Install 24'x60' E.P. 49' Rt. Remove 18'x42' E.P.

EXCEPTION for R.R.: Sta. 99+14.26 to Sta. 99+52.90 = 8.64 Ft.

Sta. 101+15 Remove 18'x32' E.P. Rt.

Sta. 103+00 Const. Special Dt. Inlet 50' Rt. Install 62' 11" CRP(M.C.) with End Section See Sheet No. 15

Sta. 103+29 Remove E.P. Rt.

Sta. 103+78 Const. Mound-End. Rt.

Sta. 103+63 Begin Type II Comb. Curb and Gutter Rt.

Sta. 104+35 Const. Type 'B' Inlet Rt. Install 82' 15" SS(E) See Sh. No. 14

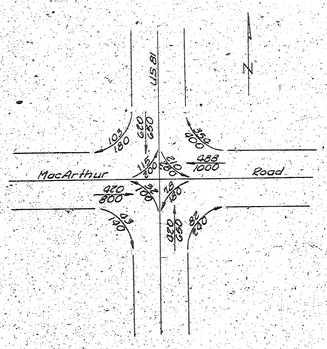
STA. 105+58.48 END Proj. 22G-87-US 256(3) 24 Ft West Sta. 119+32.93 Proj. 81-87-U 043-1(8)

Sec. 17, T28S, R1E

Transport Oil Inc.

Note: For Intersection Details and additional construction notes, see sheet No. 5 ff 6

N.E. cor. Sec. 17, T28S, R1E
1. Found tacked hub in 4" Dia. steel thimble at cor.
2. Equals P.I. Sta. 119+22.93, N.E. ¼ = 91°-02'-30"
N.W. ¼ = 89°-00'-30", S.E. ¼ = 90°-27'-30", S.W. ¼ = 89°-29'-30"
3. Spk. & washr. in, ø 34.35' SE
4. Spk. & washr. in ø 62.10' NE
5. Spk. & washr. in guy pole 48.49' NW



TRAFFIC FLOW DIAGRAM
DHV 1958
1978
(From Delamater Report)

PLAN — SURVEYED / DRAWN / TRACED / GRADES CHECKED / ALIGNMENT CHECKED / STRUCTURE NUMBERING CHKD. / NOTE BOOK / NO. / DATE

PROFILE — SURVEYED / DRAWN / TRACED / GRADES CHECKED / ALIGNMENT CHECKED / STRUCTURE NUMBERING CHKD. / NOTE BOOK / NO. / DATE

94 C.Y. Rock Exc.
4083 C.Y. Common Exc. (-20%)
2693 C.Y. Embankment
Incl. 1778 C.Y. Borrow from areas to be provided by the Contractor. See General Note

STA 105+58.48 END PROJECT

200' V.C.

-0.20%

11" CRP

-0.12%

Sq. Dt. Rt. & Lt.

180' V.C.

+0.35%

No Dt. Lt.

No Dt. Rt.

2'-Sq. Dt. Lt.

2'-Sq. Dt. Rt.

Type II C.& G.

Type I C.& G.

East Bound Ramp (Inside Edge)

-0.35%

-0.07%

10° V.C.

East Bound Ramp (Outside Edge)

-0.48%

1285
1280
1275
1270

99 100 101 102 103 104 105 106 107

PLATE 1 - PLAN-PROFILE U. P. R. R. & I. C. STANDARD
KEUFFEL & ESSER CO. NEW YORK.

PUBLIC ROAD DESIGNATION	U.S. ROUTE NO.	SHEET NO.	TOTAL SHEETS
	226-61(25)G(3)	61	5 31

Sta 120+05.20 Const.
Curb Inlet Type "B" Lt.
Connect to 15" SS. (N).
Install 10' Lin. Ft. 18" SS. (S).
Remove Exist. Inlet
And 10' Lin. Ft. 15" SS.
See Sh. No. 14

Sta 105+41.3 Install
2" Electrical Conduit (Non-Metallic)
Extension (S) 1 #17 AT.
Present Traffic Lights to be Removed
& Re-Set By Others
See Sh. No. 2

Sta. 105+17.68 Const.
Curb Inlet Type "B" Lt.
Install 65 Lin. Ft. 1.11" SS. (S)
Remove Exist. Inlet & Plug 18" SS.
See Sh. No. 14

Sta 105+19.30 Const.
Curb Inlet Type "B" Rt.
Install 48 Lin. Ft. 15" SS. (SE)
Remove Exist. Inlet & Plug 15" SS.
See Sh. No. 14

Sta 118+61.67 Const.
Curb Inlet Type "B" Lt.
Connect to 21" SS. (S)
Install 24 Lin. Ft. 18" SS. (N)
Remove Exist. Inlet
And 20 Lin. Ft. 21" SS.
See Sh. No. 14

+0370 (US-81)

+2301 (US-81)

& PROJECT PLUM Rd. 105

Sec. Line

2" Transite

4" Gas

18" H.P. Gas

2" Gas

INTERSECTION DETAILS AT U.S.-81

4754'

Sta. 103+56.50

59'-0"

180'-0"

Sta. 100+56.50

6" Edge Curb

14'-0"

12'-0"

12'-0" R

2'-0"

4'-0"

2'-0"

& Project

MEDIAN NOSE DETAILS
Scale: 1"=10'

PLAN
CONTRACT NO. 226
NOTE BOOK
PAGE NO.
ALIGNMENT CHECKED
PROFILE CHECKED
STRUCTURE MOUNTING DATA

PROFILE
PLOTTED
CURVE BOOK
CROSS CHECKED
PAGE NO.
STRUCTURE MOUNTING DATA

BY	DATE

Sta 104+56.50 Beg. Return
Sta 105+20.80 N.W. RETURN
Sta 105+20.80 End Return
Sta 106+20.80 (US-81)

Sta 104+56.50 Beg. Return
Sta 105+20.80 S.W. RETURN
Sta 106+20.80 End Return
Sta 106+20.80 (US-81)

Gutter F.L.

10' V.C.

4.30%

4.78%

1278.19
1278.92
1279.89
1279.68
1279.89
1279.70
1279.92
1279.71
1279.81
1279.97

18.18
18.18
18.16
18.14
13.97
13.97
13.98
13.97
55.89
52.37

1277
1276
1275

OUTTER PROFILES OF
CURB RETURNS AT U.S.-81
Scale: Horiz. 1"=5'
Vert. 1"=1'

PLATE 1. PLAN-PROFILE O.P.P. & P.E. STANDARD.
KELLETT & TYE CO., NEW YORK
P. & E. DWG. NO. 248-10A

FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
-- 5	KANSAS	226-87.256(3)	1961	6	31

Ramp Curve Data
Δ=22°57'
D=9°00'
L=259.00
E=137.75
T=129.37

WEST BOUND LANE

EAST BOUND LANE

Ramp Curve Data
Δ=21°00'
D=11°00'
R=81.920
T=151.883
L=300.00

STATE HIGHWAY COMMISSION OF KANSAS

U-TURN RAMP DETAILS

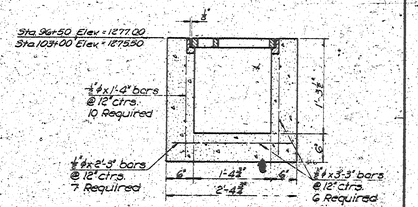
NO.	DATE	REVISIONS	BY	APP'D
1				
2				

SHEET NO. 6 OF 31 SHEETS | SCALE 1" = 15' | TRACED A.L.J.
DESIGNED | DETAILED | QUANTITIES | CHK'D | CHK'D

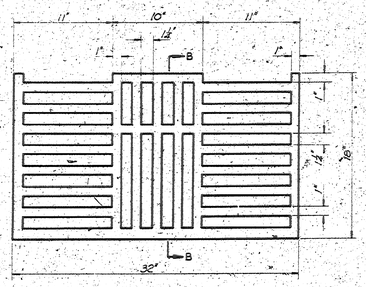
DITCH INLET

LT. STA. 96+50
RT. STA. 103+00

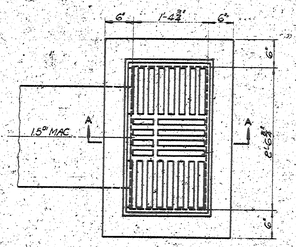
SECTION B-B



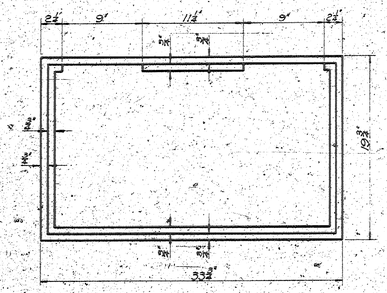
SECTION A-A



PLAN OF GRATE
Weight: 170 Lbs.



PLAN
Scale: 1"=1'



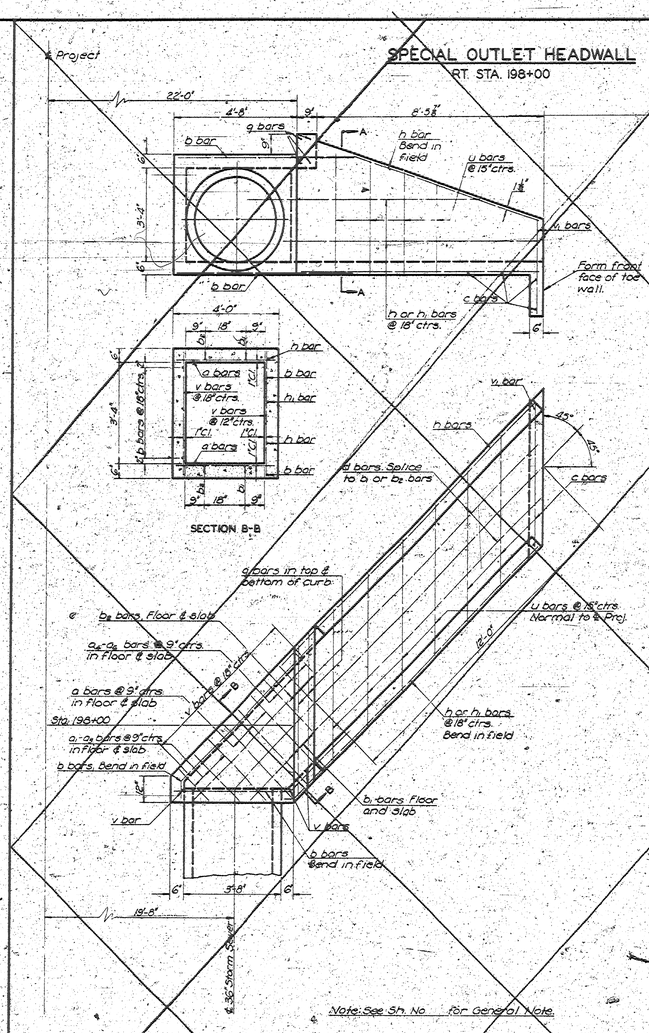
PLAN OF FRAME
Weight: 85 Lbs.
Scale: 2"=1'

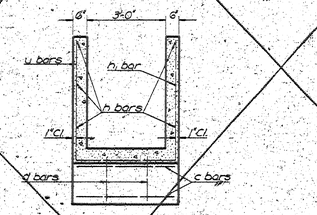
QUANTITIES		
Class "A" Concrete	0.6	Cu Yd.
Reinforcing Steel	35	Lbs.
Cast Iron	255	Lbs.
Class II Excavation	2	Cu Yds.

Notes:
Use Class A Concrete thruout.
All weights of castings are calculated weights with 10% allowed for fillets, overruns, anchor bars and bolts.
Standard gutter castings for Type 4GC catch basin and catch basin manhole used by City of Topeka.

SPECIAL OUTLET HEADWALL

RT. STA. 198+00





BENDING DIAGRAMS
All dimensions are out to out of bars.
All bars are No. 4.

BAR LIST												
Bar	a	a₂	b	b₁	b₂	c	d	g	h	h₁	u	v	v₁
Number	6	12	5	2	2	4	2	4	5	1	4	8	2
Length	3'-9"	*	7'-6"	3'-3"	6'-3"	5'-6"	14'-3"	5'-3"	3'-3"	10'-0"	*	4'-8"	8'-3"

*See Bending Diagrams for these lengths.

QUANTITIES	
Class "A" Concrete	4.6 C.Y.
Reinf. Steel	230 Lbs.
Class III Exc.	21 C.Y.

Note: See Sh. No. for General Note.

NO.	DATE	REVISIONS	BY

STATE HIGHWAY COMMISSION OF KANSAS

DITCH INLETS

SHEET NO.	OF	SCALE	APP'D		
DESIGNED C.E.M.	DETAILED C.E.M.	QUANT. C.E.M.	RECD. JNO.		
DESIGN CK. M.K.	DETAIL CK. M.K.	QUANT. CK. M.K.			

U.S.
PUB. ROAD DIV. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS
KANSAS | 226-B7-256(3) | 61 | 15 | 91

P.C. Sta. 95+74.98 P.I. Sta. 99+00 Δ=18°44' Rt. P.T. Sta. 102+24.98 P.C. Sta. 102+97.05 P.I. Sta. 104+00 Δ=19°46' Lt. P.T. Sta. 105+52.93

Sta. 99+67.16 18' Lt. Proj. ℄
Remove & Reset Existing
Highway Crossing Protection
Flashing Light Type.
Install at Sta. 99+70.86 38' Lt. ℄
See Sheet No.
Work to be done by Railroad Co. Force Account.

CURVE DATA
Δ = 19°44' Lt.
D = 0°-35'
R = 10,111.10'
T = 152.95'
L = 305.88
E = 1.16

K-226

MAC ARTHUR ROAD

Westbound Lane

Eastbound Lane

U.S. 81

Ho.

Garage

Conc.

Serv. Sta.

Bldg.

Sta. 99+30 18' Rt. Proj. ℄
Remove & Reset Existing
Highway Crossing Protection
Flashing Light Type
Install at Sta. 99+64.39 30' Lt. ℄
See Sheet No.
Work to be done by Railroad Co. Force Account.

Note.
Highway Crossing Protection
Flashing Light Type for Eastbound Lane
to be furnished under separate Project.

CURVE DATA
Δ = 7°-44' Rt
D = 0°-16'
R = 21,655.9'
T = 325.01
L = 650.0
E = 2.66

SCALE
PLAN: Lat. & Long. ℄ 50' 100'
PROFILE: Horiz. same as above
Vert.

PLAN

PROFILE

200' V.C.

-0.16%

+0.97%

Prof. ℄ Proj.

-0.52%

150' V.C.

200' V.C.

1280

1275

1270

PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS	226-87 (US 256(3))	19 01	28	31

ARKANSAS RIVER

Chicago Rock Island & Pacific RR

Elliot

Broadway

22 Acres

I-235

US 81

MacArthur Road

90 95 100 105

STATE HIGHWAY COMMISSION OF KANSAS

DRAINAGE MAP

STA 91+00 TO STA 12

PROJECT 226-87 US 256 (3) COUNTY Sedgwick

SHEET NO 1 OF 1 SCALE 1" = 250' OR 1 MILE

MAPPED BY JHB DATE DETAILED BY

CHECKED BY APPROVED BY DATE