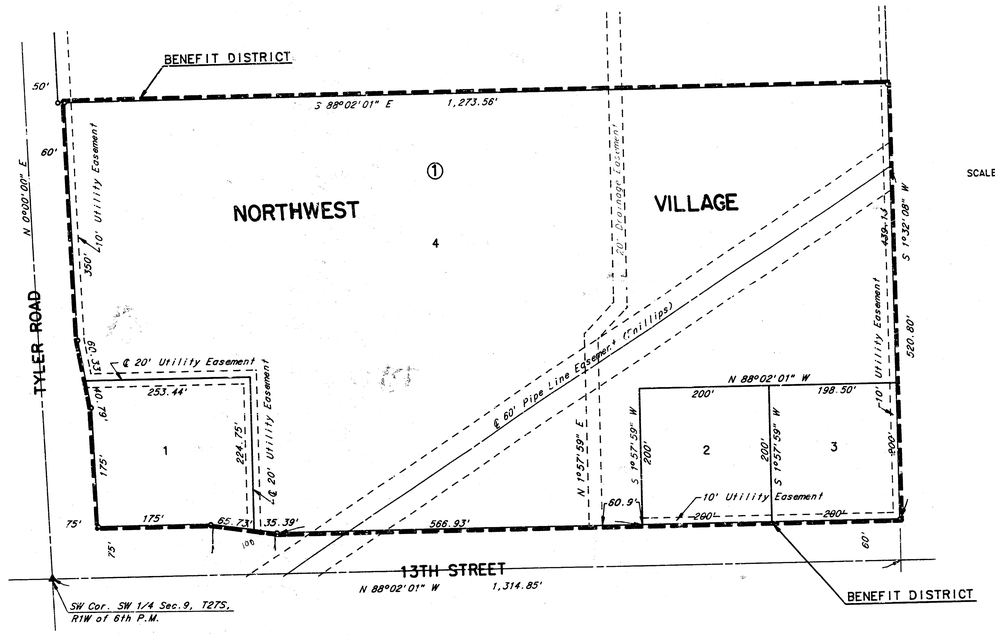
CITY OF WICHITA, KANSAS

13TH STREET ACCEL AND DECEL LANE
(E.L. TYLER ROAD TO E.L. NORTHWEST VILLAGE)

CITY OF WICHITA PROJECT NO. 472-76-245-81017-000-000-001

MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

INDEX OF SHEETS



GARY D. SCHOCK
LICENSED
6856
KANSAS
PROFESSIONAL ENGINEER

DECEMBER, 1984

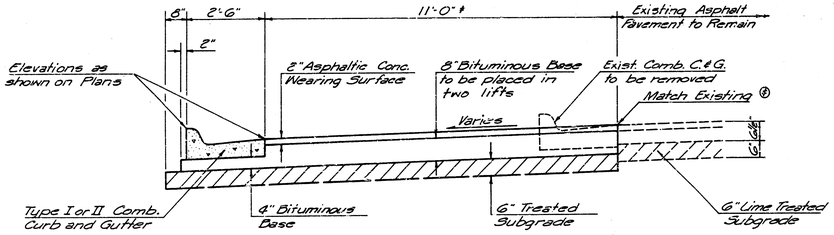
PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

PROJECT NO	SHEET NO.	TOTAL SHEETS
472-76-245-81017-000-000-001	2	18



TYPICAL SECTION

Sta. 1059+48.93 to Sta. 1071+45.45

* varies from 11'-0" at Sta. 1070+45.45 to 0'-0" at Sta. 1071+45.45.

GENERAL NOTES

THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER AND THE EXISTING PAVEMENT SHALL BE PAID AS SQUARE YARDS OF 10" ASPHALTIC CONCRETE PAVEMENT (8" BITUMINOUS BASE).

THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER AND UNDER THE 6" WALK SHALL BE PAID AS SQUARE YARDS OF 4" BITUMINOUS BASE.

THE BITUMINOUS BASE IN THE ISLAND, EXCULSIVE OF THE 6" WALK AREA, SHALL BE PAID AS SQUARE YARDS OF 18" BITUMINOUS BASE.

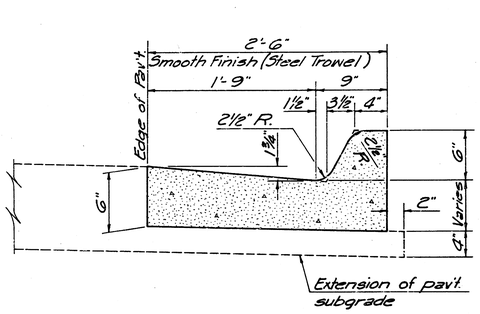
A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

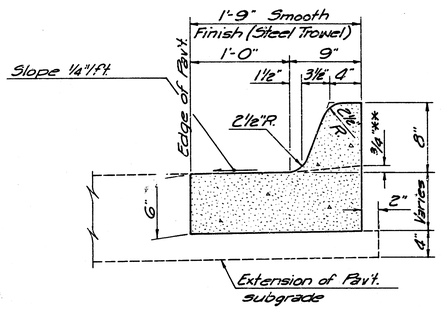
CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS.

CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATIVE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

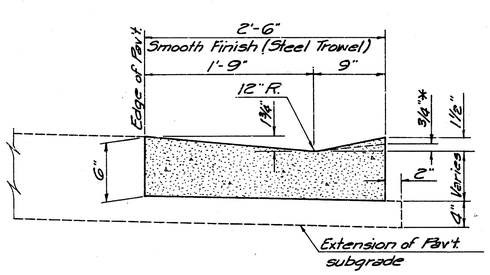
② A NEAT VERTICAL CONTACT PLANE SHALL BE PROVIDED BETWEEN THE EXISTING ASPHALT PAVEMENT AND THE NEW 2" ASPHALTIC CONCRETE WEARING SURFACE. SHOULD THE EXISTING EDGE OF PAVEMENT AT THE TIME OF PLACEMENT OF THE NEW 2" ASPHALTIC CONCRETE WEARING SURFACE NOT BE VERTICAL, THE CONTRACTOR SHALL SAW, CUT, OR BY OTHER MEANS ACCEPTABLE TO THE ENGINEER PROVIDE A NEAT VERTICAL CONTACT PLANE. SAWING, CUTTING, OR OTHER WORK REQUIRED TO PROVIDE THE VERTICAL CONTACT PLANE AND ALL ADDITIONAL LABOR, MATERIALS, AND INCIDENTALS SHALL BE CONSIDERED SUBSIDIARY TO OTHER SURFACING ITEMS.



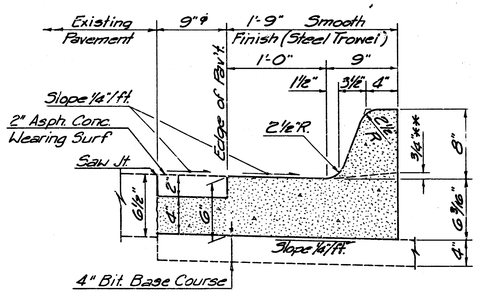
COMBINED CURB & GUTTER-TYPE I ⊛



MEDIAN COMBINED CURB & GUTTER-TYPE III ⊄⊄

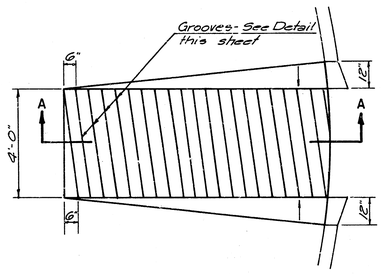


COMBINED CURB & GUTTER-TYPE II ⊛

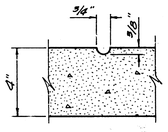


MEDIAN COMBINED CURB & GUTTER-TYPE III SPECIAL ⊄⊄

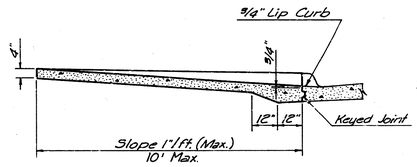
* ¾" Lip Curb through Wheelchair Ramp sections.
** ¾" Lip Curb with 12" R. at Flowline through 6" Walk sections.
⊄ Additional Concrete shall not be paid for directly, but shall be considered subsidiary to "Median Combined Curb & Gutter-Type III."
⊄⊄ Median Combined Curb & Gutter Type III & Type III Special shall be bid as "Median Combined Curb & Gutter (8" Curb)."
⊛ Combined Curb & Gutter Type I & II shall be bid as "Combined Curb & Gutter (6" & 1½" Curb)."



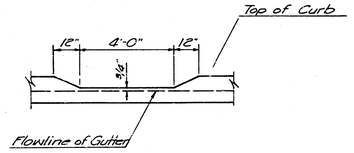
PLAN



GROOVE DETAIL



SECTION A-A



DEPRESSED CURB DETAIL

STANDARD 4" WHEELCHAIR RAMP DETAILS

TYPICAL SECTION & MISCELLANEOUS DETAILS

2/18

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by	GDD, GDS	Checked by	G.D.S.
Drawn by	GDD	Date	Dec. 1984
		Job No.	84562

PROJECT NO.	SHEET NO.	TOTAL SHEETS
47C-76-243-81017-000-000-001	3	18

GENERAL NOTES:

1. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR APARTMENT TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION.

2. UTILITY SERVICE LINES, POLES, VALVE BOXES, METERS, AND ETCETERA ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO OR DURING CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

3. A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE COURSE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAWED JOINT TO FACILITATE REMOVAL WITHIN THREE (3) FEET OF EXISTING JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SAW CUTS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF THE SURFACE OR PAVEMENT.

4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE 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.

5. CITY OF WICHITA FORCES WILL REMOVE AND REPLACE EXISTING STREET SIGNING AS CONSTRUCTION IS STARTED AND COMPLETED. THE CONTRACTOR WILL COORDINATE HIS ACTIVITIES WITH THE DEPARTMENT OF OPERATIONS AND MAINTENANCE RELATIVE TO REMOVAL OR INSTALLATION OF STREET SIGNING.

6. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS WORK WITH TRAFFIC SIGNAL WORK TO BE ACCOMPLISHED BY FORCES OF THE CITY OF WICHITA'S DEPARTMENT OF OPERATIONS AND MAINTENANCE. PORTIONS OF THE GRADING CONSTRUCTION MUST PRECEDE TRAFFIC SIGNAL MODIFICATION CONSTRUCTION. IN GENERAL, CONSTRUCTION IN THE NORTHEAST QUADRANT OF THE INTERSECTION OF 13TH AND TYLER ROAD SHALL PROCEED AS FOLLOWS:

   A. THE CONTRACTOR SHALL REMOVE THE EXISTING CURB RETURN CURB AND GUTTER AND FILLET PAVEMENT AND ROUGH GRADE THE PROPOSED FREE RIGHT TURN LANE WITHOUT DISTURBING THE EXISTING SIGNAL INSTALLATION.
   B. PERSONNEL OF THE CITY OF WICHITA'S DEPARTMENT OF OPERATIONS AND MAINTENANCE WILL THEN INSTALL TRAFFIC SIGNAL MODIFICATIONS. MODIFICATIONS WILL INCLUDE NEW SIGNAL POLE AND BASE, NEW SERVICE BOXES, NEW JUNCTION BOXES, NEW LOOP DETECTOR, AND ADDITIONAL CONDUIT WITH TRAFFIC SIGNAL WIRING AS SHOWN. IT IS ANTICIPATED THAT TRAFFIC SIGNAL MODIFICATION WORK WILL TAKE APPROXIMATELY ONE (1) WEEK.
   C. THE CONTRACTOR SHALL THEN COMPLETE GRADING AND PAVING OF THE FREE RIGHT TURN LANE AND ISLAND WHILE COORDINATING ANY REMAINING MINOR TRAFFIC SIGNAL MODIFICATIONS WITH THE DEPARTMENT OF OPERATIONS AND MAINTENANCE.

7. THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED OVER AND/OR ADJACENT TO PIPELINES.

8. PROPERTIES WITHIN THE PROJECT LIMITS WHICH HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION HAVE BEEN NOTIFIED TO REMOVE SUCH IMPROVEMENTS. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

9. WIDENED GUTTER SECTION OF COMBINED CURB AND GUTTER AT INTERSECTIONS WILL NOT BE PAID FOR DIRECTLY, AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER CONTRACT PAY ITEMS OF WORK.

10. TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

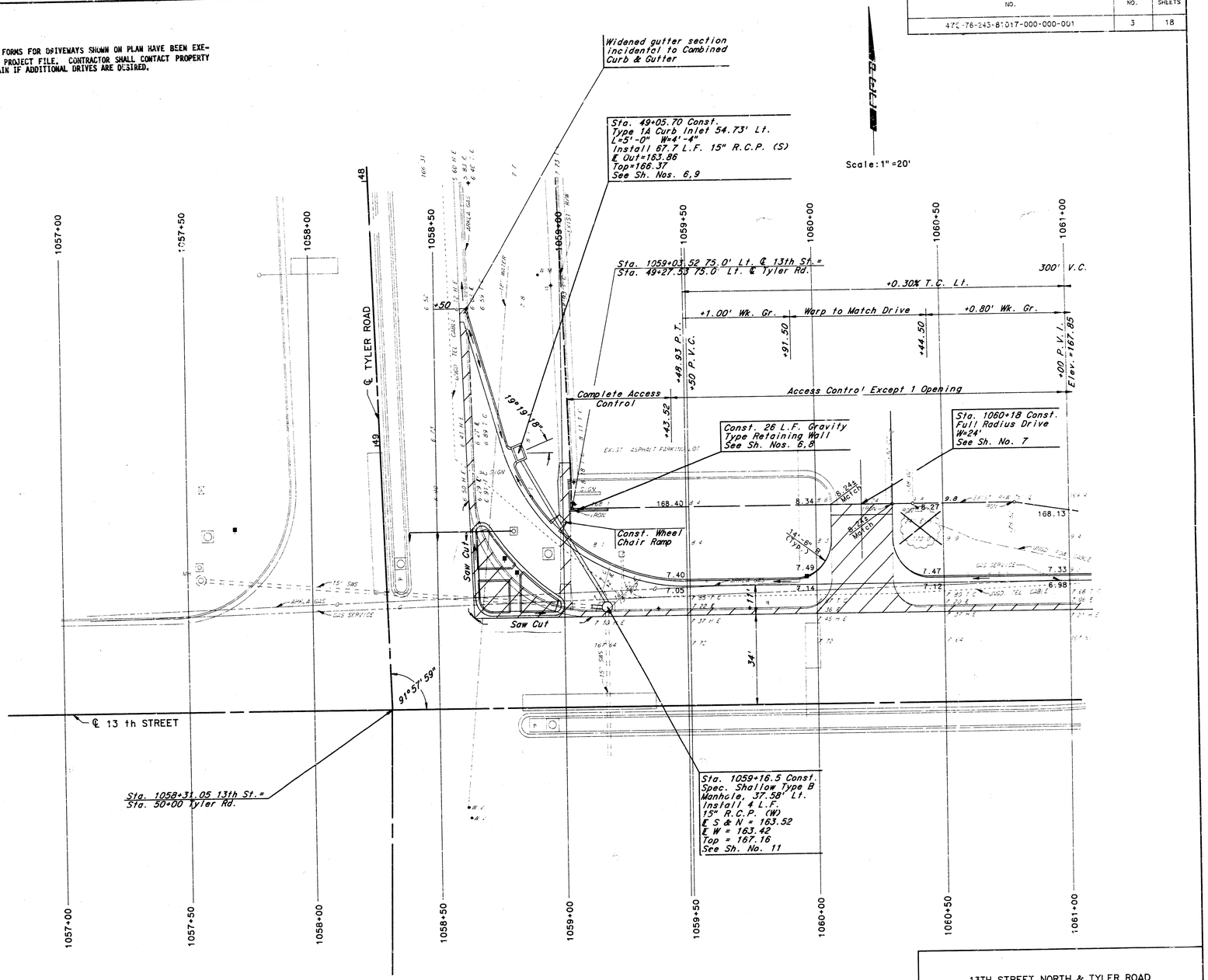
11. LIMITS OF EARTHWORK SHALL MATCH EXISTING GROUND ELEVATIONS AT THE RIGHT-OF-WAY LINE UNLESS OTHERWISE NOTED ON THE PLANS WITH A NEW FINISHED GRADE ELEVATION. WHEN A NEW FINISHED GRADE ELEVATION IS SHOWN, THE EARTHWORK SHALL EXTEND ONE FOOT BEYOND THE RIGHT-OF-WAY LINE AND THEN SLOPED UP OR DOWN USING PERMISSABLE SLOPES TO MATCH THE EXISTING GROUND SURFACE.

12. CONTRACTOR SHALL GIVE PROPERTY OWNERS ABUTTING THIS PROJECT, WHOSE PROPERTY WILL BE LOWER THAN THE NEW FINISHED GRADE ELEVATIONS AT THE RIGHT-OF-WAY LINES, AN OPPORTUNITY TO UTILIZE EXCESS EXCAVATED MATERIAL FROM THE PROJECT TO REGRADE THEIR PROPERTY TO DRAIN TO THE NEW PAVEMENT. CONTRACTOR WILL BE REQUIRED TO DUMP AND SPREAD THE EXCESS MATERIAL AS REQUIRED BY THE SPECIFICATIONS WHEN REQUESTED BY THE PROPERTY OWNER. THE CONTRACTOR SHALL ASCERTAIN THAT A DIRT ORDER FORM HAS BEEN PROPERLY EXECUTED BY THE PROPERTY OWNER BEFORE ANY SUCH EXCESS MATERIAL IS DELIVERED TO SUCH PROPERTIES.

13. THE CONTRACTOR WILL BE PERMITTED TO BID ONLY ONE OF THE ALTERNATE TYPES OF SUBGRADE TREATMENT. THE TYPE BID BY THE SUCCESSFUL BIDDER WILL BE THE TYPE OF SUBGRADE TREATMENT USED TO CONSTRUCT THE PROJECT.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.

15. DRIVEWAY REQUEST FORMS FOR DRIVEWAYS SHOWN ON PLAN HAVE BEEN EXECUTED AND ARE IN PROJECT FILE. CONTRACTOR SHALL CONTACT PROPERTY OWNERS TO ASCERTAIN IF ADDITIONAL DRIVES ARE DESIRED.



Note: Elevations shown are "Top of Curb", "High Edge" and "Property Line"

See Sh. No. 6 for Intersection Details

B.M.-"B" Railroad spike in S.E. face of power pole @ N.W. corner of 13th and Tyler 69' Lt. ℄ Sta. 1057+71 Elev.=166.83

B.M.-"E" "□" cut in top of south curb 700' E. of ℄ Tyler - 32' Rt. ℄ Sta. 1065+31 Elev.=163.03

13TH STREET NORTH & TYLER ROAD
RIGHT TURN LANE
STA. 1058+63.90 TO STA. 1061+00.00

3/18

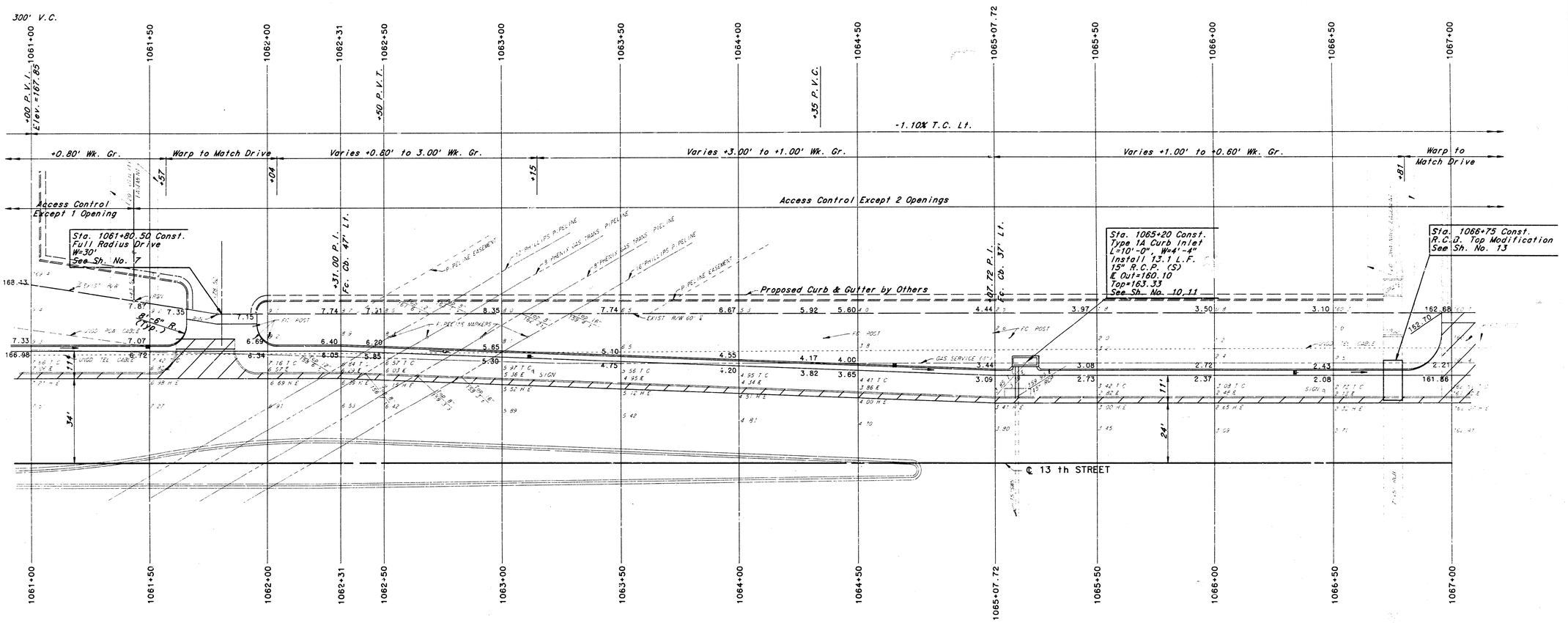
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by	G.D.S.,G.D.D.	Checked by	G.D.S.	
Drawn by	J.G.P.	Date	Dec.,1984	Job No. 84562

PROJECT NO.	SHEET NO	TOTAL SHEETS
472-76-245-81017-000-000-001	4	18

Note: Drive Lt. Sta. 1061+80.50 shall not be closed at the same time as drive Lt. Sta. 1067+18.

Scale: 1" = 20'



13TH STREET NORTH & TYLER ROAD
RIGHT TURN LANE
STA. 1061+00 TO STA. 1067+00

4/18

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

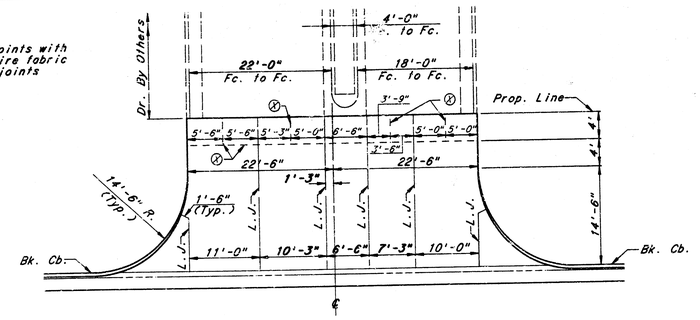
Designed by	GDS, GDD	Checked by	GDS
Drawn by	JGP	Date Dec., 1984	Job No. 84526

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-76-245-81017-000-000-001	5	18

NOTE: DRIVES SHALL BE CONSTRUCTED ONLY AFTER A DRIVEWAY REQUEST FORM HAS BEEN PROPERLY EXECUTED.

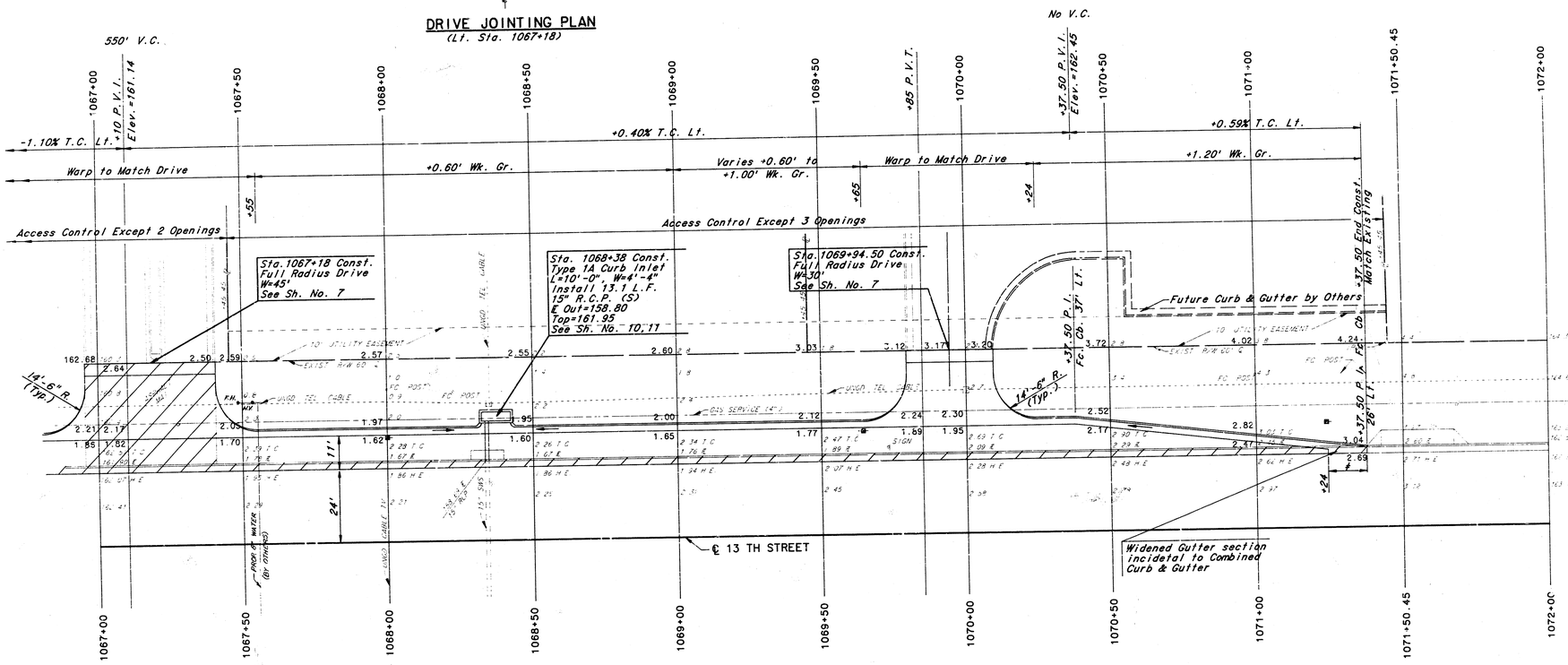
SEE NOTE 15 SHEET 1

Scale: 1" = 20'



DRIVE JOINTING PLAN

(Lt. Sta. 1067+18)



Transition to Match Existing

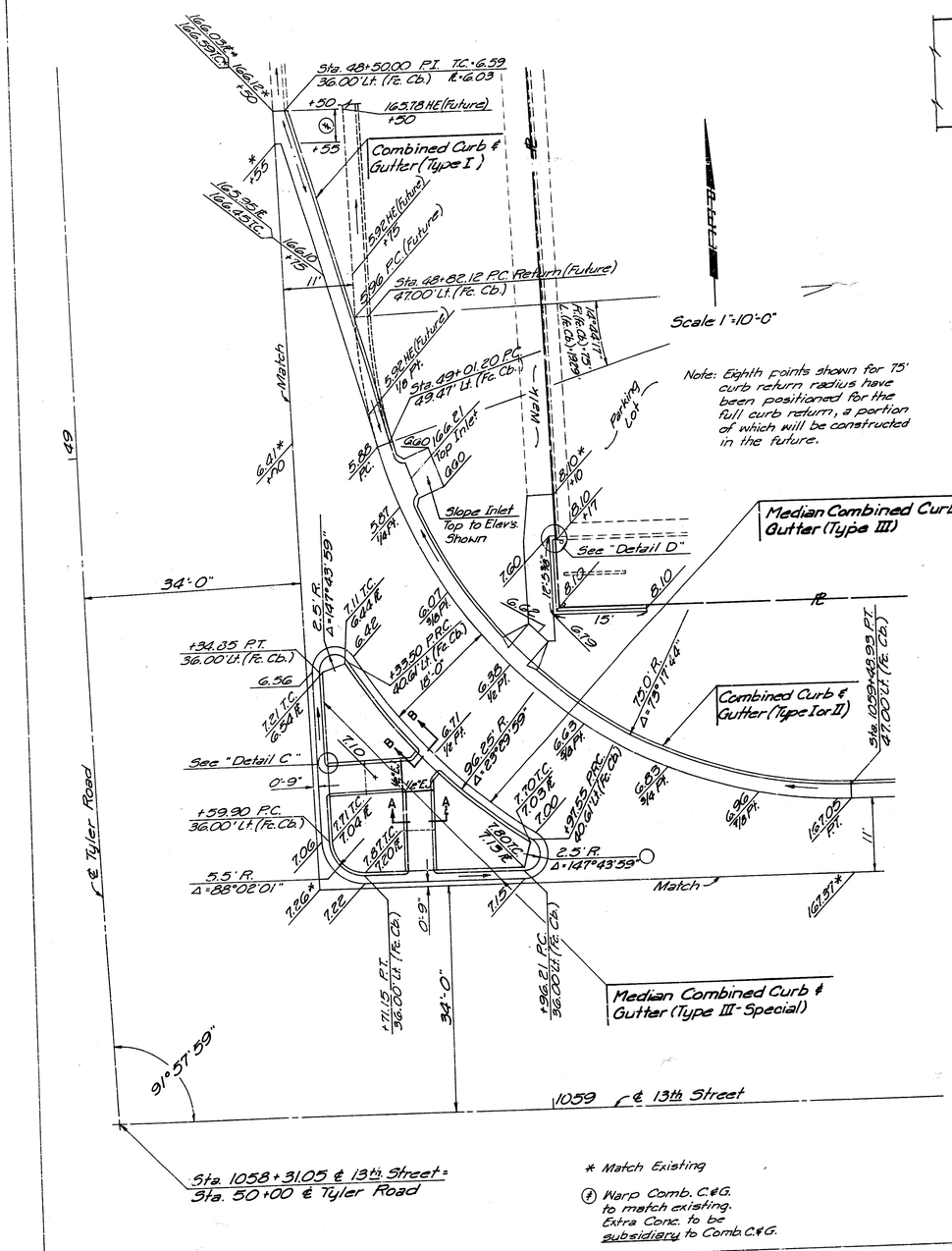
13TH STREET NORTH & TYLER ROAD
RIGHT TURN LANE
STA. 1067+00 TO STA. 1071+37.50

5/18

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by	GDS, GDD	Checked by	GDS	
Drawn by	JGP	Date	DEC., 1984	Job No. 84582

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-76-245-81017-000-000-001	6	18

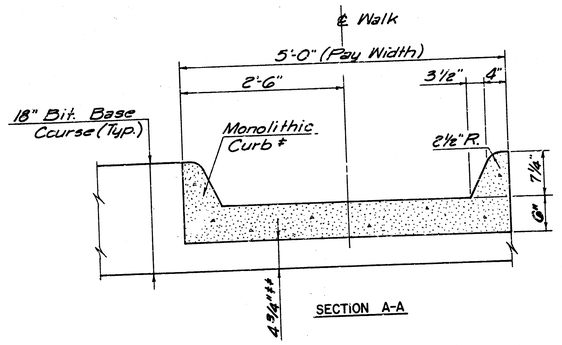


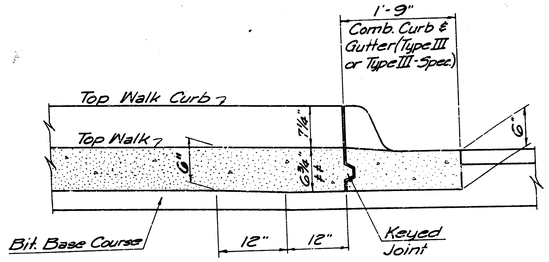
Scale 1"=10'-0"

Note: Eighth points shown for 75' curb return radius have been positioned for the full curb return, a portion of which will be constructed in the future.

* Match Existing

(#) Warp Comb. C&G. to match existing. Extra Conc. to be subsidiary to Comb. C&G.

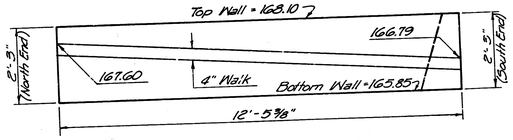


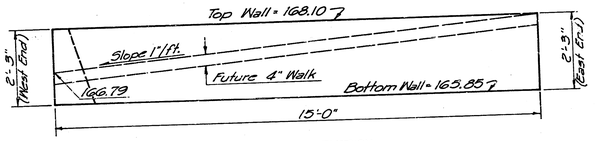


Monolithic Curb shall not be paid for directly, but shall be considered subsidiary to "6" Walk". Planes of weakness to be constructed on 6' ctrs. (Max.).

Additional thickness shall be considered subsidiary.

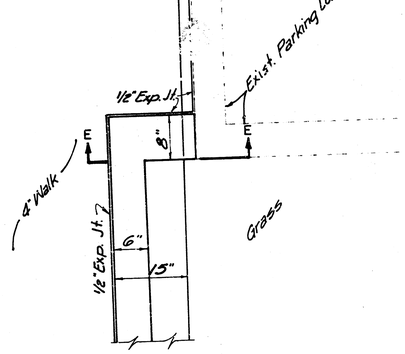
6" WALK DETAILS

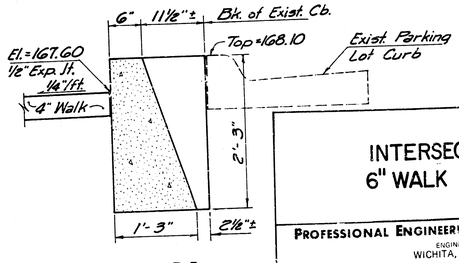




RETAINING WALL ELEVATIONS

For additional details See Sh. No. 8



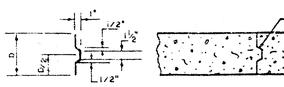


INTERSECTION & 6" WALK DETAILS

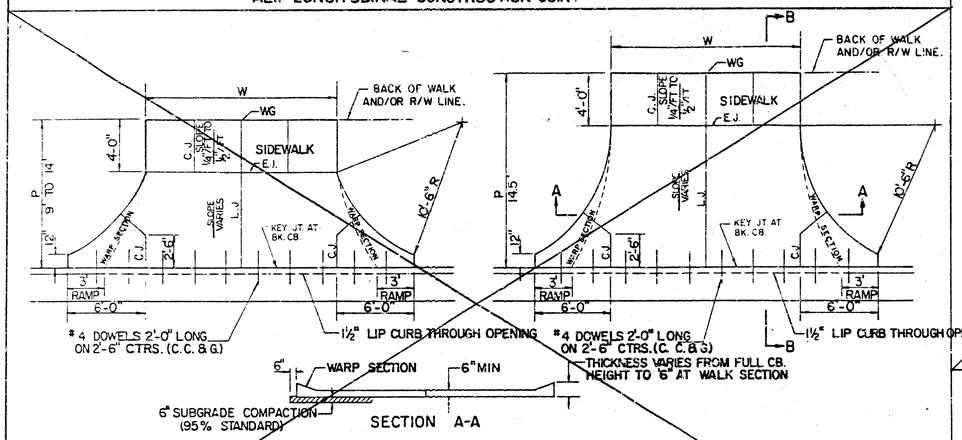
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEER
WICHITA, KANSAS

6/18

Designed by	D.D.	Checked by	G.D.S.
Drawn by	D.D.	Date	Dec. 1992
		Job No.	84562

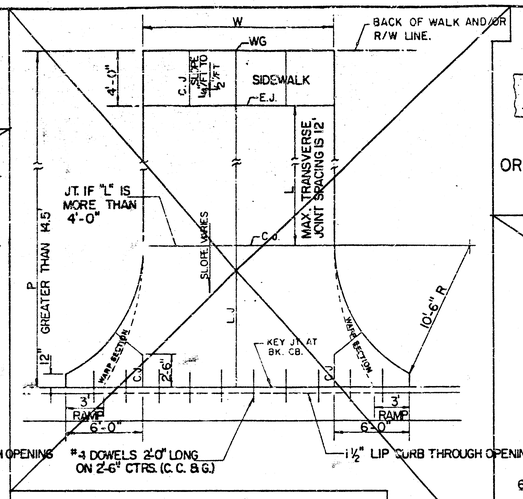


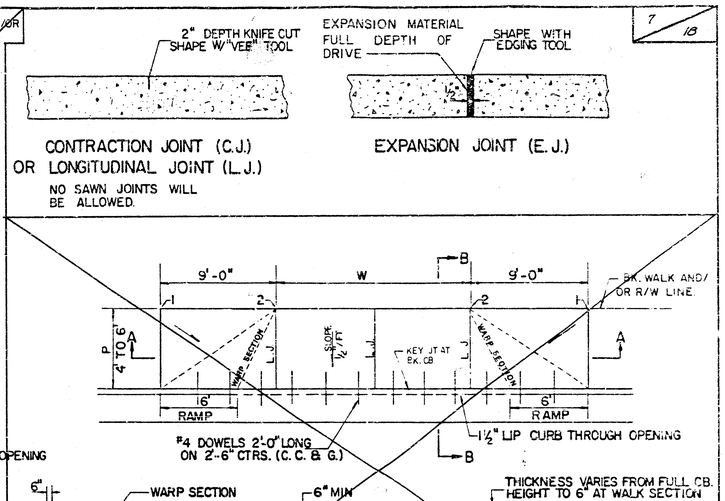
ALT. LONGITUDINAL CONSTRUCTION JOINT

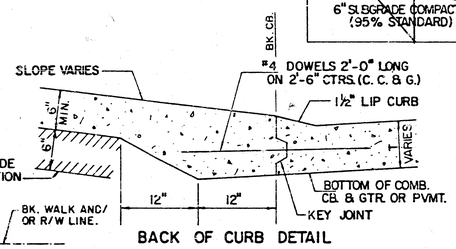


PARKING WIDTH "P"	9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.60'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.27'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	-.19'	-.16'	-.13'	-.10'	-.06'	0.00	0.00	0.15'	0.25	0.35'	0.45	0.55'	0.65'

RADIUS RAMP DRIVES (P= 9.0' & GREATER)







BACK OF CURB DETAIL
SECTION B - B (no scale)

PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'
DIST. OF PT. "I" ABOVE TOP OF FULL CB.	0.08'	0.09'	0.10'	0.12'	0.13'	0.14'
DIST. OF PT. "2" BELOW TOP OF FULL CB.	-.26'	-.24'	-.22'	-.20'	-.18'	-.16'

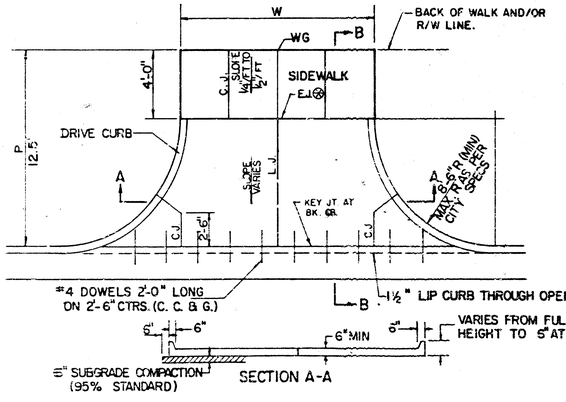
FULL RAMP DRIVE (P=4.0' TO 6.5')

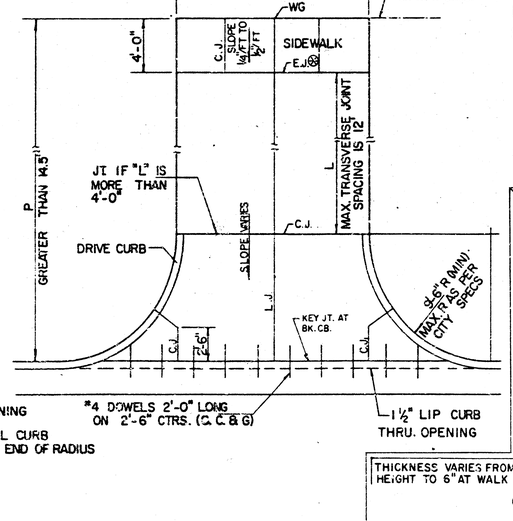
GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24' AND EQUAL TO OR LESS THAN 30'. SEE PLAN FOR LONGITUDINAL JOINTS WHEN "W" DIMENSION EXCEEDS 30.
3. ~~DRIVEWAY WIDTH DENOTED AS "W" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 32' AT THE STREET CURB LINE.~~
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 5' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 6" IN THICKNESS AND SHALL BE WITHOUT REINFORCEMENT. DRIVEWAYS MAY BE CONSTRUCTED THICKER THAN 6" AND THEY MAY BE REINFORCED WITH 6"x12" W4-W4 WELDED WIRE FABRIC WHEN PROPERLY AUTHORIZED BY THE PROPERTY OWNER WITH THE ENGINEER'S CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHENEVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLES ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.

Note: This Std. Modified for this project only.

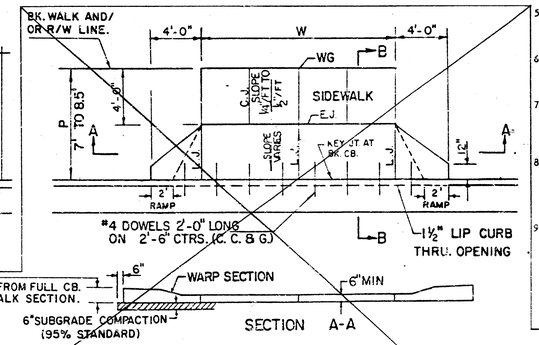
⊗ Omit Expansion Joint and construct tooled joint with welded wire fabric through joint when drive is to be reinforced.





PARKING WIDTH "P"	12.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.60'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.52'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.26'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00	0.00'	0.15'	0.25'	0.35'	0.45	0.55'	0.65'

FULL RADIUS DRIVES (P=12.5' & GREATER)



PARKING WIDTH "P"	7'	7.5'	8'	8.5'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.15'	0.16'	0.17'	0.17'
ABSOLUTE MAX. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.25'	-.20'	-.20	-.20'

FULL RAMP DRIVE (P=7.0' TO 8.5')

SCALE: 1" = 5'

STANDARD DRIVE ENTRANCES FULL HEIGHT CURB

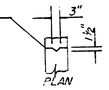
CITY OF WICHITA, KANSAS

7/18

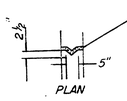
PROJECT NUMBER

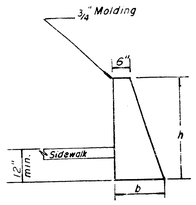
412-76-245-81017-000-000-001

Construct Tar Paper & Keyed Construction Joints @ 20' intervals. Discontinue Reinf. Steel in L & T-Type Walls.



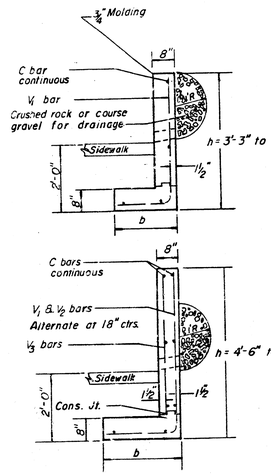
Expansion Joints @ 100' Maximum Spacing, 1" Premolded Expansion Joint Material. Discontinue Reinf. Steel





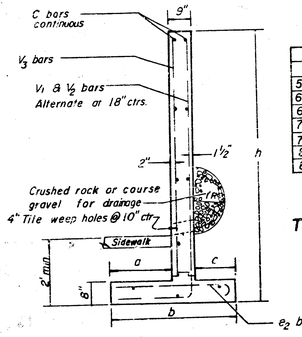
DIMENSIONS h	b	CY Conc. Per Foot
1'-9"	11"	0.045
2'-0"	13"	0.059
2'-3"	15"	0.073
2'-6"	17"	0.089
2'-9"	18½"	0.104
3'-0"	20"	0.120

GRAVITY TYPE
(Concrete)



DIMENSIONS h	b	Per Lin. Ft. Wall Rein Stl	CY Conc.
3'-3"	1'-6"	4.45	0.101
3'-6"	2'-0"	4.78	0.120
3'-9"	2'-0"	4.90	0.126
4'-0"	2'-0"	5.00	0.132
4'-6"	2'-6"	9.00	0.157
4'-9"	2'-5"	9.17	0.163
5'-0"	2'-6"	9.35	0.169

L-TYPE WALL
(Reinf. Concrete)

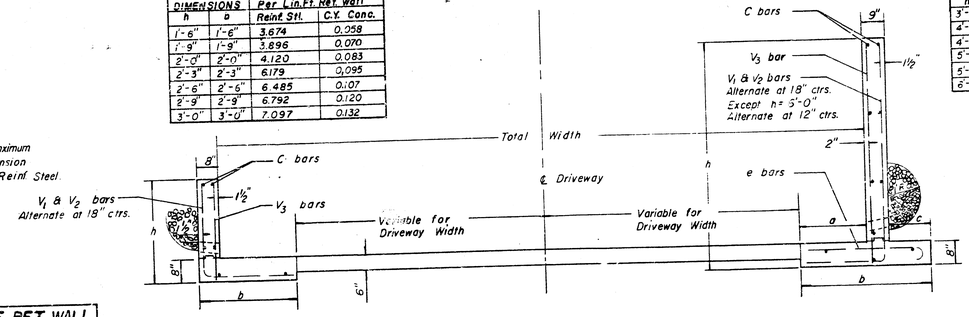


DIMENSIONS h	b	a	c	Per Lin. Ft. Wall Rein. Stl.	CY Conc.
5'-6"	2'-9"	1'-0"	1'-0"	11.630	0.202
6'-0"	3'-3"	1'-3"	1'-3"	13.995	0229
6'-6"	3'-3"	1'-3"	1'-3"	14.135	0243
7'-0"	4'-0"	2'-0"	1'-3"	18.282	0275
7'-6"	4'-0"	2'-0"	1'-3"	25.737	0289
8'-0"	4'-0"	2'-0"	1'-3"	26.600	0303
8'-6"	4'-0"	2'-0"	1'-3"	27.380	0.317

T-TYPE WALL
(Reinf. Concrete)

L-TYPE RETAINING WALL FOR DRIVEWAYS

DIMENSIONS h	b	Per Lin. Ft. Ret. Wall Reinf. Stl.	C.Y. Conc.
1'-6"	1'-6"	3.674	0.058
1'-9"	1'-9"	3.896	0.070
2'-0"	2'-0"	4.120	0.083
2'-3"	2'-3"	6.179	0.095
2'-6"	2'-6"	6.485	0.107
2'-9"	2'-9"	6.792	0.120
3'-0"	3'-0"	7.097	0.132



T-TYPE RETAINING WALL FOR DRIVEWAYS

DIMENSIONS h	b	a	c	Per Lin. Ft. Wall Steel	CY Conc.
3'-6"	3'-3"	1'-3"	1'-3"	9.213	0.159
4'-0"	3'-9"	1'-6"	1'-6"	9.805	0.186
4'-6"	4'-0"	1'-9"	1'-6"	11.085	0.206
5'-0"	4'-3"	2'-0"	1'-6"	11.698	0.226
5'-6"	4'-6"	2'-3"	1'-6"	12.867	0.247
6'-0"	4'-9"	2'-6"	1'-6"	14.147	0.266

NOTE ALL excavation for retaining walls shall be included in the bid price per lin ft of retaining wall. The 4" tile weep holes & crushed rock or course gravel for drainage shall be included in the bid price per lin. ft. of retaining wall.

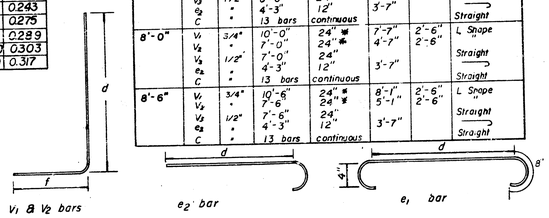
REINF STEEL SCHEDULE - L-TYPE RET WALL

h	bar	size	Cutting Length	Spacing	d	f	Remarks
3'-3"	V1	1/2"	4'-0"	18"	2'-11"	1'-2"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
3'-6"	V1	1/2"	4'-9"	18"	3'-2"	1'-8"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
3'-9"	V1	1/2"	5'-0"	18"	3'-5"	1'-8"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
4'-0"	V1	1/2"	5'-3"	18"	3'-8"	1'-8"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
4'-6"	V1	1/2"	6'-3"	36" *	4'-2"	2'-2"	L Shape
	V2	"	5'-0"	36" *	2'-11"	2'-2"	"
	V3	"	3'-6"	24"			Straight
	C	"	8 bars	continuous			
4'-9"	V1	1/2"	6'-6"	36" *	4'-5"	2'-2"	L Shape
	V2	"	5'-0"	36" *	2'-11"	2'-2"	"
	V3	"	3'-9"	24"			Straight
	C	"	8 bars	continuous			
5'-0"	V1	1/2"	6'-9"	36" *	4'-8"	2'-2"	L Shape
	V2	"	5'-3"	36" *	3'-2"	2'-2"	"
	V3	"	4'-0"	24"			Straight
	C	"	6 bars	continuous			

* Alternate V1 and V2 at 18" centers

T-TYPE RETAINING WALL

5'-6"	V1	1/2"	6'-9"	36" *	5'-4"	1'-6"	L Shape
	V2	"	4'-9"	36" *	1'-6"		"
	V3	"	4'-6"	24"			Straight
	e2	"	3'-0"	18"	2'-2"		⟶
	C	"	9 bars	continuous			Straight
6'-0"	V1	1/2"	7'-3"	24" *	5'-8"	1'-8"	L Shape
	V2	"	5'-0"	24" *	3'-3"	1'-8"	"
	V3	"	5'-0"	24"			Straight
	e2	"	3'-6"	18"	2'-10"		⟶
	C	"	10 bars	continuous			Straight
6'-6"	V1	3/4"	7'-9"	24" *	6'-2"	1'-8"	L Shape
	V2	"	5'-0"	24" *	3'-5"	1'-8"	"
	V3	1/2"	5'-6"	24"			Straight
	e2	"	3'-6"	18"	2'-10"		⟶
	C	"	10 bars	continuous			Straight
7'-0"	V1	3/4"	9'-0"	24" *	6'-7"	2'-6"	L Shape
	V2	"	6'-0"	24" *	3'-7"		"
	V3	1/2"	6'-0"	24"			Straight
	e2	"	4'-3"	12"	3'-7"		⟶
	C	"	10 bars	continuous			Straight
7'-6"	V1	3/4"	9'-6"	24" *	7'-1"	2'-6"	L Shape
	V2	"	6'-6"	24" *	4'-1"		"
	V3	1/2"	6'-6"	24"			Straight
	e2	"	4'-3"	12"	3'-7"		⟶
	C	"	13 bars	continuous			Straight
8'-0"	V1	3/4"	10'-0"	24" *	7'-7"	2'-6"	L Shape
	V2	"	7'-0"	24" *	4'-7"		"
	V3	1/2"	7'-0"	24"			Straight
	e2	"	4'-3"	12"	3'-7"		⟶
	C	"	13 bars	continuous			Straight
8'-6"	V1	3/4"	10'-6"	24" *	8'-1"	2'-6"	L Shape
	V2	"	7'-6"	24" *	5'-1"		"
	V3	1/2"	7'-6"	24"			Straight
	e2	"	4'-3"	12"	3'-7"		⟶
	C	"	13 bars	continuous			Straight



REINF STEEL SCHEDULE
L TYPE RETAINING WALL FOR DRIVES

h	bar	size	Cutting Length	Spacing	d	f	Remarks
1'-6"	V1	1/2"	2'-3"	18"	1'-1"	1'-3"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
1'-9"	V1	1/2"	2'-9"	18"	1'-4"	1'-6"	L Shape
	C	"	4 Horiz.	bars continuous			Straight
2'-0"	V1	1/2"	3'-3"	18"	1'-7"	1'-9"	L Shape
	C	"	4 bars	continuous			Straight
2'-3" Weep Holes	V1	1/2"	3'-9"	36" *	1'-10"	2'-0"	L Shape
	V2	"	3'-0"	36" *	1'-1"	2'-0"	"
	V3	"	2'-0"	24"			Straight
	C	"	6 Horiz.	bars continuous			
2'-6"	V1	1/2"	4'-3"	36" *	2'-1"	2'-3"	L Shape
	V2	"	3'-6"	36" *	1'-4"	2'-3"	"
	V3	"	2'-3"	24"			Straight
	C	"	6 bars	continuous			
2'-9"	V1	1/2"	4'-9"	36" *	2'-4"	2'-6"	L Shape
	V2	"	4'-0"	36" *	1'-7"	2'-6"	"
	V3	"	2'-6"	24"			Straight
	C	"	6 bars	continuous			
3'-0"	V1	1/2"	5'-3"	36" *	2'-7"	2'-9"	L Shape
	V2	"	4'-6"	36" *	1'-10"	2'-9"	"
	V3	"	2'-9"	24"			Straight
	C	"	6 bars	continuous			

* Alternate V1 and V2 at 18" centers

T-TYPE RETAINING WALL FOR DRIVEWAYS

3'-6"	V1	1/2"	5'-0"	36" *	3'-5"	1'-6"	L Shape
	V2	"	3'-6"	36" *	1'-11"	1'-8"	"
	V3	"	3'-3"	24"			Straight
	e2	"	3'-6"	18"	2'-10"		⟶
	C	"	6 bars	continuous			Straight
4'-0"	V1	1/2"	5'-6"	36" *	3'-8"	1'-11"	L Shape
	V2	"	4'-3"	36" *	2'-5"	1'-11"	"
	V3	"	3'-9"	24"			Straight
	e2	"	3'-10"	18"	3'-2"		⟶
	C	"	7 bars	continuous			Straight
4'-6"	V1	1/2"	6'-3"	36" *	4'-2"	2'-2"	L Shape
	V2	"	5'-0"	36" *	2'-11"	2'-2"	"
	V3	"	4'-3"	24"			Straight
	e2	"	4'-7"	18"	3'-5"		⟶
	C	"	8 bars	continuous			Straight
5'-0"	V1	1/2"	7'-0"	36" *	4'-8"	2'-5"	L Shape
	V2	"	5'-9"	36" *	3'-5"	2'-5"	"
	V3	"	4'-9"	24"			Straight
	e2	"	4'-6"	18"	3'-11"		⟶
	C	"	8 bars	continuous			Straight
5'-6"	V1	1/2"	7'-9"	36" *	5'-2"	2'-6"	L Shape
	V2	"	6'-0"	36" *	3'-5"	2'-8"	"
	V3	"	5'-3"	24"			Straight
	e2	"	4'-7"	18"	3'-11"		⟶
	C	"	9 bars	continuous			Straight
6'-0"	V1	1/2"	8'-6"	24" *	5'-8"	2'-11"	L Shape
	V2	"	6'-9"	24" *	3'-11"	2'-11"	"
	V3	"	5'-9"	24"			Straight
	e2	"	4'-10"	18"	4'-2"		⟶
	C	"	10 bars	continuous			Straight

* Alternate V1 and V2 bars

SCHEDULE OF MEASUREMENT FOR RETAINING WALLS

GRAVITY - TYPE

h From	To	Average Height
1'-6"	2'-0"	1'-9"
2'-0"	2'-6"	2'-3"
2'-6"	3'-0"	2'-9"

L-TYPE

h From	To	Average Height
3'-0"	3'-6"	3'-3"
3'-6"	4'-0"	3'-9"
4'-0"	4'-6"	4'-3"
4'-6"	5'-0"	4'-9"

T-TYPE

h From	To	Average Height
5'-0"	5'-6"	5'-3"
5'-6"	6'-0"	5'-9"
6'-0"	6'-6"	6'-3"
6'-6"	7'-0"	6'-9"
7'-0"	7'-6"	7'-3"
7'-6"	8'-0"	7'-9"

L-TYPE

h From	To	Average Height
1'-6"	2'-0"	1'-9"
2'-0"	2'-6"	2'-3"
2'-6"	3'-0"	2'-9"

T-TYPE

h From	To	Average Height
3'-6"	4'-0"	3'-9"
4'-0"	4'-6"	4'-3"
4'-6"	5'-0"	4'-9"
5'-0"	5'-6"	5'-3"
5'-6"	6'-0"	5'-9"

NOTE The field engineer shall final measure retaining walls prior to backfill operation.

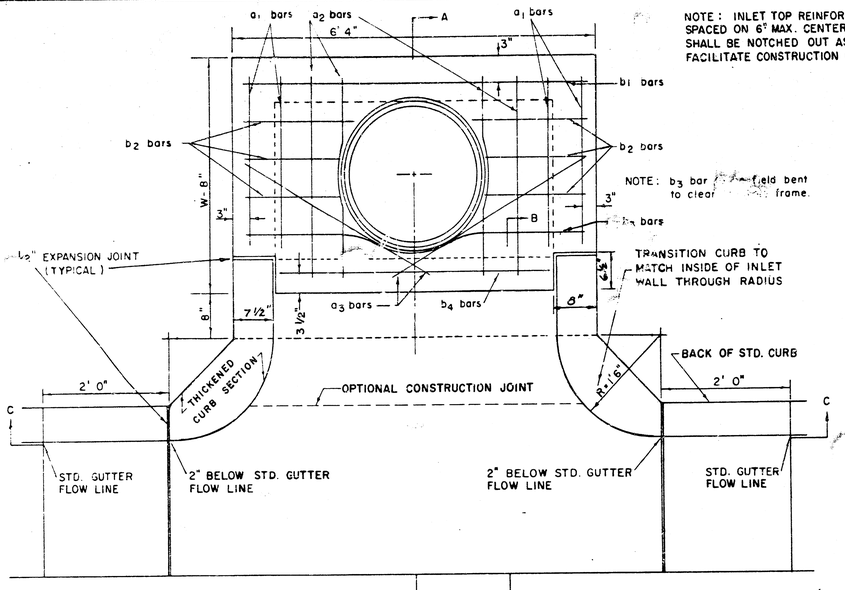
RETAINING WALL DETAILS

City of Wichita, Kansas

M. E. LINDEBAK — CITY ENGINEER

5/18

Project No. 472-76-245-21017-000-000-001

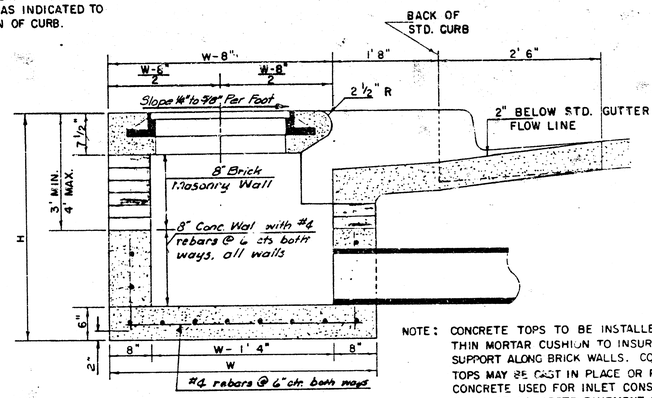


NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE: b_3 bar field bent to clear frame.

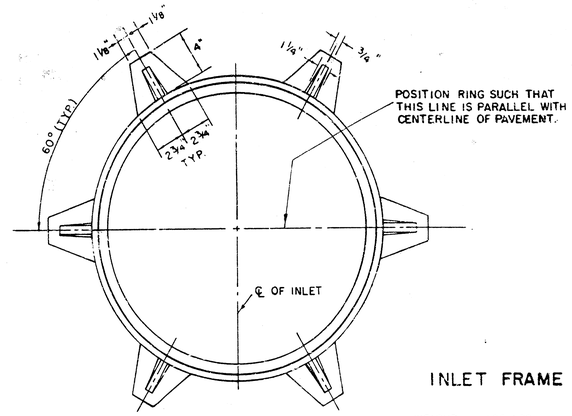
NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN



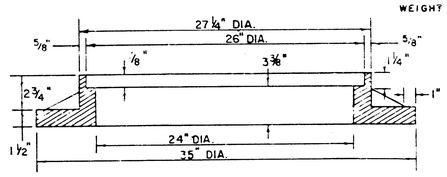
SECTION A-A

NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.



INLET FRAME

WEIGHT = 180 LBS.



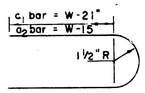
SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

STEEL SCHEDULE

BAR		a_1	a_2	a_3*	b_1 W=4'4"	b_1 W=5'4"	b_1 W=6'4"	b_1 W=7'4"	b_1 W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'4"	5' 7"	6' 7"	4' 0"	6' 1"	–	–	–	–	1' 9"	6' 2"	4' 8"	60±
	W=5'4"	7' 7"	8' 7"	5' 0"	–	6' 1"	–	–	–	1' 9"	6' 2"	4' 8"	81±
	W=6'4"	9' 7"	10' 7"	6' 0"	–	–	6' 1"	–	–	1' 9"	6' 2"	4' 8"	101±
	W=7'4"	11' 7"	12' 7"	7' 0"	–	–	–	6' 1"	–	1' 9"	6' 2"	4' 8"	121±
	W=8'4"	13' 7"	14' 7"	8' 0"	–	–	–	–	6' 1"	1' 9"	6' 2"	4' 8"	141±

* NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM



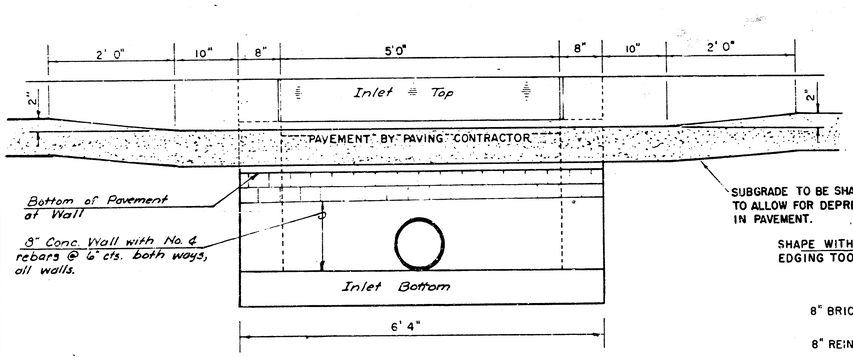
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'8"x 6'4" x7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8"x 6'4" x7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8"x 6'4" x7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8"x 6'4" x7 1/2"	48" & 54"	0.77 ±
8' 4"	7'8"x 6'4" x7 1/2"	60" & 66"	0.90 ±

NOTE: CONTRACTOR SHALL *BE REQUIRED TO* CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 4'4" AND H = 6'6" OR LESS.

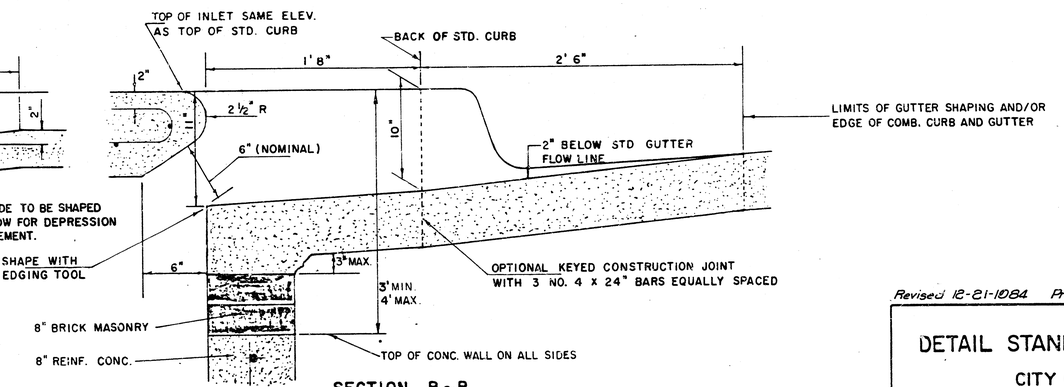
ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



SECTION C-C



SECTION B-B

Revised 12-21-1984 Proj. No. 472-76-245-81017-000-000-001

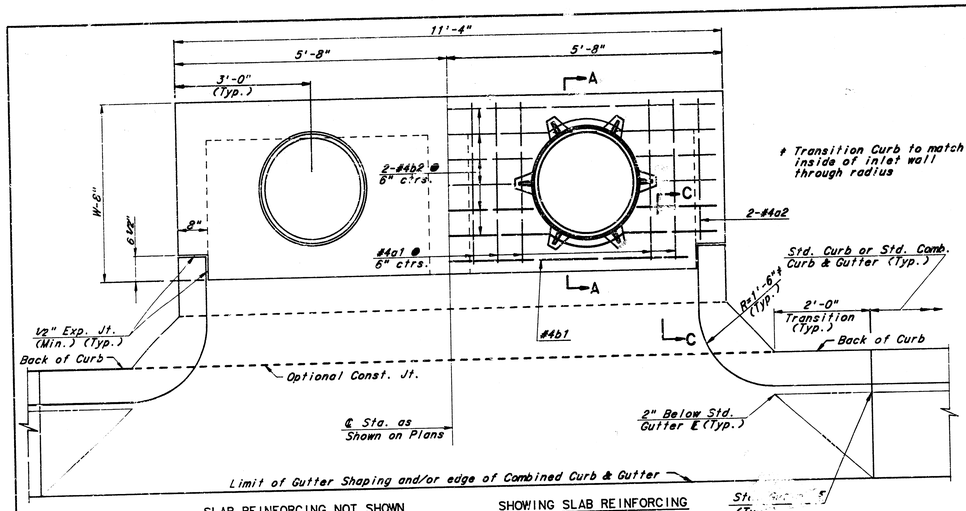
DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

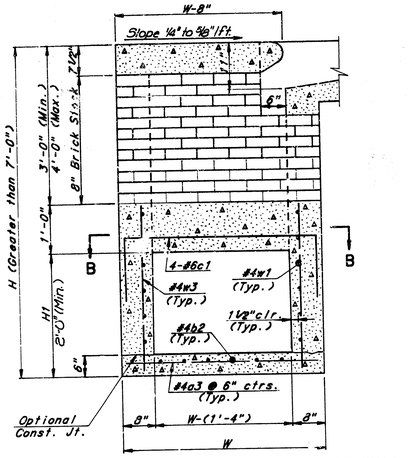
INLET OPENING = 6" × 5' 0"

JUNE 1984 Sheet No. 9 of 18

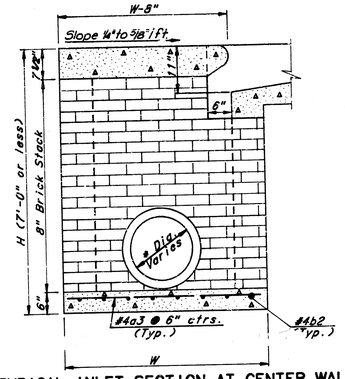
PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-76-245-8'017-000-000-001	10	18



PLAN

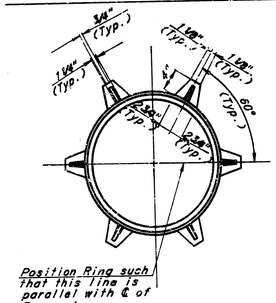


TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

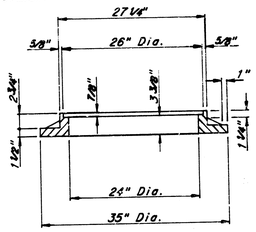


TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

* A center wall opening shall be provided by means of a section of reinforced concrete pipe. The minimum diameter used shall be that of the outlet pipe.



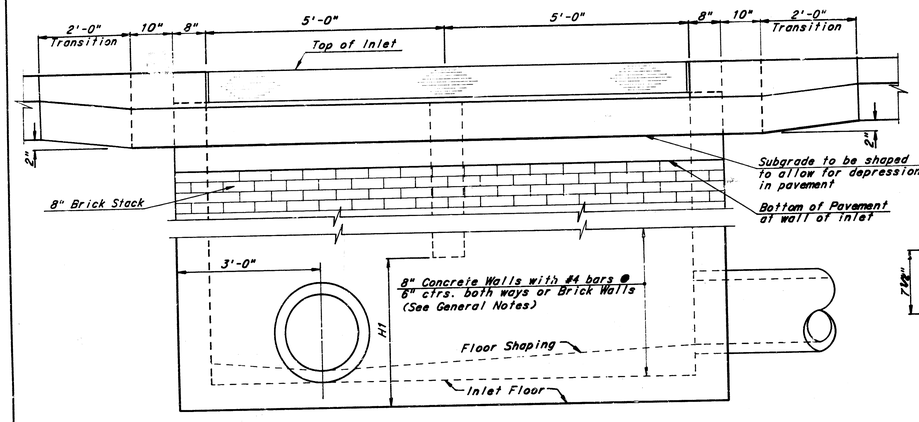
Position Ring such that this line is parallel with ℄ of Pavement



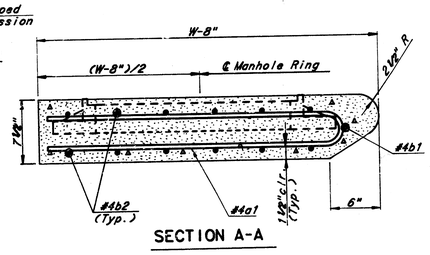
CAST IRON INLET RING

Wt.=180 lbs.

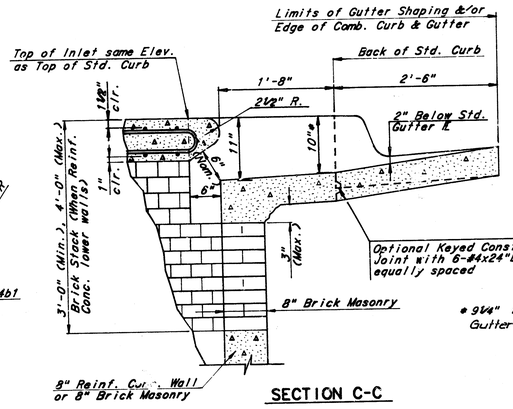
Note: See Sh. No. 12 for Std. C.O.W. Cover Details



ELEVATION

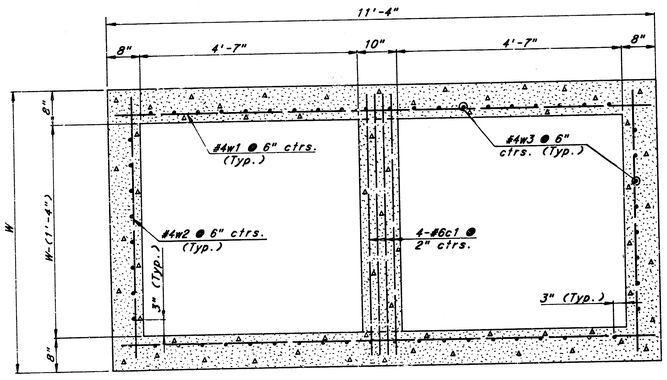


SECTION A-A



* 9¼" for Combined Curb & Gutter (Type I)

SECTION C-C



SECTION B-B

SLAB AND FLOOR REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7¼"	13	8'-7¼"	13	10'-7¼"	13	12'-7¼"	13	14'-7¼"
a2	#4	2	6'-0"	2	8'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
*b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

WALL REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	②	③	②	③	②	③	②	③	②	③

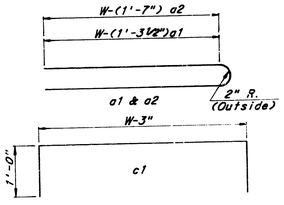
* Field bend or cut Reinforcing as required for clearance

① 4(H1+6")

② 40+4(W - 16") ③ H1+(9")

GENERAL NOTES

1. THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=8'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0" THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.
4. INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB. BARS IN INLET TOP TO BE FIELD BENT OR CUT TO CLEAR MANHOLE RING.
5. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



BENDING DIAGRAMS

Revised 12-21-1984

STANDARD TYPE 1A CURB INLET

INLET OPENING = 6" x 10'-0"

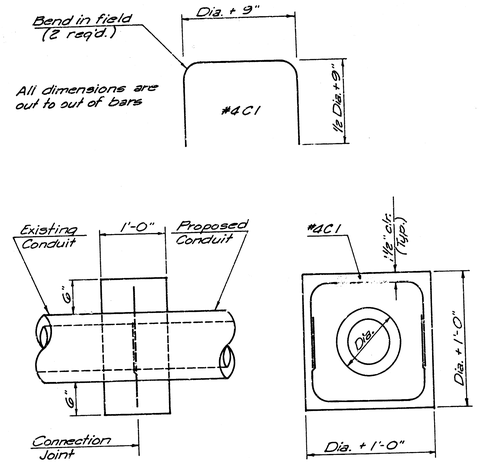
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

10/18

Designed by	BER, KJS, MMB	Checked by	MMB
Drawn by	JQP	Date	Nov., 1984

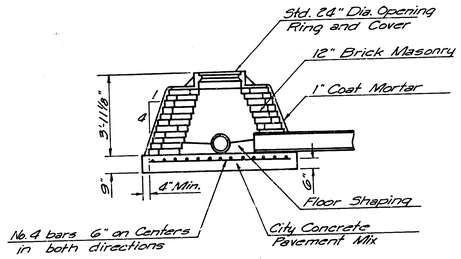
Job No. 84562

PROJECT NO	SHEET NO	TOTAL SHEETS
STP-76-285-81017-000-000-001	11	18



CONCRETE COLLAR DETAILS

Concrete collars shall be provided at connection to existing conduits where, in the opinion of the Engineer, a collar is required for a satisfactory connection. C.O.W. std. pavement mix shall be used throughout. See bending diagram and views for reinforcing steel. Concrete collars will not be paid for directly, but shall be considered subsidiary to the various conduits involved.



SPECIAL SHALLOW TYPE "B" MANHOLE

Sta. 1059+16.50 37.5833' Lt.

Note: See Sh. No. 12 for Std. Manhole Frame and Cover Details.

SPECIAL SHALLOW TYPE "B" MANHOLE & CONCRETE COLLAR DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

11/18

Designed by		Checked by	G.D.S
Drawn by	DD	Date	Dec. 1984
		Job No.	84562

MANHOLE FRAME AND COVER DETAIL

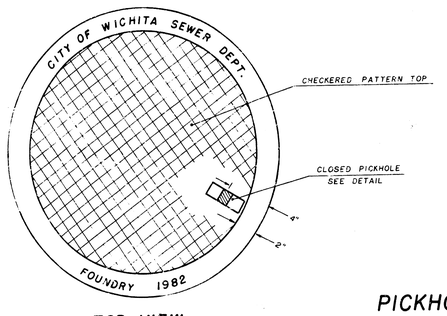
ADOPTED AS STANDARD DESIGN

BY

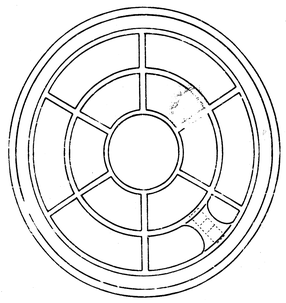
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

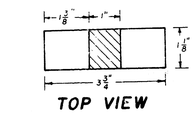


TOP VIEW

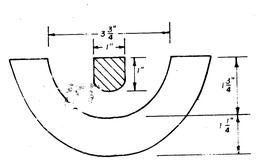


BOTTOM VIEW

PICKHOLE DETAIL



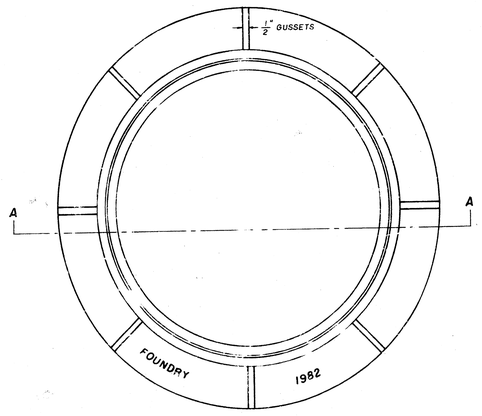
TOP VIEW



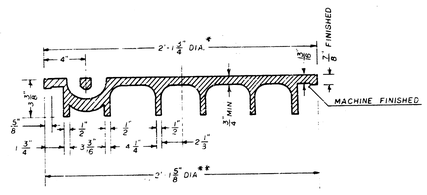
SECTION VIEW

MANHOLE FRAME

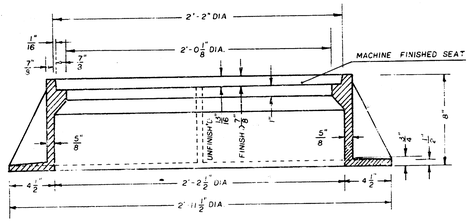
Weight: 240 Lbs.



TOP VIEW



SECTION VIEW



SECTION A-A

* OUTSIDE DIA TOP OF COVER

** OUTSIDE DIA BOTTOM OF COVER

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

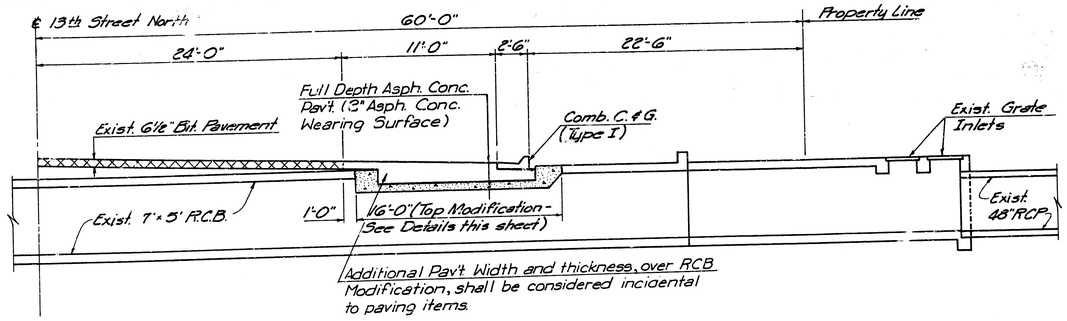
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

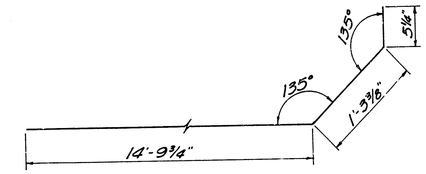
JNL DEC 1991

12/18

PROJECT NO	SHEET NO	TOTAL SHEETS
472-76-245-8107-000-000-001	13	18



HALF SECTION AT 7'x5' R.C.B.



#4 b bar

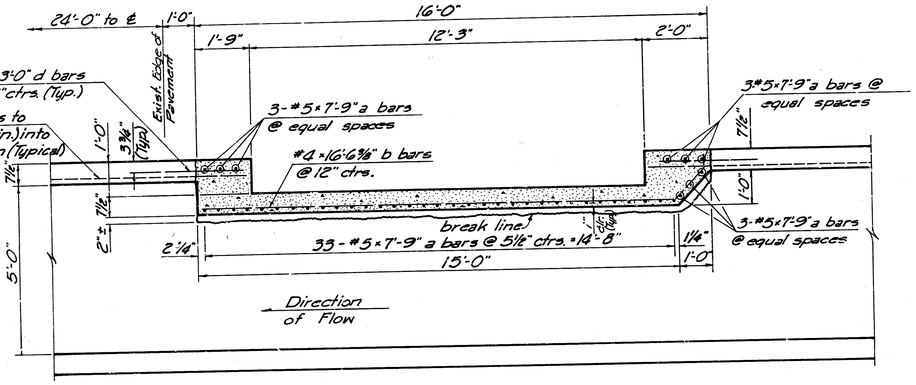
BENDING DIAGRAM

* BILL OF MATERIALS

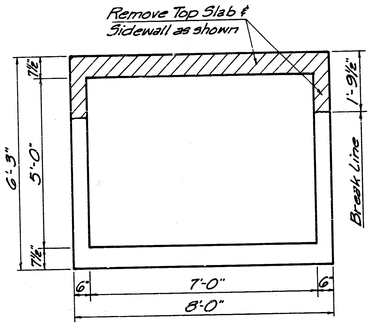
REINFORCING STEEL

Mark	No.	Size	Length
a	42	#5	7'-9"
b	7	#4	16'-6 9/16"
d	12	#5	3'-0"
Class A(AE) Concrete			4.0 Cu.Yds.
Reinforcing Steel			450 Lbs.

*For Information Only

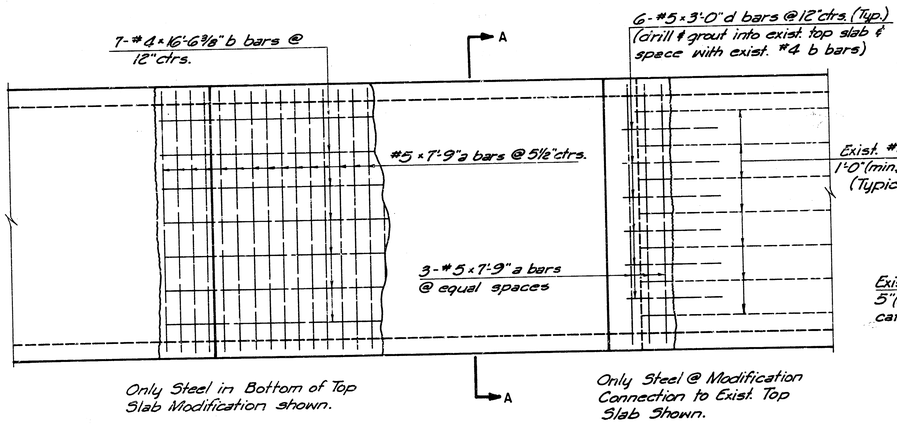


ELEVATION

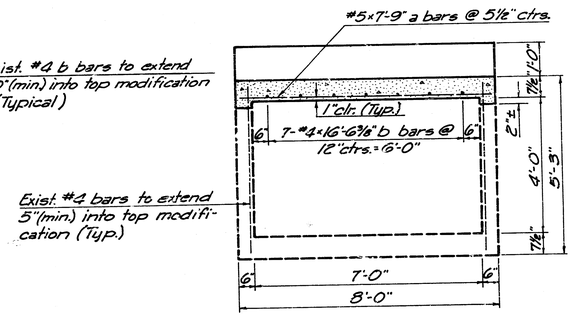


SECTION A-A

Showing Removal



PLAN



SECTION A-A

Showing Top Slab Modification

GENERAL NOTES

1. CONCRETE: CLASS A(AE) CONCRETE AS SPECIFIED IN THE 1980 EDITION OF STANDARD SPECIFICATIONS OF THE KANSAS DEPARTMENT OF TRANSPORTATION, SHALL BE USED THROUGHOUT ON THIS STRUCTURE.

2. BEVEL: BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOLDING.

3. REINFORCING STEEL: ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS A615 GRADE 40. ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO CENTER LINE OF BARS UNLESS OTHERWISE NOTED.

4. REMOVAL OF EXISTING CONCRETE: THE EXISTING CONCRETE SHALL BE REMOVED TO THE BREAK LINE SHOWN ON THE PLANS. EXISTING REINFORCING STEEL SHALL BE EXPOSED, STRAIGHTENED, THOROUGHLY CLEANED BY BRUSHING, CUT TO LENGTH NOTED, AND CAST INTO TOP MODIFICATION.

5. TREATMENT OF EXISTING CONCRETE SURFACES: ALL EXISTING CONCRETE SURFACES UPON WHICH NEW CONCRETE IS TO BE PLACED SHALL BE THOROUGHLY BRUSHED AND WASHED WITH CLEAN WATER. THE SURFACE SHALL THEN BE WATERSOAKED AND SHALL BE PAINTED WITH A THICK COAT OF NEAT CEMENT MORTAR IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.

6. DOWEL BARS: ALL WORK AND MATERIAL NECESSARY FOR INSTALLING THE DOWEL BARS SHALL BE SUBSIDIARY TO THE LUMP SUM BID ITEM FOR "RCB TOP MODIFICATION". GROUTING OF BARS SHALL MEET THE 1980 EDITION OF THE STANDARD SPECIFICATIONS OF THE KANSAS DEPARTMENT OF TRANSPORTATION.

7. PAYMENT: THE COMPLETED AND ACCEPTED WORK, AS SHOWN THIS SHEET, SHALL BE PAID FOR AT THE CONTRACT "LUMP SUM" PRICE BID FOR "RCB TOP MODIFICATION". SAID PRICE BID SHALL BE FULL PAYMENT FOR ALL REMOVAL, FOR FURNISHING ALL MATERIALS, FOR ALL EXCAVATION AND BACKFILLING, AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

R.C.B. TOP MODIFICATION

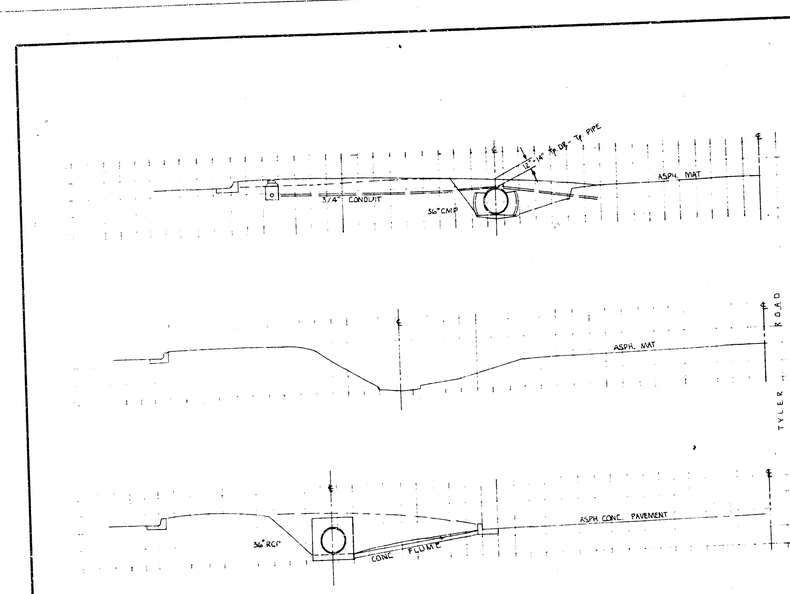
7'x5' R.C.B. at 13th. STREET

STA. 1066+75

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

13/18

Designed by	G.D.S., K.J.S.	Checked by	G.D.S.	
Drawn by	DD	Date	Dec. 1984	Job No. 84562



Note: This sheet is for "Informat[illegible]". All Traffic Signalization wor[illegible] will be accomplished by City of Wichita Department of Operations and Maintenance Forces.

NOTE: ALL FOLLOWING WORK TO BE DONE BY TRAFFIC ENGINEERING:

* Sta. 1058 + 80 68' LT ℄ 13th St.: Remove existing 40' mastarm.
* Sta. 1058 + 74 46' LT ℄ 13th St.: Install 36' mastarm
* Sta. 1058 + 93 58' LT ℄ 13th St.: Remove existing service box
* Sta. 1058 + 70 58' LT ℄ 13th St.: Install service box
* Sta. 1059 + 08 68' LT ℄ 13th St.: Install service box
* Sta. 1059 + 94 51' LT ℄ 13th St.: Install junction box
* Sta. 1061 + 24 51' LT ℄ 13th St.: Install junction box

All installations include appropriate connecting conduit & cable.

NORTH
1.0"=30'

NOTE: UNDERGROUND SPRINKLER SYSTEM IN PARKING

CONSTRUCT 23± SIDEWALK AND W.C.R.
REMOVE 25' ± EXISTING WALK AND W.C.R.

PROPOSED CURB & GUTTER - INSTALL
EXISTING CURB & GUTTER - REMOVE

PHILLIPS PIPE LINE CO.

LEGEND

- SIGNAL POLE W/MASTARM
- TRAFFIC SIGNAL
- SERVICE BOX
- 3/4" CONDUIT
- 1-1/4" CONDUIT
- 2" CONDUIT
- 3" CONDUIT
- JUNCTION BOX

CONTACT TRAFFIC ENGINEERING SECTION PRIOR TO ANY RELOCATION SIGNAL POLE, CONTROLLER PEDESTAL, SERV.BOX, LOOP, AND/OR CONDUIT.

CONDUIT TO BE PUSHED OR JACKED UNDER EXISTING PAVEMENT; UNLESS OTHERWISE NOTED.

CONTRACTOR AND/OR FIELD ENGINEER SHALL CONTACT ALL UTILITIES FOR LOCATION OF UNDERGROUND LINES WHICH MAY BE AFFECTED BY CONSTRUCTION/INSTALLATION OF SIGNALIZATION.

PROJECT DESCRIPTION

THIRTEENTH ST AT TYLER RD SIGNALIZATION

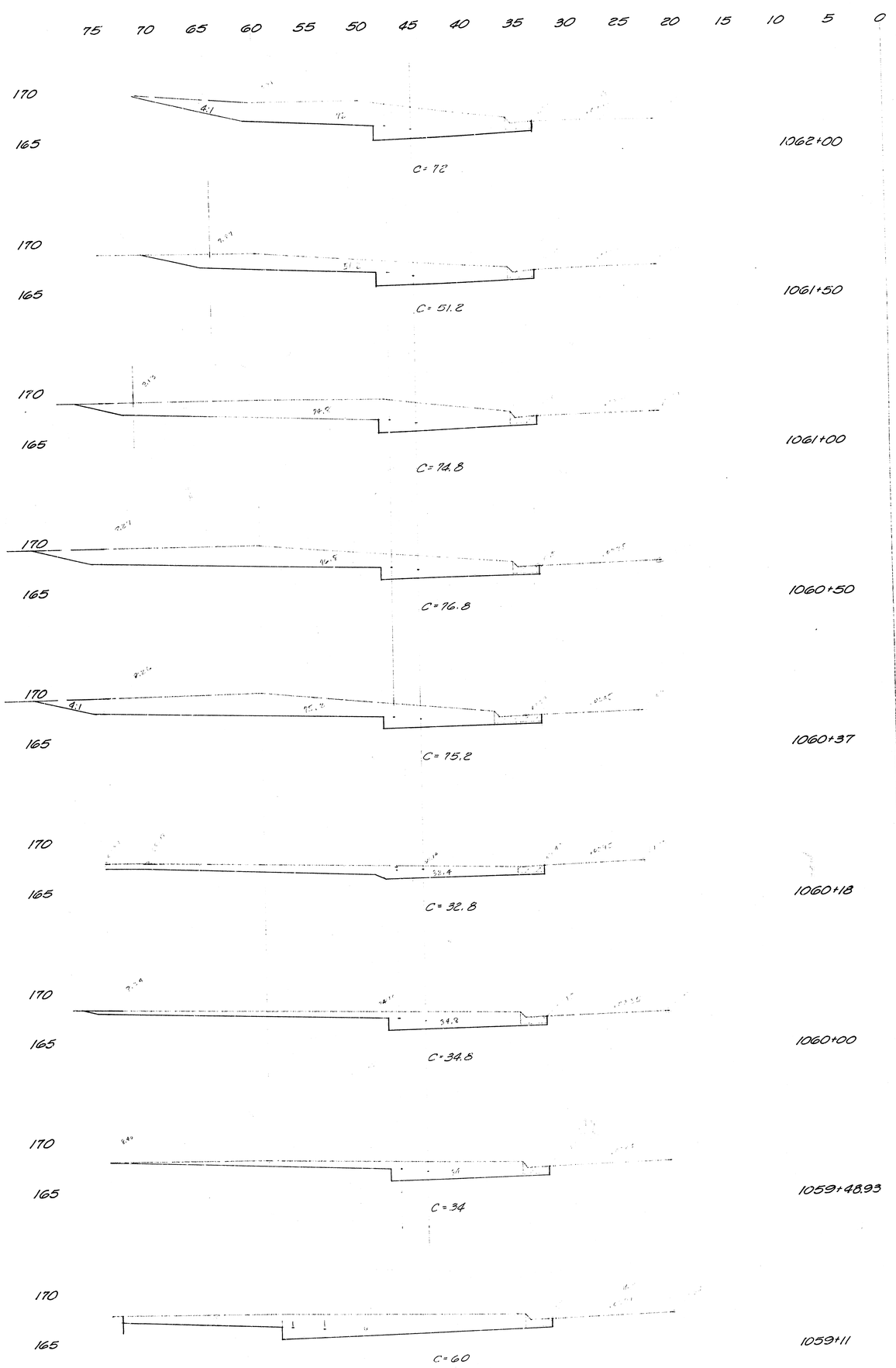
PROJECT NUMBER

472-76-245-81017-000-000-001

BOOK NO.	APPROVED BY	DATE 83 MAY
DRAWN BY SEAL		REVISED 85 JAN

CITY OF WICHITA
DEPARTMENT OF OPERATIONS & MAINTENANCE
TRAFFIC ENGINEER
WM G McKINLEY

SCALE 1.0"=30'



1062+00	31' Exc. 75 C.Y.
1061+50	50' Exc. 114 C.Y.
1061+00	50' Exc. 117 C.Y.
1060+50	50' Exc. 140 C.Y.
1060+37	13' Exc. 37 C.Y.
1060+18	19' Exc. 38 C.Y.
1060+00	18' Exc. 22 C.Y.
1059+48.93	51.07' Exc. 65 C.Y.
1059+11	37.93' Exc. 66 C.Y.

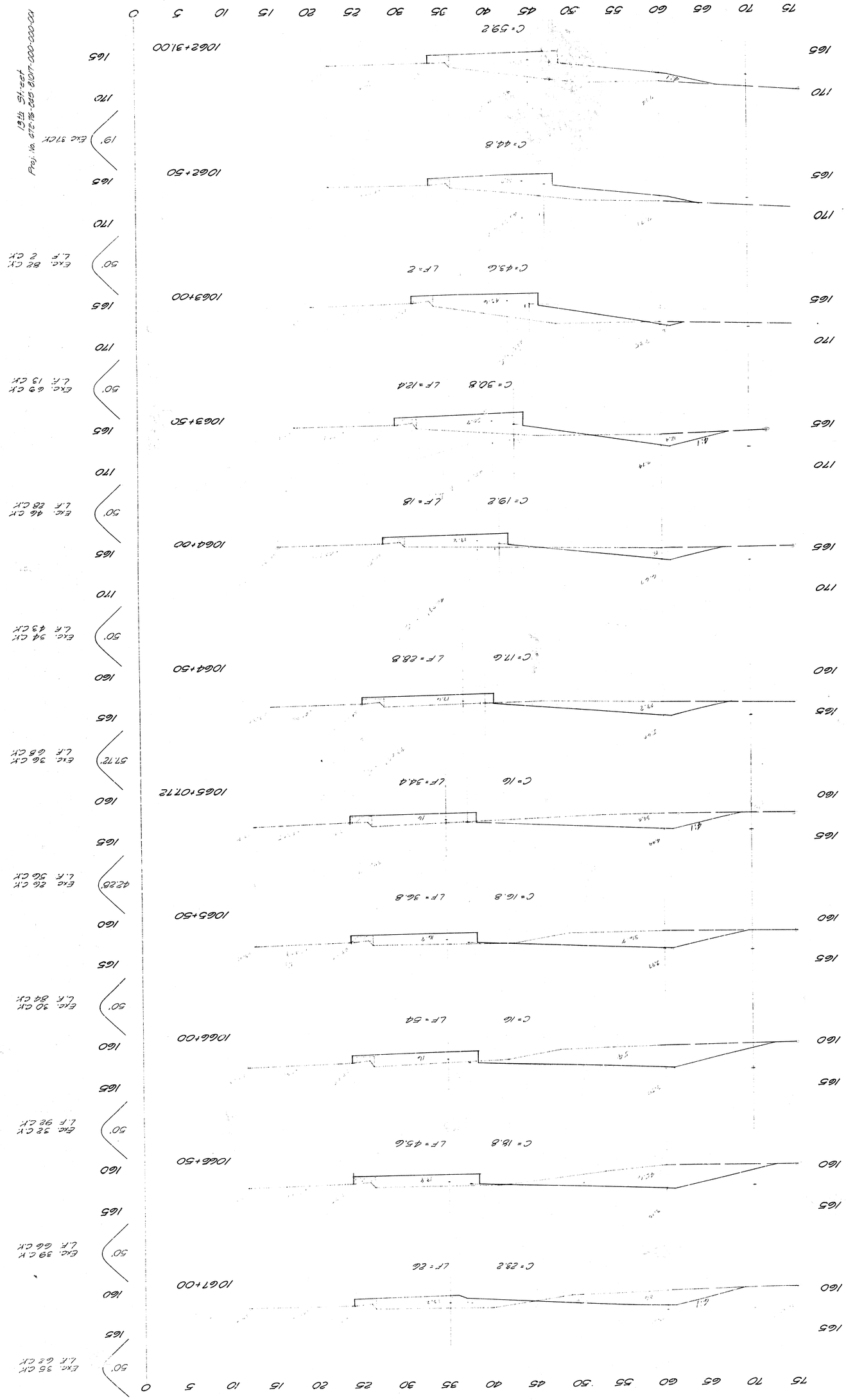
Intersection
Exc. 121 C.Y.

Excavation
10%
Total
1659 C.Y.
166
1825 C.Y.

Loose Fill
10%
669 C.Y.
67
736 C.Y.

13th Street
Proj. No. STP-TR-295-2(017)--000-001

Sheet No. 15 of 18 Sheets



13th Street
Proj. No. 475-18-265 8107-000-000-001

Sheet No. 10 of 18

8/16

1/1

Sheet No. 17 of 18

17/18

13th Street
Proj. No. 4788(13) BOULDER COUNTY

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

1070+00
C = 30.8 L.F.
165
160
50' Exc. 44 C.Y. L.F. 18 C.Y.

1069+50
C = 16.8 L.F. = 16
165
160
50' Exc. 34 C.Y. L.F. 20 C.Y.

1069+00
C = 20.4 L.F. 5.2
165
160
50' Exc. 37 C.Y. L.F. 15 C.Y.

1068+50
C = 19.6 L.F. = 10.8
165
160
50' Exc. 33 C.Y. L.F. 29 C.Y.

1068+00
C = 16.4 L.F. = 20
165
160
50' Exc. 29 C.Y. L.F. 5 C.Y.

1067+50
C = 14.8 L.F. = 40.8
165
160

1070+50
C = 25.2 L.F. = 7.6
165
160
50' Exc. 52 C.Y. L.F. 10 C.Y.

1071+00
C = 27.2 L.F. = 0
165
160
50' Exc. 49 C.Y. L.F. 7 C.Y.

1071+50.45
@ Sta. 1071+37.50
C = 28.6 L.F. = 0
165
160
37.50' Exc. 35 C.Y.

1072+00
165
160

Sheet No. 18 of 18 Sheets

Tyler Road
Proj. No. HPP-M-285-8(011)XXXX-00