Revised 3-17-78

SANITARY SEWER NO. 12

ALTER, REPAIR OR RECONSTRUCT A PORTION
OF S.S. NO. 12 LYING IN GROVE STREET
BETWEEN LINCOLN AND LEWIS

OLD PROJ. NO. DBKJ573023
PART "B"

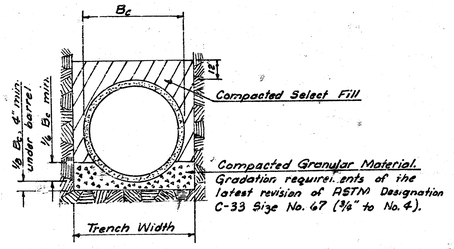
CITY OF WICHITA, KANSAS

NEW PROJ. NO. 468-80-990-80116-000-000-001

INDEX OF SHEETS

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CONTRACTOR NOTE: RIGHT-OF-WAY MUST BE ACQUIRED ON PART A BETWEEN LEWIS AND SECOND BEFORE CONSTRUCTION CAN BEGIN. THE CITY OF WICHITA ANTICIPATES THAT ALL OF THE RIGHT-OF-WAY NECESSARY TO FACILITATE RECONSTRUCTION OF THE SEWER DESIGNATED AS PART A OF THIS PROJECT BETWEEN LEWIS STREET AND SECOND STREET WILL BE ACQUIRED BY MARCH IN 1979. CONTRACTORS BIDDING THIS PROJECT SHOULD ANTICIPATE THAT CONSTRUCTION ON PART A BETWEEN LEWIS STREET AND SECOND STREET WILL NOT BEGIN UNTIL SOMETIME IN MARCH OF 1979.



TYPICAL BEDDING
No. Scale

PLANS PREPARED BY
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
CITY OF WICHITA, KANSAS
R. W. BRUGGEMAN, DIRECTOR OF PUBLIC WORKS
R. W. LINN, CITY ENGINEER

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE APPROVED BY THE ENGINEER. COST OF MAINTAINING FLOW OF SEWAGE THROUGH CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY AND SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER ITEMS OF WORK.

2. CONTRACTOR WILL BE REQUIRED TO EXCAVATE EXISTING ACTIVE BUILDING SEWERS WHICH CONNECT TO THE EXISTING 42" SEWER PRIOR TO CONSTRUCTING ANY PORTION OF THE 8" LINES SO THAT THE ENGINEER CAN VERIFY THAT LOCATIONS AND FLOW ELEVATIONS OF THE 8" LINES AS SHOWN ON THE PLANS ARE SATISFACTORY TO FACILITATE RECONNECTION OF ACTIVE BUILDING SEWERS. THE ENGINEER SHALL ADJUST LOCATION AND FLOW ELEVATIONS OF 8" LINES WHERE NECESSARY TO FACILITATE RECONNECTION OF BUILDING SEWERS. THE 8" LINES SHALL BE RAISED OR LOWERED TO SUCH ELEVATIONS WHICH WILL PERMIT RECONSTRUCTION OR RECONNECTION OF ALL ACTIVE BUILDING SEWERS TO BE CONNECTED TO EACH INDIVIDUAL REACH OF 8" SEWER, EXCEPT THAT A MINIMUM COVER OF 4' SHALL BE MAINTAINED OVER ALL 8" SEWERS. NO ADJUSTMENT IN BID PRICE WILL BE MADE FOR RAISING OR LOWERING THE 8" SEWERS WITHIN THE LIMITS PERMITTED BY FLOW ELEVATIONS OF THE NEW 48" SEWER AND THE SPECIFIED MINIMUM COVER. LOCATION OF BUILDING SEWERS CONNECTING TO THE EXISTING 42" SEWER ARE SHOWN ON THE PLANS AS TAPS AS DETERMINED BY TELEVISION INSPECTION OF THE EXISTING SEWER. COPIES OF THE TELEVISION LOG ARE AVAILABLE AND MAY BE OBTAINED IN THE OFFICE OF THE CITY ENGINEER. ALL BUILDING SEWERS SHOWN ON THE PLANS OR CALLED OUT IN THE TELEVISION INSPECTION LOG MAY NOT BE ACTIVE. CONTRACTOR WILL BE REQUIRED TO DETERMINE WHICH CONNECTIONS TO THE EXISTING 42" SEWER ARE ACTIVE AND WHICH CONNECTIONS ARE INACTIVE. INACTIVE BUILDING SEWERS SHALL NOT BE RECONNECTED. CONTRACTOR WILL BE REQUIRED TO TAKE ACTION AS NECESSARY TO ASSURE THAT ANY BUILDING WHICH IS CONNECTED TO THE 42" SEWER TO BE ABANDONED IS RECONNECTED TO THE NEW 8" LINES. NONE OF THE ABOVE WORK WILL BE PAID FOR DIRECTLY AND SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER ITEMS OF WORK.

3. RECONNECTION OF BUILDING SEWERS WILL BE PAID FOR BASED ON THE LENGTH OF PIPE NECESSARY FOR THE PRICES BID FOR THE VARIOUS SIZES OF PIPE INDICATED. NO OTHER PAYMENT WILL BE MADE FOR RECONNECTION OF BUILDING SEWERS AND THE PRICES BID FOR THE VARIOUS SIZES OF PIPE SHALL INCLUDE THE COST OF ALL WORK IN CONNECTION WITH COMPLETION OF THIS ITEM. CONNECTION OF BUILDING SEWERS TO THE NEW 8" LINES SHALL CONFORM WITH THE REQUIREMENTS SPECIFIED IN THE CODE OF THE CITY OF WICHITA, KANSAS. CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FOR EACH BUILDING SEWER CONNECTION FROM PUBLIC WORKS ADMINISTRATION, 7TH FLOOR, CITY HALL. PERMIT FEE FOR SEWER CONNECTION WILL BE WAIVED. TAPS INTO 8" LINE WILL BE MADE BY CITY OF WICHITA, MAINTENANCE DEPARTMENT. CONTRACTOR SHALL COORDINATE TAPS ON 8" LINE WITH THE MAINTENANCE DEPARTMENT. CONTRACTOR WILL BE REQUIRED TO PAY A TAPPING FEE OF $15.00 FOR EACH TAP NECESSARY TO RECONNECT BUILDING SEWERS.

4. BUILDING SEWERS WHICH ARE DISCOVERED TO BE IN A UNACCEPTABLE CONDITION DURING THE PROCESS OF RECONNECTION SHALL BE REMOVED AND RECONSTRUCTED TO LIMITS AS APPROVED BY THE ENGINEER AND THE PROPERTY OWNER. THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE VARIOUS SIZES OF PIPE INVOLVED. NO PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING BUILDING SEWERS AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER ITEMS OF WORK. REMOVAL OF BUILDING SEWER PIPE SHALL BE CONSIDERED AS INCIDENTAL TO THE BID ITEM OF 4" OR 6" PIPE.

5. THE EXISTING 42" SEWER WHICH IS TO BE ABANDONED AS A RESULT OF THIS PROJECT SHALL BE COMPLETELY FILLED WITH SAND. CONTRACTOR'S PROPOSED METHOD FOR FILLING THE EXISTING 42" SEWER WITH SAND SHALL BE APPROVED BY THE ENGINEER. FILLING THE ABANDONED 42" SEWER WITH SAND WILL BE PAID FOR AT THE PRICE BID PER LINEAL FOOT OF 42" SEWER SAND FILLED AND THIS PRICE SHALL COVER ALL COSTS FOR COMPLETION OF THIS ITEM.

6. CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE SUCH THAT WILL CAUSE THE LEAST AMOUNT OF INTERFERENCE POSSIBLE WITH TRAFFIC ON GROVE STREET. NO MORE THAN TWO CONSECUTIVE EAST-WEST STREETS WILL BE PERMITTED TO BE CLOSED AT THE SAME TIME. CONTRACTOR WILL BE REQUIRED TO MAINTAIN SUITABLE PEDESTRIAN CROSSWALKS AT ALL INTERSECTIONS FOR THE DURATION OF THE CONSTRUCTION.

7. STRUCTURAL TEE MANHOLES MAY BE CONSTRUCTED INSTEAD OF POURED IN PLACE CONCRETE MANHOLES WHERE INDICATED BY THE PLANS. WALL THICKNESS, REINFORCING STEEL AND STRENGTH OF STRUCTURAL TEE MANHOLES SHALL BE COMPATIBLE WITH THE PIPE CLASS AT THE LOCATION OF THE MANHOLE. SHOP DRAWINGS OF STRUCTURAL TEE MANHOLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF THE MANHOLES. STRUCTURAL TEE MANHOLES SHALL BE LINED WITH PLASTIC. CLAY PIPE BELLS SHALL BE INSTALLED IN THE STRUCTURAL TEE MANHOLES AS NECESSARY TO FACILITATE CONNECTION OF SEWERS AS INDICATED BY THE PLANS.

8. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III PIPE. THE TOP 300° SEGMENT OF THE 48" R.C.P. SHALL BE LINED WITH PLASTIC AS SPECIFIED BY THE SPECIFICATIONS. THE CROWN OF THE 38" X 60" R.C.P.H.E. SHALL BE LINED WITH PLASTIC CONFORMING TO THE SAME REQUIREMENTS SPECIFIED FOR THE 48" R.C.P. EXCEPT THAT THE BOTTOM OF THE LINING SHALL EXTEND TO A POINT THE SAME DIMENSION ABOVE THE FLOW LINE OF THE PIPE AS THE BOTTOM OF THE LINING WILL BE ABOVE THE FLOW LINE OF THE 48" R.C.P. JOINTS IN THE 38" X 60" R.C.P.H.E. SHALL BE SEALED WITH AN APPROVED MASTIC SUCH AS KENT SEAL NO. 2, K.T. SNYDER'S RUB'R-NEK, OR AN APPROVED EQUAL.

9. CONTRACTOR WILL BE REQUIRED TO REMOVE ALL PRIVATELY OWNED STRUCTURES ON PUBLIC RIGHT-OF-WAY ALONG THE EAST SIDE OF GROVE BETWEEN LINCOLN AND 200' NORTH OF ORNE. OWNERS OF SUCH STRUCTURES REMOVED BY THE CONTRACTOR SHALL BE GIVEN THE OPPORTUNITY TO CLAIM ALL SALVABLE MATERIAL. MATERIALS NOT CLAIMED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR. CONTRACTOR WILL BE PERMITTED TO REMOVE ONLY THOSE TREES, HEDGES AND SHRUBS WHICH ARE ESSENTIAL TO FACILITATE CONSTRUCTION OF THE SEWER. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL PRIOR TO REMOVING ANY TREES, HEDGES OR SHRUBS. TREES, HEDGES AND SHRUBS WHICH ARE TO REMAIN SHALL BE PROTECTED FROM DAMAGE. THIS WORK WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR CLEARING RIGHT-OF-WAY.

10. CONTRACTOR SHALL REMOVE EXISTING FENCES ALONG THE EAST SIDE OF GROVE BETWEEN LINCOLN AND 200' NORTH OF ORNE SUCH THAT WILL FACILITATE REPLACING EXISTING FENCES OR CONSTRUCTING NEW CHAIN LINK FENCE ON THE EAST RIGHT-OF-WAY LINE OF GROVE. THE ENGINEER WILL DESIGNATE WHICH EXISTING FENCES WILL BE REMOVED AND THEN RECONSTRUCTED ON THE RIGHT-OF-WAY LINE. FENCES NOT SUITABLE FOR REUSE AS DETERMINED BY THE ENGINEER SHALL BE DISCARDED AND NEW CHAIN LINK FENCE WILL BE CONSTRUCTED IN PLACE OF THESE FENCES NOT SUITABLE FOR REUSE. EXISTING FENCES SHALL BE RECONSTRUCTED IN SUCH A MANNER THAT EXISTING FENCES WILL NOT CONNECT DIRECTLY TO POSTS INSTALLED AS A PART OF NEW CHAIN LINK FENCE CONSTRUCTION. REMOVAL OF EXISTING FENCES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR FENCE REMOVED. RECONSTRUCTION OF FENCE USING SALVAGED MATERIALS WILL BE PAID FOR AT THE UNIT PRICE BID FOR FENCE REPLACED. CONSTRUCTION OF NEW CHAIN LINK FENCE WILL BE PAID FOR AT THE UNIT PRICE BID FOR CHAIN LINK FENCE CONSTRUCTED. RECONSTRUCTION OF EXISTING FENCES USING SALVAGED MATERIALS SHALL BE COMPLETED IN SUCH A MANNER THAT THE CONSTRUCTION WILL BE EQUAL TO OR BETTER THAN THE ORIGINAL FENCE.

DONALD E. SCHNEIDER LICENSED 6311 PROFESSIONAL ENGINEER

As Built
4/22/80 GB

1/12

LOCATION MAP



SANITARY SEWER NO. 12

ALTER, REPAIR OR RECONSTRUCT A PORTION OF S.S. NO. 12
LYING IN GROVE STREET BETWEEN LINCOLN AND LEWIS
PROJ. NO. 468-80-990-80116-000-000-001

SH. NO. 1A OF 11

2/12

BM 106.61 NE Cor. of East Shrub Box of Lincoln St. Entrance to Sears (State Hi-way Elev. 1298.065)

BM 104.94 R.R. Spike W. Face P.P. N. side Morris on E. side New Grove Pvt.

Scale 1"= 20' Hor. 1"= 5' Vert.

Sta. 0+12.5± Connect to Bell Ring Fitting in Existing Manhole Wall

Existing 42" RCP to remain in place

Sta. 0+10 Constr. Type A 5' dia. Manhole on exist. 42" RCP (Plastic Lined

Sta. 0+10 Existing Manhole

GROVE STREET (Relocated)

Remove pavement as necessary for new construction. Replace with 9" conc. pavement reinforced with wire mesh.

3+97 Sta. ~~4+09~~ Const. Std. M.H. Type A

4+08 Sta. ~~4+08~~ Remove existing manhole. Constr. reinf. conc. manhole Type II

35' Remove ~~50'~~ of 48" Pipe. Constr. 50' of 38"x60" RCP(HE) 35'

4+44 Sta. ~~4+58~~ Remove existing manhole and constr. reinf. conc. manhole Type II

1+96 Sta. ~~2+80~~ Const Std. M.H. Type "A"

Bk. Cb. 48" S.S. Constr. 8" Line Constr. 48" Line Constr. 6" Line 1/4 Sec. Line R/W Plug 42" S.S. A.C. Parking Bldg. Tap P.P. 7' Shrub 8' Shrub Grape Vine Conc. Slab Shed Fr. Ho. 8" Posts Bk. Cb. NORRIS Sta. 4+29 Abandon Manhole Plug Pipes 40' Temporary Construction Easement

Sta. 0-59 Constr. Type A Manhole. Locate manhole to facilitate connection of building sewer from the east.

Abandon 42" sewer to be filled with sand to next manhole south of manhole @ Sta. 0+12.5

Abandon 42" sewer and fill with sand

4+73 Sta. ~~4+79~~ Const. Type "A" M.H. Install 4" Stub South Connect to building sewer at 801 South Poplar

87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49

Noble Properties Inc. % Max A. Noble 1401 West River Blvd. Tract No. 32

Anna M. Allen 833 S. Poplar St. Tract No. 31

Harold O. and Bertha A. Will Tract No. 30

Kenneth W. & Patricia R. Mickes 823 So. Poplar St. Tract No. 29

Raloff Evangelistic Enterprises Corpus Christy, Texas Tract No. [illegible]

Kings-X, Inc. 1807 E. Douglas Ave. Tract No. 27

Edna E. Smith 2419 E. Morris St. Tract No. 26

Hazel Nofziger 801 So. Poplar Tract No. 26A

LINCOLN

JFG 846 WSH

Sta. 0+10 Existing Manhole

Existing Surface

Connect to Bell Ring Fitting in existing manhole wall

Existing 48" S.S.

48" LINE

93.09 93.15 93.22 93.26 93.37 93.41

395'± of 48" RCP @ +0.07%

50' of 38"x60" RCP (HE) Plastic Lined @ +0.07%

105 100 95

0-59 Sta. 0+10 Sta. 2+00 Sta. 4+08 Sta. 4+29

Existing Surface

8" LINE

96.69 96.44 96.40 96.76 97.16 97.66 97.96 Sta. 4+08 98.01 Sta. 4+08 (98.57 Flo. at Sta. 4+17)

See note sheet #1 for adjustment of 8" Line

69' of 8" C.P. @ -0.40%

469' of 8" C.P. @ +0.40%

0 1 2 3 4

WILLIAM S. KERBY LICENSED 2146 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER NO. 12 ALTER, REPAIR OR RECONSTRUCT A PORTION OF S.S. NO. 12 LYING IN GROVE STREET BETWEEN LINCOLN AND LEWIS.

CITY OF WICHITA, KANSAS
R.W. LINN, CITY ENGINEER

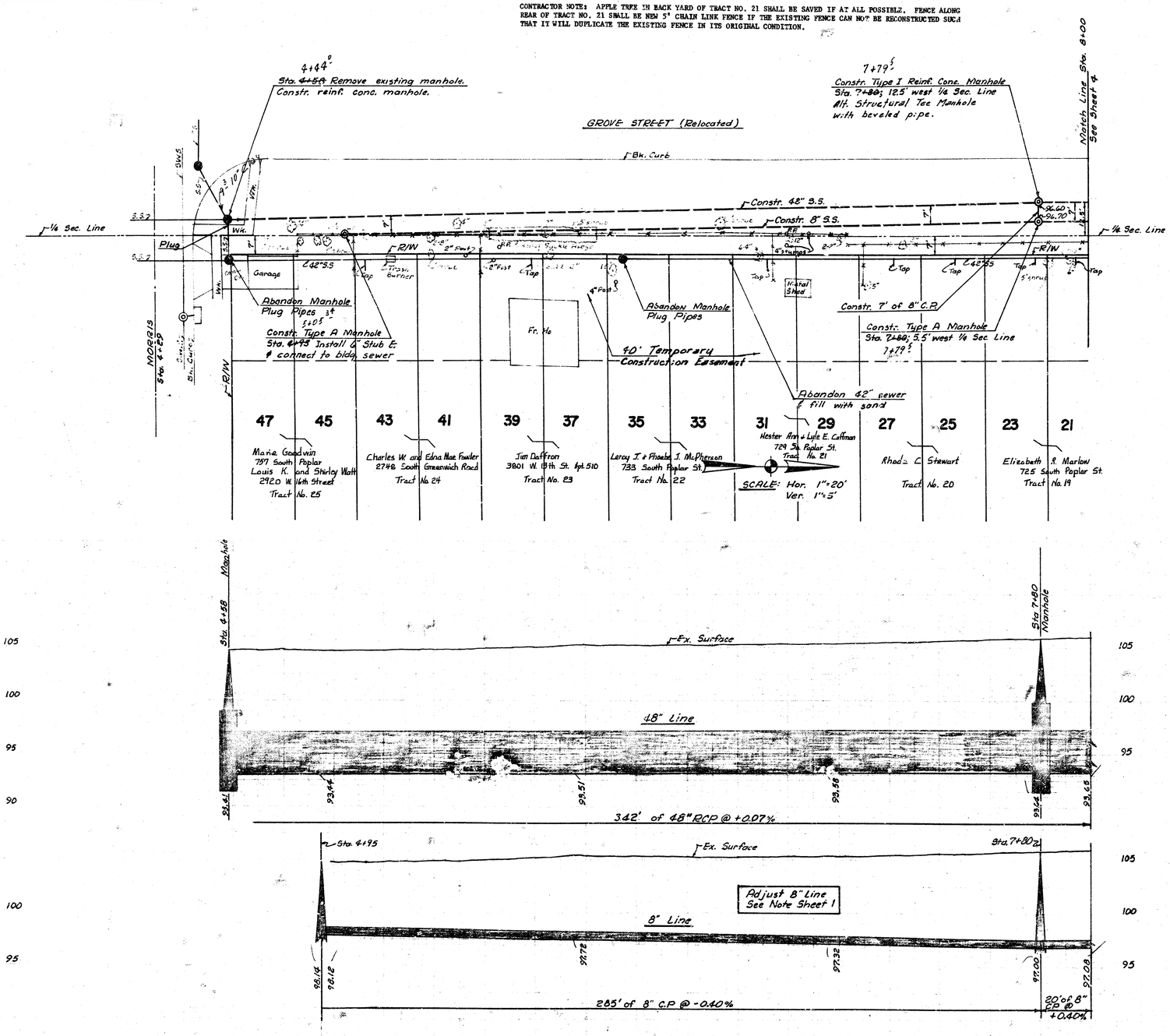
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Project No. 468-80-990-80116-000-000-001 Sheet 3/12

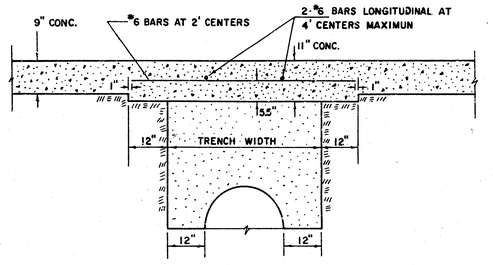
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BM 103.47 "a" cut Top Curb N.W. cor. of old Grove & Morris. (State Hi-way Elev 1290.92)

CONTRACTOR NOTE: APPLE TREE IN BACK YARD OF TRACT NO. 21 SHALL BE SAVED IF AT ALL POSSIBLE. FENCE ALONG REAR OF TRACT NO. 21 SHALL BE NEW 5' CHAIN LINK FENCE IF THE EXISTING FENCE CAN NOT BE RECONSTRUCTED SUCH THAT IT WILL DUPLICATE THE EXISTING FENCE IN ITS ORIGINAL CONDITION.



NOTE: ADDITIONAL NO. 6 BARS SHALL BE PLACED OVER SEWER TRENCH AS SHOWN IN DETAIL IN ADDITION TO TYPICAL STANDARD STEEL PATTERN. COST OF ADDITIONAL STEEL AND INCREASED THICKNESS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT.



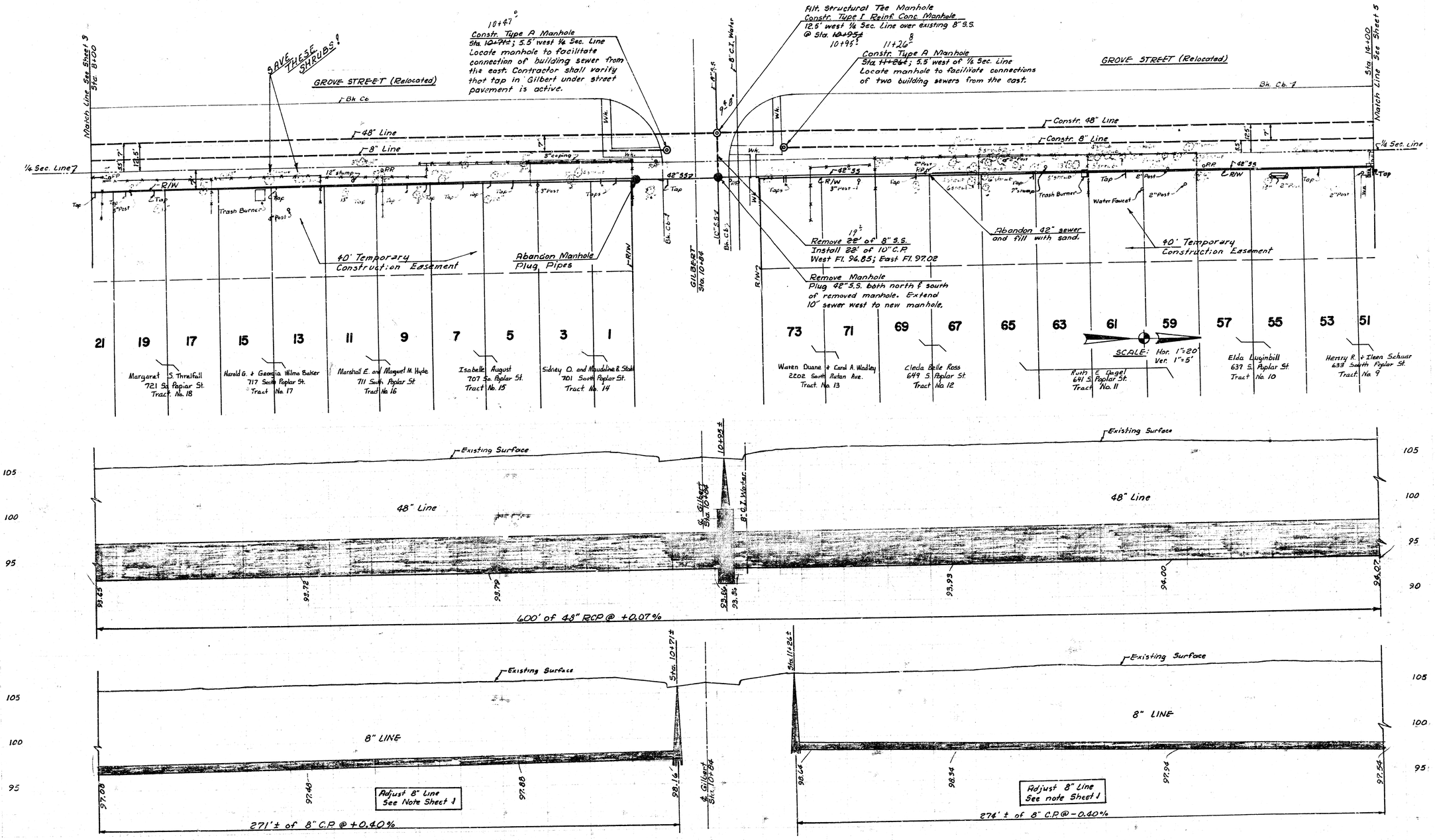
CONCRETE PAVEMENT REPLACEMENT DETAIL OVER TRENCH

San. Sewer No. 12 Project No. 468-80-990-80116-000-000-001 Sheet 9/12 11

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BM 106.70 RR Spike W. Side P. Pole S. Side Gilbert, E. Side new Pvt. on Grove

CONTRACTOR NOTE: ROCKS FROM OLD FISH POND ADJACENT TO TRACT NO. 10 SHALL BE SALVAGED AND STACKED ON PRIVATE PROPERTY AS APPROVED BY THE OWNER. CONTRACTOR SHALL VERIFY THAT CONNECTION TO THE EXISTING 42" SEWER APPROXIMATELY 13' SOUTH OF THE CENTERLINE OF GILBERT IS AN ACTIVE SANITARY SEWER.



8 9 10 11 12 13 14

San. Sewer No. 12 Project No. 468-80-990-80116-000-000-001 Sheet 5/12 11

JFG 246 WSK

FILMED FROM THE BEST

CONTRACTOR NOTE: FENCE ALONG REAR OF TRACT NO. 7 SHALL BE REPLACED WITH NEW 5' CHAIN LINK FENCE. ADDITIONAL LINE POSTS SHALL BE INSTALLED IN THE NEW CHAIN LINK IN LINE WITH SIDE FENCES ON TRACT NO. 7 SUCH THAT THE SIDE FENCES CAN BE ATTACHED TO THE NEW REAR CHAIN LINK FENCE WITHOUT GAPS BETWEEN THE EXISTING SIDE FENCES AND THE NEW REAR FENCE. ALL BUILDING CONNECTIONS FROM TRACT NO. 6 HAVE BEEN ABANDONED. NO EASEMENT HAS BEEN PROVIDED ON TRACT NO. 6 SINCE THERE ARE NO BUILDING SEWERS TO RECONNECT. TEMPORARY EASEMENT WAS NOT ACQUIRED FROM TRACT NO. 8. LEGAL DEPARTMENT HAS DETERMINED THAT THE CITY HAS THE RIGHT OF ENTRY TO COMPLETE THE MINIMUM AMOUNT OF WORK NECESSARY TO RECONNECT BUILDING SEWERS FROM TRACT NO. 8 TO THE NEW SEWER. WORK REQUIRED TO RECONNECT BUILDING SEWERS FROM TRACT NO. 8 TO THE NEW SEWER SHALL BE AS APPROVED BY THE ENGINEER.

BM 106.16 R.R. Spike W. side P.R. N. side Orme, E. side new pav't Grove

Alt. Structural Tee Manhole
Constr. Type J Reinf. conc. Manhole
Sta. 14+10; 12.5' west ¼ Sec. Line

Constr. 7' of 8" C.P.
East Fl. 97.40; West Fl. 97.30

GROVE STREET (Relocated)

Bk. Cb. 7

Constr. Special Structure
See Sheet 7

Begin special conc. structure
Sta. 17+22, See Sheet 7

End special conc. structure
Sta. 12+71, See Sheet 7
17+72

Install 7' of 8" C.P.
East Fl. 94.93; West Fl. 94.83

Constr. Type A Manhole
3.5' west ¼ Sec. Line; Sta. 17+71

Connect to Existing Bell Ring Fitting in Existing Manhole Wall

Sta. 19+89.8
Existing Manhole

See Sheet 4
Sta. 14+00

Constr. 48" Line

Constr. 8" Line

¼ Sec. Line

R/W

Trash Burner

Fr. Ho.

Constr. Type A Manhole
Sta. 14+10; 15.5' west ¼ Sec. Line

Abandon Manhole
Plug Pipes

Constr. Type A Manhole
Sta. 16+75; 5.5' west ¼ Sec. Line
Install 4" Stub east. & connect to bldg. sewer

40' Temporary Construction Easement

Abandon 42" sewer & fill with sand.

Remove Manhole
Plug 42" S.S. both north & south of removed manhole

Install 23' of 8" C.P.
East Fl. 97.13; West Fl. 97.03

Abandon Manhole
Plug Pipes 19+36

Constr. Type A Manhole
Sta. 19+35; Install 4" Stub east & connect to bldg sewer

42" sewer abandoned by Others previously

Abandon Manhole
Plug Pipes

51 49 47 45 43 41 39 37 35 33 31 29 27 25 23 21 19 17 15 13 11

200'

C. Henry & Mable Koehler
Tract No. 8

Loren M. Dupuy
625 South Poplar St.
Tract No. 7

Poplar Avenue Church of Christ
600 South Poplar
Tract No. 6

Hubert B. and Pauline P. Kelly
605 South Poplar St.
Tract No. 5

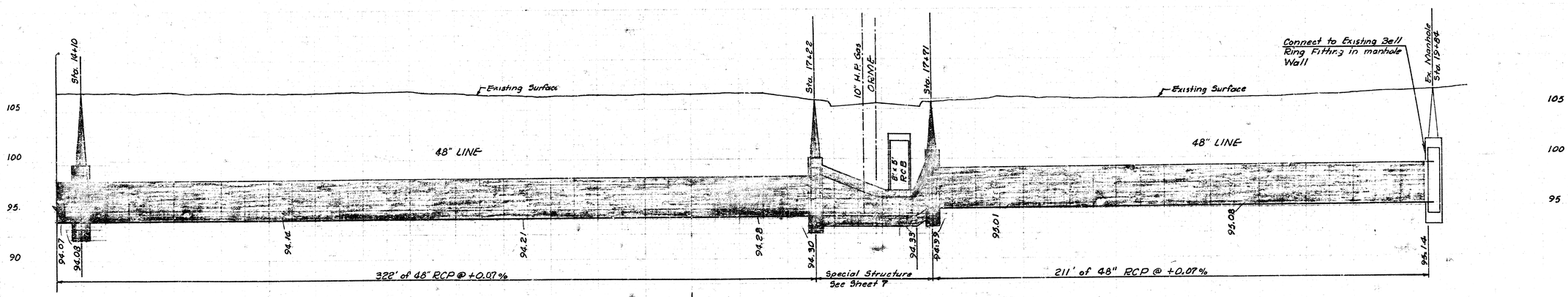
Ernest and Myrl Tompkins
551 S. Poplar St.
Tract No. 4

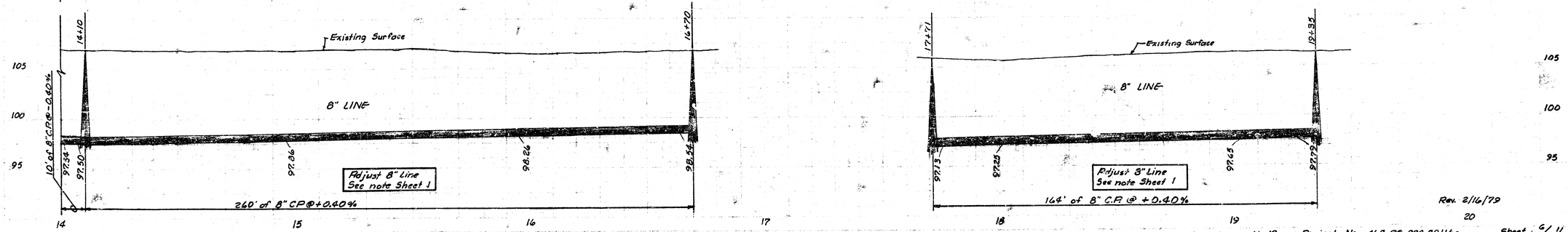
M.T. & Dorthy Fox
2250 S. Greenwich Road
Tract No. 3

Alice C. McGonagle
Tract No. 2

Laura O. Tope
543 S. Poplar
Tract No. 1

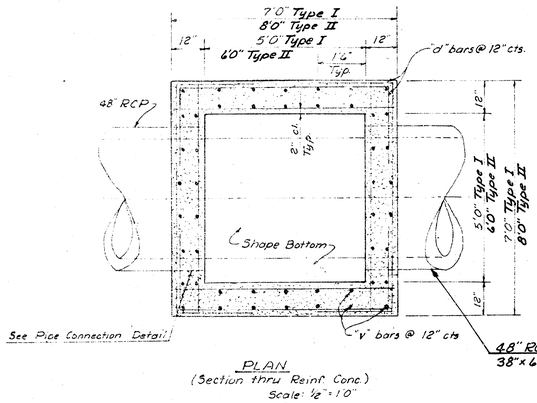
SCALE: Hor. 1"=20'
Ver. 1"=5'





Rev. 2/16/79

San. Sewer No. 12 Project No. 468-BC-990-80116-000-000-001 Sheet: 6/12



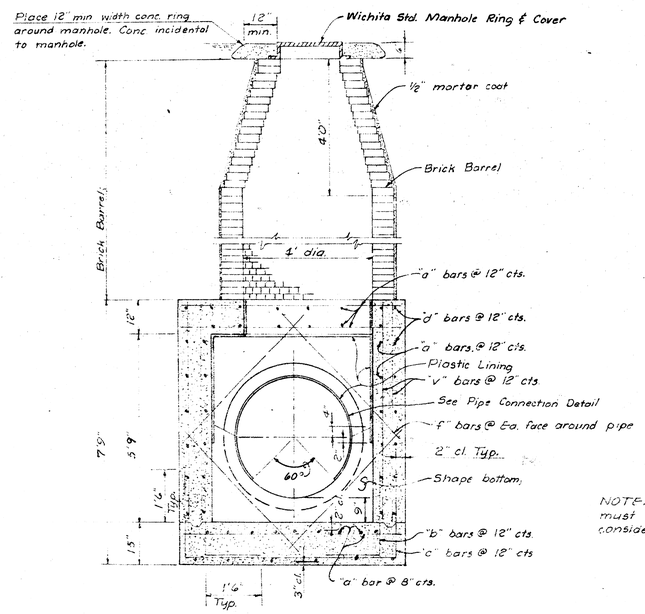
PLAN
(Section thru Reinf. Conc.)
Scale: 1/2" = 1'0"

REINFORCEMENT SCHEDULE

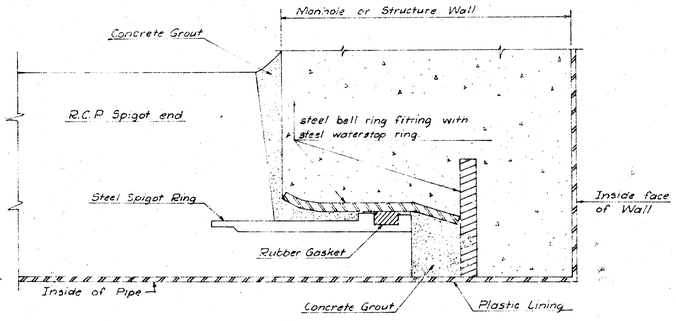
BAR SYMBOLS	BAR SIZE	TYPE I NUMBER OF BARS	TYPE I BAR LENGTHS	TYPE II NUMBER OF BARS	TYPE II BAR LENGTHS
a	#5	46	6'8"	80	7'8"
b	#5	22	3'0"	24	3'0"
c	#5	13	11'8"	15	12'6"
d	#5	28	9'8"	28	10'8"
f	#5	Varies	5'0"	Varies	5'0"
v	#5	48	6'4"	56	6'4"

~~SPECIAL~~ MANHOLE TYPE I SUMMARY

MANHOLE LOCATION	TOP ELEV.	FLOWLINE ELEV.	BRICK BARREL HEIGHT (FT)	NUMBER "f" BARS	CAST IRON (LBS)	CLASS "A" CONC. (C.Y.)	REINF. STEEL (LBS)	PLASTIC LINING (SQ. FT)	CLASS III EXCAVATION (C.Y.)
20+25 58.5' Rt	104.8	93.46	4.76	24	465	8.5	1410.7	105	40.0
20+25 13.5' Rt	104.8	93.96	4.26	16	465	8.5	1368.9	105	38.1
20+74 58.5' Rt	104.7	93.51	4.61	32	468	8.5	1452.4	105	39.6
20+74 73.5' Rt	104.7	94.01	4.11	16	465	8.5	1368.9	105	38.0
TOTAL			17.74		1860	34.0	5700.9	420	156.1



ELEVATION SECTION
Scale: 1/2" = 1'0"



Pipe connection to be included in bid price for pipe.

PIPE CONNECTION DETAIL
No Scale

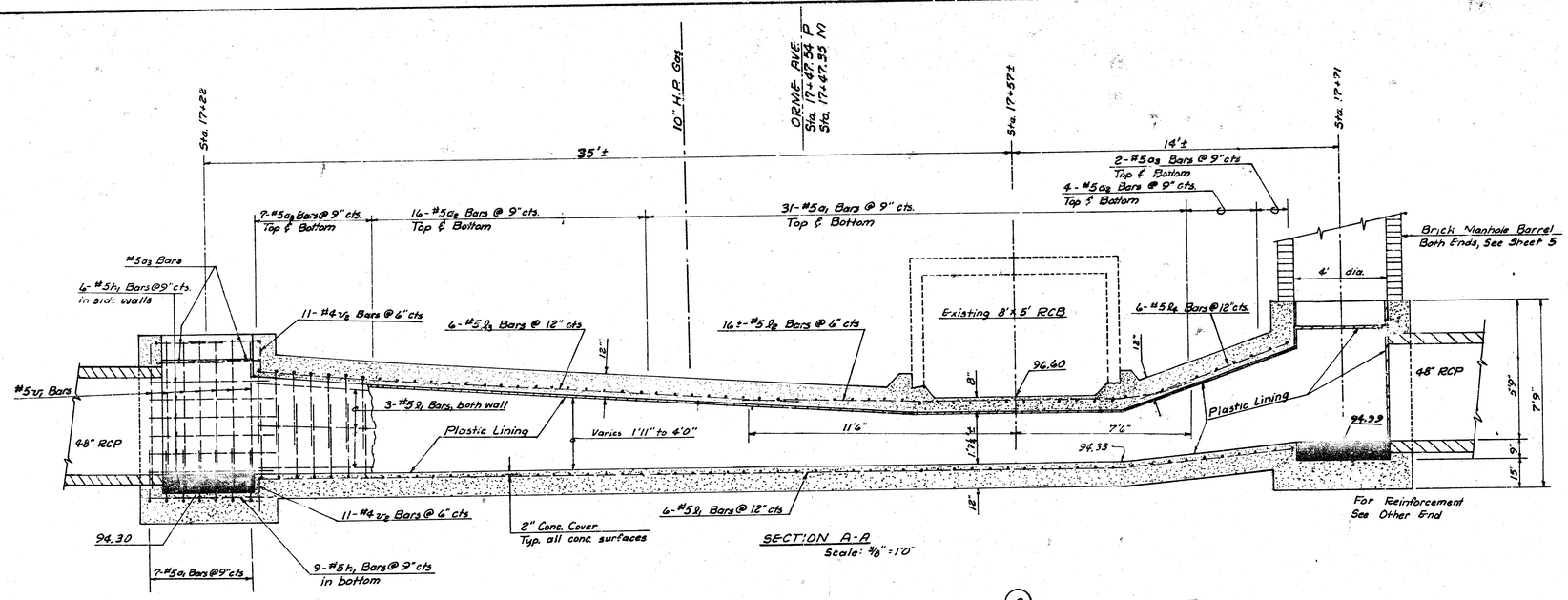
NOTE: Sewage flow may not be interrupted during construction. Contractor must provide an approved method to maintain flow. Cost to be considered in bid prices for other bid quantities.

Rev. for Project No. DBKJ 573023

STATE HIGHWAY COMMISSION OF KANSAS

SPECIAL SANITARY SEWER MANHOLE DETAILS

San. Sewer No. 12 Project No. 468-80-990-80116-000-000-001 Sheet 6 7/12



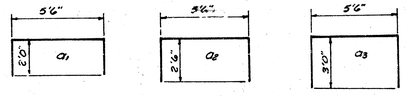
SECTION A-A
Scale: 3/8" = 1'0"

REINFORCEMENT SCHEDULE				
BAR SYMBOLS	BAR SIZE	NUMBER OF BARS	BAR LENGTH	TOTAL WEIGHT
a_1	#5	76	9'6"	753
a_2	#5	40	10'6"	438
a_3	#5	26	11'6"	312
d_1	#6	11	6'0"	96
h_1	#5	42	5'6"	241
b_1	#5	12	45'0"	563
b_2 *	#5	16±	19'0"	317
b_3	#5	6	23'6"	147
b_4	#5	6	6'3"	39
v_1	#5	36	6'0"	225
v_2	#4	44	1'3"	38
			TOTAL	3,169 lbs

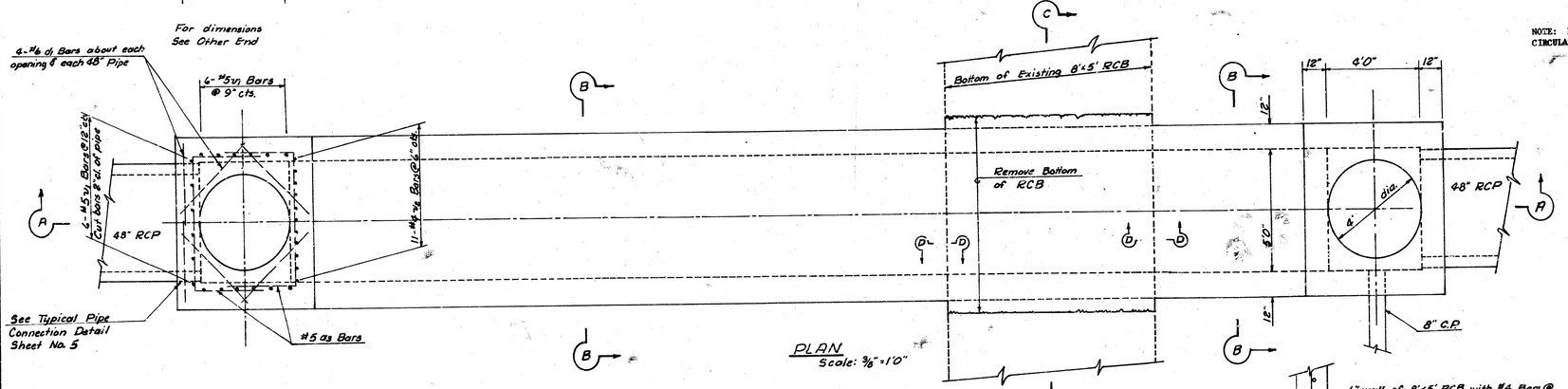
* See Note Section C-C

Reinf. Conc. of Special Structure = 47 C.Y.

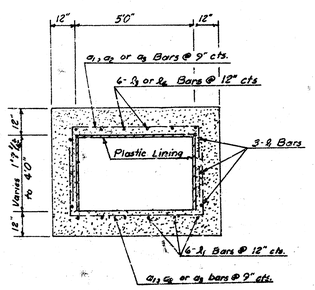
BAR DETAILS



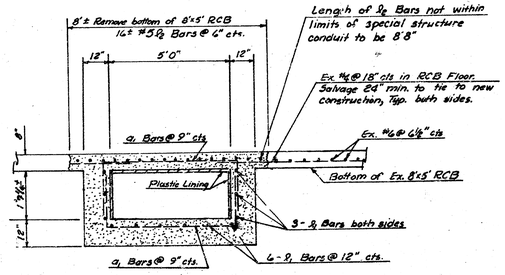
NOTE: MANHOLE FLOORS SHALL BE SHAPED TO FORM SMOOTH TRANSITIONS BETWEEN CIRCULAR PIPES AND RECTANGULAR BOXES.



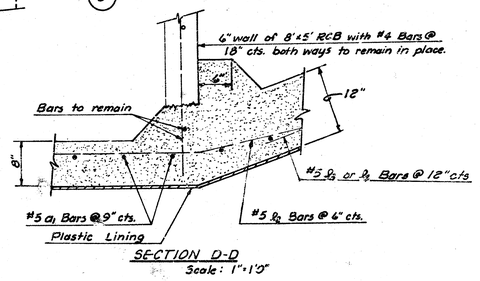
PLAN
Scale: 3/8" = 1'0"



SECTION B-B
Scale: 3/8" = 1'0"



SECTION C-C
Scale: 3/8" = 1'0"



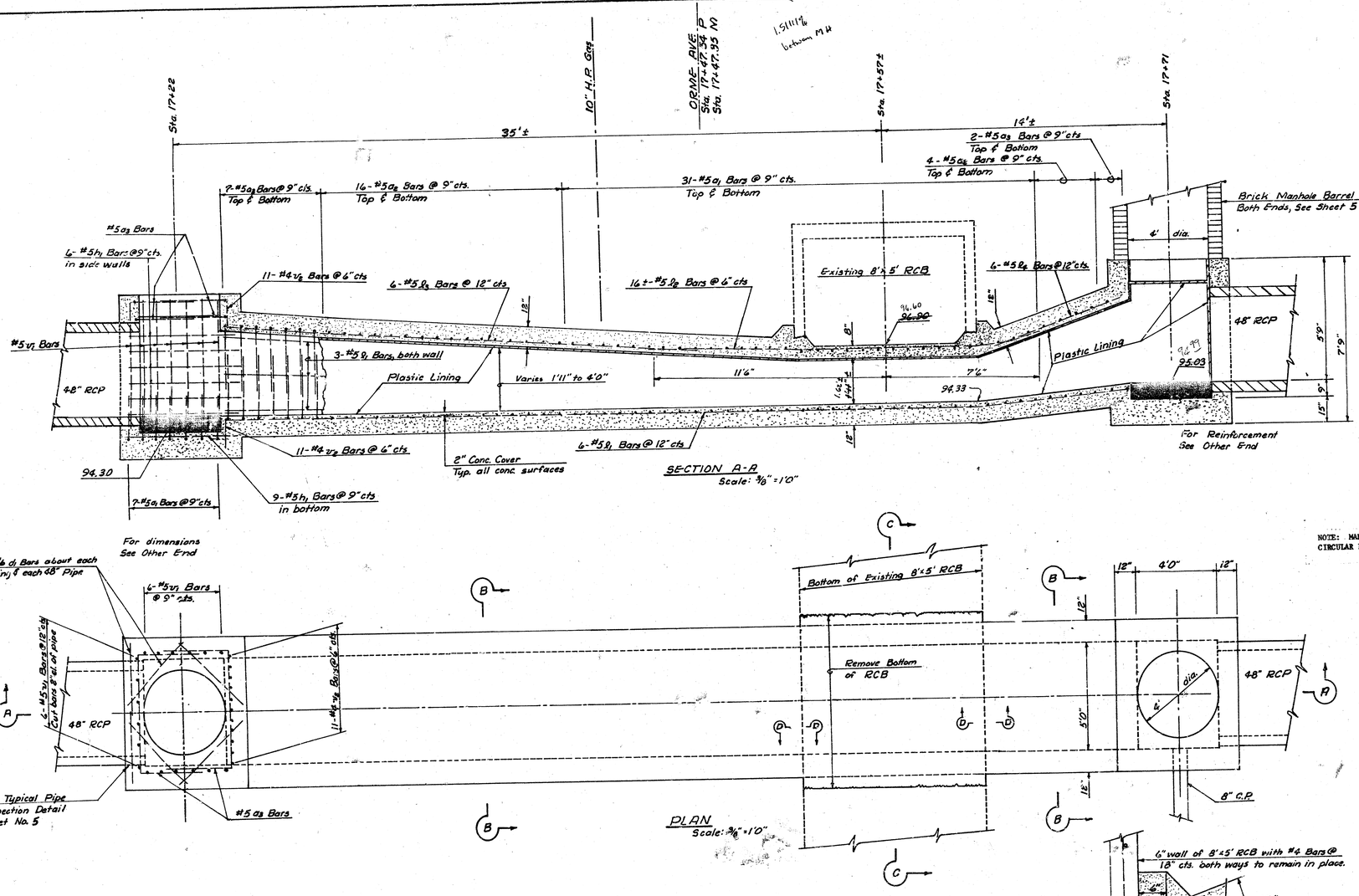
SECTION D-D
Scale: 1" = 1'0"

NOTE: Bid for Special Structure is for above structure including manhole barrels complete & in place.

Rev. 2/16/79

SPECIAL STRUCTURE

San. Sewer No. 12 Project No. 468-80-990-80116-000-003-001 Sheet 9/12 1

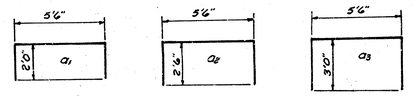


REINFORCEMENT SCHEDULE				
BAR SYMBOLS	BAR SIZE	NUMBER OF BARS	BAR LENGTH	TOTAL WEIGHT
a_1	#5	74	9'6"	753
a_2	#5	40	10'6"	438
a_3	#5	26	11'6"	312
a_4	#4	16	4'0"	96
d_1	#5	42	5'6"	241
h_1	#5	12	45'0"	563
l_1	#5	16±	19'0"	317
l_2 *	#5	6	23'6"	147
l_3	#5	6	6'3"	39
l_4	#5	36	6'0"	225
v_1	#4	44	1'3"	38
v_2			TOTAL	3,169 lbs

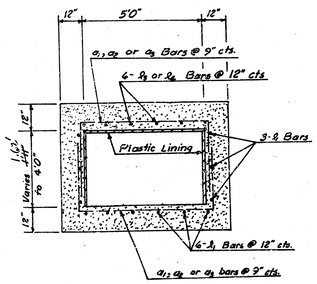
* See Note Section C-C

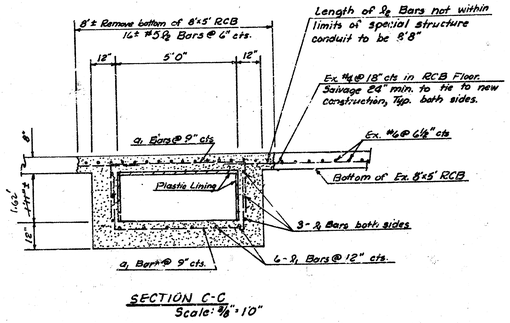
Reinf. Conc. of Special Structure = 47 C.Y.

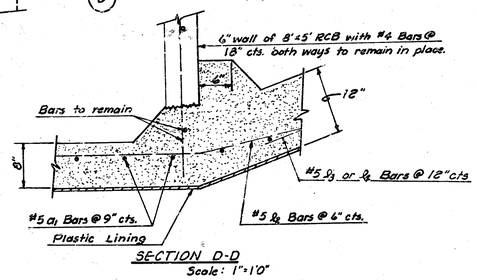
BAR DETAILS



NOTE: MANHOLE FLOORS SHALL BE SHAPED TO FORM SMOOTH TRANSITIONS BETWEEN CIRCULAR PIPES AND RECTANGULAR BOXES.





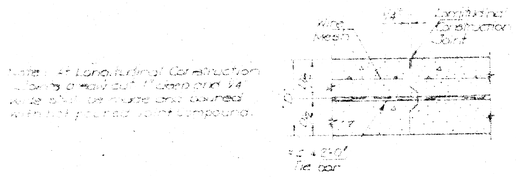


NOTE: Bid for Special Structure is for above structure including manhole barrels complete & in place.

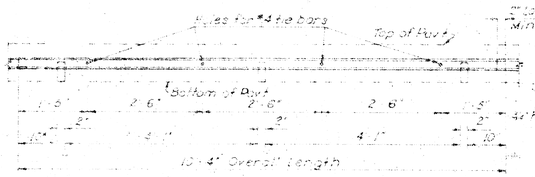
VOID

SPECIAL STRUCTURE

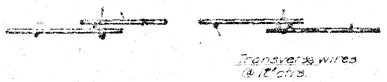
San. Sewer No. 12 Project No. 468-80-790-80116-000-000-001 Sheet 9/12



LONGITUDINAL CONSTRUCTION JOINT DETAIL
TRANSVERSE SECTION

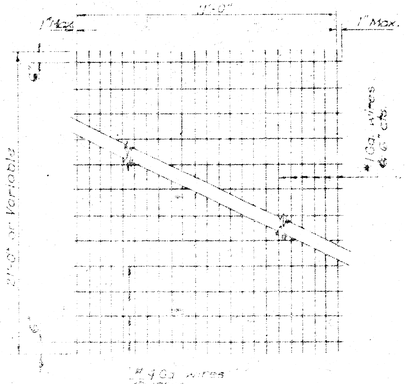


METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT
To be used only against forms. Shall not extend through contraction or expansion joints.



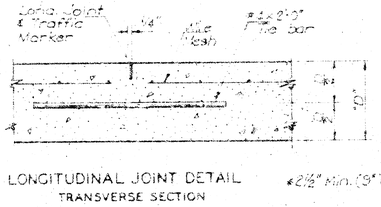
DETAIL OF LAP FOR WIRE MESH

NOTE The lap shall extend beyond the first transverse 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. Approx. wt. of wire mesh = 61 lbs per 100 sq ft. Other methods for fastening the sheets of wire mesh at the laps may be used with the approval of the Engineer.



TYPICAL SHEET OF WELDED WIRE MESH

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

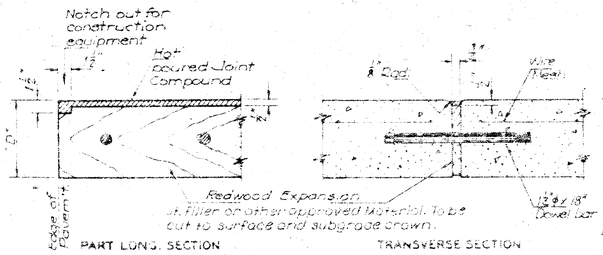


LONGITUDINAL JOINT DETAIL
TRANSVERSE SECTION

*2½" Min. (9" D")

Note: A longitudinal joint formed by sawing * deep and 1/4" wide and poured with hot poured joint compound shall be used. In lieu of sawing and pouring of hot poured joint compound, the contractor may insert a Lineal Polyethylene (semi rigid) 3" (Nominal) .012" (Min.) strip vertically into the surface of fresh concrete pavement by approved methods. The strip should also be inserted flush with the finished surface of the slab. Other approved planes of weakness may be installed.

~~Note: See Std. No. 420-1 for Contraction Joint Details.~~



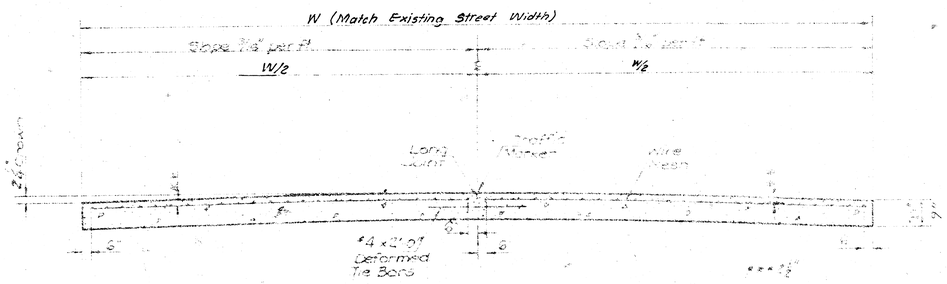
PART LONG. SECTION TRANSVERSE SECTION

EXPANSION JOINT DETAIL

NOTE An expansion joint (without load transfer devices) shall be placed at the ends of the pavement slab where the new pavement abuts the ends of bridges or other rigid structures.

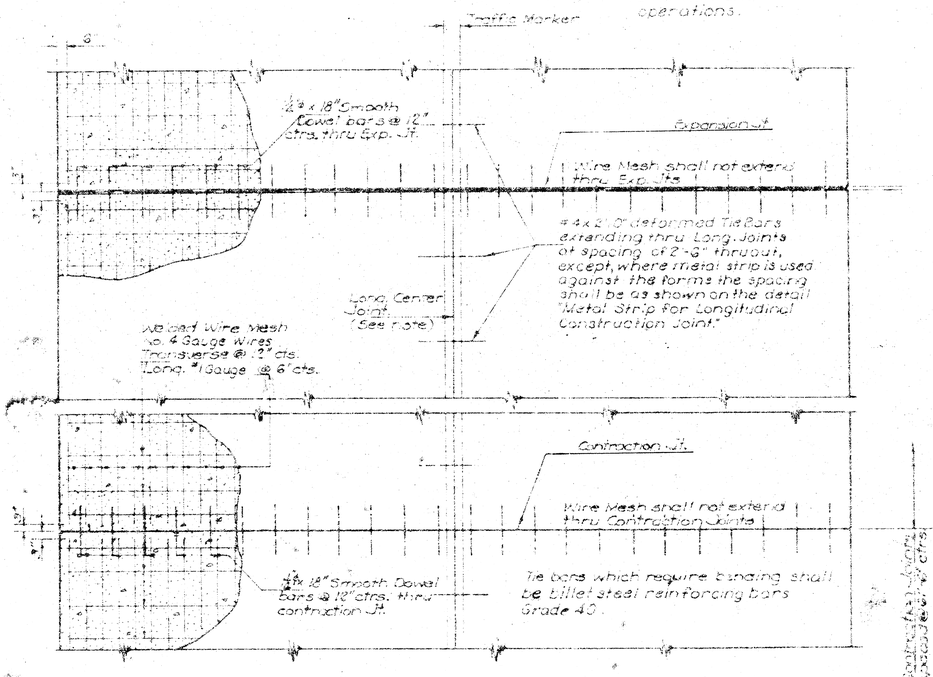
Unless otherwise noted, load transfer devices as shown in detail on other standard sheets in the plans, shall be used at all expansion & contraction joints.

Note: Traffic Marker to be painted by the State.



TRANSVERSE SECTION

** Note: The 2½" as shown on standard sheet is a nominal dimension and may be subject to a normal uneveness due to pavement operations.



PLAN

Note: At the beginning and end of the pavement on any given project, a construction joint as specified below shall be used unless the pavement abuts a rigid surface. The header shall be removed and the tie bars bent into the groove at right angles to the centerline of the pavement.

Transverse Construction Joints shall be sawed 5/8" wide x 2½" deep and filled as specified for contraction joints.

There may be a tolerance of 10 feet in setting the basket at the end of the pour; that is, the contraction joint may be not less than 61'-6" or more than 71'-6" at the end of the pour.

D = 9"

QUANTITIES

Width	Cu. Yds. per Sta.	Cu. Yds. per Mile
22' WIDTH	8"	44.67	54.32
	9"	46.50	57.11
	10"	48.33	59.90
24' WIDTH	9"	48.00	59.06
	10"	50.00	62.07

33	5-14-58	Changed dimension on Polyethylene Longitudinal Strip	W.E.H. K.D.C.
32	3-4-57	Added Detail on Form Leg	A.L. T.R.D.
31	12-18-56	Added Detail of Paper Dowel Sleeve	
30	10-31-56	Alternate Material for Removed Contraction Joint Detail	W.E.H. K.D.C.
29	5-22-56	Revised Detail of Tie Bars	T.R.D.
28	2-21-56	Revised Details	T.R.D.
NO.	DATE	REVISIONS	BY

STATE HIGHWAY COMMISSION OF KANSAS

CONCRETE PAVEMENT

TWO LANE ___ WIDTH

STD. NO. 707.1

DESIGNED	DRAWN	TRACED	CHECKED	QUANTITIES	APPROVED
W.E.H.	K.D.C.				

SCALE: NONE

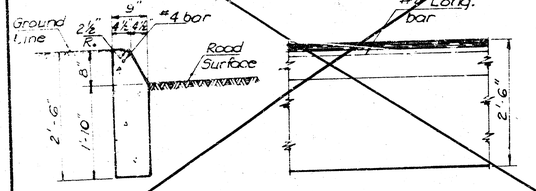
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San. Sewer No. 12 Project No. 468-80-990-80116-000-000-001 Sheet 11/12 11

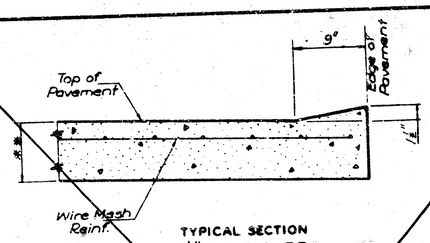
FILMED FROM THE BEST

P.R. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	KANSAS		18		

Note: Use Class A Concrete-AE thruout. Bevel all exposed edges with a 3/4" triangular moulding. Place a 1" premoulded Expansion Joint Filler (Nonextruding, Type B) at a spacing of not to exceed 250'.

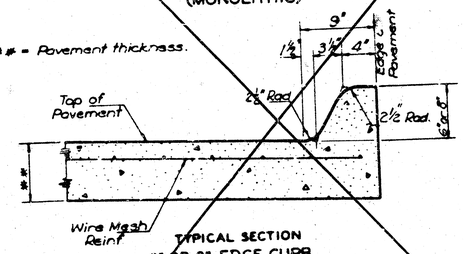


PROTECTION CURB 8"



TYPICAL SECTION
1½" EDGE CURB
(MONOLITHIC)

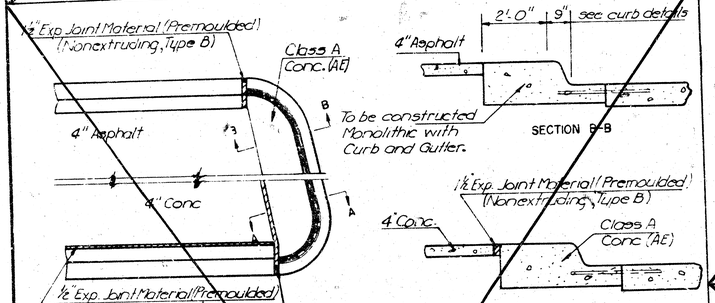
= Pavement thickness.

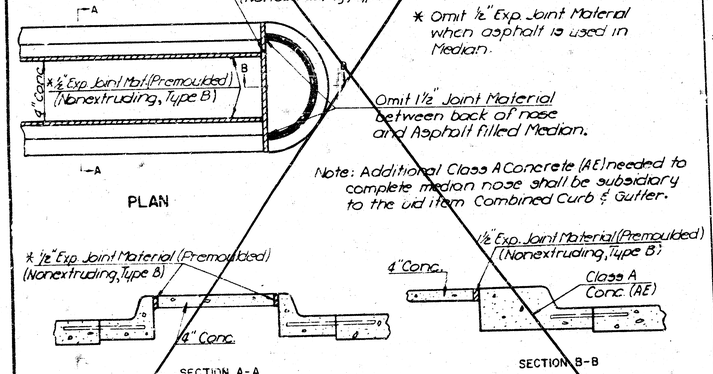


TYPICAL SECTION
6" OR 8" EDGE CURB
(MONOLITHIC)

Note: Planes of weakness are to be constructed over the contraction joints in the concrete pavement.
A 1" premoulded Expansion Joint Filler (Nonextruding, Type B) cut to the dimensions of the Edge Curb shall be used over the expansion joints in the concrete pavement.

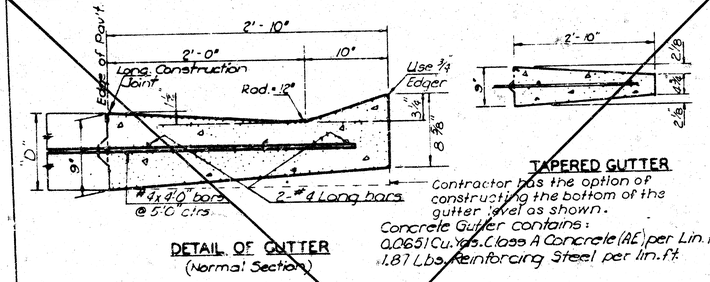
EDGE CURB





Note: Expansion joints shall be placed in concrete medians as follows: In long runs expansion joints shall be ½" Expansion Joint Material (Nonextruding, Type B) 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 median shall match plane of weakness in curb & gutter.

TYPICAL NOSE DETAILS FOR RAISED MEDIANS



DETAIL OF GUTTER
(Normal Section)

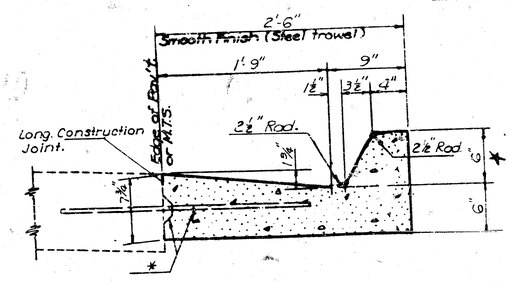
TAPERED GUTTER

Contractor has the option of constructing the bottom of the gutter level as shown.

Concrete Gutter contains:
0.0651 Cu. Yds. Class A Concrete (AE) per Lin. Ft.
1.87 Lbs. Reinforcing Steel per lin. ft.

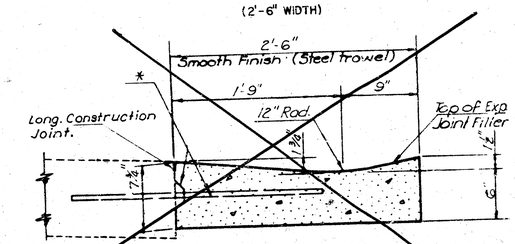
Note: In cases where gutter is tied to concrete pavement, the planes of weakness are to be constructed opposite of contraction joints in the concrete pavement. Expansion joints in the gutter are to be placed opposite expansion joints in the concrete pavement.
Where gutter abuts a bridge wing, a 1" premoulded Expansion Joint Filler (Nonextruding, Type B) is to be placed between the gutter and the bridge wing.
Where gutter does not abut concrete pavement or concrete base course, omit tie bars and longitudinal construction joint and place a 1" premoulded Expansion Joint Filler (Nonextruding, Type B) cut to the dimensions of the 2'-10" gutter, at a spacing of not to exceed 250' and at the ends of curb returns.
Plane of weakness in gutter to be constructed at not to exceed 10'-3" 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.
Use Class A Concrete (AE) thruout.
For details of longitudinal Construction Joint see standard No. 707.1 or 708.1.

GUTTER



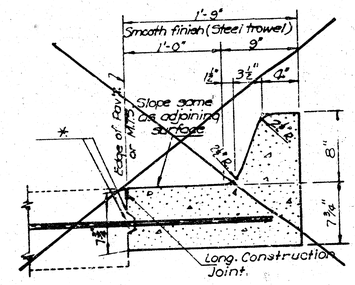
* Height of Curb to be 8" for Combined Curb and Gutter (Type I) (Special)

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



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

* Longitudinal construction joint and #4x3'-0" bars @ 2'-6" ctrs., where concrete pavement is constructed.
Where Combined Curb and Gutter (Type I, II & III) does not abut concrete pavement or concrete base course, omit tie bars and longitudinal construction joint.



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

Note: A 1" premoulded Expansion Joint Filler (Nonextruding, Type B) cut to the dimensions shown shall be used at a spacing of not to exceed 250 ft. and at the ends of curb returns.
Plane of weakness in curb and gutter to be constructed at not to exceed 10'-3" intervals. Where Combined Curb and Gutter is tied to new pavement the planes of weakness shall be so positioned to have one of the planes of weakness coincide with each contraction joint in the pavement. Expansion joints in the curb and gutter are to be placed opposite expansion joints in the pavement.
Use Class A concrete (AE) thruout.
For details of longitudinal Construction Joint see standard No. 707.1 or 708.1.

NO	DATE	REVISIONS	BY	APP'D
3				
2				
1	1-12-71	Long. Constr. Jt. & Optional Gutter Shape	W.L.H	K.G.L.

STATE HIGHWAY COMMISSION OF KANSAS

CURB, GUTTER AND COMBINED CURB & GUTTER

STD. NO. 8.25

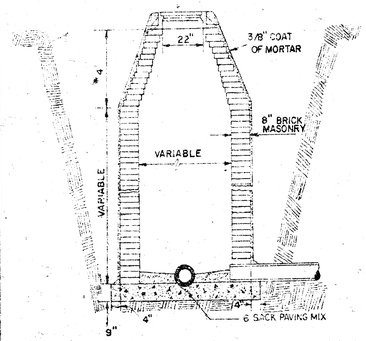
8-26-70

SHEET NO.	OF	SCALE		APP'D K. G. Lippoldt Jr.
DESIGNED		DETAILED G.G.	QUANTITIES	TRACED G.G.
DESIGN CK.		DETAIL CK. W.L.H	QUAN. CK.	TRACE CK.

11 / 14

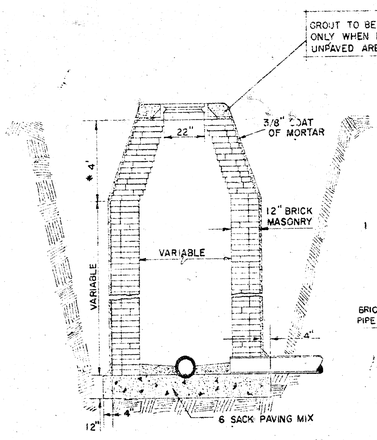
San. Sewer No. 12 Project No. 468-80-990-80116-000-000-001 Sheet 9 / 12

FILMED FROM THE BEST

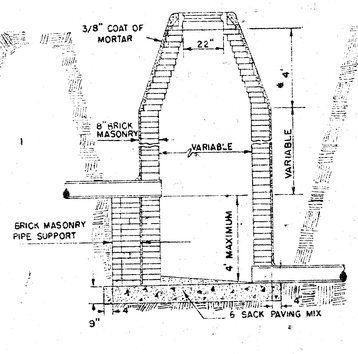


STANDARD MANHOLE
TYPE "A"

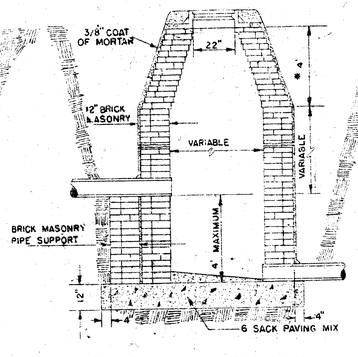
* DRAW = 6' ON 5' DIA. M.H.



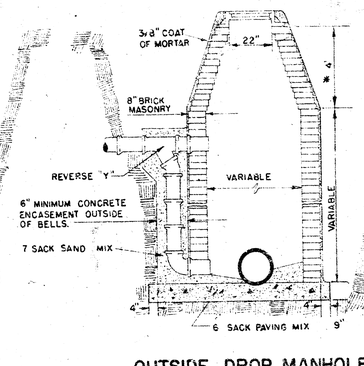
STANDARD MANHOLE
TYPE "B"



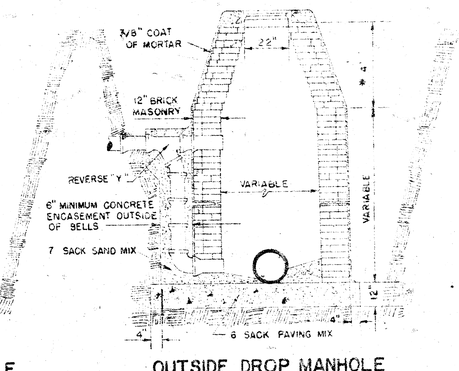
DROP MANHOLE
TYPE "A"



DROP MANHOLE
TYPE "B"

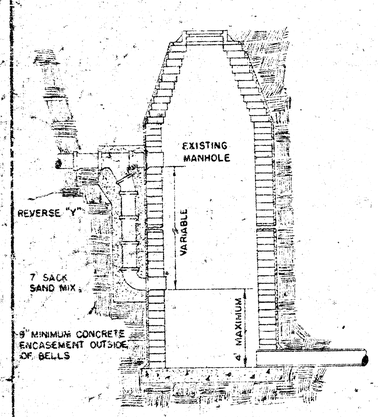


OUTSIDE DROP MANHOLE
TYPE "A"



OUTSIDE DROP MANHOLE
TYPE "B"

NOTE : REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES 6" ABOVE THE BOTTOM. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE COST OF REINFORCING STEEL IS TO BE INCLUDED IN THE PRICE BID FOR THE MANHOLE.

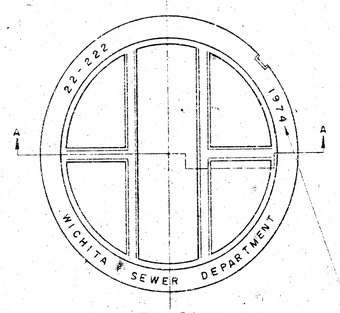


DETAIL OF DROP STACK

FOR EXISTING MANHOLES IN GROUND WATER

GENERAL NOTES

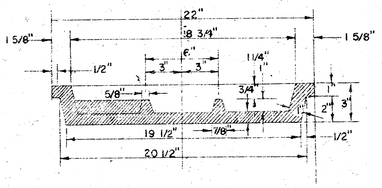
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD.
- STANDARD MANHOLES TYPE 'A' OR TYPE 'B' AND STANDARD DROP MANHOLES TYPE 'A' OR TYPE 'B' SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE. MANHOLES WITH PIPE SIZES LARGER THAN 24" SHALL BE 5' DIAMETER
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED TO INCREASE HYDRAULIC EFFICIENCY USING 6 SACK SAND MIX CONCRETE.
- PIPES INSTALLED WITHIN THE MANHOLE EXCAVATION SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. COST OF CRADLE WITHIN MANHOLE EXCAVATION SHALL BE INCLUDED IN THE PRICE BID FOR THE MANHOLE.



TOP VIEW

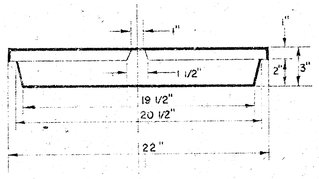
MANHOLE COVER

WEIGHT 110 LBS.



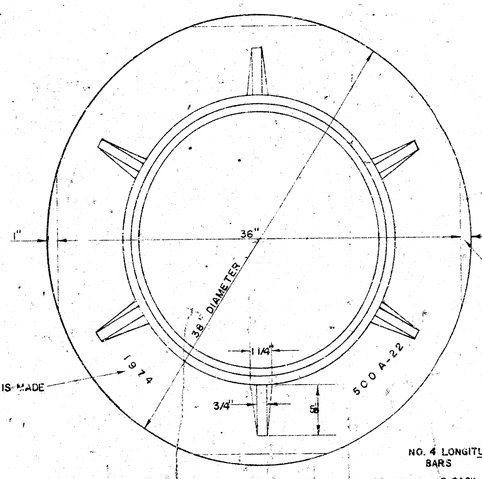
SECTION A-A

MANHOLE COVER



SIDE VIEW

MANHOLE COVER

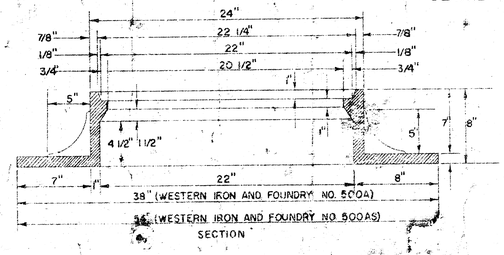


TOP VIEW

MANHOLE RING

WEIGHT 325 LBS. RING NO. 500A

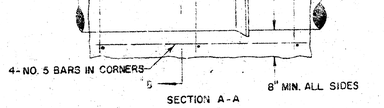
WEIGHT 800 LBS. RING NO. 500AS



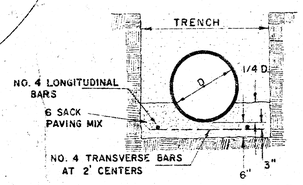
SECTION

MANHOLE RING

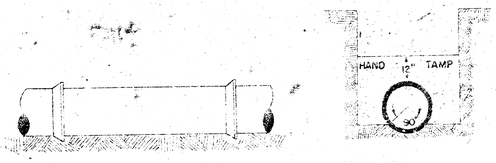
OUTSIDE CIRCUMFERENCE OF COVER AND THE INNER FACE AND SEAT OF RING TO BE MACHINE FIT.



REINFORCED CONCRETE ENCASEMENT



DETAIL OF CONCRETE CRADLE



ORDINARY BEDDING METHOD

STORM SEWER PIPE

REVISED 4-13-77

DETAILS OF

SEWER APPURTENANCES

ADOPTED AS STANDARD DESIGN

BY

ENGINEERING DIVISION

CITY OF WICHITA, KANSAS

R. W. LINN CITY ENGINEER

1974

Serv. Sewer No. 12 Project No. 468-80-990-8011a-000-000-001 Sheet 11/12

FLYER FROM THE BEST