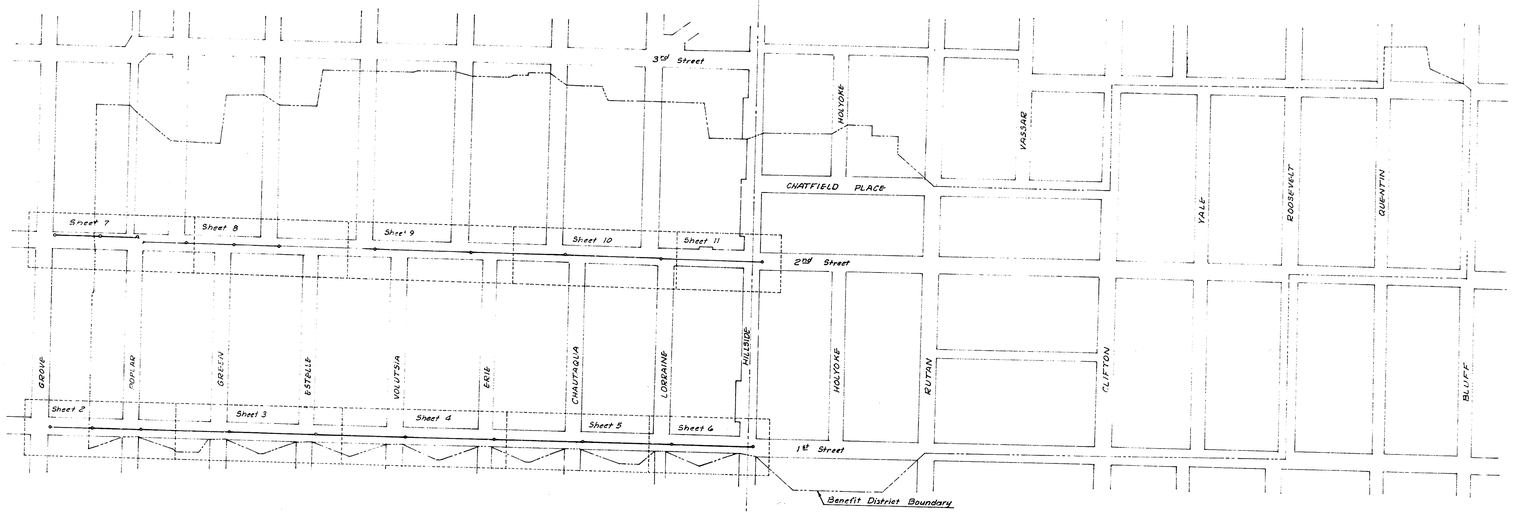
STORM WATER SEWER NO. 105



SCALE: 1"=800'

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

DATE _____

STORM WATER SEWER NO. 105
Project No. DBKA 579027

ACCESS

This project is to be co-ordinated with the drainage and paving of 2ND ST from 185' West of W.L. poplar to W.L. HILLSIDE in such a manner that vehicular access will be provided at all times to the portions of streets from 1ST to 2ND ST bet GROVE and HILLSIDE.

B.M 1149.9 'I' cut at intersection of back of W.O.'s on S.E. corner of FIRST ST and GROVE ST.

NOTE: All existing and future utility lines or plans above or below grade as indicated are for information and identification purposes only. Contractor's shall have full responsibility in contacting each respective utility company any places of lines shown.

Remove pavement with saw joint and replace pavement from Sta. 0+25 to Sta. 1+45. Width of removal approx. 7'-5".

START PROJECT Sta. 0+25

STORM SEWER BY OTHERS

FIRST ST

GROVE

POPLAR

ALLEY

Install Std. 2'x5' Inlet, Top 1170

Install Std 2'x5' Inlet, Top 1178

Install 15"x22" R.C.P.

Removal limits of paving prof.

Install 15"x3" RCP

Install Std 2'-5" Inlet, Top 1172.92'

Install 15"x28" RCP

Install Std 2'x5' Inlet, Top 1175.20

Install 18"x22" RCP

Match Line

48" R.C.P.

48" R.C.P Stub @ ±0.3% by Others. Connect to 48" R.C.P. Stub. Work incidental to project

Install 96"x 18' R.C.P.

Install Manhole Sta 1152 See Sheet 6

Install 15"x10' R.C.P.

Install Std 2'x5' Inlet Top 1178

Install 96"x 18' R.C.P.

Install Manhole Sta. 1148 See Sheet 6

Install 15"x10' RCP

Install Std. 2'x5' Inlet, Top 1178.30

Install 42"x 161' RCP

NOTE: TEMPORARY PAVEMENT REPAIRS SHALL BE CONSTRUCTED AS DIRECTED BY THE FIELD ENGINEER TO EXPEDITE CONSTRUCTION OF THE STORM SEWER. THIS WORK SHALL BE PAID FOR AT THE PRICE BID PER TON OF ASPHALT.

CAUTION UNDERGROUND UTILITIES

Install Manhole Sta 1178 Top 1195

Install Manhole Sta 1148 Top 1162

2" Water Line

3" Gas Line

Match Line

48" RCP

42" RCP

334' of 48" R.C.P. @ +2.3%

161' of 42" R.C.P @ +0.47%

As Built Per Plan IH-81

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 2 of 11

B.M.: 117.4' "O" cut in N.E. corner walk to WICHITA BIBLE COLLEGE on S.W. Cor FIRST and GREEN.

B.M.: 1206.3 N.W. Corner cono porch on west side of House of 158 N. ESTELLE.

FIRST ST

GREEN

ESTELLE AVE

I-20

Match Line

Install Std. 2'×5' Inlet, Top 116.40

Install 15"×31' RCP

Install Std. 2'×5' Inlet, Top 114.60

Install 15"×26' RCP

Install Std. 2'×5' Inlet, Top 114.6"

Install 18"×28' RCP

Install Std. 2'×5' Inlet, Top 117.75

Install 15"×64' RCP

Install Std. 2'×5' Inlet, Top 117.90

Install 15"×68' RCP

Install Std 2'×5' Inlet, Top 117.90

Install 18"×26' RCP

Install 42"×176' RCP

Install Manhole, Sta. 6+98. See Sheet 6

Install 15"×10' RCP

Install Std. 2'×5' Inlet, Top 11.. 15

Install 34"×325' RCP

Install 10 L.F. Reinf. Conc. Encasement on exist. 8" sanitary sewer.

Install Manhole Sta. 9+99 See Sheet 6

Install 15"×10' RCP

Install Std. 2'×5' Inlet, Top 117.90

Ins. 11 36"×11'4" RCP

42" RCP

36" RCP

4" Gas

8" Water

8" Gas Line

8" San Sewer

Install Manhole Sta. 7+98.5 Top 114.74

Install Manhole Sta. 9+99 Top 117.53

Install 10 L.F. Reinf. Conc. Encasement.

120	109.68	110.15	42" RCP 110.80 36" RCP 111.00	111.11	111.53	111.95	36" out 112.37 36" in 112.50	112.81	120
115									115
110									110
105									

174' of 42" RCP @ +0.47%

325' of 36" RCP @ +0.42%

101' of 36" RCP @ 0.42%

5 6 7 8 9 10 11

STORM WATER SEWER NO. 105
Project No. CBKA 573027

B.M. = 119.62 "J" in Johnson on ℄ of walk West of S.W. corner VOLUTSIA and FIRST ST.

B.M. 121.75 "O" cut on corner of walk at N.L. FIRST ST and C.L. ERIE.

Install Std. 2'x5' Inlet, Top 119.35

Install 15"x31' RCP

Install Std 2'x5' Inlet, Top 119.60

Install 15"x28' RCP

Install Std. 2'x5' Inlet, Top 119.40

Install 18"x28' RCP

Install 34"x234' RCP

Install Manhole Sta. 13+36 See Sheet G

Install 15"x18' RCP

Install Std. 2'x5' Inlet, Top 118.52

Install 30"x325' RCP

Install Std. 2'x5' Inlet, Top 121.35

Install 15"x24' RCP

Install Std. 2'x5' Inlet, Top 121.55

Install 15"x23' RCP

Install Std 2'x5' Inlet, Top 121.65

Install 18"x28' RCP

Install 24"x41' RCP

Install Manhole Sta. 16+38 See Sheet G

Install 15"x12' RCP

Install Std 2'x5' Inlet, Top 121.75

FIRST AVE

VOLUTSIA

ST

ERIE

I-20

15' Alley

16th Ave. Line

North Line

Elev. 113.90

Elev. 117.90

Elev. 110.90

Elev. 113.70

Elev. 113.58

Elev. 114.10

Elev. 114.39

Elev. 115.20

Elev. 117.30

Elev. 116.24

Elev. 116.74

Elev. 117.10

Elev. 117.50

Elev. 117.90

Elev. 118.10

Elev. 118.40

Elev. 118.60

Elev. 118.80

8" San. Sewer
El. 110.34±

3" Gas Line

8" Water Line

Install Manhole Sta. 13+36
Top 119.15

8" San. Sewer
El. 112.19

3" Gas Line

2" Gas Line

6" Water Line

Install Manhole Sta. 16+38
Top 121.75

36" RCP

30" RCP

24" RCP

30" out 113.39
30" in 113.29

30" out 114.89
30" in 114.79

24" out 116.24
24" in 116.74

234' of 36" RCP @ +0.42%

325' of 30" RCP @ +0.6%

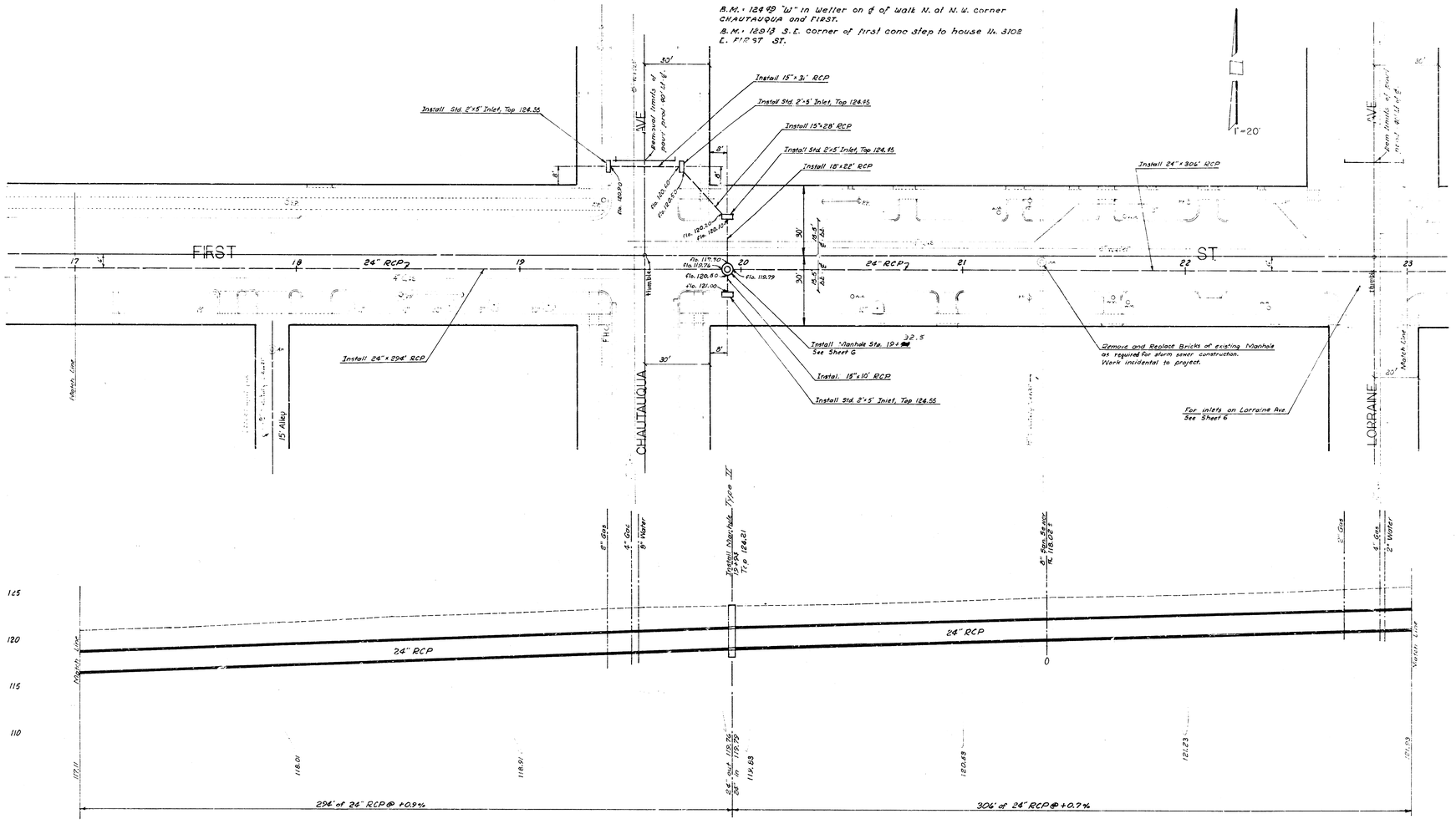
41' of 24" RCP @ +0.7%

11	12	13	14	15	16	17

STORM WATER SEWER NO. 108
Project No. DBHA 573027

B.M.= 124.98 "W" in Welter on ℄ of walk N. of N. W. corner CHAUTAUQUA and FIRST.

B.M.= 128.13 S. E. corner of first conc step to house N. 3108 E. FIRST ST.



17 18 19 20 21 22 23

STORM WATER SEWER NO. 105
Project No. DBHA 573027

B.M. = 1353g N.E. Corner conc base to SKELLY sign on S.W. Corner FIRST and HILLSIDE.

Install Std. 2'x5' Inlet, Top 126.75

Install 15"x31' R.C.P.

Install Std. 2'x5' Inlet, Top 126.81

Install 15"x28' R.C.P.

Install Std. 2'x5' - Alt, Top 126.98

Install 18"x28' R.C.P.

Install 18"x 308' R.C.P.

Remove limits of paving project

Install Spec. Manhole, See Sheet G. +00 21 Street E, Sta. 23+26

Install 15"x10' R.C.P.

Install Std. 2'x5' Inlet, Top 126.90

Remove Existing Manhole
Plug existing 21" R.C.P.
Construct Type B 4' dia. Std. Manhole

Install 24"x24' RCP

ALTERNATE DESIGN NOTE: Contractor to excavate storm sewer crossings with water lines and Bell Cables at and near Hillside prior to work ahead of Sta. 23+26. Any conflict of elevation with existing facilities shall be corrected by Engineer by lowering storm sewer the minimum required amount to clear facilities. (The elevation at Sta. 23+26 to remain the same. The min. flowline at 18" RCP @ Sta 24+32 is 124.1. The pipe slope between above stations to be constant.) Costs for this work and additional work required by an alternate shall be included in price bid for pipe.

FIRST ST. — LORRAINE AVE. — HILLSIDE AVE.

Match Line

Thimble

Saw

2" Water — 12" Water — 8" Gas — 2" Gas — Bell Cable

Install Manhole Type "A" Sta. 23+24 Top 126.13

6" San. Sewer Rd. 121.14 ±

Sta. 26+32 Top 132.39

24" RCP — 18" RCP

24" out 122.10 — 18" in 122.00 — 18" out 124.42 — 18" in 124.32

23.98 — 123.10 — 123.74 — 124.42

24' of 24" RCP @ +0.7%

308' of 18" RCP @ -0.66%

23 — 24 — 25 — 26

MANHOLE DIMENSIONS

Location	L	D_1	D_2	Type
1+55	5'0"	4'5"	1.83"	I
3+39	5'0"	4'5"	2.31"	I
6+74	4'6"	3'10½"	1.97"	I
9+39	4'0"	3'6"	1.66	I
13+34	4'0"	3'6"	1.88"	I
16+19	6'0"	5'3½"	1.86"	I
19+98	6'0"	5'3"	1.65"	II
23+84	6'0"	5'3"	2.25"	II

For Top Elevation & Pipe Flowlines See Plan-Profile of each manhole.

PLAN TOP

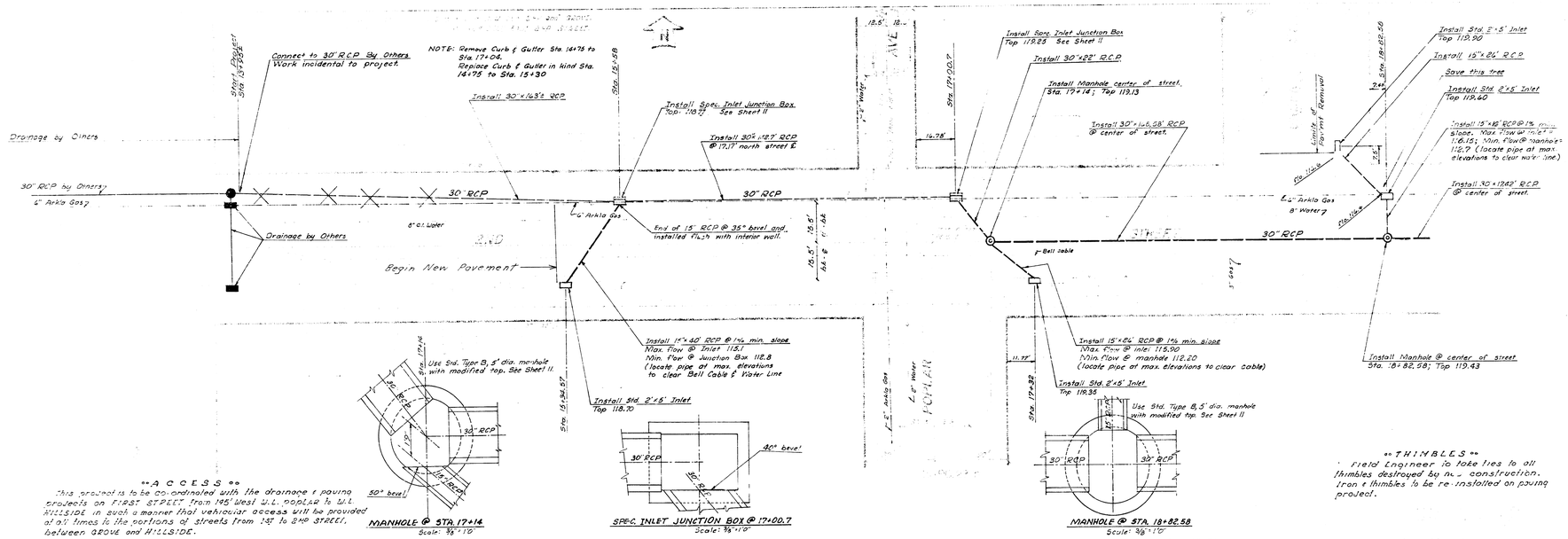
SECTION A-A

SECTION B-B

MANHOLE DETAIL
Scale: ½"=1'0"

135 — 130 — 125

STORM WATER SEWER NO. 105
Project No. DBKA 573027

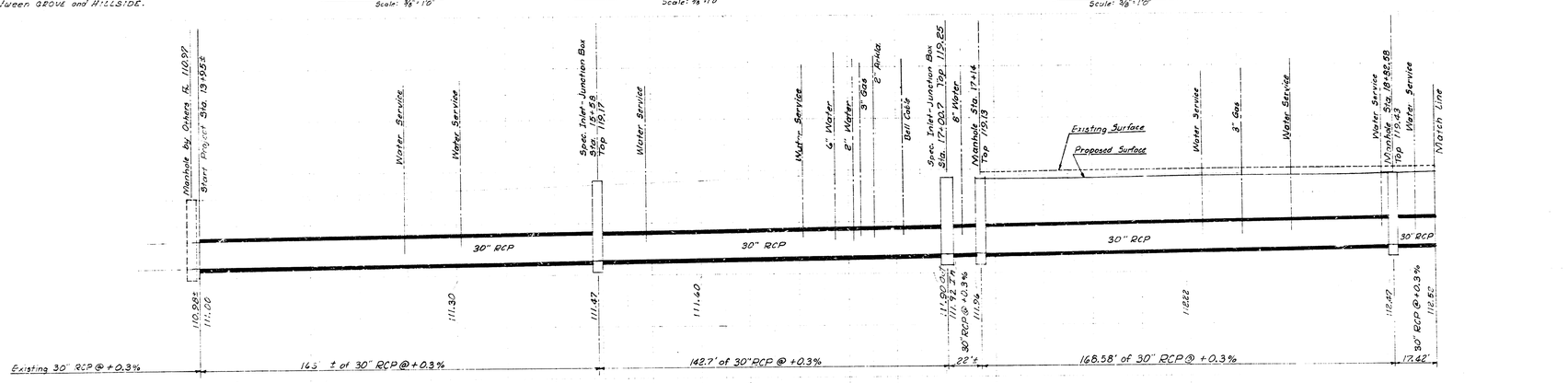


ACCESS

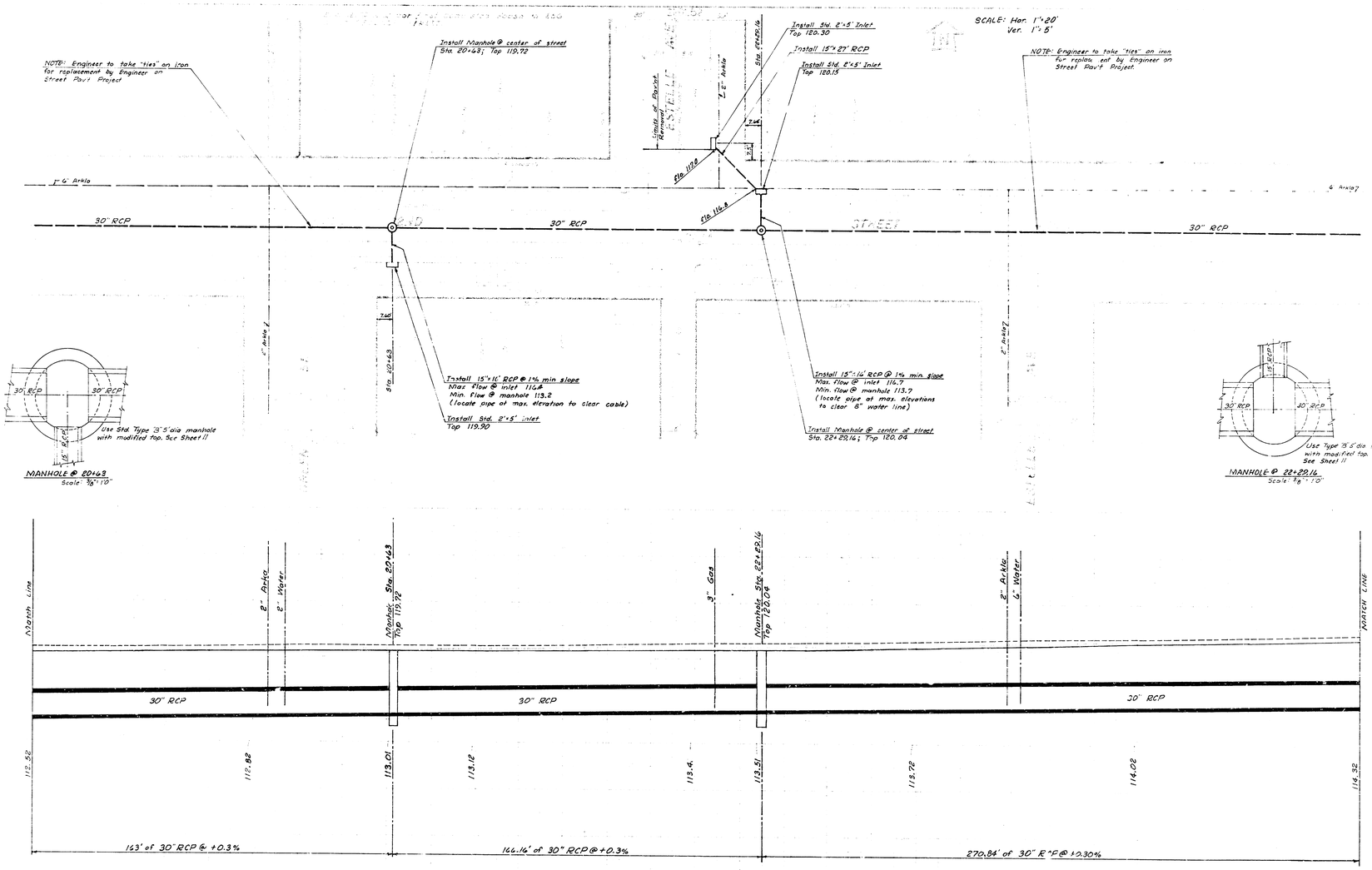
This project is to be coordinated with the drainage & paving projects on FIRST STREET from 195' West W.L. POPLAR to W.L. HILLSIDE in such a manner that vehicular access will be provided at all times to the portions of streets from 14E to 8TH STREET, between GROVE and HILLSIDE.

THIMBLES

Field Engineer is to take ties to all thimbles destroyed by new construction. Iron thimbles to be re-installed on paving project.



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



19 20 21 22 23 24 25

STORM WATER SEWER NO. 105
Project No. DBKA 573027

Sheet 8 of 11

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

Insta. Std. 2'x5' Inlet Top 127.00

Install 15"x27' RCP

Install Std. 2'x5' Inlet Top 121.85

Install 15"x16' RCP

NOTE: Engineer to take "ties" on iron for replacement by Engineer on Street Pav't Project.

Install Std. 2'x5' Inlet, Top 124.60

Install 15"x27' RCP

Install Std. 2'x5' Inlet, Top 124.60

Install 15"x16' RCP

Limits of Pav't Removal

4" Gas

2" Water

8" Water

8" Ankle

6" Ankle

2" Ankle

4" Gas

Sta 25+84.10

Sta 20+39.3

7.5%

5%

Flo 118.7

Flo 116.5

Flo 116.4

Flo 116.1

Flo 121.0

Flo 120.7

Flo 120.6

Flo 120.3

30" RCP

24" RCP

Install 24"x 355.2' RCP

Install manhole @ center of street, Sta. 25+84.10 Top 121.70

Install 30"x 84.10' RCP @ center of street

Install manhole @ center of street, Sta 20+39.3 Top 124.25

NOTE: Engineer to take "ties" on irons for replacement by Engineer on Street Pav't Project

Install 24"x 160.7' RCP @ Center of street

Use Std. Type "A" manholes with modified tops Sec. sheet 11

15" RCP

30" RCP

24" RCP

6'-0"

MANHOLE @ 25+84.10

MANHOLE @ 20+39.3

Scale: 3/8"=1'0"

4" Gas

Manhole Sta. 25+84.10 Top 121.70

2" Ankle

4" Gas

Manhole Sta. 20+39.30 Top 124.25

2" Ankle

Match Line

30" RCP

24" RCP

24" RCP

115.36

30" 114.87

24" 115.07

115.56

116.43

117.40

118.77

24" out 119.23

24" in 119.33

119.85

120.85

84.10' of 30" RCP @ +0.3%

355.2' of 24" RCP @ +1.17%

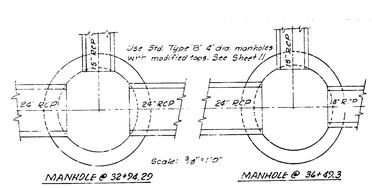
160.7' of 24" RCP @ +1.00%

25 26 27 28 29 30 31

STORM WATER SEWER NO. 105

Project No. DBKA 573027

Sheet 9 of 11



Use Std. Type 'B' 4' dia manholes with modified tops. See Sheet 11

MANHOLE @ 32+94.29

MANHOLE @ 36+49.3

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

Install Std. 2'x5' Inlet, Top 127.90

Install 15"x27" RCP

Install Std. 2'x5' Inlet, Top 130.60

Install 15"x16" RCP

Install Manhole @ center of 8" St. Sta. 36+49.3; Top 129.79

Install 18"x507' RCP

Install Std. 2'x5' Inlet, Top 127.85

Install 15"x16" RCP

Install Manhole Sta. 32+94.29 @ center of street; Top 127.06

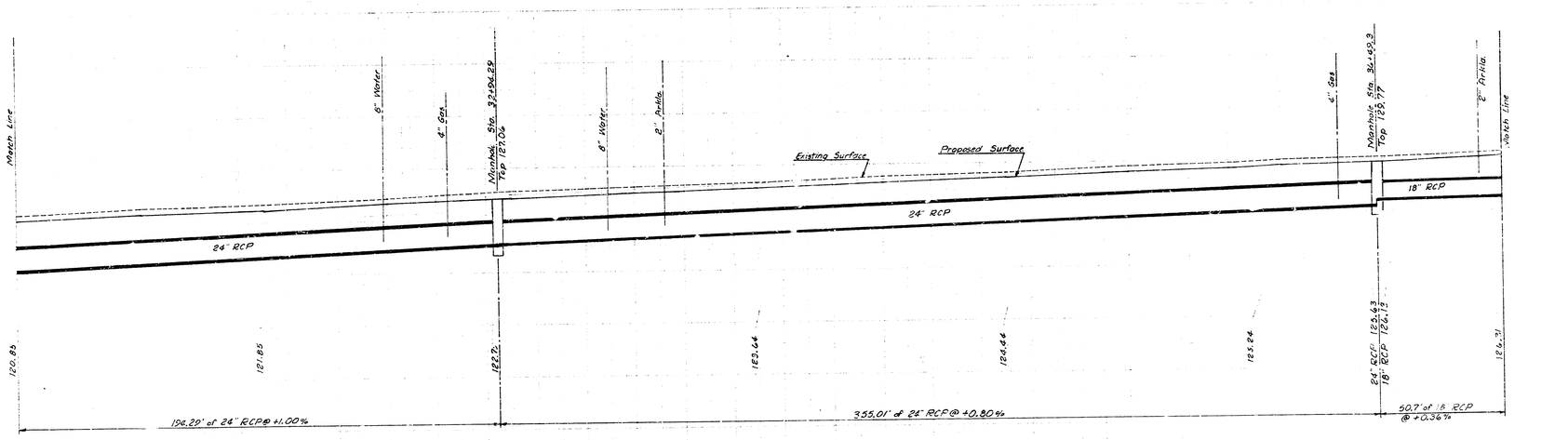
Install 24"x 194.29' RCP @ center of street

Install 24"x 355.01' RCP @ center of street

NOTE: Engineer to take "ties" on iron for replacement by Engineer on Street Pav't Project.

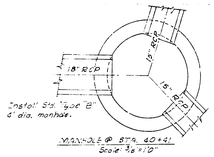
NOTE: Engineer to take "ties" on iron for replacement by Engineer on Street Pav't Project.

NOTE: See Alternate Design Note on Sheet 11 before installation of 18" RCP

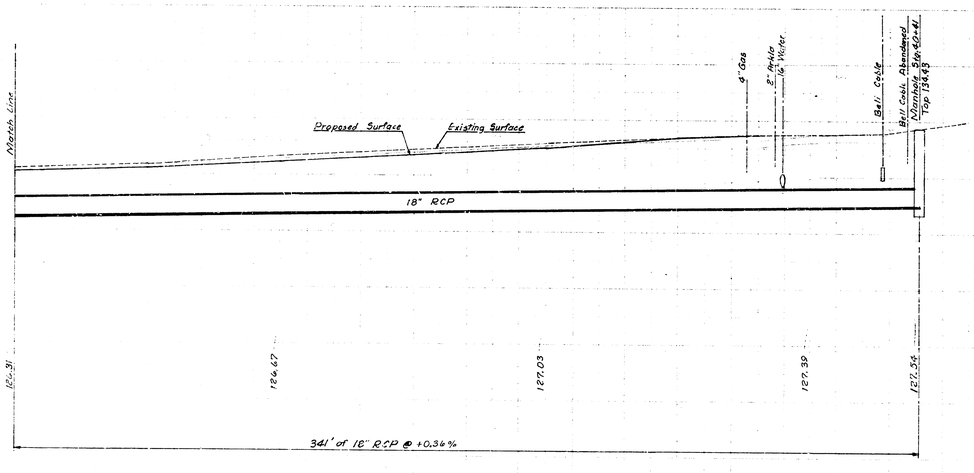


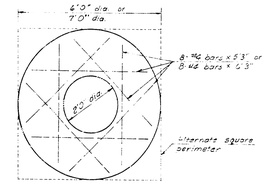
31 32 33 34 35 36 37

STORM WATER SEWER NO. 105
Project No. DBKA 573027



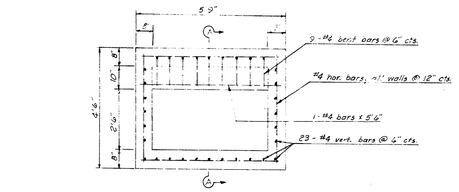
MANHOLE @ Sta. 40+41
Scale: 3/8"=1'0"

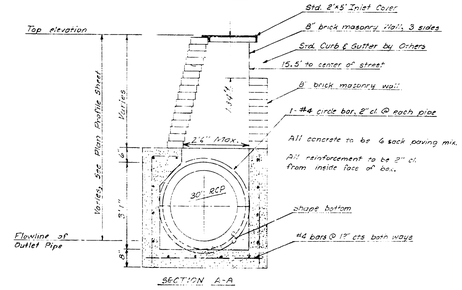




Std. Type "B" MANHOLE MODIFIED
Scale: 1/2"=1'0"

NOTE: CONTRACTOR SHALL HAVE OPTION BETWEEN CONSTRUCTING STANDARD (TYPE B) MANHOLE MODIFIED AS SHOWN BY PLANS OR STANDARD BRICK MANHOLE (TYPE B). WIDE FLANGE MANHOLE RINGS(NO. 500 A.S.T.M.) AS MANUFACTURED BY WESTERN IRON AND FOUNDRY CO., OR AN APPROVED EQUAL, SHALL BE SUBSTITUTED FOR THE STANDARD MANHOLE RING IF THE CONTRACTOR SELECTS THE STANDARD BRICK MANHOLE (TYPE B) "B" CO. STANDARD (TYPE B) "MANHOLE MODIFIED (5' DIAMETER) OR ALTERNATE STANDARD BRICK MANHOLE (TYPE B)(5' DIAMETER) WITH WIDE FLANGE RING SHALL BE PAID FOR AS MANHOLE TYPE III. STANDARD (TYPE B) MANHOLE MODIFIED (4' DIAMETER) OR ALTERNATE STANDARD BRICK MANHOLE (TYPE B)(4' DIAMETER) WITH WIDE FLANGE RING SHALL BE PAID FOR AS MANHOLE TYPE IV.





SPEC. INLET JUNCTION BOX
Scale: 1/2"=1'0"

STORM WATER SEWER NO. 105
Project No. DB1A 573027

Sheet 11 of 11