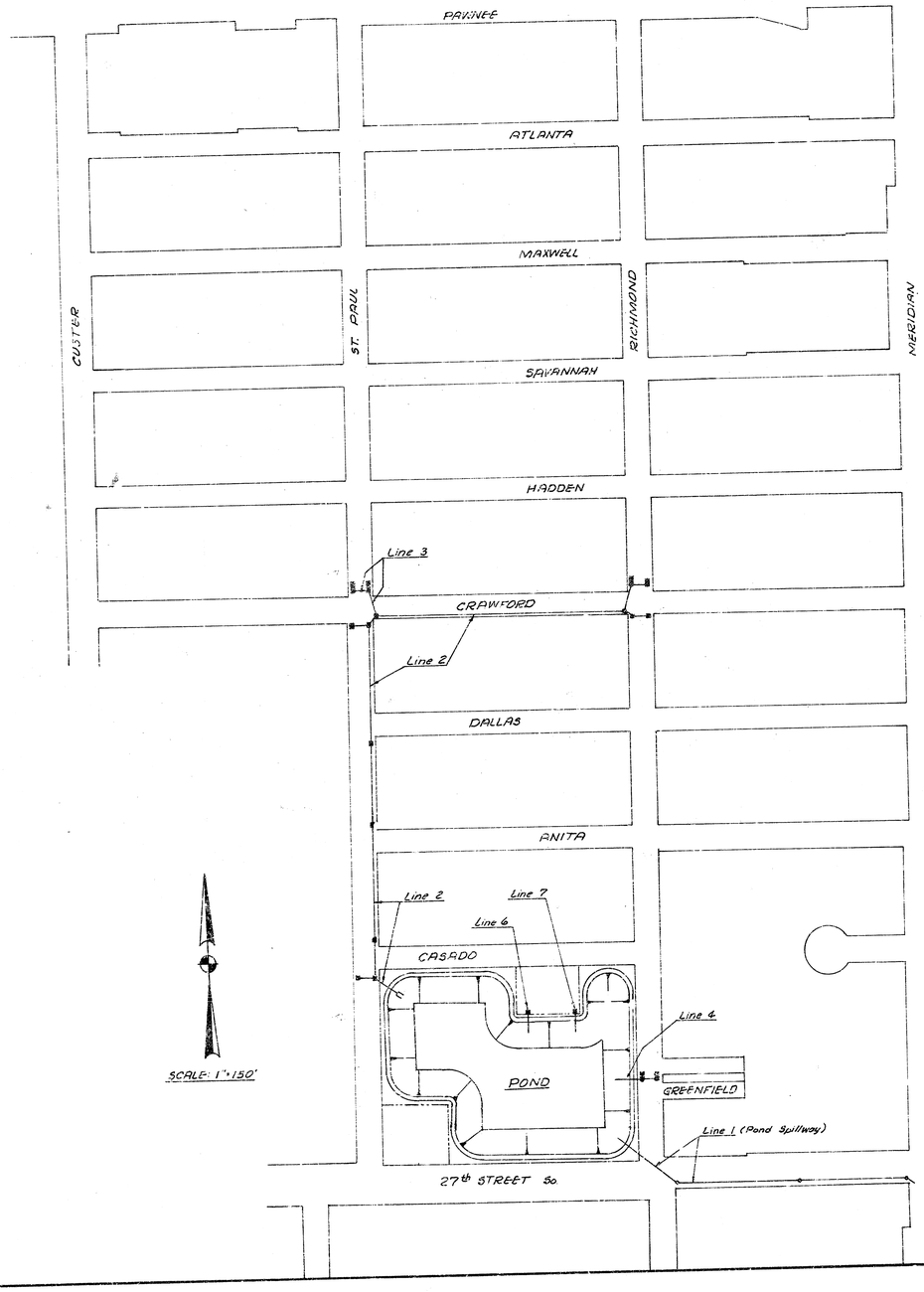
# STORM WATER SEWER NO. 194




GENERAL NOTES

1. ALL TREES, BRUSH, BUILDING, PROPERTY LINES, AND ITEMS OF SALVAGE VALUE SHALL BE REMOVED FROM POND SITE BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE FIELD ENGINEER. THE POND SITE IS THAT AREA BETWEEN 27TH ST. SOUTH, E.L. ST. PAUL ST. AND A LINE PARALLEL TO AND 150' N. OF 27TH ST. SOUTH, E.L. ST. PAUL ST. AND 150' PRIVATE PROPERTY SOUTH OF CASADO ST. AND THE 150' PRIVATE PROPERTY E. OF ST. PAUL ST. AND 27TH ST. SOUTH. ALL OF THIS WORK IS TO BE PAID FOR AT THE LUMP SUM BID PRICE FOR "CLEARING POND SITE."

2. ALL EARTHWORK SHALL BE PAID FOR AS "EXCAVATION", AND ALL EXCAVATED MATERIAL FROM THE LEVEE SHALL BE CONSIDERED INCIDENTAL TO EXCAVATION.

3. FLAP GATES ON THIS PROJECT SHALL BE TIDEFLEX MODEL TDC FLAP GATE AND SHALL BE OF THE PROPER SIZE AND TYPE FOR CONNECTION TO SIZE OF PIPE SHOWN ON PLANS. PAYMENT FOR FLAP GATE, ITS INSTALLATION, AND USE OF CONCRETE SLAB (IF REQUIRED) WITH THE GATE SHALL BE PAID FOR AT BID TYPE FOR "FLAP GATE (__")" OR "FLAP GATE (21")".

4. ALL CORRUGATED METAL PIPE ON THIS PROJECT SHALL BE ASPHALT COATED.

5. CURB INLETS ON THIS PROJECT SHALL BE LOCATED BY THE ENGINEER WITH REFERENCE TO THE CONSTRUCTION PLANS. ANY INLET OR PIPE WHICH CONFLICTS WITH EXISTING UTILITIES MAY BE ALTERED IF SUCH ALTERATION IS SATISFACTORY TO THE OPINION OF THE ENGINEER.

6. CONTRACTOR SHALL COORDINATE HIS WORK WITH WATER, ELECTRIC, TRAFFIC CONTROL, GAS, AND OTHER UTILITY COMPANIES SO MINIMUM INCONVENIENCE WILL OCCUR TO GENERAL PUBLIC. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR RELOCATION OF EXISTING SERVICES.

7. ~~ALL IRONS AND STAKES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE CONTRACTOR.~~

8. ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE SPECIFIED.

9. FIELD ENGINEER SHALL DETERMINE ALL REMOVAL LIMITS. REMOVAL OF CONCRETE SHALL BE TO BE AT NEAREST JOINT WHERE POSSIBLE. ALL OTHER REMOVAL LIMITS TO BE TO SAW JOINT.

R. W. BRUGGEMAN, DIRECTOR OF ENGINEERING

CITY OF WICHITA, KANSAS

PROJECT NO. 468-76-245-80962-000-000 001

DATE: _____

STORM WATER SEWER #194

SWS #194 Sheet 1 of 14

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BM 99.62 City Std. NE Cor. 27th St & Meridian
42.5' N. & 44.0' E. & both

LINE 1

SCALE: 1"=20'

MERIDIAN

Valley Gutter

Valley Gutter

Concrete to remain

12.5'

5'

Sta. 3+14.09 Start 3-12" CMP
35' Lt. & 27th St. So.

Sta. 3+34, P.I. & Manhole
25.5' Lt. & 27th St. So., Δ= 28°29'
See Sheet 7

Install Triple 12" CMP @ 18" cts.
℄ at 25.5' Lt. of 27th St. So. ℄

Remove & Replace Stepping Stones as required.
Cost included in other bid items.

Remove & Replace Drive as required
Typical all Drives

Foundation

Porch

House

Sta. 8+85.8 P.I. & Manhole
25.5' Lt. & 27th St So., Δ= 61°32'21"
See Sheet 7

Tile Sewer

10" San Sewer

ONONHAM RD

Remove & Replace Mail Box

Remove & Replace Mail Box

Remove & Replace Mail Box

Remove & Replace Mail Box

Sta. 5+85 Manhole, See Sheet 7

Constr. Headwall
See Detail, this sheet

℄ 27th St. So.
(7" Pav't w/ integral curb, 41' 9a)

Remove & Replace 6'6" wide Pav't.

Saw Joint.
Existing Pav't

6'6"
#4 bars @ 18" cts ea. way
2" cl.
4" cl.
12" min.
3-12" CMP @ 18" cts.
12" min.

Saw Joint
Existing Pav't

Drive, if joint is less than 4', omit saw joint & remove concrete to said joint.

SECTION OF SPECIAL ENCASEMENT
SCALE: 1/2"=1'0"

5'0" @ Sta. 10+50.22
4'0" @ Sta. 3+14.09

3'6"

FRONT

8"

All exposed edges to have 1/2" bevel.

1'6"

2'0"

#4 rebars both ways

SECTION

HEADWALL FOR 3-12" CMP
Scale: 1/2"=1'0"

NOTE: Details for Encasement, headwalls and manholes are for 3-12" CMP @ 18" cts. If 3-12" RCP @ 20" cts are used, increase width of these facilities by 6" at no additional cost.

Pav't & Drive Replaced by Spec. Encsmt, to be paid for at bid price for "Special Encasement." Additional drive removed to be paid for at bid price for "Drive Replaced."

3-12" CMP (n=0.013)
$Q_0$ = 4.08 cfs, V=1.73 fps
$H_m$ = 0.09', $K_m$ = 2.00
$H_p$ = 1.04', $K_p$ = 22.30

LINE 1

Sta. 3+14.09 Start DWS 97.00

Sta. 3+34 P.I. Install Manhole

Sta. 5+85 Install Manhole

Sta. 8+85.8 P.I. Install Manhole

Sta. 9+00 Match Line

Top of Curb

Construct Headwall

Existing Conc. slab & toe wall to remain.

100

95

96.00

95.98

96.02

96.09

96.19

96.20

96.39

96.49

96.58

96.55

585.91' @ +0.10%
AH.#1 3-12" RCP @ 20" cts.; AH #2 3-12" CMP @ 18" cts.

3 4 5 6 7 8 Match Line 9

LINE 4
See Sheet 3 for Plan

Sta 0+48.48 Flap Gate
Start Pipe
Permanent Pool 94.74
For SWS 96.74
DWS Pond 100.5

Q=17.2, $H_m$=0.40, $H_p$=0.66'

Sta. 0+82
Levee @ 101.5
Sta. 0+92

Sta. 1+00
Row Line Richmond

Sta. 1+41.82 Curb Inlet
Top 98.5
DWS 97.78

Sta. 1+49.42 Curb Inlet
Top 98.5
DWS 98.32

2" Gas Line

Ground Line

4:1

100

95

90

94.07

96.32

96.57

95.10

20'x8'x4" Conc. Slab

62' of 21" CMP @ +0.40%

37' of SWS @ +1.42%
Alt #1 - 18" RCP
Alt #2 - 18" CMP

1'6" Vert. Toe Wall

Adjust inlet brick wall to conform to 10" San. Sewer @ no additional cost.

1

LINES 6 & 7
See Sheet 3 for Plan

Sta. 0+48.48 Flap Gate
Start Pipe

Sta. 0+82
Levee @ 101.5
Sta. 0+92

1400 Property Line

Sta. 1+02 Field Inlet
Top 98.5

DWS (Pond) 100.5

Ground Line

Permanent Pool 96.74

29'x7'x6" Conc. Slab

Existing Drive Table

4:1

Pond Bottom @ 87.0
Sta. 0+27

97.10

97.50

40' of 15" CMP @ +1%

1'6" Vert. Toe Wall

1

LINE 1
See Sheet 3 for Plan

Match Line

Sta. 9+00

8" Water

4" Gas

Street Surface
Top of Special Encasement.

Existing Ground Line

Top of Levee @ 101.5

DWS 98.13

101+50.22
End

Construct Headwall

DWS @ 100.5

Permanent Pool @ 96.74

10" San. Sewer to remain

96.59

96.69

96.74

150.22' @ +0.10%
AH #1 3-12" RCP @ 20" cts.; Alt. #2 3-12" CMP @ 18" cts.

4:1

Sta. 10+89.14

Bottom @ 87.07

100

95

90

85

9 10 11

SWS # 194 Line 1 Sheet 2 of 14
Profile Lines 4, 5, 6 & 7

BM 101.72 RR Spk w-face Street Light Pole, S.E. Cor. Casado & St. Paul.

BM 98.98 "U" cut top w-G Richmond @ End of Road. S.L. 27th St. So.

BM 100.98 RR Spk N-face PP with civil defense whistle S.E. Cor. St. Paul & 27th St. So.

Install Chain Link Fence and Gates at locations as directed by the Field Engineer. See Sheet 10

Iron Sta. 0+00

Constr. Line 2 See Sheet 4
48" Pipe

℄ CASADO

Iron Sta 4+40.0 P
Sta 4+40.5 M

R/W Line 7

Levee

BL #3

Property Line 3+50

Property Line 5+00?

105'

Pond Bottom

Sta. 1+02 Constr. Field Inlet, Top 99.5, See Sheet 7
10' x 10' Easements

Property Line 7
Sta. 1+00 (Lines 6 & 7)

47' 47'

Elev. 89.25

BL #2

Line 6 @ Sta. 3+75 Base Line

Sta 0+62 Line 6
Install Flap Gate
Start 15" CMP

15" CMP See Sheet 2 for Profile

Sta 0+42 Line 7
Install Flap Gate
Start 15" CMP

Line 7 @ Sta. 4+90 Base Line

Install 29'x7'x6" Conc. Slab with Toe Wall.

DLK-40
WSK

℄ ST. PAUL

R/W Line 0+30?

100'

25'

BL #1

BL #4

BL #5

Pond DWS 100.5
Permanent Pool 94.7±
Existing Water Table 92.0±

SCALE: 1"=30'

Sta. 1+70 Constr. Type A & B
Manhole, Top 102.0±, IE 96.90±
Plug Line east

Remove 8" San. Sewer & Manhole
Included in Clearing Pond Site

8" San. Sewer to remain

10' San Easmt.

Install "Rustoke" Chain Link Fence north & east of this property

Property Line 1+80?

135'

Underground Elec.

Levee

R/W Line 1

25'

10'

℄ 27th STREET So.

Sta. 6+42 Line 4
Install 21" CMP
Start 21" CMP

Install 20'x8'x4" Conc. Slab with Toe Wall

21" (Line 4)
See Sheet 2 for Profile

Sta. 1+11.42 Line 4 Constr. Type 1A
Curb Inlet, w=4'2", Top 98.5

18" SWS (Line 4)
See Sheet 2 for Profile)

Sta. 10+89.14
Line 1

Sta. 10+50.22 Line 1
Constr. Headwall, See Sheet 2 for Detail.

4" Gas

8" Water

Remove & Replace Pav't

℄ RICHMOND

R/W Line Sta 1+30 Line 4

R/W Line Sta 4+30 (Base Line)

60' R/W

10" San. Sewer

31' 8/8 Future

190'

10" San. Sewer

1-2" Gas

10'

Sta 8+85.8 Line 1 P.I. & Manhole
25.5' So. of 27th St So., Δ = 41°32'21"
See Sheet 7

℄ RICHMOND

10'

25'

TYPICAL SECTION OF POND

SCALE: Hor. 1"=30'
Ver. 1"=5'

58' 10' 8'

Top of Levee 101.5

DWS 100.5?

Ground Line?

Permanent Pool 94.7±?

R/W Line?

4:1

Bottom 87.0?

Constr. Type 1A
Curb Inlet, W=4'2", Top 98.5

Install 4' of 15" Pipe
DSFL 95.4, USFL 95.5

GREENFIELD

Remove 24' of 10" San. Sewer
Replace 24' of 10" DIP
Encase Joints

Constr. Type 1A Curb Inlet
W=4'8", Top 98.5

Install 4' of 15" Pipe
DSFL 95.4, USFL 95.5

GREENFIELD

Sta. 1+98.42 Line 4, Constr. Type 1A
Curb Inlet, W=4'2", Top 98.5

Constr. Line 1 See Sheet 2
3-12" CMPs @ 18° cts.

SWS #194 POND Sheet 3/14

BM 101.72 RR Spk w-face Street Light Pole
SE Cor. Casado & St. Paul

LINE 2

N

Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.

Sta. 0+61 Constr. Type 1A Curb Inlet
Top 100.7 w=12'

Install 35' of 15" Pipe
USFL 97.2 DSFL 96.8

Sta. 0+61 Constr. Type 1A Curb Inlet
Top 100.7 w=7'0"

Sta 1+39 Constr. Type 1A Curb Inlet
Top 100.7 w=7'0"

Sta 3+29 Constr. Type 1A Curb Inlet
Top 101.4 w=7'0"

Sta. 1+00
Iron

Sta. 3+60 P
Sta 3+59.97 M
Iron

St. Paul Ave

9/8
31' Future
32'
30'

15"

48"

P.I. 20' Pt. St. Paul & Sta. 0+61
Δ = 54°12'40"

Remove 15" RCP & Replace

Remove 18" CMP & Replace

Casado

Anita

100'
10'
8:1
Top of Levee

Sta. 0+00
Start Pipe

Constr. Headwall
See Sheet 7

Line 2

Sta. 0-45.02 Line 2

Bottom of Pond

58'
10'
8'

All Culverts Removed are to be Replaced whenever possible.

Guard Post required to be removed shall be replace at no additional cost.

DWS-417
WSK

Q=57 cfs
Hm=0.16'
Hp=0.08'

Q=57 cfs
Hm=0.16'
Hp=0.10'

Q=57 cfs
Hm=0.16'
Hp=0.35'

Q=57 cfs
Hm=0.16'
Hp=0.26'

LINE 2

Sta. 0+00 End Apron
Start Pipe
DWS 96.74

Sta. 0+12.98
Levee @ 10.15

Sta. 0+22.98

Sta. 0+61 Curb Inlet
Top 100.7
DWS 96.98

Sta. 1+39 Curb Inlet
Top 100.7
DWS 97.24

Sta. 3+29 Curb Inlet
Top 101.4
DWS 97.75

Sta. 5+50
Match Line

Ground Line
DWS Pond 100.57
Permanent Pool 96.74
Bottom @ 87.0
Sta. 0-45.02
4:1

Proposed Top-of-Curb
Ground Line

100
95
90
85

92.87
96.99
98.01
93.17
93.27
93.72
93.82
94.04

51' of SWS @ +0.20%
Alt. #1 48" RCP
Alt. #2 48" CMP-FP

78' of SWS @ +0.20%
Alt. #1 48" RCP
Alt. #2 48" CMP-FP

260' of SWS @ +0.20%
Alt. #1 48" RCP
Alt. #2 48" CMP-FP

151' of SWS @ +0.16%
Alt. #1 48" RCP
Alt. #2 48" CMP-FP

92.87 0
93.09 1
93.39 2
93.59 3
93.82 4
93.98 5

SWS #194 Line 2 Sheet 4 of 14

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BM 102.38 RR Spk w-face S.E. Cor. Crawford & St. Paul

Sta. 8+41 (Street) Constr. Type 1A Curb Inlet w=4'2", Top 100.7

Install 35' of 15" Pipe USFL 97.2, DSFL 96.8

Sta. 9+47 Constr. Type 1A Curb Inlet w=4'2", Top 100.7

Constr. Type 1A Curb Inlet w=4'2", Top 100.7, Flo. out 97.2

Constr. Type 1A Curb Inlet w=4'2", Top 100.7, Flo. out 97.4

Constr. Reinf. Conc. Manhole Top 100.71

St. Paul Ave

6+20 P 4+19.51 P

Remove 24"x15" CMPA Replace

LINE 2

LINE 3

Line 3 See other view this sheet

Sta. 8+30

Crawford Ave

Install 14' of 18" Pipe DSFL 94.20, USFL 94.30

Plank end with 2" boards @ no additional cost.

Sta. 5+81 Constr. Type 1A Curb Inlet w=7'0", Top 101.1

Dallas

Sta. 8+41 Constr. Type 1A Curb Inlet w=7'0", Top 100.7

Eas'mt Line

Sta. 8+62 Back = 8+56 Ahead, Constr. Reinf. Conc. Manhole, Top 100.7 (Sta. 8+71 Line 3)

Crawford Ave

Constr. Type 1A Curb Inlet, w=4'2" Top 100.7 Flo. out 97.4

Constr. Type 1A Curb Inlet, w=4'2" Top 100.7 Flo. out 97.2

Sta. 9+30, Constr. Type 1A Curb Inlet, w=5'0" Top 100.7

St. Paul Ave

Remove & Replace 15" RCP

Remove & Replace Mail Box

Remove 15" RCP Replace

Sta. 8+71 Line 3 = Sta. 8+62 Back Line 2 = Sta. 8+56 Ahead Line 2 Constr. Reinf. Conc. Manhole, Top 100.7

Identical Manhole

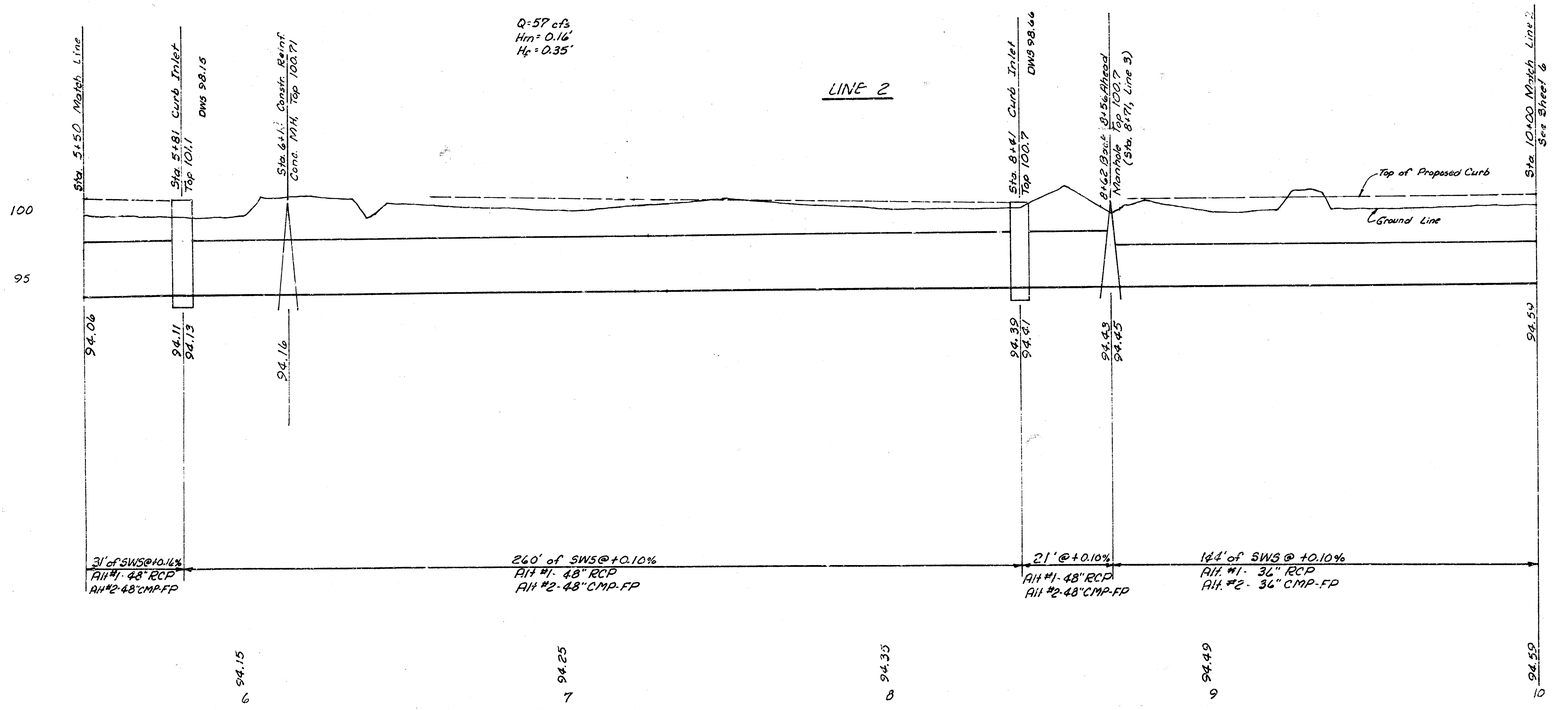
SCALE: 1" = 20'

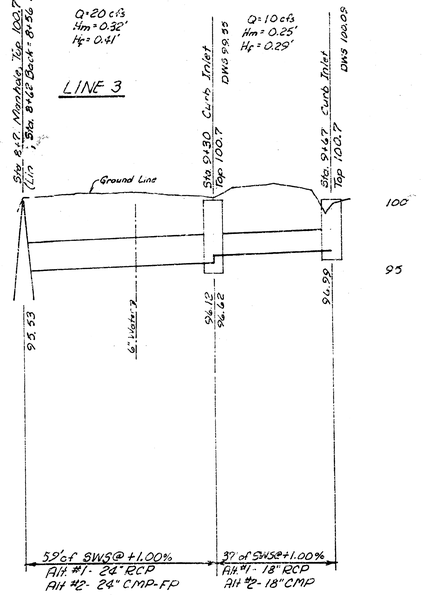
NOTE: Manholes @ 6+14 and @ 8+62 shall have bottom of reinf. conc. top slab at the top of 48" pipe opening.

Guard Posts required to be removed shall be replaced @ no additional cost.

NOTE: When inlets are shown contiguous, install 14" of 21" pipe at "Flo. out" elevation of each inlet so indicated. Cost to be included in price bid for inlet.

Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.




Rev. 9-2-82
Rev. 9-3-82

95.82

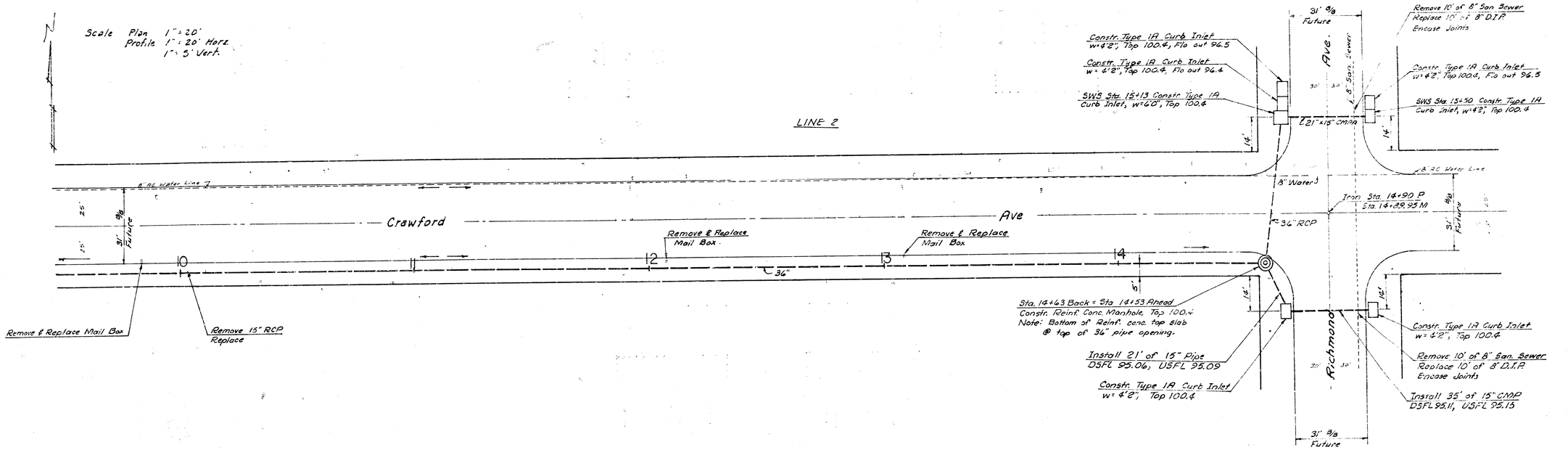
9 SWS # 194, Lines 2 & 3

Sheet 5/14 14

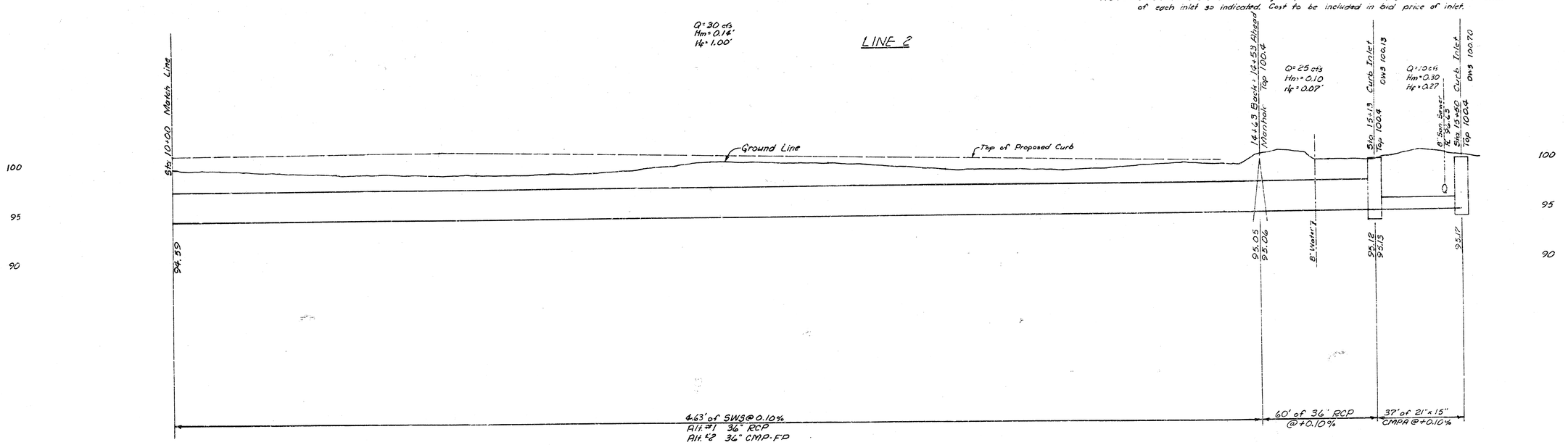
BM 104.49 NW Cor. Conc. Porch 2819 Crawford

BM 104.88 SE Cor. Conc. Porch, 2708 Crawford

Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.



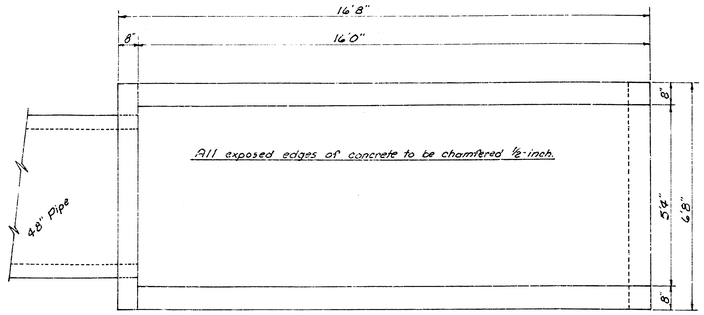

NOTE: When inlets are shown contiguous, install 1'-4" of 21" pipe at "Flo out" elevation of each inlet as indicated. Cost to be included in bid price of inlet.



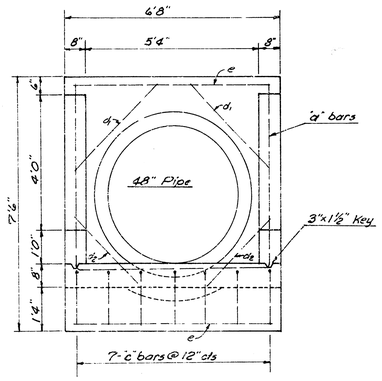

Rev. 9-2-82
Rev. 9-3-82

SWS #194, Line 2

Sheet 16/14 14

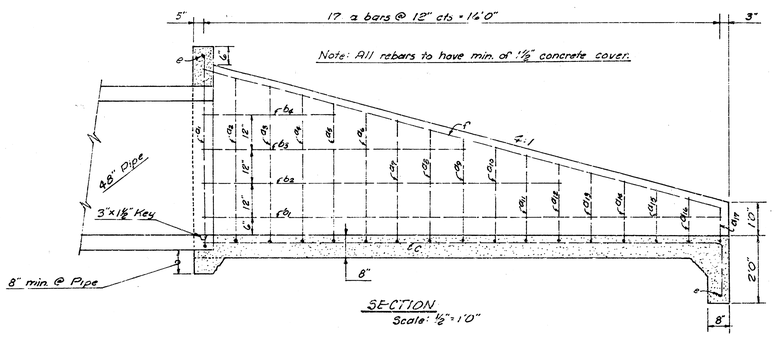



PLAN
Scale: ½"=1'0"




FRONT
Scale: ½"=1'0"

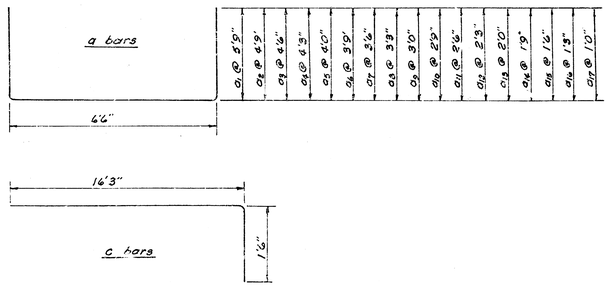
Note: All Conc Reinforcement to be #4 Rebars.



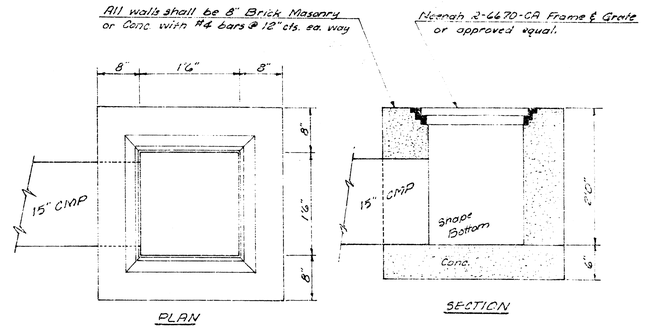

SECTION
Scale: ½"=1'0"

RE-BAR SCHEDULE

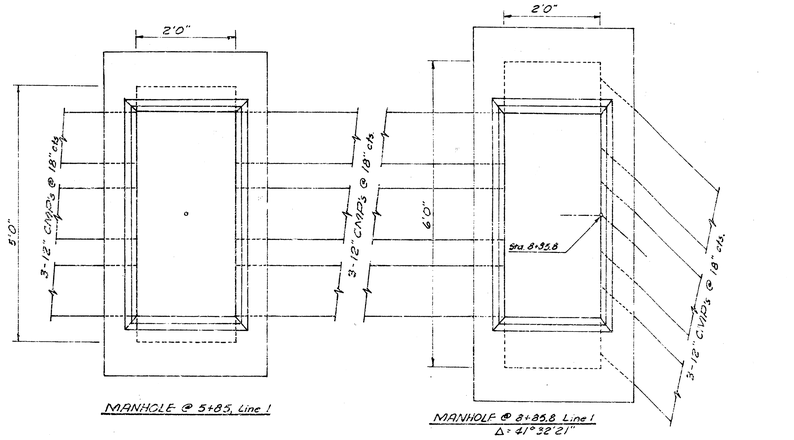
| Bar | Shape | No. & Length | Weight |
|---|---|---|---|
| $a_1$ | | 1 @ 18'0" | 12.0 lbs |
| $a_2$ | | 1 @ 16'0" | 10.6 |
| $a_3$ | | 1 @ 15'6" | 10.4 |
| $a_4$ | | 1 @ 15'0" | 10.0 |
| $a_5$ | | 1 @ 14'6" | 9.7 |
| $a_6$ | | 1 @ 14'0" | 9.4 |
| $a_7$ | | 1 @ 13½" | 9.0 |
| $a_8$ | | 1 @ 13'0" | 8.7 |
| $a_9$ | | 1 @ 12'6" | 8.4 |
| $a_{10}$ | | 1 @ 12'0" | 8.0 |
| $a_{11}$ | | 1 @ 11'6" | 7.7 |
| $a_{12}$ | | 1 @ 11'0" | 7.3 |
| $a_{13}$ | | 1 @ 10'6" | 7.0 |
| $a_{14}$ | | 1 @ 10'0" | 6.7 |
| $a_{15}$ | | 1 @ 9'6" | 6.3 |
| $a_{16}$ | | 1 @ 9'0" | 6.0 |
| $a_{17}$ | | 1 @ 8'6" | 5.7 |
| $b_1$ | | 2 @ 16'3" | 21.7 |
| $b_2$ | | 2 @ 11'3" | 15.0 |
| $b_3$ | | 2 @ 8'3" | 11.0 |
| $b_4$ | | 2 @ 4'3" | 5.7 |
| c | | 7 @ 17'9" | 83.0 |
| $d_1$ | | 2 @ 3'6" | 4.7 |
| $d_2$ | | 2 @ 2'9" | 3.7 |
| e | | 2 @ 6'2" | 8.2 |
| f | | 2 @ 14'5" | 22.4 |
| Total Rebars 319 lbs. Conc. 6¼ C.Y. | | | |




HEADWALL @ STA. 0+00 LINE 2

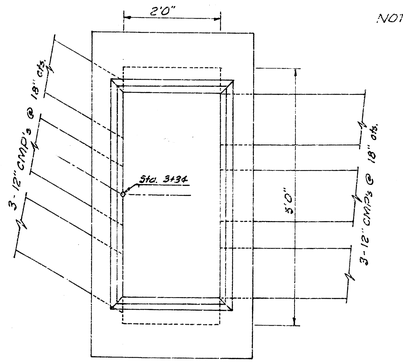



FIELD INLET LINES 6 & 7
Scale: 1"=1'0"



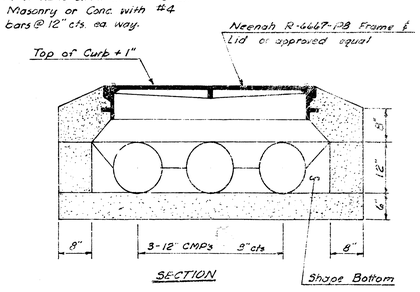

MANHOLE @ 5+85, Line 1

MANHOLE @ 8+85.8 Line 1
Δ = 41°32'21"



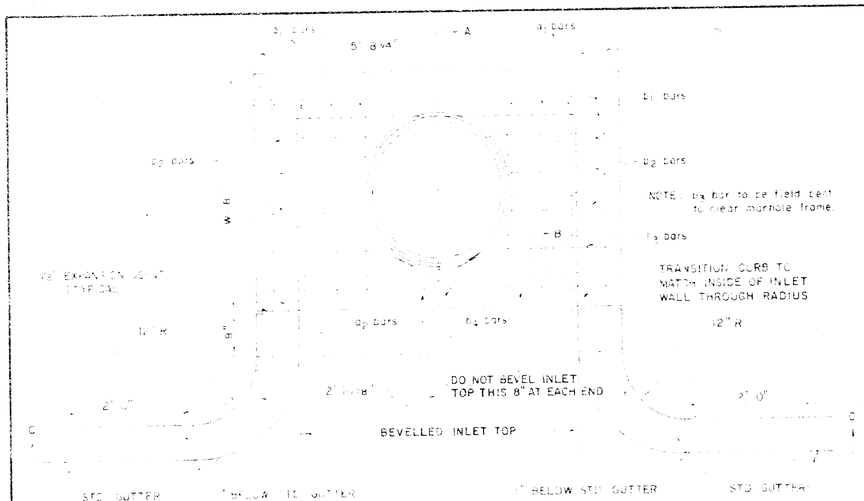

MANHOLE @ 3+36 Line 1
Δ = 28°29'

NOTE: All walls shall be 8" Brick Masonry or Conc. with #4 bars @ 12" cts. ea. way.

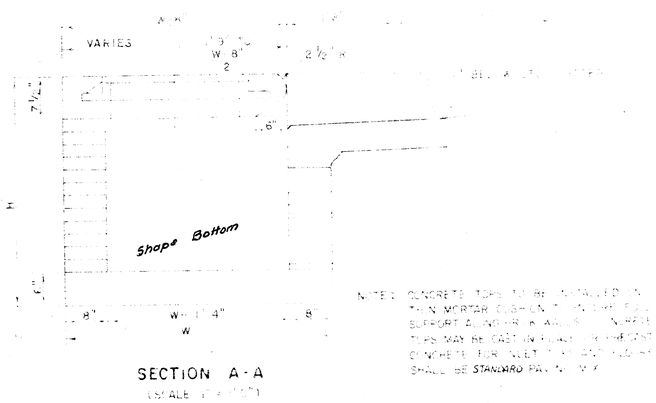



SPECIAL MANHOLE
SCALE: ¾"=1'0"

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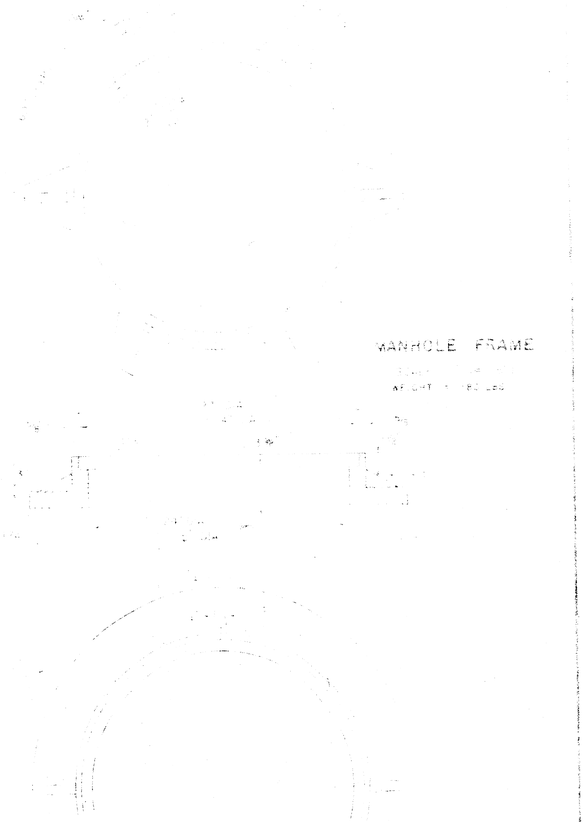


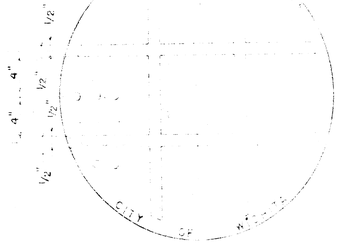

PLAN (SCALE 1" = 1'-0")




SECTION A-A
(SCALE 1" = 1'-0")

NOTES: CONCRETE TOPS TO BE INSTALLED ON A THIN MORTAR BED ON TOP OF INLET WALLS. SUPPORT ANGLES OR RAILS IN WALLS MAY BE CAST IN PLACE OR GROUTED IN CONCRETE FOR INLET TOPS. REINFORCEMENT SHALL BE STANDARD PAVING WWF




MANHOLE COVER
(SCALE 1" = 6")
WEIGHT = 175 LBS

STEEL SCHEDULE

| MARK | | $b_1$ | $b_2$ | $b_3$ | $b_4$ | | | | | AT |
|---|---|---|---|---|---|---|---|---|---|---|
| NUMBER | | | | | | | | | | |
| SIZE | | | | | | | | | | |
| W=4'2" | 6'5" | 2'4" | 5'5" | – | – | – | – | 1'5" | 5'6" | 5'5" | 60 # |
| W=5'0" | 8'1" | 4'4" | – | 5'5" | – | – | – | 1'5" | 5'6" | 5'5" | 77 # |
| W=6'0" | 10'1" | 5'4" | – | – | 5'5" | – | – | 1'5" | 5'6" | 5'5" | 97 # |
| W=7'0" | 11'1" | 6'4" | – | – | – | 5'5" | – | 1'5" | 5'6" | 5'5" | 111 # |
| W=8'0" | 12'1" | 7'4" | – | – | – | – | 5'5" | 1'5" | 5'6" | 5'5" | 124 # |

* NOTE: $b_2$ BARS TO BE PLACED APPROX 2" BELOW TOP OF INLET COVER

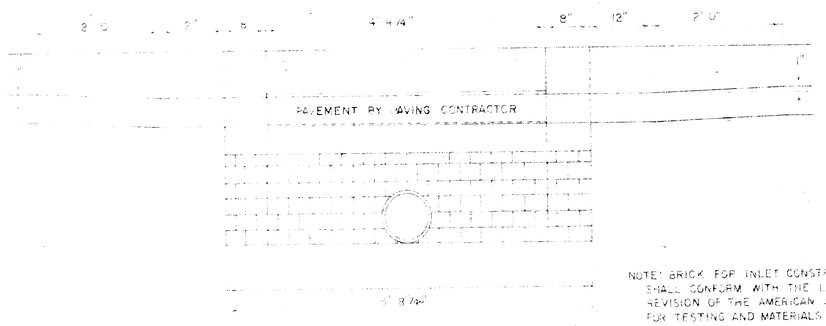
BENDING DIAGRAM




STANDARD CURB INLET PRECAST TOPS

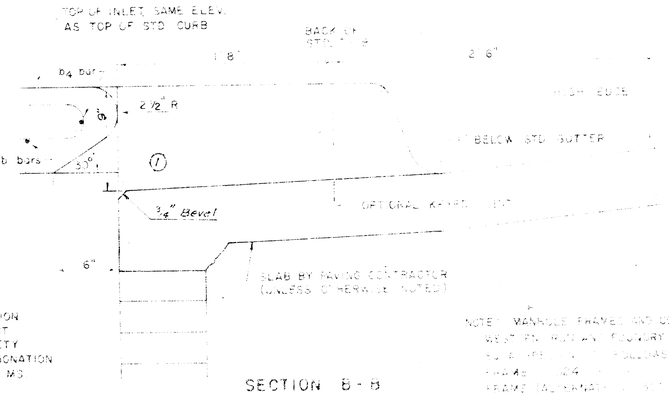
| W | PRECAST TOP SIZE | PIPE SIZE | CU YD. CONC. |
|---|---|---|---|
| 4' 2" | 36"x5'8 1/4"x7 1/2" | 21" & SMALLER | 0.46 * |
| 5' 0" | 44"x5'8 1/4"x7 1/2" | 24" & 30" | 0.57 * |
| 6' 0" | 54"x5'8 1/4"x7 1/2" | 36" & 42" | 0.71 * |
| 7' 0" | 64"x5'8 1/4"x7 1/2" | 48" & 54" | 0.84 * |
| 8' 0" | 74"x5'8 1/4"x7 1/2" | 60" & 66" | 0.97 * |

* GROSS VOLUME



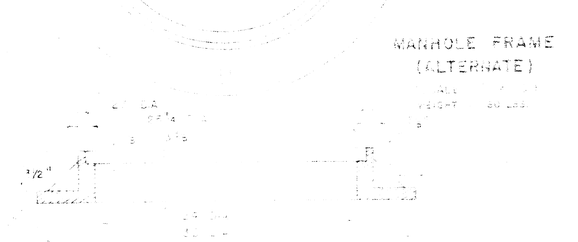

SECTION C-C
SCALE 1" = 1'-0"

NOTE: BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C32 FOR MANHOLE BRICK GRADE MS




SECTION B-B
SCALE 1" = 1'-0"

NOTE: MANHOLE FRAME AND COVER ARE MEANT TO BE AN EXAMPLE OF SUCH ITEMS AND ARE NOT REQUIRED

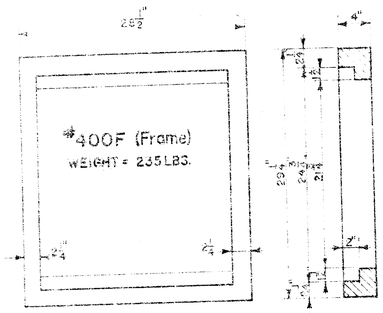


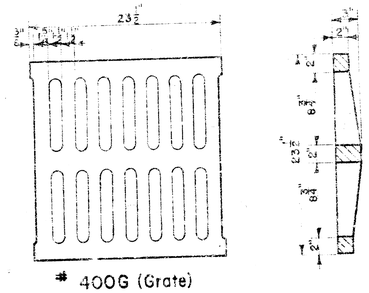

① Rev. 5-18-81

DETAIL STANDARD TYPE IA CURB INLET
CITY OF WICHITA, KANSAS
R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/ CITY ENGINEER
JUNE, 1981

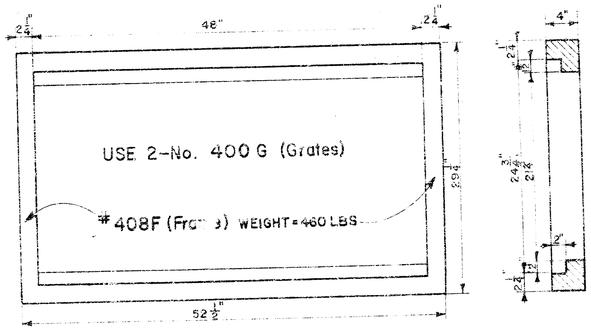
SW5 # 194
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NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be used only if approved by the engineer.

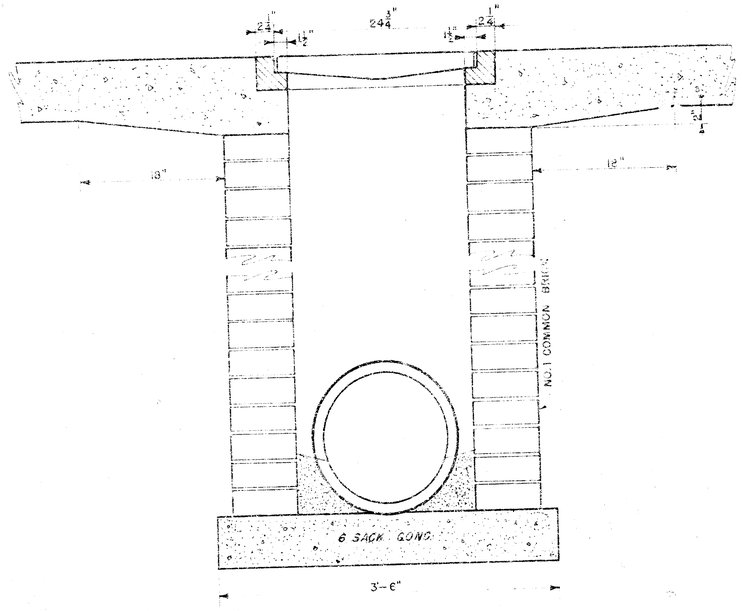


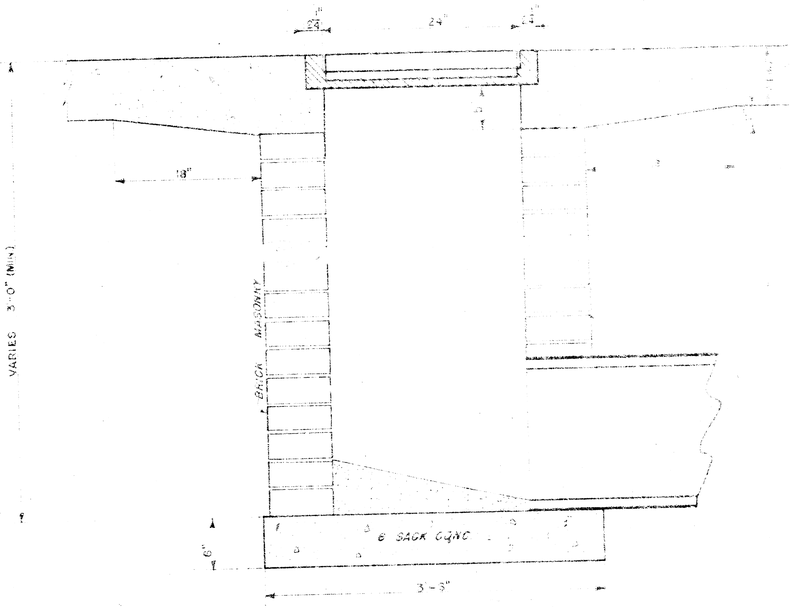



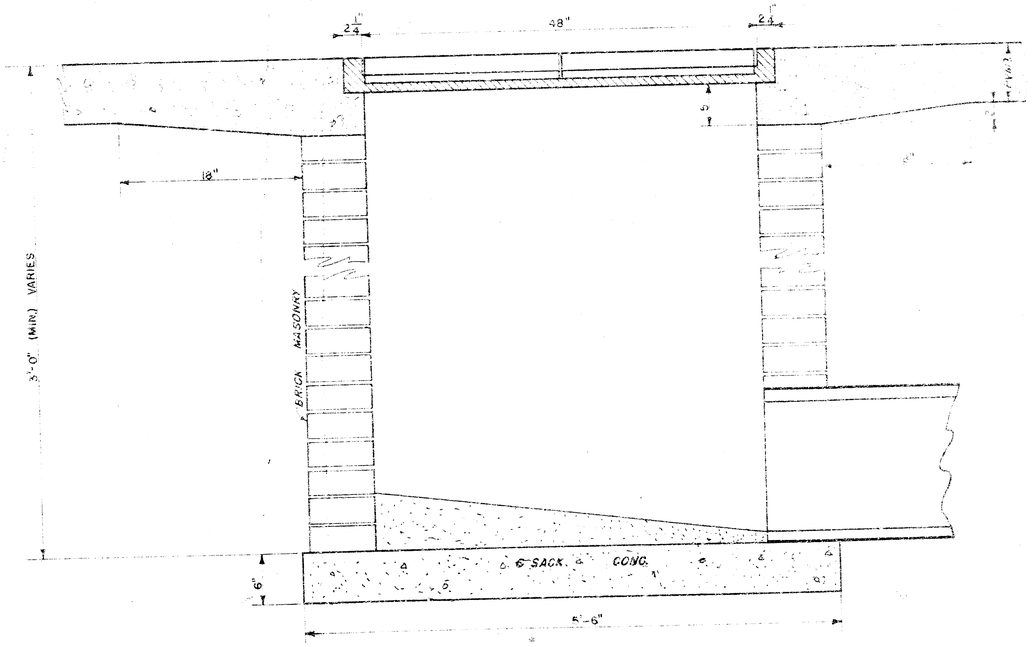

24"x24" Frame & Grate Detail




Double 24"x24" Frame Detail



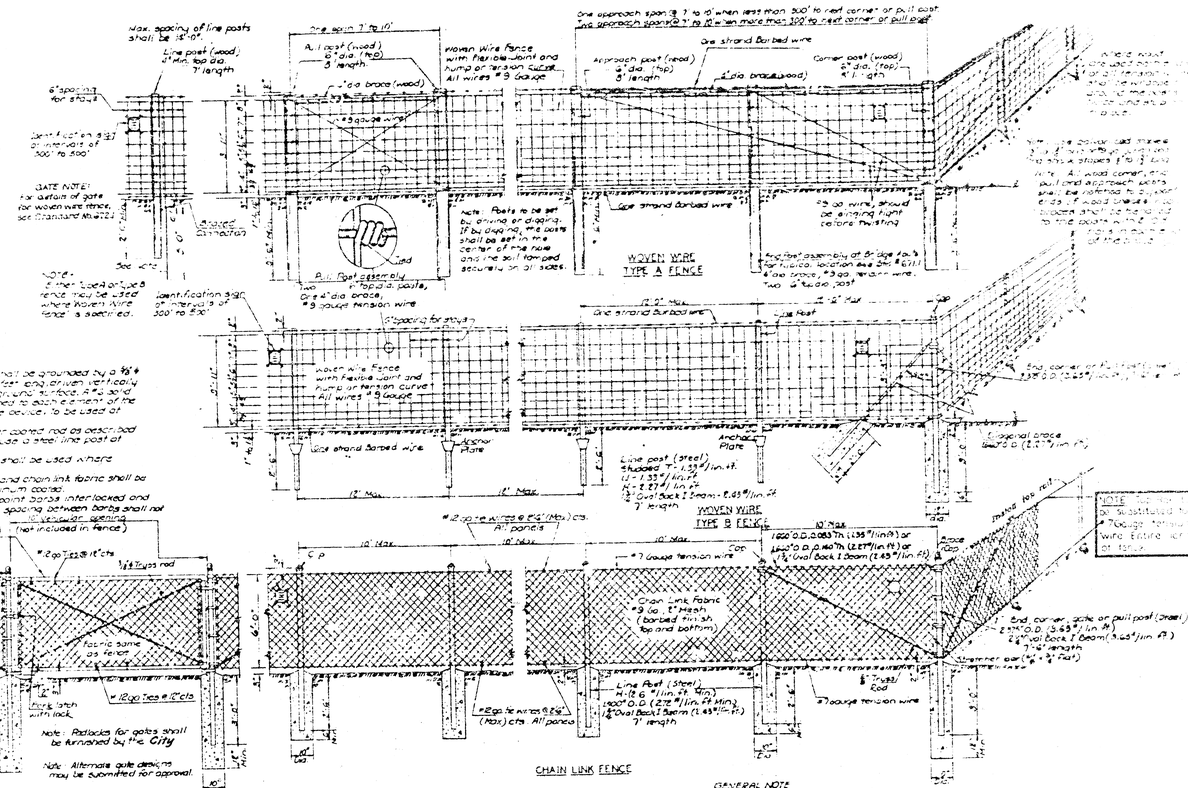




# DROP INLET DETAILS

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Scale: 1-1/2" = 1'-0"




NOTE: When wood posts are used the fence shall be grounded by a 5/8" ø copper rod or copper coated rod 8'-0" feet long, driven vertically so that the top is 6" min. but not above the ground surface. A #6 solid copper conductor shall be securely fastened to each element of the fence by use of clamps or other suitable devices to be used at intervals of 15' Max.

For all wood H frame, braced or corner post and rod as detailed the contractor may at his option, use a steel line post at intervals not to exceed each 6th post.

The galvanized or copper coated rod shall be used where paralleling steel post over the fence.

All bed wire tension wire, woven wire and chain link fabric shall be either zinc coated (galvanized) or aluminum coated.

All barbed wire shall be 12½ gauge 4 point barbs interlocked and wrapped around one main wire. Average spacing between barbs shall not be more than 5".

GENERAL NOTE

Both ends of all wood posts shall be cut square with the axis of the post. Pointed posts will not be permitted.

Pull posts shall be used at sharp breaks in vertical grade or at approximately 350' centers on straight runs or as directed by the Engineer.

All wood posts and braces shall be treated with creosote or pentachlorophenol in accordance with the requirements of the specifications.

All concrete used in fence installation shall be Class B and shall conform to the requirements of the specifications.

All steel posts, brace and gate frames shall be galvanized.

Outside diameters shown for tubular steel posts, bracing and gate frames are nominal. Weight tolerances shall be as shown in the specifications.

Right of Way fence shall generally be set parallel to and 12" clear from the Right of Way line. Private fence shall not be connected to the highway fence.

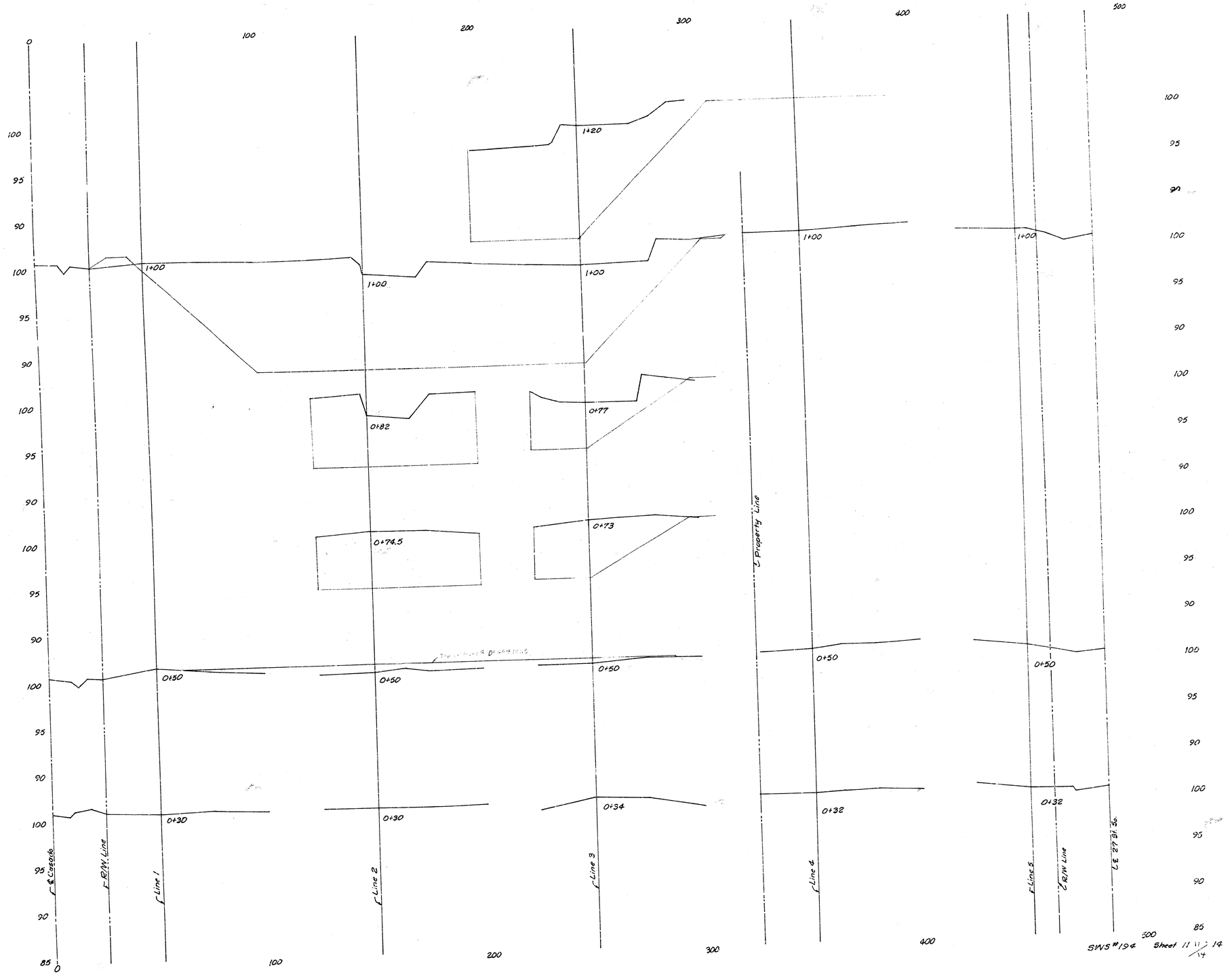
The alignment layouts as shown are typical, but are not representative of all situations that may occur. Construction may be varied as required to meet field conditions and/or as directed by the Engineer.

PROJECT DESCRIPTION

SWS # 194

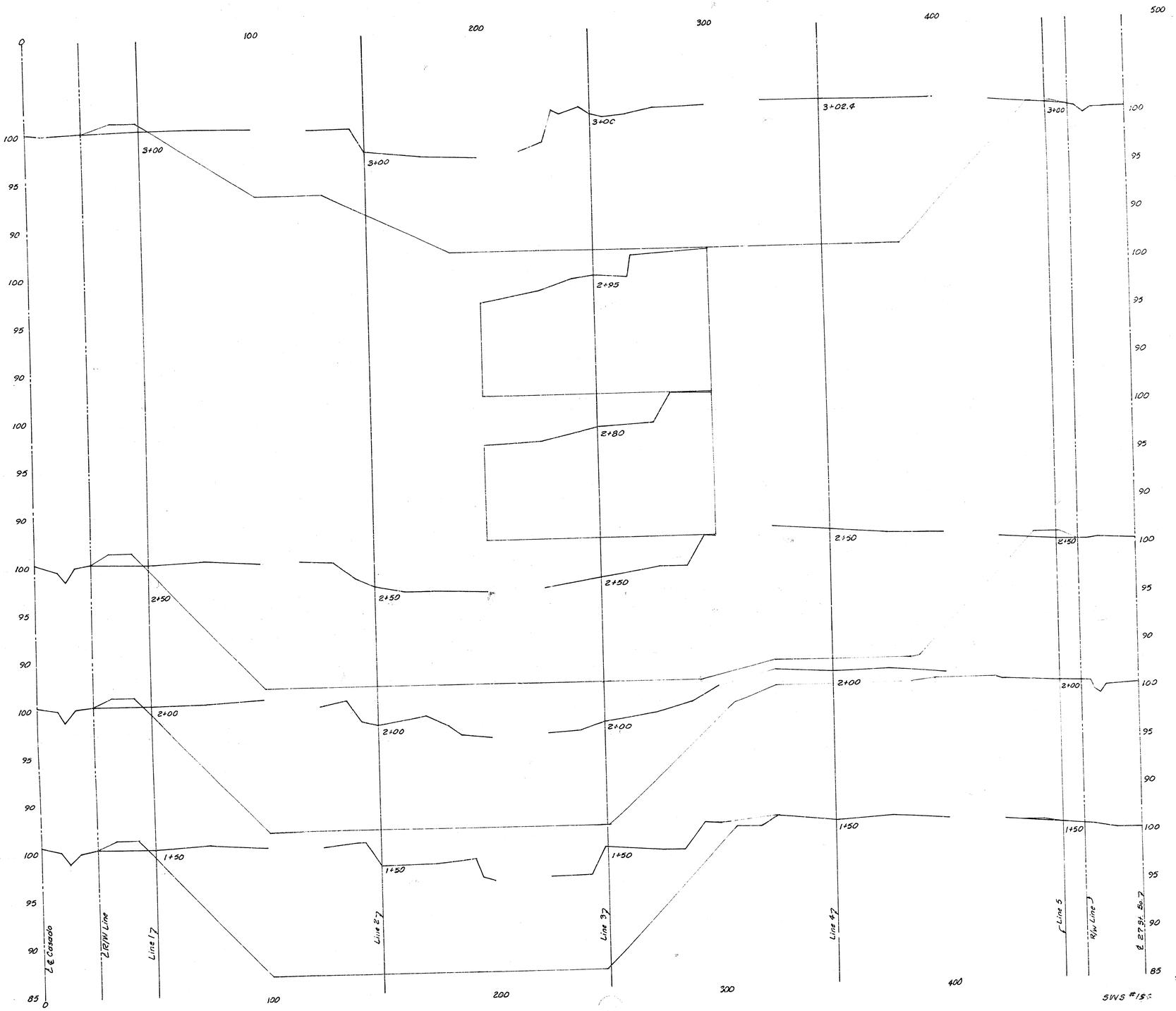
PROJECT NUMBER

468-76-845-80962-000-000-001




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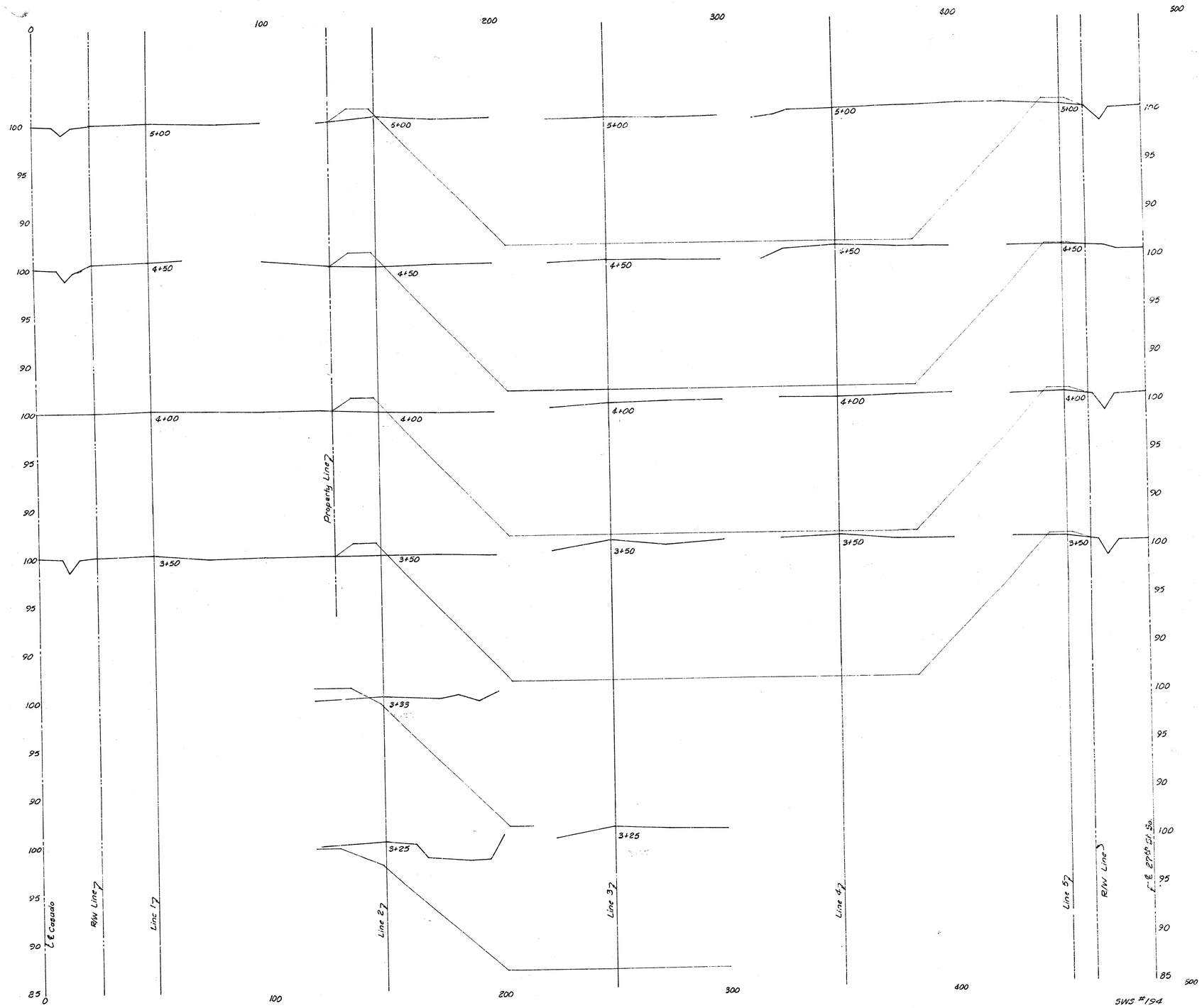
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SWS #15

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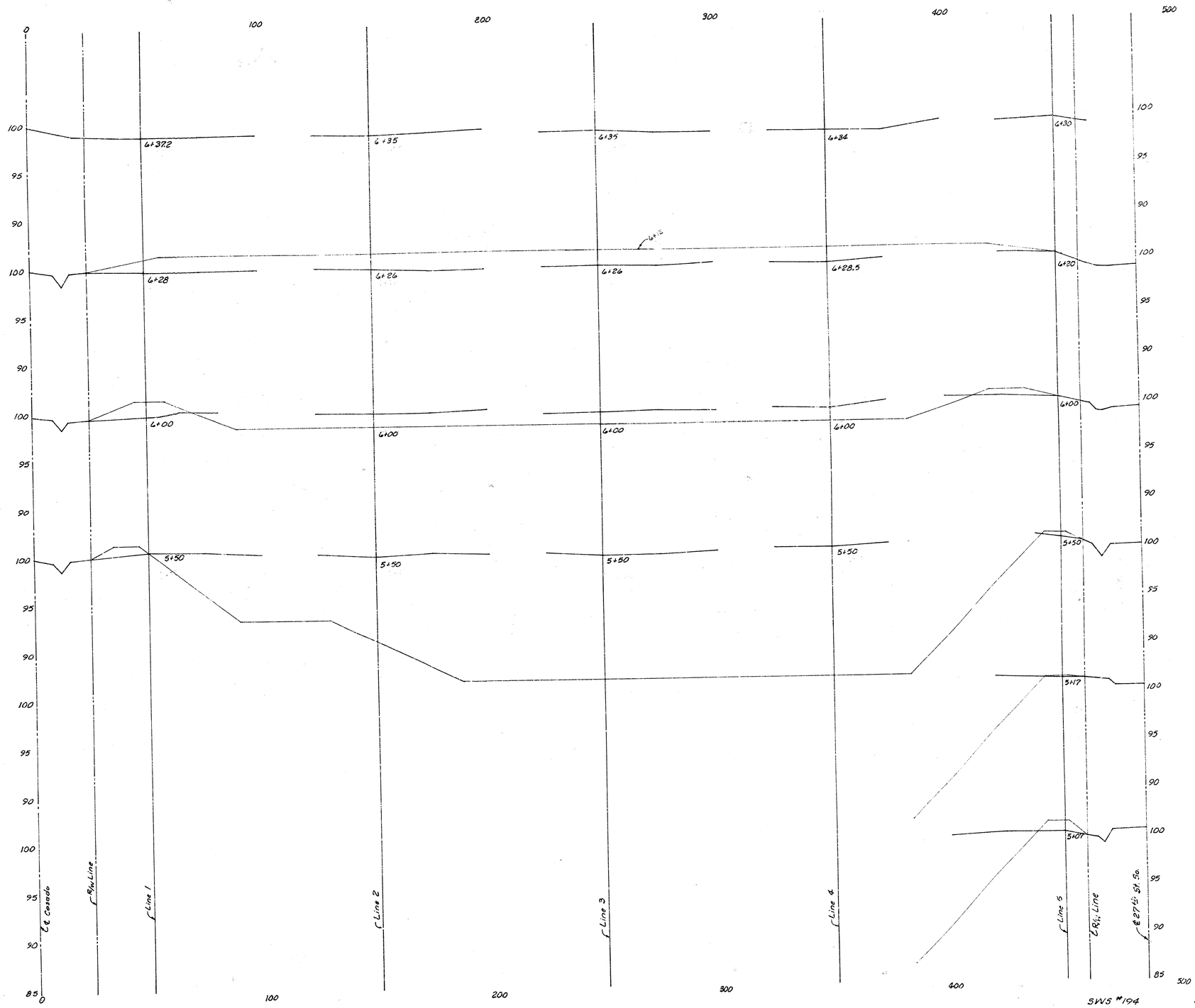
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SWS #154

Sheet 13/14

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$V_{AB} = \frac{105 \times 3}{2 \times 27} = 90$ CY

$V_{AB} = \frac{(955.15 + 3272.8) \times 50}{27 \times 2} = 3796$ CY

$V_{AB} = \frac{3272.8 + 3059.30}{2 \times 27} = 1685$ CY

3+00 to 3+60 3105.30 SF

TOTAL THIS SHEET 10,179 CY

TOTAL ALL SHEETS ~~14,110~~ CY
59,314

SWS M194

Sheet 12/14 14

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