STORM WATER SEWER NO. 205 - PHASE I

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY CONTRACTORS, AND CONTACT RELEVANT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THIS PROJECT.

2. THE TOPS OF INLETS AS SHOWN ON PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS. THE FIELD ENGINEER SHALL ESTABLISH GRADES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.

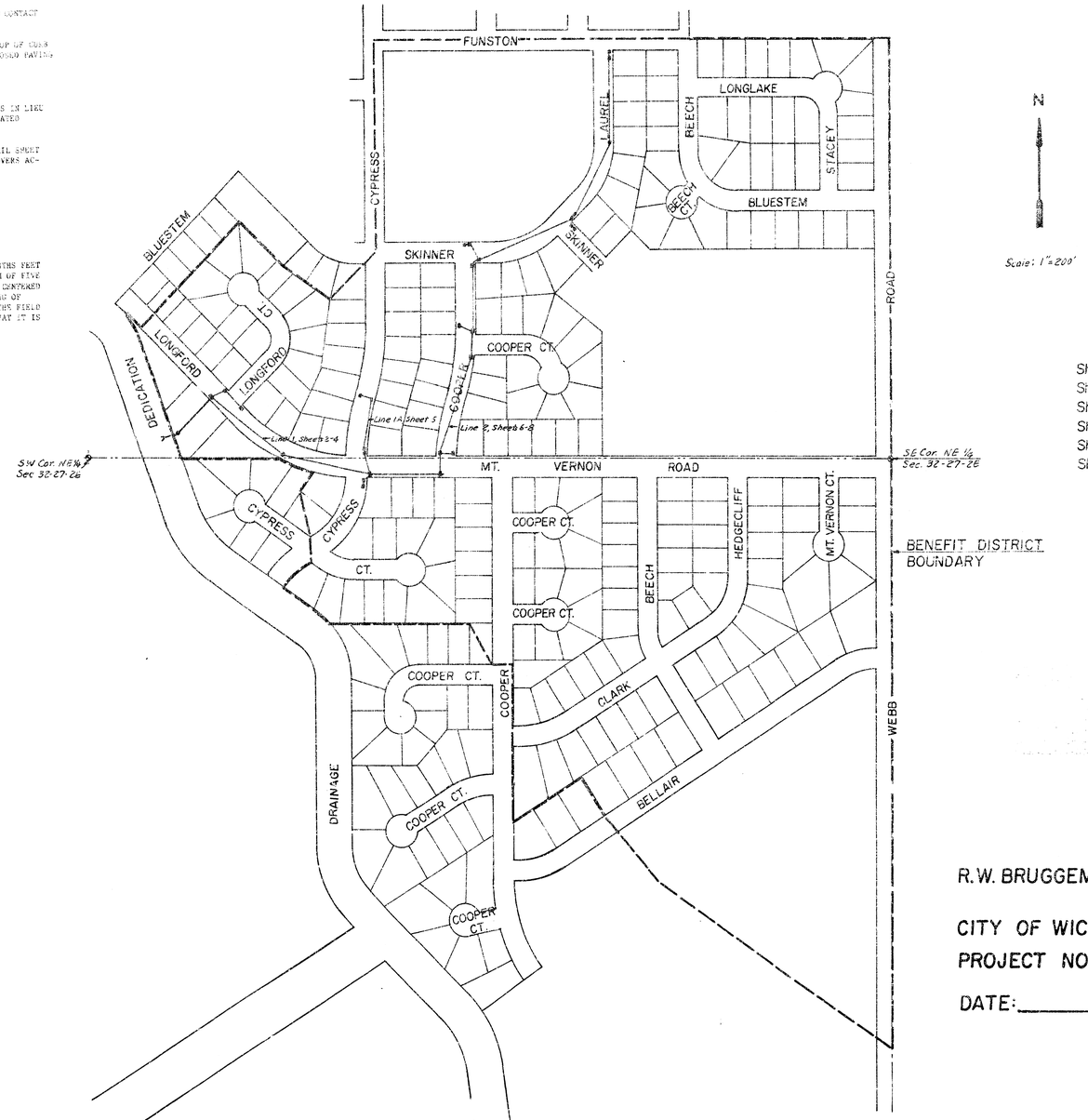
3. ALL CONCRETE SHALL BE "STANDARD PAVING MIX" UNLESS OTHERWISE NOTED.

4. CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING PRE-CAST TYPE IA CURB INLETS IN LIEU OF THE BRICK TYPE STRUCTURE. SEE STANDARD DETAIL PRE-CAST TYPE 'A' INLET DATED AUGUST, 1979

5. INLET DETAILS SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE STANDARD DETAIL SHEET FOR THE TYPE SPECIFIED. INLETS WITH CONCRETE TOPS SHALL HAVE RINGS AND COVERS ACCORDING TO THE FOLLOWING SCHEDULE:

INLET LENGTH (FEET)	NUMBER OF RINGS & COVERS
5	1
6-10	2
11-15	3
16-20	4

THE RINGS SHALL BE SPACED SUCH THAT THERE IS A MAXIMUM OF TWO AND FIVE-TENTHS FEET (2.5') FROM THE INSIDE OF THE WALL TO THE CENTER OF THE RING AND A MAXIMUM OF FIVE FEET (5') FROM CENTER TO CENTER BETWEEN RINGS. RINGS AND COVERS SHALL BE CENTERED BETWEEN THE FRONT AND THE BACK OF THE CONCRETE TOPS. THE NUMBER OF SPACING OF RINGS WITH COVERS MAY VARY FROM THIS SPECIFICATION ONLY WHEN APPROVED BY THE FIELD ENGINEER. AT LEAST ONE (1) MANHOLE RING AND COVER SHALL BE PLACED SUCH THAT IT IS ALIGNED WITH THE CENTERLINE OF THE OUTFALL PIPE OR PIPES.



N

Scale: 1"=200'

Index

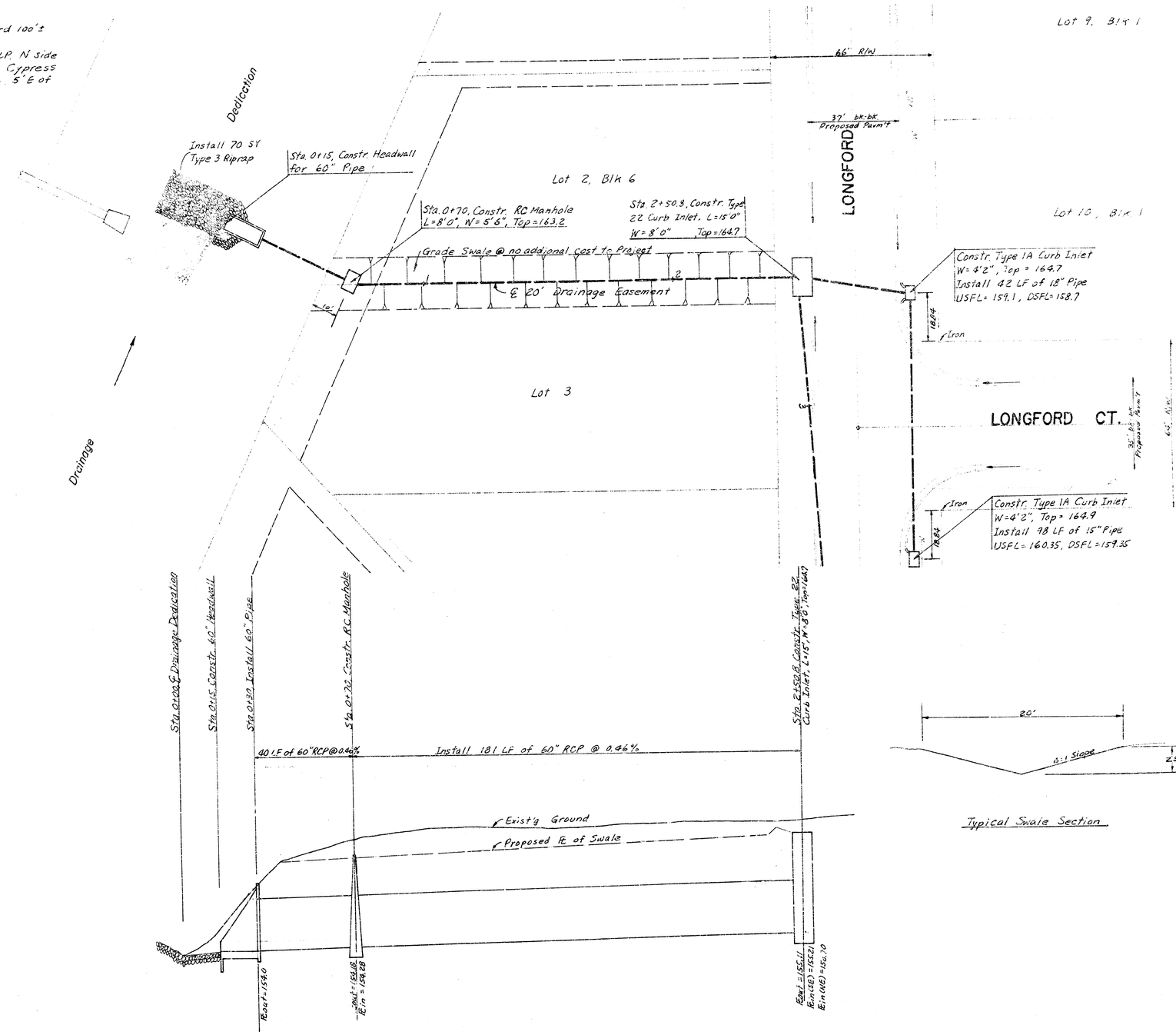
Sheet 1	Cover Sheet
Sheet 2-8	Plan & Profile
Sheet 9	Type 22 Curb Inlet
Sheet 10	Type IA Curb Inlet
Sheet 11	RC Manhole
Sheet 12	Headwall for 60" Pipe

R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/
CITY ENGINEER
CITY OF WICHITA, KANSAS
PROJECT NO. 468 76 245 81013 000 000 001
DATE:_____

8200

1/12

B.M. 160.76 o Top S-cb Longford 100's W of Bluestem
B.M. 169.52 RR Spk. SW face HLP N side Mt. Vernon East of Cypress
B.M. 170.96 D top S-cb Funston 5'E of W. L. Cypress

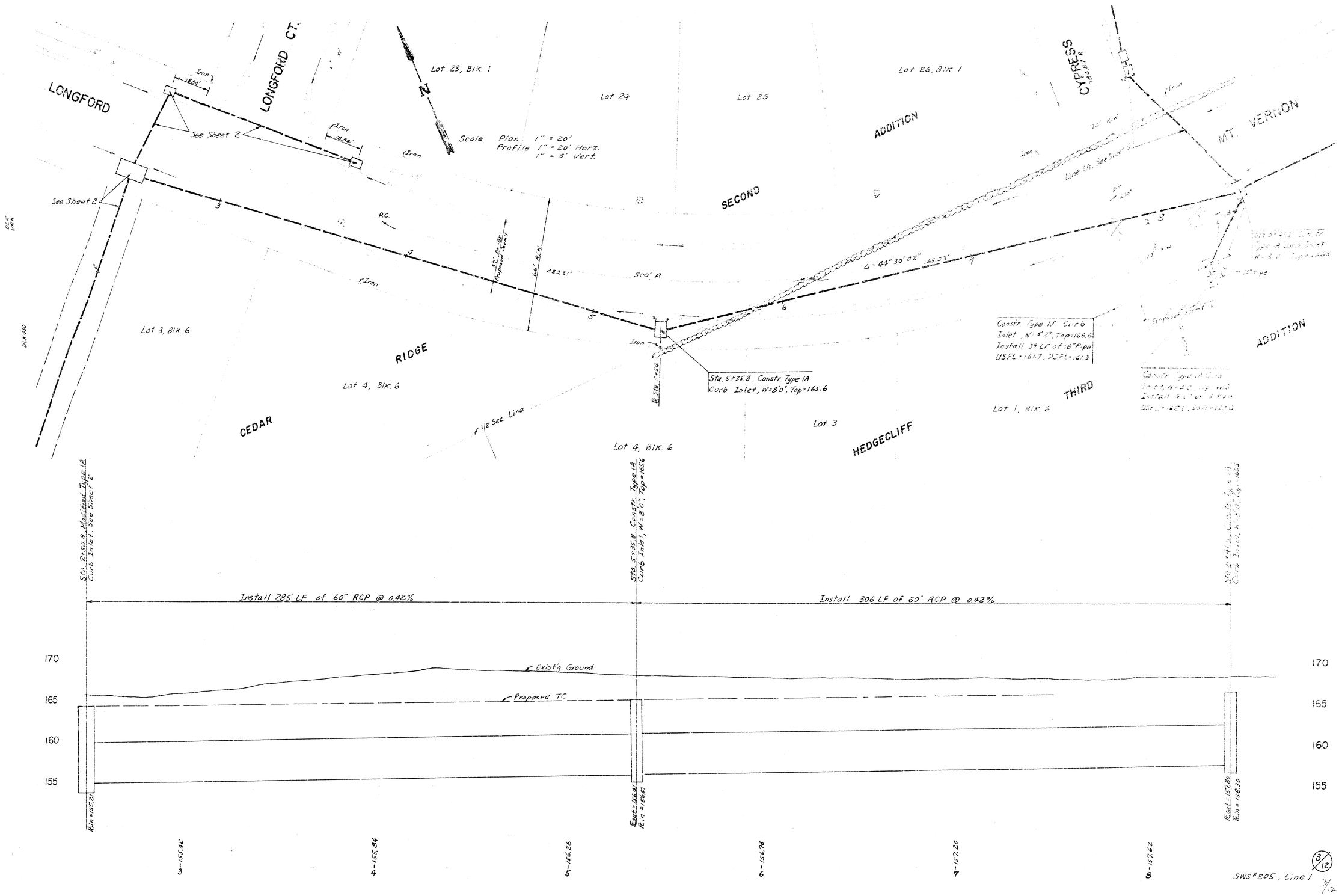


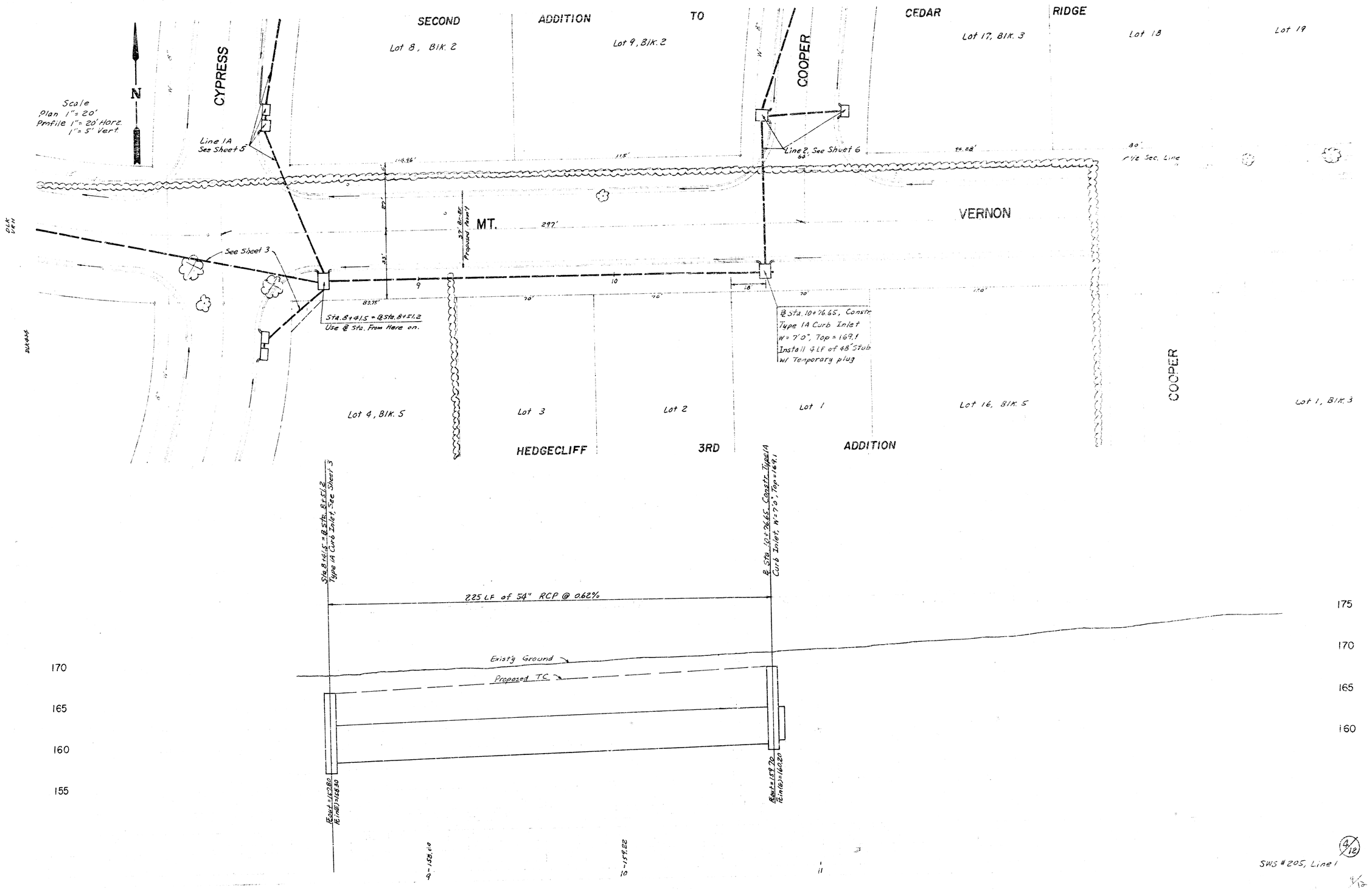


Scale Plan 1" = 20'
Profile 1" = 20' horiz
1" = 5' Vert

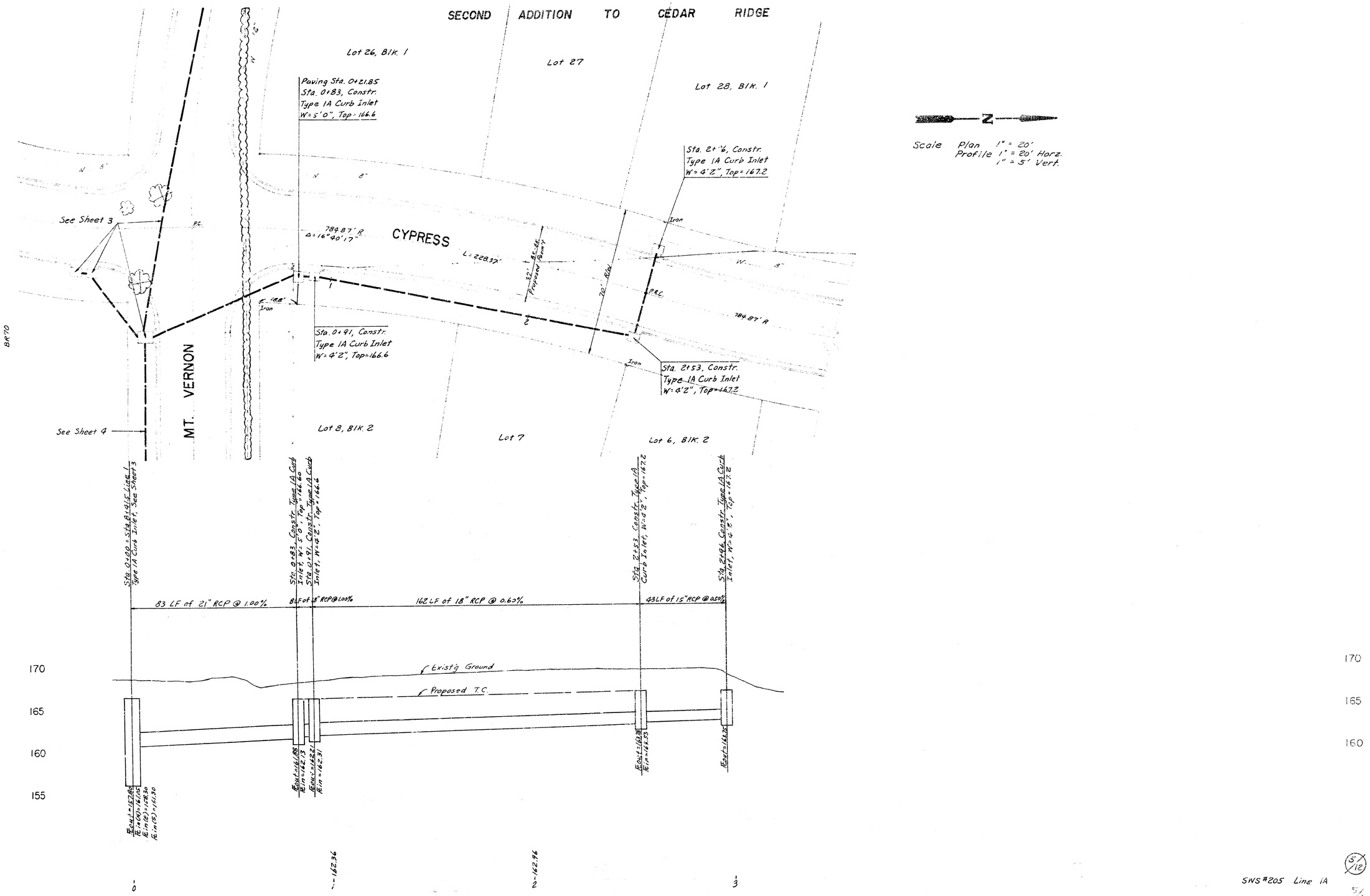
Typical Swale Section

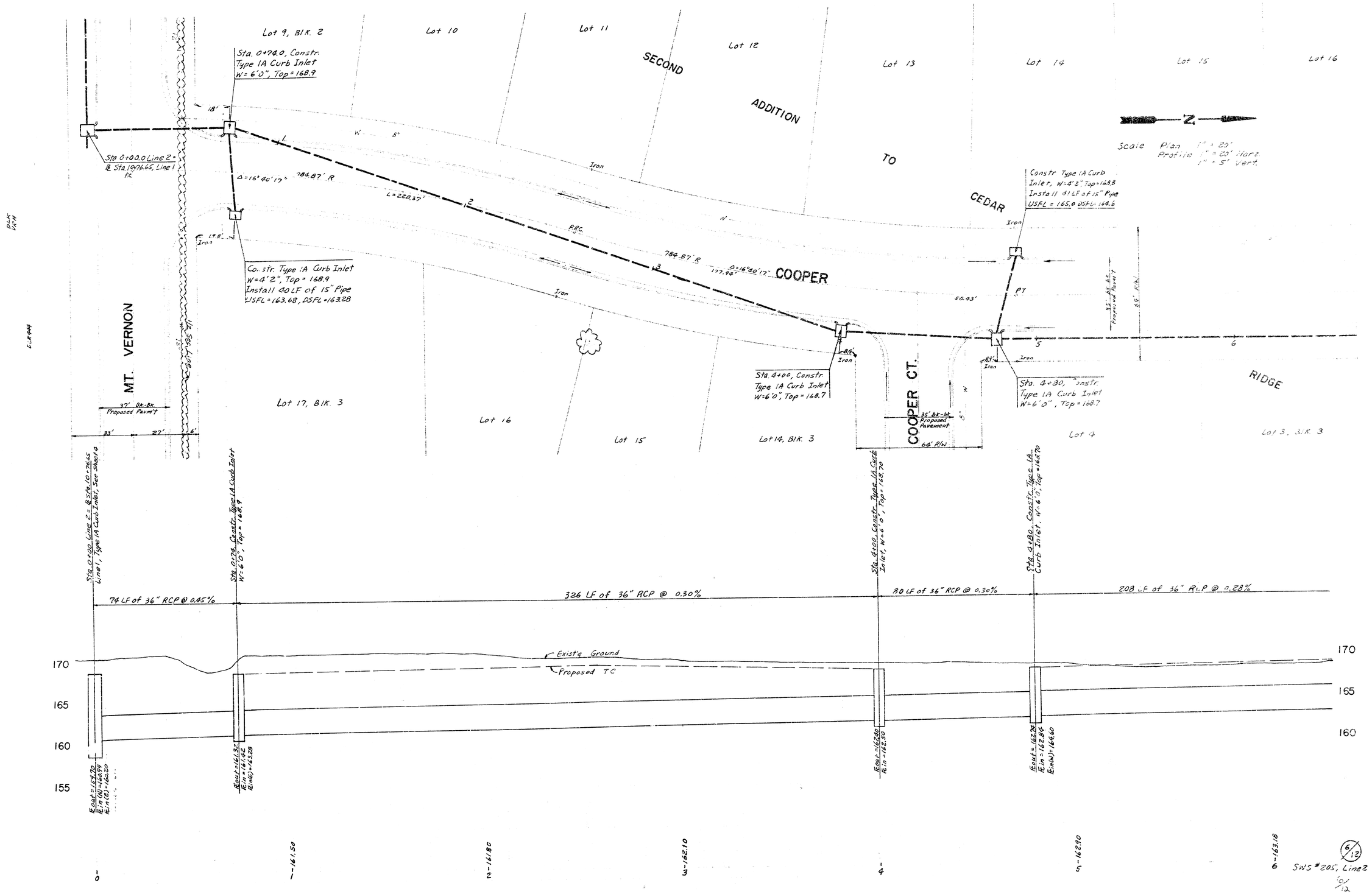
SWS # 205, Line 1


LONGFORD
LONGFORD CT.
CYPRESS
MT. VERNON
SECOND
ADDITION
RIDGE
CEDAR
HEDGECLIFF
THIRD
ADDITION
Lot 23, Blk. 1
Lot 24
Lot 25
Lot 26, Blk. 1
Lot 3, Blk. 6
Lot 4, Blk. 6
Lot 3
Lot 1, Blk. 6
Lot 4, Blk. 6
See Sheet 2
See Sheet 2
Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.
Sta. 5+35.8, Constr. Type 1A
Curb Inlet, W=8'0", Top=165.6
Constr. Type 1A Curb
Inlet, W=8'2", Top=166.6
Install 39 LF of 18" Pipe
USFL=161.7, DSFL=161.3
Sta. 2+50.8 Modified Type 1A
Curb Inlet, See Sheet 2
Sta. 5+35.8 Constr. Type 1A
Curb Inlet, W=8'0", Top=165.6
Install 285 LF of 60" RCP @ 0.42%
Install 306 LF of 60" RCP @ 0.42%
Exist'g Ground
Proposed TC
170
165
160
155
3-155.42
4-155.84
5-156.26
6-156.78
7-157.20
8-157.62
SWS #205, Line 1
3/12

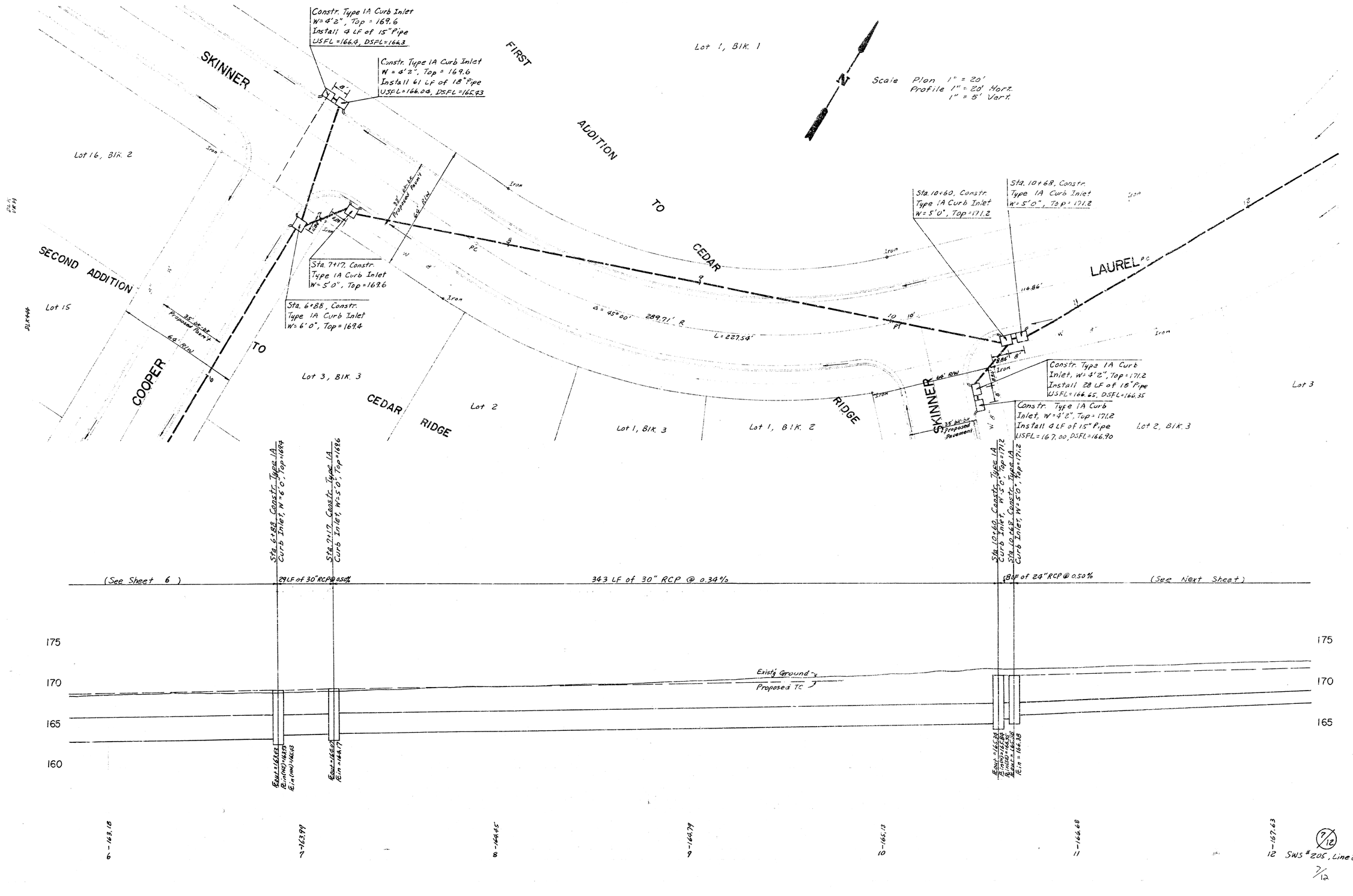


SECOND ADDITION TO CEDAR RIDGE
Lot 8, Blk. 2
Lot 9, Blk. 2
Lot 17, Blk. 3
Lot 18
Lot 19
CYPRESS
COOPER
N
Scale
Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.
Line 1A
See Sheet 5
Line 2, See Sheet 6
1/2 Sec. Line
MT.
VERNON
See Sheet 3
Sta. 8+41.5 = ℄ Sta. 8+51.2
Use ℄ Sta. From Here on.
℄ Sta. 10+76.65, Constr.
Type 1A Curb Inlet
W = 7'0", Top = 169.1
Install 4 LF of 48" Stub
w/ Temporary plug
Lot 4, Blk. 5
Lot 3
Lot 2
Lot 1
Lot 16, Blk. 5
Lot 1, Blk. 3
HEDGECLIFF 3RD ADDITION
Sta. 8+41.5 = ℄ Sta. 8+51.2
Type 1A Curb Inlet, See Sheet 3
℄ Sta. 10+76.65, Constr. Type 1A
Curb Inlet, W = 7'0", Top = 169.1
225 LF of 54" RCP @ 0.62%
Exist'g Ground
Proposed TC
170
165
160
155
175
170
165
160
SWS #205, Line 1

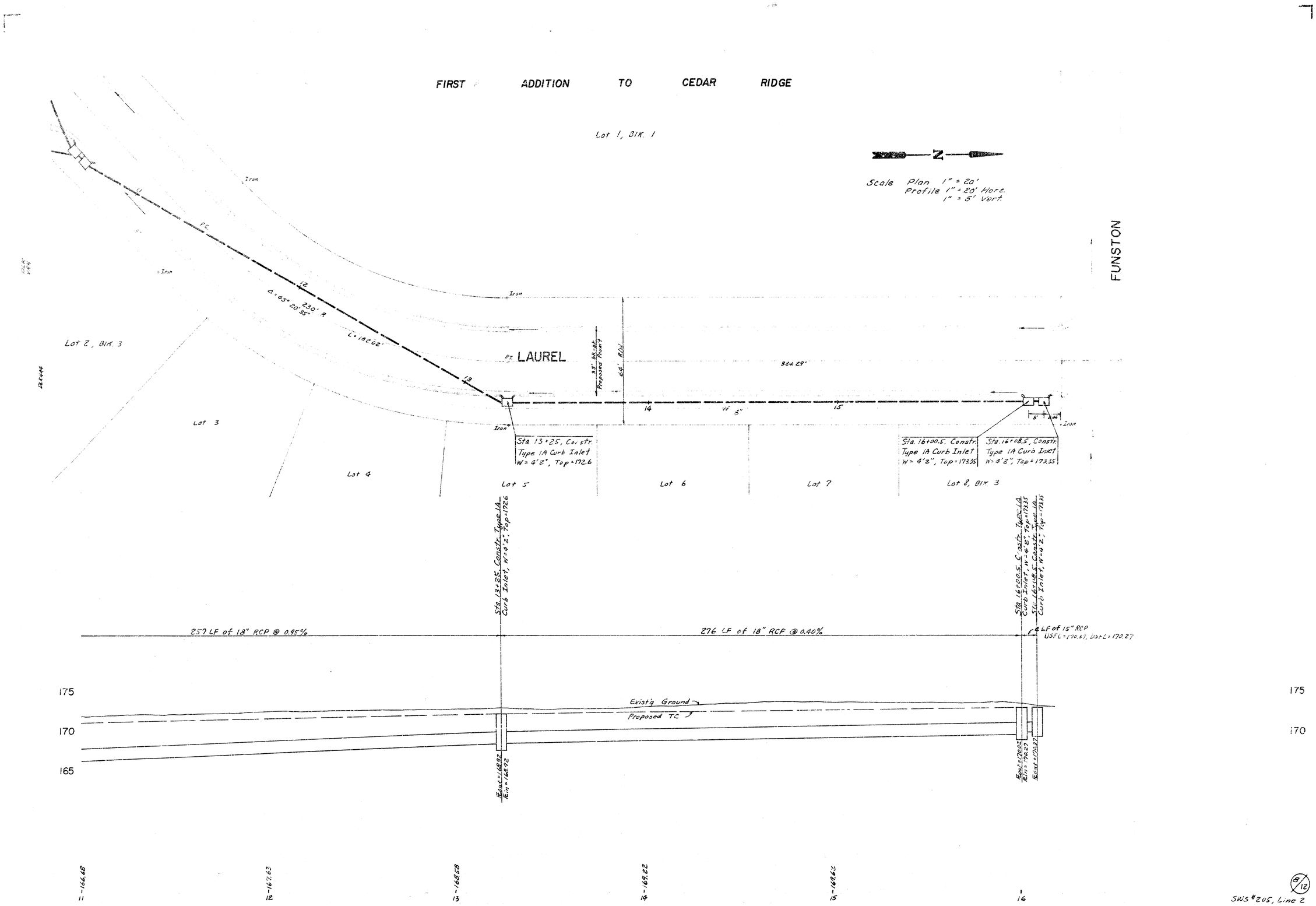

SECOND ADDITION TO CEDAR RIDGE
Lot 26, Blk. 1
Lot 27
Lot 28, Blk. 1
Paving Sta. 0+21.85
Sta. 0+83, Constr.
Type 1A Curb Inlet
W=5'0", Top=166.6
Sta. 2+76, Constr.
Type 1A Curb Inlet
W=4'2", Top=167.2
See Sheet 3
CYPRESS
L=228.37'
Sta. 0+91, Constr.
Type 1A Curb Inlet
W=4'2", Top=166.6
Sta. 2+53, Constr.
Type 1A Curb Inlet
W=4'2", Top=167.2
MT. VERNON
See Sheet 4
Lot 8, Blk. 2
Lot 7
Lot 6, Blk. 2
Sta. 0+00 = Sta. 8+41.5 Line 1
Type 1A Curb Inlet, See Sheet 3
Sta. 0+83, Constr. Type 1A Curb Inlet, W=5'0", Top=166.60
Sta. 0+91, Constr. Type 1A Curb Inlet, W=4'2", Top=166.6
Sta. 2+53, Constr. Type 1A Curb Inlet, W=4'2", Top=167.2
Sta. 2+96, Constr. Type 1A Curb Inlet, W=4'2", Top=167.2
83 LF of 21" RCP @ 1.00%
8 LF of 18" RCP @ 1.00%
162 LF of 18" RCP @ 0.60%
43 LF of 15" RCP @ 0.50%
Exist'g Ground
Proposed T.C.
170
165
160
155
Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.
SWS #205 Line 1A
5/12

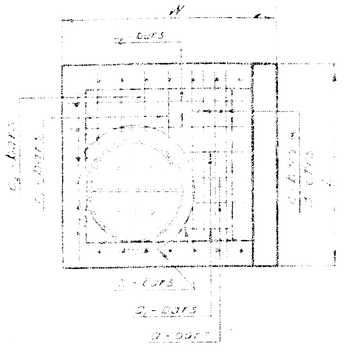


Lot 9, Blk. 2
Lot 10
Lot 11
Lot 12
Lot 13
Lot 14
Lot 15
Lot 16
SECOND ADDITION TO CEDAR RIDGE
Sta. 0+74.0, Constr. Type 1A Curb Inlet W=6'0", Top=168.9
Sta 0+00.0 Line 2 = ℄ Sta. 10+76.65, Line 1
Δ=16°40'17"
784.87' R
L=228.37'
Constr. Type 1A Curb Inlet W=4'2", Top=168.9 Install 40 LF of 15" Pipe USFL=163.68, DSFL=163.28
Constr. Type 1A Curb Inlet, W=4'2", Top=168.8 Install 41 LF of 15" Pipe USFL=165.0 DSFL=164.6
Sta. 4+00, Constr. Type 1A Curb Inlet W=6'0", Top=168.7
Sta. 4+80, Constr. Type 1A Curb Inlet W=6'0", Top=168.7
COOPER
COOPER CT.
MT. VERNON
Lot 17, Blk. 3
Lot 16
Lot 15
Lot 14, Blk. 3
Lot 4
Lot 3, Blk. 3
Scale Plan 1" = 20' Profile 1" = 20' Horz. 1" = 5' Vert.
Sta. 0+00 Line 2 = ℄ Sta. 10+76.65 Line 1, Type 1A Curb Inlet, See Sheet 4
Sta. 0+74, Constr. Type 1A Curb Inlet W=6'0", Top=168.9
Sta. 4+00, Constr. Type 1A Curb Inlet, W=6'0", Top=168.70
Sta. 4+80, Constr. Type 1A Curb Inlet, W=6'0", Top=168.70
74 LF of 36" RCP @ 0.45%
326 LF of 36" RCP @ 0.30%
80 LF of 36" RCP @ 0.30%
208 LF of 36" RCP @ 0.28%
Exist'g Ground
Proposed TC
170
165
160
155
0
1-161.50
2-161.80
3-162.10
4
5-162.90
6-163.18
SWS #205, Line 2

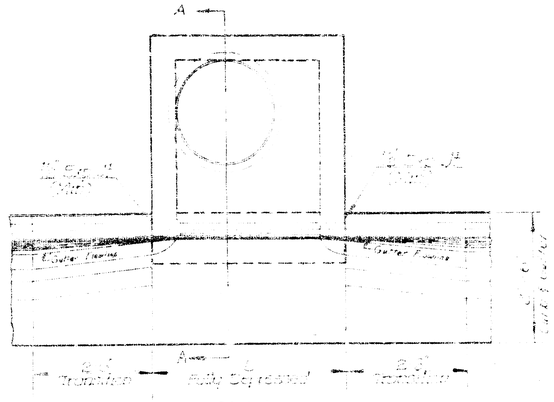


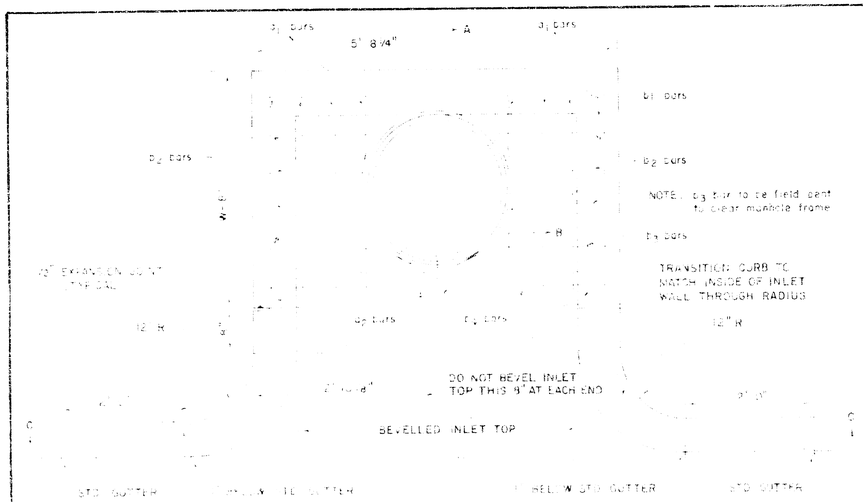
Constr. Type 1A Curb Inlet
W=4'2", Top = 169.6
Install 4 LF of 15" Pipe
USFL=166.4, DSFL=166.3
Constr. Type 1A Curb Inlet
W = 4'2", Top = 169.6
Install 61 LF of 18" Pipe
USFL=166.04, DSFL=165.43
SKINNER
FIRST
ADDITION
TO
CEDAR
RIDGE
Lot 1, BLK. 1
N
Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.
Lot 16, BLK. 2
SECOND ADDITION
TO
COOPER
Lot 15
Sta. 7+17, Constr.
Type 1A Curb Inlet
W=5'0", Top=169.6
Sta. 6+88, Constr.
Type 1A Curb Inlet
W=6'0", Top=169.4
Δ = 45°00' 289.71' R
L=227.54'
Sta. 10+60, Constr.
Type 1A Curb Inlet
W=5'0", Top=171.2
Sta. 10+68, Constr.
Type 1A Curb Inlet
W=5'0", Top=171.2
LAUREL
Constr. Type 1A Curb
Inlet, W=4'2", Top=171.2
Install 28 LF of 18" Pipe
USFL=166.65, DSFL=166.35
Constr. Type 1A Curb
Inlet, W=4'2", Top=171.2
Install 4 LF of 15" Pipe
USFL=167.00, DSFL=166.90
Lot 3, BLK. 3
Lot 2
Lot 1, BLK. 3
Lot 1, BLK. 2
Lot 2, BLK. 3
Lot 3
Sta. 6+88, Constr. Type 1A Curb Inlet, W=6'0", Top=169.4
Sta. 7+17, Constr. Type 1A Curb Inlet, W=5'0", Top=169.6
Sta. 10+60, Constr. Type 1A Curb Inlet, W=5'0", Top=171.2
Sta. 10+68, Constr. Type 1A Curb Inlet, W=5'0", Top=171.2
(See Sheet 6)
29 LF of 30" RCP @ 0.50%
343 LF of 30" RCP @ 0.34%
8 LF of 24" RCP @ 0.50%
(See Next Sheet)
175
170
165
160
Exist'g Ground
Proposed TC
6 - 163.18
7 - 163.99
8 - 164.45
9 - 164.79
10 - 165.13
11 - 166.68
12 - 167.63
SWS #205, Line 2
7/12

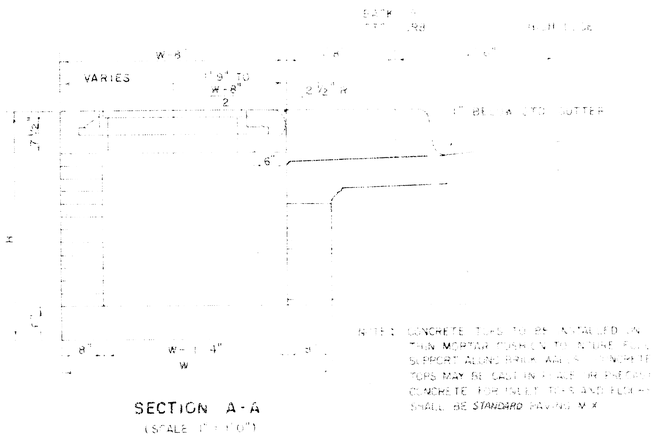

FIRST ADDITION TO CEDAR RIDGE
Lot 1, Blk. 1
Scale Plan 1" = 20'
Profile 1" = 20' Horz.
1" = 5' Vert.
FUNSTON
Lot 2, Blk. 3
Lot 3
Lot 4
Lot 5
Lot 6
Lot 7
Lot 8, Blk. 3
LAUREL
Δ = 45° 20' 35"
230' R
L = 182.02'
35' bk-bk Proposed Pavm't
64' R/W
324.29'
Sta. 13+25, Constr. Type 1A Curb Inlet W = 4'2", Top = 172.6
Sta. 16+00.5, Constr. Type 1A Curb Inlet W = 4'2", Top = 173.35
Sta. 16+08.5, Constr. Type 1A Curb Inlet W = 4'2", Top = 173.35
Sta. 13+25, Constr. Type 1A Curb Inlet, W = 4'2", Top = 172.6
Sta. 16+00.5, Constr. Type 1A Curb Inlet, W = 4'2", Top = 173.35
Sta. 16+18.5, Constr. Type 1A Curb Inlet, W = 4'2", Top = 173.35
257 LF of 18" RCP @ 0.95%
276 LF of 18" RCP @ 0.40%
4 LF of 15" RCP USFL = 170.37, DSFL = 170.27
Exist'g Ground
Proposed TC
175
170
165
11 - 166.68
12 - 167.63
13 - 168.58
14 - 169.22
15 - 169.62
16
SWS #205, Line 2
8/12



TOP VIEW


A
A
Bolt Setting
Bolt Setting
Bolt Setting
Bolt Setting
Flow Line
Flow Line
Curb Face
Curb Face

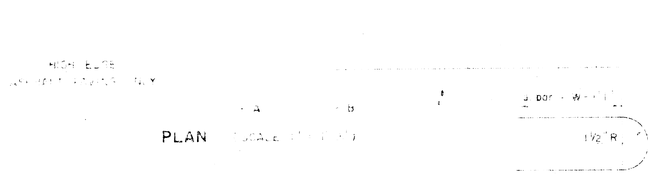




SECTION A-A
(SCALE 1" = 1'0")

NOTES: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR JOINT TO INSURE FULL SUPPORT ALONG INSIDE WALLS. CONCRETE TOPS MAY BE CAST IN PLACE IF PERMITTED. CONCRETE FOR INLET TOPS AND FLOOR SHALL BE STANDARD PAVING MIX





STEEL SCHEDULE

MK	A	B	a_1	a_2	b_1	b_2	b_3	b_4	AT
NUMBER									
SIZE									
W=2'0"	6'6"	5'4"	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"	–	5"	5'6"	5'6"	97
W=7'0"	11'1"	6'4"	–	–	–	5'5"	1'5"	5'6"	5'5"	111
W=8'0"	12'1"	7'4"	–	–	–	–	1'5"	5'6"	5'5"	124

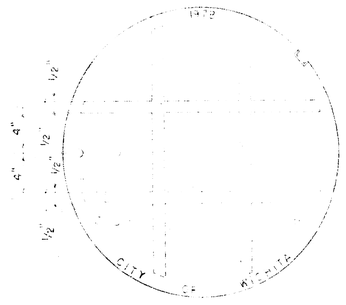
* NOTE: a_2 BARS TO BE PLACED APPROX 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM

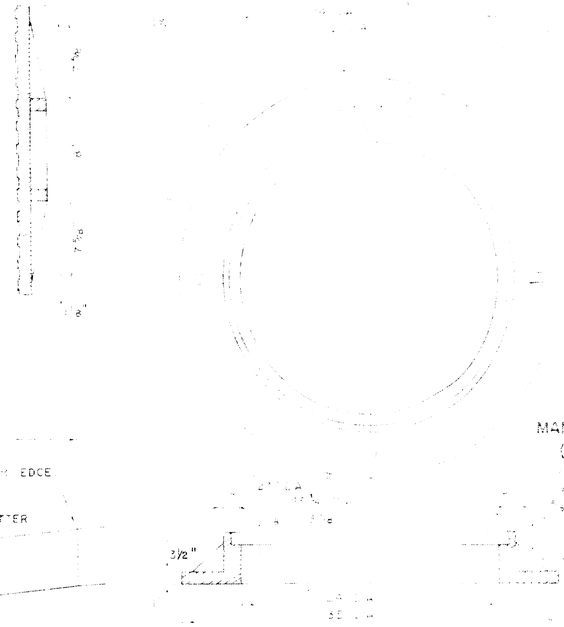
STANDARD CURB INLET PRECAST TOPS

W	PRE-CAST TOP SIZE	PIPE SIZE	CU YD. CONC.
4'2"	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 *

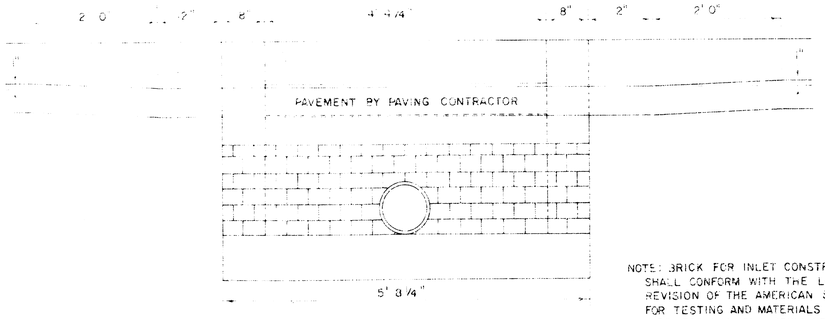
* GROSS VOLUME



MANHOLE COVER
(SCALE 1" = 6")
WEIGHT = 170 LBS

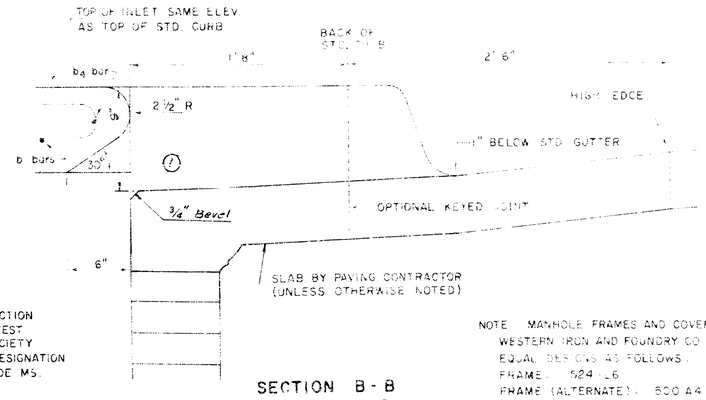


MANHOLE FRAME (ALTERNATE)
(SCALE 1" = 6")
WEIGHT = 180 LBS



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 C-32 FOR MANHOLE BRICK GRADE MS.



SECTION B-B
(SCALE 1" = 6")

NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL DESIGNS AS FOLLOWS:
FRAME: 524-L6
FRAME (ALTERNATE): 500 A4
COVER: 522 54 "NOBBY"

(1) Rev. 5-18-81

DETAIL STANDARD TYPE 1A CURB INLET

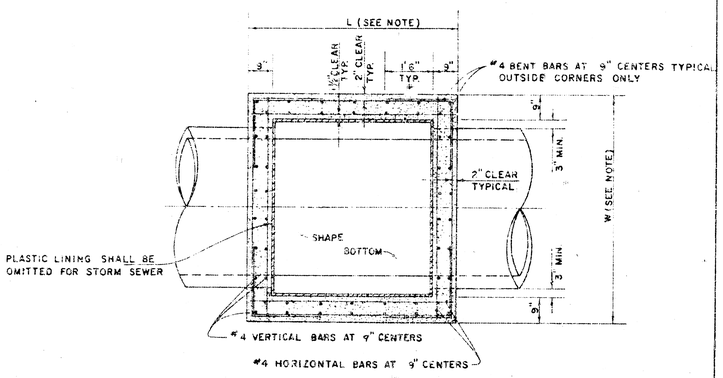
CITY OF WICHITA, KANSAS

R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/ CITY ENGINEER

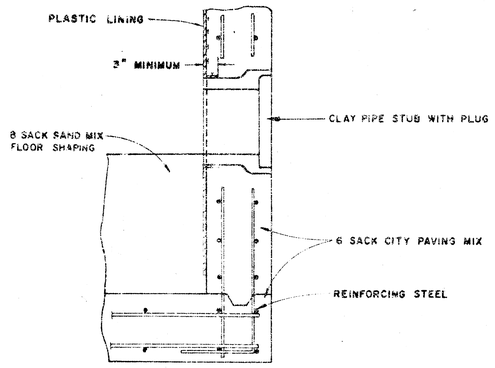
JUNE, 1981

10/12

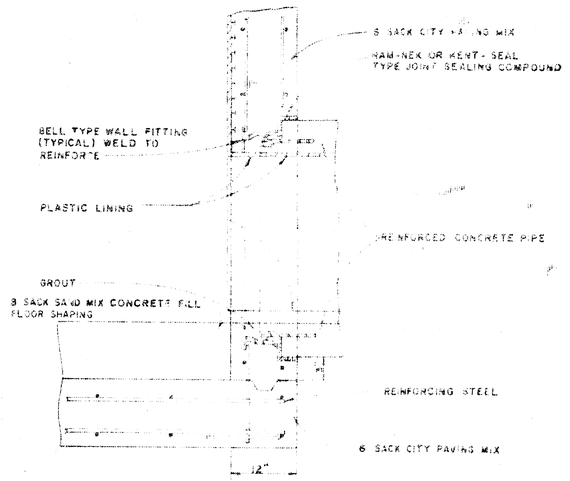
10/12



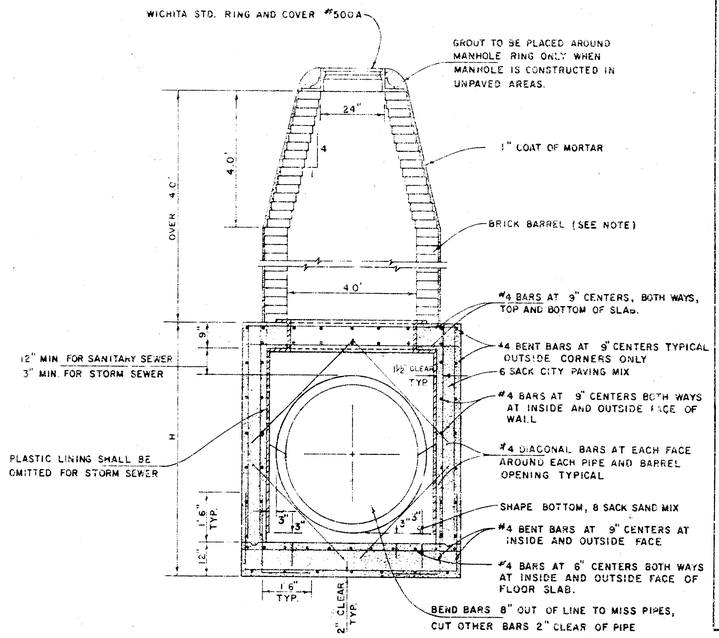
TOP VIEW



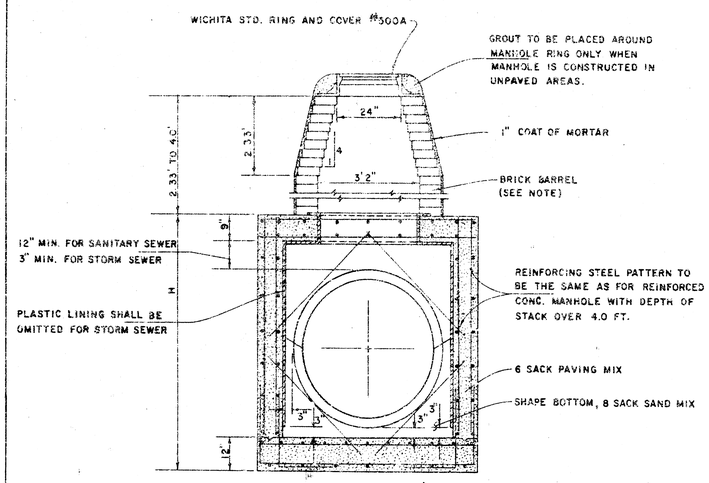
V. C. P. CONNECTION DETAIL
SANITARY SEWER ONLY



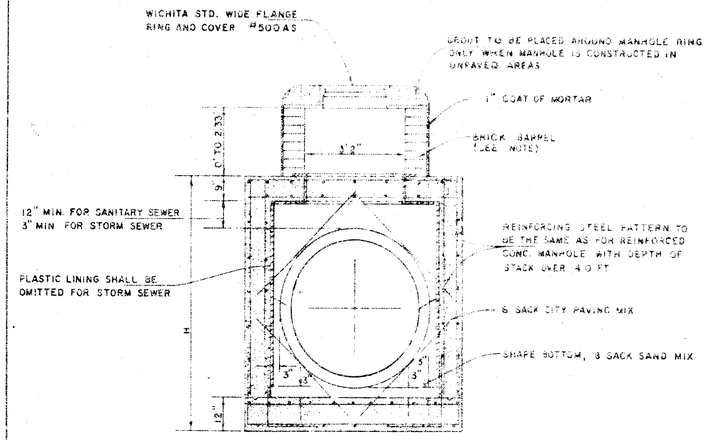
R.C.P. CONNECTION DETAIL
SANITARY SEWER ONLY



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



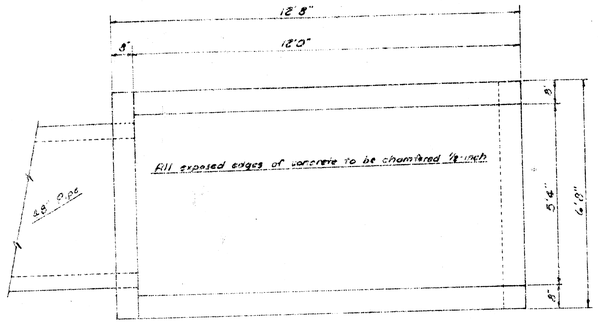
REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

NOTE :
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS.

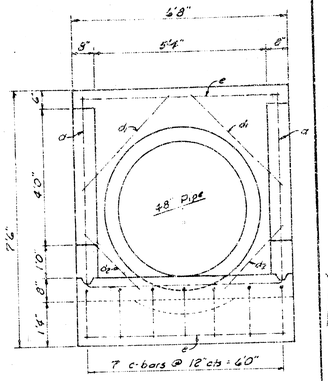
STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA

APRIL 1978 REVISED APRIL 1980 (11/12)

11/12



PLAN
Scale: ⅛"=1'0"



FRONT
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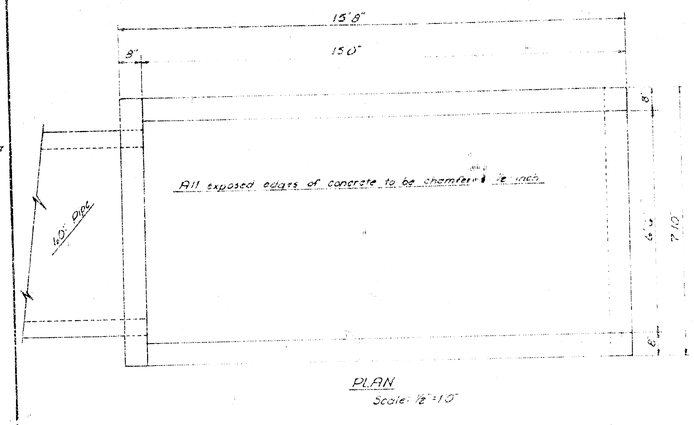

PLAN
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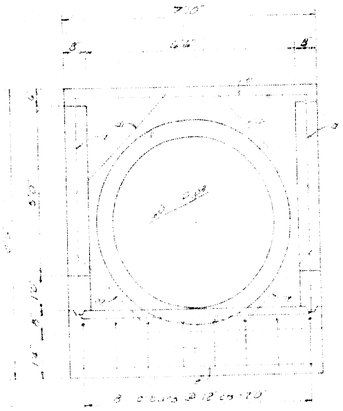

FRONT
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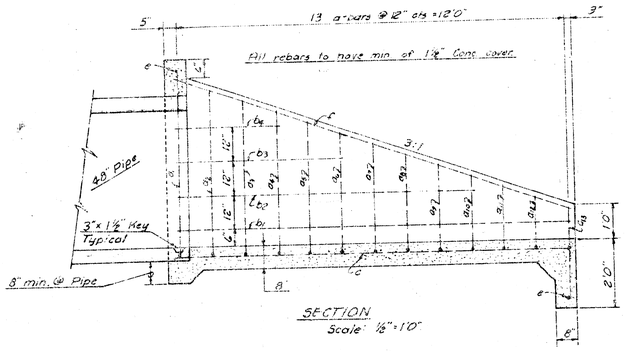

SECTION
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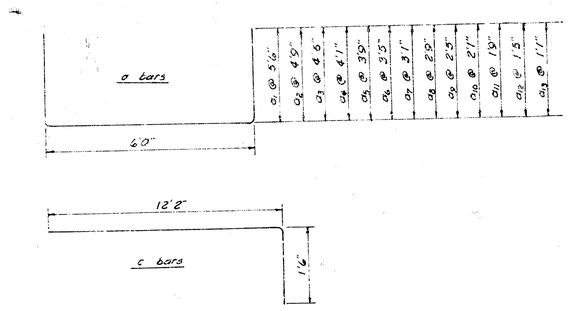
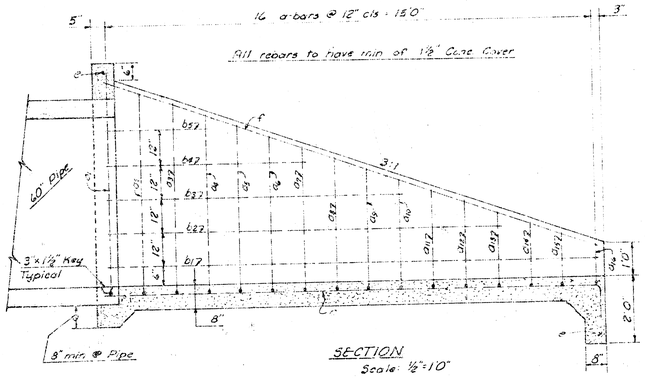


REBAR SCHEDULE

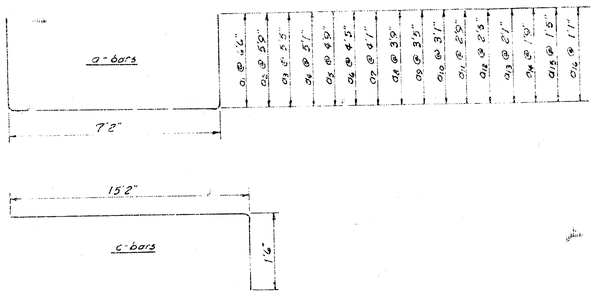
Bar	Shape	No. & Length	Weight
a_1		1 @ 17'0"	11.34
a_2		1 @ 15'6"	10.35
a_3		1 @ 14'10"	9.91
a_4		1 @ 14'2"	9.46
a_5		1 @ 13'6"	9.02
a_6		1 @ 12'10"	8.57
a_7		1 @ 12'2"	8.13
a_8		1 @ 11'6"	7.68
a_9		1 @ 10'10"	7.24
a_{10}		1 @ 10'2"	6.79
a_{11}		1 @ 9'6"	6.35
a_{12}		1 @ 8'10"	5.90
a_{13}		1 @ 8'3"	5.51
b_1		2 @ 12'3"	16.37
b_2		2 @ 9'3"	12.36
b_3		2 @ 5'3"	7.01
b_4		2 @ 3'3"	4.34
c		7 @ 13'8"	63.91
d_1		2 @ 3'10"	5.12
d_2		2 @ 2'6"	3.34
e		2 @ 6'2"	8.24
f		2 @ 12'11"	17.26
Total Rebars 245 lbs.			
Conc.		5.2 CY	

All Conc. Reinforcement to be #4 bars.

HEADWALL FOR 48" PIPE



SECTION
Scale: ½"=1'0"



REBAR SCHEDULE

Bar	Shape	No. & Length	Weight
a_1		1 @ 20'6"	13.47
a_2		1 @ 18'8"	12.27
a_3		1 @ 18'0"	11.82
a_4		1 @ 17'4"	11.53
a_5		1 @ 16'8"	11.11
a_6		1 @ 16'0"	10.65
a_7		1 @ 15'4"	10.24
a_8		1 @ 14'8"	9.80
a_9		1 @ 14'0"	9.35
a_{10}		1 @ 13'4"	8.91
a_{11}		1 @ 12'8"	8.46
a_{12}		1 @ 12'0"	8.02
a_{13}		1 @ 11'5"	7.57
a_{14}		1 @ 10'9"	7.13
a_{15}		1 @ 10'0"	6.68
a_{16}		1 @ 9'5"	6.33
b_1		2 @ 15'3"	20.37
b_2		2 @ 12'3"	16.37
b_3		2 @ 9'3"	12.36
b_4		2 @ 6'3"	8.35
b_5		2 @ 3'3"	4.34
c		8 @ 16'8"	89.07
d_1		2 @ 5'0"	5.34
d_2		2 @ 3'3"	3.67
e		2 @ 7'4"	9.80
f		2 @ 16'0"	21.38
Total Rebars 385 lbs.			
Conc.		7.29 CY	

All Conc. Reinforcement to be #5 rebars

HEADWALL FOR 60" PIPE

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