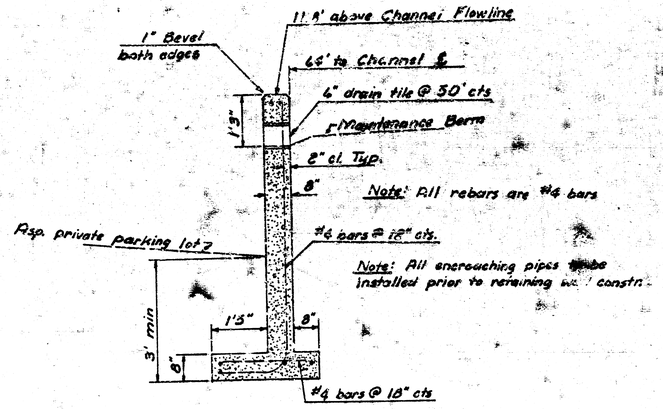
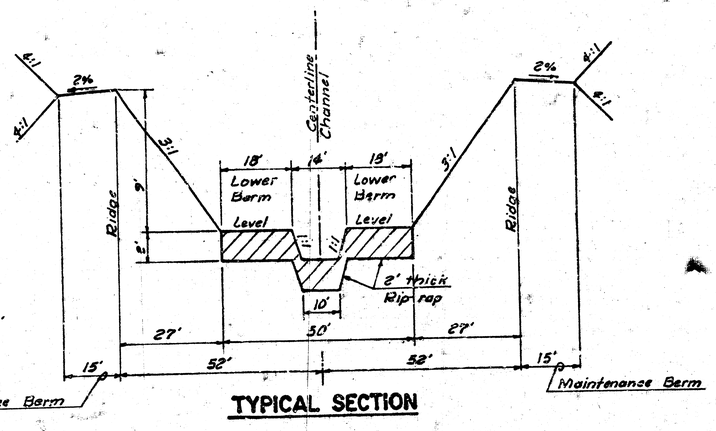
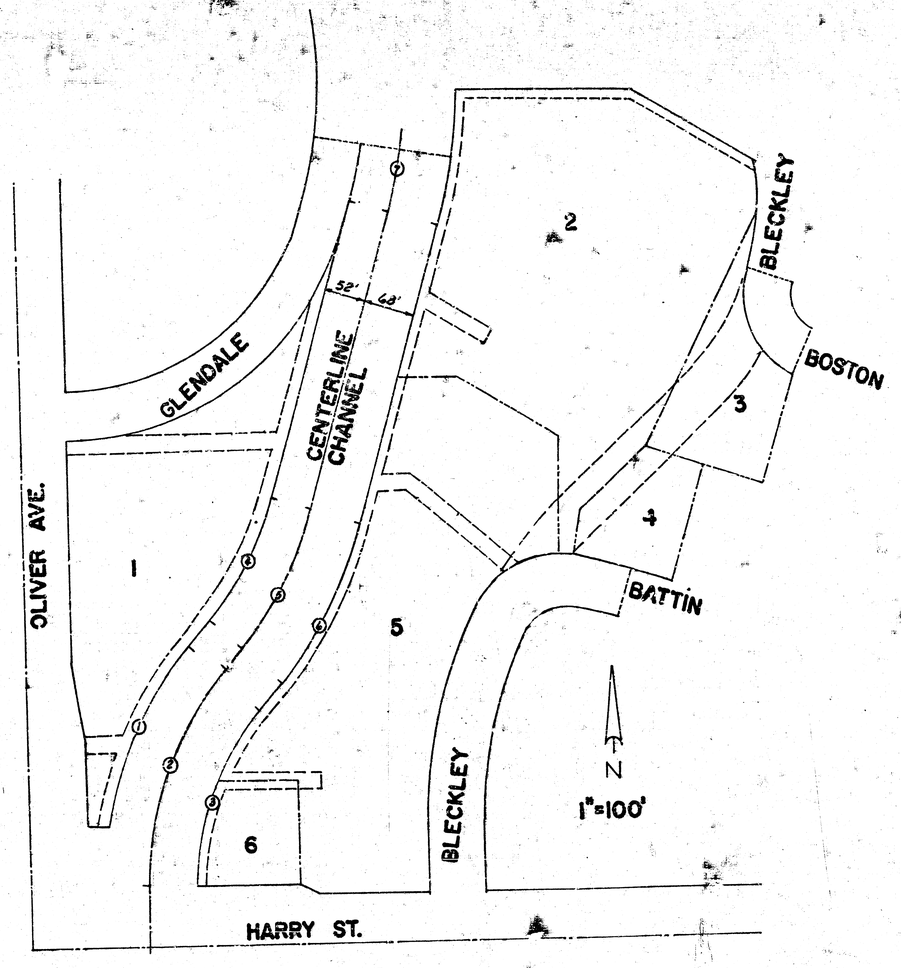
STORM WATER DRAIN NO. 23
CITY OF WICHITA



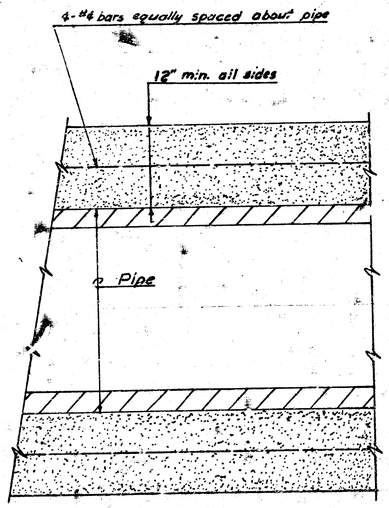
RETAINING WALL



TYPICAL SECTION



BLK. 2, PARKLANE ADDITION



PIPE ENCASEMENT OR CONC. COLLAR

Curve No. 1
Δ = 30°36'09"
R = 458.36'
T = 125.40'
L = 244.82'
LC = 241.92'

Curve No. 2
Δ = 41°16'10"
R = 398.36'
T = 150.01'
L = 286.93'
LC = 280.77'

Curve No. 3
Δ = 39°42'44"
R = 338.36'
T = 122.19'
L = 234.55'
LC = 229.85'

Curve No. 4
Δ = 24°30'
R = 400.57'
T = 86.97'
L = 171.29'
LC = 169.98'

Curve No. 5
Δ = 24°29'50"
R = 452.57'
T = 98.25'
L = 193.50'
LC = 192.03'

Curve No. 6
Δ = 24°30'
R = 520.57'
T = 113.03'
L = 222.70'
LC = 220.91'

Curve No. 7
Δ = 26°59'50"
R = 575.16'
T = 138.06'
L = 271.00'
LC = 268.50'

City of Wichita Private Project No. DBKW 707032

R.W. LINN, CITY ENGINEER

PROJECT NO. DBKD 575034

DATE: _____

SHEET 1 OF

SWD NO. 23

BM 142.43 City Std. on west end of north hub guard to new RCB approx. 150' E. of Oliver on Harry

OLIVER AVE
East Line Sec. 25-27-1E

HARRY STREET
South Line Sec. 25-27-1E

Fill existing ditch, construct ditch to 30" SWS, Grade area to drain. Engineer to take cross-sections, Contractor to be paid for Cut and Fill @ as per bid price.

47' Lt. Sta. 2+31, Top 137.5
Constr. Std. 2'x2' Inlet

Light Pole removed by Others

Constr Retaining Wall

Remove & Replace approx. 6' wide strip of Asp Parking west of Retaining wall. Grade asphalt to drain.

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

47' Lt Sta. 3+48.31, Top 139.2
Constr. Std. 2'x2' Inlet

47' Lt, Sta. 4+50, Top 136.9
Constr. Std. 2'x2' Inlet

2-15" Pipes

20' Drainage Easement

Remove Headwall
Install 4' of Conc. Collar

5' ϕ Manhole

Earthwork Limit Line

15' Drainage Eas't
15' Maintenance Berm

ROW Line

Ridge Line

Sta. 1+75
Constr. 60' of 30" SWS
USFL 86' Lt @ 132.38
DSFL 25' Lt @ 131.77

Install 15' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

Sta. 2+31 Install 42' of 15" SWS
USFL 47' Lt @ 135.5
DSFL 25' Lt @ 131.93

Install 12' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

Ridge Line
ROW Line

15' Drainage Eas't
12' Maintenance Berm

Sta. 3+48.31 Install 42' of 15" SWS
USFL 47' Lt @ 137.2
DSFL 25' Lt @ 132.26

Install 12' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

Sta 4+50 Install 42' of 15" SWS
USFL 47' Lt @ 136.9
DSFL 25' Lt @ 132.54

Install 12' of Conc Collar
Bevel Pipe & Collar flush with 3:1 Slope

Sta. 0+45 Install 40' of 15" SWS
USFL 60' Lt. @ 131.23
DSFL 20' Lt @ 129.8

Install 9' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

21" San. Sewer

Constr. Conc. Pad

Lower Berm

P.T. Sta. 3+14.93 (P)
Sta. 3+14.93 (M)

P.C. 3+48.31 (P)
3+48.22 (M)

Reset Manhole Tops

P.T. 5+41.81 (P)
5+41.71 (M)

Lower Berm

Install 15' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

Sta. 1+00 Install 35' of 15" SWS
USFL 60' Rt @ 137.28
DSFL 25' Rt. @ 131.56

60' Rt. Sta. 1+00, Top 139.28
Constr. Std. 2'x2' Inlet

Face of Box
Sta. 0+10

Lower Berm

Constr. Conc. Pad

P.C. Sta. 0+28

Reset Manhole Top

ROW Line

Ridge Line

Install 10' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 slope

Sta. 3+48.31 Install 42' of 15" SWS
USFL 87' Rt @ 135.9
DSFL 25' Rt @ 132.26

Maintenance Berm

Lower Berm

Install 10' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 Slope

Sta. 4+75 Install 56' of 15" SWS
USFL 81' Rt @ 137.7
DSFL 25' Rt @ 132.61

All areas to drain over curb @ 2%

4-12'x9' RCB

℄ Channel ℄ Box

Earthwork Limit Line

10' Utility Eas't

20' Utility Eas't

Lot 6, Blk 2, Parklane Add'n

Lot 5, Blk 2, Parklane Add'n

Sta. 2+20
Start Retaining Wall

Top of retaining wall (11.8 feet above channel flowline)

Top of Retaining Wall (44' Lt)
(11.8 feet above channel flowline)

Floor @ Face of RCB
Sta. 0+10

P.C. Sta. 0+28

P.T. Sta 3+14.93

P.C. Sta 3+48.31

P.T. Sta 5+41.81

Existing Ground @ ℄ channel

Flowline of Channel

+0.28%

+0.28%

140
135
130
125

129.31
129.36
129.56
129.84
130.12
130.16
130.26
130.40
130.48
130.60
130.82

0 1 2 3 4 5 5+50

PLATE I, PLAN PROFILE
KENNEDY & CLARK CO.

SWD No. 23

Sheet

BM 144.59' "D" top W. C6 Glendale at S. rad. dr. into Park Lane

GLENDALE

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

20' Drainage Easement

Lot 1, Blk 2, Parklane Add'n

Constr. Ret. Wall

Open Car Wash

74' Lt. Constr. Sta. 6+46 Reinf. Conc. Manhole with Beehive manhole Cover, Top 140.5

Earthwork Limit Line

Iron 32.28' Lt. Sta 9+16.71

Curb

12' Maintenance Berm

21" San. Sewer

Install 10' Conc. Encasement on exist. 21" San. Sewer

Install 6' of Conc. Collar

Sta. 6+09, Install 26' of 42" SWS
USFL 45' Lt @ 131.52
DSFL 20' Lt @ 131.27
Bevel upstream end @ 18°±

Drainage Easement
Maintenance Berm

ROW Line
Ridge Line

Reset Manhole Tops

℄ 21" San. Sewer

PT Sta 5+41.71 (M)

Lower Berm

Install 17' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 Slope

Cover, planted riprap

PC Sta 9+16.71 (M)
Sta. 9+16.81 (P)

℄ Channel

℄ Box
4-12'x8' RCB

5+50 6 7 8 9

Constr. Conc. Pads

Install 13' of Conc. Collar
Bevel Pipe & Collar flush with 3:1 Slope

Sta. 5+95 Install 41' of 30" SWS
USFL 76' Rt. @ 133.56
DSFL 25' Rt @ 132.95

Ridge Line, See Cross-Sections

BOSTON ST.
Vacated

15' Maintenance Berm

ROW Line

Maintenance Berm

Curb

Light foundation & Pole

℄ 8" San. Sewer

℄ 8" San. Sewer

76' Rt. Sta 5+95, Top 137.0
Install Grouted Rip-Rap at least 5'0" square

10' Utility Easement

20' Utility Easement

Earthwork Limit Line

20' Drainage Easement

Lot 5, Blk 2, Parklane Add'n

Lot 2, Blk 2, Parklane Add'n

Top of Retaining Wall
11.8' above channel flowline

End Retaining Wall
Sta 6+00

145
140
135
130
125

Existing Ground at Channel ℄

Flowline of Channel

+0.28%

+0.28%

P.C. Sta 9+16.71

Sta 9+41.2 Floor @ Face of RCB

131.92

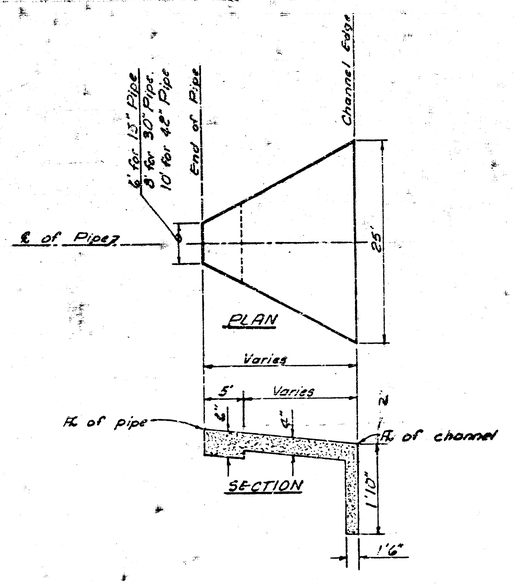
130.82

130.96 131.24 131.52 131.80

5+50 6 7 8 9 10

SWD No. 23

Sheet



TYPICAL CONC. PAD
Scale: Hor. 1"=10'
Ver. 1"=20"

PLATE 1, PLAN-PROFILE

1+65

F=67 CY
C=6 CY

F= 5×37½ / 27
C= 5×3 / 27

LF=313 SF
LC= 52 SF

21"S.S. IE 126.52

21"S.S. IE 123.88

12378

1+60

F=70 CY
C=2 CY

F= 5×38 / 27
C= 5×11.5 / 27

LF= 441 SF
LC= 105 SF

21"S.S. IE 126.25

21"S.S. IE 123.91

12378

1+55

F=53 CY
C=5 CY

F= 5×28.5 / 27
C= 5×28.5 / 27

LF=319 SF
LC= 135 SF

21"S.S. IE 126.32

21"S.S. IE 123.86

12378

1+50

F=50 CY
C=11 CY

F= 6×22.5 / 27
C= 6×48 / 27

LF=252 SF
LC= 445 SF

RF= 5 SF
RC= 158 SF

21"S.S. IE 126.53

21"S.S. IE 123.86

12370

8"S.S. IE 130.14

1+44

F=240 CY
C=81 CY

F= 44×14.7 / 27
C= 44×49.5 / 27

LF= 197 SF
LC= 52 SF

21"S.S. IE 126.51

21"S.S. IE 123.84

12348

F= 50×10 / 27
C= 50×17.4 / 27

F=18 CY
C=322 CY

Variation from Typical

1+00

F=143 CY
C=169 CY

F= 44×8.75 / 27
C= 44×16.35 / 27

LF= 975 SF
LC= 475 SF

RF= 15 S.F.
RC= 190 S.F.

21"S.S. IE 126.28

21"S.S. IE 123.66

12356

8"S.S. IE 130.10

0+56

F=28 CY
C=12 CY

F= 6×12.6 / 27
C= 6×52.5 / 27

LF= 78 S.F
LC= 60 SF

21"S.S. 126.25

21"S.S. IE 123.42

12344

F= 50×12.5 / 27
C= 50×17.5 / 27

F=23 CY
C=318 CY

Variation from Typical

0+50

F=34 CY
C=11 CY

F= 5×18.5 / 27
C= 5×59.5 / 27

LF= 174 SF
LC= 45 SF

RF= 10 SF
RC= 153 SF

21"S.S. IE 126.23

21"S.S. IE 123.38

12342

8"S.S. IE 130.06

0+45

F=32 CY
C=15 CY

F= 5×17.5 / 27
C= 5×60 / 27

LF= 196 S.F
LC= 74 SF

21"S.S. IE 126.20

21"S.S. IE 123.35

12341

Variation from Typical

F= 22×6.5 / 27
C= 22×13.5 / 27

F=7 CY
C=100 CY
110

0+40

F=35 CY
C=37 CY

F= 12×18.5 / 27
C= 12×81.5 / 27

LF= 147 S.F
LC= 81 S.F

21"S.S. IE 126.13

21"S.S. IE 123.32

12338

Variation from Typical

Variation from Typical

0+28

F=5 CY
C=41 CY

F= 16×5 / 27
C= 16×49.5 / 27

LF= 105 SF
LC= 75 SF

RF= 75 S.
RC= 110

21"S.S. IE 126.16

12336

Variation from Typical

Variation from Typical

SWD No 23

Sheet 4

5+00

LF=74 SF
LC=78 SF
RF=104 SF
RC=72 SF
21"S.S. IE 128.48
21"S.S. IE 128.06
130.68
8"S.S. IE 130.35
F=25×165.5/27
C=25×62/27

4+75

F=50×69/27
C=50×56/27
F=128 CY
C=178 CY
RF=227 SF
RC=60 SF
130.41
8"S.S. IE 130.29
F=25×226/27
C=25×56/27
F=209 C
C=525 C

4+50

21"S.S. IE 128.5
21"S.S. IE 128.0
LF=64 SF
LC=114 SF
RF=225 SF
RC=58 SF
130.54
8"S.S. IE 130.41
F=50×269.5/27
C=50×175.5/27
F=499 CY
C=525 CY

4+00

F=250 SF
C=185 SF
21"S.S. IE 127.15
21"S.S. IE 126.84
130.40
8"S.S. IE 130.28
F=51.78×283.5/27
C=51.78×199/27
F=544 CY
C=362 CY

3+48.22

F=317 SF
C=213 SF
21"S.S. IE 127.05
21"S.S. IE 126.64
130.26
8"S.S. IE 130.35
F=33.38×336.5/27
C=33.38×229.5/27
F=416 CY
C=264 CY

3+14.84

F=356 SF
C=246 SF
21"S.S. IE 126.96
21"S.S. IE 126.51
130.16
8"S.S. IE 130.23
F=14.84×275.5/27
C=14.84×257/27
F=151 CY
C=141 CY

3+00

LF=29 SF
LC=184 SF
RF=166 SF
RC=84 SF
21"S.S. IE 126.82
21"S.S. IE 126.45
130.12
8"S.S. IE 130.22
F=10×131.5/27
C=10×82/27
F=48 CY
C=30 CY

2+90

F=84 CY
C=313 CY
F=50×45.5/27
C=50×169/27
RF=97 SF
RC=80 SF
130.09
8"S.S. IE 130.22
F=40×72/27
C=40×76.5/27
F=107 CY
C=113 CY

2+50

LF=62 SF
LC=154 SF
RF=47 SF
RC=73 SF
21"S.S. IE 127.50
21"S.S. IE 127.19
129.98
8"S.S. IE 130.20
F=50×131.5/27
C=50×216/27
F=244 CY
C=400 CY

2+00


LF=130 SF
LC=113 SF
RF=249 SF
RC=92 SF
21"S.S. IE 126.83
21"S.S. IE 126.53
8"S.S. IE 130.13
F=42 CY
C=31 CY
F=8×140.5/27
C=8×103.5/27
F=50×19.5/27
C=50×14.5/27

1+92

LF=151 SF
LC=94 SF
F=2×65/27
C=

SWD No. 23

Sheet



SWD No. 23

Sheet 6 of

Sta 9+61.7 Face of RCB F = 0 SF / C = 100 SF

F = 15.7 × 19 / 27
C = 15.7 × 116.5 / 27

F = 9.9 × 39 / 27
C = 9.9 × 141.5 / 27

F = 16.7 × 43.5 / 27
C = 16.7 × 145 / 27

F = 50 × 48 / 27
C = 50 × 211 / 27

F = 50 × 69 / 27
C = 50 × 279.5 / 127

F = 56 × 96.5 / 27
C = 50 × 272.5 / 27

F = 50 × 77 / 27
C = 50 × 268.5 / 27

F = 7 × 16 / 27
C = 7 + 76.5 / 27

Variation from Typical

2:1

2%

F = 36 SF
C = 133 SF

F = 48 SF
C = 148 SF

F = 45 SF
C = 140 SF

F = 51 SF
C = 282 SF

F = 87 SF
C = 277 SF

F = 106 SF
C = 276 SF

F = 48 SF
C = 261 SF

LF = 7 SF
LC = 16 SF

RF = 19 SF
RC = 116 SF

21'-5.5
E 126.24
E 125.23
E 123.22
E 121.21
E 129.18
E 125.18
E 129.05
E 125.08
E 128.95
E 125.08
E 128.87
E 125.28
E 128.70
E 125.07
E 128.28
E 125.28

8'-5.5
E 130.71
E 130.70
E 130.68
E 130.63
E 130.55
E 130.51
E 130.47

131.87
131.85
131.80
131.66
131.52
131.38
131.24

140
135
130

9+26
9+16.7
9+00
8+50
8+00
7+50
7+00
6+50

F = 10 CY
C = 60 CY

F = 13 CY
C = 49 CY

F = 27 CY
C = 90 CY

F = 89 CY
C = 341 CY

F = 128 CY
C = 518 CY

F = 179 CY
C = 512 CY

F = 4 CY
C = 20 CY

SWD No. 23

Sheet 7 of 9