GENERAL NOTES:

1. Utility service lines, poles, valve boxes, meters and etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right–of–way which do not conflict with proposed construction.

2. A saw cut of at least one–half the depth of existing surface courses or one–fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the project costs.

3. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

   All suitable excavation shall be wasted on low lying lots within the addition before any material is disposed of off site.

   All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location

4. Trees and shrubs in public right–of–way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage. The cost is subsidiary to street construction costs.

5. Limits of earthwork shall match existing ground elevations at the right–of–way line unless otherwise noted on the plans with a new finished grade elevation. When a new finished grade elevation is shown, the earthwork shall extend one foot beyond the right–of–way line and then slope up or down using permissible slopes to match the existing ground surface.

6. The Contractor shall be responsible for preserving property irons. The Contractor will be required to reestablish any property irons which are damaged or destroyed by his construction operations. Such irons shall be reestablished by a licensed land surveyor in accordance with state laws.

7. All transition curb paid for as Roll Type Curb.

8. All lawn/turf areas disturbed by construction shall be restored with the same sod as existing. Restoration of disturbed areas shall include, but not be limited to, top soil preparation and sodding. All sodding work shall be in accordance with City Standard Specifications and the City Administrative Regulation No. AR78, which governs cleanup and restoration or replacement following construction. The "Storm Water Pollution Prevention Plan" will show the estimated Square Yards of disturbed lawn/turf area to be sodded, with a bid item for the same. When the weather/season prevents the installation of sod, the Contractor shall be responsible for installing Erosion Control Blanket (Curlex I, or approved equal) at the back of curb (8' wide minimum). All costs for erosion mat installation shall be subsidiary to "Site Restoration".

9. The Contractor shall reseed all non–lawn/turf areas disturbed by construction with a mixture of Ryegrass (applied at a rate of 200 lbs per acre) and Fescue, Bermuda, or Buffalo grass, depending on the soil conditions (applied per Standard Specifications). Pure Nitrogen fertilizer shall also be applied at a rate of 1.5 lbs per thousand square feet. The seed shall be watered with deep soaking every two (2) weeks during dry periods until a mature stand of grass is obtained. The "Storm Water Pollution Prevention Plan" will show the estimated Square Yards of disturbed non–lawn/turf area to be seeded, with a bid item for the same. The permanent seeding may be omitted only if sodding is required in accordance with previous General Note. The Contractor shall be responsible for installing Erosion Control Blanket (Curlex I, or approved equal) at the back of curb, to and including the limits of all seeded areas. All costs for this work shall be subsidiary to the seeding bid item.

10. Subdivision benchmarks will be flat survey markers, No. 8134–08, 3" top diameter available at Kansas Blue Print Co., Inc. (Cost is incidental to curb construction)

11. Contractor shall maintain all existing BMPs on project site during construction. Contractor shall repair or replace any existing BMPs that are damaged (Cost is subsidiary to site restoration). If BMPs were damaged prior to contractor beginning work on project, notify construction inspector or engineer.

12. Contractor shall remove and stockpile organic material (topsoil) to surface (to a minimum of twelve (12) inches) all fills, embankments and any other areas on the site of the work where the original topsoil will be covered or damaged. Topsoil shall be free from trash, debris and surface vegetation more than six (6) inches in height. After all work has been completed in each area, topsoil shall be placed and graded. (Cost shall be subsidiary to Excavation)

13. Contractor to coordinate construction with the Wichita Airport Authority. Contact John Oswald at 946–4700.

14. Drop Inlets shall be rated for traffic loads. Contractor shall submit shop drawings to the engineer for review and approval.

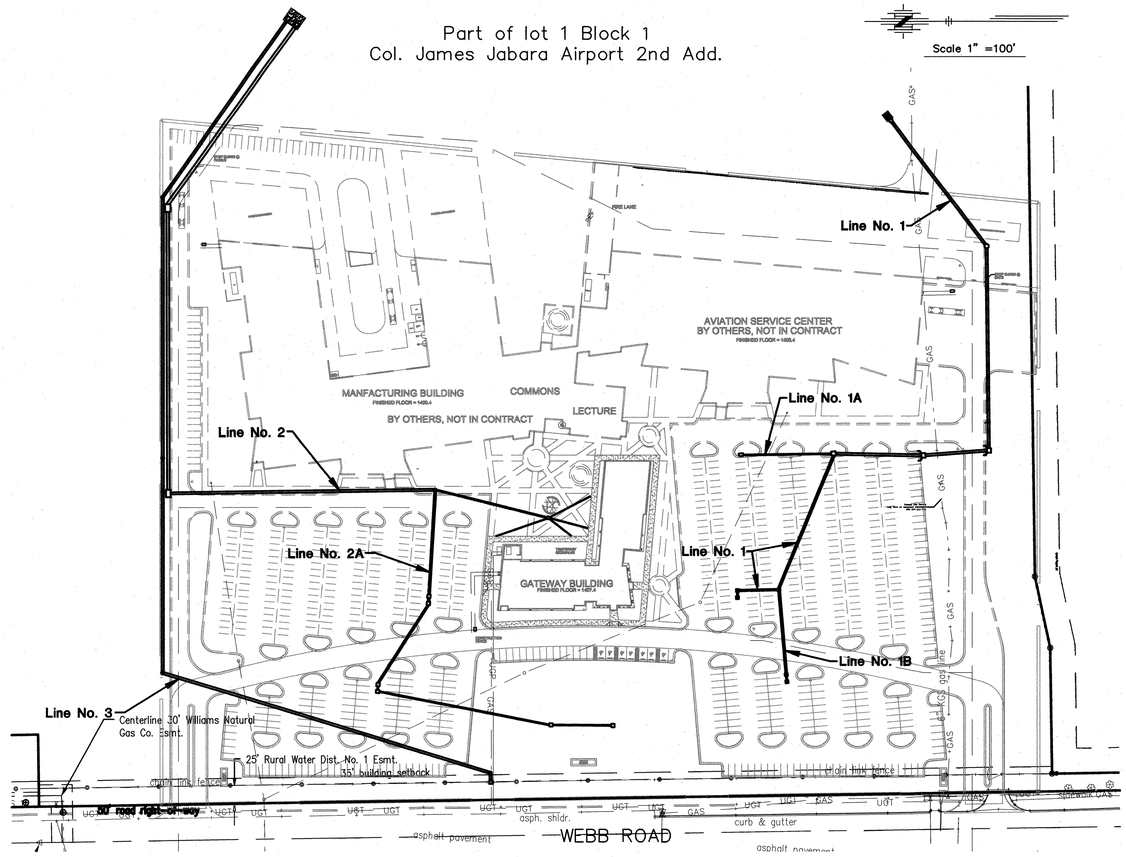
CONSTRUCTION PLANS FOR DRAINAGE IMPROVEMENTS
TO SERVE PART OF LOT 1, BLOCK 1
COL. JAMES JABARA AIRPORT 2ND ADDITION
(CENTER FOR AVIATION TRAINING)
TO
THE CITY OF WICHITA, KANSAS

JAMES L. ARMOUR, P.E. - CITY ENGINEER

PRIVATE PROJECT NO. 1857–PPS

OCA NO. 607861

AS-BUILT PLANS
CONTRACTOR: MIES CONSTRUCTION
INSPECTOR: BRIAN BLOYD, SCHWAB-EATON, P.A.
.PDF BY: BDB 12-19-08



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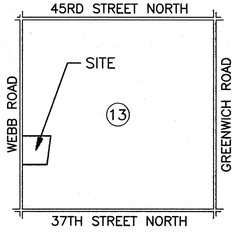


LOCATION MAP
No Scale

APPROVED AS NOTED BY CITY ENGINEER OF WICHITA

PAVING _____

STORM SEWERS VRH 3/20/08

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection is to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right–of–way by the Contractor without such inspection nor shall work be commenced without written authorization by the City Engineer. All construction and materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

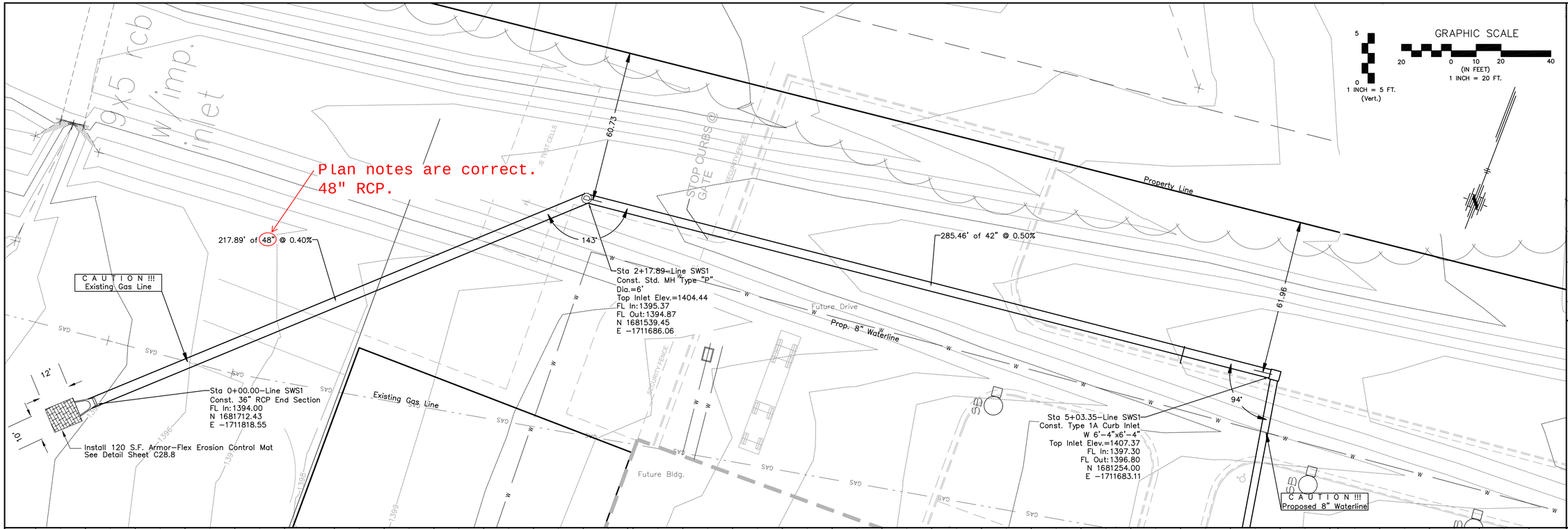
BENCH MARKS

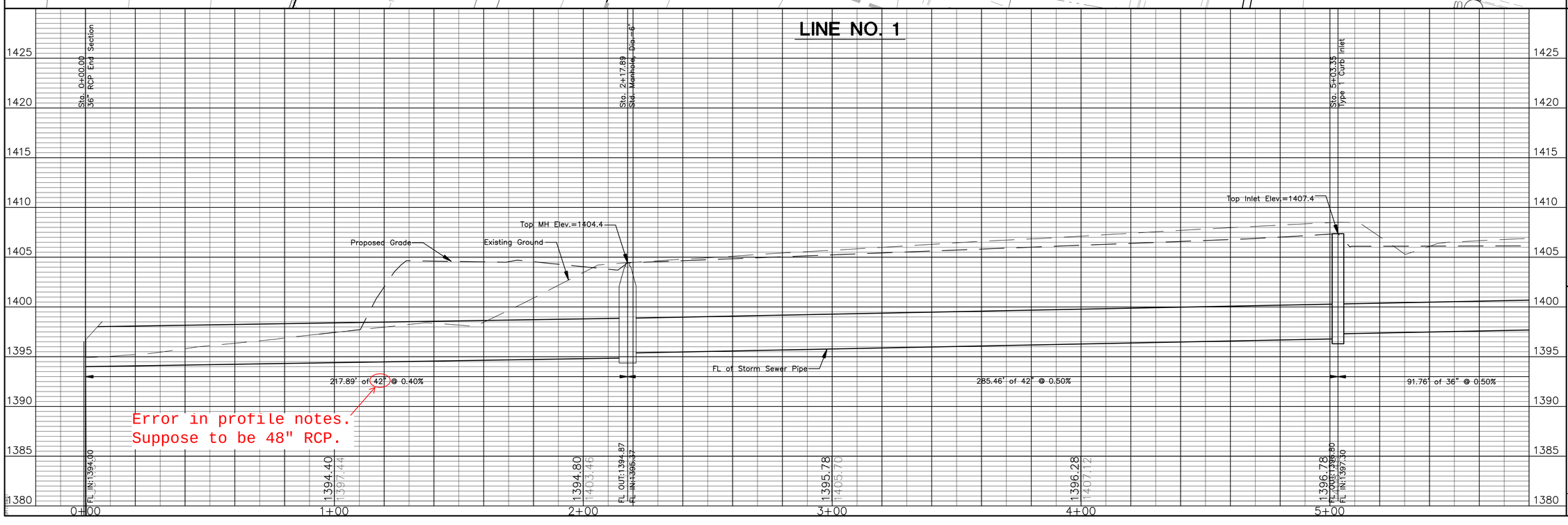
1. BM Square Cut on Concrete Taxiway at CL–CL Intersection of Taxiways Northwest of "T" Hangers
   Elevation 1416.75
2. BM Square Cut on Concrete Taxiway at Northwest Corner of North End of Taxiway, 63' North of CL of Abandon Road to West
   Elevation 1401.47
3. BM Square Cut on Top of West Curb on Webb Road, 470' South of the Southwest Corner of the Northwest Quarter of SEC.28–T26S–R2E, SEC.28–T26S–R2E, at Fire Hydrant
   Elevation 1416.00

MARCH 2008

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

TIMOTHY R. AUSTIN LICENSED 11496 KANSAS PROFESSIONAL ENGINEER 3.17.08





JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
STORM SEWER LINE NO. 1
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No.	Date	By	Approved	Revision

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone: 316/685-4114 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.2 of 26

Sta 5+03.35–Line SWS1
Const. Type 1A Curb Inlet
W 6'–4"x6'–4"
Top Inlet Elev.=1407.37
FL In:1397.30
FL Out:1396.80
N 1681254.00
E –1711683.11

94'

CAUTION !!!
Proposed 8" Waterline

91.75' of 36" @ 0.50%

175'

Sta 5+95.11–Line SWS1
Const. Type 1A Curb Inlet
W 6'–4"x6'–4"
Top Inlet Elev.=1406.15
FL In:1397.76
FL Out:1397.76
N 1681247.16
E –1711774.61

125.38' of 36" @ 0.60%

Sta 7+20.49–Line SWS1
Sta 0+00.00–Line No. 1A
Const. Type 1 Curb Inlet
W 6'–4"x6'–4"
Top Inlet Elev.=1406.68
FL In:1399.01
FL Out:1398.51
N 1681249.57
E –1711899.97

SWS Line 1

111'

67'

SWS Line 1A

Proposed 8" Waterline

Sta 9+24.75–Line SWS1
Sta 0+00–Line SWS1B
Const. 4x4' Area Inlet
2–22x48" Grate
Top Inlet Elev.=1405.76
FL In:1401.14
FL Out:1400.64
N 1681060.04
E –1711976.13

153'

94'

113'

SWS Line 1B

204.26' of 30" @ 0.80%

SWS Line 1

90'

58.16' of 24" @ 1.00%

Sta 9+92.91–Line SWS1
Const. 4x4' Area Inlet
2–22x48" Grate
Top Inlet Elev.=1405.47
FL Out:1402.33
N 1681048.88
E –1712034.08

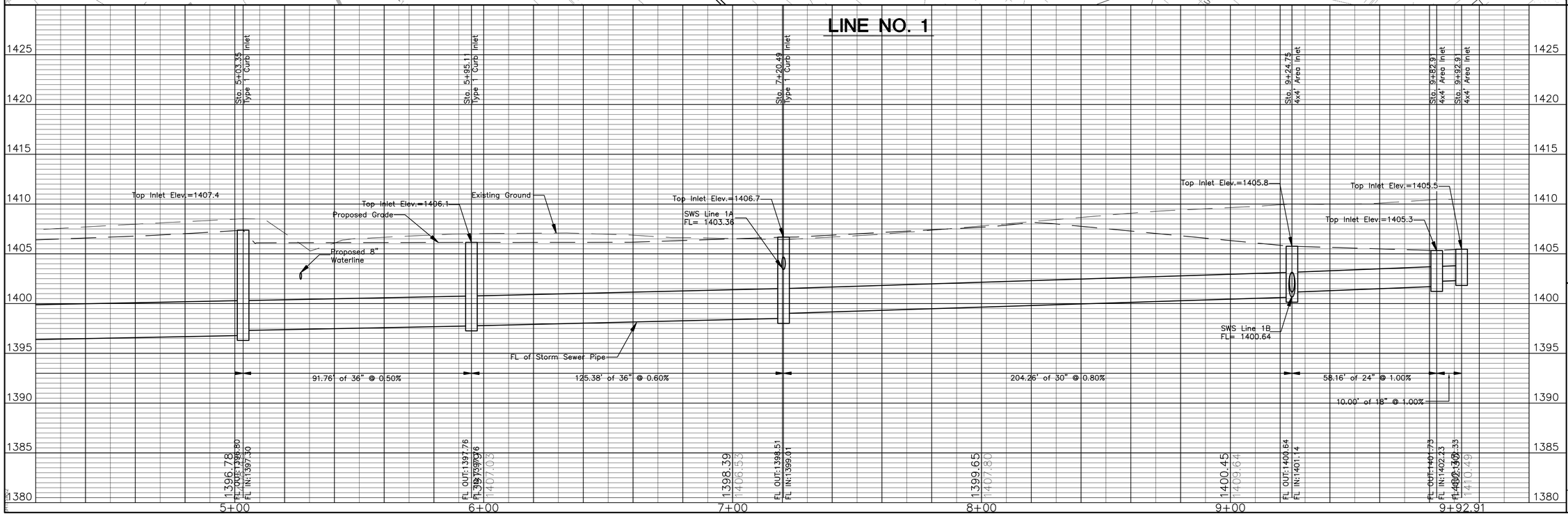
10.00' of 18" @ 1.00%

Sta 9+82.91–Line SWS1
Const. 4x4' Area Inlet
2–22x48" Grate
Top Inlet Elev.=1405.33
FL In:1402.23
FL Out:1401.73
N 1681058.88
E –1712034.28

Proposed 8" Sanitary Sewer

GRAPHIC SCALE
5 0 1 INCH = 5 FT. (Vert.)
20 0 10 20 40 (IN FEET) 1 INCH = 20 FT.

LINE NO. 1



No.	Date	By	Approved	Revision

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
STORM SEWER LINE NO. 1
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/FPPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
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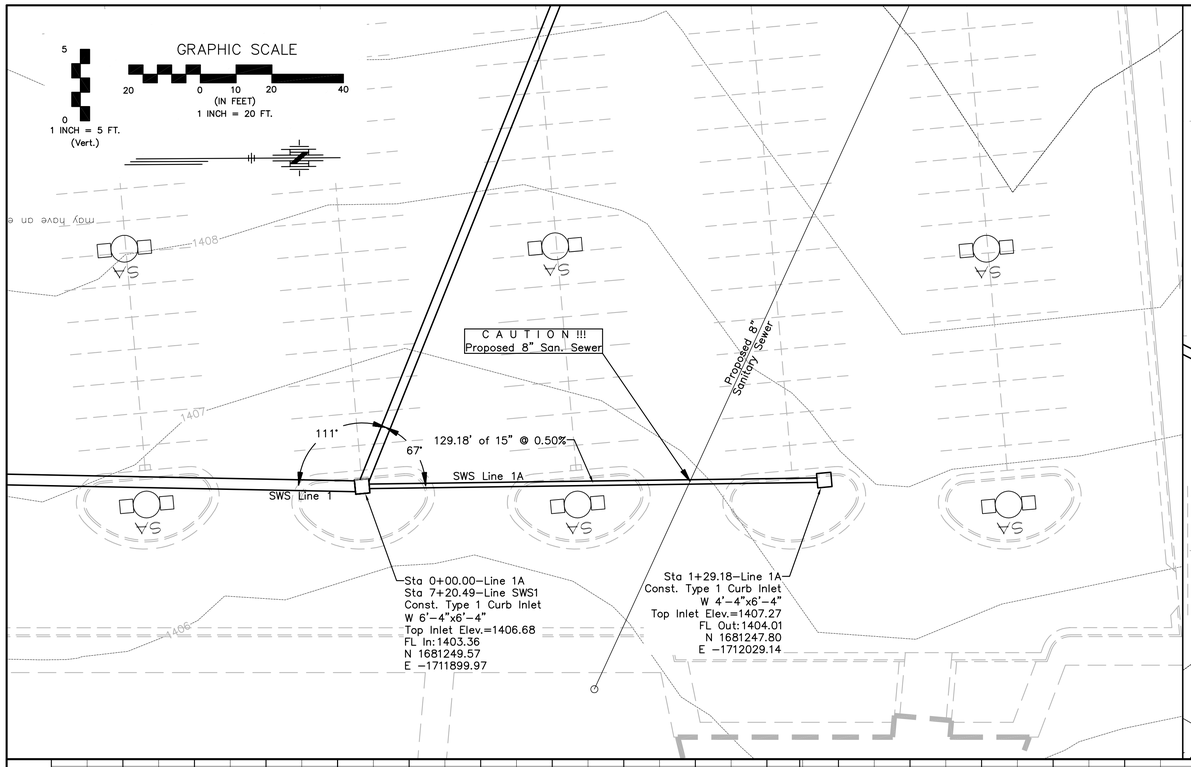
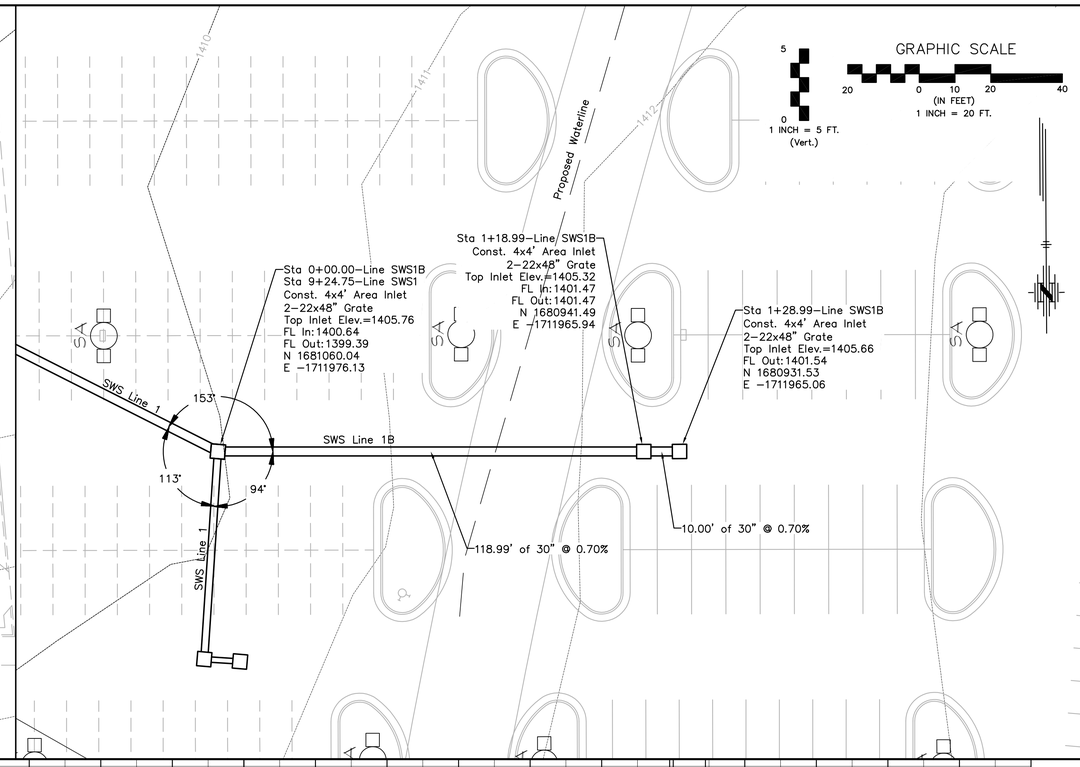
Phone 316/685-4114 ■ FAX 316/685-4444

FINAL

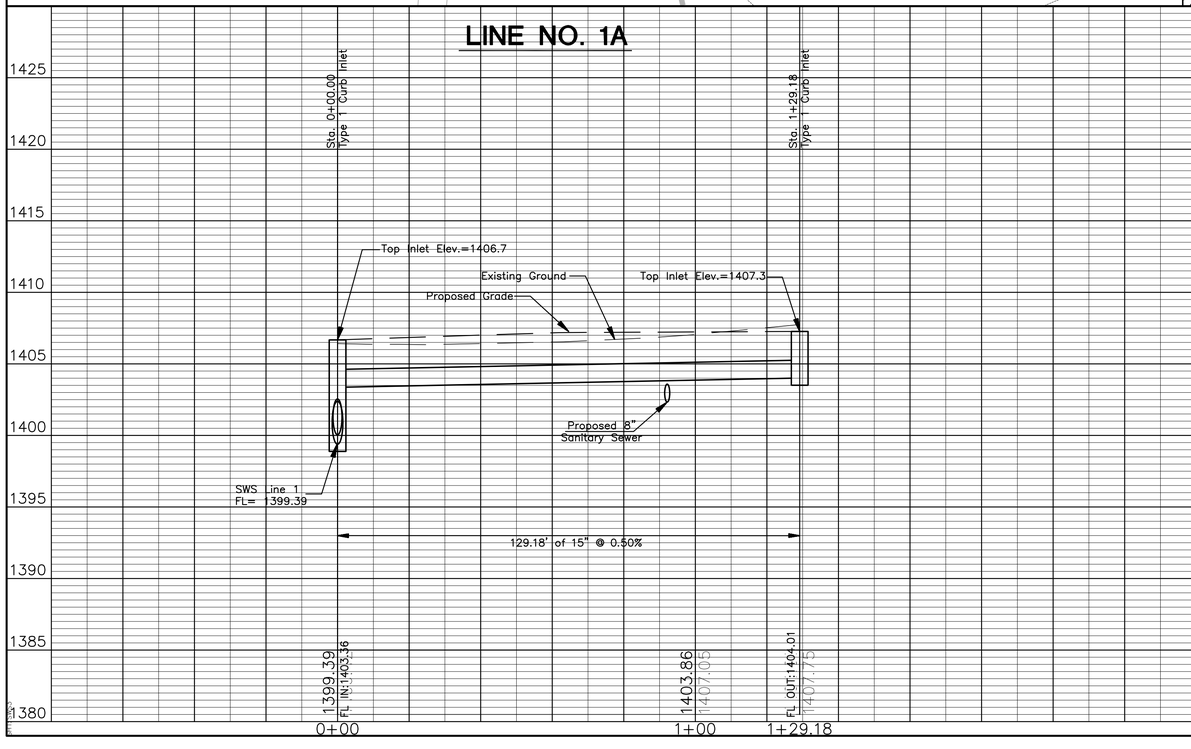
Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet C28.3 of 26





LINE NO. 1A



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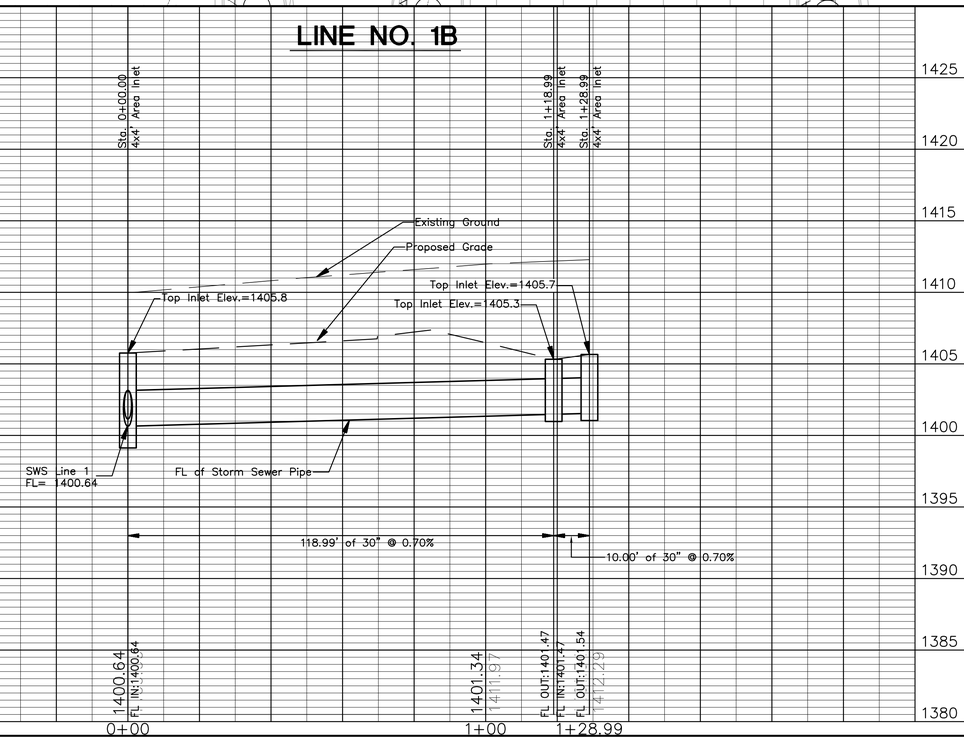

No.	Date	By	Approved	Revision

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
STORM SEWER LINE NO. 1A & 1B
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185.FPPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
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FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
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Sheet
C28.4 of 26

Armor-Flex Mat was installed on slopes, not directly below flows.

Install 500 S.F. Armor-Flex Erosion Control Mat
See Detail Sheet C28.8

Sta 0+00.00–Line No. 2
End 48" End Section
FL Out=1394.00
N 1681846.58
E –1712650.74

20'

25'

Concrete

Line 2

Line 3

311.33 L.F. 48" RCP @ 0.30% Grade

Proposed 8" Waterline

144.1°

Proposed Drive

398.19 L.F. 42" RCP @ 0.40% Grade

Sta 3+12.34–Line No. 2
Const. Type 1 Curb Inlet
W=7'–4" L=10'
Top Inlet Elev.=1410.03
FL In:1395.43
FL Out:1394.93
N 1681592.26
E –1712830.33

FUTURE EXPANSION

CATCH BASIN @

GRAPHIC SCALE

5
0
1 INCH = 5 FT.
(Vert.)

20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

LINE NO. 2

Sta. 0+00 Line No. 2
End 48" End Section

FL Out 1394.00

Existing Ground

Finish Grade

Top Inlet Elev.=1410.0

Sta. 3+12.34
Const. Type 1 Curb Inlet

311.33 L.F. 48" RCP @ 0.30% Grade

398.19 L.F. 42" RCP @ 0.40% Grade

	1394.30	1394.60	1394.90	1395.78	1396.18
	1410.22	1412.84	1414.17	1414.39	1414.07

FL OUT:1394.93
FL IN:1395.43

1425 1420 1415 1410 1405 1400 1395 1390 1385 1380

1+00 2+00 3+00 4+00 5+00

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 2

CITY OF WICHITA, KANSAS

JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No.	Date	By	Approved	Revision

POE & ASSOCIATES, INC.
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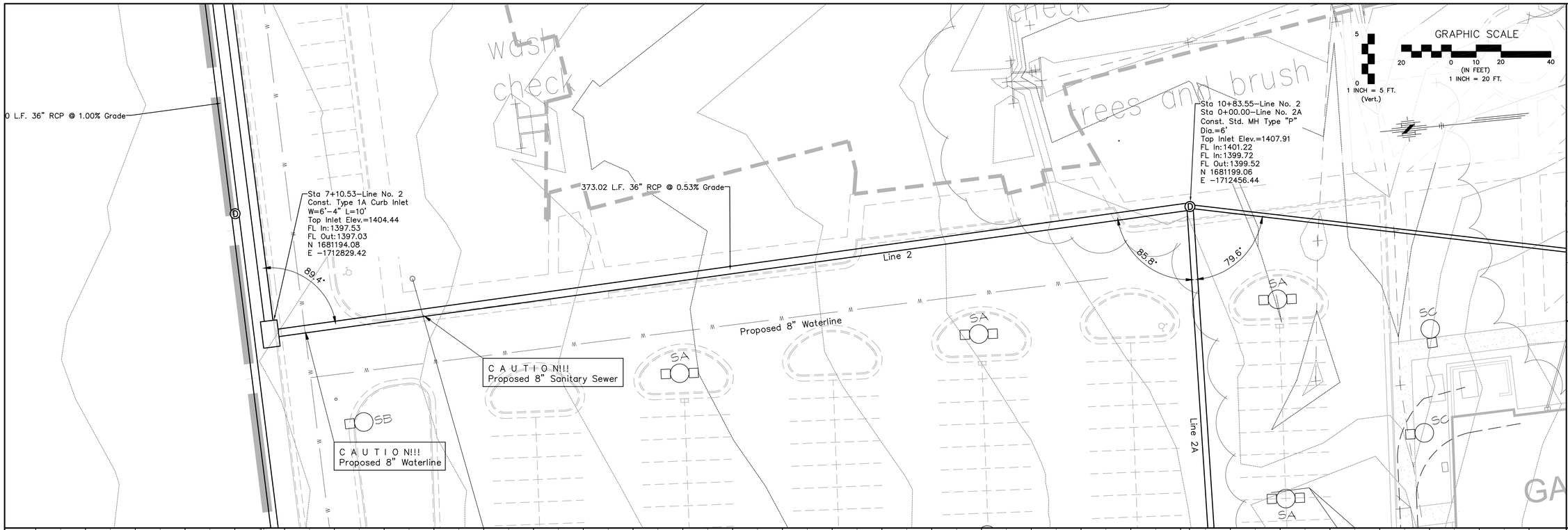
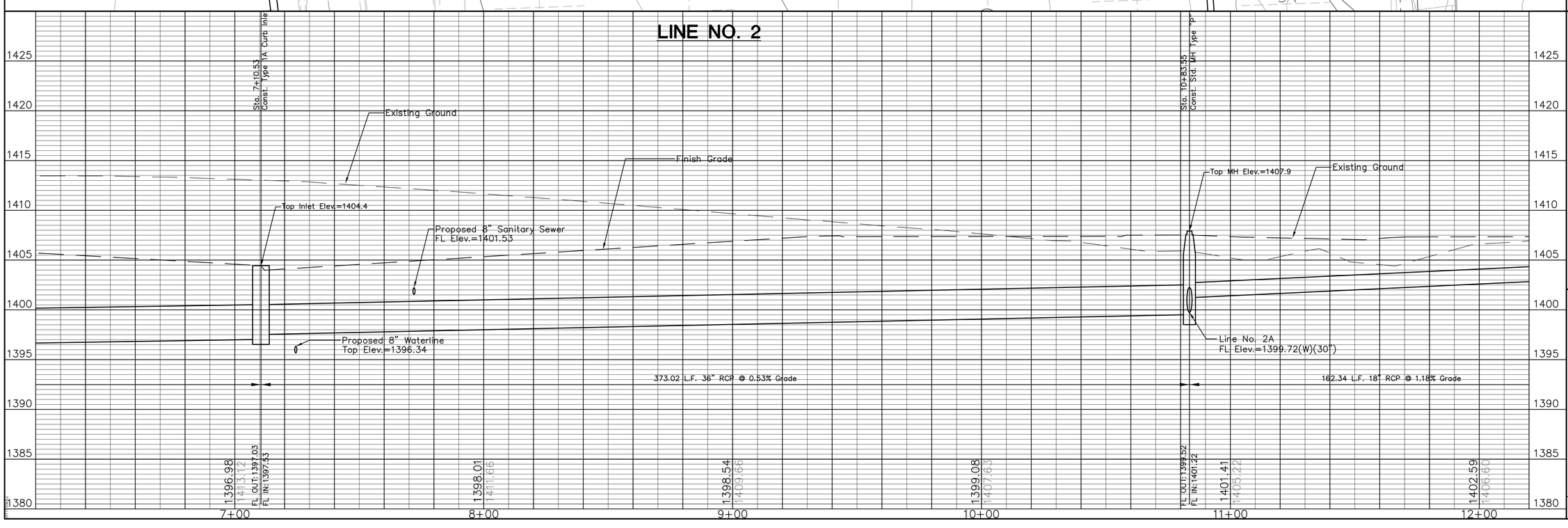
FINAL

Designed By: T. Austin / J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.5 of 26



LINE NO. 2



No.	Date	By	Approved	Revision

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 2
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
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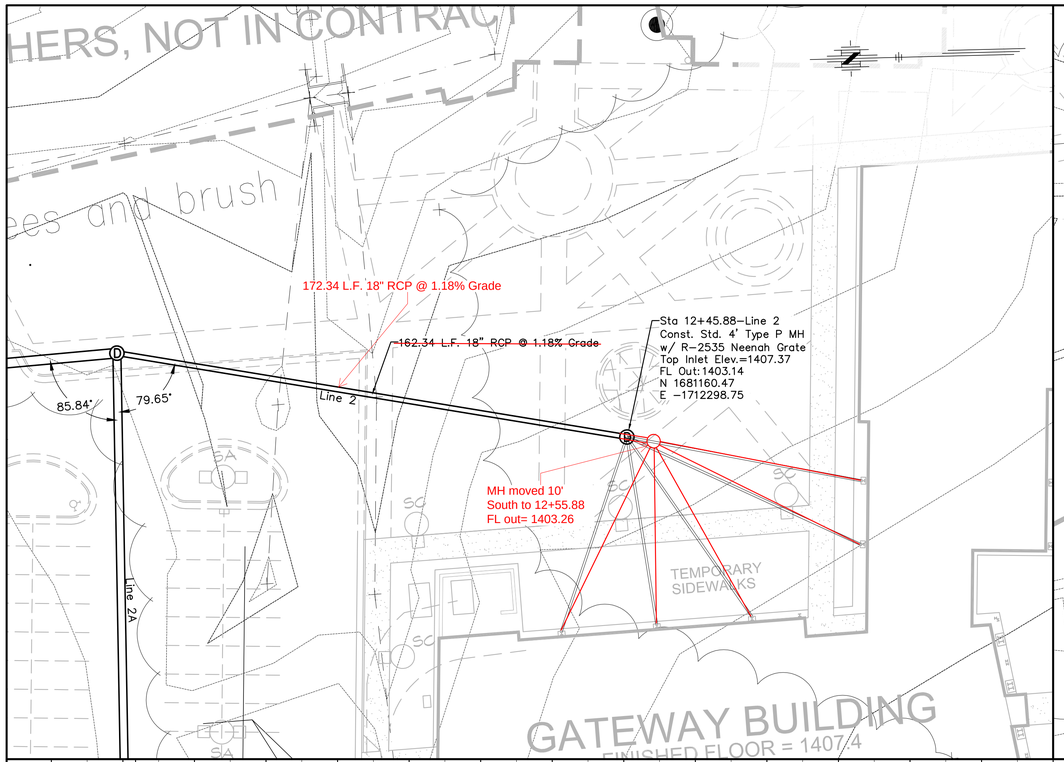
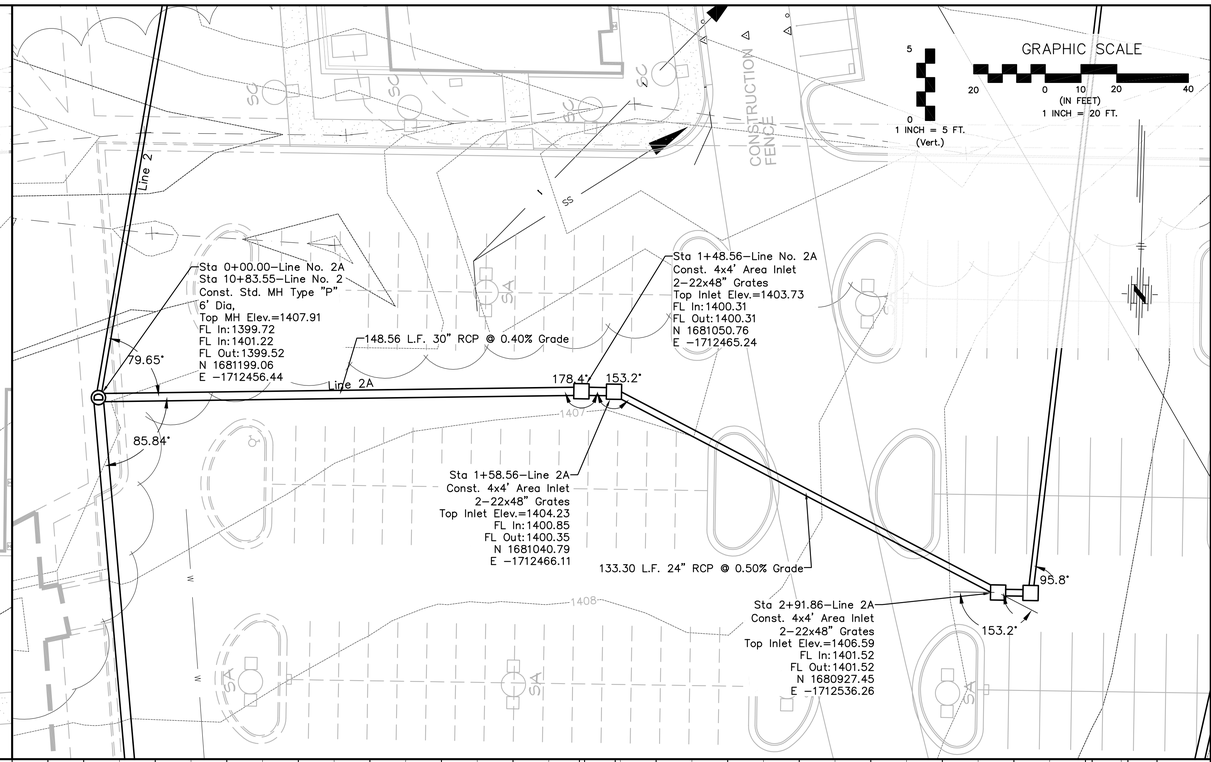
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.6 of 26

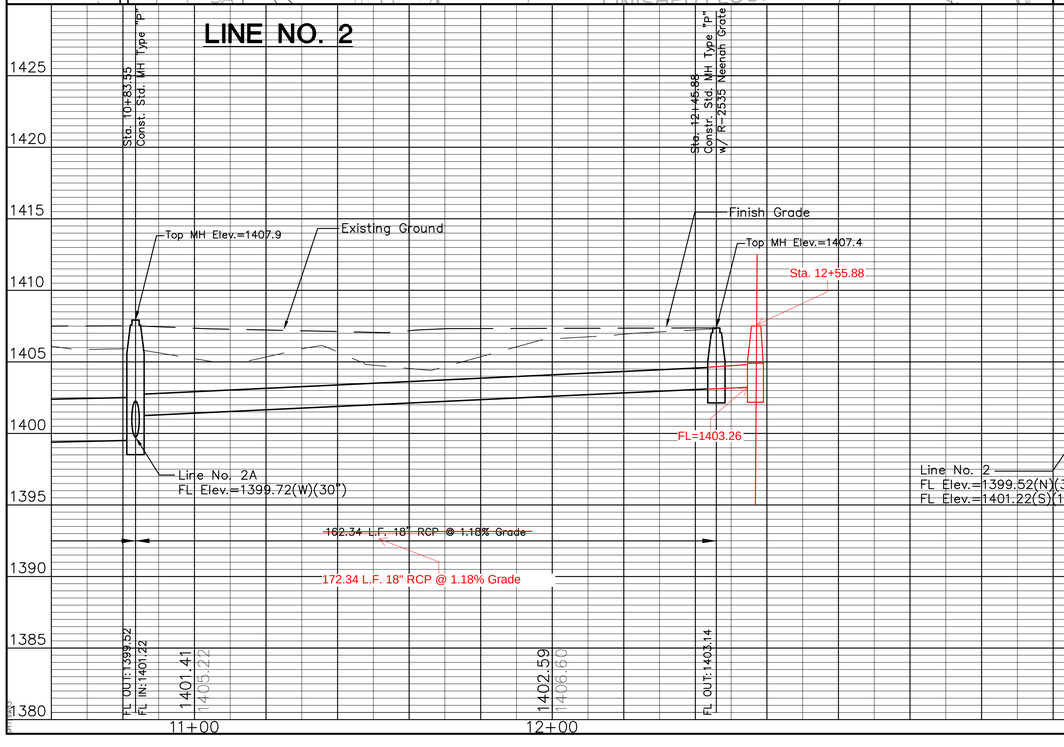




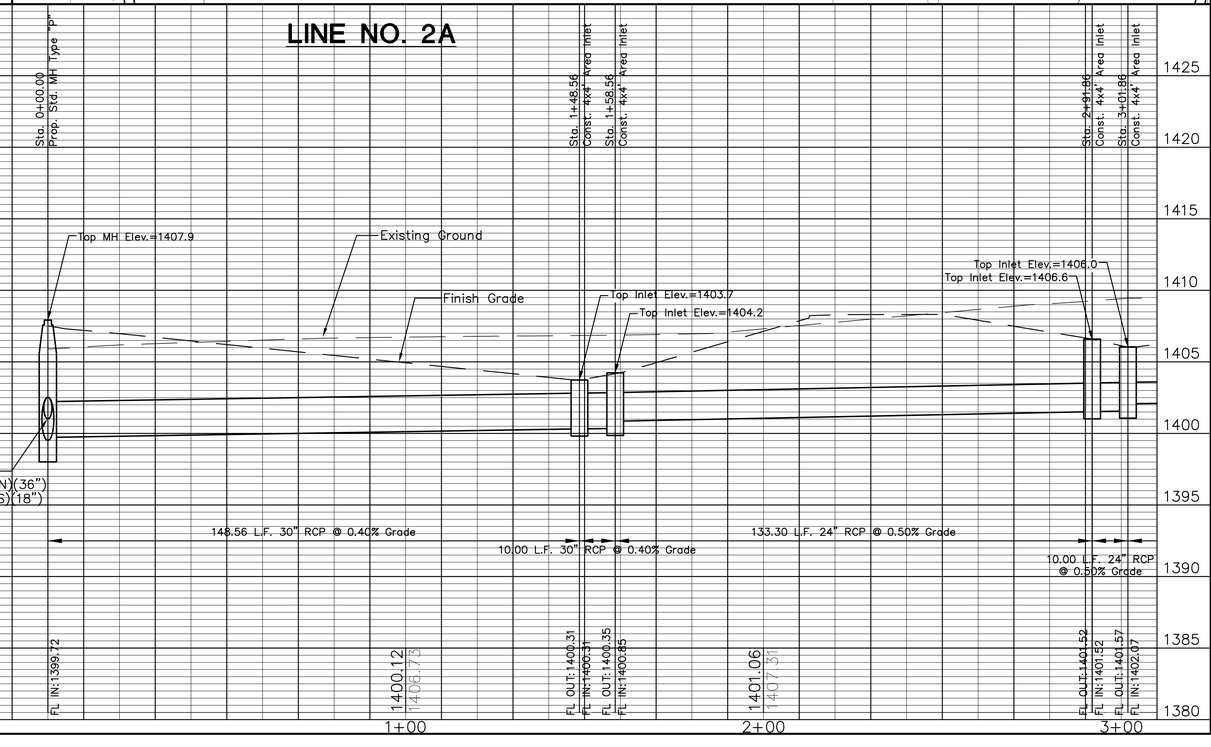
COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 2 & 2A
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No. | Date | By | Approved | Revision

LINE NO. 2



LINE NO. 2A



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Phone 316/685-4114 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.7 of 26

GRAPHIC SCALE
5
0
1 INCH = 5 FT.
(Vert.)
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

CONSTRUCTION FENCE
trees and brush
sign
C A U T I O N ! ! !
Proposed 8" Sanitary Sewer
95.8°
169.7°
Sta 3+01.86–Line 2A
Const. 4x4' Area Inlet
2–22x48" Grates
Top Inlet Elev.=1406.05
FL In:1402.07
FL Out:1401.57
N 1680917.49
E –1712537.13
Sta 5+48.52–Line 2A
Const. 4x4' Area Inlet
2–22x48" Grates
Top Inlet Elev.=1406.00
FL In:1403.26
FL Out:1403.06
N 1680871.22
E –1712294.84
Sta 6+35.24–Line 2A
Const. 4x4' Area Inlet
2–22x48" Grates
Top Inlet Elev.=1406.00
FL Out:1403.60
N 1680870.43
E –1712208.13
246.66 L.F. 18" RCP @ 0.40% Grade
86.72 L.F. 15" RCP @ 0.40% Grade
Sta 3+01.86–Line 2A
Const. 4x4' Area Inlet
2–22x48" Grates
Top Inlet Elev.=1406.05
FL In:1402.07
FL Out:1401.57
N 1680917.49
E –1712537.13
SA
SB
UGT
GAS
ECP

LINE NO. 2A

Sta. 2+91.86 Const. 4x4' Area Inlet
Sta. 3+01.86 Const. 4x4' Area Inlet
Sta. 5+48.52 Const. 4x2' Area Inlet
Sta. 6+35.24 Const. 4x2' Area Inlet

Existing Ground
Finish Grade
Top Inlet Elev.=1406.0
Top Inlet Elev.=1406.6
Top Inlet Elev.=1406.0
Top Inlet Elev.=1406.0
Proposed 8" Sanitary Sewer
Top Elev.=1400.64

133.30 L.F. 24" RCP @ 0.50% Grade
10.00 L.F. 24" RCP @ 0.50% Grade
246.66 L.F. 18" RCP @ 0.40% Grade
86.72 L.F. 15" RCP @ 0.40% Grade

1401.06 1407.31 FL OUT:1401.52 FL IN:1401.52
1401.57 1409.33 FL OUT:1401.57 FL IN:1402.07
1402.46 1409.33
1402.86 1409.68
1403.06 1403.46 1412.00 FL OUT:1403.46 FL IN:1403.60
FL OUT:1403.60

1425 1420 1415 1410 1405 1400 1395 1390 1385 1380
2+00 3+00 4+00 5+00 6+00

No.	Date	By	Approved	Revision

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 2A
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
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Phone 316/685-4114 ■ FAX 316/685-4444

FINAL
Designed By: T. Austin/ J. Dickman
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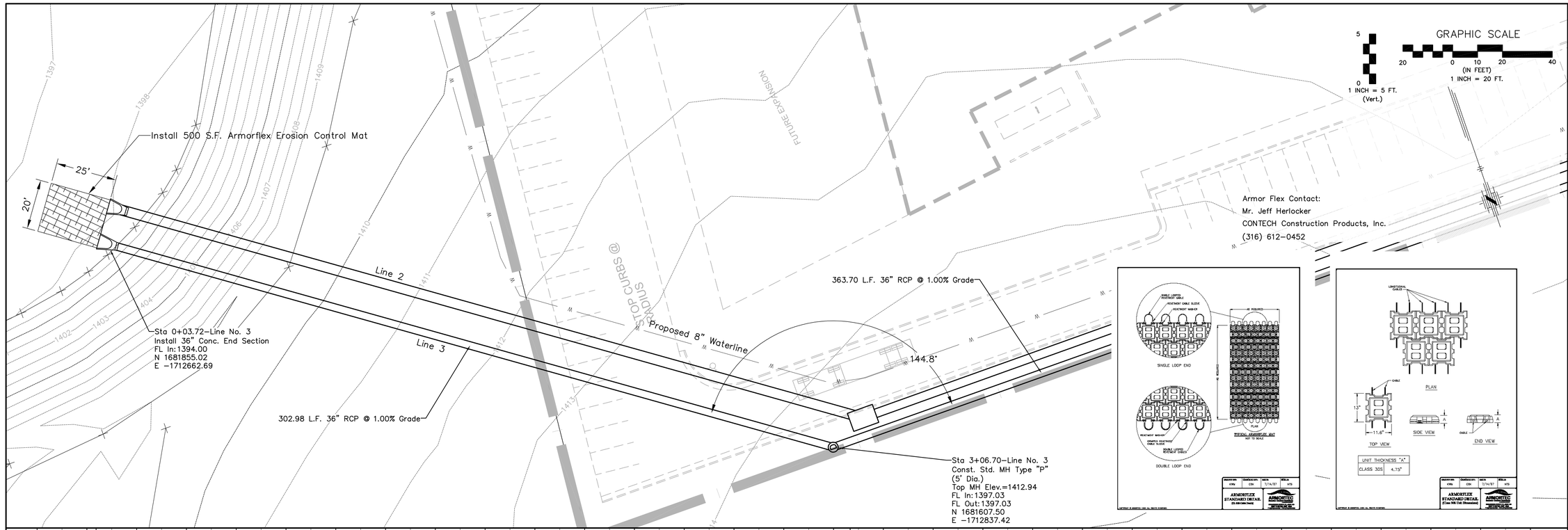
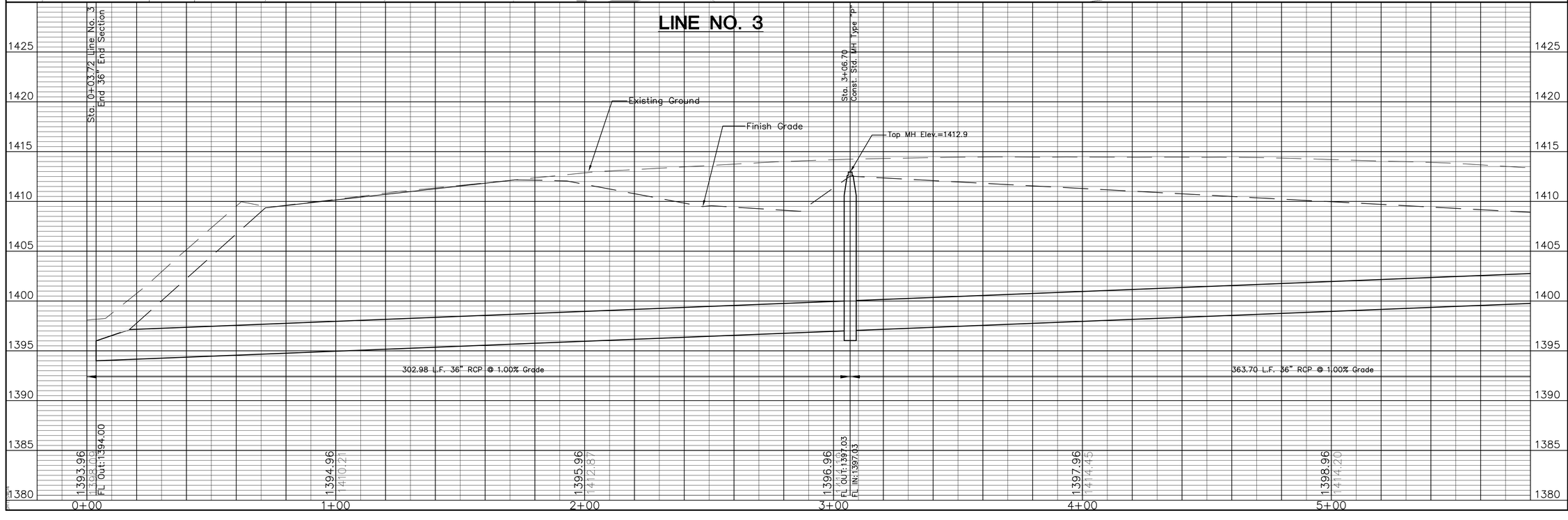
Poe Job No.: 1873
Date: March 2008





No.	Date	By	Approved	Revision

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 3

CITY OF WICHITA, KANSAS

JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
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FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.8 of 26

GRAPHIC SCALE
(IN FEET)
1 INCH = 20 FT.
1 INCH = 5 FT. (Vert.)

CAUTION!!!
Proposed 8" Waterline

106.9°

Sta 6+70.40–Line No. 3
Const. Std. MH Type "P"
6' Dia.
Top MH Elev.=1408.06
FL In:1400.67
FL Out:1400.67
N 1681243.80
E –1712837.42

363.70 L.F. 36" RCP @ 1.00% Grade

299.98 L.F. 36" RCP @ 0.73% Grade

Sta 9+70.38–Line No. 3
Const. Std. MH Type "P"
6' Dia.
Top MH Elev.=1412.67
FL In:1402.95
FL Out:1402.85
N 1680943.82
E –1712837.42

road right-of-way

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 3
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No. | Date | By | Approved | Revision

LINE NO. 3

Sta. 6+70.40 Const. Std. MH Type "P"
Top MH Elev.=1408.1
FL OUT:1400.67
FL IN:1400.67
299.98 L.F. 36" RCP @ 0.73% Grade
Sta. 9+70.38 Const. Std. MH Type "P"
Top MH Elev.=1412.7
FL OUT:1402.85
FL IN:1402.95
Finish Grade
Existing Ground
Proposed 8" Sanitary Sewer
FL Elev.=1400.25

	6+00	7+00	8+00	9+00	10+00	11+00
	1399.96	1400.88	1401.61	1402.34	1403.07	1403.47
	1413.44	1413.27	1413.16	1412.63	1411.85	1411.44

1425 1420 1415 1410 1405 1400 1395 1390 1385 1380

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4111 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin / J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

GRAPHIC SCALE
1 INCH = 5 FT. (Vert.)
1 INCH = 20 FT. (IN FEET)

C A U T I O N!!!
Proposed 8" Waterline

C A U T I O N!!!
Proposed 8" Sanitary Sewer

Line 2A

Line 3

Sta 14+48.88–Line No. 3
Const. Std. MH Type "P"
6' Dia.
Top MH Elev.=1411.72
FL In:1405.07
FL Out:1404.87
N 1680804.80
E –1712379.56

13.20 L.F. 36" RCP @ 0.40% Grade

478.50 L.F. 36" RCP @ 0.40% Grade

Sta 14+62.08–Line 3
Const. 4x4' Area Inlet
2–22x48" Grates
Top Inlet Elev.=1408.94
FL Out:1405.12
N 1680791.61
E –1712378.92

109.677°

35' building setback

asph. shldr.

LINE NO. 3

Sta. 9+70.38
Const.: Std. MH Type "P"

Top MH Elev.=1412.7

Finish Grade

Existing Ground

Proposed 8" Sanitary Sewer
FL Elev.=1400.25

478.50 L.F. 36" RCP @ 0.40% Grade

Existing Ground

Finish Grade

Top MH Elev.=1411.7

Proposed 8" Sanitary Sewer
FL Elev.=1400.26

Sta. 14+48.88
Const.: Std. MH Type "P"

Sta. 14+62.08
Const.: 4x4' Area Inlet

Top Inlet Elev.=1408.9

13.20 L.F. 36" RCP @ 0.40% Grade

FL OUT:1402.85 FL IN:1402.95	1403.07 1411.85	1403.47 1411.44	1403.87 1410.98	1404.27 1410.93	1404.67 1410.70	FL OUT:1404.87 FL IN:1405.07 FL OUT:1405.12

1425 1420 1415 1410 1405 1400 1395 1390 1385 1380

10+00 11+00 12+00 13+00 14+00 15+00

No.	Date	By	Approved	Revision

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER LINE NO. 3
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
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FINAL

Designed By: T. Austin / J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.10 of 26

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

20' Flat Bottom Ditch
Grade to Daylight

DITCH BOTTOM WAS POURED WITH CONCRETE

4:1 Side Slopes

Proposed 500 S.F. Armor-Flex Erosion Control Mat
See Detail Sheet C28.8

Part of lot 1 Block 1
Col. James Jabara Airport 2nd Add.

underdrain outlet

6" KGS gas line

4:1 Side Slopes

10' Flat Bottom Ditch
Grade to Daylight

Proposed 120 S.F. Armor-Flex Erosion Control Mat
See Detail Sheet C28.8

9x5 rcb
w/imp.
inlet

LINE 1
LINE 2
LINE 3

05.60
08.40

Tarmac
Pavement
8" Pavement
w/
6" Subbase

FIRE LANE

STOP CURBS @ RADIUS

FUTURE EXPANSION

No.	Date	By	Approved	Revision

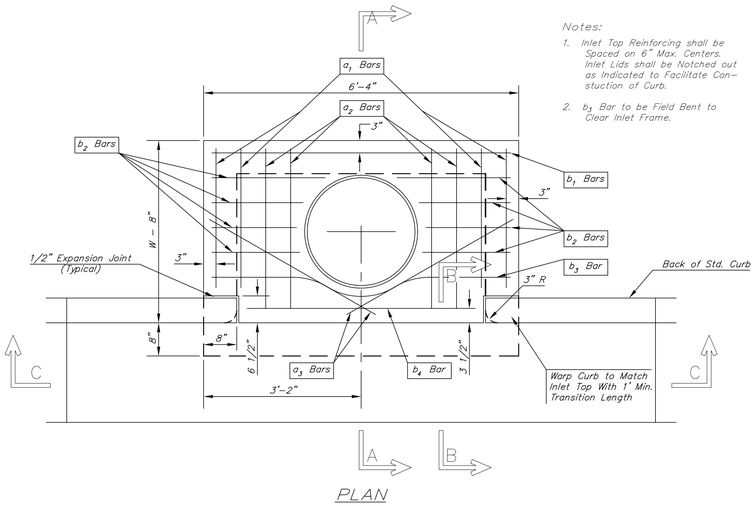
COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS
STORM SEWER END SECTION DIRT WORK
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

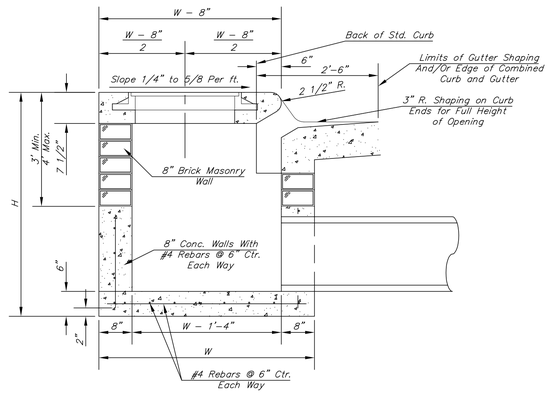
Sheet
C28.10A of 26



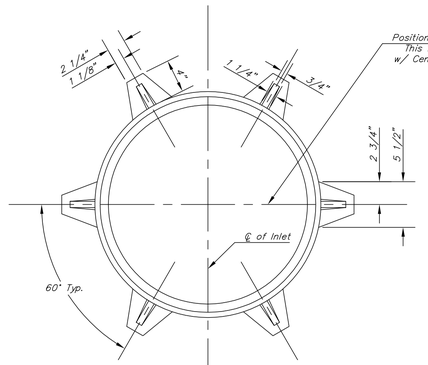
PLAN

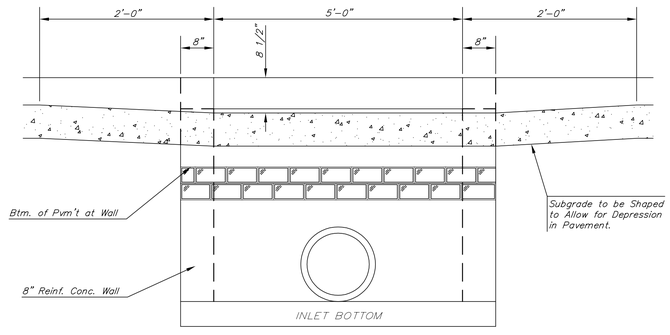
Notes:

1. Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids shall be Notched out as Indicated to Facilitate Construction of Curb.
2. b_3 Bar to be Field Bent to Clear Inlet Frame.

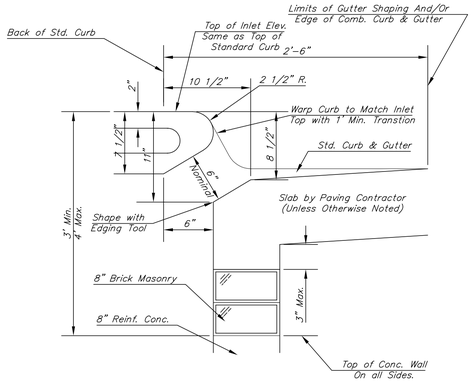


SECTION A–A

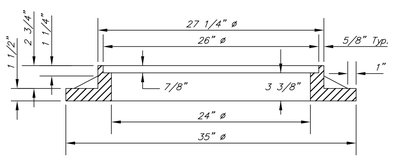




SECTION C–C



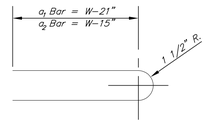
SECTION B–B



WT. = 180 lbs.

MANHOLE RING AND COVER

*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



BENDING DIAGRAM

STEEL SCHEDULE

BAR		a_1	a_2	a_3	b_1 W=4'-4"	b_1 W=5'-4"	b_1 W=6'-4"	b_1 W=7'-4"	b_1 W=8'-4"	b_2	b_3	b_4	Wt. Lbs.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'-4"	5'-7"	6'-7"	4'-0"	6'-1"	–	–	–	–	1'-9"	6'-2"	4'-8"	60±
	W=5'-4"	7'-7"	8'-7"	5'-0"	–	6'-1"	–	–	–	1'-9"	6'-2"	4'-8"	81±
	W=6'-4"	9'-7"	10'-7"	6'-0"	–	–	6'-1"	–	–	1'-9"	6'-2"	4'-8"	101±
	W=7'-4"	11'-7"	12'-7"	7'-0"	–	–	–	6'-1"	–	1'-9"	6'-2"	4'-8"	121±
	W=8'-4"	13'-7"	14'-7"	8'-0"	–	–	–	–	6'-1"	1'-9"	6'-2"	4'-8"	141±

Note: a_3 Bars to be Placed Approx. 2" Below Top of Inlet Cover.

STANDARD CURB INLET PRECAST TOPS

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 6'-4" 7 1/2"	21" & SMALLER	0.38±
5'-4"	4'-8" 6'-4" 7 1/2"	24" & 30"	0.51±
6'-4"	5'-8" 6'-4" 7 1/2"	36" & 42"	0.64±
7'-4"	6'-8" 6'-4" 7 1/2"	48" & 54"	0.77±
8'-4"	7'-8" 6'-4" 7 1/2"	60" & 66"	0.90±

GENERAL NOTES

1. Concrete tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix.
2. Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" and H=7'-0" or less.
3. Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
4. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD TYPE 1 CURB INLET
OPENING = 6" x 5'-0"

M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXXPPS	607861

No.	Date	By	Approved	Revision

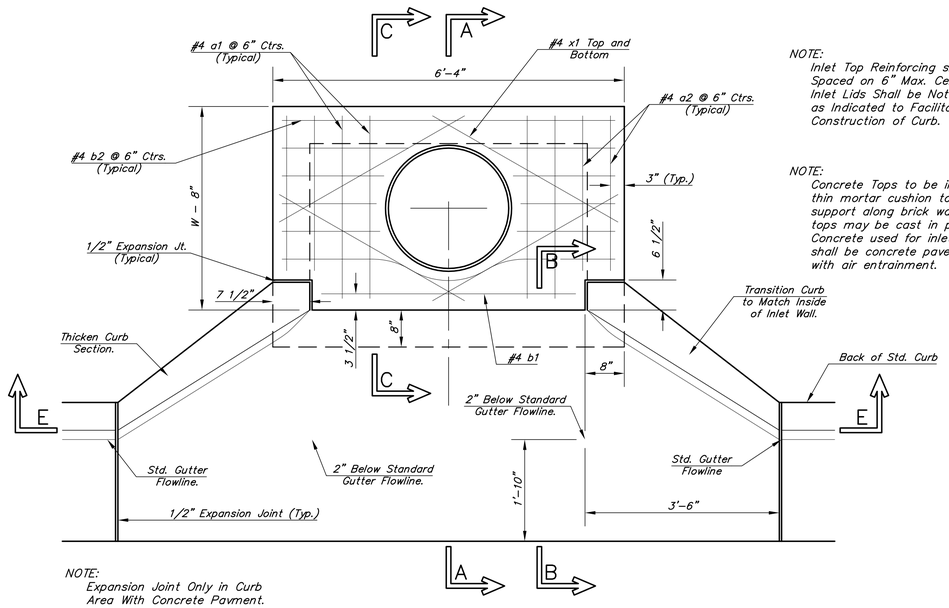
JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
TYPE 1 INLET 5'-0"
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS CCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4111 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.11 of 26

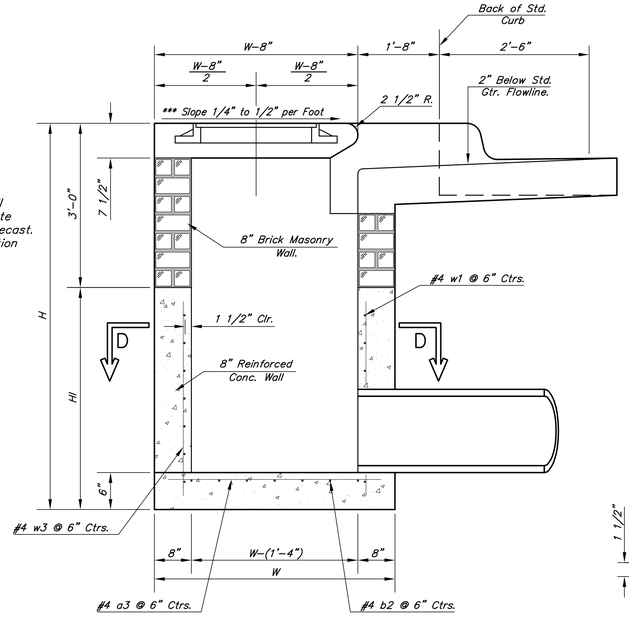


NOTE:
Expansion Joint Only in Curb Area With Concrete Pavment.

NOTE:
Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

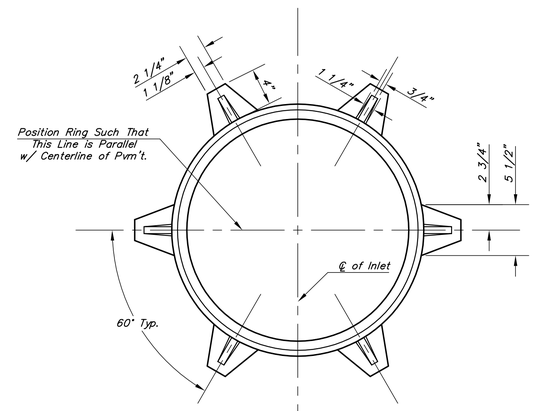
NOTE:
Concrete Tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix with air entrainment.

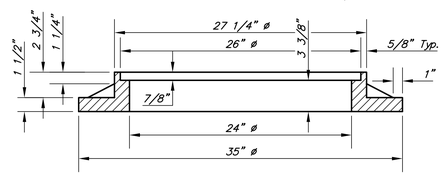
PLAN



SECTION A–A

***NOTE: Slope of Inlet tops to Match Sidewalk or Parking Slopes within Limits Indicated.

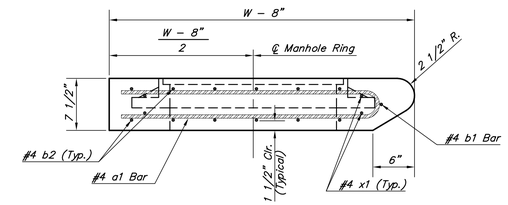




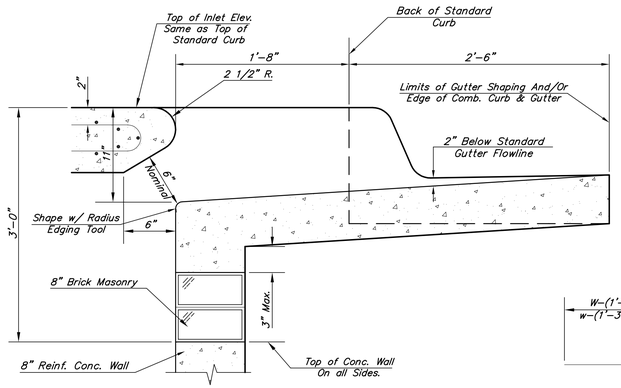
MANHOLE RING AND COVER

Weight = 180 Lbs.

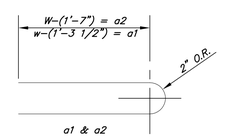
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



SECTION A–A

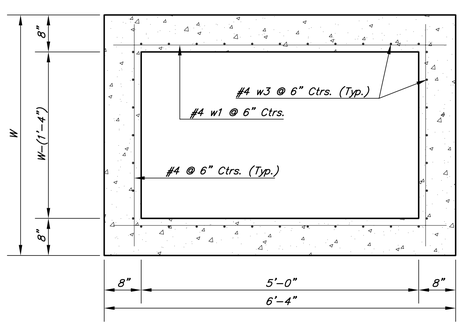


SECTION B–B



BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" x 6'-4" x 7 1/2"	21" & SMALLER	0.38±
5'-4"	4'-8" x 6'-4" x 7 1/2"	24" & 30"	0.51±
6'-4"	5'-8" x 6'-4" x 7 1/2"	36" & 42"	0.64±
7'-4"	6'-8" x 6'-4" x 7 1/2"	48" & 54"	0.77±
8'-4"	7'-8" x 6'-4" x 7 1/2"	60" & 66"	0.90±



SECTION E–E

SECTION D–D

NOTE: Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" and H=7'-0" or less.

Additional curb and gutter construction necessary to connect set-back inlet to pavement will be paid for at the unit price bid for each inlet hookup.

Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self-cleaning between all inlet and/or outlet pipes.

The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall

PRECAST SLAB AND FLOOR REINFORCING											
		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
* a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
* b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"
WALL REINFORCING											
		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
w1	#4	①	6'-1"	①	6'-1"	①	6'-1"	①	6'-1"	①	6'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	32	②	36	②	40	②	44	②	48	②

* Field Bend or Cut Reinforcing as Required for Clearance.
① 4 (HI - 12") (HI - 21") Rounded down to nearest 0.5'
② HI - 3"

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

STANDARD TYPE 1-A CURB INLET OPENING = 6" x 5'-0"

JAMES L. ARMOUR, P.E. - CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXXPPS	607861
DATE: JAN 08	

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
TYPE 1-A INLET 5'-0"
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 1857PPS OCA# 607861

No.	Date	By	Approved	Revision

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
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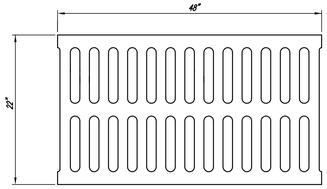
Sheet C28.11A of 26

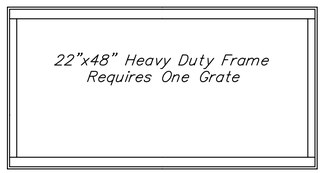


NEENAH R-4781 GRATE

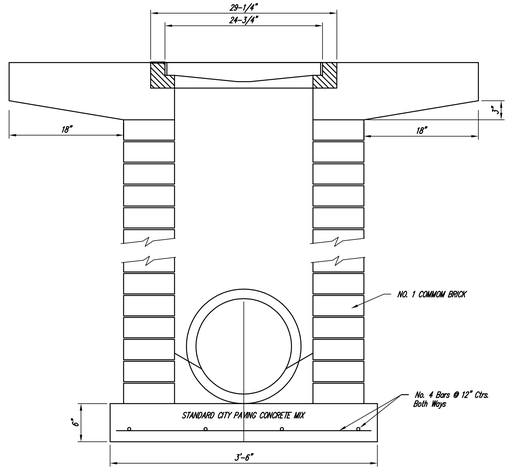
22" x 48" Frame and Grate Detail

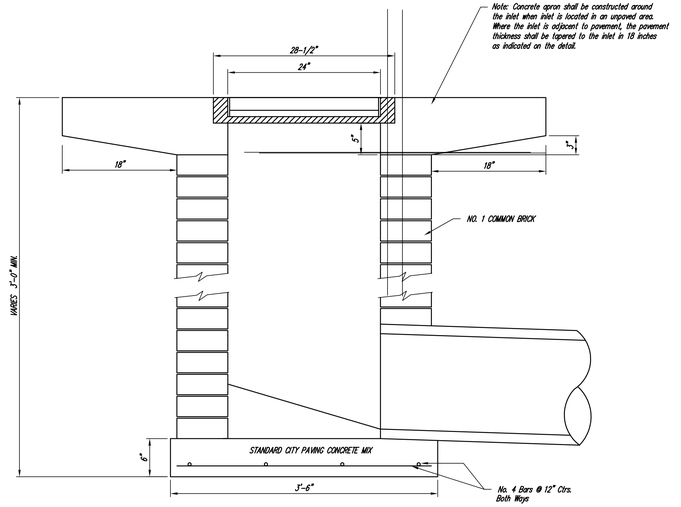
NOTE: Grates shell be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

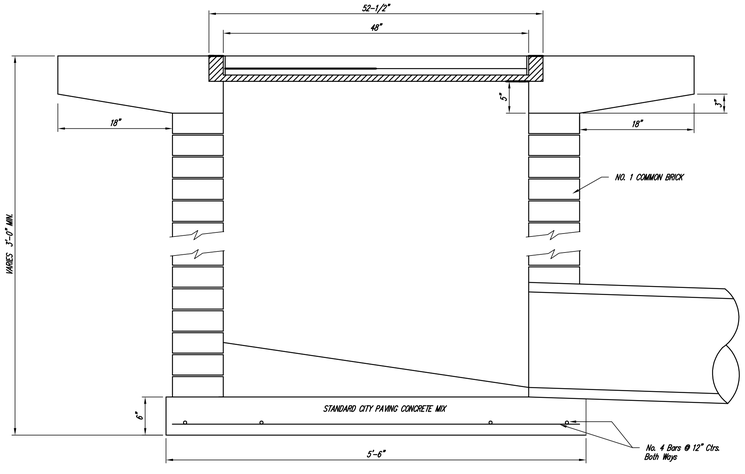
NOTE: Use of two frames of traffic load bearing capacity are required on 4'x4' area inlets, so that four grates will be supported across the inlet opening.

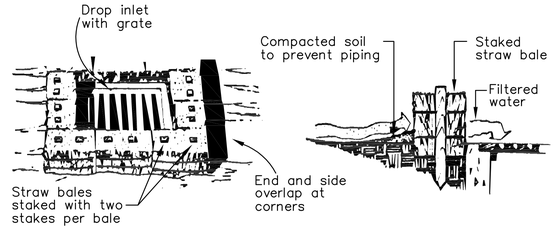


Frame For Neenah R-4781 Grate









HAY BALE SEDIMENT BARRIER

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
DROP INLET/HAY BALE SEDIMENT BARRIER
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No.	Date	By	Approved	Revision

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone: 316/685-4114 ■ FAX: 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
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THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

DROP INLET
2' X 2'/2' X 4'
4' X 4'

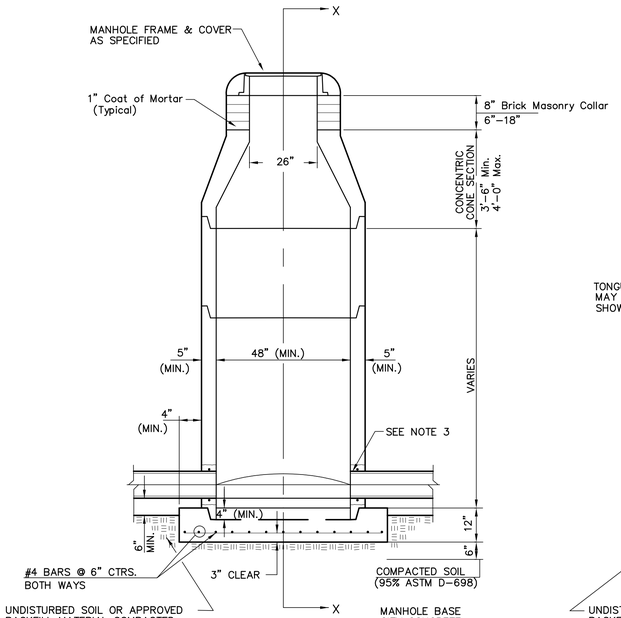
M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXXPPS	607861

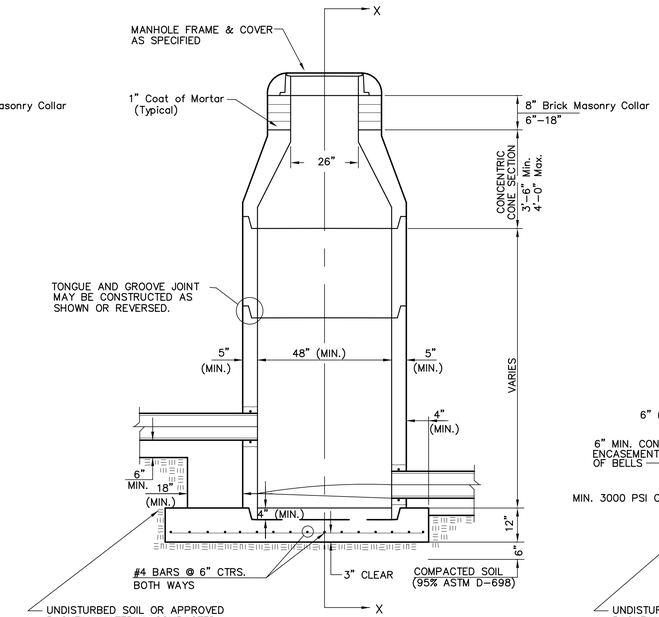
DATE
MAR 96

Sheet
C28.12 of 26

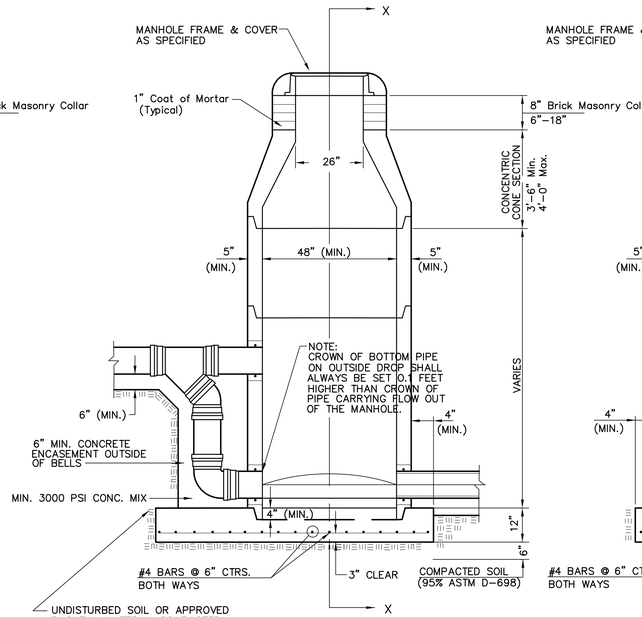
SEWER APPURTENANCES DETAILS



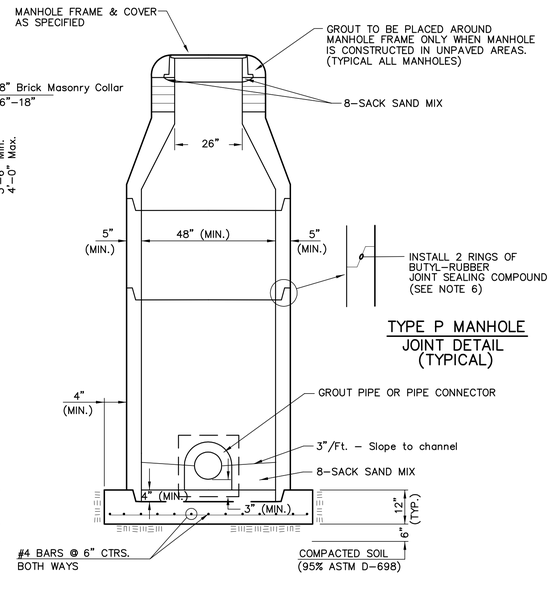
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON–SHRINK GROUT SHALL BE NON–METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON–SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI–BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
9. LIFTING HOLES SHALL BE FILLED WITH NON–SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MAHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES 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.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE–CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
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STANDARD TYPE 'P' MANHOLES

M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXXPPS	607861
DATE: JAN 08	

No.	Date	By	Approved	Revision

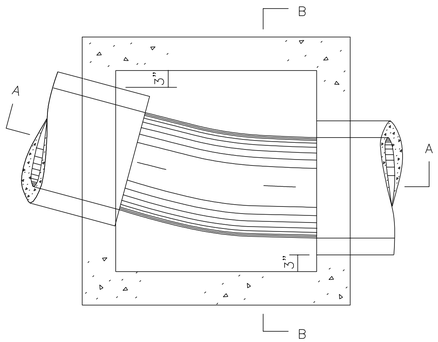
JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
TYPE "P" MANHOLE
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

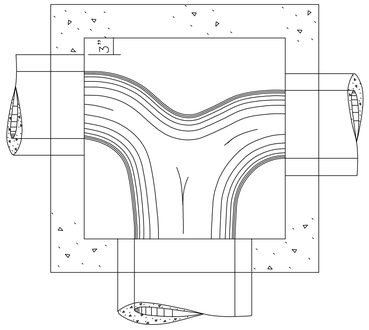
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

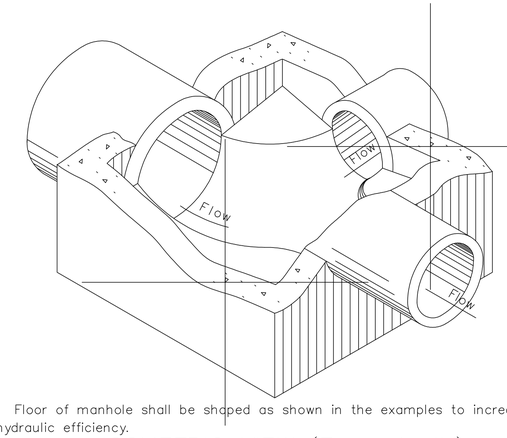
Sheet
C28.13 of 26



PLAN – FLOOR (Example I)



PLAN – FLOOR (Example III)



Floor of manhole shall be shaped as shown in the examples to increase hydraulic efficiency.

ISOMETRIC VIEW (Example IV)

Note: Use Concrete Grade 3.0 throughout. All exposed edges shall be finished with an edging tool.

At the contractors option Concrete Grade 3.0 (AE) or mix used in concrete pavement may be used throughout.

In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.

Floor of manhole shall be shaped as shown in various "EXAMPLES" with unreinforced Concrete Grade 3.0.

Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars shall be adjusted accordingly.

All castings shall be gray iron and shall comply with the KDOT Standard Specifications.

No deductions in concrete quantities shall be made for pipe openings or additions to concrete quantities shall be made for shaping floor of manholes.

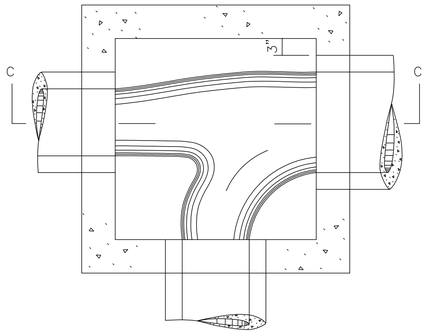
The top of the manhole shall be sloped slightly to approximately fit the ground line or other condition as directed by the Engineer.

Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.

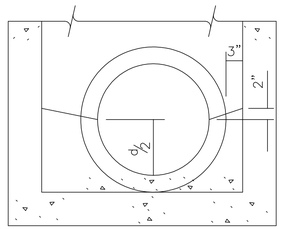
The Contractor has the option of using precast manholes, as approved by the Engineer.

Steps shall be installed in all manholes when specified in the plans or when "H" is equal to or greater than six feet. Steps shall comply with the requirements of the KDOT Standard Specification.

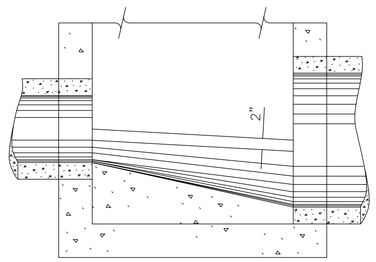
SECTION A–A (Example I)



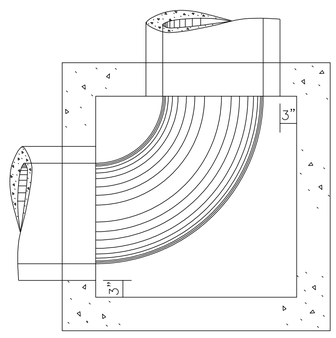
PLAN – FLOOR (Example IV)



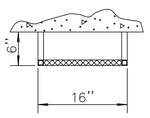
SECTION B–B (Example I)



SECTION C–C (Example IV)

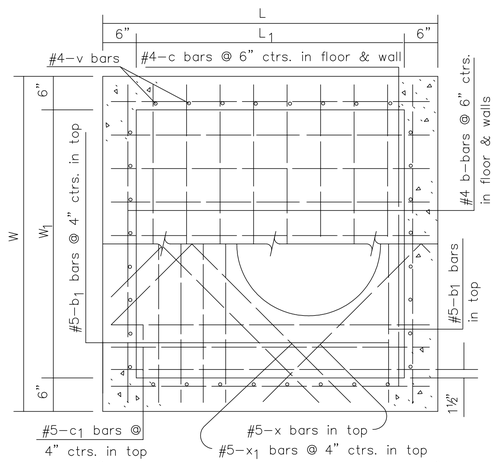


PLAN – FLOOR (Example II)

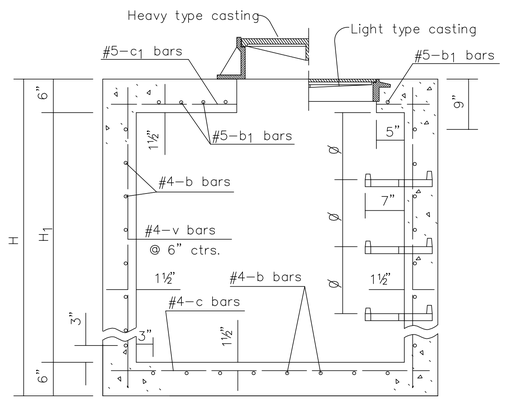


STEP DETAILS

Ø Steps shall be uniformly spaced. Spacing shall be 12" minimum and 16 ½ maximum.

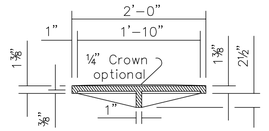


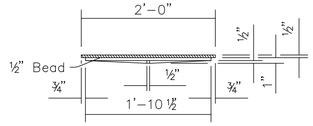
PLAN (Showing top & floor reinf.)

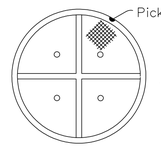


Where dimension "L" or "W" is greater than 6'–0" use 8" slab thickness.

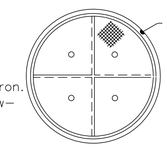
SECTION (Exclusive of floor shaping)





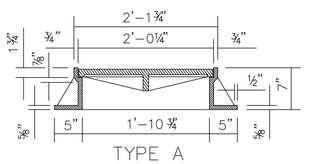


NOTE: All manhole castings are cast iron. Weight of castings includes no allowance for fillets and overruns.

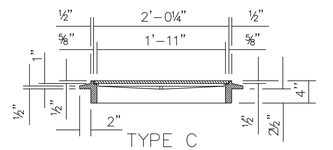


MANHOLE COVER TYPE A & B
(Weight=134 lbs.; without ¼" Crown= 125 lbs.)

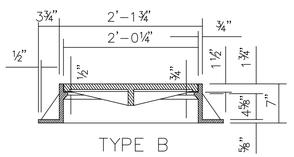
MANHOLE COVER TYPE C
(Weight= 64 lbs.)



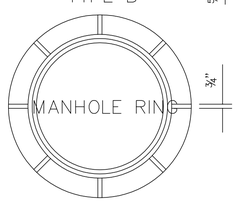
TYPE A



TYPE C



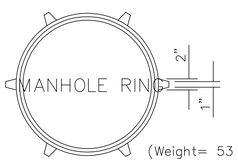
TYPE B



(Type A Ring= 192 lbs., Type B Ring= 198 lbs.)

HEAVY TYPE
MANHOLE COVER AND RING

Note: Either Type A or Type B may be used.



(Weight= 53 lbs.)

LIGHT TYPE
MANHOLE COVER & RING

Rings with four equally spaced lugs will be permitted.

NO.	DATE	REVISIONS	BY	APP'D
31	1–28–05	Changed Class to Grade concrete	S.W.K.	J.O.B.
30	12–12–97	Revised step spacing	R.J.S.	J.O.B.
29	12–27–93	Delete paint note	R.J.S.	J.O.B.
28	1–30–92	Rev. paint&step notes, ent. on CADD	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

REINFORCED
CONCRETE MANHOLE

RD633

FHWA APPROVAL	6–10–05	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seitz

No.	Date	By	Approved	Revision

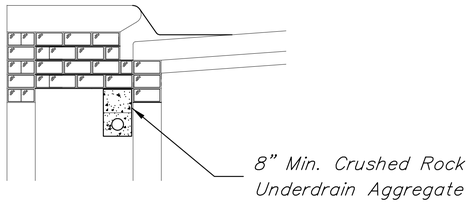
JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
REINFORCED CONCRETE MANHOLE DETAILS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185.7PPS OCA# 607861

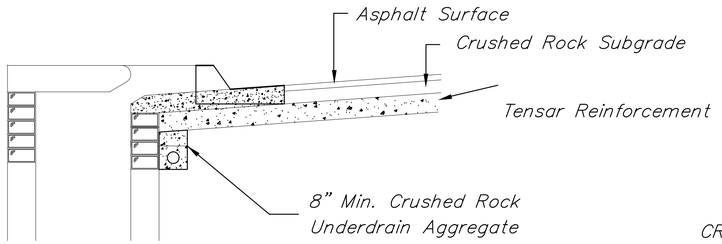
POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
3940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4111 ■ FAX 316/685-4444

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.14 of 26





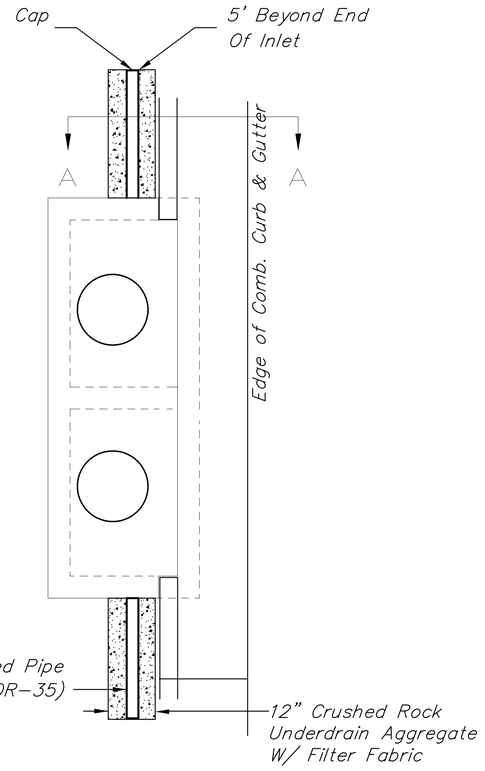
(Min. 16 Perforations Per Lin. Ft. @ 1/4" Dia.)
Perforations To Be on Bottom Half

SECTION A–A

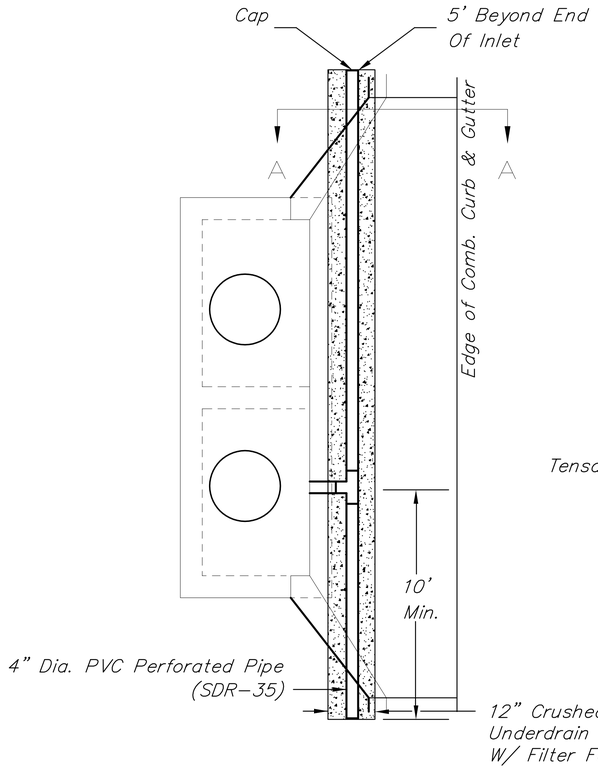
CRUSHED ROCK GRADATION REQUIREMENTS
Percent of Aggregate Retained

1 1/2"	0
3/4"	15–60
# 4	40–80
#40	74–92
P–200	4–12

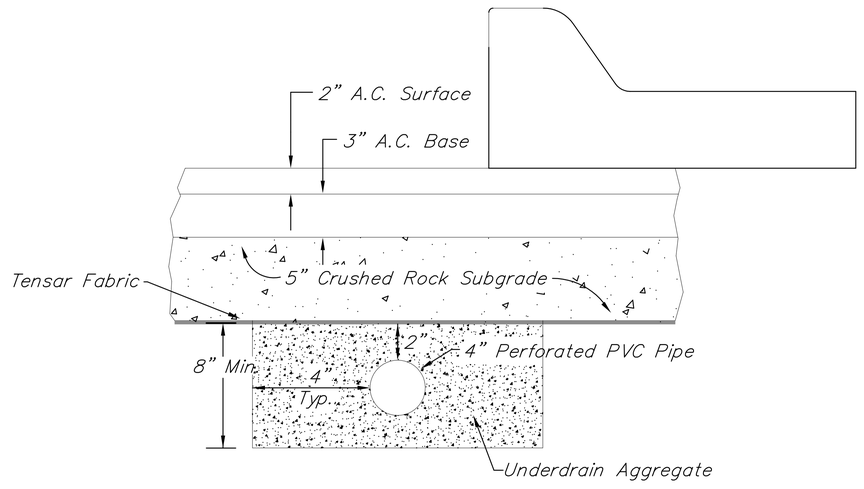
Rock Quality Shall Be The Same As Specified
For Coarse Aggregate For Asphalt Concrete Mixes.



Type 1 & 2 Inlet



Type 1–A Inlet



NOTE: Place 4" PVC Perforated Pipe at all drainage sump locations.

Cost of Underdrain System to be incidental to the Reinforced Crushed Rock Subgrade.

REV. 11–22–00, MCG

PAVEMENT UNDERDRAIN DETAIL

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268–4501
(316) 268–4114 FAX

PAVEMENT UNDERDRAIN DETAIL

JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
XXXPPS	607861
DATE: JAN 08	

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
PAVEMENT UNDERDRAIN DETAILS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 1857PPS CCA# 607861

No.	Date	By	Approved	Revision

POE & ASSOCIATES, INC.
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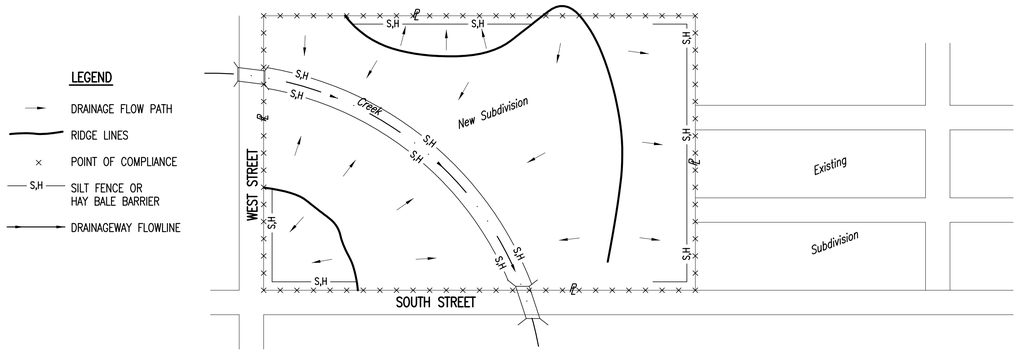
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

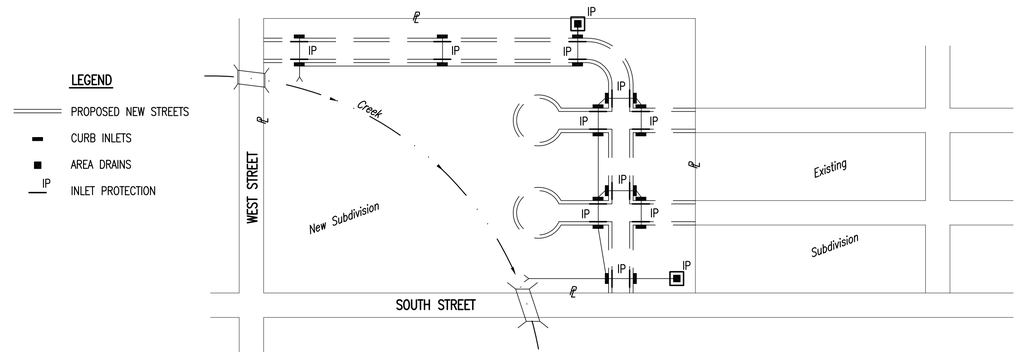
Sheet
C28.15 of 26

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



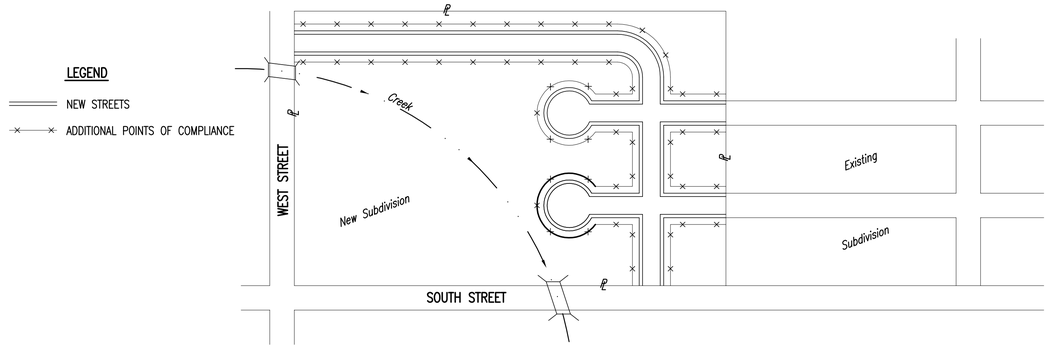
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

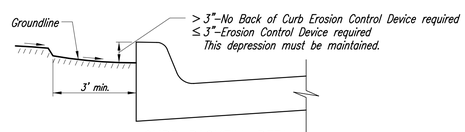


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON–SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES:

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR
BACK OF CURB SEDIMENT BARRIER DETAILS



CURB BACKFILL DETAIL
(STREET CONSTRUCTION ONLY)

CITY OF WICHITA

SOIL EROSION BMPs

SUBDIVISION DEVELOPMENT PROCESS

SCOTT LINDEBAK, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
XXPPS	607861

DATE
JAN 08

No.	Date	By	Approved	Revision

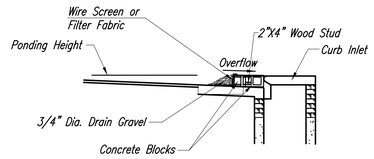
JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

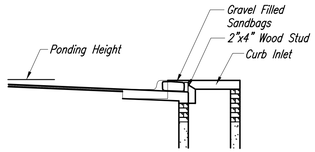
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

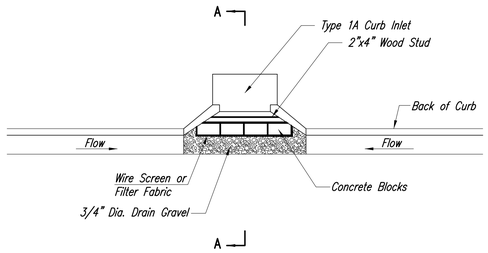
Sheet
C28.16 of 26



SECTION A–A



SECTION B–B



CURB INLET GRAVEL FILTERS
(INLET PROTECTION–RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

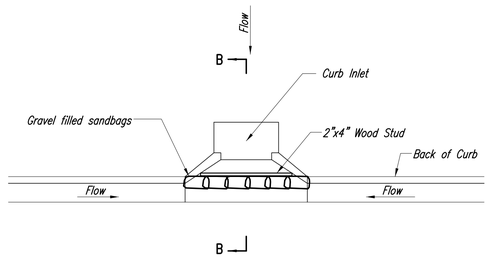
Instructions for Installing:

STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
STEP 3: Place 1" to 1–1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

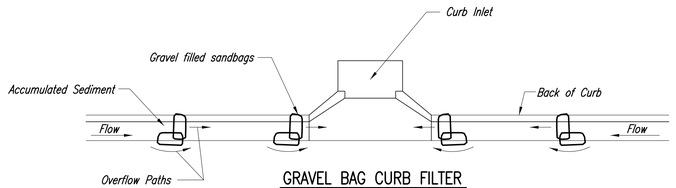
Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



GRAVEL BAG CURB FILTER
(INLET PROTECTION)

NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be completed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

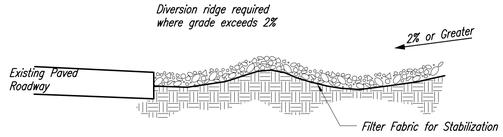
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

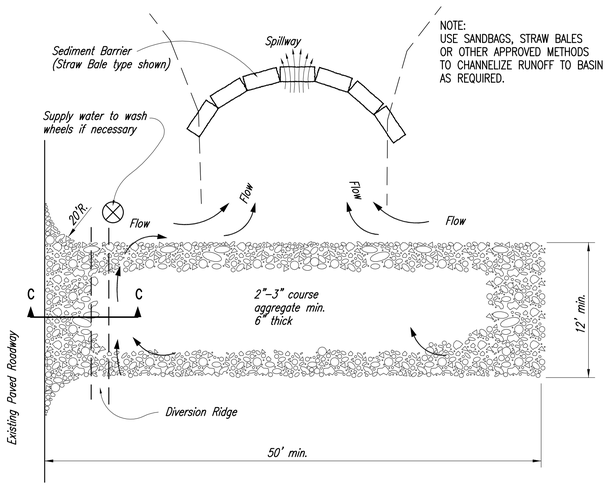
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



SECTION C–C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

CITY OF WICHITA

SOIL EROSION BMPs

CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

SCOTT LINDEBAK, P.E.
STORM WATER ENGINEER

PROJECT NUMBER: XXXPPS
OCA NO.: 607861
DATE: JAN 08

No. | Date | By | Approved | Revision

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
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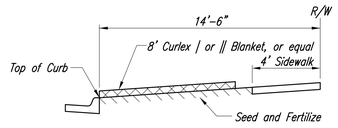
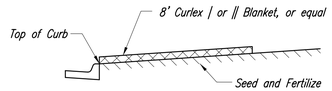
FINAL

Designed By: T. Austin / J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

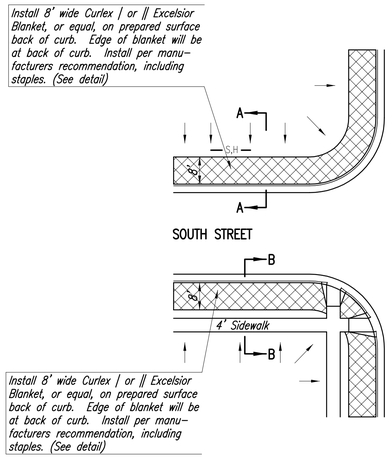
Sheet C28.17 of 26



SECTION B–B



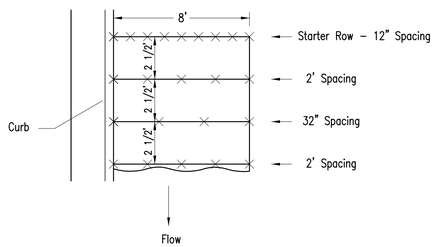
SECTION A–A



NOTES:

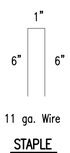
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



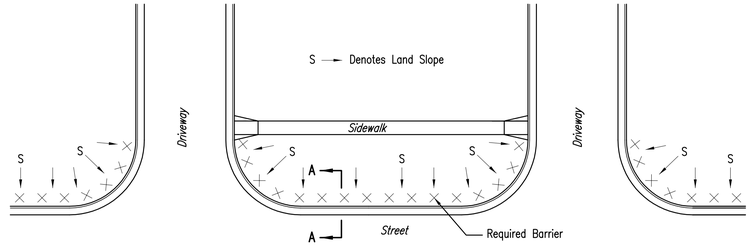
STAPLE PATTERN

NOTES: Use 6" seam overlap

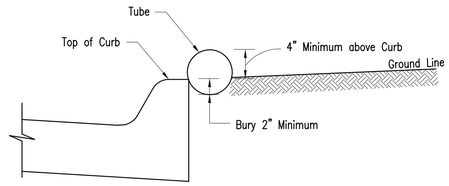


STAPLE

DETAILS FOR CURLEX I OR II BLANKETS



PLAN VIEW



SECTION A–A

NOTES:

1. Barriers must be placed back of curb along street and up the driveway sufficiently to catch all sediment from the yard.
2. Overlap seams 6 inches
3. Anchor to ground every 3.0 feet.
4. All tubes shall be constructed of heavy duty netting, rolled erosion control fabric or similar devices filled with a porous material that will allow water to pass while filtering sediment. Tubes shall be 6" to 9" in diameter.
5. Remove accumulated sediment when within 2 inches of top of device.
6. Replace all broken tubes to maintain effectiveness of device.
7. If tubes are removed during the day for access to the site, they will be replaced prior to a rainfall event and at night before work ceases. Replace properly per original design.

TUBE BARRIERS

NOTES:
Properly constructed and maintained Silt Fence Barriers or Straw Bale Barriers may be used for back of curb erosion control. See the Soil Erosion BMPs–Barrier Details for additional information.

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

No.	Date	By	Approved	Revision

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CITY OF WICHITA

SOIL EROSION BMPs

BACK OF CURB SEDIMENT BARRIER DETAILS

SCOTT LINDEBAK, P.E.
STORM WATER ENGINEER

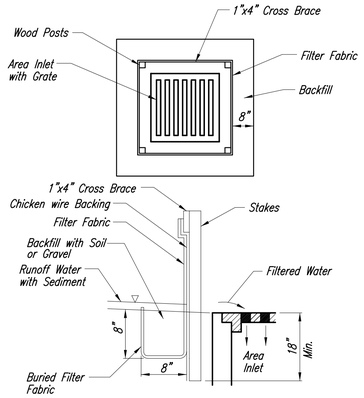
PROJECT NUMBER	OCA NO.
XXXPPS	607861

DATE
JAN 08

FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.18 of 26



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
The material used to frame the tops of the posts should be 1" by 4" boards.
Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

Placement:

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped.
Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped.
When used as a barrier for area inlets, silt fence fabric and posts must be supported at the top by a wooden frame.
When a silt fence barrier for area inlets is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper installation method:

Excavate a trench around the perimeter of the area inlet that is at least 8" deep by 8" wide.
Drive posts to a depth of at least 18" around the perimeter of the area inlet.
The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them.
Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening.
Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails.
Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed.
Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

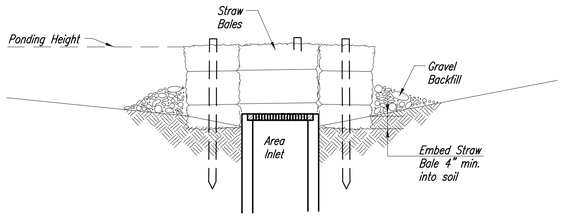
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence barrier for area inlet-not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped.
Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not install silt fence barrier for area inlets without framing the top of the posts.
The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

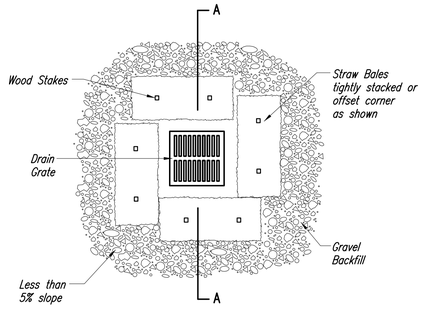
Inspection and Maintenance:

Silt fence barrier for area inlets should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the silt fence?
Does the silt fence sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the area inlet barrier?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

Bale area inlet barriers should be placed directly around the perimeter of a drop inlet.
When a bale area inlet barrier is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper Installation Method:

Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bale's width wide.
Place the bales in the trench, making sure that they are butted tightly. Some bales may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bale, approximately 6" to 8" in from the bale ends.
Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the receiving side of the barrier and compact it. The compacted soil should be no more than 3" to 4" deep.
Note: When a bale area inlet barrier is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

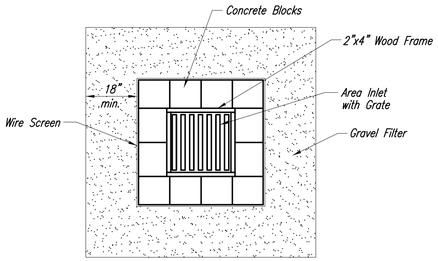
List of common placement installation mistakes to avoid:

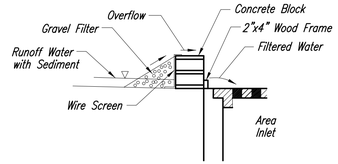
Bales should be placed directly against the perimeter of the area inlet. This allows overtopping water to flow directly into the inlet instead of onto nearby soil causing scour.
Bale area inlet barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the area inlet barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the area inlet barrier?





CONCRETE BLOCK FILTER FOR AREA INLETS
(INLET PROTECTION)

Gravel barriers provide little filtering of large inflow waters. However, when installed correctly and maintained, they can effectively treat low runoff flows.

Placement of gravel filters around area drains must be completed in a manner that will not cause local flooding.

Gravel filters can be used if the immediate and adjacent area to the area drain consists of soil or pavement.

Only gravel filters are to be installed on top of the pavement.

Instructions for Installing:

STEP 1: Place concrete blocks around the grate. The blocks can be stacked one or two high and should be supported by a 2"x4" board.
STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary.

An alternative method is use of gravel bags that are supported to prevent collapsing.

Use of rock having diameters smaller than 1" may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All gravel filters installed around area drains should be inspected and repaired after each runoff event. Sediment should be removed when material is within 3" of the top of any block. Periodically, the gravel should be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets after every runoff event.

CITY OF WICHITA

SOIL EROSION BMPs

AREA INLET BARRIERS

SCOTT LINDEBAK, P.E.
STORM WATER ENGINEER

PROJECT NUMBER: XXXPPS
OCA NO.: 607861
DATE: JAN 08

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185?PPS OCA# 607861

No.	Date	By	Approved	Revision

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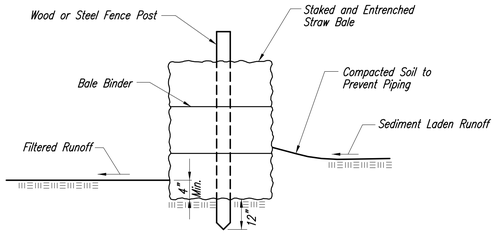
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet C28.19 of 26



STRAW BALE BARRIERS

Material Specification:

Bale slope barriers may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, bale slope barriers should be placed along contours to avoid a concentration of flow.
Bale slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

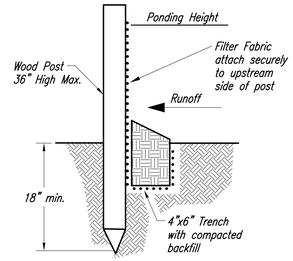
List of common placement/installation mistakes to avoid:

When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails.
Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out.
Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the slope barrier?



SILT FENCE BARRIERS

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow.
Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide.
Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Roll out a continuous length of silt fence fabric on the downslope side of the trench.
Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed.
Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts.
Just downslope of the trench, drive posts into the ground to a depth of at least 18".
Place posts no more than 4' apart.
Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates.
Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out.
Silt fence slope barriers must be dug into the ground-silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

Silt fence slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Do the silt fences sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the slope barrier?

CITY OF WICHITA

SOIL EROSION BMPs

BARRIER DETAILS

SCOTT LINDEBAK, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
XXXPPS	607861
DATE	
JAN 08	

No.	Date	By	Approved	Revision
1				
2				
3				
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JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
Private Project # 185/PPS OCA# 607861

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FINAL

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Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

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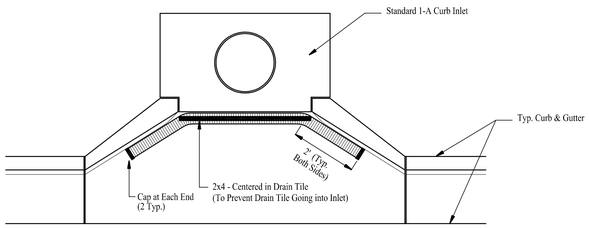
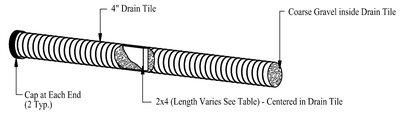
EROSION CONTROL
ADDITIONAL DETAILS

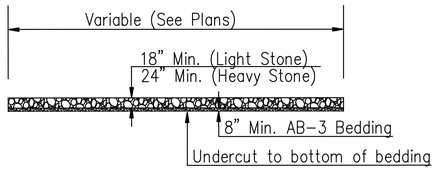


2x4 LENGTH	INLET TYPE	INLET OPENING
5' - 6"	1-A	5'-0"
10' - 6"	1-A	10' - 0"
15' - 6"	1-A	15' - 0"



Curb Inlet Sediment Barrier Detail

(No Scale)



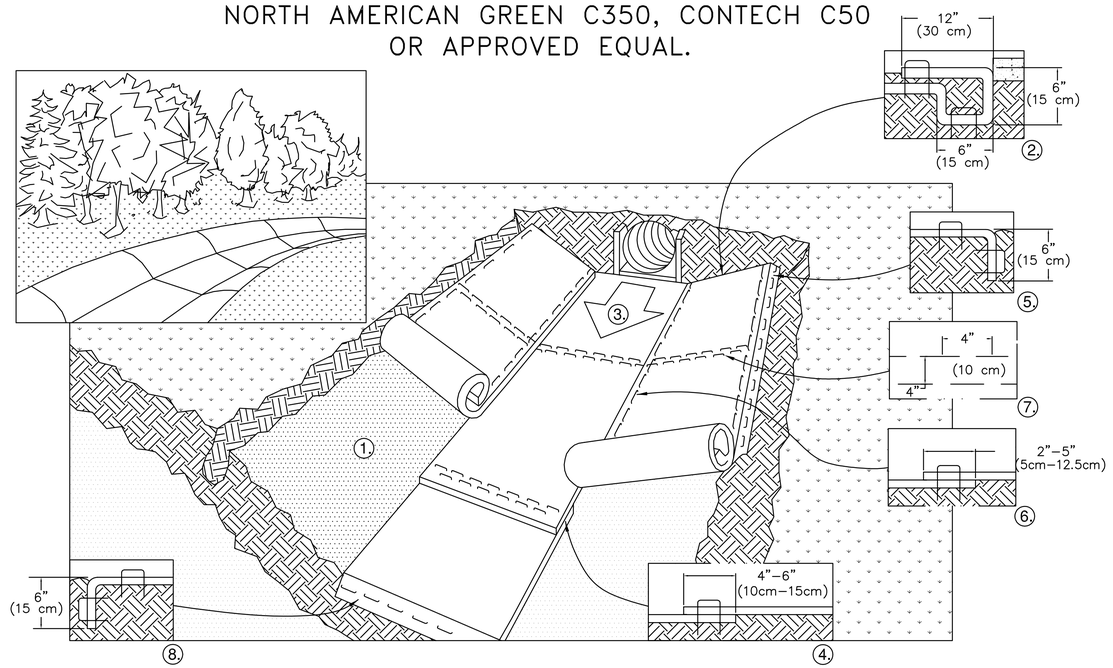
Light Stone Rip Rap shall be used
(Bedding shall be subsidiary to rip rap cost)

RIP RAP DETAIL

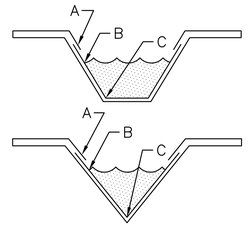
(No Scale)

EROSION CONTROL
(PERMANENT) TURF REINFORCEMENT MAT (TRM)
CHANNEL INSTALLATION

NORTH AMERICAN GREEN C350, CONTECH C50 OR APPROVED EQUAL.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"–6" (10cm–15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"–5" (5cm–12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m–12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS

A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

*** USE NORTH AMERICAN GREEN SC150, LANDLOK CS2, CONTECH SCFB2, OR APPROVED EQUAL.

No.	Date	By	Approved	Revision

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
SOIL EROSION BMPS
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER
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FINAL

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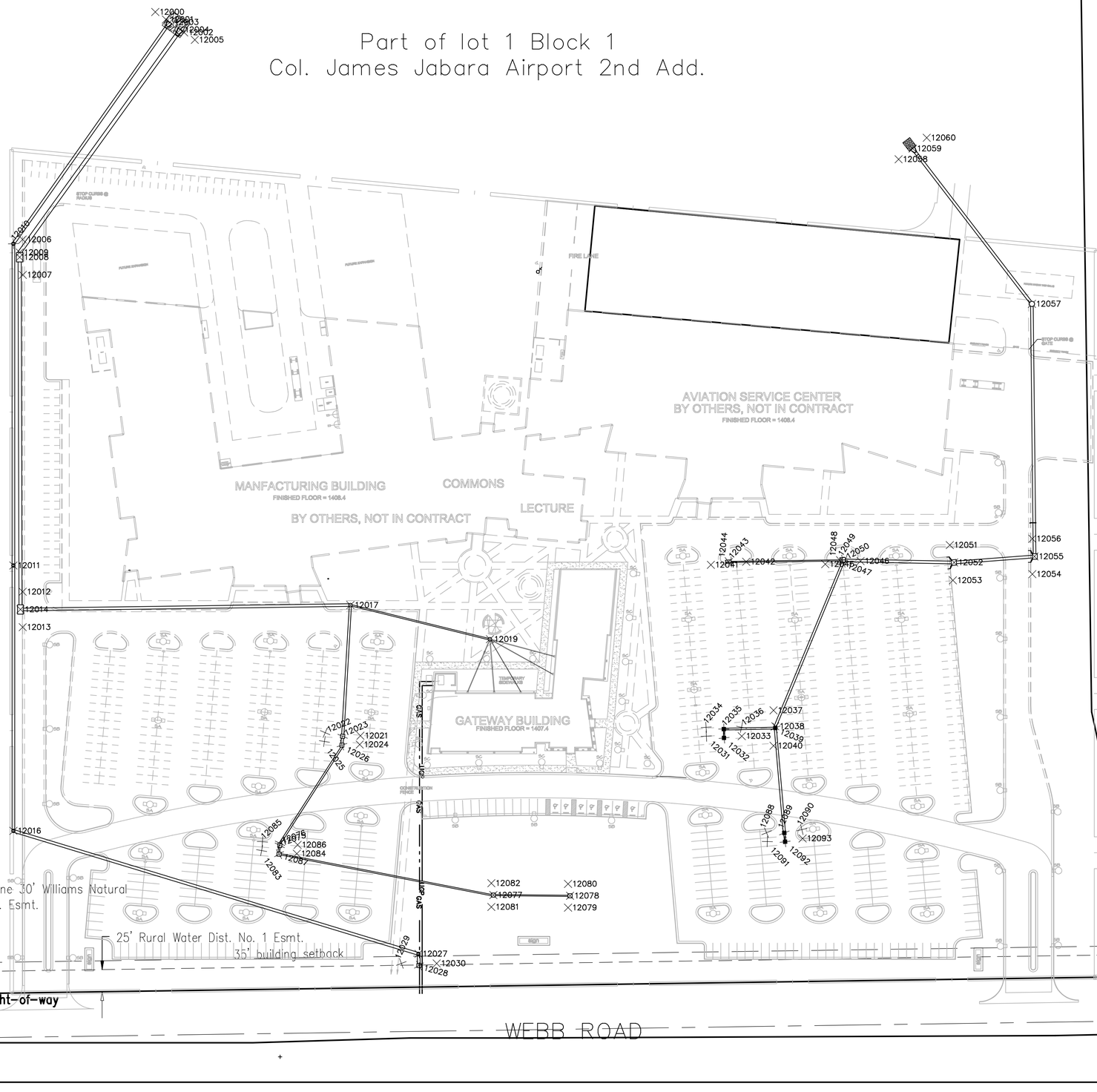
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.21 of 26

Part of lot 1 Block 1
Col. James Jabara Airport 2nd Add.



Point Table			
Point #	Northing	Easting	Description
10	1681541.71	-1710621.21	CP
11	1682058.97	-1711687.78	CP
12	1682285.82	-1712731.25	CP
13	1680800.66	-1710168.60	CP
14	1680694.46	-1711614.72	CP
15	1680684.40	-1712535.24	CP
16	1680746.75	-1710348.59	seccor
17	1680707.98	-1713009.76	1/4 cor
18	1680653.08	-1715644.21	seccor
19	1682661.93	-1714105.41	propcor
20	1683386.68	-1710394.44	1/4 cor
21	1680735.89	-1714077.70	Cogo
22	1683259.46	-1710719.70	propcor
23	1680757.97	-1713010.48	Cogo
24	1680782.40	-1711319.19	propcor
12000	1681869.46	-1712677.00	Sta 0+00 Rt 20 Line 3
12001	1681861.00	-1712665.02	Sta 0+00 Rt 20 Line 2
12002	1681846.37	-1712644.31	Sta 0+00 Lt 20 Line 3
12003	1681857.91	-1712660.64	Sta 0+00 Line 3
12004	1681849.46	-1712648.68	Sta 0+00 Line 2
12005	1681837.93	-1712632.34	Sta 0+00 Lt 20 Line 2
12006	1681612.28	-1712826.99	Line 2 Inlet Face 20 Offset
12007	1681572.28	-1712826.79	Line 2 Inlet Face 20 Offset
12008	1681592.26	-1712830.33	Sta 3+11.33 Center Inlet Line 2
12009	1681597.60	-1712830.35	Pipe at Inlet Line 2
12010	1681607.50	-1712837.42	Sta 3+06.70 Line 3 Cen. MH
12011	1681243.80	-1712837.42	Sta 6+70.40 Line 3 Cen. MH
12012	1681214.08	-1712826.92	Line 2 Inlet Face 20 Offset
12013	1681174.08	-1712826.92	Line 2 Inlet Face 20 Offset
12014	1681194.08	-1712829.42	Sta 7+20.12 Center Inlet Line 2
12015	1680707.98	-1713009.76	Stkout
12016	1680943.82	-1712837.42	Sta 9+70.38 Line 3 Cen. MH
12017	1681199.06	-1712456.44	Sta 10+83.55 Line 2 Cen. MH
12019	1681160.47	-1712298.75	Sta 12+45.88 Line 2 Cen. MH
12021	1681051.34	-1712445.11	Sta 1+46.56 Lt 20 Line 2A
12022	1681054.82	-1712484.96	Sta 1+46.56 Rt 20 Line 2A
12023	1681050.76	-1712465.24	Sta 1+48.56 Line 2A Cen. Inlet
12024	1681041.38	-1712445.98	Sta 1+56.56 Lt 20 Line x
12025	1681044.86	-1712485.83	Sta 1+56.56 Rt 20 Line 2A
12026	1681040.79	-1712466.11	Sta 1+58.56 Line 2A Cen. Inlet
12027	1680804.80	-1712379.56	Sta 14+48.88 Line 3 Cen. MH
12028	1680791.61	-1712378.92	Sta 14+61.74 Line 3 Cen. Inlet
12029	1680793.95	-1712398.92	Sta 14+59.74 Rt 20 Line 3
12030	1680793.95	-1712358.92	Sta 14+59.74 Lt 20 Line 3
12031	1681050.88	-1712054.08	Sta 9+90.91 Rt 20 Face Inlet
12032	1681048.88	-1712034.08	Sta 9+92.91 Line 1 Cen. Inlet
12033	1681050.88	-1712014.08	Sta 9+90.91 Lt 20 Face Inlet
12034	1681060.88	-1712054.28	Line 1 Inlet Face 20 Offset
12035	1681058.88	-1712034.28	Sta 9+82.91 Line 1 Cen. Inlet
12036	1681060.88	-1712014.28	Line 1 Inlet Face 20 Offset

Point Table			
Point #	Northing	Easting	Description
12037	1681080.04	-1711978.13	Sta 9+26.75 Rt 20 Face Inlet
12038	1681062.04	-1711976.13	Pipe at Inlet Face
12039	1681060.04	-1711976.13	Sta 9+24.75 Line 1 Cen. Inlet
12040	1681040.04	-1711978.13	Sta 9+26.75 Lt 20 Face Inlet
12041	1681244.56	-1712048.93	Line 1A 20 Face Inlet Offset
12042	1681248.04	-1712009.08	Line 1A 20 Face Inlet Offset
12043	1681247.84	-1712025.96	Sta 1+26.00 Line 1A Pipe at Inlet Face
12044	1681248.13	-1712029.16	Sta 1+29 Line 1A Cen. Inlet
12045	1681245.33	-1711919.67	Sta 7+22.71 Rt 20 Line 1 Inlet Face
12046	1681248.82	-1711879.83	Sta 7+22.71 Lt 20 Line 1 Inlet Face
12047	1681247.07	-1711899.75	Line 1 Pipe at Inlet Face
12048	1681249.53	-1711903.15	Line 1A Pipe at Inlet Face
12049	1681249.90	-1711900.00	Sta 0+00 Line 1A Cen. Inlet
12050	1681249.51	-1711896.79	Line 1 Pipe at Inlet Face
12051	1681266.87	-1711778.85	Line 1 Inlet Face 20 Offset
12052	1681247.21	-1711774.03	Sta 5+94.53 Line 1 Cen. Inlet
12053	1681227.02	-1711775.36	Line 1 Inlet Face 20 Offset
12054	1681234.00	-1711685.62	Line 1 Inlet Face 20 Offset
12055	1681254.01	-1711683.14	Sta 5+03.39 Line 1 Cen. Inlet
12056	1681274.00	-1711685.62	Line 1 Inlet Face 20 Offset
12057	1681539.45	-1711686.06	Sta 2+17.89 Line 1 Cen. MH
12058	1681702.94	-1711836.77	Sta 0+00 Rt 20 Line 1
12059	1681715.10	-1711820.89	Sta 0+00 Line 1
12060	1681727.26	-1711805.01	Sta 0+00 Lt 20 Line 1
12075	1680927.45	-1712536.26	Sta 2+91.86 Line 2A Cen. Inlete
12076	1680929.77	-1712536.05	Sta 2+89.86 Pipe at Inlet
12077	1680871.22	-1712294.84	Sta 5+48.52 Line 2A Cen. Inlet
12078	1680870.43	-1712208.13	Sta 6+35.24 Line 2A Cen. Inlet
12079	1680857.02	-1712210.46	Sta 6+33.24 Rt 20 Face Offset
12080	1680883.85	-1712210.46	Sta 6+33.24 Lt 20 Face Offset
12081	1680857.80	-1712297.18	Sta 5+48.52 Rt 20 Face Offset
12082	1680884.64	-1712297.18	Sta 5+48.52 Lt 20 Face Offset
12083	1680921.55	-1712556.85	Sta 2+99.86 Rt 20 Face Offset
12084	1680918.07	-1712517.00	Sta 2+99.86 Lt 20 Face Offset
12085	1680931.52	-1712555.98	Sta 2+89.86 Rt 20 Face Offset
12086	1680928.03	-1712516.13	Sta 2+89.86 Lt 20 Face Offset
12087	1680917.49	-1712537.13	Sta 3+01.86 Line 2A Cen. Inlet
12088	1680941.74	-1711986.03	Sta 1+16.99 Rt 20 Face Offset
12089	1680941.49	-1711965.94	Sta 1+18.99 Line 1B Cen. Inlet
12090	1680945.22	-1711946.19	Sta 1+16.99 Lt 20 Face Offset
12091	1680931.77	-1711985.16	Sta 1+26.99 Rt 20 Face Offset
12092	1680931.53	-1711965.06	Sta 1+28.99 Line 1B Cen. Inlet
12093	1680935.26	-1711945.31	Sta 1+26.99 Lt 20 Face Offset

No.	Date	By	Approved	Revision

JABARA AVIATION TRAINING CENTER
STREET & STORM SEWER IMPROVEMENTS
COORDINATE POINTS LIST
CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # 185/PPS OCA# 607861

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

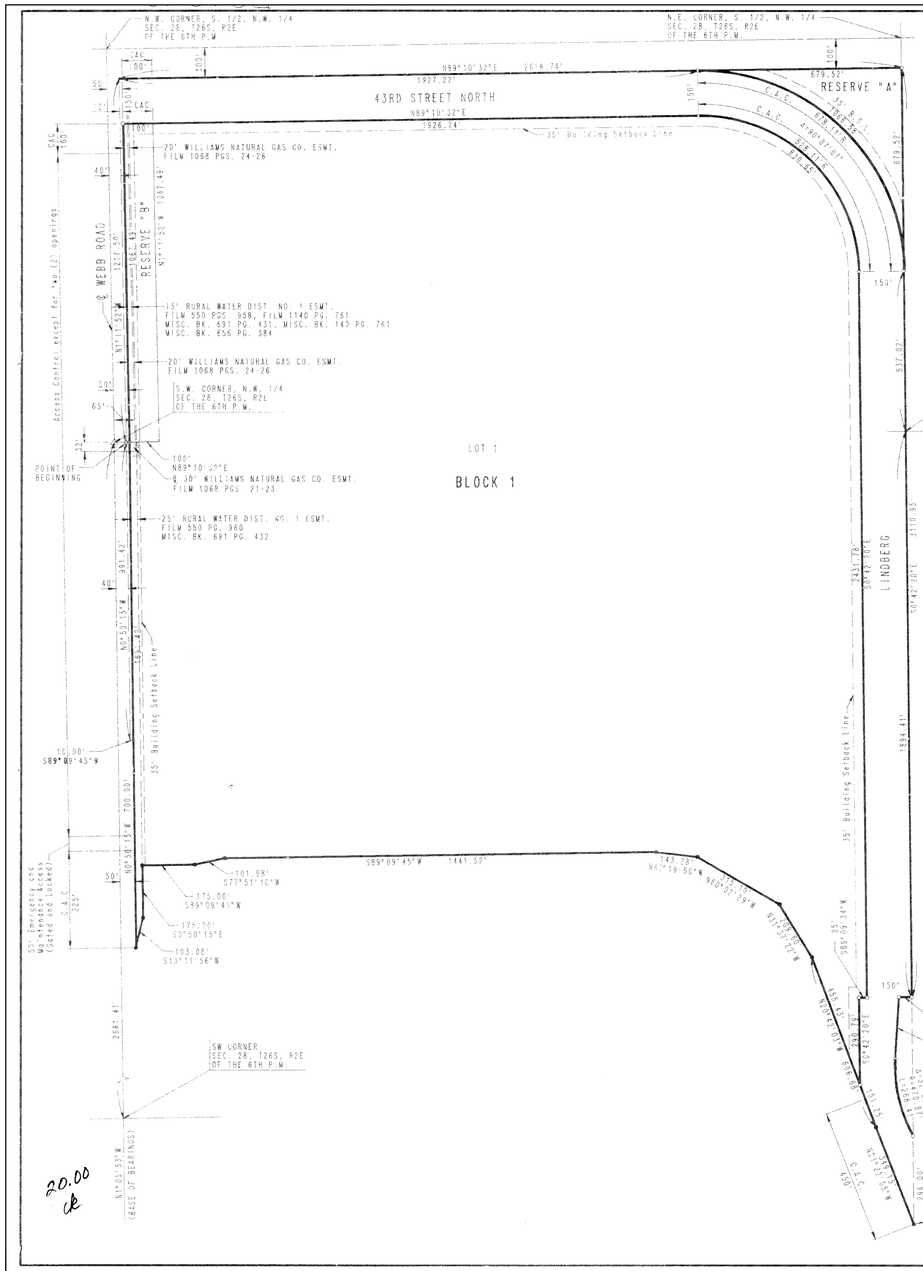
FINAL

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: March 2008

Sheet
C28.22 of 26

COLONEL JAMES JABARA AIRPORT 2ND ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS



20.00
ck

1-14-94

SCALE: 1"=200'

○ = IRON SET
● = IRON FOUND

C.A.C.=COMPLETE ACCESS CONTROL

B.M.-P.K. NAIL WITH SHINER
AT ℄ OF WEBB ROAD AND DRIVEWAY
137.20' N. OF ℄ 43RD STREET
ELEV 1417.66 M.S.L.

STATE OF KANSAS)
) SS
COUNTY OF SEDGWICK)

I, MICHAEL W. BERRY, A REGISTERED LAND SURVEYOR IN AFORESAID STATE AND COUNTY, DO HEREBY CERTIFY THAT ON THIS 14th DAY OF JANUARY, 1994, I HAVE CAUSED TO BE SURVEYED AND PLATTED COLONEL JAMES JABARA AIRPORT 2ND ADDITION, TO WICHITA, SEDGWICK COUNTY, KANSAS, INTO A BLOCK, A LOT, STREETS AND RESERVES THE SAME BEING:
THE SOUTH 1/2 OF THE NW 1/4 OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 2 EAST OF THE 6TH P.M. EXCEPT THE NORTH 100 FEET, AND EXCEPT THE WEST 40 FEET FOR ROAD PURPOSES, TOGETHER WITH THE S.W. 1/4 OF SAID SECTION 28, EXCEPT THAT PART PLATTED AS LOT 1, BLOCK A, COLONEL JAMES JABARA AIRPORT ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS, AND EXCEPT PART OF SBS INDUSTRIAL ADDITION, SEDGWICK COUNTY, KANSAS, AND EXCEPT THE WEST 40 FEET FOR ROAD PURPOSES. MORE PARTICULARLY DESCRIBED AS:
COMMENCING AT THE S.W. CORNER OF THE N.W. 1/4 OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 2 EAST OF THE 6TH P.M.; THENCE BEARING N89°09'18"E ALONG THE SOUTH LINE OF SAID N.W. 1/4 A DISTANCE OF 40.00 TO THE POINT OF BEGINNING THENCE BEARING N1°11'52"W PARALLEL TO AND 40.00 FEET EAST OF THE WEST LINE OF SAID N.W. 1/4 A DISTANCE OF 1217.50 FEET; THENCE BEARING N89°10'32"E PARALLEL TO AND 100.00 FEET SOUTH OF THE NORTH LINE OF THE SOUTH 1/2 OF SAID N.W. 1/4 A DISTANCE OF 2616.74 FEET TO A POINT IN THE EAST LINE OF SAID N.W. 1/4; THENCE BEARING S0°42'20"E ALONG SAID EAST LINE AND ALSO ALONG THE EAST LINE OF THE S.W. 1/4 OF SAID SECTION 28 A DISTANCE OF 3110.95 FEET TO A POINT IN THE NORTH LINE OF LOT 1, BLOCK A, SBS INDUSTRIAL ADDITION, SEDGWICK COUNTY, KANSAS; THENCE ALONG SAID NORTH LINE BEARING S89°09'35"W A DISTANCE OF 42.20 FEET; THENCE BEARING S3°17'37"W A DISTANCE OF 205.72 FEET TO THE P.C. OF A CURVE TO THE LEFT HAVING A RADIUS OF 470.87 FEET; THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 32°39'38" AN ARC DISTANCE OF 268.41 FEET TO A POINT IN THE EAST LINE OF THE S.W. 1/4 OF SAID SECTION 28 SAID POINT ALSO BEING ON A CURVE IN THE WESTERLY LINE OF LOT 1, BLOCK A, SBS INDUSTRIAL ADDITION; THENCE BEARING S0°42'20"E ALONG THE EAST LINE OF SAID S.W. 1/4 A DISTANCE OF 296.00 FEET TO THE S.E. CORNER OF THE S.W. 1/4 OF SAID SECTION 28; THENCE BEARING N21°22'55"W ALONG THE NORTHEASTERLY LINE OF LOT 1, BLOCK A IN SAID COLONEL JAMES JABARA AIRPORT ADDITION A DISTANCE OF 349.15 FEET; THENCE BEARING N20°42'03"W ALONG SAID LINE A DISTANCE OF 606.68 FEET; THENCE CONTINUING ALONG SAID LINE BEARING N31°37'22"W A DISTANCE OF 209.60 FEET; THENCE BEARING N60°02'29"W ALONG SAID LINE A DISTANCE OF 315.10 FEET; THENCE BEARING N83°19'50"W ALONG THE NORTH LINE OF SAID LOT 1, A DISTANCE OF 143.28 FEET; THENCE CONTINUING ON SAID LINE BEARING S89°09'45"W A DISTANCE OF 1441.52 FEET; THENCE BEARING S77°51'10"W A DISTANCE OF 101.98 FEET; THENCE BEARING S89°09'45"W A DISTANCE OF 175.00 FEET TO THE N.W. CORNER OF SAID LOT 1; THENCE BEARING S0°50'15"E A DISTANCE OF 175.00 FEET; THENCE BEARING S13°11'56"W A DISTANCE OF 103.08 FEET; THENCE BEARING N0°50'15"W PARALLEL TO AND 50.00 FEET EAST OF THE WEST LINE OF SAID S.W. 1/4 A DISTANCE OF 700.00 FEET; THENCE BEARING S89°09'45"W A DISTANCE OF 10.00 FEET; THENCE BEARING N0°50'15"W A DISTANCE OF 991.42 FEET TO THE POINT OF BEGINNING.

ALL PORTIONS OF LINDBERG, 39TH STREET NORTH, WEBB ROAD, AND SBS INDUSTRIAL ADDITION WITHIN THE ABOVE DESCRIBED TRACT ARE HEREBY VACATED AND REPLATTED BY VIRTUE OF K.S.A. 12-512(b) AMENDED.

Michael W. Berry
MICHAEL W. BERRY, R.L.S. #946

KNOW ALL MEN BY THESE PRESENTS THAT WE, THE UNDERSIGNED PROPERTY OWNERS OF THE LAND, AS ABOVE SET FORTH IN THE SURVEYOR'S CERTIFICATE, HAVE CAUSED THE LAND TO BE SURVEYED AND PLATTED INTO LOTS, A BLOCK, A RESERVE AND STREETS, THE SAME TO BE KNOWN AS COLONEL JAMES JABARA AIRPORT 2ND ADDITION, TO WICHITA, SEDGWICK COUNTY, KANSAS. THE STREETS ARE HEREBY DEDICATED TO AND FOR THE USE OF THE PUBLIC.

ALL ABUTTERS' RIGHTS OF ACCESS TO AND FROM WEBB ROAD OVER & ACROSS THE WEST LINE OF BLOCK 1 ARE HEREBY GRANTED TO THE CITY OF WICHITA, KANSAS; PROVIDED HOWEVER THAT LOT 1, BLOCK 1 SHALL HAVE ACCESS TO WEBB ROAD AT TWO (2) LOCATIONS TO BE DESIGNATED BY THE CITY ENGINEER OF WICHITA, KANSAS, TOGETHER WITH A 50 FOOT EMERGENCY AND MAINTENANCE ACCESS AS SHOWN.

ALL ABUTTERS' RIGHTS OF ACCESS TO AND FROM 43RD STREET NORTH AND LINDBERG AS SHOWN ARE HEREBY GRANTED TO THE CITY OF WICHITA.

RESERVE "A" IS HEREBY PLATTED FOR AIRPORT RELATED USES. RESERVE "B" IS HEREBY PLATTED FOR OPEN SPACE PURPOSES. RESERVE "A AND "B" SHALL BE OWNED AND MAINTAINED BY THE WICHITA AIRPORT AUTHORITY.

#1363377

OWNERS: THE WICHITA AIRPORT AUTHORITY

BY Jerry James, PRESIDENT
JERRY JAMES

Judye N. Mohring, AIRPORT CLERK
JUDYE N. MOHRING

BOARD OF COUNTY COMMISSIONERS
OF SEDGWICK COUNTY, KANSAS.

Betsy Gwin, CHAIR
BETSY GWIN

Susan E. Crockett-Spoon, COUNTY CLERK
SUSAN E. CROCKETT-SPOON

STATE OF KANSAS)
) SS
COUNTY OF SEDGWICK)

BE IT REMEMBERED THAT ON THIS 18th DAY OF January, 1994, BEFORE ME, A NOTARY PUBLIC IN AFORESAID STATE AND COUNTY, CAME JERRY JAMES, PRESIDENT AND JUDYE N. MOHRING, AIRPORT CLERK OF THE WICHITA AIRPORT AUTHORITY, IN WICHITA, KANSAS, TO ME PERSONALLY KNOWN TO BE THE SAME PERSONS WHO EXECUTED THE FOREGOING INSTRUMENT OF WRITING AND DULY ACKNOWLEDGED THE EXECUTION OF SAME FOR AND ON BEHALF AND AS THE VOLUNTARY ACT AND DEED OF SAID AIRPORT AUTHORITY. IN TESTIMONY WHEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR ABOVE WRITTEN.

Gary L. Wiley, NOTARY PUBLIC
GARY L. WILEY

MY APPOINTMENT EXPIRES Jan. 15, 1997

GARY L. WILEY
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 1-15-97

STATE OF KANSAS)
) SS
COUNTY OF SEDGWICK)

BE IT REMEMBERED THAT OF THIS 21st DAY OF January, 1994, BEFORE ME, A NOTARY PUBLIC IN AFORESAID STATE AND COUNTY, CAME BETSY GWIN, CHAIR OF THE BOARD OF COUNTY COMMISSIONERS OF SEDGWICK COUNTY, KANSAS, AND SUSAN E. CROCKETT-SPOON, SEDGWICK COUNTY CLERK, TO ME PERSONALLY KNOWN TO BE THE SAME PERSONS WHO EXECUTED THAT FOREGOING INSTRUMENT OF WRITING AND DULY ACKNOWLEDGED THE EXECUTION OF SAME FOR AND ON BEHALF AND AS THE VOLUNTARY ACT AND DEED OF SAID BOARD. IN TESTIMONY WHEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR ABOVE WRITTEN.

Gary L. Wiley NOTARY PUBLIC
GARY L. WILEY

MY APPOINTMENT EXPIRES Jan. 15, 1997

GARY L. WILEY
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 1-15-97

THIS PLAT HAS BEEN SUBMITTED TO AND APPROVED BY THE WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION, WICHITA, KANSAS, DATED THIS 27TH DAY OF AUGUST, 1992.

James D. Miner, CHAIRMAN
JAMES D. MINER

Marvin S. Krout, SECRETARY
MARVIN S. KROUT

THIS PLAT APPROVED AND ALL DEDICATIONS SHOWN HEREON ARE ACCEPTED BY THE CITY COUNCIL OF THE CITY OF WICHITA, KANSAS. DATED THIS 8th DAY OF February, 1994.

Elma Broadfoot, MAYOR
ELMA BROADFOOT

Pat Burnett, DEPUTY CITY CLERK
PAT BURNETT

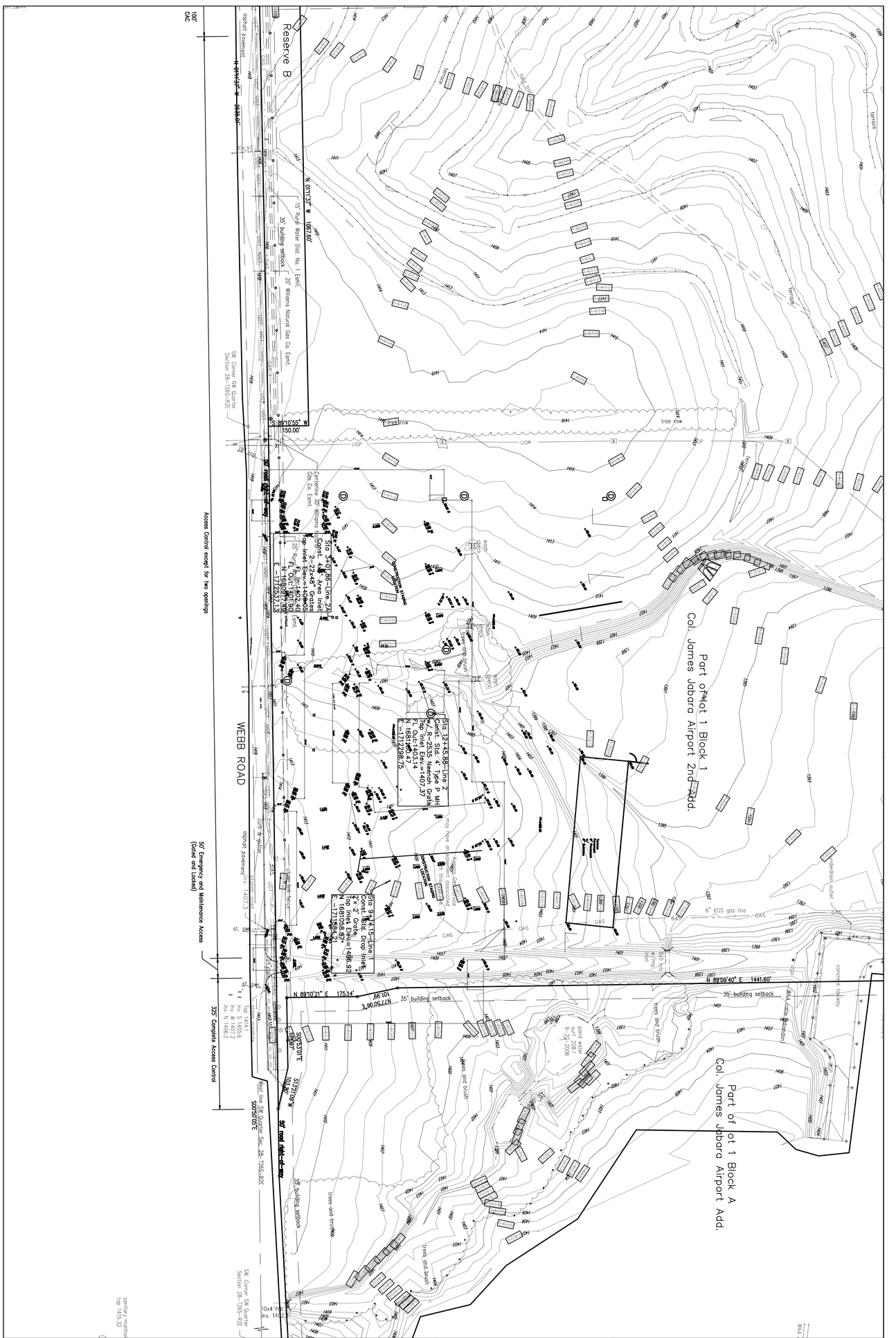
ENTERED ON TRANSFER RECORD THIS 2nd DAY OF March, 1994.

Susan E. Crockett-Spoon, COUNTY CLERK
SUSAN E. CROCKETT-SPOON

THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE REGISTER OF DEEDS OFFICE AT 8:00 A.M., ON THIS 3RD DAY OF MARCH, 1994.

Pat Kettler, REGISTER OF DEEDS
PAT KETTLER

Ed Resa, DEPUTY
ED RESA



PRELIM

Designed By: T. Austin/ J. Dickman
Drawn By: S. Schmidt
Poe Job No.: 1873
Date: February 2008

Sheet 25 of

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 ■ Wichita, KS 67208-4242
Phone 316/685-4114 ■ FAX 316/685-4444

COL. JAMES JABARA AIRPORT OF LOT 1, BLOCK 1
DRAINAGE IMPROVEMENTS

CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. – CITY ENGINEER
Private Project # XXXPPS OCA# 607861

No.	Date	By	Approved	Revision
1				
2				
3				
4				