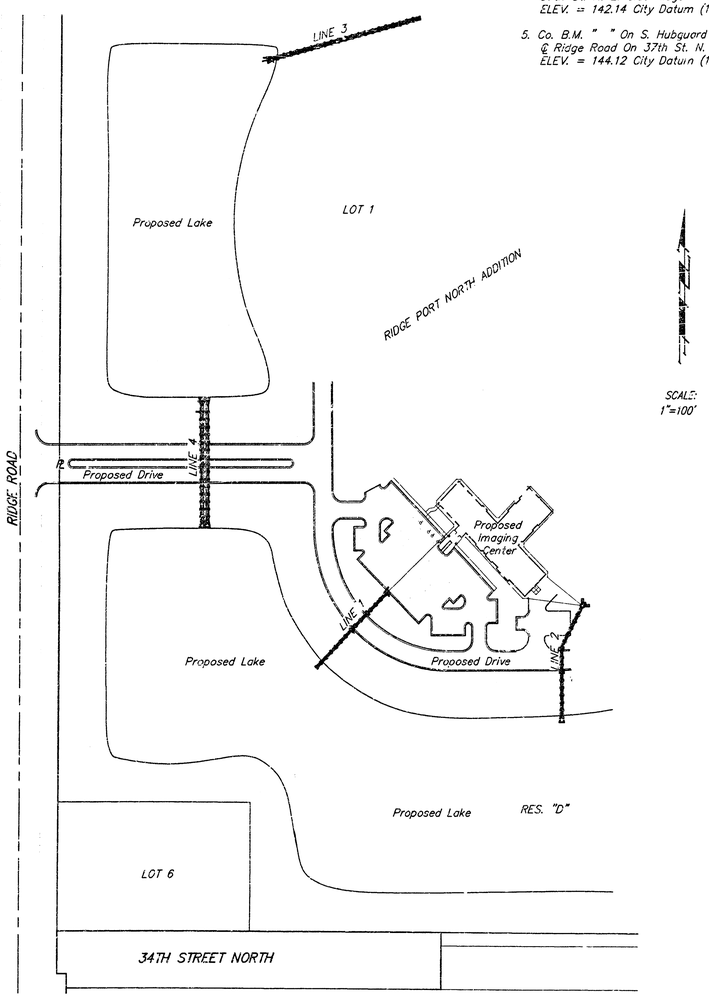
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Index

Cover Sheet	1
Plan/Profile Sheet Lines 1 & 2	2
Plan/Profile Sheet Lines 3 & 4	3
Inlet & Sediment Barrier Details	4
Headwall Details	5
Manhole Details	6
Lid & Rim Details	7
Copy Of Plat	8

Benchmarks

1. "□" S.E. Cor. Bridge Deck 1/2 Mile N. Of 29th St. N. On Ridge Rd.
   ELEV. = 139.14 City Datum (1326.54 M.S.L.)
2. 60d Step Bench E. Side HLP 1936' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 140.81 City Datum (1328.21 M.S.L.)
3. 60d Step Bench E. Side HLP 1405' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 141.18 City Datum (1328.58 M.S.L.)
4. 60d Step Bench E. Side HLP 592' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 142.14 City Datum (1329.54 M.S.L.)
5. Co. B.M. " " On S. Hubguard RCBC 73' W. Of ℄ Ridge Road On 37th St. N.
   ELEV. = 144.12 City Datum (1331.52 M.S.L.)



SCALE: 1"=100'

PRIVATE STORM WATER SEWER TO SERVE

Ridge Port North Addition

LOT 1

Private Project Number 932 PPS (607861)

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

September, 1999

General Notes:

1. Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

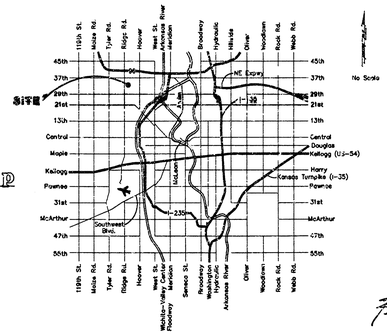
   The Contractor must notify the following in case of an emergency:

Cablevision	262-0661
or	263-2061
Kansas Gas Service	383-8650
KGE	383-8600
Peoples Gas Company	942-8811
Southwestern Bell Telephone Company	800-344-7233
City of Wichita Water Department	268-4908
City of Wichita Sewer Maintenance	268-4071

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. 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.
3. Contractor shall not start work on the project until the Project Inspector is assigned to the project and is present on the site. Any work done without inspection will be required to be uncovered for inspection.
4. All areas disturbed by construction operations shall be seeded with rye grass at a rate of 6 lbs. per 1000 sq. feet or as per city specs. Contractor to prepare ground to city specifications.
5. 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.
6. 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.
7. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state law.
8. The Contractor shall give all property owners and/or tenants of developed property directly abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.

BOOKED 8-9-00 MCL D-473

Location Map



APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Storm Sewers VRH 9/17/99

NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection 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 any 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).

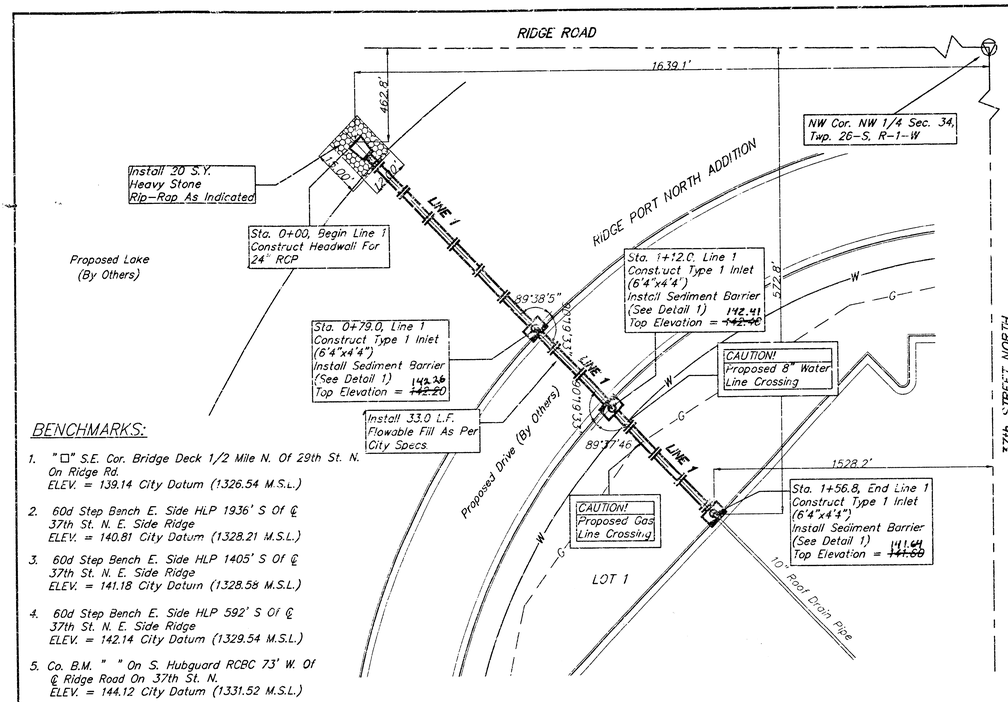
BRENT WOOTEN LICENSED 5470 9-17-99 PROFESSIONAL ENGINEER

Project Inspected & As Built by Baughman Co 3/00

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 318 ELLIS • WICHITA, KANSAS 67211

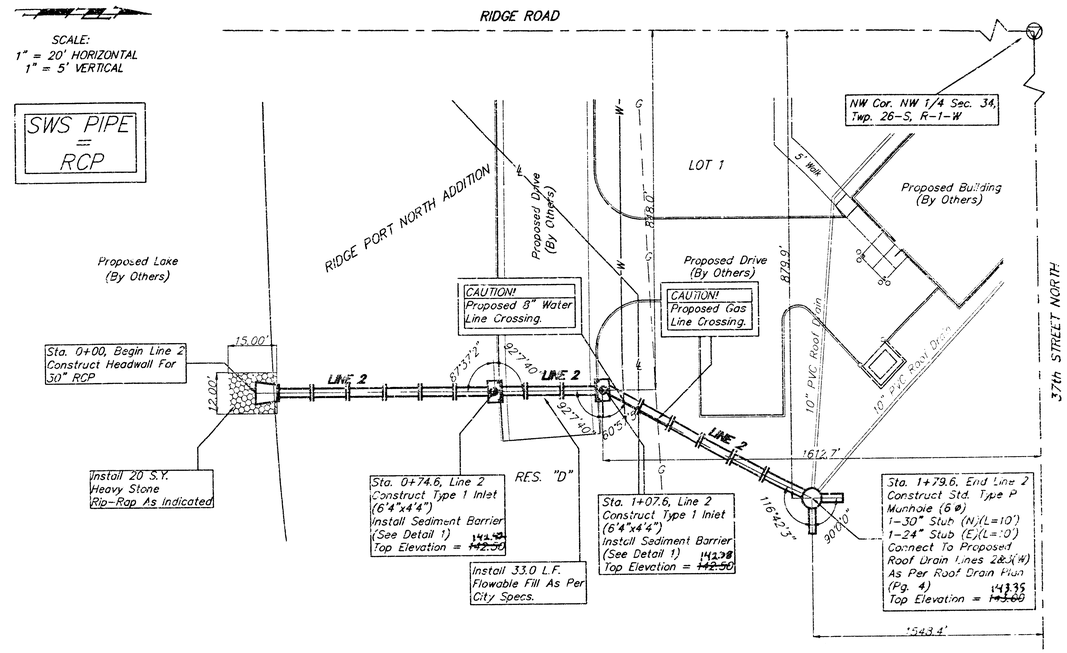
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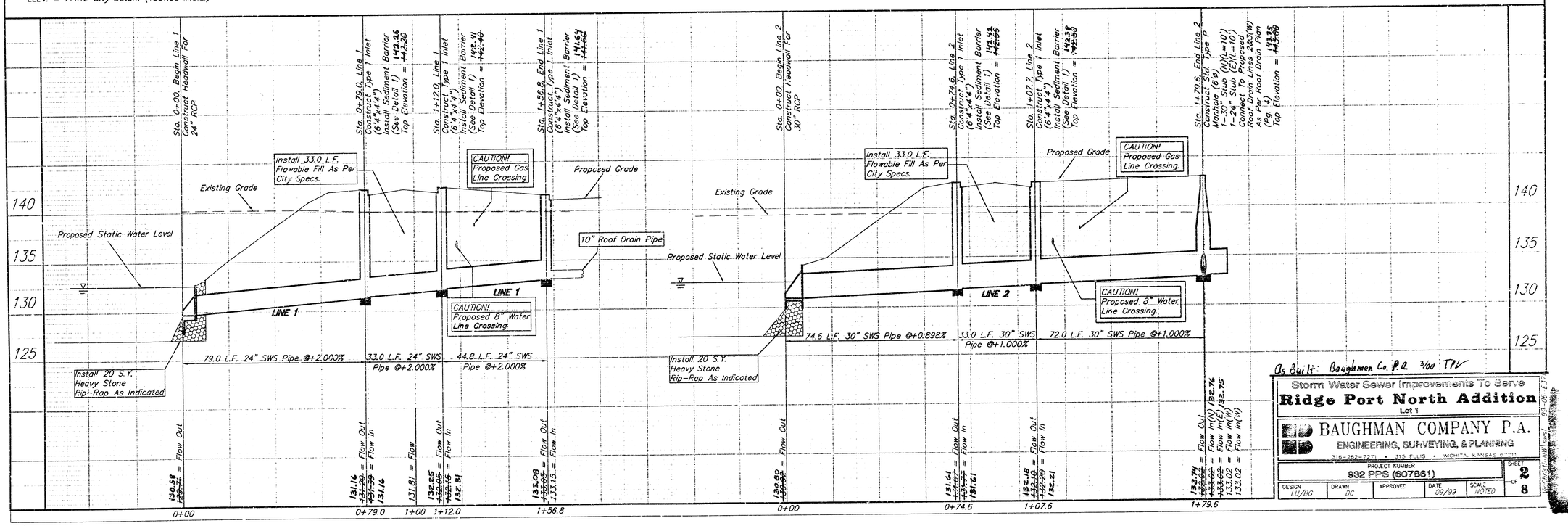
Bap: 1595 11:92:11 66/12/60



SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL

SWS PIPE = RCP





As Built: Baughmen Co. P.A. 3/00 TV

Storm Water Sewer Improvements To Serve
Ridge Port North Addition
Lot 1

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 932 PPS (607861)

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
LU/BG	DC		09/99	NOTED	2 OF 8

Bmp:2SWS 02:69:51 6661/21/60

37th STREET NORTH

619.2'

LOT 2

NW Cor. NW 1/4 Sec. 34, Twp. 26-S, R-1-W

Sta. 2+46.4, End Line 3 Seal SWS Pipe With Plastic Sheet. Plank & Shore To Close. Mark End Of Pipe At Surface With Post & Sign.

683.3'

744.7'

SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL

SWS PIPE = RCP

Sta. 0+00, Begin Line 4 Begin Construction Of Double 42" RCP Line With End Sections

Install 33.3 S.Y. Heavy Stone Rip-Rap As Indicated.

381.1'

LINE 3

20.00'

RIDGE ROAD

Pro. Lake

Sta. 0+00, Begin Line 3 Begin Construction Of 48" RCP W/ Headwall

LOT 1

RIDGE PORT NORTH ADDITION

BENCHMARKS:

1. "□" S.E. Cor. Bridge Deck 1/2 Mile N. Of 29th St. N. On Ridge Rd.
   ELEV. = 139.14 City Datum (1326.54 M.S.L.)
2. 60d Step Bench E. Side HLP 1930' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 140.81 City Datum (1328.21 M.S.L.)
3. 60d Step Bench E. Side HLP 1405' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 141.18 City Datum (1328.58 M.S.L.)
4. 60d Step Bench E. Side HLP 592' S Of ℄ 37th St. N. E. Side Ridge
   ELEV. = 142.14 City Datum (1329.54 M.S.L.)
5. Co. B.M. " " On S. Hubguard RCBC 73' W. Of ℄ Ridge Road On 37th St. N.
   ELEV. = 144.12 City Datum (1331.52 M.S.L.)

RIDGE ROAD

NW Cor. NW 1/4 Sec. 34, Twp. 26-S, R-1-W

LOT 1

Proposed Drive (By Others)

CAUTION! VERIFY Proposed UG Electric Line Crossing

CAUTION! VERIFY Proposed Sanitary Sewer Line Crossing

CAUTION! VERIFY Proposed UG Gas Line Crossing

286.3'

SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL

SWS PIPE = RCP

LINE 4

23.00'

8.50'

Proposed Lake (By Others)

20.00'

Sta. 1+99.6, End Line 4 End Construction Of Double 42" RCP Line With End Sections

Install 62.0 L.F. Flowable Fill From Sta. 0+69.6 To Sta. 1+31.6, As Per City Specs.

CAUTION! VERIFY Proposed 8" Water Line Crossing

CAUTION! VERIFY Proposed UG SWB Line Crossing

Install 44.4 S.Y. Heavy Stone Rip-Rap As Indicated

Double 42" SWS Pipes Spaced 8.5' C.L. to C.L.

RIDGE PORT ADDITION LOT 1

RIDGE PORT NORTH ADDITION

Install 51.1 S.Y. Heavy Stone Rip-Rap As Indicated

123.3'

37th STREET NORTH

Proposed Lake (By Others)

Sta. 0+00, Begin Line 3 Begin Construction Of 48" RCP W/ End Section

Sta. 2+46.4, End Line 3 Seal SWS Pipe With Plastic Sheet. Plank & Shore To Close. Mark End Of Pipe At Surface With Post & Sign.

Proposed Grade

Existing Grade

140

135

130

125

Proposed Static Water Level

LINE 3

246.4 L.F. 48" SWS Pipe @+1.300%

Install 33.3 S.Y. Heavy Stone Rip-Rap As Indicated.

133.81 = Flow Out
129.99

130.91 = Flow

132.21 = Flow

132.81 = Flow

0+00

1+00

2+00

2+46.4

Sta. 0+00, Begin Line 4 Begin Construction Of Double 42" RCP Line With End Sections

CAUTION! VERIFY Proposed UG Electric Line Crossing

CAUTION! VERIFY Proposed UG SWB Line Crossing

Proposed Grade

Existing Grade

Sta. 1+99.6, End Line 4 End Construction Of Double 42" RCP Line With End Sections

CAUTION! VERIFY Proposed UG Gas Line Crossing

Proposed Static Water Level

LINE 4

CAUTION! VERIFY Proposed 8" Water Line Crossing

Install 62.0 L.F. Flowable Fill From Sta. 0+69.6 To Sta. 1+31.6, As Per City Specs.

CAUTION! VERIFY Proposed Sanitary Sewer Line Crossing

132.58 = Flow In (West Pipe)
132.61 = Flow In (East Pipe)
132.55 = Flow Out
132.55

Install 44.4 S.Y. Heavy Stone Rip-Rap As Indicated

Install 51.1 S.Y. Heavy Stone Rip-Rap As Indicated

199.6 L.F. 42" SWS Pipe @+0.400% (2 Pipes)

131.83 = Flow Out (West Pipe)
131.76 = Flow Out
131.77 = Flow Out (East Pipe)

132.20 = Flow

0+00

1+00

1+99.6

As Built: Baughman Co. P.A. 2/00 TPV

Storm Water Sewer Improvements To Serve

Ridge Port North Addition

LOT 1

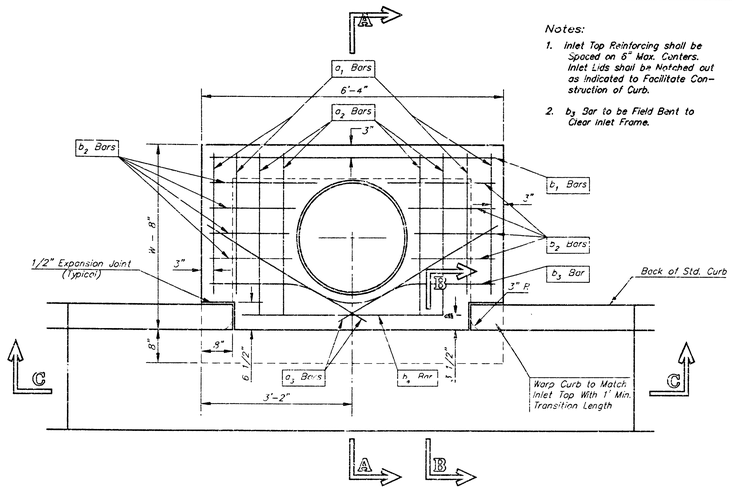
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
932 PPS (607981)	3 of 8

DESIGN	DRAWN	APPROVED	DATE	SCALE
LU/BG	DC		09/99	NOTED

VRDATA\97-NW.SWR

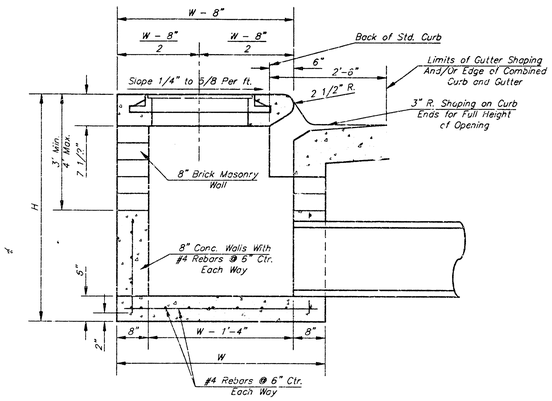
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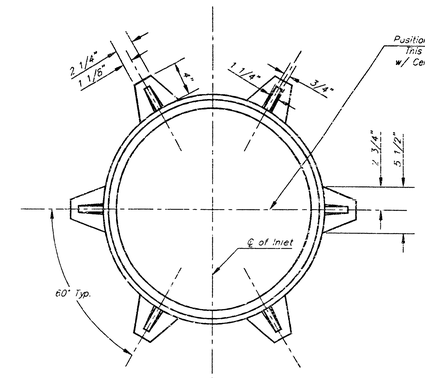
PLAN

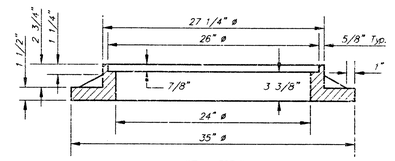
Notes:

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

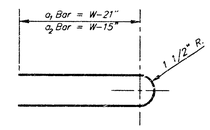




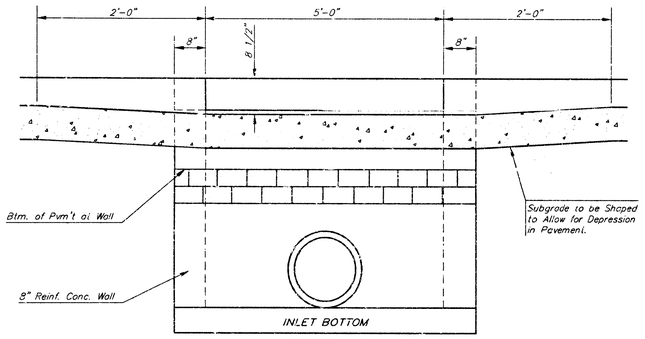
WT. = 325 lbs.

MANHOLE RING AND COVER

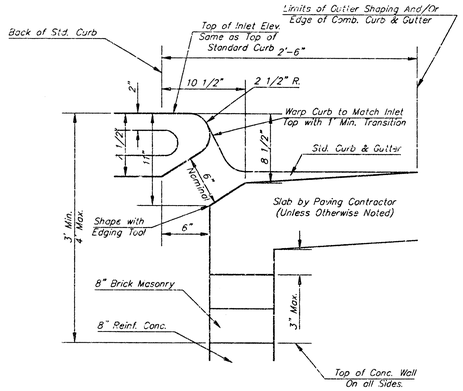
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



BENDING DIAGRAM



SECTION C–C



SECTION B–B

STEEL SCHEDULE

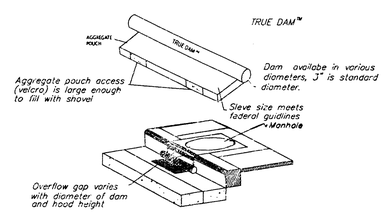
BAR		a_1	a_2	a_3	b_1 W=4'-4"	b_1 W=5'-4"	b_1 W=6'-4"	b_1 W=7'-4"	b_1 W=8'-4"	b_2	b_3	b_4	Wt. Lbs.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'-4"	5'-7"	6'-7"	4'-0"	6'-1"	–	–	–	–	1'-9"	6'-2"	4'-8"	60±
	W=5'-4"	7'-7"	8'-7"	5'-0"	–	6'-1"	–	–	–	1'-9"	6'-2"	4'-8"	81±
	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 B 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.



CURB INLET PROTECTION
DANDY BAG – TRUE DAM

Note: A substitute to the "Dandy Bags" or the "True Dam™" must be comparable and approved by the engineer in charge. For more information on the "Dandy Bag" and the "True Dam" call Merideth Brothers, Inc., Suppliers of Dandy Products at 1-800-591-2284. Dandy Products or alternative to be paid per Each as Sediment Barriers.

No Scale

SEDIMENT BARRIER DETAIL 1

CITY OF WICHITA, KANSAS

TYPE 1 CURB INLET

INLET OPENING = 6'X5'-0"

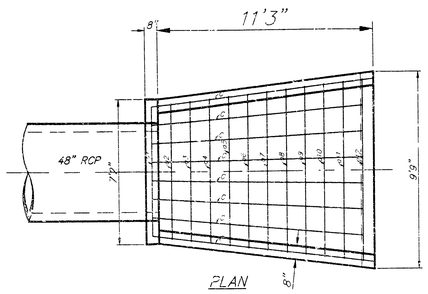
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
932 PPS (607861)	4

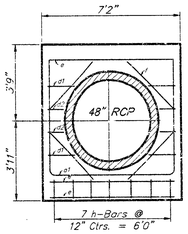
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C.O.W.	STAFF		9/99	NONE	8

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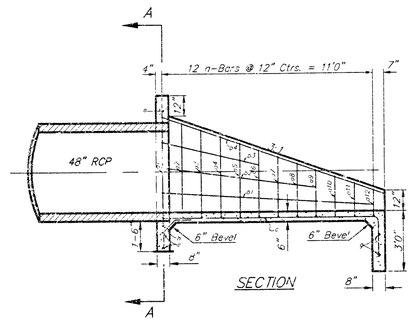
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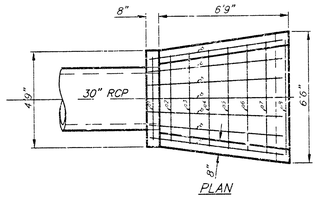
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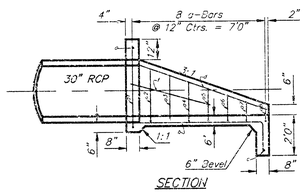
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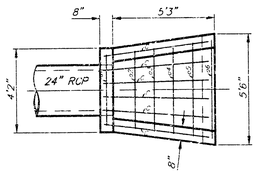
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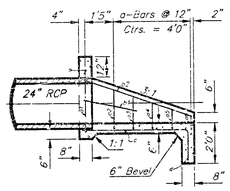
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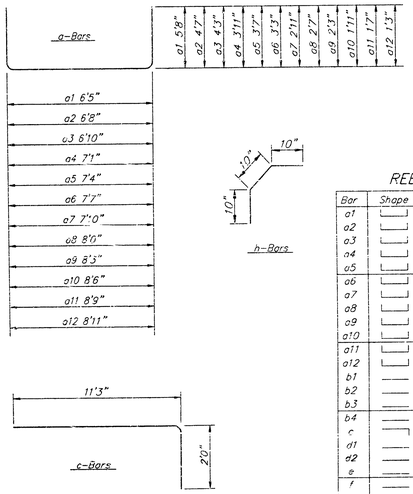
SECTION



PLAN



SECTION



REBAR SCHEDULE

Bar	Shape	No.	Length	Weight
a1		1	1'7"	11.86
a2		1	15'10"	10.58
a3		1	15'4"	10.24
a4		1	14'11"	9.96
a5		1	14'6"	9.69
a6		1	14'1"	9.41
a7		1	13'8"	9.13
a8		1	13'2"	8.80
a9		1	12'9"	8.52
a10		1	12'4"	8.24
a11		1	11'11"	7.96
a12		1	11'5"	7.63
b1	——	2	11'0"	14.70
b2	——	2	8'1"	10.80
b3	——	2	5'2"	6.90
b4	——	2	11'7"	15.48
c		8	13'3"	70.81
d1	——	4	1'4"	3.56
d2	——	4	9"	2.00
e	——	3	6'6"	13.03
f	——	4	3'4"	8.91
g	——	2	9'0"	12.02
h		7	2'6"	11.69
Total Rebar			281.92 Lbs.	
Concrete			13.22 C.Y.	

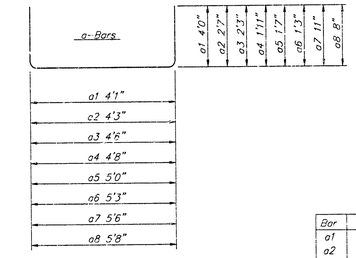
A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall

* Field Bend or Cut Reinforcing as Required for Clearance.

All Concrete Reinforcement to be #4 Rebar

All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 48" RCP



REBAR SCHEDULE

Bar	Shape	No.	Length	Weight
a1		1	12'1"	8.07
a2		1	9'5"	6.29
a3		1	9'0"	6.01
a4		1	8'6"	5.68
a5		1	8'2"	5.46
a6		1	7'9"	5.18
a7		1	7'4"	4.90
a8		1	7'0"	4.68
b		7	8'6"	33.07
c	——	1	6'0"	4.01
d	——	2	7'6"	10.02
e	——	1	4'5"	2.95
f	——	2	4'3"	5.68
Total Rebar			104.00 Lbs.	
Concrete			2.19 C.Y.	

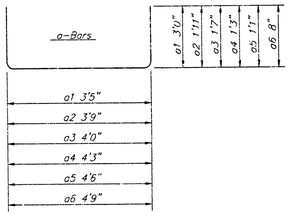
A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall

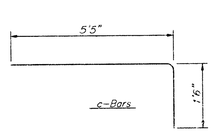
* Field Bend or Cut Reinforcing as Required for Clearance.

All Concrete Reinforcement to be #4 Rebar

All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 30" RCP





REBAR SCHEDULE

Bar	Shape	No.	Length	Weight
a1		1	9'5"	6.29
a2		1	7'7"	5.07
a3		1	7'2"	4.79
a4		1	6'9"	4.51
a5		1	6'4"	4.23
a6		1	6'1"	4.06
b1	——	2	2'9"	3.67
b2	——	2	5'10"	7.79
c		5	6'11"	27.72
d	——	1	3'0"	3.37
e	——	1	3'10"	2.56
Total Rebar			74.03 Lbs.	
Concrete			1.40 C.Y.	

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall

* Field Bend or Cut Reinforcing as Required for Clearance.

All Concrete Reinforcement to be #4 Rebar

All Rebar to Have Min. of 1 1/2" Conc. Cover

HEADWALL FOR 24" RCP

GENERAL NOTES

1. ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO CONCRETE HEADWALL
2. CONCRETE USED IN HEADWALL CONSTRUCTION SHALL BE SAME AS PER CITY STANDARD PAVING MIX EXCEPT THAT IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
3. ALL EXPOSED EDGES SHALL BE BEVELED 1/2".
4. REINFORCING STEEL SHALL COMPLY TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
5. THE "REIN. CONC. HEADWALL" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.

HEADWALL DETAIL

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-2221 • 315 ELLIS • WICHITA, KANSAS 67211

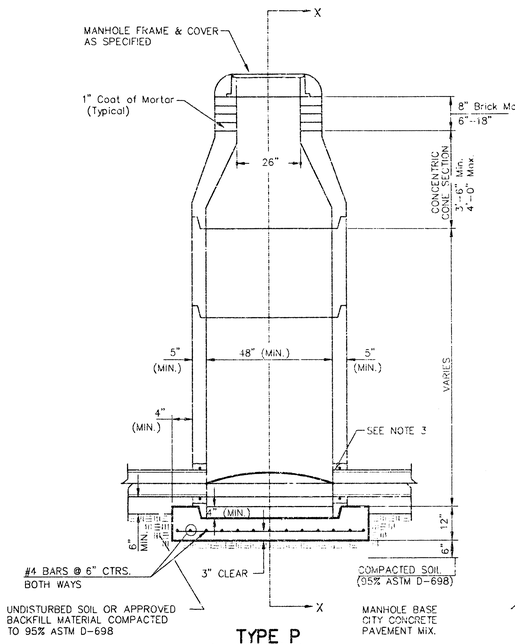
PROJECT NUMBER 932 PPS (607881)

SHEET 5 OF 8

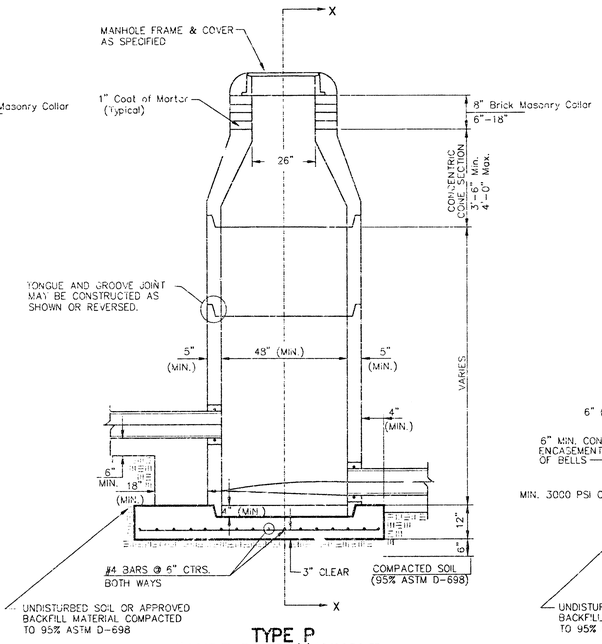
DESIGN	DRAWN	APPROVED	DATE	SCALE
BLP/DMV	JAK		09/99	NONE

V:\Drafting\...\Headwall 3.dgn

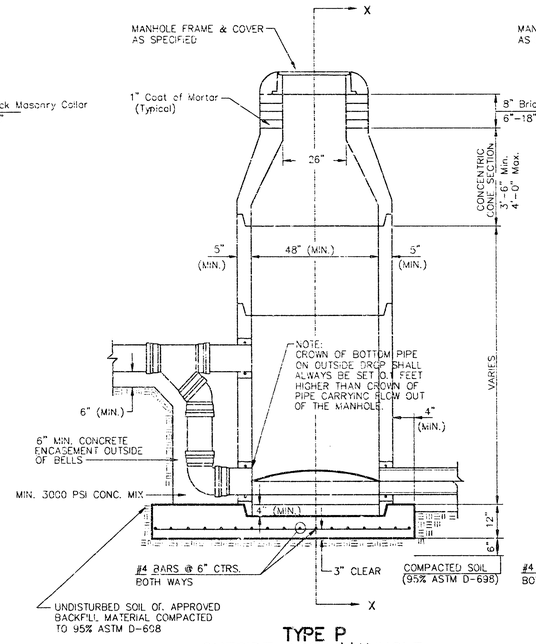
SEWER APPURTENANCES DETAILS



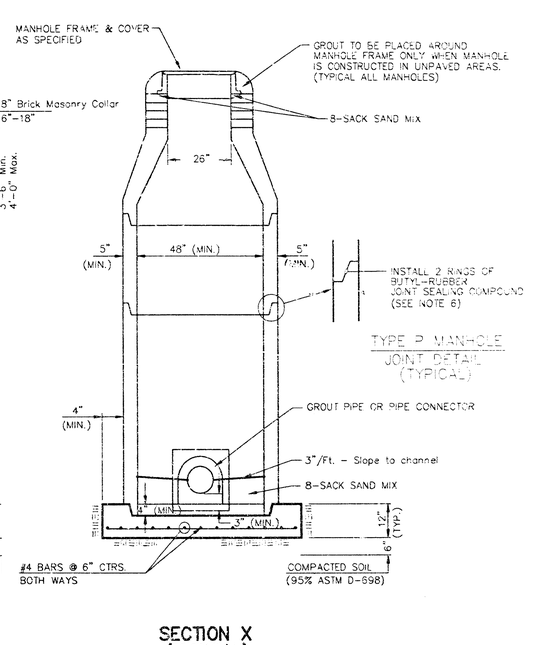
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE

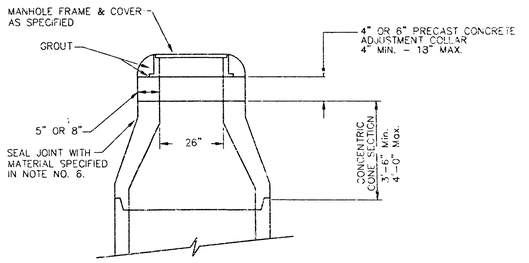


SECTION X
(TYPICAL)

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 535 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 NON-SHRINK 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 MANHOLE. 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.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

CITY OF WICHITA
STD. MANHOLE DETAILS
SEWER APPURTENANCES

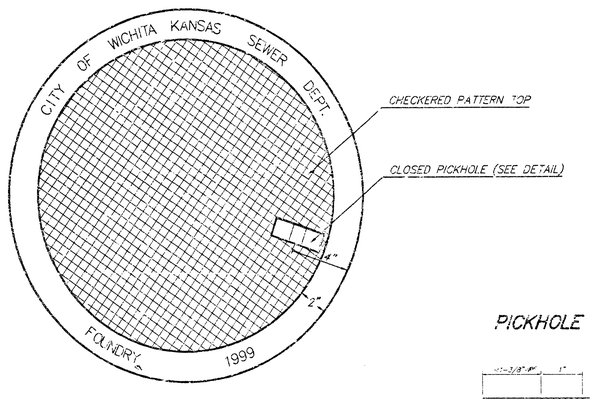
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-262-7271 • 315 S.U.S. • WICHITA, KANSAS 67211

PROJECT NUMBER				SHEET
932 PPS (807861)				6 of 8
DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF		09/99	NONE

MANHOLE FRAME AND COVER DETAIL

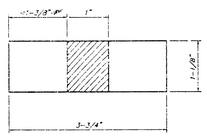
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

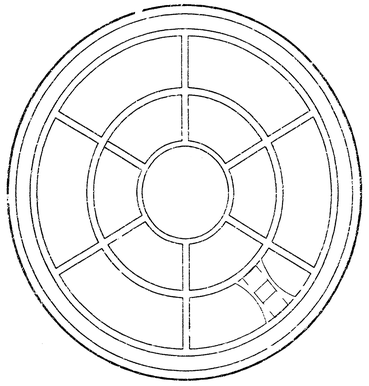


TOP VIEW

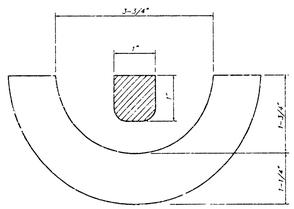
PICKHOLE DETAIL



TOP VIEW

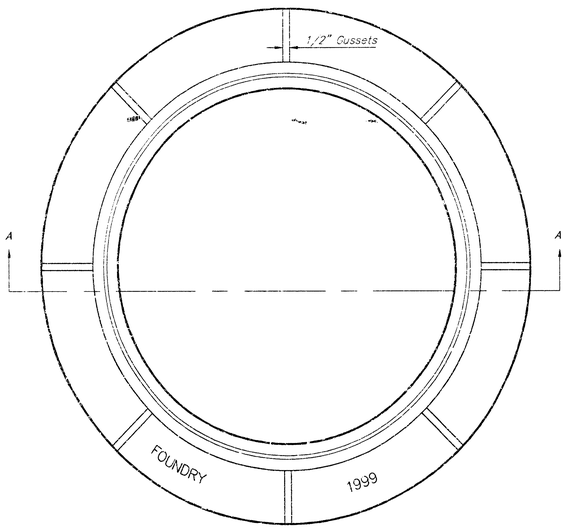


BOTTOM VIEW



SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW

GENERAL NOTES

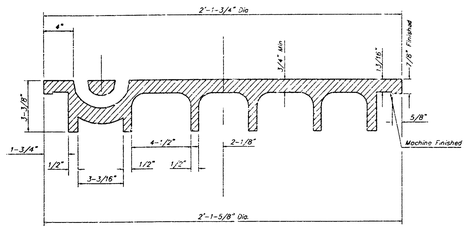
MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

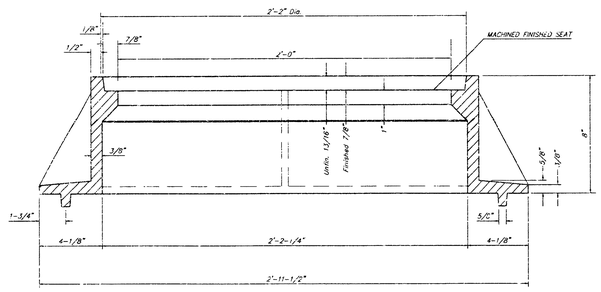
MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



SECTION VIEW



SECTION A-A

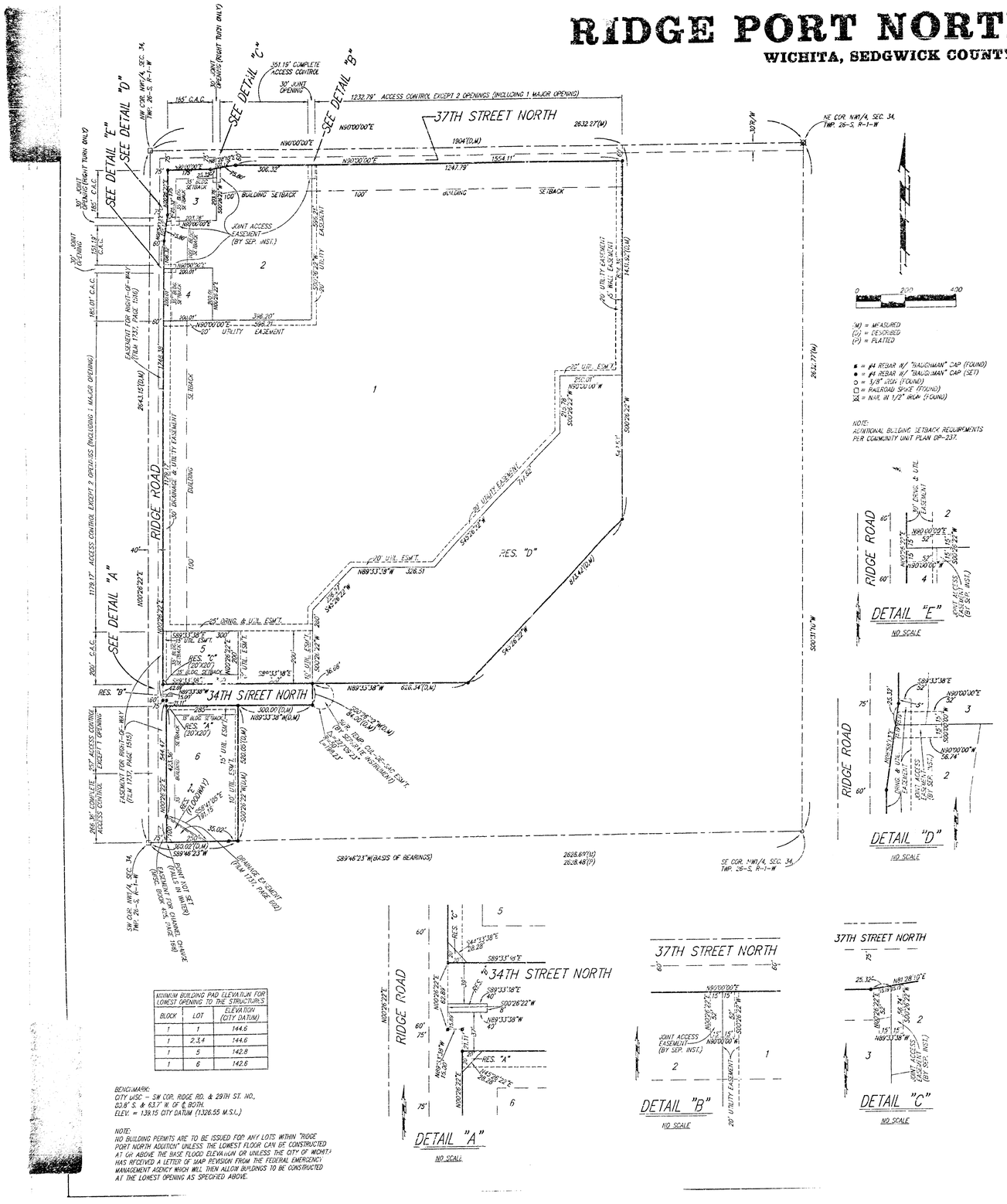
MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER					SHEET
932 PPS (807961)					7 OF 8
DESIGN: STAFF	DRAWN: STAFF	APPROVED	DATE: 02/99	SCALE: NONE	

RIDGE PORT NORTH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS


37TH STREET NORTH
34TH STREET NORTH
RIDGE ROAD
SEE DETAIL "A"
SEE DETAIL "B"
SEE DETAIL "C"
SEE DETAIL "D"
SEE DETAIL "E"
RES. "A" (20'X20')
RES. "B"
RES. "C" (20'X20')
RES. "D"
1
2
3
4
5
6
1232.79' ACCESS CONTROL EXCEPT 2 OPENINGS (INCLUDING 1 MAJOR OPENING)
351.19' COMPLETE ACCESS CONTROL
30' JOINT OPENING
185' C.A.C.
NW COR. NW1/4, SEC. 34, TWP. 26-S, R-1-W
NE COR. NW1/4, SEC. 34, TWP. 26-S, R-1-W
SW COR. NW1/4, SEC. 34, TWP. 26-S, R-1-W
SE COR. NW1/4, SEC. 34, TWP. 26-S, R-1-W
N90°00'00"E
1904(D,M)
2632.27(W)
1247.79'
1554.11'
306.39'
100' BUILDING SETBACK
JOINT ACCESS EASEMENT (BY SEP. INST.)
30' DRAINAGE & UTILITY EASEMENT
20' UTILITY EASEMENT
25' DRNG. & U.TIL. ESM'T.
15' UTIL. ESM'T.
N89°33'38"W
626.34(D,M)
S89°46'23"W(BASIS OF BEARINGS)
2628.69'(M)
2628.48'(P)
1319.17' ACCESS CONTROL
EASEMENT FOR RIGHT-OF-WAY (FILM 1737, PAGE 1315)
EASEMENT FOR RIGHT-OF-WAY (FILM 1737, PAGE 1316)
GRANTEE'S EASEMENT (FILM 1737, PAGE 860)
POINT NOT SET (FALLS IN WATER)
EASEMENT FOR CHANNEL CHANGE (MISC. BOOK 423, PAGE 189)
2643.15'(D,M)
1319.57'(M)
1322.76'(M)
1141.82'(M)
2632.77'(M)
S00°11'16"W
S00°26'22"W
S45°26'22"W
S89°46'23"W
N89°33'38"W
N00°26'22"E
N89°00'00"E
S00°00'22"W
S89°33'38"E
N45°26'22"E
S44°33'38"E
N44°33'38"W
S45°33'38"E
N00°00'00"E
S00°26'22"W
N89°00'00"W
S89°00'00"E
N00°26'22"E
S00°26'22"W
N89°33'38"W
S89