STORM WATER IMPROVEMENTS TO SERVE

HOSKINSON 2ND ADDITION

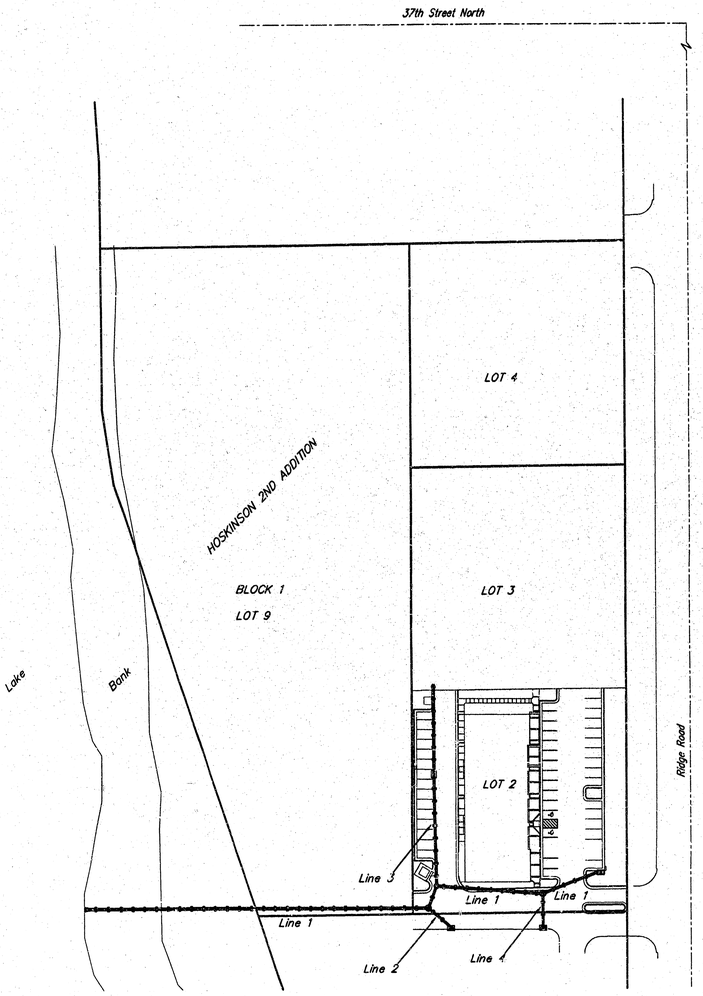
BLOCK 1, LOTS 2 & 3

Private Project Number: 1290 PPS (607861)

CITY OF WICHITA, KANSAS

Jim Armour, P.E. City Engineer

May 2004



SCALE: 1" = 60'

Index

Bench Marks:

1. County Benchmark, Chiseled Square on the South Hubguard RCBC, 73' West of Ridge Road on 37th Street North.

   Elevation=1331.52 M.S.L. 144.12 City Datum

2. "T" SE Corner Bridge Deck .5 Miles North of 29th St. N. on Ridge Road.

   Elevation: 1331.25 M.S.L. 143.85 City Datum

Legal Description

Lot 2, Hoskinson 2nd Addition, Sedgwick County, Kansas

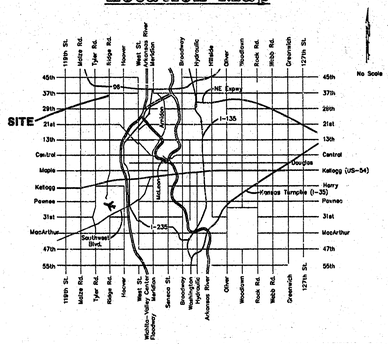
APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Storm Sewers VRH 6/7/04

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).

Location Map



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:

Cox Communications	262-4270
Kansas Gas Service Company	1-888-482-4950
Westar Energy (Electric)	383-8650
Aquila Energy (Gas)	1-800-303-0357
Southwestern Bell Telephone Company	1-800-286-8313
City of Wichita Water Department	268-4908
City of Wichita Sewer Maint. (San. Sewer)	268-4024
City of Wichita Storm Sewer Maint.	268-4090
City of Wichita Traffic Maint.	268-4034

2. All disturbed R/W areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 Sq. Ft., fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 Sq. Ft., and mulched with Prairie Hay at a rate of 92 lb./1000 Sq. Ft. Mulch shall be "patted" with forks or punched into soil to reduce loss due to wind.

3. Utility service lines, poles, valve boxes, meters, et cetera 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 and shall be field verified. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

4. Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Contractor shall not start on the project until all necessary bonds and permits have been obtained. Any work done without inspection will be required to be uncovered for inspection.

5. 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 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.

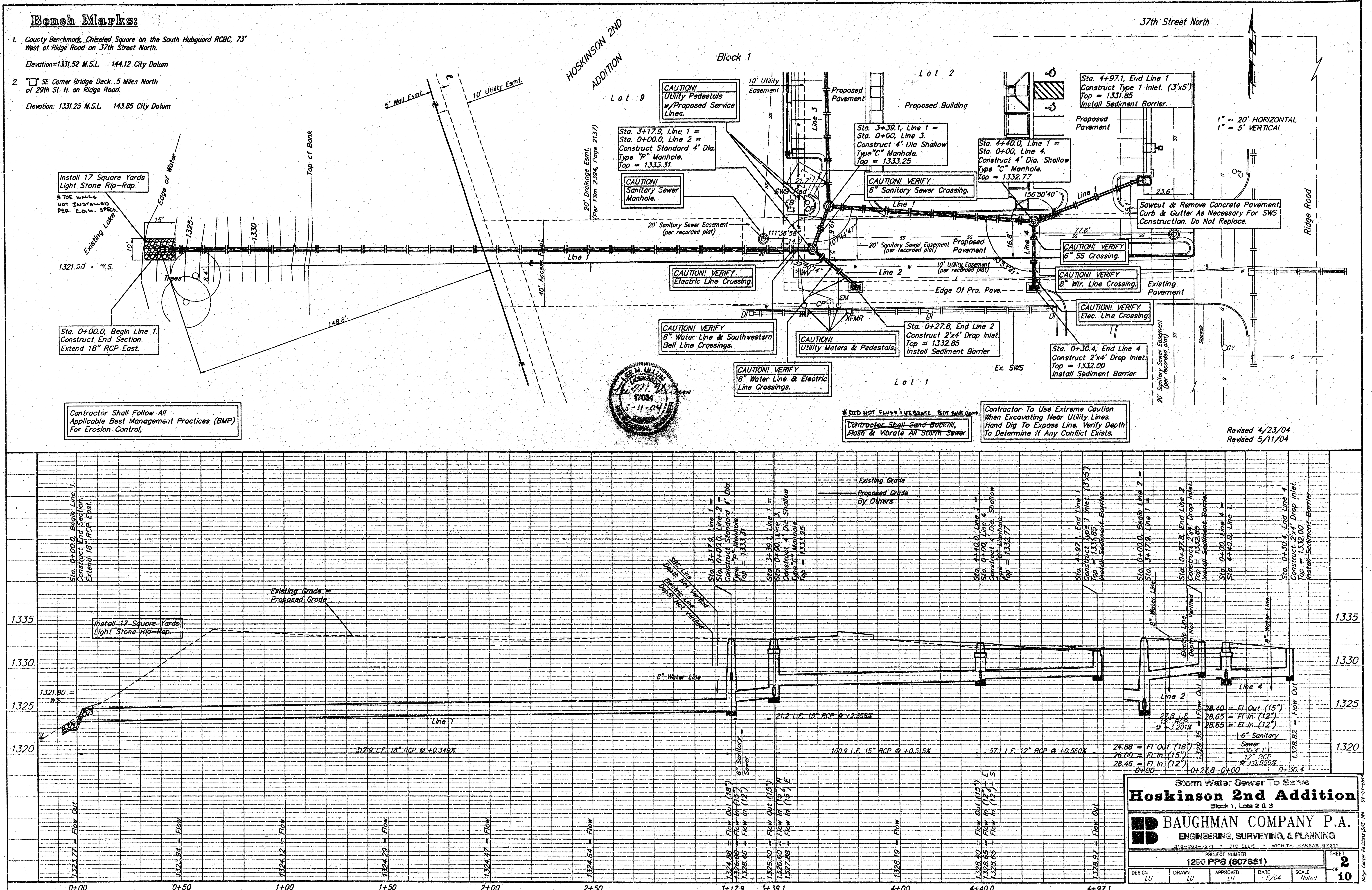
6. All storm sewers and appurtenances shall be installed in accordance with the most recent edition of City of Wichita, Kansas Standard Specifications for the Construction of City Projects.

AS-BUILT
11/10/04

LEE M. THOMAS
LICENSED
17094
5-11-04
PROFESSIONAL ENGINEER

Revised 4/23/04
Revised 5/11/04

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


Bench Marks:
1. County Benchmark, Chiseled Square on the South Hubguard RCBC, 73' West of Ridge Road on 37th Street North.
Elevation=1331.52 M.S.L. 144.12 City Datum
2. SE Corner Bridge Deck .5 Miles North of 29th St. N. on Ridge Road.
Elevation: 1331.25 M.S.L. 143.85 City Datum
37th Street North
HOSKINSON 2ND ADDITION
Block 1
Lot 9
Lot 2
Lot 1
Proposed Building
Ridge Road
1" = 20' HORIZONTAL
1" = 5' VERTICAL
Sta. 4+97.1, End Line 1
Construct Type 1 Inlet. (3'x5')
Top = 1331.85
Install Sediment Barrier.
CAUTION!
Utility Pedestals w/Proposed Service Lines.
Sta. 3+17.9, Line 1 = Sta. 0+00.0, Line 2 = Construct Standard 4' Dia. Type "P" Manhole. Top = 1333.31
Sta. 3+39.1, Line 1 = Sta. 0+00, Line 3. Construct 4' Dia Shallow Type "C" Manhole. Top = 1333.25
Sta. 4+40.0, Line 1 = Sta. 0+00, Line 4. Construct 4' Dia. Shallow Type "C" Manhole. Top = 1332.77
CAUTION!
Sanitary Sewer Manhole.
CAUTION! VERIFY
6" Sanitary Sewer Crossing.
Install 17 Square Yards Light Stone Rip-Rap.
Sawcut & Remove Concrete Pavement, Curb & Gutter As Necessary For SWS Construction. Do Not Replace.
CAUTION! VERIFY
6" SS Crossing.
CAUTION! VERIFY
8" Wtr. Line Crossing.
CAUTION! VERIFY
Electric Line Crossing.
CAUTION! VERIFY
Elec. Line Crossing.
Sta. 0+00.0, Begin Line 1. Construct End Section. Extend 18" RCP East.
CAUTION! VERIFY
8" Water Line & Southwestern Bell Line Crossings.
CAUTION!
Utility Meters & Pedestals.
Sta. 0+27.8, End Line 2
Construct 2'x4' Drop Inlet.
Top = 1332.85
Install Sediment Barrier
Sta. 0+30.4, End Line 4
Construct 2'x4' Drop Inlet.
Top = 1332.00
Install Sediment Barrier
CAUTION! VERIFY
8" Water Line & Electric Line Crossings.
Contractor Shall Follow All Applicable Best Management Practices (BMP) For Erosion Control.
Contractor Shall Sand Backfill, Flush & Vibrate All Storm Sewer.
Contractor To Use Extreme Caution When Excavating Near Utility Lines. Hand Dig To Expose Line. Verify Depth To Determine If Any Conflict Exists.
Revised 4/23/04
Revised 5/11/04
Existing Grade = Proposed Grade
Existing Grade
Proposed Grade By Others
317.9 L.F. 18" RCP @ +0.349%
21.2 L.F. 15" RCP @ +2.358%
100.9 L.F. 15" RCP @ +0.515%
57.1 L.F. 12" RCP @ +0.560%
1335
1330
1325
1320
0+00
0+50
1+00
1+50
2+00
2+50
3+17.9
3+39.1
4+00
4+40.0
4+97.1
Storm Water Sewer To Serve
Hoskinson 2nd Addition
Block 1, Lots 2 & 3
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211
PROJECT NUMBER
1290 PPS (607861)
DESIGN LU
DRAWN LU
APPROVED LU
DATE 5/04
SCALE Noted
SHEET 2 OF 10

Bench Marks:

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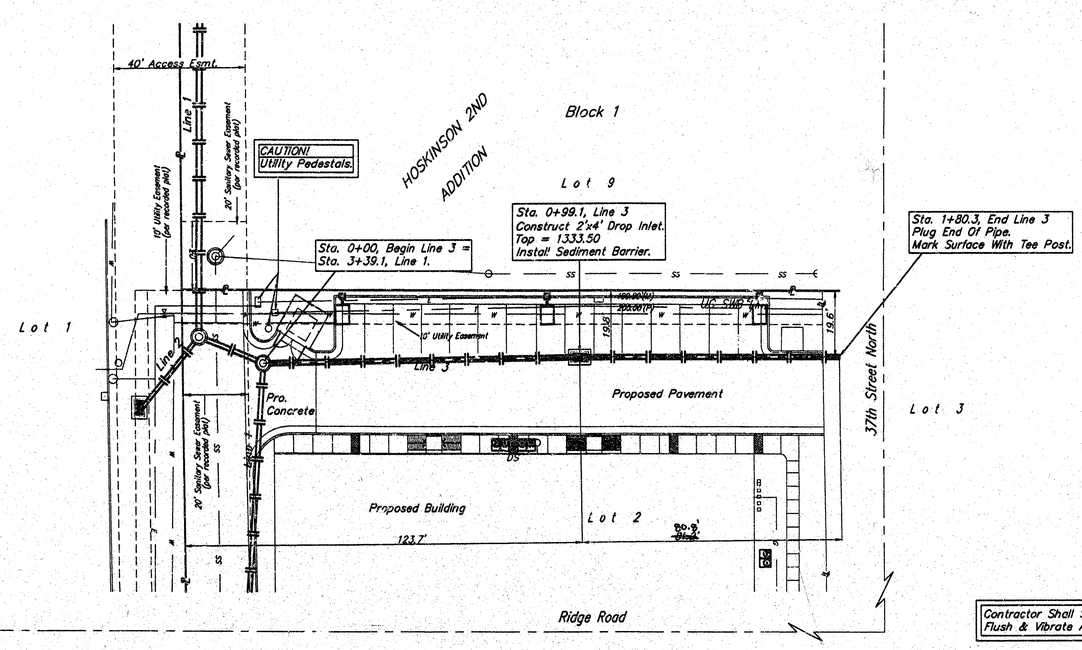

1" = 20' HORIZONTAL
1" = 5' VERTICAL

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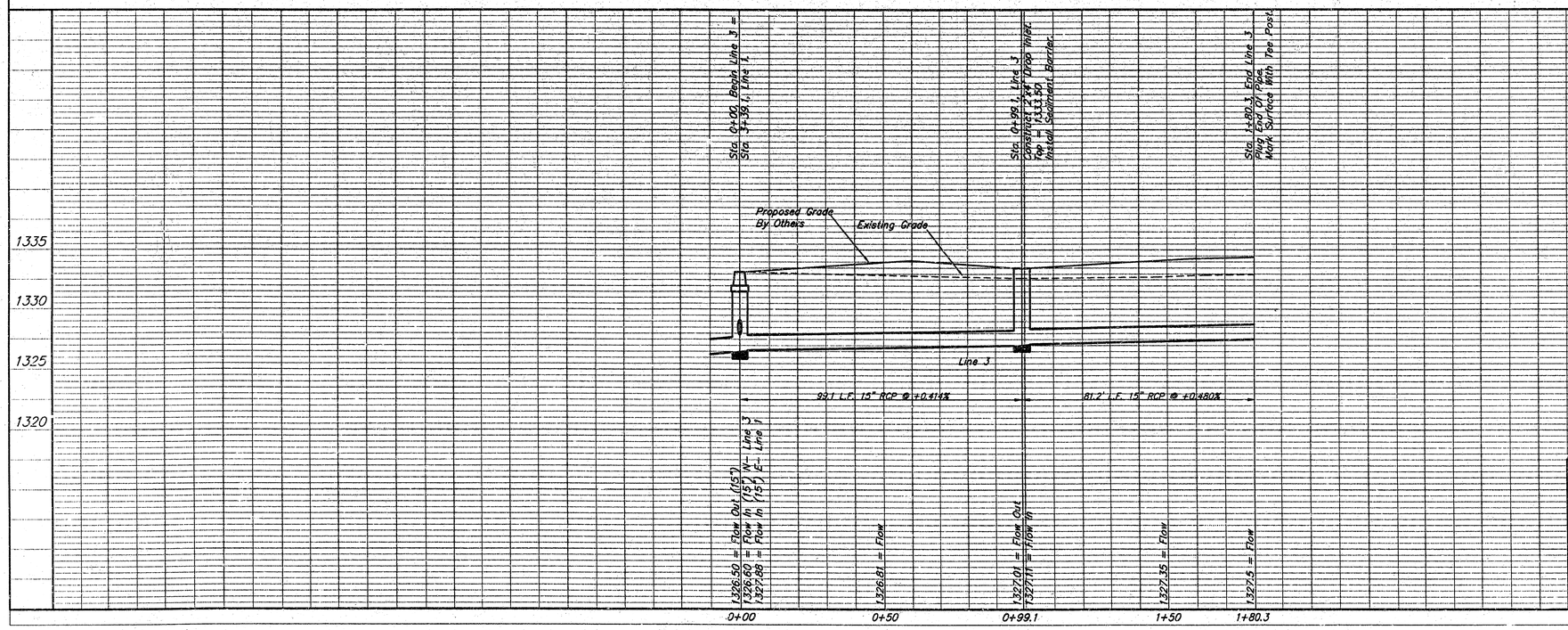
Revised 4/23/04
Revised 5/11/04



LEE M. LUDWIG
17099
5-11-04
REGISTERED PROFESSIONAL ENGINEER

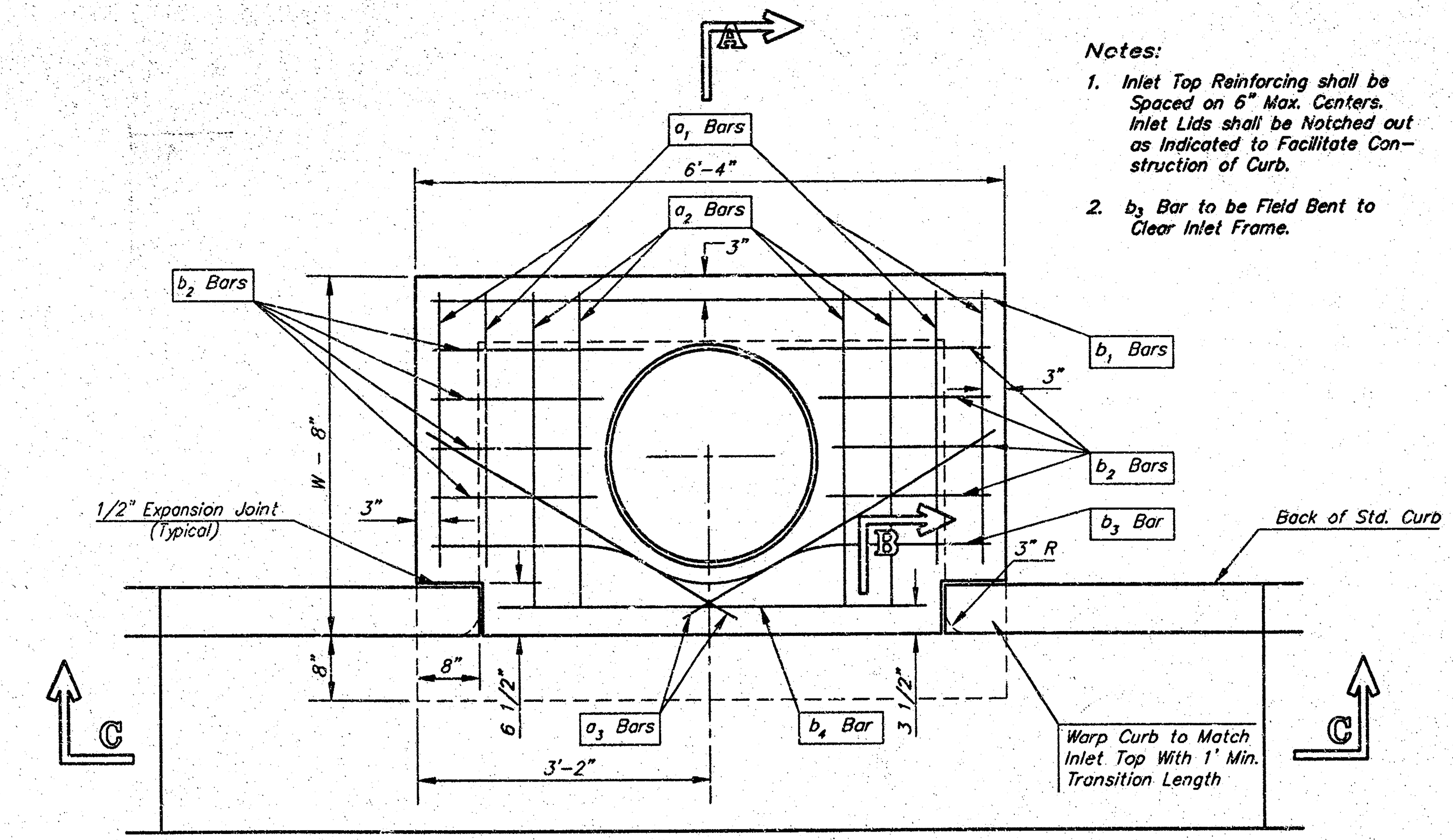
Storm Water Sewer To Serve
Hoskinson 2nd Addition
Block 1, Lots 2 & 3

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

PROJECT NUMBER	SHEET
1290 PPS (607861)	3 OF 10

DESIGN	DRAWN	APPROVED	DATE	SCALE
LU	LU	LU	5/04	Noted

04-04-1244
Ridge Center Hoskins\1290-2R

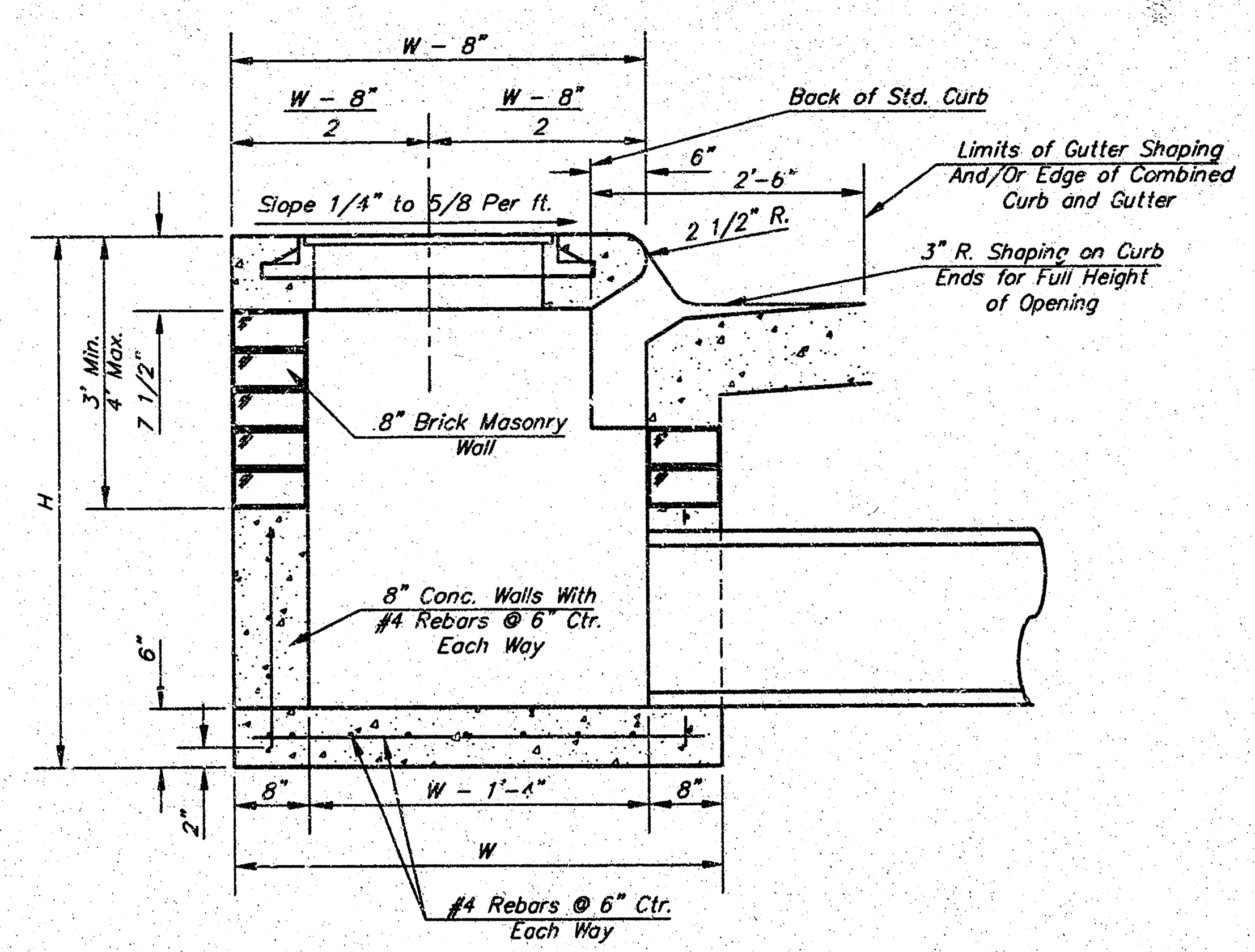


PLAN

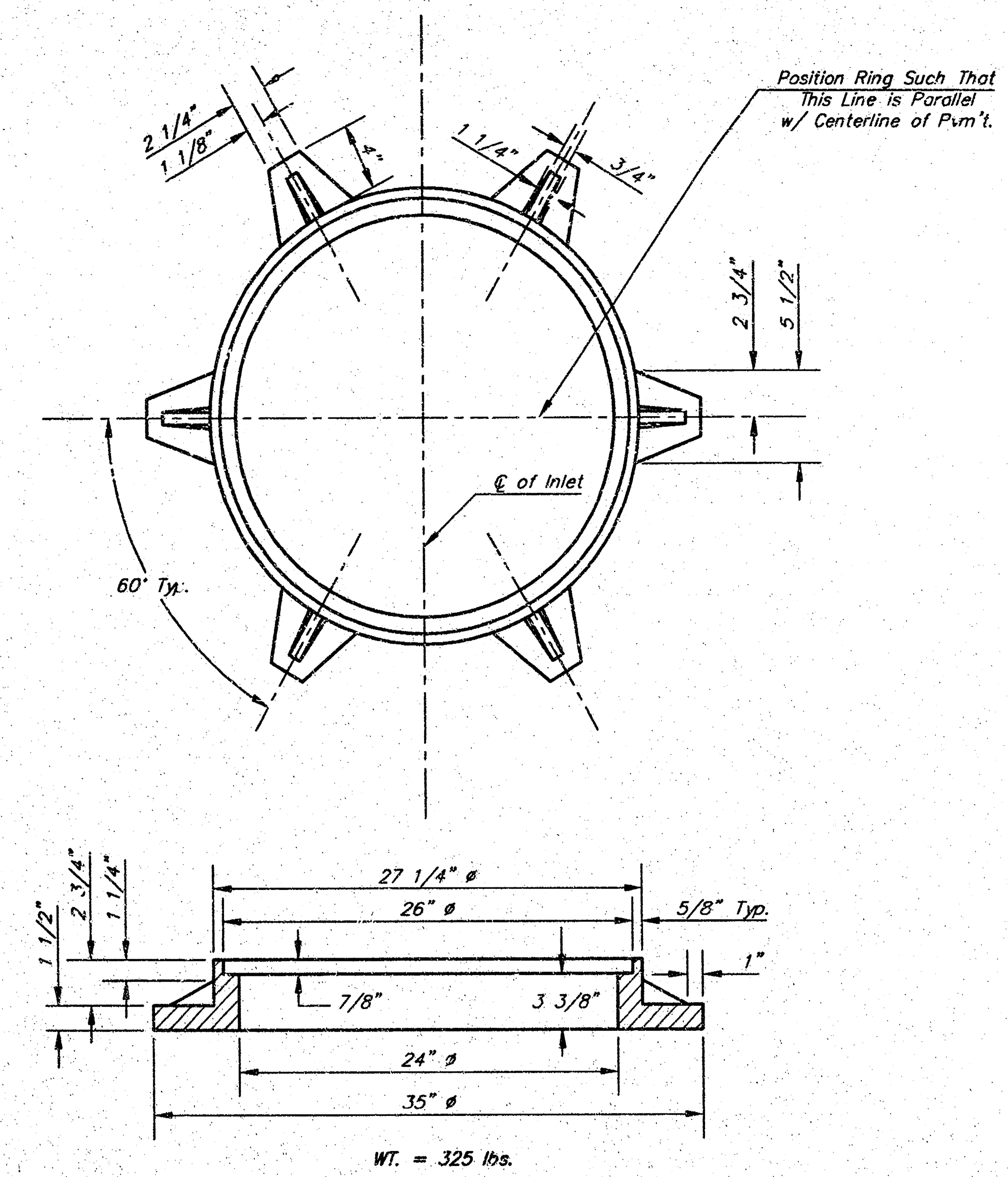
Notes:

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.

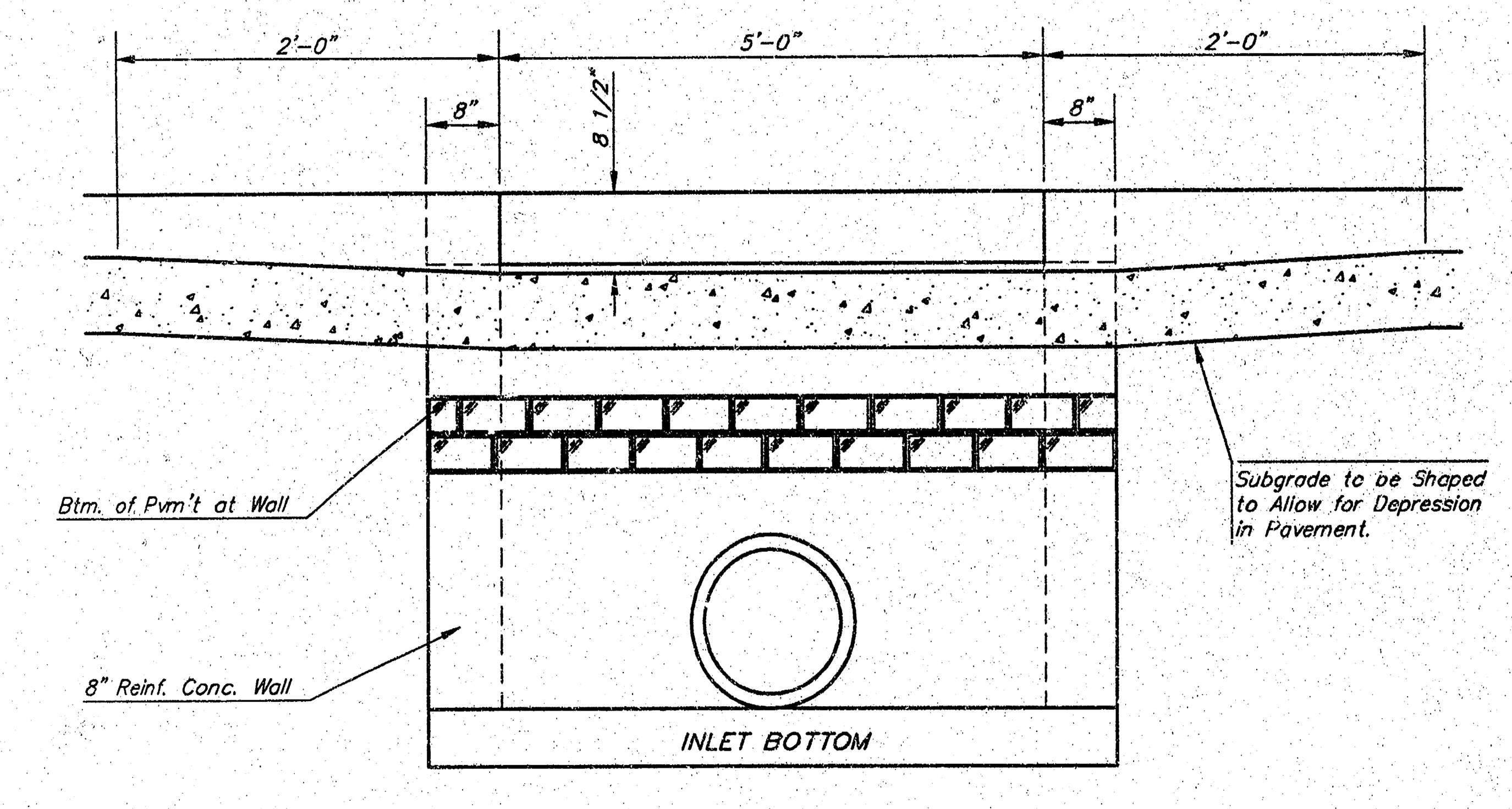


SECTION A—A

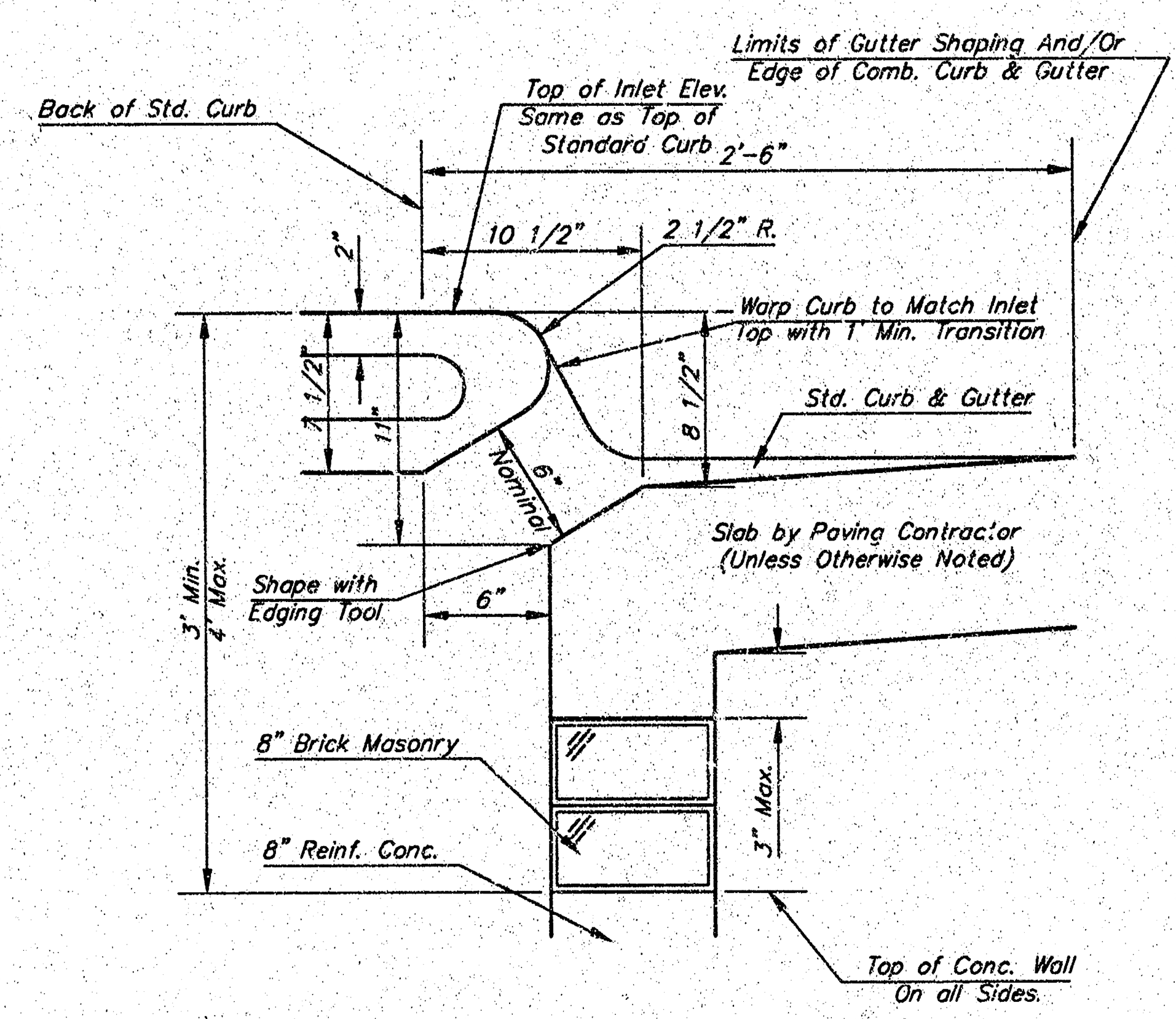


MANHOLE RING AND COVER

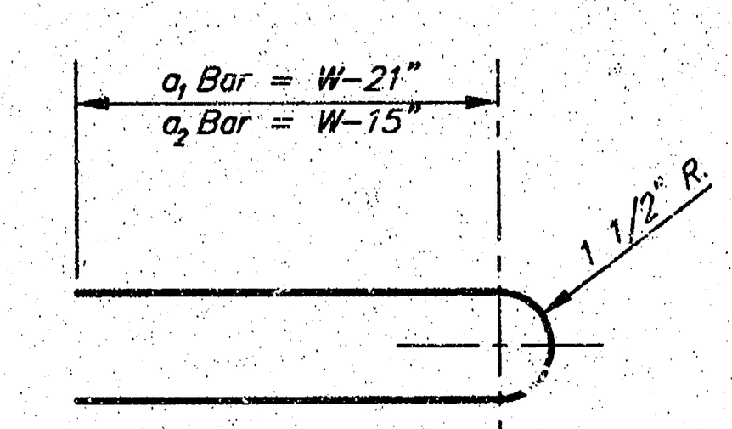
*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



SECTION C—C



SECTION B—B



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±
LENGTH	W=5'-4"	7'-7"	8'-7"	5'-0"	–	6'-1"	–	–	–	1'-9"	6'-2"	4'-8"	81±
LENGTH	W=6'-4"	9'-7"	10'-7"	6'-0"	–	–	6'-1"	–	–	1'-9"	6'-2"	4'-8"	101±
LENGTH	W=7'-4"	11'-7"	12'-7"	7'-0"	–	–	–	6'-1"	–	1'-9"	6'-2"	4'-8"	121±
LENGTH	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±

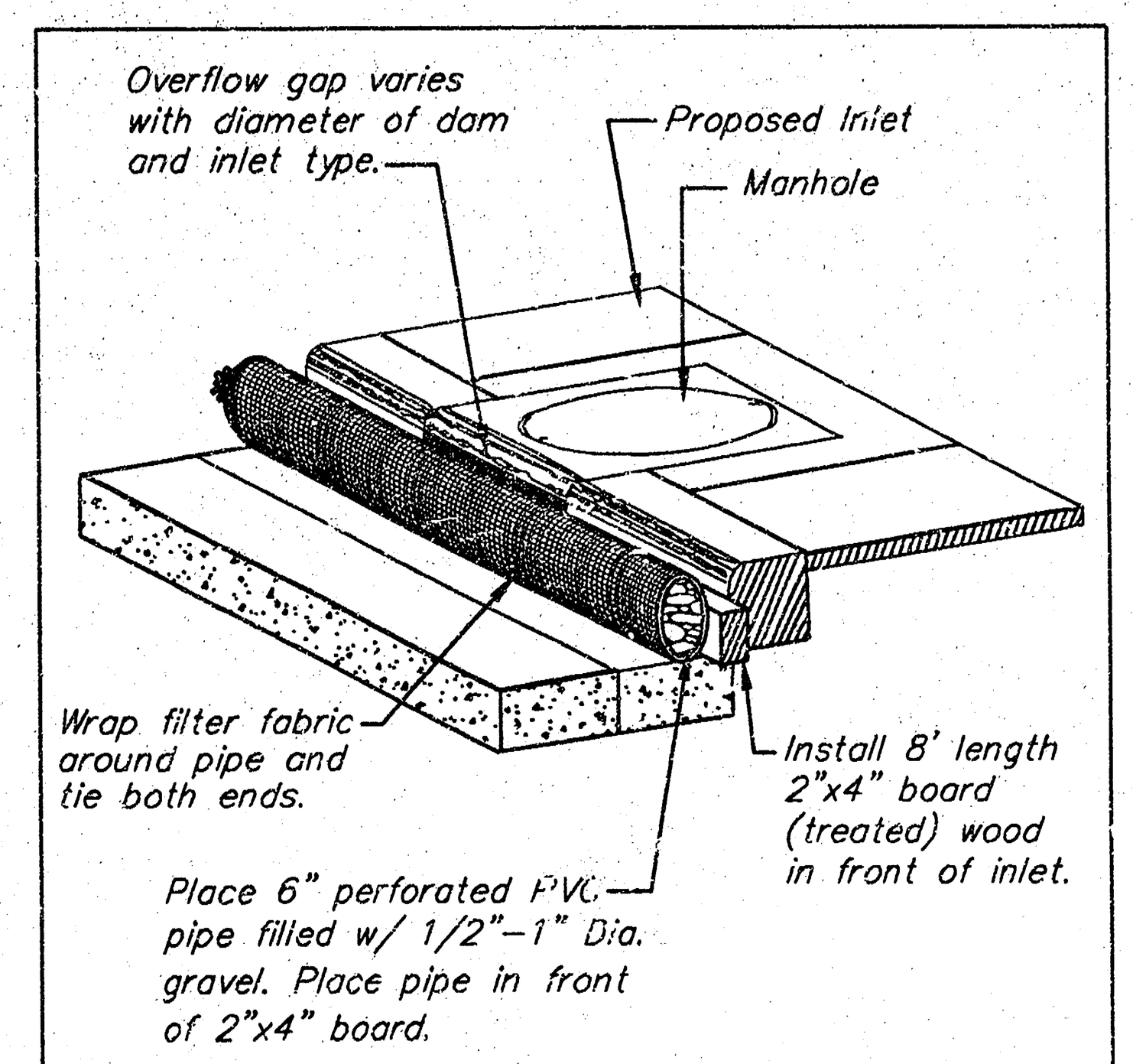
GENERAL NOTES

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.



INLET PROTECTION

Perforated Pipe w/ Gravel

CITY OF WICHITA, KANSAS

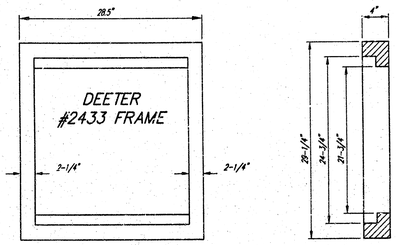
TYPE 1 CURB INLET

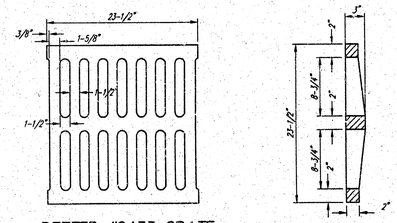
INLET OPENING = 6"X5'-0"

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

PROJECT NUMBER					SHEET
1290 PPS (607861)					4 OF 10
DESIGN STAFF	DRAWN STAFF	APPROVED LU	DATE 4/04	SCALE NONE	

Ridge Center Revisions|Styp1-s 04-04-E844

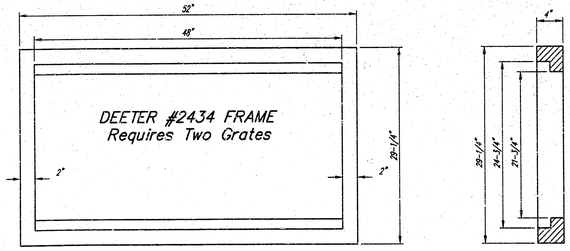




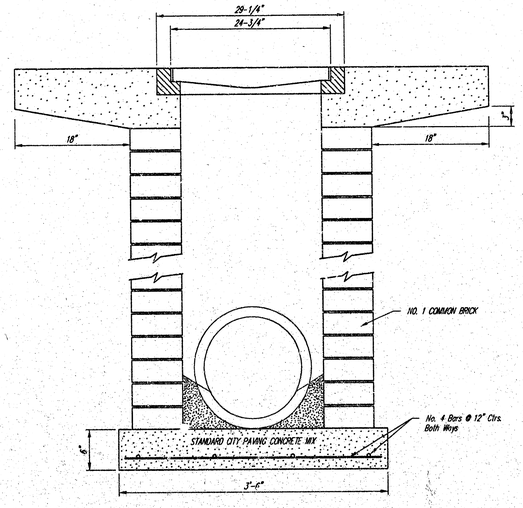
DEETER #2433 GRATE

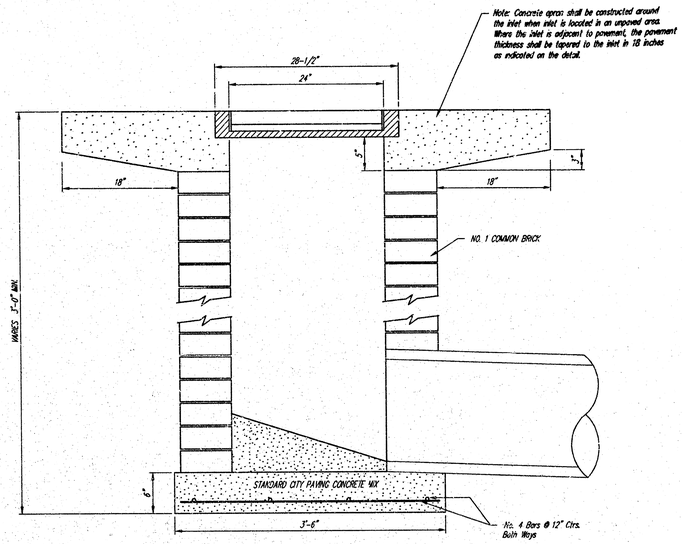
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

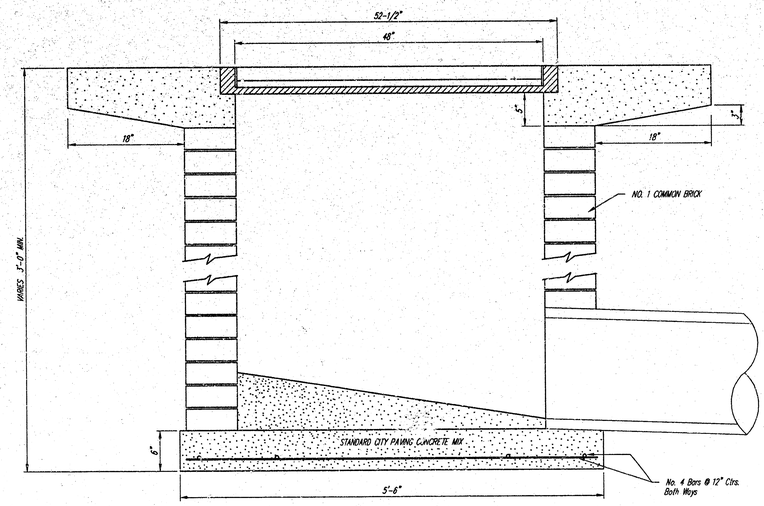
24" x 24" Frame and Grate Detail

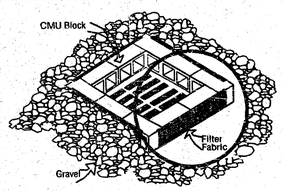


Double 24" x 24" Frame Detail









NOTES:

Frequent maintenance is required to minimize short-circuiting and to remove sediment deposits and buildup.

Wrap filter fabric around all CMU block and backfill with 2"-3" gravel rock to allow sediment deposits.

DO NOT cover inlet or grate with filter fabric.

INLET PROTECTION

Storm Drain with Gravel Apron

CITY OF WICHITA

STANDARD DROP INLET

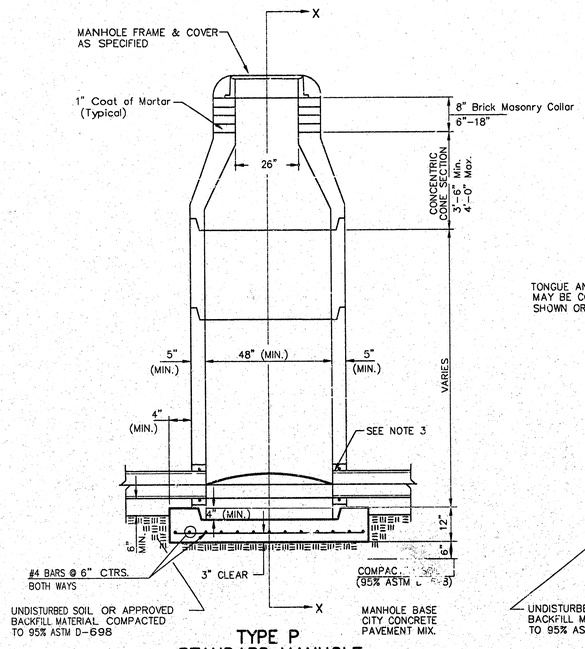
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1290 PPS (607861)	5 OF 10

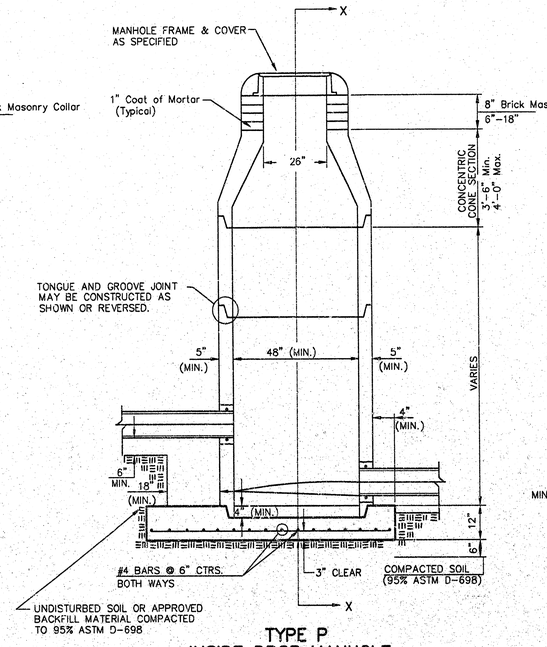
DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF	LU	4/04	NONE

Ridge Center Revisions Unsigned 04-04-2014

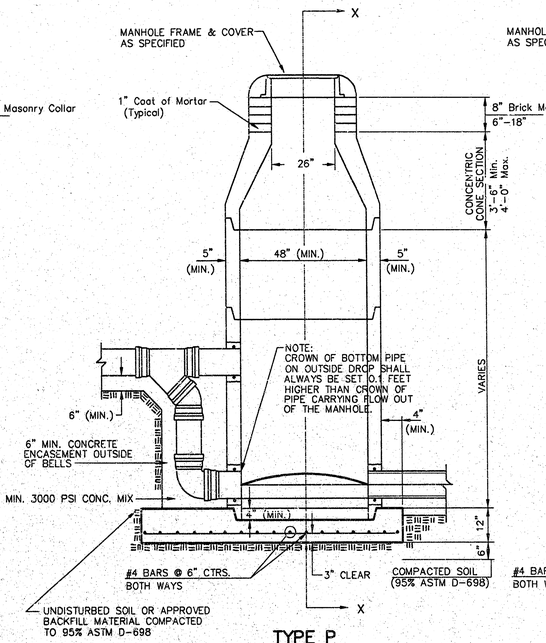
SEWER APPURTENANCES DETAILS



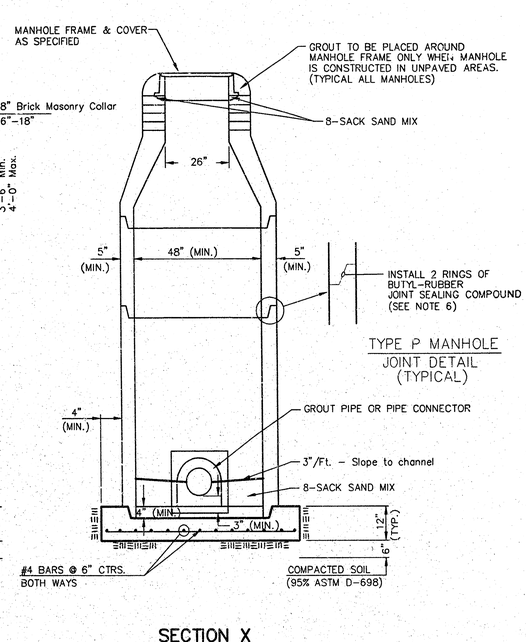
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE

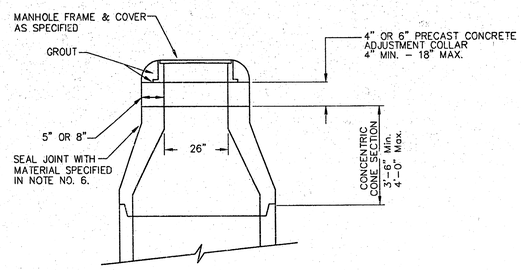


SECTION X
(TYPICAL)

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 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 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

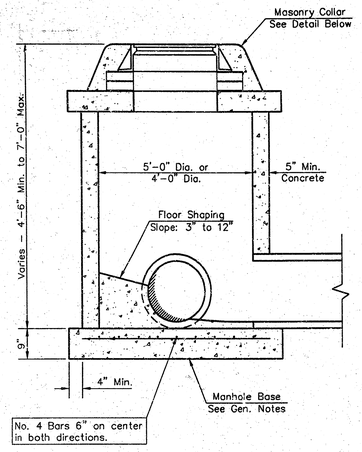
STD. MANHOLE DETAILS
SEWER APPURTENANCES

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

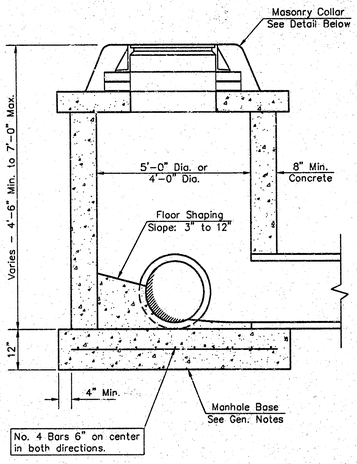
PROJECT NUMBER	SHEET
1280 PPS (607881)	6 OF 10

DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF		4/04	NONE

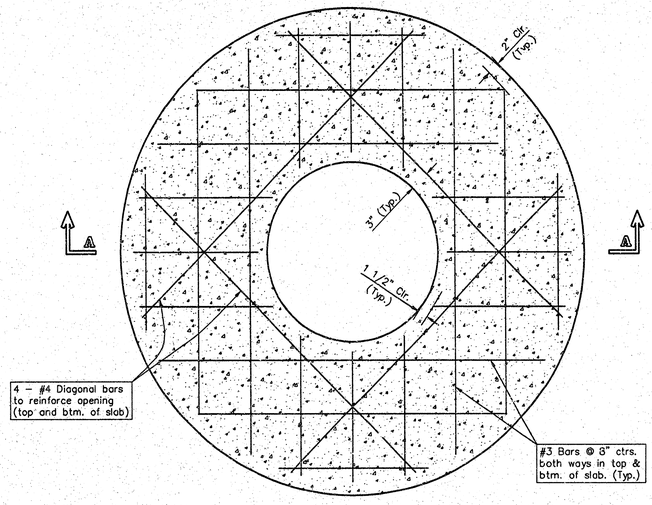
Ridge Carter Revisions/Prints 04-04-1844



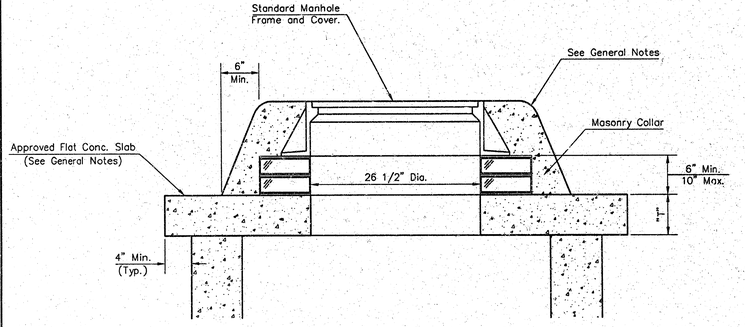
SHALLOW TYPE "P" MANHOLE



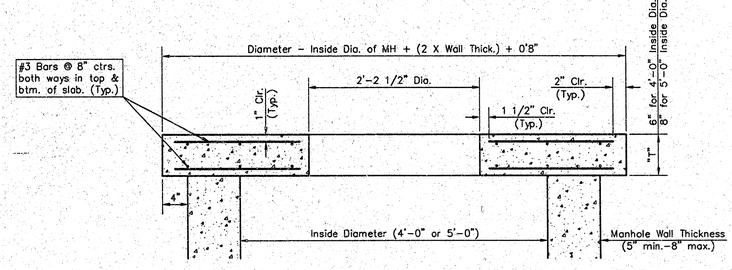
SHALLOW TYPE "C" MANHOLE



PLAN

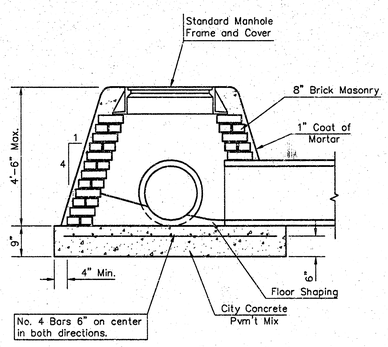


MASONRY COLLAR DETAIL

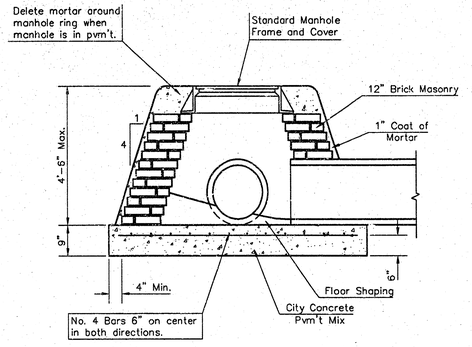


SECTION A–A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

1. 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 cement 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.

2. 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 6" 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.

3. 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. 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.

4. 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.

5. 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 drawings.

6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

7. Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.

8. All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62–87.

CITY OF WICHITA, KANSAS

STD. SHALLOW MANHOLES

TYPE 'P' AND TYPE 'C'

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

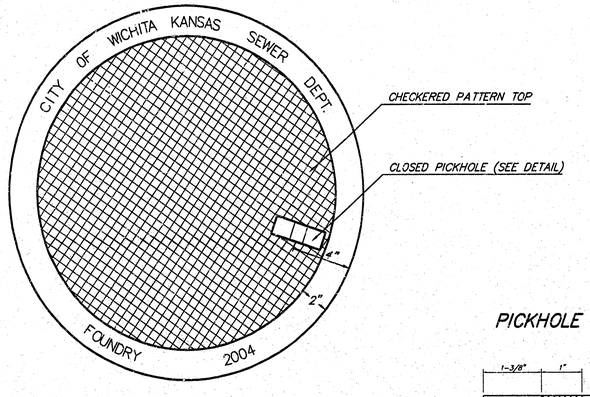
PROJECT NUMBER	SHEET
1290 PPS (607861)	7 OF 10

DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF	STAFF	4/04	NONE

MANHOLE FRAME AND COVER DETAIL

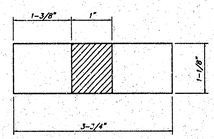
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

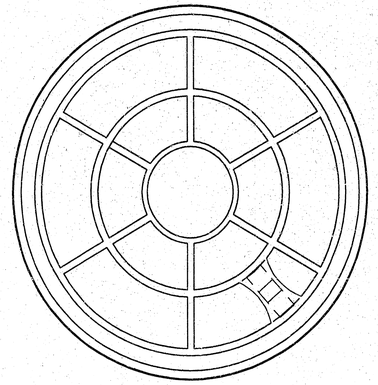


TOP VIEW

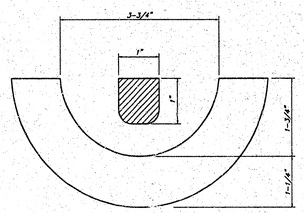
PICKHOLE DETAIL



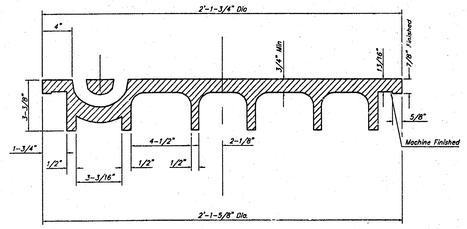
TOP VIEW



BOTTOM VIEW

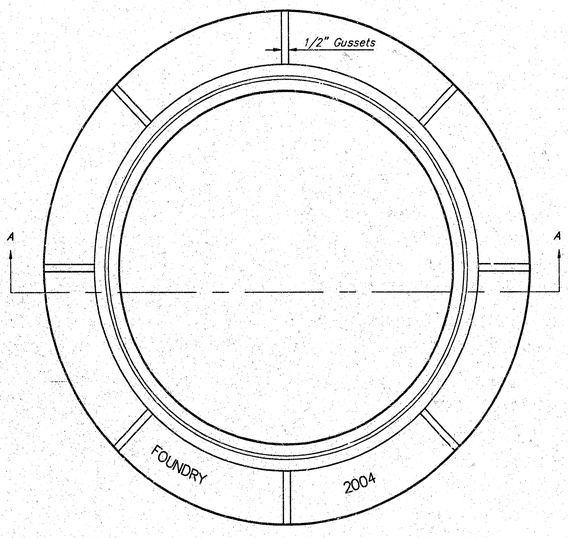


SECTION VIEW

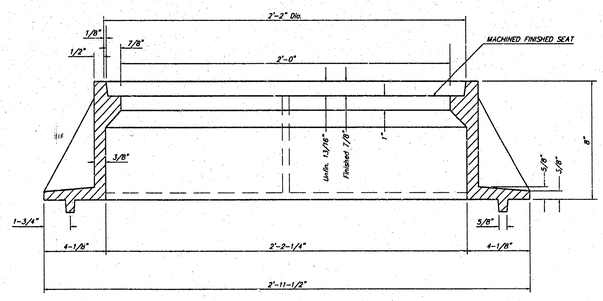


SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW



SECTION A–A

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.

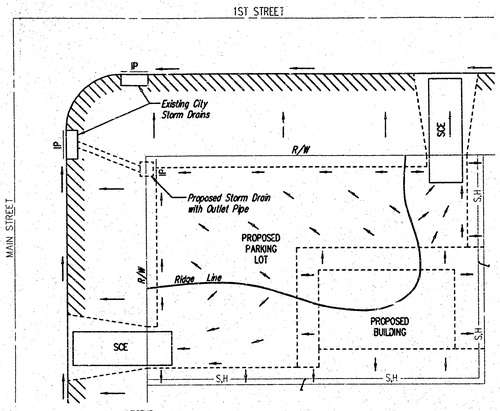
MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

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

PROJECT NUMBER	SHEET
1290 PPS (607861)	8 OF 10

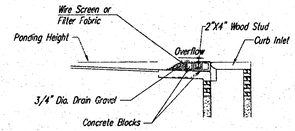
DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF	LU	4/04	NONE

04-14-2841 Ridge Center Revisions/Lettering

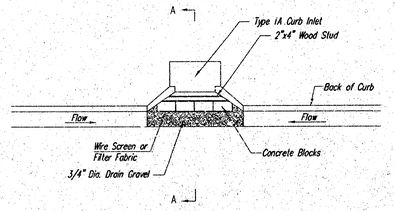


General Notes

1. This standard detail sheet is a part of your building permit. The BMP's shown on this sheet are considered minimum standards. Whenever sediment enters the streets, storm sewers, ditches, or ponds, contractor will install additional BMP's, as needed, to correct the problem.
2. Follow these general principals on all commercial building sides.
3. The soil erosion BMP's shown hereon must be in place at all times during construction until such time as the site is re-established with paving or grass.
4. Failure to install, protect, and maintain BMP's are violations of Section 16.32 of the City Code and will subject the contractor to the penalties provided therein. Included with your permit is an orange "notice" sign that must be posted on-site in a conspicuous place at all times during construction. This sign is provided to assist you in the maintenance of BMP'S.
5. Back of Curb Protection: Can include hay bale, silt fence, or Curlex barrier, as shown on City BMP standard details. This BMP must remain in place until the area between the curb and right-of-way line has been permanently stabilized.
6. The General Contractor is responsible for the installation and maintenance of all BMP's.
7. Should the site abut a lake, BMP's will be installed to prevent sediment from entering the lake.
8. Any mud inadvertently tracked onto any street will be cleaned up by the general contractor at the end of each day's work.



SECTION A–A



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.

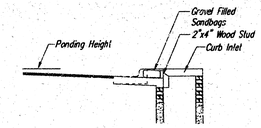
Instructions for Installing:

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.

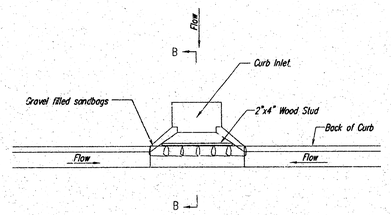
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

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.

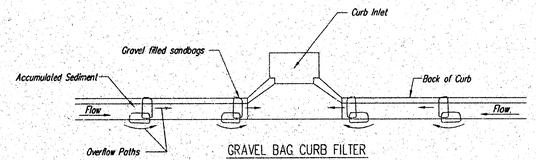


SECTION B–B



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.

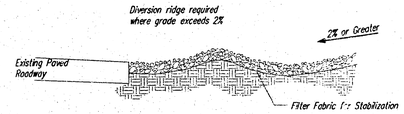
Spacing:

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

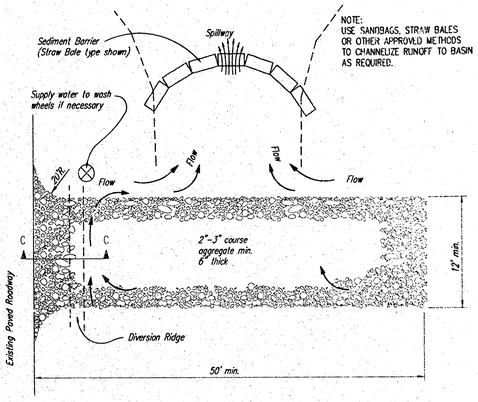
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

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 BMP DETAILS

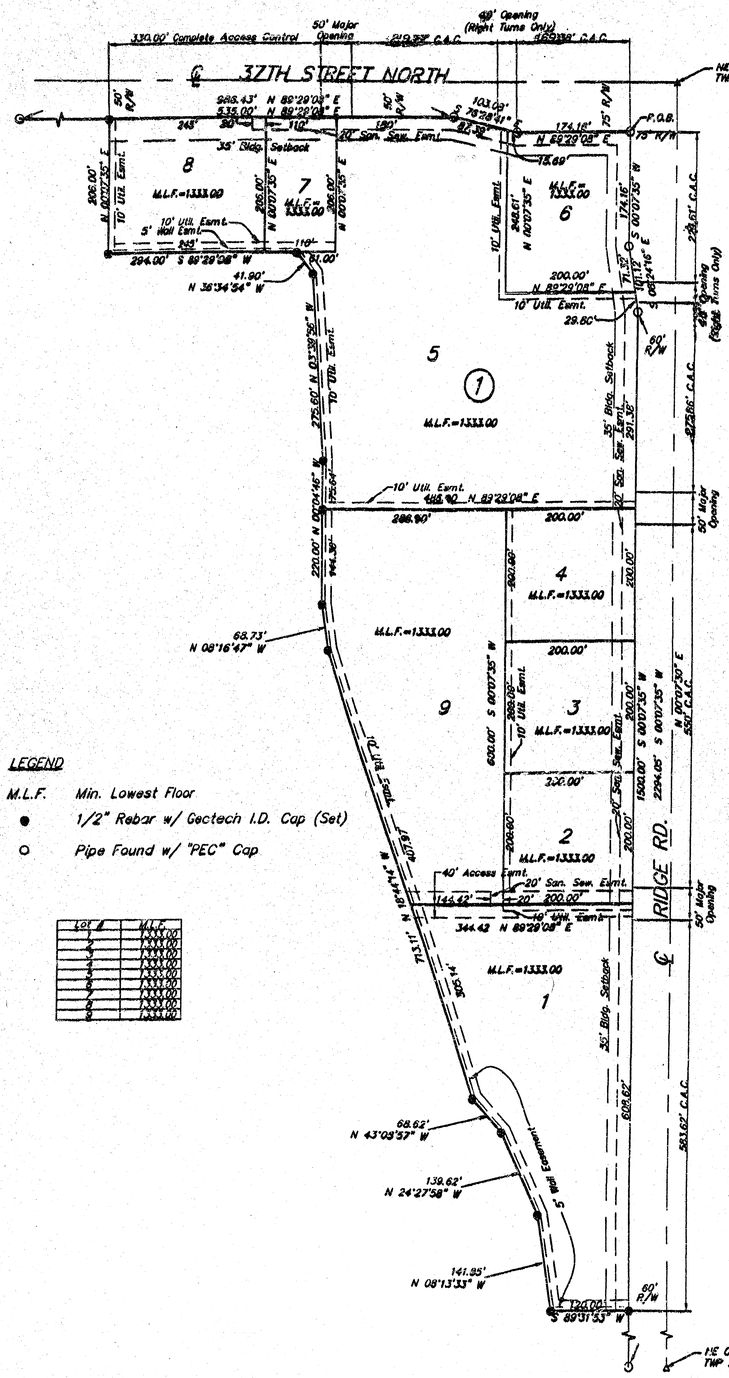
CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
1290 PPS (607861)	NA
DATE 4/04	SHEET 9 OF 10

C C11 J9

HOSKINSON 2ND ADDITION

SEDGWICK COUNTY, KANSAS



SCALE

100' 0 100' 200'

NOTES:

1. M.L.F. = Min. Lowest Floor
2. This plat is subject to the conditions of DP-242.

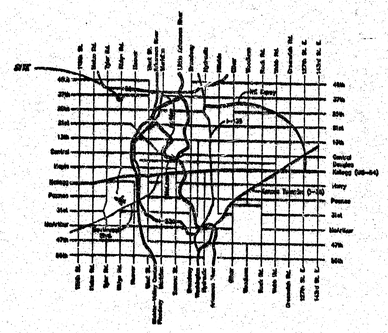
LEGEND

M.L.F. Min. Lowest Floor

● 1/2" Rebar w/ Gectech I.D. Cap (Set)

○ Pipe Found w/ "PEC" Cap

Lot #	M.L.F.
1	1333.00
2	1333.00
3	1333.00
4	1333.00
5	1333.00
6	1333.00
7	1333.00
8	1333.00
9	1333.00



LOCATION MAP

Benchmark:
A cut "□" on the southeast hubguard, south end of bridge, east side of Ridge Road. 33.5' east of east 1/4 Cor. Sec. 33
Elev.=1331.24

State of Kansas } ss
Sedgwick County }

I, the undersigned licensed land surveyor in aforesaid county and state, do hereby certify that, under the supervision of the undersigned, we have surveyed and platted "HOSKINSON 2ND ADDITION", Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as follows:

A tract of land in the East ½ of the Northeast ¼ of Section 33, Township 26 South, Range 1 West of the 6th P.M. being more particularly described as follows:
Beginning at a 1" iron pipe that is 75 feet west and 75 feet south of the Northeast corner of the Northeast ¼ of said Section 33;
Thence S 00°07'35" W (assumed) parallel with and 75 feet west of the east line of said Northeast ¼, for a distance of 174.16 feet;
Thence S 08°24'16" E for a distance of 101.12 feet;
Thence S 00°07'35" W parallel with and 50 feet west of the east line of said Northeast ¼ for a distance of 1502.00 feet;
Thence S 89°31'53" W for a distance of 120.00 feet;
Thence N 08°13'33" W for a distance of 141.85 feet;
Thence N 24°27'58" W for a distance of 139.62 feet;
Thence N 43°03'57" W for a distance of 68.62 feet;
Thence N 18°44'14" W for a distance of 713.11 feet;
Thence N 08°16'47" W for a distance of 68.73 feet;
Thence N 00°04'46" W for a distance of 220.00 feet;
Thence N 03°39'53" W for a distance of 275.60 feet;
Thence N 36°34'54" W for a distance of 41.90 feet;
Thence S 89°29'08" W for a distance of 294.00 feet;
Thence N 00°07'35" E for a distance of 206.00 feet;
Thence N 89°29'08" E parallel with and 60' south of the north line of said Northeast ¼ for a distance of 535.00 feet;
Thence S 78°28'41" E for a distance of 103.08 feet;
Thence N 89°28'08" E parallel with and 75 feet south of the north line of said Northeast ¼ for a distance of 174.16 feet to the Point of Beginning.

Steven L. Brightner, L.S. #752

State of Kansas } ss
Sedgwick County }

Know all men by these presents, that we, the undersigned, have caused the land described in the surveyor's certificate to be platted into Lots and a Block to be known as "HOSKINSON 2ND ADDITION", Sedgwick County, Kansas. The utility easements are hereby granted as indicated for constructing, maintaining, operating, and repairing public improvements. The wall easements are hereby granted as indicated for constructing and maintaining screening walls. The access controls are hereby dedicated to the appropriate governing body as shown hereon. Minimum building floor elevations have been established for this property.

A drainage plan has been developed for the plat. All drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.

Date 3-9-00

By Michael J. Boyd
Michael J. Boyd,
Member, Box Development, L.L.C.

State of Kansas } ss
Sedgwick County }

BE IT REMEMBERED, that on this 3rd day of MARCH, 2000, before me, the undersigned, a notary public in and for the County and State aforesaid, came Michael J. Boyd, Member, BOX DEVELOPMENT, L.L.C., a Kansas limited liability company, for and on behalf of said limited liability company, to me personally known to be the same person who executed this instrument and such person duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Douglas Klassen
Notary Public DOUGLAS KLASSEN

My appointment expires: 4-02-01

DOUGLAS KLASSEN
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 4-02-01

State of Kansas } ss
Sedgwick County }

This plat of "HOSKINSON 2ND ADDITION", Wichita, Sedgwick County, Kansas, has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 13th day of January, 2000.

Wichita-Sedgwick County Metropolitan Area Planning Commission.

Francis S. Garofalo, Chair

Marvin S. Kroat, Secretary

State of Kansas } ss
City of Wichita }

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 28 day of MARCH, 2000.

Bob Knight, Mayor

Pat Burnett, City Clerk

State of Kansas } ss
Sedgwick County }

The dedications shown on this plat, if any, are hereby accepted by the Board of County Commissioners, Sedgwick County, Kansas on April 10th 2000

Thomas G. Winters, Chairman

Attest: James Alford
James Alford,

State of Kansas } ss
Sedgwick County }

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this 30th day of March 2000, at 10:15 o'clock AM; and is duly recorded.

Bill Meek, Register of Deeds

Linda Kizzire, Deputy

Examined for record this 19th day of April, 2000

James Alford, County Clerk

Reviewed in accordance with K.S.A. 58-2005 on this 23rd day of March 2000

Tricia L. Robello
Tricia L. Robello, LS #1246
Deputy County Surveyor
Sedgwick County Kansas

99102/PLAT

AUSTIN MILLER P.A.
ENGINEERING SERVICES
254 S. Laura; Suite 210 Wichita, KS 67211
316/262-1281 fax: 316/262-9773

1880215

HOSKINSON SECOND ADDITION

18 14 03 08