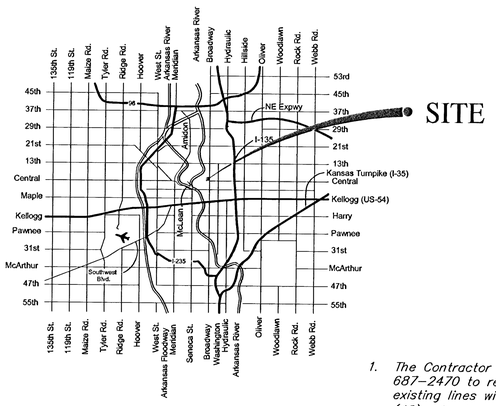
MAIN B, SANITARY SEWER NO. 1 RELIEF LINE IN PINE BETWEEN MARKET & BROADWAY

Project No.
468-76-245-83347

OCA No.
620-329

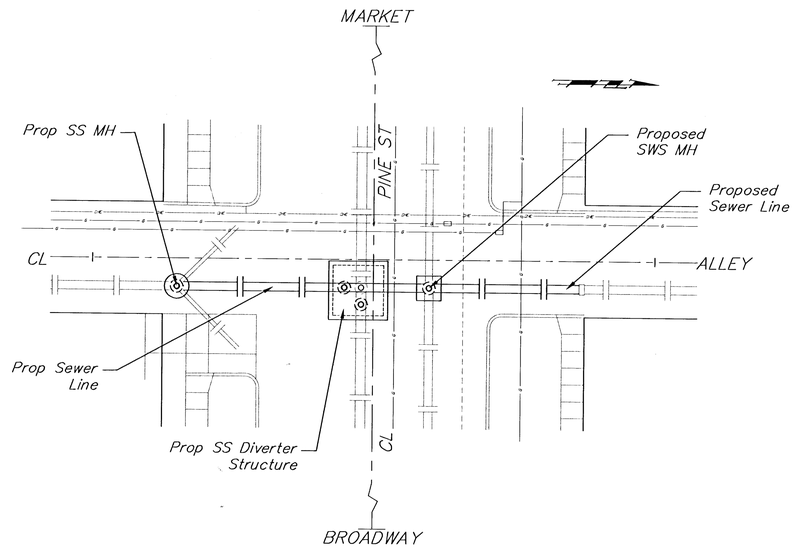
VICINITY MAP



CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

JANUARY 2002



GENERAL NOTES

1. The Contractor will be required to contact Kansas One Call at 687-2470 to request the local utility companies to mark any existing lines with in the project limits a minimum of forty-eight (48) prior to any excavation or working.
2. Utility service lines, poles, valve boxes, gas meters, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for thier 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 available at the time of design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with the proposed construction.
3. The Contractor shall give all property owners and/or tenants of a developed propertry abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.
4. The Contractor shall contain the operations to permit traffic through and across construction at exisiting roadways at all times. The Contractor shall erect warning signs, flashing lights, and barricades in compliance with the Manual on Uniform Traffic Control Devices to ensure safety as directed in the general conditions. The length of trenches that will be allowed to remain open overnight and weekends shall be left to the discretion of the Engineer.
5. All lawn/turf areas disturbed by construction shall be restored with the same grass/sod as existing. Restoration of disturbed areas shall include, but not limited to, top soil preparation, seeding, mulch, and/or reseeding. All seeding/sodding work shall be in accordance with City Standard specifications and the City Administrative Regulations No. AR78 which governs cleanup and restoration or replacement following construction. All costs for this work shall be INCIDENTAL to "Site Clearing & Restoration."
6. All Construction and Materials to comply with City of Wichita Specifications and Standards.

INDEX

Title Sheet	1
Sanitary Sewer Plan/Profile Sheet	2
Ring and Cover Detail	3
Standard Manhole Detail	4
Standard Shallow Manhole	5
Diversion Structure Details	6-7

AS BUILT
AUG 21, 02
RDL

LIST OF UTILITY COMPANIES

Contractor will be required to provide a minimum advance notice of forty-eight (48) hours to utility companies prior to excavation or working adjacent to utilities.

TYPE	OWNER	PHONE #	CONTACT
Locator Service	Kansas One-Call	687-2470	
Electric	Kansas Gas & Electric Company	261-6434	Randy Truit
Gas	Peoples Natural Gas	942-7244	Calvin Briggs
Gas	Kansas Gas Service	832-3101	Charlene Lawless
Telephone	Southwestern Bell Telephone Company	268-2245	Bob Ally
Water	City of Wichita Water Department	268-4555	Bill Perkins
Sewer	City of Wichita Sewer Maintenance	268-4025	Calvin Fugit

GERALD F. BAUGHMAN JR. LICENSED 15076 1/11/02 KANSAS PROFESSIONAL ENGINEER

Gerald F. Baughman Jr.

F:\ENG\PineStSSRelief\TITLE

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

BENCHMARKS

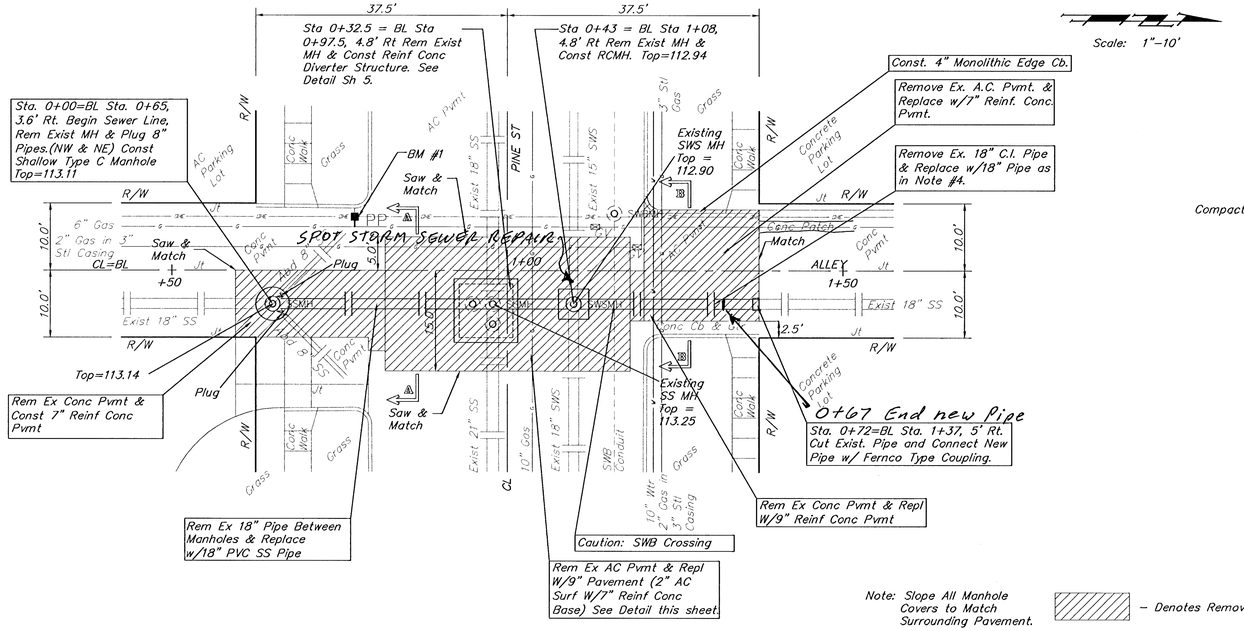
BM #1 – Spike in North Face PP on West Side of alley at the South side of Pine Street. Elev=113.09

BM #2 – "□" Cut, top of Curb @ CL Inlets, North Side of Murdock, 25' East of CL Alley Between Market & Broadway. Elev=113.88

BM #3 – COW Bench Mark on Light Pole at the NorthEast Corner of the Intersection of Broadway & Central. Elev=112.78

NOTE

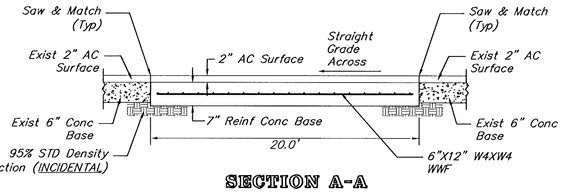
1. All Earthwork Including Excavation, Compacted Fill, Loose Fill, Borrow and Grading Shall be Considered as INCIDENTAL to the Project.
2. All New Manhole Lids to be Tilted to Match Surrounding Pavement Slopes.
3. Bypass Sewage Pumping as Required to be INCIDENTAL to Project.
4. Ductile Iron Pipe used on this Project Shall Have a Polybond Plus Lining and external High Solids Epoxy Primer Coating as Mfg. by the American Ductile Iron Pipe Co.. Centrifugally Cast Fiberglass Pipe as Mfg. by the Hobas Co. may be Substituted for the Ductile Iron Pipe at the Contractor's Option.



Scale: 1"=10'

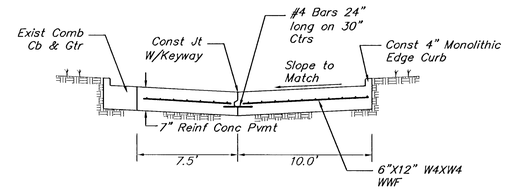
Note: Slope All Manhole Covers to Match Surrounding Pavement.

▨ – Denotes Removal



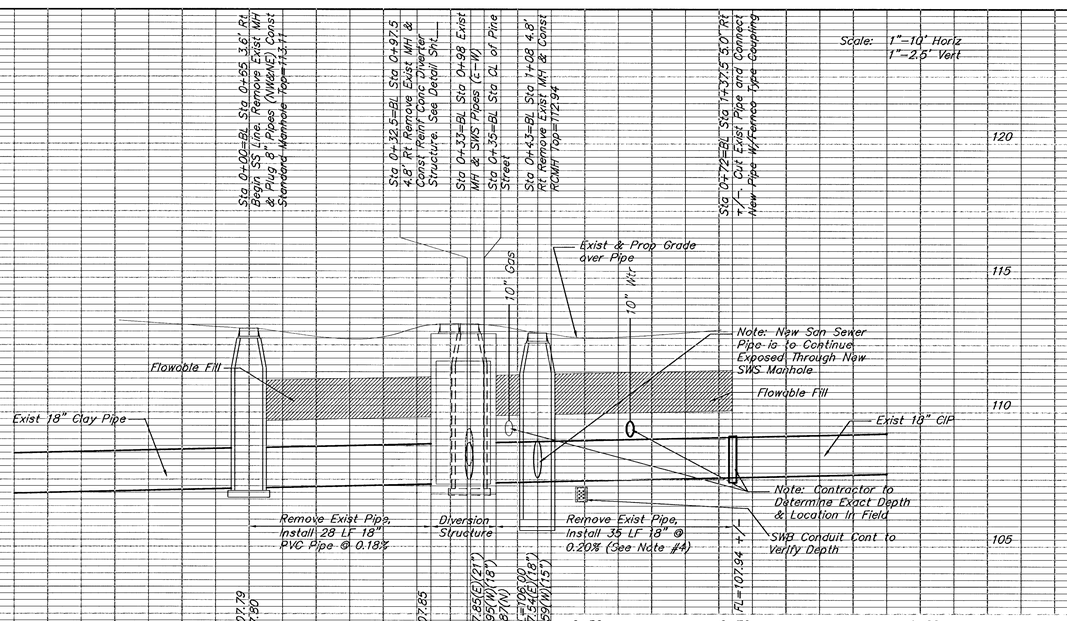
SECTION A-A

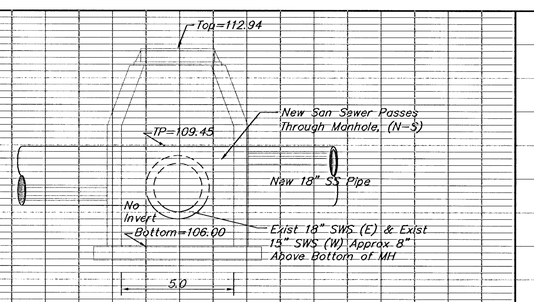
Not to Scale



SECTION B-B

Not to Scale





SECTION THROUGH NEW STORMSEWER MANHOLE

Scale: 1"=5' Horiz 1"=2.5' Vert

PROJECT NUMBER	SHEET NAME	ENGINEERING DIRECTORY
472 76 245 83347	PPPineSt	F:\\ENG\PineStSSRelief

DESIGN	DRAWN	APPROVED	DATE	SCALE	BAUGHMAN NO
KK/JFB	ATD	JFB	JAN 02		01 10 E164

DEPARTMENT OF WATER & SEWER

MAIN B, SANITARY SEWER No 1 RELIEF LINE IN PINE BETWEEN MARKET AND BROADWAY

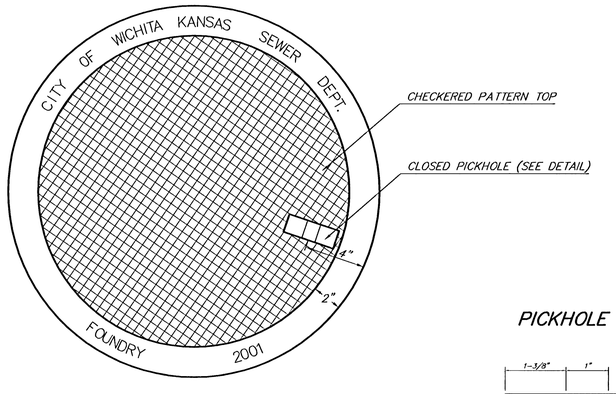
BAUGHMAN COMPANY, P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

SHEET 2 OF 7

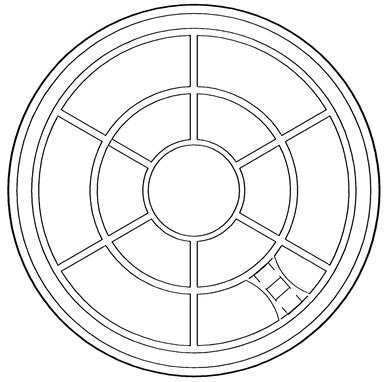
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

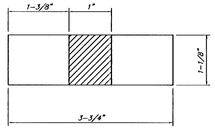


TOP VIEW



BOTTOM VIEW

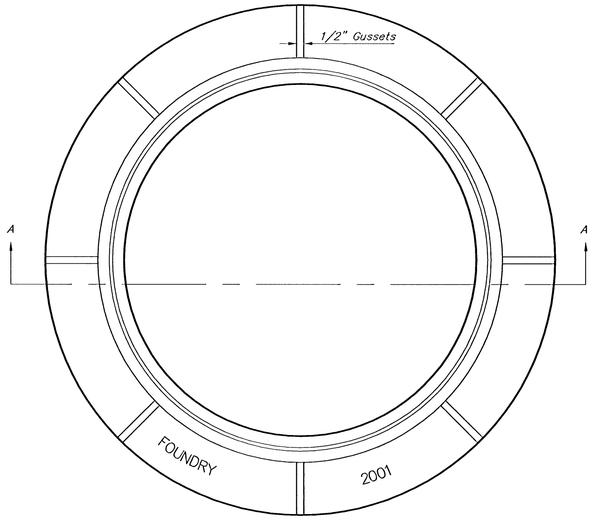
PICKHOLE DETAIL



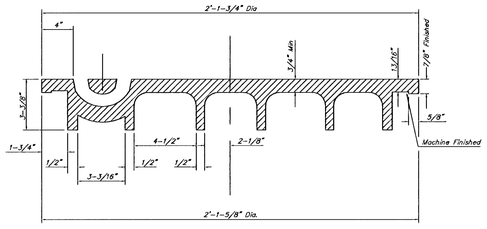
TOP VIEW

SECTION VIEW

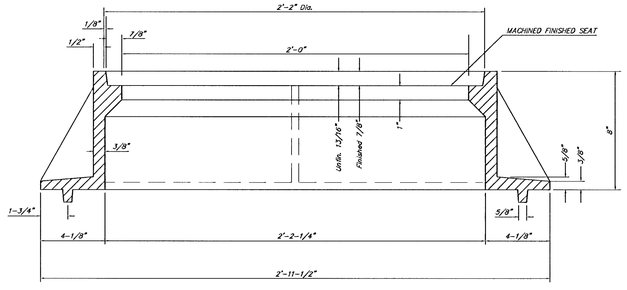
MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW



SECTION 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.

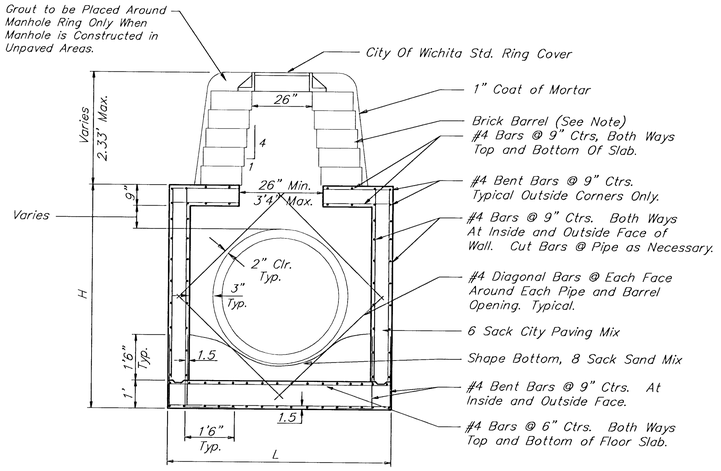
PROJECT NUMBER	SHEET NAME	ENGINEERING DIRECTORY
472 - 83347	mhring	F:\\PineSt\SS\Relief\mhring

DESIGN	DRAWN	APPROVED	DATE	SCALE	BAUGHMAN NO
JFB/KK	TCA	JFB	JAN 02	NONE	01 10 E164

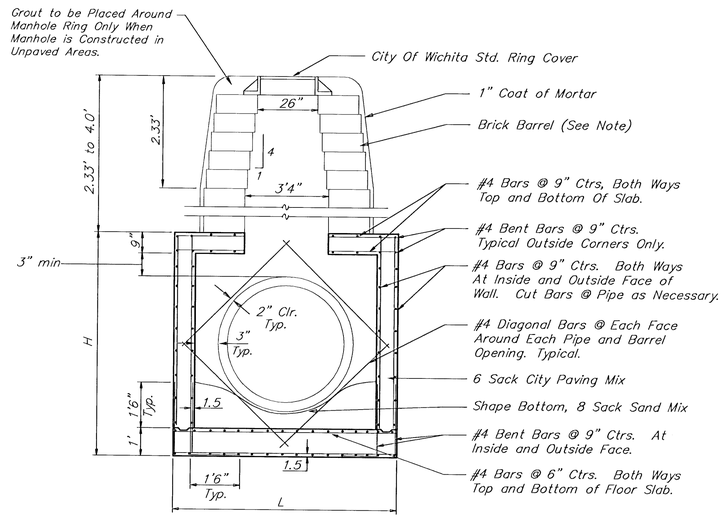
CITY OF WICHITA, KANSAS
MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY

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

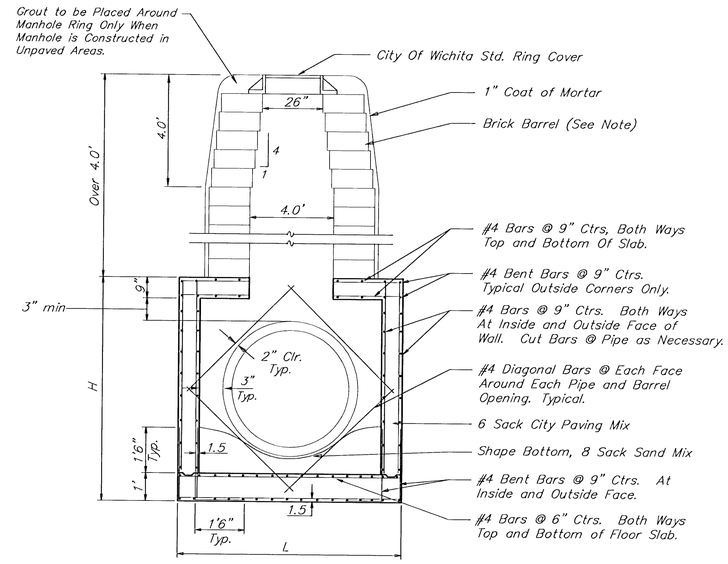
SHEET 3 OF 7



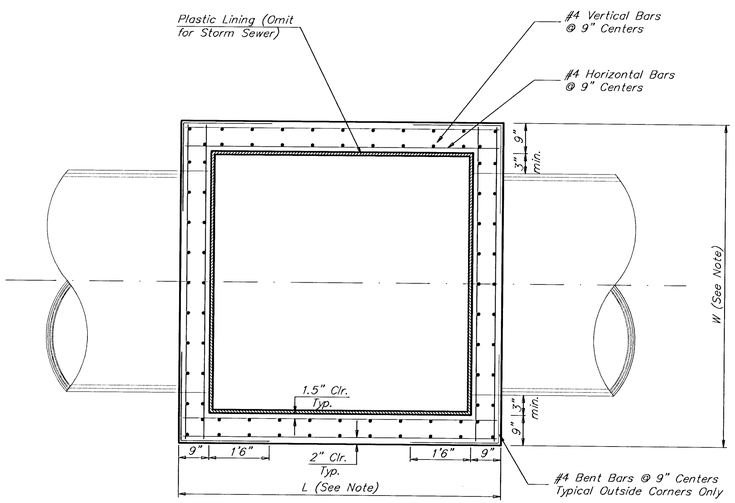
REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'



TOP VIEW

Notes:

Brick barrels less than 16' deep shall have 8" walls except when located within public street or alley pavement; then the wall shall be 12". Brick barrels more than 16' deep shall have 12" walls. The "L" and "W" dimensions shall be a minimum of 5'6" for brick barrels with 8" walls and 6'2" for brick barrels with 12" walls when the brick barrels are over 4' in height. Completed manhole shall be without leaks and watertight.

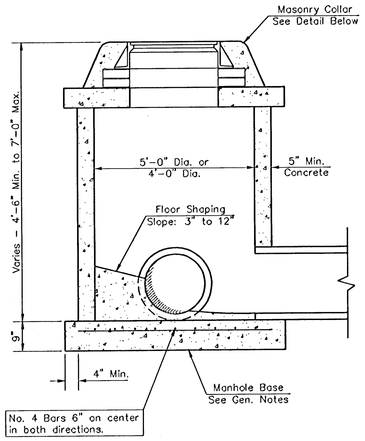
Concrete wall thicknesses shown represents manhole type located within traffic bearing areas. Manhole wall, base, & top dimensions may be reduced when manholes are not subject to vehicle loads. Contractor shall be required to submit shop drawings to the Engineer for approval.

PROJECT NUMBER	SHEET NAME	ENGINEERING DIRECTORY
472-76-245-83347	RCMH	F:\Eng\PineStSSRelief\

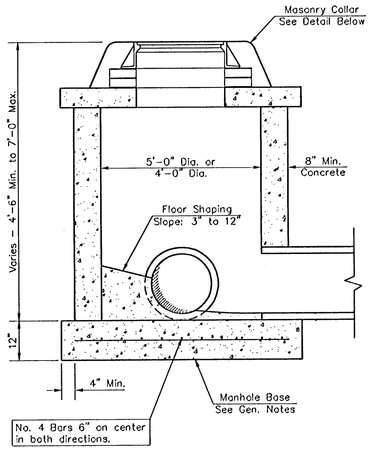
DESIGN	DRAWN	APPROVED	DATE	SCALE	BAUGHMAN NO
C.O.W.	STAFF		JAN 02	None	01 10 E164

DEPARTMENT OF WATER & SEWER
REINFORCED CONCRETE MANHOLE

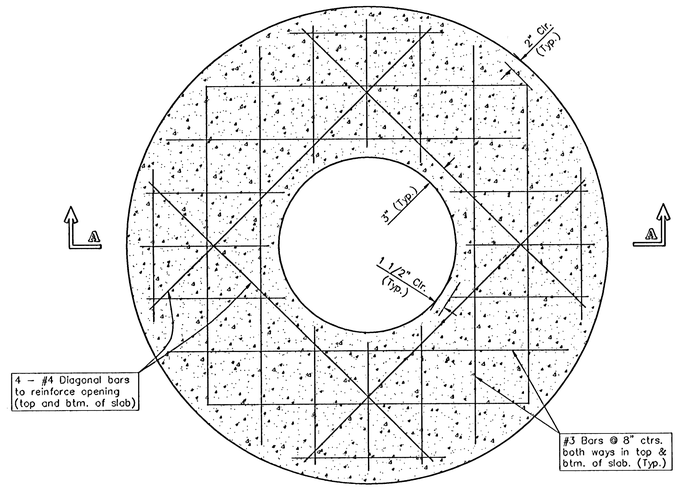
BAUGHMAN COMPANY, P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211



SHALLOW TYPE "P" MANHOLE



SHALLOW TYPE "C" MANHOLE



PLAN

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.

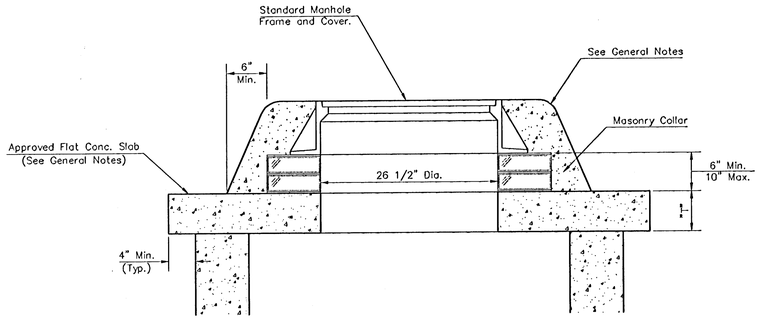
4. Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain 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.

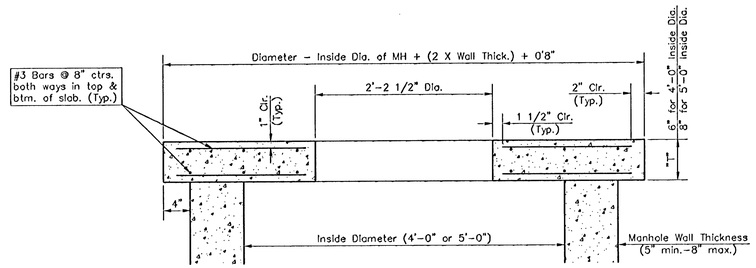
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

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.



MASONRY COLLAR DETAIL



SECTION A–A

FLAT CONCRETE SLAB DETAILS

CITY OF WICHITA, KANSAS

STD. SHALLOW MANHOLES

TYPE 'P' AND TYPE 'C'

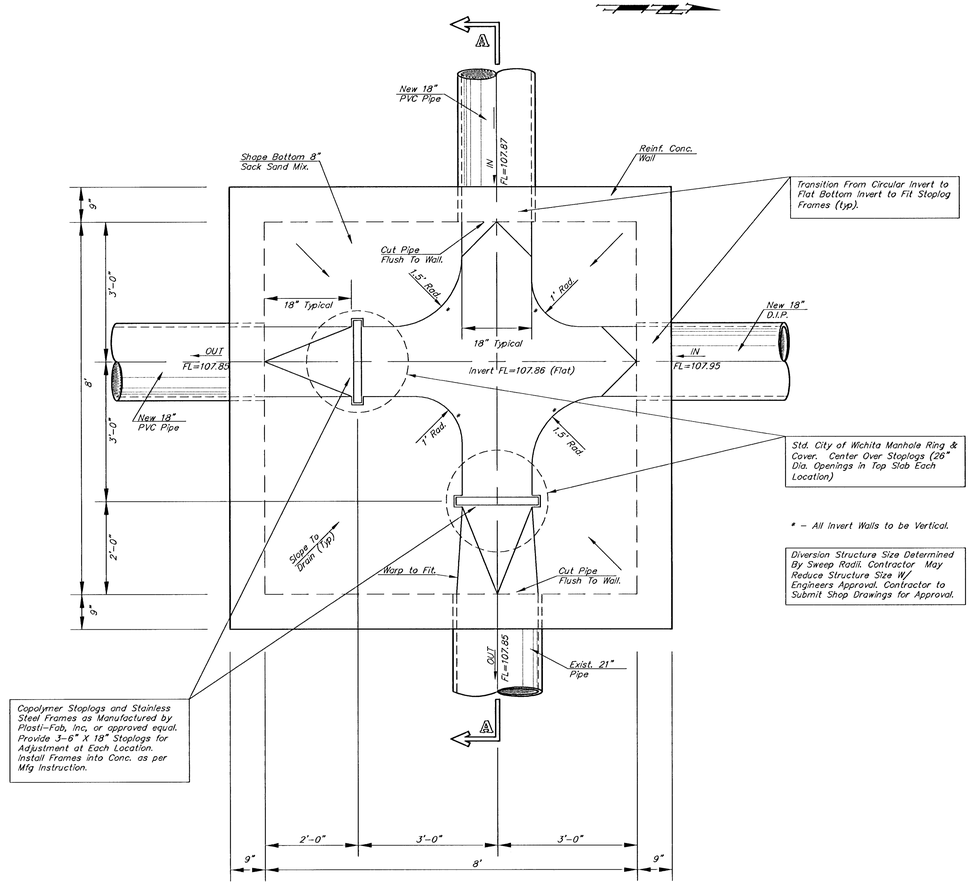
BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

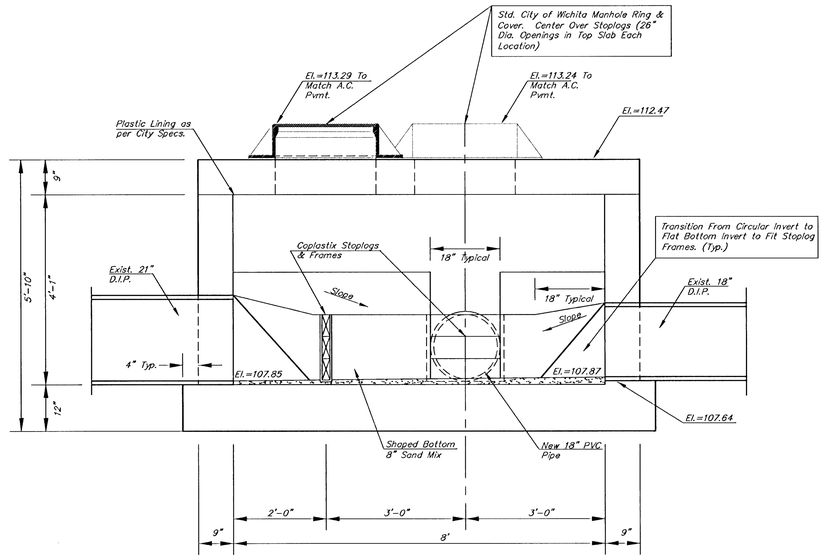
316-262-7271 • 313 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER				SHEET
468-83347				5 OF 7
DESIGN: STAFF	DRAWN: STAFF	APPROVED: STAFF	DATE	SCALE: NONE

DETAIL (SHLMANP2.DWG)



DIVERSION STRUCTURE PLAN LAYOUT



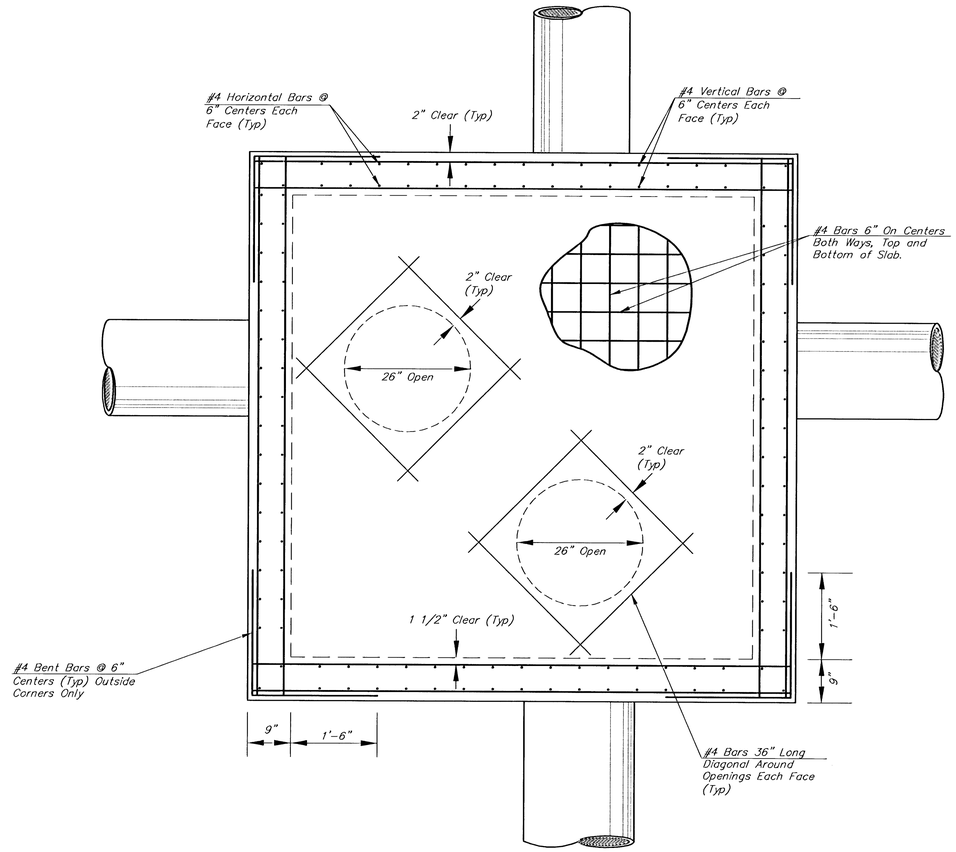
SECTION A-A

PROJECT NUMBER			SHEET NAME	ENGINEERING DIRECTORY	
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DESIGN	DRAWN	APPROVED	DATE	SCALE	BAUGHMAN NO
KK/JFB	ATD	KK/JFB	JAN 02	NONE	01 10 E146

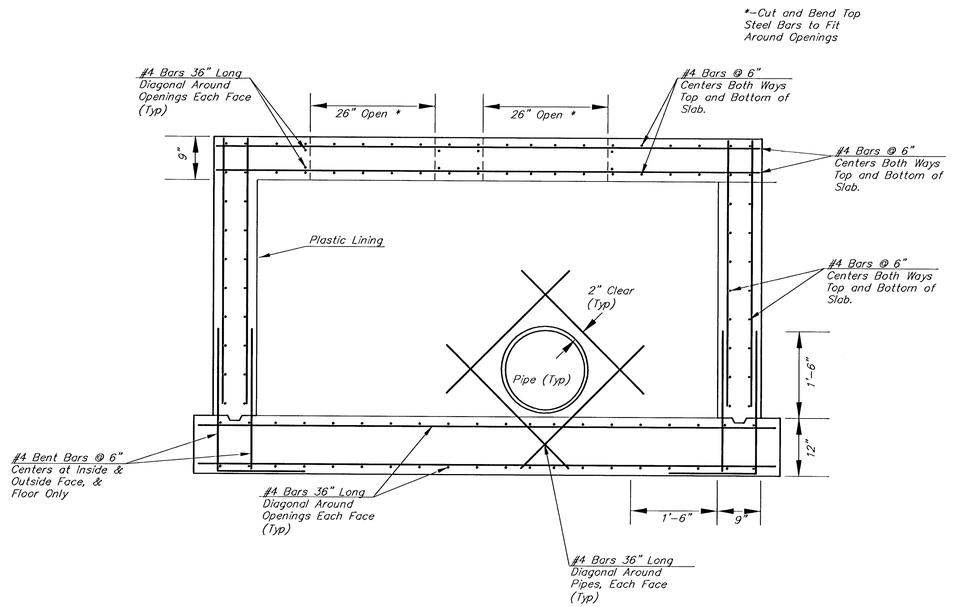
DEPARTMENT OF WATER & SEWER
MAIN B, SANITARY SEWER No 1 RELIEF LINE IN PINE BETWEEN MARKET AND BROADWAY

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

SHEET 6 OF 7



STEEL PATTERN – TOP VIEW



STEEL PATTERN – SIDE VIEW

PROJECT NUMBER	SHEET NAME	ENGINEERING DIRECTORY
472 76 245 83347	Divstr2	F:\\Eng\PineStSSRelief

DESIGN	DRAWN	APPROVED	DATE	SCALE	BAUGHMAN NO
KK/JFB	ATD	KK/JFB	JAN 02	NONE	01 10 E146

DEPARTMENT OF WATER & SEWER

MAIN B, SANITARY SEWER No 1 RELIEF LINE IN PINE BETWEEN MARKET AND BROADWAY

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ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

SHEET 7 OF 7

58-05-05-01