

PRIVATE STORM WATER SEWER TO SERVE THE ORCHARD AT SHADYBROOK FARM

Private Project Number

1079 PPS (607861)

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

DECEMBER 2000

BENCHMARK:

B.M.#1 "□" Top of Curb, West end of Curb Return, SW Corner of Sandpiper and Swallow, Shadybrook Farm Addition, Elev. = 1313.20 M.S.L.

B.M.#2 "□" Top of Curb, West end of Curb Return, SW Corner of Sagebrush and Swallow, Shadybrook Farm Addition, Elev. = 1316.12 M.S.L.

LEGAL DESCRIPTION:

The Orchard at Shadybrook Farm, City of Wichita Sedgwick County, Kansas.

INDEX:

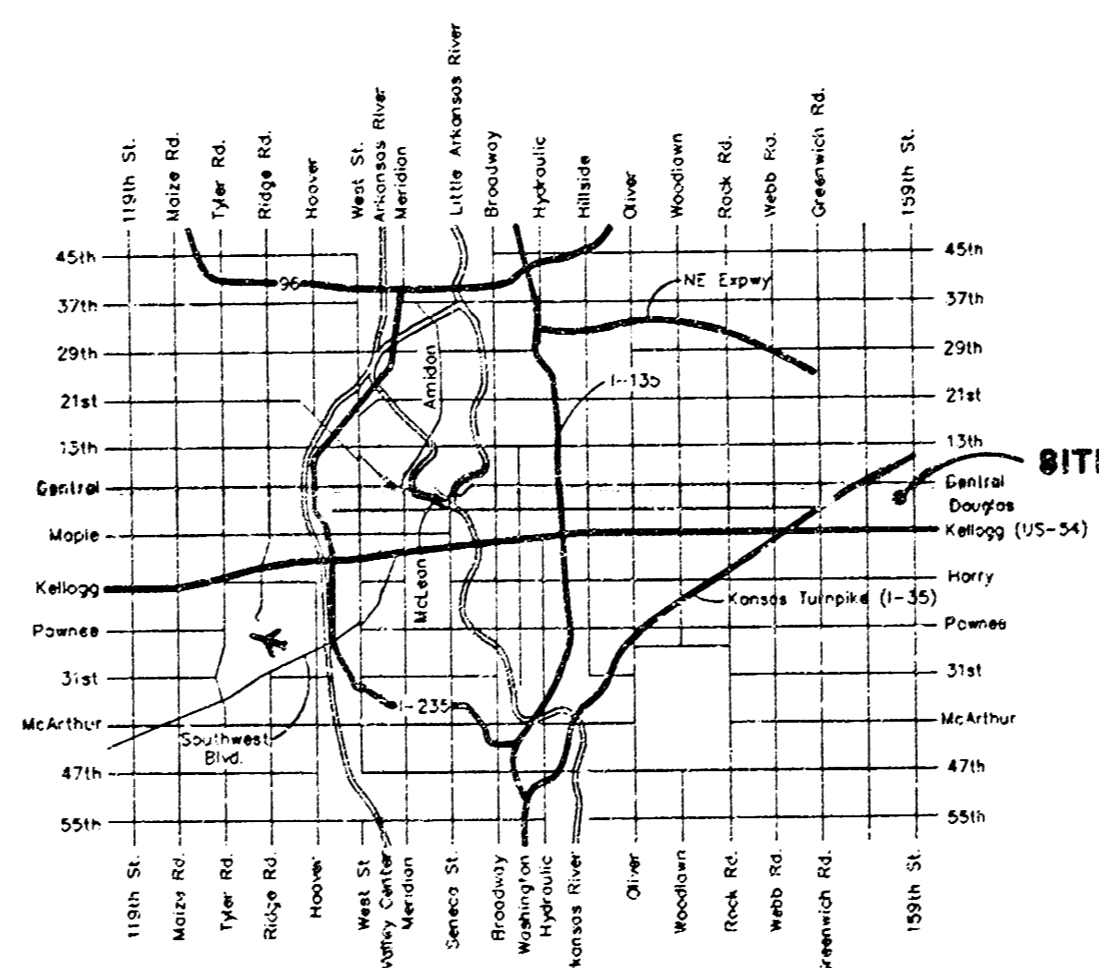
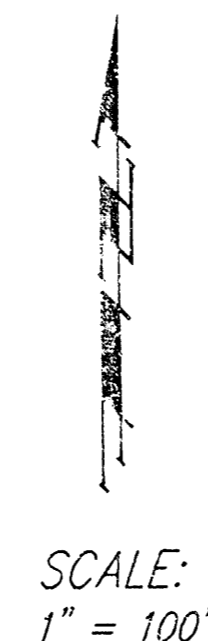
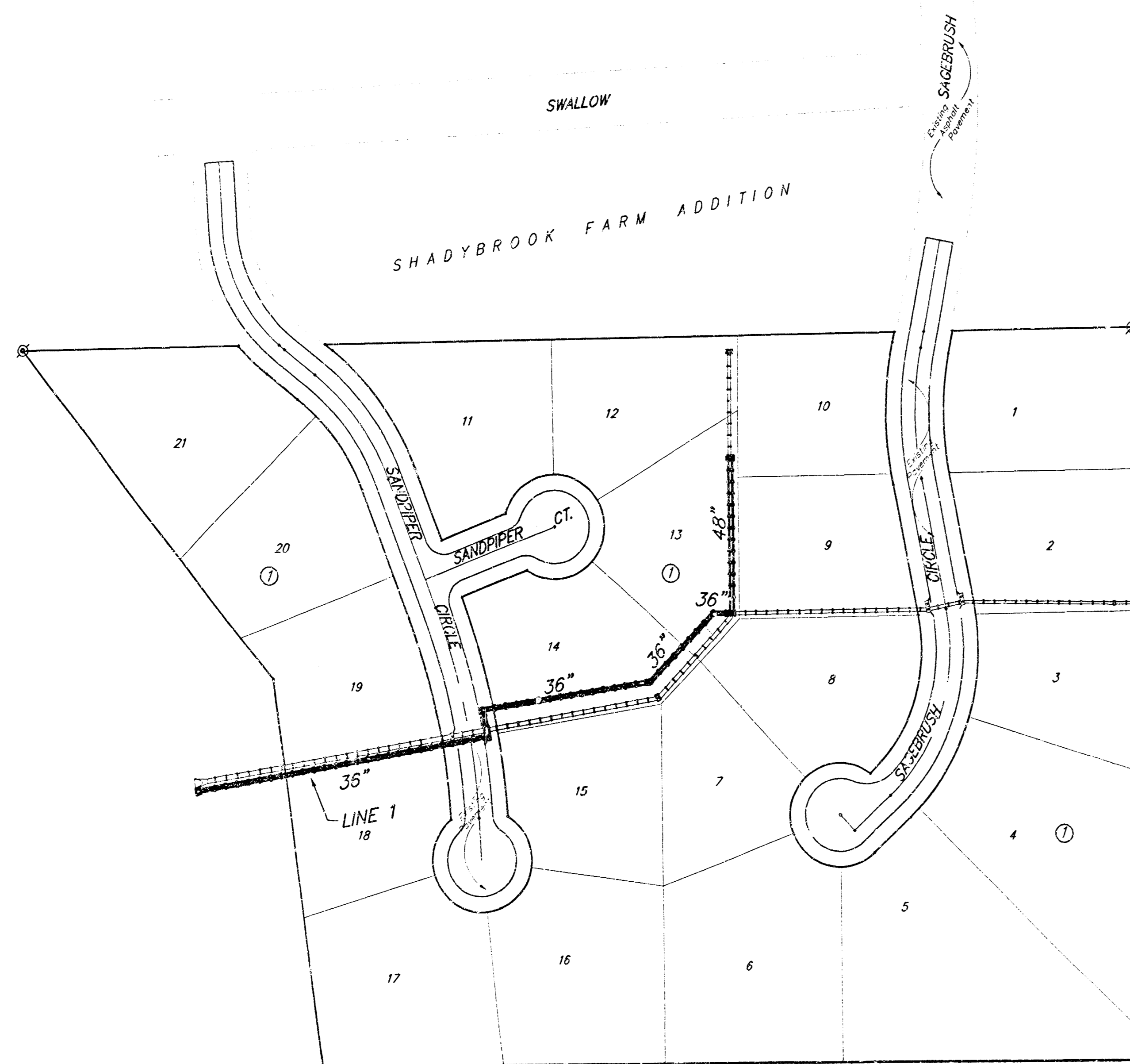
Title Sheet	1
Plan / Profile Sheets	2 - 4
Inlet Structure Details	5-6
Manhole Detail	7
Special Yard Inlet	8
Copy of Plot	9

GENERAL NOTES:

- All Elevations shown are USGS Datum.
- Contractor will be required to provide notice to utility companies at least 72 hours prior to any excavation, as follows:

Kansas One-Call	687-2470
Cox Communications	262-4270
K.P.L. Gas Service Company	263-2061
Kansas Gas & Electric Company	383-8650
Southwestern Bell Telephone Company	383-8600
City of Wichita Water Department	1-571-2611
Sedgwick County Sewer Maintenance	268-4908
	383-7901

The Contractor must notify the following in case of an emergency:
- The buried utilities as shown on the plans are approximate locations only. It should be noted that other buried lines and cables may exist which are not shown on these plans. The Contractor shall exercise extreme caution during trenching operations to avoid damaging these lines. Any lines damaged shall be replaced or repaired immediately as directed by the Engineer at the Contractor's expense.
- Rubble from the removal of miscellaneous structures including trees and brush 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.
- 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.
- The Contractor shall give all property owners and/or tenants of developed property existing the construction of this project a minimum of 5 days advance notice prior to start of construction in the vicinity of the affected property.
- Properties within the project limits may have underground sprinkler systems which conflict with new construction. Contractor will be required to remove & replace such improvements should they not be removed by their owner at the time of construction of the project. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place.
- 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.



VICINITY MAP

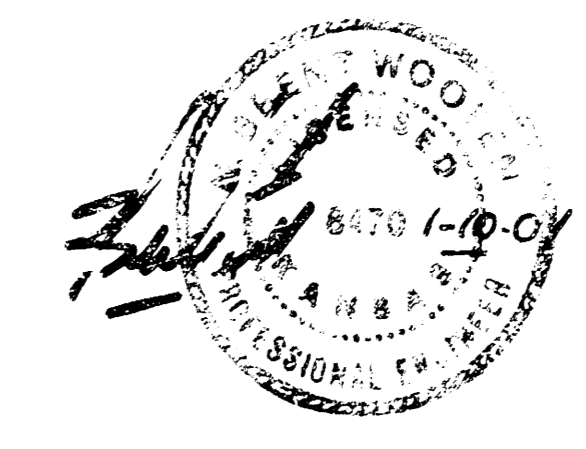
As Built 2/02 KK

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Storm Sewers VRH 3/14/01

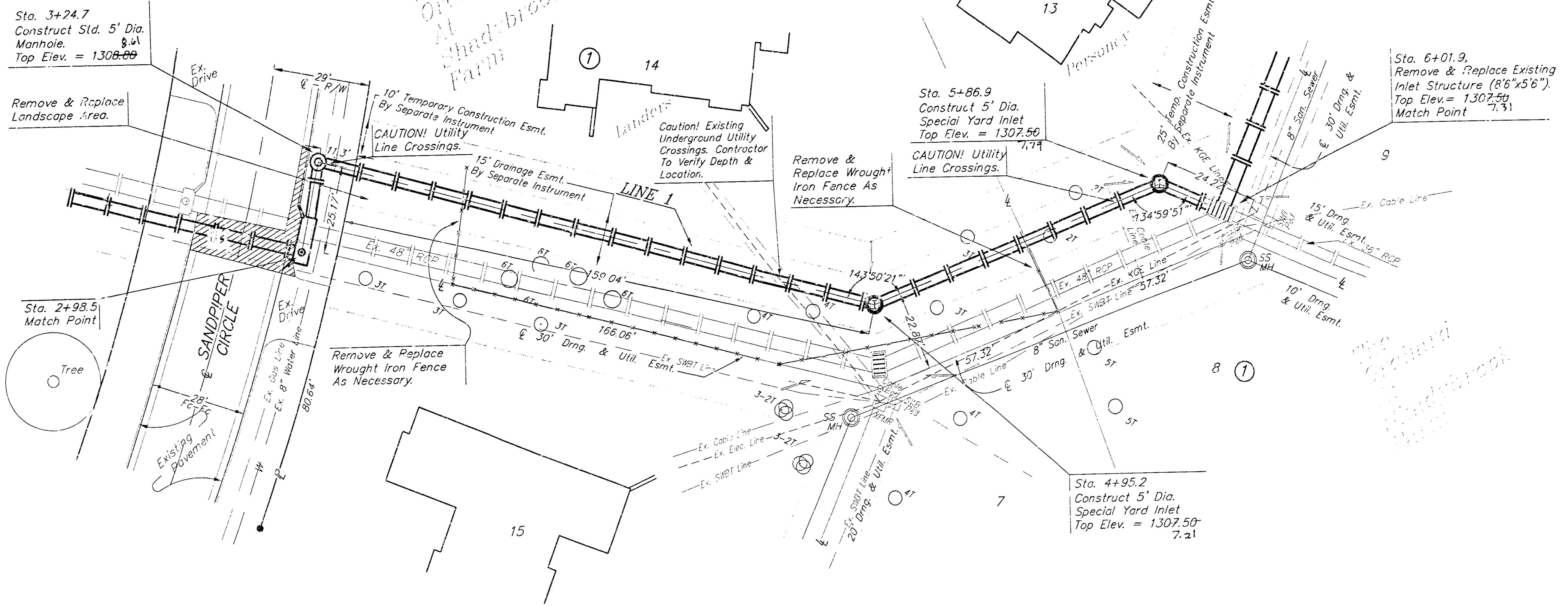
NOTE TO CONTRACTORS

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).

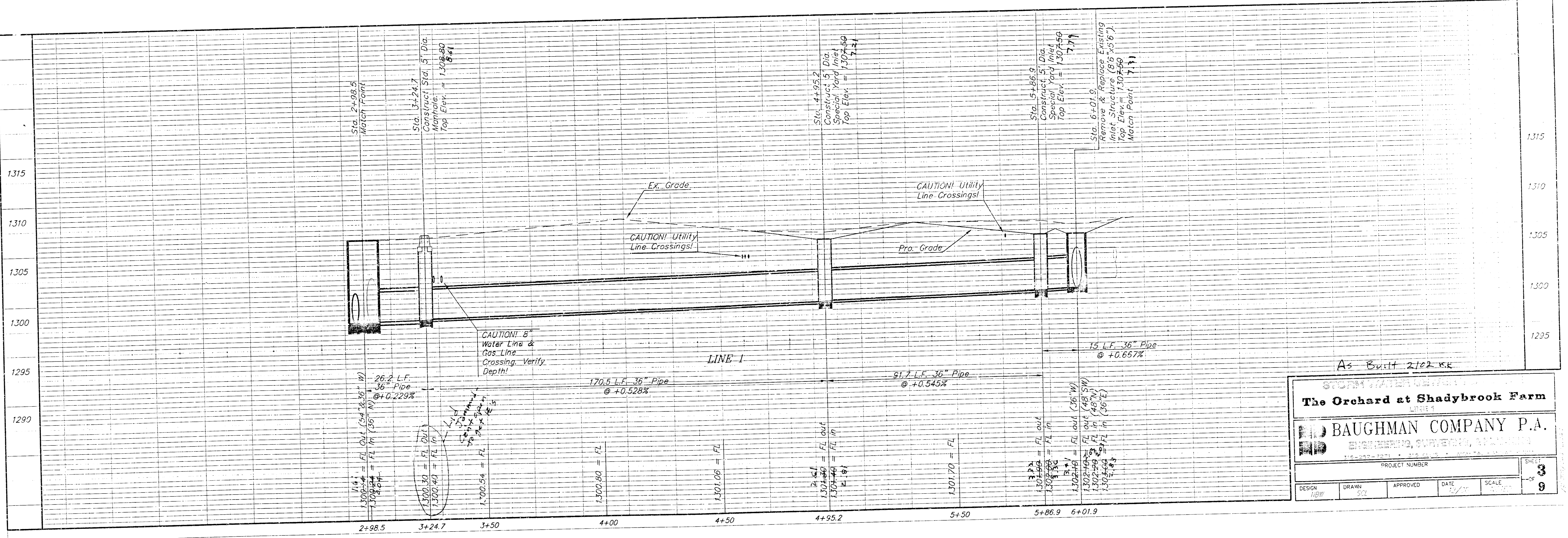


BAUGHMAN COMPANY P.A.
ENGINEERS, ARCHITECTS, PLANNERS
1100 S. WOODWARD
WICHITA, KANSAS 67202
TEL: 352-2271 • FAX: 352-2271 • WWW.BAUGHMAN.COM

BENCHMARK:
 B.M.#1 "□" Top of Curb, West end of Curb Return, SW Corner of Sandpiper and Swallow, Shadybrook Farm Addition, Elev. = 1313.20 M.S.L.
 B.M.#2 "□" Top of Curb, West end of Curb Return, SW Corner of Sagebrush and Swallow, Shadybrook Farm Addition, Elev. = 1316.12 M.S.L.



SCALE:
 1" = 20' HORIZONTAL
 1" = 5' VERTICAL
 • = 100'



As Built 2/02 KK

STORM WATER MANAGEMENT
The Orchard at Shadybrook Farm
 LINE 1
BAUGHMAN COMPANY P.A.
 116-250-3071 • 3700 W. 12th St., Suite 100, Overland Park, KS 66204

PROJECT NUMBER: _____

DESIGN: [Signature]	DRAWN: [Signature]	APPROVED: [Signature]	DATE: [Date]	SCALE: [Scale]
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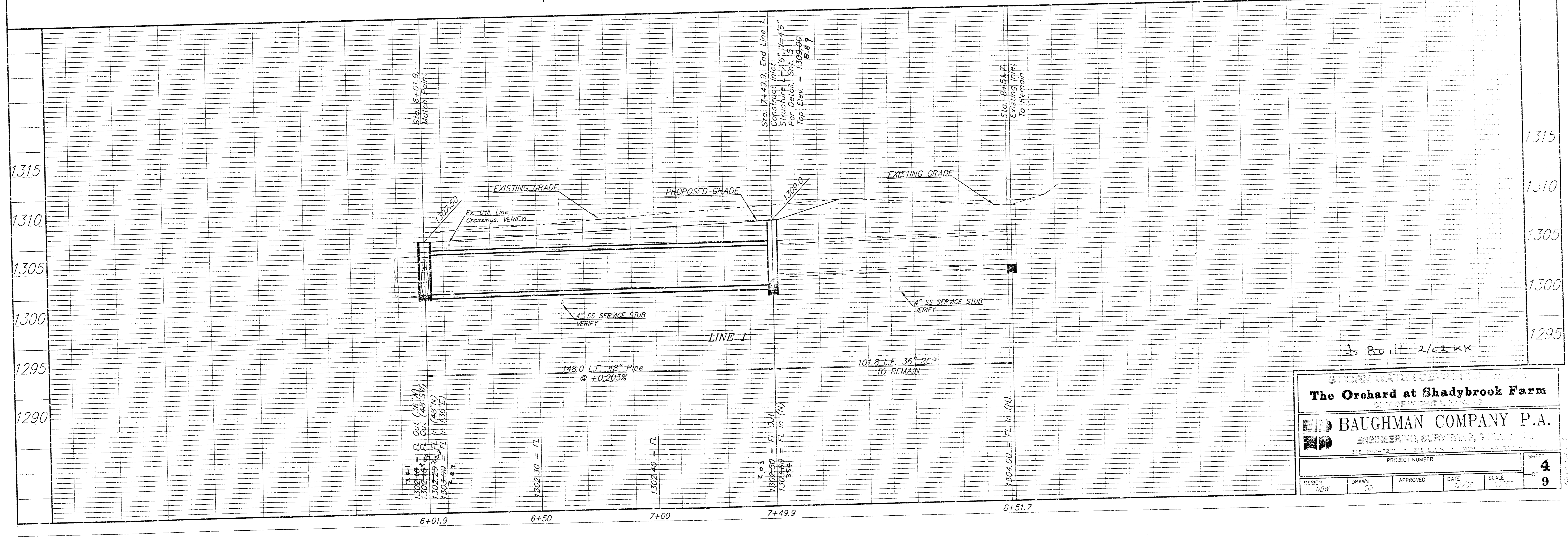
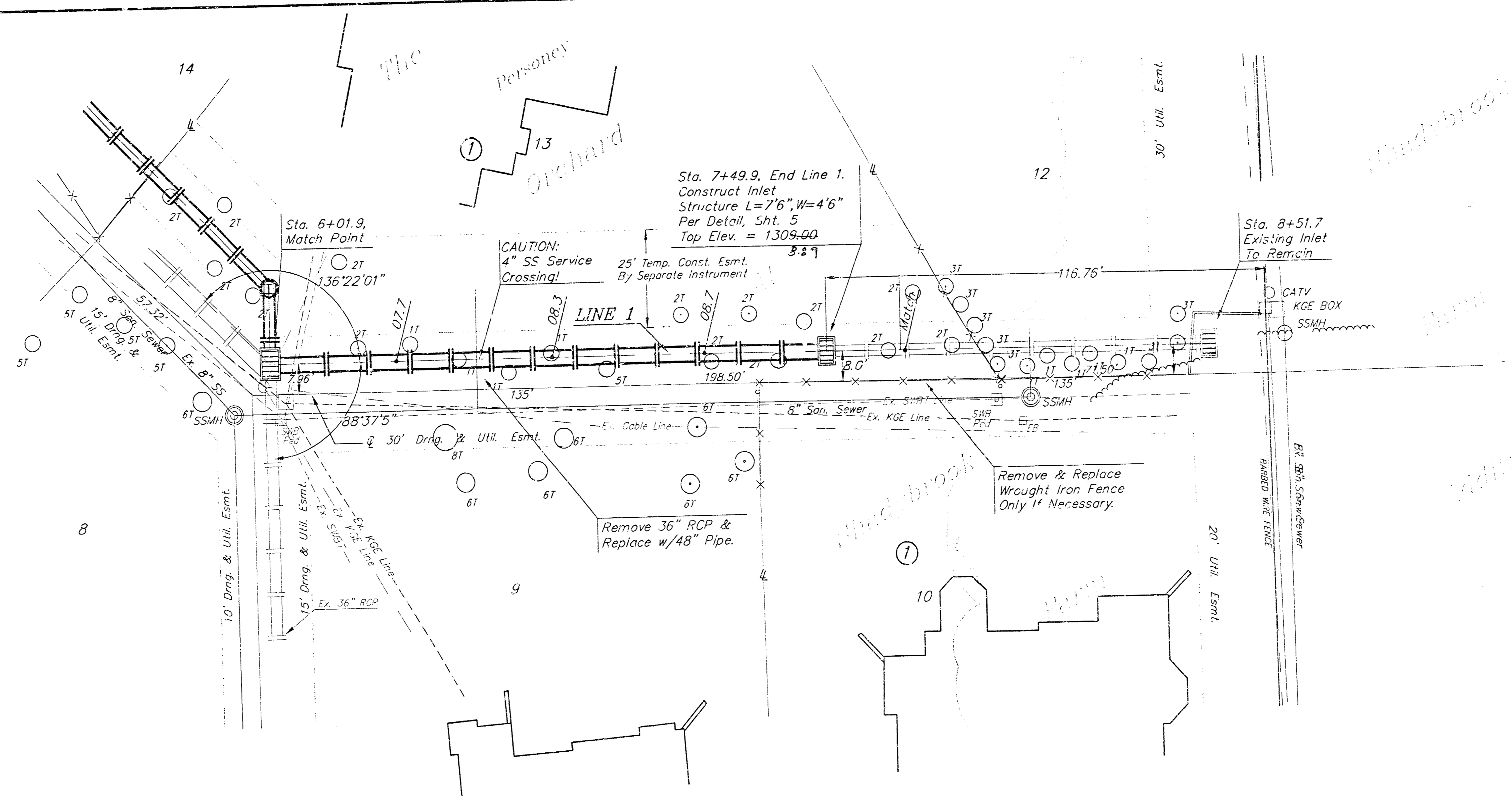
SHEET 3 OF 9

BENCHMARK:

B.M.#1 "□" Top of Curb, West end of Curb Return, SW Corner of Sandpiper and Swallow, Shadybrook Farm Addition, Elev. = 1313.20 M.S.L.

B.M.#2 "□" Top of Curb, West end of Curb Return, SW Corner of Sagebrush and Swallow, Shadybrook Farm Addition, Elev. = 1316.12 M.S.L.

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



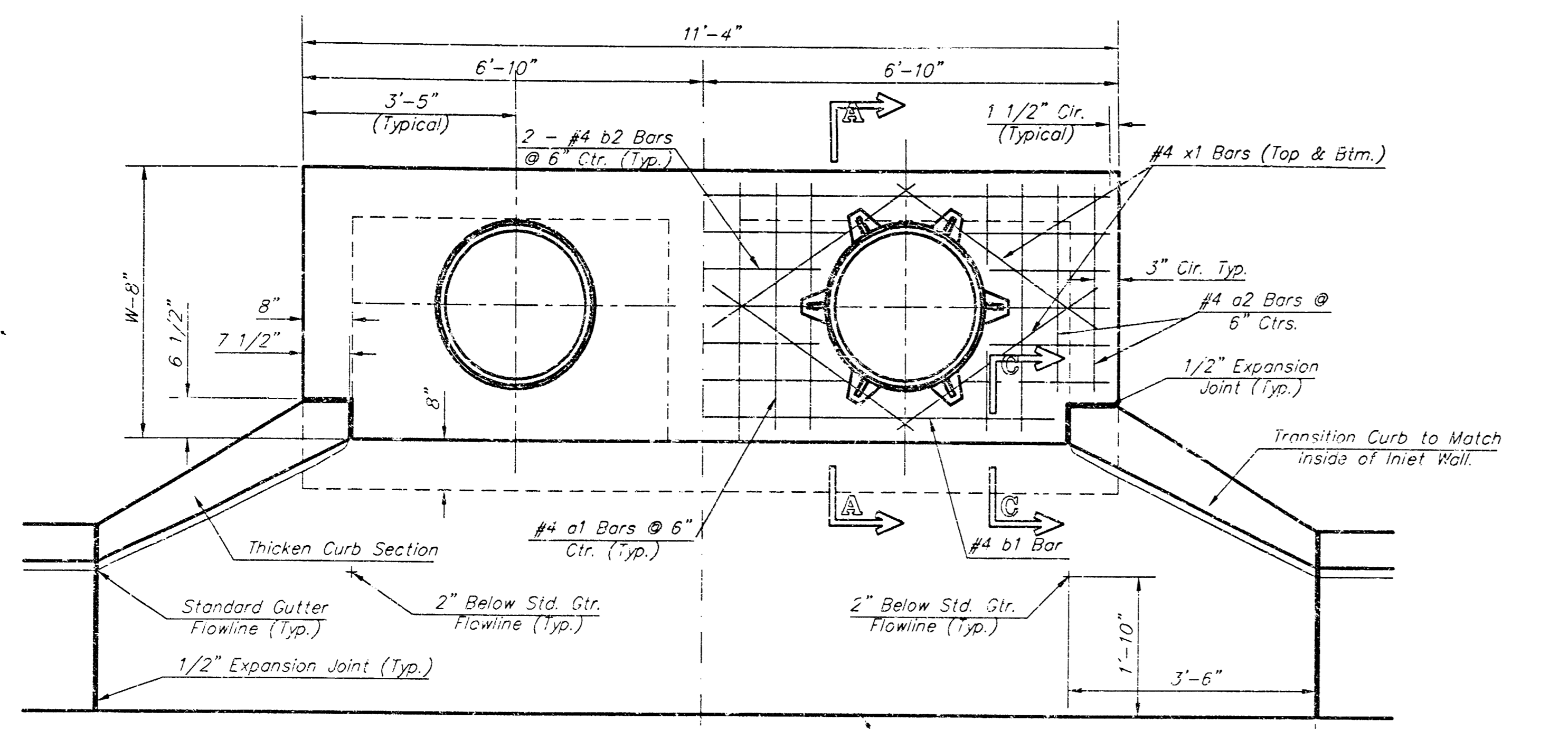
STORM WATER DESIGN FOR
The Orchard at Shadybrook Farm
 CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & ARCHITECTURE

PROJECT NUMBER: _____ SHEET: **4**
 OF: **9**

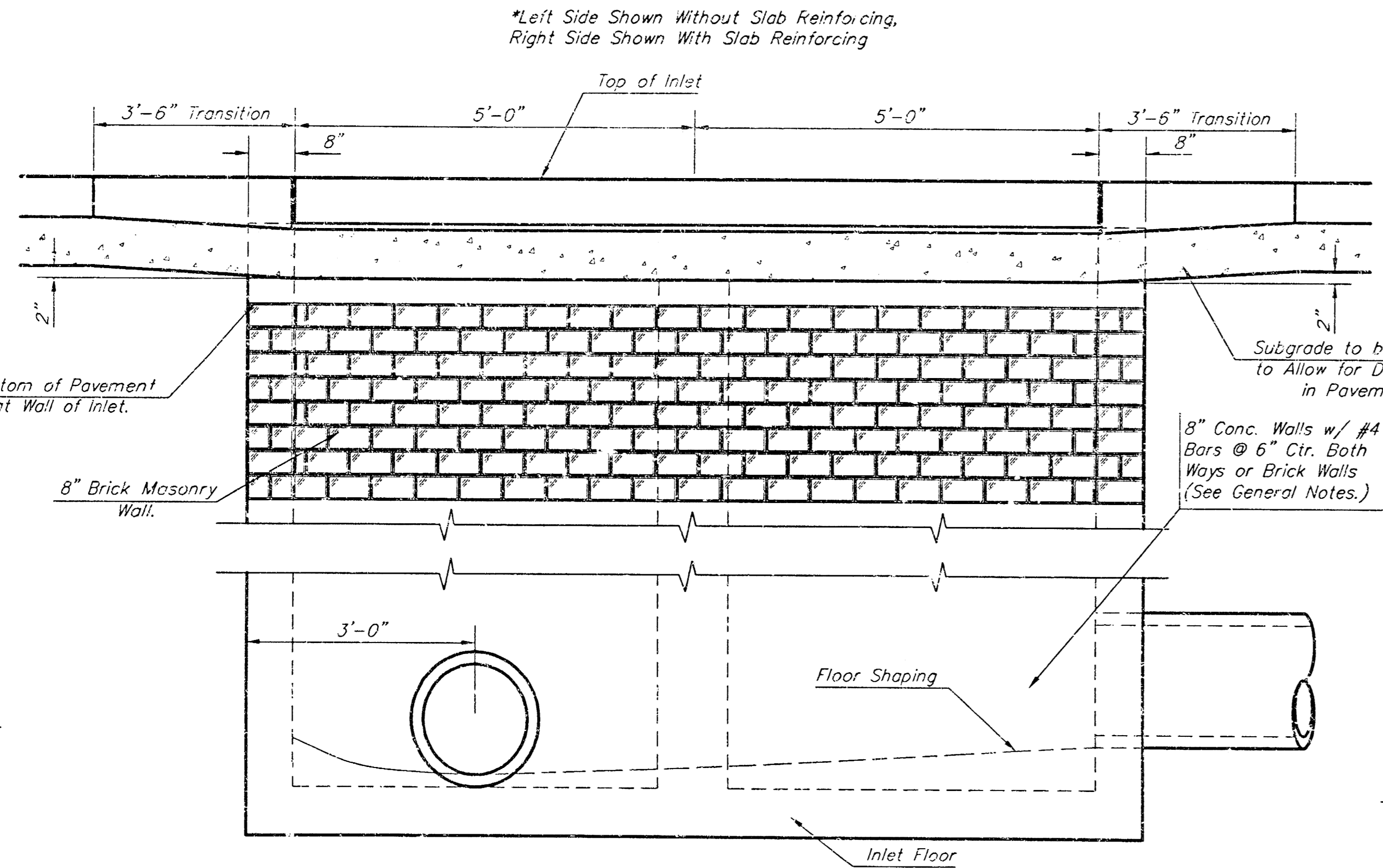
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As Built 2/02 KK

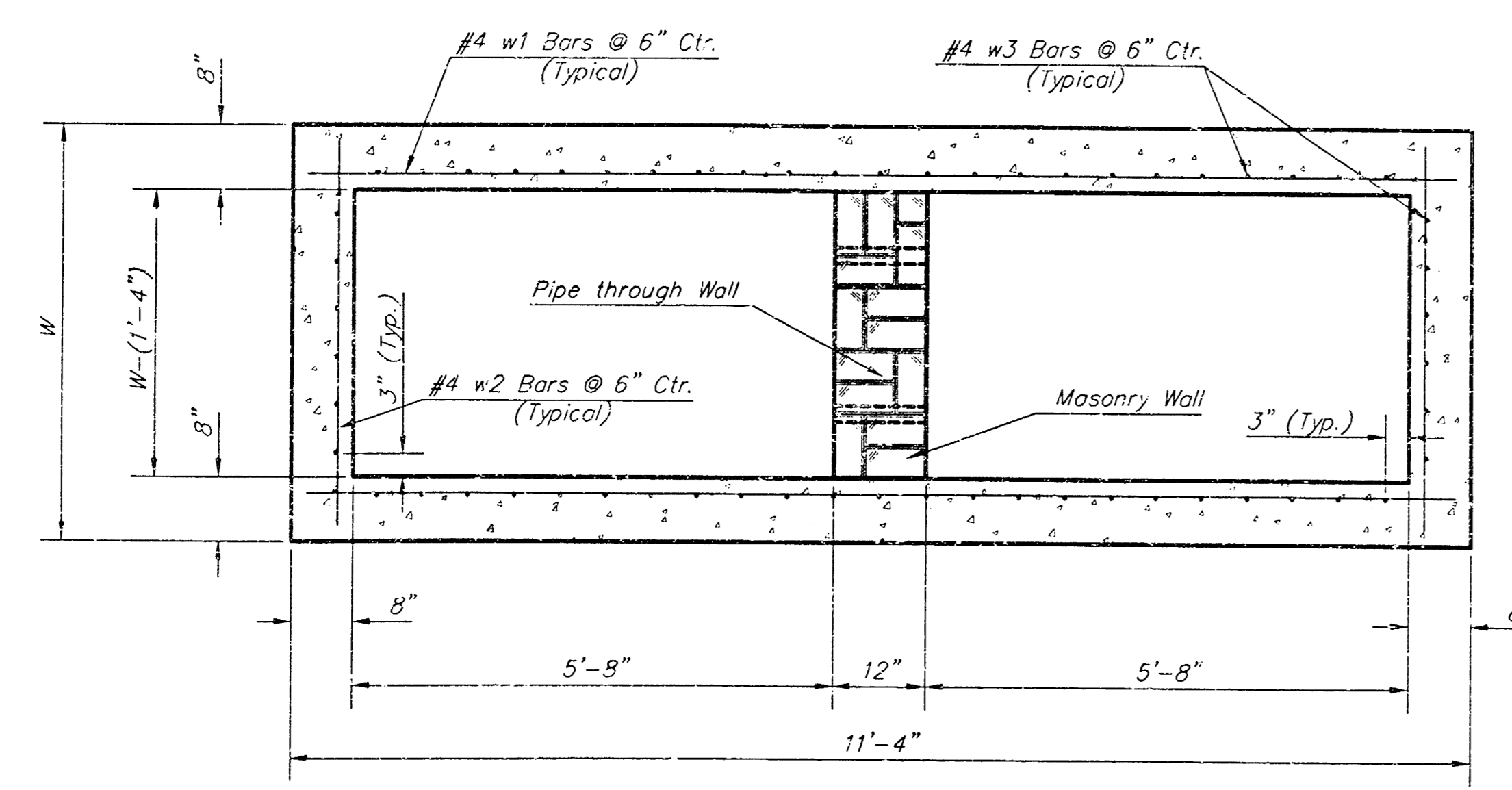


NOTE:
Expansion Joint Only in Curb Area with Concrete Pavement.

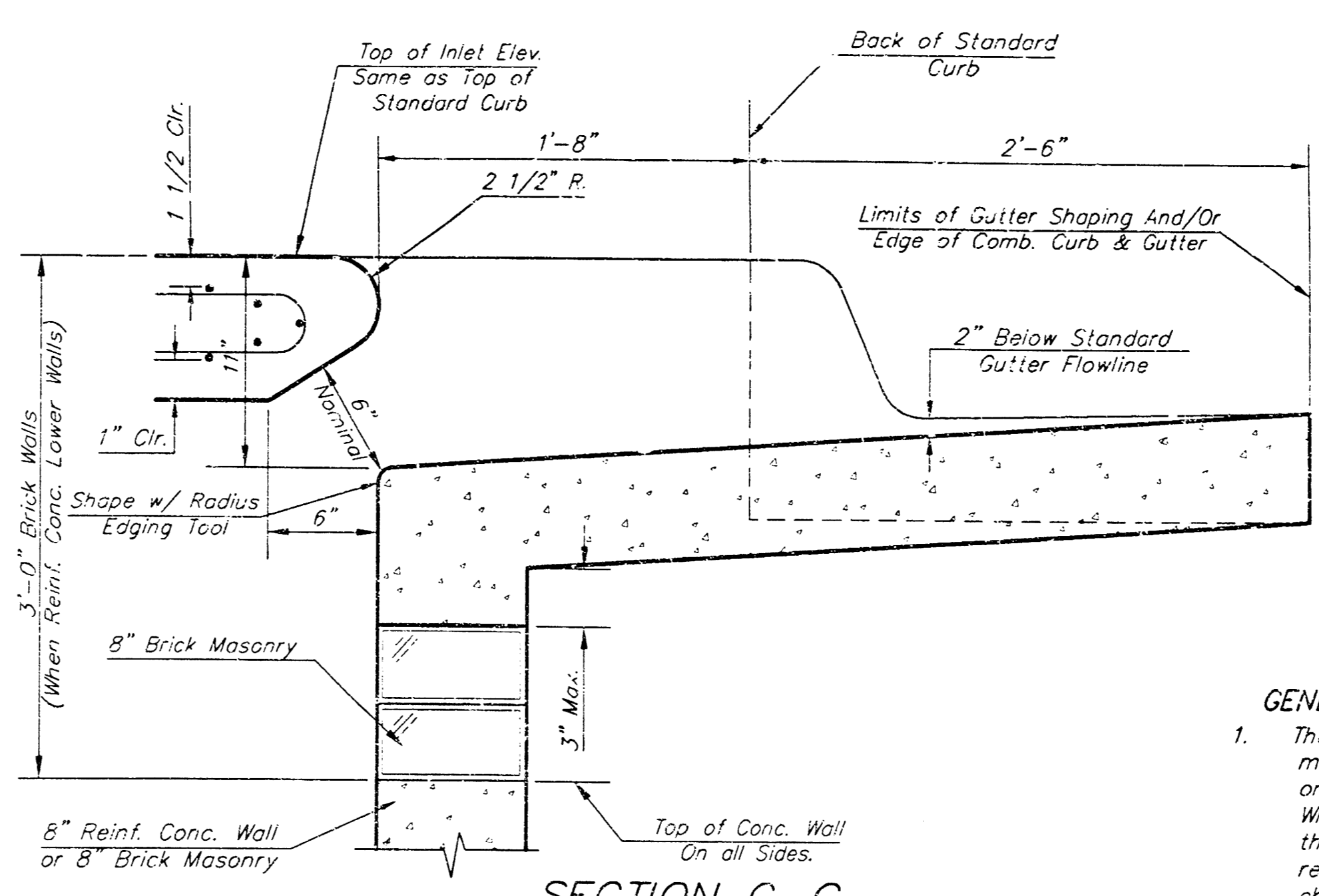
PLAN



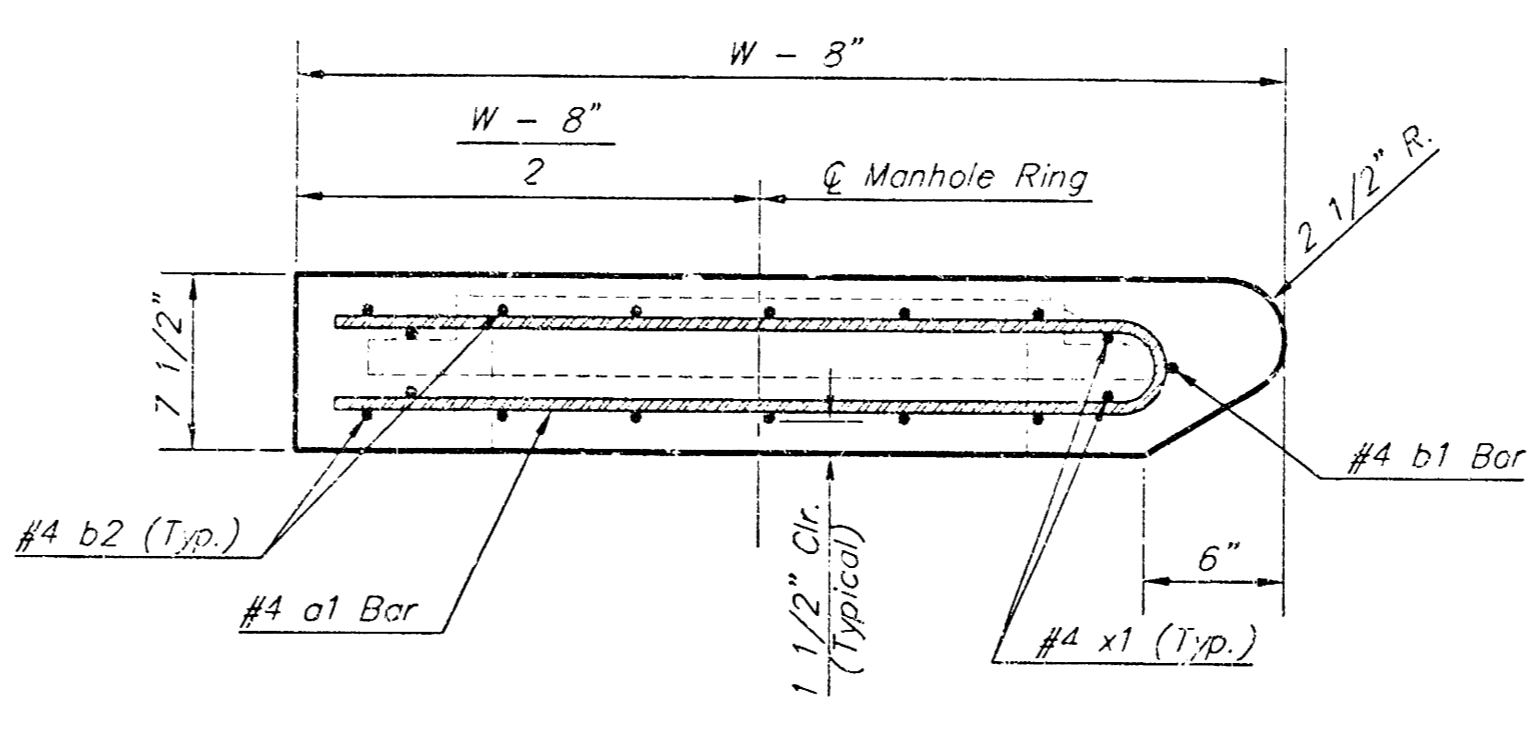
ELEVATION



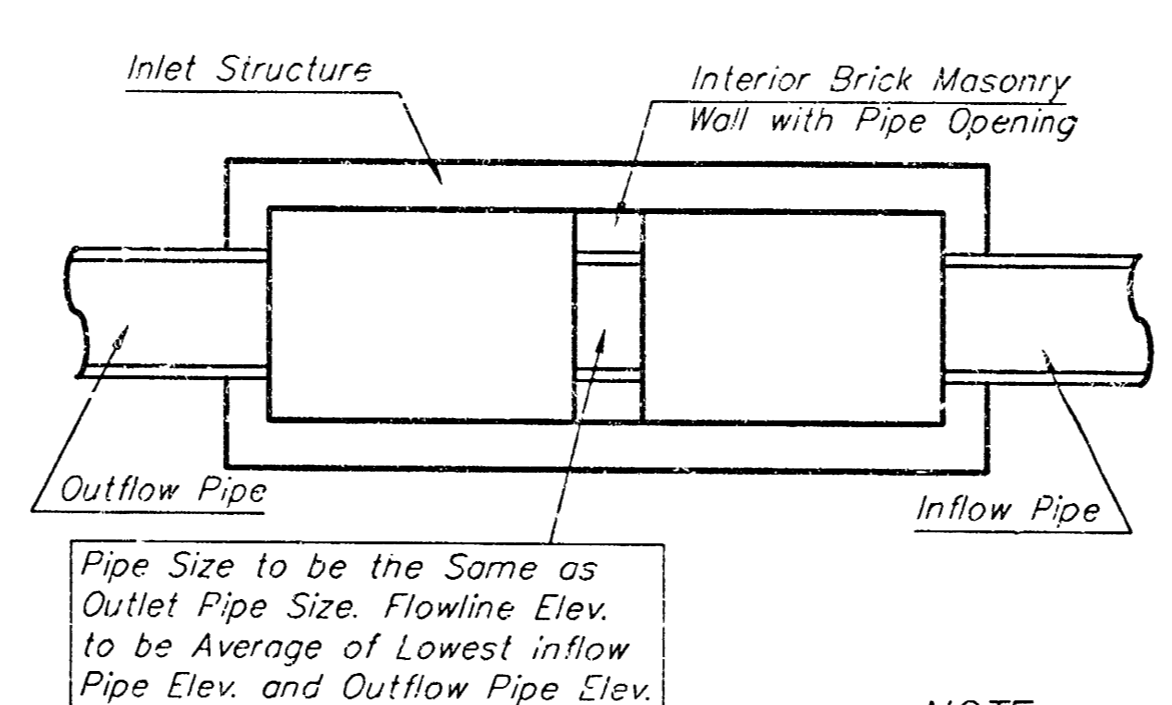
SECTION B-B



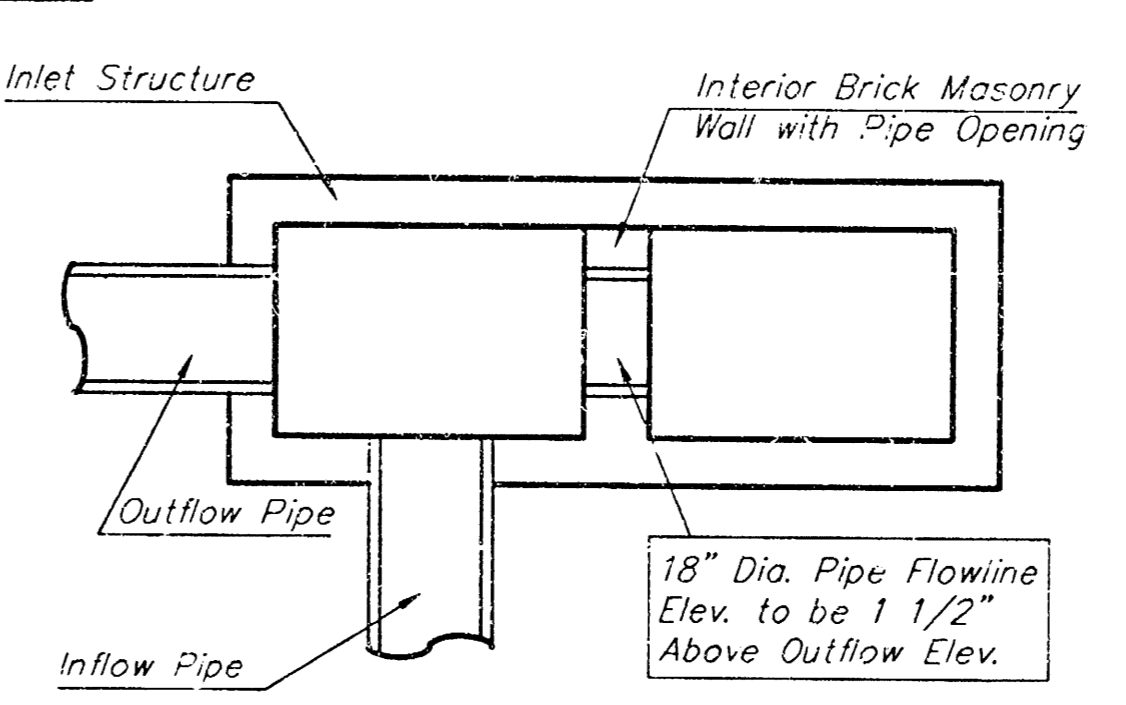
SECTION C-C



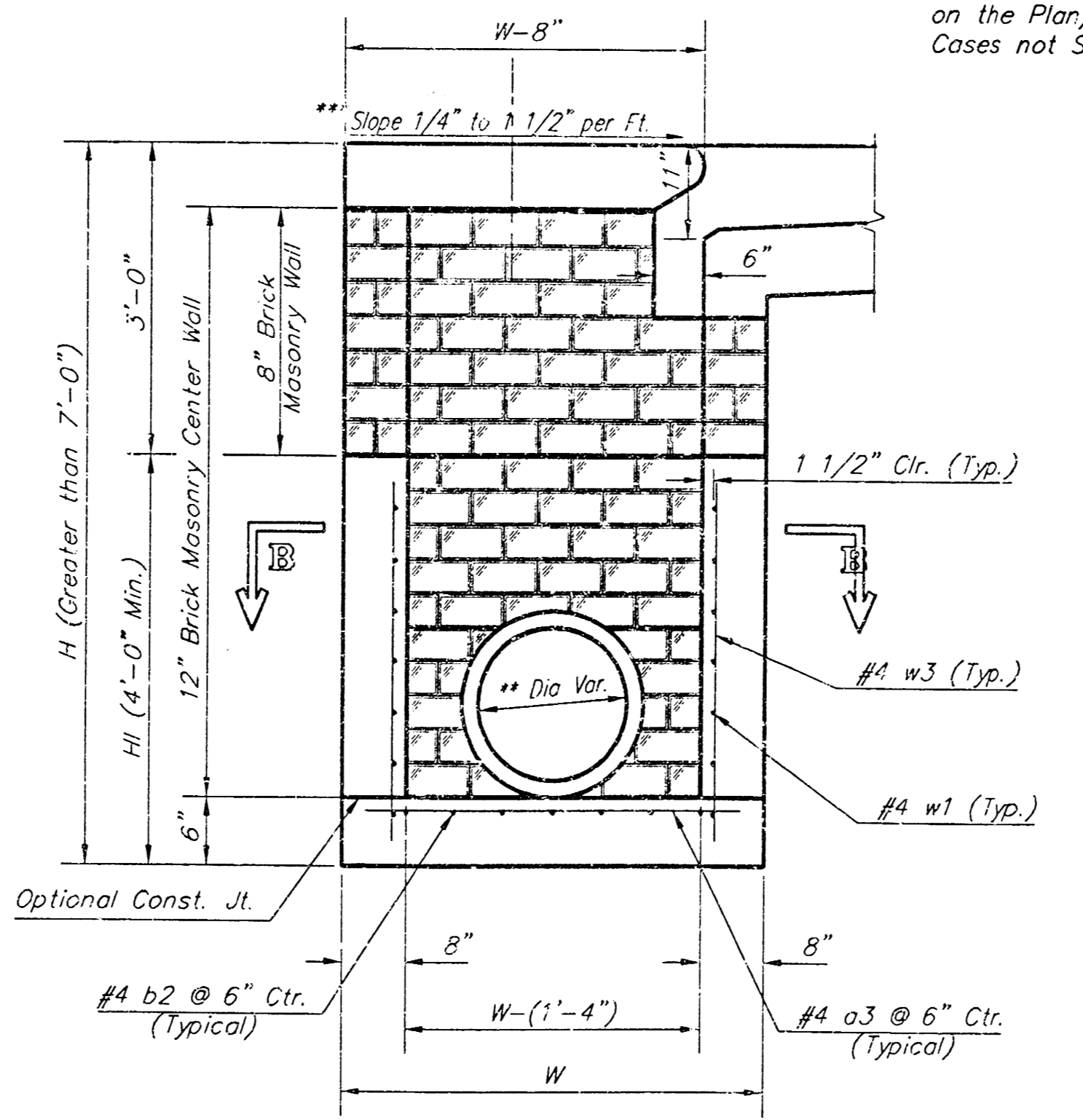
SECTION A-A



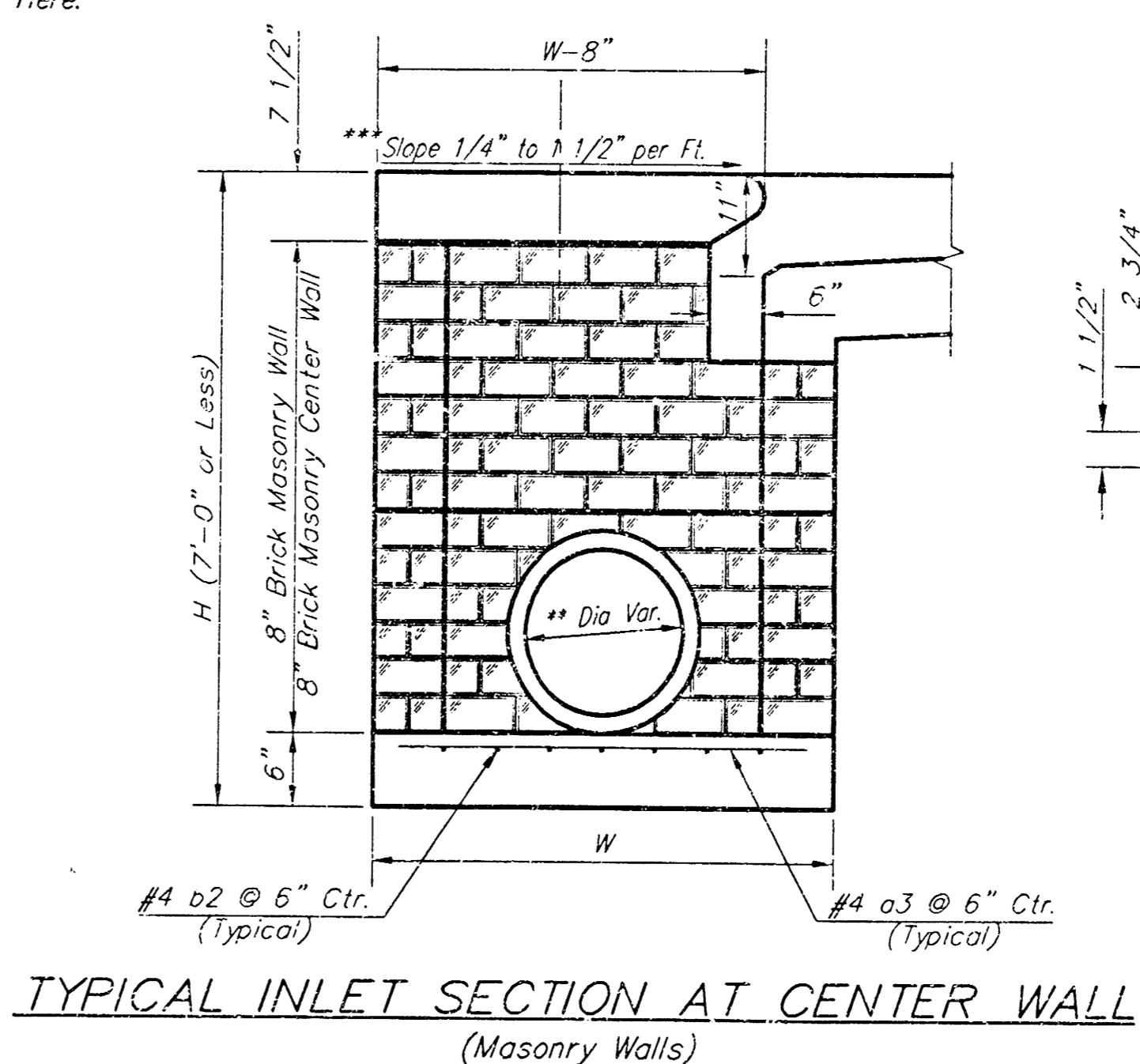
CASE I



CASE II



TYPICAL INLET SECTION AT CENTER WALL
(Reinforced Concrete Walls)



TYPICAL INLET SECTION AT CENTER WALL
(Masonry Walls)

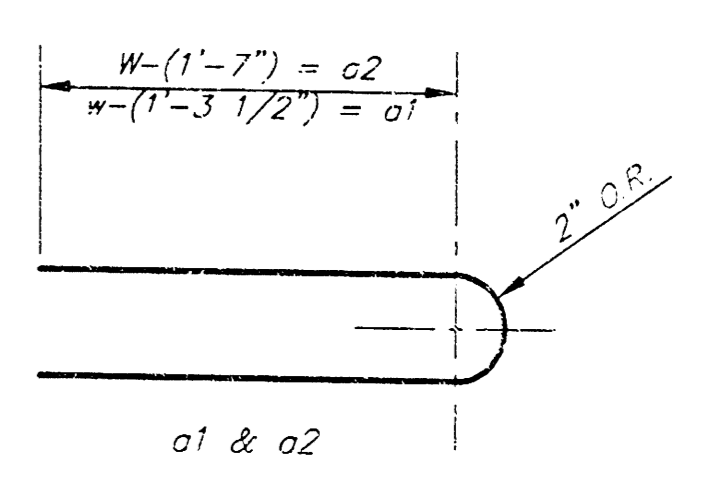
NOTES:
** A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II above.
*** Slope of inlet tops to match sidewalk of parking slopes within limits indicated.

PRECAST SLAB AND FLOOR REINFORCING											
MARK	SIZE	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
* a1	#4	13	6'-7"	13	8'-7"	13	10'-7"	13	12'-7"	13	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	23	4'-1"	23	5'-1"	23	6'-1"	23	7'-1"	23	8'-1"
b1	#4	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"	1	9'-9"
* b2	#4	23	11'-1"	29	11'-1"	35	11'-1"	41	11'-1"	47	11'-1"
x1	#4	15	3'-10"	16	4'-2"	16	4'-6"	16	4'-10"	16	5'-2"

* ALL REINFORCING
* Field Bend or Cut Reinforcing as Required for Clearance
① (H - 12) (H - 21) Rounded down to nearest 0.5"
② H - 3"

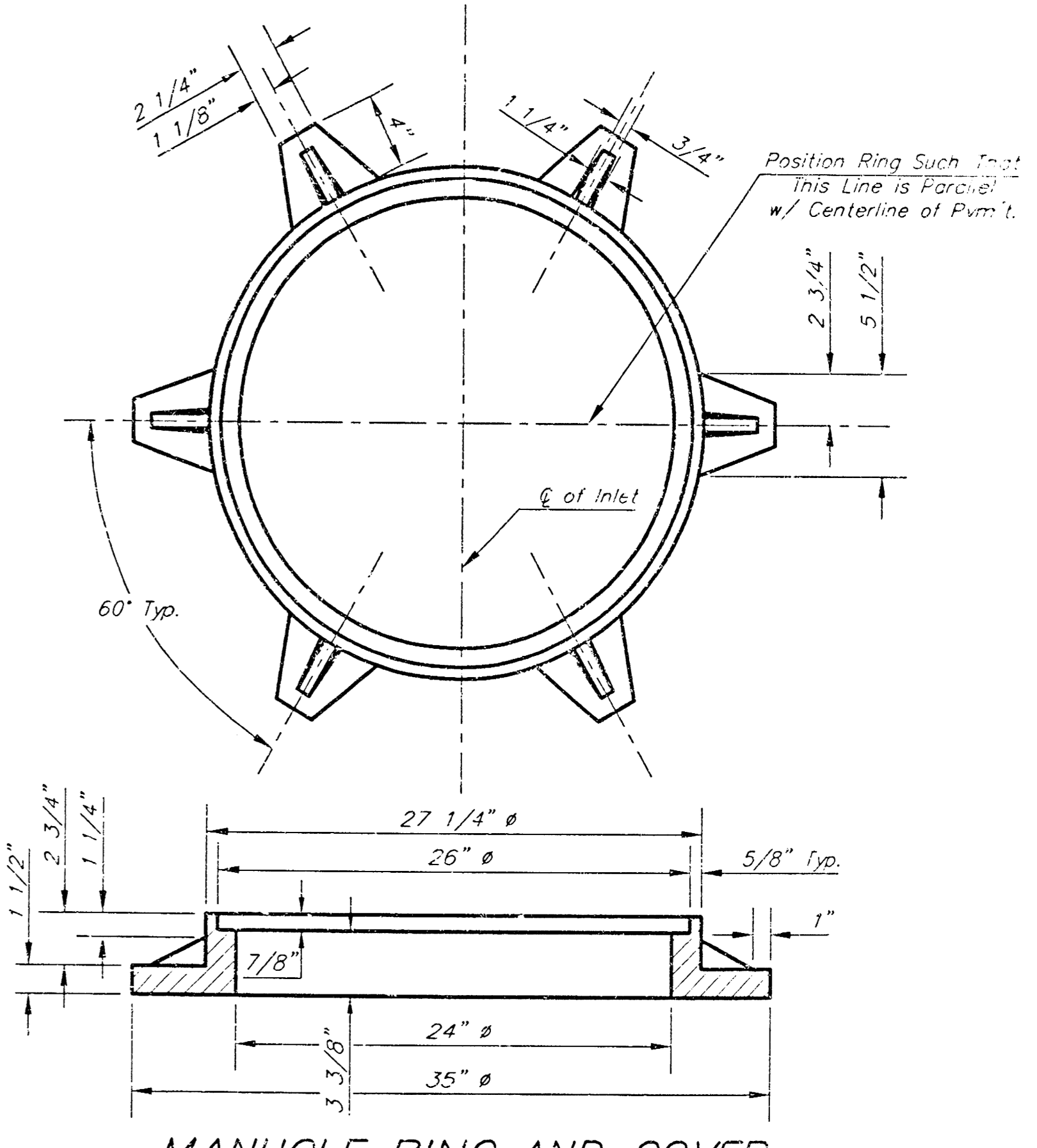
GENERAL NOTES:

- The contractor shall be required to construct 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" or less and H=7'-0" or less. When W is greater than 6'-4" and H is less than 7'-0" the outside inlet walls below the brick stack shall be reinforced concrete construction and the center wall shall be of masonry construction as shown for the masonry wall option.
- 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.
- 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.
- Inlet top reinforcing shall be spaced on 6" max. centers. Inlet lids shall be notched out as indicated to facilitate construction of curb. Bars in inlet top to be field bent or cut to clear manhole ring.
- The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS				
W	PRE-CAST TOP SIZE	PIPE SIZE	CG	CG TO CURB
4'-4"	3'-8" 11'-4"	7 1/2"	21" & SMALLER	0.5"
5'-4"	4'-8" 11'-4"	7 1/2"	24" & 30"	1.0"
6'-4"	5'-8" 11'-4"	7 1/2"	36" & 42"	1.5"
7'-4"	6'-8" 11'-4"	7 1/2"	48" & 54"	1.5"
8'-4"	7'-8" 11'-4"	7 1/2"	60" & 66"	1.5"



MANHOLE RING AND COVER
Weight = 180 lbs.

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

Revised - Feb. 16, 1989

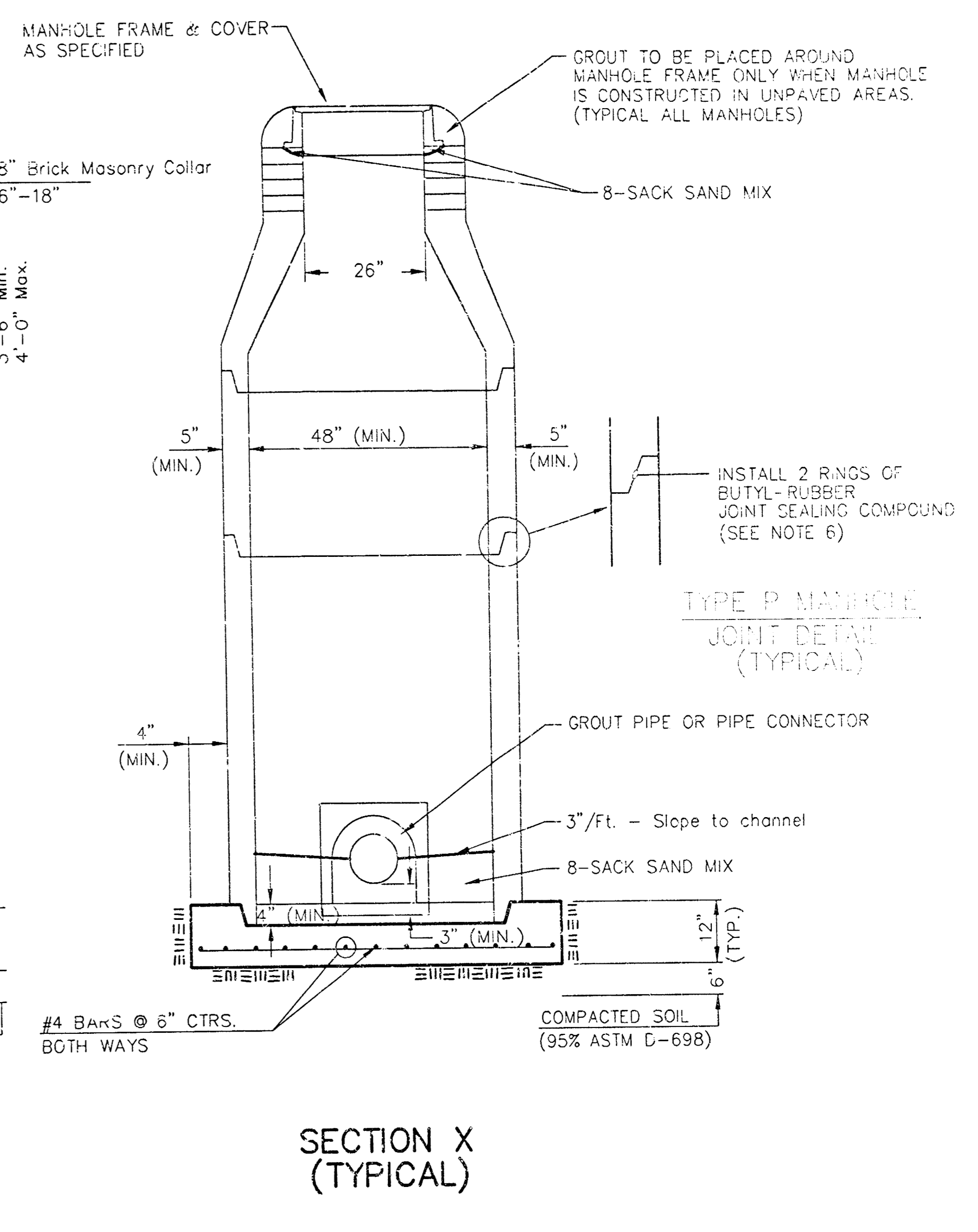
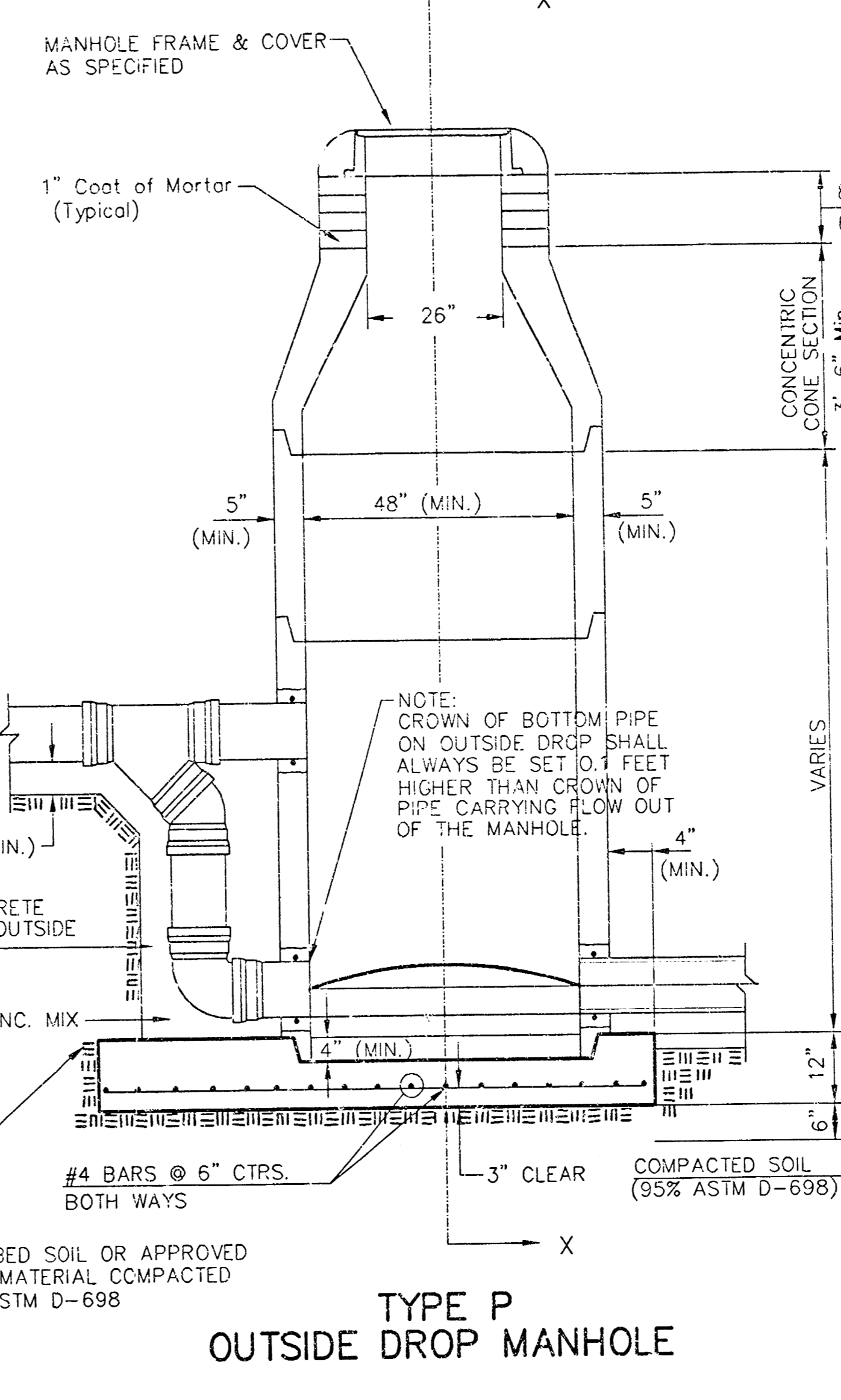
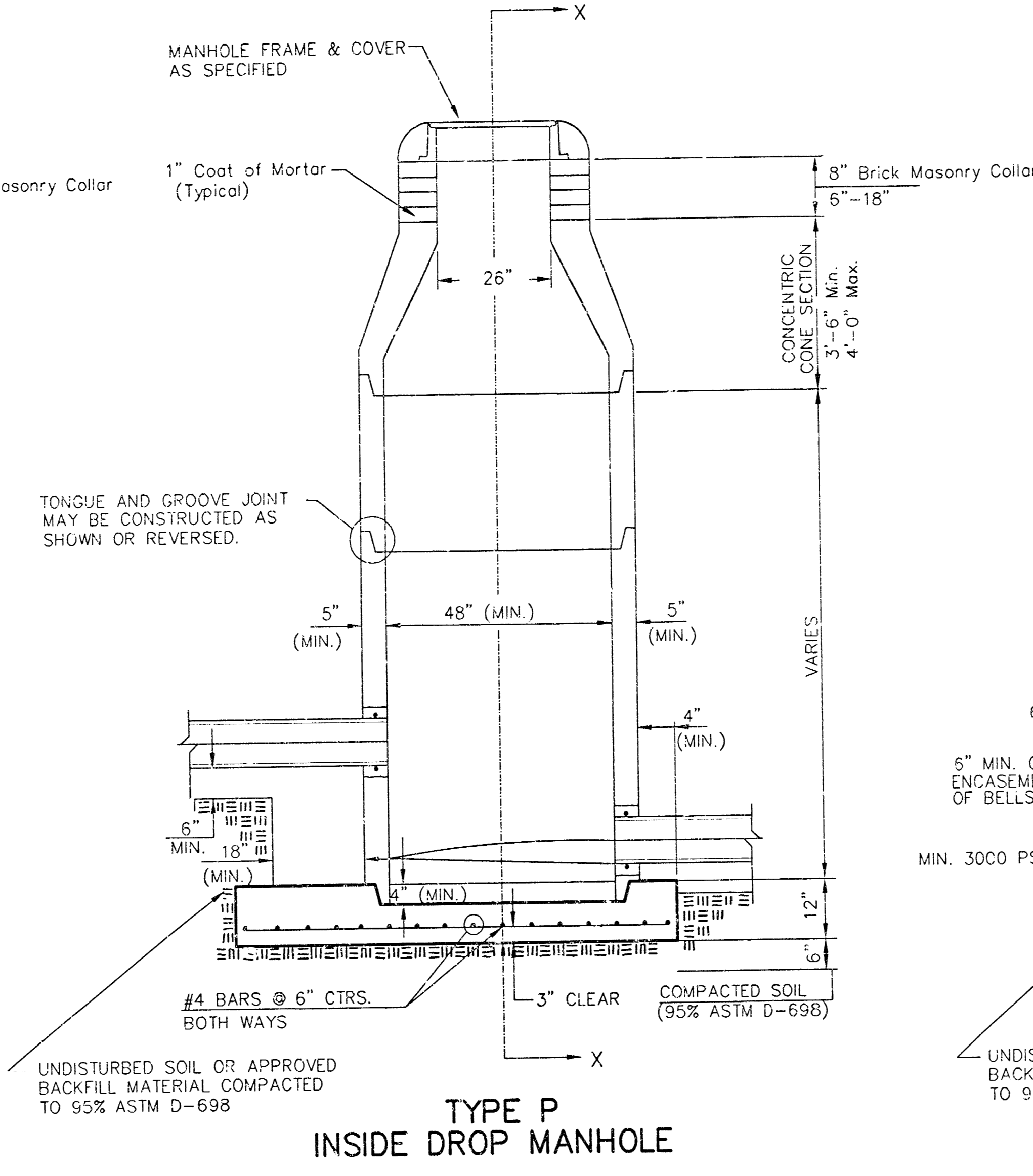
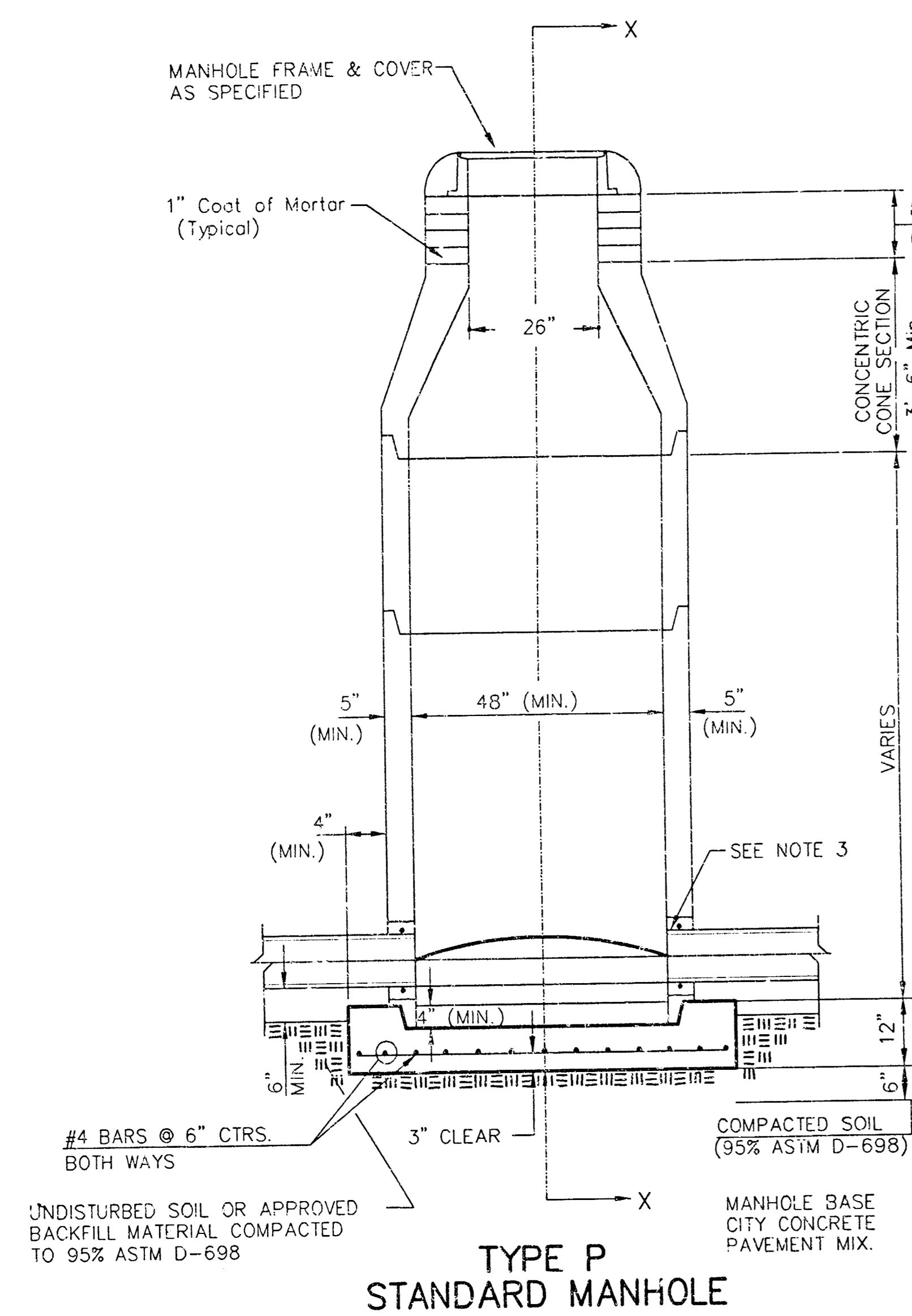
NONSTANDARD TRUCK

Curb Inlet Details
INLET OPENING = 24" x 24"

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
1100 W. 12TH ST. SUITE 100 • WICHITA, KANSAS 67202

PROJECT NUMBER: _____ SHEET: **6**
DESIGN: C.C.W. DRAWN: Staff APPROVED: _____ DATE: _____ SCALE: 1/8" = 1'-0"

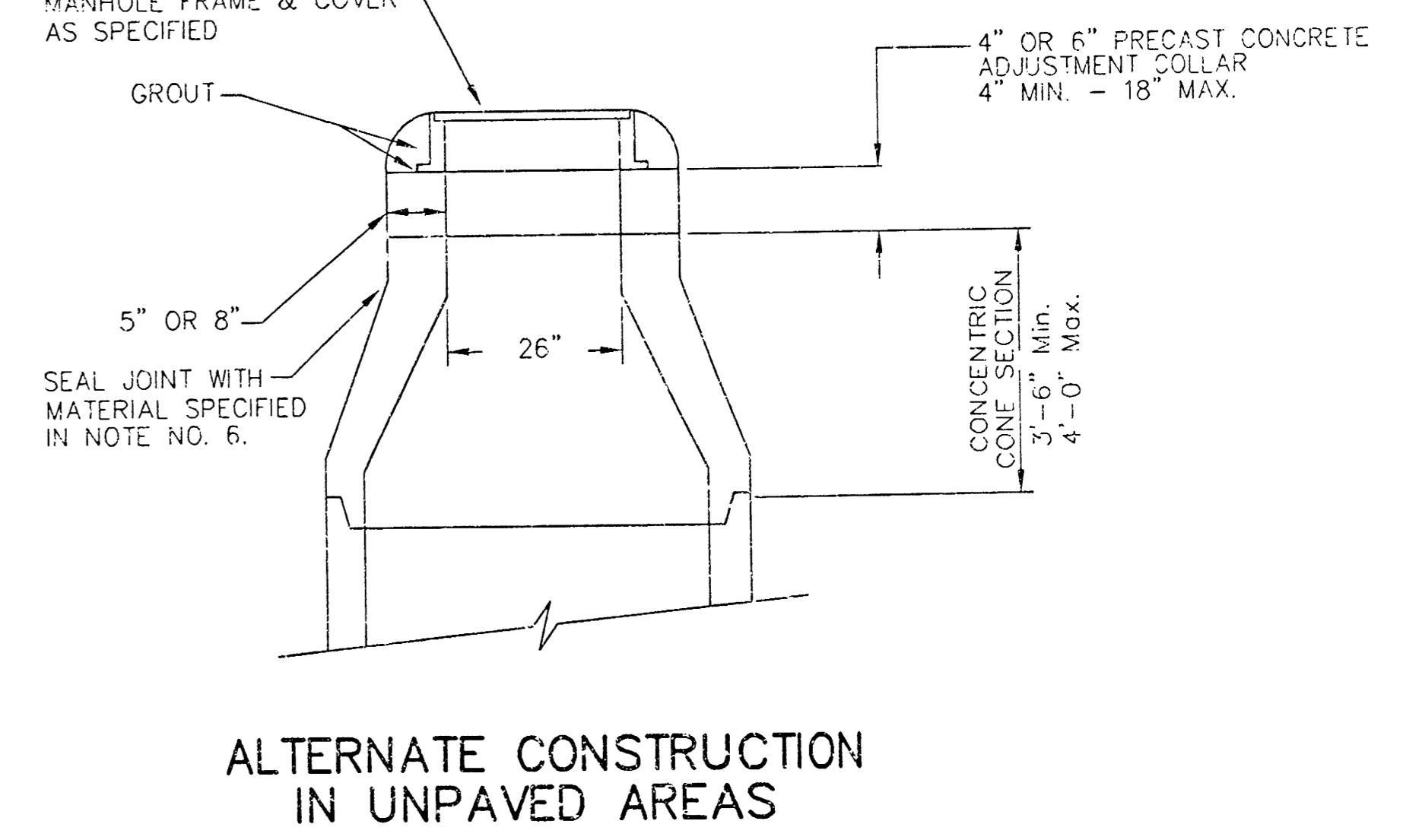
SEWER APPURTENANCES DETAILS



- GENERAL NOTES
- PRECAST MANHOLE NOTES
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
 - NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
 - 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 ENCASMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
 - ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS INEMEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
 - EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
 - JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
 - PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
 - 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.
 - LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
 - 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.

- 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.
- 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.
- 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 FILL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- 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.

- 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.
- 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.
- 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.
- 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.



CITY OF WICHITA
STD. MANHOLE DETAILS
 SEWER APPURTENANCES

BAUGHMAN COMPANY P.A.
 ENGINEERING, SURVEYING, & PLANNING

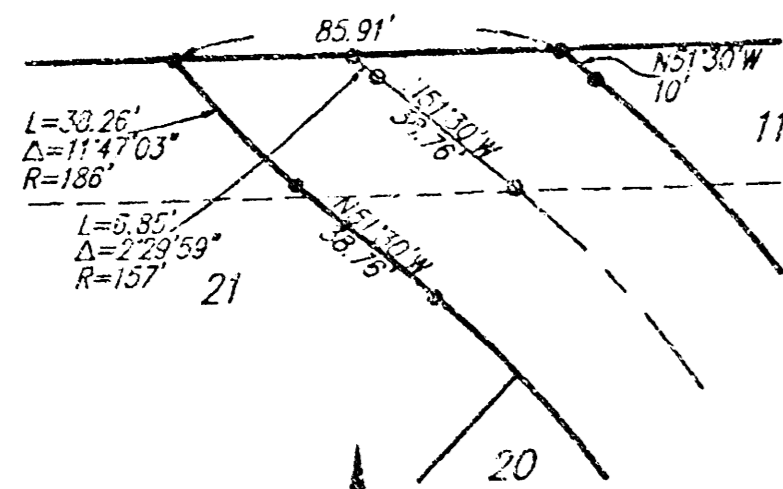
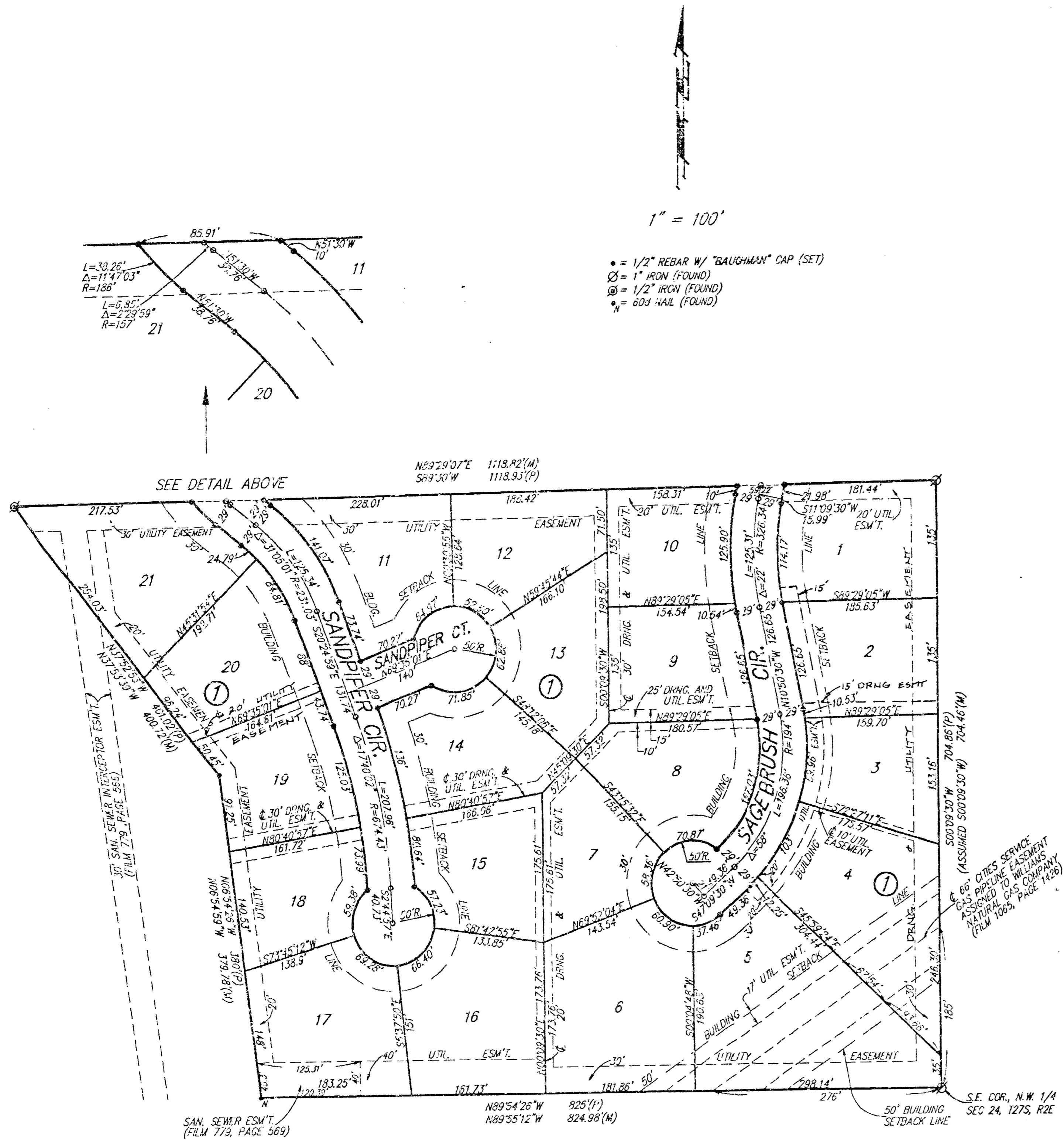
216-264-2721 • 315 E. LEE • WICHITA, KANSAS 67202

PROJECT NUMBER: _____ SHEET: **7** OF **9**

DESIGN: _____	DRAWN: _____	APPROVED: _____	DATE: 11/00	SCALE: NONE
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THE ORCHARD AT SHADYBROOK FARM

AN ADDITION TO
SEDGWICK COUNTY, KANSAS



1" = 100'

- = 1/2" REBAR W/ "BAUGHMAN" CAP (SET)
- = 1" IRON (FOUND)
- ⊙ = 1/2" IRON (FOUND)
- = 600' HAZ (FOUND)

SEE DETAIL ABOVE

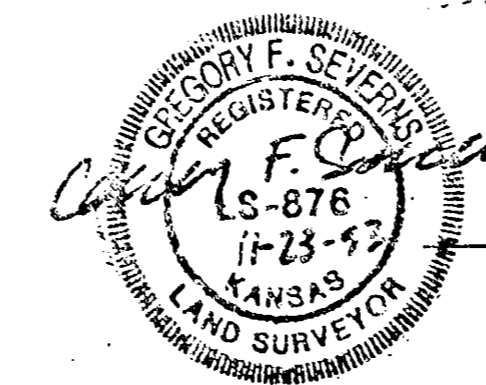
SAN. SEWER ESM'T.
(P.L.M. 778, PAGE 569)

MINIMUM BUILDING PAD ELEVATIONS
FOR LOWEST OPENING OF STRUCTURE

Lot	Block	Elevation M.S.L.
17	1	1306.0
18	1	1306.5
19	1	1307.0
20	1	1307.5
21	1	1308.0

State of Kansas) SS We, Daughman Company, P.A., Surveyors in
Sedgwick County) do hereby certify that we have surveyed
aforesaid county and state do hereby certify that we have surveyed
and platted "THE ORCHARD AT SHADYBROOK FARM", an Addition
to Sedgwick County, Kansas, and that the accompanying plat is a
true and correct exhibit of the property surveyed described as and
being a replat of Lot 6, Block 8, Shadybrook Farm Addition, Sedg-
wick County, Kansas.

All being situated in the N.W. 1/4 of Sec. 24, Twp 27-S, R-2-E
of the 6th P.M., Sedgwick County, Kansas.
Existing easements and dedications being vacated by
virtue of K.S.A. 12-512(b).



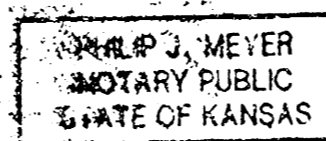
Baughman Company, P.A.
Gregory F. Severns
Surveyor

Know all men by these presents that we, the
undersigned owners, have caused the land described in the surveyors
certificate to be platted into Lots, a Block, and Streets to be known
as "THE ORCHARD AT SHADYBROOK FARM", an Addition to Sedgwick
County, Kansas. The utility easements are hereby granted as
indicated for the construction and maintenance of all public utilities.
The drainage easement is hereby granted as indicated for drainage
purposes. The drainage and utility easements are hereby granted
as indicated for drainage purposes and for the construction and
maintenance of all public utilities. The streets are hereby dedicated
to and for the use of the public. The Minimum Building Pad Elevations
for the lowest opening to the structures are as shown on the
accompanying plat.

Scott Land Developers, Inc.

Donald N. Scott President
Donald N. Scott

State of Kansas) SS The foregoing instrument acknowledged be-
fore me, this 12th day of May, 1994, by Donald N.
Scott, President of Scott Land Developers, Inc., on behalf of the
corporation.



Philip D. Meyer Notary Public
Philip D. Meyer

My App't. Exp. 5/3/97

This plat approved and all dedications shown
hereon accepted by the Board of County Commissioners of Sedgwick
County, Kansas, this 11th day of May, 1994.

Betty Quinn Chair
Betty Quinn

Andrew L. Diaz Chairman Pro-Tem
Andrew L. Diaz

Paul W. Hancock Commissioner
Paul W. Hancock

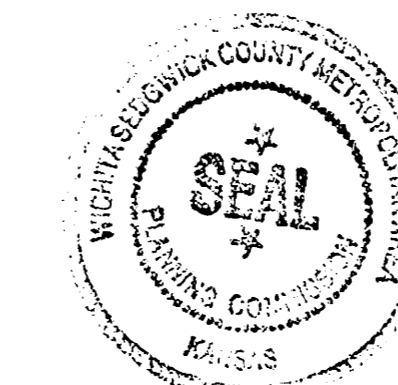
Thomas G. Winters Commissioner
Thomas G. Winters

Mark F. Schröder Commissioner
Mark F. Schröder

Susan F. Crckett-Spohn County Clerk
Susan F. Crckett-Spohn

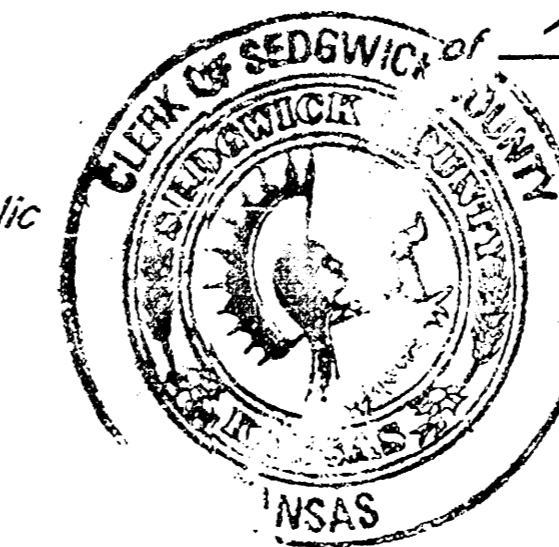


This plat of "THE ORCHARD AT SHADYBROOK
FARM", an Addition to Sedgwick County, Kansas, has been submitted
to and approved by the Wichita-Sedgwick County Metropolitan Area
Planning Commission, Wichita, Kansas.
Dated this 23rd day of September, 1993.
Wichita-Sedgwick County Metropolitan Area Planning Commission.



James D. Miner Chairman
James D. Miner

Martin S. Krout Secretary
Martin S. Krout



Entered on transfer record this 12th day
of May, 1994.

Susan F. Crckett-Spohn County Clerk
Susan F. Crckett-Spohn

#1382502

This plat approved and all dedications shown
hereon accepted by the City Council of the City of Wichita, Kansas,
this 8th day of March, 1994.



Elmer B. Bond Major
Elmer B. Bond



Pat Kettler
Pat Kettler

BAUGHMAN COMPANY P.A.
of Deeds