STORM WATER SEWER NO. 471 TO SERVE

FRIENDS UNIVERSITY

Project Number

468-76-245-82552-000-000-001

Index Code:

750752

CITY OF WICHITA, KANSAS

Michael E. Lindebak City Engineer

General Notes

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call	687-2470

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

Cablevision	262-4270
or	263-2061
K.P.L. Gas Service Company	383-8650
Kansas Gas & Electric Company	383-8600
Arkla Gas Company	942-8350
Southwestern Bell Telephone Company	1-571-2611
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. Location information has been obtained from the various utility companies and is either from company record drawings or company provided field locations. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

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

4. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.

5. 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.

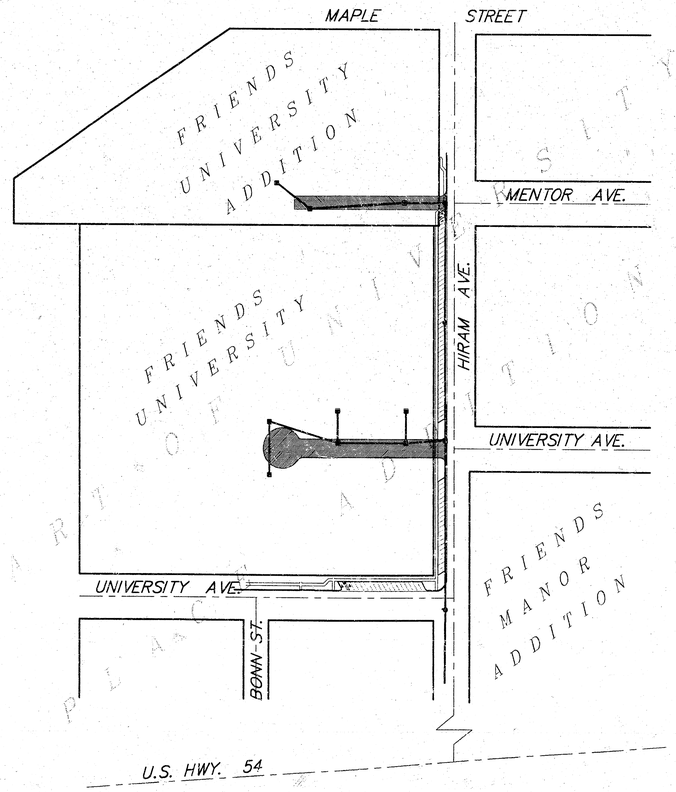
6. The Contractor shall seed all areas disturbed by construction operations as per City of Wichita Specifications for Permanent seeding.

7. The bid of Right of Way (R.O.W.) clearing and site site preparation shall include, but not be limited to the following: Pavement removal, Saw joints, Sidewalk removal, Driveway removal, Curb and Gutter removal, Pipe removal, Pipes plugged, Tree removal, sprinkler removal, and any other necessary items.

8. The bid item of site restoration shall include but not be limited to the following: Finish grading, Suitable topsoil replacement in fill areas, and Hay bale erosion control installation at inlets where necessary.

9. The sprinkler systems in the parking areas are to be relocated by Friends University Staff. Contact Paul in Maintenance at 261-5836 for coordination of this work.

11. Contractor to coordinate construction with Friends University relative to the immediate need for the pavement removal of the two streets. The remaining construction items of the parking stalls and the storm water sewer can be constructed and coordinated with the utility company relocations.

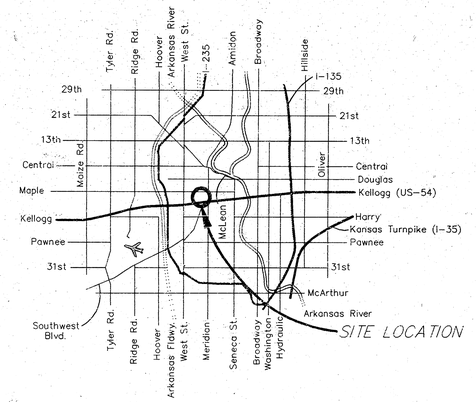


Scale: 1" = 150'

BOOKED
1-17-97
MCG
D-320

Index:

1. Title Sheet
2. Storm Sewer Line 1 & Parking (Hiram Ave.)
3. Storm Sewer Line 1 & Parking (Hiram Ave.)
4. Storm Sewer Line 1 (New Business Bldg.)
5. Sidewalk & Parking (University Ave.)
6. Fire Lane & Storm Sewer Line 2
7. Storm Sewer Lines 3 and 4
8. Pavement and Parking Details
9. Standard Type 1 Inlet Details
10. Standard Drop Inlet Details
11. Standard Manhole Details
12. Copy of Friends University Addition Plat



Vicinity Map

(No Scale)



SHEET 1 OF 12

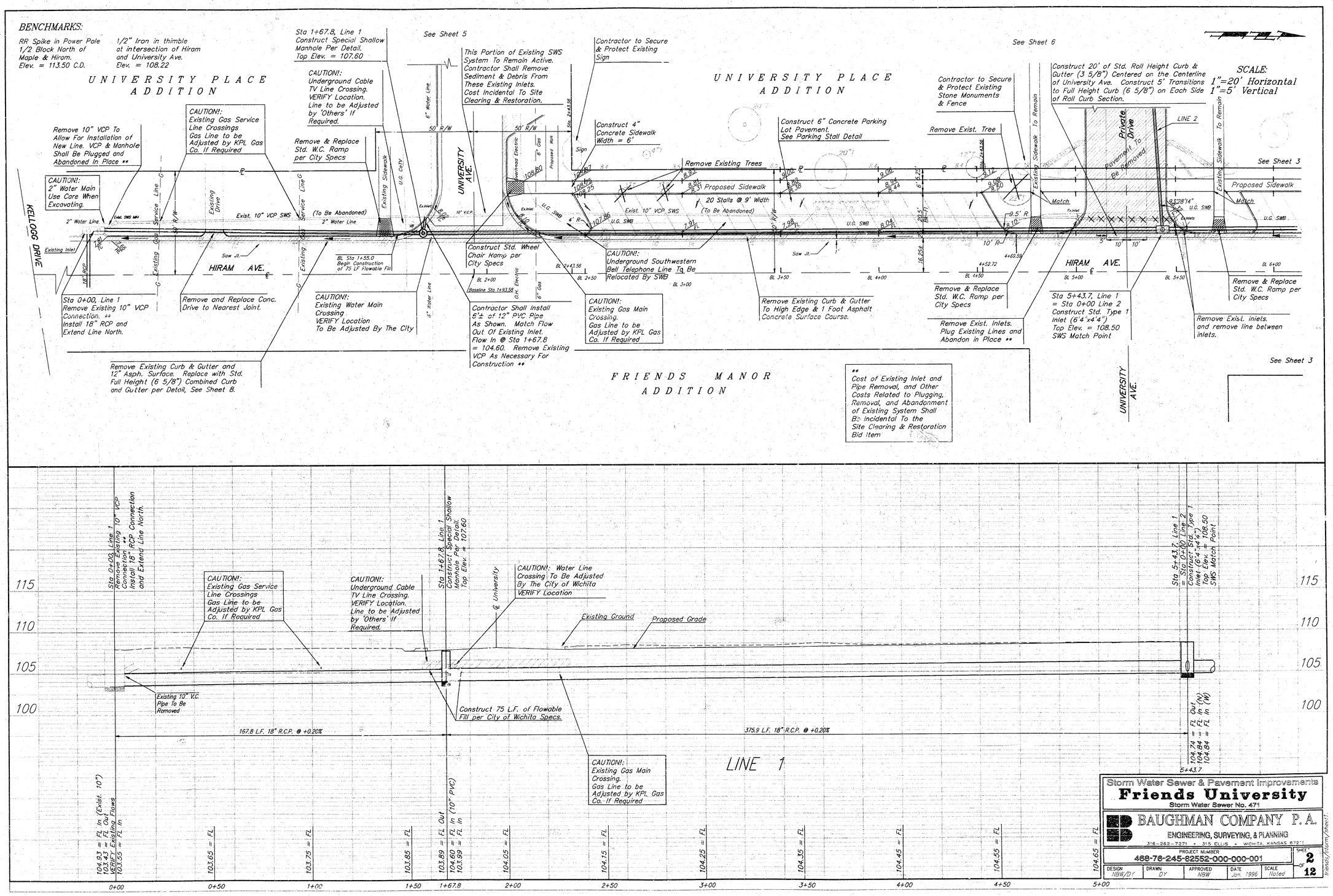
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

BENCHMARKS:

RR Spike in Power Pole 1/2 Block North of Maple & Hiram. Elev. = 113.50 C.D.

1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22

SCALE: 1"=20' Horizontal 1"=5' Vertical



Storm Water Sewer & Pavement Improvements

Friends University

Storm Water Sewer No. 471

BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 468-78-245-82552-000-000-001

SHEET 2 OF 12

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW/DY	DY	NBW	Jan. 1996	Noted

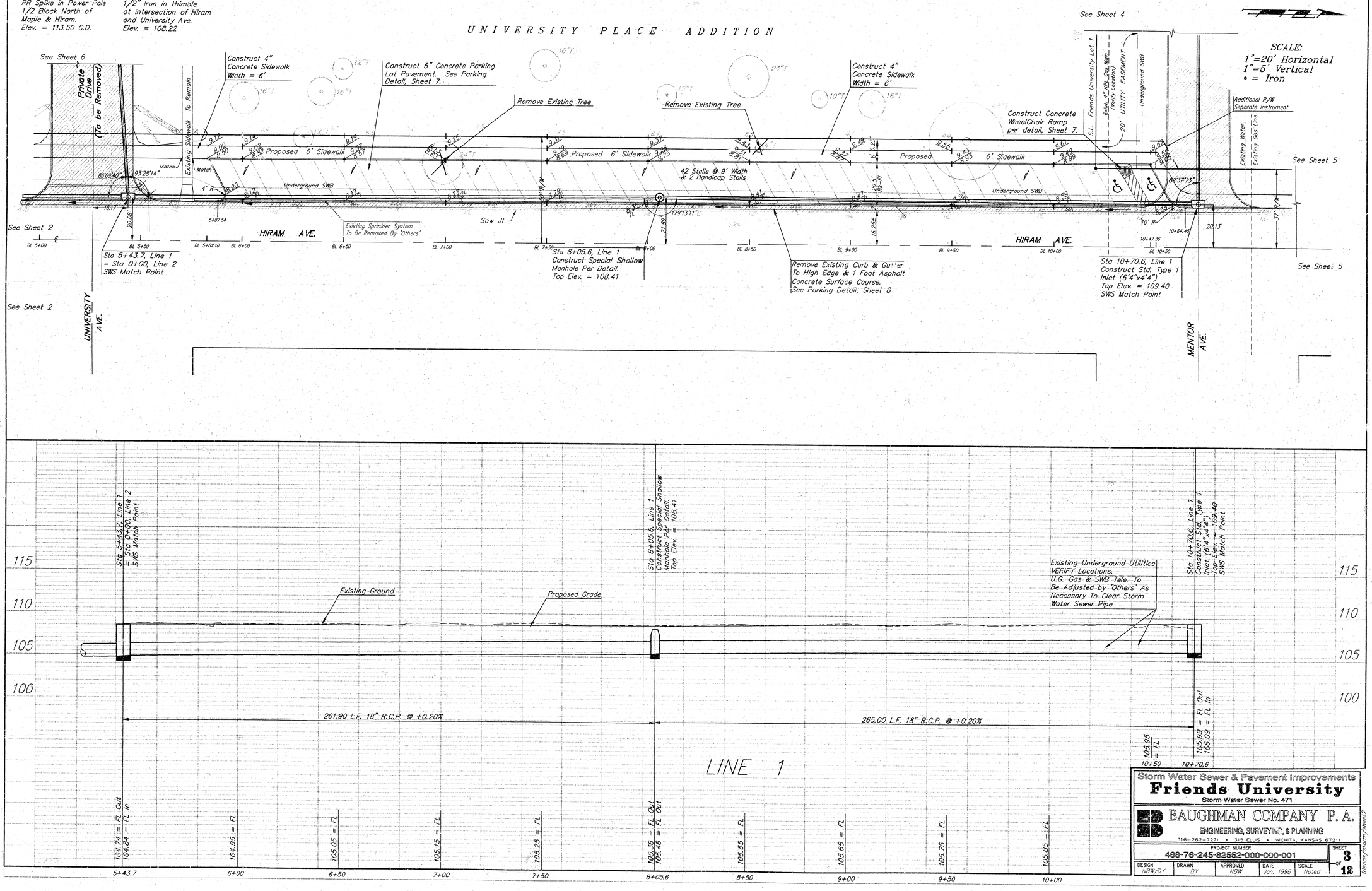
friends/storm/sheet1

BENCHMARKS:

RR Spike in Power Pole 1/2 Block North of Maple & Hiram. Elev. = 113.50 C.D.

1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22

UNIVERSITY PLACE ADDITION



Storm Water Sewer & Pavement Improvements

Friends University

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ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 488-78-245-82552-000-000-001

SHEET 3 OF 12

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW/DY	DY	NBW	Jan. 1995	Noted

friends/storm/sheet2

BENCHMARKS:

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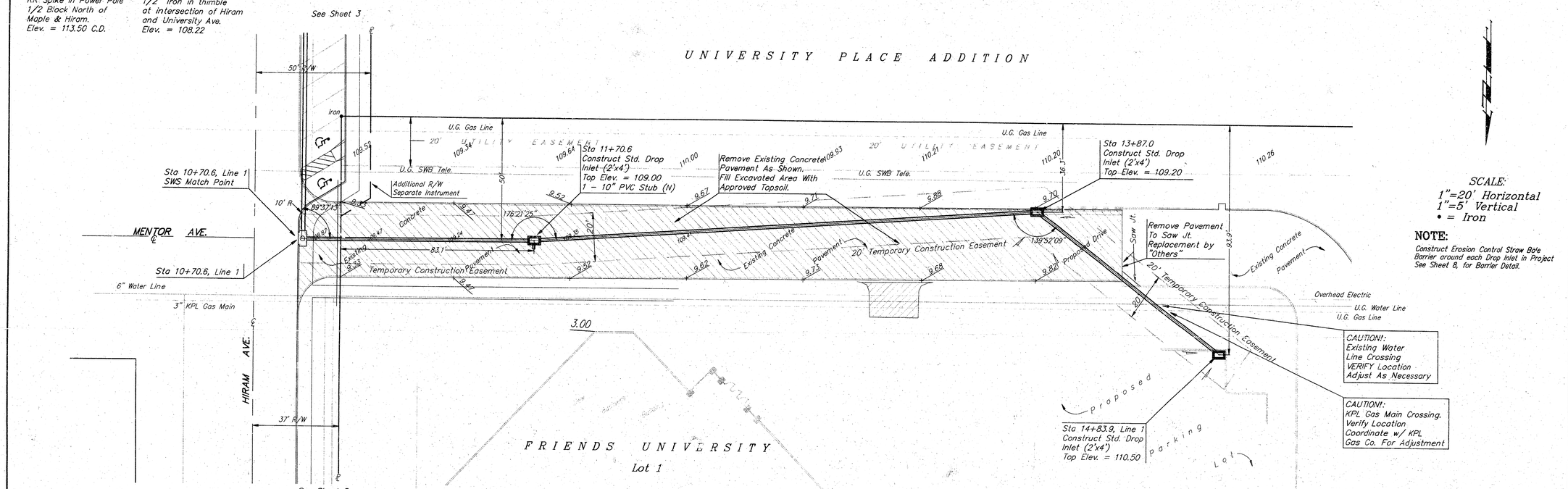
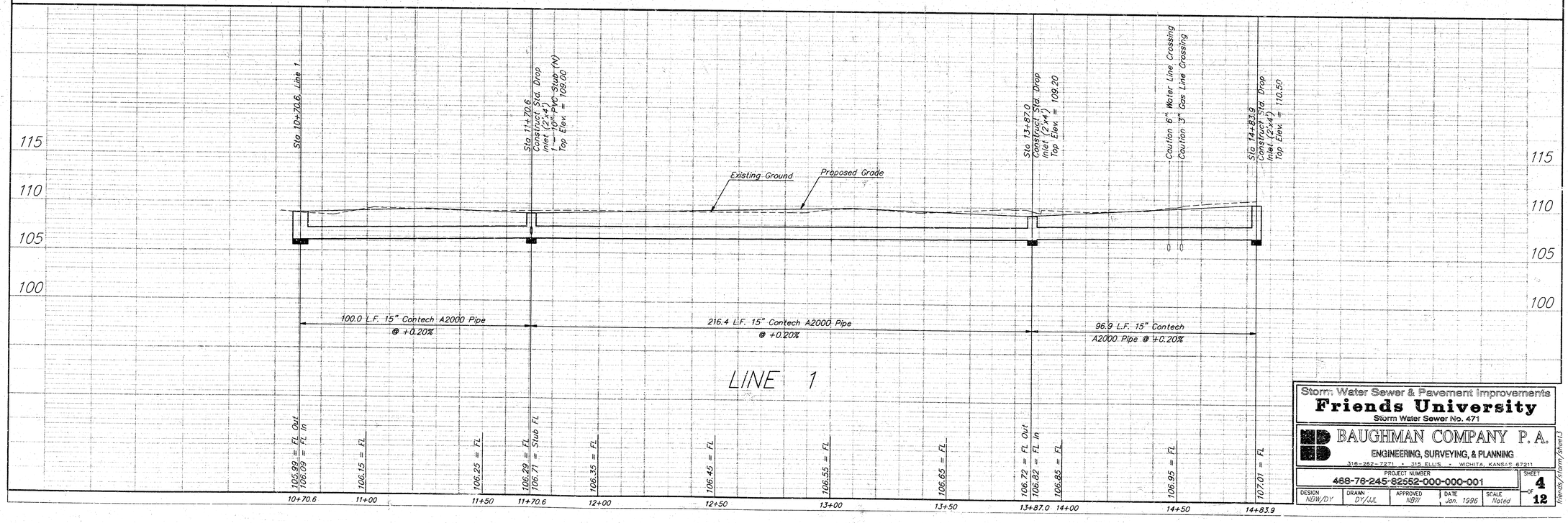
1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22



SCALE:
1"=20' Horizontal
1"=5' Vertical
• = Iron

NOTE:
Construct Erosion Control Straw Bale Barrier around each Drop Inlet in Project See Sheet 8, for Barrier Detail.



Storm Water Sewer & Pavement Improvements
Friends University
Storm Water Sewer No. 471

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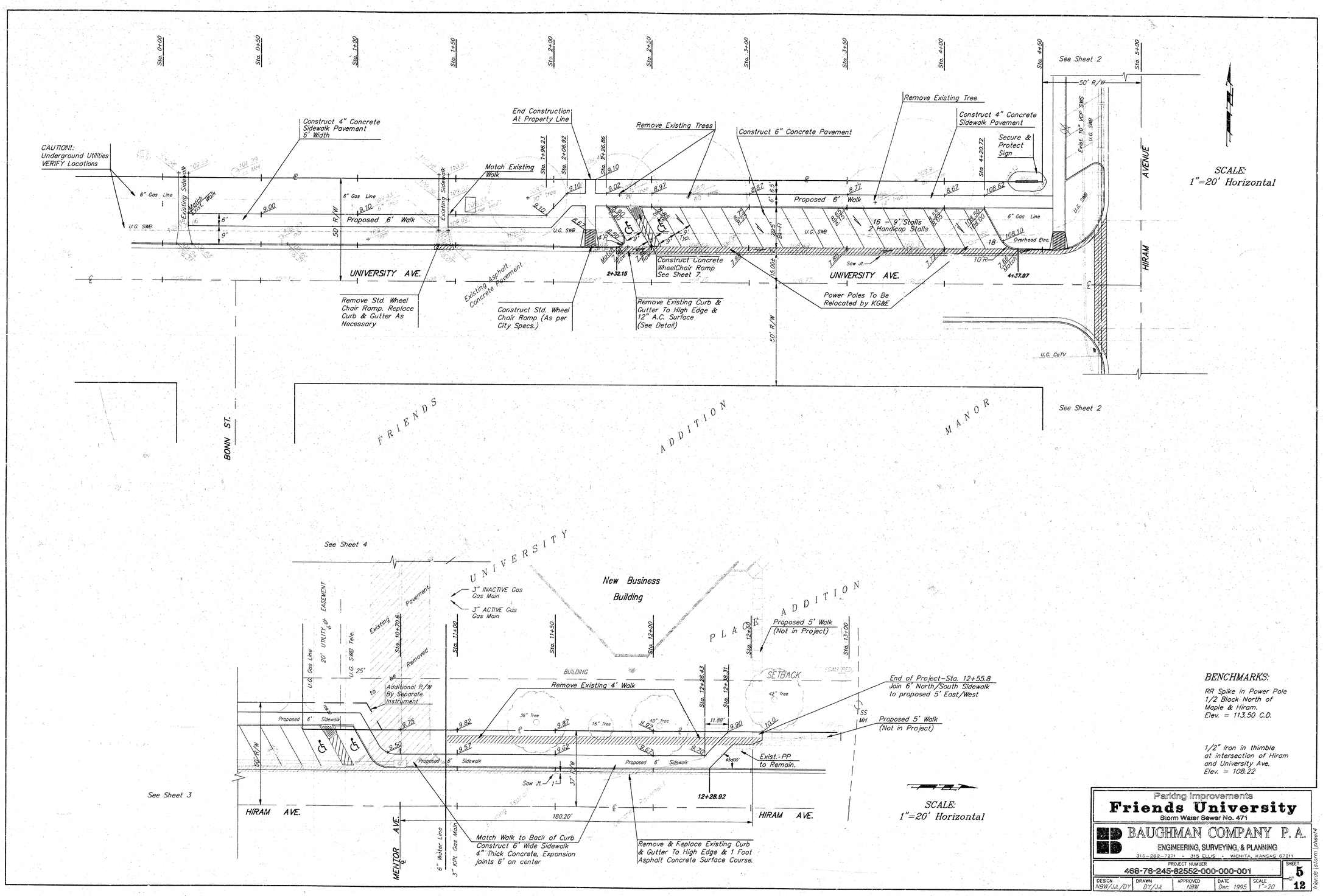
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 468-78-245-82552-000-000-001

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
NDW/DY	DY/JJL	NBW	Jan. 1996	Noted	4 OF 12

friends/storm/sheet3



BENCHMARKS:

RR Spike in Power Pole 1/2 Block North of Maple & Hiram. Elev. = 113.50 C.D.

1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22

Parking Improvements
Friends University
Storm Water Sewer No. 471

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PROJECT NUMBER					SHEET
468-76-245-82552-000-000-001					5 OF 12
DESIGN	DRAWN	APPROVED	DATE	SCALE	
NBW/JJL/DY	DY/JJL	NBW	Dec. 1995	1"=20	

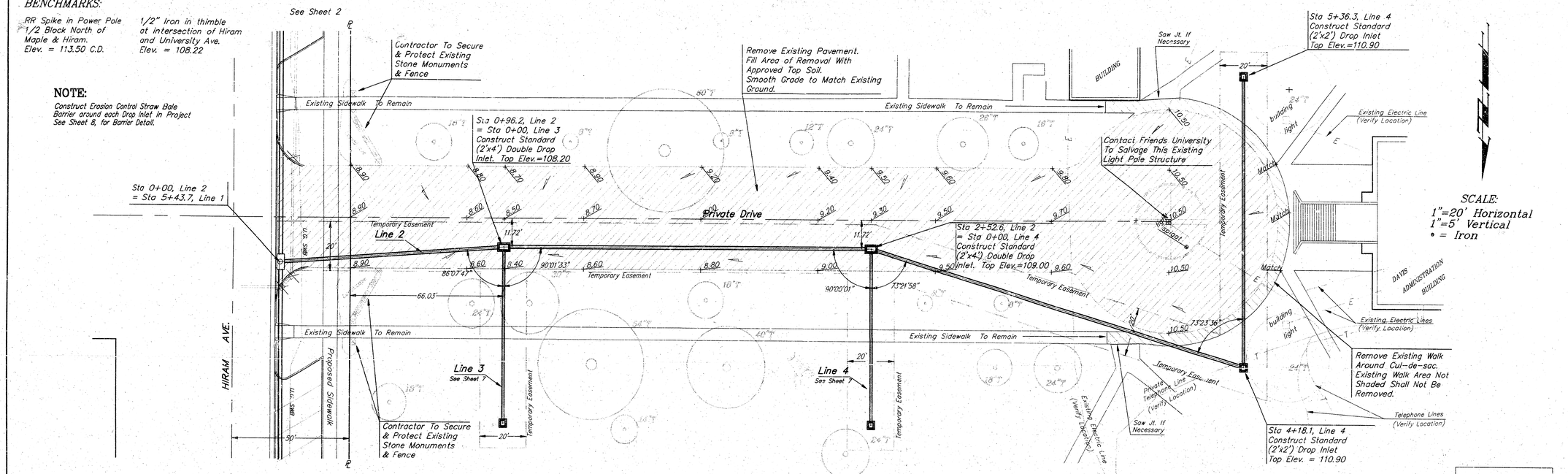
friends\storm\sheet4

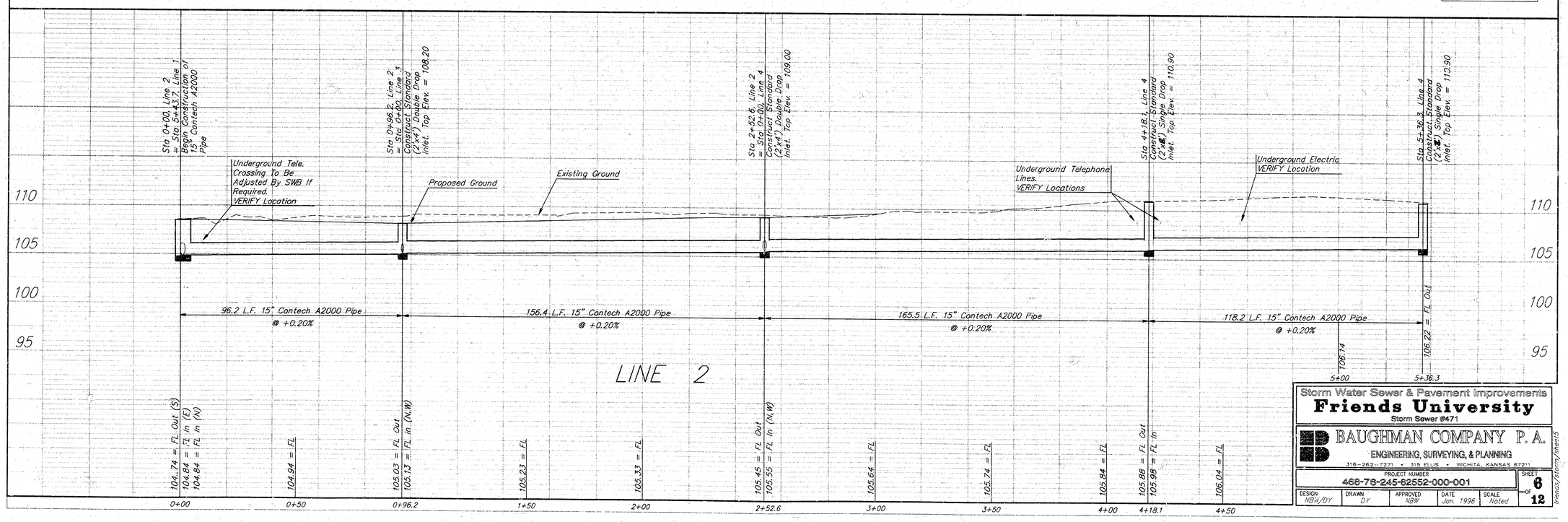
BENCHMARKS:

RR Spike in Power Pole 1/2 Block North of Maple & Hiram. Elev. = 113.50 C.D.

1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22

NOTE:
Construct Erosion Control Straw Bale Barrier around each Drop Inlet in Project See Sheet 8, for Barrier Detail.





Storm Water Sewer & Pavement Improvements
Friends University
Storm Sewer #471

BAUGHMAN COMPANY P.A.
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PROJECT NUMBER 468-78-245-62552-000-001

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
NBW/DY	DY	NBW	Jan. 1996	Noted	6 OF 12

friendy/storm/sheet5

BENCHMARKS:

RR Spike in Power Pole 1/2 Block North of Maple & Hiram. Elev. = 113.50 C.D.

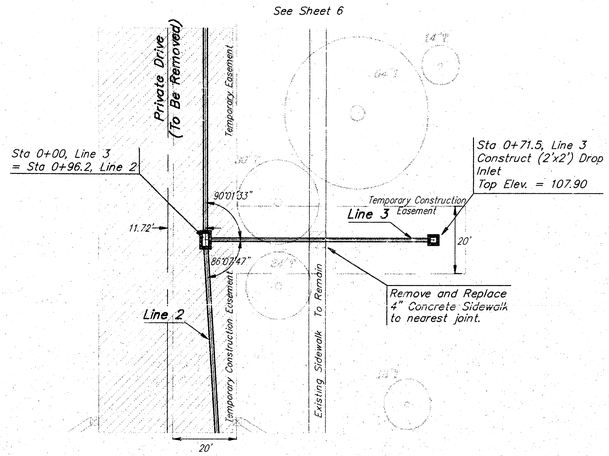
1/2" Iron in thimble at intersection of Hiram and University Ave. Elev. = 108.22

NOTE:

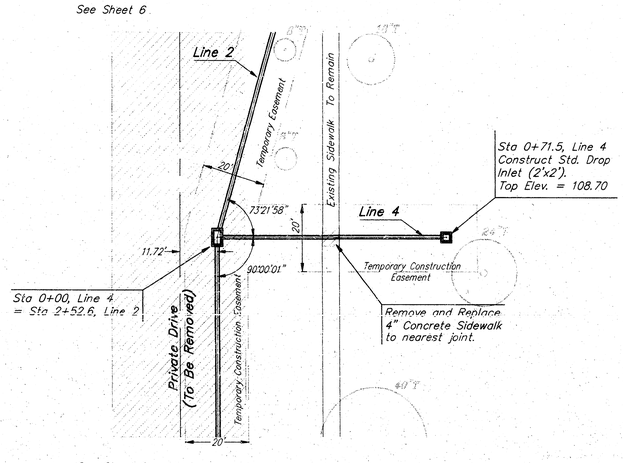
Construct Erosion Control Straw Bale Barr. - around each Drop Inlet in Project See Sheet 8, for Barrier Detail.

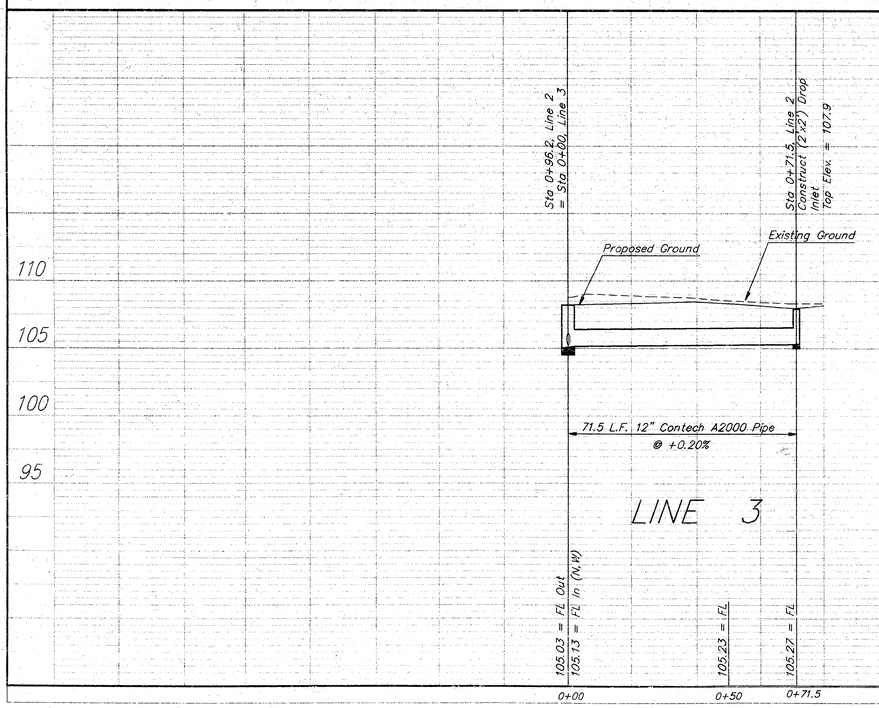
U N I V E R S I T Y P L A C E
A D D I T I O N

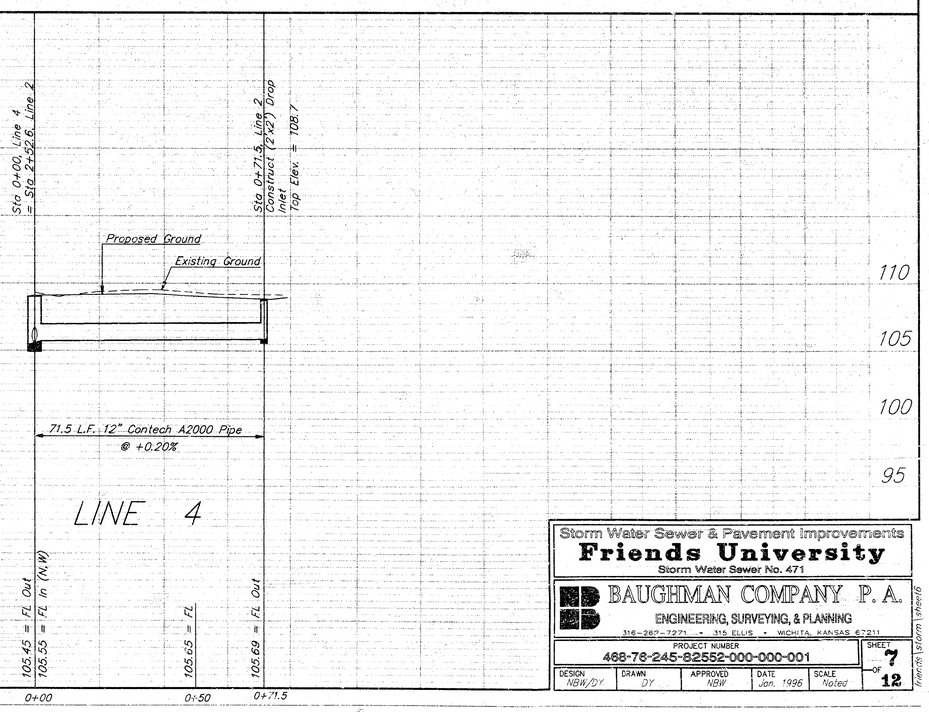
SCALE:
1"=20' Horizontal
1"=5' Vertical
• = Iron



SCALE:
1"=20' Horizontal
1"=5' Vertical
• = Iron







Storm Water Sewer & Pavement Improvements
Friends University
Storm Water Sewer No. 471

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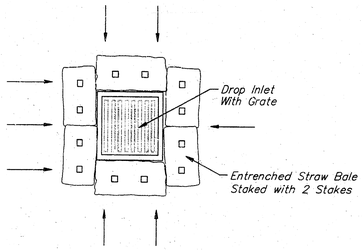
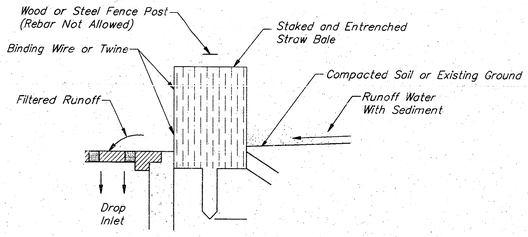
PROJECT NUMBER					SHEET
468-78-245-82552-000-000-001					7 OF 12
DESIGN	DRAWN	APPROVED	DATE	SCALE	
NBW/DY	DY	NBW	Jan. 1996	Noted	

friends\ storm\ sheet6

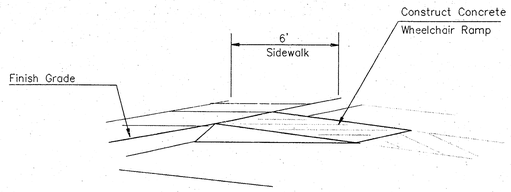




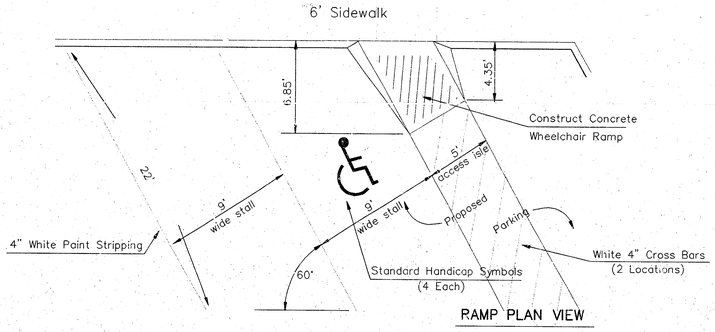
Straw Bale Barrier Detail

No Scale

* Cost To Be Incidental To Site Restoration



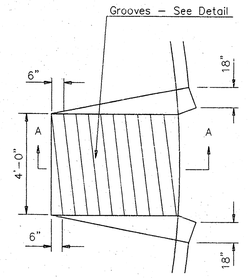
PERSPECTIVE VIEW



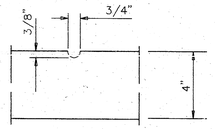
RAMP PLAN VIEW

Concrete WheelChair Ramp Detail & Stall Striping Detail

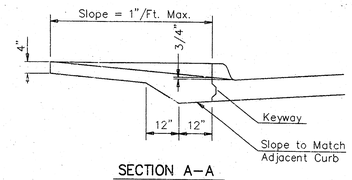
No Scale



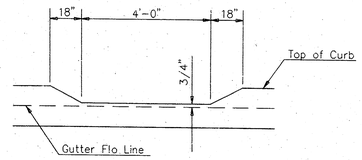
WHEELCHAIR RAMP PLAN VIEW



GROOVE DETAIL



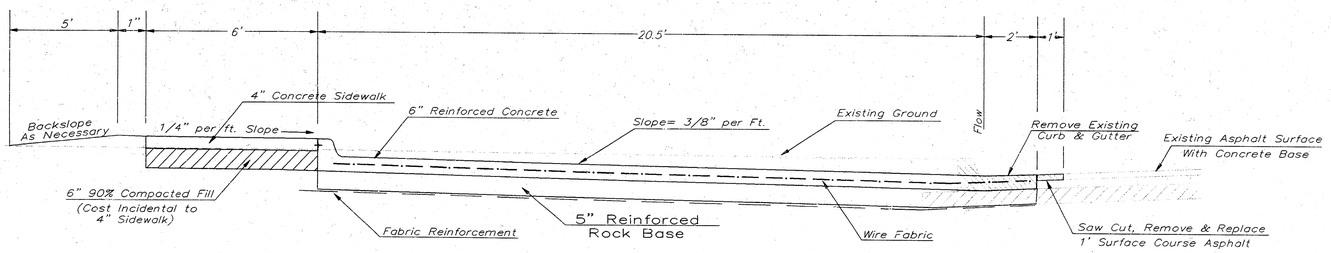
SECTION A–A



DEPRESSED CURB DETAIL

Standard WheelChair Ramp Detail

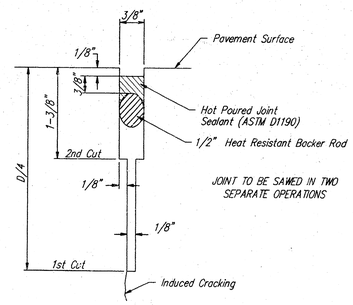
No Scale



New Parking - Typical Section Detail

No Scale

Note: All excavation and compacted fill to be incidental to 6" Reinforced Concrete Pavement



SAW JOINT DETAIL "A"

Storm Water Sewer & Pavement Improvements

Friends University

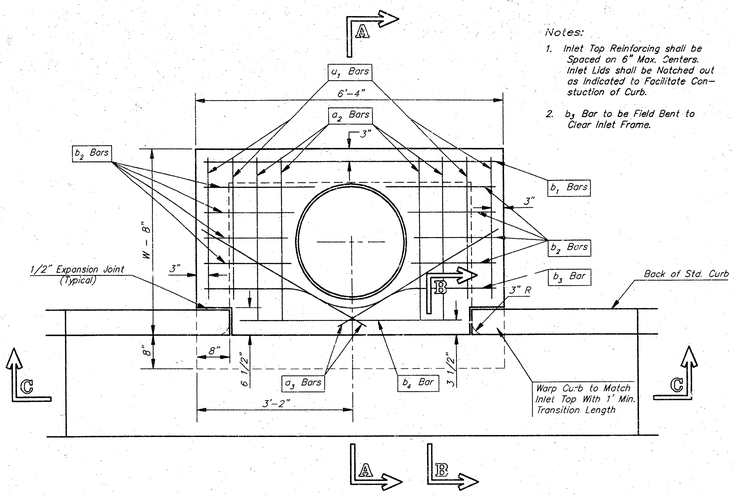
Storm Water Sewer No. 471

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

PROJECT NUMBER	SHEET
468-78-245-82552-000-000-001	8 OF 12

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW/DY	JJL/DY	NBW	Jan. 1996	Noted

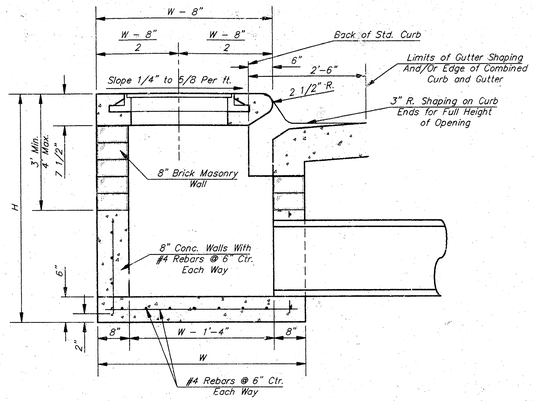
friends\storm\sheet17



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.



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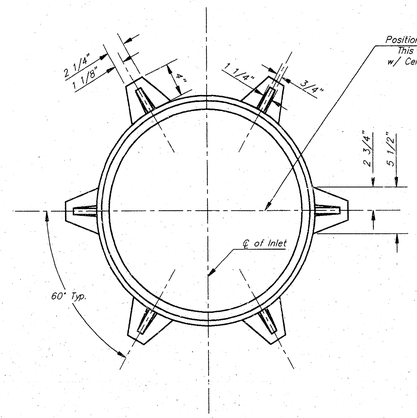

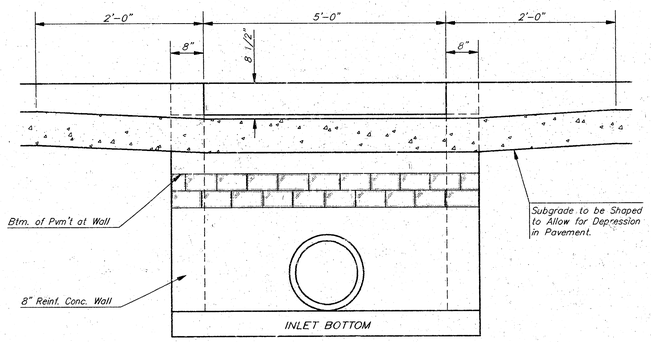

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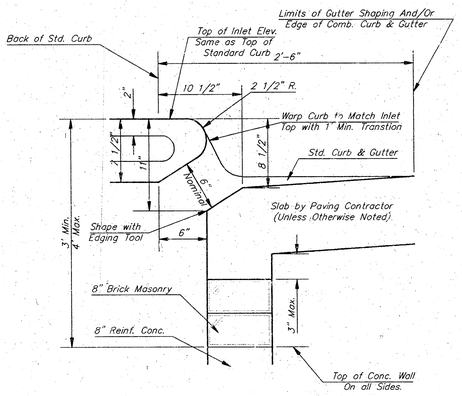

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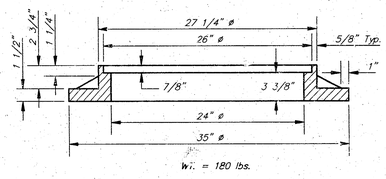
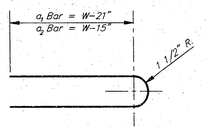


Wt. = 180 lbs.

MANHOLE RING AND COVER

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



BENDING DIAGRAM

STEEL SCHEDULE

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

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

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

GENERAL NOTES

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

Revised – Dec. 21, 1984

CITY OF WICHITA STANDARD TYPE1

CURB INLET DETAILS

INLET OPENING = 6"X5'-0"

BAUGHMAN COMPANY P. A.
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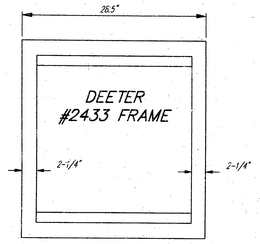
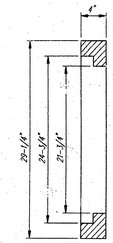
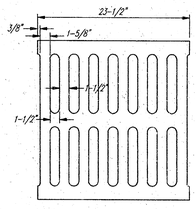
PROJECT NUMBER	SHEET
468-76-245-82552-000-000-001	9 OF 12

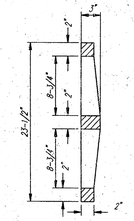
DESIGN	DRAWN	APPROVED	DATE	SCALE
C.O.W.	STAFF			

DETAILS\STYP1-5





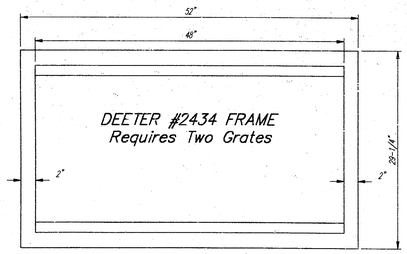


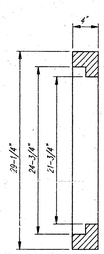


DEETER #2433 GRATE

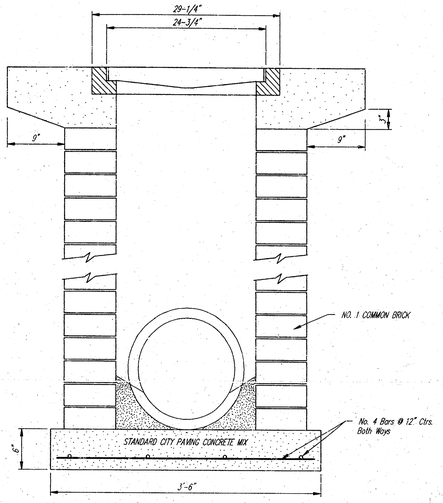
NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

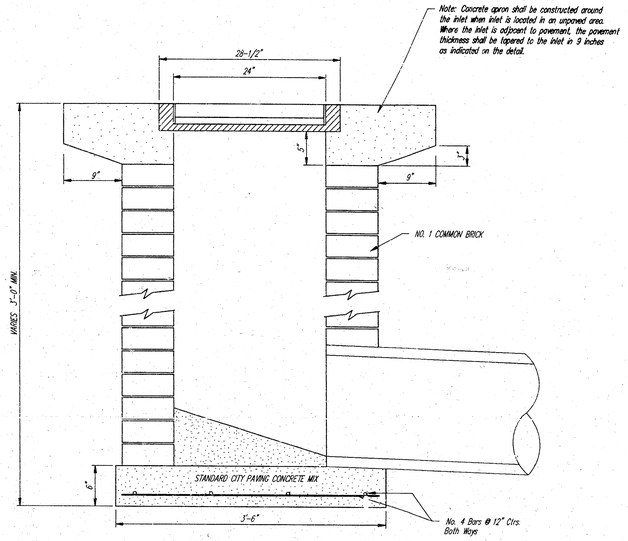
24" x 24" Frame and Grate Detail

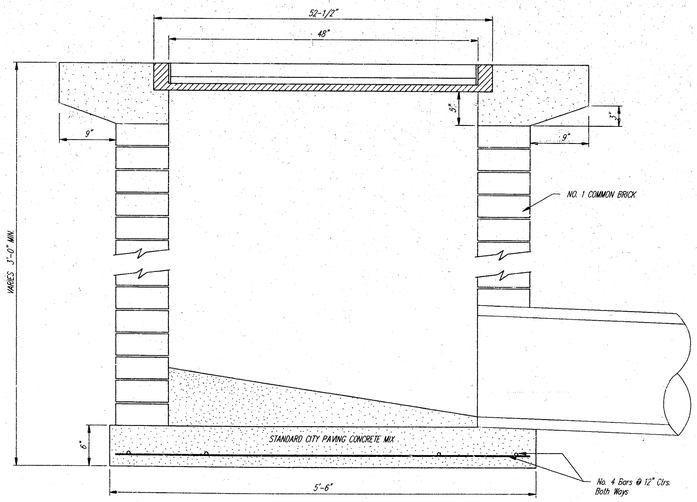




Double 24" x 24" Frame Detail







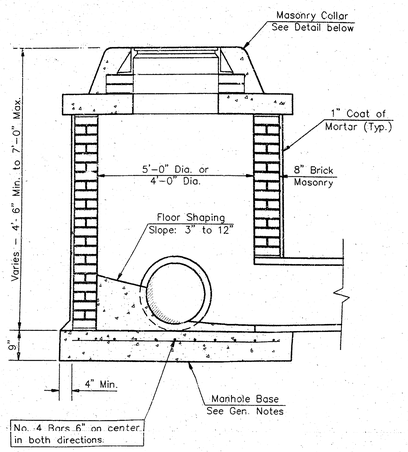
City of Wichita Standard
Drop Inlet

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

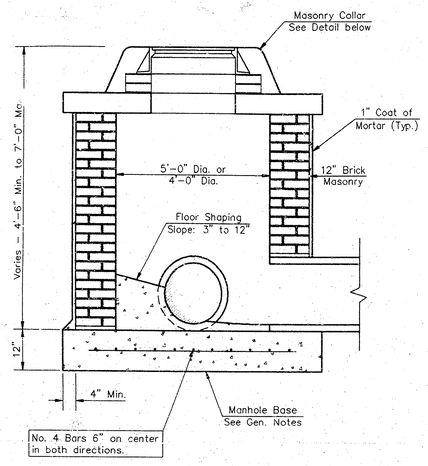
PROJECT NUMBER	SHEET
468-76-245-82552-003-000-001	10 OF 12

DESIGN	DRAWN	APPROVED	DATE	SCALE
C.O.W.	Staff			

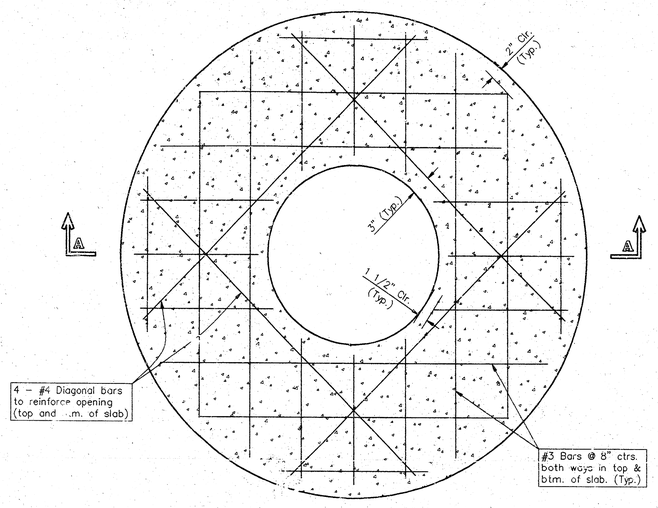
DETAILS\DROPINT2



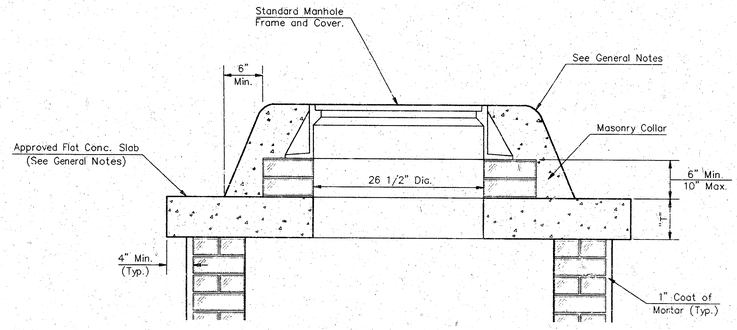
SHALLOW TYPE "A" MANHOLE



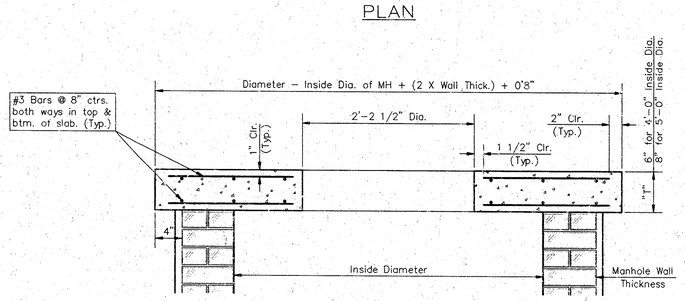
SHALLOW TYPE "B" MANHOLE



PLAN



MASONRY COLLAR DETAIL



SECTION A-A

FLAT CONCRETE SLAB DETAILS

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. Type "A" shallow manholes can be used on sewers when the manhole is not located within public street pavement. 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.

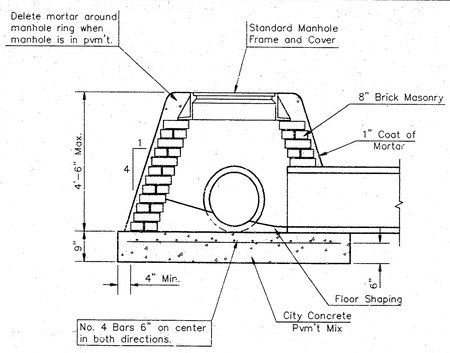
4. Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain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

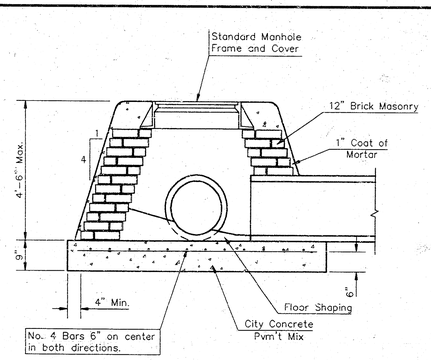
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

7. Standard shallow manholes type "A" and "B" shall be paid for at the unit price bid per each for the type and diameter indicated. Standard special shallow manholes type "A" and "B" shall be paid for at the unit price bid per each for the type 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.



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

CITY OF WICHITA, KANSAS

STD. SHALLOW MANHOLES

TYPE "A" AND TYPE "B"

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 312 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 468-76-245-82552-000-000-001

SHEET 11 OF 12

DESIGN	DRAWN	APPROVED	DATE	SCALE
C.O.W.	Staff			

DETAILS\SHLMAN

FRIENDS UNIVERSITY ADDITION
WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas)
Sedgwick County) SS We, Baughman Company, P.A., Surveyors in aforesaid County and State do hereby certify that we have surveyed and platted "FRIENDS UNIVERSITY ADDITION", Wichita, 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 Lots 139 through 199 odd and even inclusive, and the unnumbered parcel lying west of said Lot 199, all in Hendryx Subdivision of Lots in University Place Addition to Wichita, Kansas, together with Bonn Ave. and the alleys lying between said lots, and together with part of Mentor Ave., Hiram Ave., and part of Lots 28, and 30 on Everett Ave., University Place Addition to the City of Wichita, Kansas, and together with part of Lots 31, 33, and 35 on St. Clair Ave., in said University Place Addition, all being more particularly described as beginning at the N.E. Corner of Lot 140 in said Hendryx Subdivision; thence N89°58'49"E along the extended north line of said Lot 140, 13 feet; thence S00°E parallel with the west right-of-way line of Hiram Ave., 424.71 feet to a point of intersection with the south right-of-way line of Mentor Ave. extended east; thence S89°59'42"W along said south right-of-way line of Mentor Ave., 455.18 feet; thence N00°02'23"W, 75 feet; thence S89°59'42"W, 143 feet; thence S00°02'23"E, 49 feet; thence S89°59'42"W, 340.63 feet; thence S70°42'23"W, 64.67 feet; thence S66°07'45"W, 68.47 feet; thence S64°32'37"W, 172.40 feet to a point on the east right-of-way line of St. Clair Ave.; thence N00°06'32"W along said east right-of-way line, 49.93 feet to a point on the southeasterly right-of-way line of the St. Louis, Fort Scott & Wichita Railroad now Missouri Pacific Railroad; thence N57°17'42"E, along said right-of-way line, 873.32 feet to a point on the north line of said Lot 176 in Hendryx Subdivision; thence N89°58'49"E, 470.36 feet to the point of beginning.

All being situated in the NW1/4 of Sec. 31, Twp. 27-S, R-1-E of the 6th P.M., Sedgwick County, Kansas.

Existing public easements and dedications being vacated by virtue of K.S.A. 12-512(b).

Baughman Company, P.A.

Michael G. Conrey, L.S. 971 — Surveyor

Know all men by these presents that we, the undersigned, have caused the land in the surveyors certificate to be platted into a Lot and a Block to be known as "FRIENDS UNIVERSITY ADDITION", Wichita, Sedgwick County, Kansas. The utility easements are hereby granted as indicated for the construction and maintenance of all all public utilities. The street is hereby dedicated to and for the use of the public. All abutters rights of access to and from Maple Street over and across the north line of Lot 1, Block A, are hereby granted to the City of Wichita, Kansas EXCEPT the east 50 feet of the west 115.45 feet thereof.

Friends University

Randall C. Doerksen — Vice-President

State of Kansas)
Sedgwick County) SS The foregoing instrument acknowledged before me, this 30th day of August, 1994, by Randall C. Doerksen, Vice-President of Friends University, on behalf of the university.

MILDRED E. FRANZ — Notary Public

My App't. Exp. 2-3-95

We, Bootmen's First National Bank of Kansas City, holder of a mortgage on the above described property do hereby consent to this plat of "FRIENDS UNIVERSITY ADDITION", Wichita, Sedgwick County, Kansas.

JAMES P. COLGAN — Vice Pres.

State of ~~Kansas~~ Missouri)
~~Sedgwick~~ Jackson County) SS The foregoing instrument acknowledged before me, this 7th day of SEPTEMBER, 1994, by JAMES P COLGAN VICE PRES of Boatman's First National Bank of Kansas City, on behalf of the bank.

PAULA G. CLARKIN — Notary Public

My App't. Exp. Sept 20 1996

This plat of "FRIENDS UNIVERSITY ADDITION", to Sedgwick County, Kansas has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.
Dated this 30th day of June, 1994.
Wichita-Sedgwick County Metropolitan Area Planning Commission

James D. Miner — Chairman

Marvin S. Krout — Secretary

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 18th day of OCTOBER, 1994.

Elma Broadfoot — Mayor

Pat Burnett — City Clerk

Entered on transfer record this 1st day of November, 1994.

Susan E. Crockett-Spoon — County Clerk

CLERK OF SEDGWICK COUNTY — SEDGWICK COUNTY COURTHOUSE — KANSAS

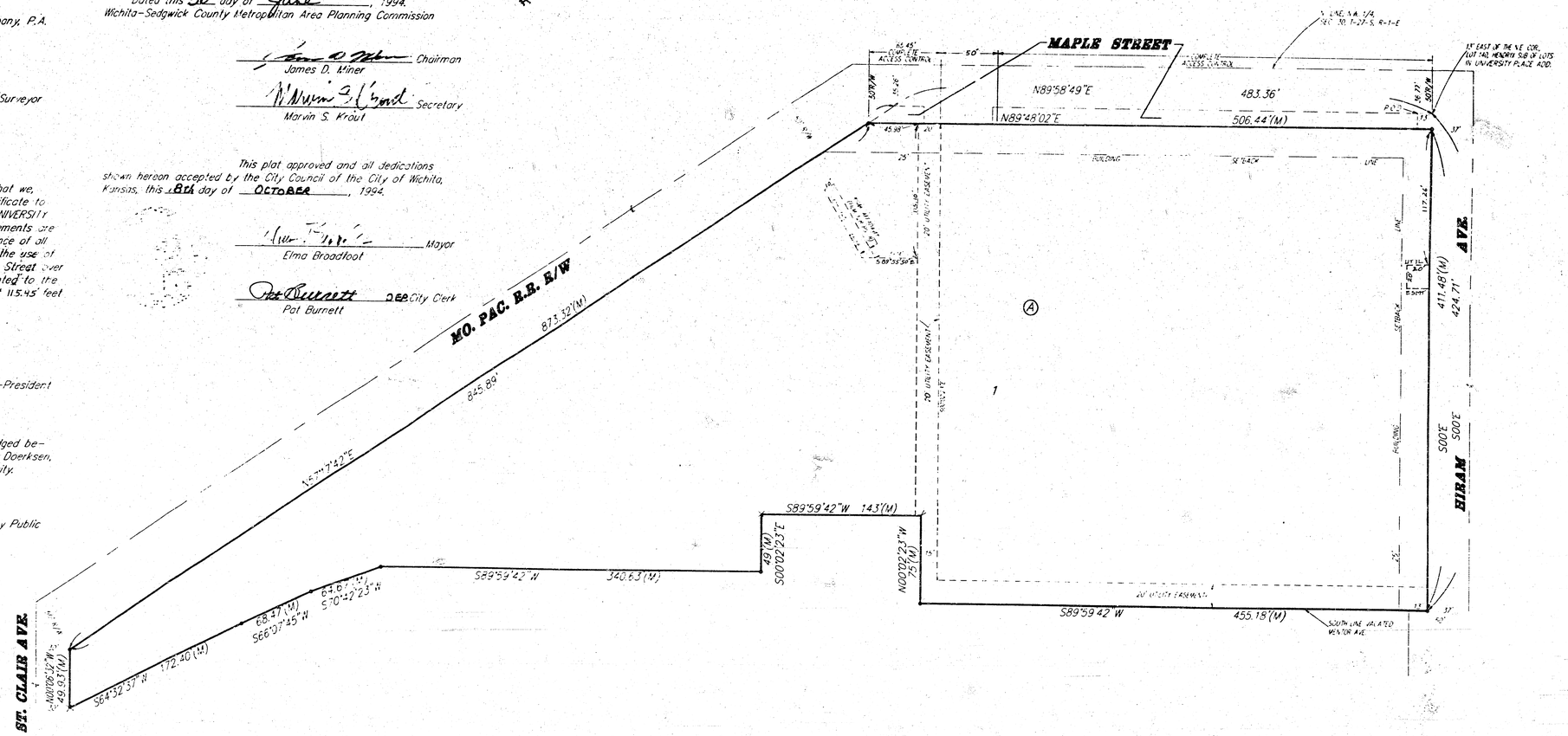
State of Kansas)
Sedgwick County) SS This is to certify that this plat has been filed for record in the office of the Register of Deeds, this 1ST day of NOVEMBER, 1994, at 3:00 o'clock P.M; and is duly recorded.

Pat Kettler — Register of Deeds
Pat Kettler

Ed Rees — Deputy
Ed Rees

1418361

SCALE
1" = 50'
● = 1/2" REBAR W/ "BAUGHMAN" CAP (SET)
X = "CROSS" CUT (SET)
Δ = "V" NOTCH (SET)
(M) = MEASURED



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