

8" PVC
Roof Drain
 $Q_s = 0.34$ cfs
 $Q_{100} = 0.55$ cfs

8" PVC
Canopy Drain
 $Q_s = 0.46$ cfs
 $Q_{100} = 0.73$ cfs

15" RCP
 $Q_s = 1.26$ cfs
 $Q_{100} = 2.02$ cfs

Grate Flow
 $Q_s = 0.46$ cfs
 $Q_{100} = 0.74$ cfs

$C = 1.0$

Calculations for grate capacity:

$$Q = 0.6 \cdot A \cdot \sqrt{2gh}$$

Q = Flow (cfs)
 A = Area (ft²)
 h = Depth (ft)
 g = Gravity (ft/s²)

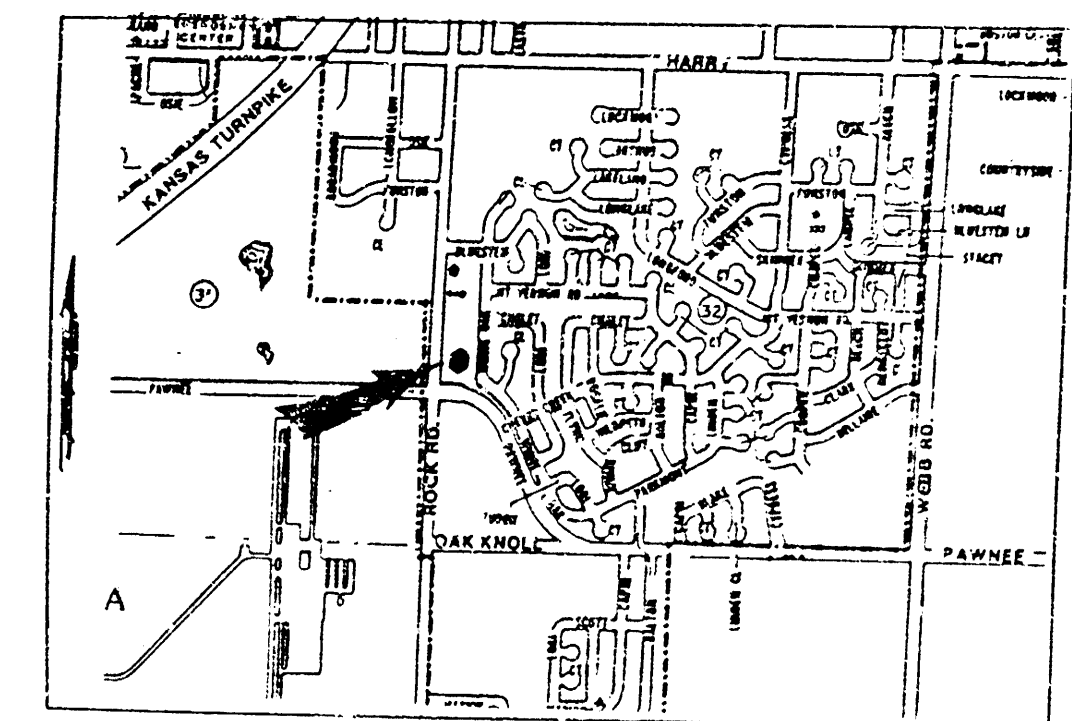
Open Area of Grate = 1.1 ft²
 Assume: $h = 0.2$ ft

$$Q = 0.6 \cdot 1.1 \cdot \sqrt{2 \cdot 32.2 \cdot 0.2}$$

$$Q = 2.4$$
 cfs

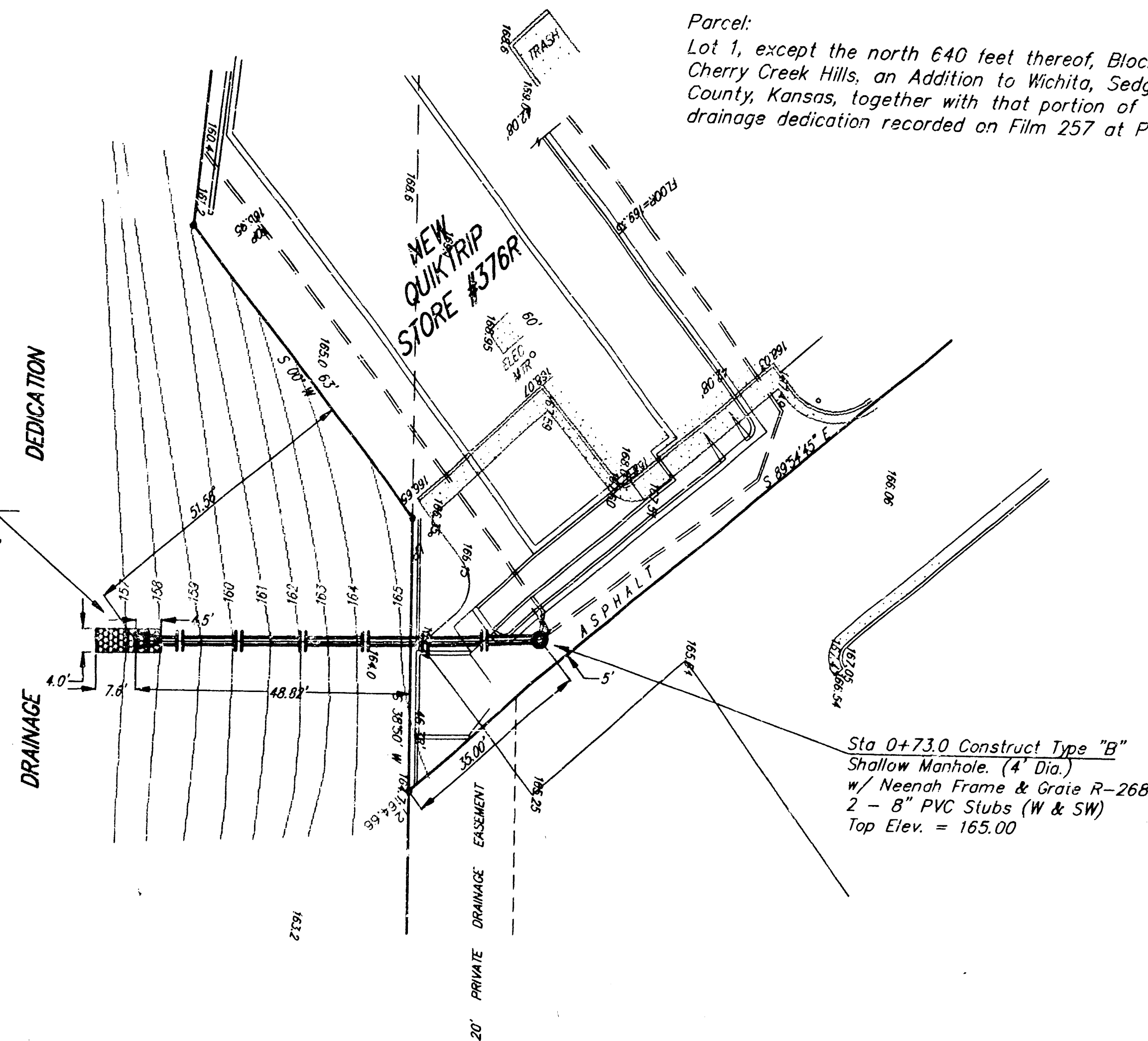
Contractor to contact KANSAS ONE CALL
to order locates in the field

Parcel:
Lot 1, except the north 640 feet thereof, Block 1,
Cherry Creek Hills, an Addition to Wichita, Sedgwick
County, Kansas, together with that portion of vacated
drainage dedication recorded on Film 257 at Page 1152.



Site Location

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

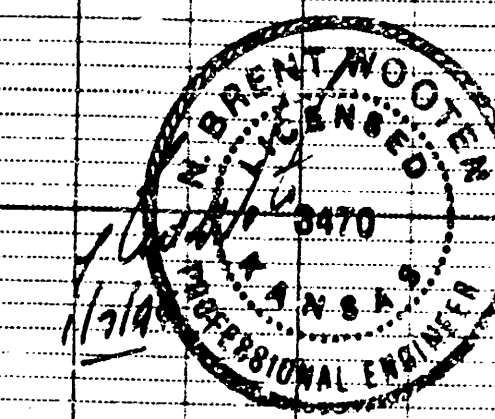
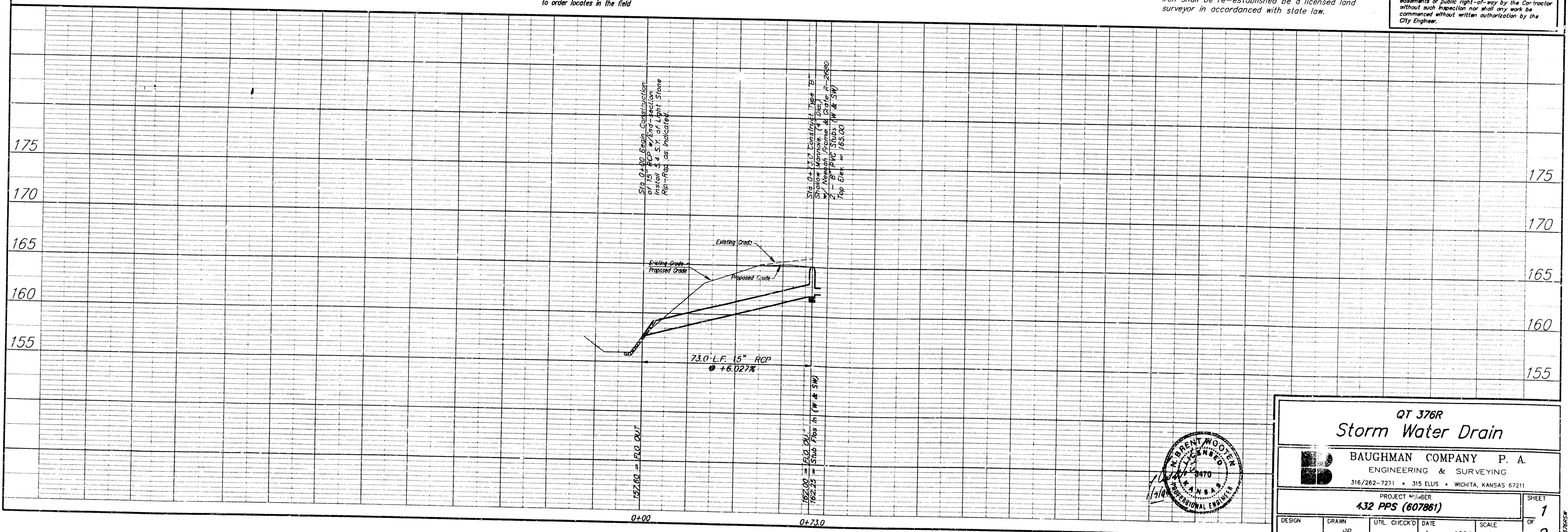


Note:
Remove Pavement only as necessary
for SWS Construction DO NOT replace.
This work shall be incidental to Project
Cost.
The Contractor shall be responsible for preserving
property irons, the Contractor will be required to
re-establish any property irons which are damaged
or destroyed by his construction operations. Such
iron shall be re-established by a licensed land
surveyor in accordance with state law.

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
 Storm Sewers VRH 1/10/94
 Driveway Approaches _____
 Water Mains _____
 Paving _____

NOTE TO CONTRACTORS
 Inspection and testing for this project is to be
 provided by a Licensed Consulting Engineering
 Firm under contract with the Owner/Developer.
 Solid 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.



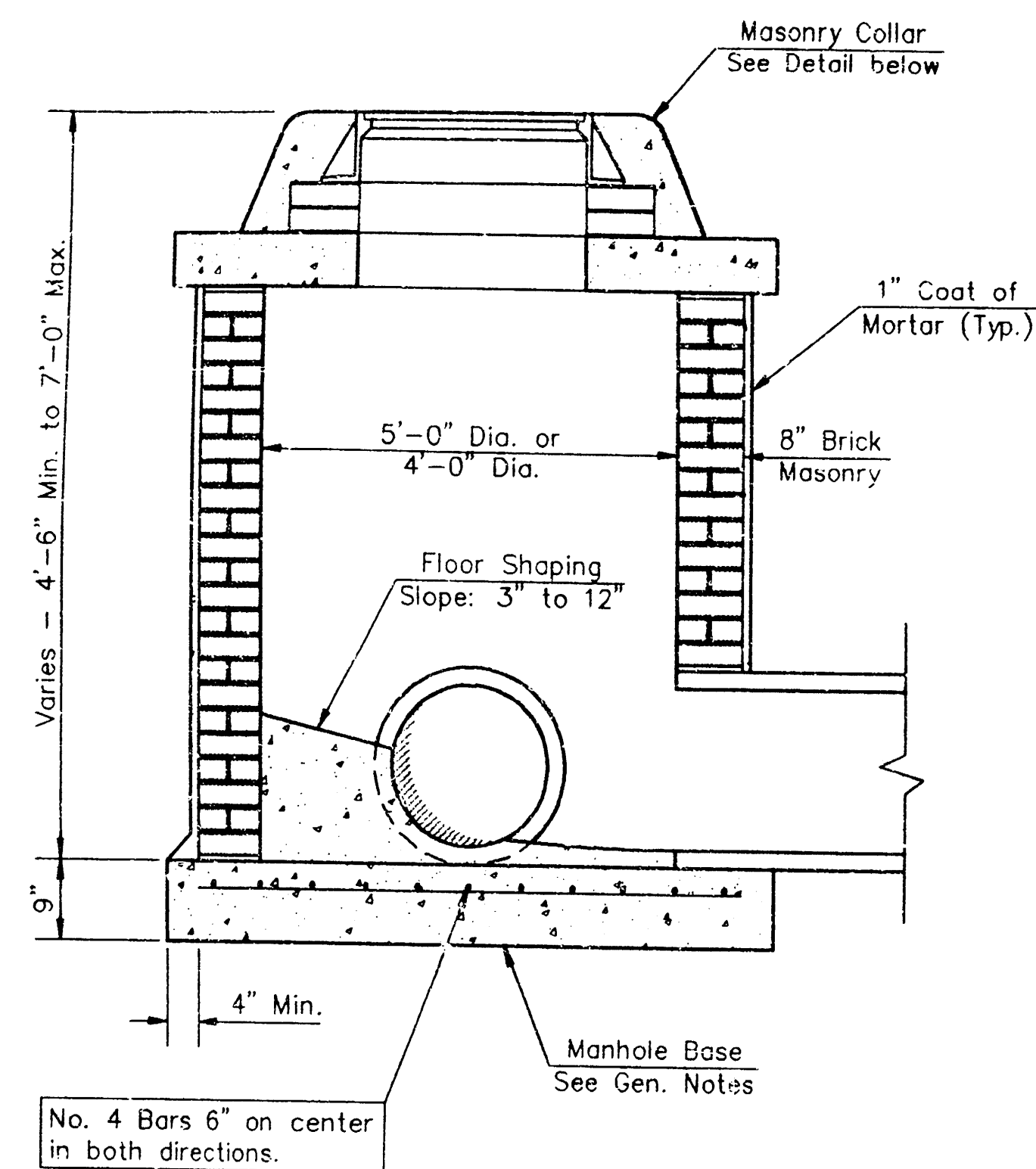
QT 376R
Storm Water Drain

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

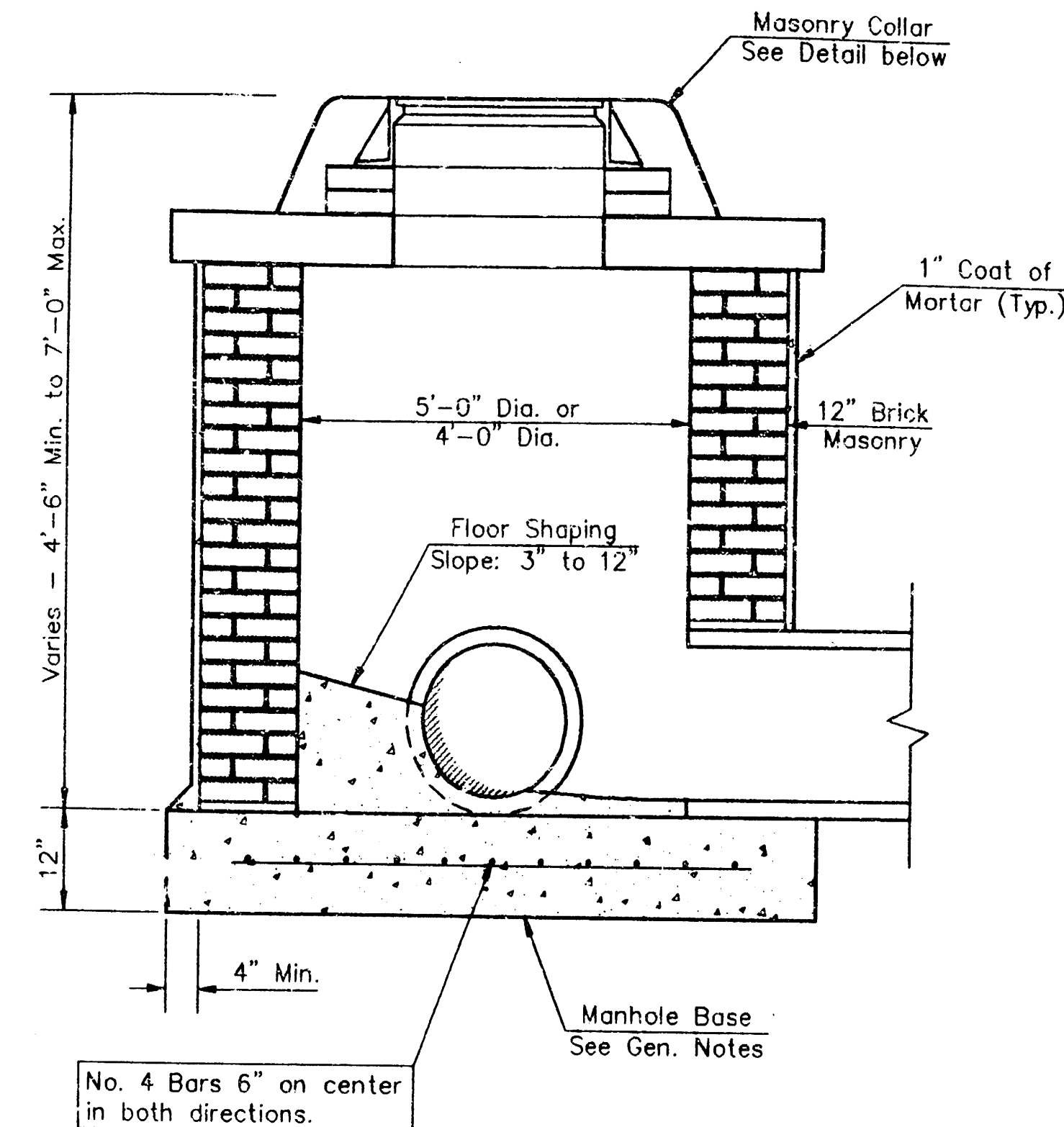
PROJECT NUMBER
432 PPS (607861)

DESIGN _____ DRAWN BP UTIL. CHECKED _____ DATE January 1994 SCALE Noted

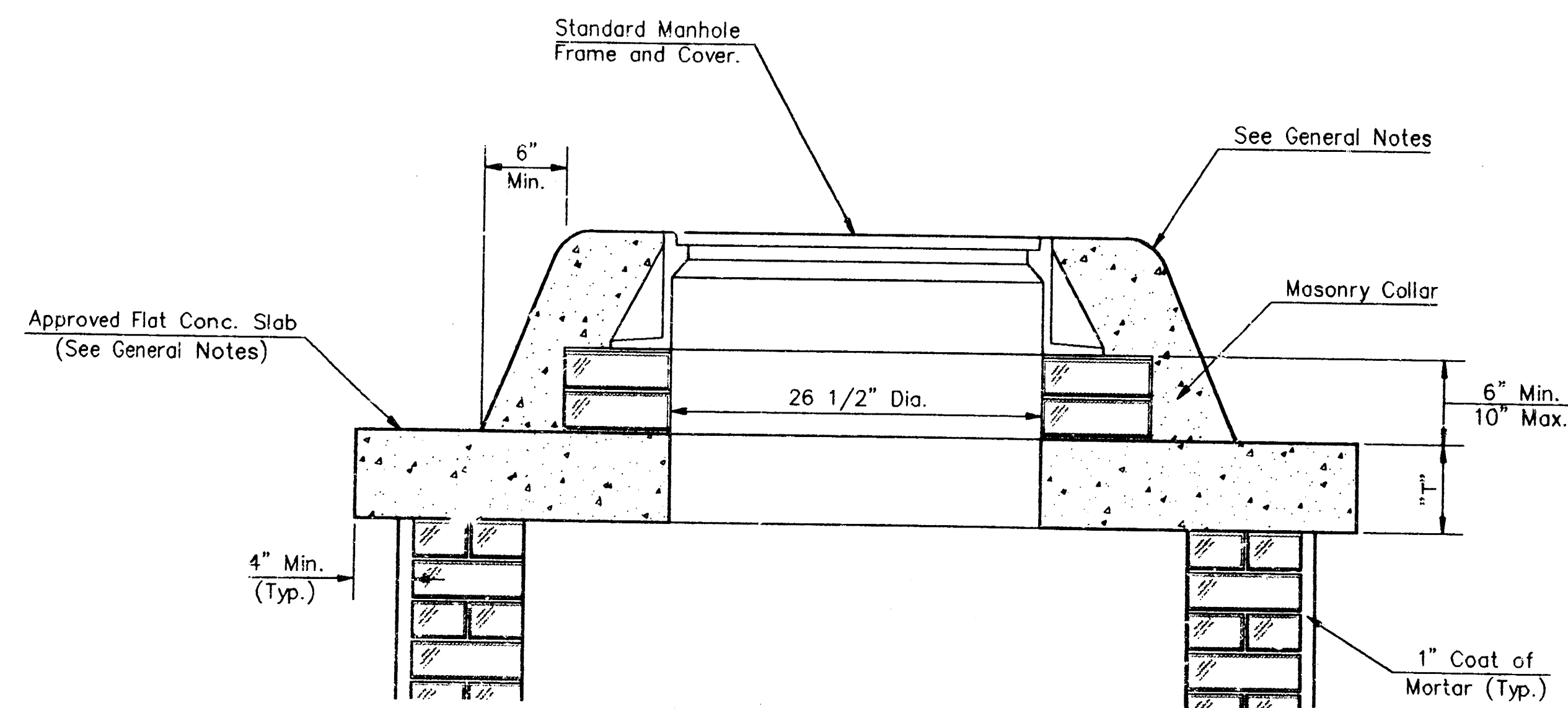
SHEET
OF 1
2



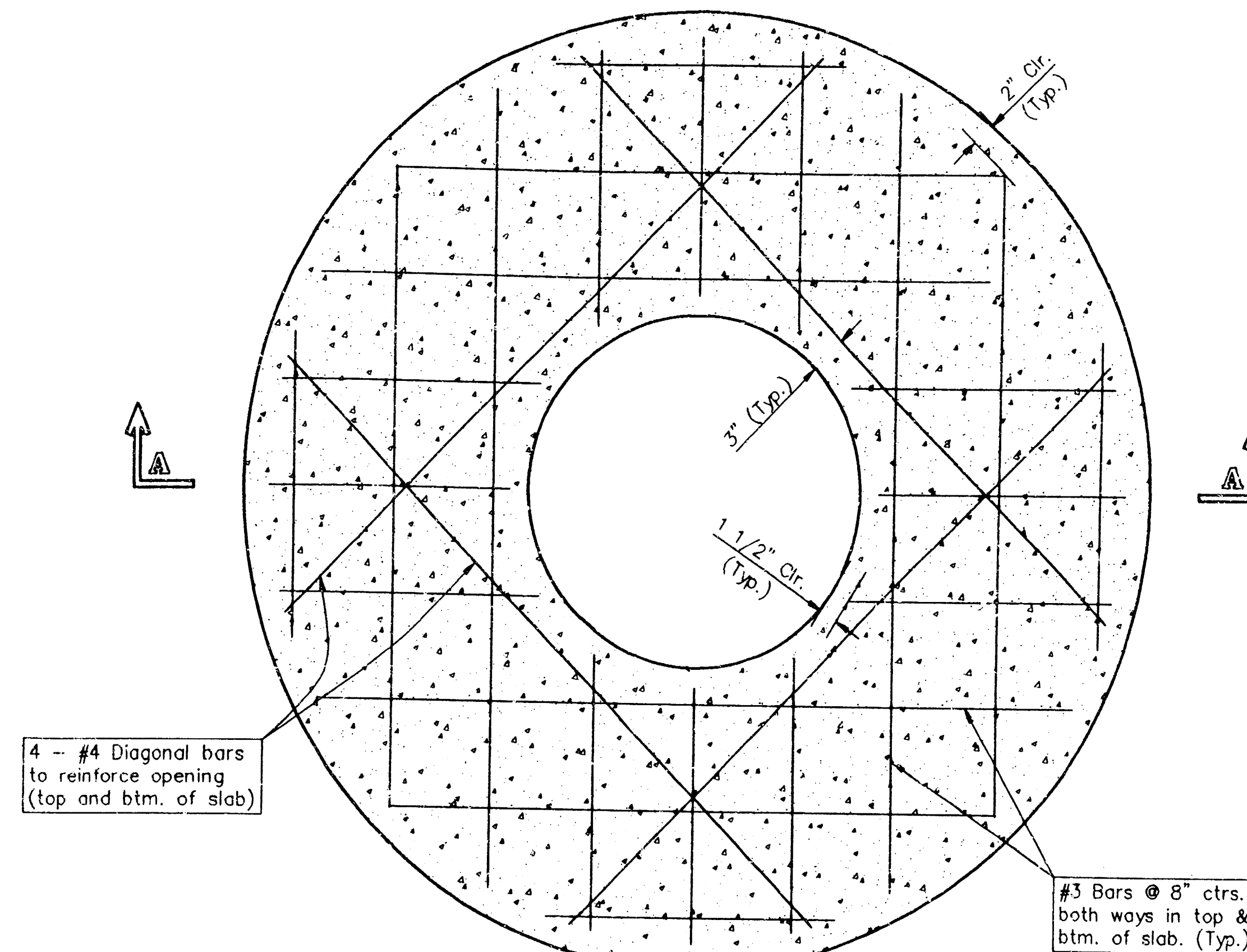
SHALLOW TYPE "A" MANHOLE



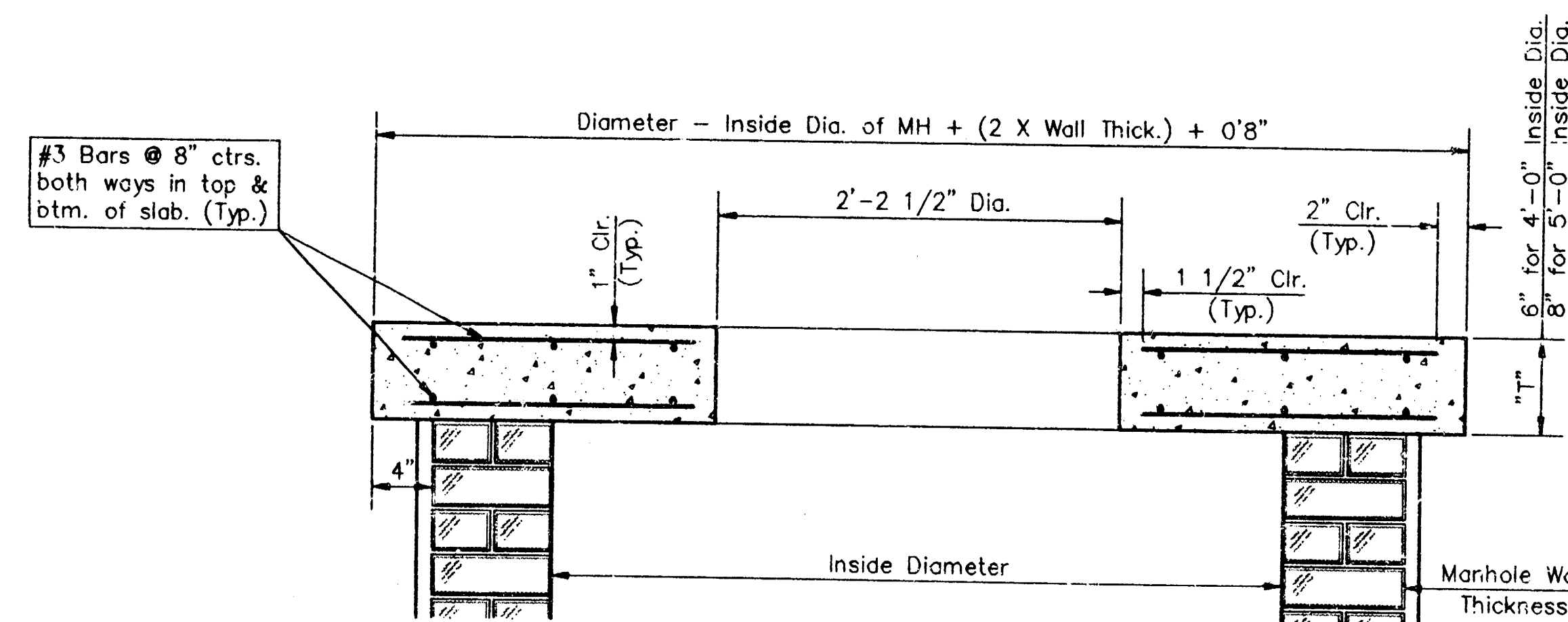
SHALLOW TYPE "B" MANHOLE



MASONRY COLLAR DETAIL

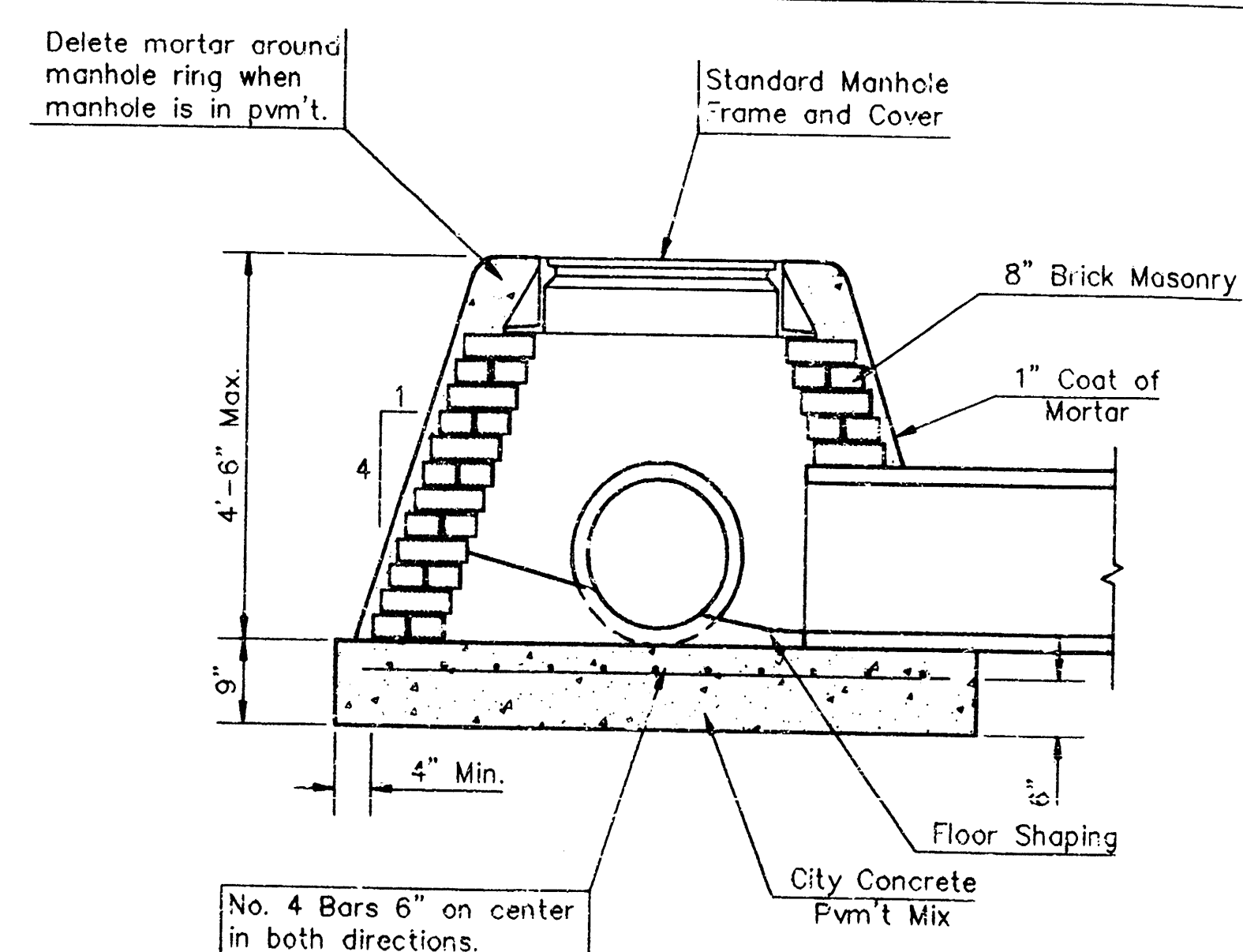


PLAN

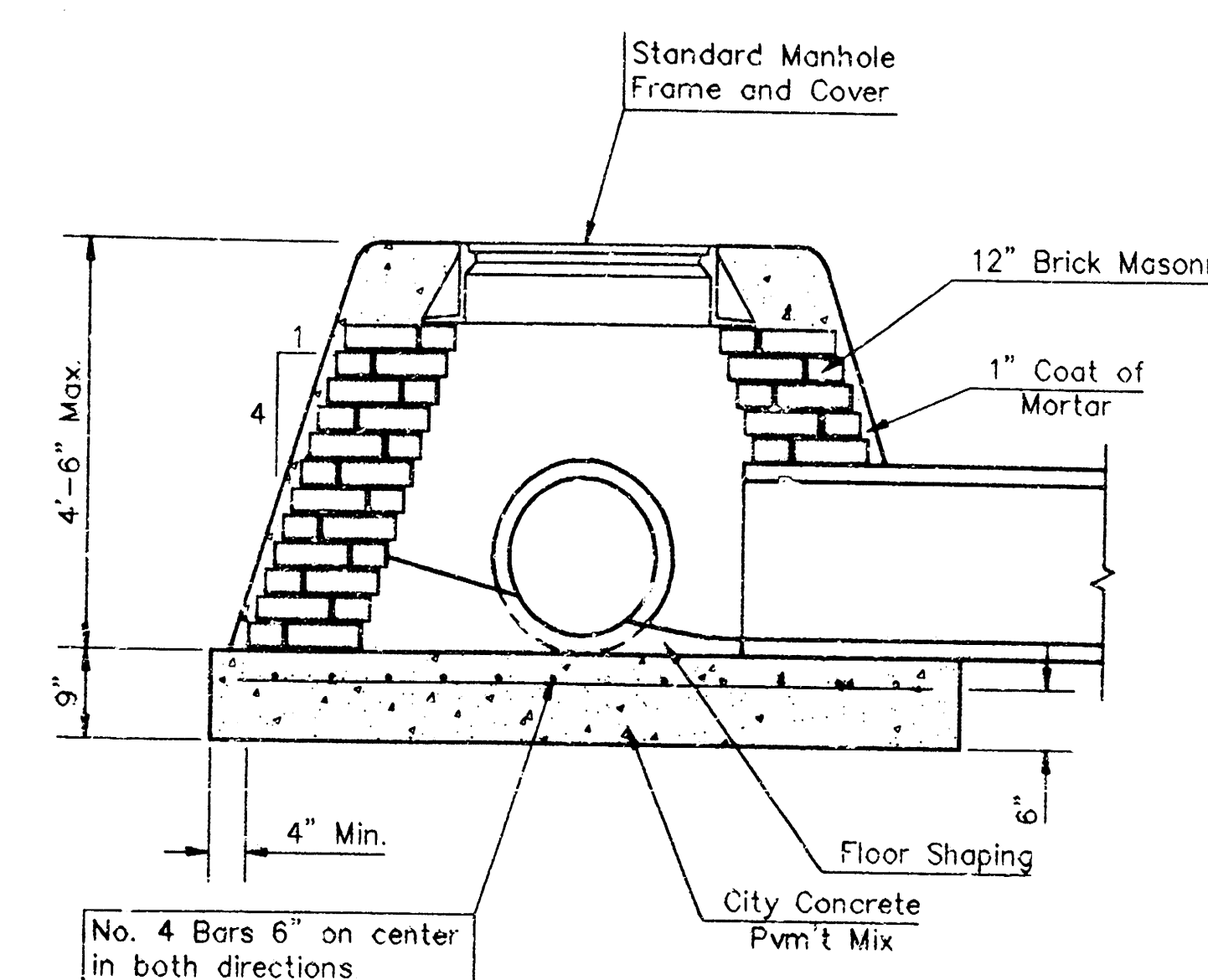


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

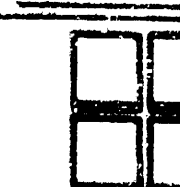
GENERAL NOTES

- 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 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.
- 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.
- 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.
- 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 drawings.
- The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
- 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.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES
TYPE "A" AND TYPE "B"

PROJECT NUMBER
432 PPS (607861)

SHEET
2 OF 2



BAUGHMAN COMPANY P. A.
ENGINEERING & SURVEYING

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DETAILS\SHMAN.DWG

10-1-3-11

8" PVC
Roof Drain
 $Q_s = 0.34$ cfs
 $Q_{100} = 0.55$ cfs

8" PVC
Canopy Drain
 $Q_s = 0.46$ cfs
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Grate Flow
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Calculations for grate capacity:

$Q = 0.6 \cdot A \cdot \sqrt{2 \cdot h \cdot g}$

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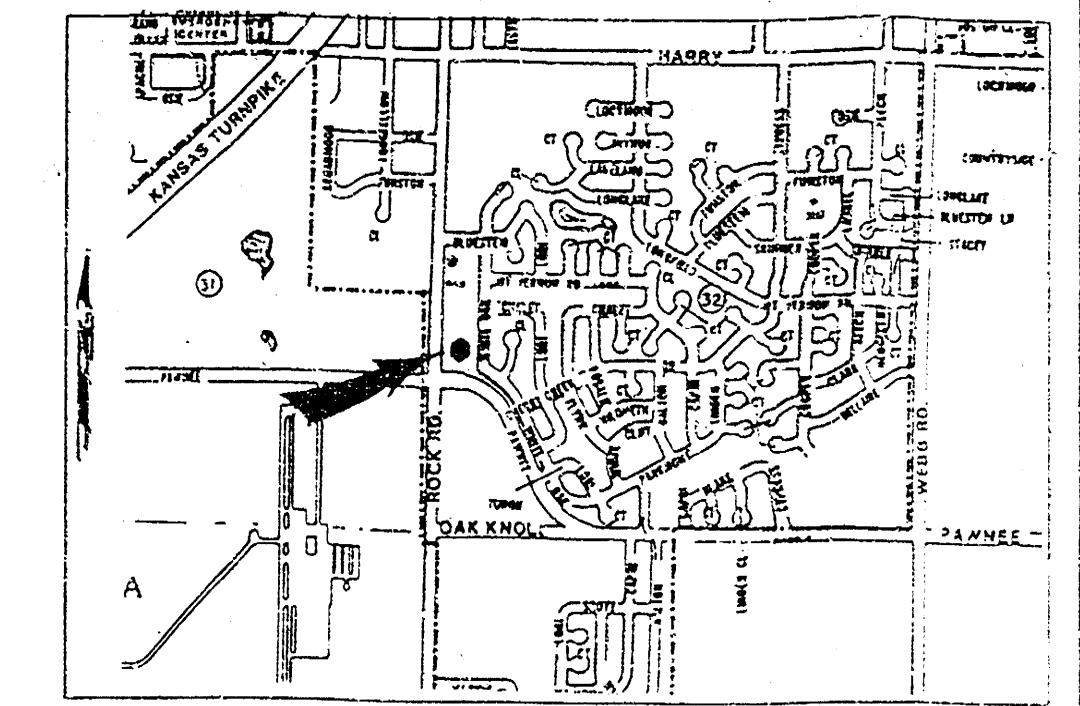
Open Area of Grate = 1.1 ft²

Assume: $h = 0.2$ ft

$Q = 0.6 \cdot 1.1 \cdot \sqrt{2 \cdot 0.2 \cdot 32.2}$
 $Q = 2.4$ cfs

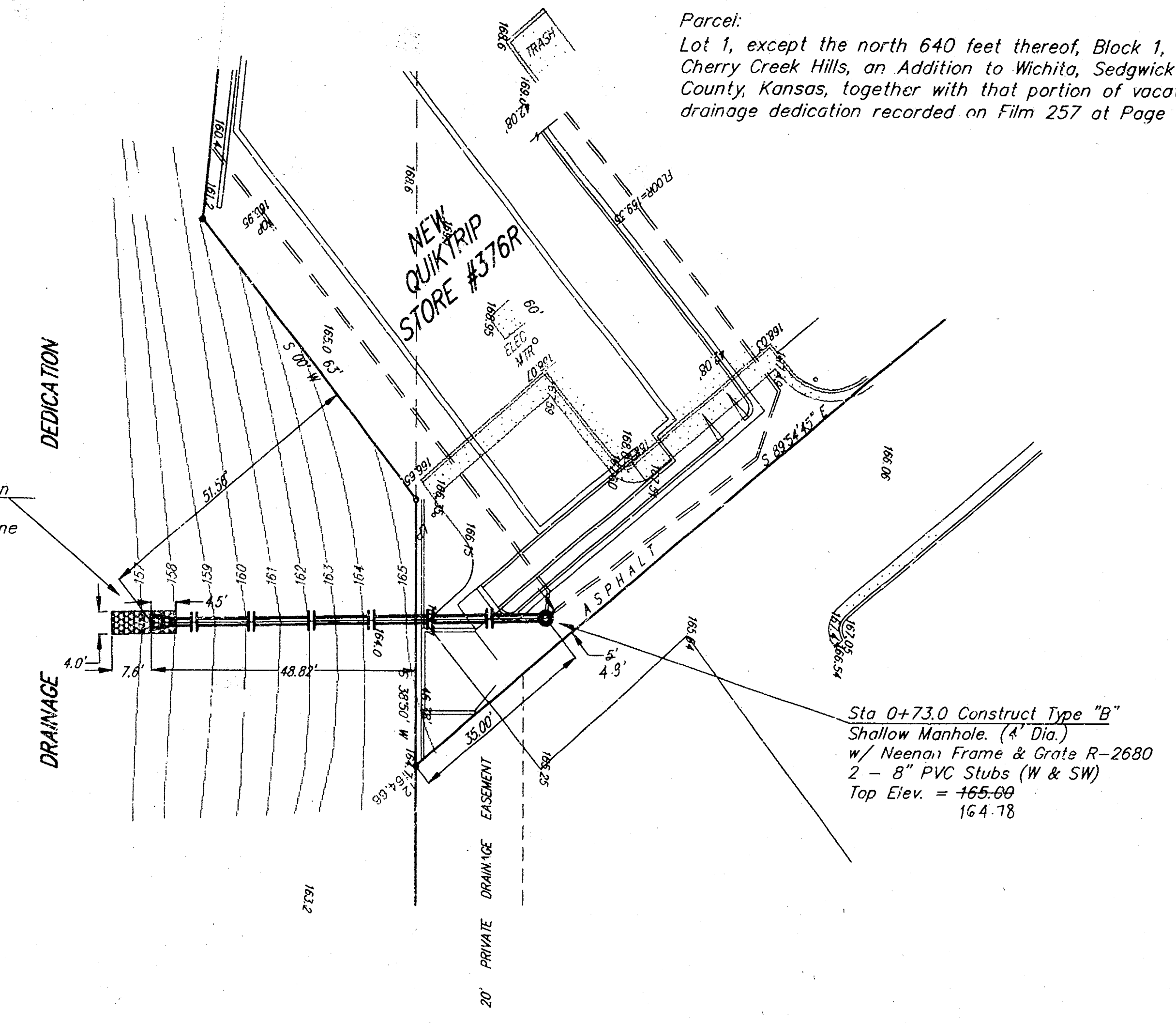
Sta 0+00 Begin Construction
of 15" RCP w/End-section
Install 5.4 S.Y. of Light Stone
Rip-Rap as Indicated.

Parcel:
Lot 1, except the north 640 feet thereof, Block 1,
Cherry Creek Hills, an Addition to Wichita, Sedgwick
County, Kansas, together with that portion of vacated
drainage dedication recorded on Film 257 at Page 1152.



Site Location

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



Bench Mark: "□" Cut on Top of curb
located 19'S and 1'E of the NW corner
of the Described Parcel.
Elev = 167.46 City Datum

Note:
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for SWS Construction DO NOT replace.
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Cost.
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APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____

Storm Sewers VRH 1/10/94

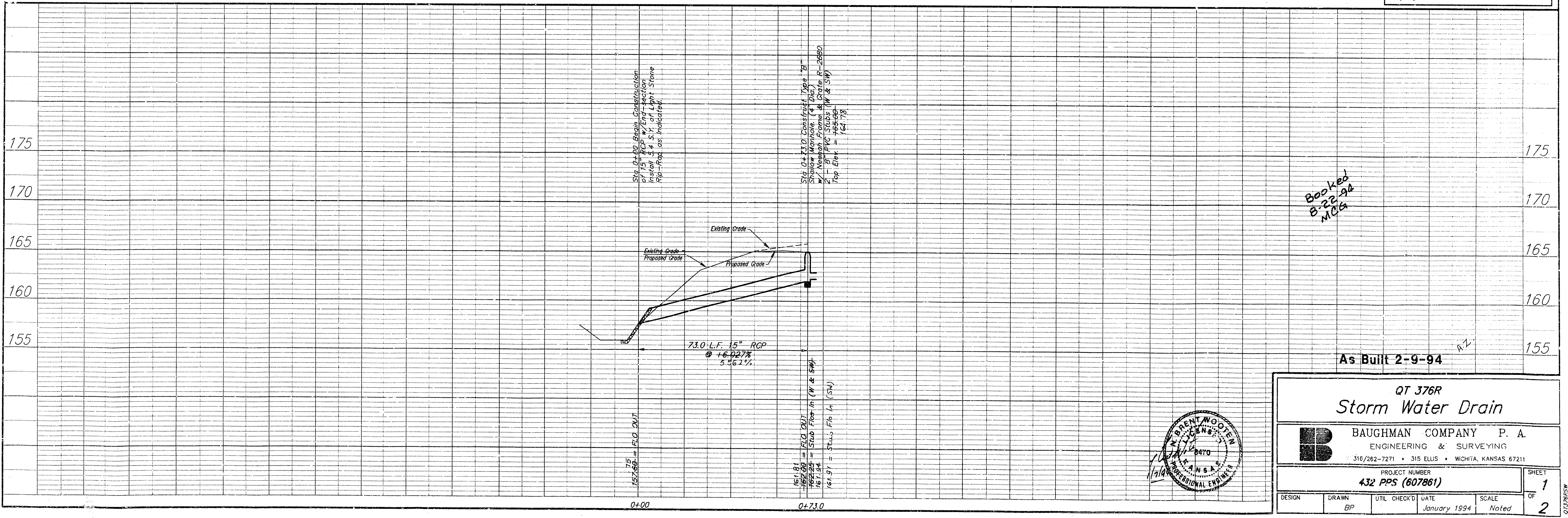
Driveway Approaches _____

Water Mains _____

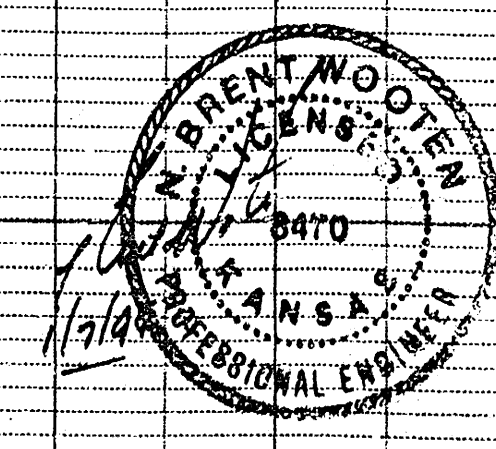
Paving _____

NOTE TO CONTRACTORS
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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
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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.

Contractor to contact KANSAS ONE CALL
to order locates in the field



Booked
8-22-94
MCS



As Built 2-9-94

QT 376R
Storm Water Drain

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

PROJECT NUMBER
432 PPS (607861)

DESIGN _____ DRAWN BP UTIL CHECKED DATE January 1994 SCALE Noted

SHEET
OF 1
2