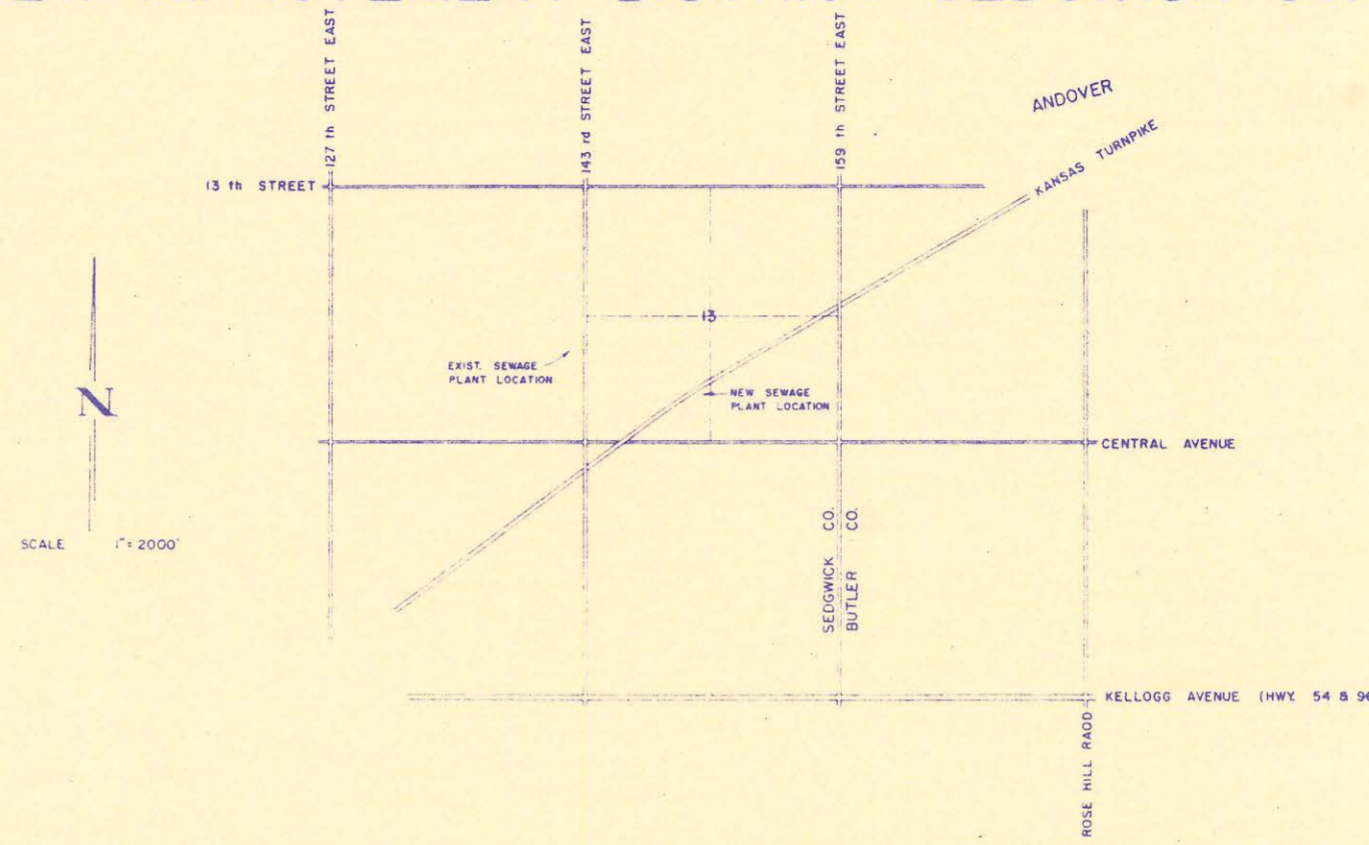


4MC-116

PLANS

SEWAGE TREATMENT PLANT RELOCATION
 CRESTVIEW IMPROVEMENT DISTRICT SEDGWICK CO. KANSAS



SCALE 1"=2000'

- MAJOR DESIGN PARAMETERS**
- A. FLOW DESIGN
 2000 PE - 300,000 gal/day
 3500 PE - 450,000 gal/day
 - B. BOD₅ 90 mg/l - INFLUENT
 - C. TOTAL SUSPENDED SOLIDS
 80 mg/l - INFLUENT
 - D. DETENTION TIME
 1) IN ORBIAL
 2000 PE - 23.41 hrs.
 3500 PE - 15.61 hrs.
 2) IN CLARIFIER
 2000 PE - 5.29 hrs.
 3500 PE - 3 hrs.
 - E. OVERFLOW RATES IN CLARIFIER
 5,000 gal/day/ft
 - F. OXYGEN TRANSFER RATES
 2.5 pounds of O₂/hour/rotor
 - G. PUMPING RATES
 1) SLUDGE - 200 gpm
 2) RAW SEWAGE - 625 gpm
 - H. PUMPING HEADS
 1) SLUDGE - 7 to 10' operating singly using overage wetwell level
 2) RAW SEWAGE - 50' operating singly

LOCATION MAP

- B.M. 1 - SW CORNER, SEC. 13, T.27S, R.5E
 TOP OF IRON (IN THIMBLE) 1372.0
- B.M. 2 - STEPPED SPIKE (SLIGHTLY BENT)
 40 PENNY NAIL NW SIDE OF HEDGE
 TREE ON SOUTH LINE OF PLANT
 SITE, 69' E. OF K.T.A. R/W. 1335.10
- B.M. 3 - TOP OF MANHOLE RING (SOUTH
 SIDE) AT EXISTING TREATMENT
 PLANT 1348.85

REISS & GOODNESS ENGINEERS
 2100 WEST 21ST STREET
 WICHITA, KANSAS 67204
 (785) 322-0200

DATE	9-21-77
REVISIONS	4-20-78 63-203
SHEET NUMBER	1 OF 15 SHEETS

911-116

FILM 302 PAGE 0529

EASEMENT FOR SANITARY SEWER

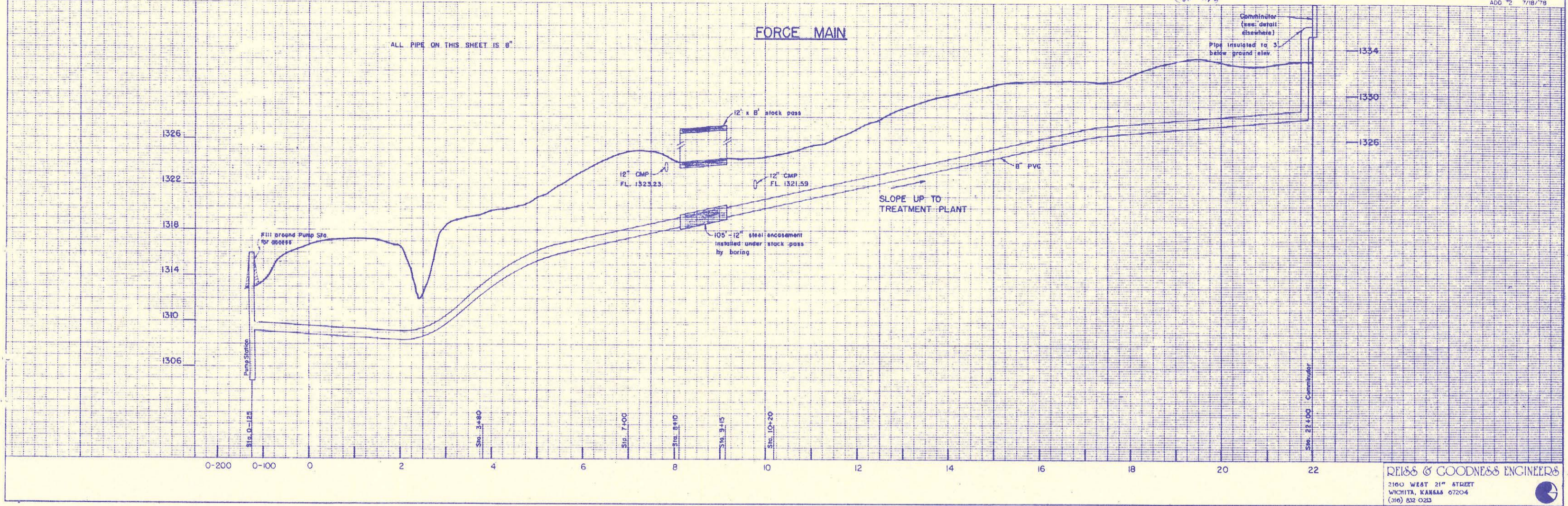
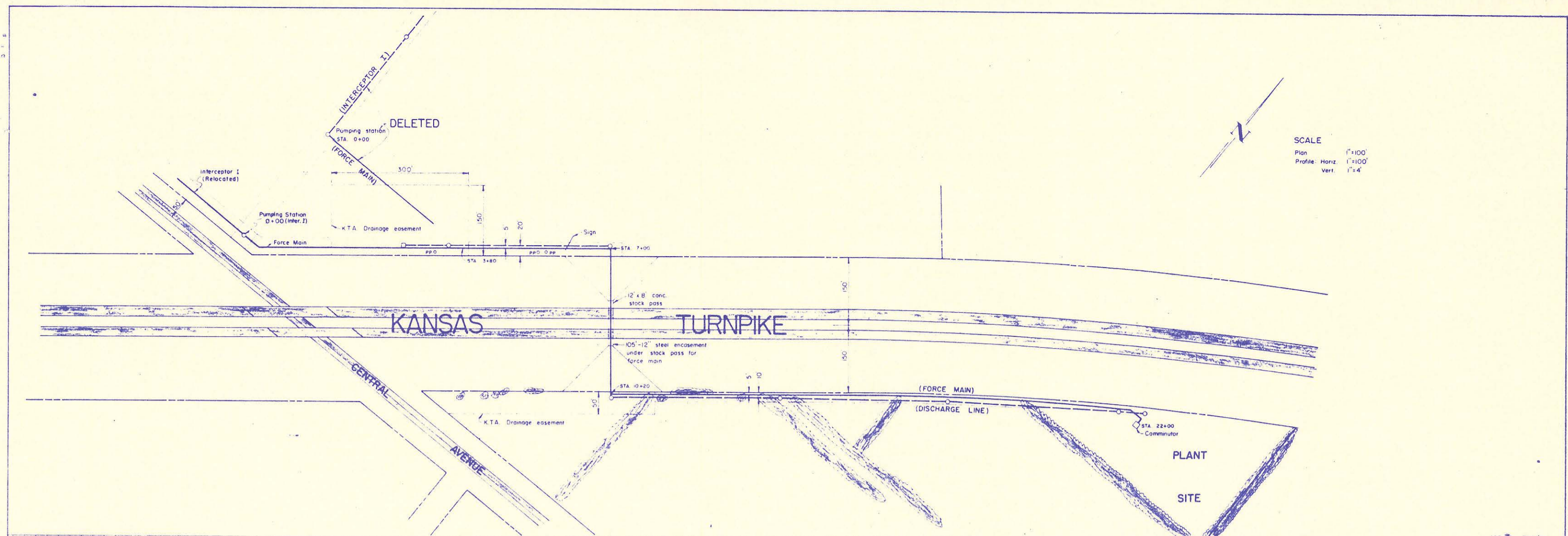
THIS EASEMENT FOR SANITARY SEWER executed and delivered to the Board of County Commissioners of Sedgwick County, Kansas, acting as the Governing Body of the Sewer District (hereinafter, "County") by Doug Lee, President, Lee Homes, Inc., (hereinafter "Owner").

WITNESSETH:

That for and in consideration of the sum of ONE DOLLAR, \$ 1.00 and other good and valuable consideration, the receipt of which is hereby acknowledged, Owner hereby grants, bargains, sells and conveys to County a permanent easement in, over, across and upon the following-described premises, to wit:

4MC-116 MH 238

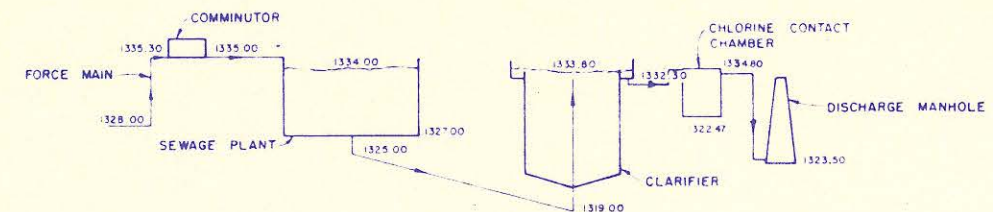
Beginning at the Northwest corner of Lot 7, Block 2, Crestview Country Club Estates Southcrest 2nd Addition, Sedgwick County, Kansas, thence east along the north line of said lot 23 feet, thence southwest to a point on the west line of said lot which is 23 feet south of the Northwest corner of said lot, thence north along the west line of said lot a distance of 23 feet to the point of beginning.



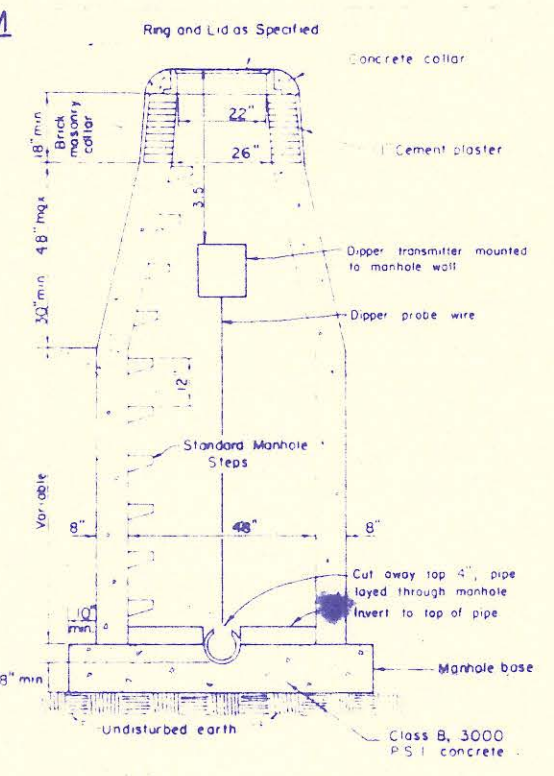
REISS & GOODNESS ENGINEERS
 2100 WEST 21ST STREET
 WICHITA, KANSAS 67204
 (316) 533-0325

PROJECT NO. _____
 DATE 10-5-77 SHEET 6 OF 15

SEWAGE TREATMENT PLANT RELOCATION
 CRESTVIEW IMPROVEMENT DISTRICT SEDGWICK CO. KANSAS

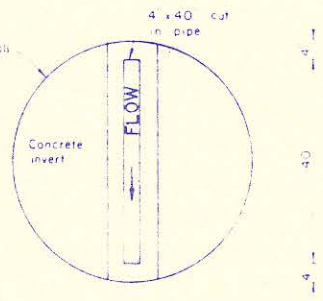


FLOW DIAGRAM
NO SCALE

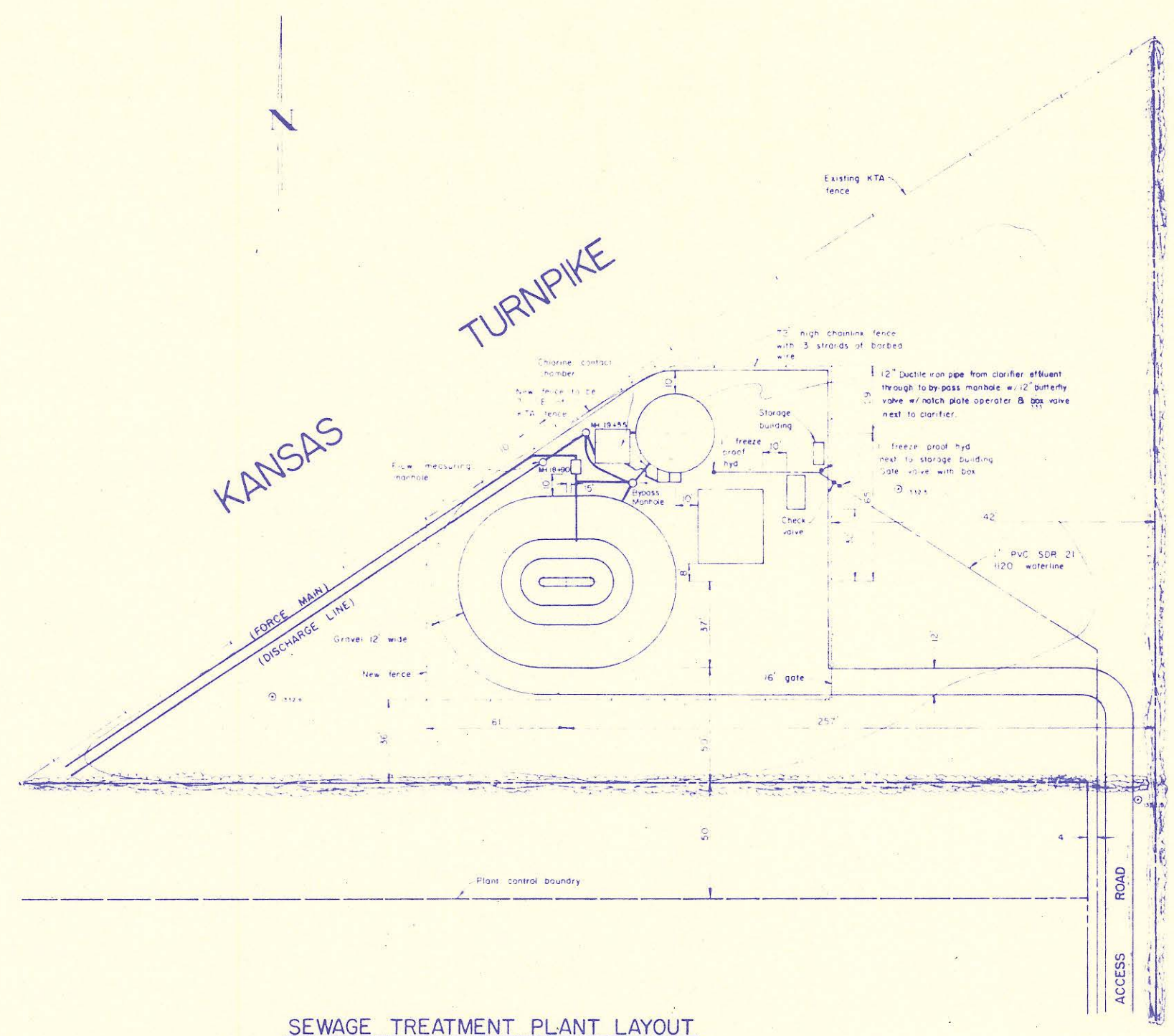


FLOW MEASURING MANHOLE
NO SCALE

NOTE
Probe to be centered in the 4\"/>



TOP VIEW
NO SCALE



SEWAGE TREATMENT PLANT LAYOUT
SCALE 1" = 30'

ADDENDUM

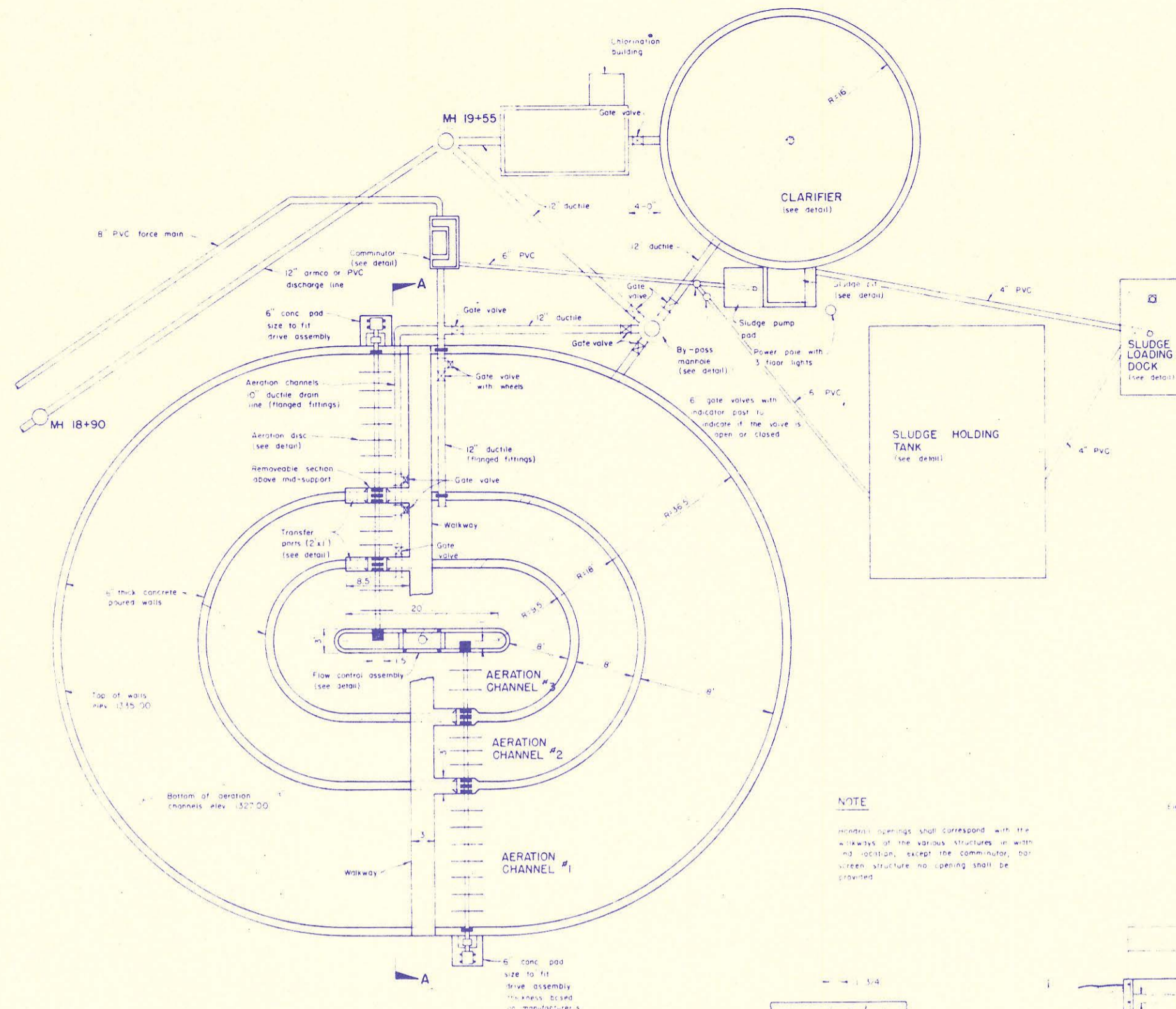
REVISION	DRAWN BY	CHECKED BY	DESIGNED BY	PROJECT
1				
2				

Sewage Treatment Plant Relocation

CUSTOMER: **Crestview Improvement District Sedgwick Co. Kansas**

(Revised 5/79)
REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 432-0283

SCALE	PROJECT NO.
Given	
DATE 10-5-77	SHEET 7 OF 15



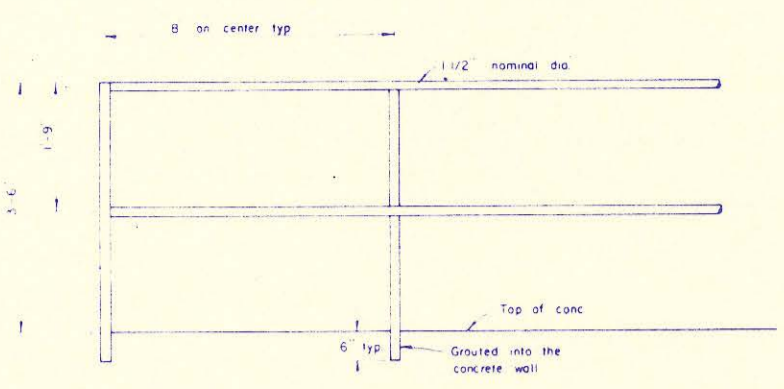
SEWAGE TREATMENT PLANT
SCALE 1/8" = 1'-0"

NOTE
Ductile iron used at manhole shall be class 50 with cast PVC liner.

NOTE
Butterfly valves may be used on the discharge lines of gate valves.

NOTE
1. All piping shall have water stops.
2. Handrails shall be installed around chlorine contact chamber.

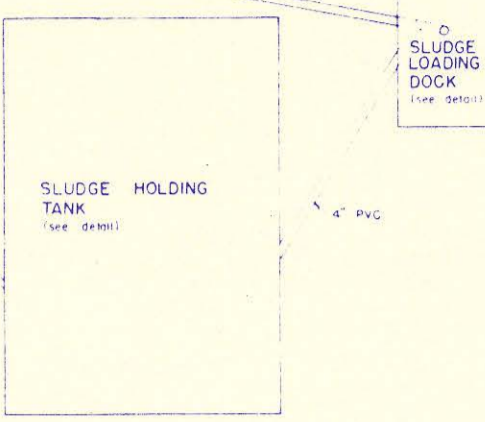
NOTE
Handrail heights shall correspond with the elevations of the various structures at various locations, except the comminutor, bar screen structure no opening shall be provided.



HANDRAILS
NO SCALE

NOTES

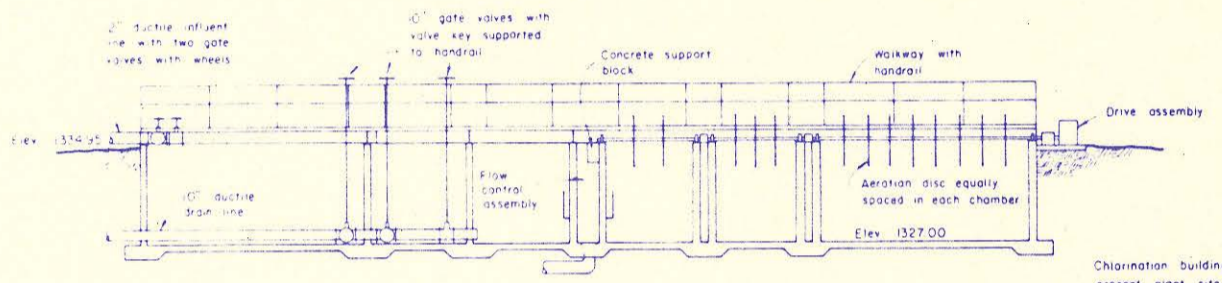
1. Top rail shall have a smooth surface throughout the length of the railing.
2. Ends of the rails shall not protrude from terminal posts.
3. On sludge holding tank the ducts shall be embedded in 6" concrete for a depth of not less than 12" below finished grade.



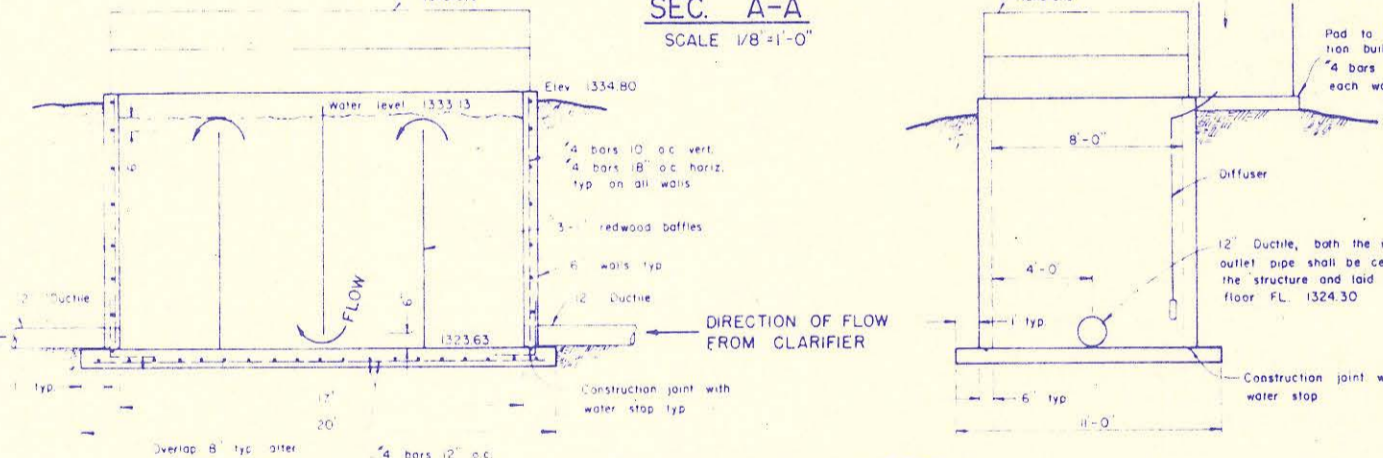
SLUDGE HOLDING TANK
(see detail)



SLUDGE LOADING DOCK
(see detail)



SEC. A-A
SCALE 1/8" = 1'-0"



CHLORINE CONTACT CHAMBER
SCALE 1/4" = 1'-0"

Chlorination Building from present plant site to be moved to new plant site.

Pod to fit chlorination building with 4 bars 12" o.c. each way.

Diffuser

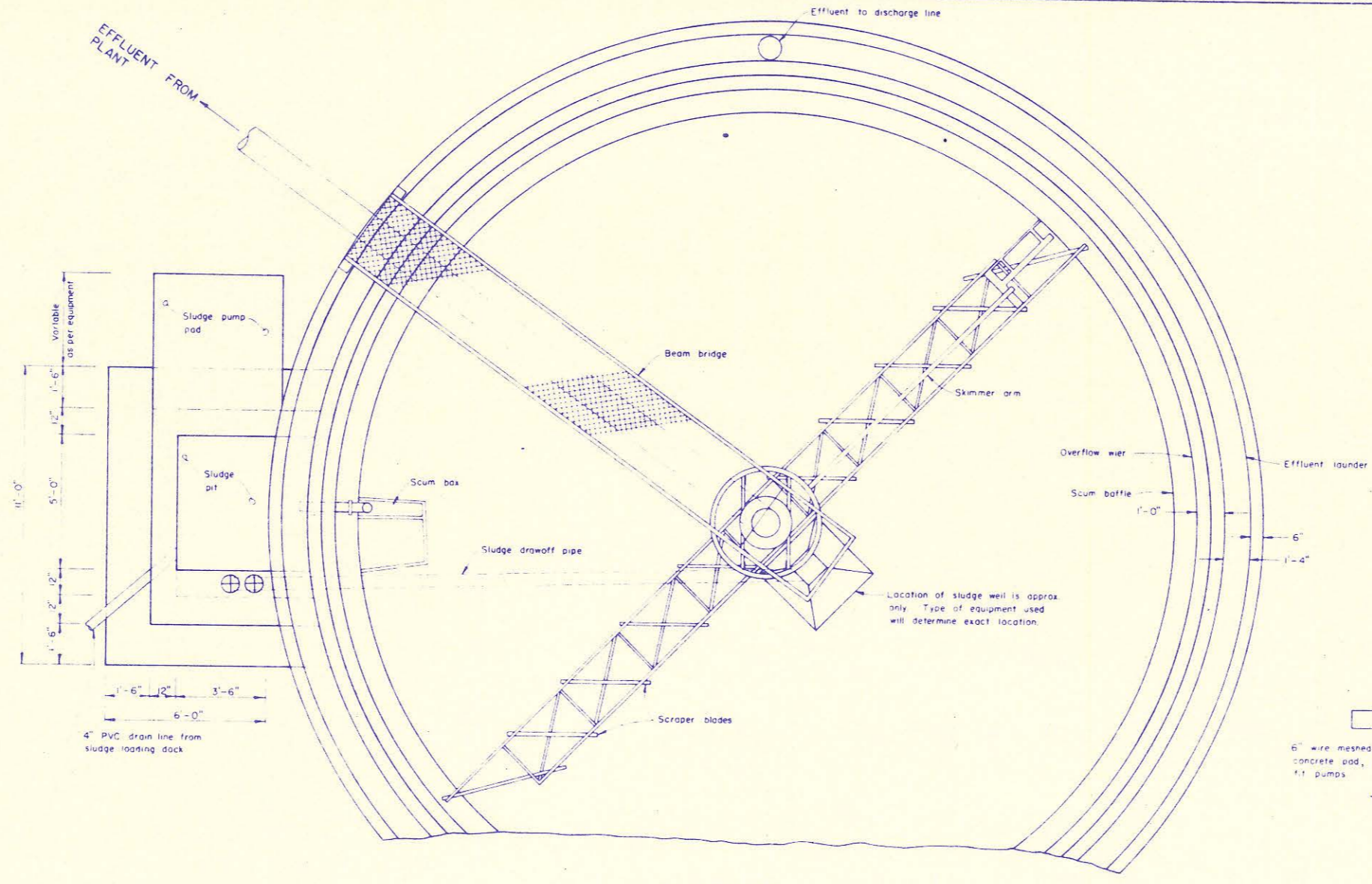
12" ductile iron inlet and outlet pipe shall be centered in the structure and laid on the floor FL. 1324.30.

Construction joint with water stop.

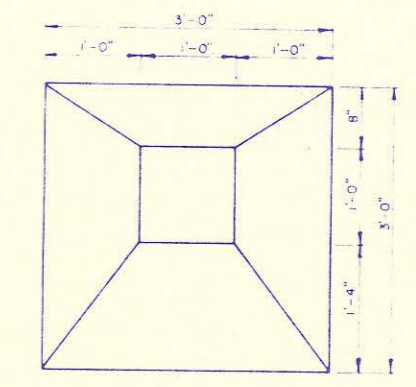
ADDENDUM I

REVISION	DATE	DRAWN BY	CHECKED BY	DESIGNED BY	PROJECT	CUSTOMER	SCALE	PROJ. NO.
1	10-20-78	Sewage Treatment Plant Relocation	Crestview Improvement District Sedgwick Co. Kansas	Green	10-20-78

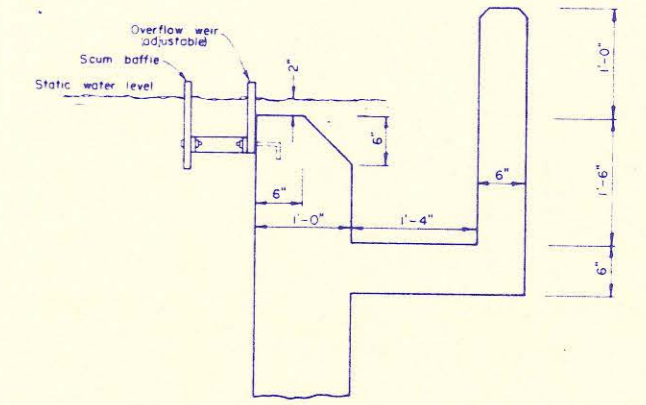
REISS & GOODNESS ENGINEERS
2160 WEST 21ST AVE. DEPT
WICHITA, KANSAS 67204
(316) 642-0333



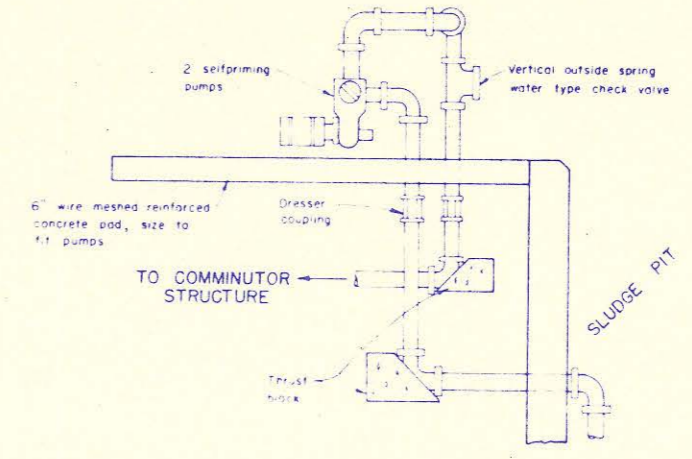
CLARIFIER
SCALE 3/8"=1'-0"



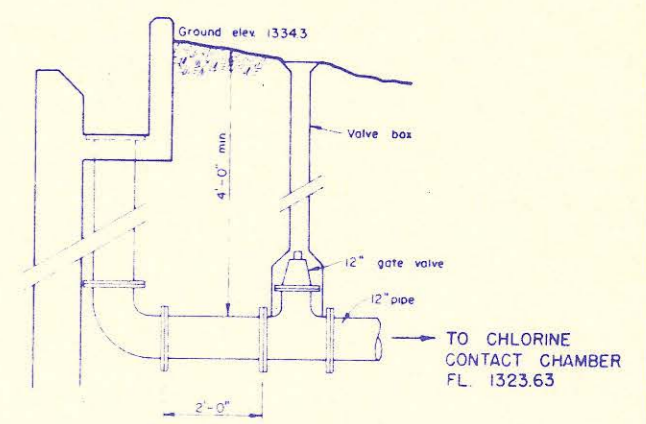
SLUDGE WELL
SCALE 1"=1'-0"



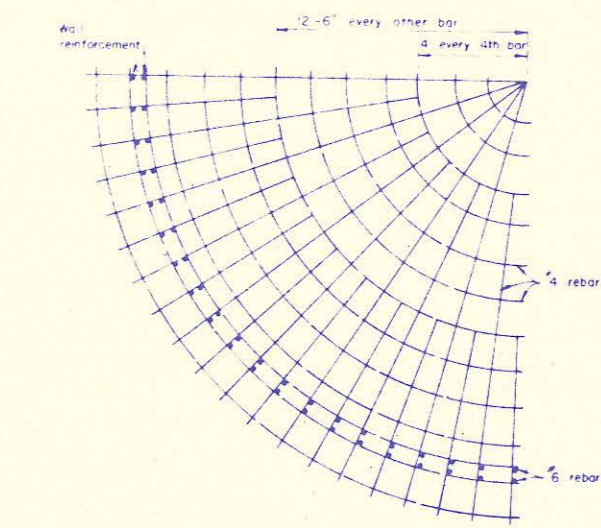
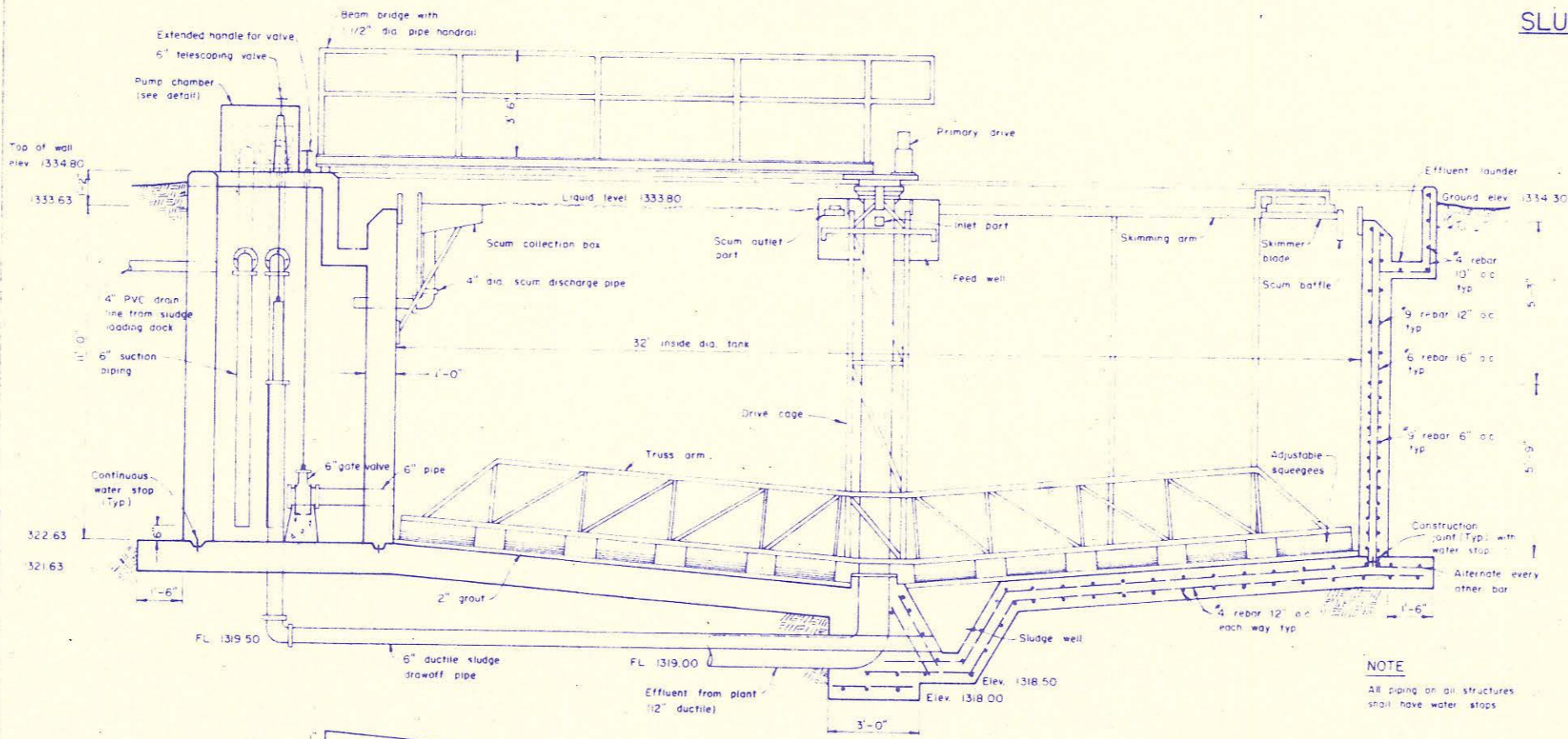
EFFLUENT LAUNDER
SCALE 1"=1'-0"



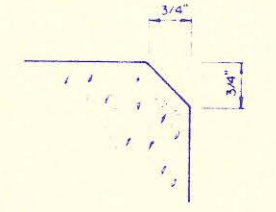
SLUDGE PUMP DETAIL
NO SCALE



EFFLUENT DISCHARGE FROM LAUNDER
SCALE 1/2"=1'-0"



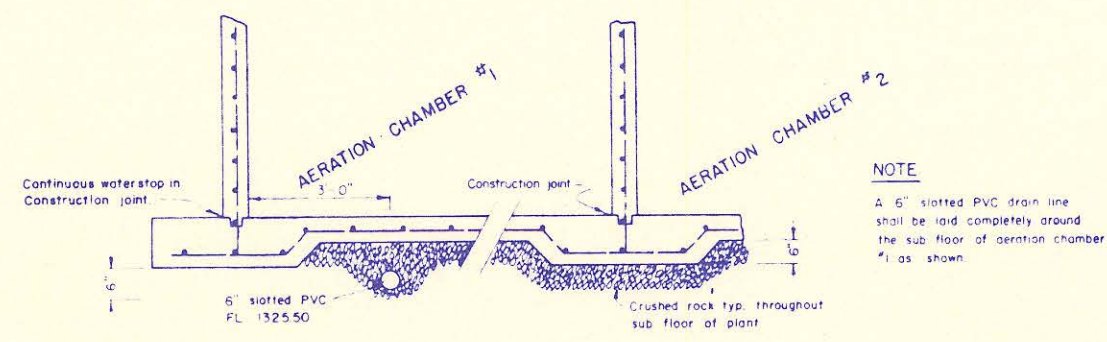
CLARIFIER FLOOR AND WALL REINFORCEMENT
NO SCALE



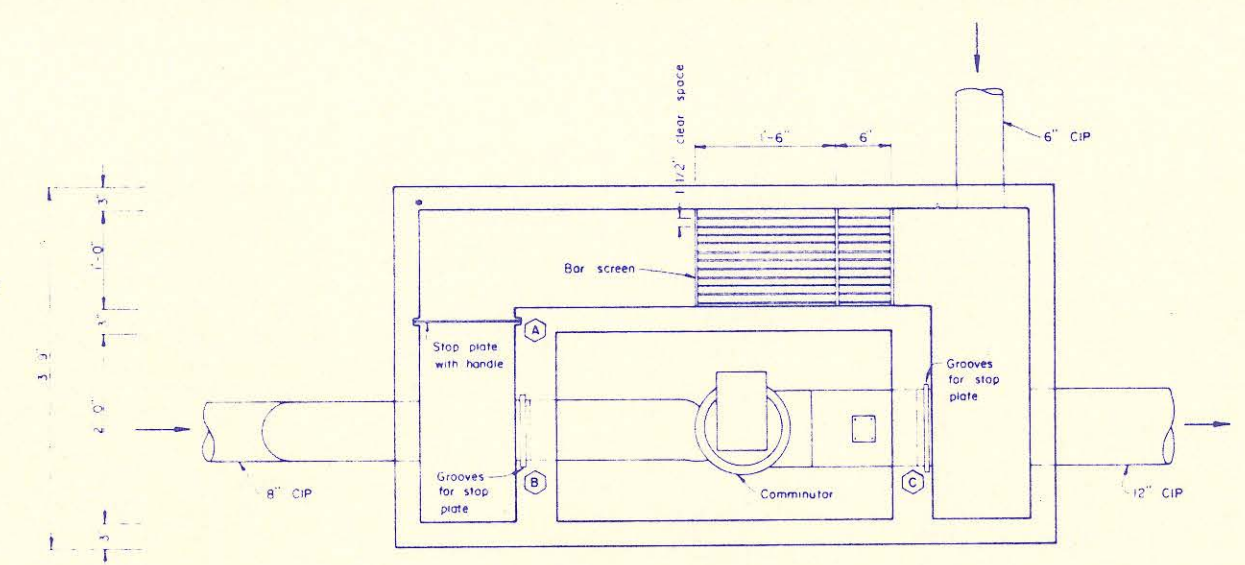
EDGE CORNERS
NO SCALE

NOTE: All corners exposed shall be beveled.

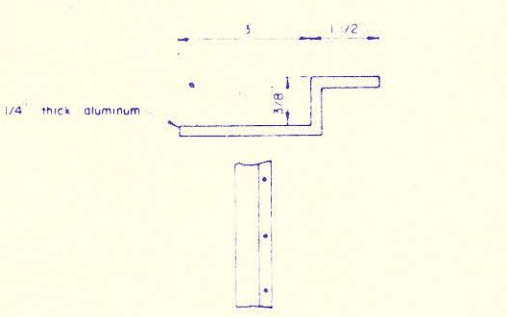
ADDENDUM 1



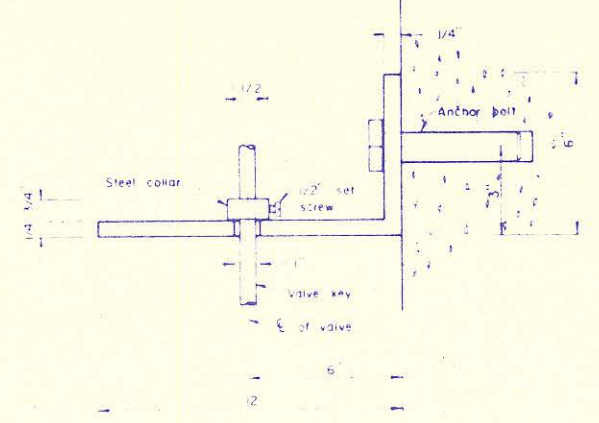
PLANT DRAIN LINE
NO SCALE



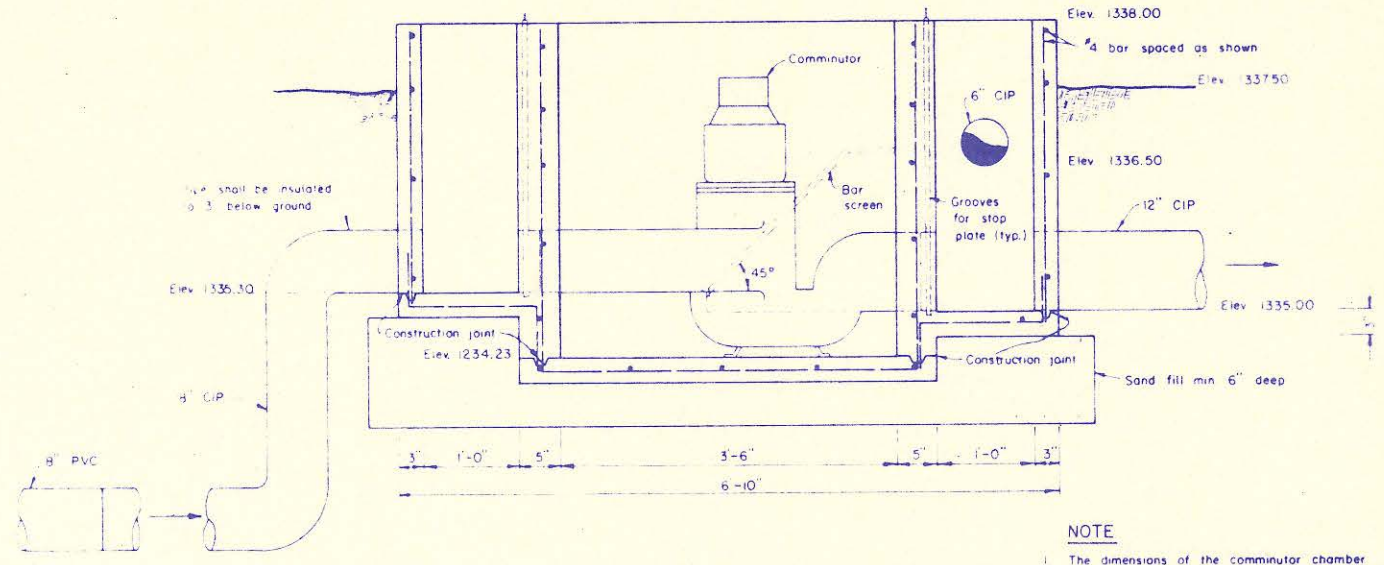
COMMUNUTOR & BAR SCREEN CHAMBER
SCALE 1"=1'-0"



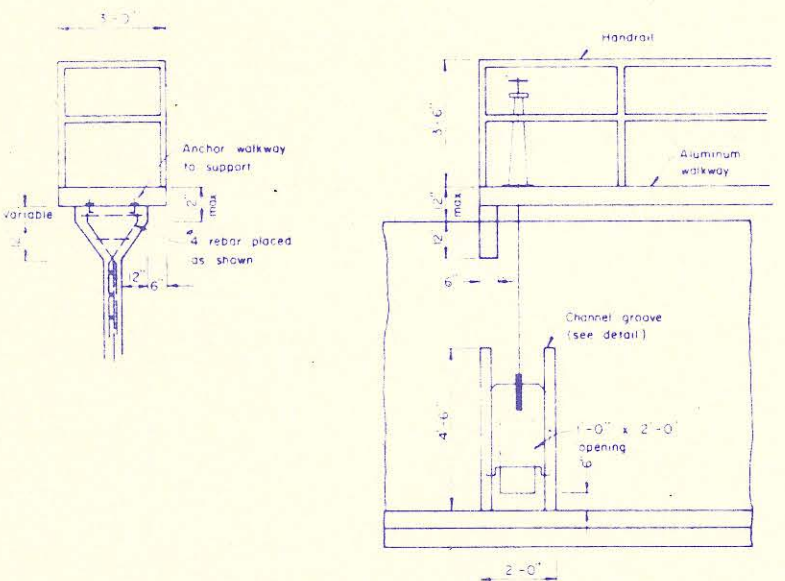
PORT GATE CHANNEL GROOVES
NO SCALE



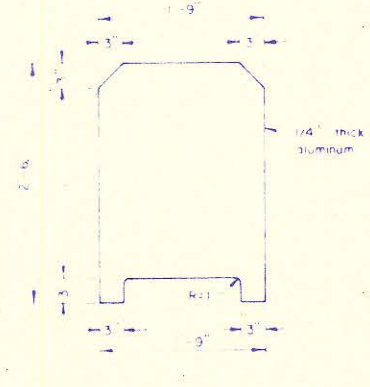
VALVE KEY SUPPORT PLATE
NO SCALE



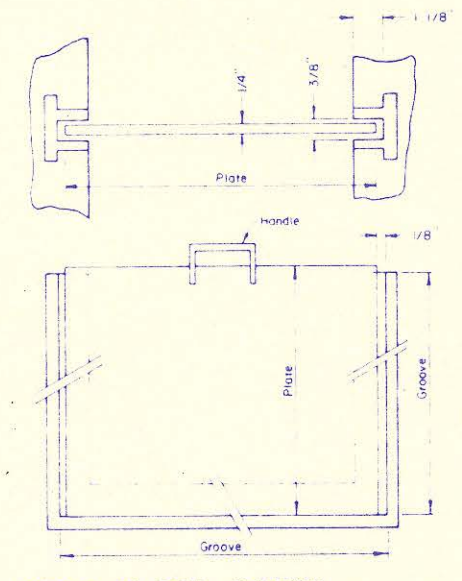
NOTE
1. The dimensions of the comminutor chamber may change depending on comminutor used.
2. Comminutor shall be wired to pump station and shall run only when pumps operate.



TRANSFER PORT DETAIL
SCALE 3/8"=1'-0"

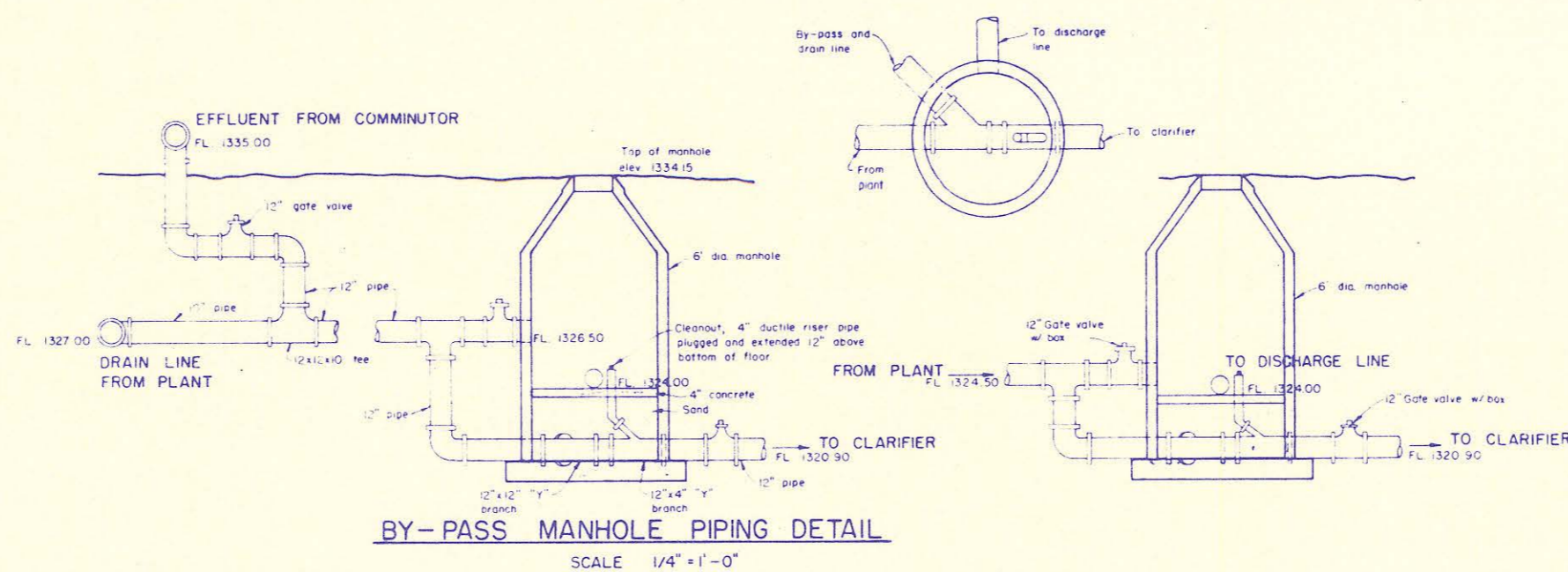


TRANSFER PORT GATE
SCALE 1"=1'-0"

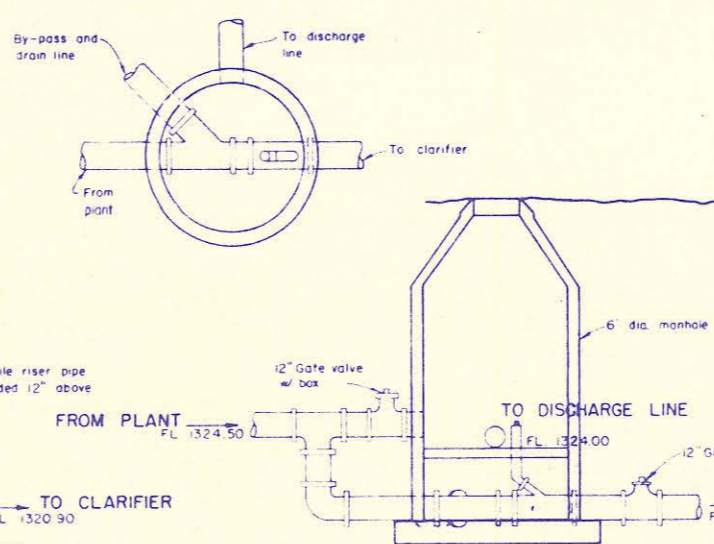


STOP PLATE DETAIL
NO SCALE

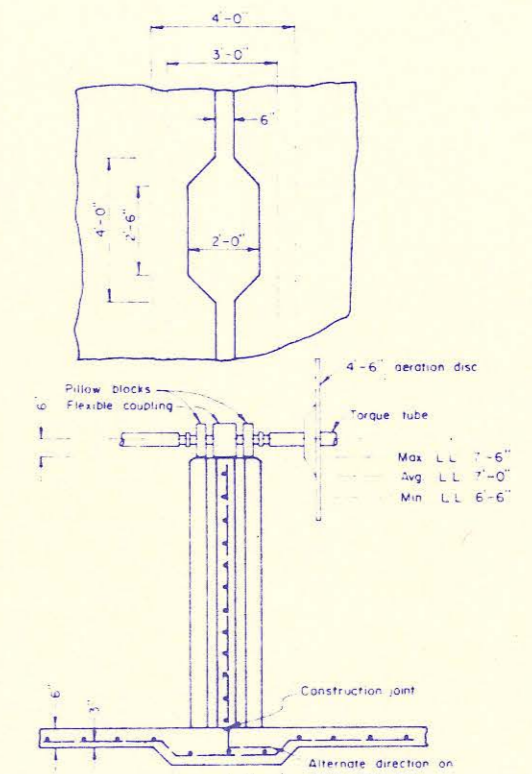
NOTE
A - stop plate - 1'-3" x 1/4" x 1/2"
B - stop plate - 2'-0" x 1/4" x 1/2"
C - stop plate - 3'-1" x 1/4" x 1/2"



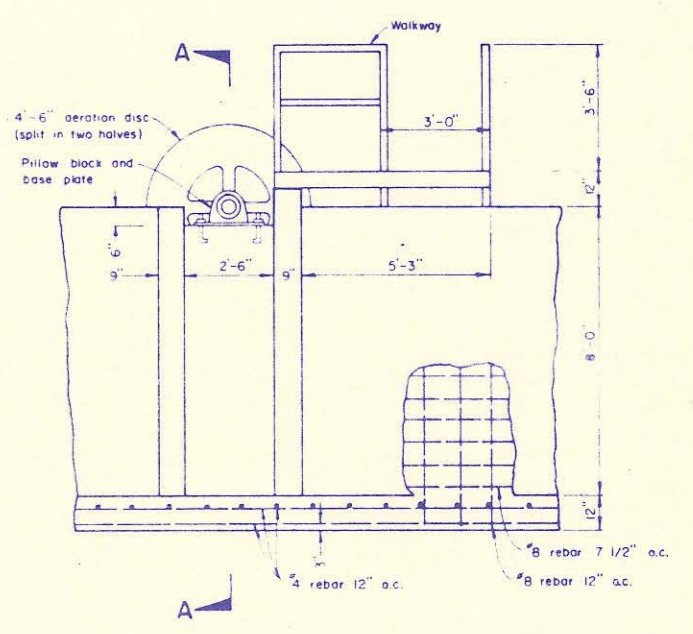
BY-PASS MANHOLE PIPING DETAIL
SCALE 1/4" = 1'-0"



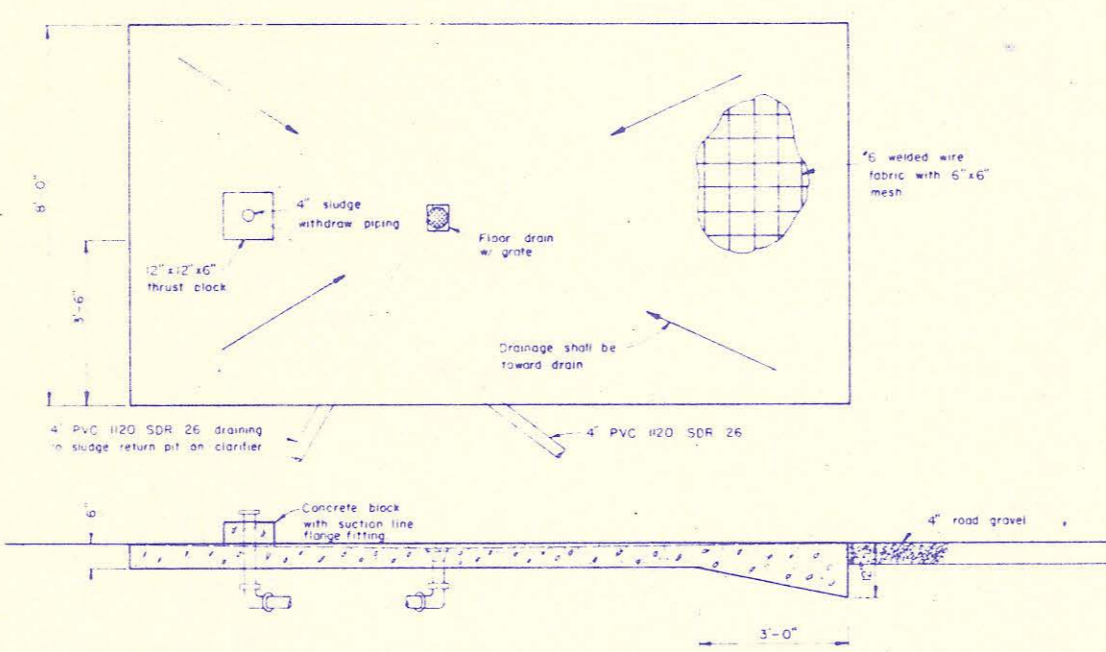
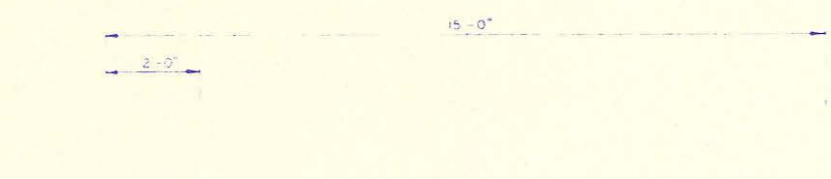
NOTE
All pipe is mechanical joint
All gate valves are to be installed with boxes



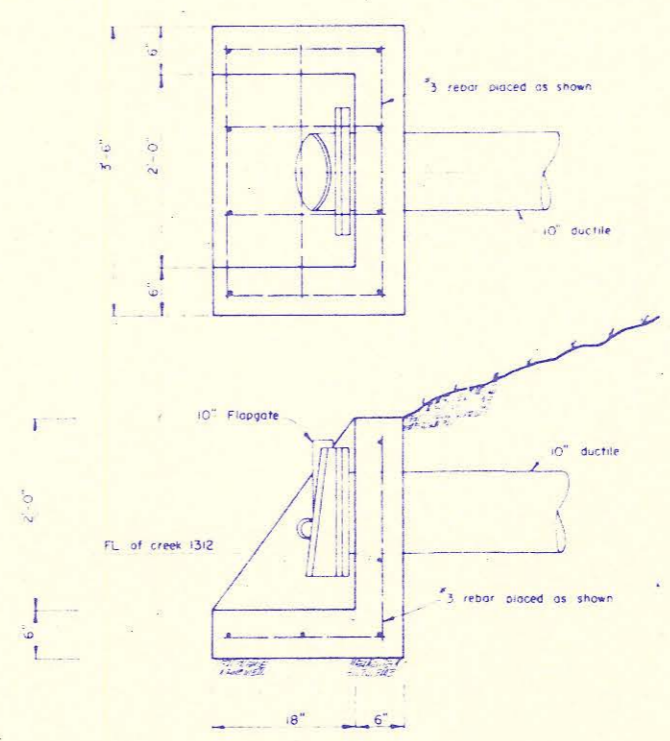
SEC. A-A



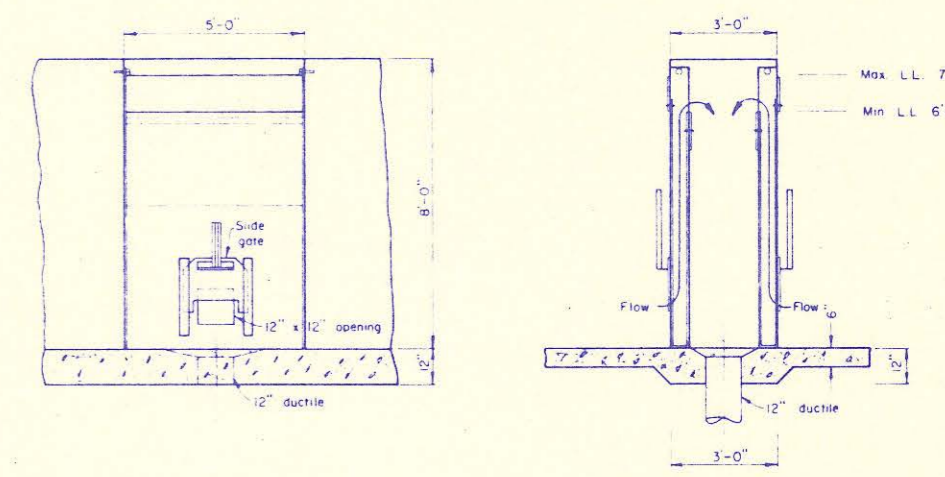
MID-SUPPORT WALL
SCALE 3/8" = 1'-0"



SLUDGE LOADING DOCK
SCALE 1/2" = 1'-0"



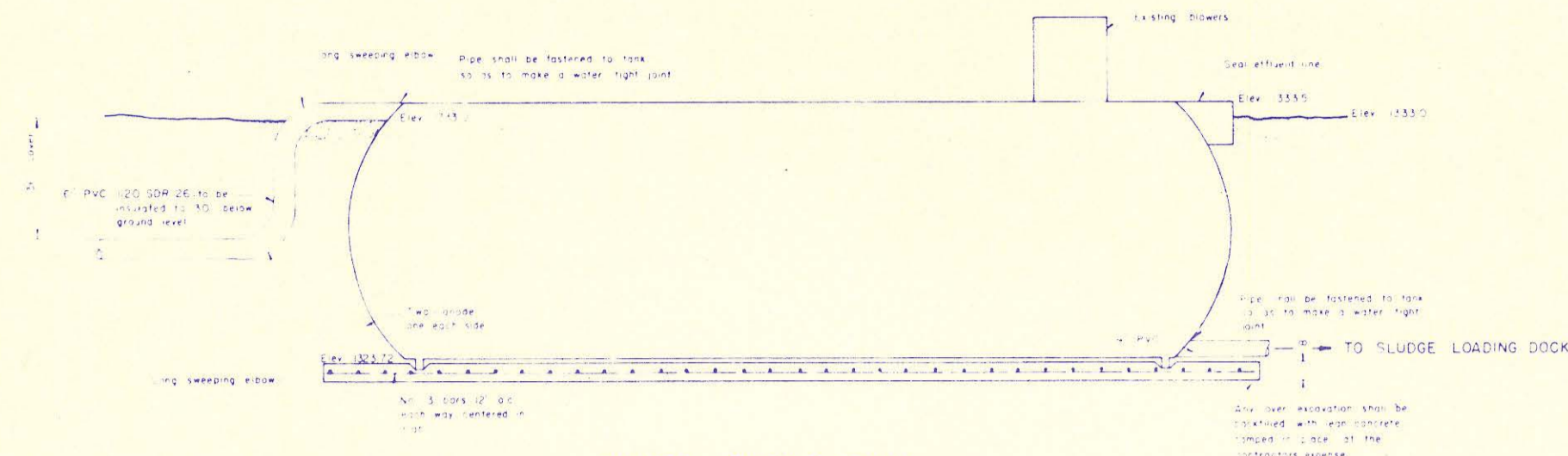
HEADWALL WITH FLAPGATE
SCALE 1" = 1'-0"



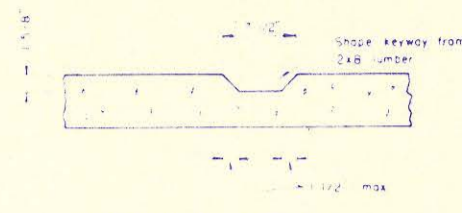
FLOW CONTROL ASSEMBLY DETAIL
SCALE 3/8" = 1'-0"

NOTE
Reinforcement in sludge loading dock will be
6/8" #6 welded wire fabric
Ground shall slope away for loading dock
-22 1/2" bend and 1-11 1/4" bend shall
be used on the sludge withdraw piping

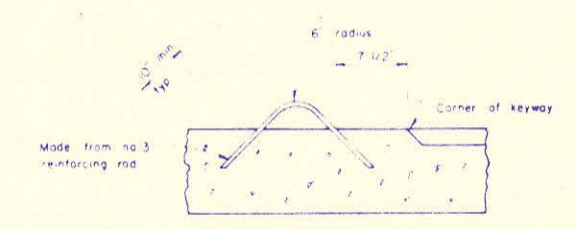
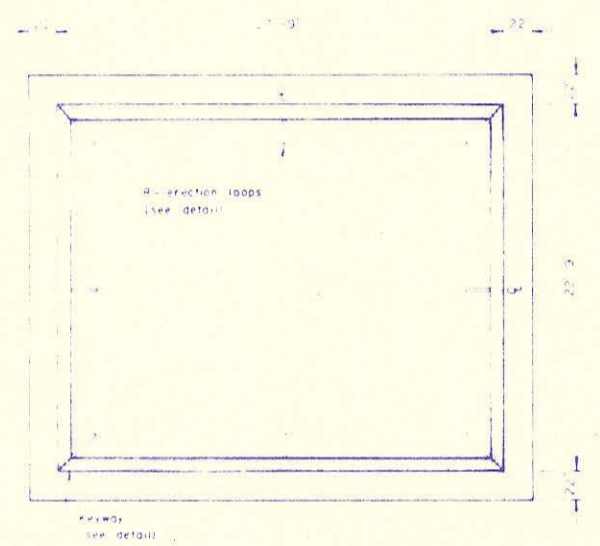
REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 632-0383



SLUDGE HOLDING TANK
SCALE 1/4" = 1'-0"



KEYWAY DETAIL
NO SCALE

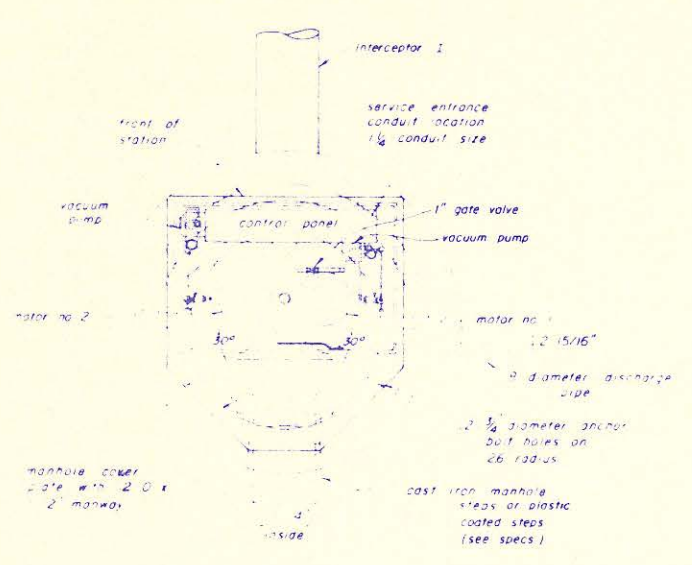


ERECTION LOOP DETAIL
NO SCALE

NOTES
 1. Keyways should be level within 1/8"
 2. Keyway diagonals should not vary more than 1/2"
 3. Keyway lengths should be correct to 1/4"

DESIGN CONDITIONS
 2 pumps rated 625 g.p.m., T.D.H. 52' C. single operation
 C 1120

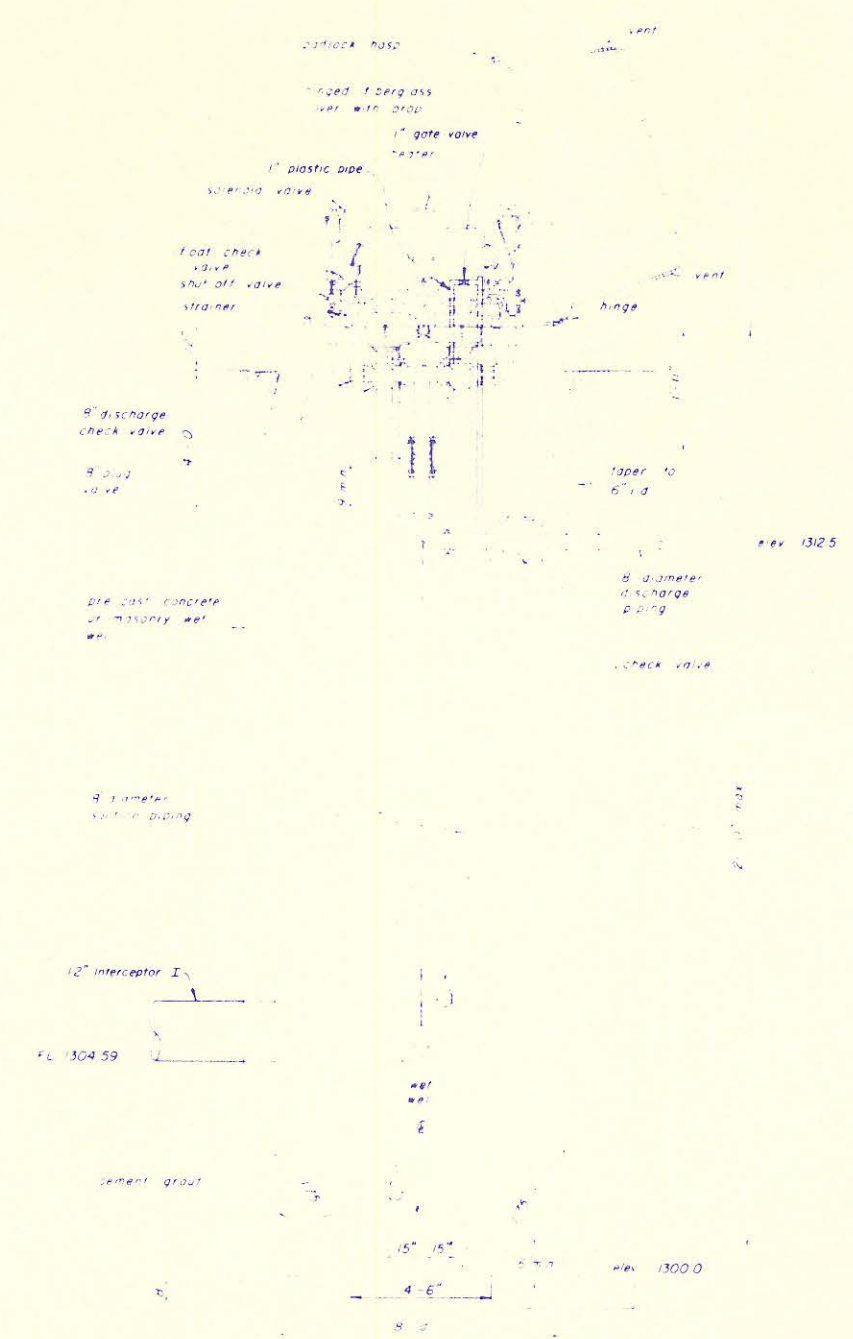
Note
 This drawing shows only general conditions
 for a well mounted pumping station and
 is not intended to indicate a particular pump
 manufacture details of the pumps proposed
 must be approved by the engineer.



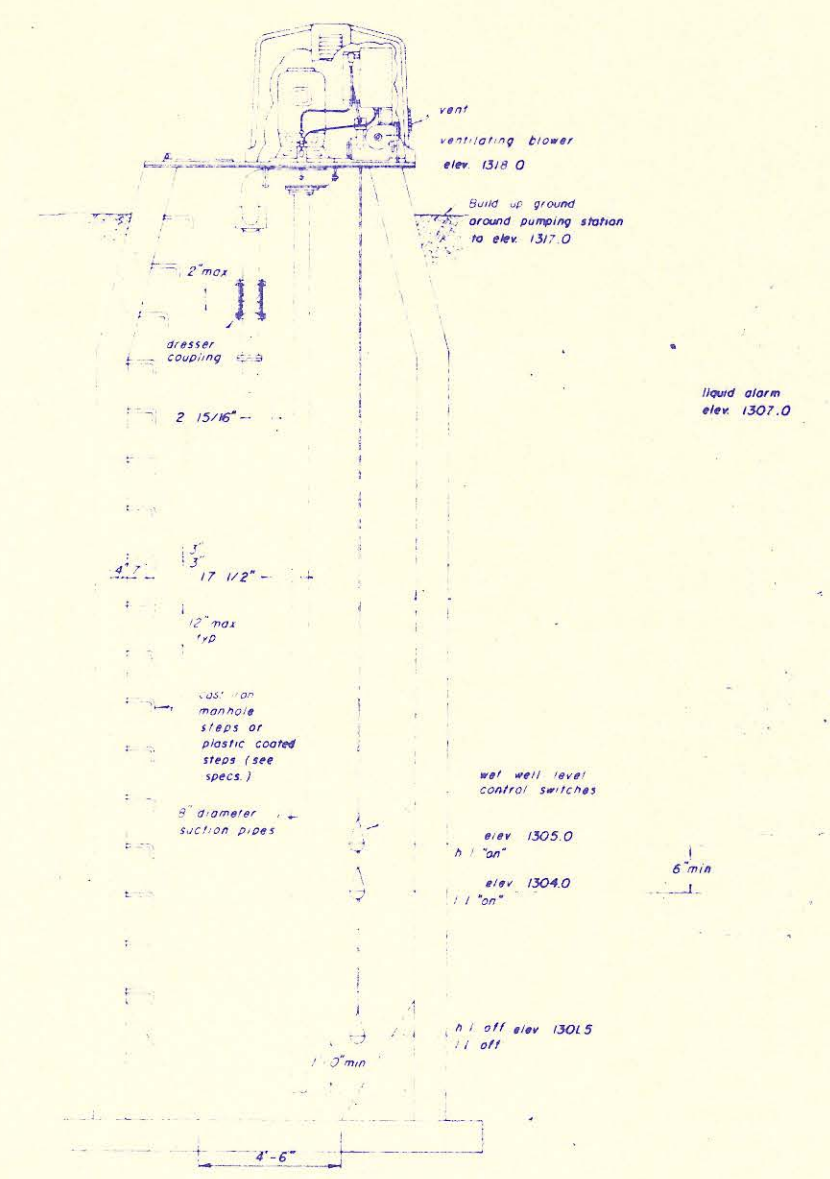
PLAN VIEW
 NO SCALE

AIR RELEASE PIPE AND VALVE

A 1" plastic line shall be connected to the
 8" discharge line and brought up through
 the pump station. A 1" tee with a plug
 shall be installed at the main in the piping
 for opening or shall be placed between
 the 1" gate valve and the 8" discharge
 line. A union shall separate the 1" gate
 valve and the tee. The line discharge shall
 extend at least 12" below the pump platform.

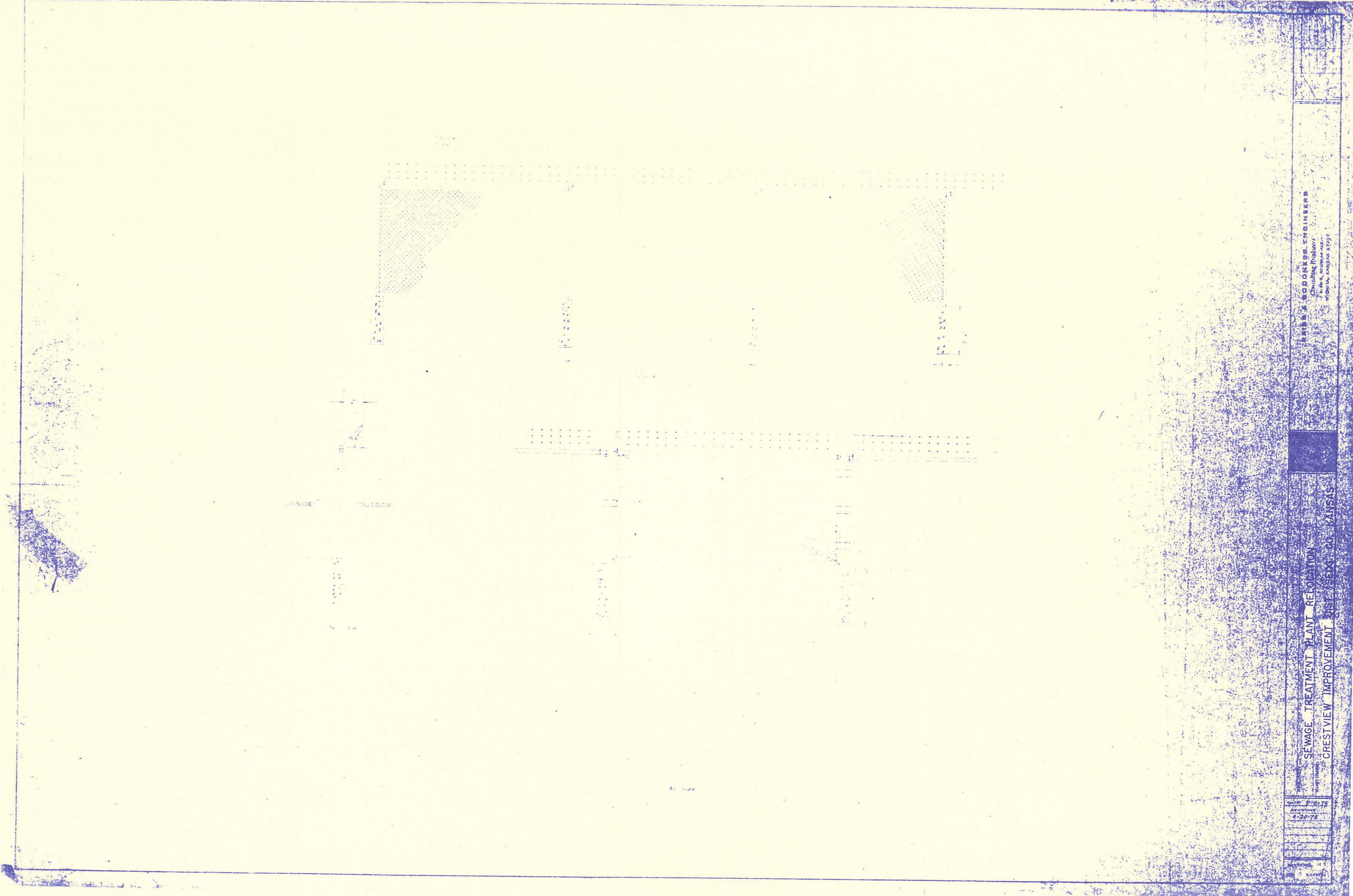


SECTIONAL ELEVATION
 NO SCALE



GROSS SECTION
 NO SCALE

REISS & GOODNESS ENGINEERS
 Consulting Engineers
 1100 S. 10th St., Suite 100
 Lincoln, Nebraska 68502-4734
 STANDARD PUMPING STATION
 SEWAGE TREATMENT PLANT RELOCATION
 CRESTVIEW IMPROVEMENT DISTRICT
 DATE: 12-20-72
 DRAWING NO.: 4-20-72
 SHEET NO.: 6-5-72
 PROJECT NO.: 15
 SHEET NO.: 15
 TOTAL SHEETS: 15

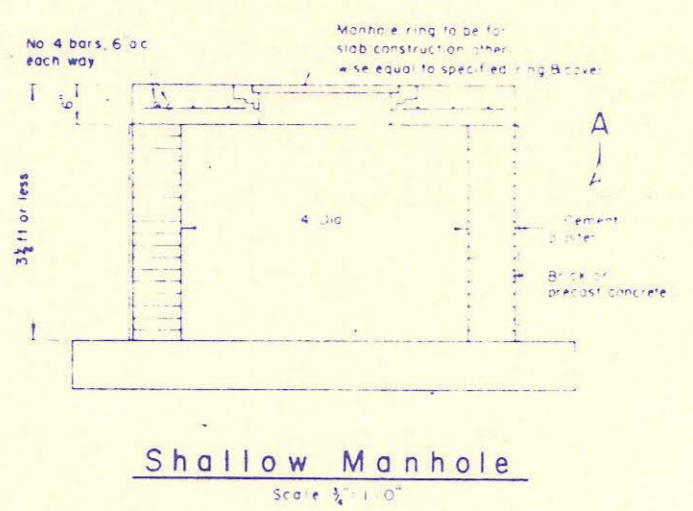


ARTHUR S. GORDON ENGINEERS
Civil Engineers
1000 West 10th Street
Ottawa, Ontario K1P 1A1

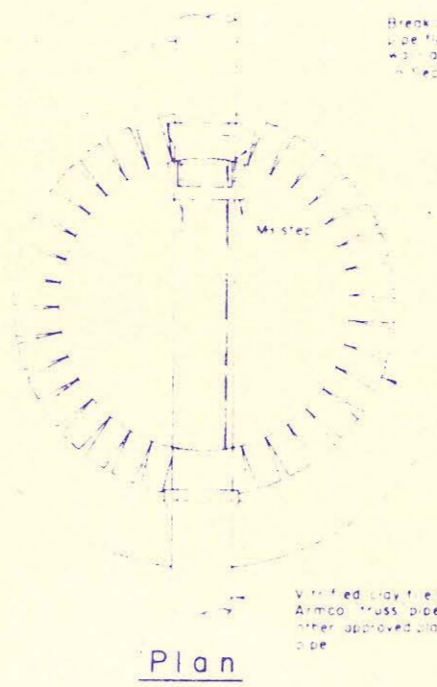
SEWAGE TREATMENT PLANT RENOVATION
CRESTVIEW IMPROVEMENT DISTRICT, CO. KANSAS

DATE	8-16-78
REVISION	4-23-77
BY	
CHECKED	
APPROVED	

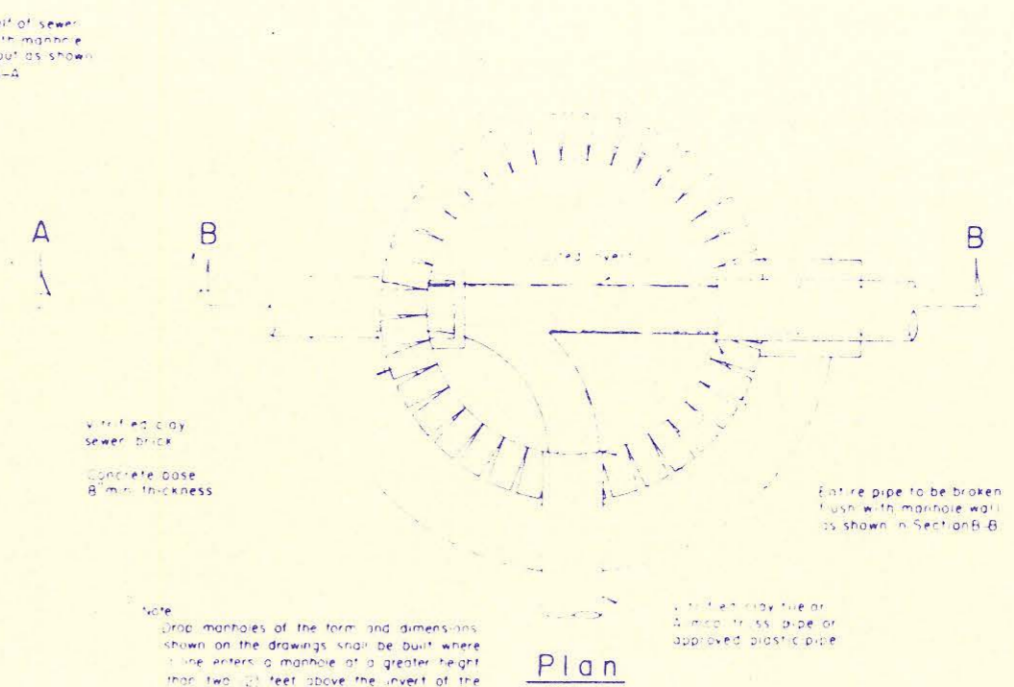
Note: Manholes 3 1/2 ft deep or less shall be constructed without a cone section but with a 6" thick reinforced concrete slab top.



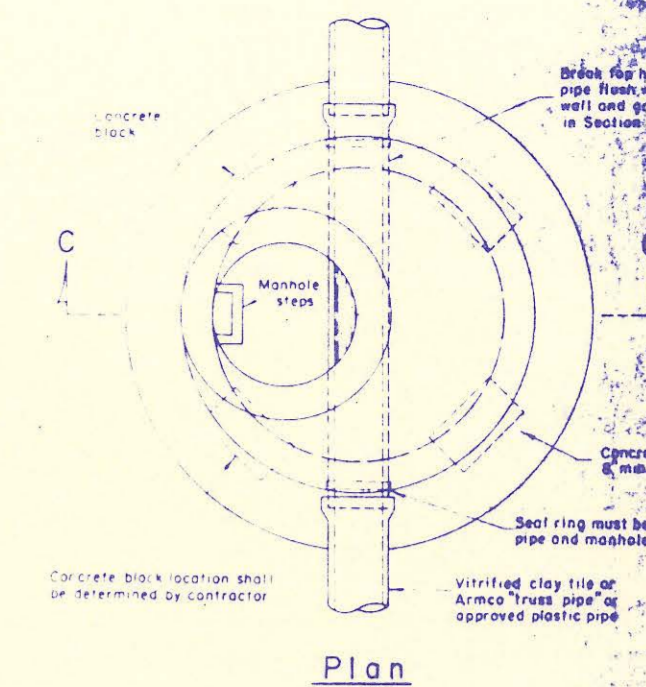
Shallow Manhole
Scale 3/4" = 1'-0"



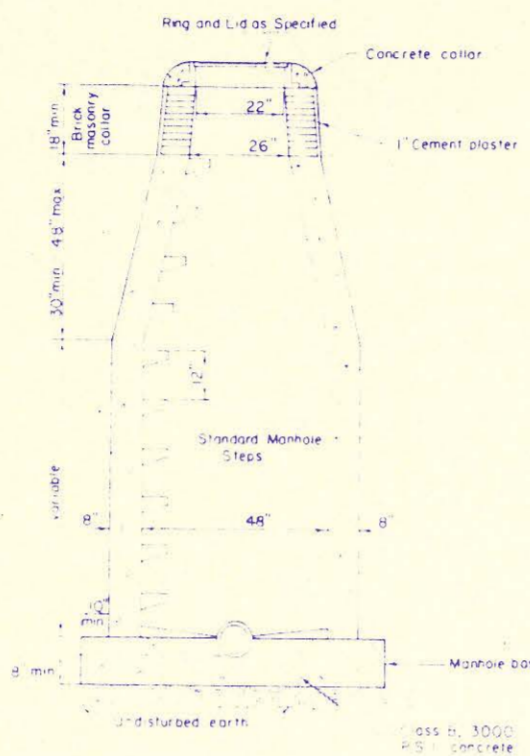
Plan



Plan



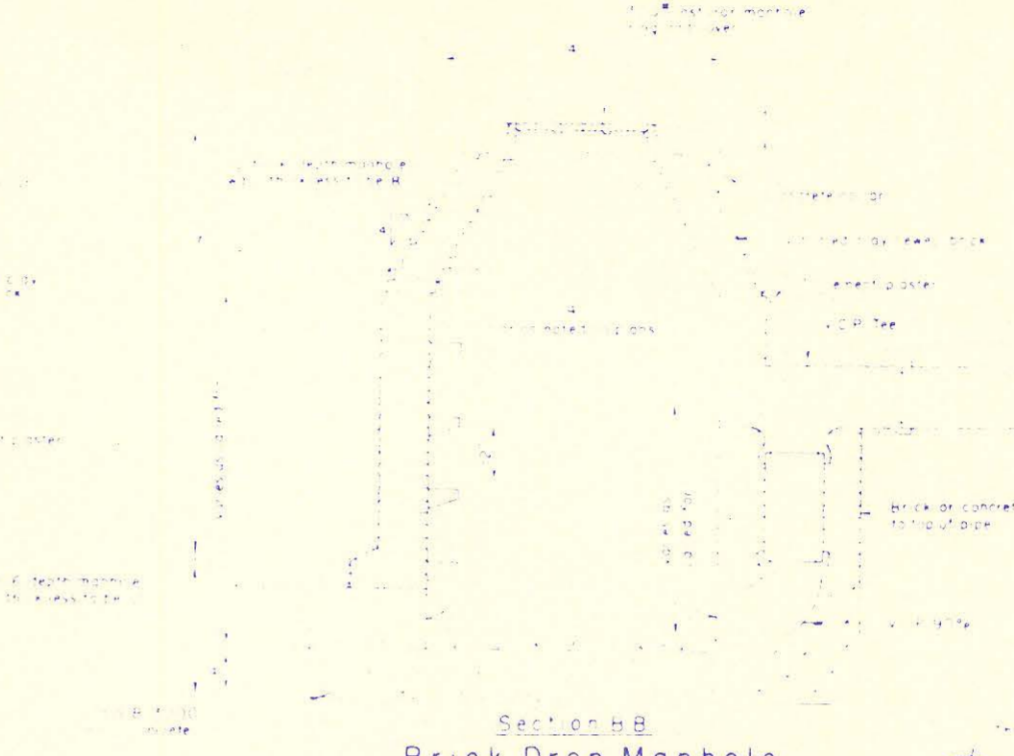
Plan



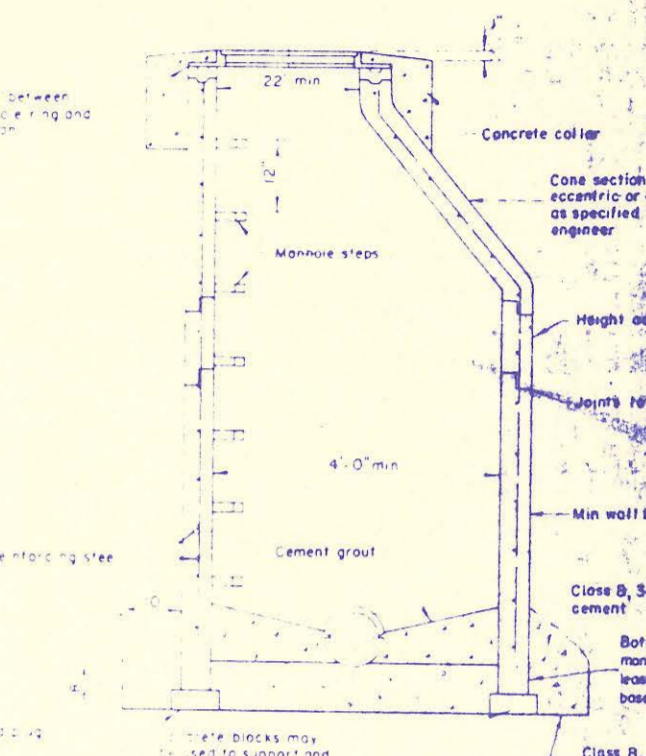
Standard Poured in Base Manhole
No Scale



Section A-A Brick Manhole



Section B-B Brick Drop Manhole



Section C-C Precast Reinforced Concrete Manhole
Scale 3/4" = 1'-0"



Manhole Step
No Scale

DELETE

Service Connection Details
No Scale

NOTE:
See sheet 4 for REINFORCED PLASTIC MORTAR MANHOLE

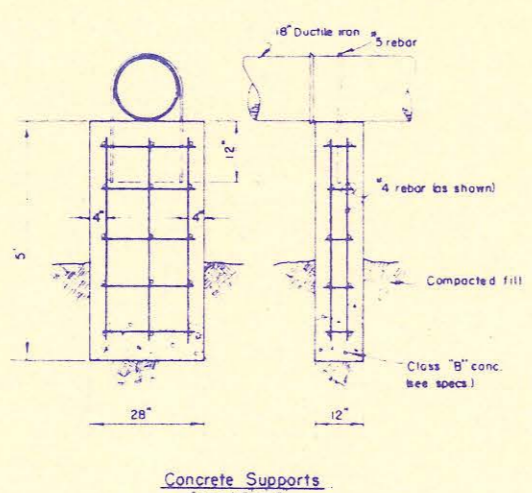


Service Cleanout
No Scale

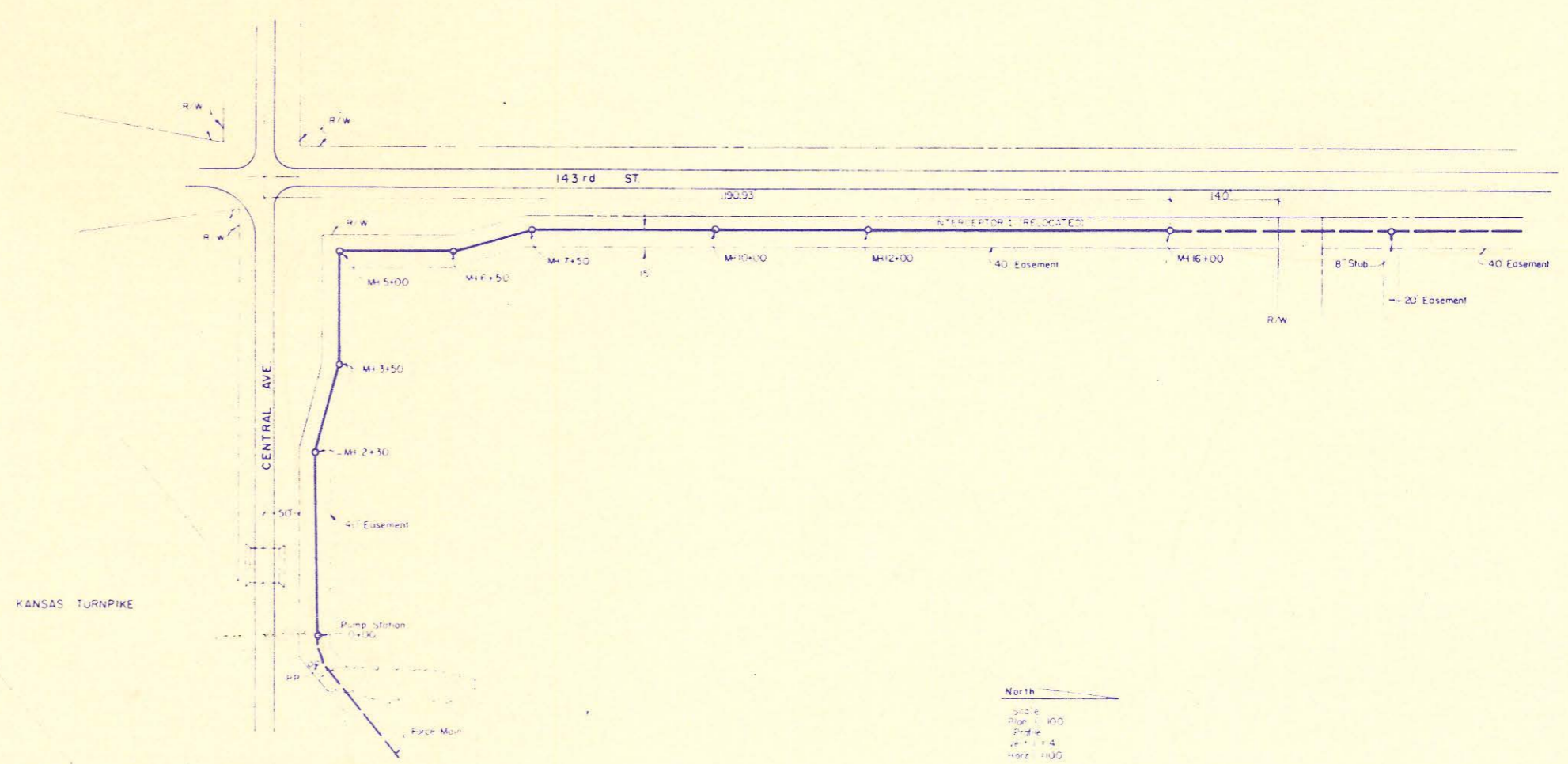
Note: Approved manhole steps shall be installed in all manholes unless specifically deleted on a project, sheet or change order.

Note: Precast manholes shall have plastic liners. The plastic liner may be Ameri-Plate T-Lock Liner Plate, B.F. Goodrich Lok-Rib Koroseal, or an approved equal. The plastic liner manufacturer's recommendations for installing sealing joints, testing and inspection of the plastic liner shall be considered as incorporated in and forming a part of these specifications. The manhole supplier shall furnish to the engineer three copies of the plastic liner manufacturer's recommendation prior to the fabrication of any manhole.

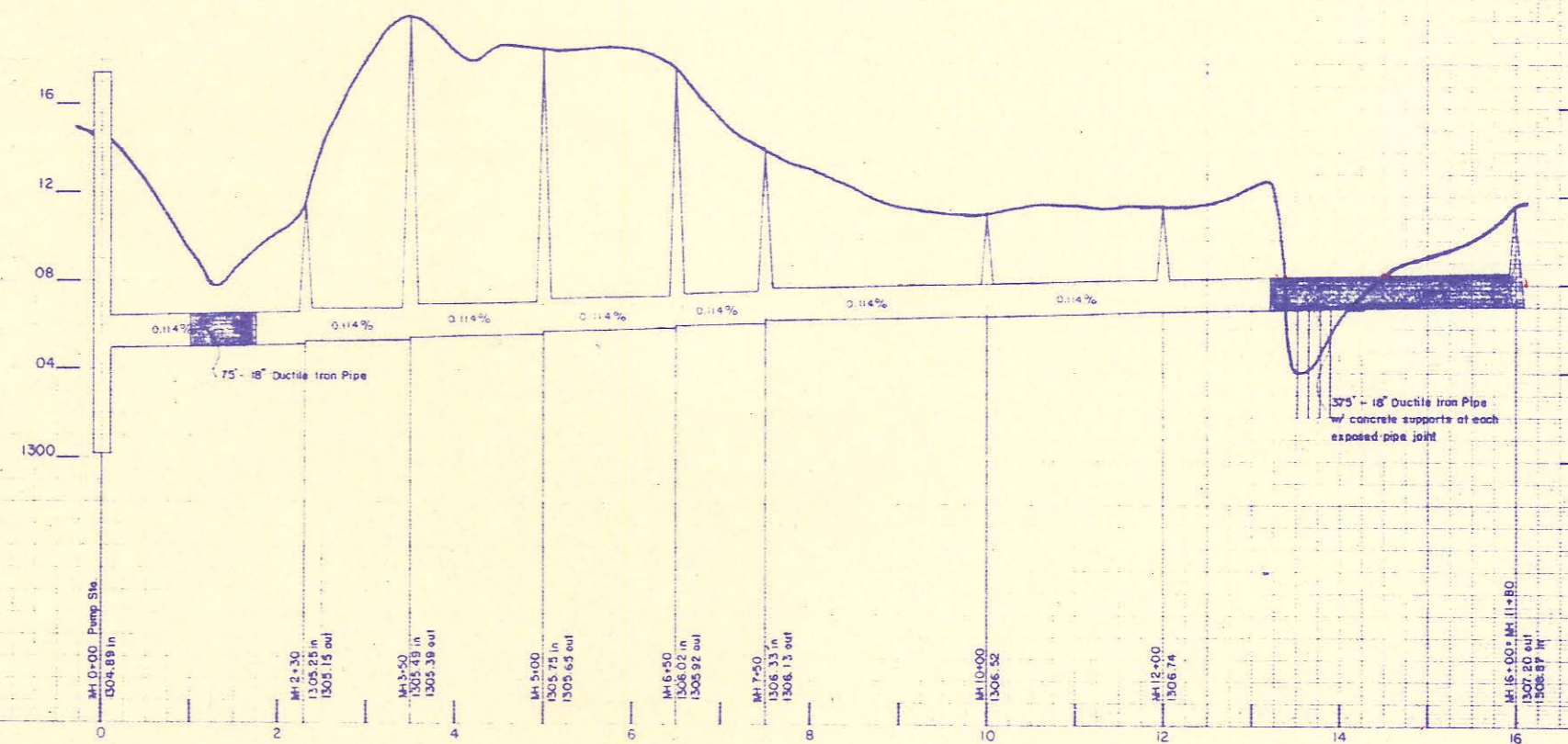
Note: This standard sheet shows the types of construction for the items shown which will normally be encountered on a sewerage project. Special conditions or types of construction are shown on other drawings and specifications.



Concrete Supports
Scale: 1/2" = 1'-0"



INTERCEPTOR I (RELOCATION)
- ALL PIPE 18" -



REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(913) 632-0233