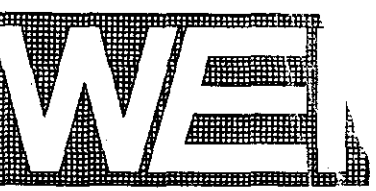




CITY OF RIDGELAND RIDGELAND, MISSISSIPPI LONGMEADOW SUBDIVISION DRAINAGE IMPROVEMENTS



WAGGONER
ENGINEERING, INC.
ENGINEERS, PLANNERS, SCIENTISTS

825 N. PRESIDENT ST.
JACKSON, MS 39202
601-355-9526
FAX 601-352-3945

CITY OFFICIALS

MAYOR
GENE F. McGEE

MAYOR PRO TEMPORE
GERALD STEEN

BOARD OF ALDERMEN

ANN BRAME HURD, WARD 1
LISA DeCELL WALTERS, WARD 2
CAROLE A. DAVIS, WARD 3
LARRY ROBERTS, WARD 4
SCOTT JONES, WARD 5
LINDA DAVIS TRUNZLER, WARD 6
GERALD STEEN, AT-LARGE

CITY CLERK
DAVID OVERBY

CITY ATTORNEY
JERRY MILLS

DIRECTOR OF PUBLIC WORKS
SAM C. VINSON, P.E.

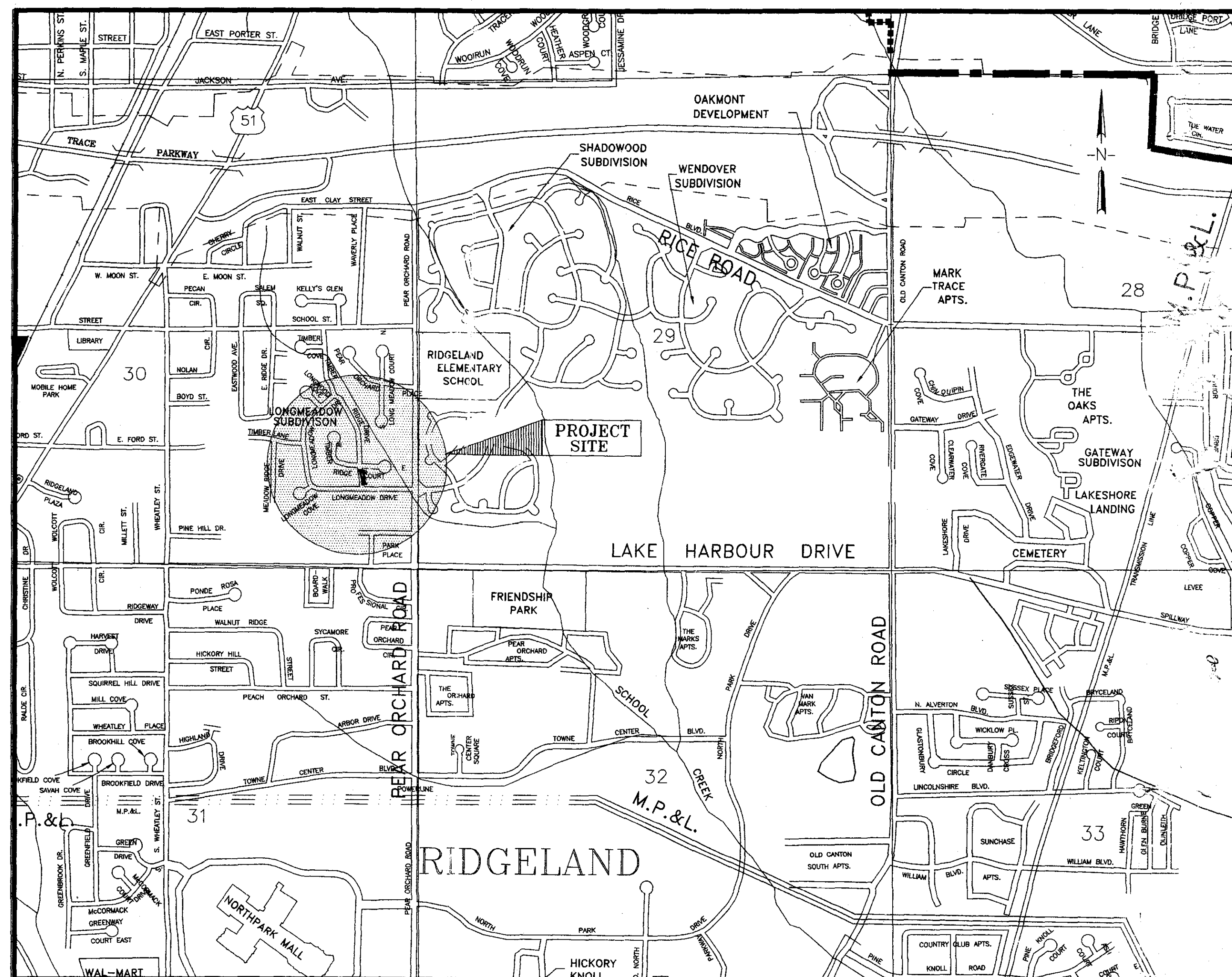
ASST. CITY ENGINEER
DAVID E. WILLIAMS, P.E.

ASST. DIRECTOR OF PUBLIC WORKS
SID HAWTHORNE

PUBLIC WORKS OPERATOR
DANNY WHITEHEAD

FIRE CHIEF
ELMER WAITS

POLICE CHIEF
CHARLES NEWELL



VICINITY MAP

MARCH - 2000
WEI C99-052

INDEX TO DRAWINGS	
SHEET NO.	TITLE
1	COVER SHEET AND INDEX OF DRAWINGS
2	SITE LAYOUT AND GENERAL NOTES
3	PLAN AND PROFILE SHEET
4	PLAN AND PROFILE SHEET
5	PLAN AND PROFILE SHEET
6	ADD ALTERNATE "A" PLAN VIEW
7	STREET DETAIL FOR STORM SEWER
8	ONE LANE CLOSURE TRAFFIC CONTROL PLAN STANDARD DETAIL
9	BRANCH CONNECTION STANDARD DETAIL
10	JUNCTION BOX FOR PIPE CULVERTS STANDARD DETAIL
11	PIPE COLLAR STANDARD DETAIL

138.86
316
342.82

374.0
374.0
479

43, 371.7 1-5
43, 372.82 6-8

1. 4.8 336³⁷
2. 4.7 336⁴⁷
3. 5.4 355⁷⁹ 3A-479 corner of inlet 336.30 6.05
4. 4.9 336²⁹
5. 5.9 335²⁷

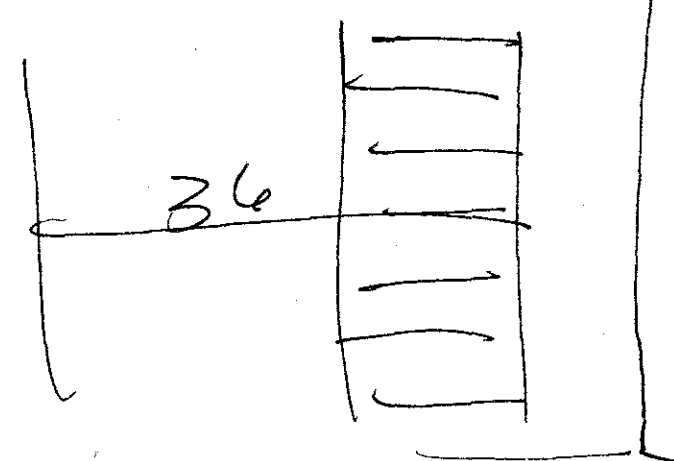
6. 7.6 335²² 6A-7.35 top of inlet 335.47 6.10
7. 6.6 336²²
8. 5.4 336²²

Every note has
350-4009

LONGMEADOW SUBDIVISION

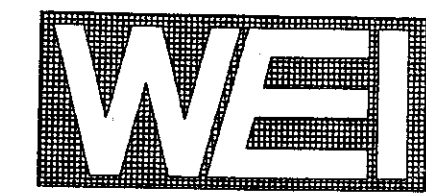
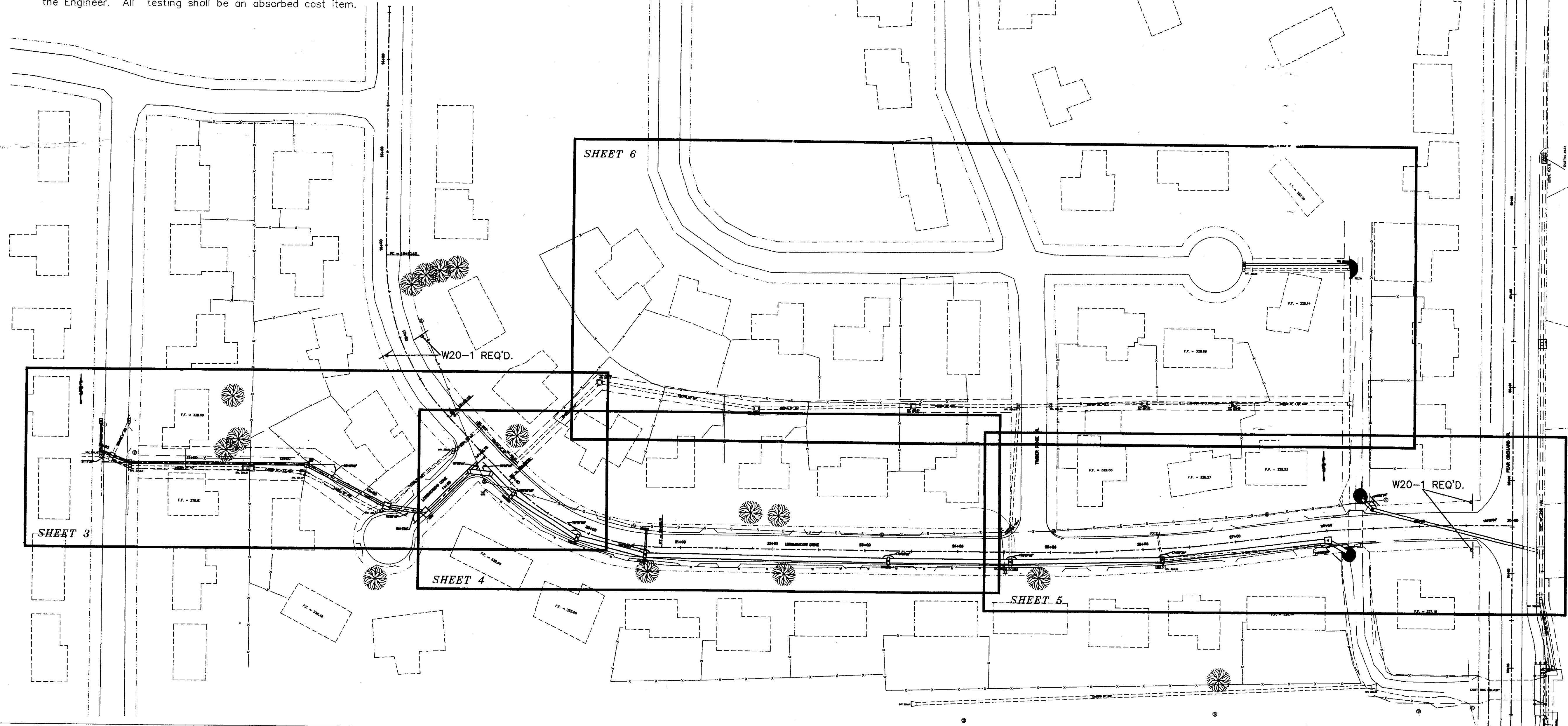


PWP-01211



GENERAL CONSTRUCTION NOTES

1. The existing utility locations shown on the Drawings are approximate only. The Contractor shall coordinate the location (horizontal and vertical) of existing utilities (power, telephone, gas, water, sewer, etc.) with the appropriate utility company before construction begins.
2. Utility lines or service lines encountered during construction, whether shown on the Drawings or not, shall be protected by the Contractor and repairs necessary due to damage to same by the Contractor shall be at no additional cost to the Owner.
3. The Contractor shall be responsible for verifying horizontal and vertical clearance requirements for utility services before installation.
4. The Contractor shall fertilize and seed areas where the existing vegetation was removed or disturbed during construction and shall solid sod the disturbed areas in front of houses.
5. Unsuitable bedding, backfill or site subgrade material which may be encountered shall be excavated to the limits required and backfilled with acceptable material to the lines and grades shown on the Drawings.
6. TBM's which are or may be in conflict with construction activities shall be relocated by Engineer prior to commencement of construction in the immediate area.
7. The Engineer will stake the base line control points necessary for the required construction staking of the project, one time only. Detailed construction staking will be by Contractor and shall be an absorbed cost item.
8. The Contractor shall be responsible for completing all sampling and testing of materials incorporated into the project and for submission of same to Engineer for review. Prior use test results, manufacturer's certificates, or proposed mix designs shall be submitted to the Engineer for review before incorporation into project. This shall include backfill, concrete, asphalt, steel, striping material, piping, materials, aggregates, seed and other items as specified by the Engineer. All testing shall be an absorbed cost item.
9. Storm sewer lengths may be varied during construction of project to conform to normal pipe joint lengths.
10. Existing sanitary sewer manhole tops, water valves, valve boxes, meters, storm sewer or other related appurtenances shall, when required, be adjusted to finished grade by Contractor as an absorbed cost of the work. Castings, required to be removed, shall be salvaged to the Owner by the Contractor.
11. Testing certifications shall state that the subject material meets the specified quality, grade, purity, class or weight, or that the subject material meets or exceeds the requirement of the applicable ASTM, AASHTO, MDT or other standards. Certifications shall be submitted to the Engineer prior to incorporation of the subject material into the project.
12. Traffic signs or delineators required under this Contract shall be constructed and installed in accordance with the Project Drawings and the MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MDT, 1990 EDITION as if said standards were written out herein in full. Measurement and Payment for traffic signs and delineators shall be as specified on the Bid Form.
13. Contractor shall, when required, relocate and reset existing mailboxes and roadway signs as an absorbed item.
14. Traffic control signage required will be located as directed by Engineer which will include: ROAD CLOSED TO THRU TRAFFIC - LOCAL TRAFFIC ONLY with Type III Barricades and other signage and/or warning devices as required for the safe passage of local traffic. See Traffic Control Plan (One lane closure of two-way traffic).
15. Curb and Gutter Removal and Replacement to be cost absorbed in base bid.
16. Undercut of Stormsewer culverts to be cost absorbed.



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ENGINEERING, INC.
ENGINEERS, PLANNERS, SCIENTISTS

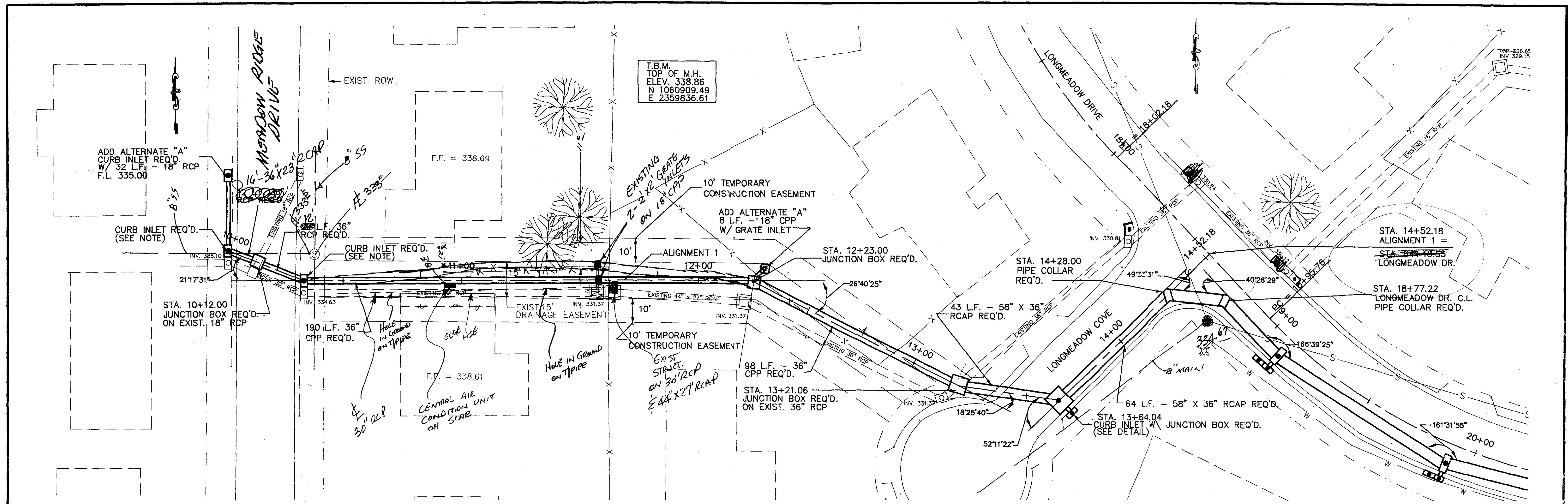
825 N. PRESIDENT ST.
JACKSON, MS 39202
601-355-9526
FAX 601-352-3945

DRAINAGE IMPROVEMENTS
LONGMEADOW SUBDIVISION
CITY OF RIDGELAND, MISSISSIPPI

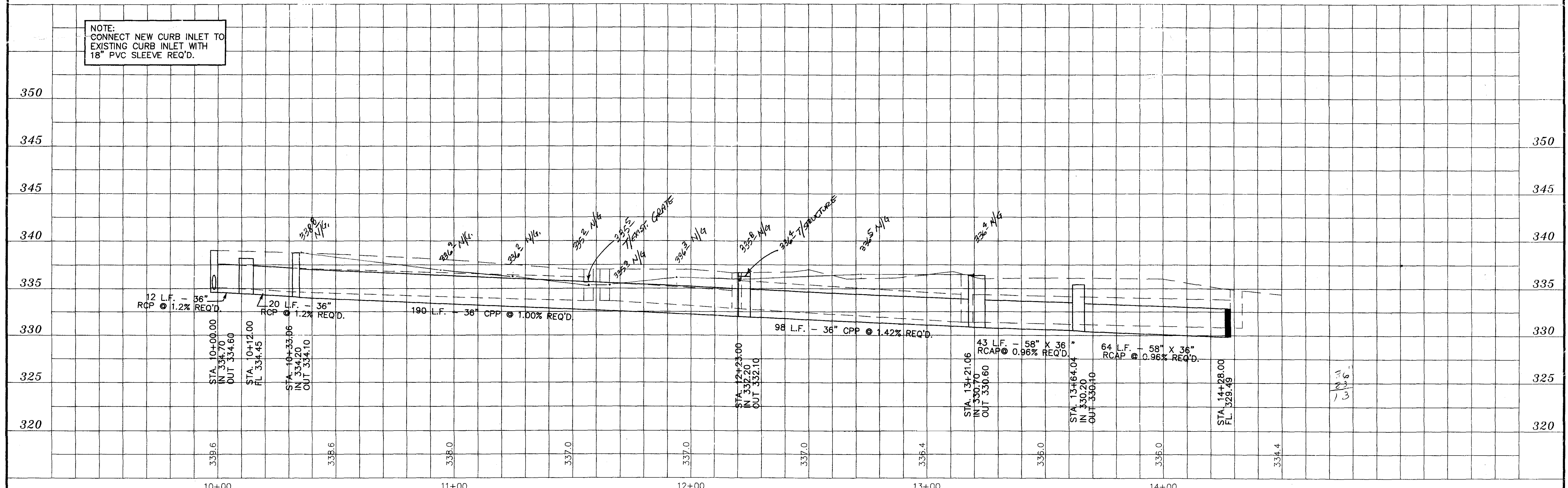
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NO.	REMARKS	DATE

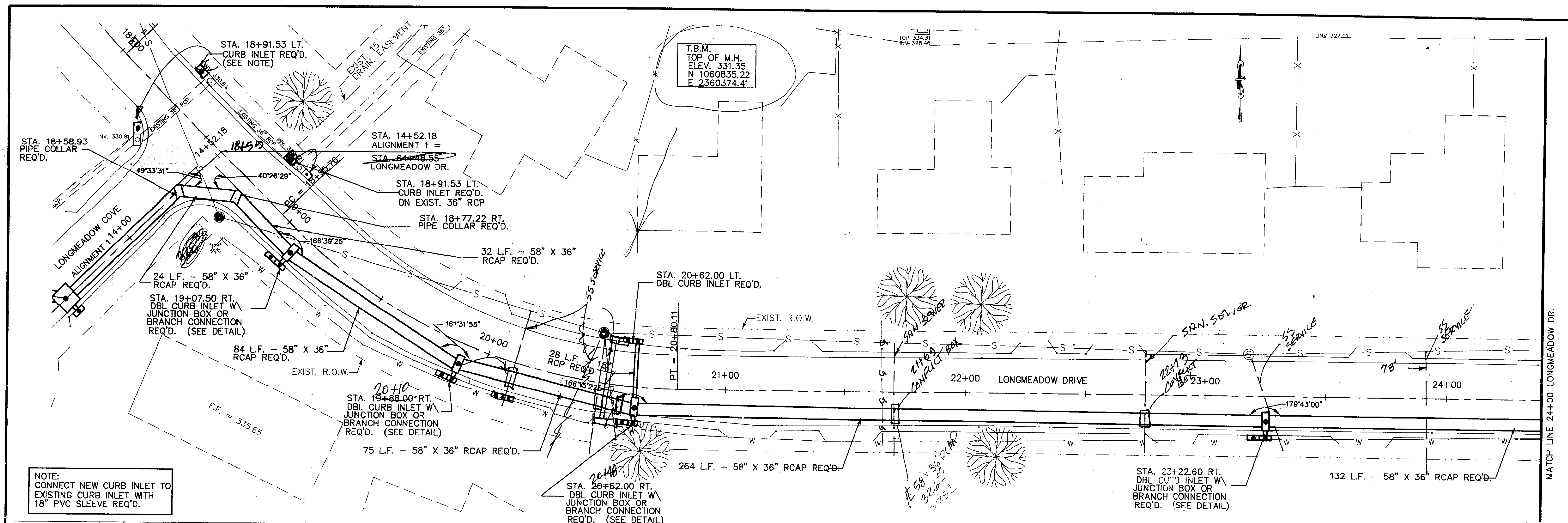
DRAWN BY: S.W. SCALE: 1" = 60'
 DESIGNED BY: S.W. DATE: 11-15-99
 CHECKED BY: C.W. PROJECT: C99052
 PART OF: P. C99052/LONGMEADOW
 DRAWING TITLE:

**SITE
LAYOUT**

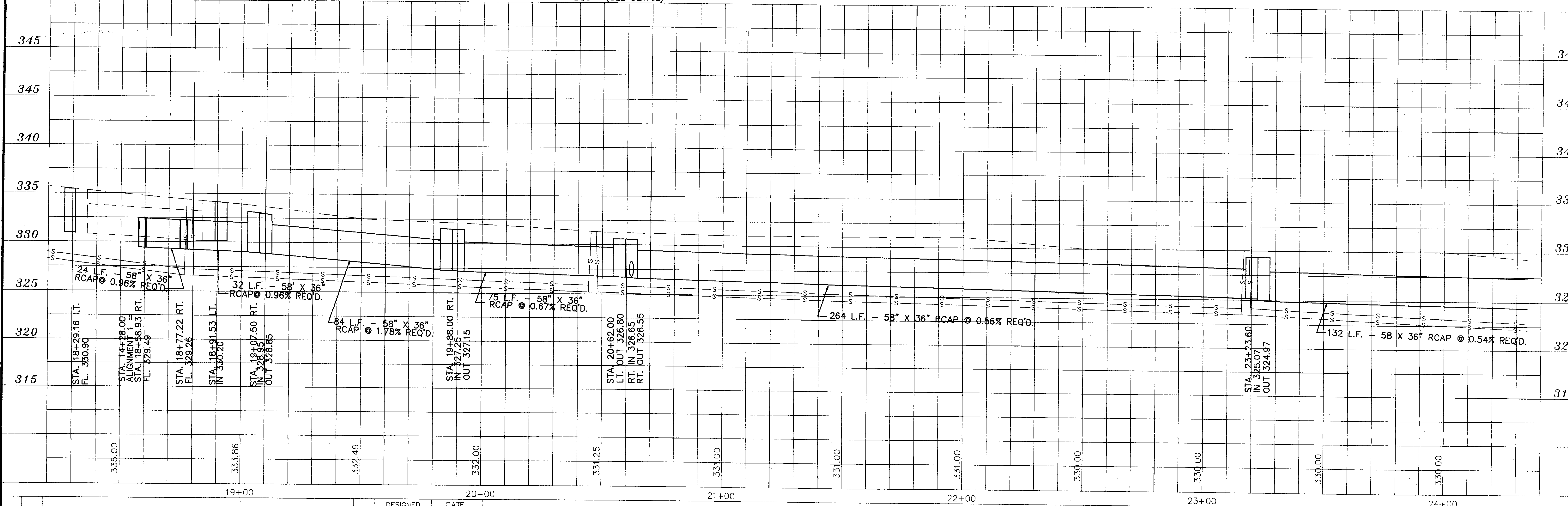


NOTE:
CONNECT NEW CURB INLET TO
EXISTING CURB INLET WITH
18" PVC SLEEVE REQ'D.





NOTE:
CONNECT NEW CURB INLET TO
EXISTING CURB INLET WITH
18" PVC SLEEVE REQ'D.

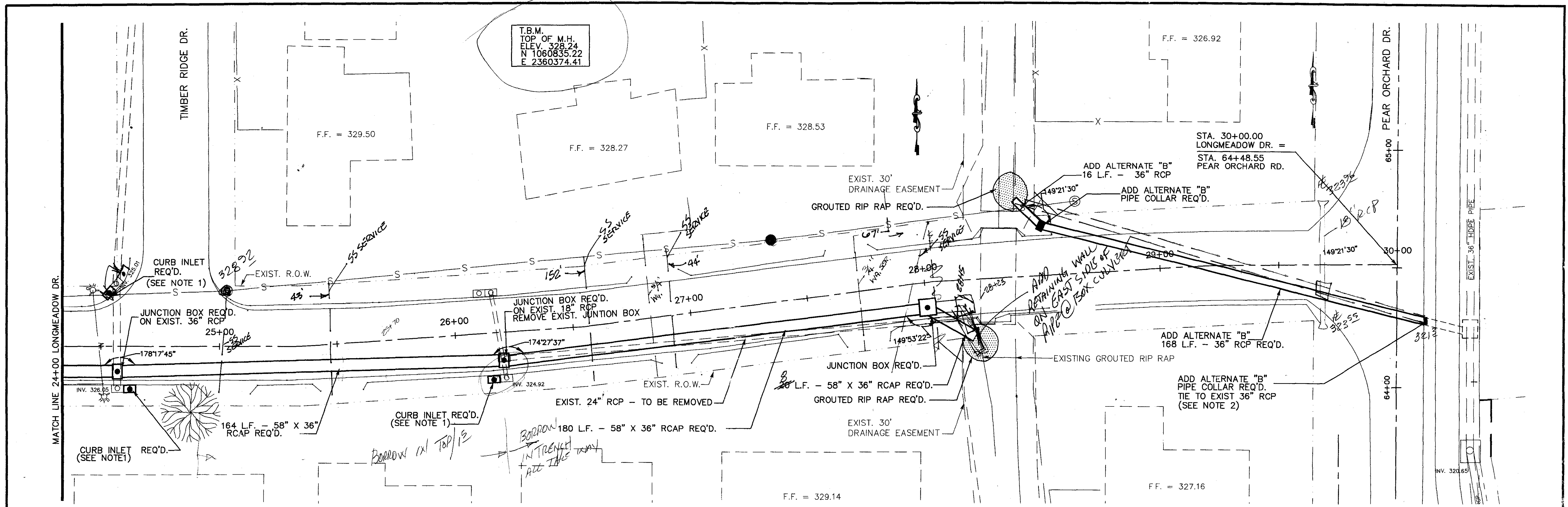


NO.	DATE	REVISIONS	BY	DESIGNED	DATE	09/28/99
				DRAWN	SCALE	1" = 30' HORIZ. 1" = 50' VERT.

WAGGONER ENGINEERING INC. CONSULTING ENGINEERS
JACKSON, MISSISSIPPI

DRAINAGE IMPROVEMENTS
LONGMEADOW SUBDIVISION
CITY OF RIDGELAND, MISSISSIPPI

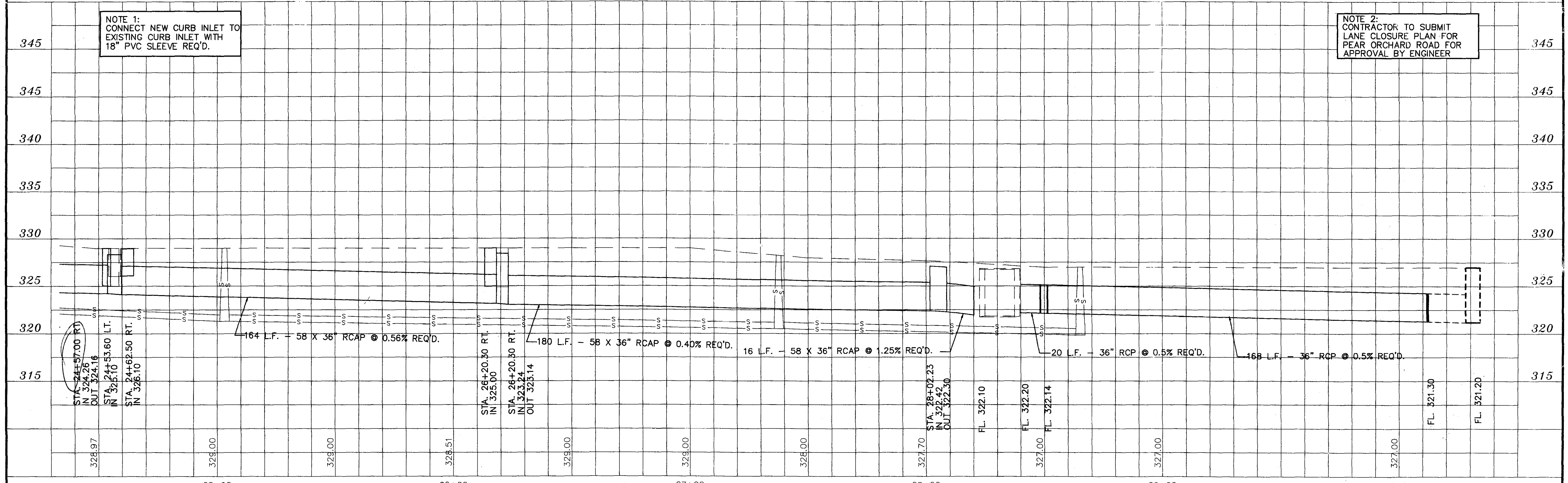
c:\sdesk\prj\longmeadow
W.E.I. JOB NO. C99052
SHEET NO. 4



T.B.M.
TOP OF M.H.
ELEV. 328.24
N 1060835.22
E 2360374.41

NOTE 1:
CONNECT NEW CURB INLET TO
EXISTING CURB INLET WITH
18" PVC SLEEVE REQ'D.

NOTE 2:
CONTRACTOR TO SUBMIT
LANE CLOSURE PLAN FOR
PEAR ORCHARD ROAD FOR
APPROVAL BY ENGINEER





WAGGONER
ENGINEERING, INC.
ENGINEERS, PLANNERS, SCIENTISTS

825 N. PRESIDENT ST.
JACKSON, MS 39202
601-355-9328
FAX 601-352-3945

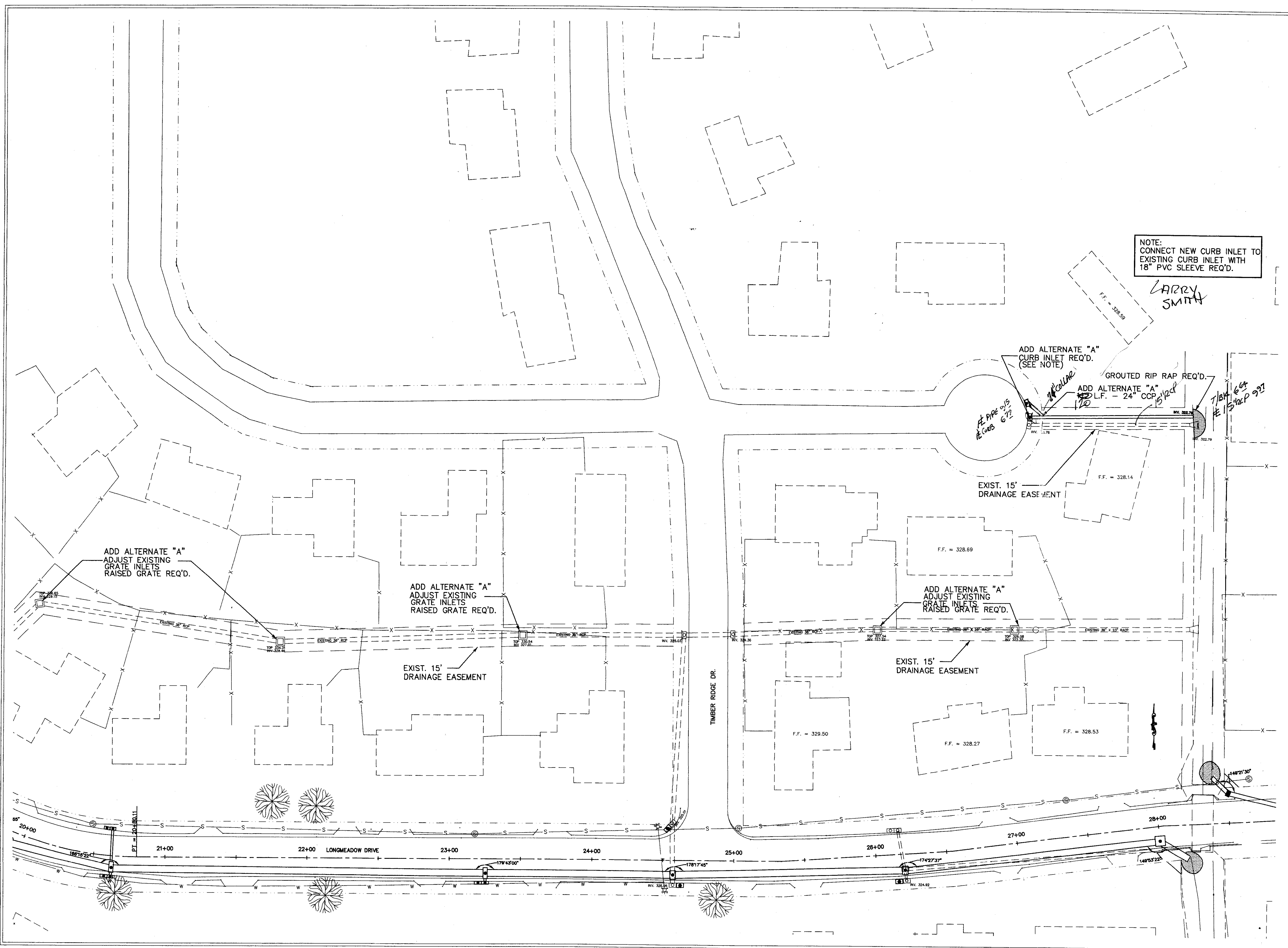
DRAINAGE IMPROVEMENTS
LONGMEADOW SUBDIVISION
CITY OF RIDGELAND, MISSISSIPPI

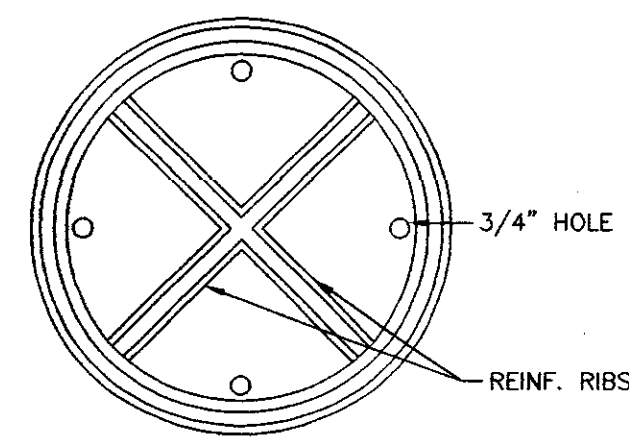
DRAWING REVISIONS		
NO.	REMARKS	DATE

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DESIGNED BY: S.W. DATE: 03-13-00
CHECKED BY: C.W. PROJECT: C99002
PATH: P:\CROSS\LONGMEADOW
DRAWING TITLE:

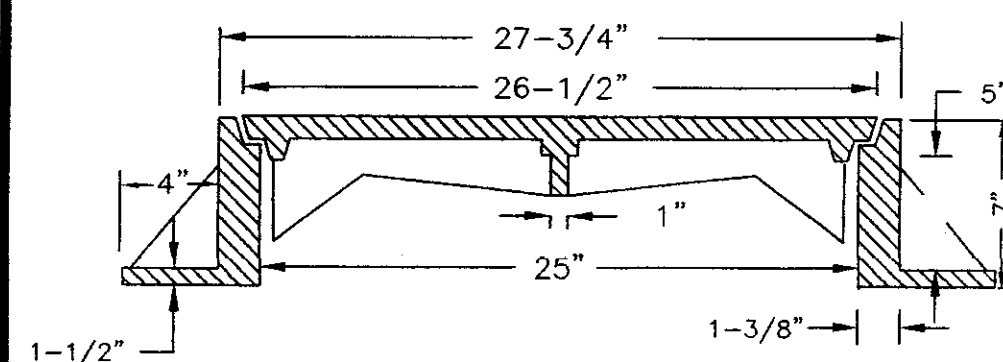
ADD
ALTERNATE "A"

SHEET NUMBER: 6



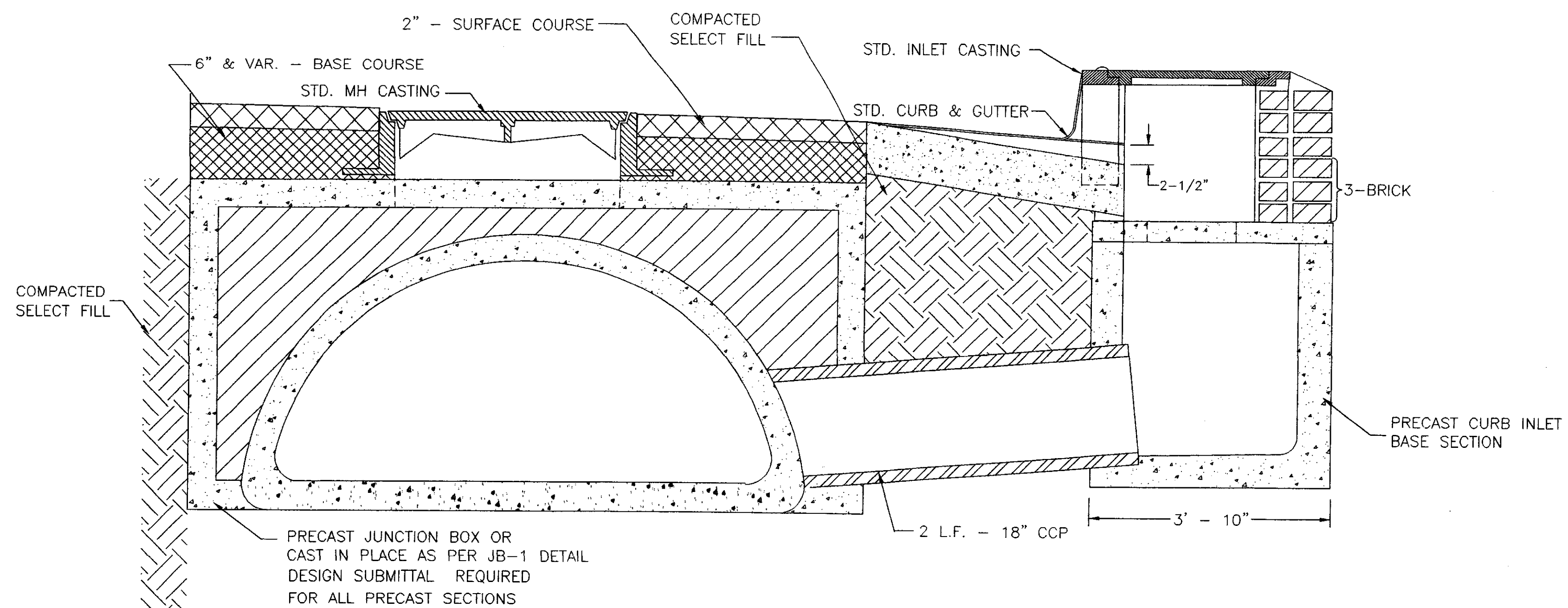


INVERT PLAN OF COVER



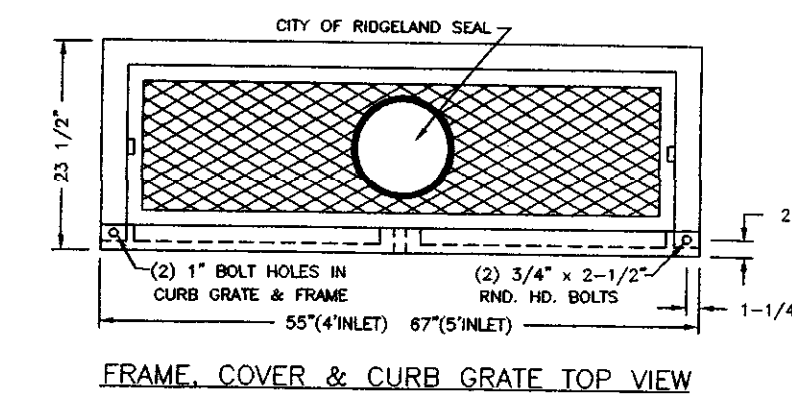
STD. MH CASTING

NOTE: 1. USE TYPE "A" MANHOLE CASTING
2. USE HARPER NO. 2, OR VULCAN NO. VM - 15

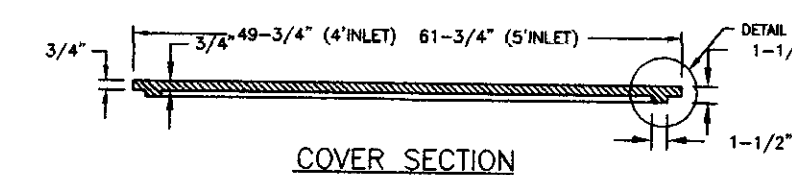


SECTION OF STANDARD CURB INLET WITH JUNCTION BOX

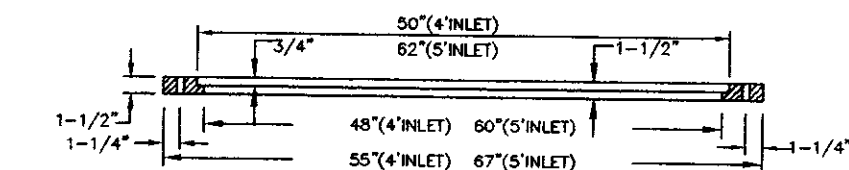
STANDARD 4' & 5' CURB INLET



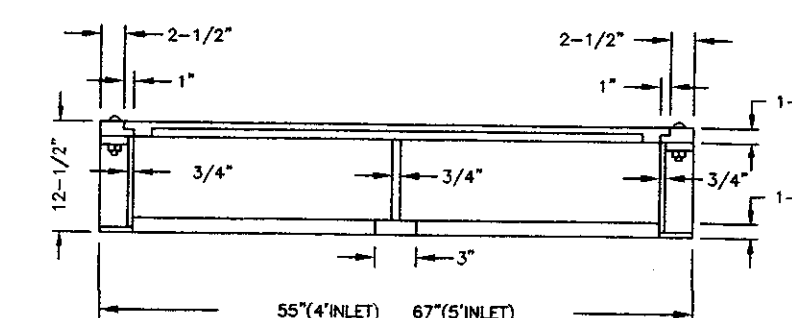
FRAME, COVER & CURB GRATE TOP VIEW



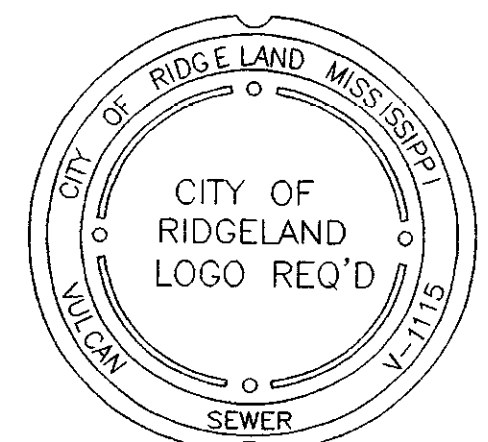
COVER SECTION



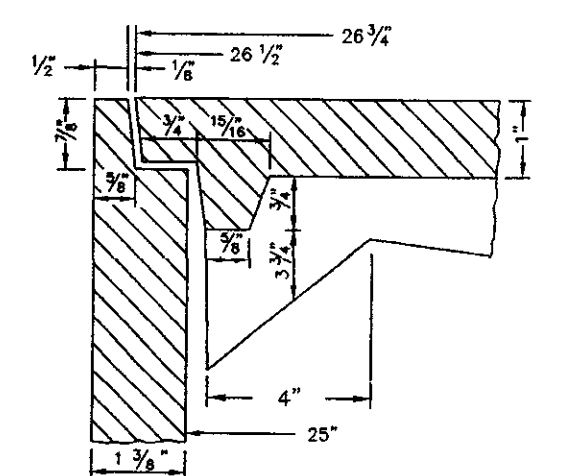
FRAME SECTION



FRONT ELEVATION

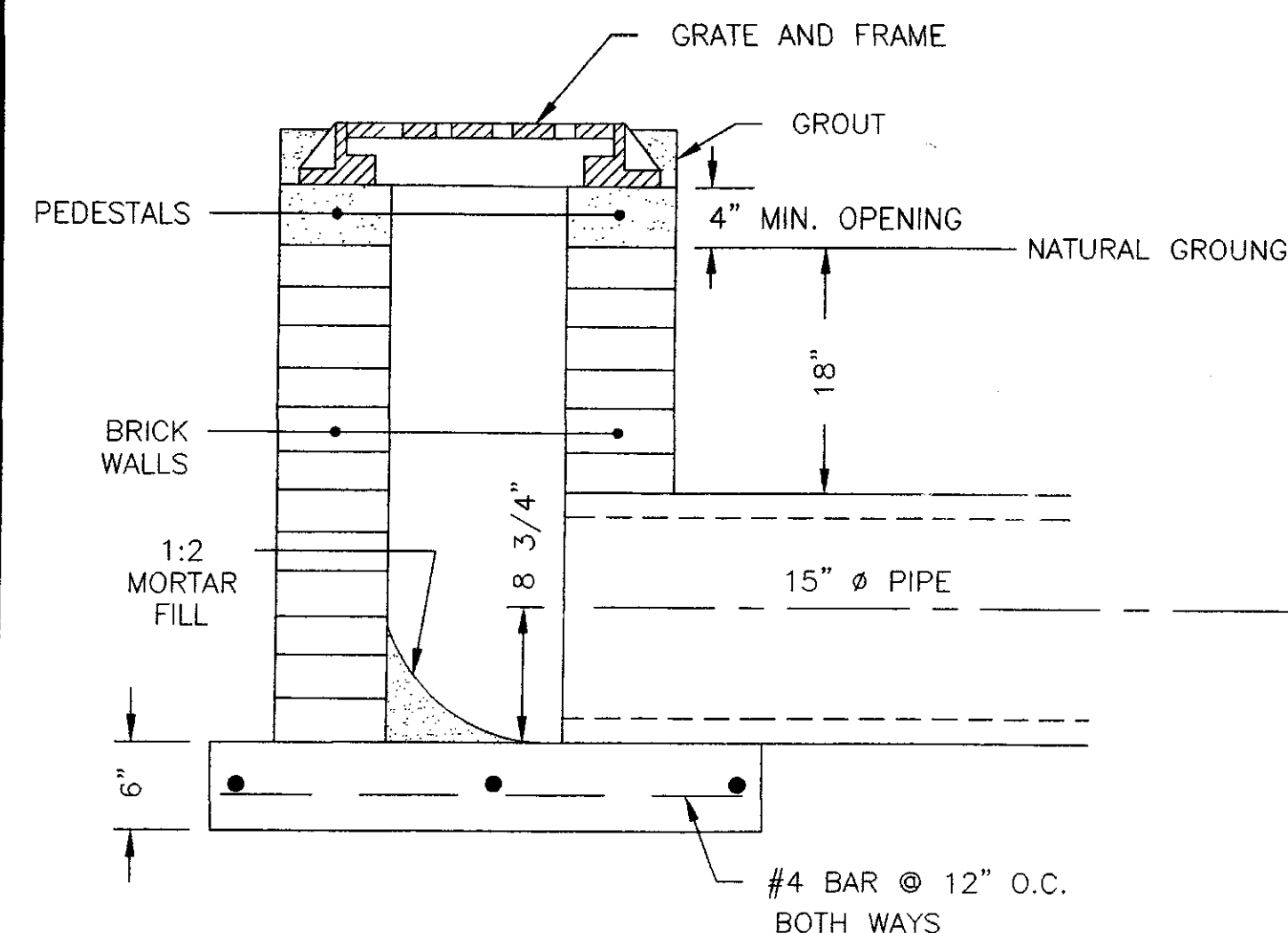


TOP PLAN OF COVER

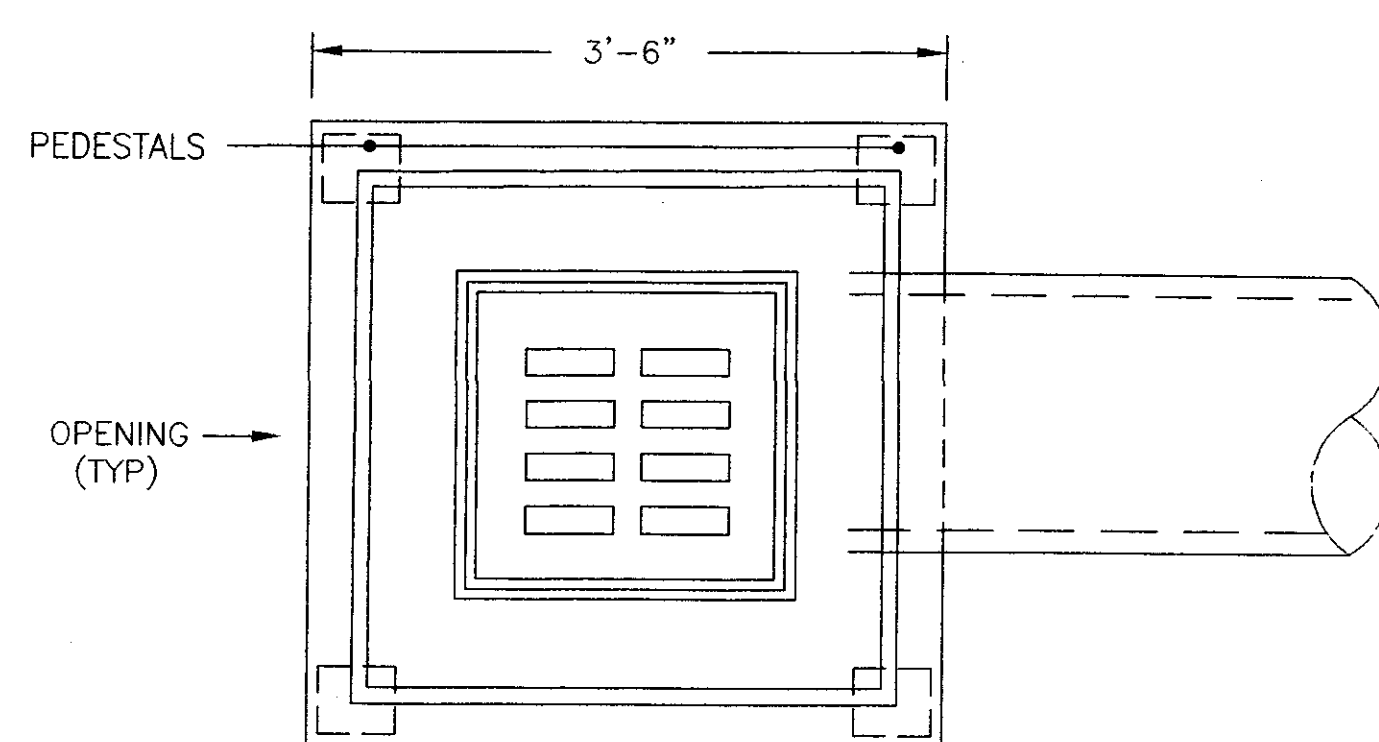


DETAIL "E"

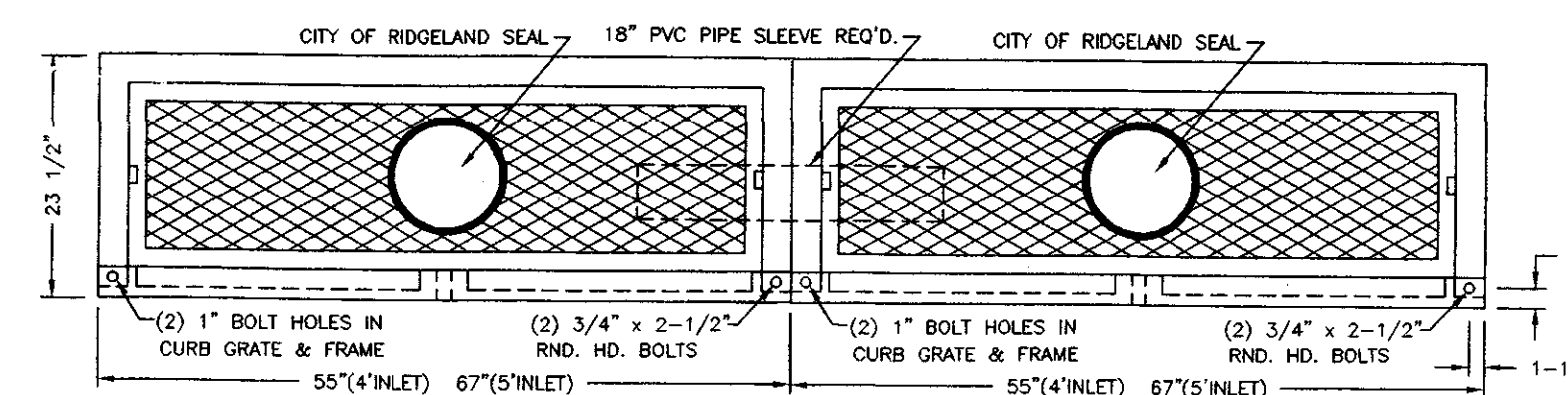
NOTE: ALL CASTINGS TO BE CONSTRUCTED OF A GOOD QUALITY GRAY IRON ACCORDING TO SPECIFICATIONS.



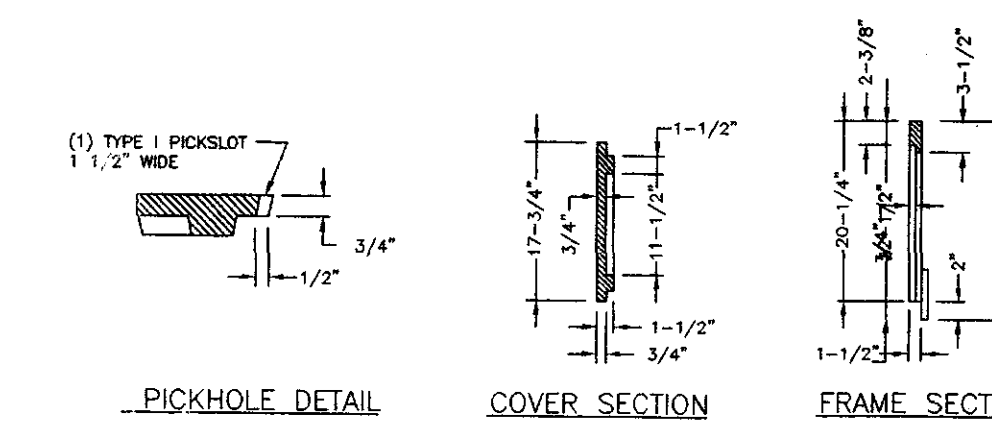
SECTION



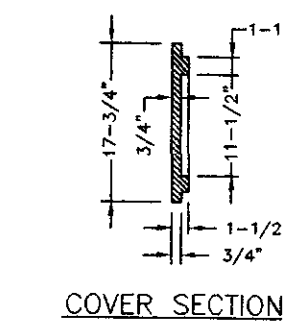
PLAN



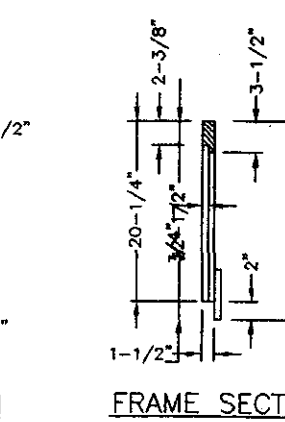
FRAME, COVER & DOUBLE CURB GRATE TOP VIEW



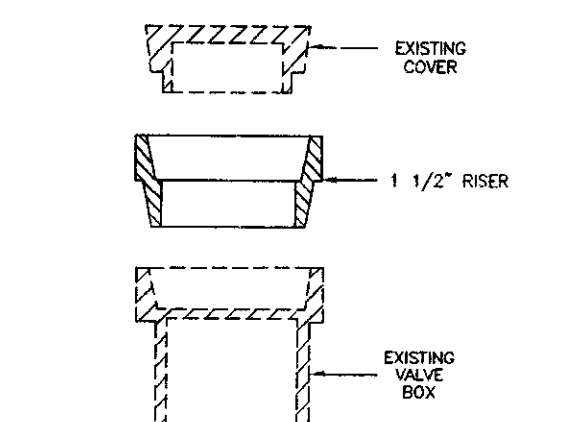
PICKHOLE DETAIL



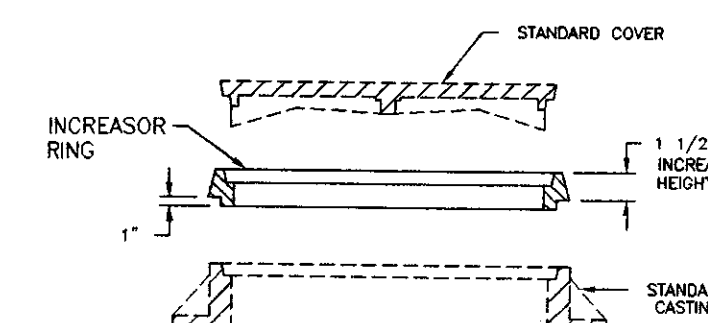
COVER SECTION



FRAME SECTION

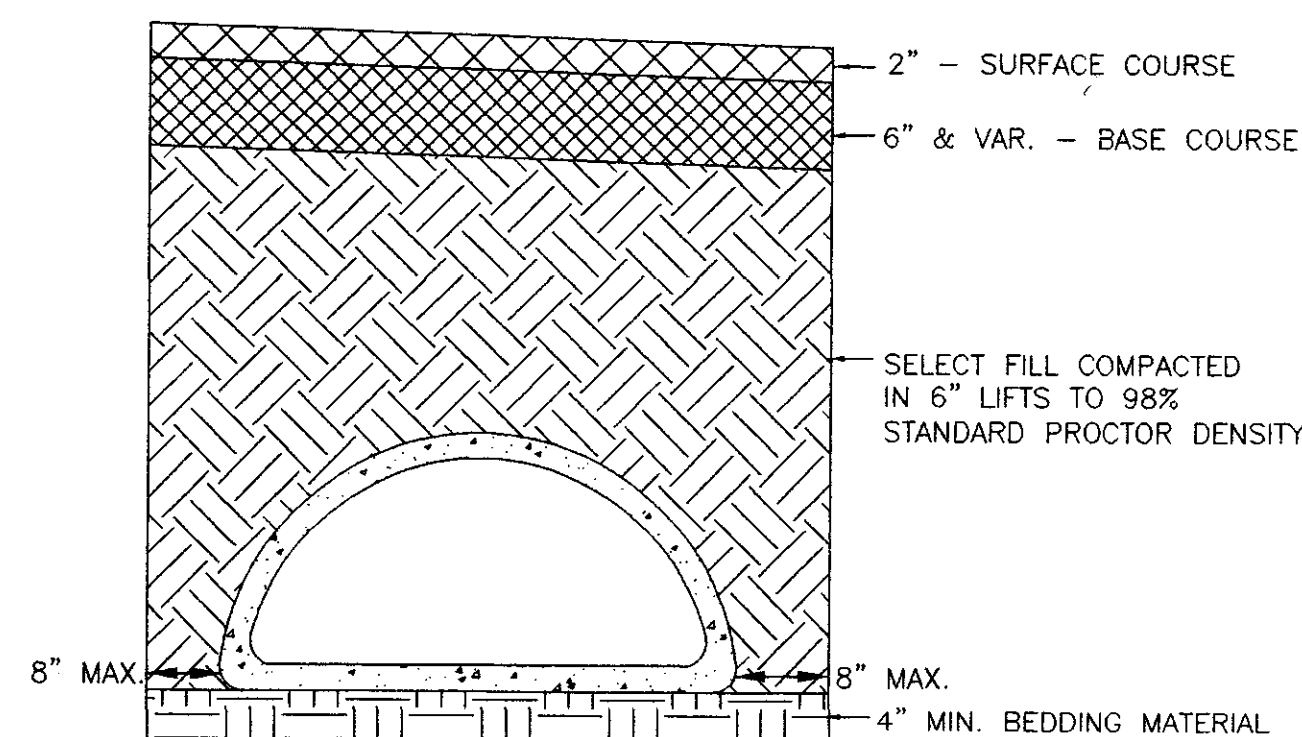


VALVE BOX RISER

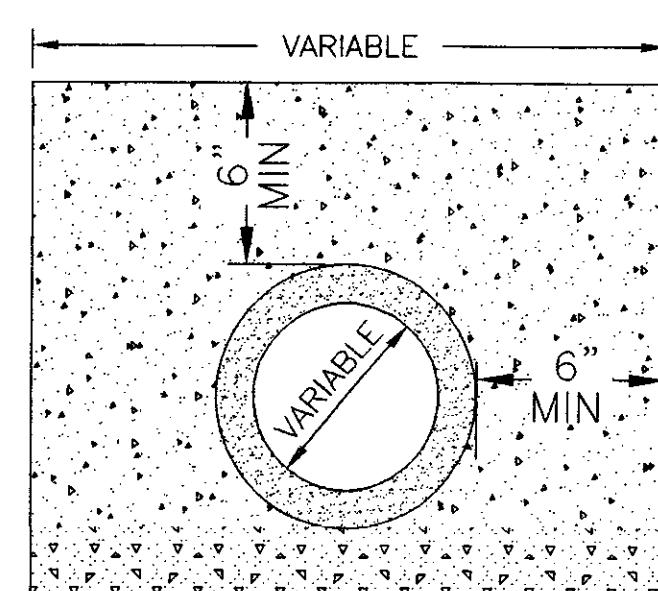


MANHOLE INCREASOR RING

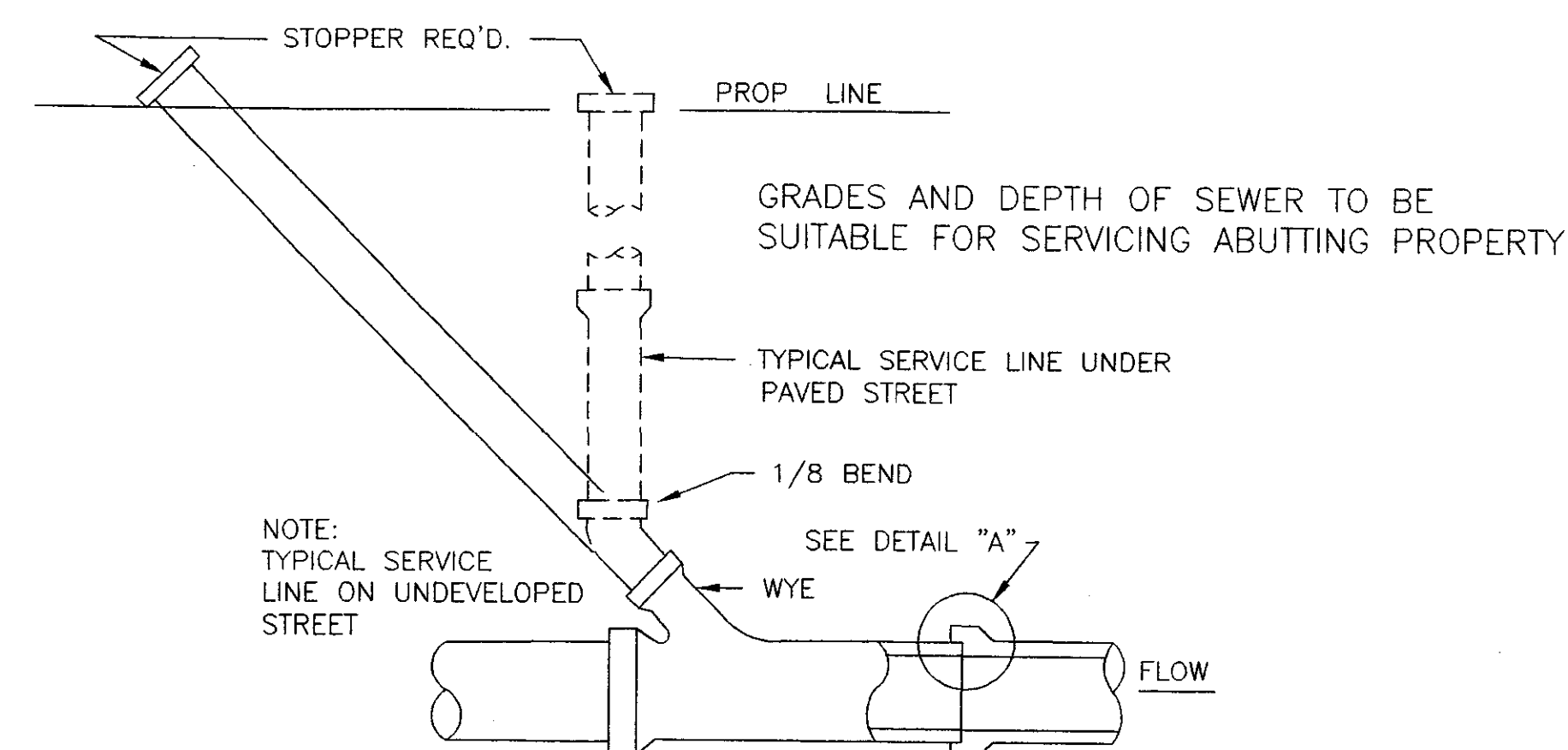
CITY OF RIDGELAND STANDARD 24" x 24" GRATE INLET



TYPICAL TRENCH DETAIL IN PAVEMENT



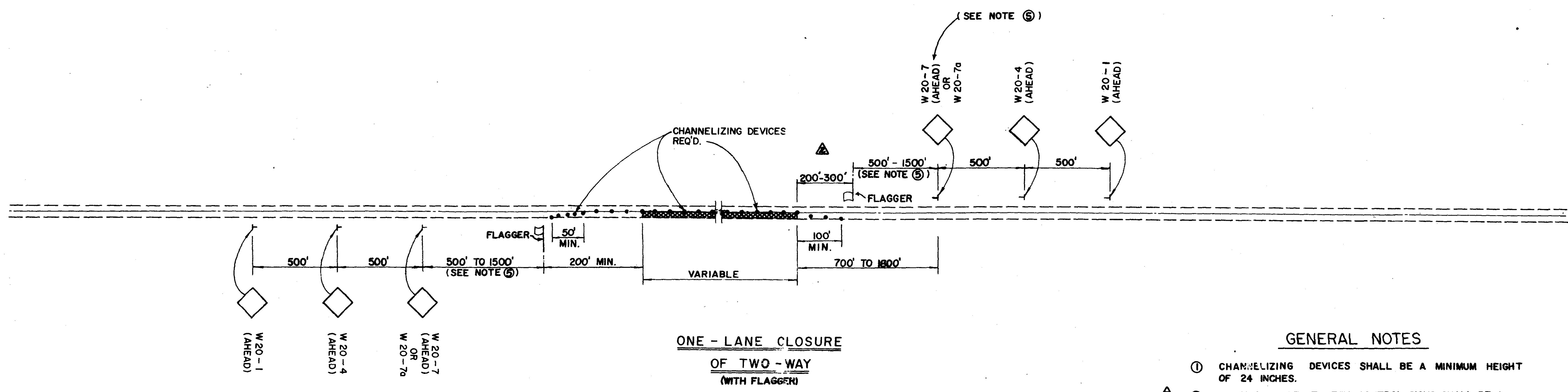
TYPICAL DETAIL OF CONCRETE ENCASEMENT



TYPICAL SERVICE TO PROPERTY LINE

STREET DETAILS FOR STORM SEWER

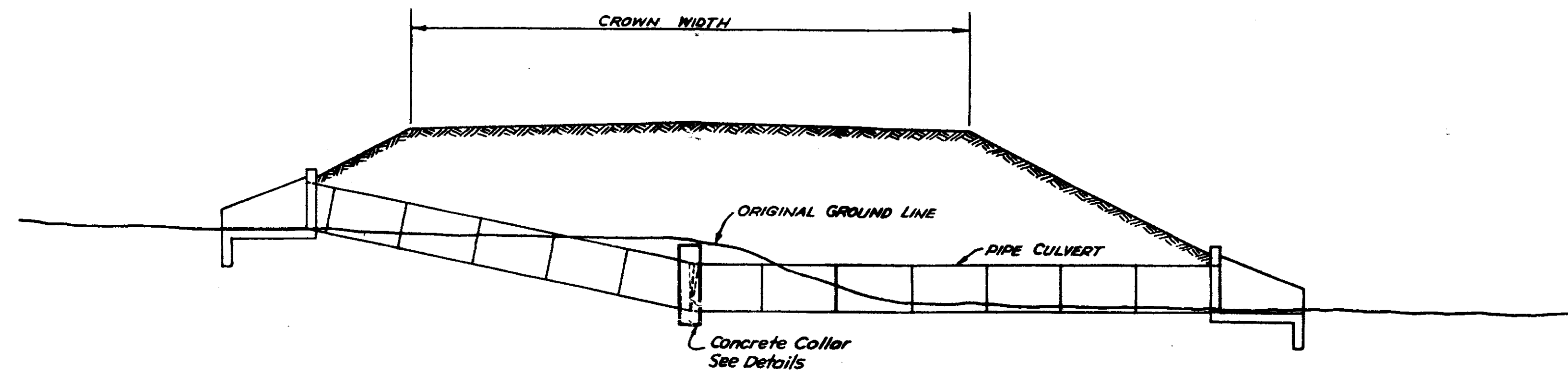
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: B.H.B.	DATE: 02-15-2000	SHEET NUMBER
REVIEWED BY: C.W.	SCALE: AS SHOWN	7



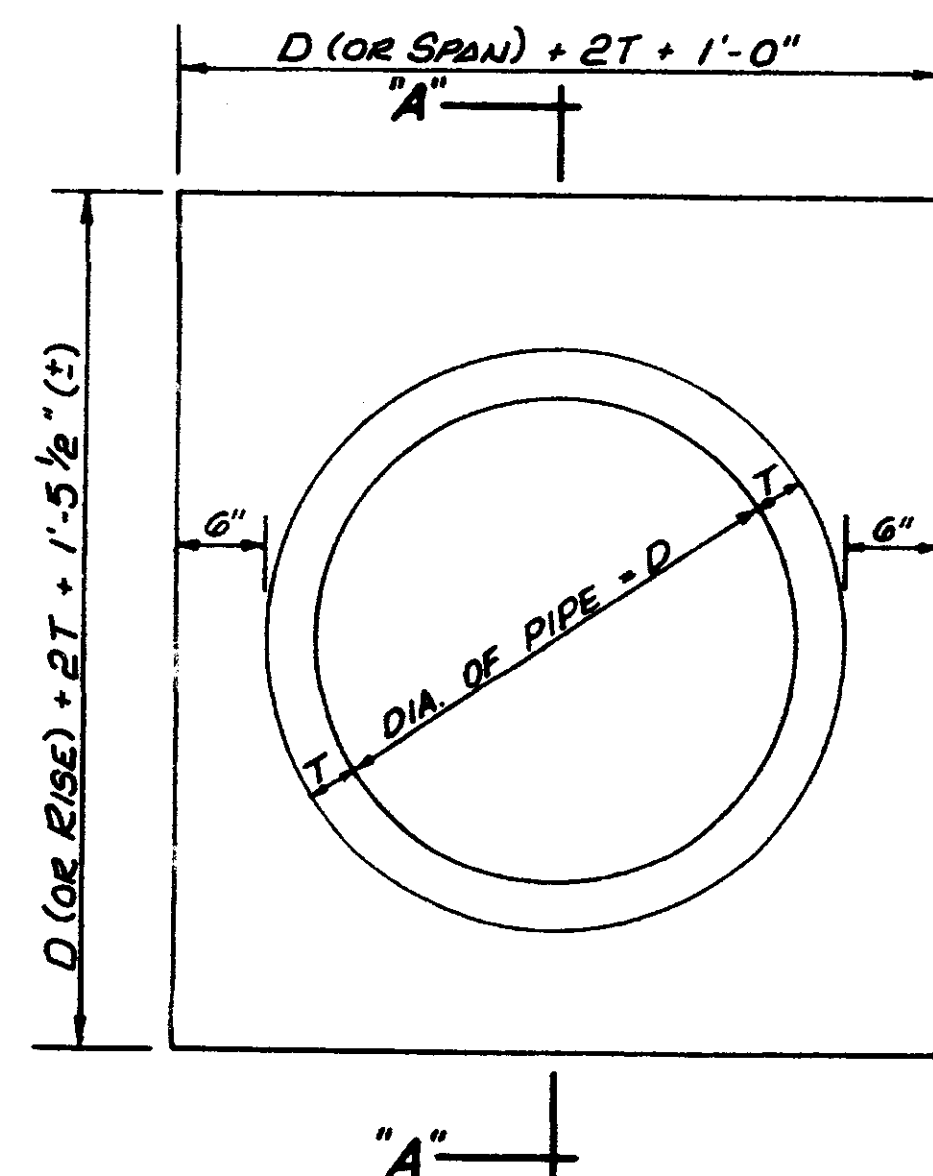
GENERAL NOTES

- ① CHANNELIZING DEVICES SHALL BE A MINIMUM HEIGHT OF 24 INCHES.
- ② DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 48" x 48".
- ③ SPACING OF CHANNELIZING DEVICES ALONG LANE LINE AND WORK ZONE TO BE EQUAL TO THE POSTED SPEED (M.P.H.) IN FEET.
- ④ WHEN THERE IS NO EXISTING HAZARD OR AT THE END OF THE WORK DAY, ALL SIGNS SHALL BE COVERED OR REMOVED AND ALL CHANNELIZING DEVICES SHALL BE MOVED TO THE SHOULDER EDGE.
- ⑤ WHEN THE WORK ZONE IS STATIONARY, THE W20-7 OR W20-7a SIGN SHOULD BE PLACED 500' IN ADVANCE OF THE FLAGGER AND SHOULD INDICATE (500') AS THE DISTANCE.
- ⑥ ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

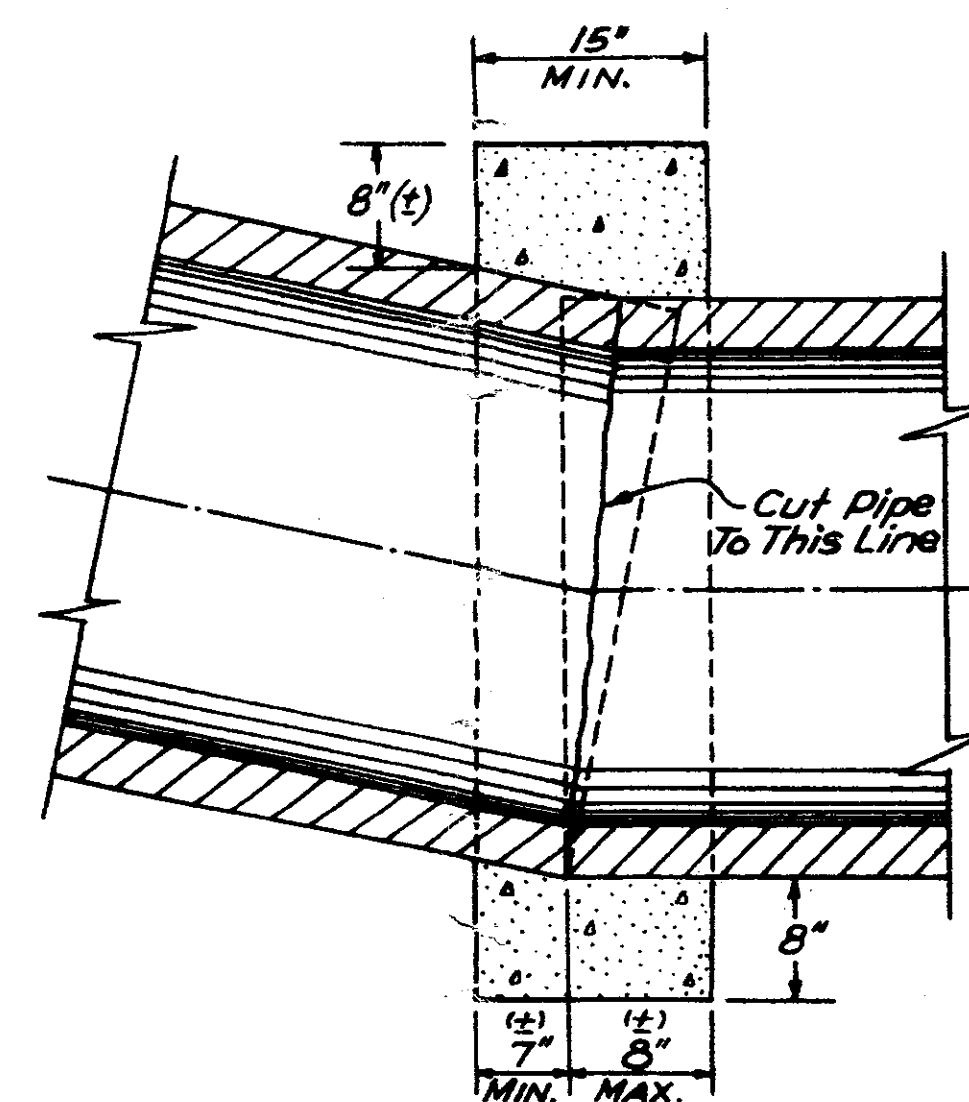
MISSISSIPPI STATE HIGHWAY DEPARTMENT TRAFFIC CONTROL PLAN (ONE-LANE CLOSURE OF TWO-WAY TRAFFIC)	
DESIGNED _____ CHECKED _____ DATE _____	DETAILED _____ ISSUED _____ DATE 6-18-96
WORKING NUMBER TCP-1 SHEET NUMBER 190	



TYPICAL INSTALLATION FOR PIPE CULVERT WITH BROKEN FLOW LINE



ELEVATION OF CONCRETE COLLAR
 (CIRCULAR PIPE SHOWN, ARCH PIPE SIMILAR)



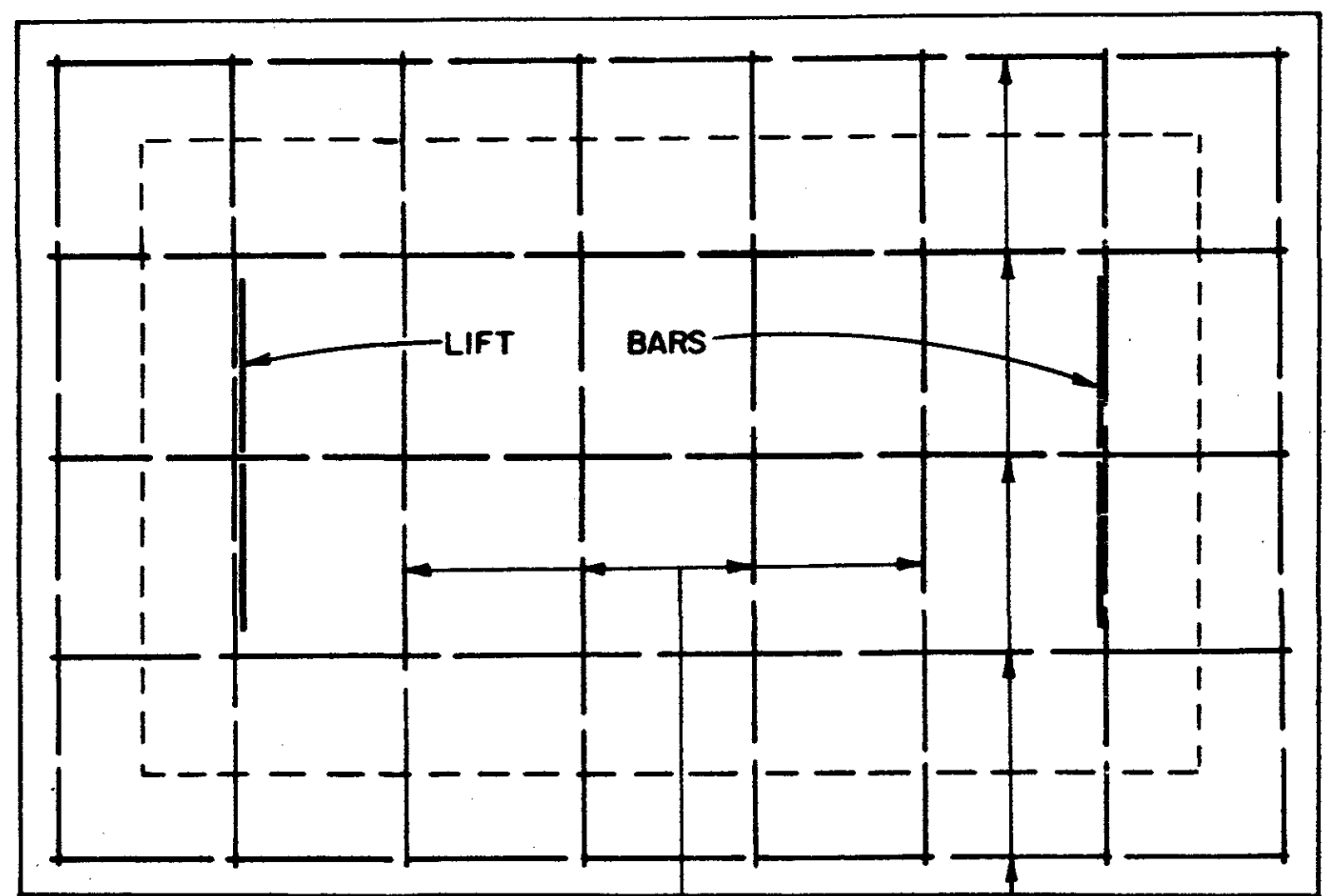
SECTION "A-A"

QUANTITIES FOR CONCRETE COLLAR FOR PIPE CULVERTS

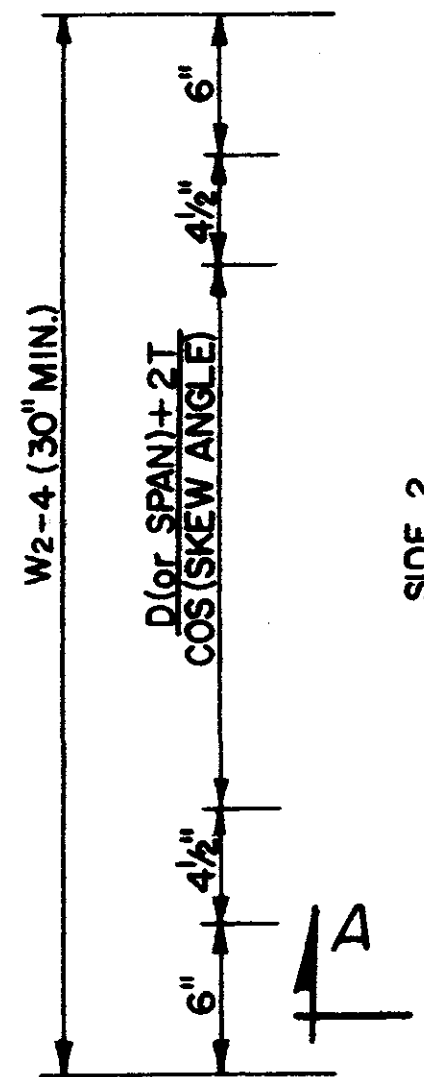
CIRCULAR PIPE		ARCH PIPE	
DIA. OF PIPE	CLASS "B" CONCRETE CULVERT	SIZE OF PIPE	CLASS "B" CONCRETE CULVERT
12"	0.240	15 x 11	0.280
15"	0.280	22 x 12	0.310
18"	0.320	29 x 18	0.410
24"	0.410	36 x 23	0.490
30"	0.510	44 x 27	0.600
36"	0.620	51 x 31	0.690
42"	0.730	58 x 36	0.820
48"	0.850	65 x 40	0.970
54"	1.110	73 x 45	1.070
66"	1.248	88 x 54	1.366
72"	1.393		

GENERAL NOTES
 QUANTITIES SHOWN SHALL BE THE BASIS FOR PAYMENT
 UNLESS AUTHORIZED MODIFICATIONS ARE MADE.

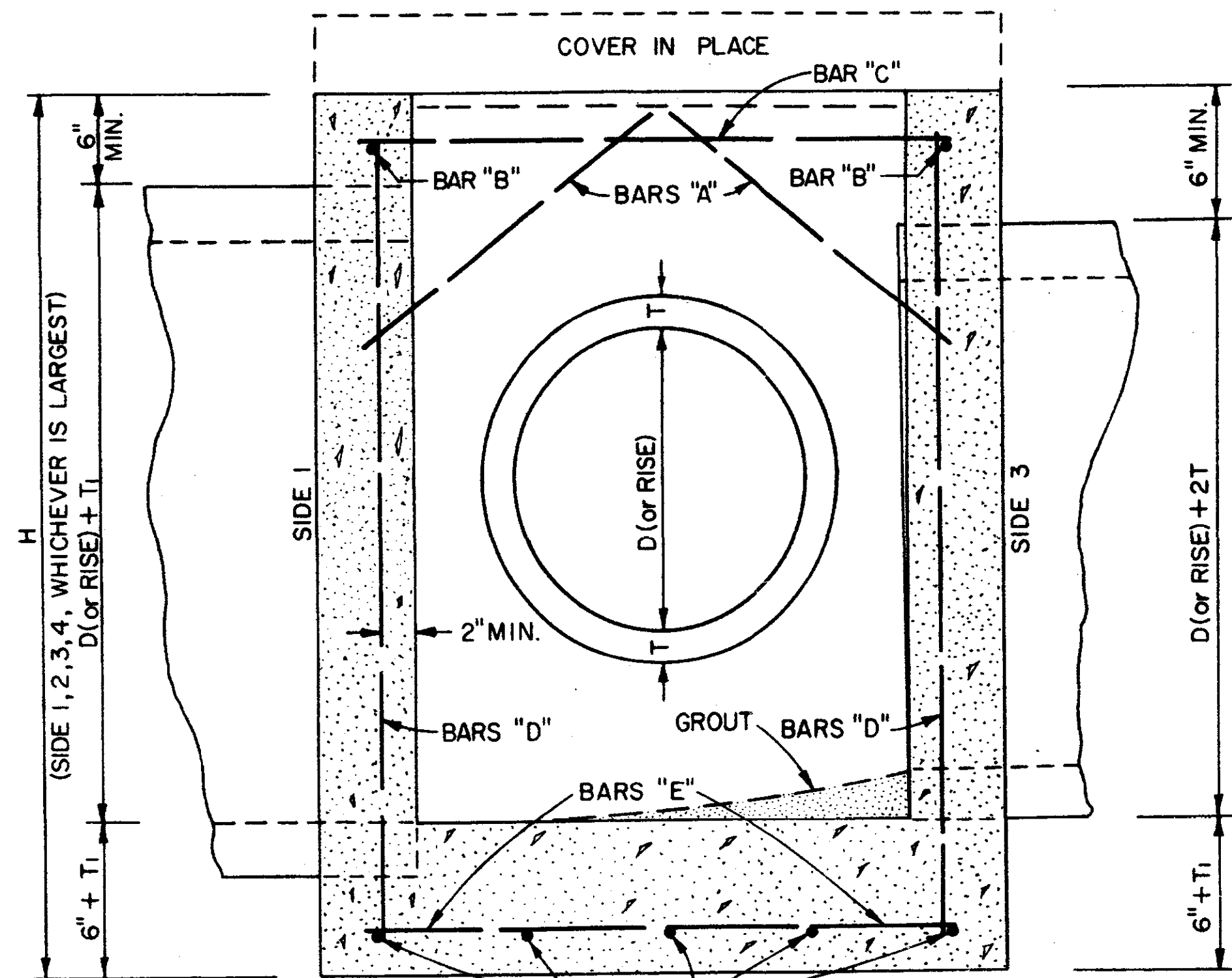
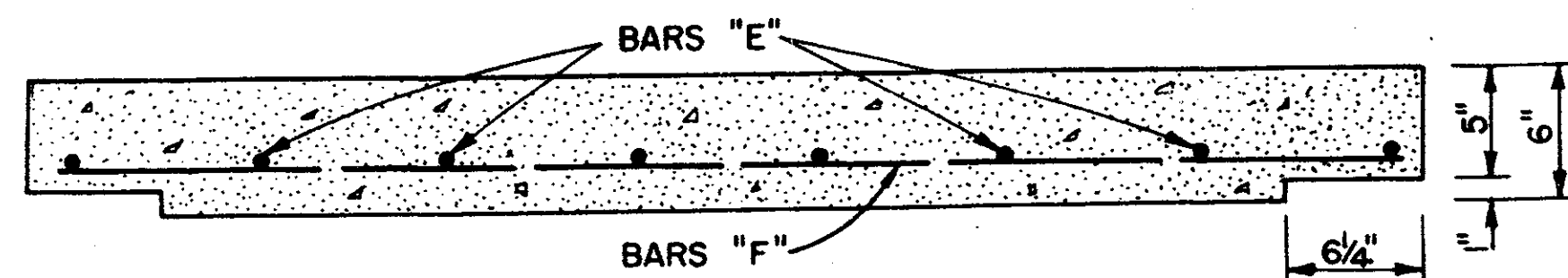
MISSISSIPPI DEPARTMENT OF TRANSPORTATION			
PIPE COLLAR, CONCRETE			
DESIGNED	DETAILS	TRACED	
CHECKED	ISSUED	DATE	11-1-78
WORKING NUMBER			226
PC-1			



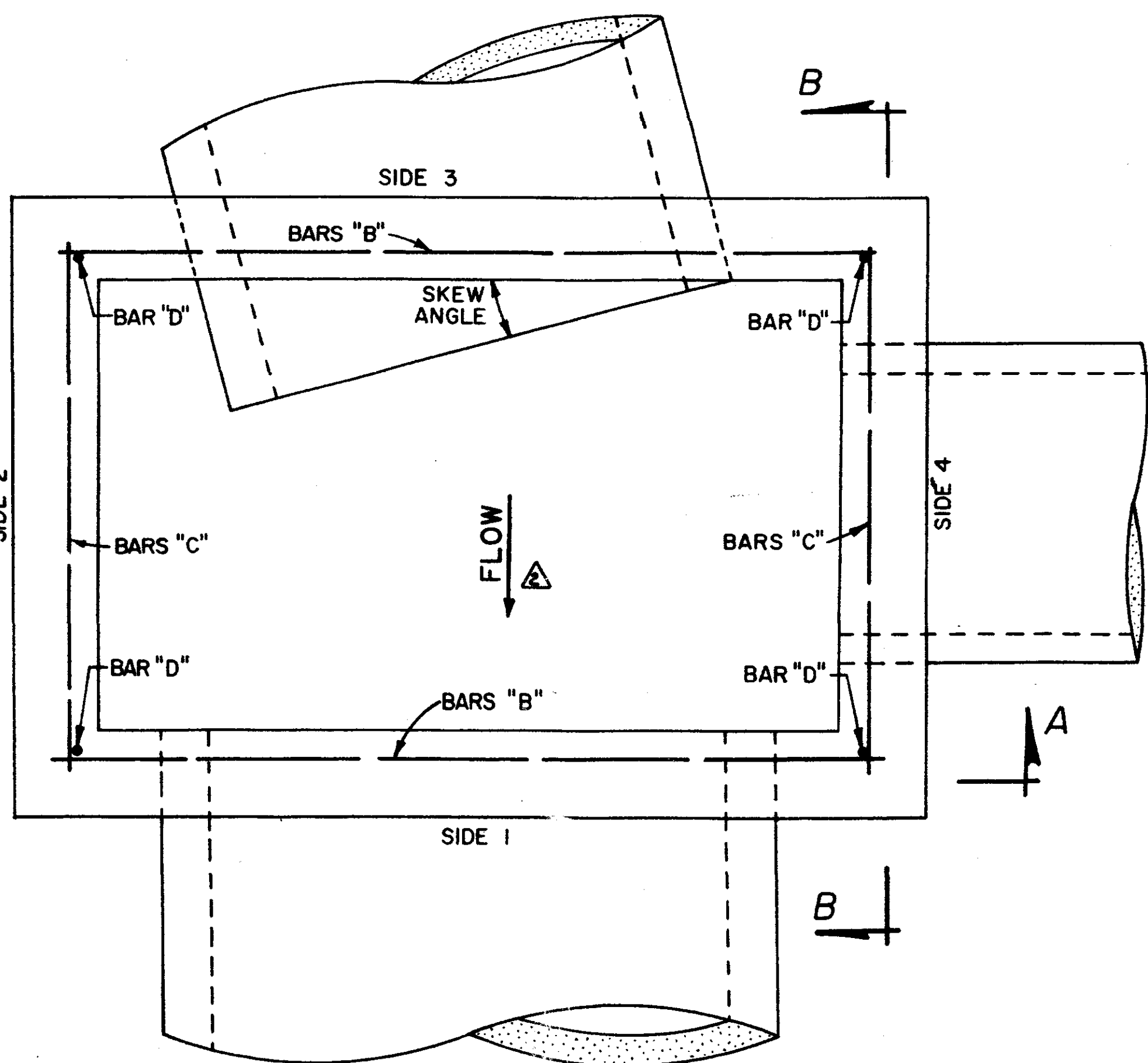
PLAN OF COVER



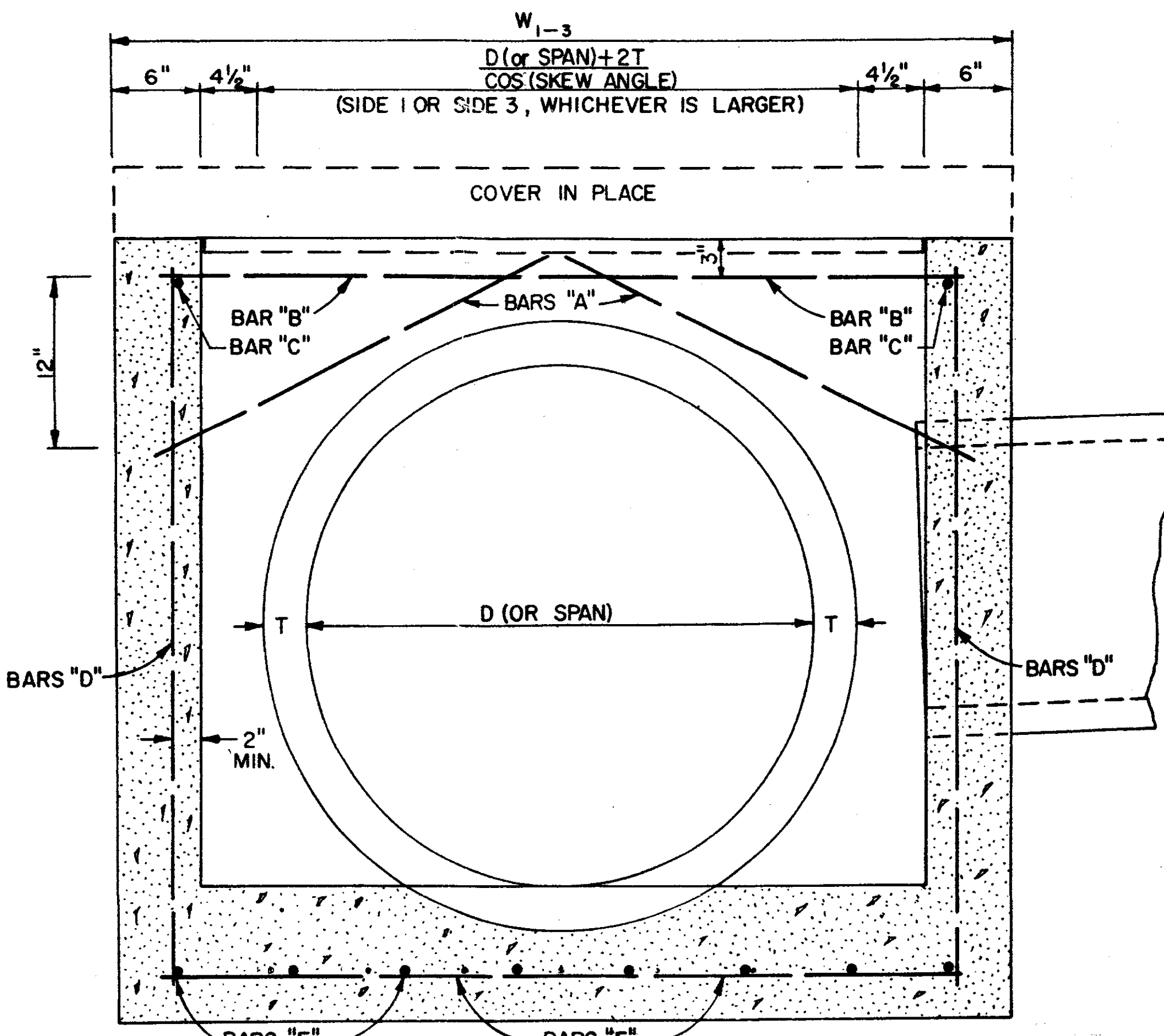
ELEVATION OF COVER



SECTION B-B



PLAN



SECTION A-A

BAR LIST		
BAR	NUMBER REQUIRED	LENGTH (INCHES)
A	2 PER PIPE OPENING	$\sqrt{196 + \left(\frac{W_1-3}{2} + 2\right)^2}$
B	2	$W_{1-3} - 6$
C	2	$W_{2-4} - 6$
D	4	$H - 6$
E	$2 \left[\frac{(W_{1-3})^{**} + 1}{9} \right]$	$W_{2-4} - 4$
F	$2 \left[\frac{(W_{2-4})^{**} + 1}{9} \right]$	$W_{1-3} - 4$

WHERE: D (or SPAN) = PIPE DIAMETER (or SPAN) (INCHES)
 W₁₋₃ = WIDTH OF SIDE 1 & SIDE 3 (INCHES)
 W₂₋₄ = WIDTH OF SIDE 2 & SIDE 4 (INCHES)
 W* = W₁₋₃ OR W₂₋₄ (SIDE OF ENTERING PIPE)
 ** ROUND TO NEAREST WHOLE NUMBER

CL. "B" CONC. (CY) = $5W_{1-3}W_{2-4} + [(W_{1-3} - 12.5)(W_{2-4} - 12.5)] + [(T_1 + 6)W_{1-3}W_{2-4}] + 12[H - (T_1 + 6)](W_{1-3} - 12) + W_{2-4}$

46,656

(MINUS) DEDUCTIONS FOR PIPE OPENINGS (C.Y.)

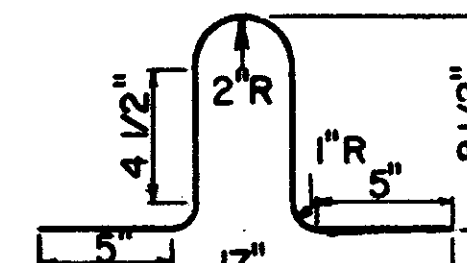
REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.

REINFORCING STEEL FOR 2 LIFT BARS = 4 LBS.

COMMON PIPE SIZE					
CIRCULAR PIPE			ARCH PIPE		
PIPE SIZE	"T" THICKNESS INCHES	PIPE OPENING DEDUCTION (CY)	PIPE SIZE	"T" THICKNESS INCHES	PIPE OPENING DEDUCTION (CY)
18"	2 1/2	0.053	22" x 13"	2 1/2	0.053
24"	3	0.091	29" x 18"	3	0.087
30"	3 1/2	0.138	36" x 23"	3 1/2	0.129
36"	4	0.196	44" x 27"	4	0.185
42"	4 1/2	0.263	51" x 31"	4 1/2	0.245
48"	5	0.340	58" x 36"	5	0.318
54"	5 1/2	0.427	65" x 40"	5 1/2	0.394
60"	6	0.524	73" x 45"	6	0.489
66"	6 1/2	0.630			
72"	7	0.747			

GENERAL NOTES

- QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
- CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS, SIZE #4.
- SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
- IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



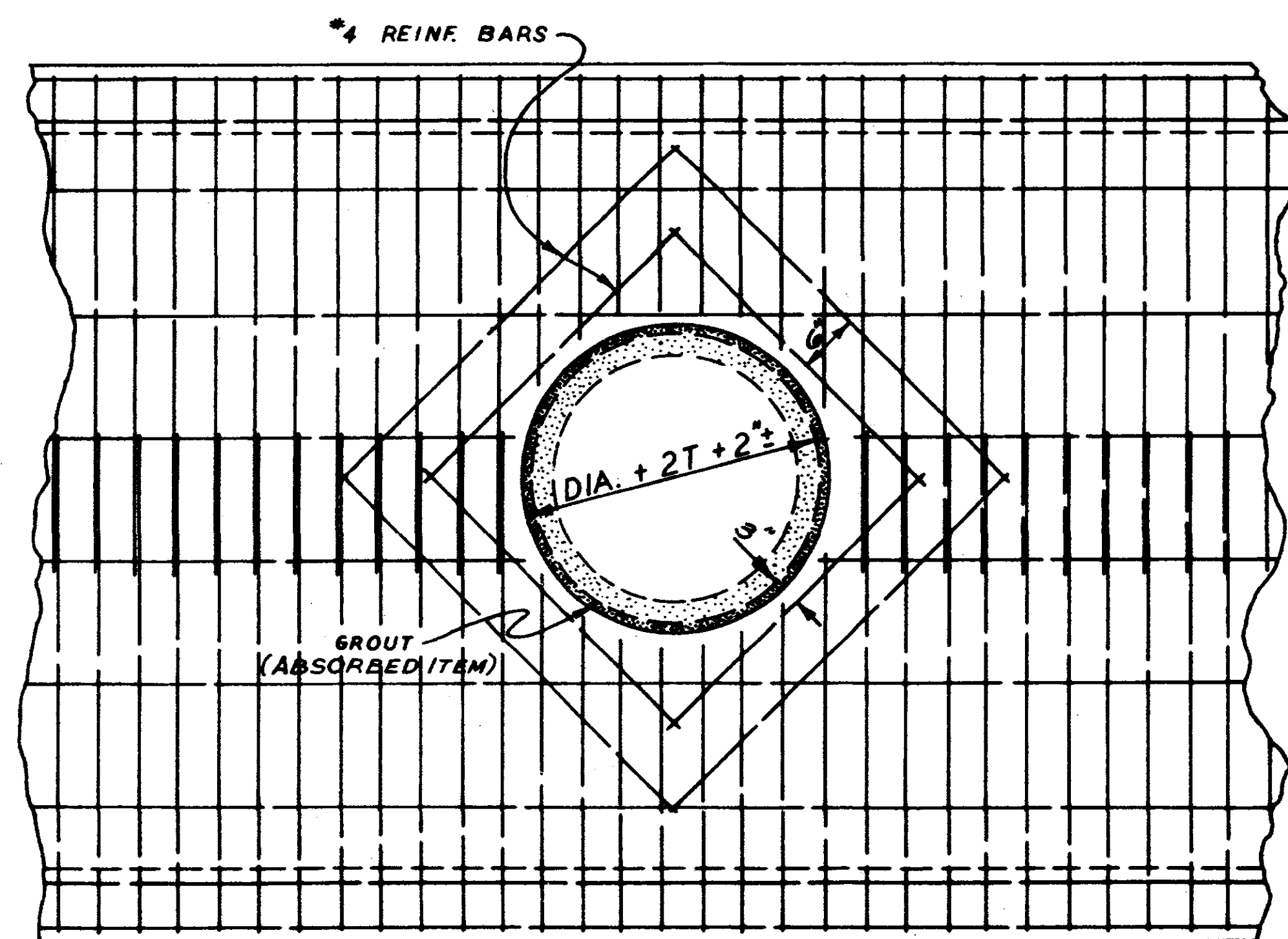
LIFT BAR OVERALL LENGTH = 30" 2 REQ'D

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

JUNCTION BOX FOR PIPE CULVERTS

S.W.R.	A.W.K.	BY	WORKING NUMBER JB-1 SHEET NUMBER 227
1/8-31	1/8-31	DATE	
1/8-31	1/8-31	DATE	
1/8-31	1/8-31	DATE	

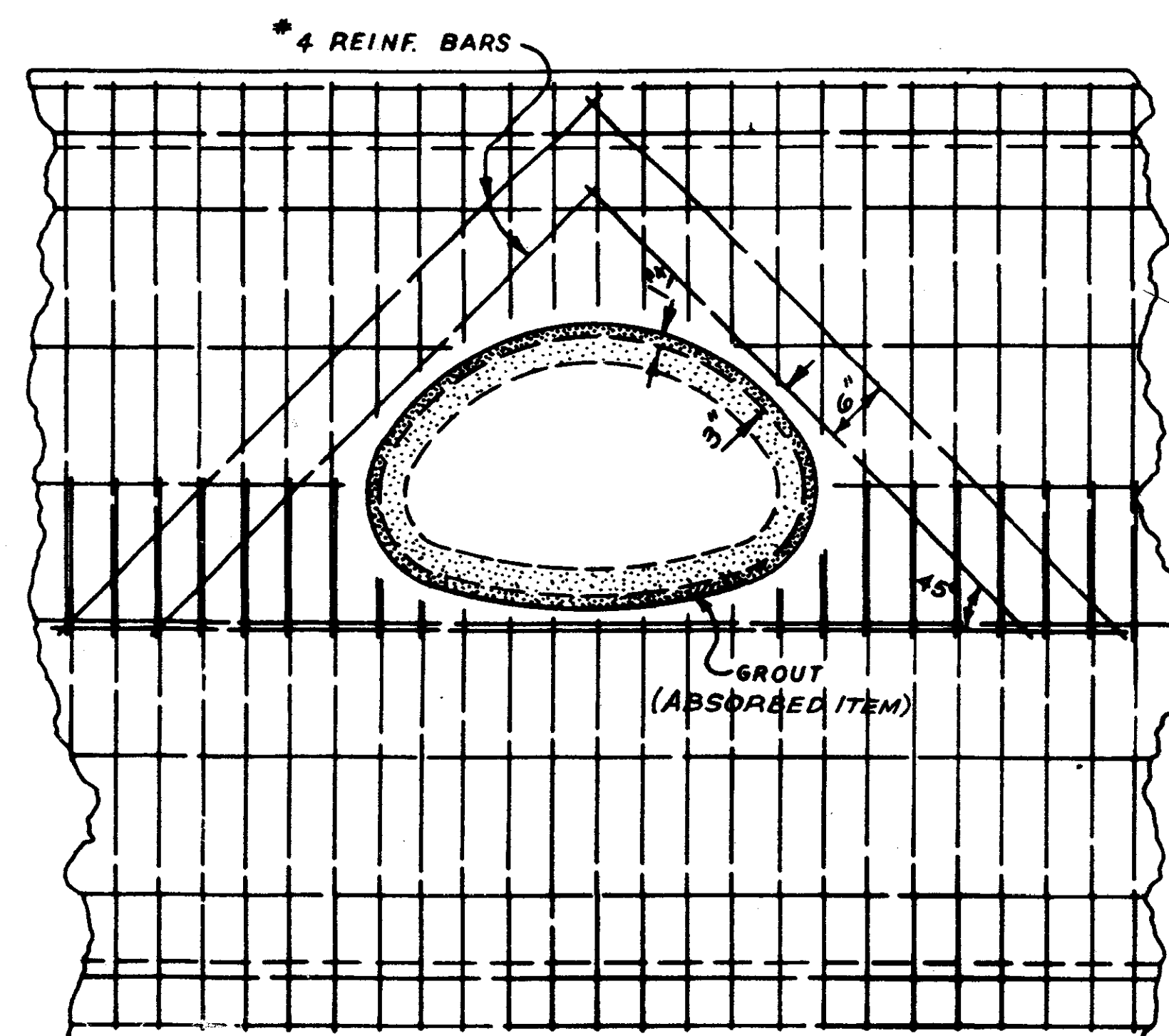
DESIGNED _____ DETAILED _____ TRACED _____
 CHECKED _____ ISSUED D.B.J. DATE 11-1-79



ELEVATION SHOWING CIRCULAR PIPE STUBBED INTO BOX CULVERT
(BARREL OR WING-WALL)

A 24" DIAMETER PIPE IS THE MAXIMUM SIZE THAT MAY BE STUBBED INTO A 54" DIAMETER PIPE.

A 60" DIAMETER PIPE IS THE MINIMUM SIZE THAT A 30" DIAMETER PIPE MAY BE STUBBED INTO.



ELEVATION SHOWING ARCH PIPE STUBBED INTO BOX CULVERT
(BARREL OR WING-WALL)

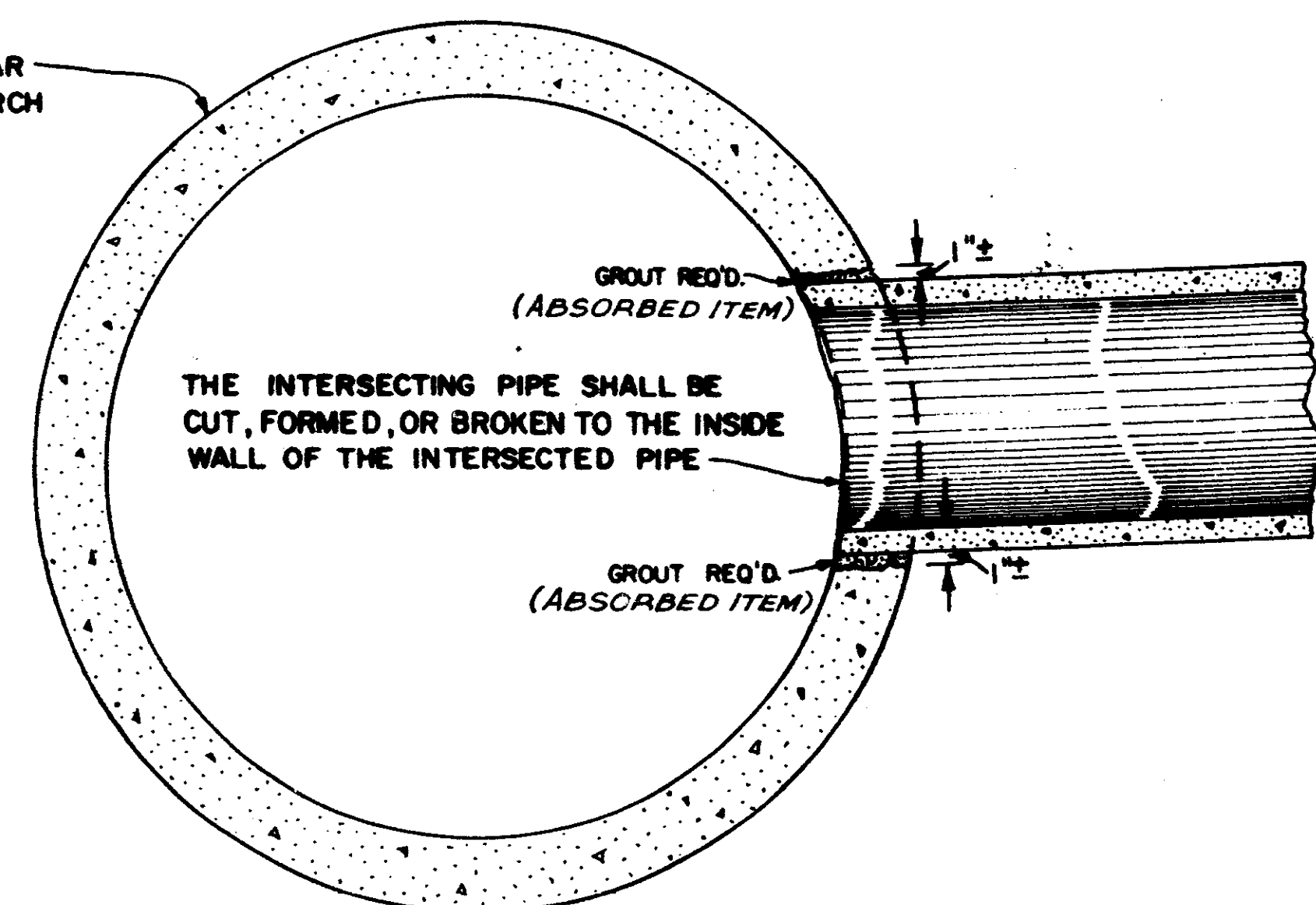
PIPE SIZE	*4 BARS
18"	4 @ 2'-6"
	4 @ 3'-6"
24"	4 @ 3'-1"
	4 @ 4'-1"
30"	4 @ 3'-8 1/2"
	4 @ 4'-8 1/2"
22" x 15"	2 @ 3'-10"
	2 @ 4'-9"
	1 @ 5'-4"
29" x 18"	2 @ 4'-6"
	2 @ 5'-5"
	1 @ 6'-3"

△

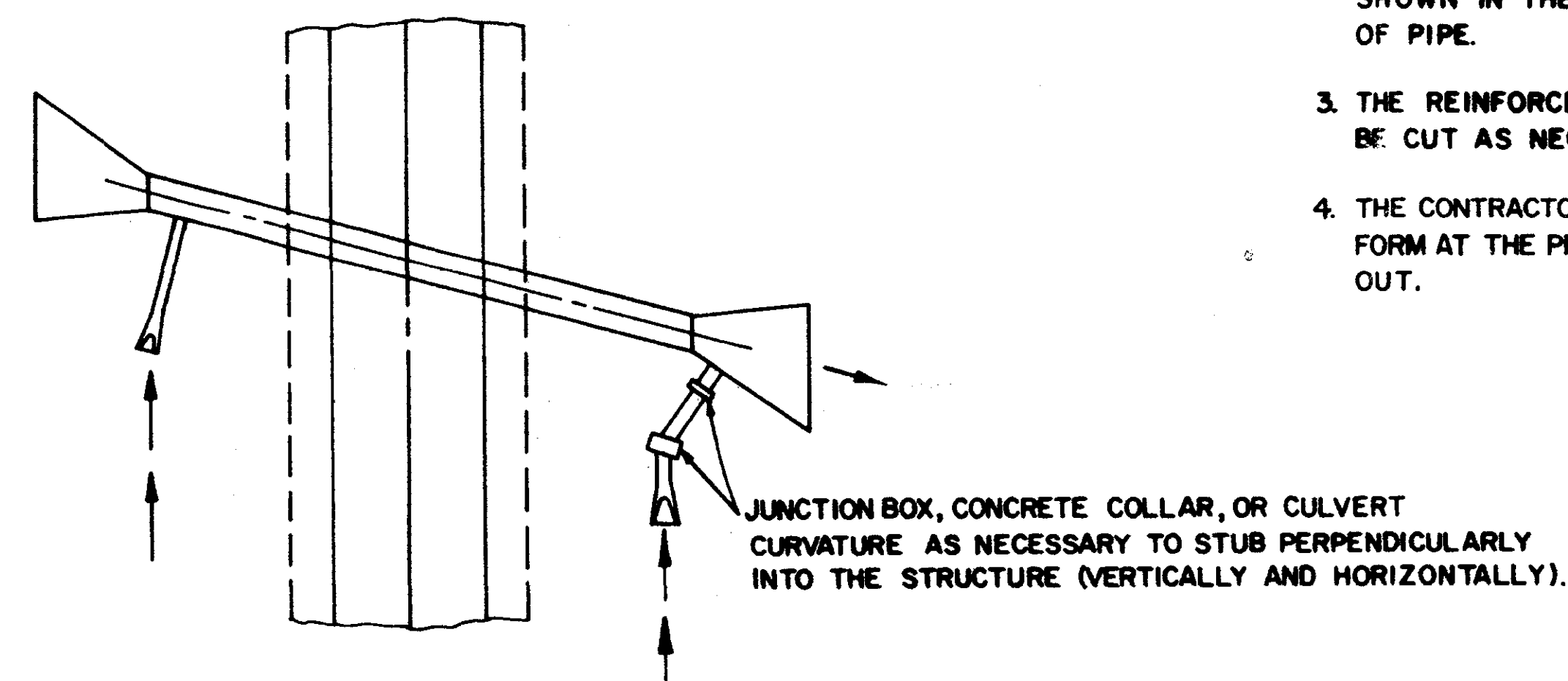
GENERAL NOTES

1. PAYMENT FOR WORK AND MATERIALS FOR STUBBING A PIPE CULVERT INTO A BOX CULVERT OR CONCRETE PIPE SHALL BE PAID FOR AS A **BRANCH CONNECTION** OF THE APPROPRIATE SIZE, TYPE, AND DESCRIPTION.
2. THE TABLE ON THIS SHEET INDICATES THE NUMBER AND LENGTHS OF ADDITIONAL REINFORCING STEEL BARS REQUIRED FOR BOX CULVERTS CONSTRUCTED. FOR A DOUBLE ROW OF REINFORCEMENT, DOUBLE THE NUMBER OF BARS SHOWN. THE ADDITIONAL REINFORCING STEEL SHALL BE INCLUDED IN THE COST FOR THIS TYPE OF BRANCH CONNECTION. THE QUANTITIES SHOWN IN THE TABLE ARE FOR THE MOST COMMON SIZES OF PIPE.
3. THE REINFORCEMENT OF THE INTERSECTED BOX OR PIPE SHALL BE CUT AS NECESSARY TO ACCOMMODATE THE STUBBED PIPE.
4. THE CONTRACTOR MAY INSERT THE INTERSECTING PIPE INTO THE FORM AT THE PROPER LOCATION IN LIEU OF FORMING BY BLOCKING OUT.

54" MIN. CIRCULAR
OR 58" x 36" MIN. ARCH



ELEVATION SHOWING PIPE CULVERT STUBBED INTO
CONCRETE PIPE CULVERT
(TYPICAL INSTALLATION - MEDIUM STUB TO CROSSING DRAIN
WITH MINIMUM COVER.)



TYPICAL PLAN OF BRANCH CONNECTION
TO BOX CULVERT WING-WALL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
BRANCH CONNECTIONS	
DESIGNED	DATE
Detailed	DATE
Traced	DATE
Checked	DATE
ISSUED <i>D.B.J.</i> DATE <i>11-1-79</i>	
WORKING NUMBER BC-1	SHEET NUMBER 228