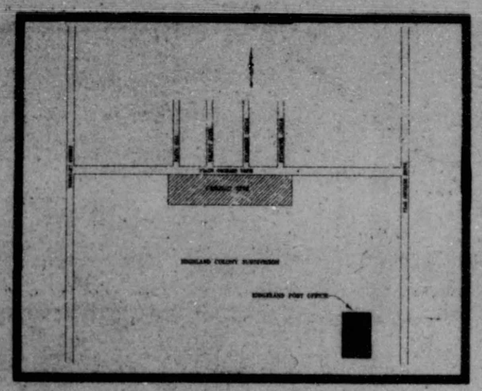
PEACH ORCHARD TOWNHOMES

SITUATED IN THE
NE1/4 OF SECTION 31, T7N, R2E
CITY OF RIDGELAND - MADISON COUNTY, MISSISSIPI



VICINITY MAP

MAYOR
Gene F. McGee
CITY CLERK
Michael R. McPhearson
BOARD OF ALDERMAN

Harvey Carr, Jr.	Ward 1
Daryl Smith	Ward 2
Brian Barcellona	Ward 3
Al Bible	Ward 4
R. Joseph Barlow	Ward 5
Linda Davis	Ward 6
Chuck Kobert	At-Large
Mayor Pro Tempore	

SHEET INDEX

SHT NO.	TITLE
1	COVER SHEET
2	SITE PLAN
3	PLAN-PROFILE STREET,SEWER & GRADING
4	PLAN-PROFILE STREET,SEWER & GRADING
5	PLAN-PROFILE STREET,SEWER & GRADING
6	CITY OF RIDGELAND STANDARD DETAILS
7	CITY OF RIDGELAND STANDARD DETAILS
8	CITY OF RIDGELAND STANDARD DETAILS
9	CITY OF RIDGELAND STANDARD DETAILS
10	CITY OF RIDGELAND STANDARD DETAILS

11599

APPROVED 6-27-95
DIVISION OF PUBLIC WATER SUPPLY
BUREAU OF ENVIRONMENTAL HEALTH
MISSISSIPPI STATE DEPARTMENT OF HEALTH

JUNE 19, 1995

REVISED: 7-26-95 | SCALE: 1/4" = 1'-0 | DATE: 06-19-95 | DRAWN BY: C.W.M. | CHECKED BY: B.S.

H. & M. REALTY, INC.
2600 INSURANCE CENTER DR., SUITE 200A
JACKSON, MISSISSIPPI, 39216

A Consulting Civil Engineering Support Service
CHARLES W. (BILL) McLEOD, P.E.
CONSULTING CIVIL ENGINEER
308 N. Wheeler
Ridgeland, Mississippi 39157
Office Tel. (601) 853-8535
Home Tel. (601) 992-5219

RESIDENTIAL MULTIPLEX TOWNHOMES
LOCATED ON PEACH ORCHARD DRIVE
RIDGELAND, MISSISSIPPI

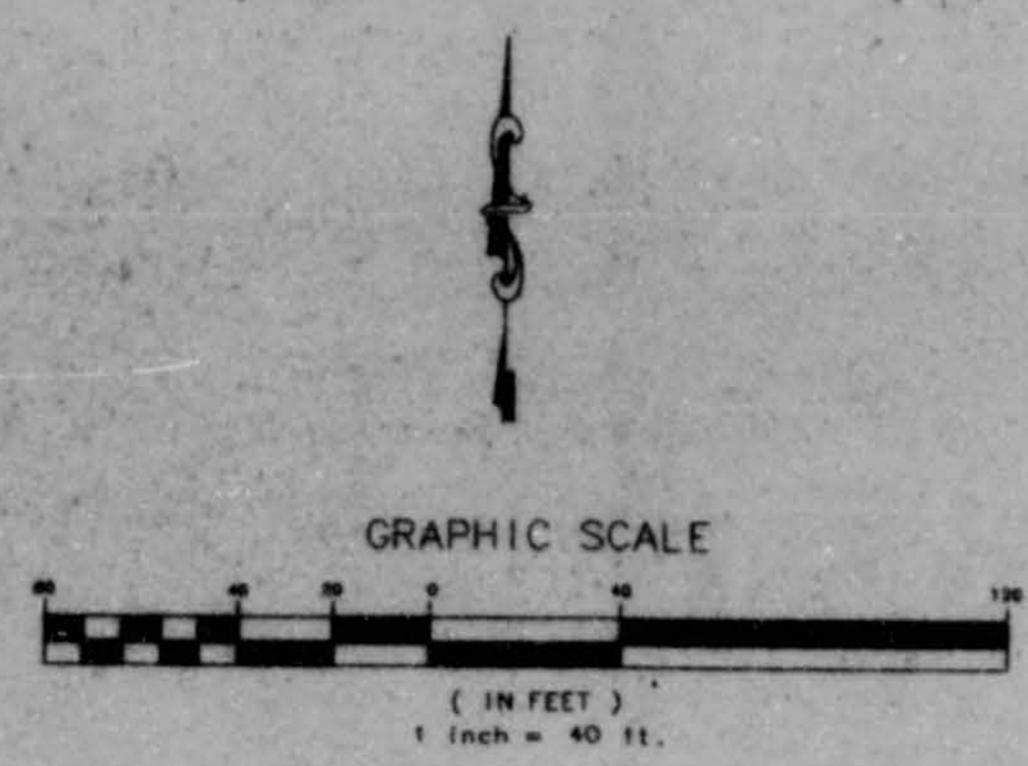
SIGN: Charles W. McLeod
DATE: 7-28-95

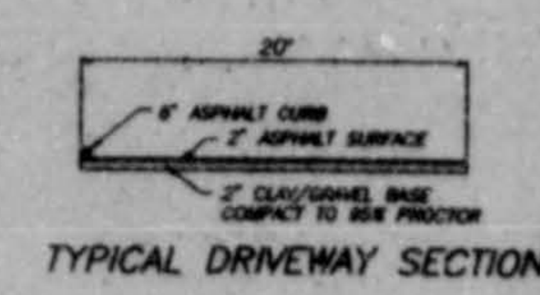
JOB NO.
SHEET NO. 1
OF 10

513

SITE PLAN

2.78 ACRES





DRAINAGE CALCULATIONS

REFERENCE: STANDARD HANDBOOK FOR
CIVIC ENGINEERS, THIRD EDITION
FREDRICK S. MERRIT, EDITOR
MCGRAW HILL, PUBLISHER

SECTION 21, Pg.88–90

RATIONAL FORMULA Q=CIA
Q = Peak Discharge, ft /s
c = runoff coeficient = % of rain that appears as direct runoff
I = rainfall intensity, in/h
A = drainage area, acres
STEEL FORMULA – rainfall intensity

$I = \frac{K}{t + b}$

I = rainfall intensity
K,b = respectively, coefficient, factor, depending on conditions that affect rainfall intensity
F = frequency of occurrence of rainfall, years
t = duration of storm, min = time of concentration
TABLE 21–17 (factor for Mississippi Area only)

Frequency years	Coefficients	Mississippi Region
2	K	206
	b	30
4	K	247
	b	29
10	K	300
	b	36
25	K	327
	b	33
50	K	315
	b	28
100	K	367
	b	33

EXISTING DATA

AREA OF SITE = 2.78 ACRES
AREA BUILDING 5,333 S.F./43560 = 0.122 ACRES x 7 = 0.854 ACRES
AREA ASPHALT 0.663 ACRES
AREA OF REMAINING GROUND = 2.78 −(0.854+0.663) = 1.263 ACRES
C FOR ASPHALT = 0.90
C FOR ROOF = 0.95
C FOR GND = 0.65

$I = \frac{K}{t + b}$

$I = \frac{327}{20 + 33} = 6.17$ IN/HR

DRAINAGE CALCULATIONS

DRAINAGE PRIOR TO CONSTRUCTION

$Q_{SITE} = 0.65 \times 6.17 \times 2.78 = 11.15$ CFS ←

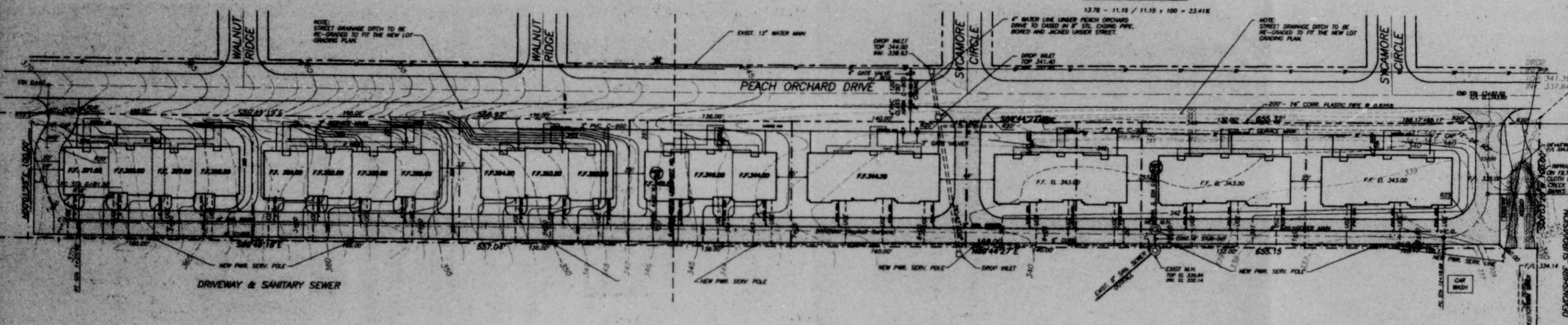
DRAINAGE DUE TO CONSTRUCTION

$Q_{ROOF} = 0.95 \times 6.17 \times 0.854 = 5.01$ CFS
$Q_{ASPH} = 0.90 \times 6.17 \times 0.663 = 3.68$ CFS
$Q_{GND} = 0.65 \times 6.17 \times 1.263 = 5.07$ CFS3.68 CFS
TOTAL 13.76 CFS

INCREASE DUE TO CONSTRUCTION

13.76 − 11.15 / 11.15 x 100 = 23.41%

CHARLES W. McLEOD REGISTERED PROFESSIONAL ENGINEER 3182 STATE OF MISSISSIPPI
7-20-95

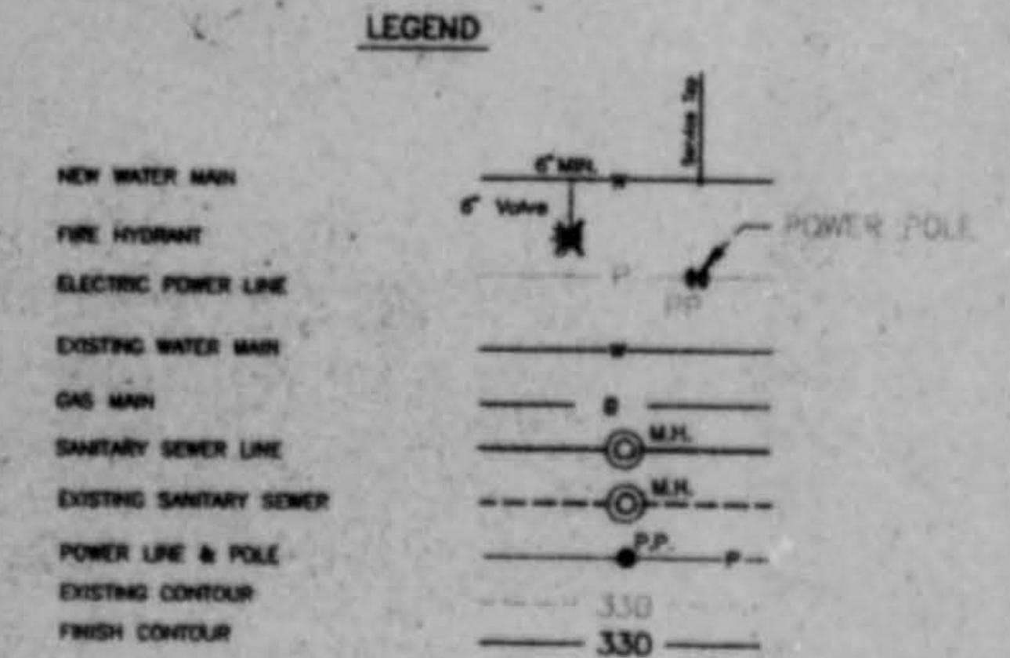


JACKSON PROJECTS PARTNERSHIP
(Trace Apartment Complex)

WATER LINE SPECIFICATIONS

VALVES TO GATE TYPE IN C.I. BOXES
ALL FITTINGS TO BE C.I. CLASS 150
PIPE TO BE CLASS 150, PVC 1120
CONFORMING TO AWWA C-900

LEGEND



OWNERS:

H & M REALTY, INC.
2600 INSURANCE CENTER DRIVE
SUITE 200A
JACKSON, MISSISSIPPI 39216

PRESENT ZONING: R-3

FLOOD ZONE "X" ACCORDING TO F.I.R.M.
COMMUNITY PANEL NO. 28089C0320 D
DATED: APRIL 15, 1994

PROPOSED LAND USE: TOWNHOUSE BUILDINGS

AREA OF PARCEL 121,096.80 S.F.– 2.78 ACRES

PROPOSED BUILDING AREA: 5,333 S.F.

GROSS LOT COVERED BY BUILDING: 31.48%

PREPARED BY:
Charles W. McLeod, P.E.
Consulting Civil Engineer
308 North Wheatley
Ridgeland, Mississippi
Tel. (601) 992-9132
ACCESS A Consulting Civil Engineering Support Service

PEACH ORCHARD TOWNHOMES
PEACH ORCHARD DRIVE
RIDGELAND, MISSISSIPPI

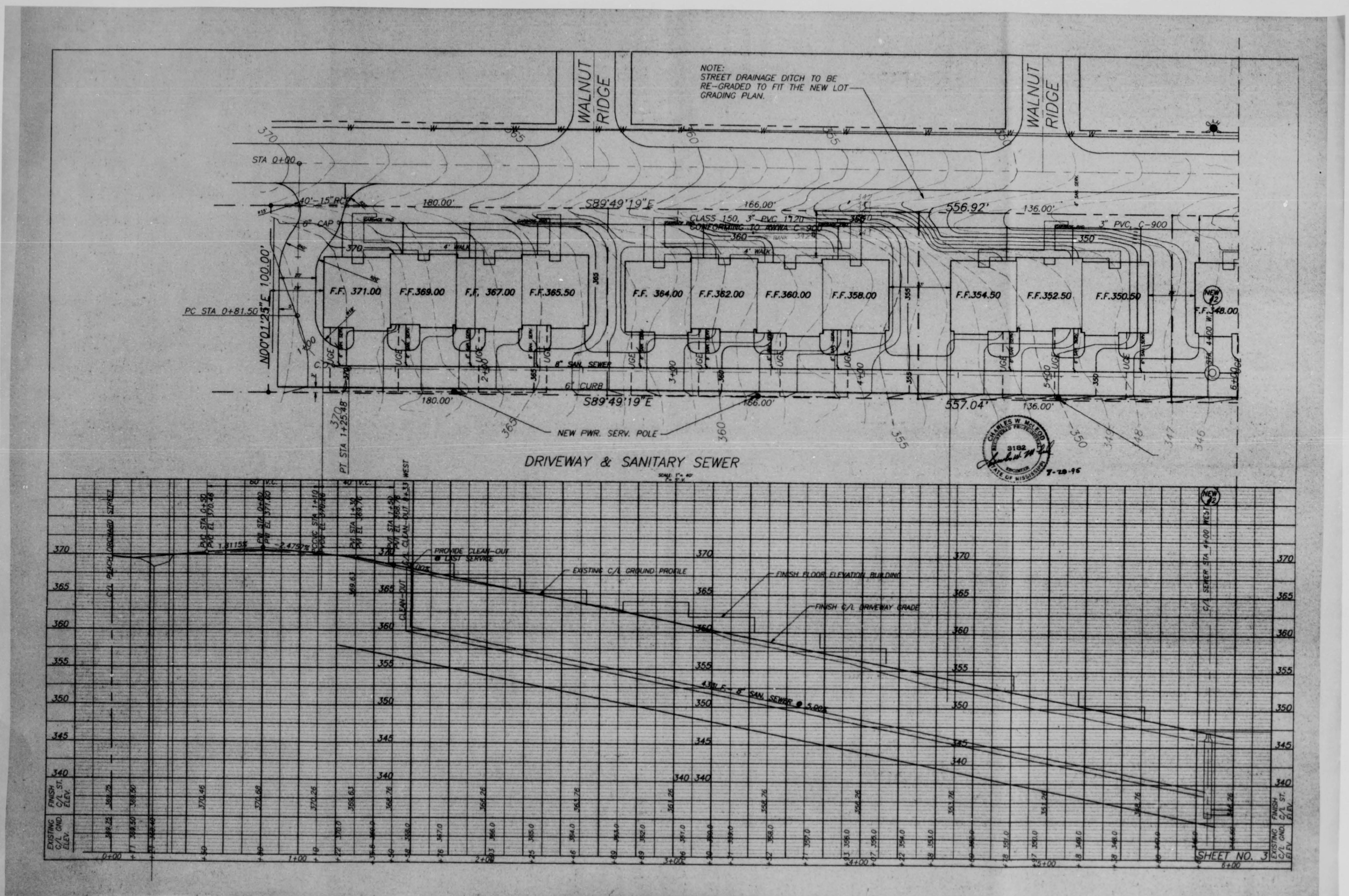
DESIGN BY: C.W.M.
DRAWN BY: C.W.M.
CHECKED BY:

TITLE: SITE PLAN

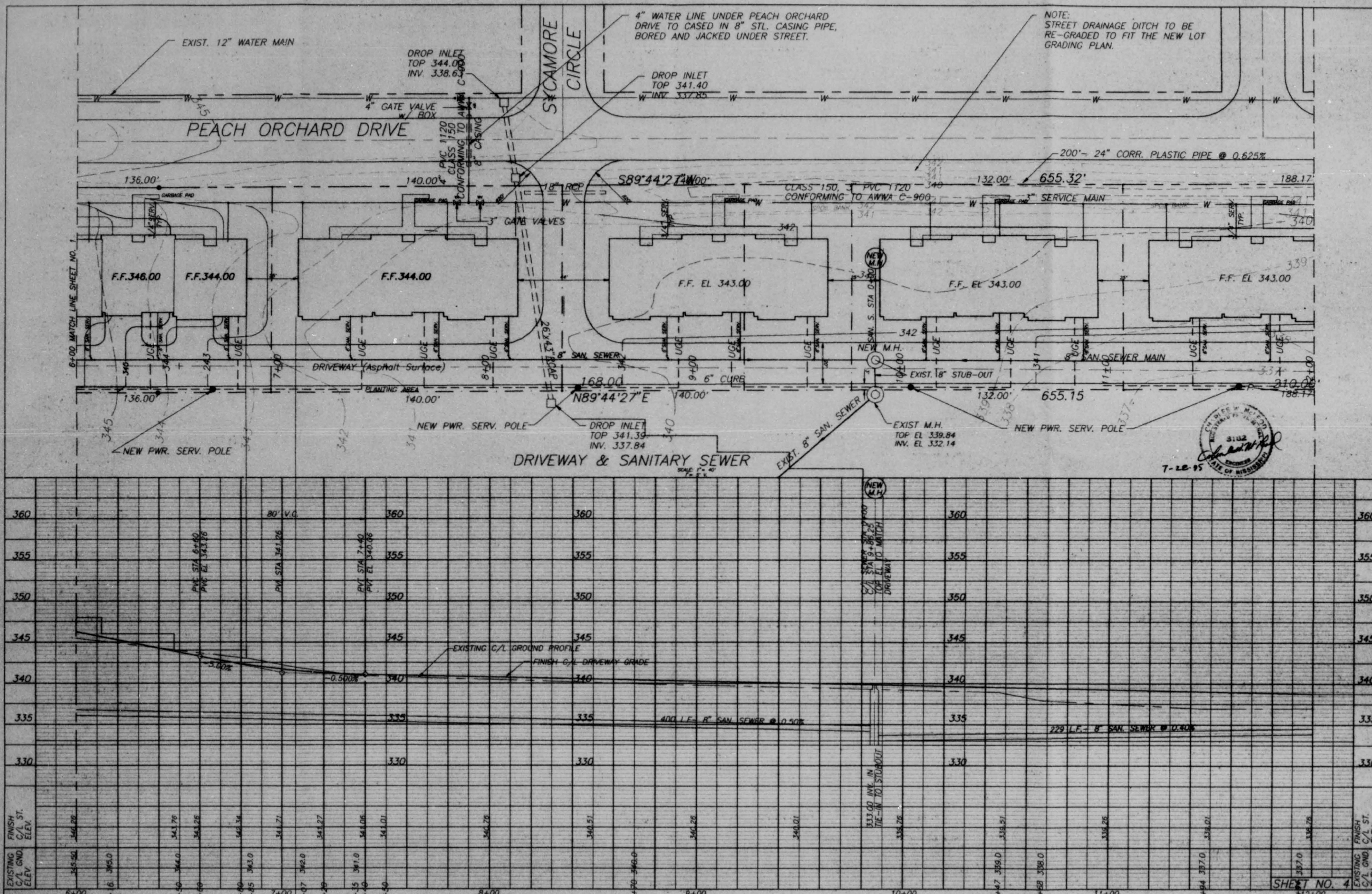
SHEET NUMBER 2

OF SHEETS

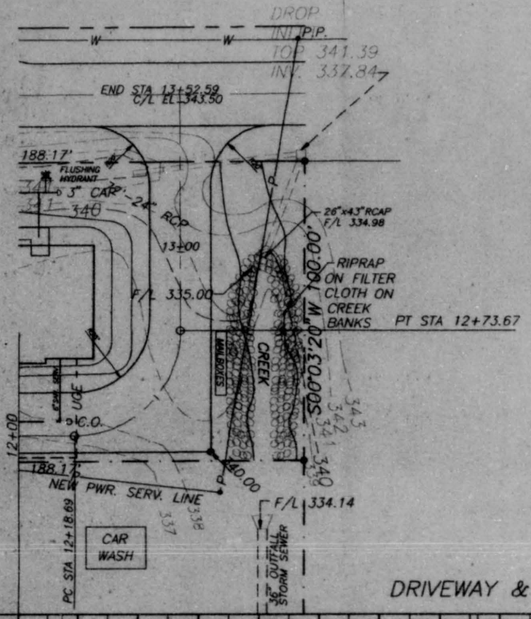
514


NOTE:
STREET DRAINAGE DITCH TO BE RE-GRADED TO FIT THE NEW LOT GRADING PLAN.
WALNUT RIDGE
WALNUT RIDGE
STA 0+00
40'-15" RCP
6" CAP
PC STA 0+81.50
N00°01'23"E 100.00'
180.00'
S89°49'19"E
166.00'
556.92'
136.00'
CLASS 150, 3" PVC 1120 CONFORMING TO AWWA C-900
3" PVC, C-900
4' WALK
F.F. 371.00
F.F. 369.00
F.F. 367.00
F.F. 365.50
F.F. 364.00
F.F. 362.00
F.F. 360.00
F.F. 358.00
F.F. 354.50
F.F. 352.50
F.F. 350.50
F.F. 348.00
NEW #2
UGE
8" SAN. SEWER
6" CURB
180.00'
S89°49'19"E
166.00'
557.04'
136.00'
PT STA 1+25.48
NEW PWR. SERV. POLE
CHARLES W. McLEOD
3192
STATE OF MISSISSIPPI
7-28-95
DRIVEWAY & SANITARY SEWER
PROVIDE CLEAN-OUT @ LAST SERVICE
EXISTING C/L GROUND PROFILE
FINISH FLOOR ELEVATION BUILDING
FINISH C/L DRIVEWAY GRADE
CLEAN-OUT
433 L.F. - 8" SAN. SEWER @ 5.00%
C/L SEWER STA 4+00 WEST
FINISH C/L ST. ELEV.
EXISTING C/L GND. ELEV.
SHEET NO. 3

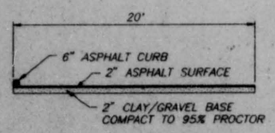
515


EXIST. 12" WATER MAIN
DROP INLET TOP 344.00 INV. 338.63
4" WATER LINE UNDER PEACH ORCHARD DRIVE TO CASED IN 8" STL. CASING PIPE, BORED AND JACKED UNDER STREET.
SYCAMORE CIRCLE
DROP INLET TOP 341.40 INV. 337.85
NOTE: STREET DRAINAGE DITCH TO BE RE-GRADED TO FIT THE NEW LOT GRADING PLAN.
4" GATE VALVE BOX
PEACH ORCHARD DRIVE
PVC 1120 CLASS 150 CONFORMING TO AWWA C-900
8" CASING
200'- 24" CORR. PLASTIC PIPE @ 0.625%
S89°44'27"W
655.32'
CLASS 150, 3" PVC 1120 CONFORMING TO AWWA C-900
3" SERVICE MAIN
3" GATE VALVES
18" RCP
F.F.346.00
F.F.344.00
F.F.344.00
F.F. EL 343.00
F.F. EL 343.00
F.F. EL 343.00
6+00 MATCH LINE SHEET NO. 1
UGE
8" SAN. SEWER
8" SAN. SEWER MAIN
NEW M.H.
SAN. S STA 10+00
EXIST. 8" STUB-OUT
DRIVEWAY (Asphalt Surface)
6" CURB
PLANTING AREA
168.00
N89°44'27"E
655.15
136.00'
140.00'
132.00'
188.17'
210.00'
NEW PWR. SERV. POLE
DROP INLET TOP 341.39 INV. 337.84
EXIST. 8" SAN. SEWER
EXIST M.H. TOP EL 339.84 INV. EL 332.14
DRIVEWAY & SANITARY SEWER
7-28-95
360
355
350
345
340
335
330
80' V.C.
PVC STA 6+40 PVC EL 343.26
PVI STA 341.76
PVT STA 7+40 PVT EL 340.06
EXISTING C/L GROUND PROFILE
FINISH C/L DRIVEWAY GRADE
5.00%
-0.500%
400 L.F. 8" SAN. SEWER @ 0.50%
229 L.F. 8" SAN. SEWER @ 0.40%
333.00 INV. IN TIE-IN TO STUBOUT
FINISH C/L ST. ELEV.
EXISTING C/L GND ELEV.
6+00
7+00
8+00
9+00
10+00
11+00
12+00
SHEET NO. 4

516

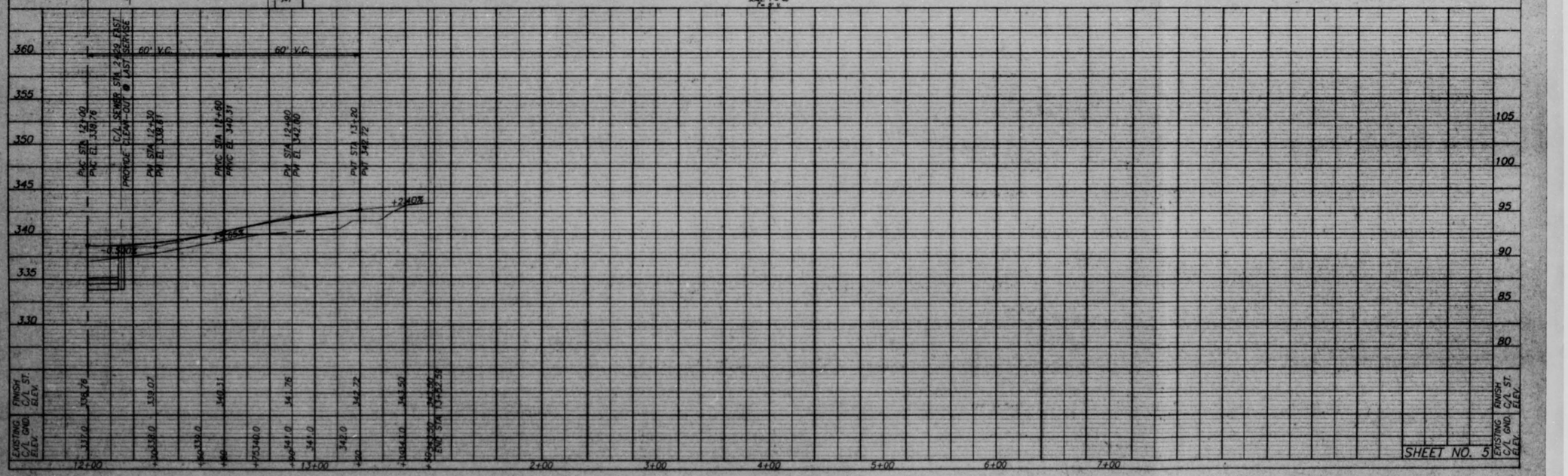


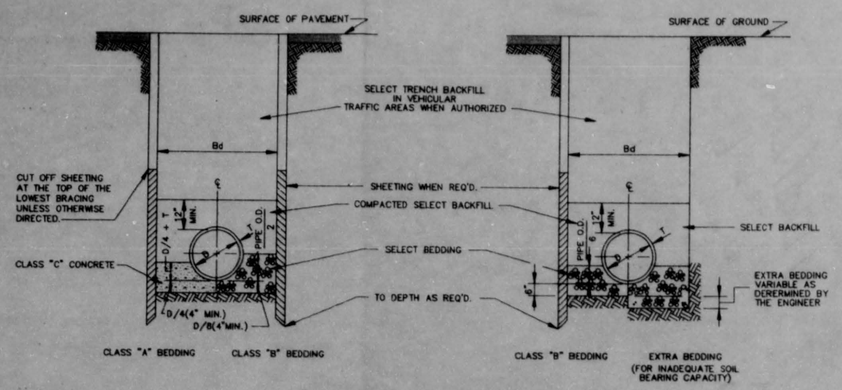
DRIVEWAY & SANITARY SEWER



TYPICAL DRIVEWAY SECTION

7-20-95

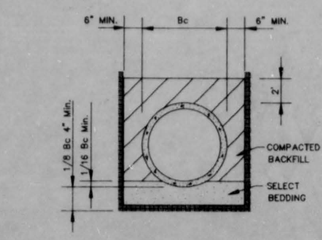




BEDDING FOR VITRIFIED CLAY, CONCRETE & ABS PIPE

TYPICAL TRENCH DETAILS

N.T.S.



GRANULAT BEDDING
TYPE 3 LAYING CONDITION

TYPICAL TRENCH DETAILS (FORCE MAIN)

CLASS "A" BEDDING

MATERIAL SHALL BE CLASS "C" CONCRETE CRADLES. THE PIPE SHALL BE LAID ON CONCRETE SADDLES CONSTRUCTED TO PROVIDE VERTICAL AND LATERAL SUPPORT FOR THE PIPE WHILE THE CRADLE IS BEING PLACED. PIPE SUPPORTS OF WOOD BLOCKS, LOOSE BRICK, ETC., WILL NOT BE PREMITTED. THE CRADLE SHALL BE POURED AFTER THE JOINTS HAVE BEEN MADE, CARE BEING TAKEN TO PREVENT MOVEMENT OF THE PIPE. WHENEVER THE CONTRACTOR PLACES CONCRETE OUTSIDE THE DIMENSIONS SHOWN ON THE DRAWINGS, THE COST OF SUCH CONCRETE WILL BE AT THE CONTRACTOR'S EXPENSE.

CLASS "B" BEDDING

MATERIAL SHALL BE SELECT BEDDING AS SPECIFIED. MATERIAL SHALL BE CAREFULLY PLACED AND THOROUGHLY COMPACTED BY TAMPING.

CLASS "C" BEDDING (STANDARD BEDDING)

MATERIAL SHALL BE THE SAME AS FOR CLASS "B" BEDDING AND SHALL BE PLACED AS SHOWN BY STANDARD DETAILS FOR THE TYPE OF PIPE USED.

TABLE "A"

PIPE SIZE

CARRIER PIPE (INCHES)	CASING PIPE DIA. (INCHES)	CASING PIPE STEEL PIPE WALL THICK
8	16	1/4"
10	20	5/16"
12	24	3/8"
14 & 16	30	1/2"
18	36	1/2"
24	36	1/2"
30	54	1/2"
36	54	1/2"
42	66	SEE TABLE "B"
48	72	-
54	78	-
60	84	-
66	96	-
72	108	-
84	120	-
96	144	-

DUCTILE IRON — R.C.P. — SPIRAL WELDED STEEL — LINEAR PLATE

TABLE "B"

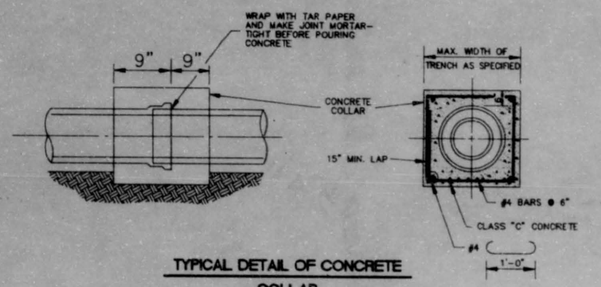
GAGES OF LINER PLATE FOR CONTINUOUS LOAD-CARRYING STRUCTURES

NOMINAL DIA. (INCHES)	HEIGHT OF COVER (FEET) 2-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45
48	12	12	12	12	12	12	12	12	10
54	12	12	12	12	12	12	12	10	8
60	12	12	12	12	12	12	12	8	7
66	12	12	12	12	12	12	10	8	5
72	12	12	12	12	12	12	10	8	7	5
78	12	12	12	12	12	10	8	7	5	5
84	12	12	12	12	10	10	8	5	5	5
96	12	10	10	10	10	10	8	5	5	5
108	10	10	10	10	10	8	7	5	5	5
120	10	10	10	10	8	8	7	5	5	3
144	8	8	8	8	8	5	5	3	1	1

MIN. THICKNESS FOR LINER PLATE CASING IN RAILROAD CROSSING-10 GAGE

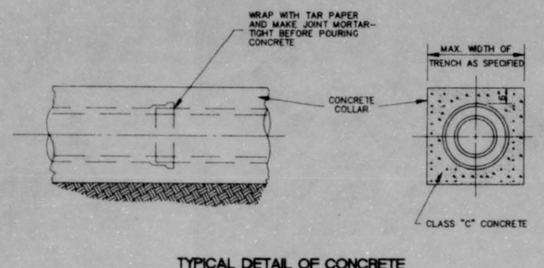
CASING PIPE

SIZE AND THICKNESS OF PIPE FOR RAILRAOD & HIGHWAY CROSSING



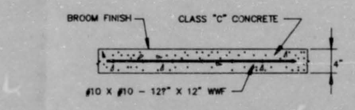
TYPICAL DETAIL OF CONCRETE COLLAR

N.T.S.

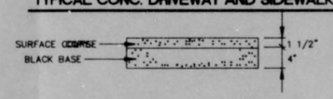


TYPICAL DETAIL OF CONCRETE ENCASEMENT

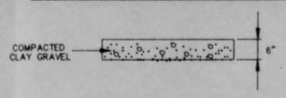
N.T.S.



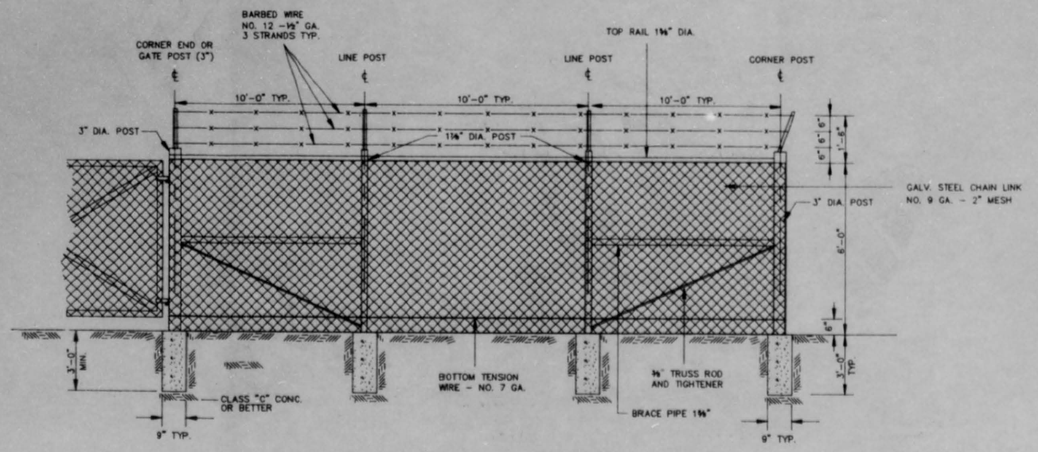
TYPICAL CONC. DRIVEWAY AND SIDEWALK REPAIR



TYPICAL ASPHALT DRIVEWAY REPAIR



TYPICAL GRAVEL DRIVEWAY REPAIR



CHAIN LINK FENCE DETAIL

N.T.S.

CITY OF RIDGELAND, MS.

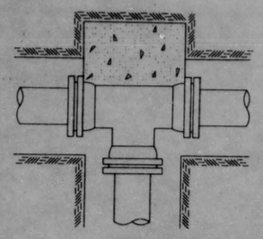
STANDARD DETAILS

DSGN: DRWN: CHKD: SCALE:

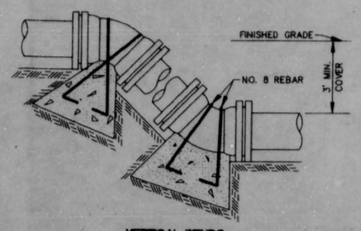
THE CITY OF RIDGELAND

DRAWING NO. 1 OF

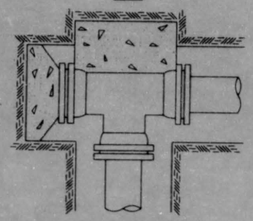
518



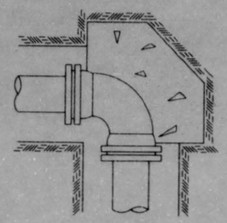
TEE



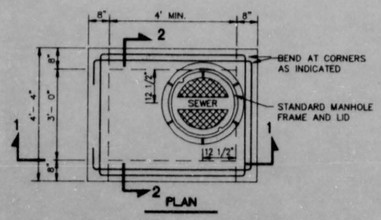
VERTICAL BENDS



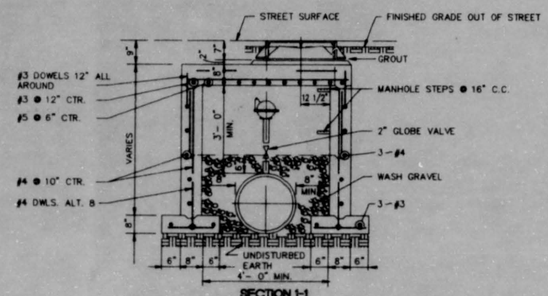
PLUGGED TEE



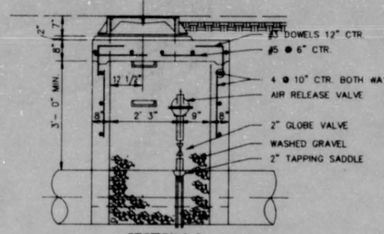
90° BEND



PLAN



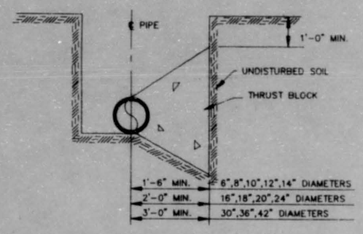
SECTION 1-1



SECTION 2-2

TYPICAL AIR OR AIR VACCUUM RELEASE VALVE INSTALLATION WITH MANHOLE

NOT TO SCALE



TYPICAL CROSS SECTION

TYPICAL THRUST BLOCKING IN WATER MAINS AND SEWAGE FORCE MAINS

N.T.S.

NOTE: ALL THRUST BLOCKS 2,500 PSI CONCRETE AGAINST UNDISTURBED EARTH

BEARING AREA IN SQ. FT.

NOMINAL PIPE DIAMETER (IN)	DEAD-END OR TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
6	2.5	3.0	2.0	2.0	2.0
8	4.0	6.0	3.0	2.0	2.0
10	6.0	9.0	5.0	2.5	2.0
12	9.0	11.0	6.0	3.5	2.0
14	12.0	18.0	9.0	5.0	2.5
16	16.0	22.5	12.0	6.0	3.0
18	20.0	28.0	15.0	8.0	4.0
20	24.5	34.0	19.0	10.0	5.0
24	35.0	49.0	27.0	14.0	7.0
30	54.0	76.0	41.0	21.0	10.0
36	77.0	108.0	59.0	30.0	15.0
42	104.0	146.0	79.0	40.0	20.0

NOTE:
ABOVE VALUES CALCULATED USING P=100 AND ALLOWANCE SOIL BRG. = 1500 PSF. FOR DIFFERENT P, MULTIPLY ABOVE VALUES BY P/100.

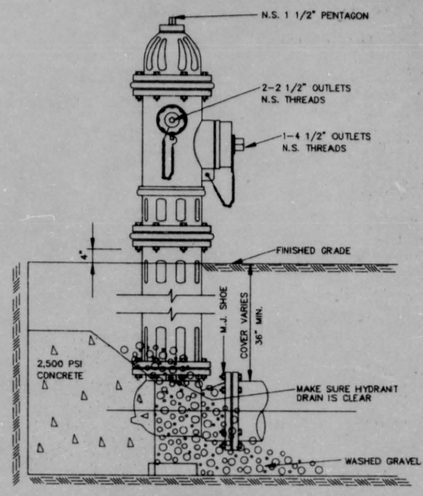
FOR DIFFERENT SOIL BRG, MULTIPLY ABOVE VALUES BY 1500/S.B.

VERTICAL BENDS

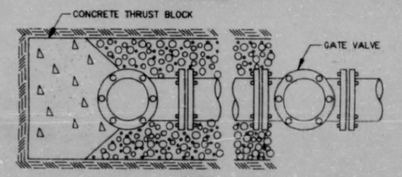
NOMINAL PIPE DIAMETER (IN)	DEAD-END OR TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
6	—	—	26.0(1.0)	14.0(.5)	7.0(.3)
8	—	—	45.0(1.7)	25.0(.9)	13.0(.5)
10	—	—	68.0(2.5)	37.0(1.4)	19.0(.7)
12	—	—	97.0(3.6)	52.0(1.9)	27.0(1.0)
14	—	—	130(4.8)	70.0(2.6)	36.0(1.3)
16	—	—	168(6.2)	91.0(3.4)	46.0(1.7)
18	—	—	211(7.8)	114(4.2)	58.0(2.2)
20	—	—	259(9.6)	140(5.2)	72.0(2.6)
24	—	—	370(13.7)	200(7.4)	102(3.8)
30	—	—	568(21.1)	308(11.4)	156(5.8)
36	—	—	814(30.1)	440(16.3)	225(8.3)
42	—	—	1100(40.7)	595(22.0)	303(11.2)

VOLUME OF BLOCKS INCLUDING SOIL LOAD CU. FT. (CU. YDS.)

NOTE:
ABOVE VALUES REPRESENT THE VOLUME OF BLOCKS INCLUDING SOIL LOAD IN CU.FT. (CU.YDS.) THE VALUES WERE CALCULATED USING A P=100 PSI AND A S.F.=1.5 . FOR DIFFERENT P, MULTIPLY VALUES BY P/100.



ELEVATION



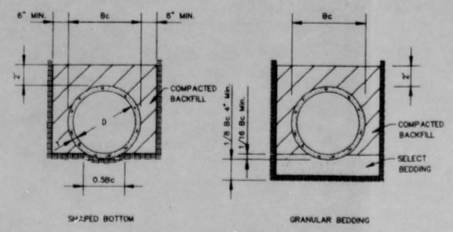
PLAN

TYPICAL FIRE HYDRANT INSTALLATION

NOTE: GATE VALVES WILL BE REQUIRED ON ALL FIRE HYDRANT LEGS.

N.T.S.

ANCHOR COUPLINGS REQ'D.



TYPICAL TRENCH DETAILS

N.T.S.

CITY OF RIDGELAND, MS.

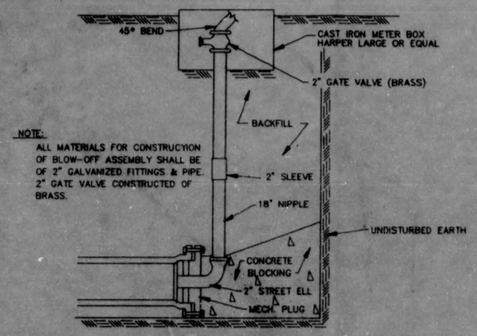
STANDARD DETAILS

DSGN:
DRWN:
CHKD:
SCALE:

RIDGELAND

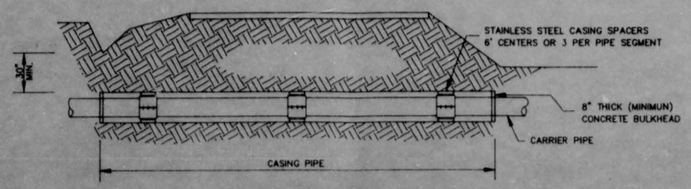
DRAWING NO. 2 OF

519

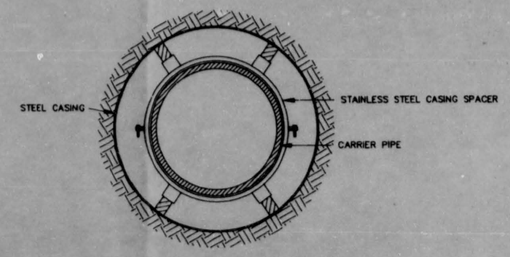


NOTE:
ALL MATERIALS FOR CONSTRUCTION OF BLOW-OFF ASSEMBLY SHALL BE OF 2" GALVANIZED FITTINGS & PIPE. 2" GATE VALVE CONSTRUCTED OF BRASS.

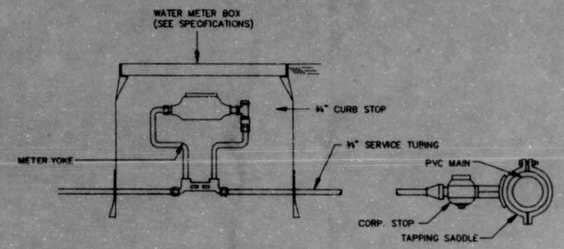
TYPICAL BLOW-OFF ASSEMBLY
N.T.S.



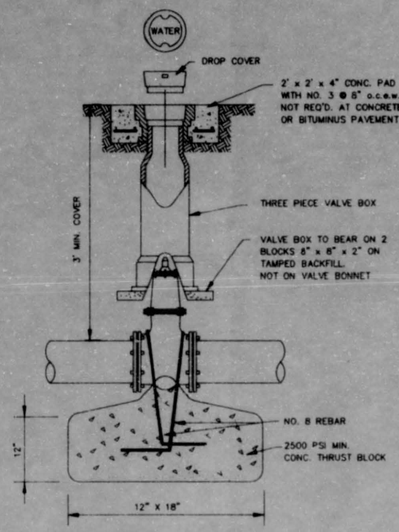
TYPICAL BORE SECTION
N.T.S.



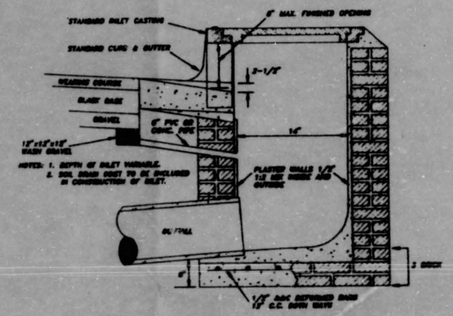
BORE SECTION
N.T.S.



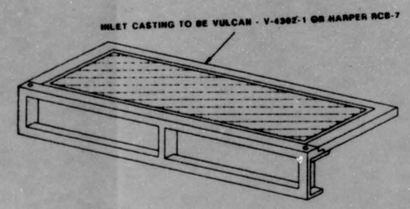
TYPICAL 3/4" WATER SERVICE
N.T.S.



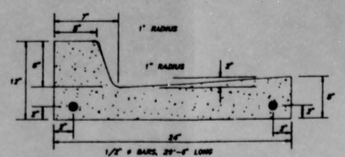
GATE VALVE DETAIL
N.T.S.



SECTION OF STANDARD CURB INLET



STANDARD CURB INLET CASTING



NOTES: 1. ALL CURBS, GUTTERS & DRIVEWAYS TO BE CONSTRUCTED OF 3000 LB. CONCRETE.
2. 1 - 3/4" DOWEL BARS, 12" LONG REQD. AT EXPANSION JOINTS. THEY SHALL BE HELD IN PLACE BY APPROVED CHAIRS OR SUPPORTS AND 1/2" EXPANSION MATERIALS.

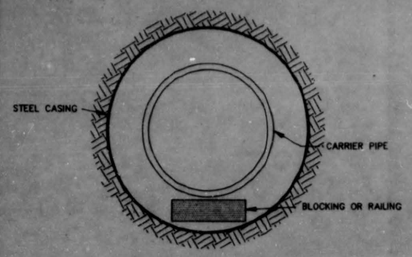
STANDARD CURB & GUTTER

CITY OF RIDGELAND, MS.

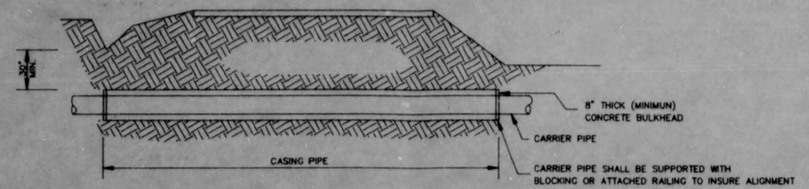
STANDARD DETAILS

DSGN:		THE CITY OF RIDGELAND	DRAWING NO. 3 OF
DRWN:			
CHKD:			
SCALE:			

520



BORE SECTION
N.T.S.

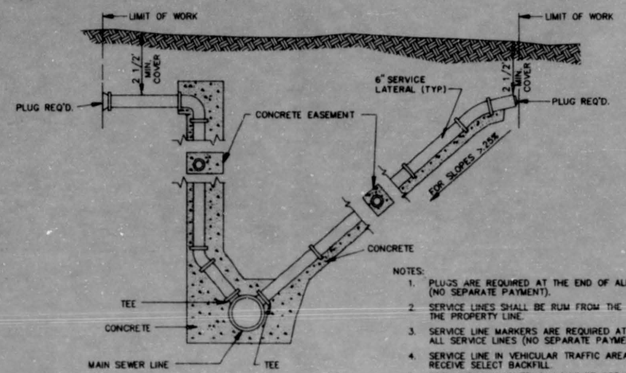


TYPICAL BORE SECTION
N.T.S.

TABLE II
GOVERNING DIMENSIONS FOR MANHOLES

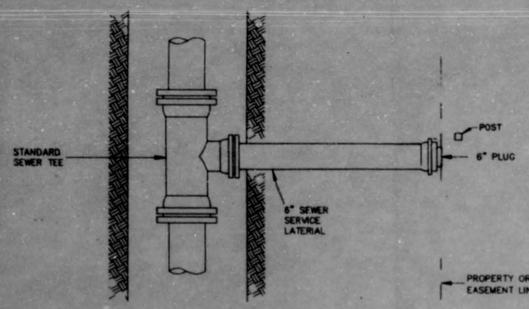
PIPE SIZE	Δ ANGLE	BASE DIAMETER **	"R" *
8" THRU 12"	0° TO 90°	4'	1'- 6"
15"	0° TO 60°	4'	1'- 10"
15"	60° TO 90°	4'	1'- 10"
18"	0° TO 60°	4'	2'- 3"
18"	60° TO 90°	4'	1'- 10"
21"	0° TO 60°	4'	2'- 7"
21"	60° TO 90°	5'	2'- 4"
24"	0° TO 45°	4'	3'- 0"
24"	45° TO 90°	5'	2'- 3"
30"	0° TO 60°	5'	3'- 9"
30"	60° TO 90°	6'	2'- 8"
36"	0° TO 60°	6'	4'- 6"
36"	60° TO 90°	7'	3'- 11"
42"	0° TO 60°	7'	5'- 3"
42"	60° TO 90°	8'	4'- 7"
48"	0° TO 60°	8'	6'- 0"
48"	60° TO 90°	9'	5'- 3"

* SEE SECTIONAL PLAN, STANDARD MANHOLE
** PRECAST MANHOLE

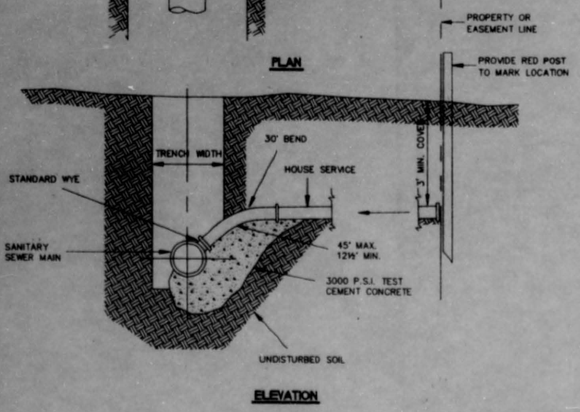


NOTES:
1. PLUGS ARE REQUIRED AT THE END OF ALL SERVICE LINES (NO SEPARATE PAYMENT).
2. SERVICE LINES SHALL BE RUN FROM THE SEWER LINES TO THE PROPERTY LINE.
3. SERVICE LINE MARKERS ARE REQUIRED AT THE END OF ALL SERVICE LINES (NO SEPARATE PAYMENT).
4. SERVICE LINE IN VEHICULAR TRAFFIC AREA SHALL RECEIVE SELECT BACKFILL.
5. WHEN MINIMUM COVER CAN NOT BE OBTAINED DUCTILE IRON PIPE SHALL BE USED.

SERVICE CONNECTION FOR DEEP SEWER
N.T.S.

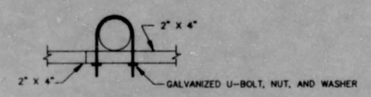


PLAN

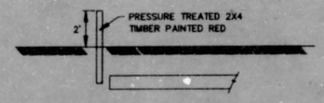


ELEVATION

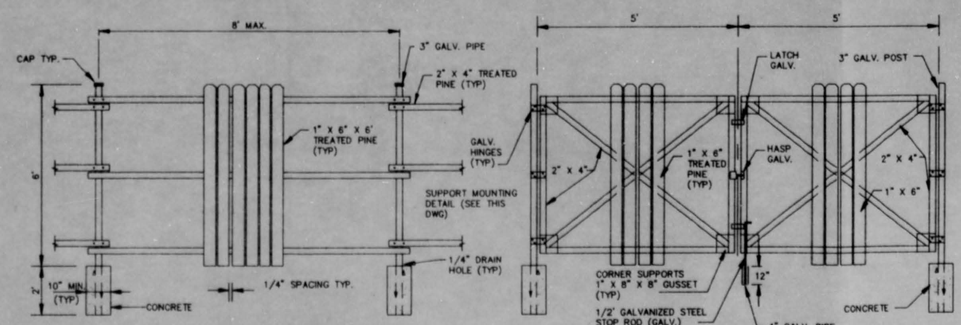
SEWER SERVICE CONNECTION
N.T.S.



SUPPORT MOUNTING DETAIL
N.T.S.



SERVICE LINE MARKER
(NO SEPARATE PAYMENT)
N.T.S.



FENCE DETAIL
N.T.S.

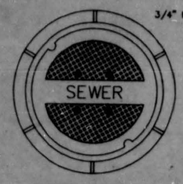
GATE DETAIL
N.T.S.

CITY OF RIDGELAND, MS.

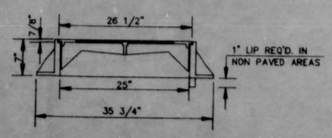
STANDARD DETAILS

DSGN:		THE CITY OF RIDGELAND	DRAWING NO. 4 OF
DRWN:			
CHKD:			
SCALE			

521

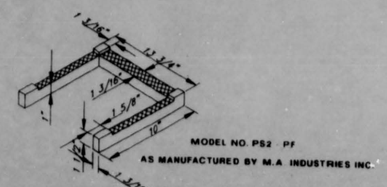


TOP PLAN OF COVER



SECTION

FRAME & COVER WEIGHT 420 LBS.

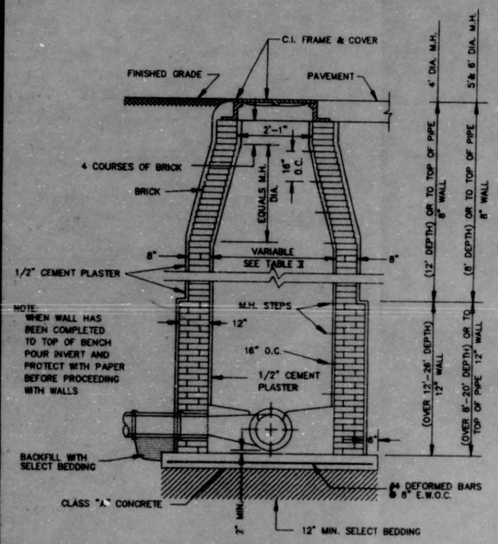


MODEL NO. PS2 - PF
AS MANUFACTURED BY M.A. INDUSTRIES INC.

DETAIL "B"

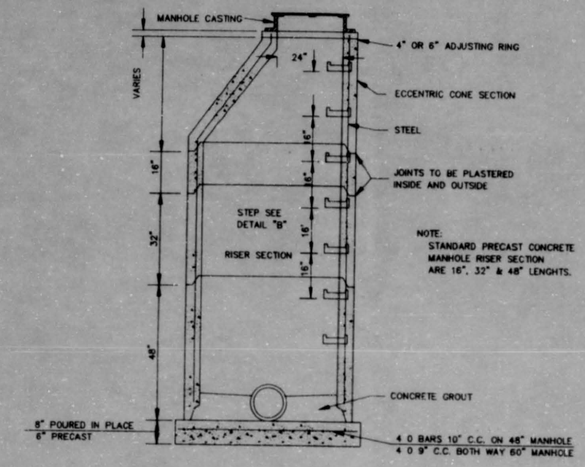
STANDARD MANHOLE FRAME AND COVER

N.T.S.



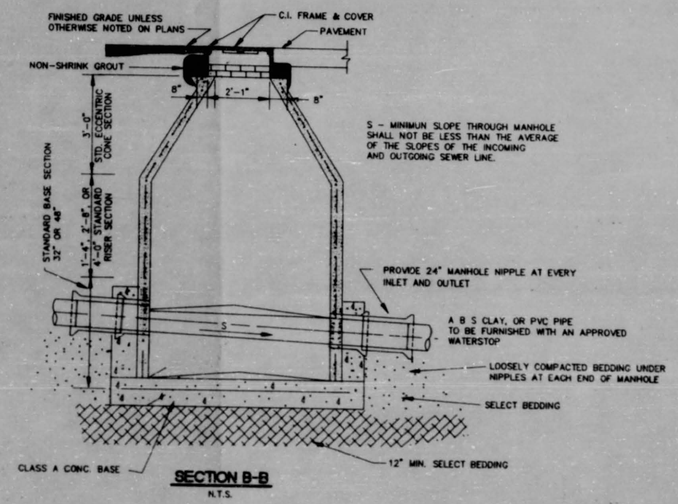
STANDARD BRICK MANHOLE

N.T.S.



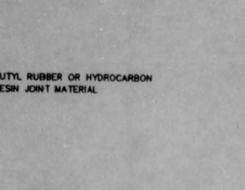
SECTION OF PRECAST CONCRETE MANHOLE

N.T.S.



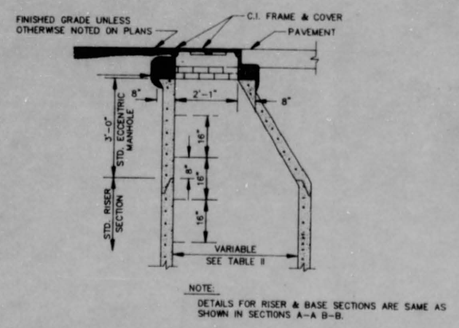
SECTION B-B

N.T.S.



TYPICAL PRECAST CONCRETE MANHOLE JOINT DETAIL

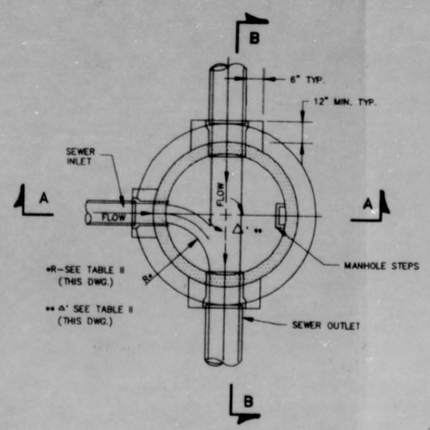
N.T.S.



NOTE:
DETAILS FOR RISER & BASE SECTIONS ARE SAME AS SHOWN IN SECTIONS A-A B-B.

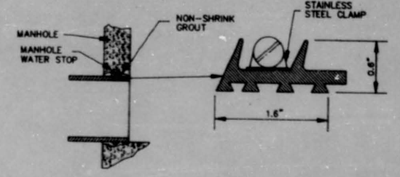
STANDARD ECCENTRIC CONE FOR ALL DIAMETER MANHOLES

N.T.S.



SECTIONAL PLAN STANDARD MANHOLE

N.T.S.



TYPICAL MANHOLE WATER STOP FOR ABS, CLAY OR PVC PIPE

EXISTING AND "STRADDLE" MANHOLES

N.T.S.

CITY OF RIDGELAND, MS.

STANDARD DETAILS

DSGN:		THE CITY OF RIDGELAND	DRAWING NO. 5 of
DRWN:			
CHKD:			
SCALE:			

522