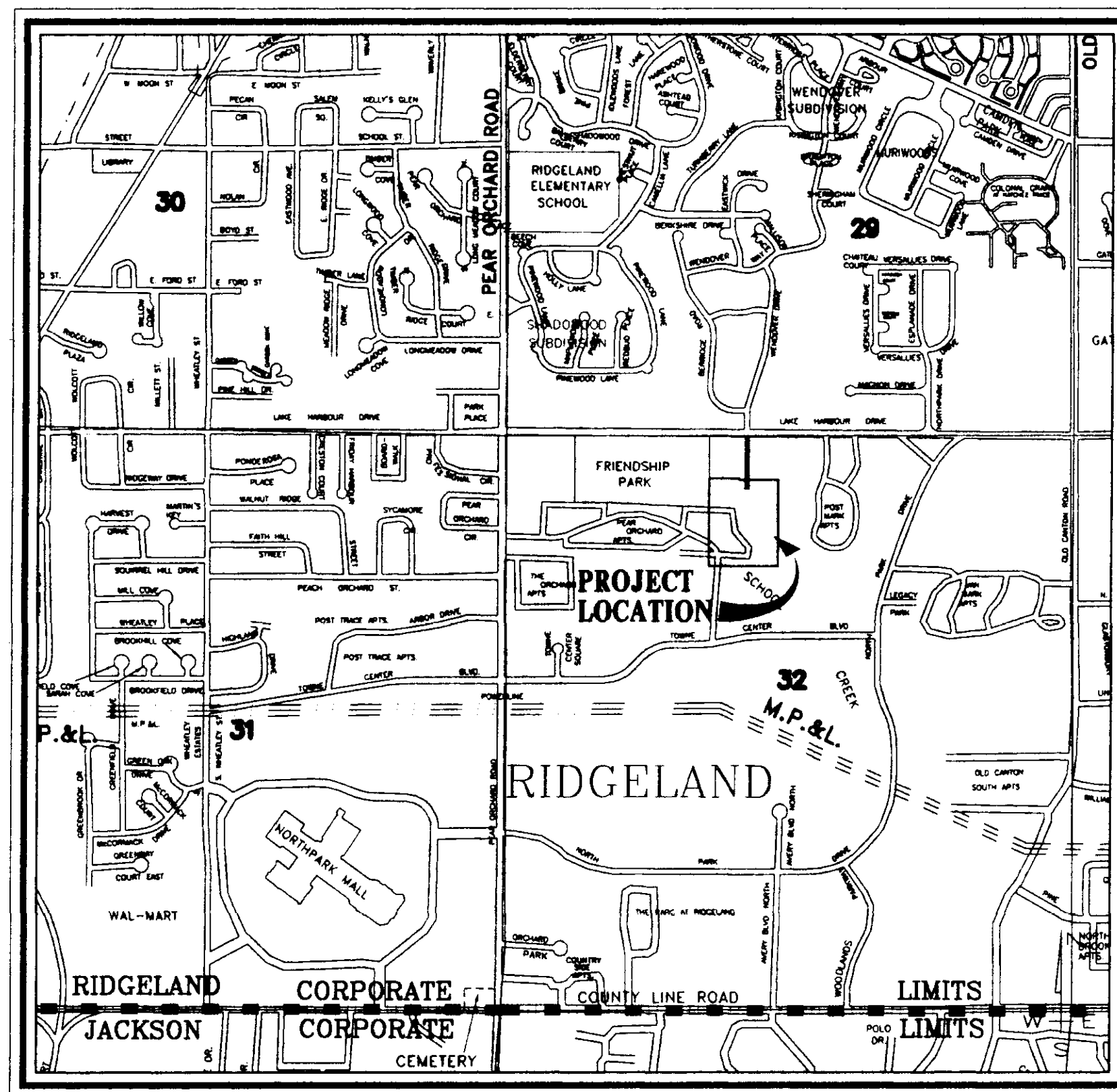
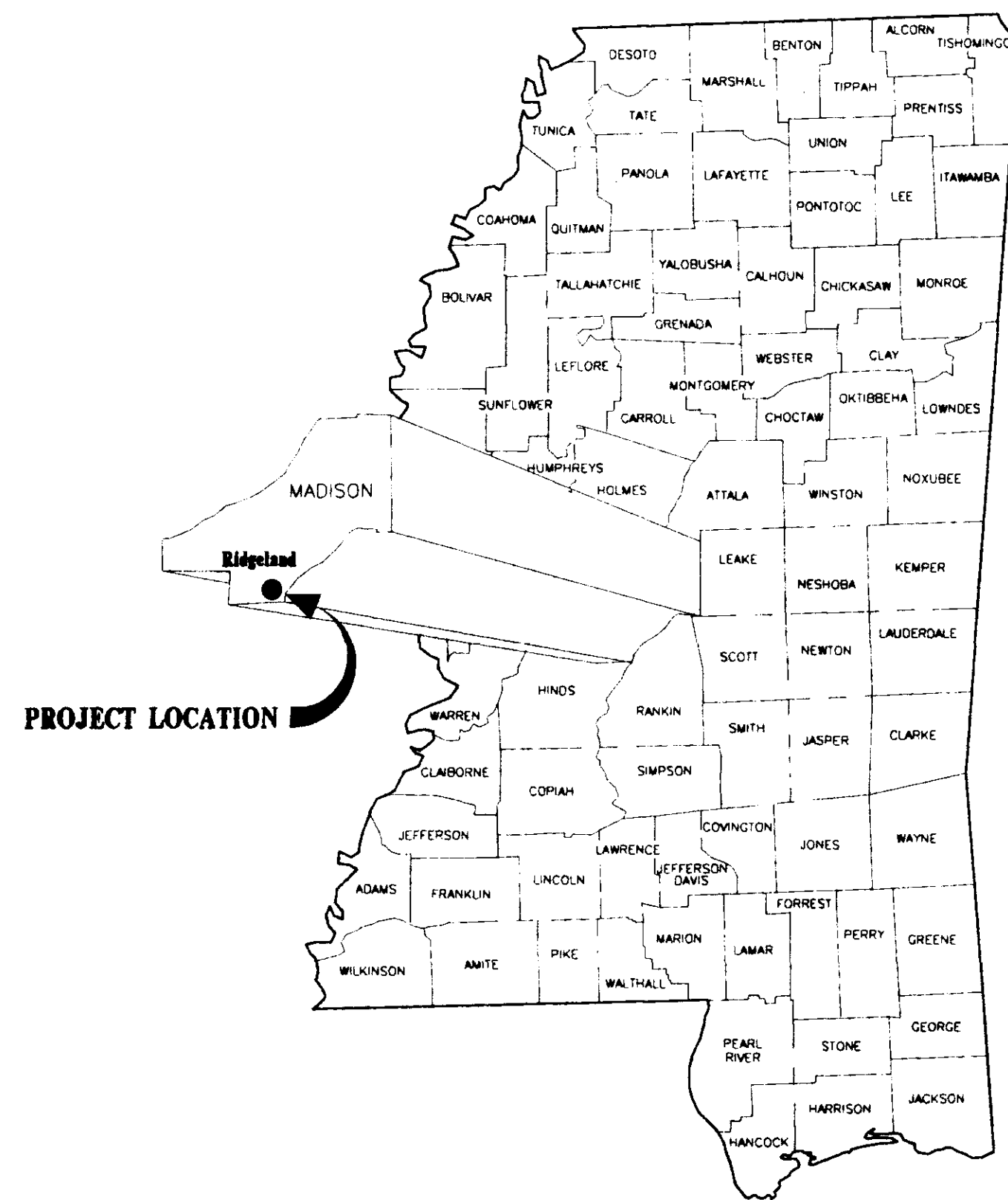
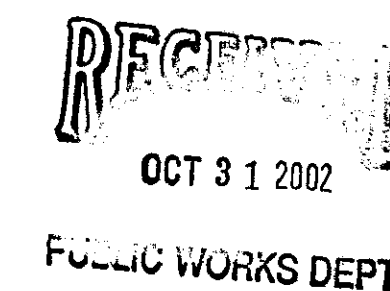
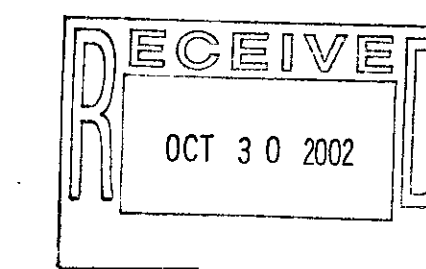
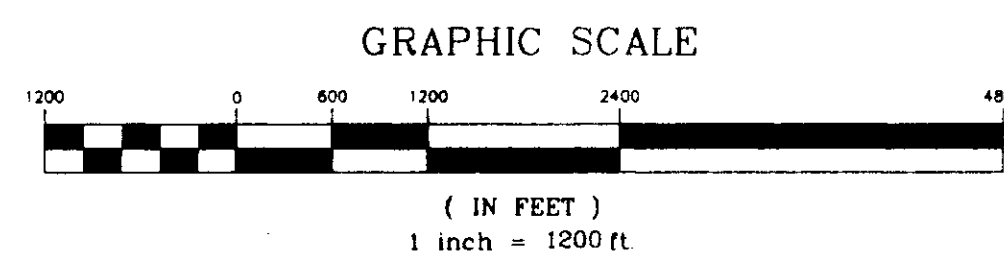


CONSTRUCTION PLANS FOR CHARMANT CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI

Corrected Construction - Utilities



VICINITY MAP

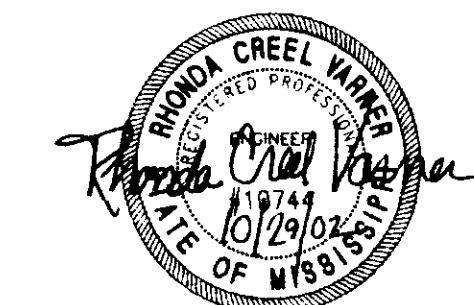


A DEVELOPMENT OF
LAKE HARBOUR ROAD, L.P.

OFFICE COPY _____
 PLANS REVIEW _____
 CD Director *[Signature]* 10-31-02
 PW Director *[Signature]* 10-31-02
 City Planner _____
 Traffic Engineer _____
 Drainage Engineer *[Signature]* (SEE SHEET 44)
 Fire Official _____
 Police Official _____
 Site plans will not go forward to the Architectural Review Board or the Mayor and Board of Aldermen prior to the above review.

Prepared By:

STERLING
consultants
 INCORPORATED
 CONSULTING ENGINEERS



PWP-00336

MATERIAL REQUIREMENTS

STREETS

1. CONCRETE FOR CURB AND GUTTER SHALL BE 3,000 PSI MINIMUM.
2. HOT BITUMINOUS PAVEMENT BASE COURSE MIXTURES AND MATERIALS SHALL MEET SPECIFICATION BB-1 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
3. HOT BITUMINOUS PAVEMENT SURFACE COURSE MIXTURES AND MATERIALS SHALL MEET SPECIFICATION SC-1 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

STORM DRAINAGE

1. PIPE - REINFORCED CONCRETE PIPE, ROUND ASTM C-76 OR ARCH, ASTM C-506.
2. JOINTS - O-RING RUBBER GASKETS, BITUMINOUS PLASTIC CEMENT OR PRE FORMED JOINT COMPOUND.
3. INLETS AND JUNCTION BOXES - PRE CAST CONCRETE, ASTM C-478 OR CONCRETE CAST-IN-PLACE. (CITY OF RIDGELAND STANDARD)
4. INLET CASTINGS - VULCAN RCB-7, C.L. DEWS NO. 2450, OR EQUAL AS APPROVED BY ENGINEER.

WATER

- MAIN - C-900 PVC CLASS 150 OR DUCTILE IRON, CEMENT LINED MORTAR PRESSURE CLASS 350 - ANSI/AWWA C151/A21.5.
- ENCASEMENT - POLYETHYLENE FILM ANSI/AWWA A21.5/C105.
- JOINTS - TYLON JOINTS WITH RUBBER GASKET ANSI/AWWA STANDARDS.
- FITTINGS - DUCTILE IRON, COMPACT FITTINGS MECHANICAL JOINT - ANSI/AWWA C153/A21.53-88.
- FIRE HYDRANTS - DRY BARREL TYPE TRAFFIC MODEL, 4-1/2" MAIN VALVE SIZE, 3 WAY NOZZLE W/ 2 EACH 2-1/2" HOSE NOZZLES AND 1 5-1/4" PUMPER NOZZLE, AWWA C502-80.
- ANCHOR COUPLINGS - TYLER/UNION MECHANICAL JOINT ADAPTERS FOR VALVE & HYDRANT CONNECTIONS ANSI/AWWA C110/A21.10.
- VALVES - DUCTILE IRON METROSEAL 250 RESILIENT SEATED GATE VALVES - AWWA C509.
- VALVE BOXES - CAST IRON, 3 PIECE ADJUSTABLE STAMPED W/ "WATER".
- SERVICE LINE - 3/4" MINIMUM, TYPE K COPPER, ASTM B88; POLYETHYLENE (PE), AWWA C901, OR POLYBUTYLENE (PB), AWWA C902.
- SVC SADDLE - FORD STYLE 304, OR APPROVED EQUAL.
- CORP. STOPS - MUELLER NO. H-15000 OR APPROVED EQUAL.
- CURB STOPS - MUELLER H-15175 OR APPROVED EQUAL.
- METER BOX - CAST IRON METER BOX W/ FLIP TOP READING COVER.

SEWER

- MAIN & SERVICE - PVC, SDR-26, ASTM D-3034 OR DUCTILE IRON, PROTECTO 401 CERAMIC EPOXY LINED.
- JOINTS - SLIP ON W/LOCKED-IN RUBBER GASKET, ASTM F-477.
- MANHOLES - PRE CAST CONCRETE, ASTM C-478. COAL TAR EPOXY COATING, REQUIRED ON INTERIOR AND EXTERIOR OF MANHOLE SECTIONS AND ON MANHOLE STEPS.
- PIPE BOOTS - KOR-N-SEAL MOLDED RUBBER CONNECTORS, OR EQUAL.
- FRAME & COVER - CAST IRON, ASTM A-78 OR EQUAL.
- STEPS - RUBBER COATED

GENERAL NOTES

STREET

1. STREET SUB GRADE AREAS WHERE EXPANSIVE CLAYS (CH) ARE ENCOUNTERED WITHIN 4' OF FINISHED GRADE SHALL BE UNDERCUT AND BACK FILLED AS REQUIRED TO SEPARATE PAVEMENT FROM EXPANSIVE CLAYS BY A MINIMUM 3 FOOT THICK LAYER OF SELECT SILTY CLAYS (CL) OR SANDY CLAYS (CL) HAVING A LIQUID LIMIT OF LESS THAN 40 AND A PI WITHIN THE RANGE OF 8 TO 20. THE BACK FILL AND FILL MATERIALS SHOULD BE SPREAD IN LOOSE LIFTS HAVING A MAXIMUM THICKNESS OF 9 IN. AND COMPACTED TO NOT LESS THAN 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) AT MOISTURE CONTENTS WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT. STABILITY MUST BE EVIDENT DURING COMPACTION OF EACH LIFT BEFORE ANY SUBSEQUENT LIFTS OF FILL OR BACK FILL MATERIAL ARE ADDED.
2. UNDERCUTTING AND BACK FILLING SHALL EXTEND A MINIMUM OF 2 FEET BEYOND BACK OF CURB.
3. PRIOR TO PLACING ASPHALT BASE MATERIAL, PAVING CONTRACTOR SHALL 1) FINE-GRADE THE SUB GRADE MATERIAL TO THE PROPER SECTION TO PERMIT PLACEMENT OF THE REQUIRED THICKNESS OF BASE COURSE; 2) COMPACT AND PROOF-ROLL SUB GRADE TO ACHIEVE STABILITY; AND ENSURE REQUIRED SUB GRADE DENSITY HAS BEEN ACHIEVED AND VERIFIED BY SOILS TESTING LABORATORY.

CURB AND GUTTER

1. CURB AND GUTTER SHALL BE 24" STANDARD (SEE DETAIL).
2. SUB GRADE BENEATH CURB AND GUTTER SHALL BE FINE GRADED AND COMPACTED TO ACHIEVE STABILITY UNDER PRESSURE OF THE REAR WHEEL LOADING OF A MOTOR GRADER MOVING SLOWLY OVER THE CURB AND GUTTER SUB GRADE.
3. AFTER FORMS AND/OR CURB AND GUTTER STRING LINES HAVE BEEN SET AND BEFORE CONCRETE IS POURED, CONTRACTOR SHALL VERIFY THAT ALL GUTTERS DRAIN TO INLETS. MINIMUM SLOPE: 9" PER 100'
4. EXPANSION JOINTS IN CURB AND GUTTER SHALL BE 3/4" JOINT MATERIAL PLACED AT 30' (MAXIMUM) INTERVALS.
5. CONTRACTION JOINTS IN CURB AND GUTTER SHALL BE SCORED AT INTERVALS NOT GREATER THAN 10 FEET AND SPACED EQUALLY BETWEEN EXPANSION JOINTS.
6. CONCRETE FOR CURB AND GUTTER SHALL BE 3,000 PSI MINIMUM.
7. 48" SIDEWALKS SHALL BE CONSTRUCTED BY THE BUILDER ON EACH LOT AFTER ALL UTILITY SERVICES ARE INSTALLED AND THE SITE HAS BEEN GRADED AND AND SHAPED TO ITS FINISHED TOPOGRAPHY. NOT A PART OF THIS PROJECT.

STORM DRAINAGE & EROSION CONTROL

1. ALL STORM DRAINAGE PIPE AND INLETS SHALL BE FLUSHED AND CLEARED OF ANY CONSTRUCTION MATERIALS AND/OR SEDIMENT UPON PROJECT COMPLETION.
2. THE CONSTRUCTION EXIT SHALL BE MAINTAINED SUCH THAT ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.
3. INLET SEDIMENT TRAPS SHALL CONSIST OF HAY BALES FULLY SURROUNDING EACH INLET.
4. SEDIMENT BARRIERS SHALL BE HAY BALES PLACED IN ALL DRAINAGE WAYS TO PREVENT SEDIMENT FROM LEAVING CONSTRUCTION SITE.

WATER & SEWER

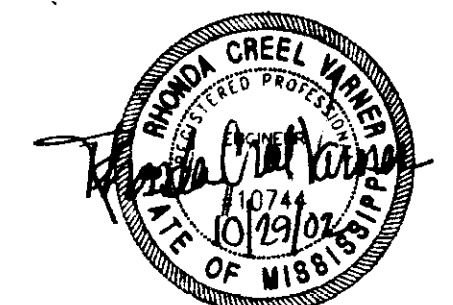
1. ALL WATER AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF RIDGELAND STANDARD SPECIFICATIONS.
2. WATER MAINS SHALL BE LAID AT LEAST 10' HORIZONTALLY AND 18" VERTICALLY FROM ANY SEWER OR MANHOLE (WATER OVER SEWER).
3. WHERE WATER LINES CROSS OVER SEWER LINES, THE ABOVE REQUIREMENTS WILL BE WAIVED IF PIPE SEGMENTS ARE CENTERED TO PROVIDE MAXIMUM SPACING OF THE JOINTS OF BOTH WATER AND SEWER LINES AND A VERTICAL SEPARATION OF AT LEAST 18" (WATER OVER SEWER) IS MAINTAINED.
4. SEWER SERVICE LINES SHALL BE 6"; SEWER MAINS SHALL BE 8" SDR-26 PVC.
5. WATER SERVICE LINES SHALL BE 3/4" POLYBUTYLENE.
6. SERVICES FOR WATER AND SEWER SHALL BE LOCATED AS SHOWN ON PLANS WITH 10 FOOT MINIMUM SEPARATION.
7. BACK FILL OF ALL TRENCHES UNDER EXISTING OR PROPOSED PAVEMENTS AND CURB AND GUTTER SHALL BE MECHANICALLY COMPACTED IN 9" MAXIMUM LOOSE LIFTS TO A MINIMUM OF 95% STANDARD PROCTOR PEAK DRY DENSITY.
8. DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACK FILL HAS BEEN IN PLACE AT LEAST 30 DAYS. DEFLECTION TEST SHALL BE RUN USING A RIGID BALL OR MANHOLE HAVING A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
9. WATER MAINS SHALL BE INSTALLED WITH 4' MINIMUM COVER UNDER ROADWAY SECTIONS AND 3' MINIMUM COVER ELSEWHERE.
10. CONTRACTOR SHALL MAINTAIN RECORDS DURING CONSTRUCTION OF HORIZONTAL LOCATION OF ALL WATER AND SEWER SERVICES FOR AS BUILT RECORDS.

INDEX TO DRAWINGS

- 1 COVER SHEET
- 2 GENERAL NOTES AND INDEX TO DRAWINGS
- 3 STREET AND BUILDING LAYOUT
- 4 WATER AND SEWER LAYOUT
- 5 STORM DRAINAGE AND GRADING PLAN
- 6 LAND DISTURBANCE AND EROSION CONTROL PLAN
- 7 PLAN AND PROFILE - CHARMANT DRIVE STA. 0+00 - STA. 6+92.67, SANITARY SEWER OUTFALL NO. 3 STA. 0+00 - STA. 3+55.42
- 8 PLAN AND PROFILE - CHARMANT PLACE STA. 0+00 - STA. 9+61.68, SANITARY SEWER OUTFALL NO. 1 STA. 0+00 - STA. 2+66.02 & SANITARY SEWER OUTFALL NO. 2 STA. 0+00 - STA. 1+54.06
- 9 STANDARD SANITARY SEWER DETAILS
- 10 STANDARD WATER DETAILS
- 11 STANDARD STORM SEWER DETAILS
- L1 CLUBHOUSE AND POOL PLAN
- L3 ENTRANCE PLAN & ELEVATION

LEGEND

—————	PROPERTY LINE
—————	LOT LINE
—————	RIGHT OF WAY LINE
—————	EASEMENT
—————	SETBACK LINE
—————	CENTER LINE
—————	EDGE OF PAVEMENT
—————	BACK OF CURB
—————	EXISTING CONTOUR
—————	PROPOSED SANITARY SEWER & MANHOLE
—————	PROPOSED STORM SEWER & CATCH BASIN
—————	SANITARY SEWER
—————	WATER LINE
—————	PROPOSED WATER VALVE
—————	PROPOSED FIRE HYDRANT
—————	PROPOSED TEE



CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP

GENERAL NOTES
AND INDEX TO DRAWINGS

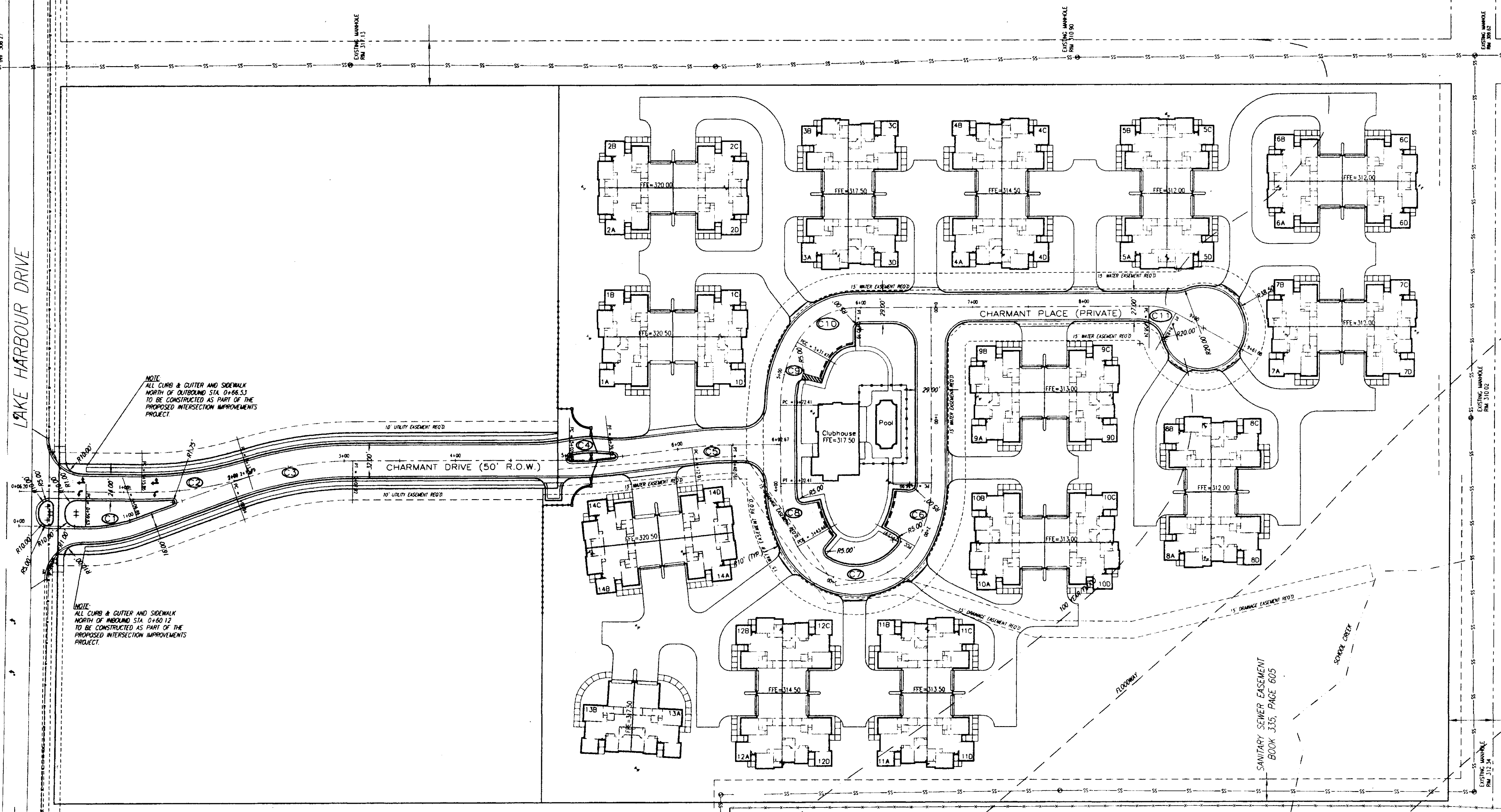
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

DESIGN: RCV	DATE: 07/13/01	STERLING consultants CONSULTING ENGINEERS	DRAWING NO.
DRAWN: RDB	DATE: 10/15/01		2 OF 13
CHECKED: RCV	DATE: 10/15/01		
SCALE: AS SHOWN			

SW 1/4
SECTION 29,

NW 1/4
SECTION 32,

SW 1/4
SECTION 32



NOTE:
ALL CURB & GUTTER AND SIDEWALK
NORTH OF OUTBOUND STA. 0+68.53
TO BE CONSTRUCTED AS PART OF THE
PROPOSED INTERSECTION IMPROVEMENTS
PROJECT.

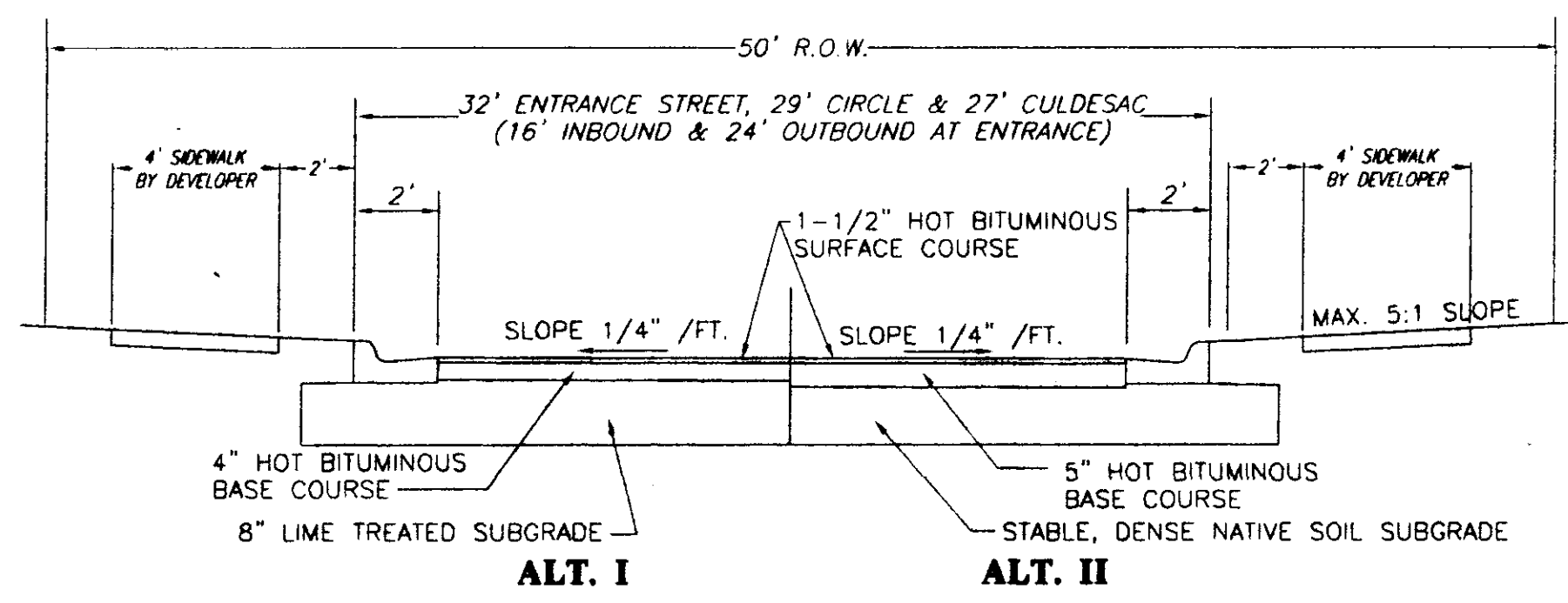
NOTE:
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NORTH OF INBOUND STA. 0+40.12
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PROPOSED INTERSECTION IMPROVEMENTS
PROJECT.

SE 1/4 SW 1/4,
SECTION 29, T7N, R2E

NW 1/4,
T7N, R2E

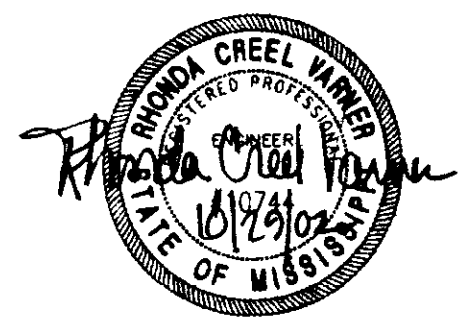
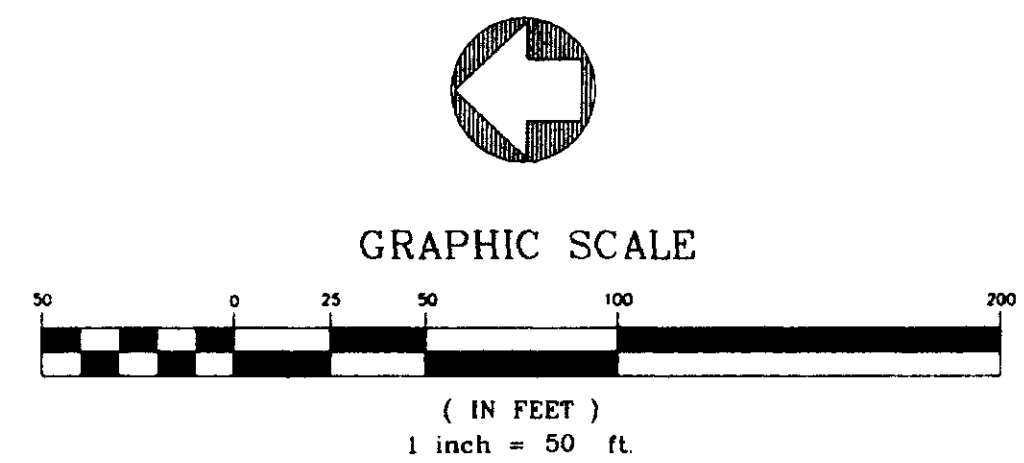
40' DEDICATED BUT
UNOPENED ROAD

1/4 NW 1/4,
T7N R2E



TYPICAL STREET SECTION
NOT TO SCALE

CURVE	ARC DISTANCE	RADIUS	CENTRAL ANGLE	CHORD
C1	47.22'	150.00'	27°45'49"	S 09°47'38" E 46.92'
C2	92.54'	316.00'	17°45'31"	S 08°18'00" E 92.55'
C3	110.98'	316.00'	20°07'18"	N 10°08'25" W 110.41'
C4	36.91'	300.00'	7°02'36"	S 07°36'13" E 36.88'
C5	35.85'	300.00'	6°50'48"	N 07°42'17" W 35.81'
C6	58.97'	114.00'	28°38'20"	S 75°27'43" E 58.32'
C7	127.47'	80.50'	120°42'20"	S 00°16'33" E 106.11'
C8	58.92'	114.00'	28°38'20"	S 75°27'43" E 58.32'
C9	58.06'	114.00'	28°41'00"	N 75°26'23" W 58.40'
C10	63.69'	80.50'	60°19'00"	N 30°26'23" W 60.79'
C11	25.45'	50.00'	28°12'34"	N 14°19'24" E 25.21'



CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP

**STREET AND BUILDING
LAYOUT**

CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

DESIGN: RCV DATE: 07/23/01
DRAWN: RDB DATE: 10/28/01
CHECKED: RCV DATE: 10/28/01
SCALE: 1"=50'

STERLING CONSULTANTS
CONSULTING ENGINEERS

DRAWING NO.
3 OF 13

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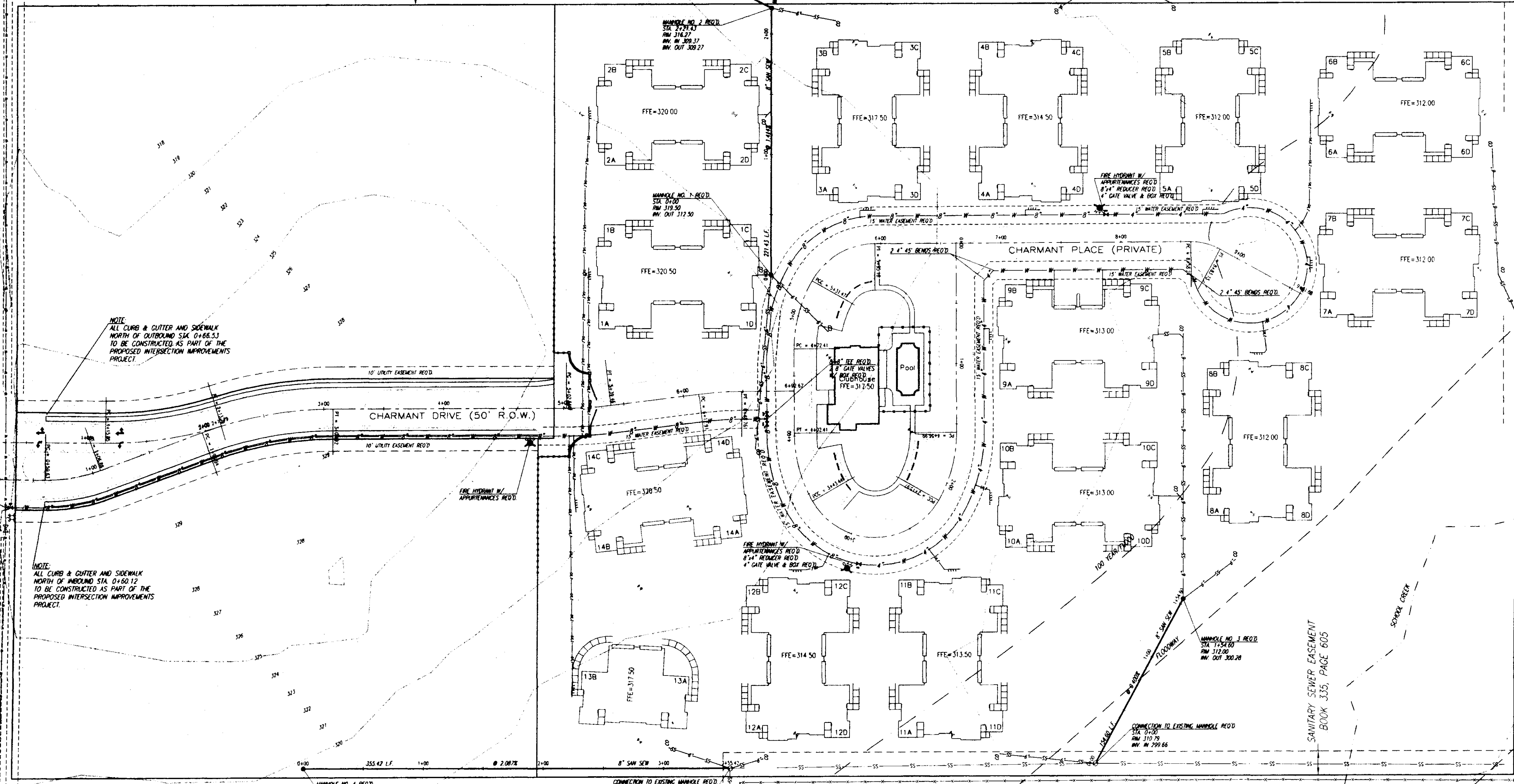
SW 1/4
SECTION 29,

NW 1/4
SECTION 32,

SW 1/4
SECTION 32

LAKE HARBOUR DRIVE

40' DEDICATED BUT UNOPENED ROAD



NOTE:
ALL CURB & GUTTER AND SIDEWALK NORTH OF OUTBOUND STA 0+66.53 TO BE CONSTRUCTED AS PART OF THE PROPOSED INTERSECTION IMPROVEMENTS PROJECT.

NOTE:
ALL CURB & GUTTER AND SIDEWALK NORTH OF INBOUND STA 0+50.12 TO BE CONSTRUCTED AS PART OF THE PROPOSED INTERSECTION IMPROVEMENTS PROJECT.

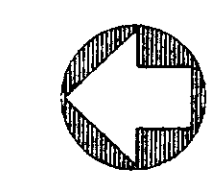
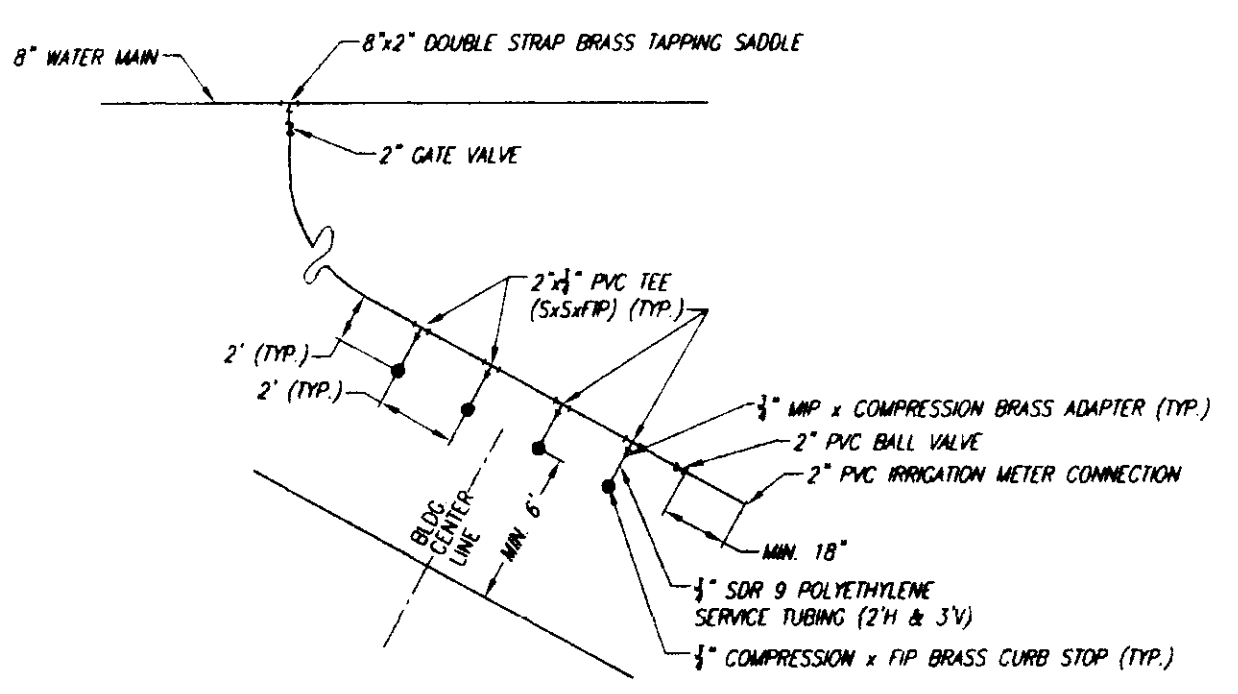
SW 1/4
SECTION 29, T7N, R2E

NW 1/4,
T7N, R2E

SW 1/4,
T7N, R2E

NOTES:

1. All sanitary sewer mains and services within Charmant are to remain private and the maintenance and repair thereof shall be the responsibility of the Charmant Condominium Association.
2. All water mains, fire hydrants and service lines to the unit meter shall be public and the maintenance and repair thereof shall be the responsibility of the City of Ridgeland.



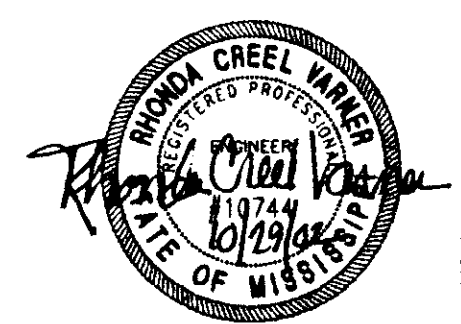
GRAPHIC SCALE



**CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP**

**WATER AND SEWER
LAYOUT**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**



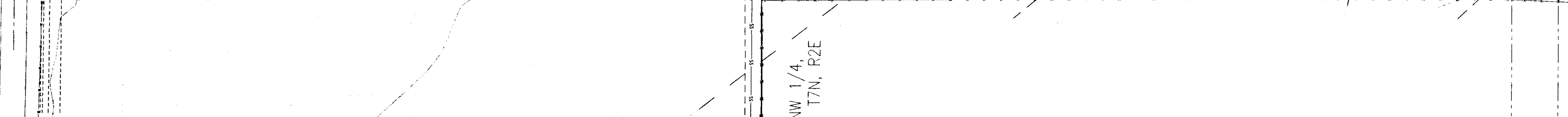
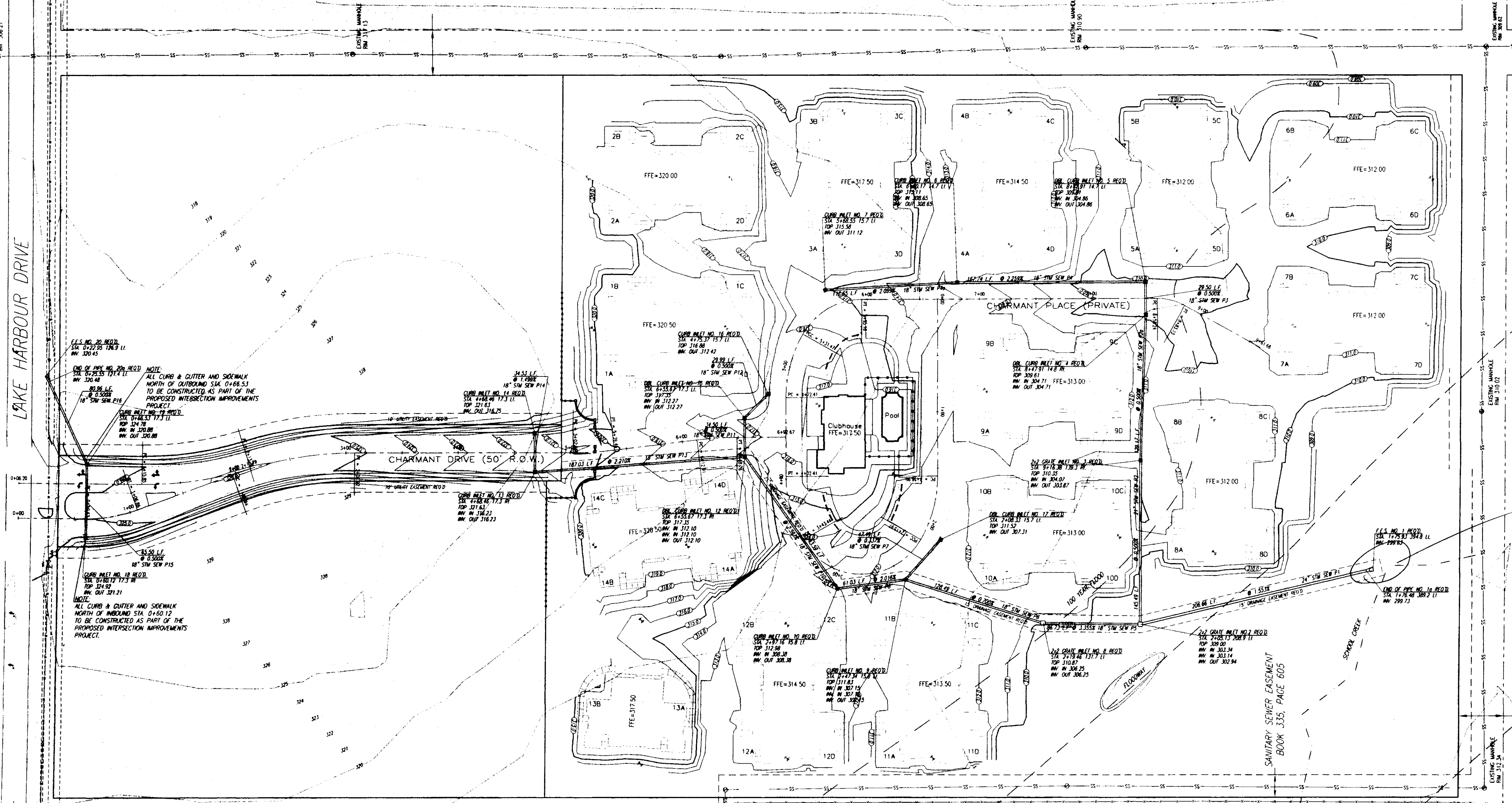
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SCALE: 1"=50'		

STERLING CONSULTANTS
CONSULTING ENGINEERS

SW 1/4
SECTION 29,

NW 1/4
SECTION 32,

SW 1/4
SECTION 32



NOTES:

- For each of Buildings 5, 6, 7, 8, 10 and 11, after setting the batter boards for the building but prior to pouring its floor slab, the builder shall furnish an Elevation Certificate prepared by a Registered Professional Engineer or Land Surveyor to the City of Ridgeland indicating that the finished floor elevation will be at least, if not higher, than the finished floor elevations for the building as shown on this Plan. The Site Grading Contractor shall be required to construct the foundation embankment for each building to one-half foot of the finished floor elevation for the building shown on this Plan.
- Storm Drainage Pipes P13, P10, P8, P6, and P1 and Curb Inlets 12, 10, and 9 and Grate Inlets 8 and 2 shall be public and the maintenance and repair thereof shall be the responsibility of the City of Ridgeland. All other storm drainage pipes shall remain private and the maintenance and repair thereof shall be the responsibility of the Charmant Condominium Association.

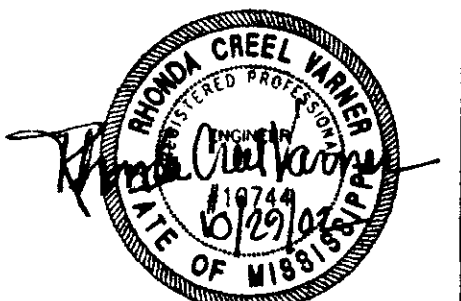
Erosion Control @ outlet!

40' DEDICATED BUT UNOPENED ROAD

SW 1/4
SECTION 29, T7N, R2E

NW 1/4,
T7N, R2E

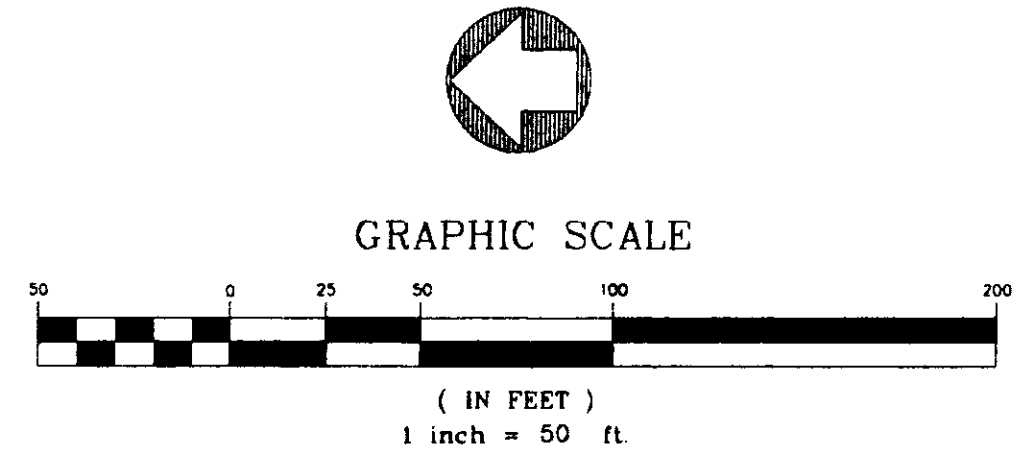
SW 1/4
T7N R2E



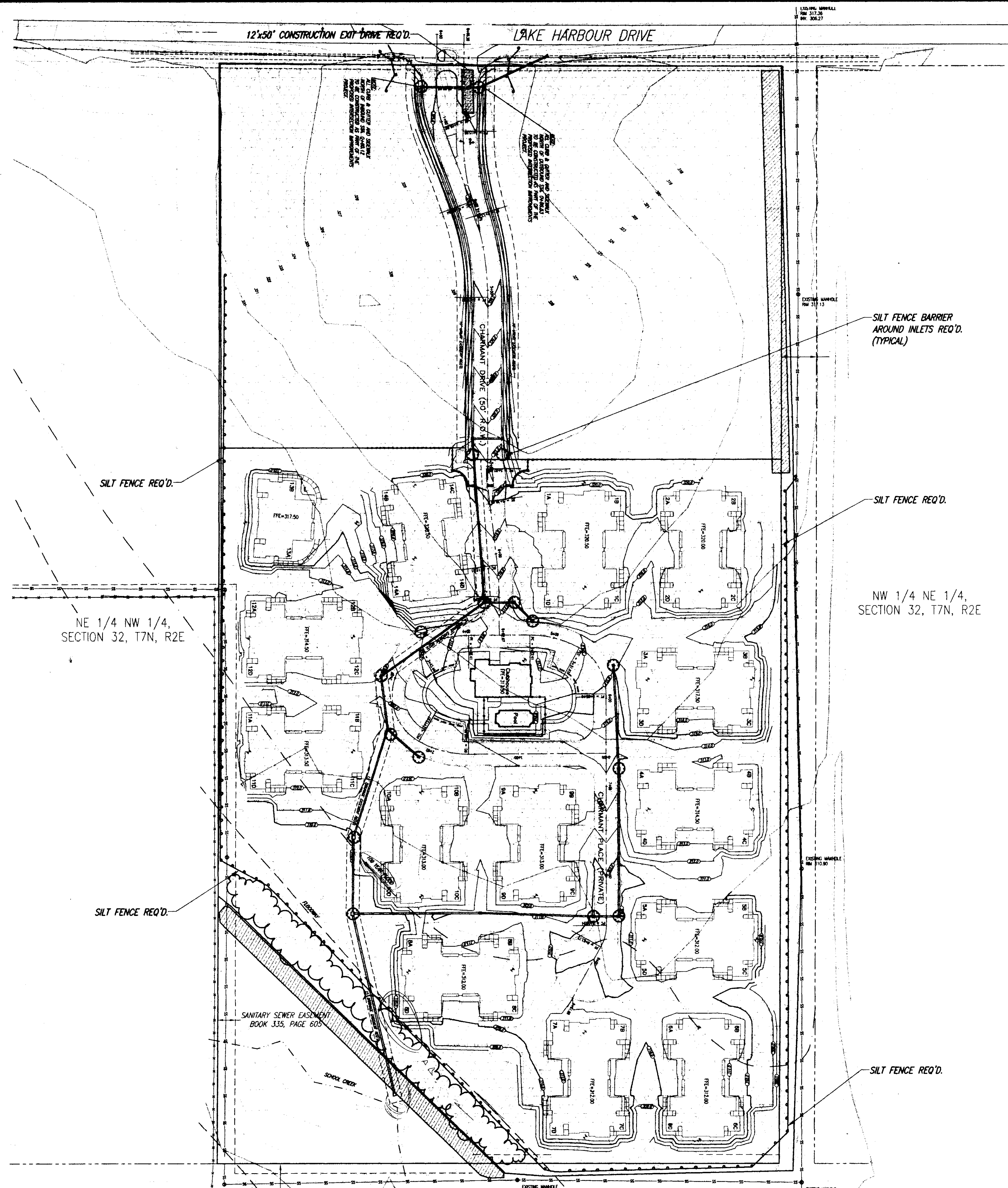
**CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP**

**STORM DRAINAGE AND
GRADING PLAN**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

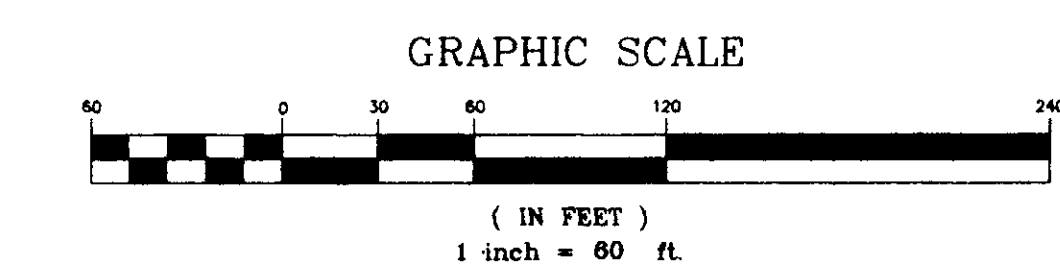


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STORM WATER POLLUTION PREVENTION PLAN

- GENERAL NOTES:**
1. CONTOUR LINES SHOWN INDICATE EXISTING GROUND ELEVATIONS. CONTOUR INTERVAL IS ONE (1) FOOT. THE DATUM USED IS NATIONAL GEODETIC VERTICAL DATUM (NGVD).
 2. THIS PARCEL OF LAND IS SITUATED IN FLOOD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN, AND FLOOD ZONE AE SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD, BASE FLOOD ELEVATIONS DETERMINED ACCORDING TO F.I.R.M. MAP NUMBER 28089C0320 D, DATED APRIL 15, 1994.
- LEGEND**
- [Hatched Box] SPECIFIC AREA TO REMAIN UNDISTURBED UNLESS SHOWN OTHERWISE ALL AREAS TO REMAIN UNDISTURBED.
 - [White Box] AREA TO BE CLEARED, GRUBBED AND EXCAVATED OR FILLED. APPROXIMATE AREA 17.947 ACRES
 - [Dotted Box] 20' WIDE VEGETATIVE BUFFER STRIP ESTABLISHED USING EXISTING VEGETATION WHERE STORMWATER RUNOFF IS ANTICIPATED TO OCCUR THROUGH SHEET FLOW
 - [Line with Dots] SILT FENCE
 - [Cloud Shape] BRUSH DIKE
 - [Stippled Box] STABILIZED STONE CONSTRUCTION EXIT DRIVE
- A. General.** The measures and land treatments shown on this plan are applicable to land disturbance activities during infrastructure construction. Should adjoining sites be developed or improved during infrastructure construction, these measures shall be modified or supplemented as necessary to minimize off-site deposition of soil sediments arising from such additional development.
- B. Erosion and Sediment Controls.** All controls must be in accordance with the standards for manufacture and installation which are set forth in the 1994 edition of "Planning and Design Manual for the Control of Erosion, Sediment and Stormwater" published by the Mississippi Department of Environmental Quality and U.S. Department of Agriculture Natural Resources Conservation Agency.
- C. Erosion and Sediment Minimization Practices During Construction.**
1. All contractors and subcontractors are to limit their activities and operations to those areas which must reasonably be occupied for safe and proper infrastructure construction. Areas inadvertently disturbed are to be promptly prepared and seeded.
 2. Contractors are specifically directed to preserve existing vegetation where possible and to employ those practices and methods which will minimize the erosion and off-site deposition of sediments. Contractors shall selectively implement temporary erosion and sediment control measures appropriate for the topography, type or soil, time of year, and anticipated duration of use.
 3. All contractors and subcontractors are to refrain from construction activities during those periods after heavy rainfalls when wet soil conditions cause mud to stick to vehicles leaving the site.
 4. Any contractor or subcontractor who fails or omits to employ and implement appropriate and practicable erosion and sediment control measures and practices or who intentionally or unintentionally destroys or damages any erosion and sediment control facility shall be responsible for damages to downhills properly caused by erosion stemming from such failure, omission, or destruction and shall promptly clean or repair ditches, drainage culverts or inlets clogged or otherwise affected by such erosion.
- D. Measures to be Implemented Prior to Construction.** Sediment basins, traps and barriers, perimeter dikes, vegetated buffer strips, and other erosion control measures intended to trap sediment on-site shall be constructed as the first step in grading, and shall be functional prior to disturbing upslope lands. The Clearing contractor shall
1. install fabric silt fencing at those locations shown on the plans, at such other locations downslope of large areas from which native vegetation is to be removed or substantially disturbed by infrastructure installation activities, and at additional locations designated by the Engineer;
 2. install sediment barriers or brush dikes made using hay bales staked across natural drainage ways situated inside and adjacent to the construction site at those locations indicated on the plans or as otherwise directed or appropriate;
 3. mark with survey tape and/or pin flags specific individual or stands of trees which are to remain undisturbed and areas of vegetation suitable for serving as buffer strips along the lower perimeter of the construction site.
- E. Additional Measures to be Implemented During Construction.**
1. The Clearing Contractor shall salvage pine boughs and tree limbs and place some at appropriate locations to reinforce silt fences and/or form brush barriers.
 2. The Earthwork Contractor shall place a six inch thick, 12' wide, 50' long pad of stabilized crushed stone at the point shown on the plans where construction traffic should enter and leave the construction site.
 3. Provided such is not patently inconsistent with the grading plans, the Earthwork Contractor shall grade and shape ground surfaces to divert stormwater flow away from disturbed ground surfaces and exposed soils and shall construct check dams, sediment retention basins and other designated or appropriate sediment controls.
 4. Pipe Installation Contractors shall leave all backfilled trenches (except those situated under proposed pavements and curbs) slightly depressed to permit the collection and infiltration of stormwater, the retention of sediments, and the consolidation of backfill soils. Excess trench excavation shall be piled upslope of depressed trenches.
 5. Drainage Pipe Installation Contractor shall construct inlet sediment traps using hay bales staked around the openings of all inlets and and/or drainage culverts and shall construct outlet erosion mitigation and/or stormwater energy dissipation blocks using pre-mixed dry sand/aggregate/cement in cubic foot kraft paper bags at the discharge end of drainage culverts. Where drainage culverts are installed with a gap to accommodate the construction of area or curb inlets or junction boxes, the drainage pipe installation Contractor shall pour the structure bottom using ready-mix concrete prior to placing hay bales.
- F. Additional Measures to be Implemented After Street Paving.**
1. The Finish Grading Contractor shall grade and shape all ground surface areas disturbed by infrastructure construction activities, remove all sediments collected in traps, and replace and/or restore as appropriate all erosion and sediment control facilities which should remain.
 2. The Grassing Contractor shall prepare, fertilize, seed and/or sod, and mulch if necessary all non-paved areas disturbed during infrastructure construction activities. The selected species of grass(es) to be sown shall be based on time of year, type of soil, and other relevant site conditions and shall be chosen to control erosion and survive seasonal conditions.
 3. Pending the establishment of vegetative ground cover, the Paving Contractor shall monitor the build up of sediments on street pavements which may occur following rainfalls and appropriately return some to the areas from which they eroded.
 4. Any disturbed or denuded ground surface areas which will not be occupied again or within sixty (60) days shall be re-vegetated with seasonal grass or permanent grass as specified by the Engineer.
- G. Post Construction Procedures.**
1. Pending the establishment of vegetative ground cover, all practicable temporary and permanent erosion and sediment control facilities shall be inspected, maintained and repaired as necessary by the Developer to assure the continued performance of their intended function.
 2. The Developer shall require, via protective covenants or deed restriction, that successive builders and lot owners
 - a. fully comply with all municipal and state land disturbance and erosion control ordinances, regulations and requirements, and
 - b. continually implement controls and take measures to prevent or mitigate soil sediments from leaving individual lots.

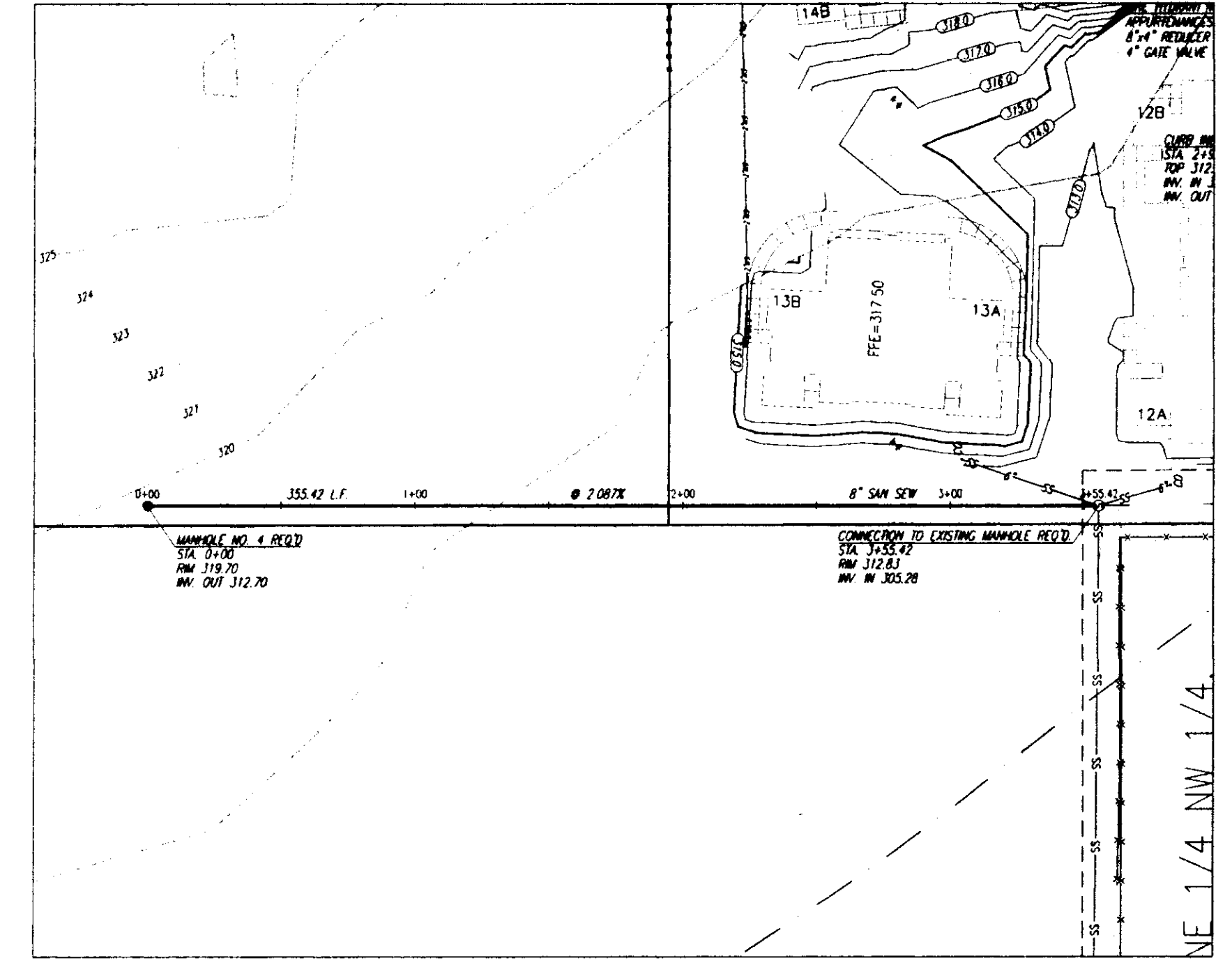
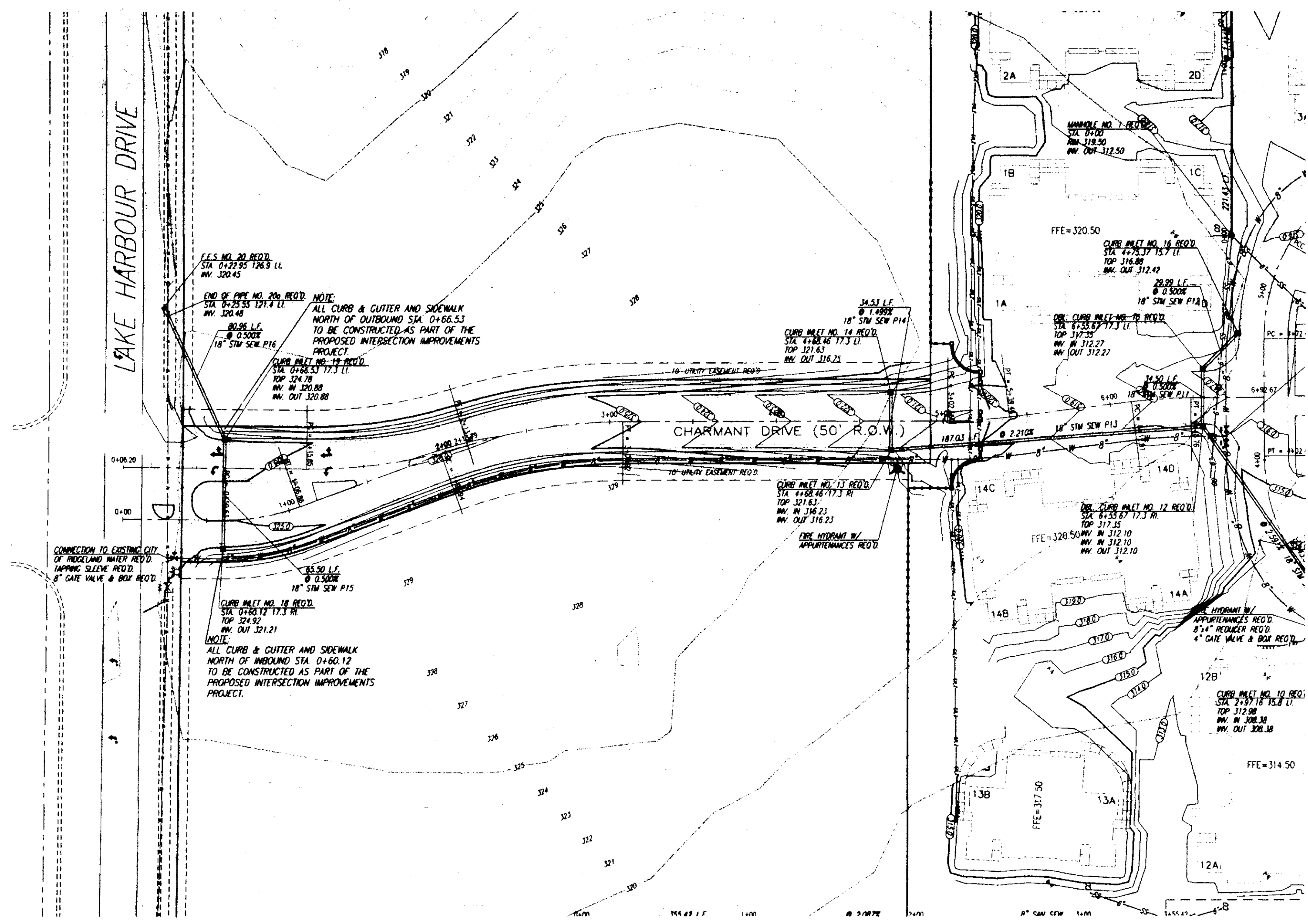


**CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP.**

**LAND DISTURBANCE AND
EROSION CONTROL PLAN**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

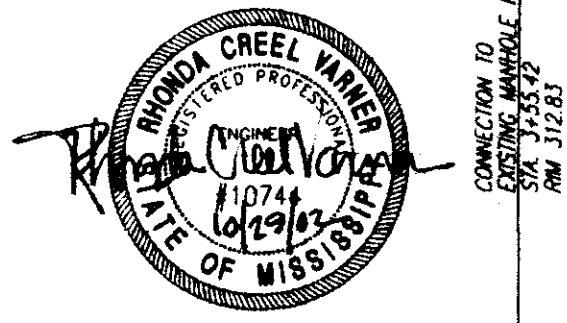
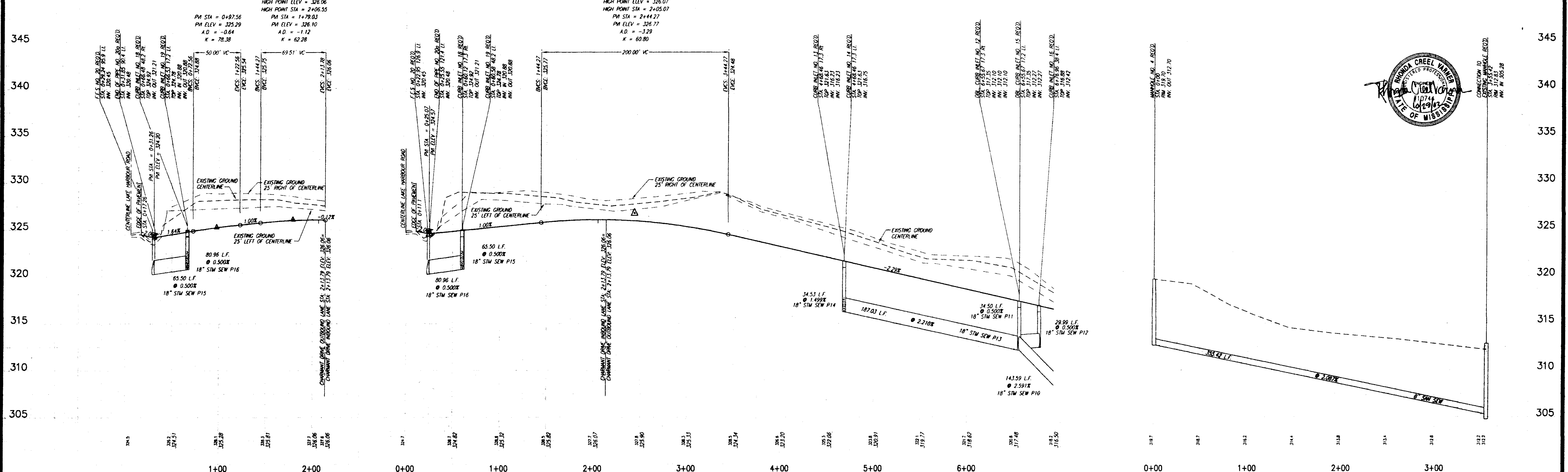
DESIGN: R.C.V.	DATE: 04/11/04	STERLING CONSULTANTS CONSULTING ENGINEERS	DRAWING NO. 6 of 13
DEVELOPER: G.D.D.	DATE: 04/11/04		
CHECKED: R.C.V.	DATE: 10/25/04		
SCALE: 1"=60'			



SANITARY SEWER OUTFALL NO. 3

SCALE 1"=50' HORIZ.
1"= 5' VERT.

REVISION	BY	DATE	COMMENTS
	RFB	10/28/02	



CHARMANT
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

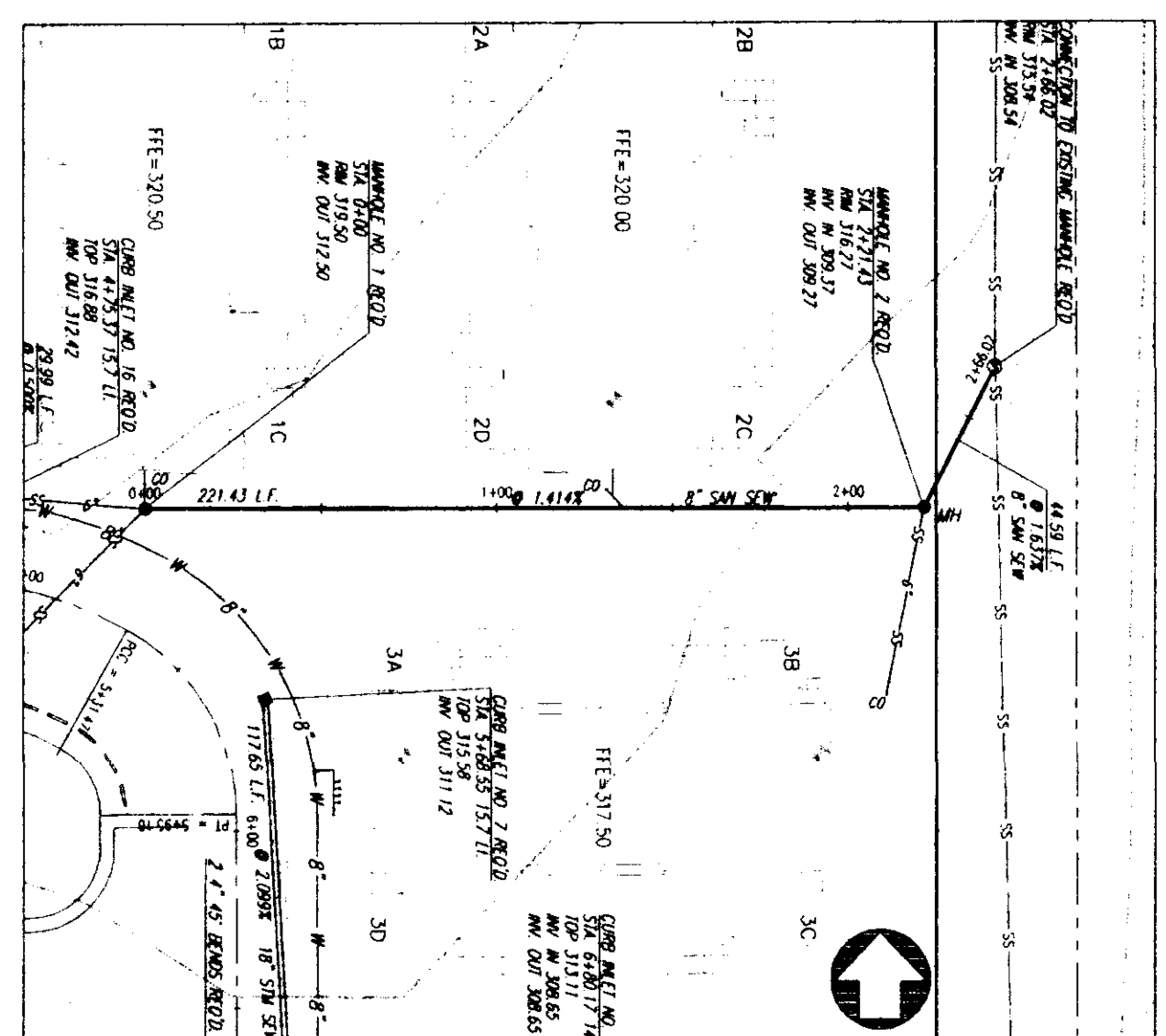
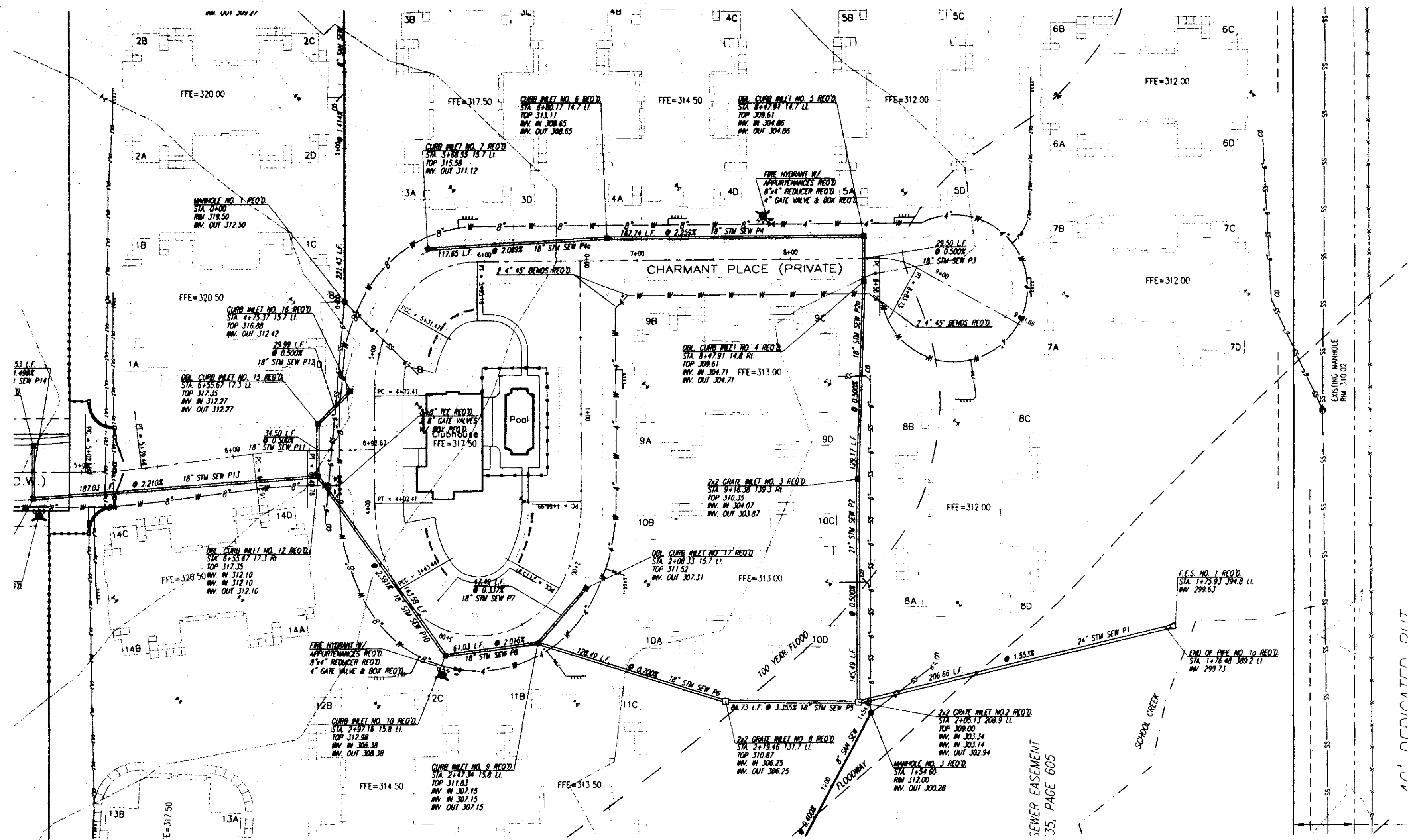
PLAN AND PROFILE - CHARMANT DRIVE STA. 0+00 - STA. 6+92.67
PLAN AND PROFILE - SANITARY SEWER OUTFALL NO. 3 STA. 0+00 - STA. 3+55.42

Prepared For:
LAKE HARBOUR ROAD, LP
RIDGELAND, MISSISSIPPI

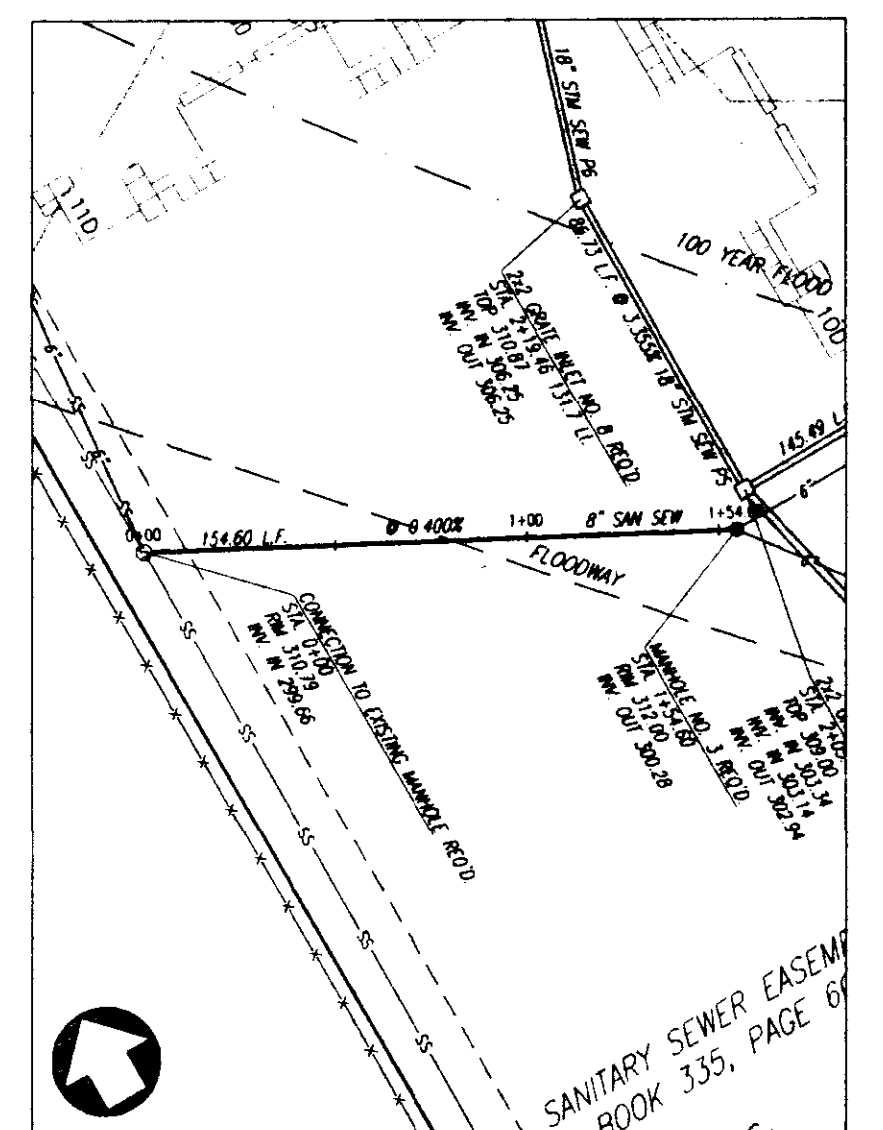
Designed By: RCV	DATE: 09/10/02
Drawn By: RDB	DATE: 10/28/02
Checked By: RCV	DATE: 10/28/02
Scale: 1"=50' HORIZ	1"=5' VERT

Drawing No.
7 of 13

F:\creslakeharb\mbg\end.dwg, Plan Profile, 10/29/2002 3:04:15 PM, R. David Bates, 1.1, Sterling Consultants, Inc.



SANITARY SEWER OUTFALL NO. 1



SANITARY SEWER OUTFALL NO. 2

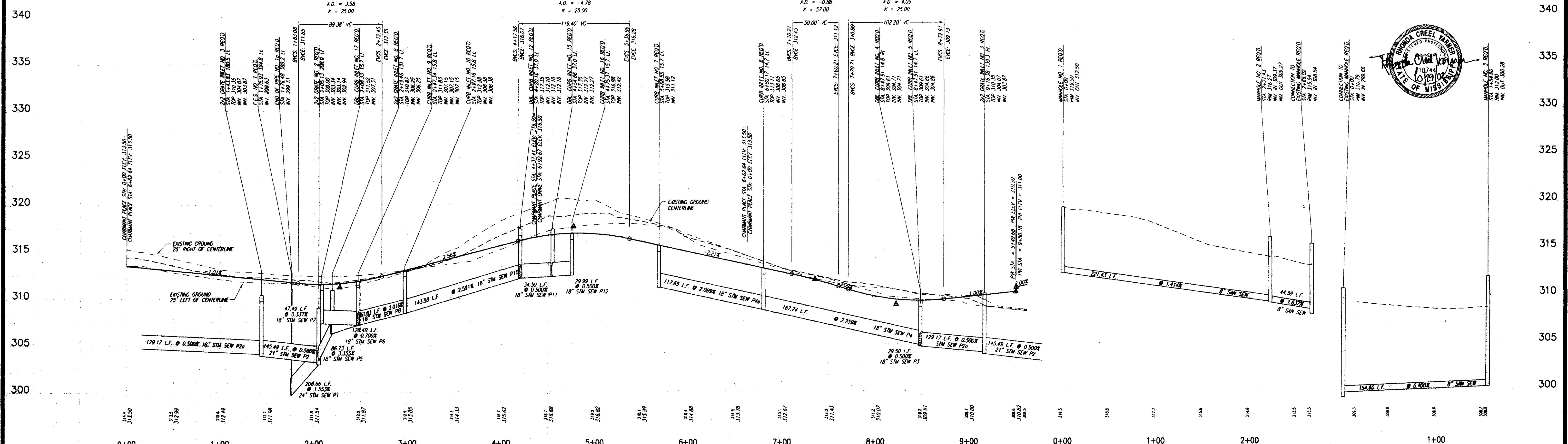
REVISION	BY	DATE
ADRESSED CITY OF RIDGELAND COMMENTS	RDP	12/28/22

LOW POINT ELEV = 311.52
 HIGH POINT STA = 2+40.33
 PM STA = 2+27.77
 PM ELEV = 311.20
 A.D. = 1.58
 K = 25.00

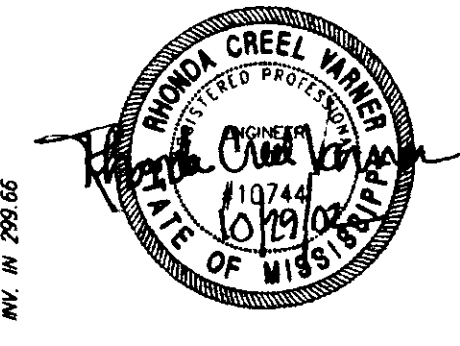
HIGH POINT ELEV = 316.89
 LOW POINT STA = 4+81.69
 PM STA = 4+73.26
 PM ELEV = 317.60
 A.D. = -4.78
 K = 25.00

LOW POINT ELEV = 309.61
 HIGH POINT STA = 8+47.91
 PM STA = 8+21.81
 PM ELEV = 311.60
 A.D. = -0.88
 K = 57.00

LOW POINT ELEV = 309.22
 HIGH POINT STA = 8+47.91
 PM STA = 8+21.81
 PM ELEV = 311.60
 A.D. = 4.09
 K = 25.00



SCALE 1"=50' HORIZ.
 1"= 5' VERT.



CHARMANT
 CITY OF RIDGELAND
 MADISON COUNTY, MISSISSIPPI

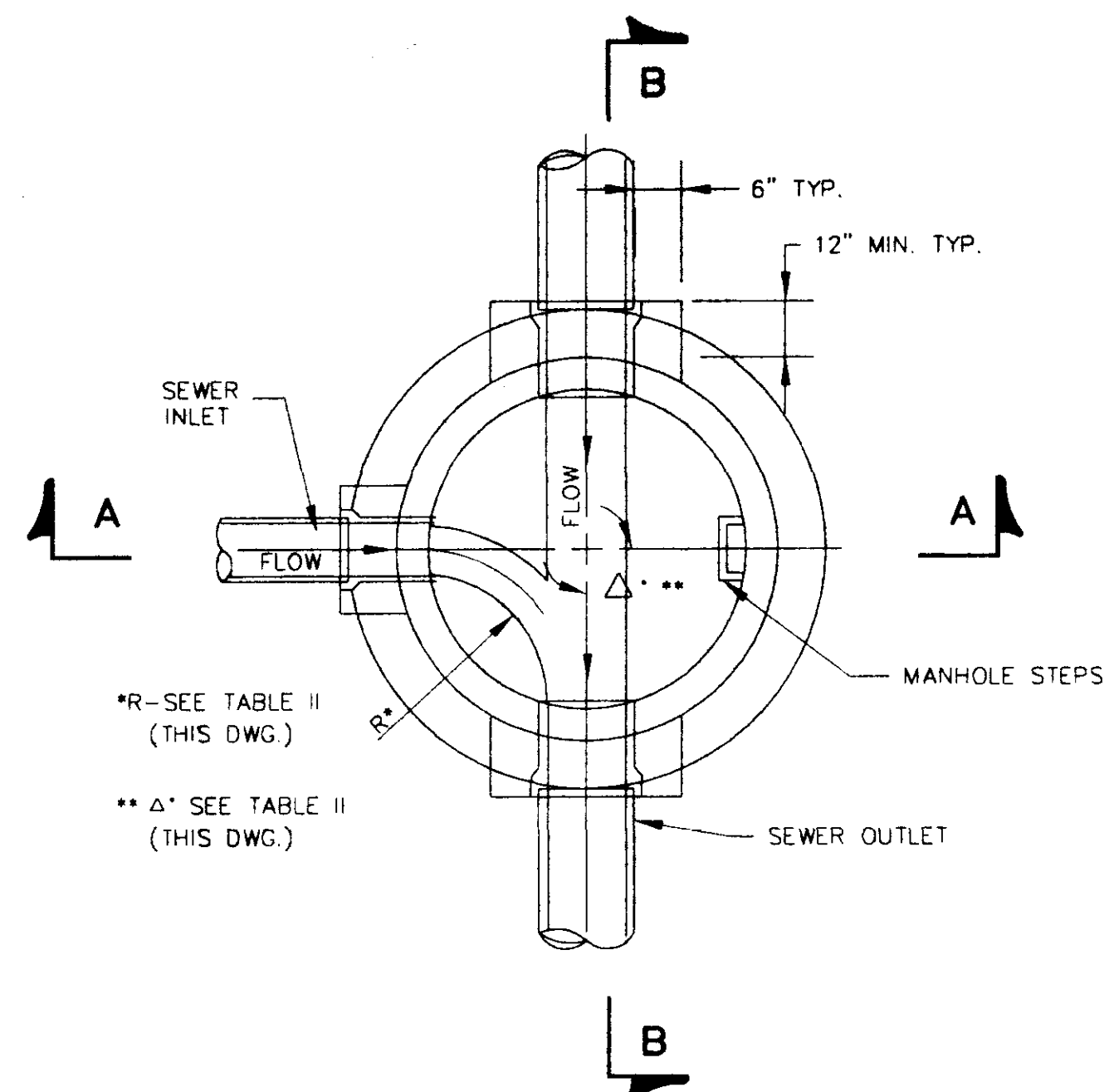
PLAN AND PROFILE - CHARMANT PLACE STA. 0+00 - STA. 9+61.68
 SANITARY SEWER OUTFALL NO. 1 STA. 0+00 - STA. 2+66.02 & SANITARY SEWER OUTFALL NO. 2 STA. 0+00 - STA. 1+54.06

Prepared For:
 LAKE HARBOUR ROAD, LP
 RIDGELAND, MISSISSIPPI

Drawn By: RCV DATE: 02/10/21
 Check By: RCV DATE: 02/18/21
 Scale: 1"=50' HORIZ 1"=5' VERT



Drawing No.
 8 of 13

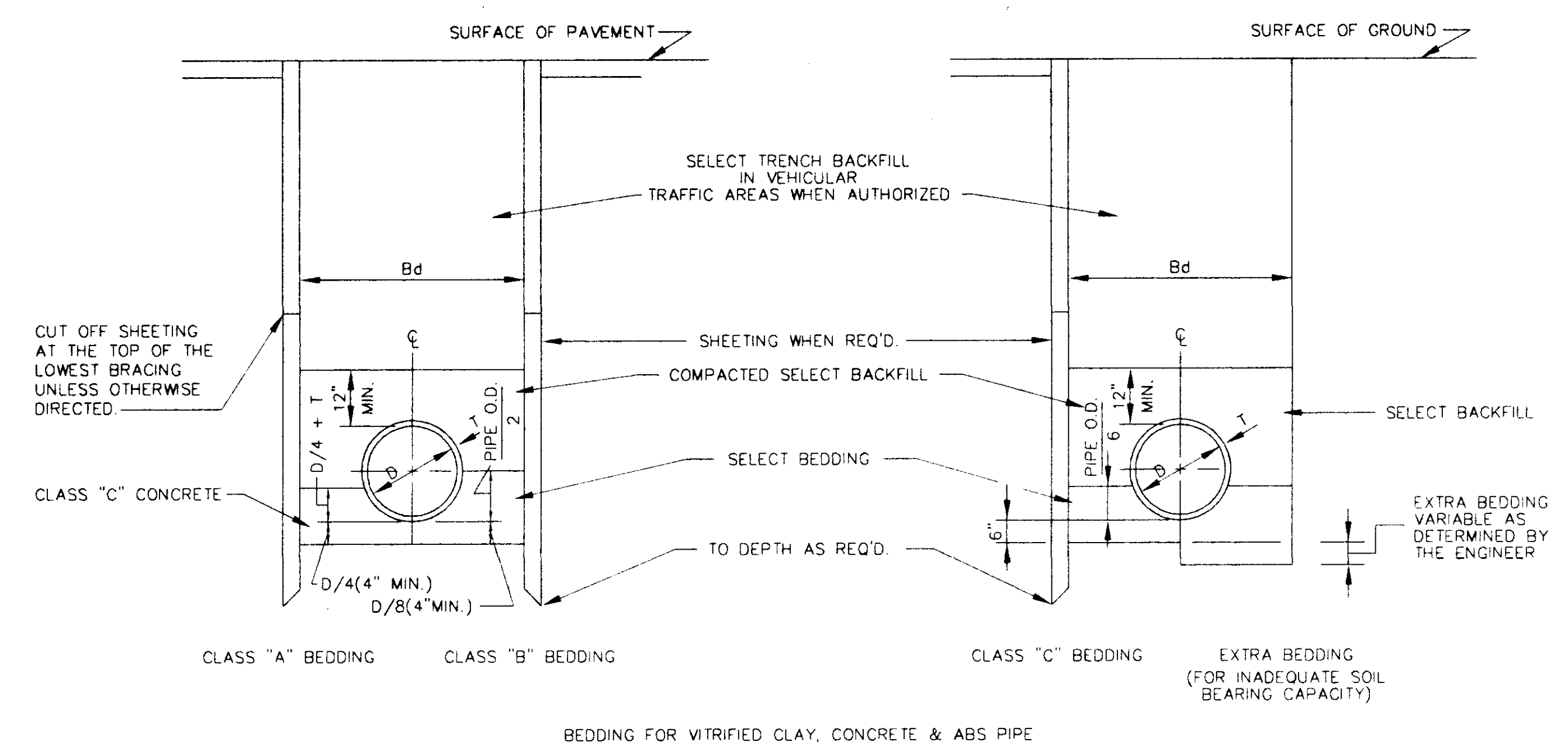


**SECTIONAL PLAN
STANDARD MANHOLE**
NOT TO SCALE

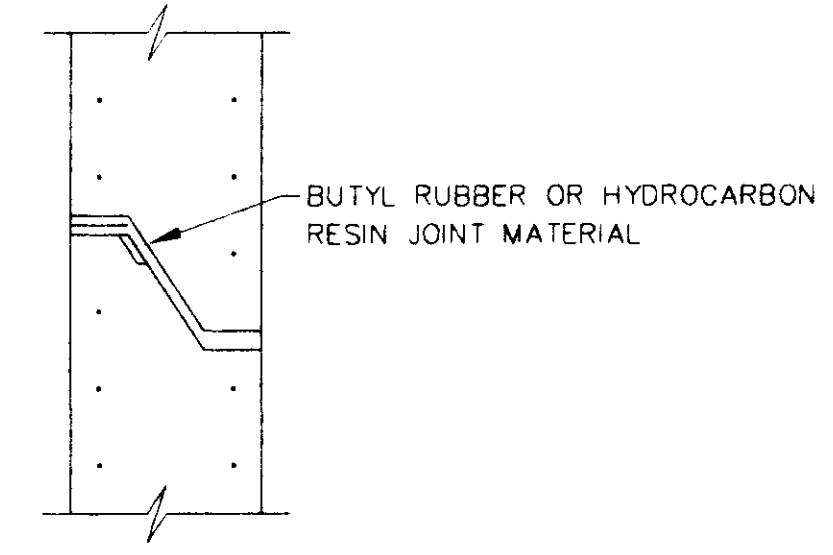
TABLE II
GOVERNING DIMENSIONS FOR MANHOLES

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"

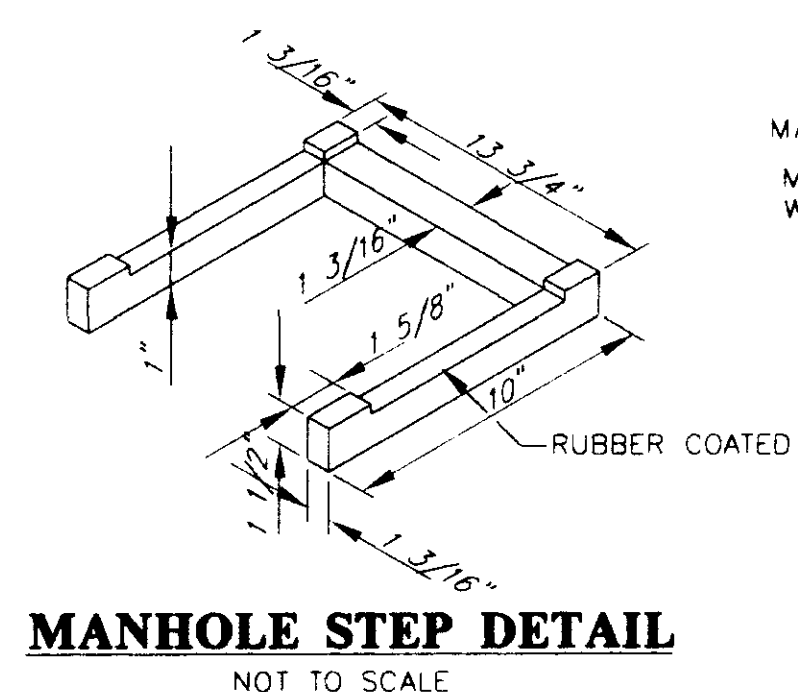
* SEE SECTIONAL PLAN, STANDARD MANHOLE
** PRECAST MANHOLE



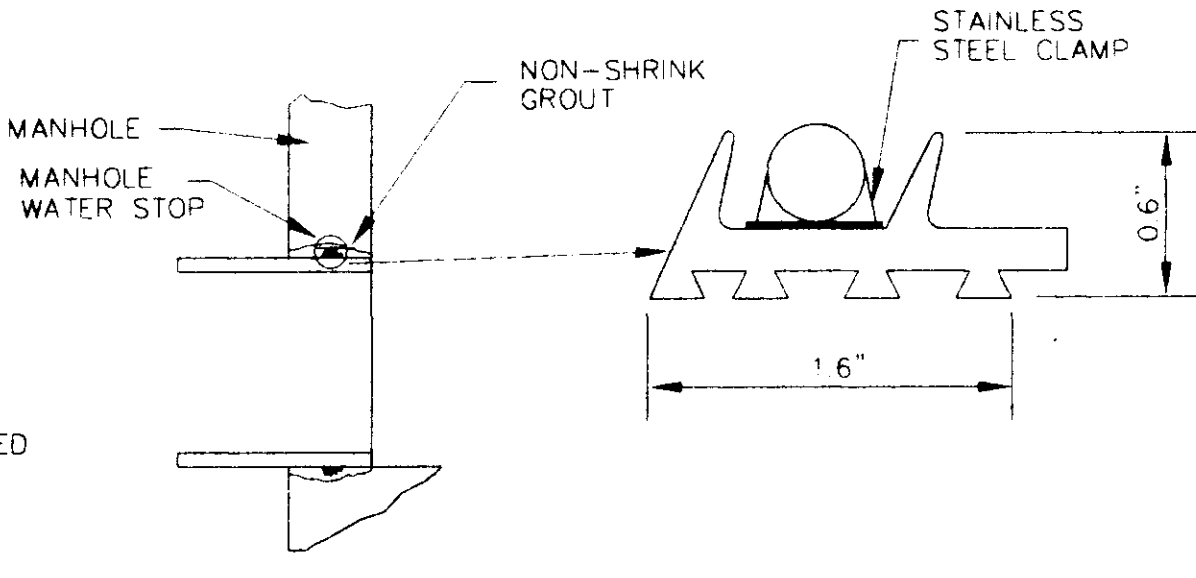
TYPICAL TRENCH DETAILS
NOT TO SCALE



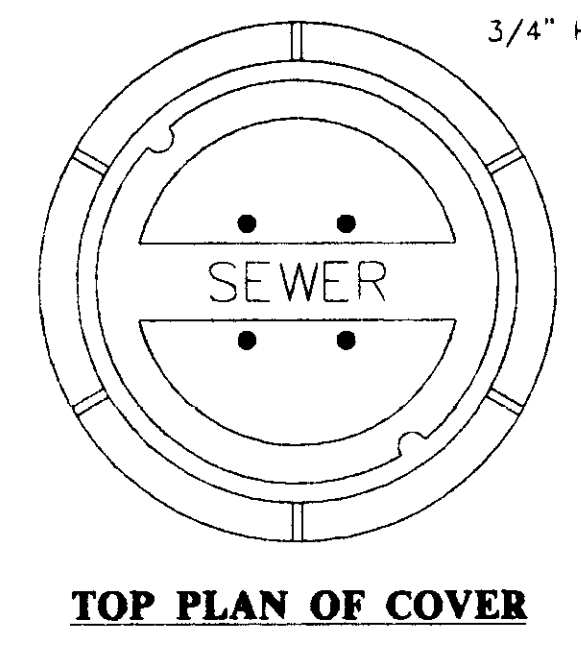
**TYPICAL PRECAST CONCRETE
MANHOLE JOINT DETAIL**
N.T.S.



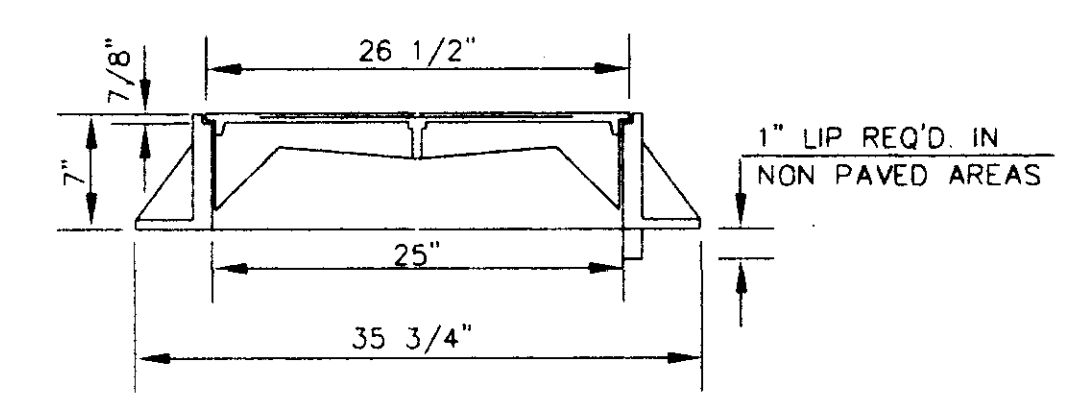
MANHOLE STEP DETAIL
NOT TO SCALE



**TYPICAL MANHOLE WATER STOP
FOR ABS, CLAY OR PVC PIPE**
EXISTING AND "STRADDLE" MANHOLES
N.T.S.

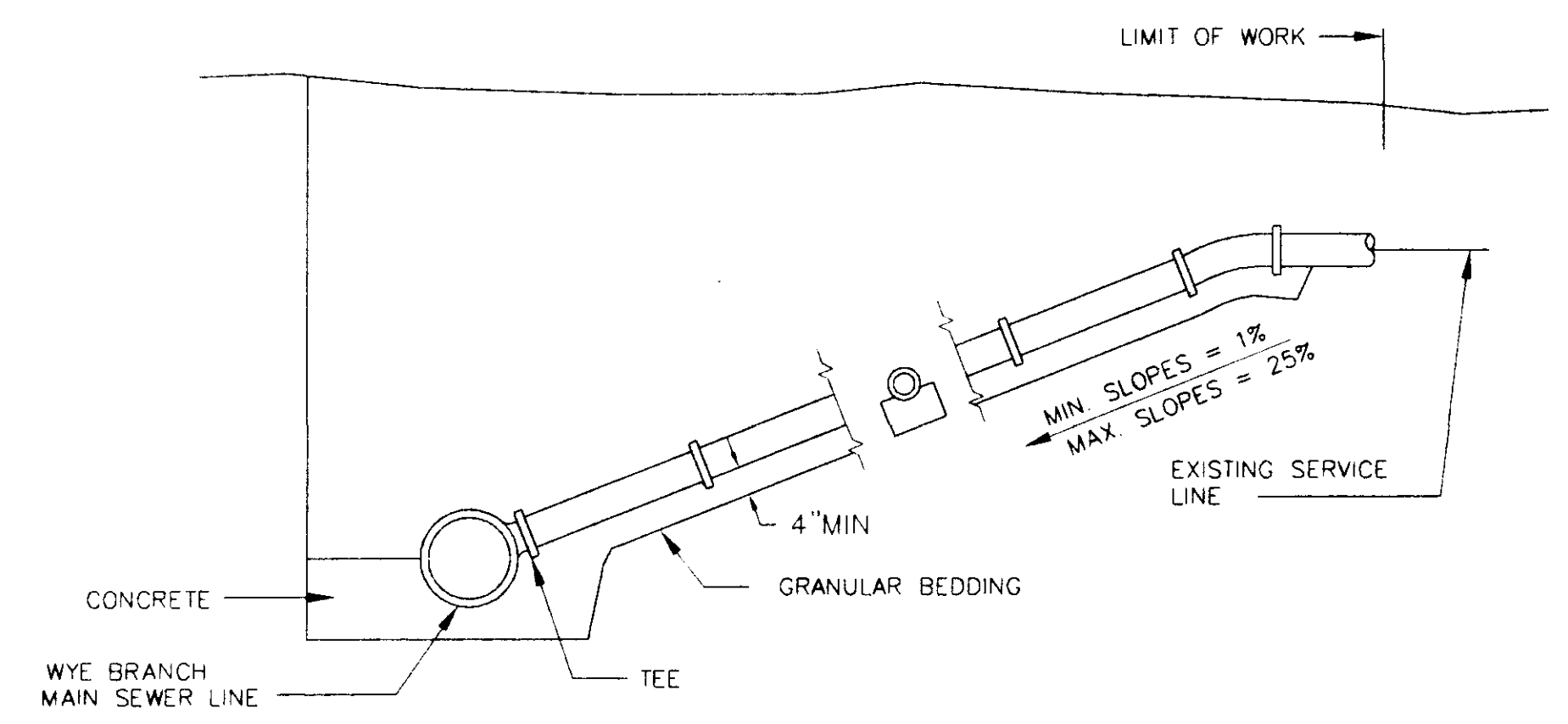


TOP PLAN OF COVER

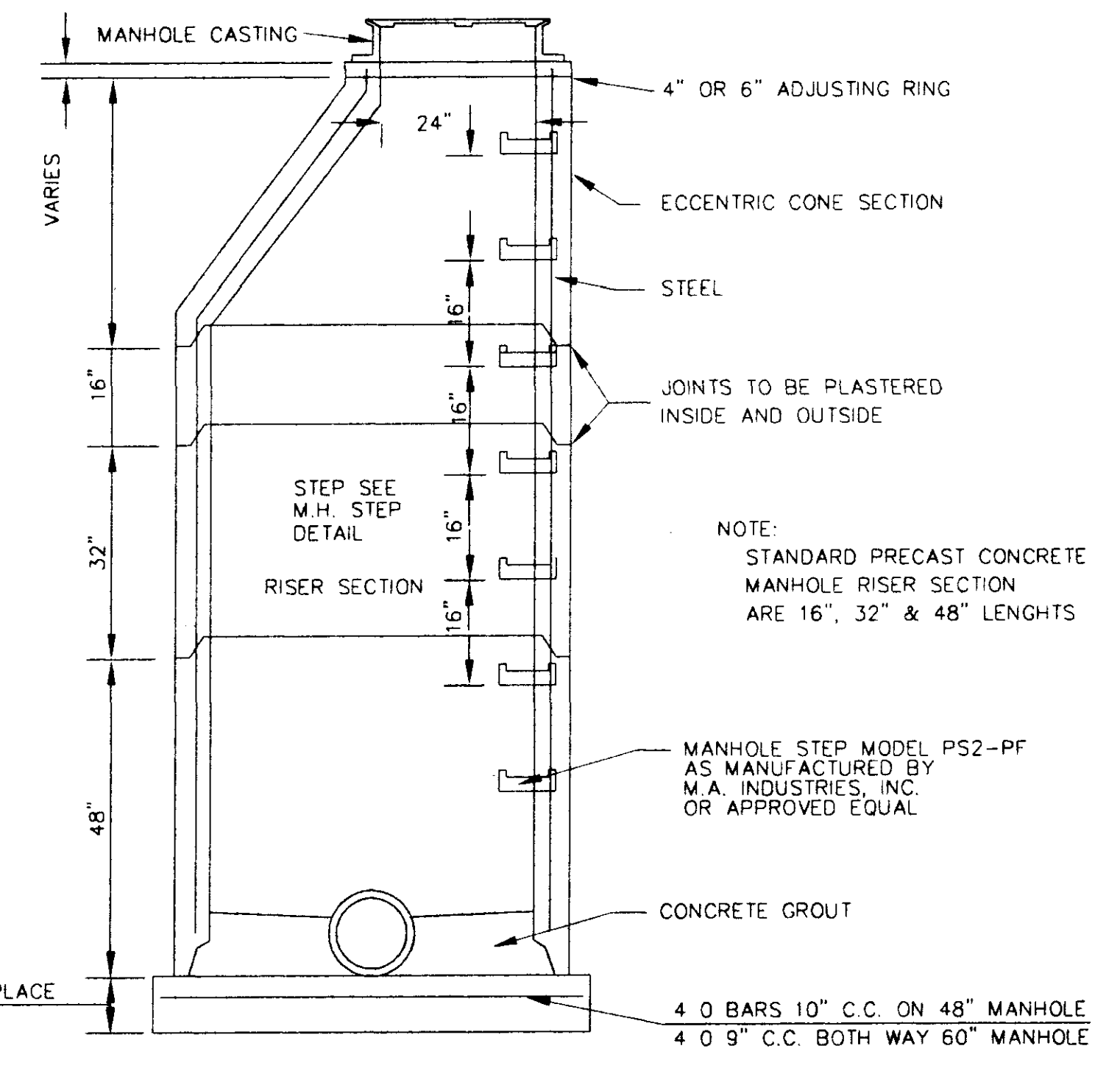


SECTION

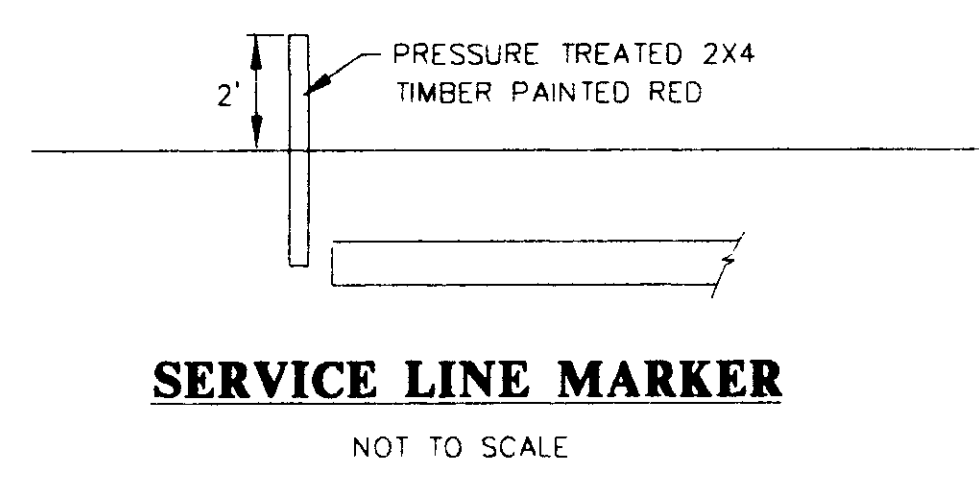
FRAME & COVER WEIGHT 420 LBS.
STANDARD MANHOLE FRAME AND COVER
N.T.S.



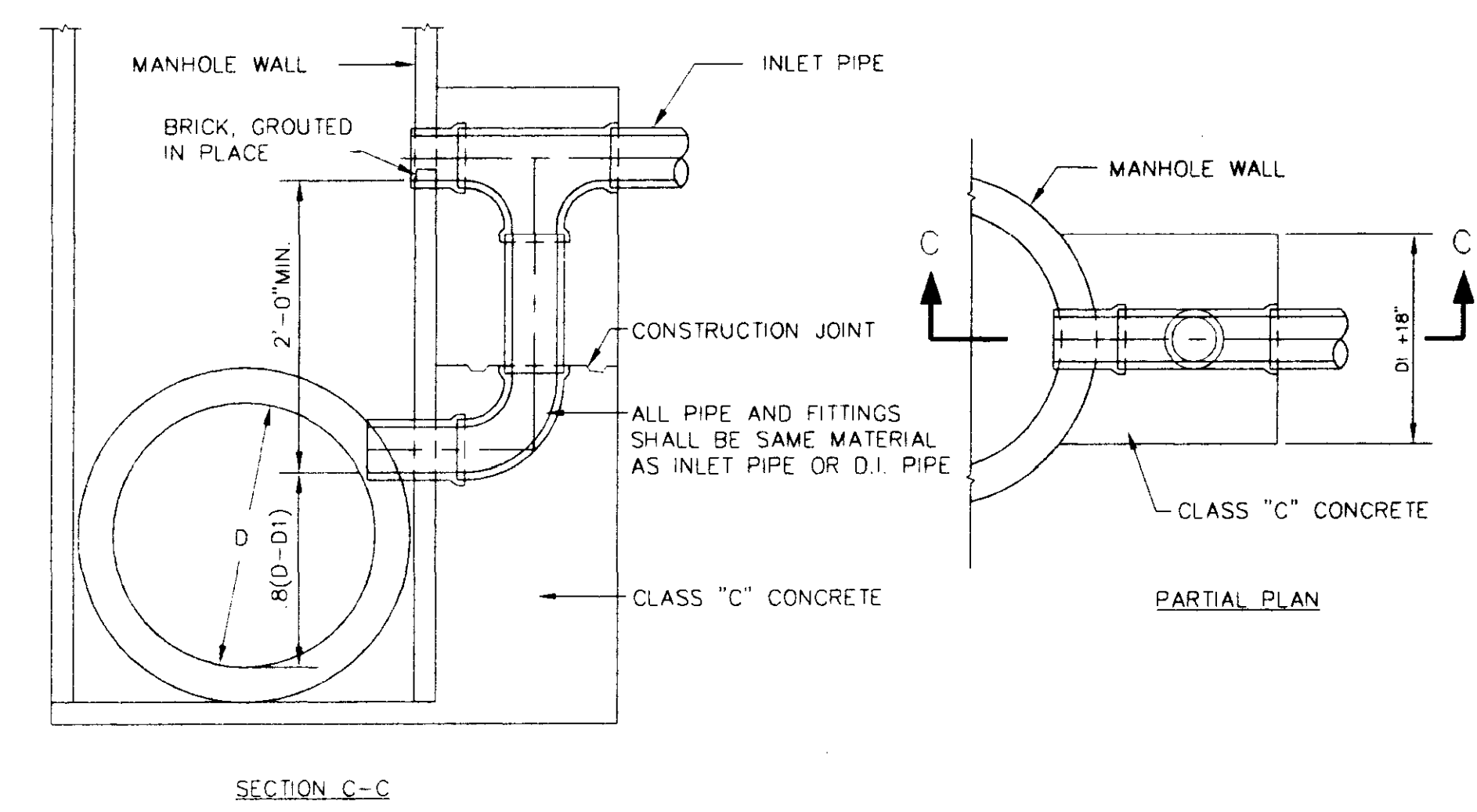
TYPICAL SERVICE LINE CONNECTION
NOT TO SCALE



SECTION OF PRECAST CONCRETE MANHOLE
N.T.S.



SERVICE LINE MARKER
NOT TO SCALE



TYPICAL VERTICAL DROP INLET AT MANHOLE
N.T.S.

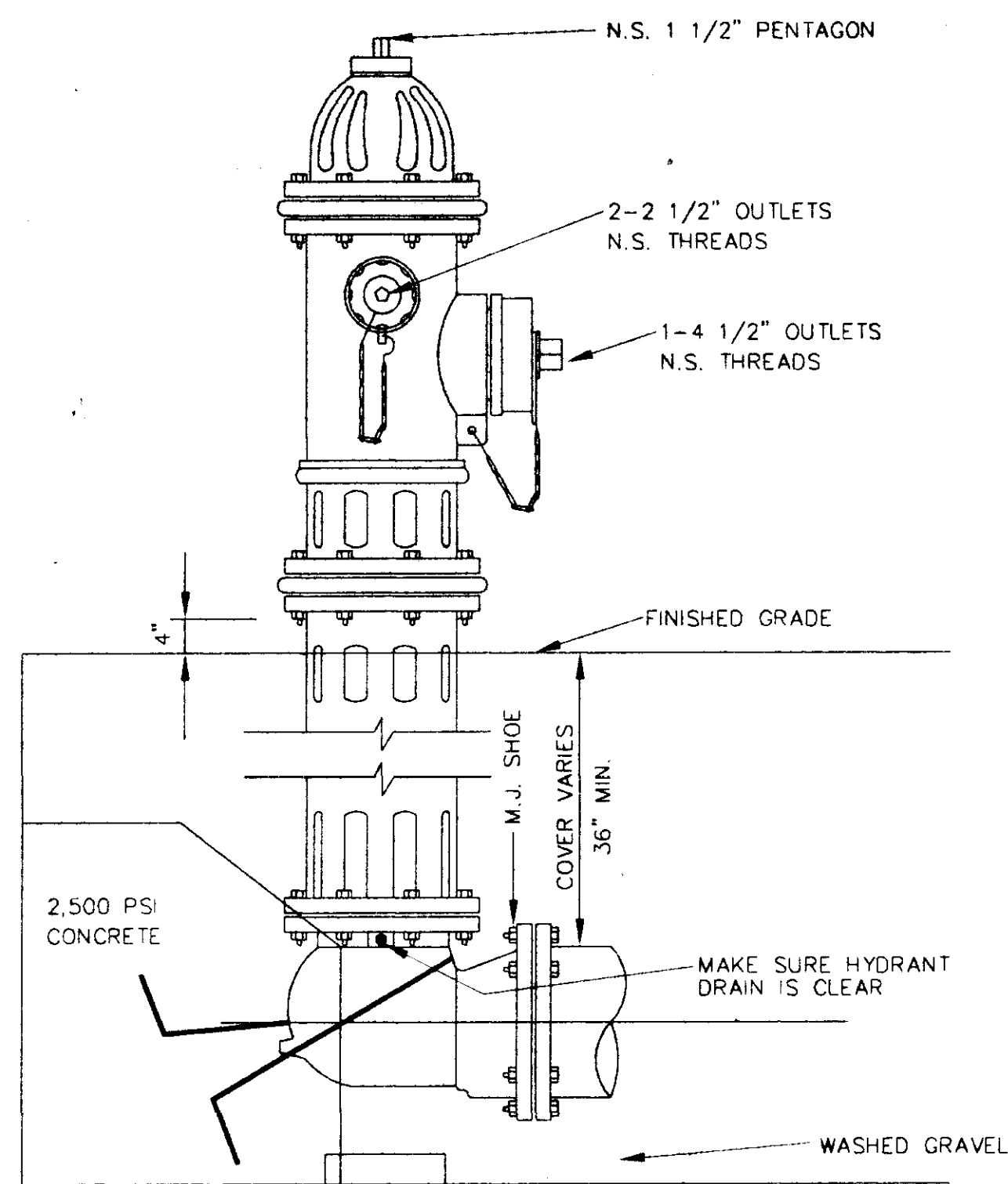
**CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP**

**STANDARD
SANITARY SEWER DETAILS**

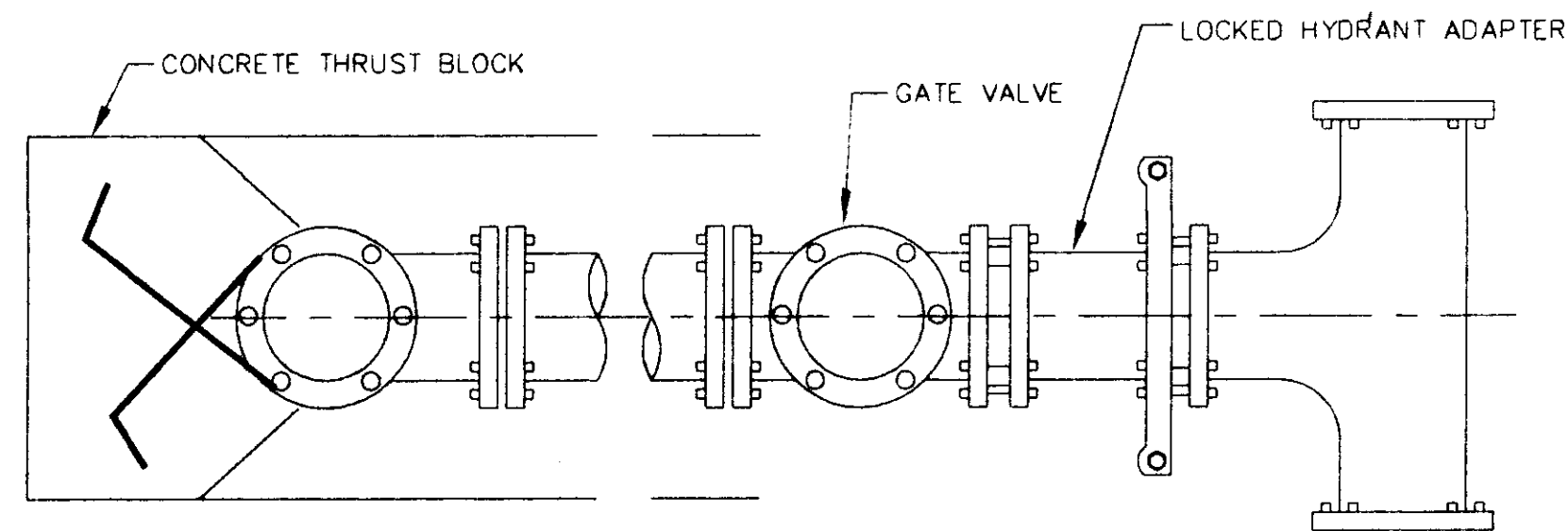
**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**



DESIGN: RCV	DATE: 09/11/02		DRAWING NO.
DRAWN: RDB	DATE: 10/23/02		9 OF 13
CHECK: RCV	DATE: 10/23/02		
SCALE: AS SHOWN			



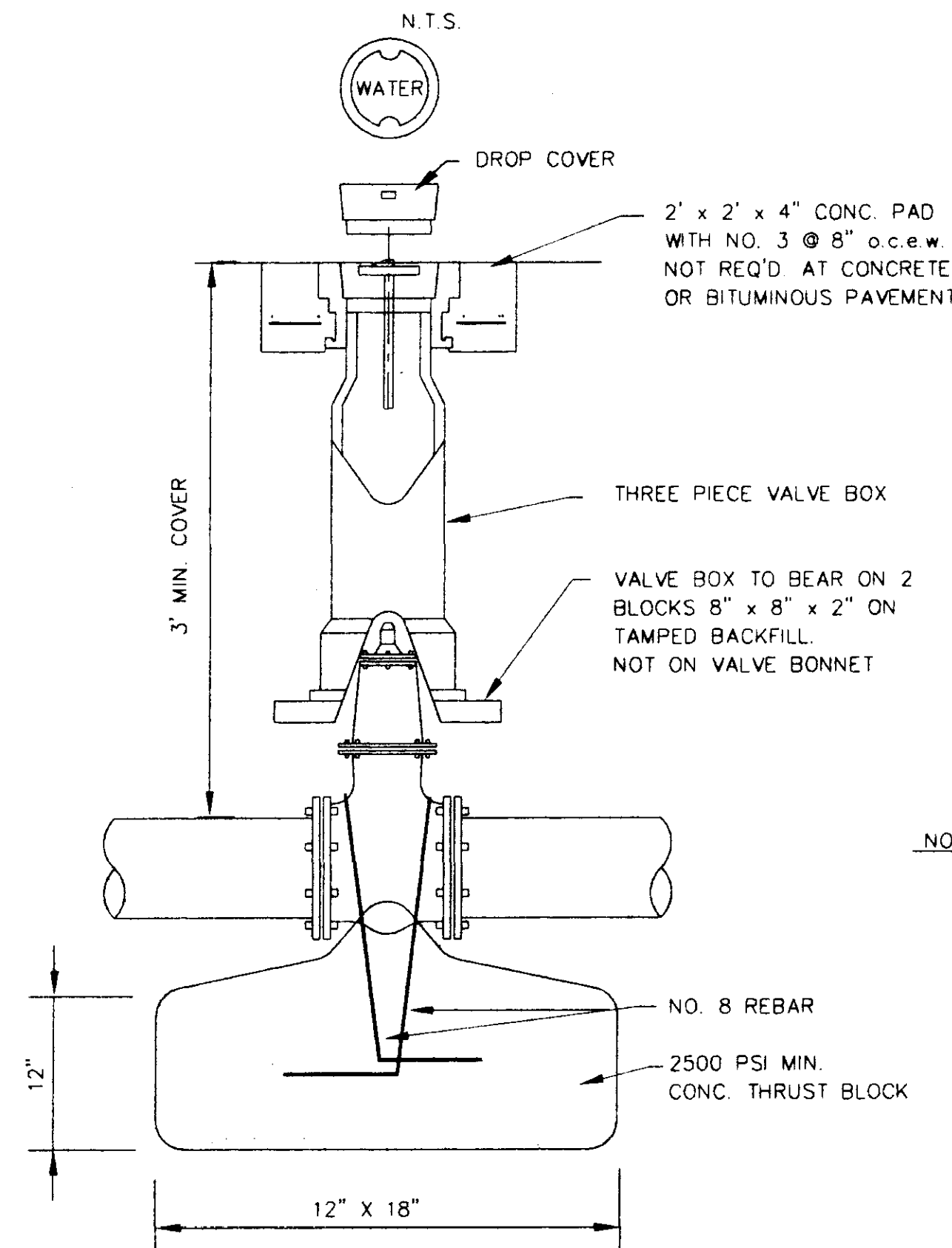
ELEVATION



PLAN

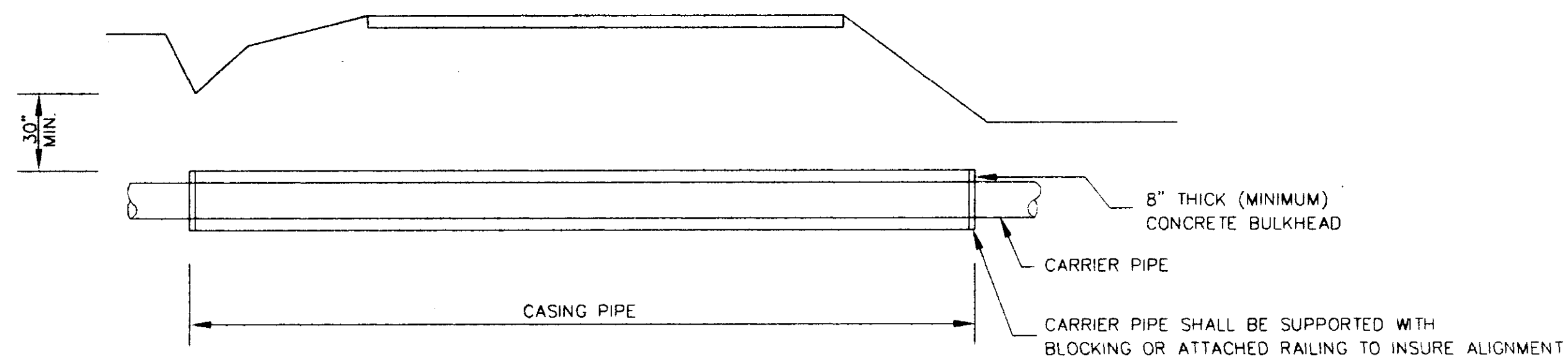
TYPICAL FIRE HYDRANT INSTALLATION

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



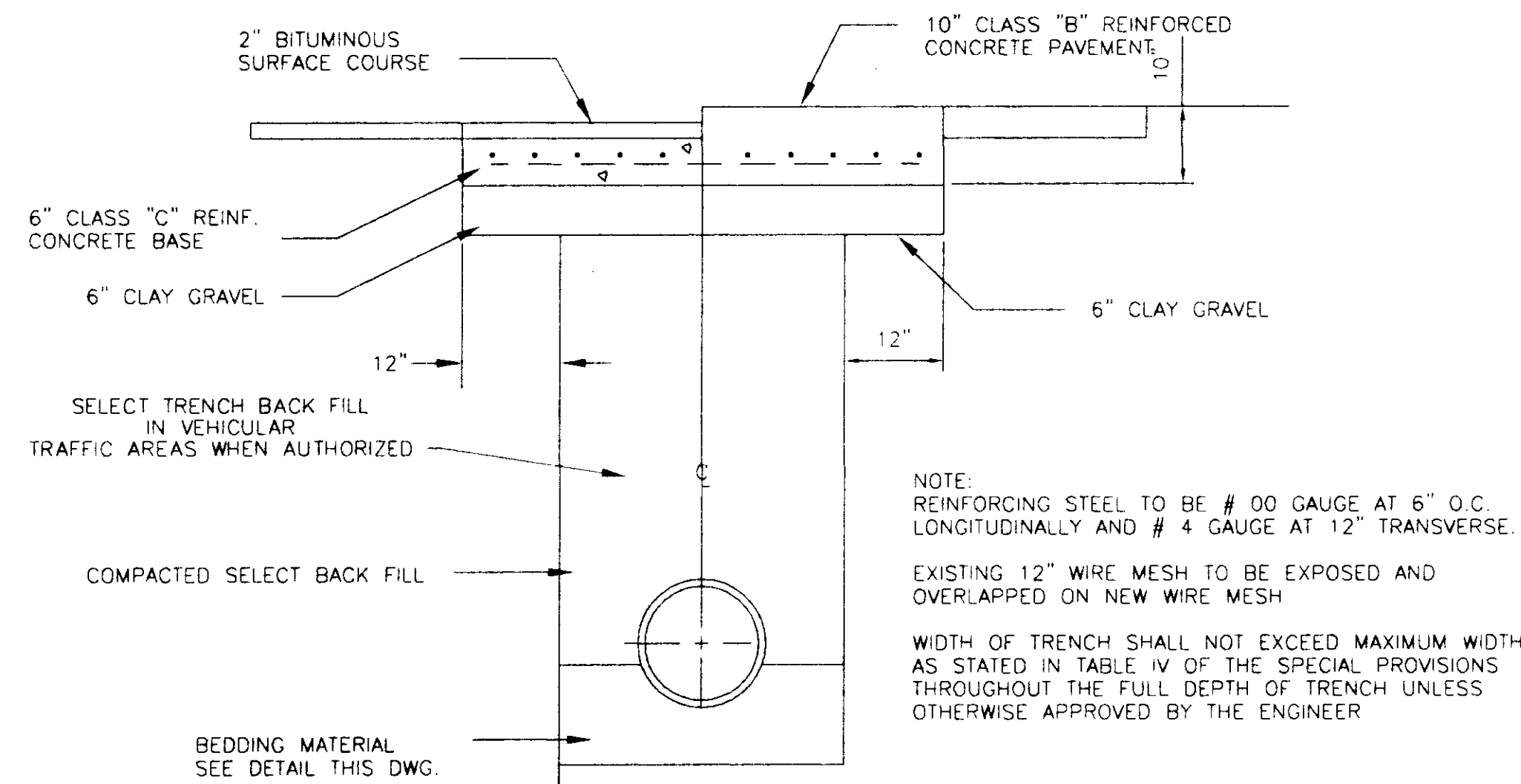
GATE VALVE DETAIL

NOT TO SCALE



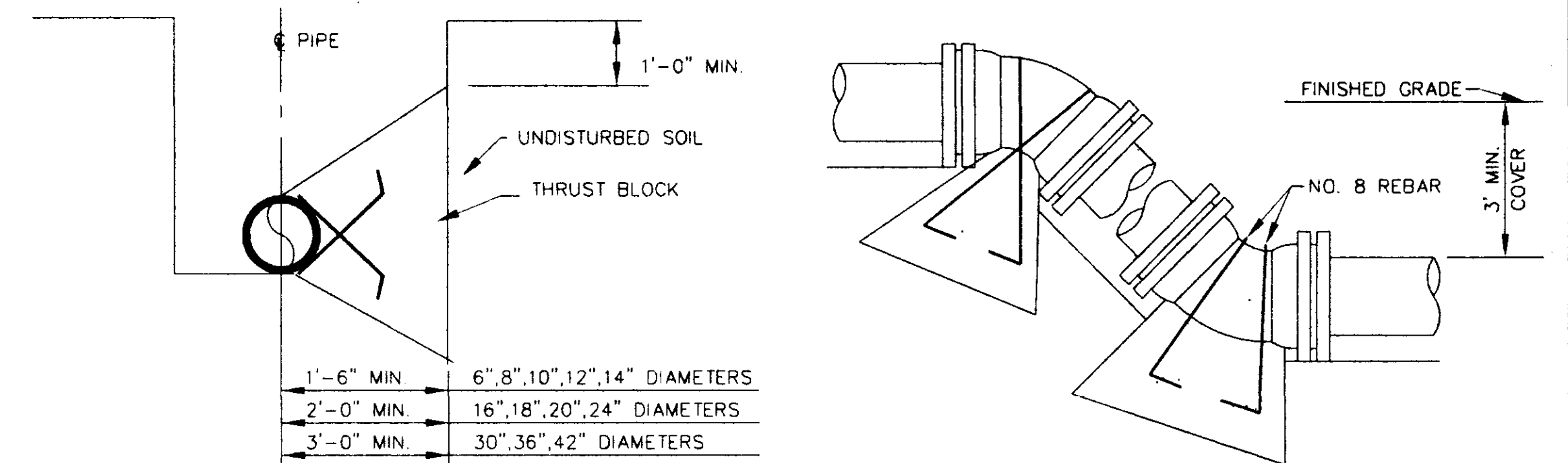
TYPICAL BORE SECTION

NOT TO SCALE



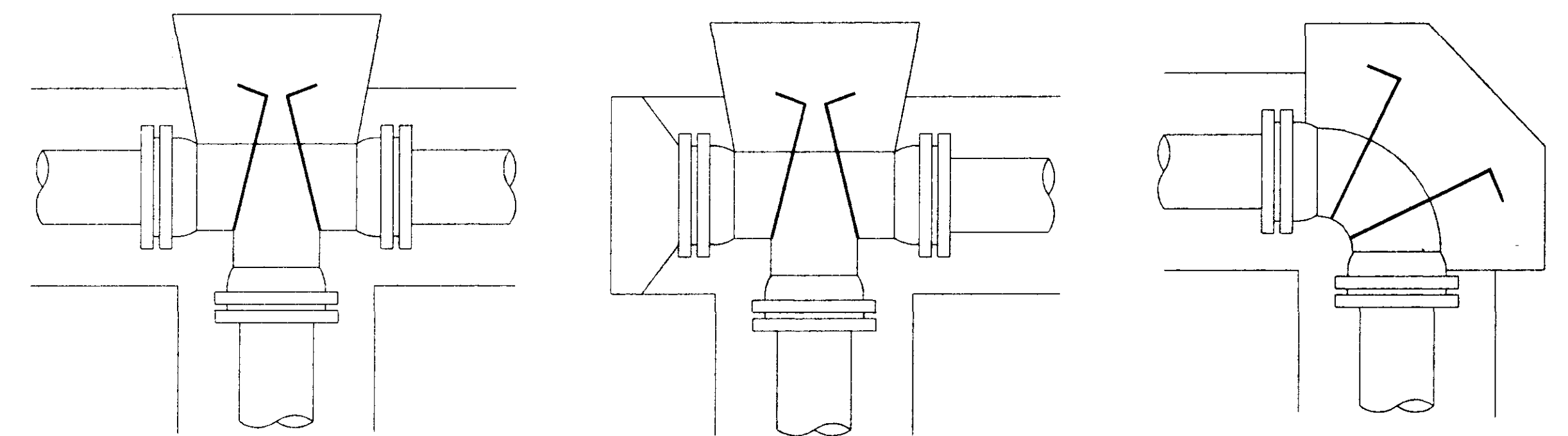
TYPICAL ROADWAY SECTION

NOT TO SCALE



TYPICAL CROSS SECTION

VERTICAL BENDS



TYPICAL THRUST BLOCKING IN WATER MAINS AND SEWAGE FORCE MAINS

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

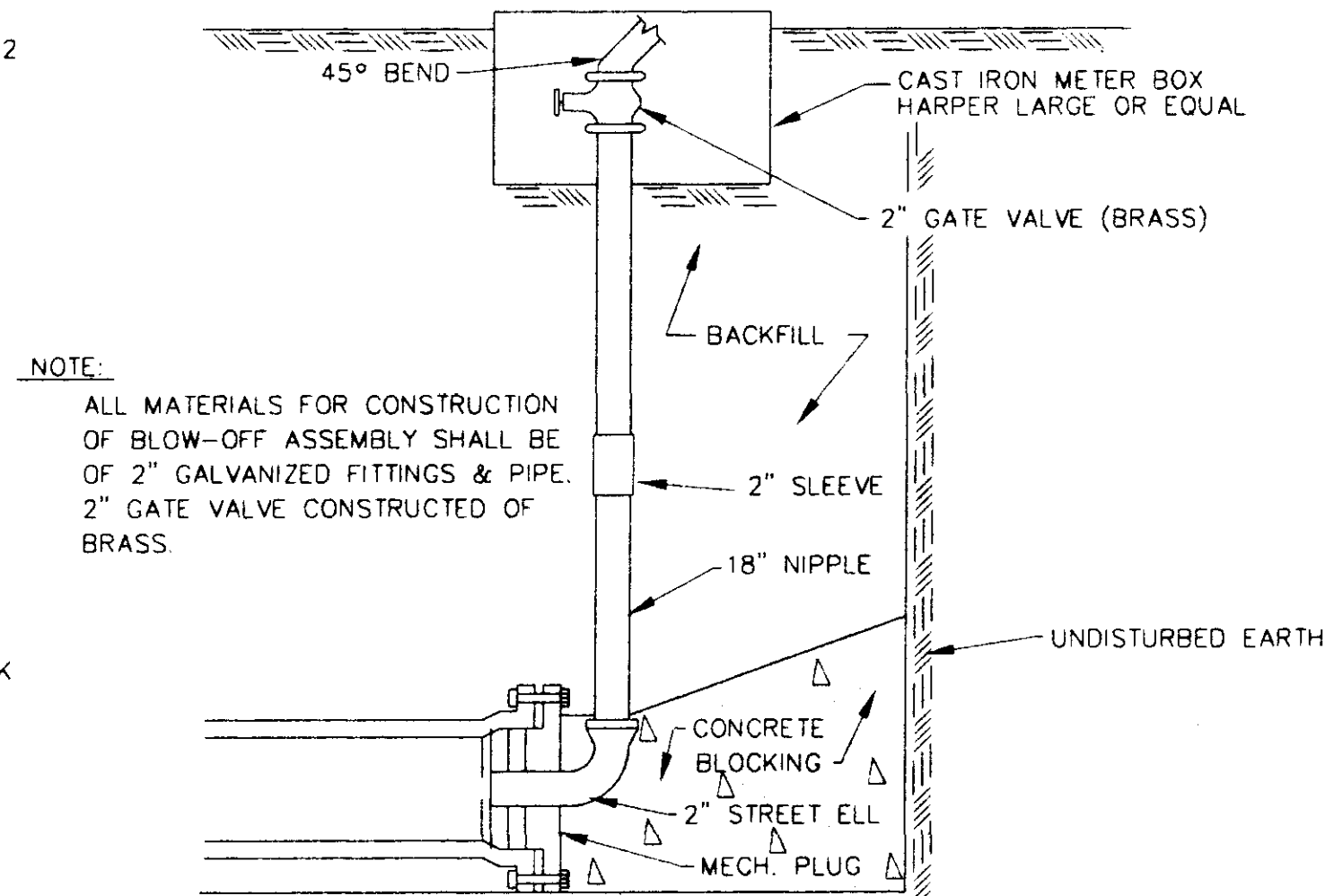
BEARING AREA IN SQ. FT.

NOMINAL PIPE DIAMETER (IN)	DEAD-END OR TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	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	6	—	—	26.0(1.0)	14.0(5)	7.0(3)
8	4.0	6.0	3.0	2.0	2.0	8	—	—	45.0(1.7)	25.0(9)	13.0(5)
10	6.0	9.0	5.0	2.5	2.0	10	—	—	68.0(2.5)	37.0(1.4)	19.0(7)
12	9.0	11.0	6.0	3.5	2.0	12	—	—	97.0(3.6)	52.0(1.9)	27.0(1.0)
14	12.0	18.0	9.0	5.0	2.5	14	—	—	130(4.8)	70.0(2.6)	36.0(1.3)
16	16.0	22.5	12.0	6.0	3.0	16	—	—	168(6.2)	91.0(3.4)	46.0(1.7)
18	20.0	28.0	15.0	8.0	4.0	18	—	—	211(7.8)	114(4.2)	58.0(2.2)
20	24.5	34.0	19.0	10.0	5.0	20	—	—	259(9.6)	140(5.2)	72.0(2.6)
24	35.0	49.0	27.0	14.0	7.0	24	—	—	370(13.7)	200(7.4)	102(3.8)
30	54.0	76.0	41.0	21.0	10.0	30	—	—	568(21.1)	308(11.4)	156(5.8)
36	77.0	108.0	59.0	30.0	15.0	36	—	—	814(30.1)	440(16.3)	225(8.3)
42	104.0	146.0	79.0	40.0	20.0	42	—	—	1100(40.7)	595(22.0)	303(11.2)

VERTICAL BENDS

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.

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.



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.

PIPE SIZE (IN)	TRENCH WIDTH (FT)	TRENCH VOLUME PER FOOT OF DEPTH (CV/LF)	BEDDING QUANTITIES (CY/LF)			BACKFILL QUANTITIES (TO ONE FOOT ABOVE TOP OF PIPE) (CY/LF)		
			CLASS C	CLASS B	CLASS A	CLASS C	CLASS B	CLASS A
4	2.50	0.074	0.054	0.053	0.048	0.13	0.12	0.12
6	2.50	0.074	0.056	0.057	0.051	0.13	0.12	0.13
8	2.50	0.093	0.058	0.062	0.054	0.14	0.12	0.14
10	3.00	0.111	0.072	0.081	0.069	0.18	0.16	0.18
12	3.50	0.130	0.085	0.10	0.087	0.22	0.19	0.22
15	3.75	0.139	0.098	0.12	0.10	0.25	0.21	0.25
18	4.00	0.148	0.11	0.14	0.12	0.28	0.24	0.27
21	4.25	0.157	0.11	0.17	0.16	0.31	0.26	0.30
24	4.50	0.167	0.13	0.17	0.17	0.34	0.28	0.33
27	4.75	0.176	0.14	0.19	0.20	0.37	0.31	0.36
30	5.00	0.185	0.16	0.21	0.23	0.40	0.33	0.39
33	5.50	0.204	0.18	0.25	0.28	0.46	0.38	0.45
36	5.75	0.213	0.19	0.28	0.31	0.49	0.41	0.48
42	6.25	0.231	0.22	0.33	0.39	0.55	0.46	0.54
48	7.00	0.259	0.26	0.42	0.49	0.66	0.55	0.64
54	7.50	0.278	0.29	0.48	0.58	0.72	0.60	0.71
60	8.00	0.296	0.33	0.55	0.68	0.78	0.66	0.77
66	8.75	0.324	0.37	0.66	0.82	0.90	0.76	0.89
72	9.25	0.343	0.41	0.74	0.90	0.96	0.82	0.96
78	9.75	0.361	0.45	0.82	1.05	1.03	0.89	1.03
84	10.50	0.389	0.50	0.95	1.22	0.16	1.00	1.16

SCHEDULE OF BEDDING AND BACKFILL QUANTITIES

CHARMANT A DEVELOPMENT OF LAKE HARBOUR ROAD, LP

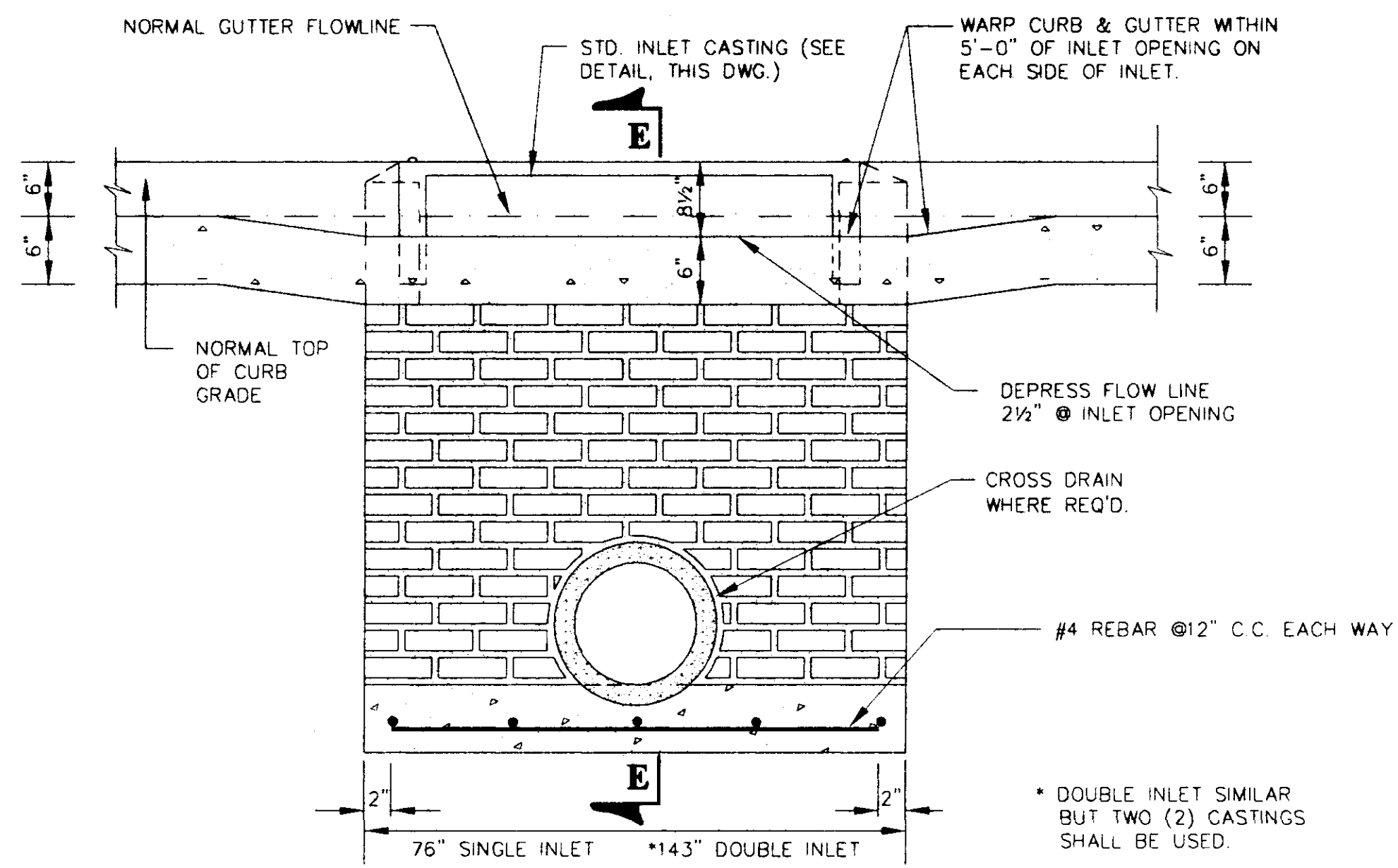
STANDARD WATER DETAILS

CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI

DESIGN: RCV DATE: 01/14/01
DRAWN: RDB DATE: 10/19/01
CHECK: RCV DATE: 10/19/01
SCALE: AS SHOWN

STERLING CONSULTANTS ENGINEERS

DRAWING NO. 10 OF 13

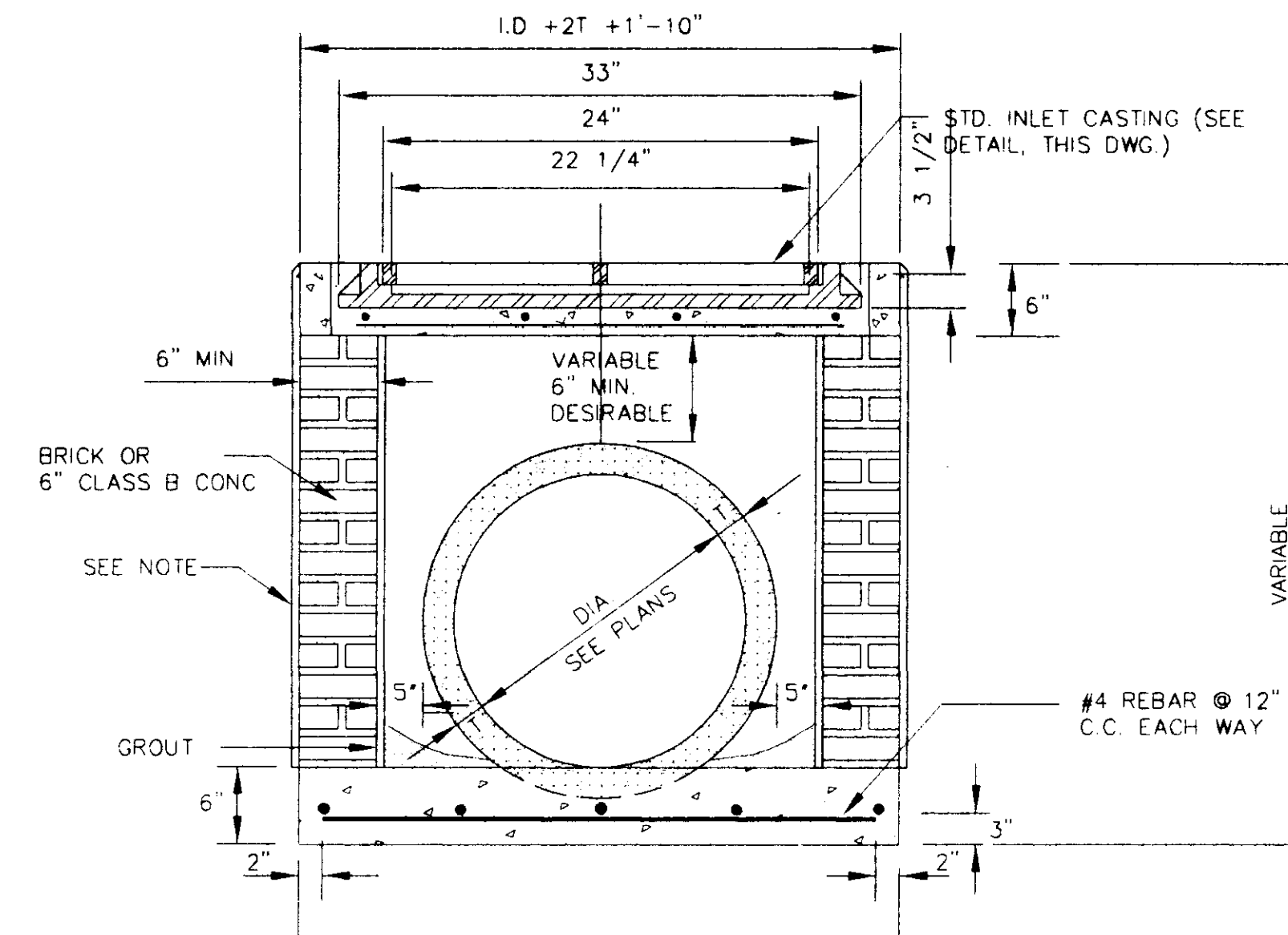


**FRONT ELEVATION
INLET TYPES "A" AND "A" MODIFIED**

GENERAL NOTES

1. ALL BRICK WALLS SHALL BE PLASTERED INSIDE AND OUTSIDE WITH CEMENT MORTAR 1/2" THICK. CLASS "B" STRUCTURAL CONCRETE MAY BE USED TO CONSTRUCT INLETS IN LIEU OF BRICK MASONRY. IF CONCRETE IS USED, WALLS SHALL BE REINFORCED WITH #4 REBAR @ 16" C.C. EACH WAY.
2. CONCRETE SLAB AND COVER SHALL BE CLASS "B" STRUCTURAL CONCRETE.

* DOUBLE INLET SIMILAR BUT TWO (2) CASTINGS SHALL BE USED.

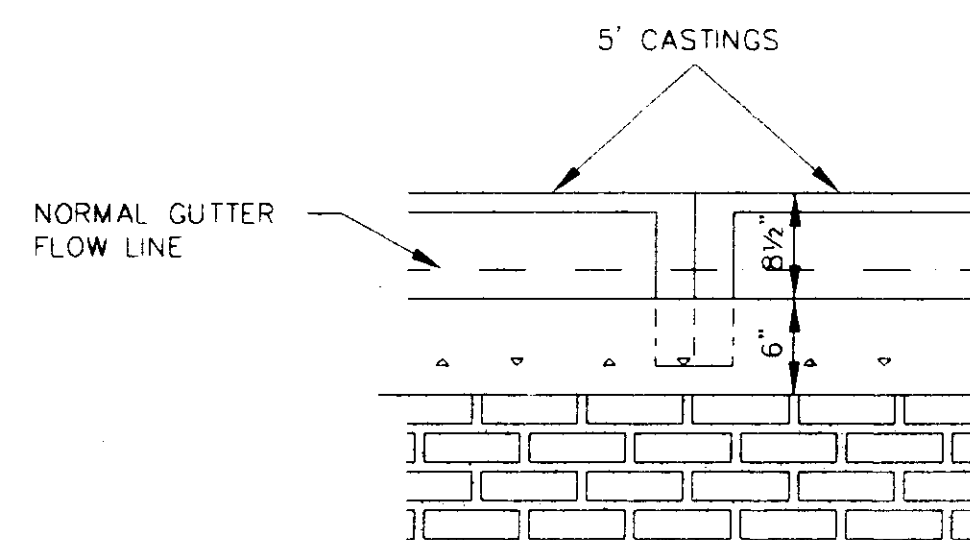


DROP INLET DETAIL

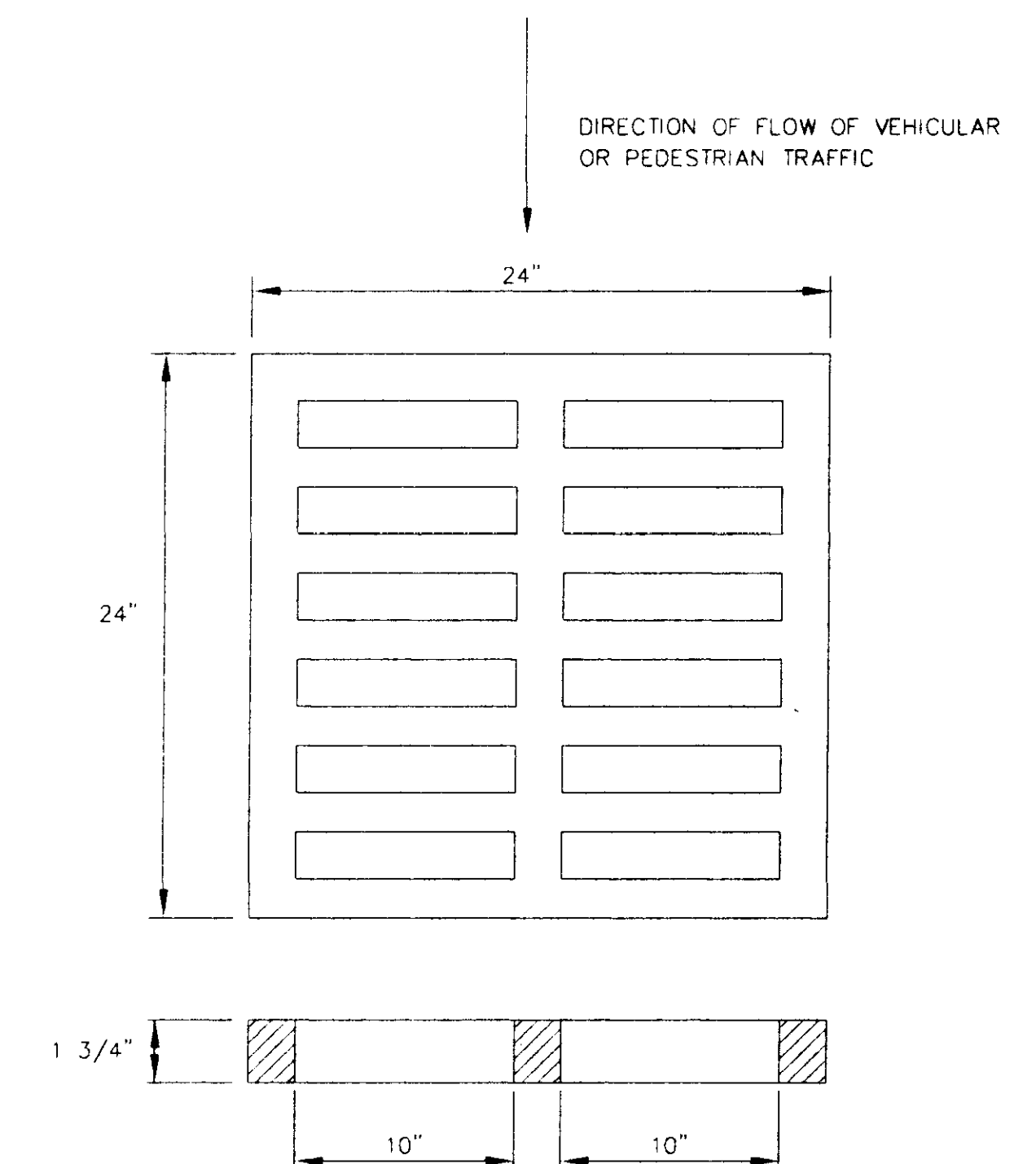
N.T.S.

NOTE

ALL BRICK WALLS SHALL BE PLASTERED INSIDE AND OUTSIDE WITH CEMENT MORTAR 1/2" THICK. CLASS "B" STRUCTURAL CONCRETE MAY BE USED TO CONSTRUCT INLETS IN LIEU OF BRICK MASONRY. IF CONCRETE IS USED, WALLS SHALL BE REINFORCED WITH #4 REBAR @ 16" O.C. EACH WAY.

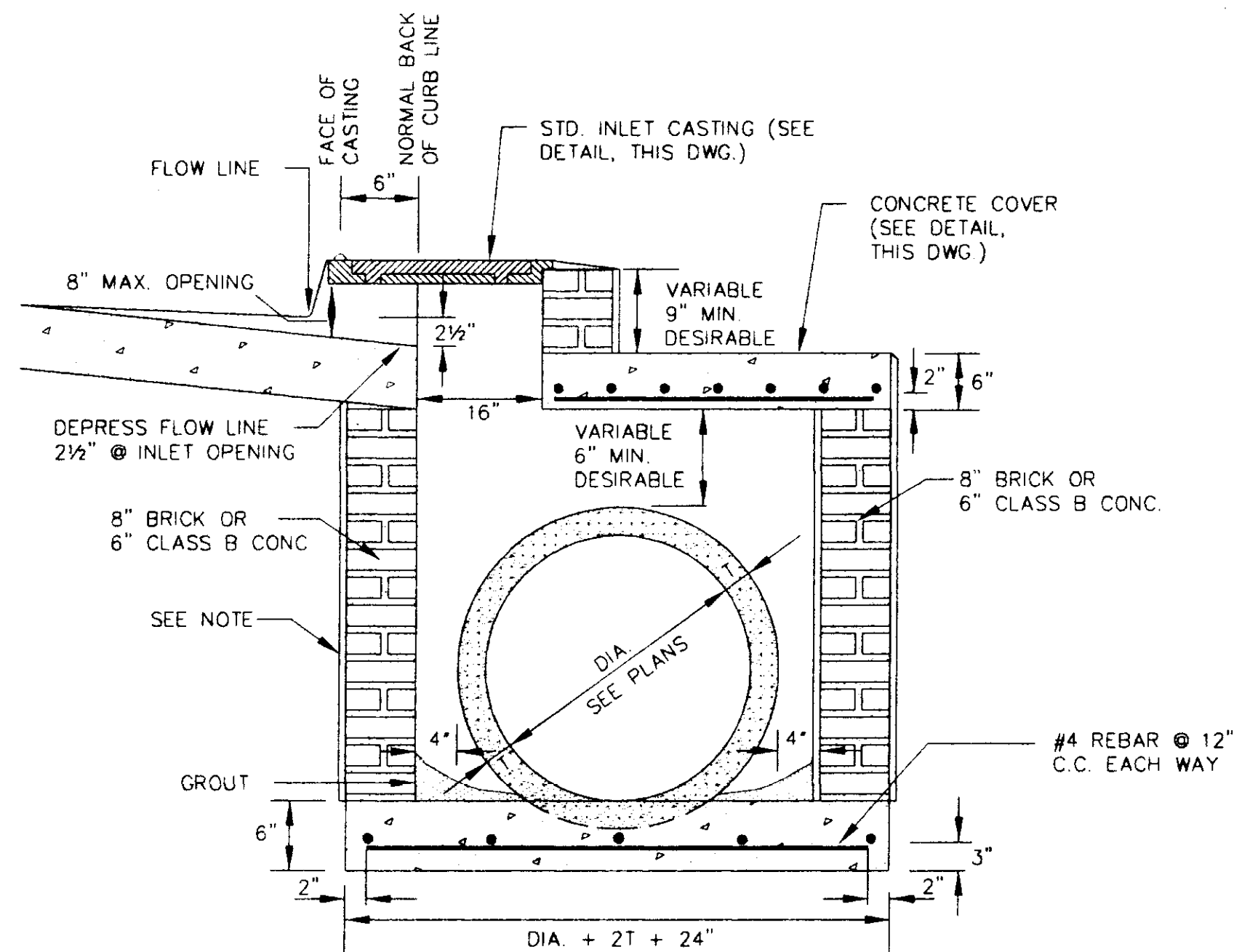


MIDSPAN ELEVATION - DOUBLE INLET

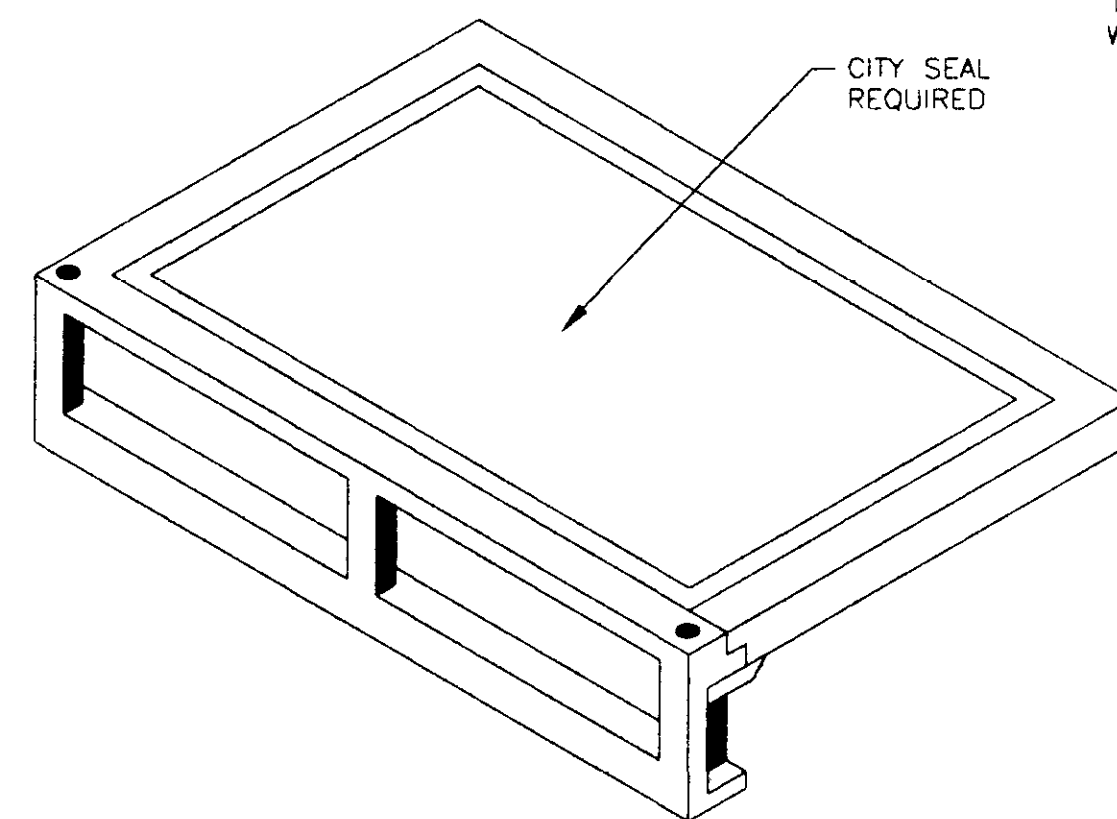


GRATE DETAIL

N.T.S.

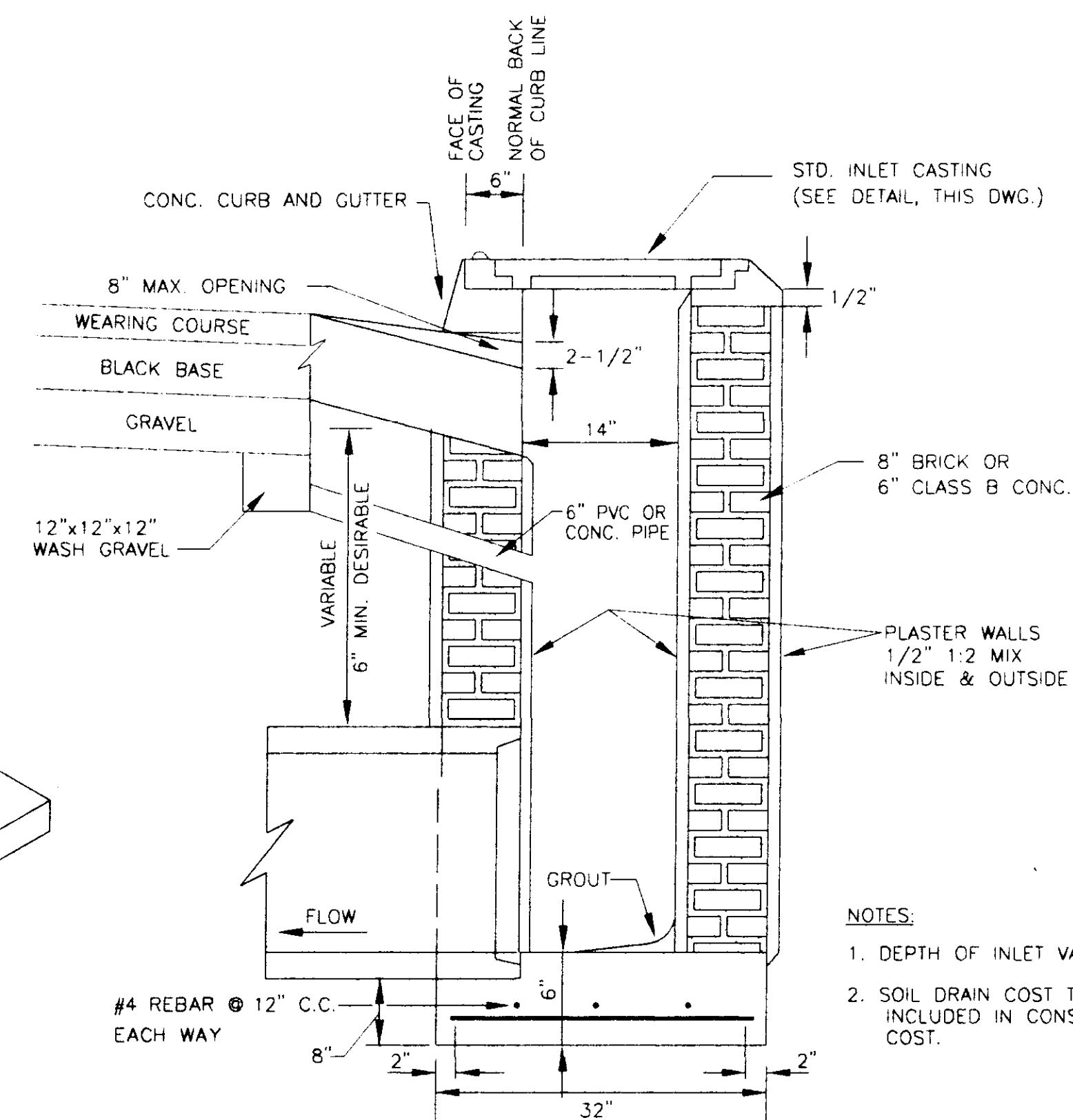


**SECTION E - E
TYPE "A" MODIFIED**



STANDARD CURB INLET CASTING

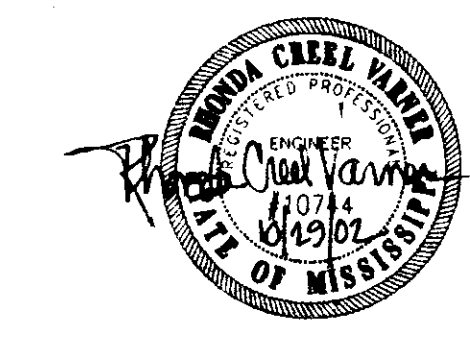
(VULCAN V-4302-1 OR HARPER RCB-7)
N.T.S.



SECTION OF STANDARD CURB INLET

NOTES:

1. DEPTH OF INLET VARIABLE.
2. SOIL DRAIN COST TO BE INCLUDED IN CONSTRUCTION COST.

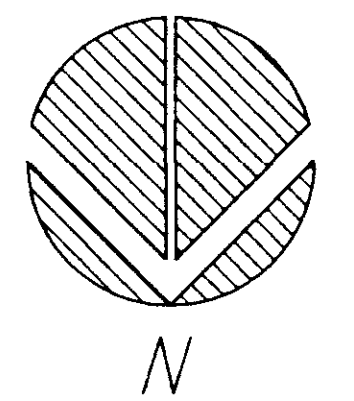
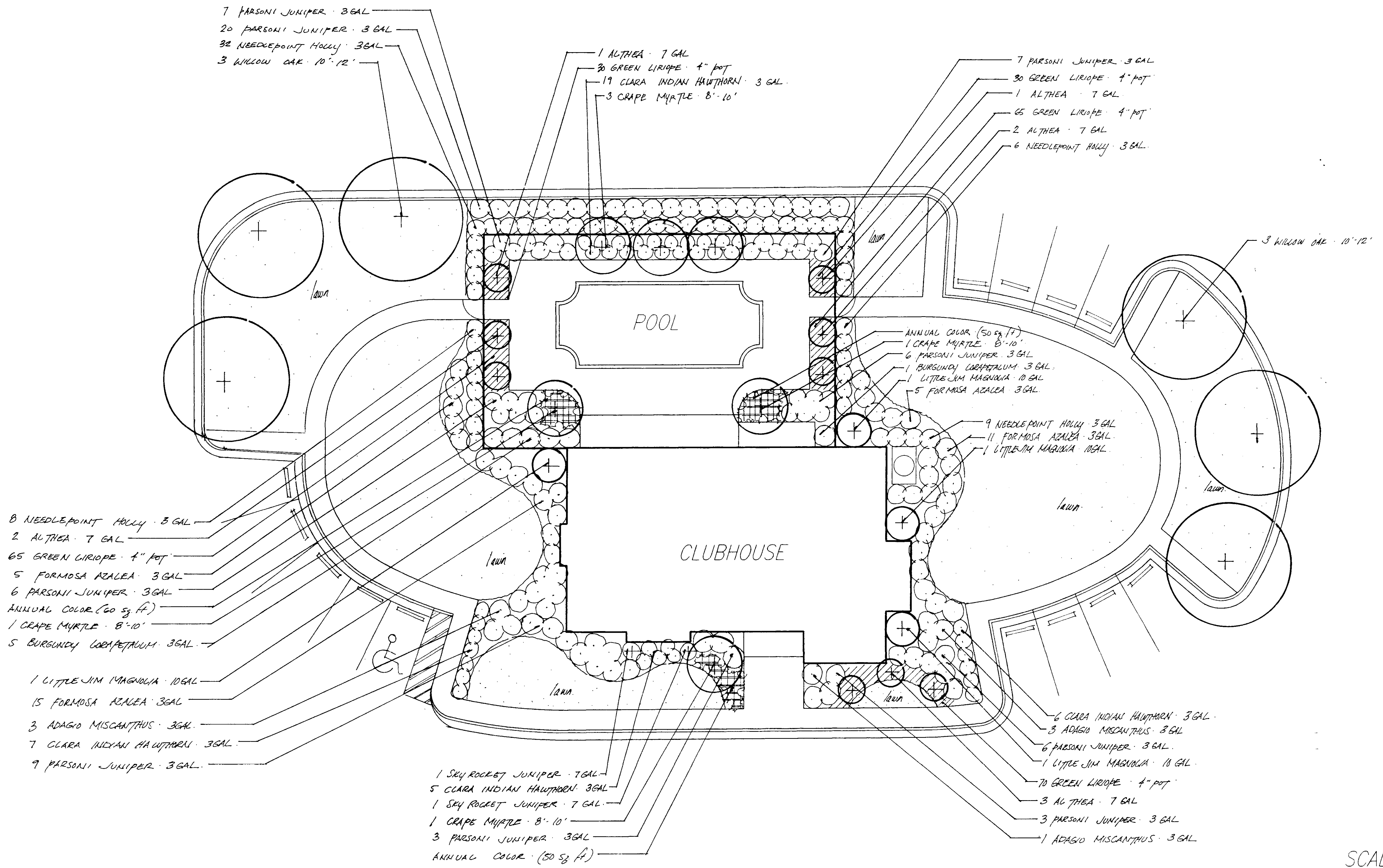


**CHARMANT
A DEVELOPMENT OF
LAKE HARBOUR ROAD, LP**

**STANDARD
STORM SEWER DETAILS**

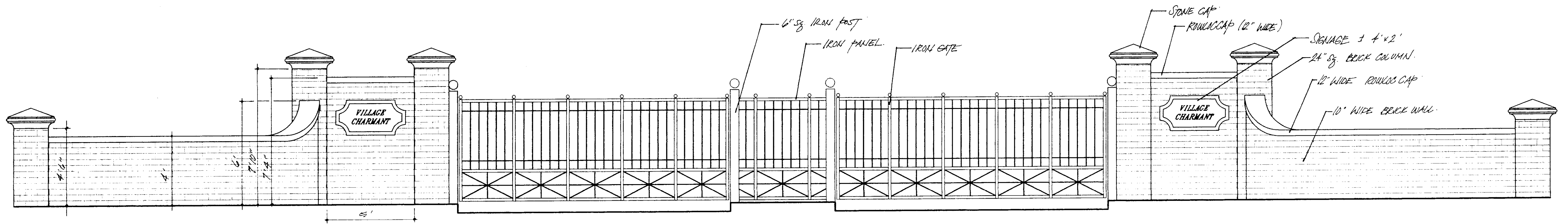
**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

DESIGN: RGV	DATE: 01/11/01		DRAWING NO.
DRAWN: RDB	DATE: 10/23/01		11 of 13
CHECKED: RGV	DATE: 10/23/01		
SCALE: AS SHOWN			



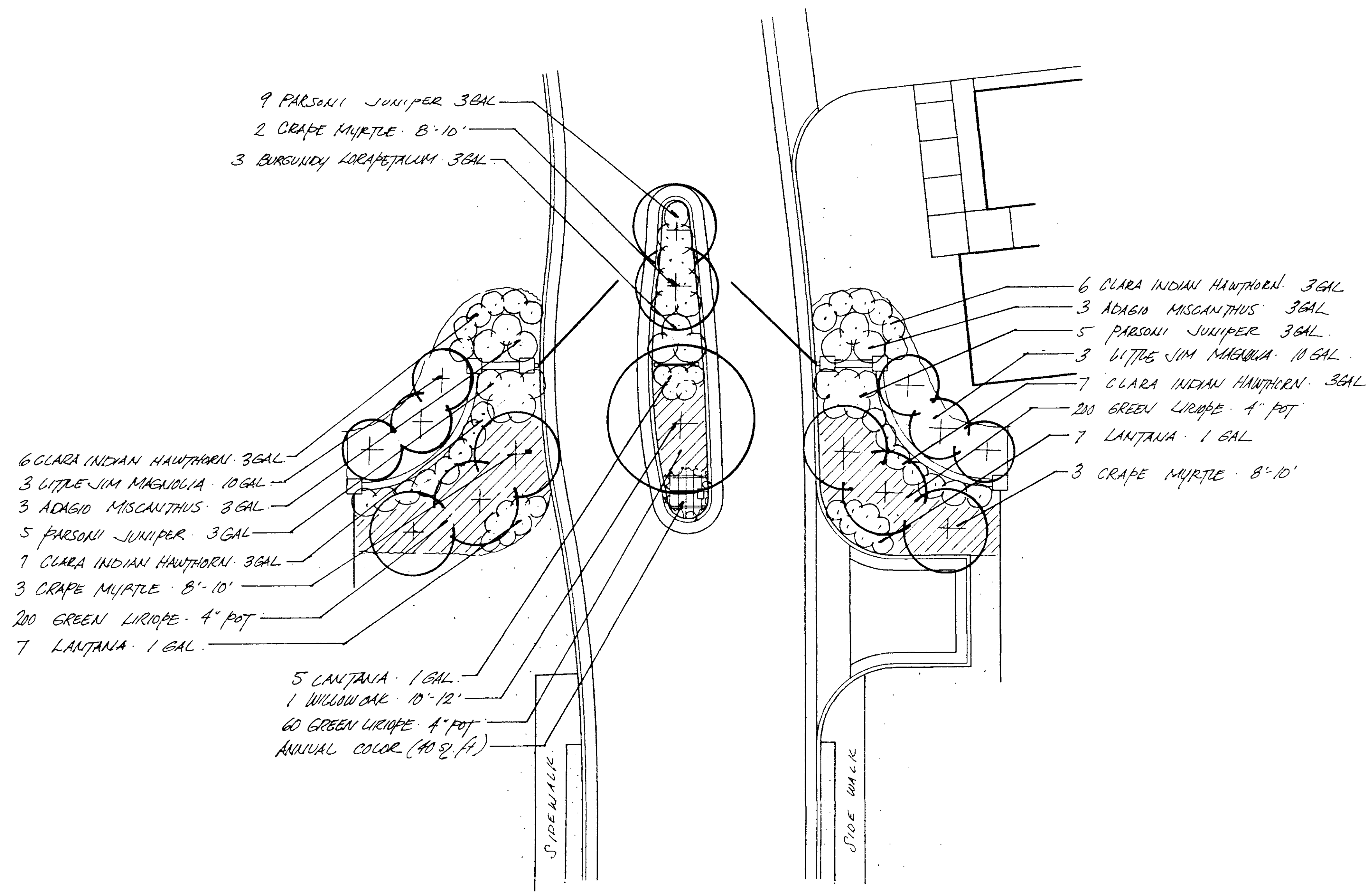
SCALE: 1" = 10'

CLUBHOUSE AND POOL PLAN	
VILLAGE CHARMANT	
Michael Gibson Landscape Architect P.O. Box 31 Madison, MS 39110 601 853 3323	L1 10/22/02



FRONT ELEVATION

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



PLAN VIEW

SCALE: 1" = 10'

ENTRANCE PLAN & ELEVATION	
VILLAGE CHARMANT	
Michael Gibson Landscape Architect P.O. Box 31 Madison, MS 39110 601 853 3323	L3 10/22/02