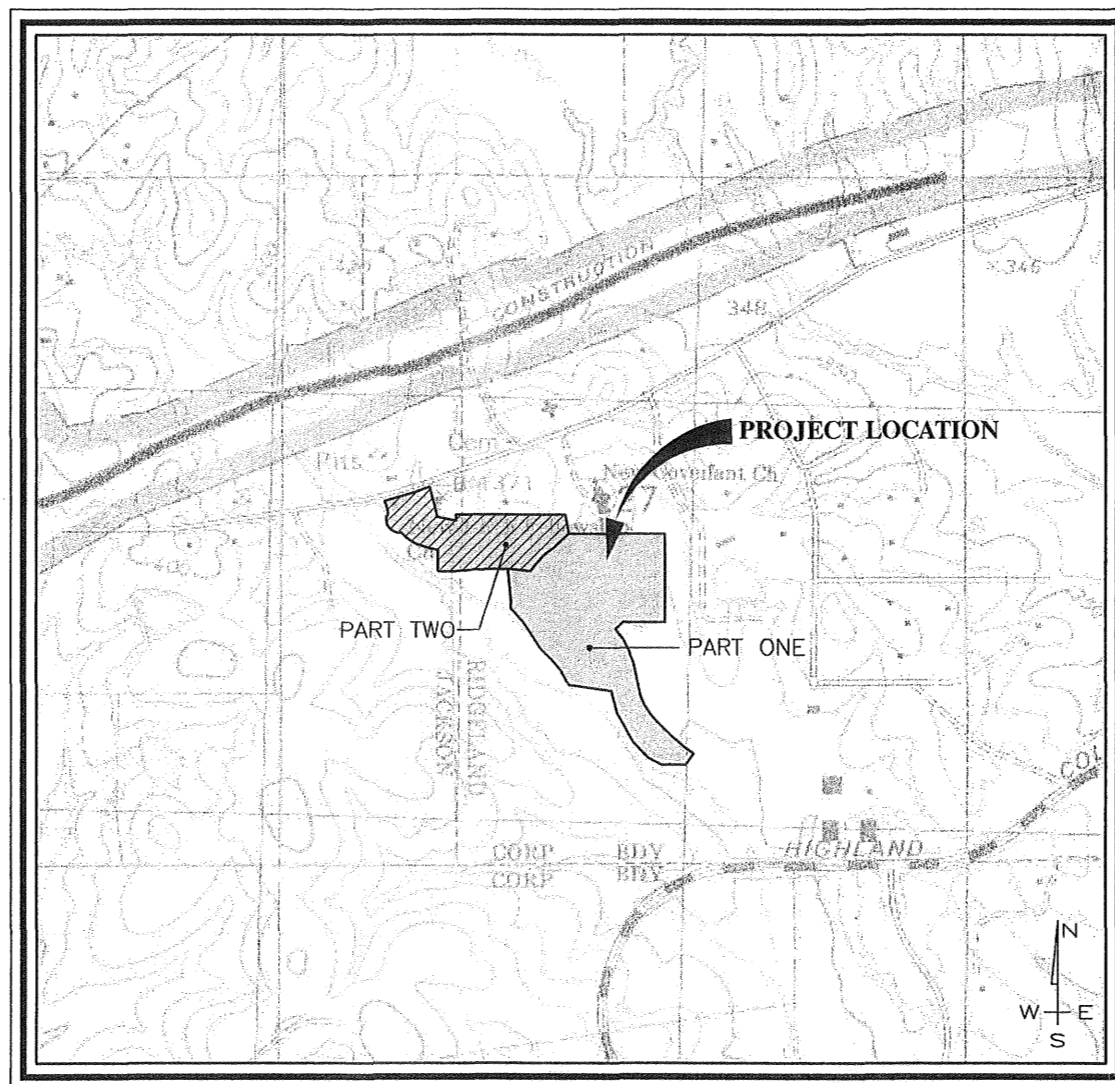
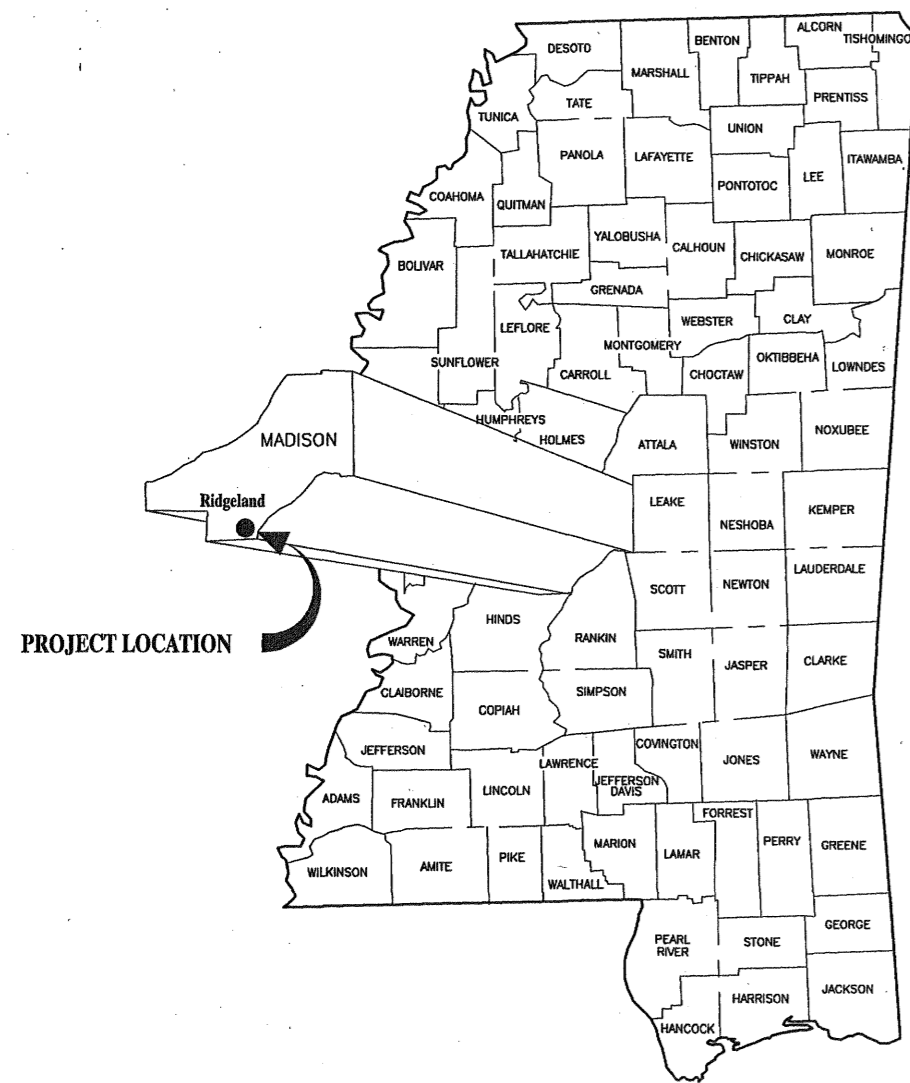
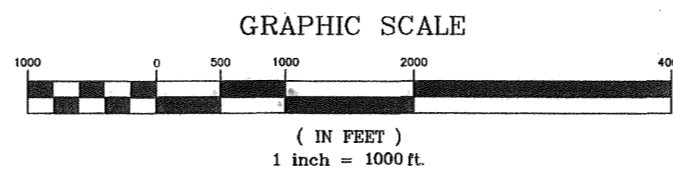


CONSTRUCTION PLANS FOR WRENFIELD PART ONE CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI



VICINITY MAP
SCALE: 1"=1000'



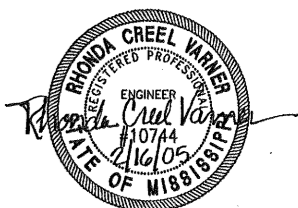
A DEVELOPMENT OF
GRACE PROP., LLC

RECORD DRAWING

BY: *R. Warner* DATE: 2/16/05

Prepared By:

STERLING
Consultants
INCORPORATED
CONSULTING ENGINEERS



PW-05044

GENERAL NOTES

1. The controlling technical specifications for items comprising a part of this project are the standard specifications and requirements of the Accepting Jurisdictions. In addition, the descriptions, references, notes and standards stated on or included in these Construction Plans and the requirements of any document which is a part, by attachment or reference, of the Construction Plans shall be applicable. All materials used shall be new, manufactured by a recognized manufacturer, enjoy a good reputation for performing as intended over time, and if applicable, shall be those specific brands, types, etc., specified by the Accepting Jurisdiction. A manufacturer's recommendations for handling and installing its materials shall also be followed. In those instances where there may be a conflict among requirements, the more restrictive shall control unless expressly permitted otherwise by the Engineer, but in no event shall the standards and requirements of the Accepting Jurisdictions be knowingly not achieved.

2. No activity is to be performed in any manner which is not in compliance with any requirement of an Accepting Jurisdiction or Approval Agency. No activity is to be performed in any manner which may be deemed unsafe or improper by the Engineer or any federal, state, county or local agency or authority lawfully exercising jurisdiction in such matters, including without limitation OSHA. No activity is to be performed in any manner which is not in conformance with the predominately prevailing methods, procedures or manner for similar work in the Accepting Jurisdiction in central Mississippi. All activities are to be performed in a safe and proper manner in order to ensure acceptance of the facilities by the Engineer, Owner, Accepting Jurisdiction and Approving Agencies.

3. A contractor must verify through Mississippi One-Call and the local jurisdictions the existence and location of any and all utility facilities within the project site and must conduct its activities and operations to protect the integrity and operation of utility facilities at all times.

4. A contractor shall furnish, install and maintain any necessary traffic control barriers, signage and/or signals which may be required by the Engineer, Owner, Accepting Jurisdiction, the City, and/or the Mississippi Department of Transportation whenever its activities and operations may affect traffic on city or county streets or state highways.

5. A contractor shall adhere to the requirements of the Storm Water Pollution Prevention Plan and the related permit(s) issued for this Project by the Mississippi Department of Environmental Quality (DEQ) and/or U.S. Department of the Army Corps of Engineers.

With respect to bedding flexible sanitary and storm sewer pipes, the installation embedment requirements shall be that specified by the manufacturer of the pipe. The prevailing practice has been and is that Class IV bedding is normally acceptable. However, the moisture content of the soil being used must be properly and carefully controlled. If the soils available from the trench excavation are too wet or are otherwise unsuitable, Class III bedding material must be used.

MATERIAL REQUIREMENTS

STREETS

- CONCRETE FOR CURB AND GUTTER SHALL BE 3,000 PSI MINIMUM. SEE CURB AND GUTTER DETAIL.
- HOT BITUMINOUS PAVEMENT BASE COURSE MIXTURES AND MATERIALS SHALL MEET SPECIFICATION BB-1 TYPE 6 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- HOT BITUMINOUS PAVEMENT SURFACE COURSE MIXTURES AND MATERIALS SHALL MEET SPECIFICATION SC-1 TYPE 8 OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- SEE TYPICAL STREET SECTION DETAIL.

STORM DRAINAGE

- PIPE - REINFORCED CONCRETE PIPE, ROUND ASTM C-76 OR ARCH, ASTM C-506 WITHOUT LIFTING HOLES. STORM DRAINAGE PIPE IN THE LOCATIONS MARKED HDPCP (N-12) MAY BE HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH INNER WALL. MANUFACTURED BY ADS IN COMPLIANCE WITH THE REQUIREMENTS FOR TEST METHODS, DIMENSIONS, AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252 AND M294. IN ALL OTHER LOCATIONS, STORM DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE.
- JOINTS - JOINTS FOR ROUND CONCRETE PIPE SHALL BE RUBBER GASKETS. JOINTS FOR ARCH PIPE SHALL BE BITUMINOUS PLASTIC CEMENT OR PRE-FORMED JOINT COMPOUND. ALL JOINTS SHALL BE WRAPPED WITH 24" STRIP OF FILTER FABRIC AROUND OUTSIDE OF PIPE.
- INLETS AND JUNCTION BOXES - PRE CAST CONCRETE, ASTM C-478 OR CONCRETE BLOCK CONSTRUCTION.
- INLET CASTINGS - VULCAN RCB-7 OR EQUAL AS APPROVED BY ACCEPTING JURISDICTION AND ENGINEER.

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.

COMPONENT NOTES

STREET

- 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.
- UNDERCUTTING, BACK FILLING, AND MECHANICAL TRENCH COMPACTION SHALL EXTEND A MIN. OF 2 FEET BEYOND BACK OF CURB. LIME TREATMENT (IF USED) SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND BACK OF CURB.
- 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; 3) ENSURE REQUIRED SUB GRADE DENSITY HAS BEEN ACHIEVED AND VERIFIED BY SOILS TESTING LABORATORY; AND 4) ENSURE SUBGRADE IS ACCEPTABLE TO ACCEPTING JURISDICTION.

CURB AND GUTTER

- CURB AND GUTTER SHALL BE 24" ROLL BACK, EXCEPT ISLANDS SHALL BE STANDARD. (SEE DETAIL).
- 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.
- INTERSECTION CURB RADII SHALL BE 20' MEASURED TO BACK OF CURB UNLESS OTHERWISE SHOWN.
- 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.
- EXPANSION JOINTS IN CURB AND GUTTER SHALL BE 1/2" JOINT MATERIAL PLACED AT 60' (MAXIMUM) INTERVALS.
- CONTRACTION JOINTS IN CURB AND GUTTER SHALL BE SCORED AT INTERVALS NOT GREATER THAN 10 FEET AND SPACED EQUALLY BETWEEN EXPANSION JOINTS.
- CONCRETE FOR CURB AND GUTTER SHALL BE 3,000 PSI MINIMUM.

SIDEWALKS

- 48" SIDEWALKS SHALL BE CONSTRUCTED BY THE BUILDER ON EACH LOT AFTER ALL UTILITY SERVICES ARE INSTALLED AND THE SITE HAS BEEN GRADED AND SHAPED TO ITS FINISHED TOPOGRAPHY. SIDEWALKS ARE NOT A PART OF THIS PROJECT UNLESS A PAY ITEM.

STORM DRAINAGE

- ALL STORM DRAINAGE PIPE AND INLETS SHALL BE FLUSHED AND CLEARED OF ANY CONSTRUCTION MATERIALS AND/OR SEDIMENT UPON PROJECT COMPLETION.

EROSION CONTROL

- THE CONSTRUCTION EXIT SHALL BE MAINTAINED TO MINIMIZE EROSION AND DEPOSITION OF SEDIMENT OFF-SITE. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES OR SITE ONTO PUBLIC ROADWAYS MUST BE REMOVED IMMEDIATELY.
- CURB AND AREA INLET SEDIMENT TRAPS SHALL CONSIST OF HAY BALES FULLY SURROUNDING EACH INLET.
- EACH CONTRACTOR PERFORMING ANY WORK REQUIRED BY THESE PLANS SHALL COMPLY WITH ALL REQUIREMENTS SPECIFIED ON THE STORM WATER POLLUTION PREVENTION PLAN INCLUDED HEREIN, INCLUDING WEEKLY INSPECTION REQUIREMENTS. COPIES OF THE INSPECTION REPORT FORMS ARE AVAILABLE FROM THE ENGINEER OR ON LINE @ WWW.DEQ.STATE.MS.US.

SANITARY SEWER

- All sanitary sewer construction to be in accordance with the City of Ridgeland standard specifications.
- Sewer service pipes shall be 6" SDR-26 PVC; Sewer mains shall be 8" SDR-26 PVC.
- Guidelines for Positioning Sanitary Sewer Services.
 - Sanitary sewer services are installed prior to water services.
 - To aid in finding, inspecting and maintaining (cleaning out) sanitary sewer services, if there is a manhole at a low corner of a lot (or if there is a manhole across the street from the lot), sewer services are to connect (with a boot) at and drain into the manhole.
 - In those circumstances where a manhole is not located on a low lot corner, sewer services are to connect (using a tee) and installed to drain to the sewer main and extended in the direction of the lot at the location on the lot where the pipe will cross the lot line approximately ten (10) feet from the center of the lot on whichever side of the lot's center is lower.
 - Enough full thirteen (13) foot long joints are to be installed to insure that the upsewer end of the pipe falls within the lot.
 - Sewer services are to terminate about six (6) feet deep (unless another depth is more appropriate given the depth of the manhole and/or sewer, the topography of the lot, the probable location of the dwelling to be built on the lot and the necessity of avoiding storm sewers).
 - The upsewer end of sewer services are to be properly capped, marked with a red-tipped steel tee post, and located by horizontal measurement from the two (2) closest lot corners. If the sanitary sewer service connects to a sewer main, the distance from the nearest downstream manhole to the connection tee is to be measured. These measurements are to be recorded on the Contractor's "as-built" plans.
- 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 maximum dry density.
- Deflection tests shall be performed on all flexible sewer pipe. The test shall be conducted after the final back fill has been in place at least 30 days. Deflection tests shall be run using a rigid ball or mandrel having a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.
- Contractor shall maintain records during construction of horizontal and vertical location of all water and sewer services for as built records.

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 |
| | EXISTING SANITARY SEWER |
| | WATER LINE |
| | PROPOSED WATER VALVE |
| | PROPOSED FIRE HYDRANT |
| | PROPOSED TEE |
| | EXISTING UTILITY POLE |
| | DRAINAGE FLOW |

INDEX TO DRAWINGS

- COVER SHEET
- GENERAL NOTES AND INDEX TO DRAWINGS
- STREET & LOT LAYOUT
- SANITARY SEWER LAYOUT
- STORM DRAINAGE LAYOUT
- STORM WATER POLLUTION PREVENTION PLAN
- PLAN AND PROFILE - INBOUND ENTRANCE STA. 0+00 - STA. 3+62.62 - OUTBOUND ENTRANCE STA. 0+00 - STA. 3+27.90
- PLAN AND PROFILE - WRENFIELD WAY STA. -2+50 - STA. 12+50
- PLAN AND PROFILE - WRENFIELD WAY STA. 12+50 - STA. 27+50
- PLAN AND PROFILE - WRENFIELD WAY STA. 27+50 - STA. 32+00
- PLAN AND PROFILE - INVERNESS COVE STA. 0+00 - STA. 5+18.27 WILMINGTON DRIVE STA. 0+00 - STA. 4+31.98
- PLAN AND PROFILE - BUCKINGHAM COURT STA. 0+00 - STA. 13+74.48
- PLAN AND PROFILE - SANITARY SEWER ALONG LAKE SHORE STA. 7+00 - STA. 15+50
- PLAN AND PROFILE - STORM OUTFALL F1 AND F2 STA. 0+00 - STA. 9+40.20 AND STA. 0+00 - STA. 3+78.33
- PLAN AND PROFILE - STORM OUTFALL C, STORM OUTFALL D, STORM OUTFALL E, AND STORM OUTFALL G
- PLAN AND PROFILE - STORM OUTFALL H AND STORM OUTFALL I
- PLAN AND PROFILE - STORM WATER RELIEF PIPE STA. 0+00 - STA. 10+45.31
- STANDARD WATER DETAILS
- STANDARD SANITARY SEWER DETAILS
- STANDARD STORM SEWER DETAILS



WRENFIELD PART ONE
A DEVELOPMENT OF
GRACE PROP., LLC

GENERAL NOTES
AND INDEX TO DRAWINGS

CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

RECORD DRAWING

BY: R. Warner DATE: 2/16/05

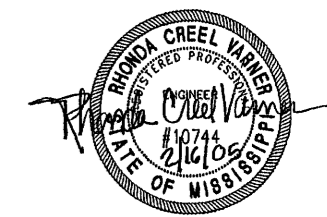
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| CHKD: <u>R.C.B.</u> | DATE: <u>02/10/04</u> | | |
| SCALE: <u>AS SHOWN</u> | | | |

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| AS-BUILT PLANS | REVISION | RAP | DATE |
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OF THIS PHASE**

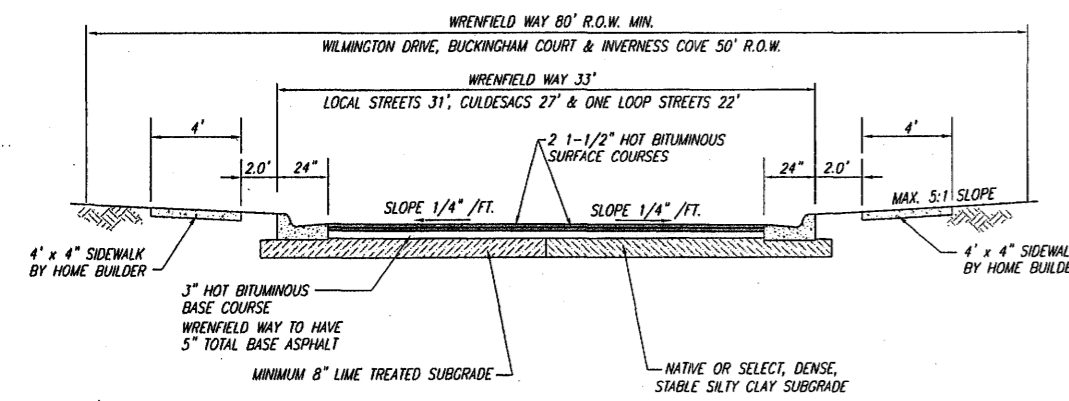
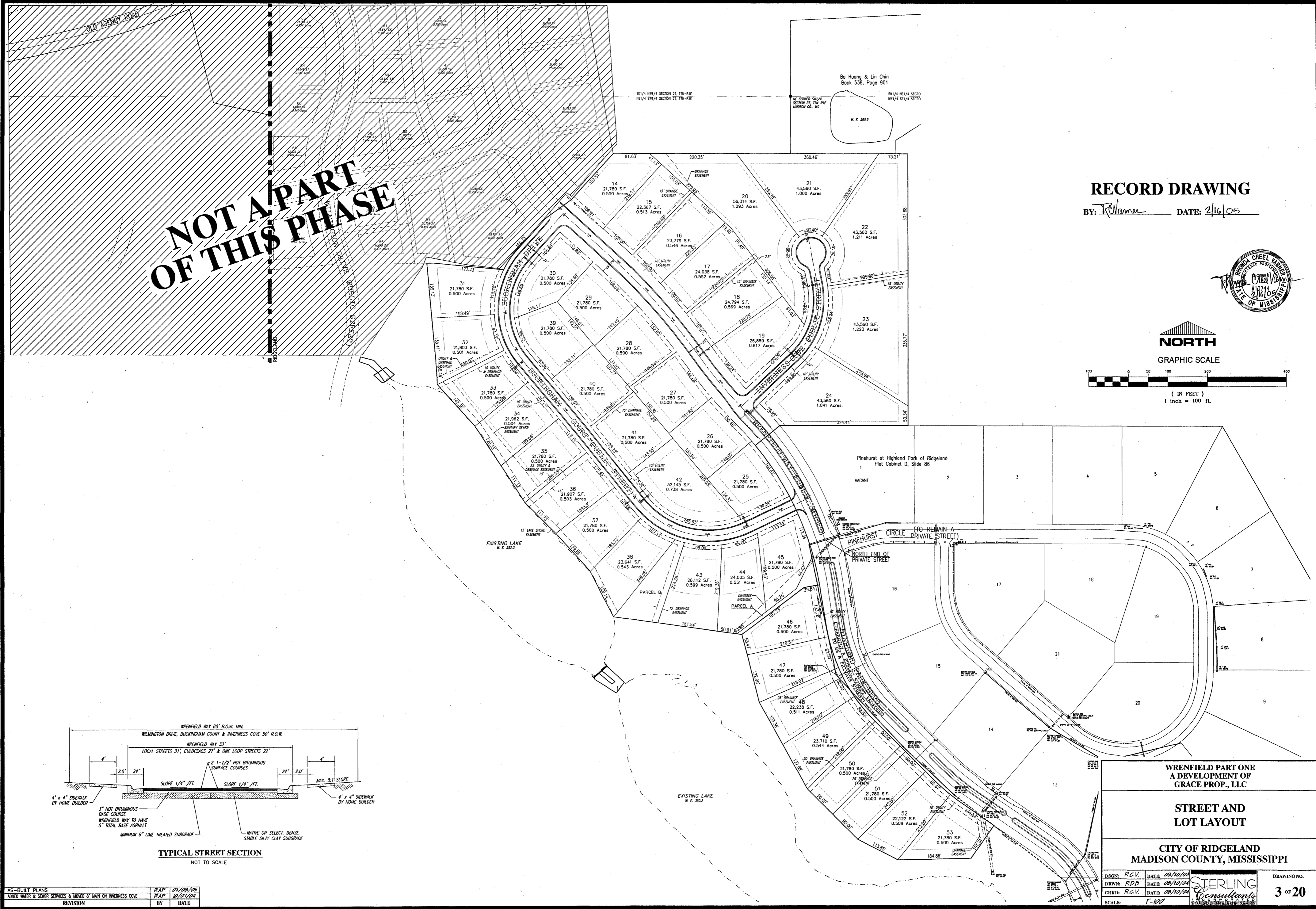
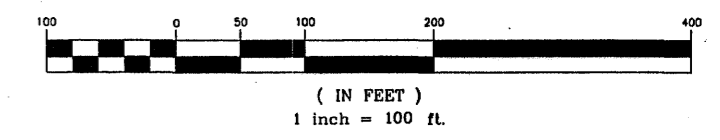
RECORD DRAWING

BY: *T. W. H. H. H.* DATE: 2/16/05



NORTH

GRAPHIC SCALE



TYPICAL STREET SECTION
NOT TO SCALE

**WRENFIELD PART ONE
A DEVELOPMENT OF
GRACE PROP., LLC**

**STREET AND
LOT LAYOUT**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

| | | | |
|----------------|----------------|--|-------------|
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| DRWN: R.D.B. | DATE: 02/10/04 | | 3 OF 20 |
| CHKD: R.C.V. | DATE: 02/10/04 | | |
| SCALE: 1"=100' | | | |

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| ADDED WATER & SEWER SERVICES & MOVED 8' MAIN ON INVERNESS COVE | RAJ | 12/27/04 |
| REVISION | BY | DATE |

**NOT A PART
OF THIS PHASE**

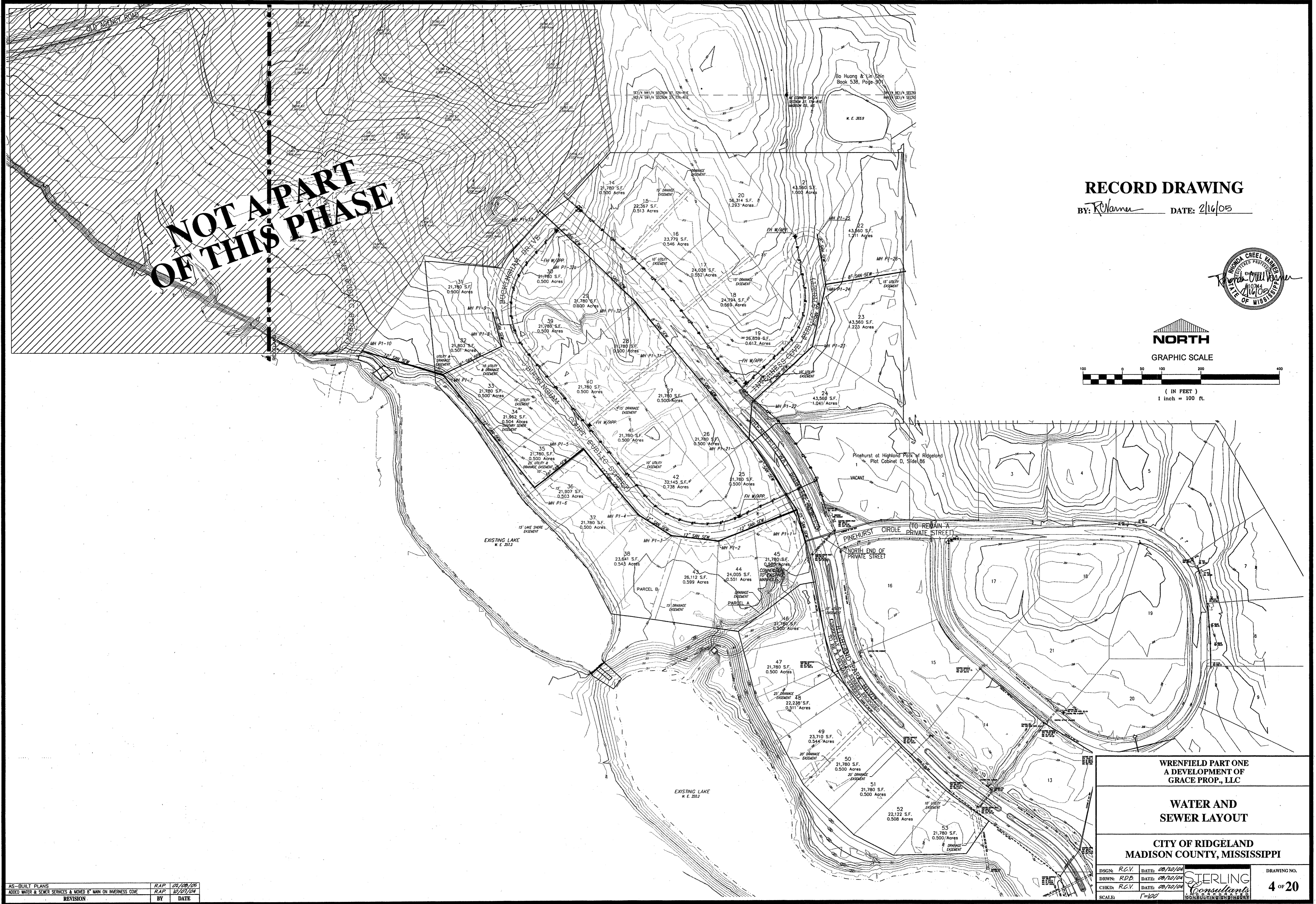
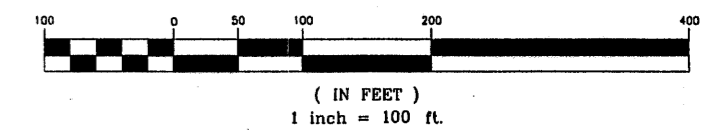
RECORD DRAWING

BY: *R. W. Hanner* DATE: *2/16/05*



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GRAPHIC SCALE



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| WRENFIELD PART ONE A DEVELOPMENT OF GRACE PROP., LLC | |
| WATER AND SEWER LAYOUT | |
| CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI | |
| DSGN: <i>R.C.V.</i> | DATE: <i>08/10/04</i> |
| DRWN: <i>R.D.B.</i> | DATE: <i>08/10/04</i> |
| CHKD: <i>R.C.V.</i> | DATE: <i>08/10/04</i> |
| SCALE: <i>1"=100'</i> | |

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| AS-BUILT PLANS | RAP | 01/28/05 |
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| REVISION | BY | DATE |

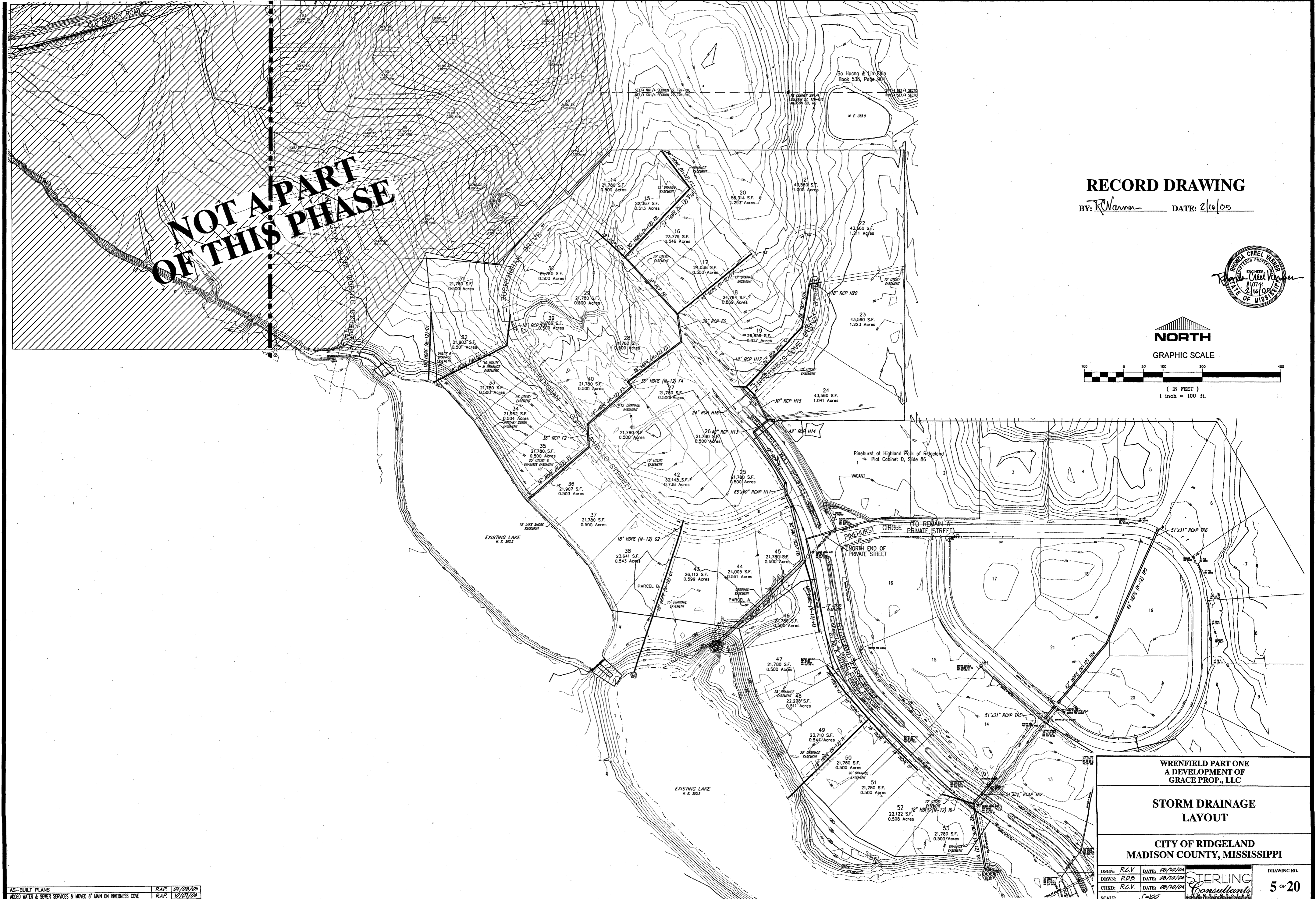
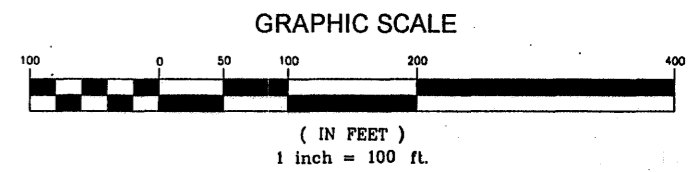
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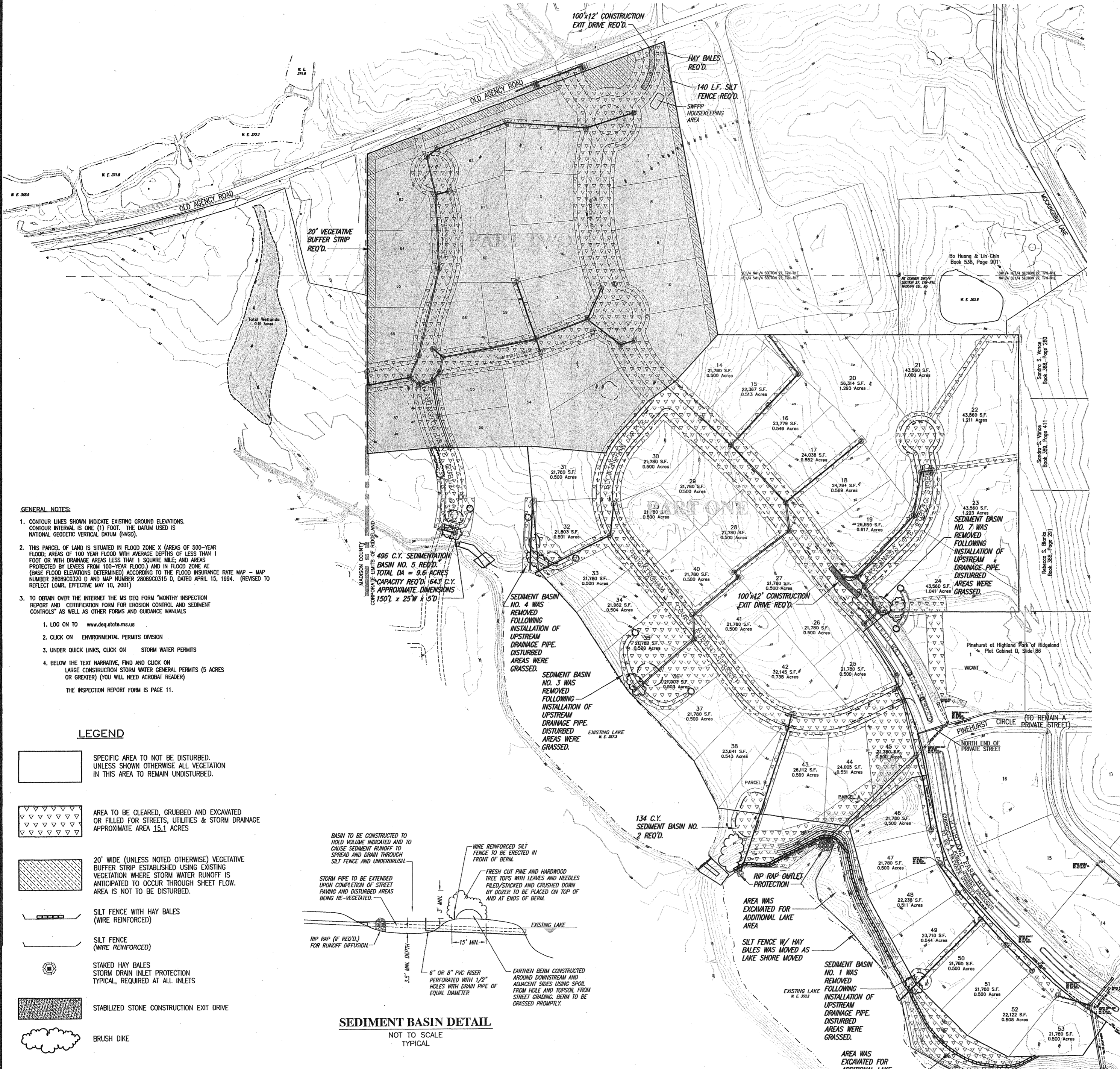


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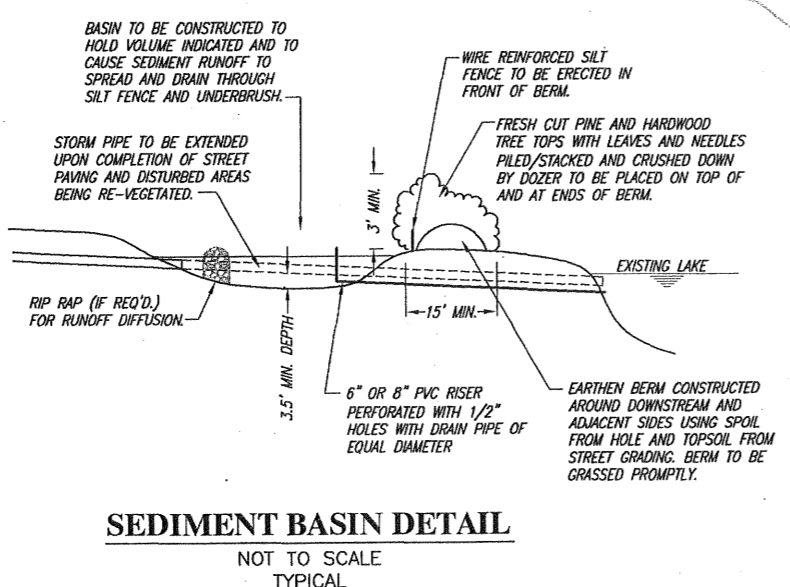
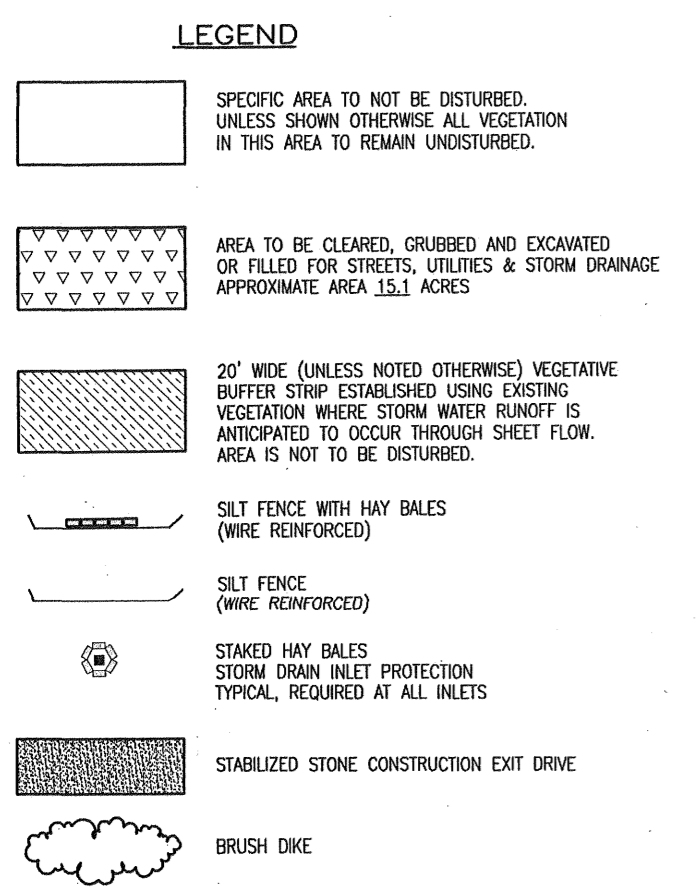
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| WRENFIELD PART ONE A DEVELOPMENT OF GRACE PROF., LLC | |
| STORM DRAINAGE LAYOUT | |
| CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI | |
| DSGN: <i>R.C.V.</i> | DATE: 02/10/04 |
| DRWN: <i>R.D.B.</i> | DATE: 02/10/04 |
| CHKD: <i>R.C.V.</i> | DATE: 02/10/04 |
| SCALE: 1"=100' | |

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| AS-BUILT PLANS | RAP | 01/28/05 |
| ADDED WATER & SEWER SERVICES & MOVED 8" MAN ON INGRESS CODE | RAP | 12/31/04 |
| REVISION | BY | DATE |



GENERAL NOTES:

- CONTOUR LINES SHOWN INDICATE EXISTING GROUND ELEVATIONS. CONTOUR INTERVAL IS ONE (1) FOOT. THE DATUM USED IS NATIONAL GEODETIC VERTICAL DATUM (NGVD).
- THIS PARCEL OF LAND IS SITUATED IN FLOOD ZONE X (AREAS OF 500-YEAR FLOOD; AREAS OF 100 YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEASES FROM 100-YEAR FLOOD) AND IN FLOOD ZONE AE (BASE FLOOD ELEVATIONS DETERMINED) ACCORDING TO THE FLOOD INSURANCE RATE MAP - MAP NUMBER 28089C0320 D AND MAP NUMBER 28089C0315 D, DATED APRIL 15, 1994. (REVISED TO REFLECT LOMR, EFFECTIVE MAY 10, 2001)
- TO OBTAIN OVER THE INTERNET THE MS DEQ FORM "MONTHLY INSPECTION REPORT AND CERTIFICATION FORM FOR EROSION CONTROL AND SEDIMENT CONTROLS" AS WELL AS OTHER FORMS AND GUIDANCE MANUALS
 - LOG ON TO www.deq.state.ms.us
 - CLICK ON ENVIRONMENTAL PERMITS DIVISION
 - UNDER QUICK LINKS, CLICK ON STORM WATER PERMITS
 - BELOW THE TEXT NARRATIVE, FIND AND CLICK ON LARGE CONSTRUCTION STORM WATER GENERAL PERMITS (5 ACRES OR GREATER) (YOU WILL NEED ACROBAT READER)
 THE INSPECTION REPORT FORM IS PAGE 11.



STORM WATER POLLUTION PREVENTION PLAN

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.

- 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.
- 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.
- 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.
- 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 or sediment control facility shall be responsible for damages to downhill property 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.
- At the location(s) shown on this plan, or at such other location(s) suitable thereafter which from time to time may be directed by the Engineer, there shall be established and maintained by each contractor an area designated the "SWPPP Housekeeping Area."
- Each contractor performing any work required or implied on the Construction Plans of which this SWPPP is a part, during the period from the date the contractor mobilizes on the project site until the date his work is completely finished, shall weekly monitor, inspect, repair or replace within 24 hours of discovery, maintain and supplement as required each and all of the erosion control facilities required by this SWPPP. Each contractor shall at least once each week inspect, repair, replace and maintain such controls even though the controls may have been installed by other contractor(s) or serve areas within the project site but outside of the contractor's immediate work area. Each contractor shall erect, operate, maintain and monitor a rain gauge. Following any storm event in which the gauge indicates that more than three (3) inches of rain fell in a 24 hour period, or after any storm event which the Engineer indicates the necessity of so doing, as soon as field conditions allow, the contractor shall monitor, inspect, repair, replace, maintain and supplement as required any erosion controls which have failed to function as intended. Each contractor shall file monthly with the Engineer a report of each such inspection on the form provided by the Engineer.

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

- Install fabric silt fencing at those locations shown on the plans, at such other locations deemed 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.
- Install sediment barriers or brush dikes made using hay bales stacked 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;
- 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.
- grade, shape and otherwise prepare as an "SWPPP Housekeeping Area" an easily accessible area approximately 20' x 40' which drains to a sump at one end, and provide and erect a sign identifying the area as the "SWPPP Housekeeping Area." This area shall be prepared for use as the location of sanitary facilities for contractor's personnel, as the location of a trash receptacle for disposal of solid waste, and for use for other purposes such as equipment maintenance and concrete chule wash-off.

E. Additional Measures to be Implemented During Construction.

- The Clearing Contractor shall salvage pine boughs and tree limbs and place same at appropriate locations to reinforce silt fences and/or form brush barriers.
- The Earthwork Contractor shall place a six inch thick, 12' wide, 100' long pad of stabilized crushed stone at the point shown on the plans where construction traffic should enter and leave the construction site.

F. Additional Measures to be Implemented After Street Paving.

- 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.
- The Grading 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.
- 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 same to the areas from which they eroded.
- When disturbed area will be left undisturbed for thirty (30) days or more, the appropriate temporary or permanent vegetative practices shall be implemented within seven calendar days.

G. Post Construction Procedures.

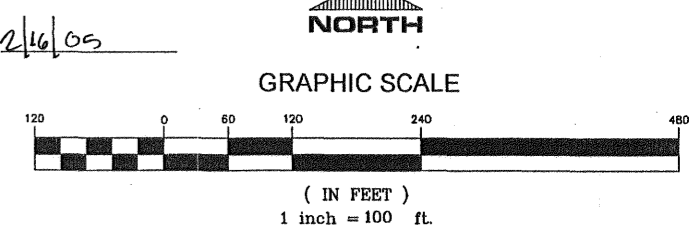
- Pending the establishment of vegetative ground cover, all practicable temporary and permanent erosion and sediment control facilities shall be inspected, maintained and repaired as necessary by the Developer to assure the continued performance of their intended function.
- The Developer shall carry forward all erosion control measures and facilities set forth in this SWPPP to ensure that successive builders and lot will take measures to prevent or mitigate sediment from leaving individual lots and parcels.

The Developer will provide to each successive builder and lot owner a copy of this SWPPP. The Developer will require, by imposing deed restrictions or protective covenants, that successive builders and lot owners:

- fully comply with all municipal and state land disturbance and erosion control ordinances, regulations and requirements; and
- fully comply with so much of this SWPPP that is pertinent or appropriate for the lot or parcel conveyed to the builder or owner.
- from the beginning of site preparation through the establishment of permanent vegetative cover, will maintain the property purchased in such a condition as to minimize off-site damage from erosion, sediment deposits and storm water.
- acknowledge and agree that the Developer will not be held responsible for, and will be held harmless from, damages which may be suffered by the builder or lot owner, or other builders and lot owners, as a result of site preparation activities (including but not limited to lot grading and shaping) carried out in connection therewith by the builder or lot owner and/or their contractors and subcontractors.

RECORD DRAWING

BY: *R. V. [Signature]* DATE: 2/16/05



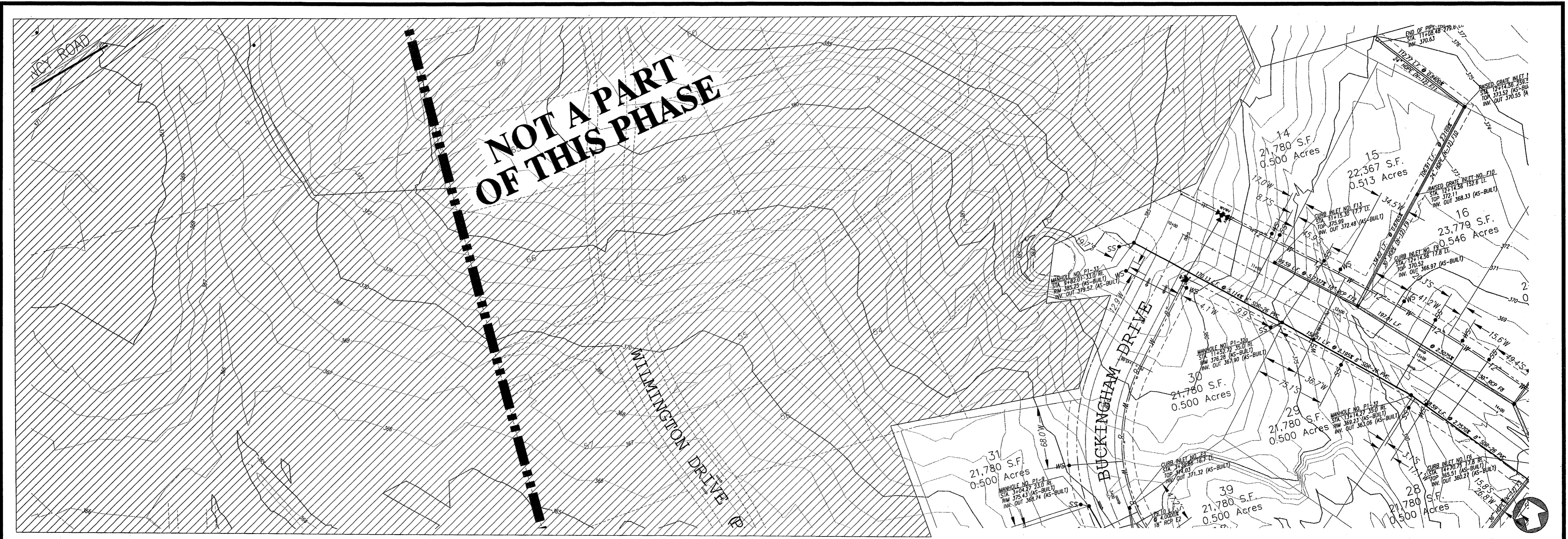
**WRENFIELD PARTS ONE AND TWO
A DEVELOPMENT OF
GRACE PROP., LLC**

**STORM WATER POLLUTION
PREVENTION PLAN**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

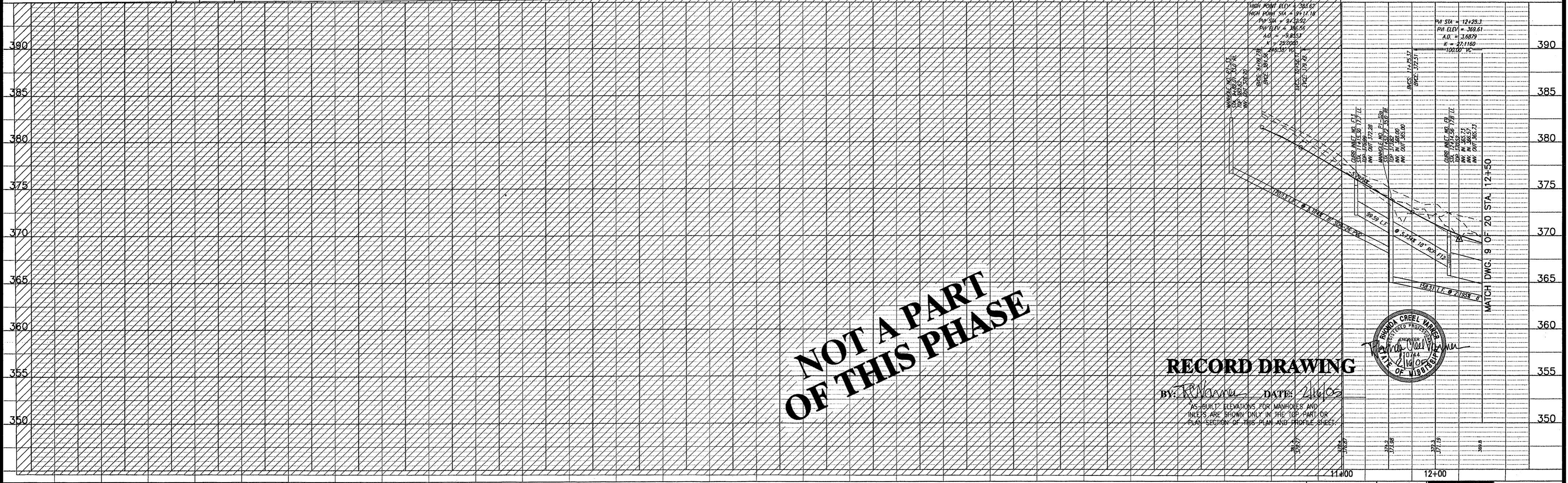
| | | |
|---------------|----------------|--|
| DSGN: RCV. | DATE: 01/08/05 | STERLING CONSULTANTS INCORPORATED CONSULTING ENGINEERS |
| DRWN: E.P.B. | DATE: 01/08/05 | |
| CHKD: RCV. | DATE: 02/10/05 | |
| SCALE: 1"=10' | | |

DRAWING NO. **6 OF 20**



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

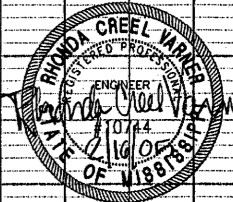
| REVISION | BY | DATE |
|----------|----|------|
| | | |



RECORD DRAWING

BY: *R. P. [Signature]* DATE: *2/16/05*

AS-BUILT ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OF PLAN SECTION OF THIS PLAN AND PROFILE SHEET.



WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

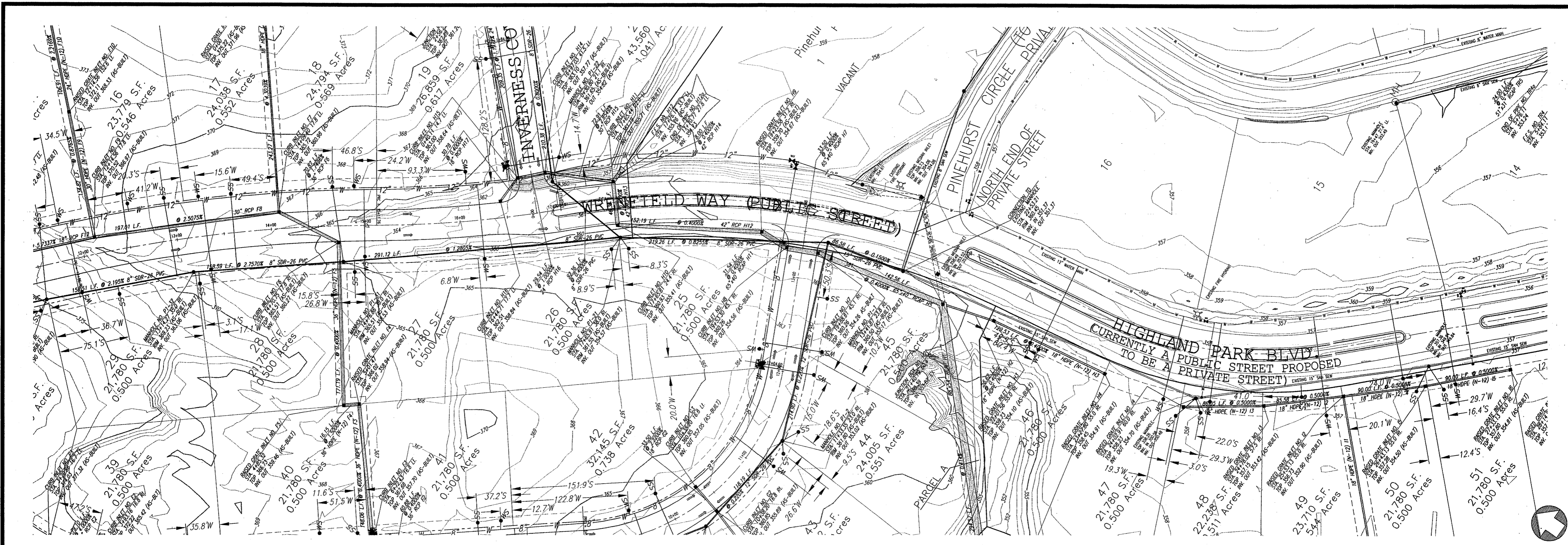
PLAN AND PROFILE - WRENFIELD WAY
STA. -2+00.31 - STA. 12+50.00

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

| Designed By: | REV | DATE: |
|--------------|-----|-------|
| | | |

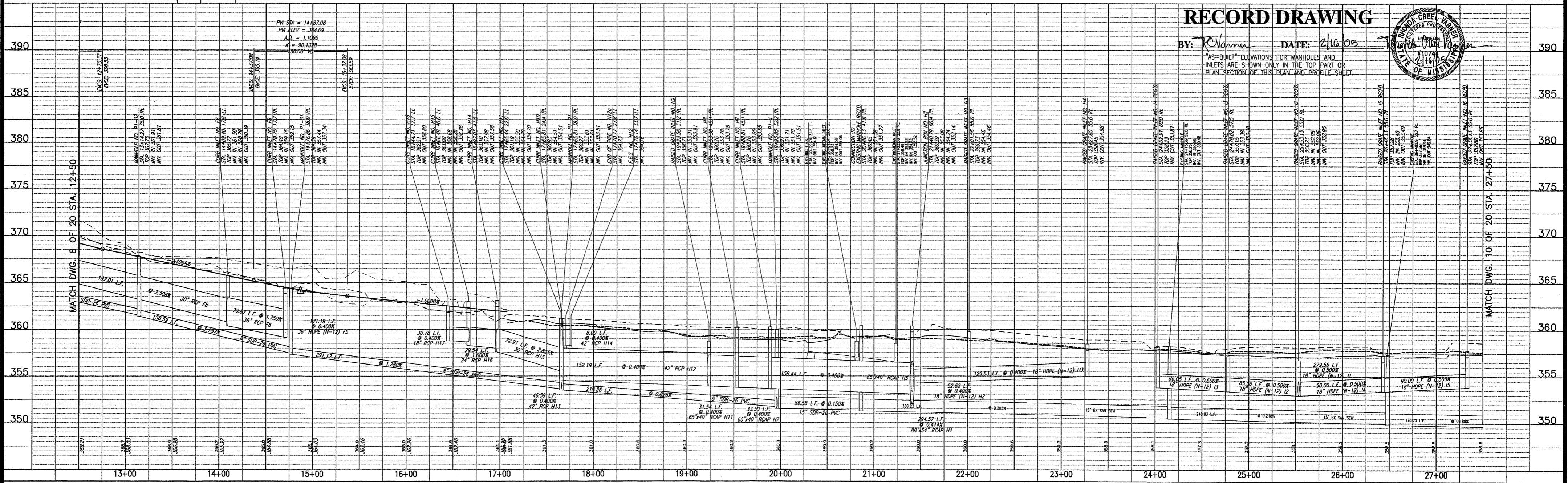


Drawing No.
8 of 20



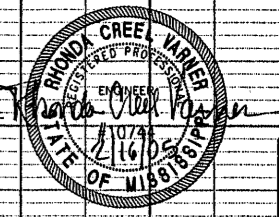
SCALE 1"=50' HORIZ.
1"= 5' VERT.

| REVISION | BY | DATE |
|----------|----|------|
| | | |



RECORD DRAWING

BY: *R. Adams* DATE: 2/16/05



"AS-BUILT" ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OF PLAN SECTION OF THIS PLAN AND PROFILE SHEET.

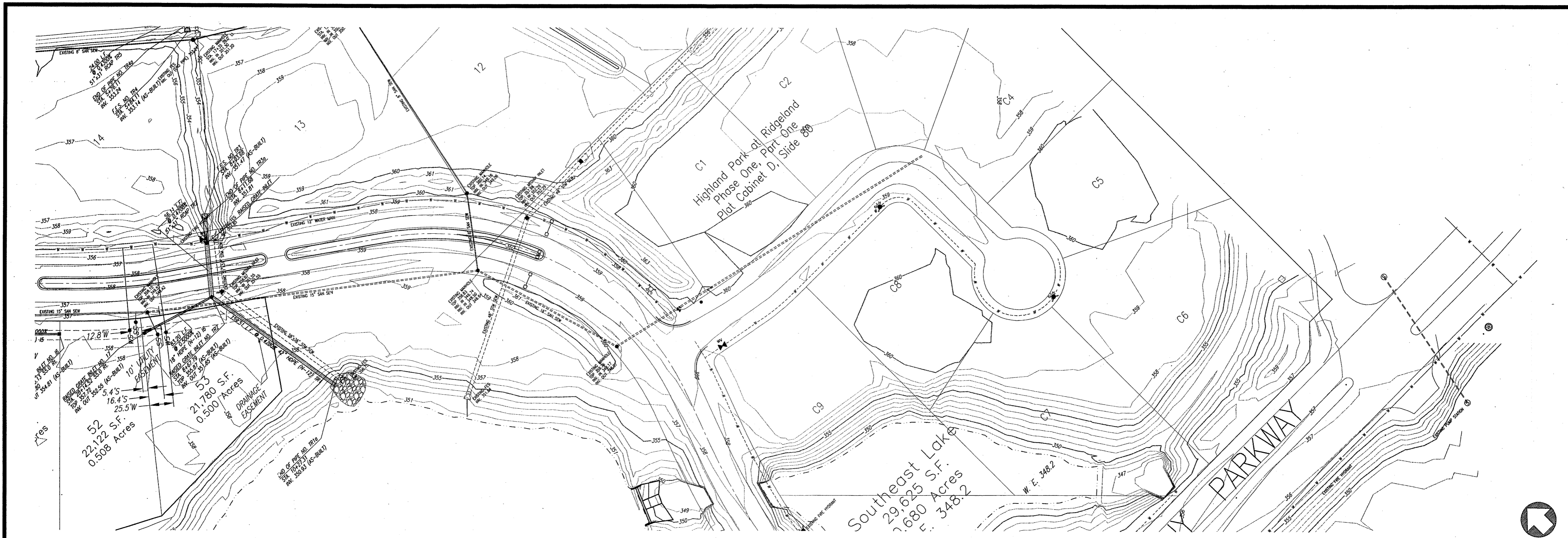
WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - WRENFIELD WAY
STA. 12+50.00 - STA. 27+50.00

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

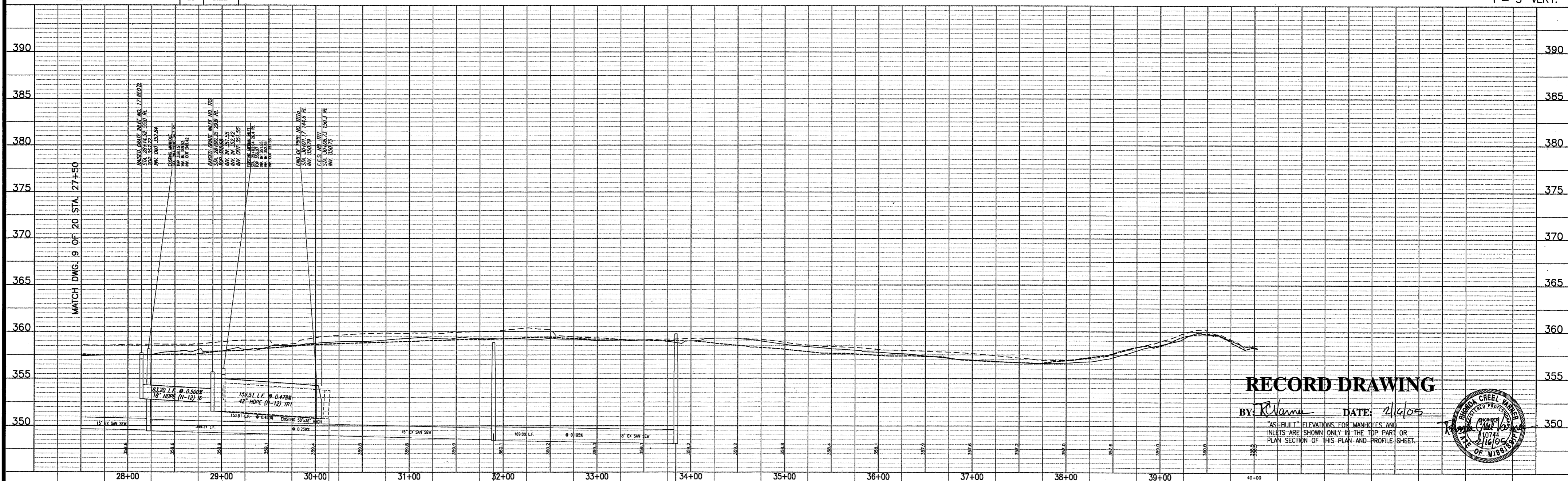
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| Designed By: RCV | DATE: 02/19/04 |
| Drawn By: RDP | DATE: 02/19/04 |
| Checked By: RCV | DATE: 07/22/04 |
| Scale: 1"=50' HORIZ. | 1"=5' VERT. |

Drawing No.
9 of 20



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

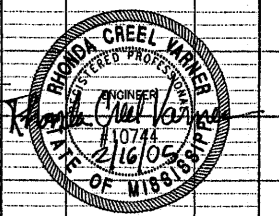
| REVISION | RAP BY | DATE |
|----------|--------|----------|
| | | 01/08/05 |



RECORD DRAWING

BY: *R. Klame* DATE: *2/1/05*

"AS-BUILT" ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OR PLAN SECTION OF THIS PLAN AND PROFILE SHEET.



WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - WRENFIELD WAY
STA. 27+50.00 - STA. 32+00.00

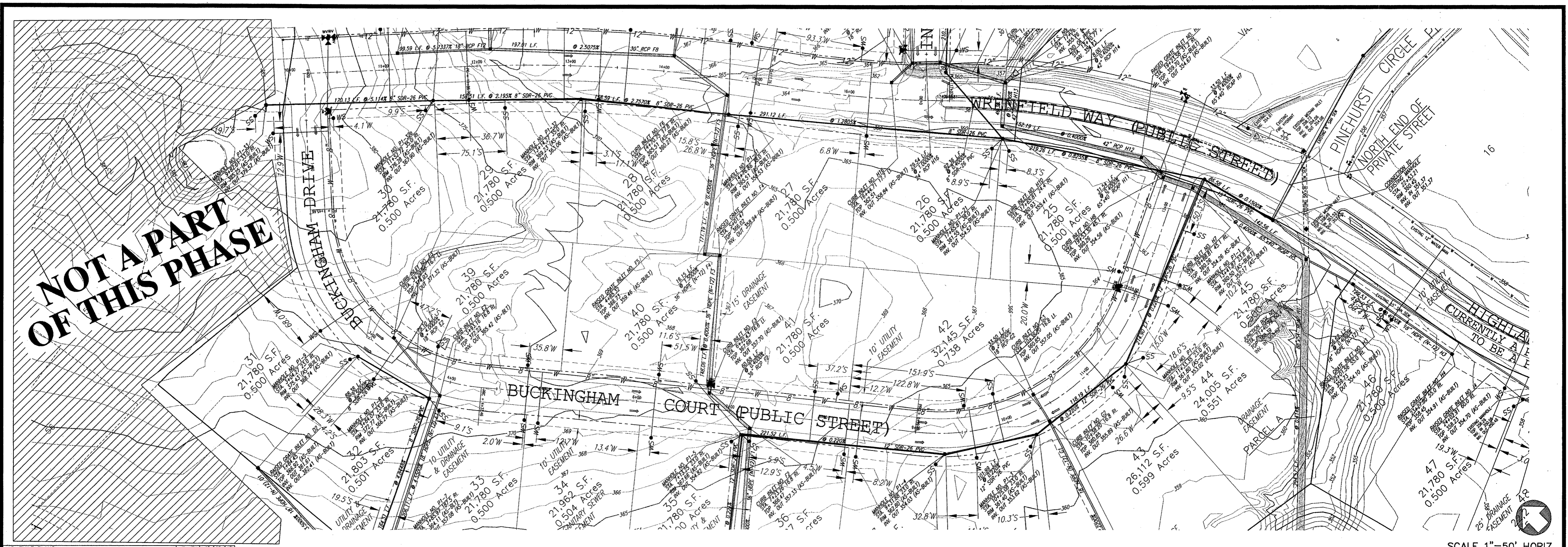
Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

| Designed By: | REV. | DATE: |
|---------------|---------------------|-------------|
| R.K. | 1 | 02/01/05 |
| Drawn By: | REV. <td>DATE:</td> | DATE: |
| R.K. | 1 | 02/01/05 |
| Checked By: | REV. <td>DATE:</td> | DATE: |
| R.K. | 1 | 02/01/05 |
| Scale: | | |
| 1"=50' HORIZ. | | 1"=5' VERT. |

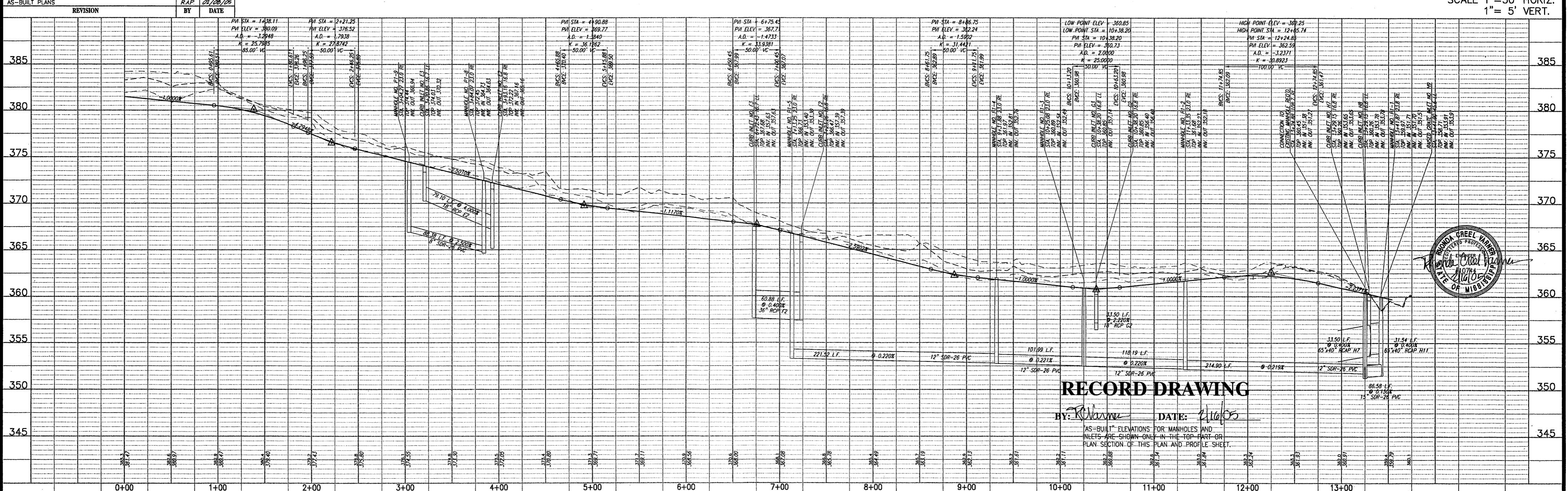


Drawing No.
10 of 20

C:\Drawings\TRAVIS\HIGHLAND-PARKHP-Property.dwg, Part One Plan Profile, 2/16/2005 3:25:33 PM, 1:1, Sterling Consultants, Inc., Ginny B. Bates



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



RECORD DRAWING

BY: *[Signature]* DATE: 2/16/05

AS-BUILT ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OR PLAN SECTION OF THIS PLAN AND PROFILE SHEET.

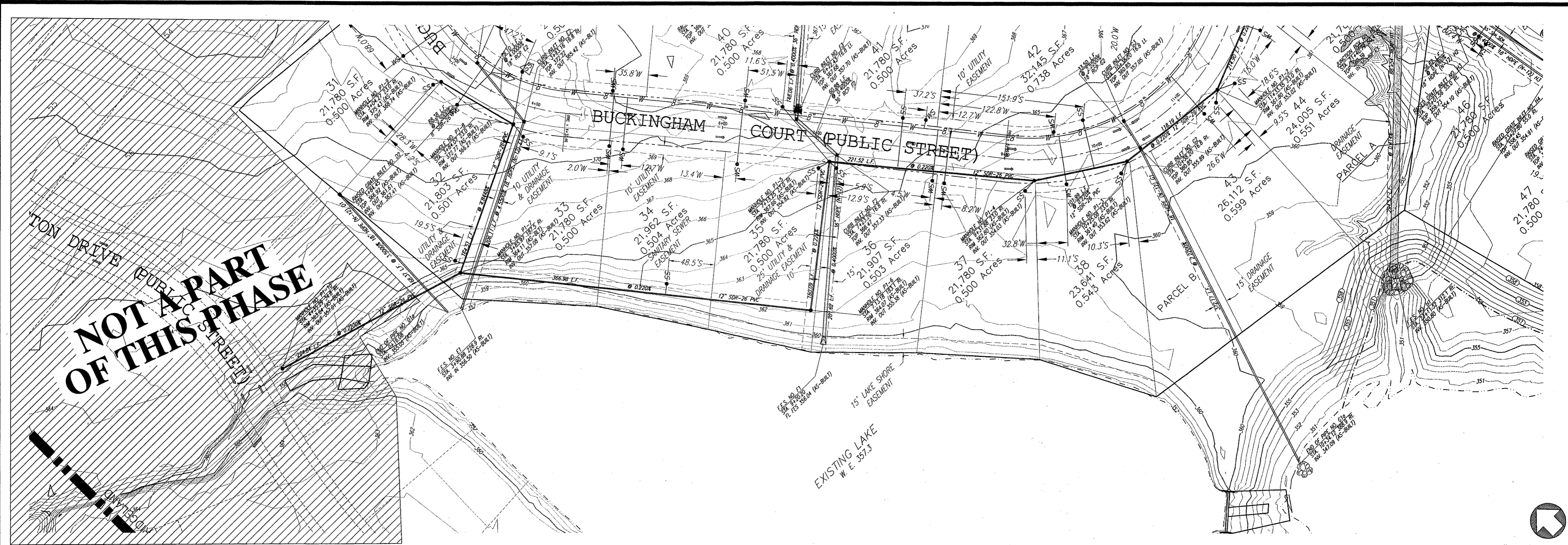
WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - BUCKINGHAM COURT
STA. 0+00 - STA. 13+74.48

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

| | |
|----------------------|----------------|
| Designed By: R.V. | DATE: 08/10/04 |
| Drawn By: R.P.D. | DATE: 08/10/04 |
| Checked By: R.V. | DATE: 10/31/04 |
| Scale: 1"=50' HORIZ. | 1"= 5' VERT. |

Drawing No.
12 of 20

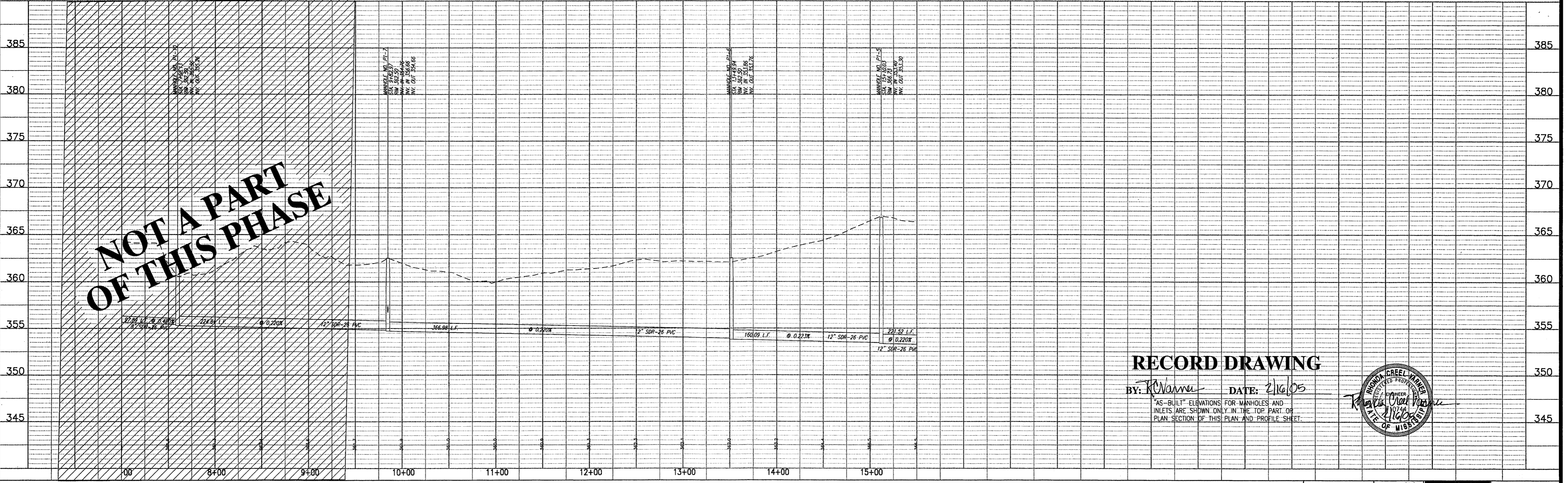


NOT A PART OF THIS PHASE

NOT A PART OF THIS PHASE

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

| REVISION | RAP | DATE |
|----------|-----|------|
| | BY | DATE |



RECORD DRAWING

BY: *KVanna* DATE: 2/16/05



"AS-BUILT" ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OF PLAN SECTION OF THIS PLAN AND PROFILE SHEET.

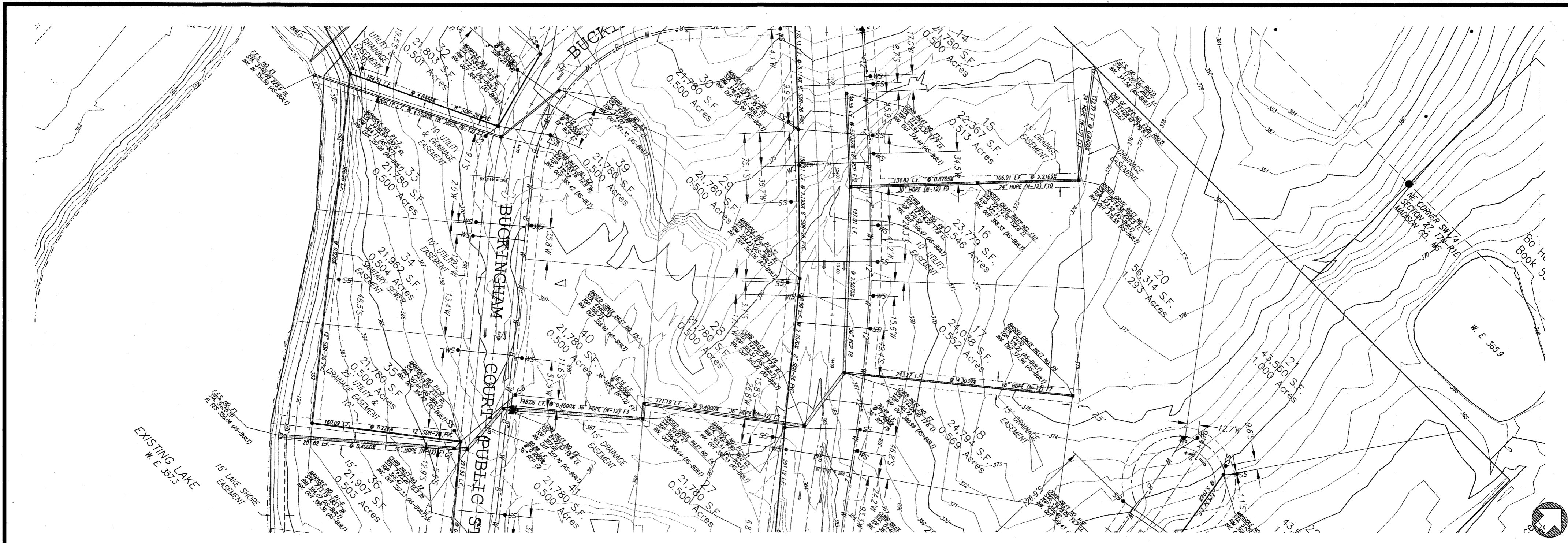
WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - SANITARY SEWER ALONG LAKE SHORE
STA. 7+00 - STA. 15+50

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

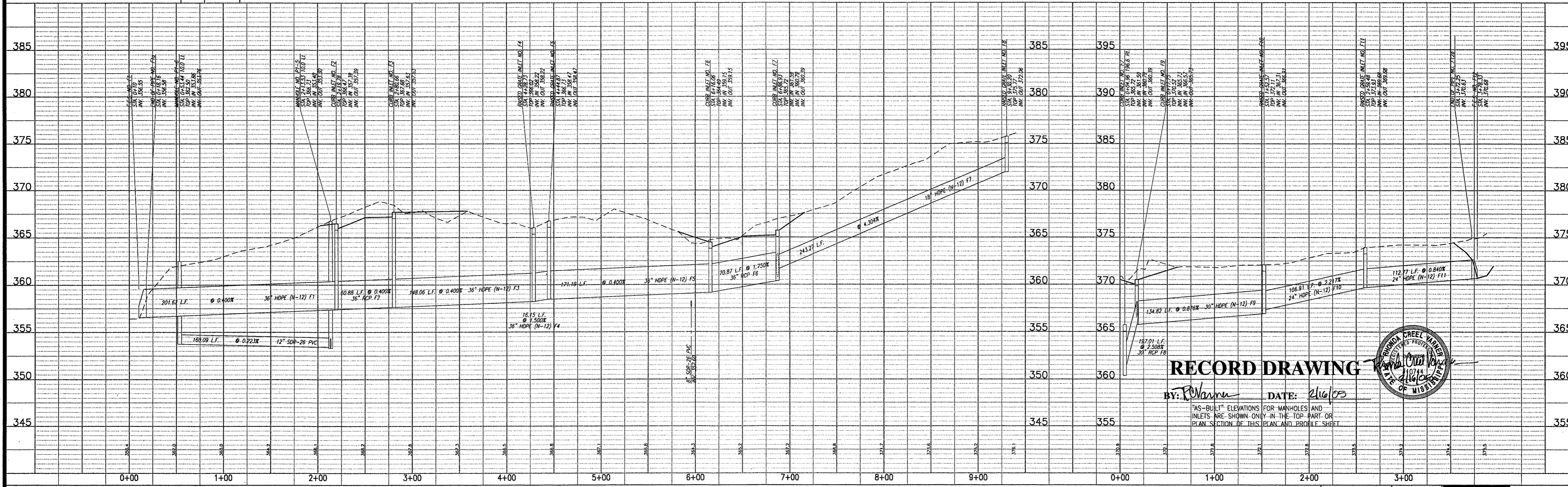
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| Designed By: | RCV | DATE: | 02/10/04 |
| Drawn By: | RDB | DATE: | 02/19/04 |
| Checked By: | RCV | DATE: | 12/21/04 |
| Scale: | 1"=50' HORIZ. | 1"=5' VERT. | |

Drawing No.
13 of 20



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

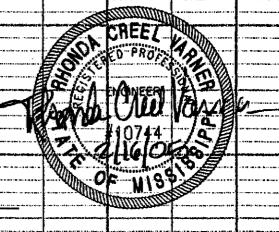
| REVISION | RAP BY | DATE |
|----------|--------|----------|
| | | 01/08/08 |



RECORD DRAWING

BY: *R. V. Varn* DATE: *2/16/08*

"AS-BUILT" ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OR PLAN SECTION OF THIS PLAN AND PROFILE SHEET



WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - STORM OUTFALL F1 AND F2
STA. 0+00 - STA. 9+40.20 AND STA. 0+00 - STA. 3+88.33

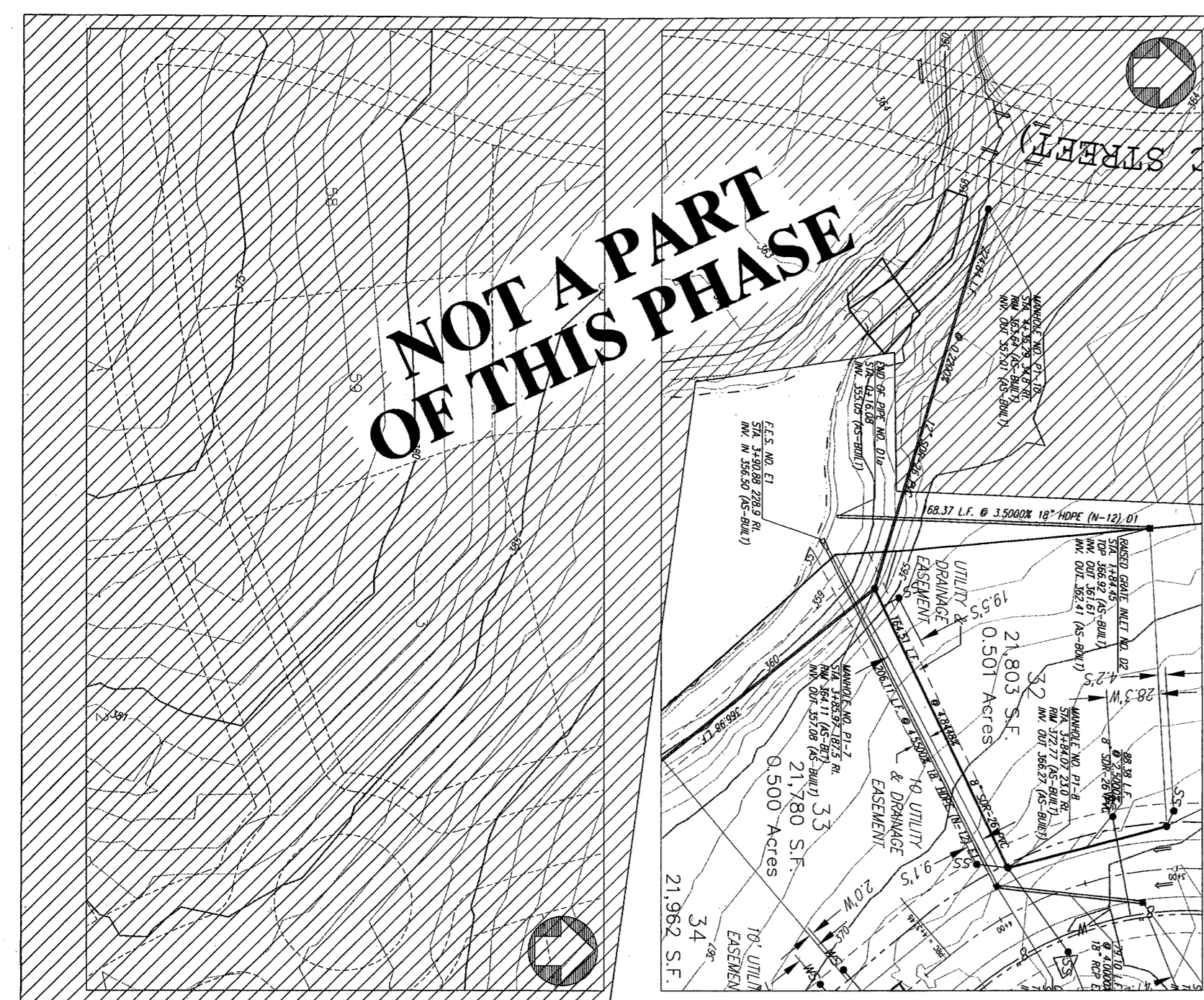
Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

| | | | |
|--------------|--------------|-------------|----------|
| Designed By: | RCV | DATE: | 08/19/04 |
| Drawn By: | RVB | DATE: | 08/19/04 |
| Checked By: | RCV | DATE: | 07/21/04 |
| Scale: | 1"=50' HORIZ | 1"=5' VERT. | |

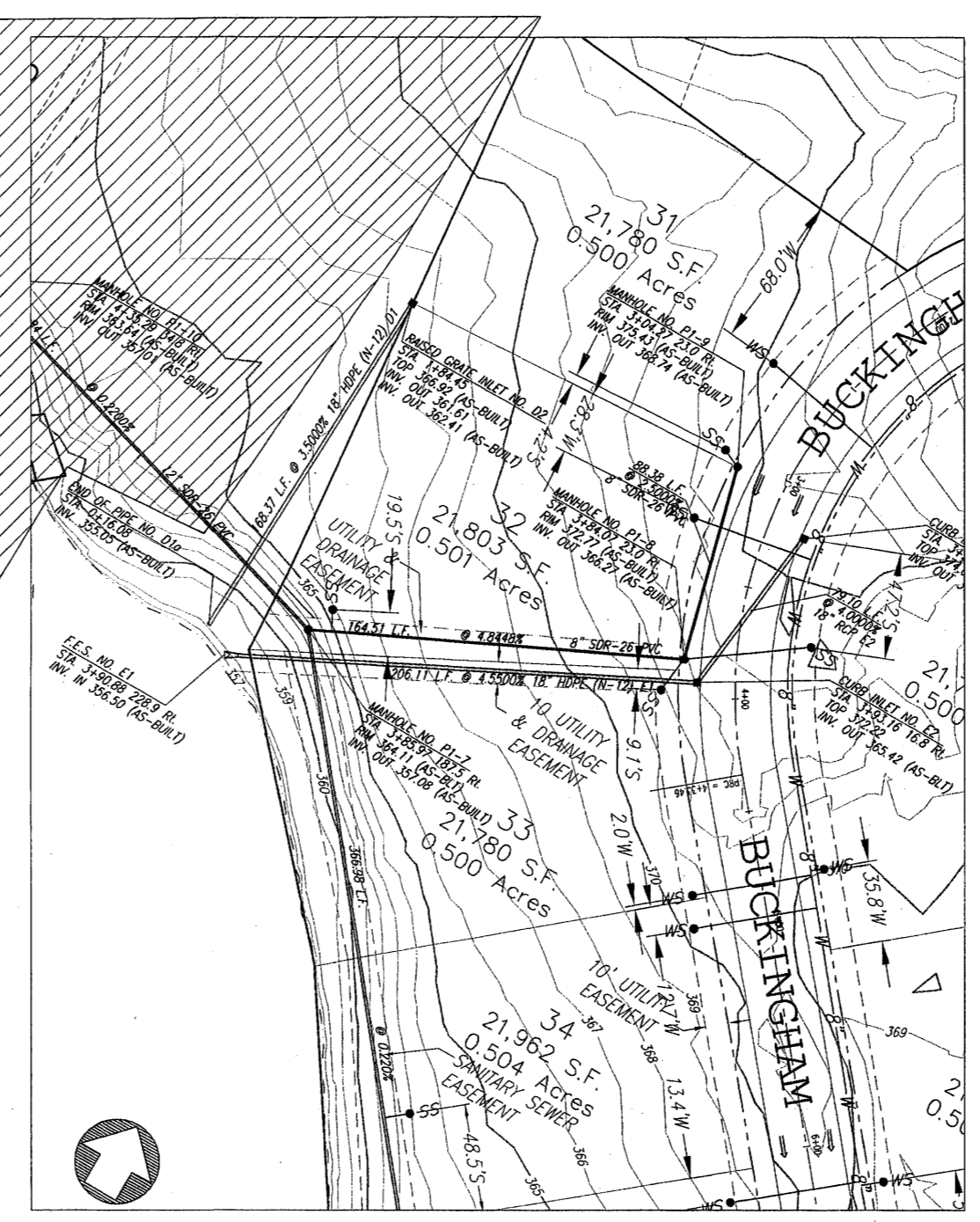


Drawing No.
14 of 20

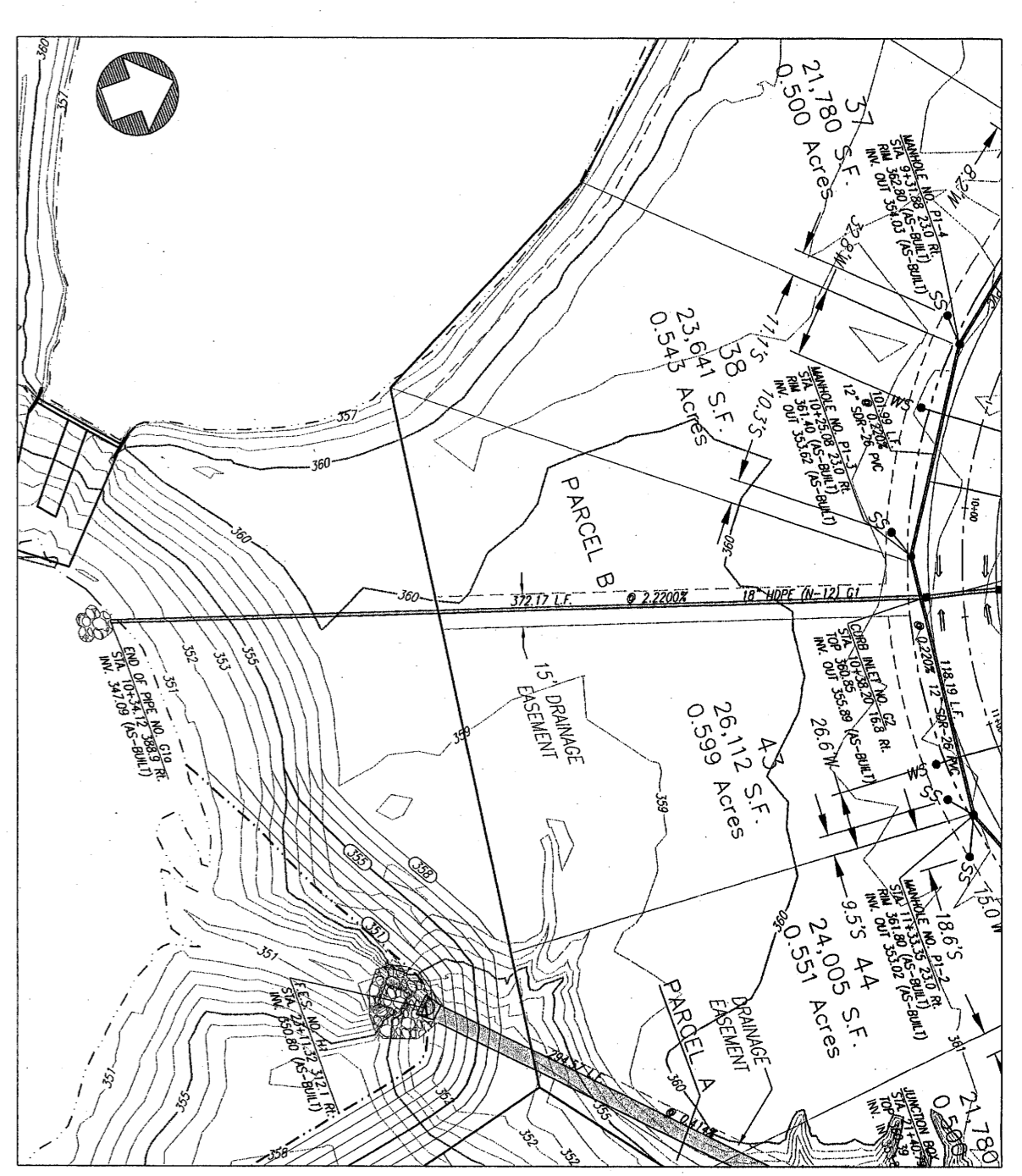
NOT A PART OF THIS PHASE



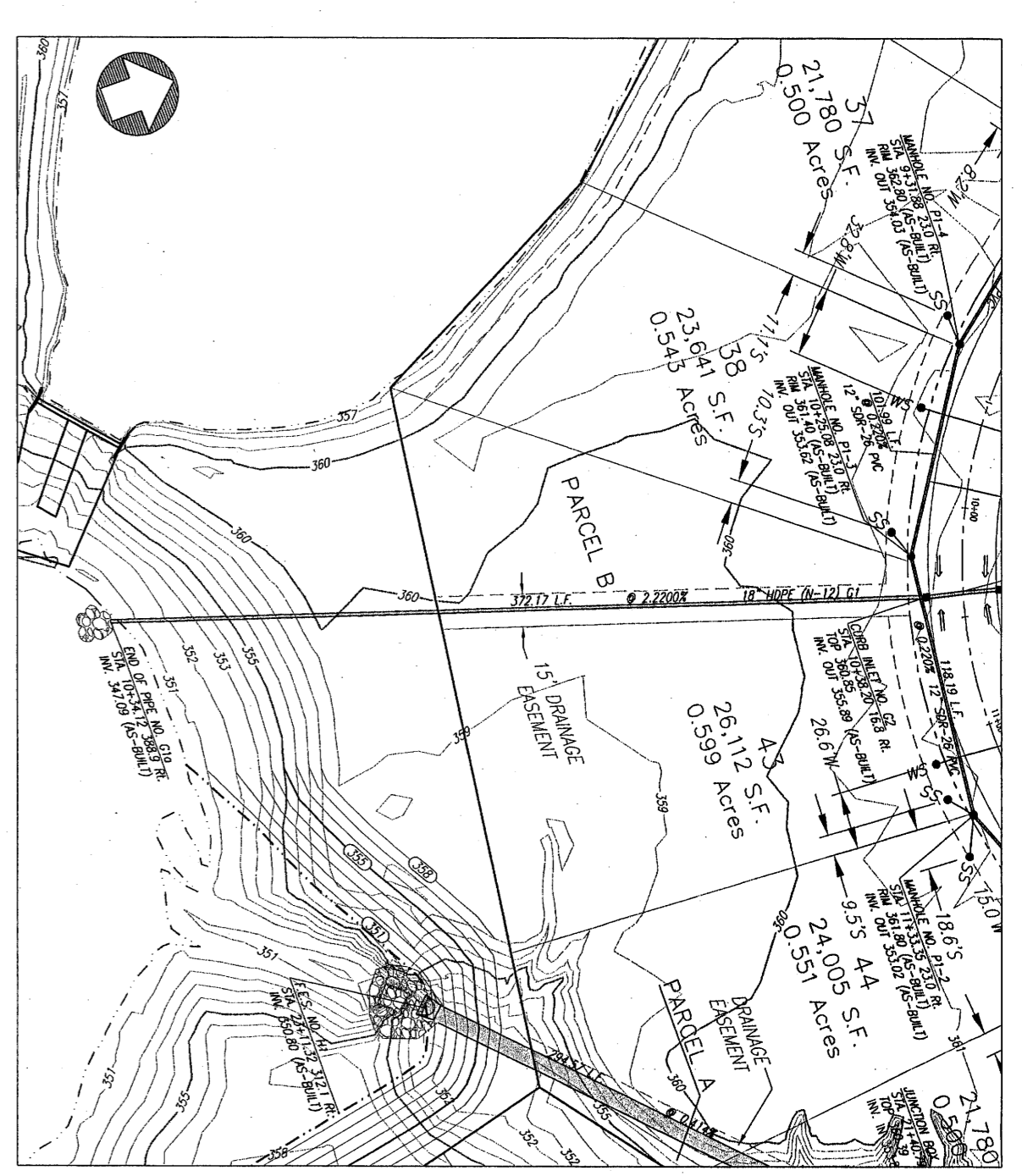
PLAN AND PROFILE - STORM OUTFALL C
STA. 0+00 - STA. 14+81.04



PLAN AND PROFILE - STORM OUTFALL D
STA. 0+00 - STA. 1+94.45



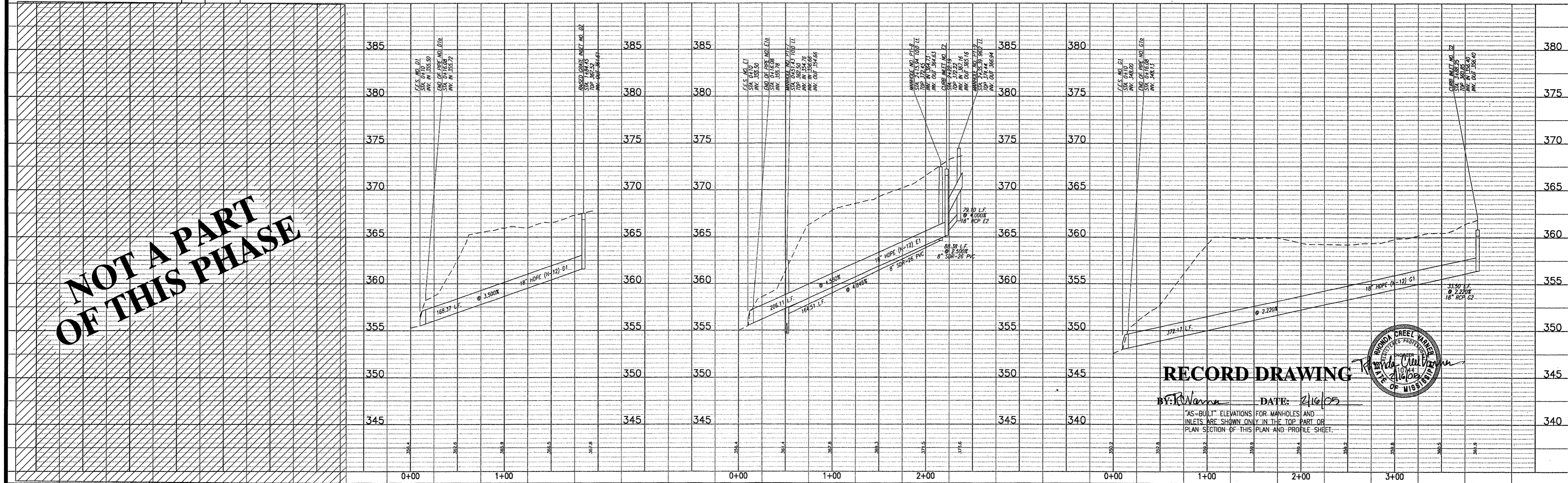
PLAN AND PROFILE - STORM OUTFALL E
STA. 0+00 - STA. 2+38.95



PLAN AND PROFILE - STORM OUTFALL G
STA. 0+00 - STA. 3+88.25

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

| REVISION | RAP BY | DATE |
|----------|--------|------|
| | | |

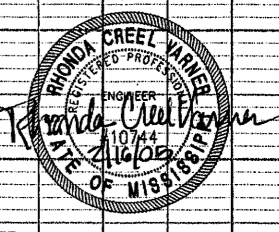


NOT A PART OF THIS PHASE

RECORD DRAWING

BY: *R. Vanna* DATE: 4/16/05

"AS-BUILT" ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OF PLAN SECTION OF THIS PLAN AND PROFILE SHEET.



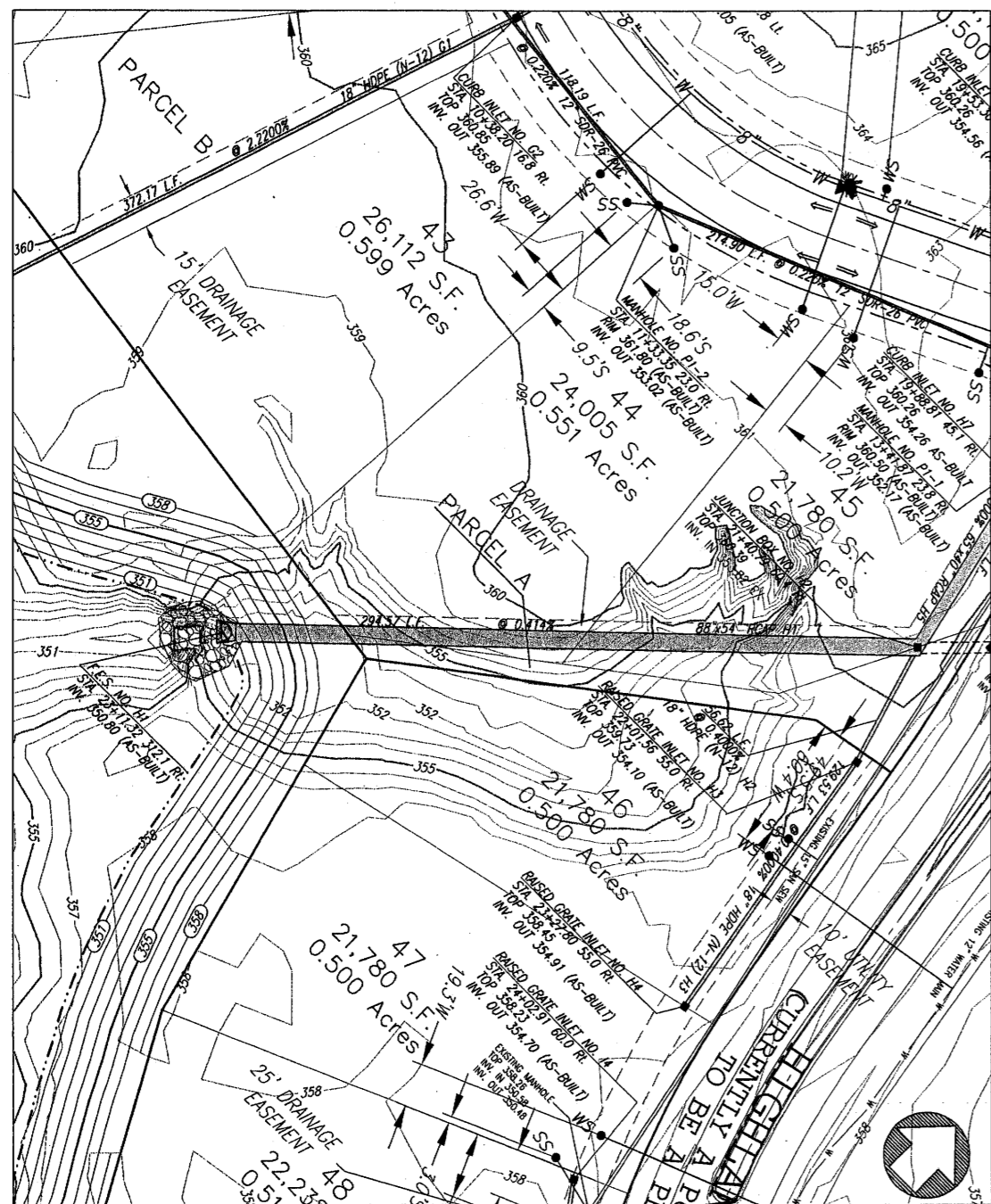
WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - STORM OUTFALL C,
STORM OUTFALL D, STORM OUTFALL E, AND STORM OUTFALL G

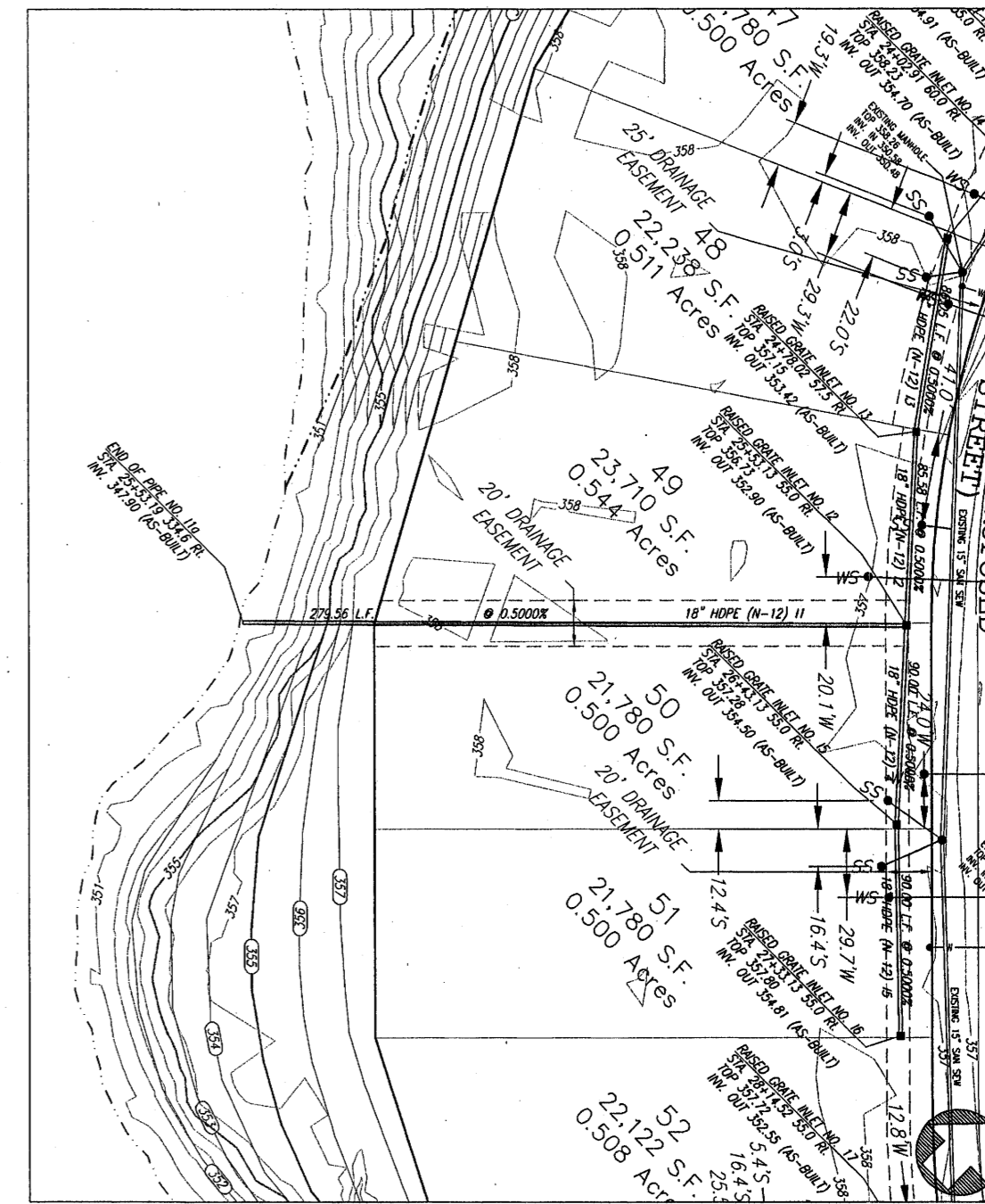
Prepared For:
GRACE PROP, LLC
RIDGELAND, MISSISSIPPI

| DESIGNED BY | RCV | DATE | 09/19/04 |
|-------------|--------------|-------------|----------|
| DRAWN BY | RDP | DATE | 09/19/04 |
| CHECKED BY | RCV | DATE | 10/11/04 |
| SCALE | 1"=50' HORIZ | 1"=5' VERT. | |

Drawing No.
15 of 20



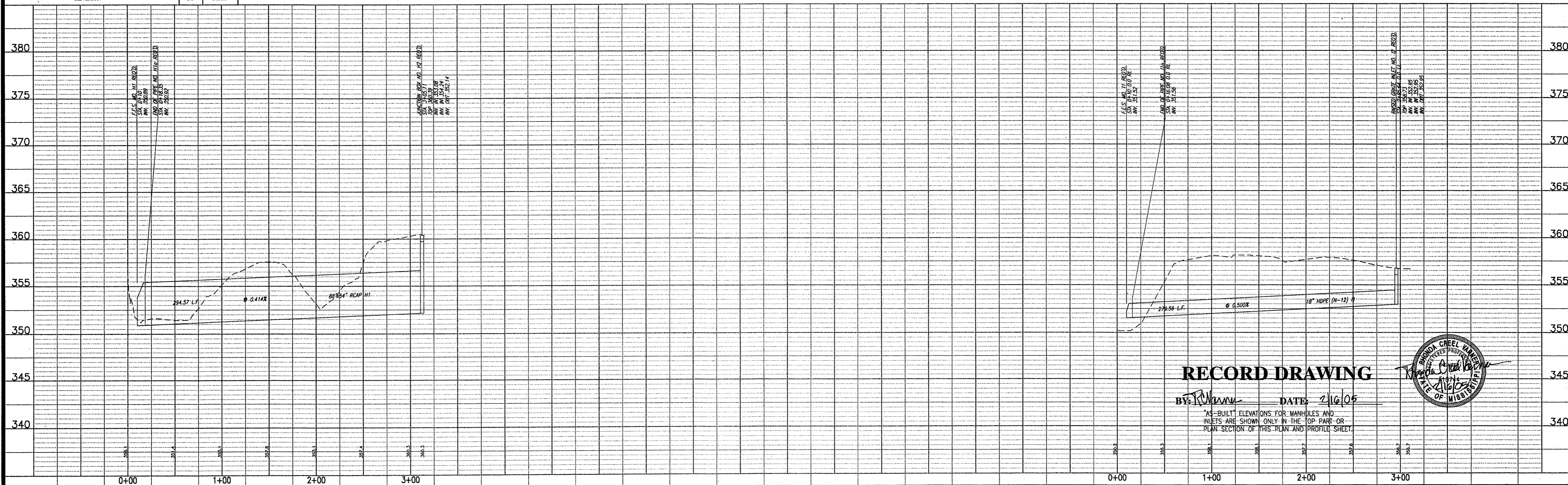
PLAN AND PROFILE - STORM OUTFALL H
STA. 0+00 - STA. 3+15.11



PLAN AND PROFILE - STORM OUTFALL I
STA. 0+00 - STA. 3+10.64

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

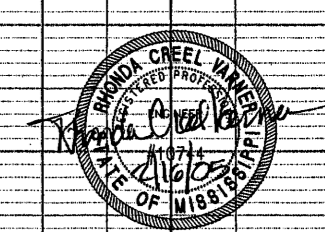
| REVISION | RAP | BY | DATE |
|----------------|-----|----|------|
| AS-BUILT PLANS | | | |



RECORD DRAWING

BY: R.V.V. DATE: 2/16/05

AS-BUILT ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OR PLAN SECTION OF THIS PLAN AND PROFILE SHEET.



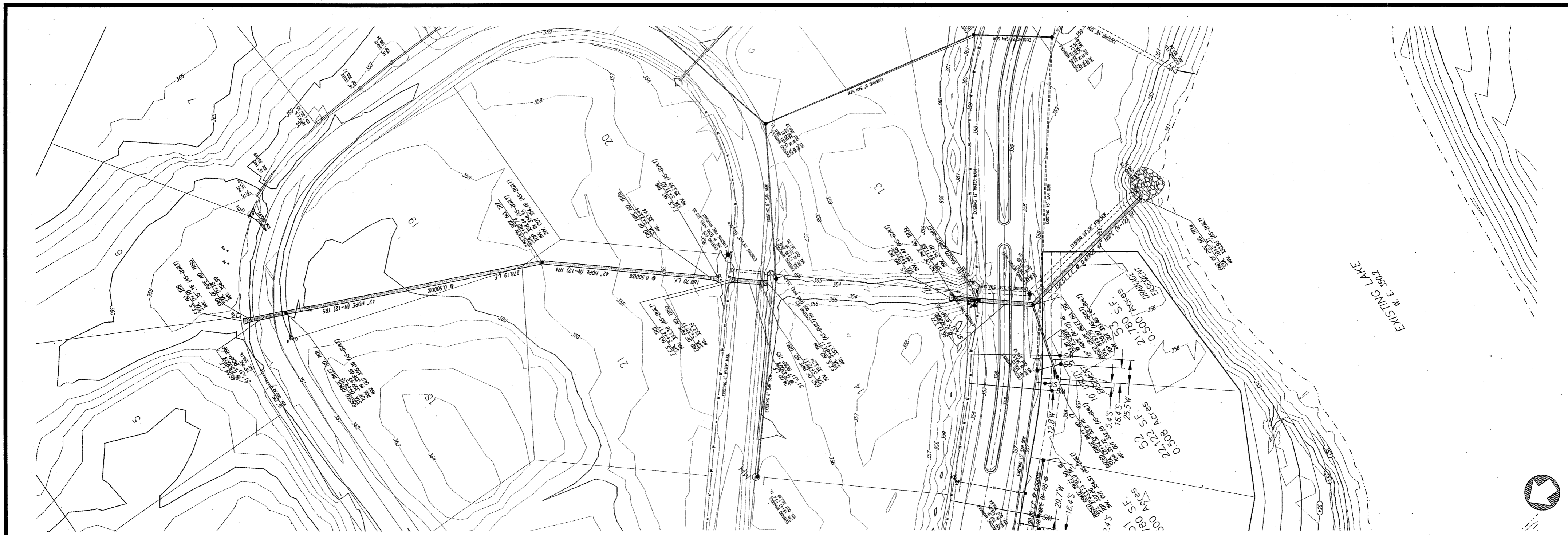
WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

PLAN AND PROFILE - STORM OUTFALL H
PLAN AND PROFILE - STORM OUTFALL I

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

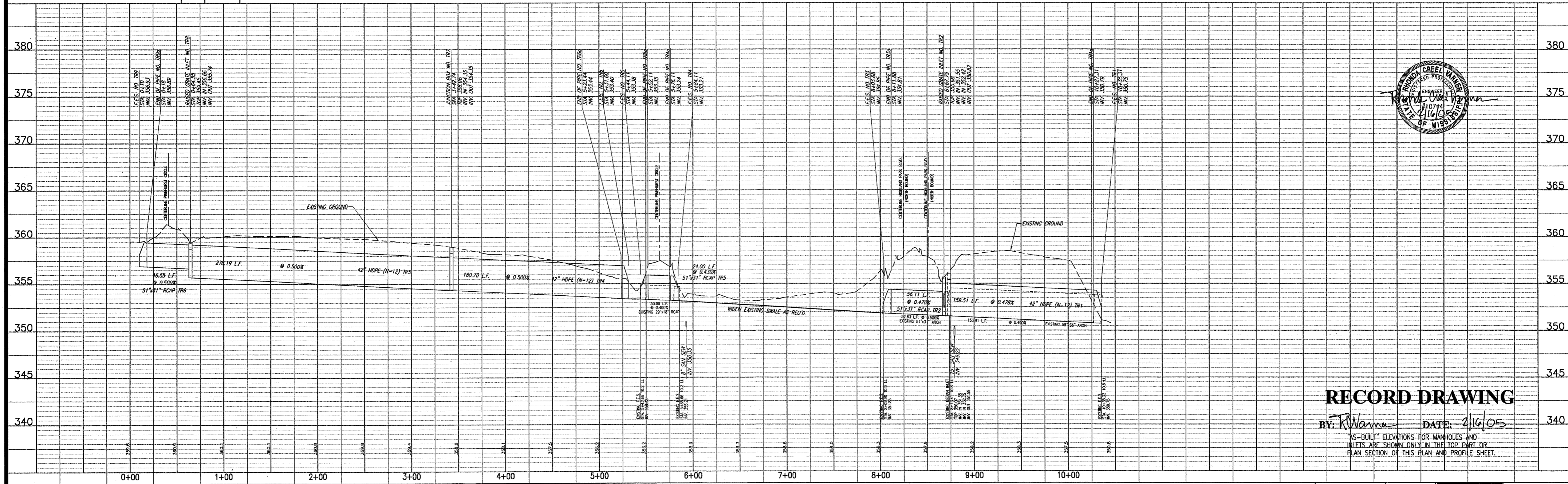
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| Drawn By: | R.D.P. | DATE: | 02/15/04 |
| Checked By: | R.V.V. | DATE: | 07/11/04 |
| Scale: | 1"=50' HORIZ. | 1"=5' VERT. | |

STERLING CONSULTANTS
Drawing No. 16 of 20



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

| REVISION | RAP | BY | DATE |
|----------|-----|----|----------|
| | | | 01/08/05 |



RECORD DRAWING

BY: *R. W. ...* DATE: 2/16/05

AS-BUILT ELEVATIONS FOR MANHOLES AND INLETS ARE SHOWN ONLY IN THE TOP PART OR PLAN SECTION OF THIS PLAN AND PROFILE SHEET.

WRENFIELD PART ONE
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

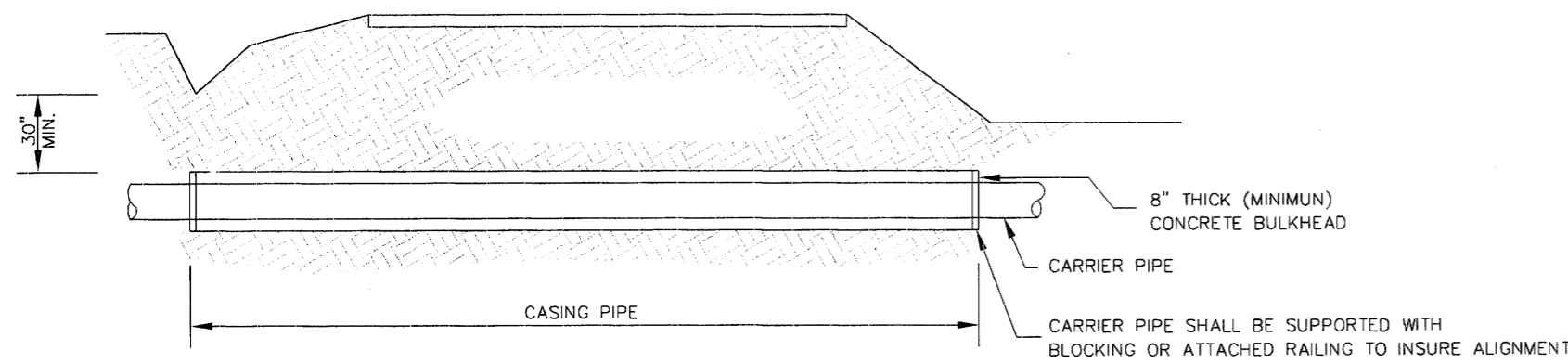
PLAN AND PROFILE - STORM WATER RELIEF PIPE
STA. 0+00 - STA. 10+45.31

Prepared For:
GRACE PROP., LLC
RIDGELAND, MISSISSIPPI

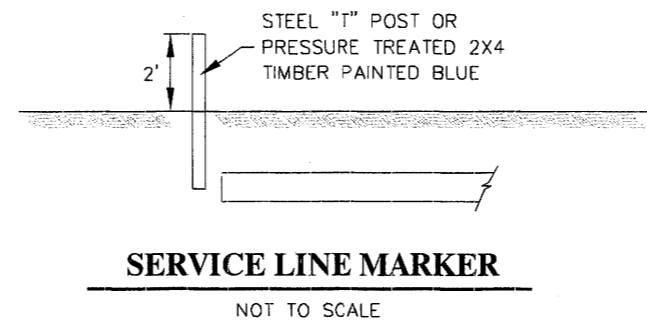
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| Designed By: | R.V. | DATE: | 08/19/04 |
| Drawn By: | R.D.B. | DATE: | 08/19/04 |
| Checked By: | R.V. | DATE: | 10/12/04 |
| Scale: | 1"=50' HORIZ. | 1"=5' VERT. | |



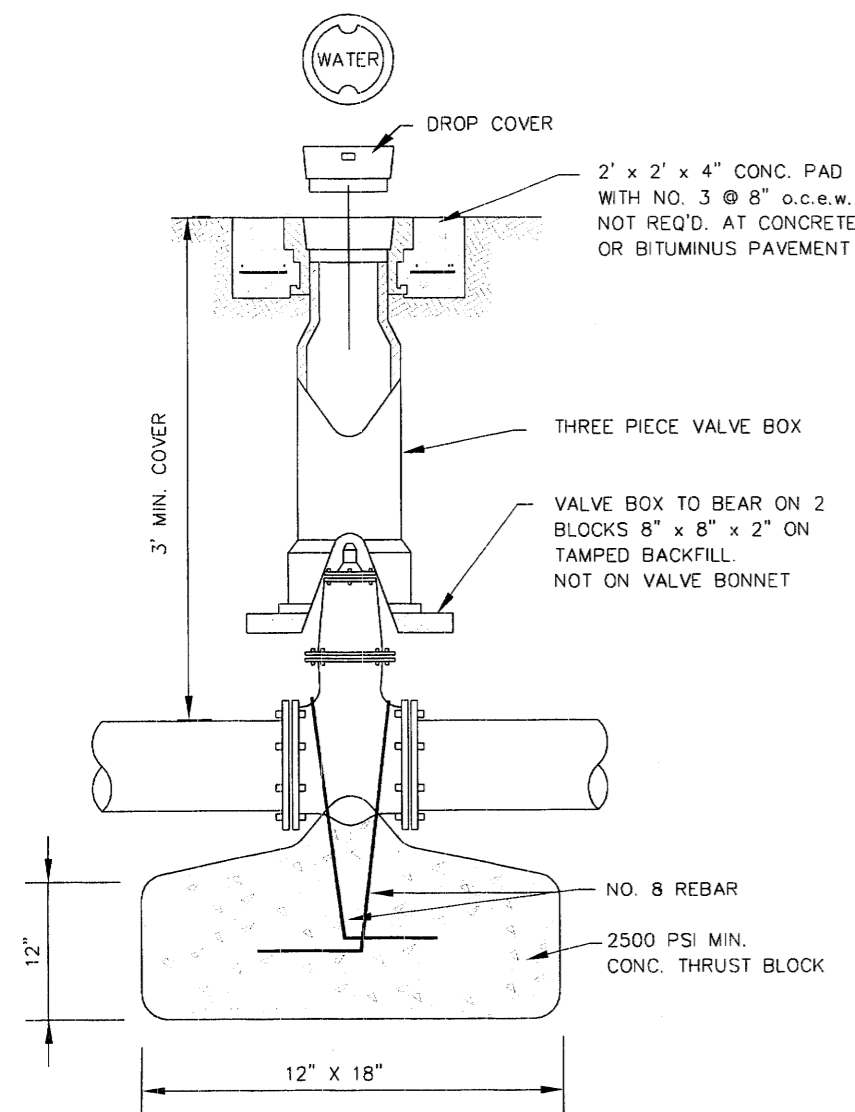
Drawing No.
17 of 20



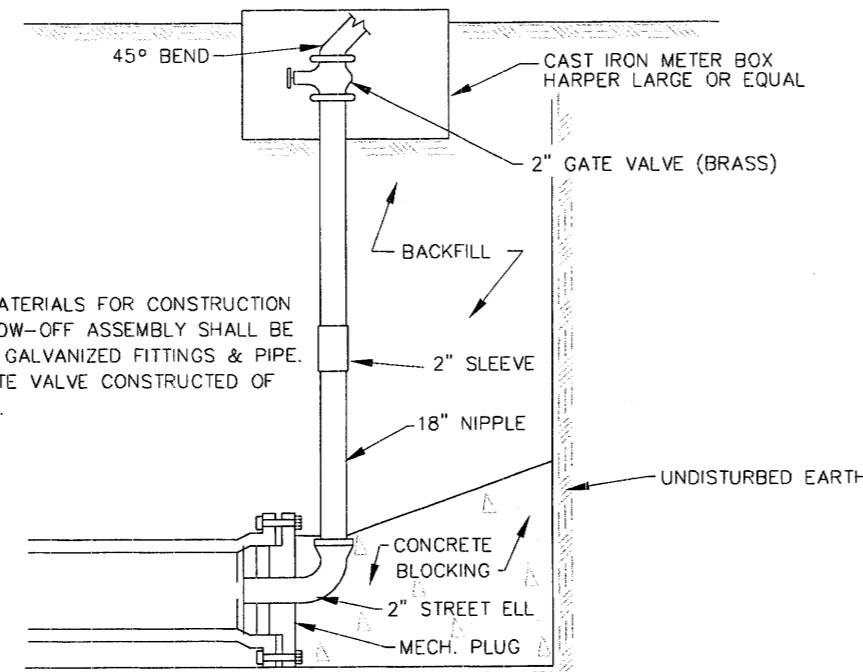
TYPICAL BORE SECTION
NOT TO SCALE



SERVICE LINE MARKER
NOT TO SCALE

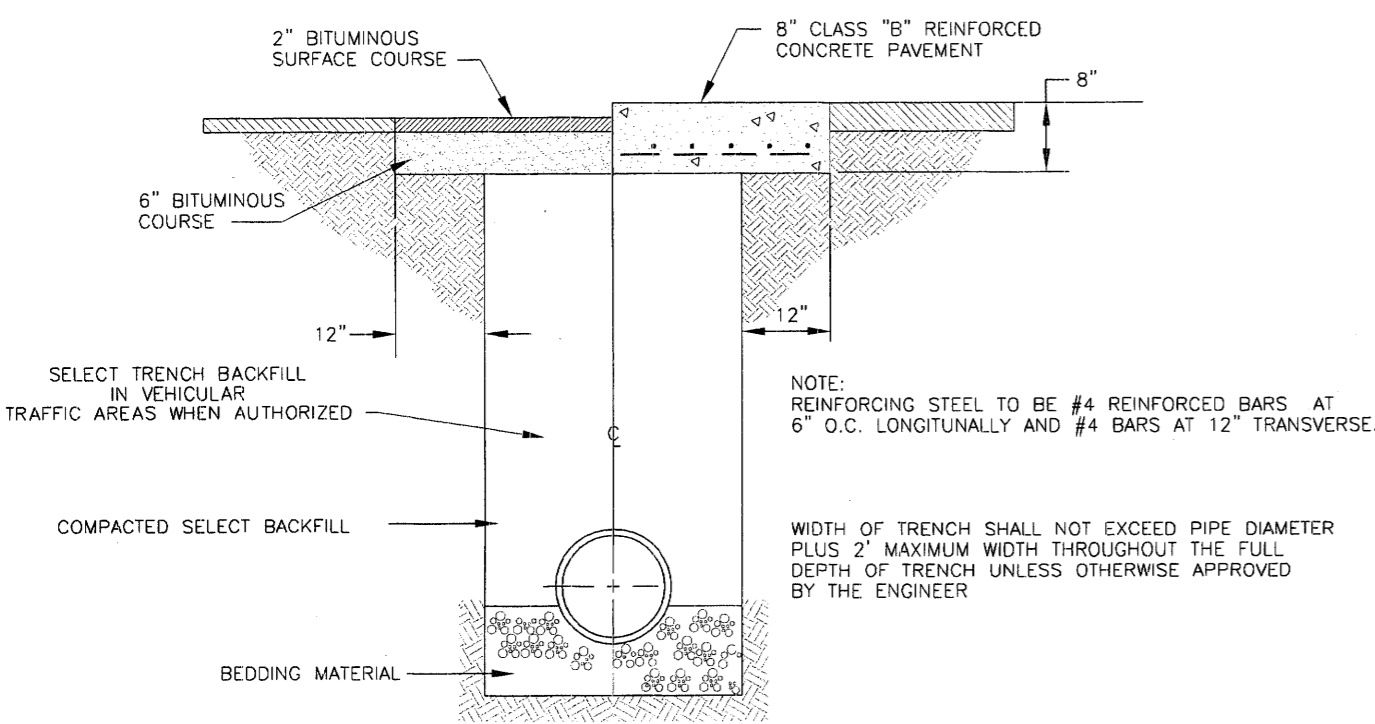


GATE VALVE DETAIL
NOT TO SCALE



TYPICAL BLOW-OFF ASSEMBLY
NOT TO SCALE

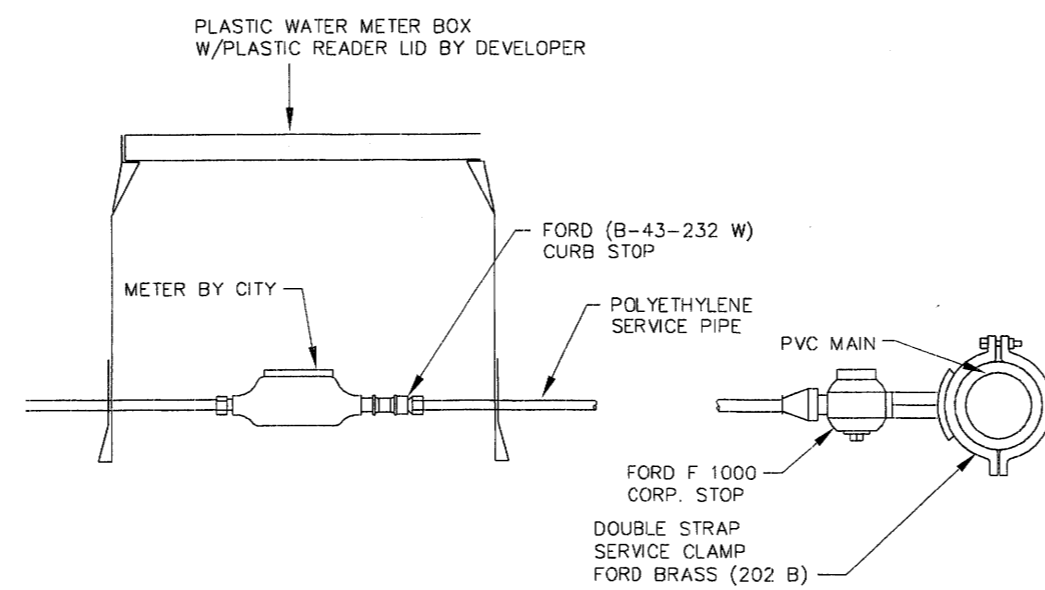
NOTE:
ALL MATERIALS FOR CONSTRUCTION OF BLOW-OFF ASSEMBLY SHALL BE OF 2" GALVANIZED FITTINGS & PIPE. 2" GATE VALVE CONSTRUCTED OF BRASS.



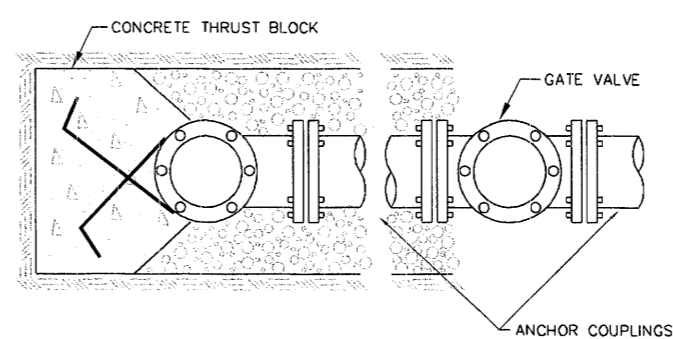
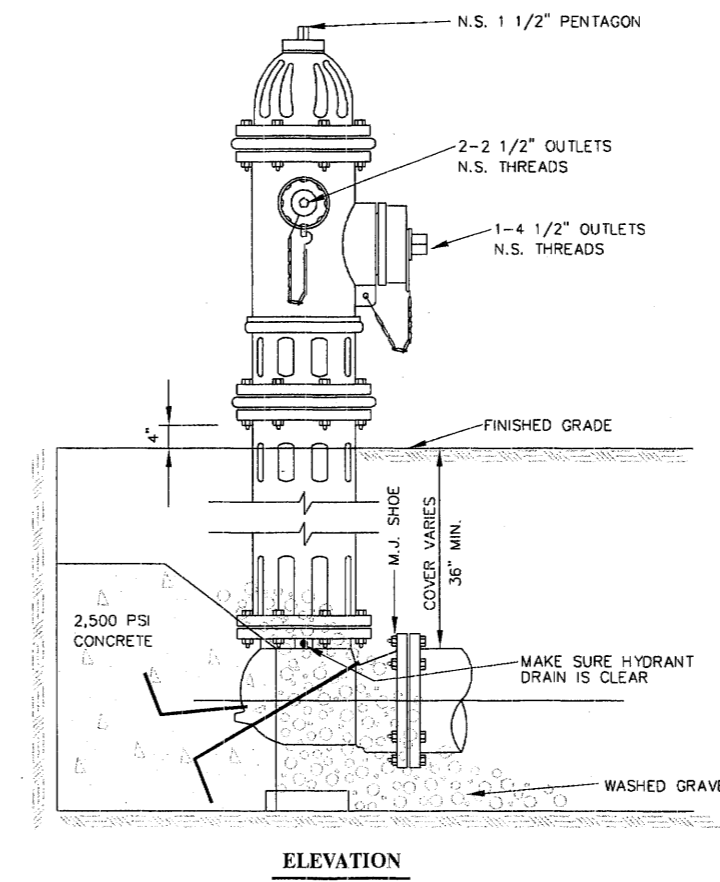
TYPICAL ROADWAY SECTION
NOT TO SCALE

| PIPE SIZE (IN.) | TRENCH WIDTH (FT.) | TRENCH VOLUME PER FOOT OF DEPTH (CY/FT) | 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 | 0.98 |
| 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

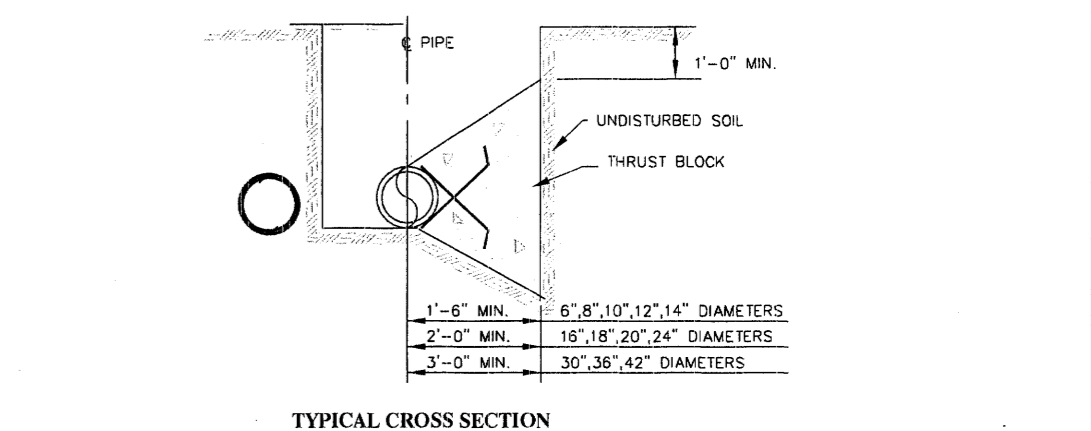
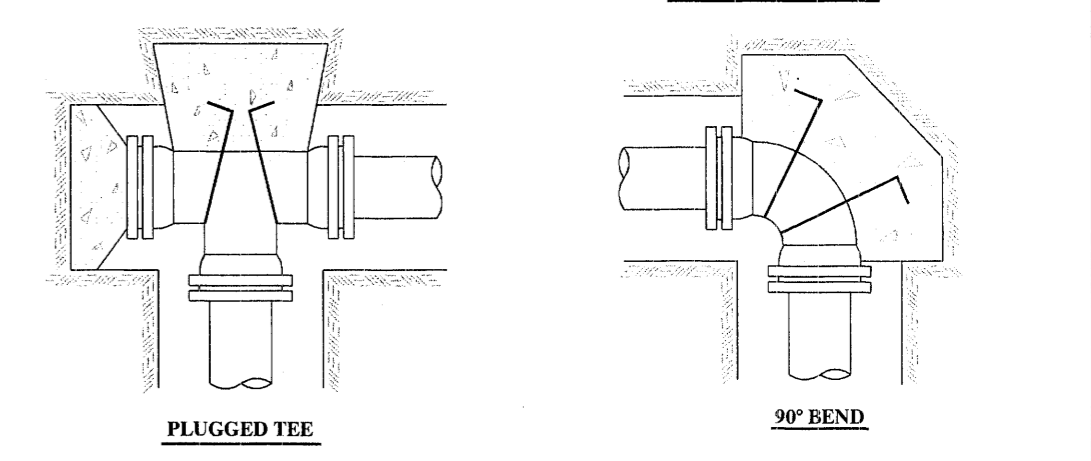
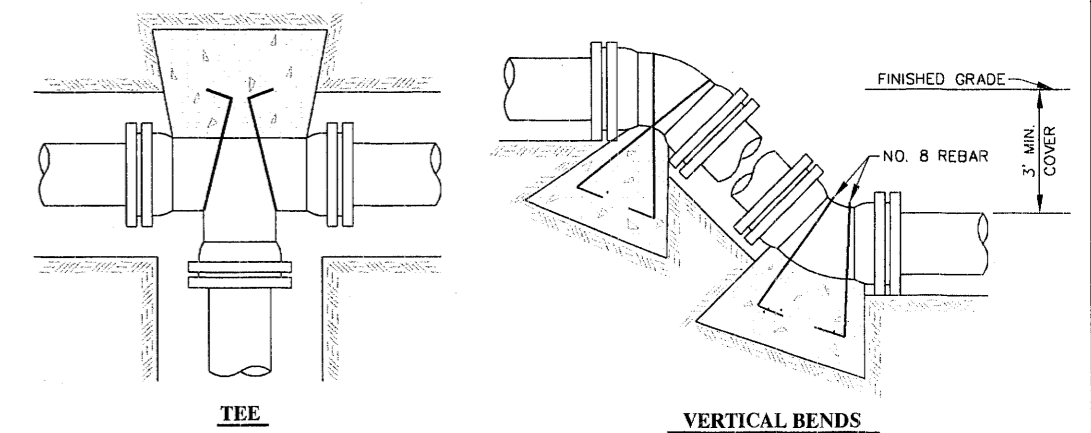


TYPICAL SERVICE ASSEMBLY
NOT TO SCALE



TYPICAL FIRE HYDRANT INSTALLATION
NOT TO SCALE

- NOTES:
1. GATE VALVES WILL BE REQUIRED ON ALL FIRE HYDRANT LEGS.
2. TWO ANCHOR COUPLINGS REQUIRED ON ALL FIRE HYDRANTS.



TYPICAL CROSS SECTION

TYPICAL THRUST BLOCKING IN WATER MAINS AND SEWAGE FORCE MAINS
NOT TO SCALE

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

BEARING AREA IN SQ. FT.

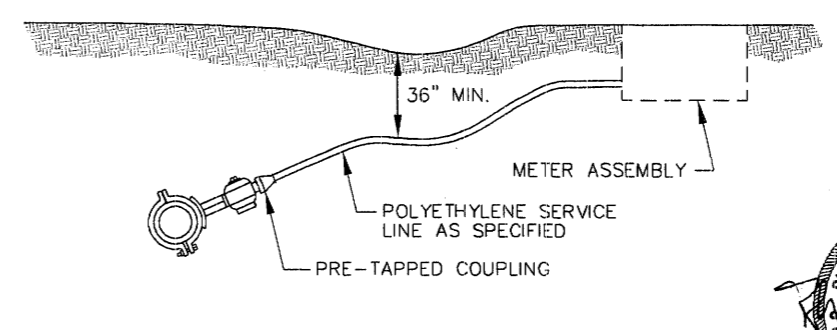
| NOMINAL PIPE DIAMETER (IN) | DEAD-END OR TEE | 90° BEND | 45° BEND | 22 1/2' BEND | 11 1/4' BEND |
|----------------------------|-----------------|----------|----------|--------------|--------------|
| 6 | 2.5 | 3.0 | 2.0 | 2.0 | 2.0 |
| 8 | 4.0 | 6.0 | 3.0 | 2.0 | 2.0 |
| 10 | 6.0 | 9.0 | 5.0 | 2.5 | 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) |

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.



TYPICAL SERVICE ASSEMBLY FOR DUCTILE IRON PIPE
NOT TO SCALE

RECORD DRAWING

BY: *R. Vanna* DATE: *4/09/05*

**WRENFIELD PART ONE
A DEVELOPMENT OF
GRACE PROF., LLC**

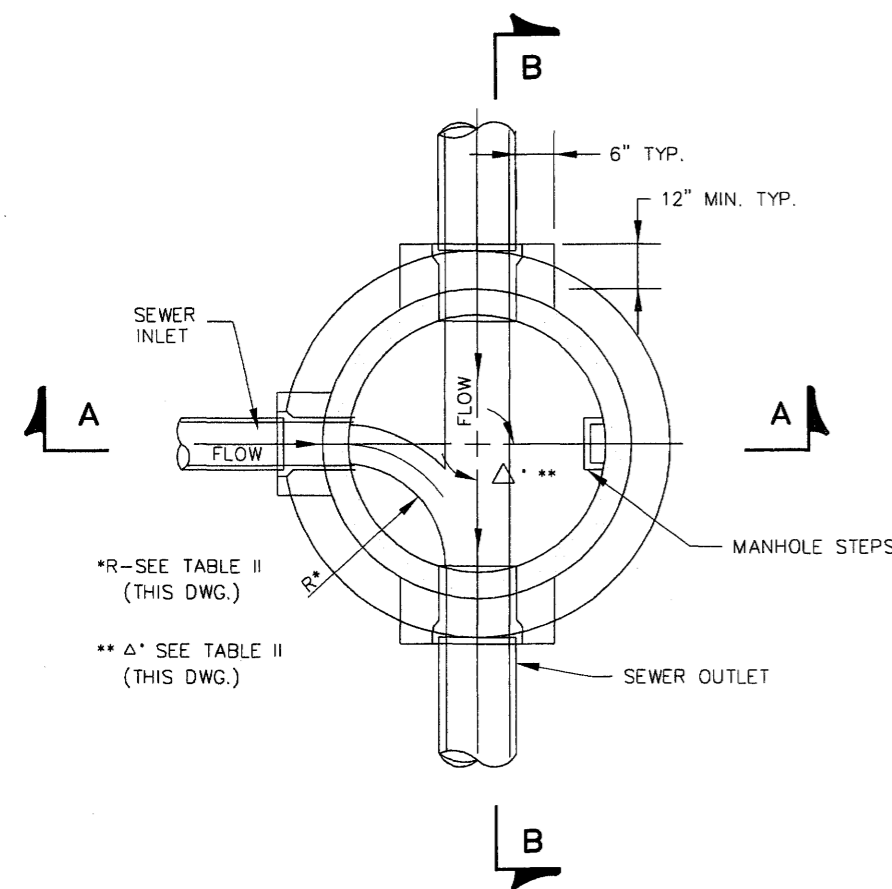
STANDARD WATER DETAILS

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

DESIGN: RCV DATE: 02/20/04
DRAWN: RDB DATE: 02/20/04
CHECKED: RCV DATE: 02/20/04
SCALE: AS SHOWN

STERLING CONSULTANTS

DRAWING NO. **18 OF 20**

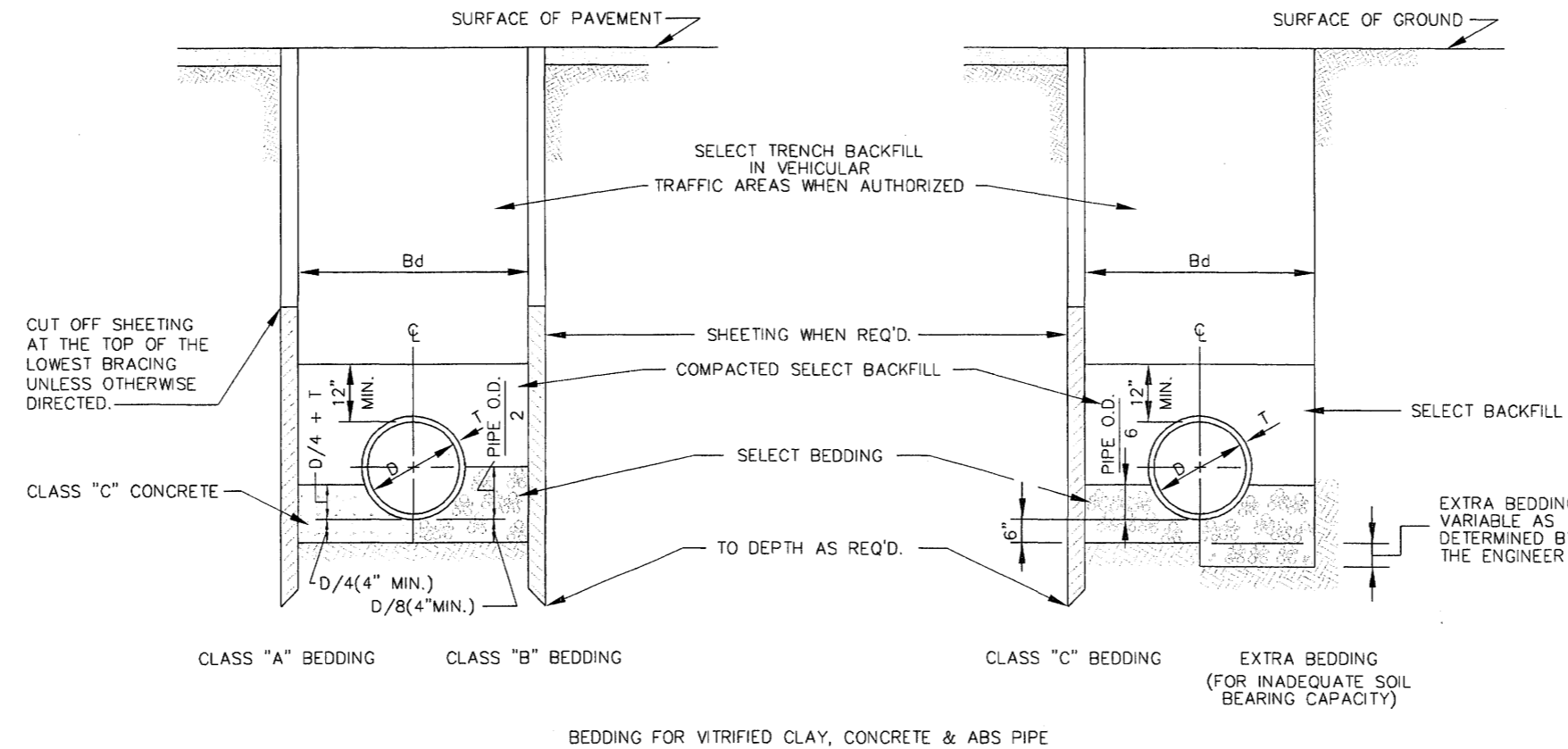


**SECTIONAL PLAN
STANDARD MANHOLE**
NOT TO SCALE

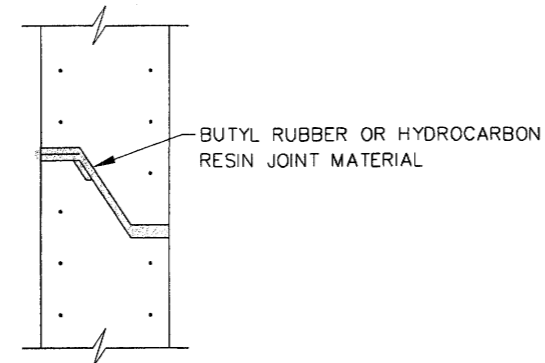
*R-SEE TABLE II
(THIS DWG.)
** Δ' SEE TABLE II
(THIS DWG.)

| 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" |

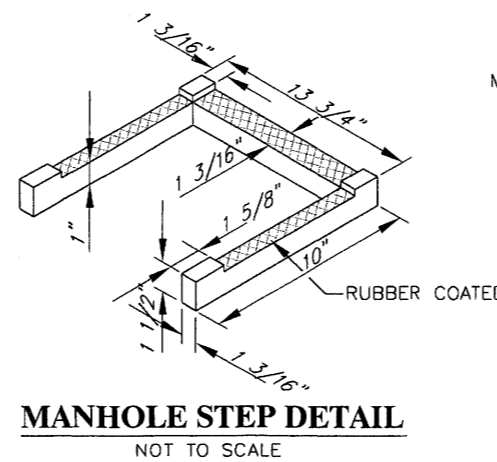
* SEE SECTIONAL PLAN, STANDARD MANHOLE
** PRECAST MANHOLE



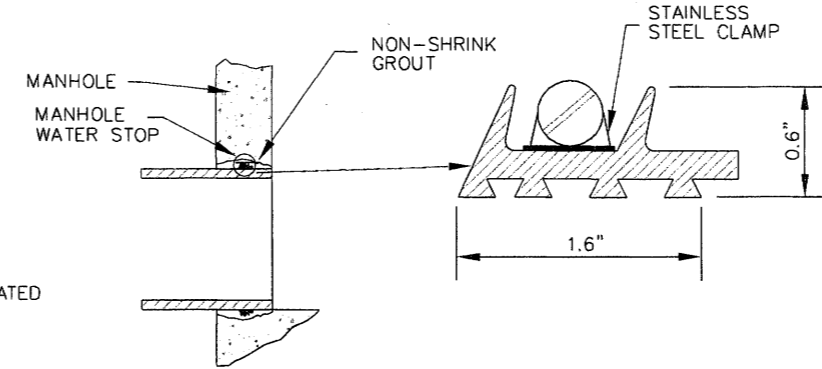
TYPICAL TRENCH DETAILS
NOT TO SCALE



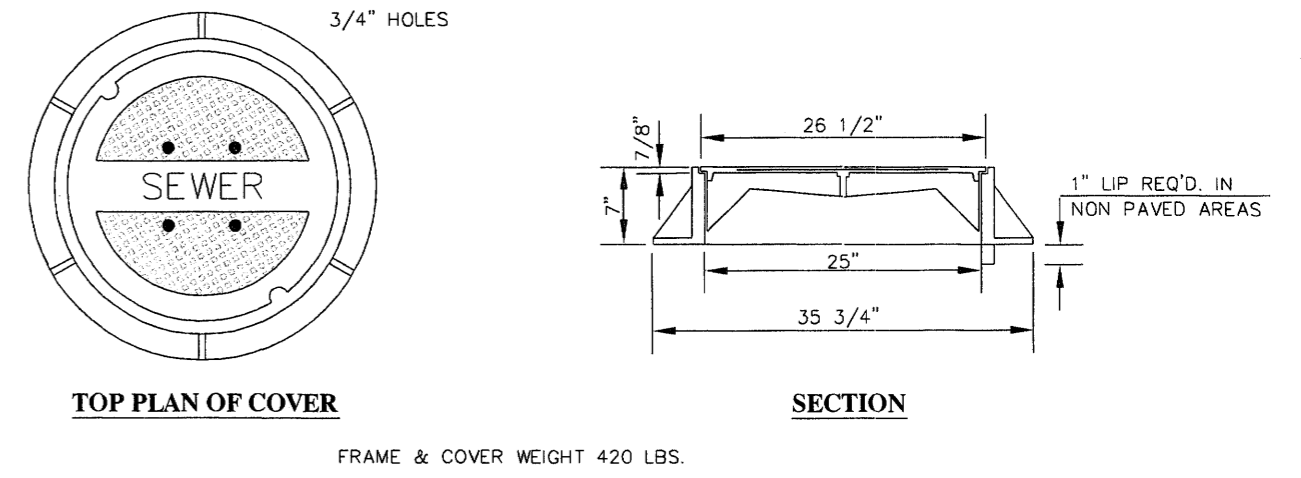
**TYPICAL PRECAST CONCRETE
MANHOLE JOINT DETAIL**
N.T.S.



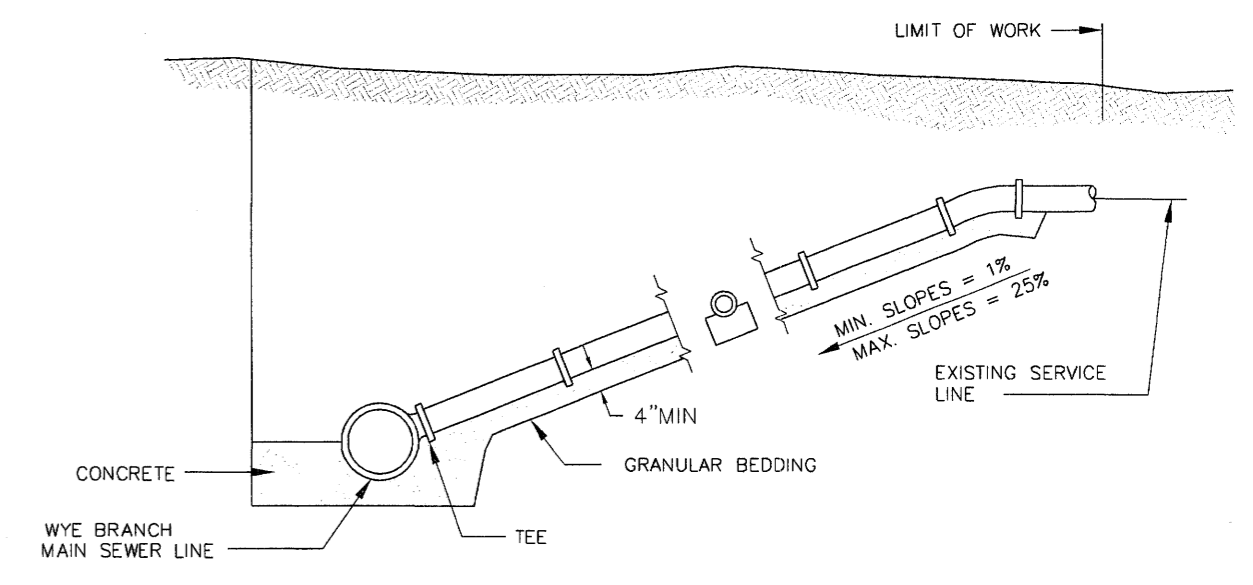
MANHOLE STEP DETAIL
NOT TO SCALE



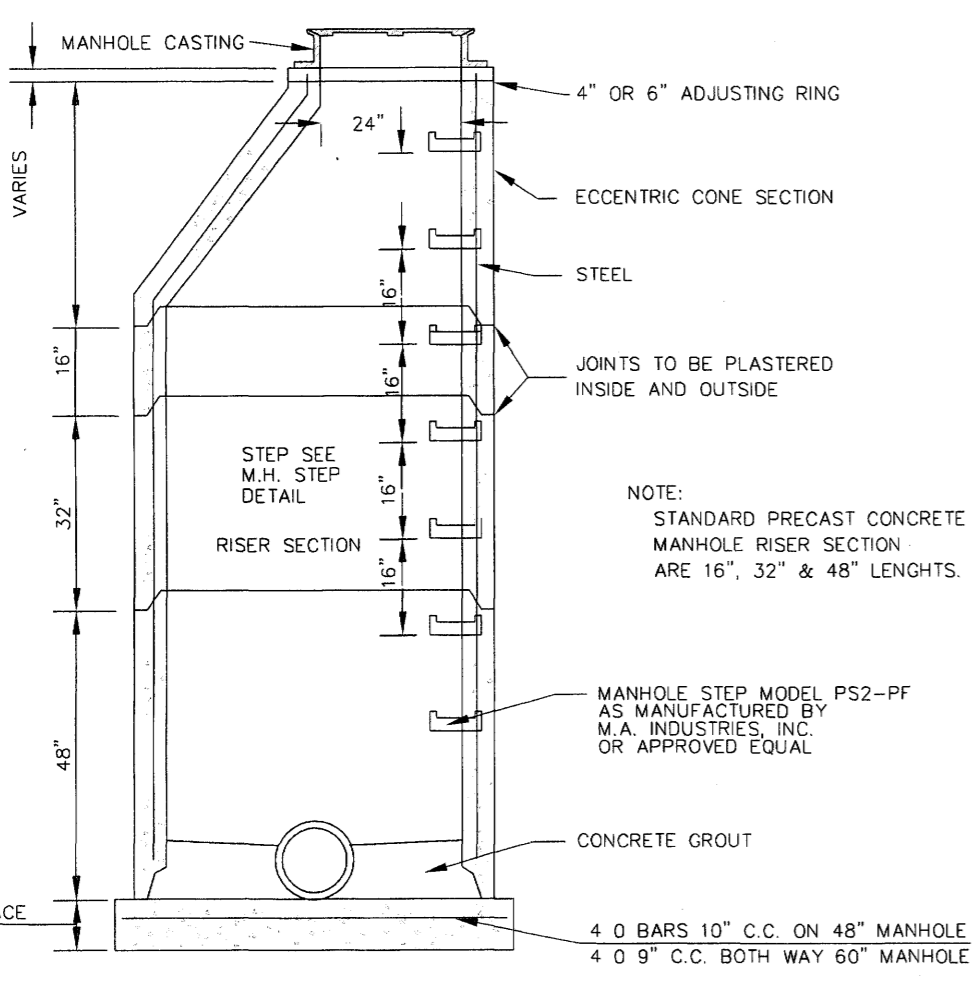
**TYPICAL MANHOLE WATER STOP
FOR ABS, CLAY OR PVC PIPE**
EXISTING AND "STRADDLE" MANHOLES
N.T.S.



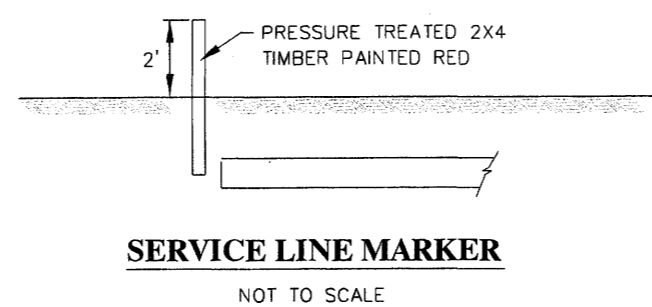
STANDARD MANHOLE FRAME AND COVER
N.T.S.



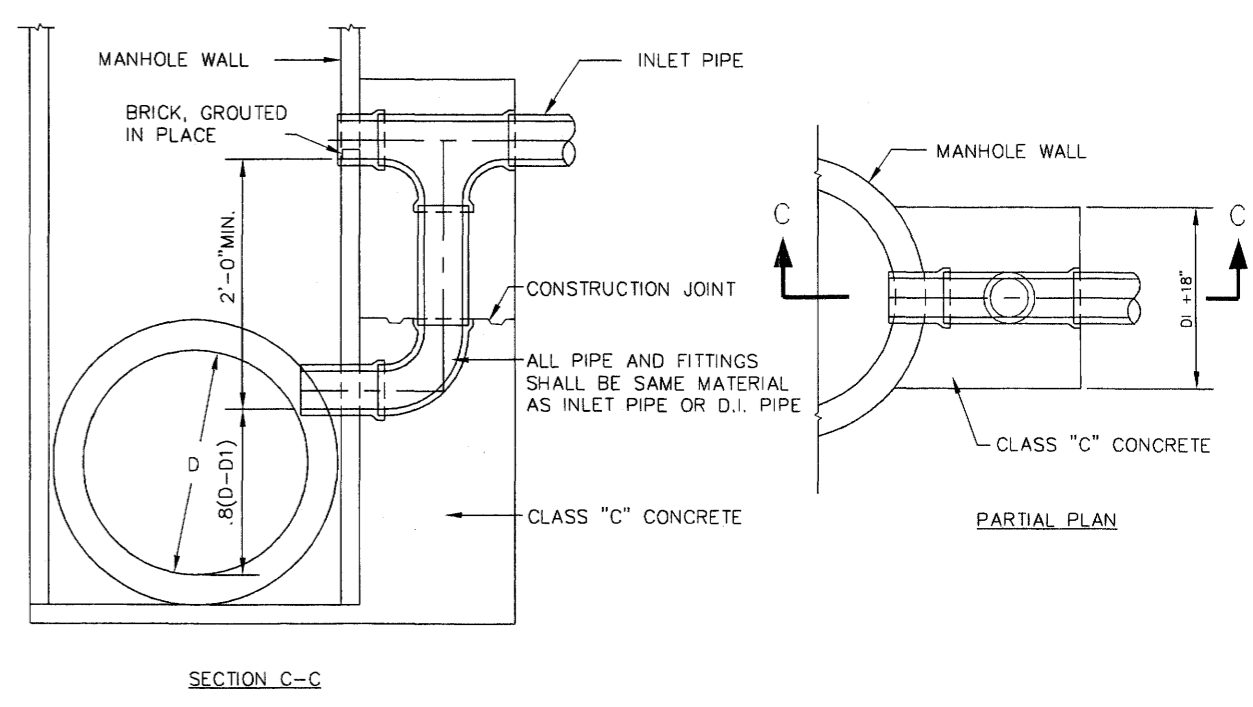
TYPICAL SERVICE LINE CONNECTION
NOT TO SCALE



SECTION OF PRECAST CONCRETE MANHOLE
N.T.S.



SERVICE LINE MARKER
NOT TO SCALE



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

| AS-BUILT PLANS | REVISION | RAP | BY | DATE |
|----------------|----------|----------|----|------|
| | | 01/28/06 | | |

RECORD DRAWING

BY: *R. Williams* DATE: *2/2/06*

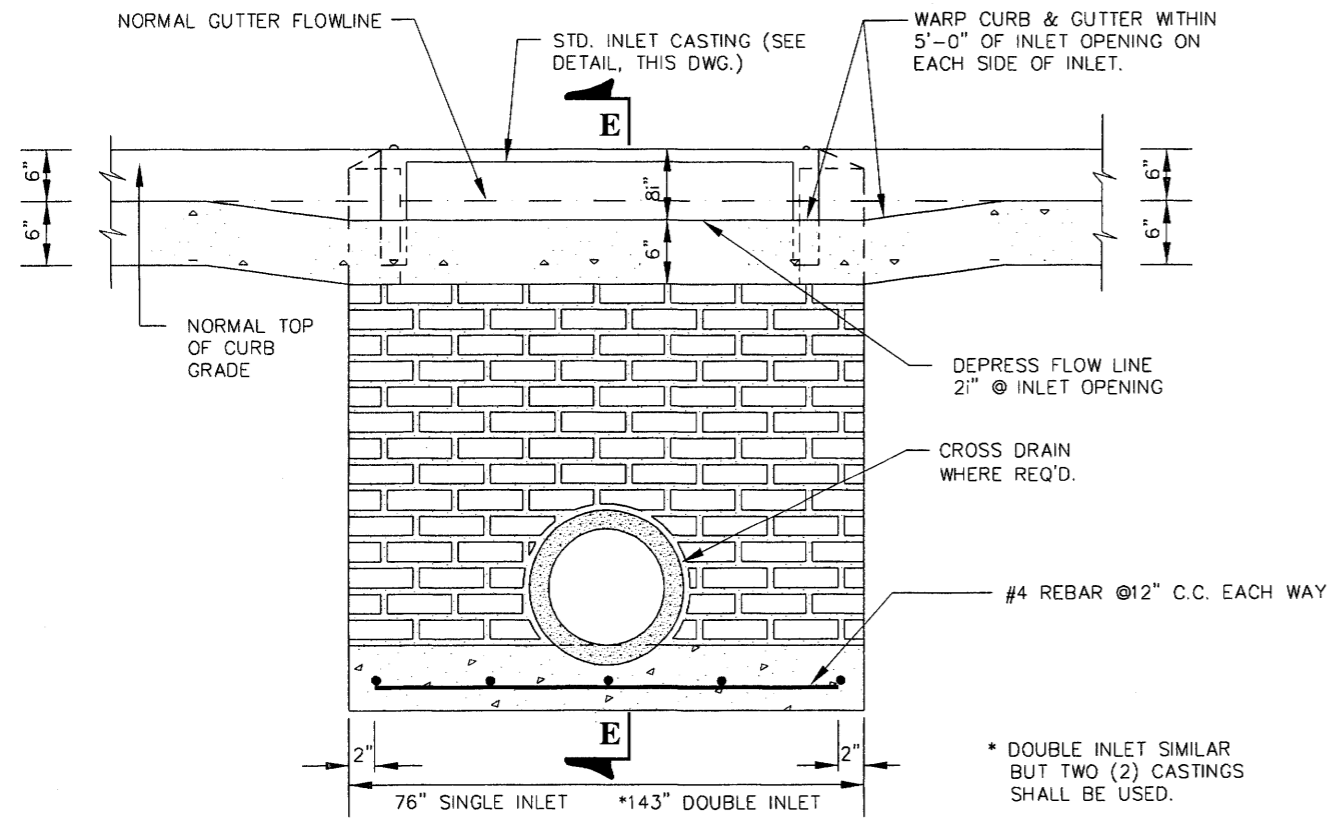


**WRENFIELD PART ONE
A DEVELOPMENT OF
GRACE PROP., LLC**

**STANDARD
SANITARY SEWER DETAILS**

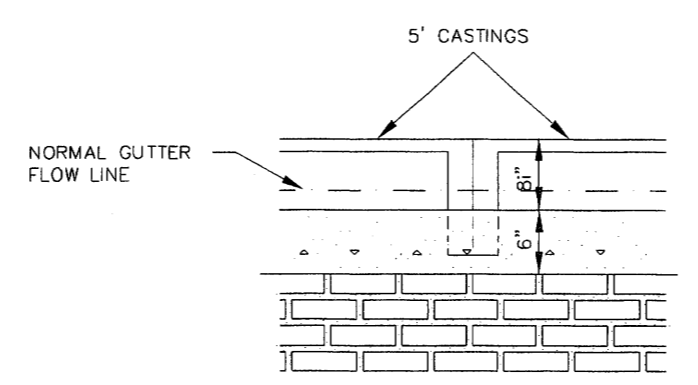
**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

| | | | |
|-----------------|----------------|--|-------------|
| DSGN: R.C.V. | DATE: 02/12/04 | | DRAWING NO. |
| DRWN: R.P.B. | DATE: 02/12/04 | | 19 OF 20 |
| CHKD: R.C.V. | DATE: 02/12/04 | | |
| SCALE: AS SHOWN | | | |

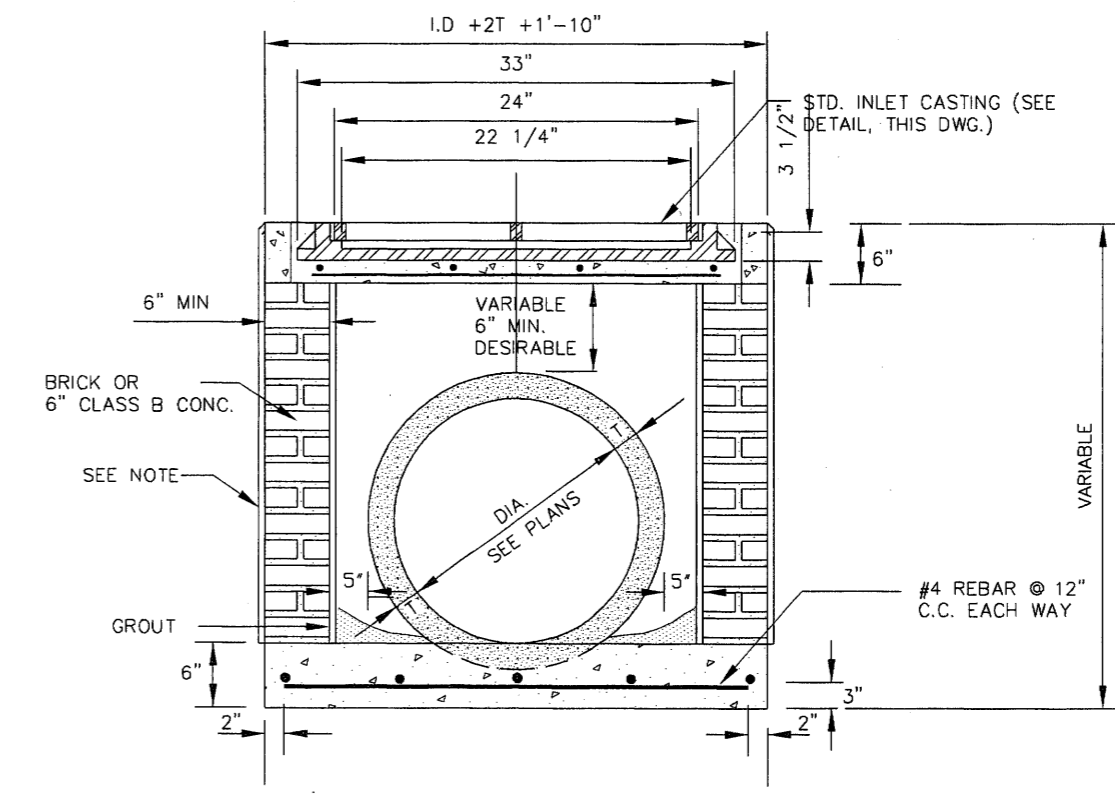


**FRONT ELEVATION
INLET TYPES "A" AND "A" MODIFIED**
NOT TO SCALE

- 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.

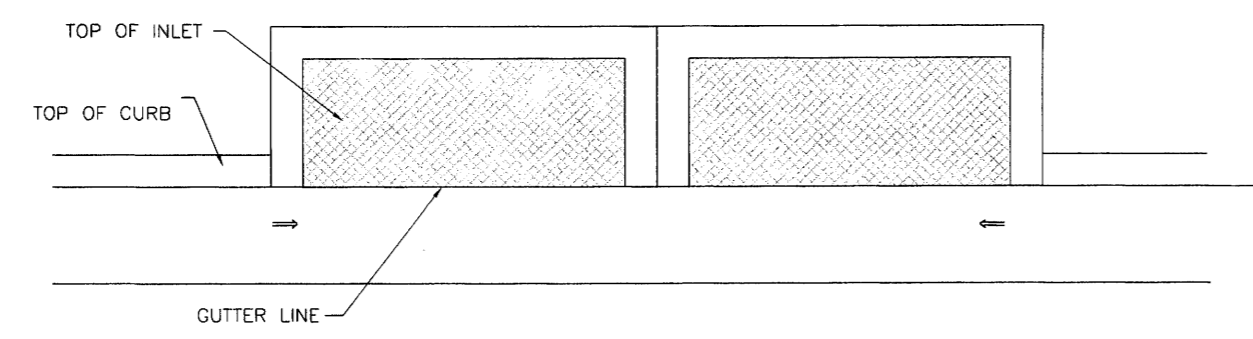


MIDSPAN ELEVATION - DOUBLE INLET
NOT TO SCALE

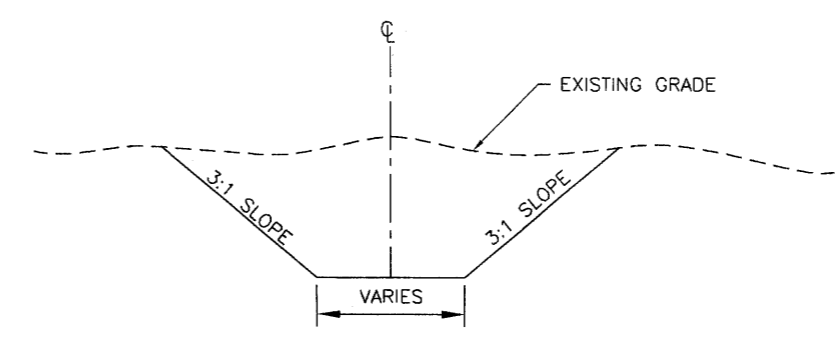


DROP INLET DETAIL
NOT TO SCALE

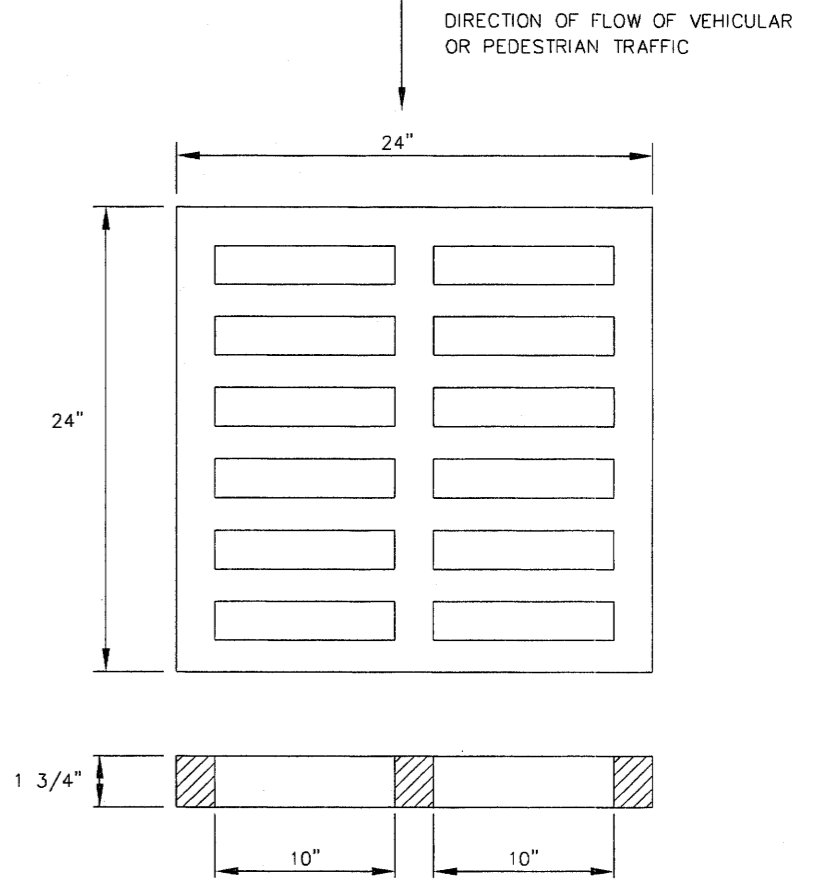
NOTE
ALL BRICK WALLS SHALL BE PLASTERED INSIDE AND OUTSIDE WITH CEMENT MORTAR 1/2" THICK. CLASS "B" STRUCTURAL CONCRETE MAY BE USED TO CONSTRUCT INLETS IN LIEU OF BRICK MASONRY. IF CONCRETE IS USED, WALLS SHALL BE REINFORCED WITH #4 REBAR @ 16" O.C. EACH WAY.



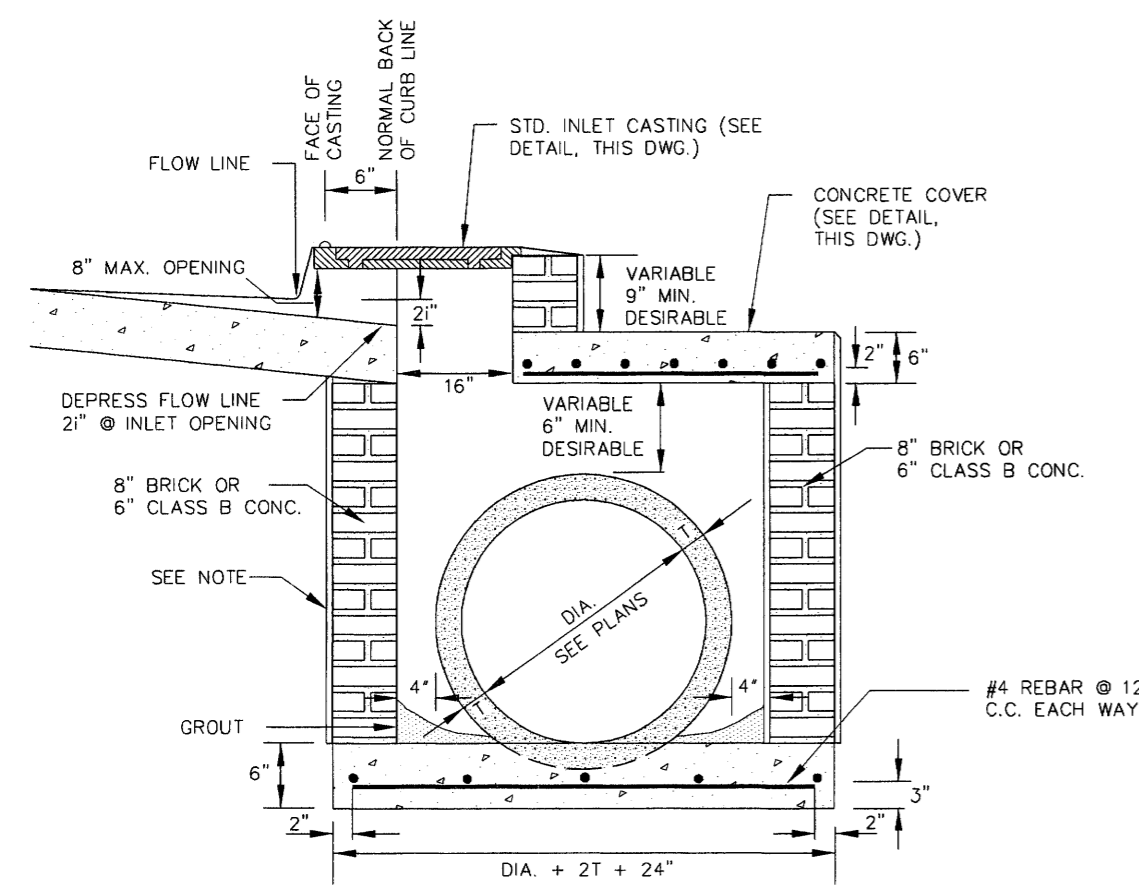
PLAN OF DOUBLE 4' STANDARD CURB INLET
NOT TO SCALE



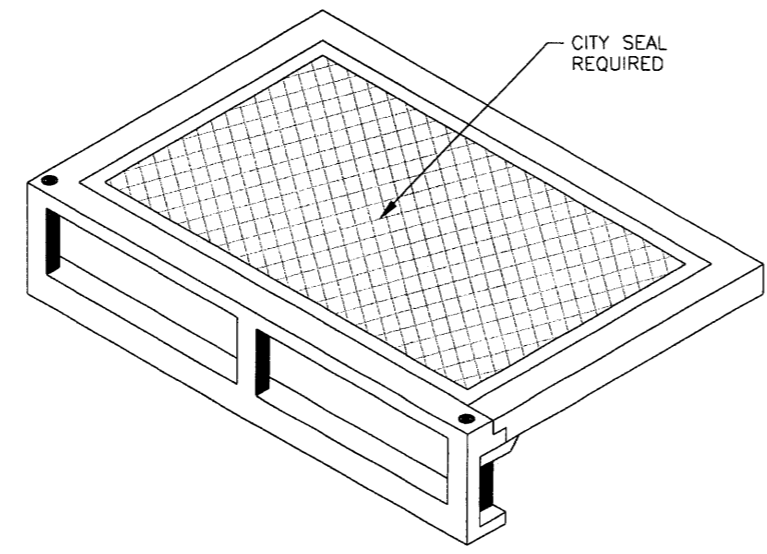
TYPICAL DETAIL OF DRAINAGE DITCH
NOT TO SCALE



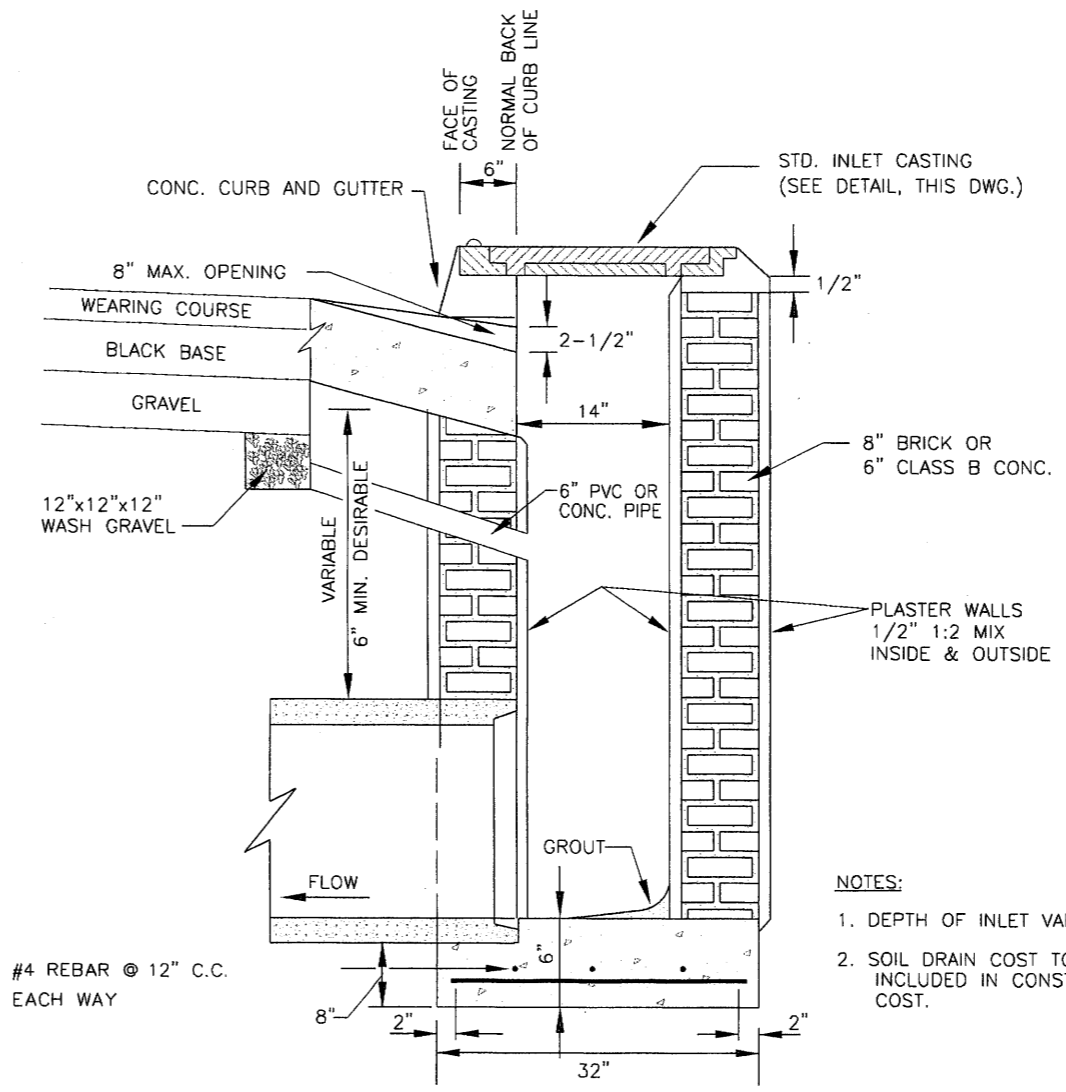
GRATE DETAIL
NOT TO SCALE



**SECTION E-E
TYPE "A" MODIFIED**
NOT TO SCALE



STANDARD CURB INLET CASTING
(VULCAN V-4302-1 OR HARPER RCB-7)
NOT TO SCALE



SECTION OF STANDARD CURB INLET
NOT TO SCALE

- NOTES:**
1. DEPTH OF INLET VARIABLE.
 2. SOIL DRAIN COST TO BE INCLUDED IN CONSTRUCTION COST.

RECORD DRAWING
BY: *R. Hanna* DATE: 2/09/05

**WRENFIELD PART ONE
A DEVELOPMENT OF
GRACE PROP., LLC**

**STANDARD
STORM SEWER DETAILS**

**CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI**

| | |
|-----------------|----------------|
| DSGN: R.C.V. | DATE: 08/10/04 |
| DRWN: R.P.B. | DATE: 08/10/04 |
| CHKD: R.C.V. | DATE: 08/10/04 |
| SCALE: AS SHOWN | |

STERLING CONSULTANTS
CONSULTING ENGINEERS

DRAWING NO. **20 OF 20**

| | | | |
|----------------|----------|-----|----------|
| AS-BUILT PLANS | REVISION | RAP | 01/08/05 |
| | | BY | DATE |