SITE DEVELOPMENT PLANS

FOR

KINGSLAND WEST

CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA

PREPARED FOR:

PHELPS INVESTMENT PROPERTIES, INC.

2629 WAVERLY BARN ROAD, SUITE 133

DAVENPORT, FL 33897

PHONE: (863) 420-9977

FAX: (863) 420-3015

Approved for Construction
Ken Kusler
5/24/07

PREPARED BY:

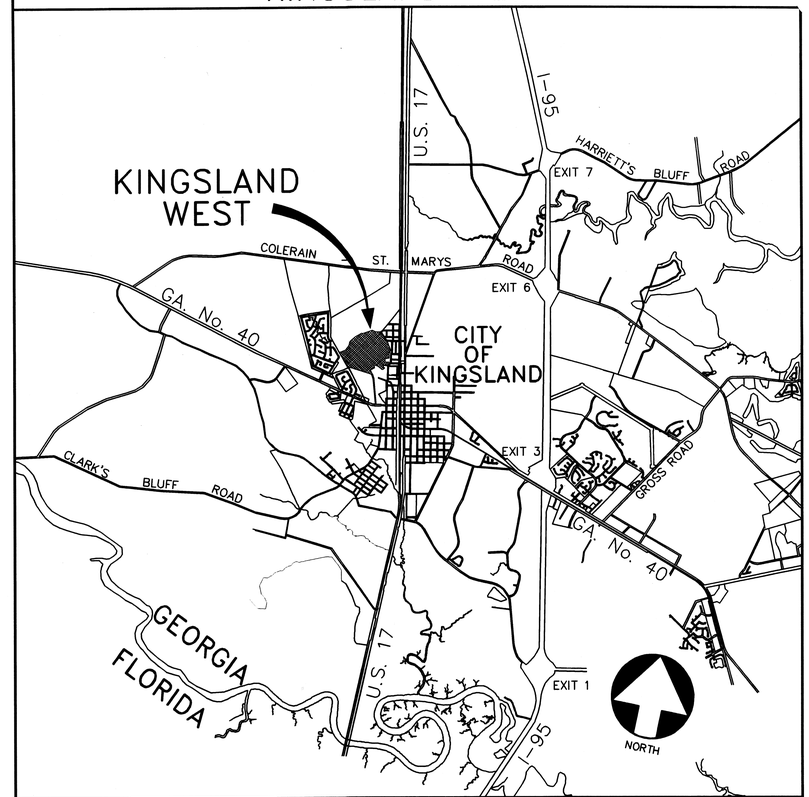
P & A ENGINEERING, INC.

CIVIL ENGINEERS

1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729

29 CORAL PARK WAY
BRUNSWICK, GEORGIA 31523
PH. (912) 265-3851
FAX (912) 265-2727

KINGSLAND WEST



VICINITY MAP
(N.T.S.)

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REVISION HISTORY

REV. NO.	DATE	DESCRIPTION
1	1/29/07	REVISIONS PER CITY COMMENTS DATED 1/22/07
2	02/14/07	REVISED MASONS COURT GRADING
3	02/26/07	REVISED PER CITY OF KINGSLAND COMMENTS

PROJECT No.: 06-5038
DWG. No.: 2006-5038

GENERAL PROJECT NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE CURRENT CITY OF KINGSLAND STANDARDS AND SPECIFICATIONS AND WITH ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL ORDINANCES AND LAWS.
2. THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE CONSTRUCTION.
3. THE CONTRACTOR SHALL COORDINATE SITE CONSTRUCTION WITH ALL UTILITY CONSTRUCTION (POWER, TELEPHONE, GAS, CABLE, ETC.) AND OTHER WHICH MAY BE SPECIFIC TO THE PROJECT.
4. THE OFFICE OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR SHALL BE GIVEN AT LEAST ONE (1) WEEK'S NOTICE PRIOR TO BEGINNING ANY CONSTRUCTION. ALL WORK SHALL BE DONE UNDER THE SUPERVISION AND INSPECTION OF THE OFFICE OF THE CITY PUBLIC WORKS DIRECTOR IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
5. ALL CONTRACTORS SHALL FURNISH "AS-BUILTS" ON MYLAR AS REQUIRED BY THE CITY OF KINGSLAND.
6. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT.
7. ALL UNSUITABLE MATERIALS FROM CLEARING, GRUBBING, AND OTHER ACTIVITIES SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE.
8. DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
9. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATIONS AND LIAISON WITH UTILITY COMPANIES IN THE PROCESS OF LOCATING, RELOCATION AND TIE-IN TO PUBLIC UTILITIES. ALSO, THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL INSPECTORS, INCLUDING CITY INSPECTORS PRIOR TO BEGINNING SITE CONSTRUCTION.
10. IN THE CASE OF UNFORESEEN CONSTRUCTION COMPLICATIONS OR DISCREPANCIES, THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.

CONSTRUCTION SITE SAFETY

1. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT.
2. WORKMEN AND THE PUBLIC SHALL BE PROTECTED BY THE CONTRACTOR FROM ANY AND ALL HAZARDS CONNECTED WITH THE CONSTRUCTION WORK.
3. OPEN TRENCHES, MATERIALS, OR EQUIPMENT WITHIN THE WORKING LIMITS ARE TO BE PROTECTED BY THE USE OF ADEQUATE BARRICADES.
4. ALL WORK SHALL BE IN CONFORMANCE TO OSHA REGULATIONS, TITLE 19, PARTS 1926.651 AND 1926.652.
5. UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES AND NOTIFY THE UTILITIES PROTECTION CENTER AT "1-800-282-7411" PRIOR TO EXCAVATION.

EARTHWORK

1. SEE SOIL AND EROSION CONTROL PLAN FOR SOILS CLASSIFICATION.
2. SUBGRADE: SUBSURFACE HAS BEEN INVESTIGATED ONLY AS SHOWN. ALL UNSUITABLE MATERIAL IN PAVEMENT OR BUILDING AREAS SHALL BE REMOVED TO A DEPTH OF 3.0 FEET BELOW SUBGRADE. BACKFILL WITH SUITABLE MATERIAL.
3. WHERE EXISTING SOILS TO BE USED IN THE STABILIZED SUBGRADE HAVE THE REQUIRED BEARING VALUE, NO ADDITIONAL STABILIZING MATERIAL NEED BE ADDED OR MIXED IN. THE STABILIZING MATERIAL, IF REQUIRED, SHALL BE HIGH-BEARING VALUE SOIL, SAND-CLAY, LIMEROCK, OR OTHER MATERIAL APPROVED BY THE CITY. THE CONSTRUCTION OF THE STABILIZED SUBGRADE, INCLUDING COMPACTION, SHALL CONFORM TO THE D.O.T. STANDARD SPECIFICATIONS, 1993 EDITION.
4. THE UPPER ONE FOOT OF MATERIAL BELOW THE ROADWAY BASE COURSE, HEREIN AFTER REFERRED TO AS STABILIZED SUBGRADE, SHALL BE COMPACTED TO DENSITIES OF AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY WEIGHT DENSITY (ASTM D1557). AFTER COMPLETING CLEARING/STRIPPING OPERATIONS, THE NATURAL SOILS BENEATH THE PAVEMENT AREAS SHALL BE COMPACTED UNTIL DENSITIES OF AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY WEIGHT DENSITY (ASTM D1557) HAVE BEEN ACHIEVED WITHIN THE UPPER ONE FOOT. NATURAL SOILS SHALL EXHIBIT MOISTURE CONTENTS WITHIN 2% OF THE MODIFIED PROCTOR MAXIMUM DRY WEIGHT DENSITY MOISTURE CONTENT.
5. STRUCTURAL FILL REQUIRED FOR BUILDING PADS AND PAVEMENT AREAS SHALL BE PLACED IN MAXIMUM ACCEPTABLE PERMISSIBLE LIFTS NOT EXCEEDING 6 INCHES COMPACTED IN THICKNESS AND SHALL BE COMPACTED TO DENSITIES EQUIVALENT TO 100% OF THE MODIFIED PROCTOR MAXIMUM DRY WEIGHT DENSITY (ASTM D1557), AND WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. STRUCTURAL FILL IS DEFINED AS NON-PLASTIC, INORGANIC (CONTAINING LESS THAN 4.0% ORGANICS), GRANULAR SOIL CONTAINING LESS THAN 10% MATERIAL PASSING THE 200 MESH SIEVE (I.E. RELATIVELY CLEAN SAND). COMPACTION SHALL BE TESTED IN EACH LIFT AND RESULTS SUBMITTED TO THE ENGINEER FOR REVIEW.
6. CONTRACTOR MUST PROVIDE CERTIFIED TEST RESULTS OF THE DEGREES OF COMPACTION OF THE SUBGRADE AND THE BASE FROM AN INDEPENDENT, QUALIFIED TEST LABORATORY. ALL BUILDING PAD AND PAVEMENT AREAS SHALL BE PROOF ROLLED PRIOR TO ACCEPTANCE BY ENGINEER.
7. TESTS FOR THE STABILIZED SUBGRADE BEARING CAPACITY AND COMPACTION SHALL BE LOCATED NO MORE THAN 300 FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND CENTERLINE OF THE ROADWAY.
8. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.

PAVING

1. RIGHT-OF-WAY INFORMATION OBTAINED FROM PRIVETT AND ASSOCIATES.
2. AT INTERSECTION OF RIGHT-OF-WAY LINES, RADII SHALL BE 25 FEET. EDGE OF PAVEMENT RADII SHALL BE 25 FEET UNLESS NOTED OTHERWISE.
3. ALL ELEVATIONS SHOWN ARE IN FEET AND BASED ON USC&G DATUM.
4. THE PAVEMENT SURFACE WEARING COURSE SHALL BE ASPHALTIC CONCRETE, TYPE F, GROUP 1 OR 2. ALL MATERIALS, INCLUDING PRIME AND TACK COATS, SHALL CONFORM TO THE D.O.T. STANDARD SPECIFICATIONS, 1993 EDITION, FOR MATERIALS AND METHOD OF CONSTRUCTION.
5. CURB TO BE MIAMI CURB AS SHOWN IN THE CONSTRUCTION DETAILS.
6. ROADWAY BASE COURSE MATERIALS SHALL BE LIMEROCK AND SHALL CONFORM TO THE D.O.T. STANDARD SPECIFICATIONS, 1993 EDITION, FOR BASE COURSE MATERIALS, INCLUDING CONSTRUCTION METHODS.
7. ALL BASES SHALL BE PRIMED IN ACCORDANCE WITH THE D.O.T. STANDARD SPECIFICATIONS, 1993 EDITION. TACK COAT SHALL NOT BE REQUIRED ON PRIMED BASES EXCEPT ON AREAS WHICH HAVE BECOME EXCESSIVELY DIRTY AND CANNOT BE CLEANED, OR, IN AREAS WHERE THE PRIME HAS CURED AND LOST ALL BONDING EFFECT. TACK COAT MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO D.O.T. STANDARD SPECIFICATIONS, 1993 EDITION.
8. TESTS FOR BASE THICKNESS AND COMPACTION SHALL BE LOCATED NO MORE THAN 300 FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND CENTER OF THE ROADWAY. IF TESTS INDICATE THICKNESS LESS THAN THOSE ALLOWED BY D.O.T. SPECIFICATIONS, THE CONTRACTOR MAY EITHER INCREASE THE THICKNESS, RECOMPACT AND RETEST TO MEET SPECIFIED VALUES, OR SUBSTITUTE 1/2 INCH ADDITIONAL SURFACE COURSE FOR EACH INCH OR FRACTION THEREOF THE BASE COURSE WHICH DOES NOT MEET THE SPECIFIED THICKNESS.
9. ALL PAVEMENT SECTION ELEMENTS SHALL BE TESTED AS REQUIRED BY THE CITY OF KINGSLAND AT THE CONTRACTOR'S EXPENSE.

EROSION CONTROL

1. EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO CLEARING AS SHOWN ON THE APPROVED SOIL EROSION CONTROL PLAN AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL CONDITIONS OF THE APPROVED PLAN SHALL BE FOLLOWED.
2. CLEAR ONLY THOSE AREAS REQUIRED FOR CONSTRUCTION AND, WHERE POSSIBLE, MAINTAIN A VEGETATIVE BUFFER ZONE BETWEEN THE DISTURBED WORKING AREA AND ANY WATERCOURSE. IF A 25 FEET BUFFER WITH HEAVY VEGETATION CANNOT BE MAINTAINED, FOR ANY REASON, A SILT FENCE SHALL BE ERECTED IN ITS PLACE.
3. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN PROPER CONDITION, SO THAT THEY WILL PERFORM THE FUNCTIONS FOR WHICH THEY WERE PROVIDED. THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO CORRECT ANY IMPAIRMENT TO FACILITIES.
5. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
6. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

CONCRETE

1. ALL CONCRETE FOR THIS WORK SHALL BE FURNISHED BY A CONCRETE MIXING PLANT. CEMENT SHALL BE PORTLAND CEMENT TYPE I OR II. FINE AGGREGATE SHALL BE CRUSHED STONE OR GRAVEL HAVING HARD DURABLE UNCOATED PARTICLES RANGING IN SIZE FROM 1" DOWN TO 1/4". ALL CONCRETE SHALL BE DESIGNED TO DEVELOP A MINIMUM COMPREHENSIVE STRENGTH OF 3000 PSI AT TWENTY EIGHT (28) DAYS. SLUMP SHALL NOT EXCEED 4".
2. RUB, CURE AND PROTECT CONCRETE STRUCTURES, CURBS AND/OR CURB AND GUTTER. PROVIDE EXPANSION AND CONTRACTION JOINTS AT A MAXIMUM OF 20' O.C.
3. EXPANSION JOINTS SHALL BE 1/2" THICK ASPHALT-SATURATED CELOTEX EXPANSION JOINT MATERIAL.

SANITARY SEWER

1. THE UTILITY LOCATIONS SHOWN ARE BASED ON EXISTING RECORDS AND FIELD MEASUREMENTS. PRIOR TO ANY EXCAVATION IN THIS AREA, THE EXACT LOCATION OF THE UTILITIES, AS WELL AS THE EXISTENCE AND LOCATION OF ANY OTHER UTILITIES NOT SHOWN, SHOULD BE VERIFIED BY THE RESPECTIVE UTILITY COMPANIES.
2. P.V.C. PIPE FOR GRAVITY SEWERS SHALL BE SDR-35, MEETING ASTM D-3034 FOR TYPE PSM P.V.C. SEWER PIPE. THE JOINTS SHALL BE PUSH-ON "O" RING GASKET TYPE WITH INTEGRAL BELL AND SPIGOT MEETING ASTM 3212. THREADED OR SOLVENT WELDED PIPE SHALL NOT BE USED.
3. PIPE SHALL BE CLEARLY MARKED WITH:
   MANUFACTURER'S IDENTIFICATION,
   NOMINAL PIPE SIZE,
   MATERIAL, TYPE AND GRADE,
   SDR OR PRESSURE RATING.
4. PRECAST CONCRETE MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH PROVISIONS OF ASTM C478 AND SHALL HAVE: PRECAST RISER SECTIONS OF 48-INCHES IN DIAMETER AND WALL THICKNESS OF AT LEAST 4-INCHES, PRECAST BASE UNITS WITH A MINIMUM WALL THICKNESS OF 5-INCHES, JOINTING MATERIAL OF RUBBER GASKET TYPE CONFORMING TO ASTM C443 OR PLASTIC MATERIAL CONFORMING TO ASTM C425.
5. MANHOLE FRAMES AND COVERS TO HAVE MACHINED BEARING (SEATING) SURFACES, ALL COVERS TO HAVE CHECKERED TOP DESIGN AND TWO PICK HOLES LOCATED AT EDGES. FRAMES SHALL HAVE A DEPTH OF APPROXIMATELY 9-INCHES AND AN ACCESS OPENING OF APPROXIMATELY 32 -INCHES(MIN.). MATERIALS SHALL CONFORM TO ITM A48 OR CLASS 30 GRAY IRON CASTING. IN AREAS WHERE MANHOLE TOP MAY HAVE OCCASION TO BE UNDERWATER, WATER TIGHT RINGS AND COVERS WILL BE USED.
6. INSTALLATION TO BE AS PER MANUFACTURER'S RECOMMENDATIONS AND CITY OF KINGSLAND STANDARDS AND SPECIFICATIONS FOR SANITARY SEWER INSTALLATION.
7. LEAKAGE TEST SHALL BE CONDUCTED BY MEANS OF EITHER INFILTRATION OR EXFILTRATION TEST. MAXIMUM ALLOWABLE LEAKAGE SHALL BE 25 GAL/DAY/INCH DIA/MILE OF PIPE. EXFILTRATION TEST SHALL NOT BE USED WHEN PIPE IS BELOW GROUND WATER.
8. WHERE SEWER SERVICES COME FROM A SEWER MANHOLE, THE INVERT OF THE SERVICE SHALL BE AT THE SAME ELEVATION AS THE MANHOLE INVERT. FLOW CHANNELS SHALL BE PROVIDED FOR THE SERVICE LATERALS INSIDE THE MANHOLE.
9. MANHOLES SHALL BE SET FLUSH IN PAVEMENT AND A MINIMUM OF 3 INCHES ABOVE FINISH GRADE IN UNPAVED AREAS.
10. SEWER LINES SHALL NOT BE LAID CLOSER THAN 10 FEET HORIZONTALLY TO A WATER MAIN. WHERE SEWER LINES PASS BENEATH WATER LINES, NO JOINTS IN THE SEWER SHALL BE CLOSER THAN 3 FEET LATERALLY FROM THE WATER LINE. ALL JOINTS OF THE SEWER PIPE SHALL BE EQUIDISTANT FROM THE SEWER LINE AT THE CROSSING OF THE WATER AND SEWER LINES. VERTICAL SEPARATION BETWEEN WATER AND SEWER AT CROSSINGS SHALL BE AT LEAST 18 INCHES BETWEEN PIPES, MEASURED EDGE TO EDGE. PRESSURE SEWER LINES SHALL ALWAYS PASS BELOW WATER LINES. SEWER AND WATER LINE CROSSINGS SHALL CONFORM WITH THE LATEST EDITION OF KINGSLAND CITY PUBLIC WORKS POLICIES AND SPECIFICATIONS MANUAL.
11. ALL SEWERS LAID BENEATH DRIVEWAYS AND ROADWAYS MUST BE OF SUFFICIENT DEPTH TO PREVENT INJURY FROM REASONABLY ANTICIPATED LOADS. BUT IN NO CASE SHALL THERE BE LESS THAN 3 FEET OF COVER IF THE SEWER IS OF OTHER THAN DUCTILE IRON.

CWATER SYSTEM

1. THE UTILITY LOCATIONS SHOWN ARE BASED ON EXISTING RECORDS AND FIELD MEASUREMENTS. PRIOR TO ANY EXCAVATION IN THIS AREA, THE EXACT LOCATION OF THESE UTILITIES, AS WELL AS THE EXISTENCE AND LOCATION OF ANY OTHER UTILITIES NOT SHOWN, SHOULD BE VERIFIED BY THE RESPECTIVE UTILITY COMPANIES.
2. THE CONTRACTOR SHALL VERIFY LOCATION, ELEVATION AND ALIGNMENT OF EXISTING UTILITIES PRIOR TO COMMENCING WITH UTILITY CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION FOR VERIFICATION AND LOCATION OF ANY UTILITY.
4. FIRE HYDRANT ASSEMBLY REFERRED TO ON DRAWINGS SHALL CONSIST OF:

   ONE 3-WAY FIRE HYDRANT, MUELLER STANDARD,
   ONE 6-INCH GATE VALVE WITH BOX & CONCRETE COLLAR,
   ONE MAIN SIZE X 6" MECHANICAL JOINT HYDRANT TEE,
   6-INCH HYDRANT LEAD,
   THRUST BLOCKING.
5. FIRE HYDRANTS TO BE LOCATED WITHIN RIGHT-OF-WAY TO BE DEDICATED TO THE CITY OF KINGSLAND.
6. ALL CONSTRUCTION SHALL CONFORM TO THE GUIDELINES AND RESTRICTIONS AS SET FORTH IN THE LATEST EDITION OF THE CITY OF KINGSLAND PUBLIC WORKS DEPARTMENT POLICIES AND SPECIFICATIONS MANUAL.
7. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WATER AND/OR SEWER FACILITIES WITH ALL OTHER CONSTRUCTION AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY THE CITY.
8. WATER LINES ARE DESIGNED TO FINISH GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL ALL WORK IS COMPLETED.
9. UNSUITABLE MATERIALS UNDER WATER PIPE, SEWER PIPE, OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL PROPERLY COMPACTED TO 95% MODIFIED PROCTOR.
10. NO WATER OR SEWER SERVICE LINES SHALL BE PLACED IN THE SAME TRENCH, UNLESS SEPARATED BY 10 FEET HORIZONTAL DISTANCE. NO SEWER JOINT SHALL BE CLOSER THAN 3 FEET TO THE WATER MAIN.
11. ALL WATER AND SEWER PIPE SHALL BE INSTALLED WITH TRACER WIRE ON TOP OF PIPE.WIRE SHALL BE NO DEEPER THAN 24 INCHES BELOW FINISHED GRADE.
12. ALL PRESSURE PIPE SHALL BE THRUST BLOCKED AND/OR RODDED AT ALL CHANGES IN DIRECTION EXCEEDING 11 DEGREE DEFLECTION ANGLE.
13. THRUST BLOCKS SHOWN IN THE DETAILS ARE THE MINIMUM SIZE ALLOWED, AND MUST BE PLACED AGAINST UNDISTURBED SOIL.
14. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
15. ALL PIPE SHALL BE NEW, UNUSED, AND IN A FACTORY FRESH STATE NEATLY STORED AND PROTECTED WHEN ON-SITE UNTIL READY FOR USE.
16. AT THE TIME OF INSTALLATION, ALL PIPE SHALL BE KEPT CLEAN AND INSTALLED IN THE DRY. CONNECTIONS AND JOINTS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
17. GATE VALVES 2-1/2" AND GREATER SHALL BE IRON BODIED, RESILIENT SEAT GATE VALVES, DOUBLE DISC TYPE, MEETING AWWA SPECIFICATION C-509 (LATEST EDITION). GATE VALVES SHALL BE:

    OF THE NON-RISING STEM VARIETY,
    RATED FOR A MINIMUM WORKING PRESSURE OF 200 PSI,
    FURNISHED WITH OPERATING NUTS WHICH TURN LEFT (COUNTER-CLOCKWISE) TO OPEN,
    FURNISHED WITH WEDGES OF DUCTILE IRON, FULLY ENCAPSULATED IN SYNTHETIC RUBBER EXCEPT FOR GUIDE AND WEDGE NUT AREAS; WEDGE RUBBER SHALL BE MOLDED IN PLACE AND BONDED TO THE DUCTILE IRON AND SHALL NOT BE MECHANICALLY ATTACHED,
    FURNISHED WITH BRONZE STEMS, STEM NUTS, GLANDS AND BUSHINGS,
    FURNISHED WITH EPOXY COATED VALVE BODY AND BONNET, INSIDE AND OUT,
    FURNISHED WITH DOUBLE O-RING STEM SEALS.
18. DOMESTIC WATER PIPE SHALL BE POLYVINYL CHLORIDE PIPE CONFORMING TO ASTM D-2241 AND SHALL CONSIST OF TYPE I, GRADE I PVC COMPOUND CONFORMING TO ASTM D-1784. ALL PIPE SHALL BE EITHER CLASS 200 (SDR 21) OR AWWA C900 (DR 18). ALL PIPE SHALL BE MANUFACTURED WITH OUTSIDE DIAMETERS EQUAL TO THOSE OF DUCTILE IRON PIPE.
19. PIPE SHALL HAVE INTEGRAL MOLDED BELL AND SPIGOT JOINTS. JOINTS SHALL BE PUSH-ON TYPE WITH ELASTOMERIC GASKETS MEETING THE REQUIREMENTS OF ASTM D-3139.
20. PIPE SHALL BE CLEARLY MARKED WITH:

    NATIONAL SANITATION FOUNDATION (NSF) SEAL,
    MANUFACTURER'S IDENTIFICATION,
    NOMINAL PIPE SIZE,
    MATERIAL, TYPE AND GRADE,
    SDR OR PRESSURE RATING.
21. FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT FITTINGS CONFORMING TO THE REQUIREMENTS OF ANSI A21.10 WITH MINIMUM PRESSURE RATING OF CLASS 200. THE MECHANICAL JOINTS SHALL MEET REQUIREMENTS OF ANSI A21.11 AND HAVE SAME PRESSURE RATING AS THE FITTING OF WHICH IT IS A PART. FITTINGS SHALL BE COATED INSIDE AND OUT WITH ONE MIL THICK BITUMINOUS COATING CONFORMING TO ANSI A21.4.
    FIRE HYDRANTS SHALL CONFORM TO AWWA C502, AND SHALL:

    HAVE A 6-INCH MECHANICAL JOINT INLET CONNECTION,
    HAVE A 5-1/4 -INCH VALVE SEAT OPENING,
    TWO 2-1/2 -INCH OUTLETS AND ONE 4-1/2 -INCH PUMPER CONNECTION (ALL ANSI NATIONAL STANDARD THREADS),
    HAVE BREAK-AWAY FLANGE AND STEM COUPLING,
    BE EQUIPPED WITH O-RING STEM SEAL,
    BE EQUIPPED WITH AN INDEPENDENT DRAIN FOR DRAINING HYDRANT RISER AFTER USE,
    BE EQUIPPED WITH AN OPERATING NUT OF SIZE AND OPENING DIRECTION CONSISTENT WITH LOCAL FIRE DEPARTMENT SPECIFICATIONS.
22. NO CONNECTION TO EXISTING POTABLE WATER SYSTEM WILL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN PRESSURE TESTED, DISINFECTED, AND APPROVED.
23. HYDROSTATIC PRESSURE TESTING SHALL BE CONDUCTED ON THE WATER MAIN AT 150% OF OPERATING PRESSURE OR 150 PSI, WHICHEVER IS GREATER. TEST DURATION SHALL BE A MINIMUM OF TWO HOURS. THERE SHALL BE NO NOTICEABLE REDUCTION IN PRESSURE.
24. LEAKAGE TESTING SHALL FOLLOW THE FOLLOWING GUIDELINE:
    QUANTITY OF LEAKAGE SHALL NOT EXCEED THE QUANTITY DETERMINED BY THE FOLLOWING FORMULA.

    $$L = \frac{SD\,(\text{SQUARE ROOT OF } P)}{133200}$$

    WHERE L = ALLOWABLE LEAKAGE IN GALLONS/HOUR
    S = TOTAL LENGTH OF PIPE TESTED IN FEET
    D = NOMINAL DIAMETER OF THE PIPE INCHES
    P = AVERAGE TEST PRESSURE DURING LEAKAGE TEST IN PSIG
25. WATER MAINS AND ACCESSORIES SHALL BE DISINFECTED IN ACCORDANCE WITH RULES FOR SAFE DRINKING WATER AS PUBLISHED BY THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION AND AWWA STANDARD FOR DISINFECTION WATER MAINS C651, LATEST REVISION. NOTE: THE TABLET METHOD IS NOT ACCEPTABLE. WATER MAINS SHALL BE FLUSHED BEFORE DISINFECTING BY MAINTAINING A VELOCITY OF 2.5 FPS FOR TEN MINUTES.
26. PRIOR TO CONNECTION TO THE PUBLIC WATER SYSTEM, BACTERIOLOGICAL TESTS SHALL BE PERFORMED TO DETECT THE PRESENCE OF COLIFORM ORGANISMS AT THE POINT MOST DISTANT FROM INTRODUCTION OF CHLORINE AND AT 1000 FEET INTERVALS.
27. ALL WATER SERVICES SHALL BE POLYETHYLENE TUBING CTS (COPPER TUBING SIZE).

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 17706 — WALTER R. CHEEK
DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	WAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE 3528 DARIEN HWY, SUITE 219
ST. MARY'S, GEORGIA BRUNSWICK, GEORGIA 31525
PH. (912) 673-8575 PH. (912) 265-3851
FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

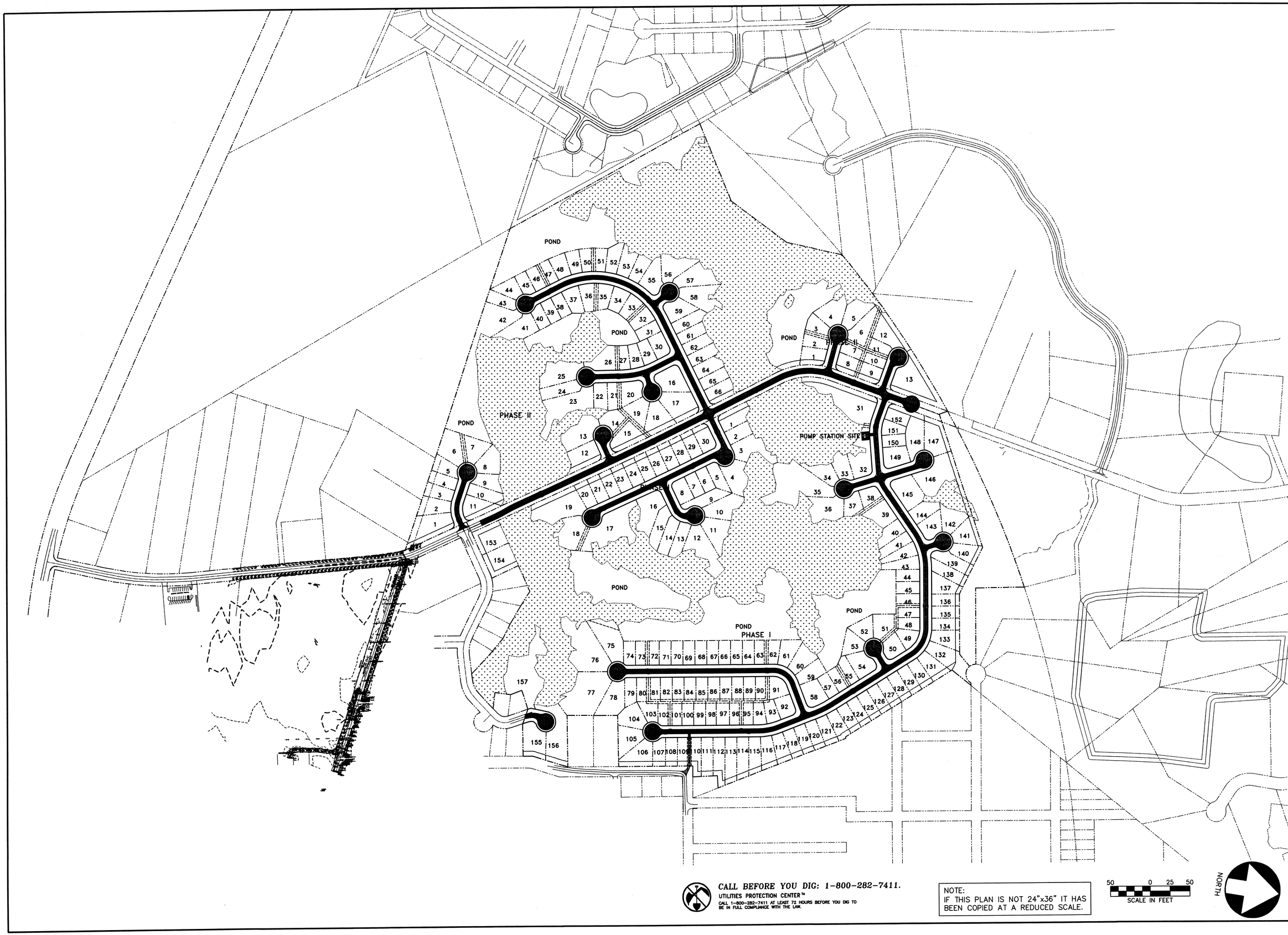
GENERAL NOTES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

SHEET 2

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
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KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

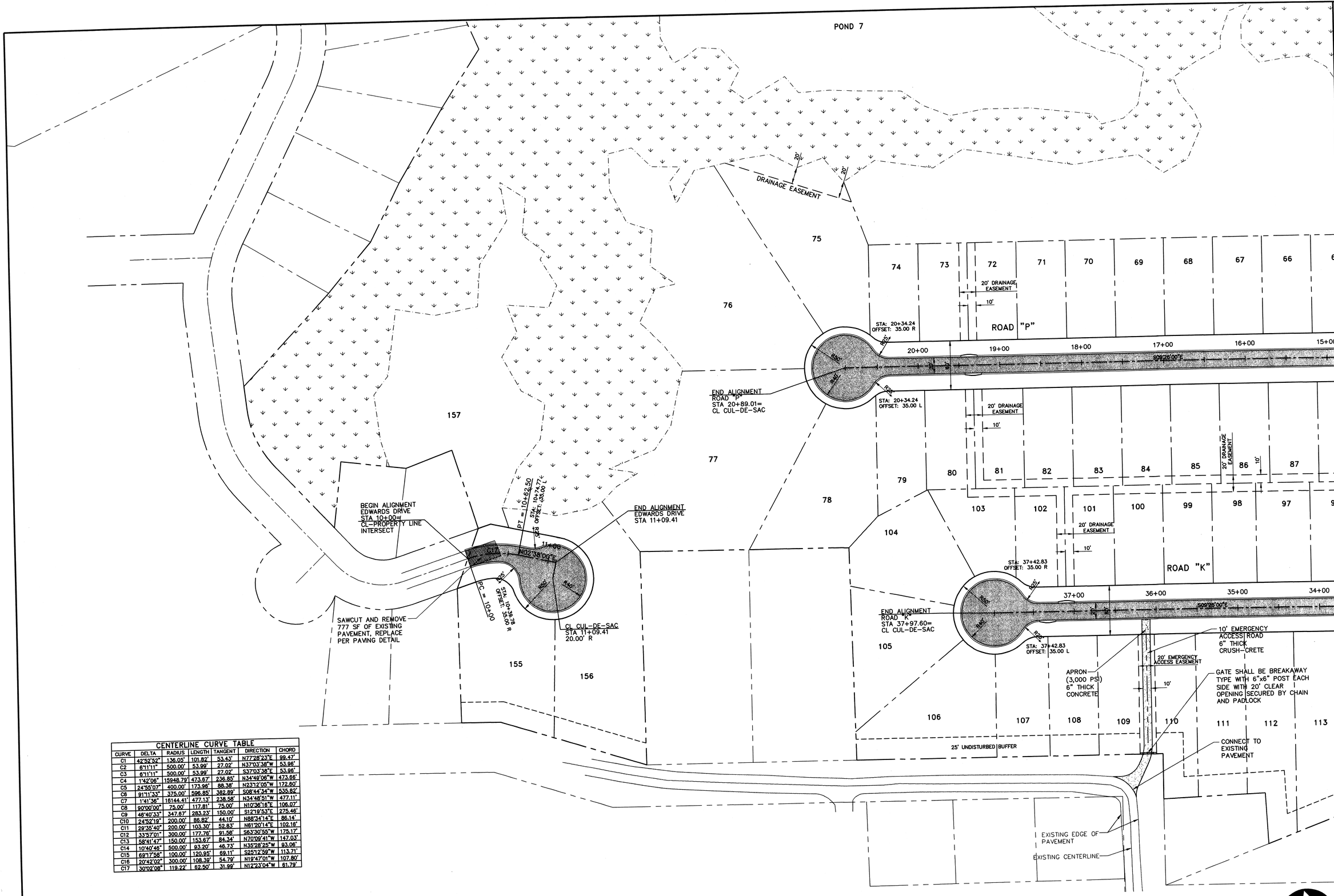
OVERALL PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=200'

SHEET 3

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



CENTERLINE CURVE TABLE						
CURVE	DELTA	RADIUS	LENGTH	TANGENT	DIRECTION	CHORD
C1	42°52'52"	136.05'	101.82'	53.43'	N77°28'23"E	99.47'
C2	6°11'11"	500.00'	53.99'	27.02'	N37°03'38"W	53.96'
C3	6°11'11"	500.00'	53.99'	27.02'	S37°03'38"E	53.96'
C4	1°42'06"	15948.79'	473.67'	236.85'	N34°49'06"W	473.66'
C5	24°55'07"	400.00'	173.96'	88.38'	N23°12'05"W	172.60'
C6	91°11'33"	375.00'	596.85'	382.89'	S08°44'34"W	535.82'
C7	1°41'36"	16144.41'	477.13'	238.58'	N34°48'51"W	477.11'
C8	90°00'00"	75.00'	117.81'	75.00'	N10°36'16"E	106.07'
C9	48°40'33"	347.67'	283.23'	150.00'	S12°19'53"E	275.46'
C10	24°52'19"	200.00'	86.82'	44.10'	N88°34'14"E	86.14'
C11	29°35'40"	200.00'	103.30'	52.83'	N61°20'14"E	102.16'
C12	33°57'01"	300.00'	177.76'	91.58'	S63°30'55"W	175.17'
C13	58°41'47"	150.00'	153.67'	84.34'	N70°09'41"W	147.03'
C14	10°40'46"	500.00'	93.20'	46.73'	N35°28'25"W	93.06'
C15	69°17'58"	100.00'	120.95'	69.11'	S25°12'59"W	113.71'
C16	20°42'02"	300.00'	108.39'	54.79'	N19°47'01"W	107.80'
C17	30°02'08"	119.22'	62.50'	31.99'	N12°23'04"W	61.79'

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
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NOTE:
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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21128 WALTER R. CHECK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 882-2572
FAX: (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX: (912) 265-9509

KINGSLAND WEST

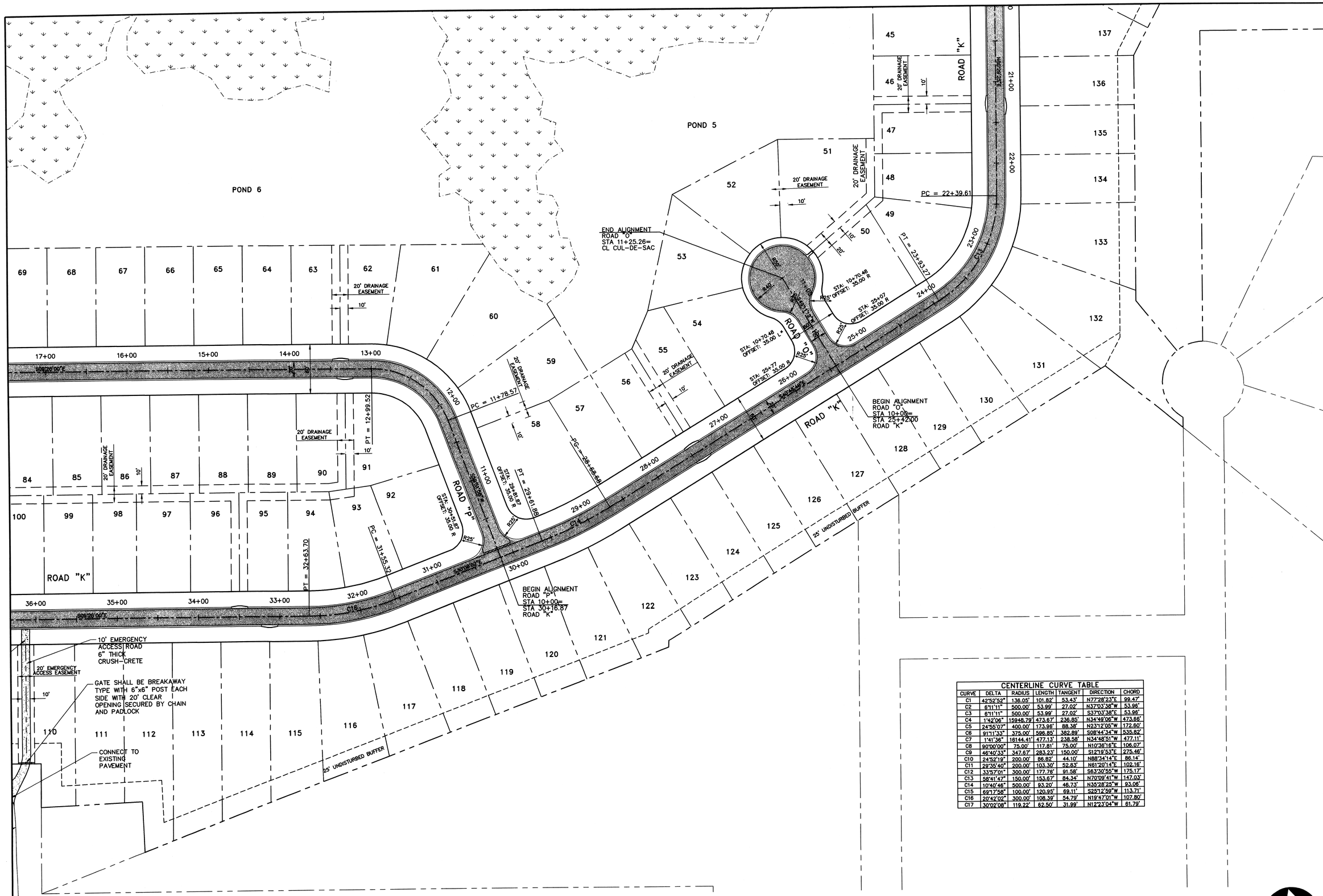
CITY OF KINGSLAND, CAMDEN COUNTY, GEORGIA
1606TH G.M.D.,
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

GEOMETRIC CONTROL PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
4
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



CENTERLINE CURVE TABLE						
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UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21798 JEFFER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE 3528 DARIEN HWY, SUITE 219
ST. MARYS, GEORGIA 31558 BRUNSWICK, GEORGIA 31525
PH. (912) 673-8570 PH. (912) 265-3851
FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

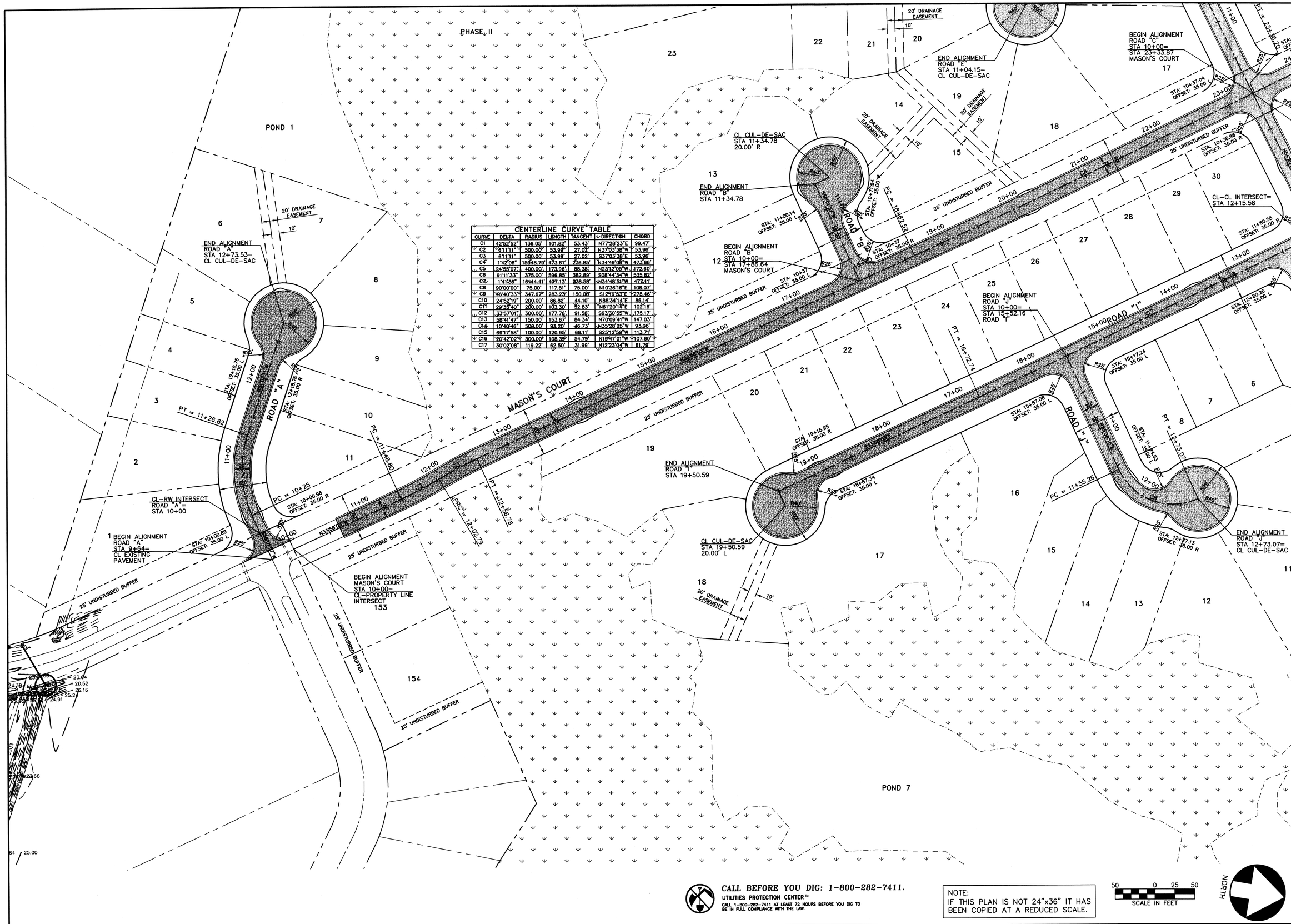
GEOMETRIC CONTROL PLAN

PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE : 1"=50

SHEET 5

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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GEORGIA REGISTERED No. 17205 PROFESSIONAL ENGINEER WALTER R. CHELK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 882-2525
FAX (912) 265-9509
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-9507

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

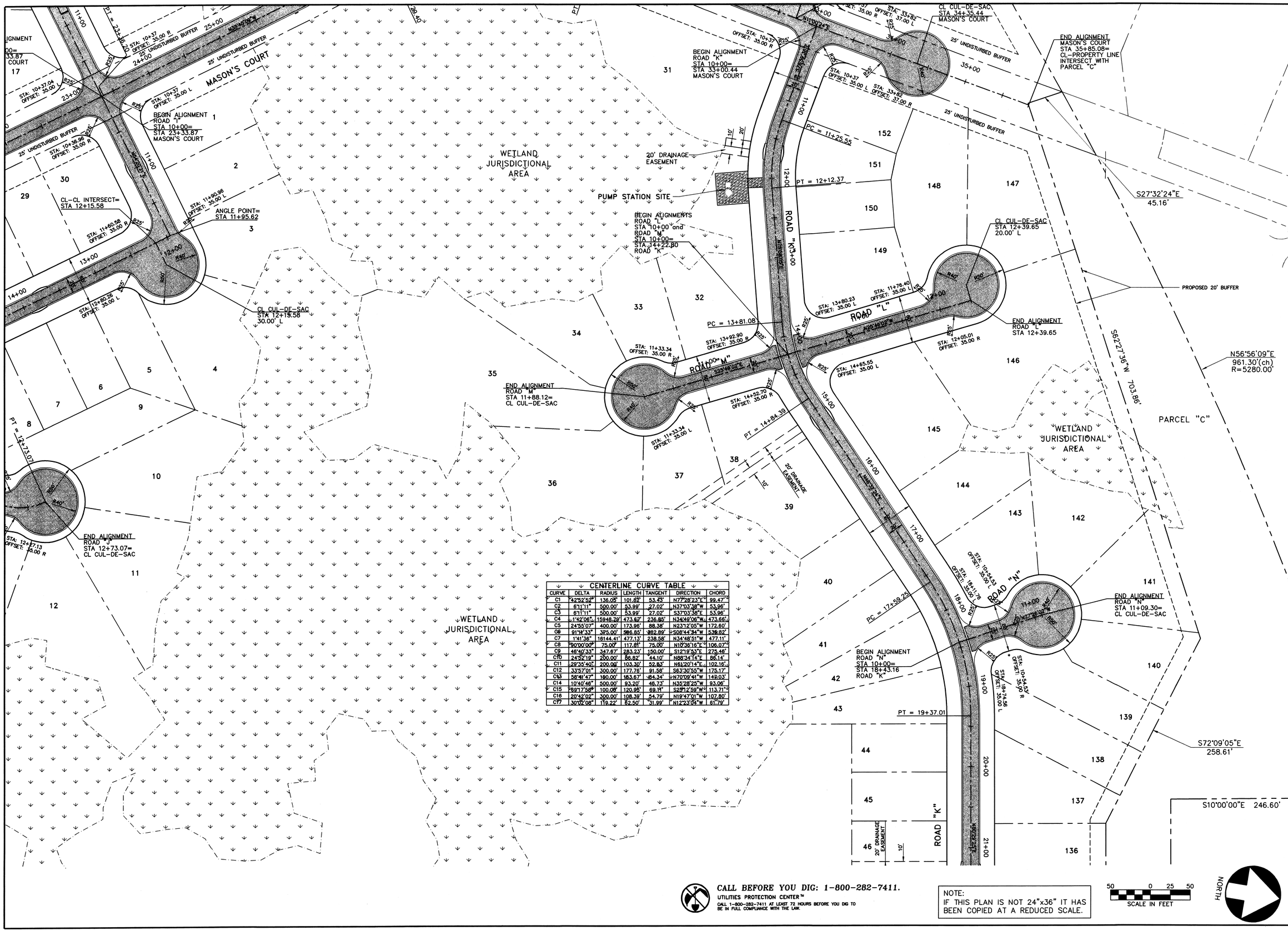
GEOMETRIC CONTROL PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 6

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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SCALE IN FEET: 50 0 25 50

NORTH

GEORGE WALTER R. CHEEK — REGISTERED PROFESSIONAL ENGINEER No. 11708

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARY'S, GEORGIA 31558, FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219, BRUNSWICK, GEORGIA 31525, FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

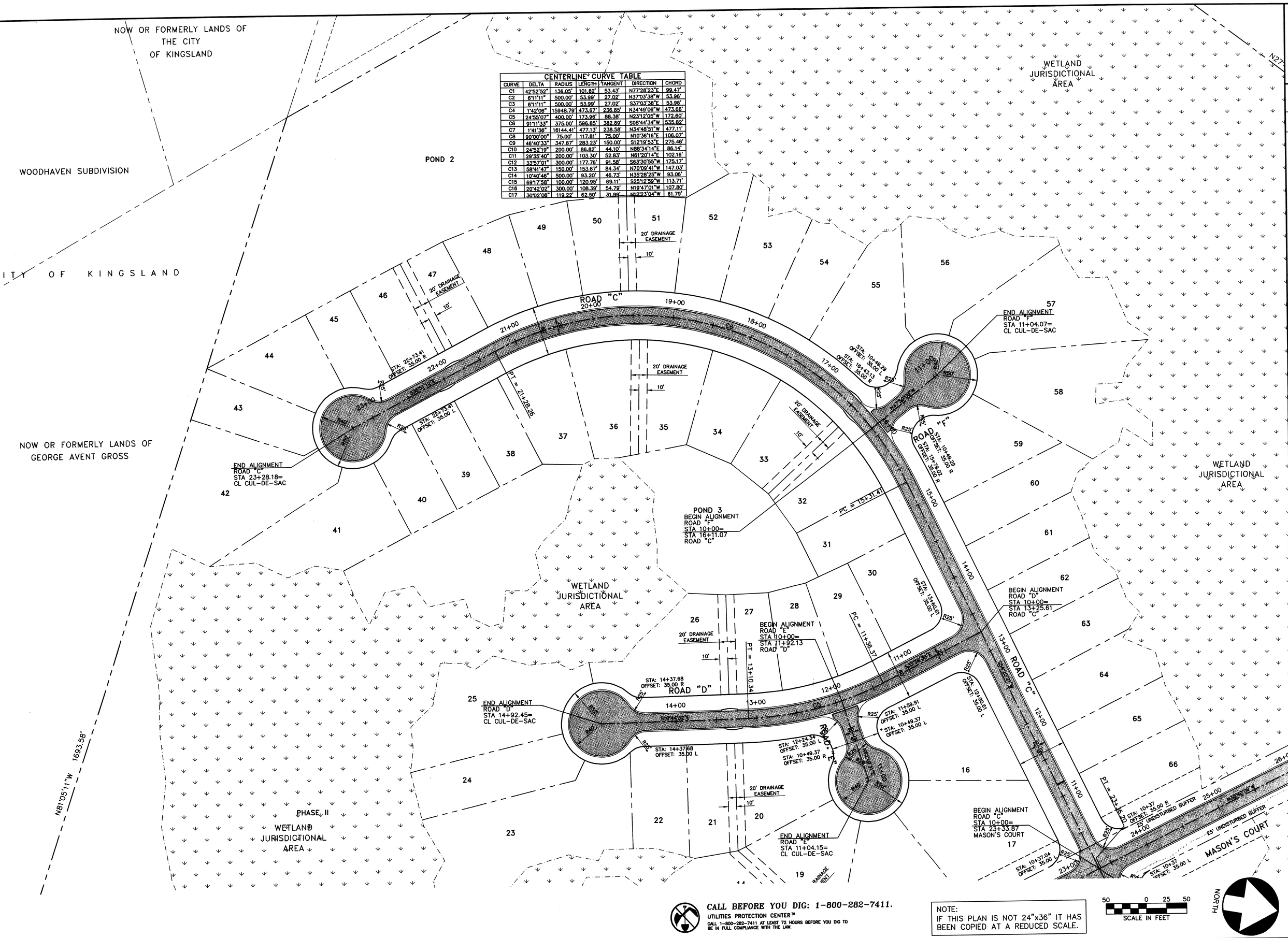
GEOMETRIC CONTROL PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 7

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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GEORGE WALTER R. REGISTERED No. 21705 PROFESSIONAL ENGINEER

DATE SEALED:

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

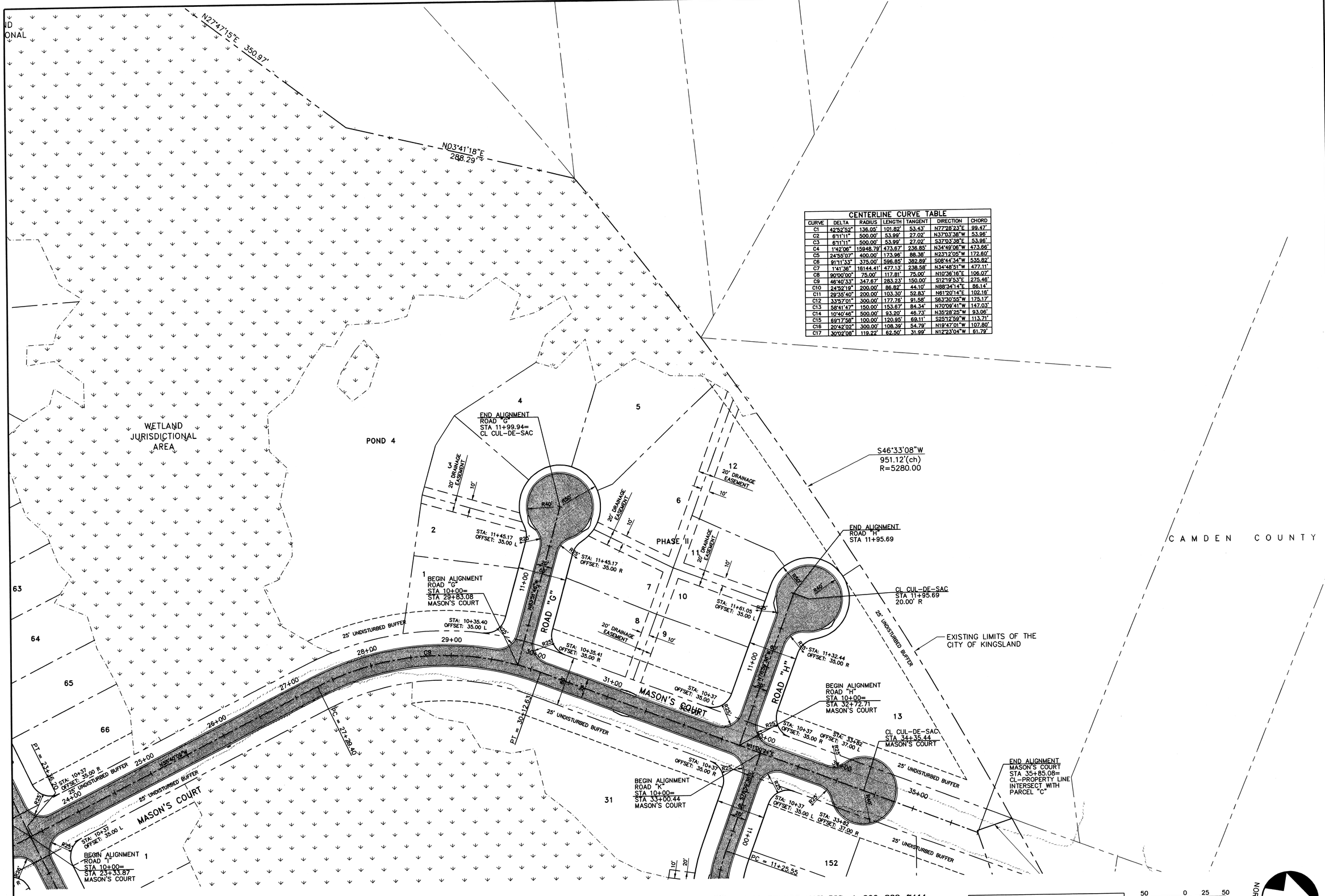
P&A ENGINEERING, INC.
CIVIL ENGINEERS

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: RUFFERS INVESTMENT PROPERTIES, INC.

PROJ NO.: 06-5038
DATE: 11/10/06
DRAWN BY: JWH

SHE
8
2006-



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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 28708 PETER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE ST. MARYS, GEORGIA 31558 PH: (912) 882-4779 FAX: (912) 882-2729
3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH: (912) 265-3851 FAX: (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

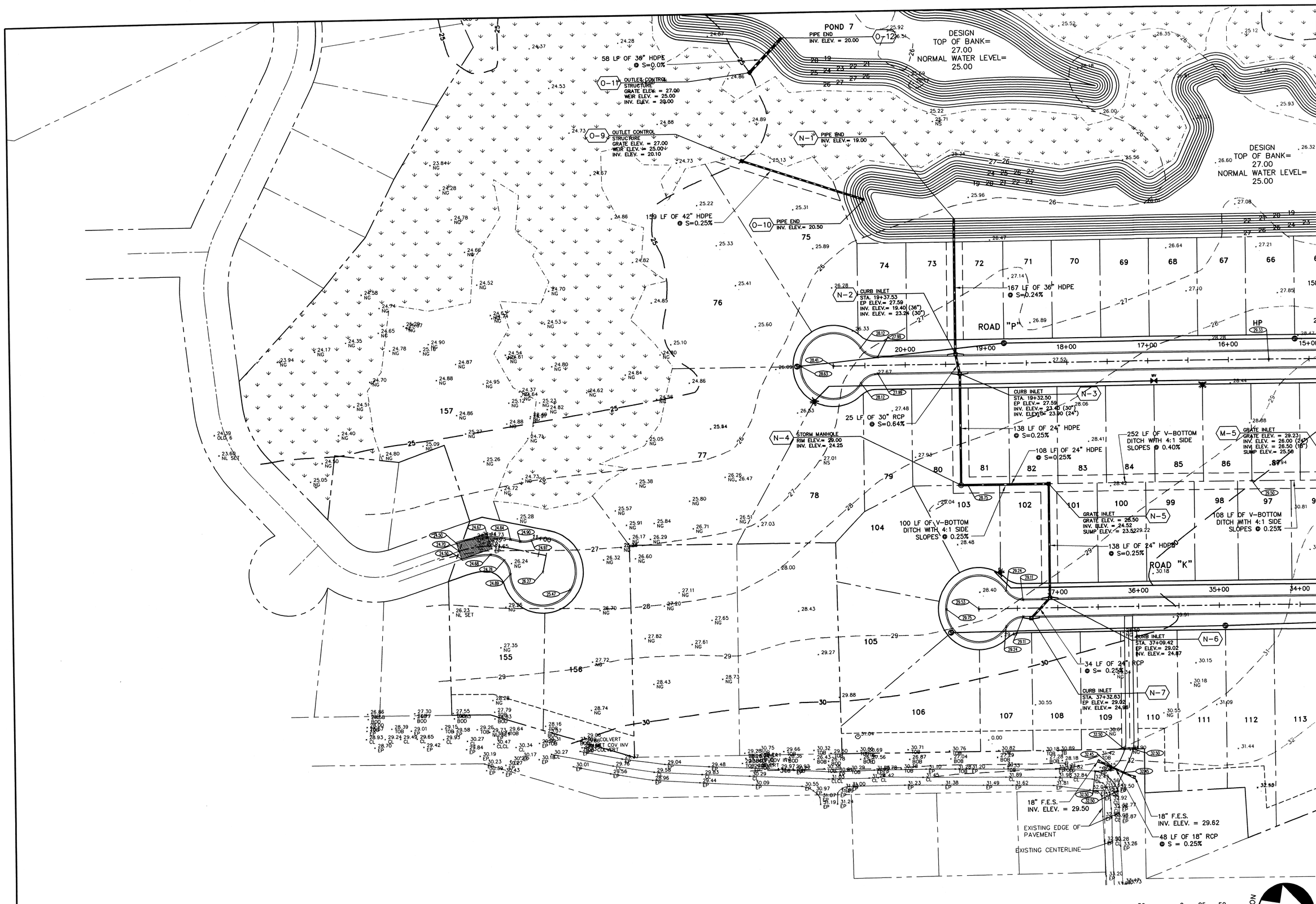
GEOMETRIC CONTROL PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 9

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27705 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 882-8513
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

GRADING AND DRAINAGE PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
10
2006-5038

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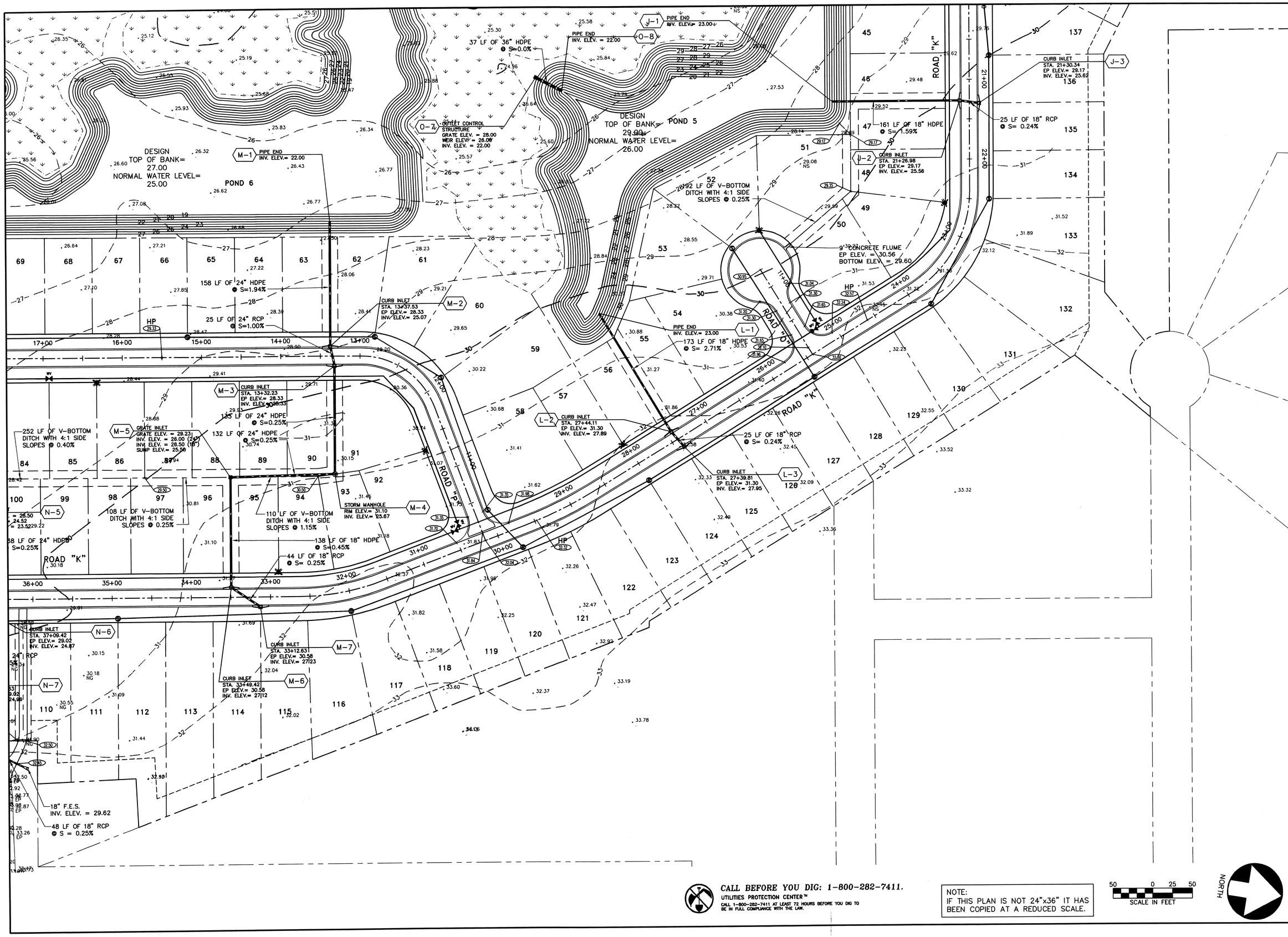

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50 0 25 50
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21788 WALTER R. CHEEK

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
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FAX (912) 265-9509

KINGSLAND WEST

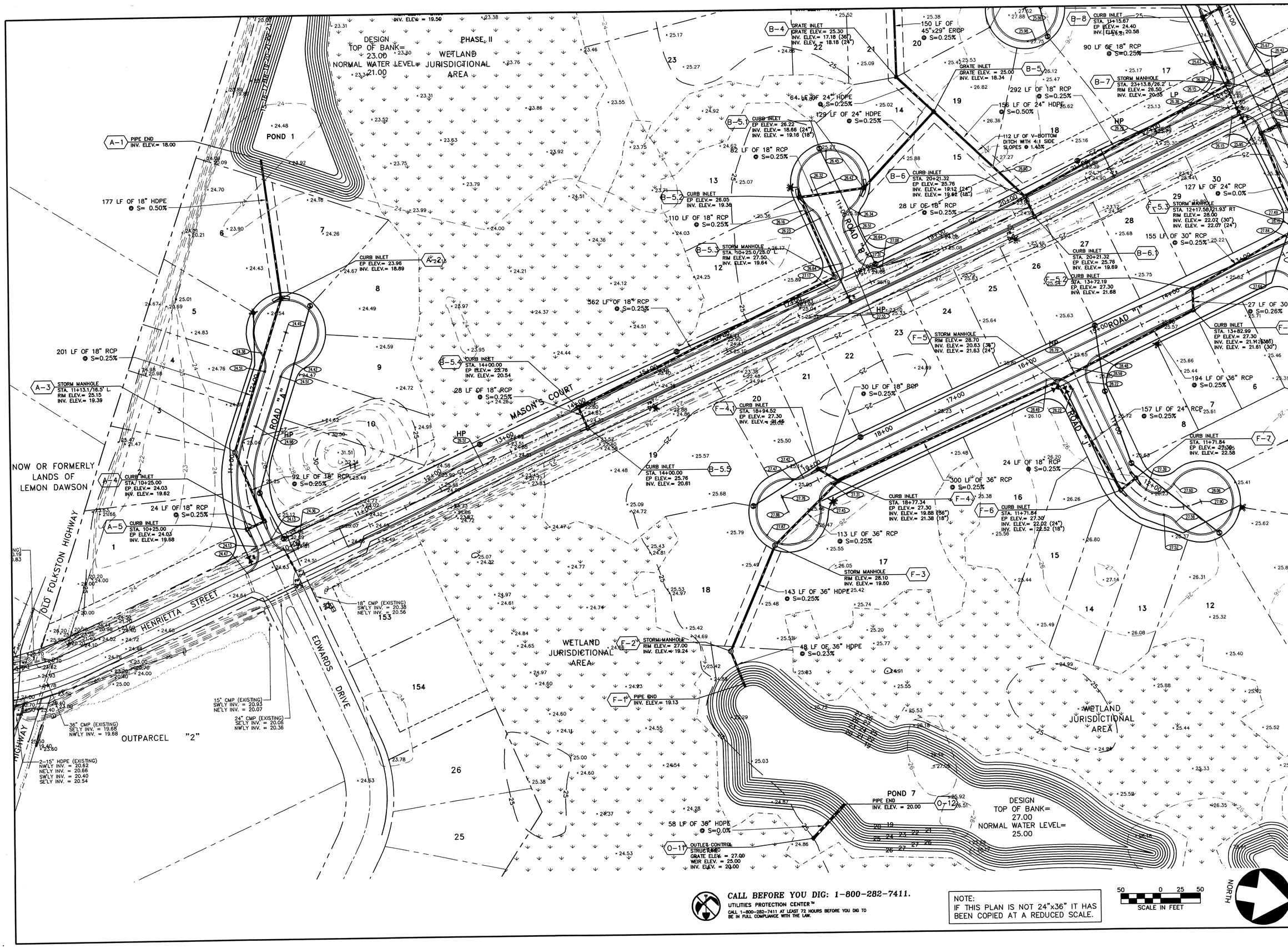
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

GRADING AND DRAINAGE PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
11
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
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GEORGIA REGISTERED NO. 21108 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 2/22/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558 PH. (912) 673-8575 FAX (912) 882-2729
3528 DARIEN HWY., SUITE 219, BRUNSWICK, GEORGIA 31525 PH. (912) 265-3851 FAX (912) 265-9539

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

GRADING AND DRAINAGE PLAN

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DATE:	11/10/06
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APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 12

2006-5038

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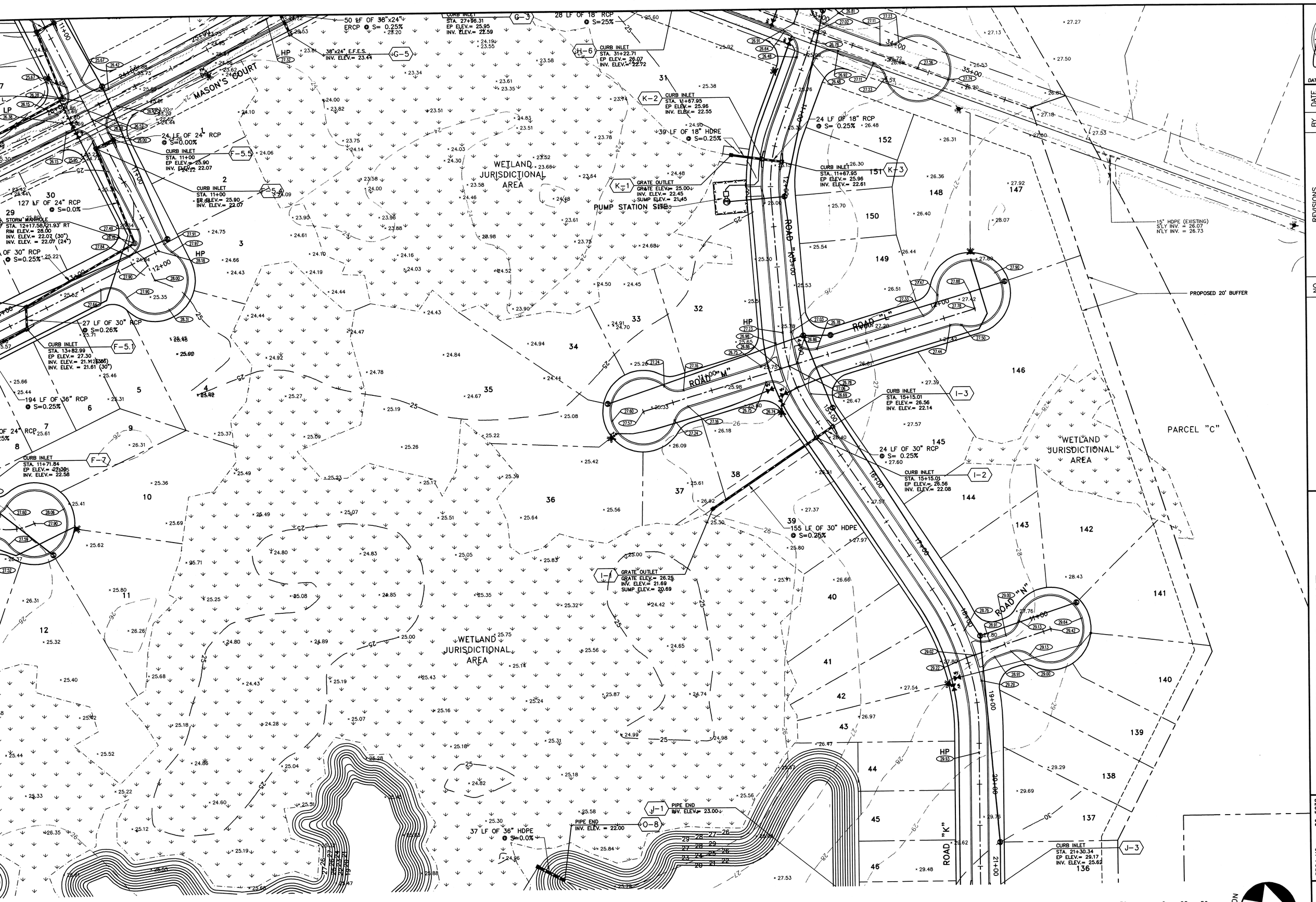

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50 0 25 50
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NORTH

DATE SEALED

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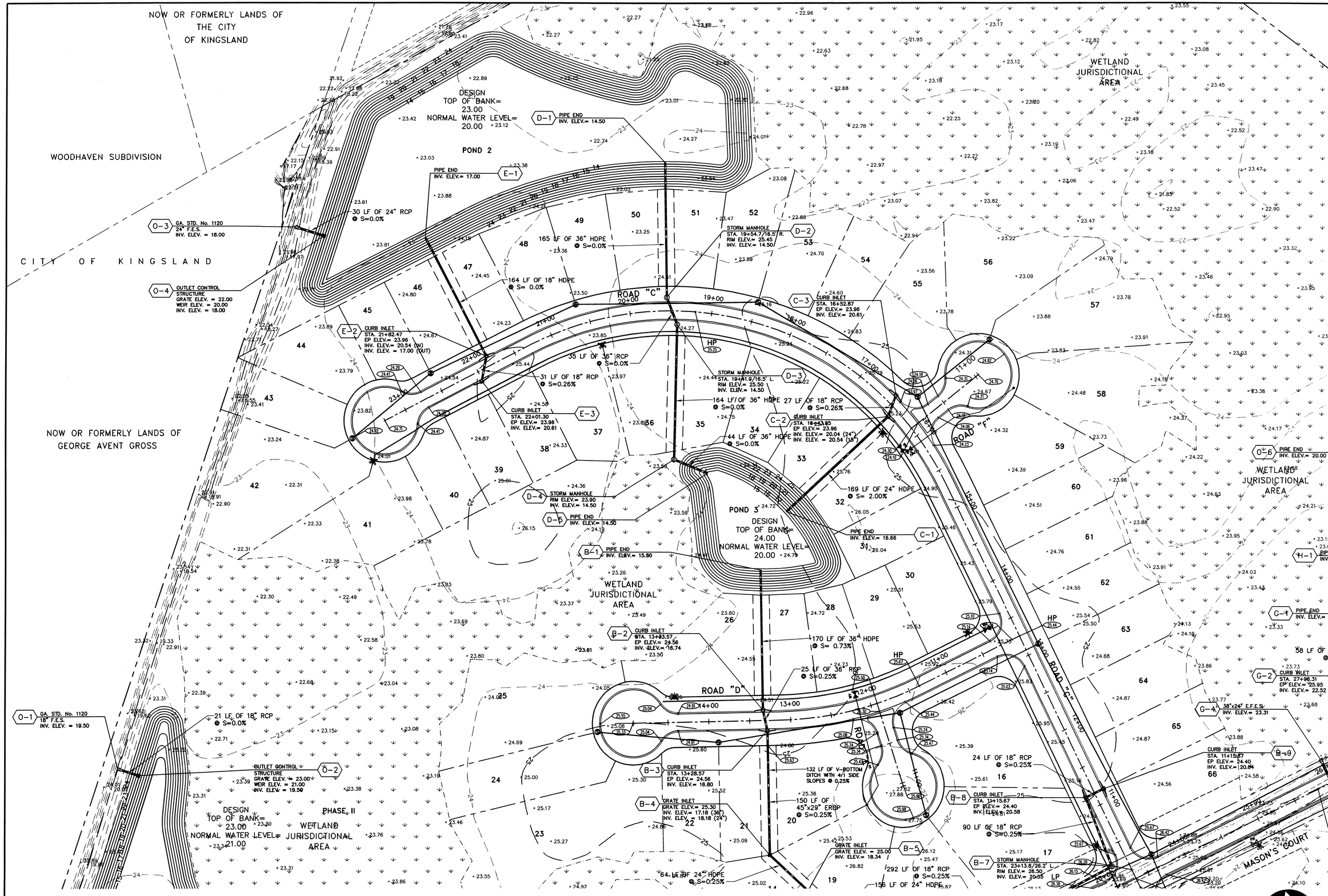
P&A ENGINEERING, INC.

KINGSLAND WEST

CITY OF KINGSLAND, CAMDEN COUNTY, GEORGIA 160BTH G.M.D.

PROJ NO. : 06-5038
DATE: 11/10/06



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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WILLIAM R. CHEEK

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
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P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558 PH. (912) 673-8575 FAX (912) 882-2729
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KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

GRADING AND DRAINAGE PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 14

2006-5038

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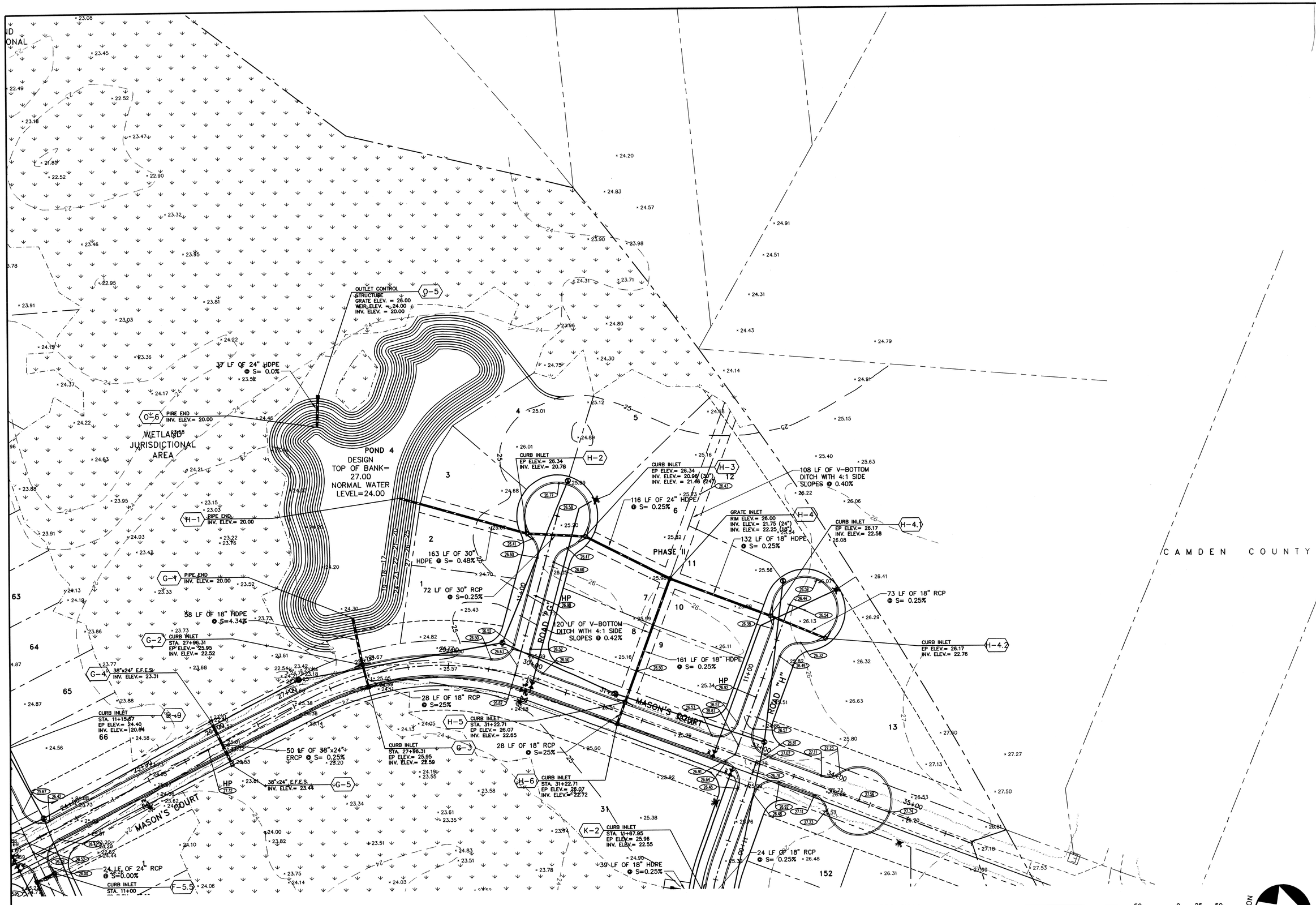

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27708 JAMES R. CHEEK

DATE SEALED: 2/21/07

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ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY. SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

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SHEET 15

2006-5038

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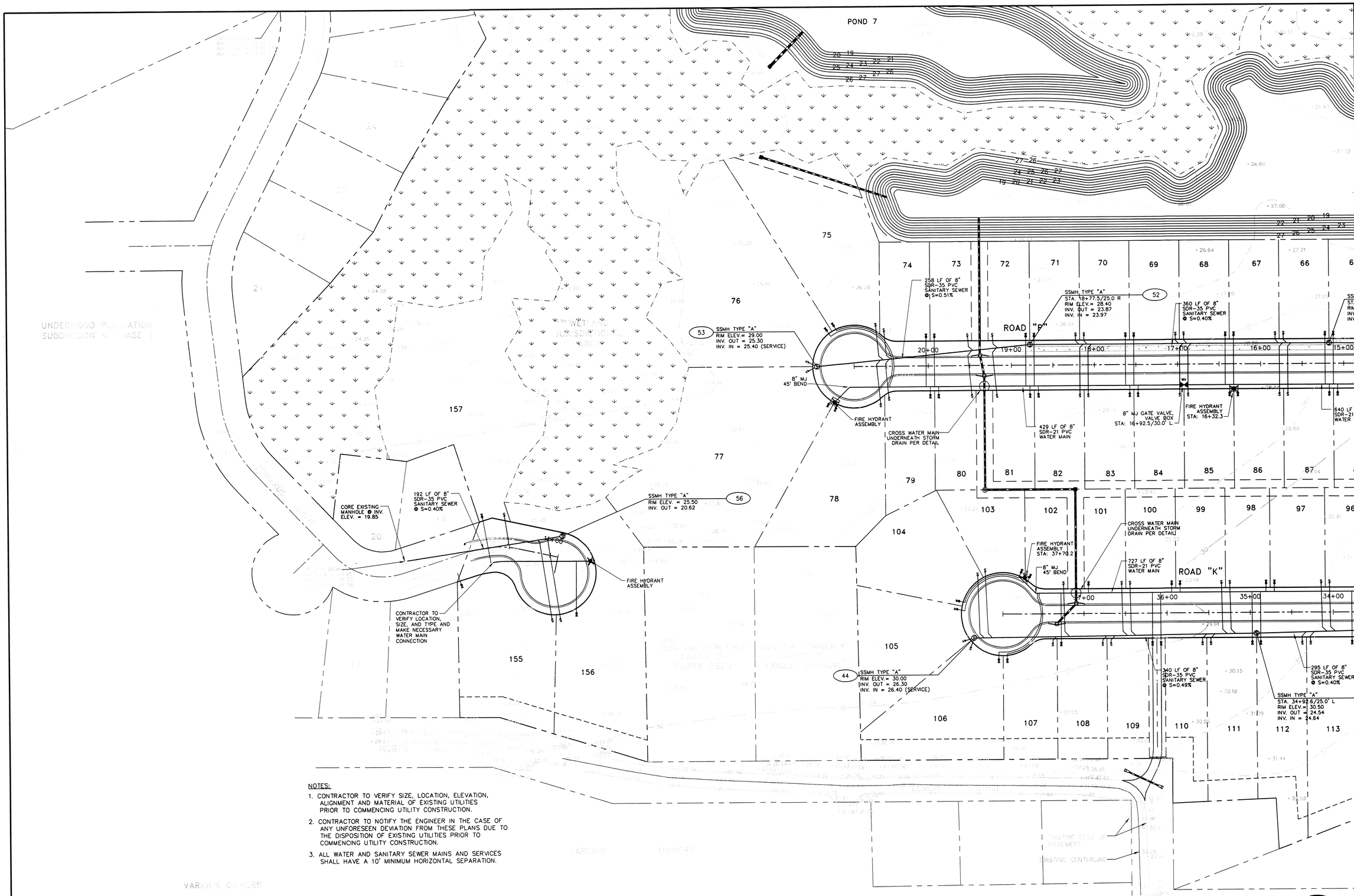

NOTES:

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: _____

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE ST. MARYS, GEORGIA 31558 PH. (912) 673-8575 FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH. (912) 265-3851 FAX (912) 265-3569

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PLAN

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CHECKED BY :	WRC
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SCALE :	1"=50'

SHEET 16

2006-5038

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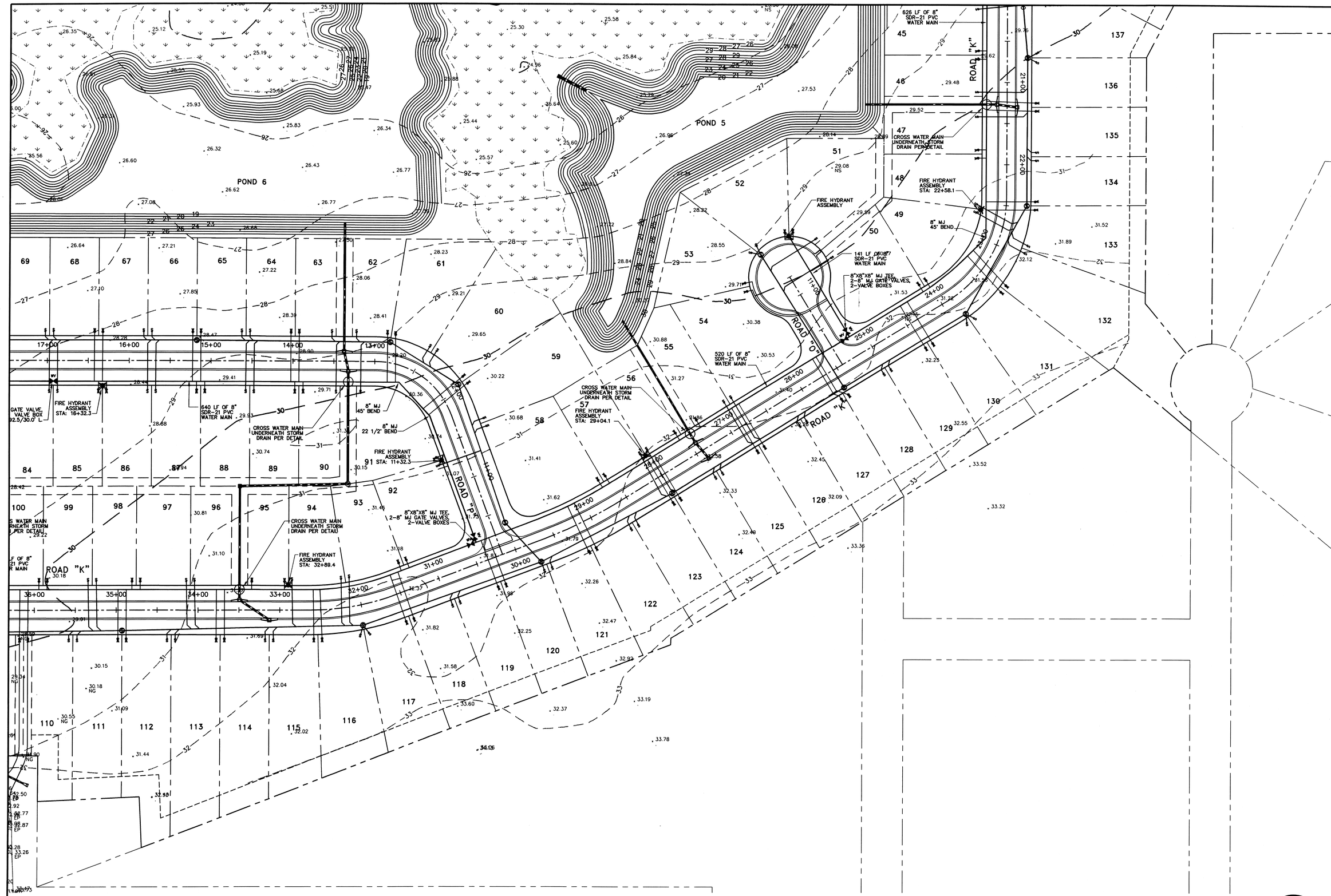

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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 17706 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
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3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARY'S, GEORGIA 31558
PH (912) 882-4551
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH (912) 265-3551
FAX (912) 265-9308

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PLAN

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CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 17

2006-5038

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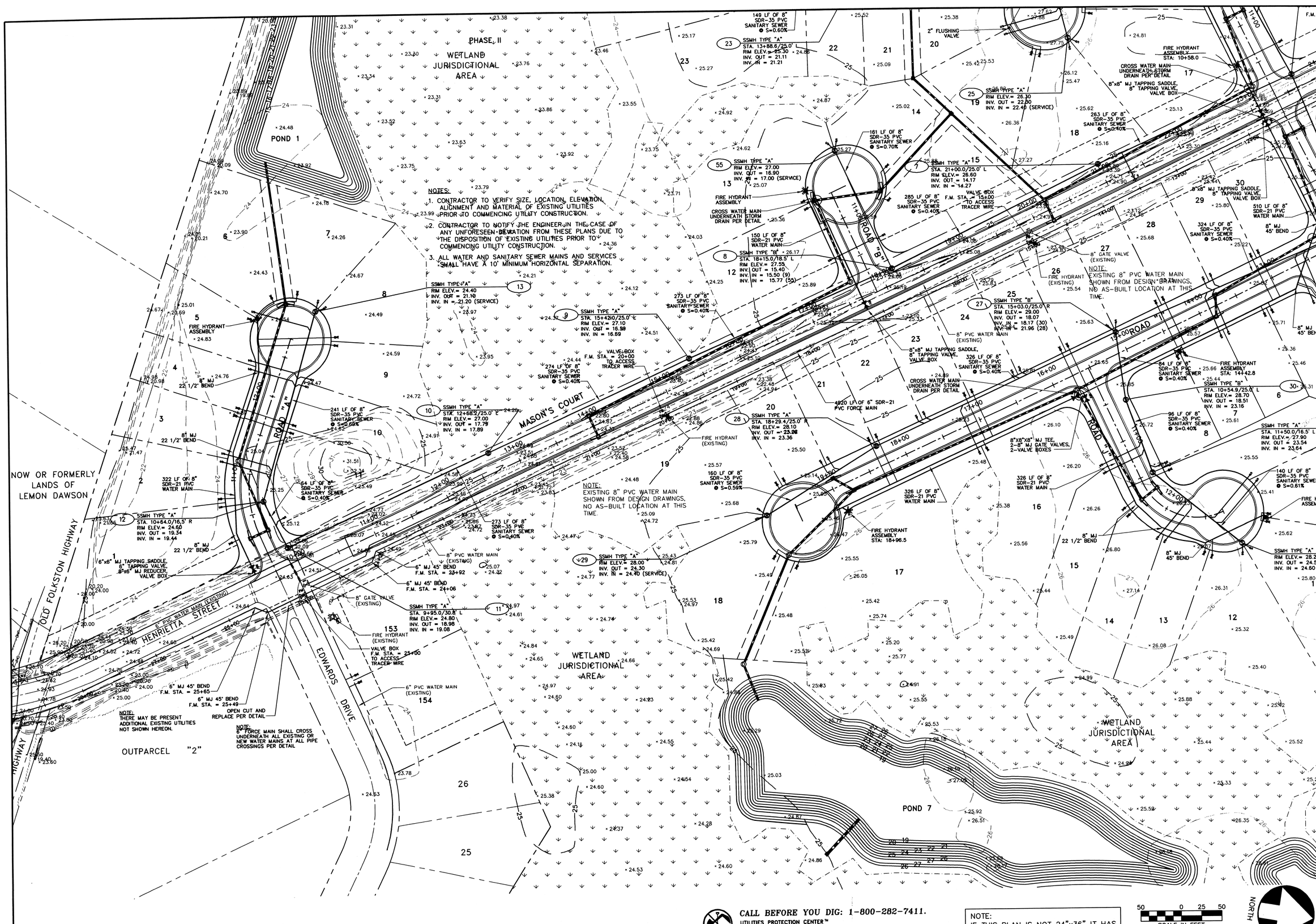

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 ROBERT R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

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3528 DARIEN HWY., SUITE 219, BRUNSWICK, GEORGIA 31525 PH: (912) 265-9519 FAX: (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PLAN

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APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 18

2006-5038

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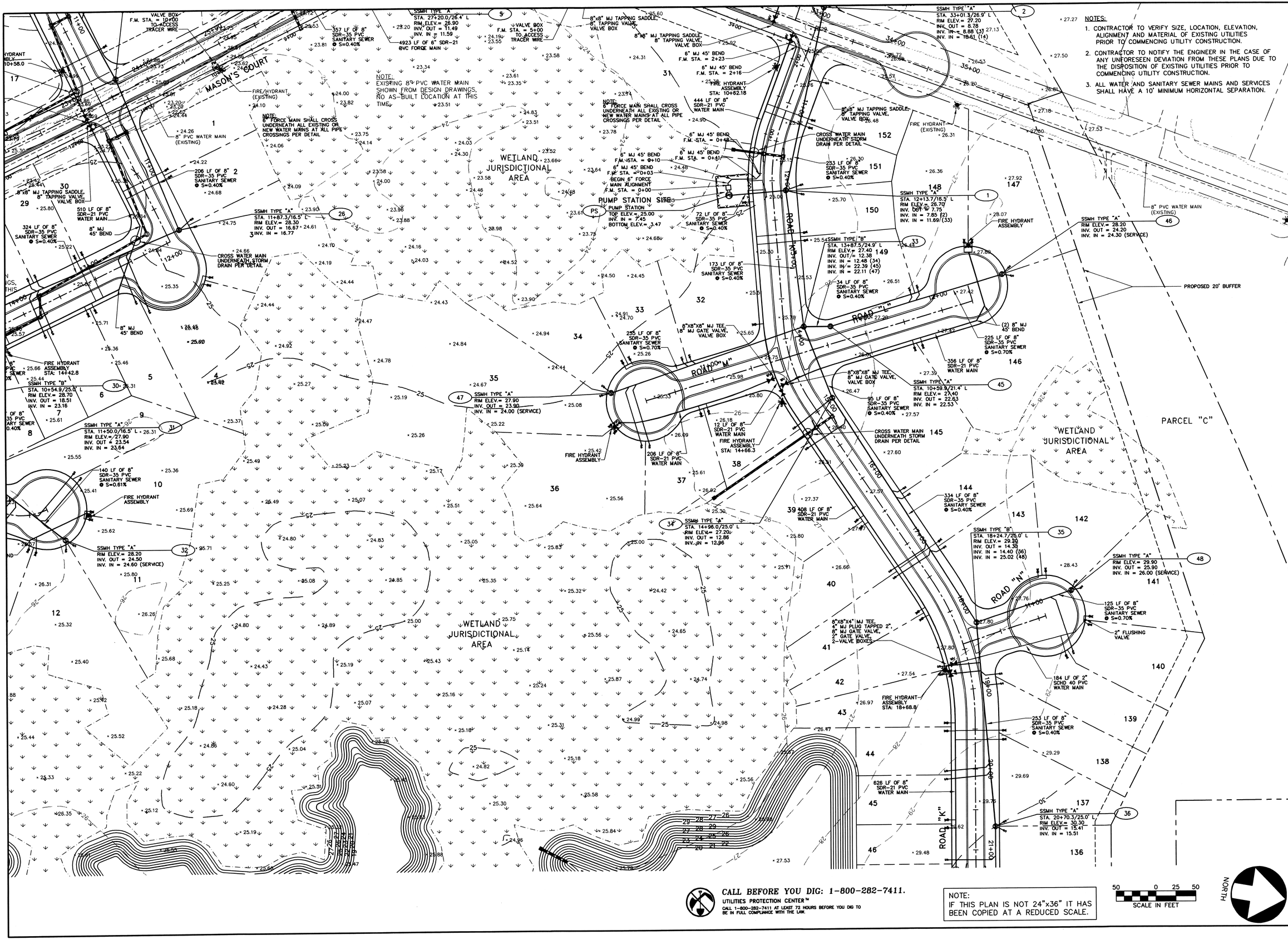

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GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER WILLIAM R. CHEEK

DATE SEALED: 7/26/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

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CIVIL ENGINEERS
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3528 DARIEN HWY. SUITE 219 BRUNSWICK, GEORGIA 31525 PH. (912) 265-3851 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 19

2006-5038

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NOW OR FORMERLY LANDS OF THE CITY OF KINGSLAND

WOODHAVEN SUBDIVISION

CITY OF KINGSLAND

NOW OR FORMERLY LANDS OF GEORGE AVENT GROSS

NOTES:

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POND 2

POND 3

WETLAND JURISDICTIONAL AREA

PHASE II

ROAD "C"

ROAD "D"

ROAD "E"

ROAD "F"

ROAD "G"

MASON'S COURT

SSMH TYPE "A"
STA. 20+60.7/25.0' R
RIM ELEV.= 25.10
INV. OUT = 19.82
INV. IN = 19.92

195 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

SSMH TYPE "A"
STA. 22+52.5/25.0' R
RIM ELEV.= 24.80
INV. OUT = 20.11
INV. IN = 20.81

123 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.64%

SSMH TYPE "A"
RIM ELEV.= 26.30
INV. OUT = 21.60
INV. IN = 21.70 (SERVICE)

FIRE HYDRANT ASSEMBLY

CROSS WATER MAIN UNDERNEATH STORM DRAIN PER DETAIL

FIRE HYDRANT ASSEMBLY STA: 20+42.2

736 LF OF 8" SDR-21 PVC WATER MAIN

223 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

SSMH TYPE "A"
STA. 18+48.7/25.0' R
RIM ELEV.= 25.40
INV. OUT = 18.83
INV. IN = 18.93

227 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

112 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.70%

SSMH TYPE "A"
RIM ELEV.= 25.10
INV. OUT = 21.10
INV. IN = 21.20 (SERVICE)

2" FLUSHING VALVE

CROSS WATER MAIN UNDERNEATH STORM DRAIN PER DETAIL

FIRE HYDRANT ASSEMBLY STA: 16+30.1

155 LF OF 2" SCHD 40 PVC WATER MAIN

SSMH TYPE "B"
STA. 16+34.3/30.0' R
RIM ELEV.= 24.60
INV. OUT = 17.82
INV. IN = 17.92 (18)
INV. IN = 20.32 (54)

8"X8"X4" MJ TEE, 4" MJ PLUG TAPPED 2", 8" MJ GATE VALVE, 2" GATE VALVE, 2-VALVE BOXES

334 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

237 LF OF 8" SDR-21 PVC WATER MAIN

FIRE HYDRANT ASSEMBLY STA: 10+55.0

8"X8"X8" MJ TEE, 8" MJ GATE VALVE, VALVE BOX

186 LF OF 8" SDR-21 PVC WATER MAIN

SSMH TYPE "A"
STA. 11+70.0/20.0' L
RIM ELEV.= 25.70
INV. OUT = 20.11
INV. IN = 20.21 (23)
INV. IN = 21.11 (25)

CROSS WATER MAIN UNDERNEATH STORM DRAIN PER DETAIL

220 LF OF 8" SDR-21 PVC WATER MAIN

8"X8"X4" MJ TEE, 4" MJ PLUG TAPPED 2", 2" GATE VALVE, VALVE BOX

FIRE HYDRANT ASSEMBLY STA: 14+41.5

SSMH TYPE "A"
RIM ELEV.= 25.80
INV. OUT = 22.10
INV. IN = 22.20 (SERVICE)

149 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.60%

SSMH TYPE "A"
STA. 13+88.6/25.0' L
RIM ELEV.= 25.30
INV. OUT = 21.11
INV. IN = 21.21

225 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

145 LF OF 2" SCHD 40 PVC WATER MAIN

2" FLUSHING VALVE

SSMH TYPE "A"
RIM ELEV.= 26.30
INV. OUT = 22.00
INV. IN = 22.40 (SERVICE)

188 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

127 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.70%

366 LF OF 8" SDR-21 PVC WATER MAIN

FIRE HYDRANT ASSEMBLY STA: 10+58.0

CROSS WATER MAIN UNDERNEATH STORM DRAIN PER DETAIL

8"x8" MJ TAPPING SADDLE, 8" TAPPING VALVE, VALVE BOX

289 LF OF 8" SDR-35 PVC SANITARY SEWER @ S=0.40%

SSMH TYPE "B"
STA. 13+07.0/16.5' R
RIM ELEV.= 25.50
INV. OUT = 16.39
INV. IN = 16.49 (17)
INV. IN = 19.36 (22)

SSMH TYPE "B"
STA. 23+63.8/18.5' L
RIM ELEV.= 26.80
INV. OUT = 13.01
INV. IN = 13.11 (7)
INV. IN = 15.23 (18)
INV. IN = 15.85 (26)

VALVE BOX F.M. STA. = 10+00 TO ACCESS TRACER WIRE

FIRE HYDRANT (EXISTING)

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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 JAMES WALTER R. CHEEK

DATE SEALED: 2/21/07

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1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PHONE (912) 882-2729
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PHONE (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PLAN

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SHEET 20

2006-5038

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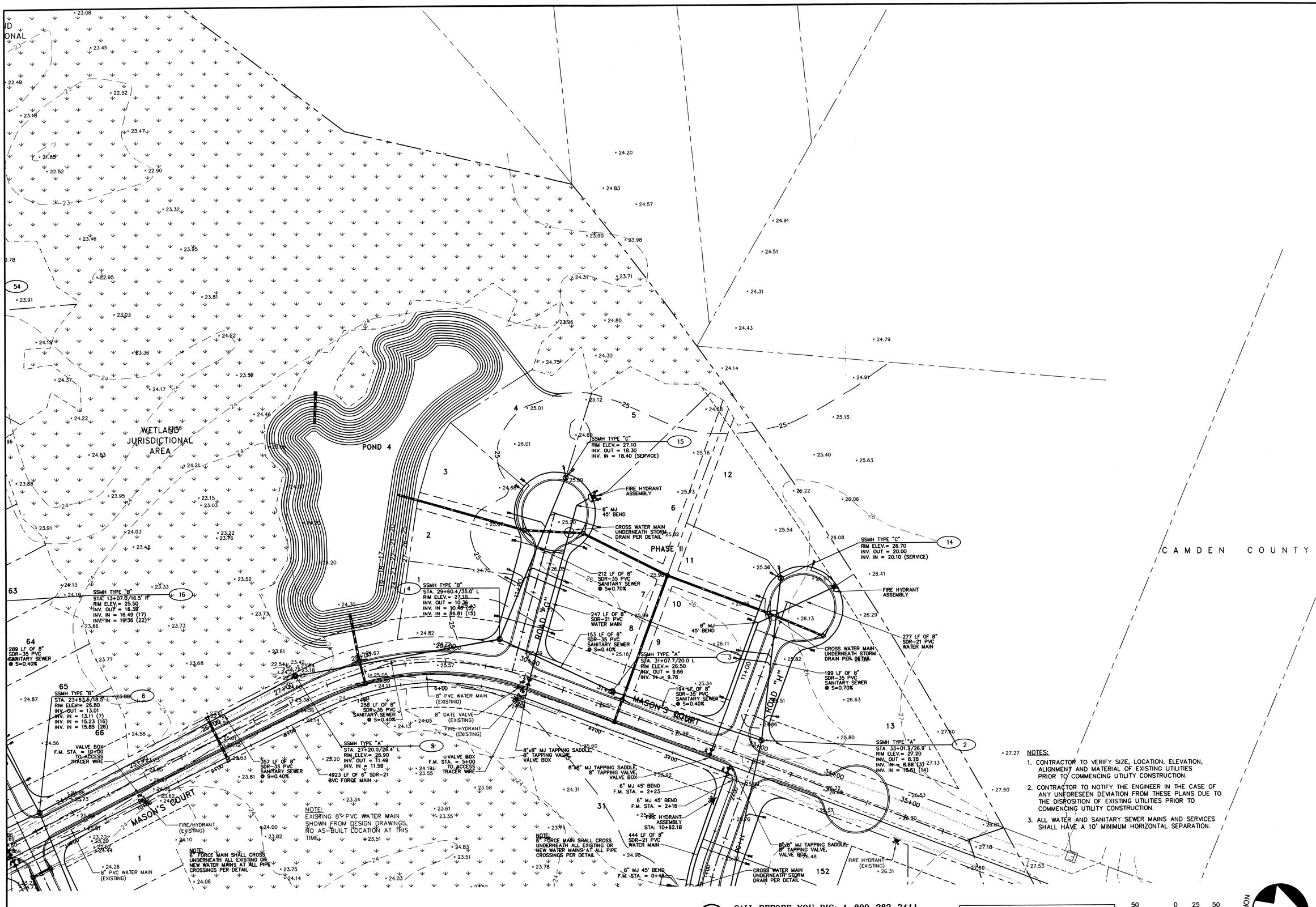

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 28708 WALTER R. CHEEK JR.

DATE SEALED: 2/27/07

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P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE 3538 DARIEN HWY, SUITE 219
ST. MARYS, GEORGIA 31558 BRUNSWICK, GEORGIA 31525
PH: (912) 673-8575 PH: (912) 265-3851
FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
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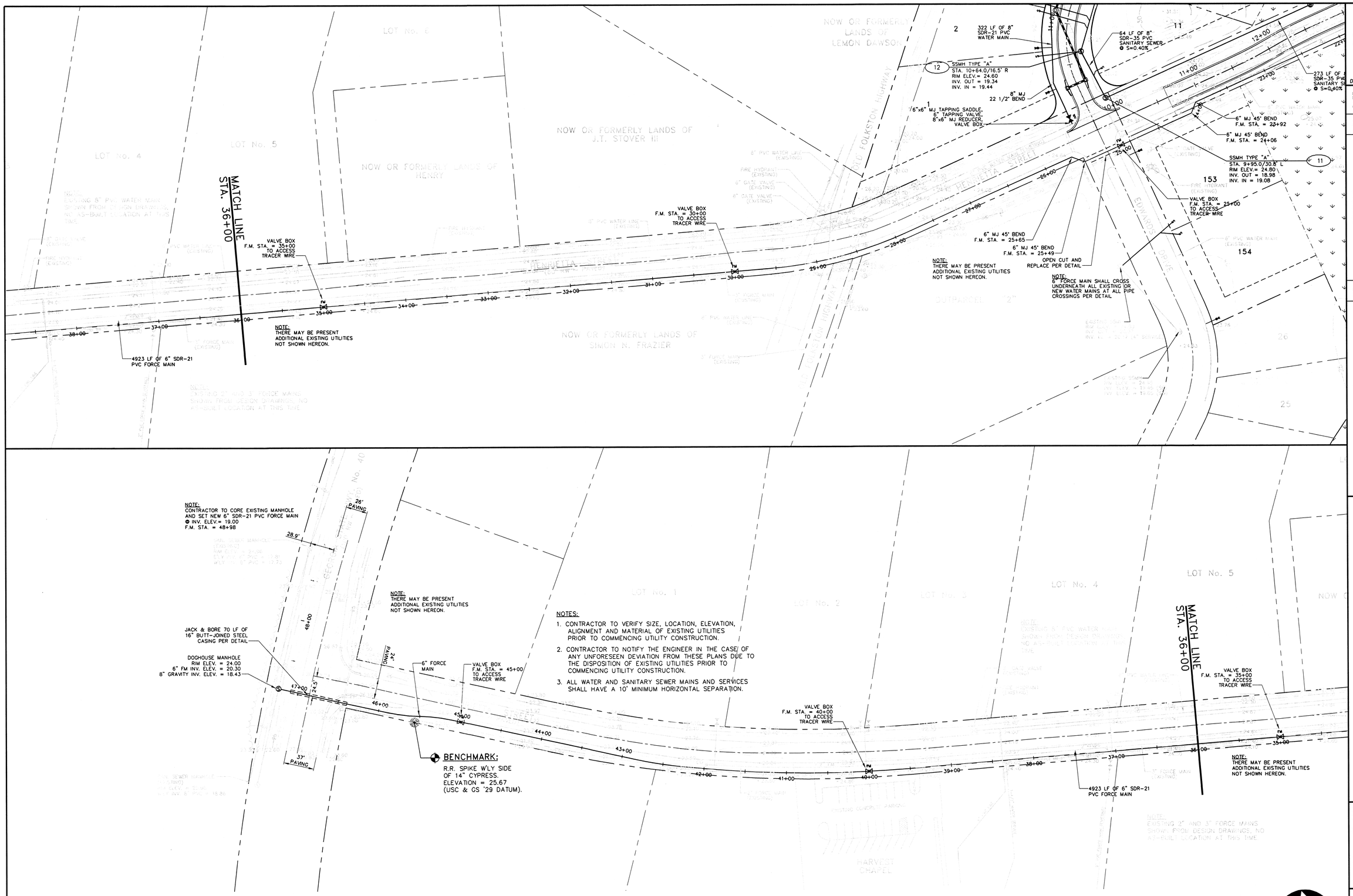


CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: _____

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
4	REVISED PER G.D.O.T. UTILITY CROSSING PERMIT	JDR	3/22/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-9351
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

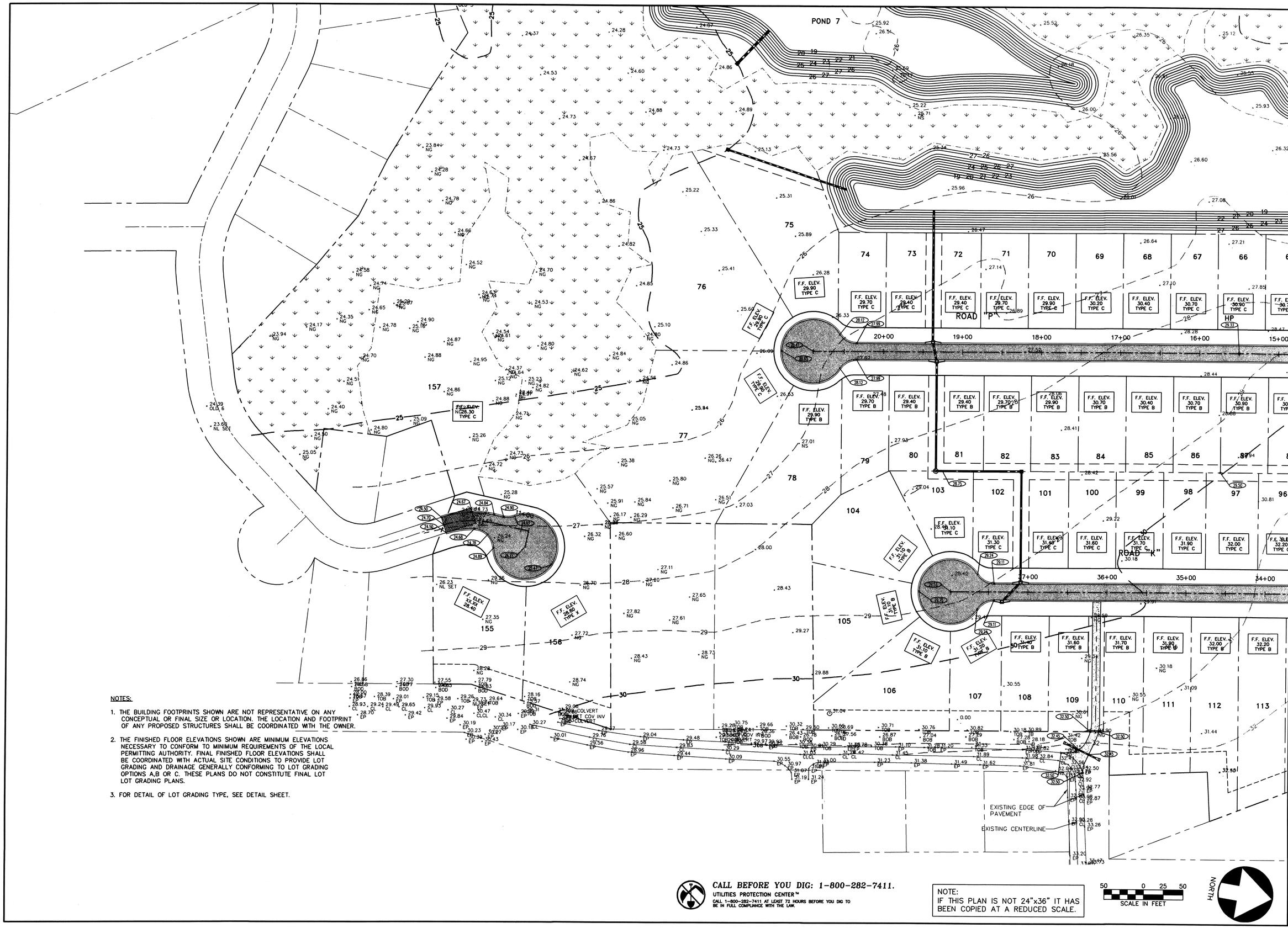
UTILITY PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
22

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



NOTES:

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3. FOR DETAIL OF LOT GRADING TYPE, SEE DETAIL SHEET.

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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21709 PETER R. CHECK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 882-4857
FAX: (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX: (912) 265-3509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

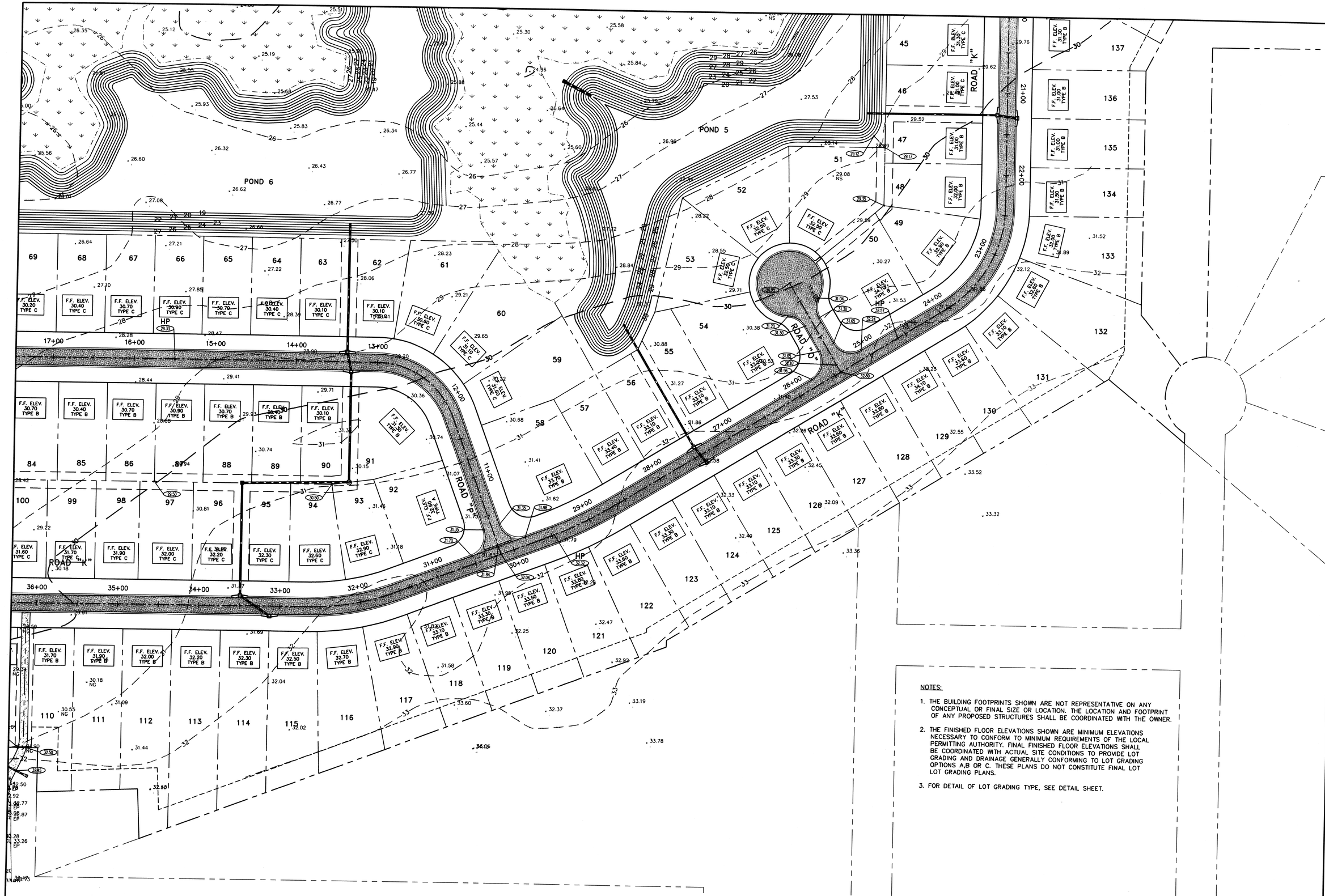
GRADING PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
23

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 21908
WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY., SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

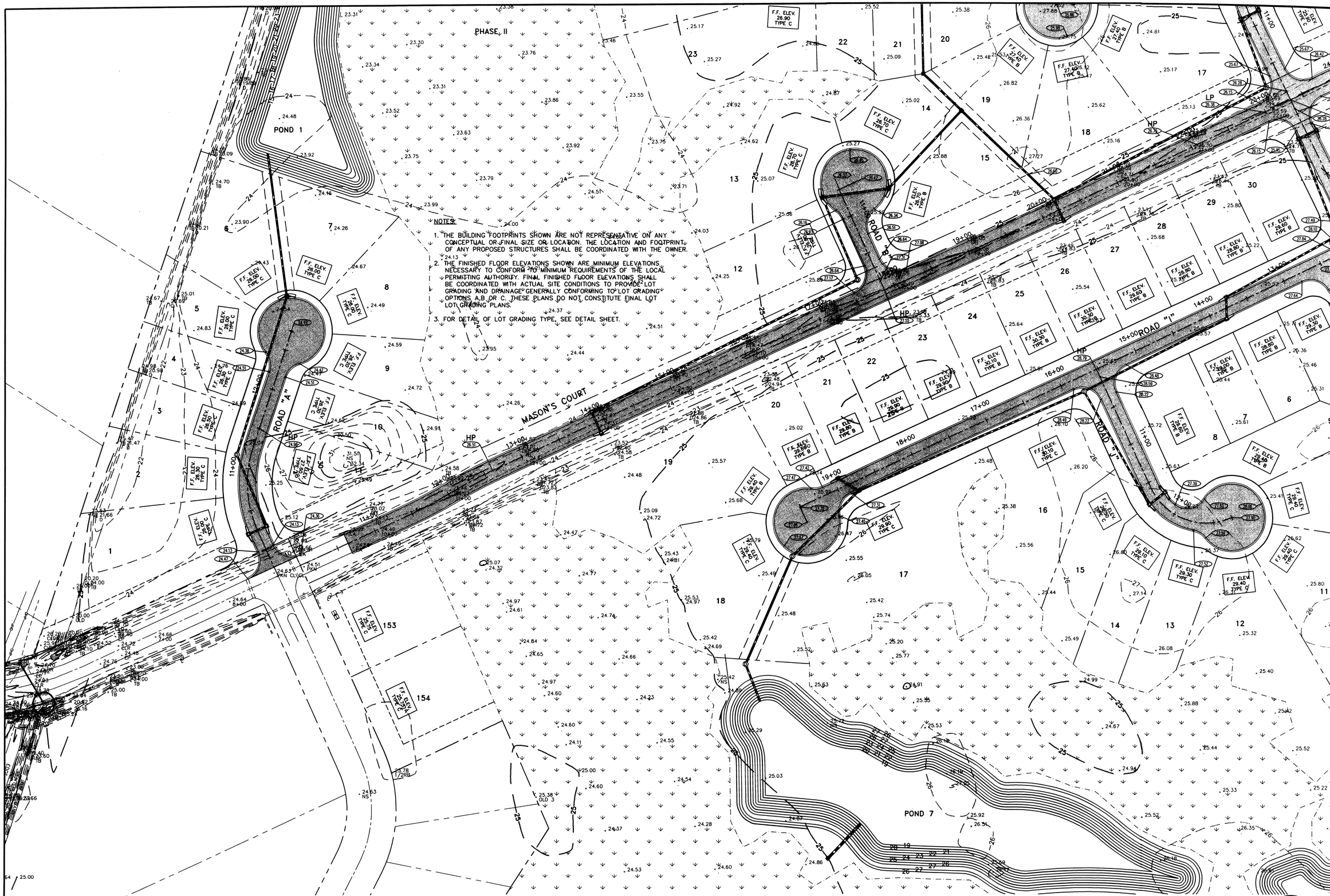
LOT GRADING PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET
24

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



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50 0 25 50
SCALE IN FEET

NORTH

GEORGE WALTER R. CHEEK
REGISTERED
No. 27709
PROFESSIONAL ENGINEER

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FF ELEV. FOR LOTS 153 & 154	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE ST. MARYS, GEORGIA 31558 PH: (912) 673-8575 FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH: (912) 265-3851 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

LOT GRADING PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 25

2006-5038

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NOTES:

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SCALE IN FEET: 50 0 25 50

NORTH

GEORGE WALTER R. CHEEK — REGISTERED PROFESSIONAL ENGINEER No. 21208

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558 — PH. (912) 673-8575, FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219, BRUNSWICK, GEORGIA 31525 — PH. (912) 265-3851, FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

LOT GRADING PLAN

PROJ. NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 26

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

NOW OR FORMERLY LANDS OF THE CITY OF KINGSLAND

WOODHAVEN SUBDIVISION

CITY OF KINGSLAND

NOW OR FORMERLY LANDS OF GEORGE AVENT GROSS

POND 2

POND 3

WETLAND JURISDICTIONAL AREA

ROAD "C"

ROAD "D"

ROAD "E"

ROAD "F"

MASON'S COURT

PHASE II

N81°05'11"W 1693.58'

NOTES:

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50 0 25 50
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 24298 TER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219, BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9309

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

LOT GRADING PLAN

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=50'

SHEET 27

2006-5038

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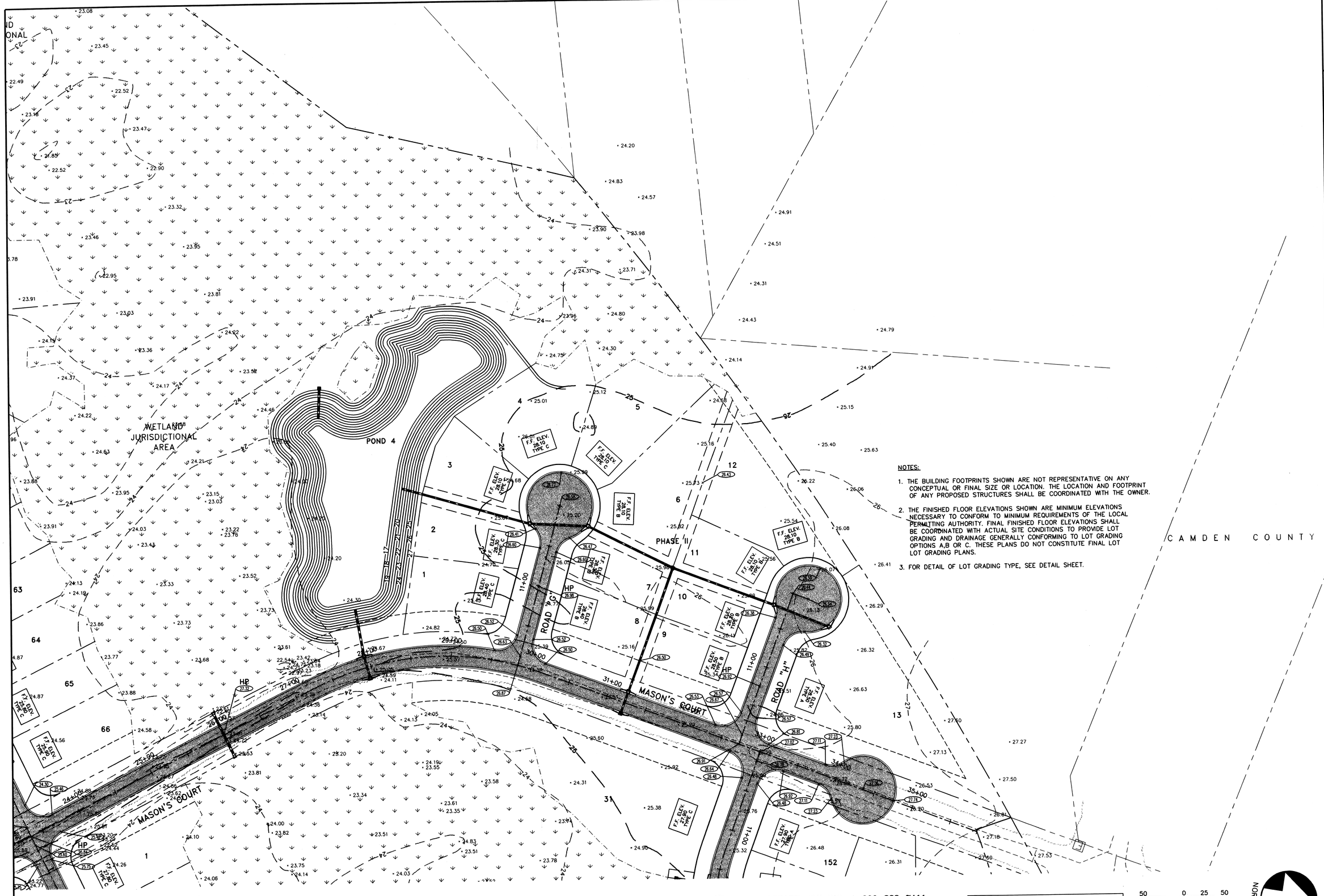

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS

1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729

3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

LOT GRADING PLAN

PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE : 1"=50'

SHEET
28

2006-5038

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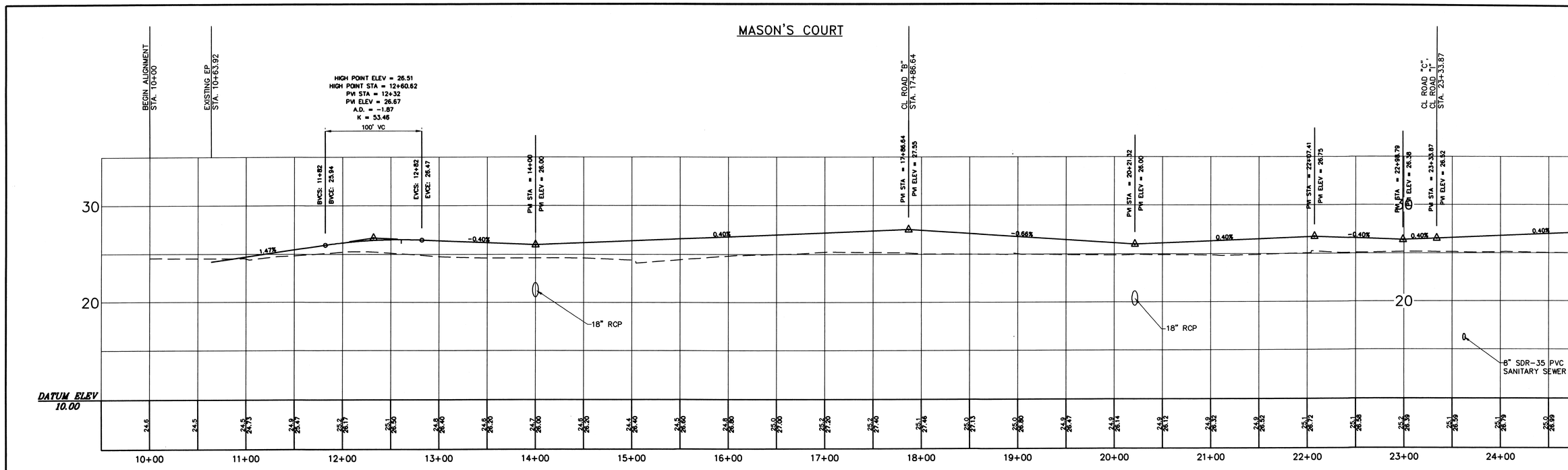

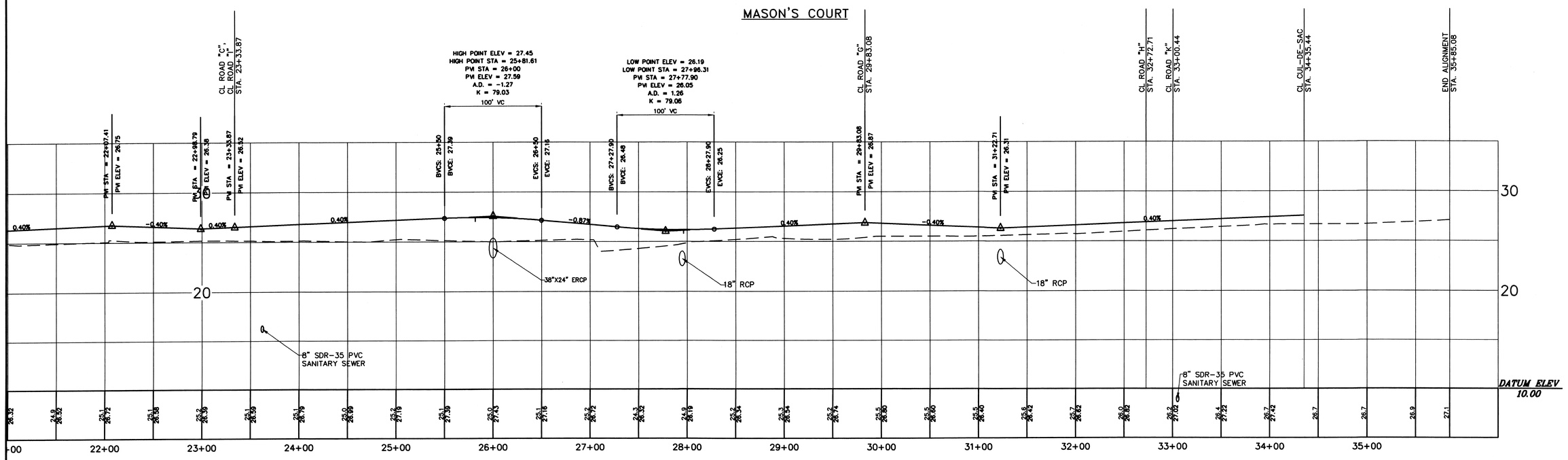

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HORIZONTAL
50 0 25 50
SCALE IN FEET

VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED No. 21208 PROFESSIONAL ENGINEER
PETER R. CHEEK
DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE	1"=50'H/1"=5'V

SHEET
29

2006-5038

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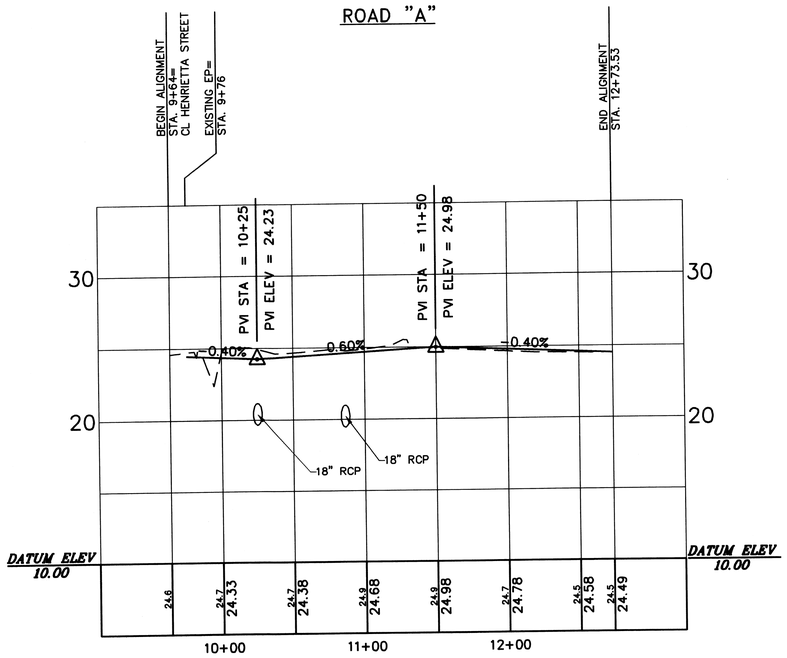

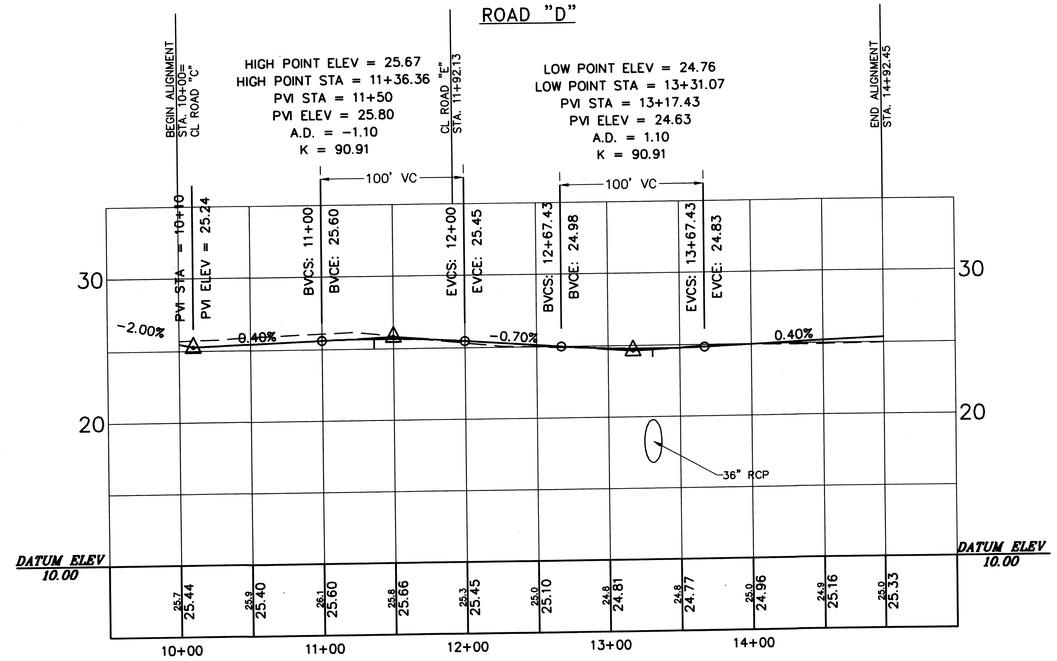

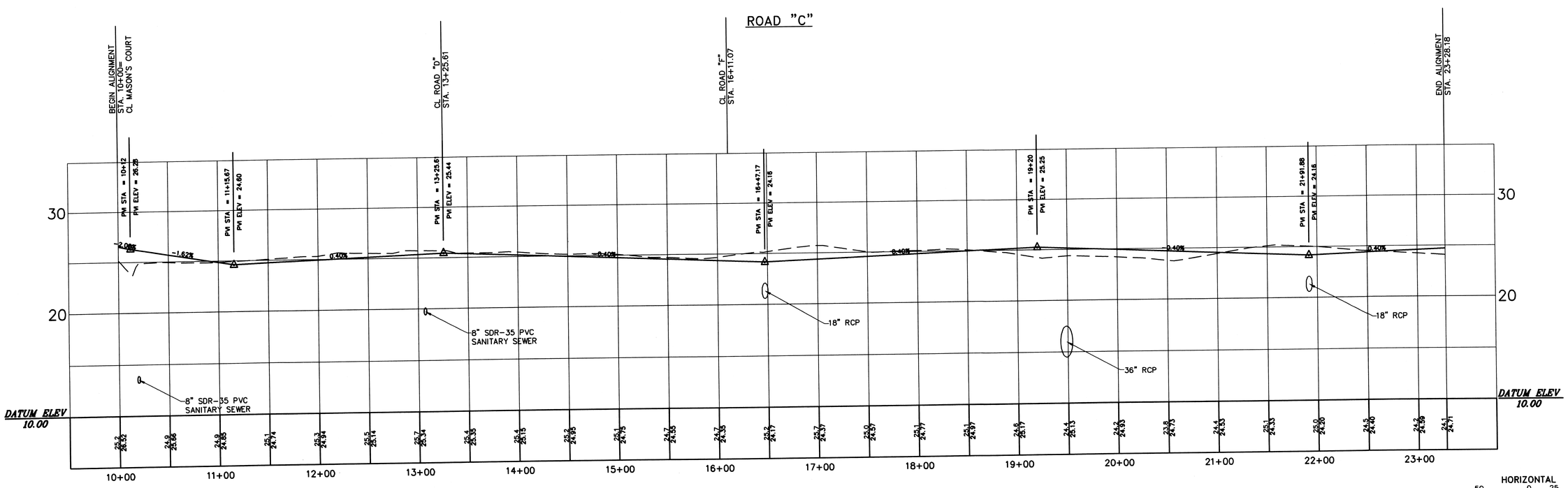

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HORIZONTAL
50 0 25 50
SCALE IN FEET

VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27707 WALTER R. CHECK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3508 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

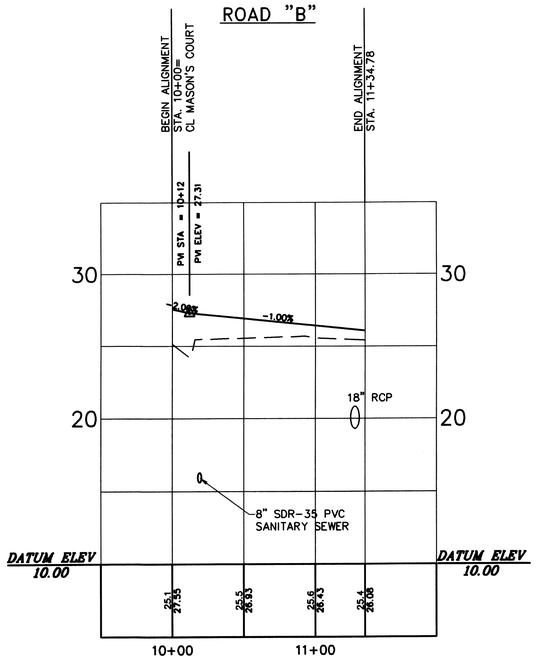
PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

SHEET
30

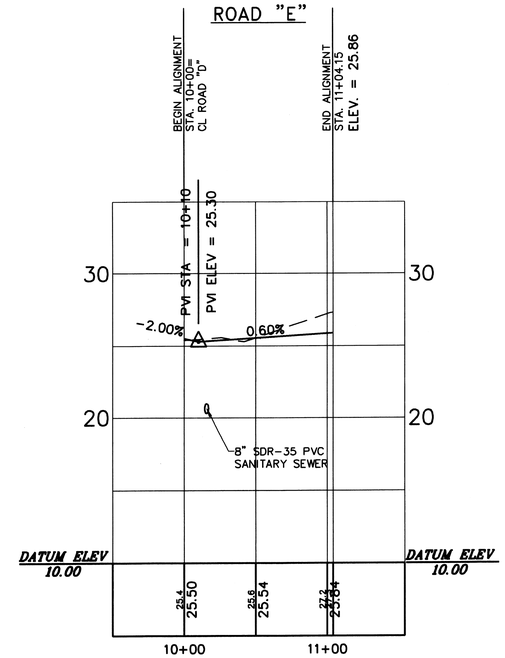
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

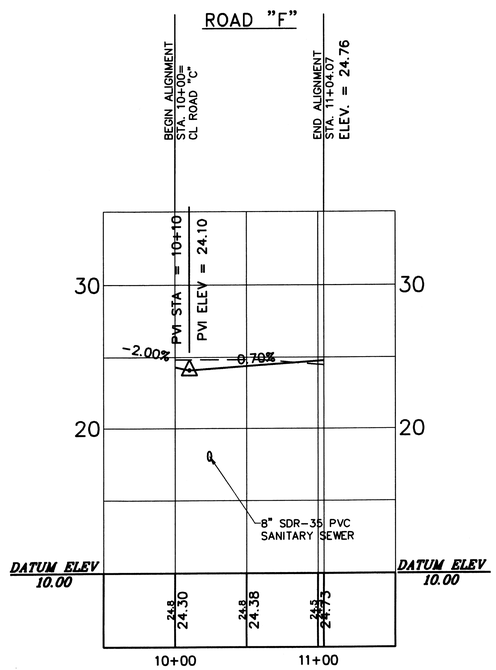
ROAD "B"



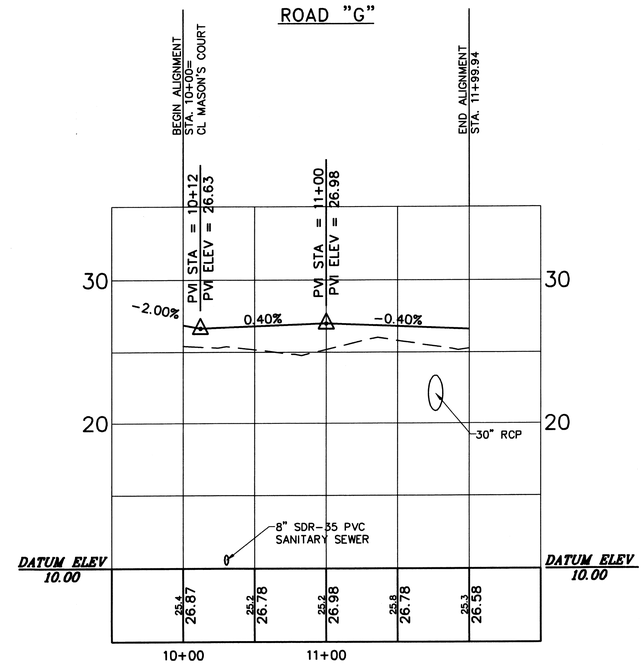
ROAD "E"



ROAD "F"



ROAD "G"



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HORIZONTAL
50 0 25 50
SCALE IN FEET
VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21706 PETER R. CHECK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY. SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

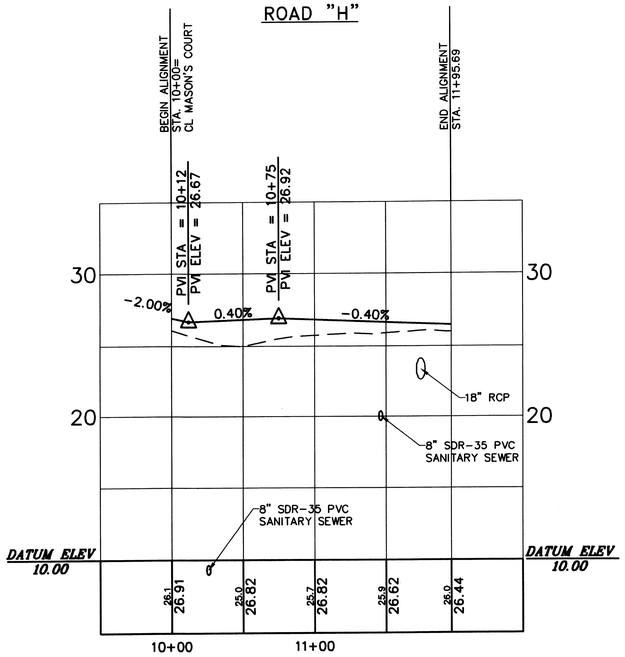
PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE :1"=50'H/1"=5'V

SHEET
31

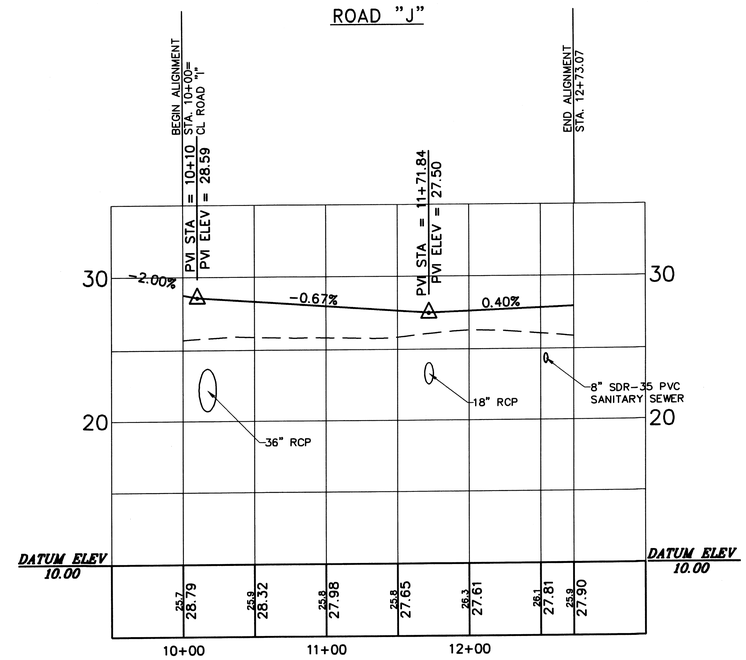
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

ROAD "H"



ROAD "J"



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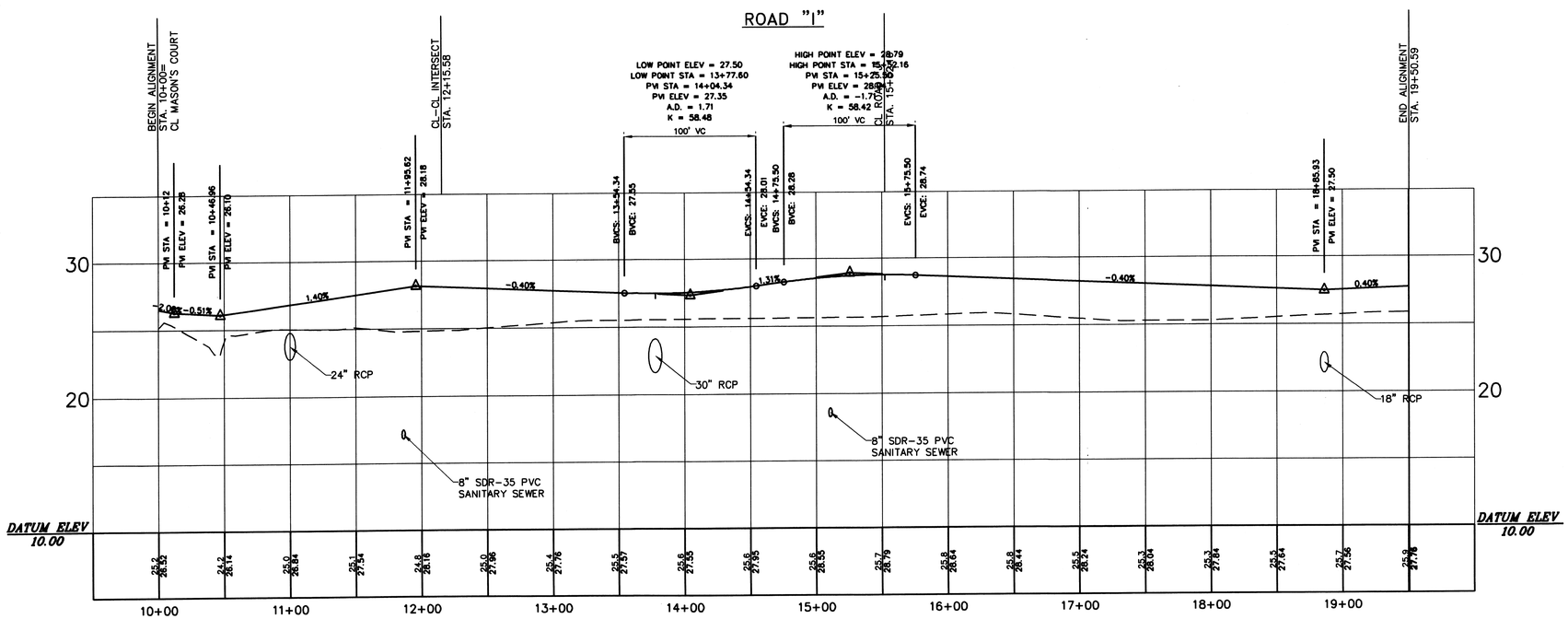

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HORIZONTAL
50 0 25 50
SCALE IN FEET
VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK
DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8275
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-9851
FAX: (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

SHEET
32

2006-5038

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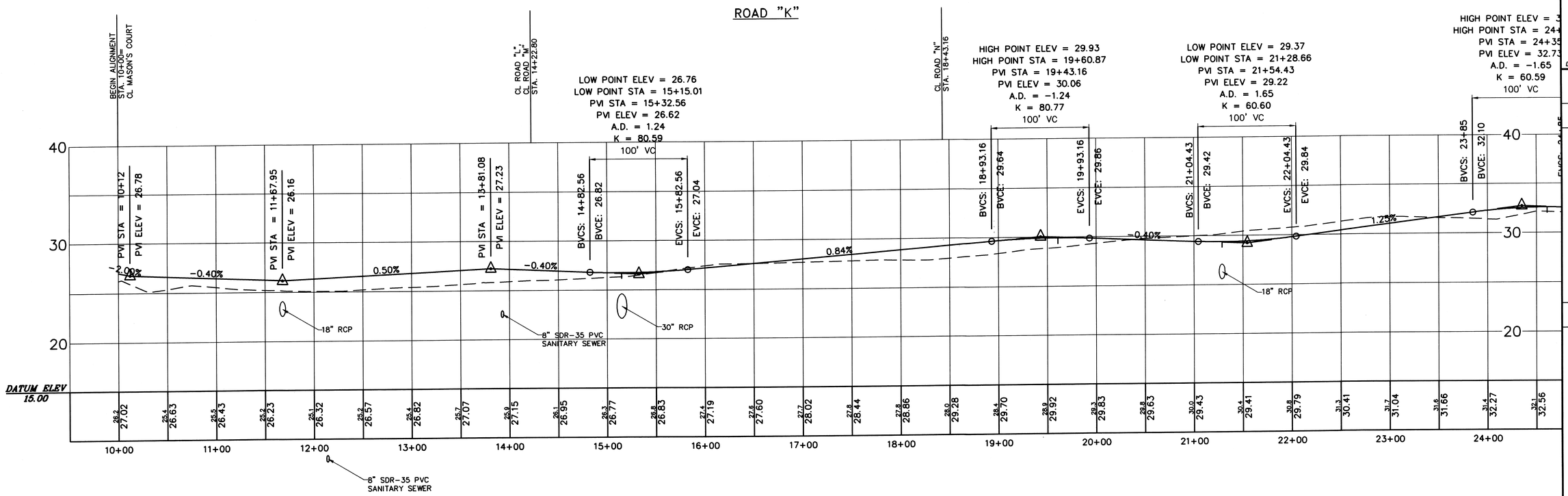

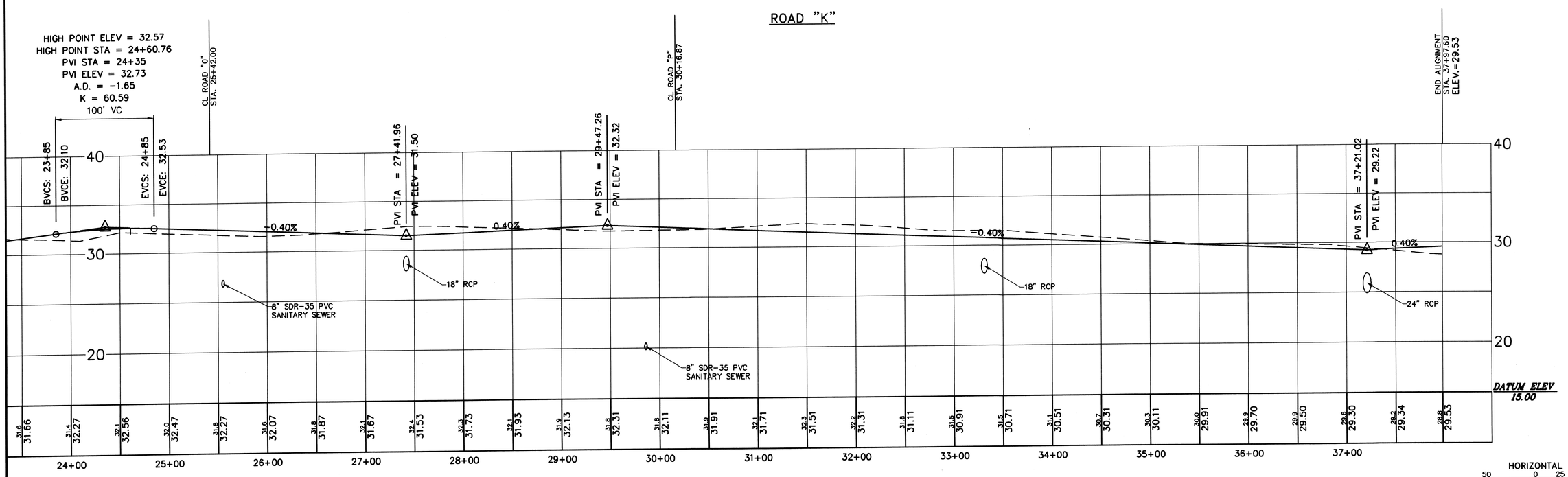

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SCALE IN FEET
VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED No. 22708 PROFESSIONAL ENGINEER PETER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

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CIVIL ENGINEERS
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ST. MARYS, GEORGIA 31558
PH: (912) 673-9575
FAX (912) 882-2729
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BRUNSWICK, GEORGIA 31525
PH: (912) 265-9851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE :1"=50'H/1"=5'V

SHEET
33

2006-5038

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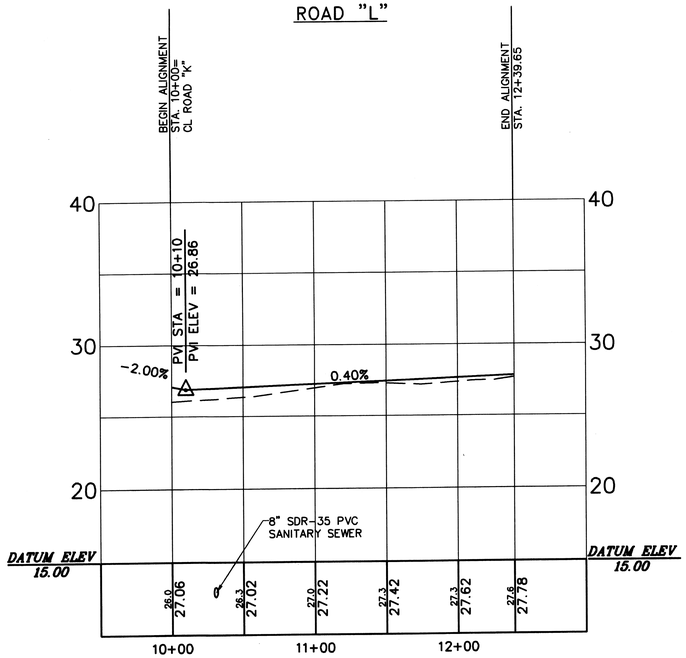
ROAD "L"



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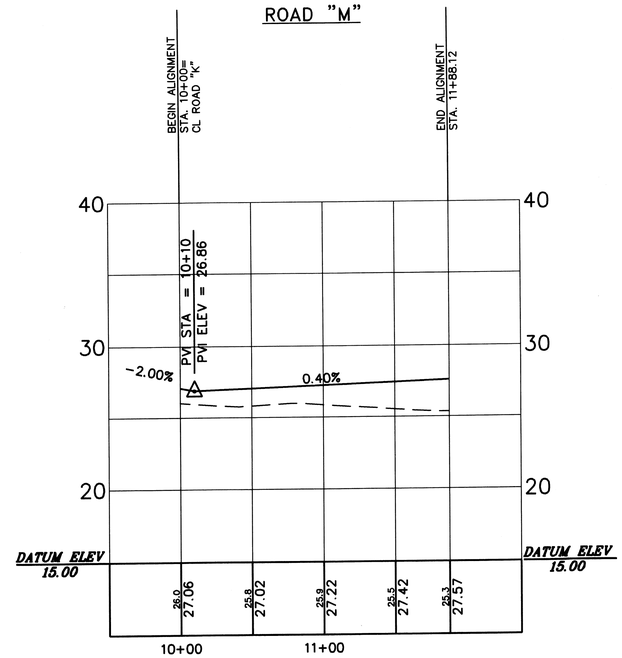

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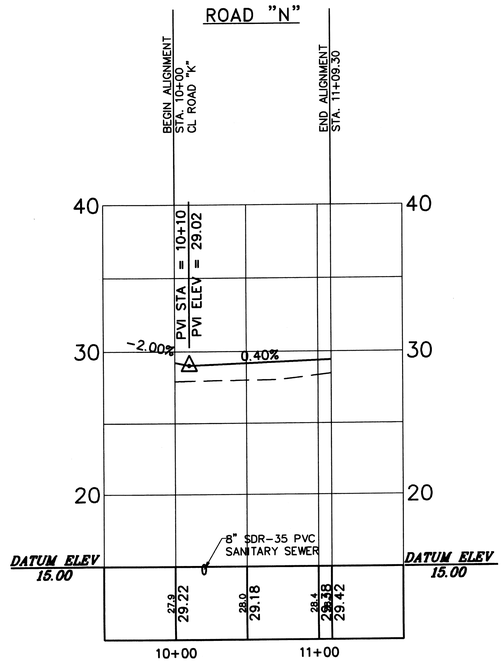

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 22170 WALTER R. CHEEK

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

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BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

ROAD PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

SHEET
34
2006-5038

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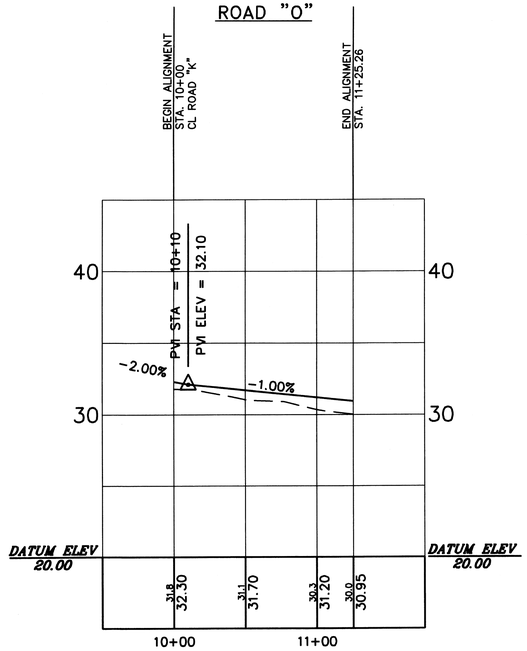
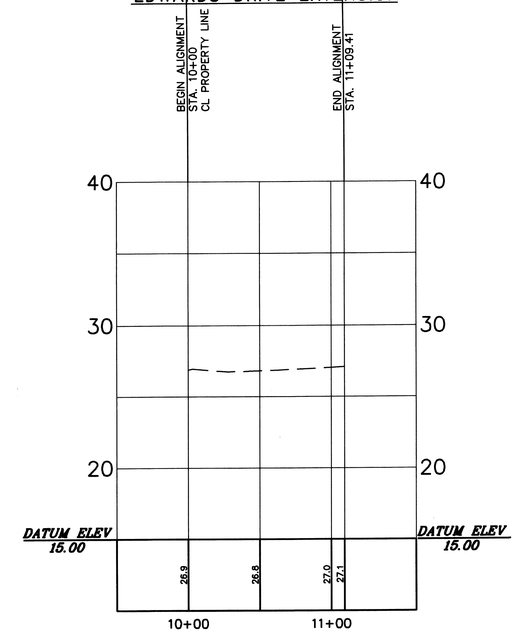


EDWARDS DRIVE EXTENSION



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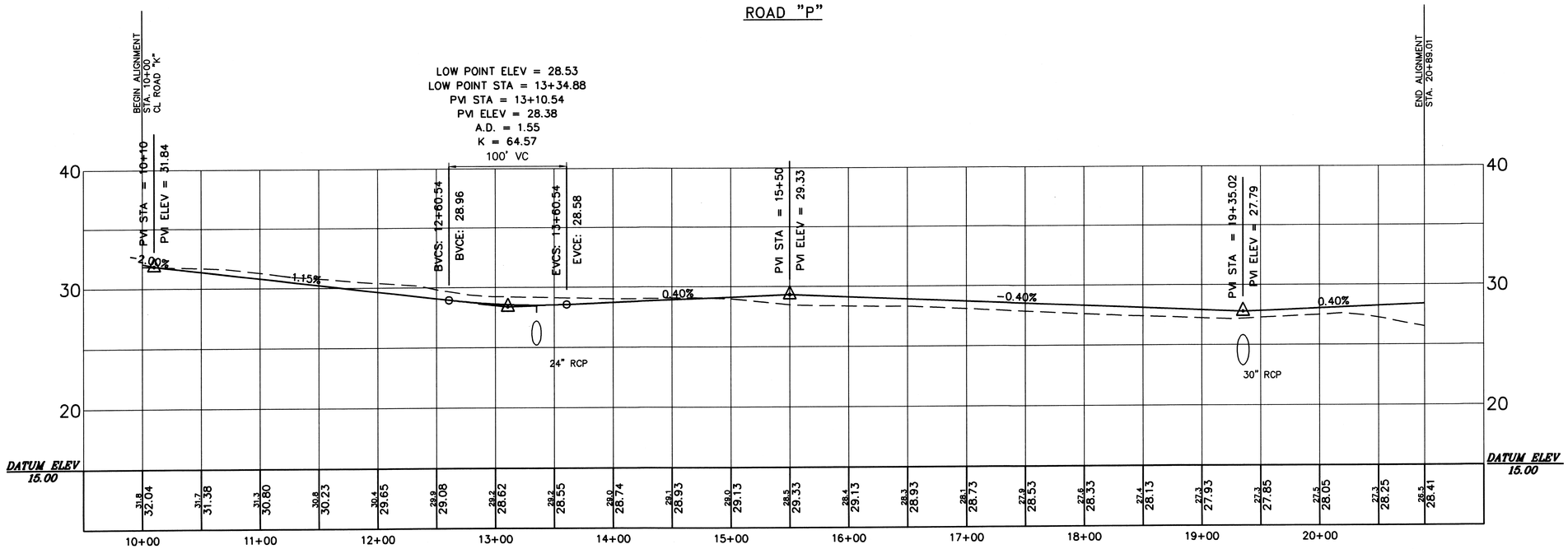

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SCALE IN FEET

GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER
TER R. CHECK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
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KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

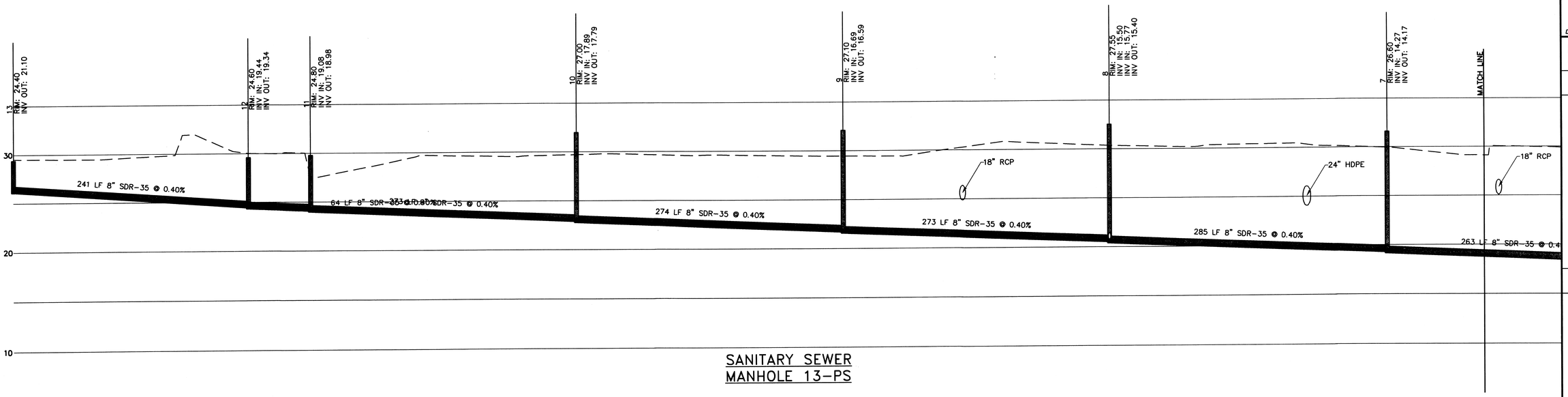
ROAD PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

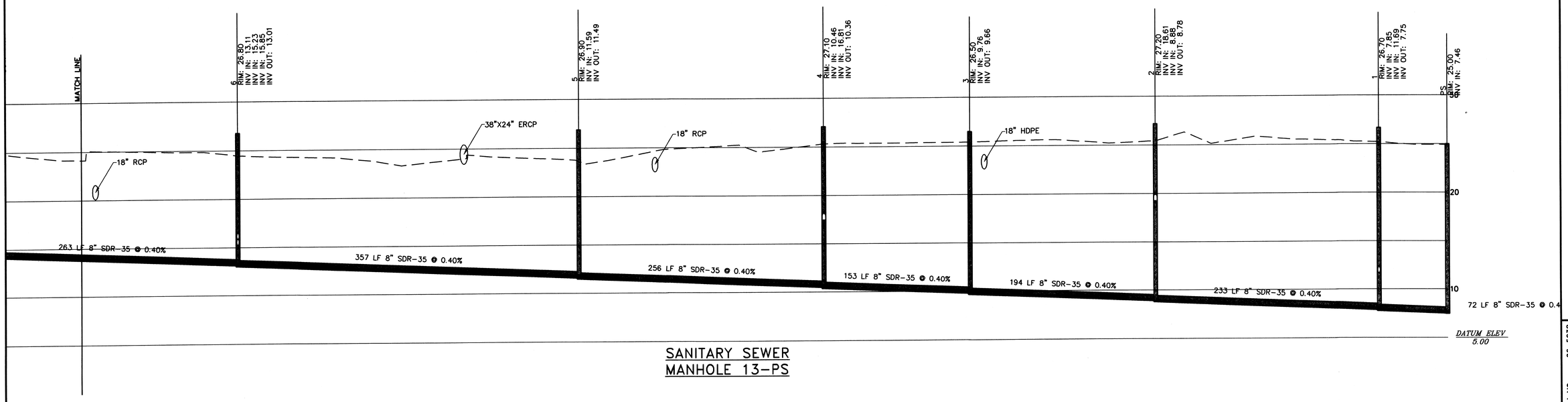
SHEET
35

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



SANITARY SEWER
MANHOLE 13-PS



SANITARY SEWER
MANHOLE 13-PS

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SCALE IN FEET

VERTICAL
5 0 5
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21108 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
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FAX (912) 882-2729
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BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE	1"=50'H/1"=5'V

SHEET
36

2006-5038

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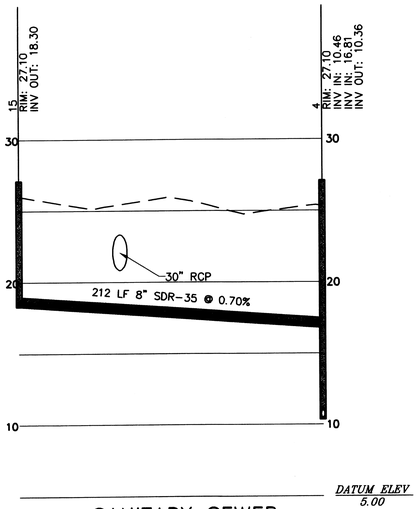
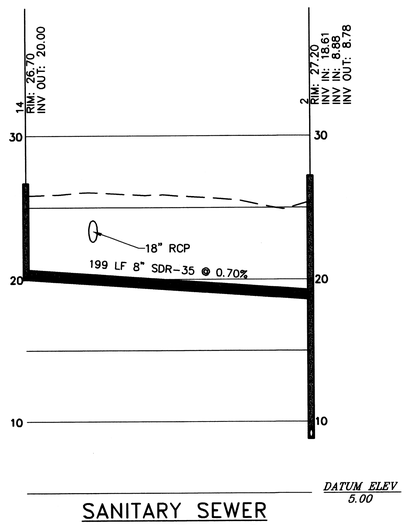
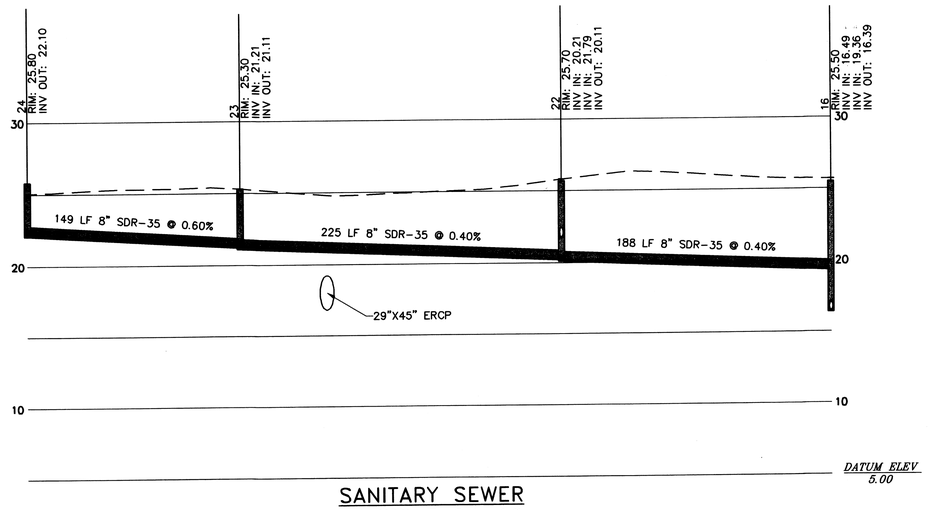


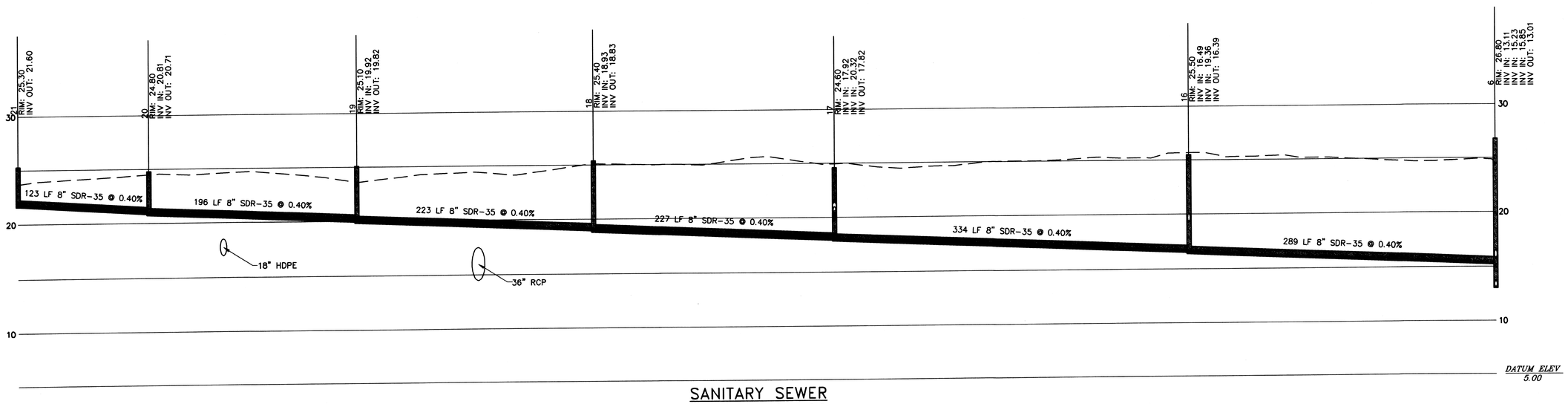
SANITARY SEWER
MANHOLE 15-4



SANITARY SEWER
MANHOLE 14-2



SANITARY SEWER
MANHOLE 24-16



SANITARY SEWER
MANHOLE 21-06

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SCALE IN FEET

GEORGIA REGISTERED No. 21705 PROFESSIONAL ENGINEER
WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
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FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

SHEET
37
2006-5038

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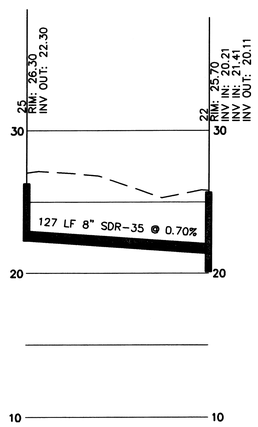
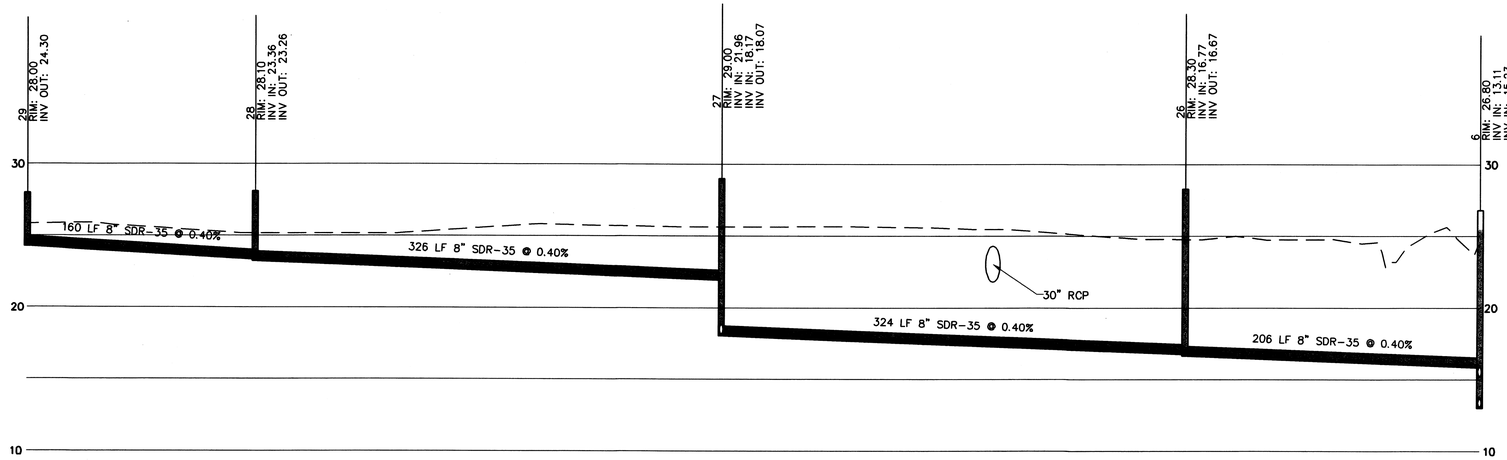
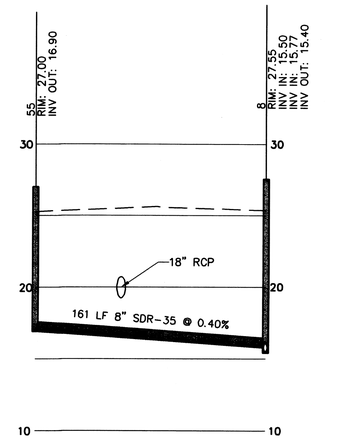


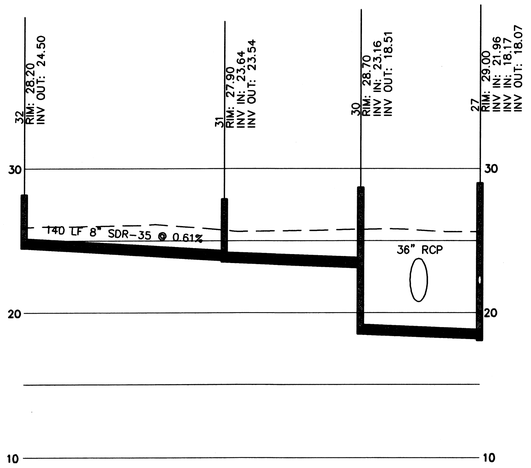
SANITARY SEWER
MANHOLE 25-22



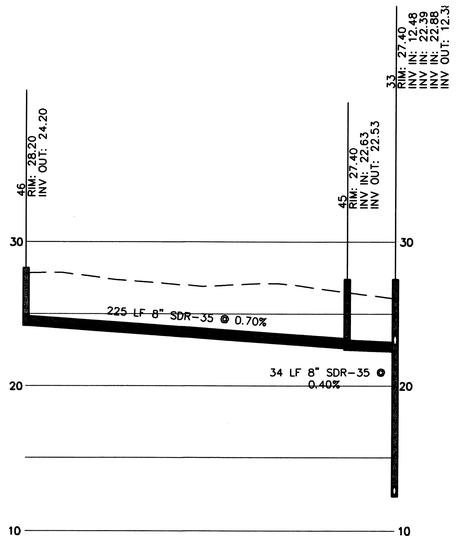
SANITARY SEWER
MANHOLE 29-06



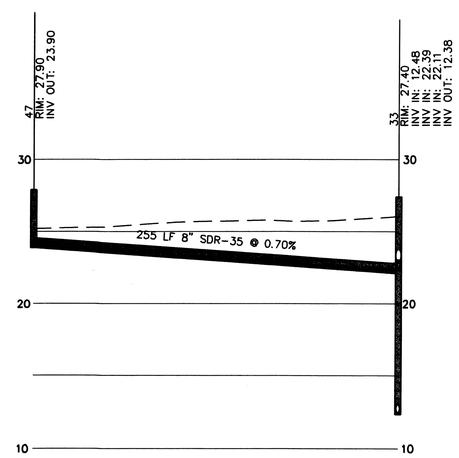
SANITARY SEWER
MANHOLE 55-08



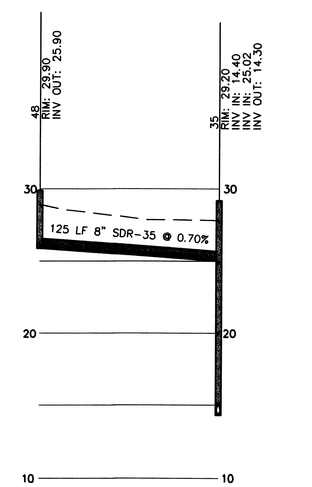
SANITARY SEWER
MANHOLE 32-27



SANITARY SEWER
MANHOLE 46-33



SANITARY SEWER
MANHOLE 47-33



SANITARY SEWER
MANHOLE 48-35

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REGISTERED PROFESSIONAL ENGINEER No. 17067 GEORGIA WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE 3528 DARIEN HWY, SUITE 219
ST. MARYS, GEORGIA 31558 BRUNSWICK, GEORGIA 31525
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KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE	1"=50'H/1"=5'V

SHEET
38

2006-5038

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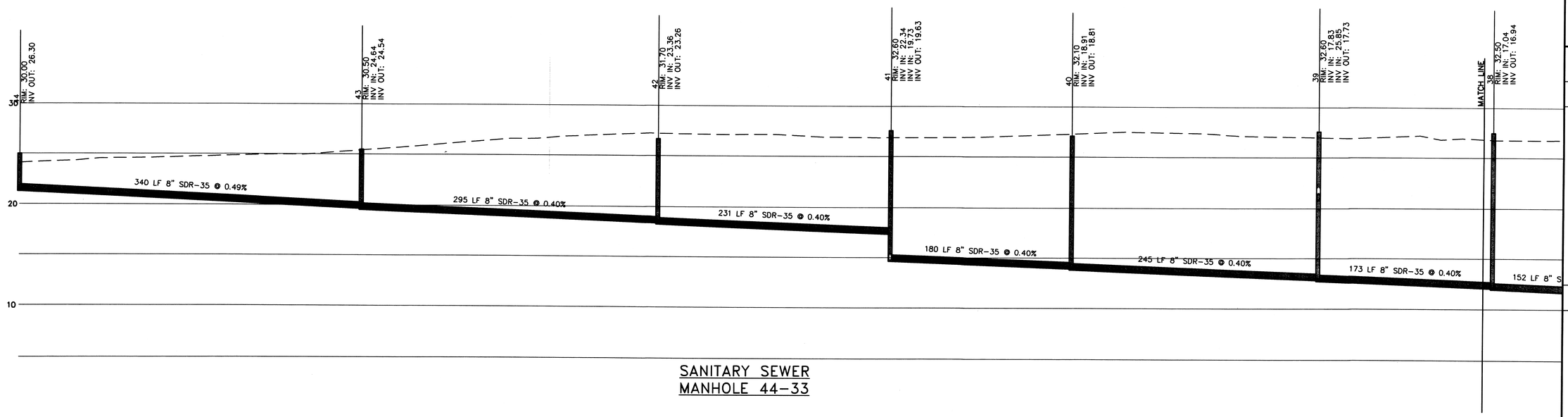
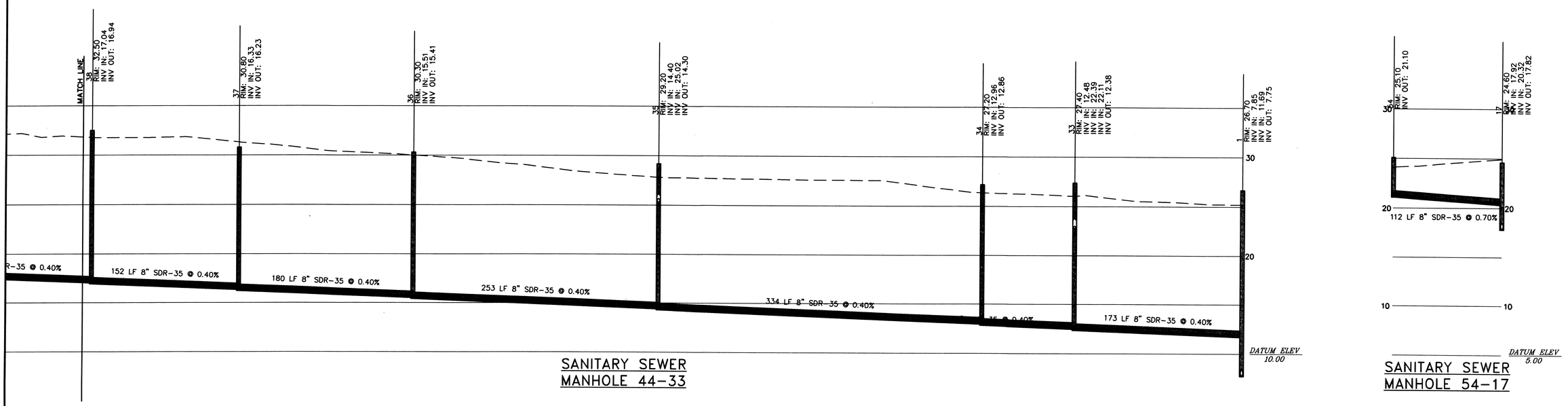


SANITARY SEWER
MANHOLE 44-33



SANITARY SEWER
MANHOLE 44-33

SANITARY SEWER
MANHOLE 54-17

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VERTICAL 5 0 5 SCALE IN FEET

GEORGIA REGISTERED No. 21108 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 7/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

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CIVIL ENGINEERS
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KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. :	06-5038
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DRAWN BY :	JWH
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APPROVED BY :	WRC
SCALE	1"=50'H/1"=5'V

SHEET
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2006-5038

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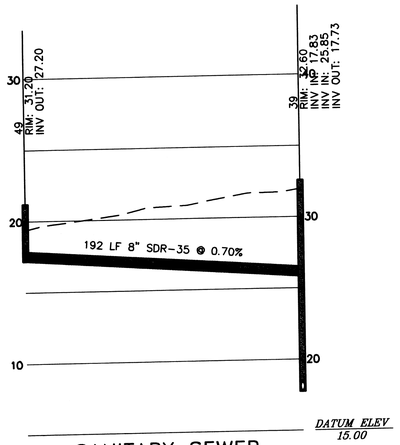
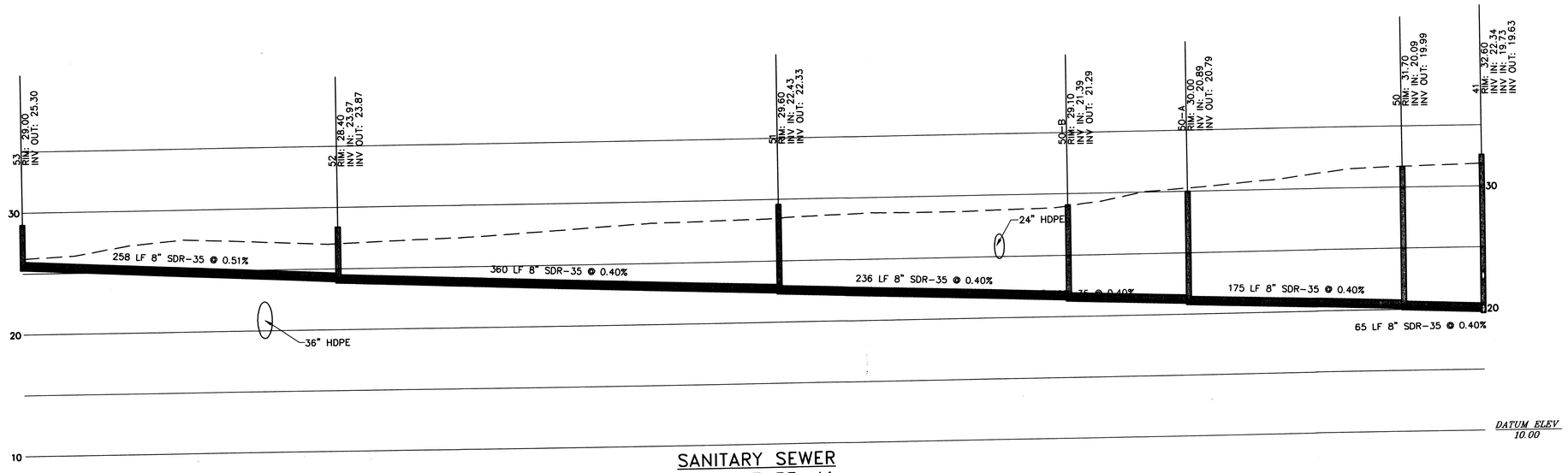


SANITARY SEWER
MANHOLE 49-39



SANITARY SEWER
MANHOLE 53-41

GEORGIA REGISTERED No. 17708 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-3572
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE :1"=50'H/1"=5'V

SHEET
40
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
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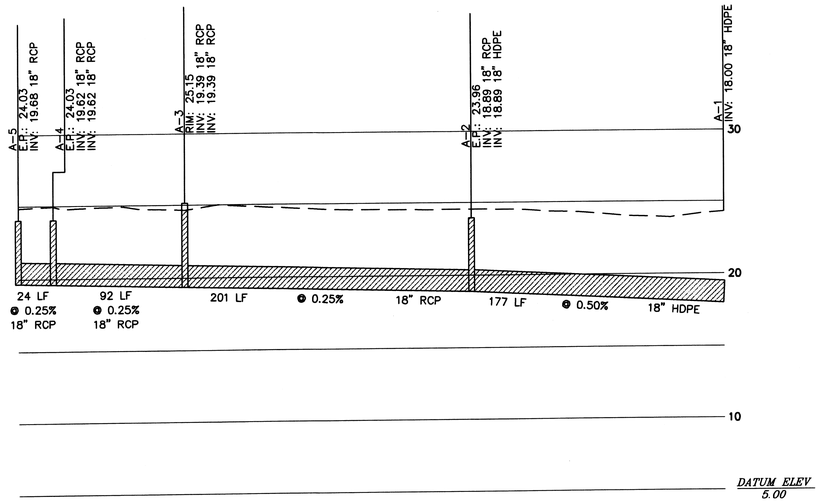
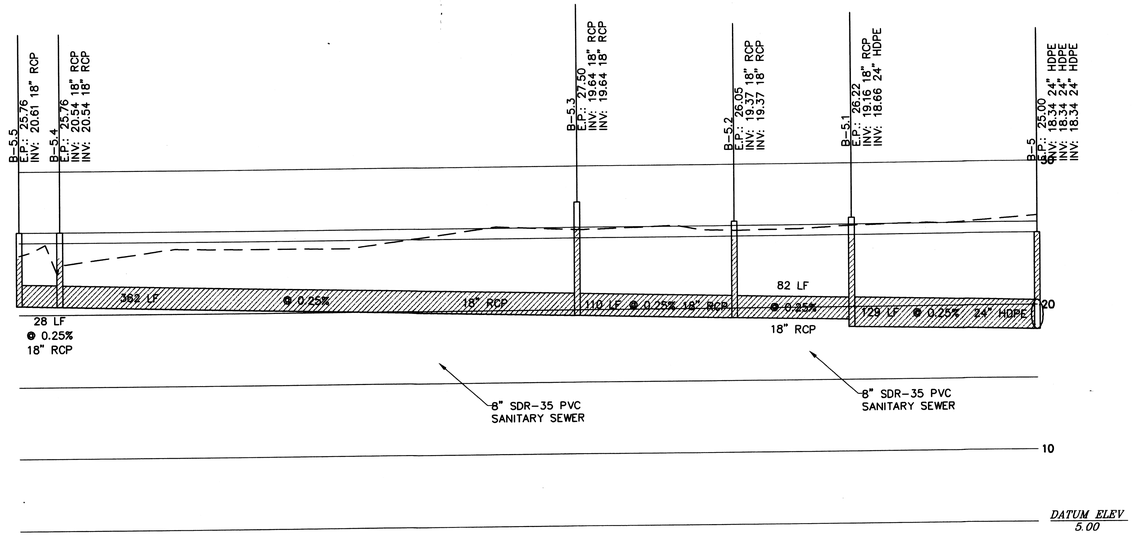
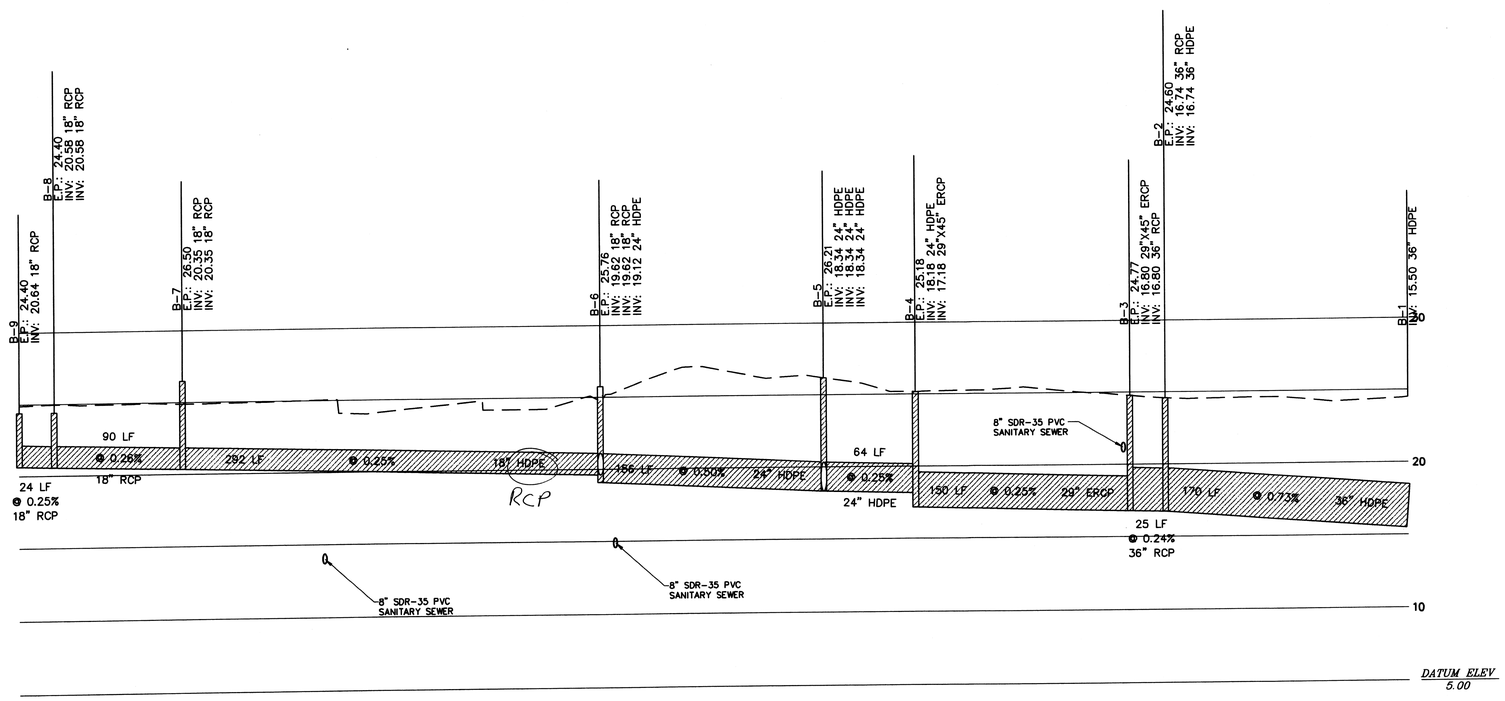
HORIZONTAL 50 0 25 50 SCALE IN FEET

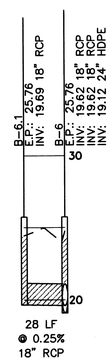
VERTICAL 5 0 5 SCALE IN FEET

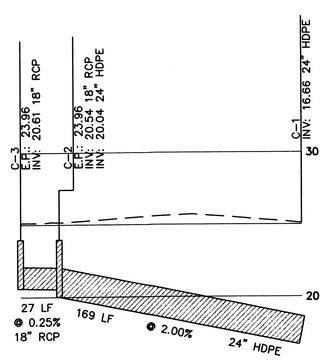
STORM SYSTEM PROFILES











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VERTICAL 5 0 5 SCALE IN FEET

GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER TYLER R. CHEEK

DATE SEALED: 7/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE ST. MARYS, GEORGIA 31558 PH: (912) 882-8575 FAX: (912) 882-2729
3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH: (912) 265-9351 FAX: (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

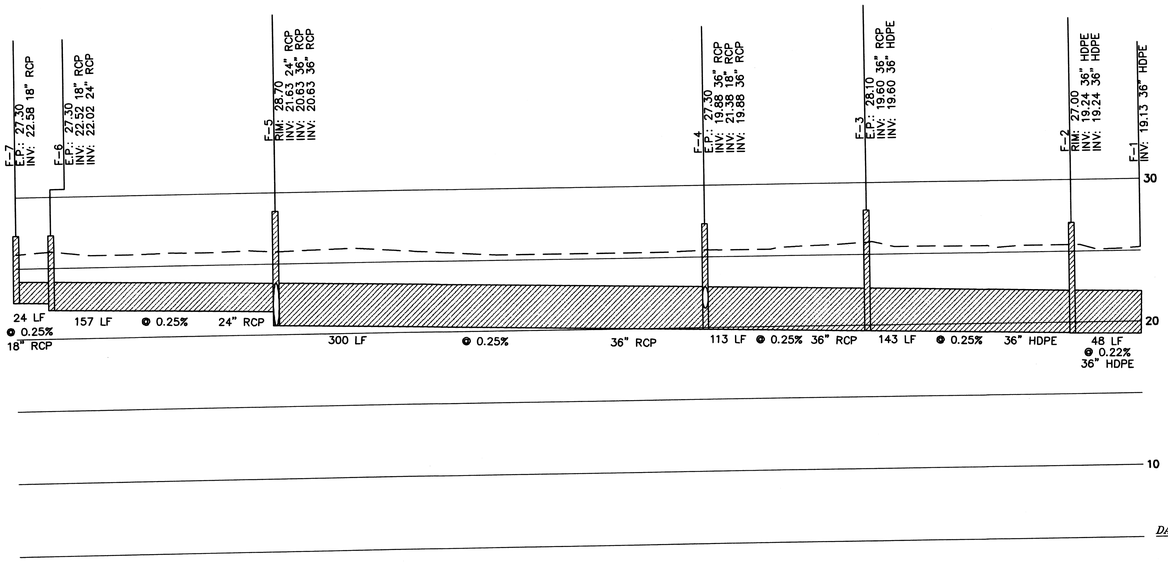
PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE 1"=50'H/1"=5'V

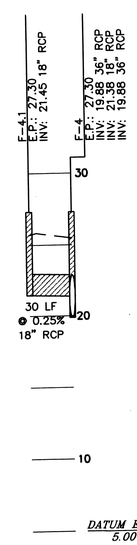
SHEET 41

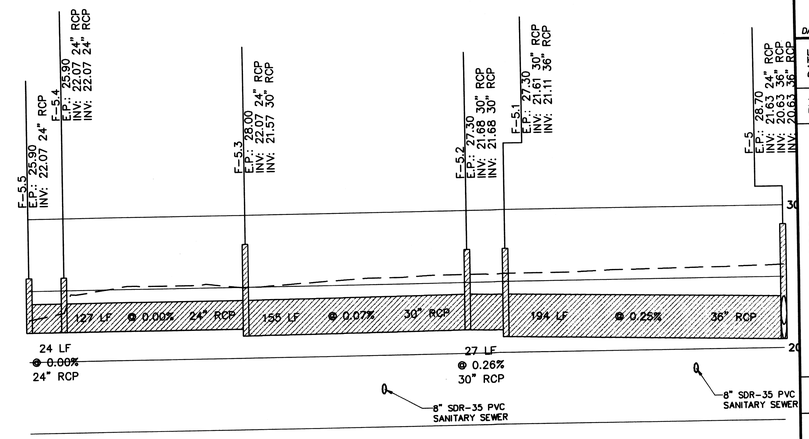
2006-5038

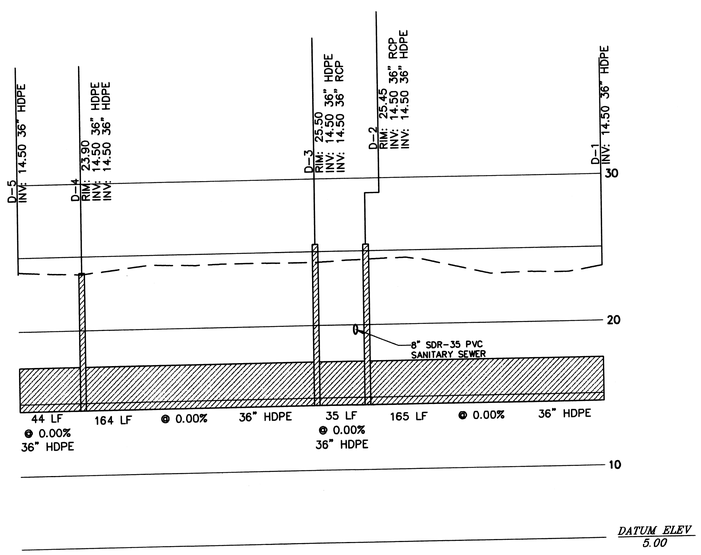
NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

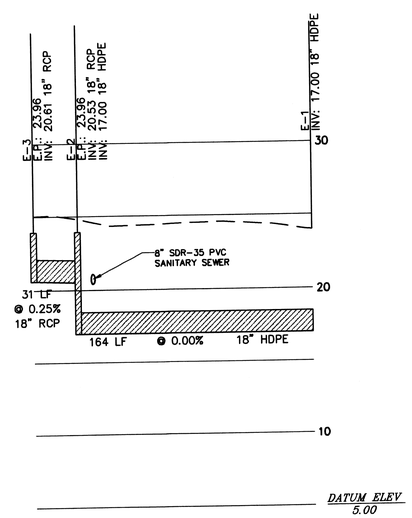
STORM SYSTEM PROFILES

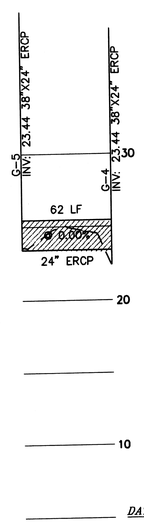


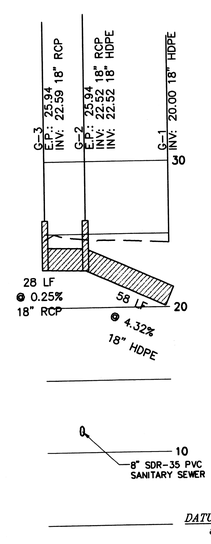


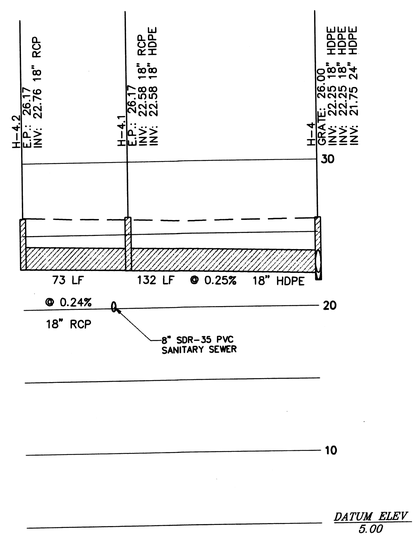












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HORIZONTAL 50 0 25 50 SCALE IN FEET

VERTICAL 5 0 5 SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 17708 PETER R. CHEEK

DATE SEALED: 2/22/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY. SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

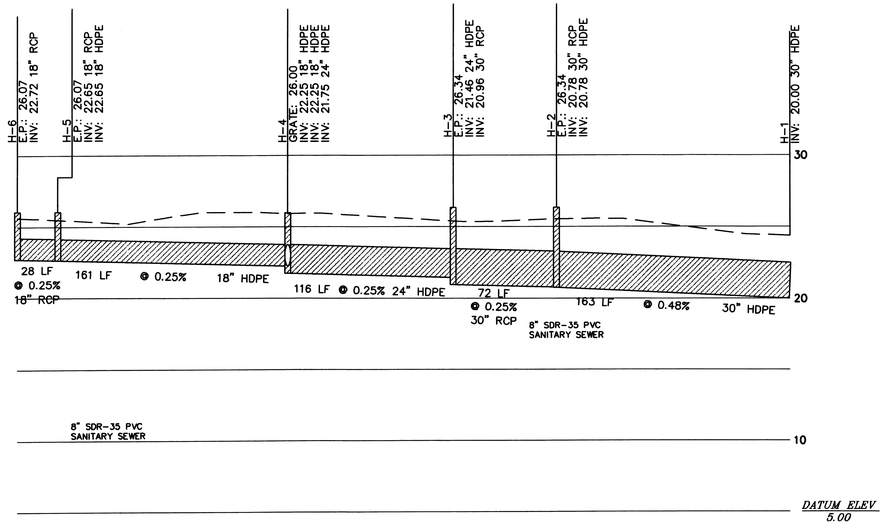
PROJ NO. : 06-5038
DATE: 11/10/06
DRAWN BY : JWH
CHECKED BY : WRC
APPROVED BY : WRC
SCALE :1"=50'H/1"=5'V

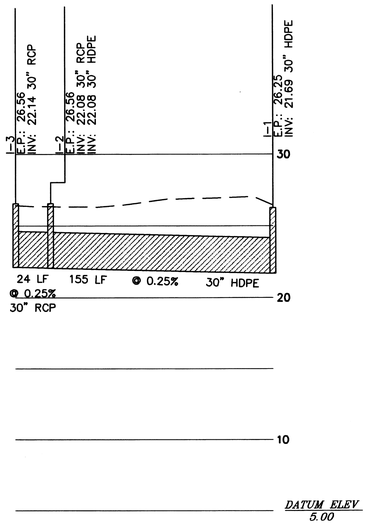
SHEET 42

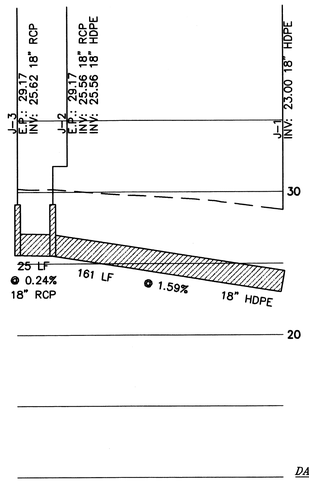
2006-5038

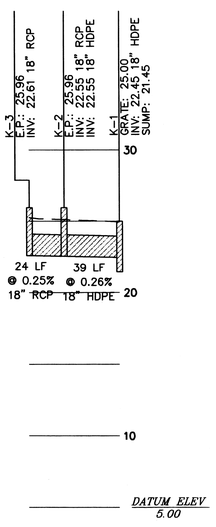
NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

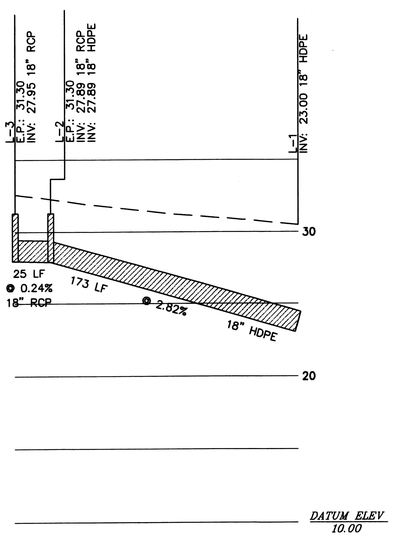
STORM SYSTEM PROFILES

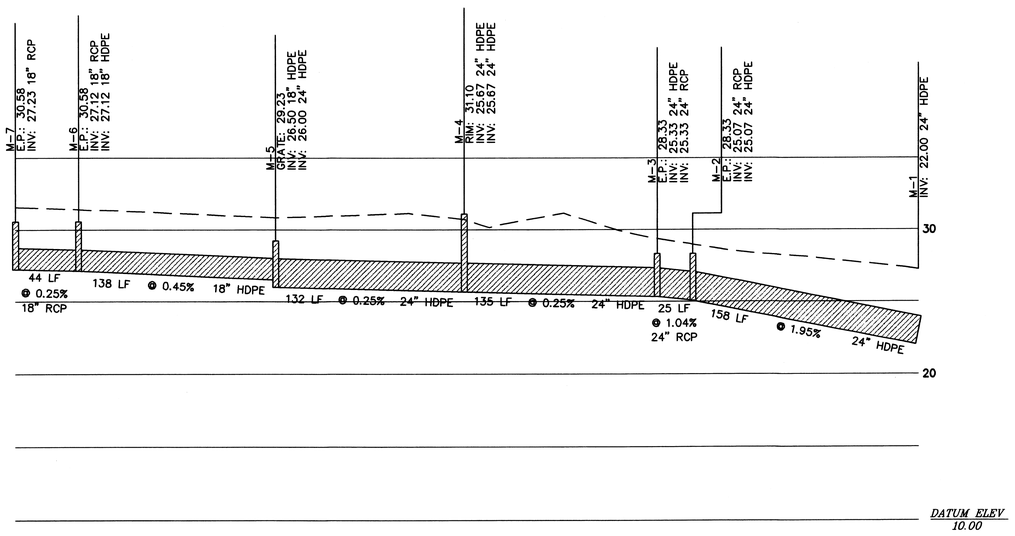


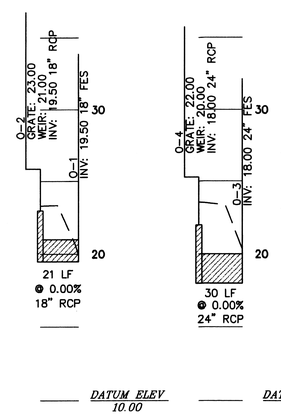












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HORIZONTAL 50 0 25 50 SCALE IN FEET
VERTICAL 5 0 5 SCALE IN FEET

GEORGIA REGISTERED No. 21786 PROFESSIONAL ENGINEER
DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE ST. MARY'S, GEORGIA 31558 PH. (912) 673-8575 FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH. (912) 265-3851 FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

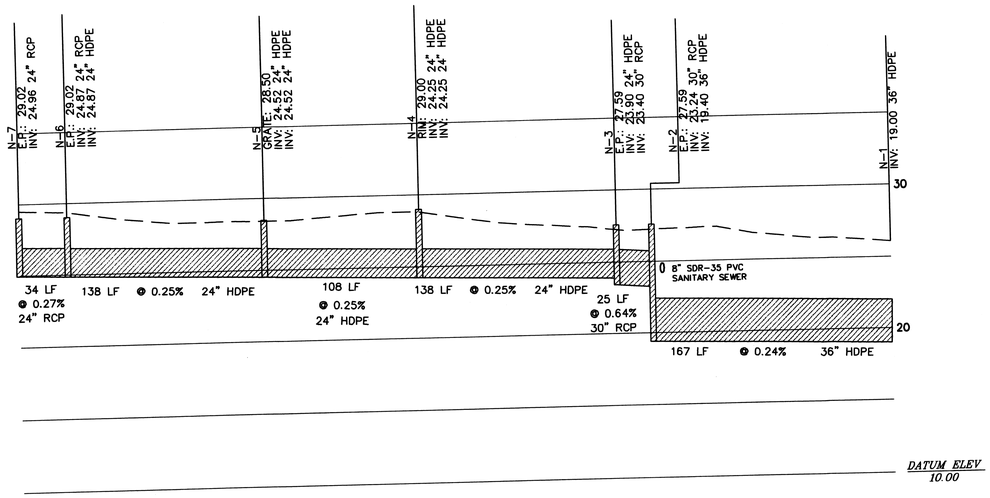
PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE	1"=50'H/1"=5'V

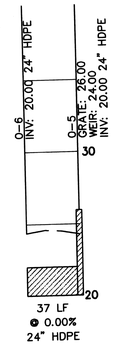
SHEET 43

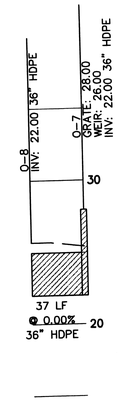
2006-5038

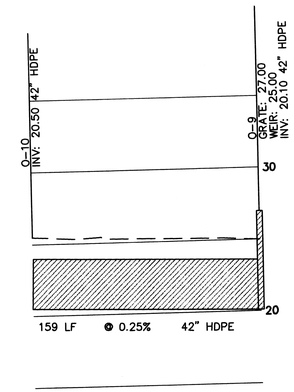
NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

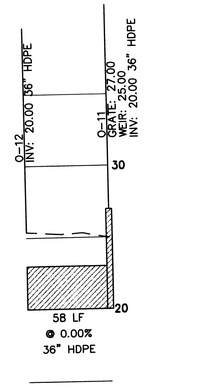
STORM SYSTEM PROFILES











GEORGIA REGISTERED No. 21768 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 1/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
2	REVISED MASONS COURT GRADING	MAD	02/14/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

UTILITY PROFILES

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :1"=50'H/1"=5'V	

SHEET

44

2006-5038

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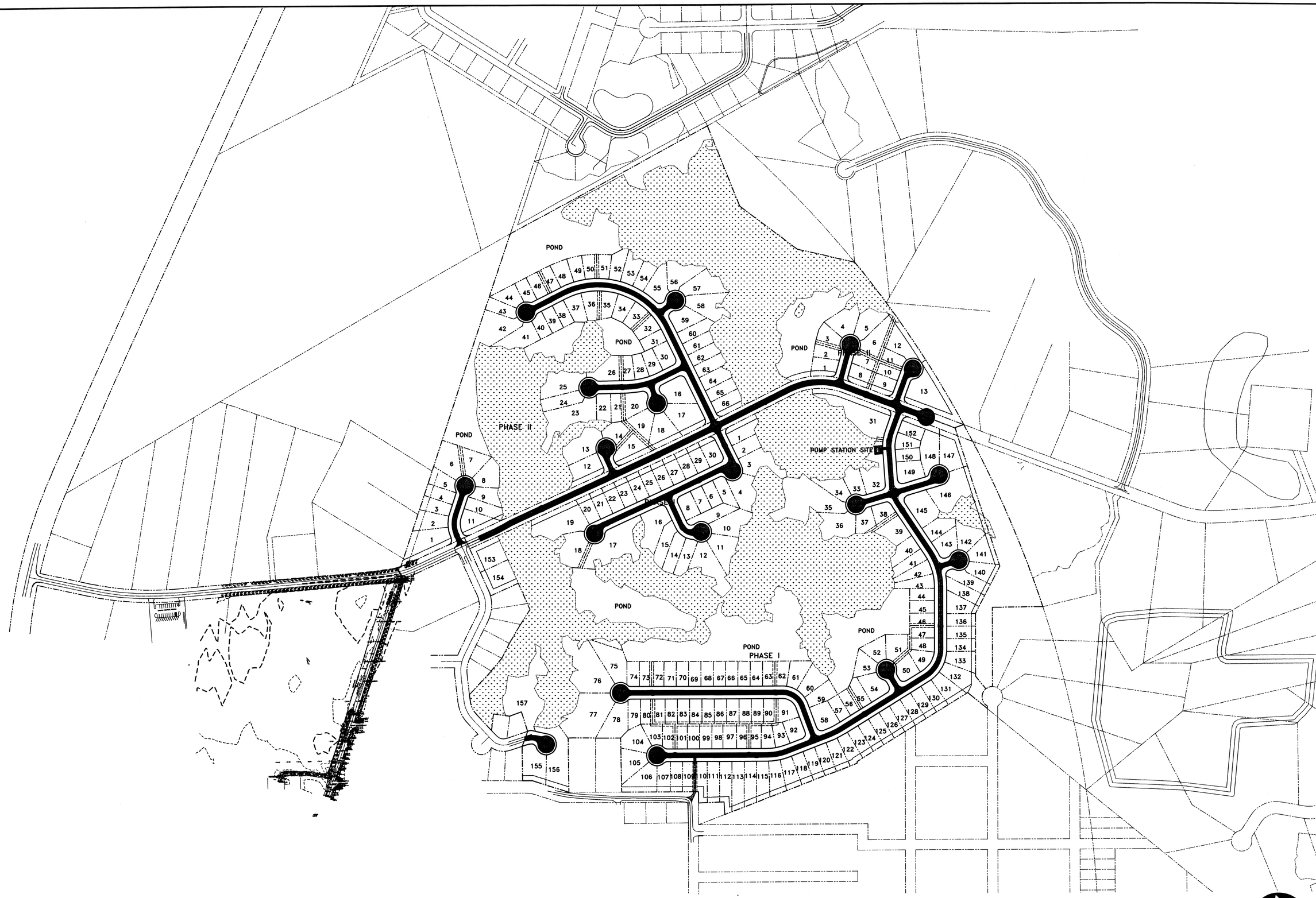
VERTICAL 5 0 5 SCALE IN FEET



GEORGIA REGISTERED No. 21709 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 7/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 882-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-8855
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION AND SEDIMENT CONTROL LAYOUT

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=200'

SHEET 45

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED)(OUTSIDE THE 500 YEAR FLOOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 13039C0362 C; DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 2 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC., KINGSLAND WEST, CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA. DATED: AUGUST 29, 2006.
5. THE SOILS BOUNDARIES SHOWN HEREON WERE SCALED FROM SOIL SURVEY OF CAMDEN AND GLYNN COUNTIES, GEORGIA BY UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS, ISSUED NOV. 1980.
6. CLEAR ONLY THOSE AREAS REQUIRED FOR CONSTRUCTION AND, WHERE POSSIBLE, MAINTAIN A VEGETATIVE BUFFER ZONE BETWEEN THE DISTURBED WORKING AREA AND ANY WATERCOURSE. IF A 25 FOOT BUFFER WITH HEAVY VEGETATION CANNOT BE MAINTAINED, FOR ANY REASON, A SILT FENCE SHALL BE ERECTED IN ITS PLACE.
7. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
8. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

SOILS INFORMATION

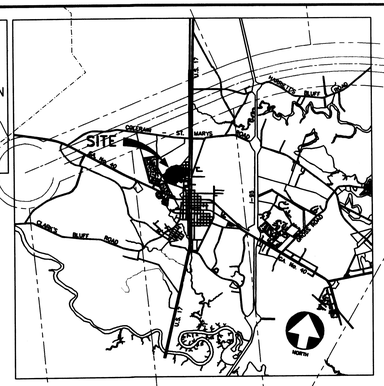
K = SOIL ERODIBILITY FACTOR

SOIL SYMBOL	NAME	SLOPE	K	LIMITATION	REASON FOR LIMITATION	HYDROLOGIC SOIL GROUP
AdA	ALBANY	0-2	0.17	SEVERE	WETNESS ---	C
Bk	BLADEN	0-1	0.10	SEVERE	WETNESS FLOODING	D
Br	BROOKMAN	0-1	0.24	SEVERE	WETNESS ---	D
Pe	PELHAM	0-2	0.10	SEVERE	WETNESS ---	B/D
Sa	SAPELO	0-2	0.17	SEVERE	WETNESS ---	B/D

NOTES:

1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.

DENOTES LIMITS OF DISTURBANCE, L.O.D.: ----------



STABILIZING STATEMENT

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

W.R. Cheek

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

EROSION CONTROL INSTALLATION

1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES IN THE FOLLOWING SEQUENCE:
   A. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL STAKE AND FLAG ALL JURISDICTIONAL WETLANDS AND ALL UNDISTURBED BUFFERS SHOWN ON THE PLANS.
   B. CONTRACTOR SHALL INSTALL CONSTRUCTION EXIT STONE PAD PRIOR TO DISTURBANCE DUE TO UTILITY AND/OR ROAD CONSTRUCTION. CONSTRUCTION ACCESS TO BE LOCATED AS SHOWN ON THIS DRAWING.
   C. PRIOR TO ROUGH GRADING OF ROADWAY AND IMMEDIATLY FOLLOWING INSTALLATION OF DRAINAGE DITCHES & INLETS, SEDIMENT BARRIERS SHALL BE INSTALLED AS INDICATED ON DRAWINGS. ANY STOCKPILES RESULTING FROM STRIPPING OR EXCAVATING WITHIN THE PROJECT SHALL BE CONTAINED WITH SILT FENCING AROUND THE STOCKPILE PERIMETER. STOCKPILES REMAINING FOR THREE WEEKS OR LONGER SHALL ALSO BE SEEDED AND MULCHED.
   D. PRIOR TO ROUGH GRADING OF ANY LOT, SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE DOWN SLOPE PERIMETER OF THAT LOT. MAINTENANCE STATEMENT EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

24 - HOUR CONTACT

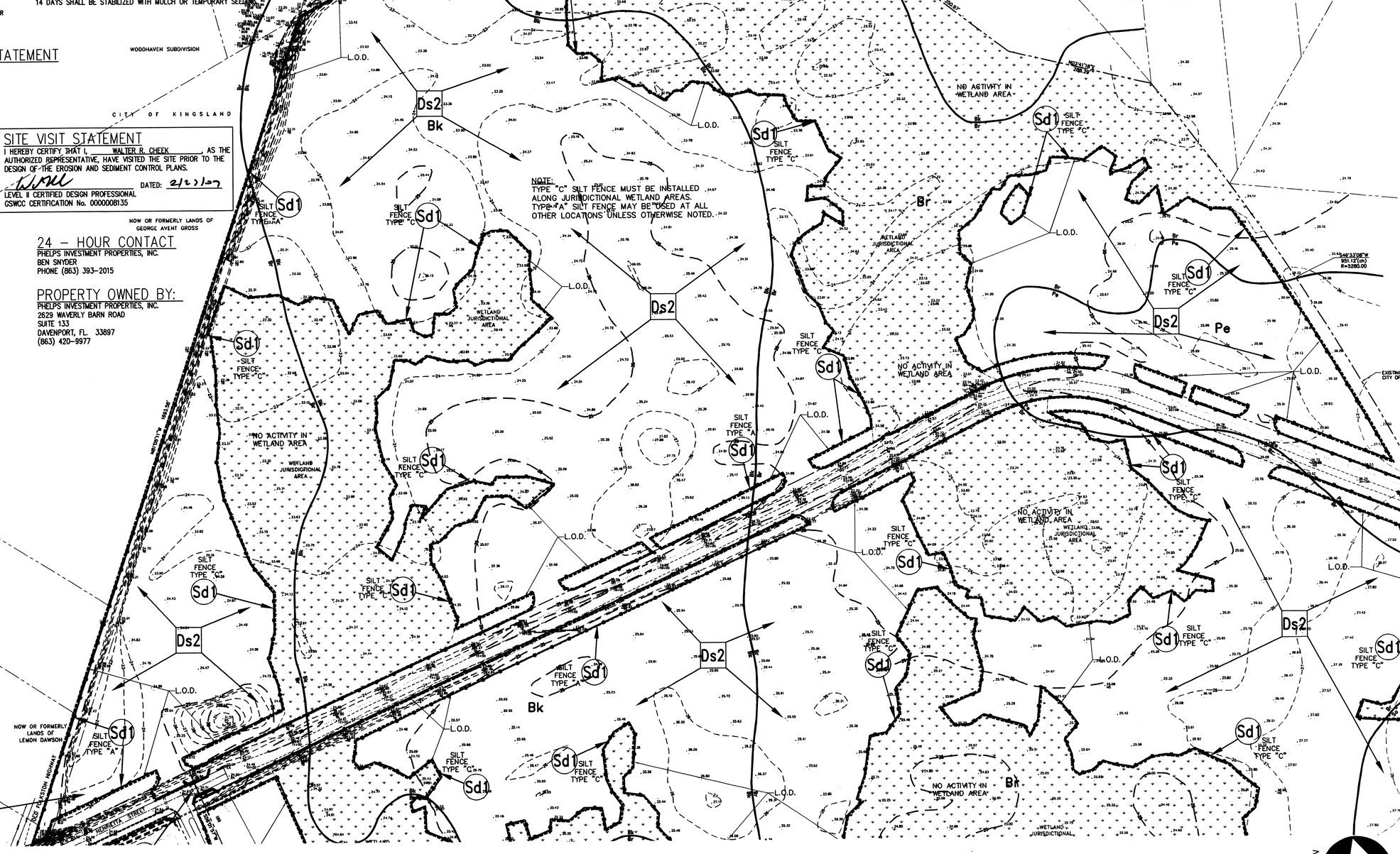
PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

EROSION CONTROL MEASURE LEGEND:

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER/DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
Sd3	TEMPORARY SEDIMENT BASIN
St	STORM DRAIN OUTLET PROTECTION (RIP RAP)
Bf	BUFFER ZONE (UNDISTURBED VEGETATIVE)
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)
	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION



PHASE 1

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
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NOTE:
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100 0 50 100
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE 3528 DARIEN HWY, SUITE 219
ST. MARYS, GEORGIA BRUNSWICK, GEORGIA 31525
PH. (912) 673-8575 PH. (912) 265-3851
FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

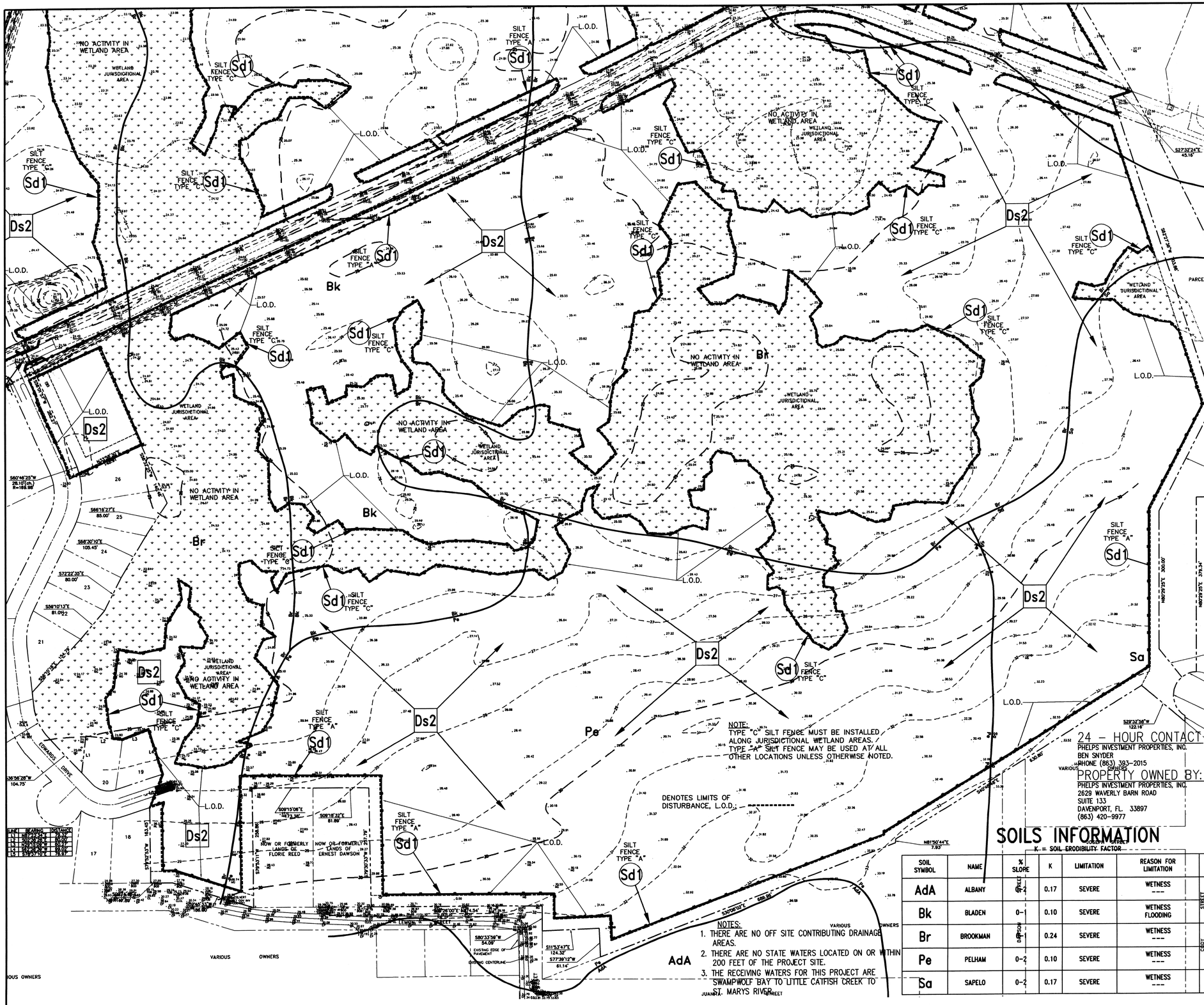
EROSION & SEDIMENT CONTROL PLAN-PHASE I

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET 46

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



EROSION CONTROL INSTALLATION

1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES IN THE FOLLOWING SEQUENCE:
   - A. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL STAKE AND FLAG ALL JURISDICTIONAL WETLANDS AND ALL UNDISTURBED BUFFERS SHOWN ON THE PLANS.
   - B. CONTRACTOR SHALL INSTALL CONSTRUCTION EXIT STONE PAD PRIOR TO DISTURBANCE DUE TO UTILITY AND/OR ROAD CONSTRUCTION. CONSTRUCTION ACCESS TO BE LOCATED AS SHOWN ON THIS DRAWING.
   - C. PRIOR TO ROUGH GRADING OF ROADWAY AND IMMEDIATLY FOLLOWING INSTALLATION OF DRAINAGE, DITCHES & INLETS, SEDIMENT BARRIERS SHALL BE INSTALLED AS INDICATED ON DRAWINGS. ANY STOCKPILES RESULTING FROM STRIPPING OR EXCAVATING WITHIN THE PROJECT SHALL BE CONTAINED WITH SILT FENCING AROUND THE STOCKPILE PERIMETER. STOCKPILES REMAINING FOR THREE WEEKS OR LONGER SHALL ALSO BE SEEDED AND MULCHED.
   - D. PRIOR TO ROUGH GRADING OF ANY LOT, SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE DOWN SLOPE PERIMETER OF THAT LOT. MAINTENANCE STATEMENT EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED) OUTSIDE THE 500 YEAR FLOOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 130390C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 3 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC., KINGSLAND WEST, CITY OF KINGSLAND, 1806th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA, DATED: AUGUST 29, 2006.
5. THE SOILS BOUNDARIES SHOWN HEREON WERE SCALED FROM SOIL SURVEY OF CAMDEN AND GLYNN COUNTIES, GEORGIA BY UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS, ISSUED NOV. 1980.
6. CLEAR ONLY THOSE AREAS REQUIRED FOR CONSTRUCTION AND, WHERE POSSIBLE, MAINTAIN A VEGETATIVE BUFFER ZONE BETWEEN THE DISTURBED WORKING AREA AND ANY WATERCOURSE. IF A 25 FOOT BUFFER WITH HEAVY VEGETATION CANNOT BE MAINTAINED, FOR ANY REASON, A SILT FENCE SHALL BE ERECTED IN ITS PLACE.
7. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
8. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

EROSION CONTROL MEASURE LEGEND:

REVISED

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
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	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION

24 - HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

STABILIZING STATEMENT

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/20/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

SOILS INFORMATION

K = SOIL ERODIBILITY FACTOR

SOIL SYMBOL	NAME	% SLOPE	K	LIMITATION	REASON FOR LIMITATION	HYDROLOGIC SOIL GROUP
AdA	ALBANY	0-2	0.17	SEVERE	WETNESS ---	C
Bk	BLADEN	0-1	0.10	SEVERE	WETNESS FLOODING	D
Br	BROOKMAN	0-1	0.24	SEVERE	WETNESS ---	D
Pe	PELHAM	0-2	0.10	SEVERE	WETNESS ---	B/D
Sa	SAPELLO	0-2	0.17	SEVERE	WETNESS ---	B/D

NOTES:
1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.

PHASE 1

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NORTH

GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED:

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3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
(912) 265-8575
FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, CAMDEN COUNTY, GEORGIA
1606TH G.M.D.,
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE I

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET
47
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

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LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

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24 - HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

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Pe	PELHAM	0-2	0.10	SEVERE	WETNESS ---	B/D
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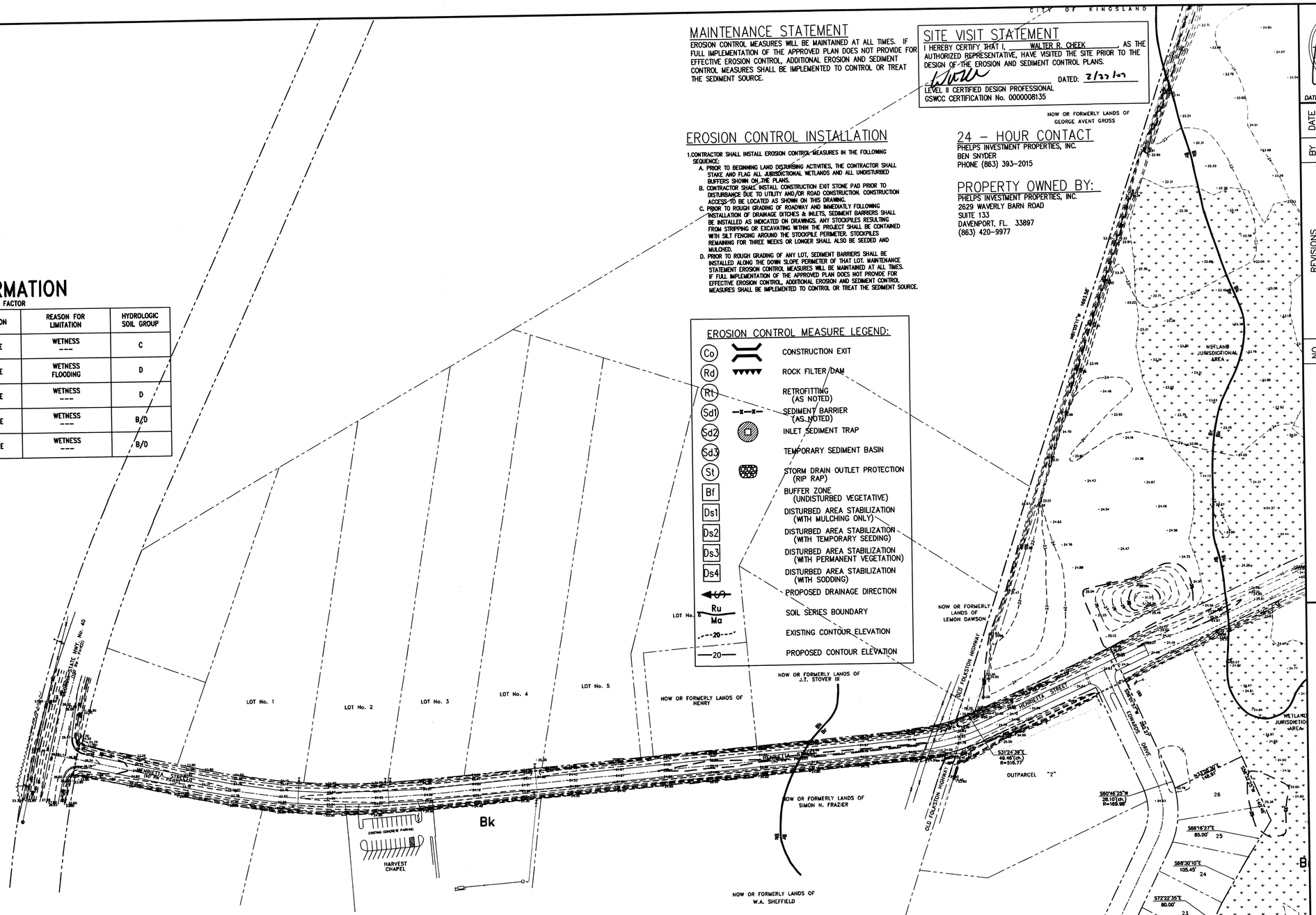

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

STABILIZING STATEMENT

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PHASE 1

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100 0 50 100
SCALE IN FEET

GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

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KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE I

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET 48

2006-5038

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2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED)(OUTSIDE THE 500 YEAR FLOOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 13039C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 5 OF 11.
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5. THE SOILS BOUNDARIES SHOWN HEREON WERE SCALED FROM SOIL SURVEY OF CAMDEN AND GLYNN COUNTIES, GEORGIA BY UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS, ISSUED NOV. 1980.
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9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

EROSION AND SEDIMENT CONTROL STATEMENT

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EROSION CONTROL MEASURE LEGEND:

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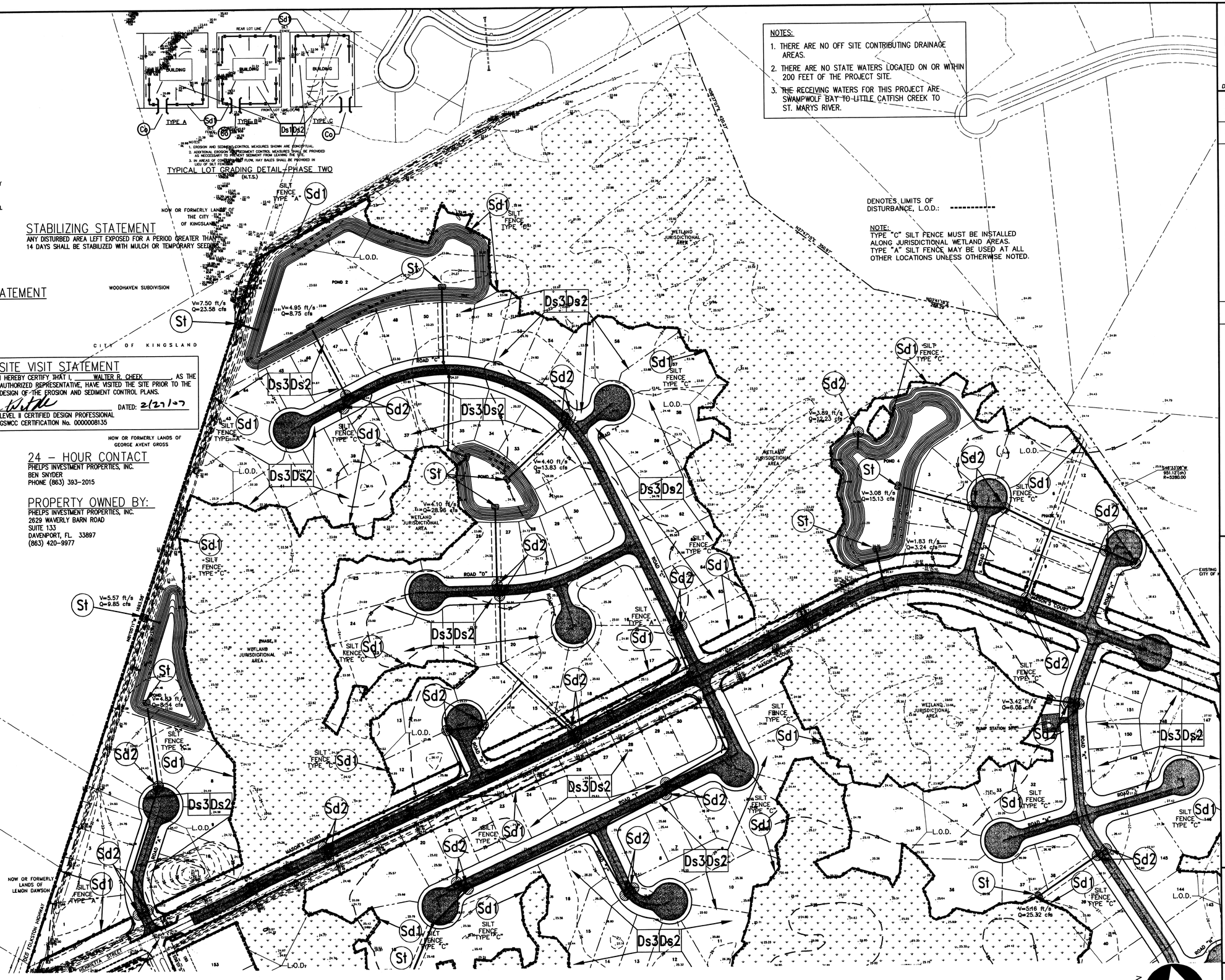

STABILIZING STATEMENT

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SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

24 - HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

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2629 WAVERLY BARN ROAD
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DAVENPORT, FL 33897
(863) 420-9977

NOTES:

1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.

DENOTES LIMITS OF DISTURBANCE, L.O.D.: ----------

NOTE:
TYPE "C" SILT FENCE MUST BE INSTALLED ALONG JURISDICTIONAL WETLAND AREAS. TYPE "A" SILT FENCE MAY BE USED AT ALL OTHER LOCATIONS UNLESS OTHERWISE NOTED.

PHASE 2

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100 0 50 100
SCALE IN FEET

HURON

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27707 WALTER R. CHEEK
DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

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FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

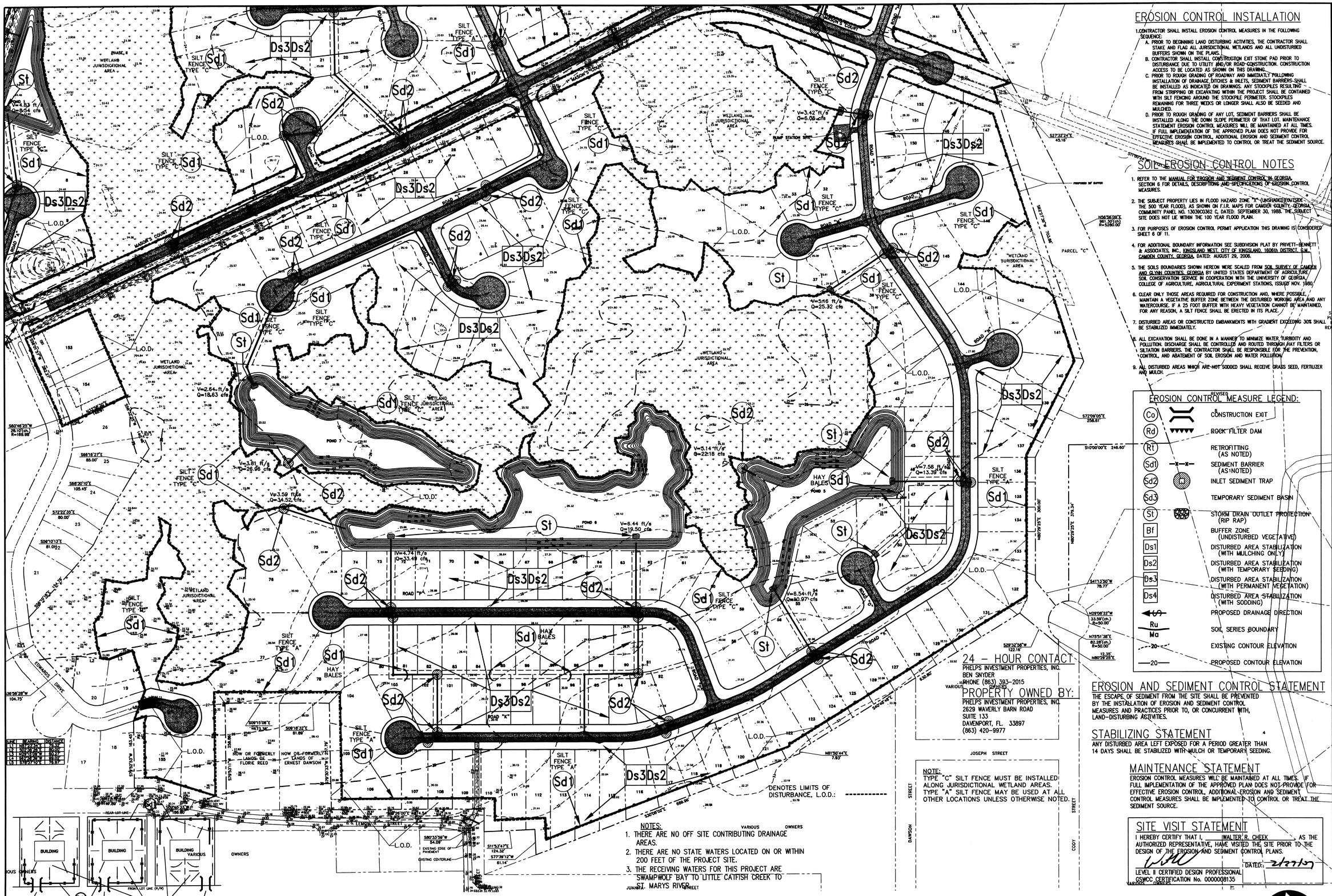
EROSION & SEDIMENT CONTROL PLAN-PHASE II

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET 49

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



NOTES:
1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.

NOTES:
1. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ARE CONCEPTUAL.
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AS NECCESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. IN AREAS OF CONCENTRATED FLOW, HAY BALES SHALL BE PROVIDED IN LIEU OF SILT FENCE.

TYPICAL LOT GRADING DETAIL-PHASE TWO
(N.T.S.)

PHASE 2

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

100 0 50 100
SCALE IN FEET

NORTH

EROSION CONTROL INSTALLATION

1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES IN THE FOLLOWING SEQUENCE:
   A. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL STAKE AND FLAG ALL JURISDICTIONAL WETLANDS AND ALL UNDISTURBED BUFFERS SHOWN ON THE PLANS.
   B. CONTRACTOR SHALL INSTALL CONSTRUCTION EXIT STONE PAD PRIOR TO DISTURBANCE DUE TO UTILITY AND/OR ROAD-CONSTRUCTION. CONSTRUCTION ACCESS TO BE LOCATED AS SHOWN ON THIS DRAWING.
   C. PRIOR TO ROUGH GRADING OF ROADWAY AND IMMEDIATLY FOLLOWING INSTALLATION OF DRAINAGE DITCHES & INLETS, SEDIMENT BARRIERS SHALL BE INSTALLED AS INDICATED ON DRAWINGS. ANY STOCKPILES RESULTING FROM STRIPPING OR EXCAVATING WITHIN THE PROJECT SHALL BE CONTAINED WITH SILT FENCING AROUND THE STOCKPILE PERIMETER. STOCKPILES REMAINING FOR THREE WEEKS OR LONGER SHALL ALSO BE SEEDED AND MULCHED.
   D. PRIOR TO ROUGH GRADING OF ANY LOT, SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE DOWN SLOPE PERIMETER OF THAT LOT. MAINTENANCE STATEMENT EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED) OUTSIDE THE 500 YEAR FLOOD, AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 13039C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 6 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC., KINGSLAND WEST, CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA, DATED: AUGUST 29, 2006.
5. THE SOILS BOUNDARIES SHOWN HEREON WERE SCALED FROM SOIL SURVEY OF CAMDEN AND GLYNN COUNTIES, GEORGIA BY UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS, ISSUED NOV. 1980.
6. CLEAR ONLY THOSE AREAS REQUIRED FOR CONSTRUCTION AND, WHERE POSSIBLE, MAINTAIN A VEGETATIVE BUFFER ZONE BETWEEN THE DISTURBED WORKING AREA AND ANY WATERCOURSE. IF A 25 FOOT BUFFER WITH HEAVY VEGETATION CANNOT BE MAINTAINED, FOR ANY REASON, A SILT FENCE SHALL BE ERECTED IN ITS PLACE.
7. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
8. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

EROSION CONTROL MEASURE LEGEND:

REVISED

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
Sd3	TEMPORARY SEDIMENT BASIN
St	STORM DRAIN OUTLET PROTECTION (RIP RAP)
Bf	BUFFER ZONE (UNDISTURBED VEGETATIVE)
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)
	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION

24 - HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

NOTE:
TYPE "C" SILT FENCE MUST BE INSTALLED ALONG JURISDICTIONAL WETLAND AREAS. TYPE "A" SILT FENCE MAY BE USED AT ALL OTHER LOCATIONS UNLESS OTHERWISE NOTED.

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

STABILIZING STATEMENT

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

GEORGIA REGISTERED No. 27708 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED TREE ACCESS	JDR	02/26/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. SIMONS ISLAND, GA. 31558
PH. (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE II

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET
50
2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED)(OUTSIDE THE 500 YEAR FROOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 13039C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 7 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC., KINGSLAND WEST, CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA, DATED: AUGUST 29, 2006.
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7. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
8. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

DENOTES LIMITS OF DISTURBANCE, L.O.D.: ----------

NOTE:
TYPE "C" SILT FENCE MUST BE INSTALLED ALONG JURISDICTIONAL WETLAND AREAS. TYPE "A" SILT FENCE MAY BE USED AT ALL OTHER LOCATIONS UNLESS OTHERWISE NOTED.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

EROSION CONTROL INSTALLATION

1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES IN THE FOLLOWING SEQUENCE:
   - A. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL STAKE AND FLAG ALL JURISDICTIONAL WETLANDS AND ALL UNDISTURBED BUFFERS SHOWN ON THE PLANS.
   - B. CONTRACTOR SHALL INSTALL CONSTRUCTION EXIT STONE PAD PRIOR TO DISTURBANCE DUE TO UTILITY AND/OR ROAD CONSTRUCTION. CONSTRUCTION ACCESS TO BE LOCATED AS SHOWN ON THIS DRAWING.
   - C. PRIOR TO ROUGH GRADING OF ROADWAY AND IMMEDIATLY FOLLOWING INSTALLATION OF DRAINAGE DITCHES & INLETS, SEDIMENT BARRIERS SHALL BE INSTALLED AS INDICATED ON DRAWINGS. ANY STOCKPILES RESULTING FROM STRIPPING OR EXCAVATING WITHIN THE PROJECT SHALL BE CONTAINED WITH SILT FENCING AROUND THE STOCKPILE PERIMETER. STOCKPILES REMAINING FOR THREE WEEKS OR LONGER SHALL ALSO BE SEEDED AND MULCHED.
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EROSION CONTROL MEASURE LEGEND:

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
Sd3	TEMPORARY SEDIMENT BASIN
St	STORM DRAIN OUTLET PROTECTION (RIP RAP)
Bf	BUFFER ZONE (UNDISTURBED VEGETATIVE)
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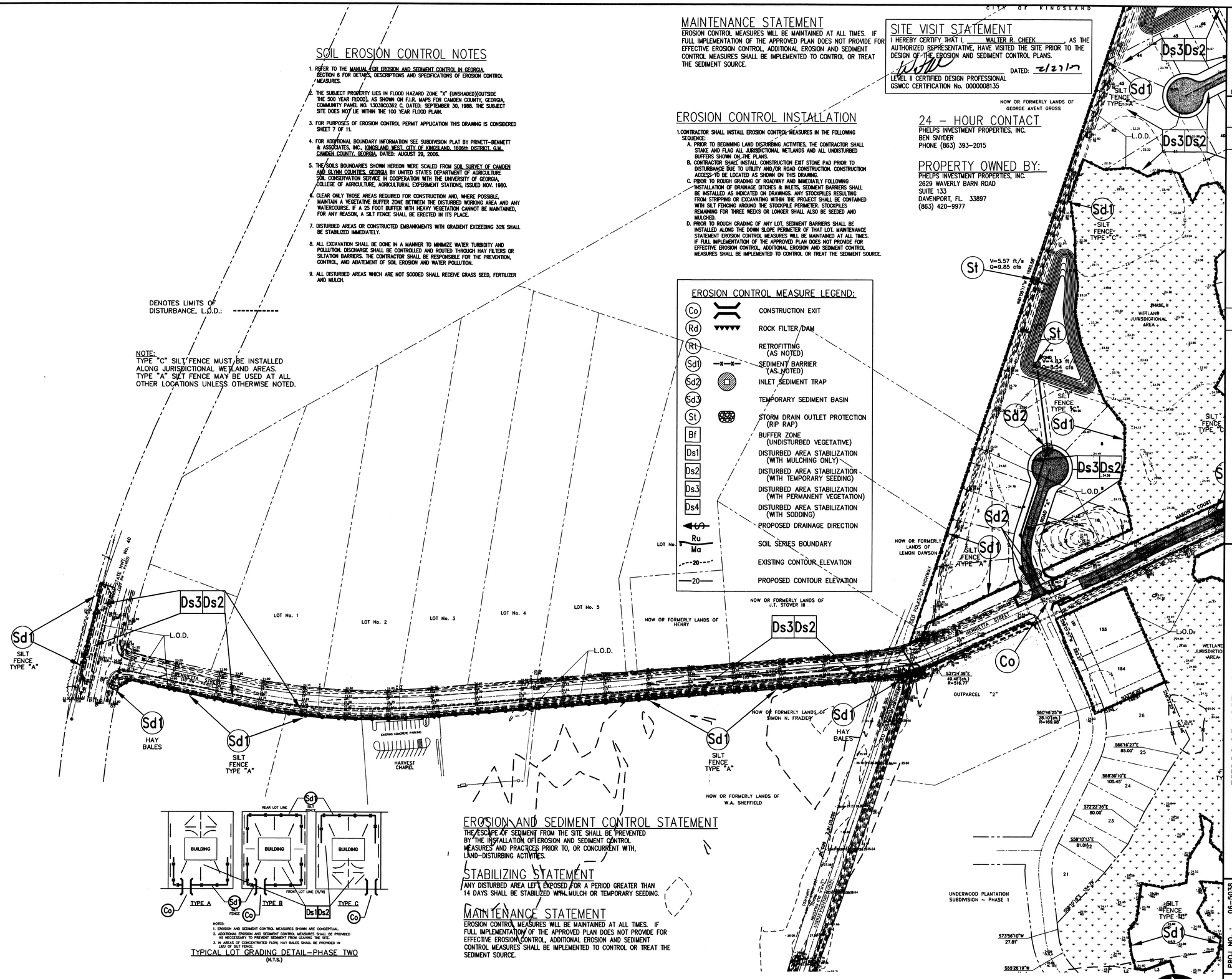
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)
	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION



24 – HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

NOTES:
1. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ARE CONCEPTUAL.
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. IN AREAS OF CONCENTRATED FLOW, HAY BALES SHALL BE PROVIDED IN LIEU OF SILT FENCE.

TYPICAL LOT GRADING DETAIL-PHASE TWO
(N.T.S.)

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

STABILIZING STATEMENT

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

PHASE 2

CALL BEFORE YOU DIG: 1-800-282-7411.
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CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

100 0 50 100
SCALE IN FEET

GEORGIA REGISTERED No. 21708 PROFESSIONAL ENGINEER WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 882-4820
FAX (912) 882-2729
3528 DARIEN HWY., SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3821
FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE II

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET 51

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED)(OUTSIDE THE 500 YEAR FLOOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA, COMMUNITY PANEL NO. 13039C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 8 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC. KINGSLAND WEST, CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA, DATED: AUGUST 29, 2006.
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9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

STABILIZING STATEMENT

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EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

MAINTENANCE STATEMENT

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SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

EROSION CONTROL INSTALLATION

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24 - HOUR CONTACT

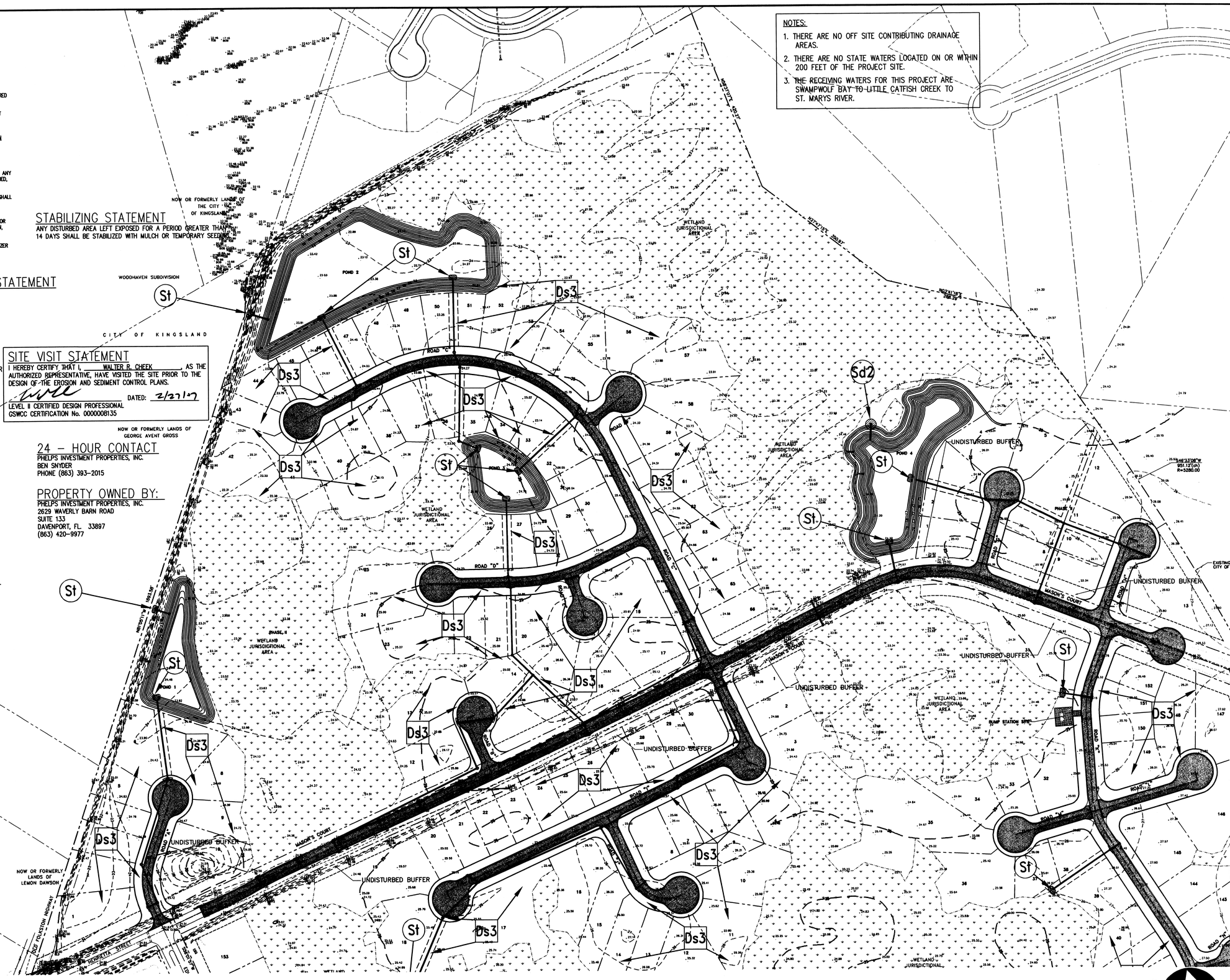
PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL 33897
(863) 420-9977

NOTES:

1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.



EROSION CONTROL MEASURE LEGEND:

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
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	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION

PHASE 3

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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21708 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, 3528 DARIEN HWY, SUITE 219
ST. MARYS, GEORGIA 31558 BRUNSWICK, GEORGIA 31525
PH. (912) 673-8575 PH. (912) 265-3851
FAX (912) 882-2729 FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

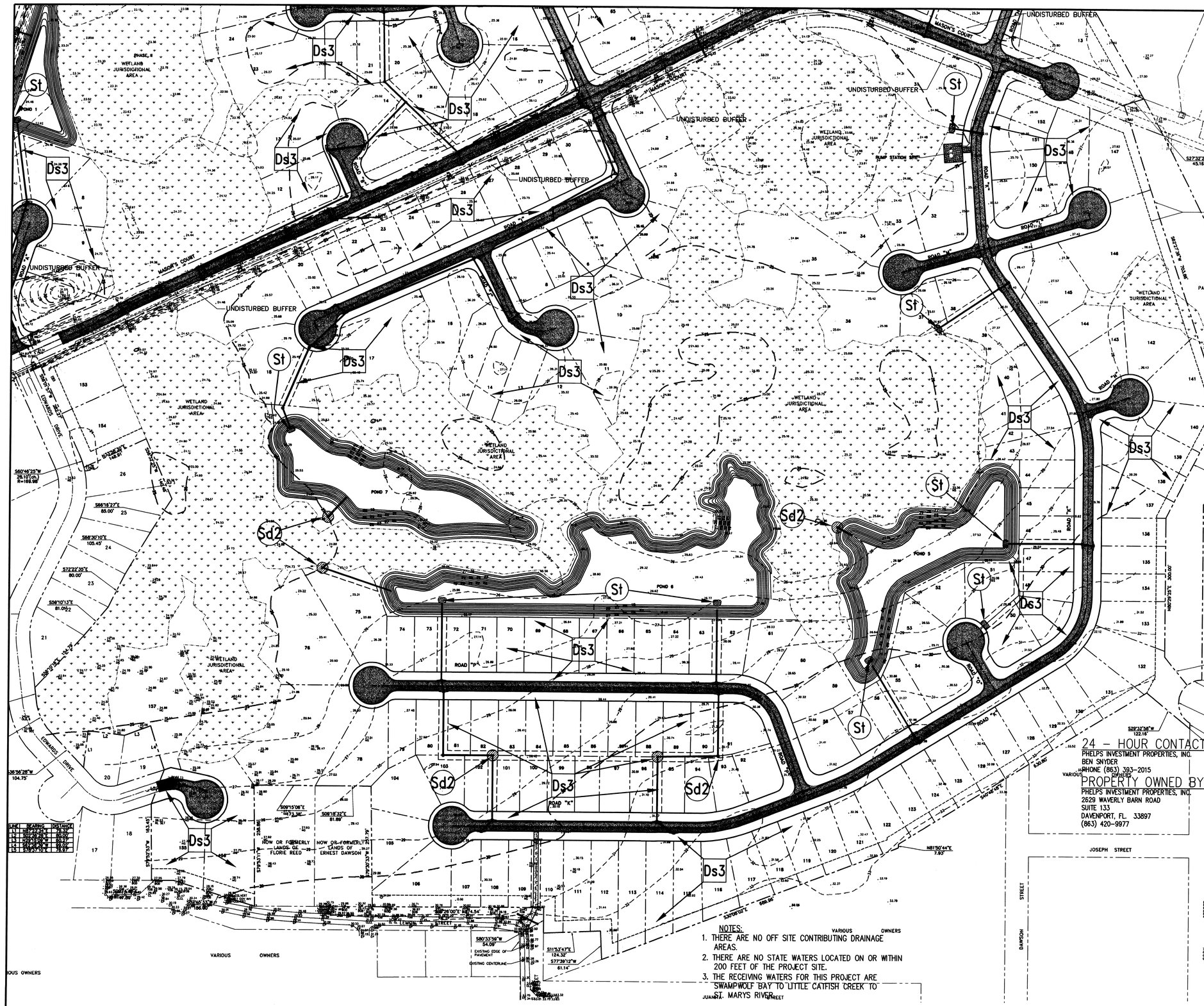
EROSION & SEDIMENT CONTROL PLAN-PHASE III

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET 52

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



EROSION CONTROL INSTALLATION

1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES IN THE FOLLOWING SEQUENCE:
   A. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL STAKE AND FLAG ALL JURISDICTIONAL WETLANDS AND ALL UNDISTURBED BUFFERS SHOWN ON THE PLANS.
   B. CONTRACTOR SHALL INSTALL CONSTRUCTION EXIT STONE PAD PRIOR TO DISTURBANCE DUE TO UTILITY AND/OR ROAD CONSTRUCTION. CONSTRUCTION ACCESS TO BE LOCATED AS SHOWN ON THIS DRAWING.
   C. PRIOR TO ROUGH GRADING OF ROADWAY AND IMMEDIATELY FOLLOWING INSTALLATION OF DRAINAGE DITCHES & INLETS, SEDIMENT BARRIERS SHALL BE INSTALLED AS INDICATED ON DRAWINGS. ANY STOCKPILES RESULTING FROM STRIPPING OR EXCAVATING WITHIN THE PROJECT SHALL BE CONTAINED WITH SILT FENCING AROUND THE STOCKPILE PERIMETER. STOCKPILES REMAINING FOR THREE WEEKS OR LONGER SHALL ALSO BE SEEDED AND MULCHED.
   D. PRIOR TO ROUGH GRADING OF ANY LOT, SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE DOWN SLOPE PERIMETER OF THAT LOT. MAINTENANCE STATEMENT EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SOIL EROSION CONTROL NOTES

1. REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, SECTION 6 FOR DETAILS, DESCRIPTIONS AND SPECIFICATIONS OF EROSION CONTROL MEASURES.
2. THE SUBJECT PROPERTY LIES IN FLOOD HAZARD ZONE "X" (UNSHADED) (OUTSIDE THE 500 YEAR FLOOD), AS SHOWN ON F.I.R. MAPS FOR CAMDEN COUNTY, GEORGIA COMMUNITY PANEL NO. 13039C0362 C, DATED: SEPTEMBER 30, 1988. THE SUBJECT SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
3. FOR PURPOSES OF EROSION CONTROL PERMIT APPLICATION THIS DRAWING IS CONSIDERED SHEET 9 OF 11.
4. FOR ADDITIONAL BOUNDARY INFORMATION SEE SUBDIVISION PLAT BY PRIVETT-BENNETT & ASSOCIATES, INC., KINGSLAND WEST, CITY OF KINGSLAND, 1606th DISTRICT, G.M., CAMDEN COUNTY, GEORGIA DATED: AUGUST 29, 2006.
5. THE SOILS BOUNDARIES SHOWN HEREON WERE SCALED FROM SOIL SURVEY OF CAMDEN AND GLYNN COUNTIES, GEORGIA BY UNITED STATES DEPARTMENT OF AGRICULTURE / SOIL CONSERVATION SERVICE IN COOPERATION WITH THE UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS, ISSUED NOV. 1980.
6. CLEAR ONLY THOSE AREAS REQUIRED FOR CONSTRUCTION AND, WHERE POSSIBLE, MAINTAIN A VEGETATIVE BUFFER ZONE BETWEEN THE DISTURBED WORKING AREA AND ANY WATERCOURSE. IF A 25 FOOT BUFFER WITH HEAVY VEGETATION CANNOT BE MAINTAINED, FOR ANY REASON, A SILT FENCE SHALL BE ERECTED IN ITS PLACE.
7. DISTURBED AREAS OR CONSTRUCTED EMBANKMENTS WITH GRADIENT EXCEEDING 30% SHALL BE STABILIZED IMMEDIATELY.
8. ALL EXCAVATION SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND ROUTED THROUGH HAY FILTERS OR SILTATION BARRIERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CONTROL, AND ABATEMENT OF SOIL EROSION AND WATER POLLUTION.
9. ALL DISTURBED AREAS WHICH ARE NOT SODDED SHALL RECEIVE GRASS SEED, FERTILIZER AND MULCH.

EROSION CONTROL MEASURE LEGEND:

REVISED

Co	CONSTRUCTION EXIT
Rd	ROCK FILTER DAM
Rt	RETROFITTING (AS NOTED)
Sd1	SEDIMENT BARRIER (AS NOTED)
Sd2	INLET SEDIMENT TRAP
Sd3	TEMPORARY SEDIMENT BASIN
St	STORM DRAIN OUTLET PROTECTION (RIP RAP)
Bf	BUFFER ZONE (UNDISTURBED VEGETATIVE)
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)
	PROPOSED DRAINAGE DIRECTION
Ru / Ma	SOIL SERIES BOUNDARY
20	EXISTING CONTOUR ELEVATION
20	PROPOSED CONTOUR ELEVATION

24 - HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

EROSION AND SEDIMENT CONTROL STATEMENT

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

STABILIZING STATEMENT

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

MAINTENANCE STATEMENT

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SITE VISIT STATEMENT

I HEREBY CERTIFY THAT I, WALTER R. CHEEK, AS THE AUTHORIZED REPRESENTATIVE, HAVE VISITED THE SITE PRIOR TO THE DESIGN OF THE EROSION AND SEDIMENT CONTROL PLANS.

DATED: 2/27/07

LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION No. 0000008135

NOTES:
1. THERE ARE NO OFF SITE CONTRIBUTING DRAINAGE AREAS.
2. THERE ARE NO STATE WATERS LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.
3. THE RECEIVING WATERS FOR THIS PROJECT ARE SWAMPWOLF BAY TO LITTLE CATFISH CREEK TO ST. MARYS RIVER.

PHASE 3

CALL BEFORE YOU DIG: 1-800-282-7411.
UTILITIES PROTECTION CENTER™
CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

100 0 50 100
SCALE IN FEET

NORTH

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21701 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07
3	REVISED PER CITY OF KINGSLAND COMMENTS-ADDED FIRE ACCESS	JRR	02/26/10

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH: (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE III

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET
53
2006-5038

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LEVEL II CERTIFIED DESIGN PROFESSIONAL
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24 – HOUR CONTACT

PHELPS INVESTMENT PROPERTIES, INC.
BEN SNYDER
PHONE (863) 393-2015

PROPERTY OWNED BY:

PHELPS INVESTMENT PROPERTIES, INC.
2629 WAVERLY BARN ROAD
SUITE 133
DAVENPORT, FL. 33897
(863) 420-9977

EROSION CONTROL MEASURE LEGEND:

Co	CONSTRUCTION EXIT
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20	EXISTING CONTOUR ELEVATION
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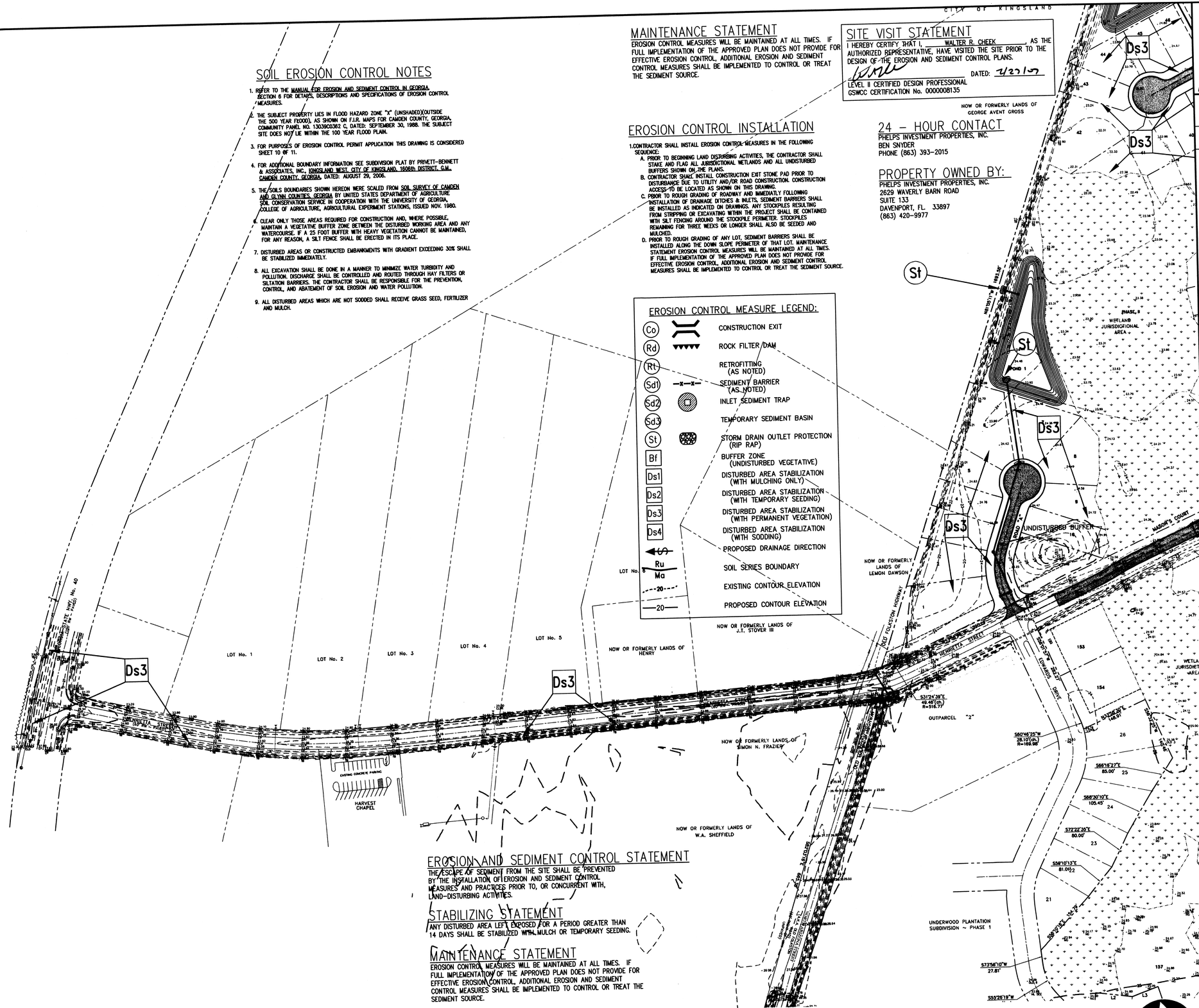

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100 0 50 100
SCALE IN FEET

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27078 WALTER R. CHEEK
DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-7141
FAX (912) 882-2729
3528 DARIEN HWY, SUITE 219
BRUNSWICK, GEORGIA 31525
PH. (912) 265-3851
FAX (912) 265-9509

KINGSLAND WEST

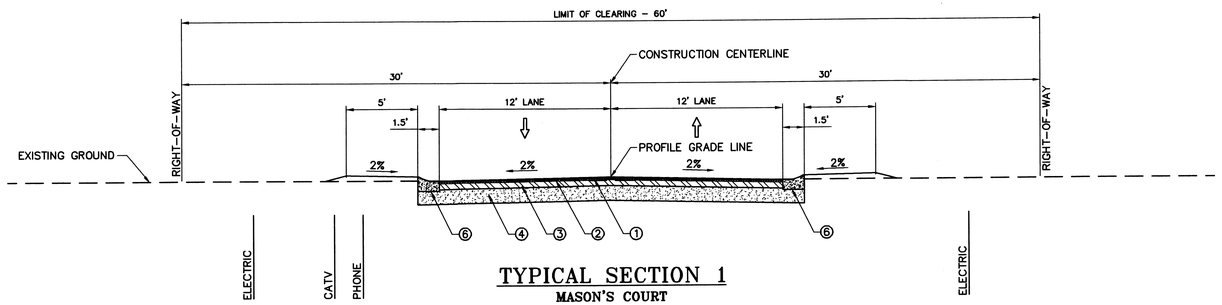
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

EROSION & SEDIMENT CONTROL PLAN-PHASE III

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	1"=100'

SHEET
54
2006-5038

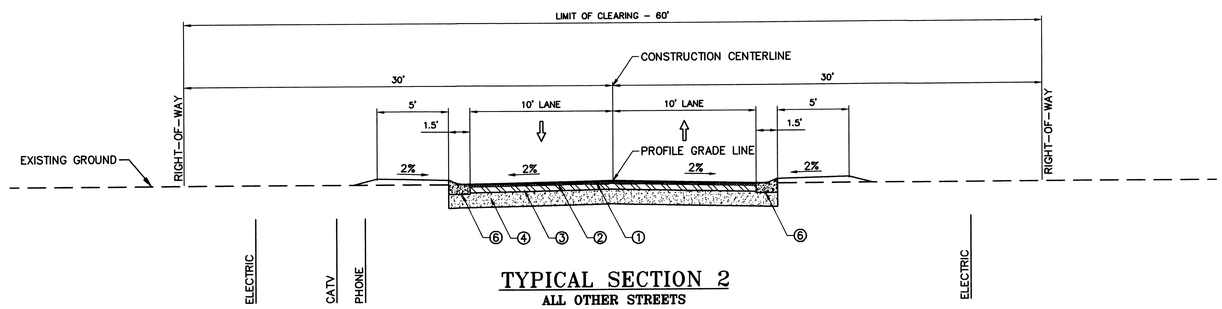
NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



TYPICAL SECTION 1

MASON'S COURT

NOTE:
LOCATIONS OF WATER, SANITARY AND STORM VARY, SEE PLAN FOR EXACT LOCATIONS.



TYPICAL SECTION 2

ALL OTHER STREETS

NOTE:
LOCATIONS OF WATER, SANITARY AND STORM VARY, SEE PLAN FOR EXACT LOCATIONS.

NOTES:

1. MEANDER SIDEWALK WITHIN THIS AREA TO AVOID EXISTING TREES. STAKE OUT WITH OWNER PRIOR TO CLEARING FOR SIDEWALK.
2. CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO CLEARING FOR SPECIFIC TREES TO REMAIN WITHIN ROAD RIGHTS-OF-WAY. COORDINATE WITH ENGINEER REGARDING CHANGES TO TYPICAL SECTIONS, ALIGNMENT AND UTILITIES REQUIRED TO PRESERVE OWNER SPECIFIED TREES.

① 1" ASPHALT SURFACE COURSE
ASPHALTIC CONCRETE 12.5mm SUPERPAVE

② 1" ASPHALT BINDER COURSE
ASPHALTIC CONCRETE 19mm SUPERPAVE

③ 6" CRUSHED LIMEROCK

④ 12" COMPACTED SUBGRADE

⑤ 12"x12" CONCRETE RIBBON CURB

⑥ 18" CONCRETE MOUNTABLE CURB

⑦ 18" CONCRETE CURB AND GUTTER

⑧ 4" THICK CONCRETE SIDEWALK

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 17708 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	WAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 673-8575
FAX (912) 882-2729
29 CORAL PARK WAY
BRUNSWICK, GEORGIA 31520
PH: (912) 265-3851
FAX (912) 264-7273

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

TYPICAL SECTIONS

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

SHEET
55

DWG. No.: 06-5038NT

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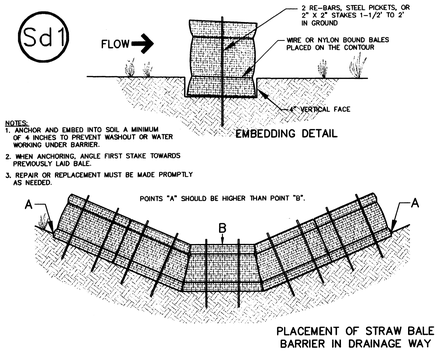
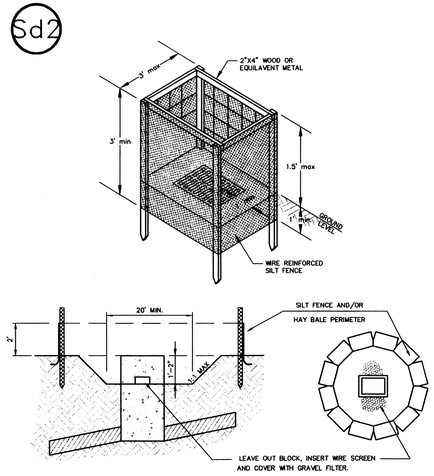


HAY BALE DETAIL

(N.T.S.)



EXCAVATED SEDIMENT TRAPS

A TEMPORARY SEDIMENT BARRIER PLACED AROUND A STORM DRAIN DROP INLET TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEM.

INSTALL ACCORDING TO PLAN.

DO NOT INSTALL WHERE VEHICULAR TRAFFIC WILL BE AFFECTED.

INSTALL AT OR AROUND ALL STORM DRAIN DROP INLETS THAT RECEIVE RUNOFF FROM DISTURBED AREAS.

CONSTRUCT ON NATURAL GROUND SURFACE, EXCAVATED SURFACE, OR ON MACHINE COMPACTED FILL.

MINIMUM OF 1.5 FEET OF SEDIMENT STORAGE IN EXCAVATED SEDIMENT TRAPS.

MUST BE SELF-DRAINING UNLESS OTHERWISE PROTECTED.

PROTECT INLETS DURING CONSTRUCTION. KEEP SEDIMENT OUT OF STORM DRAINAGE SYSTEM. USE HALF CIRCLE BEHIND CURB INLETS DURING STREET CONSTRUCTION. CIRCULAR SHAPE IS NOT ESSENTIAL – VARY SHAPE TO FIT DRAINAGE AREA AND TERRAIN. OBSERVE TO CHECK TRAP EFFICIENCY AND MODIFY AS NECESSARY TO TRAP SEDIMENT.

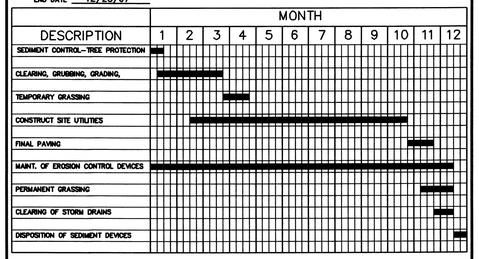
CLEAN SEDIMENT AFTER EACH RAINFALL EVENT.

SEDIMENT TRAP DETAIL

(N.T.S.)

START DATE 01/01/07

END DATE 12/28/07



ACTIVITY SCHEDULE

Ds2

TEMPORARY GRASSING

SPECIES	RATE / 1000 SF.	PLANTING DATES	FERTILIZER	RATE / 1000 SF.
MILLET	1.0–2.0 LB.	MARCH 15 TO JULY 31	10–10–10	12 LB.
RYE	2.0–3.0 LB.	AUGUST 1 TO MARCH 15	10–10–10	12 LB.

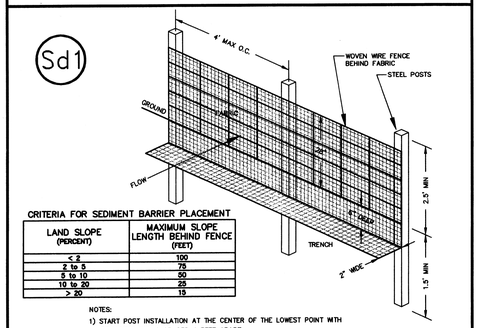
Ds3

PERMANENT GRASSING

SPECIES	RATE / 1000 SF.	PLANTING DATES	FERTILIZER	RATE / 1000 SF.
WEEPING LOVEGRASS & VIRGATA OR SERICEA LESPEDEZIA (SCARIFIED)	0.2–0.4 LB. 1.0–2.0 LB.	MARCH 1 TO JUNE 15	6–12–12	25–35 LB.
BERMUDA GRASS (HULLED) (UNHULLED)	1.0 LB. 2.0–3.0 LB.	MARCH 15 TO JUNE 15 JUNE 15 TO MARCH 15	6–12–12 6–12–12	25–35 LB. 25–30 LB.
STRAW MULCH	90 LB.	ANY TIME FOR TEMPORARY COVER.		

DISTURBED AREA STABILIZATION DETAIL

(N.T.S.)



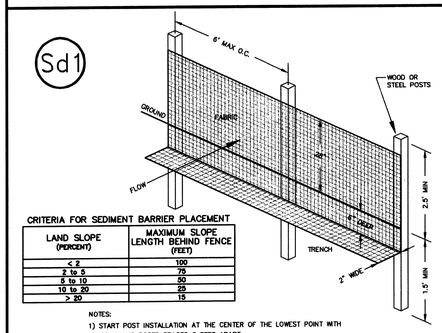
CRITERIA FOR SEDIMENT BARRIER PLACEMENT

LAND SLOPE (PERCENT)	MAXIMUM SLOPE LENGTH BEHIND FENCE (FEET)
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
> 20	15

NOTES:
1) START POST INSTALLATION AT THE CENTER OF THE LOWEST POINT WITH REMAINING POSTS SPACED 4 FEET APART.
2) USE TYPE "C" WIRE REINFORCED SILT FENCE WHERE FILL SLOPES EXCEED A VERTICAL HEIGHT OF 20 FEET AND THE SLOPE GRADIENT IS STEEPER THAN 3:1.

TYPE "C" SILT FENCE DETAIL

(N.T.S.)



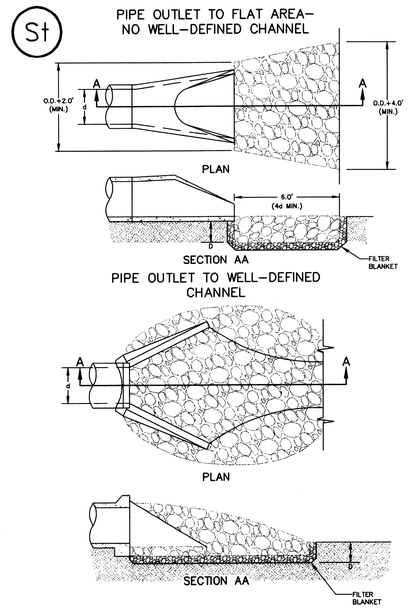
CRITERIA FOR SEDIMENT BARRIER PLACEMENT

LAND SLOPE (PERCENT)	MAXIMUM SLOPE LENGTH BEHIND FENCE (FEET)
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
> 20	15

NOTES:
1) START POST INSTALLATION AT THE CENTER OF THE LOWEST POINT WITH REMAINING POSTS SPACED 6 FEET APART.
2) USE TYPE "A" SILT FENCE: 1) ON SMALL DEVELOPMENTS WHERE THE LIFE OF THE PROJECT IS GREATER THAN SIX MONTHS, 2) WHERE THE SLOPE GRADIENT IS STEEPER THAN 3:1.

TYPE "A" SILT FENCE DETAIL

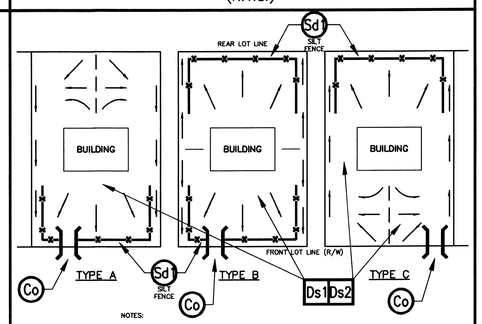
(N.T.S.)



NOTES:
1.) IN A WELL DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS GREATEST.
2.) A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
3.) RIPRAP SHALL BE GA. D.O.T. TYPE III.

STORM DRAIN OUTLET PROTECTION DETAIL

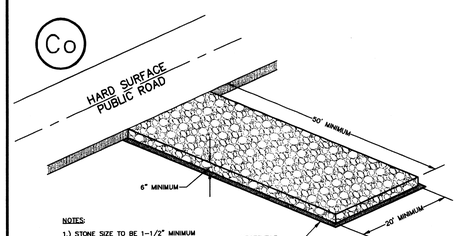
(N.T.S.)



NOTES:
1. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ARE CONCEPTUAL.
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED AS NECCESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. IN AREAS OF CONCENTRATED FLOW, HAY BALES SHALL BE PROVIDED IN LIEU OF SILT FENCE.

TYPICAL LOT DETAIL

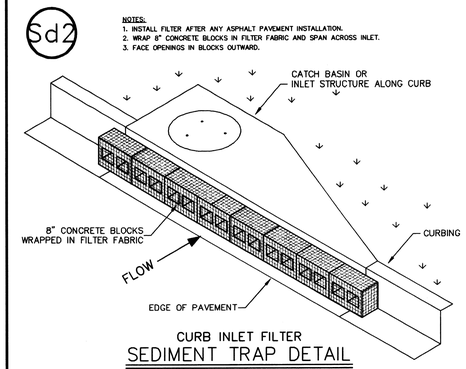
(N.T.S.)



NOTES:
1.) STONE SIZE TO BE 1-1/2" MINIMUM TO 3-1/2" MAXIMUM COARSE AGGREGATE AND NOT LESS THAN 6" THICK.
2.) BED MAY REQUIRE PERIODIC TOP DRESSING, 2" STONE.
3.) MAINTAIN IN A CONDITION WHICH WILL PREVENT TRACKING AND FLOW OF MUD OFF SITE.
4.) IF NECESSARY, INCLUDE WASHING OF PAD TO REMOVE EXCESS MUD.

CONSTRUCTION EXIT DETAIL

(N.T.S.)

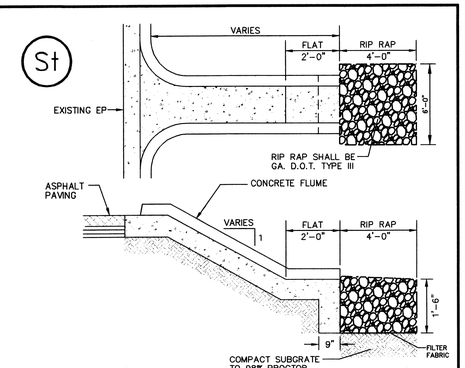


NOTES:
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS INLET.
3. FACE OPENINGS IN BLOCKS OUTWARD.

CURB INLET FILTER

SEDIMENT TRAP DETAIL

(N.T.S.)



CONCRETE FLUME OULET PROTECTION DETAIL

(N.T.S.)

NARRATIVE DESCRIPTION

DESCRIPTION:

The project consists of a 235 lot, 5 tract single family residential subdivision on a platted 143.33 acre site in the City of Kingsland, 1606th G.M.D., Camden County, Georgia. Disturbed acerage will be 93.27 acres with an additional 0.95 acres off site for utility connections for a total of 94.22 acres disturbed. A map showing the location of the site is included on the attached Erosion and Sediment Control Plan.

ZONING:

The area to be developed is currently zoned PDR–2 under the City of Kingsland Zoning Ordinance.

VEGETATION:

Existing vegetation consists of brush, pine trees and minimal hardwoods. Supplemental vegetation will be established in all disturbed areas as soon as grading operations are completed.

CONSTRUCTION ACTIVITY SCHEDULE:

The initial construction is scheduled to begin on/about January 1, 2007. Final stabilization should be accomplished no later than December 28, 2007. The activity schedule that will be followed on this project is shown on the attached Erosion and Sediment Control Plan, prepared by P&A Engineering, Inc. and dated 11/10/06.

SOIL TOPOGRAPHIC AND DRAINAGE INFORMATION:

The soil types and existing topography for this project are shown on the attached Erosion and Sediment Control Plan, prepared by P&A Engineering, Inc. and dated 11/10/06.

EROSION CONTROL PROGRAM:

The installation of erosion control measures and practices shall be completed prior to or concurrent with land disturbing activities. Land clearing will be kept to a minimum. Land disturbing activities will be scheduled to limit exposure of soils to erosive elements. Vegetation and/or mulch will be applied to disturbed areas immediately after grading is completed. Except for culverts at road crossings, storm water management will consist of surface drainage conveying storm water to existing drainage channels. Erosion at the outlet of storm structures will be prevented by the installation of storm drain outlet protection devices. Additional erosion and sediment control measures will be installed if deemed necessary.

SEDIMENT CONTROL PROGRAM:

Sediment Control at the perimeter of the project and within proposed and existing drainage channels will be accomplished by the installation of silt fence and hay bale ditch checks. All devices to be employed for erosion and sediment control are shown on the attached Erosion and Sediment Control Plan.

STANDARDS AND SPECIFICATIONS:

The standards and specifications in the Manual for Erosion and Sediment Control in Georgia, will be complied with for design and work performed in subject area.

SAFETY PROTECTION

All construction activities will be performed in accordance with applicable laws, rules and regulations.

MAINTENANCE PROGRAM:

Erosion and sediment control measures will be inspected on an ongoing basis, and all damage observed shall be repaired by the end of the work day in which the damage is noted. Sediment barriers will remain in place until the disturbed areas are stabilized. Upon removal of sediment fences and hay bales, the areas will be seeded for permanent stabilization.

GENERAL

All disturbed areas should be established to permanent vegetation as soon as possible after construction is complete.

SEEDBED PREPARATION

Scarify the soil to a depth of 1–4 inches, to expose fresh, moist soil. This may be done with a disk, rake, chain harrow, or other suitable implement. On slopes 2:1 or steeper, the graded slope should be pitted, pockmarked, or trenched across the slope to provide depressions 6–8 inches apart for seed to lodge and germinate

PLANTING

Select appropriate seeding option according to region and planting date.

Hydroseeding – apply seed, fertilizer, and mulch in a single application. Lime can either be added to hydroseeder tank mix or broadcast after seedlings germinate.

Hand Planting (Conventional) – Seed, lime, and fertilizer should be broadcast uniformly over soil surface. Where possible, lightly cover seed by disking or raking. Mulch all seeded areas immediately, using 2 1/2 tons of dry straw or hay per acre. Mulching materials should be free of weeds that will compete with planned vegetation. Mulch should be uniformly spread over all seeded areas. A properly applied mulch will cover 78–80% of the soil surface, with no clumps.

MAINTENANCE OF ESTABLISHED VEGETATION:

Fall Seeded Grasses: During the first growing season after the grass is established, fertilize with 1,000 #/acres of 6–12–12. In future years, fertilize by soil test, or apply 400 #/acres of 10–10–10 annually in the fall plus 100 #/acres of ammonium nitrate top dressing in early spring. Mow annually to prevent trees and brush. Re–seed bare areas.

Spring Seeded Grasses: During the first growing season after the grass is established, fertilize with 800 #/acre of 6–12–12. In future years, fertilize by soil test or apply 400 #/acres of 10–10–10 annually in early summer plus 100 #/acre of ammonium nitrate top dressing in mid summer. Mow annually to prevent tress and brush. Re–seed bare areas.

SEDIMENT STORAGE INFORMATION

TOTAL DISTURBED AREA =	94.22 ACRES
SEDIMENT STORAGE REQUIRED (67 C.Y./ ACRE)=	6,313 C.Y.
SEDIMENT STORAGE PROVIDED =	70,290 C.Y.
SEDIMENT STORAGE PROVIDED BY VOLUME OF STORAGE IN PROPOSED PONDS.	

GEORGIA REGISTERED No. 21108 PROFESSIONAL ENGINEER WALTER R. CHECK

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558 PH: (912) 673–8575 FAX (912) 882–2729
29 CORAL PARK WAY BRUNSWICK, GEORGIA 31520 PH: (912) 265–3851 FAX (912) 264–7273

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

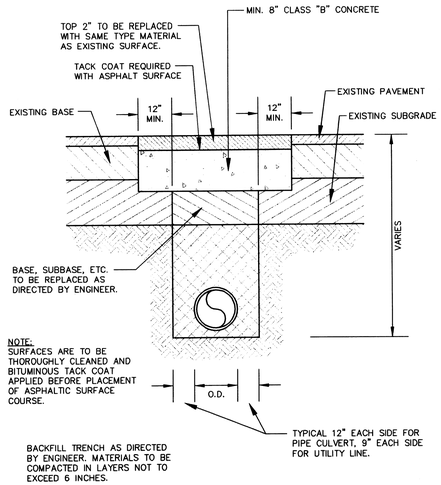
EROSION AND SEDIMENT CONTROL DETAILS

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

SHEET 56

DWG. No.: 06-5038NT

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



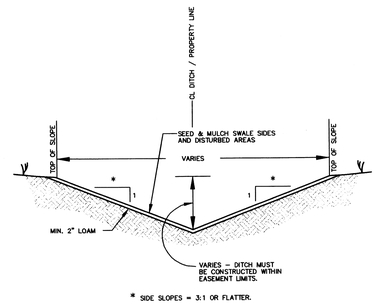
NOTE:
SURFACES ARE TO BE THOROUGHLY CLEANED AND BITUMINOUS TACK COAT APPLIED BEFORE PLACEMENT OF ASPHALTIC SURFACE COURSE.

NOTES:
STAGE 1. SAW-CUT PAVEMENT EQUAL TO WIDTH OF TRENCH. REMOVE PAVEMENT AND EXCAVATE TRENCH.

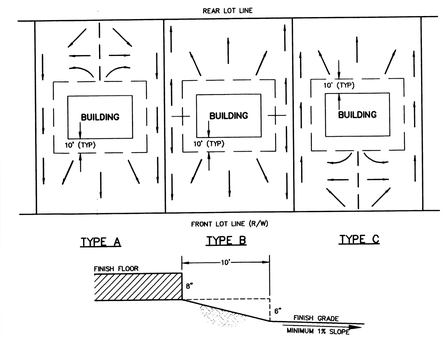
STAGE 2. AFTER PIPE INSTALLATION AND BACKFILL OPERATIONS ARE COMPLETE, SAW-CUT PAVEMENT AN ADDITIONAL 12" EACH SIDE OF TRENCH. REMOVE PAVEMENT LEAVING SUBGRADE MATERIAL UNDISTURBED.

STAGE 3. COMPLETE PATCH AS SHOWN IN DETAIL.

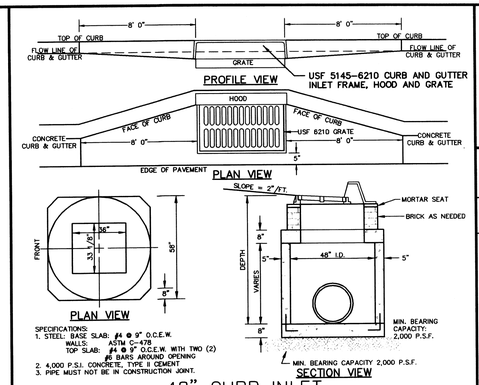
EXISTING PAVEMENT REPAIR DETAIL
(N.T.S.)



TYPICAL V-BOTTOM DITCH SECTION
(N.T.S.)

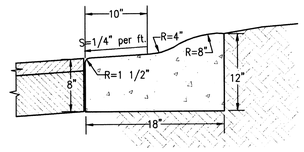


TYPICAL LOT GRADING DETAIL
(N.T.S.)

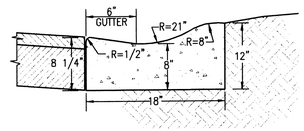


SPECIFICATIONS:
1. STEEL: BASE SLAB: #4 @ 9" O.C.E.W.
WALLS: ASTM C-478
TOP SLAB: #4 @ 9" O.C.E.W. WITH TWO (2) #6 BARS AROUND OPENING
2. 4,000 P.S.I. CONCRETE, TYPE II CEMENT
3. PIPE MUST NOT BE IN CONSTRUCTION JOINT.

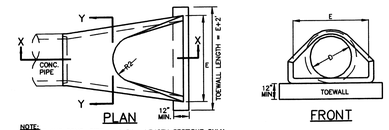
48" CURB INLET
(N.T.S.)



PITCHED CURBING



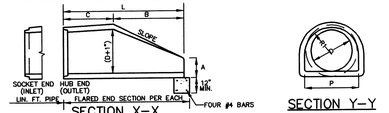
STANDARD CURBING AND GUTTER
18" CONCRETE MOUNTABLE CURB
(N.T.S.)



PLAN

FRONT

NOTE:
DO NOT CUT CONC. PIPE. USE FULL LENGTH SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



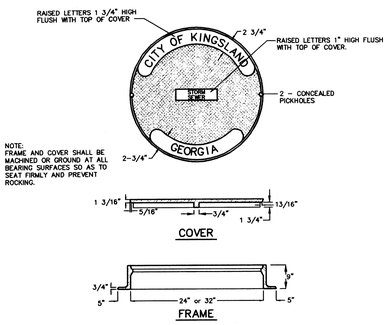
SECTION X-X

SECTION Y-Y

PIPE DIA.	SLOPE	A	B	C	L	E	P	R1	R2
12"	2.2:1	4"	2'0"	4'1"	6'1"	2'0"	1'8"	1'0"	8"
15"	2.2:1	6"	2'3"	3'10"	6'1"	2'6"	2'0"	1'0"	11"
18"	2.2:1	9"	2'5"	3'10"	6'1"	3'0"	2'3"	1'4"	1'0"
24"	2.4:1	10"	3'8"	2'6"	6'2"	4'0"	2'9"	1'5"	1'0"
30"	2.4:1	12"	4'6"	1'8"	6'2"	5'0"	3'1"	1'6"	1'3"
36"	2.4:1	15"	5'3"	2'11"	6'2"	6'0"	4'0"	2'0"	1'8"
42"	2.4:1	21"	5'3"	2'11"	6'2"	6'8"	4'6"	2'4"	1'10"

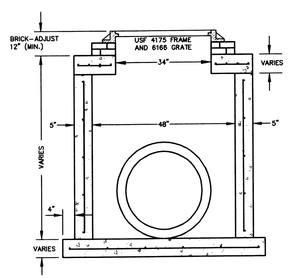
GENERAL NOTES:
1. END SECTIONS SHALL CONFORM TO STANDARD STRENGTH REINFORCED CONCRETE PIPE OF LIKE DIAMETER AS PER D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
2. END SECTIONS TO BE USED ONLY WHEN SPECIFIED ON PLANS OR AT LOCATIONS AS DIRECTED BY ENGINEER.
3. TOE WALL TO BE CONSTRUCTED WHEN SHOWN ON PLANS OR DESIGNATED BY ENGINEER.

GA. STD. 1120 REINFORCED CONCRETE FLARED END SECTION DETAIL
(N.T.S.)



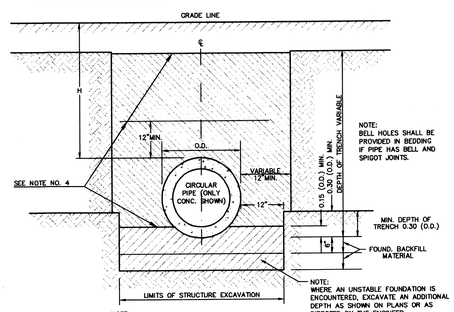
NOTE:
FRAME AND COVER SHALL BE MACHINED OR GROUND AT ALL BEARING SURFACES SO AS TO SEAT FIRMLY AND PREVENT ROCKING.

STORM MANHOLE FRAME & COVER
(N.T.S.)



48" GRATE INLET
N.T.S.

TRENCH CONSTRUCTION FOR STORM DRAIN DETAIL



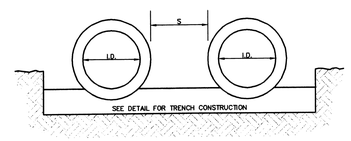
NOTE:
BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

NOTE:
WHERE AN UNSTABLE FOUNDATION IS ENCOUNTERED, EXCAVATE AN ADDITIONAL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

NOTE:
PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

GENERAL NOTES:
1. BACKFILL TO BE MECHANICALLY COMPACTED TO THE TOP OF THE TRENCH OR TO A HEIGHT OF MIN. COVER ABOVE THE TOP OF THE PIPE, WHICHEVER IS GREATER.
2. FOUNDATION MATERIAL WHEN REQUIRED SHALL BE APPROVED FOR USE BY THE ENGINEER.
3. FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.
4. BACKFILL SHALL CONSIST OF PLACING COMPACTIBLE SOIL IN 12" (LOOSE) LAYERS AND COMPACTING EACH LAYER (ACCORDING TO SPECIFICATIONS) ON BOTH SIDES OF PIPE FOR ITS FULL LENGTH.

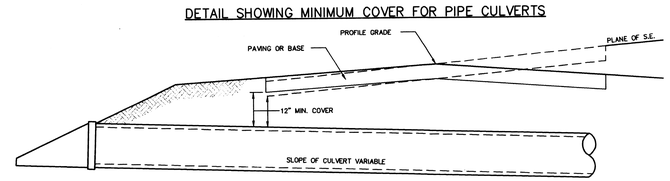
MULTIPLE PIPE CULVERT SPACING DETAIL



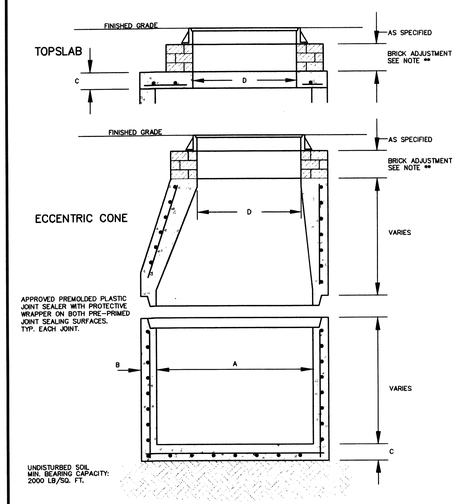
S=ONE INSIDE DIAMETER OF PIPE OR 3 FEET, WHICHEVER IS SMALLER.
FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN FOR INSIDE DIAMETER.

NOTE:
FOR MULTIBLE LINES OF C.M. PIPE WITH METAL FLARED END SECTIONS, S MAY BE INCREASED ENOUGH TO AVOID OVERLAP OF END SECTION WINGTIPS. LOCATION OF METAL END SECTIONS SHOULD BE DETERMINED BEFORE PLACEMENT OF PIPE.

DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS



PIPE CULVERT BEDDING DETAIL
N.T.S.



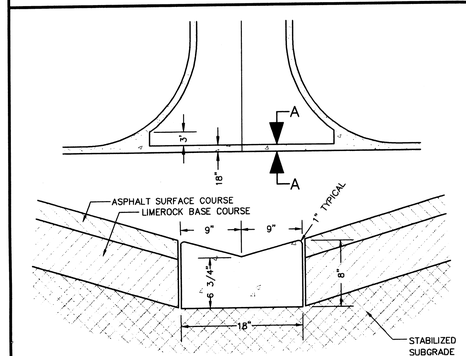
DIMENSIONS TABLE

A	B	C	D
48"	5"	8"	24" or 32"
60"	6"	8"	24" or 32"
72"	7"	8"	24" or 32"

MATERIALS
CONCRETE: 4000 PSI, Type II cement.
WALL REINFORCING: ASTM C-478
BOTTOM SLAB REINFORCING:
48" dia.-#4 @ 12" O.C.E.W.*
60" dia.-#5 @ 12" O.C.E.W.*
72" dia.-#5 @ 6" O.C.E.W.*

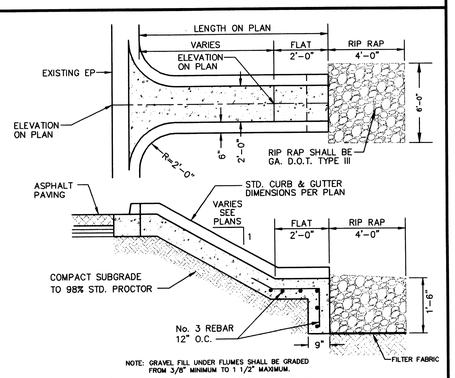
NOTE:
* Grade 40, or equivalent welded wire mesh.
** Variable grade adjustment by grade rings or brick as required.

STORM MANHOLE
N.T.S.



SECTION A-A

18" CONCRETE VALLEY GUTTER DETAIL
N.T.S.



NOTE: GRAVEL FILL UNDER FLUMES SHALL BE GRADED FROM 3/8" MINIMUM TO 1 1/2" MAXIMUM.

CONCRETE FLUME DETAIL
(N.T.S.)

REGISTERED PROFESSIONAL ENGINEER No. 17708 GEORGIA
PETER R. CHECK

DATE SEALED: 1/27/10

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	WAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE, ST. MARYS, GEORGIA 31558 PH: (912) 673-8575 FAX (912) 882-2729
29 CORAL PARK WAY, BRUNSWICK, GEORGIA 31520 PH: (912) 265-3851 FAX (912) 264-7273

KINGSLAND WEST
CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

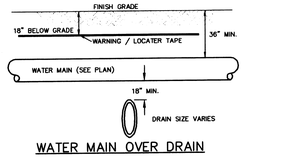
CONSTRUCTION DETAILS

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

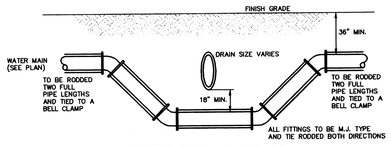
SHEET 57

DWG. No.: 06-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



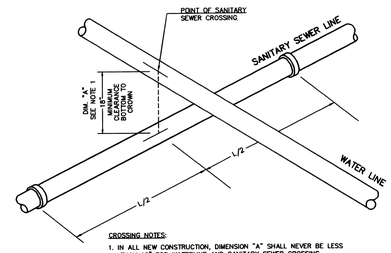
WATER MAIN OVER DRAIN



WATER MAIN UNDER DRAIN

WATER MAIN – STORM DRAIN CROSSING DETAILS

(N.T.S.)

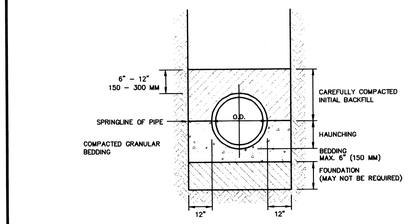


CROSSING NOTES:

1. IN ALL NEW CONSTRUCTION, DIMENSION "A" SHALL NEVER BE LESS THAN 18" FOR WATERLINE AND SANITARY SEWER CROSSING.
2. WITH ALL NEW CONSTRUCTION, THE CROSSING SHALL BE ARRANGED AS SHOWN IN THE DIAGRAM, SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
3. IF THE WATER MAIN MUST PASS BENEATH THE SEWER IN NEW CONSTRUCTION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER.

WATER – SANITARY SEWER CROSSING DETAIL

(N.T.S.)

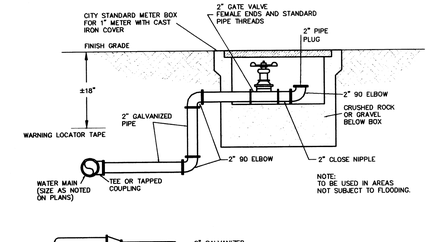


NOTES:

1. PVC PIPE FOR SANITARY SEWER MUST BE BEDDED IN ACCORDANCE WITH ASTM 2321.
2. PIPE SHALL BE BEDDED TRUE TO LINE AND GRADE WITH UNIFORM AND CONTINUOUS SUPPORT FROM A FIRM BASE. BLOCKING SHALL NOT BE USED TO BRING PIPE TO GRADE.

SEWER PIPE BEDDING DETAIL

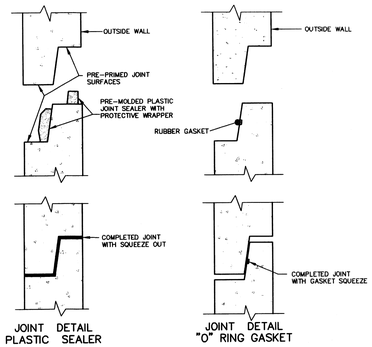
N.T.S.



ALTERNATE IN-LINE CONNECTION

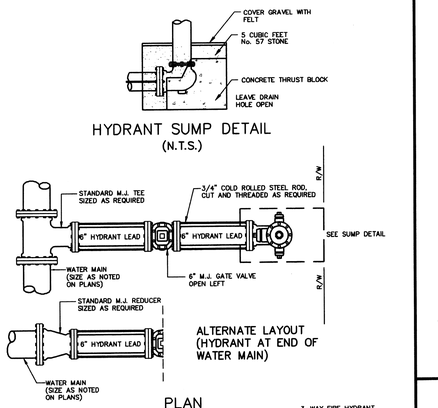
FLUSHING VALVE DETAIL

N.T.S.



JOINT DETAIL

N.T.S.

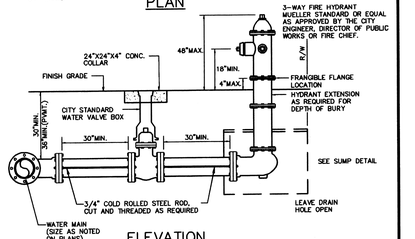


HYDRANT SUMP DETAIL

(N.T.S.)

ALTERNATE LAYOUT (HYDRANT AT END OF WATER MAIN)

PLAN



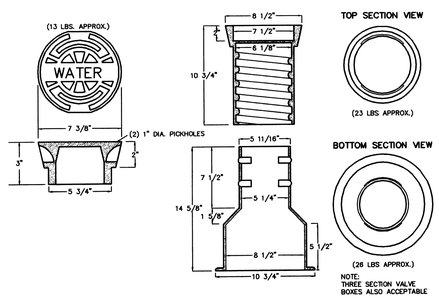
ELEVATION

NOTES:

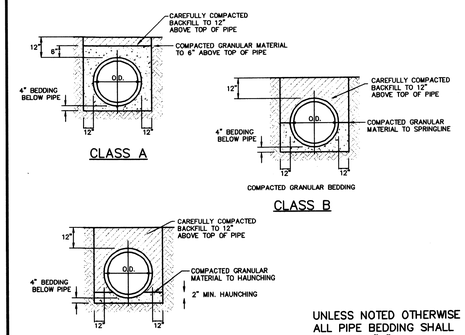
A. FIRE HYDRANT SHALL CONFORM TO AWWA C502.
B. FIRE HYDRANT SHALL HAVE A 6" MECHANICAL JOINT INLET CONNECTION AND BE EQUIPPED WITH A 5-1/4 INCH VALVE, TWO 2-1/2 INCH HOSE NOZZELS AND ONE 4-1/2 INCH PUMPER CONNECTION,ALL WITH ANSI (NATIONAL) STANDARD THREADS. OPERATING NUT SHALL BE 1-1/2 INCH, PENTAGON TYPE.
C. FIRE HYDRANT SHALL BE EQUIPPED WITH "O" RING TYPE STEM SEALS.

FIRE HYDRANT ASSEMBLY DETAIL

(N.T.S.)

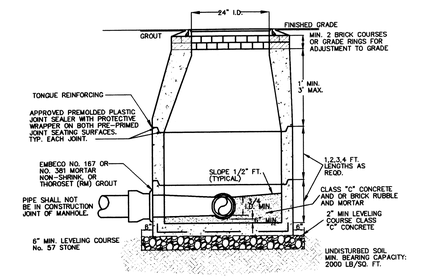


WATER SYSTEM VALVE BOX AND COVER DETAIL

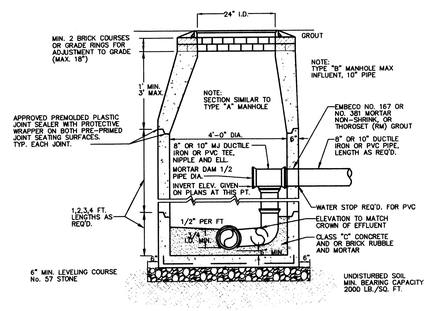


UNLESS NOTED OTHERWISE ALL PIPE BEDDING SHALL BE CLASS "B".

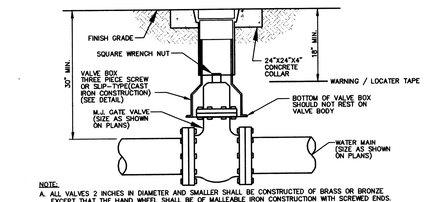
PIPE BEDDING DETAILS



SECTION VIEW



SECTION VIEW

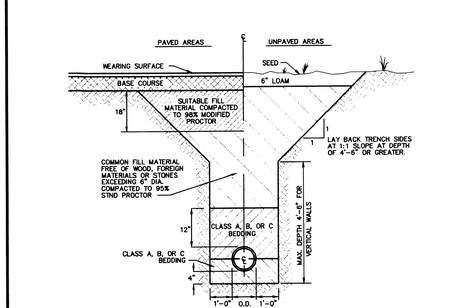


NOTE:

A. ALL VALVES 2 INCHES IN DIAMETER AND SMALLER SHALL BE CONSTRUCTED OF BRASS OR BRONZE EXCEPT THAT THE HAND WHEEL SHALL BE OF MALLEABLE IRON CONSTRUCTION WITH SCREWED ENDS. ALL VALVES 2-1/2 INCHES IN DIAMETER AND LARGER SHALL HAVE MECHANICAL JOINTS UNLESS OTHERWISE APPROVED. THEY SHALL BE IRON BODY, BRONZE MOUNTED, EXCEPT THAT IN THE SMALLER SIZES THE SMALLER VALVES MAY BE ALL BRONZE.
B. GATE VALVES SMALLER THAN 3 INCHES IN DIAMETER SHALL MEET THE REQUIREMENTS OF FED. SPEC. WW-V-54, CLASS 54, CLASS A, 125 POUNDS.
C. GATE VALVES 3 INCHES AND LARGER SHALL HAVE NON-RISING STEMS AND SHALL MEET THE REQUIREMENTS OF AWWA C509 AND SHALL BE RESILIENT SEAT WEDGE TYPE. VALVES FOR LIGHTER PRESSURE THAN THE AWWA STANDARD SHALL MEET THE REQUIREMENTS OF THE ABOVE SPECIFICATIONS EXCEPT THAT THE REQUIREMENTS FOR METAL THICKNESSES AND STRENGTHS AND STRUCTURAL DESIGNS SHALL BE ADJUSTED AS REQUIRED TO MEET HYDROSTATIC TEST PRESSURES NOT LESS THAN 200 PSI.
D. ALL GATE VALVES 2-1/2 INCHES IN DIAMETER AND LARGER SHALL BE OF THE DOUBLE DISC TYPE. ALL GATE VALVES TWO INCHES IN DIAMETER AND SMALLER SHALL BE OF THE DOUBLE DISC OR THE SOLID WEDGE TYPE.
E. VALVES TO HAVE TWO INCH OPERATING NUT.
F. VALVES BURIED IN GROUND OR LOCATED IN VAULTS OR STRUCTURES SHALL HAVE SUITABLE EXTENSIONS FOR SOCKET OPERATION WITH TOP OF OPERATING NUT LOCATED SIX INCHES BELOW FINISHED GRADES.

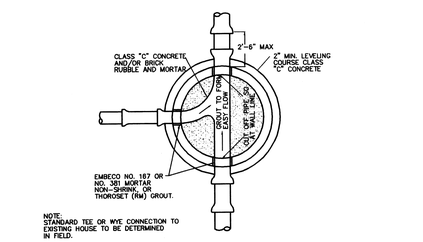
GATE VALVE DETAIL

N.T.S.



TYPICAL TRENCH SECTION

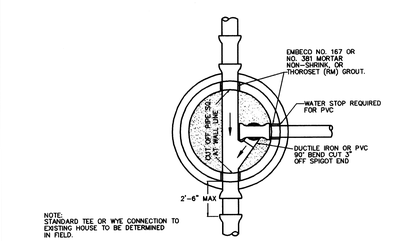
N.T.S.



PLAN VIEW

STANDARD MANHOLE TYPE "A" MANHOLE

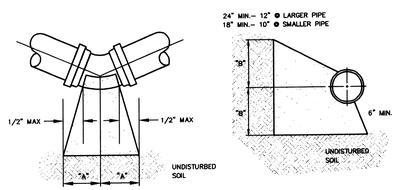
N.T.S.



PLAN VIEW

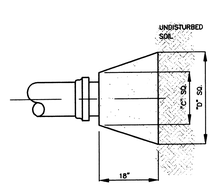
DROP MANHOLE TYPE "B" MANHOLE

N.T.S.



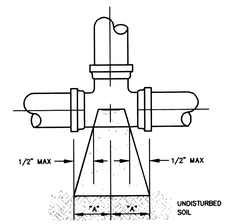
PIPE SIZE	1/4 BENDS A	1/4 BENDS B	CU. FT. CONC.	1/8 BENDS A	1/8 BENDS B	CU. FT. CONC.	1/16 BENDS A	1/16 BENDS B	CU. FT. CONC.
4"	12"	9"	2.3	8"	8"	1.6	6"	6"	1.1
6"	16"	10"	3.2	9"	10"	3.0	6"	9"	1.3
8"	22"	13"	7.2	12"	13"	3.7	8"	10"	2.1
10"	26"	17"	11.5	14"	17"	5.9	10"	13"	3.6
12"	32"	21"	21.1	18"	21"	8.6	11"	16"	6.6
14"	35"	24"	29.8	19"	24"	14.9	12"	20"	8.9
16"	38"	27"	37.8	21"	27"	19.1	12"	24"	11.2

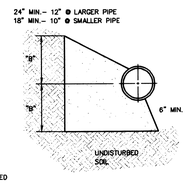
FOR BENDS



PIPE SIZE	PLUG C	PLUG D	CU. FT. CONC.
4"	8"	18"	1.5
6"	10"	21"	2.6
8"	12"	23"	4.5
10"	14"	30"	6.9
12"	15"	41"	9.0
14"	18"	48"	12.3
16"	20"	54"	15.2

FOR PLUGS



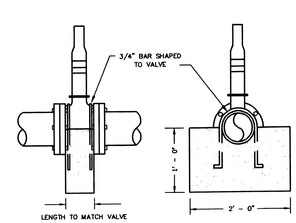


PIPE SIZE	TEE A	TEE B	CU. FT. CONC.
4"	8"	12"	3.3
6"	10"	12"	3.6
8"	13"	16"	9.4
10"	16"	20"	9.4
12"	18"	24"	16.6
14"	22"	27"	23.2
16"	24"	30"	28.6

FOR TEES

THRUST BLOCK DETAILS

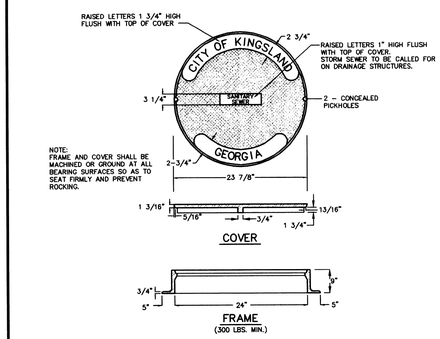
N.T.S.



FOR GATE VALVES

THRUST RESTRAINT NOTES:

1. ALL THRUST BLOCK BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THRUST BLOCK SIZES BASED ON TEST PRESSURE OF 200 PSIG.
3. THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL (A-1 THRU A-3, CLEAN SAND AND GRAVELS) AND PRESUME MINIMUM BEARING CAPACITY OF 2000 LBS PER SQ. FT. POOR SOIL (A-4 THRU A-8, SILTY SOILS, CLAYS, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.
4. NO JOINTS SHALL BE COVERED WITH CONCRETE.
5. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS, PLUGS AND CROSSES.
6. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
7. VERTICAL BENDS TO BE RODDED. TWO 3/4" DIA. RODS FOR 8" DIA. PIPE AND SMALLER; FOUR 3/4" DIA. RODS FOR PIPE LARGER THAN 8" DIA. THREADED ROD SHALL CONFORM TO ANSI A242 FY50 AND NUTS SHALL CONFORM TO AWWA C111. RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.



SEWER MANHOLE FRAME & COVER

(N.T.S.)

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

GEORGIA REGISTERED No. 27085 PROFESSIONAL ENGINEER WILLIAM R. CHEEK

DATE SEALED: 2/27/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH. (912) 673-8573
FAX (912) 882-2729
429 CORAL PARK WAY
BRUNSWICK, GEORGIA 31520
PH. (912) 265-3851
FAX (912) 264-7273

KINGSLAND WEST

CITY OF KINGSLAND, 1608TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

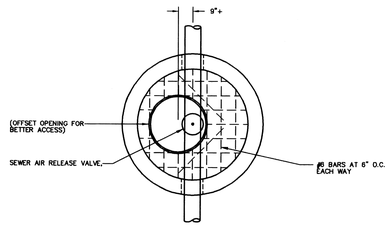
CONSTRUCTION DETAILS

PROJ NO.:	06-5038
DATE:	11/10/06
DRAWN BY:	JWH
CHECKED BY:	WRC
APPROVED BY:	WRC
SCALE:	NA

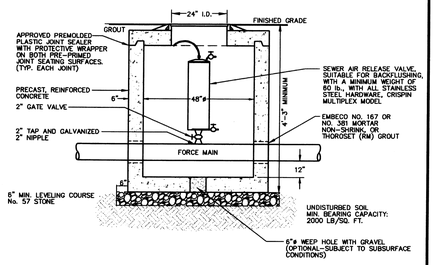
SHEET 58

DWG. No.: 06-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



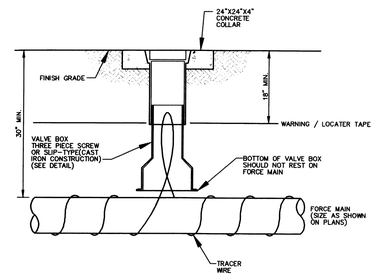
PLAN VIEW



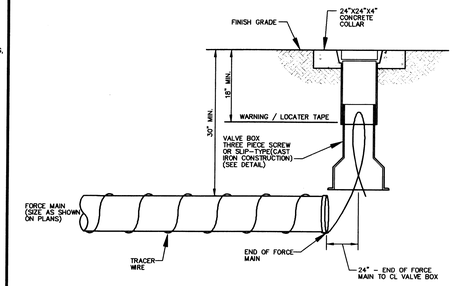
SECTION VIEW

AIR RELEASE VALVE AND MANHOLE

N.T.S.

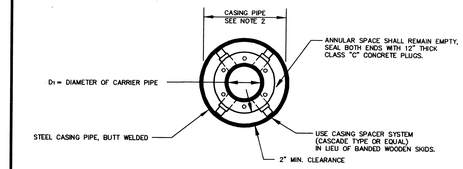


PROVIDE EVERY 500' AS SHOWN ON PLANS.



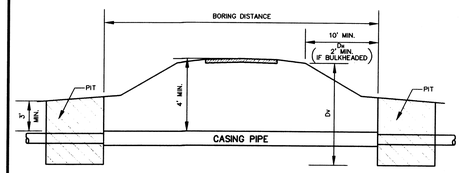
FORCE MAIN DETAIL

N.T.S.



CARRIER PIPE AND CASING PIPE SIZES (MIN.)											
CARRIER PIPE NOM. DIA. (D1)	4	6	8	10	12	14	16	18	20	24	30
CASING PIPE NOM. DIA. (D2)	14	16	18	22	24	30	30	30	36	36	48
WALL THICKNESS (INCHES)	0.250	0.250	0.250	0.312	0.344	0.406	0.406	0.406	0.469	0.469	0.625

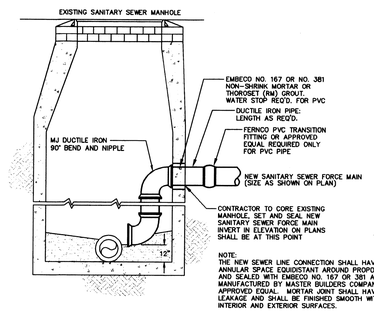
NOTES:
1. MINIMUM COVER TO TOP OF CASING SHALL BE AS SHOWN BELOW.
2. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
3. THE CASING SPACER SYSTEM SHALL BE LOCATED PER MANUFACTURER'S SPECIFICATIONS.
4. ROTATION OF CARRIER PIPE INSIDE THE CASING PIPE WILL NOT BE PERMITTED. MECHANICAL OR FLANGED JOINT PIPE SHALL BE USED TO HELP PREVENT SUCH ROTATION.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF CASING AND CARRIER PIPE INSTALLATION FOR DESIGN CONSULTANT APPROVAL PRIOR TO FABRICATION OF PIPING, CASTING AND APPURTENANCES.



NOTES:
1. D vSHALL NOT BE LESS THAN D , v
2. SYMMETRIC WITH RESPECT TO DIMENSIONS.

JACK AND BORE DETAIL

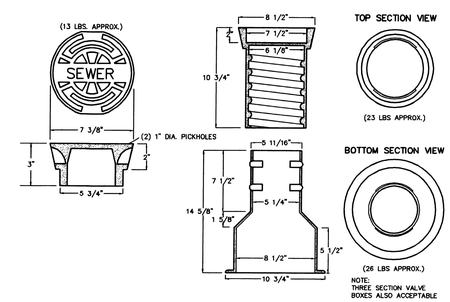
(N.T.S.)



NOTE:
THE NEW SEWER LINE CONNECTION SHALL HAVE THE ANNULAR SPACE EQUIDISTANT AROUND PROPOSED PIPE AND SEALED WITH EMBECO NO. 167 OR 381 AS MANUFACTURED BY MASTER BUILDERS COMPANY, OR APPROVED EQUAL. MORTAR JOINT SHALL HAVE ZERO LEAKAGE AND SHALL BE FINISHED SMOOTH WITH THE INTERIOR AND EXTERIOR SURFACES.

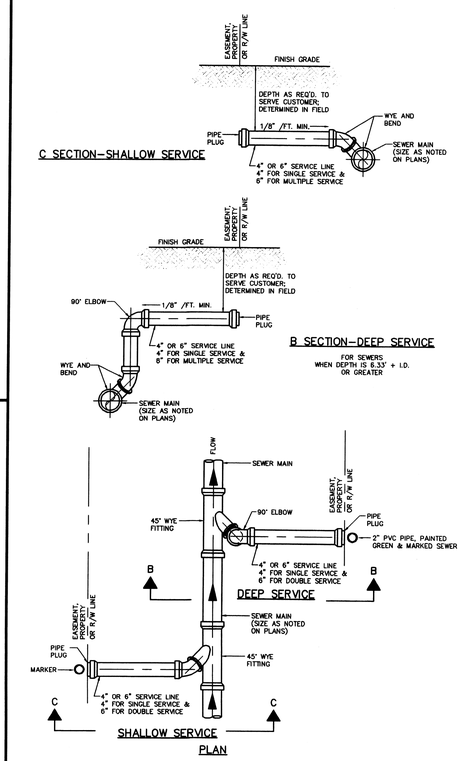
EXISTING MANHOLE FORCE MAIN CONNECTION

N.T.S.



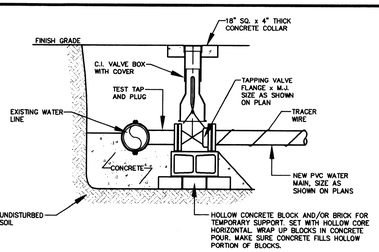
NOTE:
THREE SECTION VALVE BOXES ALSO ACCEPTABLE

FORCE MAIN VALVE BOX AND COVER DETAIL



SANITARY SEWER LATERAL DETAIL

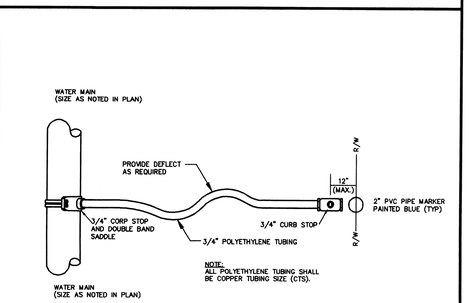
(N.T.S.)



NOTES:
1. TEMPORARILY SUPPORT TAPPING SADDLE AND VALVE AND APPLY STANDARD HYDROSTATIC TEST.
2. IF NO LEAKS ARE DETECTED, POUR INDICATED CONCRETE BLOCKING AND SUPPORT PAD. COVER GLANDS AND BOLTS WITH HEAVY POLYETHYLENE SHEETING TO KEEP CONCRETE FROM BONDING.
3. COAT TAPPING SLEEVE AND BOLTS WITH AN APPROVED COATING BEFORE POURING CONCRETE - TYPICAL FOR ALL STEEL INCLUDING RODS, COUPLINGS, STRAPS AND OTHER BURIED STEEL.

TAPPING VALVE AND SLEEVE

N.T.S.



NOTE:
ALL POLYETHYLENE TUBING SHALL BE COPPER TUBING SIZE (CTS).

SINGLE WATER SERVICE DETAIL

GEORGE A. FULTER R. CHEKE REGISTERED PROFESSIONAL ENGINEER No. 21709

DATE SEALED: 2/21/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARY'S, GEORGIA 31558
PH. (912) 673-8575
FAX (912) 882-2729
29 CORAL PARK WAY
BRUNSWICK, GEORGIA 31520
PH. (912) 265-3851
FAX (912) 264-7273

KINGSLAND WEST
CITY OF KINGSLAND, 16066TH G.M.D., CAMDEN COUNTY, GEORGIA
PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

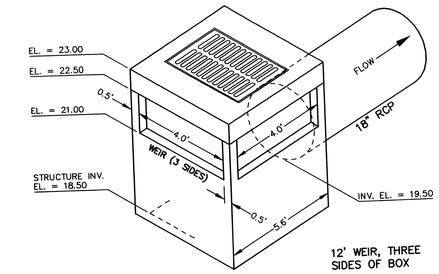
CONSTRUCTION DETAILS

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

SHEET 59

DWG. No.: 06-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.

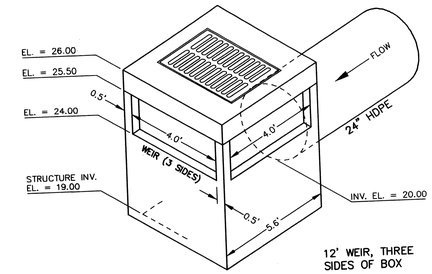


NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 02–POND 1 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)

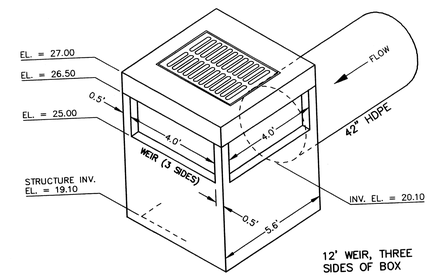


NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 05–POND 4 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)

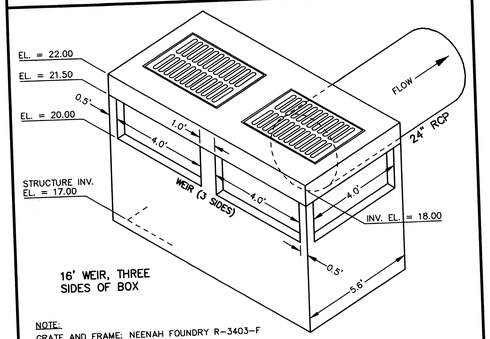


NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 09–POND 6 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)

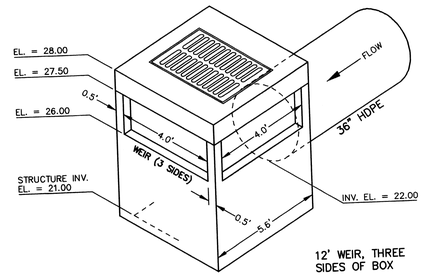


NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 04–POND 2 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)

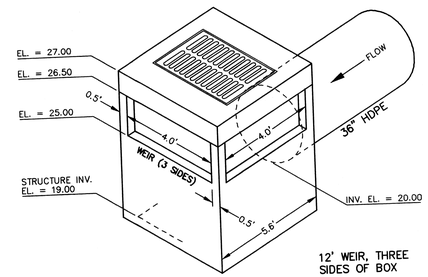


NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 07–POND 5 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)



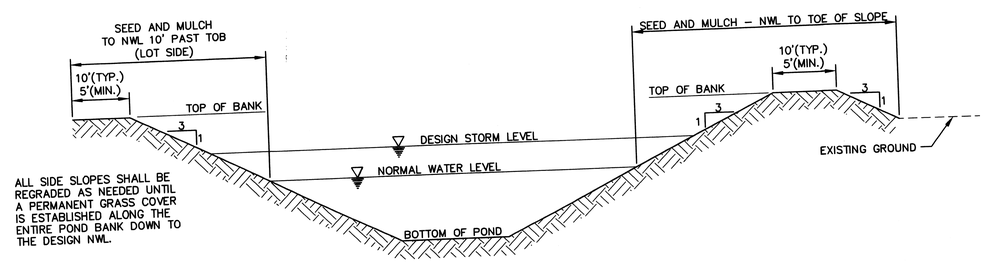
NOTE:
GRATE AND FRAME: NEENAH FOUNDRY R-3403-F

STRUCTURE 011–POND 7 OUTFALL

OUTLET CONTROL STRUCTURE

(N.T.S.)

	POND 1	POND 2	POND 3	POND 4	POND 5	POND 6	POND 7
TOP OF BANK ELEVATION	23.0	23.0	24.0	27.0	29.0	27.0	27.0
100 yr. STORM WATER ELEV.	22.25	22.28	23.00	25.24	27.30	26.83	26.64
50 yr. STORM WATER ELEV.	22.06	21.97	22.53	25.08	27.15	26.61	26.44
25 yr. STORM WATER ELEV.	21.84	21.59	21.98	24.88	26.96	26.34	26.20
NORMAL WATER LEVEL	21.0	20.0	20.0	24.0	26.0	25.0	25.0
BOTTOM OF POND ELEVATION	15.0	14.0	16.0	17.0	20.0	19.0	19.0



ALL SIDE SLOPES SHALL BE REGRADED AS NEEDED UNTIL A PERMANENT GRASS COVER IS ESTABLISHED ALONG THE ENTIRE POND BANK DOWN TO THE DESIGN NWL.

TYPICAL POND SECTION

(N.T.S.)

REGISTERED PROFESSIONAL ENGINEER No. 21708 GEORGIA WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
1	REVISED PER CITY OF KINGSLAND COMMENTS	MAD	01/29/07

P&A ENGINEERING, INC.
CIVIL ENGINEERS
1201 SHADOWLAWN DRIVE
ST. MARYS, GEORGIA 31558
PH: (912) 882-5752
FAX (912) 882-2729
29 CORAL PARK WAY
BRUNSWICK, GEORGIA 31520
PH: (912) 265-3851
FAX (912) 264-7273

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

CONSTRUCTION DETAILS

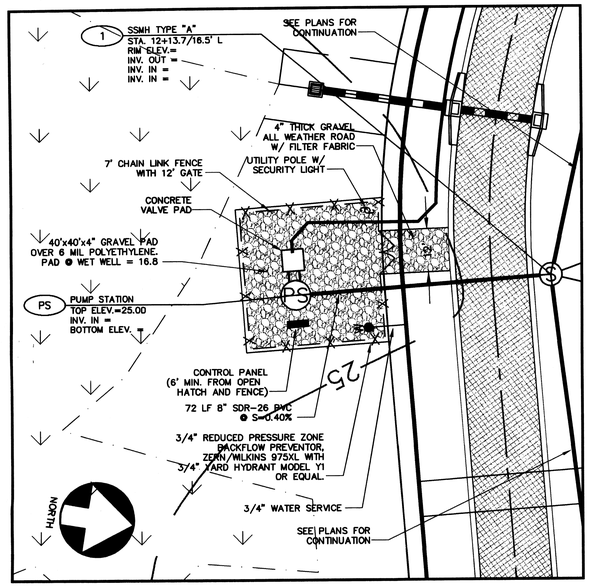
PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	JWH
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	NA

SHEET

60

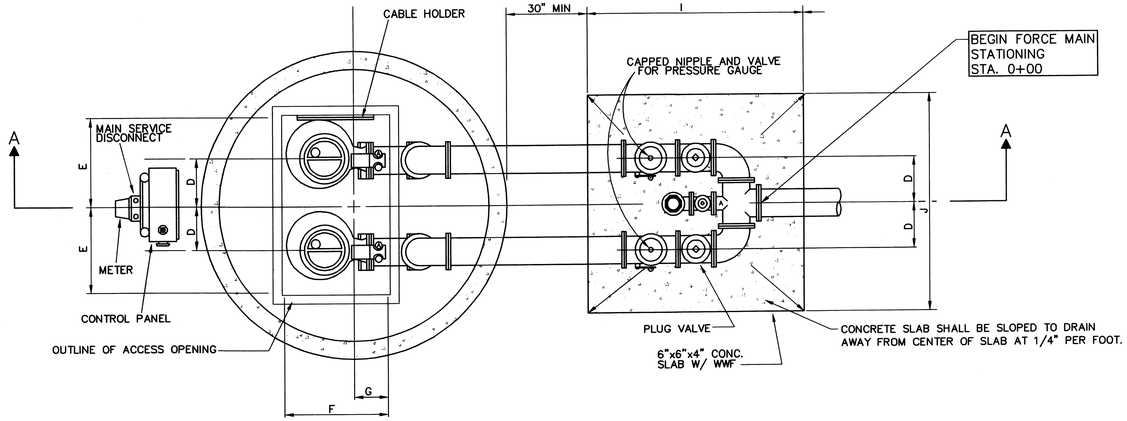
DWG. No.: 06-5038

THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.



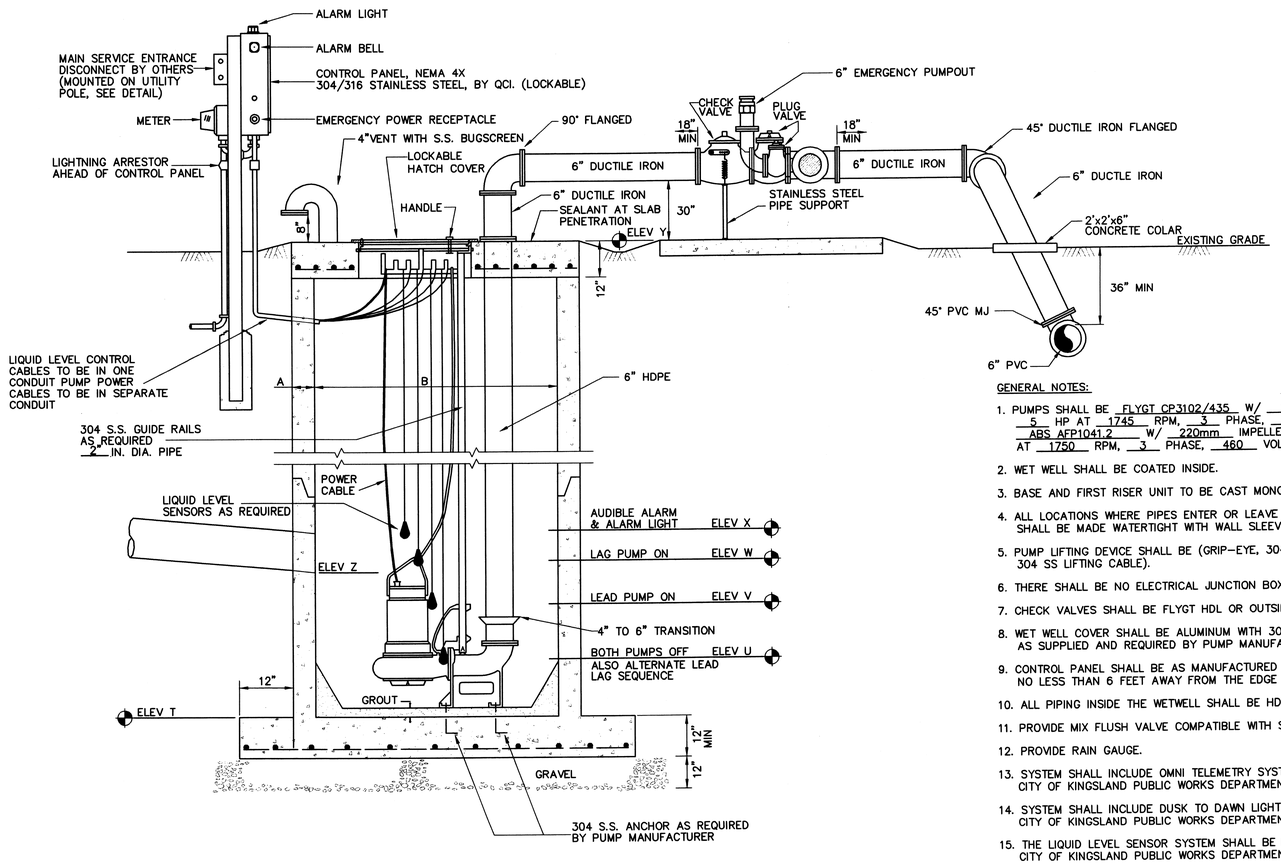
LIFT STATION SITE PLAN

SCALE: 1"=20'



PLAN

NOT TO SCALE



SECTION A-A

NOT TO SCALE

LIFT STATION DATA

PUMPING STATIONS	DIMENSIONS	ELEV. AT CONST.	
DIM A	8"		
DIM B	96"		
DIM C	N/A		
DIM D	13"		
DIM E	24"		
DIM F	30"		
DIM G	9 1/2"		
DIM H	N/A		
DIM I MIN	72"		
DIM J MIN	60"		
ELEV T		2.97	
ELEV U		4.47	
ELEV V		5.95	
ELEV W		6.45	
ELEV X		6.95	
ELEV Y		25.00	
ELEV Z		7.45	

GENERAL NOTES:

1. PUMPS SHALL BE FLYGT CP3102/435 W/ 189mm IMPELLER, 5 HP AT 1745 RPM, 3 PHASE, 460 VOLTS, OR ABS AFP1041.2 W/ 220mm IMPELLER, 6.2 HP AT 1750 RPM, 3 PHASE, 460 VOLTS.
2. WET WELL SHALL BE COATED INSIDE.
3. BASE AND FIRST RISER UNIT TO BE CAST MONOLITHIC.
4. ALL LOCATIONS WHERE PIPES ENTER OR LEAVE THE WET WELL SHALL BE MADE WATERTIGHT WITH WALL SLEEVE OR NON-SHRINK GROUT.
5. PUMP LIFTING DEVICE SHALL BE (GRIP-EYE, 304 SS CHAIN, OR 304 SS LIFTING CABLE).
6. THERE SHALL BE NO ELECTRICAL JUNCTION BOXES IN WET WELL.
7. CHECK VALVES SHALL BE FLYGT HDL OR OUTSIDE WEIGHT & LEVER.
8. WET WELL COVER SHALL BE ALUMINUM WITH 304S.S. HARDWARE AS SUPPLIED AND REQUIRED BY PUMP MANUFACTURER(LOADING 300 PSF).
9. CONTROL PANEL SHALL BE AS MANUFACTURED BY QCI-APOPKA,FL.AND LOCATED NO LESS THAN 6 FEET AWAY FROM THE EDGE OF THE WETWELL.
10. ALL PIPING INSIDE THE WETWELL SHALL BE HDPE.
11. PROVIDE MIX FLUSH VALVE COMPATIBLE WITH SPECIFIED PUMPS.
12. PROVIDE RAIN GAUGE.
13. SYSTEM SHALL INCLUDE OMNI TELEMETRY SYSTEM AS SPECIFIED BY THE CITY OF KINGSLAND PUBLIC WORKS DEPARTMENT.
14. SYSTEM SHALL INCLUDE DUSK TO DAWN LIGHTING SYSTEM AS SPECIFIED BY THE CITY OF KINGSLAND PUBLIC WORKS DEPARTMENT.
15. THE LIQUID LEVEL SENSOR SYSTEM SHALL BE ROTO-FLOAT, AS SPECIFIED BY THE CITY OF KINGSLAND PUBLIC WORKS DEPARTMENT.
16. PUMP STATION SITE SHALL INCLUDE A SENSUS TOUCH-READ METER AND A 3/4" HOSE BIBB.

CALL BEFORE YOU DIG: 1-800-282-7411.

UTILITIES PROTECTION CENTER™

CALL 1-800-282-7411 AT LEAST 72 HOURS BEFORE YOU DIG TO BE IN FULL COMPLIANCE WITH THE LAW.

NOTE:
IF THIS PLAN IS NOT 24"x36" IT HAS BEEN COPIED AT A REDUCED SCALE.

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 21709 WALTER R. CHEEK

DATE SEALED: 2/27/07

NO.	REVISIONS	BY	DATE
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CIVIL ENGINEERS
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3528 DARIEN HWY, SUITE 219 BRUNSWICK, GEORGIA 31525 PH. (912) 265-3851 FAX (912) 265-9509

KINGSLAND WEST

CITY OF KINGSLAND, 1606TH G.M.D., CAMDEN COUNTY, GEORGIA

PREPARED FOR: PHELPS INVESTMENT PROPERTIES, INC.

PUMP STATION DETAILS

PROJ NO. :	06-5038
DATE:	11/10/06
DRAWN BY :	DRS
CHECKED BY :	WRC
APPROVED BY :	WRC
SCALE :	AS SHOWN

SHEET 61

2006-5038

NOTE: THIS PLAN IS NOT INTENDED FOR CONSTRUCTION UNLESS IT HAS BEEN SIGNED AND SEALED BY THE ENGINEER.