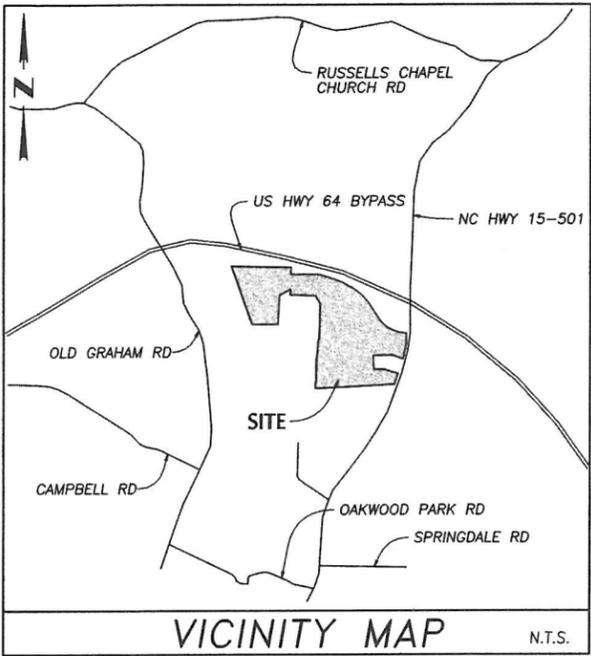


CONSTRUCTION DRAWINGS FOR POWELL PLACE PHASE 2D PITTSBORO, CHATHAM COUNTY, NC

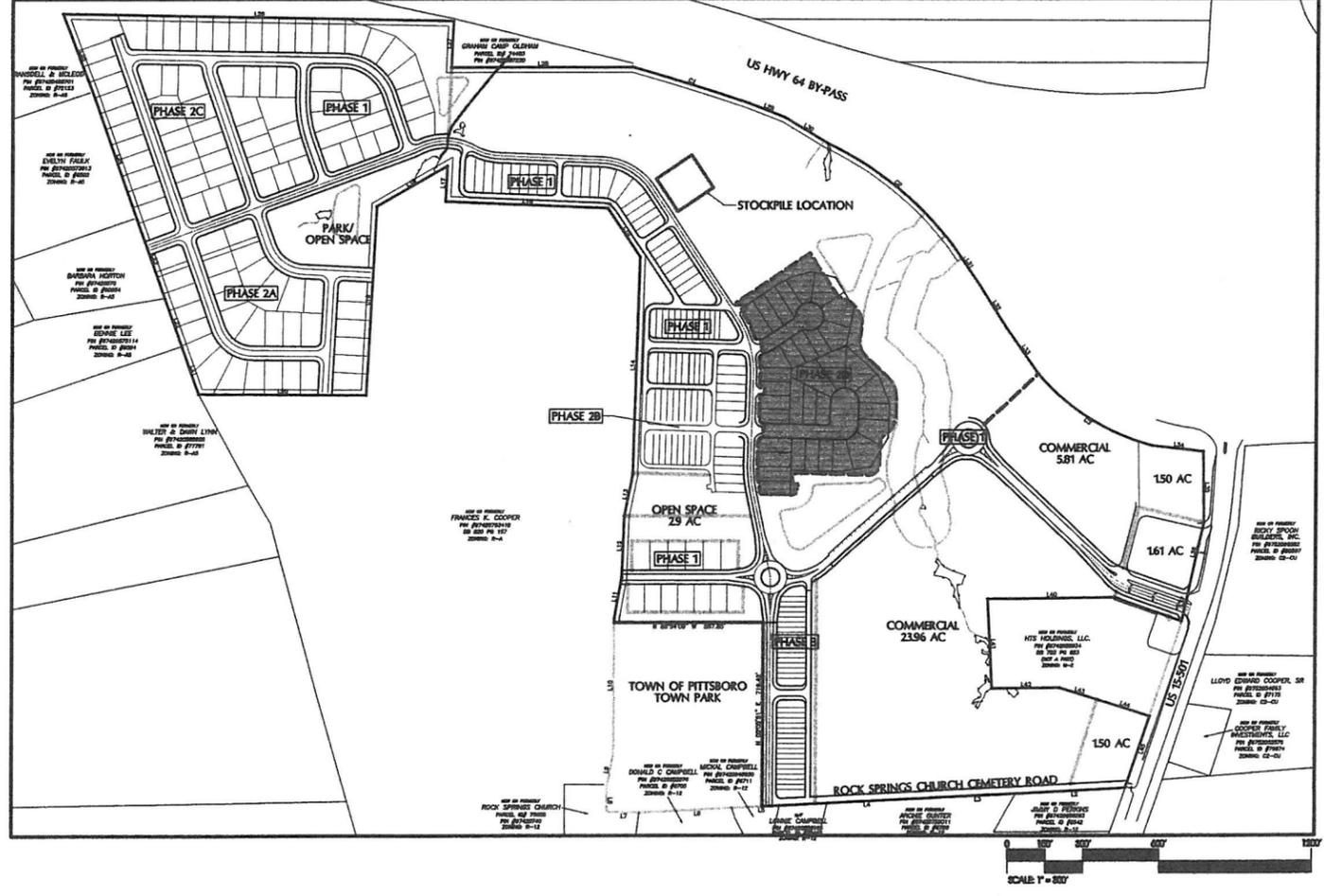
OCTOBER 29, 2013

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
1' CONTOUR INTERVAL	---	---
5' CONTOUR INTERVAL	---	---
EASEMENT LINE	---	---
CENTER LINE	---	---
SANITARY SEWER	○—○	●—● SS
STORM DRAINAGE	---	---
WATERLINE	---	---
FIRE HYDRANT ASSEMBLY	---	---
WATERWAYS	---	---
WETLANDS	---	---
BUFFER	---	---
BUILDING SETBACK	---	---
PHASE LINE	---	---
SIDEWALK/HANDICAP RAMPS	---	---



BOUNDARY LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	S 18°54'54" W	29.61'
L2	S 87°04'41" W	404.04'
L3	S 87°04'49" W	357.93'
L4	S 87°05'51" W	639.78'
L5	S 87°15'12" W	60.02'
L6	S 87°07'09" W	447.80'
L7	N 88°19'18" W	129.59'
L8	N 01°17'22" E	90.29'
L9	N 11°19'19" E	139.89'
L10	N 00°05'03" E	529.16'
L11	N 10°02'23" E	184.64'
L12	N 02°10'27" E	240.54'
L13	N 11°29'47" E	163.63'
L14	N 01°41'28" E	856.22'
L15	N 33°46'38" W	230.03'
L16	N 87°33'27" W	633.89'
L17	N 02°45'09" E	139.00'
L18	S 60°33'17" W	319.47'
L19	S 03°06'43" W	741.21'
L20	N 89°31'40" W	659.98'
L21	N 19°24'17" W	194.62'
L22	N 19°39'39" W	199.17'
L23	N 19°41'44" W	331.80'
L24	N 19°12'42" W	500.04'
L25	N 20°38'46" W	356.33'
L26	S 88°51'05" E	1535.71'
L27	S 02°30'46" W	181.34'
L28	S 82°57'01" E	708.84'
L29	S 89°05'36" E	155.81'
L30	S 58°49'18" E	194.35'
L31	S 34°20'29" E	191.58'
L32	S 37°16'05" E	201.08'
L33	S 35°19'36" E	218.78'
L34	S 83°27'08" E	203.53'
L35	S 00°45'29" E	278.54'
L36	S 12°33'58" W	253.02'
L37	S 12°33'58" W	144.57'
L38	N 70°38'03" W	101.34'
L39	N 70°38'03" W	180.09'
L40	S 89°21'28" W	469.99'
L41	S 02°37'30" E	351.01'
L42	N 89°21'28" E	265.85'
L43	S 72°38'41" E	156.53'
L44	S 72°38'41" E	217.62'
L45	S 18°54'54" W	287.35'

BOUNDARY CURVE TABLE			
CURVE	RADIUS	LENGTH	CHORD BEARING
C1	11309.16'	476.58'	476.55' N72°47'58" W
C2	1307.39'	636.20'	626.94' N57°49'36" W
C3	888.94'	539.14'	530.92' S58°02'36" E



INDEX OF SHEETS	
SHT No.	DRAWING DESCRIPTION
1	SUBDIVISION PLAN
2	UTILITY PLAN
3	EROSION CONTROL AND STORM DRAINAGE PLAN
4	STREET A PLAN & PROFILE STREET B PLAN & PROFILE
5	SANITARY SEWER OUTFALL 'A' PLAN & PROFILE
6	EROSION CONTROL DETAILS
7	STORM DRAINAGE & UTILITY DETAILS

PRELIMINARY PLAN
NOT APPROVED FOR CONSTRUCTION

10/29/13

PREPARED BY:

WITHERS & RAVENEL
ENGINEERS | PLANNERS | SURVEYORS

115 MacKenan Drive Cary, North Carolina 27511 tel: 919-469-3340 www.wITHERSRAVENEL.com License No. C-0832

OWNER/DEVELOPER:

POWELL PLACE DEVELOPMENT COMPANY
190 FINLEY GOLF COURSE ROAD
CHAPEL HILL, NC 27716

TEL 919-929-0660
FAX 919-967-0969

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- GENERAL NOTES:**
1. AREAS COMPUTED BY COORDINATE METHOD.
 2. BASIS OF BEARINGS: PLAT BOOK 93 PAGE 172. NO NC GRID MONUMENT IS LOCATED WITHIN 2000'.
 3. BOUNDARY INFORMATION BASED ON BOUNDARY SURVEY BY WITHERS AND RAVENEL.
 4. TOPOGRAPHICAL INFORMATION BASED FIELD SURVEY MERGED WITH PROPOSED GRADES FOR BMP'S A & B AND MILLBROOK DRIVE.
 5. WETLANDS SHOWN BASED ON FIELD DELINEATION BY SAEC AND SURVEYED BY WITHERS & RAVENEL AS SHOWN ON "WETLAND DELINEATION MAP" DATED APRIL 15, 2004.
 6. WETLAND AREAS SHALL NOT BE CLEARED, DRAINED, FILLED, OR OTHERWISE IMPACTED EXCEPT AS PERMITTED BY NCDENR AND U.S. ARMY CORPS OF ENGINEERS.
 7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST TOWN OF PITTSBORO STANDARD SPECIFICATIONS AND DETAILS.
 8. UTILITY AND PIPELINE EASEMENTS SHALL BE RECORDED AFTER CONSTRUCTION IS COMPLETED AS PART OF THE SUBDIVISION PLAT.
 9. ALL STREETS SHALL BE PUBLIC. SEE ROADWAY DETAILS FOR TYPICAL SECTIONS.
 10. NO PORTION OF THIS PROJECT IS LOCATED WITHIN FEMA FLOOD HAZARD AREA PER FEMA FIRM COMMUNITY-PANEL NUMBERS 37109742001, CHATHAM COUNTY, DATED FEBRUARY 2, 2007.
 11. BACK OF CURB TURNOUT RADII SHALL BE 30' AT RESIDENTIAL STREET INTERSECTIONS.
 12. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ICC/DOE STD. 848.05 (REVISED 01/2012).
 13. COMMON OPEN SPACE SHALL BE MAINTAINED BY HOMEOWNERS ASSOCIATION.
 14. TYPICAL LOT LAYOUTS, PROPOSED LOT STANDARDS AND TYPICAL PLANTING REQUIREMENTS SHOWN ON THIS SHEET.

PHASE 2D SITE DATA

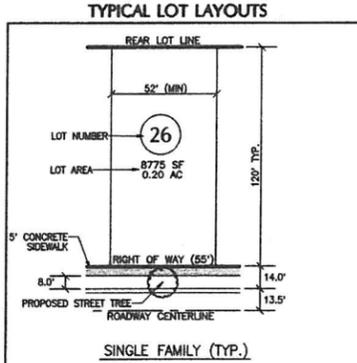
DEVELOPMENT NAME:	POWELL PLACE
LOCATION:	US 84 BY-PASS & NC 15/501
CHATHAM COUNTY PARCEL #:	88008
TOTAL PHASE AREA	12.22 AC
ZONING	MU-PD
PROPOSED NUMBER OF LOTS	34
PROPOSED DENSITY (34 LOTS/12.22 AC)	2.78 DU/AC
MINIMUM LOT SIZE	6,163 SF
AVERAGE LOT SIZE	8,331 SF
MEDIAN LOT SIZE	7,652 SF
LF OF STREETS	738
LF OF 6" WATERLINE:	357
LF OF 4" WATERLINE:	387
LF OF SEWER LINES:	502
AVERAGE SEWER FLOW:	12,240 GPD (360 GPD/UNIT)
BUILDING SETBACKS	
FRONT	10'
SIDE/CORNER SIDE	3'/6"
REAR	5'
BUILDING SETBACKS - US 64	50'

ROADWAY CURVE TABLE

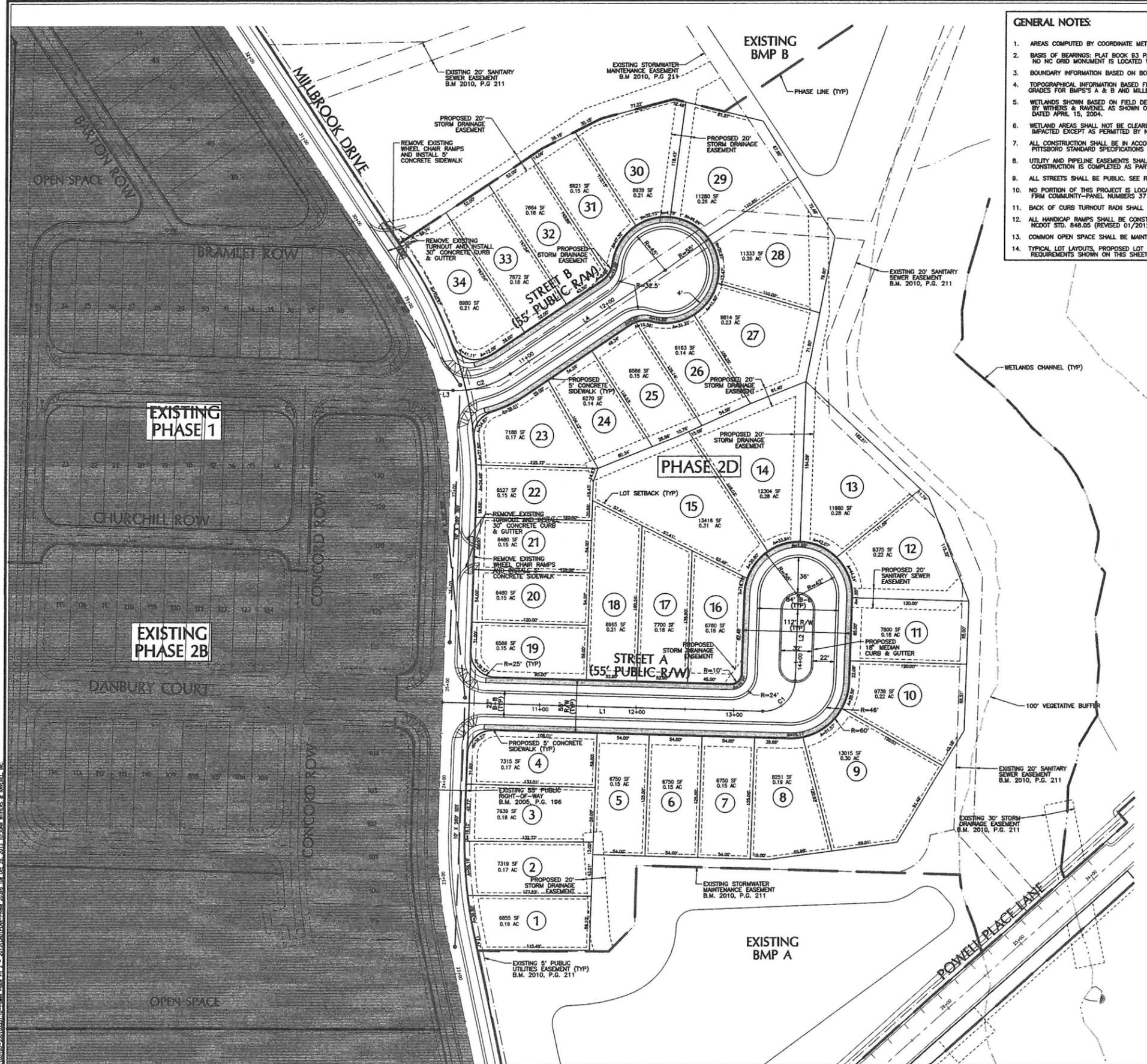
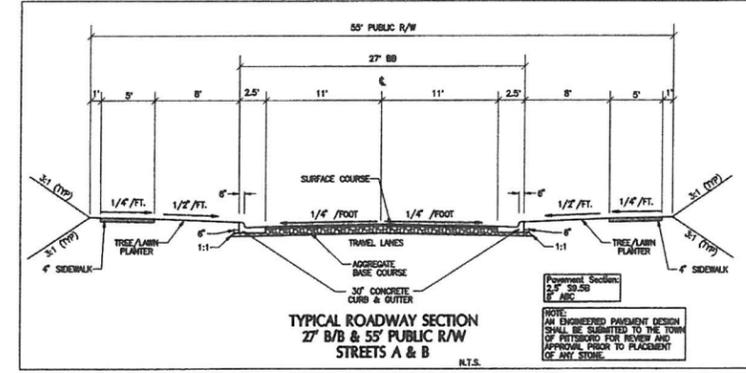
LINE	RADIUS	ARC	CHORD	CHORD BEARING
C1	32.50'	51.05'	45.95'	N46°41'28" E
C2	100.00'	61.90'	60.92'	N73°57'25" E

ROADWAY LINE TABLE

LINE	BEARING	DISTANCE
L1	S38°18'32" E	330.00'
L2	N01°41'28" E	87.46'
L3	S88°18'32" E	15.10'
L4	N56°13'22" E	191.87'



STREET TREE NOTE:
 ONE TREE SHALL BE PLANTED IN THE MIDDLE OF EACH LOT AND SHALL BE PLANTED IN THE MIDDLE OF THE 5' UTILITY STRIP (BETWEEN THE SIDEWALK AND BACK OF CURB).
 TREE SHALL BE MINIMUM 2" CALIPER AND ONE OF THE FOLLOWING TYPES SHALL BE PLANTED PER LOT:
 Acer buergerianum 'ABMTF' - Aeryn Trident Maple
 Acer x fraxinifolium 'Jeffers' - Autumn Blaze Maple
 Quercus nuttallii - Nuttall Oak
 Quercus shumardii - Shumard Oak
 Ulmus parvifolia 'Error II' - Alice Chinese Elm
 Zelkova serrata - Japanese Zelkova



No.	Revision	Date	By
1	Replan Per TOP Comments	10/29/13	JCI

Designer	WAB	Scale	1" = 50'
Drawn By	JCI	Date	10/16/13
Checked By	JCI	Job No.	020903811

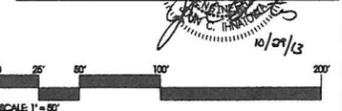
POWELL PLACE - PHASE 2D
 TOWN OF PITTSBORO CHATHAM COUNTY NORTH CAROLINA

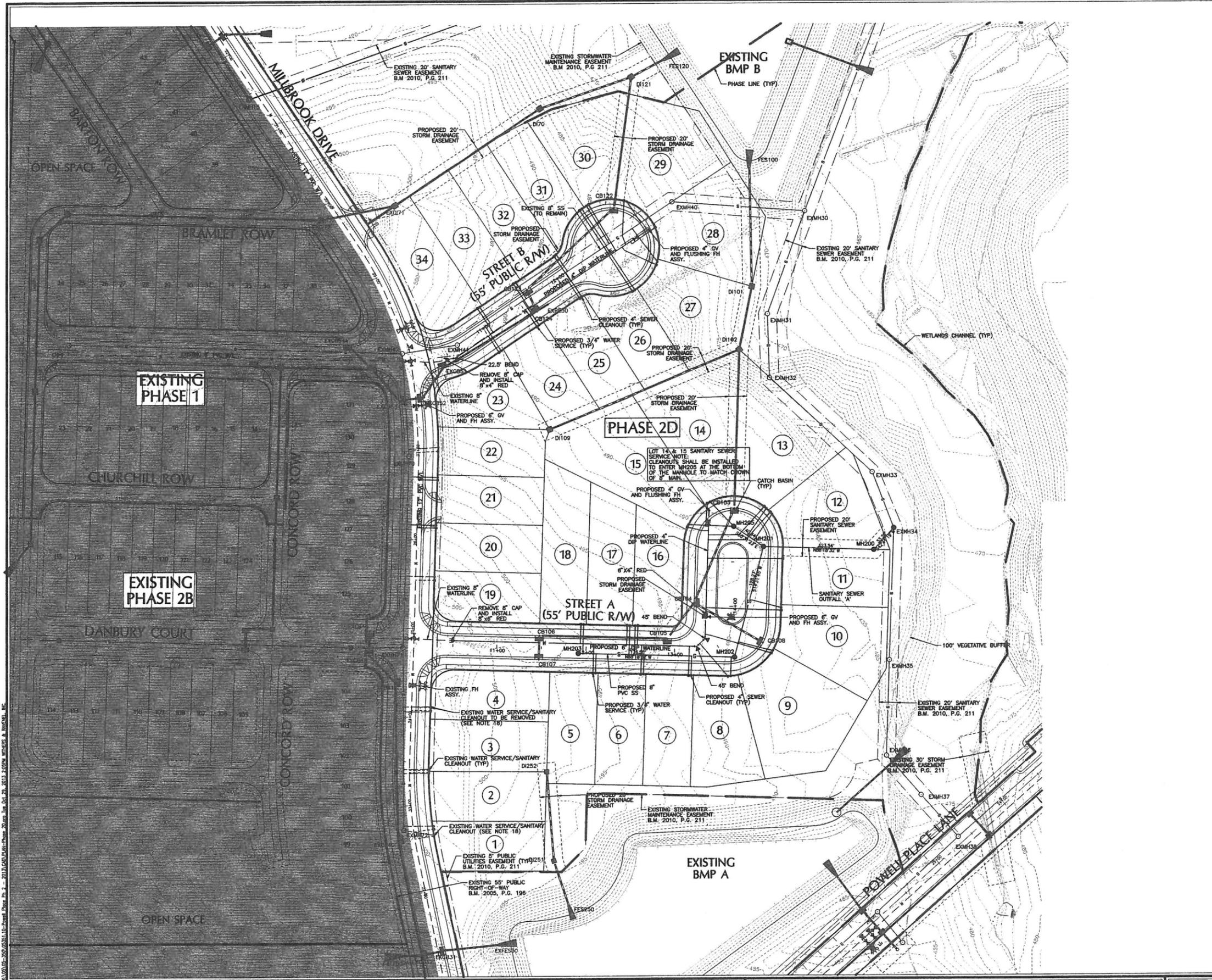
SUBDIVISION PLAN

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Sheet No.
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PRELIMINARY PLAN
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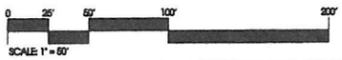
- GENERAL UTILITY NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF PITTSBORO STANDARD SPECIFICATIONS AND DETAILS, LATEST REVISION JANUARY 1, 2007.
 - ALL CONSTRUCTION WITHIN THE NCDOT PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST NCDOT STANDARD SPECIFICATIONS.
 - ALL RESIDENTIAL SEWER SERVICES SHALL BE 4" SCHEDULE 40 PVC. ALL RESIDENTIAL WATER SERVICES SHALL BE 3/4" TYPE K COPPER.
 - ALL STORM DRAINAGE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED.
 - ALL UTILITY LINES SHALL HAVE 20" EASEMENTS CENTERED ON THE LINES UNLESS LOCATED COMPLETELY IN ROAD R/W.
 - WATERLINE SHALL BE 2" MINIMUM OFF EDGE OF CURB UNLESS SHOWN OTHERWISE. ALL WATER LINES SHALL BE DUCTILE IRON PIPE.
 - WATERLINES SHALL BE LAID AT A MINIMUM OF 10 FEET LATERALLY MEASURED OUTSIDE EDGE FROM EXISTING OR PROPOSED SANITARY SEWERS UNLESS THE ELEVATIONS OF THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER WITH A HORIZONTAL SEPARATION OF AT LEAST 3 FEET.
 - WHEN A WATER MAIN MUST CROSS OVER A SEWER MAIN, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN. IF THIS SEPARATION CANNOT BE OBTAINED WHILE MAINTAINING THE REQUIRED COVER, BOTH THE WATER AND SEWER MAINS SHALL BE DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS. FOR 10 FEET ON EACH SIDE OF THE POINT OF CROSSING, A JOINT OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 - WHEN A WATER MAIN MUST CROSS UNDER A SEWER MAIN, BOTH THE WATER AND SEWER MAINS SHALL BE DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS. THE LOCATION OF THE ABANDONED LINES SHALL BE NOTED ON THE AS-BUILT DRAWINGS. LINES CAN ALSO BE REMOVED INSTEAD OF BEING ABANDONED IN-PLACE. EXISTING SANITARY SEWER SERVICES ARE TO BE CAPPED AT THE MAN AND SHALL HAVE THE CLEANOUT STACK REMOVED TO AT LEAST 2" BELOW GRADE. THE ABANDONED PIPE CAN BE LEFT IN PLACE. EXISTING ABANDONED SEWER SERVICES CONNECTED TO A MANHOLE SHALL BE REMOVED AS DESCRIBED ABOVE AND THE SERVICE PLUGGED AT THE MANHOLE.
 - WHEN A WATER MAIN CROSSES OVER OR UNDER A STORM SEWER, VERTICAL SEPARATION BETWEEN THE PIPES SHALL BE MINIMUM 18 INCHES UNLESS BOTH PIPES ARE DUCTILE IRON OR ENGAGED IN CONCRETE FOR 10 FEET EITHER SIDE OF THE CROSSING.
 - SANITARY SEWER MAINS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 24 INCHES BETWEEN STORM SEWERS WHEN THE HORIZONTAL SEPARATION IS 3 FEET OR LESS. WHERE SANITARY AND STORM SEWERS CROSS WITH A VERTICAL SEPARATION LESS THAN 24 INCHES THE SANITARY SEWER PIPE SHALL BE DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS. A SECTION OF SANITARY SEWER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS IS BASED ON BEST AVAILABLE INFORMATION BUT CAN BE CONSIDERED ONLY AS APPROXIMATE.
 - WHERE THE STATIC WATER PRESSURE IS IN EXCESS OF 80 PSI, A PRESSURE REDUCING VALVE SHALL BE PROVIDED INSIDE THE BUILDING IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLUMBING CODE.
 - SEWER LINES AND SERVICES INSTALLED WITH A DEPTH OF COVER LESS THAN 3' OR OVER 20 FEET SHALL REQUIRE DUCTILE IRON PIPE FOR THE ENTIRE RUN BETWEEN MANHOLES OR CLEANOUTS.
 - MINIMUM SLOPE FOR FOUR INCH SANITARY SEWER SERVICES SHALL BE 1%. CLEANOUTS SHALL BE PROVIDED AS SHOWN ON THE PLANS BUT SHALL BE SPACED AT NO GREATER THAN 75 LF FOR SERVICES. ALL CLEANOUTS SHALL EXTEND A MINIMUM OF 8 INCHES ABOVE FINISH GRADE OR MEET THE OPTIONAL CLEANOUT REQUIREMENT METHODS.
 - ALL MANHOLES LOCATED OUTSIDE OF PAVED AREAS SHALL BE INSTALLED BETWEEN 2 AND 3 FEET ABOVE FINISHED GRADE. MANHOLES TALLER THAN 3 FEET ABOVE FINISHED GRADE SHALL BE CONSTRUCTED WITH STEPS CAST INTO THE EXTERIOR OF THE MANHOLE.
 - FOR 8"-12" SEWER LINES, 4" DIA MANHOLES SHALL BE USED FOR DEPTHS UP TO 12', 6" DIA MANHOLES FOR DEPTH FROM 12' TO 20', AND 8" DIA MANHOLES FOR DEPTHS GREATER THAN 20'.
 - FOR LOTS 1 & 4 EXISTING WATER SERVICES ARE TO BE SHUT OFF AT THE WATER MAIN AND SERVICE DISCONNECTED. ABANDONED LINES CAN BE LEFT IN PLACE. THE LOCATION OF THE ABANDONED LINES SHALL BE NOTED ON THE AS-BUILT DRAWINGS. LINES CAN ALSO BE REMOVED INSTEAD OF BEING ABANDONED IN-PLACE. EXISTING SANITARY SEWER SERVICES ARE TO BE CAPPED AT THE MAN AND SHALL HAVE THE CLEANOUT STACK REMOVED TO AT LEAST 2" BELOW GRADE. THE ABANDONED PIPE CAN BE LEFT IN PLACE. EXISTING ABANDONED SEWER SERVICES CONNECTED TO A MANHOLE SHALL BE REMOVED AS DESCRIBED ABOVE AND THE SERVICE PLUGGED AT THE MANHOLE.

PHASE 2D UTILITY TAKEOFFS:

LF OF 6" DIP WATERLINE:	357 LF
LF OF 4" DIP WATERLINE:	387 LF
LF OF 8" SEWER LINE:	502 LF

PRELIMINARY PLAN
NOT APPROVED FOR CONSTRUCTION

10/29/13



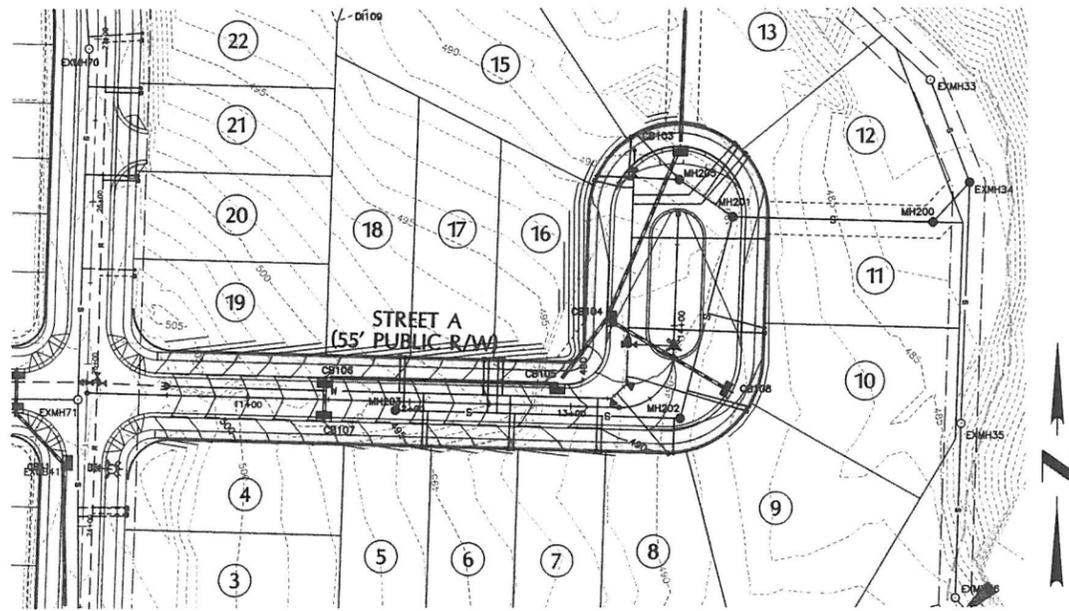
No.	Revision	Date	By	Design	YBR	Scale
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POWELL PLACE - PHASE 2D
TOWN OF PITTSBORO CHATHAM COUNTY NORTH CAROLINA

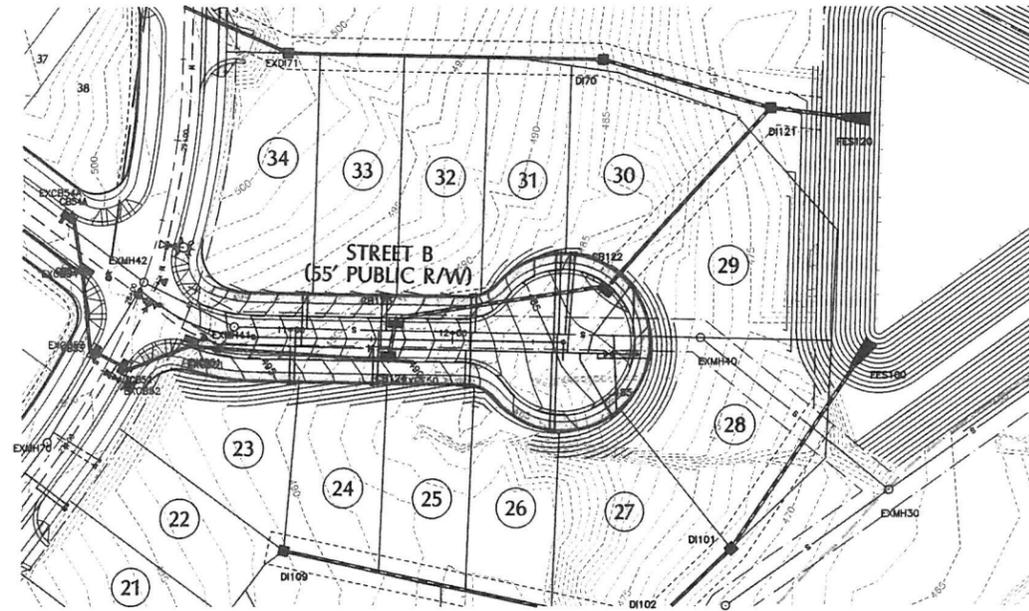
UTILITY PLAN

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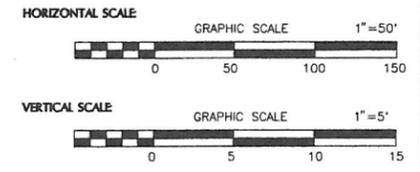
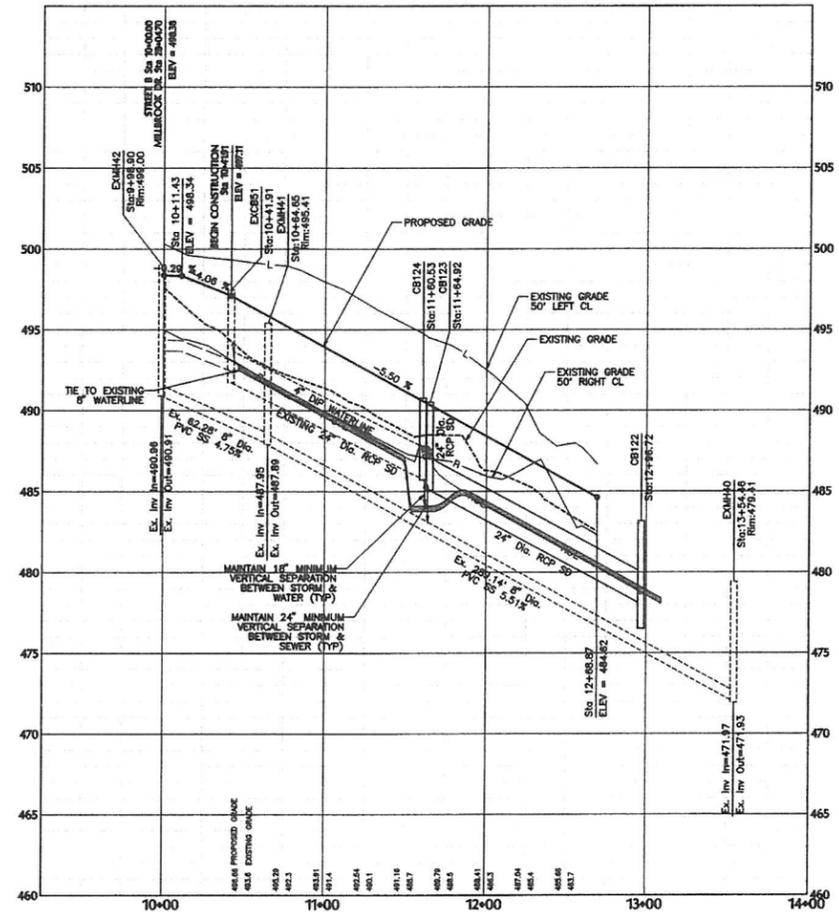
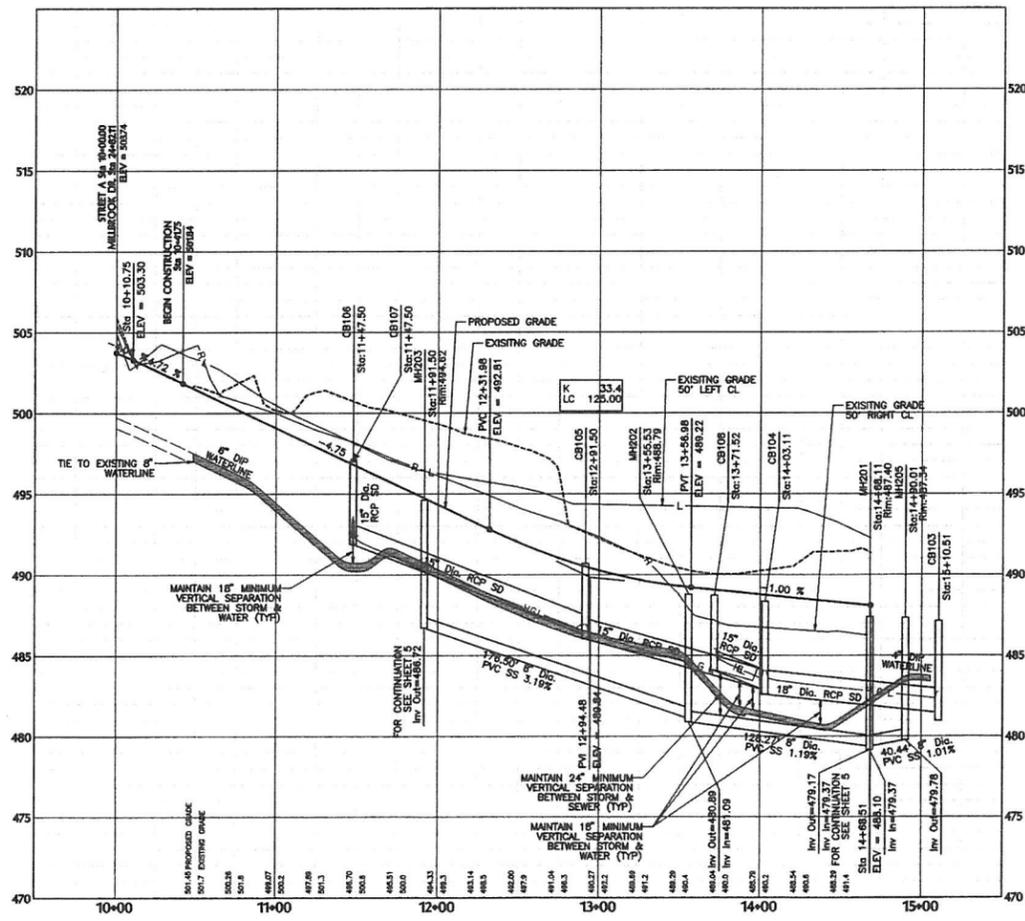
Sheet No.
2 of 7



STREET A



STREET B



PRELIMINARY PLAN
NOT APPROVED FOR CONSTRUCTION
10/29/13

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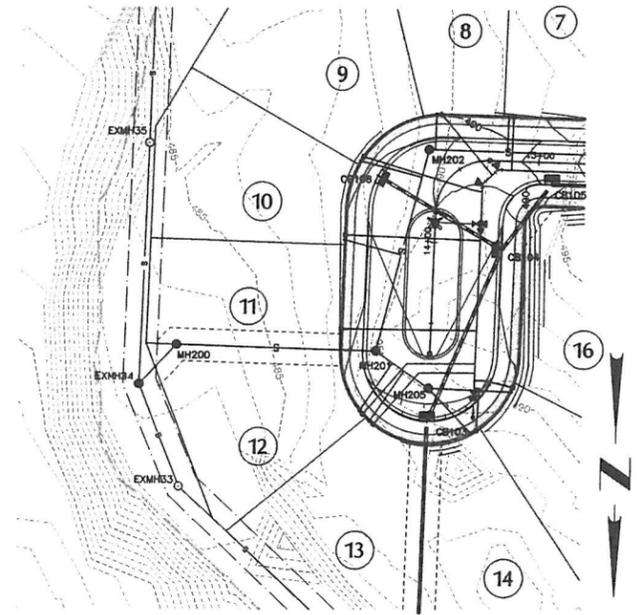
No.	Revision	Date	By	Design	Scale	HORIZ. (1"=50')	VERT. (1"=5')
1	Revised Per TOP Comments	10/29/13	JO	JO	1/8"	1/8"	1/8"

POWELL PLACE - PHASE 2D
TOWN OF PITTSBORO CHATHAM COUNTY NORTH CAROLINA

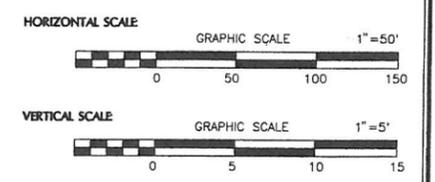
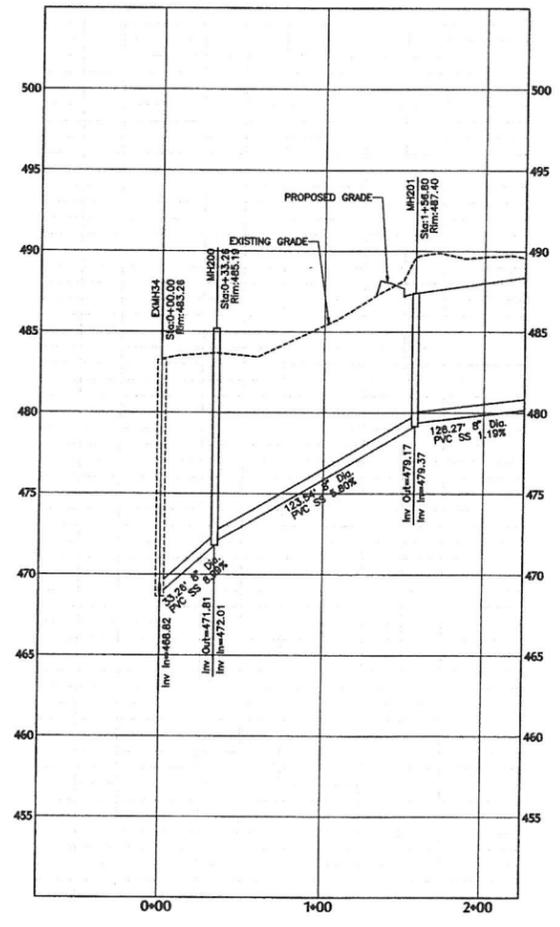
STREET A PLAN & PROFILE
STREET B PLAN & PROFILE

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Sheet No. **4** of **7**



OUTFALL 'A'



PRELIMINARY PLAN
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 10/22/13

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No.	Revision	Date	By	Design	Scale	HORIZ. 1"=50'	VERT. 1"=5'
1	Revised Per TOP Comments	10/29/13	JCI	WMB	DATE	10/16/13	
				Checked By	JCI	Job No.	000903911

POWELL PLACE - PHASE 2D
 TOWN OF PITTSBORO CHATHAM COUNTY NORTH CAROLINA

SANITARY SEWER OUTFALL 'A'
PLAN & PROFILE

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