

CITY OF WILMINGTON  
 NEW HANOVER COUNTY, NORTH CAROLINA

# SHIPYARD VILLAGE APARTMENTS

## SRB SUBMITTAL

MARCH 4, 2016  
 NOT FOR CONSTRUCTION

### DEVELOPMENT INFORMATION:

**OWNER/DEVELOPER:**  
 SHIPYARD VILLAGE WILMINGTON, LLC  
 PO BOX 29169  
 GREENSBORO, NC 27429-9169  
 2100-D W. CORNWALLIS DR.  
 GREENSBORO, NC 27408

**OWNER'S DESIGNATED REPRESENTATIVE:**  
 VERNON POWELL, PRESIDENT  
 SHIPYARD VILLAGE WILMINGTON, LLC.  
 vernonbpowell@gmail.com  
 (336) 282-7200

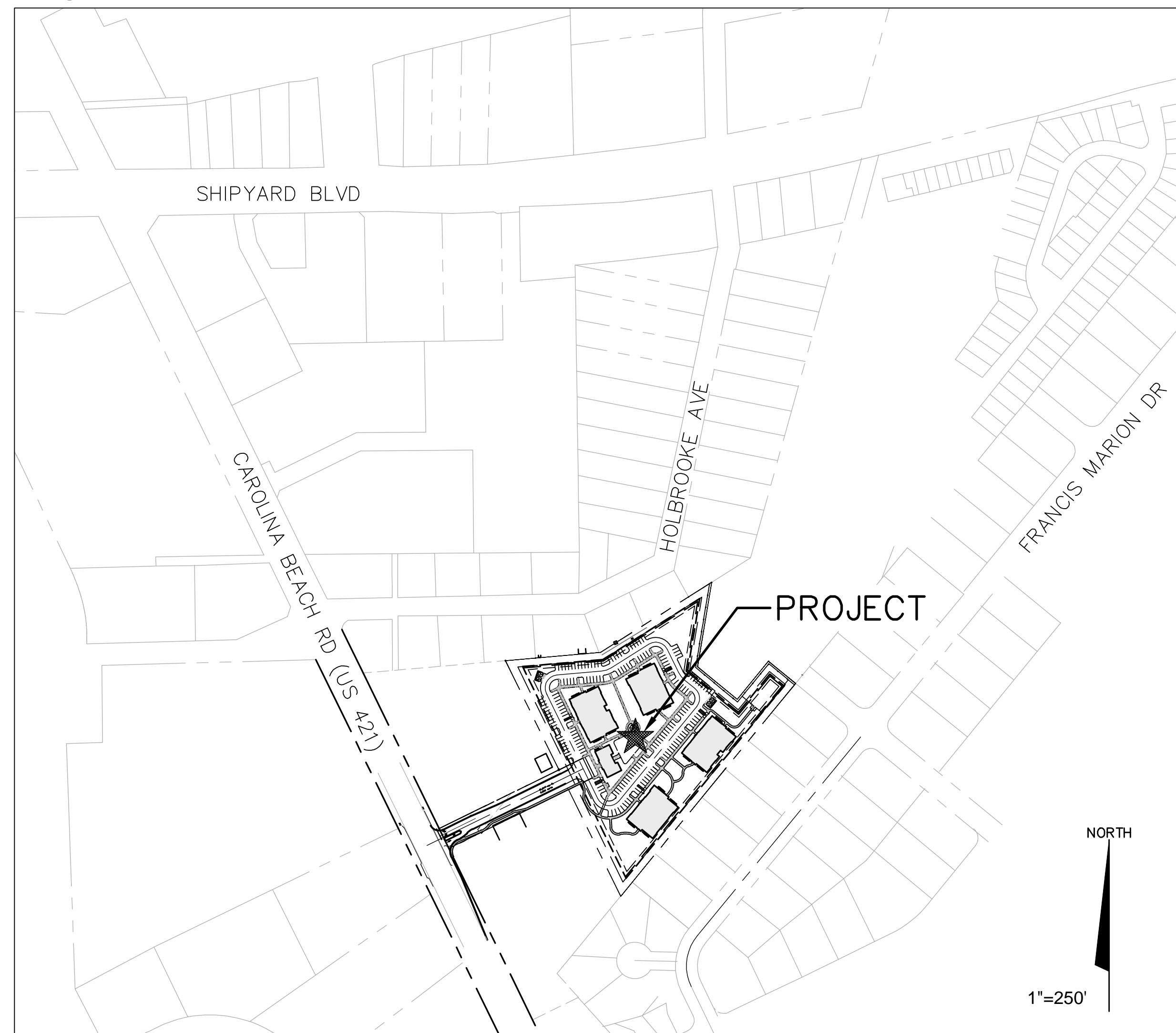
**PROJECT ENGINEER / REPRESENTATIVE:**  
 TARA S. MURPHY, RLA, ASLA, LEED AP, PMP  
 MCKIM & CREED, INC.  
 243 NORTH FRONT STREET  
 WILMINGTON, NORTH CAROLINA 28401  
 tschwenzfeier@mckimcreed.com  
 (910) 343-1048

**PROJECT ADDRESS:**  
 2821 CAROLINA BEACH ROAD  
 WILMINGTON, NC 28412

**TAX PARCEL IDENTIFICATION NUMBER:**  
 R06506-008-020-000

**PROPERTY ZONING:**  
 MF-M MULTI-FAMILY RESIDENTIAL  
 DISTRICT, MEDIUM DENSITY

### VICINITY MAP



### SHEET INDEX:

Sheet List Table		
Sheet Number	Sheet Title	Sheet Description
1	G001	COVER
3	CX101	SITE INVENTORY PLAN
6	CS101	OVERALL SITE PLAN
7	CS102	SITE PLAN ENLARGEMENT
9	CU101	UTILITY PLAN

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

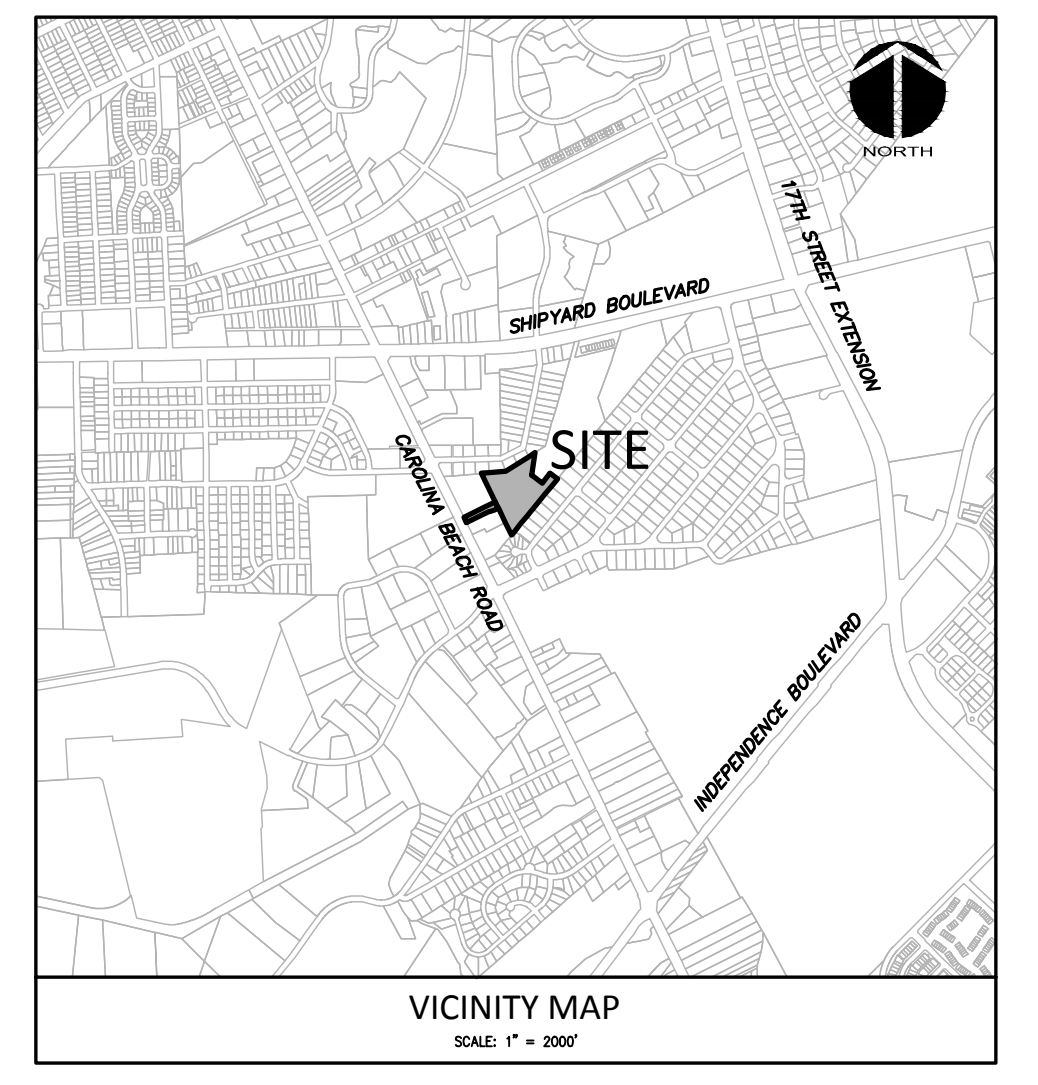
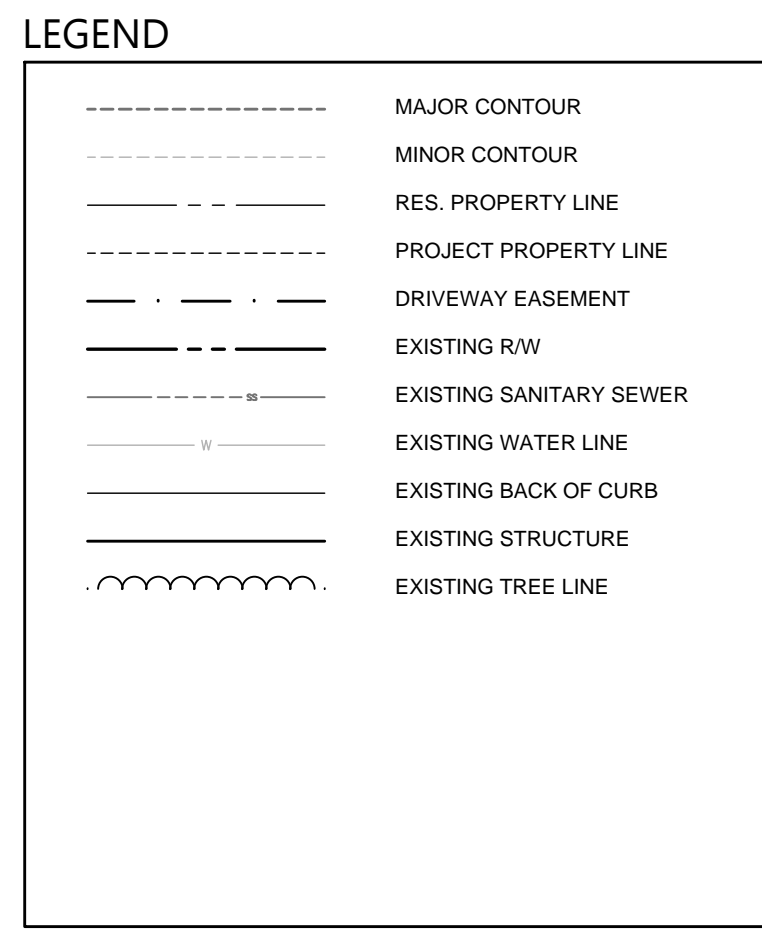
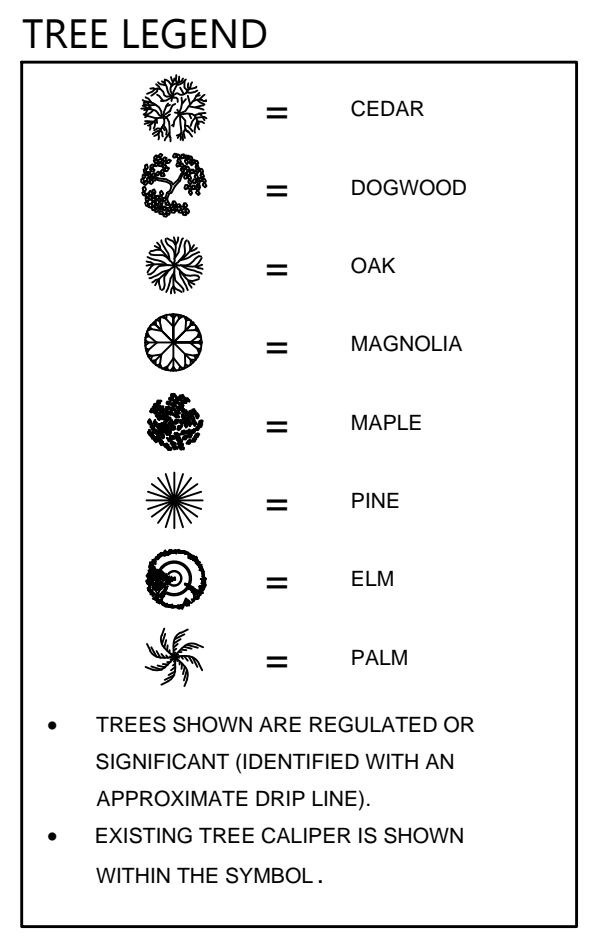
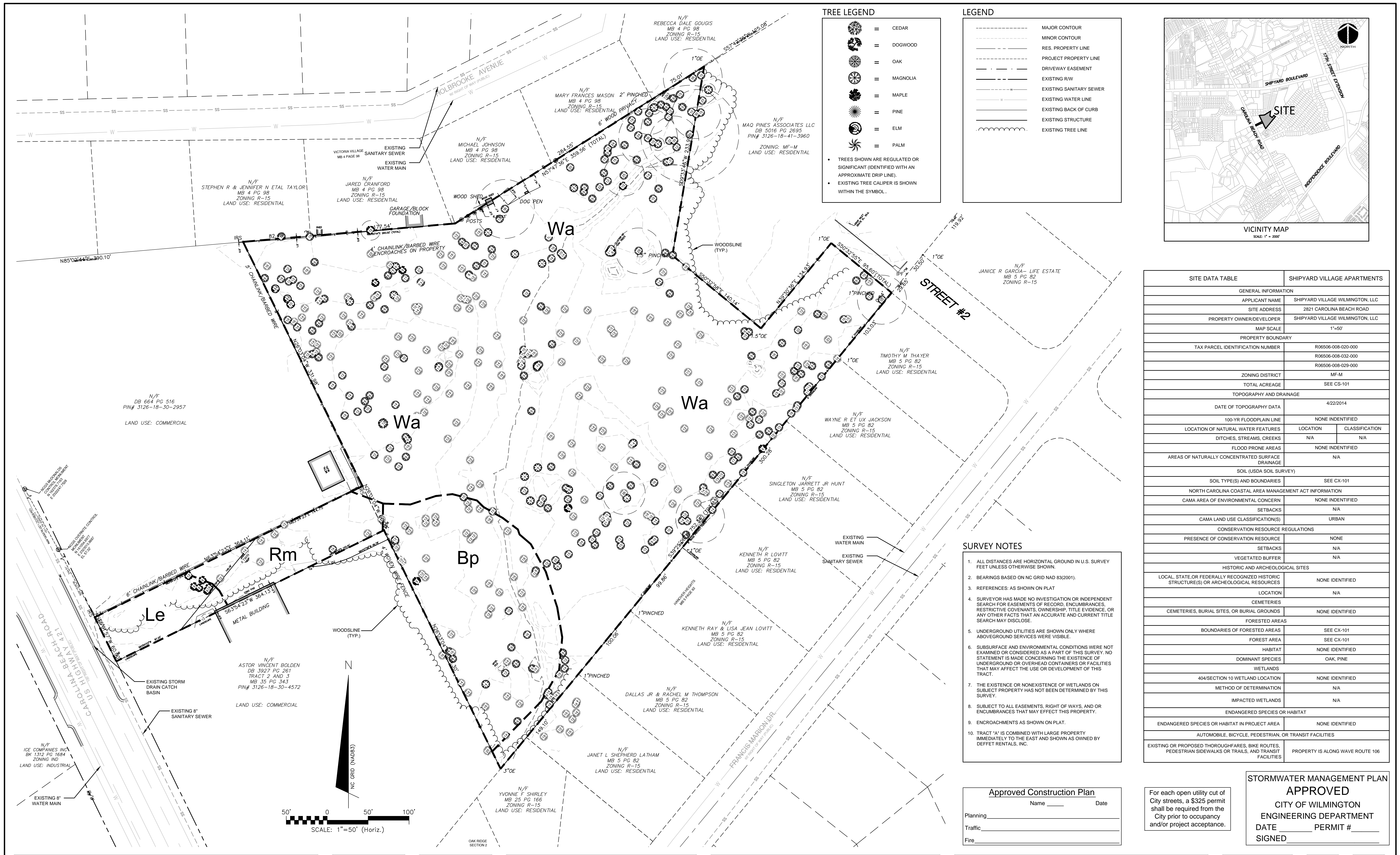
Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

**PRELIMINARY PLANS  
 NOT FOR CONSTRUCTION**

For each open utility cut of  
 City streets, a \$325 permit  
 shall be required from the  
 City prior to occupancy  
 and/or project acceptance.



243 North Front Street  
 Wilmington, North Carolina 28401  
 Phone: (910)343-1048 , Fax: (910)251-8282  
 NC LICENSE NO. F-1222  
 www.mckimcreed.com



SITE DATA TABLE		SHIPYARD VILLAGE APARTMENTS	
GENERAL INFORMATION			
APPLICANT NAME	SHIPYARD VILLAGE WILMINGTON, LLC		
SITE ADDRESS	2821 CAROLINA BEACH ROAD		
PROPERTY OWNER/DEVELOPER	SHIPYARD VILLAGE WILMINGTON, LLC		
MAP SCALE	1"=50'		
PROPERTY BOUNDARY			
TAX PARCEL IDENTIFICATION NUMBER	R06506-008-020-000		
	R06506-008-032-000		
	R06506-008-029-000		
ZONING DISTRICT	MF-M		
TOTAL ACREAGE	SEE CS-101		
TOPOGRAPHY AND DRAINAGE			
DATE OF TOPOGRAPHY DATA	4/22/2014		
100-YR FLOODPLAIN LINE	NONE IDENTIFIED		
LOCATION OF NATURAL WATER FEATURES	LOCATION	CLASSIFICATION	
DITCHES, STREAMS, CREEKS	N/A	N/A	
FLOOD PRONE AREAS	NONE IDENTIFIED		
AREAS OF NATURALLY CONCENTRATED SURFACE DRAINAGE	N/A		
SOIL (USDA SOIL SURVEY)			
SOIL TYPE(S) AND BOUNDARIES	SEE CX-101		
NORTH CAROLINA COASTAL AREA MANAGEMENT ACT INFORMATION			
CAMA AREA OF ENVIRONMENTAL CONCERN	NONE IDENTIFIED		
SETBACKS	N/A		
CAMA LAND USE CLASSIFICATION(S)	URBAN		
CONSERVATION RESOURCE REGULATIONS			
PRESENCE OF CONSERVATION RESOURCE	NONE		
SETBACKS	N/A		
VEGETATED BUFFER	N/A		
HISTORIC AND ARCHEOLOGICAL SITES			
LOCAL, STATE, OR FEDERALLY RECOGNIZED HISTORIC STRUCTURE(S) OR ARCHEOLOGICAL RESOURCES	NONE IDENTIFIED		
LOCATION	N/A		
CEMETERIES			
CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS	NONE IDENTIFIED		
FORESTED AREAS			
BOUNDARIES OF FORESTED AREAS	SEE CX-101		
FOREST AREA	SEE CX-101		
HABITAT	NONE IDENTIFIED		
DOMINANT SPECIES	OAK, PINE		
WETLANDS			
404/SECTION 10 WETLAND LOCATION	NONE IDENTIFIED		
METHOD OF DETERMINATION	N/A		
IMPACTED WETLANDS	N/A		
ENDANGERED SPECIES OR HABITAT			
ENDANGERED SPECIES OR HABITAT IN PROJECT AREA	NONE IDENTIFIED		
AUTOMOBILE, BICYCLE, PEDESTRIAN, OR TRANSIT FACILITIES			
EXISTING OR PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS, AND TRANSIT FACILITIES	PROPERTY IS ALONG WAVE ROUTE 106		

- ### SURVEY NOTES
- ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
  - BEARINGS BASED ON NC GRID NAD 83(2001).
  - REFERENCES: AS SHOWN ON PLAT
  - SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
  - UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE ABOVEGROUND SERVICES WERE VISIBLE.
  - SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
  - THE EXISTENCE OR NONEXISTENCE OF WETLANDS ON SUBJECT PROPERTY HAS NOT BEEN DETERMINED BY THIS SURVEY.
  - SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND OR ENCUMBRANCES THAT MAY EFFECT THIS PROPERTY.
  - ENCROACHMENTS AS SHOWN ON PLAT.
  - TRACT 'A' IS COMBINED WITH LARGE PROPERTY IMMEDIATELY TO THE EAST AND SHOWN AS OWNED BY DEFFET RENTALS, INC.

### Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

### STORMWATER MANAGEMENT PLAN

## APPROVED

CITY OF WILMINGTON  
ENGINEERING DEPARTMENT

DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_

SIGNED \_\_\_\_\_

REV. NO.	DESCRIPTION/REVISIONS	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

SEAL

243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

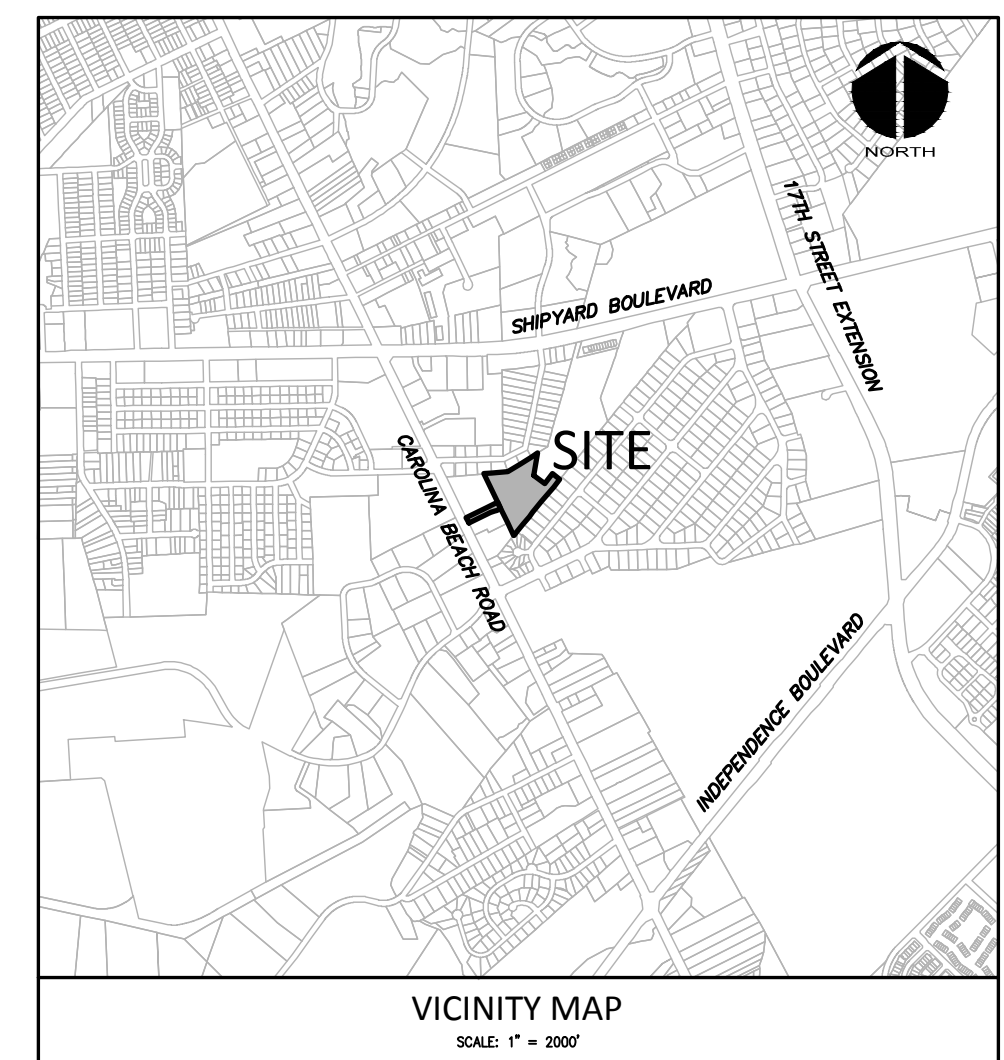
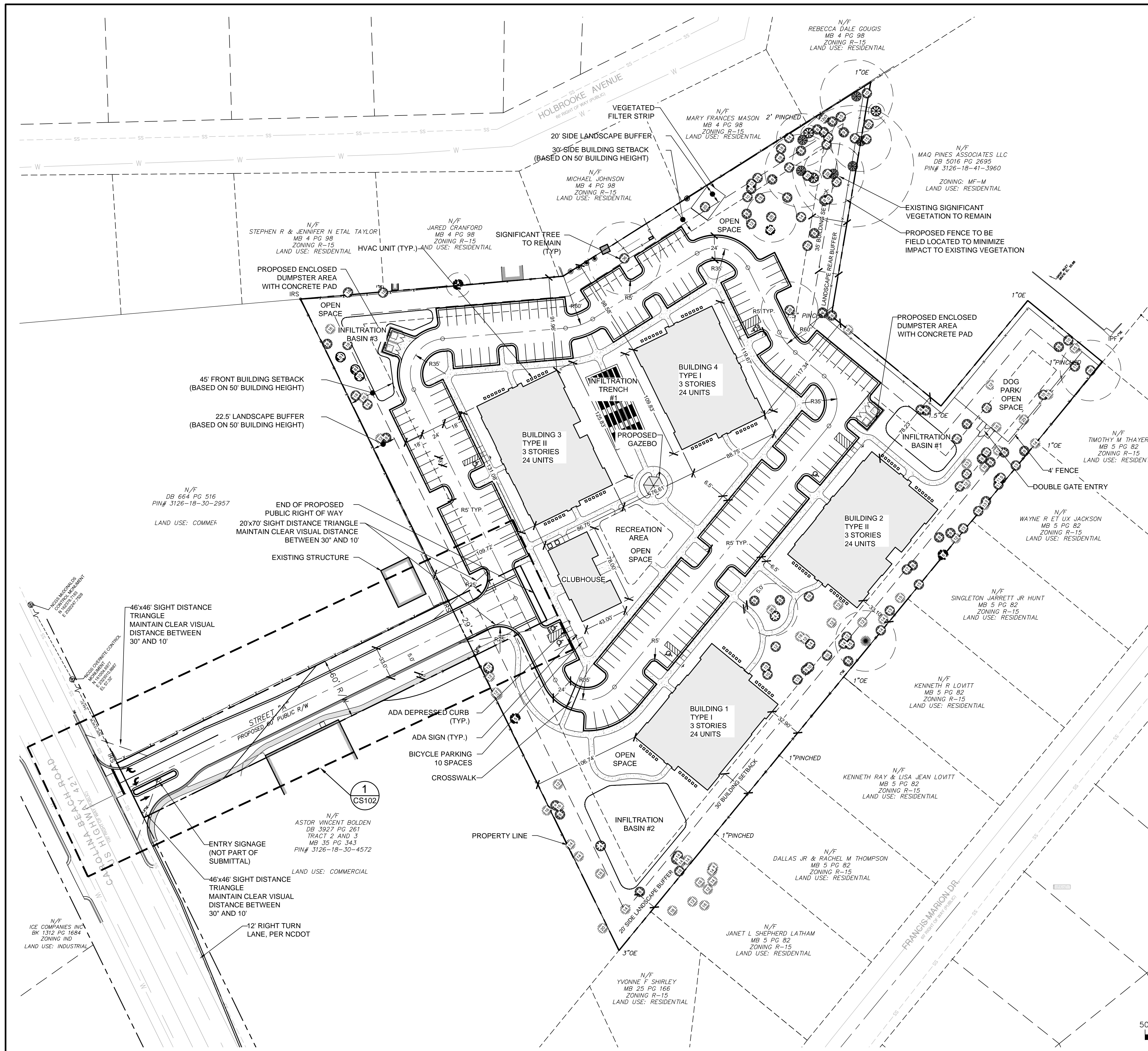
SHIPYARD VILLAGE WILMINGTON, LLC  
PO BOX 29169  
GREENSBORO, NC 27429-9169

### SHIPYARD VILLAGE APARTMENTS

2821 CAROLINA BEACH ROAD  
WILMINGTON, NORTH CAROLINA  
TOWNSHIP OF WILMINGTON

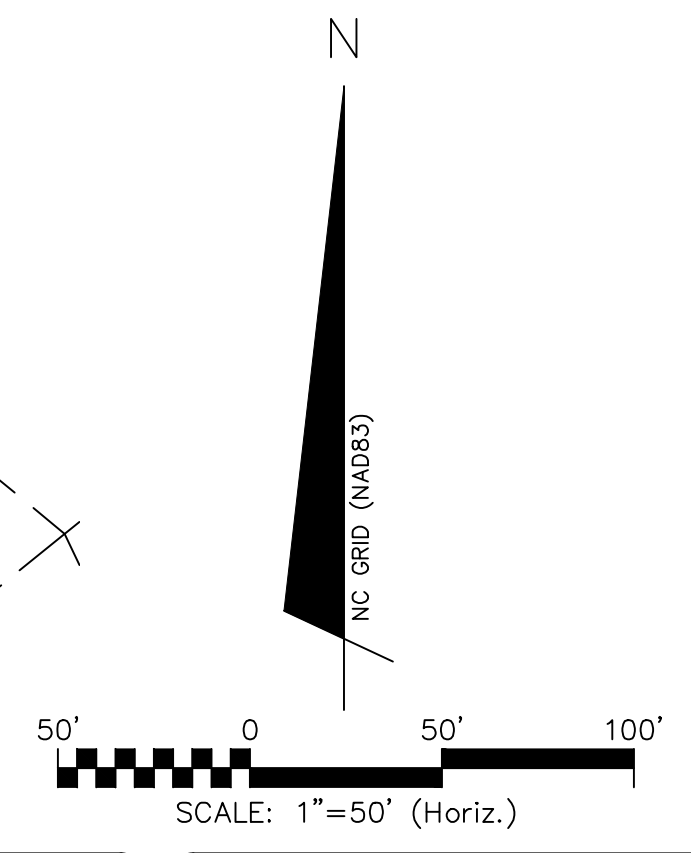
## SITE INVENTORY PLAN

DATE: 4 MAR 2016	SCALE: HORIZONTAL: 1"=50'	MAP FILE NUMBER: CX-101
MCE PROJ. #: 07010-0001	VERTICAL: N/A	DRAWING NUMBER: 3
DRAWN: TCM/TSM		
DESIGNED: TCM/TSM		
CHECKED: RMC		
PROJ. MGR: TSM		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION		



- GENERAL NOTES:**
- PROJECT IS NOT WITHIN ANY SPECIAL HIGHWAY OVERLAY DISTRICT.
  - PROJECT IS NOT WITHIN ANY CORRIDOR OVERLAY DISTRICT.
  - NO WETLANDS HAVE BEEN IDENTIFIED ON SITE.
  - CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949.
  - THE AT&T CONTACT IS JAMES BATSON - HE IS THE BUILDING INDUSTRY CONSULTANT - (910) 392-8712. PLEASE CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
  - THE PROCESS FOR TELEPHONE CABLE PLACEMENT:
    - FINAL GRADE WILL NEED TO BE ESTABLISHED.
    - POWER WILL PLACE THEIR CABLE FIRST AT APPROXIMATELY 3 FT DEEP.
    - BELLSOUTH/CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2 FEET DEEP.
  - SITE DIMENSIONS FOR PARKING AREAS ARE TO THE FACE OF CURB.
  - ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'.
  - SEE SHEET 4 (CS-102) FOR TYPICAL HANDICAP SPACE DIMENSION INFORMATION.
  - NO FEMA 100-YEAR FLOODPLAIN HAS BEEN IDENTIFIED ON SITE.

SITE DATA TABLE		SHIPYARD VILLAGE	
PARCEL ADDRESS	2821 CAROLINA BEACH ROAD		
BUILDING SETBACKS	REQUIRED	PROPOSED	
FRONT	35'	35'	
REAR	25'	25'	
SIDE (INTERIOR)	20'	20'	
SIDE (CORNER)	30'	30'	
TAX PARCEL IDENTIFICATION NUMBER(S)	R06506-008-020-000 R06506-008-029-000 R06506-008-032-000		
PARCEL DEED BOOK AND PAGE NUMBER(S)	DB 5387 PG 329 DB 5813 PG 1822		
CURRENT ZONING	MF-M (17 DU/AC)		
TOTAL ACREAGE	7.19 ACRES (313,133 SF)		
AREA OF PROPOSED PUBLIC RIGHT OF WAY	0.81 ACRES (26,804 SF)		
REMAINING SITE	6.58 ACRES (286,529 SF)		
MAX DENSITY ALLOWED	119 UNITS		
DENSITY PROPOSED	96 UNITS		
BUILDING SIZE WITH SQUARE FOOTAGE	45,506 GROSS SF		
(2) BUILDING TYPE 1	10,082 SF (EACH)		
(2) BUILDING TYPE 2	11,061 SF (EACH)		
CLUBHOUSE	3,220 SF		
NC BUILDING CODE CONSTRUCTION TYPE	VA		
BUILDING LOT COVERAGE	14.49%		
PROPOSED BUILDING HEIGHT	50 (BLDG. TYPE 1 & 2) 15' CLUBHOUSE		
NUMBER OF STORIES & SQUARE FEET PER FLOOR	3 STORIES, SF VARIES		
TOTAL AMOUNT OF DISTURBED AREA	6.60 ACRES (287,613 SF)		
CAMA LAND USE CLASSIFICATION	URBAN		
EXISTING IMPERVIOUS AREA	0		
IMPERVIOUS AREA (PROPOSED)			
BUILDINGS	45,506	SF	
ROADWAYS AND PARKING	77,942	SF	
SIDEWALKS	17,231	SF	
OFF-SITE IMPERVIOUS (WITHIN PROPOSED PUBLIC R/W)	18,029	SF	
TOTAL S.F. (ONSITE IMPERVIOUS AREA)	140,679	SF	
PERCENTAGE (ONSITE IMPERVIOUS AREA/ONSITE AREA)	49.0	%	
PARKING CALCULATIONS			
PROPOSED USE:	MULTI-FAMILY		
SPACES PROVIDED	187		
MAXIMUM SPACES ALLOWED (2.5 PER UNIT)	240		
MINIMUM SPACES REQUIRED	177		
36 1 BEDROOM UNITS @ 1.5 SPACES PER UNIT	54 SPACES		
48 2 BEDROOM UNITS @ 2.0 SPACES PER UNIT	96 SPACES		
12 3 BEDROOM UNITS @ 2.25 SPACES PER UNIT	27 SPACES		
ACCESSIBLE SPACES REQUIRED	6 (1 VAN)		
ACCESSIBLE SPACES PROVIDED	6 (1 VAN)		
BICYCLE PARKING SPACES REQUIRED	10		
BICYCLE PARKING SPACES PROVIDED	10		
OPEN SPACE CALCULATIONS			
TOTAL OPEN SPACE REQUIRED (35% OF SITE, EXCLUDING PUBLIC RIGHT OF WAY)	2.30 ACRES (100,285 SF)		
OPEN SPACE PROVIDED	2.58 ACRES (112,385 SF)		
REQUIRED ACTIVE OPEN SPACE (17.5% OF SITE, EXCLUDING PUBLIC RIGHT OF WAY)	1.15 ACRES (50,142.5 SF)		
PROPOSED ACTIVE OPEN SPACE	1.20 ACRES (52,272 SF)		
REQUIRED PASSIVE OPEN SPACE (17.5% OF SITE, EXCLUDING PUBLIC RIGHT OF WAY)	1.15 ACRES (50,142.5 SF)		
PROPOSED PASSIVE OPEN SPACE	1.38 ACRES (60,113 SF)		



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

**STORMWATER MANAGEMENT PLAN APPROVED**

CITY OF WILMINGTON  
ENGINEERING DEPARTMENT

DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_

SIGNED \_\_\_\_\_

REV. NO.	DESCRIPTION	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

SEAL

**MCKIM & CREED**

243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

SHIPYARD VILLAGE WILMINGTON, LLC  
PO BOX 29169  
GREENSBORO, NC 27429-9169

**SHIPYARD VILLAGE APARTMENTS**  
2821 CAROLINA BEACH ROAD  
WILMINGTON, NORTH CAROLINA  
TOWNSHIP OF WILMINGTON

**OVERALL SITE PLAN**

DATE: 4 MAR 2016	SCALE: HORIZONTAL: 1"=50'	M&C FILE NUMBER: CS-101
MCE PROJ. #: 07010-0001	VERTICAL: N/A	DRAWING NUMBER: 6
DRAWN: TCM/TSM		
DESIGNED: TCM/TSM		
CHECKED: RMC		
PROJ. MGR: TSM		
STATUS: PRELIMINARY PLANS	REVISION: NOT FOR CONSTRUCTION	

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

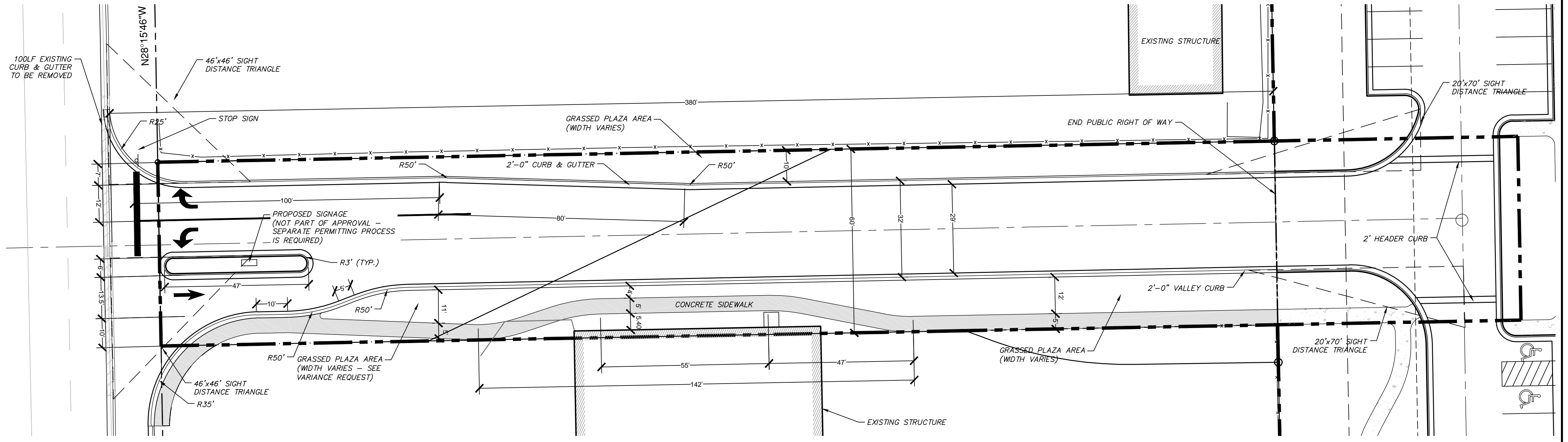
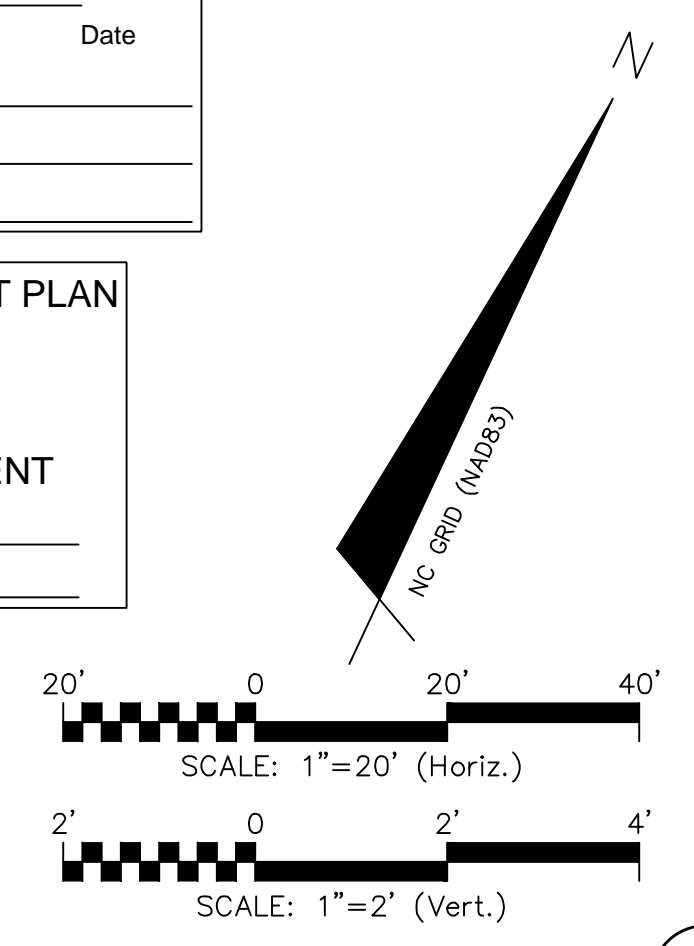
Fire \_\_\_\_\_

**STORMWATER MANAGEMENT PLAN APPROVED**

CITY OF WILMINGTON  
ENGINEERING DEPARTMENT

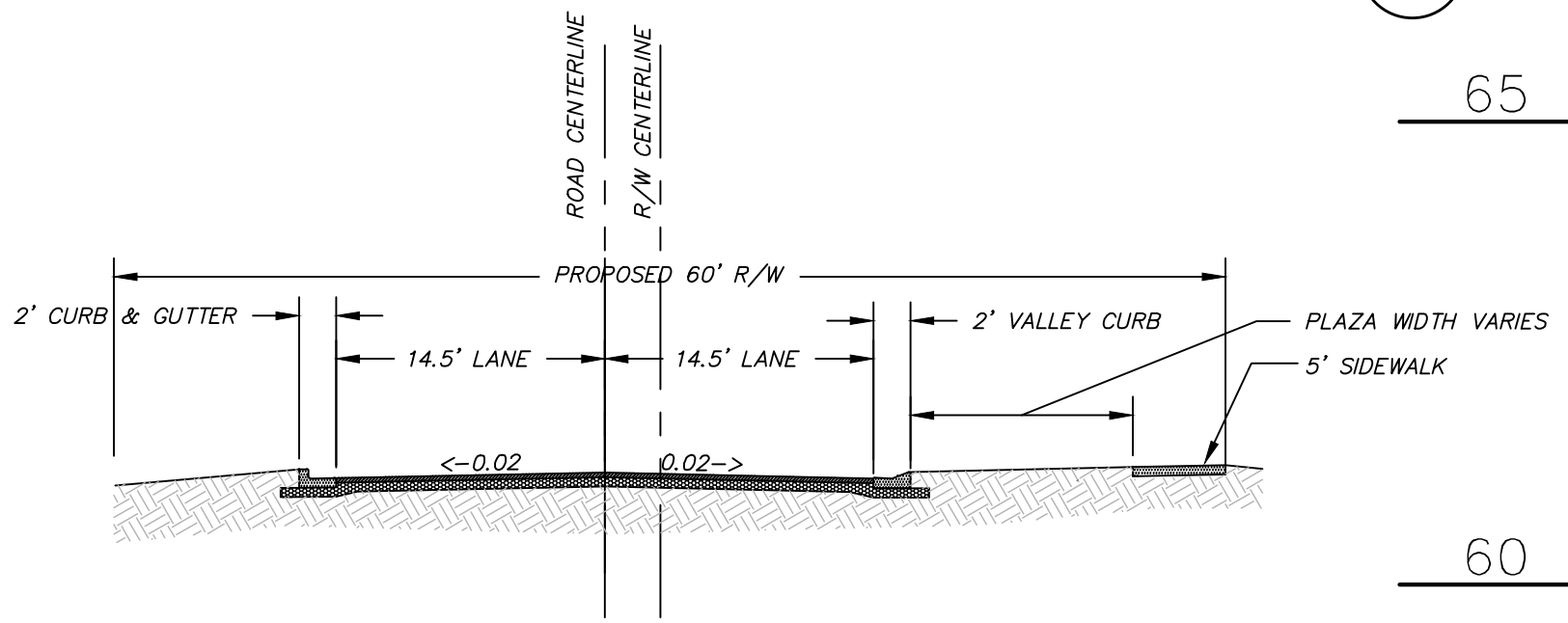
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_

SIGNED \_\_\_\_\_

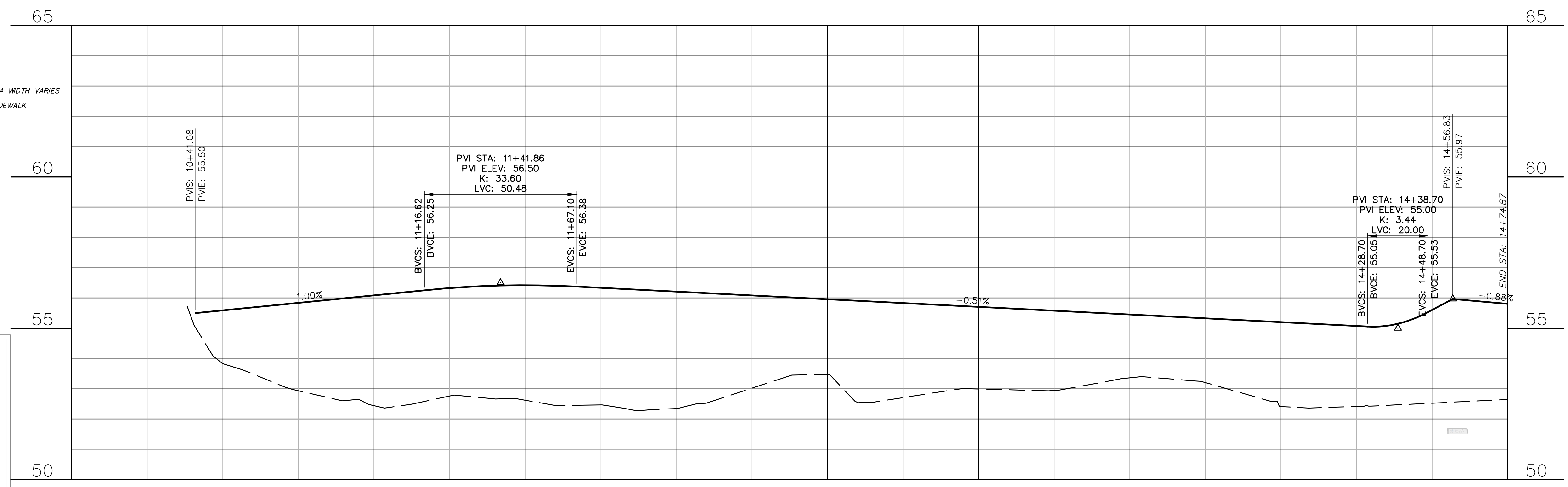


1 PROPOSED 60' PUBLIC RIGHT OF WAY (STREET "A")

SCALE: 1"=20'

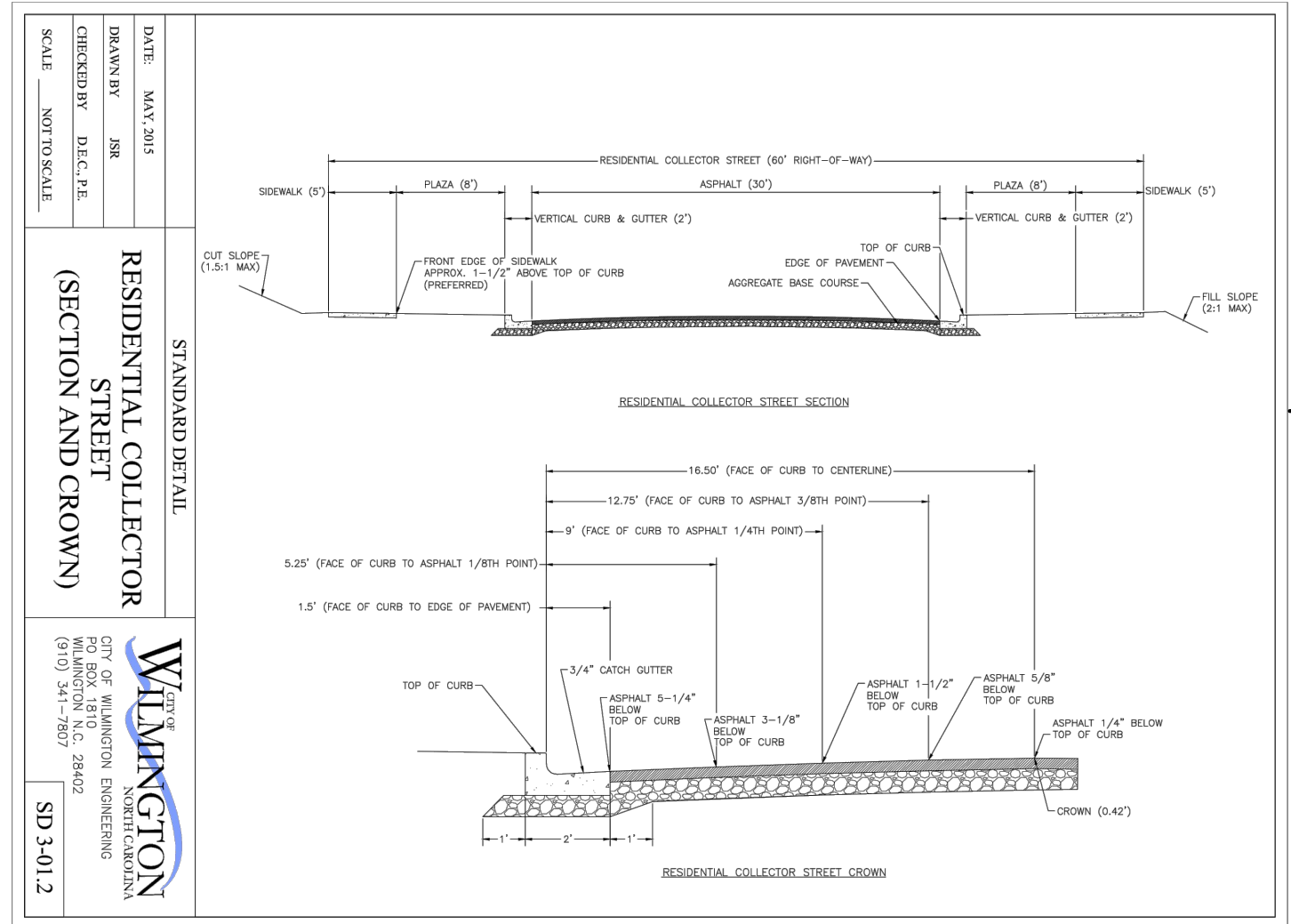


STREET "A" CROSS SECTION  
60' PROPOSED PUBLIC RIGHT OF WAY  
SCALE: 1"=10'



10+00	55.62	55.59	55.84	55.44	56.09	55.76	56.33	55.62	56.42	55.46	56.34	55.51	56.21	55.02	56.08	55.47	55.96	55.71	55.83	55.99	55.70	55.93	55.88	55.56	55.45	55.20	55.33	55.41	55.20	55.42	55.07	55.62	55.60	55.64	55.81
-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

STREET "A"  
PROPOSED 60' PUBLIC RIGHT OF WAY  
HORIZ. SCALE: 1"=20'  
VERT. SCALE: 1"=2'



2 COW STANDARD STREET SECTION (SD 3-01.2)

NOT TO SCALE

REV. NO.	DESCRIPTION	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

SEAL

**MCKIM & CREED**

243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

SHIPYARD VILLAGE WILMINGTON, LLC  
PO BOX 29169  
GREENSBORO, NC 27429-9169

SHIPYARD VILLAGE APARTMENTS  
2821 CAROLINA BEACH ROAD  
WILMINGTON, NORTH CAROLINA  
TOWNSHIP OF WILMINGTON

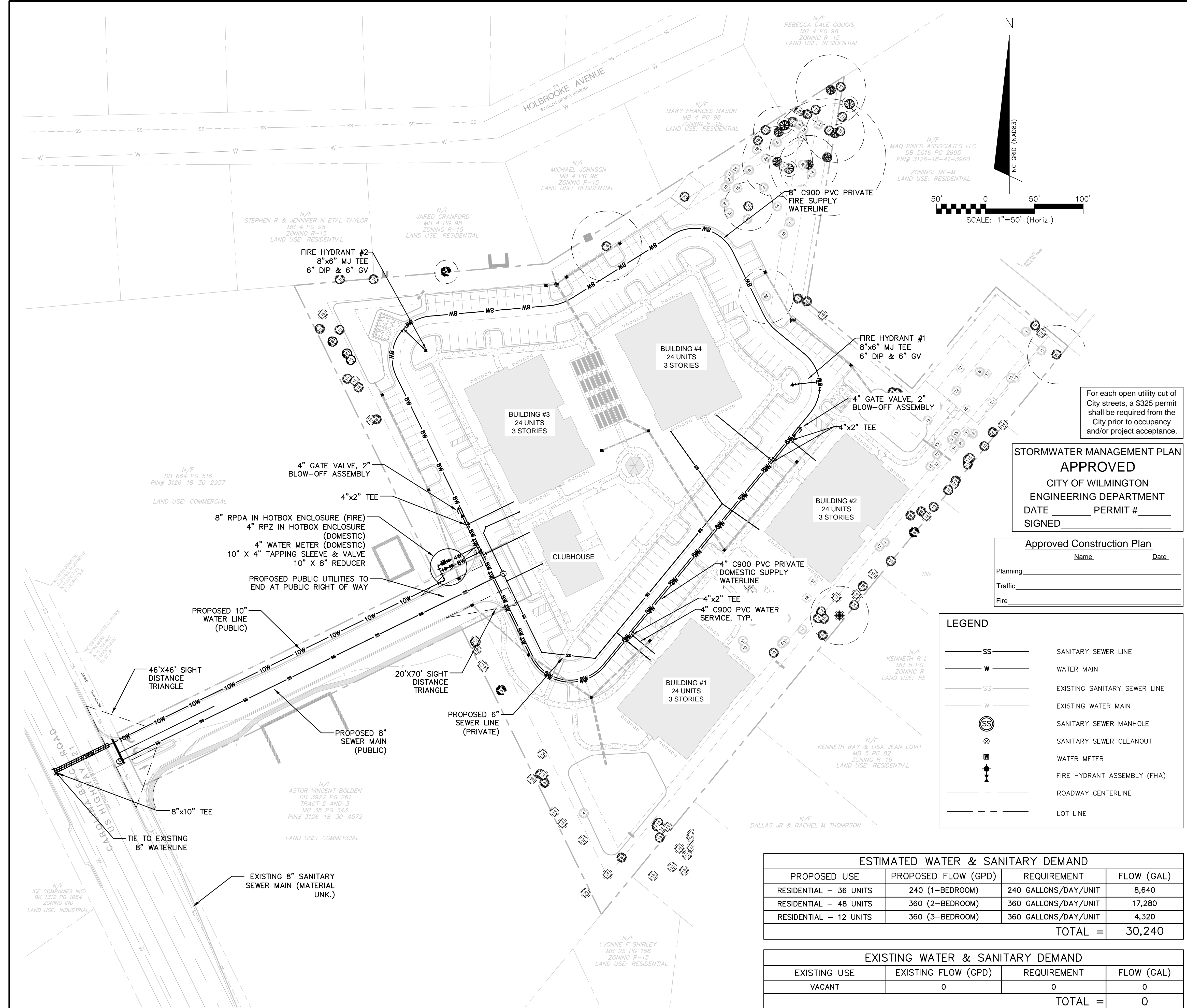
SITE PLAN ENLARGEMENT

DATE: 4 MAR 2016  
MCE PROJ. #: 07010-0001  
DRAWN: TCM/TSM  
DESIGNED: TCM/TSM  
CHECKED: RMC  
PROJ. MGR: TSM

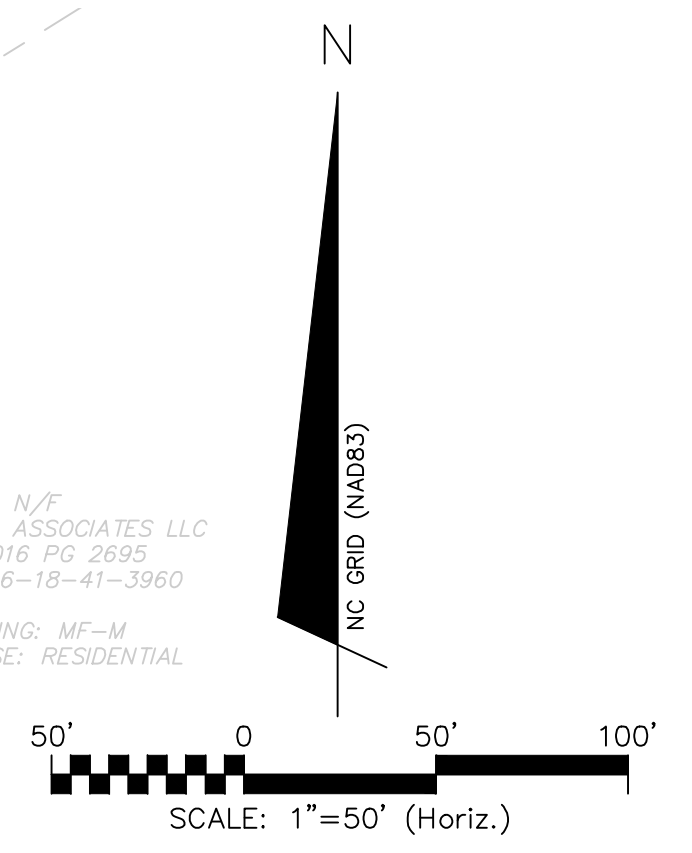
SCALE: HORIZONTAL: 1"=10'  
VERTICAL: N/A

STATUS: PRELIMINARY PLANS  
NOT FOR CONSTRUCTION

MAC FILE NUMBER: CS-102  
DRAWING NUMBER: 7



- ### UTILITY NOTES
- SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
  - WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
  - THIS PROJECT SHALL COMPLY WITH THE CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THE "FINAL APPROVAL".
  - ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CFPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPWA AND APPROVED BY USFCFCHHR OR ASSE.
  - BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPDA) AND DOMESTIC SERVICE (RPZ). FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT CFPWA PRIOR TO INSTALLING UNITS TO GIVE CFPWA THE OPTION TO VERIFY INSTALLATION PROCEDURES.
    - REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
    - REDUCED PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
  - IF THE CONTRACTOR DESIRES CFPWA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
  - WATER: 1.5" & 2" PVC MAINS SHALL BE CONSTRUCTED USING ASTM D2241, IPS, GASKETED PIPE, SDR 21. 4"-12" PVC MAINS AND SERVICES SHALL BE CONSTRUCTED USING AWWA C-900 PVC, CL235 (DR-18).
  - SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2672. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3139.
  - WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDENR AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY OF NCDENR.
  - PVC WATER MAINS AND POLYETHYLENE SERVICES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
  - SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
  - MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 380' (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
  - UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
  - MINIMUM OF 36" COVERAGE ABOVE ALL WATER MAINS.
  - MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS
  - A VARIANCE IS NOT ANTICIPATED FROM ANY NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ) REQUIREMENT.
  - PLANS ARE IN COMPLIANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY TECHNICAL STANDARDS AND SPECIFICATIONS.
- RELATION OF WATER MAINS TO SANITARY SEWERS:
- LATERAL SEPARATION OF SANITARY SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
    - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
    - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
  - CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER MAIN THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 24 INCHES ABOVE THE TOP OF THE SEWER MAIN. UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
  - CROSSING A WATER MAIN UNDER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
  - CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE HORIZONTAL, OR THE SEWER MAIN/WATER MAIN SHALL EITHER BE CONSTRUCTED OF DUCTILE IRON PIPE OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**STORMWATER MANAGEMENT PLAN**  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	

**LEGEND**

SS	SANITARY SEWER LINE
W	WATER MAIN
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER MAIN
⊙	SANITARY SEWER MANHOLE
⊗	SANITARY SEWER CLEANOUT
⊕	WATER METER
⊙	FIRE HYDRANT ASSEMBLY (FHA)
---	ROADWAY CENTERLINE
---	LOT LINE

**UTILITY COMPANY CONTACTS**

DUKE/PROGRESS ENERGY: SID LIVINGSTON/MARK HATFIELD (910) 452-2777  
 DUKE ENERGY (TRANSMISSION): BILL WILDER (910) 772-4903  
 AT&T (BELLSOUTH): JAMES BATSON (910) 452-5300  
 TIME WARNER CABLE: ROBERT JOHN (910) 216-4494  
 PIEDMONT NATURAL GAS: PAUL GONKA (910) 512-2841  
 DJ MEDEIROS (910) 431-3233  
 CAPE FEAR PUBLIC UTILITY AUTHORITY (910) 332-6550

**CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES**

- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.

- FIRE PROTECTION NOTES:**
- HYDRANT MUST BE WITHIN 150' OF THE FDC.
  - THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
  - LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
  - HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
  - COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERECTED ON SITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
  - NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
  - UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
  - A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES
  - CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  - TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.



**ESTIMATED WATER & SANITARY DEMAND**

PROPOSED USE	PROPOSED FLOW (GPD)	REQUIREMENT	FLOW (GAL)
RESIDENTIAL - 36 UNITS	240 (1-BEDROOM)	240 GALLONS/DAY/UNIT	8,640
RESIDENTIAL - 48 UNITS	360 (2-BEDROOM)	360 GALLONS/DAY/UNIT	17,280
RESIDENTIAL - 12 UNITS	360 (3-BEDROOM)	360 GALLONS/DAY/UNIT	4,320
<b>TOTAL =</b>			<b>30,240</b>

**EXISTING WATER & SANITARY DEMAND**

EXISTING USE	EXISTING FLOW (GPD)	REQUIREMENT	FLOW (GAL)
VACANT	0	0	0
<b>TOTAL =</b>			<b>0</b>

REV. NO.	DESCRIPTIONS	DATE

PRELIMINARY PLAN  
NOT FOR  
CONSTRUCTION

**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**SHIPYARD VILLAGE WILMINGTON, LLC**  
 PO BOX 29169  
 GREENSBORO, NC 27429-9169

**SHIPYARD VILLAGE APARTMENTS**  
 2821 CAROLINA BEACH ROAD  
 WILMINGTON, NORTH CAROLINA  
 TOWNSHIP OF WILMINGTON

**UTILITY PLAN**

DATE:	4 MAR 2016	SCALE:	MAC FILE NUMBER:
MCE PROJ. #	07010-0001	HORIZONTAL:	CU-101
DRAWN	TSM/TSM	VERTICAL:	DRAWING NUMBER
DESIGNED	TSM/TSM	1"=50'	9
CHECKED	RMC	N/A	
PROJ. MGR.	TSM		
STATUS:	PRELIMINARY PLANS	REVISION:	
	NOT FOR CONSTRUCTION		