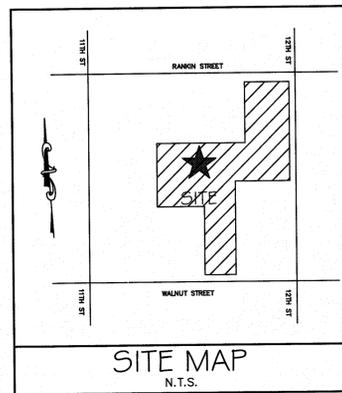


NEW HANOVER COUNTY
 CITY OF WILMINGTON, NORTH CAROLINA
RANKIN PLACE TERRACE
MINOR SITE PLAN SUBMITTAL
 DECEMBER 12, 2013



VICINITY MAP
NOT TO SCALE

SHEET INDEX

SHEET NO.	FILE NO.	DESCRIPTION
1	G-001	COVER
2	CX-101	EXISTING CONDITIONS
3	CD-101	DEMOLITION PLAN
4	CS-101	SITE AND UTILITY PLAN
5	CS-102	SITE INVENTORY PLAN
6	CG-101	GRADING, DRAINAGE & EROSION CONTROL PLAN
7	CL-101	LANDSCAPE PLAN
8	CS-501	SITE DETAILS
9	CS-502	SITE DETAILS
10	CS-503	SITE DETAILS
11	CS-504	SITE DETAILS
12	CU-501	UTILITY DETAILS

ARCHITECT:
 JOHN ABISCH
 AXIOM ARCHITECTURE
 333 WEST TRADE ST.
 SUITE 200
 CHARLOTTE, NC 28202
 (704)927-9900

PROJECT ENGINEER / REPRESENTATIVE:
 BRANCH SMITH, PE
 MCKIM + CREED, INC.
 243 NORTH FRONT STREET
 WILMINGTON, NORTH CAROLINA 28401
 rchristensen@mckimcreed.com
 (910) 343-1048

OWNER:
 WILMINGTON HOUSING AUTHORITY
 1524 SOUTH 16TH STREET
 WILMINGTON, NC 28401
 (910)341-7700

Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

1 inch

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE _____ PERMIT # _____
 SIGNED _____

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

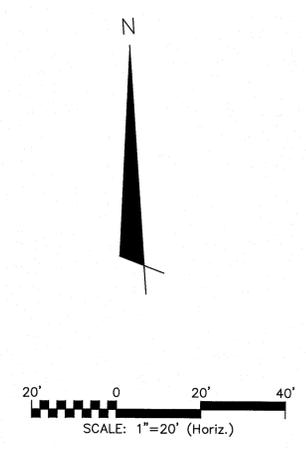
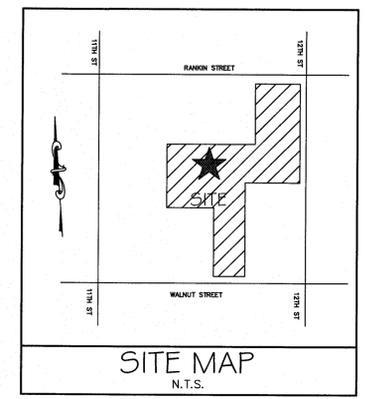
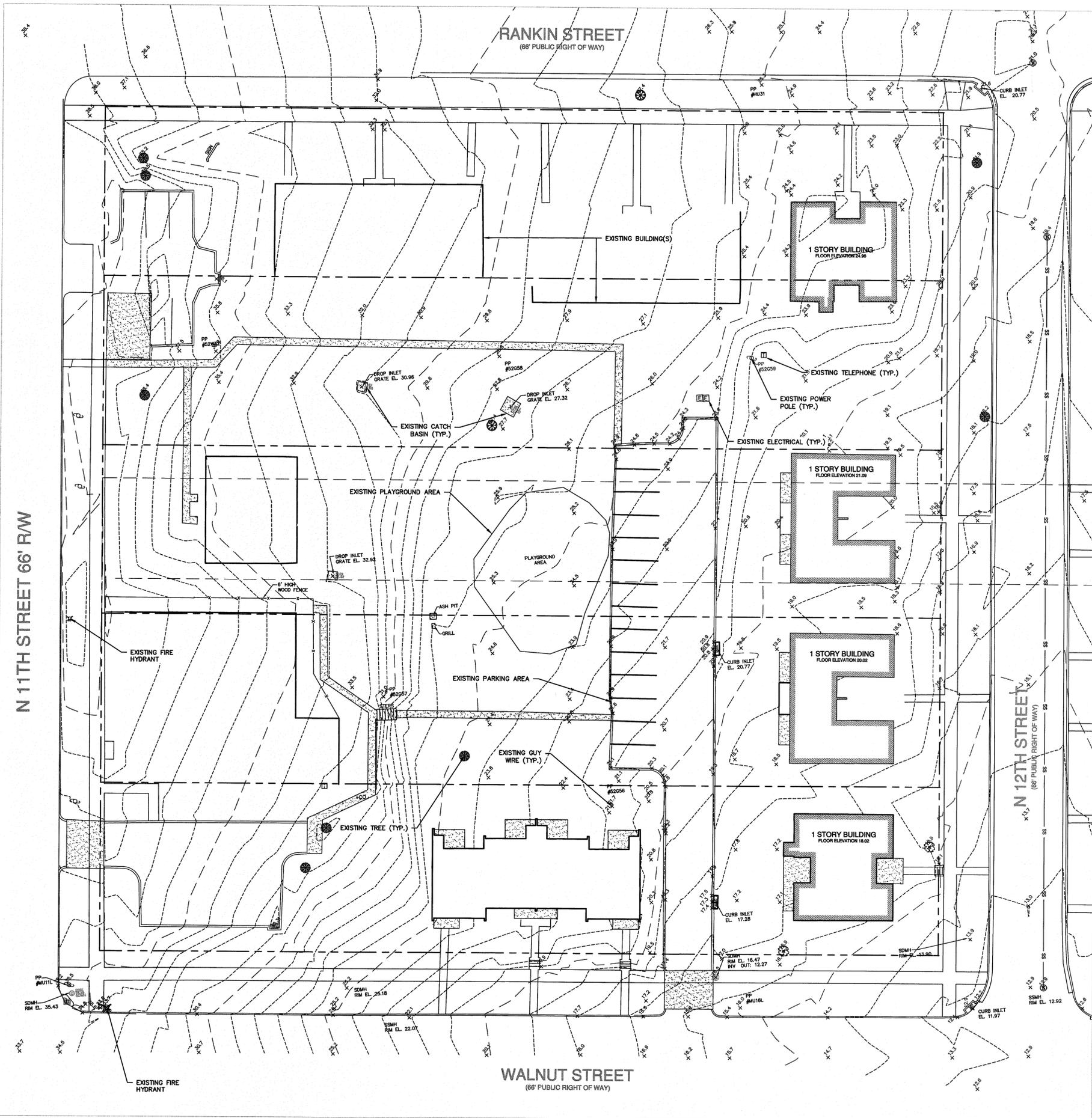


PHONE# 1-800-632-4949



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





LEGEND

RBC Δ	= REBAR & CAP	□	= TELEPHONE PEDESTAL
□	= CONCRETE MONUMENT FOUND	⊕	= FIRE HYDRANT
IPF O	= IRON PIPE FOUND	WV	= WATER VALVE
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⊕	= UNDERGROUND ELECTRIC LINE	⊕	= UNDERGROUND STORM LINE
⊕	= WOODSLINE	⊕	= UNDERGROUND SANITARY LINE

LEGEND

⊕	= CEDAR
⊕	= CHERRY
⊕	= CRAPE
⊕	= DOGWOOD
⊕	= GUM
⊕	= HICKORY
⊕	= HOLLY
⊕	= OAK
⊕	= MAGNOLIA
⊕	= MAPLE
⊕	= MIMOSA
⊕	= PECAN
⊕	= PINE
⊕	= POPLAR
⊕	= SYCAMORE
⊕	= MISC HARDWOOD

- ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
- REFERENCES:
- 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.

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

STORMWATER MANAGEMENT PLAN APPROVED

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1 inch

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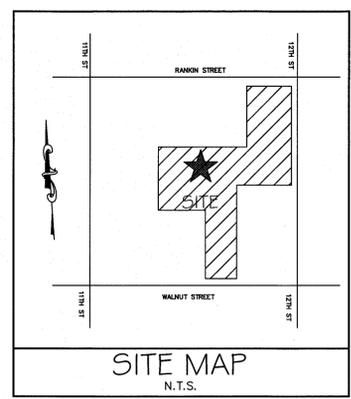
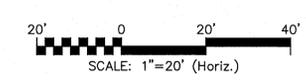
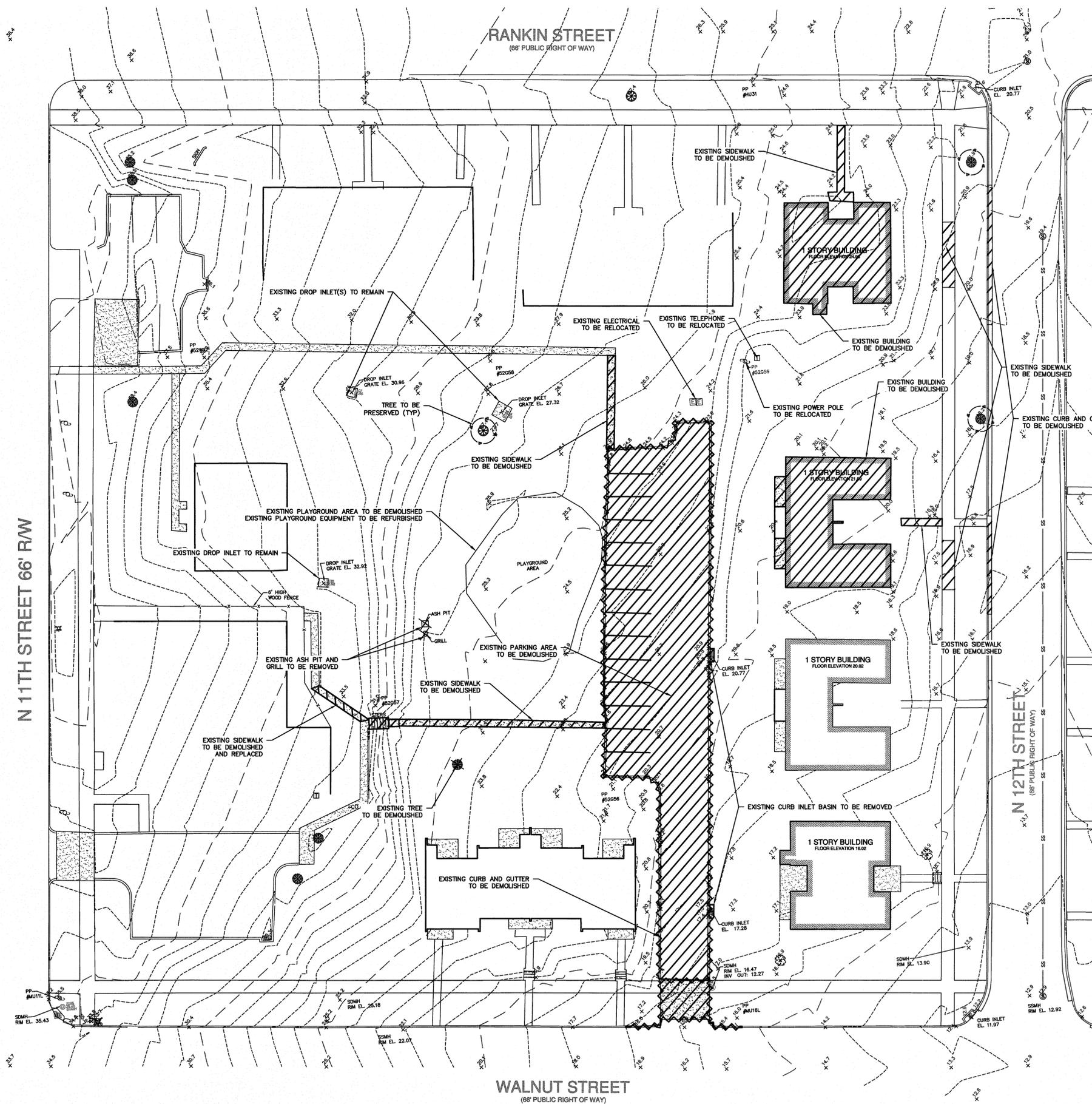
RANKIN PLACE TERRACE
APARTMENTS REHAB
WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA



PROJECT 1020
EXISTING CONDITIONS

DECEMBER 12, 2013

BID SET
NOT FOR CONSTRUCTION
CX-101



DEMOLITION NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST GENERATED BY THE WORK, INCLUDING BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION ACTIVITIES, SITE VEHICULAR TRAFFIC AND RELATED OPERATIONS.
4. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO BEGINNING ANY DEMOLITION. CONTRACTOR SHALL CONTACT NC ONE CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
5. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE AND ENGINEER IMMEDIATELY.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF DISCONNECTING AND ABANDONING ALL EXISTING UTILITIES WITH THE OWNER UNLESS OTHERWISE NOTED. ALL EXISTING UTILITIES AND ASSOCIATED PIPING, ETC. NOT IN USE ON THE SITE SHALL BE PROPERLY ABANDONED AND REMOVED AS REQUIRED. COORDINATE WITH THE OWNER.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES THAT REMAIN IN SERVICE DURING DEMOLITION.
8. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS AND SLOPES ON AND OFF SITE IN ACCORDANCE WITH THE EROSION CONTROL MEASURES SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHO IS RESPONSIBLE FOR PROVIDING THE PERMANENT STABILIZATION MEASURES AND THE TYPE OF PERMANENT MEASURES PRIOR TO BEGINNING DEMOLITION AND CONSTRUCTION. THE PERMANENT STABILIZATION MEASURES SHALL BE IN PLACE AND ACCEPTABLE TO THE OWNERS REPRESENTATIVE AND ENGINEER PRIOR TO PROJECT CLOSOUT. COORDINATE INSPECTION WITH THE OWNER AND ENGINEER PRIOR TO PROJECT CLOSOUT.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.

LEGEND

RBC Δ	= REBAR & CAP	□	= TELEPHONE PEDESTAL
□	= CONCRETE MONUMENT FOUND	⊙	= FIRE HYDRANT
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DEMOLITION LEGEND

- CURB AND GUTTER TO BE REMOVED
- TREE PROTECTION FENCING

1 inch

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Approved Construction Plan

Name _____ Date _____

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Fire _____

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
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Wilmington, NC 28401
(910)-343-1048

OWNER:
Wilmington Housing Authority
1524 S 16th St.
Wilmington, NC 28401

RANKIN PLACE TERRACE
APARTMENTS REHAB
WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA



PROJECT 1020
DEMOLITION PLAN

DECEMBER 12, 2013

BID SET
NOT FOR CONSTRUCTION
CD-101

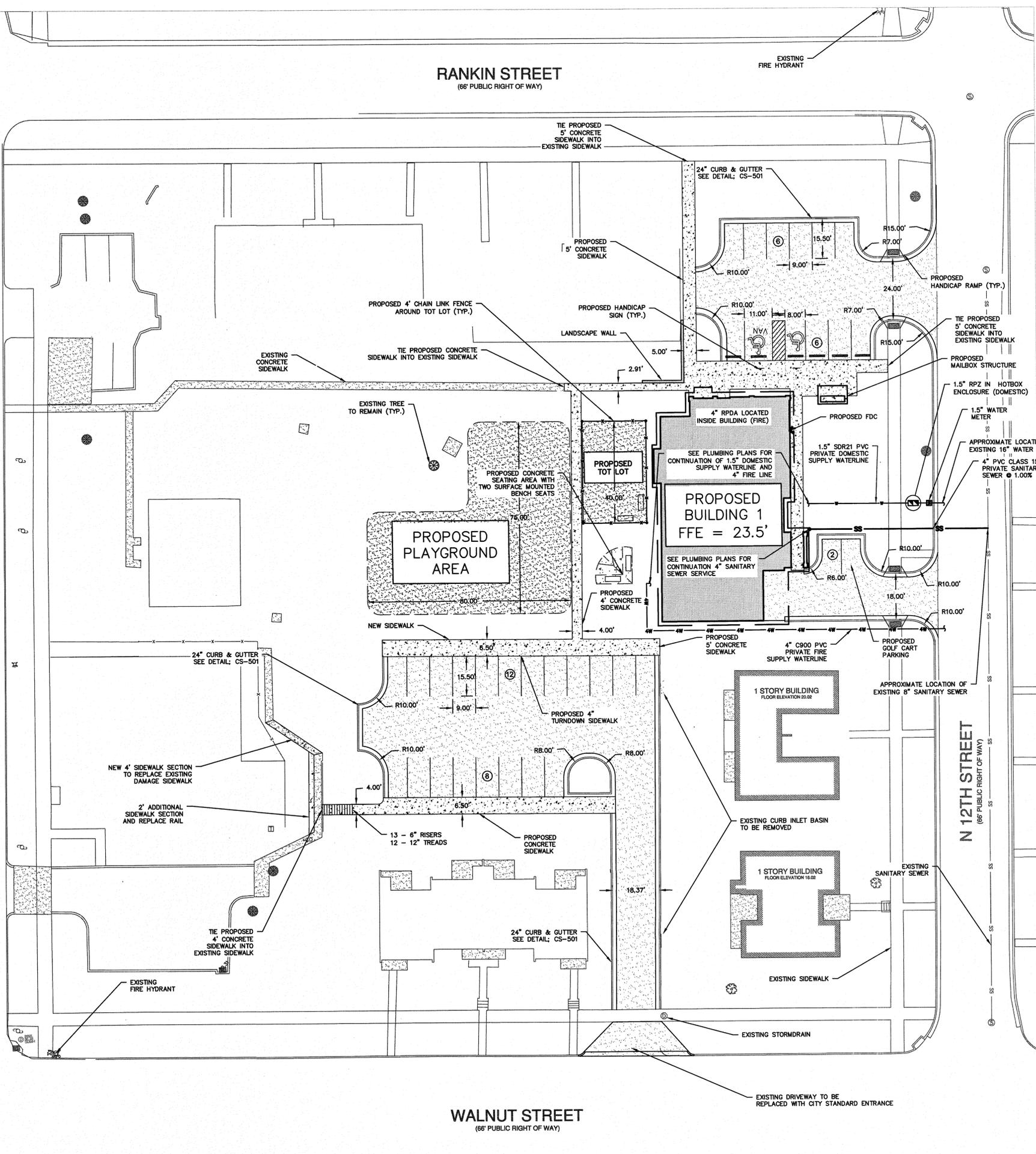


N 11TH STREET
(66' PUBLIC RIGHT OF WAY)

RANKIN STREET
(66' PUBLIC RIGHT OF WAY)

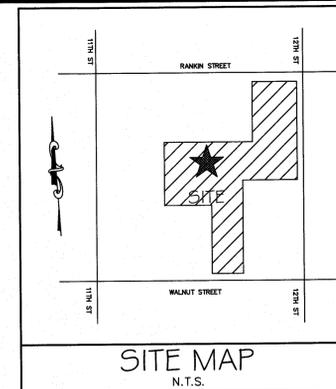
N 12TH STREET
(66' PUBLIC RIGHT OF WAY)

WALNUT STREET
(66' PUBLIC RIGHT OF WAY)



GENERAL NOTES:

1. THE WILMINGTON HOUSING AUTHORITY OWNS THE PROPOSED PROJECT SITE AND ALL ADJACENT PROPERTIES. THE ZONING AND LAND USE OF ADJACENT PROPERTIES IS MF-M AND THE CAMA LAND USE CLASSIFICATION IS URBAN.
2. THE PROPOSED PROJECT WILL UTILIZE CARTS FOR WASTE DISPOSAL.
3. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
4. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
5. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
6. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.



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ENGINEER:
McKim & Creed, Inc.
243 N Front St.
Wilmington, NC 28401
(910)-343-1048

OWNER:
Wilmington Housing
Authority
1524 S 18th St.
Wilmington, NC 28401

SITE DATA TABLE		RANKIN TERRACE PLACE	
PARCEL ADDRESS	1118 RANKIN ST & 407/409 N. 12TH ST		
BUILDING SETBACKS	REQUIRED	PROPOSED	
FRONT	15' MIN	58'	
REAR	15' MIN	256'	
SIDE (INTERIOR)	N/A	N/A	
SIDE (CORNER)	10' MIN	120'	
TAX PARCEL IDENTIFICATION NUMBER:	R04814-016-001-000		
ZONING/OVERLAY DISTRICT:	MF-M		
TOTAL ACREAGE WITHIN THE PROJECT BOUNDARY	0.89 ACRES (38,636.7 SF)		
TOTAL ACREAGE WITHIN THE PROJECT PARCEL BOUNDARY	2.49 ACRES (108,464.4 SF)		
TOTAL BUILDING SIZE WITH SQUARE FOOTAGE	3,463.0 GROSS SF		
NC BUILDING CODE CONSTRUCTION TYPE	V-B		
BUILDING LOT COVERAGE	8.9 %		
NUMBER OF BUILDINGS	1		
BUILDING HEIGHT	26'-1" MAX PROPOSED		
NUMBER OF STORIES	1 STORY		
TOTAL AMOUNT OF DISTURBED AREA	0.89 ACRES (38,636.7 SF)		
CAMA LAND USE CLASSIFICATION	URBAN		
EXISTING IMPERVIOUS AREA	11,180.7 SF		
IMPERVIOUS AREA (PROPOSED)			
ROOF TOPS	4,248.9	SF	
ROADWAYS	0	SF	
PARKING	11,780.7	SF	
SIDEWALKS	3,825.1	SF	
OTHER (TOT LOT & SEATING AREA)	1,177.5	SF	
TOTAL POST DEVELOPMENT/%	21,032.2	SF/54.5%	
TOTAL PRE DEVELOPMENT/%	11,180.7	SF/28.9%	
PARKING CALCULATIONS			
PROPOSED USE:	RECREATION FACILITY		
RECREATION FACILITY MIN. NUMBER OF SPACES REQUIRED	(1/400 SF GFA) = 9 SPACES		
RECREATION FACILITY MAX. NUMBER OF SPACES ALLOWED	(1/250 SF GFA) = 14 SPACES		
EXISTING MULTI-FAMILY PARKING ON SITE	20 SPACES		
MAXIMUM ALLOWED	34 SPACES		
SPACES PROVIDED	32		
EXISTING USE:	MULTI-FAMILY		
ACCESSIBLE SPACES REQUIRED	1		
ACCESSIBLE SPACES PROVIDED	2 (1 VAN)		
ON-SITE DISTURBANCE PROPOSED	38,636.7 SF (0.89 ACRES)		
PROPOSED BUILDING			
BUILDING 1			
TOTAL BUILDING SQUARE FOOTAGE	3,463.0	SF	
NUMBER OF STORIES	1	FLOORS	
SQUARE FEET PER FIRST FLOOR	3,463.0	SF	
BUILDING HEIGHT	21'-26"	SF	

SEC. 18-529, EACH PARKING SPACE LOCATED AT THE PERIMETER OF A PARKING FACILITY SHALL BE EQUIPPED WITH A CURB, WHEEL STOP, OR SIMILAR DEVICE TO PREVENT VEHICLE ENCROACHMENT BEYOND PROPERTY LINES OF PARKING LOTS AND INTO PEDESTRIAN WAYS OR TRAFFIC AISLES.

WATER AND SEWER CAPACITY:

1. WATER 480 GPD (CURRENT USE)
2. WATER 41,040 GPD (PROPOSED USE)
3. SEWER 480 GPD (CURRENT USE)
4. SEWER 41,040 GPD (PROPOSED USE)

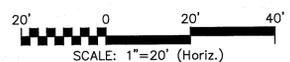
*REFERENCE PLAN SHEET G-002 FOR UTILITY NOTES.

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1 inch

STORMWATER MANAGEMENT PLAN APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____



RANKIN PLACE TERRACE
APARTMENTS REHAB
WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA



PROJECT 1020
SITE AND UTILITY PLAN

DECEMBER 12, 2013

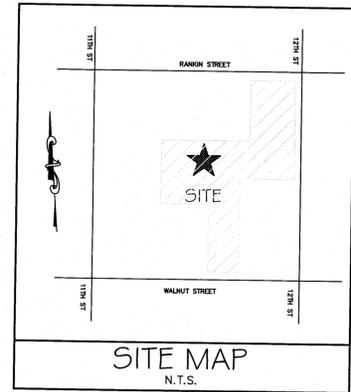
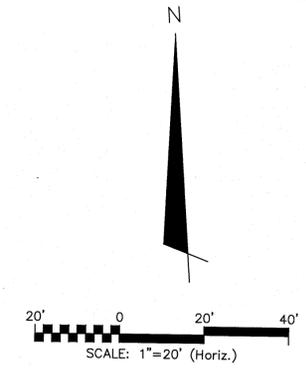
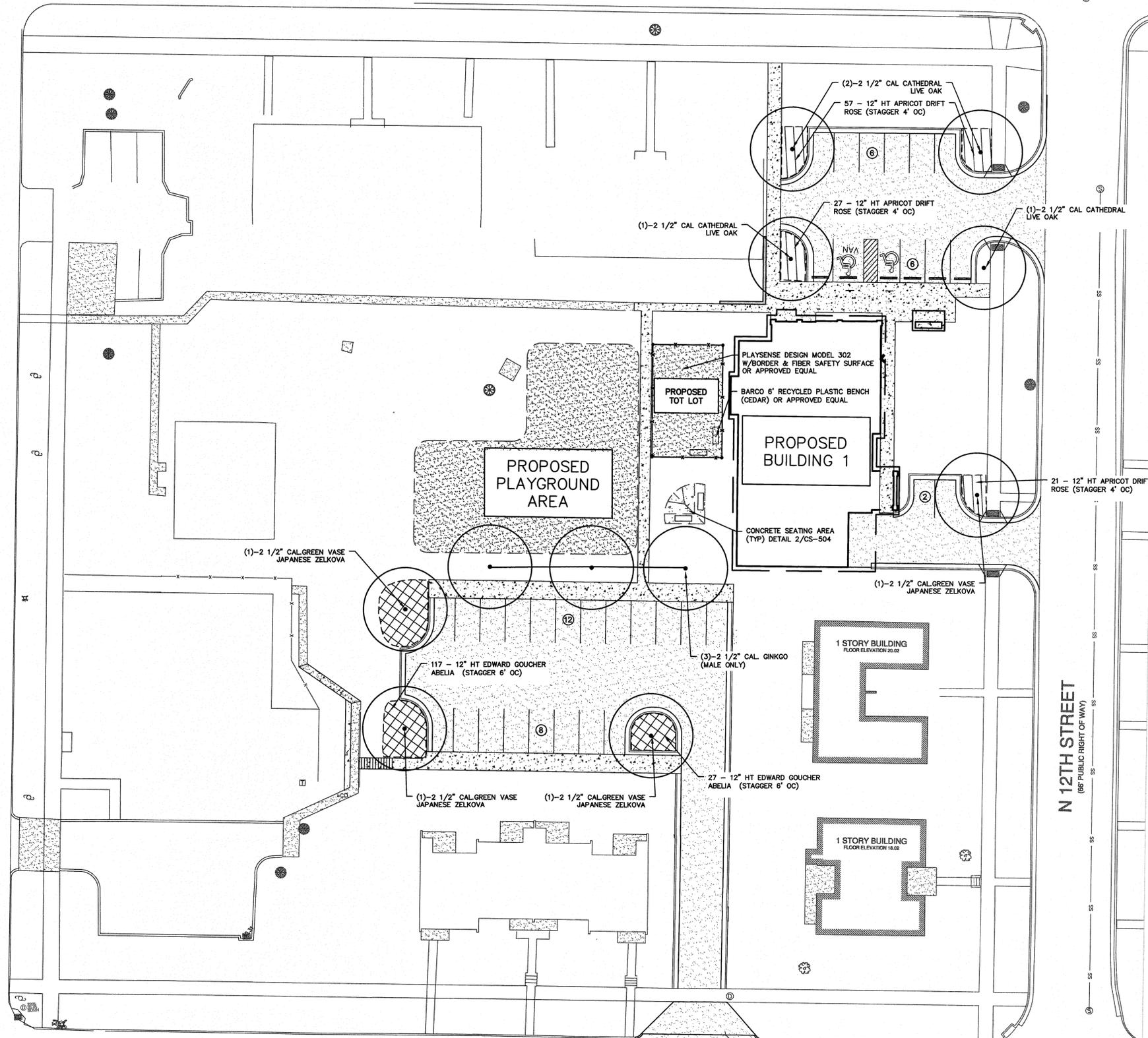
BID SET
NOT FOR CONSTRUCTION
CS-101

RANKIN STREET
(66' PUBLIC RIGHT OF WAY)

N 11TH STREET 66' RW

N 12TH STREET
(66' PUBLIC RIGHT OF WAY)

WALNUT STREET
(66' PUBLIC RIGHT OF WAY)



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Approved Construction Plan
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STORMWATER MANAGEMENT PLAN
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1 inch

PROJECT 1020
LANDSCAPE PLAN

DECEMBER 12, 2013

BID SET
 NOT FOR CONSTRUCTION

CL-101

ENGINEER:
McKim & Creed, Inc.
243 N Front St.
Wilmington, NC 28401
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RANKIN PLACE TERRACE
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PROJECT 1020

SITE DETAILS

DECEMBER 12, 2013

REVISION 1 -
REVISION 2 -
REVISION 3 -
REVISION 4 -

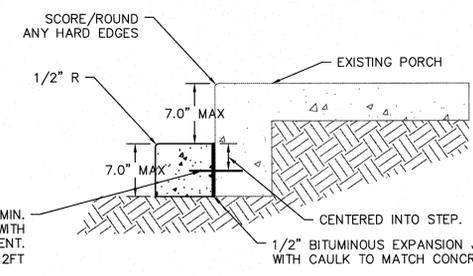
BID SET
NOT FOR CONSTRUCTION

CS-502

TEMPORARY SEEDING			
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRASS	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
BROWNTOP MILLET	1-2 LBS.	JUNE - AUGUST	25 LBS. 10-10-10

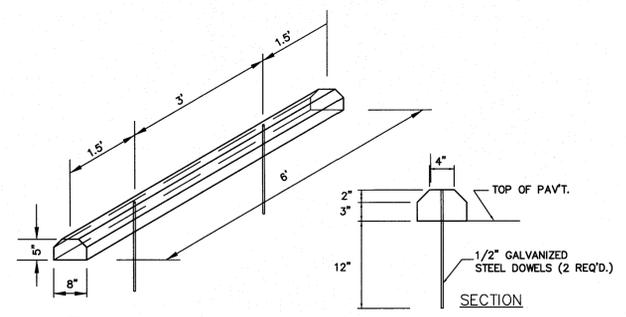
PERMANENT SEEDING			
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA COMMON	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS.	JUNE - AUGUST FEB. - OCT.	25 LBS. 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH - APRIL	25 LBS. 10-10-10

GROUND STABILIZATION CRITERIA		
SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FT OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FT IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERMETERS AND HOW ZONES)



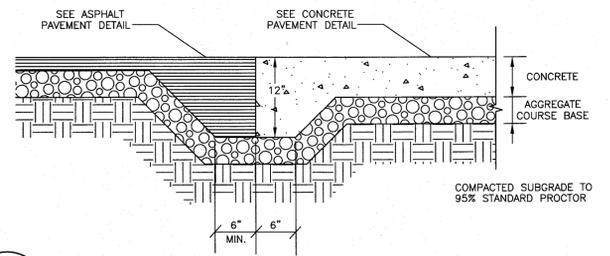
NOTES:
1. CONCRETE PER SPECIFICATIONS.
2. EXTEND ANY GUTTER DOWNSPOUTS DOWN THIS STEP AND OUTLET FLUSH WITH GROUND INTO A TYP. SPLASH PAD

1 PORCH CONCRETE STEP ADDITION
CS-502 NOT TO SCALE

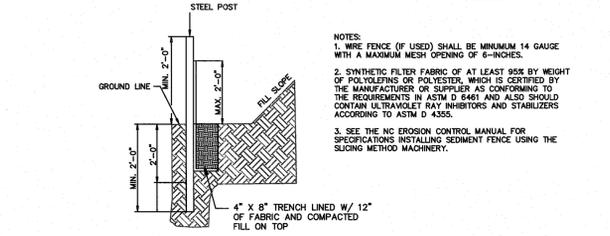


2 CONCRETE WHEEL STOP DETAIL
CS-502 NOT TO SCALE

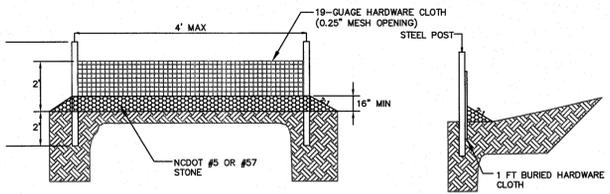
- EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE TO THE LINES AND GRADES AS SHOWN ON THE PLANS.
- THE BEDDING SHALL BE SHAPED IN ACCORDANCE WITH CLASS 'C' BEDDING AS SHOWN ON CITY STANDARD DETAIL SD 2-17.
- THE BEDDING SHALL PROVIDE A FIRM FOUNDATION OF UNIFORM DENSITY ALONG THE ENTIRE LENGTH OF PIPE. RECESSES SHALL BE MADE TO ACCOMMODATE BELLS AND JOINTS.
- WHERE UNSTABLE SOILS ARE ENCOUNTERED AS DETERMINED BY GEOTECHNICAL ENGINEER, A MINIMUM 4-INCH THICK BEDDING OF STONE SHALL BE PLACED, SEE FIGURE 2, SD 2-17.
- THE STONE SHALL BE UNIFORMLY GRADED FROM 3/4 INCH TO NO. 4 IN ACCORDANCE WITH ASTM C-33. CARE SHALL BE TAKEN TO PREVENT UNDERCUTTING IN SUITABLE SOIL.
- AREAS UNDERCUT SHALL BE FILLED WITH SUITABLE SOIL AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 1557 STANDARD TEST METHOD.



3 ASPHALT TO CONCRETE TRANSITION
CS-502 NOT TO SCALE



4 TEMPORARY SILT FENCE
CS-502 NOT TO SCALE



- NOTES:**
- DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
 - SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH, SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM, PLACING A 1-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
 - PLACE CLEAN GRAVEL (NO DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.

5 GUIDELINES FOR HARDWARE CLOTH & GRAVEL INLET PROTECTION
CS-502 SD 13-01 NOT TO SCALE

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 _____

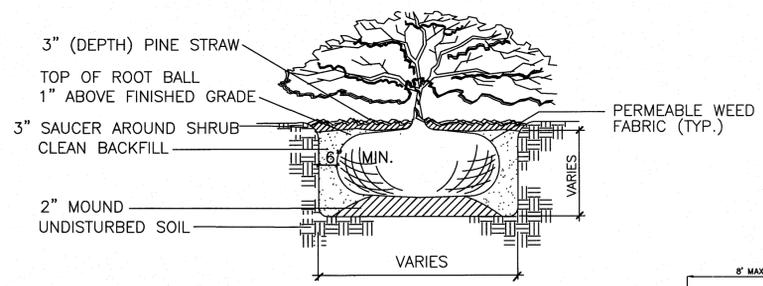
Planning _____

Traffic _____

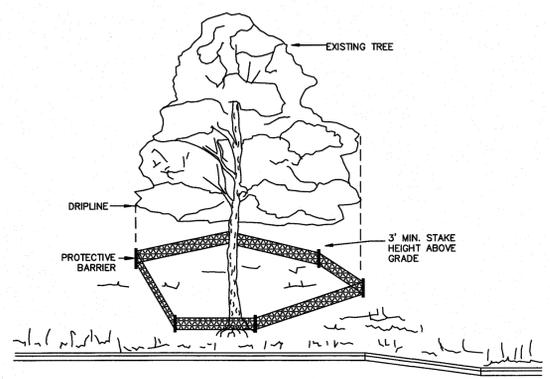
Fire _____

SEEDBED PREPARATION:

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW).
- CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- APPLY:
AGRICULTURAL LIMESTONE - 2 TONS/ACRE
FERTILIZER - 1000 LBS/ACRE (10-10-10)
SUPERPHOSPHATE - 500 LBS/ACRE (20%)
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)
ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE



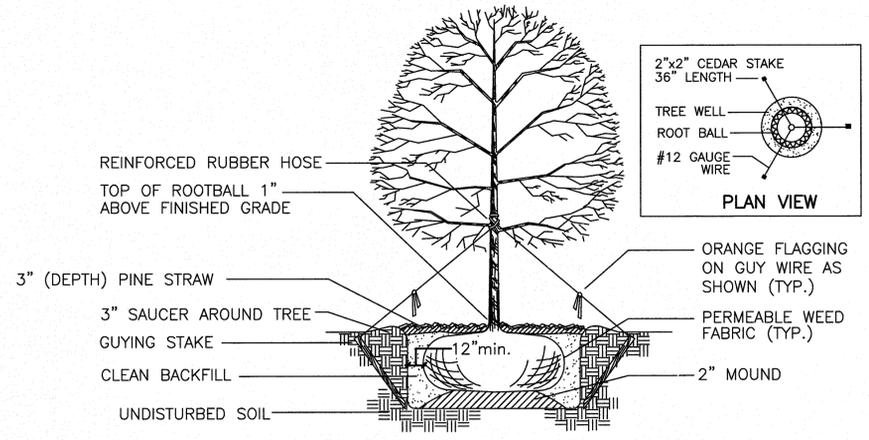
6 SHRUB PLANTING DETAIL
CS-502 NO SCALE



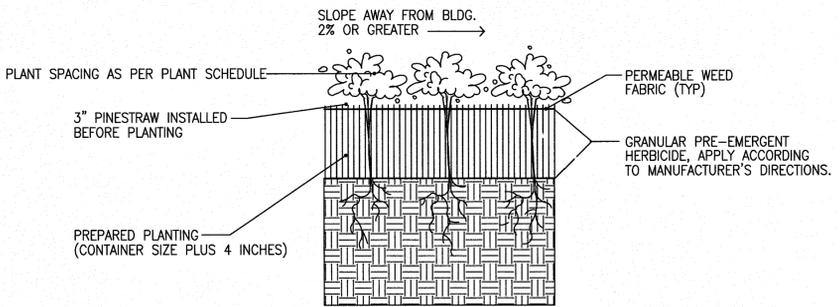
7 METHOD OF TREE PROTECTION DURING CONSTRUCTION
CS-502 SD 15-08 NOT TO SCALE

TREE PROTECTION NOTES:

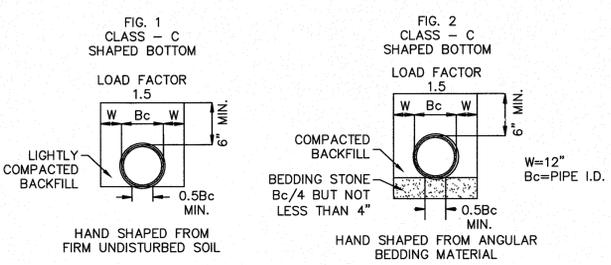
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
- PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
- LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
- ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS. [18-458]
- NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
- REGULATED AND SIGNIFICANT TREES IN THE STREET YARD [18-456(c)] AND ANY TREES IN ANY REQUIRED BUFFERS [18-456(d)] ARE REQUIRED TO BE RETAINED.



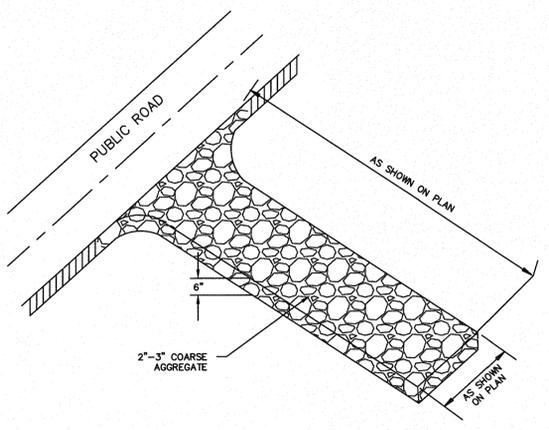
8 TREE PLANTING DETAIL
CS-502 NO SCALE



9 GROUNDCOVER/PERENNIAL PLANTING DETAIL
CS-502 NO SCALE



10 GUIDELINES FOR BEDDING DETAILS, STORM SEWER CLASS C
CS-502 SD 2-17 NOT TO SCALE

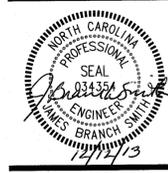


11 CONSTRUCTION ENTRANCE/EXIT
CS-502 SD 13-03 NOT TO SCALE

ENGINEER:
 McKim & Creed, Inc.
 243 N Front St.
 Wilmington, NC 28401
 (910)-343-1048

OWNER:
 Wilmington Housing
 Authority
 1524 S 16th St.
 Wilmington, NC 28401

**RANKIN PLACE TERRACE
 APARTMENTS REHAB**
 WILMINGTON HOUSING AUTHORITY
 WILMINGTON, NORTH CAROLINA



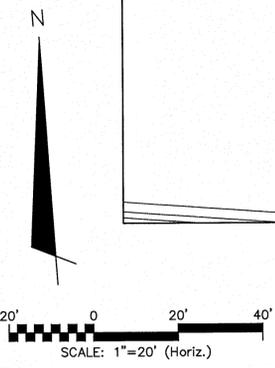
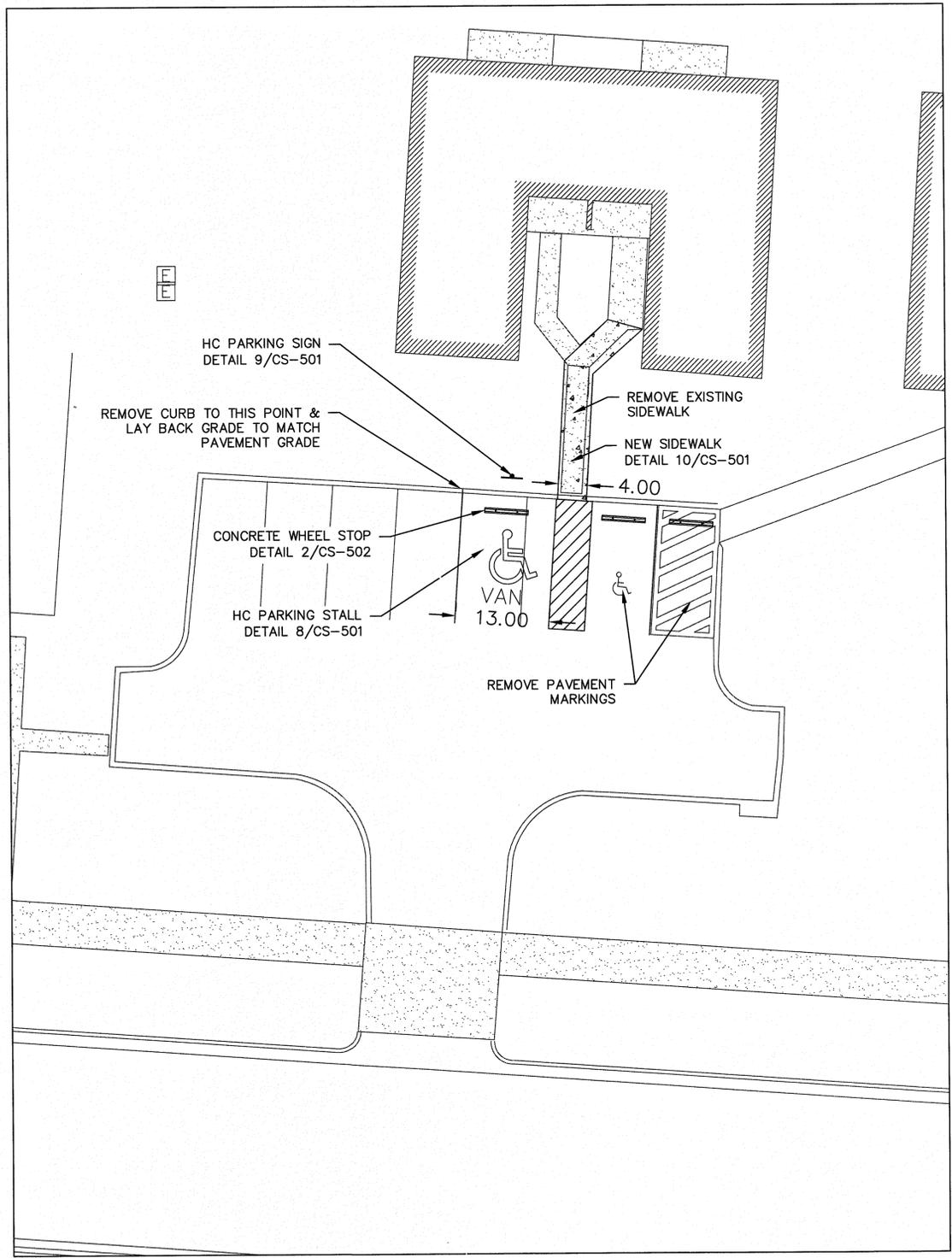
PROJECT 1020
 SITE DETAILS

DECEMBER 12, 2013

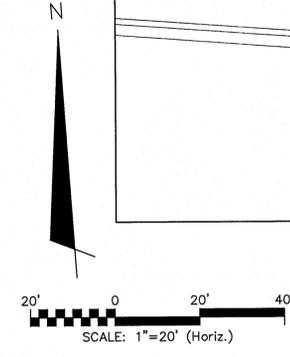
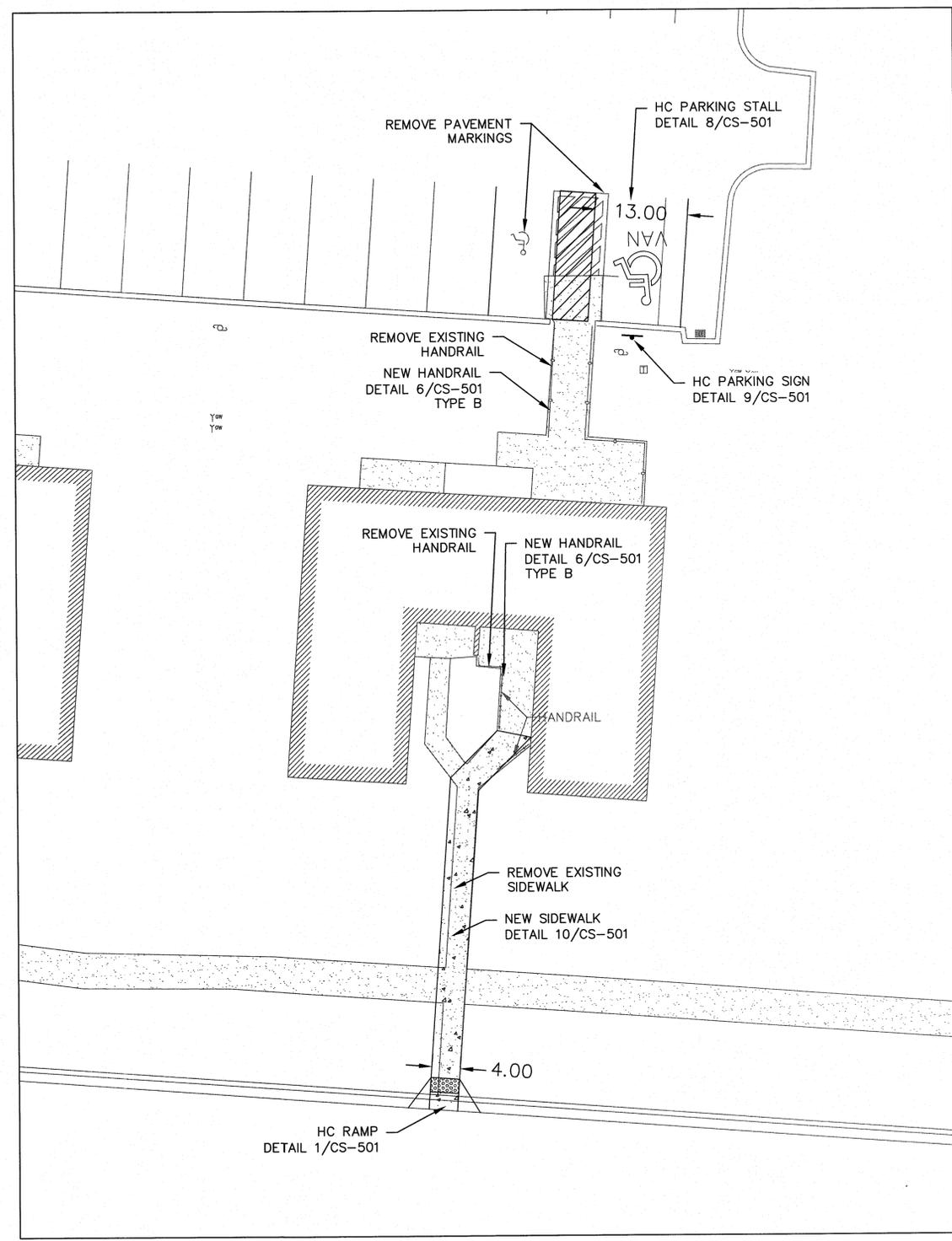
- REVISION 1-
- REVISION 2-
- REVISION 3-
- REVISION 4-

BID SET
 NOT FOR CONSTRUCTION

CS-503



1 UNIT 1211 ADA UPGRADES
 CS-503 NOT TO SCALE



2 UNIT 1207 ADA UPGRADES
 CS-503 NOT TO SCALE

1 inch

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**

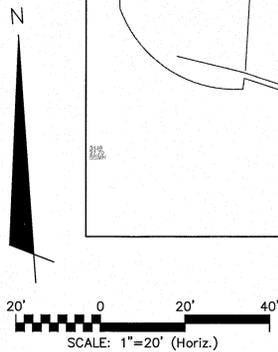
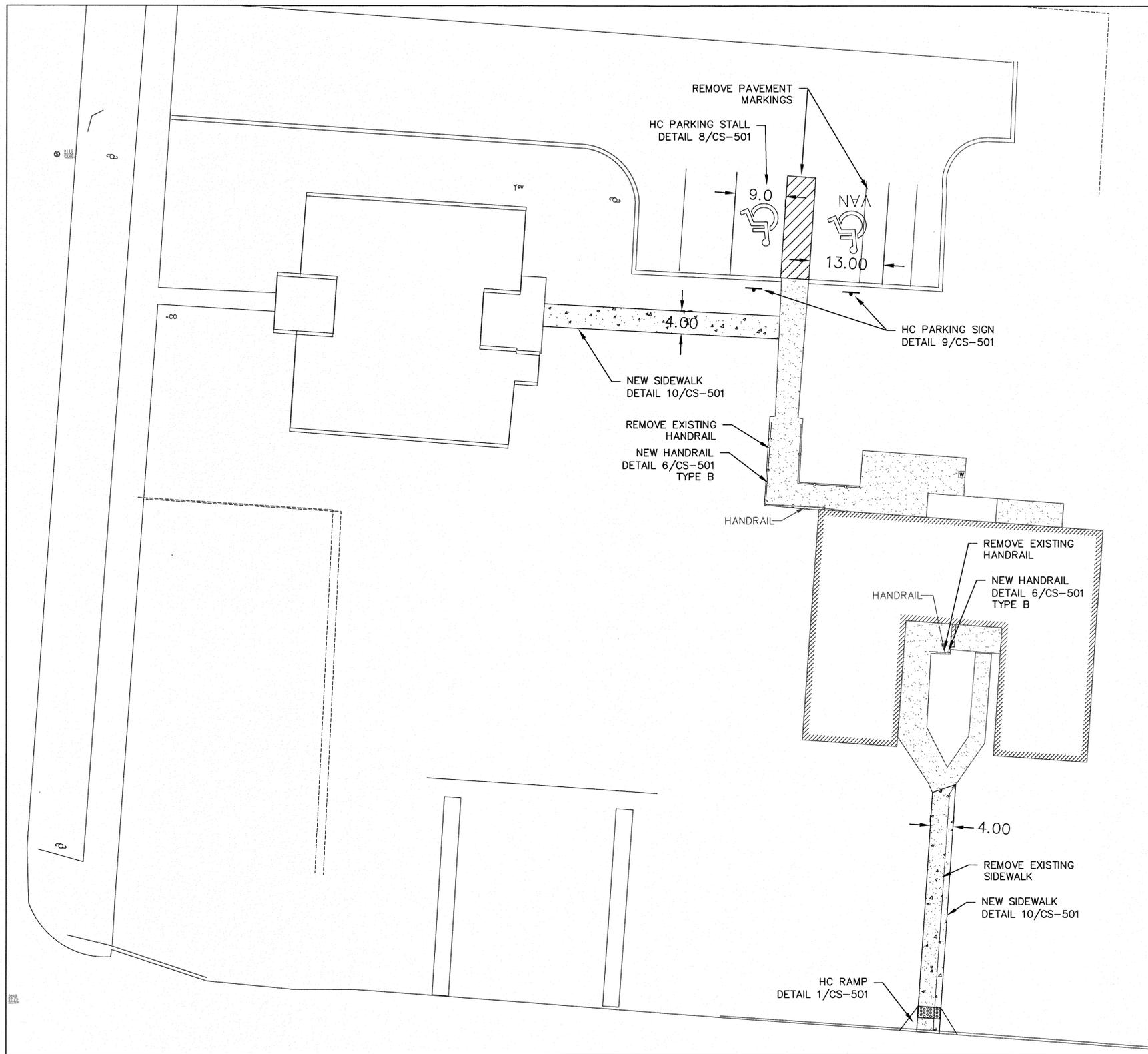
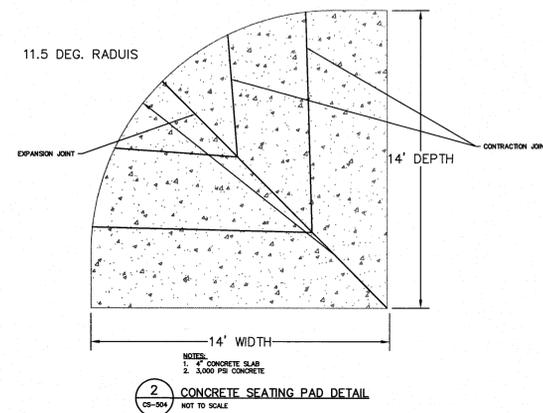
CITY OF WILMINGTON
 ENGINEERING DEPARTMENT

DATE _____ PERMIT # _____

SIGNED _____

ENGINEER:
 McKim & Creed, Inc.
 243 N Front St.
 Wilmington, NC 28401
 (910)-343-1048

OWNER:
 Wilmington Housing
 Authority
 1524 S 16th St.
 Wilmington, NC 28401



1 UNITS 602 & 1107 ADA UPGRADES
 CS-504 NOT TO SCALE

1 inch

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 _____



PROJECT 1020

SITE DETAILS

DECEMBER 12, 2013

REVISION 1-
 REVISION 2-
 REVISION 3-
 REVISION 4-

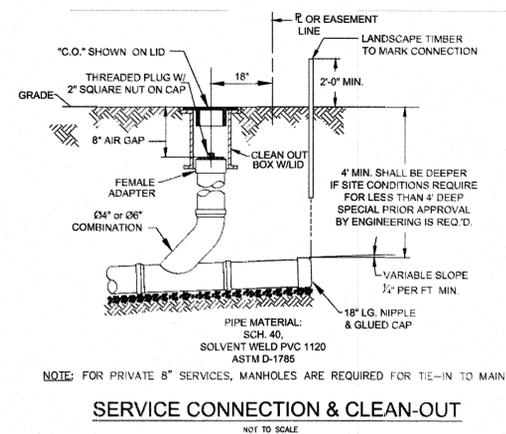
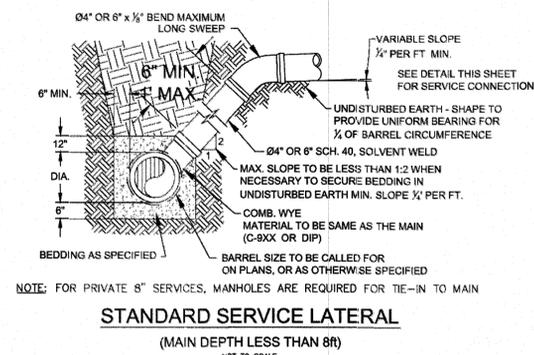
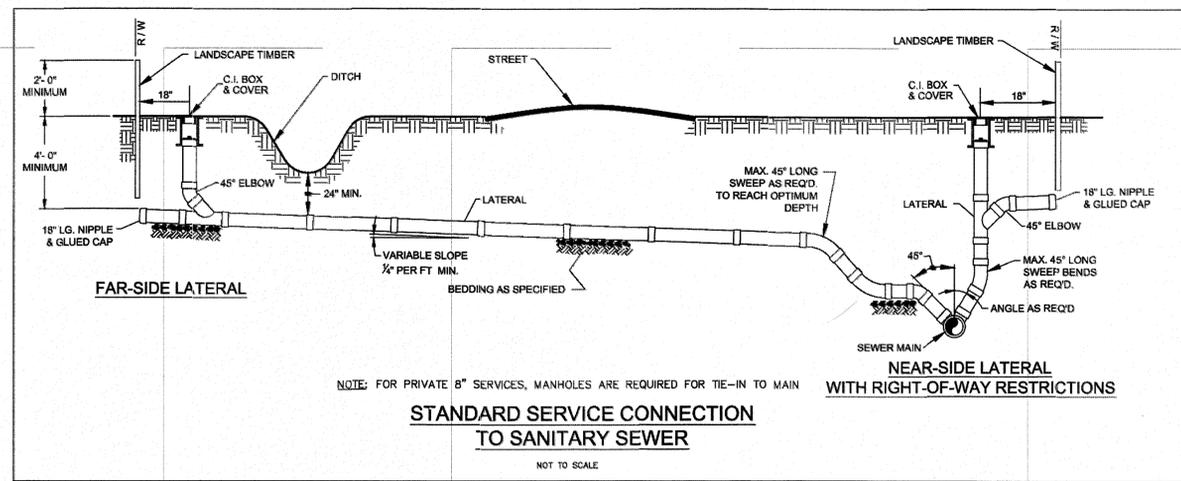
BID SET
 NOT FOR CONSTRUCTION

CS-504

RANKIN PLACE TERRACE
 APARTMENTS REHAB
 WILMINGTON HOUSING AUTHORITY
 WILMINGTON, NORTH CAROLINA

ENGINEER:
McKim & Creed, Inc.
 243 N Front St.
 Wilmington, NC 28401
 (910)-343-1048

OWNER:
Wilmington Housing Authority
 1524 S 16th St.
 Wilmington, NC 28401



FIRE PROTECTION NOTES:

1. HYDRANT MUST BE WITHIN 150' OF THE FDC.
2. THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
3. 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.
4. COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERRECTED ONSITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
5. 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.
6. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES.
7. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
8. HYDRANTS MUST BE LOCATED WITHIN 8' OF CURB.
9. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
10. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

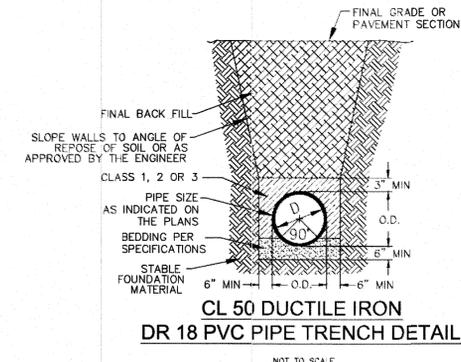
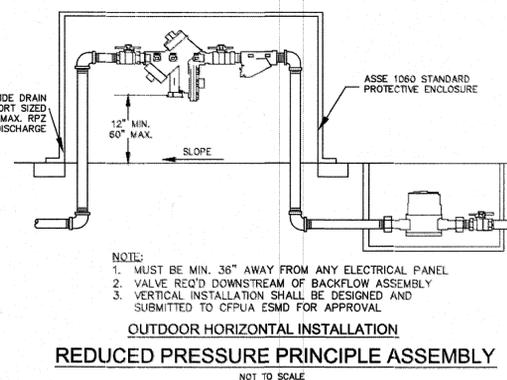
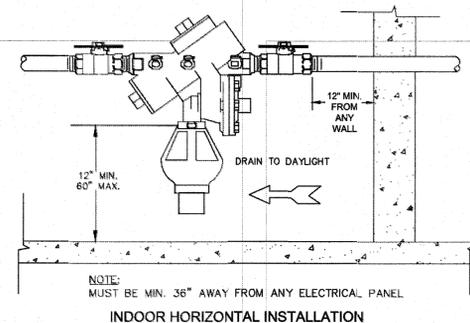
UTILITY NOTES:

1. SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
2. WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
3. 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".
4. ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CFPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPWA AND APPROVED BY USCFCOCHR OR ASSE.
5. 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.
 - 5.1. REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
 - 5.2. REDUCED PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
6. 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.
7. 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).
8. 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.
9. 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.
10. 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 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.

11. 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.
12. FIRE SPRINKLERS WILL BE PROVIDED FOR BUILDINGS.
13. 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.
14. MINIMUM OF 36" COVERAGE ABOVE ALL WATERMAINS.
15. MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.

RELATION OF WATER MAINS TO SEWERS:

1. LATERAL SEPARATION OF 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:
 - 1.1. 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
 - 1.2. 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.
2. CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER 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.
3. 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.
4. 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.



CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
2. 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.
3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
4. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
5. NO FLEXIBLE COUPLINGS SHALL BE USED.
6. ALL STAINLESS STEEL FASTENERS SHALL BE 316.

STANDARD SEWER NOTES
 (REQUIRED ON ALL SEWER PLAN AND PROFILE SHEETS)

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

1 inch

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN
APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE _____ PERMIT # _____
 SIGNED _____

RANKIN PLACE TERRACE
APARTMENTS REHAB
 WILMINGTON HOUSING AUTHORITY
 WILMINGTON, NORTH CAROLINA



PROJECT 1020
CFPUA UTILITY DETAILS

DECEMBER 12, 2013

BID SET
 NOT FOR CONSTRUCTION
CU-501