RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY

WILMINGTON, NORTH CAROLINA

PROJECT TEAM

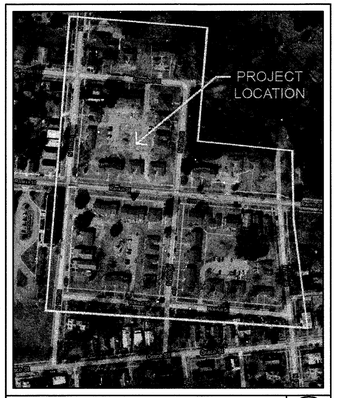
AXIOM ARCHITECTURE
333 WEST TRADE ST.
SUITE 200
CHARLOTTE, NC 28202
T 704.927.9900
F 704.343.9380
www.axiomarchitecture.com

OWNER	WILMINGTON HOUSING AUTHORITY 1524 SOUTH 16TH STREET WILMINGTON, NC 28401 CONTACT: GLENN FLOYD (910) 341-7700	CIVIL & LANDSCAPE	McKIM & CREED 243 NORTH FRONT STREET WILMINGTON, NC 28401 CONTACT: MARGARET GREY (910) 251-6665
ARCHITECT	AXIOM ARCHITECTURE, PA 333 W. TRADE ST. STE. 200 CHARLOTTE, NC 28202 CONTACT: STEVE BARTON (704) 927-9900	MEP ENGINEER	McVEIGH & MANGUM ENGINEERING, INC. 1610 E. MOREHEAD STREET, SUITE 100 CHARLOTTE, NC 28207 CONTACT: SCOTT CAMPAGNA (704) 927-9900
STRUCTURAL ENGINEER	WOODS ENGINEERING, PA 254 N. FRONT ST. STE. 201 WILMINGTON, NC 28401 CONTACT: DON WOODS (910) 343-8007	CONTRACTOR	

ISSUE DATE/REVISIONS

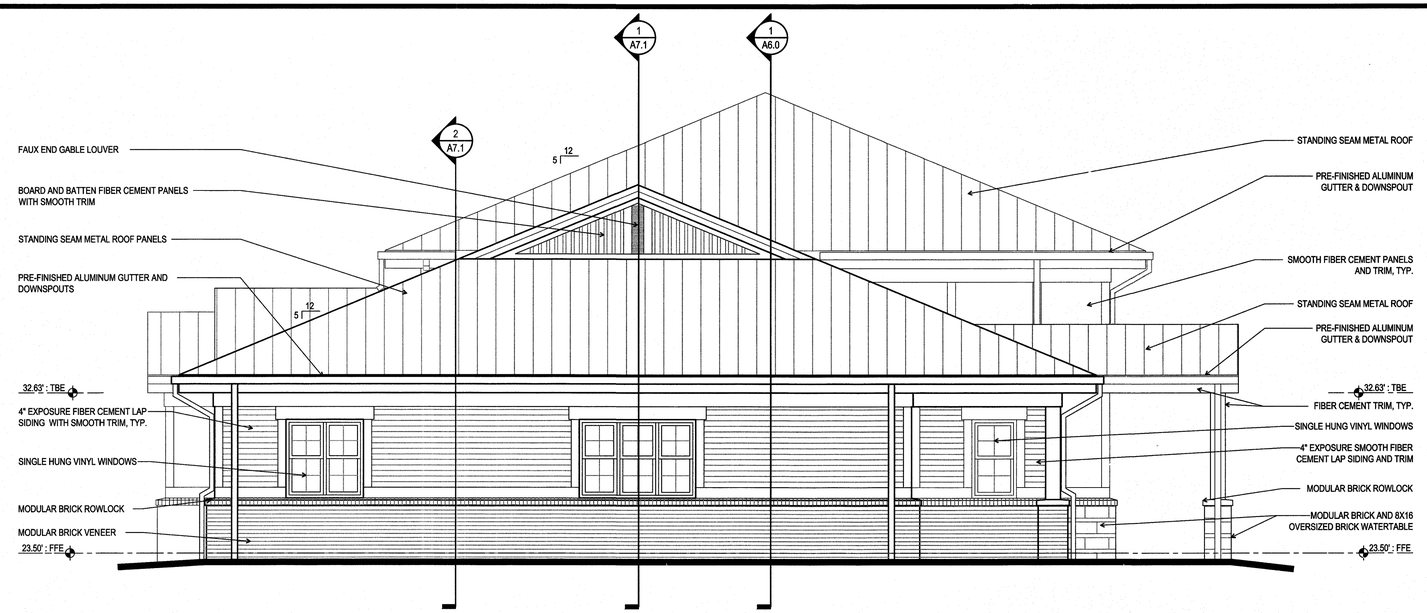
DESCRIPTION	DATE
OWNER REVIEW SET	January 21, 2013
PRELIMINARY TAX CREDIT SET	January 25, 2013
FINAL TAX CREDIT SET	May 15, 2013
BID SET	February 3, 2013

WILMINGTON HOUSING AUTHORITY

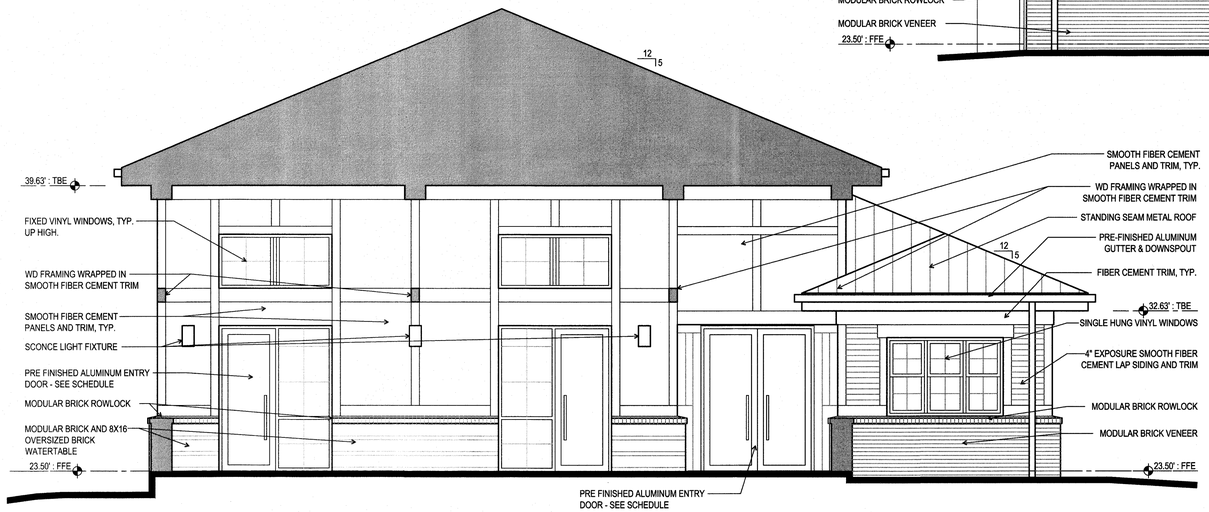


VICINITY MAP

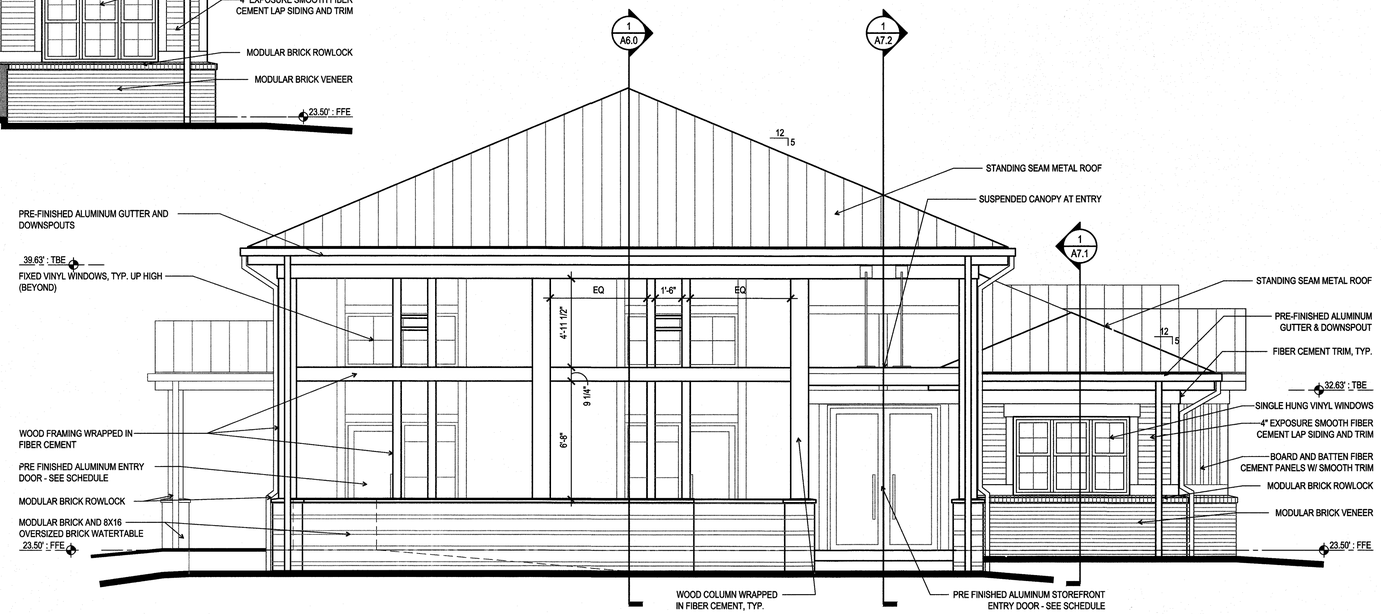
NOTE: GENERAL CONTRACTOR TO COMPLY WITH ALL NC QAP APPENDIX B GUIDELINES



2 REAR ELEVATION
A4.1 1/4" = 1'-0"



3 FRONT PORCH ELEVATION
A4.1 1/4" = 1'-0"



1 FRONT ELEVATION
A4.1 1/4" = 1'-0"

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WILMINGTON, NORTH CAROLINA

WILMINGTON HOUSING AUTHORITY

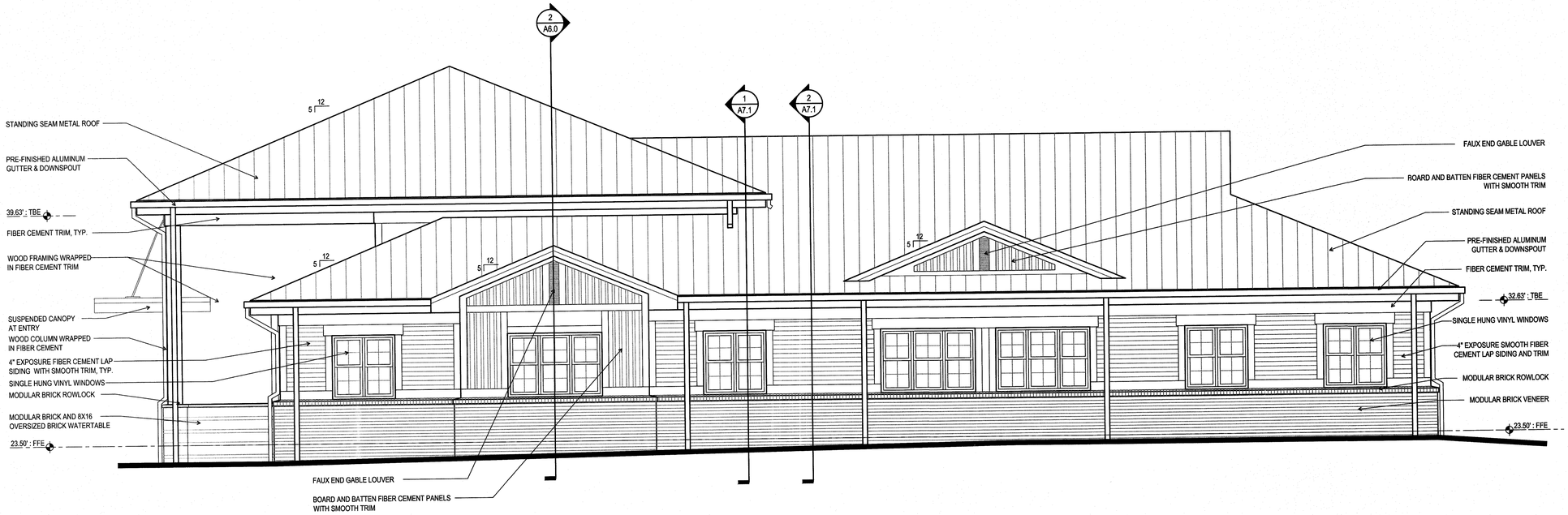
PROJECT 1129

RECREATION FACILITY ELEVATIONS

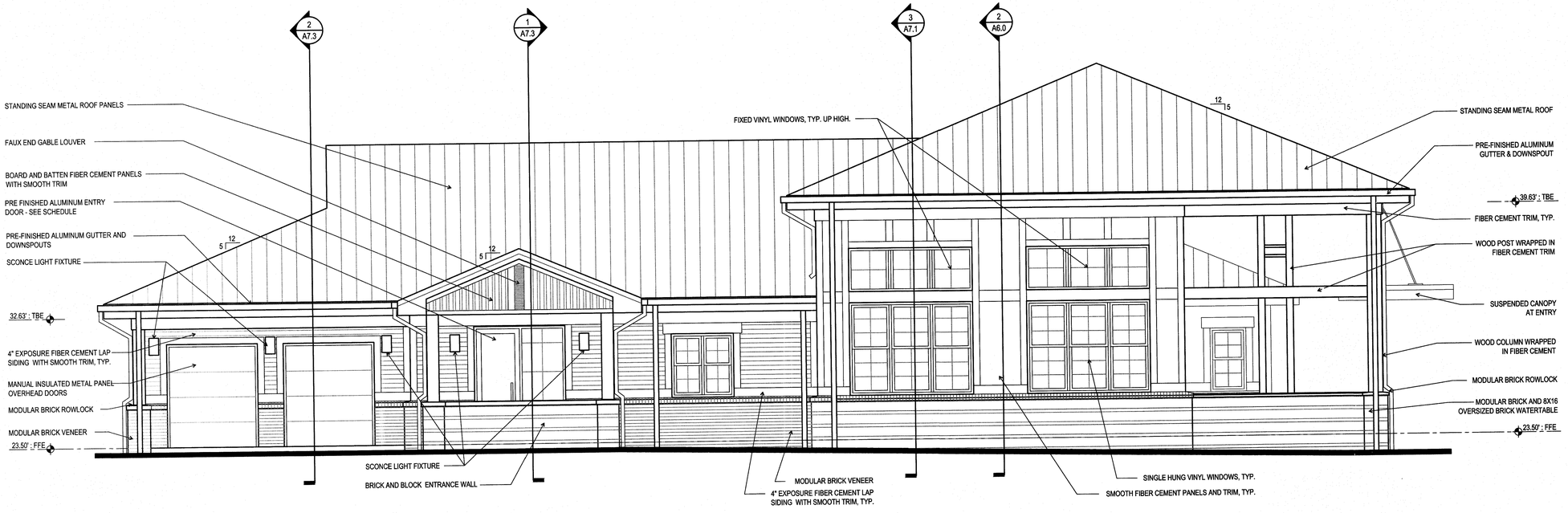
FEBRUARY 3, 2014

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

A4.1



2 A4.2 **RIGHT ELEVATION**
1/4" = 1'-0"



1 A4.2 **LEFT ELEVATION**
1/4" = 1'-0"

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WILMINGTON, NORTH CAROLINA

WILMINGTON HOUSING AUTHORITY

PROJECT 1129

RECREATION FACILITY ELEVATIONS

FEBRUARY 3, 2014

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

A4.2

RANKIN STREET
(66' PUBLIC RIGHT OF WAY)

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

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

WALNUT STREET
(66' PUBLIC RIGHT OF WAY)

SSMH
RIM EL. 36.63
INV. EL. 32.65

6" CLAY

LINE CHANGES FROM
6" CLAY TO 8" CLAY

SSMH
RIM EL. 20.99
INV. EL. 13.85 (E)
INV. EL. 13.93 (W)

8" CLAY

CURB INLET
EL. 20.92
INV. EL. 17.22

12" RCP

CURB INLET
EL. 19.56
INV. EL. 18.24

PP
#HU31

S85°56'38"E
(N87°28'00"E

329.97'
329.98' DEED)

2 STORY RESIDENCE
FLOOR ELEVATION 33.49

2 STORY RESIDENCE
FLOOR ELEVATION 28.35

1 STORY RESIDENCE
FLOOR ELEVATION 24.96

CURB INLET
GRATE EL. 36.08
(GRATE BOLTED)

PP
#52W30

PP
#52G58

PP
#52G59

EXISTING TELEPHONE (TYP.)

EXISTING POWER
POLE (TYP.)

12" RCP

DROP INLET
GRATE EL. 30.96
INV. EL. 26.74 (SE)
INV. EL. 26.78 (SW)

DROP INLET
GRATE EL. 27.32
INVERT INACCESSIBLE
FULL OF DEBRIS

PP
#MU34L

PP
#MU31L

N02°34'00"W
166.08' DEED)

EXISTING ELECTRICAL (TYP.)

1 STORY RESIDENCE
FLOOR ELEVATION 21.09

WATER LINES
SHOWN PER GIS, TYP.

2 STORY BUILDING
FLOOR ELEVATION 35.54

DROP INLET
GRATE EL. 32.92
INV. EL. 28.88 (NE)

PLAYGROUND
AREA

6' HIGH
WOOD FENCE

WOOD DECK

ASH PIT

GRILL

1 STORY BUILDING
FLOOR ELEVATION 40.91

EXISTING PARKING AREA

1 STORY RESIDENCE
FLOOR ELEVATION 20.02

HVAC

PP
#52G57

STEPS

EXISTING GUY
WIRE (TYP.)

1 STORY BUILDING
FLOOR ELEVATION 35.45

DECK

STEPS

EXISTING TREE (TYP.)

CURB INLET
20.77
INVERT INACCESSIBLE
TOP BOLTED ON

PP
#MU20L

(N02°33'00"W
164.95' DEED)

2 STORY RESIDENCE
FLOOR ELEVATION 24.27

1 STORY RESIDENCE
FLOOR ELEVATION 18.03

(S02°32'00"E
331.11' DEED)

PROPERTY BOUNDARY
NOT RECOMBINED
TO DATE. TO BE RECOMBINED
AT A LATER DATE.

CURB INLET
EL. 17.28
INVERT INACCESSIBLE
TOP BOLTED ON

SDMH
RIM EL. 13.90
INV. EL. 9.10 (N)
INV. EL. 8.95 (S)
INV. EL. 9.70 (W)

CURB INLET
EL. 31.44
INV. EL. 25.75

HANDRAILS

HANDRAIL

PP
#MU11L

12" RCP

15" RCP

15" RCP

(S87°28'00"W

329.80' DEED)

8" CLAY

SDMH
IM EL. 35.43
IV. EL. 32.41 (E)
IV. EL. 32.62 (SW)
IV. EL. 32.45 (W)

8" CLAY

SSMH
RIM EL. 34.19
INV. EL. 27.20 (E)
INV. EL. 27.24 (W)
INV. EL. 28.06 (N)

CURB INLET
EL. 34.42
INV. EL. 33.10

SDMH
RIM EL. 25.18
INV. EL. 17.60 (E)
INV. EL. 21.23 (W)
INV. EL. 21.38 (NW)

SSMH
RIM EL. 22.07
INV. EL. 16.92 (E)
INV. EL. 17.17 (W)

PP
#MU16L

SDMH
RIM EL. 16.47
INV. EL. 12.17 (E)
INV. EL. 12.36 (W)
INV. EL. 12.35 (N)

CURB INLET
EL. 11.97
INV. EL. 7.71 (N)
INV. EL. 7.62 (S)

SSMH
RIM EL. 16.30
INV. EL. 13.05 (N)
INV. EL. 13.08 (S)

6" CLAY

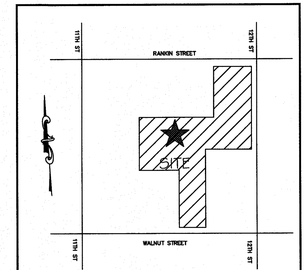
6" CLAY

PP
#MU15

LPP
#MU10L

N

20' 0 20' 40'
SCALE: 1"=20' (Horiz.)



SITE MAP
N.T.S.

LEGEND

RBC△	=	REBAR & CAP	☎	=	TELEPHONE PEDESTAL
⊡	=	CONCRETE MONUMENT FOUND		=	FIRE HYDRANT
IPF○	=	IRON PIPE FOUND	WV	=	WATER VALVE
R/W	=	RIGHT OF WAY	WM	=	WATER METER
DB	=	DEED BOOK	LP ☼	=	LIGHT POLE
PG	=	PAGE	PP	=	POWER POLE
N/F	=	NOW/FORMERLY	GW	=	GUY WIRE
CMP	=	CORRUGATED METAL PIPE	GV	=	GAS VALVE
RCP	=	REINFORCED CONCRETE PIPE		=	SANITARY SEWER MANHOLE
DIP	=	DUCTILE IRON PIPE		=	SANITARY SEWER VALVE
INV.	=	INVERT	•CO	=	CLEANOUT
EL.	=	ELEVATION		=	SIGN
LSA	=	LANDSCAPE AREA		=	YARD INLET
	=	SPRINKLER		=	STORM DRAIN MANHOLE
12.2	=	GROUND SHOT ELEVATION		=	CURB INLET
	=	CONCRETE		=	YARD LIGHT
	=	ASPHALT PAVEMENT		=	ELECTRIC HANDHOLE
	=	LINES PER NEW HANOVER GIS		=	TELEPHONE MANHOLE
	=	UNKNOWN UTILITY LINE		=	UNDERGROUND CABLE LINE
	=	UNDERGROUND GAS LINE		=	UNDERGROUND TELEPHONE LINE
W	=	UNDERGROUND WATER LINE		=	UNDERGROUND FIBER OPTIC LINE
OHE	=	OVERHEAD ELECTRIC LINE	x x	=	CHAIN LINK FENCE
E	=	UNDERGROUND ELECTRIC LINE	SD	=	UNDERGROUND STORM LINE
	=	WOODSLINE	SS	=	UNDERGROUND SANITARY LINE

LEGEND

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

SURVEY NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
2. SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE, OR ANY OTHER FACTS OUTSIDE THE CURRENT TITLE COMMITTMENT DOCUMENTS PROVIDED BY MURCHISON, TAYLOR, & GIBSON, PLLC LEGAL SERVICES. AN ALTA MAP IS BEING PREPARED AT A LATER DATE FOR THE OWNER.
3. UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE ABOVEGROUND SERVICES WERE VISIBLE. ALL WATER LINES SHOWN WERE DRAWN APPROXIMATE TO THE CFPUA GIS SYSTEM.
4. 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.
5. THE EXISTENCE OR NONEXISTENCE OF WETLANDS ON SUBJECT PROPERTY HAS NOT BEEN DETERMINED BY THIS SURVEY.
6. SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND OR ENCUMBRANCES THAT MAY EFFECT THIS PROPERTY.

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
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.

1 inch

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(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

NORTH CAROLINA PROFESSIONAL SEAL 032187 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

EXISTING CONDITIONS

APRIL 18, 2014

ISSUED FOR CDW PERMITTING

CX-101

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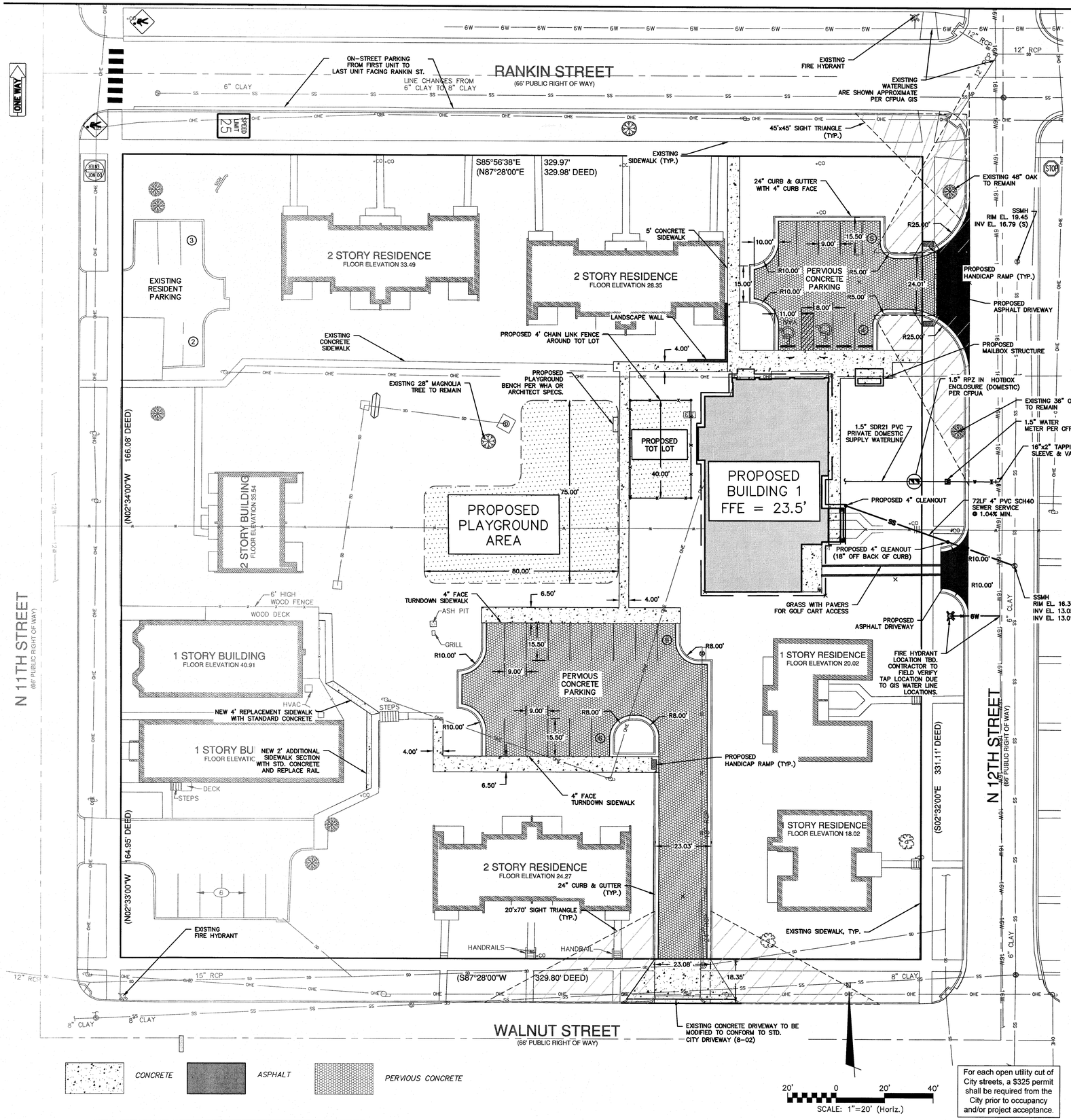
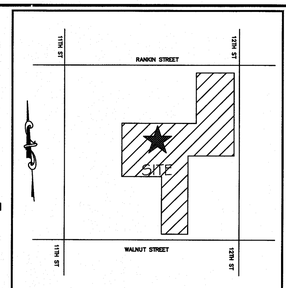


For each open utility cut of City streets, a $325 permit shall be required from the City prior to occupancy and/or project acceptance.

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. ALL PAVEMENT MARKINGS IN PUBLIC RIGHT-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
7. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
8. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
9. CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.



SITE MAP
N.T.S.

SITE DATA TABLE	RANKIN TERRACE PLACE	
PARCEL ADDRESS	415 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 (38,637 SF)	
TOTAL ACREAGE WITHIN THE PROJECT PARCEL BOUNDARY	2.51 ACRES (109,279 SF)	
TOTAL BUILDING SIZE WITH SQUARE FOOTAGE	3,463 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 (38,637 SF)	
CAMA LAND USE CLASSIFICATION	URBAN	
EXISTING IMPERVIOUS AREA	11,180	SF (29%)
BUILT UPON AREA (PROPOSED)		
ROOF TOPS	4,250	SF
ROADWAYS	0	SF
PARKING	10,734	SF
SIDEWALKS	3,318	SF
OTHER	0	SF
TOTAL POST DEVELOPMENT/%	18,302	SF (47%)
PERVIOUS CONCRETE %	9,224	SF
IMPERVIOUS (WITH PERVIOUS UTILIZING A 75% CREDIT) %	9,874	SF (<10,000 SF)
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	14 SPACES	
MAXIMUM ALLOWED	28 SPACES	
SPACES PROVIDED	24	
EXISTING USE:	MULTI-FAMILY	
ACCESSIBLE SPACES REQUIRED	1	
ACCESSIBLE SPACES PROVIDED	2 (1 VAN)	
PROPOSED BUILING		
BUILDING 1		
TOTAL BUILDING SQUARE FOOTAGE	3,463	SF
NUMBER OF STORIES	1	FLOORS
SQUARE FEET PER FIRST FLOOR	3,463	SF
BUILDING HEIGHT	21'-26"	FT

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)

NOTE: REFER TO PLUMBING AND BUILDING PLANS FOR CONNECTIONS OF 4" SEWER LINE AND 1.5" DOMESTIC WATER SERVICE.

1 inch

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date:_____ Permit #_____
Signed:_____

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

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WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 032886 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

SITE AND UTILITY PLAN

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CS-101

S:\646\2002\80 Drawings\CS-101_646-2002.dwg, 4/18/2014 2:42:26 PM, brunch

SITE PLAN LEGEND

SF | MF	EXISTING STRUCTURES NOT OWNED BY WHA - FOR REFERENCE ONLY SF = SINGLE FAMILY PARCEL MF = MULTI-FAMILY PARCEL
	DENOTES SECTION 504 TYPE 'A' ACCESSIBLE DWELLING UNIT
3D	UNIT TYPE
	DENOTES EXISTING LARGE TREE

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1 inch

Approved Construction Plan

Name Date

Planning_____

Traffic_____

Fire_____

CITY OF WILMINGTON NORTH CAROLINA

Public Services • Engineering Division

APPROVED DRAINAGE PLAN

Date:_____ Permit #_____

Signed: _____

GENERAL REMOVAL ITEMS:

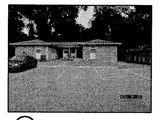
1. SHRUBS (17 TOTAL)
2. SATELLITE DISHES (5 TOTAL)
3. GARBAGE CAN HOLDERS (3 TOTAL)

#15 NOTES:
1. REPLACE WITH ADA COMPLIANT RAMP DETAIL.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-504 DETAIL 1.

#14 NOTES:
1. REPLACE WITH ADA COMPLIANT RAMP.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL 1.

#13 NOTES:
1. REPLACE WITH ADA COMPLIANT RAMP AND REPAIR CRACKED SIDEWALK SECTION.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL 1.

#12 NOTES:
1. REMOVE AND REPLACE RAILS ALONG N. 12TH ST (UNITS 501,505 AND 509).
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL 5 OPTION A.



#11 NOTES:
1. ADA TYPE A ACCESSIBLE DWELLING.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-503 DETAIL 1.

#16 NOTES:
1. ADA TYPE A ACCESSIBLE DWELLING FROM REAR.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-504 INSET 1.

#17 NOTES:
1. EXCESSIVE BACK PORCH DROP AT MAINTENANCE CLOSET. ADD SPLASH PAD TO DOWNSPOUT.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-502 DETAIL 1.

#18 NOTES:
1. EXCESSIVE BACK PORCH DROP AT MAINTENANCE CLOSET. ADD SPLASH PAD TO DOWNSPOUT.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-502 DETAIL 1.

#19 NOTES:
1. REPLACE RAIL.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL 5 OPTION B.

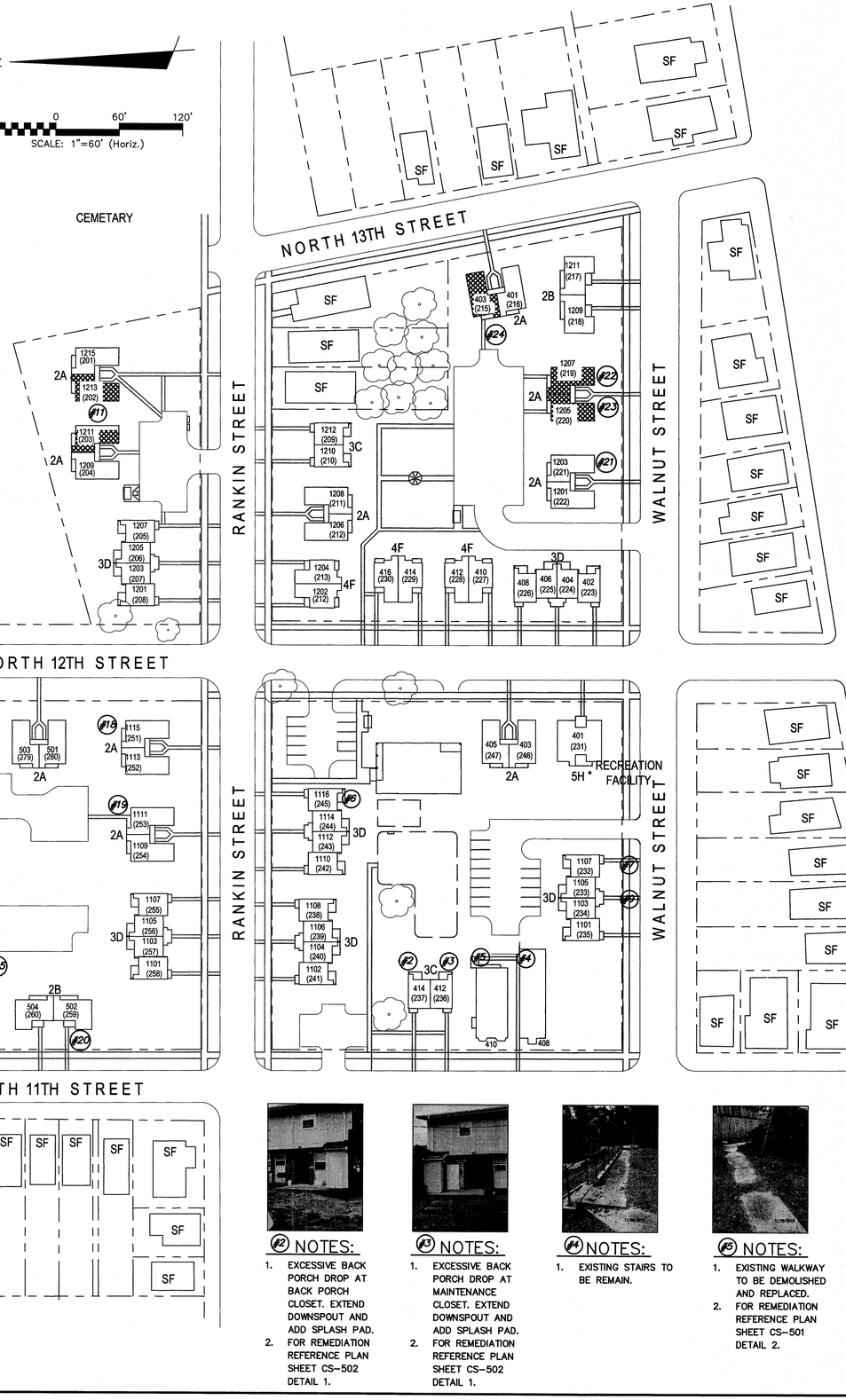
#21 NOTES:
1. EXAMPLE OF TYPICAL SHRUB REMOVAL.
2. SEE NOTE 1 ON THIS SHEET.

#20 NOTES:
1. REPLACE WOODEN RAMP WITH CONCRETE RAMP AND ADD RAIL.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL(S) 1 AND 6 OPTION B.

N

60' 0 60' 120'

SCALE: 1"=60' (Horiz.)



#25 NOTES:
1. SEE INSET ON PLAN SHEET CS-504 DETAIL 2.

#2 NOTES:
1. EXCESSIVE BACK PORCH DROP AT BACK PORCH CLOSET. EXTEND DOWNSPOUT AND ADD SPLASH PAD.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-502 DETAIL 1.

#3 NOTES:
1. EXCESSIVE BACK PORCH DROP AT MAINTENANCE CLOSET. EXTEND DOWNSPOUT AND ADD SPLASH PAD.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-502 DETAIL 1.

#4 NOTES:
1. EXISTING STAIRS TO BE REMAIN.

#5 NOTES:
1. EXISTING WALKWAY TO BE DEMOLISHED AND REPLACED.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-501 DETAIL 2.

#6 NOTES:
1. EXCESSIVE BACK PORCH DROP AT MAINTENANCE CLOSET. EXTEND DOWNSPOUT AND ADD SPLASH PAD.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-502 DETAIL 1.

#22 NOTES:
1. REPLACE WITH ADA COMPLIANT ACCESS AND RAIL DETAIL.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-503 DETAIL 2.

#23 NOTES:
1. RETROFIT SIDEWALK FOR HANDICAP ACCESS.
2. FOR REMEDIATION REFERENCE PLAN SHEET CS-503 DETAIL 2.

#24 NOTES:
1. SEE CS-503 DETAIL 2.

#9 NOTES:
1. REPLACE EXISTING RAIL. NEW RAIL WILL BE INSTALLED ON BOTH SIDES AND FLANGED MOUNTED.
2. REFERENCE PLAN SHEET CS-501 DETAIL 5 OPTION B.

#7 NOTES:
1. REPLACE EXISTING RAIL. NEW RAIL WILL BE INSTALLED ON BOTH SIDES AND FLANGED MOUNTED.
2. REFERENCE PLAN SHEET CS-501 DETAIL 5 OPTION B.

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(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

NORTH CAROLINA PROFESSIONAL SEAL 032118 ENGINEER FRANK BRANCH SMITH

PROJECT 1129

SITE INVENTORY PLAN

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CS-102

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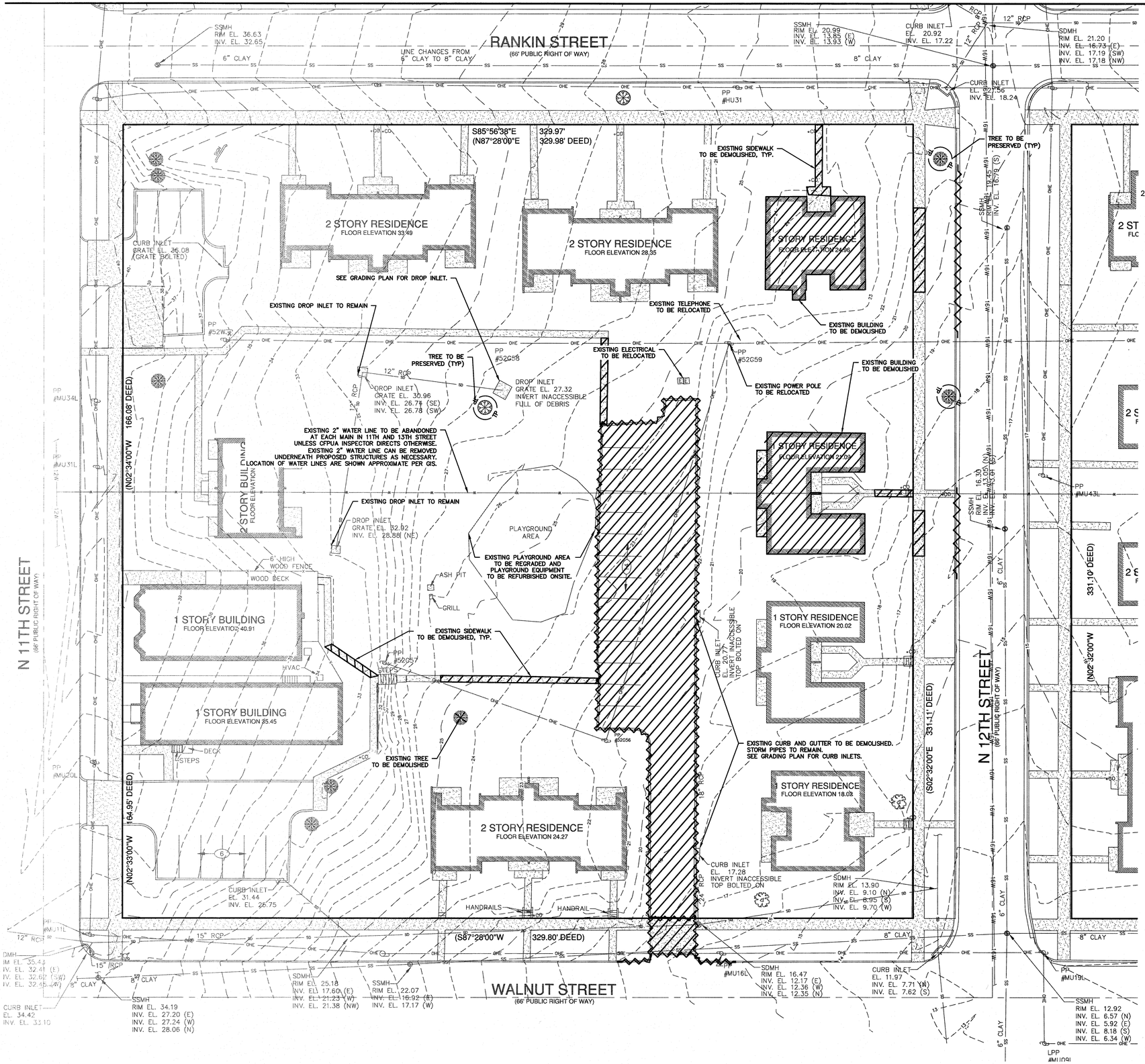

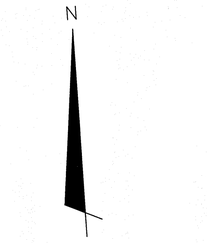

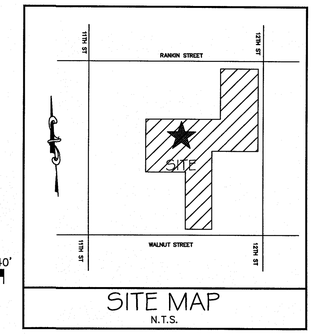

SITE MAP
N.T.S.

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 CLOSEOUT. COORDINATE INSPECTION WITH THE OWNER AND ENGINEER PRIOR TO PROJECT CLOSEOUT.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.

DEMOLITION LEGEND

- CURB AND GUTTER DEMOLITION
- BUILDINGS AND PAVEMENT DEMOLITION
- TREE PROTECTION FENCING

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	

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit #_____
Signed: _____

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RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 047284 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

DEMOLITION PLAN

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CD-101

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RANKIN STREET
(66' PUBLIC RIGHT OF WAY)

LINE CHANGES FROM 6" CLAY TO 8" CLAY

6" CLAY

8" CLAY

S85°56'38"E 329.97'

2 STORY RESIDENCE
FLOOR ELEVATION 33.49

2 STORY RESIDENCE
FLOOR ELEVATION 28.55

2 STORY BUILDING
FLOOR ELEVATION 35.54

1 STORY BUILDING
FLOOR ELEVATION 40.91

1 STORY BUILDING
FLOOR ELEVATION 35.45

2 STORY RESIDENCE
FLOOR ELEVATION 24.27

1 STORY RESIDENCE
FLOOR ELEVATION 20.02

STORY RESIDENCE
FLOOR ELEVATION 18.02

PROPOSED
BUILDING 1
FFE = 23.5'

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

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

WALNUT STREET
(66' PUBLIC RIGHT OF WAY)

24" CURB & GUTTER WITH 4" CURB FACE

INSTALL CONSTRUCTION ENTRANCE PER DETAILS IF NEEDED.

TAPER CURB FLUSH WITH SIDEWALK, TYP.

TREE PROTECTION, TYP.

SILT FENCE, TYP.

FALSE SUMP @ 1.5:1
12" ABOVE EX. RIM ELEV.

CLEAN OUT DEBRIS AND CONVERT CURB INLET TO MANHOLE COVER. (CITY STD. 14-02)
RIM=MATCH FINISH GRADE.

LANDSCAPE WALL
TOP EL: 25
STEP EL: 24
LOWEST EL: 23.3

6' HIGH WOOD FENCE

WOOD DECK

ASH PIT

GRILL

4" TURN DOWN SIDEWALK

STEPS

HVAC

DECK

CONVERT CURB INLET TO MANHOLE COVER. (CITY STD. 14-02)
RIM= MATCH FINISH GRADE.

CONCRETE GUTTER THRU ISLAND

SILT FENCE, TYP.

EXIST. 18"/24" RCP TO REMAIN

24" CURB & GUTTER (TYP.)

CONVERT CURB INLET TO TB2GI (NCDOT STD. 840.35) RIM=16.50 USE INLET PROTECTION PER DETAILS.

SIDEWALK TO BE EXPANDED OR REPLACED TO MATCH CITY STD. DRIVEWAY

HANDRAILS

TREE PROTECTION, TYP.

12" RCP

15" RCP

8" CLAY

6" CLAY

USE INLET PROTECTION (DANDY BAGS/SOCKS/OTHERS IF NECESSARY TO PROTECT CONSTRUCTION RUNOFF INTO STORM SYSTEM.

EXISTING DRIVEWAY TO MODIFIED TO CONFORM CITY DRIVEWAY (8-02)

INSTALL CONSTRUCTION ENTRANCE PER DETAILS IF NEEDED.

N

20' 0 20' 40'

SCALE: 1"=20' (Horiz.)

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		

CITY OF WILMINGTON NORTH CAROLINA
Public Services ● Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit # _____
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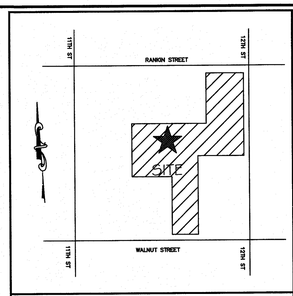

SITE MAP
N.T.S.

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RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY

WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 032158 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

GRADING, DRAINAGE, & EROSION CONTROL PLAN

APRIL 18, 2014

ISSUED FOR CDW PERMITTING

CG-101

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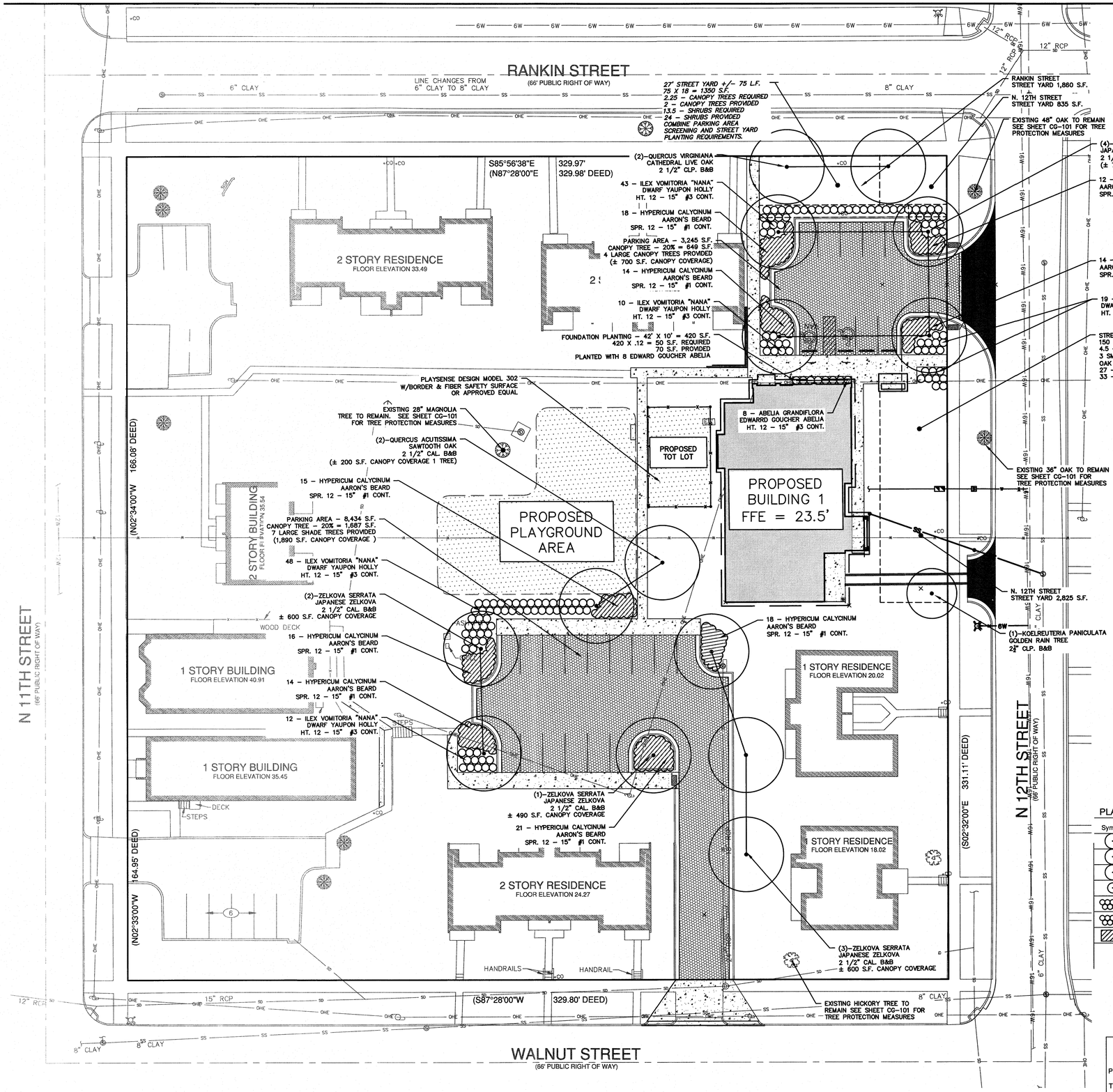
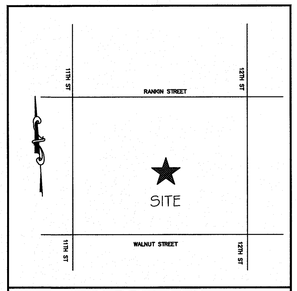


N

20' 0 20' 40'

SCALE: 1"=20' (Horiz.)



SITE MAP
N.T.S.

NOTES:

1. TOTAL SQUARE FOOTAGE OF STRUCTURES = 4,325 SF.
2. TOTAL SQUARE FOOTAGE OF VEHICULAR SURFACE AREA = 11,679 SF.
3. NO SIGNIFICANT TREES WILL BE REMOVED AS A RESULT OF THE PROPOSED SITE IMPROVEMENTS.
4. CANOPY COVERAGE CALC.:
   707 SF = CANOPY TREE/15' RADIUS
   314 SF = SMALLER CANOPY TREE/10' RADIUS
   PERIMETER TREES BASED ON ½ OVERHANG
   11,679 S.F. OF VEHICULAR SURFACE AREA
   2,336 S.F. OF CANOPY COVERAGE REQUIRED (20%)
   2,590 S.F. OF CANOPY COVERAGE PROVIDED (22%)
5. TREE REQUIREMENT CALC.:
   .92 ACRES DISTURBED X 15 TREES/ACRE = 14 REQUIRED TREES
   PROPOSED: 15 NEW LARGE CANOPY AND SMALL CANOPY TREES
   PRESERVED: 5
   TOTAL: 20 TREES
6. FOUNDATION PLANTING CALC.:
   42' X 10' = 420 S.F.
   420 X .12 = 50 S.F.
   70 S.F. PROVIDED (8 EDWARD GOUCHER ABELIA)
7. STREET YARD CALCULATIONS:
   RANKIN STREET
   27' WIDE STREET YARD ± 75 L.F.
   75' X 18' = 1,350 S.F.
   2.25 CANOPY TREES REQUIRED / 2 CANOPY TREES PROVIDED
   13.5 SHRUBS REQUIRED / 24 SHRUBS PROVIDED
   (COMBINE PARKING AREA SCREENING WITH STREET YARD REQ.)

   North 12TH STREET
   WIDTH VARIES X 150 L.F.
   150' X 18' = 2,700 S.F.
   4.5 CANOPY TREES REQUIRED / 2 LARGE CANOPY AND 1 SMALL CANOPY TREE PROVIDED WITH EXISTING 48" AND 36" OAKS TO REMAIN
   27 SHRUBS REQUIRED / 33 SHRUBS PROVIDED
8. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
9. ALL PLANTED AND RETAINED LIVING MATERIAL REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED AND MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT AND SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, AND REPRESENTATIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.

PLANT SCHEDULE

Symbol	Plant Type	Quantity	Scientific Name	Common Name	Size	Root Type	Remarks
	Large Shade Tree	2	QUERCUS ACUTISSMA	SAWTOOTH OAK	2 1/2" Clp.	B&B	
	Large Shade Tree	2	QUERCUS VIRGINIANA	CATHEDRAL LIVE OAK	2 1/2" Clp.	B&B	
	Large Shade Tree	10	ZELKOVA SERRATA	JAPANESE ZELKOVA	2 1/2" Clp.	B&B	
	Small Shade Tree	1	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	2 1/2" Clp.	B&B	
	Evergreen Shrub	8	ABELIA GRANDIFLORA "EDWARD GOUCHER"	EDWARD GOUCHER ABELIA	15 – 18" HT.	#3 CONT.	36" O.C.
	Evergreen Shrub	132	ILEX VOMITORIA "NANA"	DWARF YAUPON HOLLY	15 – 18" HT.	#3 CONT.	36" O.C.
	Groundcover	142	HYPERICUM CALYCINUM	AARON'S BEARD	12 – 15" SPR.	#1 CONT.	36" O.C.

EXISTING PLANT LEGEND

	Existing Shrub
	Existing Tree

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Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit #_____
Signed: _____

1 inch

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RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042334 ENGINEER BRANCH SMITH

PROJECT 1129

LANDSCAPE PLAN

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CL-101

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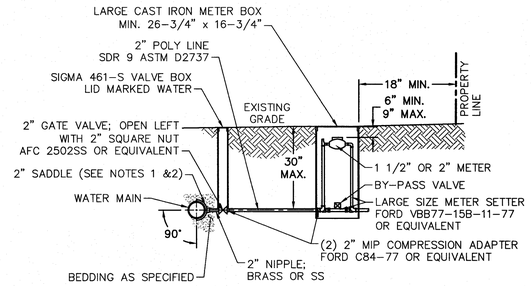
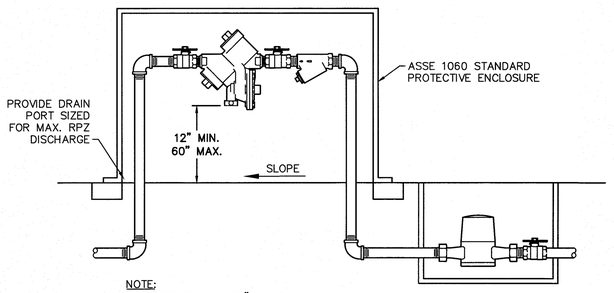


NOTES:
1. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
4. METER BOXES SUSCEPTIBLE TO INCIDENTAL, NON-DELIBERATE TRAFFIC SHALL CONFORM TO ANSI/SCTE 77 TIER 15 LOAD RATING STANDARDS (SYNERTECH MODEL DUO 17x30 OR APPROVED EQUIVALENT).
5. NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
6. 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

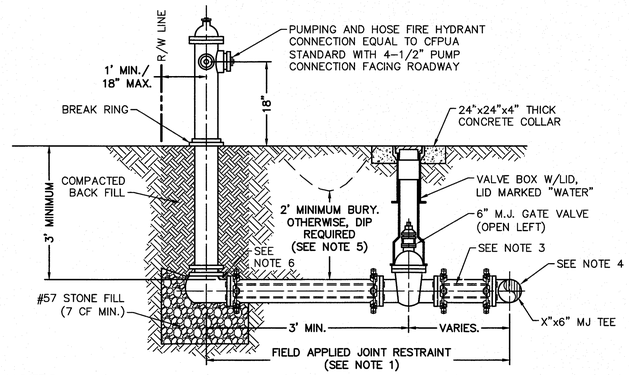
LARGE METER
FOR 1-1/2" OR 2" WATER SERVICES
NOT TO SCALE



NOTE:
1. MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
2. VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
3. VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA ESMD FOR APPROVAL.

OUTDOOR HORIZONTAL INSTALLATION

REDUCED PRESSURE PRINCIPLE ASSEMBLY
NOT TO SCALE



NOTES:
1. JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI OR C-900 PVC PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
2. WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
3. CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR-BLUE MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
4. HYDRANT TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN PLUS ANY VALVE, FITTING, OR JOINT IN MAIN WITHIN 10-FEET OF HYDRANT TEE.
5. HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
6. WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

FIRE HYDRANT ASSEMBLY
NOT TO SCALE

FIRE PROTECTION NOTES:

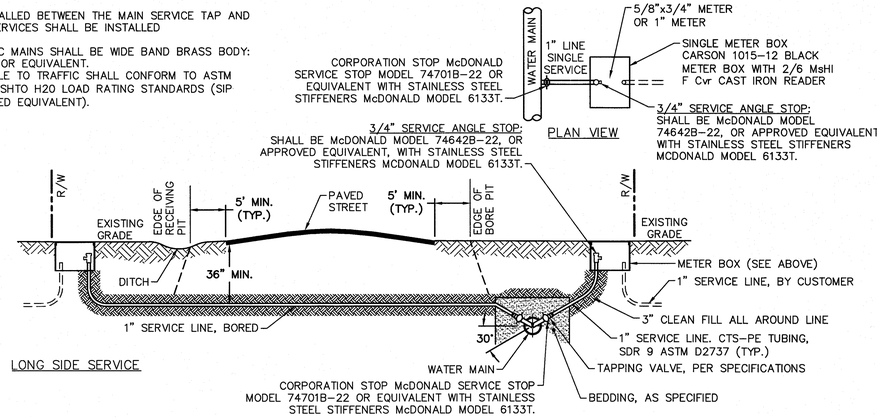
1. HYDRANT MUST BE WITHIN 150' OF THE FDC.
2. THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
3. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
4. COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERECTED 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 WLMINGTON 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 INETERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

UTILITY NOTES:

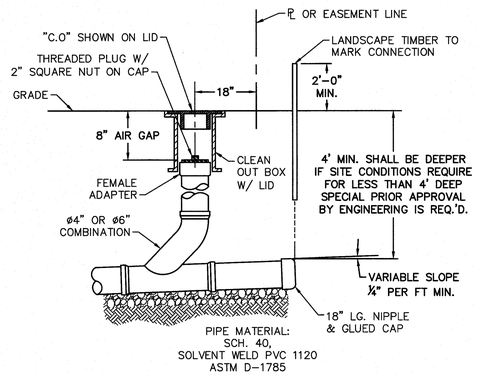
1. SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
2. WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
3. THIS PROJECT SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. 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 CFPUA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPUA AND APPROVED BY USCFCCCHR 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 CFPUA PRIOR TO INSTALLING UNITS TO GIVE CFPUA 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 CFPUA 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. 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.

THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

NOTES:
1. NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4240 OR APPROVED EQUIVALENT).

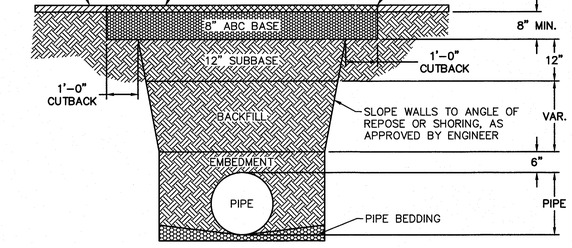


SINGLE SERVICE CONNECTION
TYPICAL WATER SERVICE CONNECTION FOR RESIDENTIAL SINGLE FAMILY HOME ON CFPUA WATER SYSTEM
NOT TO SCALE



NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN

SERVICE CONNECTION & CLEAN-OUT
NOT TO SCALE



NOTES:
1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
3. 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
4. BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS
5. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
7. ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
8. 1-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%.

PAVEMENT REPAIR WHERE PIPE INSTALLED
(FOR PRIVATE ROADS AND PAVED AREAS;
CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)
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.

1 inch

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: _____ Permit # _____
Signed: _____

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333 WEST TRADE ST.
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RANKIN PLACE TERRACE APARTMENTS REHAB
WILMINGTON HOUSING AUTHORITY, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 034454 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

CFPUA UTILITY DETAILS

APRIL 18, 2014

ISSUED FOR
COW PERMITTING

CU-501

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GENERAL HANDICAP NOTES

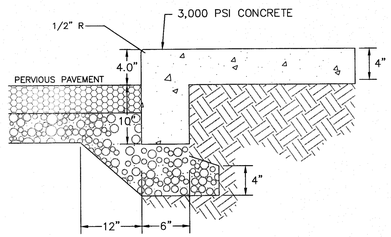
1. IN ACCORDANCE WITH N.C.G.S. 136-44.14, ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED ON EACH SIDE OF ANY STREET OR ROAD, WHERE CURBS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
2. WHEELCHAIR RAMPS SHALL BE LOCATED AS INDICATED IN DETAIL DRAWINGS; HOWEVER, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
3. CURB RAMPS SHALL HAVE DETECTABLE WARNINGS EXTENDING THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 2-FT. IN LENGTH.

CONSTRUCTION HANDICAP NOTES

1. CONSTRUCTION SHALL CONFORM WITH CONSTRUCTION STANDARDS OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
2. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
3. A ½-IN. EXPANSION JOINT SHALL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
4. IN NO CASE SHALL THE WIDTH OF A CURB RAMP OR CURB CUT BE LESS THAN 40-IN. (3-FT, 4-IN.), NOT INCLUDING THE FLARED SIDES.
5. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
6. THE MAXIMUM SLOPE ON THE CURB RAMP RUN IS 1:12.
7. THE MAXIMUM CROSS SLOPE OF THE CURB RAMP IS 1:50.
8. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
9. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48-IN. LONG BETWEEN THE CURB RAMPS.
10. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9-IN., A HEIGHT OF NOMINAL 0.2-IN. AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35-IN. AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

ADDITIONAL HANDICAP NOTES

1. STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT.
2. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF THE PEDESTRIAN CROSSWALK.
3. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS DOCUMENT IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.
4. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
5. THE BOTTOM OF DIAGONAL (CORNER TYPE) CURB RAMPS AT MARKED CROSSINGS SHALL HAVE 48-IN. MINIMUM CLEAR SPACE WITHIN THE MARKINGS.
6. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL HAVE AT LEAST A 24-IN. LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.

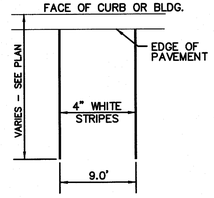


COMPACTED SUBGRADE TO 95% STANDARD PROCTOR

- EXPANSION JOINT AT EVERY 30' O.C.
- 1" SCORE AT EVERY 5' O.C.
- FINISH PER SPECIFICATIONS

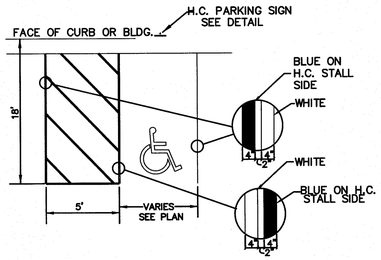
TURN-DOWN CONCRETE SIDEWALK

NOT TO SCALE



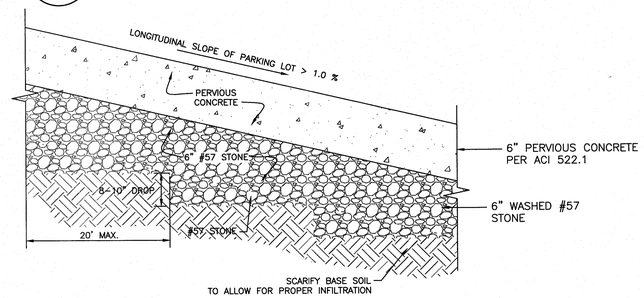
TYPICAL PARKING STALL

NOT TO SCALE



4 / CS-501 TYPICAL HANIDCAP PARKING STALL

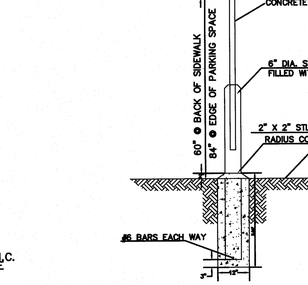
NOT TO SCALE



NOTES:
1. DO NOT PLACE PERVIOUS CONCRETE UNTIL SITE HAS REACHED FINISH GRADE AND IS STABILIZED.
2. INSTALL NON-WOVEN FILTER FABRIC BETWEEN STONE/EARTH WHEN TRANSITIONING BETWEEN CONCRETE PAVEMENT AND PERVIOUS CONCRETE.

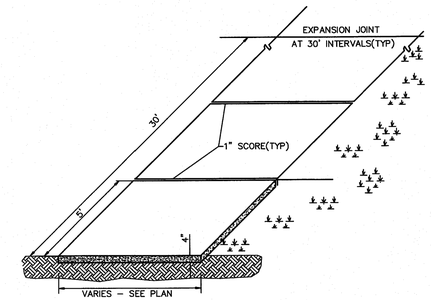
PERVIOUS CONCRETE TERRACED PARKING SECTION

NOT TO SCALE



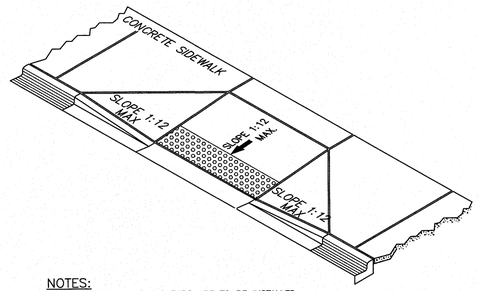
3 / CS-501 TYPICAL HANDICAP PARKING STALL

NOT TO SCALE



2 / CS-501 STANDARD SIDEWALK DETAIL

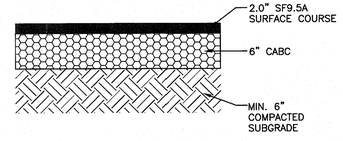
NOT TO SCALE



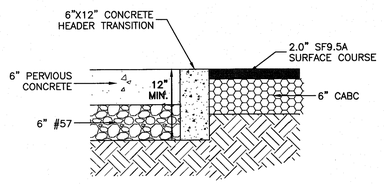
NOTES:
1. DEDECTABLE WARNING PADS ARE TO BE INSTALLED WHERE RAMPS LEAD TO VEHICLAR TRAFFIC AREAS.
2. DEDECTABLE WARNING PADS SHALL BE CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN. LATEST EDITION.

1 / CS-501 SIDEWALK HC RAMP

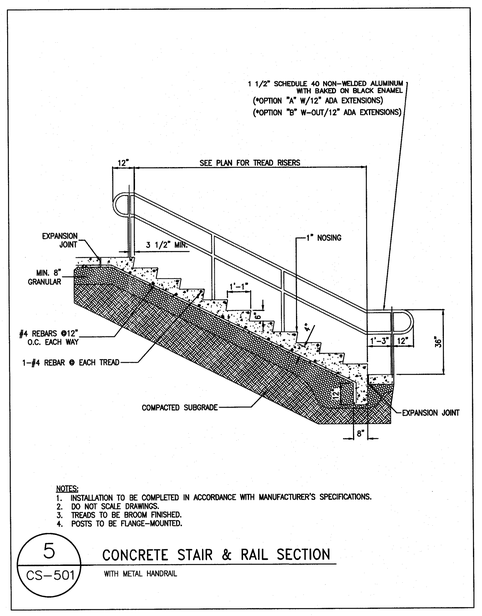
NOT TO SCALE



ASPHALT PAVEMENT SECTION (DRIVEWAYS)

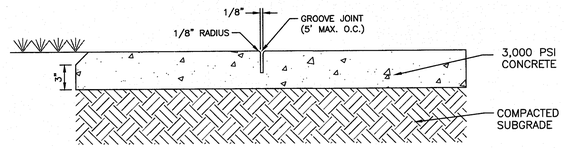


ASPHALT TO PERVIOUS CONCRETE TRANSITION



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. TREADS TO BE BROOM FINISHED.
4. POSTS TO BE FLANGE-MOUNTED.

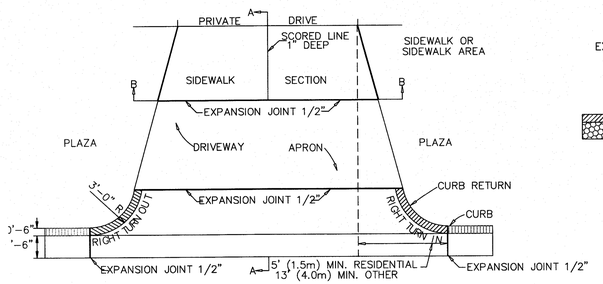
5 / CS-501 CONCRETE STAIR & RAIL SECTION WITH METAL HANDRAIL



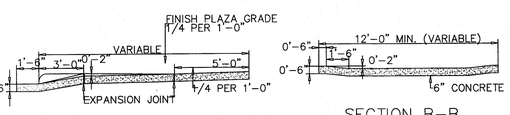
GENERAL NOTES:
1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS.
2. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS.
3. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK ABUTS ANY CURB AND GUTTER AND ANY RIGID STRUCTURES.
4. IN SIDEWALKS AND PLAZA AREAS EXPANSION JOINTS ARE REQUIRED AT NO GREATER THAN 30' INTERVALS.

CONCRETE SIDEWALK SECTION

NOT TO SCALE



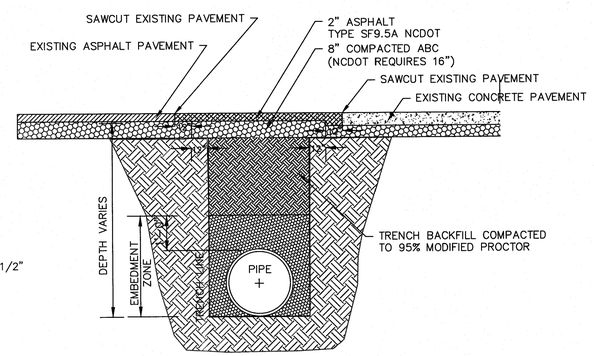
PAVEMENT PLAN



STANDARD DRIVEWAY DETAIL

SD 8-02

NOT TO SCALE



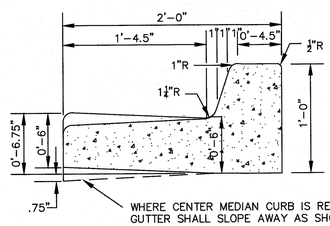
NOTES:
* BACKFILL TO BE INSTALLED IN 6" LIFTS (MAXIMUM) AND COMPACTED TO A MINIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED A.A.S.H.T.O. STANDARD METHOD T-99
* CUT - BACK TO BE PREPARED AFTER TRENCH BACKFILLING AND COMPACTION

STANDARD SHOWING METHOD MAKING PAVEMENT REPAIRS WHERE PIPE IS INSTALLED

PAVEMENT REPAIR DETAIL

SD 1-16

NOT TO SCALE



WHERE CENTER MEDIAN CURB IS REQUIRED GUTTER SHALL SLOPE AWAY AS SHOWN

NOTE: WHERE CURB AND GUTTER IS USED FOR PARKING SPACES CURB FACE SHALL BE 4" FACE INSTEAD OF TYP. 6" FACE.

STANDARD CURB SECTION TYPE "A"

SD 7-01

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.

CITY OF WILMINGTON NORTH CAROLINA
Public Services ● Engineering Division
APPROVED DRAINAGE PLAN
Date:_____ Permit #_____
Signed: _____

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

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333 WEST TRADE ST.
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RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 034454 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

SITE DETAILS

APRIL 18, 2014

ISSUED FOR CDW PERMITTING

CS-501

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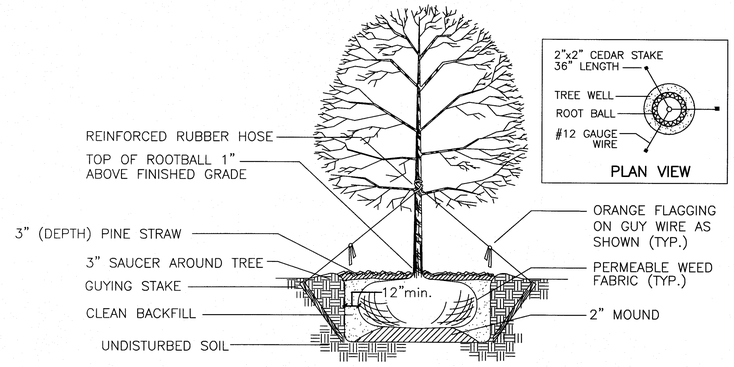
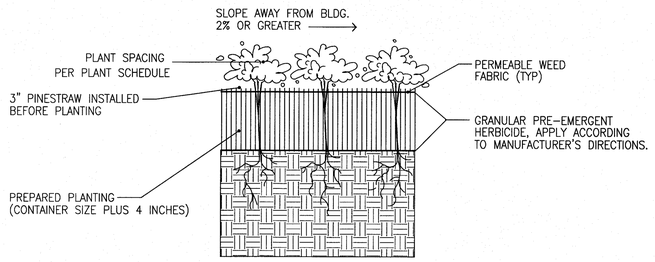


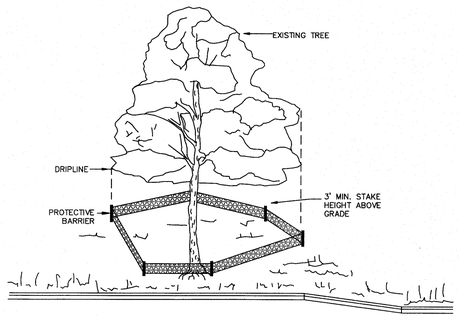
TREE PLANTING DETAIL

NO SCALE



GROUNDCOVER/PERENNIAL PLANTING DETAIL

NO SCALE



NOTE
TREES TO BE SAVED WILL BE CLEARLY MARKED PRIOR TO CONSTRUCTION AND A PROTECTIVE BARRIER IS TO BE INSTALLED AT THE DRIPLINE. DRIP LINE – THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.

METHOD OF TREE PROTECTION DURING CONSTRUCTION

SD 15-08
NOT TO SCALE

TREE PROTECTION NOTES:

1. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
2. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
3. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
4. 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]
5. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
6. 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.
7. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING. [SEC. 18-462]

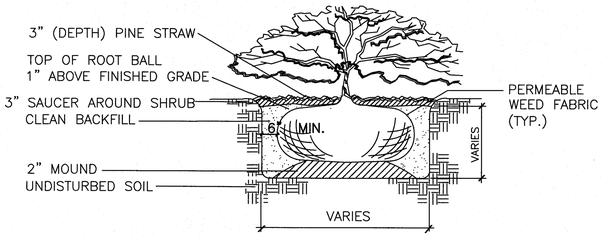
SEEDBED PREPARATION:

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL – PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. 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.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
10. 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

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

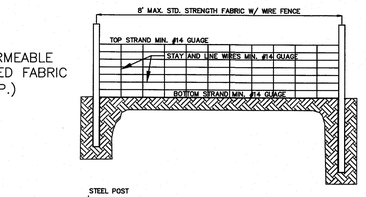
PERMANENT SEEDING			
GRASS TYPE	AMOUNT/ 1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA, COMMON	1-2 LBS.	APRIL – JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS	JUNE – AUGUST FEB. – OCT.	25 LBS 10-10-10
SERICEA LESPEDEZA (SLOPES	1-2 LBS	MARCH – APRIL	25 LBS 10-10-10

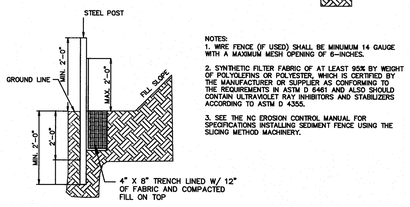
GROUND STABILIZATION CRITERIA		
SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10 FT OR LESS IN IN LENGTH AND ARE NOT STEEPER THAN 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 PERIMETERS AND HOW ZONES)



SHRUB PLANTING DETAIL

NO SCALE

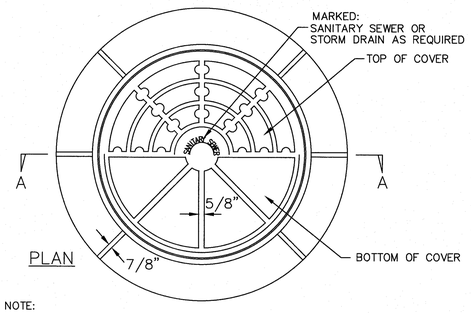




NOTES:
1. WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
2. SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
3. SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

TEMPORARY SILT FENCE

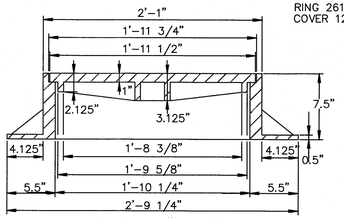
NOT TO SCALE



PLAN

NOTE:
RING & COVER CONTACT SURFACES SHALL BE MACHINED TO INSURE EVEN BEARING OF COVER AND RING

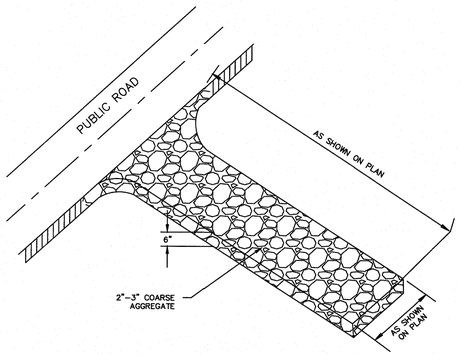
MINIMUM WEIGHTS:
RING 261 LBS.
COVER 120 LBS.



SECTION "A-A"

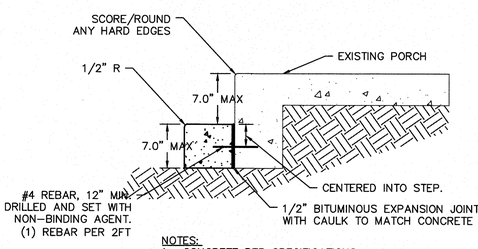
STANDARD MANHOLE RING & COVER

SD 14-02
NOT TO SCALE



CONSTRUCTION ENTRANCE/EXIT

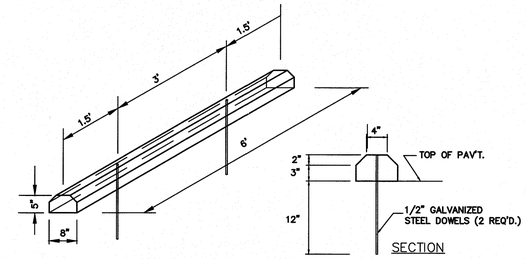
SD 13-03
NOT TO SCALE



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

PORCH CONCRETE STEP ADDITION

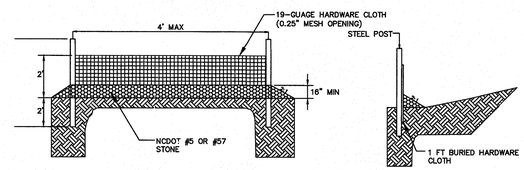
NOT TO SCALE



CONCRETE WHEEL STOP DETAIL

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.



NOTES:
1. 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.
2. 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.
3. PLACE CLEAN GRAVEL (NC 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.

GUIDELINES FOR HARDWARE CLOTH & GRAVEL INLET PROTECTION

SD 13-01
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.

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date:_____ Permit #_____
Signed: _____

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

AXIOM ARCHITECTURE
333 WEST TRADE ST.
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F 704.343.9380
www.axiomarchitecture.com

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

NORTH CAROLINA PROFESSIONAL SEAL 034354 ENGINEER BRANCH SMITH

PROJECT 1129

SITE, EROSION CONTROL, AND LANDSCAPE DETAILS

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CS-502

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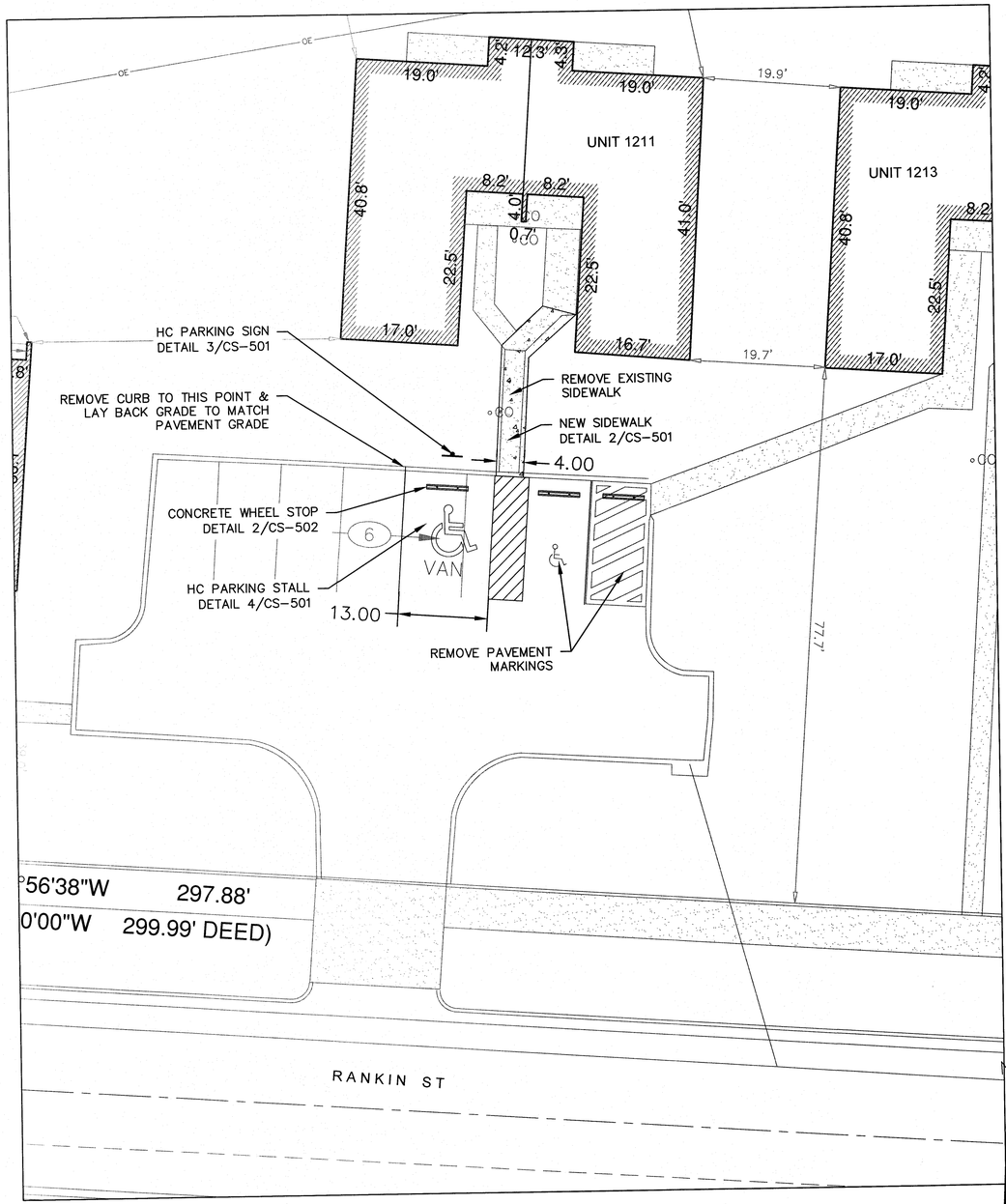
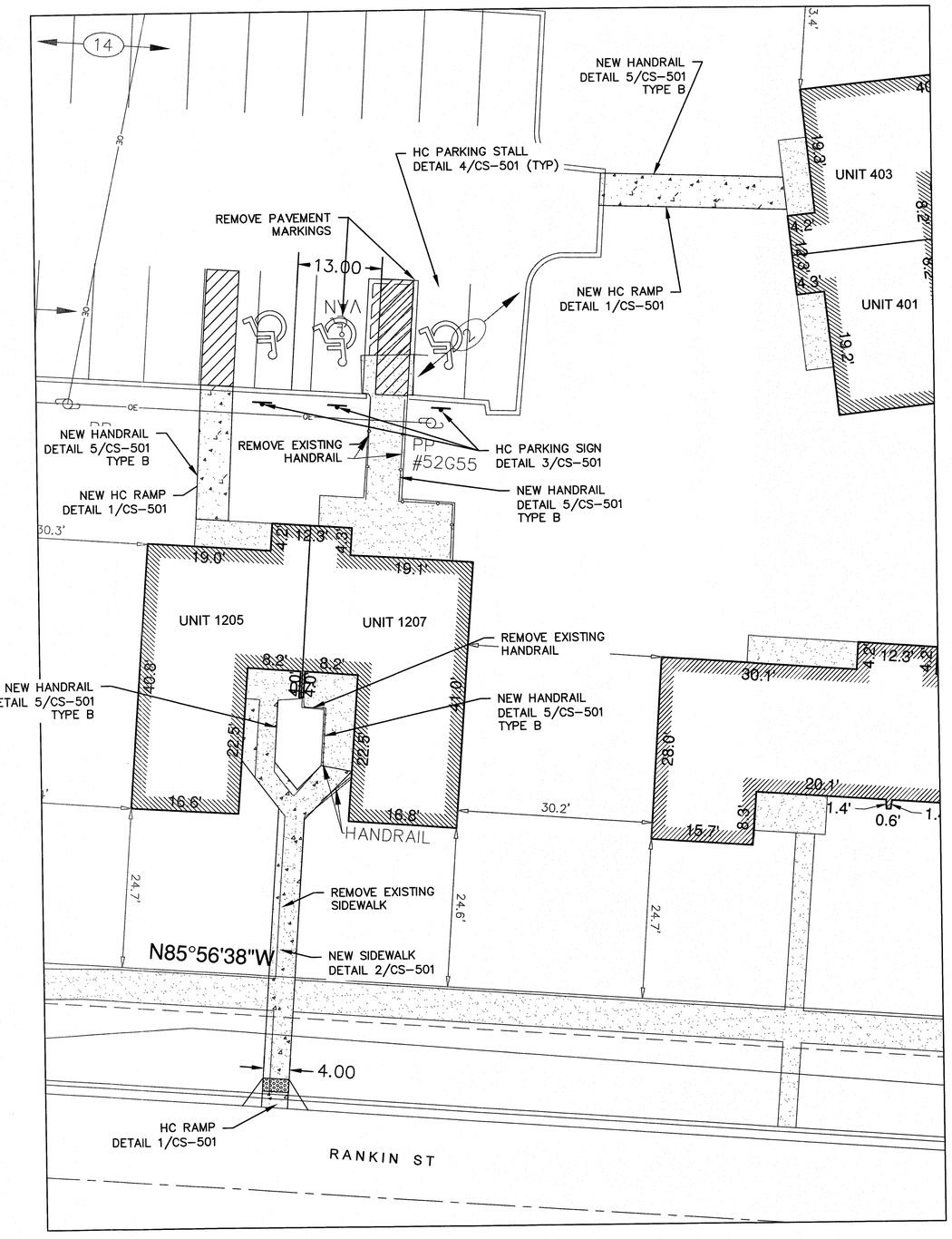


1 CS-503 UNITS 1211 AND 1213 ADA UPGRADES

NOT TO SCALE



2 CS-503 UNITS 1205, 1207, AND 403 ADA UPGRADES

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		

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date:_____ Permit #_____
Signed:_____

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Wilmington, NC 28401

RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY

WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 034354 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

SITE INVENTORY
LARGER SCALE
PLANS

APRIL 18, 2014

ISSUED FOR
CDW PERMITTING

CS-503

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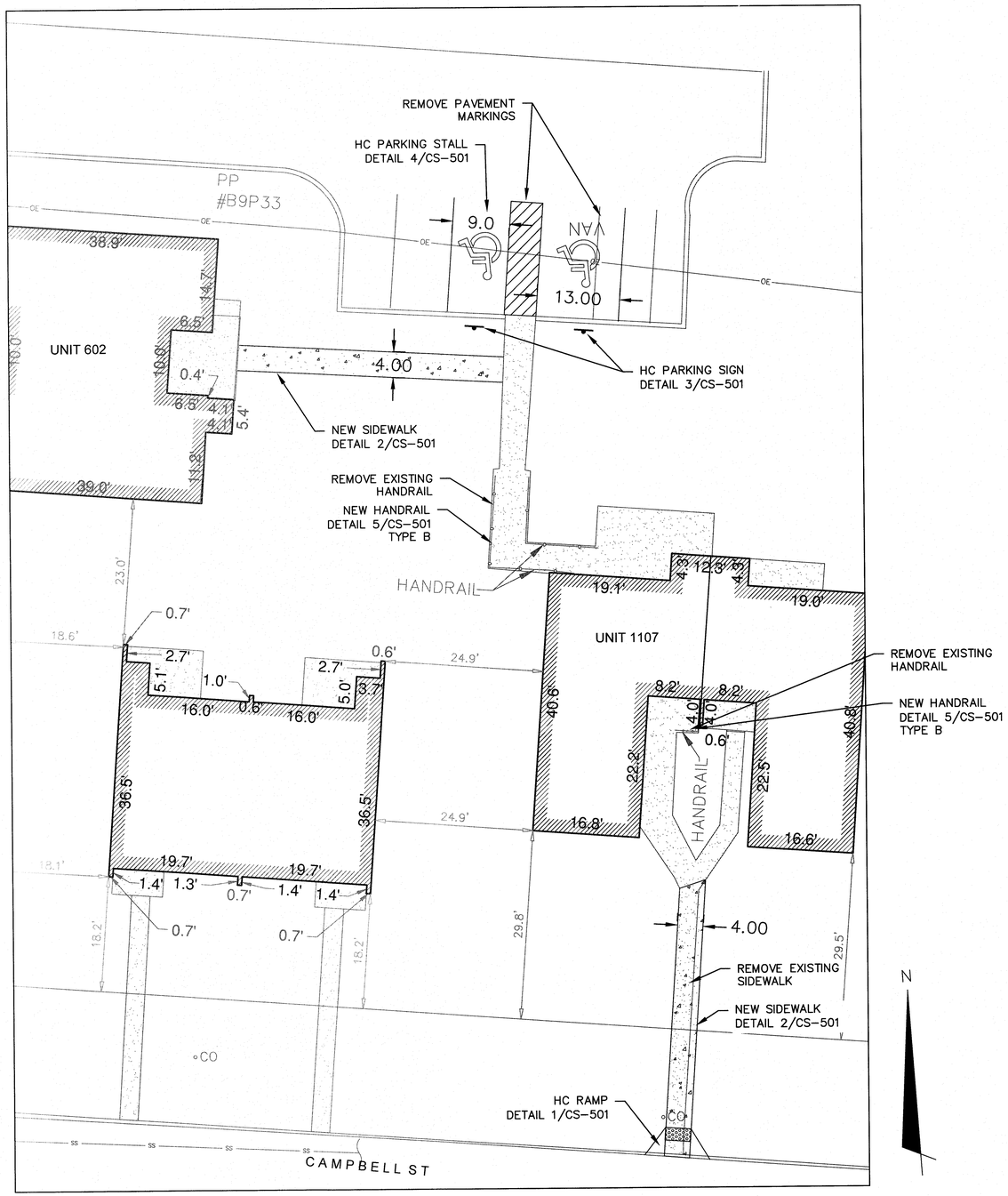
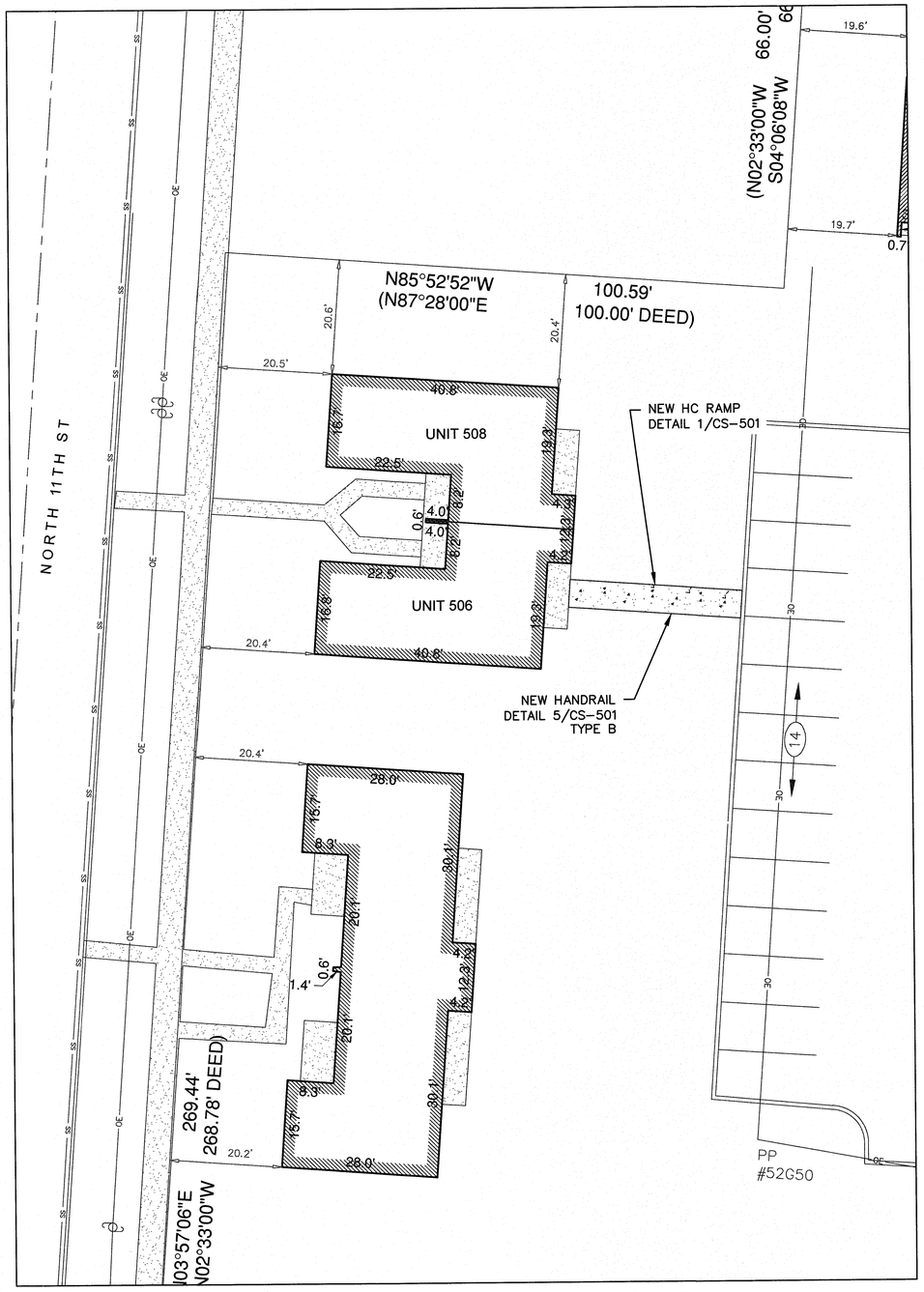


1 CS-504 UNITS 602 AND 1107 ADA UPGRADES

NOT TO SCALE



2 CS-504 UNIT 506 ADA UPGRADES

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		

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: Permit #:
Signed:

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RANKIN PLACE TERRACE APARTMENTS REHAB

WILMINGTON HOUSING AUTHORITY
WILMINGTON, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 033424 ENGINEER JAMES BRANCH SMITH

PROJECT 1129

SITE INVENTORY LARGER SCALE PLANS

APRIL 18, 2014

ISSUED FOR COW PERMITTING

CS-504

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