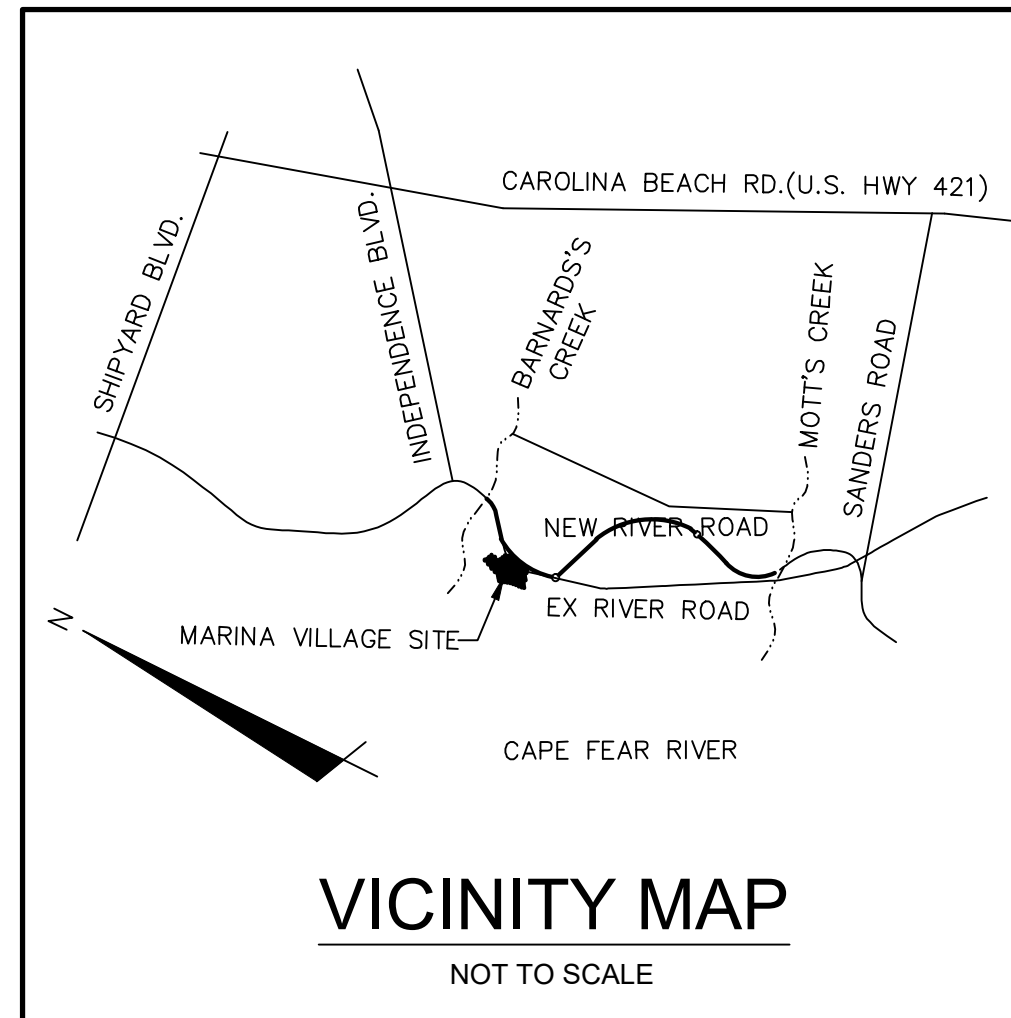


RIVERLIGHTS MARINA VILLAGE- PHASE 1B

CITY OF WILMINGTON, NC

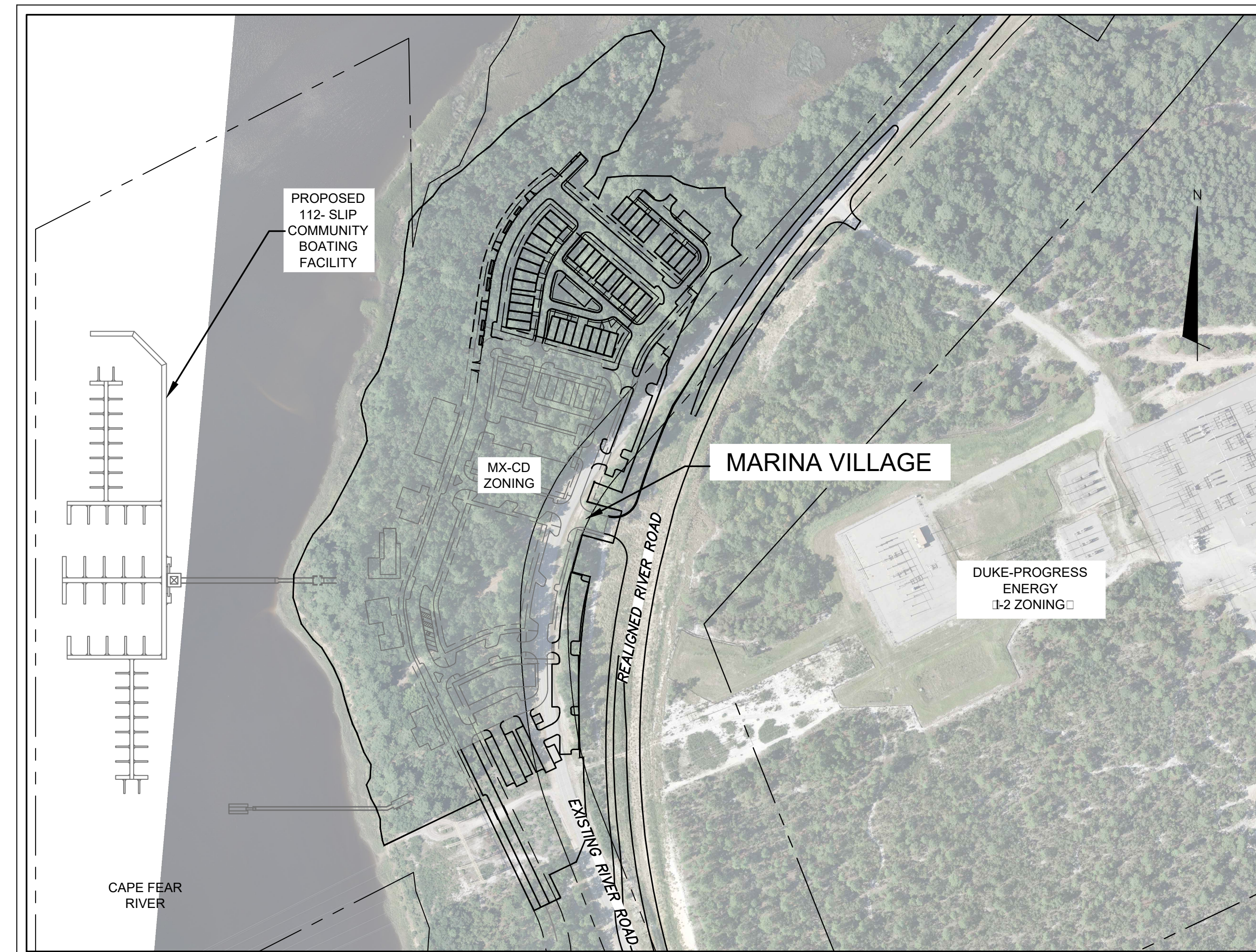
MARCH 17, 2016 [REVISED AUG. 23, 2016]

ISSUED FOR CONSTRUCTION



CITY AND AGENCY CONTACTS

- A. City of Wilmington**
 Planning Department
 102 North Third Street
 PO BOX 1810
 Wilmington, NC 28402-1810
 (910)341-7800
 Contact: Ron Satterfield
 Email: Ron.Satterfield@wilmingtonnc.gov
- B. City of Wilmington**
 Engineering
 212 Operations Center Drive
 PO BOX 1810
 Wilmington, NC 28402-1810
 (910) 341-7807
 Contact: Rob Gordon
 Email: Rob.Gordon@wilmingtonnc.gov
- C. New Hanover County**
 Sediment and Erosion Control
 230 Government Center Drive, Suite 160
 Wilmington, NC 28403
 (910) 798-7432
 Contact: Beth Wetherill
 Email: BWetherill@nhcgov.com
- D. Cape Fear Public Utility Authority**
 235 Government Center Drive
 Wilmington, NC 28403
 (910) 332-6626
 Contact: David Dailey
 Email: David.Dailey@cfpua.org
- E. NCDENR**
 Division of Environmental Health
 Public Water Supply Section
 1634 Mail Service Center
 Raleigh, NC 27699-1634
 (919) 707-9075
 Contact: Christyn Fertenbaugh
 Email: christyn.fertenbaugh@ncdenr.gov



VICINITY MAP
1"=200'

PROJECT DATA

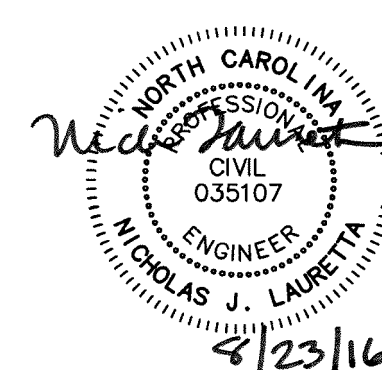
NAME OF PROJECT:
 RIVERLIGHTS - MARINA VILLAGE PHASE 1B
 WILMINGTON, NORTH CAROLINA

OWNER/DEVELOPER:
 NNP IV-CAPE FEAR RIVER, LLC
 3410 RIVER ROAD, SUITE 103
 WILMINGTON, NC 28412
 PHONE: (704)813-8697
 CONTACT: DOUG BROWN

PREPARED BY:
 MCKIM & CREED, INC
 243 NORTH FRONT ST
 WILMINGTON, NC 28401
 PHONE: (910)343-1048
 FAX: (910)251-8282
 CONTACT: NICK LAURETTA, PE, LEED AP
 EMAIL: NLAURETTA@MCKIMCREED.COM



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



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 _____

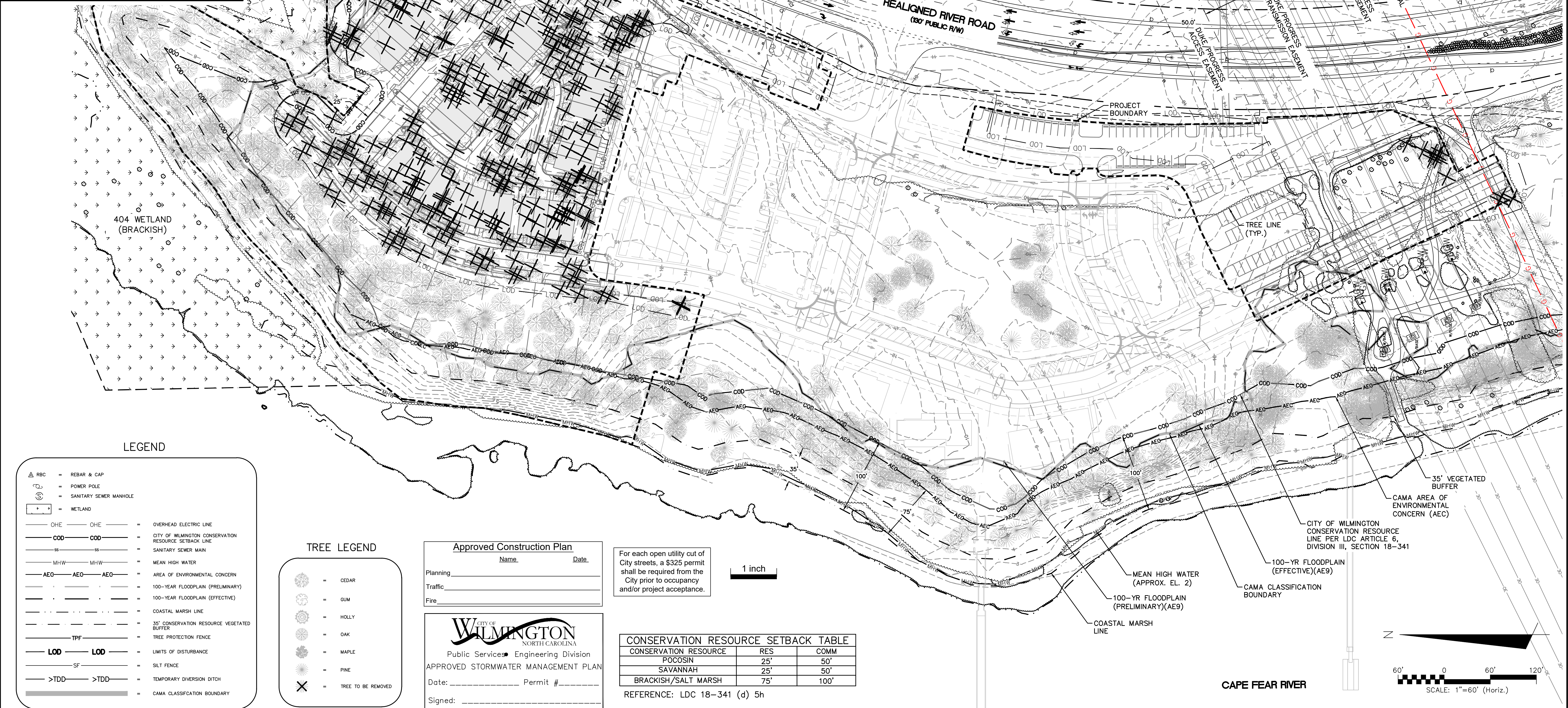
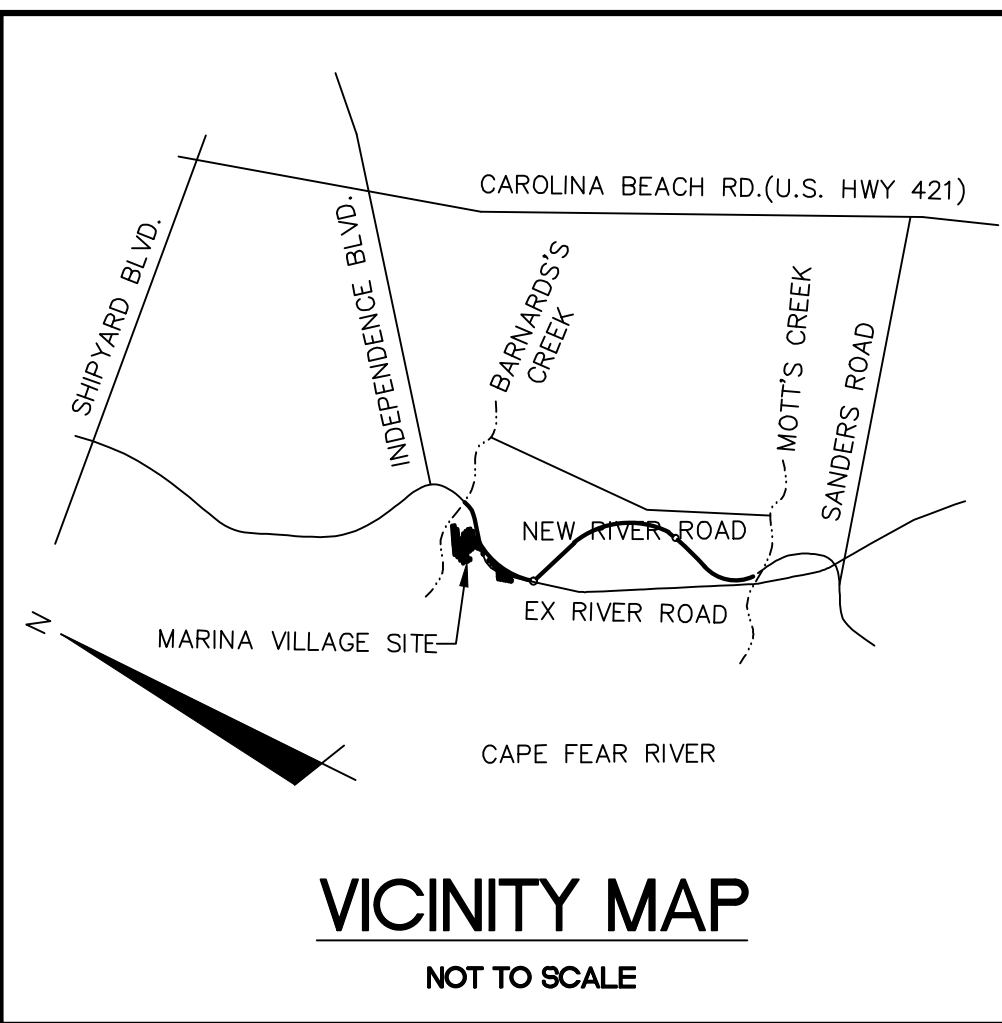
CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

SHEET INDEX		
SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
1	G-001	COVER
2	G-002	ABBREVIATIONS & LEGEND
3	G-003	GENERAL NOTES
4	GK-101	EXISTING CONDITIONS SITE INVENTORY MAP
5	CX-102	TREE REMOVAL PLAN
6	GE-101	PHASE 1 SEDIMENT & EROSION CONTROL PLAN
7	GE-102	PHASE 2 SEDIMENT & EROSION CONTROL PLAN
8	CG-101	GRADING PLAN NORTH
9	CG-102	GRADING PLAN SOUTH
10	CG-103	STORM DRAINAGE PLAN
11	CS-100	OVERALL SITE PLAN
12	CS-101	SITE PLAN
13	CS-102	SITE PLAN NORTH
14	CS-103	SITE PLAN SOUTH
15	CU-101	UTILITY PLAN
15A	CU-102	UTILITY PROFILE INDEX SHEET
16	CU-701	PLAN AND PROFILE
17	CU-702	PLAN AND PROFILE
18	CU-703	PLAN AND PROFILE
19	L-160	OVERALL PLANTING PLAN SHEET REFERENCE
20	L-161	PLANTING PLAN NORTH
21	L-162	PLANTING PLAN SOUTH
22	L-501	LANDSCAPE DETAILS
23	GN-501	STORMWATER MANAGEMENT DETAILS
24	CT-301	ROADWAY SECTIONS
25	GE-501	SEDIMENT & EROSION CONTROL DETAILS
26	GE-502	SEDIMENT & EROSION CONTROL DETAILS
27	CS-501	SITE DETAILS
28	CS-502	SITE DETAILS
29	GG-501	STORMWATER DRAINAGE DETAILS
30	GG-502	STORMWATER DRAINAGE DETAILS
31	GG-503	STORMWATER DRAINAGE DETAILS
32	WSD-1	UTILITY DETAILS
33	WSD-2	UTILITY DETAILS
34	SSD-1	UTILITY DETAILS
35	SSD-2	UTILITY DETAILS
36	SSD-3	UTILITY DETAILS
37	SSD-4	UTILITY DETAILS
38	PS-1	SIMPLEX PUMP STATION DETAILS





LEGEND

- △ RBC = REBAR & CAP
- = POWER POLE
- ⊙ = SANITARY SEWER MANHOLE
- = WETLAND
- OHE — = OVERHEAD ELECTRIC LINE
- COD — = CITY OF WILMINGTON CONSERVATION RESOURCE SETBACK LINE
- SS — = SANITARY SEWER MAIN
- MHW — = MEAN HIGH WATER
- AEG — = AREA OF ENVIRONMENTAL CONCERN
- — = 100-YEAR FLOODPLAIN (PRELIMINARY)
- — = 100-YEAR FLOODPLAIN (EFFECTIVE)
- — = COASTAL MARSH LINE
- — = 35' CONSERVATION RESOURCE VEGETATED BUFFER
- TPF — = TREE PROTECTION FENCE
- LOD — = LIMITS OF DISTURBANCE
- SF — = SILT FENCE
- >TDD — = TEMPORARY DIVERSION DITCH
- — = CAMA CLASSIFICATION BOUNDARY

TREE LEGEND

- = CEDAR
- = GUM
- = HOLLY
- = OAK
- = MAPLE
- = PINE
- ✗ = TREE TO BE REMOVED

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT 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.

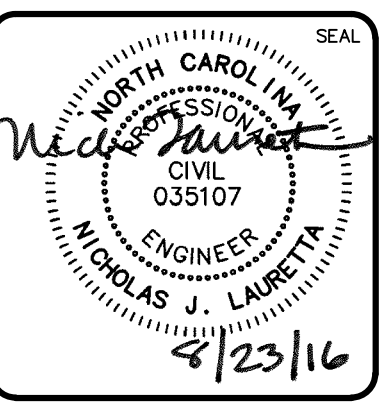
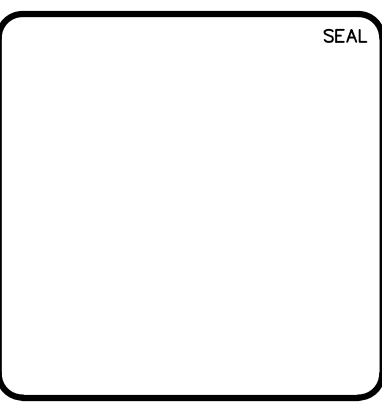
1 inch

CONSERVATION RESOURCE SETBACK TABLE

CONSERVATION RESOURCE	RES	COMM
POCOSIN	25'	50'
SAVANNAH	25'	50'
BRACKISH/SALT MARSH	75'	100'

REFERENCE: LDC 18-341 (d) 5h

REVNO.	DESCRIPTIONS	DATE
3	CITY OF WILMINGTON IRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CIVIL COMMENTS	04/11/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016



MCKIM & CREED

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Wilmington, North Carolina 28401
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License: F-1222
www.mckimcreed.com

RIVERLIGHTS

NORTH AMERICA SEKISUI HOUSE, LLC

**RIVERLIGHTS MARINA VILLAGE
PHASE 1B**

TREE REMOVAL PLAN

DATE: 17MAR16
MCE PROJ. #: 2735-0124
DRAWN: ALM
DESIGNED: NJL
CHECKED: KCBE
PROJ. MGR.: NJL

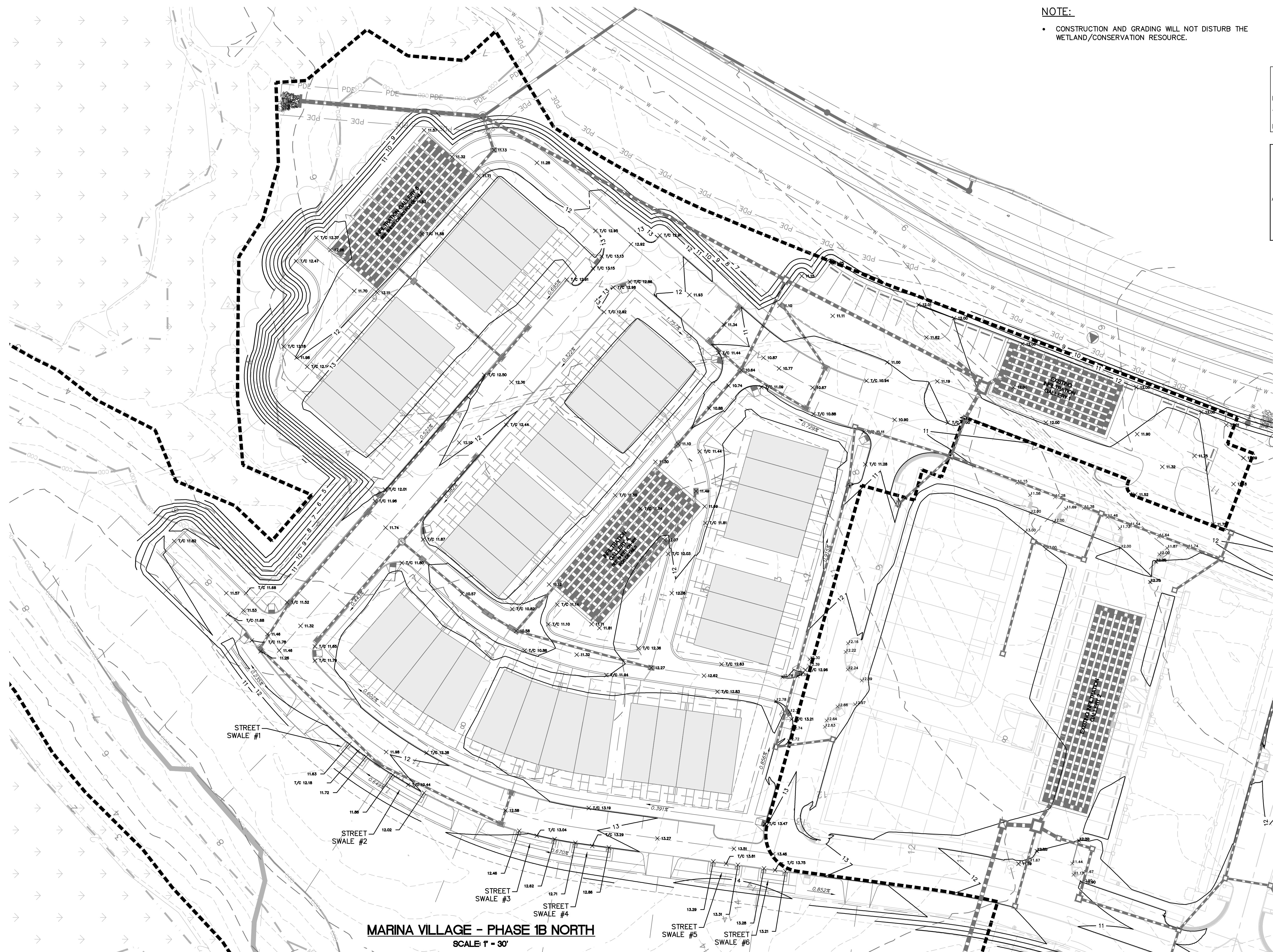
SCALE: HORIZONTAL: 1"=60'
VERTICAL: N/A

MAC FILE NUMBER: CX-102
DRAWING NUMBER: 5

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

REVISION: 3

S:\2735\2735 Marina Village\B0-Drawings\Phase 1B\CX-102.dwg, 8/23/2016 11:06:02 AM, rlawrence



NOTE:
 • CONSTRUCTION AND GRADING WILL NOT DISTURB THE WETLAND/CONSERVATION RESOURCE.

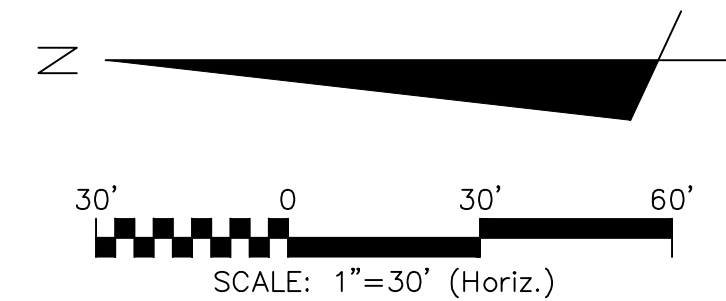
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

Approved Construction Plan

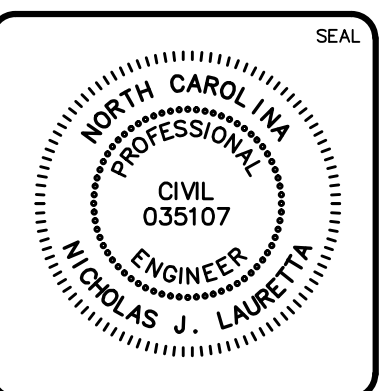
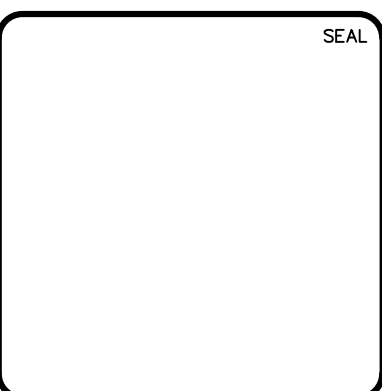
Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

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



MARINA VILLAGE - PHASE 1B NORTH
 SCALE 1" = 30'

REVNO.	DESCRIPTIONS	DATE
3	CITY OF WILMINGTON IRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CFRPA COMMENTS	04/11/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016



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 www.mckimcreed.com

RIVERLIGHTS
 NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS MARINA VILLAGE PHASE 1B
GRADING PLAN NORTH

DATE: 17MAR16	SCALE: CG-101	MAC FILE NUMBER: CG-101
MCE PROJ. # 2735-0124	HORIZONTAL: 1"=30'	DRAWING NUMBER: 8
DRAWN: ALM	VERTICAL: N/A	REVISION: 3
DESIGNED: NJL		
CHECKED: KCBE		
PROJ. MGR.: NJL		
STATUS: FINAL DESIGN		ISSUED FOR CONSTRUCTION

S:\2735\2735 Marina Village-28\Drawings\Phase 1B CG-101.dwg, 8/23/2016 11:08:40 AM, hmarista, 1:1

MATERIALS AND STANDARDS NOTES:

- ALL CATCH BASINS ARE NCDOT STD 840.01
- ALL DROP INLETS IN TRAFFIC AREAS ARE NCDOT STD 840.35. ALL DROP INLETS IN LANDSCAPE AREAS ARE CITY OF WILMINGTON STD 2-02 & 14-04.
- ALL STORM DRAINAGE PIPING TO BE CLASS III RCP, UNLESS OTHERWISE NOTED.

STRUCTURE TABLE - STRM - 14-15	
STR. NAME	DETAILS
CB-401	RIM = 12.33 SUMP = 9.85 INV OUT = 9.85W
CB-402	RIM = 12.39 SUMP = 9.74 INV IN = 9.74E INV OUT = 9.74NE
CB-403	RIM = 11.80 SUMP = 9.30 INV IN = 9.30SW INV OUT = 9.30NE
CB-404	RIM = 11.28 SUMP = 8.76 INV IN = 8.76SW INV OUT = 8.76SE
CB-405	RIM = 11.04 SUMP = 8.13 INV IN = 8.13NW INV OUT = 8.13SE
CB-405A	RIM = 11.03 SUMP = 8.02 INV OUT = 8.02SE
CB-406	RIM = 11.43 SUMP = 7.74 INV IN = 7.74NW INV OUT = 7.74SE
CB-409	RIM = 11.80 SUMP = 7.38 INV IN = 7.38NW INV OUT = 7.38SE
CB-410	RIM = 11.82 SUMP = 7.95 INV OUT = 7.95NW

STRUCTURE TABLE - STRM - 14-15	
STR. NAME	DETAILS
CB-417	RIM = 10.39 SUMP = 7.54 INV IN = 7.54SE INV OUT = 7.54NE
CB-418	RIM = 10.37 SUMP = 7.66 INV IN = 7.66NE INV OUT = 7.66NW
CB-419	RIM = 11.06 SUMP = 7.48 INV IN = 7.48SE INV OUT = 7.48SW
CB-420	RIM = 11.04 SUMP = 7.63 INV OUT = 7.63NW
CB-424	RIM = 12.22 SUMP = 7.29 INV OUT = 7.29NW
DI-407	RIM = 11.13 SUMP = 6.04 INV IN = 6.04E INV OUT = 7.10NW
DI-408	RIM = 12.09 SUMP = 7.20 INV IN = 7.20NW INV IN = 7.20SE INV OUT = 7.20NE
DI-411	RIM = 11.11 SUMP = 7.50 INV IN = 7.50NE INV OUT = 7.50SW
DI-412	RIM = 10.48 SUMP = 7.23 INV IN = 7.23NE INV OUT = 7.23SW

STRUCTURE TABLE - STRM - 14-15	
STR. NAME	DETAILS
DI-412A	RIM = 10.48 SUMP = 7.23 INV IN = 7.23NE INV OUT = 7.23SW
DI-413	RIM = 10.58 SUMP = 7.16 INV IN = 7.16NE INV OUT = 7.16SE
DI-413A	RIM = 10.55 SUMP = 7.61 INV IN = 7.16NE INV OUT = 7.16SW
DI-414	RIM = 12.27 SUMP = 7.61 INV OUT = 7.61N
DI-415	RIM = 11.49 SUMP = 6.08 INV OUT = 6.08W
DI-416	RIM = 10.64 SUMP = 6.34 INV IN = 7.34NE INV IN = 7.34NW INV OUT = 7.34SE
DI-421	RIM = 11.10 SUMP = 6.09 INV IN = 7.09SE INV OUT = 7.09NW
DI-422	RIM = 11.10 SUMP = 6.85 INV OUT = 7.85SW
DI-423	RIM = 10.91 SUMP = 6.07 INV IN = 7.07NW INV OUT = 7.07SE

STRUCTURE TABLE - STRM - 14-15	
STR. NAME	DETAILS
DI-424	RIM = 12.50 SUMP = 6.03 INV IN = 7.03SW INV OUT = 7.03NE
EW-4	RIM = 7.00
I-4A	RIM = 11.07 SUMP = 7.00 INV IN = 7.00NW
I-4B	RIM = 11.58 SUMP = 7.00 INV IN = 7.00E
I-4C	RIM = 11.25 SUMP = 7.00 INV IN = 7.00SE
I-5A	RIM = 11.81 SUMP = 6.95 INV IN = 7.00SW
I-5B	RIM = 11.33 SUMP = 7.00 INV IN = 7.00SE
JB-407A	RIM = 9.85 SUMP = 4.46 INV IN = 4.46SW INV OUT = 4.46N
JB-416A	RIM = 9.56 SUMP = 7.00 INV IN = 7.00NW INV IN = 7.00SW INV OUT = 7.00NE

STRUCTURE TABLE - STRM - 13B	
STR. NAME	DETAILS
DI-501	RIM = 12.11 SUMP = 7.57 INV OUT = 8.57N
DI-502	RIM = 10.75 SUMP = 7.14 INV IN = 8.14N INV OUT = 8.14S
DI-502A	RIM = 10.75 SUMP = 7.14 INV IN = 8.14N INV OUT = 8.14S
DI-503	RIM = 10.86 SUMP = 7.54 INV OUT = 8.54S
EX. CB-318	RIM = 10.48 SUMP = 7.76 INV IN = 7.76E
SDMH-2	RIM = 10.92 SUMP = 6.95 INV IN = 7.95S INV IN = 7.95E INV OUT = 7.95W

STRUCTURE TABLE - STRM - 14-15	
STR. NAME	DETAILS
SDMH-1	RIM = 11.46 SUMP = 7.59 INV IN = 7.59NE INV IN = 7.59NW INV OUT = 7.59SW

STORM DRAINAGE PIPE DATA TABLE - STRM - 14-15							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
SDMH-1	DI-411	17.50'	15"	RCP	0.51%	7.59'	7.50'
JB-416A	JB-407A	222.59'	24"	RCP	1.14%	7.00'	4.46'
JB-407A	EW-4	118.34'	30"	RCP	0.48%	4.46'	3.89'
DI-424	I-5A	15.00'	15"	CAP	0.22%	7.03'	7.00'
DI-423	I-4A	16.00'	15"	CAP	0.42%	7.07'	7.00'
DI-422	CB-418	48.51'	15"	CL IV RCP	0.40%	7.85'	7.66'
DI-421	I-4C	21.30'	18"	CAP	0.40%	7.09'	7.00'
DI-416	JB-416A	64.81'	18"	DUAL 18" RCP	0.52%	7.34'	7.00'
DI-416	DI-421	62.85'	18"	RCP	0.40%	7.34'	7.09'
DI-415	I-4B	6.39'	15"	CAP	1.25%	7.08'	7.00'
DI-414	DI-413	90.58'	15"	RCP	0.50%	7.61'	7.16'
DI-413A	DI-413	4.01'	15"	RCP	0.00%	7.16'	7.16'
DI-413	DI-422	22.64'	15"	RCP	0.42%	7.16'	7.07'
DI-412A	DI-413A	15.31'	15"	RCP	0.46%	7.23'	7.16'
DI-412	DI-412A	3.97'	15"	RCP	0.00%	7.23'	7.23'
DI-411	DI-412	53.12'	15"	RCP	0.51%	7.50'	7.23'
DI-408	DI-424	75.34'	15"	RCP	0.22%	7.20'	7.03'
DI-407	JB-407A	22.85'	18"	RCP	2.54%	6.04'	5.46'
DI-407	I-5B	20.91'	18"	CAP	0.50%	7.10'	7.00'
CB-424	DI-408	25.50'	15"	RCP	0.34%	7.29'	7.20'
CB-420	CB-419	29.30'	15"	RCP	0.50%	7.63'	7.48'

STORM DRAINAGE PIPE DATA TABLE - STRM - 14-15							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
CB-419	DI-416	27.40'	15"	RCP	0.50%	7.48'	7.34'
CB-418	CB-417	29.30'	15"	CL IV RCP	0.40%	7.66'	7.54'
CB-417	DI-416	48.99'	15"	CL IV RCP	0.40%	7.54'	7.34'
CB-410	SDMH-1	72.71'	15"	RCP	0.50%	7.95'	7.59'
CB-409	DI-408	59.62'	15"	RCP	0.30%	7.38'	7.20'
CB-406	CB-409	72.73'	15"	RCP	0.50%	7.74'	7.38'
CB-405A	SDMH-1	84.00'	15"	RCP	0.51%	8.02'	7.59'
CB-405	CB-406	78.03'	15"	RCP	0.50%	8.13'	7.74'
CB-404	CB-405	34.46'	15"	CL IV RCP	1.83%	8.76'	8.13'
CB-403	CB-404	106.80'	15"	CL IV RCP	0.50%	9.30'	8.76'
CB-402	CB-403	88.45'	15"	CL IV RCP	0.50%	9.74'	9.30'
CB-401	CB-402	21.30'	15"	CL IV RCP	0.50%	9.85'	9.74'
JB-416A	JB-416A	138.32'	24"	RCP	0.06%	7.08'	7.00'

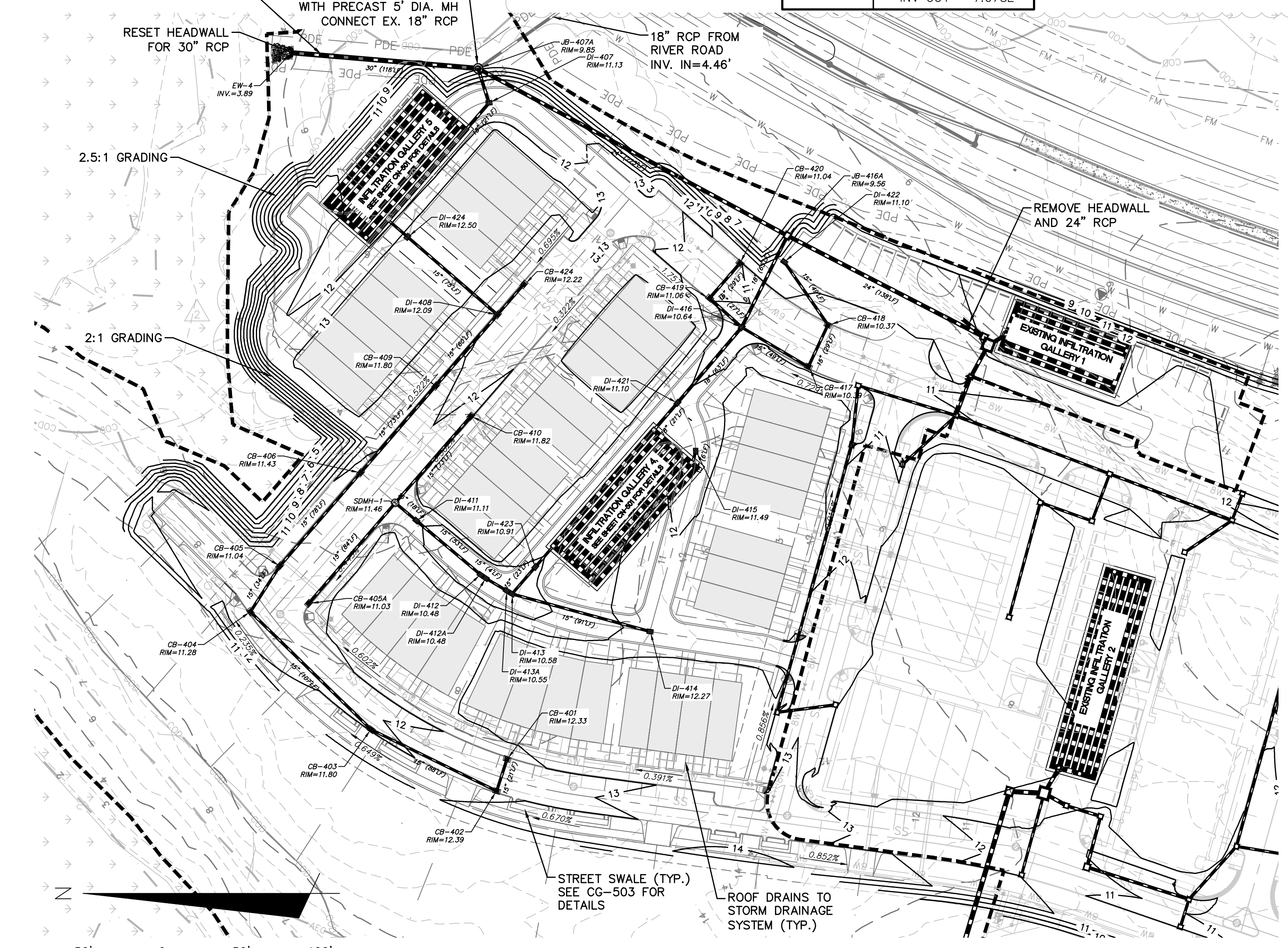
STORM DRAINAGE PIPE DATA TABLE - STRM - 13B							
FROM	TO	LENGTH	SIZE	PIPE TYPE	SLOPE	UPSTREAM INVERT	DOWNSTREAM INVERT
SDMH-2	EX. CB-318	40.27'	15"	RCP	0.48%	7.95'	7.76'
DI-503	DI-502A	109.99'	15"	CL IV RCP	0.36%	8.54'	8.14'
DI-502A	DI-502	4.01'	15"	CL IV RCP	0.00%	8.14'	8.14'
DI-502	SDMH-2	37.99'	15"	CL IV RCP	0.50%	8.14'	7.95'
DI-501	SDMH-2	124.80'	15"	RCP	0.50%	8.57'	7.95'

REPLACE EX. 18" RCP WITH 30" RCP ALONG SAME ALIGNMENT AND ELEVATIONS

REPLACE EX. MH WITH PRECAST 5' DIA. MH CONNECT EX. 18" RCP

18" RCP FROM RIVER ROAD INV. IN=4.46'

REMOVE HEADWALL AND 24" RCP

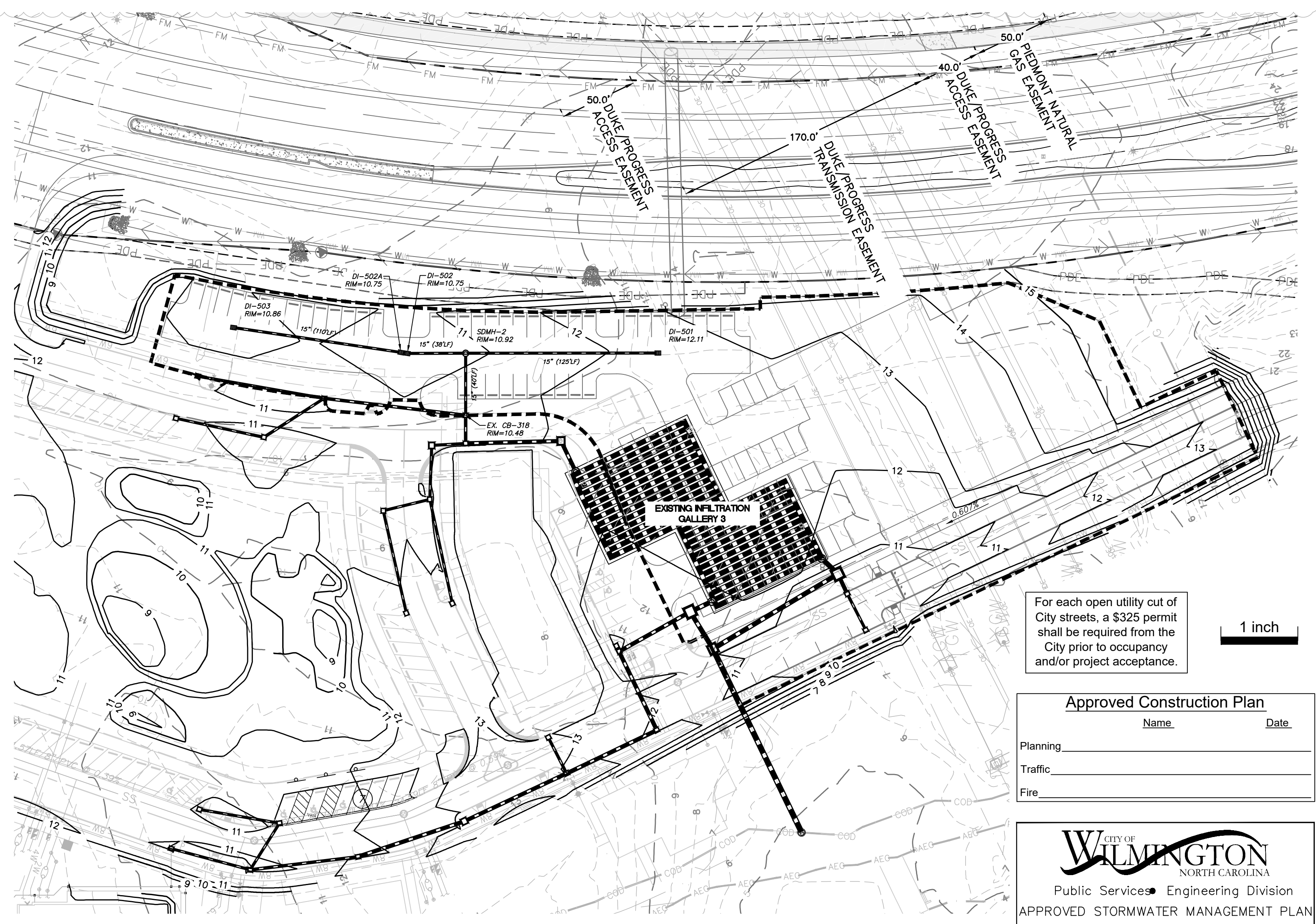


MARINA VILLAGE - PHASE 1B NORTH

SCALE: 1" = 50'

NOTE:

- CONSTRUCTION AND GRADING WILL NOT DISTURB THE WETLAND/CONSERVATION RESOURCE.



MARINA VILLAGE - PHASE 1B SOUTH

SCALE: 1" = 50'

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 _____

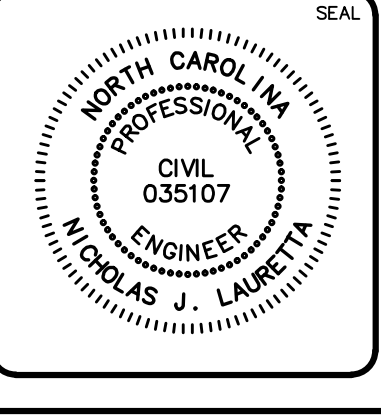
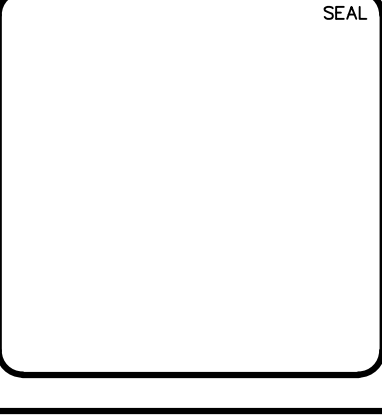
Planning _____

Traffic _____

Fire _____

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

REVNO.	DESCRIPTIONS	DATE
3	CITY OF WILMINGTON IRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CIPAL COMMENTS	06/17/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016

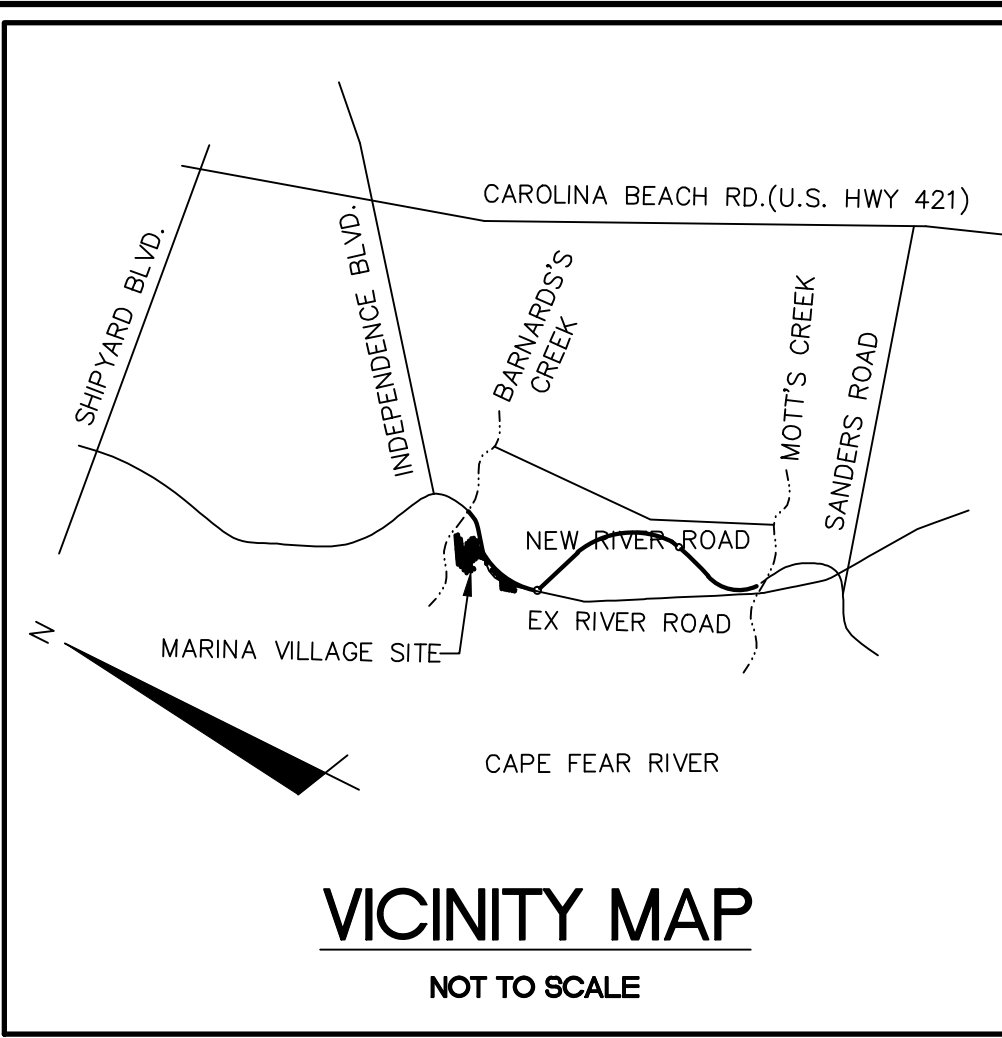
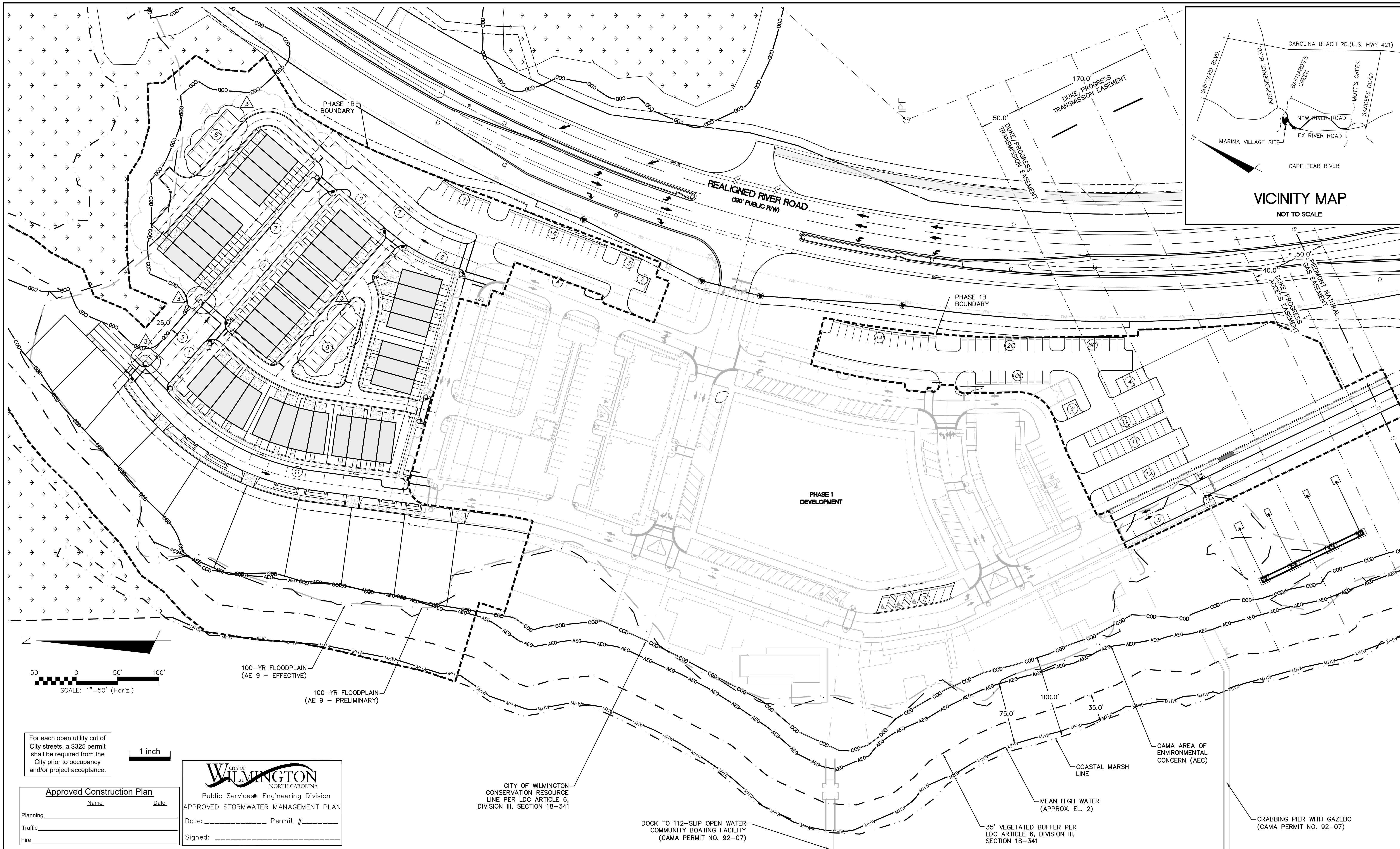


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www.mckimcreed.com

RIVERLIGHTS
NASH
NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS MARINA VILLAGE PHASE 1B
STORM DRAINAGE PLAN

DATE: 17MAR16	SCALE: 1"=50'	MAC FILE NUMBER: CG-103
MCE PROJ. # 2735-0124	HORIZONTAL: 1"=50'	DRAWING NUMBER
DRAWN: ALM	VERTICAL: N/A	10
DESIGNED: NJL		
CHECKED: KCBE		
PROJ. MGR.: NJL		
STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION	REVISION 3



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

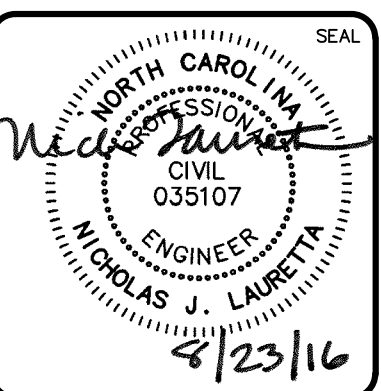
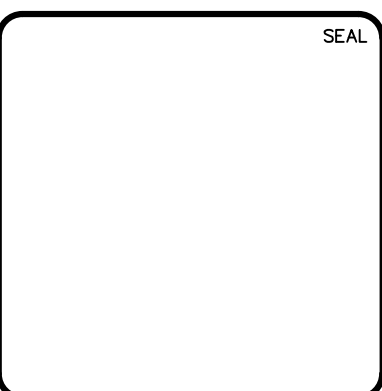
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

CITY OF WILMINGTON
CONSERVATION RESOURCE
LINE PER LDC ARTICLE 6,
DIVISION III, SECTION 18-341

REVNO.	DESCRIPTIONS	DATE
3	CITY OF WILMINGTON IRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CIVIL COMMENTS	04/17/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016



MCKIM & CREED

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

RIVERLIGHTS

NORTH AMERICA SEKISUI HOUSE, LLC

**RIVERLIGHTS MARINA VILLAGE
PHASE 1B**

OVERALL SITE PLAN

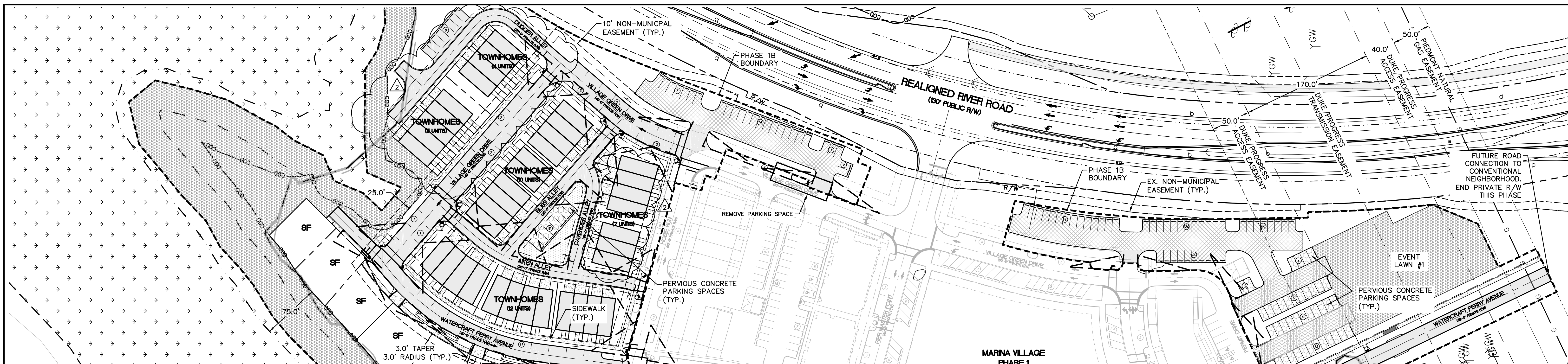
DATE: 17MAR16
MCE PROJ. # 2735-0124
DRAWN: ALM
DESIGNED: NJL
CHECKED: KCBE
PROJ. MGR.: NJL

SCALE: HORIZONTAL: 1"=50'
VERTICAL: N/A

MAC FILE NUMBER: CS-100
DRAWING NUMBER: 11
REVISION: 3

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION

S:\2735\2735 Marina Village-20-Drawings-Phase 1B-CS-100.dwg, 8/23/2016 11:08:43 AM, rlawrence



SITE DATA TABLE		MARINA VILLAGE - PHASE 1B	
PARCEL ADDRESS	4410 RIVER ROAD		
TAX PARCEL IDENTIFICATION NUMBER	R07000-006-009-000		
ZONING DISTRICT	CD-MX		
CAMA LAND USE CLASSIFICATION	TRANSITION AND CONSERVATION		
TOTAL ACREAGE WITHIN THE RIVERLIGHTS BOUNDARY	1,329.41 ACRES (57,909,100 SF)		
TOTAL ACREAGE WITHIN THE MARINA VILLAGE BOUNDARY	38.67 ACRES (1,684,343 SF)		
TOTAL ACREAGE OF COASTAL WETLANDS	14.57 ACRES (634,715 SF)		
TOTAL PROJECT AREA (STORMWATER PROJECT AREA)	24.10 ACRES (1,049,628 SF)		
TOTAL ACREAGE OF NON-COASTAL WETLANDS (ISOLATED/404)	76,797 SF (1.76 ACRES)		
TOTAL ACREAGE WITHIN THE MARINA VILLAGE - PHASE 1B	9.84 ACRES (428,668 SF)		
BUILDING SETBACKS AND SEPARATIONS (MX ZONING)	REQUIRED	PROPOSED	
FRONT	N/A	N/A	
REAR	N/A	N/A	
SIDE (INTERIOR)	N/A	N/A	
SIDE (CORNER)	N/A	N/A	
TOTAL BUILDING(S) SIZE (SQUARE FOOTAGE)	68,000 SF		
NC BUILDING CODE CONSTRUCTION TYPE	VB		
BUILDING LOT COVERAGE	16%		
NUMBER OF BUILDINGS	38 DUPLEX TOWNHOUSE		
TOTAL AMOUNT OF DISTURBED AREA	5.24 AC (228,450 SF)		
TOTAL ACRES WITHIN 100-YR FLOODPLAIN/BELOW MHW MARK	0.01 ACRES (513 SF)		
TOTAL ACRES WITHIN WETLANDS (DWQ PROJECT #07-1335)	N/A		

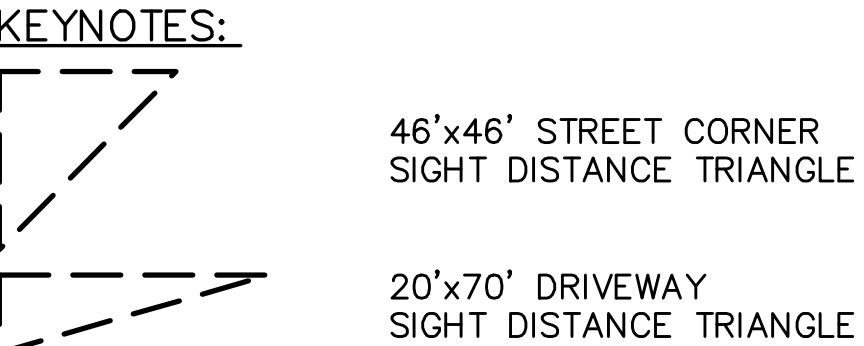
IMPERVIOUS AREA (EXISTING - PHASE 1)			
ROOF TOPS	52,249	SF	
ROADWAYS	92,792	SF	
PARKING	0	SF	
SIDEWALKS	35,408	SF	
OTHER	0	SF	
TOTAL PRE DEVELOPMENT/%	180,449/17.2	SF/%	

IMPERVIOUS AREA (PROPOSED)			
ROOF TOPS	71,516	SF	
ROADWAYS	51,562	SF	
PARKING	43,575	SF	
PERVIOUS PARKING	0	SF	
PERVIOUS PARKING (75% REDUCTION)	0	SF	
SIDEWALKS	22,078	SF	
PERVIOUS SIDEWALK	0	SF	
PERVIOUS SIDEWALK (75% REDUCTION)	0	SF	
FUTURE ALLOTMENT	0	SF	
OTHER	0	SF	
TOTAL S.F. (ONSITE IMPERVIOUS AREA)	188,731	SF	
PERCENTAGE (ONSITE IMPERVIOUS AREA/ONSITE AREA)	18.0	%	
PERCENTAGE (EXIST. ONSITE IMPERVIOUS AREA/ONSITE AREA)	17.2	%	
TOTAL SQUARE FOOTAGE OF IMPERVIOUS SURFACES SHOWN IN THE STREET YARD	0	SF	

PARKING CALCULATIONS		
MINIMUM NUMBER OF SPACES REQUIRED	N/A	
MAXIMUM NUMBER OF SPACES ALLOWED	494	
(48) TOWNHOMES (2.5 SPACES/UNIT)	120	
(24) APARTMENTS (2.5 SPACES/UNIT)	60	
(10) SINGLE FAMILY (2.5 SPACES/UNIT)	25	
RESTAURANTS (1 SPACE / 65 SF GFA)	151	
ART GALLERY (1 SPACE / 250 SF GFA)	31	
RIVER HOUSE (1 SPACE / 65 SF GFA)	31	
RETAIL (1 SPACE / 200 SF GFA)	20	
MARINA (1 SPACE / 2 WET SLIPS)	56	
PARKING SPACES PROVIDED (PHASE 1B)	172	
PARKING SPACES PROVIDED (PHASE 1)	180	
PARKING SPACES PROVIDED (TOTAL)	352	
COMPACT CAR PARKING SPACES	30	
BICYCLE PARKING SPACES REQUIRED	20	
BICYCLE PARKING SPACES PROVIDED	20	
HANDICAP SPACES REQUIRED	9	
HANDICAP SPACES PROVIDED	9	

SURFACE MATERIAL LEGEND	
	ASPHALT - STREET SECTION
	ASPHALT - DRIVE AISLE
	GRAVEL - PARKING LOT
	PERVIOUS CONCRETE
	ROOFTOP
	SIDEWALK
	COMMON SPACE
	OPEN SPACE

PARKING NOTE:
 • ALL BICYCLE PARKING IS PROVIDED IN PHASE 1.



NOTE:
 ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" - 10'

WATER & SEWER DEMAND	
WATER DEMAND	17,280 GDP
SANITARY SEWER DEMAND	17,280 GDP

TOTAL ACREAGE OF MARINA VILLAGE - PHASE 1B WITHIN COD: 2.06 ACRES (89,951 SF)

TOTAL ACREAGE OF MARINA VILLAGE - PHASE 1B ENCROACHMENT INTO THE COD: 0 ACRES (0 SF)

COMMON SPACE CALCULATIONS	
TOTAL COMMON SPACE REQUIRED	18.47 ACRES (804,640 SF)*
TOTAL COMMON SPACE PROPOSED	0.08 ACRES (3,634 SF)

OPEN SPACE CALCULATIONS*	
TOTAL OPEN SPACE REQUIRED	46.18 ACRES (2,011,601 SF)*
TOTAL OPEN SPACE PROPOSED	2.82 ACRES (122,991 SF)

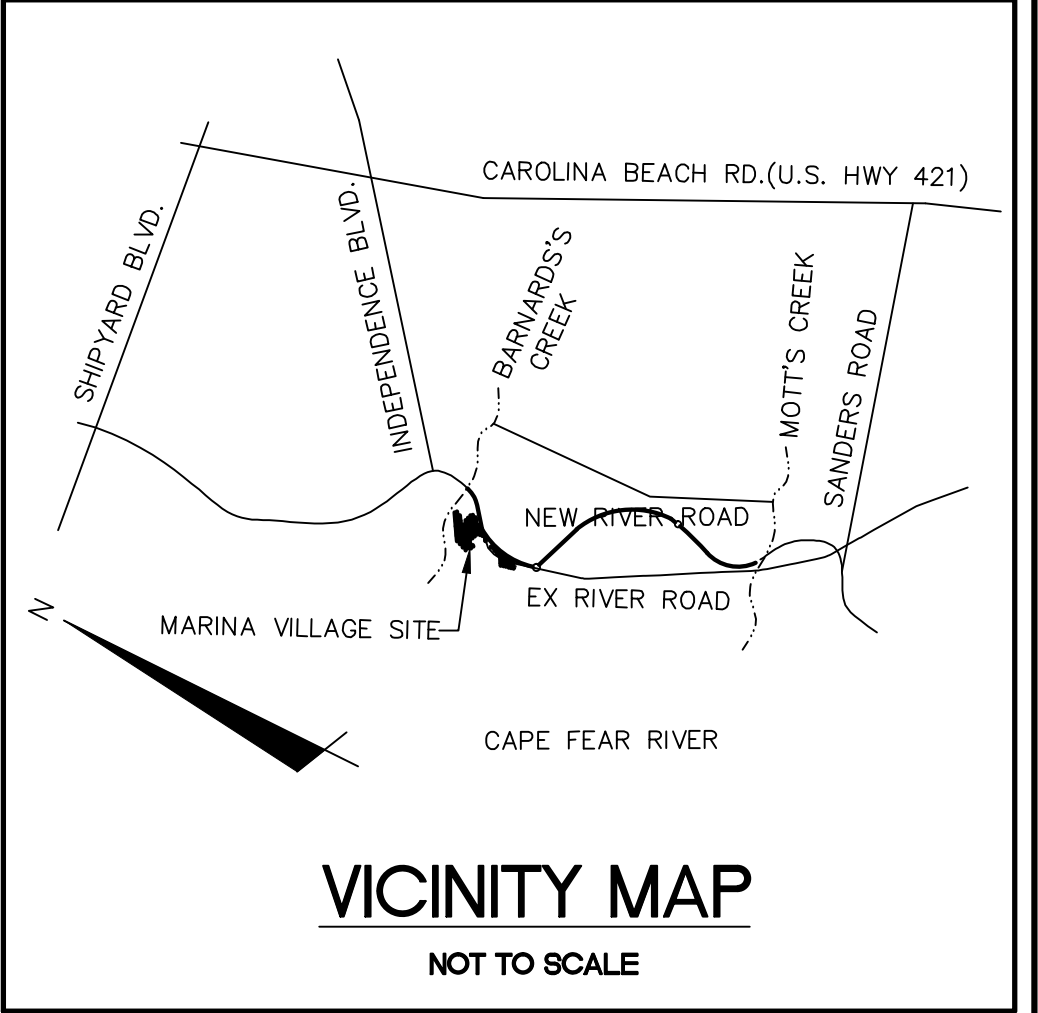
*PROPOSED MX-CD CLUSTER FOR ENTIRE RIVER LIGHTS DEVELOPMENT = 184.7 ACRES
 OPEN SPACE AND COMMON SPACE ACRES REQUIRED FOR ENTIRE RIVERLIGHTS DEVELOPMENT
 @ 25% OPEN SPACE AND 10% COMMON SPACE = 46.18 AC (OPEN) AND 18.47 AC (COMMON)

REVNO.	DESCRIPTIONS	DATE
3	CITY OF WILMINGTON IRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CIPRA COMMENTS	06/17/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016

RIVERLIGHTS MARINA VILLAGE PHASE 1B

SITE PLAN

DATE: 17MAR16	SCALE: CS-101
MCE PROJ. # 2735-0124	HORIZONTAL: 1"=60'
DRAWN: ALM	VERTICAL: N/A
DESIGNED: NJL	REVISION: 12
CHECKED: KCB	
PROJ. MGR.: NJL	
STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION
REVISION: 3	



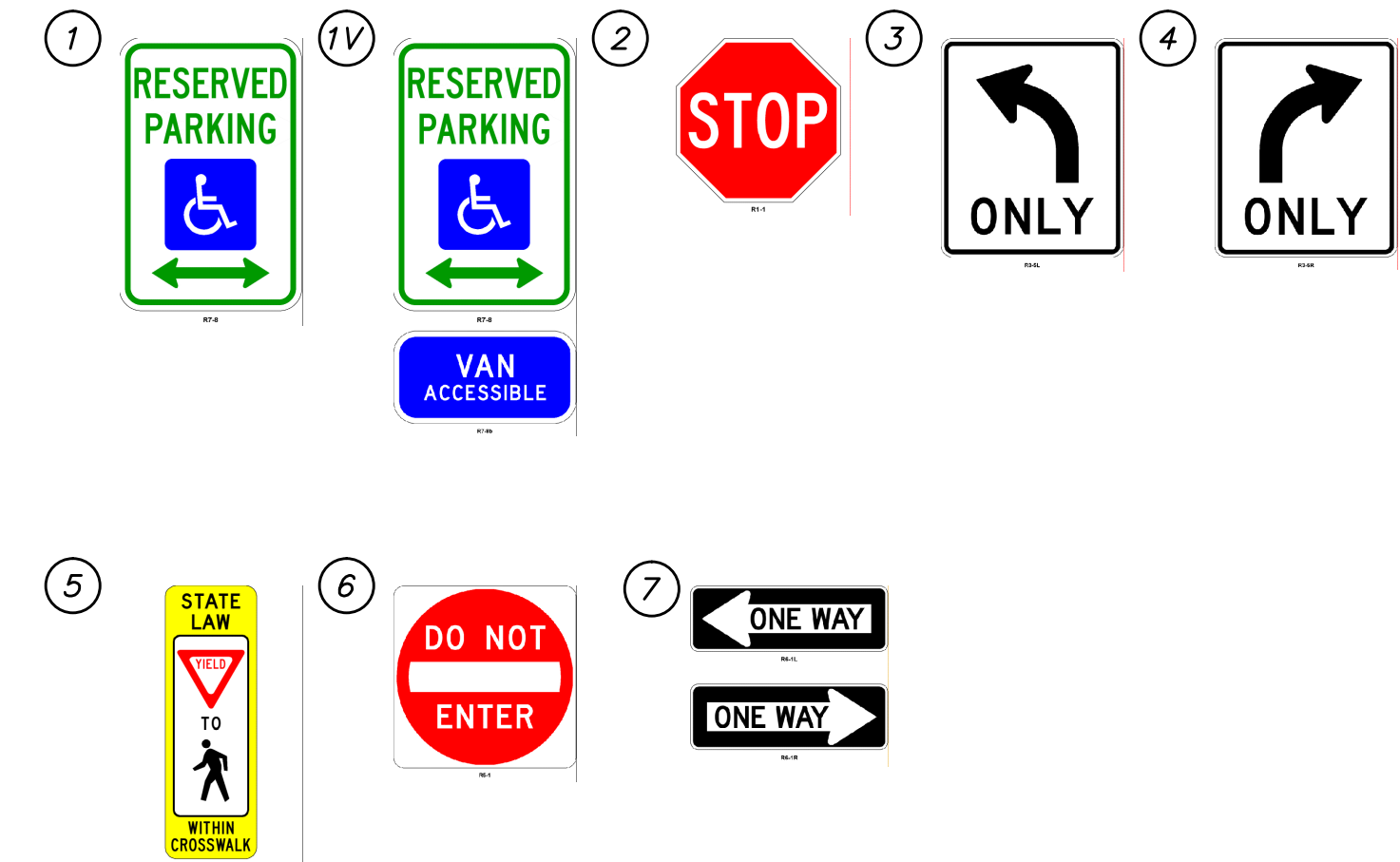
S:\2735\24 Marina Village\20-Drawings\Phase 1B CS-101.dwg, 8/23/2016 11:08:16 AM, rlawrence

CITY OF WILMINGTON NOTES:

- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- 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.
- 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.
- ZERO LOT LINES ARE PERMITTED.
- BUILDINGS LOCATED ON THE PERIPHERY OF THE MX DISTRICT SHALL BE SET BACK A MINIMUM OF 20 (TWENTY) FEET FROM THE MX DISTRICT BOUNDARY.
- ZONING AND LAND USE OF ADJACENT PROPERTIES IS AS FOLLOWS:
 NORTH - FUTURE MX-CD / TRANSITION
 SOUTH - FUTURE MX-CD / TRANSITION AND CONSERVATION AREA
 WEST - FUTURE MX-CD / TRANSITION
 EAST - I-2 / TRANSITION AND CONSERVATION AREA
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATION MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COSTS OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
- IF THESE UNITS ARE SOLD AT ANY POINT, THE BUYER MUST RECEIVE A SUBDIVISION STREET DISCLOSURE STATEMENT.

GENERAL NOTES:

- FLOODPLAIN INFORMATION WAS OBTAINED FROM NC FLOODPLAIN MAPPING FLOOD RISK INFORMATION SYSTEM PROGRAM. RIVERLIGHTS IS LOCATED WITHIN FIRM MAP 3720312400K, PANEL 3124 AS REVISED JUNE 02, 2006.
- ITEMS DESIGNATED AS "PROPOSED" ARE PART OF THE RIVER ROAD REALIGNMENT PROJECT THAT IS CURRENTLY UNDER CONSTRUCTION. RIVER ROAD CONSTRUCTION TO BE COMPLETE SPRING 2016.
- WETLANDS SHOWN IN THIS PORTION OF RIVERLIGHTS WERE DESCRIBED AS BRACKISH/SALT MARSH AND POCOSIN WETLANDS AND CONSERVATION RESOURCE SETBACK LINES WERE GENERATED AS 100' AND 25', RESPECTIVELY, MINIMUM OUTSIDE OF THE RESOURCE.
- FINISHED FLOOR ELEVATIONS OFF ALL INHABITABLE STRUCTURES WILL BE MIN. 2- FEET ABOVE BASE FLOOD ELEVATION
- RIVERLIGHTS PHASE 1 MARINA VILLAGE COMMUNITY DOES NOT CONTAIN ANY LOCAL, STATE, OR FEDERALLY RECOGNIZED HISTORIC STRUCTURES OR ARCHEOLOGICAL SITES ON SITE. RIVERLIGHTS WAS ISSUED A NOTICE OF NO FURTHER ACTION LETTER DATED JUNE 2, 2008 FOLLOWING COMPLETION OF AN EA/SERA DOCUMENT.
- EXISTING THOROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS AND TRANSITS FACILITIES DO EXIST ON THE ADJACENT MARINA VILLAGE PHASE 1 SITE.



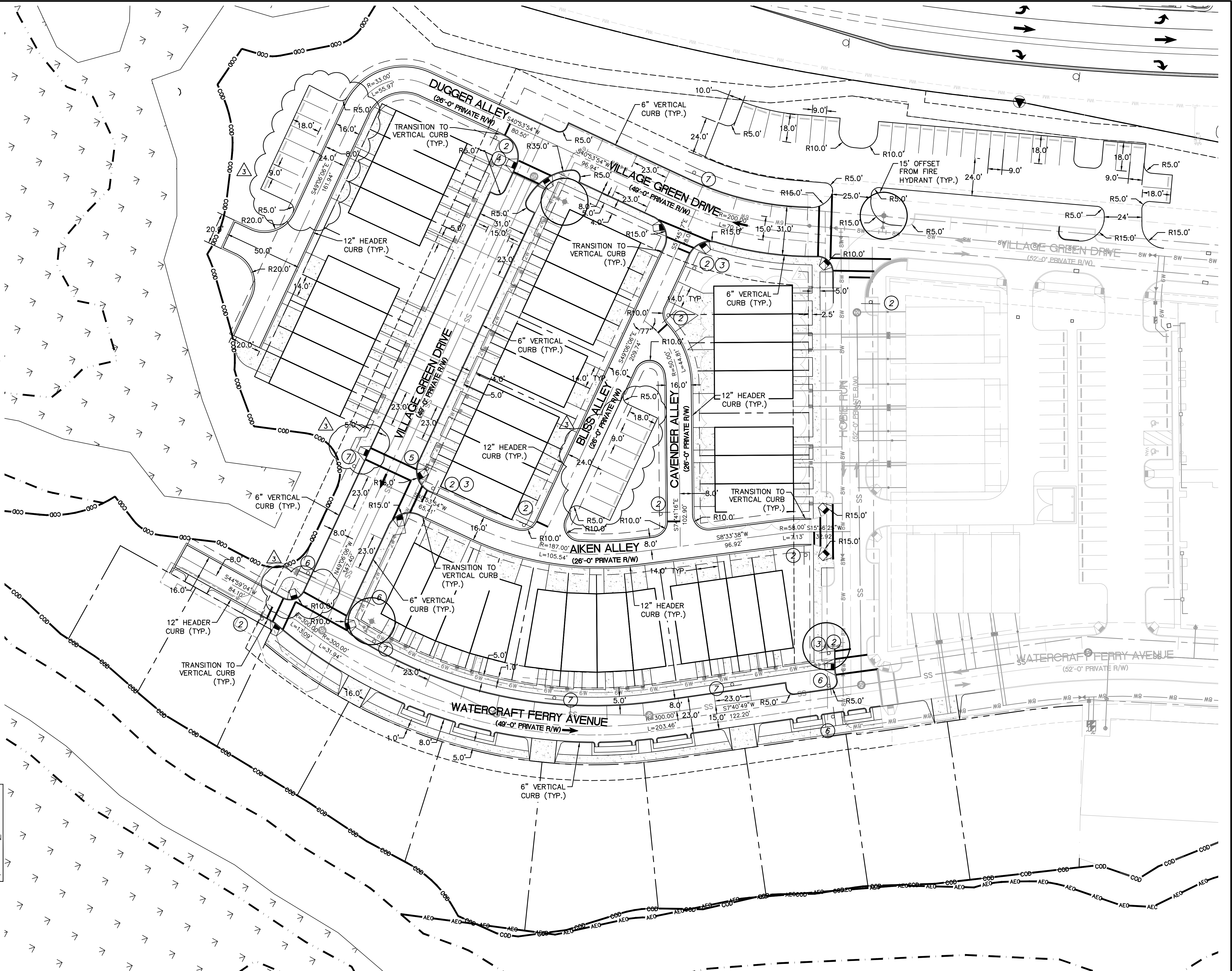
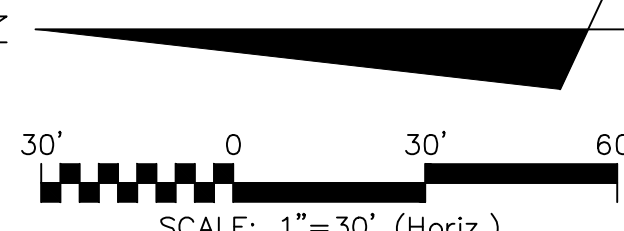
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

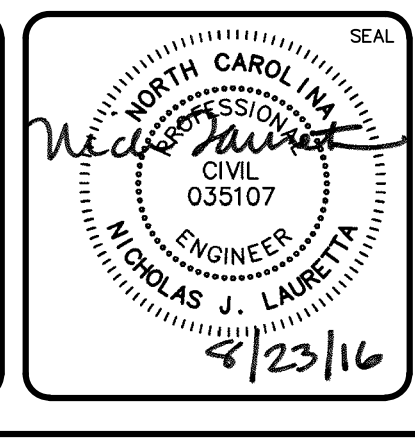
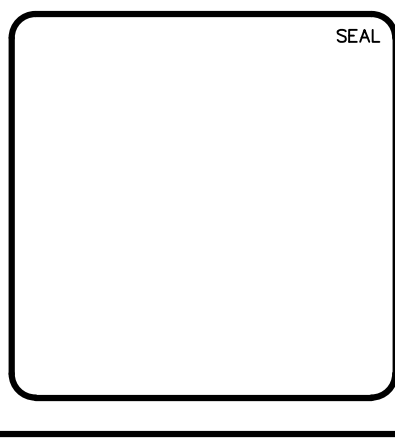
Approved Construction Plan

Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services - Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____



REVNO.	DESCRIPTIONS / REVISIONS	DATE
3	CITY OF WILMINGTON TRC COMMENTS	08/23/2016
2	SITE PLAN AND STORM DRAINAGE REVISIONS	07/19/2016
1	CITY COMMENTS	06/17/2016
0	ISSUED FOR CONSTRUCTION	03/17/2016

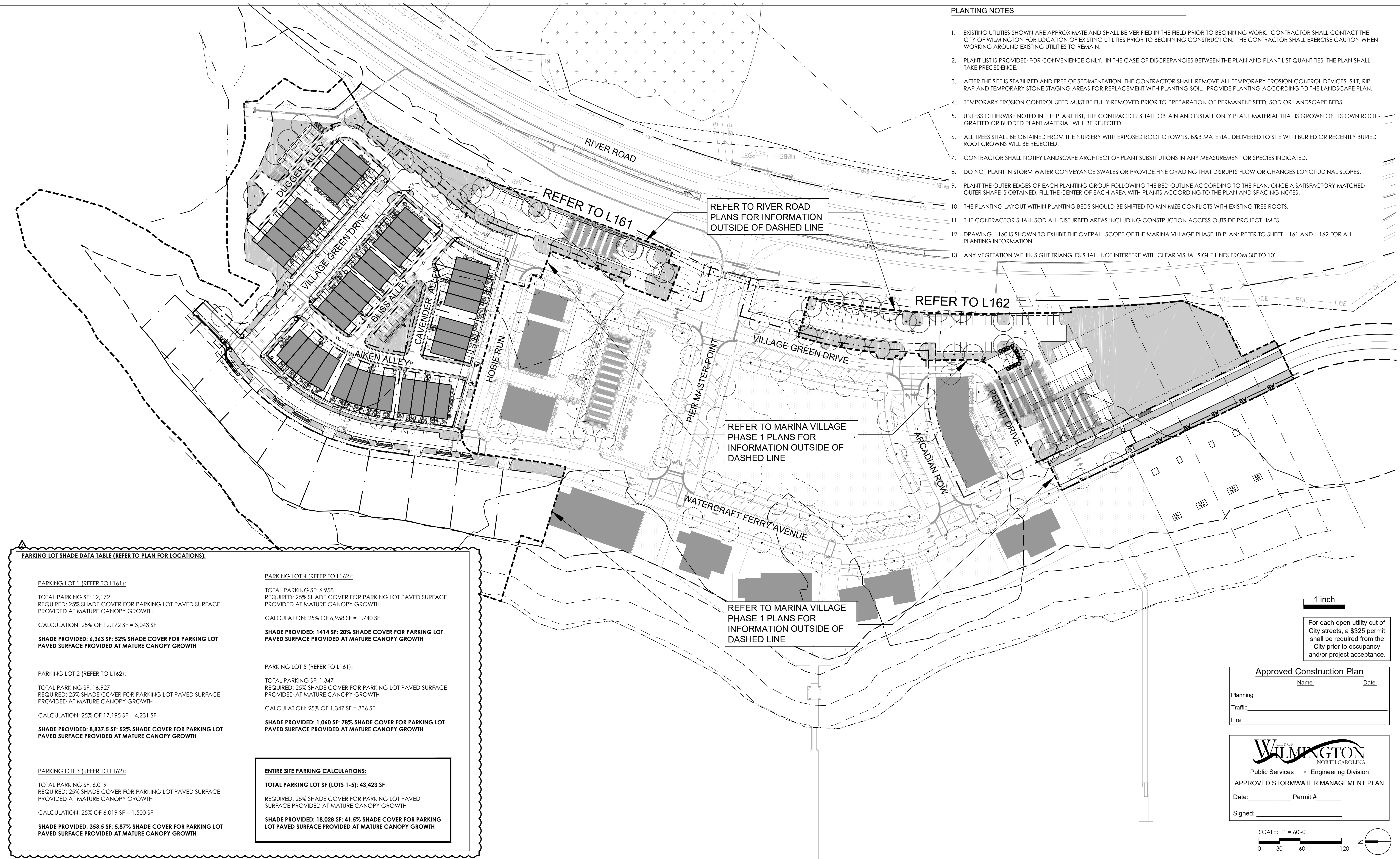


RIVERLIGHTS MARINA VILLAGE PHASE 1B
 SITE PLAN NORTH

DATE: 17MAR16	SCALE: 1"=30'	MAC FILE NUMBER: CS-102
MCE PROJ. # 2735-0124	HORIZONTAL: 1"=30'	DRAWING NUMBER: 13
DRAWN: ALM	VERTICAL: N/A	
DESIGNED: NJL		
CHECKED: KCBE		
PROJ. MGR.: NJL		
STATUS: FINAL DESIGN		REVISION: 3
ISSUED FOR CONSTRUCTION		

PLANTING NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT THE CITY OF WILMINGTON FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
- PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE.
- AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES, SILT, RIP RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL. PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.
- TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.
- UNLESS OTHERWISE NOTED IN THE PLANT LIST, THE CONTRACTOR SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT - GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
- ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF PLANT SUBSTITUTIONS IN ANY MEASUREMENT OR SPECIES INDICATED.
- DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.
- PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER SHAPE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.
- THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS.
- THE CONTRACTOR SHALL SOD ALL DISTURBED AREAS INCLUDING CONSTRUCTION ACCESS OUTSIDE PROJECT LIMITS.
- DRAWING L-160 IS SHOWN TO EXHIBIT THE OVERALL SCOPE OF THE MARINA VILLAGE PHASE 1B PLAN; REFER TO SHEET L-161 AND L-162 FOR ALL PLANTING INFORMATION.
- ANY VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'



PARKING LOT SHADE DATA TABLE (REFER TO PLAN FOR LOCATIONS):

PARKING LOT 1 (REFER TO L161):

TOTAL PARKING SF: 12,172
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

CALCULATION: 25% OF 12,172 SF = 3,043 SF

SHADE PROVIDED: 6,363 SF: 52% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 2 (REFER TO L162):

TOTAL PARKING SF: 16,927
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

CALCULATION: 25% OF 17,195 SF = 4,231 SF

SHADE PROVIDED: 8,837.5 SF: 52% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 3 (REFER TO L162):

TOTAL PARKING SF: 6,019
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

CALCULATION: 25% OF 6,019 SF = 1,500 SF

SHADE PROVIDED: 353.5 SF: 5.87% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 4 (REFER TO L162):

TOTAL PARKING SF: 6,958
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

CALCULATION: 25% OF 6,958 SF = 1,740 SF

SHADE PROVIDED: 1414 SF: 20% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 5 (REFER TO L161):

TOTAL PARKING SF: 1,347
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

CALCULATION: 25% OF 1,347 SF = 336 SF

SHADE PROVIDED: 1,060 SF: 78% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

ENTIRE SITE PARKING CALCULATIONS:

TOTAL PARKING LOT SF (LOTS 1-5): 43,423 SF

REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

SHADE PROVIDED: 18,028 SF: 41.5% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

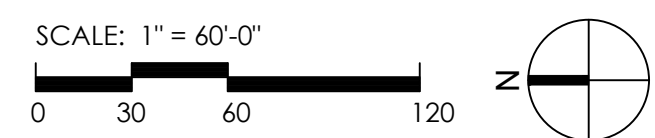
1 inch

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

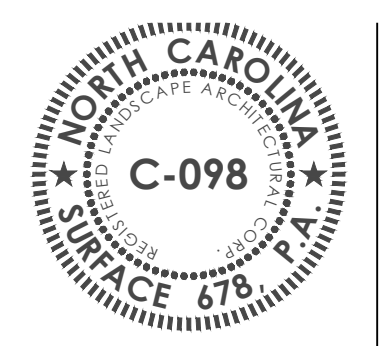
Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

WILMINGTON NORTH CAROLINA
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____



REV. NO.	DESCRIPTIONS	DATE
3	REVISION 3	08/24/2016
2	REVISION 2	07/20/2016
0	ISSUED FOR CONSTRUCTION	03/02/2016



OVERALL PLANTING PLAN SHEET REFERENCE
MARINA VILLAGE PHASE 1B

DATE	11/03/2015	SCALE	AS NOTED
PROJECT			
DRAWN	JL		
DESIGNED	JC, ED		
CHECKED	JC, ED		
PROJ. MGR.	JC		

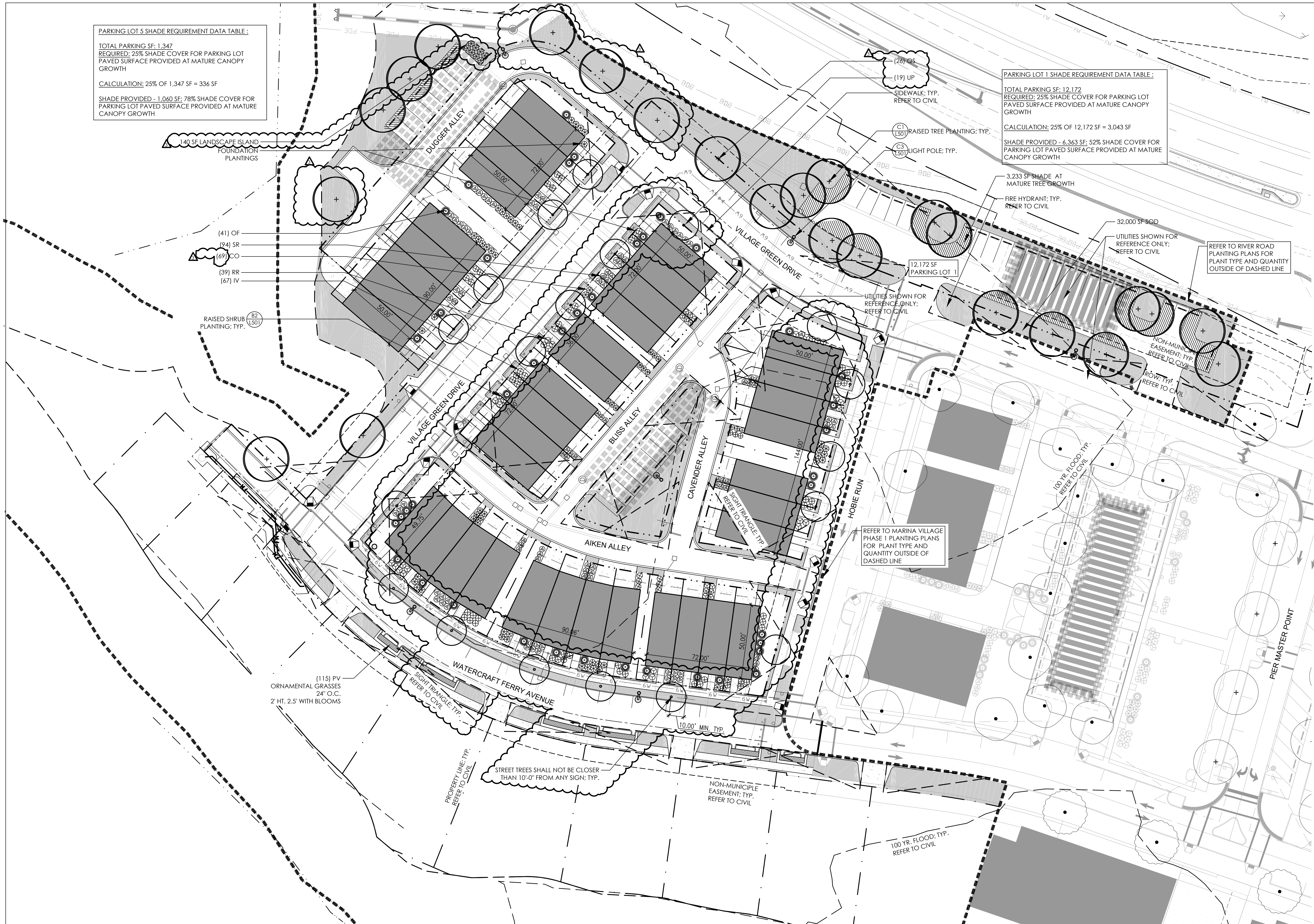
DRAWING NUMBER
L160

CONSTRUCTION DOCUMENTS

PARKING LOT 5 SHADE REQUIREMENT DATA TABLE:
 TOTAL PARKING SF: 1,347
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH
 CALCULATION: 25% OF 1,347 SF = 336 SF
 SHADE PROVIDED - 1,060 SF; 78% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 1 SHADE REQUIREMENT DATA TABLE:
 TOTAL PARKING SF: 12,172
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH
 CALCULATION: 25% OF 12,172 SF = 3,043 SF
 SHADE PROVIDED - 6,363 SF; 52% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

LEGEND	
	PARKING LOT SHADE REQUIREMENT
	SOD: 419 TIFWAY BERMUDA; SAND BASED SOD
TREES	
	QUERCUS SHUMARDII
	ULMUS PARVIFOLIA 'EVERCLEAR'
SHRUBS	
	SERENOA REPENS
	CHAMAECYPARIS OBTUSA 'NANA' GRACILIS
	ILEX VOMITORIA OBTUSA 'NANA'
	ROSA 'RADRAZZ'
	OSMANTHUS FORTUNEI
SIGHT LIGHTING	
	LIGHT POLE: TYP. REFER TO DETAIL C3 / L501



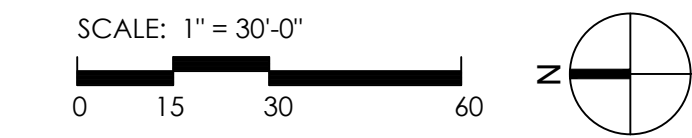
1 inch

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

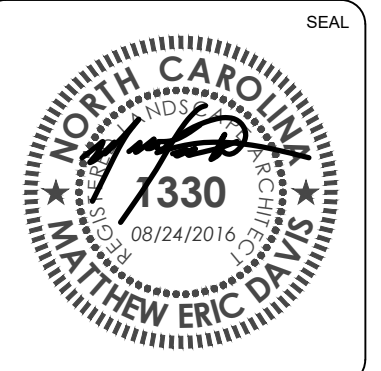
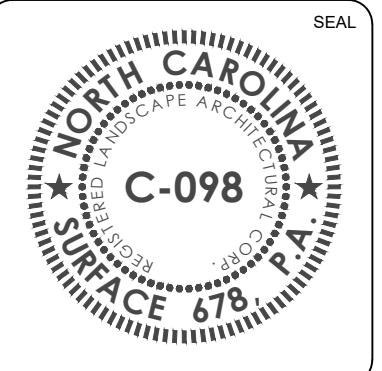
Approved Construction Plan

Planning	Name	Date
Traffic		
Fire		

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



REV. NO.	DESCRIPTIONS / REVISIONS	DATE
3	REVISION 3	09/24/2016
2	REVISION 2	07/26/2016
0	ISSUED FOR CONSTRUCTION	03/02/2016



PLANTING PLAN NORTH
MARINA VILLAGE PHASE 1B

DATE	11/03/2015	SCALE	AS NOTED	DRAWING NUMBER	L161
PROJECT					
DRAWN	JL				
DESIGNED	JC, ED				
CHECKED	JC, ED				
PROJ. MGR.	JC				

CONSTRUCTION DOCUMENTS

PLANTING SCHEDULE: MARINA VILLAGE PHASE 1B

SYM	QTY	BOTANICAL NAME	COMMON NAME	CAL/RT	MIN. HT.	MIN. SPR.	REMARKS
STREET TREES							
QS	74	QUERCUS SHUMARDII	SHUMARD OAK	3"	---	---	STRONG CENTRAL LEADER: NO INCLUDED BARK
UP	19	ULMUS PARVIFOLIA 'EVERCLEAR'	LACEBARK ELM	3"	---	---	STRONG CENTRAL LEADER: NO INCLUDED BARK
DECIDUOUS SHRUBS							
RR	40	ROSA 'RADRAZZ'	KNOCKOUT ROSE	CONT	12'	12'	FULL DENSE
EVERGREEN SHRUBS							
CO	69	CHAMAECYPARIS OBTUSA 'NANA' GRACILLIS	DWARF HINOKI CYPRESS	CONT	12'	12'	FULL DENSE
IV	67	ILEX VOMITORIA 'NANA'	DWARF YAUPON HOLLY	CONT	12'	12'	FULL DENSE
OF	41	OSMANTHUS FORTUNEI	TEA OLIVE	CONT	12'	12'	FULL DENSE
SR	94	SERENOA REPENS	SAW PALMETTO	CONT	12'	12'	FULL DENSE
ORNAMENTAL GRAASSES							
PV	115	PANICUM VIRGATUM 'CAPE BREEZE' PP2489'S	CAPE BREEZE DWARF SWITCHGRASS	---	---	---	---
SOD							
							419 TIFWAY BERMUDA SAND BASED SOD

PARKING LOT 2 SHADE REQUIREMENT DATA TABLE:
 TOTAL PARKING SF: 16,927
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH
 CALCULATION: 25% OF 17,195 SF = 4,231 SF
 SHADE PROVIDED - 8,837.5 SF; 52% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

REFER TO RIVER ROAD PLANTING PLANS FOR PLANT TYPE AND QUANTITY OUTSIDE OF DASHED LINE
 4,231 SF SHADE AT MATURE GROWTH

PARKING LOT 4 SHADE REQUIREMENT DATA TABLE:
 TOTAL PARKING SF: 6,958
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH
 CALCULATION: 25% OF 6,958 SF = 1,740 SF
 SHADE PROVIDED - 1,414 SF; 20% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

PARKING LOT 3 SHADE REQUIREMENT DATA TABLE:
 TOTAL PARKING SF: 6,019
 REQUIRED: 25% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH
 CALCULATION: 25% OF 6,019 SF = 1,500 SF
 SHADE PROVIDED - 353.5 SF; 5.87% SHADE COVER FOR PARKING LOT PAVED SURFACE PROVIDED AT MATURE CANOPY GROWTH

LEGEND

	PARKING LOT SHADE REQUIREMENT
	SOD: 419 TIFWAY BERMUDA; SAND BASED SOD
TREES	
	QUERCUS SHUMARDII
	ULMUS PARVIFOLIA 'EVERCLEAR'
SHRUBS	
	SERENOA REPENS
	CHAMAECYPARIS OBTUSA 'NANA' GRACILLIS
	ILEX VOMITORIA OBTUSA 'NANA'
	ROSA 'RADRAZZ'
	OSMANTHUS FORTUNEI
SIGHT LIGHTING	
	LIGHT POLE: TYP. REFER TO DETAIL C3 / LS01

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: _____

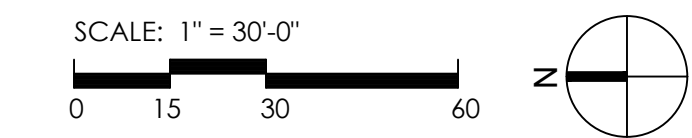
Fire: _____

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division

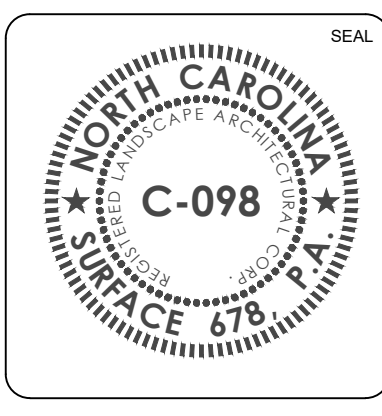
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

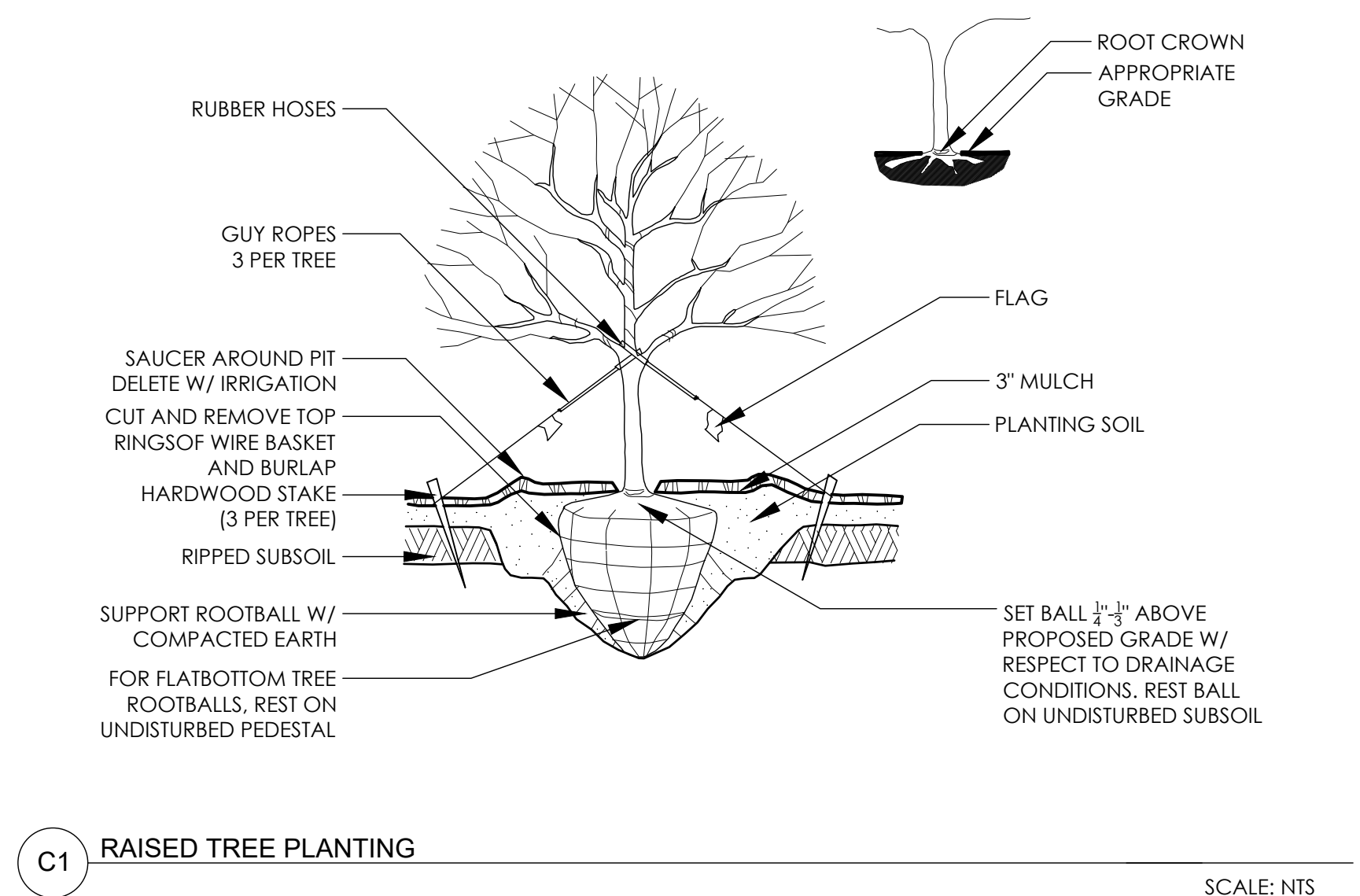


REV. NO.	DESCRIPTIONS	REVISIONS	DATE
3	REVISION 3		08/24/2016
2	REVISION 2		07/20/2016
0	ISSUED FOR CONSTRUCTION		03/02/2016

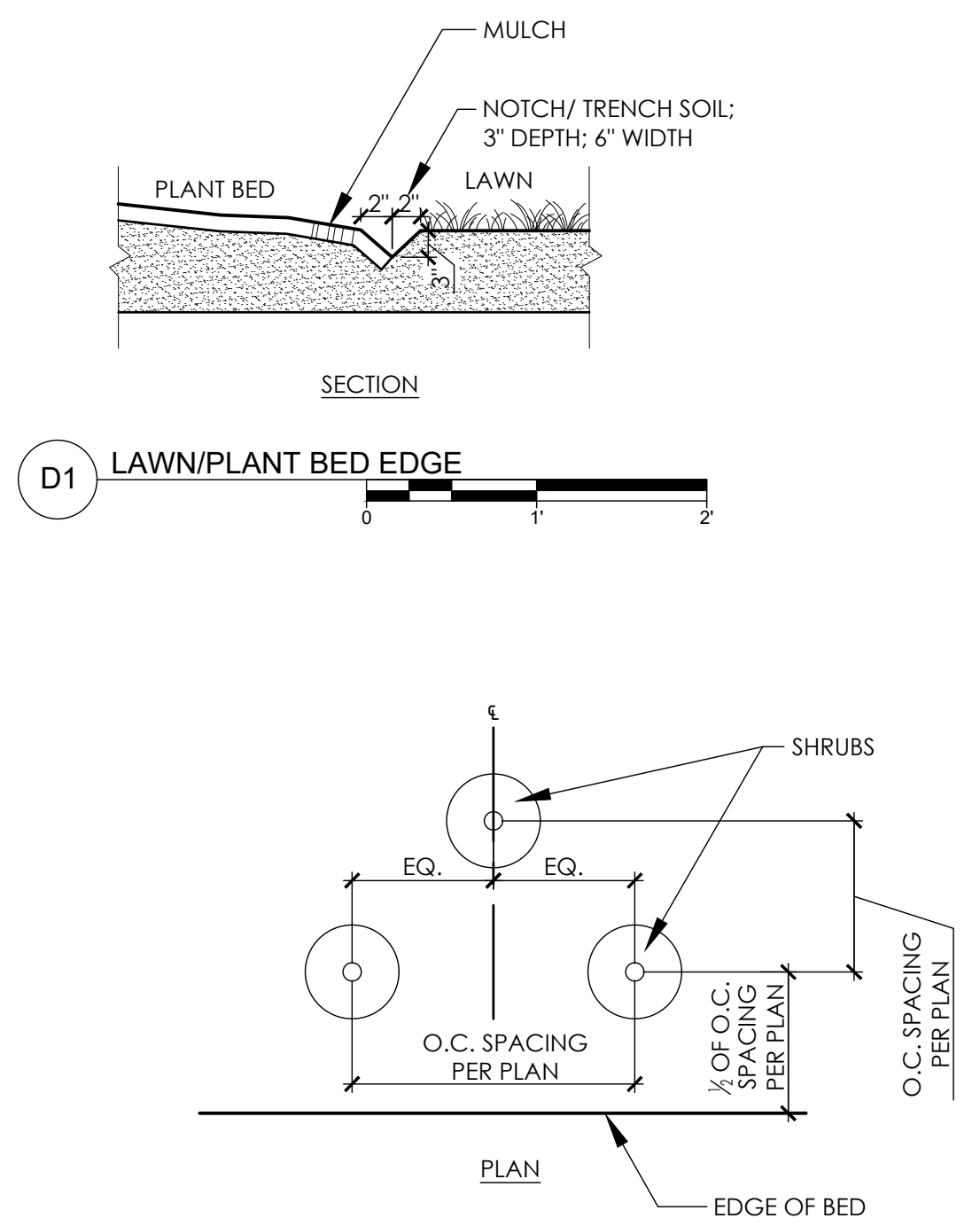


PLANTING PLAN SOUTH
MARINA VILLAGE PHASE 1B

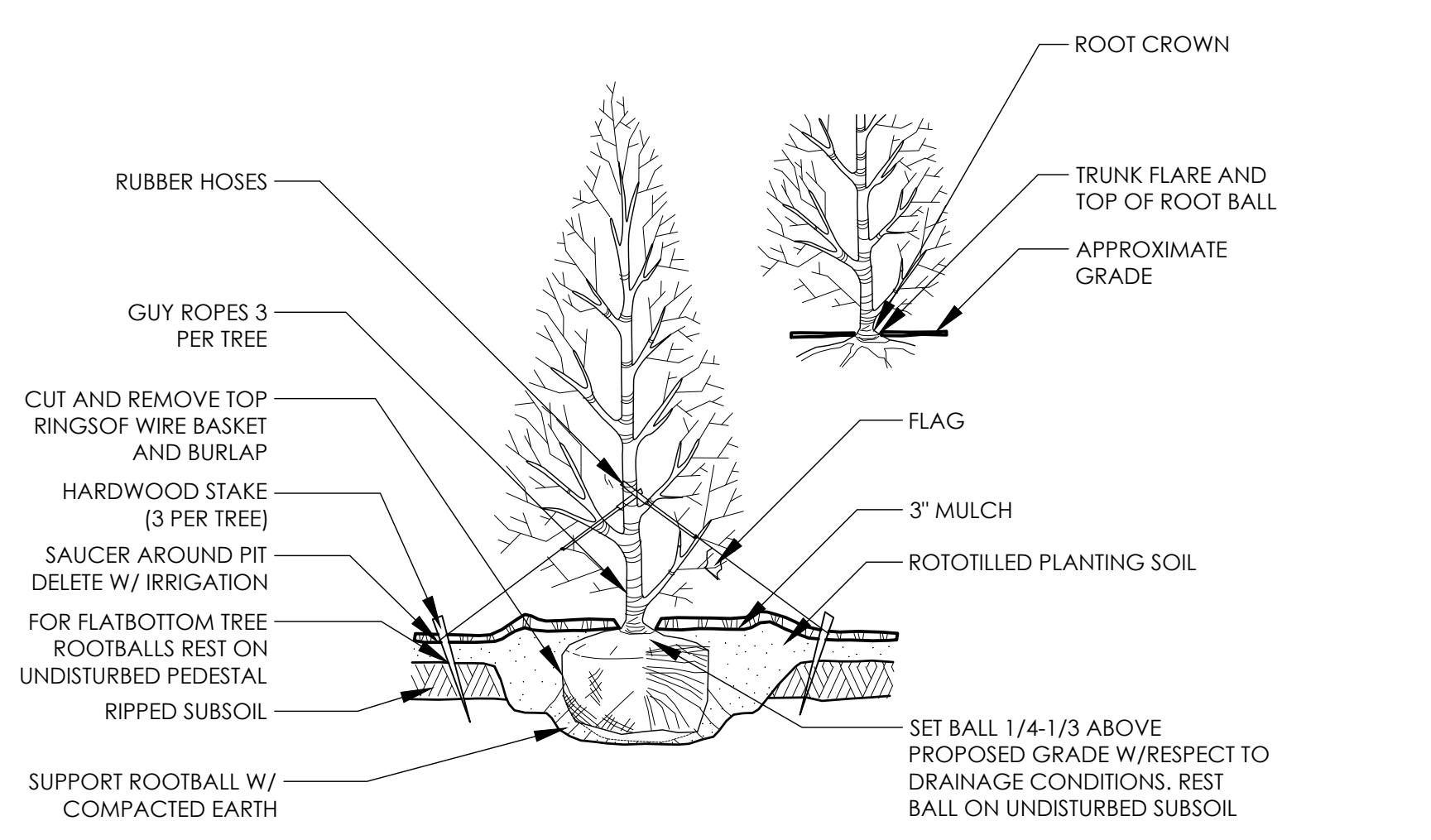
DATE	11/03/2015	SCALE	AS NOTED
PROJECT		DRAWN	JL
DESIGNED	JC, ED	CHECKED	JC, ED
PROJ. MGR.	JC		
DRAWING NUMBER		L162	
CONSTRUCTION DOCUMENTS			



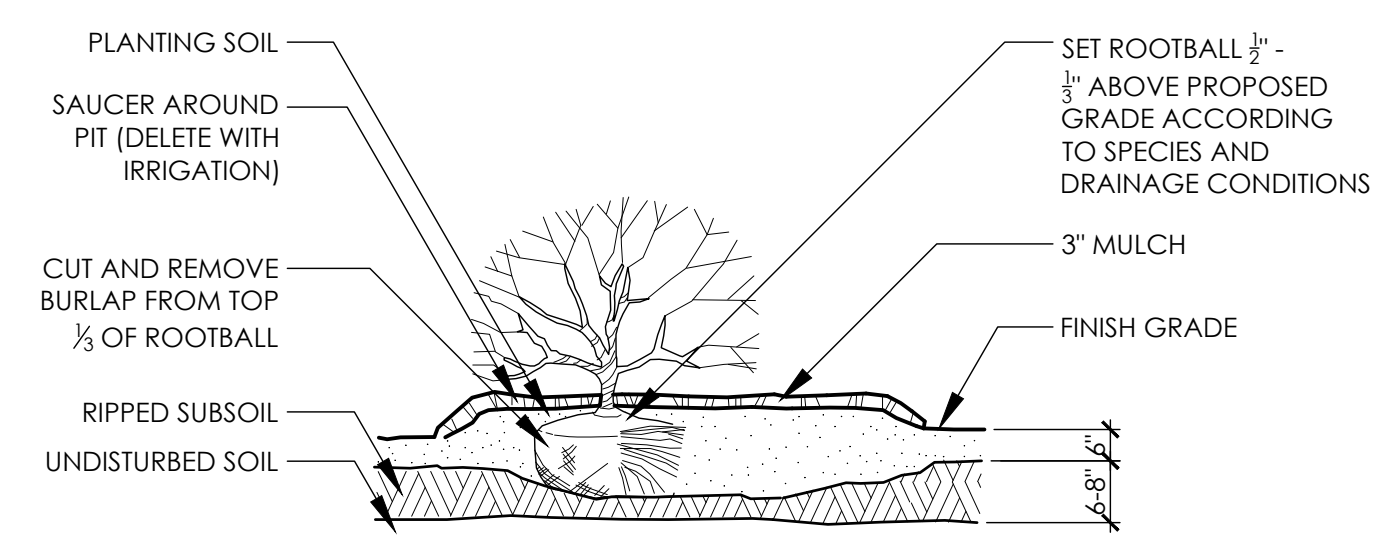
C1 RAISED TREE PLANTING SCALE: NTS



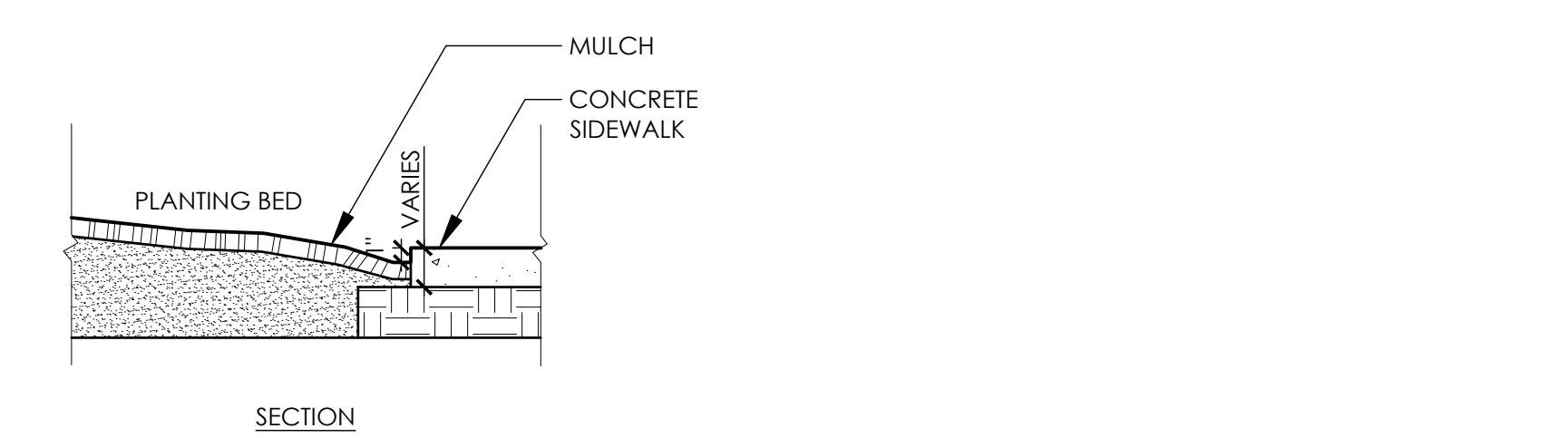
D1 LAWN/PLANT BED EDGE



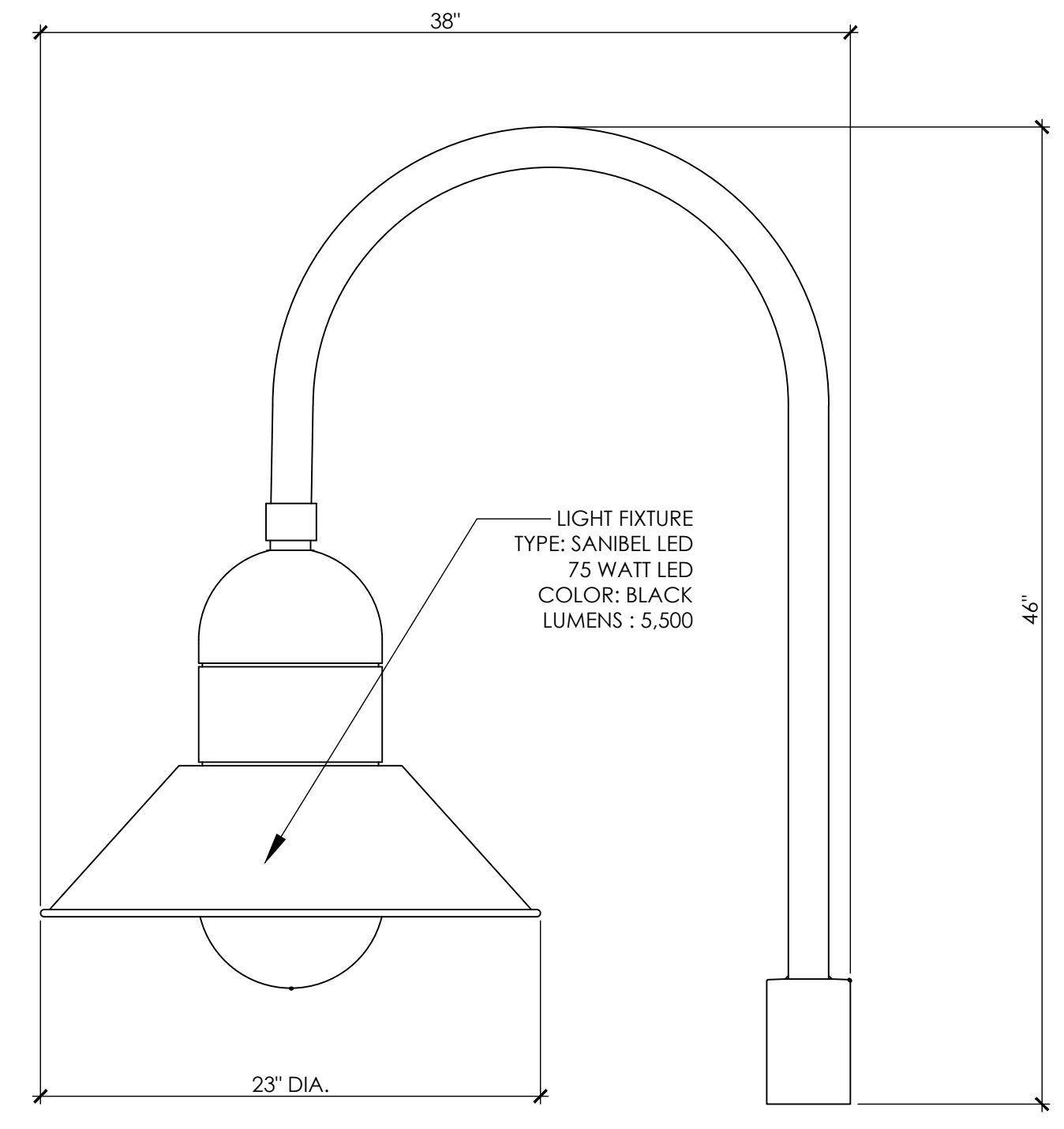
B1 EVERGREEN TREE PLANTING SCALE: NTS



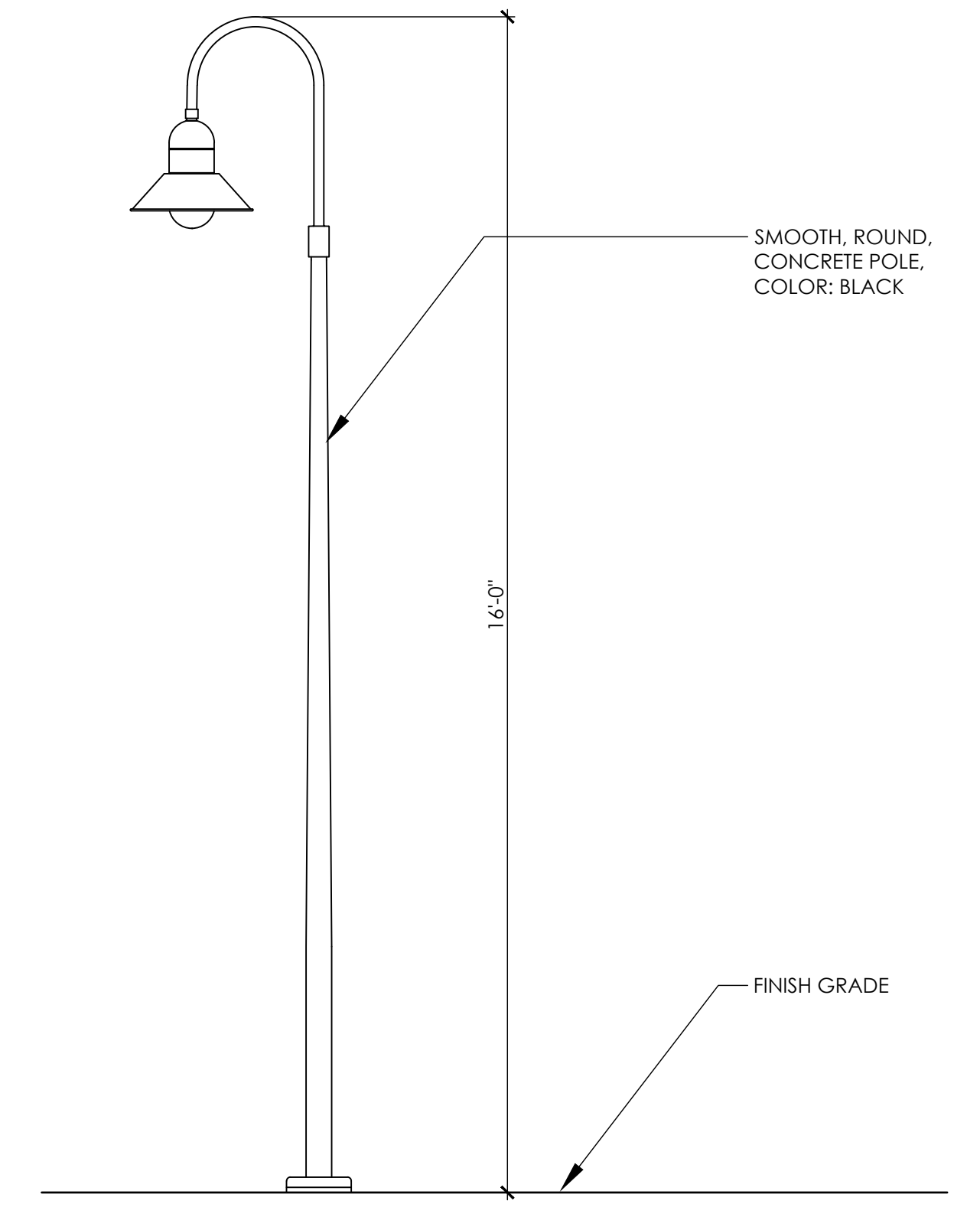
B2 RAISED SHRUB PLANTING SCALE: NTS



A1 CONCRETE/PLANT BED EDGE

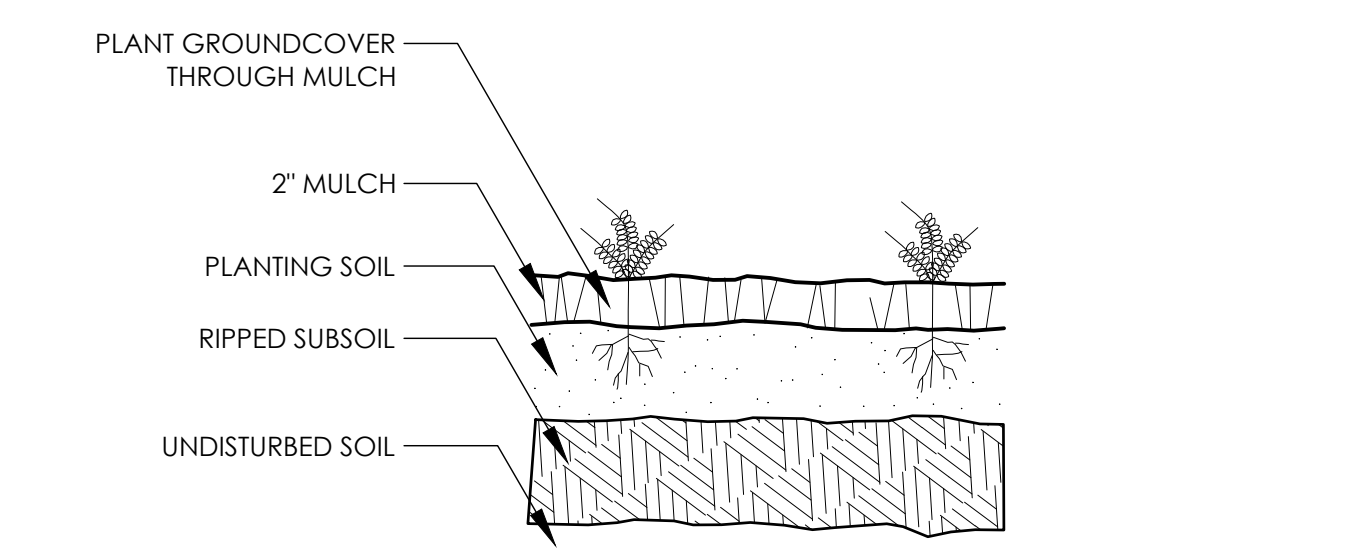
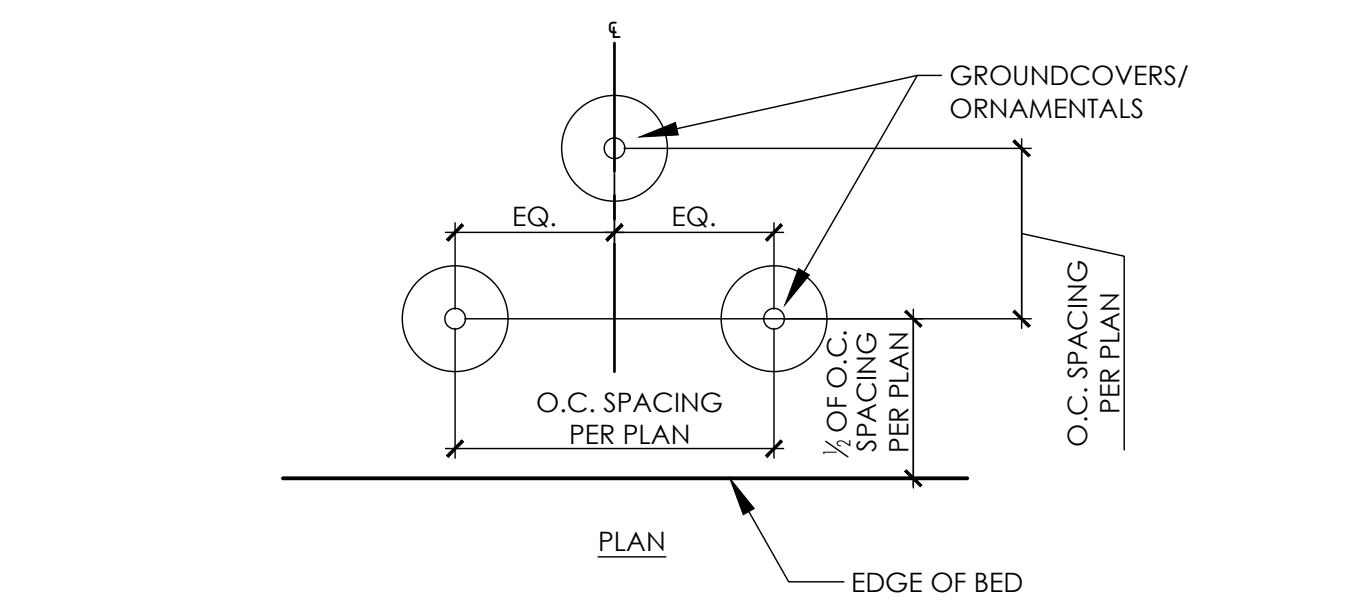


NON STANDARD LIGHT FIXTURE DETAIL



LIGHT FIXTURE POLE ELEVATION

C3 LIGHT POLE
 * LIGHT POLE SHOWN FOR REFERENCE ONLY.
 * LIGHT POLE TO BE SIMILAR IN STYLE, COLOR, TYPE.
 * FINAL LAYOUT AND FOOT CANDLE STUDIES SHALL BE PROVIDED BY THE POWER COMPANY.



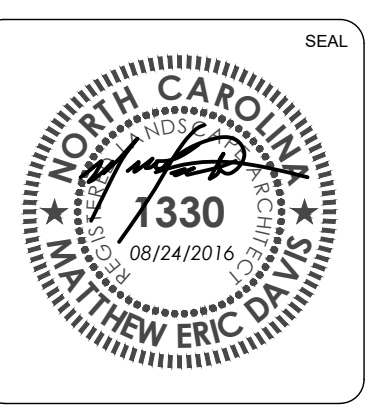
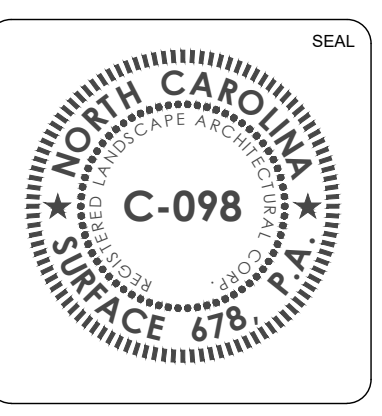
A3 GROUND COVER PLANTING SCALE: NTS

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 STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

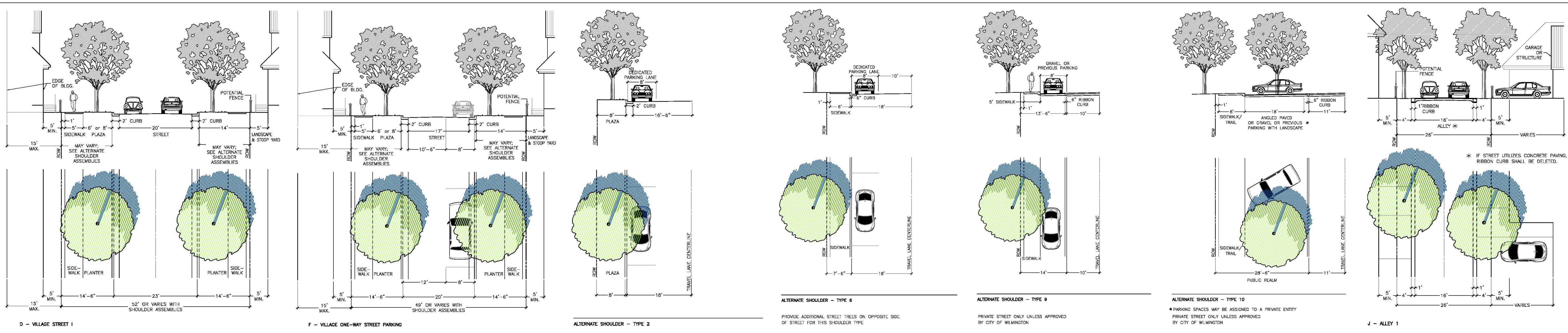
REV. NO.	DESCRIPTIONS	DATE
3	REVISION 3	08/24/2016
2	REVISION 2	07/20/2016
0	ISSUED FOR CONSTRUCTION	03/02/2016



LANDSCAPE DETAILS
 MARINA VILLAGE PHASE 1B

DATE	11/03/2015	SCALE	AS NOTED	DRAWING NUMBER
PROJECT				L501
DRAWN	JL			
DESIGNED	JC, ED			
CHECKED	JC, ED			
PROJ. MGR.	JC			

CONSTRUCTION DOCUMENTS



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

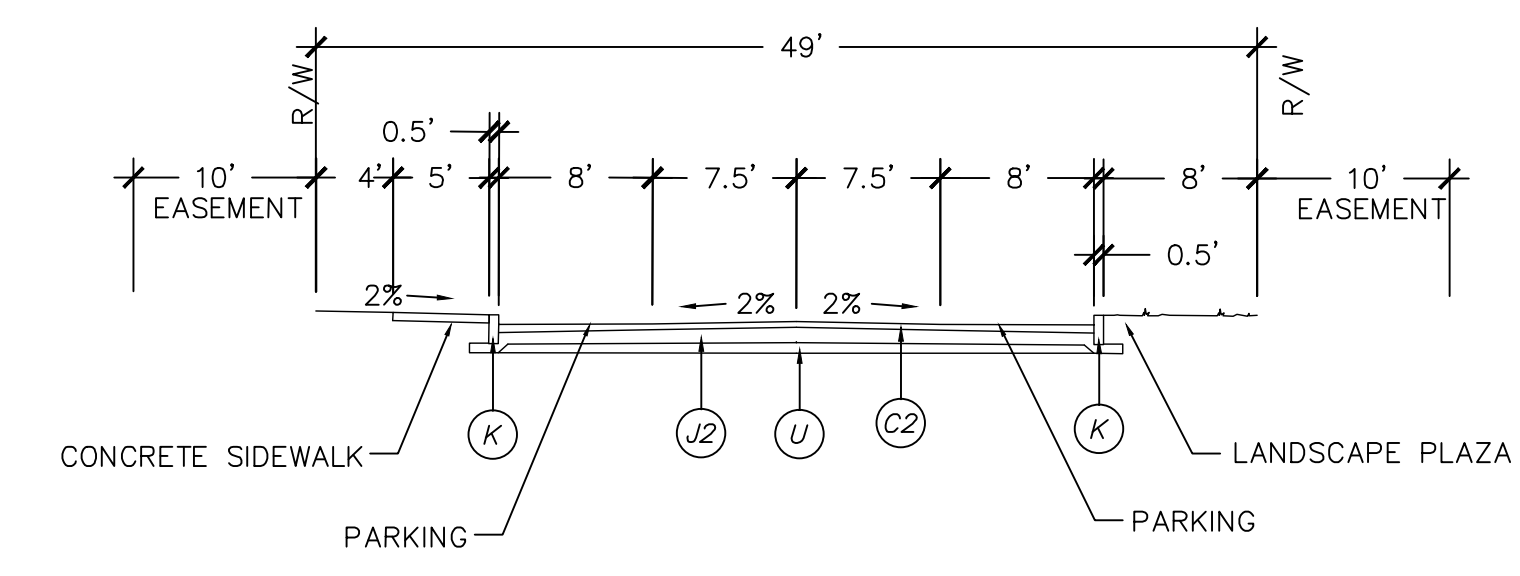
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

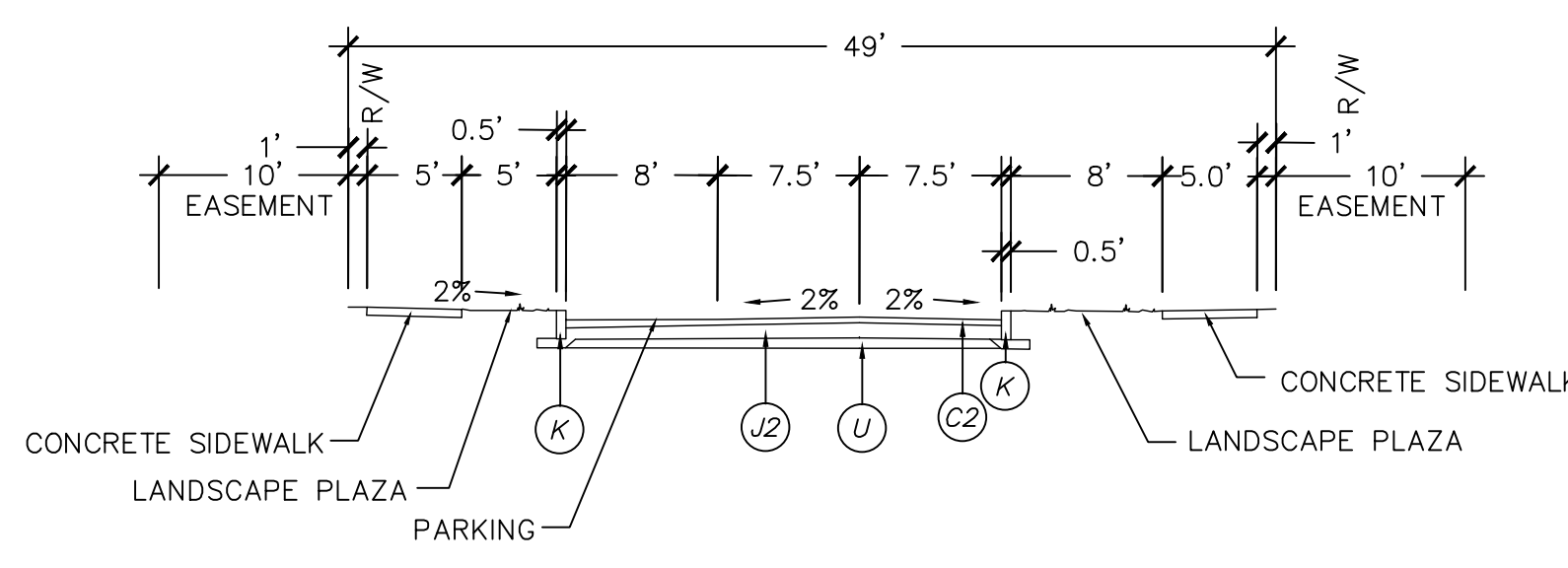
Date: _____ Permit # _____

Signed: _____

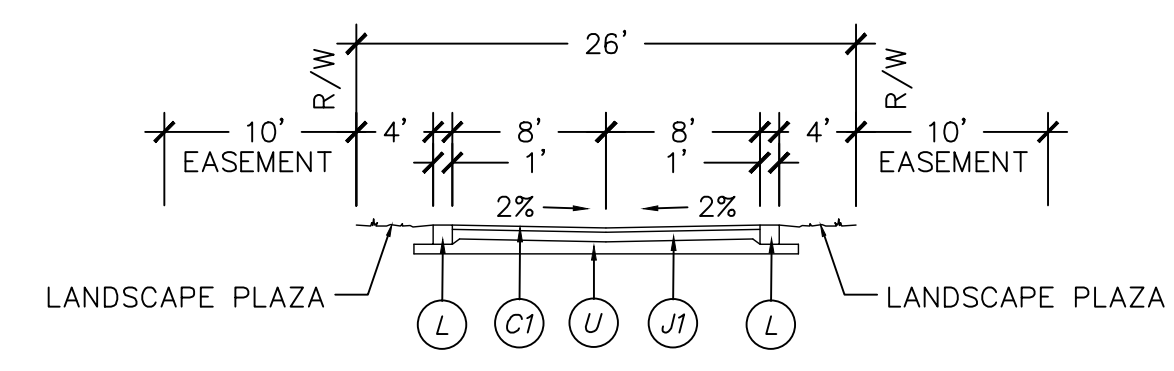
ILLUSTRATIVE STREET SECTIONS FROM DEVELOPMENT AGREEMENT



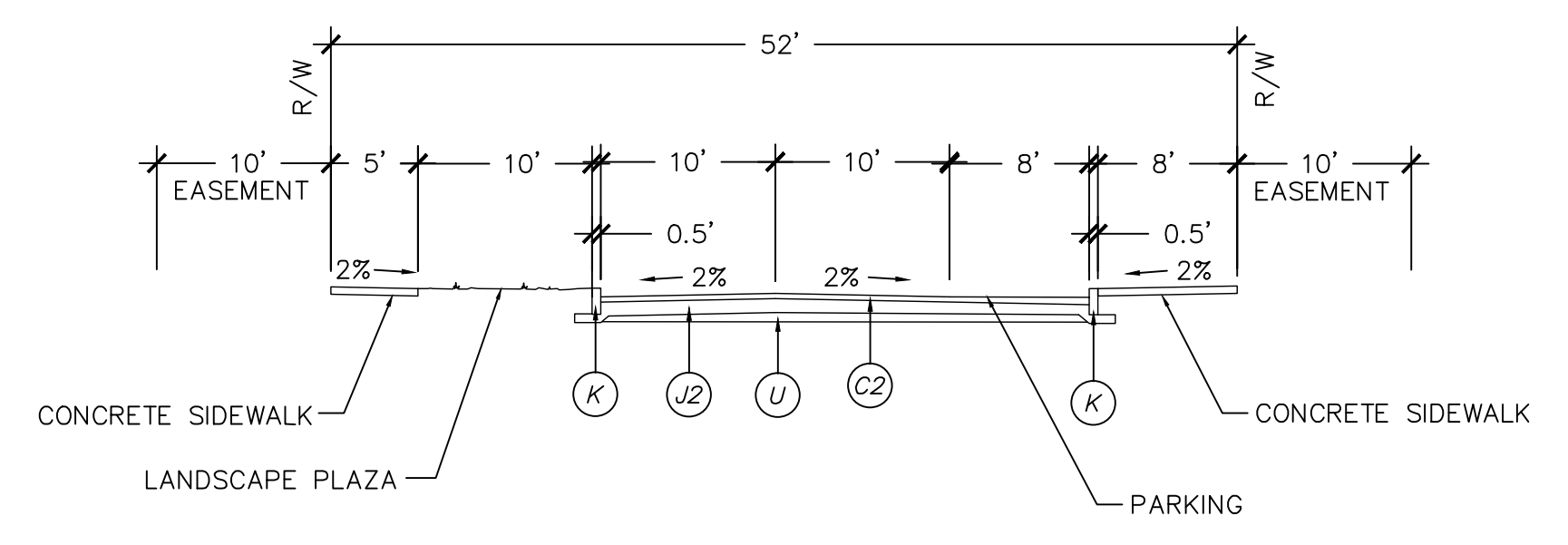
UNDIVIDED TYPICAL SECTION
VILLAGE ONE WAY STREET PARKING
49' PUBLIC R/W
VILLAGE GREEN DRIVE
NOT TO SCALE



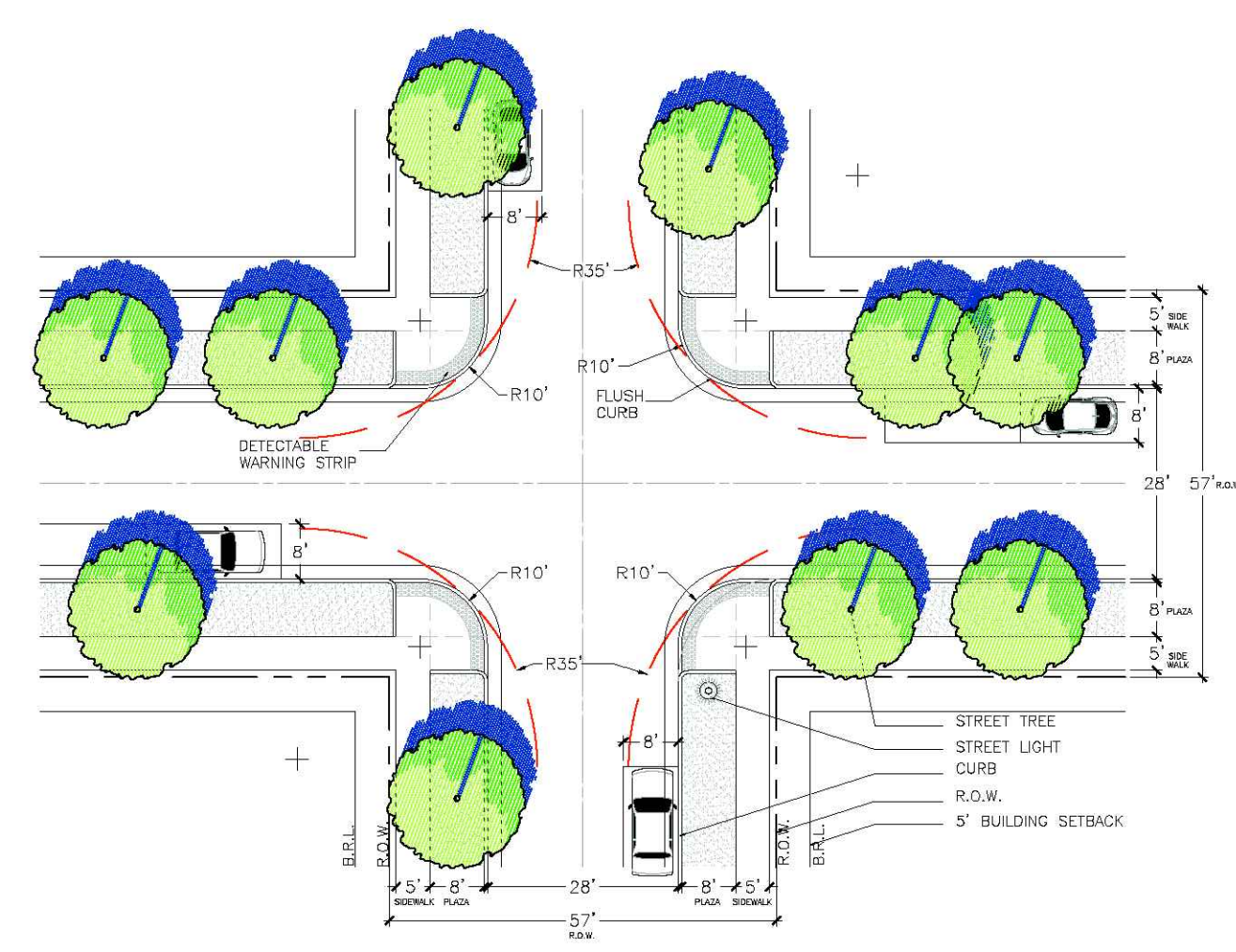
UNDIVIDED TYPICAL SECTION
VILLAGE ONE WAY STREET PARKING
49' PUBLIC R/W
WATERCRAFT FERRY AVENUE
NOT TO SCALE



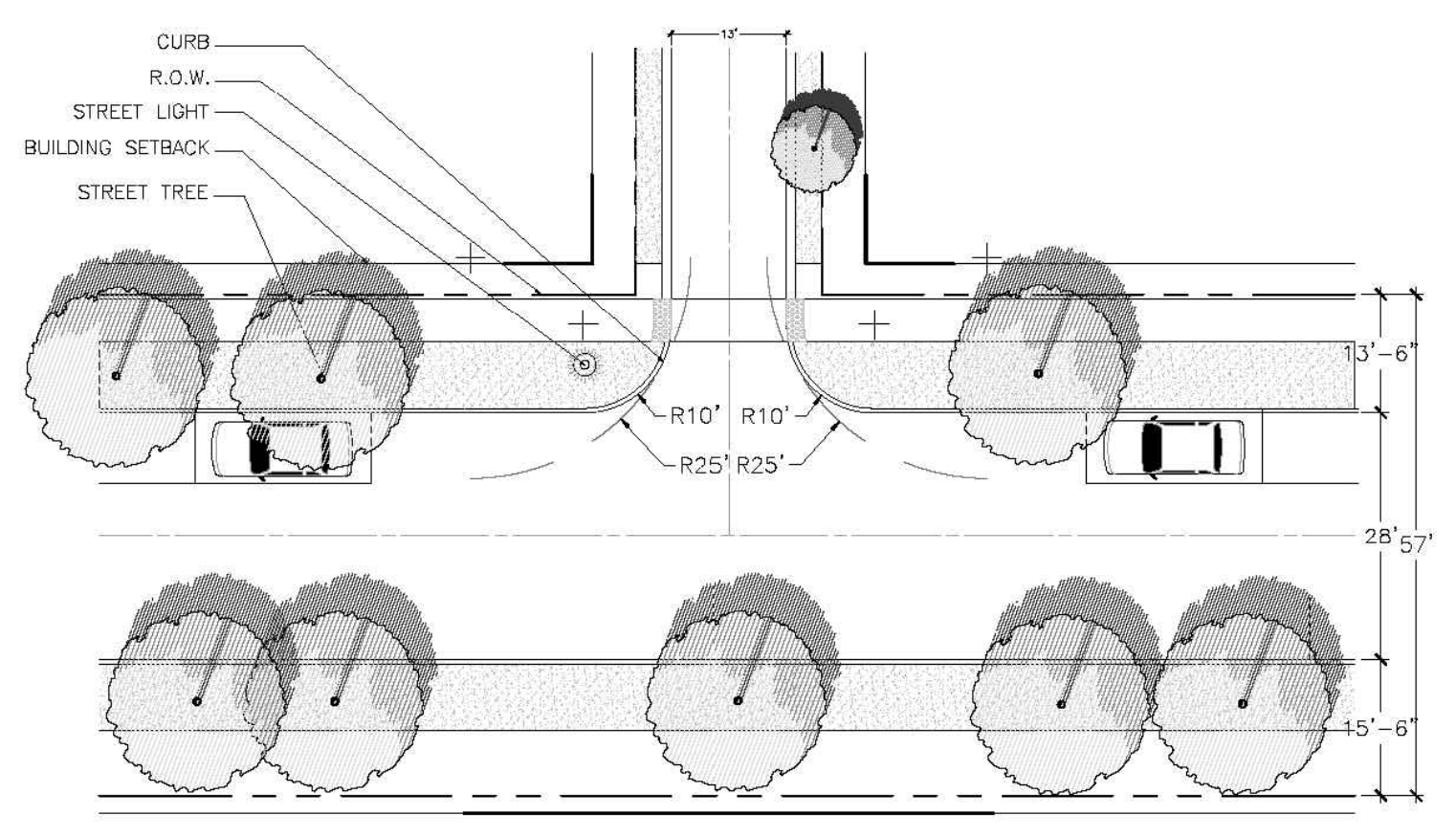
ALLEY TYPICAL SECTION
26' PUBLIC R/W
NOT TO SCALE



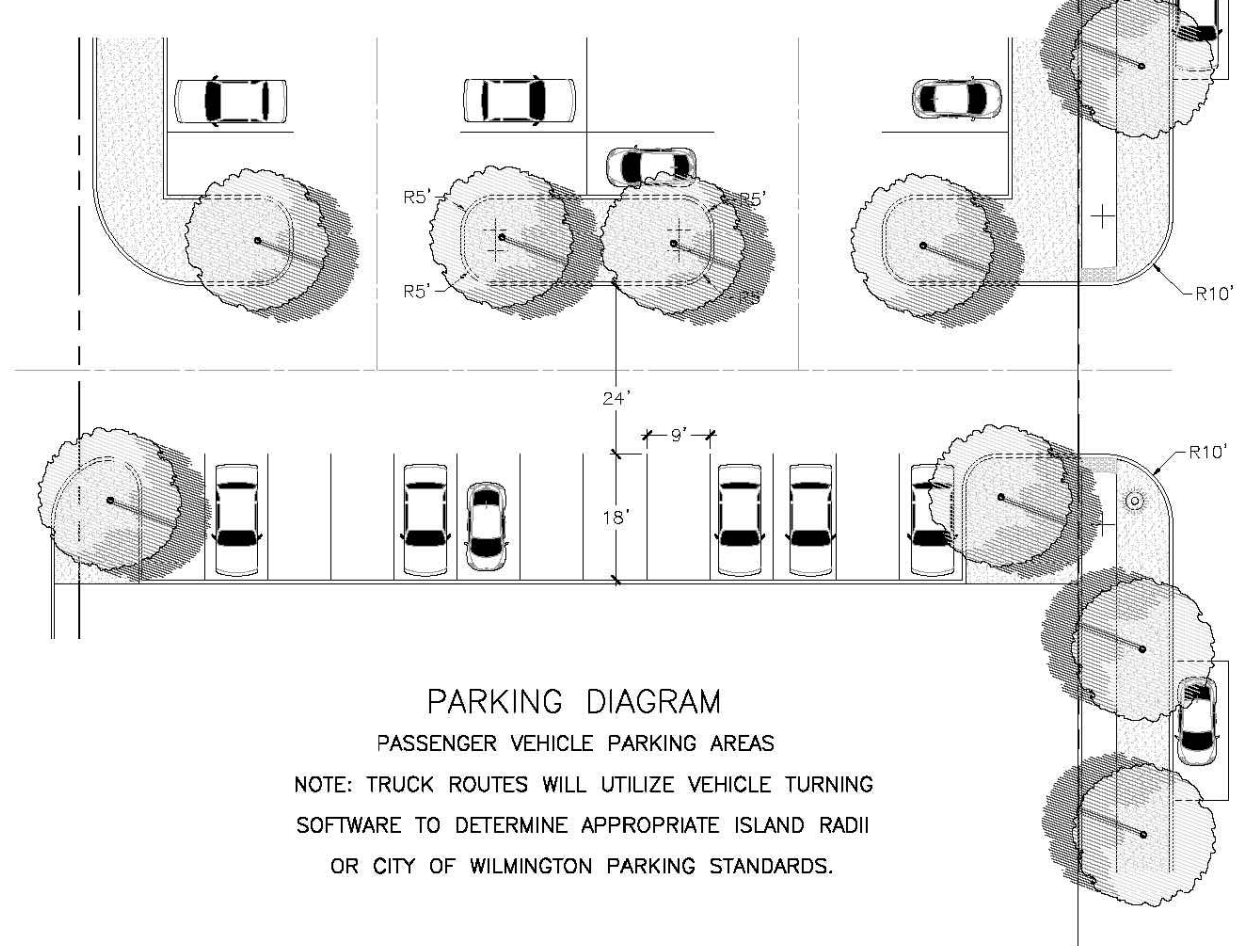
UNDIVIDED TYPICAL SECTION
VILLAGE STREET 1 W/ALTERNATE SHOULDER 4 + 6
52' PRIVATE R/W
NOT TO SCALE



INTERSECTION DIAGRAM
VILLAGE STREET AND
VILLAGE STREET



INTERSECTION DIAGRAM
VILLAGE (RESIDENTIAL)
AND ALLEY II



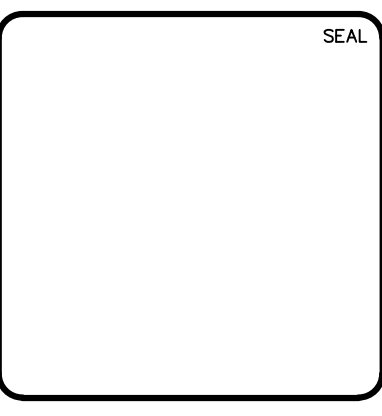
PARKING DIAGRAM
PASSENGER VEHICLE PARKING AREAS
NOTE: TRUCK ROUTES WILL UTILIZE VEHICLE TURNING SOFTWARE TO DETERMINE APPROPRIATE ISLAND RADIUS OR CITY OF WILMINGTON PARKING STANDARDS.

PAVEMENT SCHEDULE	
C1	2" ASPHALT CONCRETE SURFACE COARSE, TYPE SF9.5A AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	3" ASPHALT CONCRETE SURFACE COARSE, TYPE S9.5B AT AN AVERAGE RATE OF 336 LBS. PER SQ. YD.
J1	6.0" COMPACTED ABC STONE BASE COURSE
J2	8.0" COMPACTED ABC STONE BASE COURSE
K	6.0" VERTICAL CURB
L	12.0" RIBBON CURB
U	COMPACTED SUBGRADE

* SEE SHEET CS-501 (14) FOR ADDITIONAL DETAILS AND SECTIONS FOR CURBING, PAVEMENT, STONE, AND SUBGRADE.

ILLUSTRATIVE INTERSECTION DIAGRAMS FROM DEVELOPMENT AGREEMENT

REVNO.	ISSUED FOR CONSTRUCTION	DATE
0	ISSUED FOR CONSTRUCTION	03/17/2016



MCKIM & CREED

243 North Front Street
Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
License: F-1222
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RIVERLIGHTS
by Newland COMMUNITIES

NORTH AMERICA SEXIUS HOUSE, LLC

RIVERLIGHTS MARINA VILLAGE
PHASE 1B

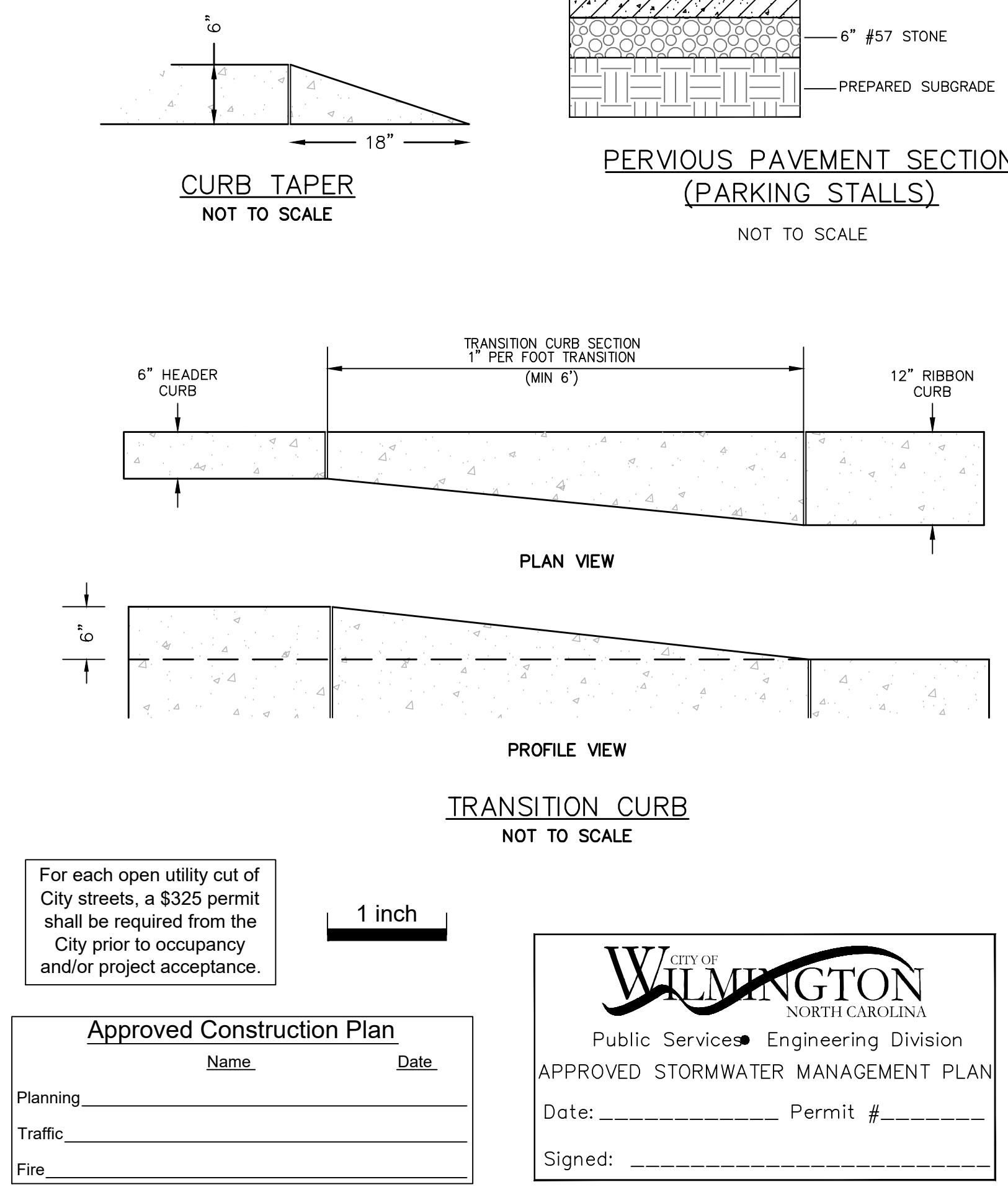
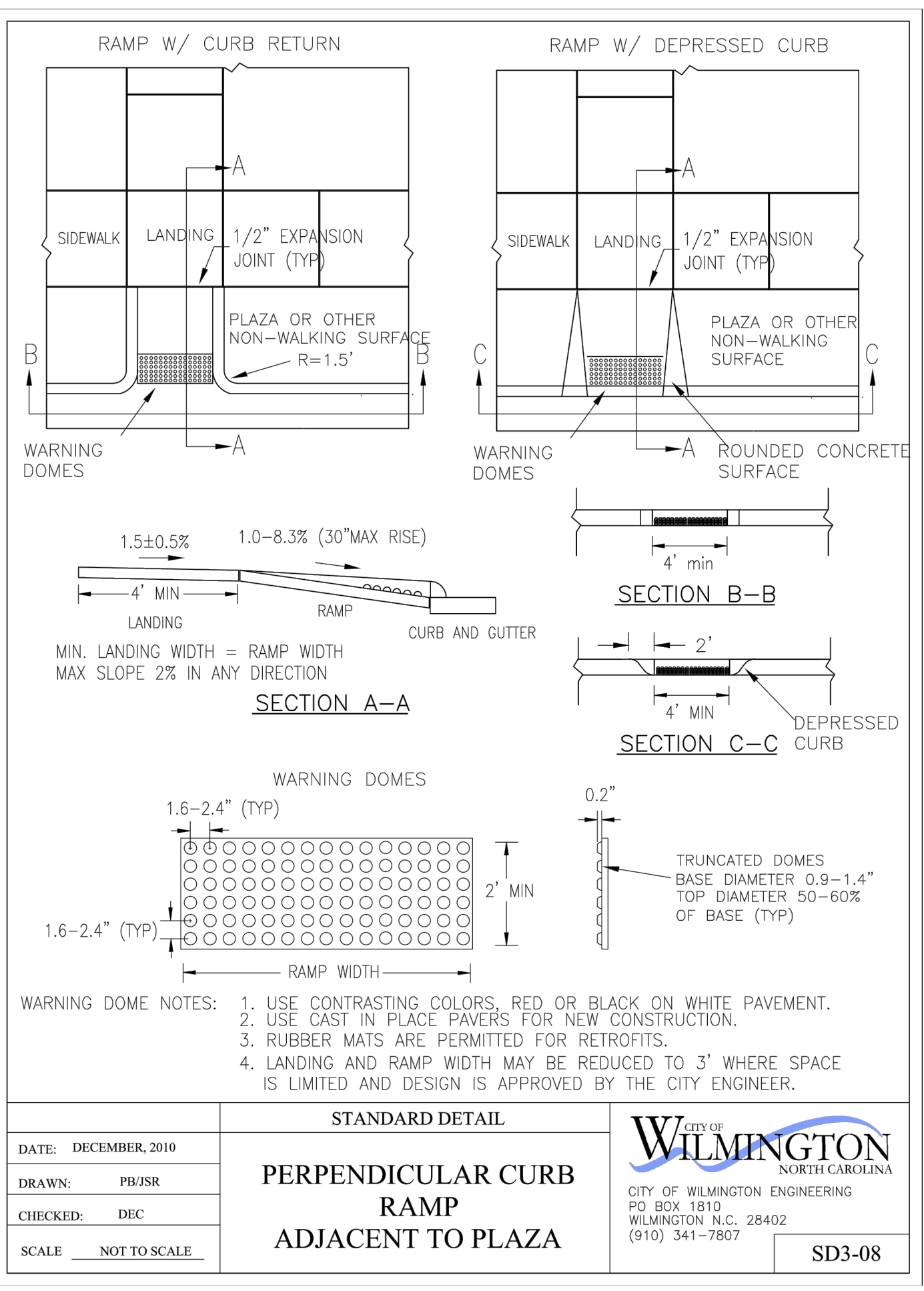
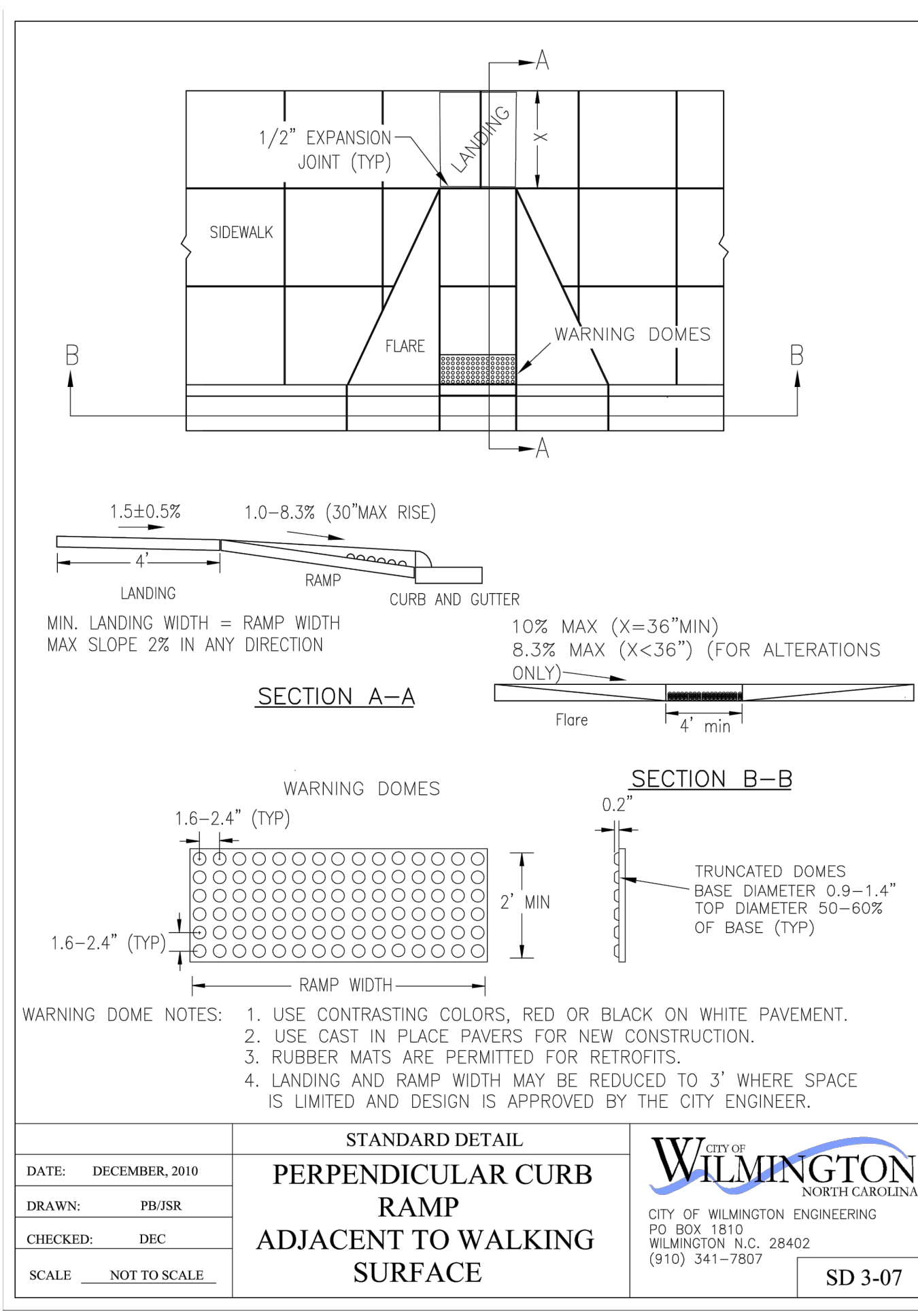
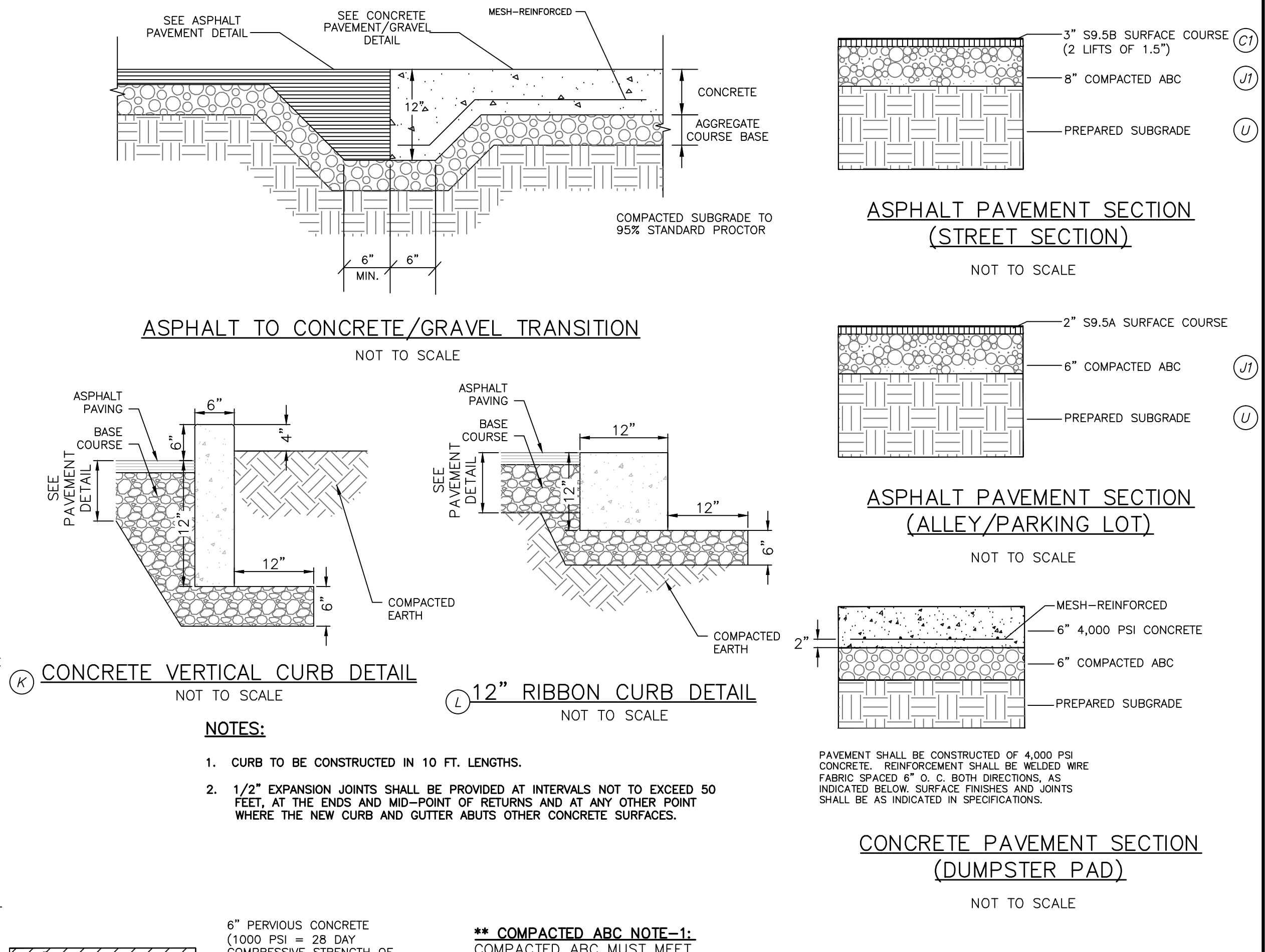
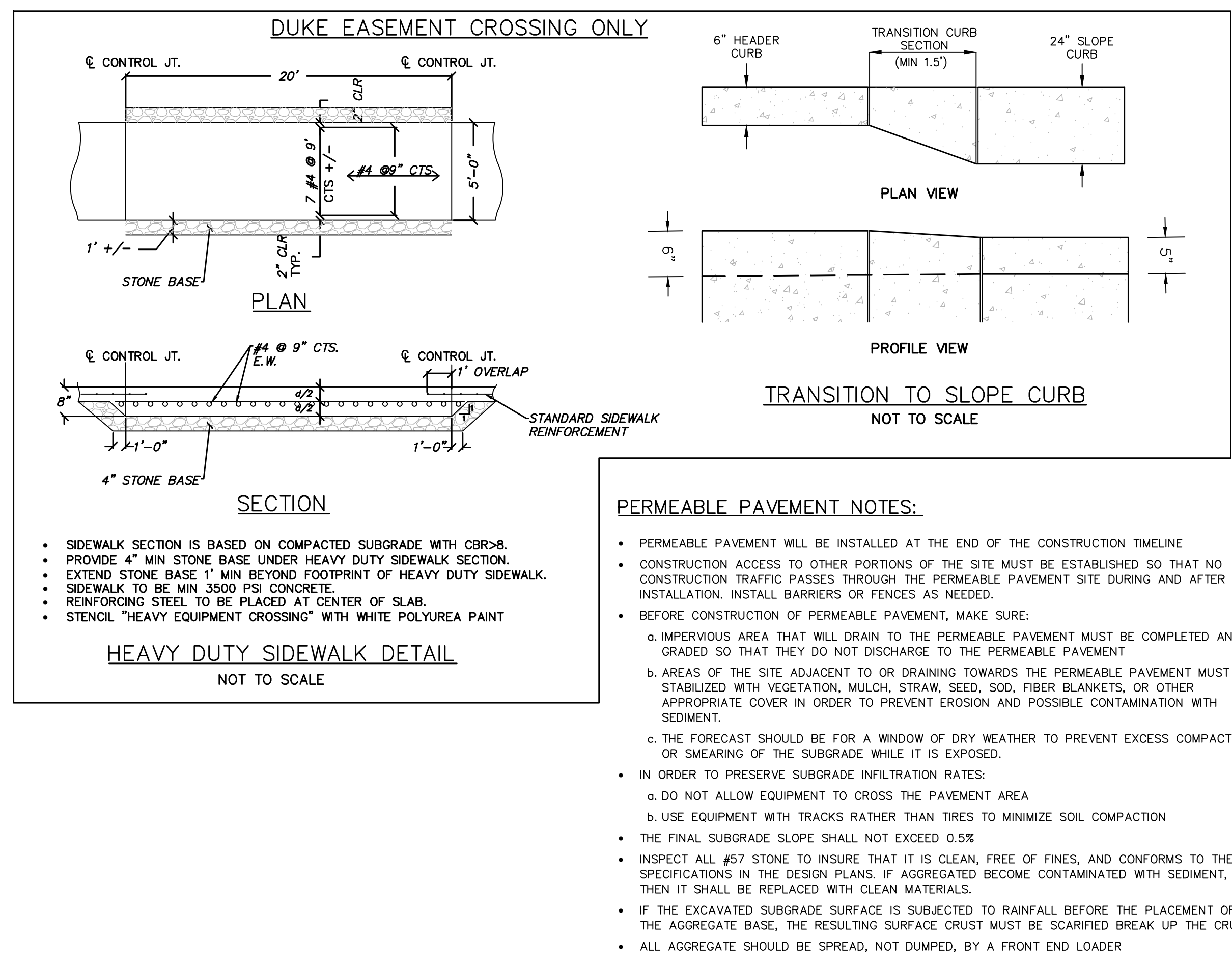
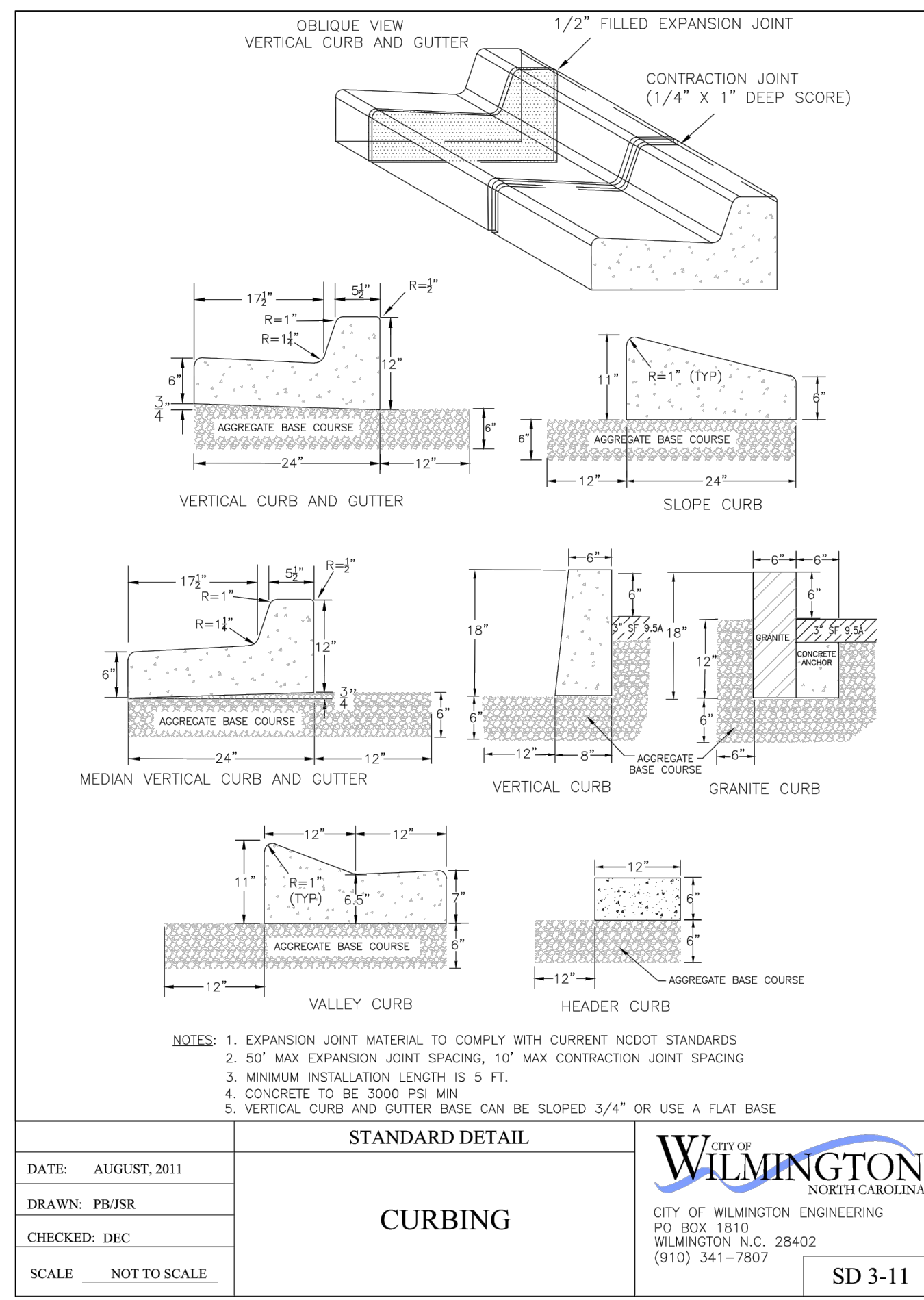
ROADWAY SECTIONS

DATE: 17MAR16
MCE PROJ. # 2735-0124
DRAWN: ALM
DESIGNED: NUL
CHECKED: KCBE
PROJ. MGR.: NUL

SCALE: HORIZONTAL: 1"=50'
VERTICAL: N/A

MAC FILE NUMBER: CT-301
DRAWING NUMBER: 24
REVISION: 0

STATUS: FINAL DESIGN
ISSUED FOR CONSTRUCTION



REVNO.	ISSUED FOR CONSTRUCTION	DESCRIPTIONS REVISIONS	DATE
0			03/17/2016



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RIVERLIGHTS
 by Newland COMMUNITIES

NORTH AMERICA SEXISUI HOUSE, LLC

RIVERLIGHTS MARINA VILLAGE PHASE 1B

SITE DETAILS

DATE: 17MART16
 MCE PROJ. # 2735-0124
 DRAWN: ALM
 DESIGNED: NJL
 CHECKED: KCB
 PROJ. MGR.: NJL

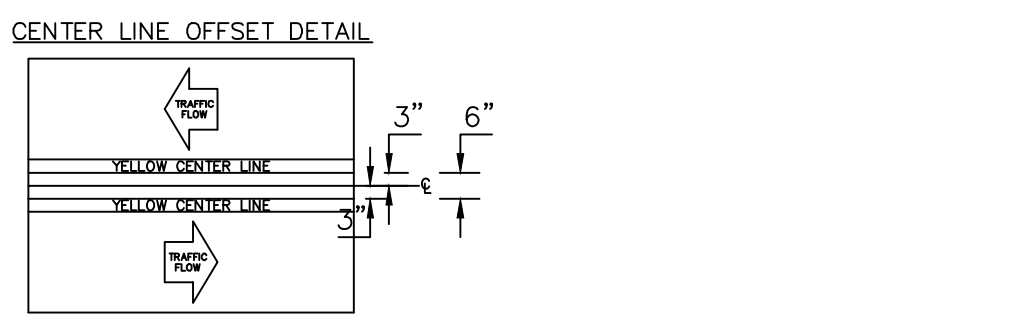
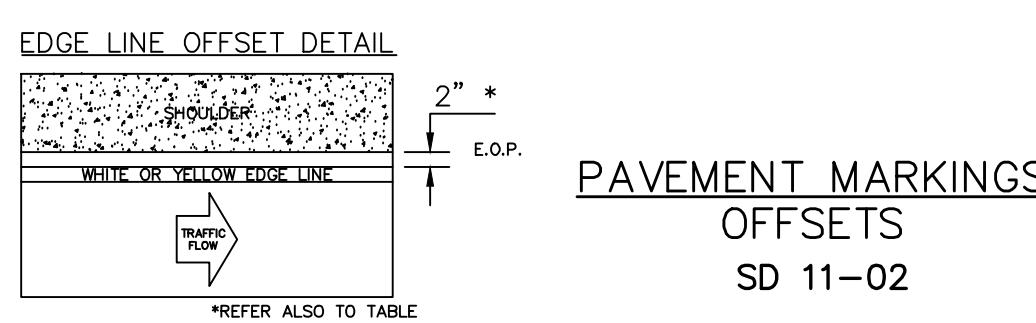
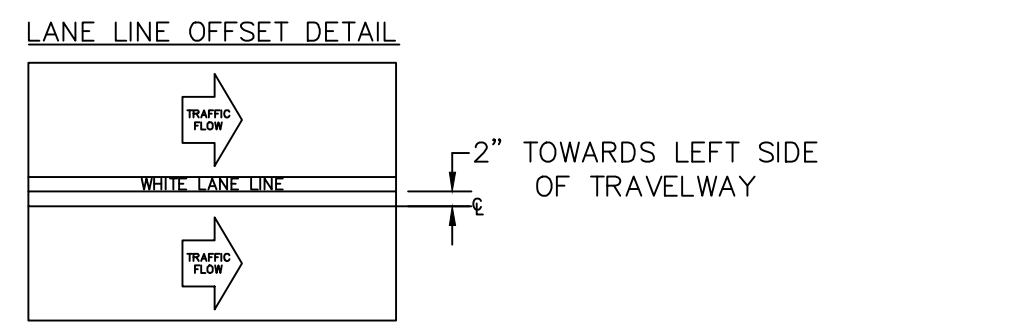
SCALE: HORIZONTAL: N/A
 VERTICAL: N/A

MAC FILE NUMBER: CS-501
 DRAWING NUMBER: 27

STATUS: FINAL DESIGN
 ISSUED FOR CONSTRUCTION

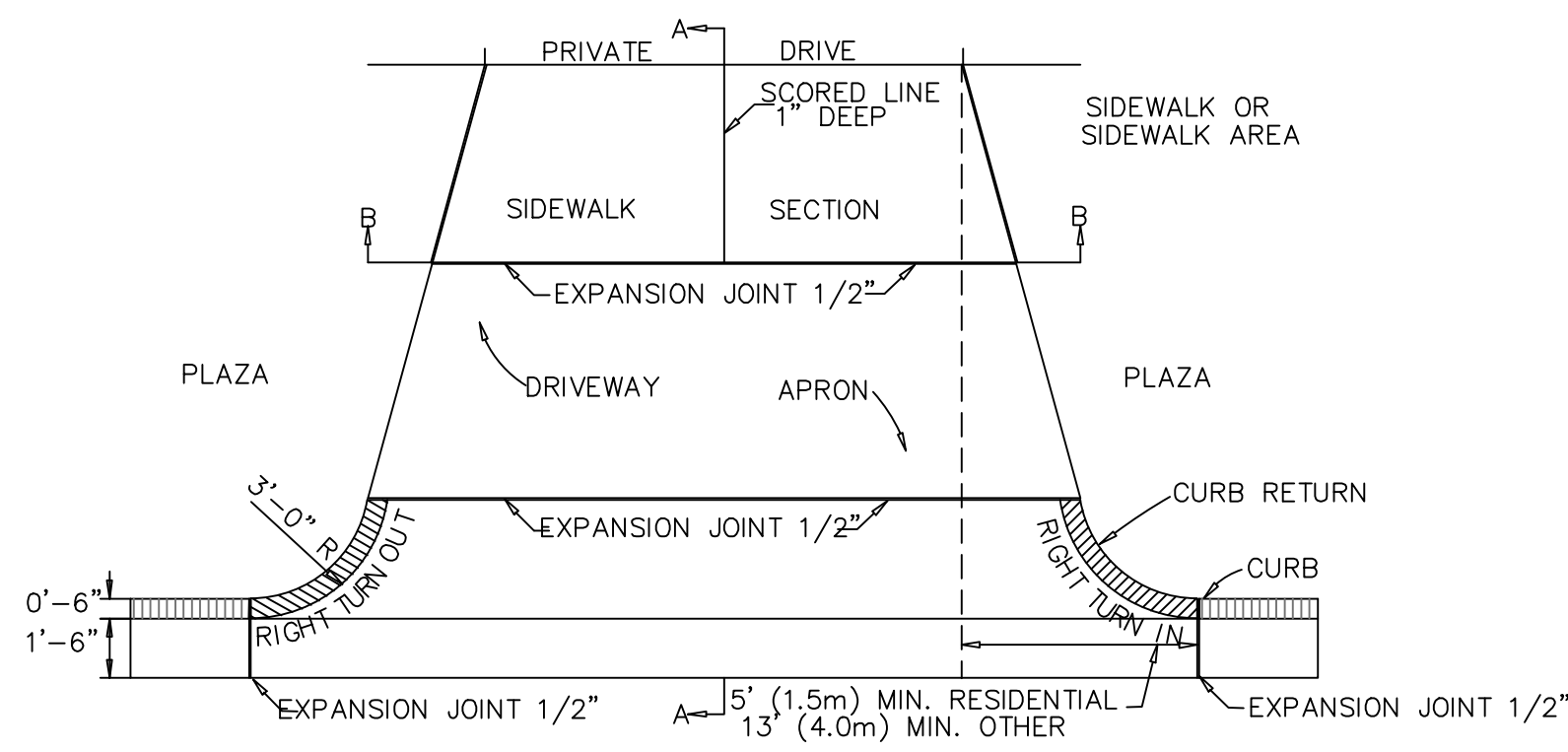
REVISION: 0

S:\2735\212 Marina Village\B0-Drawing\p1a.dwg, 3/17/2016 03:15:59 PM, Insettable

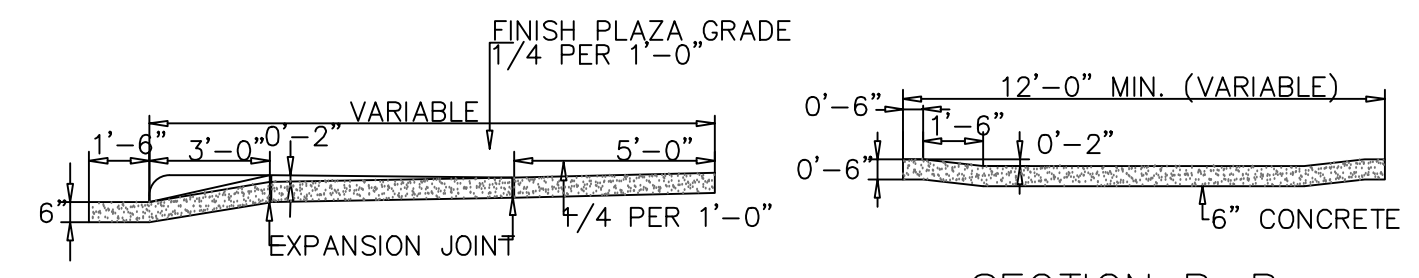


PAVEMENT MARKINGS OFFSETS
SD 11-02

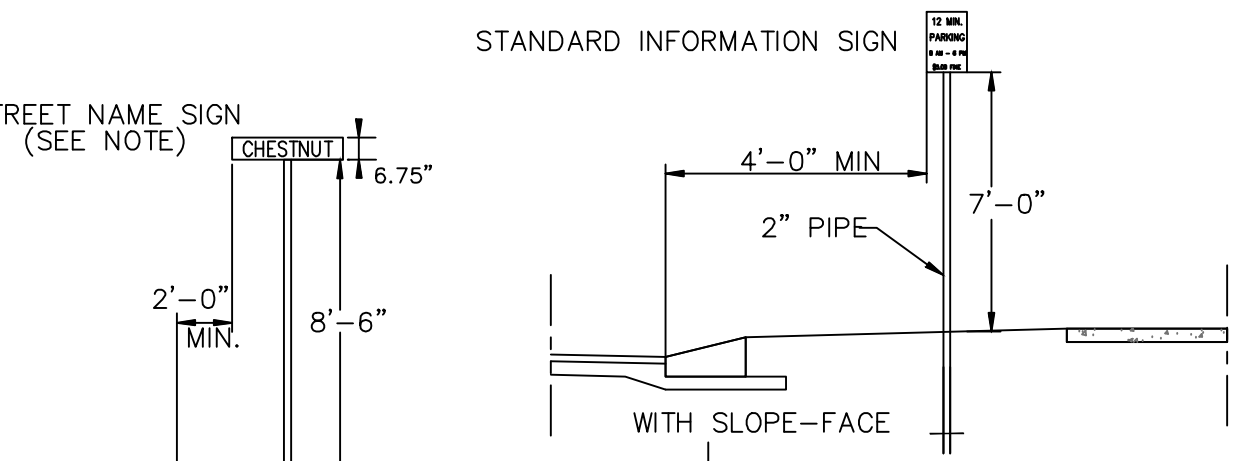
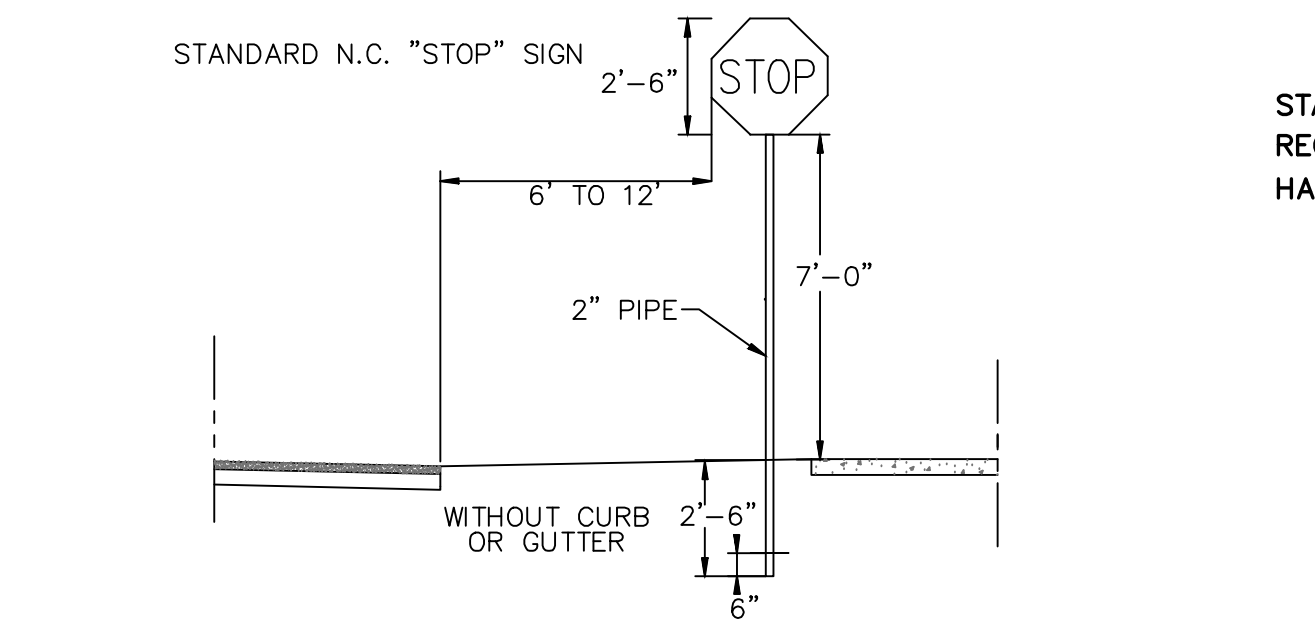
WIDTH OF TRAVEL PAVEMENT	MAX. EDGE LINE OFFSET FROM E. O. P.	MINIMUM LANE WIDTH
16' - 20'	2'	8' - 10'
22'	2'	11'
24'	1'	11'
26'	2'	11'
28'	2'	12'
30'	3'	12'
32'	4'	12'



PAVEMENT PLAN

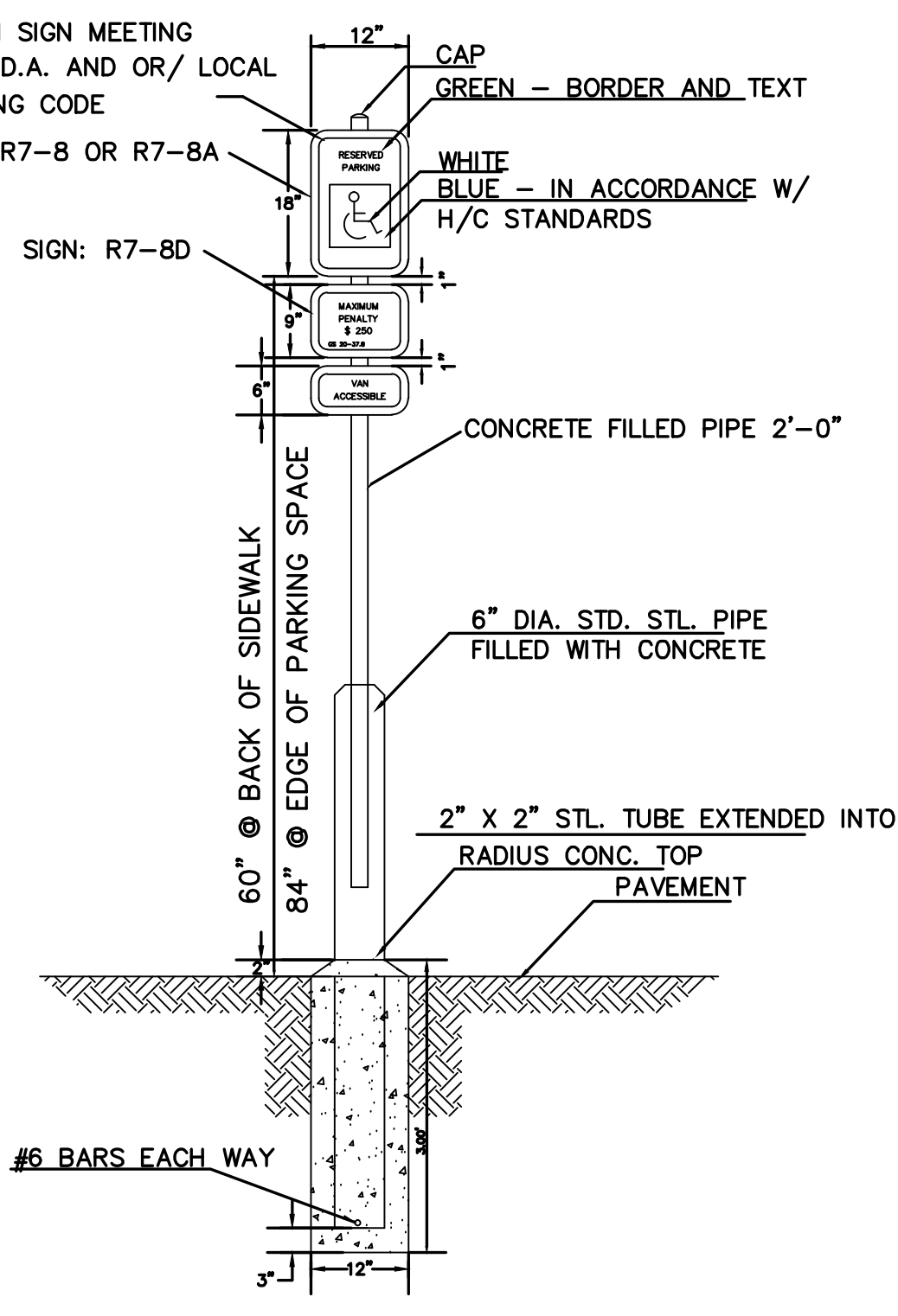


STANDARD DRIVEWAY DETAIL
SD 8-02
NOT TO SCALE

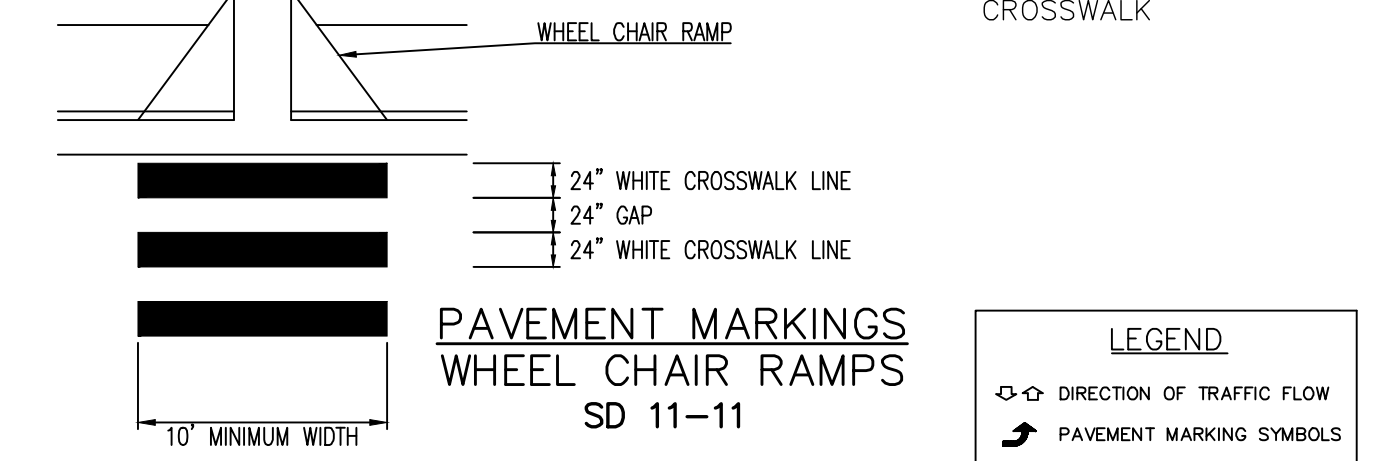
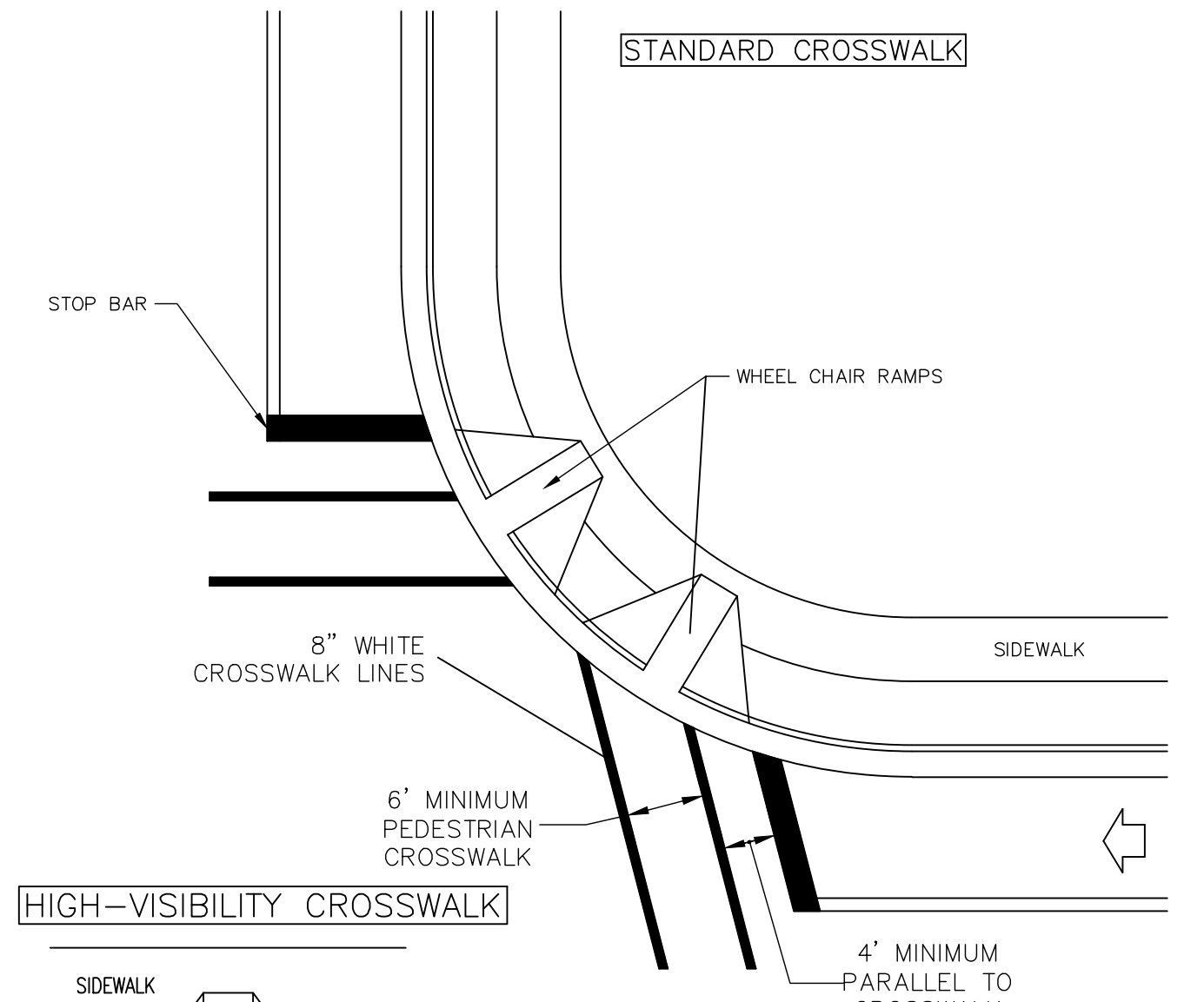


- NOTES:**
- STREET NAME SIGNS SHALL BE A MINIMUM OF 6" EXTRUDED ALUMINUM BLADES USING A MINIMUM OF 4" C SERIES LETTERING IN REFLECTIVE SILVER & REFLECTIVE GREEN BACKGROUND.
 - ALL REFLECTIVE SIGNS SHALL BE MADE OF ENGINEERING GRADE OR HIGH INTENSITY GRADE REFLECTIVE SHEETING OR APPROVED EQUIVALENT.
 - ALL SIGNS PLACED IN RIGHT-OF-WAY WILL BE APPROVED BY TRAFFIC ENGINEERING DIVISION.
 - ALL FOOTINGS TYPICAL FOR ALL SIGNS, WHICH NEED TO BE ANCHORED IN CONCRETE.

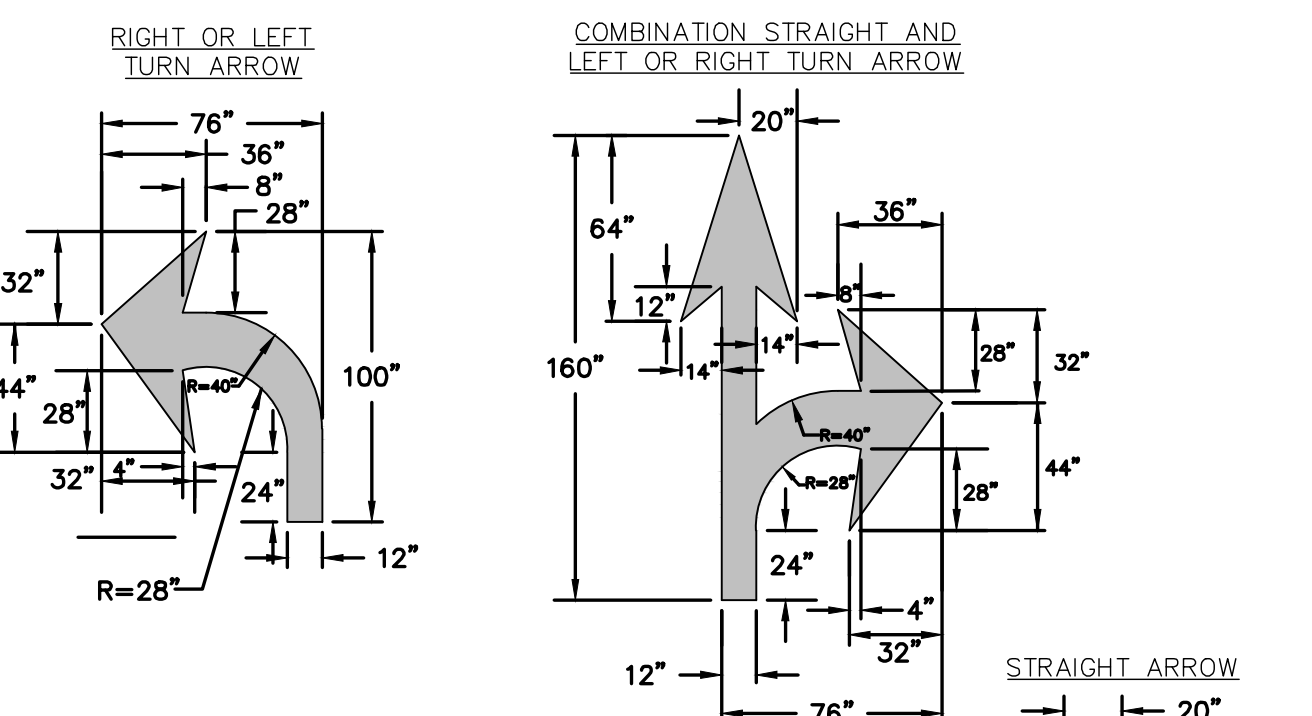
STANDARD SIGN INSTALLATION LOCATION
SD 15-04
NOT TO SCALE



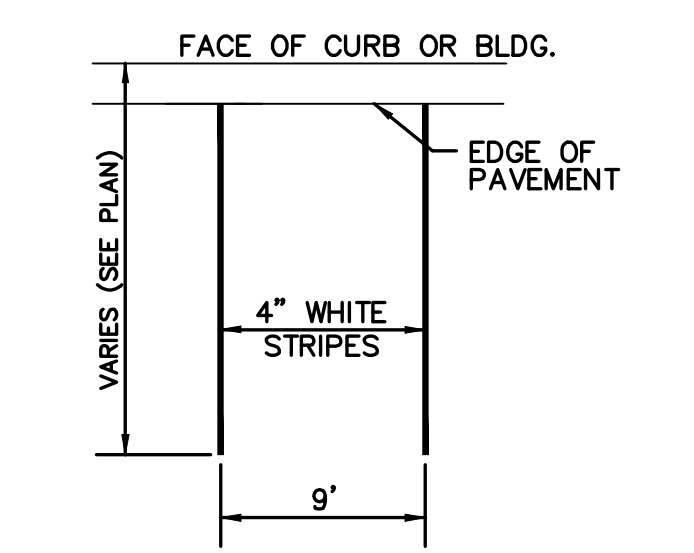
HANDICAP PARKING SIGN
NOT TO SCALE



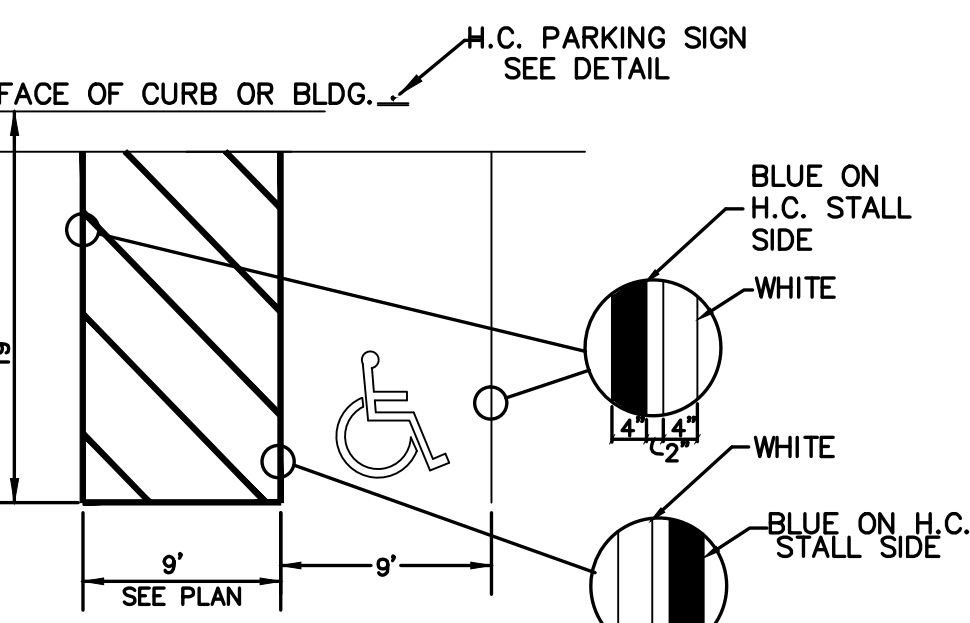
PAVEMENT MARKINGS WHEEL CHAIR RAMP
SD 11-11



PAVEMENT MARKINGS ARROW SYMBOLS
SD 11-03



TYPICAL PARKING STALL
NOT TO SCALE



HANDICAPPED PARKING STALL
NOT TO SCALE

GENERAL NOTES

- IN ACCORDANCE WITH N.C.G.S. 136-44.14, ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED SHALL PROVIDE WHEELCHAIR RAMP 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.
- WHEELCHAIR RAMP SHALL BE LOCATED AS INDICATED IN DETAIL DRAWINGS; HOWEVER, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- CURB RAMP SHALL HAVE DETECTABLE WARNINGS EXTENDING THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 2'-FT. IN LENGTH.

CONSTRUCTION NOTES

- CONSTRUCTION SHALL CONFORM WITH CONSTRUCTION STANDARDS OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
- WHEELCHAIR RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
- A 1/2-IN. EXPANSION JOINT SHALL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
- 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.
- TRANSITIONS FROM RAMP TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
- THE MAXIMUM SLOPE ON THE CURB RAMP RUN IS 1:12.
- THE MAXIMUM CROSS SLOPE OF THE CURB RAMP IS 1:50.
- MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
- ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMP AT BOTH SIDES AND A LEVEL AREA AT LEAST 48-IN. LONG BETWEEN THE CURB RAMP.
- 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 NOTES

- 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.
- PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF THE PEDESTRIAN CROSSWALK.
- 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.
- CURB RAMP AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
- THE BOTTOM OF DIAGONAL (CORNER TYPE) CURB RAMP AT MARKED CROSSINGS SHALL HAVE 48-IN. MINIMUM CLEAR SPACE WITHIN THE MARKINGS.
- IF DIAGONAL CURB RAMP 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.

SD 8-09

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

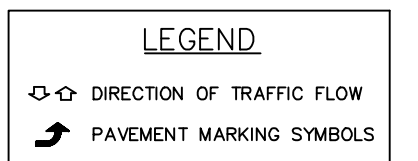
Name	Date
Planning	
Traffic	
Fire	

CITY OF WILMINGTON
NORTH CAROLINA
Public Services - Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

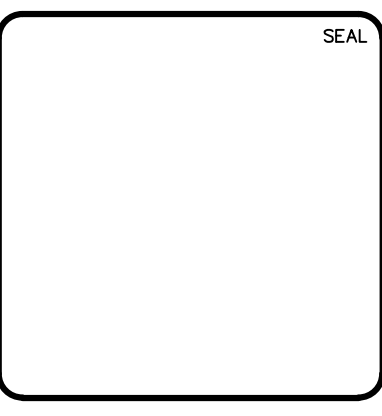
Date: _____ Permit # _____
Signed: _____

GENERAL NOTES

- ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR
- PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENDOUR INTO INTERSECTION AREAS.
- ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS UNLESS APPROVED BY THE ENGINEER.



REVNO.	ISSUED FOR CONSTRUCTION	DESCRIPTIONS REVISIONS	DATE
0			03/17/2016



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RIVERLIGHTS
by Newland COMMUNITIES

RIVERLIGHTS MARINA VILLAGE PHASE 1B
SITE DETAILS

DATE: 17MAR16	SCALE: CS-502
MCE PROJ. # 2735-0124	HORIZONTAL: N/A
DRAWN: ALM	VERTICAL: N/A
DESIGNED: NJL	REVISION: 28
CHECKED: KCBE	
PROJ. MGR.: NJL	
STATUS: FINAL DESIGN	ISSUED FOR CONSTRUCTION