

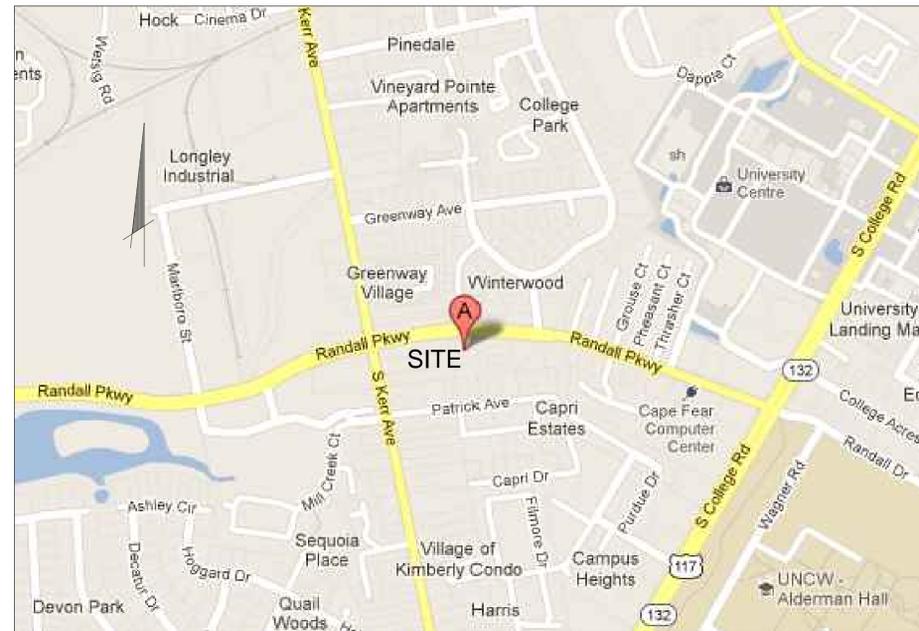
The Solstice Lofts

Randall Parkway and S. Kerr Avenue

City of Wilmington, New Hanover County, North Carolina
Major Site Plan Submittal

DEVELOPMENT DATA

PROJECT:	The Solstice Lofts
PLAN TYPE:	MAJOR SITE PLAN
ENGINEER:	CHANDLER ENGINEERING, PA JIM CHANDLER, PE 309 S. FUQUAY AVENUE FUQUAY-VARINA, NC 27526 PHONE: 919-552-4845 FAX: 919-552-6962 EMAIL: jim@chandlerengineeringpa.com
OWNER/DEVELOPER:	THE LOFTS AT RANDALL LLC CATHERINE CONNORS - MANAGER 106 MUIR WOODS DRIVE CARY, NC 27513 PHONE: 919-380-0446 EMAIL: cathy.connors@solsticepartners.net
PROPERTY ADDRESS:	4810 RANDALL PARKWAY 4629 PATRICK AVENUE 363 S. KERR AVENUE 369 S. KERR AVENUE 375 S. KERR AVENUE
PARCEL NUMBER:	313711-67-9382.000 313711-77-1253.000 313711-67-6311.000 313711-67-6221.000 313711-67-6150.000
REFERENCE:	DB 4073, PG 784 DB 5503, PG 1266 DB 5567, PG 479 DB 5298, PG 1819
ZONING:	MF-L (CD)
PROPOSED USE:	MULTI-FAMILY
EXISTING TRACT AREA:	5.57 ACRES



VICINITY MAP - 1"=1000'

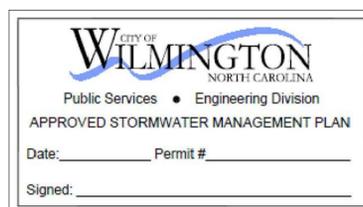
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C3.01 -	SITE GRADING PLAN
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A1.08 -	ACCESSORY PLANS
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SP-1 -	SWIMMING POOL LAYOUT
SP-2 -	SWIMMING POOL DETAILS

CONDITIONAL DISTRICT ZONING CONDITIONS

- The use and development of the subject property shall comply with all regulations and requirements imposed by the Land Development Code, the City of Wilmington Technical Standards and Specifications Manual and any other applicable federal, state or local law, ordinance or regulation, as well as any condition stated below. In the event of a conflict, the more stringent requirement or higher standard shall apply.
- Approval of this rezoning request does not constitute technical approval of the site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to release of the project for construction.
- If, for any reason, any condition for approval is found to be illegal or invalid or if the applicant should fail to accept any condition following approval, the approval of the site plan for the district shall be null and void and of no effect and proceedings shall be instituted to rezone the property to its previous zoning classification.
- The use and development of the subject property shall be in accordance with the plan as submitted 2/21/14 and approved. The permitted use shall be restricted to a maximum 54-unit multi-family residential development.
- Ingress and egress to the site shall be provided by two, right-in/right-out driveways from Randall Parkway.
- All existing protected trees not impacted by essential site improvements shall be preserved or mitigated.
- Access to the site shall be restricted to Randall Parkway.
- The use of the Patrick Avenue access for construction, pedestrian or any other use associated with the multi-family residential development shall be prohibited.
- A 10-foot wide multi-use path shall be provided along Randall Parkway and South Kerr Avenue.
- A minimum of 70 bicycle parking spaces shall be provided on the site.
- Exterior site lighting shall be installed so as not to shine directly onto adjacent parcels and shall be limited to full cutoff type fixtures.
- A conceptual site lighting plan shall be submitted prior to construction release.
- Any freestanding signs on the site shall be monument style with landscaping around the base of the sign, no pole signs shall be permitted and internal illumination shall be prohibited.
- The use of pine straw as ground cover shall be prohibited within ten (10) feet of any combustible exterior construction.
- Tree protection fencing shall be installed along all protected trees with signage of no material storage in English and Spanish.
- All applicable city, state and federal regulations shall be followed.

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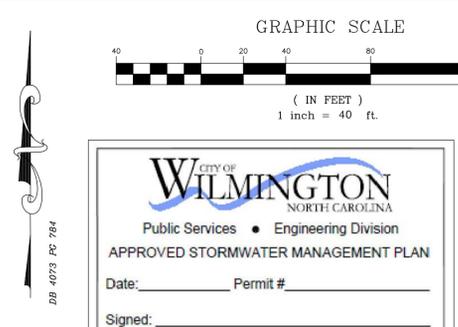


Approved Construction Plan	
Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962

CALL 48 HOURS BEFORE YOU DIG
1-800 632-4949
NORTH CAROLINA ONE-CALL CENTER





ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

Approved Construction Plan

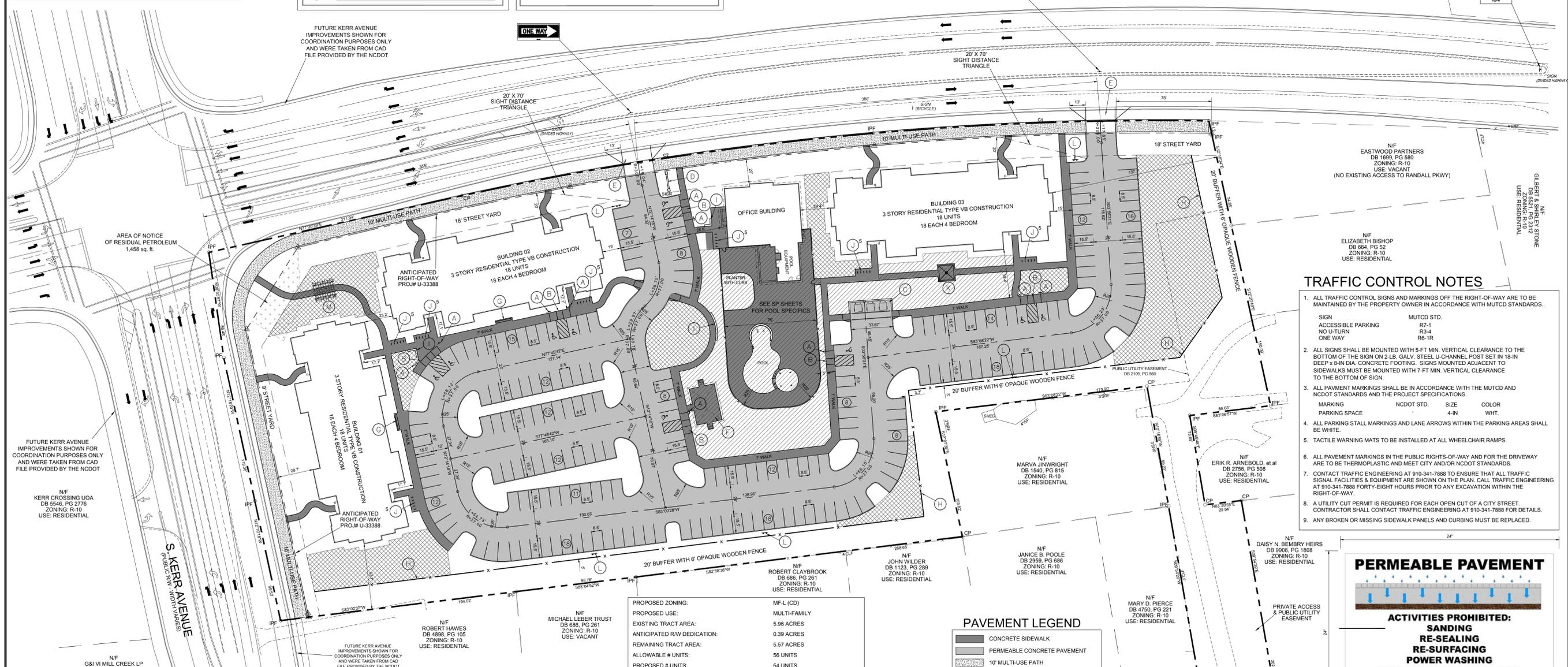
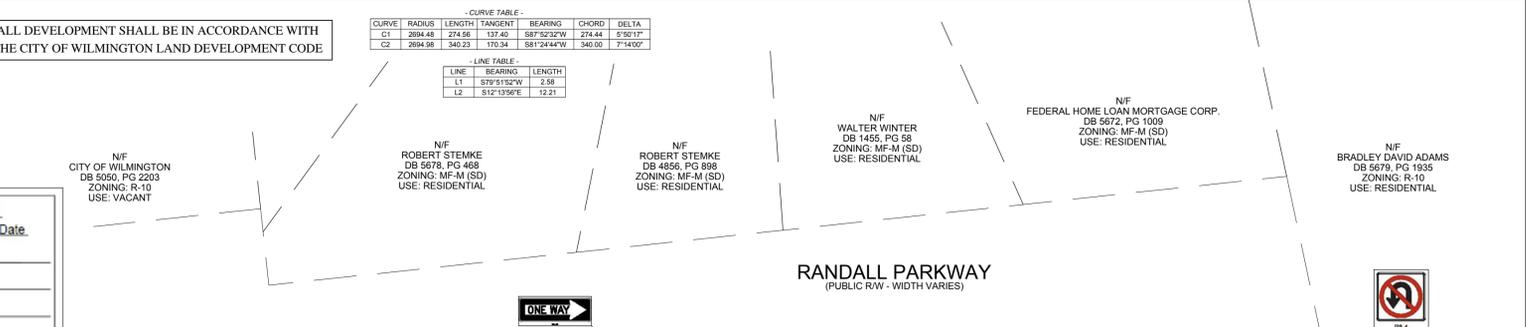
Name: _____ Date: _____

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Traffic: _____

Fire: _____

Signed: _____



GENERAL NOTES

- ALL CURVE RADII ARE 5 FT AT FACE OF CURB, UNLESS OTHERWISE NOTED.
- ALL CURBING SHALL BE 4" HIGH BY 6" WIDE HEADER CURB. SEE DETAIL SHEET.
- Ⓜ DENOTES VAN ACCESSIBLE PARKING SPACE.
- ALL REQUIRED IMPROVEMENTS SHALL CONFORM TO CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.
- SOLID WASTE DUMPSTER AREAS WILL BE SCREENED WITH LANDSCAPE MATERIALS AS REQUIRED BY THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
- ALL HVAC AND MECHANICAL EQUIPMENT WILL BE GROUND MOUNTED AND SHALL BE SCREENED FROM PUBLIC VIEW. REFER TO PLANTING PLAN ADDITIONAL INFORMATION.
- ALL SIDEWALKS SHALL BE 5-FEET IN WIDTH, UNLESS OTHERWISE NOTED.
- ALL SIDEWALKS THAT ABUT PARKING SHALL BE TURNED DOWN AND BE 7-FEET IN WIDTH.
- ALL PARKING SPACES SHALL BE AS REQUIRED PER THE TECHNICAL STANDARDS.

DEVELOPMENT DATA

PROJECT: THE SOLSTICE LOFTS

PLAN TYPE: MAJOR SITE PLAN

ENGINEER: CHANDLER ENGINEERING, PA
JIM CHANDLER, PE
309 S. FLOQUAY AVENUE
FLOQUAY-VARINA, NC 27526
PHONE: 919-552-4845
FAX: 919-552-4962
EMAIL: jim@chandlerengineeringpa.com

OWNER/DEVELOPER: THE LOFTS AT RANDALL LLC
CATHERINE CONNORS - MANAGER
106 MUIR WOODS DRIVE
CARY, NC 27513
PHONE: 919-380-0446
EMAIL: cathy.connors@solsticepartners.net

PROPERTY ADDRESSES: 4810 RANDALL PARKWAY
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PARCEL NUMBERS: 313711-67-9382.000
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REFERENCES: DB 4073, PG 784
DB 5503, PG 1286
DB 5507, PG 479
DB 5298, PG 1819

PROPOSED ZONING: MF-L (CD)

PROPOSED USE: MULTI-FAMILY

EXISTING TRACT AREA: 5.96 ACRES

ANTICIPATED R/W DEDICATION: 0.39 ACRES

REMAINING TRACT AREA: 5.57 ACRES

ALLOWABLE # UNITS: 56 UNITS

PROPOSED # UNITS: 54 UNITS

ALLOWABLE DENSITY: 10 UNITS PER ACRE

PROPOSED DENSITY: 9.89 UNITS PER ACRE

PROPOSED # BEDROOMS: 216 TOTAL BEDROOMS

GROSS FLOOR AREA (APARTMENTS): 90,261 SF (3 @ 30,087 SF)

GROSS FLOOR AREA (COMMUNITY CENTER): 3,440 SF

BUILDING COVERAGE: APARTMENT BUILDINGS: 3 @ 10,409 SF
OFFICE/POOL HOUSE: 4,496 SF
PICNIC SHELTER: 792 SF
TOTAL: 36,515 SF (15.1%)

MIN. BUILDING SETBACKS: (FRONT) CODE: 35' ACTUAL: 20'
(REAR) CODE: 25' ACTUAL: 53.6'
(SIDE) CODE: 20' ACTUAL: 137'
(CORNER SIDE) CODE: 30' ACTUAL: 28.5'

MAX. BUILDING HEIGHT: 3-STORY / 35' MAN ROOF

CAMA LAND CLASSIFICATION: URBAN

POST CONSTRUCTION IMPERVIOUS SURFACE AREAS:

POST R/W DEDICATION	ON-SITE	OFF-SITE
ROOFTOP:	36,515 SF	0 SF
WALKS:	19,709 SF	10,480 SF
NON-PERMEABLE PAVEMENT:	0 SF	1,103 SF
PERMEABLE PAVEMENT:	66,697 SF	0 SF
(75% REDUCTION FOR TYPE A SOILS):	- 50,023 SF	
TOTAL:	72,898 SF	11,583 SF

PAVEMENT LEGEND

- CONCRETE SIDEWALK
- PERMEABLE CONCRETE PAVEMENT
- 10' MULTI-USE PATH

REQUIRED PARKING (QUAD UNITS):

MINIMUM: 1 SPACE PER BEDROOM: 216

MAXIMUM: MINIMUM PLUS 1 SPACE PER 10 UNITS: 221

PROPOSED PARKING: 221

ACCESSIBLE PARKING REQUIRED: 7

ACCESSIBLE PARKING PROVIDED: 10

BIKE PARKING REQUIRED: 20 SPACES

BIKE PARKING PROVIDED: 70 SPACES (35 RACKS)

OPEN SPACE CALCULATIONS:

OPEN SPACE REQUIRED (POST R/W DEDICATION): 84,920 SF (35.0%)

OPEN SPACE PROVIDED (POST R/W DEDICATION): 95,222 SF (39.3%)

AREA PROVIDED IS TOTAL TRACT AREA (242,629 SF) MINUS COVERED SURFACES (122,921 SF) (DOES NOT INCLUDE EXISTING GRAVEL DRIVE)

PLANTING ISLANDS (4,104 SF)

FOUNDATION PLANTING AREA (2,321 SF)

AND FENCED BUFFERS (18,061 SF)

REC. AREA REQUIRED (50% OF OPEN SPACE REQUIRED): 42,460 SF

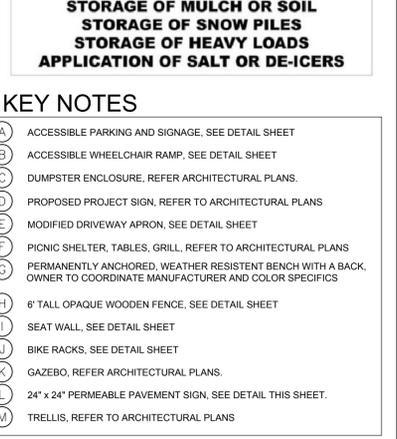
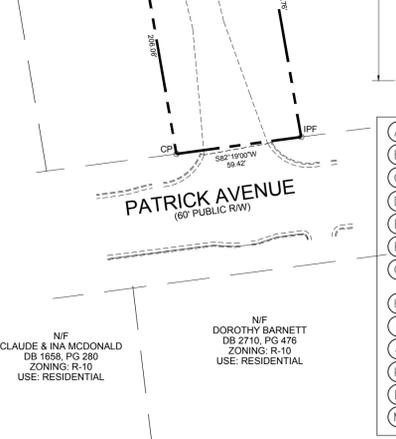
ACTIVE REC. AREA REQUIRED (50% OF REC AREA): 21,230 SF

PASSIVE REC. AREA REQUIRED (50% OF REC. AREA): 21,230 SF

ACTIVE REC. AREA PROVIDED: 22,010 SF

PASSIVE REC. AREA PROVIDED: 23,265 SF

TOTAL REC. AREA PROVIDED: 45,275 SF



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309 S. FLOQUAY AVENUE, FLOQUAY-VARINA, NC 27526
Phone: 919-552-4845 Fax: 919-552-4962

SEALS

REVISIONS

MAJOR SITE PLAN

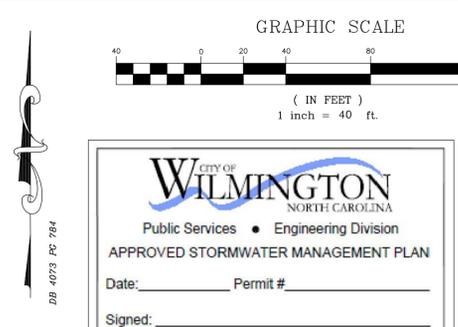
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Randall Parkway and S. Kerr Avenue
Wilmington, North Carolina

REVIEWED BY: JFC
DATE: 6/19/14
PROJECT NUMBER: 13-006
COUNTY: NEW HANOVER
ZONING: MF-L (CD)
TOWNSHIP: WILMINGTON

SITE LAYOUT PLAN

C2.01

JUNE 2014



ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

Signed: _____

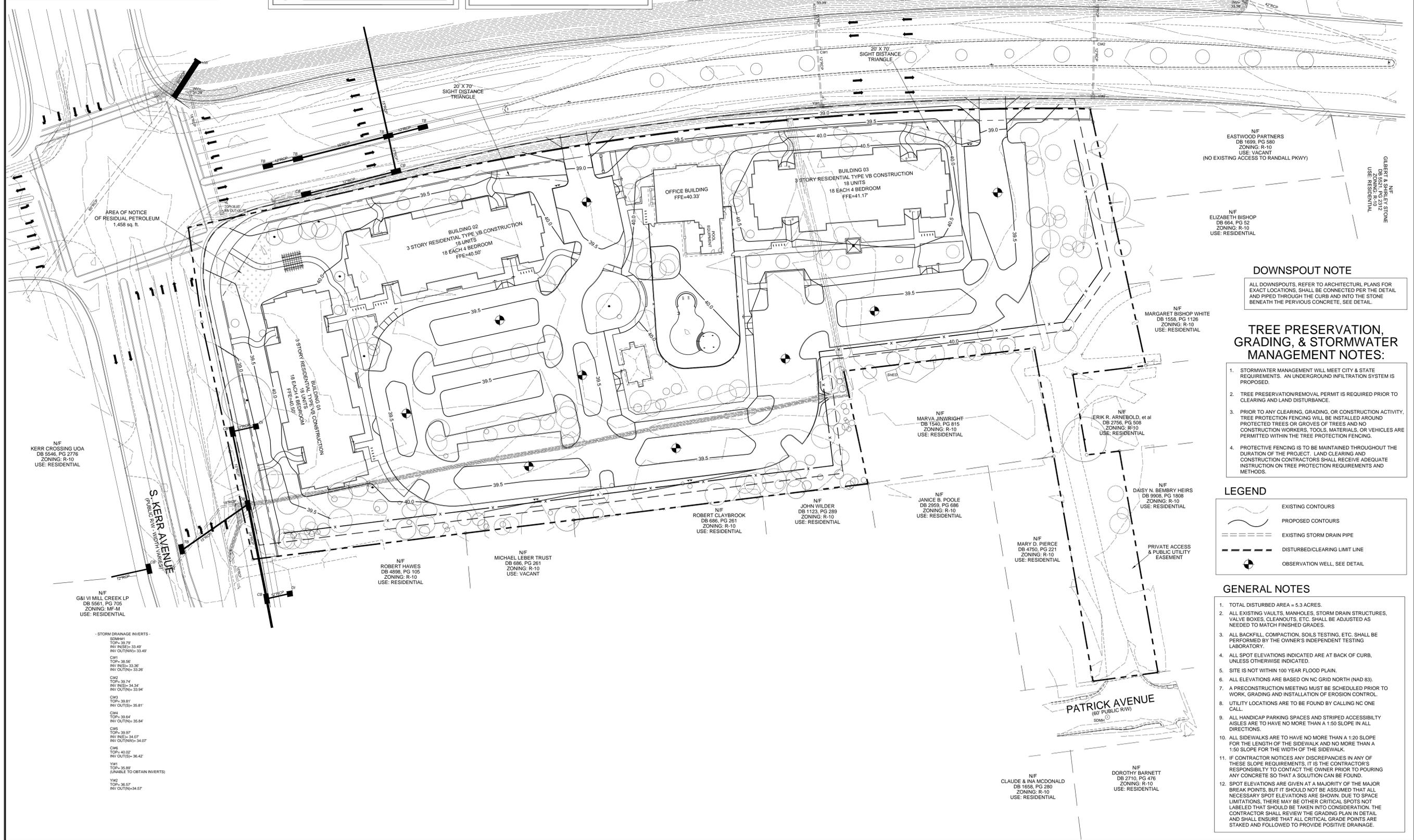
CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



DOWNSPOUT NOTE

ALL DOWNSPOUTS. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS. SHALL BE CONNECTED PER THE DETAIL AND PIPED THROUGH THE CURB AND INTO THE STONE BENEATH THE PVIOUS CONCRETE. SEE DETAIL.

TREE PRESERVATION, GRADING, & STORMWATER MANAGEMENT NOTES:

1. STORMWATER MANAGEMENT WILL MEET CITY & STATE REQUIREMENTS. AN UNDERGROUND INFILTRATION SYSTEM IS PROPOSED.
2. TREE PRESERVATION/REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBANCE.
3. 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.
4. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING STORM DRAIN PIPE
- DISTURBED/CLEARING LIMIT LINE
- OBSERVATION WELL, SEE DETAIL

GENERAL NOTES

1. TOTAL DISTURBED AREA = 5.3 ACRES.
2. ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADES.
3. ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
4. ALL SPOT ELEVATIONS INDICATED ARE AT BACK OF CURB, UNLESS OTHERWISE INDICATED.
5. SITE IS NOT WITHIN 100 YEAR FLOOD PLAIN.
6. ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83).
7. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING AND INSTALLATION OF EROSION CONTROL.
8. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
9. ALL HANDICAP PARKING SPACES AND STRIPED ACCESSIBILITY AISLES ARE TO HAVE NO MORE THAN A 1:50 SLOPE IN ALL DIRECTIONS.
10. ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 SLOPE FOR THE WIDTH OF THE SIDEWALK.
11. IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER PRIOR TO POURING ANY CONCRETE SO THAT A SOLUTION CAN BE FOUND.
12. SPOT ELEVATIONS ARE GIVEN AT A MAJORITY OF THE MAJOR BREAK POINTS, BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.

chandler engineering pa
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SEALS

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 028486
FLAORE CHANDLER

NORTH CAROLINA CORPORATE SEAL
Chandler Engineering, PA
C-2822

REVISIONS

NO.	DATE	COMMENTS

MAJOR SITE PLAN

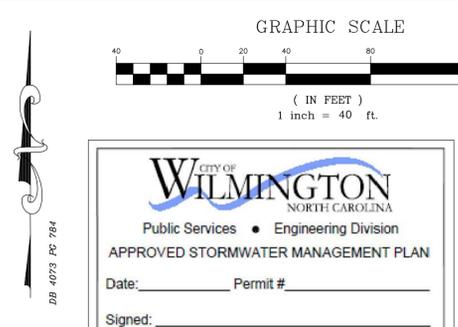
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REVIEWED BY: JFC
DATE: 6/19/14
PROJECT NUMBER: 13-006
COUNTY: NEW HANOVER
ZONING: MF-L (CD)
TOWNSHIP: WILMINGTON

SITE GRADING PLAN

C3.01

JUNE 2014



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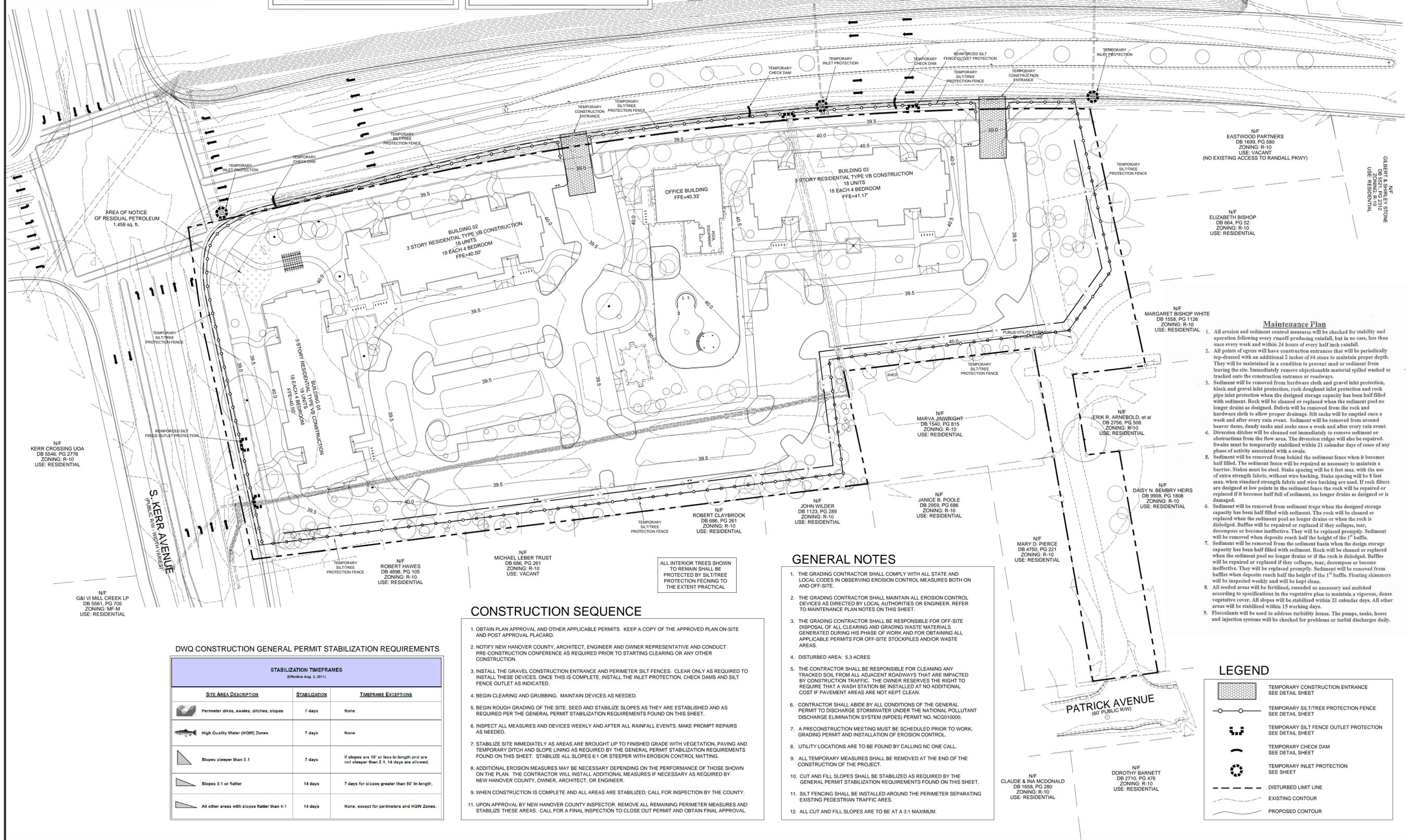
Approved Construction Plan
Name: _____ Date: _____

Planning _____
Traffic _____
Fire _____

Signed: _____

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

Date: _____ Permit # _____
Signed: _____



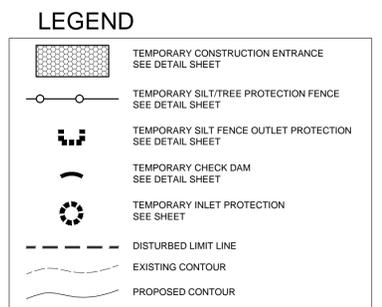
- Maintenance Plan**
- All erosion and sediment control measures will be checked for stability and operation following every runoff-producing rainfall, but in no case, less than once every week and within 24 hours of every half inch rainfall.
 - All points of egress will have construction entrances that will be periodically top-dressed with an additional 2 inches of #4 stone to maintain proper depth. They will be maintained in a condition to prevent mud or sediment from leaving the site. Immediately remove objectionable material spilled washed or tracked onto the construction entrance or roadways.
 - Sediment will be removed from hardware cloth and gravel inlet protection, block and gravel inlet protection, rock doughnut inlet protection and rock pipe inlet protection when the designed storage capacity has been half filled with sediment. Rock will be cleaned or replaced when the sediment pool no longer drains as designed. Debris will be removed from the rock and hardware cloth to allow proper drainage. Silt sacks will be emptied once a week and after every rain event. Sediment will be removed from around beaver dams, sandbags and socks once a week and after every rain event.
 - Diversion ditches will be cleaned out immediately to remove sediment or obstructions from the flow area. The diversion ridges will also be repaired. Swales must be temporarily stabilized within 21 calendar days of cease of any phase of activity associated with a swale.
 - Sediment will be removed from behind the sediment fence when it becomes half filled. The sediment fence will be repaired as necessary to maintain a barrier. Stakes must be steel. Stakes spacing will be 6 feet max. with the use of extra strength fabric, without wire backing. Stake spacing will be 8 feet max. when standard strength fabric and wire backing are used. If rock filters are designed at low points in the sediment fence the rock will be repaired or replaced if it becomes half full of sediment, no longer drains as designed or is damaged.
 - Sediment will be removed from sediment traps when the designed storage capacity has been half filled with sediment. The rock will be cleaned or replaced when the sediment pool no longer drains or when the rock is dislodged. Baffles will be repaired or replaced if they collapse, tear, decompose or become ineffective. They will be replaced promptly. Sediment will be removed when deposits reach half the height of the 1st baffle.
 - Sediment will be removed from the sediment basin when the design storage capacity has been half filled with sediment. Rock will be cleaned or replaced when the sediment pool no longer drains or if the rock is dislodged. Baffles will be inspected weekly and will be kept clean.
 - All seeded areas will be fertilized, reseeded as necessary and mulched according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover. All slopes will be stabilized within 21 calendar days. All other areas will be stabilized within 15 working days.
 - Flocculants will be used to address turbidity issues. The pumps, tanks, hoses and injection systems will be checked for problems or turbid discharges daily.

- GENERAL NOTES**
- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
 - THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER. REFER TO MAINTENANCE PLAN NOTES ON THIS SHEET.
 - THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
 - DISTURBED AREA: 5.3 ACRES
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
 - CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NC0910000.
 - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
 - UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
 - ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
 - CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
 - SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
 - ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.

- CONSTRUCTION SEQUENCE**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS. KEEP A COPY OF THE APPROVED PLAN ON-SITE AND POST APPROVAL PLACARD.
 - NOTIFY NEW HANOVER COUNTY, ARCHITECT, ENGINEER AND OWNER REPRESENTATIVE AND CONDUCT PRE-CONSTRUCTION CONFERENCE AS REQUIRED PRIOR TO STARTING CLEARING OR ANY OTHER CONSTRUCTION.
 - INSTALL THE GRAVEL CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCES. CLEAR ONLY AS REQUIRED TO INSTALL THESE DEVICES. ONCE THIS IS COMPLETE, INSTALL THE INLET PROTECTION, CHECK DAMS AND SILT FENCE OUTLET AS INDICATED.
 - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED.
 - BEGIN ROUGH GRADING OF THE SITE. SEED AND STABILIZE SLOPES AS THEY ARE ESTABLISHED AND AS REQUIRED PER THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
 - INSPECT ALL MEASURES AND DEVICES WEEKLY AND AFTER ALL RAINFALL EVENTS. MAKE PROMPT REPAIRS AS NEEDED.
 - STABILIZE SITE IMMEDIATELY AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING AND TEMPORARY DITCH AND SLOPE LINING AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET. STABILIZE ALL SLOPES 6:1 OR STEEPER WITH EROSION CONTROL MATTING.
 - ADDITIONAL EROSION MEASURES MAY BE NECESSARY DEPENDING ON THE PERFORMANCE OF THOSE SHOWN ON THE PLAN. THE CONTRACTOR WILL INSTALL ADDITIONAL MEASURES IF NECESSARY AS REQUIRED BY NEW HANOVER COUNTY, OWNER, ARCHITECT, OR ENGINEER.
 - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED, CALL FOR INSPECTION BY THE COUNTY.
 - UPON APPROVAL BY NEW HANOVER COUNTY INSPECTOR, REMOVE ALL REMAINING PERIMETER MEASURES AND STABILIZE THESE AREAS. CALL FOR A FINAL INSPECTION TO CLOSE OUT PERMIT AND OBTAIN FINAL APPROVAL.

DWQ CONSTRUCTION GENERAL PERMIT STABILIZATION REQUIREMENTS

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.



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SEALS

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FLORIANE CHANDLER

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REVISIONS

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MAJOR SITE PLAN

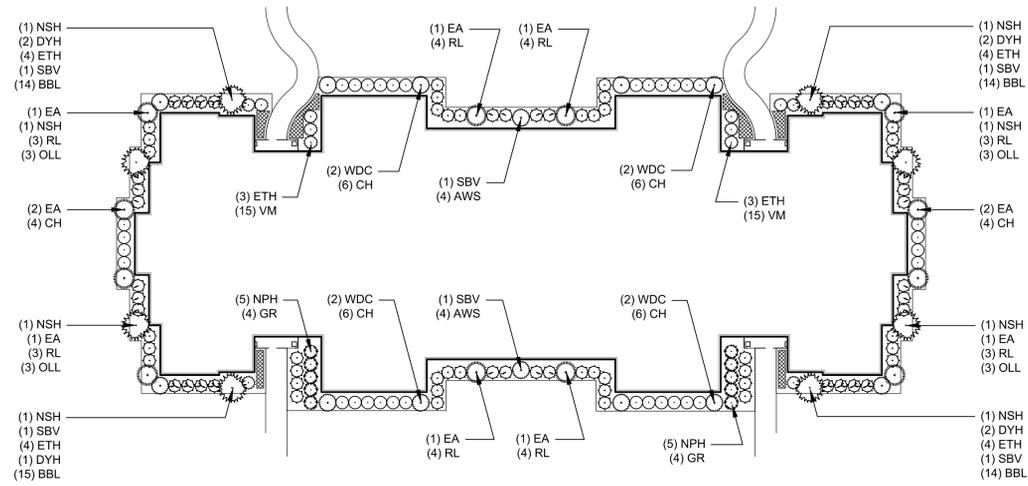
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SITE SEDIMENTATION AND EROSION CONTROL PLAN

C4.01

JUNE 2014



**BUILDINGS 1, 2 & 3
FOUNDATION PLANTINGS**

SCALE: 1" = 20'

PLANT LIST (THIS SHEET)									
KEY	PLANT NAME	SIZE	BLDG ONE	BLDG TWO	BLDG THREE	POOL AREA	TOTAL	PLANT TYPE	
AWS	ANTHONY WATERER SPIREA SPIREA BUNALDIA 'ANTHONY WATERER'	18 - 24" HT 3 GAL	8	8	8	0	24	SHRUB	
BBL	BIG BLUE LIRIOPE LIRIOPE MUSCARI 'BIG BLUE'	4" POTS 12" o/c	56	56	56	10	178	GRD COVER	
CH	CARISSA HOLLY ILEX CORNUTA 'CARISSA'	15-18" SPR 3 GAL	32	32	32	18	114	SHRUB	
CJH	COMPACT JAPANESE HOLLY ILEX CREMATA 'COMPACTA'	18-24" HT 3 GAL	0	0	0	37	37	SHRUB	
DL	STELLA 'ORO DAYLILY HEMEROCALLIS 'STELLA d'ORO'	1 GAL	0	0	0	10	10	GRD COVER	
DYH	DWARF YAUPON HOLLY ILEX VOMITORIA 'SCHILLINGS'	15-18" SPR 3 GAL	7	7	7	26	47	SHRUB	
EA	EMERALD ARBORVITAE THUJA OCCIDENTALIS 'EMERALD'	6" HT 25 GAL	12	12	12	9	45	SHRUB	
ETH	ELEANOR TABOR INDIAN HAWTHORNE RAPIHOLEPSIS INDICA 'ELEANOR TABOR'	15-18" SPR 3 GAL	22	22	22	19	85	SHRUB	
GR	TRAILING GARDENIA GARDENIA RADICANS	15 - 18" SPR 3 GAL	8	8	8	0	24	GRD COVER	
LRA	LITTLE RICHARD ABELIA ABELIA x GRANDIFLORA 'LITTLE RICHARD'	15 - 18" SPR 3 GAL	0	0	0	3	3	SHRUB	
NPH	NEEDLEPOINT HOLLY ILEX CORNUTA 'NEEDLEPOINT'	18-24" HT 3 GAL	10	10	10	5	35	SHRUB	
NSH	NELLIE STEVENS HOLLY ILEX x NELLIE R. STEVENS	6" HT 25 GAL	8	8	8	3	27	SHRUB	
OLL	OTTO LUYKEN LAUREL PRUNUS LAUROCERASUS 'OTTO LUYKEN'	18 - 24" HT 3 GAL	12	12	12	0	36	SHRUB	
RG	GOLDSTURN BLACK EYED SUSAN RUBROCKA FLUIDA 'COLDSTURN'	8 - 12" SPR 1 GAL	0	0	0	17	17	GRD COVER	
RL	RUBY LOROPETALUM LOROPETALUM CHINENSIS 'RUBY'	18-24" HT 3 GAL	28	28	28	37	121	SHRUB	
SBV	SPRING BOUQUET VIBURNUM VIBURNUM TINUS 'SPRING BOUQUET'	18 - 24" HT 3 GAL	6	6	6	0	18	SHRUB	
VM	PERIWINKLE VINCA MINOR	4" POTS 15" o/c	30	30	30	0	90	GRD COVER	
WDC	WHITE DOVES SASANQUA (MINO-NO-YUKI) CAMELLIA SASANQUA 'WHITE DOVES'	24 - 30" HT 7 GAL	8	8	8	0	24	SHRUB	

- NOTES:**
- ALL DISTURBED AREAS OF THE SITE WILL BE MULCHED, PLANTED OR GRASSED.
 - LAWN TURF SHALL BE HYBRID BERNUOLA, SPRIGGED OR SODDED, OR HYBRID FESCUE, SEEDED OR SODDED.
 - MULCH ALL PLANT BEDS AND TREE RINGS WITH 3" OF TRIPLE SHREDDED HARDWOOD BARK.

LANDSCAPE CALCULATIONS

RANDALL PKWY PRIMARY VARIABLE WIDTH STREETYARD
 LENGTH: 730 LF (EXCL. DRIVES)
 MF DISTRICT FACTOR: 18
 SQUARE FOOTAGE REQ'D: 13,140 SF
 SQUARE FOOTAGE PROV'D: 13,209 SF
 REQ'D CANOPY TREES: 1 / 600 SF = 22
 EXIST CANOPY TREES: 18 FOR CREDIT (MARKED WITH AN 'A')
 PROP NEW CANOPY TREES: 5
 REQ'D SHRUBS: 6 / 600 SF = 131
 PROP. SHRUBS: 131+ (BLDG FRONT FOUNDATION PLANTINGS)

SOUTH KERR AVE SECONDARY VARIABLE WIDTH STREETYARD
 LENGTH: 273 LF
 MF DISTRICT FACTOR: 18 @ 50%
 SQUARE FOOTAGE REQ'D: 2,457 SF
 SQUARE FOOTAGE PROV'D: 2,477 SF
 REQ'D CANOPY TREES: 1 / 600 SF = 4
 EXIST CANOPY TREES: 2 FOR CREDIT (MARKED WITH AN 'A')
 PROP NEW CANOPY TREES: 2
 REQ'D SHRUBS: 6 / 600 SF = 25
 PROP. SHRUBS: 25+ (BLDG FRONT FOUNDATION PLANTINGS)

PARKING - INTERNAL AREA
 TOTAL AREA: 66,673 SF
 SHADING AREA REQ'D (20%): 13,335 SF
 REQ'D CANOPY TREES: 1 / 707 SF = 19 MIN
 EXIST CANOPY TREES: 11 FOR CREDIT (MARKED WITH A 'B')
 PROP. CANOPY TREES: 8
 TOTAL SHADED AREA PROV'D: 13,433 SF
 ALL PARKING SPACES WILL BE WITHIN 120' OF A PROPOSED CANOPY TREE OR EXISTING TREE TO REMAIN.

PARKING - PERIMETER AREA
 N / A (BUFFERYARDS MORE STRINGENT)

FOUNDATION PLANTINGS (2,321 SF TOTAL)

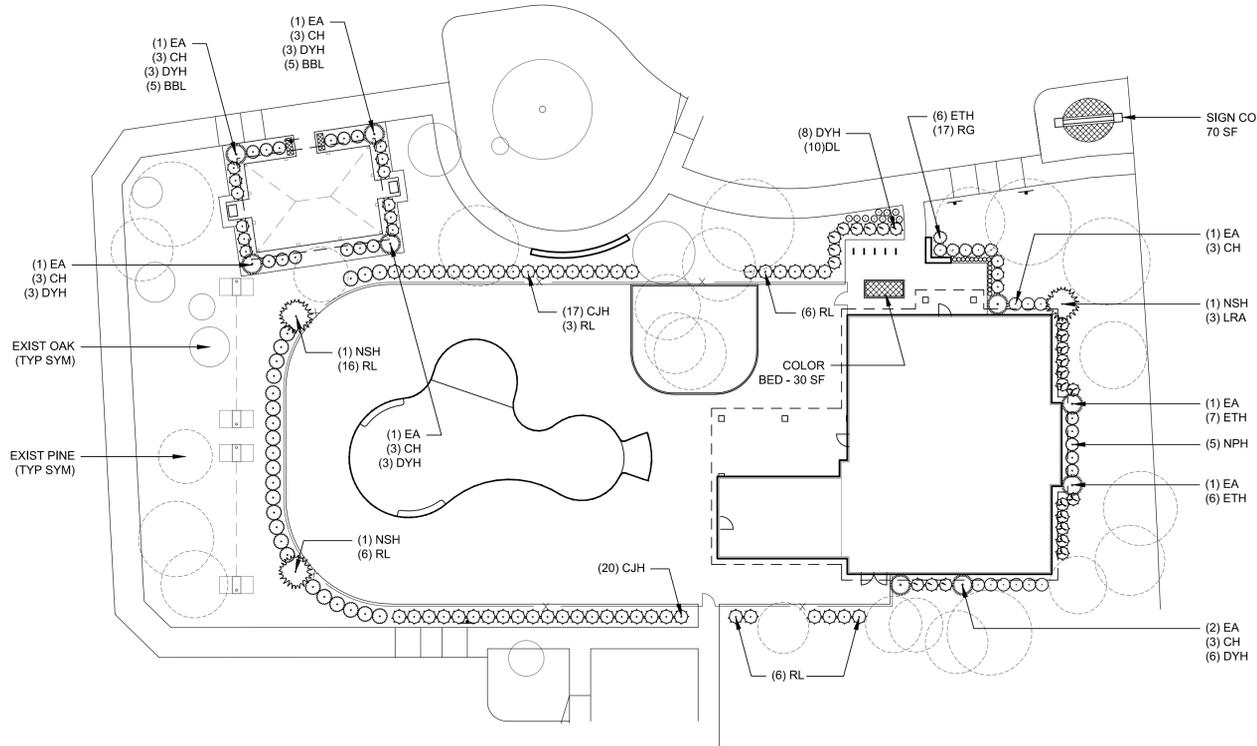
BLDG #1 (EAST SIDE):	BLDG #2 (EAST SIDE):
LENGTH: 182 LF	LENGTH: 182 LF
FACADE HEIGHT: 28'	FACADE HEIGHT: 28'
REQ'D SF (12%): 612 SF	REQ'D SF (12%): 612 SF
PROV'D SF: 612 SF	PROV'D SF: 612 SF
BLDG #2 (SOUTH SIDE):	BLDG #3 (EAST SIDE):
LENGTH: 182 LF	LENGTH: 62 LF
FACADE HEIGHT: 28'	FACADE HEIGHT: 28'
REQ'D SF (12%): 612 SF	REQ'D SF (12%): 208 SF
PROV'D SF: 612 SF	PROV'D SF: 208 SF
BLDG #3 (SOUTH SIDE):	BLDG #3 (EAST SIDE):
LENGTH: 182 LF	LENGTH: 62 LF
FACADE HEIGHT: 28'	FACADE HEIGHT: 28'
REQ'D SF (12%): 612 SF	REQ'D SF (12%): 208 SF
PROV'D SF: 612 SF	PROV'D SF: 208 SF

OFFICE (WEST SIDE):
 LENGTH: 48 LF
 FACADE HEIGHT: 12'
 REQ'D SF (12%): 69 SF
 PROV'D SF: 69 SF

BUFFERYARD
 LENGTH: 1021 LF - 143' (SE CORNER EASEMENT) = 878 LF
 WIDTH: 20' WITH SOLID 6' FENCE
 AREA: 18,061 SF
 REQ'D CANOPY TREES: 3 / 100 LF = 26
 EXIST CANOPY TREES: 26 FOR CREDIT (MARKED WITH A 'C')
 PROP NEW CANOPY TREES: 0 (To achieve 50% opacity)
 REQ'D SHRUBS: 2 EVERGREEN SHRUB ROWS
 1 ROW @ 6' o/c = 146
 1 ROW @ 12' o/c = 73
 SHRUBS PROV'D: 219 MAX. (To achieve 50% opacity - 126 shown)
 EVERGREEN SHRUBS 3' HT MIN
 EXIST VEGETATION WILL BE SUPPLEMENTED AS NECESSARY FROM THE QUANTITIES ABOVE TO ACHIEVE 50% OPACITY. (Prior to planting, stake tree and shrub locations for site review by Inspections Dept. to determine whether 50% opacity will be achieved by the proposed locations)

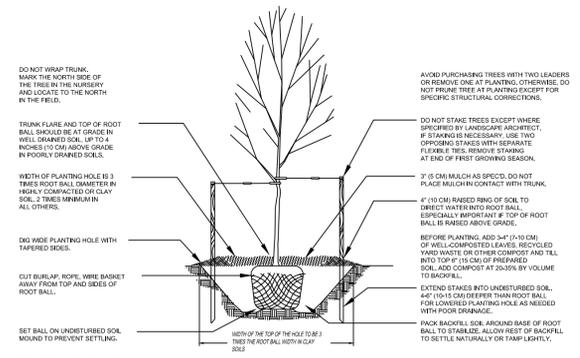
REQUIRED TREE RETENTION
 DISTURBED AREA: 4.0 AC +/-
 REQ'D TREES: 15 / AC = 60
 EXIST TREES: 60 FOR CREDIT (MARKED WITH A 'D')
 PROV'D NEW TREES: 0

SIGNIFICANT TREE MITIGATION
 10" MAGNOLIA (#9) @ 100%: 2 x 10" / 3 = 7 NEW TREES REQ'D
 10" MIMOSA (#368) @ 25%: 2 x 2.5" / 3 = 2 NEW TREES REQ'D
 TOTAL TREES REQ'D: 9
 TREES PROV'D: 9 (MARKED WITH AN 'E')

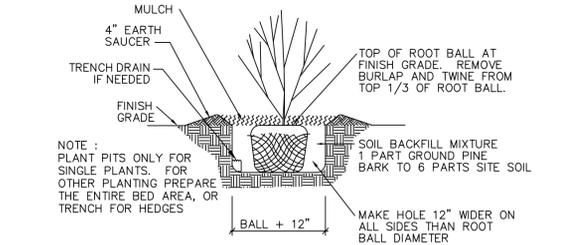


OFFICE & POOL PLANTINGS

SCALE: 1" = 20'



TYPICAL TREE PLANTING
NO SCALE



TYPICAL SHRUB PLANTING
NO SCALE

STEPHEN PEASE
 LANDSCAPE ARCHITECTURAL SERVICES
 1609 Phelps West Road (919) 612-6851
 Fayetteville, North Carolina 27526 tpease@earthlink.net

chandler engineering pa
 3008 S. Finley Avenue, Fayetteville, NC 27526
 Phone: 919-552-4845 Fax: 919-552-8082

SEALS

REVISIONS

NO.	DATE	COMMENTS

MAJOR SITE PLAN

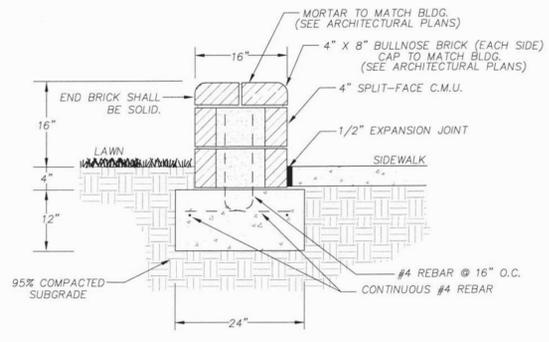
The Solstice Lofts
 Randall Parkway and S. Kerr Avenue
 Wilmington, North Carolina

REVIEWED BY: JFC
 DATE: 6/19/14
 PROJECT NUMBER: 13-006
 COUNTY: NEW HANOVER
 ZONING: MF-L (CD)
 TOWNSHIP: WILMINGTON

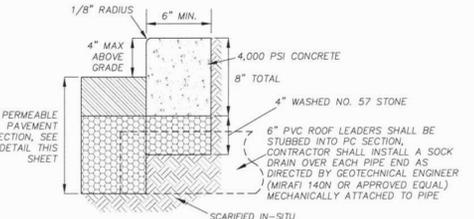
DETAILED PLANTING PLAN

C6.02

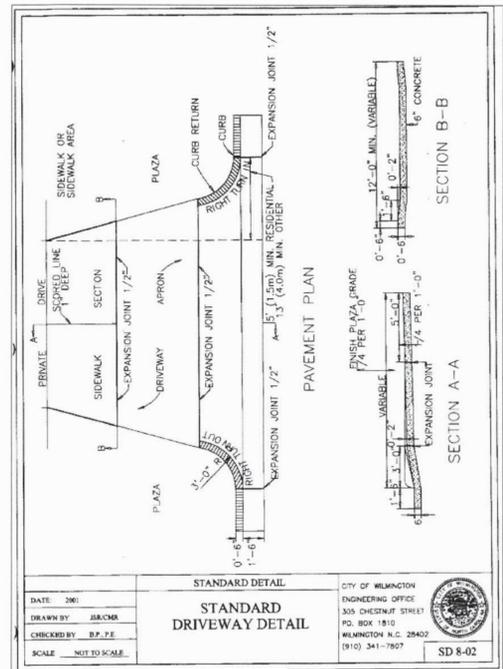
JUNE 2014



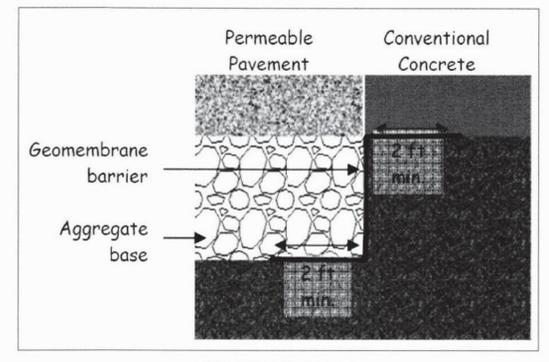
TYPICAL SEAT WALL
NOT TO SCALE



HEADER CURB DETAIL
NOT TO SCALE

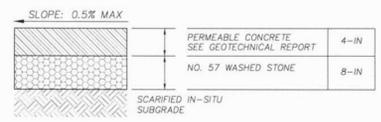


STANDARD DRIVEWAY DETAIL
SD 8-02

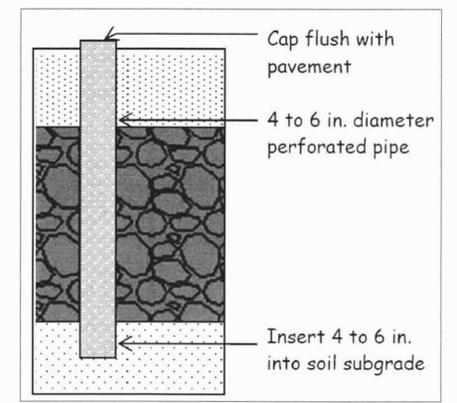


PERMEABLE PAVEMENT SECTION

- NOTES:**
1. GEOMEMBRANE (OPTIONAL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER)
 2. CONTRACTOR SHALL INSTALL AGAINST DRIVEWAY APRON, CONCRETE SIDEWALKS AND DUMPSTER PAD AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.



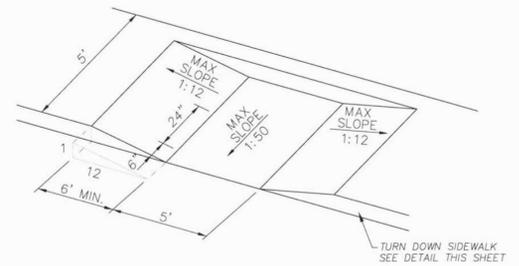
PERMEABLE PAVEMENT SECTION



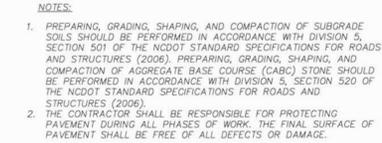
OBSERVATION WELL

- NOTES:**
1. SEE SHEET C3.01 FOR LOCATIONS. CONTRACTOR SHALL USE 4", SCH. 40 PVC.
 2. CONTRACTOR SHALL INSTALL A CONCRETE COLLAR AROUND TOP CAP, FLUSH WITH TOP OF PAVEMENT GRADE.

- CONSTRUCTION NOTES:**
1. A PRE-CONSTRUCTION MEETING SHALL BE HELD ON SITE WITH ALL REQUIRED PARTIES PRIOR TO ANY CONSTRUCTION STARTING. THE CONTRACTOR SHALL INSTALL THE PERMEABLE PAVEMENT AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND AS OUTLINED IN THE NC DIVISION OF WATER QUALITY BMP MANUAL, CONSTRUCTION STEPS 1 THROUGH 11, IN CHAPTER 18 FOR PERMEABLE PAVEMENT AS REVISED OCTOBER 6, 2012.



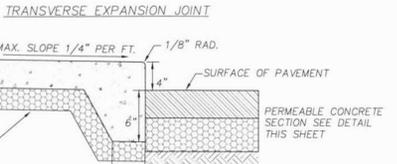
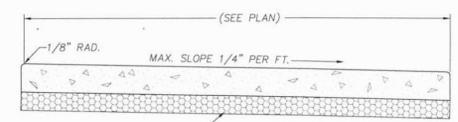
HANDICAP RAMP DETAIL
NOT TO SCALE



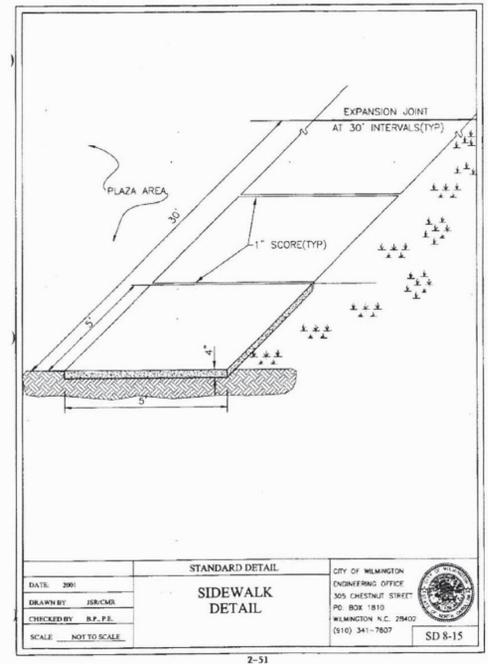
GRAVEL DRIVE SECTION
NOT TO SCALE

- NOTES:**
1. PREPARING, GRADING, SHAPING, AND COMPACTION OF SUBGRADE SOILS SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 501 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PREPARING, GRADING, SHAPING, AND COMPACTION OF AGGREGATE BASE COURSE (ABC) STONE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 520 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006).
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.

- GENERAL NOTES:**
1. A GROOVE JOINT 1" DEEP WITH 1/8" RADIUS SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS UNLESS INDICATED OTHERWISE. SEE SPECS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.
 2. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS.
 3. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
 4. ALL CONCRETE SHALL BE 4,000 P.S.I.

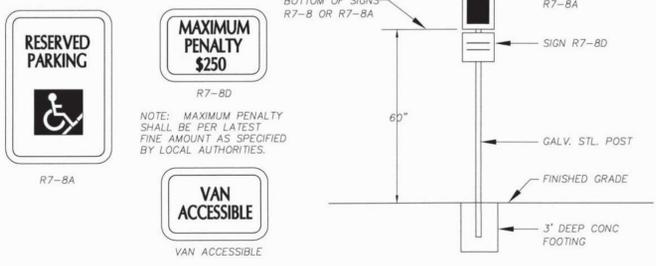


TYPICAL CONCRETE SIDEWALK (ON-SITE)
NOT TO SCALE

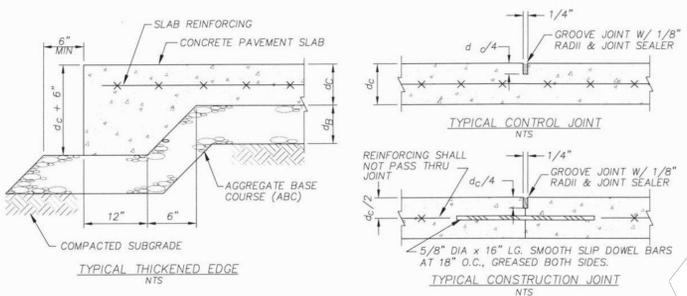


STANDARD DETAIL
SIDEWALK DETAIL
SD 8-15

ALL SIGNS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, NCSBC AND ADA SPECIFICATIONS AND REQUIREMENTS.



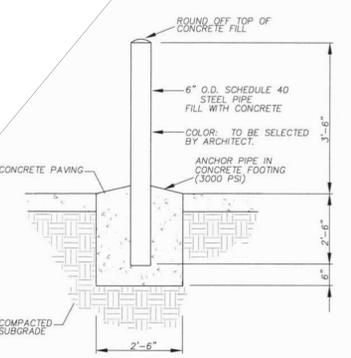
ACCESSIBLE PARKING SIGNAGE
NOT TO SCALE



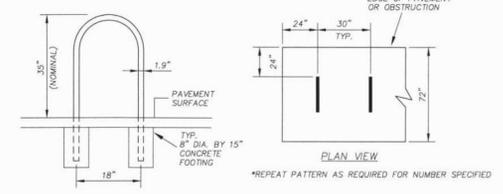
CONCRETE PAVEMENT DIMENSIONS	
CONCRETE SLAB THICKNESS, d _c	HEAVY 4"
WASHED NO. 57 STONE THICKNESS, d _g	4"
REINFORCEMENT	6x6-W2.9xW2.9

- NOTES:**
1. ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI (ASTM C39) WITH ENTRAINED AIR BETWEEN 4% AND 6%.
 2. CONTRACTION JOINTS SHALL BE SPACED AT 15 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN.
 3. EXPANSION JOINTS SHALL BE SPACED AT 50 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN AND WHERE CONCRETE PAVEMENT ABUTS ANY RIGID OBJECT.

CONCRETE PAVEMENT
NOT TO SCALE

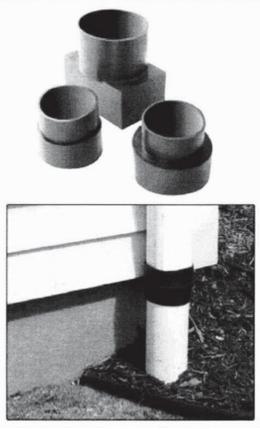


STEEL BOLLARD
NOT TO SCALE



INVERTED U-SHAPED BIKE RACK
NOT TO SCALE

- NOTES:**
1. INVERTED U-SHAPED RACKS SHALL BE "U-LOK", AS MANUFACTURED BY SUNSHINE-U-LOK CORP. OR APPROVED EQUAL.
 2. 2" DIAMETER, MINIMUM SCHEDULE 10, 16 GAUGE STEEL PIPE WITH DIPPED AND BAKED BLACK POLYVINYL FINISH, 180 DEGREE BANDS IN A U PATTERN TO PROVIDE TWO VERTICAL POSTS 4" WIDE OF 18" APART, INSTALLED HEIGHT OF 35", ANCHOR TO SUBSURFACE.

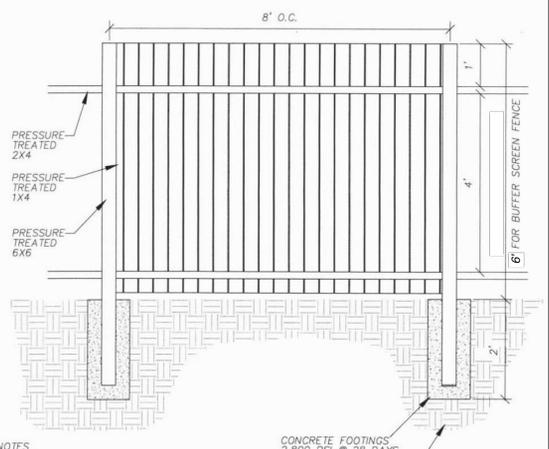


DOWNSPOUT CONNECTORS
Seals out problem causing debris and pests.
Fence Flexible Downspout Connectors stretch easily over most common downspouts and drain pipes to seal out problem causing debris and pests. Installation is fast and simple.

- FEATURES | SPECIFICATIONS | MODELS | ACCESSORIES**
- MODELS**
- DSC-43-4 (101mm) Drain Pipe and 3" x 2" (76 x 50mm) rectangular Downspout
 - DSC-33-3 (76mm) Drain Pipe and 3" (76mm) round or 2-1/2" (63.5mm) square Downspout
 - DSC-534-4 (101mm) Drain Pipe and 5" x 3" rectangular Downspout

- NOTES:**
1. SPECIFIC PRODUCT SHOWN FOR REFERENCE ONLY. CONTRACTOR MAY SUBMIT EQUIVALENT PRODUCT FOR SUBSTITUTION APPROVAL. MODEL AND SIZE SHALL BE AS REQUIRED BASED ON DOWNSPOUT SIZE SPECIFIED BY THE ARCHITECT, REFER TO ARCHITECTURAL PLANS.

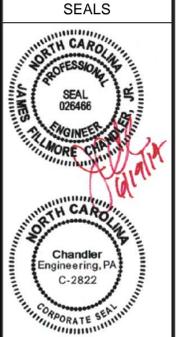
DOWNSPOUT CONNECTOR
NOT TO SCALE



OPAQUE WOODEN FENCE
NOT TO SCALE

- NOTES:**
1. USE HOT DIPPED GALVANIZED RING SHANK NAILS TO FASTEN 1X4 VERTICALS TO HORIZONTAL RAILS.
 2. PROVIDE 1/2" MAX. GAP BETWEEN 1/2" VERTICALS.
 3. PROVIDE 2" GAP BETWEEN BOTTOM OF 1X4 AND FINISH GRADE.
 4. ALL MATERIALS TO BE PRESSURE-TREATED TO GROUND CONTACT QUALITY.

chandler engineering pa
309 S. Fugate Avenue, Fugate, Virginia, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962



REVISIONS		
NO.	DATE	COMMENTS

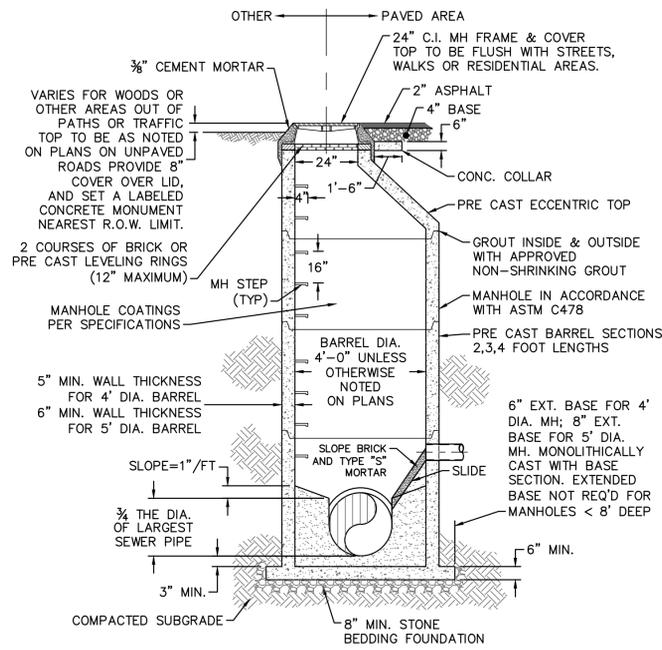
MAJOR SITE PLAN

The Solstice Lofts
Randall Parkway and S. Kerr Avenue
Wilmington, North Carolina

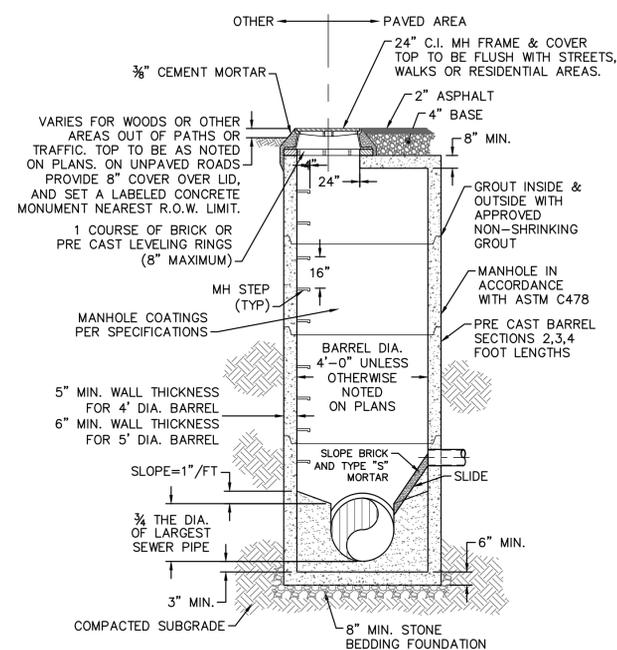
REVIEWED BY:	JFC
DATE:	6/19/14
PROJECT NUMBER:	13-006
COUNTY:	NEW HANOVER
ZONING:	MF-L (CD)
TOWNSHIP:	WILMINGTON

SITE DETAILS

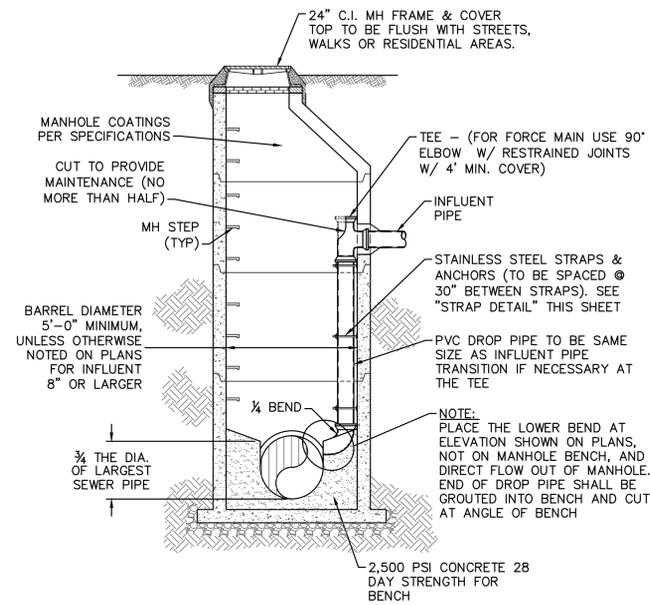
C7.01
JUNE 2014



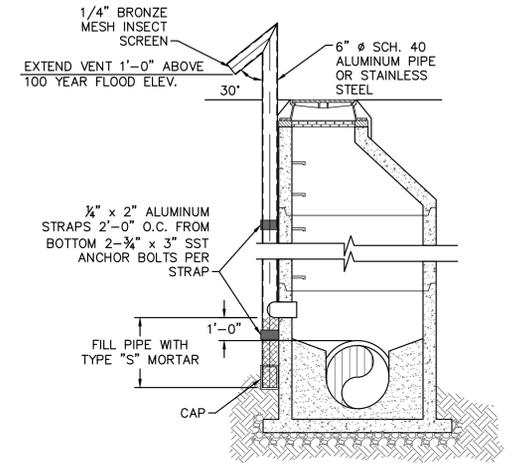
PRECAST CONCRETE OFFSET MANHOLE TYPICAL
(LESS THAN 30° DROP)
NOT TO SCALE



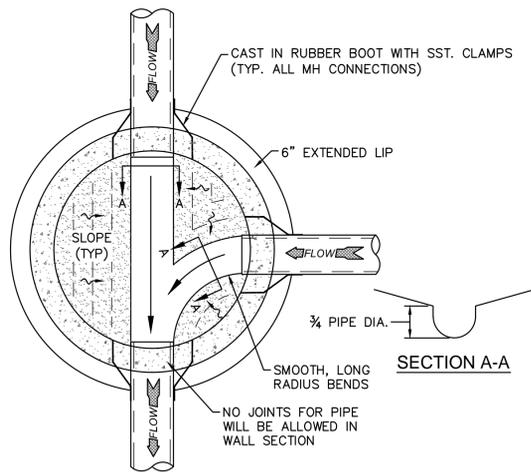
PRECAST CONCRETE FLAT TOP MANHOLE TYPICAL
(LESS THAN 30° DROP)
NOT TO SCALE



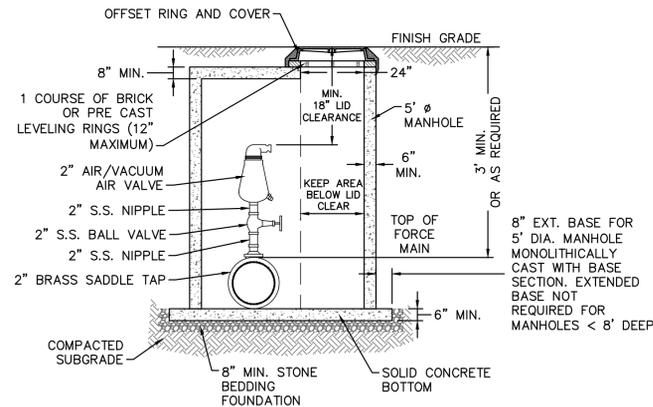
DROP MANHOLE
(MORE THAN 30° DROP)
NOT TO SCALE



STANDARD VENT MANHOLE
NOT TO SCALE

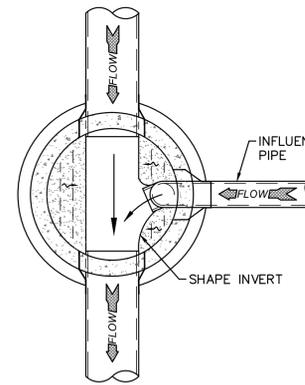


MANHOLE FLOOR PLAN
NOT TO SCALE

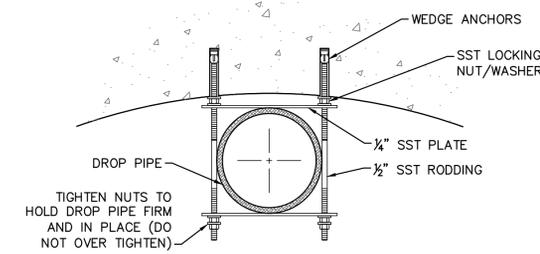


NOTES:
1. CONTRACTOR TO INSTALL VALVE AND MANHOLE AT SUFFICIENT DEPTH TO ALLOW FOR ACCESS.
2. FORCE MAIN TO BE OFFSET IN MANHOLE TO KEEP AREA BELOW LID CLEAR.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
4. USE CAST IN RUBBER BOOT WITH SST. CLAMPS FOR ALL MH CONNECTIONS, INCLUDING FORCE MAIN.

**AIR/ VACUUM AND AIR
RELEASE COMBINATION VALVE**
NOT TO SCALE



DROP MANHOLE FLOOR PLAN
NOT TO SCALE



STRAP DETAIL
NOT TO SCALE

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:

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

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

- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
 - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
 - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
 - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

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

chandler engineering pa

309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962



REV.	DESCRIPTION:	DATE:
1	AIR / VACUUM AND AIR RELEASE COMBINATION VALVE REVISED	10/26/12
2	STANDARD SEWER NOTE #6 REVISED	12/10/12

CFPUA SANITARY SEWER

STANDARD DETAILS

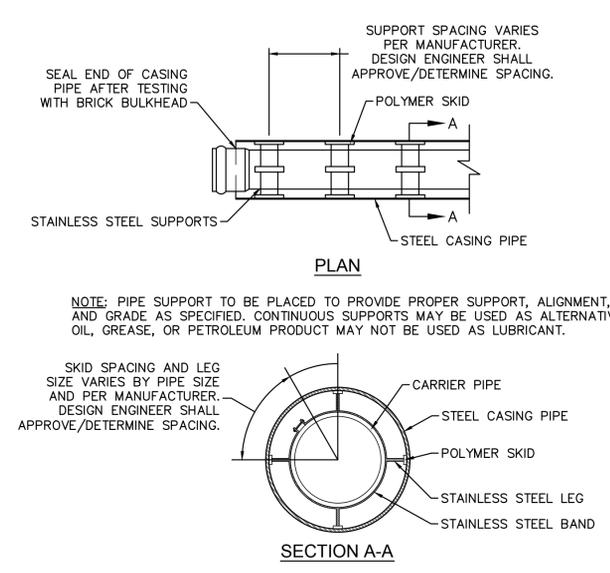
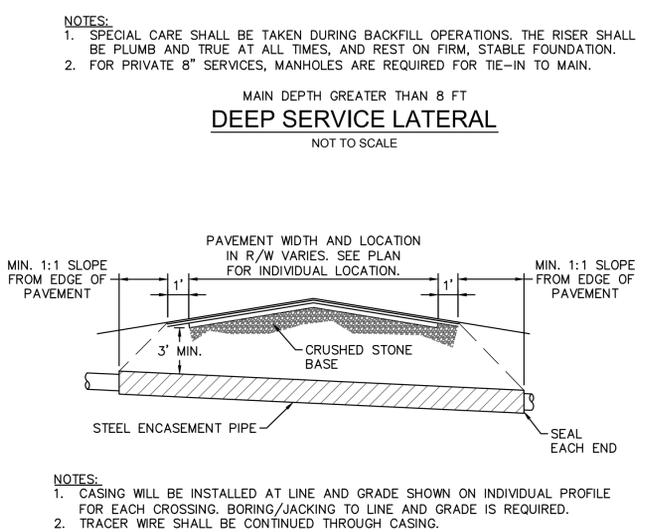
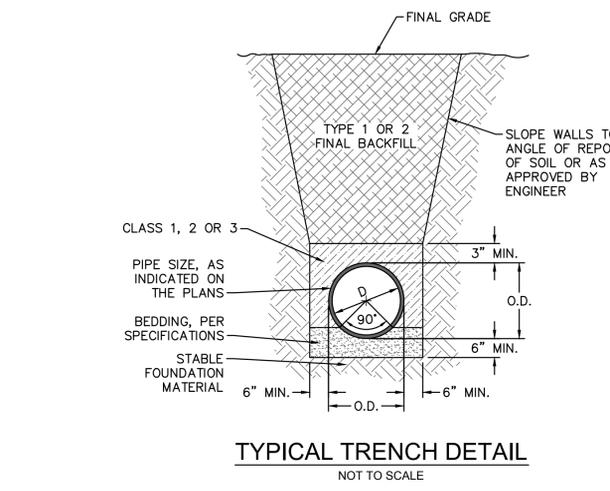
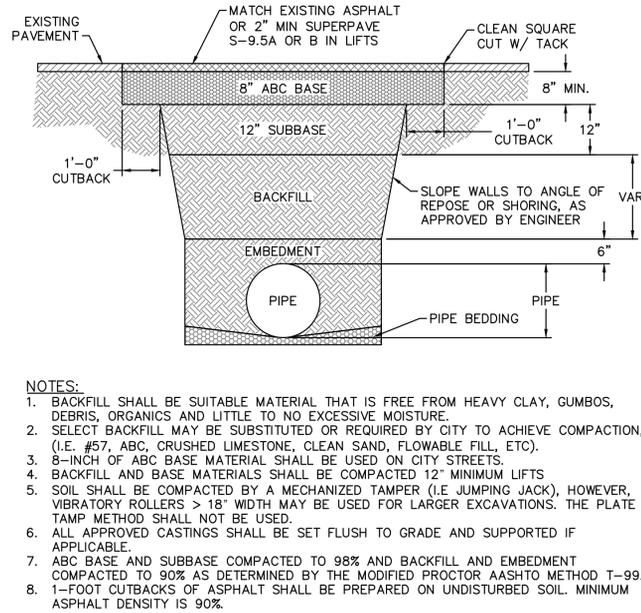
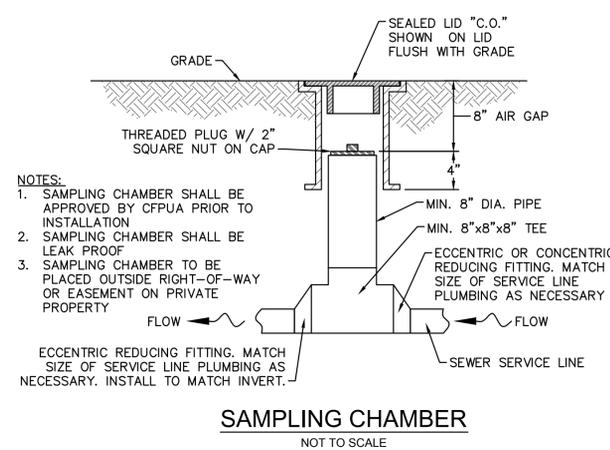
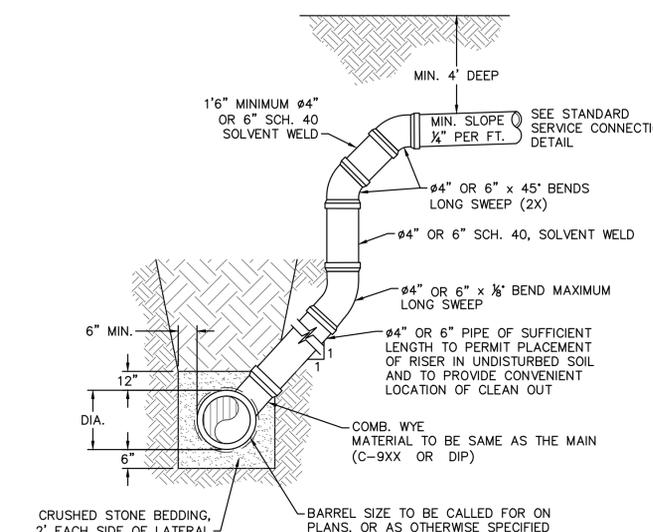
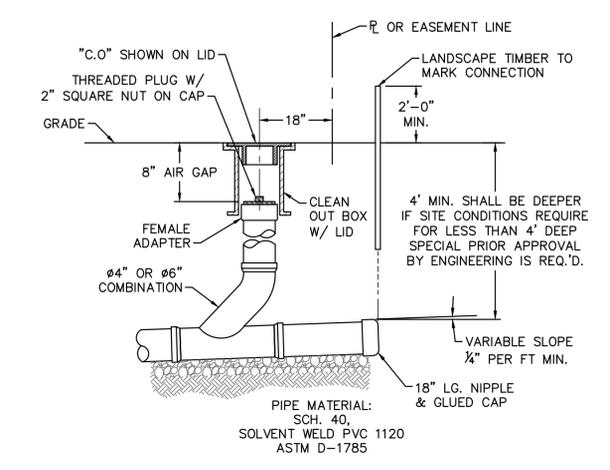
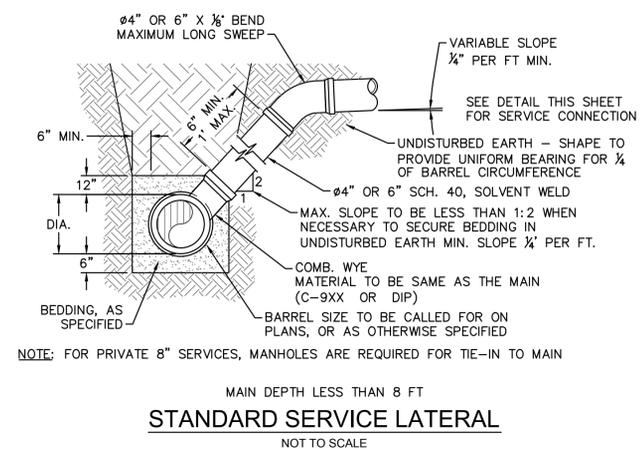
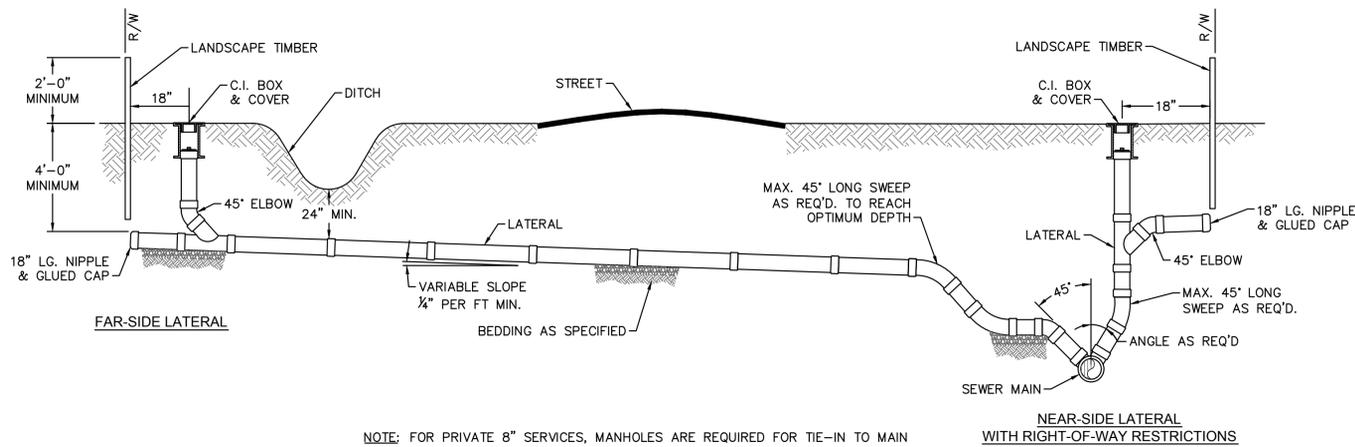


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Stewardship. Sustainability. Service.

DATE:
1/9/12
SCALE:
N/A
DRAWN BY:
CFPUA
CHECKED BY:
CFPUA
PROJECT NO.:

SHEET NO:
SSD-1



chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962



- GENERAL NOTES:**
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THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

REV:	DESCRIPTION:	DATE:
1	SAMPLING CHAMBER REVISED	10/26/12

CFPUA SANITARY SEWER

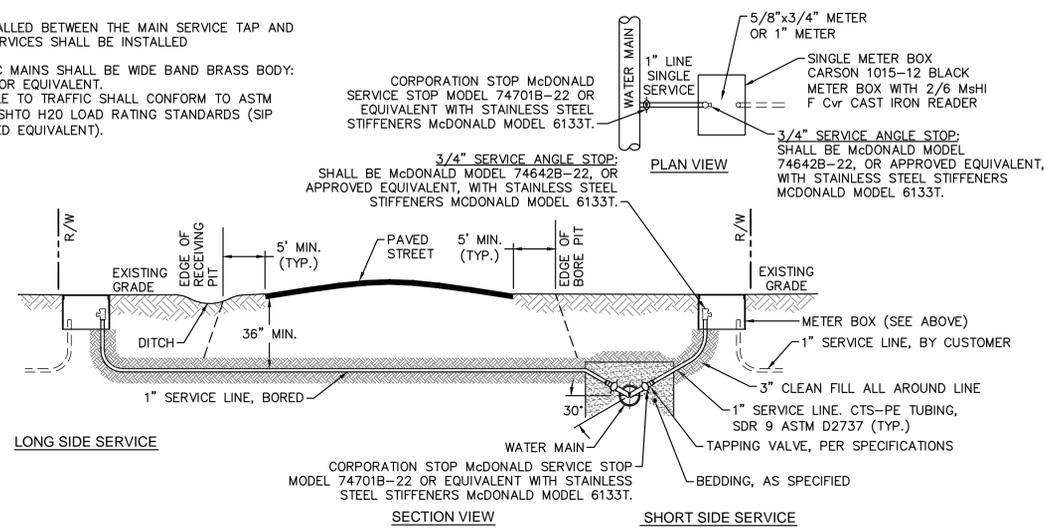
STANDARD DETAILS

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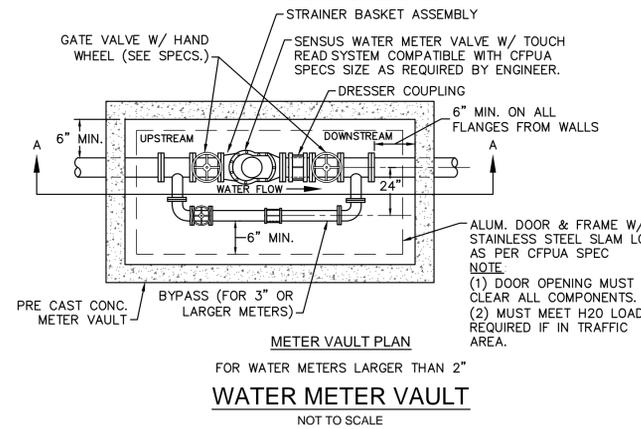
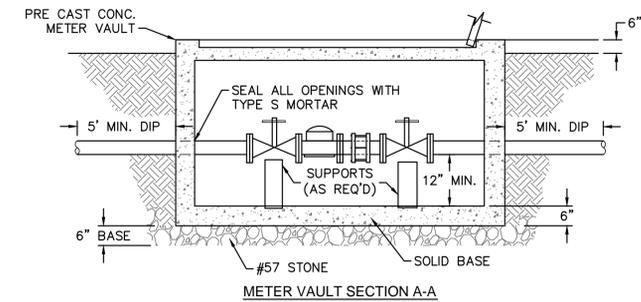
DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPUA
CHECKED BY: CFPUA
PROJECT NO.:

SHEET NO:
SSD-2

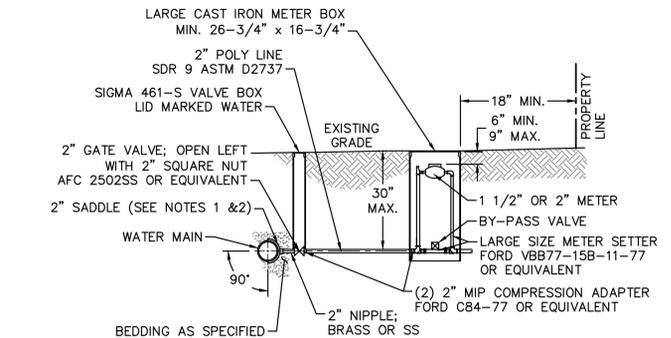
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM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



SINGLE SERVICE CONNECTION
NOT TO SCALE

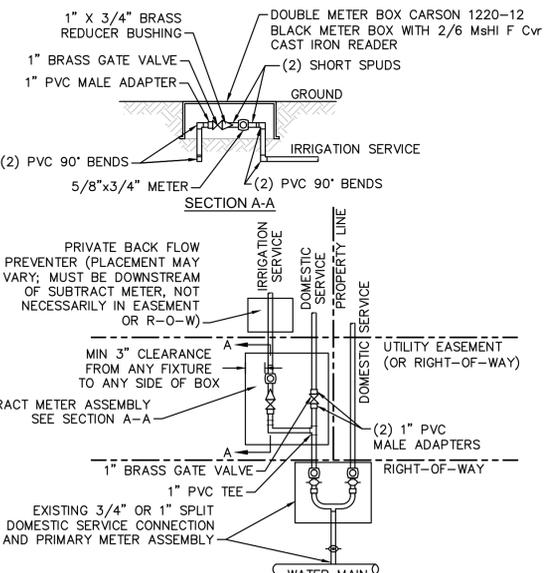


WATER METER VAULT
NOT TO SCALE



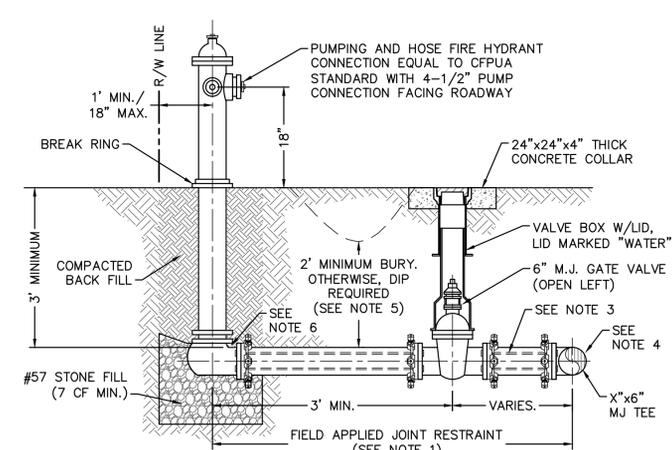
- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
 - 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).
 - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
 - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

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



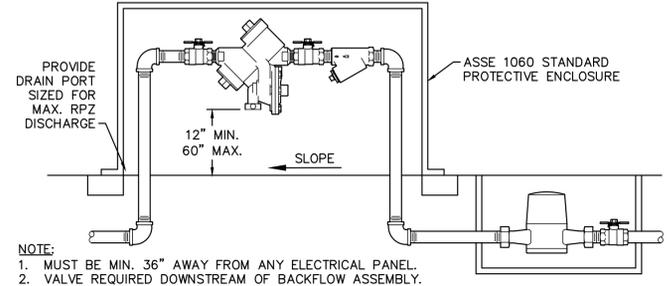
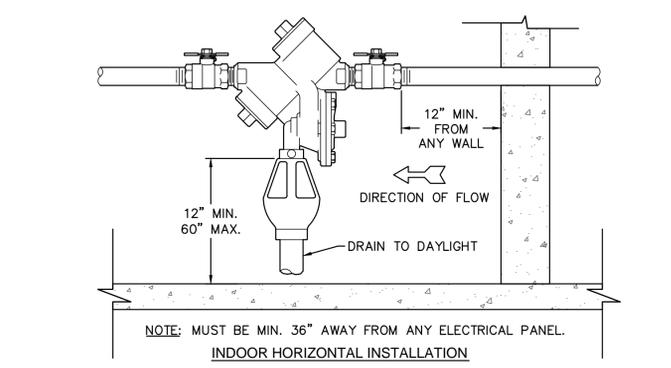
- NOTES:**
- BEYOND THE PRIMARY DOMESTIC METER ASSEMBLY, CFPUA IS ONLY RESPONSIBLE FOR METER AND WASHERS OF SUBTRACT METER ASSEMBLY.
 - ALL PIPE AND FITTINGS UP TO FINAL SERVICE LINE TO BE 1" EXCLUDING METERS.

DOUBLE SERVICE CONNECTION USING SUBTRACT METER
NOT TO SCALE

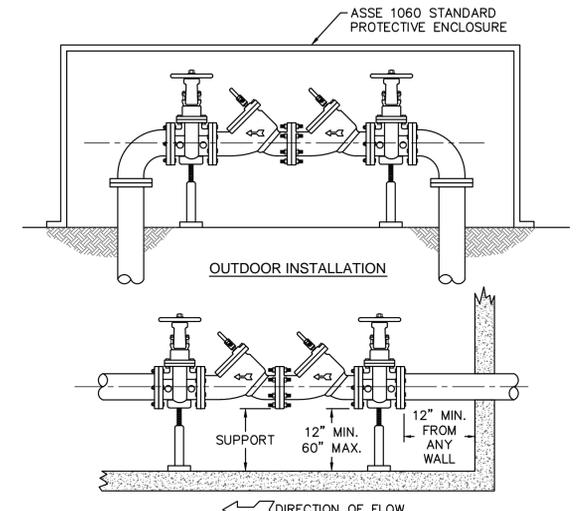


- NOTES:**
- JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI OR C-900 PVC PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
 - WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
 - 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.
 - HYDRANT TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN PLUS ANY VALVE, FITTING, OR JOINT IN MAIN WITHIN 10- FEET OF HYDRANT TEE.
 - HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
 - WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

FIRE HYDRANT ASSEMBLY
NOT TO SCALE



REDUCED PRESSURE PRINCIPLE ASSEMBLY
NOT TO SCALE



DOUBLE CHECK VALVE ASSEMBLY
NOT TO SCALE

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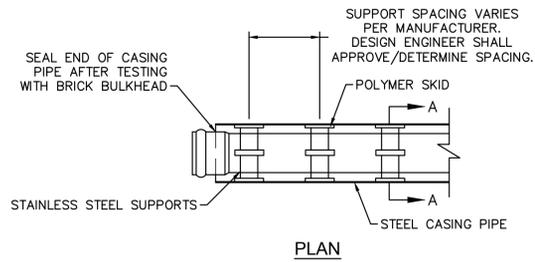
REV:	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/26/12
2	Single Service Connection and Fire Hydrant Details Revised	7/23/13
3	Fire Hydrant Detail Revised	01/03/14

CFPUA WATER DISTRIBUTION SYSTEM

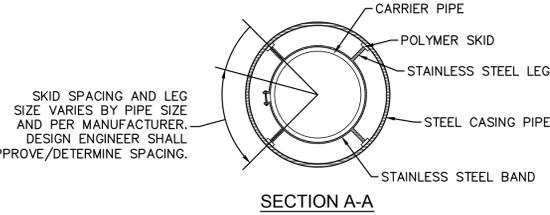
STANDARD DETAILS

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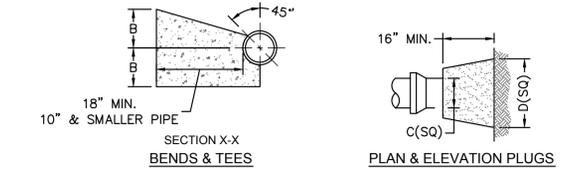
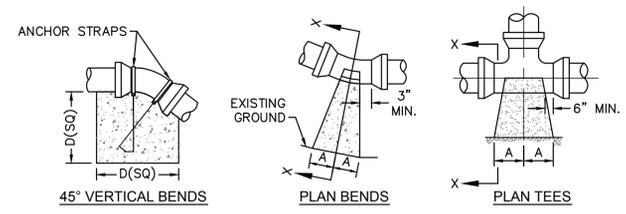
SHEET NO:
WSD-1



NOTE: PIPE SUPPORT TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SUPPORTS MAY BE USED AS ALTERNATIVE. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.



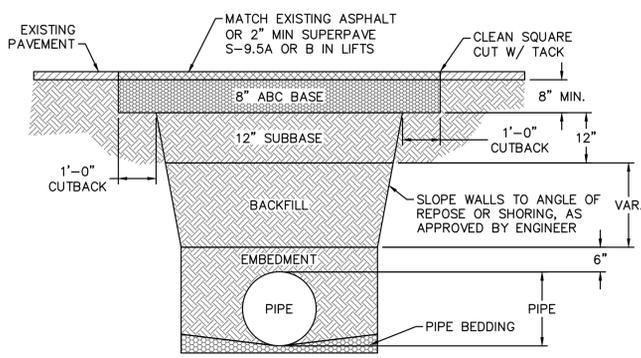
PIPE CASING SUPPORT DETAIL
NOT TO SCALE



SIZE	90 BENDS		45 BENDS		22 1/2 BENDS		TEES/PLUGS		45 VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

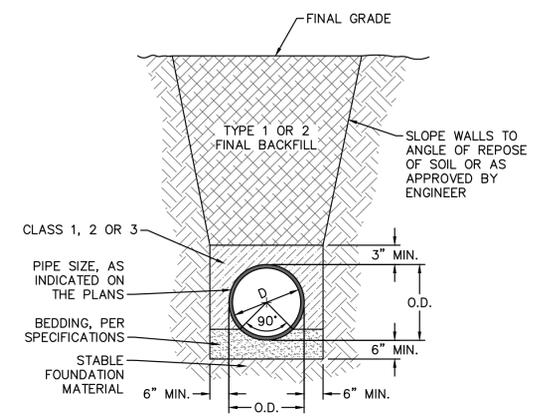
NOTES:
1. BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
3. USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

THRUST BLOCK DETAIL
NOT TO SCALE

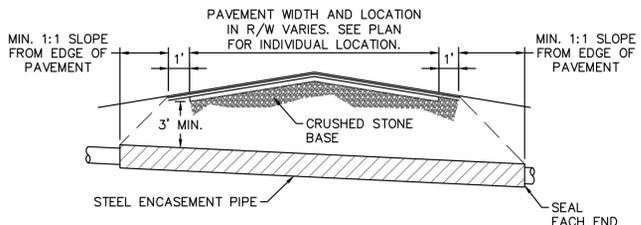


NOTES:
1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
3. 8-INCH OF ABC 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
NOT TO SCALE

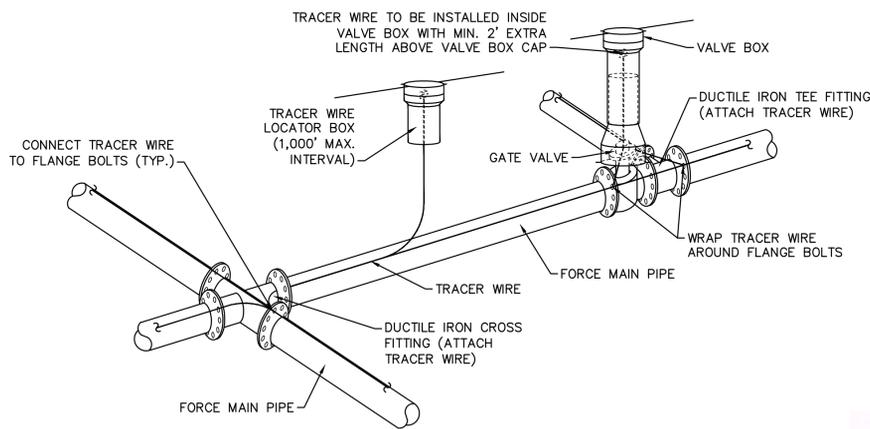


TYPICAL TRENCH DETAIL
NOT TO SCALE



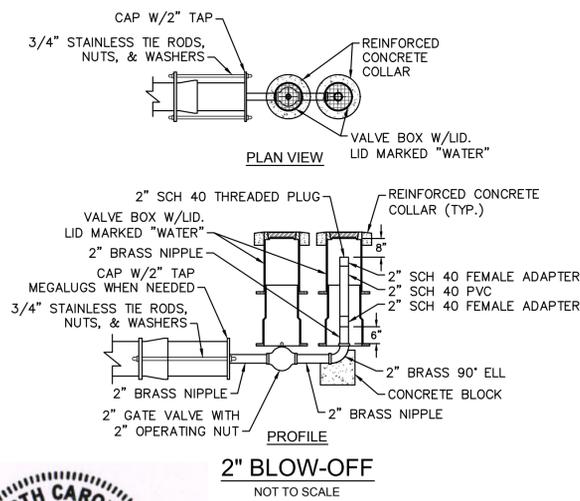
NOTES:
1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING.

TYPICAL BORING/JACKING DETAIL
NOT TO SCALE

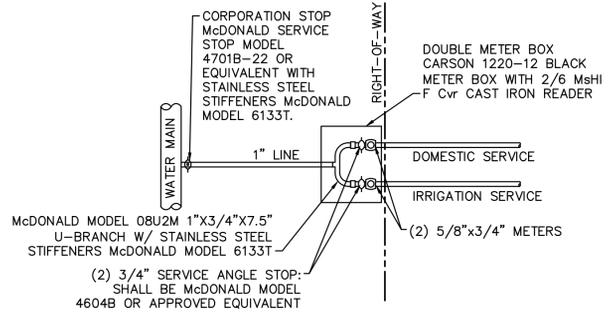


NOTES:
1. TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION.
2. WIRE SHALL BE STRAPPED TO ALL PVC FORCE MAIN PIPING WITH DUCT TAPE AT 12-FT. INTERVALS.
3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS.
4. ALL WIRE SPLICES SHALL HAVE WATER PROOF WIRE CONNECTIONS.

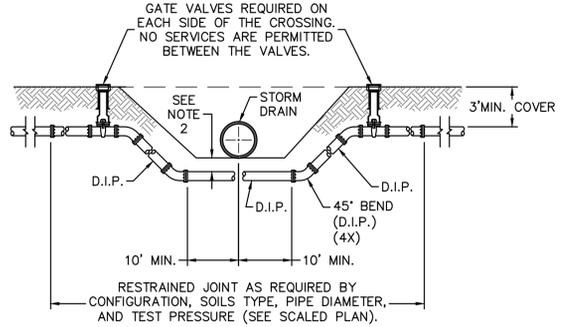
TRACER WIRE DETAIL
NOT TO SCALE



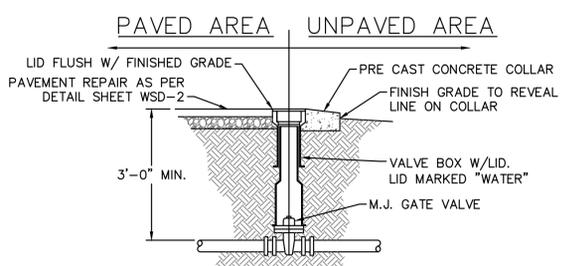
2" BLOW-OFF
NOT TO SCALE



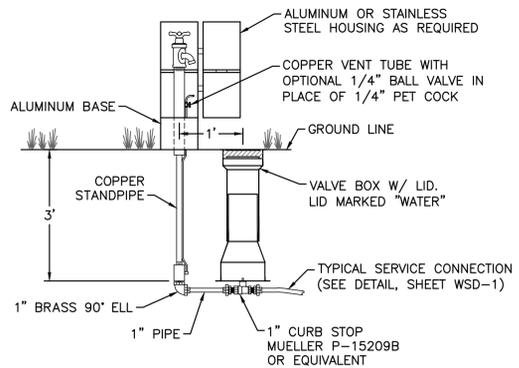
DOUBLE SERVICE CONNECTION
NOT TO SCALE



WATER MAIN DITCH AND STORM DRAIN CROSSING
NOT TO SCALE



VALVE DETAIL
NOT TO SCALE



SAMPLING STATION
NOT TO SCALE



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309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962

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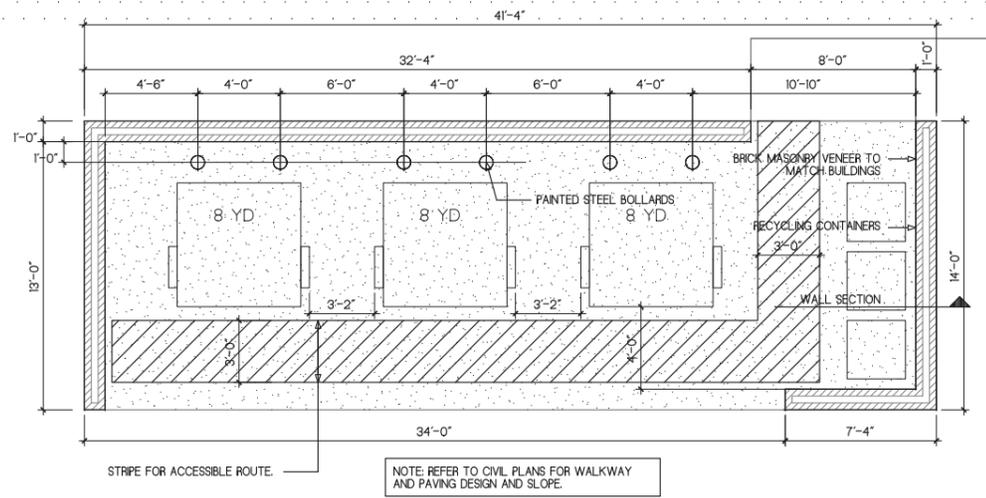
REV:	DESCRIPTION:	DATE:
1	Revised Water Main Ditch and Storm Crossing Detail	11/12/13
2	Revised Water Main Ditch and Storm Crossing Detail	05/05/14

CFPUA WATER DISTRIBUTION SYSTEM

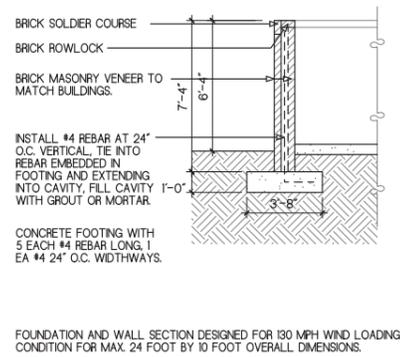
STANDARD DETAILS

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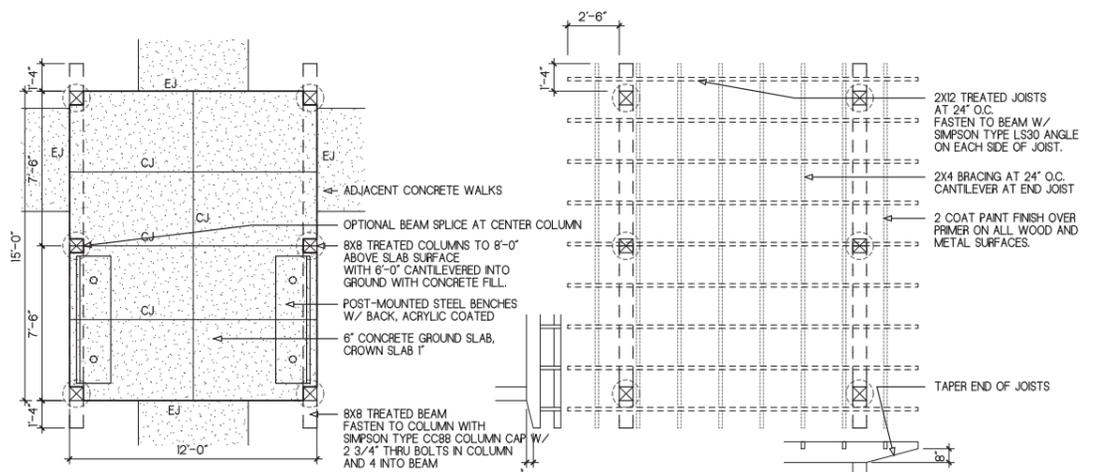
DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPWA
CHECKED BY: CFPWA
PROJECT NO.:
SHEET NO: WSD-2



Q1 DUMPSTER PLAN AND SECTION
A1.08 SCALE: 1/4" = 1'-0"

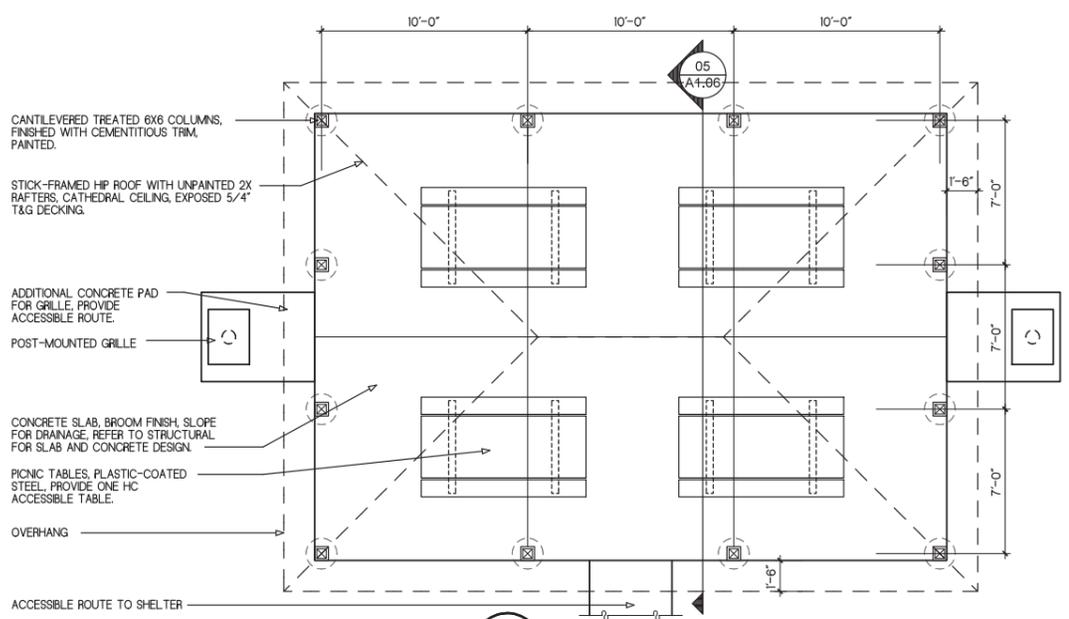


FOUNDATION AND WALL SECTION DESIGNED FOR 130 MPH WIND LOADING CONDITION FOR MAX. 24 FOOT BY 10 FOOT OVERALL DIMENSIONS.

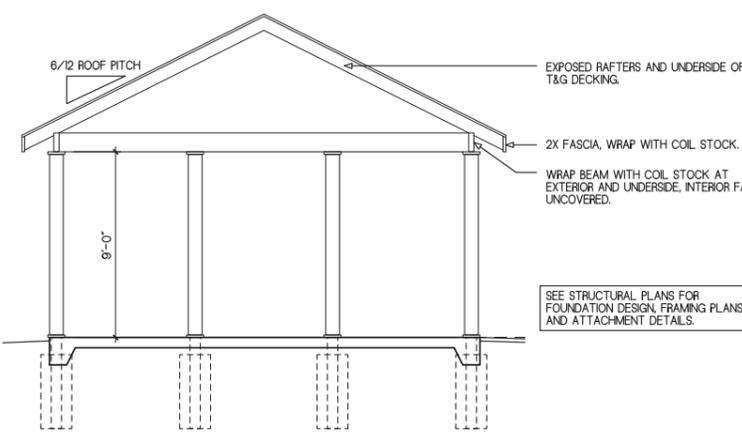


Q2 TRELLIS LAYOUT PLAN
A1.08 SCALE: 1/4" = 1'-0"

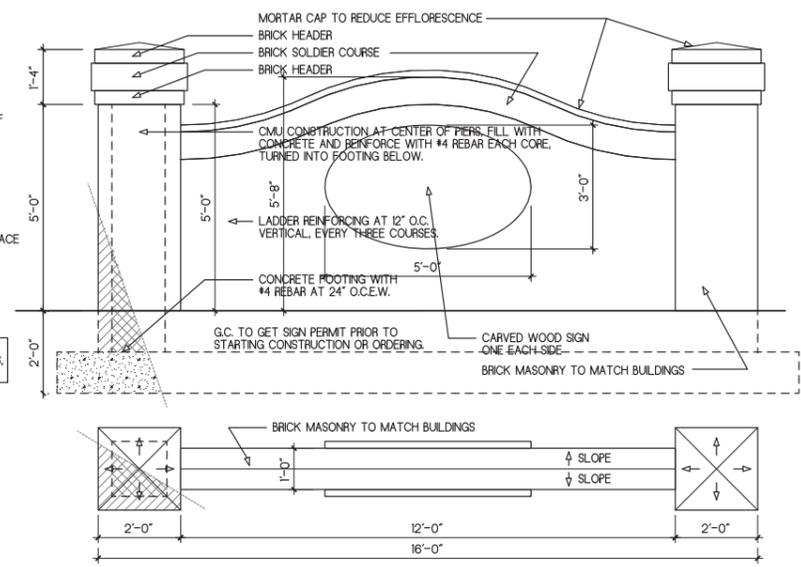
Q3 TRELLIS OVERHEAD PLAN
A1.08 SCALE: 1/4" = 1'-0"



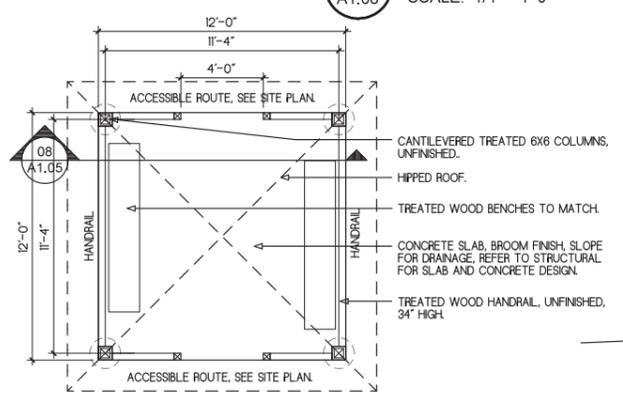
Q4 COVERED PICNIC SHELTER
A1.08 SCALE: 1/4" = 1'-0"



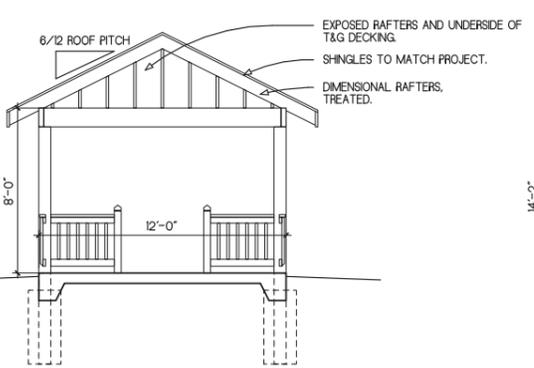
Q5 COVERED PICNIC SHELTER
A1.08 SCALE: 1/4" = 1'-0"



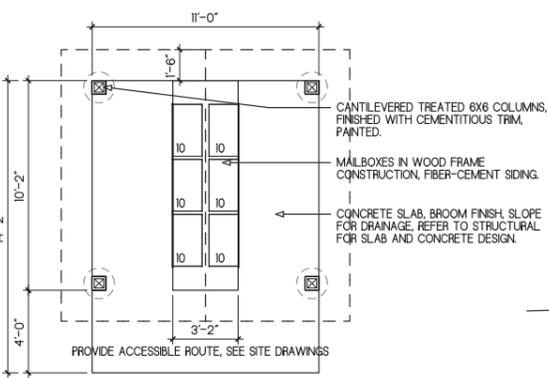
Q6 ENTRY SIGNAGE
A1.08 SCALE: 1/2" = 1'-0"



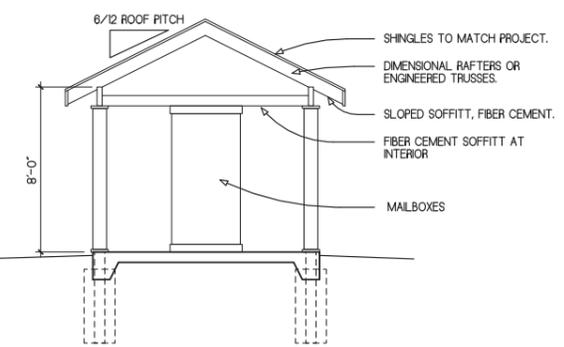
Q7 GAZEBO
A1.08 SCALE: 1/4" = 1'-0"



Q8 GAZEBO SECTION
A1.08 SCALE: 1/4" = 1'-0"



Q9 MAIL KIOSK
A1.08 SCALE: 1/4" = 1'-0"



Q10 MAIL KIOSK
A1.08 SCALE: 1/4" = 1'-0"



01 BUILDING 1,2,3 LONG ELEVATION
A5.01 SCALE: 1/8" = 1'-0"



02 BUILDING 1,2,3 END ELEVATION
A5.01 SCALE: 1/8" = 1'-0"



THE SOLSTICE LOFTS

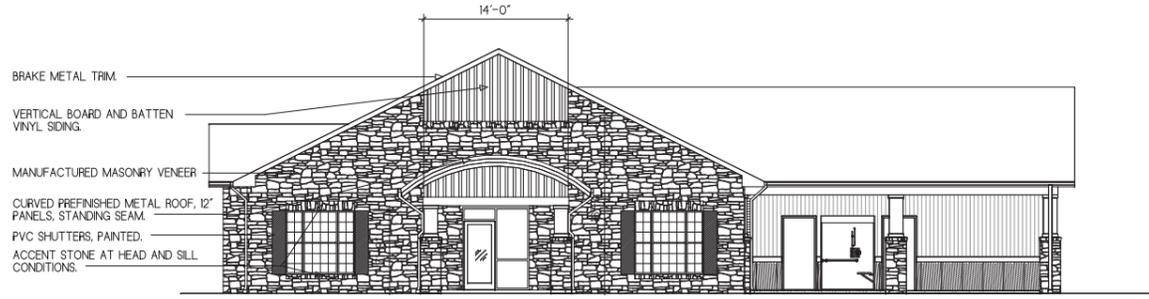
4810 RANDALL PARKWAY
WILMINGTON, NC
54 RESIDENTIAL UNITS

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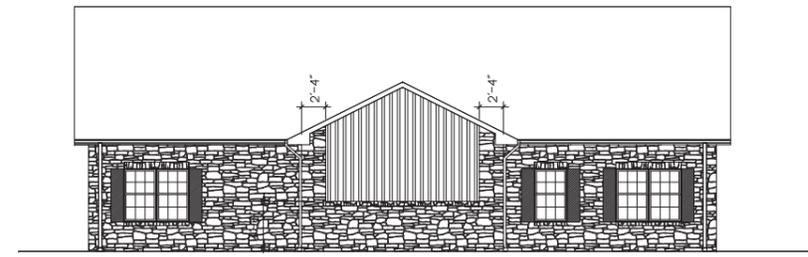
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JA JOB#: 1311
DATE: 06-19-2014

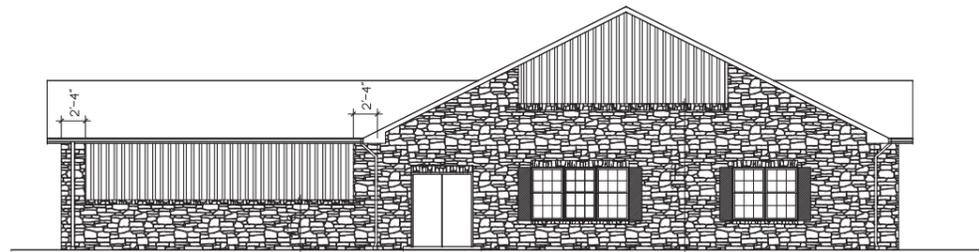
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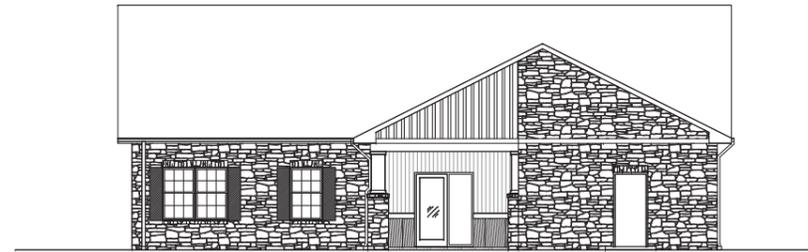
02 BUILDING #4 - EAST ELEVATION
 A5.02 SCALE: 1/8" = 1'-0"



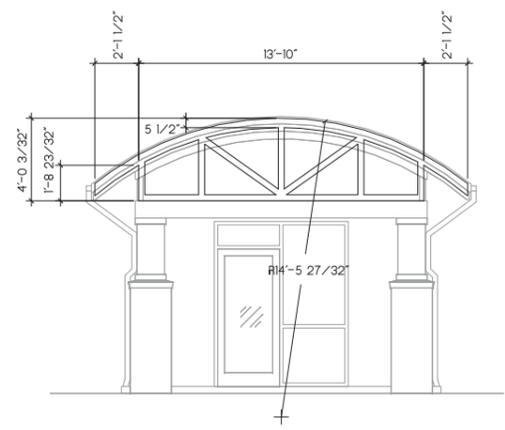
03 BUILDING #4 - SOUTH ELEVATION
 A5.02 SCALE: 1/8" = 1'-0"



04 BUILDING #4 - WEST ELEVATION
 A5.02 SCALE: 1/8" = 1'-0"



05 BUILDING #4 - NORTH ELEVATION
 A5.02 SCALE: 1/8" = 1'-0"

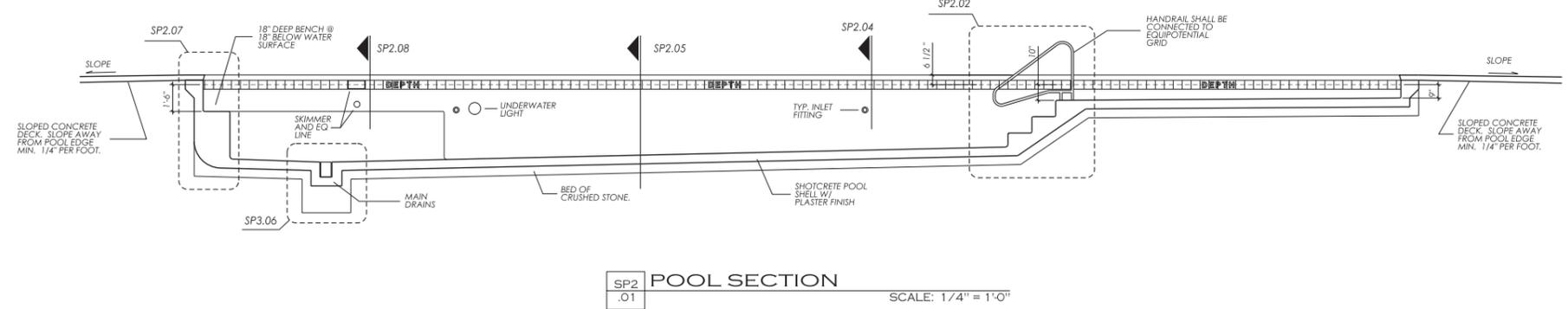
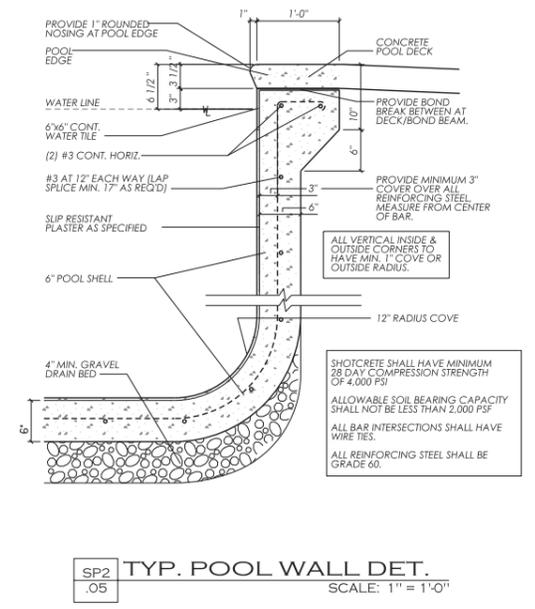
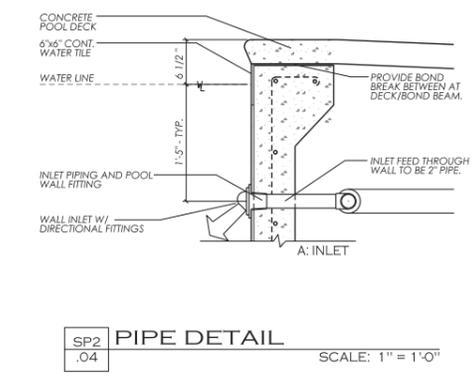
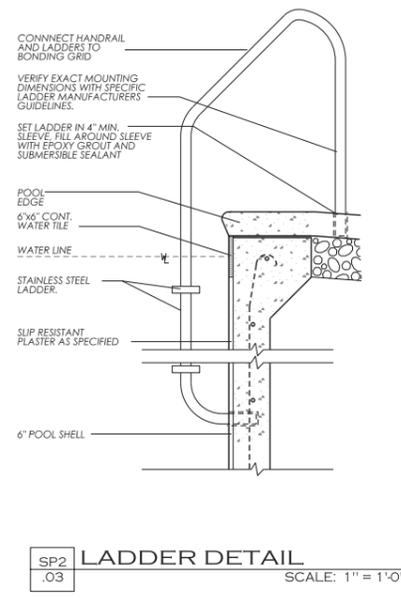
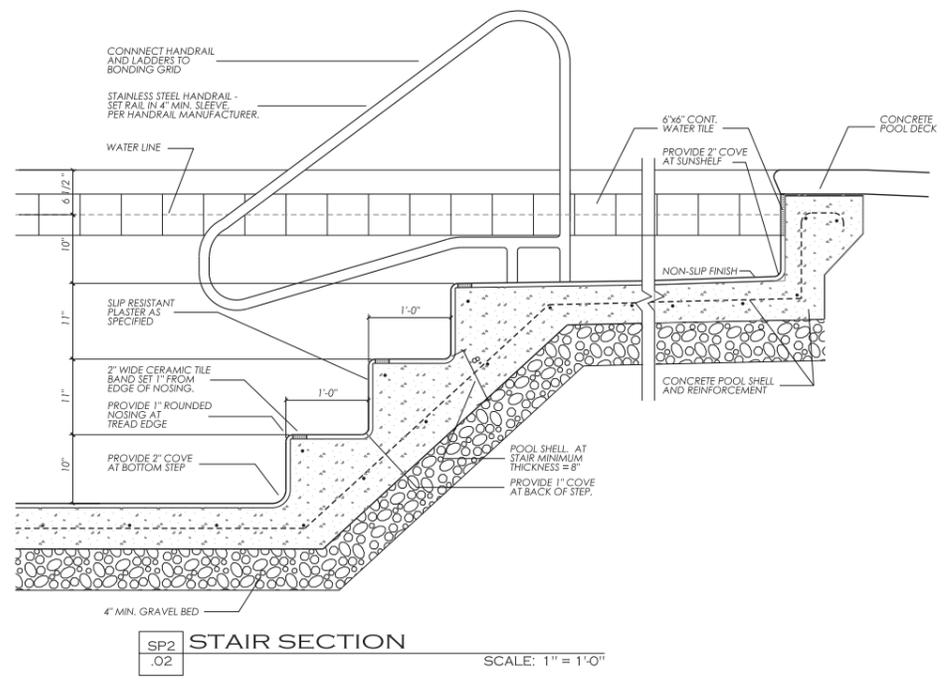
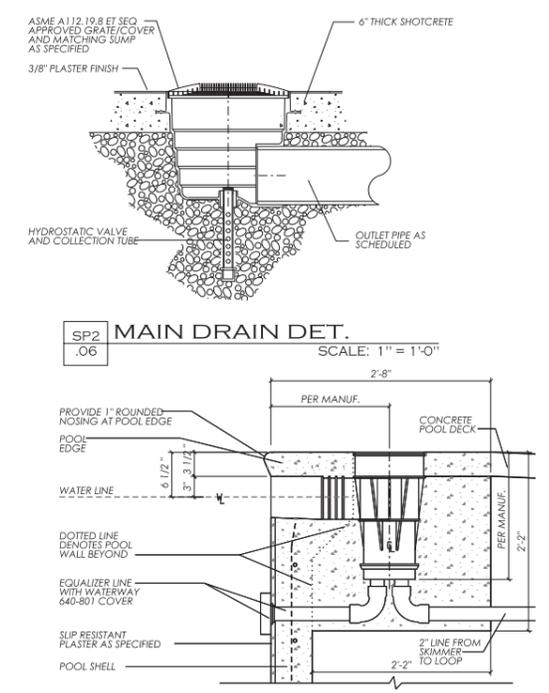
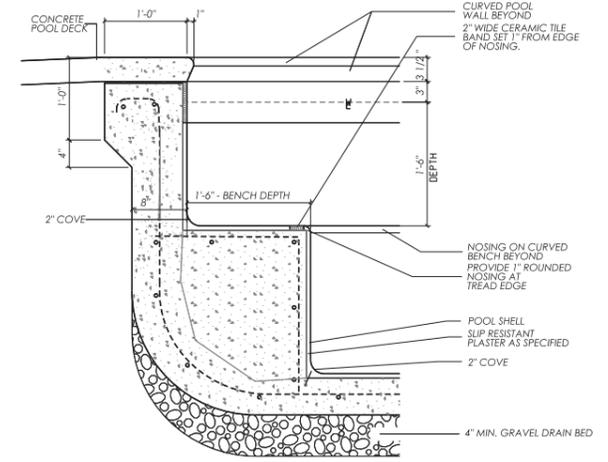
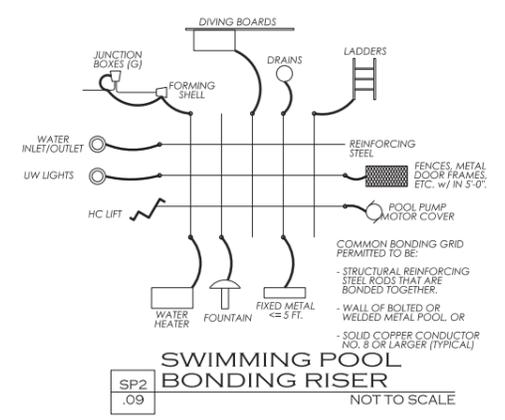
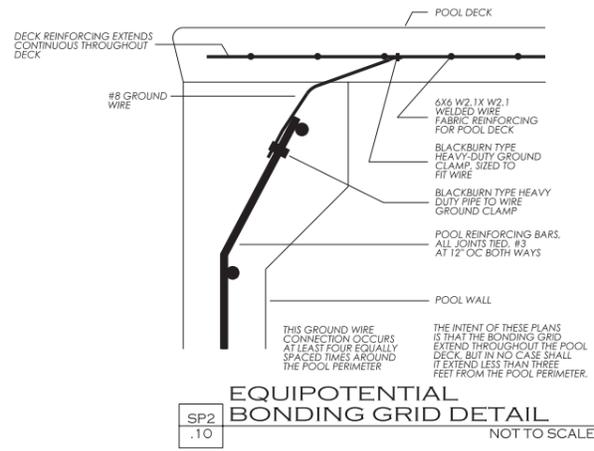


05 ENLARGED ENTRY - TRUSS PROFILE
 A5.02 SCALE: 1/4" = 1'-0"



THE SOLSTICE LOFTS
 4810 RANDALL PARKWAY
 WILMINGTON, NC
 54 RESIDENTIAL UNITS

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NO.	DATE	COMMENTS/REVISIONS

SWIMMING POOL FOR THE SOLSTICE LOFTS

WILMINGTON, NORTH CAROLINA

