

- LEGEND:**
- x FENCE (BARBED)
  - - - FENCE (CHAINLINK)
  - - - FENCE (WOOD)
  - OE ELECTRIC (OVERHEAD)
  - UE ELECTRIC (UNDERGROUND)
  - G GAS LINE
  - SD STORM DRAIN
  - SS SANITARY SEWER
  - FO FIBER OPTIC LINE
  - T TELEPHONE LINE
  - W WATER LINE
  - - - SETBACK LINES
  - - - CLEAR AND STRIP AREA
  - - - LIMITS OF DISTURBANCE
  - - - TREE PROTECTION FENCING
  - 8"x8" P.T. TIMBERS LANDSCAPE BORDER AND WHEEL STOP
  - PP POWER POLE
  - LP LIGHT POLE
  - GUY GUYANCHOR
  - TF TRANSFORMER PAD
  - FO FIBER OPTIC PEDESTAL
  - TE TELEPHONE PEDESTAL
  - TM TELEPHONE MANHOLE
  - SM SANITARY SEWER MANHOLE
  - SC SANITARY SEWER CLEAN-OUT
  - SDM STORM DRAIN MANHOLE
  - SDR STORM DRAIN
  - DI DROP INLET/CATCH BASIN
  - FH FIRE HYDRANT
  - WV WATER VALVE
  - WM WATER METER

- NOTES:**
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  2. THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A CERTIFIED TITLE REPORT AND THEREFORE THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO RECORDED OR UNRECORDED RIGHT-OF-WAYS, EASEMENTS, RESTRICTIONS OF RECORD, OR OTHER ENCUMBRANCES NOT OBSERVED OR SHOWN HEREON.
  3. NO DETERMINATION HAS BEEN MADE BY THE SURVEYOR AS TO THE FOLLOWING: FLOOD ZONES, WETLANDS, UNDERGROUND STORAGE FACILITIES, CEMETERIES, HAZARDOUS WASTE DEPOSITS OR MATERIALS, OR OTHER CONDITIONS.
  4. THIS MAP IS NOT INTENDED FOR RECORDATION AS PER G.S. 47-60 AS AMENDED.
  5. THE CALCULATED PROPERTY LINES SHOWN HEREON WERE DRAWN FROM FIELD LOCATED BOUNDARY EVIDENCE AND/OR RECORDED DEEDS AND MAPS AS NOTED.
  6. ANY LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS MAP ARE APPROXIMATE BASED ON INFORMATION PROVIDED BY OTHERS AND FIELD LOCATIONS. ALL UTILITIES SHOWN HEREON ARE SUBJECT TO FIELD VERIFICATION.
  7. A LANDSCAPING PLAN INDICATING THE LOCATION OF THE 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.
  8. CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  9. ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
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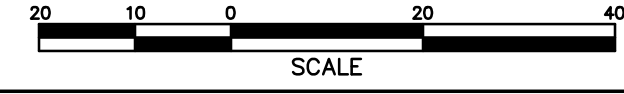
- LEGEND:**
- IRF IRON PIPE FOUND
  - IR5 IRON ROD FOUND
  - IR5 IRON ROD SET

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

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

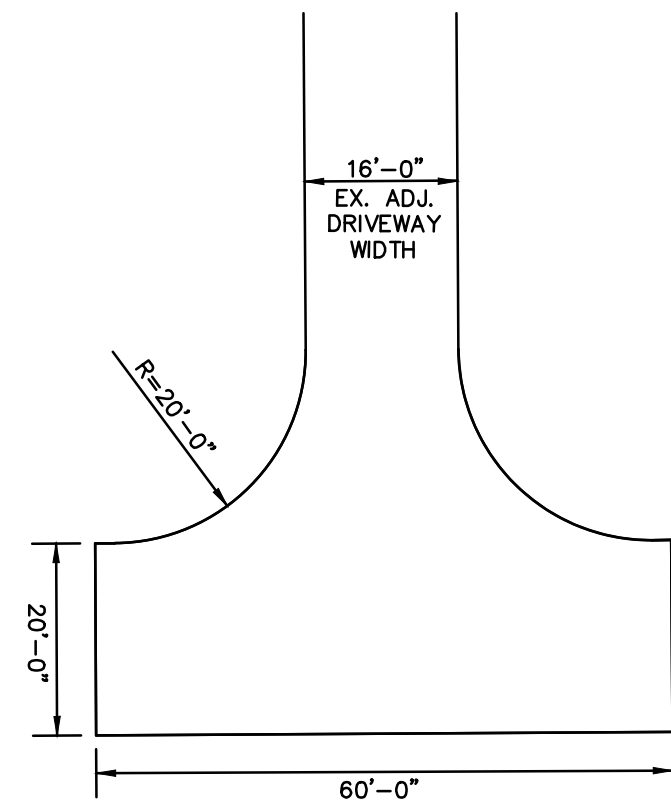
**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____



REV. NO.	DESCRIPTION	DATE

<b>5006 OLEANDER DRIVE</b>			DATE: 3/4/21
<b>BUG-N-A-RUG</b>			Scale: 1"=20'
WILMINGTON	NEW HANOVER	NORTH CAROLINA	Drawn: NNC
SITE INVENTORY AND DEMOLITION			Checked: WSL
<b>RIGHT ANGLE</b> ENGINEERING, P.C. 212 PRINCESS STREET WILMINGTON, NC 28401 (910) 251-8544 FAX (910) 251-2208 FIRM: C-0829			Project No: BN0121
Sheet No: <b>C1</b>			



**APPARATUS TURNAROUND  
PER CITY DETAIL SD 3-05**  
1"=30'

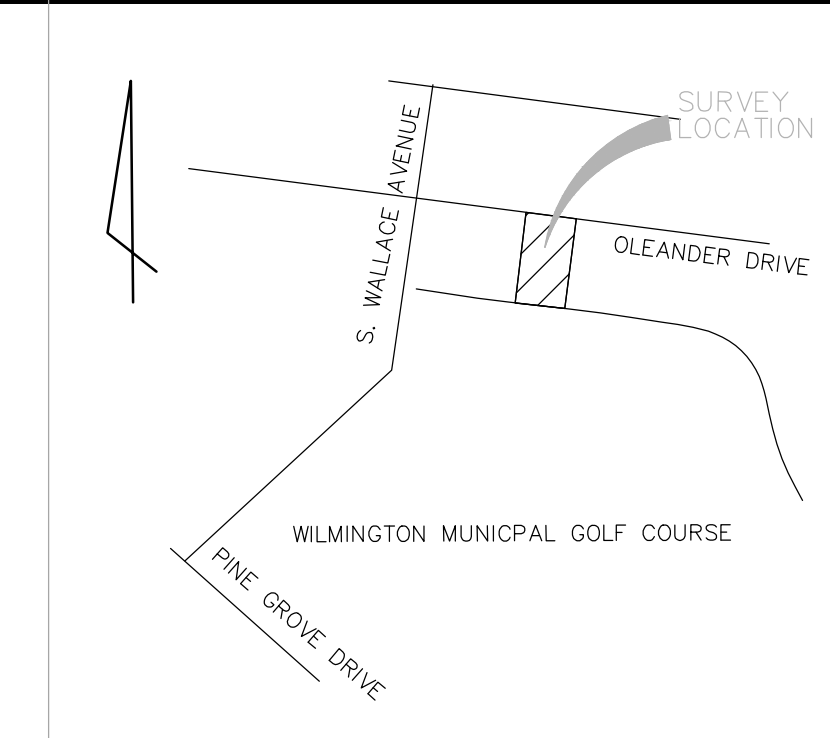
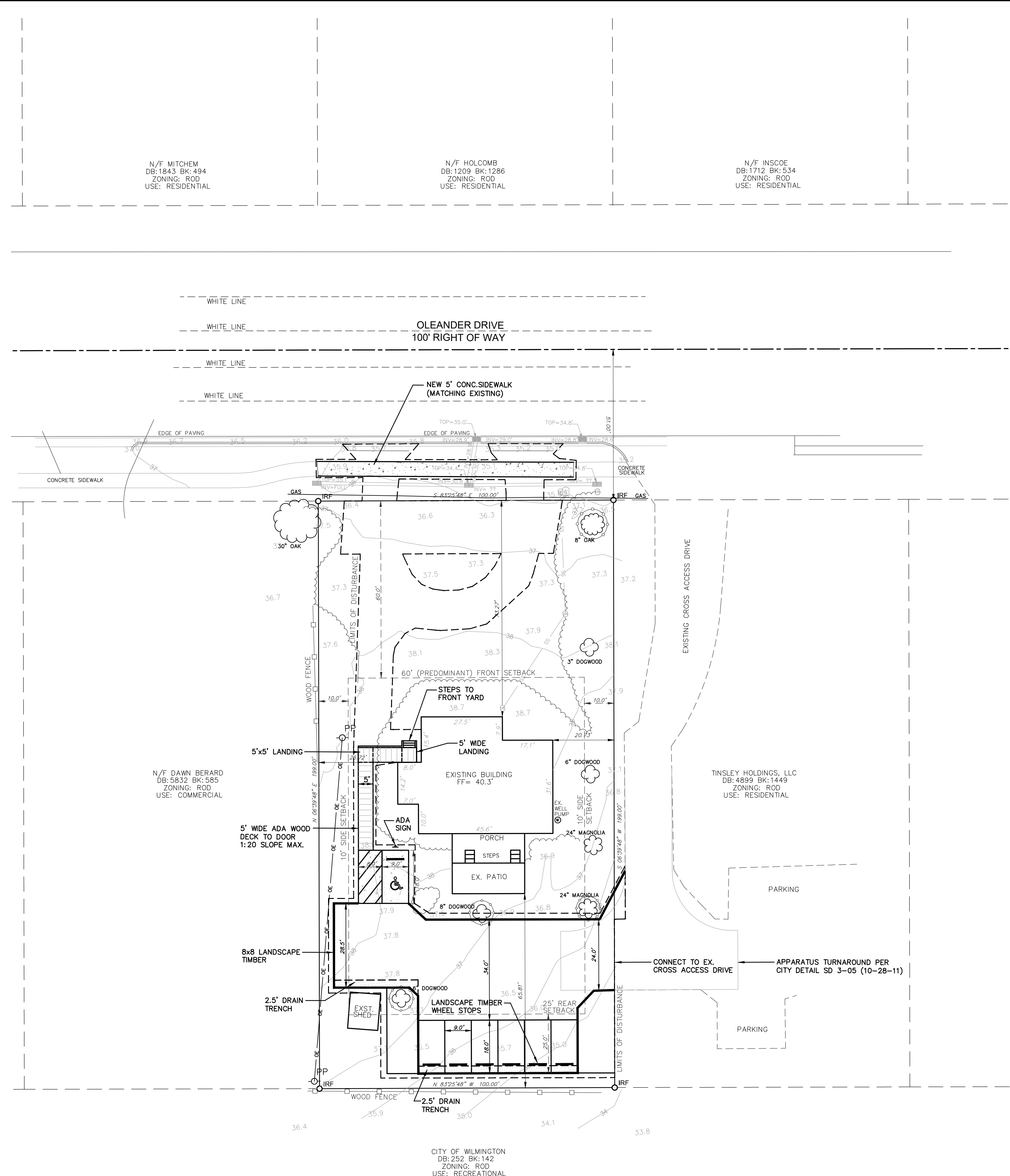
**LEGEND:**

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—//—	FENCE (CHAINLINK)
—□—	FENCE (WOOD)
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—UC—	ELECTRIC (UNDERGROUND)
—G—	GAS LINE
—SD—	STORM DRAIN
—SS—	SANITARY SEWER
—FO—	FIBER OPTIC LINE
—T—	TELEPHONE LINE
—W—	WATER LINE
---	SETBACK LINES
- - -	CLEAR AND STRIP AREA
- . - .	LIMITS OF DISTURBANCE
- - -	TREE PROTECTION FENCING
PP	6"x6" PRESSURE-TREATED TIMBERS LANDSCAPE BORDER AND WHEEL STOP
LP	POWER POLE
LP	LIGHT POLE
—	GUY/ANCHOR
EP	TRANSFORMER PAD
FP	FIBER OPTIC PEDESTAL
TP	TELEPHONE PEDESTAL
MP	TELEPHONE MANHOLE
SS	SANITARY SEWER MANHOLE
SS	SANITARY SEWER CLEAN-OUT
SD	STORM DRAIN MANHOLE
SD	STORM DRAIN DROP INLET/CATCH BASIN
—	FIRE HYDRANT
—	WATER VALVE
—	WATER METER

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**LEGEND:**

IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
IRS	IRON ROD SET



SITE DATA TABLE	
PIN	R0618-009-007-000
ADDRESS	5006 OLEANDER DR WILMINGTON, NC 28403
TELEPHONE	910-254-9443
EMAIL ADDRESS	stuart@bugnarug.com
ZONING	RDD
OWNER	STEAMER PROPERTIES, LLC
ADDRESS	2005 SPANISH WELLS DR WILMINGTON, NC 28405
ACREAGE	0.45 AC (19,602 SF)
SETBACKS REQUIRED / PROVIDED	
FRONT	PREDOMINANT: 60' / PROVIDED: 73.2'
SIDE	REQUIRED: 10' / PROVIDED: 26.72'/20.73'
REAR	REQUIRED: 25' / PROVIDED: 65.81'
ON-SITE QUANTITIES	
EX. BLDG (FOOTPRINT - BUILDING LOT COVERAGE)	1,750 SF = 0.04 AC (8.9%)
EX. SHED (FOOTPRINT - BUILDING LOT COVERAGE)	126 SF = 0.002 AC (0.6%)
EX. CONCRETE DRIVEWAY	1,638 SF = 0.04 AC (8.3%)
EX. CONCRETE SIDEWALK	34 SF = 0.001 AC (0.17%)
TOTAL EX. IMPERVIOUS	3,548 SF = 0.08 AC (18%)
EX. CONCRETE DRIVEWAY TO BE REMOVED	1,187 SF = 0.03 AC (5.7%)
EX. CONCRETE SIDEWALK TO BE REMOVED	34 SF = 0.001 AC (0.17%)
REMAINING EX. IMPERVIOUS	1,876 SF = 0.04 AC (9.5%)
PROPOSED GRAVEL DRIVE AND PARKING	4,031 SF = 0.10 AC (20%)
PROPOSED ADA CONCRETE PARKING	306 SF = 0.007 AC (1.6%)
TOTAL PROPOSED DNSITE IMPERVIOUS	6,213 SF = 0.14 AC (31%)
OFF-SITE QUANTITIES	
EX. CONCRETE DRIVEWAY TO BE REMOVED	511 SF = 0.01 AC
EX. CONCRETE SIDEWALK TO BE REMOVED	50 SF = 0.001 AC
TOTAL OFFSET IMPERVIOUS TO BE REMOVED	561 SF = 0.01 AC
TOTAL PROPOSED OFFSET IMPERVIOUS (SIDEWALK)	432 SF = 0.14 AC
PROPOSED DNSITE PERVIOUS (WOODEN ADA RAMP)	248 SF = 0.006 AC (1.3%)
TOTAL DISTURBED AREA	9,775 SF = 0.22 AC (49%)
BUILDING HEIGHT	0 SPACES
EXISTING PARKING	0 SPACES
PARKING REQUIRED (1 PER 300SF) / PROVIDED	5 STD. + 1 ADA / 6 STD. + 1 ADA
EX. REGULATED TREES ON SITE / PRESERVED	3 / 2
EX. SIGNIFICANT TREES ON SITE / PRESERVED	3 / 3
MITIGATION FOR 4" RED BUD TO BE REMOVED	4" X 75% = 3/3 = 1 TREE PROVIDED
STREET YARD CALCULATION	100 X 18 = 1800 SF REQUIRED / PROVIDED
STREET TREES REQUIRED / PROVIDED	3 / 3
STREET SHRUBS REQUIRED / PROVIDED	18 / 18
FOUNDATION PLANTING CALCULATION	10 X 52.6 = 526 X 12% = 63 SF REQUIRED
FOUNDATION PLANTING PROVIDED (EXISTING)	863 SF
CAMA LAND USE DESIGNATION	URBAN
USDA SOIL CLASSIFICATION - ENTIRE SITE	BAYMEADER-URBAN LAND
FEMA FLOOD ZONE X	FEMA MAP PANEL 3720314600K - 8/28/2018
CAPE FEAR RIVER BASIN	

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

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	

20 10 0 20 30 40  
SCALE

REV NO.	DESCRIPTION	DATE

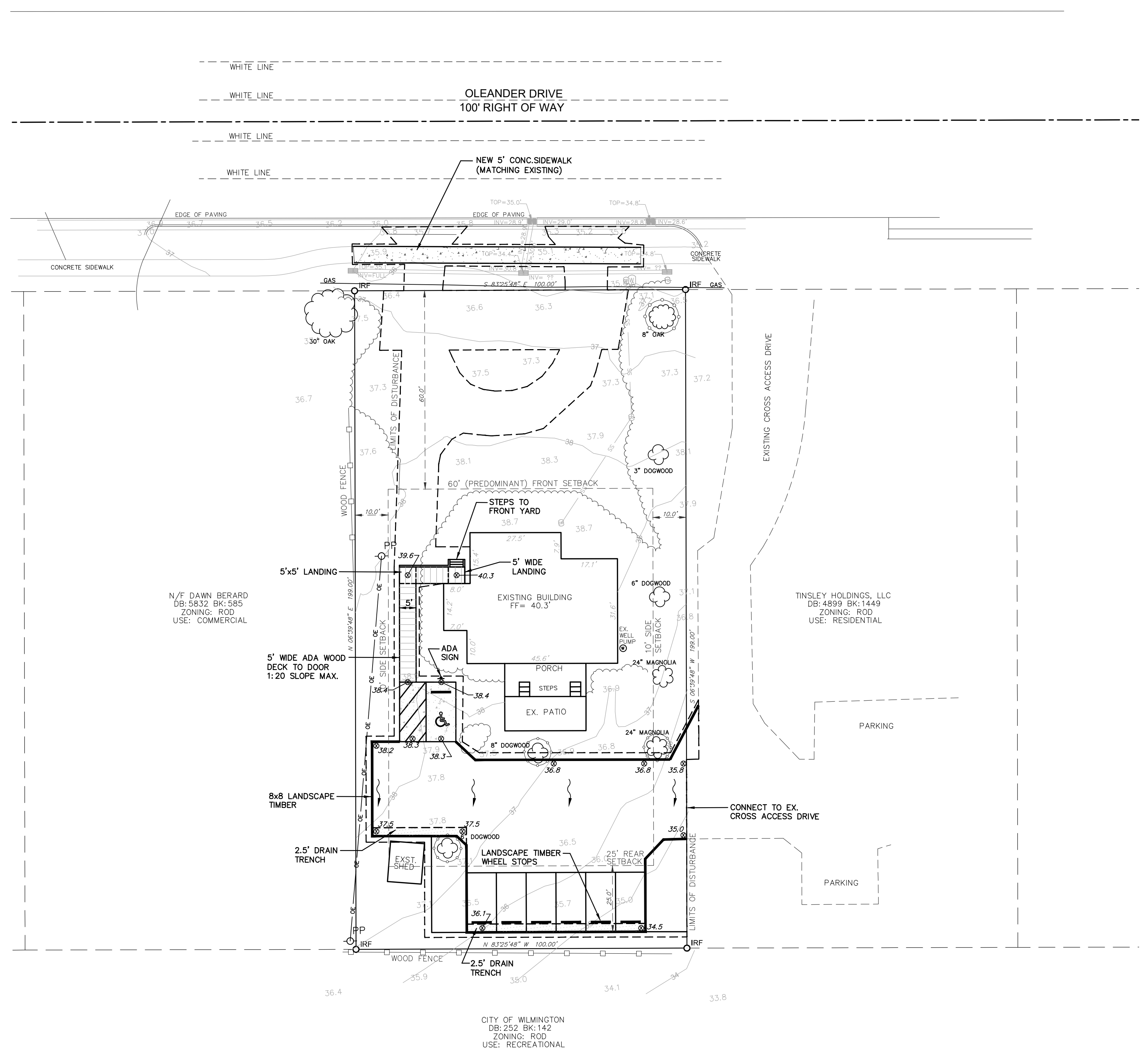
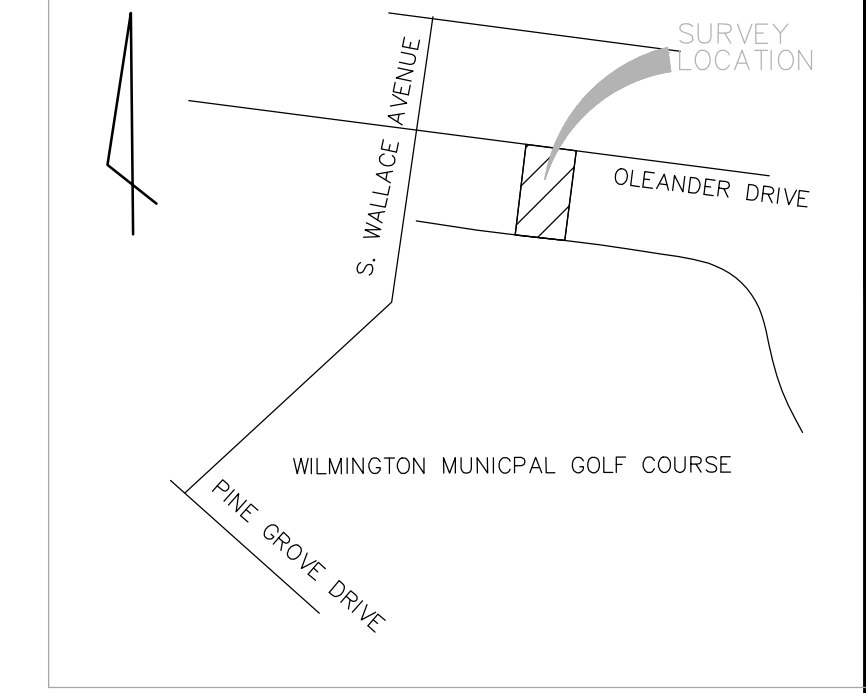
**5006 OLEANDER DRIVE  
BUG-N-A-RUG**

WILMINGTON NEW HANOVER NORTH CAROLINA

**SITE PLAN**

**RIGHT ANGLE  
ENGINEERING, P.C.**  
212 PRINCESS STREET  
WILMINGTON, NC 28401  
(910) 251-8544 FAX (910) 251-2208 FIRM: C-0829

DATE: 3/4/21  
Scale: 1"=20'  
Drawn: NNC  
Checked: WSL  
Project No: BN0121  
Sheet No: C2



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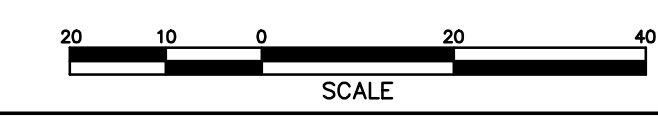
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- LEGEND:**
- IRF IRON PIPE FOUND
  - IRF IRON ROD FOUND
  - IRS IRON ROD SET

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

**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	



REV. NO.	DESCRIPTION	DATE

<b>5006 OLEANDER DRIVE</b>			DATE: 3/4/21
<b>BUG-N-A-RUG</b>			Scale: 1"=20'
WILMINGTON	NEW HANOVER	NORTH CAROLINA	Drawn: NNC
GRADING PLAN			Checked: WSL
 <b>RIGHT ANGLE</b> <b>ENGINEERING, P.C.</b> 212 PRINCESS STREET WILMINGTON, NC 28401 (910) 251-8544 FAX (910) 251-2208 FIRM: C-0829			Project No: BN0121
 <b>CITY OF WILMINGTON</b> NORTH CAROLINA Public Services • Engineering Division APPROVED DRAINAGE PLAN			Sheet No: <b>C3</b>

- VEGETATION PLAN**
- AFTER COMPLETE STABILIZATION OF THE ENTIRE COVERED AREA, TOP COVER SOILS WILL BE ROUGHENED BY MAKING 1"-2" DEEP GROOVES PERPENDICULAR TO THE SLOPE.
  - SPREAD LIME (AGRICULTURAL LIMESTONE) EVENLY OVER THE AREA AT A RATE OF 1.5 TONS/ACRES; SPREAD 10-10-10 FERTILIZER AT THE RATE SPECIFIED AND INCORPORATE INTO THE TOP 6" OF SOIL.
  - LOOSEN SURFACE PRIOR TO APPLYING SEED/SOD.
  - BROADCAST/INSTALL SEED/SOD AT RECOMMENDED RATES.
  - RAKE SEED INTO THE SOIL AND LIGHTLY PACK SEED/SOD TO ESTABLISH GOOD CONTACT.
  - IF SEEDING, MULCH WITH 4000 LB/ACRE GRAIN STRAW OR EQUIVALENT AND ANCHOR BY WEIGHTED FARM DISC SET NEARLY STRAIGHT (OR OTHER MULCH ANCHORING TOOL).
  - MOW AS NEEDED AND RESEED IN LATE WINTER OR EARLY SPRING BY TOPDRESSING WITH 10-10-10 FERTILIZER.
  - SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
    - ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
    - ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

- 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 OR MORE 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 OBJECTABLE 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 AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
  - 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. 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 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 REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE FIRST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
  - ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE, VEGETATIVE COVER.
  - FLOCCULENTS 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**
- CONTRACTOR SHALL CONTACT THE N.C. ONE CALL CENTER TO LOCATE EXISTING UTILITIES AT THE SITE PRIOR TO ANY LAND DISTURBING ACTIVITY.
  - CONTRACTOR SOLELY RESPONSIBLE FOR COORDINATION WITH EXISTING UTILITIES AND ANY DAMAGE THAT OCCURS.
  - ALL TREES TO BE SAVED MUST BE PROPERLY PROTECTED THROUGHOUT CONSTRUCTION.
  - NO WETLANDS EXIST WITHIN THE PROJECT SITE.
  - TOPOGRAPHIC AND LOCATION INFORMATION SHOWN BASED ON SITE SURVEY BY MCKIM&CREED.

- PARKING NOTES**
- WHEEL STOPS SHALL BE REQUIRED 2.5 FEET FROM THE END OF PARKING STALL WHEN USING EIGHTEEN FEET DEEP STALLS.
  - ALL PARKING STALL MARKINGS AND LANE ARROWS SHALL BE WHITE.
  - ALL OTHER PAVEMENT MARKINGS, SIGNS OR OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION AND/OR INTERPRETATION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  - NO OBSTRUCTIONS WILL BE ALLOWED ADJACENT TO A PARKING STALL WHICH WOULD PREVENT SAFE INGRESS AND EGRESS FROM A PARKED VEHICLE.

- CONSTRUCTION SCHEDULE**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
  - HOLD PRE-CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO BEGINNING CONSTRUCTION.
  - INSTALL/MAINTAIN TEMPORARY CONSTRUCTION ENTRANCE/EXIT.
  - BEFORE CLEARING AND GRADING OF SITE, INSTALL SILT FENCING AT THE BASE OF SLOPES TO RESTRICT MOVEMENT OF SEDIMENT FROM THE SITE.
  - BEGIN CLEARING AND GRADING OF THE SITE. INSTALL AND STABILIZE INFILTRATION AREAS.
  - INSTALL STORM PIPING, CATCH BASINS AND CURB INLETS.
  - INSTALL INLET PROTECTION FOR CATCH BASINS AND CURB INLETS TO RESTRICT MOVEMENT OF SEDIMENT FROM THE SITE.
  - ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED BI-WEEKLY AND AFTER EACH RAINFALL EVENT. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
  - AFTER THE ENTIRE COVERED AREA IS STABILIZED, ALL TEMPORARY MEASURES WILL BE REMOVED AND PERMANENT VEGETATIVE REPAIRS SHOULD BE COMPLETED.
  - FLUSH ALL PIPING OF ACCUMULATED SEDIMENT.
  - CLEAN OUT INFILTRATION BASIN AND EXCAVATE TO FINAL DESIGN ELEVATION. ESTABLISH PERMANENT VEGETATION IN BASIN.

**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

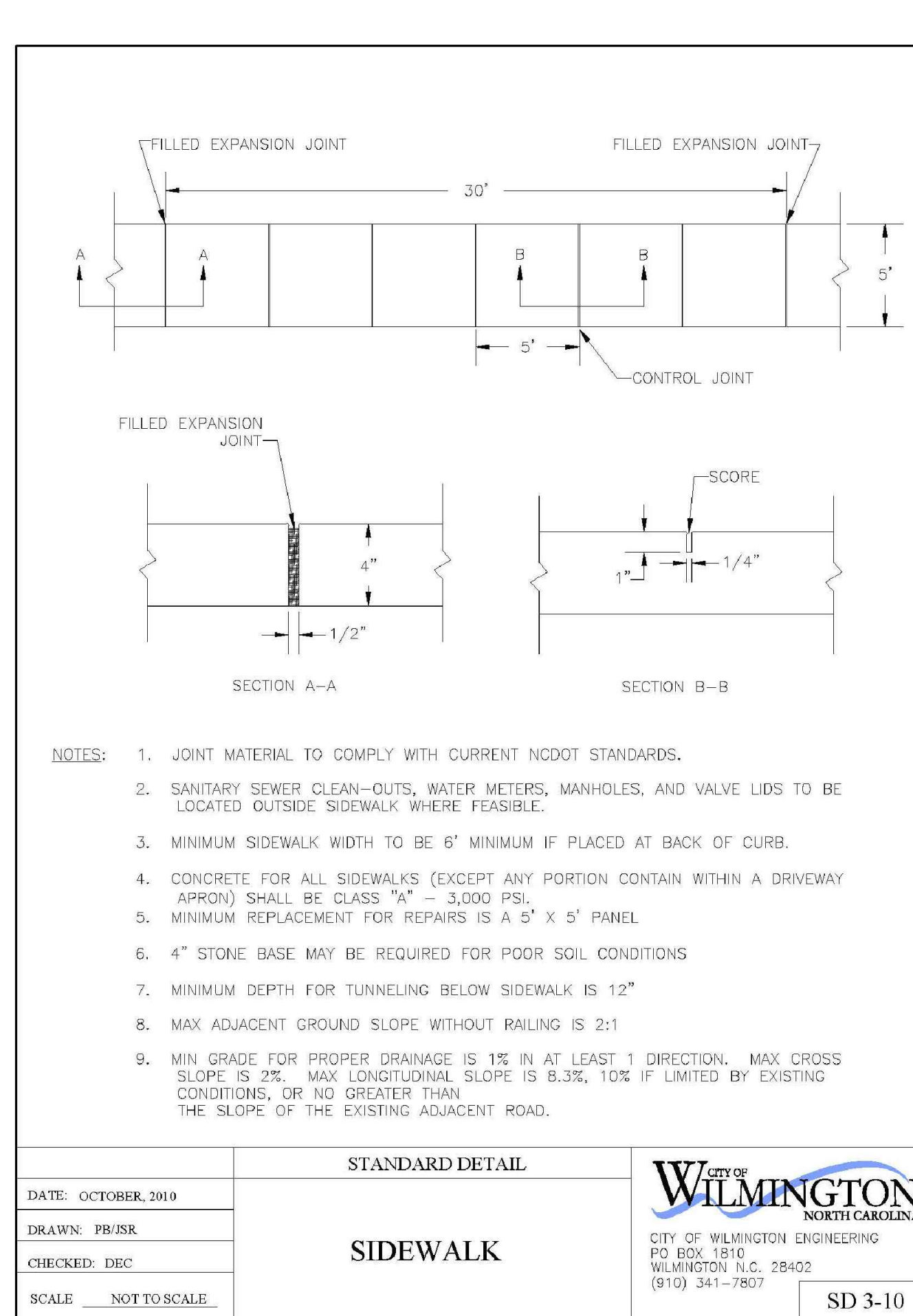
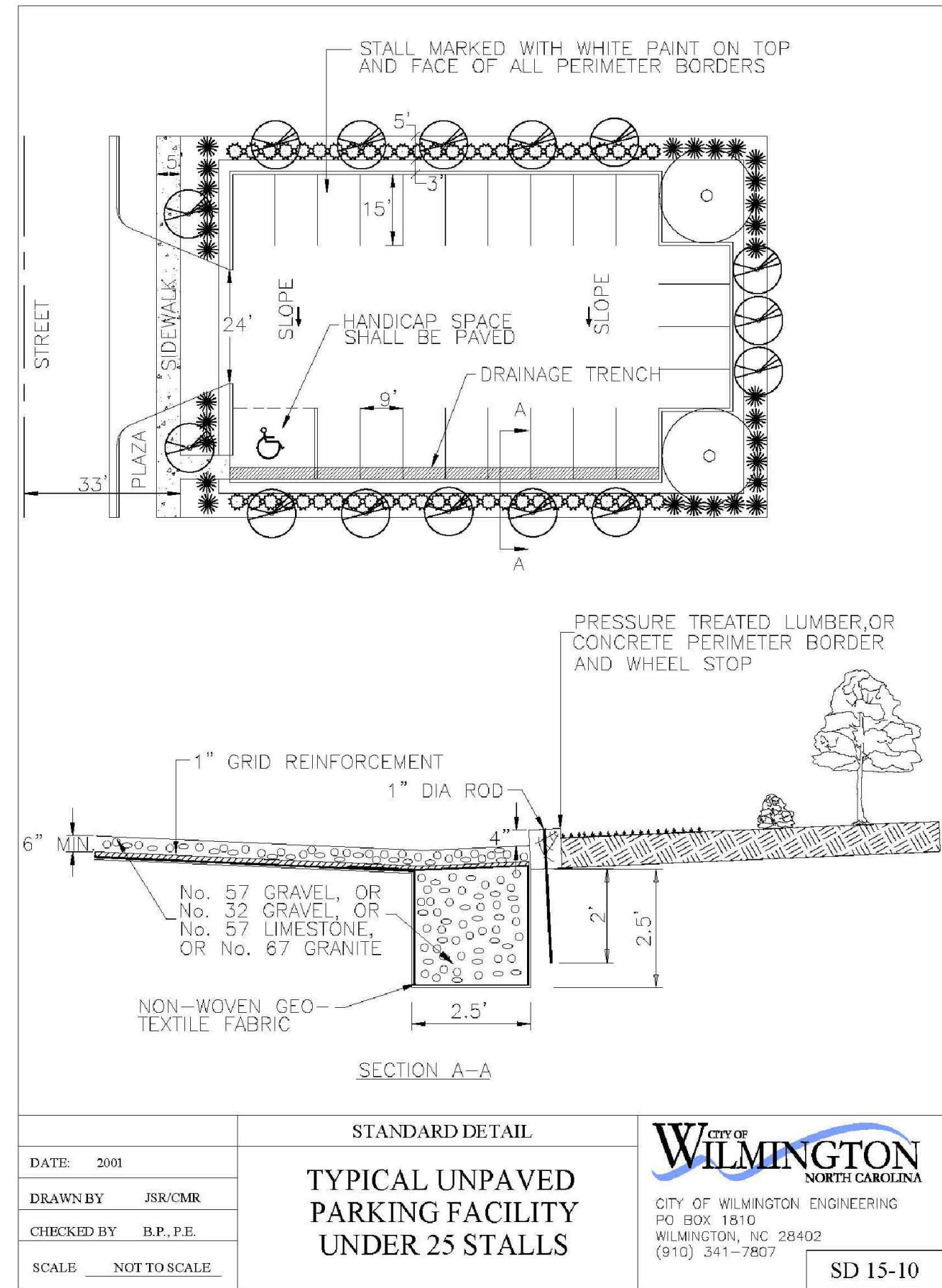
**APPROVED DRAINAGE PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
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**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

**STANDARD DETAIL**

**SIDEWALK**

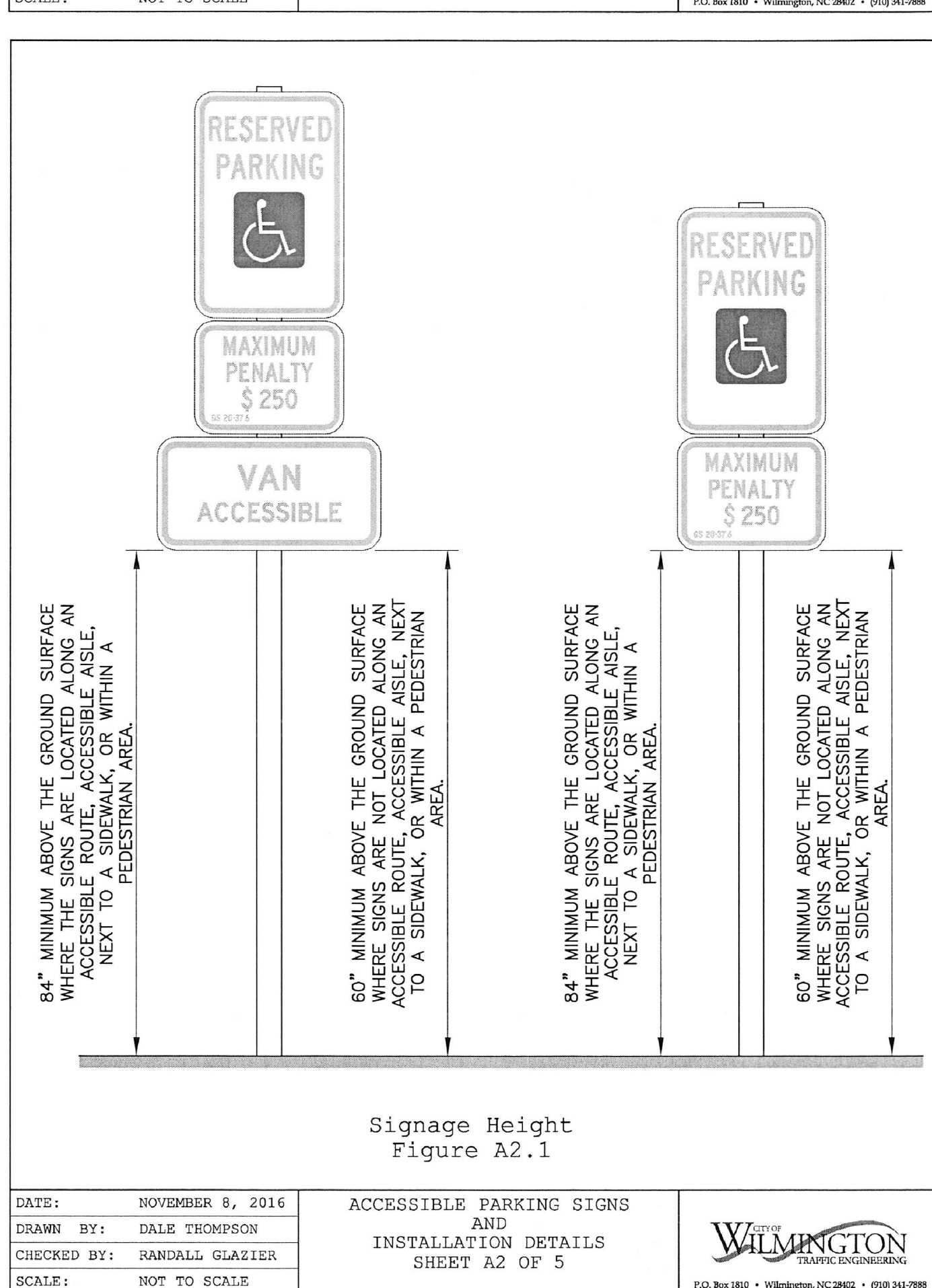
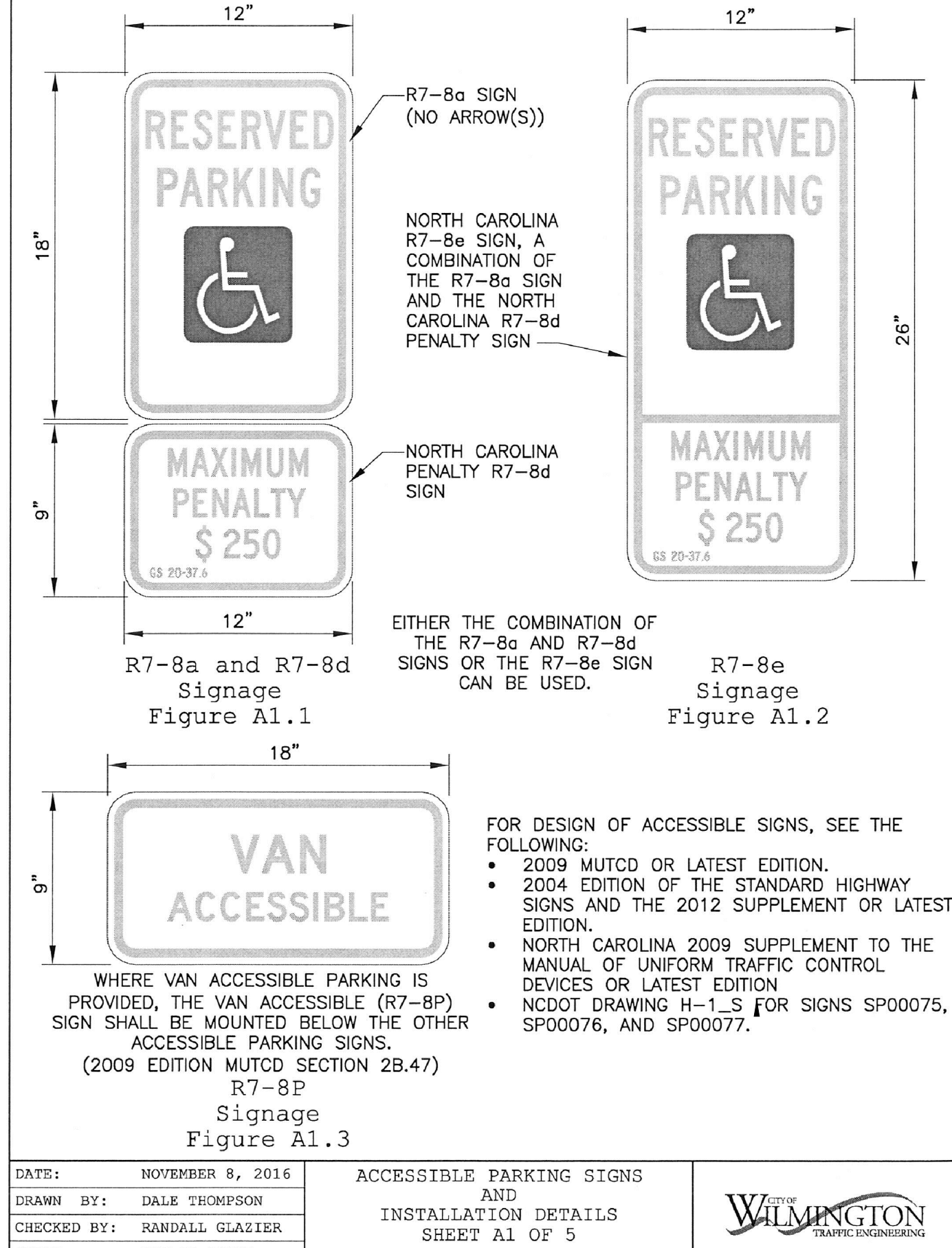
DATE: OCTOBER, 2019

DRAWN BY: P8/RSR

CHECKED BY: DEC

SCALE: NOT TO SCALE

SD 3-10



**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

**STANDARD DETAIL**

**ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS**

SHEET A2 OF 5

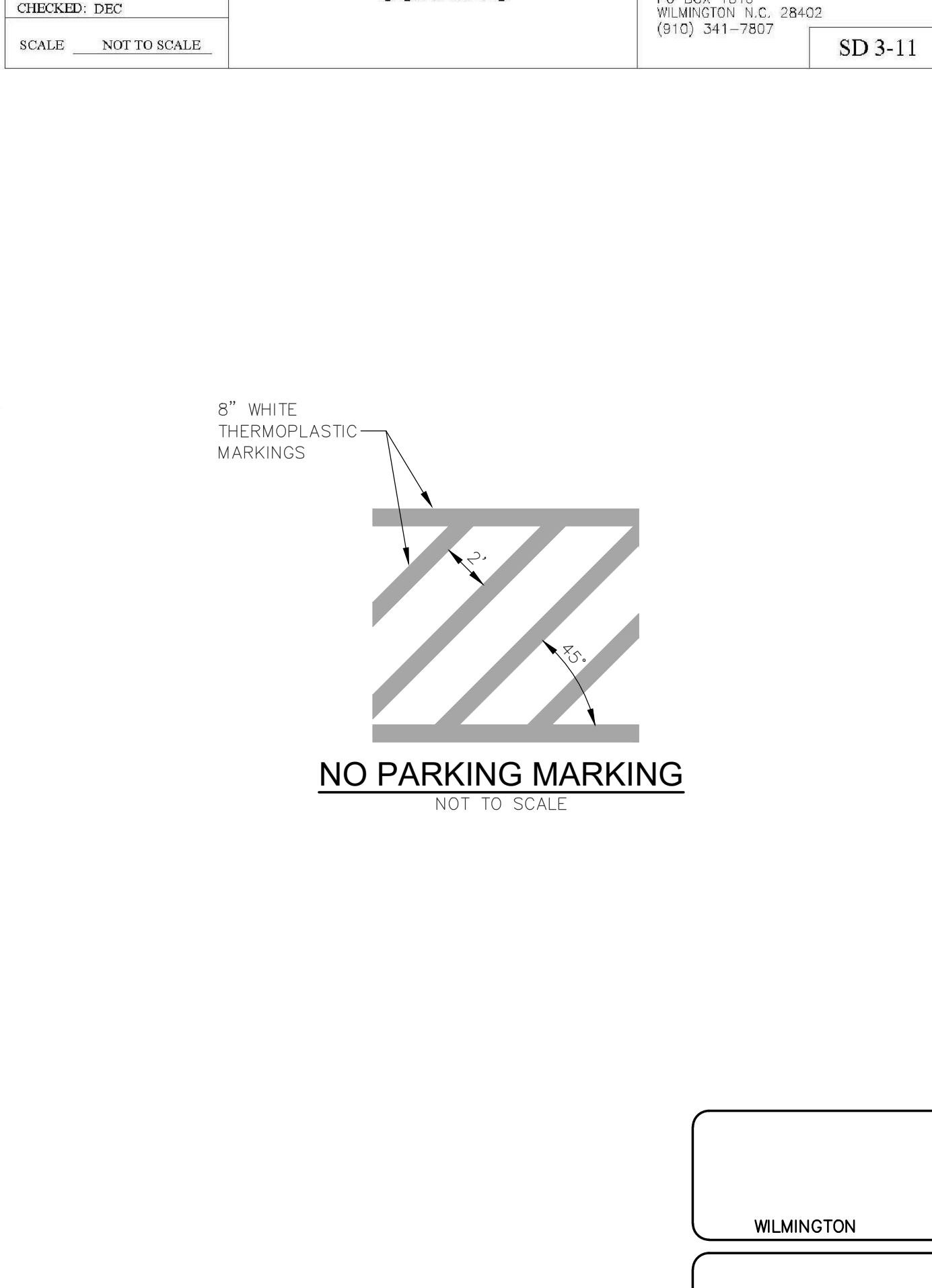
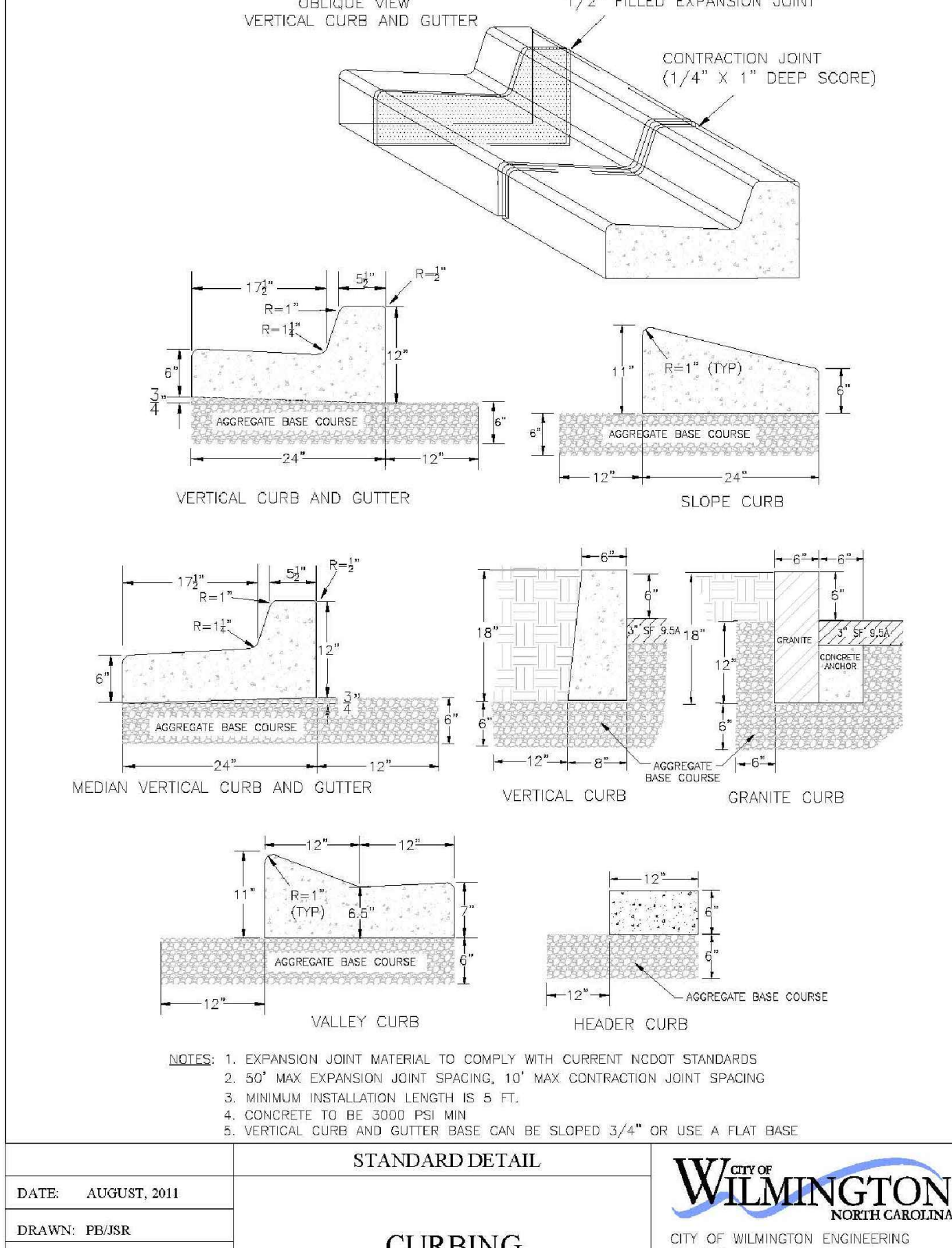
DATE: NOVEMBER 8, 2016

DRAWN BY: DALE THOMPSON

CHECKED BY: RANDALL GLAZIER

SCALE: NOT TO SCALE

SD 3-10



**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

**STANDARD DETAIL**

**CURBING**

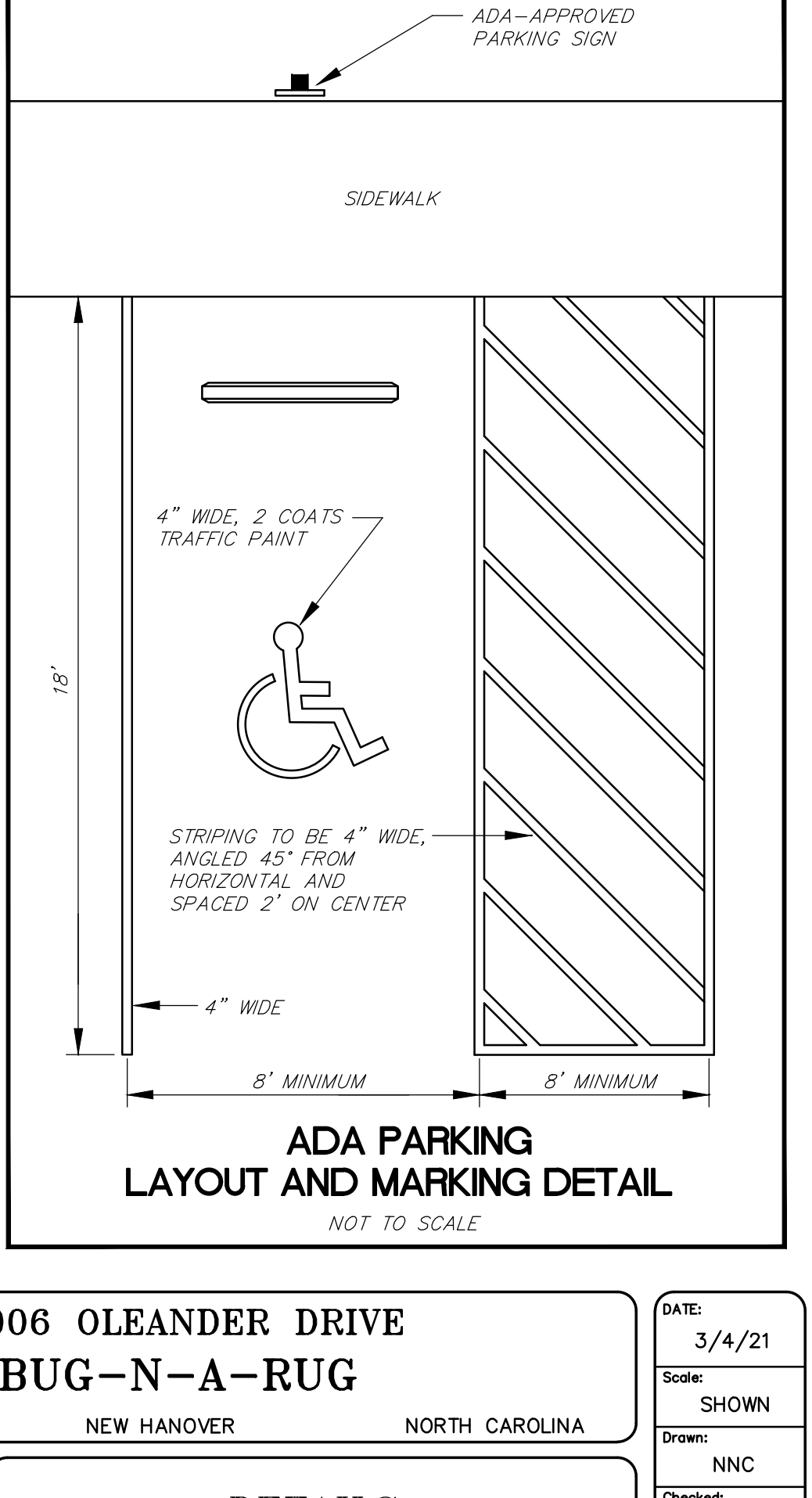
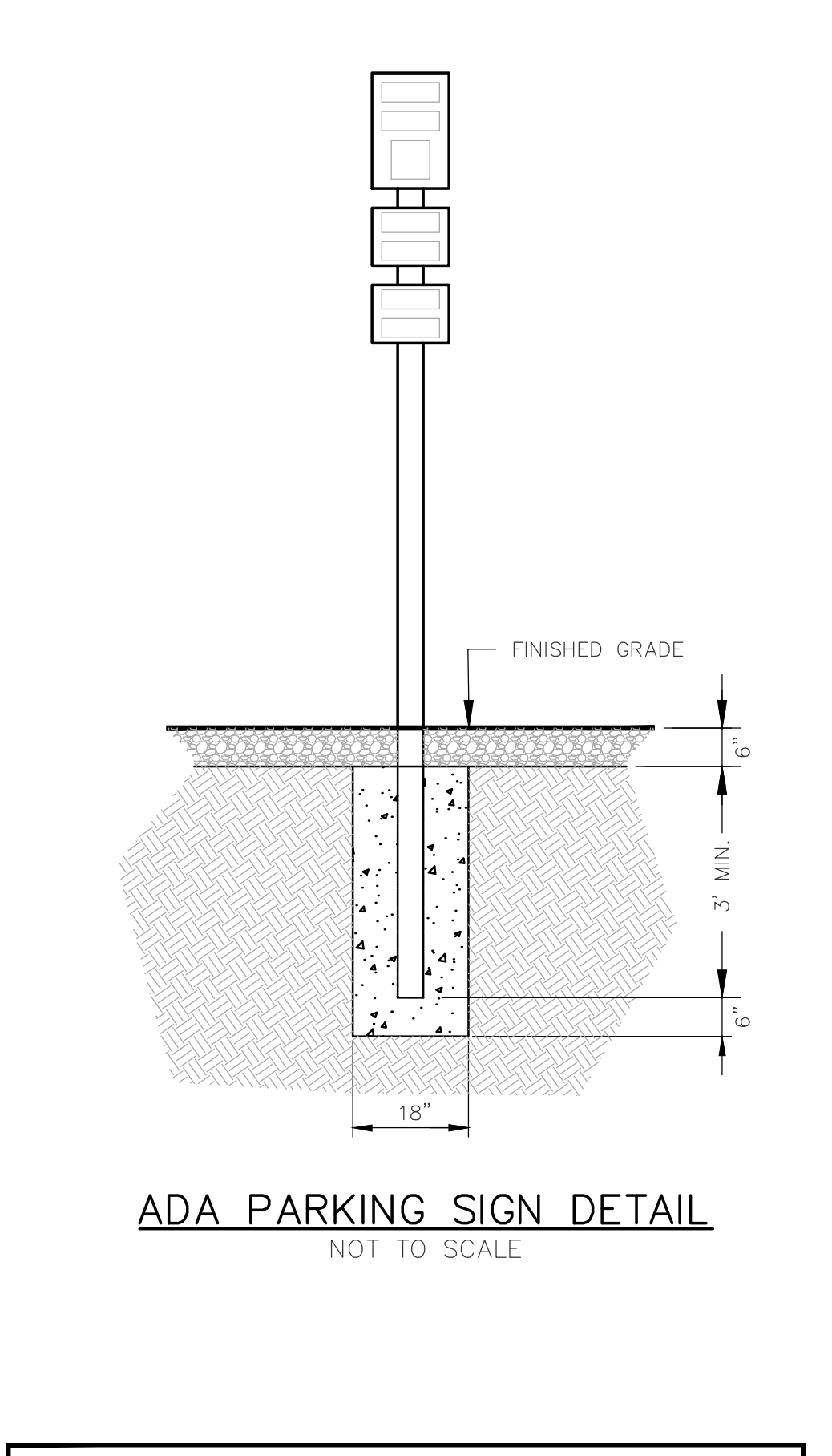
DATE: AUGUST, 2011

DRAWN BY: P8/RSR

CHECKED BY: DEC

SCALE: NOT TO SCALE

SD 3-11



**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

**STANDARD DETAIL**

**SIDEWALK**

DATE: OCTOBER, 2019

DRAWN BY: P8/RSR

CHECKED BY: DEC

SCALE: NOT TO SCALE

SD 3-10

**5006 OLEANDER DRIVE**  
**BUG-N-A-RUG**

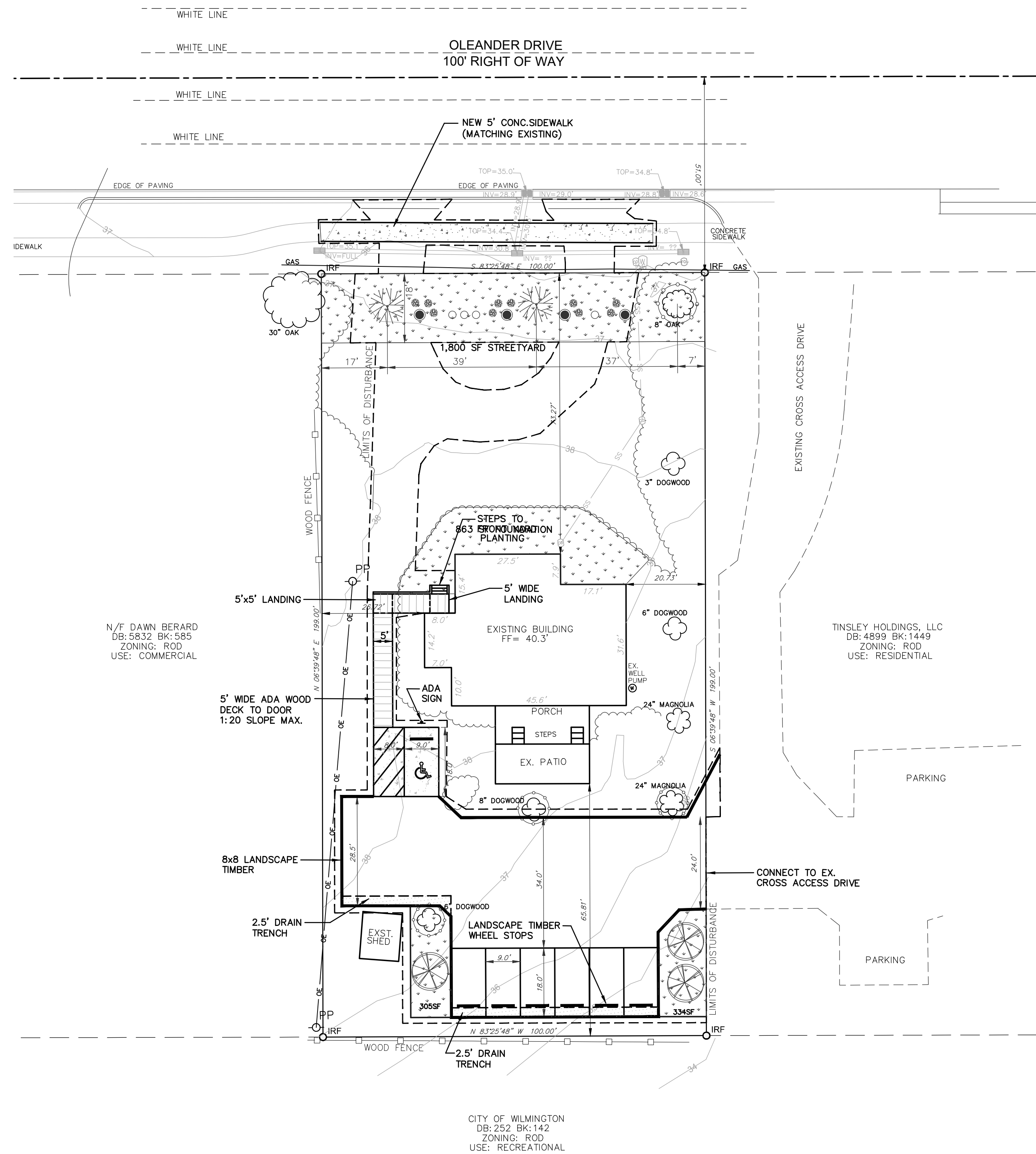
WILMINGTON NEW HANOVER NORTH CAROLINA

**DETAILS**

**RIGHT ANGLE ENGINEERING, P.C.**  
212 PRINCESS STREET  
WILMINGTON, NC 28401  
(910) 251-8544 FAX (910) 251-2208 FIRM: C-0829

DATE: 3/4/21  
Scale: SHOWN  
Drawn: NNC  
Checked: WSL  
Project No: GH0120  
Sheet No: D1

REV. NO.	DESCRIPTION	DATE



**LEGEND:**

- X FENCE (BARBED)
- // FENCE (CHAINLINK)
- FENCE (WOOD)
- OE ELECTRIC (OVERHEAD)
- UE ELECTRIC (UNDERGROUND)
- G GAS LINE
- S STORM DRAIN
- SS SANITARY SEWER
- FO FIBER OPTIC LINE
- T TELEPHONE LINE
- W WATER LINE
- SETBACK LINES
- CLEAR AND STRIP AREA
- LIMITS OF DISTURBANCE
- TREE PROTECTION FENCING
- 8'x8' PRESSURE-TREATED TIMBERS
- PP POWER POLE
- LP LIGHT POLE
- GUYANCHOR
- TRANSFORMER PAD
- FIBER OPTIC PEDESTAL
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- SS SANITARY SEWER MANHOLE
- SS SANITARY SEWER CLEAN-OUT
- SM STORM DRAIN MANHOLE
- SD STORM DRAIN DROF INLET/CATCH BASIN
- FH FIRE HYDRANT
- WV WATER VALVE
- WM WATER METER

- NOTES:**
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN US SURVEY FEET, UNLESS NOTED OTHERWISE.
  - THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A CERTIFIED TITLE REPORT AND THEREFORE THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO RECORDED OR UNRECORDED RIGHT-OF-WAYS, EASEMENTS, RESTRICTIONS OF RECORD, OR OTHER ENCUMBRANCES NOT OBSERVED OR SHOWN HEREON.
  - NO DETERMINATION HAS BEEN MADE BY THE SURVEYOR AS TO THE FOLLOWING: FLOOD ZONES, WETLANDS, UNDERGROUND STORAGE FACILITIES, CEMETERIES, HAZARDOUS WASTE DEPOSITS OR MATERIALS, OR OTHER CONDITIONS.
  - THIS MAP IS NOT INTENDED FOR RECORDATION AS PER G.S. 47-60 AS AMENDED.
  - THE CALCULATED PROPERTY LINES SHOWN HEREON WERE DRAWN FROM FIELD LOCATED BOUNDARY EVIDENCE AND/OR RECORDED DEEDS AND MAPS AS NOTED.
  - ANY LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS MAP ARE APPROXIMATE BASED ON INFORMATION PROVIDED BY OTHERS AND FIELD LOCATIONS. ALL UTILITIES SHOWN HEREON ARE SUBJECT TO FIELD VERIFICATION.
  - A LANDSCAPING PLAN INDICATING THE LOCATION OF THE 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.
  - CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  - ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
  - BUSINESS IDENTIFICATION SIGNAGE MUST BE PERMITTED SEPARATELY THROUGH THE CITY OF WILMINGTON. NO OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY WILL BE ALLOWED.

**TEMPORARY SEEDING**

GRASS TYPE	AMOUNT/1000 SF	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF MAINTENANCE
RYE GRASS	1-2 LBS	NOV. THRU JAN.	25 LBS 10-10-10	N/A N/A N/A
BROWN TOP MILLET	1-2 LBS	JUNE THRU AUG.	25 LBS 10-10-10	N/A N/A N/A

**PERMANENT SEEDING**

GRASS TYPE	AMOUNT/1000 SF	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF MAINTENANCE
BERMUDA, COMMON	1-2 LBS	APR. THRU JUNE	25 LBS 10-10-10	MARCH-APRIL 12 LBS 10-10-10 AUG- SEPT 12 LBS 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS	SEPT THRU OCT FEB THRU OCT	25 LBS 10-10-10	FEB - MARCH 12 LBS 10-10-10 MAY & DEC 1/2 TO 1 LB. N. SEPT - OCT 12 LBS 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS	MARCH THRU APR.	25 LBS 10-10-10	FEB - MARCH 1/2 TO 1 LB. N. N/A

**LEGEND:**

- IRF IRON PIPE FOUND
- IRF IRON ROD FOUND
- IRS IRON ROD SET

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

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

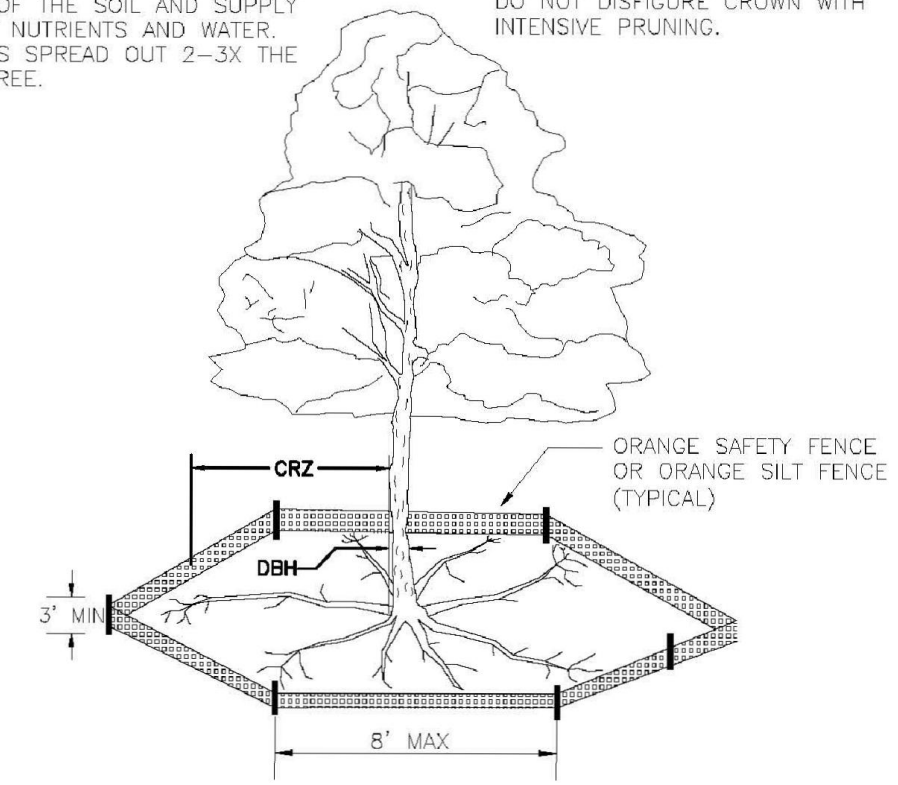
**Approved Construction Plan**

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

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

**NOTES:**  
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY, 80% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

**NOTE:**  
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISLOURE CROWN WITH INTENSIVE PRUNING.



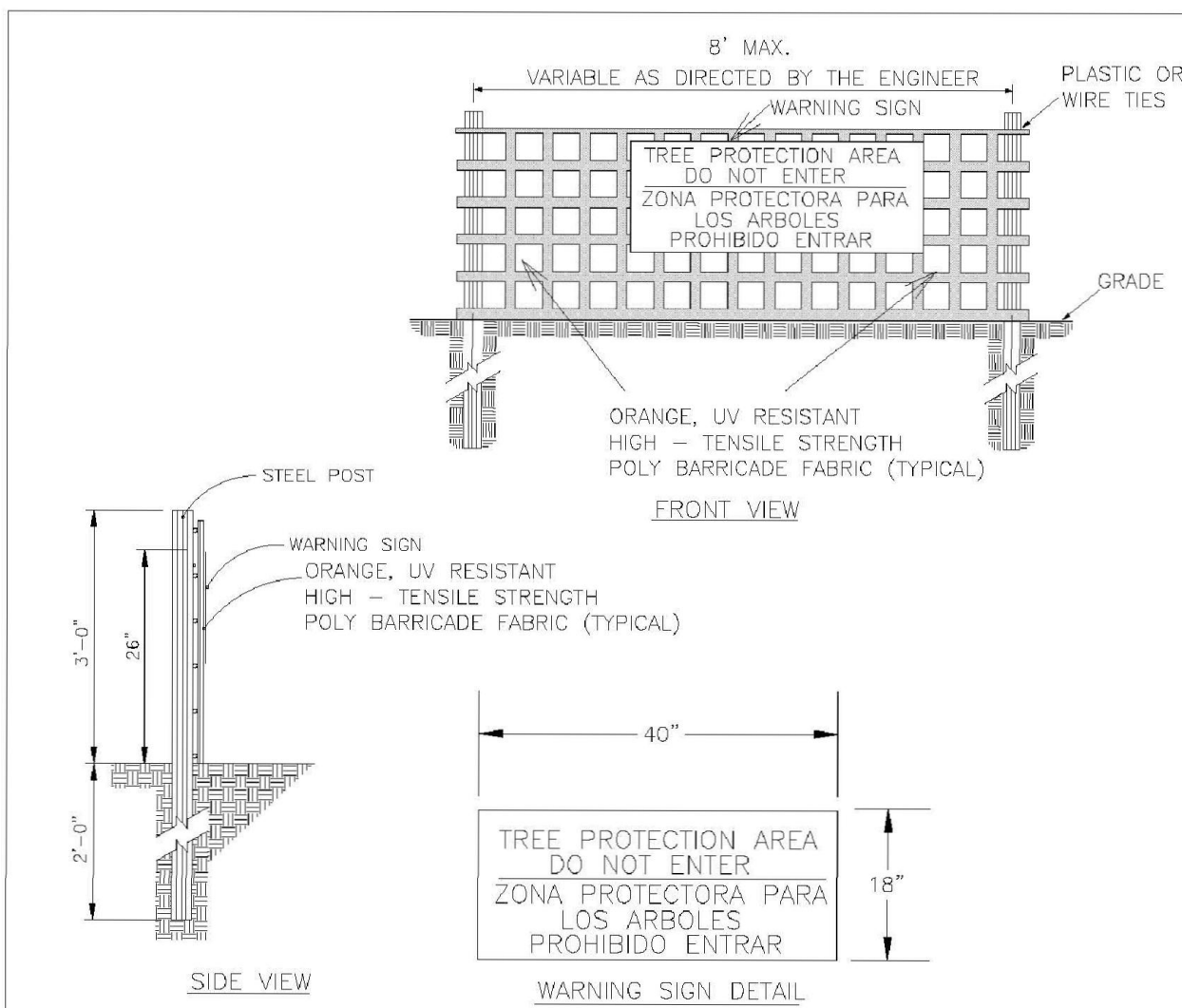
- NOTES:**
- PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
  - CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
  - IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
  - WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
  - FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES, DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
  - FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

**STANDARD DETAIL**  
**TREE PROTECTION DURING CONSTRUCTION**  
SHEET 1 of 2

**CITY OF WILMINGTON**  
NORTH CAROLINA  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807

DATE: JAN 2015  
DRAWN BY: JSR  
CHECKED BY: RDK/P.E.  
SCALE: NOT TO SCALE

SD 15-09



- NOTES:**
- THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
  - WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
  - SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
  - ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
  - TREE PROTECTION FENCING AND SIGNS SHALL BE REMOVED AFTER CONSTRUCTION.
  - ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

**STANDARD DETAIL**  
**TREE PROTECTION DURING CONSTRUCTION**  
SHEET 2 of 2

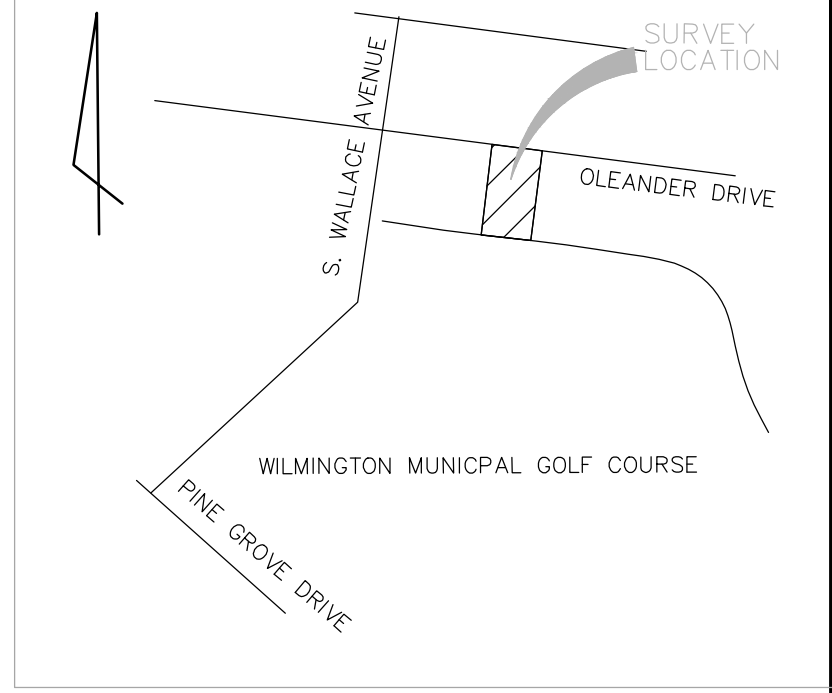
**CITY OF WILMINGTON**  
NORTH CAROLINA  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807

DATE: JAN 2015  
DRAWN BY: JSR  
CHECKED BY: RDK/P.E.  
SCALE: NOT TO SCALE

SD 15-09

SCALE: 1" = 20'

REV NO.	DESCRIPTION	DATE



**LANDSCAPE LEGEND**

SYMBOL	SPECIFICATION	QTY
(Symbol)	GRAPE MYRTLE LAGERSTROEMIA INDICA 2" CALIPER AT PLANTING	3
(Symbol)	LAUREL OAK QUERCUS LAURIFOLIA 2" CALIPER AT PLANTING	2
(Symbol)	WAX MYRTLE MYRTICA CERIFERA MIN. 12" HEIGHT AT PLANTING	4
(Symbol)	INDICA AZALEA RHODODENDRON INDICA MIN. 12" HEIGHT AT PLANTING	10
(Symbol)	GLOSSY ABELIA ABELIA GRANDIFLORA MIN. 12" HEIGHT AT PLANTING	4
(Symbol)	TREE PROTECTION FENCING	
(Symbol)	4" MULCH AROUND NEW TREES, GRASS OR SOD REMAINING	

**PARKING SHADE CALCULATIONS:**

TOTAL PARKING AREA: 4,250 SF  
4,250 x 20% = 850 SF  
3 CRAPE MYRTLES PROVIDED  
3 x 314 SF = 942 SF SHADE PROVIDED

**TREE MITIGATION CHART**

TREES PRESERVED ON SITE	CREDITS	TREES REMOVED	MITIGATION PROVIDED
8' OAK	2	4" RED BUD	4" x 75% = 3 1/4
3" DOGWOOD	1		
(2) 6" DOGWOODS	4		
8' DOGWOOD	2		
(2) 24" MAGNOLIAS	12		
<b>TOTAL</b>	<b>21</b>		
			1 CRAPE MYRTLE PROVIDED

**5006 OLEANDER DRIVE**  
**BUG-N-A-RUG**

WILMINGTON NEW HANOVER NORTH CAROLINA

**LANDSCAPE PLAN**

**RIGHT ANGLE ENGINEERING, P.C.**  
212 PRINCESS STREET  
WILMINGTON, NC 28401  
(910) 251-8544 FAX (910) 251-2208 FIRM: C-0829

DATE: 3/4/21  
Scale: 1"=20'  
Drawn: NNC  
Checked: WSL  
Project No: BN0121  
Sheet No: L1