

4039 MASONBORO LOOP RD.
LOCATED IN THE CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
DESCRIPTION OF WORK: GRADING, PAVING, DRAINAGE, AND UTILITIES
OWNER: ACADIA SERVICES, LLC
222 BEECH STREET
WILMINGTON, N.C. 28405

 PROPOSED SIDEWALK

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

No geotechnical testing has been performed on site. No warranty is made for suitability of subgrade, and undercut and any required replacement with suitable material shall be the responsibility of the contractor.

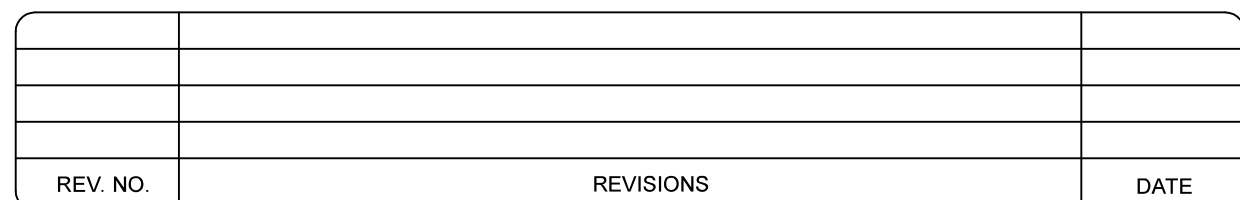
1. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
2. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL A "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
3. ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
4. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE AND CURB BOXES TO THE FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DESTROYED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. PARKING AREAS SHALL BE WATERED TO CONTROL DUST AS DIRECTED BY THE ENGINEER.
6. NO GEOTECHNICAL TESTING HAS BEEN PERFORMED ON SITE. NO WARRANTY IS MADE FOR SUITABILITY OF SUBGRADE, AND UNDERCUT AND ANY REQUIRED REPLACEMENT WITH SUITABLE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
CONTRACTOR RESPONSIBLE FOR GEOTECHNICAL TESTING AS NECESSARY.
7. EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
8. CONTRACTOR TO ENSURE THAT STREET PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE ROADWAY INLETS AND CATCH BASINS.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
10. THIS PLAN IS FOR SITE UTILITIES, GRADING, ROADWORK, AND DRAINAGE ONLY.
11. AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT AT THE MINIMUM THIS SHOULD INCLUDE AT&T AND DUKE (PROGRESS) ENERGY.
12. ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND ALL APPLICABLE STATE & LOCAL CODES.
13. CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH THE STATE AND CITY. OBTAIN REQUIRED RESPONSIBILITY FOR ANY ADDITIONAL REQUIRED PERMITS.
14. CARE SHALL BE TAKEN DURING FINAL GRADING TO ENSURE POSITIVE DRAINAGE TO RECEIVING STRUCTURES. ALL STORM WATER RUNOFF FROM THE IMPAVED AREAS (i.e. DRIVEWAYS, SIDEWALKS, DRIVEWAYS, DRIVEWAYS) TO BE DIRECTED TO STORM SEWER COLLECTION SYSTEM (i.e. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS.
16. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, ADJUSTMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
17. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB, ASPHALT, INLETS, AND ANY OTHER STRUCTURES INCLUDING TREES, STUMPS AND DEBRIS EXISTING ON SITE. TREES NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE DIRECTED.
18. ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET NCDOT AND MUTCD STANDARDS
19. SANITARY SERVICES SMALLER THAN 8" SHALL HAVE CLEANOUTS AT INTERVALS OF NOT MORE THAN 100'. CLEANOUTS SHALL BE PROVIDED FOR SERVICE LINES AND BUILDING DRAINS THAT HAVE HORIZONTAL DIRECTION CHANGES GREATER THAN 45 DEGREES.
20. SEE 2018 IPC FOR FURTHER GUIDANCE ON UTILITY SERVICE REQUIREMENTS.

1. This map is not for conveyance, recordation, or sales.
2. This property is located within in zone X1 according to Flood Insurance Rate Map Community ID# 3720314500 suffix J effective date April 3, 2006 (see existing conditions sheet)
3. This property is zoned CB-COMMUNITY BUSINESS, City of Wilmington.
4. Water service to be CFPUA (public).
5. Sewer service to be CFPUA (public).
6. Topographic data furnished by Bateman Civil Survey Company.

[illegible]

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

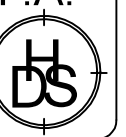
	Name	Date
Planning		
Traffic		
Fire		



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PRELIMINARY PLAN

1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597



C 7

1. 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.
2. ANY TREES AND / OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
3. NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.

4. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY, MUTCD, AND/OR NCDOT STANDARDS.
5. ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
6. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.

29. ANY PVC MAINS ARE TO BE MARKED WITH NO. 10 INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND ATTACHED TO THE PIPE AND STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES AND FITTINGS. ACCESSIBLE IN ALL VALVE AND METER BOXES. ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 3' OF COVER.

10. LANDSCAPING AND LIGHTING PLAN BY OTHERS.

-
- Diagram illustrating the cross-section of a ramp and gutter, labeled SECTION A-A.
- Key dimensions and labels:
- 1.54±0.5% (Slope)
 - 1.0~8.3% (30° MAX RISE) (Slope)
 - MIN. LANDING WIDTH = RAMP WIDTH
 - MAX SLOPE 2% IN ANY DIRECTION
 - CURB AND GUTTER
 - 10% MAX (X<36° MIN)
 - 8.3% MAX (X<36°) (FOR ALTERATIONS ONLY)
 - Section A-A

1.6-2.4" (TYP)

2" MIN

TRUNCATED DOMES
BASE DIAMETER 0.9-1.4"
TOP DIAMETER 50-60%
OF BASE (TYP)

1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

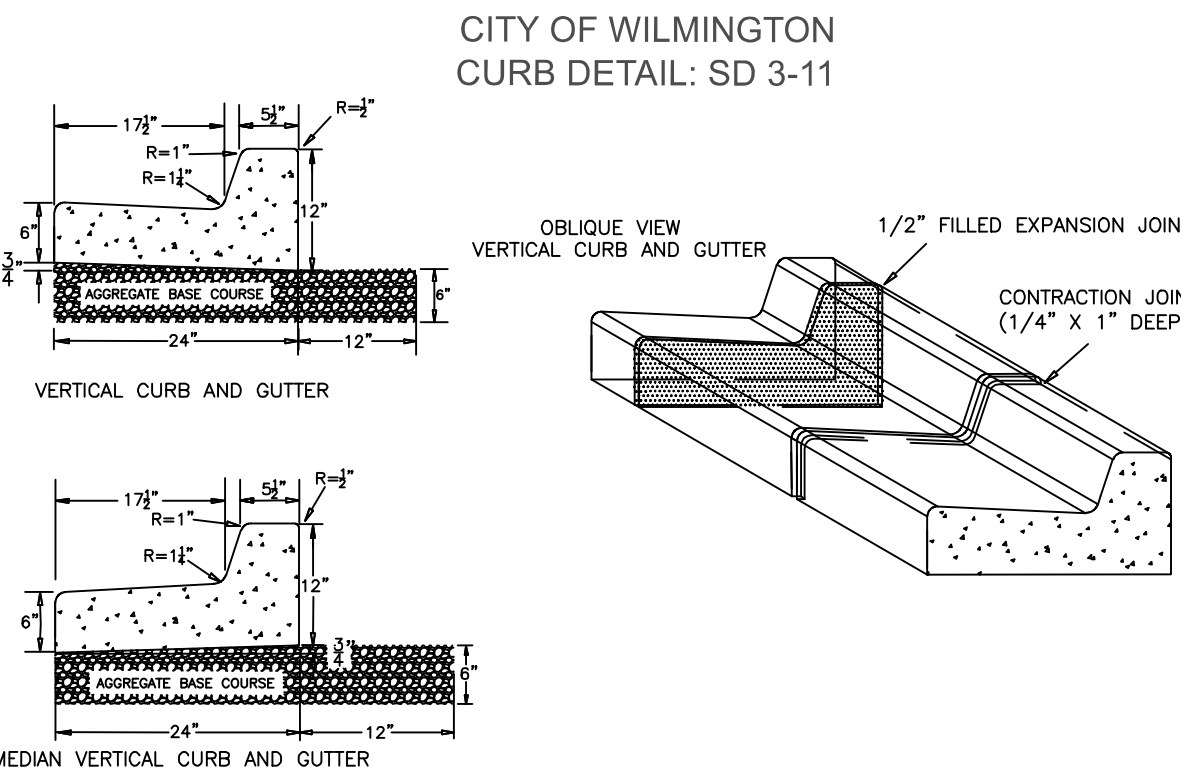
20. All required easement maps shall be reviewed by city staff and recorded prior to issuance of a certificate of occupancy.

SEWER AND WATER TO BE PUBLIC AND PROVIDED BY CFPWA. SPECIFIC LOCATION, SIZING, AND DETAILS WILL BE PROVIDED ON THE CONSTRUCTION PLANS AND ARE TO BE APPROVED BY CFPWA AND CITY ENGINEERS.

1. CFPWA STANDARD DETAIL SHEETS FOR SEWER AND WATER TAPS TO BE INCLUDED AS A PART OF THIS PLAN, ATTACHED.
2. 48-HOUR NOTICE AND 3 COMPLETE SETS OF PLANS REQUIRED FOR PRE-CONSTRUCTION MEETING BY CONTRACTOR.
3. NCDOT ENCROACHMENT REQUIRED FOR ANY WORK IN PUBLIC R/W.
4. ALL FEES TO BE PAID PRIOR TO PRE-CONSTRUCTION MEETING.

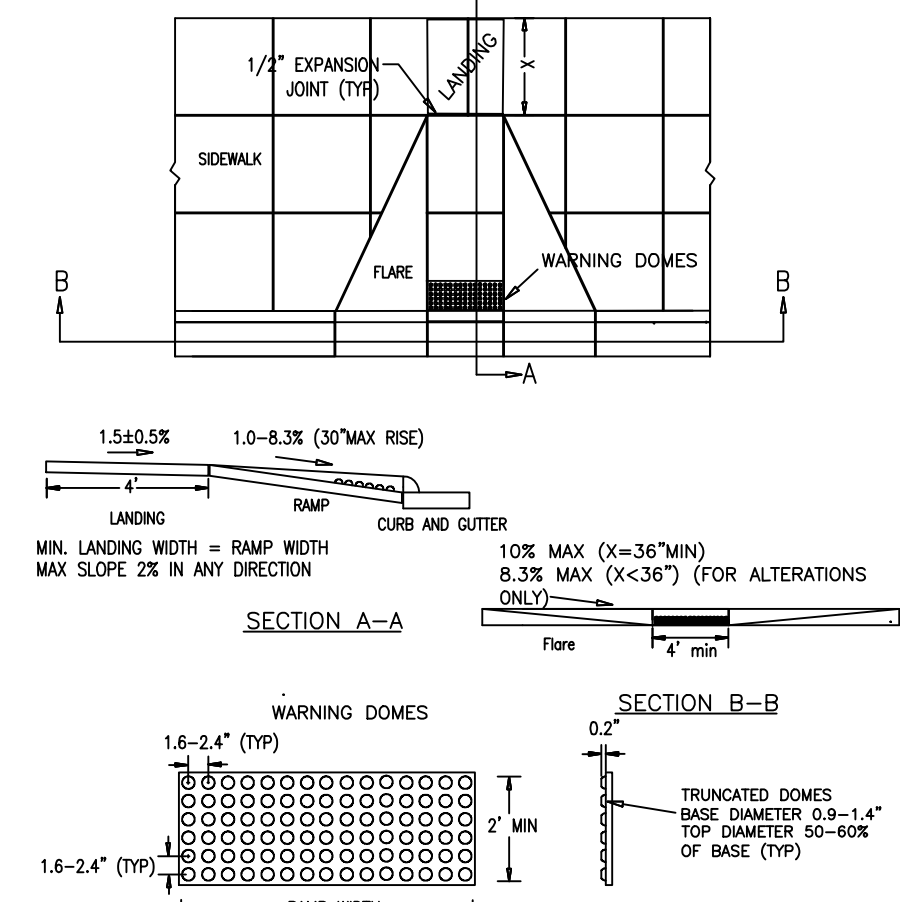
7. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM

CONTRACTOR RESPONSIBLE FOR PERMIT AND COORDINATION WITH CFPUA.
ALL SERVICES TO BE INSTALLED IN ACCORDANCE WITH
CITY and CFPUA TECHNICAL STANDARDS.



- NOTES:**
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
 2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
 3. MINIMUM INSTALLATION LENGTH IS 5 FT.
 4. CONCRETE TO BE 3000 PSI MIN
 5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

CITY OF WILMINGTON
TYPICAL CURB RAMP: SD 3-07



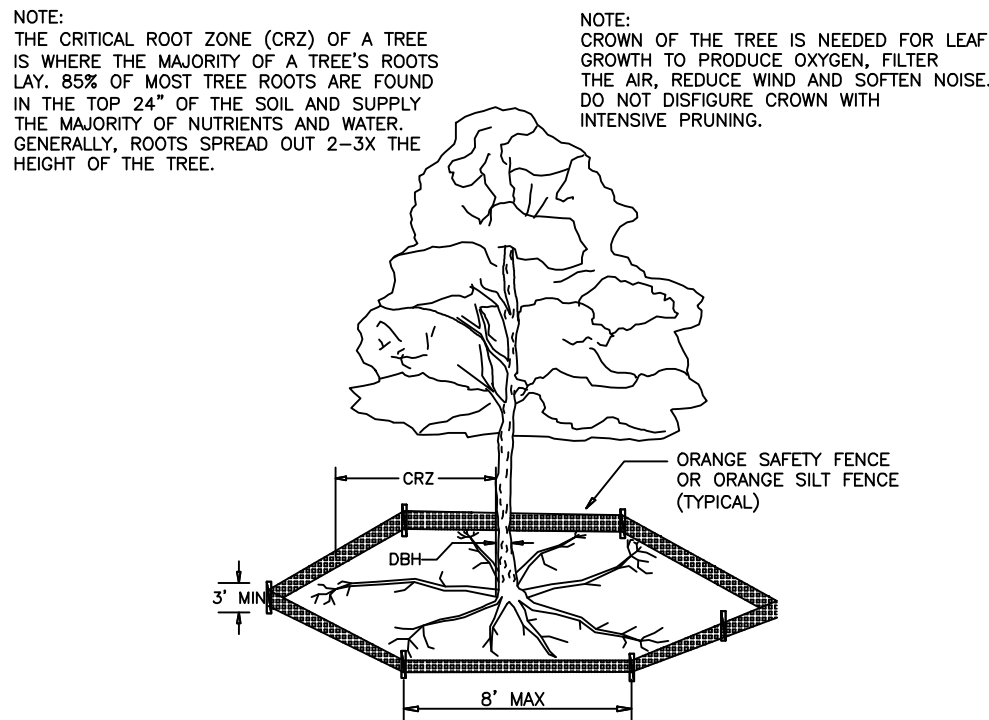
1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
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4. SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS.

- THE WATER LINE TO FIRE HYDRANTS.

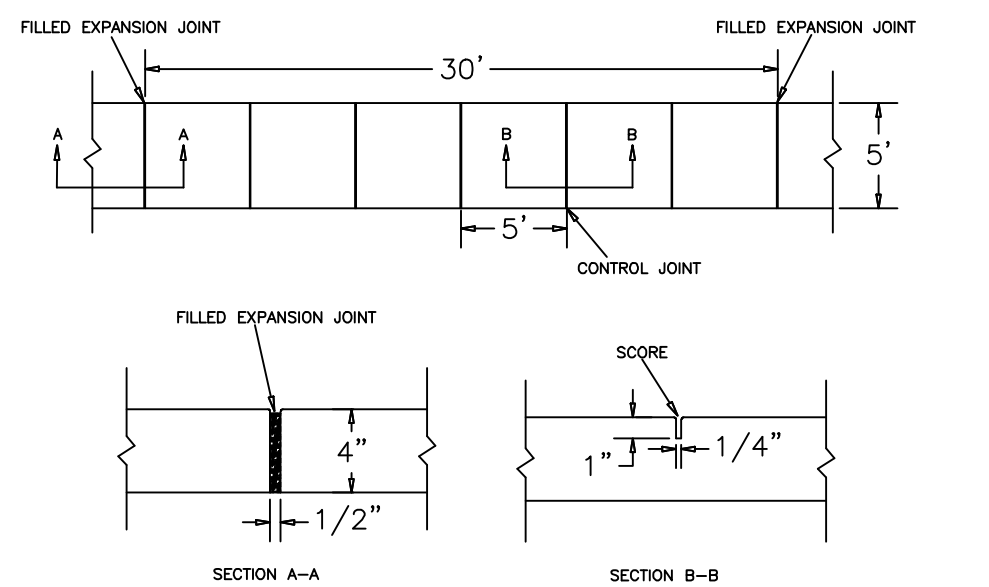
10. SANITARY SEWER, STORM, WATER, AND OTHER PERTINENT DETAILS/SPECIFICATIONS TO BE PROVIDED WITH CONSTRUCTION PLANS AND SHALL MEET OR EXCEED CITY AND CFPWA DESIGN STANDARDS

- HYDRANTS MUST BE WITHIN 150' OF THE FDC
- THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT
- LANDSCAPING MAY NOT BLOCK ANY FDC OR HYDRANT WITH A 3' CLEAR SPACE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC
- CONTRACTOR TO MAINTAIN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES DURING CONSTRUCTION
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO BUILDING CONSTRUCTION



- NOTES:**
1. IDENTIFY 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.
 2. CRZ OF TREES SHALL BE MAINTAINED AT ALL TIMES. CRZ SHALL BE IDENTIFIED BY SIGN (DO NOT REMOVE SIGN) AND SHALL BE MAINTAINED AT ALL TIMES.
 3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12% OF MULCH AND/OR SOIL SHALL BE REPLACED TO MAINTAIN CRZ. CRZ SHALL BE MAINTAINED UNTIL SOIL COMPACTION IN THIS ZONE.
 4. IF CONSTRUCTION OCCURS 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.
 5. FOR TREES LOCATED NEAR THE SIDEWALK, ANY CUTTING NEAR THE BASE OF THE TRUNK IS PROHIBITED, DO NOT COMPACT SOIL BENEATH TREES. NO PEOPLE OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAMINATIONS SHALL BE PROHIBITED. ANY DAMAGE TO THE BARK SHALL BE REPAIRED. THE CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. IF ANY MEASURES SHALL BE REQUIRED TO BE TAKEN TO PREVENT DAMAGE TO TREES, WORK ORDER AND FINE OF \$500/DAY. DISBURSANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR THE

CITY OF WILMINGTON
TYPICAL SIDEWALK SD 3-10
NTS



- NOTE:** 1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANYT SEWER CLEAN-OUTS, WATER METER, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SLOPE WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAINING A DRIVEWAY APPROX) SHALL BE CLASS # 3, 3000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS 3' X 5' X 5" PANEL.
6. *STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAY ADJUST GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAY CROSS SLOPE IS 2% . MAY LONGEST SLOPE IS 1% IN, 1% OR LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN
10. THE SLOPE OF THE EXISTING DRIVEWAY ROAD.

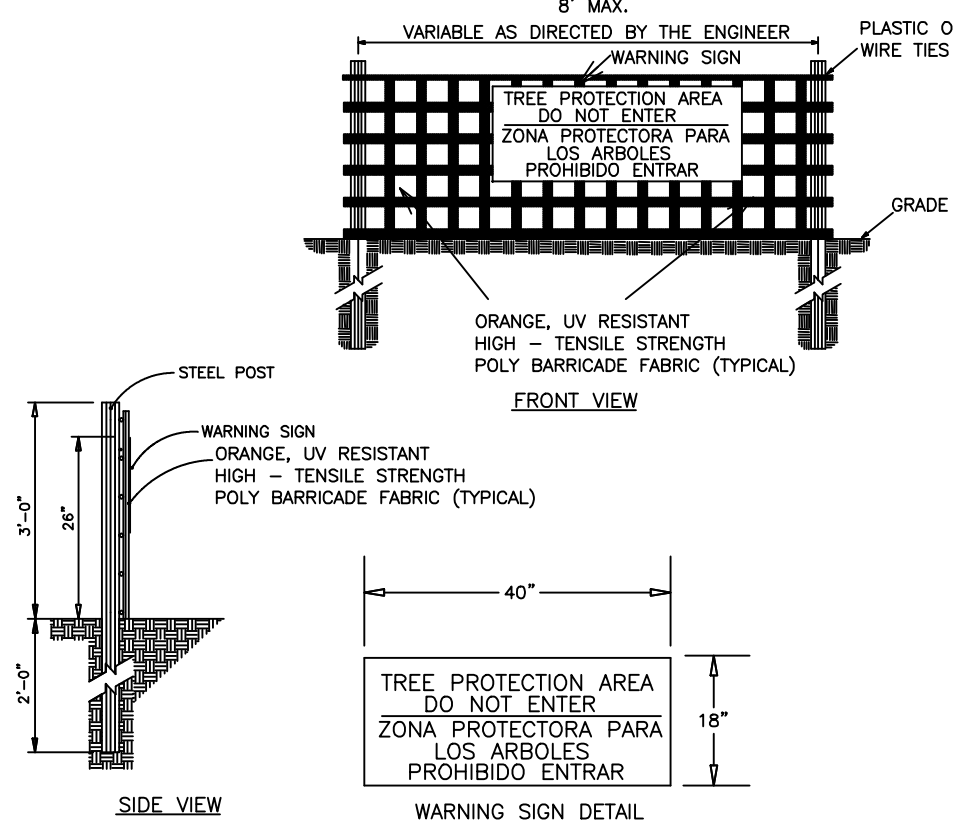
1. IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.

2. WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.

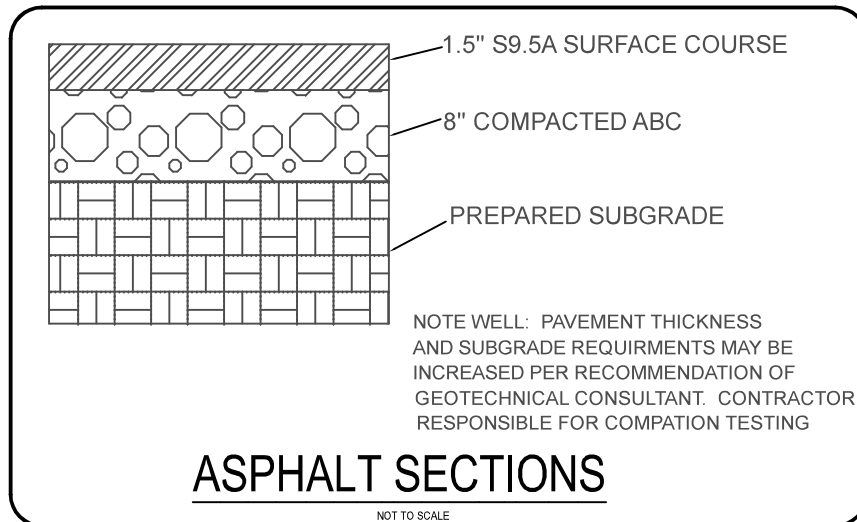
1. NO SLOPE SHALL EXCEED 1"=1' (12:1) ON THE RAMP OR SIDEWALK.
2. IN NO CASE SHALL THE WIDTH OF WHEELCHAIR RAMPS BE LESS THAN 40" (3'-4"). WIDTHS MAY EXCEED 40" IF NECESSARY.
3. USE CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
4. 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
5. CONSTRUCTION METHODS SHALL CONFORM WITH THOSE OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.

1. THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE ESTABLISHED BY BISECTING THE INTERSECTION RADI WHERE MARKED (SEE NOTE 6).
2. THE WHEEL CHAIR RAMPING SHALL BE LOCATED AT THE BEGINNING OF THE WHEEL CHAIR RAMP WILL BE TWO FEET FROM THE INSIDE PEDESTRIAN CROSSWALK LINE.
3. THE WIDTH OF THE INSIDE PEDESTRIAN CROSSWALK SHALL BE 10 FEET UNLESS A GREATER WIDTH IS REQUIRED TO ACCOMMODATE THE PEDESTRIAN.
4. STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP TO COMPLY WITH THE REQUIREMENTS COMPLIANCE WITH TRAFFIC SIGNAL, STOP SIGN, OR OTHER LEGAL REQUIREMENTS.
5. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK FROM PEDESTRIAN CROSSWALK.
6. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL ROAD ADMINISTRATION. THIS MANUAL IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT.

CITY OF WILMINGTON
TREE PROTECTION STD DETAIL: SD 15-09



- NOTES:
1. THE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 12" HIGH. MINIMUM 10' SPACING. PERMITS TO BE POSTED IN FRONT OF PROJECT.
 3. 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 WITH PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND THRUOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. APPROVAL OF SIGNAGE TO BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.



ASPHALT SECTIONS

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

Approved Construction Plan	
Name	Date
Planning _____	
Traffic _____	
Fire _____	

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

AND SHALL CONFORM TO ANY LOCAL REQUIREMENTS

- ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED
AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.

REV. NO.	REVISIONS	DATE

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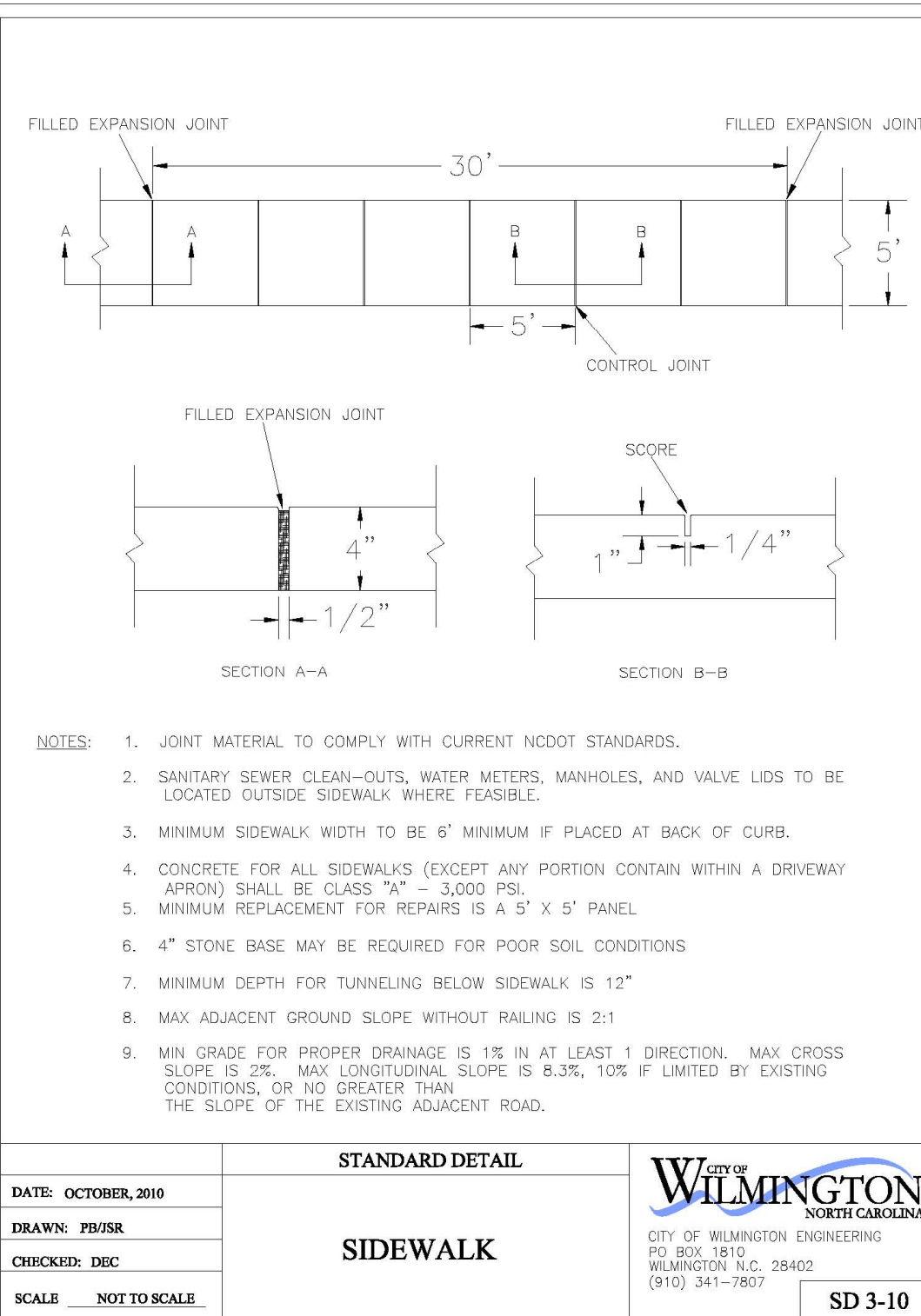
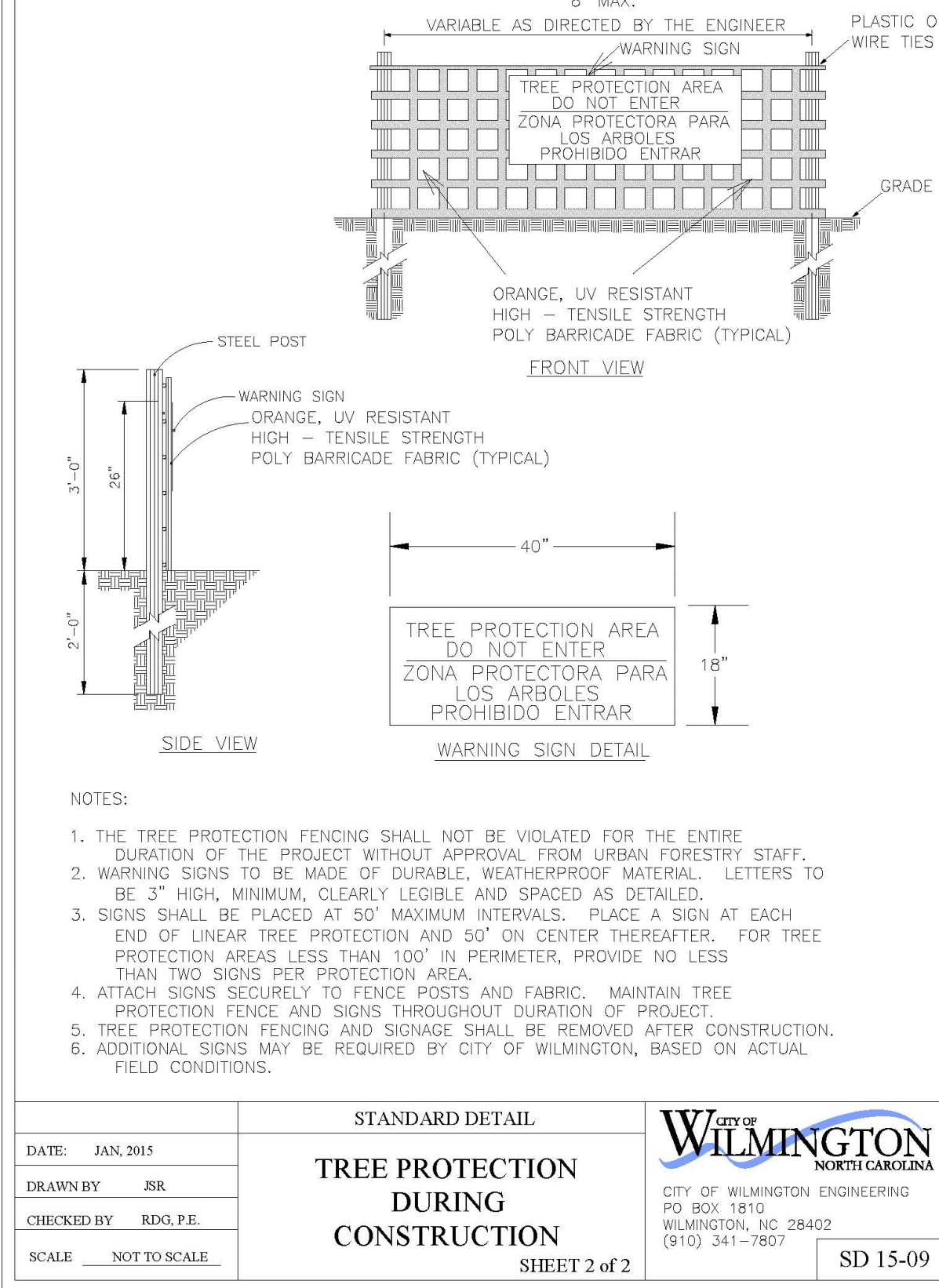
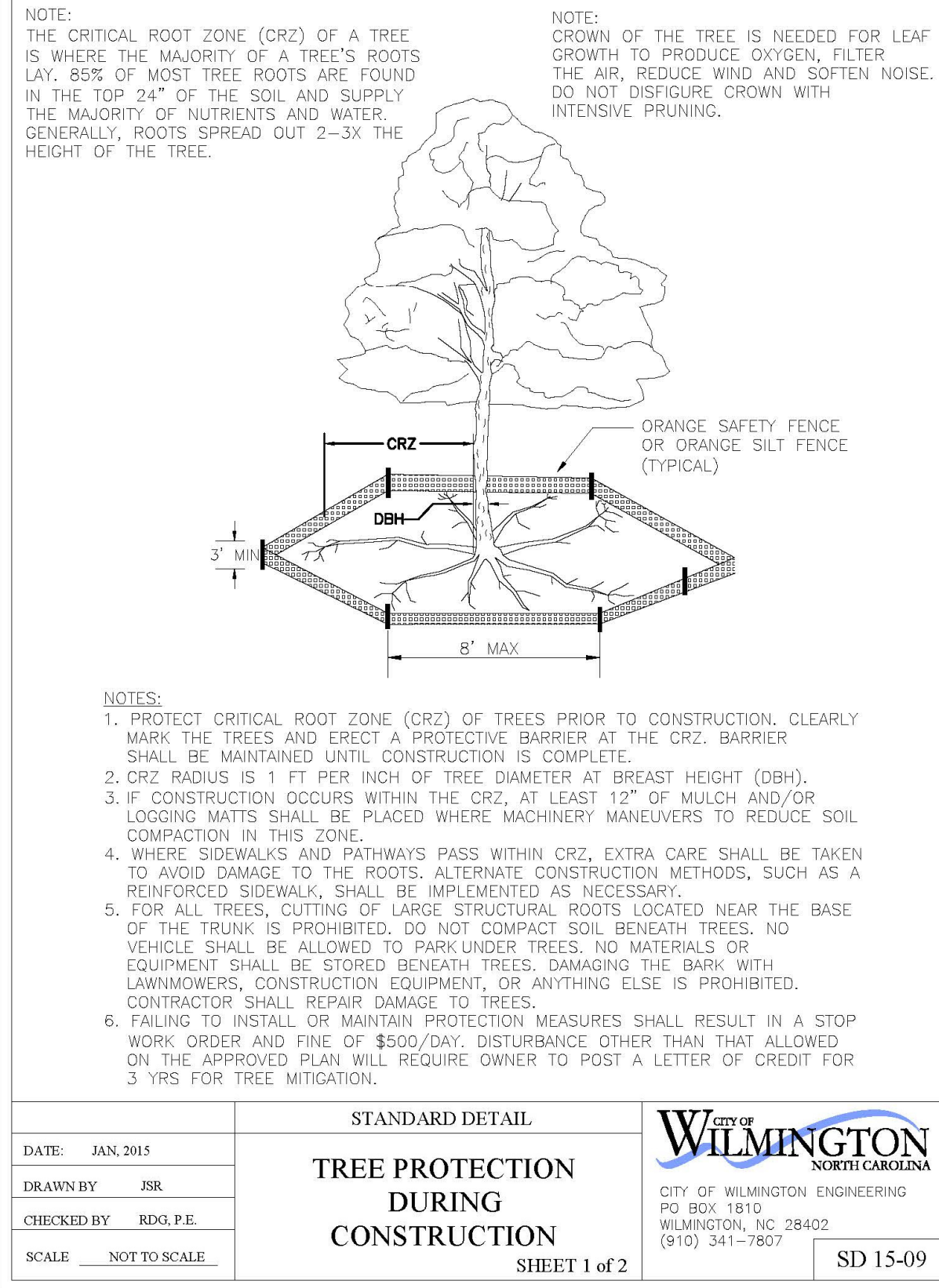
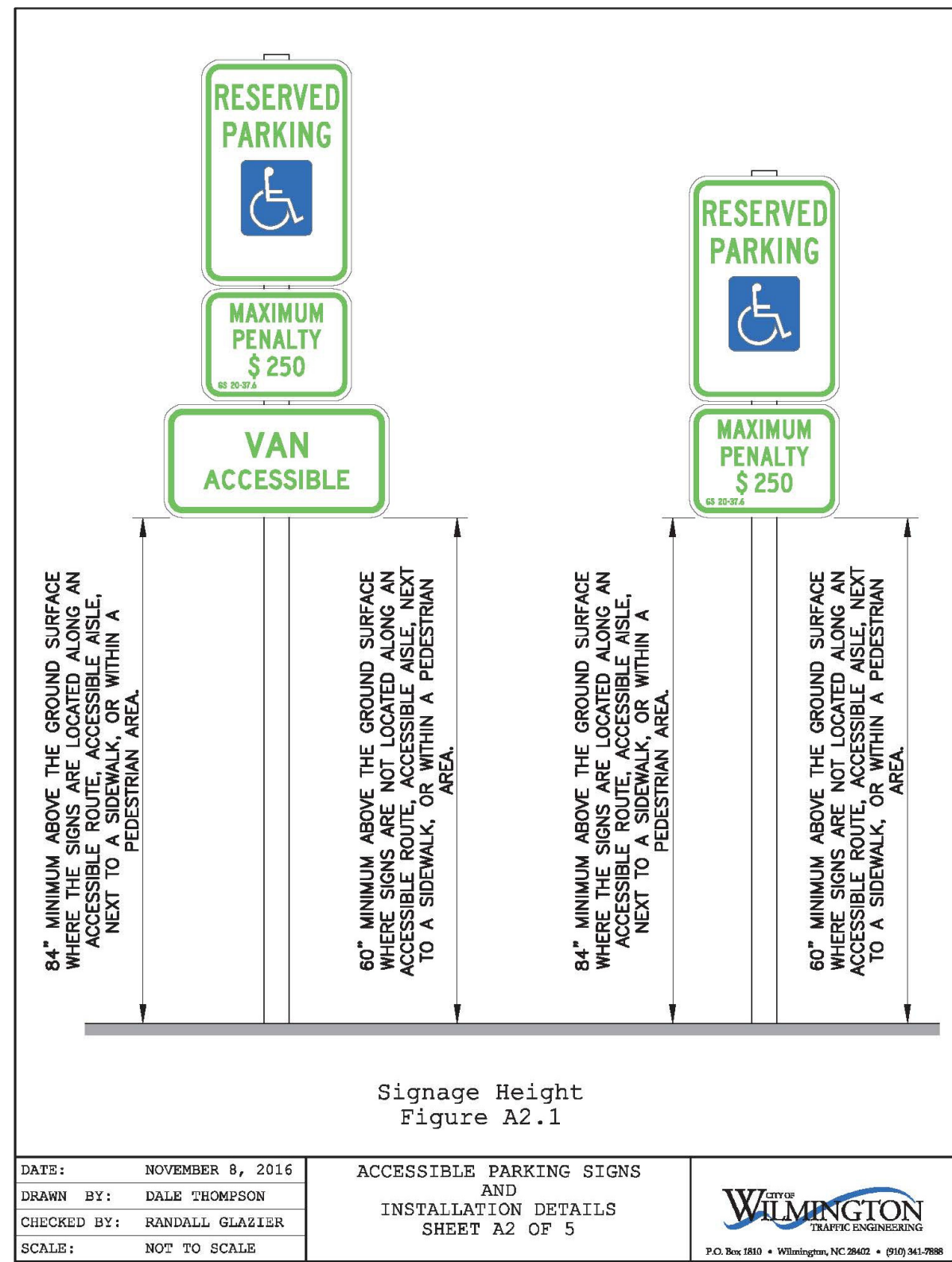
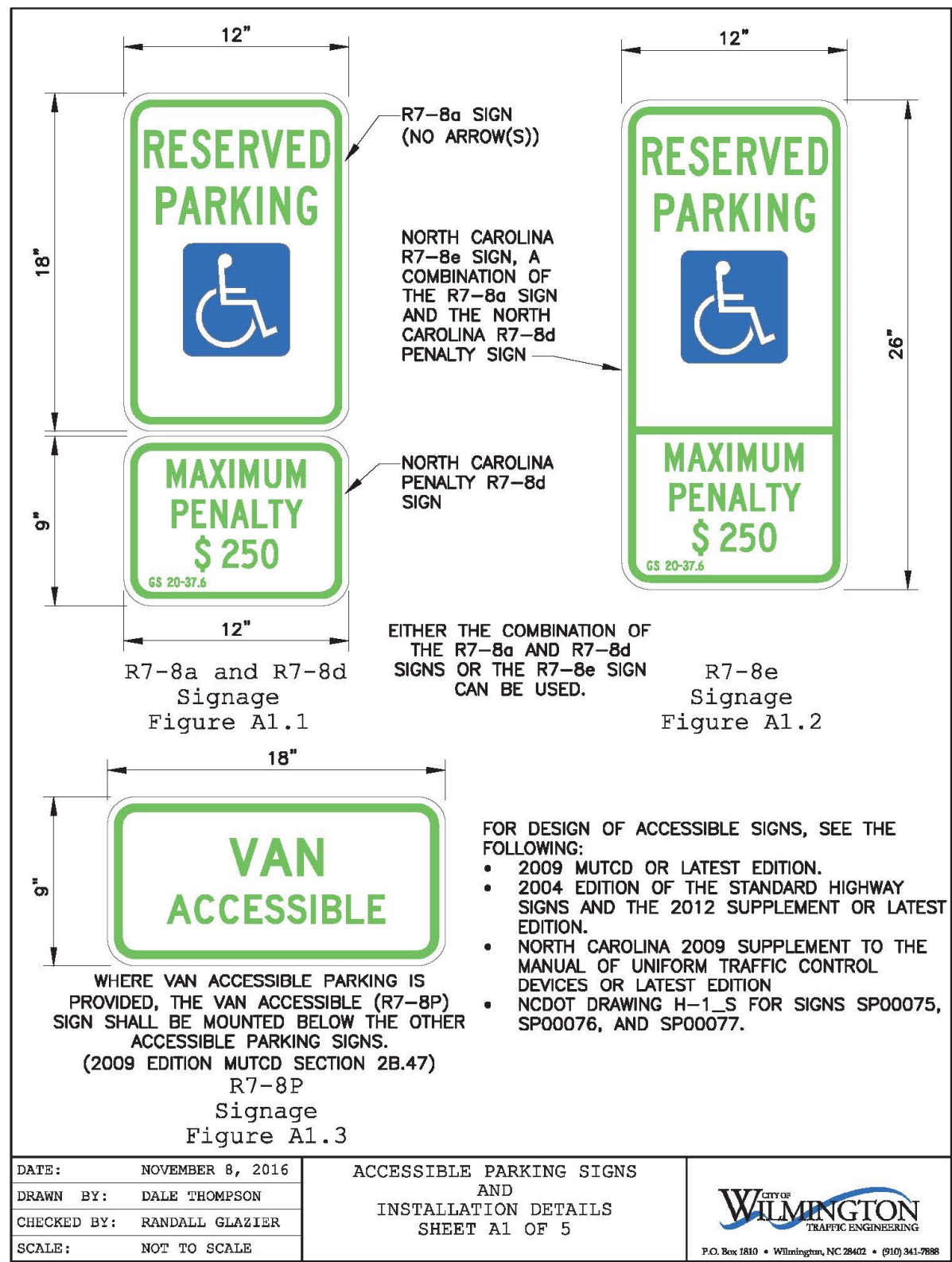
Masonboro Station Parking and Building Expansion

OWNER: ACADIA SERVICES, LLC
222 BEECH STREET
WILMINGTON, N.C. 28405

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS

1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

<div style="border: 1px solid black; height: 100px; width: 100%;"></div>	Date: <div style="border: 1px solid black; padding: 2px;">7-30-19</div>
	Scale: <div style="border: 1px solid black; padding: 2px;">HORZ.: 1"= 20'</div>
Drawn: <div style="border: 1px solid black; padding: 2px;">GW</div>	Checked: <div style="border: 1px solid black; padding: 2px;">GW</div>
Project No: <div style="border: 1px solid black; padding: 2px;">15040</div>	Sheet No: <div style="border: 1px solid black; padding: 2px;">C-2 C-7</div>



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

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

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

NOTES AND DETAILS
Masonboro Station
Parking and Building Expansion
 City of Wilmington

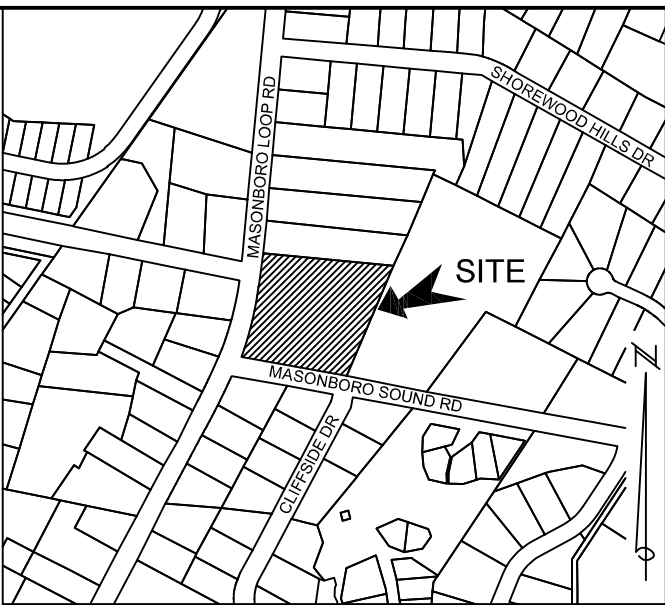
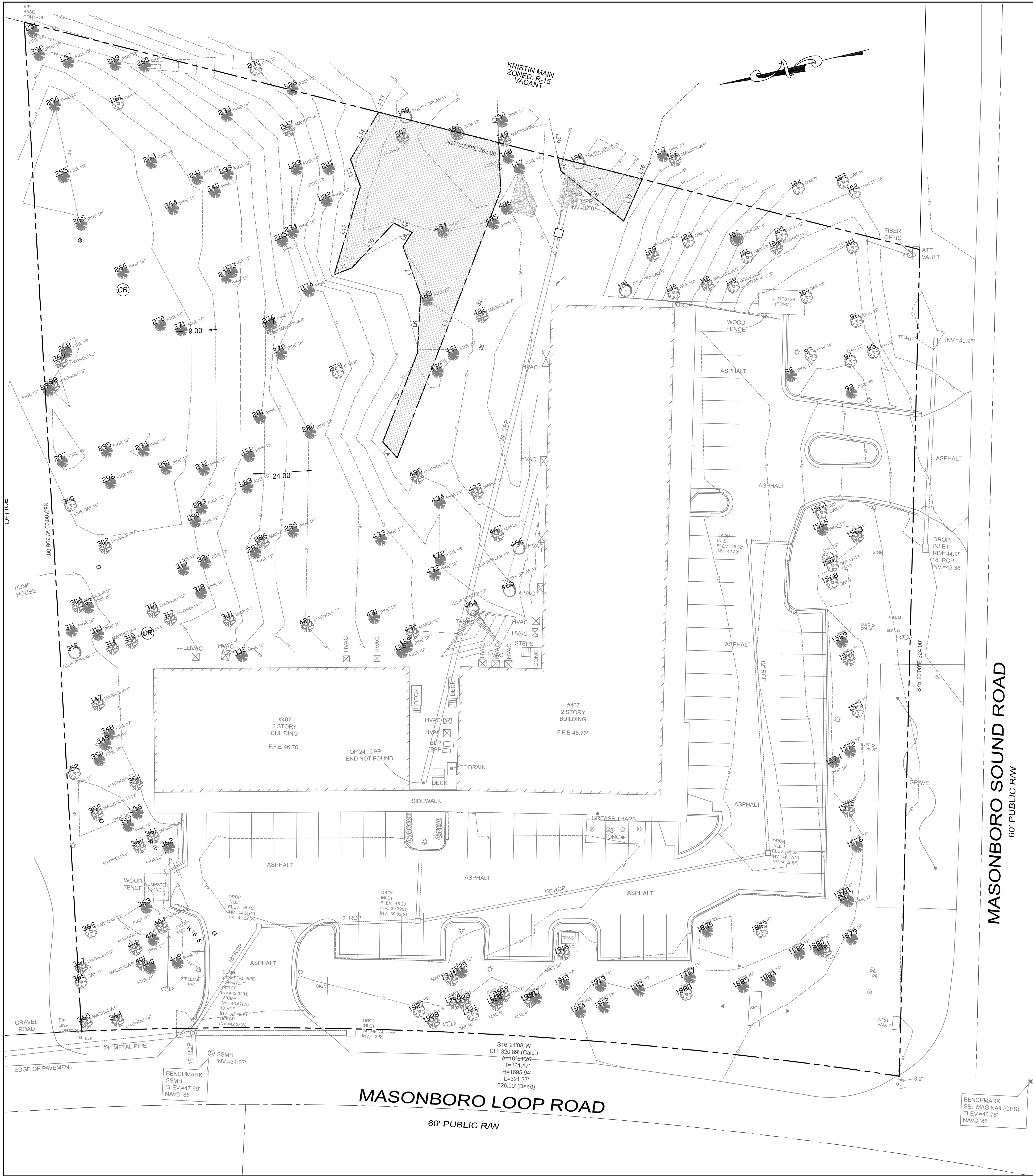
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: ACADIA SERVICES, LLC
 222 BEECH STREET
 WILMINGTON, N.C. 28405

HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORAL PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-6022
 LICENSE # C-4597

PRELIMINARY PLAN

DATE: 7-30-19
 SCALE: HORIZ: 1"= 20'
 DRAWN: GW
 CHECKED: GW
 PROJECT NO: 15040
 SHEET NO: C-3
 C-7



LOCATION MAP
NOT TO SCALE

NOTE: SURVEY OF EXISTING CONDITIONS PERFORMED BY BATEMAN CIVIL SURVEY COMPANY AND PROVIDED BY ACADIA SERVICES, LLC.

Preliminary Plan

REV. NO.	REVISIONS	DATE

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STORMWATER MANAGEMENT PLAN
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Approved Construction Plan

Name	Date
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Traffic	_____
Fire	_____

EXISTING CONDITIONS

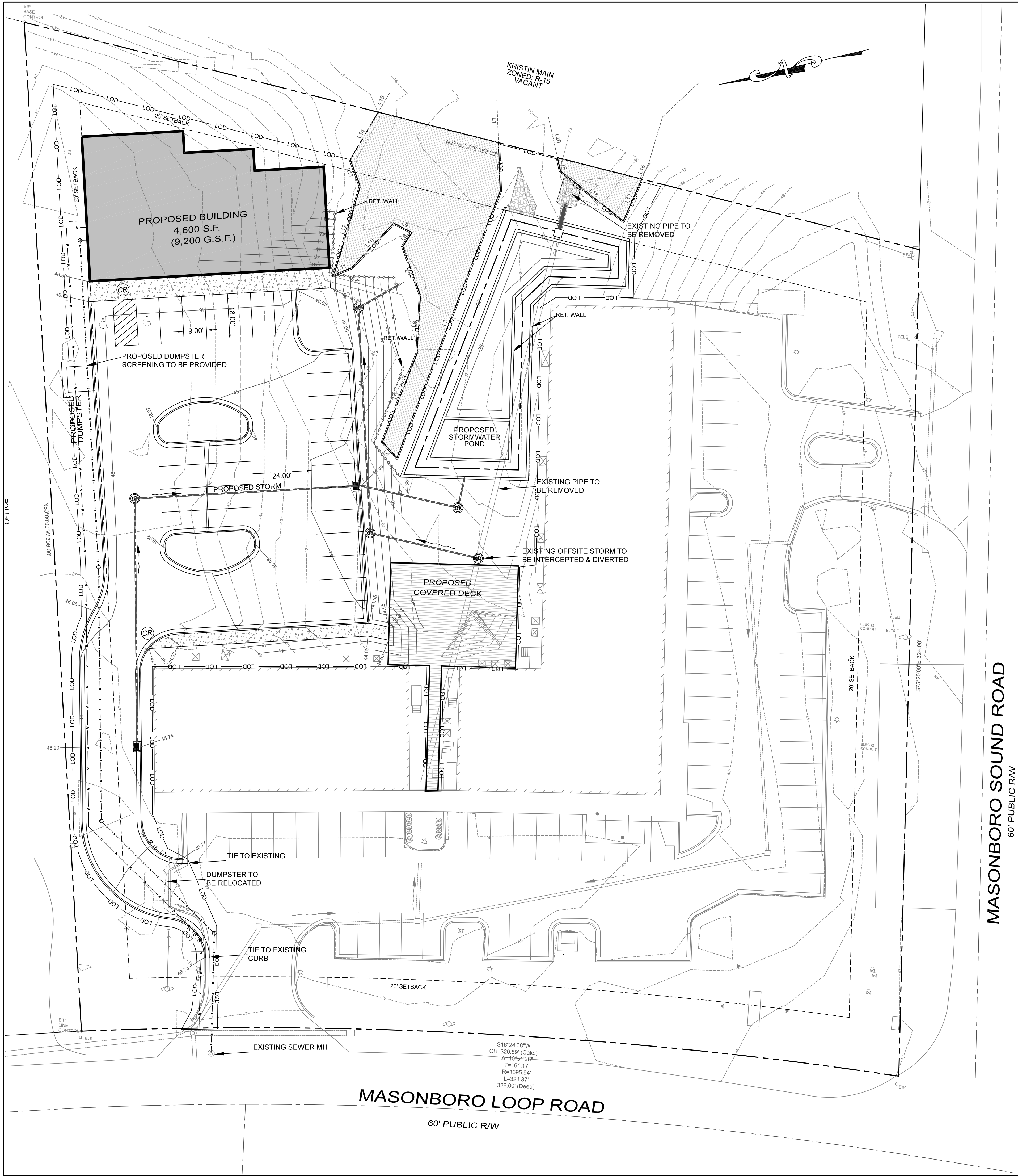
Masonboro Station Parking and Building Expansion

City of Wilmington

OWNER: ACADIA SERVICES, LLC
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WILMINGTON, N.C. 28403
PHONE: (910) 345-9002
LICENSE # C-0597

Date: 7-30-19
Scale: HORIZ.: 1"= 20'
Drawn: GW
Checked: GW
Project No: 15040
Sheet No: C-4
C-7



SITE INVENTORY TABLE:

PROJECT NAME: MASONBORO STATION EXPANSION

STREET ADDRESS: 4039 MASONBORO LOOP RD.
WILMINGTON, NC 28405

TAX PARCEL IDENTIFICATION NUMBERS:
R07200-002-002-000
DB 6084 PG 2184
ADDRESS: 4039 MASONBORO LOOP RD.

ZONING: CB-COMMUNITY BUSINESS

CAMA LAND CLASSIFICATION: URBAN
HISTORICAL AND ARCHAEOLOGICAL SITES: NONE EXIST
WETLANDS: AS SHOWN
LAND COVER: PARTIALLY DEVELOPED.

DIMENSIONAL STANDARDS:

- MINIMUM LOT AREA: 0.5 ACRE
- MAXIMUM LOT COVERAGE: 30%
- MINIMUM LOT WIDTH: 80'
- MINIMUM FRONT SETBACK: 20'
- MINIMUM REAR SETBACK: 25'
- MINIMUM INTERIOR SIDE SETBACK: 20'
- MINIMUM CORNER LOT SETBACK: 20'
- HEIGHT: 45'

TOTAL ACREAGE = 2.72 ACRES

EXISTING BUILDINGS: BUILDING 1: 4,841 SF
BUILDING 2: 10,769 SF

PROPOSED BUILDINGS: BUILDING 3: 9,200 SF

PARKING REQUIREMENTS: 1 SPACE/400 SF=24 SPACES
28 SPACES PROVIDED

SOILS DATA:

- USCS: SM
- SHWT IS BETWEEN 4" AND 16"

DISTURBED AREA: 0.93 ACRES

SEWER DEMAND:

- AVERAGE DAILY DEMAND 1050 GPD

IMPERVIOUS SURFACE AREAS	
EXISTING	AREA (SF)
TOTAL LOT AREA	118690
BUILDING 1	4841
BUILDING 2	10769
PARKING AND DRIVES	24139
SIDEWALK	3481
DUMPSTER PADS	275
TOTAL EXISTING	43505
EXISTING % IMPERVIOUS	37%
PROPOSED	
BUILDING	4600
PARKING AND DRIVES	15898
SIDEWALKS	1215
COVERED DECK	2000
TOTAL PROPOSED	23713
EXISTING & PROPOSED TOTAL	67218



- ADDITIONAL ADA NOTES:**
1. REFER TO 2018 NCDOT ROADWAY STANDARD DRAWINGS NUMBER 848.05 - 848.06 FOR RAMP DESIGN AND DETAILS.
 2. ALL RAMPS, RAMPED PARKING, AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE LATEST ADA GUIDELINES.
 3. RUNNING SLOPES ALONG AN ACCESSIBLE ROUTE EXCEEDING 1:20 SHALL BE CONSIDERED A RAMP.
 4. 8.33% (12:1) MAX RAMP SLOPE
 5. MAXIMUM CROSS SLOPE ALLOWED ALONG ACCESSIBLE ROUTES: 2.00%
 6. ALL CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
 7. CONTRACTOR TO ENSURE SLOPES IN HANDICAP PARKING STALLS AND ACCESS ISLES DO NOT TO EXCEED 2% IN ANY DIRECTION.

- ADDITIONAL STORM WATER NOTES:**
1. ALL STORM WATER RUNOFF FROM BUILT UPON AREAS (I.E. IMPERVIOUS SURFACES AND ROOF DRAINAGE) TO BE DIRECTED TO THE STORM SEWER COLLECTION SYSTEM (I.E. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING OR LANDSCAPE INLETS.
 2. CONTRACTOR TO ENSURE THAT STREET PAVEMENT AND CURBING IS PLACED TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES.
 3. FOR STORM PIPE MATERIAL AND INSTALLATION SEE DETAILS AND NCDOT STANDARD DRAWINGS 300.1 SHEETS 1-3
 4. ROOF DRAINS SHALL BE SIZED ACCORDING TO THE 2018 INTERNATIONAL PLUMBING CODE AND ALL AND SHALL CONFORM TO ANY LOCAL REQUIREMENTS
 5. ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.

Preliminary Plan

REV. NO.	REVISIONS	DATE

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SITE PLAN

Masonboro Station

Parking and Building Expansion

City of Wilmington

NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: ACADIA SERVICES, LLC
222 BEECH STREET
WILMINGTON, N.C. 28405

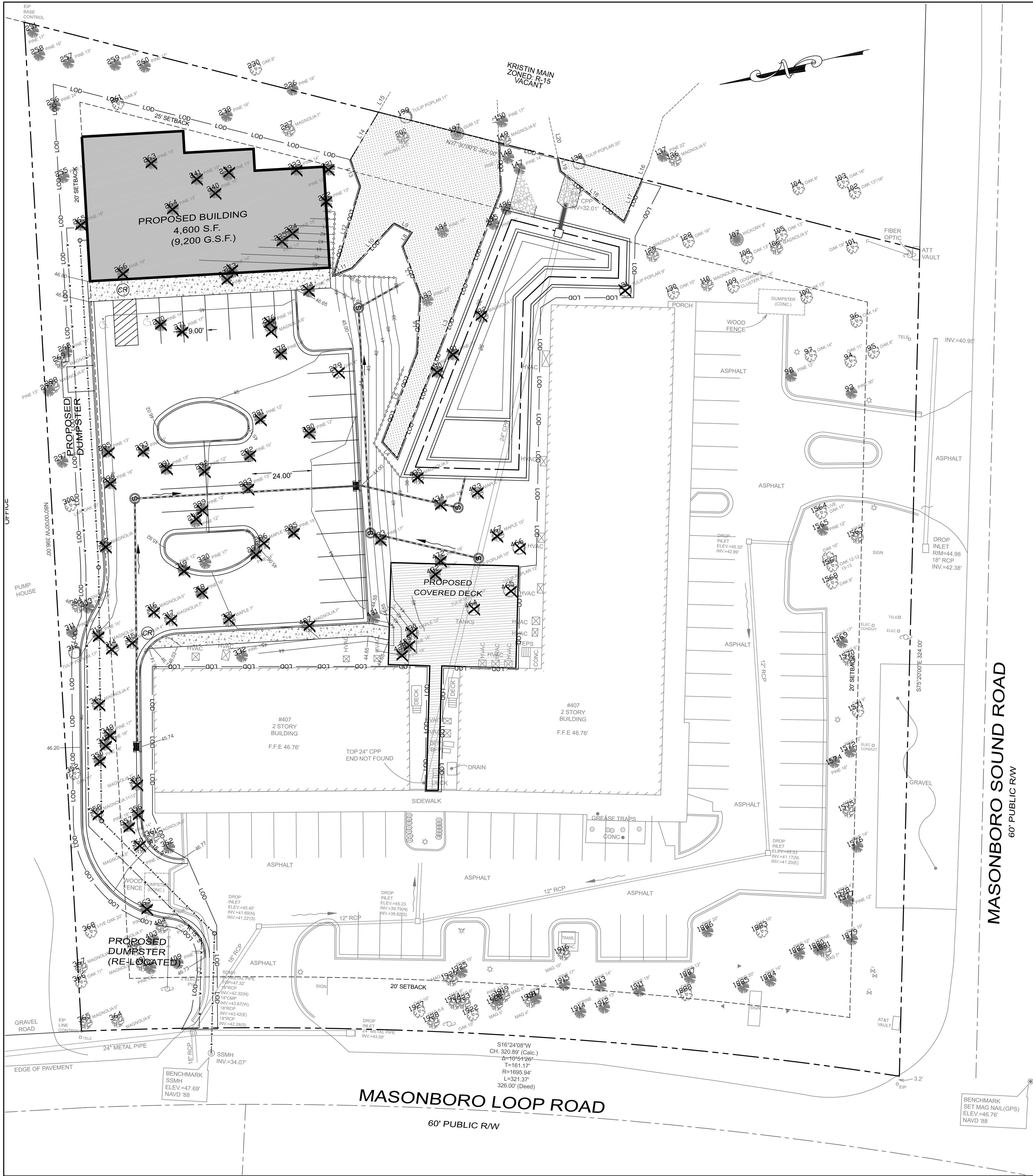
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 345-9002
LICENSE # C-0597

Date: 05-28-19
Scale: HORIZ: 1"= 20'
Drawn: GW
Checked: GW
Project No: 15040
Sheet No: C-5
C-7

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

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

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



TREE INVENTORY							
POINT NO.	DESCRIPTION	POINT NO.	DESCRIPTION	POINT NO.	DESCRIPTION	POINT NO.	DESCRIPTION
93	30PINE	223	14PINE	296	16PINE	432	14PINE
94	11OAK	224	15PINE	297	15PINE	433	17PINE
95	8OAK	225	13PINE	298	8MAG	434	24PINE
96	14OAK	227	7MAG	299	13PINE	435	9MAG
97	14OAK	228	15PINE	300	10LIVE OAK	464	10TULIP POPLAR
98	12PINE	229	10OAK	302	7MAG	465	12TULIP POPLAR
100	13OAK	235	14MAPLE	303	20PINE	466	10TULIP POPLAR
101	19OAK	238	16PINE	304	8MAG	467	15MAPLE
239	13PINE	311	18PINE	472	16PINE	481	20PINE
240	15PINE	312	17TULIP POPLAR	473	10MAPLE	482	7MAG
241	13PINE	313	15PINE	480	18PINE	483	23PINE
105	13OAK	251	17PINE W/CHOPS	314	4MAG	484	17PINE
106	5MAG	255	18PINE	315	4MAG	485	18PINE
107	9HICKORY	256	24PINE	316	5MAG	486	18PINE
108	13OAK	257	13PINE	317	7MAG	1563	6MAG
109	4USDOG	258	16PINE	318	16PINE	1564	17LIVE OAK
110	6MAG	259	12PINE	319	12PINE	1565	12PINE
128	16OAK	260	17PINE	320	17PINE	1566	10OAK
129	4MAG	261	9OAK	321	7MAPLE	1567	9OAK
130	10OAK	263	13PINE	332	18PINE	1568	12/12/13/13OAK
131	9TULIP POPLAR	264	13PINE	347	4MAG	1569	17PINE
132	10OAK	265	16PINE	348	17PINE	1570	6MAG
133	11OAK	266	15PINE	349	18PINE	1571	9OAK
134	11OAK	268	13PINE	350	16PINE	1572	12PINE
135	5MAG	269	5MAG	352	11OAK	1573	LP
138	25TULIP POPLAR	270	14PINE	354	7MAG	1574	18PINE
147	14PINE	271	17PINE	356	18PINE	1575	6MAG
148	17PINE	272	12PINE	357	14PINE	1576	14PINE
151	19PINE	273	14PINE	358	11/12MAG	1577	12PINE
167	28TULIP POPLAR	274	17PINE	360	8MAG	1578	4MAG
168	7MAG	276	15PINE	361	9MAG	1879	19PINE
169	10MAG	277	6MAG	362	25PINE	1880	18PINE
170	12OAK	278	14PINE	363	17PINE	1881	7MAG
172	10MAPLE	279	9OAK	364	6MAG	1882	12PINE
173	11GUM	280	12PINE	365	5MAG	1883	10OAK
174	13MAPLE	281	12PINE	366	11OAK	1884	14PINE
187	8TULIP POPLAR	282	15PINE	367	5MAG	1885	20PINE
190	18TULIP POPLAR	283	13PINE	368	20LIVE OAK	1886	20PINE
191	5MAG	285	15PINE	400	24PINE	1887	13PINE
192	25TULIP POPLAR	286	9MAPLE	401	9MAG	1888	13OAK
197	12GUM	287	14PINE	402	7MAG	1911	19PINE
200	6MAG	289	12PINE	403	17PINE	1912	13PINE
221	12PINE	290	12PINE	404	9MAG	1913	14PINE
222	13PINE	291	13PINE	409	12PINE	1914	18PINE
		292	12PINE	427	7MAG	1915	17PINE
		293	13PINE	428	18PINE	1916	10MAG
		295	13PINE	429	16PINE		
				430	12MAPLE		
				431	12PINE		

TOTAL REGULATED TREES: 186
TREES TO BE REMOVED: 71

NOTES:
1. THIS TRACT IS LOCATED IN ZONE "X1" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 3720314500 J DATED 4/3/05.
2. TOTAL SITE AREA = 2.72 AC ±

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

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

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

Preliminary Plan

REV. NO.	REVISIONS	DATE

TREE REMOVAL PLAN
Masonboro Station
Parking and Building Expansion
City of Wilmington

OWNER: ACADIA SERVICES, LLC
222 BEECH STREET
WILMINGTON, N.C. 28405

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 345-9002
LICENSE # C-0597

PRELIMINARY PLAN

DATE: 7-30-19
Scale: HORIZ. 1"= 20'
Drawn: GW
Checked: GW
Project No: 15040
Sheet No: C-7
C-7