

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

Approved Construction Plan
 Date: 10/19/20
 # 2020031
 SWP #: 2020031
 PO, ES, BM, MB, CW

NOTE: 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 DISFIGURE CROWN WITH INTENSIVE PRUNING.

CRZ
DBH
8" MAX
ORANGE SAFETY FENCE OR ORANGE SILT FENCE (TYPICAL)

DATE: JAN, 2015
 DRAWN BY: JSR
 CHECKED BY: REG, P.E.
 SCALE: NOT TO SCALE

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

SD 15-09

8" MAX.
 VARIABLE AS DIRECTED BY THE ENGINEER
 PLASTIC OR WIRE TIES
 TREE PROTECTION AREA DO NOT ENTER
 ZONA PROTECTORA PARA LOS ARBOLES PROHIBIDO ENTRAR
 GRADE
 ORANGE, UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRIAGE FABRIC (TYPICAL)
 FRONT VIEW

WARNING SIGN
 ORANGE, UV RESISTANT HIGH - TENSILE STRENGTH POLY BARRIAGE FABRIC (TYPICAL)
 STEEL POST
 SIDE VIEW

40"
 18"
 TREE PROTECTION AREA DO NOT ENTER
 ZONA PROTECTORA PARA LOS ARBOLES PROHIBIDO ENTRAR
 WARNING SIGN DETAIL

DATE: JAN, 2015
 DRAWN BY: JSR
 CHECKED BY: REG, P.E.
 SCALE: NOT TO SCALE

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
 SHEET 2 of 2

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SD 15-09

MITIGATION REQUIRED FOR REMOVAL OF SIGNIFICANT TREES

| QTY | SIZE | TYPE | % MITIGATION | REPLACEMENT TREE QTY |
|--------------------------------|------|---------------|--------------|----------------------|
| 1 | 32" | LOBLOLLY PINE | 50% | 10.67 |
| TOTAL REPLACEMENT TREES | | | | 11 |

CREDITS FOR PRESERVED TREES

| QTY | SIZE | TYPE | DBH | TOTAL DBH |
|--|------|------------|-----|-----------|
| 1 | 15" | MAGNOLIA | 15 | 15 |
| 1 | 16" | MAGNOLIA | 16 | 16 |
| 1 | 19" | MAGNOLIA | 19 | 19 |
| 17 | 2" | ARBORVITAE | 2 | 34 |
| TOTAL CREDITS FOR PRESERVED TREES | | | | 14 |

SITE DATA

PARCEL ID: R05714-001-009-000, R05714-001-010-000, R05714-001-010-001

CURRENT ZONING: CB(CD)

CAMA LAND USE CLASSIFICATION: CONSERVATION AREA/ WATERSHED RESOURCE PROTECTION

PROJECT ADDRESS: 115, 123 & 125 CANAL ST WILMINGTON, NC 28405

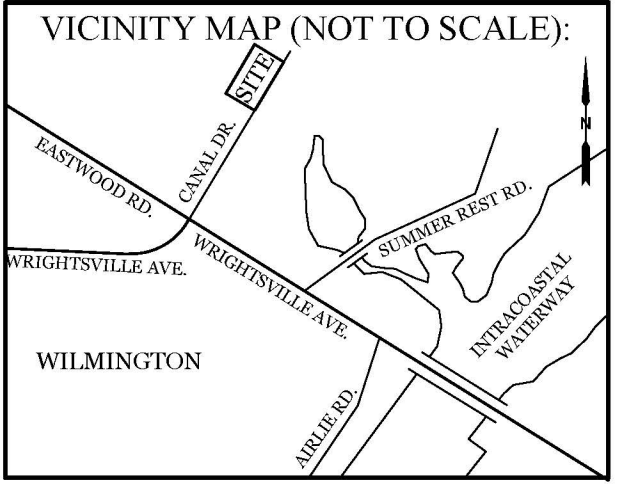
CURRENT OWNER: WILLSTHRIILL LLC PO BOX 644 WRIGHTSVILLE BEACH, NC 28480

TOTAL ACREAGE IN PROJECT BOUNDARY: 55,486 SF (±1.27 ac.)

EXISTING ONSITE IMPERVIOUS AREAS: (ALL IS BEING REMOVED)
 BUILDINGS: 3,875 S.F.
 GRAVEL: 1,940 S.F.
 CONCRETE: 515 S.F.
 TOTAL: 6,330 S.F. (11.4%)

SOIL TYPE: Be (Baymeade fine sand)
 (Per the USDA websoil survey map)

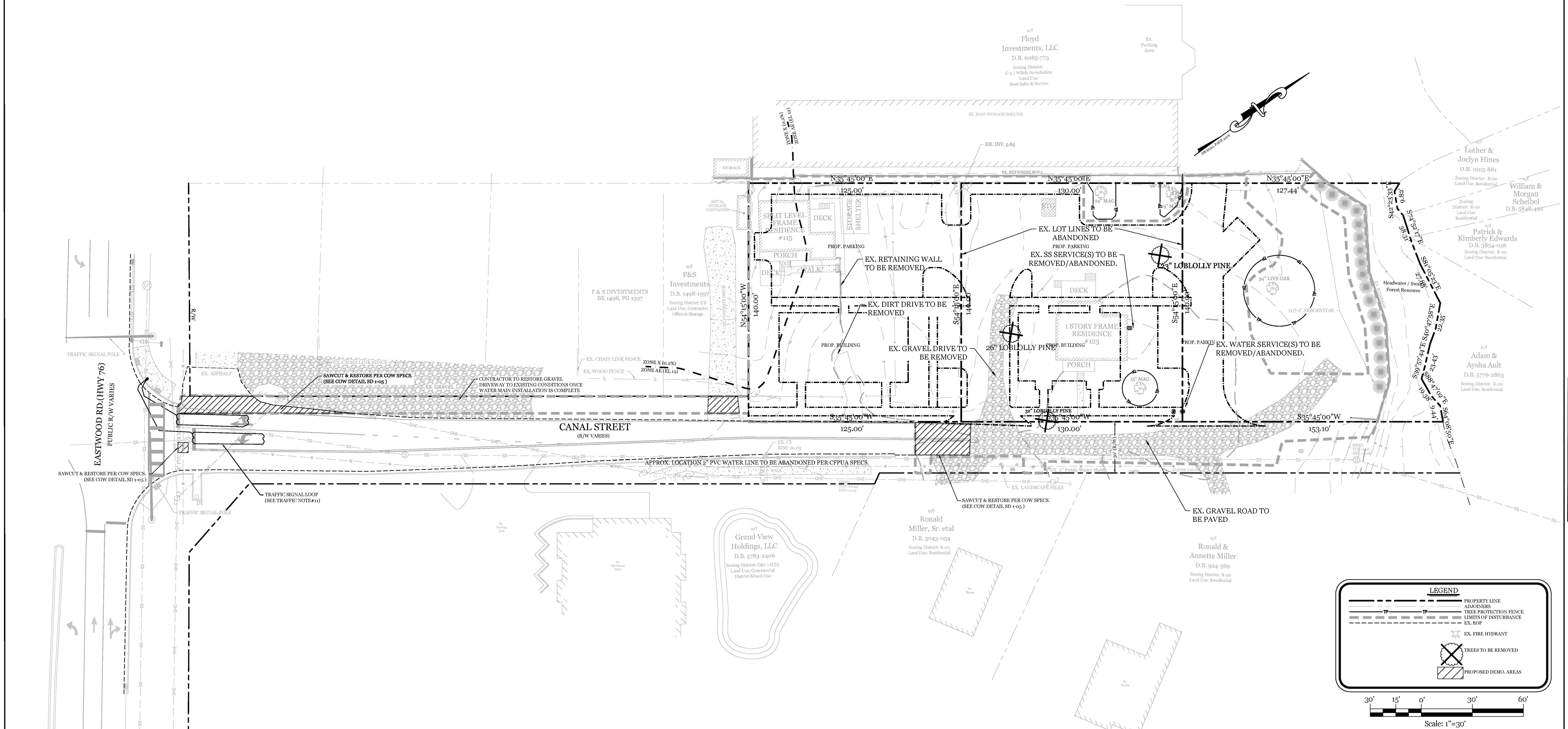
- NOTES:
- EXISTING SURVEY DATA PROVIDED BY C.I. GLOVER COMPANY, NC PLS # C-2855.
 - NO WETLANDS EXIST WITHIN THE PROPOSED DEVELOPMENT AREA.
 - THIS PROPERTY IS NOT AFFECTED BY AN AEC.
 - NO CONSERVATION RESOURCES EXIST ON SITE.
 - THIS PROPERTY IS NOT AFFECTED BY ANY HISTORIC OR ARCHAEOLOGICAL SITES.
 - PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, A CONSTRUCTION ENTRANCE AND SILT FENCING SHALL BE INSTALLED.
 - PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
 - NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
 - TREE PROTECTION SIGNAGE SHALL BE ADDED ALONG THE LIMITS OF DISTURBANCE ADJACENT TO TREES EVERY 100' TO PROTECT TREES ADJACENT TO THE CONSTRUCTION SITE.



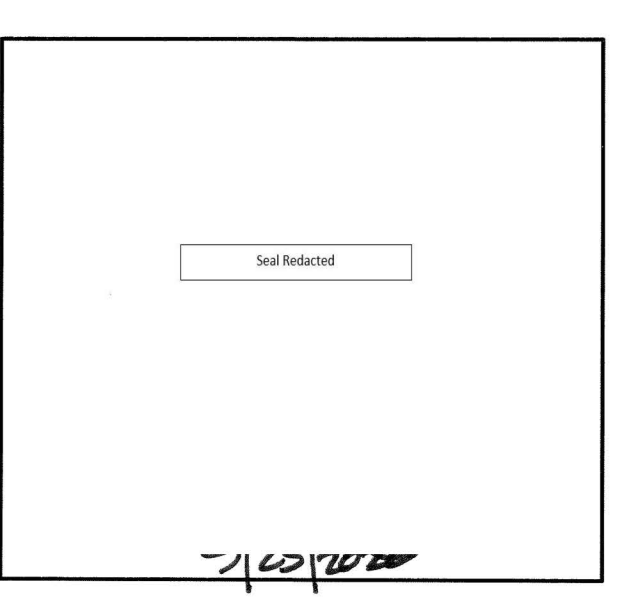
REVISIONS

| NO. | DATE | DESCRIPTION |
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INTRACOASTAL ENGINEERING, PLLC
 5725 Oleander Dr. Unit E-7
 Wilmington, North Carolina 28403
 Phone: 910.859.8983
 Email: Charlie@intracoastalengineering.com
 License Number: P-0662



EXISTING CONDITIONS / TREE REMOVAL & PROTECTION PLAN FOR ATLANTIC MARINE CANAL ST. CITY OF WILMINGTON NEW HANOVER COUNTY, NC

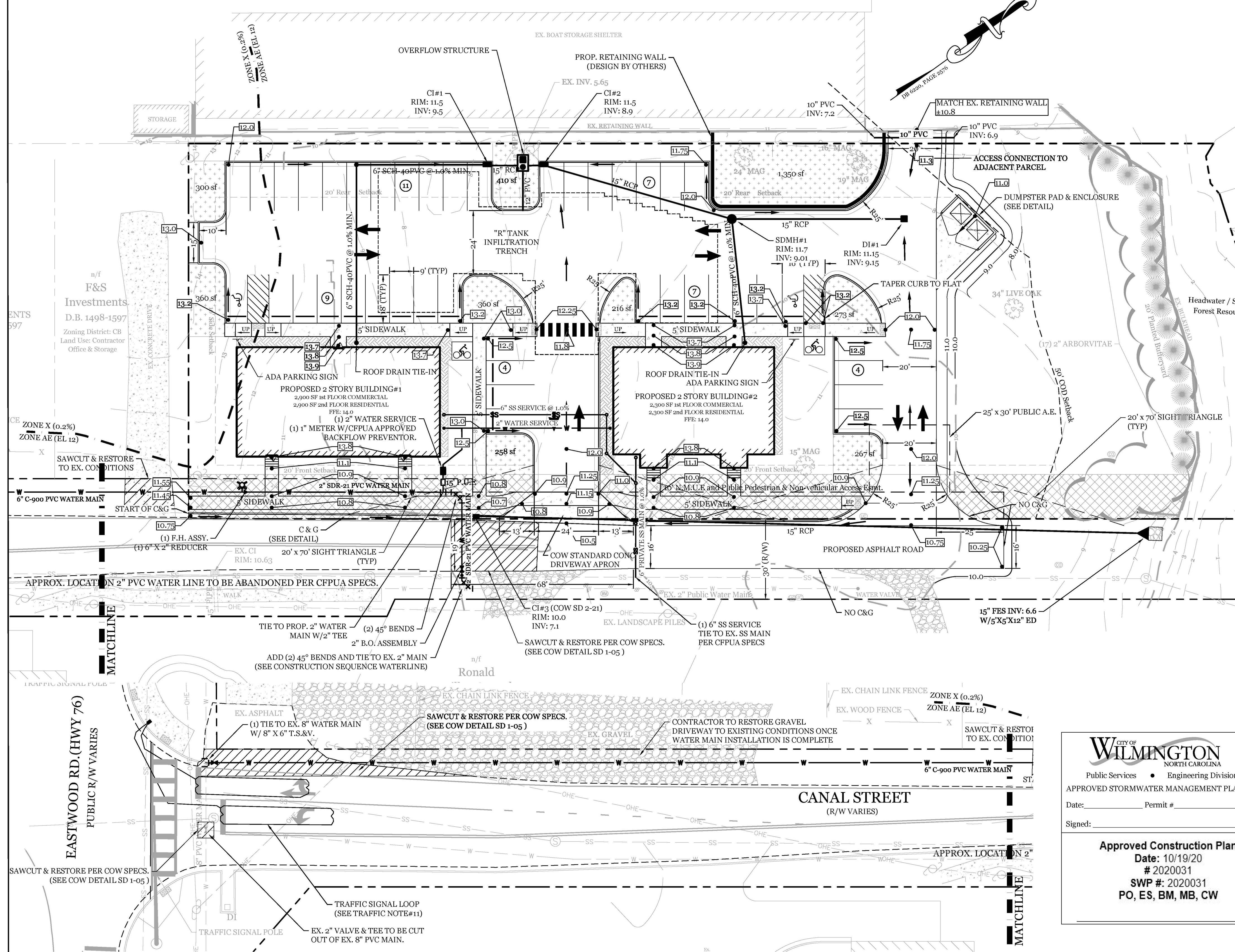


CLIENT INFORMATION:
 Floyd Investments, LLC
 PO Box 659
 Wrightsville Beach, NC 28480
 910-256-9911

| | | | |
|-----------------|----------|-------------|-----------|
| DRAWN: | JAE | SHEET SIZE: | 24x36 |
| CHECKED: | CDC | DATE: | 9/25/2020 |
| APPROVED: | CDC | SCALE: | 1" = 30' |
| PROJECT NUMBER: | 2019-019 | | |

DRAWING NUMBER: **C-0**
 1 OF 7

Zoning District: C-5 / W/beh Jurisdiction
Land Use: Boat Sales & Service



SITE DATA

PARCEL ID: R05714-001-009-000, R05714-001-010-000, R05714-001-010-001

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CAMA LAND USE CLASSIFICATION: CONSERVATION AREA/ WATERSHED RESOURCE PROTECTION

PROJECT ADDRESS: 115, 123 & 125 CANAL ST WILMINGTON, NC 28405

CURRENT OWNER: WILLSTHILL LLC PO BOX 644 WRIGHTSVILLE BEACH, NC 28480

TOTAL ACREAGE IN PROJECT BOUNDARY: 55,486 SF (±1.27 ac.)

TOTAL DISTURBED AREA: ±1.25 ACRES

NUMBER OF BUILDINGS: 2

PROPOSED USE: MIXED USE

TOTAL BUILDING SIZE IN GFA: BUILDING#1 5,800 S.F. GFA
BUILDING#2 4,600 S.F. GFA
TOTAL: 10,400 S.F. GFA

BUILDING HEIGHT: ±25' / 2 STORY (35' MAX. ALLOWED)

BUILDING SETBACKS:
FRONT: REQUIRED= 20' PROPOSED= 24'
SIDE: REQUIRED= 30' COD PROPOSED= 21' L/98'R
REAR: REQUIRED= 20' PROPOSED= 7'

CALCULATION FOR BUILDING COVERAGE:
PROPOSED COVERAGE: 5,500 S.F. ÷ 55,486 S.F. = 1.0%

PROPOSED ON-SITE IMPERVIOUS AREAS:
BUILDING ROOF: 5,500 S.F.
CONCRETE SIDEWALK, C&G, ETC.: 3,600 S.F.
ASPHALT DRIVES: 16,985 S.F.
TOTAL: 26,085 S.F. (47.0%)

PROPOSED OFF-SITE IMPERVIOUS AREAS:
ASPHALT ROAD: 3,313 S.F.
CONCRETE DRIVE APRONS/SIDEWALK: 1,536 S.F.
TOTAL: 4,849 S.F.

PARKING REQUIRED (5,200 S.F. PROFESSIONAL OFFICE & (6) TWO BEDROOM APARTMENTS):
MIN: 2.0 Spaces/du + 1/300 sq.ft. Commercial = 29 SPACES
MAX: 2.5 Spaces/du + 1/200 sq.ft. Commercial = 41 SPACES

PARKING PROVIDED: 42 SPACES (2 H.C.)

BICYCLE PARKING REQUIRED: (MIN. 5 PER 25-125 VEHICLE SPACES)
REQUIRED: 5 SPACES
PROVIDED: 10 SPACES

FOUNDATION PLANTINGS:
BUILDING #1: 112.5 LF X 25' FACADE X 12% REQUIRED: 338 S.F.
PROVIDED: 425 S.F.
BUILDING #2: 140 LF X 25' FACADE X 12% REQUIRED: 420 S.F.
PROVIDED: 550 S.F.

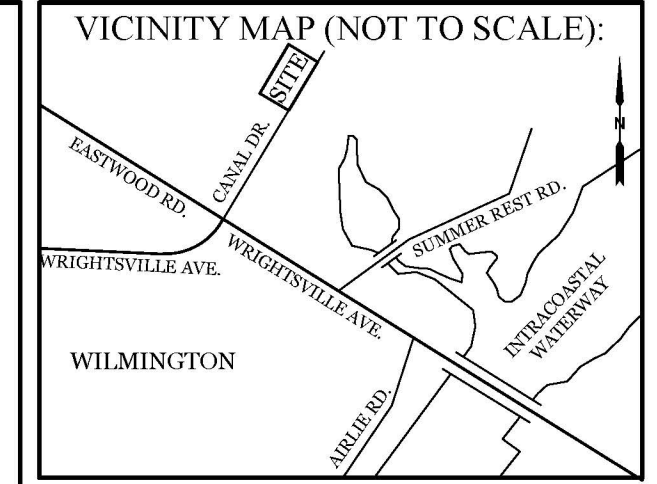
STREETYARD REQUIREMENT: 18' (9' MIN & 27' MAX WIDTH)
REQUIRED: 354'-94.5" = 259.5' X 18" = 4,671 S.F.
PROVIDED: 5,132 S.F.

ESTIMATED TRIP GENERATION (Per Trip Generation Manual, 10th Edition):
6 RESIDENTIAL UNITS (ITE CODE 231)
AM PEAK: 2 PM PEAK: 2 DAILY: 25

5,200 SF OFFICE (ITE CODE 710)
AM PEAK: 6 PM PEAK: 6 DAILY: 51

PROJECT TOTAL
AM PEAK: 8 PM PEAK: 8 DAILY: 76

EXISTING SEWER AND WATER DEMAND: 480 GPD
PROPOSED SEWER AND WATER DEMAND: 1,740 GPD



REVISIONS

| NO. | DESCRIPTION |
|-----|-------------|
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SITE, GRADING, DRAINAGE, STORMWATER, & UTILITIES PLAN
FOR
ATLANTIC MARINE
CANAL ST.
CITY OF WILMINGTON
NEW HANOVER COUNTY, NC

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
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Approved Construction Plan
Date: 10/19/20
2020031
SWP #: 2020031
PO, ES, BM, MB, CW

- CD-6-1219 CONDITIONS:**
- THE USE AND DEVELOPMENT OF THE 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 CONDITIONAL DISTRICT REZONING 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 PROPERTY SHALL BE IN ACCORDANCE WITH THE PLAN AND ELEVATIONS APPROVED BY CITY COUNCIL.
 - THE PROPOSED USE SHALL BE LIMITED TO 10,400 SQUARE FEET OF NEIGHBORHOOD COMMERCIAL, OFFICE, PERSONAL SERVICE, AND RESIDENTIAL USES, WITH A MAXIMUM OF SIX UPPER-STORY RESIDENTIAL UNITS.
 - THE FIVE EXISTING SIGNIFICANT TREES (SPECIFICALLY THE 15', 16', 19', 24' MAGNOLIAS AND THE 34' LIVE OAK SHOWN ON THE SUBMITTED SITE PLAN) SHALL BE PRESERVED AND MITIGATED IF ANY SHOULD EXPIRE NATURALLY.
 - THE SUBJECT SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN AND SHALL BE ELEVATED OR FLOODPROOFED TO COMPLY WITH ARTICLE 13 OF THE CITY'S FLOOD ZONE DEVELOPMENT STANDARDS.
 - EXTERIOR SITE LIGHTING SHALL BE INSTALLED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT RESIDENTIAL PARCELS.
 - ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH A MAXIMUM HEIGHT OF 6 FEET AND LANDSCAPING AROUND THE BASE OF THE SIGN; NO POLE SIGNS SHALL BE PERMITTED.
 - THE APPLICANT SHALL SUBMIT AN EXCEPTIONAL DESIGN NARRATIVE PRIOR TO CONSTRUCTION RELEASE IF IMPERVIOUS SURFACE OF THE SITE EXCEEDS 25%.
 - THE AREA LOCATED WITHIN THE CONSERVATION RESOURCE SETBACK SHALL BE PLACED INTO A CONSERVATION EASEMENT FOR THE PURPOSE OF LIMITING FUTURE DEVELOPMENT IN THAT AREA.
 - ALL CITY, STATE AND FEDERAL REGULATIONS SHALL BE FOLLOWED.

- UTILITY NOTES:**
- CONSTRUCTION SEQUENCE WATERLINE:**
CONTRACTOR TO INSTALL NEW 6" & 2" LINES TO PROPOSED 2" BLOW OFF. NEW MAIN(S) TO BE TESTED AND CERTIFIED. ONCE CERTIFIED 2" BLOW OFF TO BE REMOVED. (2) 2" 45° BENDS INSTALLED AND TIED IN WITH EXISTING 2" MAIN. SECTION OF EXISTING MAIN TO BE ABANDONED BETWEEN EASTWOOD RD. AND NEW TIE IN. THIS INCLUDES REMOVAL OF EXISTING TEE AND VALVE AT EASTWOOD RD.
- EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS.
 - ALL PROPOSED UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS & TELEPHONE SHALL BE INSTALLED UNDERGROUND.
 - ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CFPUA TECHNICAL SPECIFICATIONS & STANDARDS.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCO/CHOR OR ASSE.
 - IF CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
 - WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. CALL NC811 AT 811 OR 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT MAY BE BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
 - THE PROCESS FOR TELEPHONE CABLE PLACEMENT: * FINAL GRADE WILL NEED TO BE ESTABLISHED. * POWER WILL PLACE THEIR CABLE FIRST - APPROXIMATELY 2' DEEP. * TELEPHONE & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2' DEEP.
 - SOLID WASTE DISPOSAL BY PRIVATE DUMPSTER SERVICE.
 - ANY EXISTING SEWER AND WATER SERVICES NOT BEING UTILIZED ARE TO BE ABANDONED PER CFPUA STANDARDS.
 - RUNOFF FROM ALL IMPERVIOUS SURFACES, INCLUDING ROOF DRAINAGE, TO BE DIRECTED TO STORM DRAIN SYSTEM.
 - ALL WATER AND SANITARY SEWER LINES TO BE BURIED AT 36" MIN. DEPTH

- GENERAL TRAFFIC NOTES:**
- ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS OFF THE R/W TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 - ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. [DETAIL SD 15-13 & SD 11-3 COFW TECH STDS]
 - ALL SIGNS AND PAVEMENT MARKINGS OFF RIGHT OF WAY ARE TO MEET BE MAINTAINED TO MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS. [DETAIL SD 15-13 & SD 11-3 COFW TECH STDS]
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5890 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
 - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
 - CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON, TRAFFIC ENGINEERING REGARDING THE UTILITIES IN ROW.
 - ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 90' TO 10'.
 - STREET TREES MUST BE LOCATED A MINIMUM OF 15 FEET FROM STREET LIGHTS. [COFW SD 15-17]
 - CONTACT TRAFFIC ENGINEERING AT (910) 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5890 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
 - CONTRACTOR TO REPAIR/REPLACE SIGNAL LOOP TO FULL FUNCTIONALITY IN THE EVENT IT GETS CUT.

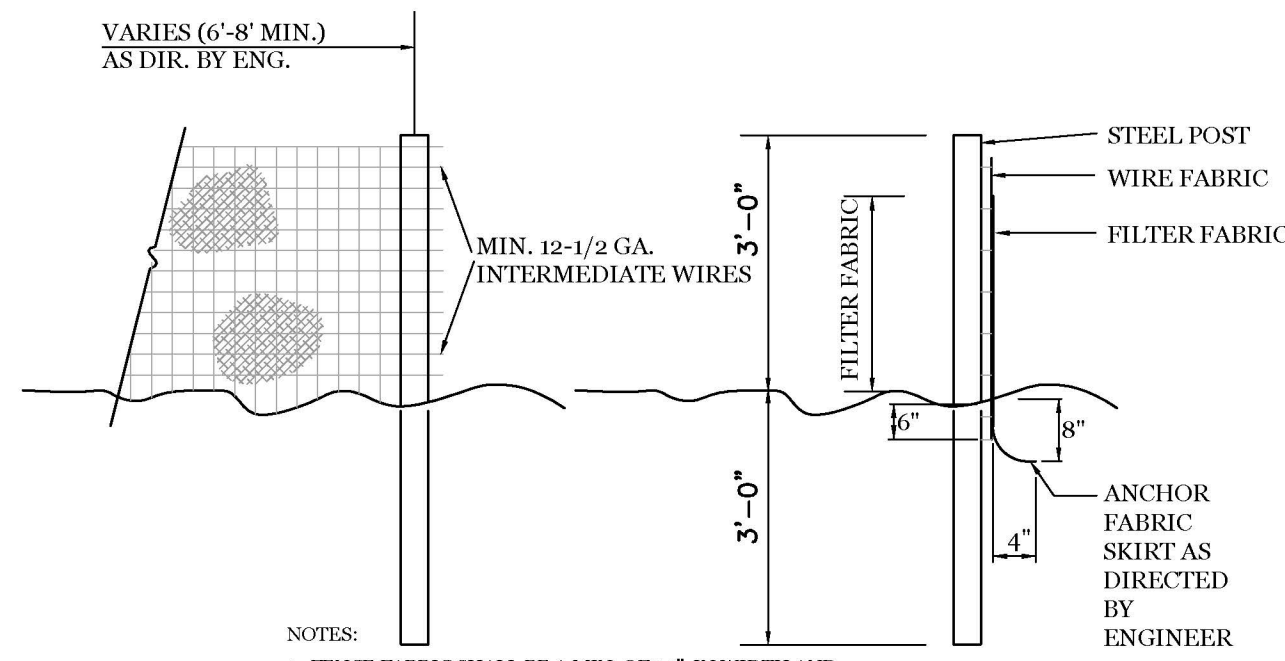
LEGEND

- PROPERTY LINE
- ADJACENT
- RUNOFF DIRECTION
- EX. TOP
- PROP. WATER LINE
- PROP. SS LINE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED REDUCER
- BIKE RACK (SPACES)
- SPOT ELEVATION
- PARKING LOT LANDSCAPING
- STREETYARD
- FOUNDATION PLANTINGS

Scale: 1" = 20'

CLIENT INFORMATION:
Floyd Investments, LLC
PO Box 659
Wrightsville Beach, NC 28480
910-256-9911

DRAWN: JAE SHEET SIZE: 24x36
CHECKED: CDC DATE: 9/25/2020
APPROVED: CDC SCALE: 1" = 20'
PROJECT NUMBER: 2019-019
DRAWING NUMBER: C-1
2 OF 7



- NOTES:**
- FENCE FABRIC SHALL BE A MIN. OF 36" IN WIDTH AND SHALL HAVE A MIN. OF SIX LINE WIRES WITH 12" STAY SPACING.
 - FABRIC SHALL BE FOR EROSION CONTROL AND MIN. OF 36" IN WIDTH. FABRIC SHALL BE FASTENED AROUND THE PERIMETER TO THE WIRE FABRIC AS DIRECTED BY THE ENGINEER.
 - STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

TEMPORARY SILT FENCE
NTS

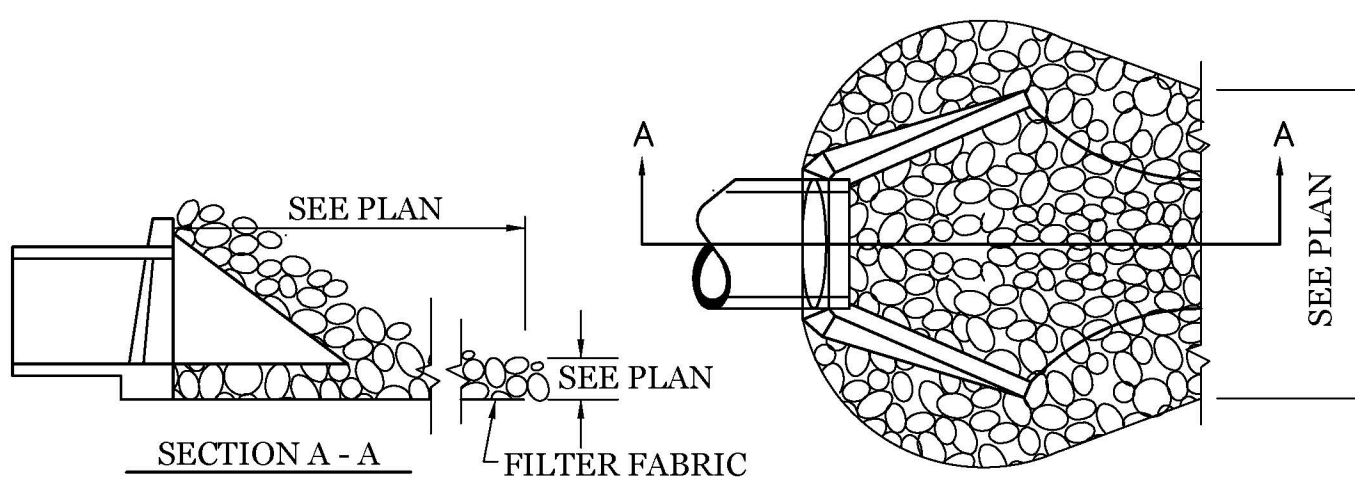
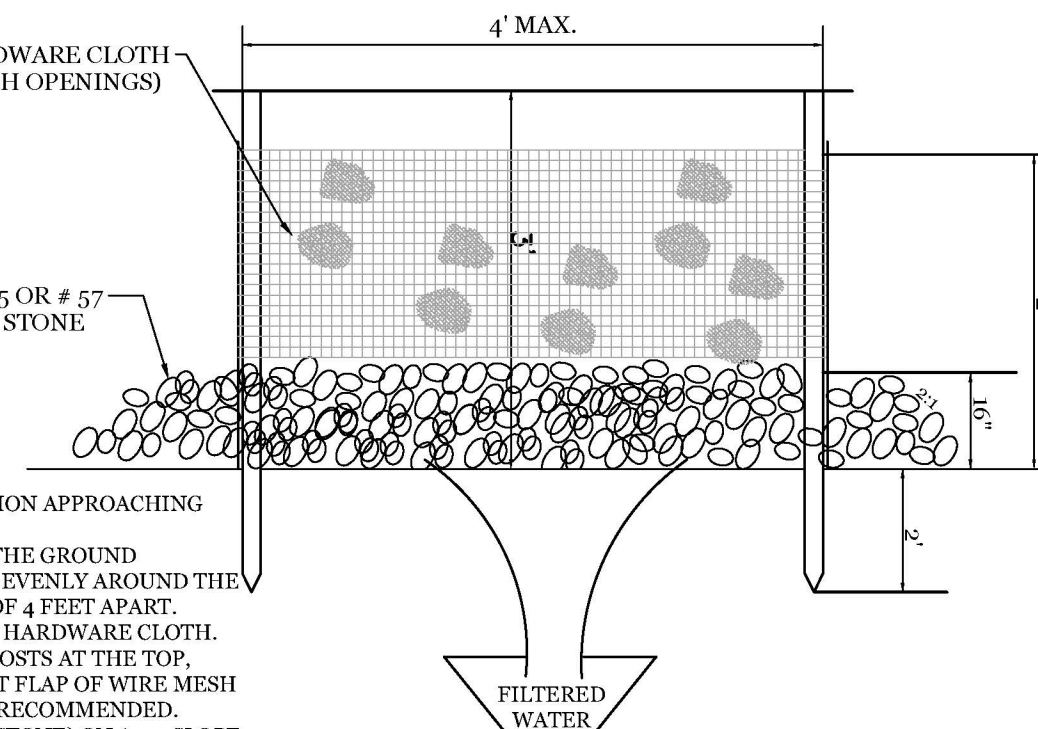
CONSTRUCTION SPECIFICATIONS:

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 6-FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.

MAINTENANCE:

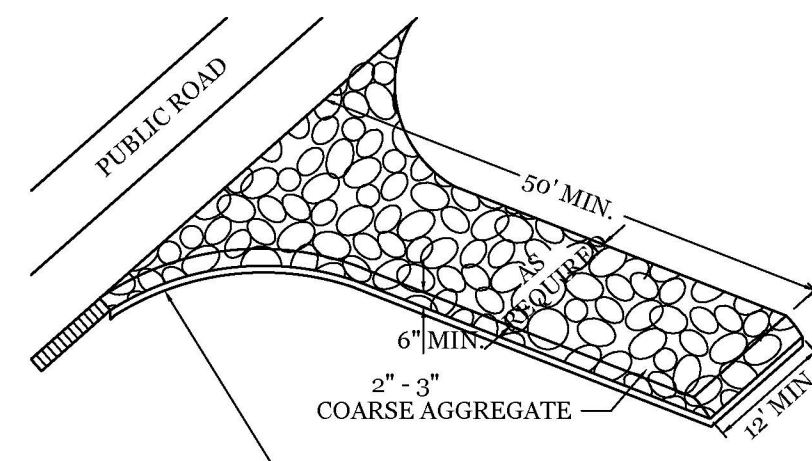
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (4 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

HARDWARE CLOTH AND GRAVEL INLET PROTECTION
NTS



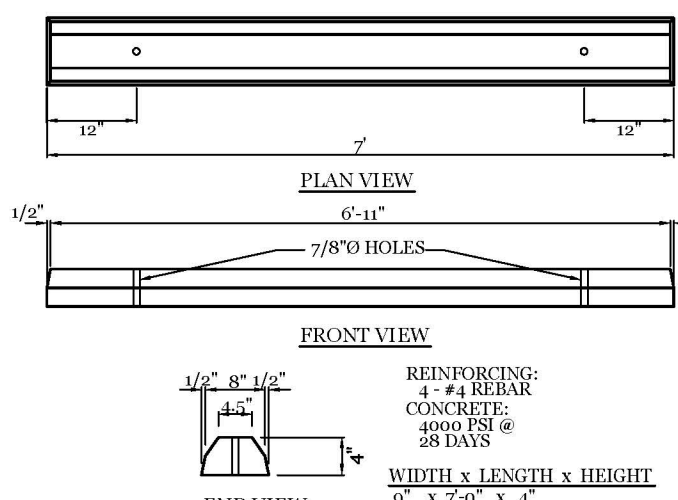
- NOTES:**
- CLASS "B" RIP RAP TO BE USED FOR ALL ENERGY DISSIPATOR AREAS.

ENERGY DISSIPATOR
NTS



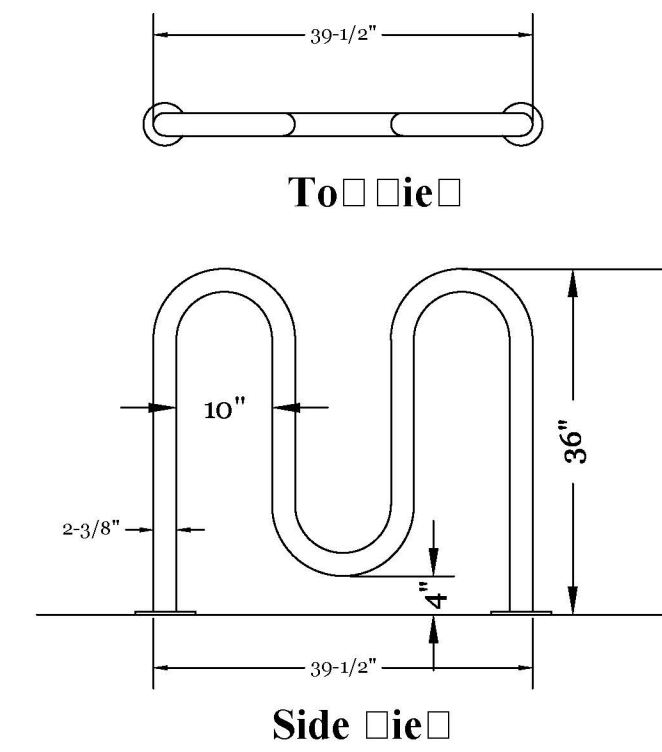
- NOTE:**
- CONSTRUCTION ENTRANCE TO BE 1/2 OR ENTIRE WIDTH OF ENTRANCE, WHICHEVER IS GREATER.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NTS

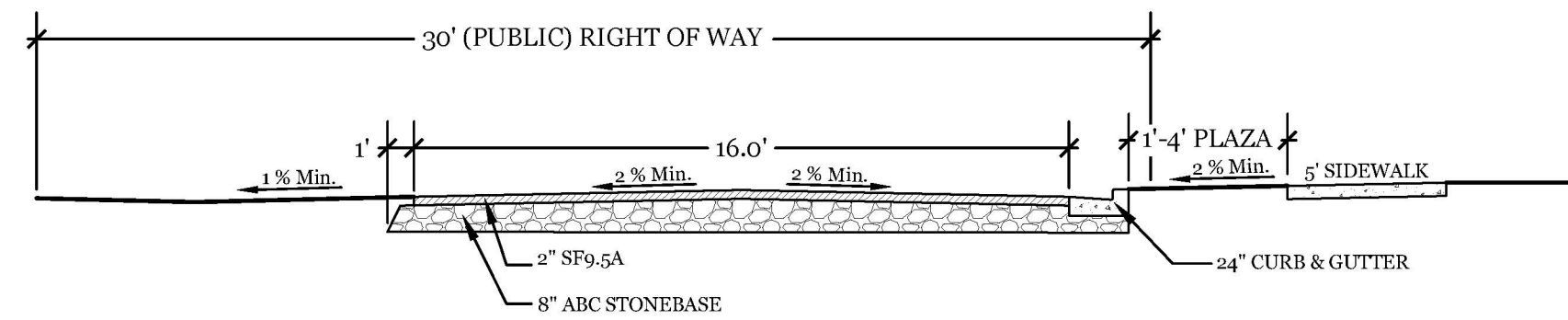


- NOTE:**
- CONTRACTOR SHALL INSTALL PER CITY OF WILMINGTON TECHNICAL STANDARD PER SD 10-13
 - CONTRACTOR SHALL INSTALL WHEEL STOP 2' FROM SIDEWALK

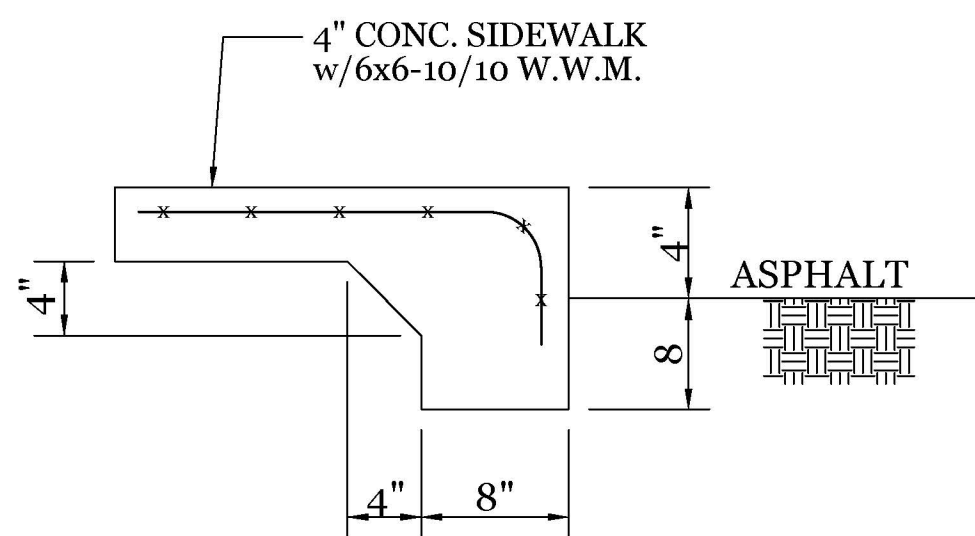
WHEEL STOP DETAIL
NTS



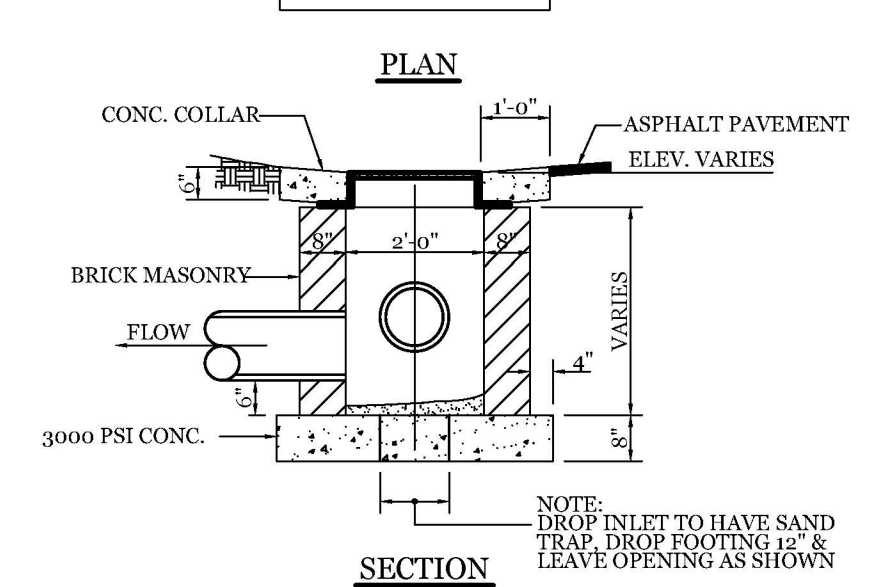
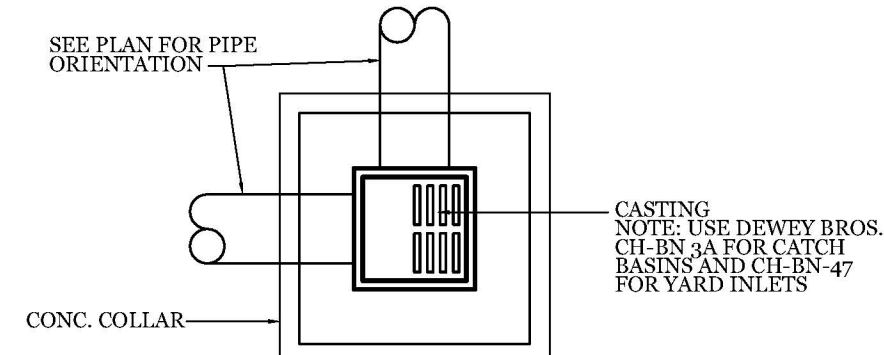
WAVE STYLE BIKE RACK DETAIL
5 BIKE RACK
NTS



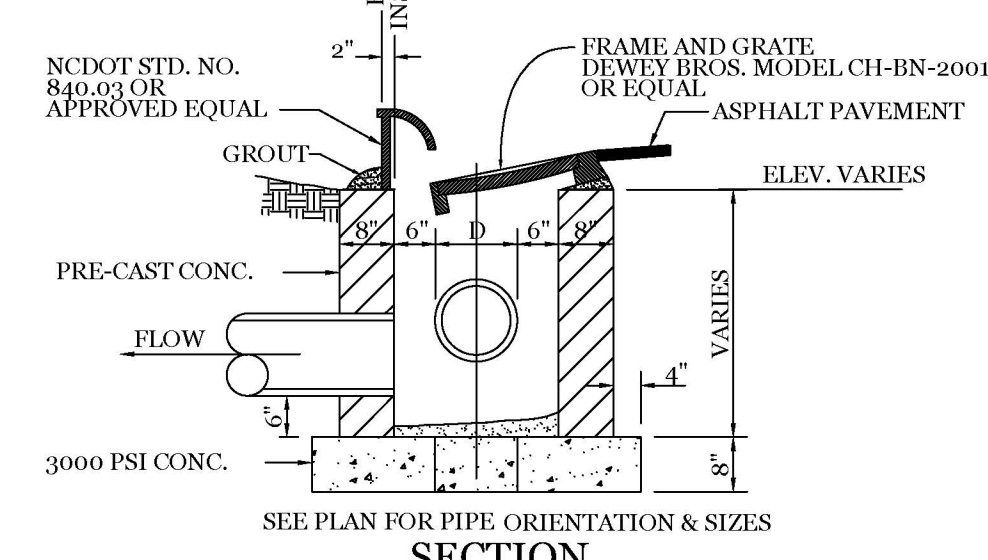
CANAL ST. EXTENSION SECTION
NTS



TURNDOWN SIDEWALK
NTS

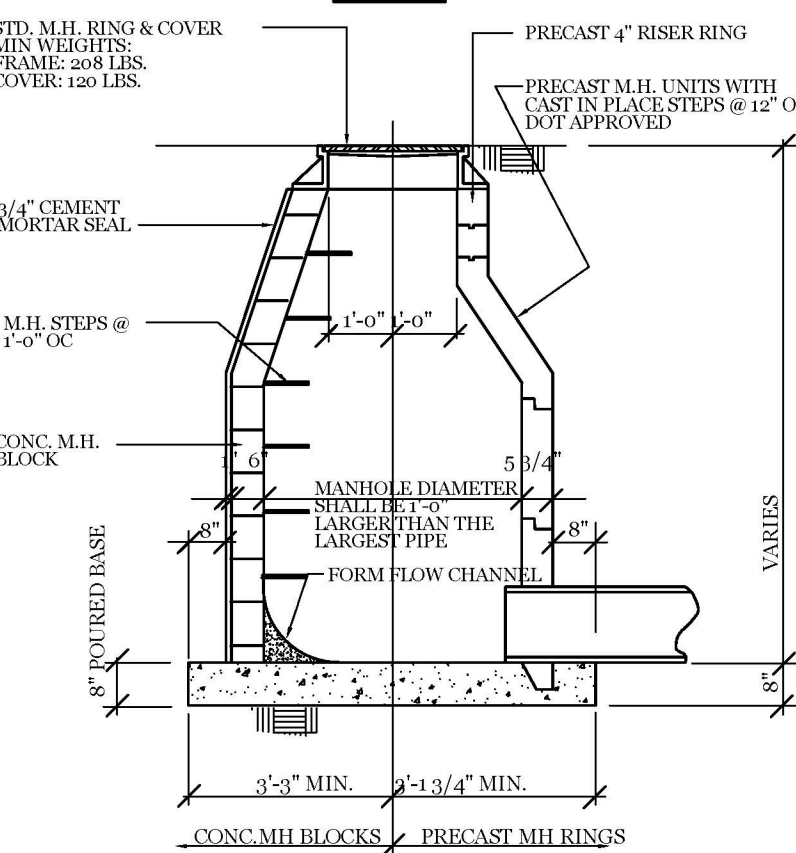
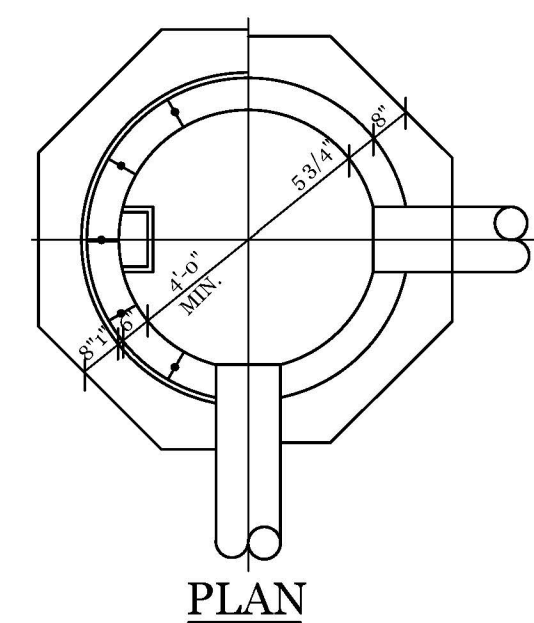


DROP INLET DETAIL
NTS

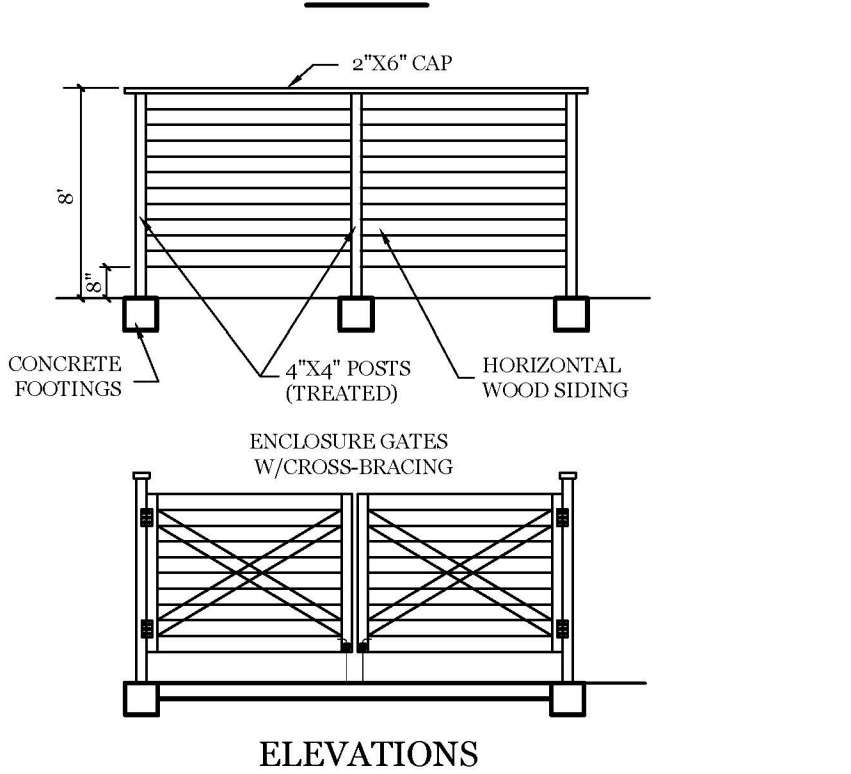
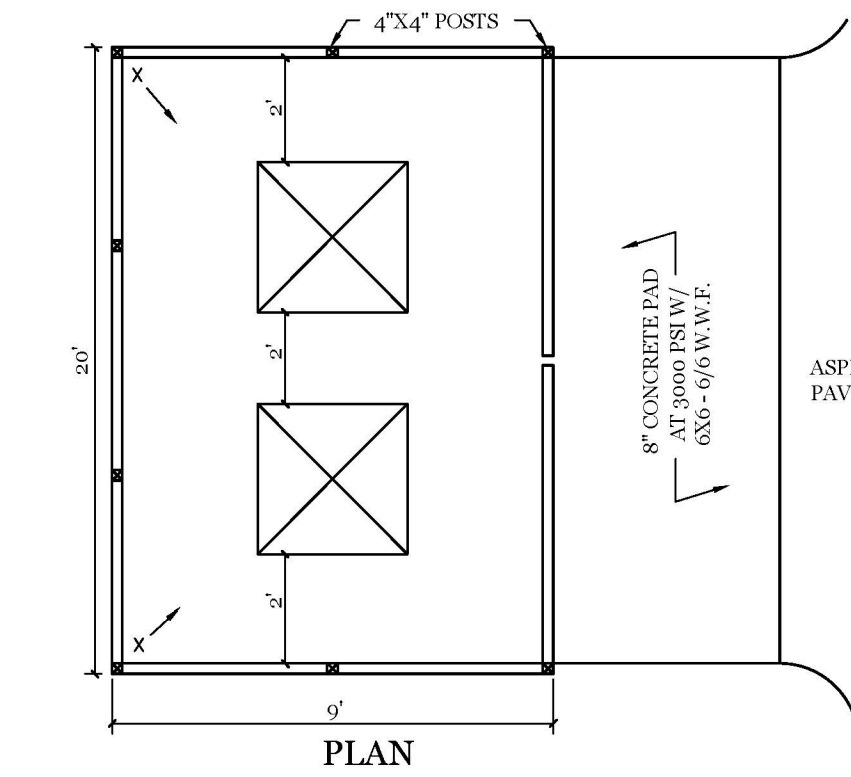


CURB INLET DETAIL
NTS

- NOTE:**
- CONTRACTOR MAY USE BRICK WITH MAX. CORBEL 1" PER COURSE
 - CONTRACTOR MAY USE ECCENTRIC M.H. UNIT



STORM DRAIN MANHOLE DETAIL
NTS



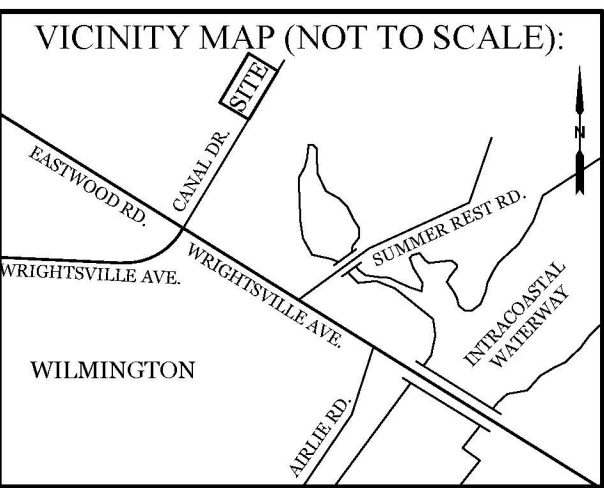
DUMPSTER PAD & ENCLOSURE DETAIL
NTS

Approved Construction Plan
Date: 10/19/20
2020031
SWP #: 2020031
PO, ES, BM, MB, CW



APPROVED STORMWATER MANAGEMENT PLAN

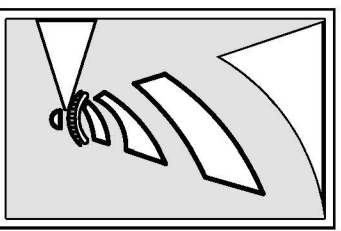
Date: _____ Permit # _____
Signed: _____



REVISIONS

| NO. | DATE | DESCRIPTION |
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INTRACOASTAL ENGINEERING, PLLC
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number: P-0662

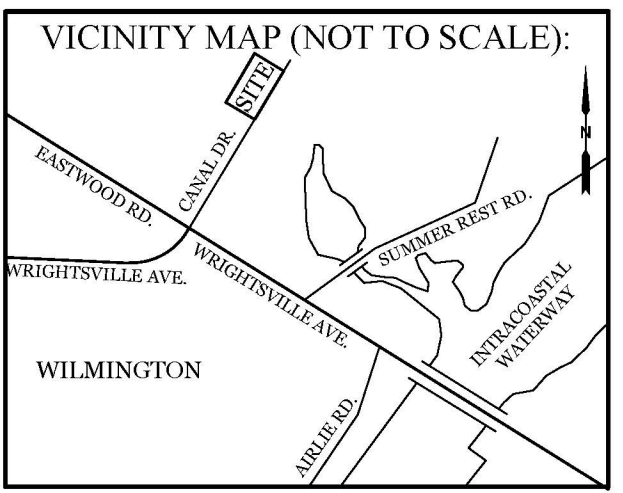
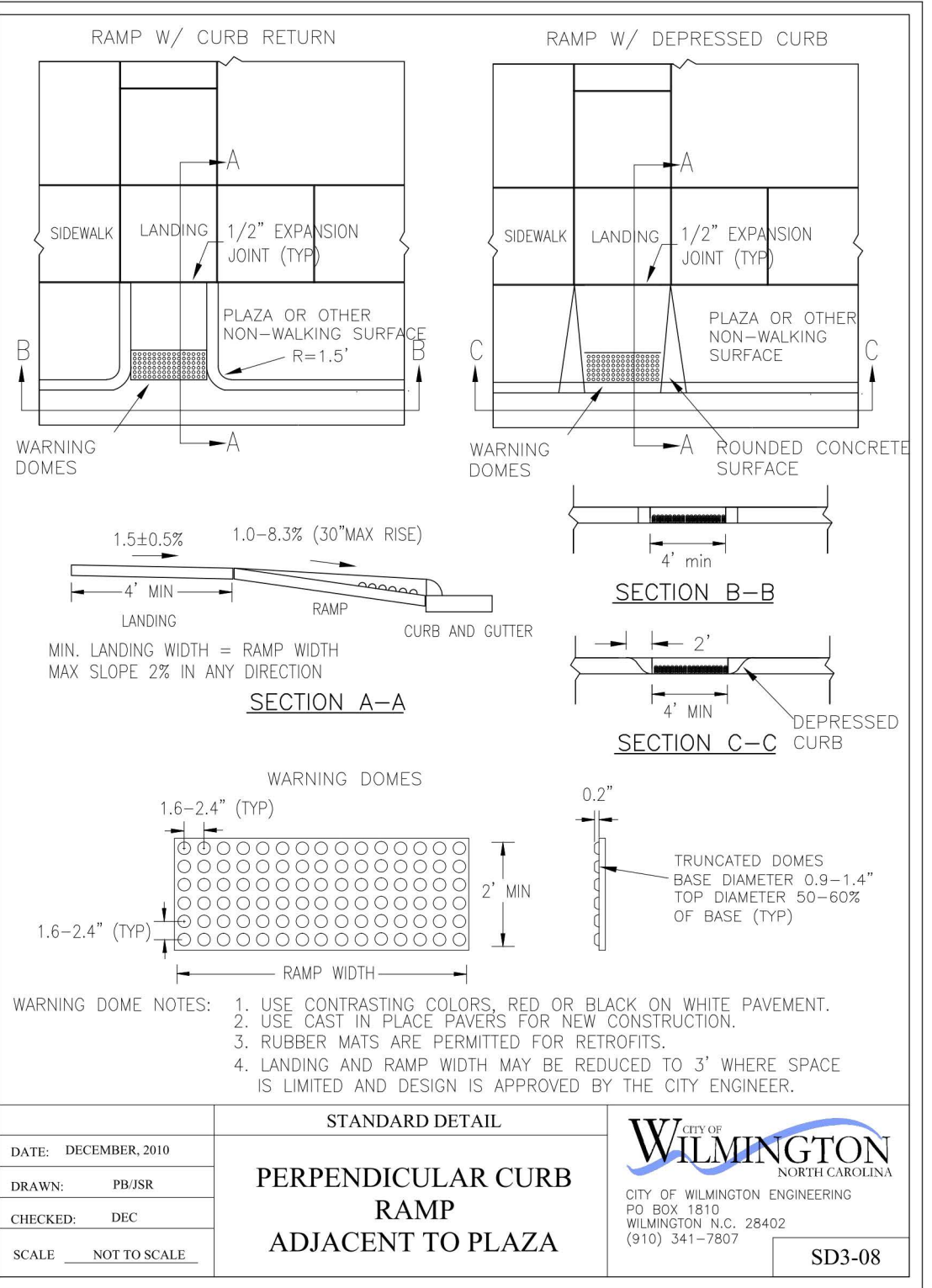
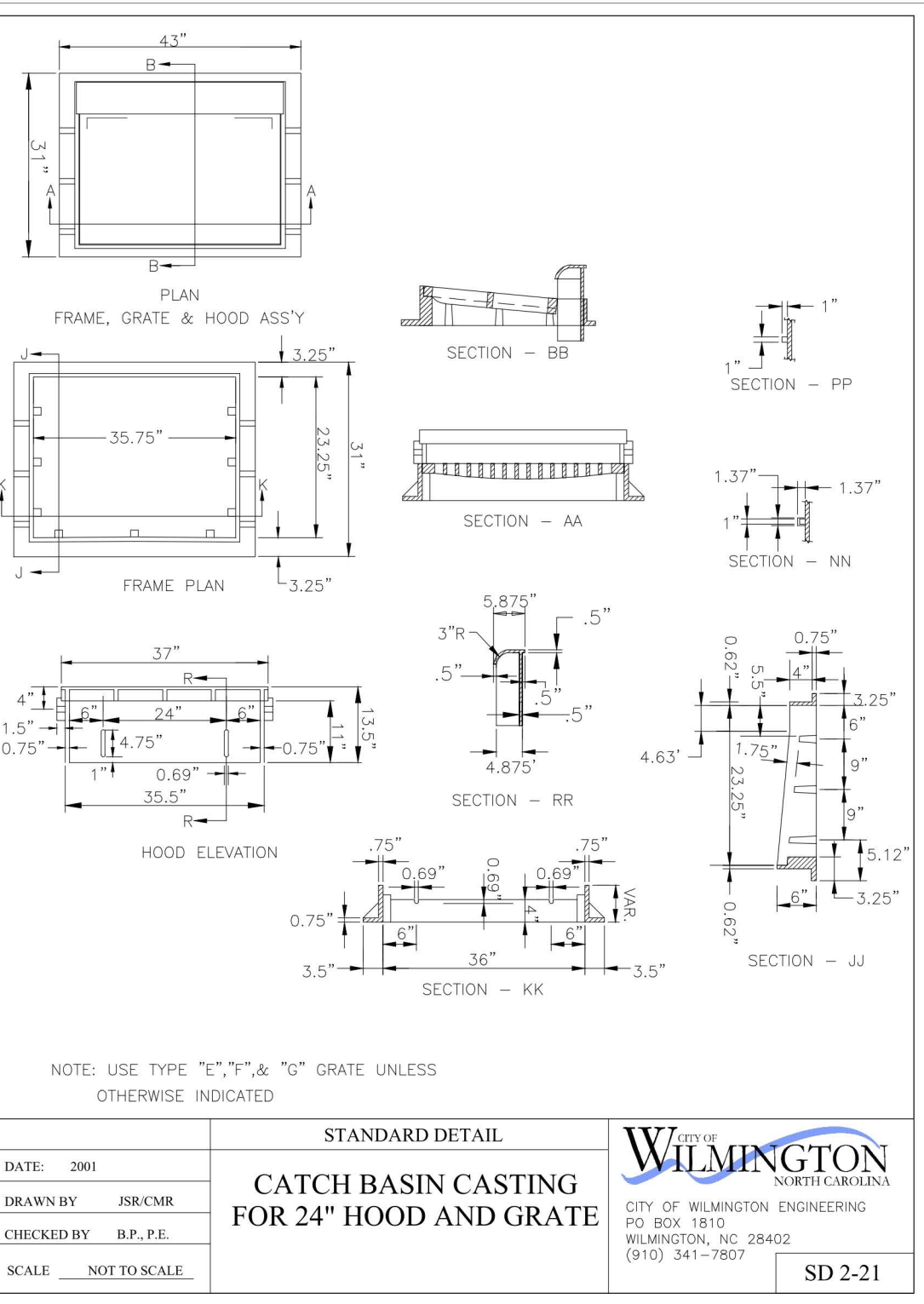
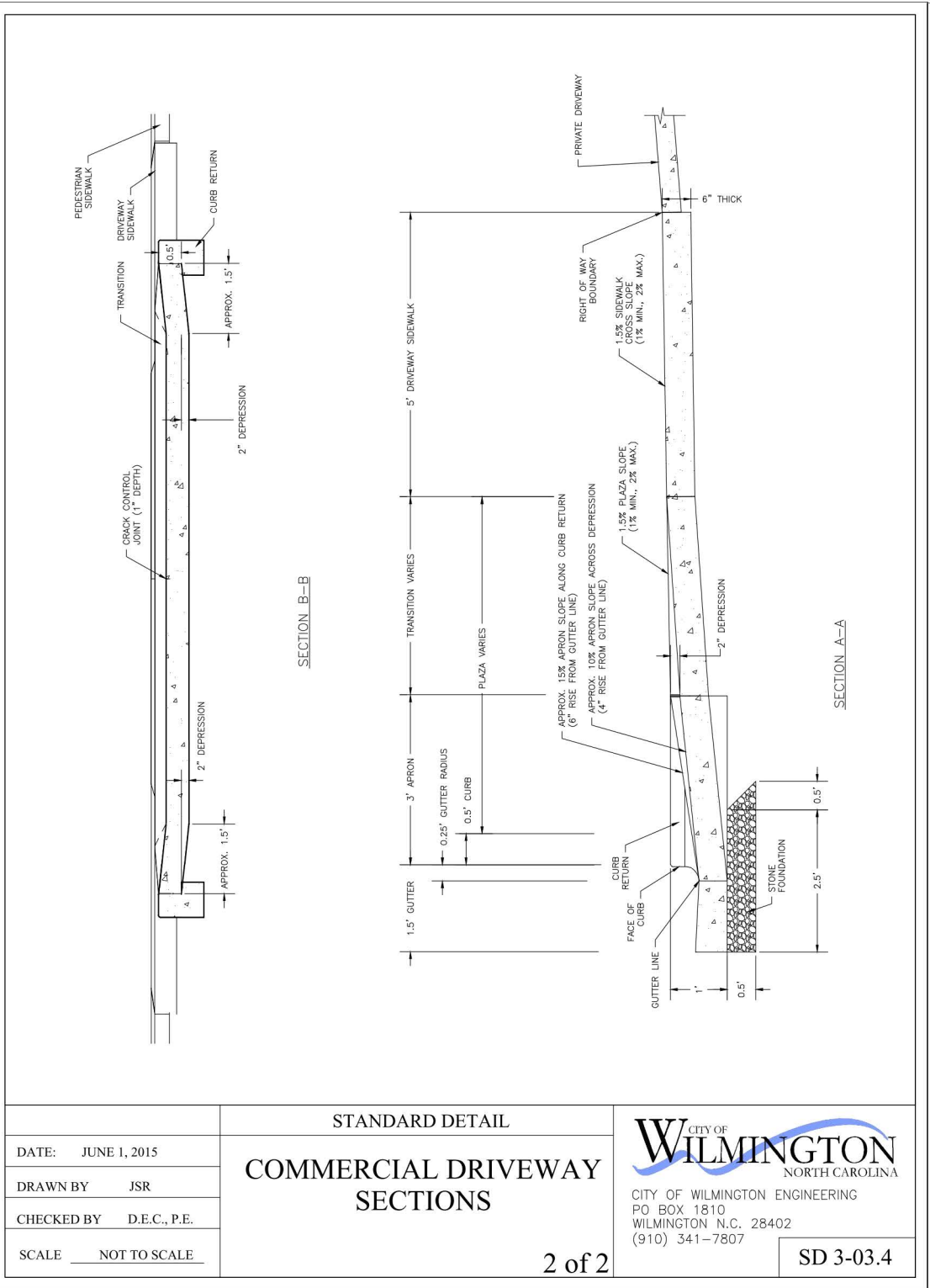
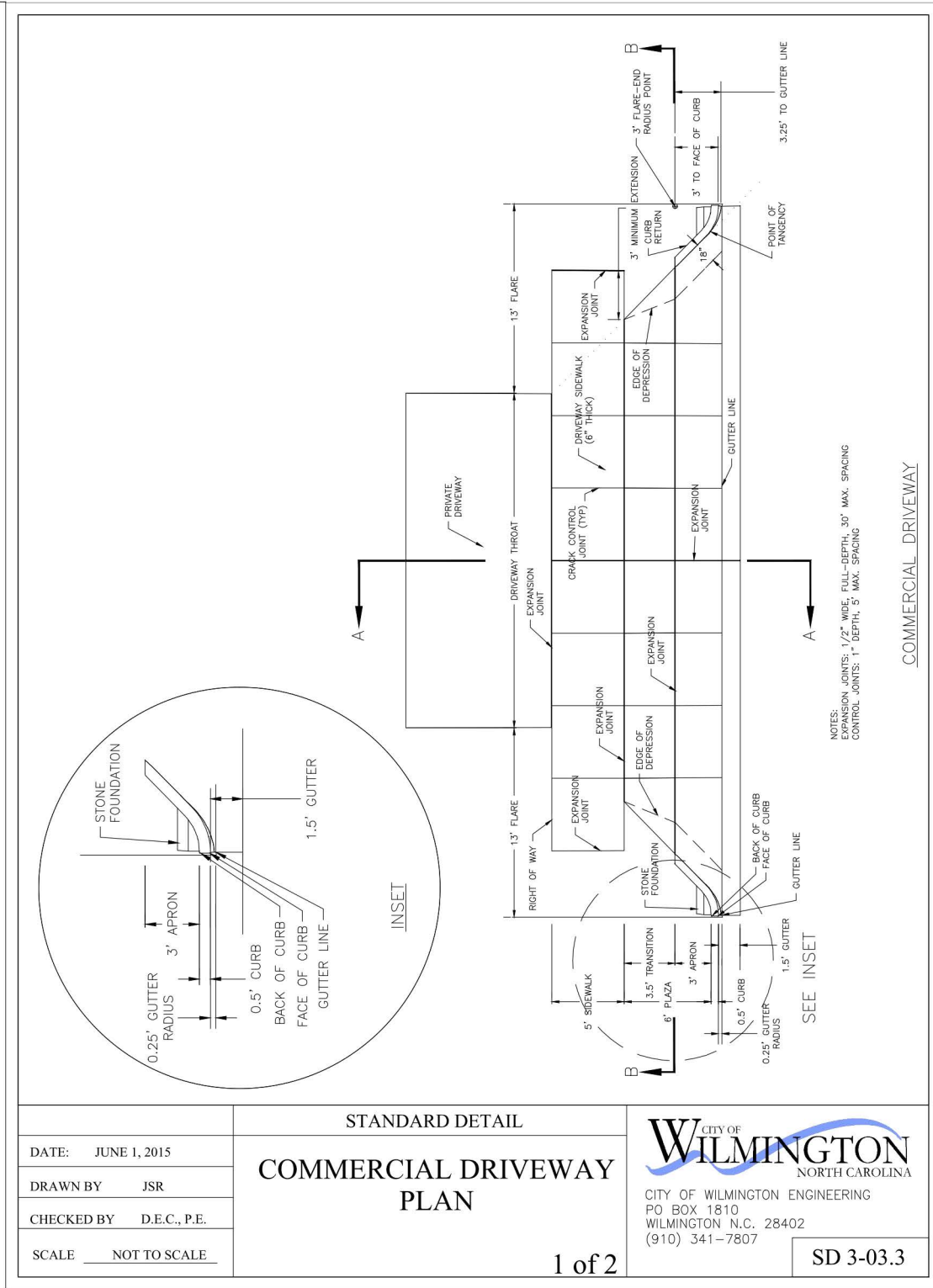
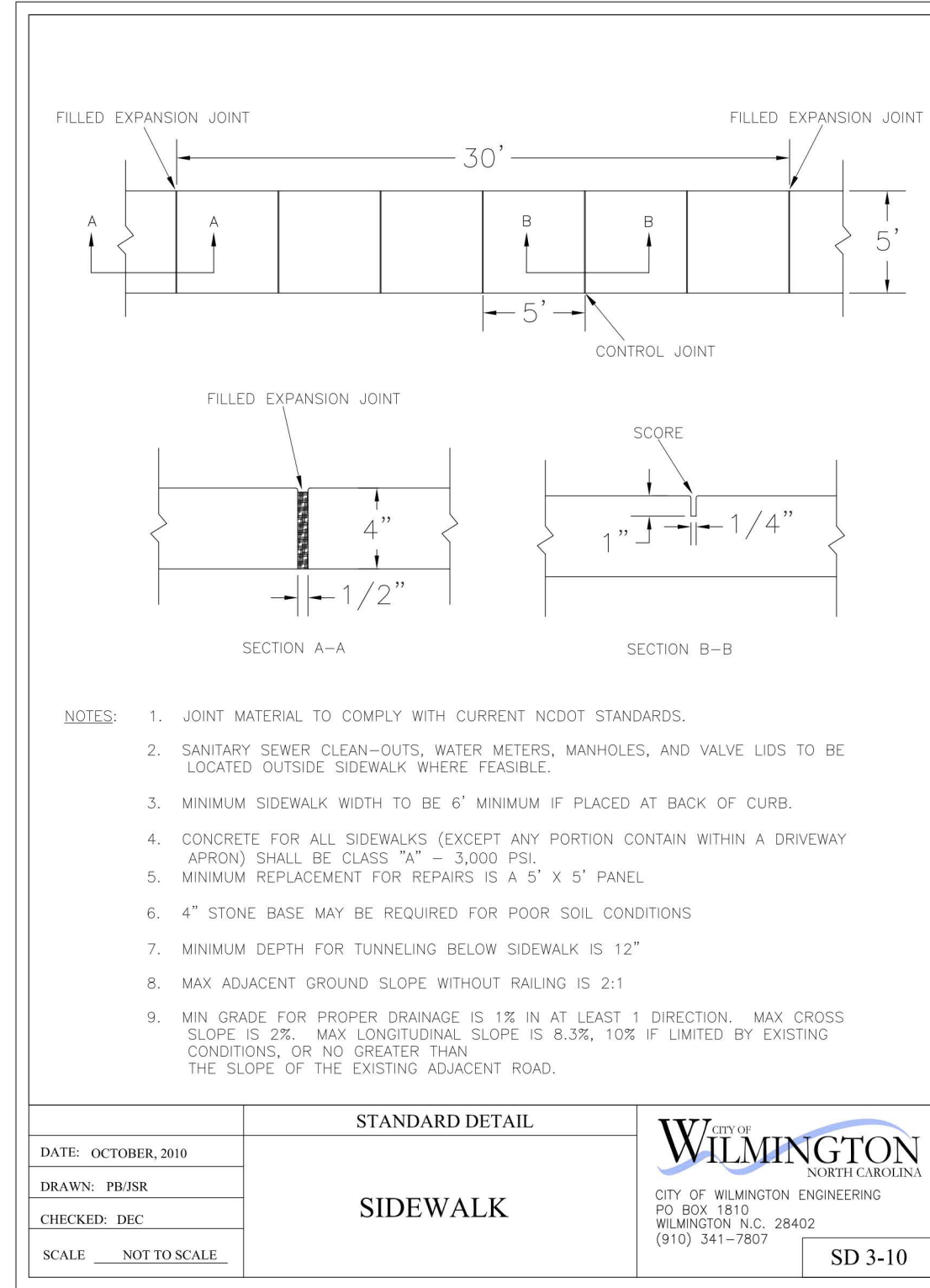


DETAILS
FOR
ATLANTIC MARINE
CANAL ST.
CITY OF WILMINGTON
NEW HANOVER COUNTY, NC

CLIENT INFORMATION:
Floyd Investments, LLC
PO Box 659
Wrightsville Beach, NC 28480
910-256-9911

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|--------------------------|-------------------|
| DRAWN: JAE | SHEET SIZE: 24x36 |
| CHECKED: CDC | DATE: 9/25/2020 |
| APPROVED: CDC | SCALE: NTS |
| PROJECT NUMBER: 2019-019 | |

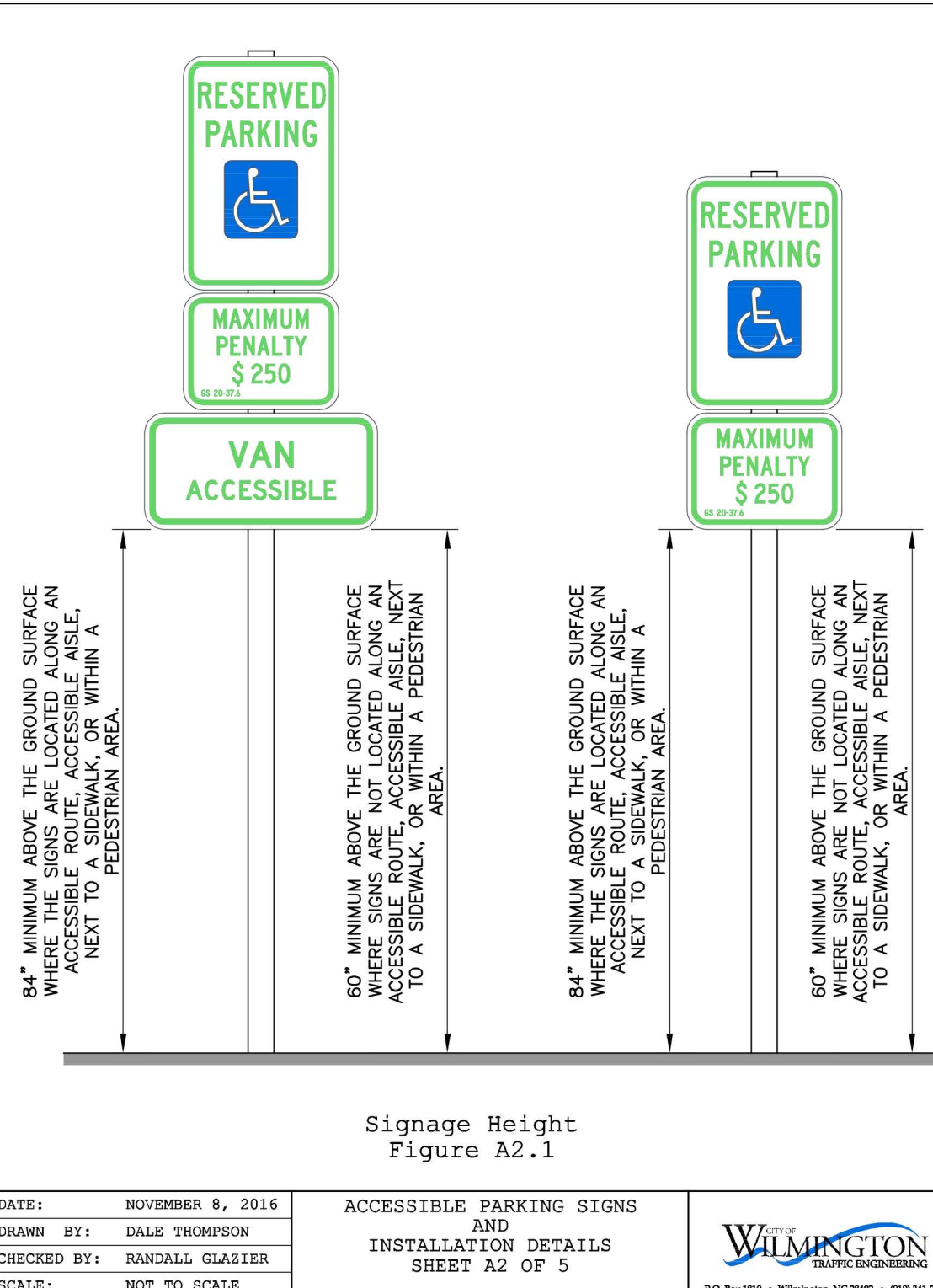
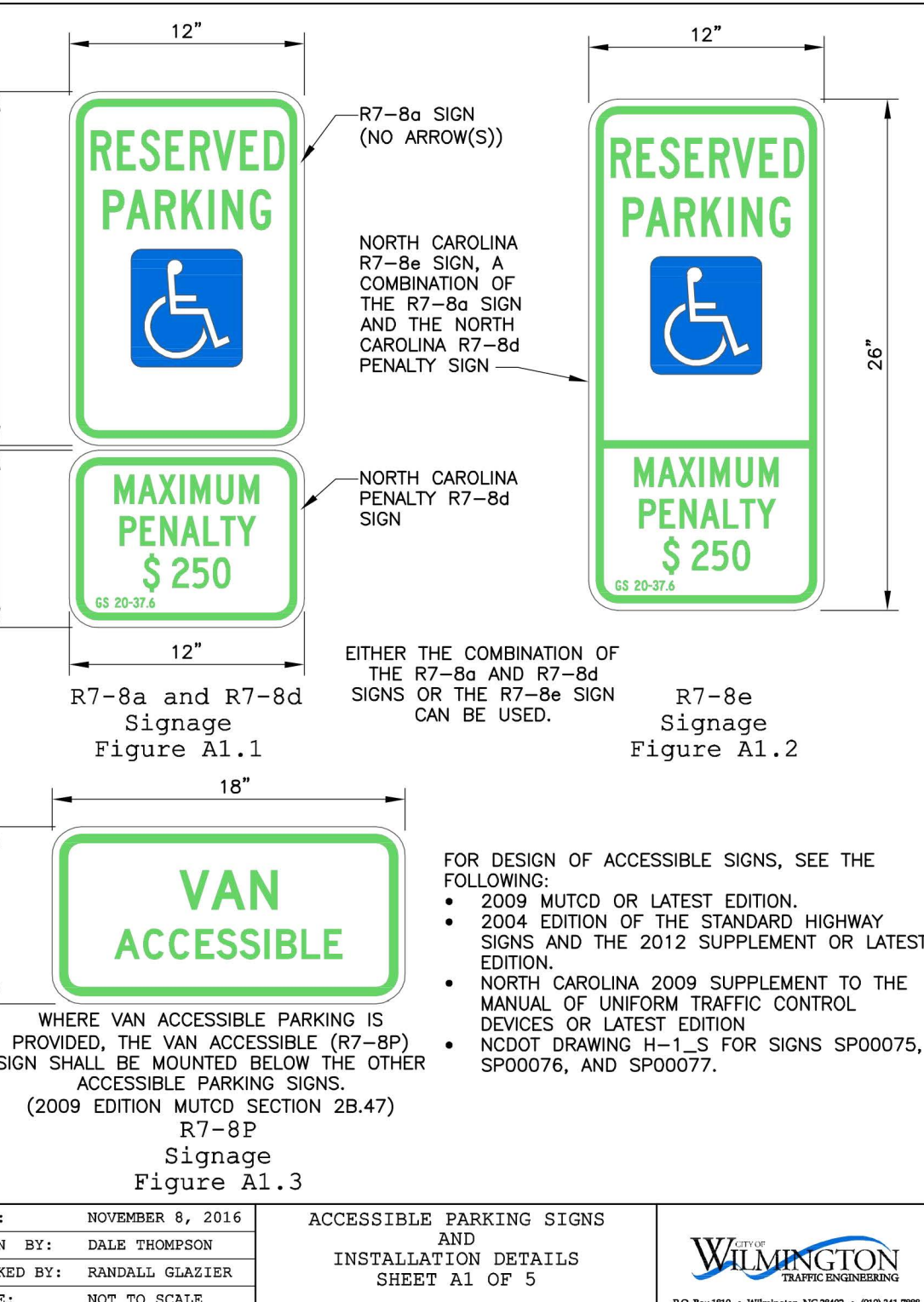
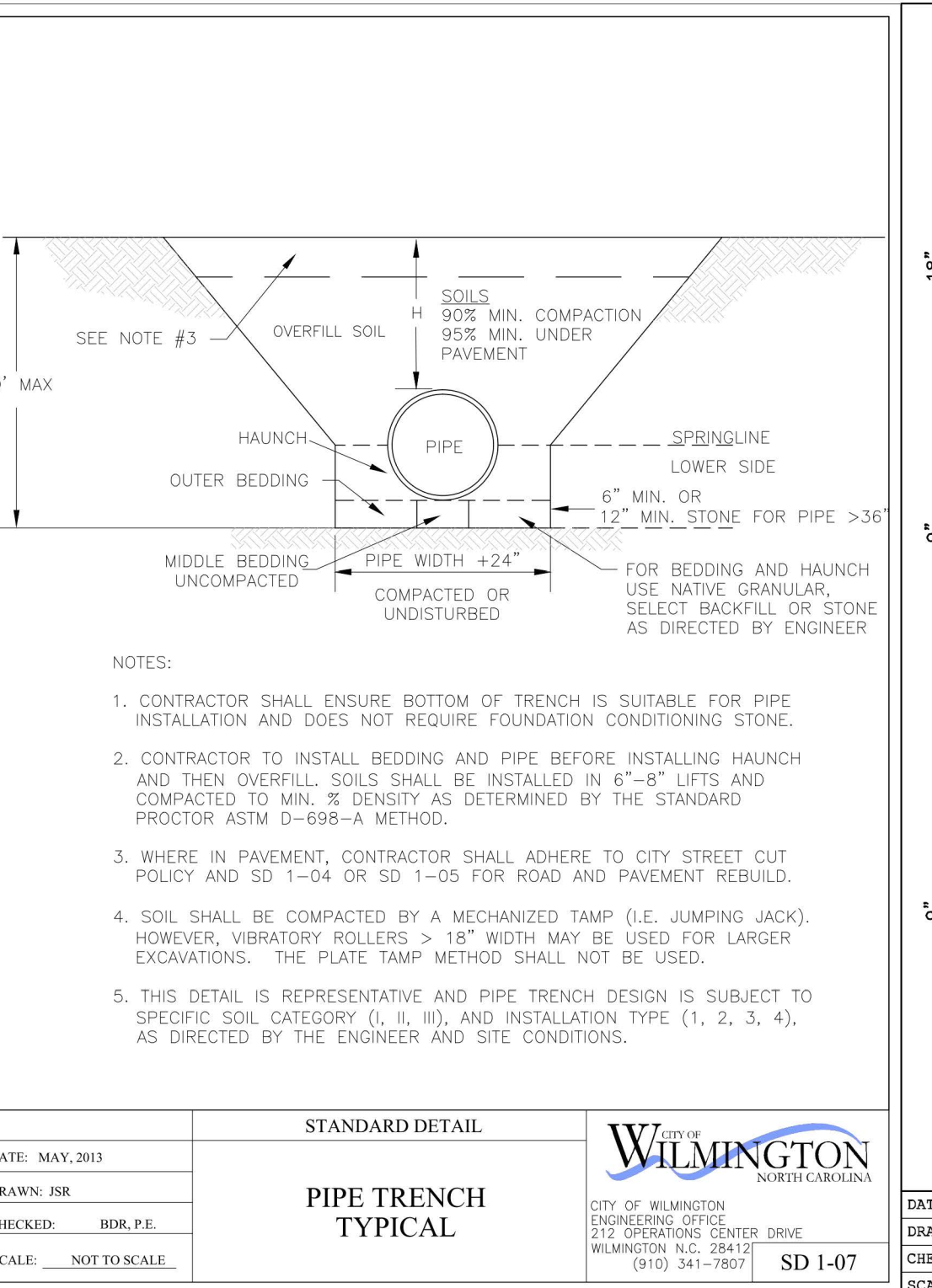
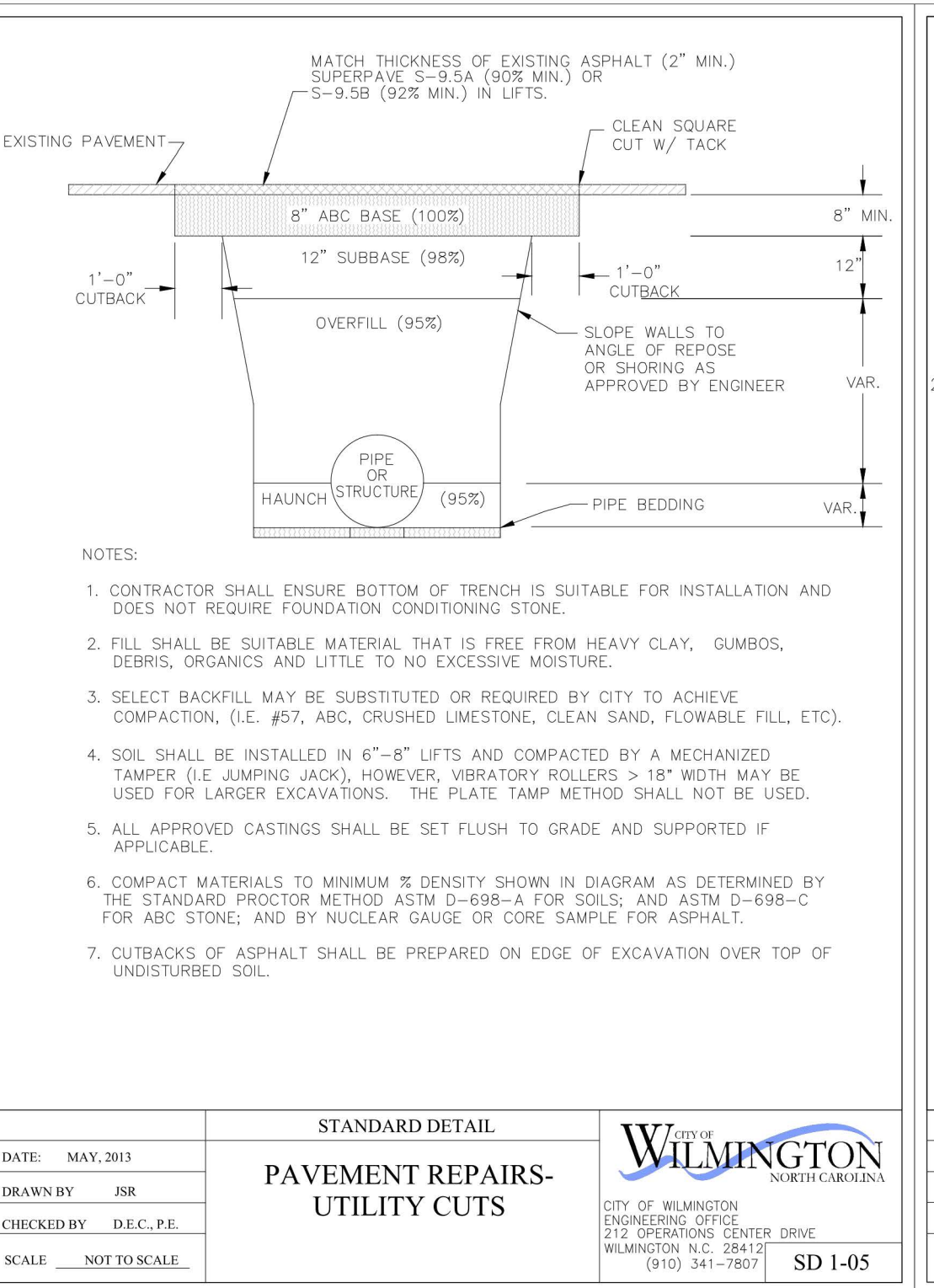
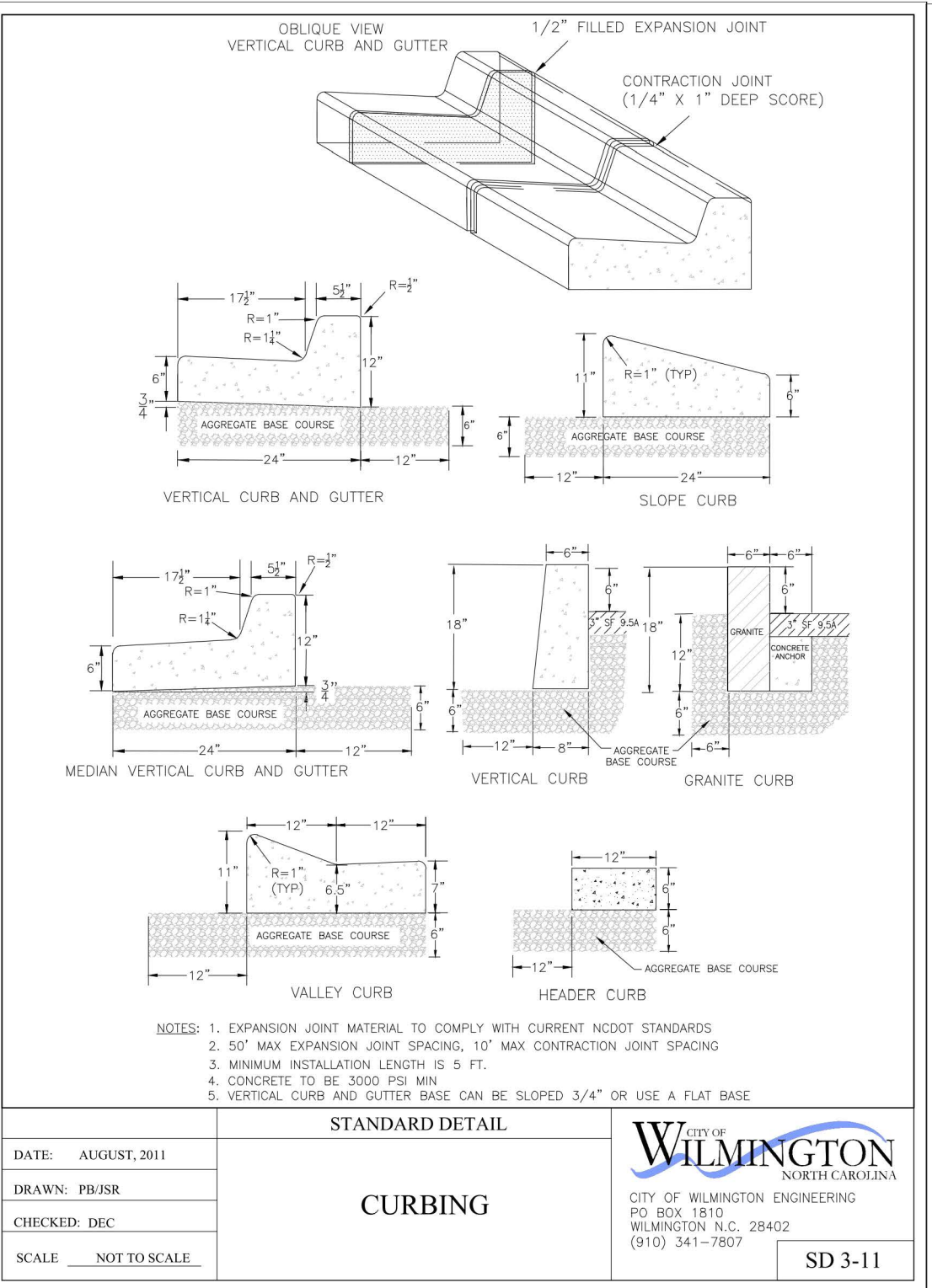
DRAWING NUMBER: **C-3** 4 OF 7



REVISIONS

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DETAILS FOR ATLANTIC MARINE CANAL ST. CITY OF WILMINGTON NEW HANOVER COUNTY, NC

CLIENT INFORMATION:

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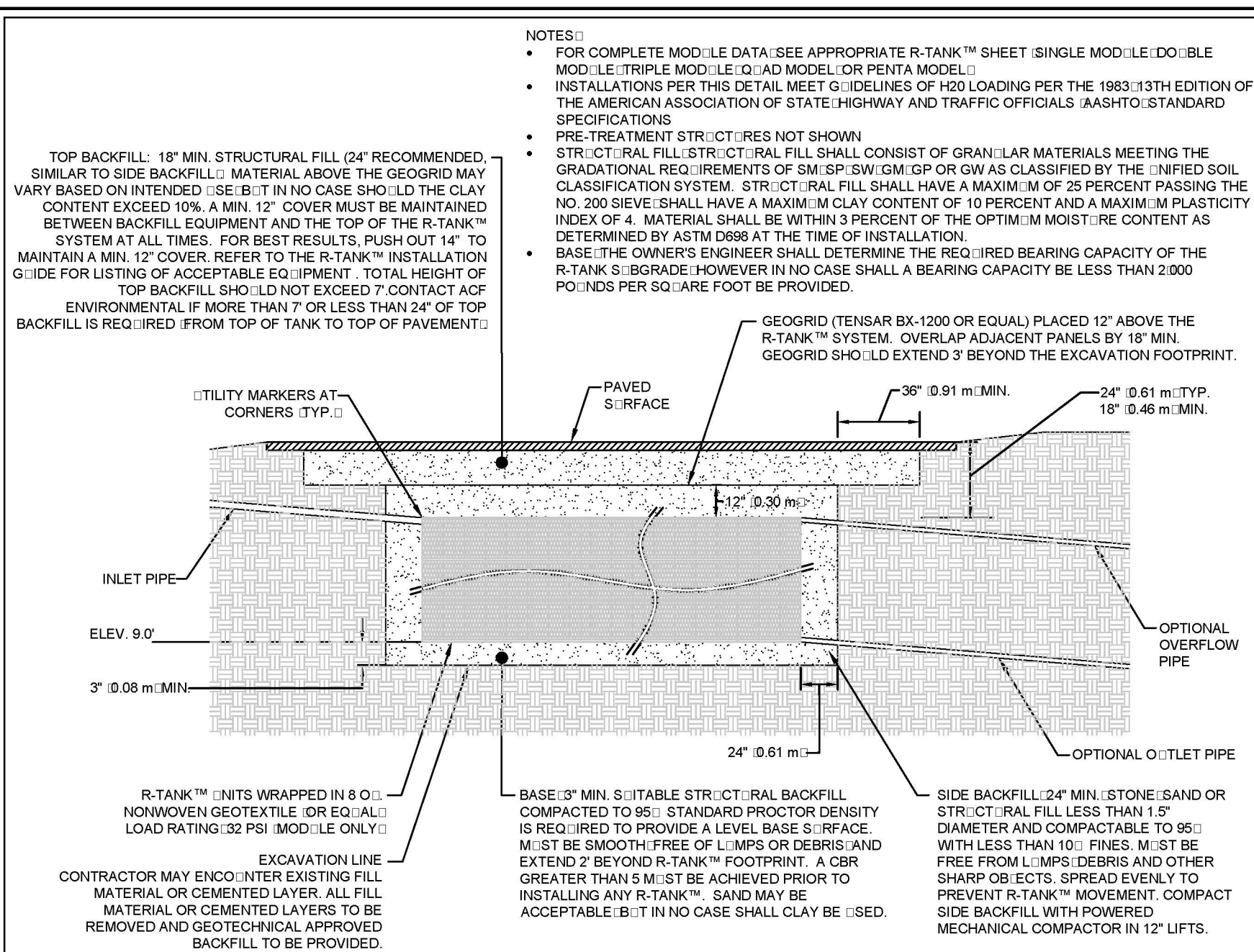
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| CHECKED: CDC | DATE: 9/25/2020 |
| APPROVED: CDC | SCALE: NTS |
| PROJECT NUMBER: 2019-019 | |

Approved Construction Plan
Date: 10/19/20
2020031
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WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

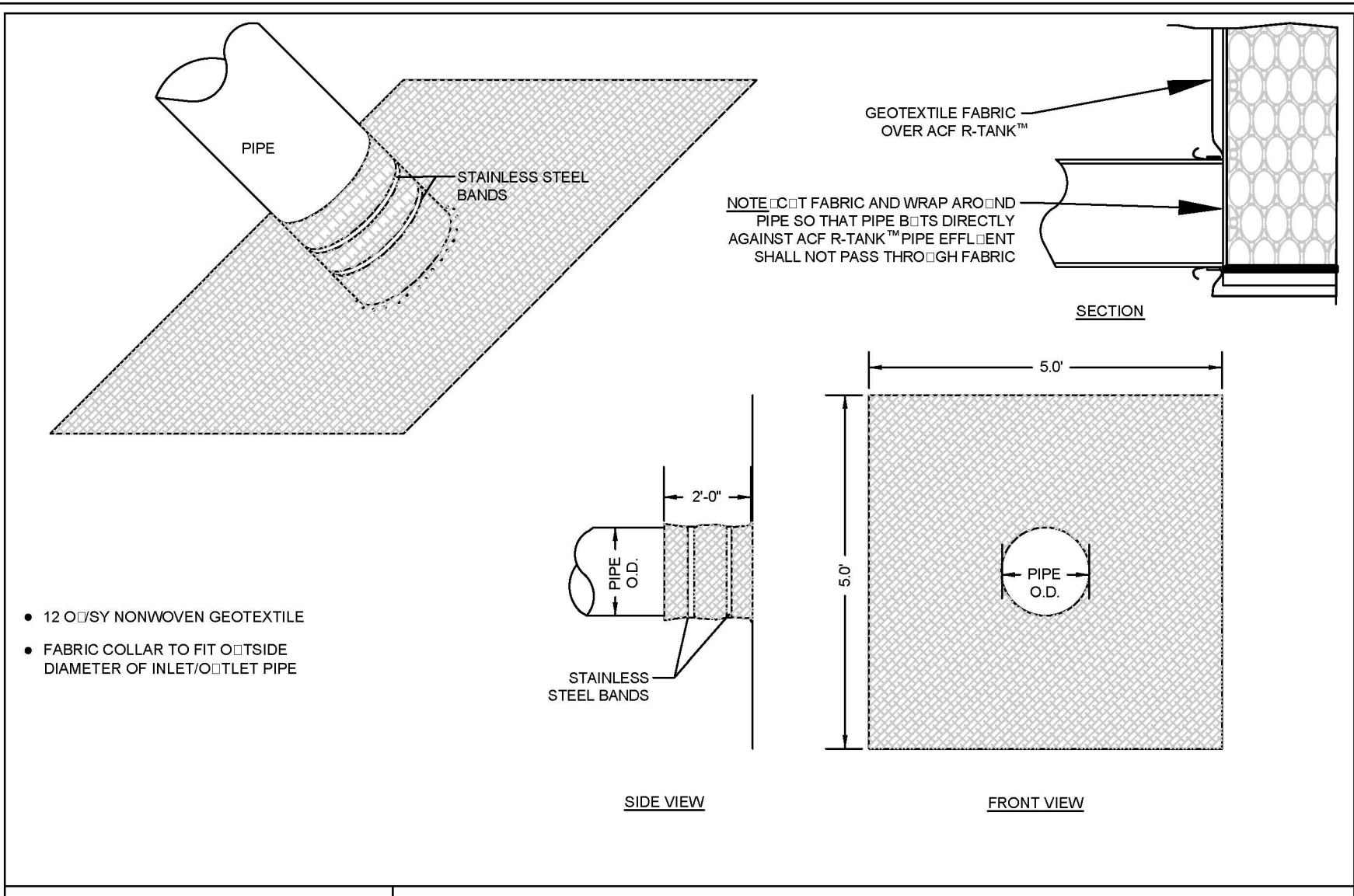
Date: _____ Permit # _____
Signed: _____



ACF ENVIRONMENTAL

R-TANK™ - H2O LOADS

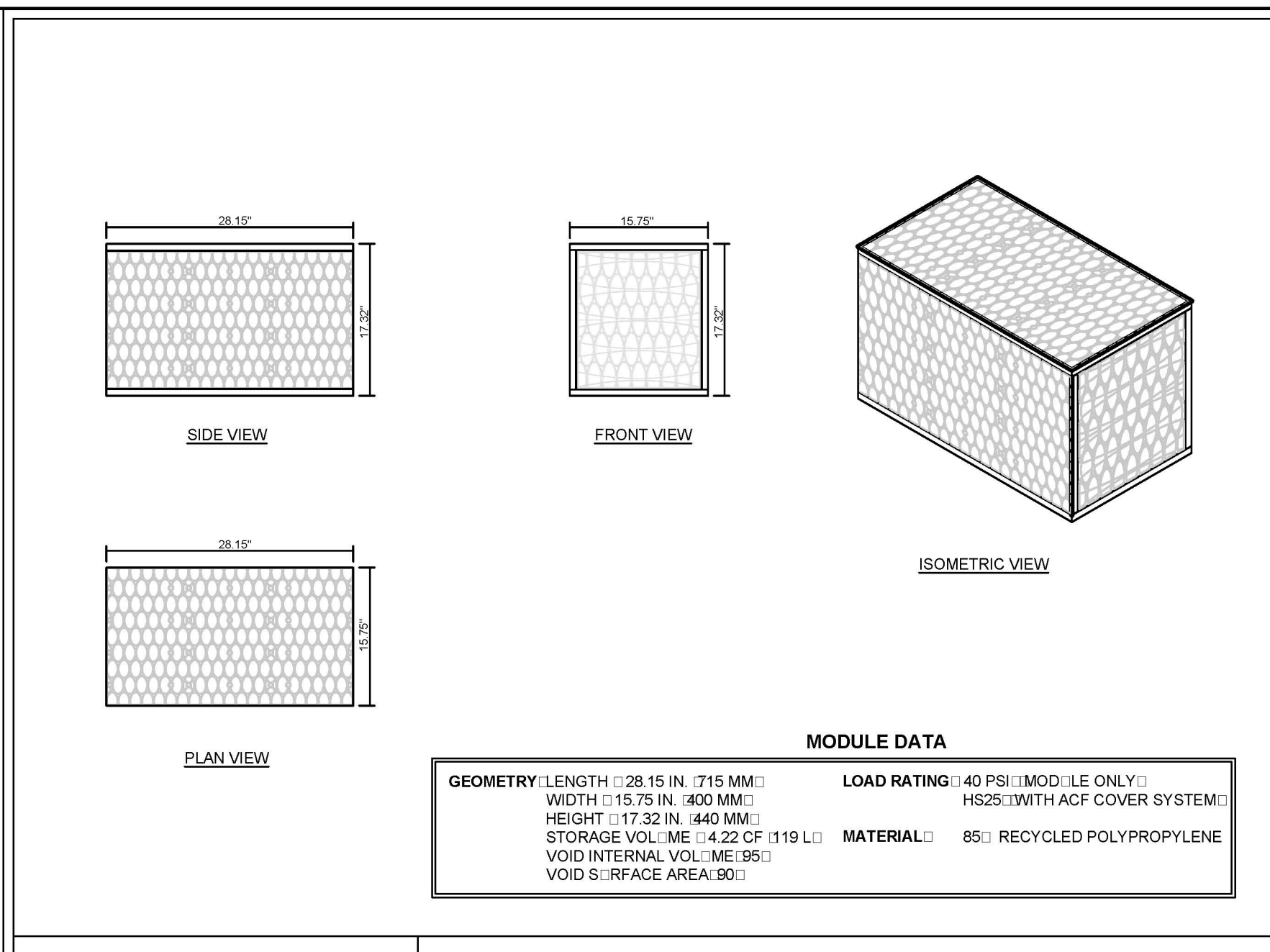
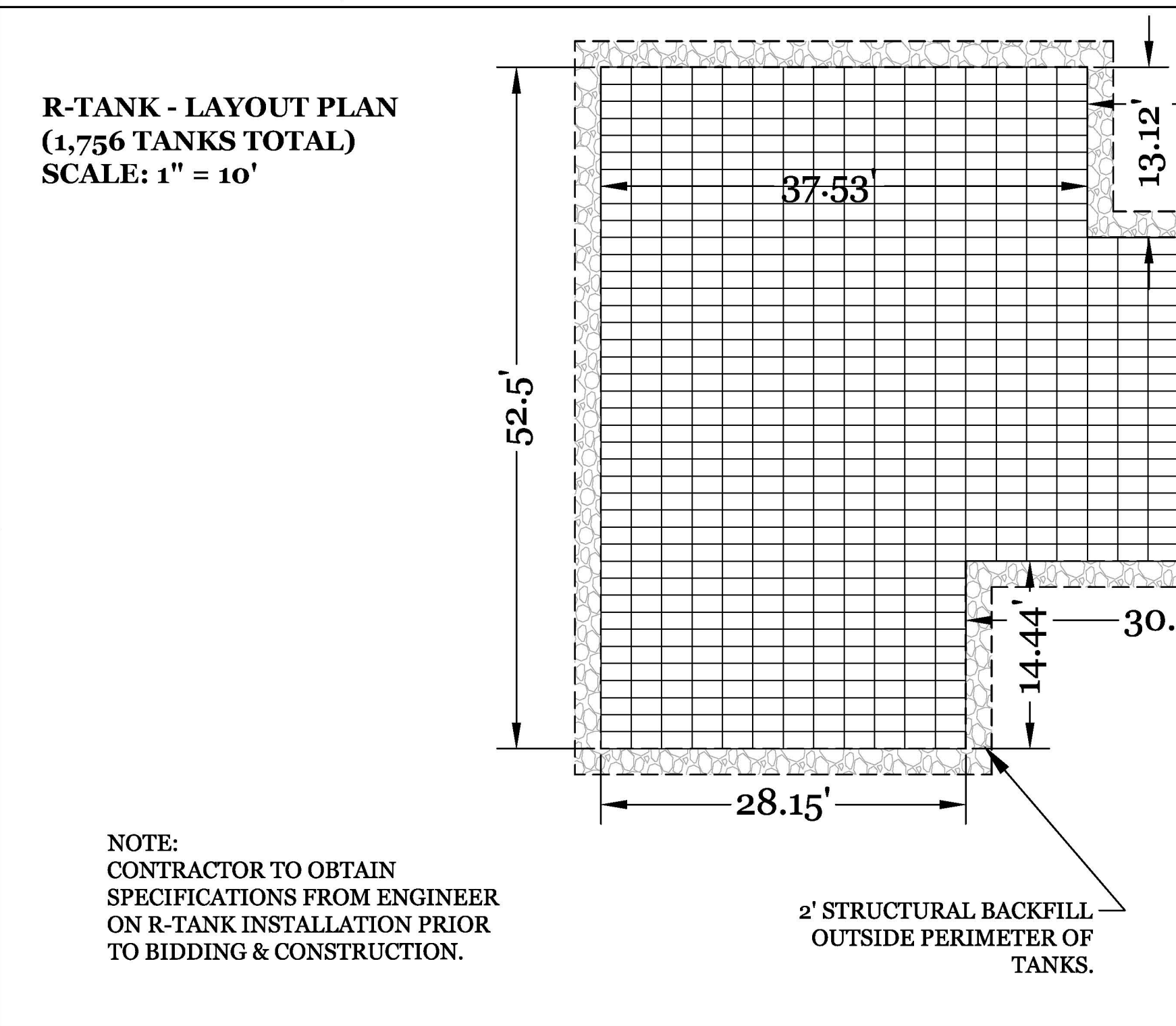
FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL (1-800-448-3636) www.acfenvironmental.com



ACF ENVIRONMENTAL

FABRIC PIPE BOOT FOR R-TANK™

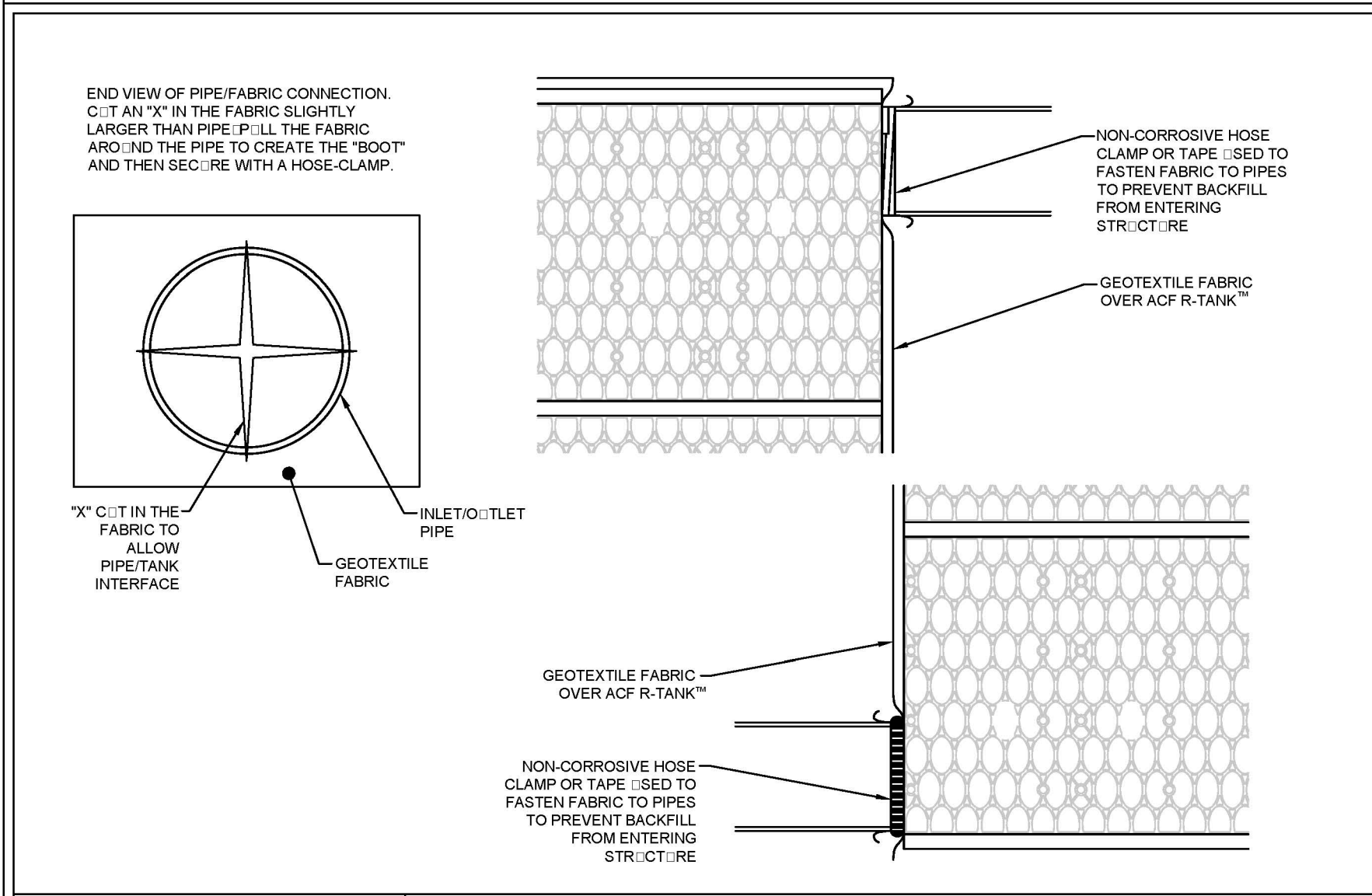
FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL (1-800-448-3636) www.acfenvironmental.com



ACF ENVIRONMENTAL

R-TANK™ - SINGLE MODULE

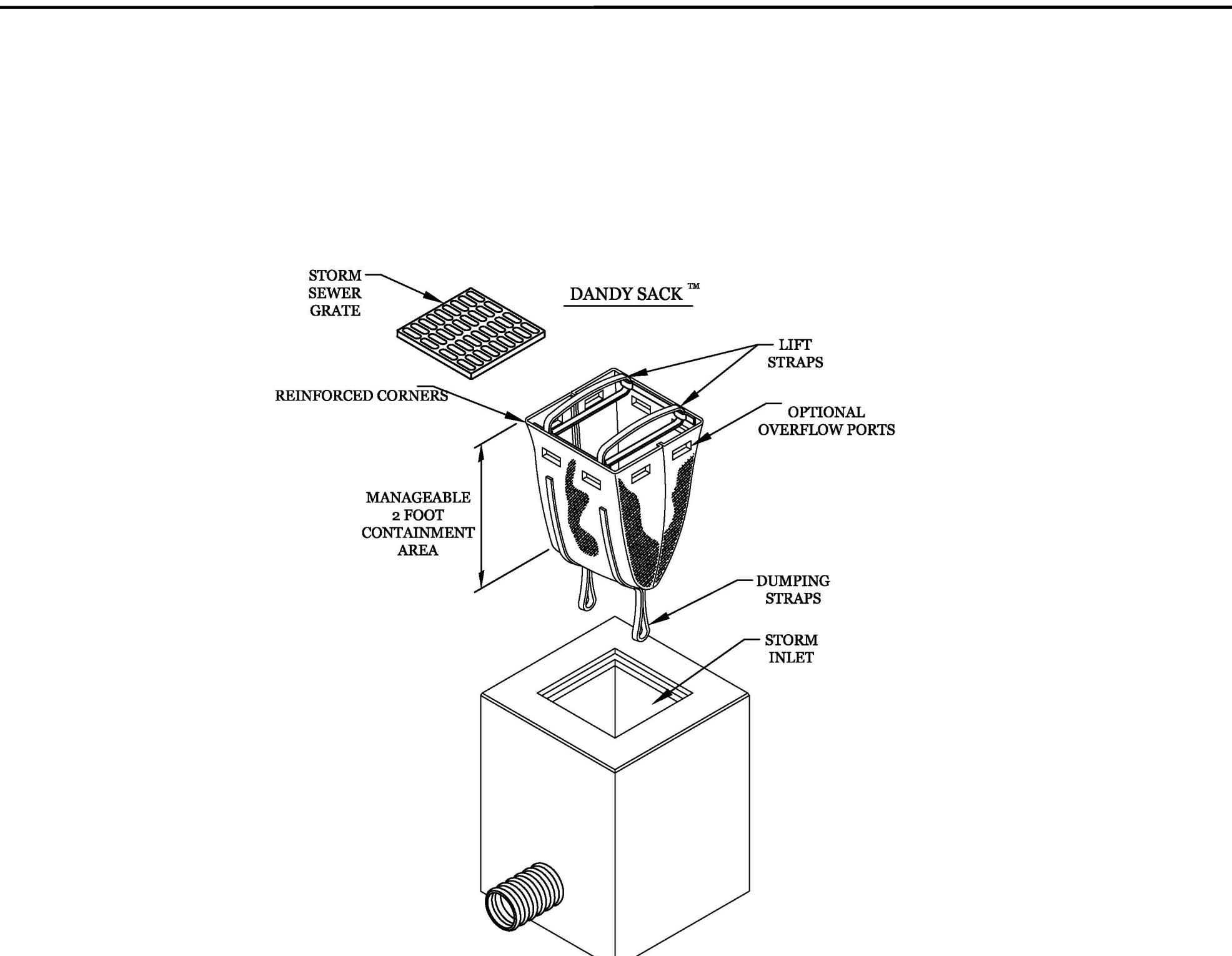
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ACF ENVIRONMENTAL

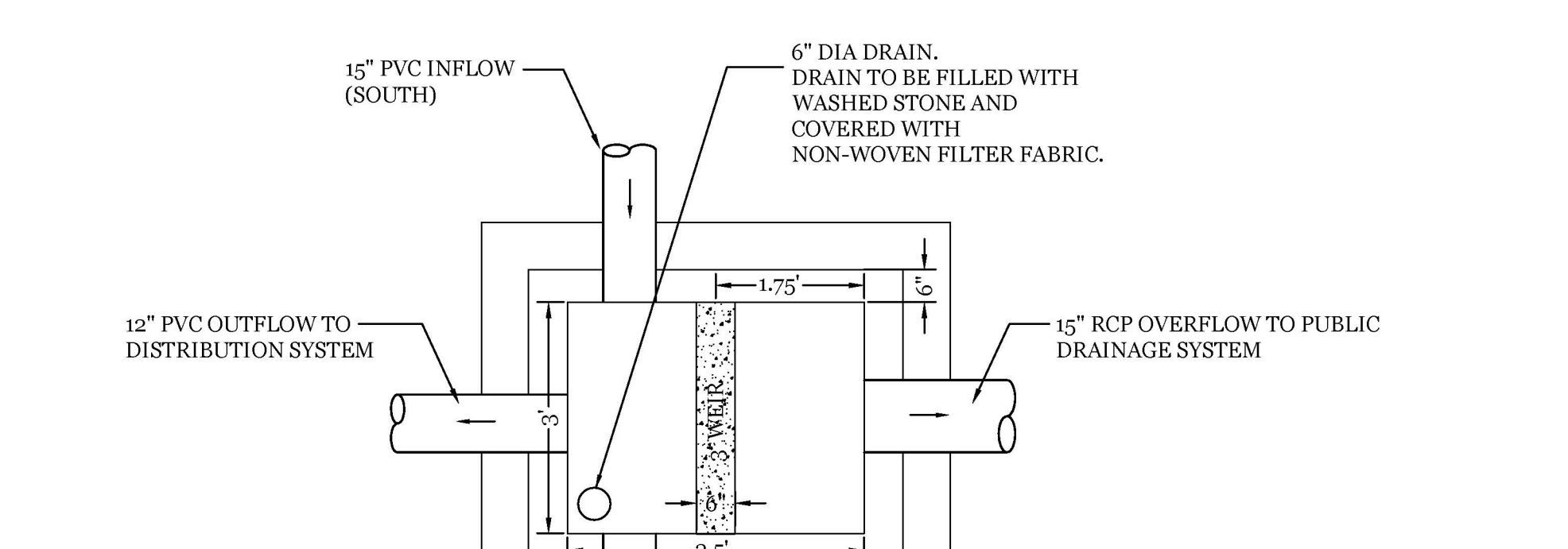
R-TANK™ TYPICAL TANK INLET/OUTLET DETAIL

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL (1-800-448-3636) www.acfenvironmental.com



DANDY SACK™ DETAIL

NTS



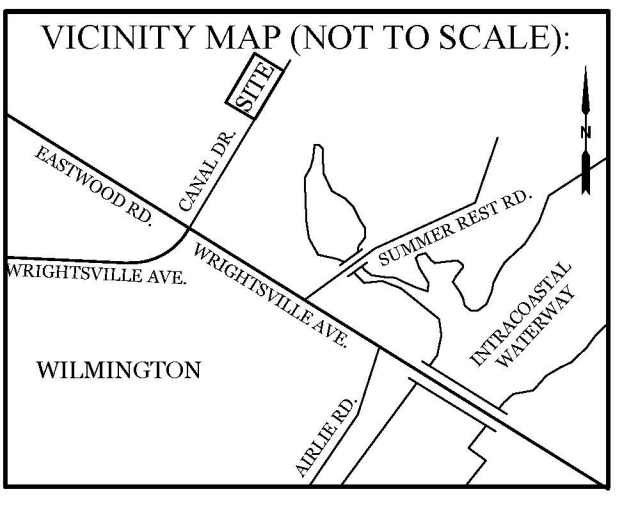
OVERFLOW STRUCTURE

NTS

Approved Construction Plan
Date: 10/19/20
2020031
SWP #: 2020031
PO, ES, BM, MB, CW

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

Date: _____ Permit # _____
Signed: _____



REVISIONS

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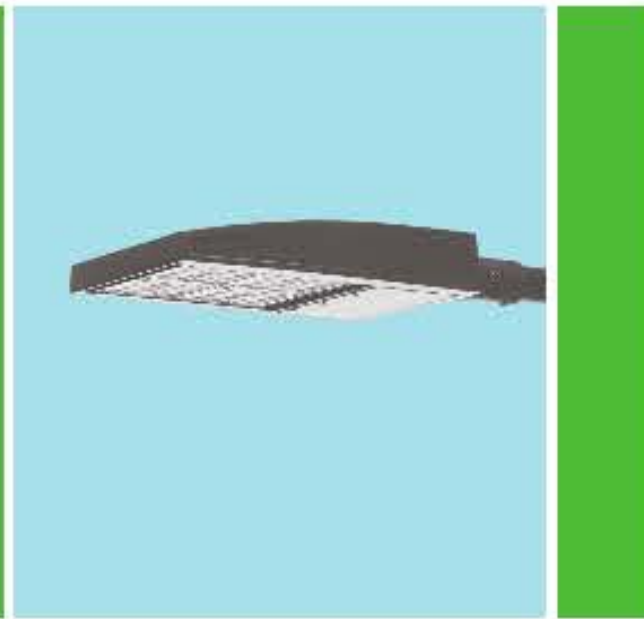
DETAILS FOR ATLANTIC MARINE CANAL ST. CITY OF WILMINGTON NEW HANOVER COUNTY, NC

Client Information area with a redacted name.

CLIENT INFORMATION:
Floyd Investments, LLC
PO Box 659
Wrightsville Beach, NC 28480
910-256-9911

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|-----------------|----------|-------------|-----------|
| DRAWN: | JAE | SHEET SIZE: | 24x36 |
| CHECKED: | CDC | DATE: | 9/25/2020 |
| APPROVED: | CDC | SCALE: | NTS |
| PROJECT NUMBER: | 2019-019 | | |
| DRAWING NUMBER: | C-5 | | |

Outdoor Lighting
Shoobox LED



The energy-efficient Shoobox LED combines a decorative, contemporary style with versatility and ample lighting effect that is perfect for streets, parking lots, commercial buildings and residential communities. The Shoobox LED provides excellent color rendition along with a controlled light pattern that reduces glare and keeps the light directed only where you want it. Available in black, dark bronze, gray or white with one to four fixtures per pole.

| | |
|------------------------|--|
| LED | 150, 220, 420, 530 watts |
| (Light Existing Drawn) | |
| Mounting heights | 25', 30', 35' |
| Colors | Black Bronze Gray White |
| Poles | Fiberglass (1 or 2 fixtures per pole) Decorative tapered metal Decorative square metal |

Note: 35' pole available in black or bronze only.

For additional information, visit us at duke-energy.com/OutdoorLighting or call us toll free at 866.769.6417.



Outdoor Lighting
Shoobox LED

Light source: LED (white)
Replacement for* LED Wattage 150 - 250-watt HPS and metal halide;
LED Wattage 205 - up to 400-watt metal halide;
LED Wattage 530 - 1,000-watt metal halide

Warm-up and restrike time: Instant on (no warm-up or restrike time)

| Wattage | BUG Rating | Light Pattern | Lumens | Color Temp |
|---------|------------|-------------------------------|--------|------------|
| LED 150 | B5 L0-G3 | IESNA Type V (circular) | 19180 | |
| LED 150 | B3-L0-G4 | IESNA Type IV (forward throw) | 18459 | |
| LED 150 | B2-L0-G3 | IESNA Type III (oval) | 19006 | |
| LED 220 | B5-L0-G3 | IESNA Type V (circular) | 20870 | |
| LED 220 | B3-L0-G4 | IESNA Type IV (forward throw) | 24390 | 4,000K |
| LED 220 | B2-L0-G4 | IESNA Type III (oval) | 25114 | |
| LED 420 | B5-L0-G3 | IESNA Type V (circular) | 48514 | |
| LED 420 | B3-L0-G5 | IESNA Type IV (forward throw) | 43763 | |
| LED 530 | B5-L0-G3 | IESNA Type V (circular) | 60296 | |
| LED 530 | B3-L0-G5 | IESNA Type IV (forward throw) | 51295 | |

*These are approximate replacement suggestions; actual conditions could be different.

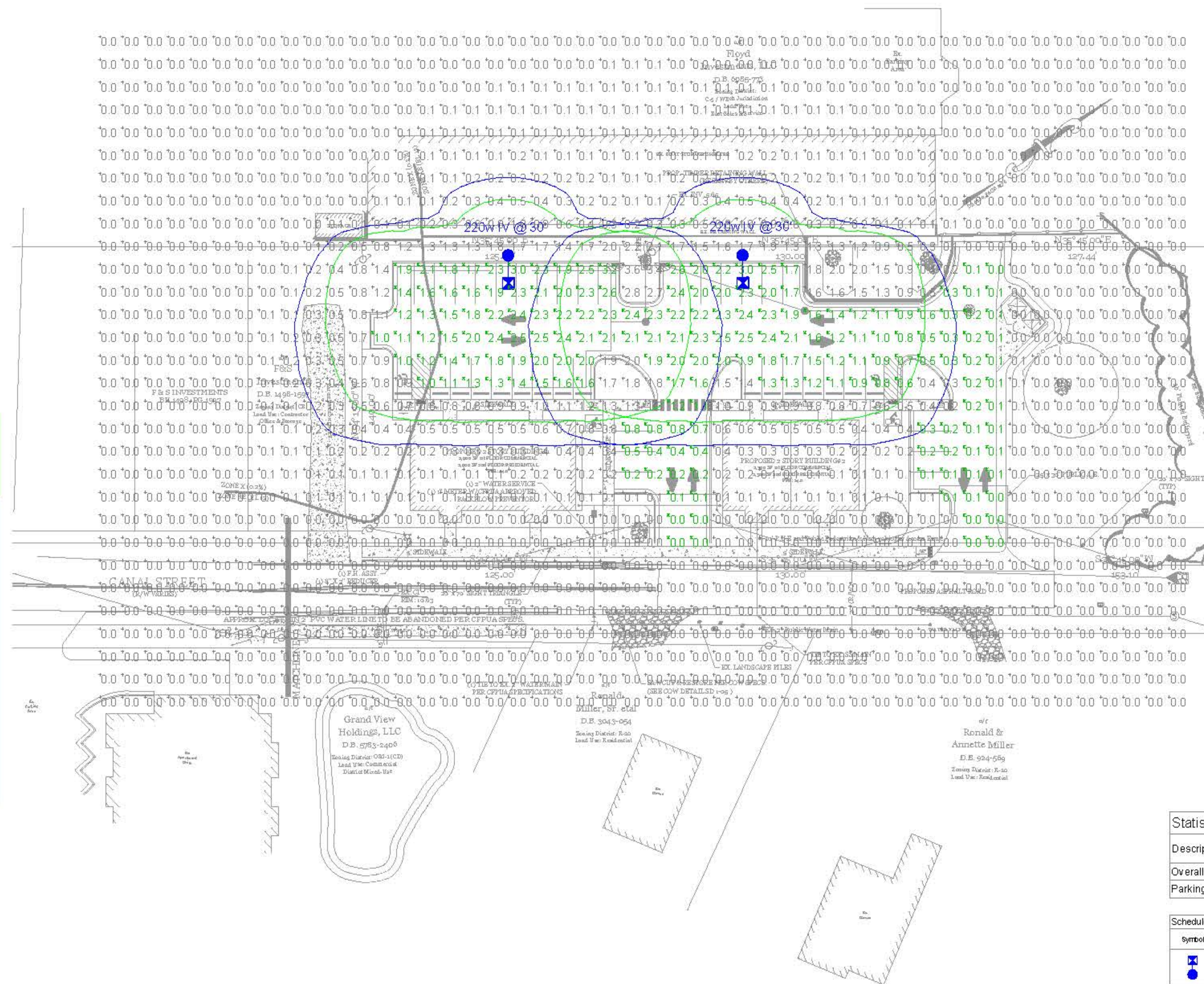
| Name | Mounting Height | Color |
|---------------------------------|-----------------|---|
| Round tapered decorative metal* | 35' | Black Bronze |
| Decorative square metal* | 25' and 30' | Black Bronze Gray White |
| Fiberglass | 30' | Black (1 or 2 fixtures per pole) Gray (1 or 2 fixtures per pole) |

| Features | Benefits |
|--|---|
| Little or no installation cost | Free up capital for other projects |
| Design services by lighting professionals included | Meets industry standards and lighting ordinance |
| Maintenance included | Eliminates high and unexpected repair bills |
| Electricity included | Less expensive than metered service |
| Warranty included | Worry-free |
| One low monthly cost on your electric bill | Convenience and savings for you |
| Turnkey operation | Provides hassle-free installation and service |
| Backed by over 40 years of experience | A name you can't trust today... and tomorrow |

*2" raised foundation available when required on metal poles only.

ISOFOOTCANDLE CURVES

FIXTURE: 220, GALLON
MOUNTING HEIGHT: 30 FT
LIGHT SOURCE: LED, 4000K, 70 CRI
LUMENS: 24390
PATTERN: TYPE IV, B3-L0-G4 (less light at or above 90 degrees)
NOTE: THE FOOTCANDLE READINGS BELOW ARE MAINTAINED AND HAVE BEEN DEPRECIATED FOR LED LUMEN DEPRECIATION AND LUMINAIRE DIRT DEPRECIATION FOR INITIAL FOOTCANDLES, DIVIDE THE READINGS BELOW BY .85.



Client: Luther & Jocelyn Hines
D.E. 1009-881
Zoning District: R-50
Lead Use: Residential

Client: Patrick & Kimberly Edm
D.E. 3854-04
Zoning District: R-50
Lead Use: Residential

Client: Adam & Ayshe Ault
D.E. 2779-288
Zoning District: R-50
Lead Use: Residential

Client: Ronald & Annette Miller
D.E. 924-059
Zoning District: R-50
Lead Use: Residential

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|--------------|--------|--------|--------|--------|---------|---------|
| Overall Grid | + | 0.3 fc | 3.6 fc | 0.0 fc | N/A | N/A |
| Parking | * | 1.3 fc | 3.2 fc | 0.0 fc | N/A | N/A |

| Symbol | Label | Quantity | Description | Number Lamps | Lumens Per Lamp | Light Loss Factor |
|--------|---------|----------|------------------------------------|--------------|-----------------|-------------------|
| ⊙ | 220w IV | 2 | LED 220w Shoobox - Type IV - 4000K | 64 | 361 | 0.85 |

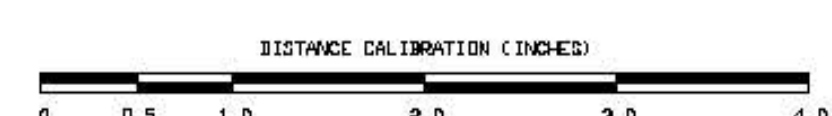
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2020031
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Disclaimer Statement Regarding Good Lighting Design Practice
This lighting layout is a deviation from a proposed Duke Energy Progress design. It may not meet the industry lighting standards recommended by the IESNA. This deviation is being requested by the customer and/or those in the municipal code approval process for this project. Duke Energy Progress assumes no responsibility for any resulting changes in the lighting level or uniformity from the design originally proposed.

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy Progress. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

Customer approval _____ Date _____



PROPRIETARY & CONFIDENTIAL
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| | |
|--------------------------------|----------------------------|
| ATLANTIC MARINE - CANAL STREET | |
| Wilmington, NC | |
| SITE LIGHTING PLAN | |
| Designed by | DEPLIGHTING SOLUTIONS |
| Reviewed by | N. Johnson Scale: 1" = 30' |
| Date | 07/30/2020 Size: "Arch.D" |
| Description | LED 220w Shoobox |
| Drawing No. | 20-c272B Sht. 1 OF 1 |