

Director of
Planning and Inspections
MEREDITH GUNS



Assistant Director of
Planning and Inspections
CAMERON RAY

Building Inspector
MARTY SHAW
CHARLES THUMAN

Senior Planner
RYAN LANG

Code Enforcement Officer
JORDAN BLYTHE

Zoning Administrator
DONNA ELLIOTT

THE TOWN OF KILL DEVIL HILLS
NORTH CAROLINA

PLANNING DEPARTMENT

February 15, 2022

Memorandum

To: Planning Board

From: Ryan Lang, Senior Planner 

Subject: **SITE PLAN REVIEW**—2011 S Croatan Highway — Proposed 2927 sq. ft. Drive Thru Carwash, 26 parking spaces, drive thru aisle and associated site modifications

Enclosed is a site plan review submittal by Enclosed is a site plan review submitted by Quible and Associates for the proposed construction of a new 2927 sq. ft. drive thru car wash, 26 parking spaces, drive thru aisle and associated site modifications. The proposed Car Wash is a permitted use in the Commercial Zone (N) *Retail Business (car wash)*. There are currently three separate parcels, all currently owned by the Town of Kill Devil Hills, that will be incorporated into the site. Attached you will find a commercial site plan application, owners authorization, proposed site plan, architectural plan, lighting plan, site narrative, stormwater calculations, wastewater commitment from KDHWTP, LLC, lighting plan, water meter sizing form, and applicant's response to Staff's Tech 1 comments.

The applicant has addressed most of staffs initial technical review comments; however, the following conditions remain to be addressed:

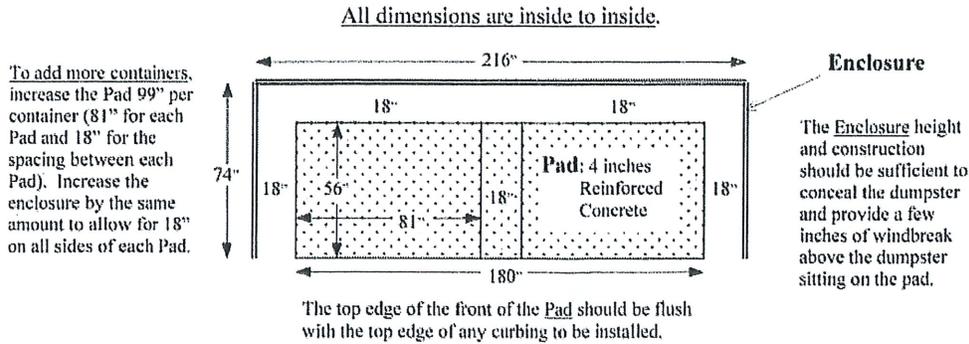
Planning

1. Sheet 8 "Utility Details" is not included in site plan.

Public Services

Solid Waste

- a. The dumpster detail on Sheet 7 needs to be revised. The dumpster screen is required have an 18" clear space on all sides of the required dumpster pad, see detail excerpt below.



- b. Truck turning detail demonstrates that the truck can service the dumpster site but it is a very tight fit. The interior entrance radius needs to be increased to help ensure that the refuse truck does not drive over the interior entrance curbs and potentially damage the curbs.

Streets/Drainage

Public Services has concerns with erosion potential on the east side of the driveway entrance where the street stormwater enters the roadside swale. Public Services request the engineer take a look at this and provide an erosion control measure to address this concern. Possible options may include a modified flume, sod installation in the area of the discharge point, etc. Public Services has concerns with construction parking and staging on Wrightsville Boulevard that could cause damage to the road side swale and recently paved street. We would like to see a parking deterrent such as construction fencing or other measure to keep contractor activities off the right-of-way in Wrightsville Boulevard that is currently identified as "No Parking" on the official traffic map.

Staff recommends that the Planning Board forward the plan to the Board of Commissioners with a favorable recommendation after the above listed conditions have been addressed.

Town of Kill Devil Hills Planning and Inspections Commercial Site Plan Review Application*



Applicant

Name: MPF Investment Company, LP
 Address: 102 W. Airstrip Rd
Kill Devil Hills, NC 27948
 Phone: 917-940-2894
 Fax: _____
 Cell: _____

Property Owner

Name: Town of Kill Devil Hills
 Address: PO Box 1719
Kill Devil Hills, NC 27948
 Phone: _____
 Fax: _____
 Cell: _____

Property Location

Address: 2011 S. Croatan Hwy & 2032 Wrightsville Blvd Lot, Block: Lot 2, 3, 4, 5, 6, PT 10; Blk 1
 Subdivision: Fresh Pond Beaches Pin#: 9893-1316-6228, 9893-1313-3272, 9893-1313-1395

Zoning District: Commercial LI-1 LI-2 OIR
 Total Lot Size: 43,500 Sq. Ft. Disturbed Area: 40,884 Sq. Ft.

Contractor

Company Name: _____ License Number: _____
 Name: _____ Phone: _____
 Address: _____ Cell: _____
 _____ Fax: _____
 Town Privilege License Number: _____

Construction Information

Type of Construction: _____
 Assembly Business Educational Factory/Industrial High Hazard
 Institutional Mercantile Residential Storage Utility/Misc.
 New Construction Addition Repair/Replace Remodel Other: _____

Square Footage Proposed:

Interior Space: 2,927 Sq. Ft. Covered Deck(s): 0 Sq. Ft. Storage: 0 Sq. Ft.
 Garage: 0 Sq. Ft. # of Bedrooms: N/A # of Open Deck(s): N/A
 Proposed Square Footage: 2,927 (UND) + Existing Square Footage: 0 = 2,927 Total Sq. Ft.
 % Impervious Coverage: 52.1 + % Pervious Coverage: 0 = 52.1 Total % Coverage
 # of Parking Spaces: Existing: 0 Proposed: 6 Total: 6
 Septic Tank Permit #: n/a Construction Type: Commercial

Estimated Construction Cost (including labor and materials): _____

Flood Information

Flood Zone: VE AE X Base Flood Elevation: n/a
 Proposed First Floor Elevation: 10' Sq. Ft Below Base Flood Elevation: n/a

**This form is designed as a guide for Commercial Site Plan Review.
 Additional plans and information will be required prior to building permits.*

Project Description

Construction of a drive through carwash ()
and associated utilities, parking, + walks

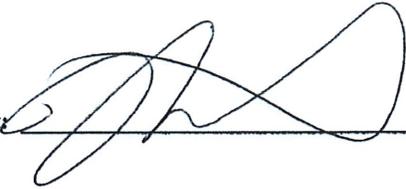
Required Site Plan Information Checklist:

- Permit Application (Completed)
- Site Plan Including the following
 - Submittal Requirements:
 - Vicinity Map
 - 15 Copies of Site Plan & Building Plan Elevations – Front, Side, and Rear
 - Tentative Health Department Approval (Commitment to serve)
 - Site Plan Development Review Fee Paid in Full
 - Existing Conditions:
 - Boundary of Entire Lot
 - Width and Location of Existing Right of Ways
 - Nature, Purpose, Locations, and Size of Existing Easements
 - Iron Pins and Concrete Monuments
 - Scale (1" = 50" Minimum)
 - North Arrow
 - Streets Including Width of Pavement
 - All Underground Utilities, Gas/Propane Below or Above Grade
 - Dare Co. Register of Deeds Map Book/Subdivision Ref.
 - Street Address
 - Present Recorded Owner, Developer, Engineer contacts
 - Adjacent Property Owners, Adj. Use & Zone
 - Corp. of Engineers Report / Wetland Study
 - NFIP Flood Zone (ref: Elevation Datum (NAVD 1988))
 - Minimum, Lot Size indicated
 - Proposed Improvements:
 - Zoning Use Compliance/Setbacks labeled
 - Landscaping Plan / Buffers / Screening (per section 153.073)
 - Lighting Plan - photometric showing point output (section 153.074)
 - Sedimentation & Erosion Control Plan including details
 - Disturbed Areas delineated & areas calculated
 - Location of Sidewalks on the Croatan Highway and Curbs
 - Location of Sewer Facilities and Drain field
 - Proposed Building Type, # of Floors and dimensions, floor area ratio, Height
 - Existing and Finished Grades of Entire Site
 - Storm Water Management Plan including calculations
 - N/A Total Units and Density per Acre (Multi-Family) or floor area ratio (in OIR)
 - Lot Size and Lot Coverage Calculation
 - Utility Plan indicating location & sizes of proposed improvements
 - Water Service Sizing Checklist Not yet known
 - Layout, Size and Number of Parking Spaces including handicap w/ setbacks (Each Space Numbered)
 - Fire Lane and Driveways
 - N/A Loading Zone (Commercial Sites)
 - N/A Mail Delivery Cluster Sites (Multi-Family)

- Proposed First Floor Elevation
- Dumpster Pad Location
- Proposed Sign Location
- Sight triangle shown
- Commercial Building Plans showing architectural compliance
- Plans to N.C.D.O.T. (if required)
- NC Engineer/Land Surveyor Seal on Site Plan

*** The items listed in the Site Plan portion of the above checklist represent information that must be indicated on any site plan submitted for review by the Kill Devil Hills Planning Department, Planning Board, and Board of Commissioners. All of the above required documents shall be submitted on or before the 3rd Tuesday of each month. Upon completion of review, the Planning Board shall transmit its recommendations to the Board of Commissioners. The Board of Commissioners shall review site plans on the second Monday of each month.

Signature of Applicant:



(Date)

1/13/22



TOWN OF KILL DEVIL HILLS, NORTH CAROLINA
OWNER AUTHORIZATION

I, Town of Kill Devil Hills, authorize Jeff Fabrikant
(Owner) (Agent/ Contractor)

to act as my agent for Site plan approval for proposed car wash during investigation period of contract
(Description)

located at 2011 South Croatan Highway, Kill Devil Hills, NC, 27948
(Address)

I understand and accept responsibility to comply with all regulations and required inspections.

I further understand and acknowledge that until a final inspection has been performed and approved and this project has received a Certificate of Occupancy/Completion (CO), no portion of this project is authorized for use or occupancy.

[Signature]
Signature of Owner

January 12 2022
Date

[Signature]
Signature of Agent

1/12/22
Date

P.O. Box 71125 Beltsville, MD 20813
Address

917 940 2894
Telephone # (s)

OWNER AUTHORIZATION IS REQUIRED AT INITIAL SUBMITTAL

Please check with you Insurance Agent prior to construction. Your project may affect your flood insurance rates!

PO Box 1719 • Kill Devil Hills, NC 27948
252-449-5318 • 252-441-4102 (fax) • www.kdhnc.com

**PURCHASE AND SALE AGREEMENT
For
ADDITIONAL SEWER CAPACITY**

WHEREAS, KDHWTP, LLC, (“KDHWTP” as “Seller”) is the owner and franchised operator of a wastewater treatment plant located in Kill Devil Hills, NC and

WHEREAS, in its treatment plant, KDHWTP currently has unused and available wastewater treatment capacity which is available for sale to existing and future customers, and

WHEREAS, MPF Investment Company and/or its assigns hereafter referred to as “Purchaser,” has a contract to purchase the property which is the subject of this agreement and located at 2011 South Croatan Highway in Kill Devil Hills, NC 27948, which Legal Description is Dare County PIN 989313133228, PIN 989313133272 and PIN 989313131395. There is currently 510 gpd allocated to the subject property and the Purchaser desires to purchase an additional 4000 gpd of the unused and available treatment capacity belonging to KDHWTP to develop the property, which is currently located within the Public Utilities Service Area. This Agreement is specifically contingent on the Purchaser taking title to the property referenced above or shall be considered void.

W I T N E S S E T H:

1. Purchase and Sale. Purchaser hereby agrees to purchase, and Seller agrees to sell, capacity in the KDHWTP treatment plant, such purchase to consist of the right to use an additional 4000 gallons per day (“gpd”) of the plant’s treatment capacity.

2. Purchase Price. The purchase price for this purchase of capacity is \$12.98 per gpd for a total purchase price of \$51,920.00. In addition to the purchase price the purchaser shall be required to pay, by separate check, an additional \$15,394.28 if required by the North Carolina Utilities Commission as the Gross-Up for Taxes on all Contributions in Aid of Construction for a total of \$67,314.28. Full payment shall be made within thirty (30) days after the Purchaser takes title to the property.

3. Connection to System; Succession. It shall be Purchaser’s responsibility to construct the necessary collection pipes and associated equipment, including any required lift stations and stand by generators, the location of which must be approved by the Public Utility, which are required to connect Purchaser’s premises with Seller’s existing plant facilities. Such construction shall meet standards prescribed by the North Carolina Department of Environmental Resources, Division of Environmental Quality and the Public Utility. Upon completion and upon request of the Seller all such pipes, lift stations, other equipment, easements and rights-of-way associated with the sewer lines and facilities, and any facility plans and specifications including as-built surveys shall be conveyed at no cost by the Purchaser to the Seller, or to any successor-in-interest of the Seller. Purchaser and Seller may convey their rights and obligations hereunder to third parties upon giving written notice to the other party.

4. Paragraph Headings. The underlined paragraph headings are for the convenience of the parties and are not part of the substance of this Agreement.

5. Interpretation. This Agreement shall be construed pursuant to the laws of the State of North Carolina.

6. **Entire Agreement.** This Agreement represents the entire Agreement between the Purchaser and Seller regarding the subject matter of this Agreement. All prior discussions and negotiations are merged in this Agreement.

7. **Dispute Resolution.** In the event of disagreement or dispute concerning any of the terms of this Agreement, the Purchaser and Seller shall first attempt to negotiate a resolution themselves. If that fails, the parties will petition the North Carolina Utilities Commission for a resolution of the dispute. No lawsuits shall be filed by either party.

8. **Amendment.** This Agreement may be amended, in writing, with such written Amendment to be signed by both Purchaser and Seller or their respective successor(s) in interest.

9. **Date of Agreement.** This Agreement is executed on or as of _____

SELLER

KDHWTP, LLC

By: _____
George E. Goodrich
Manager

PURCHASER

MPF Investment Company

By: _____
(Name)
(Title)



Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

P.O. Drawer 870
Kitty Hawk, NC 27949
Phone: 252-491-8147
Fax: 252-491-8146
web: quible.com

Town of Kill Devil Hills

FEB 10 2022

February 9, 2022

Ryan Lang
County of Dare
Town of Kill Devil Hills Planning and Inspections
102 Town Hall Drive
Kill Devil Hills, NC 27948

Planning & Inspections Department

Re: Caliber Carwash
Major Site Plan Resubmittal
2011 S. Croatan Highway
Kill Devil Hills, Dare County, NC

Mr. Lang,

Thank you for the TRC review comments for the Major Site Plan submittal of the above referenced project dated February 8, 2022. On behalf of MPF Investment Company, Quible & Associates, P.C., hereby submits, for your review and approval, the following documentation:

1. Fifteen (15) full size (24"x36") copies of the revised Plan Set;

Please find our responses listed below in *italics* to your review comments.

Planning – Ryan Lang (252-449-5315)

1. Sheet 8 "Utility Details" is not included in site plan. *Fifteen copies of this plan sheet is provided with this submittal package. It should be noted that review, approval, and permitting of the wastewater system is still ongoing with KDHWTP, LLC and the State NCDEQ office. Design of the wastewater pump station and associated appurtenances are subject to change based on comments received by these review agencies.*
2. Mechanical Equipment shall not be visible from any right-of-way and all mechanical equipment and appurtenances shall be screened per 153.186(D)(1) and (2). *Acknowledged. Screening is called out on Sheet 1 of 9.*

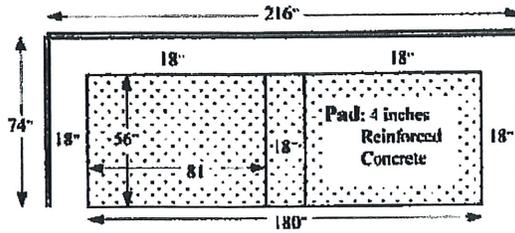
Public Services – Derek Dail (252-480-4085)

Solid Waste

1. The dumpster detail on Sheet 6 needs to be revised. The dumpster screen is required have an 18" clear space on all sides of the required dumpster pad, see detail excerpt below. *Acknowledged. Detail has been updated as requested.*

All dimensions are inside to inside.

To add more containers, increase the Pad 99" per container (81" for each Pad and 18" for the spacing between each Pad). Increase the enclosure by the same amount to allow for 18" on all sides of each Pad.



Enclosure

The Enclosure height and construction should be sufficient to conceal the dumpster and provide a few inches of windbreak above the dumpster sitting on the pad.

The top edge of the front of the Pad should be flush with the top edge of any curbing to be installed.

2. Truck turning detail demonstrates that the truck can service the dumpster site but it is a very tight fit. The interior entrance radius needs to be increased to help ensure that the refuse truck does not drive over the interior entrance curbs and potentially damage the curbs.
Acknowledged. The interior entrance curb has been changed to 8' radius. See Sheet 1 of 9.

Streets/Drainage

1. Public Services has concerns with erosion potential on the east side of the driveway entrance where the street stormwater enters the roadside swale. Public Services request the engineer take a look at this and provide an erosion control measure to address this concern. Possible options may include a modified flume, sod installation in the area of the discharge point, etc. *Sod is to be provided along the swale on the east side of the driveway entrance. See revised Sheet 5.*
2. Public Services has concerns with construction parking and staging on Wrightsville Boulevard that could cause damage to the road side swale and recently paved street. We would like to see a parking deterrent such as construction fencing or other measure to keep contractor activities off the right-of-way in Wrightsville Boulevard that is currently identified as "No Parking" on the official traffic map. *Acknowledged, Safety fencing is now shown within the right-of-way. See revised Sheet 5.*

Water System

1. Valve marker detail on Sheet 3 is not required for the water services. *Acknowledged. Detail has been removed.*
2. Anticipated water fees associated with the project are provided below and are based on the current rate schedule and proposed 2" service:

| | |
|-------------------------|--------------------|
| System Development Fee: | = \$13,900.00 |
| 2" Tap Fee | = \$ 4,315.00 |
| <u>Surety Deposit</u> | <u>= \$ 550.00</u> |
| Total | = \$18,765.00 |

Acknowledged

Sincerely,
Quible & Associates, P.C.

Cathleen M. Saunders, PE

Encl.: As stated

Cc: Jeff Fabrikant, MPF Investment Company, File

Town of Kill Devil Hills

Water Meter Service Sizing Forms – Water Customer data Sheet

FEB 02 2022

Customer: _____ Address: _____
 Building Address: 2011 S. Croatan Hwy, Kill Devil Hills, NC Zip Code: 27948
 Lot: _____ Block: _____ Section: _____ Subdivision: _____
 Type of Occupancy: _____

Planning & Inspections Department

| Fixture | Fixture Value 35 P.S.I. | = | # of Fixtures | = | Fixture Value |
|------------------------------------|-------------------------|---|---------------|---|---------------|
| Bathtub | 8 | = | | = | |
| Bedpan Washers | 10 | = | | = | |
| Combination Sink & Tray | 3 | = | | = | |
| Dental Unit | 1 | = | | = | |
| Dental Lavatory | 2 | = | | = | |
| Drinking Fountain – Cooler | 1 | = | | = | |
| Drinking Fountain – Public | 2 | = | | = | |
| Kitchen Sink – 1/2" Connection | 3 | = | | = | |
| Kitchen Sink – 3/4" Connection | 7 | = | | = | |
| Lavatory – 3/8" Connection | 2 | = | | = | |
| Lavatory – 1/2" connection | 4 | = | 1 | = | 4 |
| Laundry Tray – 1/2" Connection | 3 | = | | = | |
| Laundry Tray – 3/4" Connection | 7 | = | | = | |
| Shower Head (Shower Only) | 4 | = | | = | |
| Service Sink – 1/2" Connection | 3 | = | 1 | = | 3 |
| Service Sink – 3/4" Connection | 7 | = | | = | |
| Urinal – Pedestal Flush Valve | 35 | = | | = | |
| Urinal – Wall Flush Valve | 12 | = | | = | |
| Urinal – Trough (2 ft. unit) | 2 | = | | = | |
| Wash Sink (each set of faucets) | 4 | = | | = | |
| Water Closet – Flush Valve | 35 | = | | = | |
| Water Closet – Tank Type | 3 | = | 1 | = | 3 |
| Dishwasher – 1/2" Connection | 5 | = | | = | |
| Dishwasher – 3/4" Connection | 10 | = | | = | |
| Washing Machine – 1/2" Connection | 5 | = | | = | |
| Washing Machine – 3/4" Connection | 12 | = | 1 | = | 12 |
| Washing Machine - 1" Connection | 25 | = | | = | |
| Hose Connection (Wash Down) – 1/2" | 6 | = | 2 | = | 12 |
| Hose Connection (Wash Down) – 3/4" | 10 | = | | = | |
| Hose (50ft Wash Down) – 1/2" | 6 | = | | = | |
| Hose (50ft Wash Down) 5/8" | 9 | = | | = | |
| Hose (50ft Wash Down) – 3/4" | 12 | = | | = | |

| | |
|-------------------------------|-----------|
| COMBINED FIXTURE TOTAL | 34 |
|-------------------------------|-----------|

| | | | |
|---|------------------|----------|--|
| Swimming Pool – size/water Connection _____ | Total GPM | = | |
| Ornamental Sprinkler - # of Heads _____ | Total GPM | = | |
| Fire Suppression Sprinklers - # of Heads _____ | Total GPM | = | |
| Other uses such as Saunas, Whirlpools, Etc.: | Total GPM | = | |
| | Total GPM | = | |
| Customer Peak Demand from sizing book by Press. | Total GPM | = | |
| TOTAL FIXTURE DEMAND IN GALLONS PER MINUTE | Total GPM | = | |

NOTE: THIS FORM MUST BE COMPLETED BEFORE SERVICE IS PURCHASED!

Person Completing Form _____

Date _____

PECO Carwash - Water Distribution

| | Equipment/Application | Water Type | Water Flow | Fresh Water | Reclaim Water | RO Reject |
|-----------------|----------------------------------|------------|------------|-------------|---------------|-----------|
| 1 | Prep Unit | Reclaim | 4 | | 2.5 | |
| 2 | Foaming Bath Arch | RO Reject | 2 | | | 1 |
| 3 | MRF CTA #1 | RO Reject | 1 | | | 0.25 |
| 4 | Bumper Prep Manifold | Reclaim | 6 | | 4 | |
| 5 | MRF CTA #2 | RO Reject | 1 | | | 0.25 |
| 6 | Top Brush - Soap & Water | RO Reject | 6 | | | 4 |
| 7 | Tire Brush - Water | Reclaim | 6 | | 6 | |
| 8 | Wash Around Brush - Soap & Water | Reclaim | 6 | | 6 | |
| 9 | Full Side Washer - Soap & Water | Reclaim | 6 | | 6 | |
| 10 | Tire Brush - Water | Reclaim | 6 | | 6 | |
| 11 | Under Carriage | Reclaim | 12 | | 12 | |
| 12 | Full Sider Washer - Soap & Water | Reclaim | 6 | | 6 | |
| 13 | High Pressure Rinse - Sides | Reclaim | 35 | | 25 | |
| 14 | High Pressure Rinse - Top | Reclaim | 15 | | 20 | |
| 15 | Triple Foam - Wax & water | RO Reject | 1.5 | | | 0.75 |
| 16 | Diagonal Curtain - Water | Reclaim | 6 | | 4 | |
| 17 | Rocker Washer - Water | Reclaim | 6 | | 5 | |
| 18 | Rinse Water | Fresh | 4 | 4 | | |
| 19 | Sealer Wax/Drying Agent | RO Reject | 4 | | | 2.5 |
| 20 | SpotFree Rinse | Fresh | 4 | 4 | | |
| TOTAL (Gallons) | | | | 8 | 102.5 | 8.75 |

| Vehicle Washing Statistics | |
|--------------------------------------|-----|
| Vehicles Washed - Estimated Per Hour | 70 |
| Vehicles Washed - Estimated Per Day | 500 |

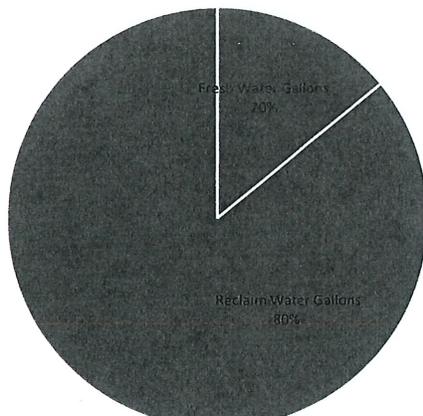
| Water Statistics | |
|---|--------|
| Evaporation Carry-out (Gallons/Car) | 6 |
| Fresh Water (Gallons/Car) | 16.75 |
| Reclaim Water (Gallons/Car) | 102.5 |
| Total Gallons/Car | 119.25 |
| Flow Through Settling Tanks (Gallons/Car) | 113.25 |
| Overflow Discharge to Sewer (Gallons/Car) | 10.75 |
| Reclaim Percent | 86.0% |
| Fresh Water Percent | 14.0% |

| Reclaim Water Settling Time | |
|--|-------|
| Settling Capacity For Recycled Water (Gallons) | 7500 |
| Setting Time In Tank (Minutes) | 66.23 |

| Effluent Water Settling Time | | |
|---|---|---------------|
| MAIN TANKING | Settling Capacity Prior to Overflow to Sand/Oil (Gallons) | 3750 |
| | Total Flow Through Reclaim Tanking (GPM) | 132.13 |
| | Time in Tank Prior To Overflow to Sand/Oil (Minutes) | 28.4 |
| SAND/OIL SEPARATOR | Settling Capacity of Sand/Oil (Gallons) | 1500 |
| | Total Flow Through Sand/Oil Separator(GPM) | 12.54 |
| | Time in Sand Oil Separator prior to overflow to Sewer (Minutes) | 119.60 |
| Combined Effluent Setting Time (Minutes) | | 147.98 |

| Effluent Discharge | |
|---------------------------|-------|
| Average Water Flow (GPM) | 12.54 |
| Average Per Day (Gallons) | 5,375 |

Water Distribution

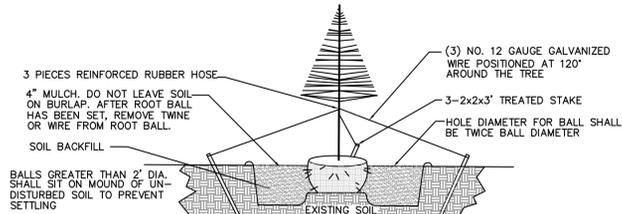


TREE PLANTING SUMMARY

| REQUIRED | | PROVIDED | |
|----------|--------------------|------------|-----------|
| 30 | BALD CYPRESS | 50' - 100' | 20' - 30' |
| 42 | GRAPE MYRTLE | 15' - 30' | 6' - 15' |
| 27 | GLOSSY ABELIA | 3' - 6' | 3' - 6' |
| 42 | DWARF YAUPON HOLLY | 3' - 5' | 3' - 6' |
| 20 | PINK MUHLY GRASS | 3' - 5' | 3' |

| SYMBOL | QUANTITY | COMMON NAME | HEIGHT | SPREAD | MIN. SIZE | PLANTING |
|----------|----------|--------------------|------------|-----------|-----------|----------|
| (Symbol) | 30 | BALD CYPRESS | 50' - 100' | 20' - 30' | 2" CAL. | 8' HT. |
| (Symbol) | 42 | GRAPE MYRTLE | 15' - 30' | 6' - 15' | 1.5" CAL. | 6' HT. |
| (Symbol) | 27 | GLOSSY ABELIA | 3' - 6' | 3' - 6' | | 3 GALLON |
| (Symbol) | 42 | DWARF YAUPON HOLLY | 3' - 5' | 3' - 6' | | 3 GALLON |
| (Symbol) | 20 | PINK MUHLY GRASS | 3' - 5' | 3' | | 1.5' HT |

* ORNAMENTAL GRASS/SHRUB SPECIES MAY BE SUBSTITUTED WITH APPROVED SPECIES IDENTIFIED BY THE TOWN OF KILL DEVIL HILLS.



TREE PLANTING DETAIL
N.T.S.

ZONED: COMMERCIAL
USE: SINGLE FAMILY DWELLING

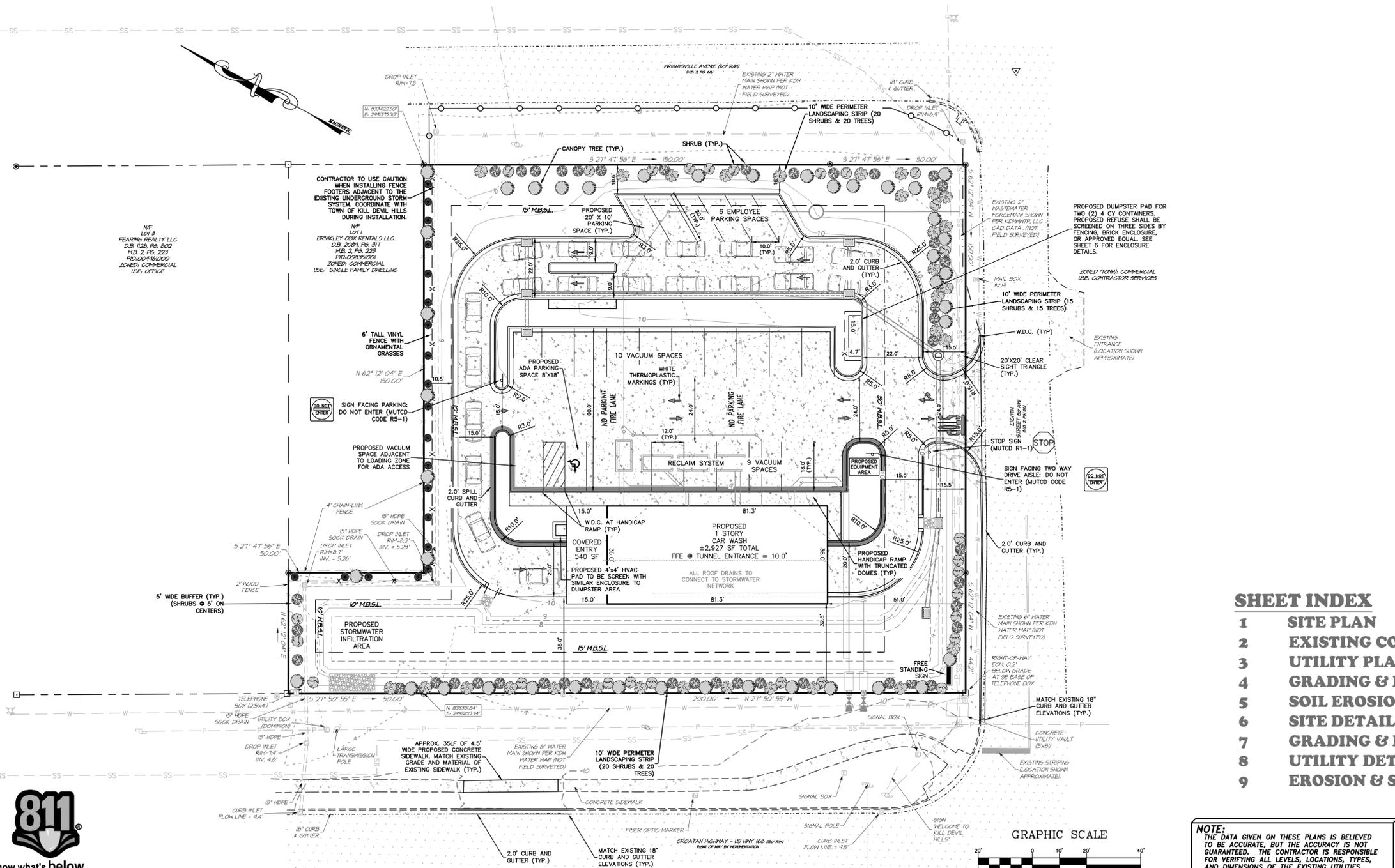
LEGEND

- (Symbol) EXISTING ASPHALT PAVEMENT
- (Symbol) EX. IRON PIPE, EIP
- (Symbol) EX. IRON ROD, EIR
- (Symbol) EX. TELEPHONE PEDESTAL
- (Symbol) EX. ELECTRICAL BOX
- (Symbol) EX. UTILITY POLE
- (Symbol) EX. LIGHT POLE
- (Symbol) EX. WATER LINE
- (Symbol) PROPOSED ASPHALT PAVEMENT
- (Symbol) PROPOSED CONCRETE PAVEMENT
- (Symbol) PROPOSED GRAVEL
- (Symbol) PROPOSED STORM PIPE
- (Symbol) PROPOSED FIRE HYDRANT
- (Symbol) PROPOSED BENDS & TEES
- (Symbol) PROPOSED WATERLINE
- (Symbol) PROPOSED SANITARY SEWER
- (Symbol) PROPOSED TANK
- (Symbol) PROPOSED CLEAN OUT



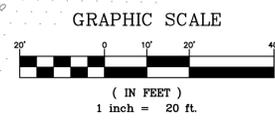
VICINITY MAP
(KILL DEVIL HILLS)
N.T.S.

- NOTES:**
- OWNER: TOWN OF KILL DEVIL HILLS
P.O. BOX 1719
KILL DEVIL HILLS, NC 27948
 - APPLICANT: MPF INVESTMENT COMPANY
102 W. AIRSTRIP RD.
KITTY HAWK, NC 27948
 - ENGINEER: QUILBE & ASSOCIATES, P.C.
8466 CARATOKE HIGHWAY
POWELLS POINT, NC 27966
 - PIN#: 9893-1313-3228
9893-1313-1395
9893-1313-3272
 - RECORDED REFERENCE: DB 1641, PG 0063 & DB 1641, PG 0062; PL 2, SL 68
 - PROPERTY ZONED: COMMERCIAL
PROPOSED USE: CAR WASH
PERMITTED USE: (N) RETAIL BUSINESS; CAR WASH
 - PARCEL AREA: 41,080 SQ.FT. - 0.94 acres
 - LOT COVERAGE:
PROPOSED BUILDING (INCLUDING COVERED ENTRANCE) = 3467.9 SQ.FT.
CONCRETE WALK = 676.4 SQ.FT.
ASPHALT/CONCRETE DRIVE (INCLUDING DUMPSTER PAD & HVAC) = 17,693.6 SQ.FT.
TOTAL PROPOSED COVERAGE = 21,837.9 SQ.FT. (53.1%)
TOTAL COVERAGE ALLOWED = 26,702.0 SQ.FT. (65.0%)
 - PARKING CALCULATIONS:
REQUIRED: 1 SPACE PER 1 EMPLOYEE x 3 EMPLOYEES = 3 SPACES
PROVIDED: 6 SPACES
TOTAL = 3 SPACES
ADA SPACES REQUIRED: 1 SPACE
ADA SPACES PROVIDED: 1 SPACE (1 VAN ACCESSIBLE)
 - STACKING REQUIRED:
5X WASHING OPERATION CAPACITY
5 X 4 CARS = 20 STACKING SPACES
PROVIDED: 20 STACKING SPACES
 - WASTEWATER CALCULATIONS:
PER NCAC 02T 1,200 GAL/BAY REQUIRED. ANTICIPATED WASTEWATER EFFLUENT 4,500 GPD (80% OF WATER IS RECLAIMED).
 - PROPERTY IS LOCATED IN NFIP FLOOD ZONE X SHOWN AND SUBJECT TO CHANGES. BASED ON COMMUNITY CID NO. 37535; PANEL 9893; SUFFIX K. (MAP NUMBER 3720989300K) EFFECTIVE DATE: 06/19/2020. RFFE = 8'. ALL ELEVATIONS REFERENCED TO NAVD 88.
 - BOUNDARY INFORMATION SHOWN BASED UPON PL 2, SL 68 AND T.A. STOKELY, PLLC 10/07/2021.
 - TOPOGRAPHIC INFORMATION SHOWN BASED UPON FIELD SURVEY BY T.A.STOKELY, DATED 10/07/2021.
 - PROJECT SCOPE: THIS PLAN PROPOSES THE CONSTRUCTION OF A DRIVE THROUGH CAR WASH AND ASSOCIATED UTILITIES, PARKING AND WALKS.
 - BUILDING MAXIMUM HEIGHT = 50'
PROPOSED HEIGHT = 31.5'



SHEET INDEX

- 1 SITE PLAN
- 2 EXISTING CONDITIONS & DEMOLITION
- 3 UTILITY PLAN
- 4 GRADING & DRAINAGE PLAN
- 5 SOIL EROSION & SEDIMENTATION CONTROL PLAN
- 6 SITE DETAILS
- 7 GRADING & DRAINAGE DETAILS
- 8 UTILITY DETAILS
- 9 EROSION & SEDIMENT CONTROL DETAILS



NOTE:
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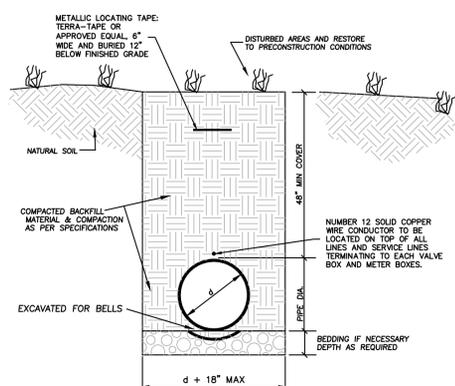
REVISIONS

| NO. | DATE | REVISIONS |
|-----|----------|---------------------------|
| 1 | 02/02/22 | REVISED PER TOWN COMMENTS |
| 2 | 02/09/22 | REVISED PER TOWN COMMENTS |

SITE PLAN
CAR WASH
2011 S CROATAN HIGHWAY
DARE NORTH CAROLINA

PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22
SHEET NO. 1
OF 9 SHEETS

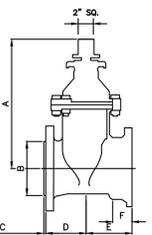




TRENCH SECTION
N.T.S.

| DIMENSION | VALVE SIZE | | | |
|----------------------|------------|--------|---------|--------|
| | 4" | 6" | 8" | 10" |
| A | 13-3/8 | 16-3/4 | 20-3/16 | 24-1/8 |
| B +0.00/-0.31 | 4.984 | 6.984 | 8.984 | 10.984 |
| C ± 0.18 | .188 | .250 | .250 | .250 |
| D (FLANGED END) | 4-1/2 | 5-1/4 | 5-3/4 | 6-1/2 |
| E (M.J. END) | 5-5/8 | 6 | 6-7/8 | 7-3/8 |
| F | 2-1/2 | 2-1/2 | 2-1/2 | 2-1/2 |
| NO. OF TURNS TO OPEN | 13 | 18 | 32 | 38 |
| MAX. CUTTER DIAMETER | 3-3/4 | 5-3/4 | 7-3/4 | 9-3/4 |

- NOTES:**
- DO NOT EXCEED THE RECOMMENDED TAPPING MACHINE CUTTER DIAMETER LISTED IN THE TABLE. FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE SEALING SURFACES OF THE VALVE.
 - VALVE MEETS OR EXCEEDS APPLICABLE REQUIREMENTS OF ANSI/AWWA C509 WITH WALL THICKNESS WHICH EXCEEDS THE MINIMUM REQUIREMENTS OF ANSI/AWWA C153/A21.53.
 - UL LISTED FM APPROVED. VALVE MUST BE ORDERED IN CONFIGURATIONS WHICH ARE UL LISTED AND FM APPROVED AND HAVE PERMANENT UL/FM MARKINGS.
 - 250 PSI RATED WORKING PRESSURE.
 - FUSION BONDED EPOXY COATING MEETS OR EXCEEDS REQUIREMENTS OF ANMA C550.
 - MECHANICAL JOINT ENDS ARE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11.
 - BOLT PATTERNS OF FLANGED ENDS ARE IN ACCORDANCE WITH ANSI/AWWA C110/A21.10 (ANSI B16.1, CLASS 125).
 - RAISED PILE DIMENSIONS OF FLANGED ENDS ON TAPPING VALVES ARE IN ACCORDANCE WITH MSS SP-60.



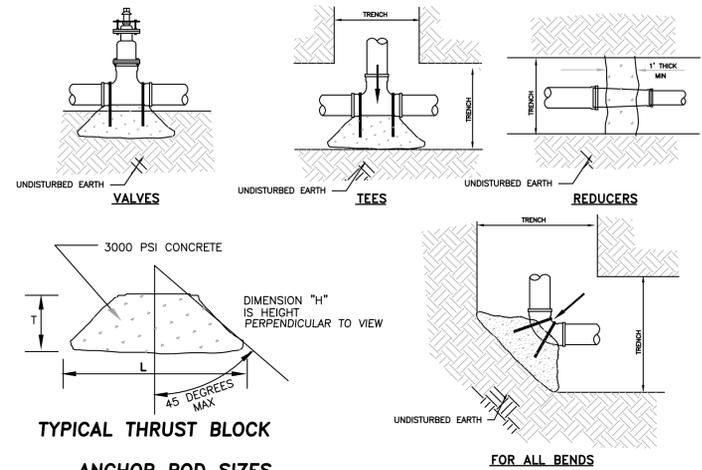
TYPICAL TAPPING VALVE DETAIL
AMERICAN FLOW CONTROL SERIES 2500 RESILIENT WEDGE VALVE

| NOMINAL PIPE SIZE | SLEEVE O.D. RANGE (INCHES) | CATALOG NUMBER | | APPROX. WEIGHT (LBS) |
|-------------------|----------------------------|----------------|----------------|----------------------|
| | | SLEEVE NUMBER | BY BRANCH SIZE | |
| 4" | 4.50 - 4.80 | 88T - 480 | X 1\"/> | |
| | 4.70 - 4.80 | 88T - 480 | X 1\"/> | |
| | 4.80 - 5.00 | 88T - 500 | X 1\"/> | |
| 6" | 6.00 - 7.00 | 88T - 700 | X 1\"/> | |
| | 7.10 - 7.50 | 88T - 750 | X 1\"/> | |
| | 7.60 - 8.00 | 88T - 800 | X 1\"/> | |
| 8" | 8.00 - 8.25 | 88T - 825 | X 1\"/> | |
| | 8.25 - 8.50 | 88T - 850 | X 1\"/> | |
| | 8.50 - 10.50 | 88T - 1050 | X 1\"/> | |

TYPICAL TAPPING SLEEVE DETAIL
ROMAC INDUSTRIES, INC. "SS" STAINLESS STEEL TAPPING SLEEVE

| PIPE SIZE | FITTING | L (FT.) | H (FT.) | T (FT.) |
|-----------|--------------|---------|---------|---------|
| 2 - 3 - 4 | TEE OR BLOCK | 2.0 | 1.0 | 1.0 |
| 2 - 3 - 4 | 90 | 2.0 | 1.5 | 1.0 |
| 2 - 3 - 4 | 45 | 1.5 | 1.0 | 1.0 |
| 2 - 3 - 4 | 22 1/2 | 1.0 | 1.0 | 1.0 |
| 6 | TEE OR BLOCK | 2.0 | 2.0 | 1.0 |
| 6 | 90 | 3.0 | 2.0 | 1.5 |
| 6 | 45 | 2.0 | 1.5 | 1.0 |
| 6 | 22 1/2 | 1.5 | 1.0 | 1.0 |

NOTE: THIS TABLE BASED ON WATER PRESSURE 150 PSI SOIL BRG. 1500 #/SQ. FT. TO 2000 #/SQ. FT.



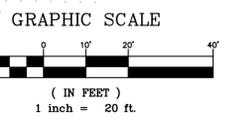
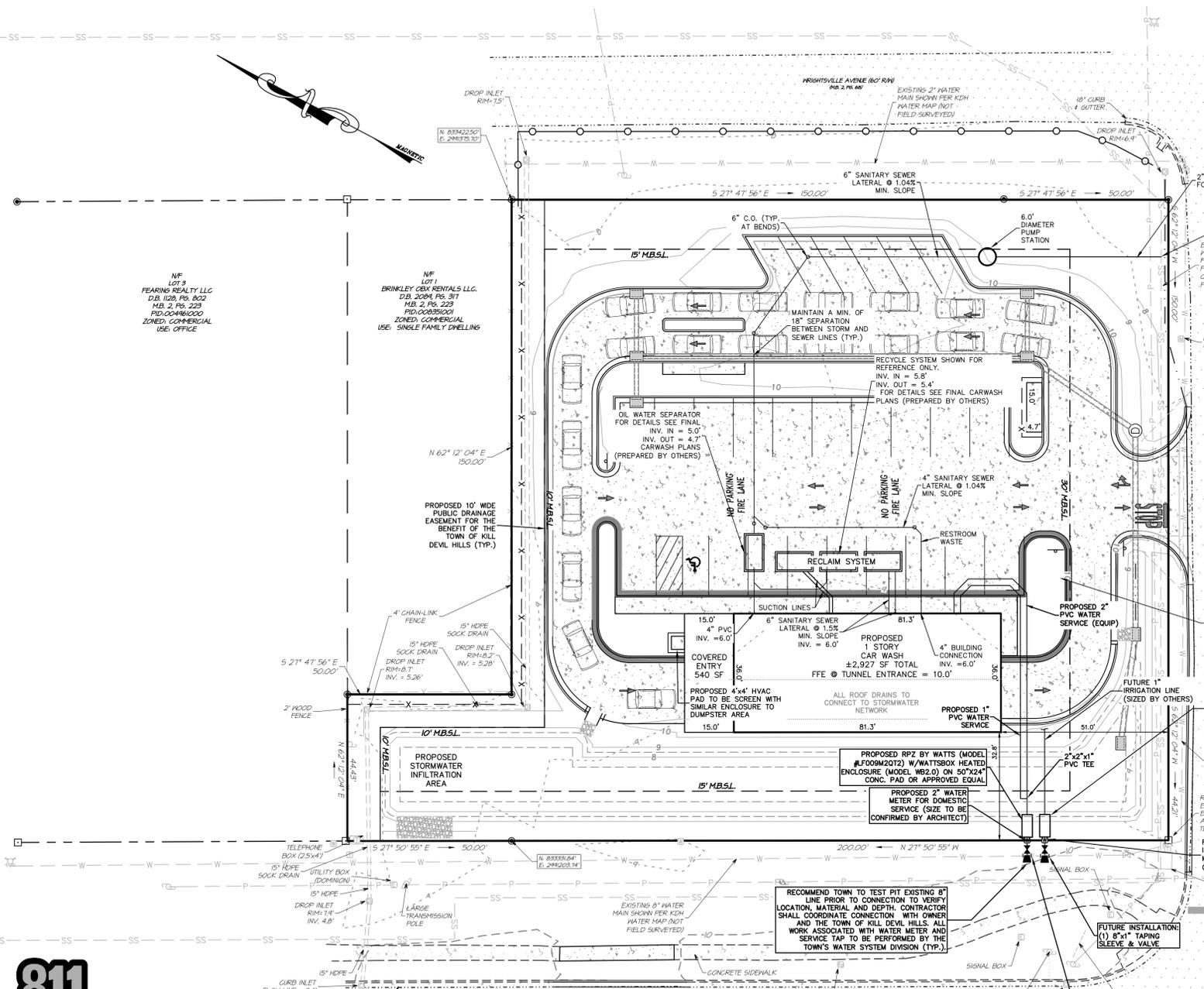
TYPICAL THRUST BLOCK ANCHOR ROD SIZES

| PIPE SIZE | ROD SIZE |
|------------|----------|
| 4" THRU 8" | #4 |

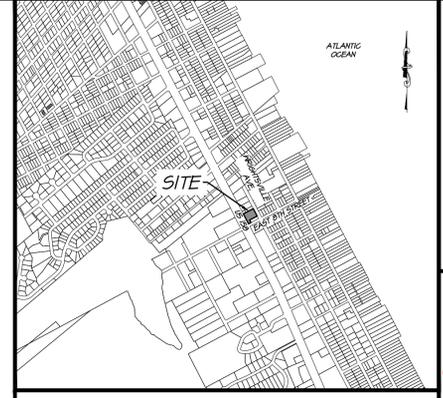
LEGEND

- EXISTING ASPHALT PAVEMENT
- EX. IRON PIPE, EIP
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. ELECTRICAL BOX
- EX. UTILITY POLE
- EX. LIGHT POLE
- EX. WATER LINE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED STORM PIPE
- PROPOSED FIRE HYDRANT
- PROPOSED BENDS & TEES
- PROPOSED GATE VALVE
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER
- PROPOSED TANK
- C.O. PROPOSED CLEAN OUT

- NOTES:**
- OWNER: TOWN OF KILL DEVIL HILLS P.O. BOX 1719 KILL DEVIL HILLS, NC 27948
 - APPLICANT: MPF INVESTMENT COMPANY 102 W. AIRSTRIP RD. KITTY HAWK, NC 27948
 - ENGINEER: QUILBE & ASSOCIATES, P.C. 8466 CARATOKE HIGHWAY POWELLS POINT, NC 27966
 - PI#s: 08351000, 026186000, 08350000
 - RECORDED REFERENCE: DB 1641, PG 0063 & DB 1641, PG 0062; PL 2, SL 68
 - PROPERTY ZONED: COMMERCIAL
 - PARCEL AREA: 41,080 SQ.FT. - 0.94 acres
 - WASTEWATER CALCULATIONS: PER NCAC 02T 1.200 GALS/HR REQUIRED. ANTICIPATED WASTEWATER EFFLUENT 4,500 GPD (80% OF WATER IS RECLAIMED).
 - PROPERTY IS LOCATED IN NPFL FLOOD ZONE X SHOWN AND SUBJECT TO CHANGES BASED ON COMMUNITY ID NO. 37535; PANEL 9893; SUFFIX K. (MAP NUMBER 372098300K) EFFECTIVE DATE: 06/19/2020.
 - BOUNDARY INFORMATION SHOWN BASED UPON PL 2, SL 68 AND T.A. STOKELY. PLIC 10/07/2021.
 - TOPOGRAPHIC INFORMATION SHOWN BASED UPON FIELD SURVEY BY T.A. STOKELY. DATED 10/07/2021.
 - PROJECT SCOPE: THIS PLAN PROPOSES THE CONSTRUCTION OF A DRIVE THROUGH CAR WASH AND ASSOCIATED UTILITIES, PARKING AND WALKS.
 - ALL BUILDING ROOF DRAINS SHALL BE DIRECTED TO THE STORMWATER COLLECTION SYSTEM.
 - ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.
 - EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
 - REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.
 - PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.
 - PRIOR TO CONSTRUCTION, A STATE STORMWATER PERMIT AND NCDOT ENCROACHMENT AGREEMENT ARE REQUIRED.
 - THE ENTIRE SITE WILL BE IN FULL COMPLIANCE WITH ALL APPLICABLE NFPA REGULATIONS PERTAINING TO FIRE PROTECTION INCLUDING BUT NOT LIMITED TO NFPA 30 AS WELL AS VOLUME V OF THE NC STATE BUILDING CODE.
 - BUILDING CONSTRUCTION SHALL COMPLY WITH ALL ASPECTS OF THE NORTH CAROLINA BUILDING AND FIRE CODE.
 - THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE TOWN OF KILL DEVIL HILLS CODES AND ORDINANCES, AND NCDOT DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS.
 - THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING STRUCTURES, PIPING, AND UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
 - THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
 - THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COATED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
 - ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
 - PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
 - WATER IS PROVIDED VIA THE TOWN OF KILL DEVIL HILLS WATER SYSTEM. ALL WATER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE TOWN OF KILL DEVIL HILLS STANDARD WATER SPECIFICATIONS AND DETAILS.
 - SEWER IS PROVIDED KDHWWTP, LLC CENTRAL SEWER.



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VICINITY MAP (KILL DEVIL HILLS)
N.T.S.

NC License # C-028
SWCE 1959
Quilbe & Associates, P.C.
ENGINEERING, SURVEYING, ENVIRONMENTAL SCIENCES
8466 CARATOKE HWY
POWELLS POINT, NC 27966
Phone: (252) 891-8127
Fax: (252) 891-8128



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| NO. | DATE | REVISIONS |
|-----|----------|---------------------------|
| 1 | 02/02/22 | REVISED PER TOWN COMMENTS |
| 2 | 02/09/22 | REVISED PER TOWN COMMENTS |

UTILITY PLAN
CAR WASH
201 S CROATAN HIGHWAY
DARE
NORTH CAROLINA

PROJECT NO. **P21103**
DESIGNED BY **JJC**
DRAWN BY **JJC**
CHECKED BY **CMS**
ISSUE DATE **01/18/22**
SHEET NO. **3**
OF 9 SHEETS



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- LEGEND**
- EXISTING ASPHALT PAVEMENT
 - EX. IRON PIPE, EP
 - EX. IRON ROD, EIR
 - EX. TELEPHONE PEDESTAL
 - EX. ELECTRICAL BOX
 - EX. UTILITY POLE
 - EX. LIGHT POLE
 - EX. WATER LINE
 - EX. CONTOUR
 - EXISTING SPOT GRADE
 - PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE PAVEMENT
 - PROPOSED RIP-RAP
 - PROPOSED STORM PIPE
 - PROPOSED CONTOUR
 - PROPOSED SPOT GRADE (TOP OF ASPHALT/EDGE OF PAVEMENT UNLESS OTHERWISE NOTED)
 - PROPOSED 2.0' CURB & GUTTER
 - PROPOSED 2.0' SPILL CURB & GUTTER



**VICINITY MAP
(KILL DEVIL HILLS)**
N.T.S.

Quible & Associates, P.C.
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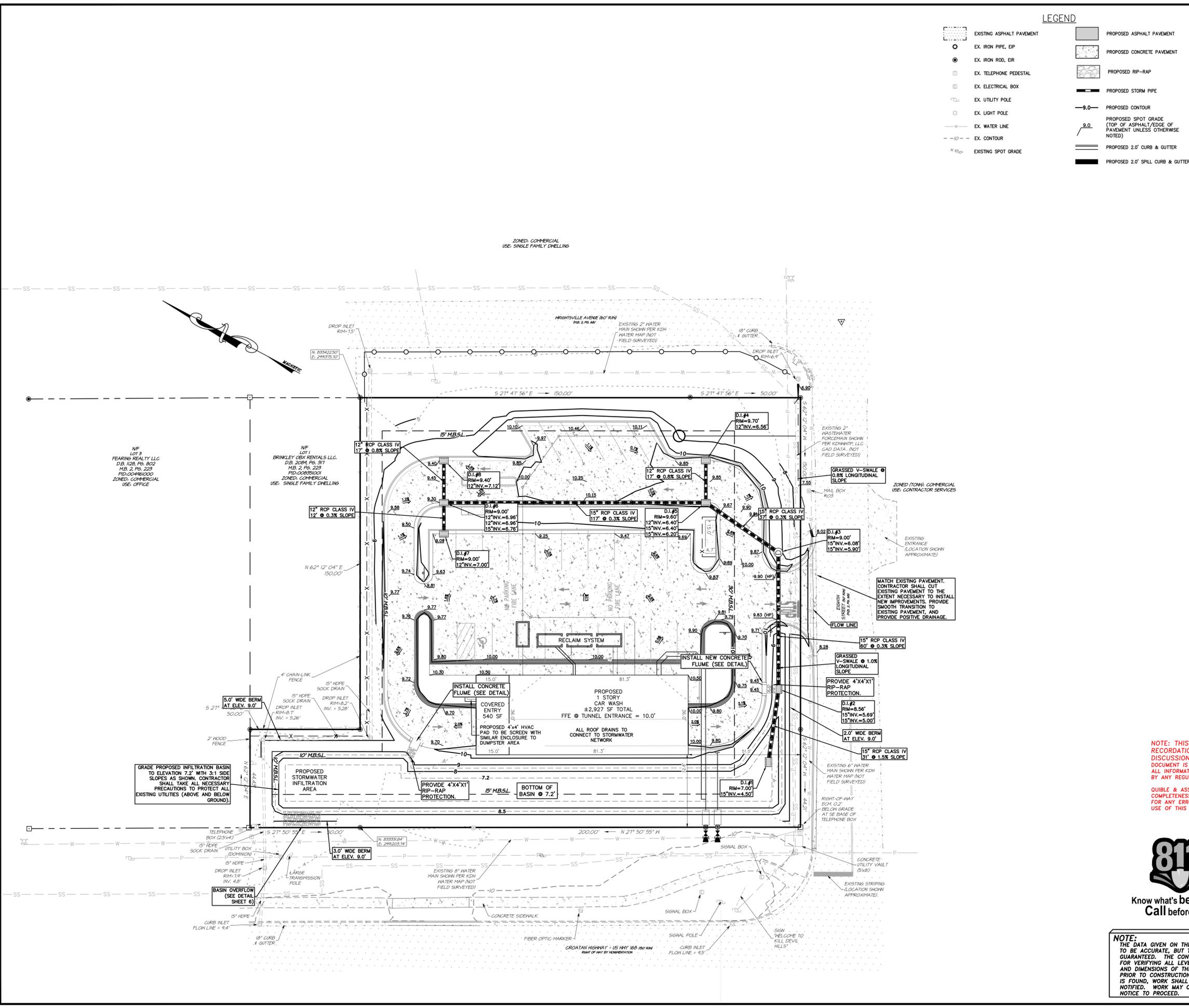
- NOTES:**
- OWNER: TOWN OF KILL DEVIL HILLS
P.O. BOX 1719
KILL DEVIL HILLS, NC 27948
 - APPLICANT: MPF INVESTMENT COMPANY
102 W. AIRSTRIP RD.
KITTY HAWK, NC 27948
 - ENGINEER: QUIBLE & ASSOCIATES, P.C.
8486 CARATOKE HIGHWAY
POWELL'S POINT, NC 27966
 - ADDRESS: 2011 S. CROATAN HWY
PIN# 9893-1313-3228
PI# 00351000
 - RECORDED REFERENCE: DB 1641, PG 0663; PL 2, SL 68
 - PROPERTY ZONED: COMMERCIAL HIGHWAY (07)
 - PARCEL AREA: 41,080 sq.ft. - 0.94 acres
 - LOT COVERAGE:
BUILDING (INCLUDING COVERED ENTRANCE) = 3467.9 SQ.FT.
CONCRETE WALK = 676.4 SQ.FT.
ASPHALT/CONCRETE DRIVE = 17,677.6 SQ.FT.
TOTAL PROPOSED COVERAGE = 21,821.9 SQ.FT. (53.1%)
TOTAL COVERAGE ALLOWED = 26,702.0 SQ.FT. (65.0%)
 - PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BASED ON COMMUNITY CID NO. 37535; PANEL 9893; SUFFIX K. (MAP NUMBER 3720989300K) EFFECTIVE DATE: 06/19/2020.
 - BOUNDARY INFORMATION SHOWN BASED UPON PL 2, SL 68 AND FIELD SURVEY BY T. A. STOKELY, PLLC, DATED 10-07-2021.
 - TOPOGRAPHIC INFORMATION SHOWN BASED UPON FIELD SURVEY BY T.A. STOKELY, PLLC, DATED 10-07-2021.
 - ALL PROPOSED ELEVATIONS SHOWN ON THIS PLAN REFERENCE NAVD 1988.
 - CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION BETWEEN SPOT ELEVATION GRADES AND MAINTAIN POSITIVE DRAINAGE.
 - BUILDING STORMWATER RUNOFF SHALL BE COLLECTED VIA ROOF GUTTERS & OR SWALES AND CONVEYED INTO THE STORMWATER COLLECTION SYSTEM.
 - AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.
 - MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING.
 - HANDICAP PARKING SPACES SHALL NOT EXCEED 2% GRADE.
 - SPOT ELEVATIONS SHOWN ON THIS PLAN ARE ALONG THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 - DROP INLET RIM ELEVATIONS ARE REFERENCED TO THE FLOW LINE OF THE INLET.

REVISIONS

| NO. | DATE | REVISED PER TOWN COMMENTS |
|-----|----------|---------------------------|
| 1 | 02/02/22 | |
| 2 | 02/09/22 | |

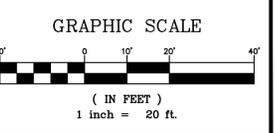
DRAINAGE & GRADING PLAN
CAR WASH
2011 S CROATAN HIGHWAY
NORTH CAROLINA
DARE

PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22
SHEET NO. 4 OF 9 SHEETS

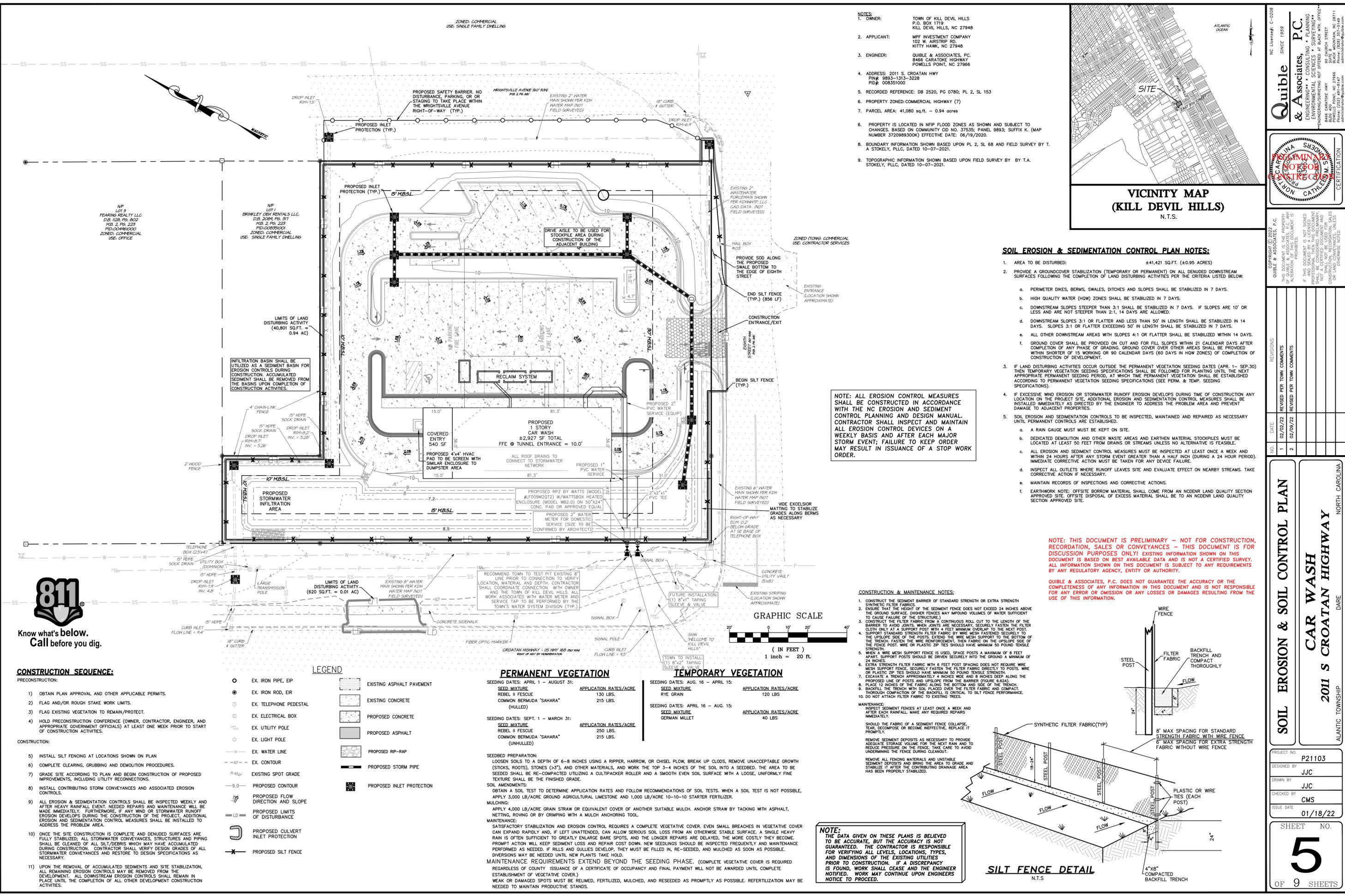


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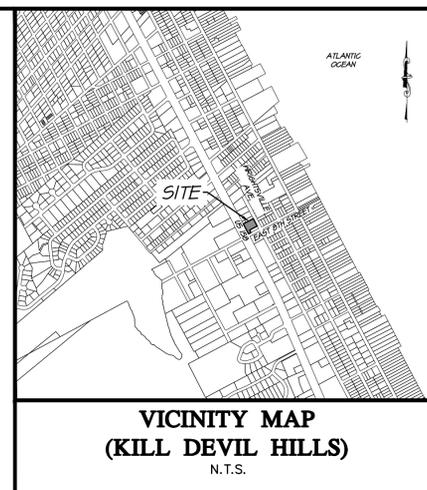


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NOTES:

- OWNER: TOWN OF KILL DEVIL HILLS
P.O. BOX 1719
KILL DEVIL HILLS, NC 27948
- APPLICANT: MPF INVESTMENT COMPANY
102 W. AIRSTREET RD.
KITTY HAWK, NC 27948
- ENGINEER: QUILBE & ASSOCIATES, P.C.
8466 CARATOKE HIGHWAY
POWELLS POINT, NC 27966
- ADDRESS: 2011 S. CROATAN HWY
TRAC 9893-1313-3228
PID# 008351000
- RECORDED REFERENCE: DB 2520, PG 0780; PL 2, SL 53
- PROPERTY ZONED: COMMERCIAL HIGHWAY (7)
- PARCEL AREA: 41,080 sq.ft. - 0.94 acres
- PROPERTY IS LOCATED IN MPF FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES BASED ON COMMUNITY ID NO. 37535; PANEL 9893; SUFFIX K. (MAP NUMBER 3720989300K) EFFECTIVE DATE: 06/19/2020.
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Phone: (252) 891-8127
Fax: (252) 891-8128
www.quilbe.com

NC License # C-0208
SINCE 1959
Professional Seal
CERTIFICATION

SOIL EROSION & SEDIMENTATION CONTROL PLAN NOTES:

- AREA TO BE DISTURBED: ±41,421 SQ.FT. (±0.95 ACRES)
- PROVIDE A GROUND COVER STABILIZATION (TEMPORARY OR PERMANENT) ON ALL DENUDED DOWNSTREAM SURFACES FOLLOWING THE COMPLETION OF LAND DISTURBING ACTIVITIES PER THE CRITERIA LISTED BELOW:
 - PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 DAYS.
 - HIGH QUALITY WATER (HQW) ZONES SHALL BE STABILIZED IN 7 DAYS.
 - DOWNSTREAM SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPES ARE 10' OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
 - DOWNSTREAM SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
 - ALL OTHER DOWNSTREAM AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.
 - GROUND COVER SHALL BE PROVIDED ON CUT AND FOR FILL SLOPES WITHIN 21 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF GRADING. GROUND COVER OVER OTHER AREAS SHALL BE PROVIDED WITHIN SHORTER OF 15 WORKING OR 90 CALENDAR DAYS (60 DAYS IN HQW ZONES) OF COMPLETION OF CONSTRUCTION OF DEVELOPMENT.
- IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1 - SEP.30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).
- IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.
- SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
 - A RAIN GAUGE MUST BE KEPT ON SITE.
 - DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD). IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
 - INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
 - MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
 - EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCDNR LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCDNR LAND QUALITY SECTION APPROVED SITE.

NOTE: ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT; FAILURE TO KEEP ORDER MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.

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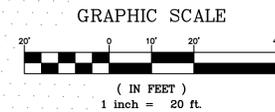
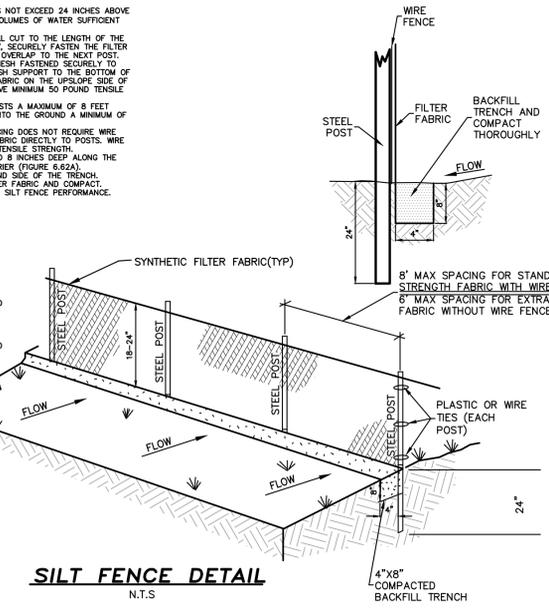
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CONSTRUCTION & MAINTENANCE NOTES:

- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRIC.
- ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)
- CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS WHEN JOINTS ARE NECESSARY. SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
- SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
- EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE OF THE BARRIER (FIGURE 6.6.2A).
- PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTING OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

MAINTENANCE:
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, BECOME POLE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



- CONSTRUCTION SEQUENCE:**
- PRECONSTRUCTION:**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
 - FLAG AND/OR ROUGH STAKE WORK LIMITS.
 - FLAG EXISTING VEGETATION TO REMAIN/PROTECT.
 - HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.
- CONSTRUCTION:**
- INSTALL SILT FENCING AT LOCATIONS SHOWN ON PLAN
 - COMPLETE CLEARING, GRUBBING AND DEMOLITION PROCEDURES.
 - GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS, INCLUDING UTILITY RECONNECTIONS.
 - INSTALL CONTRIBUTING STORM CONVEYANCES AND ASSOCIATED EROSION CONTROLS.
 - ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
 - ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENUDED SURFACES ARE FULLY STABILIZED, ALL STORMWATER CONVEYANCES, STRUCTURES AND PIPING SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
 - UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS MAY BE REMOVED FROM THE DEVELOPMENT. ALL DOWNSTREAM EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.

LEGEND

| | | | |
|-------|-----------------------------------|---|---------------------------|
| ○ | EX. IRON PIPE, EIP | ▨ | EXISTING ASPHALT PAVEMENT |
| ● | EX. IRON ROD, EIR | ▩ | EXISTING CONCRETE |
| □ | EX. TELEPHONE PEDESTAL | ▧ | PROPOSED CONCRETE |
| ▭ | EX. ELECTRICAL BOX | ▦ | PROPOSED ASPHALT |
| ⊕ | EX. UTILITY POLE | ▤ | PROPOSED RIP-RAP |
| ⊙ | EX. LIGHT POLE | ▣ | PROPOSED STORM PIPE |
| — | EX. WATER LINE | ▢ | PROPOSED INLET PROTECTION |
| - - - | EX. CONTOUR | | |
| ⊗ | EXISTING SPOT GRADE | | |
| ⊘ | PROPOSED CONTOUR | | |
| ⊙ | PROPOSED FLOW DIRECTION AND SLOPE | | |
| LD | PROPOSED LIMITS OF DISTURBANCE | | |
| ⊕ | PROPOSED CULVERT INLET PROTECTION | | |
| ⊗ | PROPOSED SILT FENCE | | |

PERMANENT VEGETATION

SEEDING DATES: APRIL 1 - AUGUST 31

| | |
|------------------------------------|----------------------------------|
| SEED MIXTURE: REBEL II FESCUE | APPLICATION RATES/ACRE: 130 LBS. |
| COMMON BERBERDA "SAHARA" (HULLLED) | 215 LBS. |

SEEDING DATES: SEPT. 1 - MARCH 31

| | |
|------------------------------------|----------------------------------|
| SEED MIXTURE: REBEL II FESCUE | APPLICATION RATES/ACRE: 250 LBS. |
| COMMON BERBERDA "SAHARA" (HULLLED) | 215 LBS. |

TEMPORARY VEGETATION

SEEDING DATES: AUG. 16 - APRIL 15

| | |
|-------------------------|----------------------------------|
| SEED MIXTURE: RYE GRASS | APPLICATION RATES/ACRE: 120 LBS. |
|-------------------------|----------------------------------|

SEEDING DATES: APRIL 16 - AUG. 15

| | |
|-----------------------------|---------------------------------|
| SEED MIXTURE: GERMAN MILLET | APPLICATION RATES/ACRE: 40 LBS. |
|-----------------------------|---------------------------------|

SEED PREPARATION:
LOOSEN SOILS TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW. BREAK UP CLODS, REMOVE UNACCEPTABLE GROWTH (STICKS, ROOTS), STONES (>3"), AND OTHER MATERIALS, AND WORK THE TOP 3-4 INCHES OF THE SOIL INTO A SEEDBED. THE AREA TO BE SEEDBED SHALL BE RE-COMPACTED UTILIZING A CULTIPACKER ROLLER AND A SMOOTH EVEN SOIL SURFACE WITH A LOOSE, UNIFORMLY FINE TEXTURE SHALL BE THE FINISHED GRADE.

SOIL AMENDMENTS:
OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

MULCHING:
APPLY 4,000 LB/ACRE GRASS STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, ROWING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

MAINTENANCE:
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE. (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY. ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.)
WEAK OR DAMAGED SPOTS MUST BE REIMED, FERTILIZED, MULCHED, AND RESEED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

NOTE: THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

811
Know what's below.
Call before you dig.

SOIL EROSION & SOIL CONTROL PLAN

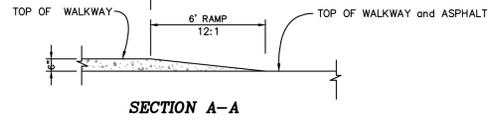
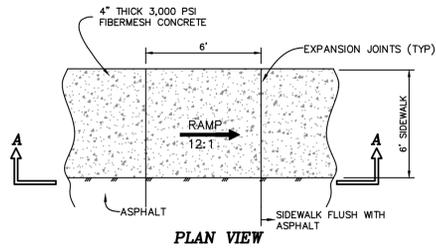
CAR WASH

201 S CROATAN HIGHWAY

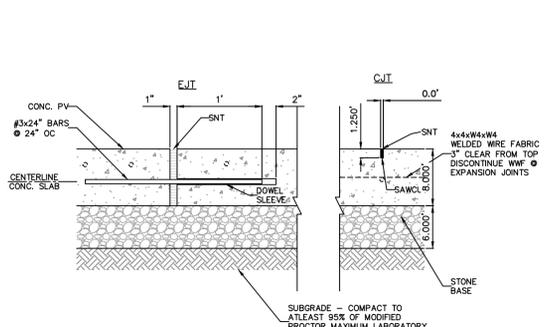
NORTH CAROLINA
DARE
ALANTIC TOWNSHIP

PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22

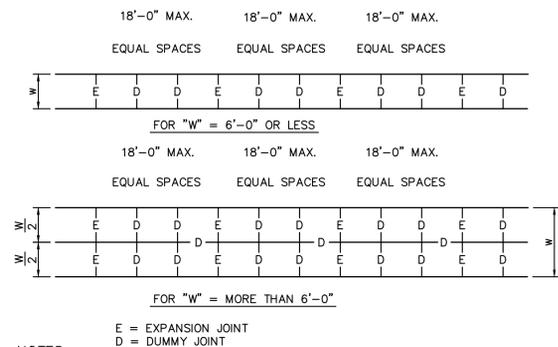
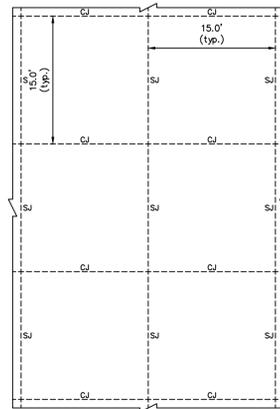
SHEET NO. 5 OF 9 SHEETS



WHEELCHAIR RAMP WALKWAY
N.T.S.

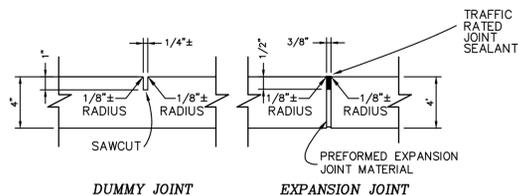


TYPICAL CONCRETE PAD JOINT SPACING
N.T.S.

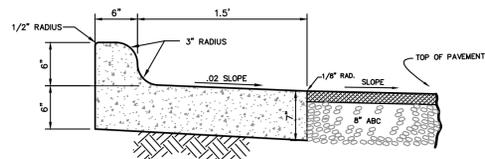


NOTES:
-EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.
-AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.
-SEE ALSO ARCHITECTURAL PLANS

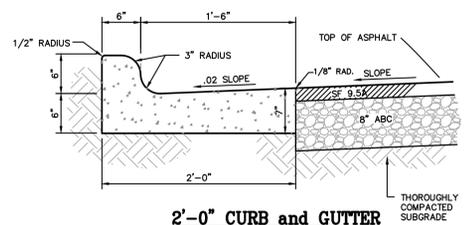
JOINT PATTERN



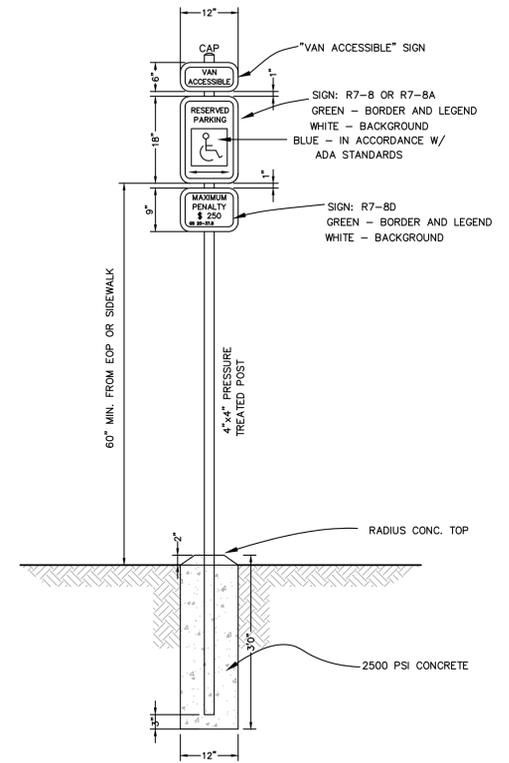
JOINT DETAIL
SIDEWALK JOINTS
N.T.S.



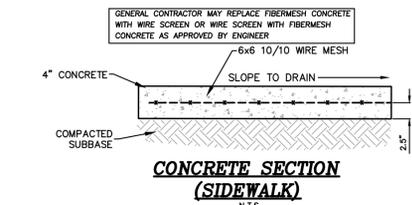
2'-0" SPILL CURB & GUTTER CROSS SECTION
N.T.S.



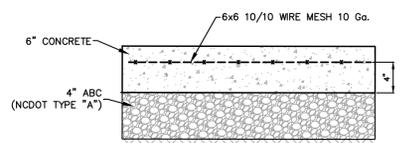
2'-0" CURB and GUTTER
REF. NCDOT STD. 648.01
N.T.S.



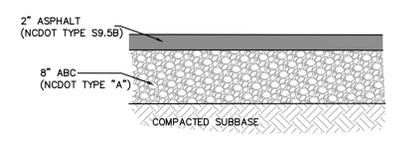
ADA RESERVED PARKING SIGN DETAIL
N.T.S.



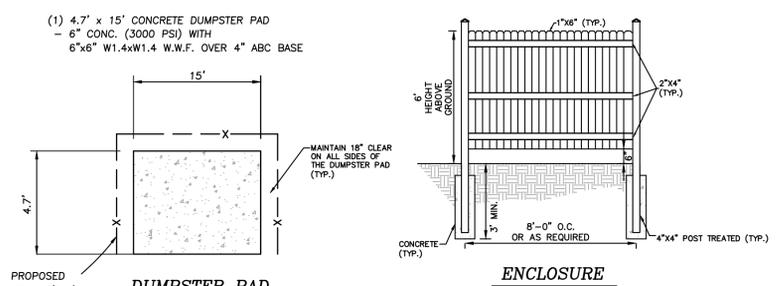
CONCRETE SECTION (SIDEWALK)
N.T.S.



HEAVY DUTY CONCRETE SECTION (DUMPSTER PAD)
N.T.S.



ASPHALT CROSS SECTION
N.T.S.



CONCRETE DUMPSTER PAD AND ENCLOSURE
N.T.S.

- COMPACTION NOTES:**
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
 2. COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
 3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES (SP, SW, GP, GW) HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

COMPACTION NOTES

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SM/CE #599
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REVISIONS

| NO. | DATE | REVISED PER TOWN COMMENTS |
|-----|----------|---------------------------|
| 1 | 02/02/22 | REVISED PER TOWN COMMENTS |
| 2 | 02/09/22 | REVISED PER TOWN COMMENTS |

SITE DETAILS
CAR WASH
2011 S CROATAN HIGHWAY
ALANTIC TOWNSHIP DARE NORTH CAROLINA

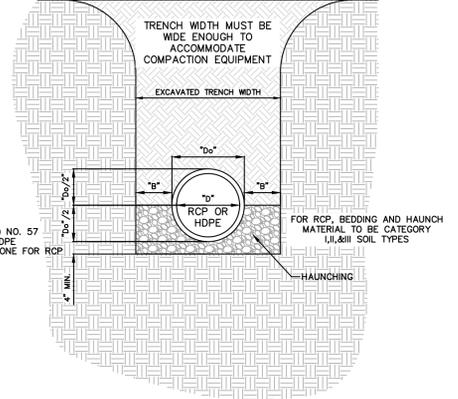
PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22

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- NOTES:**
1. ALL PIPE JOINTS SHALL BE WRAPPED WITH NCDOT TYPE II GEOTEXTILE OR APPROVED EQUIVALENT.
 2. PERFORATED HDPE PIPES SHALL BE SLEEVED WITH NCDOT TYPE II GEOTEXTILE OR APPROVED EQUIVALENT.

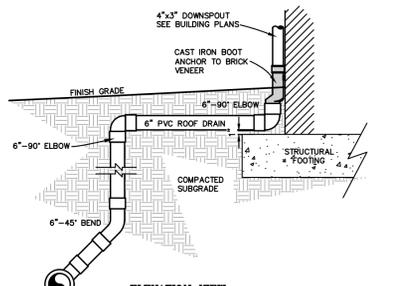
| RCP PIPE DIA. "D" | "B" |
|-------------------|-----|
| 2'-15" | 8" |
| 18"-24" | 10" |
| 30"-48" | 18" |

TRENCH SHALL BE BACKFILLED WITH CLEAN SAND AND TOPPED WITH TOP SOIL. IF LOCATED IN PAVEMENT, PAVE PER PAVEMENT SPECIFICATIONS.

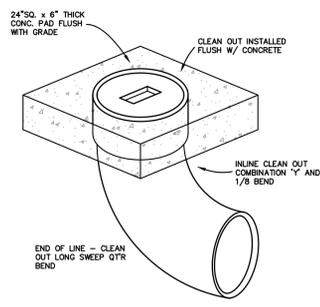


STORM PIPE TRENCH SECTION
N.T.S.

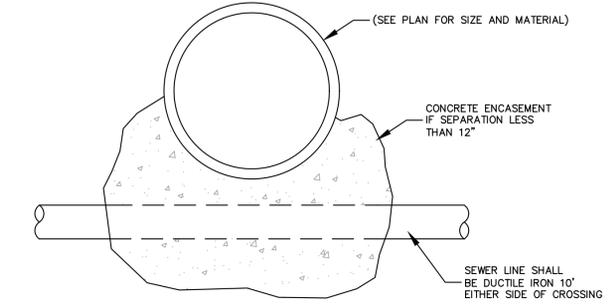
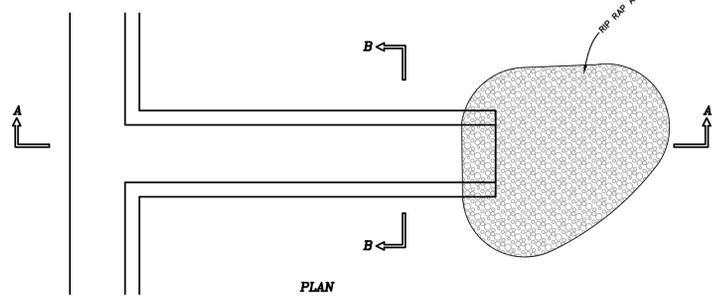
- N.T.S.
1. CLEAN OUTS INSTALLED OUTSIDE BUILDING AND FLUSH WITH GRADE SHALL BE INSTALLED FLUSH WITH 24"x24"x6" THICK CONCRETE PAD.
 2. CLEAN OUTS INSTALLED OUTSIDE OF BUILDING AND IN SIDEWALKS SHALL HAVE ADJUSTABLE CAST IRON BODY WITH CAST BRASS FLUG, LEAD SEAL AND SQUARE NICKEL BRONZE TOP WITH WATER TIGHT GASKETED COVER.



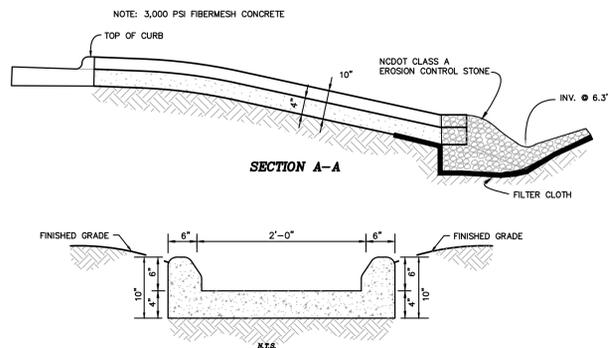
ROOF DRAIN COLLECTION LATERAL
N.T.S.



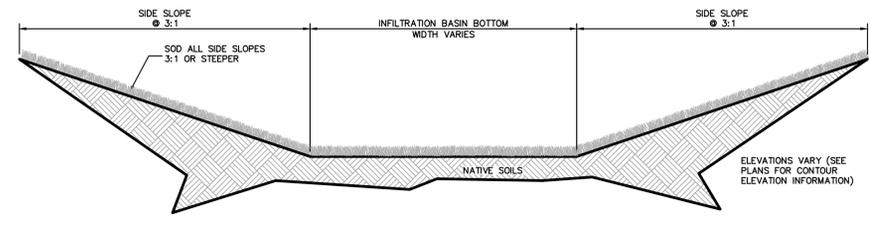
EXTERIOR CLEAN OUT DETAIL



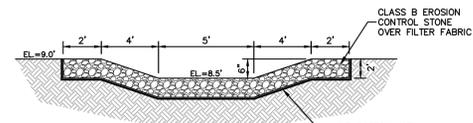
STORM SEWER AND SANITARY SEWER CROSSING
N.T.S.



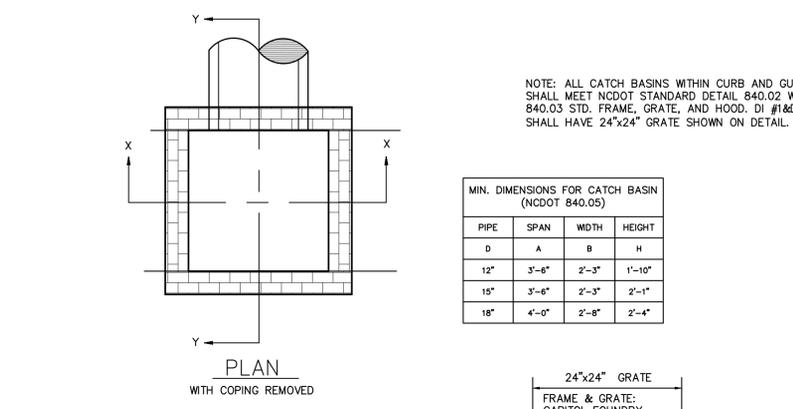
FLUME DETAIL
N.T.S.



TYPICAL INFILTRATION BASIN CROSS-SECTION DETAIL
N.T.S.

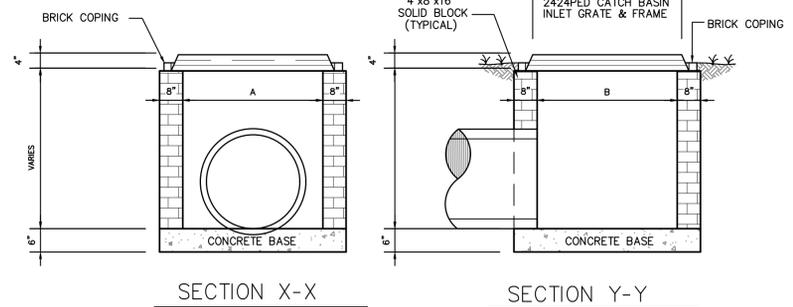


BASIN OVERFLOW
N.T.S.



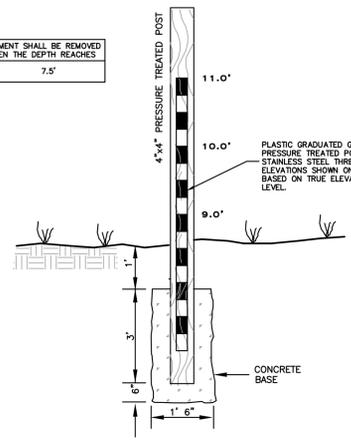
MIN. DIMENSIONS FOR CATCH BASIN (NCDOT 840.05)

| PIPE DIA. | SPAN | | WIDTH | | HEIGHT |
|-----------|-------|-------|-------|--------|--------|
| | A | B | A | B | H |
| 12" | 3'-6" | 2'-3" | 2'-3" | 1'-10" | |
| 15" | 3'-6" | 2'-3" | 2'-3" | 2'-1" | |
| 18" | 4'-0" | 2'-8" | 2'-8" | 2'-4" | |



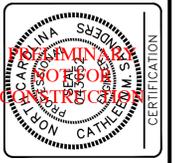
STORM INLET DETAIL
N.T.S.

| INFILTRATION BASIN | BOTTOM ELEVATION | SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES |
|--------------------|------------------|--|
| 1 | 7.0' | 7.5' |



DEPTH BENCHMARK
N.T.S.

NC License # C-028
SINCE 1959
Quible & Associates, P.C.
1000 S. WILSON ST., SUITE 100
RANDLEM, NC 27884
919-885-5555
WWW.QUIBLEANDASSOCIATES.COM



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| NO. | DATE | REVISIONS |
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| 1 | 02/02/22 | REVISED PER TOWN COMMENTS |
| 2 | 02/09/22 | REVISED PER TOWN COMMENTS |

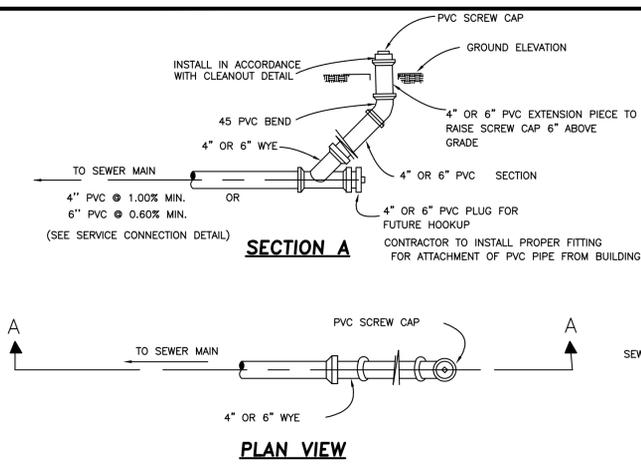
GRADING & DRAINAGE DETAILS

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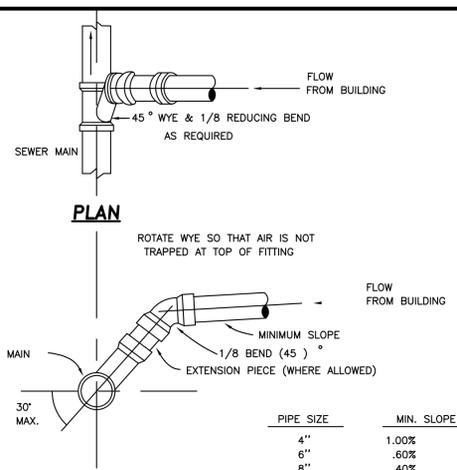
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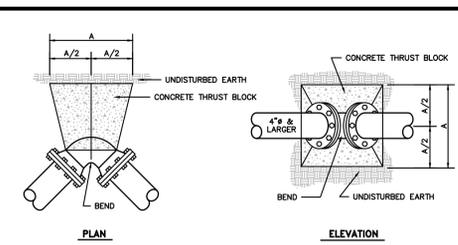
PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22
SHEET NO. 7
OF 9 SHEETS



SINGLE GRAVITY SERVICE LATERAL CONNECTION
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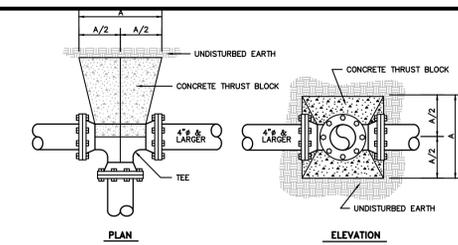
GRAVITY SERVICE CONNECTION
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NOTE: CARE SHALL BE TAKEN WHEN PLACING THRUST BLOCKS TO KEEP THE FITTING BOLTS FREE OF CONCRETE.

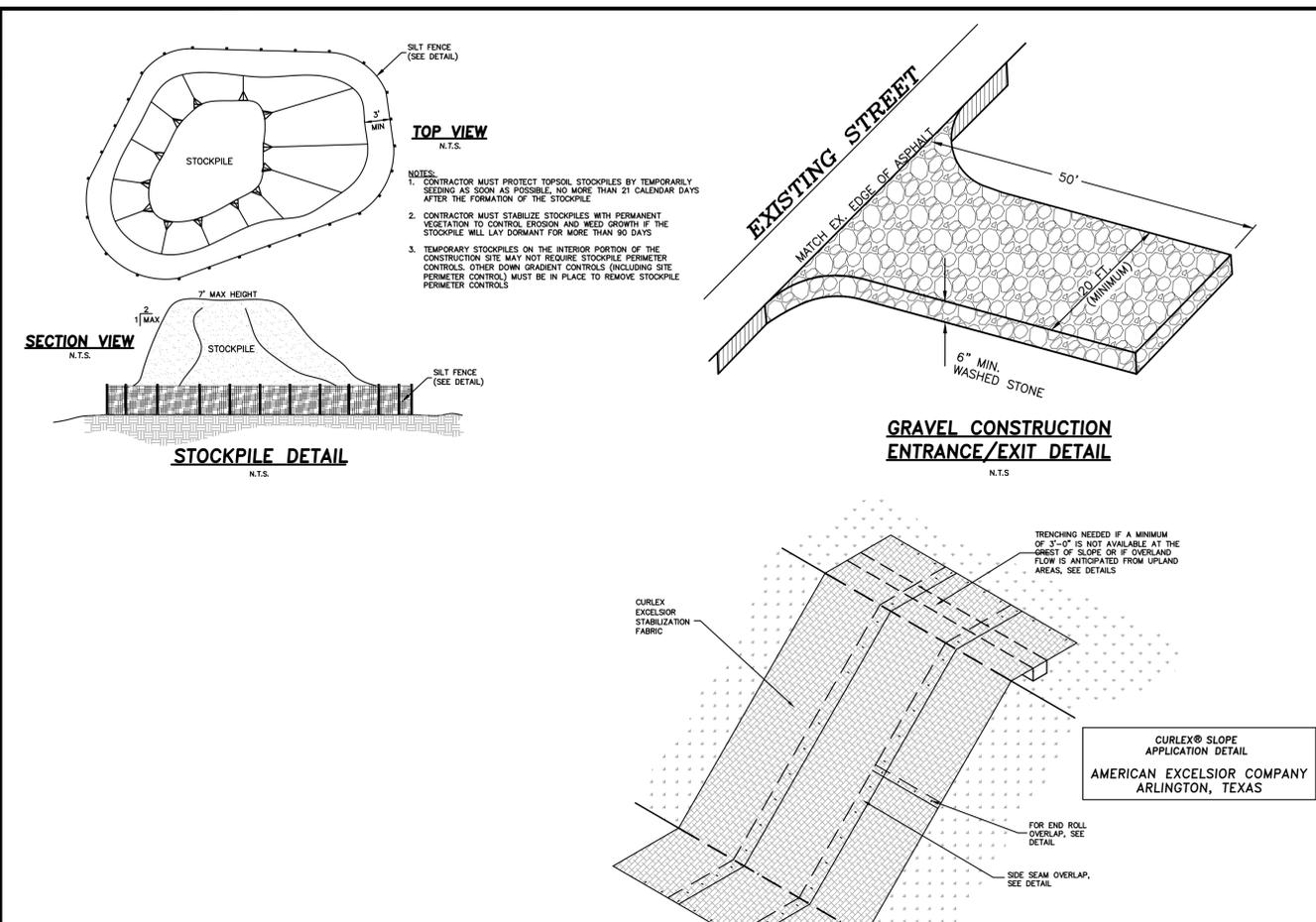
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THRUST BLOCKS - DIMENSION "A"



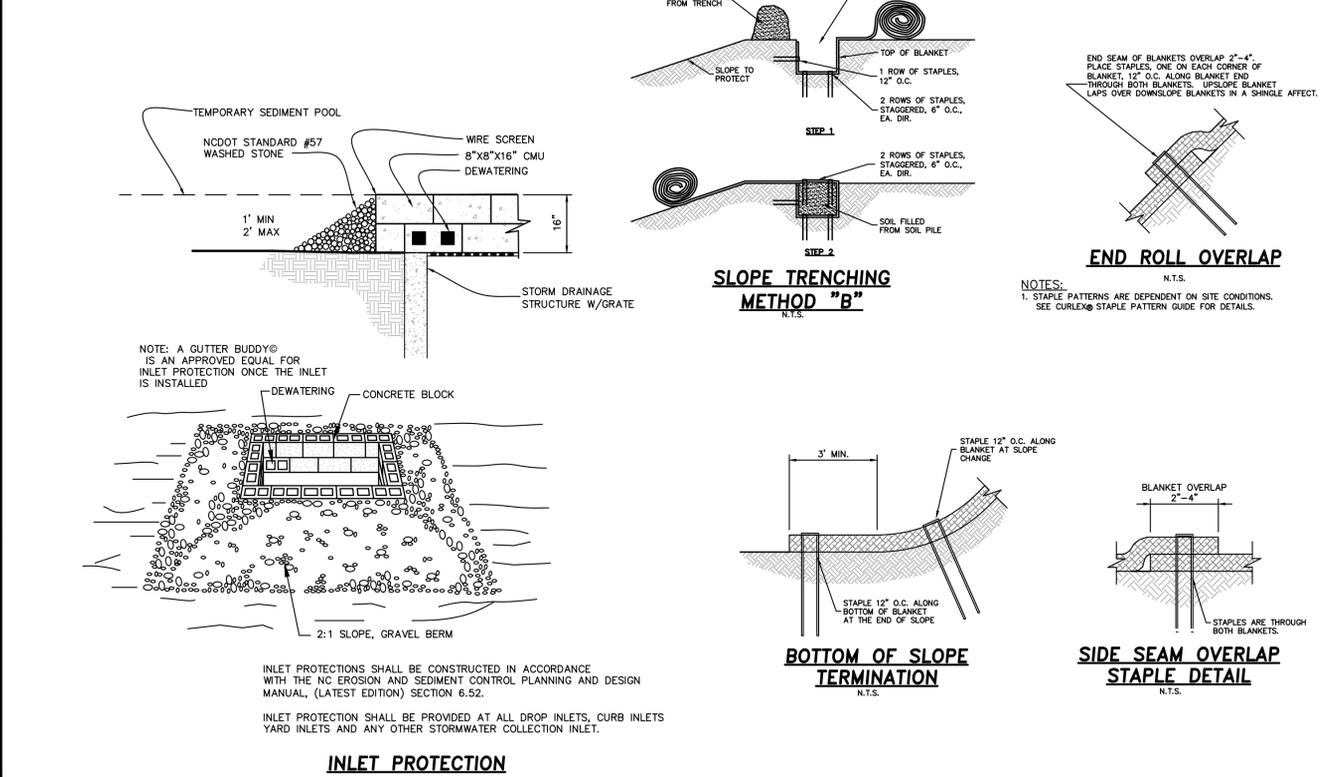
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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

| Site Area Description | Required Ground Stabilization Timeframes | Timeframe variations |
|--|--|--|
| (a) Perimeter dikes, swales, ditches, and perimeter slopes | 7 | None |
| (b) High Quality Water (HQW) Zones | 7 | None |
| (c) Slopes steeper than 3:1 | 7 | If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed |
| (d) Slopes 3:1 to 4:1 | 14 | -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope |
| (e) Areas with slopes flatter than 4:1 | 14 | -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope |

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

| Temporary Stabilization | Permanent Stabilization |
|---|--|
| <ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roller erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting | <ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roller erosion control products with grass seed |

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

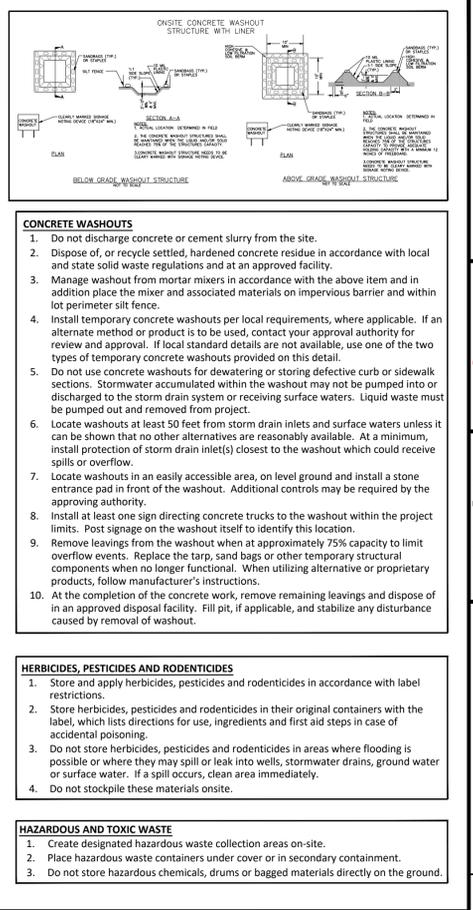
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

| Inspect | Frequency (during normal business hours) | Inspection records must include: |
|--|--|--|
| (1) Rain gauge maintained in good working order | Daily | Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division. |
| (2) E&S Measures | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | 1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken. |
| (3) Stormwater discharge outfalls (SDOs) | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | 1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken. |
| (4) Perimeter of site | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases. |
| (5) Streams or wetlands onsite or offsite (where accessible) | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part II, Section C, Item (2)(a) of this permit. |
| (6) Ground stabilization measures | After each phase of grading | 1. The phase of grading (installation of perimeter E&S measures and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or as assurance that they will be provided as soon as possible. |

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&S Plan Documentation
The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be documented in the manner described:

| Item to Document | Documentation Requirements |
|---|---|
| (a) Each E&S Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S Plan. | Initial and date each E&S Measure on a copy of the approved E&S Plan or complete, date and sign an inspection report that lists each E&S Measure shown on the approved E&S Plan. This documentation is required upon the initial installation of the E&S Measures or if the E&S Measures are modified after initial installation. |
| (b) A phase of grading has been completed. | Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate completion of the construction phase. |
| (c) Ground cover is located and installed in accordance with the approved E&S Plan. | Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications. |
| (d) The maintenance and repair requirements for all E&S Measures have been performed. | Complete, date and sign an inspection report. |
| (e) Corrective actions have been taken to E&S Measures. | Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate the completion of the corrective action. |

2. Additional Documentation
In addition to the E&S Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This general permit as well as the certificate of coverage, after it is received.
- Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported
Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

| Occurrence | Reporting Timeframes (After Discovery) and Other Requirements |
|--|---|
| (a) Visible sediment deposition in a stream or wetland | <ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(b) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. |
| (b) Oil spills and releases of hazardous substances per Item 1(b)-(c) above | <ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release. A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. |
| (c) Anticipated bypasses [40 CFR 122.41(m)(3)] | <ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass. |
| (d) Unanticipated bypasses [40 CFR 122.41(m)(3)] | <ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis. |
| (e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)] | <ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis. |

QUIBLE & ASSOCIATES, P.C.
REGISTERED PROFESSIONAL ENGINEER
REGISTERED PROFESSIONAL SURVEYOR
REGISTERED PROFESSIONAL CIVIL ENGINEER
REGISTERED PROFESSIONAL LAND SURVEYOR
REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
REGISTERED PROFESSIONAL MECHANICAL ENGINEER
REGISTERED PROFESSIONAL CHEMICAL ENGINEER
REGISTERED PROFESSIONAL METALLURGICAL ENGINEER
REGISTERED PROFESSIONAL INDUSTRIAL ENGINEER
REGISTERED PROFESSIONAL AERONAUTICAL ENGINEER
REGISTERED PROFESSIONAL AGRICULTURAL ENGINEER
REGISTERED PROFESSIONAL FOOD ENGINEER
REGISTERED PROFESSIONAL TEXTILE ENGINEER
REGISTERED PROFESSIONAL FIBER ENGINEER
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REGISTERED PROFESSIONAL PLASTIC ENGINEER
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2011 S CROATAN HIGHWAY
ALANTIC TOWNSHIP
DARE
NORTH CAROLINA

PROJECT NO. P21103
DESIGNED BY JJC
DRAWN BY JJC
CHECKED BY CMS
ISSUE DATE 01/18/22
SHEET NO. 9 OF 9 SHEETS