DUPLIN COUNTY AIRPORT

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Airport Rules and Regulations

Adopted by Duplin County
August 16, 2021

*These Rules and Regulations repeal and replace the Manual of Airport Rules and Regulations previously adopted by the Board of Commissioners on 17 August 2009, which became effective 1 September 2009.

DUPLIN COUNTY
NORTH CAROLINA

DUPLIN COUNTY AIRPORT RULES AND REGULATIONS

RECORD OF UPDATES:

DATE OF UPDATE	DESCRIPTION OF UPDATE
August 16, 2021	Reorganization, modernization

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SECTION 1 – DEFINITIONS

Unless specifically defined otherwise, or unless a different meaning is apparent from the context, the terms used in these Rules and Regulations shall have the following definitions:

Aeronautical Activity means any activity commonly conducted at airports which involves, makes possible, or is required for, the operation of aircraft, or which contributes to or is required for the safety of such operations. These activities include, but are not limited to, air taxi and charter operations, pilot training, aircraft renting, sightseeing, aerial photography, crop dusting, aerial advertising, aerial surveying, air carrier operations, skydiving, ultra-light operations, aircraft sales and services, sale of aviation petroleum products, repair and maintenance of aircraft, or sale of aircraft parts and aircraft storage.

Aeronautical Service means any service which involves, makes possible, or is required for, the operation of aircraft, or which contributes to or is required for the safety of aircraft operations commonly conducted on the Airport by a person who has a lease from Duplin County (hereinafter referred to as the County) to provide such service.

Aircraft means a manned or unmanned machine or device, such as an airplane, helicopter, glider, or dirigible, which is capable of atmospheric and navigational flight.

Airport means all property and improvements within the boundary lines of the airport operated or controlled by Duplin County, except when otherwise noted.

Airport Commission means the Duplin County Airport Commission hereinafter as the “Airport Commission” and also referred to as the “Airport Board.”

Airport Director means the chief executive officer of the Airport, or his/her designee who under administrative direction of the County Director and the Airport Commission, manages the overall operation, maintenance and development of the Airport and performs other duties as assigned.

Airport Improvement Program (AIP) means a program that provides financial grants-in-aid for airport development projects such as runways, taxiways, aircraft parking aprons, terminal buildings and land acquisition associated with airport development including runway protection zones and approach protection.

Airport Master Plan means an assembly of appropriate documents and drawing covering the development of a specific airport from a physical, economic, social, and political jurisdictional perspective. The airport layout plan is a part of this plan.

Airport Operations Manager means the officer of the airport, who under the administrative direction of the Airport Director, manages the daily operation of the airport and performs other duties as assigned.

Airport Operations Area (AOA) means the area of the airport used for landing, take-off, or surface maneuvering of aircraft, including the areas around hangars, navigation equipment, and communication facilities.

Airport Sponsor means a public agency or tax-supported organization, such as an airport authority that is authorized to own and operate an airport; to obtain property interests; to obtain funds; and to be legally, financially, and otherwise able to meet all applicable requirements of the current laws and regulations.

Airside means the part of an airport directly involved in the arrival and departure of aircraft, including runways, taxiways, aprons, and ramps.

Air Taxi means operations performed by operators of aircraft holding an air taxi certificate under Part 135 of the Federal Aviation Regulations. This category includes commuter airline operations (excluding certificated commuter airlines), mail carriers under contract with the USPS, and operators of nonscheduled air taxi services. Typically, air taxis do not utilize aircraft with a payload capacity over 7500 pounds or capable of carrying more than 30 passengers.

Apron or Ramp means the areas of the airport within the Airport Operations Area (AOA), equipped for loading, unloading, servicing, or parking of aircraft.

Authorized Area means a specific location, approved by the Airport Director or the Airport Operations Manager, accessible only to specific authorized personnel.

Authorized Representative/Employee means an individual or individual(s) designated by the Airport Director.

Cargo means any property carried onto an aircraft, other than mail and baggage.

Commercial Operator means an individual who, for compensation or hire, engages in air commerce, the carriage by aircraft of persons or cargo, other than as an air carrier or foreign air carrier or under the authority given by an administrator. Where it is doubtful that an operation is for “compensation or hire,” the test is whether the carriage by air is merely incidental to the person’s other business or is, in itself, a major enterprise for profit.

County means Duplin County, North Carolina.

FAA means Federal Aviation Administration

FAR means the Federal Aviation Regulations as published and amended under 14 CFR (Code of Federal Regulations)

FBO means Fixed Based Operator – Any person who shall have entered into a written agreement with the County for the use of any business located on the airport that provides services such as hangar space, fuel, flight training, repair, and maintenance to airport users, or any person or firm hired directly by the County to act as an FBO.

Firearm means any weapon or device, including a starter gun, flare gun or the like, which will, or is designed to or may readily be converted to expel a projectile by the action of an explosive; the frame or receiver of any such weapon; any firearm muffler or firearm silencer; any destructive device; or any matching gun. The term "firearm" shall not include any non-functioning antique firearm.

Flammable Liquids means any liquid substance that is combustible and can burn or cause a flame.

Flying club means a non-commercial, non-profit, organization established for the sole purpose to promote flying, develop skills in aeronautics, including pilot training, navigation, and awareness and appreciation of aviation requirements and techniques solely to its members, their personal use and enjoyment. Aircraft owned by the Flying Club are vested in the name of the club or owners on a pro-rated share.

Fuel Farm means specifically, the area on the Duplin County Airport where aviation fuels are received, contained and dispensed.

Fueling or Fuel Handling means the transportation, sale, delivery, dispensing, storage, or draining of fuel or fuel waste products to or from fuel storage tanks, aircraft, vehicles, or equipment.

Hangar(s) means any building or buildings used for the storage of Aircraft

Instructor means any individual giving, or offering to give instruction in the operation, construction, repair or maintenance of aircraft.

Lease means the written, contractual Agreement between the City and an entity which is enforceable by law, wherein said Agreement grants a concession or otherwise authorizes the conduct of certain activities.

Minimum Standards means the standards which are established by the Airport Commission, amended from time to time, and which are the minimum requirements to be met by an FBO or SASO or proposed FBO or SASO as a condition for the privilege to provide aeronautical services to the public at the Airport.

Motor Vehicle means any motorized vehicle designed for the carriage of persons or things from point-to-point.

NAVAIDS means any navigational aid used

NCDOA means The North Carolina Division of Aviation or duly authorized representatives thereof.

NFPA means National Fire Protection Association.

Non-Operating Aircraft means any aircraft located on an airport which does not possess a current certificate of air worthiness issued by the Federal Aviation Administration and is not actively being repaired to become an operating aircraft.

Notice to Airmen (NOTAM) means a notice containing information (not known sufficiently in advance to publicize by other mans concerning the establishment of, condition of, or change in any component (facility, service, or procedure) of, or hazard in, the national airspace system, the timely knowledge of which is essential to personnel concerned with flight operations.

NTSB means the National Transportation Safety Board and its successors.

Operator means either a Fixed Base Operator, a Specialized Aviation Service Operator, or operator of an aircraft, as applicable, or the City, when performing a Commercial Aeronautical Activity, unless the context clearly indicates another meaning.

Owner means the owner of either a Fixed Base Operation, a Specialized Aviation Service Operation, or an aircraft, as applicable, or the City, when owning a Commercial Aeronautical Activity, unless the context clearly indicates another meaning.

Pilot means an individual who operates an aircraft at the Airport, either based or transient.

Person means any individual, partnership, firm, corporation, company, or duly authorized representatives thereof.

Ramp or Apron means the areas of the airport within the Airport Operations Area (AOA), equipped for loading, unloading passengers or cargo, refueling, servicing, or parking of aircraft.

Restricted Area means any area of the airport designated to prohibit or limit access to only those persons authorized by the Airport Director.

Refueling Tanks means any vessel, container or tank used for the purpose of holding and/or dispensing fuel.

Refueling Trucks means any motor vehicle used for the transporting, handling, or dispensing of aviation fuel, oils, and lubricants.

Rules and Regulations means these Rules and Regulations of the Duplin County Airport, adopted by the Airport Commission and approved as a local ordinance by the Duplin County Board of Commissioners, amended from time-to-time as may be required.

Runway means a restricted area used for take-offs and landings of an aircraft.

SASO means Specialized Aviation Service Organization

SWPPP means Storm Water Pollution Prevention Plan, a stormwater management plan addressing stormwater discharge from the airport that incorporates best management practices.

SPCC means Spill Prevention Control and Countermeasure, a written plan to prevent the spill and discharge of oil products in order to protect surface and ground waters. This SPCC Plan also addresses the spill response procedures and actions that must be implemented if a spill occurs at a facility.

Taxi means the movement of an airplane under its own power on the surface of an airport; also, the surface movement of helicopters equipped with wheels.

Taxiway means portions of the Airport Operations Area (AOA) authorized by the Airport for the surface maneuvering of aircraft.

Tenant means a lessee of space at the Airport.

Traffic Pattern means a standard path followed by aircraft when taking off or landing while maintaining visual contact with the airfield.

Tug means any device by which an aircraft is pushed, pulled or towed on airport property

Two-way Radio means a two-way communication system operated by a non-governmental entity that provides communications between operators, pilots and Airport advisory information.

Ultralight Vehicle means an aeronautical vehicle operated for sport of recreational purposes that does not require FAA registration, an airworthiness certificate, or pilot certification. An ultralight vehicle is primarily a single-occupant vehicle, although some two-place vehicles are authorized for training purposes. Operation of an ultralight vehicle in certain airspace requires authorization from air traffic control.

Unicom means a common, multipurpose radio frequency used at most nontowered airports as the common traffic advisory frequency. Used by a FBO for general administrative services, including fuel orders, parking instructions, etc.

Vehicle means any device by which any person or property is or may be transported or drawn upon a highway, including bicycles.

Weapon means any dirk, metallic knuckles, "slingshot", billy club, tear-gas gun, chemical gun or device, or any other device the principal function of which is to inflict bodily harm or severe discomfort.

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SECTION 2 – GENERAL INFORMATION

2.1 INTRODUCTION & PURPOSE

This document describes the Rules and Regulations for all users of the Duplin County Airport.

Judicious and proper administration requires that rules and regulations establishing the minimum acceptable conduct for Airport users and employees are adopted. This requirement provides protection from irresponsible and/or unsafe operations.

By publication and adoption of these rules, all persons shall be deemed to have knowledge of its contents. However, the Airport Director will have copies of the ordinance / order posted in paper form or electronically, where appropriate. Copies shall be available at all times in the Airport Director's office and copies shall be furnished to all owners and operators of aircraft based at the airport upon request.

2.2 APPLICABILITY

These Rules and Regulations apply to any person(s) or entity utilizing the Duplin County Airport.

2.3 VIOLATIONS AND PROCEDURES

If the Airport Director concludes that any of these Rules and Regulations have been disregarded and that he/she cannot resolve the matter satisfactorily by notice to and discussion with the offending party, then formal action may be taken against the party by the Airport Director. These actions may include suspension of airport operations or revocation of the party's right to utilize the Airport. A person who has had their airport privileges suspended by the Airport Director may appeal that decision to the Airport Commission. A written notice of appeal must be filed with the Airport Commission within thirty (30) days of the effective date of suspension in order for the matter to be reconsidered by the Airport Commission. Please refer to Section 11 INFRACTIONS for more information.

2.4 GENERAL AUTHORIZATION

In any circumstances not specifically covered by these rules and regulations, the Airport Director shall be authorized to make reasonable decisions as deemed necessary and proper. All such actions may be subject to review by the Airport Commission. At all times, the Airport Director shall have the authority to take reasonable action as may be necessary, including use of local law enforcement, to enforce these rules and regulations and to efficiently manage the airport and its operations.

2.5 NORMAL AIRPORT OPERATIONS (PUBLIC USE)

The Duplin County Airport is open daily except Thanksgiving and Christmas and is open on-call 24 hours a day, seven days a week. The Airport may be closed when either the County or the Airport Director determines that an unsafe condition exists. The Airport may remain closed until the unsafe condition has been corrected or no

longer exists. Student pilots will not be allowed use of the airport runway when surface winds create a direct crosswind component of 15 nautical miles per hour or 30 nautical miles per hour total wind velocity. Meteorological conditions at the Airport shall be determined by the official weather as reported by the Flight Service Stations. FBOs or SASOs are not required to be open at all times the Airport is open.

2.6 EFFECTIVE DATE

These Rules and Regulations shall become effective on August 16, 2021. All previous versions of Duplin County Rules and Regulations are repealed upon this date.

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SECTION 3 – GENERAL REGULATIONS

3.1 SCOPE

A. All users of the Airport shall be governed by directions from the Airport Director, these Rules and Regulations, and the directions of the Duplin County Airport Commission, or their designated representative(s). These regulations are subject to change by joint decision of the Airport Director and the Airport Commission at any time, based on experience, need, and operating conditions.

B. Each user of the airport and its facilities shall be obligated to obey all the regulations herein provided and adopted by Duplin County.

C. The privilege of using the airport shall be conditioned on the assumption that the user shall take on full responsibility and risk, shall release and hold harmless, and shall indemnify the County of Duplin, the Duplin County Airport Commission, its officers, and employees from any liability of loss resulting from such use.

Hold Harmless – The Airport and Duplin County shall not be liable to an Airport tenant's employees, agents, servants, customers, invitees, or to any other person whomsoever, for any injury to persons or damages to property on or about the leased premises or any adjacent area owned by the Airport.

D. The privilege of using the airport shall be upon the further condition that any person(s), corporation(s), co-partnership, or others desiring to use the same as Commercial Operator, Fixed Based Operator (FBO), or Specialized Aviation Service Organization (SASO), shall produce a policy of indemnity against personal injury and property damage.

E. Any person violating any of the airport Rules and Regulations may be punished as provided by law. Any such individual may further be prohibited from using the Duplin County Airport facilities for a specific period of time, as may be deemed necessary and appropriate by the Airport Director and/or the Airport Commission.

F. These Rules and Regulations are not intended to supersede, modify or amend any provision of Federal, State, or Local Law; however, these Rules and Regulations shall be interpreted so that no conflict arises.

G. If any portions of these Rules and Regulations prove to be invalid or unenforceable, all other portions of this document shall remain in effect to achieve the purposes hereof.

H. Any proposed changes to these Rules and Regulations will be dated and posted by the Airport Director at the airport for a period of thirty (30) days. Comments on the proposed changes may be submitted by the general public in writing to the Airport Director, during this time period. After review of all comments, revisions may be made, and the final draft of the proposed changes will be published. Copies of the changes will be posted at the airport and distributed to all holders of the manual.

I. All users of the Airport shall comply with all existing and future safety and environmental Rules and Regulations adopted by the Duplin County Airport Commission. A copy of such Rules and Regulations as currently in force will be available at the offices of the Airport Director.

J. No person shall engage in a business or commercial operation on the Airport without the approval of the Airport Director or designated representative.

K. The soliciting of business, fares, or funds for any purpose on the airport without the permission of the Airport Director or designated representative, is prohibited.

L. No individual, partnership, corporation, or business shall construct any building, sign, or structure, or modify any pre-existing facility without permission of the Airport Director and approval of the Airport Commission.

M. When Grant Assurances (obligations) are referenced herein, they imply the most current version of FAA AIP Grant Assurances and NCDOT Division of Aviation Block Grant State Grant Assurances

3.2 LOST ARTICLES

All lost articles should be turned in to the Airport staff by the finders. If the articles are not claimed within sixty (60) days, they shall be disposed of as determined by the policies and procedures set forth by Duplin County.

3.3 LIABILITY

Duplin County assumes no responsibility for loss, injury, or damage to any person(s) or property by reason of fire, theft, vandalism, wind, flood, earthquake, collision, lightning strikes, or other acts of God. Duplin County likewise does notassume any liability for other injury to person(s) or property sustained while at the airport or arising out of use of the airport facilities.

3.4 RESPONSIBILITY FOR DAMAGES

Any person(s) causing damage to or destroying airport property of any kind, including but not limited to buildings, fixtures, and facilities, shall be fully liable to Duplin County. All property damage shall be reported immediately to the Airport Director.

3.5 INSURANCE

Insurance requirements for tenants, commercial operations and FBO/SASOs are detailed in the Duplin County Airport Minimum Standards document, located as Appendix A within this document. Strict adherence to the standards set forth in Appendix A is required.

3.6 ACCIDENT REPORT

All person(s) involved in any accident, whether personal, aircraft, or automotive, occurring on the Airport, shall make a full verbal report to the Airport Director as soon after the accident as possible and, in any event, within 24 hours after it has occurred. Based on the verbal report, a written report may also be required. See Section 5 for additional information. Please refer to Exhibit “E” for the Accident Reporting Form.

3.7 GROUND TRANSPORTATION

For safety purposes, any vehicle used to transport passengers or cargo shall load and unload passengers and cargo only in areas designated by the Airport Director.

3.8 BUILDING REQUIREMENTS AND GROUND RENTAL

Any person desiring to construct any building or facility on the Airport shall be required to submit plans and specifications to the Airport Director. The plans shall consist of a general layout, drawn to scale, showing the desired amount of ground required for the operation of the building or facility in addition to the portion occupied by the building or facility. All buildings and facilities constructed upon the Airport shall conform to the Building Code requirements of the state of North Carolina and Duplin County and be approved by the Airport Commission. Prior to any construction, all licenses and permits must be obtained. Once plans have been approved, a lease may then be entered into with Duplin County at the rate set by the Airport Commission and approved by the Duplin County Board of Commissioners. Please refer to APPENDIX B for minimum requirements for construction of hangars.

Hangars and other buildings or structures owned by the County may be leased to private individuals, companies, or corporations on a monthly or yearly basis for the storage of aircraft and ancillary equipment or to conduct a commercial Fixed Base Operation (FBO). Shorter term leases may on occasion be entered within the discretion of the Airport Director and Airport Commission.

The County may lease property within the building area or other portions of the Airport for the construction of hangars, buildings, aprons, taxiways, and auto parking lots in accordance with an approved Airport Master Plan/Airport Layout Plan and design guidelines. Aviation related use must be given priority in the use of all leased or privately-owned property, buildings or structures. If the aviation needs of the Airport are sufficiently met, the County may authorize non-aviation use of any portion of the Airport or any building on the Airport on a case-by-case basis. Application for non-aviation use shall be made to the County, and approval from NCDOA and the FAA must be received prior to granting authorization for non-aviation use.

Lease terms will be determined based on the level of investment, but in no case will exceedtwenty-five (25) years. However, the initial term of a lease of airport property or facility may exceed twenty-five (25) years, but not more than forty (40) years, if a loan or deed of trust lien is obtained expressly for construction of the facility which will become property of the County at the end of the lease term, free and clear of all liens and encumbrances.

Each lease will include a covenant running with the land to ensure that:

1. No person on the grounds of race, color, sex, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of the leased property.
2. In the construction of any improvements on, over or under such land and the furnishing of services thereon, no person on the grounds of race, color, sex or national origin shall be excluded from participation in, denied benefits of, or otherwise be subjected to discrimination.

The right to conduct aeronautical activities for furnishing services to the public is granted to an Airport tenant subject to the agreement:

1. To furnish said services on a fair, equal and not unjustly discriminatory basis to all users.
2. To charge fair, reasonable and not unjustly discriminatory prices for each unit or service provided an allowance may be made to make reasonable and non-discriminatory discounts, rebates or other similar types of price reductions to volume purchasers.

3.9 RESTRICTED AREAS AND AIR OPERATIONS AREAS

All airside areas of the airport and all areas within the Air Operations Area (AOA) are restricted. No person shall enter the Air Operations Area (AOA), or any hangar, except:

1. Person(s) assigned to duty therein
2. Airport staff, authorized representative(s) of the FAA, NCDOA, TSA (Transportation Security Administration), Law Enforcement and Emergency Services personnel
3. Passengers under appropriate supervision entering the Air Operations Area for the purpose of enplaning and deplaning
4. Aircraft Owners or Renters and/or their authorized representatives
5. Business representatives in the conduct of their business with tenants
6. All pedestrians, air carrier passengers, and sightseers at the Airport shall remain behind the fence of the AOA, or in designated areas, and shall be escorted onto the AOA by the Airport Director, FBO,SASO personnel, tenants or pilots, who shall be responsible for safety enforcement. No person authorized to operate on or conduct business activities at the Airport shall conduct any of its business activities, or park any aircraft, on any areas except those specified in the lease or written agreement. No FBO or SASO shall occupy any common-use areas except as authorized by these Rules and Regulations or by the County.

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SECTION 4 – PERSONAL CONDUCT

4.1 COMPLIANCE WITH SIGNS

All individuals shall observe and abide by all posted signs governing activities and/or actions of the respective individual while at the Airport.

No signs or other advertising, other than those existing on the date these rules are adopted by the County shall be placed or constructed upon the Airport, Airport entrance roads, or on any building or structure or improvement thereon, without prior written approval of the Airport Director. All signs or advertising media shall be kept in good repair and neat in appearance. Please see APPENDIX C for the airport sign policy and Exhibit "F" Application for Placement of Sign on Airport Property.

4.2 ENVIRONMENT POLLUTION AND SANITATION

While on Airport property, individuals shall limit activities in such a manner as not to cause littering or any other form of pollution.

a. No person shall dispose of garbage, papers, or any other forms of trash including cigarettes, cigars, or matches, except in the receptacles provided.

b. No person shall keep any uncovered trash containers in any area of the airport. Areas to be used for trash and garbage containers shall be designated by the Airport Director. Such areas shall be kept clean and sanitary at all times.

c. Any hazardous solid or liquid which may be spilled at the Airport shall immediately cleaned up by the person responsible for such spillage and reported immediately to the Airport Director.

d. Environmental Issues and Indemnification - Any tenant of the Airport, its agents, employees, independent contractors, or sub lessee shall not install, store, use, treat, transport or dispose of any of the following on Airport property:

    A. Asbestos in any form

    B. Urea formaldehyde foam insulation.

    C. Transformers or other equipment which contain dielectric fluid containing levels of polychlorinated biphenyls in excess of 50 parts per million; or

    D. Other chemicals, materials, air pollutants, toxic pollutants, waste, or substances which are regulated as toxic or hazardous or exposure to which is prohibited, limited or regulated by the Resource Conservation Recovery Act, the Comprehensive and Environmental Response Compensation and Liability Act, the Hazardous Materials Transportation Act, the Toxic Substances Control Act, the Clean Air Act, and/or the Clean Water Act or any other federal, state, county, regional, local or other governmental authority or which, even if not so regulated,

may or could pose a hazard to the health and safety of the occupants of the Leased Premises if:

1. in amounts in excess of that permitted or deemed safe under applicable law; or

2. used in a manner which is prohibited or deemed unsafe under applicable law. (The substances referred to in (A), (B), (C) or (D) are collectively referred to hereinafter as "Hazardous Materials").

e. Environmental Cleanup Laws – An Airport tenant will, at their own expense, comply with all existing or hereafter local and State enacted laws relating to Hazardous Materials (collectively "Cleanup Laws") in effect at the time of the lease, and all future laws thereafter. An Airport tenant will, at their own expense, make all submissions to provide all information to, and comply with all requirements of the appropriate governmental authority (the "Authority") under the Cleanup Laws. Should any Authority require that a cleanup plan be prepared and that a cleanup be undertaken because of the existence of Hazardous Materials which were installed, stored, used, treated, transported, disposed of or discharged on the leased premises by an Airport tenant, its agents, employees, independent contractors or sub lessees during the term of a lease, the Airport tenant will prepare and submit the required plans and financial assurances in accordance with such Cleanup Laws. The Airport and Duplin County shall be indemnified and held harmless from and against all obligations, damages, injunctions, fines, penalties, demands, claims, costs, expenses, actions, liabilities, suits, proceedings and losses of whatever nature (including, without limitation, attorneys' fees and costs), and all cleanup or removal costs, and all actions of any kind arising out of or in any way connected with the installation, storage, use, treatment, transporting, disposal or discharge of Hazardous Materials in or on the leased premises.

f. Environmental Notices – An Airport tenant shall promptly supply the Authority with copies of any notices, correspondence and submissions made or received from any governmental authorities of the United States Environmental Protection Agency, the United States Occupational Safety and Health Administration, or any other local, state or federal authority that requires submission of any information concerning environmental matters or Hazardous Materials.

g. Environmental Survival – An Airport tenant's liability pursuant to any environmental issue shall survive the expiration or earlier termination of their lease.

h. Storm Water Compliance

A. The Airport is subject to federal storm water regulations, 40 C.F.R. Part 122 for “vehicle maintenance shops” (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and/or deicing operations that occur at the Airport as defined in these regulations and, if applicable, state storm water regulations. Each Airport tenant shall become familiar with these storm water regulations if it conducts “vehicle maintenance” or operates equipment cleaning operations and/or deicing activities as defined in the federal storm water regulations.

B. The County will take steps necessary to apply for or obtain a storm water discharge permit as required by the applicable federal and/or state regulations, including the leased property occupied or operated by an Airport tenant. A storm water discharge permit issued to the County may name an Airport tenant as a co-permittee.

C. An Airport tenant's close cooperation is necessary to ensure compliance with any storm water discharge permit terms and conditions, as well as to ensure safety and to minimize costs. An Airport tenant may therefore have to implement and maintain "Best Management Practices" to minimize the exposure of storm water (and snow melt) to "significant materials" generated, stored, handled or otherwise used as defined in the federal storm water regulations.

D. The County's storm water discharge permit is incorporated by reference into each lease and any subsequent renewals.

E. The County will provide an Airport tenant with a written notice of those storm water discharge permit requirements that are in the County's storm water permit, that a tenant will be obligated to perform from time to time, including, but not limited to:

    1. Certification of non-storm water discharge;

    2. Collection of storm water samples;

    3. Preparation of storm water pollution prevention or similar plans; and

    4. Implementation of "good housekeeping" measures or best management practices; and maintenance of necessary records.

    Such written notice will include applicable deadlines and an opportunity to dispute any of the storm water discharge permit requirements.

F. Each Airport tenant shall participate in any organized task force or other work group established to coordinate storm water activities of the Airport.

4.3 ANIMALS

No person shall enter the Airport with any animal without the permission of the Airport Director or his/her authorized representative, except:

a. Dogs or other animals which are to be transported by air within a suitable container properly equipped for air travel.

b. Within the discretion of the Airport Director, dogs or other animals that are restrained by leash, or otherwise properly confined and under the supervision of an adult.

Animals shall be allowed to the extent mandated by applicable law, including "service animals" pursuant to the Americans with Disabilities Act.

4.4 FIREARMS AND WEAPONS

No person except those authorized by Federal Law and/or State Law may carry or transport any firearm or weapon on Airport property, except when the firearm or weapon is properly confined for shipment or is part of a survival kit and is packed accordingly.

a. For the purpose of this section a firearm shall mean: any weapon designed to expel a projectile by the action of an explosive other than a flare gun.

b. For the purpose of this section a weapon shall mean: any dirk, slingshot, chemical weapons, electric weapon, or any other deadly weapon as defined by any Federal or State Law.

c. No person shall discharge any firearm or weapon on the Airport premises.

4.5 PRESERVATION OF PROPERTY

No person shall destroy, injure, deface, or disturb any building, sign, equipment, marker, or other structure on Airport property; nor alter, make revisions to, or erect any building or sign on Airport property without prior approval of the Airport Director. (Please see APPENDIX C for the airport sign policy and Exhibit “F” Application for Placement of Sign on Airport Property).

No person shall travel upon any part of the Airport other than the designated roads, walks, or other marked rights-of-way provided by the Airport for specific purpose.

4.6 DAMAGES AND TAMPERING WITH AIRCRAFT

All person(s) shall be fully responsible for all damages to buildings, equipment, and real property in the ownership or custody of the Airport caused by abuse, carelessness, or negligence. No person shall interfere or tamper with any aircraft, or use any aircraft, aircraft parts, instruments or tools, without the permission from the owner or by specific direction of the Airport Director.

4.7 MAINTENANCE AND EQUIPMENT IN APRON AREA

All tenants shall maintain their leased property in such condition or repair, cleanliness, and general maintenance as acceptable to the Airport Director. All ramp equipment shall be parked and kept in a neat, orderly manner. No receptacles, cases, or housing shall remain on the apron or ramp area that does not fit in with architectural and cleanliness standards of the rest of the installation. Final approval of these items rests with the Airport Director.

4.8 ALCOHOLIC BEVERAGES AND CONTROLLED SUBSTANCES

a. No person may act or attempt to act as a pilot or crewmember of an aircraft:

A. Within eight (8) hours after consuming any alcoholic beverage;

B. While under the influence of alcohol; or

C. While under the influence of any drug or medication that impairs the person's judgement or otherwise affects the safe operation of the aircraft.

b. No person may operate a vehicle of any type on Airport property while under the influence of alcohol, or any impairing drug or medication, or any combination thereof, to a degree that affects the safe operation of the vehicle.

c. The consumption of alcohol is not permitted in the AOA and is only permitted in leased spaces or in the airport terminal building at receptions, events or functions as authorized by the Airport Director.

4.9 USE OF LAW ENFORCEMENT AGENCIES

In the event a situation arises that is beyond the control of the Airport Management, the Duplin County Sheriff's Department is authorized to enter the premises and enforce the Rules and Regulations adopted by the Airport Commission.

4.10 UNACCOMPANIED MINORS

Unaccompanied minors under the age of 16 are not permitted on Airport property without permission of the Airport Director.

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SECTION 5 - AERONAUTICAL

5.1 GENERAL RULES

a. Compliance with Orders

All aeronautical activities shall be conducted in compliance with these Rules and Regulations, current Federal Aviation Regulations, NCDOA Regulations and with the Minimum Standards (APPENDIX A).

b. Operation of all aircraft at the Airport shall be done in a safe and responsible manner and in compliance with these Rules and Regulations, the FARs, FAA Advisory Circulars and the requirements of other appropriate governmental agencies. One copy of each applicable document will be maintained in the pilot briefing room in the Terminal Building and at each FBO or SASO office. Each Person operating an aircraft is responsible for the safety of its operation and for the safety of others exposed to such operation.

c. In the event the County or the Airport Director determines that conditions at the Airport are unsafe for landings or takeoffs, a “Notice to Airmen” (NOTAM) will be initiated to close or limit the operations at the Airport, or any portion thereof, for a reasonable period of time (i.e., until those unsafe conditions can be corrected or no longer exist). See APPENDIX D for Hazardous Weather Plan.

d. The Airport is served by a Unicom radio which is periodically manned by airport personnel. All pilots of aircraft having radio equipment permitting two-way communications should, as recommended by the FAA, contact the Airport Unicom to obtain Airport advisory information and announce their intentions when operating within 10 miles of the Airport. The pilots are also encouraged to maintain a listening watch on the Unicom frequency 123.000 at the Airport when operating within a 10-mile radius of the Airport. All departing aircraft should, as recommended by the FAA, announce on the Unicom their intentions and the runway to be used for take-off and landing.

e. Inattentive Operations Prohibited

1. No person shall operate any aircraft at the Airport in a careless manner or in disregard of the safety of others.

2. All individuals using the Airport shall be liable for any damage to property caused intentionally, accidentally, negligently or otherwise, while on or over the Airport property.

f. Disabled/damaged Aircraft

All aircraft owners shall be responsible for the prompt removal of all disabled aircraft and their parts at the Airport. The Airport Director will be solely responsible for determining when an unflyable aircraft is to be moved from the Airport.

g. In the event any aircraft is damaged to the extent that it cannot be moved under its own power, the pilot shall immediately notify the Airport Director, the aircraft owner and the FBO or SASO. The pilot is also responsible for reporting under NTSB 49 CFR Part 830. Subject to governmental investigation and

inspection of the damaged aircraft, the owner or pilot of the damaged aircraft or the owner's agent or legal representative shall, as soon as reasonably possible, obtain the necessary permission for removal of said aircraft from all landing areas, taxiway, ramp, tie-down areas and all other traffic areas, and park or store said aircraft in an area designated by the Airport Director. If, for any reason, the owner of the aircraft fails to remove the wrecked or damaged aircraft from the AOA or Airport as requested by the Airport Director, the County or the FBO or SASO may cause the removal and storage or disposal of the wrecked or damaged aircraft at the sole expense of the aircraft owner and without liability for further damage as a result of the removal.

h. All aeronautical activities and services for aircraft using the Airport landing facilities will be performed on the Airport.

i. Cleaning, Maintenance, and Repair of Aircraft

1. Nothing contained herein shall prevent any Person operating aircraft on the Airport from performing any services it may wish to perform on its own aircraft with its own employees (including, but not limited to maintenance, repair and fueling) subject to these Rules and Regulations. For the purpose of these Rules and Regulations, an employee is an individual on the normal payroll of the employer (aircraft owner) hired to perform a specific function for that employer. Any aircraft owner utilizing an employee to perform aircraft maintenance shall, at the request of the Airport Director, provide evidence of employment in a form acceptable to the County.

2. All repairs to aircraft or engines, other than specified in FAR Part 43, Preventive Maintenance paragraph A43.c, made by the aircraft owner or FBO or SASO, shall be made in the spaces or areas designated for such purpose by the Airport Director or County or in the leased area of the Operator and shall not be made on any part of the landing area, taxiways, ramps or fueling or service areas. Reservations for the maintenance spaces can be made with the Airport Director. See Exhibit "A" for designated space location.

3. Area(s) on the Airport property may be designated where self-maintenance is to be performed. If such an area is designated, all self-maintenance shall be performed in that (those) areas only. See Exhibit "A".

4. All maintenance activities must comply with the current SWPPP.

5. The cleaning, painting, washing or repairing of any aircraft shall only be permitted in areas approved by the Airport Director, and shall not be made on any part of the landing area, taxiways, ramps or fueling or service areas. Reservations for the maintenance spaces can be made with the Airport Director. See Exhibit "A" for designated space. Location area(s) on the airport may be designated where self-maintenance is to be performed. If such an area is designated, all self-maintenance shall be performed in that (those) areas only. See Exhibit "A".

j. Certification of Aircraft and Licensing of Pilots

As required by the FAA, all aircraft operating at the Airport shall be required to display on board a valid Airworthiness Certificate issued by the FAA; and shall display on the exterior of the aircraft a valid registration number issued by the FAA or appropriate foreign government. All person(s) operating aircraft are required by the FAA to possess an appropriate certificate or license issued by the FAA. If requested by the Airport Director, the pilot or operator shall be required to show these documents. Based aircraft shall be registered and insured in accordance with all applicable Federal and State statutes.

5.2 ACCIDENTS AND INCIDENTS

In order to promote and maintain safety at the Airport, any pilot or tenant or FBO or SASO shall immediately report to the Airport Director any bodily injury requiring medical attention. Any damage to property at the Airport or other accident, incident, injury, occurrence or unsafe practice should be reported to the Airport Director within twenty-four (24) hours. A reporting form is attached (see Exhibit "E"). If the accident or incident report is required under NTSB, 49 CFR Part 830, a copy of that information may be submitted to the Airport Director in lieu of the form in Exhibit "E".

Examples of accidents, incidents, unsafe practices or occurrences that shall be reported promptly to the Airport Director include but are not limited to:

a. Aircraft landing off the runway without prior permission of the Airport Director.

b. Aircraft damaging runway or taxiway lights, airfield signs, or NAVAIDS.

The report shall include the following information:

c. Location, date and time of incident and the identity of each Person and Aircraft involved;

d. Nature of any injuries suffered by any Person as a result of the incident and the name and address of any Person injured;

e. Nature and extent of any property damage occurring as a result of the incident and the name and address of the owner of the damaged property; and

f. A narrative explaining circumstances of the incident occurred.

Airport property destroyed or damaged by an accident shall be paid for by the responsible parties.

5.3 CATEGORIES OF AIRCRAFT, ACTIVITIES, RULES AND OPERATIONS

Final determination as to proper designation of any aircraft shall rest with the Airport Director. Charges as shown in Section 8 shall be determined and defined according to the following classifications:

a. Private

1. Private aircraft may be used by person(s) other than the owner provided that it is not rented or leased by the owner for a profit.

2. Company and corporation owned aircraft that are operated for the free transportation of personnel and/or products are classified as private aircraft and subject to the restrictions as listed above.

b. Commercial Aircraft Use:

    1. For rental, hire, or charter

    2. Student instruction and occupations for hire

    3. Any aircraft used for commercial services and not otherwise covered in these regulations.

c. Air Taxi (Commuters)

    1. Contract:
    All federally certified Air Taxis or Commuters holding a contract with Duplin County for Airport usage.

    2. Non-Contract:
    All Air Taxis or Commuters not covered in this Section.

d. Rotorcraft Operation Rules

    1. Rotorcraft not under the control of an Air Traffic Control Tower shall avoid fixed wing aircraft traffic patterns and altitudes to the maximum extent possible, with safety precautions.

    2. Rotorcraft shall not be operated within fifty (50) feet of any areas on the Airport where unsecured light aircraft are parked.

5.4 TRAFFIC PATTERNS

a. All aircraft operating into and out of the Airport shall follow the approved Airport traffic pattern which has been established. See EXHIBIT “B”.

    a. Traffic pattern altitude for the Airport is 800 feet Above Ground Level (AGL) for single-engine and multi-engine piston aircraft, and 1500 feet AGL for turbine Aircraft.

    b. Traffic pattern is standard left hand for all runways.

b. Helicopter traffic pattern altitude is 500 feet AGL with standard right-hand pattern. Air taxiing is permitted only over the runway, ramp and taxiway. Helicopter operators shall operate so as to minimize rotor down wash on the ramp or they may be required to be towed to the taxiway before starting the engine.

c. All takeoffs or landings by powered Aircraft shall only be on the paved runway unless otherwise directed by the Airport Director.

5.5 AIRCRAFT ACTIVITIES

a. No fixed wing or rotary wing aircraft shall be allowed to operate at the Duplin County Airport unless the aircraft has a current Airworthiness Certificate and is operated by a licensed pilot or student pilot holding a valid medical certificate, except aircraft being taxied by a qualified mechanic for maintenance purposes or operated under a valid ferry permit.

b. The owners of all aircraft based on the Airport will register their aircraft with the Airport Director.

c. All aircraft shall comply to with all applicable Federal Aviation Regulations (FAR) and National Transportation Safety Board (NTSB) including but not limited to:

    a. 14 CFR Part 61 – Certification: Pilots, Flight Instructors & Ground Instructors

    b. 14 CFR Part 65 – Certification: Subpart D - Mechanics 65.71 thru 65.95

    c. 14 CFR Part 67 – Medical Standards and Certifications

    d. 14 CFR Part 91 – General Operating & Flight Rules

    e. 14 CFR Part 93 – Special Air Traffic Rules

    f. 14 CFR Part 135 – Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons on Board Such Aircraft

    g. 14 CFR Part 137 – Agricultural Aircraft Operators

    h. 14 CFR Part 141 – Pilot Schools

    i. 14 CFR Part 43.3g – Aircraft Owner Repairs/Preventive Maintenance

    j. 14 CFR Part 145 – Repair Stations

    k. 49 CFR Part 830 – Notification & Reporting of Aircraft Accidents

5.6 AIRPORT OPERATIONS:

The Airport Director and/or the Airport Operations Manager may prohibit aircraft movement at any time, under any circumstances, as the Airport Director deems necessary.

5.7 TAXI AND GROUND RULES

Aircraft Parking

a. Aircraft may only be parked in designated spaces and in the manner prescribed by the Airport Director. If this rule is violated, the aircraft parked may be subject to removal at the direction of the Airport Director.

b. No aircraft shall be left unattended on Airport property unless it is in a hangar or securely locked or tied down.

c. Any materials left in an aircraft are the sole responsibility of the aircraft owner/pilot. Theft or vandalism of any materials is not the responsibility of the Airport.

d. No Person shall park, store, tie down or leave any aircraft on any area of the Airport other than that which is prescribed by the Airport Director and is not prohibited by these Rules and Regulations.

e. Aircraft pilots, owners or agents shall properly secure aircraft while parked or stored. Aircraft pilots, owners or agents are solely responsible for parking and tying down aircraft, and for any special security measures required by weather or other conditions at the Airport. Aircraft pilots, owners or agents shall also be responsible for securing aircraft in a manner necessary to avoid damage to other aircraft or buildings at the Airport in the event of wind or other severe weather. Owners, pilots or agents of all aircraft shall be held solely responsible for any damage or loss resulting from the failure of such owner, pilot or agents of such aircraft to comply with these Rules and Regulations.

f. Each tie-down space being rented on a monthly basis shall be assigned to a specific aircraft. Tie-down spaces will be designated and assigned by the Airport Director. A person shall not knowingly take or use any aircraft tie-down facility when such facilities are already in actual use by, or rented to, another person. Tie-down space renters shall not sublease their space.

g. All cargo shall be loaded and unloaded in the leased areas of those FBOs or SASOs who provide that aeronautical activity.

Non-Flyable Aircraft

a. No person will be allowed to park an aircraft in non-flyable, non-airworthy condition on Airport property for a period over one hundred eighty (180) days without approval from the Airport Director.

b. If an aircraft is parked or stored in non-flyable condition on Airport property in violation of this Section, the Aircraft will be removed by the Airport at the owner’s expense.

Other

a. Engine Run-up – Aircraft shall not perform run-up or prolonged engine test operations in any area that would result in a hazard to other aircraft, person(s), or property

b. No person shall run any engine in any aircraft unless a competent person is in the aircraft attending the engine controls.

5.8 USE OF T-HANGARS AND STORAGE HANGARS

a. Airport Sponsors that have accepted FAA grants or deeds of federal surplus property are obligated to use dedicated aviation facilities for aeronautical use. If hangars are not reserved for aeronautical use, federal airport grant funds could inadvertently subsidize non-aeronautical users and aeronautical users could be denied access to needed airport facilities. Conditions in Airport Improvement Program (AIP) grant assurances that can apply to hangar use include:

   - Preserving rights and powers (Grant Assurance 5);
   - Making the airport available for aviation use on certain terms (Grant Assurance 22);
   - Not granting exclusive rights (Grant Assurance 23);
   - Ensuring safe operations (Grant Assurance 19); and
   - Complying with ALP (Airport Layout Plan) process and requirements (Grant Assurance 29).

b. To assure appropriate use of hangars, an airport sponsor should:

   - Manage the use of hangars through an airport leasing program that requires a written lease agreement or permit;
   - Monitor the use of hangars on the airport and take steps to prevent unapproved non-aeronautical use;
   - Ensure that the length of time on a waiting list of those in need of a hangar for aircraft storage is minimized; and
   - In cases where temporary non-aeronautical use of a vacant hangar is permitted, ensure that non-aviation users pay a fair market rental for the use of the hangar and that the hangar can be returned to aviation use when needed.

   In accordance with FAA policy, the following uses of T-hangars are permitted or prohibited.

   Permitted uses include:

   - Storing active aircraft;
   - Sheltering aircraft for maintenance, repair, or refurbishment, but not indefinitely storing non-operational aircraft;
   - Constructing amateur-built or kit-build aircraft, provided that activities are conducted safely;
   - Storing aircraft handling equipment, e.g., tow bar, glider tow equipment, workbenches, and tools and materials used to service, maintain, repair or outfit aircraft; items related to ancillary or incidental uses that do not affect the hangars' primary use;

- Storing materials related to an aeronautical activity, e.g., balloon and skydiving equipment, office equipment, teaching tools, and materials related to ancillary or incidental uses that do not affect the hangars primary use;
- Storing non-aeronautical items that do not interfere with the primary aeronautical purpose of the hangar, e.g. televisions and furniture and other items that do not affect the hangars' primary use; or
- Parking a vehicle at the hangar while the aircraft usually stored in that hangar is flying, subject to local airport rules and regulations.

Prohibited uses include:

- Use as a residence;
- Operation of a non-aeronautical business, e.g., limo service, car and motorcycle storage, storage of inventory, and non-aeronautical business office;
- Activities that impede the movement of aircraft in and out of the hangar or other aeronautical contents of the hangar;
- Activities that displace the aeronautical contents of the hangar or impede access to aircraft or other aeronautical contents of the hangar;
- Storage of household items that could be stored in commercial storage facilities;
- Long-term storage of derelict aircraft and parts;
- Storage of items or activities prohibited by local or state law;
- Storage of fuel and other dangerous and Hazmat materials;
- Storage of inventory or equipment supporting a municipal agency function unrelated to the airport;
- Any purpose that would interfere with the use of other buildings and structures in the vicinity of the leased premises.

c. Additional rules:

- T-hangars and storage hangars shall not be used for any purpose that would interfere with the use of other buildings or structures in the vicinity of the leased premises.
- T-hangars shall be used for storage of aircraft in accordance with the current lease. These hangars shall not be used for any other purpose without written permission from the Airport Director.
- No alterations may be made to the hangar structure without written approval by the County

- No accelerants (a fuel or oxidizer often an ignitable liquid, used to initiate a fire or increase the rate of growth or spread of fire (NFPA 921 3.3.2)) will be stored in hangars. See Section 7 of this document for further rules regarding Fire prevention.
- No paint spraying or spraying of any kind will be permitted within the hangar.

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SECTION 6 – MOTOR VEHICLES

6.1 RULES OF OPERATION

a. No person will be allowed to operate a motor vehicle of any kind in a reckless manner or in excess of the speed limits prescribed by the Airport Commission, and in no event in excess of 10 miles per hour in ramp, apron, aircraft parking, or hangar areas.

b. Pedestrians and aircraft will at all times have the right of way over vehicular traffic. All vehicles shall pass to the rear of taxiing aircraft.

c. All person(s) operating a motor vehicle on the Airport shall give proper signals and observe the directions of posted traffic signs.

d. No person under the influence of alcohol or any impairing drug or medication, or any combination thereof, may operate a vehicle of any type on Airport property.

e. No person shall operate any motor vehicle on Airport property that is overloaded or carrying more passengers than those for which the vehicle was designed pursuant to the manufacturer's specifications.

f. No vehicle shall be operated on Airport property if it is equipped or loaded in a manner which endangers persons or property.

6.2 LICENSING, REGULATION, AND SPEED LIMITS

1. No person shall operate a motor vehicle of any kind on Airport property without a valid Operator's License.

2. All vehicles on Airport property must be properly registered with a current license plate and tag issued by a State Department of Motor Vehicles.

3. All motor vehicles must park in designated parking areas.

4. Parking in front of the terminal building shall be limited to 15 minutes and is allowed only for the purpose of loading/unloading.

5. The installation of two-way radios does not permit the operation of vehicles on Airport property without prior permission from the Control Tower or on the AOA by the Airport Director.

6. No person may abandon any motor vehicle on the Airport. The Airport Director has the authority to tow or otherwise move motor vehicles which are parked on Airport property in violation of the designated parking areas.

6.3 ACCIDENT PROCEDURE AND EMERGENCY PROTOCOL

The operator of any vehicle involved in an accident on Airport property which results in the injury or death of any person(s), or property damage, shall immediately stop the vehicle at the scene of the accident and render

necessary assistance. The operator shall further give immediate notice of the accident to the Airport Director and the Duplin County Sheriff's. The operator of each vehicle shall provide the name and address of the owner and driver of the vehicle, as well as the operator's license, vehicle registration, and the name of the liability insurance carrier for the vehicle, to any person injured, the driver of the vehicle damaged, and to any police officer. In the event of an emergency on Airport property, notification should be given to the following:

1. Dial 911 Emergency Operator
2. The Airport Director

Please refer to Exhibit "E" for the Accident Reporting Form.

6.4 VEHICLE OPERATIONS ON AIR OPERATIONS AREA (AOA)

Permission

No motor vehicle shall be permitted on the Air Operations Area without specific permission granted by the Airport Director. All vehicles shall at all times yield right-of-way to aircraft.

Rules of Operations

a. No motor vehicle shall be parked on any part of the AOA except authorized trucks and other vehicles necessary for the servicing and maintenance of aircraft and transportation of passengers on the Airport.

b. No person shall park a vehicle so that it blocks or obstructs fire hydrants, gates, emergency exits, and building entrances or exits.

c. Aircraft taxiing on any runway, taxiway, or apron area shall always have the right-of-way over any vehicular traffic.

d. No Aircraft shall be left unattended so that it blocks or obstructs access to fuel dispensers or tanks.

e. Individual tenants may drive to their aircraft or hangar, as approved and directed by the Airport Director and, at their own risk, may park private vehicles in their hangars when aircraft is not in the hangar.

f. Construction contractors' equipment and personnel vehicles shall be marked in accordance with the guidelines as established in the current edition of FAA Advisory Circular 150/5370, Operational Safety on Airports During Construction.

g. During any periods of construction activity within 125 feet of a runway edge, a radio operator must be on the construction site with a working two-way radio at all times. The radio operator shall be responsible for directing and controlling the movement of all construction equipment in accordance with information as provided by the Unicom operator.

6.5 RESERVED AND PUBLIC PARKING

a. Operators of motor vehicles using public parking facilities at the Airport shall abide by all regulatory signs and markings.

b. No vehicle shall remain in a public parking facility for more than thirty (30) consecutive days without the permission of the Airport Director.

c. No person shall park any vehicle in a reserved parking area on airport property without a valid permit issued by the Airport Director expressly allowing parking in such specified area(s).

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SECTION 7 – FIRE, SAFETY, AND HAZARDOUS CARGO

7.1 GENERAL

All persons using the Airport and its facilities shall exercise the utmost care and caution against fire and injury to persons and/or property. The authority for all fire prevention at the Airport shall be the State and local fire code and the current edition of NFPA 407, including all NFPA Standards referenced in 407.

7.2 FUELING OPERATIONS

All aircraft fueling, fuel equipment, and procedures will be in accordance with National Fire Prevention Association (NFPA) Manual 407 – "Standard for Aircraft Fuel Servicing, 2017 edition," (or as revised).

All transportation, storage and other handling of aircraft and vehicle fuel shall comply with the International Fire Code, 2012 Edition, (or current edition) as published by the International Code Council, Inc. and FAA Advisory Circular 150/5230-4, (latest change).

Only those individuals who have been so authorized by the Airport Director may dispense fuel into an aircraft.

a. No aircraft shall be fueled or de-fueled while one or more of the engines are running, or the aircraft is then being warmed by external heat, or while such aircraft is in a hangar or enclosed space.

b. No person shall start the engine of an aircraft if there is any gasoline or other volatile fluid on the ground or elsewhere if starting the engine could ignite such fuel.

c. All aviation fuels and oils for sale on Airport property shall be dispensed only by authorized Airport personnel or by the pilot in command in the case of self-service fueling. No fuel shall be stored on Airport property by any person without the permission of the Airport Director and approval of the Airport Commission. Aircraft being fueled shall be positioned no closer than fifty (50) feet from any hangar or building. Fuel trucks, whether loaded or empty, shall never be in hangars nor be parked less than fifty (50) feet from any hangar or building. No person shall ever dispense or sell aviation fuel for automotive purposes.

d. No fuel, grease, oil, or flammable liquids shall be allowed to flow in any Airport sanitary or storm drain system. Any person(s) involved in a spillage of fuel shall be held responsible for expeditious notification to the Airport Director and will be held responsible for immediate clean-up of the affected area. In the event of a fuel spillage, no vehicles shall be moved or operated in the vicinity of the spill until the spillage is removed.

e. No person is permitted to fuel or de-fuel an aircraft while passengers are on board.

f. No person shall park motorized ground equipment near any aircraft that prevents it or the aircraft from being driven or towed away in case of an emergency.

g. Prior to making a fueling connection to an aircraft, the fueling equipment shall be physically bonded or grounded to the aircraft being fueled by use of a cable, thus providing a conductive path to equalize the electric potential between the fueling equipment and the aircraft.

h. All hoses and funnels used in fueling and de-fueling operations shall be equipped with a bonding/grounding device to prevent ignition of volatile liquids.

i. When a fire occurs in a fuel delivery device while servicing an aircraft, fueling shall be stopped immediately; all emergency valves shall be shut off; and 911 and the Airport Director shall be immediately notified.

j. Fueling personnel shall not carry lighters or matches on their person while engaged in fuel servicing operations.

k. No aircraft shall be fueled or defueled while its engine is running or while in a hangar or other enclosed place. Fueling or defueling shall be done in such a manner and with such equipment that adequate connections for electrical bonding shall be continuously maintained.

7.3 HANGAR ACTIVITIES

a. The cleaning of engines or other parts of Aircraft shall not be accomplished in any hangar except with non-flammable substances. If flammable liquids are used for this purpose, the operation shall be conducted outside in the open air in designated spaces. Flammable liquids shall be stored in Underwriters Laboratory (U.L.) approved containers. All aircraft painting shall be done in accordance with safety procedures approved in writing by the County.

b. All hangar and shop floors shall be kept clean and free of oil, gas, and other flammable substances. No volatile, flammable solvent shall be used for cleaning floors. No rags soiled with flammable substances shall be kept or stored in any building on the Airport in such manner as to create any fire hazard.

c. Hangar entrances must be clear in a manner such that emergency or fire / rescue personnel and equipment can immediately access the hangar without hindrance.

d. No person shall smoke or produce any open flame anywhere within a hangar, building or structure in which any aircraft, gas, oil or flammable substance may be stored, or within 50 feet of any aircraft or any fueling facility, except in a designated smoking area. When heaters, open flames (e.g., acetylene torches for heating components, welding or soldering), or arc welding equipment are being used in the maintenance hangars, the FBO or SASO must adhere to State and local fire codes.

e. Airport management will supply and maintain adequate and readily accessible fire extinguishers, as may be required by applicable fire codes and regulations, to all airport tenants and lessees.

f. Fuel services shall be administered by the County, which has retained the "Proprietary Exclusive Right" to sell all aviation petroleum products to the public on Airport property. Individuals or FBOs or SASOs refueling their own Aircraft from their own containers shall conduct such operations only in designated areas (see Exhibit “C”) using the approved equipment and procedures.

7.4 SELF-FUELING

Any aircraft owner may self-fuel their own Aircraft only after obtaining a self-fueling permit from the Airport Director. Procedures for obtaining a self-fueling permit are contained in Exhibit “D”. Those Aircraft owners who have obtained a self-fueling permit will adhere to the following rules governing self-fueling:

a. All Aircraft shall be fueled in the area designated by the County for self-fueling. This area will be maintained by the County which will provide and maintain fire extinguishers and bonding cables. All self-fueling shall be performed in a designated area for fueling and not on the ramps or outside parking areas.

b. Fueling equipment and fuel maybe brought to the designated self-fueling area only when fueling is to be accomplished. A current self-fueling permit must be available for inspection, upon request by the Airport Director.

c. All self-fueling tanks, trucks and equipment shall be removed from the Airport at the end of each day. NO tanks, trucks or equipment shall remain on Airport property overnight unless authorized by the Airport Director.

d. All fueling activity must comply with the requirements of the State and local fire code and the current edition of NFPA 407, including all NFPA Standards referenced in 407.

7.5 FUEL FARMS AND FUEL TRANSPORTING VEHICLES

Fuel Farms

a. All fuel farm installation shall conform to the appropriate National Fire Protection Association Standards, City/County Fire Codes, Federal, State, and local laws. There shall always be NO SMOKING within one hundred (100) feet of the fuel farm installation.

b. Fuel installations shall always be kept up and maintained, removing all debris in order to prevent foreign object debris (FOD).

c. Fire extinguishers shall always be maintained in an accessible position and in an operable condition with an un-expired certification date.

d. No fuel or fuel-transporting vehicle shall be left unattended during loading or unloading of fuel at a fuel farm.

e. Aircraft fuel storage tanks for below-ground or above-ground use will be constructed, installed, registered, monitored for leakage, operated, and maintained in accordance with Federal and State statutes, rules, and regulations promulgated by the Environmental Protection Agency and the N.C. Department of Environmental Quality (NCDEQ).

f. All aviation fuel storage tanks, aviation fuel pumps, hydrant fuel services, and aircraft fuel service vehicles, whether publicly or privately owned, shall have the type of aviation fuel dispensed printed in large block letters, including octane if aviation gasoline, plus the fuel I.D. number and “NO SMOKING”

signs. This information shall be printed on all sides of the fueling tanks, pumps, etc. so the information is visible from any direction on the ground.

g. Fuel spills in excess of one gallon must be reported to the Airport Director and immediate action must be taken by the spilling entity to clean up the spill in accordance with all local, state, and federal regulations

Fuel Transporting Vehicles

Each fuel transporting vehicle will be labelled on both sides and the rear of the cargo tank with the words “FLAMMABLE,” “NO SMOKING,” and “FUEL TYPE.”

7.6 SMOKING

Smoking or carrying lighted smoking materials, or striking matches, lighters, or other lighting devices, is only permitted in designated smoking areas.

7.7 STORAGE OF MATERIALS AND HAZARDOUS MATERIALS

Storage of Materials

a. No person shall store any material or piece of equipment in such a manner that it becomes a hazard. Gasoline, jet fuel, lubricating oil, or any other flammable substance shall be stored in accordance with the applicable City and/or County Codes. Buildings shall be provided with fire-suppressant devices and first-aid equipment as required.

b. No person shall keep, transport, or store any lubricating oils on Airport property except in specified containers or receptacles.

c. All hazardous waste shall be disposed of in accordance with applicable regulations.

Transport of Hazardous Materials

a. No person shall handle, transport, or store any cargo containing explosive materials without the permission of the Airport Director.

b. No person may accept any hazardous materials for shipment at the Airport unless the shipment is handled and stored in full compliance with the current provisions of the Federal Regulations.

c. Any person transporting hazardous materials shall have designated personnel at the Airport authorized and responsible for receiving and handling such shipments.

7.8 APRONS, BUILDINGS, AND EQUIPMENT

a. All persons on Airport property shall keep all areas of any premises leased or used by them clean and free of oil, grease and other flammable material.

b. The floors of hangars shall be kept clean and free from waste materials or other trash or rubbish.

c. Any person operating or using any equipment on Airport property shall use extreme caution and care.

d. Any person using a facility or building onAirport property shall exercise cleanliness and caution.

e. No person shall use flammable substances for cleaning hangars or other buildings on Airport property.

f. Without the prior written consent of the Airport Director, the leased premises or any rights there under (except to a leasehold mortgagee as herein provided) may not be assigned. Any assignment or subletting shall be expressly subject to all the terms and provisions of the original lease.

7.9 FIRE EXTINGUISHERS

Fire extinguishing equipment is provided by the Airport and shall be checked daily to avoid tampering. Fire extinguishers shall not be tampered with at any time, nor used for any purpose other than firefighting or fire prevention. All equipment shall be maintained in accordance with current NFPA Standards. Tags showing the last inspection shall be attached to each unit.

7.10 INSPECTION OF POSSIBLE HAZARDOUS AIRCRAFT

Inspection of all aircraft and subsequent declaration of safety or contamination shall be the responsibility of the aircraft owner or his/her authorized agent and shall be accomplished immediately after parking and evacuation.

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SECTION 8 - CHARGES

8.1 COMMERCIAL OPERATIONS

a. No aircraft organization or person shall engage in any commercial operation of any type at the Airport unless prior permission is obtained from and assessed fees paid to the Airport

b. Permission requirements and fees are in effect for each visit to the Airport, with all fees being set by the Airport Commission.

c. The Airport may enter into separate contracts with any commercial operation at the Duplin County Airport.

d. The Airport Commission may adopt a fee schedule to be applied for ramp operations by any commercial operator not having a contract with the Duplin County Board of County Commissioners (BOCC); such fee schedule shall be placed at the Airport Terminal Building operations desk. Commercial operators shall pay a ramp fee for each ramp operation at the Airport.

e. Private or business (non-commercial) ramp fees shall be posted on the Airport's schedule of fees. At the discretion of the Airport Director, fees are subject to change based on the weight of the aircraft.

f. The Airport Director may grant written permission for a specific commercial operator to enter the Airport for the purpose of repairing or maintaining an aircraft or equipment which is beyond the capability of any Fixed Based Operator located at the Airport. Capability of the Airframe and Powerplant (A&P) mechanic, Inspection Authorization (IA) is defined in FAR 65.71 thru 65.95 (14 CFR Part 65 Subpart D). This privilege will be on a case-by-case basis and will require a separate agreement for each activity.

g. Any permission granted by the Airport Director under this clause will be limited toa specific purpose and for a specific period.

8.2 AIRCRAFT SERVICING FEES

All charges owed to the Airport for service(s) performed, for Airport facilities used, or for aircraft stored on a daily basis shall be paid before the aircraft is cleared to depart from the Airport unless credit arrangements have been made. The Airport Director may detain any aircraft for non-payment of any charges due.

8.3 RAMP FEES

Ramp fees for commercial aviation operations shall be payable to the Duplin County Airport immediately upon landing at the airport unless other arrangements have been made.

8.4 AIRCRAFT PARKING FEES

Aircraft parking on ramp areas shall be appropriately charged.

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SECTION 9 – SPECIAL AIRPORT USES

The Airport Commission obligates itself, as appointed by the Duplin County Board of Commissioners, to operate the Duplin County Airport for the use and benefit of the public and to keep the airport open to the various types of aeronautical use for which the facility is designed and intended to serve.

The Airport Commission established these rules to be met by all users to provide for the safe and efficient use of the airport and to otherwise protect the safety of person(s) and property both on the ground and in the air.

9.1 LANDING FACILITIES

The landing area facilities that are constructed are primarily intended for the use of powered aircraft whose weights are not in excess of the published strengths of the paved surfaces. Operations on these surfaces by aircraft slightly in excess of the published pavement strengths may be permitted on an infrequent basis so long as permission is obtained from the Airport Director.

9.2 FLYING CLUBS

All flying clubs desiring to base their aircraft and operate on Airport property must comply with the applicable provisions of these Rules and Regulations. However, they shall be exempt from regular FBO or SASO requirements upon satisfactory fulfillment of the conditions contained below:

1. The club shall be a non-profit entity (i.e., corporation, association or partnership) organized for the purpose of providing its members with aircraft for their personal use and enjoyment only. The ownership of aircraft must be vested in the name of the flying club (or owned ratably by all of its members). The property rights of the members of the club shall be equal and no part of the net earnings of the club will inure to the benefit of any member in any form (e.g., salaries, bonuses). The club may not derive greater revenue from the use of its aircraft than the amount necessary for the operation, maintenance, and replacement of its aircraft.

2. Flying clubs may not offer or conduct charter, air taxi, or rental of aircraft operations. Except for regular members, they may not conduct aircraft flight instruction and only members of the flying club may operate the aircraft. No flying club shall permit its aircraft to be utilized for giving flight instruction to any person, including members of the club owning the aircraft, when such person pays or becomes obligated to pay for such instructions, except when instruction is given by an FBO or SASO based on the Airport who provides flight training. Any qualified mechanic who is a registered member and part owner of the aircraft owned and operated by a flying club shall not be restricted from performing maintenance work on aircraft owned by the club, and the club does not become obligated to pay for such maintenance work except that such mechanic and instructors may be compensated by credit against payment of dues or flight time.

3. All flying clubs and their members are prohibited from leasing or selling any goods or services to any person or firm other than a member of such club at the Airport, except that said flying club may sell or exchange its capital equipment.

4. With its initial application, the flying club shall furnish the County with a copy of its charter and by-laws, articles of association, partnership agreement or other documentation supporting its existence; a roster, or list of members, including names of officers and directors, to be revised on a semi-annual basis; evidence of insurance, (see Appendix A for insurance requirements), number and type of aircraft; evidence that aircraft are properly certificated; evidence that ownership is vested in the club; and the operating rules of the club. The books and other records of the club shall be available for review at any reasonable time by Airport management or other representatives of the County. The flying club shall make annual certifications to the County that its insurance is in force, and the County may require certificates at other times to confirm that adequate insurance is in force.

5. A flying club must abide by and comply with all Federal, State and local laws, ordinances, regulations, and the Rules and Regulations.

6. A flying club which violates any of the foregoing, or permits one or more members to do so, will be required to terminate all operations on Airport property.

9.3 ULTRALIGHT VEHICLES / FAR PART 103 AIRCRAFT

1. All ultralight vehicles using the Airport should either be equipped with a radio capable of sending and receiving the UNICOM frequency of 123.000 or notify airport personnel (call Airport Operations to request Prior Permission Required (PPR) authorization) of time of arrival or departure. If the ultralight vehicle is staying in the Airport traffic pattern or using the Airport for practice landings and take-off, it will be required to have a radio on board capable of sending and receiving the UNICOM frequency.

2. Before operating from the Airport, the ultralight pilot must be briefed on airport policy, traffic pattern procedures and populated areas to be avoided.

3. . Operators shall provide proof of insurance to the County upon request of the Airport Director (see Appendix A for insurance requirements).

9.4 UNMANNED AIRCRAFT SYSTEMS (UAS) / FAR PART 107 AIRCRAFT

Any person wishing to use the Airport for UAS operations must obtain permission from the Airport Director.

Before operating from the Airport, the UAS pilot must be briefed on airport policy, traffic pattern procedures and populated areas to be avoided. Operators should be familiar with all applicable requirements including all applicable federal, state, and local regulations and should visit the FAA's website at http://www.faa.gov/uas and http://knowbeforeyoufly.org.

9.5 AERIAL ADVERTISING/BANNER TOWING

Any Person wishing to use the Airport to pick up or drop off an aerial advertising banner shall obtain the prior written approval of the Airport Director. The Airport will require such safeguards as it deems necessary to protect

the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies, additional security personnel, facilities and waivers/authorizations to the FARs issued by the FAA. The County may establish and charge reasonable fees for this activity.

9.6 AEROBATICS

Any Person wishing to use the Airport for aerobatics operations shall obtain the prior written approval of the Airport Director. The Airport will require such safeguards as it deems necessary to protect the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies, additional security personnel, facilities and waivers/authorizations to the FARs issued by the FAA. The County may establish and charge reasonable fees for this activity.

Aerobatic operations at DPL must follow rules for aerobatic operations as listed in FAR Section 91.903.

9.7 PARACHUTE JUMPING

Persons wishing to use the Airport for a parachute drop area shall obtain the prior written approval of the Airport Director as required by FAR 105.17. The Airport will require such safeguards as it deems necessary to protect the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies, additional security personnel, facilities and waivers /authorizations to the FARs issued by the FAA. The County may establish and charge reasonable fees for this activity.

9.8 GLIDER / SAILPLANE OPERATIONS

Any Person wishing to use the Airport to launch and recover gliders or sailplanes shall obtain written permission from the Airport Director in advance of the operations. This will require advance coordination due to the need for additional personnel and equipment at the Airport to launch and recover the gliders and/or sailplanes. The Airport will require such safeguards as it deems necessary to protect the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies and additional security personnel. The County may establish and charge reasonable fees for this activity.

9.9 HOT AIR BALLOON OPERATIONS

Any Person wishing to use the Airport to launch and recover hot air balloons shall obtain written permission from the Airport Director in advance of the operations. This will require advance coordination due to the need for additional personnel and equipment at the Airport to launch and recover the hot air balloons. The Airport will require such safeguards as it deems necessary to protect the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies and additional security personnel. The County may establish and charge reasonable fees for this activity.

9.10 AERIAL APPLICATORS – "CROP DUSTING"

Any person seeking to conduct aerial agriculture application – crop dusting or spraying of agricultural chemicals - shall be required to satisfy the Airport Director that:

a. Suitable arrangements have been provided for the safe storage and containment of chemical materials; no poisonous or inflammable materials shall be kept or stored in close proximity to other facility installations at the Airport.

b. The operator shall have available properly certified and suitably equipped agricultural operation aircraft and equipment.

c. No crop-dusting operations shall be conducted on the principal public use apron or ramp of the Airport.

d. Any Person wishing to use the Airport as a base to load chemicals, fertilizer, or seeds onto aircraft for the purpose of crop spraying, dusting, or seeding shall obtain written permission from the Airport Director in advance of the operations. The Airport Director at the time of approval shall designate a specific area at the Airport to be used for this operation. The County will require such safeguards as it deems necessary. The County may establish and charge reasonable fees for this activity. Insurance requirements are outlined in Appendix A.

e. All operations will be in accordance with applicable Federal Aviation Regulation and State and Local Regulations concerning the handling of pesticides and other substances.

9.11 SPECIAL EVENTS

Any Person wishing to sponsor a Special Event shall obtain the prior written approval of the Airport Director. The Airport will require such safeguards as deemed necessary to protect the Airport, aircraft using the Airport, and the general public. These requirements may include, but are not limited to, bonds, insurance policies, additional security personnel, facilities, and a waiver/authorization to the FARs issued by the FAA. The County is prohibited by the FAA from closing the Airport for any activity which is not an Aeronautical Activity. The County may establish and charge reasonable fees for Special Events.

9.12 GENERAL

a. No operations involving unlicensed or unregistered aircraft will be permitted at the Airport without prior approval of the Airport Director.

b. The Airport will not participate in any non-aeronautical event(s) that will conflict with its aeronautical use.

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SECTION 10 – INFRACTIONS

1. Infraction means any of the following:

    a. A violation of these Rules and Regulations.

    b. In the case of an FBO or SASO, a violation of the FBO or SASO lease or giving false or inaccurate information to the County or the Airport Director in connection with the FBO or SASO lease.

2. Effect of Infraction

    Any Infraction by any Person, FBO, SASO, or tenant may result in immediate termination of the contract, agreement or permit under which such person, FBO, SASO, or tenant is operating. Upon termination, such individual or entity shall not be eligible for a new contract or agreement for a minimum period of six (6) months.

3. Notice of Infraction and Termination

    The County, acting through the Airport Director or another whom he/she may from time to time designate, shall give notice of any contract, agreement, or permit termination by sending a certified letter to the individual or entity at the address listed upon the relevant permit, contract or agreement or, at the option of the County, at that individual or entity's last known address.

4. Hearing

    Any individual or entity whose contract or agreement is terminated as the result of an infraction may request a hearing thereon before the Airport Commission, provided such request is made in writing and received by the Airport Director within thirty (30) calendar days of the date of the notice of termination being sent. Upon receipt of a hearing request, the County will mail notice of the date, time and location of such hearing at least thirty (30) days in advance of the hearing date. At the hearing, the Party requesting the hearing may appear, may be represented by counsel, and may present evidence. Upon completion of the hearing, the Airport Commission shall affirm, revoke or modify the termination and shall give prompt written notice of its action to the Party requesting the hearing. Any adverse determination of the Airport Commission to the party requesting the hearing may be subject to appeal in accordance with the applicable laws of the State of North Carolina. Individuals may appeal to the Duplin County Board of Commissioners.

5. Severability

    In the event that any provision of these Rules and Regulations shall for any reason be determined to be invalid, illegal or unenforceable in any respect, the other provisions of these Rules and Regulations shall remain in full force and effect.

6. Revisions

    The County shall reserve the right to modify, alter, change or add to these Airport Rules & Regulations as needed.

7. Conflict of Rules and Regulations

If and where there are conflicts in the rules and regulations prescribed herein and the FAA's Federal Aviation Regulations (FAR), the latter shall prevail. If and where there exists a conflict between any of the rules or regulations prescribed herein and any other Authority rules applicable to the same area, the more stringent limitation or requirement shall govern and prevail.

If any section, subsection, paragraph, sentence, clause, phrase, or portion of these Rules and Regulations are for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.

8. Penalty for Violations

The Airport Director may deny use of the Airport for a period not exceeding fifteen (15) days for any person violating or refusing to comply with any of the rules or regulations prescribed herein pending a hearing by the Airport Commission. Upon such hearing, such person may be deprived of the further use of the Airport and its facilities for a period of time as may appear necessary for the protection of life and property. Any violation of these rules may be punishable to the full extent of the law. This section is cumulative of all other penalties for violation of Federal, State, and local laws, rules, regulations, ordinances, and orders. Citation for violation or issuance of a violation ticket of any of the rules and regulations prescribed herein may be made by any authorized officer of the law. The Airport Director may request the Duplin County Sheriff's Department to investigate any suspected violation of these rules.

9. Severability

If any of the provisions of these rules or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of these rules, which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared to be severable.

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SECTION 11 – PERMITS FOR COMMERCIAL OPERATIONS

11.1 PERMIT RULES AND REQUIREMENTS

No Person may provide an Aeronautical Service at the Airport unless:

a. The Person has an Aeronautical Operator's Lease executed by the County to provide an Aeronautical Service on the Airport, or

b. A Permit has been issued to the Person by the Airport Director authorizing the Person to provide the Aeronautical Service at the Airport. This requirement for a permit does not apply to any FAA designated examiner acting as such.

The Minimum Standards, together with application and leasing requirements of the County, apply to any FBO or SASO lease.

11.2 PROCEDURE FOR RECEIVING AND PROCESSING PERMIT APPLICATIONS

Any applicant wishing to establish commercial operations at the Airport shall be furnished a copy of the minimum standards, and shall make an application in writing to the Airport Director, setting forth in detail the following:

a. The name and address of the applicant;

b. The proposed land use, facility and/or activity sought;

c. The names and qualifications of all personnel to be involved in conducting such activity;

d. The financial responsibility and technical ability of the applicant and operator to carry out the activity;

e. The tools, equipment, services and inventory, if any, proposed to be furnished in connection with such activity;

f. The requested or proposed date for commencement of the activity and the term of conducting the same;

g. The estimated cost of any structure or facility to be furnished, the proposed specifications for same, and the means or method of financing such construction or acquisition or facilities.

h. Upon the filing of any application with the Airport Director; it will be immediately referred to the appropriate committee and considered at the next scheduled meeting. If no meeting is scheduled within forty-five (45) days from the filing of an application, a meeting will be called for considering the application and notice will be given to the applicant. Upon consideration of the application, the Airport Director and committee shall determine whether the applicant meets the standards and qualifications established in the Rules and Regulations.

i. Upon approval of an application, the Airport Director will prepare a suitable lease or contract agreement setting forth the terms and conditions under which the commercial operation may be conducted by the applicant.

j. Any rejected application will be returned to the applicant within (10) days of the rejection, with a written explanation of the reason for rejection.

k. Any Permit issued shall be for a designated time and date and for a period not to exceed one (1) year; based on the contemplated activity, impact on the safety of airport operations, past experience with the requester, current circumstances, and the civil aviation needs of the public.

l. The County may establish and revise fees for issuance of Permits.

11.3 COMMERCIAL ACTIVITIES REQUIRING PERMITS

Permits may be issued by the Airport Director to any Person who satisfies the conditions for the Aeronautical Activities listed below:

a. Any Person providing flight instruction as a part-time business under FAR Part 61 and having no more than three students at any one time shall provide the Airport Director with the following to his satisfaction:

i. Proof of proper and current instructor's license approved by the FAA with appropriate ratings to cover the types of instruction being offered and current medical certificate.

ii. Proof of County business license, if applicable.

iii. Proof of aircraft bodily injury and property damage liability insurance specified in the Minimum Standards for Commercial Operations at the Duplin County Airport (Appendix A)

iv. Current list of names and addresses of all students receiving flight instruction.

b. Any Person providing aircraft repair and/or inspection services, other than owner-preventive maintenance as defined in FAR Part 43, shall provide the Airport Director with the aircraft registration number and the following to his/her satisfaction:

i. Proof of proper and current licenses approved by the FAA, with appropriate ratings to cover the types of repairs or inspection work being offered.

ii. Proof of business license, if applicable.

iii. Proof of General Liability Insurance, as specified in the Minimum Standards for Commercial Operations at the Duplin County Airport (Appendix A)
The County is to be included as additional insured.

The contractual liability coverage shall include protection for the Permit Holder from claims arising out of the liability assumed under the indemnification provision of these Rules and Regulations.

c. Any Person based outside of the boundaries of the Airport and providing warranty service to a customer whose Aircraft is located on the Airport shall provide the Airport Director with the following to his/her satisfaction:

i. Proof of proper and current licenses approved by the FAA with appropriate ratings to cover the types of repairs or inspection work being offered.

ii. Proof of County business license, if applicable.

iii. Proof of General Liability Insurance as specified in the Minimum Standards for Commercial Operations at the Duplin County Airport (Appendix A)

The County is to be included as additional insured.

The contractual liability coverage shall include protection for the Permit Holder from claims arising out of the liability assumed under the indemnification provision of these Rules and Regulations.

d. All other aeronautical activities that any person may wish to operate at the Airport require prior approval of the Airport Director.

APPENDICES & EXHIBITS

APPENDIX A – MINIMUM STANDARDS FOR COMMERCIAL OPERATIONS AND FIXED BASE OPERATORS

The following minimum standards shall apply to all operations; however, all the activities listed may not be provided, depending on the lease agreement executed between Duplin County and the operator.

A.1 GENERAL

A. No commercial operator shall be allowed to operate on Airport property without a lease agreement with Duplin County. Any operator whose principal place of business is located other than the Duplin County Airport and who further has a valid contract with another airport sponsor, may not be required to maintain facilities at the Airport.

B. The Airport Commission shall determine all substantial conformances to the standards for all operators. Also, all operators must show financial solvency and business ability to the satisfaction of the Airport Commission.

A.2 INSURANCE

A. Airport Tenants

An Airport tenant shall, at all times during the term of their lease, maintain at their cost and expense insurance relating to the leased premises as follows:

A. Insurance against loss or damage to property in leased premises by fire, lightning, and other risks included under standard extended coverage policies.

B. General public liability insurance against claims for bodily injury, death or property damage occurring on, in, or about the leased premises, such insurance to afford protection to Duplin County of not less than $1,000,000.00 with respect to any one person, $2,000,000.00 with respect to any one accident and not less than $1,000,000.00 with respect to property damage.

C. Hangarkeeper's liability insurance providing coverage for aircraft not owned by the tenant in the following limits: $1,000,000.00 per aircraft and $2,000,000.00 per occurrence on property damage to aircraft in the care, custody, or control of tenant.

D. All such policies of insurance shall be issued by insurance companies acceptable to Duplin County, shall name Duplin County as an additional insured or loss payee, and shall provide for at least thirty (30) days written notice prior to cancellation, modification, or non-renewal.

As identified throughout the regulations, proof of insurance shall also be provided to the County upon request of the Airport Director. These instances include, but are not limited to:

B. Aircraft Maintenance and Repair

1. All person(s) operating aircraft, engine, or accessory maintenance facilities shall provide: Hangar space to house any aircraft upon which such service is being performed.

2. Suitable storage space for aircraft waiting for maintenance or delivery after repair and maintenance have been completed.

3. Sufficient shop space to house equipment and adequate equipment and machine tools, jacks, lifts, and testing equipment to perform top overhauls as required for FAA certification and repair of parts not needing replacement on all single engine land and light multi-engine land general aviation aircraft.

4. At least one FAA certified air frame and engine mechanic available during reasonable hours.

5. Separate space where adequate exhaust type work may be performed.

6. Appropriate insurance

7. Non-airworthy aircraft shall be screened from public view

Any person wishing to perform aircraft maintenance and repair / inspection services at the Airport shall be required to hold general liability insurance of at least the following with no deductible:

a. $1,000,000 each occurrence for bodily injury and property damage.

b. $2,000,000 each incident for personal and advertising injury.

c. $2,000,000 product-completed operation aggregate.

d. $2,000,000 general aggregate.

The County is to be included as an additional insured.

The contractual liability coverage shall include protection for the Permit Holder from claims arising out of the liability assumed under the indemnification provision of the Rules and Regulations.

Business automobile liability insurance shall apply to any automobile including all owned, hired and non-owned vehicles, to a combined single limit of at least $300,000.00 each accident. Any statutorily required "No-Fault" benefits and uninsured/underinsured motorist coverage shall be included.

All airport mechanics and inspectors shall carry a $1,000,000.00 liability policy naming Duplin County as an additional insured, have written authorization for each occurrence from the Airport Director, and shall be charged a fee for each occurrence on the Airport.

C. Warranty Services

Proof of General Liability Insurance. This insurance must be written on an "occurrence" basis, responding to claims arising out of any occurrences which may take place during the policy period. The general liability form shall provide limits of at least the following with no deductible:

e. $1,000,000.00 each occurrence for bodily injury and property damage.

f. $2,000,000.00 each incident for personal and advertising injury.

g. $2,000,000.00 product-completed operation aggregate.

h. $2,000,000.00 general aggregate.

The County is to be included as an additional insured.

The contractual liability coverage shall include protection for the Permit Holder from claims arising out of the liability assumed under the indemnification provision of these Rules and Regulations.

D. Flight Training

Public liability and property damage insurance to protect the operator and the Duplin County from legal liabilities and shall provide liability insurance of at least $1,000,000.00 per passenger seat and property damage liability of at least $1,000,000.00.

Proof of aircraft bodily injury and property damage liability insurance in the amount of $500,000.00 (limited to $100,000 each passenger), with no deductible amount and naming the County as additional insured. Coverage shall apply to bodily injury or death, passenger injuries, including mental anguish, and property damage.

E. Disabled/Damaged Aircraft.

All aircraft that remain in an unflyable condition (out of annual), in the absence of full coverage, must carry coverage known as "Ground, not in motion" insurance in an amount of not less than $50,000.00.

F. Private Vehicles on the AOA

To obtain approval from the Airport Director to operate a private vehicle on the AOA, the tenant shall show proof that they have, in force, automobile liability insurance in the minimum amount of $300,000.00

G. Flying Clubs

Flying clubs will be required to have insurance with a limit of One Hundred Thousand Dollars ($100,000.00) per person for personal injury and property damage and a total limit of Five Hundred Thousand Dollars ($500,000.00).

H. Ultralight Vehicles

Ultralight vehicle operators shall maintain a minimum $100,000.00 combined single limit insurance policy

I. Aircraft Rental

All person(s) conducting aircraft rental activity shall provide hangar or parking for at least one aircraft to be used as a rental, at least one airworthy aircraft maintained and certified, and current up-to-date specifications and price lists for types and models of rental aircraft.

Any Person wishing to perform aircraft rental shall maintain insurance pursuant to the General Insurance Requirements section below or as otherwise deemed necessary by the County.

J. Aerial Advertising/Banner Towing

Any Person wishing to perform aerial advertising shall maintain insurance pursuant to the General Insurance Requirements section below or as otherwise deemed necessary by the County.

K. Parachute jumping

Any Person wishing to use the Airport for a parachute drop area shall maintain insurance pursuant to the General Insurance Requirements section below or as otherwise deemed necessary by the County.

L. Glider/Sailplane Operations

Any Person wishing to use the airport to launch and recover gliders and sailplanes shall maintain insurance pursuant to the General Insurance Requirements section below or as otherwise deemed necessary by the County.

M. Hot Air Balloon Operations

Any Person wishing to use the airport to launch and recover hot air balloons shall maintain insurance pursuant to the General Insurance Requirements section below or as otherwise deemed necessary by the County.

N. Crop Dusting Operations

Any Person wishing to conduct aerial agriculture application – crop dusting or spraying of agricultural chemicals shall maintain General insurance pursuant to the Insurance Requirements section below or as otherwise deemed necessary by the County.

O. Special Events

Any Person wishing to sponsor a Special Event shall maintain insurance as deemed necessary by the Airport Commission for said type of event.

General Insurance Requirements

General requirements for insurance for FBO, SASO, and any other commercial airport operators/users are as follows:

A. Minimum Liability Insurance

The minimum liability insurance (including general liability, product liability, and premise liability), is $1,000,000.00. The County is to be included as an additional insured.

The contractual liability coverage shall include protection from claims arising out of the liability assumed under the indemnification provisions of these Rules and Regulations. Each FBO/SASO/other commercial airport operator or user agrees to indemnify and hold the County and each of its officers,

representatives, agents, employees, successors or assigns harmless from all claims and liabilities (including, without limitation, legal fees) arising out of the use of the Airport.

B. Workers Compensation and Employer's Liability Insurance

Workers' compensation insurance must be maintained in accordance with the statutory limits as required under North Carolina law.

C. General Liability Insurance

This insurance must be written on an "occurrence" basis, responding to claims arising out of any occurrences which may take place during the policy period. The general liability form shall provide limits of at least the following, with no deductible: $1,000,000.00 each occurrence for bodily injury and property damage; $2,000,000.00 each incident for personal and advertising injury; $2,000,000.00 product-completed operation aggregate; and $2,000,000.00 general aggregate. The contractual liability coverage shall include protection for the FBO/SASO/other commercial airport operator or user from claims arising out of the liability assumed under the indemnification provision of these Rules and Regulations. The insurance policy shall provide for contingent liability of the County on any claim or loss, and the County shall be named as an additional insured. The FBO/SASO/other commercial airport operator or user shall instruct the insurer to notify the County in writing by certified mail at least thirty (30) days prior to cancellation or refusal to renew any policy and shall file certificates of all insurance required with the County.

D. Property and Casualty Insurance

Insurance against fire, windstorm or other casualty, including all standard extended coverage available, upon all of the FBO/ or SASO/other commercial airport operator or user personal property, together with such medical payment coverage as desired. In connection therewith, the FBO/SASO/other commercial airport operator or user holds the County harmless against loss or damage to the FBO/SASO/other commercial airport operator or user's person or property by reason of any casualty other than the sole negligence or fault of the County.

E. Hangarkeeper's Liability Insurance

Hangarkeeper's legal liability coverage shall include protection for those who lease hangar storage or operate aircraft maintenance/repair service to a limit of at least $300,000.00 each occurrence.

F. Aircraft Liability Insurance

This insurance shall provide aircraft liability, including temporary substitute aircraft and non-owned aircraft liability, to a combined single limit determined on a case by case basis. Coverage shall apply to bodily injury or death and mental anguish, including passenger injuries and property damage.

Any Person providing an aeronautical service to the public at the Airport under the supervision of, or pursuant to, an arrangement with an FBO/SASO/other commercial airport operator or user shall not be required to obtain the insurance described above if the insurance policy or policies of the FBO/SASO/other commercial airport operator

or user covers that Person to the same extent, and in the same amount, as the applicable insurance policy threshold(s) as described above.

All policies required by this section will name as an insured, Duplin County, its officers, members, and employees, and will contain a provision which will require the insurance carrier to notify the Airport Commission at least thirty (30) days in advance of cancellation, modification, non-renewal, or other change in coverage.

The FBO/SASO/other commercial airport operator or user shall only use responsible insurance companies of recognized standing which are authorized to do business within the State of North Carolina. The insurance companies shall have a Best's rating of at least "B+" and a financial size of "Class VII" or better in the latest edition of Best's Insurance Reports. Copies of all certificates of insurance for required insurance, any policy amendments and policy renewals, and any additional information related to required insurance shall be delivered to the Airport Director upon request. Each policy shall require the insurer to provide at least thirty (30) days prior written notice of termination, cancellation, modification, or non-renewal to the County.

Timely notices and claims of all losses insured under any required insurance policy shall be submitted to the appropriate insurer, and claims shall be pursued diligently and comply with all terms and conditions of required insurance policies. Airport Director shall promptly be given copies of all notices and claims of loss and any documentation or correspondence related to such losses.

A.7 MISCELLANEOUS OPERATIONS

Radio and instrument repairs, aerial advertising, and other activities may be conducted by any person, firm, or corporation, upon application and approval from the Airport Director. Reasonable terms and conditions will be established by the Airport Commission.

A.8 HANGAR SPACE REQUIREMENTS

Facility requirements for commercial operations will be adequate and reasonable for the services offered to operators such as: hangar space, office and lounge areas and aircraft parking.

A.9 NEW CONSTRUCTION

All new hangars shall comply with the Minimum Requirements for Construction of pre-engineered Corporate Hangars and T-hangars at the Duplin County Airport (APPENDIX B)

All new parking aprons and services provided shall:

A. Be constructed according to plans and specifications approved by the Airport Commission. Aircraft parking aprons may be required for operators handling aviation petroleum products and aircraft repair.

B. Be provided on a fair, equal, and not unjustly discriminatory basis to all users of the airport. The prices charged for all products at the Airport shall be fair and reasonable.

APPENDIX B – Minimum Requirements for Construction of Pre- Engineered Corporate Hangars and T-hangars at the Duplin County Airport

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Duplin County Airport

Hangar Performance Specifications

Minimum Requirements for Construction of Pre-Engineered Corporate Hangars and T-Hangars at the Duplin County Airport as part of the Preliminary Terminal Area Development Project

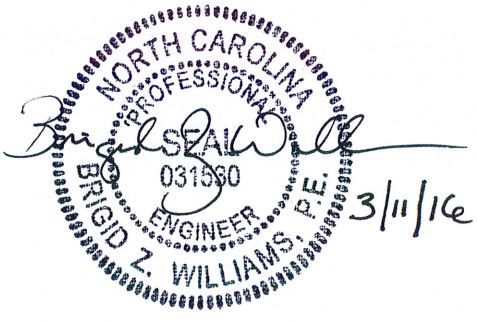
260 Airport Road
Kenansville, North Carolina 28349

WKD No: 20150121.00.RA
DPL No: 44-7538
NCDOT DOA No: 36237.13.13.1

WK DICKSON
community infrastructure consultants

720 Corporate Center Drive
Raleigh, NC 27607
License No. F-0374

March 11, 2016



DO NOT USE FOR CONSTRUCTION

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APPENDICES

Appendix A	Geotechnical Exploration Report prepared by S&ME dated September 2, 2015

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DIVISION 01 – GENERAL REQUIREMENTS

PART 1- GENERAL

1.1 SUMMARY

A. These specifications have been established to provide an outline of the minimum requirements for construction of pre-engineered corporate hangars and T-hangars at the Duplin County Airport. These specifications are intended to provide a standard for planning, design, and construction. All hangars to be constructed on airport property must meet or exceed all requirements specified herein.

B. For the purposes of this document, the term Owner shall refer to Duplin County or its designated representative, including the Duplin County Airport Commission and the Airport Director.

C. Hangars may not be constructed on airport property unless approved by the Owner and the Owner's Engineer for conformance with the following:

1. Current Airport Layout Drawing (ALD)
2. Current Terminal Area Drawing (TAD)
3. Current Terminal Area Development Plan

D. The Developer will be responsible for obtaining a Duplin County Building Permit and any other permits required by Duplin County or the Town of Kenansville.

E. The developer will be responsible for obtaining an Erosion and Sediment Control permit from North Carolina Department of Environmental Quality (NCDEQ) for development that creates one (1) or more acres of ground disturbance.

F. Construction must be in compliance with FAA regulations for design and construction, height restrictions, and all other regulations established by applicable agencies having jurisdiction over the project.

G. Design must conform to FAA requirements and shall incorporate FAA standard construction specifications located in Advisory Circular 150/5370-10, Standards for Specifying Construction of Airports (current edition).

H. Anyone constructing a hangar on airport property must follow the Owner's Rules & Regulations, Stormwater Pollution Prevention Plan (SWPPP), and Spill Prevention Control and Countermeasure Plan (SPCC).

I. Hangar construction must be in compliance with the National Fire Protection Association (NFPA) regulations, all state and local Fire Codes. All construction must be approved by the local Fire Marshal.

1.2 SUBMITTALS

A. Plans and specifications for construction must be prepared by a Professional Engineer (PE) licensed in the State of North Carolina. The cost of all engineering and permitting services shall be the Developer's responsibility.

B. The Developer is responsible for preparing all documents contained in this section and submitting documents to Owner and to the Owner's Consulting Engineer for review and approval. The Developer is responsible for all cost associated with the Owner's Consulting Engineer's review of the proposed plans, specifications, shop drawings and submittals.

C. 30% Design Submittal

1. Developer shall submit to the Owner three (3) sets of 22"x34" plans, as well as a PDF copy. The plan set shall include the following at a minimum:

    a. Cover Sheet
    b. Project Layout and Safety Plan
        i. Existing and proposed geometry
        ii. Haul route
        iii. Staging and stockpile areas
        iv. Phasing and construction safety measures
    c. Typical Sections - for proposed pavement and hangar floor
    d. Proposed Profiles - for proposed access roads and taxilanes
    e. Demolition Plans
    f. Geometric Layout Plan
    g. Grading and Drainage / Site Plan
        i. Existing and proposed contours
        ii. Proposed hangar fixed floor elevation (FFE)
        iii. Proposed drainage pipes and structures
    h. Utility Layout Plan

2. The Owner shall complete review of the 30% submittal and return comments within

14 days of receipt.

D. Pre-Construction Submittal

1. Project must be approved by Owner before construction may begin.

2. Developer shall submit three (3) sets of 22″x34″ plans sealed by a Professional Engineer (PE) licensed in the state of North Carolina, as well as a PDF copy. The plan set shall include the following at a minimum:

    a. Cover Sheet

    b. Project Layout and Safety Plan

        i. Existing and proposed geometry

        ii. Haul Route

        iii. Staging and Stockpile Areas

        iv. Project Limits

        v. Phasing and construction safety measures

        vi. Traffic control devices, if necessary

    c. Typical Sections - for proposed details for pavement and hangar floor

    d. Demolition Plans

    e. Geometric Layout Plan

    f. Joint Layout Plan – for concrete aprons and hangar floor

    g. Erosion Control Plans

    h. Grading and Drainage / Site Plan

        i. Existing and Proposed Contours

        ii. Spot Elevations

        iii. Proposed hangar fixed floor elevation (FFE)

        iv. Proposed drainage pipes and structures

        v. Pipe invert and size

    i. Utility Layout Plan

        i. Proposed water service, sanitary sewer service, oil/water separator, grinder pump, electrical service, data/communication service

        ii. Associated utility details

    j. Landscaping Plan

k. Structural Plans

l. Building Plans

m. Foundation/Footing Details

n. Mechanical, Electrical, and Plumbing Plans and Details

3. Project specifications

4. Shop drawings, material information, and other items as specified in other Divisions.

5. The Developer is responsible for submitting a Notice of Proposed Construction, Form 7460-1, to the FAA for review and approval. The Developer shall submit this form once the Owner has approved the hangar site location and hangar size. Form 7460-1 reviews typically take 45-90 days to process and approve. No construction will be allowed to begin until an approved FAA 7460-1 form is on file with the Owner.

E. Complete set of Record Drawings upon the completion of construction. Record Drawings shall be submitted in AutoCAD format, as well as a set of 24" x 36" drawings.

1.3 WARRANTY REQUIREMENTS

A. Warranty periods begin at the date of Substantial Completion.

1. Metal Panel Finishes – 20 years
2. Weathertightness Warranty for Metal Roof Panels – 2 years
3. Grinder Pump – 2 years
4. Warranty for Corrosion and Structural Defects of Oil/Water Separators – 10 years
5. Warranty for all other construction – 1 year

1.4 CONSTRUCTION ADMINISTRATION, INSPECTION, & QUALITY ASSURANCE

A. The Owner's Consulting Engineer and Duplin County shall be allowed to inspect any and all work done during the construction phase of the project. The Developer shall authorize the Owner's Consulting Engineer and/or Duplin County to stop work at the Hangar immediately in the event that any of the plans or specifications are not being followed. In the event that the Owner's Consulting Engineer and/or Duplin County stops Work at the Hangar, the Developer shall be immediately notified and the parties shall work towards a sufficient solution to avoid any unnecessary delays.

B. The Owner's Consulting Engineer shall provide quality assurance testing to ensure the Developer's compliance with any and all of the Owner's construction specifications and

all project specifications. The Developer is solely responsible for any and all costs related to the Owner's Consulting Engineer's quality assurance testing to verify conformance with earthwork, stone base, concrete, and asphalt to the minimum requirements outlined in the Owner's Construction Specification and the project specifications.

C. The Owner's Consulting Engineer shall provide periodic construction inspection services to ensure all elements of the project are being constructed in accordance with Owner's Development Plan, Professional Engineer's plans and specifications, respectively. The Developer is solely responsible for any and all costs related to the Owner's Consulting Engineer's periodic construction inspection services.

1.5 GENERAL REQUIREMENTS DURING CONSTRUCTION

A. All construction activities must conform to the requirements of FAA Advisory Circular 150/5370-2 (current edition), Operational Safety on Airports During Construction.

B. Developer must utilize a General Contractor properly licensed in the State of North Carolina to oversee all construction.

C. Developer shall be required to locate and protect existing utilities and facilities from damage by equipment or personnel. The locations of existing underground utilities are shown in an approximate way only on the Owner's Terminal Area Development Plan. Developer is responsible for repair of any utilities or facilities damaged during construction.

D. Developer will be required to transport and store all equipment and materials in a manner which will not damage any existing pavement, buildings, signs, lights, etc. Any damage will be repaired by the Developer at no cost to the Owner.

E. No debris of any nature shall be allowed outside of the Developer's approved construction area. All loose materials must be kept within the limits of construction. No loose materials that could blow into aircraft operations areas shall be allowed in the construction area.

F. Developer shall control and continuously remove waste or loose materials that might attract wildlife during construction.

G. Developer must not leave or place foreign object debris (FOD) on or near active aircraft operations areas (AOA). Material tracked onto these areas must be continuously removed during the construction project.

1.6 GENERAL REQUIREMENTS FOR OPERATION OF HANGAR

A. All improvements made by the Developer to the hangar building throughout the life of the ground lease shall remain in the hangar and become the property of the Owner when ownership of the hangar reverts to the Airport.

B. Developer shall be responsible for providing for his own trash removal. Dumpsters will not be allowed adjacent to the corporate or T-hangars. A dumpster must be provided by the Developer and located in a centralized location on airport property, as directed by the Owner.

C. Developer shall be responsible for the cost of all utilities provided to the hangar building.

D. Developer shall be responsible for costs associated with annual testing of backflow preventers, as required by Duplin County.

END OF DIVISION 01

DIVISION 03 – CONCRETE

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete for building slabs on grade
2. Concrete floor finish

1.2 REFERENCES

A. FAA Advisory Circular 150/5370-10 (current edition) - Standards for Specifying Construction of Airports.

1.3 SUBMITTALS

A. Submit product information and mix design for concrete pavements.

B. Product Data:

1. Aggregate certifications
2. Joint materials, admixtures, and curing compounds
3. Reinforcing materials

C. Product and process data for penetrating liquid floor treatment for polished concrete.

D. Manufacturer's product data.

E. Manufacturer's installation instructions.

F. Catalog pages illustrating products to be incorporated into project.

G. Foundation and footing design to be approved by Owner's Consulting Engineer.

1.4 RELATED WORK SPECIFIED ELSEWHERE

A. Requirements for concrete pavements for both landside and airfield pavements are detailed in Division 32 Exterior Improvements.

PART 2 – PRODUCTS

2.1 CONCRETE SECTION AND MATERIALS

A. Concrete hangar slabs shall be Portland cement concrete.

B. Cement shall conform to the requirements of ASTM C150 Type I.

C. Concrete hangar slabs designed for aircraft weighing 30,000 lbs. or less shall be constructed in accordance with Item P-501 from FAA AC 150/5370-10. All concrete for hangar floors, foundations, and footings shall have a minimum 28-day compressive strength of 4,400 psi.

D. Concrete hangar slabs designed for aircraft weighing over 30,000 lbs. shall be constructed in accordance with Item P-501 of FAA AC 150/5370-10. All concrete for hangar floors, foundations, and footings shall have a minimum flexural strength of 650 psi.

E. Concrete floor slabs shall be reinforced with a minimum 6x6 welded wire fabric, furnished in flat sheets only, conforming to the requirements of ASTM A1064, or bar mats conforming to the requirements of ASTM A184 or A704.

F. Refer to Division 32, Exterior Improvements Section 2.1 C, for floor slab thickness, stone base thickness, and joint spacing.

G. 6 mil vapor barrier shall be placed beneath stone base under concrete slab.

H. The Developer's building manufacturer or structural engineer shall be responsible for the design of concrete footings.

I. Corporate and T-hangar hangar floor finish shall be polished concrete, approved by the owner. Polished concrete shall include grinding installation of silicate sealer, polishing, and a stain repellant. The polished floor shall have medium reflectivity, 800 grit. Other methods of finishing concrete floors may be submitted to the Owner for review and approval.

PART 3 - EXECUTION

3.1 PREPARATION

A. Concrete placement operations must adhere to the weather limitations detailed in the applicable specifications listed above.

B. Stone base shall not be placed until underlying subgrade has been reviewed and accepted

by the Owner and/or the Owner's Consulting Engineer.

C. Concrete may not be placed until Owner and/or Owner's Consulting Engineer has reviewed and accepted the preparation of the underlying subgrade and stone base.

3.2 CONCRETE SLAB CONSTRUCTION

A. Owner will conduct acceptance sampling and testing as outlined in the above specifications. If testing reveals that construction does not meet the applicable specifications, construction activities shall stop until a mutually acceptable solution can be reached.

B. Corporate hangar floor slab shall be constructed to flow to floor drain. Slope shall be approximately 0.5%.

C. T-hangar floors shall be sloped to drain towards doors.

D. No abrupt change in grade will be allowed between concrete hangar floor and adjacent asphalt or concrete apron. A smooth transition is required.

END OF DIVISION 03

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DIVISION 09 – FINISHES

PART 1- GENERAL

1.1 SUMMARY

A. This division specifies the general requirements for interior and exterior painting for T-Hangars and Corporate Hangars constructed on airport property. All colors shall be reviewed and approved by the Owner prior to construction.

1.2 SUBMITTALS

A. Submit manufacturer's Product Data Sheets for each product to be used in the work.

B. Submit label analysis of each paint product to be used in the work.

C. Certificates: Submit letters of certification from the paint manufacturer certifying that top coats are compatible and appropriate with undercoats when undercoats and topcoats are of a different manufacturer.

1.3 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials to the job site in original, unopened containers with labels and tags attached. Store paint materials and tools in an assigned room. Furnish galvanized drip pans in the paint mixing space, and do all mixing and handling of paint on these pans. Keep paint cans closed when not in use, and keep the room clear of oily rags and other waste that might create a fire hazard.

1.4 JOB CONDITIONS

A. Refer to the paint manufacturer's Product Data Sheets for paint application job condition.

B. Spaces to be painted shall be broom clean and dust free.

1.5 RELATED WORK SPECIFIED ELSEWHERE

A. Factory Finished Items.

B. Shop Coats.

C. Division 13 Special Construction - Pre-Engineered Hangar Building.

PART 2 - PRODUCTS

2.1 PAINTING

A. Structural Painting: All uncoated structural steel shall be cleaned of all foreign matter and loose scales in accordance and given a one mil coat of red oxide primer. Primer shall be applied by the use of airless handguns. Primer shall meet or exceed the performance requirements of Federal Specification TT-P0636D. Light gauge steel members shall be shot blasted and pre-coated with one coat of red oxide primer. Some hand sprayed shop touch up may be employed. Primer shall be furnished to touch up abrasions caused by handling. All members (if required) shall be touched up prior to field assembly.

Prime Coat: The base metal shall be pre-treated and then primed with an epoxy type primer for superior adhesion and superior resistance to corrosion.

2.2 PAINT SELECTION

A. Materials selected for each painting system shall be the product of a single manufacturer.

B. Thinners, solvents, and tinting colors shall be as specified on the manufacturer's Product Data Sheets.

C. All paint shall be factory mixed except tinting necessary to distinguish undercoats.

D. Exterior colors shall be selected by the Owner.

2.3 ACCEPTED PAINT PRODUCTS

A. Alkyd Rust Inhibitive Primer:
PPG 6-208
Glidden 4570
Porter 297

B. Alkyd Universal Steel Primer:
PPG 97-682
Glidden 5210
Porter 284

C. A8046 Alkyd-Zinc Dust Primer:
PPG 6-215/6-216
Porter 299

D. Alkyd-Portland Cement Primer:
PPG 6-209

Glidden 5229
Porter 290

E. Phosphoric Acid Treatment:
Porter 99

F. Alkyd Interior Wood Undercoater:
PPG 6-6
Glidden 555
Porter 429

G. Latex Block Filler:
PPG 6-7
Glidden 5320
Porter 896

H. Cementitious Block Filler:
Glidden 1971
Porter 895

I. Alkyd Gloss Enamel:
PPG 6-252 Series
Glidden 4500 Series
Porter I.A. 24

J. Alkyd Interior S.G. Enamel:
PPG 6-90
Glidden
Porter I.A. 24 S.G.

K. Polyamide Epoxy Gloss Coating:
PPG 97 Line
Glidden 5240/5242
Porter MCR 43

L. Polyamide Epoxy High Build Intermediate Coat:
PPG 97-150 Series
Glidden 5555/5556
Porter MCR 43 High Build

Alternative, equivalent paint products may be submitted to the Owner for review and approval.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. All Surfaces: Before starting work, examine all surfaces which are to be painted. Do not apply paint on dirty, dusty, or otherwise contaminated surfaces, nor on surfaces of materials having more than 15% moisture content. Do not start work on any surface requiring corrective work. Start of work constitutes acceptance of surface as suitable for painting.

B. Ferrous Metals: Remove all oil, grease, dirt, salts, loose rust, loose mill scale, and loose paint. Remove shop crayon marks.

C. Galvanized Steel:

1. Remove oil and grease by wiping with clean rags soaked in xylol.
2. Remove white rust with soap and water and rinse clean.
3. Remove red rust by power tool cleaning.
4. Deactivate fresh zinc surfaces and remove passivating compounds by weathering six months or by applying phosphoric Acid Etch.

D. Concrete Block: Let the concrete unit masonry cure for 30 days before painting. Fill all minor holes and cracks. Rub to remove mortar burrs from surface of joints and block.

E. Wood: Sand to remove raised grain, tool marks and similar imperfections. After prime coat has dried, putty nail holes, cracks, open joints and other defects. At the same time, seal knots, pitch and resinous.

3.2 PAINT APPLICATION SCHEDULE

A. Paint the following:

1. Paint exposed steel pipe, brackets, hangers, valve bodies, electrical conduits, outlet boxes and junction boxes.
2. Paint exposed pipe insulation.

B. Do not paint the following:

1. Steel to be embedded in concrete.
2. Factory items fully finished.
3. Exterior formed concrete foundation walls, steps or slabs on grade, unless noted otherwise.

4. Interior concrete floor slabs, unless noted otherwise.
5. Aluminum, brass, cadmium plated surfaces, and stainless steel.
6. Interior air handling ductwork.
7. Acoustical ceiling board.
8. Plastic pipe and plastic conduit.
9. Plastic pipe insulation covers.
10. Code required labels.

C. Paint shall be tinted, reduced, mixed and applied according to the manufacturer's Product Data Sheets.

D. Flow all paint evenly and fully over surfaces being painted. Leave each coat free of brush marks, voids, sags, runs or other defects. Each coat shall be applied as a film of uniform thickness. Hiding shall be complete.

E. Do not thin the paint for any coat to a degree that reduces the finished dry film thickness below that specified.

F. Remove hardware, accessories, fixtures, switch plates and similar items and replace after painting. Remove paint from all surfaces not intended to be painted.

G. Paint sharp clean edges at perimeter of painted surfaces and at changes of color.

H. Paint primed grilles, access panels, ducts, etc., to match adjacent wall or ceiling surface.

I. Apply all paint with brush or roller except where spraying is recommended for ceilings and/or epoxy wall finishes. Overspray on surfaces scheduled to be unfinished shall be repaired by removing the overspray or by painting the entire surface at the Owner's option.

END OF DIVISION 09

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DIVISION 13 – SPECIAL CONSTRUCTION
PRE-ENGINEERED HANGAR BUILDINGS

PART 1- GENERAL

1.1 SUMMARY

A. This section includes requirements for pre-engineered hangar buildings. Hangars shall be a single story, rigid frame, metal building with eave heights, roof slopes and configuration to be specified by the Developer and approved by the Owner.

B. These specifications cover the materials and fabrication of metal buildings designed, fabricated and readily erected to be weather tight. These specifications are an outline of performance to insure the basis for design, manufacture and application of all the manufacturer's metal building systems.

C. Hangar building shall be supplied by a manufacturer who is regularly engaged in the manufacture of aircraft hangar buildings and hangar doors. The hangar package shall be supplied as a complete system and furnished by a manufacturer who provides hangar doors and hangar building as an integral hangar building package. The hangar manufacturer shall have been engaged in the manufacture for a minimum of five years and upon request from Owner provide a list of completed hangar projects.

D. Hangar sizes must be approved by Owner.

E. Hangar buildings and doors shall be designed to withstand 115 MPH wind loading.

F. Single Source Responsibility for Pre-engineered building system: Obtain pre-engineered building from a single source for the entire building system as described in this section. Corporate hangar doors may be provided by a separate manufacturer. If a different manufacturer is used, Developer must provide evidence that the design and construction of the hangar building and the hangar doors has been coordinated by both manufacturers.

G. Erector's Qualifications: Pre-engineered building shall be erected by a firm that has no less than 5-years successful experience in the erection of pre-engineered buildings similar to those required for this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Surface treatment for concrete is detailed in Division 03 Concrete.

B. Field painting or primed metal members are specified in Division 09 Finishes.

C. Information concerning the concrete foundation and footings can be found in Division 32

Exterior Improvements.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product information, specifications and installation instructions for building components and accessories.

B. Calculations: Submit calculations for all structural elements indicating compliance with specified design requirements.

C. Manufacturer shall furnish complete erection drawings for the proper identification and assembly of all building components. These drawings will show anchor bolt settings, transverse cross sections, sidewall, endwall, roof framing, flashing, sheeting and accessory installation details.

D. Shop Drawings: Submit complete erection drawings showing anchor bolt settings, foundation drawings, electrical drawings, mechanical drawings, sidewall, endwall, and roof framing, frame bracing, transverse cross section, covering and trim details, and accessory installation details to clearly indicate proper assembly of building components.

E. Certification: Standard drawings and design analysis shall bear the seal of a registered professional engineer licensed in the state of North Carolina. Design analysis shall be furnished to the Owner. The Manufacturer shall furnish a sealed letter of certification stating that the building design and fabrication will meet all design specifications and loads as required by applicable codes. This letter must be furnished prior to delivery of building.

1.4 STRUCTURAL STEEL DESIGN

A. General: The building manufacturer shall use standards, specifications, recommendations, findings, and/or interpretations of professionally recognized groups (AISC, AISI, AAMA, AWS, ASTM, MBMA), Federal Specifications and unpublished research by MBMA as the basis for establishing design, drafting, fabrication and quality criteria, practices and tolerances. For convenience, one or more sources may be referenced in a particular portion of these specifications.

B. Structural Steel: For design of structural steel members, comply with requirements of the American Institute of Steel Construction's (AISC) "Specifications for the Design, Fabrications and Erection of Structural Steel for Buildings" for design requirements and allowable stresses.

C. In all instances, however, the manufacturer's design, drafting, fabrication, quality criteria, practices and tolerances shall govern, unless specifically countermanded by the Contract Documents. Structural mill sections or welded up plate sections will be designed in

accordance with AISC's "Specification of the Design, Fabrication, and Erection of Structural Steel for Buildings" (latest edition).

D. Cold-formed steel structural members will be designed in accordance with AISI's "Specification for the Design of Cold-formed Steel Structural members" (latest edition)

1. Design Loads: Design loads will include dead load, roof live loads, wind load, seismic loads, collateral loads, auxiliary equipment loads, and/or other applied or specified loads.

2. Dead Loads: The actual weight of the building system supported by a member.

3. Roof Live Loads: Loads produced by maintenance activities, rain, erection activities and other movable or moving loads, but not including wind, snow, seismic, crane, or dead loads.

4. Roof Snow Loads: Gravity load induced by weight of snow or ice on the roof, assume to act on horizontal projection of the roof.

5. Winds Loads: The loads on a structure induced by the forces of wind blowing from any horizontal direction.

6. Collateral Loads: The weight of any non-moving equipment of material, such as ceilings, electrical or mechanical equipment, sprinkler systems or plumbing. Purlins and frames shall support electrical, including lighting. Add purlins as required.

7. Seismic Loads: Horizontal loads acting in any direction on a structural system due to action of an earthquake.

8. Floor Live Loads: Loads induced on a floor system by occupants of a building and their furniture, equipment, etc.

9. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for Class 90.

E. Design of all members shall be in accordance with the latest international building code with North Carolina amendments.

F. The pre-engineered metal building shall be designed for all loads as required by the governing building code. The metal building engineer shall determine these required loads and clearly note them in calculations and on building drawings. They shall contact the local authorities for verification of governing codes. The metal building engineer shall also account for all superimposed loads from building accessories and systems such as but not limited to mechanical equipment, suspended ceilings, fixtures, piping, operable

doors, etc. Building accessories may or may not be noted on the contract drawings. It is up to the Contractor to coordinate all materials from other trades to ensure they are accounted for.

1.5 BASIC MATERIAL SPECIFICATIONS

A. Primary Framing Steel: Steel for hot rolled shapes shall conform to the requirements of ASTM Specification A36, with minimum yield of 36,000, 42,000, or 50,000 psi.

B. Steel for built up sections shall conform to the physical requirements of ASTM A570, ASTM 572 or ASTM A36 as applicable, with minimum yield of 42,000 or 50,000 psi as indicated by the design requirements.

C. Steel for endwall "C" sections shall conform to the physical requirements of Republic Steel's P-55 or equivalent and have a minimum yield of 55,000 psi.

D. Secondary Framing Steel: Steel used to form purlins, girts, eave struts and "C" sections shall be Republic Steel's P-55 or equivalent of ASTM A607 Grade 55. Minimum yield shall be 55,000 psi.

1.6 STRUCTURAL FRAMING

A. General: All framing members shall be shop fabricated for field bolted assembly. The surfaces of the bolted connections shall be smooth and free from burrs or distortions.

B. Primary Framing:

1. Primary structural framing shall be main load carrying structural members. They shall include door trusses, rafters, interior columns and exterior columns.

2. Rigid Frame: All rigid frames shall be connected to webs by means of a continuous fillet weld on one side.

3. Endwall Frame: All endwall roof beams and endwall columns shall be cold-formed "C" sections, mill rolled sections or built up "I" sections depending on design requirements.

4. Plate, Stiffeners, etc.: All base plates, splice and flanges shall be shop fabricated to include bolt connections holes. Webs shall be shop fabricated to include bracing holes.

5. Connections for secondary structural (purlins and girts) shall be by means of welded clips.

C. Secondary Framing:

1. Secondary framing shall be the structural members which carry the loads to the primary framing systems; and shall include the purlins, girts, wind bracing and miscellaneous structural members.

2. Purlins and Girts: Purlins and girts shall be cold-formed "Z" sections with stiffened flanges. They shall be pre-punched at the factory to provide for field bolting to the rigid frames. They shall be simple or continuous span as required by design. Connection bolts will install through the webs, not flanges.

3. Eave Struts: Eave struts shall be unequal flange cold-formed "C" sections.

D. Bracing:

1. Provide wind bracing, rafter bracing, sheeting angles where required.

2. Diagonal Bracing: Diagonal bracing in the roof shall be used to remove longitudinal loads from the structure. This bracing will be furnished to length and equipped with bevel washers and nuts at each end. It may consist of rods threaded each end or galvanized cable with suitable threaded end anchors. If load requirements so dictate bracing may be of structural angle and/or pipe, bolted in place.

3. Flange Braces: The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the flange compressive stress is within allowable limits for any combination of loading.

1.7 FIRE SUPPRESSION

A. Fire suppression and fire rated construction for hangars shall be provided in accordance with State and local Building Codes and the requirements of the local Fire Marshal.

B. Construction of fire lines and fire hydrants shall be in accordance with State and local Building Codes and the requirements of the local Fire Marshal.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store prefabricated components, sheets, panels, and other manufactured items so they will not be damaged or deformed. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weather-tight ventilated covering. Store metal sheets or panels so that water accumulations will drain freely. Do not store sheets or panels in contact with other materials which might cause staining.

PART 2 – T-HANGAR REQUIREMENTS

2.1 GENERAL

A. Hangar building shall be a 10-unit, nested T configuration conforming to the layout as shown on the Airport Layout Plan.

2.2 MANUFACTURERS

A. T-hangar Available Manufacturer's: Based on the history of installation and years of manufacturing experience in pre-engineered hangar building construction, T-Hangars should be manufactured by one of the following, or an approved equal:

1.	Erect-a-Tube (800) 624-9217	P.O. Box 100, Harvard, Illinois 60030-0100
2.	Ful-Fab Aircraft Hangars (330) 477-7211	1525 Whipple Ave. S.W. Canton, Ohio 44710
3.	OSI Building Systems (334) 834-3500	P.O. Box 5230, Montgomery, AL 36103

2.3 MATERIALS

A. Sheeting Materials:

1. Roof sheets shall be 26 gauge galvalume coating conforming to ASTM specification A-792 with panel configuration with 1-1/8" min. high major ribs 12" on center. Panel coverage shall be 36" and shall be furnished full length from building eave to ridge purlin. A pre-formed ridge cap shall be provided.

2. Wall sheet shall be 26 ga. galvalume coating conforming to ASTM specification A446 Panel configuration shall be 1-1/8" min. major ribs 12" on center. Wall sheet shall be furnished full height.

3. Interior walls shall be 26 ga. galvalume metal extending from floor to ceiling.

4. Building trim shall include eave trim, gable trim, corner trim, service door trim, and hangar door trim. All trim shall be 26 ga. and manufactured of flat stock material equal in quality to wall sheets and color as selected from manufacturer's standard color chart, and approved by the Owner. Trim pieces shall be packaged for shipment at factory.

5. All standard exterior gutters, rake flashing, and downspouts shall be 26 ga. galvalume steel, with painted finish to match.

B. Sealants and Closures:

1. All gutter and downspout joints, rake flashing laps, and ridge flashing laps, shall be sealed with pigmented caulk of butyl rubber base to match the color.

2. Factory applied sealant used in panel side laps shall be a hot melt, foamable mastic.

3. Field applied sealant used at the end laps, ridge assembly, and gable flashings shall be 100% solids, butyl-based elastomeric tape sealer, furnished in roll form or pre-cut to length. Sealant used to the eave shall be pre-compressed expanding foam sealant tape.

4. Joint sealant material shall be as recommended by manufacturer to seal all side and end laps in metal sheets and panels, at ridges, bolt holes before inserting fasteners, for all flashings and corner closure sheets and elsewhere as necessary to provide watertight construction.

5. Closures: Inside and outside semi-rigid cross-linked polyethylene foam closure shall be provided as required to provide a bird proof building. Inside closure shall be self-adhesive.

6. 3" x 9" x 11 gauge galvanized gas curb angle at the curb of EVERY interior partition wall with fuel resistant sealant on all sides.

C. Gutter, Flashing, and Downspouts:

1. Metal gutter and downspouts sizes and spacing to be determined by building manufacturer. Unless otherwise approved by the Owner, downspouts shall be connected to storm drainage system. If downspouts cannot be connected to storm drainage system, adequate splash pads must be provided at each outlet to prevent erosion. Proposed splash pad must be approved by the Owner.

2. Gutters and Flashing: All standard exterior gutters, rake flashing and downspouts are 26 gauge galvalume steel, with painted finish to match.

3. Flashing and Trim: Flashing at the rake (parallel to roof panels) and high eave shall not compromise the integrity of the roof system by constricting movement due to thermal expansion and contraction. The panel manufacturer shall supply the flexible membranes if applicable.

4. Installation: Erection of the roof system shall be in complete accordance with the

manufacturer's erection manual.

D. Finishes:

1. Painting: All interior exposed structural steel shall receive two coats shop primer. All exterior surfaces of the hangars and hangar doors for all exterior wall and roof sheeting shall be factory-painted with a Thermoset coating system composed of polyester resin which has been modified with a silicon resin equal to MS Color Fast 30. All interior surfaces of metal siding, hangar doors, and panels shall be galvanized. All interior divider wall panels shall be galvanized, both sides.

2. Colors shall be as selected by the Owner from the manufacturers' standard selection. Developer shall submit color swatches to Owner for selection.

E. Insulation:

1. Insulation for conditioned spaces shall be in accordance with current building code and energy conservation code regulations.

2. Exterior walls, doors, and roof shall be insulated.

3. Insulation shall be glass fiber blanket insulation, complying with ASTM C991, of 0.5 lbs. per cu.ft. density, R-13 minimum insulation value, with UL flame spread classification of 25 or less and 2 inches wide continuous vapor-tight edge tabs.

4. Insulation shall have scrim reinforced white vinyl facing.

5. Vapor barrier shall be vinyl film.

6. Retainer strips for insulation shall be 26-gauge formed galvanized steel retainer clips, colored to match the insulation facing.

7. Insulation shall be installed tightly, without sagging. Install insulation concurrently with installation of roof panels in accordance with manufacturer's directions. Install blankets straight and true in one-piece lengths with both sets of tabs sealed to provide a complete vapor barrier. Locate insulation on underside of roof sheets, extending across the top flange of purlin members and held taut and snug to roofing panels with retainer clips. Install retainer strips at each longitudinal joint, straight and taut, nesting with roof rib to hold insulation in place.

F. Hangar Doors: Provide a flush-mounted, electrically operated bi-folding or single-panel hydraulic hangar door.

1. Each T shall have a door with a 14'-0" high by 44'-0" wide clear opening, minimum.

2. Each hangar door panel shall be provided with a 3'-0" x 6'-8" steel entry door for personnel use. Provide keying of locks as directed by Owner.

3. Doors shall have a rubber seals to provide a water tight door.

4. The hangar doors shall be coordinated for design and furnished by the manufacturer of the building structural system for complete integration.

5. The door framing shall be designed to carry its own dead load and resist horizontal wind pressure as specified by code.

6. Door insulation shall be the same as wall panel insulation.

7. Sliding doors and manually operated hangar doors are prohibited.

G. Hollow Metal Doors and Frames:

1. Where indicated in these specifications, provide exterior hollow metal door, frames and hardware (see below) with aluminum threshold. The door dimensions are as follows:

Width:	3′-0″
Height:	6′-8″
Thickness:	1-3/4″

2. Hardware to include 1-1/2 pair ball bearing butts, overhead closer, weather stripping, and heavy-duty cylinder lock set. Provide keying of locks as directed by Owner.

3. Hollow metal doors and frames shall conform to SDI 100-76, Recommended Specifications, Standard Steel Doors and Frames, for minimum requirements.

4. Personnel doors shall have fire exit signs with battery backups above each door, per the requirements of State and Federal building and fire code.

H. Electrical:

1. A locking, electric panel board shall be installed inside one of the end hangar units. The location of the panel board shall be coordinated with local building inspections department and is subject to the approval of the Owner. Distribution panel shall be appropriately sized for the loads (200 amp minimum).

2. Interior lighting in each T-hangar bay shall consist of a minimum of three (3) 4 ft. long, LED, linear light fixtures designed for low-bay installation, meeting the following requirements:

a. Maximum of 40 watts rating per fixture

b. Suitable for damp locations

c. 80+ CRI rating at 4,000K

d. 120° beam angle or wider

e. Minimum 2700 lumens

f. Lighting configuration should provide illuminance of approximately 10 foot-candles

g. Lights shall be instant-on and provide flicker free lighting

h. Switch shall be located adjacent to personnel door and shall be in accordance with State, Local, and Federal requirements.

Alternate lighting fixtures which provide equal or better illumination may be submitted to Owner for review and approval.

3. Each T-hangar bay shall be equipped with a minimum of three (3) 110V receptacles. Receptacles shall be evenly spaced throughout the bay.

4. Exterior lighting shall consist of building-mounted flood lights. Lights shall be 250 watt high pressure sodium flood lights. Each light is to include a fixed hood/visor, white finish, and shall be equipped with motion detectors adjustable up to a one-hour delayed "off". All exterior lighting power shall be activated by one single photocell oriented to northern sky and mounted on exterior of the building. Alternate lighting fixtures which provide equal or better illumination may be submitted to Owner for review and approval. A minimum of one light fixture for every two units/bays shall be provided. In addition, one exterior fixture shall be provided on each end of the T-hangar building.

I. Plumbing: T-hangar building shall be equipped with one hose bib on each end of the building.

J. Signage: Exterior signage will not be allowed on T-hangar buildings.

PART 3 – CORPORATE HANGAR REQUIREMENTS

3.1 GENERAL

A. This section shall apply to any size box or corporate hangar to be constructed on the Airport.

3.2 MANUFACTURERS

A. Corporate hangar shall be supplied by a manufacturer meeting the requirements of Section 1.1 C, of this specification.

3.3 MATERIALS

A. Sheeting Materials:

1. Roof sheets shall be 26 gauge galvalume coating conforming to ASTM specification A-792 with panel configuration with 1-1/8" min. high major ribs 12" on center. Panel coverage shall be 36" and shall be furnished full length from building eave to ridge purlin. A pre-formed ridge cap shall be provided.

2. Wall sheet shall be 26 ga. galvalume coating conforming to ASTM specification A446 Panel configuration shall be 1-1/8" min. major ribs 12" on center. Wall sheet shall be furnished full height.

3. Building trim shall include eave trim, gable trim, corner trim, service door trim, bi-parting hangar door trim. All trim shall be 26 ga. and manufactured of flat stock material equal in quality to wall sheets and color as selected from manufacturer's standard color chart. Trim pieces shall be packaged for shipment at factory.

4. All standard exterior gutters, rake flashing, and downspouts shall be 26 gauge galvalume steel, with painted finish to match.

5. Interior walls shall have liner panels a minimum of 8 feet high. Liner panels shall be 29 gauge steel or shall be clad with fiberglass panels. Panels shall be provided from the manufacturer in white, unless otherwise approved by Owner.

B. Sealants and Closures:

1. All gutter and downspout joints, rake flashing laps, and ridge flashing laps, shall be sealed with pigmented caulk of butyl rubber base to match the color.

2. Factory applied sealant used in panel side laps shall be a hot melt, foamable mastic.

3. Field applied sealant used at the end laps, ridge assembly, and gable flashings shall

be 100% solids, butyl-based elastomeric tape sealer, furnished in roll form or pre-cut to length. Sealant used to the eave shall be pre-compressed expanding foam sealant tape.

4. Joint sealant material shall be as recommended by manufacturer to seal all side and end laps in metal sheets and panels, at ridges, bolt holes before inserting fasteners, for all flashings and corner closure sheets and elsewhere as necessary to provide watertight construction.

5. Closures: Inside and outside semi-rigid cross-linked polyethylene foam closure shall be provided as required to provide a bird proof building. Inside closure shall be self-adhesive.

C. Gutter, Flashing, and Downspouts:

1. Metal gutter and downspouts sizes and spacing to be determined by building manufacturer. Unless otherwise approved by the Owner, downspouts shall be connected to storm drainage system. If downspouts cannot be connected to storm drainage system, adequate splash pads must be provided at each outlet to prevent erosion. Proposed splash pad must be approved by the Owner.

2. Gutters and Flashing: All standard exterior gutters, rake flashing and downspouts are 26 gauge galvalume steel, with painted finish to match.

3. Flashing and Trim: Flashing at the rake (parallel to roof panels) and high eave shall not compromise the integrity of the roof system by constricting movement due to thermal expansion and contraction. The panel manufacturer shall supply the flexible membranes if applicable.

4. Installation: Erection of the roof system shall be in complete accordance with the manufacturer's erection manual.

D. Finishes:

1. Painting: All interior exposed structural steel shall receive two coats shop primer. All exterior surfaces of the hangars and hangar doors for all exterior wall and roof sheeting shall be factory-painted with a Thermoset coating system composed of polyester resin which has been modified with a silicon resin equal to MS Color Fast 30. All interior surfaces of metal siding, hangar doors, and panels shall be galvanized. All interior divider wall panels shall be galvanized, both sides.

2. Colors shall be as selected by the Owner from the manufacturers' standard selection. Developer shall submit color swatches to Owner for selection.

3. Any façade or wainscoting proposed by the Developer shall be reviewed and approved by the Owner. Owner reserves the right to reject the use of a façade other than the standard metal sheeting.

E. Insulation:

1. Exterior walls, doors, and roof shall be insulated.

2. Insulation shall be glass fiber blanket insulation, complying with ASTM C991, of 0.5 lbs. per cu.ft. density, R-13 minimum insulation value, with UL flame spread classification of 25 or less and 2 inches wide continuous vapor-tight edge tabs.

3. Insulation shall have scrim reinforced white vinyl facing.

4. Vapor barrier shall have a permeance of not greater than 0.10 perms.

5. Retainer strips for insulation shall be 26-gauge formed galvanized steel retainer clips, colored to match the insulation facing.

6. Insulation shall be installed tightly, without sagging. Install insulation concurrently with installation of roof panels in accordance with manufacturer's directions. Install blankets straight and true in one-piece lengths with both sets of tabs sealed to provide a complete vapor barrier. Locate insulation on underside of roof sheets, extending across the top flange of purlin members and held taut and snug to roofing panels with retainer clips. Install retainer strips at each longitudinal joint, straight and taut, nesting with roof rib to hold insulation in place.

7. Insulation for conditioned spaces, including offices and restrooms, shall be in accordance with current building code and energy conservation code regulations. Insulation rating shall meet the requirements identified in Table 502.1.2 or Table 502.2(1) of the North Carolina Energy Conservation Code.

F. Bottom Rolling Hangar Doors:

1. The hangar doors shall be designed for complete integration with the building.

2. The door framing shall be designed to carry its own dead load and resist horizontal wind pressure as specified by code.

3. Main members both vertical and horizontal shall be of continuous sections of new hot rolled structural steel equal to or exceeding ASTM A-36 and comply with AISC specifications. Cold-formed C and Z shapes shall be used only for girts and interior bracing and not as structural framing members. All framing members shall be true to dimension and square in all directions. Diagonal bracing shall be provided so that

the completed door section assembly will be adequately braced to withstand design loads.

4. Top guides shall be either the fixed type or the telescoping type depending on the amount of specified building vertical deflection. Fixed type shall have permanently lubricated rollers that engage both sides of the web of the top track wide flange beam and allow for vertical deflection between the flanges. Telescoping type shall have both vertical and horizontal permanently lubricated rollers that engage both sides of the web of the top track wide flange beam and have the predetermined amount of vertical travel built into the telescoping design of the guide assembly

5. Bottom rail system shall consist of 25 lb/yard ASCE rail with rail supports of hot or cold rolled angles with a minimum yield strength yield of 36,000 psi supported during erection by A307 anchor bolts with double nuts intended for leveling. Anchor bolts specified by manufacturer and furnished by contractor.

6. Bottom wheels: Each door section shall have two double flange solid steel wheels of a diameter capable to handle the load of the door. Each wheel shall be equipped with tapered roller bearings capable of transmitting both vertical and horizontal loads. Bearings shall be provided with grease seals. Wheels shall be removable from the housing without the need to remove the door from its position on the rail.

7. Provide weather stripping that is easily replaceable on the horizontal bottom and vertical edges of the door. Material shall be EPDM with cloth insertion and be attached 12″ O.C

8. Exterior door paneling and trim shall match the building wall panels.

9. Door insulation shall be the same as wall panel insulation.

10. Fasteners shall be A-325 for all door framing connections.

11. All door framing shall be stop primed the same as the structural framing members.

12. Door system shall include rail drains.

G. Hollow Metal Doors and Frames:

1. Where indicated in these specifications, provide exterior hollow metal door, frames and hardware (see below) with aluminum threshold. The doors dimensions are as follows:

Width:	3′-0″
Height:	6′-8″

Thickness: 1-3/4″

2. Hardware to include 1-1/2 pair ball bearing butts, overhead closer, weather stripping, and heavy-duty cylinder lock set. Provide keying of locks as directed by Owner.

3. Hollow metal doors and frames shall conform to SDI 100 for minimum requirements.

4. Personnel doors shall have fire exit signs with battery backups above each door, per the requirements of State and Federal building and fire code.

5. Exact location of personnel doors for egress shall be per Code requirements.

H. Utility Doors:

1. Provide a slide-up or roll-up metal utility door, frames and hardware. The utility door should be installed on the back wall of the hangar, opposite of the main hangar door. The minimum door dimensions are as follows:

Width:	10′-0″
Height:	10′-0″
Thickness:	26 gauge galvanized steel

2. Mechanically or manually operated utility doors will be acceptable.

3. A minimum 10′x 10′ concrete pad shall be installed adjacent to the utility door.

I. Electrical:

1. All electrical work must be performed by a contractor licensed to perform electrical work in the State of North Carolina.

2. Interior lighting in corporate hangar shall consist of LED light fixtures designed for high-bay installation, meeting the following requirements:

   a. Maximum of 300 watts rating per fixture
   b. Suitable for damp locations
   c. 70+ CRI rating at 4,000K
   d. 120° beam angle or wider
   e. Minimum 20,000 lumens
   f. Lighting configuration should provide illuminance of approximately 50 foot-candles
   g. Lights shall be instant-on and provide flicker free lighting

h. Switches shall be located adjacent to all personnel doors and shall be in accordance with State, Local, and Federal requirements. Lights shall be configured on a minimum of 2 circuits.

Alternate lighting fixtures which provide equal or better illumination may be submitted to Owner for review and approval.

3. 110V duplex receptacles shall be provided on each wall of the hangar. Receptacles shall be spaced not more than 30 feet apart.

4. Exterior lighting shall consist of building-mounted flood lights, meeting the following requirements:

   a. Lights shall be 250 watt high pressure sodium flood lights.

   b. Each light is to include a fixed hood/visor.

   c. Finish of fixtures shall be reviewed and approved by the Owner.

   d. All exterior lighting power shall be activated by one single photocell oriented to northern sky and mounted on exterior of the building.

   e. Alternate lighting fixtures which provide equal or better illumination may be submitted to Owner for review and approval.

   f. A minimum of two fixtures shall be provided on the front of the hangar, facing the aircraft apron. In addition, an exterior light shall be provided over each personnel door and adjacent to each utility door.

5. Hangars 6,400 sq.ft. or larger shall be provided with a minimum of 2 electrical outlets for use in charging a Ground Power Unit (GPU) capable of delivering a minimum of 28 volts of DC.

6. See section K below for restroom electrical requirements.

7. See section L below for office space electrical requirements.

8. One, double, steady-burning, red obstruction light (L-810) meeting the requirements of FAA Advisory Circular 70/7460-1L Obstruction Lighting and Marking, and FAA Advisory Circular 150/5345-43G Specification for Obstruction Lighting Equipment, shall be installed on the hangar roof. Light shall be installed on the airside face of the hangar at the highest point of the roof line.

J. Plumbing:

1. Hangars larger than 3,600 sq.ft. shall be provided with two utility sinks located on opposite walls on the interior of the building. Sinks shall be equipped with hot and cold water. An interior hose bibb shall be installed adjacent to each sink.

2. Two hose bibbs shall be installed on the exterior of the building. Hose bibbs shall be located on opposite walls.

K. Restroom: All corporate hangars shall be provided with one restroom space. Restroom shall meet the following requirements, at a minimum:

1. Restrooms are considered conditioned spaces and must meet all applicable code requirements. Developer must provide heating and air conditioning for restroom.
2. Restroom facility shall meet North Carolina Handicap Code and ADA requirements.
3. Walls and ceiling of restroom shall be minimum 5/8″ gypsum wall board or as required by code official, finished and painted with primer and two coats of latex enamel, semi-gloss paint. All interior walls shall have a 4″ rubber base.
4. Flooring shall be polished concrete. Use of vinyl composition tile or other materials may be submitted to Owner for review and approval.
5. Toilet shall be enclosed in a handicap accessible restroom stall.
6. Sink shall be standalone adjacent to restroom stall.
7. Electric, 1.5 GPM point-of-use tankless water heater shall be installed at the restroom sink.
8. Shower facilities are optional. Any shower facility provided shall meet the North Carolina Handicap Code and ADA requirements. If shower facilities are provided, additional water heater capacity shall be provided.
9. All restroom fixtures shall be American Standard or Kohler commercial grade fixtures, or approved equal.
10. Ceiling vent fan vented to the exterior of the building.
11. Restroom lighting shall consist of 40 W florescent light fixtures above the sink and other ceiling florescent lighting necessary for a 10 footcandle illumination level in the restroom area. Florescent fixtures shall not have exposed tubes. Light switch shall be located adjacent to the entry door.
12. One 110V duplex GFCI outlet shall be provided in the restroom.
13. Ceiling vent fan and lights shall be controlled by a single switch located adjacent to the restroom door.
14. Door shall be 3′-0″ x 6′-8″ interior type as required for use and location. Hardware

shall be locking and keyed.

15. All waterline construction shall be in accordance with State, Local, and Federal requirements.
16. All sanitary sewer line construction shall be in accordance with State, Local, and Federal requirements.
17. Restroom shall have floor drain connecting to oil/water separator.

L. Office: Inclusion of office space in corporate hangars is optional. Office space shall meet the following requirements, at a minimum:

1. Offices are considered conditioned spaces and must meet all applicable code requirements. Developer must provide heating and air conditioning for offices.
2. Office space shall meet North Carolina Handicap Code and ADA requirements.
3. Walls and ceiling of office shall be minimum 5/8" gypsum wall board or as required by code official, finished and painted with primer and two coats of latex enamel, eggshell or satin paint.
4. All interior walls shall have a 4" rubber base. Use of other baseboard materials may be submitted to the Owner for review and approval.
5. Flooring shall be polished concrete. Use of vinyl composition tile or other materials may be submitted to Owner for review and approval.
6. Office lighting shall consist of 40 W florescent light fixtures necessary for a 30 foot candle illumination level in each room of the office area. Florescent fixtures shall not have exposed tubes. Light switch shall be located adjacent to the entrance to each room.
7. A minimum of one 110V duplex receptacle shall be provided on each wall of each individual room within the office space.
8. Door shall be interior type as required for use and location. Hardware shall be locking and keyed.
9. Office space shall have a door leading to the exterior of the building. Door shall be situated to open onto existing or proposed parking area, as shown on Airport's Terminal Area Development Plan.

M. HVAC: Hangar shall be equipped with a minimum of two power wall louvers and overhead fans to promote air circulation.

N. Signage:

1. Exterior signage is optional. All signage plans must be reviewed and approved by the Owner.

2. Exterior sign will consist of one building-mounted sign facing the landside and/or one building mounted sign facing the airside. Height of individual letters in the sign shall be not more than 1/12 the height of the building. The total sign height shall be no more than 1/6 of the building's elevation and the sign width no more than ¾ of the width of the entire side. Wording of these signs shall be restricted to recognized company signatures. Other inscriptions of an informational nature may be approved.

3. Only wall mounted signs will be allowed. Signs shall not extend above the eaves of the building.

4. Proposed illumination of signs will be reviewed and approved on a case-by-case basis.

5. The following types of signs are prohibited:

    a. Freestanding signs
    b. Roof signs
    c. Flashing, moving, animated, digital, or fluttering signs
    d. Neon signs
    e. Portable signs
    f. Inflatable signs
    g. Exterior signs containing excessive product or service advertising or trade names.
    h. Flags, banners and pennants
    i. Billboards

O. Miscellaneous Appurtenances:

1. Outdoor trash areas shall be visually screened. Trash enclosures shall be designed and located so as not to be highly visible from adjacent streets and property.

PART 4 — EXECUTION

4.1 FABRICATION

A. General: Design prefabricated components and necessary field connections required for erection to permit easy assembly and disassembly. Fabricate components in such a manner that once assembled, they may be disassembled, repackaged and reassembled with a minimum amount of labor.

1. Clearly and legibly mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams and instruction manuals.

B. Structural Framing: Shop fabricate structural framing components to the indicated size and section complete with base plates, bearing plates and other plates required for erection, welded in place. Provide required holes for anchoring or connections either shop drilled or punched to template dimensions.

C. Shop Connections: Provide power riveted, bolted or welded shop connections.

D. Field Connections: Provide bolted field connections.

4.2 EXAMINATION

A. Examine substrates, areas, and conditions, with Erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with Erector present, for compliance with requirements and metal building system manufacturer's tolerances.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

4.3 PREPARATION

A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.

B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place, unless otherwise indicated.

4.4 ERECTION

A. Framing: Erect structural framing true to line, level and plumb, rigid and secure. Level base plates to a true even plan with full bearing to supporting structures, set with double-nutted anchor bolts. Use a non-shrinking grout to obtain uniform bearing and to maintain a level base line elevation. Moist cure grout for not less than 7 days after placement.

B. Purlins and Girts: Provide rake or gable purlins with tight fitting closure channels and fascias. Secure structural framing and hold rigidly to a straight line by sag rods.

C. Bracing: Provide angle bracing in both roof and sidewalls as required to meet design criteria. Movement resisting frames may be used in lieu of sidewall rod bracing, to suit manufacturer's standards.

D. Where aluminum surfaces come in contact with ferrous metal or other incompatible metals, paint the incompatible metal with a coating of heavy-bodied bituminous paint.

E. Apply sheets or panels for exterior wall construction with the ribs or corrugations in a vertical position. All side and end laps shall be sealed with joint sealant as specified in this section. The placement of closure strips, flashing and sealing materials shall be accomplished in an approved manner which will assure complete weather-tightness.

F. All roofing sheets or panels shall be applied with the corrugations or ribs parallel to the slope of the roof. Roofing sheets or panels shall be supplied in the longest lengths obtainable with the end laps occurring only at the structural members, with no transverse joints. All side laps shall be laid away from the prevailing wind, and all side and end laps shall be sealed with the joint sealing specified in this section.

G. Apply sheets or panels for interior wall construction with the ribs or corrugations in a vertical position.

H. Minimum side laps for all types of sheets or panels shall be one or more corrugation or rib. Minimum end laps for all types of sheets or panels shall be 2-1/2".

I. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual". Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

    1. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.

    2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

    3. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to panel as recommended by manufacturer.

J. Doors:

1. Hollow Metal Doors and Frames: Install doors and frames straight, plumb, and level. Securely anchor frames to building structure. Set units with 1/8" maximum clearance between door and frame at jambs and head 3/4" maximum between door and floor. Adjust for proper operation.

2. Hangar Doors: Erect doors in accordance with manufacturer's recommendations and approved trade practice. Doors shall be hung plumb and true to building and shall open in a smooth continuous motion without binding and warping. Adjust all rollers, cables, shafts, hinges, locks, cane bolts, etc., for proper operation.

3. Electrically Operated Bi-fold Doors: Erect doors in accordance with manufacturer's recommendations and approved trade practice. Doors shall be hung plumb and true to building and shall open in a smooth continuous motion without binding and warping. Adjust all rollers, cables, shafts, hinges, locks, cane bolts, etc., for proper operation.

4. After completing installation of doors, test and adjust doors to operate easily, free of warp, twist, or distortion.

K. All OSHA safety requirements shall be adhered to including 100% fall protection when above 6'-0" working height.

4.5 CLEANING AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing and accessories.

C. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

D. Doors and Frames: Immediately after installation, sand smooth rusted or damaged areas or prime coat and apply touchup of compatible air-drying primer. Immediately before final inspection, remove protective wrappings from doors and frames.

END OF DIVISION 13

DIVISION 31 – EARTHWORK

PART 1- GENERAL

1.1 SUMMARY

A. This section includes earthwork required to construct hangar buildings, airside pavement, parking lots, and access roads.

B. Grading shall be in conformance with the Airport's Terminal Area Development Plan.

C. The contractor will be responsible for all site safety and for following the appropriate OSHA guidelines.

1.2 REFERENCES

A. FAA Advisory Circular 150/5370-10 (current edition) - Standards for Specifying Construction of Airports.

B. See Appendix A, Geotechnical Exploration Report.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Division 32 Exterior Improvements

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 GENERAL

A. All earthwork shall be completed in accordance with Item P-152 of FAA AC 150/5370-10.

B. Grades shall be maintained so that the surface is well drained at all times.

C. Developer shall be prepared to provide dewatering to maintain groundwater levels below bottom of excavation areas.

D. The existing soils onsite are suitable for use as structural fill only when dry. When wet, the contractor shall be required to disk, or use other approved methods, to dry the soils prior to use as fill material.

E. All excess material generated from grading operations shall be disposed of off airport

property, unless otherwise approved by the Owner.

F. All areas to be graded shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled temporarily for future use.

3.2 COMPACTION REQUIREMENTS

A. The subgrade under areas to be paved or areas where buildings are to be constructed shall be compacted to the depth and density as shown in the table below. The material to be compacted shall be within +/- 2% of optimum moisture content before beginning rolling to obtain the prescribed compaction.

Table 1: Minimum Subgrade Compaction Requirements

Pavement Location	Pavement Type	Aircraft Weight (lbs.)	Proctor	Compaction Depth*	Compaction Density*
Landside	Asphalt	-	Standard (ASTM D698)	12″	98%
Airside	Asphalt or PCC	30,000	Standard (ASTM D698)	12″	98%
	Asphalt or PCC	50,000	Standard (ASTM D698)	12″	98%
	Asphalt or PCC	60,000	Standard (ASTM D698)	12″	98%
	PCC	75,000	Modified (ASTM D1557)	12″	100%
	PCC	100,000	Modified (ASTM D1557)	12″	100%

*Minimum Requirement

B. Owner will conduct acceptance sampling and testing as outlined in FAA Item P-152. If testing reveals that construction does not meet the applicable specifications, construction activities shall stop until a mutually acceptable solution can be reached.

3.3 STRUCTURAL FILL

A. Off-site borrow for structural fill should consist of soils having USCS designations of SC, SM, SP, or SW. The material should also have a maximum plasticity index of 15 percent, be free of debris, and must have less than 3% organics. The material should have a modified Proctor maximum dry density (MDD) of at least 115 pcf. These soils should have a CBR value of at least 15 percent when compacted to at least 95% of their modified Proctor MDD at their optimum moisture content.

3.4 EMBANKMENT

A. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6" and shall then be compacted as indicated in paragraph 3.2, above.

B. Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12" and compacted as specified for the adjacent fill.

C. Embankments shall be formed in successive horizontal layers of not more than 8" in loose depth. The material in each layer shall be within +/- 2% of optimum moisture content before rolling to obtain the prescribed compaction.

END OF DIVISION 31

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DIVISION 32 – EXTERIOR IMPROVEMENTS

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Asphalt Paving
2. Concrete Paving
3. Concrete Sidewalks
4. Seeding and Mulching
5. Site Restoration

1.2 REFERENCES

A. NCDOT Standard Specifications for Roads and Structures (current edition) published by the North Carolina Department of Transportation.

B. FAA Advisory Circular 150/5370-10 (current edition) - Standards for Specifying Construction of Airports.

1.3 SUBMITTALS

A. Submit product information and mix design for asphalt and concrete pavements.

B. Product Data:

1. Aggregate certifications
2. Asphalt binder certifications
3. Joint materials, admixtures, and curing compounds
4. Grass seed mixture

1.4 RELATED WORK SPECIFIED ELSEWHERE

A. Division 03 Concrete

B. Division 31 Earthwork

PART 2 - PRODUCTS

2.1 PAVEMENT SECTIONS AND MATERIALS

A. Parking Lots and Access Roads

1. Access roads and parking lots shall be asphalt pavement. Use Superpave mix design conforming to Section 610 of NCDOT Standard Specifications.

2. The pavement section for access roads and parking lots shall consist of the following minimum thicknesses:

   a. Surface Course - 3" NCDOT Asphalt Pavement (SF-9.5A), placed in two 1.5" lifts, with tack coat between lifts.

   b. Base Course – 6" NCDOT Crushed Aggregate Base Course (CABC)

   c. Compacted subgrade

B. Airside Pavement (T-Hangars)

1. Airfield pavement in the T-Hangar area shall be either asphalt concrete or Portland cement concrete (PCC) pavement. Pavement shall be designed and constructed in accordance with FAA Items designated below, as defined in AC 150/5370-10.

2. Reclaimed asphalt pavement (RAP) will not be allowed in airside pavement.

3. Asphalt pavement sections shall consist of the following minimum thicknesses:

   a. Surface Course – 4" FAA Bituminous Surface Course (FAA P-401), placed in two 2" lifts, with tack coat (FAA P-603) between lifts.

   b. Base Course – 8" FAA Crushed Aggregate Base Course (FAA P-209)

   c. Compacted subgrade

4. Concrete for T-hangar areas shall meet the requirements outlined in Section C, below.

C. Airside Pavement (Corporate Hangars)

1. Airfield pavement in the Corporate Hangar area must be PCC, constructed in accordance with FAA P-501.

2. Concrete aprons designed for aircraft weighing 30,000 lbs. or less shall have a minimum 28-day compressive strength of 4,400 psi.

3. Concrete aprons designed for aircraft weighing over 30,000 lbs. shall have a minimum flexural strength of 650 psi.

4. Cement shall conform to the requirements of ASTM C150 Type I.

5. See table below for minimum PCC pavement thicknesses based on aircraft design weights:

Pavement Design Weight (lbs.)	P-501 (Inches)	P-209 (Inches)	k-Value Subgrade	Max. Joint Spacing (feet)
30k	6	4	195	12.5
45k	7	4	195	15
60k	9	4	195	15
75k	10	4	195	20

6. Concrete floor slabs shall be reinforced with a minimum 6x6 welded wire fabric, furnished in flat sheets only, conforming to the requirements of ASTM A1064, or bar mats conforming to the requirements of ASTM A184 or A704.

7. The ratio of the longest side of a slab to the shortest side of a slab shall not exceed 1.25.

8. Pavement joints shall be constructed in accordance with FAA AC 150/5320-6.

9. Concrete joint sealer shall meet the requirements of FAA Item P-605. Joint sealants shall be Dow Corning 888-SL, or 890-SL, as applicable, or approved equal.

10. The Owner shall review the Developer's selected pavement design weight in relation to the dimensions of the proposed hangar building. At the Owner's discretion, the Developer may be required to provide concrete pavement designed for a heavier aircraft.

11. Expansion of the main concrete aircraft apron, required to accommodate hangar construction, as shown on the Airport's Terminal Area Development Plan, shall be constructed for a minimum aircraft weight of 75,000 lbs.

D. Sidewalks

1. Sidewalks shall be constructed of PCC in accordance with FAA P-610.

2. Concrete for sidewalks shall have a minimum 28-day compressive strength of 3,000 psi.

3. Concrete sidewalk shall be a minimum 4" thick and shall be constructed 5' wide.

4. A 5'x5' concrete pad shall be constructed outside of any personnel door which does not exit onto a turfed area.

2.2 SEEDING AND MULCHING

A. Seeding, lime, fertilizer, and mulch shall be in accordance with Items T-901 and T-908 of FAA AC 5370-10.

B. The use of Bahiagrass is not permitted.

C. Temporary Seed for December 1- April 15 shall meet the following requirements:

1. Rye (grain) applied at 120 lbs/acre.
2. Annual Kobe Lespedeza applied at 50 lbs/acre
3. Apply 2,000 lbs/acre ground agricultural limestone and 750 lbs/acre of 10-10-10 fertilizer.

D. Temporary Seed for April 15 – August 15 shall meet the following requirements:

1. German Millet applied at 40 lbs/acre
2. Apply 2,000 lbs/acre ground agricultural limestone and 750 lbs/acre of 10-10-10 fertilizer.

E. Temporary Seed for August 15 – December 30

1. Rye (grain) applied at 120 lbs/acre
2. Apply 2,000 lbs/acre ground agricultural limestone and 1,000 lbs/acre of 10-10-10 fertilizer.

F. Permanent Seed for April 15 – June 30 shall meet the following requirements:

1. Common Bermuda Grass applied at 80 lbs/acre
2. Apply 4,000 lbs/acre ground agricultural limestone and 1,000 lbs/acre of 10-10-10 fertilizer.

G. Permanent Seed for August 25 – September 15 shall meet the following requirements:

1. Blend of two turf-type tall Fescues (90%) and two or more Kentucky Bluegrass varieties (10%) applied at 250 lbs/acre.
2. Apply 4,000 lbs/acre ground agricultural limestone and 1,000 lbs/acre of 10-10-10 fertilizer.

H. Apply 4,000 lbs/acre of straw mulch. Anchor straw by tacking with asphalt, netting, or mulch anchoring tool.

2.3 LANDSCAPING

A. Landscaping of the premises is required for corporate hangars. A plan for landscaping the premises shall be submitted to the Owner for its review and approval.

B. Careful review will be placed on the plant material selection. Plant materials that attract birds and other wildlife are prohibited.

C. Developer shall be responsible for maintaining the landscaping.

PART 3 - EXECUTION

3.1 PAVEMENT PREPARATION

A. Asphalt and concrete paving operations must adhere to the weather limitations detailed in the applicable specifications listed above.

B. Stone base shall not be placed until underlying subgrade has been reviewed and accepted by the Owner and/or the Owner's Consulting Engineer.

C. Asphalt and concrete pavements may not be placed until Owner and/or Owner's Consulting Engineer has reviewed and accepted the preparation of the underlying subgrade and stone base.

3.2 PAVEMENT CONSTRUCTION

A. Owner will conduct acceptance sampling and testing as outlined in the above specifications. If testing reveals that construction does not meet the applicable specifications, construction activities shall stop until a mutually acceptable solution can be reached.

B. No abrupt change in grade will be allowed between concrete hangar floor and adjacent asphalt or concrete pavement. A smooth transition is required.

C. All pavements shall be constructed to drain away from hangar building.

3.3 SITE RESTORATION

A. All disturbed areas, including haul routes, staging areas, and stockpiles shall be restored to a smooth line and grade with positive drainage. Disturbed areas shall be smooth graded to allow for ease of mowing.

B. All disturbed areas shall be seeded and mulched.

C. All disturbed areas shall be seeded and stabilized within 14 calendar days of completion of grading operations.

D. Cover seeded slopes where grade is greater than 4H: 1V with erosion control fabric. Lay fabric smoothly on surface, bury top end of each section in 6" deep excavated topsoil trench. Overlay edges and ends of adjacent rolls minimum 12 inches. Backfill trenches and rake smooth, level with adjacent soil. Secure outside edges and overlaps at 36" intervals with stakes.

E. Refertilize if growth is not fully adequate. Developer shall be responsible for achieving a vigorous stand of permanent grass.

F. Reseed, refertilize, and mulch immediately following erosion or other damage.

END OF DIVISION 32

DIVISION 33 – UTILITIES

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Stormwater drainage
2. Sanitary sewer
3. Waterline service
4. Power service
5. Data / telephone

B. Developer shall be responsible for individual connection to all utilities and shall have meters for water and electricity for each hangar building.

C. All utility layouts must conform to the Airport's Terminal Area Development Plan and be approved by the Owner and the Owner's Consulting Engineer.

D. Developer shall be responsible for coordination with utility companies and shall be responsible for any costs associated with permits, taps, meters, transformers, or other costs associated with establishing service.

E. All development on airport property must follow the Owner's Rules & Regulations, Stormwater Pollution Prevention Plan (SWPPP), and Spill Prevention Control and Countermeasure Plan (SPCC).

1.2 REFERENCES

A. FAA Advisory Circular 150/5370-10 (current edition) - Standards for Specifying Construction of Airports.

1.3 SUBMITTALS

A. Submit manufacturer's Product Data Sheets for each product to be used in the work.

B. Submit product information and construction and installation details for proposed oil/water separator.

C. Submit product information and installation details for grinder pump.

1.4 RELATED WORK SPECIFIED ELSEWHERE

A. Division 13 – Special Construction – Pre-Engineering Hangar Buildings

PART 2 - PRODUCTS

2.1 STORMWATER DRAINAGE SYSTEM

A. Stormwater pipes shall be sized and installed per the Owner's adopted Terminal Area Development Plan.

B. Developer shall submit proposed stormwater drainage plan to Owner for review and approval for any proposed development in the T-hangar area.

C. All stormwater pipe shall be constructed in conformance with the requirements of Item D-701 of FAA AC 150/5370-10.

1. Reinforced concrete pipe shall meet the requirements of ASTM C76. Pipe installed under pavements to be used by aircraft shall be Class IV. Pipe installed under parking lots, access roads, and in turfed areas shall be Class III.
2. Corrugated polyethylene pipe shall meet the requirements of AASHTO M294.
3. Rigid pipe shall have Class B bedding.

D. All stormwater structures shall be installed in conformance with the requirements of Items D-751 and D-752 of FAA AC 150/5370-10.

E. Unless otherwise approved by the Owner, downspouts shall be connected to the storm drainage system. If downspouts cannot be connected to storm drainage system, adequate splash pads must be provided at each outlet to prevent erosion. Proposed splash pad must be approved by the Owner.

2.2 SANITARY SEWER SYSTEM

A. Sanitary sewer service shall include force main, gravity lines, wyes, saddles, bends, and appurtenances required for proper installation and complete and approved system.

B. All materials shall meet the requirements of the local utility.

C. Maintain 3-foot minimum depth of cover over pipe. Sanitary sewer lines shall have a minimum separation of 18″ vertical and 10′ horizontal from water lines. Sanitary sewer lines shall have a minimum separation of 12″ vertical from storm sewers.

D. Sanitary sewer manholes, if necessary, shall be reinforced, precast manholes meeting the requirements of ASTM C478.

E. Plastic ribbon and trace wire tape shall be installed over water lines. Ribbon shall be brightly colored green continuously printed with "Sanitary Sewer" in large letters, minimum 6 inches wide by 4 mils thick, with magnetic detectable conductor manufactured for direct burial service.

F. Each corporate hangar shall have a dedicated oil/water separator as shown on the Owner's Terminal Area Development Plan.

G. All corporate hangars must have a minimum of one appropriately sized trench drain in the main hangar bay, which drains to the oil/water separator. Trench drain system shall be HDPE or fiberglass, 4" inner diameter, drain system with frame and grate rated for aircraft loading. Trench drain systems shall be one of the following, or approved equal:

   1. Zurn Z886 Perma-Trench System with DGE or FGF grate.

   2. Eric'sons DuraTrench DTPF-HDBP

H. All restrooms must have a floor drain which drains to the oil/water separator.

I. Oil/water separator shall be, at a minimum, Proceptor OMC 300 without a coalescer, or Proceptor OMC 150 with a coalescer, or approved equal. A larger oil/water separator may be required based on actual use and activities proposed for the hangar by the Developer.

J. Each corporate hangar shall have a grinder pump station to pump wastewater to the sewer main.

K. Minimum grinder pump shall be model DH151-74, manufactured by E-ONE, or approved equal. A larger pump may be required based on actual usage proposed by Developer.

L. Force main discharge pipe from grinder pump shall be 1 ¼" diameter, for use with DH151-74 pump. If a larger grinder pump is necessary, force main discharge pipe shall be sized to meet the requirements of the grinder pump.

2.3 WATER SERVICE

A. Water service connections shall include tapping the main line and providing all saddles, corporation stops, fittings, service lines, copper setters, meters, meter boxes, backflow preventers, and other incidentals required for proper installation and complete and approved system.

B. All materials shall meet the requirements of the local utility company.

C. Water service pipe sizes shown on the Airport's Terminal Area Development Plan are minimum requirements. Developer may need larger pipe sizes depending on the expected water usage for the hangar.

D. Developer shall be required to install fire line and fire hydrant as required per the Airport's Terminal Area Development plan and the local Fire Marshall.

E. Maintain 3-foot minimum depth of cover over pipe.

F. Plastic ribbon and trace wire tape shall be installed over water lines. Ribbon shall be brightly colored blue continuously printed with "Water Service" in large letters, minimum 6 inches wide by 4 mils thick, with magnetic detectable conductor manufactured for direct burial service.

2.4 POWER SERVICE

A. The Developer shall provide and coordinate electric power supply to all buildings with the local utility. Existing power supply at the airport is 3-phase, 208 V. Developer will be responsible for any cost associated with extending power service or installation of any required transformers.

B. All permanent power lines shall be installed underground.

C. Temporary overhead power shall only be permitted during construction.

2.5 DATA/TELEPHONE SERVICE

A. The Developer shall provide and coordinate data/telephone service to all corporate hangars.

B. Data/telephone service shall be provided to each office space incorporated into a corporate hangar.

C. T-hangar buildings will not require data/telephone service.

D. All data/telephone lines shall be installed underground.

PART 3 – EXECUTION

3.1 STORMWATER SYSTEM

A. Stormwater pipe and structures shall be installed in accordance with Items D-701, D-751, and D-752 of FAA AC 150/5370-10.

3.2 TRENCHING

A. Excavate subsoil required for utilities. Remove lumped subsoil, boulders, and rock.

B. Perform excavation within 48 inches of existing utility service in accordance with utility's requirements.

C. Remove water or materials that interfere with pipe installation.

D. Trench Width: Excavate bottom of trenches maximum 16 inches wider than outside diameter of pipe.

E. Excavate trenches to depth required for installation of pipe as shown on the Airport's Terminal Area Development Plan. Provide uniform and continuous bearing and support for bedding material and pipe.

F. Maintain vertical faces to an elevation equal to 12 inches above top of pipe.

    1. When Project conditions permit, side walls may be sloped or benched above this elevation.

    2. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this Section.

G. Support Utilities and Structures:

    1. Keep trench width at top of trench to practical minimum to protect adjacent or crossing utility lines.

    2. Support utilities crossing trench by means acceptable to utility company.

    3. Do not interfere with 45-degree bearing splay of foundations.

    4. Provide temporary support for structures above and below ground.

H. When subsurface materials at bottom of trench are loose or soft, excavate to firm subgrade or to depth directed by Engineer.

    1. Cut out soft areas of subgrade not capable of compaction in place.

    2. Backfill with foundation stone and compact to density equal to or greater than requirements for subsequent backfill material.

I. Trim Excavation: Hand trim for bell and spigot pipe joints where required. Remove loose matter.

3.3 SHEETING AND SHORING

A. Sheet, shore, and brace excavations to prevent danger to persons, structures, and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.

B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.

C. Design sheeting and shoring to be removed at completion of excavation work unless approved by Engineer.

D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.

E. Repair damage to new and existing Work from settlement, water, or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.4 SURFACE WATER CONTROL

A. Control and remove unanticipated water seepage into excavation.

B. Provide ditches, berms, and other devices to divert and drain surface water from excavation area as indicated on drawings.

C. Divert surface water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.

3.5 DEWATERING

A. Design and provide dewatering system to permit Work to be completed on dry and stable subgrade.

B. Operate dewatering system continuously until backfill is minimum 2 feet above normal ground water table elevation.

C. Modify dewatering systems when operation causes or threatens to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells.

D. Discharge ground water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.

3.6 BEDDING AND BACKFILL

A. Place No. 57 pipe bedding material full width of trench to a depth of 6″ and compact to 95 percent maximum density. Excavate for pipe bells.

B. Install utility pipe and conduit in accordance with the utility company requirements.

C. Support pipe uniformly along entire length of pipe.

D. Backfill trenches to contours and elevations with unfrozen fill materials. Backfill shall be compacted to 95% of maximum density.

E. Place fill material in continuous 8″ loose layers and compact.

F. Employ placement method that does not disturb or damage utilities in trench or foundation perimeter drainage.

G. Maintain optimum moisture content of fill materials to attain required compaction density.

H. Protect open trench to prevent danger to the public.

3.7 OIL/WATER SEPARATORS AND GRINDER PUMPS

A. Oil/water separators and grinder pump stations shall be installed per manufacturer's recommendations.

3.8 MAINTENANCE

A. Maintenance of oil/water separators and grinder pumps shall be the responsibility of Developer.

B. Developer shall be responsible for costs associated with annual testing of backflow preventers, as required by Duplin County.

END OF DIVISION 33

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APPENDIX A

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Geotechnical Exploration Report
Duplin County Airport
Terminal Area Development
Duplin County, North Carolina
S&ME Project No. 1305-15-082

Prepared for:
W.K. Dickson & Company, Inc.
720 Corporate Center Drive
Raleigh, North Carolina 27613

Prepared by:
S&ME, Inc.
3201 Spring Forest Road
Raleigh, NC 27616

September 2, 2015

September 2, 2015

W.K. Dickson & Company, Inc.
720 Corporate Center Drive
Raleigh, North Carolina 27613

Attention: Ms. Brigid Williams, P.E.

Reference: **Geotechnical Exploration Report**
Duplin County Airport - Terminal Area Development
Duplin County, North Carolina
S&ME Project No. 1305-15-082
NC PE Firm License No. F-0176

Dear Ms. Williams:

S&ME, Inc. (S&ME) is pleased to submit this geotechnical exploration report prepared for the referenced project. Work was conducted in accordance with S&ME's Revised Proposal 13-1500395 dated July 22, 2015. The purpose of the exploration was to evaluate subsurface conditions as they relate to site grading and subgrade support for potential future development. This report presents a summary of pertinent project information, a description of our exploration program, results of field and laboratory testing, and our geotechnical conclusions and recommendations regarding potential future development. A Boring Location Plan, Generalized Subsurface Profile, boring logs, and laboratory test records are included in the Appendix.

S&ME appreciates the opportunity to provide our professional engineering services on this project. Should you have any questions concerning this report or if we may be of further assistance, please contact us at your convenience.

Sincerely,

S&ME, Inc.

J. Adam Browning, P.E.
Sep 2 2015 8:37 AM

J. Adam Browning, P.E.
Project Manager
N.C. Registration No. 034984

John R. Browning, P.E.
Senior Engineer

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1.0 PROJECT AND SITE DESCRIPTION

We understand that new development is planned at the Duplin County Airport in Duplin County, North Carolina. We understand that initial development will include preliminary grading and drainage improvements for future apron expansions, hangar construction, and vehicular access and parking in the terminal area. We understand W.K. Dickson will develop minimum construction standards for the airport that could be provided to a private developer, including minimum concrete slab requirements for a variety of hangar sizes and aircraft loading.

You provided us with ten boring locations on a Google Earth aerial image that you requested S&ME drill to a depth of 15 feet below existing grade. We understand that future proposed grades may be as much as 5 to 8 feet below existing grade.

The site is currently an open, relatively flat, grassed area. Broken asphalt was observed at the ground surface in the north portion of the site near boring location B-10. Possible fill may exist in the area of borings B-8 through B-10. We estimate possible fill depths may be on the order of 2 to 3 feet based on a visual evaluation of existing site elevations during our site reconnaissance. A drainage ditch exists along the south and west sides of the existing concrete apron. Water was observed in the ditch with the banks showing signs of erosion. Based on a conversation with on-site personnel, we understand the concrete apron was built approximately 25 years ago above a low-lying, wet area.

2.0 EXPLORATION PROGRAM

The field exploration program for this project included a site reconnaissance by an S&ME representative along with the performance of ten soil test borings. The boring locations were provided by W.K. Dickson and marked in the field by an S&ME representative estimating distances off existing site features. The approximate boring locations are shown on Figure 1 in the Appendix.

The soil borings were advanced to depths of 15 feet below the existing ground surface using hollow stem auger drilling procedures with a CME-45D drill rig. Within each of the soil test borings, samples of subsurface soils were obtained at approximately 2-1/2 foot intervals to a depth of 10 feet and 5 feet intervals below 10 feet using a split-spoon sampler. Standard penetration tests were conducted in conjunction with split-spoon sampling in general accordance with ASTM D 1586 -11.

The boreholes were observed for groundwater at completion of drilling. Boreholes were then backfilled up to the original ground surface with auger cuttings.

A Generalized Subsurface Profile drawing (Figure 2) and Boring Logs presenting subsurface information from the borings are included in the Appendix. Stratification lines shown on the Test Boring Records are intended to represent approximate depths of changes in soil types. Naturally, transitional changes in soil types are often gradual and cannot be defined at a particular depth.

3.0 SUBSURFACE CONDITIONS

Approximately 4 inches of grass/topsoil was encountered at the ground surface at the boring locations. Fill/possible fill soils were encountered below the surface materials in borings B-8, B-9, and B-10. Fill soils consisted of clayey sands (Unified Soil Classification System classification SC). Asphalt fragments were encountered in the split-split spoon sample obtained from 1 to 2.5 feet in B-10. Standard Penetration Test (SPT) N-values in fill soils ranged from 4 to 11 blows per foot (bpf). Well-compacted fill soils typically exhibit SPT N-values on the order of 10 bpf or greater. Thus, existing fill soils appear poorly to moderately compacted. The lower consistency existing fill was encountered in B-8 (SPT N-value of 4 bpf) and B-10 (SPT N-value of 7 bpf). The fill soils were visually observed as moist to wet.

Natural, Coastal Plain soils were encountered below the surface and fill materials to boring termination depths. Natural soils consisted of low plasticity clays (CL), clayey sands (SC), silty sands (SM), slightly clayey sands (SP-SC), slightly silty sands (SP-SM), and relatively clean sands (SP). SPT N-values in natural soils ranged from 4 to 50 blows per foot. These values are indicative of soft to very stiff consistencies for the clays and very loss to dense consistencies for the sands. Relatively low consistency natural soils (having SPT N-values of 4 to 7 bpf) were encountered near the existing ground surface in borings B-1, B-3, and B-6. Low consistency clays and clayey sands (having SPT N-values of 4 to 6 bpf) were encountered from about 3 to 6 feet in borings B-4, B-6, B-7, and B-9. Natural soils were visually observed as moist to wet. Wet soils were encountered in the split-spoon driven from 1 to 2.5 feet at B-1, B-3, and B-5.

Water levels were measured within the boreholes at the termination of drilling. Water levels measured ranged from approximately 5 feet (B-1) to 13 feet (B-10) below the existing ground surface. Please note that these groundwater levels were recorded at the termination of drilling and may not represent more stabilized water levels that may exist after an extended period of time. Stabilized water levels could be slightly higher. Groundwater elevations can be expected to fluctuate due to seasonal variations in rainfall, evaporation, and other factors.

4.0 LABORATORY TESTING

Laboratory testing consisted of natural moisture content, grain size analysis, modified Proctor, and California Bearing Ratio (CBR) testing. The modified Proctor was used per FAA guidelines for airports servicing aircraft having gross weights of 60,000 pounds or greater.

Grain size analysis testing was performed on bulk samples of near-surface soils obtained from B-2 and B-9. Testing indicated the soils were mostly fine sand (about 67 to 70 percent) with about 23 to 25 percent fines (silt and clay).

Modified Proctor tests were performed on the bulk samples of near-surface soils obtained from borings B-2 and B-9. Testing indicated maximum dry densities of about 118 to 125 pounds per cubic foot with corresponding optimum moisture contents of about 9.1 to 9.4 percent. Natural moisture content tests performed on near surface soils indicated moisture contents ranging from 7.2 to 22.7 percent. These values indicate the near-surface soils range from about 2 percent dry to more than 13 percent wet of their optimum moisture content.

California Bearing Ratio (CBR) tests were also performed on recompacted specimens from the bulk samples obtained from borings B-2 and B-9. The test specimens were recompacted to approximately 95 percent of their modified Proctor maximum dry density near their optimum moisture content. The test specimens were then soaked for 96 hours. California Bearing Ratios of 33 to 47 percent were measured. No swelling was observed in the specimens during soaking.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The subsurface exploration indicates that the future development areas are adaptable for the proposed construction. Geotechnical issues that should be taken into consideration in development of the site include near surface very loose to loose natural sands, poorly compacted near surface fill, near surface wet soils, and water tables that may impact deeper excavations. The following paragraphs present more detailed conclusions and recommendations regarding these issues.

5.1 Site Preparation

Site grading will be difficult during wet periods of the year. Most near surface soils are moisture sensitive, and when wet, will tend to rut and pump under rubber-tired traffic and provide poor subgrade support for structures and pavements. As stated above wet near surface soils were encountered at several of the borings. To reduce potential earthwork problems, we recommend that site preparation and grading be conducted during the typically drier summer and fall months. If grading is attempted during wet conditions, more extensive repair of near surface soils and use of select off-site borrow will be necessary to adequately prepare subgrades for new construction. Heavy rubber-tired construction equipment should not be allowed to operate on exposed subgrades during wet conditions. Even during drier periods of the year, we recommend that exposed subgrades be sloped and sealed at the end of each day to promote runoff and reduce infiltration from rainfall.

Site preparation should begin with stripping of existing vegetation and topsoil. Existing asphalt debris should also be removed where encountered near boring location B-10. Approximately 4 inches of topsoil was encountered in borings. We recommend that this site be stripped with wide track dozers to reduce subgrade disturbance and prevent mixing of topsoil with underling clean soils. Topsoil may be stockpiled on site and reused in landscaped areas. Topsoil should not be used for construction of permanent slopes. It should be noted that stained (black) sands are present near the existing ground surface. These materials should not be considered topsoil unless organic contents are greater than 5%.

Following stripping, areas at planned grades and areas that will receive fill should be proofrolled with a loaded, tandem-axle dump truck or equivalent. Any areas that are observed to rut, pump, or deflect excessively during the proofrolling process should be repaired as recommended by the geotechnical engineer. It is anticipated that some repair of low consistency near-surface soils will likely be required in the area of borings B-1, B-6, and B-8. Possible repair measures may include undercutting to stable soils (estimated undercutting depths of 2 to 3 feet, based on the borings) and backfilling with well compacted, low-plasticity sandy soils, discing/drying/compacting existing soils, in-place densification using a large vibratory steel drum roller, placement of a geotextile stabilization fabric and crushed stone, or some combination of these. The most practical repair measure will be influenced by the degree of instability which exists and weather conditions. As such, actual repair measures must be determined in the field at time of construction.

Existing fill materials encountered in B-8, B-9, and B-10 (to approximate depths of 3 feet below the existing ground surface) should be further evaluated during construction by the performance of shallow test pits. Fill materials containing debris or organic contents greater than 5% should be removed and replaced with suitable, compacted structural fill.

5.2 Excavations

Based on results of borings, low to moderate consistency soils are present at the site. Past experience indicates that these materials can be excavated by routine earth-moving equipment such as scrapers pushed by dozers, backhoes, front end loaders, etc. Where wet and lower consistency soils exist heavy rubber tired equipment will cause subgrade disturbance. Local excavations for shallow utility trenches and foundations can likely be accomplished by a conventional backhoe.

Groundwater was encountered at depths of approximately 5 (B-1) to 13 feet (B-10) below the existing ground surface at time of drilling. Please note that more stabilized groundwater levels may exist at higher elevations and groundwater levels will fluctuate with rainfall amounts and seasonal conditions. The contractor should be prepared to maintain groundwater levels below excavation bottoms by appropriate means (i.e. pumping from sumps, well points, etc.).

For confined excavations, trench safety must be evaluated on a case-by-case basis. The contractor will be responsible for all site safety, including the determination of appropriate trench safety measures according to OSHA guidelines.

5.3 Structural Fill

The soils at this site having a Unified Soil Classification designation of CL, SC, SM, SP-SC, SP-SM, and SP are suitable for reuse as structural fill provided that the moisture content is properly controlled during placement and compaction. The moisture condition of near surface soils will be influenced by prevailing weather conditions. At the time our borings were performed, some of the near surface soils were wet and would require drying prior to use as fill.

Off-site borrow for structural fill should consist of soils having USCS designations of SC, SM, SP, or SW, have a maximum plasticity index of 15 percent, be free of debris and have less than 3% organics, and have a modified Proctor maximum dry density (MDD) of at least 115 pcf. These soils when compacted to at least 95% of their modified Proctor MDD at their optimum moisture content should have a CBR value of at least 15 percent.

Fill should be placed in 8 to 10-inch loose lifts and compacted to the following compaction requirements . Moisture contents should be maintained within +/-2% of their optimum moisture content:

- Pavements Not Subjected to Aircraft Loading
  - At least 95% of standard Proctor Below Top 12 inches
  - At least 98% of standard Proctor within Top 12 inches

- Pavements Subjected to Aircraft Loading Greater than 60,000 pounds (per FAA requirements)
  - At least 95% of modified Proctor Below Top 12 inches
  - At least 100% of modified Proctor within Top 12 inches

In-place density testing should be performed during fill placement to confirm that the recommended degree of compaction is achieved.

5.4 Recommendations for Drainage Improvements

Groundwater was encountered at depths of approximately 5 (B-1) to 13 feet (B-10) below the existing ground surface at time of drilling. Please note that more stabilized groundwater levels may exist at higher elevations and groundwater levels will fluctuate with rainfall amounts and seasonal conditions. If excavations are required such that final subgrades are within 3 feet of groundwater elevations, then we recommend that permanent drainage be established. Permanent drainage may include French drains, blanket/edge drains, perimeter ditching, or some combination of the above draining by gravity to low points. If gravity drainage is not possible, installation of sumps and permanent pumping will be required. Once development plans are further along, S&ME can further evaluate the groundwater conditions and how they may affect proposed construction.

5.5 California Bearing Ratio and Subgrade Reaction Modulus Recommendations

Based on laboratory CBR testing along with past experience in this area with similar soils, we recommend a design CBR of 15 percent used for pavement design.

We recommend a design subgrade reaction modulus (k-value) of 195 pci based on the CBR value recommended above. This value is based on FAA's recommended conversion from CBR to k-value using the following formula:

$$K = [(1500 \times CBR) / 26] \text{ ^ } 0.7788 \text{ (in pci)}$$

Please note that the design CBR and k-value assume the subgrade is compacted in accordance with the structural fill recommendations provided in section 5.3.

6.0 QUALIFICATIONS OF REPORT

This report has been prepared in accordance with generally accepted engineering practice for specific application to this project. Any wetland, environmental, or contaminant assessment efforts are beyond the scope of this geotechnical exploration; and therefore, those issues are not addressed in this geotechnical exploration report. The recommendations contained in this report are based on the applicable standards of our profession at the time this report was prepared. No other warranty, express or implied, is made.

Conclusions and recommendations submitted in this report are based, in part, upon the data obtained from the geotechnical exploration. The nature and extent of variations between and outside of the borings may not become evident until construction. If variations appear evident, then it will be necessary to re-evaluate the recommendations of this report. In the event that any changes in the grades, nature,

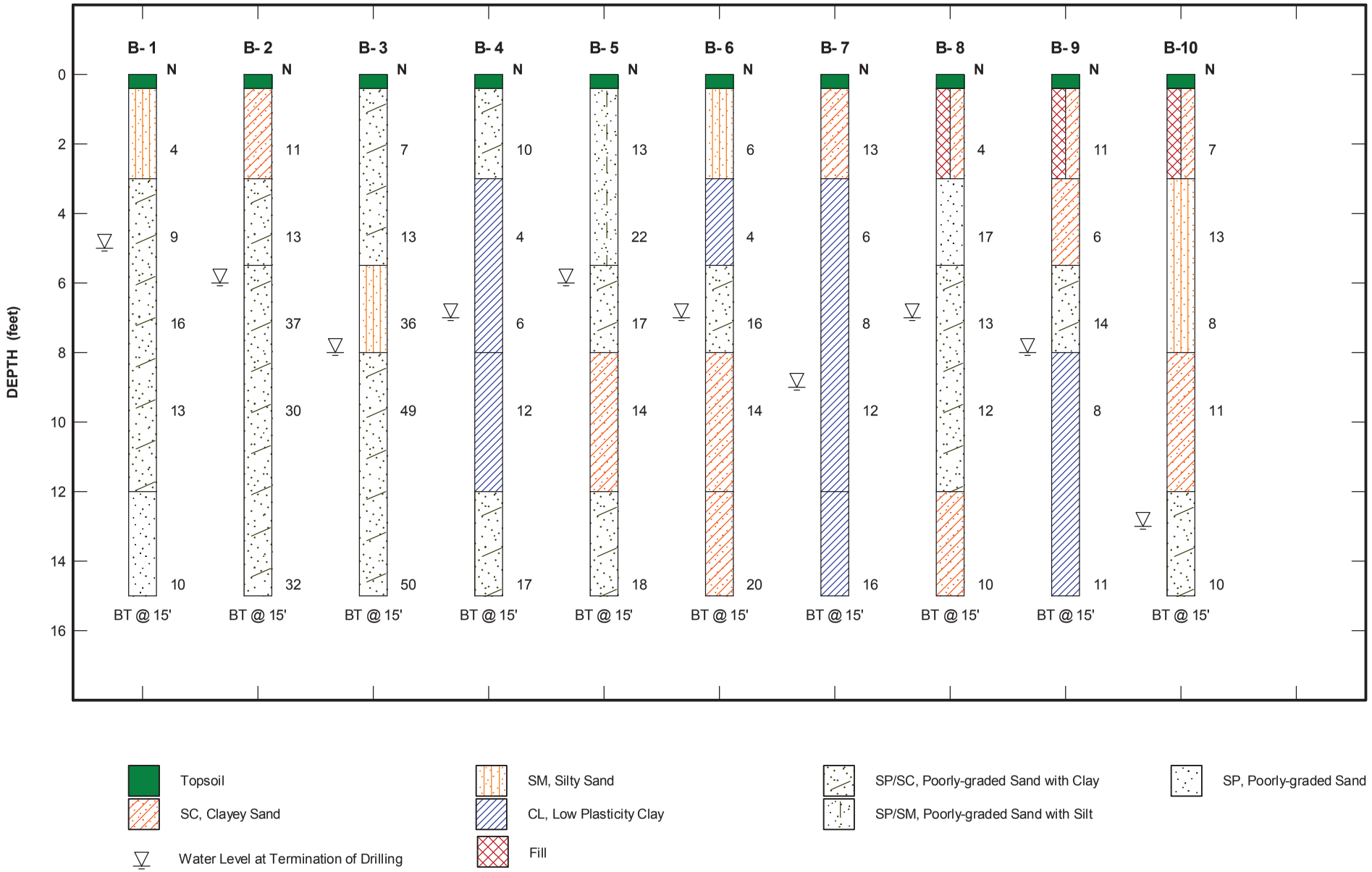
design, or location of the proposed development are planned, the recommendations contained in this report should be reviewed and modified or verified in writing. We recommend that our firm be provided the opportunity for general review of final design plans and specifications to confirm that our recommendations are properly interpreted and implemented.

Appendices

Appendix I –Figures

Note: Base figure from Google Earth, prepared by W.K. Dickson.

SCALE: AS SHOWN	S&ME	BORING LOCATION PLAN DUPLIN COUNTY AIRPORT EXPANSION DUPLIN COUNTY, NORTH CAROLINA	FIGURE NUMBER 1
CHECKED BY: JRB			
DRAWN BY: JAB			
DATE: AUG. 2015		S&ME PROJECT NUMBER: 1305-15-082	



N = Standard Penetration Test resistance value (blows per foot). The depicted stratigraphy is shown for illustrative purposes only. The actual subsurface conditions will vary between boring locations.

JOB NO: 1305-15-082	S&ME	Diagram: GENERALIZED SUBSURFACE CONDITIONS Project: Duplin County Airport Location: Kenansville, NC	Figure 2
DATE: 8/24/15			

Appendix II – Boring Logs

LEGEND TO SOIL CLASSIFICATION AND SYMBOLS

SOIL TYPES

(Shown in Graphic Log)


Fill


Asphalt


Concrete


Topsoil


Partially Weathered Rock


Cored Rock


GW WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES


GP POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES


GM SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES


GC CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES


SW WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES


SP POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES


SM SILTY SANDS, SAND - SILT MIXTURES


SC CLAYEY SANDS, SAND - CLAY MIXTURES


ML INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY


CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS


OL ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY


MH INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS


CH INORGANIC CLAYS OF HIGH PLASTICITY


OH ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS

WATER LEVELS

(Shown in Water Level Column)

▽ = Water Level At Termination of Boring
▼ = Water Level Taken After 24 Hours
◄ = Loss of Drilling Water
HC = Hole Cave

CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	STD. PENETRATION RESISTANCE BLOWS/FOOT
Very Soft	0 to 2
Soft	3 to 4
Firm	5 to 8
Stiff	9 to 15
Very Stiff	16 to 30
Hard	31 to 50
Very Hard	Over 50

RELATIVE DENSITY OF COHESIONLESS SOILS

RELATIVE DENSITY	STD. PENETRATION RESISTANCE BLOWS/FOOT
Very Loose	0 to 4
Loose	5 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	Over 50

SAMPLER TYPES

(Shown in Samples Column)

■ Shelby Tube

☒ Split Spoon

I Rock Core

□ No Recovery

TERMS

Standard Penetration Resistance - The Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in. I.D. Split Spoon Sampler 1 Foot. As Specified in ASTM D-1586.

REC - Total Length of Rock Recovered in the Core Barrel Divided by the Total Length of the Core Run Times 100%.

RQD - Total Length of Sound Rock Segments Recovered that are Longer Than or Equal to 4" (mechanical breaks excluded) Divided by the Total Length of the Core Run Times 100%.

S&ME
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ENVIRONMENTAL SERVICES

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 1**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**		
DRILLER: **Carolina Drilling**	WATER LEVEL: **5' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
	TOPSOIL (4 inches)							
	SILTY SAND (SM) very loose, brown, fine, wet	SS-1		3	2	2		4
				3	4	5		9
5	**SLIGHTLY CLAYEY SAND (SP-SC)** loose to medium dense, gray, fine, wet			5	7	9		16
				4	6	7		13
10								
	SAND (SP) loose, tan, medium to fine, wet			3	5	5		10
15	Boring terminated at 15 ft							

WATER LEVEL: ▽

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS: 10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. *THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.*
2. *BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.*
3. *STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.*
4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 2**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**	***Bulk sample collected from 1 to 5 feet.**	
DRILLER: **Carolina Drilling**	WATER LEVEL: **6' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	N VALUE
	TOPSOIL (4 inches)						
	CLAYEY SAND (SC) medium dense, black, fine, moist			3	5	6	11
	SLIGHTLY CLAYEY SAND (SP-SC) medium dense, gray tan, fine, wet			3	6	7	13
5	**SLIGHTLY CLAYEY SAND (SP-SC)** dense, gray, fine, wet			13	18	19	37
				10	12	18	30
10							
				13	15	17	32
15	Boring terminated at 15 ft						

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS — 10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

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4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 3**

DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**	
DRILLER: **Carolina Drilling**	WATER LEVEL: **8' ATD**	
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**	
SAMPLING METHOD: **Split spoon**	NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**		

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
	TOPSOIL (4 inches)							
	SLIGHTLY CLAYEY SAND (SP-SC) loose to medium dense, gray, fine, wet	SS-1		4	3	4		7
				6	5	8		13
5	**SILTY SAND (SM)** dense, black, fine, wet			10	19	17		36
	SLIGHTLY CLAYEY SAND (SP-SC) dense, dark gray, fine, wet			13	27	22		49
10								
				19	24	26		50
15	Boring terminated at 15 ft							

WATER LEVEL ▽

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

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2. ***BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.***
3. ***STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.***
4. ***WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.***

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 4**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**		
DRILLER: **Carolina Drilling**	WATER LEVEL: **7' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
		TOPSOIL (4 inches)									
		SLIGHTLY CLAYEY SAND (SP-SC) loose, gray, fine, moist					2	5	5		10
		SANDY CLAY (CL) soft to firm, tan gray, wet					2	2	2		4
5			▽				2	3	3		6
		SANDY CLAY (CL) stiff, tan gray, wet					4	5	7		12
10											
		SLIGHTLY CLAYEY SAND (SP-SC) medium dense, orange, fine, wet					5	8	9		17
15		Boring terminated at 15 ft									

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

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3. ***STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.***
4. ***WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.***

S&ME

PROJECT:	Duplin County Airport Kenansville, NC S&ME Project No. 1305-15-082	BORING LOG	B- 5
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**		
DRILLER: **Carolina Drilling**	WATER LEVEL: **6' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
		TOPSOIL (4 inches)									
		SLIGHTLY SILTY SAND (SP-SM) medium dense, black gray brown, fine, wet					4	6	7		13
							6	9	13		22
5		**SLIGHTLY CLAYEY SAND (SP-SC)** medium dense, gray, fine, wet	▽				5	8	9		17
		CLAYEY SAND (SC) medium dense, tan gray, fine, wet					6	6	8		14
10		**SLIGHTLY CLAYEY SAND (SP-SC)** medium dense, pink tan, fine, wet									
							5	7	11		18
15		Boring terminated at 15 ft									

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

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3. *STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.*
4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 6**

DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**	
DRILLER: **Carolina Drilling**	WATER LEVEL: **7' ATD**	
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**	
SAMPLING METHOD: **Split spoon**	NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**		

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	N VALUE
	TOPSOIL (4 inches)						
	SILTY SAND (SM) loose, black, with clay, fine, moist	SS-1		4	3	3	6
	SANDY CLAY (CL) soft, red gray, moist			1	1	3	4
5	**SLIGHTLY CLAYEY SAND (SP-SC)** medium dense, tan, fine, wet ▽			5	7	9	16
	CLAYEY SAND (SC) medium dense, pink tan, fine, wet			7	7	7	14
10	**SLIGHTLY CLAYEY SAND (SC)** medium dense, pink tan, fine, wet			7	9	11	20
15	Boring terminated at 15 ft						

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS

10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. ***THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.***
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3. ***STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.***
4. ***WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.***

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PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 7**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**		
DRILLER: **Carolina Drilling**	WATER LEVEL: **9' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	N VALUE
	TOPSOIL (4 inches)						
	CLAYEY SAND (SC) medium dense, orange brown, fine, moist			5	6	7	13
	SANDY CLAY (CL) firm to stiff, brown, moist to wet			5	3	3	6
5				4	4	4	8
				3	5	7	12
10							
	SANDY CLAY (CL) very stiff, gray brown, wet			5	8	8	16
15	Boring terminated at 15 ft						

WATER LEVEL: ▽

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS

10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. *THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.*
2. *BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.*
3. *STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.*
4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 8**

DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**	
DRILLER: **Carolina Drilling**	WATER LEVEL: **7' ATD**	
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**	
SAMPLING METHOD: **Split spoon**	NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**		

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
	TOPSOIL (4 inches)							
	FILL: CLAYEY SAND (SC) very loose, brown, fine, moist	SS-1		2	2	2		4
	SAND (SP) medium dense, white tan, fine, wet			3	7	10		17
5	**SLIGHTLY CLAYEY SAND (SP-SC)** medium dense, gray, fine, wet			4	6	7		13
				5	5	7		12
10	**CLAYEY SAND (SC)** loose, gray, fine, wet			4	6	4		10
15	Boring terminated at 15 ft							

WATER LEVEL: ▽ at 7 ft

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS: 10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. *THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.*
2. *BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.*
3. *STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.*
4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B- 9**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**	***Bulk sample obtained from 1 to 5 feet.**	
DRILLER: **Carolina Drilling**	WATER LEVEL: **8' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA 1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	N VALUE
	TOPSOIL (4 inches)						
	FILL: CLAYEY SAND (SC) medium dense, brown, fine, moist			8	6	5	11
	CLAYEY SAND (SC) loose, brown, fine, wet			2	3	3	6
5	**SLIGHTLY CLAYEY SAND (SP-SC)** medium dense, gray, fine, wet			3	7	7	14
	SANDY CLAY (CL) firm to stiff, gray brown, wet			2	2	6	8
10							
				3	4	7	11
15	Boring terminated at 15 ft						

WATER LEVEL: ▽

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS

10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. *THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.*
2. *BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.*
3. *STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.*
4. *WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.*

S&ME

PROJECT:	**Duplin County Airport** **Kenansville, NC** **S&ME Project No. 1305-15-082**	**BORING LOG**	**B-10**
DATE DRILLED: **8/14/15**	ELEVATION:	NOTES: **Boring location is approximate.**	
DRILL RIG: **CME 45-D**	BORING DEPTH: **15.0 ft**		
DRILLER: **Carolina Drilling**	WATER LEVEL: **13' ATD**		
HAMMER TYPE: **Automatic**	LOGGED BY: **A. Browning**		
SAMPLING METHOD: **Split spoon**		NORTHING:	EASTING:
DRILLING METHOD: **3¼" H.S.A.**			

DEPTH (feet)	MATERIAL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	N VALUE
	TOPSOIL (4 inches)						
	FILL: CLAYEY SAND (SC) loose, black tan, with asphalt fragments, medium to fine, wet			7	4	3	7
	SILTY SAND (SM) medium dense to loose, tan black, fine, wet			7	6	7	13
5				4	4	4	8
	CLAYEY SAND (SC) medium dense, black, fine, wet			3	4	7	11
10							
	SLIGHTLY CLAYEY SAND (SP-SC) loose, tan, fine, wet ▽			3	5	5	10
15	Boring terminated at 15 ft						

STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS — 10 20 30 60 80

S&ME BORING LOG 15-082.GPJ S&ME.GDT 8/24/15

NOTES:

1. ***THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.***
2. ***BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.***
3. ***STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.***
4. ***WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.***

S&ME

Appendix III – Laboratory Test Records

Form No: TR-D2216-T265-2
Revision No. 0
Revision Date: 02/22/08

Laboratory Determination of Water Content

S&ME

ASTM D 2216 ☑ *AASHTO T 265* ☐ ***Quality Assurance***

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

Project #:	1305-15-082	Report Date:	8/27/15
Project Name:	Duplin Co. Airport	Test Date(s):	8/21 - 8/25/15
Client Name:			
Client Address:			
Sample by:		Sample Date(s):	8/14/15
Sampling Method:	Borehole	Drill Rig :	N/A

Method: **A (1%)** ☐ **B (0.1%)** ☑ *Balance ID.* ***1024*** *Calibration Date:* ***11/4/14***

Boring No.	Sample No.	Sample Depth	Tare #	Tare Weight	Tare Wt.+ Wet Wt	Tare Wt. + Dry Wt	Water Weight	Percent Moisture
		ft.		grams	grams	grams	grams	%
B-2	Bulk	1 - 5	1202	122.86	478.55	446.56	31.99	**9.9%**
B-9	Bulk	1 - 5	8003	121.02	428.89	408.10	20.79	**7.2%**
B-3	SS-1	1 - 2.5	10	49.07	263.85	238.23	25.62	**13.5%**
B-6	SS-1	1 - 2.5	64	49.11	232.02	198.22	33.80	**22.7%**
B-8	SS-1	1 - 2.5	31	49.61	244.96	217.21	27.75	**16.6%**

Notes / Deviations / References

AASHTO T 265: Laboratory Determination of Moisture Content of Soils

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

Mal Krajan, ET		Laboratory Manager	8/27/2015
Technical Responsibility	*Signature*	*Position*	*Date*

Sieve Analysis of Soils

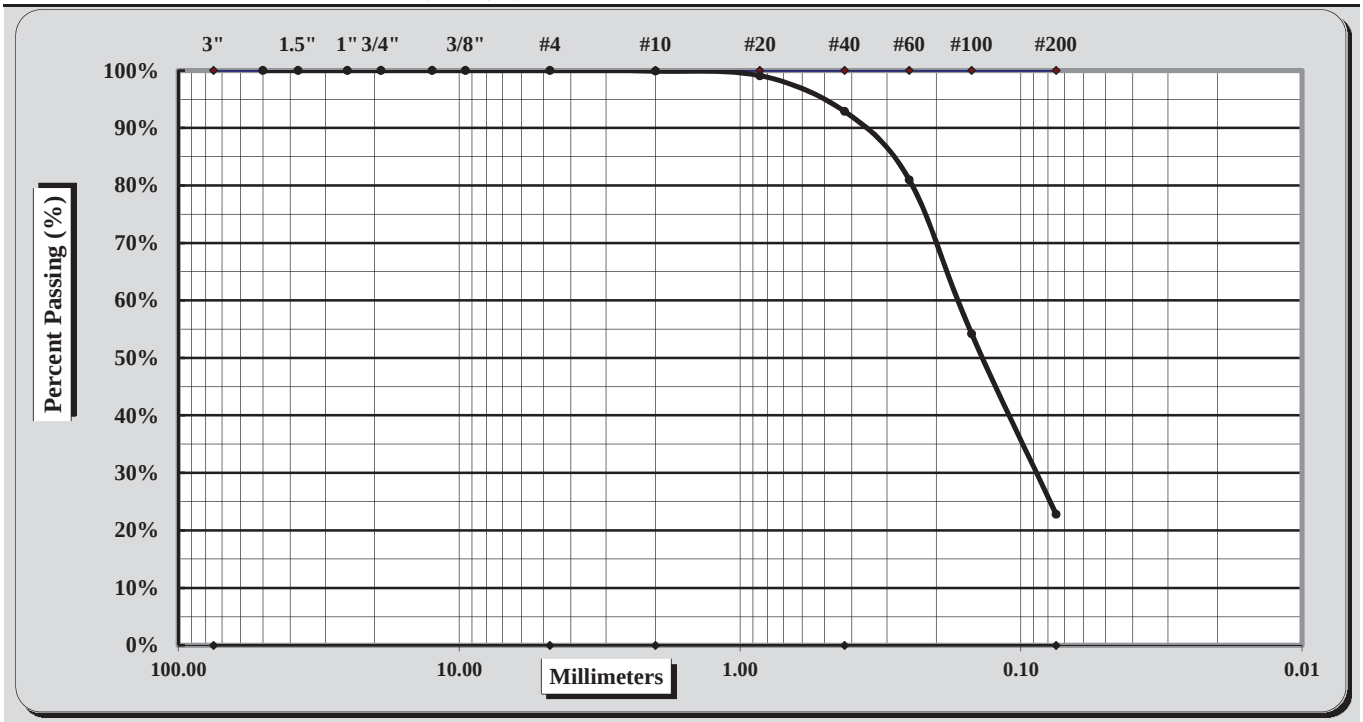
ASTM D 6913

Quality Assurance

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

Project #:	**1305-15-082**	Report Date:	8/24/15
Project Name:	Duplin Co. Airport	Test Date(s):	8/21 - 8/24/15
Client Name:			
Client Address:			
Boring No.: B-2	Sample: Bag	Sample Date:	8/14/15
Location: Site-Borehole	Offset: N/A	Depth (ft):	1 - 5 ft.

Sample Description: Dark Gray Clayey SAND



Cobbles	< 300 mm (12") and > 75 mm (3")	Fine Sand	< 0.425 mm and > 0.075 mm (#200)
Gravel	< 75 mm and > 4.75 mm (#4)	Silt	< 0.075 and > 0.005 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Clay	< 0.005 mm
Medium Sand	< 2.00 mm and > 0.425 mm (#40)	Colloids	< 0.001 mm

Maximum Particle Size	#4	Coarse Sand	0.1%	Fine Sand	70.1%
Gravel	0.0%	Medium Sand	7.0%	Silt & Clay	22.8%
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND
Specific Gravity	ND			Moisture Content	9.9%
Coarse Sand	0.1%	Medium Sand	7.0%	Fine Sand	70.1%

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐
Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Notes / Deviations / References: ND=Not Determined.

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

ASTM D 2487: Classification of Soils for Engineering Purposes (Unified Soil Classification System)

Mal Krajan, ET		Laboratory Manager	8/24/2015
Technical Responsibility	*Signature*	*Position*	*Date*

Moisture - Density Report

Quality Assurance

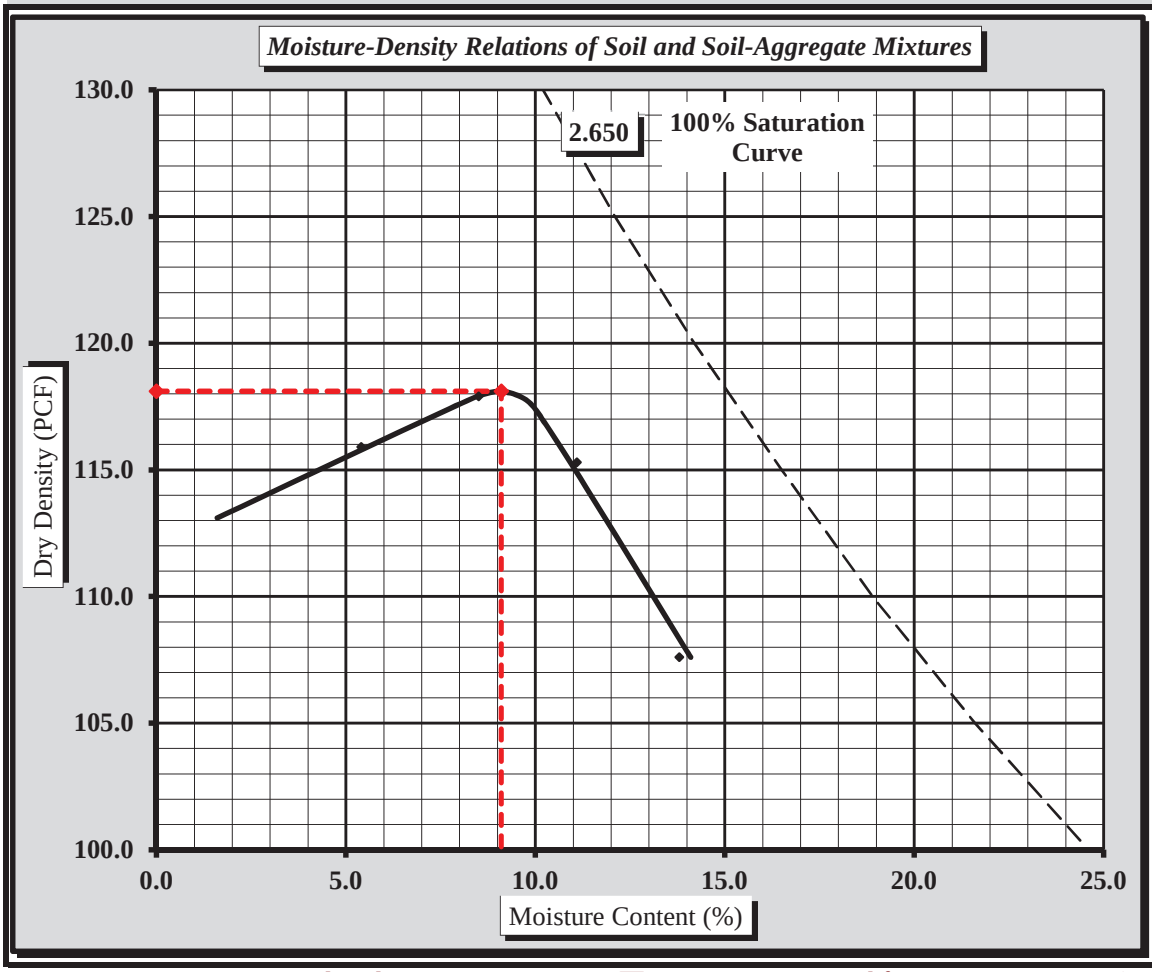
S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	**1305-15-082**	Report Date:	8/25/15
Project Name:	Duplin Co. Airport	Test Date(s):	8/21 - 8/25/15
Client Name:			
Client Address:			

Boring #:	B-2	Sample #:	Bag	Sample Date:	8/14/2015
Location:	Site-Borehole	Offset:	N/A	Depth:	1 - 5 ft.
Sample Description:	Dark Gray Clayey SAND				

Maximum Dry Density **118.1** **PCF.** **Optimum Moisture Content** **9.1%**

ASTM D1557 - - Method A



Soil Properties	
Natural Moisture Content	**9.9%**
Assumed Specific Gravity	**2.650**
Liquid Limit	**ND**
Plastic Limit	**ND**
Plastic Index	**ND**

% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.9%
#40	92.9%
#60	81.0%
#200	22.8%

Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND=Not Determined.

ASTM D 422: Particle Size Analysis of Soils

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

ASTM D 1557: Laboratory Compaction Characteristics of Soil Using Modified Effort

Mal Krajan, ET		Laboratory Manager	8/27/2015
Technical Responsibility	*Signature*	*Position*	*Date*

CBR (California Bearing Ratio) of Laboratory Compacted Soil

ASTM D 1883

Quality Assurance

S&ME, Inc.Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

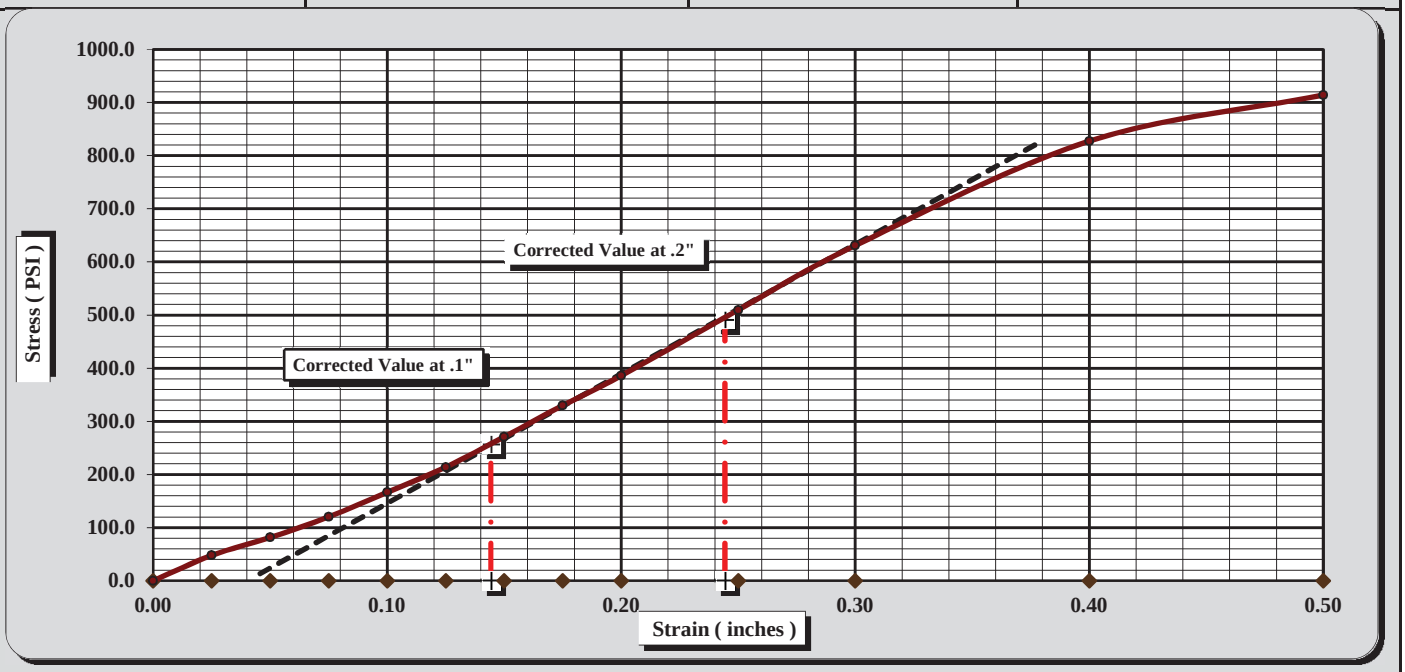
Project #:	**1305-15-082**	Report Date:	8/29/15
Project Name:	Duplin Co. Airport	Test Date(s)	8/21 - 8/29/15
Client Name:			
Client Address:			
Boring #:	B-2	Sample #: Bag	Sample Date: 8/14/15
Location:	Borehole	Offset: N/A	Depth (ft): 1 - 5 ft.

Sample Description: Dark Gray Clayey SAND

ASTM D1557 *Method A* Maximum Dry Density: **118.1** **PCF** Optimum Moisture Content: **9.1%**

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: **0.0%**

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 16.6	**CBR at 0.2 in. 25.7**	**CBR at 0.1 in. 25.7**	**CBR at 0.2 in. 32.7**



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 7.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	40	Final Dry Density (PCF)	110.1
Initial Dry Density (PCF)	112.0	Average Final Moisture Content	11.3%
Moisture Content of the Compacted Specimen	9.3%	Moisture Content (top 1" after soaking)	11.8%
Percent Compaction	94.8%	Percent Swell	0.0%

Soak Time: 96-hr Surcharge Weight 20.0 Surcharge Wt. per sq. Ft. 101.9

Liquid Limit ND Plastic Index ND

Notes/Deviations/References: ND=Not Determined.

Test specimen was compacted to 95% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	8/29/2015
Technical Responsibility	*Signature*	*Position*	*Date*

Sieve Analysis of Soils

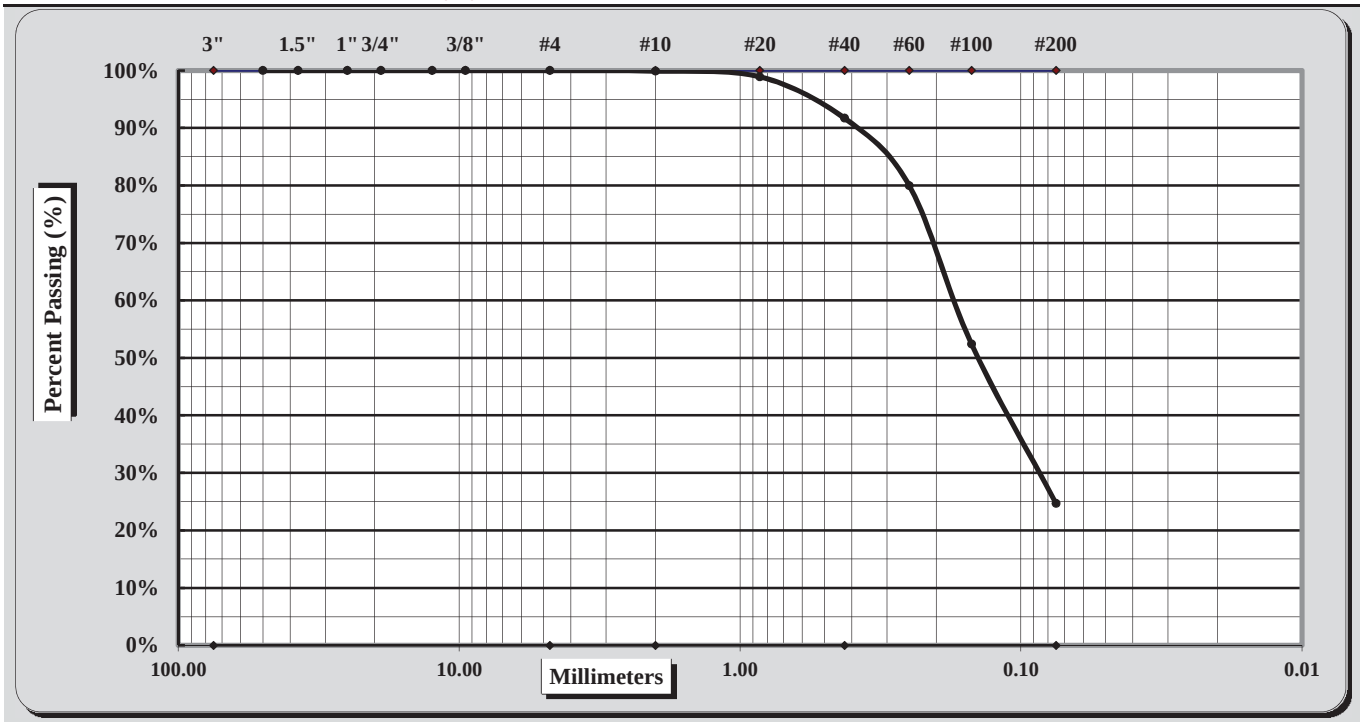
ASTM D 6913

Quality Assurance

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

Project #:	**1305-15-082**	Report Date:	8/24/15
Project Name:	Duplin Co. Airport	Test Date(s):	8/21 - 8/24/15
Client Name:			
Client Address:			
Boring No.: B-9	Sample: Bag	Sample Date:	8/14/15
Location: Site-Borehole	Offset: N/A	Depth (ft):	1 - 5 ft.

Sample Description: Brown Clayey SAND



Cobbles	< 300 mm (12") and > 75 mm (3")	Fine Sand	< 0.425 mm and > 0.075 mm (#200)
Gravel	< 75 mm and > 4.75 mm (#4)	Silt	< 0.075 and > 0.005 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Clay	< 0.005 mm
Medium Sand	< 2.00 mm and > 0.425 mm (#40)	Colloids	< 0.001 mm

Maximum Particle Size	#4	Coarse Sand	0.1%	Fine Sand	67.0%
Gravel	0.0%	Medium Sand	8.2%	Silt & Clay	24.7%
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND
Specific Gravity	ND			Moisture Content	7.2%
Coarse Sand	0.1%	Medium Sand	8.2%	Fine Sand	67.0%

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐
Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Notes / Deviations / References: ND=Not Determined.

ASTM D 4318: Liquid Limit, Plastic Limit, & Plastic Index of Soils

ASTM D 2487: Classification of Soils for Engineering Purposes (Unified Soil Classification System)

Mal Krajan, ET		Laboratory Manager	8/24/2015
Technical Responsibility	*Signature*	*Position*	*Date*

Moisture - Density Report

Quality Assurance

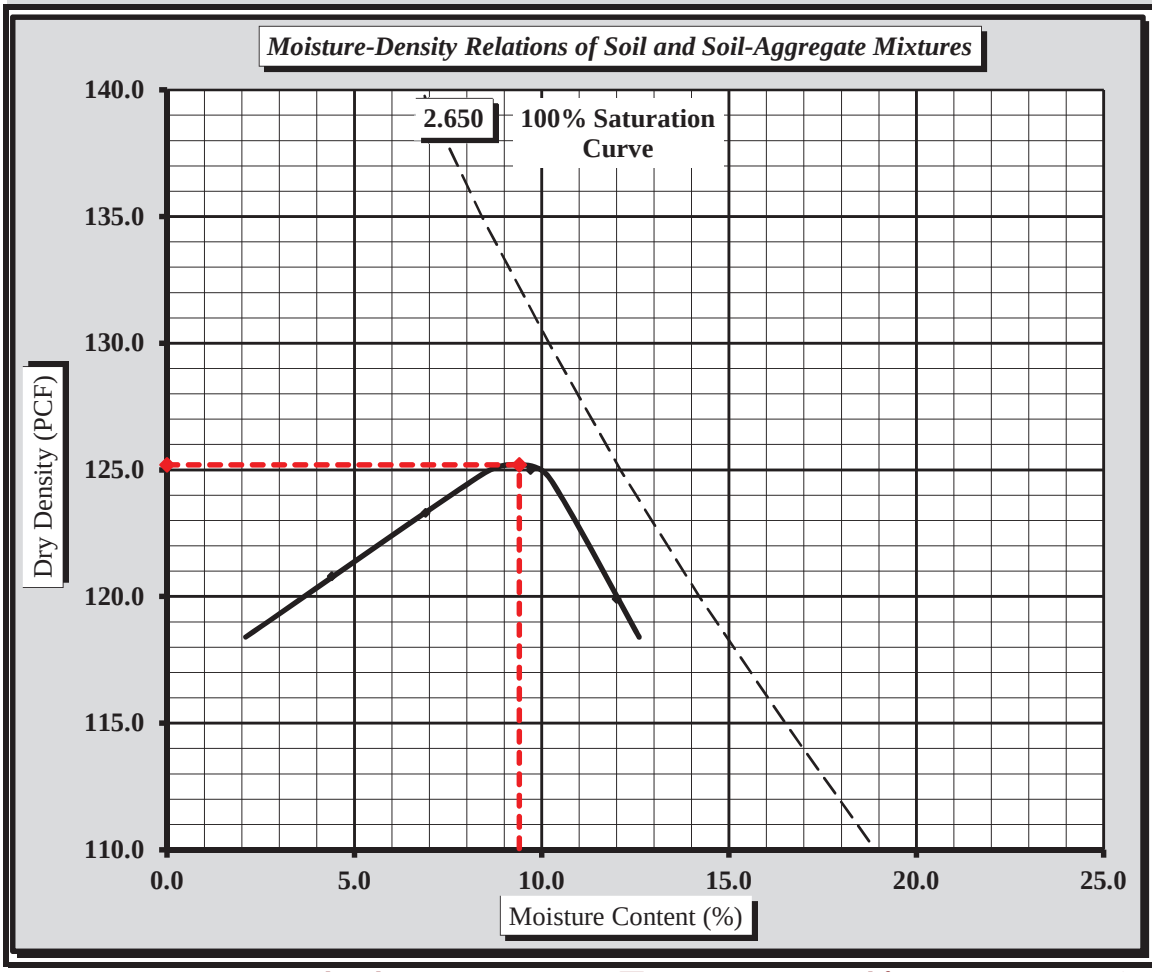
S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	**1305-15-082**	Report Date:	8/25/15
Project Name:	Duplin Co. Airport	Test Date(s):	8/21 - 8/25/15
Client Name:			
Client Address:			

Boring #:	B-9	Sample #:	Bag	Sample Date:	8/14/2015
Location:	Site-Borehole	Offset:	N/A	Depth:	1 - 5 ft.
Sample Description:	Brown Clayey SAND				

Maximum Dry Density **125.2** **PCF.** **Optimum Moisture Content** **9.4%**

ASTM D1557 - - Method A



Soil Properties	
Natural Moisture Content	**7.2%**
Assumed Specific Gravity	**2.650**
Liquid Limit	**ND**
Plastic Limit	**ND**
Plastic Index	**ND**

% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.9%
#40	91.7%
#60	80.0%
#200	24.7%

Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND=Not Determined.

ASTM D 422: Particle Size Analysis of Soils

ASTM D 2216: Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

ASTM D 1557: Laboratory Compaction Characteristics of Soil Using Modified Effort

Mal Krajan, ET		Laboratory Manager	8/27/2015
Technical Responsibility	*Signature*	*Position*	*Date*

CBR (California Bearing Ratio) of Laboratory Compacted Soil

ASTM D 1883

Quality Assurance

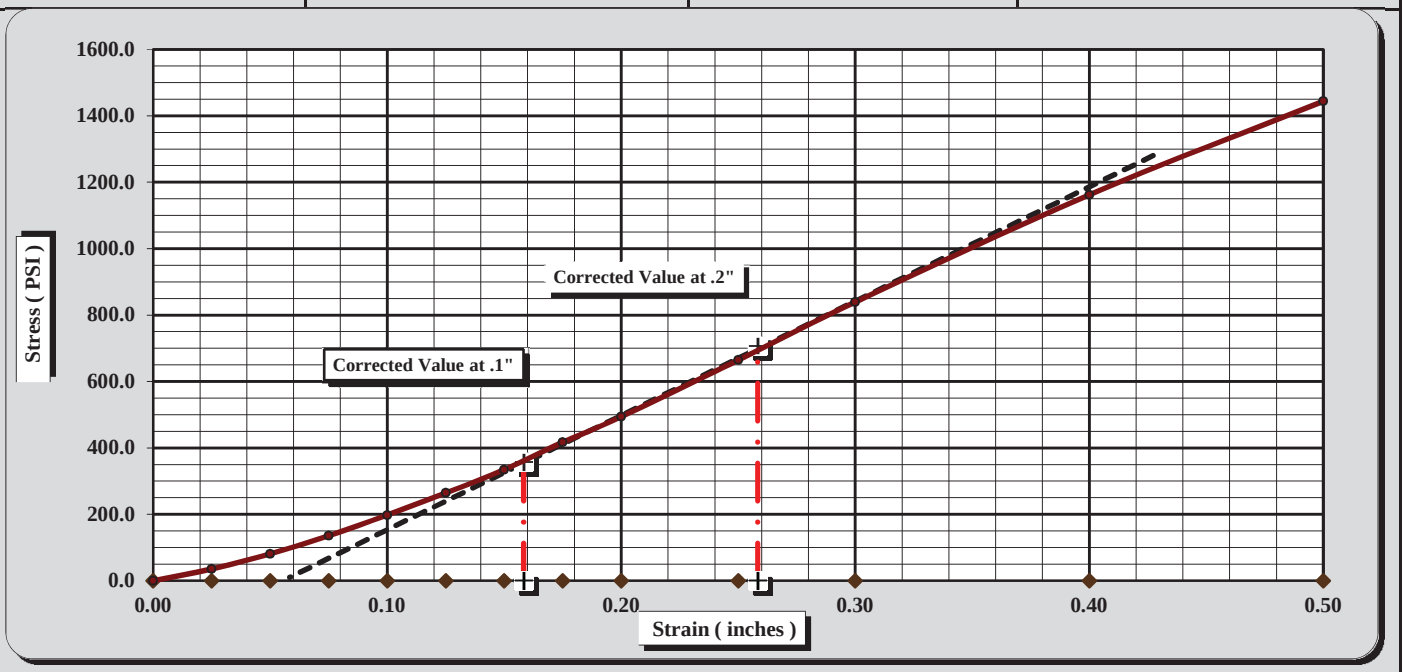
S&ME, Inc.Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

Project #:	**1305-15-082**	Report Date:	8/29/15
Project Name:	Duplin Co. Airport	Test Date(s)	8/21 - 8/29/15
Client Name:			
Client Address:			
Boring #:	B-9	Sample #: Bag	Sample Date: 8/14/15
Location:	Borehole	Offset: N/A	Depth (ft): 1 - 5 ft.
Sample Description:	Brown Clayey SAND		

ASTM D1557 *Method A* Maximum Dry Density: **125.2** **PCF** Optimum Moisture Content: **9.4%**

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: **0.0%**

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 19.8	**CBR at 0.2 in. 32.9**	**CBR at 0.1 in. 35.7**	**CBR at 0.2 in. 47.1**



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with ASTM D1883, Section 7.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	40	Final Dry Density (PCF)	118.7
Initial Dry Density (PCF)	119.2	Average Final Moisture Content	10.4%
Moisture Content of the Compacted Specimen	9.7%	Moisture Content (top 1" after soaking)	10.8%
Percent Compaction	95.2%	Percent Swell	-0.2%

Soak Time: 96-hr Surcharge Weight 20.0 Surcharge Wt. per sq. Ft. 101.9

Liquid Limit ND Plastic Index ND

Notes/Deviations/References: ND=Not Determined.

Test specimen was compacted to 95% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	8/29/2015
Technical Responsibility	*Signature*	*Position*	*Date*

Appendix C – SIGN POLICY

1.1 General

A. This policy sets the rules and standards for the placement of non-Airport signs on airport property.

B. The Airport Director retains the right to accept or refuse any application requesting the placement of any sign based on content, structure, and proposed location.

C. Applications will be accepted only from applicants with an active lease between themselves and Duplin County.

D. Signs will be limited to advertising business concerning or related to airport business.

E. Please see Exhibit "F"- Application for Placement of Sign on Airport Property

1.2 Locations Where Prohibited

A. No sign of any description shall be installed, erected, or constructed in such a manner as to obstruct any egress point or any fire escape, or any window or door leading thereto, nor shall any sign be attached in any form, shape, or manner to a fire escape.

B. Signs will only be installed in locations designated by the Airport Director and must be in compliance with these Rules and Regulations and *all* federal, state, county, and local laws.

1.3 Name of Sign Owner to Appear on Sign

A. Every sign shall be plainly marked with the name of the person or organization erecting and maintaining the sign.

1.4 Monument Signs

Monument sign shall be approved on a case by case basis by the Airport Director.

1.5 Sign Placement

A. Signs shall be placed at least 15 feet away from any public road or drive.

B. Signs will be a minimum of 50 feet apart, as to provide a clear view of each sign.

C. Signs (freestanding) will be placed at least 20 feet from any permanent structure.

D. Signs must be placed a minimum of 7 feet from the edge of any ditch or waterway in order to allow ample room for mowing equipment to maneuver between the sign and ditch or waterway.

1.6 Building Mounted Signs

No signs mounted on a structure may protrude above the structure's highest point. Sign placement is subject to approval of DCAC.

1.7 Sign Maintenance

A. All signs must be maintained to a serviceable standard with a clean and professional appearance.

B. In the event that Airport management determines that a sign fails to satisfy any applicable standard(s), the sign owner and/or maintainer will be notified in writing. The owner will then have (10) working days to rectify the issue. If insufficient progress has been made by that time, the sign will be removed at the owner's expense and a new application must be filed in order to replace it.

C. The airport will continue to maintain the grounds around the sign.

1.8 Removal

A. It is the responsibility of a sign owner to remove the sign upon discontinuation of a lease.

1.9 Temporary Signs

A. Are subject to the same approval criteria as monument signs.

B. May be put in place no sooner than two (2) weeks prior to an event.

C. Must be removed within three (3) working days after the conclusion of an event.

2.0 Interior Signage

Any signage on the interior of the terminal building/hangars shall be at the approval and discretion of the Airport Director.

Appendix D Hazardous Weather Plan

1.1 General

A. The geographic region in which the airport resides is prone to rapid weather changes. In the past, there have been microbursts, Nor'easters, tornados, hail, and hurricanes that have caused local damage.

B. Aircraft are vulnerable to these conditions. It is the intent of this airport to make available the most protection for aircraft possible. The airport has hangars that it leases to the public. These hangars provide protection from the sun, wind, rain, and hail. There is a finite number of available hangars. All other aircraft are kept on the ramp in tie down spots. The tie down straps help prevent the aircraft from sustaining damage in normal to moderate winds, however these spots offer no further protection from the elements.

C. ******It is the responsibility of the aircraft owner to take care of their aircraft. The airport has no direct responsibility to make sure your aircraft is secure in hazardous weather conditions.** ****

D. In the event of an approaching hurricane, it is advised that aircraft owners relocate their aircraft to other locations. The airport is not responsible for finding alternate locations in which to relocate. *Please refer to this interactive map, shown on the NCDOT Division of Aviation website, for locations of publicly owned/operated general aviation airports in North Carolina for alternative locations.*

1.2 Hurricane Categories

Saffir–Simpson hurricane wind scale

Category	Wind speeds
Five	≥70 m/s, ≥137 knots ≥157 mph, ≥252 km/h
Four	58–70 m/s, 113–136 knots 130–156 mph, 209–251 km/h
Three	50–58 m/s, 96–112 knots 111–129 mph, 178–208 km/h
Two	43–49 m/s, 83–95 knots 96–110 mph, 154–177 km/h
One	33–42 m/s, 64–82 knots 74–95 mph, 119–153 km/h

Additional classifications

Tropical storm	18–32 m/s, 35–63 knots 39–73 mph, 63–118 km/h
Tropical depression	<17 m/s, <34 knots <38 mph, <62 km/h

1.3 Plan

A. Microbursts, thunderstorms, tornados, and hail give next to no warning. That being said, the Airport will make every effort to be weather conscious and will try to make sure that aircraft are tied down when storms approach. It is ultimately the responsibility of the aircraft owner, however, to make sure their aircraft is properly secured.

B. Hurricanes generally give more warning. Proper measures will be taken by airport personnel to ensure the security of airport property and personnel when hurricanes are forecast. It is still the ultimate responsibility of the aircraft owner, however, to properly secure their aircraft.

C. Egress

1. *Please refer to this interactive map, shown on the NCDOT Division of Aviation website, for locations of publicly owned/operated general aviation airports in North Carolina for alternative locations.*

2. Remember that a hurricane can be large, and the impact may be felt over several states. Also remember that many people from the area may be considering moving their airplanes and some alternative airports may fill up. Plan accordingly.

1.4 Priorities

1. The first priority in the execution of this plan is the safety and welfare of the personnel working for and the users of the Duplin County Airport.

2. The second priority in the execution of this plan is the protection of Airport property.

3. Every effort, within reason, will be made to protect aircraft on airport property but it is ultimately the responsibility of the aircraft owner to properly secure and protect their aircraft.

EXHIBIT “A”

Location of Designated Areas for Self-Maintenance at DPL

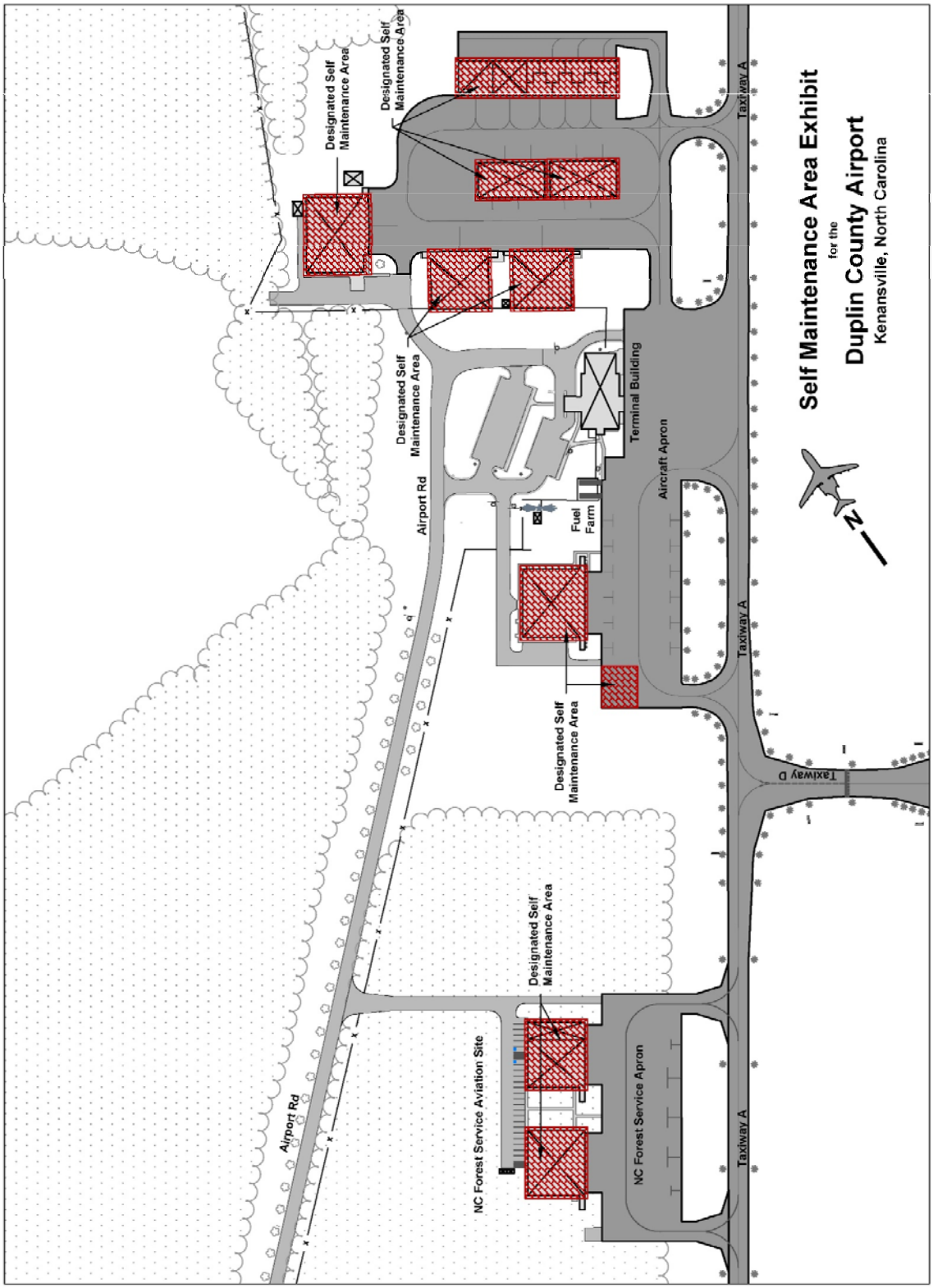


EXHIBIT “B”

Duplin County Airport Traffic Pattern

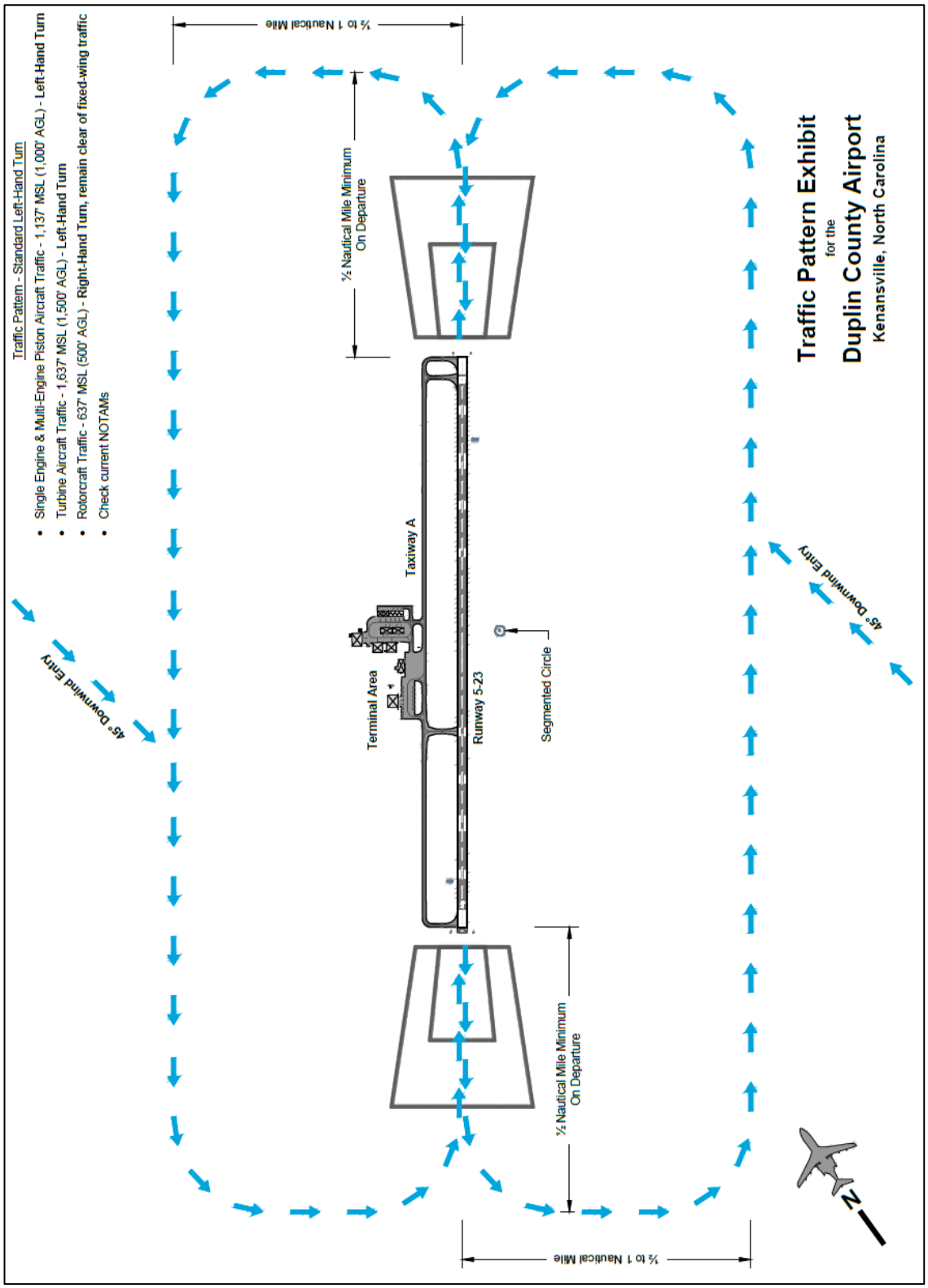


EXHIBIT “C”

Location of Designated Areas for Self-Fueling at DPL

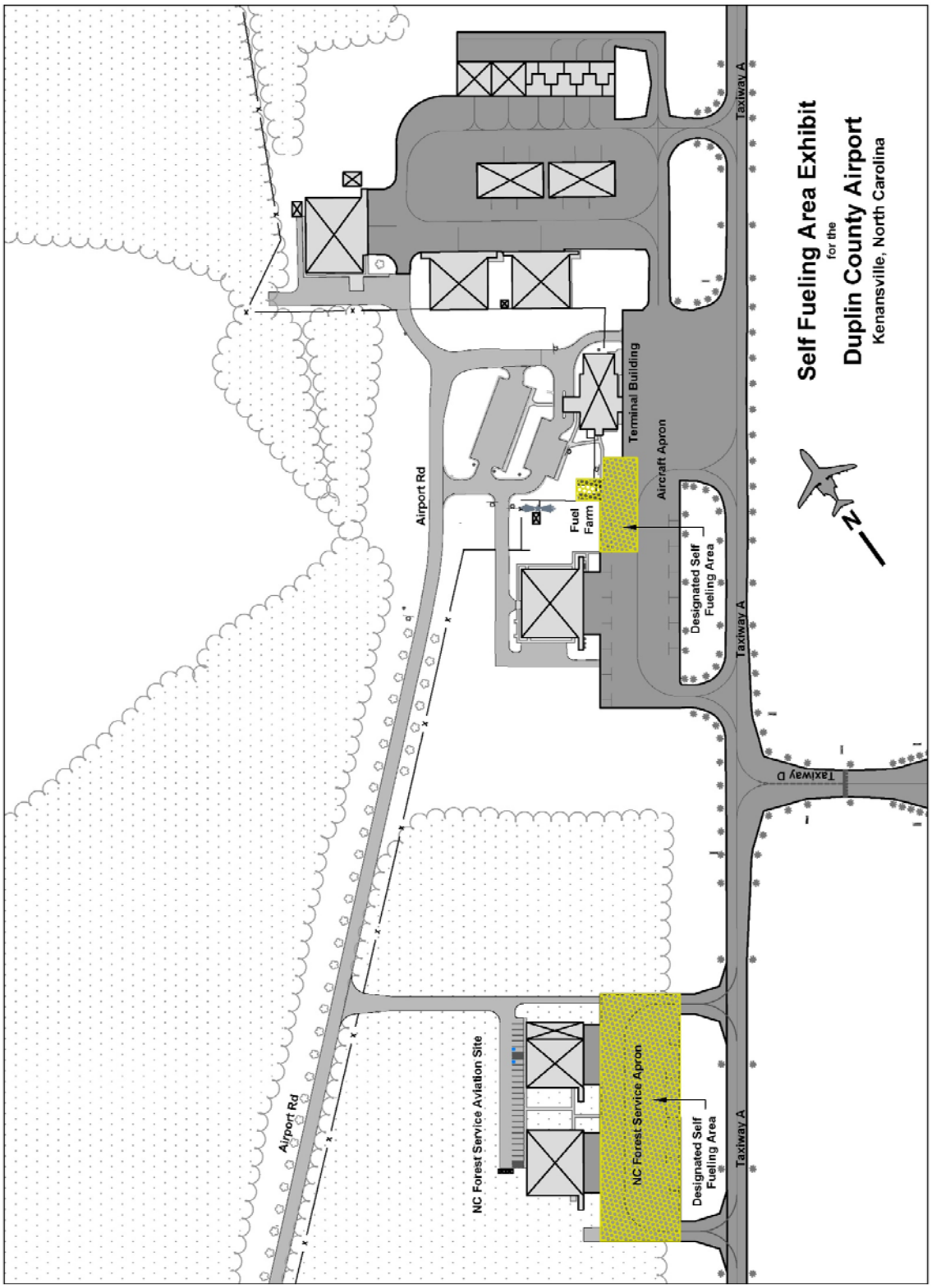


EXHIBIT “D”

Procedure for Obtaining A Self Fueling Permit at DPL

Any individual or entity wishing to supply and dispense fuel into their own aircraft at the Airport must do so using their own employees and their own equipment, and they must also obtain a self-fueling permit from the Airport Director. Applications for self-fueling permits are available at the Airport Director's office. The procedure for obtaining a self-fueling permit is as follows:

a. Submit a completed self-fueling application to the Airport Director with the required approvals shown below in paragraphs b. & c. together with a check for the fee.

b. Complete the approved self-fueling training course conducted by the Fire Marshall or the Airport Director.

c. Obtain approval from the Fire Marshall for equipment to be used in the self-fueling operation.

d. Obtain general liability insurance coverage on the fueling equipment, as required by the County.

e. Pay the annual permit fee of $50.00 and a flowage fee for all gallons over 500 pumped per year.

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EXHIBIT "E"

Accident Reporting Form

Duplin County Airport

In accordance with the accident reporting provisions of the Rules and Regulations governing the operation of the Duplin County Airport, it is mandatory to report any damage to public property and any injury requiring medical attention. Damage to privately owned property located within the confines of the Airport is to be reported to the owner. The Airport Director will help you with contacting the owner.

This form is for local Airport usage and does not replace the reporting requirements of NTSB 830 with regard to aircraft accidents and incidents. A copy of a Federal accident report may be submitted in lieu of this form.

---

1. Name of person _____

_____ Age _____

Address

_____

_____

_____

Phone (H) _____ (W) _____

Date and time of occurrence _____

2. Nature and extent of injuries

_____

_____

_____

_____

Description of accident/injury _____

_____

_____

_____

_____

_____

Name of doctor or hospital _____

3. Kind of property and extent of damage (use reverse for vehicles and aircraft)

_____

_____

_____

_____

_____

_____

Name of owner _____

Address _____

_____

Phone (H) _____ (W) _____

4. Reported to police _____

Report number _____

Name of police department _____

Weather condition(s) _____

5. Vehicle/Aircraft identification (Number 1)

Name of owner _____

Address _____

_____

_____

Phone (H) _____ (W) _____

N Number (or Tag & State) _____

Make _____

Model _____ Year _____

Serial Number (or VIN) _____

6. Vehicle/Aircraft identification (Number 2)

Name of owner _____

Address _____

_____

_____

Phone (H) _____ (W) _____

N Number (or Tag & State) _____

Make _____

Model _____ Year _____

Serial Number (or VIN) _____

7. Name of Witness

_____

Address _____

_____

_____

Phone (H) _____ (W) _____

8. Name of Witness

_____

Address _____

_____

_____

Phone (H) _____ (W) _____

9. Remarks or additional information _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

10. Signature _____ Date _____

EXHIBIT “F”

Application for Placement of Sign on Airport Property

Duplin County Airport

DATE: _____

NAME: _____

ORGANIZATION: _____

LEASE DATE: _____

LEASE EXPIRATION: _____

PURPOSE OF SIGN: _____

_____

_____

DESCRIPTION OF SIGN (ATTACH PHOTO IF AVAILABLE): _____

_____

_____

DIRECTOR’S REVIEW AND COMMENTS _____

_____

_____

BOARD APPROVAL? Y N DATE: _____