Construction of a Fuel Farm and Fixed Based Operator (FBO) Facility at the Portsmouth International Airport at Pease
Portsmouth, NH

New Hampshire Department of Environmental Services

Wetlands Bureau Permit Application

Hoyle, Tanner Project Number: 565900

12/1/2021

Prepared for:

Pease Aviation Partners, LLC

Prepared By:

HOYLE TANNER

December 2021

HOYLE TANNER

Trusted Experts | Innovative Results

December 1, 2021

D.E.S. Wetlands Bureau
P.O. Box 95
Concord, NH 03302-0095

Re: Wetlands Permit Application
Construction of a Fuel Farm and Fixed Based Operator (FBO)
Facility at the Portsmouth International Airport
at Pease, Portsmouth, NH
Hoyle, Tanner Project No. 565900

Dear Sir/Madam:

Pease Aviation Partners, LLC is proposing the development of a new Fixed Base Operator (FBO) facility and fuel farm located at the Portsmouth International Airport at Pease (PSM) in Portsmouth, NH on property owned by Pease Development Authority (PDA) that will be leased to Pease Aviation Partners, LLC. The project includes primarily Map/Lots 307-0 and a portion of 307-3 and 307-2. The proposed site address will be 53 Exeter Street. The project lease site is approximately 2.65 acres, with an anticipated project area of roughly 4 acres. The project includes the installation of a new fuel farm, an FBO facility with attached hanger space and office/administration space and relocation of a portion of the airport's wildlife fence. The fuel farm will have (3) 30k gallon Jet A pencil tanks, a 15k gallon 100 LL avgas tank, a 2.5k glycol tank, and a 2.5k ULSD tank. The site design also includes room for (4) 10k gallon trucks and their associated spill containment areas. Vehicular access for the facility will be from a new roadway connecting to Exeter Street. Fuel deliveries will be from the airside through PDA Gate 16.

Wetland impacts have been avoided and minimized to the extent practicable. Unavoidable impacts will occur as a result of the access road from Exeter Street to the site, replacement of an existing drainage outlet, and relocation of a portion of the airport's existing wildlife fence.

There will be permanent and temporary resource impacts as a result of the project. All areas of temporary disturbance will be re-vegetated. A filing fee of $400 is included with the package. All abutters to this project have been notified by certified mail. The project is proposed to be constructed in two phases, with Phase 1 being the installation of a new fuel farm and Phase 2 being the construction of a new FBO facility. The current schedule is to commence construction in late spring of 2022 and complete construction by December 2023.

If you require any additional information, please feel free to contact me at your convenience.

Very truly yours,
HOYLE, TANNER & ASSOCIATES, INC.

Kimberly R. Peace
Senior Environmental Coordinator

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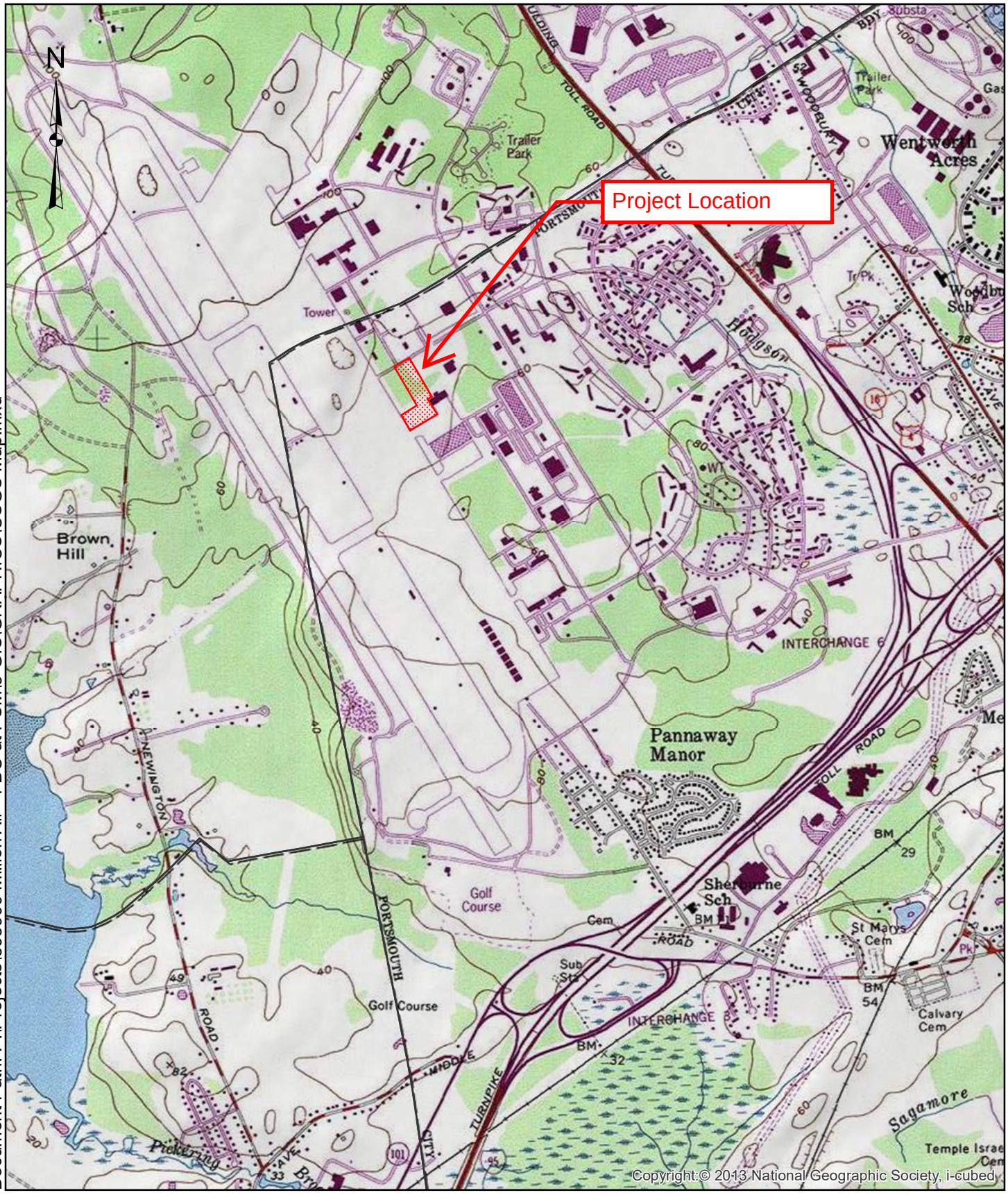

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HOYLE TANNER
150 Dow Street
Manchester, NH 03101-1227
Tel 603-669-5555
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Web Page www.hoyletanner.com

CONSTRUCTION OF A FUEL FARM AND FIXED BASED OPERATOR BUILDING AT PORTSMOUTH INTERNATIONAL AIRPORT AT PEASE
PORTSMOUTH, NH

APPENDIX

A

PROJECT LOCATION MAP

DR. BY	DATE	SCALE
dcoon	10/23/2020	1 inch = 2,000 feet

STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/Env-Wt 100-900

APPLICANT'S NAME: Pease Aviation Partners, LLC **TOWN NAME:** Portsmouth, NH

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the Waiver Request Form.

Section 1 - Required Planning for all projects (Env-Wt 306.05; RSA 482-A:3, I(d)(2)) Please use the Wetland Permit Planning Tool (WPPT), the Natural Heritage Bureau (NHB) DataCheck Tool, the Aquatic Restoration Mapper, or other sources to assist in identifying key features such as: priority resource areas (PRAs), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.	
Has the required planning been completed?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☐ Yes ☒ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	☐ Yes ☒ No
• Protected species or habitat? ○ If yes, species or habitat name(s): ○ NHB Project ID #: NHB21-3135	☐ Yes ☒ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☐ Yes ☒ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☐ Yes ☒ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No
For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ Yes ☐ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): N/A	

Section 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))
Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

Pease Aviation Partners, LLC is proposing the development of a new Fixed Base Operator (FBO) facility and fuel farm located at the Portsmouth International Airport at Pease (PSM) in Portsmouth, NH on property owned by Pease Development Authority (PDA) that will be leased to Pease Aviation Partners, LLC. The project includes primarily Map/Lots 307-0 and a portion of 307-3 and 307-2. The proposed site address will be 53 Exeter Street. The project lease site is approximately 2.65 acres, with an anticipated project area of roughly 4 acres. The project includes the installation of a new fuel farm, an FBO facility with attached hanger space and office/administration space and relocation of a portion of the airport's wildlife fence. The fuel farm will have (3) 30k gallon Jet A pencil tanks, a 15k gallon 100 LL avgas tank, a 2.5k glycol tank, and a 2.5k ULSD tank. The site design also includes room for (4) 10k gallon trucks and their associated spill containment areas. Vehicular access for the facility will be from a new roadway connecting to Exeter Street. Fuel deliveries will be from the airside through PDA Gate 16.

Wetland impacts have been avoided and minimized to the extent practicable. Unavoidable impacts will occur as a result of the access road from Exeter Street to the site, replacement of an existing drainage outlet, and relocation of a portion of the airport's existing wildlife fence.

There will be 2,265 square feet of permanent and 38 square feet of temporary resource impacts as a result of the project.

SECTION 3 - PROJECT LOCATION
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: Portsmouth International Airport at Pease, Exeter Street

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: Map 307 Lots 0, 3 and 2

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:
☒ N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 43.080300° North
-71.814984° West

SECTION 4 - APPLICANT (Desired permit holder) INFORMATION (Env-Wt 311.04(a))
If the applicant is a trust or a company, then complete with the trust or company information.

NAME: Pease Aviation Partners, LLC / Chuck Suma

MAILING ADDRESS: 7555 Ipswich Road

TOWN/CITY: Houston	STATE: TX	ZIP CODE: 77061

EMAIL ADDRESS: csuma@millionair.com

FAX:	PHONE: 772-640-4000

ELECTRONIC COMMUNICATION: By initialing here: CS, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))
☐ N/A

LAST NAME, FIRST NAME, M.I.: Peace, Kimberly R.

COMPANY NAME: Hoyle, Tanner & Associates, Inc.

MAILING ADDRESS: 100 International Drive, Suite 360		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: kpeace@hoyletanner.com		
FAX: 603-669-4178	PHONE: 603-460-5205	
ELECTRONIC COMMUNICATION: By initialing here KRP, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
SECTION 6 - PROPERTY OWNER INFORMATION (If different than applicant) (Env-Wt 311.04(b)) If the owner is a trust or a company, then complete with the trust or company information. ☐ Same as applicant		
NAME: Pease Development Authority / Maria Stowell		
MAILING ADDRESS: 55 International Drive		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: m.stowell@peasedev.org		
FAX:	PHONE: 603-766-9296	
ELECTRONIC COMMUNICATION: By initialing here MS, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
Section 7 - resource-specific criteria established in Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, or Env-Wt 900 have been met (Env-Wt 313.01(a)(3))		
In accordance with Env-Wt 400 the jurisdictional areas within the project limits have been delineated by Fieldstone Land Consultants, PLLC and GM2 Associates, Inc. Copies of the Wetland Reports are included with this application. The jurisdictional areas are referenced on the attached existing conditions plan. The project has been designed in accordance with Env-Wt 524 Residential, Commercial and Industrial Development. Project specific information to address the Approval Criteria per Env-Wt 524.02 is contained within this permit application.		
Section 8 - Avoidance and Minimization		
The Avoidance and Minimization Checklist is attached to this permit application.		
SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02) If unavoidable jurisdictional impacts require mitigation, a mitigation pre-application meeting must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.		
Mitigation Pre-Application Meeting Date: Month: Day: Year: (☒ N/A - Mitigation is not required)		
Section 10 - The project MEETS compensatory mitigation requirements (Env-Wt 313.01(a)(1)c)		
Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable: ☐ I confirm submittal. (☒ N/A – Compensatory mitigation is not required)		

SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland	986		☐			☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland	1279		☐	38		☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface Water	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River			☐			☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
TOTAL		**2,265**			**38**		

SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)

☒ **MINIMUM IMPACT FEE**: Flat fee of $400.

☐ **NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:** Flat fee of $400 (refer to RSA 482-A:3, 1(c) for restrictions).

☐ **MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking):		SF	× $0.40 =	$
Seasonal docking structure:		SF	× $2.00 =	$
Permanent docking structure:		SF	× $4.00 =	$
Projects proposing shoreline structures (including docks) add $400 =				$
Total =				$

The application fee for minor or major impact is the above calculated total or $400, whichever is greater = $ 400

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)

Indicate the project classification.

☒ Minimum Impact Project	☐ Minor Project	☐ Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)	
Initial each box below to certify:	
Initials:	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials:	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials:	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials:	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATUREs (Env-Wt 311.04(d); Env-Wt 311.11)		
SIGNATURE (OWNER):	PRINT NAME LEGIBLY: Paul E. Brean	DATE: 11/19/2021
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY: Charles M Shima	DATE: 11/18/2021
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Kimberly R. Peace	DATE: 11/29/2021

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))	
As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.	
TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY: Kelli L. Barnaby
TOWN/CITY: Portsmouth	DATE: 12-1-2021

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:
Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".

AVOIDANCE AND MINIMIZATION CHECKLIST

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in Attachment A: Minor and Major Projects (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for Wetlands Best Management Practice Techniques for Avoidance and Minimization dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION	
APPLICANT LAST NAME, FIRST NAME, M.I.: Pease Aviation Partners, LLC / Chuck Suma	
PROJECT STREET ADDRESS: Portsmouth International Airport at Pease, Exeter Street	PROJECT TOWN: Portsmouth
TAX MAP/LOT NUMBER: Map 307 Lots 0, 3 and 2	

SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	☐ Yes ☒ No
If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed: The primary purpose of this project is to construct a fuel farm and FBO facility that will allow for economic growth at the airport.		

Section 3 - A/M Project Design Techniques Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.		
Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	☐ Check ☒ N/A

Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	☒ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	☒ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	☒ Check ☐ N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	☒ Check ☐ N/A
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	☐ Check ☒ N/A
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	☒ Check ☐ N/A
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	☒ Check ☐ N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	☒ Check ☐ N/A
A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	☒ Check ☐ N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	☐ Check ☒ N/A
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	☐ Check ☒ N/A

A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	☒ Check ☐ N/A
SECTION 4 - NON-TIDAL SHORELINE STRUCTURES		
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	☐ Check ☒ N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	☐ Check ☒ N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	☐ Check ☒ N/A
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	☐ Check ☒ N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	☐ Check ☒ N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	☐ Check ☒ N/A

RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482/ Env-Wt 524

APPLICANT LAST NAME, FIRST NAME, M.I.: Pease Aviation Partners, LLC

This worksheet summarizes the criteria and requirements for a Standard Permit for "Residential, Commercial, and Industrial Development", one of the 18 specific project types in Chapter Env-Wt 500. In addition to the project-specific criteria and requirements on this worksheet, all Standard Dredge and Fill Applications must meet the criteria and requirements listed in the Standard Dredge and Fill Application form (NHDES-W-06-012).

SECTION 1 - APPLICABILITY (ENV-WT 509.02(B); ENV-WT 524.01)

The information in this worksheet applies to residential, commercial, and industrial development projects, including associated roadways, in non-tidal wetlands.

Do **not** use this worksheet if the project is located in a coastal (tidal) area.

SECTION 2 - APPROVAL CRITERIA FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (ENV-WT 524.02)

An application for a residential, commercial or industrial development project must meet the following criteria:

☒ The project must meet the applicable criteria established in Env-Wt 300;

☐ An off-site alternatives analysis is conducted for any project that will result in more than one acre of permanent wetland impacts;

☒ The project avoids and minimizes impacts to wetlands, watercourses, and sensitive and valuable wetlands in accordance with Env-Wt 313.03;

☐ The project complies with the design criteria specified in Env-Wt 524.04 and the construction criteria specified in Env-Wt 524.05; and

☐ Compensatory mitigation is provided for any new residential, commercial, or industrial development in a Priority Resource Area.

SECTION 3 - APPLICATION REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (ENV-WT 524.03)

☐ For all projects requiring subdivision approval, a plan prepared and stamped by a land surveyor licensed in the State of New Hampshire pursuant to RSA 310-A showing existing and proposed topography and the location of all proposed lot lines;

☒ For all projects requiring subdivision approval, the following clearly delineated on the plan required above: the boundaries of all wetlands and surface waters and the footprint of all proposed impacts;

☐ For minor and major projects requiring subdivision approval, wetlands classifications clearly indicated in accordance with Env-Wt 400 on the plan required above; and

☐ For a project that is associated with one or more phases of a multi-phase subdivision, a project impact plan that also shows all wetlands on remaining property proposed for future phases of development.

Please note that permits for subdivisions of 4 or more lots shall not be effective until the permittee records the permit with the appropriate registry of deeds and a copy of the registered permit has been received by the department.

An application for a residential, commercial or industrial development project must include the following information:

☐ If the project includes components that are subject to multiple project-specific requirements in Chapter Env-Wt 500, a narrative statement and plan that describes how each project-specific component meets the requirements of the applicable part in Chapter Env-Wt 500 and how the project as a whole impacts jurisdictional areas.

N/A – This project is only subject to Env-Wt 524.

SECTION 4 - DESIGN REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (ENV-WT 524.04)

In addition to meeting the applicable design requirements established in Env-Wt 300, a residential, commercial, or industrial development project must be designed to meet the following criteria:

☒ The project complies with all applicable requirements of Env-Wt 400, Env-Wt 700, Env-Wt 800, Env-Wt 900, and other applicable project-specific criteria in Chapter Env-Wt 500;

☒ The project does not use wetlands or surface waters to serve as stormwater or water quality treatment to mitigate impacts;

☒ The project provides setbacks and water quality protection measures sufficient to protect private and public drinking water supplies, source water protection areas, and fisheries;

☒ The project maintains or restores hydrologic connections to maintain flows necessary to preserve adjacent wetland and riparian functions;

☒ The project maintains existing fishery spawning, feeding, or cover habitat and fish passage necessary to maintain fishery or habitat or populations; and

☒ The project maintains existing wetland-dependent wildlife habitat and its associated migratory pathways, reproductive sites, and associated wetland complex or wetland community system.

SECTION 5 - CONSTRUCTION REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (ENV-WT 525.05)

In addition to meeting all applicable construction standards specified in Env-Wt 307 and other applicable project-specific standards in Chapter Env-Wt 500, the following requirements apply to residential, commercial, or industrial development projects:

☒ A construction notice shall be filed with the department at least 48 hours prior to commencing work; and

☒ All work shall be conducted in accordance with the approved plan.

SECTION 6 - CLASSIFICATION OF RESIDENTIAL AND COMMERCIAL OR INDUSTRIAL DEVELOPMENT PROJECTS (ENV-WT 524.06)

Residential and commercial or industrial development projects shall be classified under Env-Wt 407 and as follows:

(a) A project shall be a minimum impact project only if:

(1) All stream-crossing components of the project meet the requirements for minimum impact classification specified in Env-Wt 903;

(2) All other components of the project meet the requirements for minimum impact classification specified in Env-Wt 407 and this chapter;

(3) The project is not part of a new subdivision of 4 or more lots; and

(4) The project does not meet the criteria listed in (d) below.

(b) A project shall be an expedited minimum impact project only if:

(1) It is a minimum impact project to construct a new subdivision of 3 lots or less;

(2) The applicant has attended a pre-design submission meeting with the department at least 7 days prior to application submission and included department feedback in the design plan; and

(3) The project does not meet the criteria listed in (d) below.

(c) A project shall be a minor impact project if the project does not meet the criteria listed in (d) below and if any of the following apply:

(1) Any single stream-crossing component of the project meets the requirements for minor impact classification specified in Env-Wt 903;

(2) The project is part of a new subdivision of 4 or more lots;

(3) Any single component of the project meets the requirements for minor impact classification specified in Env-Wt 407, Env-Wt 903, or Chapter Env-Wt 500; or

(4) No component of the project meets the requirements for major impact classification specified in Env-Wt 407, Env-Wt 903, or Chapter Env-Wt 500.

(d) A project shall be a major impact project if:

(1) The project exceeds the minor impact criteria;

(2) The project requires mitigation or meets the requirements for major impact classification specified in Env-Wt 407, Env-Wt 903, or any other associated project classification that is part of the overall project; or

(3) The project is elevated based on an aggregation undertaken by a developer or is part of a series of developments under Env-Wt 400.

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Construction of a Fuel Farm and Fixed Based Operator Facility
at the Portsmouth International Airport at Pease, Portsmouth, NH
Supplemental Narrative

The following information is offered as a supplement to the information provided in the Wetland Permit Application and Plans.

Explanation as to methods, timing, and manner as to how the project will meet applicable standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7))

307.02 (US Army Corps of Engineers (USACE) Conditions). Appendix B is attached to this permit application.

307.03 (Protection of Water Quality Required). The contractor shall be responsible for implementing Erosion and Sediment control measures in accordance with the "New Hampshire Stormwater Manual, Volume 3 Erosion and Sediment Controls during Construction" by NHDES. Erosion and siltation control measures will be installed by the Contractor prior to start of any work and will be maintained during the duration of the construction activities. It is the Contractor's responsibility to not cause violations of surface water quality standards. Upon completion of the project, the project will cause no adverse effects on the quality or quantity of surface or groundwater entering or exiting the project site.

307.05 (Protection Against Invasive Species Required) It is unknown if invasive species are located within the project area. Should invasive species be identified during construction that are on the NH List of Prohibited Invasive Species (AGR PART 3802.01) and the plants cannot be avoided, all work, including daily removal of plant material from construction equipment, shall be conducted in accordance with the Department publication "Best Management Practices for the Control of Invasive and Noxious Plant Species

307.06 (Protection of Rare, Threatened or Endangered Species and Critical Habitat) The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB21-3135, dated 10/19/2021). The database check determined although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, it is not expected that it will be impacted by the proposed project.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool on September 8, 2021 (Consultation Code 5E1NE00-2021-SLI-0072). The list includes the Federally-threatened Northern Long Eared Bat (*Myotis septentrionalis*; NLEB). There is no tree removal associated with the project and therefore there will be no impact to NLEB. The list also noted the Monarch Butterfly (*Danaus plexippus*) as a candidate species.

307.10 (Dredging Activity Conditions) Perimeter controls will be installed prior to earth moving operations in the approximate locations shown on the attached plans and will remain in place until completion of the project and restoration of the site.

307.12 (Restoring Temporary Impacts: Site Stabilization) Upon completion of the project all temporary impact areas will be restored to the preconstruction condition.

307.13 (Property Line Setbacks) Abutting property lines are not within 10' of the proposed impacts. All work will be completed on property owned by Pease Development Authority (PDA). An easement or land lease will be executed prior to construction and will be provided to DES upon receipt.

307.15 (Use of Heavy Equipment in Wetlands) There will be no heavy equipment in the wetlands for construction of this project.

307.16 (Adherence to Approved Plans Required) All work shall be in accordance with the plans prepared by Hoyle, Tanner and approved by NHDES.

307.18 (Reports) The contractor will be responsible for preparing a Storm Water Pollution Prevention Plan. This plan will be submitted to NHDES for approval prior to the contractor working within the wetlands.

Construction Sequence and Timing

The construction sequence for the project is as follows:

1. Install silt socks, inlet protection barriers and construction entrances as shown on the plans outside of the airport fence, prior to the start of any construction.
2. Remove and dispose of existing pavement, site structures, utilities and vegetation as shown on the plans outside of the airport fence.
3. Strip the topsoil outside of the airport fence and stockpile onsite. Construct a silt sock perimeter around all stockpiles.
4. Place gravels for the proposed access drive. Construct and stabilize cut and fill slopes along the access drive. Apply temporary (or permanent) seed and mulch within 72 hours of their construction.
5. Install temporary security fencing. Coordinate with airport and Pease Development Authority.
6. Remove and dispose of existing airport fence within project limits as shown.
7. Install silt sock and inlet protection barriers in all remaining areas prior to the start of any construction.
8. Remove and dispose of the remaining existing pavement, site structures, utilities, and vegetation
9. Strip the remaining topsoil and stockpile onsite.
10. Construct the fuel farm & concrete apron needed for operation.
11. Construct building footings and foundation walls for the FBO & hangar. Backfill foundation.
12. Construct bridge abutments and backfill.
13. Install all drainage, water, sewer, electric, telecom and gas utilities.
14. Place gravels for the proposed parking areas and concrete apron. Construct and stabilize cut and fill slopes around the site. Apply temporary (or permanent) seed and mulch within 72 hours of their construction.
15. Install binder paving course.
16. Construct the FBO and hangar.
17. Construct the concrete apron.
18. Install the pedestrian bridge.
19. Install curbing and pour concrete sidewalks.

20. Install new airport fencing. Remove temporary fencing once security controls are setup.
21. Install landscape plantings.
22. Install screened loam (4" min.) On all disturbed surfaces and apply permanent seeding.
23. Install finish pavement, pavement markings and signage.
24. Remove trapped sediments from collector devices as appropriate and then remove temporary erosion control measures.
25. Clean the entire stormwater system of all sediment and debris, within the limit of work.

The current schedule is to commence construction in late spring of 2022 and complete construction by December 2023.

Statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h))

A copy of this wetland permit application was submitted to the City of Portsmouth for distribution to the Portsmouth Conservation Commission concurrent with submittal of the application to DES. Comments will be forwarded to DES should they be received.

Federal Agency Coordination

A USACE General Permit will be required for this project. Pre-application coordination with USACE was not completed during application development, as the GP conditions will be met. See section below for Appendix B and Checklist answers. Coordination with the US Fish and Wildlife Service (USFWS) was not required as noted in section 307.06 above.

US Army Corps of Engineers®
New England District

New Hampshire General Permits (GPs)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www2.des.state.nh.us/nhb_datacheck/. The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	N/A	
2.7 What is the area of the proposed fill in wetlands?	2,265 SF	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	1.3%	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index	X	

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?	X	
3.5 Are stream crossings designed in accordance with the GC 21?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

U.S. Army Corps of Engineers
New Hampshire Programmatic General Permit (PGP)
Appendix B Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

Construction of a Fuel Farm and Fixed Based Operator Facility
at the Portsmouth International Airport at Pease, Portsmouth, NH

Explanations For Checklist Answers

1.1 According to the 2018 Draft 303(d) list, Newfields Ditch is marginally impaired for aquatic life and fish consumption due to mercury and Upper Hodgson Brook is marginally impaired for fish consumption and severely impaired for aquatic life due to mercury. Both surface waterbodies lie over 1750 feet and 4,000 feet, respectively, and are disconnected hydrologically from the wetlands to be impacted. The proposed project will not add to these impairments.

3.1 The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB21-3135, dated 10/19/2021). The database check determined although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, it is not expected that it will be impacted by the proposed project.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool on October 8, 2020 (Consultation Code 5E1NE00-2021-SLI-0072). The list includes the Federally-threatened Northern Long Eared Bat (*Myotis septentrionalis*; NLEB). There is no tree removal associated with the project and therefore there will be no impact to NLEB. The list also noted the Monarch Butterfly (*Danaus plexippus*) as a candidate species.

3.4 The proposed project is to construct a new fuel farm and Fixed Based Operator (FBO) facility at Portsmouth International Airport at Pease (PSM) and is considered commercial development. The project limits are contained completely within the boundary of PSM and the project is consistent with the zoning and development in the area.

5. A Request for Project Review was submitted to the NH Division of Historic Resources (NHDHR) in October 2020. A response was received with a determination of “No Historic Properties Affected’. A copy of the determination is included with this application.

NH Natural Heritage Bureau (NHNHB) Review

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Deb Coon, Hoyle, Tanner & Associates, Inc.
150 Dow Street

Manchester, NH 03101

From: NH Natural Heritage Bureau
Date: 10/19/2021 (valid until 10/19/2022)
Re: Review by NH Natural Heritage Bureau of request submitted 10/5/2021
Permits: NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Minor, USACE - General Permit

NHB ID: **NHB21-3135**

Applicant: Pease Development Authority

Location: Portsmouth
Exeter Street

Project Description: Construction of a Fuel Farm and Fixed Based Operator Building at Portsmouth International Airport at Pease, Portsmouth, NH

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 10/5/2021 1:14:17 PM, and cannot be used for any other project.

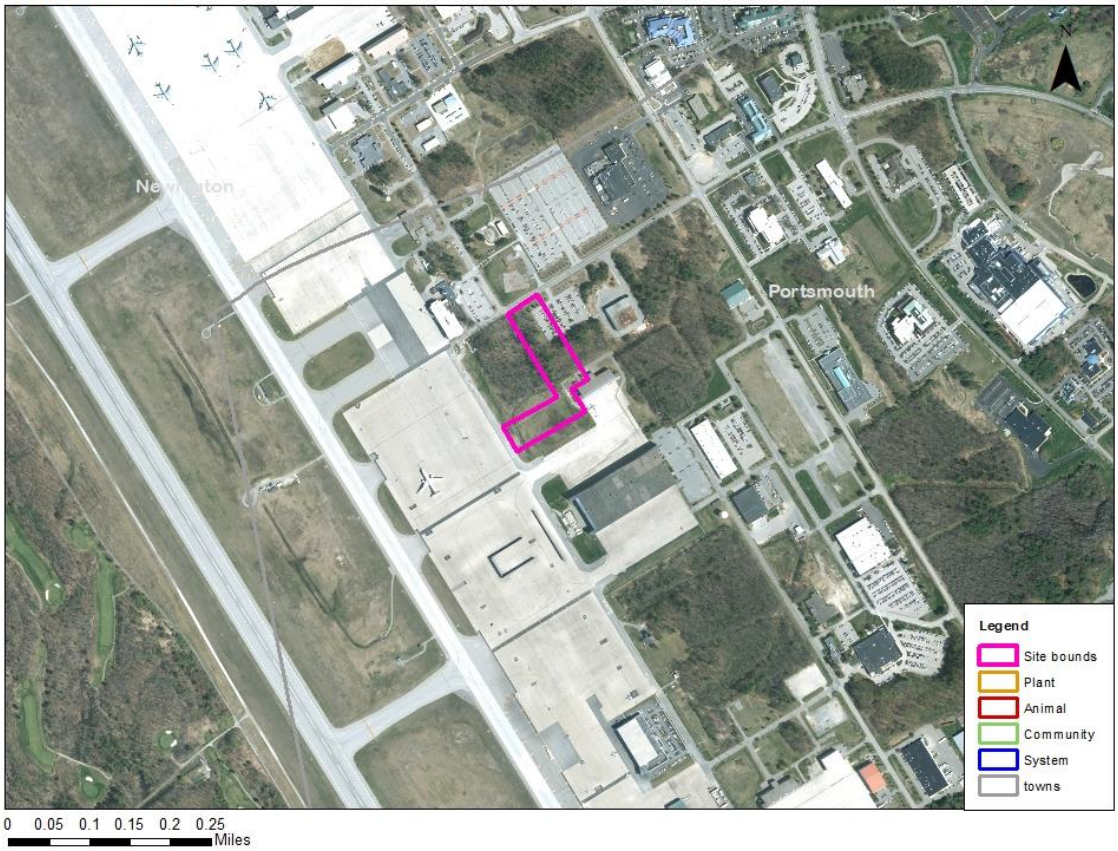
Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB21-3135**

NHB21-3135



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

US Fish and Wildlife (USF&W) IPaC Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: September 08, 2021
Consultation Code: 05E1NE00-2021-SLI-0072
Event Code: 05E1NE00-2021-E-14305
Project Name: Million Air FBO at PSM

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2021-SLI-0072
Event Code: Some(05E1NE00-2021-E-14305)
Project Name: Million Air FBO at PSM
Project Type: TRANSPORTATION
Project Description: Development of a new Fixed Base Operator (FBO) for Million Air located at Portsmouth International Airport (PSM).

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.08099591793457,-70.815383052285,14z

Counties: Rockingham County, New Hampshire

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Section 106
Cultural Resources Determination

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED
OCT 27 2020

DHR Use Only	
R&C #	12202
Log In Date	10/27/20
Response Date	11/12/20
Sent Date	11/12/20

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title Construction of a Fuel Farm and Fixed Based Operator Building at Portsmouth International Airport at Pease

Project Location Exeter Street, Portsmouth International Airport at Pease

City/Town Portsmouth Tax Map 307 Lot # 0 & 3

NH State Plane - Feet Geographic Coordinates: Easting 1211788.69 Northing 212625.93
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* US Army Corps of Engineers
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference # Wetlands Permit

State Agency and Contact *(if applicable)* N/A

Permit Type and Permit or Job Reference # N/A

APPLICANT INFORMATION

Applicant Name Million Air Portsmouth / Chuck Suma, COO

Mailing Address 7555 Ipswich Road Phone Number 713-640-4020

City Houston State TX Zip 77061 Email csuma@millionair.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Deb Coon / Hoyle, Tanner & Associates, Inc.

Mailing Address 150 Dow Street Phone Number 603-669-5555 ext. 106

City Manchester State NH Zip 03101 Email dcoon@hoyletanner.com

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at marika.labash@dncr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the Project Mapping ***using EMMIT or relevant portion of a 7.5' USGS Map.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1**. *(Blank table forms are available on the DHR website.)*
  EMMIT or in-house records search conducted on **10/20/2020**.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☐ Yes ☒ No
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- ☒ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances.
- ☐ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☑ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments: _____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: Nadine Miller, DSHPO Date: 11/12/2020

Wetland Delineation Report, Functional Assessment & Site Photos
Fieldstone Land Consultants, PLLC & GM2 Associates, Inc.

FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ⌖ Engineering
Land Planning ⌖ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

November 22, 2021

Shawn Tobey, PE
Project Manager
Senior Civil Engineer
Hoyle Tanner & Associates, Inc
100 International Drive, #360
Portsmouth, NH 03801
.

RE: Wetland Report
Exeter Street – Pease Trade Port
Portsmouth, NH

Background:

In November 2020 field work was performed on the above referenced property located off Exeter Street in the Pease International Trade port, Portsmouth NH. The project area is almost entirely developed, or was developed, graded, drained and manipulated in the past and has undergone various stages of re-development over the years as part of former Pease Air Force Base. Current developed area is paved asphalt and concrete tarmac and aviation hangars along with grassed area that was previously paved and filled over. The project area on the restricted runway area (air-side) and partially on the non-air side appears to have been filled and graded with a medium to coarse sandy fill material. A number of underground utilities run through the parcel including electric, drainage, sewer and water.

Wetlands Delineation:

Jurisdictional Wetlands within the project area were delineated by Certified Wetland Scientist Christopher A. Guida, CSS, CWS in November 2020. Wetlands on site fell into two main

categories, Very Poorly Drained and Poorly Drained Wetlands; both of which appear to be driven by drainages structures associated with runway and adjacent development along with underlying Marine Clay parent soils which have been manipulated with areas of ditching and drainage as well as filled areas to create more level and usable land.

Under the Cowardin System, the Very Poorly Drained wetlands would be classified as Palustrine, Emergent Persistent / Scrub-Shrub broad-leaved deciduous, Saturated (PEM1/SSBd). Poorly Drained wetlands would be Palustrine, Emergent Persistent, Seasonally Saturated, partially drained / ditched (PEM1Ed). Both types of wetland exhibit man-influenced alterations from mowing, filling, dredging, drainage, utilities etc.. Upland areas adjacent to wetland areas on the easterly portion of the project area were vegetated with a fairly mature forest dominated by Red Oak (Quercus rubra), Eastern White Pine (Pinus strobus) with sapling and shrub understory dominated by same along with Quaking Aspen (Popular tremuloides) Eastern Cottonwood (Populus deltoides) and some Highbush Blueberry (Vacinium corymbosom).

The delineation conducted by Fieldstone was limited to only the western portion of Area “A” as shown on the plan set and the remainder was to be delineated by others. There are portions of Area “A” that are poorly drained forested wetlands typically along the outside perimeter of the wetlands. The site specific soil map classifies the wetland as very poorly drained and the poorly drained portion has not be separately delineated at this time.

Functions and Values:

Given the altered nature of the on-site wetlands and proximity to major airport / runway and associated infrastructure, the primary functions and values from the USACE Highway Methodology would be Sediment / toxicant Retention, Nutrient Removal and secondarily wildlife habitat. The wetlands on site are fed and drained by man-made drainage structures and culverts and serve as a natural sediment and toxicant filter and treatment system. Also since the wetlands are surrounded by developed area associated with Pease Trade Port it provides cover and habitat for birds, amphibians, and mammals.

Poorly Drained PEM1Ed Wetland

Very Poorly Drained Wetland PEM1/SSBd adjacent to project area

Poorly drained wetlands adjacent to northern side of very poorly drained wetlands

Upland area with underground utilities

Sincerely,
Fieldstone Land Consultants, PLLC

Christopher A. Guida, CSS, CWS
Certified Soil & Wetland Scientist

August 20, 2021

Mr. John Pelletier, P.E.
Project Manager
Jacobs Engineering Group, Inc.
2 Executive Park Drive, Suite 205
Bedford, NH 03110

Subject: Wetland Delineation Summary
Pease Development Authority
53 Exeter Street, Portsmouth, NH

Dear Mr. Pelletier,

This letter report provides a summary of the wetland resources that were delineated for a portion of the property (Lot 307-3) located at 53 Exeter Street in Portsmouth, New Hampshire (refer to Attachment A, Wetland Delineation Map).

Wetlands were delineated on August 12, 2021 in accordance with the US Army Corps of Engineers (ACOE) 1987 Methodology and the ACOE Northcentral and Northeast Regional Supplement (2012). Individually-labeled flags were placed in the field to designate delineated wetland boundaries and the flags were located with a Trimble Geo7x GPS unit. The delineation was conducted during normal conditions, however drought conditions occurred earlier in the year (spring/early summer 2021) and have also been present in previous years. The wetland delineation was conducted by Jennifer Riordan (CWS #269) and Meg Gordon of GM2 Associates, Inc. (GM2).

Representative photographs of the wetland resources are included as Attachment B. Wetland determination data forms (paired wetland and upland plots) were completed for each wetland delineated (Attachment C). The following provides a summary of the wetland resources.

Wetland A

Flag series A corresponds to a large forested/emergent wetland (Wetland A) located southwest of Parking Lot C. The eastern portion of the wetland was delineated (flags A-1 to A-27). The wetland continues west beyond the study area toward Flightline Road. A drainage inlet and pipe were noted near flag A-21 at the southern end of the wetland.

Wetland A is classified as palustrine, emergent, persistent, seasonally flooded/saturated (PEM1E) and palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E). Within the study area, most of Wetland A is forested. Dominant vegetation includes white pine (*Pinus strobus*), red maple (*Acer rubrum*), red oak (*Quercus rubra*) saplings, glossy buckthorn (*Frangula alnus*), highbush blueberry (*Vaccinium corymbosum)*, cinnamon fern (*Osmundastrum cinnamomeum*), poison ivy (*Toxicodendron radicans*), and greenbrier (*Smilax rotundifolia*). Wild sarsaparilla (*Aralia nudicaulis*) and lowbush blueberry (Vaccinium angustifolium) are present in small amounts at the wetland edge. The emergent portion of the wetland is vegetated with purple loosestrife (*Lythrum salicaria*) and broad-leaf cattail (*Typha latifolia*).

197 LOUDON RD
SUITE 310
CONCORD NH 03301
603.856.7854

115 GLASTONBURY BLVD
GLASTONBURY CT 06033
860.659.1416

6 CHESTNUT ST
AMESBURY MA 01913
978.388.2157

317 IRON HORSE WAY
SUITE 100
PROVIDENCE RI 02908
401.383.6530

120 MIDDLESEX AVENUE
SUITE 20
SOMERVILLE, MA 02145
617.776.3350

The central, emergent portion of Wetland A had standing water at the time of the site visit and appears to be inundated for much of the year. The forested portion of the wetland appears to have fluctuating water levels with a mix of upland and wetland vegetation. Soils met Hydric Soil Indicator A11 since they have a depleted matrix below a dark surface. The upper soil layer was observed to have some organic content.

Wetland Series B

Flag series B corresponds to a small, narrow wetland (Wetland B) located at the southern edge of the forested area south of Parking Lot C and east of Wetland A. The wetland extends for the length of the Hangar 229 building (flags B-1 to B-19). A connection to Wetland A was not observed and no inlets or outlets were found. The wetland appears to be a low area that collects water from the adjacent developed area and forested upland.

Wetland B is classified as palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated (PFO1E). It was not flooded at the time of the site visit but contained water-stained leaves, wetland vegetation, and hydric soils. Dominant vegetation includes red maple and highbush and lowbush blueberry, with some gray birch (*Betula populifolia*), lowbush blueberry, and red oak and white pine saplings also present.

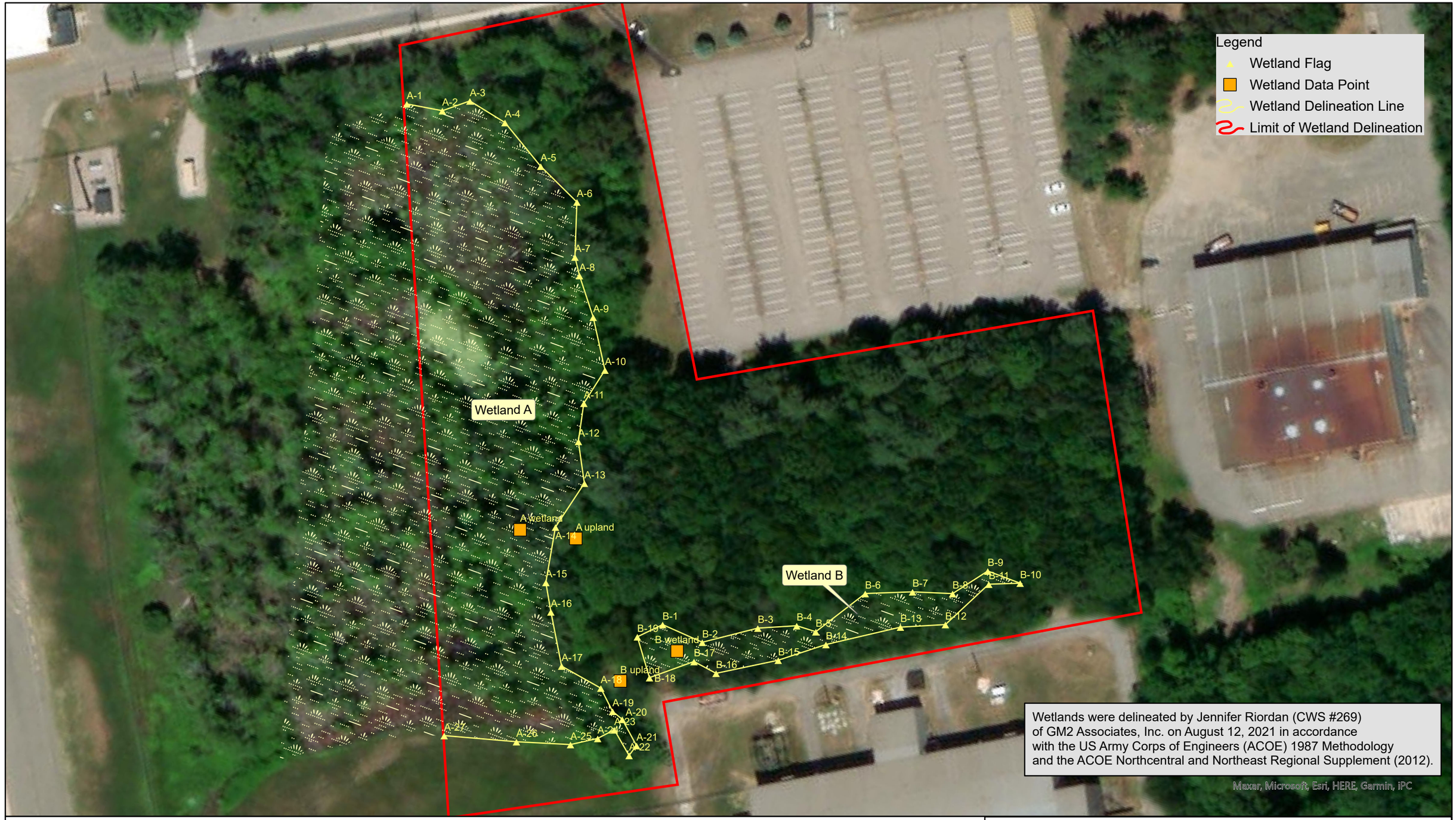
Please contact me at jriordan@gm2inc.com or 603-856-7854 if you have any questions or comments.

Sincerely,

Jennifer Riordan
Senior Environmental Scientist
GM2 Associates, Inc.

ATTACHMENT A

Wetland Delineation Map



GM2

Wetland Delineation Map

N

0 50 100 200 Feet

Pease Development Authority
53 Exeter Street, Portsmouth, NH

ATTACHMENT B

Photographs

Northern edge of Wetland A, view south

Wetland A
near flag A-9

Wetland A
near flag A-18

Wetland A
near A-26 view east

Emergent portion in center of Wetland A

Wetland B, view east

Wetland B near flag B-1

Wetland B near flag B-14

ATTACHMENT C

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 53 Exeter Street City/County: Portsmouth/Rockingham Sampling Date: 8/12/21

Applicant/Owner: Pease Development Authority State: NH Sampling Point: A-wet

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): None Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 43.08 Long: 70.8 Datum:

Soil Map Unit Name: 538A - Squamscott fine sandy loam NWI classification: PEM1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:	Wetland A

Remarks: (Explain alternative procedures here or in a separate report.)
Hydrophytic vegetation indicator not met at data point location. Shallow roots noted on some of the trees.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	____
Water Table Present?	Yes X	No ____	Depth (inches):	18
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	16

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water (a flooded emergent wetland) is located approximately 20 feet away. Wetland delineation was conducted under normal conditions, but drought conditions had been present during spring/early summer 2021 and in previous years.

VEGETATION – Use scientific names of plants. Sampling Point: A-wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2. *Pinus strobus*	38	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	58	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Frangula alnus*	10	No	FAC
2. *Quercus rubra*	20	Yes	FACU
3. *Prunus serotina*	3	No	FACU
4. *Pinus strobus*	20	Yes	FACU
5.			
6.			
7.			
	53	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Pinus strobus*	10	Yes	FACU
2. *Aralia nudicaulis*	10	Yes	FACU
3. Unknown grass	3	No	
4. *Rubus hispidus*	10	Yes	FACW
5. *Frangula alnus*	10	Yes	FAC
6. *Toxicodendron radicans*	3	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	46	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
	10	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	53	x 3 =	159
FACU species	101	x 4 =	404
UPL species	0	x 5 =	0
Column Totals:	164 (A)		583 (B)
Prevalence Index = B/A =			3.55

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Loamy/Clayey	Sandy loam with organic
8-18	10YR 5/1	49					Sandy	Loamy sand
	10YR 5/2	49	10YR 4/4	2	C	M		Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 53 Exeter Street City/County: Portsmouth/Rockingham Sampling Date: 8/12/21

Applicant/Owner: Pease Development Authority State: NH Sampling Point: A-up

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): None Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 43.08 Long: 70.8 Datum:

Soil Map Unit Name: 538A - Squamscott fine sandy loam NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: A-up

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	38	Yes	FAC
2. *Pinus strobus*	63	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	101	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Acer rubrum*	10	No	FAC
2. *Pinus strobus*	20	Yes	FACU
3. *Vaccinium corymbosum*	20	Yes	FACW
4. *Prunus serotina*	3	No	FACU
5. *Quercus alba*	3	No	FACU
6.			
7.			
	56	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Aralia nudicaulis*	20	Yes	FACU
2. *Pinus strobus*	3	No	FACU
3. *Quercus rubra*	3	No	FACU
4. *Vaccinium corymbosum*	3	No	FACW
5. *Vaccinium angustifolium*	3	No	FACU
6. *Monotropa uniflora*	3	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	35	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
	10	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	23	x 2 =	46
FAC species	58	x 3 =	174
FACU species	121	x 4 =	484
UPL species	0	x 5 =	0
Column Totals:	202 (A)		704 (B)

Prevalence Index = B/A = 3.49

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: A-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	40					Loamy/Clayey	Sandy loam
	10YR 3/2	60						
10-16	10YR 3/3	100					Sandy	loamy sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 53 Exeter Street City/County: Portsmouth/Rockingham Sampling Date: 8/12/21

Applicant/Owner: Pease Development Authority State: NH Sampling Point: B-wet

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): Slight concave Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 43.08 Long: 70.8 Datum:

Soil Map Unit Name: 538A - Squamscott fine sandy loam NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**		
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** X	**No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:	Wetland B	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: B-wet

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	63	Yes	FAC
2. *Betula populifolia*	10	No	FAC
3.			
4.			
5.			
6.			
7.			
	73	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Quercus rubra*	10	No	FACU
2. *Pinus strobus*	10	No	FACU
3. *Betula populifolia*	3	No	FAC
4. *Vaccinium corymbosum*	38	Yes	FACW
5.			
6.			
7.			
	61	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Vaccinium angustifolium*	3	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	3	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *None*			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B-wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					Loamy/Clayey	Sandy loam
5-14	10YR 4/2	80	7.5YR 4/6	10			Loamy/Clayey	Sandy loam
			10YR 3/2	10				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- _X_ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- _X_ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _X_ **No** _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 53 Exeter Street City/County: Portsmouth/Rockingham Sampling Date: 8/12/21

Applicant/Owner: Pease Development Authority State: NH Sampling Point: B-up

Investigator(s): Jennifer Riordan and Meg Gordon Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): Slightly concave Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 43.08 Long: 70.8 Datum:

Soil Map Unit Name: 538A - Squamscott fine sandy loam NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: B-up

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2. *Pinus strobus*	20	Yes	FACU
3. *Quercus rubra*	38	Yes	FACU
4. *Populus tremuloides*	10	No	FACU
5.			
6.			
7.			
	88	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Frangula alnus*	3	No	FAC
2. *Cornus amomum*	3	No	FACW
3. *Vaccinium corymbosum*	10	Yes	FACW
4. *Prunus serotina*	10	Yes	FACU
5. *Betula populifolia*	3	No	FAC
6. *Quercus rubra*	20	Yes	FACU
7.			
	49	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Toxicodendron radicans*	10	Yes	FAC
2. *Solidago*	10	Yes	
3. *Populus tremuloides*	10	Yes	FACU
4. Unknown grass	3	No	
5. *Maianthemum canadense*	3	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	36	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Celastrus orbiculatus*	3	No	UPL
2.			
3.			
4.			
	3	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	13	x 2 =	26
FAC species	36	x 3 =	108
FACU species	111	x 4 =	444
UPL species	3	x 5 =	15
Column Totals:	163 (A)		593 (B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: B-up

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Loamy/Clayey	Sandy loam
6-14	10YR 4/3	45					Loamy/Clayey	Sandy loam
	10YR 4/2	45						
	10YR 2/1	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Tax Map

Note: Lot 308-6 is the small building depicted on Lot 308-1

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Portsmouth, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 4/1/2019
Data updated 7/17/2019

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

Abutter List

Abutters List
New Hampshire Department of Environmental Services
WETLAND PERMIT APPLICATION

Construction of a Fuel Farm and Fixed Based Operator Building
at Portsmouth International Airport at Pease, Portsmouth, NH

MAP /LOT #	OWNER	PROPERTY ADDRESS	MAILING ADDRESS
301-1	Master Card PDA	Airline Ave Portsmouth, NH 03801	55 International Drive Portsmouth, NH 03801
301-3	Spyglass Development LLC, C/O The Kane Company	30 New Hampshire Avenue Portsmouth, NH 03801	210 Commerce Way, Ste 300 Portsmouth, NH 03801
307-1	Cinthesys Real Estate Management Co.	68 New Hampshire Avenue Portsmouth, NH 03801	68 New Hampshire Avenue Portsmouth, NH 03801
308-1	Pease Development Authority	80 Rochester Avenue Portsmouth, NH 03801	80 Rochester Avenue Portsmouth, NH 03801
306-1 308-12	Pease Development Authority	Airline Avenue Portsmouth, NH 03801 25 Airline Avenue Portsmouth, NH 03801	25 Airline Avenue Portsmouth, NH 03801
308-5	Pease Development Authority	75 Rochester Avenue Portsmouth, NH 03801	75 Rochester Avenue Portsmouth, NH 03801
308-6	New England Telephone & Telegraph NKA Fairpoint Communications	5 Aviation Avenue Portsmouth, NH 03801	770 Elm Street Manchester, NH 03101
320-0	Pease Airport District Master Card	Flight Line Road Portsmouth, NH 03801	
308-9	Pease Development Authority	22 Hampton Street Portsmouth, NH 03801	55 International Drive Portsmouth, NH 03801
319-3	New Hampshire Air National Guard	Pease Boulevard Portsmouth, NH 03801	61 International Drive Portsmouth, NH 03801

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Hoyle, Tanner & Associates, Inc.
150 Dow Street
Manchester, NH 03101

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- ☐ Adult Signature Restricted Delivery
- ■ Certified Mail
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery (COD)
- ☐ Insured Mail
- ☐ Priority Mail
- ☐ Priority Mail Express
- ☐ Registered Mail
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation
- ☐ Signature Confirmation Restricted Delivery

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1.	7020 1810 0000 0333 3715	Spyglass Development LLC, C/O The Kane Company 210 Commerce Way, Ste 300 Portsmouth, NH 03801	$.53	$3.75											
2.	7020 1810 0000 0333 3722	Cinthesys Real Estate Management Co. 68 New Hampshire Avenue Portsmouth, NH 03801	$.53	$3.75										Signature Confirmation Restricted Delivery	
3.	7020 1810 0000 0333 3739	New England Telephone & Telegraph NKA Fairpoint Communications 770 Elm Street Manchester, NH 03101	$.53	$3.75					Adult Signature Required	Adult Signature Restricted Delivery	Restricted Delivery	Return Receipt	Signature Confirmation		Special Handling
4.	7020 1810 0000 0333 3746	New Hampshire Air National Guard 61 International Drive Portsmouth, NH 03801	$.53	$3.75											
5.															
6.															
7.															
8.															

Handling Charge - If Registered and over $50,000 in value

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Sample Notice to Abutters

VIA CERTIFIED MAIL

November 30, 2021

Re: Construction of a Fuel Farm and Fixed Based Operator Building
at Portsmouth International Airport at Pease, Portsmouth, NH
Hoyle, Tanner Project No. 565900
Abutter Map/Lot

Hoyle, Tanner & Associates, Inc. will be submitting an application for a Wetlands Permit from the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau on behalf of Pease Development Authority (PDA) to allow Pease Aviation Partners, LLC to construct a fuel farm and a Fixed Base Operator (FBO) facility at the Portsmouth International Airport at Pease (PSM).

Pease Aviation Partners, LLC (Million Air) is proposing the development of a new Fixed Base Operator (FBO) facility and fuel farm located at the Portsmouth International Airport at Pease (PSM) in Portsmouth, NH on property owned by Pease Development Authority (PDA) that will be leased to Pease Aviation Partners, LLC. The project includes primarily Map/Lots 307-0 and a portion of 307-3 and 307-2. The proposed site address will be 53 Exeter Street. The project lease site is approximately 2.65 acres, with an anticipated project area of roughly 4 acres. The project includes the installation of a new fuel farm, an FBO facility with attached hanger space and office/administration space and relocation of a portion of the airport's wildlife fence. The fuel farm will have (3) 30k gallon Jet A pencil tanks, a 15k gallon 100 LL avgas tank, a 2.5k glycol tank, and a 2.5k ULSD tank. The site design also includes room for (4) 10k gallon trucks and their associated spill containment areas. Vehicular access for the facility will be from a new roadway connecting to Exeter Street. Fuel deliveries will be from the airside through PDA Gate 16.

Under state law RSA 482-A:3 I (d)(1), we are required to notify you about the wetland permit application, which proposes work abutting your property.

A copy of the wetlands permit application, including the proposed plans, will be available for viewing in the near future at Portsmouth City Hall during normal business hours or at the NHDES offices by scheduling a file review by calling (603) 271-2919.

If you have any questions about this notice, please contact me at (603) 460-5205 or kpeace@hoyletanner.com.

Sincerely,
Hoyle, Tanner & Associates, Inc.

Kimberly R. Peace
Senior Environmental Coordinator

Documentation of Applicant’s Legal Interest

PEASE
INTERNATIONAL
DEVELOPMENT
AUTHORITY

55 International Drive, Portsmouth NH 03801

January 7, 2021

Charles Suma, COO
Pease Aviation Partners, LLC
7555 Ipswich
Houston, Texas 77061

Re: Letter of Intent

Mr. Suma:

The Pease Development Authority ("PDA") is pleased to submit to REW Investments, Inc. and Pease Aviation Partners, LLC d/b/a Million Air Portsmouth ("PAP") the following outline of terms and conditions of a proposed agreement with the PDA for aviation development at Portsmouth International Airport at Pease, located within the Pease International Tradeport ("Airport").

If approved by the PDA Board of Directors, the terms set forth in this letter shall constitute a Letter of Intent ("LOI") between the parties reflecting our mutual commitment in principle to conclude with due diligence and in good faith one or more agreements, including an appropriate Lease and Operating Agreement (collectively, the "Agreement" and/or "Lease"), based upon these terms and such other mutually acceptable terms and conditions as the parties may deem necessary and appropriate.

Without limitation of any other provision of this LOI, the general understanding of the parties is that PAP would sublease, on a short-term basis, an existing hangar and adjoining office space from a current tenant of PDA, subject to any required change of use approvals. During the term of the sublease, PAP would construct and operate a Fixed Base Operator ("FBO"), fuel farm, and hangar on the Leased Premises (defined below). As a term of the Agreement, PDA would grant PAP reasonable access to the common use apron areas adjoining the Leased Premises for purposes related to the operation of the FBO.

The central business terms of our understanding include the following:

Landlord: Pease Development Authority (see NH RSA 12-G)

Tenant: Pease Aviation Partners, LLC, a Texas limited liability company

Leased Premises: The land area generally described as 53 Exeter Street in Attachment A hereto (collectively the "Leased Premises" or "Premises"). Final lot dimensions and access areas to be determined through survey work and/or subdivision and site plan review process.

Without limitation of the foregoing, the understanding of the parties is that PAP would construct and operate an FBO, fuel farm, and hangar on the Leased Premises. Additionally, as a term of the Agreement, PDA would grant PAP reasonable access to all common use Apron areas (shown as apron areas on Attachment A) adjoining the Leased Premises for fueling operations and other purposes related to the operation of the FBO.

Lease Term and Term Commencement: The Agreement shall be effective upon execution ("Effective Date"). The lease term shall be for a base term of forty-seven (47) years, commencing on the Effective Date (the "Term").

Annual Ground Rent and Additional Rent: The annual ground rent ("Ground Rent") per acre for the Leased Premises during the Term of the Agreement will be as follows:

Years 1- 5	an annual amount equal to [redacted] per square foot
Years 6 - 47	an annual payment equal to the per square foot rate plus an annual adjustment equal to the lesser of CPI or 3%, not to exceed 12% in any five (5) year period.

The Ground Rent will be based upon the total area of the Leased Premises (including any contiguous Ramp), as described in Attachment A, is subject to adjustment upon final determination of the exact acreage of the Leased Premises through survey work and/or subdivision and site plan review process.

Airport Related Fees: If applicable, PAP shall be responsible for the collection, disbursement and reporting of Landing Fees, Parking Fees and Fuel Flowage Fees in accordance with PDA policies and procedures.

Airport Use Fees: With respect to any additional use of the Leased Premises requested by PAP, and specifically with reference to the conduct of future commercial and non-commercial general aviation activities at the Airport, such use shall be subject to the execution of an appropriate agreement which shall include a provision for the payment of established fees and charges that may be generally applicable at the Airport.

Condition of Leased Premises: Except as otherwise provided herein, PAP shall take the Leased Premises in an "as is" condition without warranty or representation of any kind; provided, however, PAP shall have no liability or responsibility to PDA for environmental impacts and damage caused by the use of the United States of America - Department of the Air Force ("Air Force" or "Government") of Hazardous Substances on any portion of Pease, including the Leased Premises. PAP and PDA acknowledge the obligation of the Air Force to indemnify PDA and PAP to the extent required by the provisions of Public Law No. 101-511 Section 8056.

Taxes/Fees/Services: In accordance with the provisions of the Municipal Services Agreement by and between the PDA and the City of Portsmouth with an effective date of July 1, 1998, PAP shall pay to PDA a municipal services fee to include the cost of providing police, fire and public works services.

Utilities: PDA will bring utility lines at reasonable capacities to the points existing as of the Term Commencement Date, or such other points as may be designated by PDA. PAP will be responsible for connecting to such points, wherever they may be, as necessary for its use of the Leased Premises, and for installing and paying for all utilities, including electric, gas, telephone, cable, water and sewer from such points to the Leased Premises. In addition, depending on the requirements of site review, PAP shall be responsible for installing any necessary or required connections of the Leased Premises to the PDA's stormwater discharge system at the points existing within the Airport as of the Term Commencement Date, or such other points as may be designated by the PDA, wherever they may be. PDA shall provide PAP reasonable access to the Airport prior to entering into the Agreement so that PAP may ascertain appropriate utility and stormwater connection points.

Net Lease: The Agreement shall be triple net to PDA and all costs associated with the use, occupancy, maintenance and insurance of the Premises shall be borne by PAP.

Right to Use Apron Area: **PAP shall have the right in connection with its Lease to use certain common use apron areas, which space shall not be part of the Leased Premises, and such apron areas shall meet all requirements of the Minimum Standards.**

Right to Use Airport:

Subject to the provisions and additional restrictions as may be set forth in the Lease for the Premises, PAP shall have in common with other authorized Airport users the right to use the entrances, exits and roadways designated by PDA for common use at the Airport. PAP shall also have in common with other airfield users the right to use the runway, taxiways and available common apron areas of the Airport.

Surrender of Leased Premises at Termination:

PDA to assume ownership of the FBO facility and related improvements at termination of the Lease.

Pease International Airport Access Requirements:

The portion of the Airport within the perimeter fence is part of the Airport Security Identification Display Area ("SIDA"). Designated representatives of PAP and its contractors will be required to obtain security badges and qualify as escorts in order for representatives, employees and agents of PAP and its contractors to gain access to and remain within the SIDA. While in the SIDA, escort procedures per the requirements of the Airport Security Program must be met. Prior to accessing the SIDA, all persons providing SIDA escort must undergo a criminal history background check, verification of their employment history for the past ten (10) years, attend a training class that is offered no more than once every two weeks and pay any applicable fees. Information regarding escort requirements can be obtained by calling the Airport Management Department at (603) 433-6536, Monday through Friday, 8:00 a.m. to 5:00 p.m. No representative, employee or agent of PAP or its contractors will be allowed in the SIDA without escorts meeting the requirements of the Portsmouth International Airport at Pease Security Program.

PAP acknowledges that it will be responsible for the payment of all fines imposed by the FAA and/or TSA arising or incurred as a result of the improper use of or access by PAP's officers, employees, agents, customers, vendors, guests, or invitees to Portsmouth International Airport at Pease and its SIDA.

Sublease:

Subject to PAP securing change of use/site review approval, PDA would consent to PAP's entry into a sublease with Executive Hangar LLC for the hangar and adjoining office space, located at Portsmouth Airport, and as described in Attachment B hereto ("Subleased Premises"). The sublease would be for a temporary term coextensive with the Construction/Operating Phase, defined below. PAP would conduct FBO operations out of the subleased space until the new FBO is completed.

Site Plan and Design Permitting: PAP would undertake and continue with due diligence and at its sole expense subdivision, site planning, design, permitting, and construction on the Premises of not less than 12,000 +/- square feet of new hangar space, and up to an additional 2,000 square feet of FBO Facilities and a Fuel Farm in support of the permitted uses, which shall meet or exceed all minimum standards set by PDA, with related paving, utilities, landscaping, drainage and associated site improvements, (the "Facility") for establishment, fueling aircraft and servicing customers of those aircraft for General Aviation, Military, Cargo and Commercial operations. Additionally, PAP would plan, design, permit, and construct the access road to the Leased Premises as shown on Attachment A, including any necessary security gate required by the PDA, which road would be a common use access area owned by the PDA.

Phased Approach: PAP has developed a two-phase approach to the development, which phases are detailed below as the **Construction/Operating Phase** and the **Operating Phase.**

Construction/ Operating Phase: During the Construction/Operating Phase, PAP would (i) operate an FBO out of the Subleased Premises, and (ii) construct an FBO facility that complies with the minimum standards for an FBO as described in Attachment C hereto. Immediately upon execution of the Agreement, PAP would commence construction of the fuel farm, followed by the FBO building and hangar, as well as the access road. This phase shall take no longer than thirty (30) months from the execution of the Agreement.

Operating Phase: PAP would operate the new FBO and related facilities under the terms of the Agreement.

Anticipated Timeline: PAP acknowledges that PDA's willingness to enter into a Lease is contingent upon PAP establishing a time line for the **Construction/Operating Phase** and the **Operating Phase** that is acceptable to PDA and consistent with the terms and conditions set forth above.

1. PAP shall be solely responsible for the development of plans and specifications for any proposed renovations at the Premises and for making any required submission and obtaining any necessary approval, including subdivision approval, in accordance with the provisions of the PDA Land Use Controls. PDA agrees to use its best efforts (without obligation on the part of PDA to incur any expenses) to assist PAP in such process.

2. The following is a partial list of issues and costs identified and required to be addressed by PAP and PDA during the negotiation of the

Agreement in connection with PAP's proposed development of the Leased Premises:

A) Conformance with ALP;
B) PDA Reservations of Access to Apron/Taxiways;
C) Adequacy of Vehicle Parking;
D) Siting for Noise Mitigation;
E) Siting for Air Traffic Control Tower Line of Sight;
F) Subdivision and Site Plan Approval;
G) Installation of utilities, as required;
H) Area of Special Notice Approval;
I) Construction Access;
J) TSA approval, as the same may be required;
K) Protection of monitoring wells;
L) Coordination of Air Force PFAS Remediation;
M) Location of Fuel Farm and Fuel Farm Operations;
N) Protection of stormwater, surface water, and ground water quality;
O) Impacts to wetlands and wetlands buffer;
P) Soils management;
Q) Site dewatering;
R) Airport security and access control; and
S) Changes to Airport Layout Plan.

Use: **PAP will develop the Leased Premises to service General Aviation, Military, Cargo and Commercial operations meeting all PDA minimum Standards for such use.**

Sublease and Assignment: PAP may, without the approval of PDA, assign its rights under the Agreement to or enter into a sublease of the Leased Premises, or any part thereof, with an affiliate (i.e., any corporation that controls, is controlled by or is under common control with PAP). For purposes of the preceding sentence, the term "control" shall mean ownership or other beneficial interest in at least fifty-one percent (51%) of the voting stock or other voting interest of a corporation; provided the minimum net worth of the controlling or affiliated entity is not less than [redacted] All other assignments or subleases shall be subject to approval of PDA.

Environmental Protection: PAP acknowledges that Pease has been identified as a National Priority List (NPL) Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. PAP acknowledges that PDA has provided it with a copy of the Pease Federal Facility Agreement ("FFA") entered into by EPA, and the Air Force on April 24, 1991, as amended,

and agrees that it will comply with the terms of the FFA to the extent the same may be applicable to the Leased Premises and that should any conflict arise between the terms of the FFA and the provisions of the Agreement, the terms of the FFA will take precedence.

PAP shall comply with all federal, state and local laws, regulations and standards that are or may become applicable to PAP's activities at the Premises. PAP shall not assume any liability or responsibility for environmental impacts and damage caused by the Air Force's use of Hazardous Substances on any portion of Pease, including the Premises. The parties acknowledge the obligations of the Air Force to indemnify PDA and PAP to the extent required by the provisions of Public Law No. 101-511, Section 8056.

In addition, PDA shall indemnify, defend and hold harmless PAP against and from any and all claims, judgments, damages, penalties, fines, costs and expenses, liabilities and losses (including, without limitation, diminution in value of the Premises, damages for the loss or restriction on the use of the Premises, and sums paid in settlement of claims, attorneys' fees, consultants' fees and experts' fees), resulting or arising from discharges, emissions, spills, releases, storage or disposal of Hazardous Substances, or any other action, by the PDA giving rise to PAP liability or responsibility under federal, state or local environmental laws. This provision shall survive the expiration or termination of the Lease, and the PDA's obligations hereunder shall apply whenever the PAP incurs costs or liabilities for the PDA's actions of the types described in this provision.

To the extent the same is available and applicable, PDA will furnish the following data to PAP: relevant maps, diagrams, surveys, drawings, engineering studies and plans related to the Premises, including but not limited to: the Environmental Baseline Survey; approved airport layout plan; existing property drawings and plans; Health and Safety Plans; Construction Work Plans and planning and engineering studies conducted for the PDA or for others, including available studies conducted for the Air Force, and pertaining to Pease and or the Premises. PDA makes no warranty or representation, actual or implied, as to the accuracy of any material to be furnished to the PAP.

Brokerage: Each party warrants to the other that it has had no dealing with any real estate broker or agent in connection with the negotiation of this letter or the Agreement.

Repairs and Maintenance: Throughout the term of the Agreement, and without cost to PDA, PAP shall take commercially reasonable care of the Leased Premises and related improvements, including sidewalks, curbs, parking apron areas designated for PAP's exclusive use, and shall keep the same in good order and condition, and shall promptly at its own cost and expense, make all necessary repairs thereto. PAP's obligation hereunder shall also include grounds maintenance and restoration and snow

removal from the Leased Premises, including any apron areas designated for PAP's exclusive use.

Restrictions on Aircraft Operations: PAP is aware of PDA's efforts to promulgate proprietary regulations that will include certain restrictions on aircraft operations. PAP has agreed to use commercially reasonable efforts to comply with all such future rules and regulations, and will agree and obtain the agreement of its successors in interest, in accordance with the provisions of 14 CFR Part 161, to voluntary operating restrictions which are reasonably consistent with the aircraft operation restriction.

Airport Minimum Standards: PAP's use of the Leased Premises shall be subject to its compliance with Minimum Standards (Attachment C) as the same are from time to time promulgated by PDA.

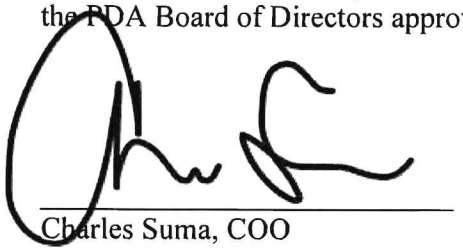
Termination Rights: PAP shall have the right to terminate the Lease upon thirty (30) days written notice to PDA in the event that PAP is precluded for a period of three (3) consecutive months or longer during the Construction/Operating Phase from proceeding with construction of the Facility as a direct result of (A) the issuance of an order or other adjudication of a state or federal court or determination of a governmental body of competent jurisdiction, or (B) exercise by the FAA, Air Force, EPA and NHDES of their rights under the Deed and/or FFA. In the event that PAP is so precluded from proceeding with construction directly as the result of any of the events listed in (A) and (B) above, irrespective of whether the period is long enough to provide PAP with a right of termination, any remaining established dates or milestones for payment or construction shall be extended by the time equal to the period of preclusion provided that PAP provides PDA with notice of any claim for extension within thirty (30) days of the occurrence of such event.

The execution of this LOI does not constitute a reservation of the Premises, an option to lease the Premises, or an offer to lease the Premises, and no legal obligation shall arise with respect to the Premises or lease thereof until a Lease Agreement is executed by the Parties.

Sincerely,

Paul E. Brean
Executive Director

I have read the foregoing and it correctly states the terms upon which we will proceed to negotiate a mutually acceptable Lease Agreement for the Premises between PDA and PAP, subject to the PDA Board of Directors approval, and any other governmental approvals that may be required.



Charles Suma, COO

Project Plans
Including Existing Conditions Plan with Wetland Scientist's Stamp

SITE DEVELOPMENT PLANS

FOR THE

PROPOSED MILLION AIR PORTSMOUTH FBO

PORTSMOUTH INTERNATIONAL AIRPORT AT PEASE

53 EXETER STREET
PORTSMOUTH, NH 03801

APPLICANT

PEASE AVIATION PARTNERS, LLC

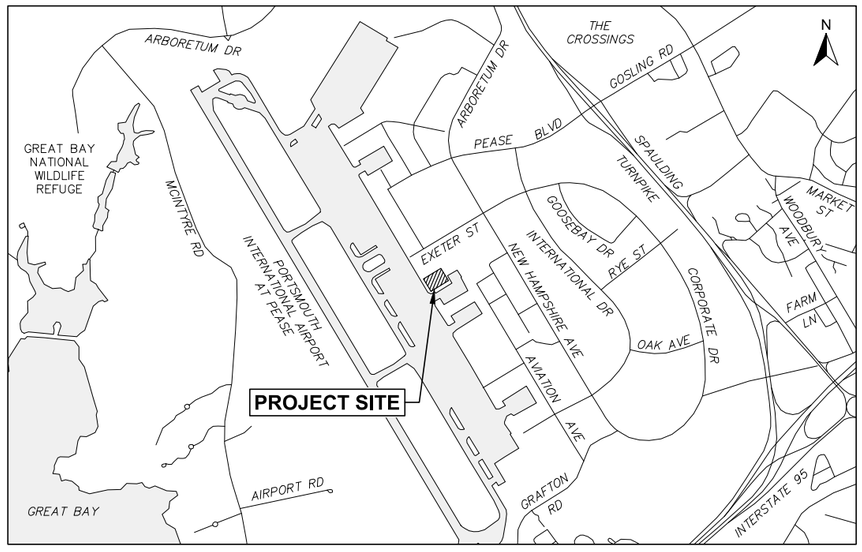
7555 IPSWICH ROAD
HOUSTON, TX 77061

LAST REVISED: NOVEMBER 23, 2021

LIST OF DRAWINGS

PERMITS/APPROVALS

	PERMIT NUMBER	DATE APPROVED
PEASE DEVELOPMENT AUTHORITY SITE PLAN APPROVAL	TAX MAP 307, LOT 0, 2 & 3	__/__/22
PEASE DEVELOPMENT AUTHORITY CONDITIONAL USE APPROVAL	TAX MAP 307, LOT 0, 2 & 3	__/__/22
NEW HAMPSHIRE DES ALTERATION OF TERRAIN	TBD	__/__/22
NEW HAMPSHIRE DES WETLAND PERMIT	TBD	__/__/22
ARMY CORPS OF ENGINEERS	TBD	__/__/22
NEW HAMPSHIRE DES SEWER CONNECTION PERMIT	TBD	__/__/22
NEW HAMPSHIRE DES ABOVEGROUND STORAGE TANK PERMIT	TBD	__/__/22



LOCUS MAP
1" = 1500'

NOT FOR CONSTRUCTION

NOTE: PLANS HAVE BEEN REDUCED AND ARE NOT TO SCALE

SUBMISSION NOTE:

THE INTENT OF THIS PLAN SET IS TO SHOW THE SITE LAYOUT, GRADING, DRAINAGE AND UTILITIES FOR THE PROPOSED DEVELOPMENT OF A NEW FBO, HANGAR AND FUEL FARM. THESE PLANS ARE INTENDED FOR NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES) PERMITTING ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.

PARCEL INFORMATION:

TAX MAP 307 LOT 0
PEASE AIRPORT DISTRICT
55 INTERNATIONAL DRIVE
PORTSMOUTH, NH 03801

TAX MAP 307 LOT 2
PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NH 03801

TAX MAP 307 LOT 3
PEASE DEVELOPMENT AUTHORITY
55 INTERNATIONAL DRIVE
PORTSMOUTH, NH 03801

PROPOSED LEASE LOT:
115,271± S.F (2.65 AC.)

ZONING:
AIRPORT

PROJECT TEAM:

CIVIL ENGINEER
HOYLE, TANNER & ASSOCIATES, INC.
100 INTERNATIONAL DRIVE, SUITE 360
PORTSMOUTH, NH 03801
ATTN: SHAWN TOBEY
(603) 413-2904

SURVEYOR
FIELDSTONE LAND CONSULTANTS, PLLC
206 ELM STREET
MILFORD, NH 03055
ATTN: MICHAEL PLOOF
(603) 672-5456 x104

WETLANDS/SOIL MAPPING
FIELDSTONE LAND CONSULTANTS, PLLC
206 ELM STREET
MILFORD, NH 03055
ATTN: CHRISTOPHER GUIDA
(603) 672-5456

PROJECT MANAGER
JACOB WHITE CONSTRUCTION
2000 W PARKWOOD AVE
FRIENDSWOOD, TX 77546
CONTACT: SEAN MICKLER
(281) 286-6666 x101

ARCHITECT
BEXHILL GROUP, LLC
1907 SABINE STREET, SUITE 140
HOUSTIN, TX 77007
ATTN: BENJAMIN NOTZAN
(713) 300-4999 x201

LOCAL ARCHITECT
JSA DESIGN
273 CORPROATE DRIVE, SUITE 100
PORTSMOUTH, NH 03801
ATTN: NORTH STURTEVANT
(603) 239-1238

MEP & SITE LIGHTING
CSI ENGINEERING LLC
125 AVIATION AVE, #4
PORTSMOUTH, NH 03801
ATTN: JAMES O'BRIEN
(603) 319-8244

GENERAL CONTRACTOR
SULLIVAN CONSTRUCTION, LLC
258 SOUTH RIVER ROAD
BEDFORD, NH 03110
CONTACT: TOM SULLIVAN
(603) 647-1777

GEOTECHNICAL
GEOTECHNICAL SERVICES, INC.
55 NORTH STARK ROAD
WEARE, NH 03281
ATTN: HARRY WETHERBEE
(603) 529-7766

FUEL TANK DESIGN
ATTAWAY SERVICES CAROLINA, INC.
6126 BROOKSHIRE BLVD, UNIT C
CHARLOTTE, NC 28216
ATTN: JESSE VARNER
(954) 536-8291

UTILITY CONTACTS:

WATER SERVICE:
CITY OF PORTSMOUTH DPW
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801
CONTACT: TERRY DESMARIS
(603) 427-1550

SEWER SERVICE:
CITY OF PORTSMOUTH DPW
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801
CONTACT: JOHN ADAMS
(603) 427-1550

FIRE DEPARTMENT:
PORTSMOUTH FIRE DEPT.
170 COURT STREET
PORTSMOUTH, NH 03801
CONTACT: TODD GERMAIN
(603) 427-1515

STORMWATER (DRAINAGE):
CITY OF PORTSMOUTH DPW
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801
CONTACT: DAVE DESFOSSES
(603) 427-1530

ELECTRIC SERVICE:
EVERSOURCE ENERGY
1700 LAFAYETTE ROAD
PORTSMOUTH, NH 03801
CONTACT: MICHAEL BUSBY
(603) 436-7708

TELECOMMUNICATIONS:
FAIRPOINT COMMUNICATIONS
1575 GREENLAND ROAD
GREENLAND, NH 03840
CONTACT: JOE CONSIDINE
(603) 427-5525

GAS SERVICE:
UNITIL NORTHERN UTILITIES, INC
375 WEST ROAD
PORTSMOUTH, NH 03801
CONTACT: DAVID BEAULIEU
(603) 933-3820 EXT. 5144

CABLE SERVICE:
COMCAST
180 GREENLEAF AVE
PORTSMOUTH, NH 03801
CONTACT: MIKE COLLINS
(603) 266-2278

CONTACT DIG SAFE
72 HOURS PRIOR
TO CONSTRUCTION
DIGSAFE.COM
DIAL 811

STATE OF NEW HAMPSHIRE
SHAWN M. TOBEY
No. 14121
PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	REVISION DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS – ISSUED FOR PDA REVIEW

CHECKED BY WRD
DRAWN BY MJG/SMT
DESIGNED BY SMT
ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

HOYLE TANNER
Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801
(603) 431-2520
www.hoyletanner.com

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

TITLE SHEET

C1

PROJECT NO. 20.565900.00

SHEET 1 OF 31

GENERAL NOTES:

1. THE SURFACE FEATURES AND TOPOGRAPHY ARE THE RESULT OF AN ON THE GROUND SURVEY CONDUCTED DURING THE MONTH OF NOVEMBER 2020 BY FIELDSTONE LAND CONSULTANTS, PLLC. SEE DWG C4 FOR ADDITIONAL EXISTING CONDITIONS INFORMATION.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN COMPILED IN PART FROM PLANS OF RECORD AND FIELD LOCATION. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHALL VERIFY AND DETERMINE THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL LOCATE THE UTILITIES SHOWN AND THE POSSIBLE EXISTENCE OF OTHER UNDERGROUND UTILITIES BY PROVIDING OBSERVATION TEST PITS. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (DIAL 811), THE PEASE DEVELOPMENT AUTHORITY AND CITY OF PORTSMOUTH AT LEAST 72 HOURS BEFORE DIGGING.
4. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE PLANS AND THE SITE OF THE PROPOSED WORK, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS; OR WORK THAT CANNOT BE CONSTRUCTED AS SHOWN; OR ANY METHODS PROPOSED BY THE CONTRACTOR THAT ARE IN VARIANCE WITH THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IN WRITING AT LEAST 10 DAYS PRIOR TO STARTING THE WORK.
5. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
6. THIS PROJECT IS TO BE CONSTRUCTED TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE STANDARDS OF THE PEASE DEVELOPMENT AUTHORITY AND CITY OF PORTSMOUTH.
7. ALL WORK SHALL BE IN COMPLIANCE WITH ALL PERMITS AS LISTED ON THE COVER SHEET. ALL REPORTS REQUIRED BY THE TERMS OF ANY STATE OR FEDERAL PERMITS SHALL BE PROVIDED TO PDA.
8. WHEN PREPARING THE EXISTING SITE FOR THE PROPOSED DEVELOPMENT, ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES.
9. THE CONTRACTOR SHALL PERFORM ALL THE CLEARING AND GRUBBING NECESSARY WITHIN THE CONSTRUCTION AREA, LIMITING THE AMOUNT OF CLEARING AND GRUBBING TO THE GREATEST EXTENT POSSIBLE.
10. BEFORE ANY DEWATERING IS PERFORMED, COORDINATION BETWEEN THE APPLICANT, PDA, NHDES AND THE AIR FORCE IS REQUIRED TO DETERMINE PROPER PROCEDURES AND IF PERMITTING IS REQUIRED.
11. CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING BENCHMARKS AND BOUNDS. ALL BENCHMARKS AND BOUNDS DISTURBED BY THE CONTRACTOR SHALL BE RE-ESTABLISHED BY A NEW HAMPSHIRE REGISTERED LAND SURVEYOR AT NO EXPENSE TO THE OWNER.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY EXCAVATION SAFEGUARDS, NECESSARY BARRICADES, POLICE DETAILS, ETC., FOR TRAFFIC CONTROL AND SITE SAFETY. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND MAINTENANCE OF TRAFFIC DETOUR(S) AROUND THE WORK FOR VEHICLES AND PEDESTRIANS.
14. PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES. WHEN AN AREA IS SHUT DOWN TO PERFORM WORK AN ADEQUATE DETOUR MUST BE ESTABLISHED AND CLEARLY IDENTIFIED WITH SIGNAGE TO PEDESTRIANS. ALL PEDESTRIAN MITIGATION SIGNS SHALL BE A MINIMUM OF 2' BY 3'. CONTRACTOR TO REVIEW ALL SIGNAGE AND FENCING ON A DAILY BASIS.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE CONDITIONS OF THE SITE.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL WORK IS DONE IN ACCORDANCE WITH OSHA REQUIREMENTS.
17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS (PIPE, CASTINGS, STRUCTURES, ETC.) TO THE INSPECTING ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
18. ALL SIGNAGE SHALL BE SUBMITTED TO THE PDA BOARD OF DIRECTORS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
19. THE APPLICANT SHALL BE RESPONSIBLE TO PERFORM A RADIO-STRENGTH TEST WITH A MOTOROLA SERVICE SHOP TO ENSURE SUFFICIENT SIGNAL STRENGTH WITHIN ANY STRUCTURE INCLUDED IN THE PROJECT TO SUPPORT ADEQUATE RADIO COVERAGE FOR EMERGENCY PERSONNEL. THE EXPENSE FOR THE TEST SHALL BE THE RESPONSIBILITY OF THE APPLICANT, WHETHER OR NOT THE TEST INDICATES THAT AMPLIFIERS ARE NECESSARY TO ENSURE THIS COMMUNICATION. IF THE TEST INDICATES THAT AMPLIFIERS ARE REQUIRED, THAT COST, TOO, SHALL BE THE RESPONSIBILITY OF THE APPLICANT. ALL TESTING AND INSTALLATIONS SHALL BE COORDINATED BETWEEN THE APPLICANT AND THE POLICE/FIRE COMMUNICATIONS SUPERVISOR.
20. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, TEMPORARY UTILITIES AND COORDINATION WITH ALL AGENCIES IN OBTAINING ACCESS TO THE SITE AND PERFORMING ALL WORK REQUIRED FOR THIS PROJECT.
21. CONTRACTOR TO OBTAIN A NPDES CONSTRUCTION GENERAL PERMIT NOI PRIOR TO CONSTRUCTION.
22. THE CONTRACTOR SHALL ACQUIRE A PDA DIG PERMIT BEFORE ANY DISTURBANCE CAN TAKE PLACE. ALLOW 7 CALENDAR DAYS FOR PROCESSING.
23. TWO 7460-1 APPLICATIONS, SHALL BE FILED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ONE FOR THE BUILDING AND THE OTHER FOR A CRANE DURING CONSTRUCTION.
24. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AMERICANS WITH DISABILITIES (ADA) ACT, AND STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS.

GENERAL NOTES:

25. NO WELDED WIRE FABRIC SHALL BE USED IN CONCRETE SIDEWALKS.
26. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT IN THE FIELD USING SURVEY EQUIPMENT. AN AUTOCAD FILE OF THE EXISTING AND PROPOSED FEATURES WITH CONTROL POINTS WILL BE PROVIDED TO THE CONTRACTOR FOR CONSTRUCTION LAYOUT.
27. THE BUILDING FOOTPRINT SHOWN ON THESE PLANS ARE BASED ON PRELIMINARY ARCHITECTURAL DRAWINGS. COORDINATE ALL BUILDING LAYOUTS AND DIMENSIONS WITH THE FINAL ARCHITECTURAL DRAWINGS.
28. SYMBOLS OF PROPOSED STRUCTURES SUCH AS CATCH BASINS AND DRAIN MANHOLES ARE EXAGGERATED FOR CLARITY ON THESE DRAWINGS. THE CENTER OF THE SYMBOL MAY NOT BE THE ACTUAL CENTER OF THE STRUCTURE IF LOCATED ALONG THE CURB. THE CONTRACTOR SHALL ADJUST FOR THIS DURING CONSTRUCTION LAYOUT.
29. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY AND RELEASE OF BOND, THE APPLICANT SHALL SUBMIT A LETTER TO THE PEASE DEVELOPMENT AUTHORITY, SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER, STATING CONSTRUCTION HAS BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS.
30. THE CONTRACTOR SHALL SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLAR AND IN DIGITAL FORMAT (AUTOCAD .DWG FORMAT) ON CD TO THE OWNER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A REGISTERED NEW HAMPSHIRE LAND SURVEYOR OR PROFESSIONAL ENGINEER. AN ELECTRONIC FILE OF THE SITE LAYOUT SHALL BE SUBMITTED TO THE CITY OF PORTSMOUTH'S GIS DEPARTMENT.
31. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DRAINAGE NOTES:

1. THE STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. ALL PIPE MATERIALS SHALL BE AS SPECIFIED ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL CONFIRM THE ELEVATIONS FOR ALL DRAIN PIPE RUNS PRIOR TO ANY INSTALLATION.
3. PROPOSED RIM ELEVATIONS OF DRAINAGE MANHOLES AND CATCH BASINS ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
4. THE CONTRACTOR SHALL INSTALL BELL TRAPS/OIL SEPARATOR HOODS ON ALL CATCH BASIN OUTLETS.
5. DRAIN PIPES SHALL HAVE A MINIMUM GROUND COVER OF 3'. IF THE REQUIRED COVER CANNOT BE OBTAINED, THE PROPOSED PIPE SHALL BE RCP, CLASS V OR APPROVED EQUAL. INSTALL 4" OF RIGID INSULATION ABOVE THE DRAIN LINE IF 3' COVER CANNOT BE OBTAINED.
6. ALL PROPOSED CATCH BASINS SHALL BE DEEP SUMP CATCH BASINS WITH 4' SUMPS.
7. ROOF LEADER PIPE DIAMETERS ARE ASSUMED. COORDINATE ALL SIZES WITH THE APPROVED PLUMBING PLANS.
8. REFER TO STRUCTURAL PLANS AND GEOTECHNICAL REPORT FOR PERIMETER FOOTING DRAIN PIPE SIZE AND INSTALLATION LOCATIONS.
9. THE CONTRACTOR SHALL PROVIDE FOR THE HANDLING OF EXISTING FLOWS FROM SERVICE CONNECTIONS AND MAINLINE PIPES. THE EXISTING DRAINS MAY HAVE ACTIVE FLOW AND THE CONTRACTOR SHALL MAINTAIN CONTINUOUS FLOW WITHOUT RESTRICTIONS.
10. THE CONTRACTOR SHALL STABILIZE ANY AND ALL DITCHES AND SWALES PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
11. WHEN CONNECTING NEW PIPES TO EXISTING STRUCTURES SUCH AS MANHOLES AND CATCH BASINS, THE STRUCTURE SHALL BE COMPLETELY CLEANED OUT. THE HOLE MADE IN THE STRUCTURE SHALL BE AS SMALL AS NECESSARY. THE STRUCTURE SHALL BE REPAIRED TO MATCH ITS ORIGINAL TYPE OF CONSTRUCTION. THE JOINT BETWEEN THE STRUCTURE AND THE PIPE SHALL BE MADE WATERTIGHT BY FILLING THE JOINT WITH MORTAR.
12. THE CONTRACTOR SHALL CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS, WITHIN THE LIMIT OF WORK UPON COMPLETION OF CONSTRUCTION.
13. THE PROPOSED STORMWATER TREATMENT DEVISED AND UNDERGROUND DETENTION SYSTEM SHALL BE MAINTAINED ACCORDING TO THE STORMWATER INSPECTION AND MAINTENANCE MANUAL PREPARED UNDER THE NHDES ALTERATION OF TERRAIN PERMIT. THE STRUCTURES SHALL BE INSPECTED AT MINIMUM ONCE IN THE SPRING AND FALL.
14. THE SNOW & ICE MANAGEMENT CONTRACTOR MUST BE GREEN SNOWPRO CERTIFIED BY THE UNH TECHNOLOGY TRANSFER CENTER AND ALSO BE A NEW HAMPSHIRE CERTIFIED SALT APPLICATOR.

EXTERIOR LIGHTS:

1. THE SOURCE OF EXTERIOR LIGHTING SHALL NOT BE ARRANGED IN SUCH A MANNER AS TO BE DETRIMENTAL TO ADJACENT PROPERTIES OR CREATE A HAZARD ON PUBLIC WAYS.
2. OUTSIDE LIGHTS MUST BE MADE UP OF A LIGHT SOURCE AND REFLECTOR SO THAT, ACTING TOGETHER, THE LIGHT BEAM IS CONTROLLED AND NOT DIRECTED ACROSS A PROPERTY LINE SO AS TO CONSTITUTE A NUISANCE.
3. ANY PULSATING, FLASHING, ROTATING, OSCILLATING, OR OTHER TYPE OF LIGHTING INTENDED AS AN ATTENTION-GETTING DEVICE SHALL BE EXPRESSLY PROHIBITED, EXCEPT FOR AVIATION-RELATED PURPOSES.
4. FLOOD LIGHTS, SPOT LIGHTS, OR OTHER LIGHTING DEVICES SHALL BE ARRANGED OR SHIELDED SO AS NOT TO INTERFERE WITH THE SAFE OPERATION OF VEHICLES OR AIRCRAFT.
5. ALL PROPOSED LIGHTING SHALL BE DARK SKY FRIENDLY.
6. COORDINATE LIGHT POLE BASE LOCATIONS WITH, CONDUIT ROUTING, CONDUIT SIZE AND POWER SUPPLY FOR SITE LIGHTING WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS.

EARTHWORK & GRADING NOTES:

1. GRADE AWAY FROM BUILDING WALLS AT 1% MINIMUM (TYPICAL).
2. ALL EXCESS SOILS SHALL REMAIN ONSITE.
3. PROVIDE UNIFORM SLOPE BETWEEN CONTOURS AND/OR SPOT ELEVATIONS.
4. SPOT GRADES SHOWN ARE PAVEMENT ELEVATIONS AT THE CURBLINE UNLESS OTHERWISE NOTED.
5. EARTH SLOPES SHALL BE NO STEEPER THAN 3:1 (HORIZONTAL:VERTICAL) AND SHALL BE FLATTER WHERE SHOWN.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ROOTS AND STUMPS FOR TREES THAT ARE REMOVED.
7. ANY UNSUITABLE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL MATERIAL.
8. GENERAL FILL BEYOND PAVED AREAS SHALL BE FREE OF BRUSH RUBBISH, STUMPS, AND STONES LARGER THAN 8". FILL SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 8" IN THICKNESS. THE DRY DENSITY AFTER COMPACTION SHALL NOT BE LESS THAN 95% OF THE STANDARD PROCTOR TEST AND DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D698.
9. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2" TO ENSURE BONDING OF THE TOPSOIL AND SUBSOIL.
10. FILL OR TOPSOIL SHALL NEITHER BE PLACED NOR COMPACTED WHILE IN A FROZEN OR MUDDY CONDITION OR WHILE SUBGRADE IS FROZEN.
11. FINISH PAVEMENT/CONCRETE SURFACES AND LAWN AREAS SHALL BE FREE OF LOW SPOTS AND PONDING AREAS.
12. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS THAT DO NOT HAVE A SURFACE TREATMENT SPECIFICALLY SPECIFIED SHALL BE RESTORED TO A MINIMUM OF 4" OF SEEDED TOPSOIL, FERTILIZER, AND MULCH.
13. THE CONTRACTOR SHALL REMOVE, CONTAIN, TEST AND DISPOSE OF EXCAVATED SOILS IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS DIVISION 200 - EARTHWORK.

UTILITY NOTES:

1. COORDINATE ALL UTILITY WORK WITH THE APPROVED MEP DRAWINGS.
2. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE WITH THE UTILITY COMPANIES FOR RELOCATING AND/OR SUPPORTING THEIR UTILITIES IN ACCORDANCE WITH THE SPECIFICATIONS.
3. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO EXISTING FACILITIES AT ALL TIMES. IF ANY DISRUPTION MUST OCCUR, CONTRACTOR SHALL NOTIFY AND COORDINATE WITH FACILITY AT LEAST 72 HOURS IN ADVANCE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF EXISTING UTILITIES AND STRUCTURES DAMAGED OR REMOVED BY THE CONTRACTOR DURING THEIR OPERATIONS.
5. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
6. FINAL ELEVATIONS OF UTILITY STRUCTURES ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES, AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF WORK.
7. DURING EXCAVATION, IT IS ANTICIPATED THAT EXISTING UTILITIES AND SEWERS WILL BE EXPOSED. THE CONTRACTOR SHALL PROVIDE PROTECTION AND SUPPORT OF THESE FACILITIES AND REPAIR ANY DAMAGE CAUSED BY THE WORK IN A MANNER SATISFACTORY TO THE OWNER.
8. THE SEWER SYSTEM SHALL HAVE A MINIMUM GROUND COVER OF 4' WHEN CROSS COUNTRY AND A MINIMUM GROUND COVER OF 6' WHEN BENEATH PAVEMENT. IF THE REQUIRED MINIMUM AMOUNT OF COVER CANNOT BE OBTAINED, INSTALL 4" OF RIGID INSULATION ABOVE THE SEWER LINE.
9. ALL ELECTRIC MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AS WELL AS STATE AND LOCAL CODES.
10. INSTALL NYLON PULL ROPES IN UNDERGROUND CONDUITS TO FACILITATE PULLING CABLES.
11. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL HANDHOLES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
12. THE CONTRACTOR SHALL REVIEW THE LOCATION OF ALL OVERHEAD WIRES WITHIN THE PROJECT AREA IN THE FIELD TO DETERMINE THEIR IMPACT ON CONSTRUCTION MEANS AND METHODS.
13. THE NUMBER, TYPE, AND SIZE OF UTILITY CONDUITS SHALL BE DETERMINED BY THE UTILITY COMPANY.
14. THE EXACT LOCATION AND SIZE OF NEW UTILITY SERVICES SHALL BE DETERMINED BY THE UTILITY COMPANY.
15. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
16. THE PROPOSED BUILDING WILL BE SERVED BY SPRINKLER SYSTEMS.
17. ALL ON-SITE UTILITIES SHALL BE UNDERGROUND.
18. BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
19. CONTRACTOR TO COORDINATE UNDERGROUND ELECTRIC, INCLUDING BUT NOT LIMITED TO SIZE, LOCATION, MATERIAL, CONDUIT, AND HAND HOLES.
20. SPRINKLER SYSTEM SHALL BE MONITORED OFF-SITE THROUGH A DIALER. CONTRACTOR TO COORDINATE WITH A THIRD PARTY.

ABBREVIATIONS:

ABAN	ABANDONED
AC	ASBESTOS CONCRETE
ADJ	ADJUST
APPROX	APPROXIMATE
B=	BOTTOM=
BC	BOTTOM OF CURB
BERM	BITUMINOUS CONCRETE BERM
BIT CONC	BITUMINOUS CONCRETE
BLDG	BUILDING
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
BW	BOTTOM OF WALL
CB	CATCH BASIN
CBRND	CATCH BASIN ROUND
CBSQ	CATCH BASIN SQAURE
CI	CAST IRON
CICL	CAST IRON CEMENT LINED
CIP	CAST IN PLACE
℄	CENTER LINE
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CP	CONCRETE PIPE
DHW	DESIGN HIGH WATER
DI	DUCTILE IRON
DICL	DUCTILE IRON CEMENT LINED
DIA	DIAMETER
DMH	DRAIN MANHOLE
DWG	DRAWING
DYCL	DOUBLE YELLOW CENTER LINE
EL, ELEV	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATION
EMH	ELECTRIC MANHOLE
EXIST	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FF	FINISH FLOOR
FM	FORCE MAIN
GC	GRANITE CURB
GG	GAS GATE
GM	GAS METER
GR	GUARDRAIL
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
HH	HAND HOLE
HORIZ	HORIZONTAL
HR	HANDRAIL
HVAC	HEAT VENT AIR CONDITIONING
HYD	HYDRANT
INV	INVERT
IP	IRON PIPE
LP	LIGHT POLE
LS	LANDSCAPED
LT	LEFT
MC	METAL COVER
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MIN	MINIMUM
NO, #	NUMBER
NTS	NOT TO SCALE
OCS	OUTLET CONTROL STRUCTURE
OHW	OVERHEAD WIRES
PB	PULL BOX
PDA	PEASE DEVELOPMENT AUTHORITY
PERF	PERFORATED
PL	PLASTIC
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVI	POST VALVE INDICATOR
R=	RIM=
RCP	REINFORCED CONCRETE PIPE
R&D	REMOVE & DISPOSE
(rec)	RECORD
RET	RETAINING
RT	RIGHT
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE
SHWT	SEASONAL HIGH WATER TABLE
SS	SANITARY SEWER
STA	STATION
STMH	STEAM MANHOLE
SW	SIDEWALK
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TL	TRAFFIC LIGHT
TMH	TELEPHONE MANHOLE
TOFA	TAXILANE OBJECT FREE AREA
TP	TEST PIT
TRANS	TRANSFORMER
TS	TOP OF SLOPE
TW	TOP OF WALL
TYP	TYPICAL
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
W	WATER
WC	WYE CONNECTION
WF	WETLAND FLAG
WV	WATER VALVE
WIP	WROUGHT IRON PIPE
WM	WATER METER
YD	YARD DRAIN

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		RIGHT OF WAY
		BUILDING SETBACK
		PARKING SETBACK
		EDGE OF WETLANDS
		WETLAND BUFFER
		SURVEY MONUMENT
TOFA	TOFA	TAXILANE OBJECT FREE AREA
		EDGE OF PAVEMENT
		EDGE OF CONCRETE
CC	CC	CONCRETE CURB
SGC	SGC	SLOPED GRANITE CURB
VGC	VGC	VERTICAL GRANITE CURB
		SAWCUT
		BUILDING
EN	EN	BUILDING ENTRANCE
		BOLLARD
		SIGN
		TREE
		FENCE
SF	SF	SILT FENCE
		DRAINAGE FLOW
		SWALE
98	98	MINOR CONTOUR
100	100	MAJOR CONTOUR
10	10	PARKING COUNT
SWL	SWL	SINGLE WHITE LINE
DYL	DYL	DOUBLE YELLOW LINE
		STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		DETECTABLE WARNING PANEL
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING
97.5	97.5	SPOT ELEVATION
		KSAT TEST LOCATION
		TEST PIT LOCATION
		MONITORING WELL
D	D	DRAIN
S	S	SEWER
OHW	OHW	OVERHEAD WIRE
W	W	WATER
FP	FP	FIRE PROTECTION
G	G	GAS
UE	UE	UNDERGROUND ELECTRIC
ST	ST	STEAM
T	T	TELEPHONE
		CATCH BASIN
		DOUBLE CATCH BASIN
		DRAIN MANHOLE
		PLUG OR CAP
CO	CO	CLEANOUT
		HEADWALL
		SEWER MANHOLE
WSO	WSO	WATER SHUT-OFF
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE,VALVE&BOX
HYD	HYD	FIRE HYDRANT
		THRUST BLOCK
GV	GV	GAS GATE
GM	GM	GAS METER
E	E	ELECTRIC MANHOLE
		LIGHT POLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
T	T	TELEPHONE MANHOLE
		INLET PROTECTION
		STONE CHECK DAM
		TREE TO BE REMOVED
		STABILIZED CONSTRUCTION ENTRANCE
		STRUCTURE TO BE REMOVED
		PAVEMENT TO BE REMOVED
		CONCRETE
		STAMPED CONCRETE
		WETLAND IMPACT
		PDA BUFFER IMPACT

SHAWN M. TOBEY No. 14121 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS - ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS - ISSUED FOR PDA REVIEW - REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS - ISSUED FOR PDA REVIEW

CHECKED BY: WRD
DRAWN BY: MJG/SMT
DESIGNED BY: SMT

HOYLE TANNER
Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801
(603) 431-2520
www.hoyletanner.com

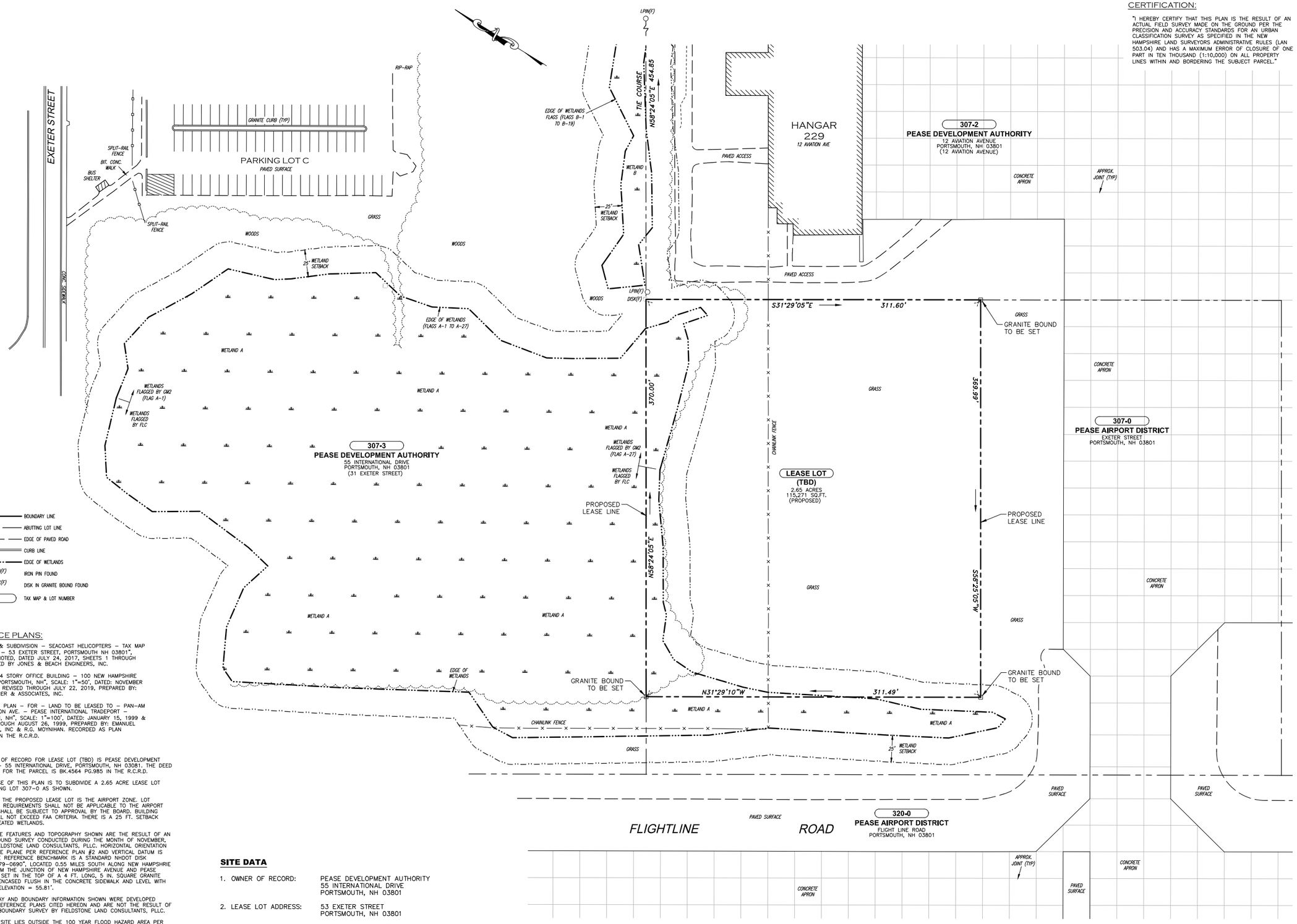
ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
51 EXETER STREET
PORTSMOUTH, NH 03801

PROJECT NOTES & LEGEND
C2

PROJECT NO. 20.565900.00



CERTIFICATION:

"I HEREBY CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND PER THE PRECISION AND ACCURACY STANDARDS FOR AN URBAN CLASSIFICATION SURVEY AS SPECIFIED IN THE NEW HAMPSHIRE LAND SURVEYORS ADMINISTRATIVE RULES (LAN 503.04) AND HAS A MAXIMUM ERROR OF CLOSURE OF ONE PART IN TEN THOUSAND (1:10,000) ON ALL PROPERTY LINES WITHIN AND BORDERING THE SUBJECT PARCEL."

STATE OF NEW HAMPSHIRE — No. 848 — MICHAEL D. PLOOF — LICENSED LAND SURVEYOR — SIGNATURE

11/23/21

LEGEND:

- BOUNDARY LINE
- ABUTTING LOT LINE
- EDGE OF PAVED ROAD
- CURB LINE
- EDGE OF WETLANDS
- LPIN(F) — IRON PIN FOUND
- DISK(F) — DISK IN GRANITE BOUND FOUND
- 307-0 — TAX MAP & LOT NUMBER

REFERENCE PLANS:

1. "SITE PLAN & SUBDIVISION – SEACOAST HELICOPTERS – TAX MAP 307, LOT 3 – 53 EXETER STREET, PORTSMOUTH NH 03801". SCALE: AS NOTED, DATED JULY 24, 2017, SHEETS 1 THROUGH 12, PREPARED BY JONES & BEACH ENGINEERS, INC.
2. "PROPOSED 4 STORY OFFICE BUILDING – 100 NEW HAMPSHIRE AVENUE – PORTSMOUTH, NH", SCALE: 1"=50', DATED: NOVEMBER 16, 2018 & REVISED THROUGH JULY 22, 2019, PREPARED BY: HOYLE, TANNER & ASSOCIATES, INC.
3. "SUBDIVISION PLAN – FOR – LAND TO BE LEASED TO – PAN–AM – 14 AVIATION AVE. – PEASE INTERNATIONAL TRADEPORT – PORTSMOUTH, NH", SCALE: 1"=100', DATED: JANUARY 15, 1999 & REVISED THROUGH AUGUST 26, 1999, PREPARED BY: EMANUEL ENGINEERING, INC & R.G. MOYNIHAN. RECORDED AS PLAN #D–27540 IN THE R.C.R.D.

NOTES:

1. THE OWNER OF RECORD FOR LEASE LOT (TBD) IS PEASE DEVELOPMENT AUTHORITY – 55 INTERNATIONAL DRIVE, PORTSMOUTH, NH 03081. THE DEED REFERENCES FOR THE PARCEL IS BK.4564 PG.985 IN THE R.C.R.D.
2. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE A 2.65 ACRE LEASE LOT FROM EXISTING LOT 307–0 AS SHOWN.
3. ZONING FOR THE PROPOSED LEASE LOT IS THE AIRPORT ZONE. LOT DIMENSIONAL REQUIREMENTS SHALL NOT BE APPLICABLE TO THE AIRPORT ZONE AND SHALL BE SUBJECT TO APPROVAL BY THE BOARD. BUILDING HEIGHT SHALL NOT EXCEED FAA CRITERIA. THERE IS A 25 FT. SETBACK FROM DELINEATED WETLANDS.
4. THE SURFACE FEATURES AND TOPOGRAPHY SHOWN ARE THE RESULT OF AN ON THE GROUND SURVEY CONDUCTED DURING THE MONTH OF NOVEMBER, 2020 BY FIELDSTONE LAND CONSULTANTS, PLLC. HORIZONTAL ORIENTATION IS N.H. STATE PLANE PER REFERENCE PLAN #2 AND VERTICAL DATUM IS NAVD88. THE REFERENCE BENCHMARK IS A STANDARD NHDOT DISK STAMPED "379–0690", LOCATED 0.55 MILES SOUTH ALONG NEW HAMPSHIRE AVENUE FROM THE JUNCTION OF NEW HAMPSHIRE AVENUE AND PEASE BOULEVARD. SET IN THE TOP OF A 4 FT. LONG, 5 IN. SQUARE GRANITE MONUMENT ENCASED FLUSH IN THE CONCRETE SIDEWALK AND LEVEL WITH THE ROAD. ELEVATION = 55.81'.
5. RIGHT OF WAY AND BOUNDARY INFORMATION SHOWN WERE DEVELOPED FROM THE REFERENCE PLANS CITED HEREON AND ARE NOT THE RESULT OF A PRECISE BOUNDARY SURVEY BY FIELDSTONE LAND CONSULTANTS, PLLC.
6. THE ENTIRE SITE LIES OUTSIDE THE 100 YEAR FLOOD HAZARD AREA PER FEMA F.I.R.M. MAP #33015C0255E, DATED MAY 17, 2005.
7. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN COMPILED IN PART FROM PLANS OF RECORD AND FIELD LOCATION. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITIES.

SITE DATA

1.	OWNER OF RECORD:	PEASE DEVELOPMENT AUTHORITY 55 INTERNATIONAL DRIVE PORTSMOUTH, NH 03801
2.	LEASE LOT ADDRESS:	53 EXETER STREET PORTSMOUTH, NH 03801
3.	LEASE LOT ID:	TAX MAP 307 LOT TBD
4.	LEASE LOT AREA:	115,271± S.F (2.65± ACRES)
5.	ZONING:	AIRPORT ZONE

REV.	DESCRIPTION	DATE
4	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING	11/23/21
3	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW	10/22/21
2	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS	10/08/21
1	60% DESIGN PLANS – ISSUED FOR PDA REVIEW	08/30/21

CHECKED BY: WRD
DRAWN BY: MJG/SMT
DESIGNED BY: SMT

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100 International Drive, Suite 360
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ORIGINAL DATE: AUGUST 30, 2021
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APPLICANT: PEASE AVIATION PARTNERS, LLC
7355 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

SUBDIVISION PLAN

C3

PROJECT NO. 20.565900.00

SHEET 3 OF 31

CERTIFICATION:

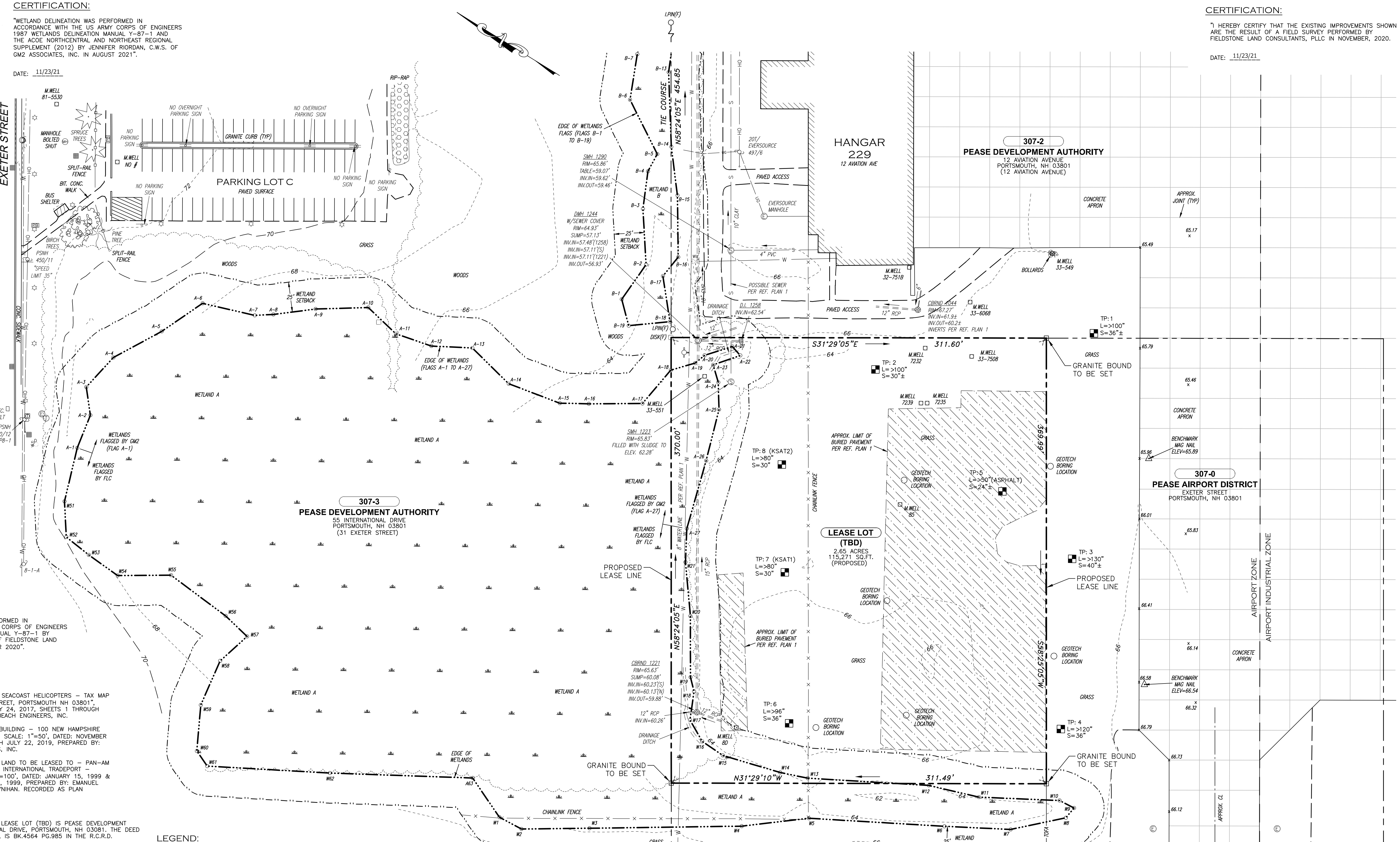
"WETLAND DELINEATION WAS PERFORMED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLANDS DELINEATION MANUAL Y-87-1 AND THE ACOE NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT (2012) BY JENNIFER RIORDAN, C.W.S. OF GM2 ASSOCIATES, INC. IN AUGUST 2021".

DATE: 11/23/21

CERTIFICATION:

"I HEREBY CERTIFY THAT THE EXISTING IMPROVEMENTS SHOWN ARE THE RESULT OF A FIELD SURVEY PERFORMED BY FIELDSTONE LAND CONSULTANTS, PLLC IN NOVEMBER, 2020.

DATE: 11/23/21



CERTIFICATION:

"WETLAND DELINEATION WAS PERFORMED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLANDS DELINEATION MANUAL Y-87-1 BY CHRISTOPHER A. GUIDA, C.W.S. OF FIELDSTONE LAND CONSULTANTS, PLLC IN NOVEMBER 2020".

DATE: 11/23/21

REFERENCE PLANS:

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3. "SUBDIVISION PLAN – FOR – LAND TO BE LEASED TO – PAN-AM – 14 AVIATION AVE. – PEASE INTERNATIONAL TRADEPORT – PORTSMOUTH, NH", SCALE: 1"=100', DATED: JANUARY 15, 1999 & REVISED THROUGH AUGUST 26, 1999, PREPARED BY: EMANUEL ENGINEERING, INC & R.G. MOYNIHAN. RECORDED AS PLAN #D-27540 IN THE R.C.R.D.

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4. RIGHT OF WAY AND BOUNDARY INFORMATION SHOWN WERE DEVELOPED FROM THE REFERENCE PLANS CITED HEREON AND ARE NOT THE RESULT OF A PRECISE BOUNDARY SURVEY BY FIELDSTONE LAND CONSULTANTS, PLLC.
5. THE EASTERN HALF OF WETLAND "A" AND ALL OF WETLAND "B" WERE DELINEATED BY JENNIFER RIORDAN (CWS #269) AND MEG GORDAN OF GM2 ASSOCIATES, INC. (GM2) IN AUGUST 2021 AND LOCATED WITH A TRIMBLE GEO7X GPS UNIT. THE WESTERN HALF OF WETLAND "A" WAS DELINEATED BY CHRISTOPHER GUIDA, (CWS #053) OF FIELDSTONE LAND CONSULTANTS, PLLC (FLC) IN NOVEMBER 2020.
6. THE ENTIRE SITE LIES OUTSIDE THE 100 YEAR FLOOD HAZARD AREA PER FEMA F.I.R.M. MAP #33015C0255F, DATED JANUARY 29, 2021.
7. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN COMPILED IN PART FROM PLANS OF RECORD AND FIELD LOCATION. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITIES.

LEGEND:

BOUNDARY LINE
ABUTTING LOT LINE
IRON PIN FOUND
DISK IN GRANITE BOUND FOUND
TAXILANE OBJECT FREE AREA
EDGE OF PAVED ROAD
CURB LINE
EDGE OF WETLANDS
WETLAND BUFFER
10' CONTOUR INTERVAL
2' CONTOUR INTERVAL
CULVERT
OVERHEAD UTILITY LINE
UTILITY POLE & GUY
UNDERGROUND UTILITY LINE
GAS LINE
WATER LINE
SEWER LINE
CATCH BASIN (SQUARE)
CATCH BASIN (ROUND)
DRAIN MANHOLE
SEWER MANHOLE
SEWER CLEANOUT
WATER HYDRANT
WATER VALVE
WATER SHUTOFF
GAS VALVE
CABLE PEDESTAL
TELEPHONE PEDESTAL
TELEPHONE MANHOLE
CONTROL BOX
LIGHT POST
SINGLE SIGN POST
TEST PIT DEPTH TO LEDGE DEPTH TO SHWT
TAX MAP & LOT NUMBER

MONITORING WELL ELEVATION CHART:

M.WELL NUMBER	GROUND ELEV.	CASING ELEV.	PVC ELEV.
33-551	63.07'	65.27'	64.94'
8D	66.36'	68.50'	68.28'
85	65.45'	67.63'	67.21'
7239	65.86'	68.50'	67.73'
7235	66.20'	68.27'	67.79'
33-7508	65.13'	65.13'	65.10'
33-6068	65.96'	67.65'	67.10'
33-549	66.30'	67.89'	67.63'
7232	65.13'	68.00'	67.71'
32-751B	66.78'	---	---
81-5530	73.54'	---	---
---	73.33'	---	---

SCALE IN FEET: 40 0 40 80

REV.	REVISION DESCRIPTION	DATE
4	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING	11/23/21
3	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW	10/22/21
2	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS	10/08/21
1	60% DESIGN PLANS – ISSUED FOR PDA REVIEW	08/30/21

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(603) 431-2520
www.hoyletanner.com

SCALE: AS SHOWN | ORIGINAL DATE: AUGUST 30, 2021 | DESIGNED BY SMT | DRAWN BY MJG/SMT | CHECKED BY WRD

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

EXISTING CONDITIONS PLAN

C4

PROJECT NO. 20.565900.00

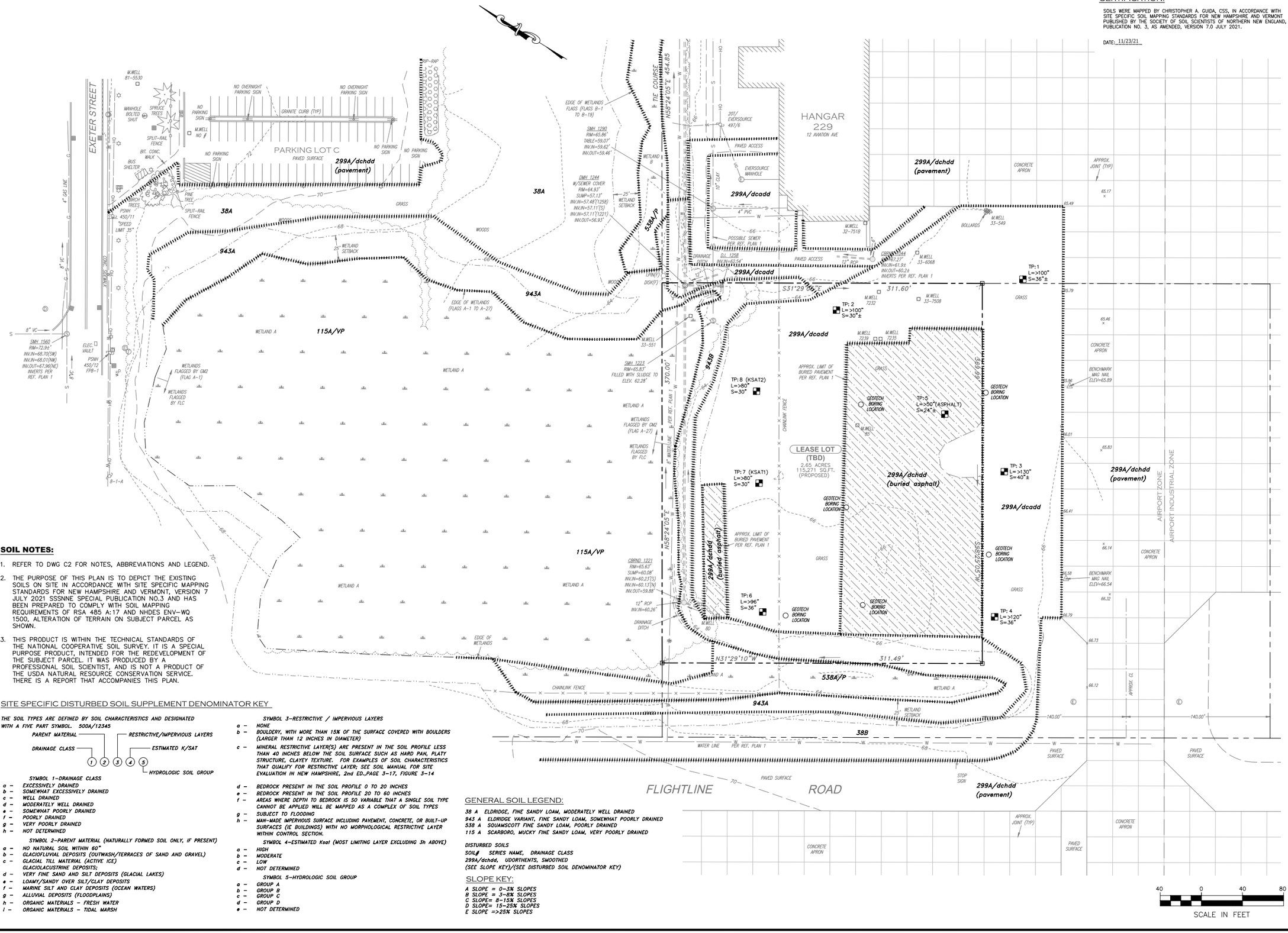
SHEET 4 OF 31

CERTIFICATION:

SOILS WERE MAPPED BY CHRISTOPHER A. GUIDA, CSS, IN ACCORDANCE WITH SITE SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT PUBLISHED BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND, PUBLICATION NO. 3, AS AMENDED, VERSION 7.0 JULY 2021.

DATE: 11/23/21

STATE OF NEW HAMPSHIRE — CHRISTOPHER A. GUIDA — no. 00091 — CERTIFIED SOIL SCIENTIST



SOIL NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING SOILS ON SITE IN ACCORDANCE WITH SITE SPECIFIC MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT, VERSION 7 JULY 2021 SSSNNE SPECIAL PUBLICATION NO.3 AND HAS BEEN PREPARED TO COMPLY WITH SOIL MAPPING REQUIREMENTS OF RSA 485 A:17 AND NHDES ENV-WQ 1500, ALTERATION OF TERRAIN ON SUBJECT PARCEL AS SHOWN.
3. THIS PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR THE REDEVELOPMENT OF THE SUBJECT PARCEL. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A REPORT THAT ACCOMPANIES THIS PLAN.

SITE SPECIFIC DISTURBED SOIL SUPPLEMENT DENOMINATOR KEY

THE SOIL TYPES ARE DEFINED BY SOIL CHARACTERISTICS AND DESIGNATED WITH A FIVE PART SYMBOL. 500A/12345

PARENT MATERIAL — RESTRICTIVE/IMPERVIOUS LAYERS
DRAINAGE CLASS — ESTIMATED K/SAT
(1) (2) (3) (4) (5) — HYDROLOGIC SOIL GROUP

SYMBOL 1–DRAINAGE CLASS

a – EXCESSIVELY DRAINED
b – SOMEWHAT EXCESSIVELY DRAINED
c – WELL DRAINED
d – MODERATELY WELL DRAINED
e – SOMEWHAT POORLY DRAINED
f – POORLY DRAINED
g – VERY POORLY DRAINED
h – NOT DETERMINED

SYMBOL 2–PARENT MATERIAL (NATURALLY FORMED SOIL ONLY, IF PRESENT)

a – NO NATURAL SOIL WITHIN 60"
b – GLACIOFLUVIAL DEPOSITS (OUTWASH/TERRACES OF SAND AND GRAVEL)
c – GLACIAL TILL MATERIAL (ACTIVE ICE)
GLACIOLACUSTRINE DEPOSITS;
d – VERY FINE SAND AND SILT DEPOSITS (GLACIAL LAKES)
e – LOAMY/SANDY OVER SILT/CLAY DEPOSITS
f – MARINE SILT AND CLAY DEPOSITS (OCEAN WATERS)
g – ALLUVIAL DEPOSITS (FLOODPLAINS)
h – ORGANIC MATERIALS – FRESH WATER
i – ORGANIC MATERIALS – TIDAL MARSH

SYMBOL 3–RESTRICTIVE / IMPERVIOUS LAYERS

a – NONE
b – BOULDERY, WITH MORE THAN 15% OF THE SURFACE COVERED WITH BOULDERS (LARGER THAN 12 INCHES IN DIAMETER)
c – MINERAL RESTRICTIVE LAYER(S) ARE PRESENT IN THE SOIL PROFILE LESS THAN 40 INCHES BELOW THE SOIL SURFACE SUCH AS HARD PAN, PLATY STRUCTURE, CLAYEY TEXTURE. FOR EXAMPLES OF SOIL CHARACTERISTICS THAT QUALIFY FOR RESTRICTIVE LAYER; SEE SOIL MANUAL FOR SITE EVALUATION IN NEW HAMPSHIRE, 2nd ED.,PAGE 3–17, FIGURE 3–14
d – BEDROCK PRESENT IN THE SOIL PROFILE 0 TO 20 INCHES
e – BEDROCK PRESENT IN THE SOIL PROFILE 20 TO 60 INCHES
f – AREAS WHERE DEPTH TO BEDROCK IS SO VARIABLE THAT A SINGLE SOIL TYPE CANNOT BE APPLIED WILL BE MAPPED AS A COMPLEX OF SOIL TYPES
g – SUBJECT TO FLOODING
h – MAN-MADE IMPERVIOUS SURFACE INCLUDING PAVEMENT, CONCRETE, OR BUILT-UP SURFACES (IE BUILDINGS) WITH NO MORPHOLOGICAL RESTRICTIVE LAYER WITHIN CONTROL SECTION.

SYMBOL 4–ESTIMATED Ksat (MOST LIMITING LAYER EXCLUDING 3h ABOVE)

a – HIGH
b – MODERATE
c – LOW
d – NOT DETERMINED

SYMBOL 5–HYDROLOGIC SOIL GROUP

a – GROUP A
b – GROUP B
c – GROUP C
d – GROUP D
e – NOT DETERMINED

GENERAL SOIL LEGEND:

38 A ELDRIDGE, FINE SANDY LOAM, MODERATELY WELL DRAINED
943 A ELDRIDGE VARIANT, FINE SANDY LOAM, SOMEWHAT POORLY DRAINED
538 A SQUAMSCOTT FINE SANDY LOAM, POORLY DRAINED
115 A SCARBORO, MUCKY FINE SANDY LOAM, VERY POORLY DRAINED

DISTURBED SOILS
SOIL# SERIES NAME, DRAINAGE CLASS
299A/dchdd, UDORTHENTS, SMOOTHED
(SEE SLOPE KEY)/(SEE DISTURBED SOIL DENOMINATOR KEY)

SLOPE KEY:

A SLOPE = 0–3% SLOPES
B SLOPE = 3–8% SLOPES
C SLOPE= 8–15% SLOPES
D SLOPE= 15–25% SLOPES
E SLOPE =>25% SLOPES

REV.	DESCRIPTION	DATE
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DESIGNED BY: SMT
DRAWN BY: MJG/SMT
CHECKED BY: WRD
ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7550 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
65 EXETER STREET
PORTSMOUTH, NH 03801

SITE SPECIFIC SOILS MAP
C5

PROJECT NO. 20.565900.00

SHEET 5 OF 31

AIRPORT NOTE:

1. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE PEASE DEVELOPMENT AUTHORITY. TEMPORARY SECURITY FENCING WILL BE REQUIRED IN THE TAXIWAY OBJECT FREE AREA AND MAY REQUIRE THE TAXIWAY TO BE CLOSED WITH BARRICADES PLACED AT THE ENTRANCE.

DEMOLITION NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
3. INSTALL ALL EROSION CONTROL MEASURES PRIOR TO THE START OF ANY SITE DEMOLITION OR CONSTRUCTION. ALL SILT SOCK LOCATIONS SHALL BY SET USING GPS.
4. NO DISTURBANCES SHALL OCCUR OUTSIDE OF THE LIMITS OF THE SILT SOCK SET FOR EROSION CONTROL.
5. THE CONTRACTOR SHALL REMOVE ALL UTILITIES, MAINS AND SERVICES UNCOVERED DURING CUT OPERATIONS OR WITHIN 36" OF FINISHED GRADE.
6. ALL EXISTING MONITORING WELLS ARE TO REMAIN. COORDINATE WITH PDA TO CUT AND LOWER WELL COVERS TO BE FLUSH WITH THE FINISHED SURFACE.

CONSTRUCTION SEQUENCE:

1. INSTALL SILT SOCKS, INLET PROTECTION BARRIERS AND CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS OUTSIDE OF THE AIRPORT FENCE, PRIOR TO THE START OF ANY CONSTRUCTION.
2. REMOVE AND DISPOSE OF EXISTING PAVEMENT, SITE STRUCTURES, UTILITIES AND VEGETATION AS SHOWN ON THE PLANS OUTSIDE OF THE AIRPORT FENCE.
3. STRIP THE TOPSOIL OUTSIDE OF THE AIRPORT FENCE AND STOCKPILE ONSITE. CONSTRUCT A SILT SOCK PERIMETER AROUND ALL STOCKPILES.
4. PLACE GRAVELS FOR THE PROPOSED ACCESS DRIVE. CONSTRUCT AND STABILIZE CUT AND FILL SLOPES ALONG THE ACCESS DRIVE. APPLY TEMPORARY (OR PERMANENT) SEED AND MULCH WITHIN 72 HOURS OF THEIR CONSTRUCTION.
5. INSTALL TEMPORARY SECURITY FENCING. COORDINATE WITH AIRPORT AND PEASE DEVELOPMENT AUTHORITY.
6. REMOVE AND DISPOSE OF EXISTING AIRPORT FENCE WITHIN PROJECT LIMITS AS SHOWN.
7. INSTALL SILT SOCK AND INLET PROTECTION BARRIERS IN ALL REMAINING AREAS PRIOR TO THE START OF ANY CONSTRUCTION.
8. REMOVE AND DISPOSE OF THE REMAINING EXISTING PAVEMENT, SITE STRUCTURES, UTILITIES AND VEGETATION
9. STRIP THE REMAINING TOPSOIL AND STOCKPILE ONSITE.
10. CONSTRUCT THE FUEL FARM & CONCRETE APRON NEEDED FOR OPERATION.
11. CONSTRUCT BUILDING FOOTINGS AND FOUNDATION WALLS FOR THE FBO & HANGAR. BACKFILL FOUNDATION.
12. CONSTRUCT BRIDGE ABUTMENTS AND BACKFILL.
13. INSTALL ALL DRAINAGE, WATER, SEWER, ELECTRIC, TELECOM AND GAS UTILITIES.
14. PLACE GRAVELS FOR THE PROPOSED PARKING AREAS AND CONCRETE APRON. CONSTRUCT AND STABILIZE CUT AND FILL SLOPES AROUND THE SITE. APPLY TEMPORARY (OR PERMANENT) SEED AND MULCH WITHIN 72 HOURS OF THEIR CONSTRUCTION.
15. INSTALL BINDER PAVING COURSE.
16. CONSTRUCT THE FBO AND HANGAR.
17. CONSTRUCT THE CONCRETE APRON.
18. INSTALL THE PEDESTRIAN BRIDGE.
19. INSTALL CURBING AND POUR CONCRETE SIDEWALKS.
20. INSTALL NEW AIRPORT FENCING. REMOVE TEMPORARY FENCING ONCE SECURITY CONTROLS ARE SETUP.
21. INSTALL LANDSCAPE PLANTINGS.
22. INSTALL SCREENED LOAM (4" MIN.) ON ALL DISTURBED SURFACES AND APPLY PERMANENT SEEDING.
23. INSTALL FINISH PAVEMENT, PAVEMENT MARKINGS AND SIGNAGE.
24. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.
25. CLEAN THE ENTIRE STORMWATER SYSTEM OF ALL SEDIMENT AND DEBRIS, WITHIN THE LIMIT OF WORK.

40 0 40 80
SCALE IN FEET

SHAWN M. TOBEY No. 14121 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS – ISSUED FOR PDA REVIEW

CHECKED BY WRD | DRAWN BY MJG/SMT | DESIGNED BY SMT | DRAFTED BY MJG

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ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
63 EXETER STREET
PORTSMOUTH, NH 03801

SITE PREPARATION & DEMO PLAN

C6

PROJECT NO. 20.565900.00

SHEET 6 OF 31

SIGN SUMMARY

M.U.T.C.D. NUMBER	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	SIGN
R1-1	30"	30"	STOP
R7-8	12"	18"	RESERVED PARKING
R7-8A	12"	6"	VAN ACCESSIBLE

SITE NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWG C8A FOR WETLAND IMPACT CALCULATIONS.
3. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
4. THE PROPOSED WORK IS LOCATED ON LOTS 307–0, 307–2 & 307–3. A NEW 2.65± ACRE LEASE LOT WILL BE SUBDIVIDED FROM EXISTING LOT 307–0 FOR THE PROPOSED FBO, HANGAR, FUEL FARM AND PARKING. THE ACCESS ROAD TO BE CONSTRUCTED ON LOT 307–3 WILL SERVE BOTH THIS PROJECT AND HANGAR 229.

SITE DATA

1.	OWNER OF RECORD:	PEASE DEVELOPMENT AUTHORITY 55 INTERNATIONAL DRIVE PORTSMOUTH, NH 03801
2.	APPLICANT:	PEASE AVIATION PARTNERS, LLC 7555 IPSWICH ROAD HOUSTON, TX 77061
3.	LEASE LOT ADDRESS:	53 EXETER STREET PORTSMOUTH, NH 03801
4.	LEASE LOT ID:	TAX MAP 307 LOT TBD
5.	LEASE LOT AREA:	115,271± S.F (2.65± ACRES)
6.	ZONING:	AIRPORT ZONE
7.	BUILDING SQ. FT.:	AIRCRAFT STORAGE = 12,000 SF FBO = 12,681 SF COFFEE KIOSK = 174 SF TOTAL = 24,855 SF
8.	PARKING:	AIRPORT – DETERMINED BY BOARD 28 SPACES PROPOSED
9.	ACCESSIBLE PARKING:	26 TO 50 SPACES = 2 REQUIRED
10.	VAN ACCESSIBLE:	1 PER 6 OF TOTAL 1 VAN ACCESSIBLE REQUIRED
11.	BICYCLE RACKS:	1 PER 10 PARKING SPACES 28/10 = 3 BICYCLE RACKS REQUIRED
12.	AREA OF DISTURBANCE:	LEASE LOT = 95,645± SF OFFSITE = 90,245± SF TOTAL = 185,890± SF
13.	IMPERVIOUS COVER:	NET INCREASE = 81,320± SF
14.	OPEN SPACE CALC:	TOTAL LOT SIZE = 2.65 AC TOTAL UPLAND AREA = 2.43 AC TOTAL WETLAND AREA = 0.22 AC OPEN SPACE PROVIDED = 0.91 AC

DIMENSIONAL REQUIREMENTS (AIRPORT)

REGULATION	REQUIRED	PROVIDED
LOT AREA:	NA	2.65 AC
LOT FRONTAGE:	NA	NONE
FRONT YARD SETBACK[1]:	NA	50.9 FT
SIDE YARD SETBACK:	NA	20.6 FT
REAR YARD SETBACK:	NA	60.5 FT
MAX. BUILDING HEIGHT:	PER FAA	33.0 FT
WETLAND SETBACK[2]:	25.0 FT	25.6 FT
PARKING:	PER BOARD	28 SPACES
ACCESSIBLE PARKING:	2 SPACES	2 SPACES
VAN ACCESSIBLE PARKING:	1 SPACES	2 SPACES
STALL DIMENSIONS:	8.5 FT WIDE (160 SF)	9.0 FT WIDE (162 SF)
AISLE WIDTH:	24 FT	24 FT
BICYCLE RACKS:	3	3
OPEN SPACE:	NA	0.91 AC (34%)

DIMENSIONAL NOTES:

1. THE NORTHWEST LEASE LINE FACING EXETER STREET IS CONSIDERED THE FRONT OF THE LEASE LOT.
2. A 25' WETLAND SETBACK IS MAINTAINED FOR ALL BUILDINGS AND PARKING. AREAS ESSENTIAL FOR SITE ACCESS IMPACT THE WETLANDS AND BUFFER.

MINIMUM FBO STANDARDS

REGULATION	REQUIRED	PROVIDED
OFFICE/TERMINAL FACILITY:	2,000 SF	12,681 SF
HANGAR SIZE:	12,000 SF	12,000 SF
PAVED APRON AREA:	150,000 SF	152,000 SF[1]
FUEL STORAGE – JET A	36,000 GAL	60,000 GAL
FUEL STORAGE – AVGAS	5,000 GAL	15,000 GAL

NOTE:

1. THERE IS 17,000 SF OF PAVED APRON ADJACENT TO THE NEW HANGAR AND 135,000 SF OF REMOTE APRON AREA TO BE LEASED FOR A TOTAL OF 152,000 SF.

SCALE IN FEET

SHAWN M. TOBEY No. 14121 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	REVISION DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS – ISSUED FOR PDA REVIEW

DESIGNED BY	SMT
DRAWN BY	MJG/SMT
CHECKED BY	WRD

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SITE LAYOUT & MATERIALS PLAN

C7

PROJECT NO. 20.565900.00

SHEET 7 OF 31

FUEL FARM NOTES:

1. REFER TO FUEL FARM DWGS PREPARED BY ATTAWAY SERVICES CAROLINA, INC. FOR ADDITIONAL DETAILS.
2. STORMWATER RUNOFF FROM THE TANK AND FUEL TRUCK CONTAINMENT AREAS WILL DRAIN TO THE 10,000 GALLON CONCRETE CONTAINMENT BASIN BEFORE ENTERING AN ISOLATION VALVE PIT AND 1,000 GALLON OIL WATER SEPARATOR. THE OIL WATER SEPARATOR WILL DISCHARGE THE CLOSED DRAINAGE SYSTEM AND THEN TO JELLYFISH FILTER JF2 PRIOR TO ENTERING THE UNDERGROUND STORMWATER DETENTION SYSTEM.

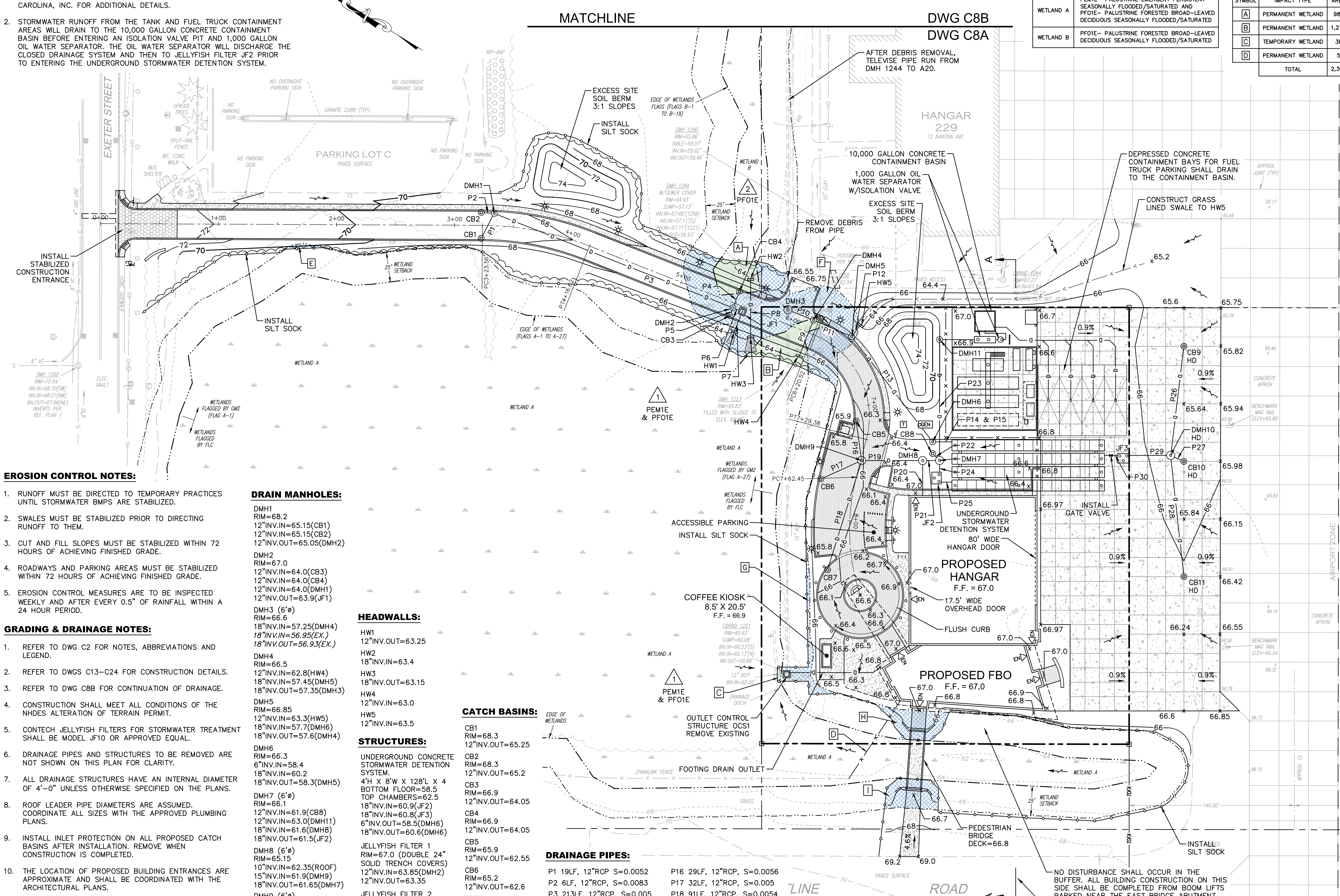
WETLAND CLASSIFICATION	
WETLAND A	PEM1E– PALUSTRINE EMERGENT PERSISTENT SEASONALLY FLOODED/SATURATED AND PFO1E– PALUSTRINE FORESTED BROAD–LEAVED DECIDUOUS SEASONALLY FLOODED/SATURATED
WETLAND B	PFO1E– PALUSTRINE FORESTED BROAD–LEAVED DECIDUOUS SEASONALLY FLOODED/SATURATED

WETLAND IMPACTS (SF)

SYMBOL	IMPACT TYPE	AREA
A	PERMANENT WETLAND	986
B	PERMANENT WETLAND	1,274
C	TEMPORARY WETLAND	38
D	PERMANENT WETLAND	5
	TOTAL	2,303

PDA BUFFER IMPACTS (SF)

SYMBOL	IMPACT TYPE	AREA
E	PERMANENT BUFFER	76
F	PERMANENT BUFFER	7,336
G	TEMPORARY BUFFER	707
H	PERMANENT BUFFER	1,049
I	PERMANENT BUFFER	1,054
	TOTAL	10,222



EROSION CONTROL NOTES:

1. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPS ARE STABILIZED.
2. SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
3. CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
4. ROADWAYS AND PARKING AREAS MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
5. EROSION CONTROL MEASURES ARE TO BE INSPECTED WEEKLY AND AFTER EVERY 0.5" OF RAINFALL WITHIN A 24 HOUR PERIOD.

GRADING & DRAINAGE NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
3. REFER TO DWG C8B FOR CONTINUATION OF DRAINAGE.
4. CONSTRUCTION SHALL MEET ALL CONDITIONS OF THE NHDES ALTERATION OF TERRAIN PERMIT.
5. CONTECH JELLYFISH FILTERS FOR STORMWATER TREATMENT SHALL BE MODEL JF10 OR APPROVED EQUAL.
6. DRAINAGE PIPES AND STRUCTURES TO BE REMOVED ARE NOT SHOWN ON THIS PLAN FOR CLARITY.
7. ALL DRAINAGE STRUCTURES HAVE AN INTERNAL DIAMETER OF 4'–0" UNLESS OTHERWISE SPECIFIED ON THE PLANS.
8. ROOF LEADER PIPE DIAMETERS ARE ASSUMED. COORDINATE ALL SIZES WITH THE APPROVED PLUMBING PLANS.
9. INSTALL INLET PROTECTION ON ALL PROPOSED CATCH BASINS AFTER INSTALLATION. REMOVE WHEN CONSTRUCTION IS COMPLETED.
10. THE LOCATION OF PROPOSED BUILDING ENTRANCES ARE APPROXIMATE AND SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS.
11. ACCESSIBLE PARKING STALLS HAVE SLOPES LESS THAN 2% IN ALL DIRECTIONS.
12. THE MAXIMUM ALLOWABLE SIDEWALK AND TIP–DOWN RAMP CROSS SLOPE SHALL BE 2.0% (1% MIN.)
13. THE MAXIMUM ALLOWABLE SLOPE OF THE ACCESSIBLE ROUTE EXCLUDING TIP–DOWN RAMPS SHALL BE 5%.
14. AT THE COMPLETION OF CONSTRUCTION, THE PERMIT HOLDER AND A QUALIFIED ENGINEER MUST CERTIFY THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND THE CONTECH JELLYFISH SYSTEM WAS INSTALLED CORRECTLY. ANY DEVIATIONS FROM THE APPROVED PLANS THAT DO NOT REQUIRE AN AMENDMENT MUST BE DOCUMENTED.

DRAIN MANHOLES:

DMH1
RIM=68.2
12"INV.IN=65.15(CB1)
12"INV.IN=65.15(CB2)
12"INV.OUT=65.05(DMH2)

DMH2
RIM=67.0
12"INV.IN=64.0(CB3)
12"INV.IN=64.0(CB4)
12"INV.IN=64.0(DMH1)
12"INV.OUT=63.9(JF1)

DMH3 (6'ø)
RIM=66.6
18"INV.IN=57.25(DMH4)
18"INV.IN=56.95(EX.)
18"INV.OUT=56.93(EX.)

DMH4
RIM=66.5
12"INV.IN=62.8(HW4)
18"INV.IN=57.45(DMH5)
18"INV.OUT=57.35(DMH3)

DMH5
RIM=66.85
12"INV.IN=63.3(HW5)
18"INV.IN=57.7(DMH6)
18"INV.OUT=57.6(DMH4)

DMH6
RIM=66.3
6"INV.IN=58.4
18"INV.IN=60.2
18"INV.OUT=58.3(DMH5)

DMH7 (6'ø)
RIM=66.1
12"INV.IN=61.9(CB8)
12"INV.IN=63.0(DMH11)
18"INV.IN=61.6(DMH8)
18"INV.OUT=61.5(JF2)

DMH8 (6'ø)
RIM=65.15
10"INV.IN=62.35(ROOF)
15"INV.IN=61.9(DMH9)
18"INV.OUT=61.65(DMH7)

DMH9 (6'ø)
RIM=65.9
12"INV.IN=62.4(CB5)
12"INV.IN=62.4(CB6)
12"INV.IN=62.4(CB7)
15"INV.OUT=62.15(DMH8)

DMH10 (6'ø) HD
RIM=65.9
12"INV.IN=62.05(CB9)
12"INV.IN=62.05(CB10)
12"INV.IN=62.05(CB11)
18"INV.OUT=61.55(JF3)

DMH11
RIM=68.0
8"INV.IN=63.9(OIL SEP.)
12"INV.OUT=63.5(DMH7)

HEADWALLS:

HW1
12"INV.OUT=63.25

HW2
18"INV.IN=63.4

HW3
18"INV.OUT=63.15

HW4
12"INV.IN=63.0

HW5
12"INV.IN=63.5

STRUCTURES:

UNDERGROUND CONCRETE STORMWATER DETENTION SYSTEM.
4'H X 8'W X 128'L X 4
BOTTOM FLOOR=58.5
TOP CHAMBERS=62.5
18"INV.IN=60.9(JF2)
18"INV.IN=60.8(JF3)
6"INV.OUT=58.5(DMH6)
18"INV.OUT=60.6(DMH6)

JELLYFISH FILTER 1
RIM=67.0 (DOUBLE 24" SOLID TRENCH COVERS)
12"INV.IN=63.85(DMH2)
12"INV.OUT=63.35

JELLYFISH FILTER 2
RIM=66.3 X 3
18"INV.IN=61.45(DMH7)
18"INV.OUT=60.95

JELLYFISH FILTER 3 HD
RIM=66.2 X 3
18"INV.IN=61.35(DMH10)
18"INV.OUT=60.85

NEW OCS1
GRATE=63.75
12"ORIFICE=60.25
12"INV.IN=60.23(EX.)
15"INV.OUT=59.88(EX.)

ROOF LEADER
10"INV.OUT=62.5

CATCH BASINS:

CB1
RIM=68.3
12"INV.OUT=65.25

CB2
RIM=68.3
12"INV.OUT=65.2

CB3
RIM=66.9
12"INV.OUT=64.05

CB4
RIM=66.9
12"INV.OUT=64.05

CB5
RIM=65.9
12"INV.OUT=62.55

CB6
RIM=65.2
12"INV.OUT=62.6

CB7
RIM=65.8
12"INV.OUT=62.9

CB8
RIM=66.0
12"INV.OUT=62.0

CB9 HD
RIM=65.52
12"INV.OUT=62.55

CB10 HD
RIM=65.67
12"INV.OUT=62.15

CB11 HD
RIM=66.11
12"INV.OUT=62.55

DRAINAGE PIPES:

P1 19LF, 12"RCP, S=0.0052
P2 6LF, 12"RCP, S=0.0083
P3 213LF, 12"RCP, S=0.005
P4 10LF, 12"RCP, S=0.005
P5 2LF, 12"RCP, S=0.025
P6 2LF, 12"RCP, S=0.025
P7 15LF, 12"RCP, S=0.0067
P8 50LF, 18"RCP, S=0.005
P9 31LF, 12"RCP, S=0.006
P10 17LF, 18"HDPE, S=0.0059
P11 30LF, 18"HDPE, S=0.005
P12 10LF, 12"HDPE, S=0.02
P13 108LF, 18"HDPE, S=0.0055
P14 17LF, 6"PVC, S=0.0071
P15 17LF, 18"HDPE, S=0.033
P16 29LF, 12"RCP, S=0.0056
P17 32LF, 12"RCP, S=0.005
P18 91LF, 12"RCP, S=0.0054
P19 45LF, 15"RCP, S=0.005
P20 26LF, 10"PVC, S=0.0057
P21 7LF, 18"RCP, S=0.0071
P22 2LF, 12"RCP, S=0.05
P23 96LF, 12"RCP, S=0.0052
P24 7LF, 18"RCP, S=0.0071
P25 10LF, 18"RCP, S=0.005
P26 87LF, 12"RCP, S=0.0057
P27 6LF, 12"RCP, S=0.016
P28 97LF, 12"RCP, S=0.0051
P29 32LF, 18"RCP, S=0.0063
P30 10LF, 18"RCP, S=0.005

STATE OF NEW HAMPSHIRE
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PROFESSIONAL ENGINEER
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DESIGNED BY	DRAWN BY	CHECKED BY
SMT	MJG/SMT	WRD

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SCALE: AS SHOWN
ORIGINAL DATE: AUGUST 30, 2021

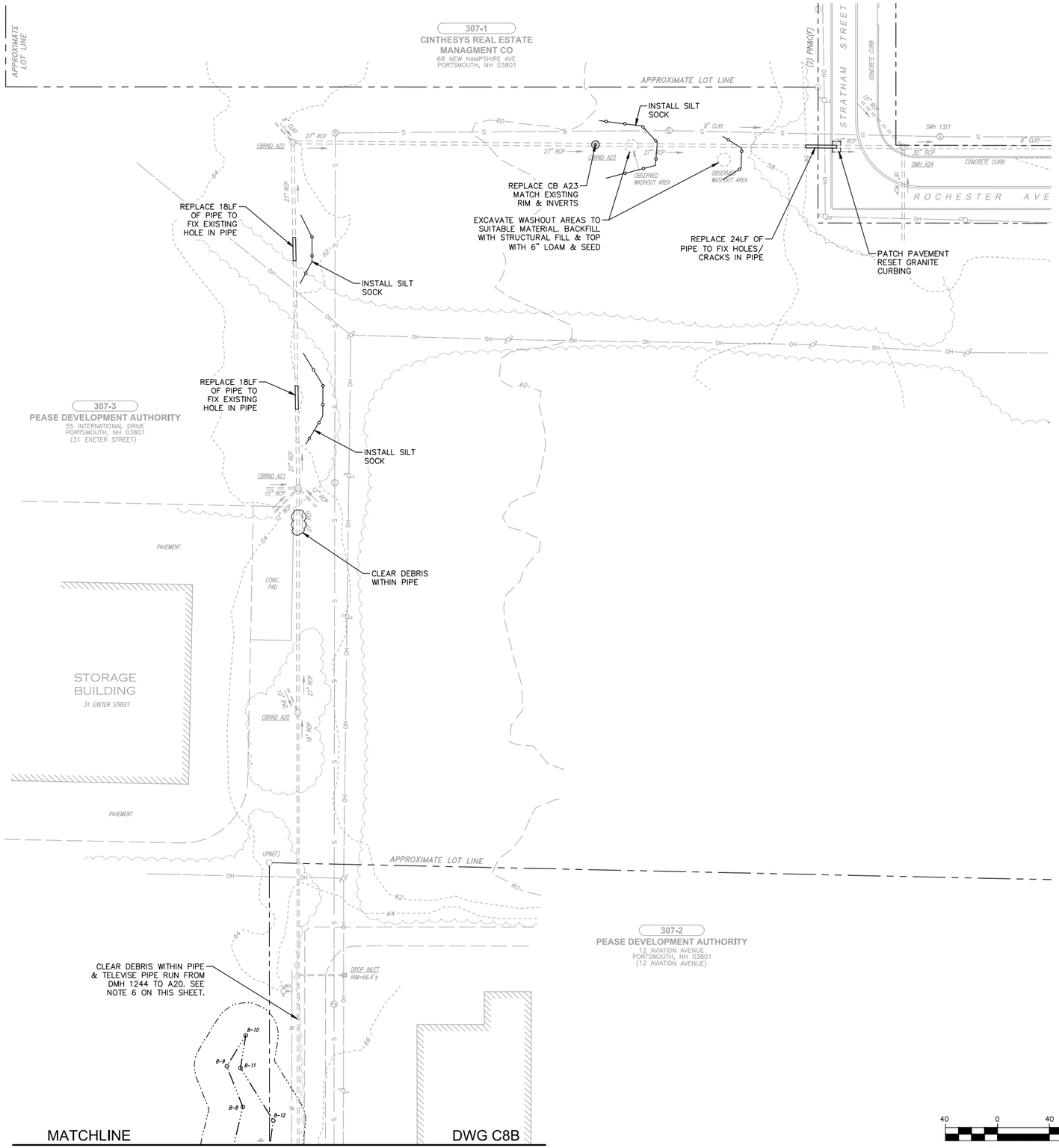
APPLICANT
PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT
PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

GRADING, DRAINAGE & E.C. PLAN 1

C8A

PROJECT NO. 20.565900.00



GRADING & DRAINAGE NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWG C8A FOR CONTINUATION OF DRAINAGE.
3. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
4. THE SURFACE FEATURES AND TOPOGRAPHY SHOWN ON STRATHAM STREET AND ROCHESTER AVENUE ARE THE RESULT OF AN ON THE GROUND SURVEY CONDUCTED DURING THE MONTH OF SEPTEMBER, 2018 BY FIELDSTONE LAND CONSULTANTS, PLLC. THE REMAINING AREAS ARE BASED ON RECORD PLANS, AERIAL IMAGERY AND NH GRANIT DATA. ALL FEATURES SHALL BE CONSIDERED APPROXIMATE AND FIELD VERIFIED PRIOR TO ANY CONSTRUCTION.
5. VIDEO INSPECTION OF THE DRAIN RUN BETWEEN CB 1221 AND DMH A24 WAS PERFORMED BY VORTEX SERVICES IN OCTOBER 2021.
6. THE FULL PIPE RUN BETWEEN DMH 1244 AND CB A20 COULD NOT BE TELEVISED DUE TO DEBRIS WITHIN THE PIPE AT EACH END. THE CONTRACTOR SHALL REMOVE THIS DEBRIS AND TELEVISE THE FULL LENGTH OF PIPE BETWEEN DMH 1244 AND DMH CB A20. THE VIDEO INSPECTION SHALL BE PROVIDED TO THE ENGINEER TO REVIEW AND TO DETERMINE THE NECESSARY REPAIRS IF HOLES OR CRACKS ARE FOUND WITHIN THE PIPE.

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7355 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT
PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
63 EXETER STREET
PORTSMOUTH, NH 03801

GRADING, DRAINAGE & E.C. PLAN 2

C8B

PROJECT NO. 20.565900.00

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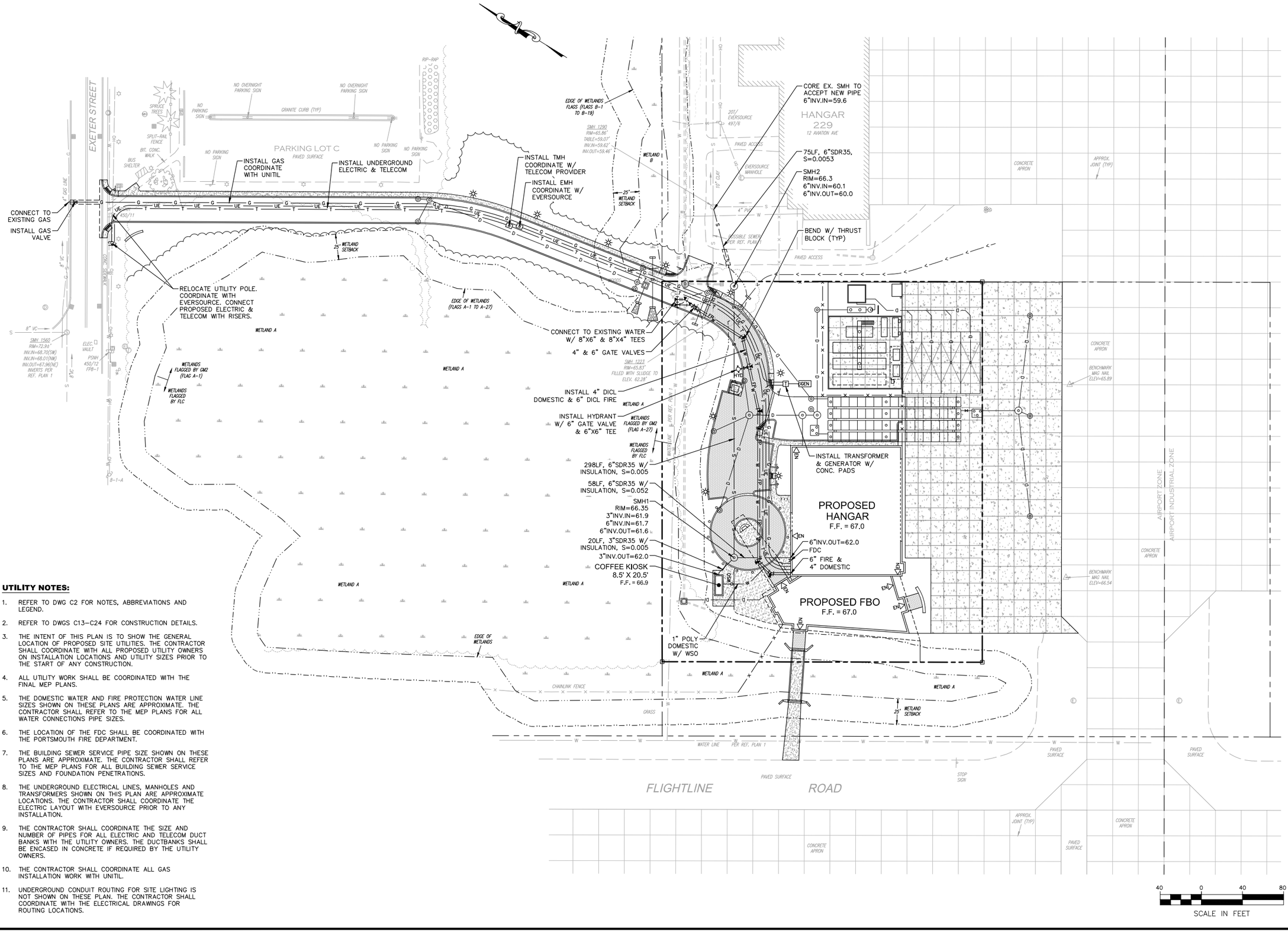

UTILITY NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
3. THE INTENT OF THIS PLAN IS TO SHOW THE GENERAL LOCATION OF PROPOSED SITE UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH ALL PROPOSED UTILITY OWNERS ON INSTALLATION LOCATIONS AND UTILITY SIZES PRIOR TO THE START OF ANY CONSTRUCTION.
4. ALL UTILITY WORK SHALL BE COORDINATED WITH THE FINAL MEP PLANS.
5. THE DOMESTIC WATER AND FIRE PROTECTION WATER LINE SIZES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL REFER TO THE MEP PLANS FOR ALL WATER CONNECTIONS PIPE SIZES.
6. THE LOCATION OF THE FDC SHALL BE COORDINATED WITH THE PORTSMOUTH FIRE DEPARTMENT.
7. THE BUILDING SEWER SERVICE PIPE SIZE SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL REFER TO THE MEP PLANS FOR ALL BUILDING SEWER SERVICE SIZES AND FOUNDATION PENETRATIONS.
8. THE UNDERGROUND ELECTRICAL LINES, MANHOLES AND TRANSFORMERS SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL COORDINATE THE ELECTRIC LAYOUT WITH EVERSOURCE PRIOR TO ANY INSTALLATION.
9. THE CONTRACTOR SHALL COORDINATE THE SIZE AND NUMBER OF PIPES FOR ALL ELECTRIC AND TELECOM DUCT BANKS WITH THE UTILITY OWNERS. THE DUCTBANKS SHALL BE ENCASED IN CONCRETE IF REQUIRED BY THE UTILITY OWNERS.
10. THE CONTRACTOR SHALL COORDINATE ALL GAS INSTALLATION WORK WITH UNITIL.
11. UNDERGROUND CONDUIT ROUTING FOR SITE LIGHTING IS NOT SHOWN ON THESE PLAN. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL DRAWINGS FOR ROUTING LOCATIONS.

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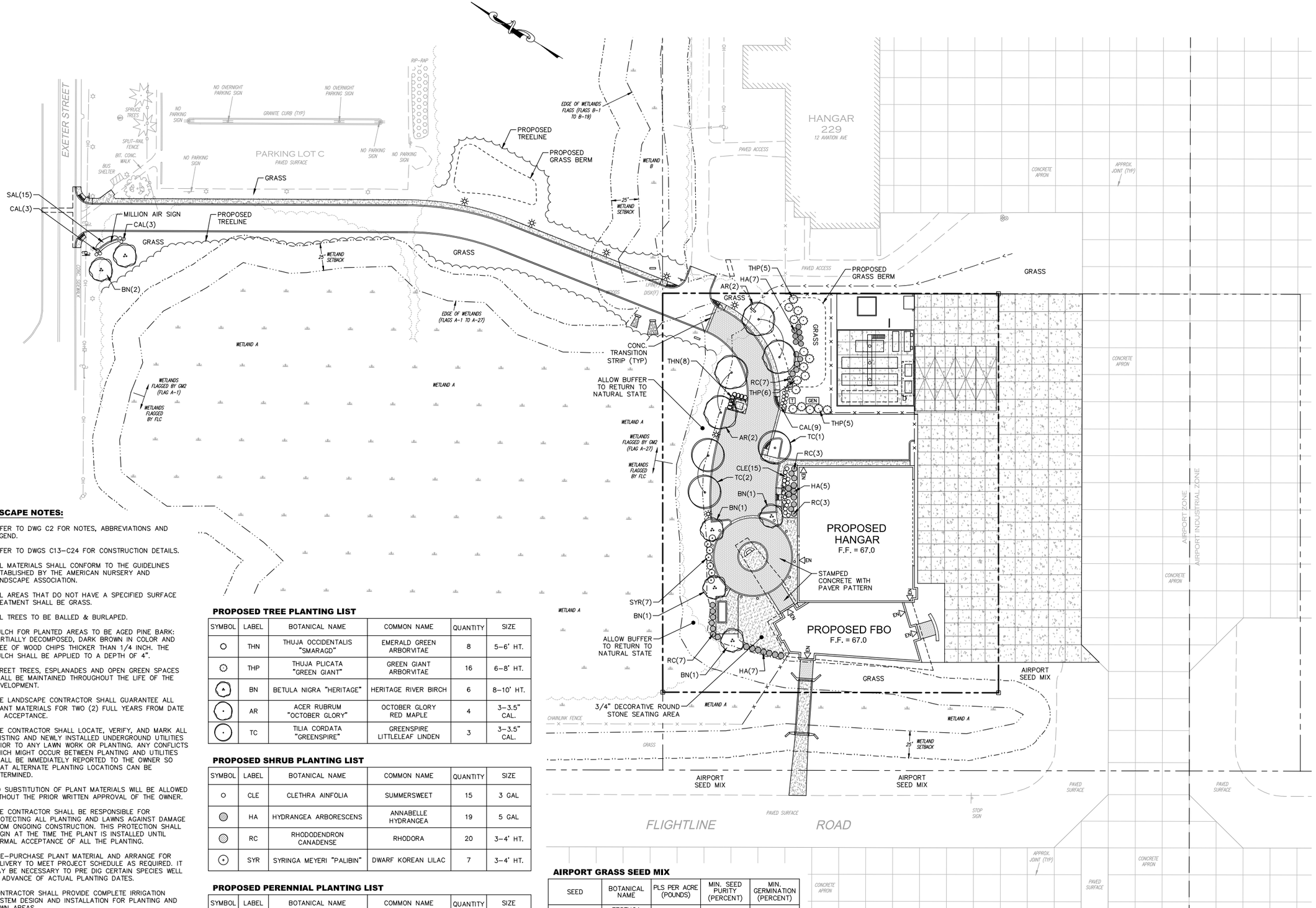
SITE UTILITY PLAN

C9

PROJECT NO. 20.565900.00

SHEET 10 OF 31



LANDSCAPE NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
3. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
4. ALL AREAS THAT DO NOT HAVE A SPECIFIED SURFACE TREATMENT SHALL BE GRASS.
5. ALL TREES TO BE BALLED & BURLAPED.
6. MULCH FOR PLANTED AREAS TO BE AGED PINE BARK: PARTIALLY DECOMPOSED, DARK BROWN IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH. THE MULCH SHALL BE APPLIED TO A DEPTH OF 4".
7. STREET TREES, ESPLANADES AND OPEN GREEN SPACES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE DEVELOPMENT.
8. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR TWO (2) FULL YEARS FROM DATE OF ACCEPTANCE.
9. THE CONTRACTOR SHALL LOCATE, VERIFY, AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
10. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED UNTIL FORMAL ACCEPTANCE OF ALL THE PLANTING.
12. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED. IT MAY BE NECESSARY TO PRE DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATES.
13. CONTRACTOR SHALL PROVIDE COMPLETE IRRIGATION SYSTEM DESIGN AND INSTALLATION FOR PLANTING AND LAWN AREAS.
14. SITE CONTRACTOR SHALL INSTALL 4" SCHEDULE 40 PVC SLEEVES UNDER PAVEMENT TO PROVIDE ACCESS FOR IRRIGATION LINES TO ALL IRRIGATED AREAS. CONTRACTOR SHALL COORDINATE WORK WITH GENERAL CONTRACTOR AND SUBCONTRACTORS.

PROPOSED TREE PLANTING LIST

SYMBOL	LABEL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
○	THN	THUJA OCCIDENTALIS "SMARAGD"	EMERALD GREEN ARBORVITAE	8	5–6' HT.
⊙	THP	THUJA PLICATA "GREEN GIANT"	GREEN GIANT ARBORVITAE	16	6–8' HT.
⊛	BN	BETULA NIGRA "HERITAGE"	HERITAGE RIVER BIRCH	6	8–10' HT.
⊙	AR	ACER RUBRUM "OCTOBER GLORY"	OCTOBER GLORY RED MAPLE	4	3–3.5" CAL.
⊙	TC	TILIA CORDATA "GREENSPIRE"	GREENSPIRE LITTLELEAF LINDEN	3	3–3.5" CAL.

PROPOSED SHRUB PLANTING LIST

SYMBOL	LABEL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
○	CLE	CLETHRA AINFOLIA	SUMMERSWEET	15	3 GAL
▨	HA	HYDRANGEA ARBORESCENS	ANNABELLE HYDRANGEA	19	5 GAL
▨	RC	RHODODENDRON CANADENSE	RHODORA	20	3–4' HT.
⊙	SYR	SYRINGA MEYERI "PALIBIN"	DWARF KOREAN LILAC	7	3–4' HT.

PROPOSED PERENNIAL PLANTING LIST

SYMBOL	LABEL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
○	CAL	CALAMAGROSTIS ACUTIFOLIA "KARL FOERSTER"	FEATHER REED GRASS	15	1 GAL
▭	SAL	SALVIA NEMOROSA "BLUE HILL"	DARK BLUE SALVIA	15	1 GAL

AIRPORT GRASS SEED MIX

SEED	BOTANICAL NAME	PLS PER ACRE (POUNDS)	MIN. SEED PURITY (PERCENT)	MIN. GERMINATION (PERCENT)
TALL FESCUE	FESTUCA ARUNDINACEA	72	96%	85%
ALKALI GRASS	PUCCINELLIA DISTANS	36	96%	85%
HARD FESCUE	FESTUCA OVINA VAR	12	96%	85%

40 0 40 80
SCALE IN FEET

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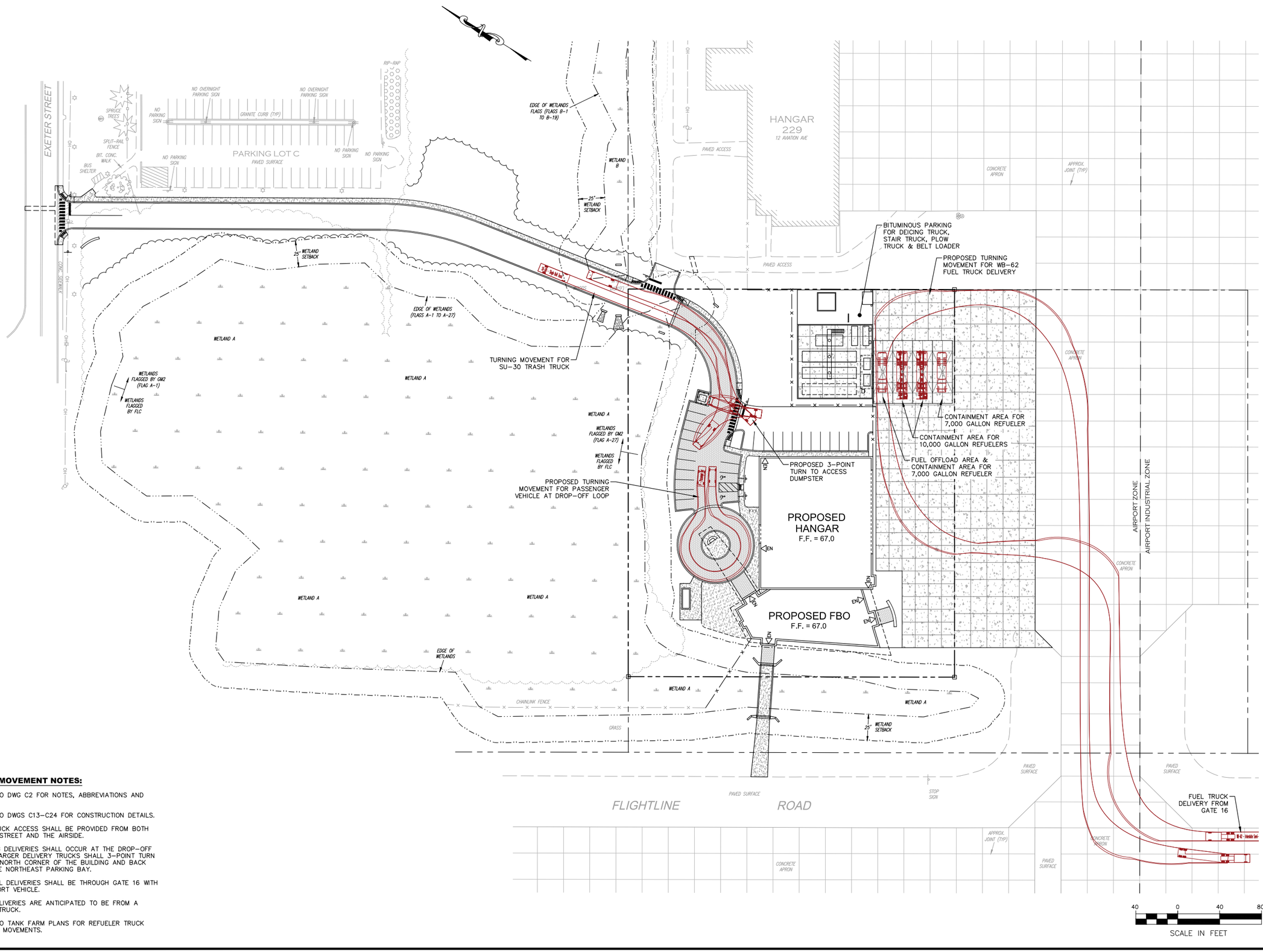
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
61 EXETER STREET
PORTSMOUTH, NH 03801

SITE LANDSCAPING PLAN
C10

PROJECT NO. 20.565900.00
SHEET 11 OF 31



TURNING MOVEMENT NOTES:

1. REFER TO DWG C2 FOR NOTES, ABBREVIATIONS AND LEGEND.
2. REFER TO DWGS C13–C24 FOR CONSTRUCTION DETAILS.
3. FIRE TRUCK ACCESS SHALL BE PROVIDED FROM BOTH EXETER STREET AND THE AIRSIDE.
4. BUILDING DELIVERIES SHALL OCCUR AT THE DROP–OFF AREA. LARGER DELIVERY TRUCKS SHALL 3–POINT TURN AT THE NORTH CORNER OF THE BUILDING AND BACK INTO THE NORTHEAST PARKING BAY.
5. ALL FUEL DELIVERIES SHALL BE THROUGH GATE 16 WITH AN ESCORT VEHICLE.
6. FUEL DELIVERIES ARE ANTICIPATED TO BE FROM A WB–62 TRUCK.
7. REFER TO TANK FARM PLANS FOR REFUELER TRUCK TURNING MOVEMENTS.

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TURNING MOVEMENT PLAN

C11

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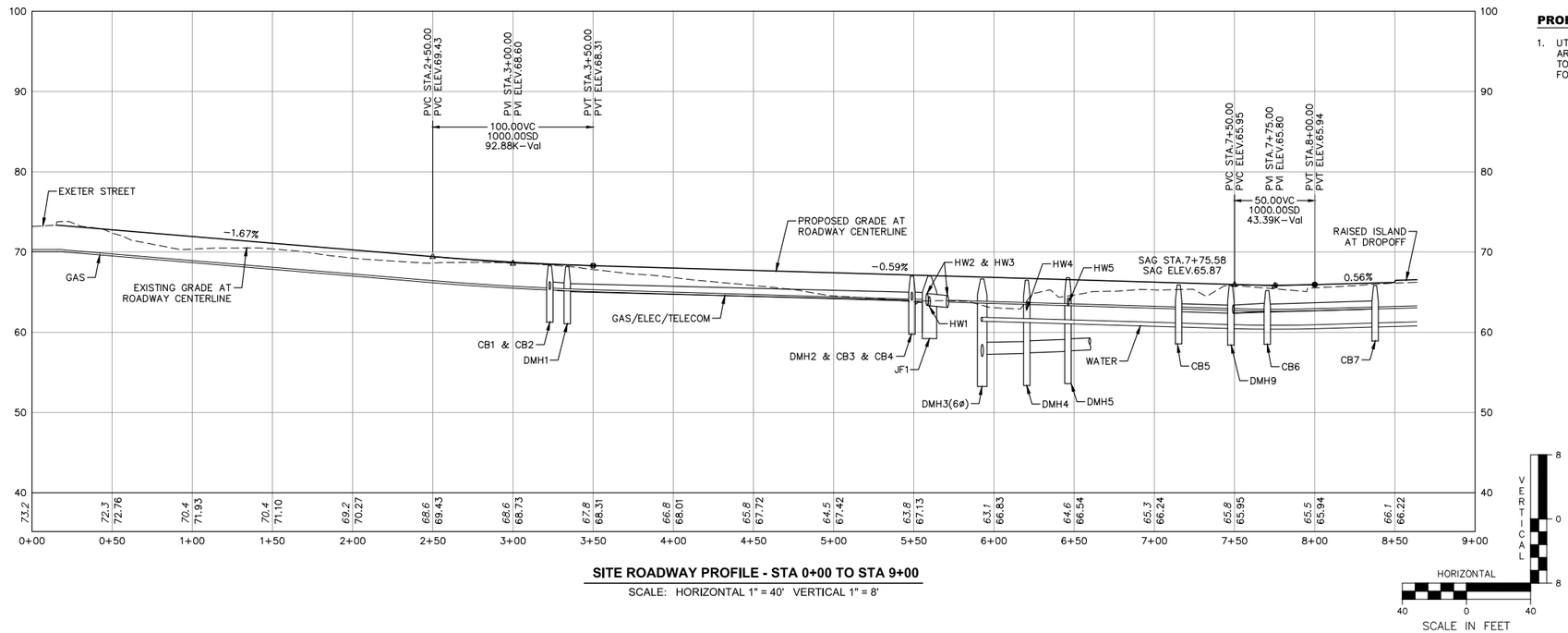
SHEET 12 OF 31

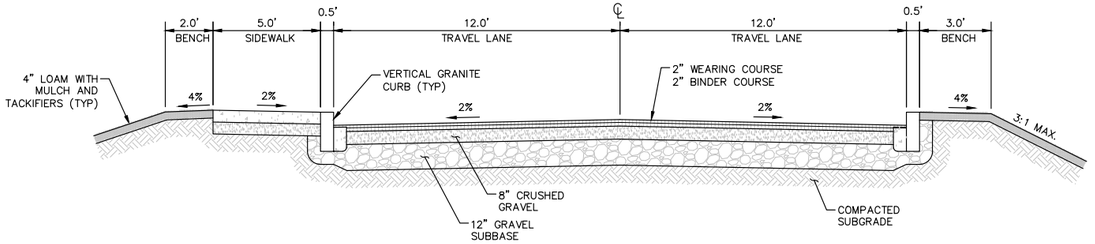


SITE ROADWAY PROFILE - STA 0+00 TO STA 9+00

SCALE: HORIZONTAL 1" = 40' VERTICAL 1" = 8'

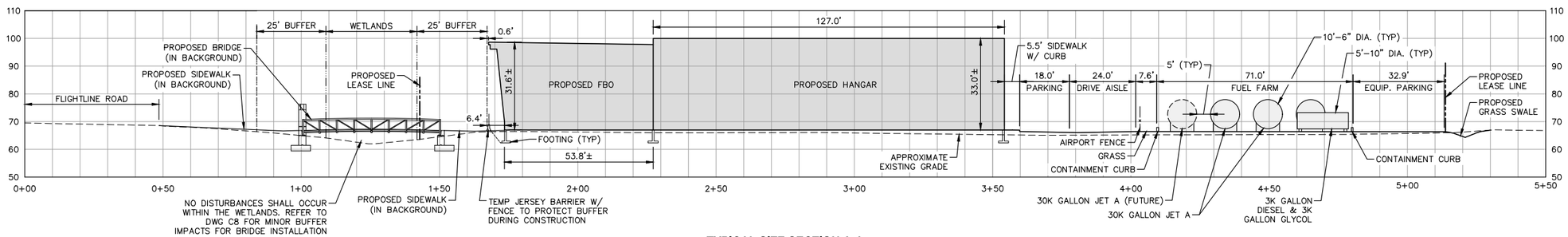
PROFILE NOTE:

1. UTILITIES SHOWN ON THE PROFILE ARE FOR REFERENCE ONLY. REFER TO DRAINAGE AND UTILITY PLANS FOR CONSTRUCTION INFORMATION.



TYPICAL SITE ROADWAY SECTION

SCALE: NONE



TYPICAL SITE SECTION A-A

SCALE: 1" = 20'

SECTION NOTES:

1. REFER TO DWG C8A FOR PLAN VIEW OF SECTION A–A
2. REFER TO DWGS B1–B6 FOR ADDITIONAL BRIDGE DETAILS.
3. REFER TO FUEL FARM PLANS FOR ADDITIONAL DETAILS.
4. REFER TO ARCHITECTURAL DWGS FOR ADDITIONAL FBO & HANGAR DETAILS.

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY — No. 14121 — PROFESSIONAL ENGINEER
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ROADWAY PROFILE & SITE SECTIONS

C12

PROJECT NO. 20.565900.00

SHEET 13 OF 31

EROSION CONTROL NOTES:

A. GENERAL NOTES

1. DURING CONSTRUCTION, AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND (5 ACRES MAXIMUM) SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO A MAXIMUM OF 72 HOURS BEFORE APPLYING TEMPORARY OR PERMANENT EROSION CONTROL MEASURES. ALL DITCHES AND SWALES ARE REQUIRED TO BE STABILIZED PRIOR TO DIRECT RECEIPT OF ANY FLOW. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

2. INSTALL SILT SOCKS WHERE SHOWN PRIOR TO CONSTRUCTION START. INSTALL INLET PROTECTION AT ALL EXISTING DRAINAGE STRUCTURES ADJACENT TO PROJECT. DO NOT REMOVE SILT BARRIERS UNTIL DISTURBED AREAS ARE FULLY COVERED WITH TURF OR OTHER APPLICABLE SURFACE MATERIAL. ALL PONDS ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO ANY OTHER DRAINAGE SYSTEM WORK, INCLUDING DITCH AND SWALE EXCAVATION.

3. EROSION AND SEDIMENT CONTROL PRACTICES INCLUDE THE USE OF THE FOLLOWING SILT FENCE BARRIERS, PERMANENT DETENTION/SEDIMENTATION POND BASIN, GRASS AND/OR ROCK LINED SWALES, DIVERSIONS WITH LEVEL SPREADERS. ALL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS CONTAINED IN THE "NH STORMWATER MANUAL", VOLUME 3, DECEMBER 2008.

4. SEE PLANS FOR ADDITIONAL EROSION CONTROL MEASURES WHICH MAY BE REQUIRED.

5. CONSTRUCTION AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

   a. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
   b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   c. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
   d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

B. VEGETATIVE MEASURES

1. TOPSOIL STOCKPILING: TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR LATER USE ON CRITICAL AREAS AND ALL OTHER AREAS TO BE SEEDED. THE STOCKPILE WILL NOT BE COMPACTED AND SHALL BE STABILIZED AGAINST EROSION WITH TEMPORARY SEEDING.

2. TEMPORARY SEEDING:

   a. BEDDING – REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT 3" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.

   b. FERTILIZER – FERTILIZER SHOULD BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. A 10–10–10 MIX OF FERTILIZER SHOULD BE APPLIED AT A RATE OF 300 POUNDS PER ACRE (OR 7 POUNDS PER 1,000 S.F.).

   c. SEED MIXTURE – USE ANY OF THE FOLLOWING IN UPLAND AREAS:

   d. SEEDING RATE:

SPECIES	ACRE	1,000 S.F	PER ACRE RATES	DEPTH
WINTER RYE	112 LBS	2.5 LBS.	8/15–9/5	1 IN.
OATS	80 LBS.	2.0 LBS.	SPRING–5/15	1 IN.
ANNUAL RYE GRASS	40 LBS.	1.0 LBS.	4/15–9/15	0.25IN. W/MULCH

   e. MULCHING – WHERE IT IS IMPRACTICAL TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, THE SEEDED AREA SHALL BE MULCHED TO FACILITATE GERMINATION. MULCH IN THE FORM OF STRAW SHOULD BE APPLIED AT A RATE OF 70 TO 90 LBS. PER 1,000 S.F.

3. PERMANENT SEEDING:

   f. BEDDING – STONES LARGER THAN 4", TRASH, ROOTS, AND OTHER DEBRIS THAT WILL INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA SHOULD BE REMOVED. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL.

   g. FERTILIZER – LIME AND FERTILIZER SHOULD BE APPLIED EVENLY OVER THE AREA PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:

      AGRICULTURAL LIMESTONE @ 100 LBS. PER 1,000 S.F. 10–20–20 FERTILIZER @ 12 LBS. PER 1,000 S.F.

   h. SEEDING MIXTURE (RECOMMENDED)

SLOPE WORK

SPECIES	PER ACRE	PER 1,000 S.F	USE
CROWNVETCH	15	0.34	
PERENNIAL RYE GRASS	30	0.69	
CREEPING RED FESCUE	35	0.80	ALL SLOPE WORK
RED TOP	5	0.11	
ALSIKE CLOVER	5	0.11	
BIRDSFOOT TREFOIL	5	0.11	
TOTAL	95	2.18	

TREATMENT SWALES

SPECIES	PER ACRE	PER 1,000 S.F.	USE
TALL FESCUE	35	0.80	
SWITCH GRASS	35	0.80	TREATMENT SWALES
JAPANESE MILLET	90	2.00	
TOTAL	160	3.60	

   i. MULCHING – MULCH SHOULD BE USED ON HIGHLY ERODIBLE SOILS, ON CRITICALLY ERODING AREAS, AND ON AREAS WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT.

TYPE	RATE PER 1,000 S.F.	USE AND COMMENTS
STRAW	70 TO 90 LBS.	MUST BE DRY AND FREE FROM MOLD. MAY BE USED WITH PLANTINGS
WOOD CHIPS OR BARK MULCH	460 TO 920 LBS.	USED MOSTLY WITH TREES AND SHRUB PLANTINGS
JUTE AND FIBROUS MATTING	AS PER MANUFACTURER SPECIFICATIONS	USED IN SLOPE AREAS, WATER COURSES AND OTHER AREAS
CRUSHED STONE		SPREAD MORE ¼" TO 1½" DIA THAN ½" THICK. EFFECTIVE IN CONTROLLING WIND AND WATER EROSION.

   j. SODDING – SODDING IS DONE WHERE IT IS DESIRABLE TO RAPIDLY ESTABLISH COVER ON A DISTURBED AREA. SODDING AN AREA MAY BE SUBSTITUTED FOR PERMANENT SEEDING PROCEDURES ANYWHERE ON SITE. BED PREPARATION, FERTILIZING, AND PLACEMENT OF SOD SHALL BE PERFORMED ACCORDING TO THE S.C.S. HANDBOOK.

C. STRUCTURAL MEASURES

1. STRAW BALE BARRIERS/SILT SCREEN FENCES: STRAW BALE BARRIERS AND/OR SILT SCREEN FENCES ARE TO BE INSTALLED IN THE AREAS SHOWN ON THE PLAN. THEY ARE INTENDED PRIMARILY TO INTERCEPT AND FILTER SMALL VOLUMES OF "SHEET FLOWING" RUNOFF, OR AS SEDIMENT TRAPS IN SMALL SWALES. STRAW BALES HAVE A USEFUL LIFE OF 3 MONTHS WHEN WET, AND THEREFORE, MUST BE INSPECTED AND REPAIRED OR REPLACED PERIODICALLY. SILT SCREEN FENCES WILL FUNCTION 6 MONTHS OR LONGER IF KEPT FREE OF SEDIMENT ACCUMULATIONS (SEE DETAILS FOR ADDITIONAL INFORMATION).

2. SWALES: TEMPORARY AND/OR PERMANENT SWALES ARE TO BE INSTALLED AS SHOWN ON THE PLAN. SWALES ARE USED TO CONVERT SHEET FLOW TO CHANNEL FLOW AND CONVEY THE RUNOFF TO A PERMANENT CHANNEL, STORM DRAIN, OR DETENTION/SEDIMENT STRUCTURE. SWALES ARE INTENDED TO INTERCEPT RUNOFF AND DIVERT IT FROM AN EXPOSED NEWLY SEEDED SLOPE TOWARD AN ACCEPTABLE OUTLET OR TO REDUCE THE VELOCITY OF RUNOFF FLOWING DOWN FROM A DRAINAGE AREA.

3. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED OF 3 INCH STONE ACROSS THE FULL WIDTH OF THE VEHICLE INGRESS EGRESS AREA. THE STONE PAD SHOULD BE AT LEAST 50 FEET LONG, 25 FEET WIDE AND AT LEAST 6 INCHES THICK. ADDITIONAL STONE MAY HAVE TO BE ADDED PERIODICALLY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.

4. CATCH BASIN SEDIMENT FILTER: STONE CATCH BASIN SEDIMENT FILTERS ARE TO BE INSTALLED IN THE AREAS SHOWN ON THE PLAN. THEY ARE INTENDED PRIMARILY FILTER SMALL VOLUMES OF "SHEET FLOWING" RUNOFF. CATCH BASIN SEDIMENT FILTERS SHALL BE CONSTRUCTED OF FILTER FABRIC BEING INSTALLED OVER INLET GRATE, AND 3/4" WASHED CRUSHED STONE, 12 INCHES THICK. CATCH BASIN SEDIMENT FILTERS WILL LAST LONGER IF KEPT FREE OF SEDIMENT ACCUMULATIONS (SEE DETAILS FOR ADDITIONAL INFORMATION).

D. MAINTENANCE

1. DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED:

   a. SEEDED AREAS WILL BE FERTILIZED AND WILL BE SEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.

   b. ADDITIONAL STONE MAY HAVE TO BE ADDED TO THE CONSTRUCTION ENTRANCE, ROCK LINED SWALES, ETC., PERIODICALLY TO MAINTAIN THE PROPER FUNCTIONING OF THE EROSION CONTROL STRUCTURE.

   c. ALL DIVERSION CHANNELS AND SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

   d. ALL SILT SCREEN FENCES WILL BE CHECKED WEEKLY. NECESSARY REPAIRS WILL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIER.

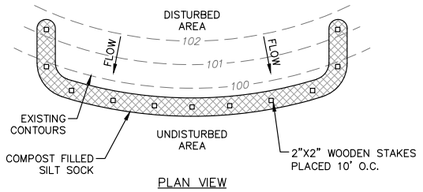
   e. EROSION CONTROL MEASURES TO BE INSPECTED WEEKLY AND AFTER EVERY 0.5" OF RAINFALL.

E. WINTER CONSTRUCTION

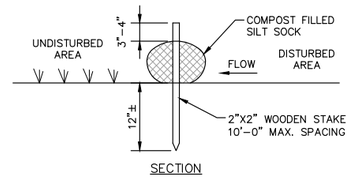
1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.



PLAN VIEW



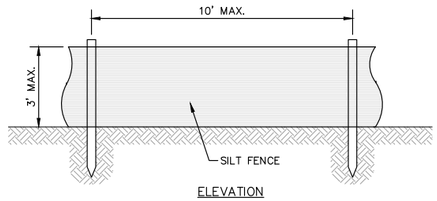
SECTION

SILT SOCK NOTES:

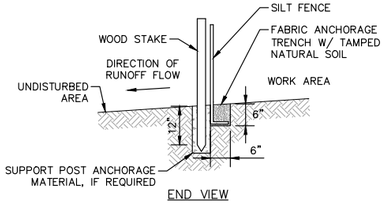
1. INSTALL SILT SOCK AT THE TOE OF 2:1 OR STEEPER SLOPES ON THE DOWNHILL SIDE OF THE ROAD AND AROUND RIP–RAP APRONS. REFER TO THE SWPPP FOR ADDITIONAL INFORMATION.
2. SILT SOCK SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND THE MATERIAL REMOVED WHEN "BULGES" DEVELOP. DO NOT DEPOSIT THE MATERIAL NEAR WETLANDS OR WATERCOURSES.

1 C13 SILT SOCK EROSION CONTROL DETAIL

SCALE: NONE



ELEVATION



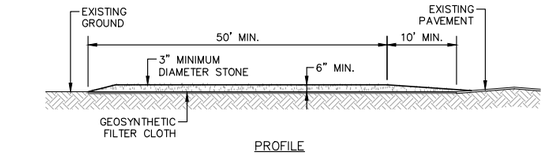
END VIEW

SILT FENCE NOTES:

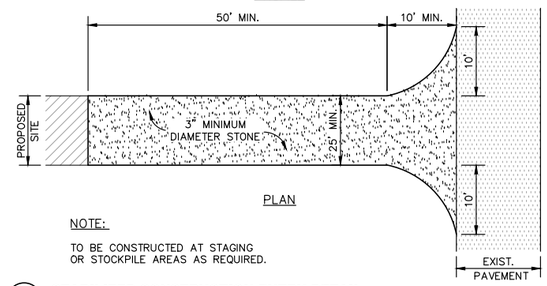
1. SPACING OF FENCE POSTS NOT TO EXCEED 10'–0".
2. SILT FENCE SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.
3. FILTER FABRIC TO BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES AT TOP, MIDPOINT AND BOTTOM.
4. OVERLAP BY 6". FOLD AND STAPLE ADJOINING SECTIONS OF FILTER FABRIC.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND THE MATERIAL REMOVED WHEN "BULGES" DEVELOP. DO NOT DEPOSIT THE MATERIAL NEAR WETLANDS OR WATERCOURSES.
6. FILTER FABRIC SHALL BE ENTRENCHED 6" MINIMUM BELOW EXISTING OR FINISHED GRADE.

2 C13 SILT FENCE EROSION CONTROL DETAIL

SCALE: NONE



PROFILE



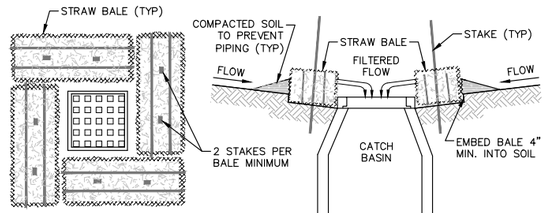
PLAN

NOTE:

TO BE CONSTRUCTED AT STAGING OR STOCKPILE AREAS AS REQUIRED.

3 C13 STABILIZED CONSTRUCTION ENTRY DETAIL

SCALE: NONE



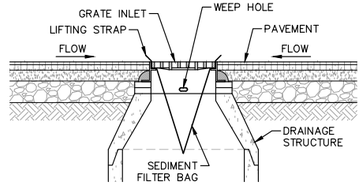
PLAN SECTION

SEDIMENTATION CONTROL NOTES:

1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
2. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
3. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR PURPOSE SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

4 C13 SEDIMENTATION CONTROL AT CATCH BASIN (AS NEEDED)

SCALE: NONE



INLET PROTECTION NOTES:

1. THE SEDIMENT FILTER BAG SHALL BE DESIGNED FOR CATCH BASIN INLET PROTECTION. FILTER FABRIC IS NOT AN ACCEPTABLE SEDIMENT FILTER BAG.
2. REMOVE DRAINAGE INLET GRATE AND PLACE SEDIMENT FILTER BAG AROUND THE FRAME, REPLACE GRATE AND SEDIMENT FILTER BAG IN POSITION OR FOLLOW MANUFACTURER'S RECOMMENDATIONS. LIFTING STRAPS SHALL BE EXPOSED AND READY FOR MAINTENANCE PROCEDURES.
3. INSPECT SEDIMENT FILTER BAG WEEKLY AND AFTER EVERY RAINFALL EVENT.
4. REPLACE, CLEAN OR REMOVE SEDIMENT FILTER BAG AS DIRECTED.

5 C13 INLET PROTECTION DETAIL

SCALE: NONE

STATE OF NEW HAMPSHIRE
SHAWN M. TOBEY
No. 14121
PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS – ISSUED FOR PDA REVIEW

CHECKED BY: WRD
DRAWN BY: MJG/SMT
DESIGNED BY: SMT

HOYLE TANNER
Pease International Tradeport
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Portsmouth, NH 03801
(603) 431-2520
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ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
51 EXETER STREET
PORTSMOUTH, NH 03801

EROSION CONTROL NOTES & DETAILS

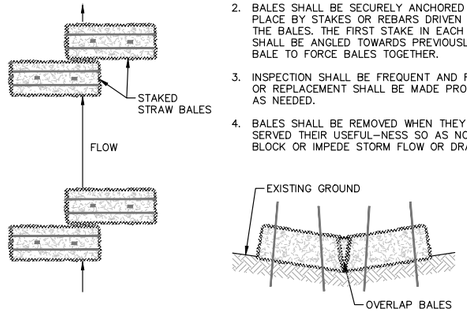
C13

PROJECT NO. 20.565900.00

SHEET 14 OF 31

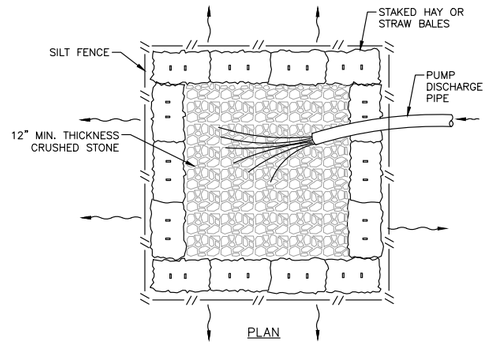
STRAW BALE CHECK DAM NOTES:

1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THOUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARDS PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL-NESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



PLAN ELEVATION

1 C14 STRAW BALE CHECK DAM DETAIL (AS NEEDED)
SCALE: NONE

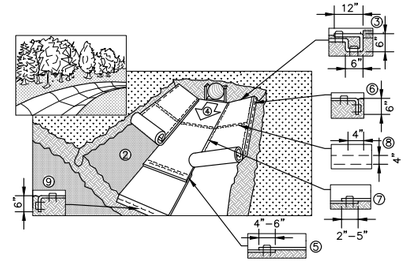


PLAN

DEWATERING PIT NOTES:

1. ADJUST SIZE OF PIT TO MAINTAIN CLEAN NON-EROSIVE WATER DISCHARGE FROM PIT.
2. TO BE CONSTRUCTED AT APPROVED UPLAND LOCATIONS.
3. TO BE USED FOR PUMPING OPERATIONS DURING DEWATERING, THE DEWATERING PIT IS TO BE USED IN CONJUNCTION WITH A FRACK TANK.
4. ALL DEWATERING SHALL BE COORDINATED WITH NHDES FOR A TEMPORARY DISCHARGE PERMIT, TREATMENT AND DISCHARGE PROCEDURES.

2 C14 DEWATERING PIT DETAIL
SCALE: NONE



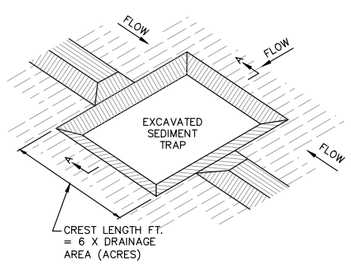
** HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USED OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS

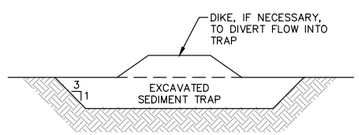
CHANNEL INSTALLATION NOTES:

1. INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
2. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH THE PAPER SIDE DOWN.
3. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
4. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4"(10") ON CENTER TO SECURE BLANKETS.
6. FULL-LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6"DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON BLANKET TYPE) AND STAPLED TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30' TO 40' INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF CHANNEL.
9. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

3 C14 CHANNEL EROSION CONTROL MATTING DETAIL
SCALE: NONE



ISOMETRIC VIEW

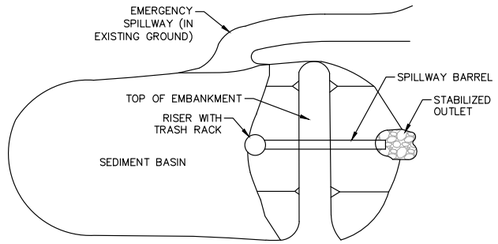


SECTION A-A VIEW

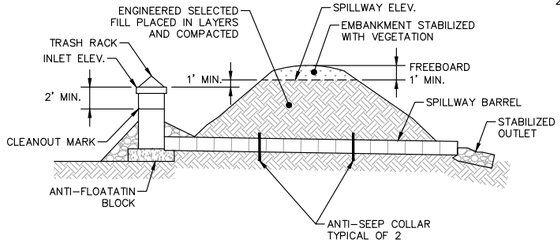
SEDIMENT TRAP NOTES:

1. THE TEMPORARY SEDIMENT TRAP, IS TO BE DESIGNED BY A QUALIFIED PROFESSIONAL
2. THE SEDIMENT BASIN SHALL BE REMOVED AT THE END OF CONSTRUCTION.

4 C14 EARTH OUTLET SEDIMENT TRAP DETAIL
SCALE: NONE



PLAN VIEW

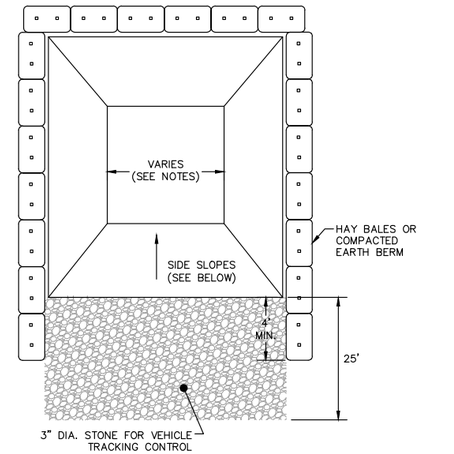


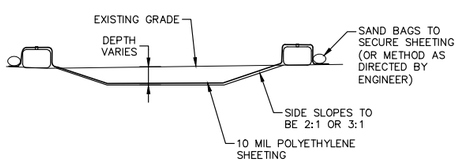
SECTION VIEW

SEDIMENT BASIN NOTES:

1. THE TEMPORARY SEDIMENT BASIN, IS TO BE DESIGNED BY A QUALIFIED PROFESSIONAL
2. THE SEDIMENT BASIN SHALL BE REMOVED AT THE END OF CONSTRUCTION

5 C14 TYPICAL SEDIMENT BASIN DETAIL
SCALE: NONE





WASHOUT AREA NOTES:

1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER.
3. LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED A MINIMUM OF 50 FEET FROM ANY STREAM, WETLAND, STORM DRAIN, OR ANY OTHER SENSITIVE RESOURCE.
4. THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS INCLUDING, BUT NOT LIMITED TO, OPERATIONS ASSOCIATED WITH GROUT AND MORTAR.
5. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.
6. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO CONCRETE TRUCK OPERATORS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHODS.
7. WASHOUT(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. WASHOUT AREAS SHOULD BE CHECKED AFTER EVERY RAIN EVENT.
8. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. ALL CONCRETE WASTE SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE LAWS, REGULATIONS, AND GUIDELINES

6 C14 CONCRETE WASHOUT AREA DETAIL
SCALE: NONE

STATE OF NEW HAMPSHIRE
SHAWN M. TOBEY
No. 14121
PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS - ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS - ISSUED FOR PDA REVIEW - REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS - ISSUED FOR PDA REVIEW

CHECKED BY: WRD
DRAWN BY: MJG/SMT
DESIGNED BY: SMT

HOYLE TANNER
Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801
(603) 431-2520
www.hoyletanner.com

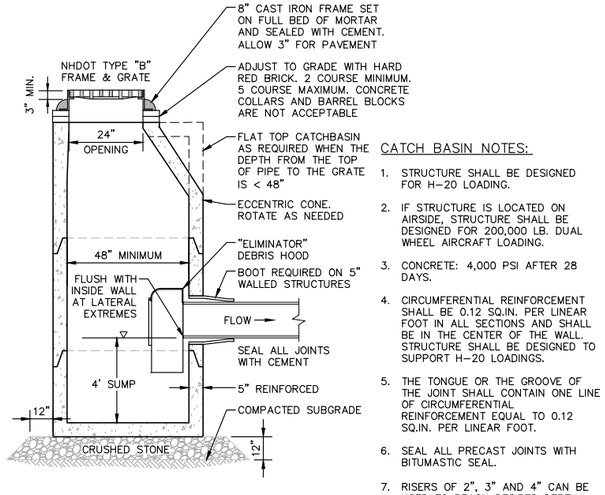
ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
51 EXETER STREET
PORTSMOUTH, NH 03801

EROSION CONTROL DETAILS
C14

PROJECT NO. 20.565900.00

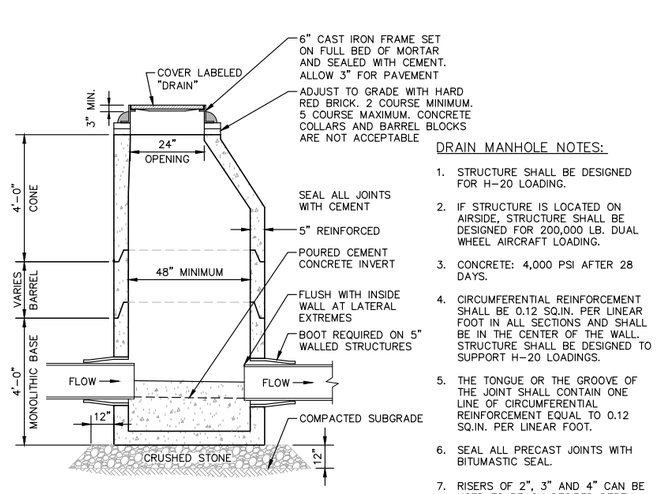


CATCH BASIN NOTES:

1. STRUCTURE SHALL BE DESIGNED FOR H–20 LOADING.
2. IF STRUCTURE IS LOCATED ON AIRSIDE, STRUCTURE SHALL BE DESIGNED FOR 200,000 LB. DUAL WHEEL AIRCRAFT LOADING.
3. CONCRETE: 4,000 PSI AFTER 28 DAYS.
4. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE IN THE CENTER OF THE WALL. STRUCTURE SHALL BE DESIGNED TO SUPPORT H–20 LOADINGS.
5. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ.IN. PER LINEAR FOOT.
6. SEAL ALL PRECAST JOINTS WITH BITUMASTIC SEAL.
7. RISERS OF 2", 3" AND 4" CAN BE USED TO REACH DESIRED DEPTH. 12" MAXIMUM RISER HEIGHT.

1/C15 TYPICAL CATCH BASIN DETAIL

SCALE: NONE



DRAIN MANHOLE NOTES:

1. STRUCTURE SHALL BE DESIGNED FOR H–20 LOADING.
2. IF STRUCTURE IS LOCATED ON AIRSIDE, STRUCTURE SHALL BE DESIGNED FOR 200,000 LB. DUAL WHEEL AIRCRAFT LOADING.
3. CONCRETE: 4,000 PSI AFTER 28 DAYS.
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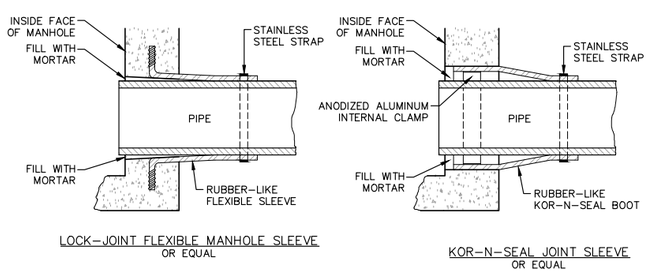
7. RISERS OF 2", 3" AND 4" CAN BE USED TO REACH DESIRED DEPTH. 12" MAXIMUM RISER HEIGHT.

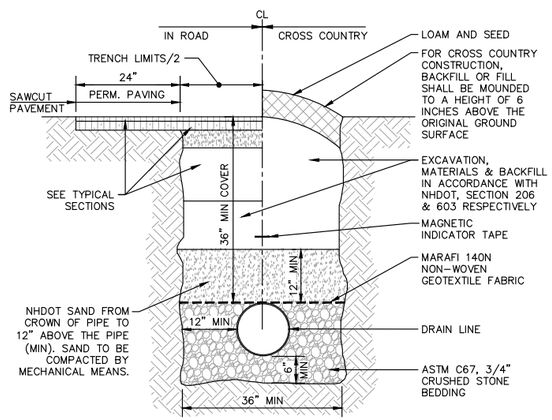
2/C15 DRAIN MANHOLE DETAIL

SCALE: NONE



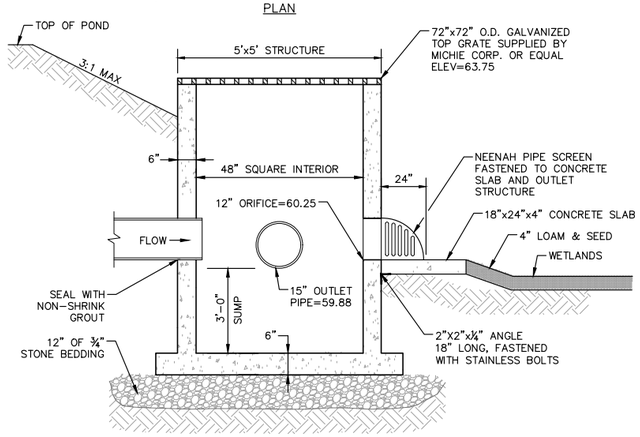
3/C15 TYPICAL PIPE TO MANHOLE DETAILS

SCALE: NONE



4/C15 DRAIN TRENCH DETAIL

SCALE: NONE

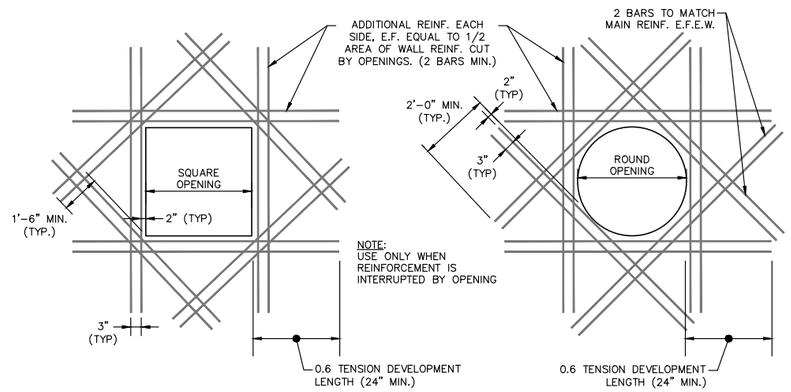


OUTLET STRUCTURE NOTES:

1. ALL CEMENT CONCRETE TO BE 4000 PSI (MIN.).
2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.
3. ALL OPENINGS SHALL BE CAST IN AS REQUIRED.
4. PRECAST REINFORCED CONCRETE STRUCTURE TO MEET ASTM C–478 DESIGNATION AND H–20 LOADING.

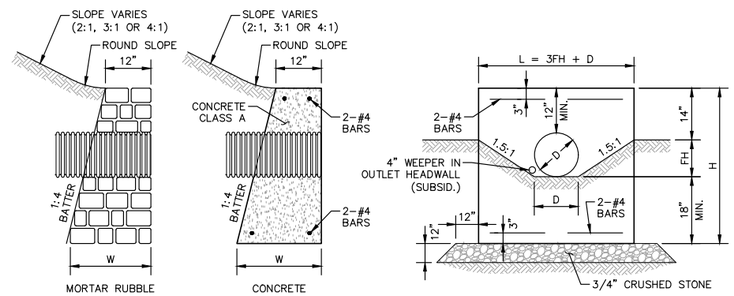
5/C15 OUTLET STRUCTURE DETAIL

SCALE: NONE



6/C15 TYPICAL SLAB TOP REINFORCEMENT DETAIL FOR CATCHBASINS

SCALE: NONE



DIAMETER D INCHES	MASONRY PER FOOT OF WALL CU. YD	MASONRY PER STANDARD HEADER CU. YD	STEEL PER STANDARD HEADER LB.	LENGTH OF BARS	EXC. FOR 1' DEPTH CU. YD.	HEADER LENGTH L	HEADER HEIGHT H	FILL HEGHT FH	WIDTH AT BOTTOM OF HEADER W
12	0.186	0.61	9	3'–2"	0.789	3'–6"	3'–6"	0'–10"	0'–10½"
15	0.202	0.85	11	3–10	0.947	4–6	3–9	1–1	1–11¼
18	0.222	1.13	14	5–2	1.111	5–6	4–0	1–4	2–0
24	0.260	1.78	20	7–2	1.451	7–6	4–6	1–10	2–1½
30	0.301	2.58	25	9–2	1.810	9–6	5–0	2–4	2–3

7/C15 CONCRETE OR MORTAR RUBBLE HEADWALL DETAILS

SCALE: NONE

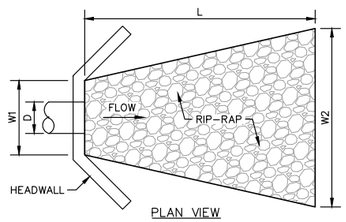
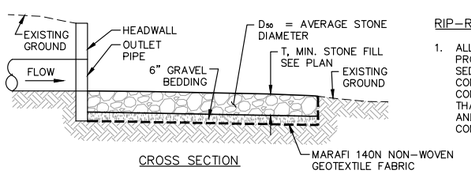


TABLE OF DIMENSIONS							
	D (IN)	W1 (FT)	L (FT)	W2 (FT)	T (IN)	D_{50} (IN)	RIPRAP VOLUME (C.Y.)
HW1	12	3	11	7.5	12	6	2.14
HW3	18	4.5	16	11	12	6	4.59



RIP–RAP NOTES

1. ALL RIP–RAP SHALL BE PROTECTED FROM RECEIVING SEDIMENT RUNOFF DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ENSURE THAT ALL RIP–RAP IS CLEAN AND FREE OF SEDIMENT AT THE COMPLETION OF THE PROJECT.

8/C15 STONE LINED OUTLET PROTECTION DETAIL

SCALE: NONE

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY No. 14121 — PROFESSIONAL ENGINEER — 11/23/21

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CHECKED BY WRD | DRAWN BY MJG/SMT | DESIGNED BY SMT

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ORIGINAL DATE: AUGUST 30, 2021

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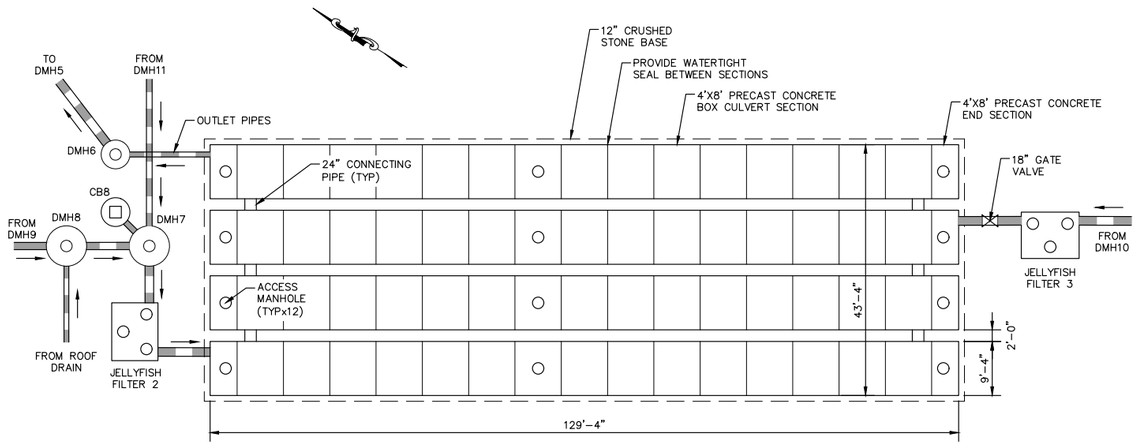
DRAINAGE DETAILS 1

C15

PROJECT NO. 20.565900.00

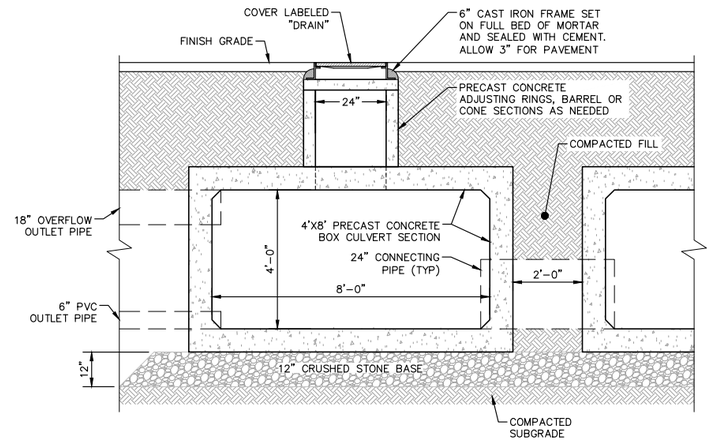
SHEET 16 OF 31



DETENTION SYSTEM NOTES:

1. THE PROPOSED UNDERGROUND CONCRETE STORMWATER DETENTION SYSTEM SHALL BE CONSTRUCTED WITH 4'X8' PRECAST BOX CULVERTS (OR APPROVED EQUAL) AND PRECAST END CAPS TO PROVIDE A WATER TIGHT SYSTEM.
2. THE SYSTEM SHALL BE DESIGNED TO HOLD 122,550 GALLONS OR GREATER.

1 / C16 UNDERGROUND CONCRETE STORMWATER DETENTION SYSTEM PLAN DETAIL
SCALE: NONE



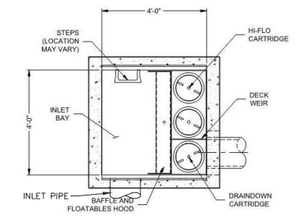
NOTES:

1. A TYPICAL OPENING FOR THE CONCRETE DETENTION SYSTEM ARE 2'-0" IN DIAMETER. ALL OPENINGS MUST RETAIN AT LEAST 1'-0" OF CLEARANCE FROM THE END OF THE STRUCTURE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED.
2. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS.
3. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE.
4. MAXIMUM OPENING SIZE TO BE DETERMINED BY MODULE HEIGHT. PREFERRED OPENING SIZE IS 36"ø OR LESS. ANY OPENING NEEDED THAT DOES NOT FIT THIS CRITERIA SHALL BE BROUGHT TO THE ATTENTION OF STORMTRAP FOR REVIEW.
5. CONNECTING PIPES SHALL BE INSTALLED WITH A 1'-0" CONCRETE COLLAR, AND AN AGGREGATE CRADLE FOR AT LEAST ONE PIPE LENGTH. A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI SHALL BE USED.
6. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

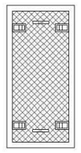
BACKFILLING NOTES:

1. STRUCTURE SHALL BE DESIGNED FOR H-20 LOADING. BACKFILL SHALL EITHER BE COMPACTED AND/ OR VIBRATED TO ENSURE THAT BACKFILL MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED.
2. DURING PLACEMENT OF MATERIAL OVERTOP THE SYSTEM, AT NO TIME SHALL MACHINERY BE USED OVERTOP THAT EXCEEDS THE DESIGN LIMITATIONS OF THE SYSTEM.
3. THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED AT A MINIMUM OF 6" LIFTS. AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN HS-20 LOADING CRITERIA TRAVEL OVERTOP THE SYSTEM WITHOUT THE MINIMUM DESIGN COVERAGE. IN SOME CASES, IN ORDER TO ACHIEVE REQUIRED COMPACTION, HAND COMPACTION MAY BE NECESSARY IN ORDER NOT TO EXCEED THE ALLOTTED DESIGN LOADING.

2 / C16 UNDERGROUND CONCRETE STORMWATER DETENTION SYSTEM SECTION TYPICAL SECTION DETAIL
SCALE: NONE



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

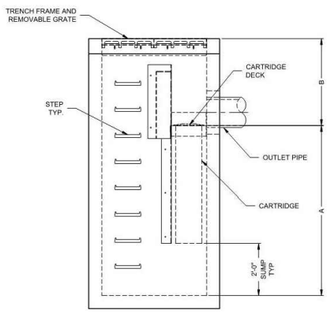


24" TRENCH COVER
N.T.S.

CARTRIDGE SELECTION	
CARTRIDGE LENGTH	54"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089
MAX. TREATMENT (CFS)	0.45
OUTLET INVERT TO RIM (MIN) (B)	3'-4"

JELLYFISH FILTER JF1

2 HI-FLO CARTRIDGES
1 DRAIN DOWN CARTRIDGE
54" CARTRIDGES



ELEVATION VIEW

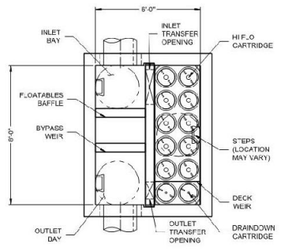
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

Jellyfish Filter
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,201,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE (WHERE APPLICABLE) AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

3 / C16 CONTECH JELLYFISH FILTER (JFOV0404-2-1) DETAIL
SCALE: NONE



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

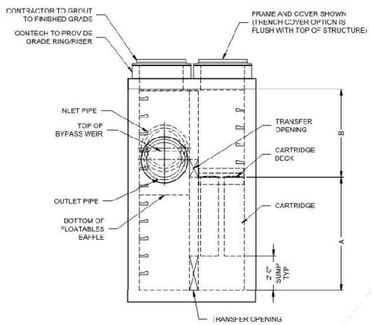
CARTRIDGE SELECTION	
CARTRIDGE LENGTH	40"
OUTLET INVERT TO STRUCTURE INVERT (A)	5'-4"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.133 / 0.067
MAX. TREATMENT (CFS)	1.47
DECK TO INSIDE TOP (MIN) (B)	4.00

JELLYFISH FILTER JF2

7 HI-FLO CARTRIDGES
2 DRAIN DOWN CARTRIDGE
40" CARTRIDGES

JELLYFISH FILTER JF3

7 HI-FLO CARTRIDGES
2 DRAIN DOWN CARTRIDGE
40" CARTRIDGES



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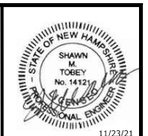
4 / C16 CONTECH JELLYFISH FILTER (JFPD0806-7-2) DETAIL
SCALE: NONE



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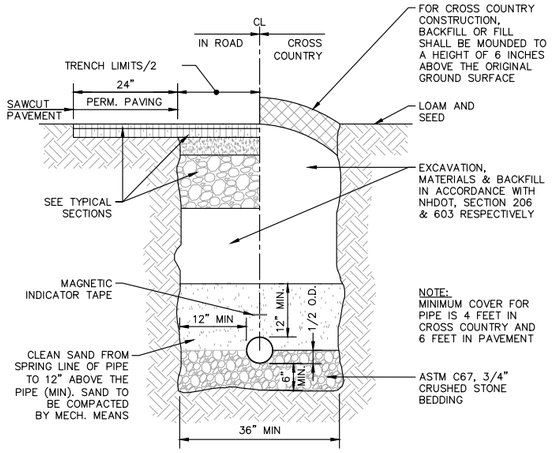
DRAINAGE DETAILS 2

C16

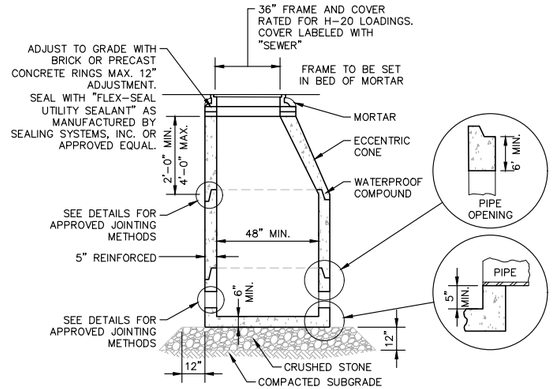
PROJECT NO. 20.565900.00

SHEET 17 OF 31



1 C17 **SEWER TRENCH DETAIL**

SCALE: NONE



TYPICAL SECTION

SEWER NOTES:

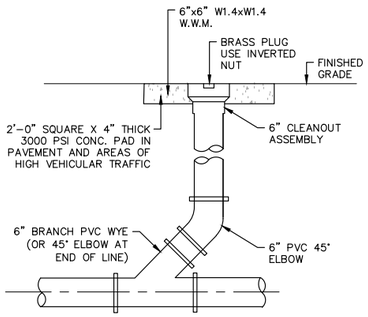
1. MANHOLES: THE MANHOLE, INCLUDING ALL COMPONENT PARTS, SHALL HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
3. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER SHALL BE USED, WHERE INDICATED, HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS. SEE DETAILS.
4. RISER SECTION: THE RISER SECTION SHALL HAVE THE EXTERIOR WRAPPED WITH WRAPIDSEAL MANHOLE ENCAPSULATION SYSTEM AS MANUFACTURED BY CCI PIPE PROTECTION PRODUCTS OR APPROVED EQUAL.

MANHOLE NOTES:

1. BASE SECTION TO BE FULL WALL THICKNESS AND MONOLITHIC TO A POINT 6" ABOVE THE PIPE CROWN.
2. THERE SHALL BE NO STEPS IN ANY OF THE SEWER MANHOLES

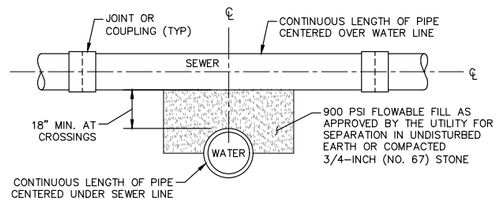
3 C17 **STANDARD SANITARY SEWER MANHOLE DETAIL**

SCALE: NONE

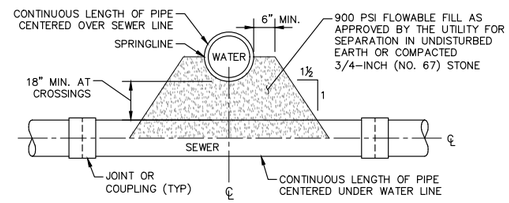


5 C17 **SEWER CLEANOUT DETAIL**

SCALE: NONE



WATER CROSSING UNDER SEWER



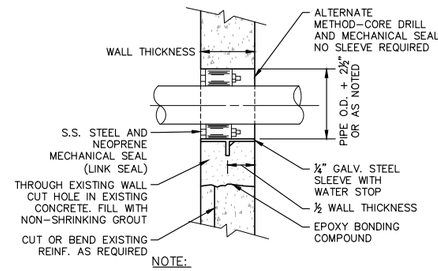
WATER CROSSING OVER SEWER

CROSSING NOTES:

1. SEE PLAN AND PROFILE FOR CROSSING LOCATIONS,
2. IF A CONTINUOUS LENGTH OF PIPE CANNOT BE CENTERED AT THE CROSSING OR IF 18" VERTICAL SEPARATION CANNOT BE ACHIEVED, THE LOWER PIPE SHALL BE INCASED IN CONCRETE 10'-0" IN EACH DIRECTION (SEE DETAIL). THE CONCRETE IS SUBSIDIARY TO THE PIPE INSTALLATION. CONTACT ENGINEER FOR DIRECTION BEFORE PROCEEDING IF THIS SITUATION IS ENCOUNTERED.

6 C17 **WATER/SEWER PIPE CROSSING DETAIL**

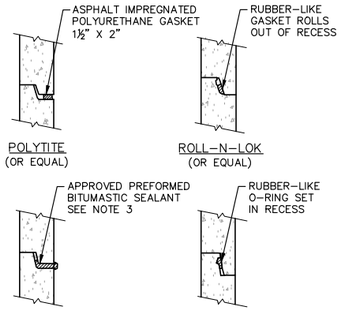
SCALE: NONE



NOTE:

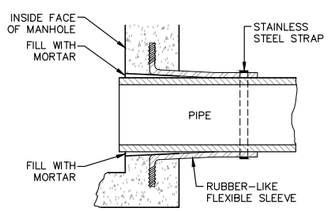
INSTALL SEALS FROM DRY SIDE OF PENETRATION. WET SIDE FILLED WITH WATERPROOF GROUT.

WALL SLEEVE DETAIL

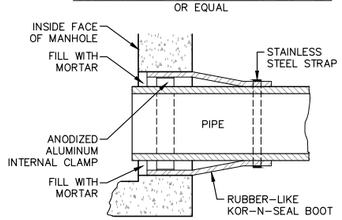


NOTE:

ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

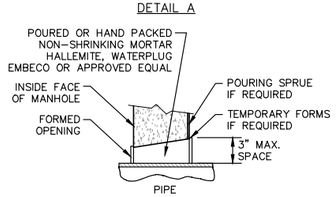


LOCK-JOINT FLEXIBLE MANHOLE SLEEVE OR EQUAL



KOR-N-SEAL JOINT SLEEVE OR EQUAL

DETAIL A



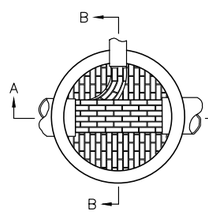
NON-SHRINKING MORTAR (SEE NOTE 4)

SLEEVE AND GASKET NOTES:

1. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON ELASTOMERIC SEALANT.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. NON-SHRINKING MORTAR SHALL ONLY BE USED WHERE SPECIFICALLY APPROVED BY THE ENGINEER.

2 C17 **SEWER MANHOLE JOINT AND PIPE CONNECTION DETAILS**

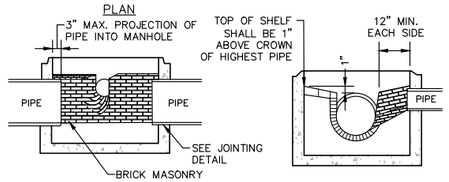
SCALE: NONE



PLAN

SHELF NOTES:

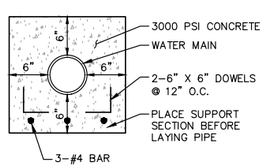
1. INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST
2. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE.



SECTION A-A SECTION B-B

4 C17 **STANDARD SANITARY SEWER BRICK INVERT DETAILS**

SCALE: NONE



ENCASEMENT NOTES:

1. CONCRETE ENCASEMENT OF UTILITY PIPE WILL BE REQUIRED AS SHOWN ON THE PLANS OR WHEN UTILITY CROSSING REQUIREMENTS CANNOT BE MET.
2. CONCRETE ENCASEMENT SHALL EXTEND 10'-0" MIN. ON EACH SIDE OF UTILITY CROSSING

7 C17 **CONCRETE ENCASEMENT DETAIL**

SCALE: NONE

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY No. 14121 — PROFESSIONAL ENGINEER

11/23/21

REV.	DESCRIPTION	DATE
4	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING	11/23/21
3	REVISED TYPICAL SITE SECTION PER PDA COMMENTS - ISSUED FOR REVIEW	10/22/21
2	90% DESIGN PLANS - ISSUED FOR PDA REVIEW - REVISED PER COMMENTS	10/08/21
1	60% DESIGN PLANS - ISSUED FOR PDA REVIEW	08/30/21

CHECKED BY WRD

DRAWN BY MJG/SMT

DESIGNED BY SMT

HOYLE TANNER
Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801
(603) 431-2520
www.hoyletanner.com

ORIGINAL DATE: AUGUST 30, 2021

SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

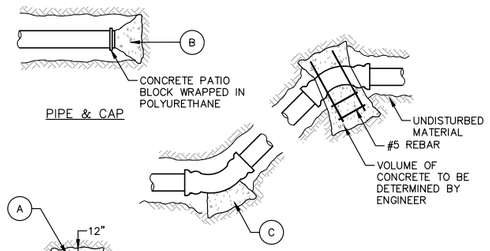
PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
51 EXETER STREET
PORTSMOUTH, NH 03801

SEWER DETAILS

C17

PROJECT NO. 20.565900.00

SHEET 18 OF 31



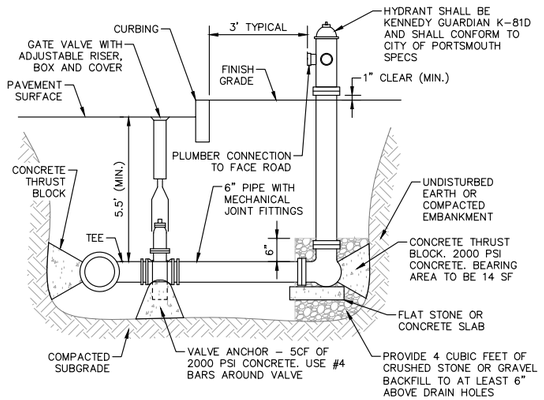
THRUST BLOCK SCHEDULE
SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL

REACTION TYPE		PIPE SIZE				
TEST PRESSURE = 100 PSIG		1"–4"	6"	8"	10"	12"
	(A)	0.89	2.19	3.92	5.57	8.62
	(B)	0.65	1.55	2.76	4.19	6.09
	(C)	0.48	1.19	2.12	3.01	4.66
	(D)	0.25	0.60	1.08	1.54	2.37
	(E)	0.13	0.30	0.54	0.77	1.19
OTHER TEST PRESSURES FOR THE ABOVE REACTIONS		TEST PRESSURE TO BE 200 PSI MINIMUM AT LOW END OF THE TEST SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE.				

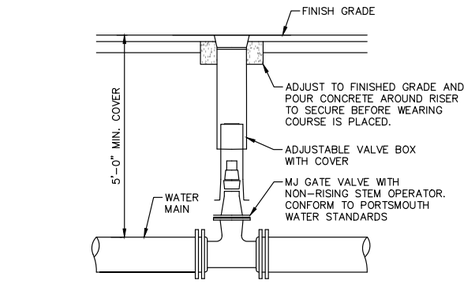
THRUST BLOCK NOTES:

1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE CONCRETE PATIO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
5. RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
6. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
7. THREADED RODS SHALL BE ANSI A242 FY50 PIPE RESTRAINT NUTS TO MATCH AIWA C111. THREADED RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.
8. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS PLUGS, OR CROSSES.
9. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
10. ALL WATERLINE CONSTRUCTION SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PORTSMOUTH WATER DIVISION CONSTRUCTION MANUAL

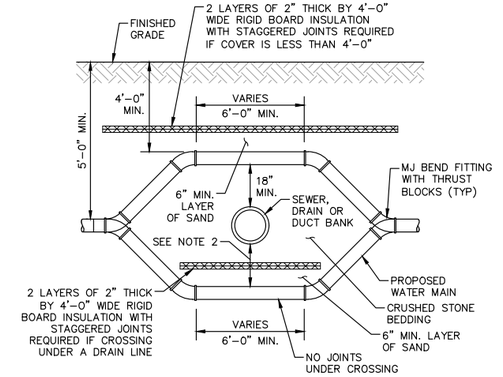
1 C18 WATER LINE THRUST BLOCK DETAILS
SCALE: NONE



2 C18 FIRE HYDRANT ASSEMBLY DETAIL
SCALE: NONE



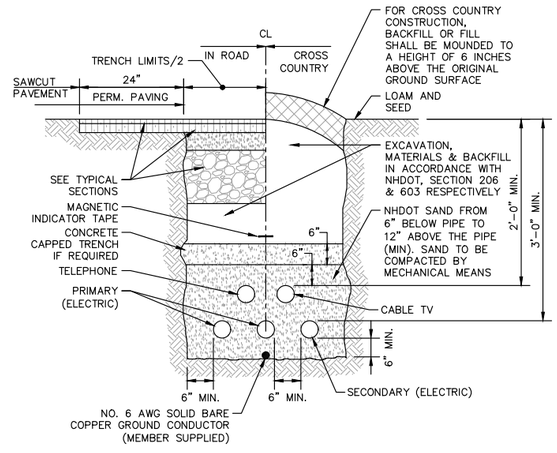
6 C18 GATE VALVE DETAIL
SCALE: NONE



CROSSING NOTES:

1. DROP WATER LINE BELOW UTILITY CONFLICT WITH 4 MJ BEND FITTINGS.
2. VERTICAL SEPARATION BETWEEN WATER LINES, SEWER LINES AND ALL OTHER UTILITIES SHALL BE A MINIMUM OF 18".

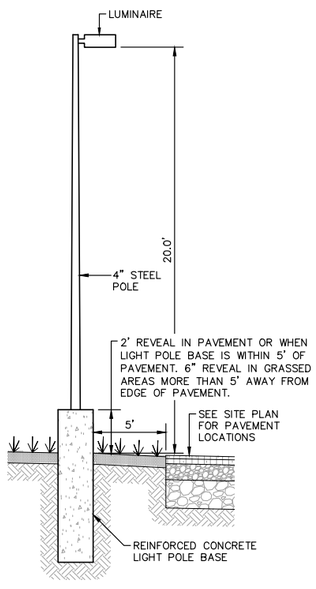
7 C18 WATER UTILITY CONFLICT CROSSING DETAIL
SCALE: NONE



TRENCH NOTES:

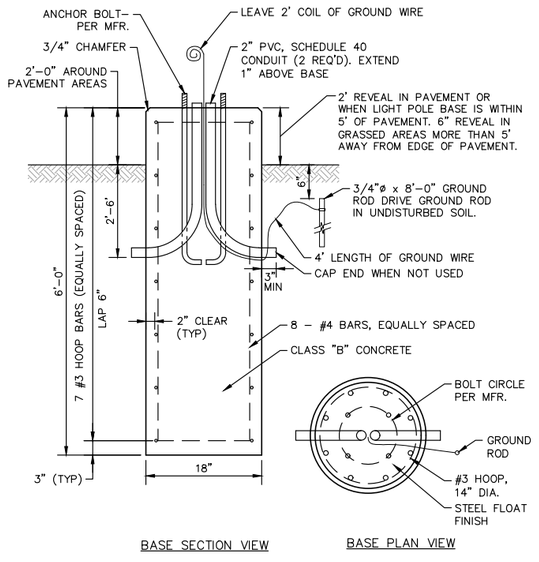
1. COORDINATE TRENCH DETAIL WITH ALL UTILITY OWNERS.
2. ELECTRICAL CONDUIT SHALL BE SCHEDULE 40 PVC
3. ALL PVC CONDUIT JOINTS SHALL BE CEMENTED.
4. A SUITABLE PULL CABLE, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE ELECTRICAL CONDUIT.
5. COORDINATE SIZE OF CONDUIT WITH OWNER.
6. DEPTH OF CONDUIT SHALL BE 36" TO INVERT.
7. TRENCH WIDTH AS REQUIRED TO MAINTAIN 6" MINIMUM SPACING BETWEEN ALL CONDUITS AND TRENCH SIDEWALLS.

3 C18 PRIMARY CIRCUIT W/ TELEPHONE AND/OR CABLE TV ELEC. TRENCH
SCALE: NONE



SECTION VIEW

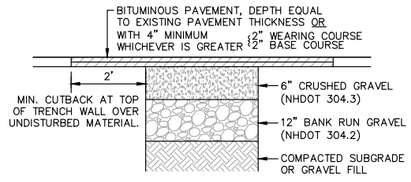
4 C18 TYPICAL LIGHT POLE DETAILS
SCALE: NONE



BASE SECTION VIEW

BASE PLAN VIEW

5 C18 TYPICAL LIGHT BASE POLE DETAILS
SCALE: NONE



PERMANENT PAVEMENT REPAIR

PAVEMENT REPAIR NOTES:

1. MATERIALS SHOULD BE REPLACED IN–KIND, WITH MINIMUM THICKNESS AS SHOWN.
2. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REQUIREMENTS.
3. ROADWAY CONSTRUCTION SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS.
4. NOT FOR WINTER CONSTRUCTION.

8 C18 PAVEMENT REPAIR DETAILS
SCALE: NONE

STATE OF NEW HAMPSHIRE
SHAWN M. TOBEY
No. 14121
PROFESSIONAL ENGINEER
11/23/21

REV.	DATE	REVISION DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
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CHECKED BY WRD
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HOYLE TANNER

ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

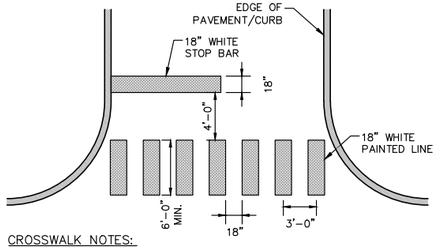
APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
63 EXETER STREET
PORTSMOUTH, NH 03801

WATER & ELECTRIC DETAILS
C18

PROJECT NO. 20.565900.00

SHEET 19 OF 31

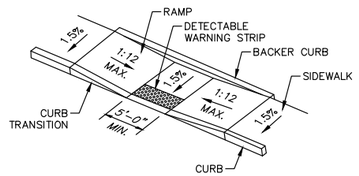


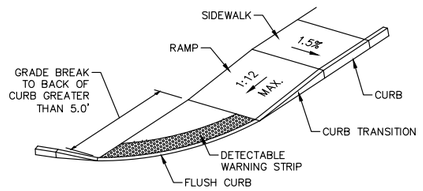
CROSSWALK NOTES:

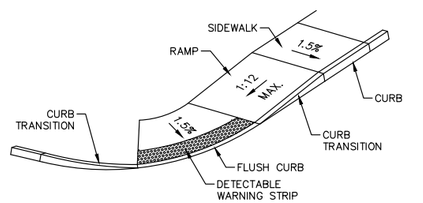
1. CROSSWALK LINES SHALL BE CENTERED TO AVOID WHEEL MARKS.
2. ALL CROSSWALK LINES TO BE SAME LENGTH AND PROPERLY ALIGNED.
3. SEE PLANS FOR THE CROSSWALK LOCATIONS.

1 C19 **PAINTED CROSSWALK DETAIL**

SCALE: NONE







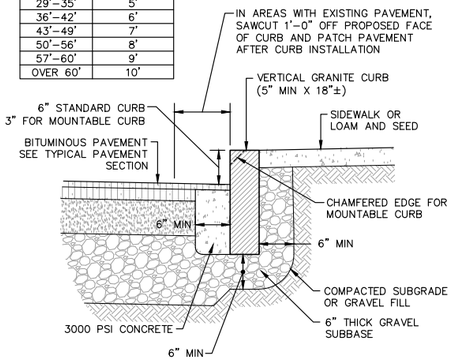
SIDEWALK RAMP NOTES:

1. THE MAXIMUM ALLOWABLE SIDEWALK AND TIP-DOWN RAMP CROSS SLOPE SHALL BE 2.0% (1% MIN.)
2. THE MAXIMUM ALLOWABLE SLOPE OF THE ACCESSIBLE ROUTE EXCLUDING TIP-DOWN RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT TIP-DOWN RAMPS SHALL BE 1:12 (8.3%).
4. FLARED SIDE SLOPES SHALL BE INSTALLED WITH A MAXIMUM SLOPE OF 10% MEASURED PARALLEL TO THE CURB LINE.
5. A MINIMUM OF 4 FEET CLEARANCE SHALL BE PROVIDED BETWEEN ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. AN ADA DETECTABLE WARNING TRUNCATED DOME PANEL FINISH SHALL TRANSVERSE THE SLOPE OF THE TIP-DOWN RAMP. DETECTIBLE WARNING PANELS SHALL BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.
8. CURBING SHALL BE SET FLUSH WHERE TIP-DOWN RAMP ABUTS PAVEMENT.
9. MAINTAIN THE NORMAL GUTTER PROFILE THROUGHOUT THE RAMP AREA. INTERCEPT DRAINAGE ALONG THE CURB IN ADVANCE OF THE RAMP.

2 C19 **ACCESSIBLE TIP-DOWN RAMPS**

SCALE: NONE

RADIUS	MAX LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

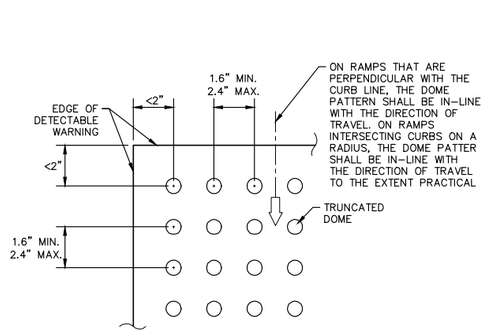


VERTICAL GRANITE CURB NOTES:

1. MINIMUM LENGTH OF CURB STONES – 3'
2. MAXIMUM LENGTH OF CURB STONES – 10'
3. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART.
4. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
5. CURB ENDS TO BE TIPPED DOWN.

3 C19 **VERTICAL GRANITE CURB DETAIL**

SCALE: NONE



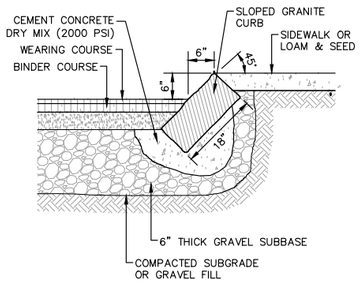
DETECTABLE WARNING NOTES:

1. BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.
2. ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM THE BACK OF CURB.
3. THE TOP WIDTH OF THE DOME SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER.
4. WARNING PANELS TO BE CAST IRON AND PAINTED YELLOW.

4 C19 **TYPICAL DETECTABLE WARNING DETAILS**

SCALE: NONE

RADIUS	MAX LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

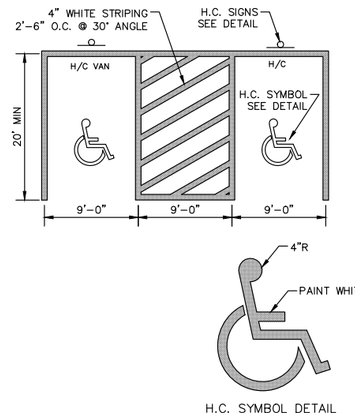


SLOPED GRANITE CURB NOTES:

1. MINIMUM LENGTH OF CURB STONES – 3'
2. MAXIMUM LENGTH OF CURB STONES – 10'
3. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART.
4. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
5. CURB ENDS TO BE TIPPED DOWN.

5 C19 **SLOPED GRANITE CURB DETAIL**

SCALE: NONE

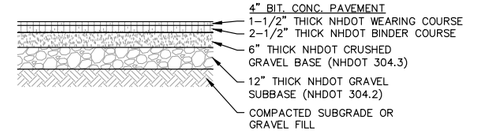


STALL LAYOUT NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF MUTCD.
2. WIDTH OF LINES SHALL VARY NO MORE THAN ± 1/4 INCH FROM THAT SPECIFIED.
3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 20 MILS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED. OVERSPRAY SHALL BE KEPT TO AN ABSOLUTE MINIMUM.
4. BROKEN LINES SHALL BEGIN AND END WITH THE NEAREST FULL CYCLE OF BROKEN LINE.
5. SOLID LONGITUDINAL LINES SHALL BEGIN AND END WITHIN ± 2 INCHES OFF A LAYOUT SYMBOL INDICATING THE END OF THE LINE, OR WITH A FULL CYCLE OF BROKEN LINE (IF APPROPRIATE).

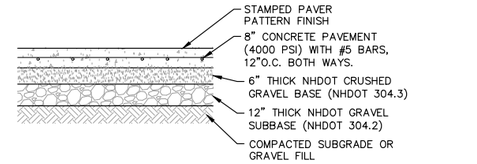
6 C19 **HANDICAP PARKING STALL LAYOUT**

SCALE: NONE



7 C19 **TYPICAL LANDSIDE BITUMINOUS PAVEMENT SECTION**

SCALE: NONE

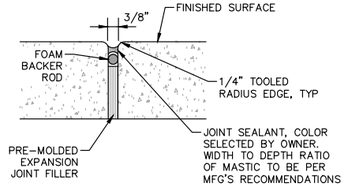


NOTE:

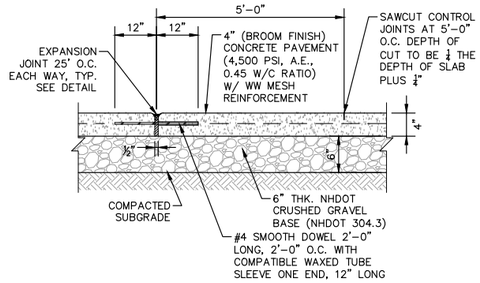
1. COORDINATE WITH THE OWNER FOR THE STAMPED PAVER PATTERN AND CONCRETE COLOR.

8 C19 **TYPICAL STAMPED CONCRETE SECTION**

SCALE: NONE



EXPANSION JOINT DETAIL



TYPICAL SECTION

CONCRETE WALK NOTES NOTES:

1. THE CONTRACTOR SHALL INSTALL EXPANSION JOINTS EVERY 25'-0" ON CENTER AND CONTROL JOINTS AT 5'-0" ON CENTER.
2. THE CONTROL JOINTS SHALL BE SAWCUT AS SHOWN IN THE DETAIL ABOVE OR TOOLED CONTROL JOINTS WITH A 1/4" RADIUS.

9 C19 **TYPICAL CONCRETE WALKWAY DETAIL**

SCALE: NONE

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY No. 14121 — PROFESSIONAL ENGINEER — 11/23/21

REV.	DATE	REVISION DESCRIPTION
4	11/23/21	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING
3	10/22/21	REVISED TYPICAL SITE SECTION PER PDA COMMENTS – ISSUED FOR REVIEW
2	10/08/21	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS
1	08/30/21	60% DESIGN PLANS – ISSUED FOR PDA REVIEW

CHECKED BY WRD | DRAWN BY MJG/SMT | DESIGNED BY SMT

HOYLE TANNER
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100 International Drive, Suite 360
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(603) 431-2520
www.hoyletanner.com

ORIGINAL DATE: AUGUST 30, 2021

SCALE: AS SHOWN

APPLICANT: PEASE AVIATION PARTNERS, LLC
7555 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT: PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

SITE DETAILS 1

C19

PROJECT NO. 20.565900.00

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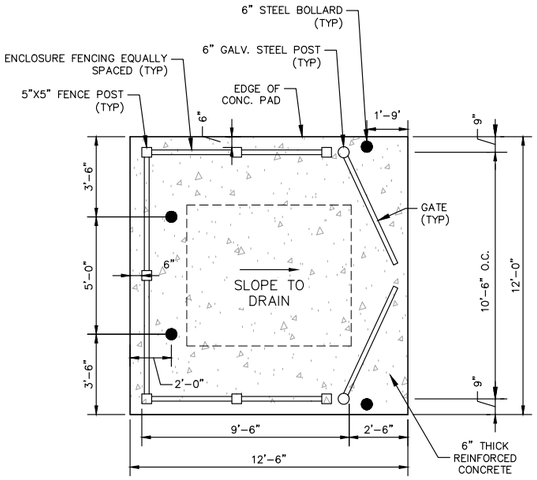
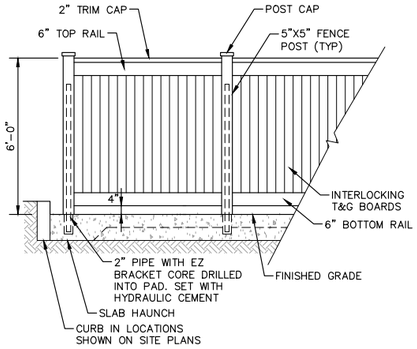


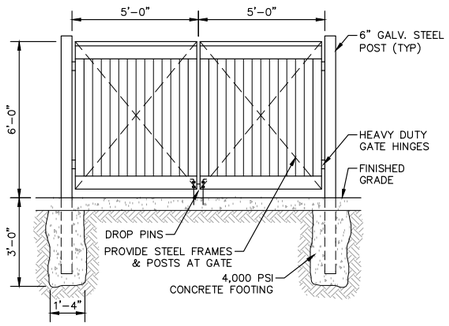
DUMPSTER ENCLOSURE PLAN VIEW

DUMPSTER ENCLOSURE NOTES:

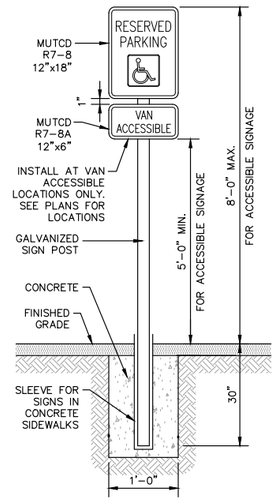
1. THE CONTRACTOR SHALL SUBMIT A FENCING & GATE DETAIL FOR OWNER APPROVAL PRIOR TO ENCLOSURE CONSTRUCTION.
2. FENCING MATERIAL SHALL BE PAINTED WOOD OR VINYL. COLOR TO BE OFF WHITE OR MATCH BUILDING ACCENT COLORS.
3. DUMPSTER GATES SHALL MATCH FENCING MATERIAL.
4. ALL ENCLOSURE HARDWARE INCLUDING HINGES, LATCHES, DROP PINS & FASTENERS SHALL BE HEAVY DUTY COMMERCIAL GRADE WITH A WEATHER RESISTANT COATING. HARDWARE COLOR SHALL BE BLACK OR MATCH BUILDING ACCENT COLORS.

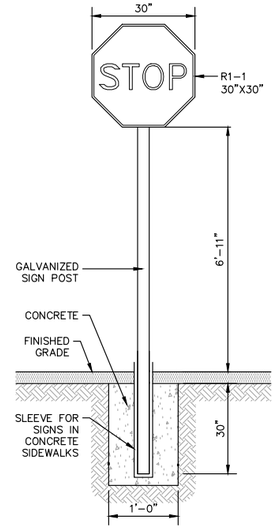


DUMPSTER ENCLOSURE FENCE ELEVATION



DUMPSTER ENCLOSURE GATE ELEVATION





SIGN NOTES:

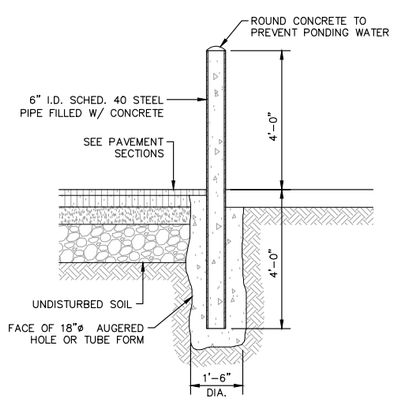
1. ALL SIGNAGE SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D.
2. ACCESSIBLE PARKING SIGN TO BE INSTALLED AT HEAD OF ALL DESIGNATED PARKING SPACES.
3. SIGNS IN CONCRETE AREAS SHALL BE INSTALLED WITH AN ANCHOR SLEEVE.
4. REFER TO SITE PLANS FOR TYPE OF SIGN AND SIGN INSTALLATION LOCATIONS.

1 C20 DUMPSTER PAD ENCLOSURE DETAIL

SCALE: NONE

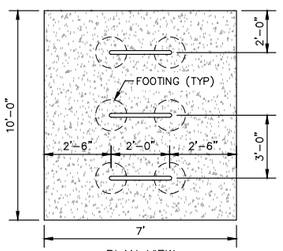
2 C20 TYPICAL SIGN MOUNTING DETAILS

SCALE: NONE

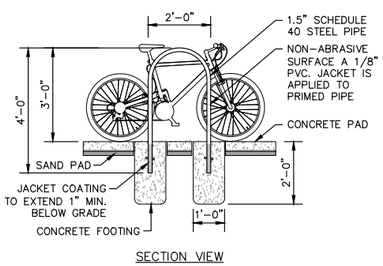


3 C20 STEEL PIPE BOLLARD DETAIL

SCALE: NONE



PLAN VIEW



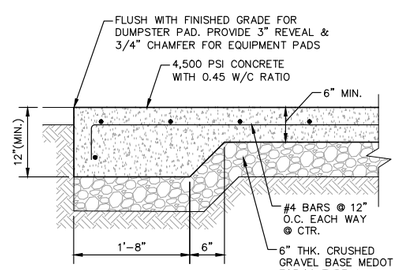
SECTION VIEW

BICYCLE RACK NOTES:

1. BICYCLE RACK BY CYCLE SAFE, INC – MODEL U2RACK OR APPROVED EQUAL.
2. STEEL SHALL MEET ASTM D2240 FOR HARDNESS

4 C20 BICYCLE RACK DETAIL

SCALE: NONE



PAD NOTE:

1. REFER TO SITE PLANS FOR DUMPSTER & EQUIPMENT PAD DIMENSIONS.

5 C20 TYPICAL DUMPSTER PAD & EQUPMENT PAD DETAIL

SCALE: NONE

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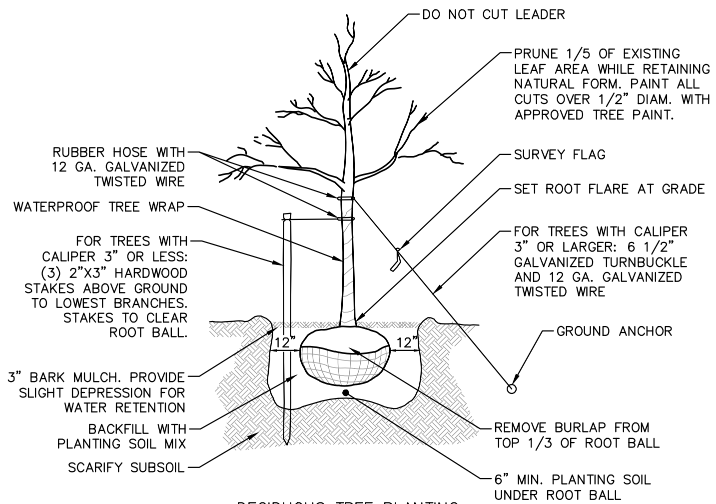
PEASE INTERNATIONAL AIRPORT
51 EXETER STREET
PORTSMOUTH, NH 03801

SITE DETAILS 2

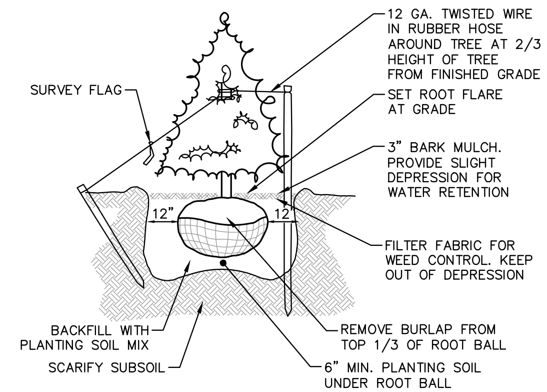
C20

PROJECT NO. 20.565900.00

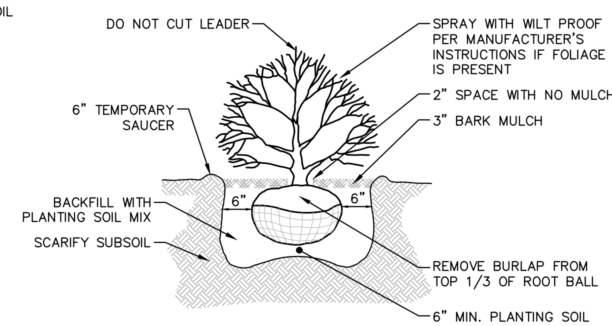
SHEET 21 OF 31



DECIDUOUS TREE PLANTING



CONIFEROUS TREE PLANTING



SHRUB PLANTING

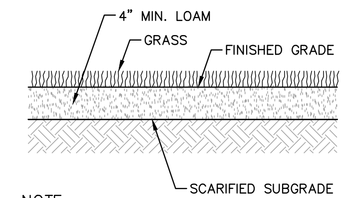
FOR TREES 5' IN HEIGHT OR GREATER:

1. PROVIDE (3) 12 GA. GALVANIZED GUY WIRES @ 120 DEGREE SPACING WITH (6) 1/2" GALVANIZED TURNBUCKLE WIRE IN RUBBER HOSE AROUND TREE.
2. ATTACH TO TREE @ 1/2-2/3 HEIGHT OF TREE ABOVE GRADE.
3. ANCHOR WITH 2"X3' HARDWOOD STAKE BURIED BELOW GRADE AND CLEAR OF ROOT BALL.

FOR TREES LESS THAN 5' IN HEIGHT:

1. PROVIDE (3) 2"X3' HARDWOOD STAKES @ 120 DEGREE SPACING, MIN. 36" IN GROUND AND CLEAR OF ROOT BALL.

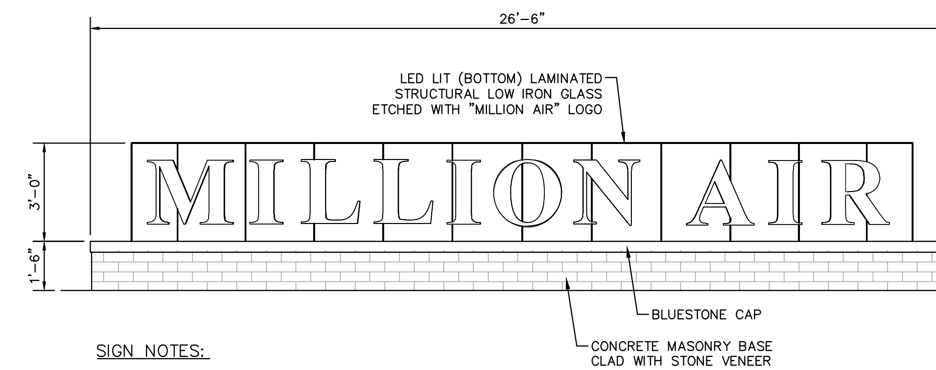
1 / C21 **TYPICAL TREE & SHRUB PLANTING DETAILS**
SCALE: NONE



NOTE:

1. REFER TO LANDSCAPE DRAWINGS FOR SEED MIXTURES AND APPLICATION RATES.

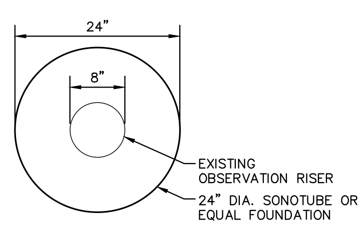
2 / C21 **GRASS PLANTING DETAIL**
SCALE: NONE



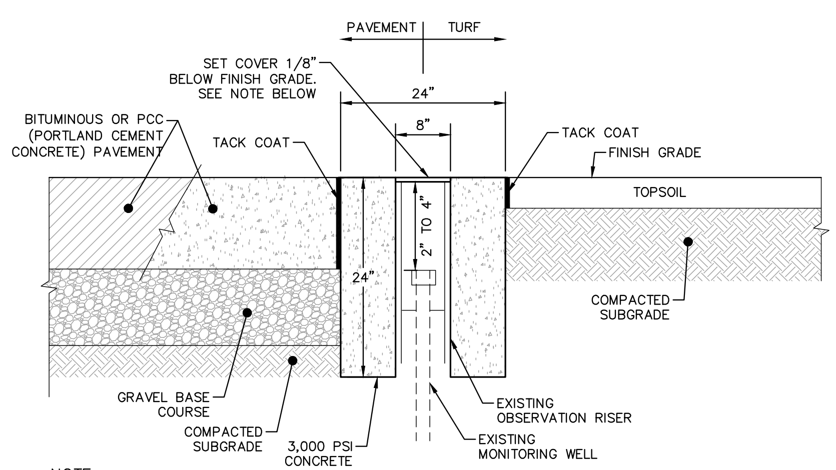
SIGN NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL SHAPE AND SIZE OF THE PROPOSED SIGNS. REFER TO FINAL ARCHITECTURAL DRAWINGS FOR ADDITIONAL SIGN DETAILS.
2. REFER TO FINAL STRUCTURAL DRAWINGS FOR SIGN FOOTINGS.

3 / C21 **MILLIONAIR MONUMENT SIGN**
SCALE: NONE



PLAN VIEW

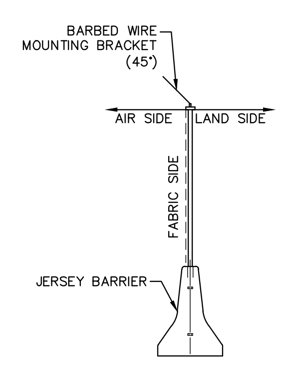


SECTION

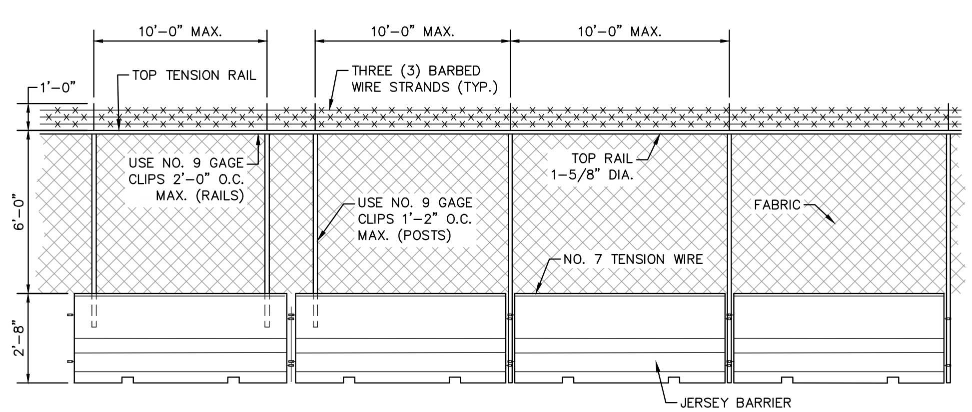
NOTE:

1. RESET EXISTING OR SET NEW RISER ROAD BOX AS DIRECTED BY ENGINEER.

4 / C21 **MONITORING WELL PROTECTION**
SCALE: NONE



SIDE VIEW



FRONT VIEW

5 / C21 **SELF SUPPORTING TEMPORARY FENCE DETAIL**
SCALE: NONE

STATE OF NEW HAMPSHIRE · SHAWN M. TOBEY No. 14121 · PROFESSIONAL ENGINEER
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DESIGNED BY	DRAWN BY	CHECKED BY
SMT	MJG/SMT	WRD

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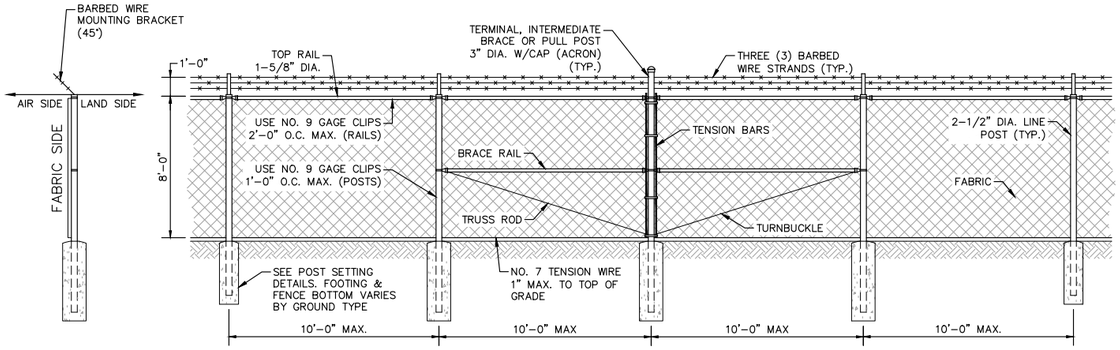
SITE DETAILS 3

C21

PROJECT NO. 20.565900.00

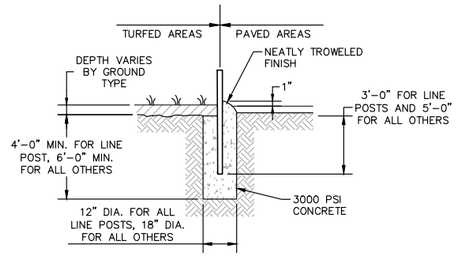


NOTES:

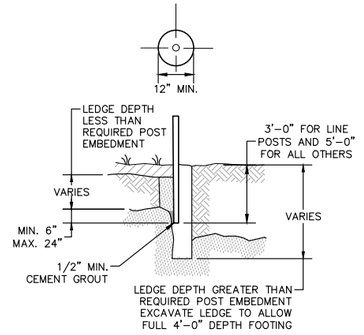
ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES, WITH A MAXIMUM SPACING BETWEEN POST ASSEMBLIES OF 500'.

1 / C22 INTERMEDIATE POST ASSEMBLY SECURITY FENCE

SCALE: NONE



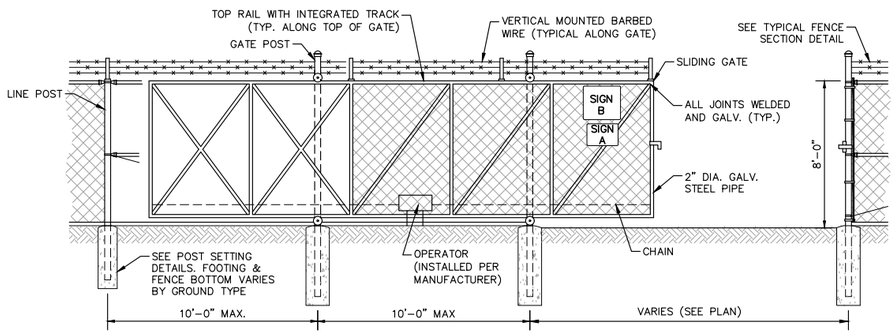
POST SET IN EARTH



POST SET IN LEDGE

4 / C22 SECURITY FENCE POST SETTING DETAILS

SCALE: NONE

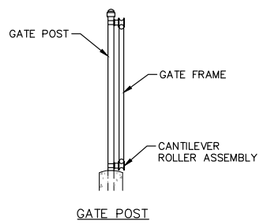


NOTES:

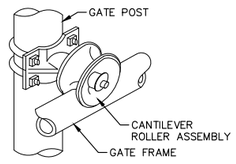
FENCES SHALL BE GROUNDED ON EACH SIDE OF EVERY GATE, AT POINTS 150 (FEET) ON EACH SIDE OF HIGH-TENSION LINE CROSSINGS, AND AT 150-FOOT INTERVALS ALONG THE FENCE WHERE HIGH TENSION LINES (AS DEFINED BY ANSI C2) ARE DIRECTLY OVERHEARD AND RUN PARALLEL TO THE FENCE. FENCES SHALL BE GROUNDED EVERY 1,000 FEET TO 1,500 FEET OF LENGTH WHEN FENCING IS IN ISOLATED PLACES AND AT LESSER DISTANCES DEPENDING ON PROXIMITY OF FENCE TO PUBLIC ROADS, HIGHWAYS, AND BUILDINGS. THE GROUND SHALL BE ACCOMPLISHED BY WITH A COPPER CLAD ROD 10 FEET LONG AND A MINIMUM OF 3/4 INCH IN DIAMETER DRIVEN VERTICALLY UNTIL THE TOP IS 6 INCHES BELOW THE GROUND SURFACE. A NO. 6 SOLID COPPER CONDUCTOR SHALL BE CLAMPED TO THE ROD AND TO THE FENCE IN SUCH A MANNER THAT EACH ELEMENT OF THE FENCE IS GROUNDED.

2 / C22 SLIDING FENCE GATE DETAIL

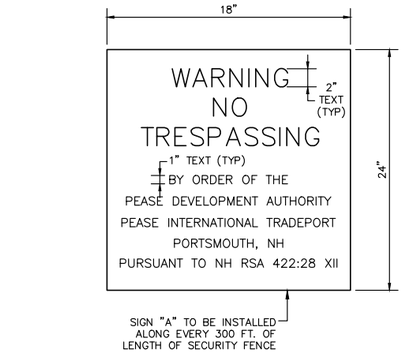
SCALE: NONE



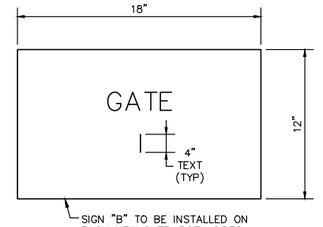
GATE POST



ROLLER ASSEMBLY



SIGN "A" DETAIL



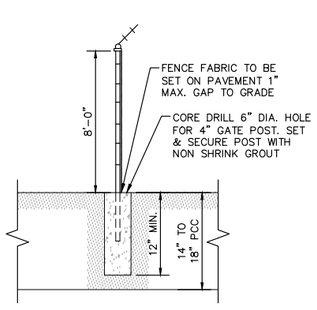
SIGN "B" DETAIL

NOTE:

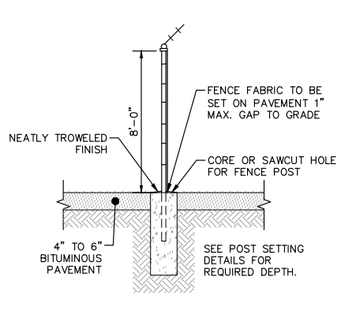
ALL SIGN LETTING, FONTS, COLORS, SIZES AND GRAPHICS ARE TO BE APPROVED BY THE OWNER PRIOR TO PROCUREMENT OF SIGNS.

5 / C22 SECURITY FENCE SIGN DETAILS

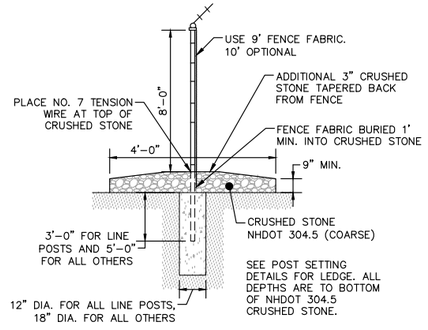
SCALE: NONE



FENCE IN PORTLAND CEMENT CONCRETE PAVEMENT (PCC)



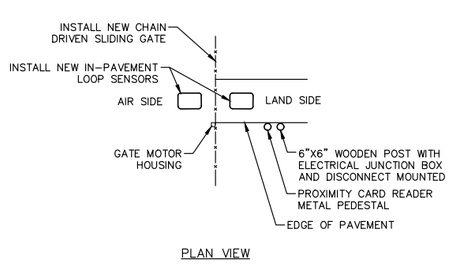
FENCE IN BITUMINOUS PAVEMENT



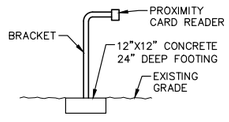
FENCE IN TURF

3 / C22 SECURITY FENCE POST SETTING DETAILS

SCALE: NONE



PLAN VIEW



TYPICAL CARD READER

NOTES:

1. ALL PAVEMENT LOOP CENSORS, CARD READER AND JUNCTION BOXES SHALL BE DESIGNED AND INSTALLED PER MANUFACTURES RECOMMENDATIONS.
2. ALL GATES AND SECURITY FEATURES SHALL BE COORDINATED WITH THE AIRPORT.

6 / C22 TYPICAL GATE CONTROL AND LOOP DETECTOR DETAIL

SCALE: NONE

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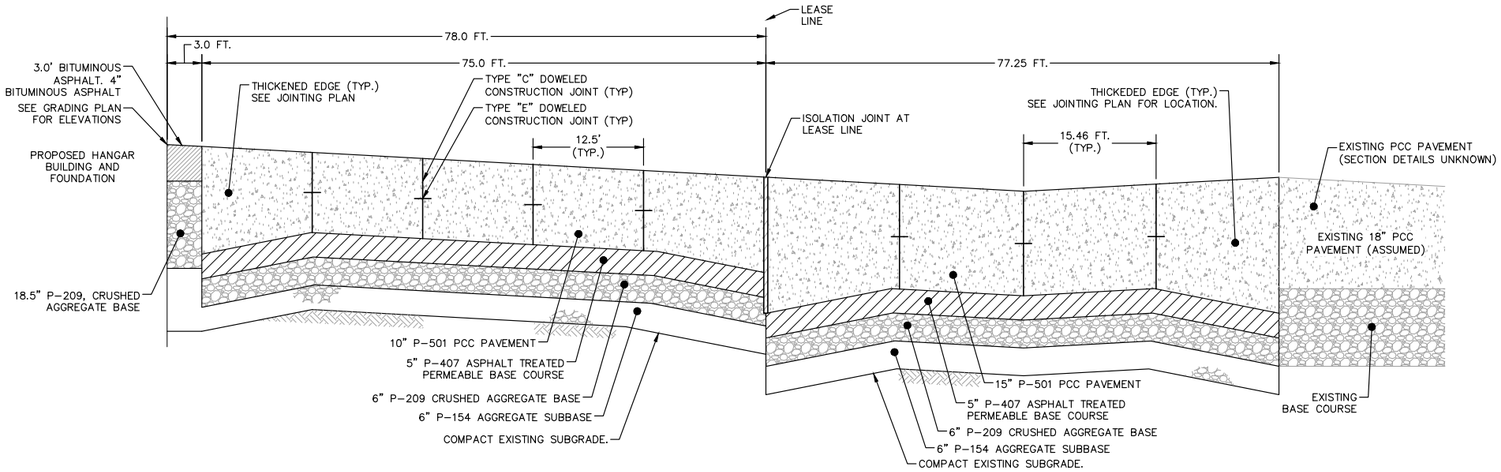
63 EXETER STREET
PORTSMOUTH, NH 03801

FENCING DETAILS

C22

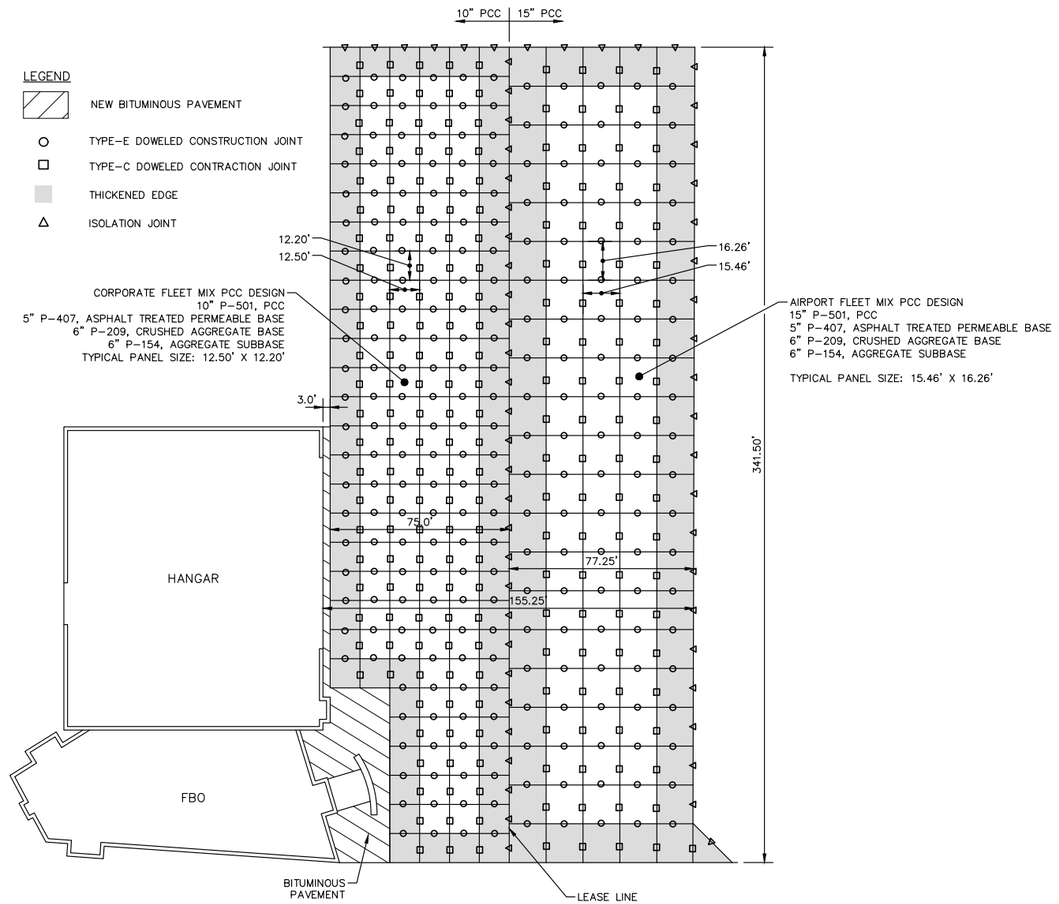
PROJECT NO. 20.565900.00

SHEET 23 OF 31



1 / C23 **TYPICAL PCC SECTION DETAIL**

SCALE: NONE



2 / C23 **PCC JOINTING PLAN**

SCALE: NONE

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY No. 14121 — PROFESSIONAL ENGINEER

11/23/21

REV.	REVISION DESCRIPTION	DATE
4	ISSUED FOR NHDES ALTERATION OF TERRAIN AND WETLAND PERMITTING	11/23/21
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2	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS	10/08/21
1	60% DESIGN PLANS – ISSUED FOR PDA REVIEW	08/30/21

CHECKED BY WRD | DRAWN BY MJG/SMT | DESIGNED BY SMT

HOYLE TANNER
Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801
(603) 431-2520
www.hoyletanner.com

ORIGINAL DATE: AUGUST 30, 2021

SCALE: AS SHOWN

APPLICANT
PEASE AVIATION PARTNERS, LLC
7355 IPSWICH ROAD
HOUSTON, TX 77061

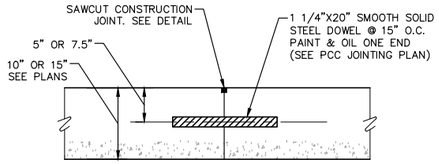
PROJECT
PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
63 EXETER STREET
PORTSMOUTH, NH 03801

APRON DETAILS 1

C23

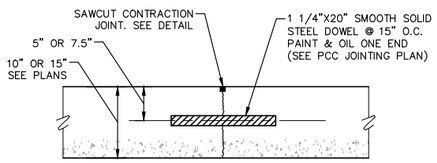
PROJECT NO. 20.565900.00

SHEET 24 OF 31



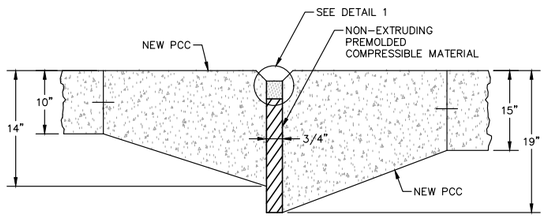
1 / C24 PCC PAVEMENT TRANSVERSE TYPE E DOWELED CONSTRUCTION JOINT DETAIL

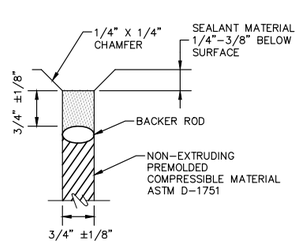
SCALE: NONE



2 / C24 PCC PAVEMENT TRANSVERSE TYPE C DOWELED CONTRACTION JOINT DETAIL

SCALE: NONE

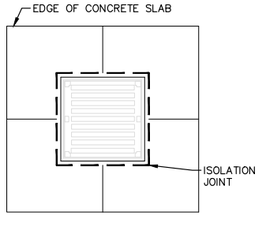




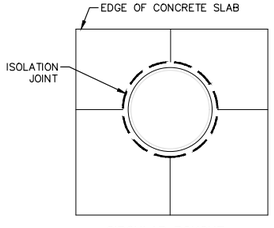
DETAIL 1

3 / C24 ISOLATION JOINT DETAIL

SCALE: NONE



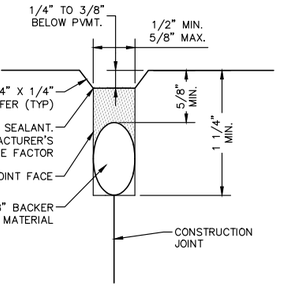
SQUARE BOXOUT



CIRCULAR BOXOUT

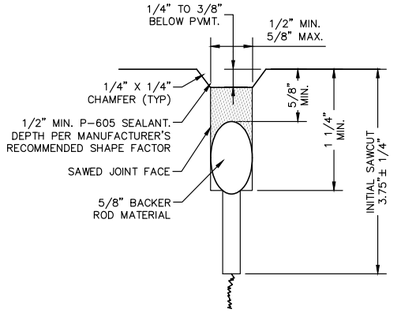
4 / C24 DETAILS FOR PAVEMENT PENETRATIONS

SCALE: NONE



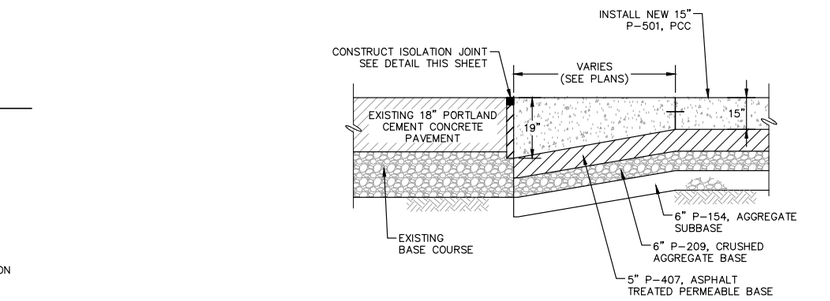
5 / C24 SAWCUT PCC CONSTRUCTION JOINT SEALANT DETAIL

SCALE: NONE



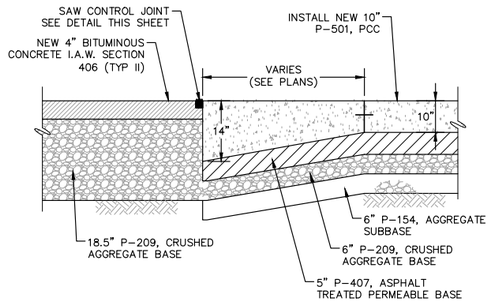
6 / C24 SAWCUT PCC CONTRACTION JOINT SEALANT DETAIL

SCALE: NONE



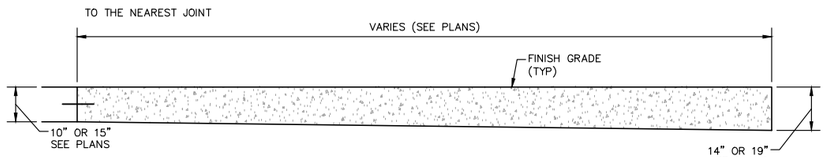
7 / C24 NEW PCC TO EXISTING PCC PAVEMENT BUTT JOINT DETAIL

SCALE: NONE



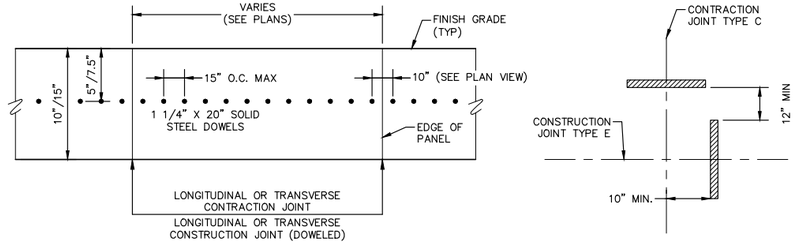
8 / C24 NEW PCC TO LIGHT DUTY BITUMINOUS CONC. BUTT JOINT DETAIL

SCALE: NONE



9 / C24 TYPE A THICKENED EDGE DETAIL

SCALE: NONE



SECTION VIEW

PLAN VIEW

10 / C24 LONGITUDINAL AND TRANSVERSE DOWELED JOINT DETAIL IN PCC PAVEMENT

SCALE: NONE

STATE OF NEW HAMPSHIRE — SHAWN M. TOBEY No. 14121 — PROFESSIONAL ENGINEER

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PORTSMOUTH, NH 03801

APRON DETAILS 2

C24

PROJECT NO. 20.565900.00

SHEET 25 OF 31

DESIGN LOADS, MATERIALS AND SPECIFICATIONS:

1. DESIGN LIVE LOAD: LOAD CASE 1: 90 PSF PEDESTRIAN LOAD
   LOAD CASE 2: AASHTO H5 TRUCK AND 50 PSF GROUND SNOW LOAD.
2. DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD)
3. SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

   AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION WITH 2015 INTERIM REVISIONS.

   NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2016 WITH CURRENT ADDITIONS AND MODIFICATIONS.

   WELDING PER ANSI/AASHTO/AWS D1.5–02 (INCLUDING ALL REVISIONS PUBLISHED BY AASHTO AS OF THE BID OPENING DATE)
4. FOUNDATION DATA: SPREAD FOOTINGS FOUNDED ON SOIL WITH AN ALLOWABLE BEARING CAPACITY OF 1.5 TSF.
5. REINFORCING STEEL: AASHTO M 31 (ASTM A615) GRADE 60
   AASHTO M 284 (ASTM A775) GRADE 60 EPOXY COATED (WHERE INDICATED)
6. STRUCTURAL STEEL: GALVANIZED AND PAINTED PREFABRICATED PEDESTRIAN BRIDGE:
   AASHTO M 270, GRADE 50 (ASTM A709, GRADE 50) GALVANIZED PER ASTMA123

   TUBING SHALL MEET THE REQUIREMENTS OF ASTM A 500, GRADE C

   PLATES AND ROLLED SHAPES SHALL MEET THE REQUIREMENTS OF ASTM A 572, GRADE 50
7. CONCRETE: ABUTMENT BACKWALLS AND WINGWALLS (ABOVE BEARING SEAT CONSTRUCTION JOINT):
   4,000 PSI (AT 28 DAYS), WITH 3/4" AGGREGATE

   ABUTMENT AND WINGWALLS (BELOW BEARING SEAT CONSTRUCTION JOINT):
   3,000 PSI (AT 28 DAYS), WITH 1 1/2" MAXIMUM AGGREGATE

   FOOTINGS:
   3,000 PSI (AT 28 DAYS), WITH 1 1/2" MAXIMUM AGGREGATE
8. SEISMIC: PEAK GROUND ACCELERATION (PGA) = 0.155
   SITE CLASS = D
   ZONE = 2
9. SUBSTRUCTURE BACKFILL: SUBSTRUCTURE BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING THE FOLLOWING GRADATION:

   – 100% OF PARTICLES PASSING THE 6" SIEVE
   – 25%–70% OF PARTICLES PASSING THE NO. 4 SIEVE
   – 0%–12% OF PARTICLES PASSING THE NO. 200 SIEVE

   STRUCTURAL FILL SHALL CONSIST OF GRANULAR MATERIAL MEETING THE FOLLOWING GRADATION:

   – 100% OF PARTICLES PASSING 3" SIEVE
   – 95%–100% OF PARTICLES PASSING 2" SIEVE
   – 55%–85% OF PARTICLES PASSING 1" SIEVE
   – 27%–52% OF PARTICLES PASSING NO.4 SIEVE
   – 0%–5% OF PARTICLES PASSING NO. 4 200 SIEVE

   CLEAN STONE FILL MEETING THE FOLLOWING GRADATION MAY BE SUBSTITUTED FOR STRUCTURAL FILL IF THE DEPTH DOES NOT EXCEED 1 FT.

   – 100% OF PARTICLES PASSING 2" SIEVE
   – 95%–100% OF PARTICLES PASSING 1.5" SIEVE
   – 35%–70% OF PARTICLES PASSING 3/4" SIEVE
   – 10%–30% OF PARTICLES PASSING 3/8" SIEVE
   – 0%–5% OF PARTICLES PASSING NO. 4 SIEVE

REINFORCEMENT NOTES:

1. ALL REINFORCING STEEL SHALL HAVE 2–1/2" MINIMUM CLEAR COVER UNLESS OTHERWISE NOTED.
2. PLACE REINFORCING STEEL TO AVOID WEEPERS, ELECTRICAL CONDUIT AND TRUSS BEARING ANCHOR BOLTS.
3. ANY EPOXY COATED REBAR CUT TO FIT SHALL BE TOUCHED–UP WITH AN APPROVED EPOXY COATING MATERIAL.
4. REINFORCING LEGEND:

   ES = EACH SIDE
   SP = SPACE
   SPL = SPLICE
   FS = FAR SIDE
   NS = NEAR SIDE
   BOT = BOTTOM
   MID = MIDDLE
   EQ = EQUAL
   ALT = ALTERNATING
   DOW = DOWELS
   (E) = EPOXY COATED

5. THE CONTRACTOR SHALL PREPARE THE REINFORCING STEEL SHOP PLANS FOR REVIEW AND APPROVAL FROM THE TYPICAL DESIGN DETAILS SHOWN ON THE CONTRACT PLANS. FOR THE FABRICATION AND FIELD LAYOUT OF THE REINFORCING STEEL, THE SHOP PLANS SHALL BE COMPLETE IN DETAIL INCLUDING BAR MARKS, BAR LOCATION AND SPACING, SPLICE LENGTH AND SPLICE LOCATIONS. THE SHOP PLANS SHALL HAVE A BAR LIST, BENDING DIAGRAMS, BAR WEIGHT BY SIZE AND BAR QUANTITY GRAND TOTAL.
6. APPROVED SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO HOYLE, TANNER & ASSOCIATES, INC. AS ELECTRONIC FILES. THE SHOP PLANS SHALL BE PROPERLY TITLED AS TO PROJECT LOCATION AND BRIDGE COMPONENTS (AS ABUTMENT A, ABUTMENT B, ETC.) SIMILAR TO THE CONTRACT DRAWING TITLE BOX.
7. THE CONTRACTOR SHALL ATTEMPT TO MAXIMIZE REINFORCING BAR LENGTHS BY MINIMIZING THE NUMBER OF SPLICES.

ABUTMENT AND WINGWALL NOTES:

1. WATER REPELLENT (SILANE/SILOXANE) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES ON ABUTMENTS (INCLUDING BRIDGE SEATS), BACKWALLS AND ALL WINGWALLS TO 1'–0" BELOW THE FILL LINES. ALLOWABLE PRODUCTS ARE CHEMMASTERS CERTI–VEX PENSEAL 244 100% OR 40% AIM, OR ADVANCED CHEMICAL TECHNOLOGIES, INC. SIL–ACT ATS–42A.
2. BARRIER MEMBRANE, PEEL AND STICK – VERTICAL SURFACES (F), 2'–0" WIDE WITH PROTECTION BOARD, SHALL BE PLACED CENTERED OVER THE BEARING SEAT CONSTRUCTION JOINT AND CENTERED OVER THE VERTICAL CONSTRUCTION JOINTS OR AS INDICATED ON THE PLANS. ALLOWABLE PRODUCTS ARE CHASE CORPORATION ROYSTON 104 AHT MEMBRANE, ROYBOND 740 PRIMER, AND 104–CM (MASTIC). PROTECTO WRAP CO. JIFFY SEAL 140/60 COLD WEATHER, VOC 100 PRIMER, 160 H MASTIC.
3. WEEPERS SHALL BE PLACED SYMMETRICALLY 10'–0" APART AND LOCATED ABOVE THE TOP OF FOOTINGS AS SHOWN. WEEPERS SHALL BE 4" IN DIAMETER AND SLOPED TO DRAIN WITH A 12:1 SLOPE.
4. ABUTMENTS SHALL BE BACKFILLED TO THE LEVEL OF THE BRIDGE SEAT ELEVATION PRIOR TO ERECTING THE PREFABRICATED TRUSS.
5. ALL ANCHOR BOLTS AT THE ABUTMENT SHALL BE CAST–IN–PLACE OR CORED DRILLED, USING A TEMPLATE. ROCK DRILLING IS NOT ALLOWED.
6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4".
7. SHEAR KEYS SHALL BE 3" HIGH BY ONE–THIRD THE WIDTH OF THE WALL, CENTERED.

FOUNDATION NOTES:

1. ANY UNSUITABLE MATERIALS SUCH AS BOULDERS, ROOTS, ORGANIC SOILS, OR SILT/CLAY ENCOUNTERED AT THE PROPOSED BOTTOM OF EXCAVATION ELEVATION SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL AS REQUESTED BY THE ENGINEER.
2. FINAL EXCAVATIONS TO SUITABLE SUBGRADES AT ABUTMENT A SHALL BE PERFORMED USING A SMOOTH–BLADED EXCAVATOR BUCKET TO PREVENT EXCESS DISTURBANCE TO THE EXISTING SUBGRADE.
3. PROTRUDING BOULDERS OR COBBLES ENCOUNTERED AT THE FINAL EXCAVATION DEPTH SHALL BE REMOVED OR SPLIT TO PROVIDE A LEVEL BEARING SURFACE.
4. ABUTMENT A AND ABUTMENT B AS DETAILED ON THE PLANS SHALL BE FOUNDED ON A 1'–0" THICK LAYER OF STRUCTURAL FILL PLACED OVER UNDISTURBED SOIL.

SUPERSTRUCTURE NOTES:

1. PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE, SHALL INCLUDE, GALVANIZED & PAINTED PREFABRICATED TRUSS, CONCRETE DECK, DECK REINFORCING STEEL, BEARING DEVICES, ANCHOR RODS, HANDRAILS, HORIZONTAL RAILINGS, TOE PLATES AND ALL INCIDENTAL ITEMS OR ITEMS SHOWN IN THE CONTRACT DOCUMENTS NECESSARY TO COMPLETE THE DESIGN AND CONSTRUCTION OF THE PROPOSED BRIDGE SUPERSTRUCTURE.
2. THE PROPOSED BRIDGE SHALL BE A SINGLE SPAN.
3. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL, DESIGN CALCULATIONS AND SHOP DRAWINGS FOR THE PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE, INCLUDING, REINFORCED CONCRETE DECK, TRUSSES, FLOOR BEAMS, BRACING, BEARINGS, ANCHOR BOLTS AND HANDRAILS. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE PREFABRICATED BRIDGE STRUCTURE.
4. BEARING DEVICES AND ANCHOR BOLT LAYOUT SHALL BE SPECIFIED BY THE BRIDGE FABRICATOR AND COORDINATED WITH THE CONTRACTOR.
5. THE DECK REINFORCING STEEL SHALL BE EPOXY COATED. A CORROSION INHIBITOR ADMIXTURE MEETING THE REQUIREMENTS OF ASTM C 1582 SHALL BE INCLUDED IN THE CONCRETE FOR THE DECK. THE DOSAGE SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS FOR A 75 YEAR SERVICE LIFE. ALLOWABLE PRODUCTS ARE GCP APPLIED TECHNOLOGIES INC. DCI, SIKA CORPORATION CNI, OR THE EUCLID CHEMICAL COMPANY EUCON CIA.
6. NOTCH TOUGHNESS REQUIREMENTS FOR HSS MEMBERS SHALL BE 25FT–LB AT 40 DEGREES FAHRENHEIT. NOTCH TOUGHNESS OF ALL OTHER MAIN LOAD CARRYING ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF ZONE 2 OF AASHTO M 270.
7. DIRECT TENSION INDICATORS SHALL BE INSTALLED WITH HIGH STRENGTH BOLTS, WHERE BOLTING IS REQUIRED.
8. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 7/8" Ø MINIMUM HIGH–STRENGTH BOLTS IN 15/16" Ø HOLES. ALL FASTENERS SHALL CONFORM TO REQUIREMENTS FOR AASHTO M164 (ASTM A325) GALVANIZED IN ACCORDANCE WITH ASTM B 695 CLASS 50. ALL FASTENERS AND ASSOCIATED APPURTENANCES SHALL BE PAINTED.
9. SHOP OR FIELD WELDING OF ATTACHMENTS TO, OR PLACEMENT OF HOLES IN, ANY EXPOSED PORTION OF THE BRIDGE FOR CONSTRUCTION PURPOSES IS NOT PERMITTED.
10. BRIDGE SHALL BE CAMBERED 6" (MIN.) AT MIDSPAN AFTER FULL DEAD LOAD DEFLECTION HAS OCCURRED. BRIDGE SHALL MAINTAIN POSITIVE CAMBER UNDER ALL APPLICABLE LOADING COMBINATIONS.
11. APPROVED SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO HOYLE, TANNER & ASSOCIATES, INC. AS ELECTRONIC FILES. THE SHOP DRAWINGS SHALL BE SEALED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
12. THE CONTRACTOR SHALL SUBMIT A HANDLING AND ERECTION PROCEDURE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO HANDLING THE PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE. THE SUBMITTAL SHALL INCLUDE DETAILS, PLANS AND CALCULATIONS FOR EQUIPMENT LOCATION, SIZE AND WEIGHT.
13. INCIDENTAL CHANGES TO THE ABUTMENT GEOMETRY ARE PERMISSIBLE BASED ON THE BRIDGE GEOMETRY AS DETERMINED BY THE FABRICATOR. HOWEVER, THE PROPOSED ABUTMENT ELEVATIONS INCLUDING BUT NOT LIMITED TO BACKWALL ELEVATIONS AND BEAM SEAT ELEVATIONS ARE TO BE MAINTAINED.
14. PAINT COLOR SHALL BE SUBMITTED TO OWNER AND ARCHITECT FOR REVIEW AND APPROVAL.
15. REQUIREMENTS FOR PAINT SHALL CONFORM TO APPENDIX A "DUPLEX COATINGS – PAINT OVER GALVANIZING" OF SECTION 708 OF THE NHDOT STANDARD SPECIFICATIONS 2016.

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DRAWN BY JHV | CHECKED BY JCR | DESIGNED BY RPM/KD

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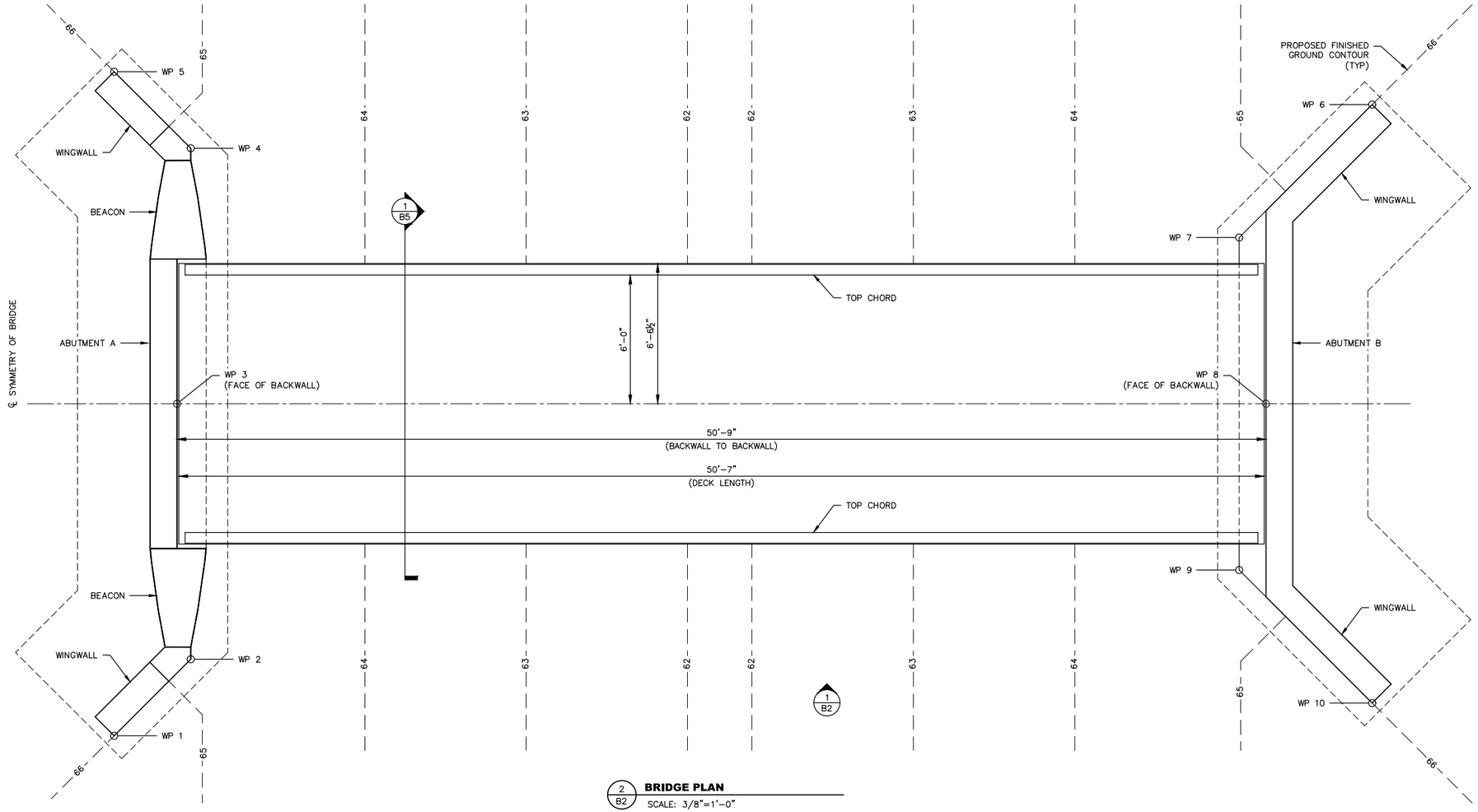
BRIDGE NOTES

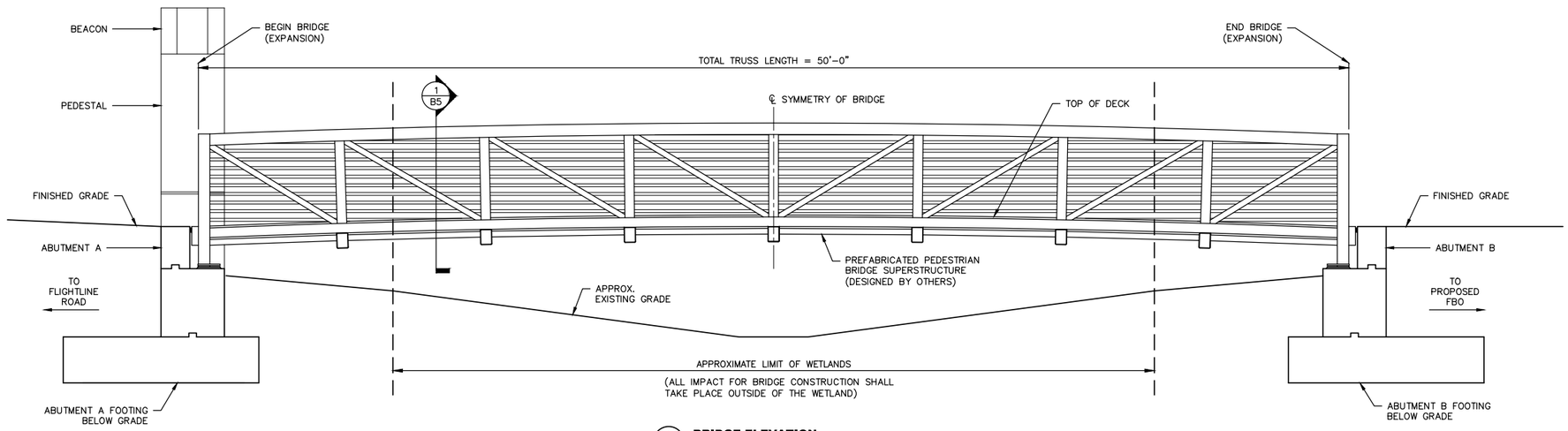
B1

PROJECT NO. 20.565900.00

SHEET 26 OF 31



2 B2 **BRIDGE PLAN**
SCALE: 3/8"=1'-0"



1 B2 **BRIDGE ELEVATION**
SCALE: 3/8"=1'-0"

WORKING POINT COORDINATES		
WP#	NORTHING	EASTING
1	XXXXXX.XX	XXXXXX.XX
2	XXXXXX.XX	XXXXXX.XX
3	XXXXXX.XX	XXXXXX.XX
4	XXXXXX.XX	XXXXXX.XX
5	XXXXXX.XX	XXXXXX.XX
6	XXXXXX.XX	XXXXXX.XX
7	XXXXXX.XX	XXXXXX.XX
8	XXXXXX.XX	XXXXXX.XX
9	XXXXXX.XX	XXXXXX.XX
10	XXXXXX.XX	XXXXXX.XX

SCALE: 3/8" = 1'-0"

0 2 4 6 8

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BRIDGE PLAN & ELEVATION

B2

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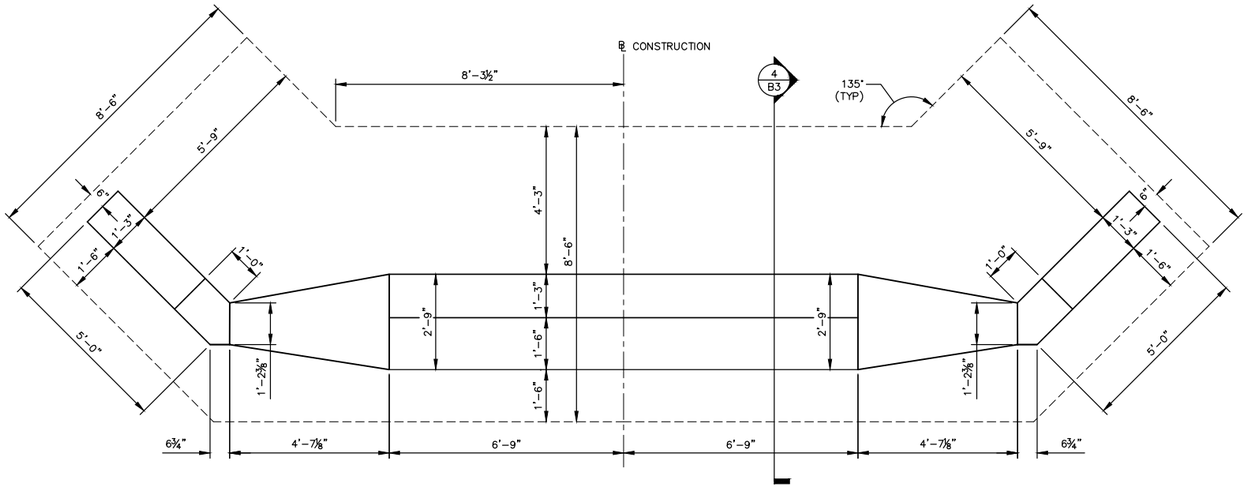
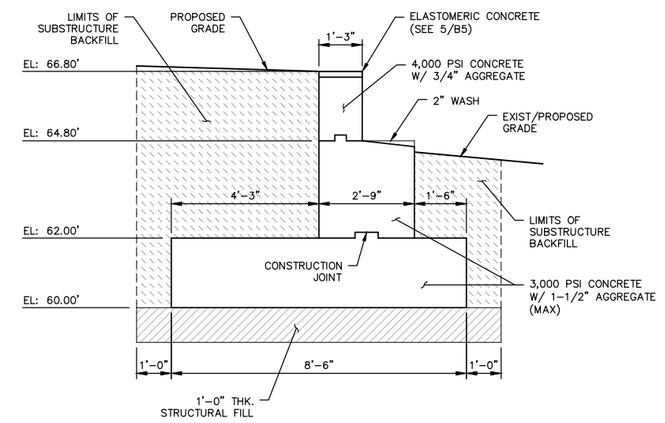
SHEET 27 OF 31



2 / B3 ABUTMENT A PLAN

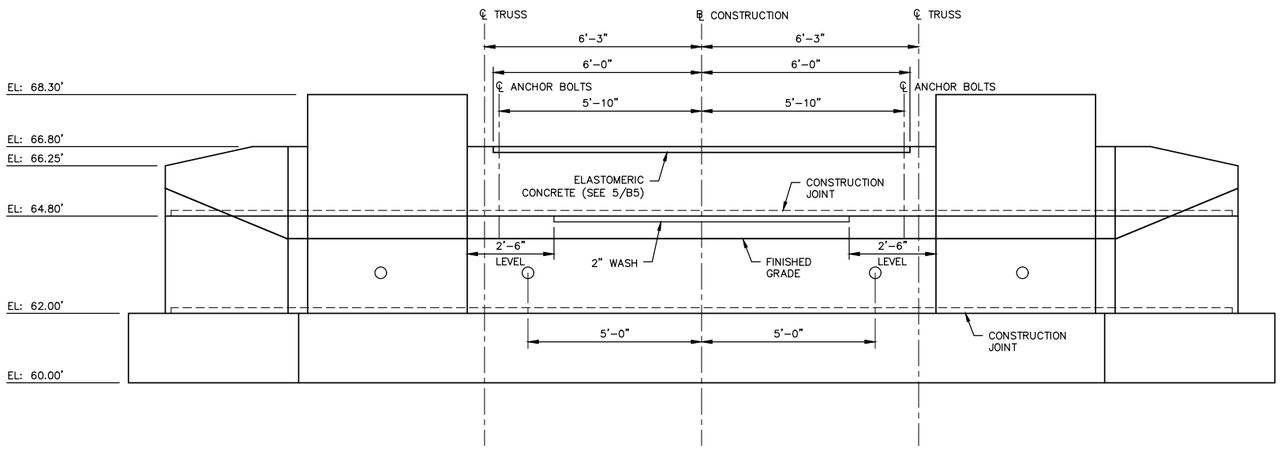
SCALE: 1/2"=1'-0"

NOTE:
1. ELASTOMERIC CONCRETE JOINT NOT SHOWN FOR CLARITY.



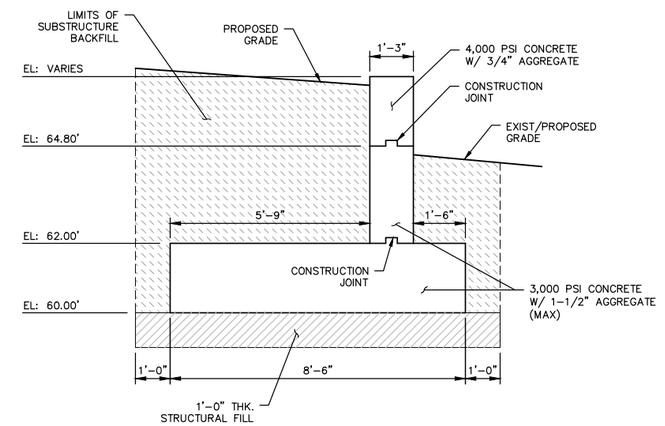
4 / B3 ABUTMENT A SECTION

SCALE: 1/2"=1'-0"



1 / B3 ABUTMENT A ELEVATION

SCALE: 1/2"=1'-0"



3 / B3 ABUTMENT A WINGWALL SECTION

SCALE: 1/2"=1'-0"

SCALE: 1/2" = 1'-0"
0 2 4 6

REV.	DESCRIPTION	DATE
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2	90% DESIGN PLANS – ISSUED FOR PDA REVIEW – REVISED PER COMMENTS	10/08/21
1	60% DESIGN PLANS – ISSUED FOR PDA REVIEW	08/30/21

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DESIGNED BY: RPM/KD
DRAWN BY: JHV
CHECKED BY: JCR
ORIGINAL DATE: AUGUST 30, 2021
SCALE: AS SHOWN

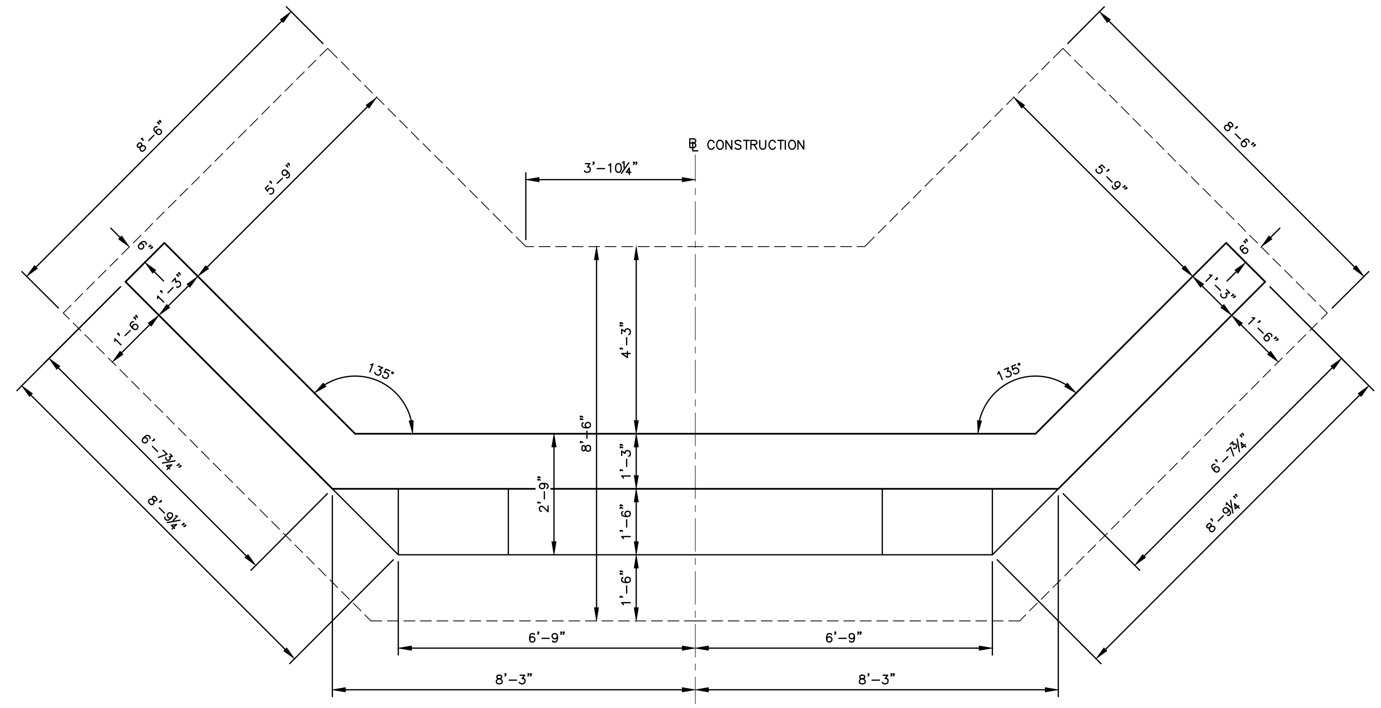
APPLICANT
PEASE AVIATION PARTNERS, LLC
7355 IPSWICH ROAD
HOUSTON, TX 77061

PROJECT
PROPOSED MILLION AIR PORTSMOUTH FBO
PEASE INTERNATIONAL AIRPORT
53 EXETER STREET
PORTSMOUTH, NH 03801

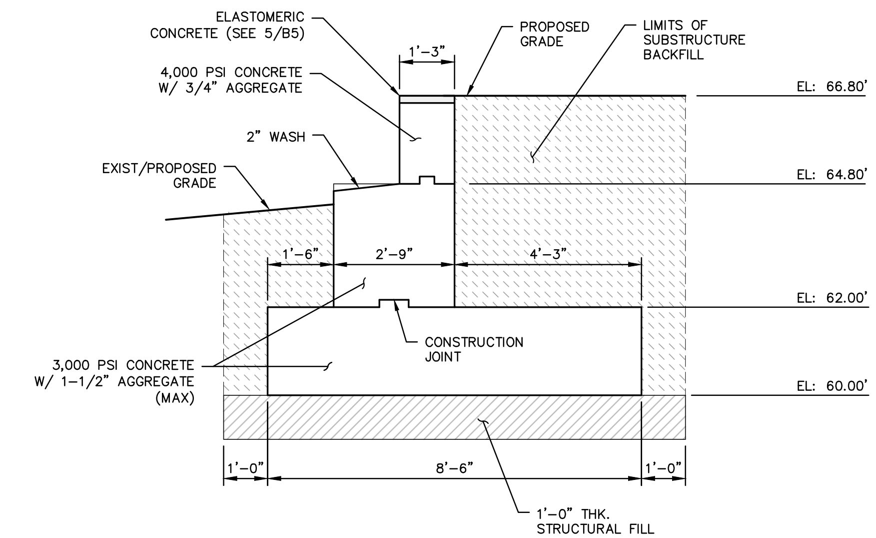
ABUTMENT A

B3

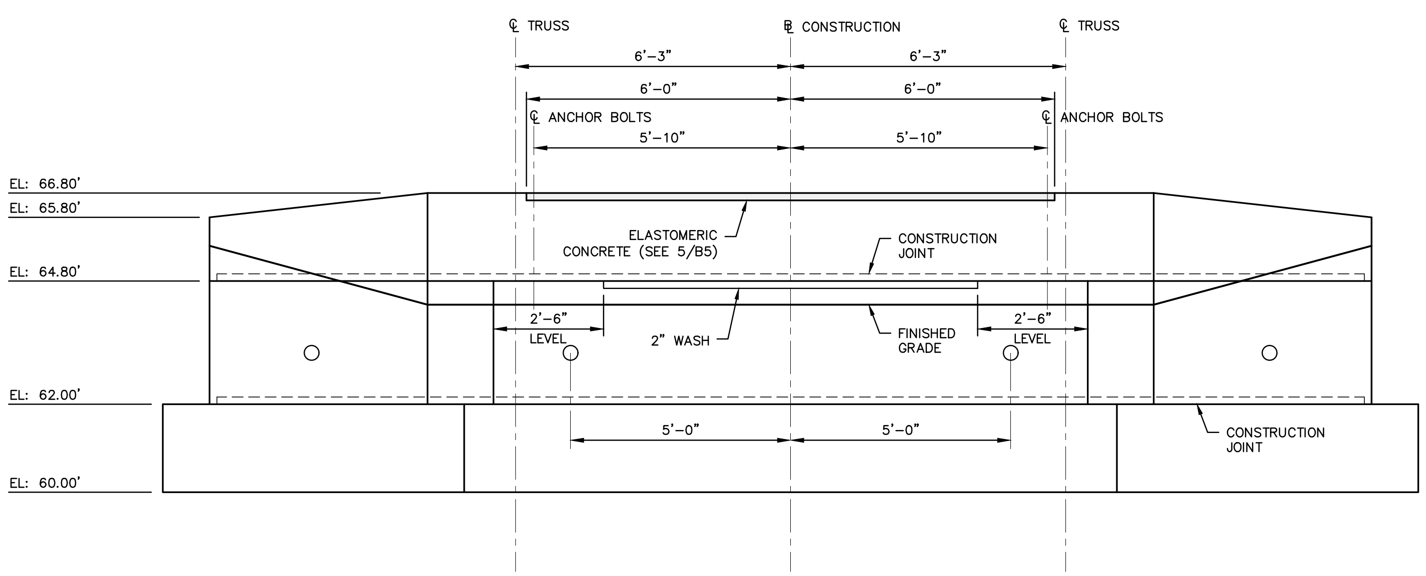
PROJECT NO. 20.565900.00



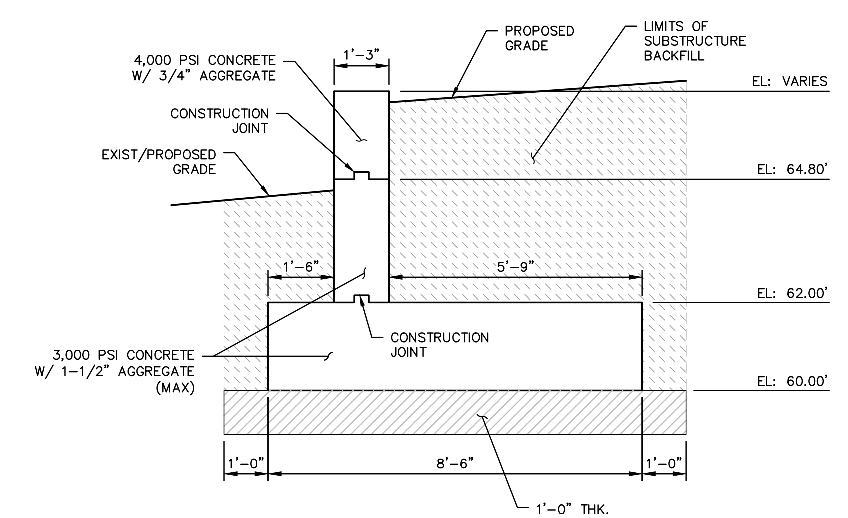
2
B4
ABUTMENT B PLAN
SCALE: 1/2"=1'-0"



4
B4
ABUTMENT B SECTION
SCALE: 1/2"=1'-0"



1
B4
ABUTMENT B ELEVATION
SCALE: 1/2"=1'-0"



3
B4
ABUTMENT B WINGWALL SECTION
SCALE: 1/2"=1'-0"

SCALE: 1/2" = 1'-0"
0 2 4 6

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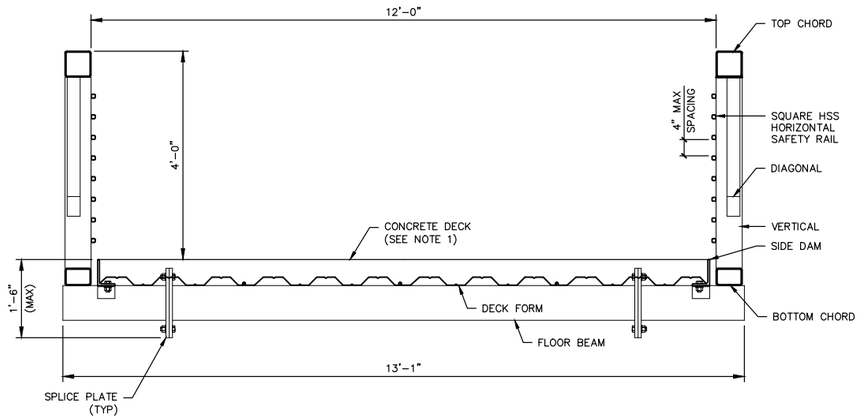
ABUTMENT B
B4
PROJECT NO. 20.565900.00

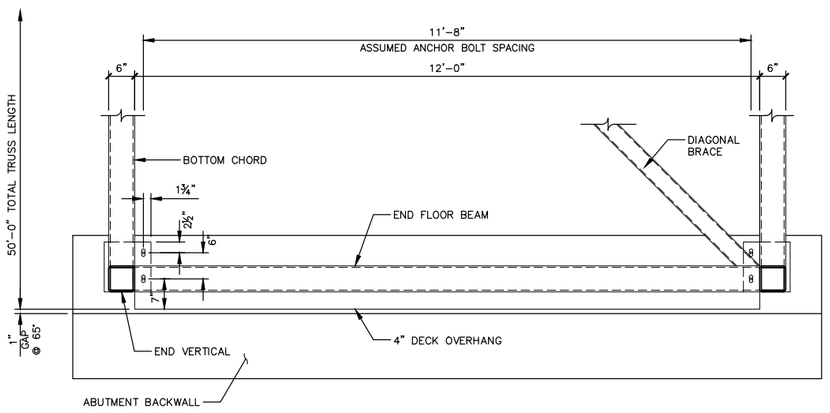


1/B5 TYPICAL PEDESTRIAN BRIDGE SECTION

SCALE: 3/4"=1'-0"

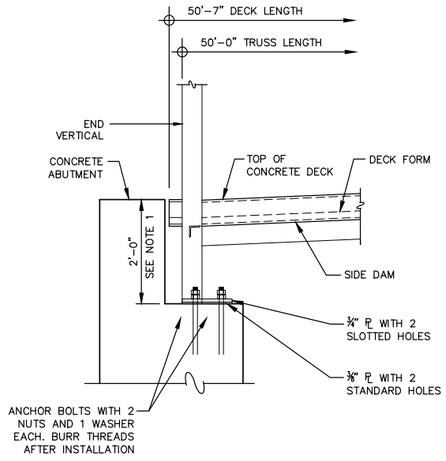
NOTE:

1. DECK REINFORCING TO BE DESIGNED AND DETAILED BY THE PREFABRICATED BRIDGE MANUFACTURER.



3/B5 SUGGESTED BEARING ASSEMBLY PLAN VIEW

SCALE: 3/4"=1'-0"

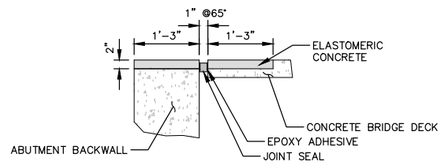


NOTE:

1. BRIDGE FABRICATOR SHALL MAINTAIN THIS DIMENSION.

4/B5 SUGGESTED BEARING ASSEMBLY ELEVATION VIEW

SCALE: 3/4"=1'-0"



NOTES:

1. ABUTMENT A SHOWN. ABUTMENT B SIMILAR
2. EXPANSION JOINT SYSTEM SHALL BE WATSON, BOWMAN, ACME "WABO CRETE FLEXFOAM TYPE 'EV'", CHASE CORPORATION "CEVA" JOINT SYSTEM WITH PHYZITE 380 PREFORMED SEAL OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY THAT THE PROPOSED JOINT SYSTEM CAN ACCOMMODATE FULL THERMAL MOVEMENT OF THE BRIDGE.
3. SAW CUTTING OR CHIPPING OF ABUTMENT AND BRIDGE DECK CONCRETE SHALL NOT BE PERMITTED. PRECAUTIONS SUCH AS BLEEDER HOLES MAY BE REQUIRED IN ORDER TO ENSURE PROPER CONCRETE CONSOLIDATION BELOW BLOCKOUTS.
4. BRIDGE FABRICATOR SHALL PROVIDE A TEMPERATURE ADJUSTMENT TABLE.

5/B5 EXPANSION JOINT DETAIL

SCALE: 3/4"=1'-0"

SHEET NOTE:

1. THESE DETAILS INCLUDED HEREIN ARE BASED ON CONTECH JOB #689349 FOR THE GALVANIZED AND PAINTED FINISH OPTION AND ARE INTENDED TO BE GENERIC OR SCHEMATIC IN NATURE AND SOME DIMENSIONS ARE SUBJECT TO MODIFICATIONS BASED ON THE BRIDGE FABRICATOR.
2. THE SUBSTRUCTURES WERE DESIGNED BASED UPON A SERVICE DEAD LOAD REACTION OF 12.50 KIPS FOR EACH TRUSS BEARING. TRUSS DESIGNS THAT PRODUCE SERVICE DEAD LOADS WITHIN ±5% OF THE ASSUMED REACTIONS ARE PERMITTED WITHOUT FURTHER REVIEW OF THE SUBSTRUCTURE DESIGNS. TRUSS DESIGNS PRODUCING SERVICE DEAD LOAD REACTIONS OUTSIDE THE TOLERANCE LIMITS REQUIRE PRIOR REVIEW AND APPROVAL BY THE ENGINEER.

SCALE: 3/4" = 1'-0"

0 2 4

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DRAWN BY JHV | CHECKED BY JCR | DESIGNED BY RPM/KD

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DETAILS

B5

PROJECT NO. 20.565900.00

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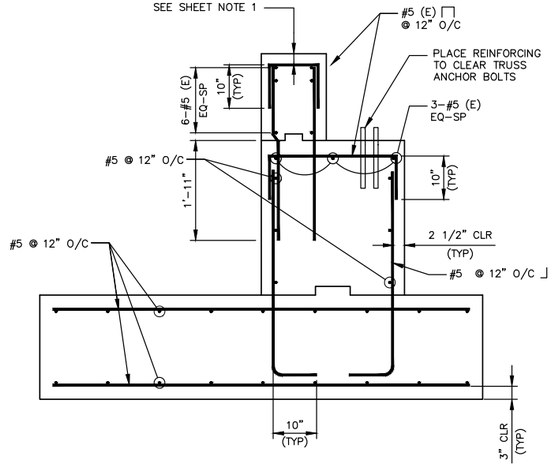
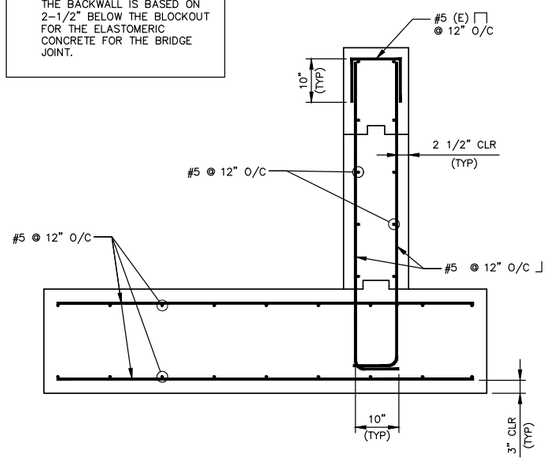


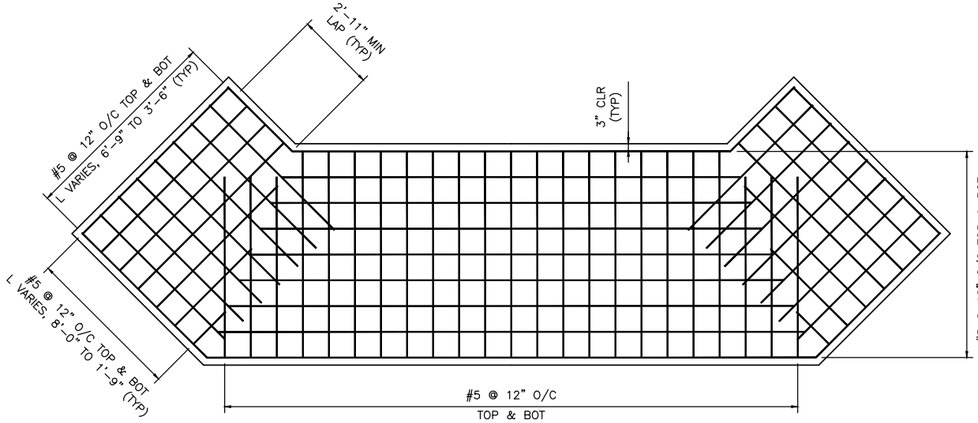
1 B6 **TYPICAL ABUTMENT REINFORCEMENT**
SCALE: 3/4"=1'-0"

SHEET NOTE:

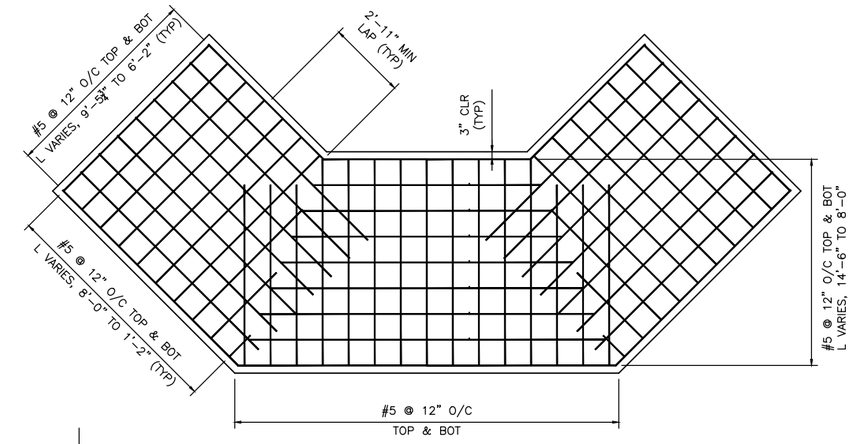
1. CLEAR COVER AT THE TOP OF THE BACKWALL IS BASED ON 2-1/2" BELOW THE BLOCKOUT FOR THE ELASTOMERIC CONCRETE FOR THE BRIDGE JOINT.



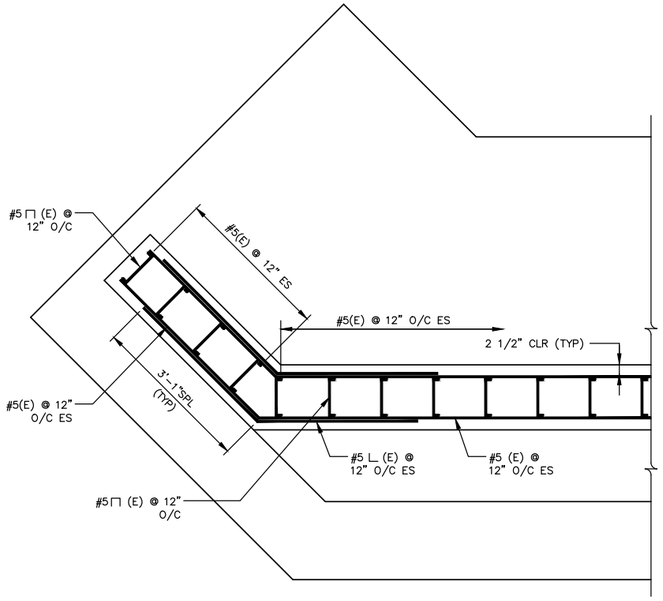
2 B6 **TYPICAL WINGWALL REINFORCEMENT**
SCALE: 3/4"=1'-0"



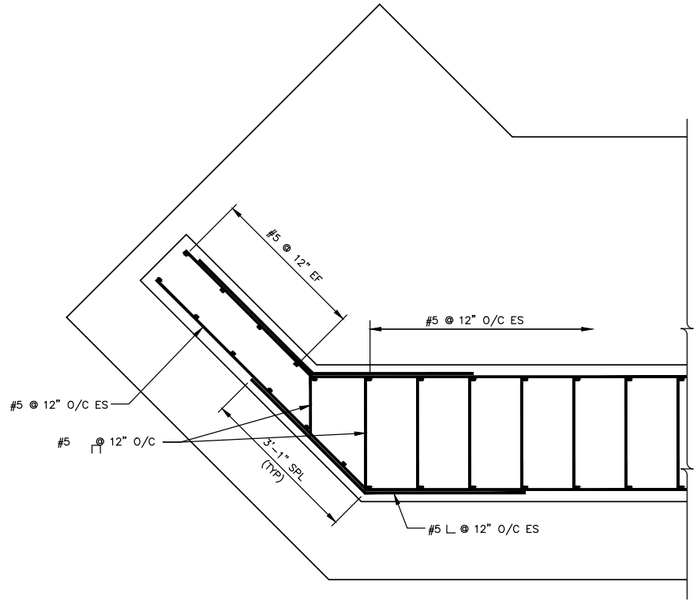
5 B6 **ABUTMENT A FOOTING REINFORCEMENT**
SCALE: 3/8"=1'-0"



6 B6 **ABUTMENT B FOOTING REINFORCEMENT**
SCALE: 3/8"=1'-0"



3 B6 **ABUTMENT B REINFORCEMENT (ABOVE BEAM SEAT)**
SCALE: 3/4"=1'-0"



4 B6 **ABUTMENT B REINFORCEMENT (BELOW BEAM SEAT)**
SCALE: 3/4"=1'-0"

SCALE: 3/8" = 1'-0"

0 2 4 6 8

SCALE: 3/4" = 1'-0"

0 2 4

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REBAR DETAILS

B6

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SHEET 31 OF 31