WETLAND REPORT

for

303 Demi Road

UPPER MOUNT BETHEL TOWNSHIP

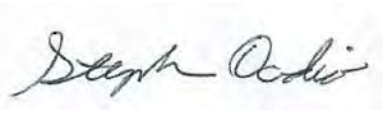
NORTHAMPTON COUNTY, PENNSYLVANIA

April 10, 2020
Last Revised April 19, 2021

Prepared For:

New Demi Road, LLC
559 Main Street, Suite 300
Bethlehem, PA 18018

Prepared By:



Stephen Dadio, CPSS/CPSC/SEO

Value Engineering Inc

Contents

Appendices

INTRODUCTION

A Wetland Investigation was completed for the 303 Demi Road Planned Industrial Park property to determine the presence or absence of wetlands or Waters of the United States. Value Engineering, Inc. was retained by New Demi Road, LLC to complete this Wetland Investigation.

PROJECT AND SITE DESCRIPTION

The project site for the 303 Demi Road Planned Industrial Park is a 60.97 -acre tract that is located in Upper Mount Bethel Township, Northampton County, Pennsylvania. In addition to the 60.97-acre development property, there is also a temporary 4.3-acre grading easement on an adjacent parcel. The property consists of tax parcels C11 26 12 0131, C11 26 11 0131, C11 26 10A 0131, C11 26 10B 0131, and a portion of C11 26 9 0131. The project also involves a temporary grading easement on tax parcel C11 26 2 0131. It is proposed that an industrial development be constructed.

As part of the land development process, a delineation of the Wetlands and/or Waters of the United States must be completed.

NATURAL FEATURES INVENTORY

Topography:

According to the surveyed plan of the property, elevation ranges from 600 ft asl along the southern property boundary to 332 ft asl; sloping to the North-Northwest.

Geology:

The site is underlain primarily by the Epler (Oe) and Martinsburg (Om) Formations. The Epler Formation consists of Ordovician-Age limestone and dolomite while the Martinsburg Formation consists of Ordovician-Age shale and siltstone

Watersheds:

The project site lies within the watershed of an un-named tributary to the Delaware River. This un-named tributary is classified as a Cold Water Fishery (CWF). It is also classified by DEP as an attaining or non-impaired stream. The area of the Delaware River where this un-named tributary enters is classified as a Warm Water Fishery (WWF) and is classified as impaired due to mercury (source unknown).

Soils:

According to the USDA-NRCS Web Soil Survey, the soils on the property are included in the table below:

Table 1. Soil Series Mapping on Property

Soil Series	Map Units	Depth to Rock (in)	Depth to Seasonal High Water Table (in)	Hydric Components Dominant?
Arnot	AtB, AtC, AtD	10-20	>80	NO
Chippewa	CkB	>60	0-6	YES
Conotton	CtB; CtC	>80	>80	NO
Manlius	MaB, MaC	20-40	>80	NO
Swartswood	SvB	>80	33-36	NO
Phelps	PhB	>80	18-24	NO
Red Hook	RhB	>80	6-18	NO
Wurtsboro	WuB, WuC	60-120	12-30	NO

- The Arnot and Manlius soils formed in glacial till and are shallow and moderately deep to bedrock and well-drained. These soils are non-hydric and are not commonly associated with wetlands.
- The Chippewa soils consist of very deep, poorly drained and very poorly drained soils formed in till deposits with dominantly sandstone, siltstone, and shale rock fragments. These soils are in upland depressions. These soils have a major hydric component.
- The Conotton soils are very deep and well drained soils that formed in glacio-fluvial deposit. These soils are non-hydric and are not commonly associated with wetlands.
- The Swartswood soils formed in glacial till and are very deep and moderately well-drained. These soils are non-hydric and are rarely associated with wetlands.
- The Phelps series consists of very deep, moderately well drained soils formed in glacial outwash. These soils are non-hydric and are not commonly associated with wetlands.
- The Red Hook soils formed in glacio-fluvial deposits and are very deep and somewhat poorly drained. While these soils are non-hydric, there is the potential that hydric soils may be present within this map unit.
- The Wurtsboro soils consist of very deep, moderately well drained and somewhat poorly drained soils formed in till derived from quartzite, conglomerate and sandstone. These soils are non-hydric and are not commonly associated with wetlands.

Historic Land Use:

The site consists of existing woods. Historically, based on the farm field rock walls present in the woodlands this land was in agriculture either as crop fields or in pasture.

INVESTIGATION

A soil investigation was advanced on March 27,April 6, 2020, and March 30, 2021 by a Certified Professional Soil Scientist. U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, the U.S. Geological Survey (USGS) National Hydrographic Dataset (NHD) (USGS 2014), and

aerial photographs were reviewed prior to field work to determine potential locations of wetlands and/or waterbodies on the property.

Wetland delineation methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Eastern Mountains and Piedmont Regional Supplement (USACE 2012b) were used to identify and delineate wetlands. According to the 1987 Corps Manual (Environmental Laboratory, 1987), wetlands are characterized by the following three distinct environmental characteristics:

- Vegetation. The prevalent vegetation consists of macrophytes that are typically adapted to life in hydric soil conditions. These hydrophytic species, due to morphological, physiological, and/or reproductive adaptations, can and do persist in anaerobic soil conditions.
- Soils. Soils are present and have been classified as hydric, or they possess redoximorphic characteristics that are associated with anaerobic soil conditions
- Hydrology. The area must be inundated either permanently or periodically at mean water depths less than 6.6 feet, or the soil is saturated at the surface for some time during the growing season of the prevalent vegetation.

Where potential wetland indicators were observed, data were collected at sample plot locations to determine whether a dominance of hydrophytic vegetation indicators, hydric soil indicators, and hydrology indicators were present. If each of these indicators was present within the sample plot, a wetland boundary was delineated, and upland and wetland data plot locations were established.

RESULTS

There is an area of wetlands present along the northern property boundary. This area consists of the Upland meeting a thin (5-20 ft) fringe of Palustrine Forested wetlands (PFO) and then opening up to Palustrine Emergent wetlands (PEM).

These areas are characterized by the following vegetation, hydrology, and soils.

Vegetation:

Phalaris arundinacea (Reed canarygrass)	Fac-Wet	65%
Typha Latifolia (Cattails)	Obligate	20%
Symplocarpus foetidus (Skunk cabbage)	Obligate	15%

As all of the plant species observed were either Fac-Wet or Obligate, the vegetation passes the Dominance Test to determine if it's hydrophytic.

Hydrophytic Vegetation **YES**

Soils:

0-7	10YR 3/1	mucky silt loam	
7-18	10YR 5/2	silty clay loam	30% 10YR 5/6 redox concentrations

The soil description meets the Hydric Soil Indicator: F3, Depleted Matrix.

Hydric Soil **YES**

Hydrology:

PRIMARY	SECONDARY
Surface Water (A1)	Moss Trim Lines (B16)
High Water Table (A2)	Dry Season Water Table (C2)
Saturation (A3)	Geomorphic Position (D2)
Water Marks (B1)	

In order to have wetland hydrology, there must be at least 1 Primary Indicator and least 2 Secondary Indicators. This landscape has wetland hydrology.

Wetland Hydrology **YES**

The areas of Uplands included the following vegetation:

Vegetation:

Berberis Thunbergii (Japanese barberry)	Fac-Up	60%
Quercus rubra (Northern red oak)	Fac-Up	20%
Northern spicebush (Lindera benzoin)	Facultative	20%

This is not dominant hydrophytic vegetation.

Hydrophytic Vegetation **NO**

Soils:

0-11	10YR 3/2	silt loam	
11-20	10YR 5/4	silt loam	10% 10YR 5/8 redox concentrations
			5% 10YR 6/3 redox depletions

The soil does not meet any hydric soil indicator.

Hydric Soil **NO**

Hydrology:

PRIMARY	SECONDARY
---	Dry Season Water Table (C2)
	Geomorphic Position (D2)

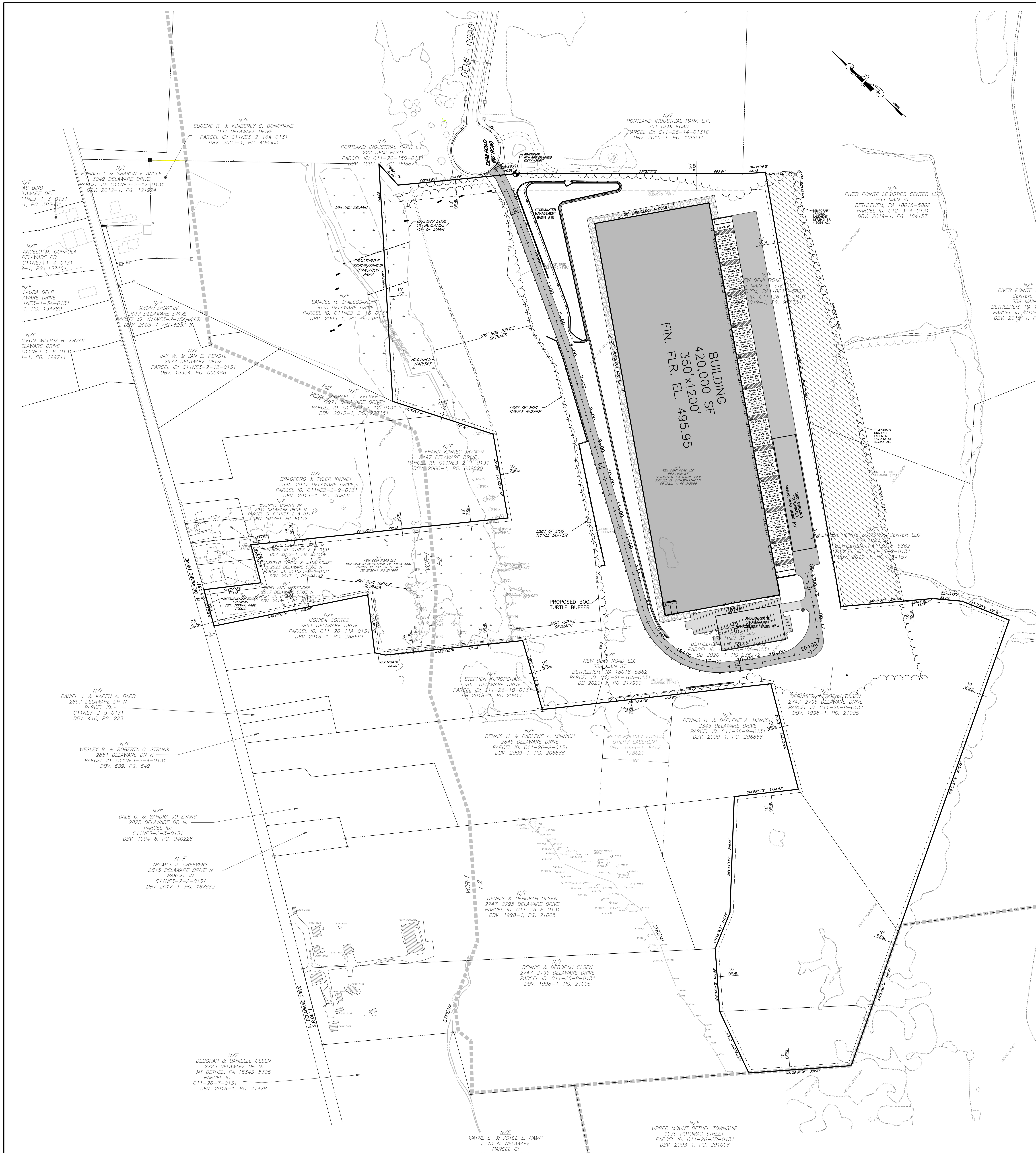
In order to have wetland hydrology, there must be at least 1 Primary Indicator and least 2 Secondary Indicators. This landscape does not have sufficient hydrology.

Wetland Hydrology **NO**

SUMMARY

In Summary, a wetland delineation was completed at the 303 Demi Road Planned Industrial Park property. Wetlands were delineated along the northern property boundary. This area consists of the Upland meeting a thin (5-20 ft) fringe of Palustrine Forested wetlands (PFO) and then opening up to Palustrine Emergent wetlands (PEM). These areas are characterized by having all three wetland criteria (hydrophytic plants, hydric soils, and wetland hydrology).

SITE MAP



GENERAL NOTES

1. THE INTENDED USE OF THE PROPOSED DEVELOPMENT IS AN INDUSTRIAL/MANUFACTURING/DISTRIBUTION USE OR ANY OTHER USE ALLOWED BY THE UPPER MOUNT BETHEL TOWNSHIP ZONING ORDINANCE.
2. BOUNDARY INFORMATION SHOWN HEREON IS TAKEN FROM:
   - 2.1. A PLAN PREPARED BY BASE ENGINEERING, INC., CONSULTING ENGINEERS AND SURVEYORS 1010 N. QUEBEC STREET, ALLENTOWN, PA. 18109, ENTITLED "LAYOUT PLAN/RECORD PLAN, PORTLAND PROPERTIES, LLC., PHASE 1", LOCATED IN UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED NOVEMBER 7, 2017, LAST REVISED: NO REVISION DATE PRESENT AND THE PLAN ENTITLED "RECORD PLAN, PORTLAND PROPERTIES, LLC., PHASE 2", LOCATED IN UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED JUNE 11, 2015, LAST REVISED: JUNE 6, 2017, BOUNDARY DELINEATION WAS BASED ON DEEDS, PLANS OF RECORD, & PHYSICAL EVIDENCE LOCATED AT THE TIME OF THE FIELD VERIFICATION SURVEY AND WITH THE BENEFIT OF A TITLE COMMITMENT FOR THE PROPERTY BY FIDELITY NATIONAL TITLE INSURANCE COMPANY (FILE NO.:RE19-1027, EFFECTIVE DATE MARCH 13, 2019. LOCATIONS OF EXISTING FACILITIES SHOWN HEREON HAVE BEEN FIELD VERIFIED AND LOCATED. UNDERGROUND UTILITIES ARE SHOWN ONLY TO THE EXTENT OF VISIBLE SURFACE STRUCTURES THAT WERE EVIDENT AT THE TIME OF THE SURVEY.
   - 2.2. INFORMATION SUPPLIED BY ARTHUR A. SWALLOW AND ASSOCIATES, LLC, 1003-1005 NORTH 19TH STREET, ALLENTOWN, PA 18104, 610-820-6470, FOR TAX PARCELS C11-26-2-013, N/F RIVER POINTE LOGISTICS, LLC, 559 MAIN STREET SUITE 300, BETHLEHEM, PA 18018, & C11-26-10A-0131, C11-26-10B-0131, C-11-26-11-0131, & C11-26-12-0131, N/F NEW DEMI ROAD LLC, 559 MAIN STREET, SUITE 300, BETHLEHEM PA 18018. BOUNDARY DELINEATION WAS BASED ON DEEDS, PLANS OF RECORD, & PHYSICAL EVIDENCE LOCATED AT THE TIME OF THE FIELD VERIFICATION SURVEY AND WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
3. TOPOGRAPHIC AND PLANIMETRIC INFORMATION FEATURES SHOWN FROM:
   - 3.1. HEREON ARE DRAWN IN ACCORDANCE WITH A PLAN PREPARED BY BASE ENGINEERING, INC., CONSULTING ENGINEERS AND SURVEYORS 1010 N. QUEBEC STREET, ALLENTOWN, PA. 18109, ENTITLED "LAYOUT PLAN/RECORD PLAN, PORTLAND PROPERTIES, LLC., PHASE 1", LOCATED IN UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED NOVEMBER 7, 2017, LAST REVISED: NO REVISION DATE PRESENT AND THE PLAN ENTITLED "RECORD PLAN, PORTLAND PROPERTIES, LLC., PHASE 2", LOCATED IN UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED JUNE 11, 2015, LAST REVISED: JUNE 6, 2017.
   - 3.2. HEREON ARE DRAWN IN ACCORDANCE WITH INFORMATION SUPPLIED BY ARTHUR A. SWALLOW AND ASSOCIATES, LLC, 1003-1005 NORTH 19TH STREET, ALLENTOWN, PA 18104, 610-820-6470, FOR TAX PARCEL C11-26-10A-0131, C11-26-10B-0131, C-11-26-11-0131, & C11-26-12-0131 N/F NEW DEMI ROAD LLC, 559 MAIN STREET SUITE 300, BETHLEHEM, PA 18018 AND TAX PARCEL C11-26-8-0131 N/F DENNIS & DEBORAH OLSEN 2747-2795 DELAWARE DRIVE, MT. BETHEL, PA 18343.
4. THE SUBJECT PROPERTY'S IMPROVEMENTS ARE LOCATED IN BOTH FLOOD ZONE A, NO BASE FLOOD ELEVATIONS DETERMINED, AND ZONE X, AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER NORTHAMPTON COUNTY PENNSYLVANIA FIRM MAP NO. 42095C0061E, EFFECTIVE JULY 16, 2014.
5. WETLANDS FOR TAX PARCEL C-11-26-12-0131 WERE DELINEATED AND SURVEYED BY RKR HESS ASSOCIATES ON APRIL 1998, CONFIRMED BY US ARMY CORPS OF ENGINEERS ON JD FILE NO. 199801398-30(JD). ON MAY 31, 2019 A PARTIAL WETLAND EVALUATION WAS COMPLETED BY VALUE ENGINEERING, INC. THE BOUNDARY WAS ALTERED TO A MINIMAL EXTENT.
6. WETLANDS FOR TAX PARCEL C11-26-11-0131 SHOWN HEREIN, WERE DELINEATED AND SURVEYED BY VALUE ENGINEERING, INC. 1578 STATE ROAD, COOPERSBURG, PA 18036 AND NOTED WITHIN THE WETLAND REPORT FOR 303 DEMI ROAD, UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED APRIL 10, 2020. WETLAND DELINEATION WAS CONFIRMED BY US ARMY CORPS OF ENGINEERS IN JD FILE NO. 2020-00396-91(JD), DATED JUNE 30, 2020.
7. WETLANDS FOR TAX PARCEL C11-26-8-0131 SHOWN HEREIN, WERE DELINEATED BY VALUE ENGINEERING, INC. 1578 STATE ROAD, COOPERSBURG, PA 18036, SURVEYED BY ARTHUR A. SWALLOW AND ASSOCIATES, LLC, 1003-1005 NORTH 19TH STREET, ALLENTOWN, PA 18104, 610-820-6470, AND NOTED WITHIN THE WETLAND REPORT FOR 303 DEMI ROAD, UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA, DATED APRIL 28, 2021.
8. CONSTRUCTION DETAILS MUST BE IN COMPLIANCE WITH PENNDOT FORM 408 (OR ANY AMENDMENTS THERETO) UNLESS OTHERWISE APPROVED BY UPPER MOUNT BETHEL TOWNSHIP.
9. A DRIVEWAY PERMIT SHALL BE ISSUED PRIOR TO CONSTRUCTION OF THE DRIVEWAY.
10. ALL DRIVEWAYS SHALL BE BUILT IN ACCORDANCE WITH THE TOWNSHIP OR PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS, WHICHEVER IS APPROPRIATE, AS PER SECTION 400.6.2 HEREOF (AND ITS SUBSECTIONS).
11. BY APPROVAL OF THIS PLAN, THE TOWNSHIP HAS NEITHER CONFIRMED NOR DENIED THE EXISTENCE AND/OR EXTENT OF ANY WETLANDS AREAS, WHETHER OR NOT DELINEATED ON THE SAID PLAN. ANY ENCROACHMENT THEREON FOR ANY REASON WHATSOEVER, SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT, SUB-DIVIDER AND/OR DEVELOPER, HIS/HER HEIR, SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO THE JURISDICTION OF THE ARMY CORPS OF ENGINEERS AND/OR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE SAID ENCROACHMENT SHALL CONFIRM TO THE RULES AND REGULATIONS OF THE JURISDICTIONAL AGENCIES.
12. INDIVIDUAL LOT OWNERS SHALL BE RESPONSIBLE FOR MAINTENANCE OF DRAINAGE SWALES, DETENTION BASINS OR RETENTION FACILITIES, AND APPURTENANCES ON ANY STORM WATER MANAGEMENT FACILITY LOCATED UPON THEIR LOT.
13. THE PRIVATE DRIVEWAY OFF OF THE DEMI ROAD CUL-DE-SAC SHALL NOT BE DEDICATED TO THE TOWNSHIP OF UPPER MOUNT BETHEL AND THE TOWNSHIP SHALL HAVE NO RESPONSIBILITY TO EITHER REPLACE, REPAIR, MAINTAIN OR OTHERWISE UPKEEP SAME. MOREOVER, THIS PRIVATE DRIVEWAY WILL NEVER BE SO OFFERED FOR DEDICATION TO THE TOWNSHIP UNLESS SUCH DRIVEWAY MEETS ALL TOWNSHIP ROAD RULES, REGULATIONS, REQUIREMENTS, EXISTING AT THE TIME THE OFFER OF DEDICATION IS MADE. THESE ARE TO BE NOTED AS GENERAL CONDITIONS ON THE PLAN. THESE CONDITIONS SHALL BE DEEMED RESTRICTIVE COVENANTS (RUNNING WITH THE LAND) ON ANY DEED FOR ANY LOT WITHIN THE SUBDIVISION THAT MAY UTILIZE SAID PRIVATE DRIVEWAY FOR EGRESS, INGRESS OR REGRESS.
14. THE PLANNING COMMISSION AND BOARD OF SUPERVISORS HAVE NOT PASSED UPON THE FEASIBILITY OF ANY INDIVIDUAL LOT OR LOCATION WITHIN A LOT BEING ABLE TO SUSTAIN ANY TYPE OF WELL OR SEWAGE DISPOSAL SYSTEM.
15. LOT LINE EASEMENTS SHALL BE PROVIDED IN ACCORDANCE WITH SALDO SECTION 400.5.1 IF NECESSARY.
16. CONCRETE MONUMENTS AND PROPERTY CORNER MARKERS WILL BE PROVIDED IN ACCORDANCE WITH SALDO SECTION 600.4.1 UPON FINAL PLAN APPROVAL IF NECESSARY.
17. THE RETENTION/DETENTION BASINS AND STORMWATER FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PLAN OF THE STORM DRAINAGE SYSTEM OF THE TOWNSHIP, AND AS SUCH ARE TO BE PROTECTED AND PRESERVED, IN ACCORDANCE WITH THE APPROVED FINAL PLAN BY THE OWNER(S) ON WHOSE LAND THE STRUCTURE(S) IS(ARE) LOCATED. THE TOWNSHIP AND/OR ITS AGENTS RESERVES THE RIGHT AND PRIVILEGE TO ENTER UPON SUCH LANDS FROM TIME TO TIME WITH PRIOR NOTICE AND COORDINATION FOR THE PURPOSE OF INSPECTION OF SAID RETENTION/DETENTION BASIN(S) IN ORDER TO DETERMINE THAT THE STRUCTURAL AND DESIGN INTEGRITY ARE BEING MAINTAINED BY THE OWNER(S). IN THE EVENT THAT MAINTENANCE AND STRUCTURAL INTEGRITY ARE NOT MAINTAINED BY THE OWNER AS REQUIRED BY THE TOWNSHIP, THE OWNER HEREBY GRANTS TO THE TOWNSHIP THE RIGHT TO ENTER UPON SUCH PROPERTY WITH PRIOR NOTICE AND COORDINATION, TO PERFORM ANY AND ALL IMPROVEMENTS, REVISIONS OR MAINTENANCE AS MAY BE DETERMINED NECESSARY AND TO RECOVER THE COSTS THEREOF FROM THE PROPERTY OWNER BY ALL LAWFUL MEANS INCLUDING, BUT NOT LIMITED TO, THE IMPOSITION OF A MUNICIPAL LIEN ON THE SUBJECT PROPERTY.
18. ALL TRASH, GARBAGE, RUBBISH AND DEBRIS OF EVERY KIND SHALL BE STORED WITHIN THE BUILDING IN FIRE-PROOFED ROOMS OR CONTAINERS, OR IN A SCREENED AND SHIELDED COURTYARD AREA, AND SHALL BE COLLECTED AND DISPOSED OF ON A FREQUENT BASIS BY PRIVATE COLLECTORS AND AT NO COST TO THE TOWNSHIP.
19. UNDER THE PROVISIONS OF TOWNSHIP ORDINANCE NO.2017-04, AS AMENDED, YOU MAY BE ENTITLED TO A PROPERTY TAX EXEMPTION ON YOUR CONTEMPLATED NEW CONSTRUCTION. AN APPLICATION FOR EXEMPTION MAY BE SECURED FROM THE UPPER MOUNT BETHEL TOWNSHIP AND MUST BE FILED WITH THE TOWNSHIP AT THE TIME A BUILDING PERMIT IS SECURED.
20. THIS PLAN AND THE ASSOCIATED LAND DEVELOPMENT PLAN SET WAS PREPARED IN ACCORDANCE WITH THE UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA ORDINANCE NO. 2020-02.
21. THE OWNER OF THE PROPERTY GRANTS UPPER MOUNT BETHEL TOWNSHIP A BLANKET EASEMENT FOR

DRAINAGE COVENANT AGREEMENT

THE OWNERS FOR THEMSELVES, THEIR HEIRS, EXECUTORS, ADMINISTRATORS AND SUCCESSORS AND ASSIGNS DO HEREBY COVENANT TO BIND THEMSELVES, THEIR HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSORS, AND ASSIGNS AND THE LANDS DESCRIBED IN THE PLAN ENTITLED "303 DEMI ROAD PLANNED INDUSTRIAL PARK" TO FAITHFULLY PERFORM ALL OF THE FOLLOWING REQUIREMENTS:

1. THE OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION, INSTALLATION, USE, OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, STABILIZATION AND RECONSTRUCTION (TO APPROVED DESIGN GRADES AND SPECIFICATIONS) OF ALL STORMWATER MANAGEMENT, DRAINAGE FACILITIES AND DETENTION BASINS OR RETENTION FACILITIES WITHIN AN OWNER'S LOT WHICH, BECAUSE OF CONSTRUCTION ACTIVITIES, GRADING, STRIPPING OF VEGETATION ON THE OWNER'S LOT OR OTHERWISE, HAS CAUSED DAMAGE TO SAID IMPROVEMENTS. SUCH SHALL BE CONSISTENT WITH ACCEPTED ENGINEERING AND CONSTRUCTION PRACTICES AS DETERMINED BY THE TOWNSHIP ENGINEER.
2. ALL DRAINAGE AND DETENTION BASIN OR RETENTION FACILITIES EASEMENTS SHOWN ON THIS PLAN SHALL BE MAINTAINED IN A GRASSED OR OTHERWISE IMPROVED CONDITION, IN ACCORDANCE WITH THE GRADES AND DESIGNS SHOWN ON THE IMPROVED DEVELOPMENT PLANS FOR THIS PROJECT. ALL THESE EASEMENTS SHALL BE KEPT FREE OF ALL OBSTRUCTIONS, BUT NOT LIMITED TO, SUCH OBSTRUCTIONS AS FILL, TEMPORARY OR PERMANENT STRUCTURES, AND PLANTS (OTHER THAN GRASS). FENCES MAY BE CONSTRUCTED WITHIN THESE EASEMENTS, WITHIN THE REQUIREMENTS OF OTHER TOWNSHIP ORDINANCES, PROVIDED THAT THE FENCE IS OF A TYPE AND LOCATION THAT WILL NOT IMPEDE THE FLOW OF STORMWATER AND PROVIDED THAT THE OWNER SHALL BE BOUND TO REMOVE SUCH FENCE AT THE OWNER'S EXPENSE AND WITHOUT COMPENSATION TO THE OWNER IF DETERMINED BY THE TOWNSHIP TO BE NECESSARY TO ALLOW WORK WITHIN THE EASEMENT. THE MAINTENANCE OF ALL SUCH EASEMENTS SHALL BE THE RESPONSIBILITY OF THE CURRENT LOT OWNER'S AT ANY POINT IN TIME, INCLUDING FUTURE OWNER(S).
3. WHENEVER SEDIMENTATION IS CAUSED BY STRIPPING VEGETATION, GRADING OR OTHER EARTH MOVING ACTIVITIES, IT SHALL BE THE RESPONSIBILITY OF THE OWNERS TO REMOVE THE SEDIMENTATION FROM ALL ADJOINING SURFACES, DRAINAGE SYSTEMS AND WATERCOURSES, AND TO REPAIR AND DAMAGE AT THE OWNERS EXPENSE. FURTHER, THE OWNER SHALL ENGAGE IN PERIODIC MAINTENANCE TO REMOVE AND DISPOSE OF ANY ACCUMULATED PARTICULATE MATTER OR DEBRIS.
4. THE OWNER SHALL MAKE PROVISION FOR AND BE PERSONALLY RESPONSIBLE STRICT COMPLIANCE WITH ALL OF THE AFORESAID COVENANTS, AND ANY OTHER AGREEMENT CONTAINED IN ANY AND ALL AGREEMENTS WITH THE TOWNSHIP. UPON FAILURE BY THE OWNER TO COMPLY WITHIN THE TIME PERIOD SPECIFIED BY THE ORAL OR WRITTEN NOTICE, OR IN THE EVENT THE TOWNSHIP, IN ITS SOLE AND ABSOLUTE DISCRETION, DETERMINES THE WORK TO BE ON AN EMERGENCY NATURE, THE TOWNSHIP MAY PERFORM SUCH WORK AS MAY BE NECESSARY TO BRING THE OWNER INTO COMPLIANCE AT THE OWNER'S EXPENSE. THIS SHALL BE AT THE OWNER'S EXPENSE AND THE OWNER SHALL BE LIABLE AND CHARGED FOR ALL EXPENDITURES (TIME, LABOR, AND MATERIALS) INCURRED BY THE TOWNSHIP PLUS ANY COSTS (INCLUDING ADMINISTRATIVE EXPENSES AND ENGINEERING FEES) AND REASONABLE ATTORNEY'S FEES. WITNESS COSTS AND COURT COSTS INCURRED SHALL ALSO BE THE RESPONSIBILITY OF THE OWNER IF A MUNICIPAL LIEN OR SUIT IS FILED.

   THIS SHALL BE DEEMED A RESTRICTIVE COVENANT THAT RUNS WITH THE LAND SO THAT ALL SUBSEQUENT OWNERS OF THE LOT (UPON WHICH THE STORMWATER FACILITIES ARE LOCATED) SHALL ALSO BE BOUND BY THIS AGREEMENT.

I ACCEPT THIS DRAINAGE COVENANT AGREEMENT.

______________________ OWNER'S SIGNATURE   __________ DATE

______________________ ATTEST

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT-OF-WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	BUILDINGS	
	BOG TURTLE BUFFER	
	CONCRETE MONUMENTS	
	IRON PINS	
	WOODED LIMITS	
	TREES	
	SITE BENCHMARK	
	HEAVY DUTY PAVE	
	LIGHT DUTY PAVE	
	TRUCK LOADING CONCRETE SECTION	
	WETLAND	
	RETAINING WALL	
	GUIDE RAIL	
	ZONING BOUNDARY	
	TEMPORARY GRADING EASEMENT	

Pennsylvania811

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP - CALL BEFORE YOU DIG

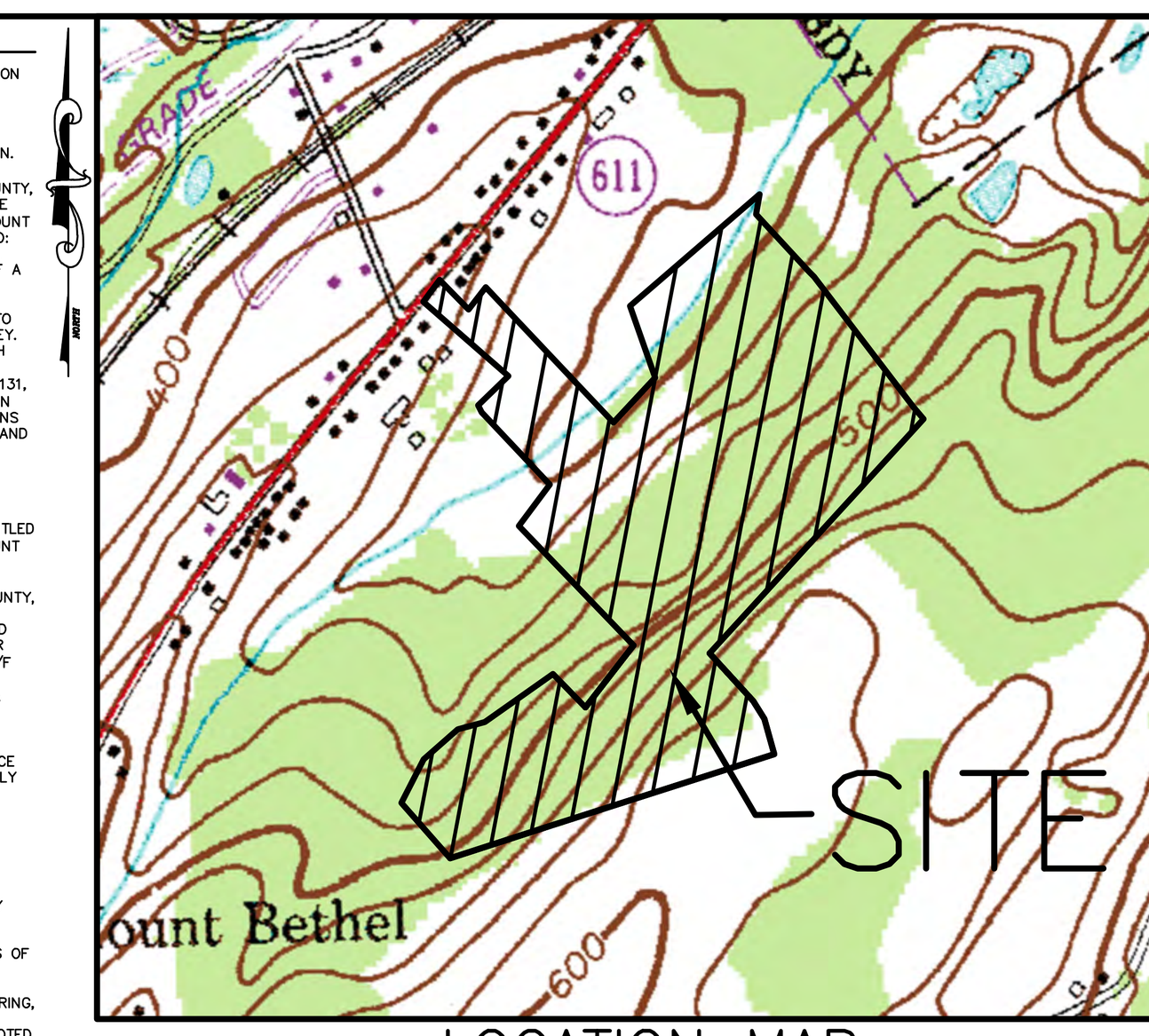
ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. SERIAL NO. 20200450830 WAS PLACED FOR DESIGN PURPOSES ON 02/14/2020.

GRAPHIC SCALE

100 0 50 100 200

(IN FEET)

1 inch = 100 ft.



LOCATION MAP

SCALE: 1"=800'

SITE STATISTICS

1. APPLICANT/OWNER OF RECORD:
   NEW DEMI ROAD, LLC.
   559 MAIN STREET, SUITE 300
   BETHLEHEM, PA 18018
2. APPLICANT/OWNER OF RECORD PLANNED INDUSTRIAL PARK MASTER DEVELOPMENT PLAN:

NEW DEMI ROAD, LLC.	RIVER POINTE LOGISTICS CENTER, LLC	GREYSTONE CAPITAL, INC,
559 MAIN STREET, SUITE 300	559 MAIN STREET, SUITE 300	559 MAIN STREET, SUITE 300
BETHLEHEM, PA 18018	BETHLEHEM, PA 18018	BETHLEHEM, PA 18018

3. EXISTING PROPERTY IDENTIFICATION:
   - TAX MAP PARCEL REFERENCE – TMP C11-26-12-0131 AREA: 944,614 SF (21.6853 AC)
     RECORDED DEED DATA REFERENCE – NORTHAMPTON COUNTY, DEED BOOK 2019-1, PAGE 292784
     TRACT LOCATION:
     303 DEMI ROAD
     MT. BETHEL, PA 18343
     UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY
   - TAX MAP PARCEL REFERENCE – TMP C11-26-11-0131 AREA: 781,314 SF (17.9365 AC)
     RECORDED DEED DATA REFERENCE – NORTHAMPTON COUNTY, DEED BOOK 2020-1, PAGE 217999
     TRACT LOCATION:
     DELAWARE DRIVE N
     MT. BETHEL, PA 18343
     UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY
   - TAX MAP PARCEL REFERENCE – TMP C11-26-10A-0131 AREA: 106,796 SF (2.4517 AC)
     RECORDED DEED DATA REFERENCE – NORTHAMPTON COUNTY, DEED BOOK 2020-1, PAGE 217999
     TRACT LOCATION:
     2847 DELAWARE DRIVE N
     MT BETHEL, PA 18343
     UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY
   - TAX MAP PARCEL REFERENCE – TMP C11-26-10B-0131 AREA: 39,956 SF (0.9173 AC)
     RECORDED DEED DATA REFERENCE – NORTHAMPTON COUNTY, DEED BOOK 2020-1, PAGE 236772
     TRACT LOCATION:
     2849 DELAWARE DRIVE N
     MT BETHEL, PA 18343
     UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY
   - TAX MAP PARCEL REFERENCE – TMP C11-26-8-0131 AREA: 777,651 SF (17.8524 AC)
     RECORDED DEED DATA REFERENCE – NORTHAMPTON COUNTY, DEED BOOK 1998-1, PAGE 021005
     TRACT LOCATION:
     2747-2795 DELAWARE DRIVE
     MT BETHEL, PA 18343
     UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY
4. TRACT AREA SUMMARY:

GROSS TRACT AREA=	60.8432	ACRES
EXISTING RIGHT-OF-WAY DEDICATION =	0.00	ACRES
PROPOSED RIGHT-OF-WAY DEDICATION =	0.00	ACRES
OPEN SPACE DEDICATION =	0.00	ACRES
NET TRACT AREA =	60.8432	ACRES
TOTAL NUMBER OF PROPOSED LOTS =	1	LOTS

5. UTILITY CONNECTIONS:
   SEWER SERVICE:
   EXISTING – NONE
   PROPOSED – ON-LOT SANITARY SEWER SERVICE
   WATER SERVICE:
   EXISTING – NONE
   PROPOSED – PUBLIC WATER SERVICE

*SITE STATISTICS ADJUSTED BASED UPON UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA ORDINANCE NO. 2020-02

ZONING DATA

1. ZONING DISTRICT CLASSIFICATION:
   I-2 GENERAL INDUSTRIAL, VCR-1 VILLAGE COMMERCIAL RESIDENTIAL
2. PROPOSED USE:
   PLANNED INDUSTRIAL PARK (CLASS 8.A)
3. ZONING REQUIREMENTS TABLE (I-2 DISTRICT)

	REQUIRED	PROPOSED
MINIMUM LOT AREA	2 AC (SCHEDULE II)	PR. LOT: 2,650,331 SF (60.8432 AC)
MINIMUM LOT WIDTH	150 FT	>1,000 FT
MINIMUM LOT DEPTH	200 FT	>700 FT
MAXIMUM BUILDING COVERAGE	40%*	~15.85% (9.64 AC.)
MAXIMUM IMPERVIOUS COVERAGE	60%	~25.70% (15.64 AC.)
MINIMUM SETBACK BLDGS. STREET	50 FT	50 FT
MINIMUM SETBACK BLDGS. TRACT PERIMETER	10 FT	10 FT.
MINIIMUM SETBACK PARKING, INTERIOR ROADS	25 FT.	>25 FT
MINIMUM DIST. BETWEEN BLDGS.	25 FT	N/A FT
MAXIMUM BUILDING HEIGHT	100 FT	50 FT

3. ZONING REQUIREMENTS TABLE (VCR-1 DISTRICT):

	REQUIRED	PROVIDED
MINIMUM LOT AREA	1 AC.	4.9 AC
MINIMUM LOT WIDTH	125 FT	110.81 FT*
MINIMUM LOT DEPTH	200 FT	>500 FT
MAXIMUM BUILDING COVERAGE	35%	N/A
MAXIMUM IMPERVIOUS COVERAGE	50%	N/A
MINIMUM FRONT YARD	35 FT	35 FT
MINIMUM SIDE YARD	10 FT (25 FT BOTH)	10 FT (25 FT BOTH)
MINIMUM REAR YARD	25 FT	N/A
MAXIMUM BUILDING HEIGHT	30 FT	N/A

4. PARKING REQUIREMENTS/TABULATION:

- THE PROPOSED USE IS A PLANNED INDUSTRIAL PARK.
- FOR PARKING CALCULATION PURPOSES, PLANNED INDUSTRIAL PARK SHALL BE CONSIDERED THE USE.
- PER ARTICLE I.29.PARKING OF THE UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA ORDINANCE NO. 2020-02:

1) 1 PARKING SPACE FOR EACH 3 EMPLOYEES OR
2) 1 PARKING SPACE FOR EVERY 5,000 GROSS SQ. FT. OF INTERIOR BUILDING FLOOR AREA, WHICHEVER IS GREATER.

- NUMBER OF EMPLOYEES PER SHIFT IS ANTICIPATED AT 145.
- PROPOSED BUILDING SIZE = 420,000 SQ. FT.
- REQUIRED NUMBER OF CAR PARKING SPACES:
  - 1 SPACE PER 3 EMPLOYEES (145 EMPLOYEES) = 49 SPACES
  - INTERIOR BUILDING FLOOR AREA (420,000 SQ. FT.) = 84 SPACES

  TOTALS = 49 OR 84 = 84 SPACES

TOTAL CAR PARKING SPACES REQUIRED = 84
TOTAL CAR PARKING SPACES PROVIDED = 97 TOTAL (INCLUDING 4 HANDICAP SPACES)
TOTAL LOADING DOCK SPACES PROVIDED = 42
TOTAL TRACTOR TRAILER PARKING SPACES = 25

- SITE ZONING DATA ADJUSTED BASED UPON UPPER MOUNT BETHEL TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA ORDINANCE NO. 2020-02

*EXISTING NON-CONFORMITY

RECORDING ACKNOWLEDGEMENTS

SURVEYOR'S CERTIFICATION

I MICHAEL A. HOUSTEN, P.L.S., LIC. NO. SU-075182, A REGISTERED PROFESSIONAL SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN, PREPARED BY A FIELD SURVEY, CORRECTLY REPRESENTS THE PROPOSED LOTS AS SURVEYED BY ME FOR THE OWNERS AND THAT THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF UPPER MT. BETHEL TOWNSHIP HAVE BEEN FULLY COMPLIED WITH.

______________________ __________ DATE

MICHAEL A. HOUSTEN, PLS
ARTHUR A. SWALLOW ASSOCIATES, LLC.
1003 NORTH 19TH STREET
ALLENTOWN, PA 18104

ENGINEER'S CERTIFICATION

I, MICHAEL A. SODL, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN CORRECTLY REPRESENTS THE PROPOSED LOTS AND THAT THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF UPPER MT. BETHEL TOWNSHIP HAVE BEEN FULLY COMPLIED WITH.

______________________ __________ DATE

MICHAEL A. SODL, P.E. NO. PE-044862-E
VERTEK CONSTRUCTION MANAGEMENT, LLC.
7171 AIPRORT ROAD, SUITE 200
BATH, PA 18014

STORMWATER CERTIFICATION

I, MICHAEL A. SODL, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE DETENTION BASIN FACILITIES WILL NOT SIGNIFICANTLY INCREASE DOWNSTREAM PEAK FLOW CONDITIONS PER THE REQUIREMENTS OF UPPER MT. BETHEL TOWNSHIP AND THE MARTINS-JACOBY CREEK ACT 167.

______________________ __________ DATE

MICHAEL A. SODL, P.E. NO. PE-044862-E
VERTEK CONSTRUCTION MANAGEMENT, LLC.
7171 AIPRORT ROAD, SUITE 200
BATH, PA 18014

OWNER'S CERTIFICATION

WE, THE OWNERS OF THIS PLAT OF LAND BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY WE ARE THE SOLE OWNERS OF THIS PROPERTY IN PEACEFUL POSSESSION OF IT AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, HEREBY DEDICATE TO THE TOWNSHIP OF UPPER MOUNT BETHEL TOWNSHIP FOR PUBLIC USE ALL THE ROAD RIGHTS-OF-WAYS, UTILITY EASEMENTS AND RIGHTS-OF-WAY OF THE PUBLIC IMPROVEMENTS SUCH AS SEWER LINES AND STORM DRAINAGE FACILITIES AS SHOWN OF THIS PLAN. WE DO FURTHER DEPOSE AND SAY THAT WE HAVE COMPLIED WITH ALL REQUIREMENTS AND PROVISIONS OF THE UPPER MOUNT BETHEL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND SHALL SAVE THE TOWNSHIP HARMLESS AND INDEMNIFY THE TOWNSHIP OF UPPER MOUNT BETHEL TOWNSHIP AGAINST ANY LIABILITY OR LOSS RESULTING FROM THE LAND DEVELOPMENT OR SUBDIVISION OF THIS PLAT FOR WHATEVER REASON PRESENT OR FUTURE.

______________________ OWNER SIGNATURE

SWORN AND SUBSCRIBED BEFORE THIS ______ DAY OF _________, 20__.

______________________ NOTARY PUBLIC NAME & SEAL

TOWNSHIP ENGINEER

REVIEWED BY THE UPPER MOUNT BETHEL TOWNSHIP ENGINEER

______________________ TOWNSHIP ENGINEER SIGNATURE   __________ DATE

LEHIGH VALLEY PLANNING COMMISSION

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION

______________________ LVPC STAFF PERSON RESPONSIBLE FOR REVIEW   __________ DATE

TOWNSHIP PLANNING COMMISSION

RECOMMENDED FOR APPROVED BY THE UPPER MOUNT BETHEL TOWNSHIP PLANNING COMMISSION

__________ CHAIRMAN   __________ SECRETARY   __________ DATE

TOWNSHIP BOARD OF SUPERVISORS

APPROVED BY THE UPPER MOUNT BETHEL TOWNSHIP BOARD OF SUPERVISORS

__________ CHAIRMAN   __________ SECRETARY   __________ DATE

RECORDER OF DEEDS OFFICE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR THE COUNTY OF NORTHAMPTON, AT EASTON, PENNSYLVANIA IN PLAN BOOK NUMBER __________, PAGE NUMBER __________, ON THIS ______ DAY OF ____________ 20__ .

______________________ RECORDER OF DEEDS

TOWNSHIP APPROVAL STAMP

VERTEK Construction Management
Construction Managers and Consulting Engineers
7171 AIRPORT ROAD
SUITE 200
BATH, PA 18014
P: (610) 837-1856
F: (484) 281-3447

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MICHAEL A. SODL No. PE044862

MICHAEL A. SODL, PE

OWNER

NEW DEMI ROAD, LLC
559 MAIN STREET,
SUITE 300
BETHLEHEM, PA 18018

Project Title:

303 DEMI ROAD PLANNED INDUSTRIAL PARK

Project Location:

303 DEMI ROAD UPPER MOUNT BETHEL TOWNSHIP NORTHAMPTON COUNTY PENNSYLVANIA

PROJECT NO: 20VT0106

REVISION

NO.	DATE	DESCRIPTION
1	04/28/2021	REV. PER TWP ENGINEER LETTER DATED 12-12-2020

DRAWN BY: B.M.S., C.M.M., J.P.K.

APPROVED BY: R.C.C., B.M.S., M.A.S.

ISSUED FOR: LAND DEVELOPMENT

DATE: 11/16/2020

SCALE: AS NOTED

DRAWING NAME:

PRELIMINARY OVERALL SITE LAYOUT PLAN

DRAWING NO:

C-05

SITE PHOTOGRAPHS

Palustrine Emergent Wetlands near W-17.

Upland near W-17.

RESUME OF REPORT PREPARER

Stephen D. Dadio, CPSS/CPSC

SUMMARY OF EXPERIENCE

Mr. Dadio has seventeen (17) years of professional experience in the environmental and soils industries. He has used his extensive technical knowledge and expertise in ecological and hydrological fields for wetland delineations, watershed studies, environmental site assessments, and nonpoint source pollution prevention programs. Specializing in urban and disturbed landscapes, his career has taken him around the globe with focus on green infrastructure solutions in built-out communities to replicate natural hydrologic conditions. A knowledgeable resource for municipal projects, he also provides experience in estimating, field management, site inspection and quality control.

PROFESSIONAL CERTIFICATIONS

Certified Professional Soil Scientist (CPSS) SSSA (ARCPACS)

Certified Professional Soil Classifier (CPSC) SSSA (ARCPACS)

Professional Soil Scientist PAPSS Registered

Delaware DNREC Licensed Class D Soil Classifier

Pennsylvania Licensed Sewage Enforcement Officer (SEO)

PROFESSIONAL EXPERIENCE

French Creek West Hydrologic Soil Group Reclassification - Phoenixville, PA

Completed a detailed soil investigation to reclassify the soil hydrologic group for this site. Completed soil profile descriptions and permeability testing to justify this reclassification. Produced report in accordance with USDA-NRCS policies and procedures and successfully submitted to DEP.

PPL Progress Substation Failing Stormwater Basin Forensic Investigation - Linglestown, PA

Completed a field investigation to determine the cause of a failing infiltration basin. Completed a detailed soil and permeability investigation, laboratory analysis of soil physical and chemical properties, and reviewed the previous testing and installation procedures. Produced report summarizing the results of this investigation and provided guidance for restoring the infiltration back to the condition for which it was designed.

U.S. Army, Fort Drum MS4 Services - Fort Drum, NY

Project Manager for Fort Drum to develop and maintain a Multi-Sector General Permit for Stormwater Discharges from Industrial Activity and MS4 Permit Program. We provide comprehensive permit administration that includes: Infrastructure assessment, illicit discharge and pollution prevention, MS4 and MSGP inspections, water sampling, construction site assessments and public education and outreach development.

U.S. Air Force, Moody Air Force Base Stormwater Compliance Services - Valdosta, Georgia

Project Manager for Moody AFB to develop and maintain Industrial Stormwater General Permit for Stormwater Discharges from Industrial Activity. We provide comprehensive permit administration that includes: Infrastructure assessment, benchmark sampling for Oil & Grease, wet weather stormwater sampling and comprehensive site evaluations

Dominica National Soil Survey - Dominica, Eastern Caribbean

Project Manager for developing a national program soil survey standards and work plan mapping strategy for an updated National Soil Survey. This program involves the completion of a Data Review and Needs Assessment, Preparation of Soil Survey Data Requirements, development of a Soil Survey Plan, Technical Specifications and Contracting, Contracting Support and Supervision, and Quality Insurance/Quality Control of the Soil Survey.

United States Environmental Protection Agency - Cincinnati, OH

Conducted detailed soil surveys and hydrologic investigations in the cities of Phoenix, AZ, Atlanta, GA, New Orleans, LA, Portland, ME, Detroit, MI, Omaha, NE, Camden, NJ, Cincinnati, OH, Cleveland, OH, San Juan, PR, and Tacoma, WA to determine the stormwater management potential for the soils in vacant lots in order to mitigate Combined Sewer Overflow (CSO) events. The urbanized soils collected from the sites were analyzed to identify feature classifications that are like native material, to develop a database of soil information on a regional basis for planning.

NPDES Program Manager - City of Coatesville, PA

Plan all stormwater activities required to maintain compliance with the MS-4; PAG Permit. This includes the development of a TMDL plan for sediments, nitrogen, and phosphorous. Also served on the Christina Basin TMDL Improvement Committee (CTIP) as a municipal representative.

NPDES Program Manager - Westtown Township, PA

Plan all stormwater activities required to maintain compliance with the MS-4; PAI Permit. This includes the development of a TMDL plan for phosphorous.

NPDES Program Manager - West Norriton Township, PA

Plan all stormwater activities required to maintain compliance with the MS-4; PAG Permit. This includes the development of a Pollutant Reduction Plan for impaired waters.

On-Lot Sewage Management Program - Newlin Township, PA

Developed a Sewage Management Program for Newlin Township. This program involves the implementation of an ordinance, resident education, and associated record documentation.

Grant Writing - City of Coatesville, PA

Successfully procured two grants for the City of Coatesville to repair aging infrastructure, particularly stormwater inlets. These grants totaled $277,500 from both the PA DCED WRPP Program ($127,500) and PA DEP Growing Greener ($150,000).

Construction Manager – PA

Supervised three construction inspectors working on various land development projects throughout southeastern Pennsylvania. Coordinated work with both municipal officials as well as private construction managers.

Timber Harvest Reviewer - West Nantmeal Township, PA

Review and inspect timber harvests in accordance with local regulations. Interact with Chester County Conservation District in the facilitation of these unique permits.

Stargazer Road Land Acquisition - Newlin Township, PA

Conducted Phase 1 Environmental Site Assessment for property that was purchased by Newlin Township.

305 Kimberton Road Phase 1 and Phase 2 - Schuylkill Township, PA

Conducted Phase 1 and Phase 2 Environmental Site Assessment for property that was purchased for a private land development. These tasks include detailed site characterization for possible contaminants.

USDA Agricultural Research Service (USDA-ARS)

Completed detailed evaluation of soils in central Pennsylvania to determine the presence of dense, brittle soil horizons (fragipans). This project involved detailed site characterization and sampling to assist with the greater research project.

Valley Forge Distribution Center, Valley Forge, PA

Supervised the design of a water line extension from an existing facility to the main several hundred feet away. This involved the design of a water meter pit and required extensive coordination with PA American.

Wetland Delineation for Giant - Lower Paxton Township, PA

Completed a wetland delineation for the construction of a supermarket. This included field delineation and submission of a completed wetland report.

Geotechnical Borings, 827 Carpenter Street - Philadelphia, PA

Completed geotechnical borings and produced soil bearing capacity calculations for the construction of a 3-story residence in South Philadelphia.

Historic Resources Evaluation, Whitehall Inn - Spring City, PA

Completed all forms and documentation as required by the PHMC for this redevelopment project.

On-Site Sewage System Testing and Design - West Bradford Township, PA

Completed detailed soil testing to determine the suitability of on-site sewage disposal. Completed a design for an inground system that was required by the Chester County Health Department to receive a permit.

Stormwater Management and Loading Rate Determination - Phoenixville, PA

Completed soil testing for a stormwater infiltration basin. Produced report with a justification of enhanced loading rates in accordance with PADEP guidance. When the basin encountered problems, completed a forensics investigation to determine the problem source (compaction); developed a remediation strategy to restore the functionality of the basin.

Stormwater Streetscape Project in Port Richmond - Philadelphia, PA

Completed detailed soil and stormwater evaluation for a PWD-funded streetscape project in the Port Richmond section of Philadelphia. This involved detailed urban soil investigation as well as permeability testing in accordance with PWD regulations.

Environmental Permitting, Brandywine Branch Distillery - Elverson, PA

Completed detailed soil and stormwater evaluation, wetland determination, PNDI clearance, and archaeological screening for the repurposing of a barn to a craft distillery. Interacted with local, state, and federal agencies to gain approvals.

PROFESSIONAL AFFILIATIONS

Pennsylvania Association of Professional Soil Scientists, *President 2009, 2010*

DEP Stormwater Loading Re-Write Workgroup, *Member*

Soil Science Society of America, *Member*

W.B. Saul Agricultural High School (Philadelphia) Natural Resources Curriculum Advisory Board, *Member*

Adjunct Faculty, Delaware Valley University, Doylestown, PA

PUBLICATIONS

Dadio S., Barkasi, A. (2015) "Urban Soils: The Foundation for Green Infrastructure." Villanova Urban Stormwater Partnership Symposium, VUSP, Villanova, PA.

Shuster, W. D., Dadio, S., Burkman, C. E., Earl, S. R., and Hall, S. J. (2015). "Hydropedological assessments of parcel-level infiltration in an arid urban ecosystem." Soil Science Society of America Journal, 79(2), 398-406.

Shuster W., Dadio, S. (2014) "Urban fingerprints on soil morphology and hydrology – a summary of field investigations in US cities, across different soil orders." Soils in the City Conference. IEWA, Chicago, Illinois.

Shuster, W. D., Dadio, S., Drohan, P., Losco, R., & Shaffer, J. (2014) "Residential demolition and its impact on vacant lot hydrology: Implications for the management of stormwater and sewer system overflows." Landscape and Urban Planning, 125, 48-56.

Shuster, W. and Dadio, S. (2014) "Soils Investigation for Infiltration-based Green Infrastructure for Sewershed Management (Omaha NE)." U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/063.

Dadio S., Drohan, P.J. (2012) "Utilizing Ground Penetrating Radar and EM to Supplement Deep Borings in Urban Soil Surveys." Soil Science Society of America, Cincinnati, Ohio, poster presentation and abstract. Abstract 287-1.

Barkasi, A., Dadio, S., Shuster, W., Losco, R. (2012) "Urban Soils and Vacant Land as an Urban Stormwater Re-source." ASCE-EWRI World Environmental and Water Resources Congress, Albuquerque, New Mexico, oral presentation (published). Abstract 89.

Losco, R., Dadio, S. (2012) "A Contrasting Study of Ohio Urban Soils – Cleveland Vs. Cincinnati." Soil Science Society of America, Cincinnati, Ohio, poster presentation and abstract. Abstract 287-2.

Barkasi, A., Dadio, S., Losco, R. L., & Shuster, W. D. (2012) "Urban soils and vacant land as stormwater resources." In World Environmental and Water Resources Congress 2012: Crossing Boundaries 569-579.

Shuster, W., Barkasi, A., Dadio, S., Drohan, P.J., Gerber, T., Houser, T., Losco, R., Reinhold, K., Wander, J., and Wigington, M. (2011) "Moving beyond the udorthent – a proposed protocol for surveying urban soils to service contemporary urban ecosystem management data needs." Soil Survey Horizons, 52:1-8.

EDUCATION:

Master of Science: Soil Science
Pennsylvania State University

Bachelor of Science: Soil Science
Cornell University