

# JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885  
603.772.4746 - JonesandBeach.com

August 19, 2021

Kittery Planning Board  
Attn. Dutch Dunkleberger, Chairman  
200 Rogers Road  
Kittery, ME 03094

**RE: Site Plan Application  
89 Route 236, Kittery, Maine  
Tax Map 28, Lot 14-2  
JBE Project No. 21076**

Dear Mr. Dunkleberger,

Jones & Beach Engineers, Inc., on behalf of the applicant & owner, JD Investment, LLC, respectfully submits a Site Plan Application for the parcel referenced above. The intent of this project is to show a proposed layout of a 11-space parking lot expansion.

Fifteen (15) Copies of following is provided in support of this application:

1. Completed Site Application.
2. Waiver Request.
3. Application Fee.
4. Letter of Authorization.
5. Current Deed.
6. Abutters List with Three Sets of Mailing Labels.
7. Tax Map.
8. Fifteen (15) Drainage Analysis.
9. Three (3) Full-Size Plan Sets (24" x36").
10. Twelve (12) Half-Size Plan Sets (11" x 17").
11. Subsurface Waste water Disposal System Design Package.

If you have any questions, please feel free to contact our office. Thank you for your time.

Very truly yours,  
**JONES & BEACH ENGINEERS, INC.**



Erik Poulin, P.E  
Project Manager

cc: Davis Drolet, JD Investments, LLC (application package & plan set via email)



# TOWN OF KITTERY, MAINE

## TOWN PLANNING AND DEVELOPMENT DEPARTMENT

200 Rogers Road, Kittery, Maine 03904  
 PHONE: (207) 475-1323 - FAX: (207) 439-6806  
[www.kittery.org](http://www.kittery.org)

### APPLICATION: SITE PLAN REVIEW

<b>FEE FOR SITE PLAN REVIEW:</b>	<input checked="" type="checkbox"/> \$300.00 PLUS THE GREATER OF:	<input type="checkbox"/> \$50/USE OF UNIT; OR	<input type="checkbox"/> \$5.00/100 SQ FT OF GROSS FLOOR AREA	<b>Application Fee Paid:</b> \$300.00 Date: 8/19/21  <b>ASA Fee Paid:</b> (TITLE 3.3 TOWN CODE) \$_____ Date:_____						
		<input type="checkbox"/> \$0.50/LINEAR FOOT OF DOCK, SLIP & FLOAT; OR	<input type="checkbox"/> \$20.00/ UNIT INTENDED TO PROVIDE OVERNIGHT SLEEPING ACCOMODATIONS							
<b>PROPERTY DESCRIPTION</b>	Parcel ID	Map	28	Lot	14-2	Zone:	Commercial 2	Total Land Area (Square Feet)	60,402 S.F.	
	Base:			Overlay:			MS4:			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	Physical Address	89 Route 236, Kittery, Maine								
<b>PROPERTY OWNER'S INFORMATION</b>	Name	JD Investments, LLC				Mailing Address	19 Buffum Road, Unit 6 North Berwick, ME 03906			
	Phone	603-978-7159								
	Fax									
	Email	davis@greentruckfarm.com								
<b>APPLICANT'S AGENT INFORMATION</b>	Name	Erik Poulin, P.E.				Name of Business	Jones & Beach Engineers, Inc.			
	Phone	603-772-4746				Mailing Address	PO Box 219 Stratham, NH 03885			
	Fax									
	Email	epoulin@jonesandbeach.com								
<b>PROJECT DESCRIPTION</b>	Existing Use: Commercial Business									
	Project Name:	Parking Lot Expansion								
	Proposed Use:	To show a proposed layout of a 11-space parking lot expansion.								

## WAIVER REQUEST

	Ordinance Section	Describe why this request is being made.
DESCRIPTION	***EXAMPLE*** 16.32.560 (B)- OFFSTREET PARKING.	***EXAMPLE*** Requesting a waiver of this ordinance since the proposed professional offices have a written agreement with the abutting Church owned property to share parking.
	16.3.2.11 (D) (d)	See attached letter

Related Kittery Land Use Code concerning waivers and modifications:

**16.10.8.2.5 Conditions or Waivers.**

Conditions required by the Planning Board at the final plan review phase must have been met before the final plan may be given final approval unless so specified in the condition or specifically waived, upon written request by the applicant, by formal Planning Board action wherein the character and extent of such waivers which may have been requested are such that they may be waived without jeopardy to the public health, safety and general welfare.

**16.7.4.1 Objectives Met.** In granting modifications or waivers, the Planning Board must require such conditions as will, in its judgment, substantially meet the objectives of the requirements so waived or modified.

I certify that, to the best of my knowledge, the information provided in this application is true and correct and will not deviate from the plans submitted without notifying the Kittery Planning Department of any changes.			
Applicant's Signature:		Owner's Signature:	<u>LOA included</u>
Date:	<u>8/19/21</u>	Date:	_____

COMPLETED BY OFFICE STAFF

ASA CHARGE	AMOUNT	ASA CHARGE	AMOUNT
<b>REVIEW</b>		<b>SERVICES</b>	
LEGAL FEES (TBD)		RECORDER	\$35
ENGINEERS REVIEW (TBD)		FACT FINDING (TBD)	
ABUTTER NOTICES		3 <sup>RD</sup> PARTY INSPECTIONS (TBD)	
POSTAGE	\$20	OTHER PROFESSIONAL SERVICES	\$50
<b>LEGAL NOTICES</b>		<b>PERSONNEL</b>	
ADVERTISING	\$300	SALARY CHARGES IN EXCESS OF 20 HOURS	
<b>SUPPLIES</b>			
OFFICE	\$5		
SUB TOTAL		SUB TOTAL	
		<b>TOTAL ASA REVIEW FEES</b>	

## Minimum Submission Requirements

- 15 COPIES OF THIS APPLICATION
- 15 COPIES OF THE PROPOSED SITE PLAN – 12 REDUCED SIZE AT 11"X17"AND 3 FULL SIZE AT 24"X 36"
- 1 PDF OF THE SITE PLAN SHOWING GPS COORDINATES

SUBMITTALS THE TOWN PLANNER DEEMS SUFFICIENTLY LACKING IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.

### Related Ordinances: Kittery Land Use Code- Title 16

#### **16.10.5.2 Planner Review and Confirmation of Submittal Content - Preliminary Plan.**

A completed application must include on the plan or attached thereto, the following items, unless upon the applicant's written request, the Planning Board, by formal action, waives or defers any requirement(s) for submission.

- A. A minimum of fifteen (15) paper copies of the application form, plan and all attachments thereto plus if applicable, five (5) paper copies of the 24 x 36 inches size plan sheets.
- B. Plan must include:
  1. Plan sheets drawn on a reproducible medium and must measure no less than eleven (11) inches by seventeen (17) inches and no larger than twenty-four (24) inches by thirty-six (36) inches; with a:
  2. Scale of the drawings no greater than one inch equals thirty (30) feet for developments less than ten (10) acres, and one inch equals fifty (50) feet for all others;
  3. Code block in the lower right-hand corner. The block must contain:
    - a. Name(s) and address(es) of the applicant and owner,
    - b. Name of the project.
    - c. Name and address of the preparer of the plan, with professional seal, if applicable,
    - d. Date of plan preparation/revision, and a unique ID number for the plan and any revisions;
  4. Standard boundary survey conducted by a surveyor licensed in the state of Maine, in the manner recommended by the State Board of Registration for Land Surveyors;
  5. An arrow showing true north and the magnetic declination, a graphic scale, and signature blocks for the owner(s) and members of the Planning Board;
  6. Locus map showing the property in relation to surrounding roads, within two thousand (2,000) feet of any property line of the development,
  7. Surveyed acreage of the total parcel, of rights-of-way, wetlands, and area to be disturbed and amount of street frontage;
  8. Names and addresses of all owners of record of property abutting the development, including those across a street;
  9. Locations of essential physical features such as watercourses, forest cover, and outcroppings
  10. Proposed development area conditions including, but not limited to:
    - a. Structures; their location and description including signs, to be placed on the site, floor plan of exterior walls and accesses located within one hundred (100) feet of the property line;
    - b. Utilities proposed including power, water, sewer, holding tanks, bridges, culverts and drainage ways;

- c. Sewage facilities type and placement. Test pit locations, at least two of which must meet the State of Maine Plumbing Code requirements, must be shown;
- d. Domestic water source;
- e. Parks, open space, or conservation easement locations;
- f. Lot lines, interior and exterior, right-of-way, and street alignments;
- g. Road and other paved ways plans, profiles and typical sections including all relevant data;
- h. Setbacks Existing and proposed;
- i. Machinery permanently installed locations likely to cause appreciable noise at the lot lines;
- j. Raw, finished or waste materials to be stored outside the buildings, and any stored material of a toxic or hazardous nature;
- k. Topographic contours of existing contours and finished grade elevations within the development;
- l. Sidewalks, curbs, driveways, fences, retaining walls and other artificial features locations and dimensions proposed;;
- m. Landscaping required including size and type of plant material;
- n. Temporary markers locations adequate to enable the Planning Board to readily locate and appraise the layout of the development;
- o. Land proposed to be dedicated to public use and the conditions of such dedication;
- p. Natural features or site elements to be preserved.

C. Supporting documentation must include:

1. Vicinity map and aerial photograph showing the property in relation to surrounding properties, roads, geographic, natural resource (wetland, etc.), historic sites, applicable comprehensive plan features such as proposed park locations, land uses, zones, and other features within five hundred (500) feet from any boundary of the proposed development;
2. Existing Development Area Conditions including but not limited to:
  - a. Location and description of all structures, including signs, existing on the site, together with accesses located within one hundred (100) feet of the property line;
  - b. Essential physical features such as watercourses, wetlands, flood plains, wildlife habitat areas, forest cover, and outcroppings;
  - c. Utilities existing, including power, water, sewer, holding tanks, bridges, culverts and drainage ways;
3. Legal interest documents showing legal interest of the applicant in the property to be developed. Such documents must contain the description upon which the survey was based;
4. Property encumbrances currently affecting the property, as well as any proposed encumbrances;
5. Water District approval letter, if public water is used, indicating there is adequate supply and pressure to be provided to the development;

6. Erosion and sedimentation control plan endorsed by the York County soil and water conservation district;
7. Stormwater management plan for stormwater and other surface water drainage prepared by a registered professional engineer including a Maintenance Plan and Agreement that defines maintenance responsibilities, responsible parties, shared costs, and schedule. Where applicable, a Maintenance Agreement must be included in the Document of Covenants, Homeowners Documents and/or as riders to the individual deed and recorded with the York County Registry of Deeds.
8. Soil survey for York County covering the development. Where the soil survey shows soils with severe restrictions for development, a high intensity Class "A" soil survey must be provided;
9. Vehicular traffic report estimating the amount and type of vehicular traffic that will be generated by the development on a daily basis and for peak hours.
10. Traffic impact analysis in accordance with subsection (E)(2) for developments involving forty (40) or more parking spaces or which are projected to generate more than four hundred (400) vehicle trips per day;
11. Test pit(s) analysis prepared by a licensed site evaluator when sewage disposal is to be accomplished by subsurface disposal, pits, prepared by a licensed site evaluator;
12. Town Sewage Department or community system authority letter, when sewage disposal is to be through a public or community system, approving the connection and its location;
  - a. Additional submissions as may be required by other sections of this Code such as for clustered development, mobile home parks, or junkyards must be provided.
  - b. Letters of evaluation of the development by the Chief of Police, Fire Chief, Commissioner of Public Works, and, for residential applications, the superintendent of schools, must be collected and provided by the Town Planner.
  - c. Additional Requirements. In its consideration of an application/plan, the Planning Board may at any point in the review, require the applicant to submit additional materials, studies, analyses, and agreement proposals as it may deem necessary for complete understanding of the application.

1. Such materials may include:

1. Traffic impact study, including the following data:

- a. An executive summary outlining the study findings and recommendations.
- b. A physical description of the project site and study area encompassed by the report with a diagram of the site and its relationship to existing and proposed development sites within the study area.
- c. A complete description of the proposed uses for the project site (in cases where specific uses have not been identified, the highest traffic generators within the category best fitting the proposed development must be used to estimate traffic generators).
- d. Existing land uses and zone(s) in the vicinity of the site must be described. Any proposals for the development of vacant parcels or redevelopment of parcels within the study area of which the municipality makes the applicant aware, must be included in the description.
- e. Roadway geometry and existing traffic control devices on all major streets and intersections affected by the anticipated traffic generated.
- f. Trip generation must be calculated for the proposed project and other proposed new projects and redevelopment projects within the study area using the most recent data available from the Institute of Transportation Engineers' (ITE) Trip Generation Guide, and/or actual field data collected from a comparable trip generator (i.e., comparable in size, location and setting). This data will be presented in a summary table

such that assumptions on trip generation and rates arrived at by the engineer are fully understandable to the Planning Board.

- g. The anticipated trip distribution of vehicles entering and exiting the proposed site during the appropriate peak hour(s) must be described and diagrammed.
  - h. Trip assignment, the anticipated utilization of study area roadways by traffic generated by the proposed project, must be described and diagrammed.
  - i. Existing traffic conditions in the study area will be identified and analyzed based upon actual field counts and/or recent available machine counts.
  - j. Existing traffic conditions in the study area will be described and diagrammed, specifically AADT, appropriate peak design hour(s), traffic volumes, roadway and intersection capacities, and levels of service.
  - k. Existing safety conditions must be evaluated based upon the traffic accident data available for the most current three years and described including link and node critical rate factors (CRF).
  - l. Future traffic conditions on the roadway system will be estimated based on existing volumes, projected traffic growth in the general study area, projected traffic from approved development, and traffic generated by the proposed project, specifically AADT traffic, appropriate peak hour(s) traffic volumes, roadway and intersection capacity, roadway and intersection levels of service will be analyzed. When other projects are being proposed within the impact area of the project, the Planning Board may require these projects to be incorporated into the analysis.
  - m. When the analysis of the proposed project's impact on traffic indicates unsatisfactory CRF, levels of service or operating capacity on study area roadways and intersections, a description of proposed improvements to remedy identified deficiencies must be included.
  - n. The base data collected and analyzed during the course of the traffic impact study must be made available upon request of the Planning Board.
2. o. If a development that requires a traffic impact study is within five hundred (500) feet of York or Eliot, Maine or if the study identifies impacts on segments of Route 1 or Route 236 or on their intersections located in York or Eliot, Maine, the applicant must provide evidence that a copy of the impact study has been given to the impacted municipality's chief administrative officer;
3. Environmental Analysis. An analysis of the effects that the development may have upon surrounding lands and resources, including intensive study of groundwater, ecosystems, or pollution control systems, as the Planning Board, upon review and recommendation by the Conservation Commission, may deem necessary;
4. Hydrologic Analysis. When required, an analysis of the effects that the development may have on groundwater must be conducted in accordance with Section 16.32.520. This analysis is always required for mobile home park proposals.
5. Wireless Communication Services Facilities (WCSF) Analysis.
- a. A visual impact analysis prepared by a landscape architect or other qualified professional acceptable to the Town that quantifies the amount of visual impact on properties located within five hundred (500) feet, within two thousand five hundred (2,500) feet and within two miles of the WCSF. This analysis will include recommendations to mitigate adverse visual impacts on such properties;
  - b. An analysis prepared by a qualified professional acceptable to the Town that describes why this site and structure is critical to the operation for which it is proposed. The analysis must address, at a minimum: existing and proposed service area; how this WCSF is integrated with other company operations, particularly other structures in Kittery and surrounding communities; future expansion needs in the area; the effect on company operations if this structure is not constructed in this location; other sites evaluated for location of this

structure and how such sites compare to the proposed site; other options, if any, which could be used to deliver similar services, particularly if the proposed equipment can be co-located (shared use) on an existing structure; and an analysis to the projected life cycle of this structure and location;

- c. Certification by a structural engineer that construction of the structure satisfies all federal, state and local building code requirements as well as the requirement of maximum permitted co-location at the site as approved by the Planning Board / Town Planner;
- d. Payment of all required performance guarantees as a condition of plan approval, with a note on the plan so stating;
- e. Payment of the Planning Board application fees;
- f. And all other requirements per Section 16.10.

#### **16.10.7.2 Final Plan Application Submittal Content.**

A. A complete final plan application must fulfill all the requirements of a preliminary plan as indicated in subsection 16.36.??? of this section and must show the following items, unless the Planning Board, by formal action, upon the applicant's written request, waives or defers any requirement(s) for submission. If no changes occurred to the preliminary plan it also may be considered to be the final plan.

B. Preliminary plan information including vicinity map and any amendments thereto suggested or required by the Planning Board, or other required reviewing agency;

C. Street names and lines, pedestrian ways, lots, easements, and areas to be reserved for or dedicated to public use;

D. Street length of all straight lines, the deflection angles, radii, lengths of curves and central angles of all curves, tangent distances and tangent bearings;

E. Lots and blocks within a subdivision numbered in accordance with local practice;

F. Markers/permanent reference monuments: Their location, source references, and where required, constructed in accordance with specifications herein;

G. Structures; their location and description including signs, to be placed on the site, floor plans and elevations of principal structures as well as detail of all structures showing building materials and colors, and accesses located within one hundred (100) feet of the property line;

H. Outdoor lighting and signage plan; if the

1. Lighting plan, if the application involves the construction of more than five thousand (5,000) square feet of nonresidential floor area, or the creation of more than twenty thousand (20,000) square feet of impervious area, or the creation of three or more dwelling units in a building; prepared by a qualified lighting professional, showing at least the following at the same scale as the site plan:

- a. All buildings, parking areas, driveways, service areas, pedestrian areas, landscaping, and proposed exterior lighting fixtures;
- b. All proposed lighting fixture specifications and illustrations including photometric data, designation as "cut-off" fixtures, color rendering index (CRI) of all lamps (bulbs), and other descriptive information on the fixtures;
- c. Mounting height of all exterior lighting fixtures;
- d. Lighting analyses and luminance level diagrams or photometric point by point diagrams on a twenty (20) foot grid showing that the proposed installation conforms to the lighting level standards of the ordinance codified in this Section together with statistical summaries documenting the average luminance, maximum luminance, minimum luminance, average to minimum uniformity ratio, and maximum to minimum uniformity ratio for each parking area, drive, canopy, and sales or storage area;



- e. Drawings of all relevant building elevations showing the fixtures, the portions of the walls to be illuminated, the luminance levels of the walls, and the aiming points for any remote light fixtures; and
  - f. A narrative that describes the hierarchy of site lighting hierarchy and how the lighting will be used to provide safety, security, and aesthetic effects.
- I. Machinery permanently installed locations likely to cause appreciable noise at the lot lines;
  - J. Materials (raw, finished or waste) storage areas, their types and location; and any stored toxic or hazardous materials, their types and locations;
  - K. Fences, retaining walls and other artificial features locations and dimensions proposed;
  - L. Landscaping plan including location, size, and type of plant material;
  - M. Boundary markers for protected land areas permanently marked using Town environmental boundary markers, their location and type. The five boundary markers are: (1) Conservation Land, (2) Protected Wetland, (3) Protected Vernal Pool, (4) Wildlife Habitat, and (5) Wetlands. Depending on the proposed development the required markers(s), number of markers, placement and spacing, and the method of mounting.
  - N. Municipal impact analysis of the relationship of the revenues to the Town from the development and the costs of additional publicly funded resources including:
    - 1. Review for impacts. A list of the construction items that will be completed by the developer prior to the sale of lots.
    - 2. Municipal construction and maintenance items. A list of construction and maintenance items that must be borne by the municipality, which must include, but not be limited to:
      - a.. Schools, including busing;
      - b. Road maintenance and snow removal;
      - c. Police and fire protection;
      - d. Solid waste disposal;
      - e. Recreation facilities;
      - f. Runoff water disposal drainage ways and/or storm sewer enlargement with sediment traps
    - 3. Municipal costs and revenues. Cost estimates to the Town for the above services and the expected tax revenue of the development.
  - O. Open Space Land Cession Offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements, or other documents showing the manner in which space(s), Code to which is reserved by the subdivider, are to be maintained.
  - P. Open Space Land Cession Offers Acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in subsection (C)(2)(a) of this section. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in subsection (C)(2)(a) of this section.
  - Q. Performance Guaranty and Town Acceptance to secure completion of all improvements required by the Planning Board and written evidence the Town manager is satisfied with the sufficiency of such guaranty.
    - 1. Where improvements for the common use of lessees or the general public have been approved, the Planning Board must require a performance guaranty of amount sufficient to pay for said improvements as a part of the agreement.
    - 2. Process. Prior to the issue of a building permit, the applicant must, in an amount and form acceptable to the Town manager, file with the municipal treasurer an instrument to cover the full cost of the required improvements. A period of one year (or such other period as the Planning Board may determine appropriate, not to exceed three years) is the guaranty time within which required improvements must be completed. The performance guaranty must include an amount required for recreation land or improvements as specified.

R. Maintenance Plan and Agreement defining maintenance responsibilities, responsible parties, shared costs, and schedule. Where applicable, a Maintenance Agreement must be included in the Document of Covenants, Homeowners Documents and/or as riders to the individual deed.

S. Phasing Plan. Where, upon applicant's request, the Planning Board may permit phasing of the plans where it can be demonstrated to the Planning Board's satisfaction that such phasing would result in a safe and orderly development of the plan.

1. The applicant may file a section of the approved plan with the municipal officials and the York County registry of deeds if said section constitutes at least twenty-five percent (25%) of the total number of lots, or for plans including buildings, twenty-five percent (25%) of the gross area, contained in the approved plan. In all circumstances, plan approval of the remaining sections of the plan will remain in effect for three years unless the applicant requests and the Planning Board grants extensions of time equivalent to the requirements for approved plans in Section 16.36.050(E).

2. Phasing is subject to any conditions deemed necessary to assure a reasonable mixture of uses is completed within each separate phase of the plan.

3. Where projects are to be constructed in phases, phasing of stormwater management, water mains and streets are part of the review process.

4. Portions of both the developed and undeveloped site, impacted by interim infrastructure conditions such as un-looped water systems, stormwater runoff from unfinished areas onto finished areas and vice versa, dead end streets, etc., must be clearly defined and shown on the plans.

5. The Planning Board may permit construction of phases "out of order" only when the storm drainage plan and the water plan, etc. have been reviewed and it has been demonstrated that the impact on both the developed and undeveloped sections is negligible.

T. Right-of-Way Plan.

1. A completed application for a Planning Board approved right-of-way must include the requirements of Section 16.36.060 with the following modifications:

a. The following submission requirements are not necessary for Right-of-Way review: subsections (B)(2)(l), (m), (p), (r)—(w) and (z); (B)(3)(c)—(h); (B)(4); and (B)(5) of this section.

b. Subsection (B)(2) of this section modified so floor plans and elevations of principal structures are not required;

c. Include the size of the parcel minus the area in the ROW, and the street frontage excluding the ROW;

d. Only need to show and locate on the plan the names and addresses of all owners of record of contiguous property, including those across a street;

e. Include required front yards from the R.O.W. on the plan.

# JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885  
603.772.4746 - JonesandBeach.com

August 19, 2021

Kittery Planning Board  
Attn. Dutch Dunkleberger, Chariman  
200 Rogers Road  
Kittery, ME 03094

**RE: Site Plan Application  
89 Route 236, Kittery, Maine  
Tax Map 28, Lot 14-2  
JBE Project No. 21076**

Dear Mr. Dunkleberger,

On behalf of the owner, JD Investment, LLC, Jones & Beach Engineers, Inc. respectfully requests a waiver from the Town of Kittery Ordinance for the following:

**Ordinance Section 16.3.2.11(D)(d) – “Minimum Rear and Side Setback”**

**During the design process for the project, it was determined that the septic field needed to be replaced. The proposed system was redesigned by Albert Frick Associates Inc. As apart of their design, the “Pod A” septic field was placed within the 40’ residential setback to the rear of the property. The “Pod B” system complies with the setback, but the grading required with its installation will impact the buffer with approximately 585 SF of tree clearing.**

**Albert Frick Associates Inc. has confirmed this is the only suitable location to install the fields that will fit the needs of the existing uses on site.**

**The proposed “Pod A” field is approximately 10’ over the setback line at its farthest point. This system will be placed within an existing cleared area. There will be no clearing of the existing tree buffer along the back property line in order to install the system. Following the installation this area will be loamed and seeded.**

**The proposed “Pod B” field will be impacting the residential buffer on the side property line of the subject parcel. This section of the residential use (Lot 14) is located within the Commercial 2 zone. This area of Lot 14 at the intersection of Fernald Road and Morgan Court, does not currently have a residential structure. The closest residential unit on Morgan Court is located approximately 250’ from the closet point to the proposed septic fields.**

We look forward to discussing these waiver requests at the Planning Board Hearing. Thank you very much for your time.

Very truly yours,  
**JONES & BEACH ENGINEERS, INC.**



Erik Poulin P.E.  
Project Manager

cc: Davis Drolet, JD Investments, LLC (application package & plan set via email)

**JONES&BEACH**  
ENGINEERS INC.

**Letter of Authorization**

I, Davis Drolet, 19 Buffum Road, Unit 6, North Berwick, Maine, 03906, owner of property located in Kittery, ME, known as Tax Map 28, Lot 14-2, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously-mentioned property. The parcel is located on 89 Route 236 in Kittery, ME.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.

Witness 

  
Davis Drolet

4/8/21  
Date

WARRANTY DEED

No Transfer Tax

KNOW ALL PERSONS BY THESE PRESENTS: That **Joshua J. Seymour**, a single man of 8 Deer Ridge Lane, Kittery, Maine 03904 and **David P. Drolet, Trustee of the David P. Drolet Revocable Trust**, with a mailing address of 34 Stowecroft Drive, Hampton, NH 03842, for minimal consideration paid, **grant to JD Investments, LLC**, a Maine Limited Liability Company with an address of 19 Buffum Road, Unit 6, North Berwick, Maine 03906, with WARRANTY COVENANTS the following described premises:

A certain lot or parcel of land, together with any improvements located thereon, situated on the westerly side of Route 236 in the Town of Kittery, County of York and State of Maine and being shown as "LOT #2" on a certain plan entitled "SUBDIVISION OF LAND OF PETER J. PAUL, TRUSTEE OF THE PAOLUCCI REALTY TRUST, U.S. ROUTE 236, KITTERY, MAINE, PREPARED FOR PETER J. PAUL", dated 18 April 2013, and most recently revised 02/20/14, and approved by Kittery Planning Board on 20 February 2014, which plan is recorded in the York County Registry of Deeds at Plan Book 366, Page 28.

Said lot is conveyed with the benefit of an easement as set forth in the Easement Deed of Peter J. Paul, Trustee of the Paolucci Realty Trust to AMP Realty Holdings, LLC dated March 5, 2014 and recorded in the York County Registry of Deeds at Book 16787, Page 185.

Meaning and intending to describe and convey the same premises conveyed to Joshua J. Seymour, individually and David P. Drolet as Trustee of the David P. Drolet Revocable Trust, by virtue of a Warranty Deed recorded on December 16, 2019 at York County Registry of Deeds, Book 18124, Page 262.

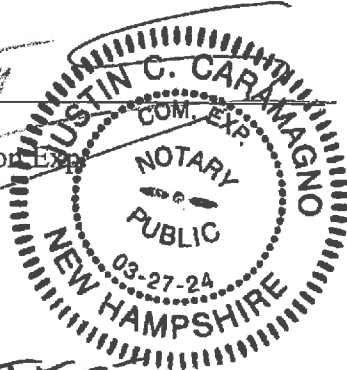
This transaction is exempt from transfer tax pursuant to MRSA 36:711-A §4641-C,19.

Executed this 16<sup>th</sup> day of June, 2020.

X *Joshua J. Seymour*  
Joshua J. Seymour

State of NH  
County of Roch

On this 16<sup>th</sup> day of June, 2020, before me, personally appeared Joshua J. Seymour, known to me or satisfactorily proven to be the person whose name is subscribed in the foregoing instrument, and acknowledged that he executed the same for the purposes set forth therein, and did so of his own free and voluntary act.

*Justin C. Caramagno*  
Notary Public  
My Commission Exp. 03-27-24  


Executed this 11<sup>th</sup> day of June, 2020.

*David P. Drolet, TTEC*  
David P. Drolet, Trustee

State of ~~New Hampshire~~ Maine  
County of York

On this 11 day of June, 2020, before me, personally appeared David P. Drolet, as Trustee of the David P. Drolet Revocable Trust known to me or satisfactorily proven to be the person whose name is subscribed in the foregoing instrument, and acknowledged that he executed the same for the purposes set forth therein, and did so of his own free and voluntary act.

*Heather A. Legere*  
Notary Public  
My Commission Exp. November 20, 2021  
HEATHER A. LEGERE  
NOTARY PUBLIC, MAINE  
My Commission Expires November 20, 2021

TRUSTEE CERTIFICATE


The undersigned trustee as Trustee under the David P. Drolet Revocable Trust, and thereto has full and absolute power in said trust agreement to convey any interest in Real Estate and improvements thereon held in said trust and no purchaser or third party shall be bound to inquire whether the trustee has said power or is properly exercising said power or to see to the application of any trust asset paid to the trustee for a conveyance thereof.

Executed this 11<sup>th</sup> day of June, 2020.

  
David P. Drolet, Trustee

State of ~~New Hampshire~~ Maine  
County of York

On this, the 11 day of June, 2020, before me, personally appeared David P. Drolet, Trustee of the David P. Drolet Revocable Trust, known to me, or satisfactorily proven to be the person whose name is subscribed in the foregoing instrument, and acknowledged that he executed the same for the purposes set forth therein.

  
Justice of the Peace/Notary Public  
My Commission Expires: \_\_\_\_\_

HEATHER A. LEGERE  
NOTARY PUBLIC, MAINE  
My Commission Expires November 20, 2021



**SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION**

Maine Dept. Health & Human Services  
 Div of Environmental Health 11 SHS  
 (207) 287-2070 FAX (207) 287-4172

<b>PROPERTY LOCATION</b>		<b>&gt;&gt;CAUTION: LPI APPROVAL REQUIRED&lt;&lt;</b>	
City, Town, or Plantation	KITTERY	Town/City _____	Permit # _____
Street or Road	89 ROUTE 236	Date Permit Issued ___/___/___	Fee \$ _____ Double Fee Charged [ ]
Subdivision, Lot #		Local Plumbing Inspector Signature _____ L.P.I.# _____	
<b>OWNER/APPLICANT INFORMATION</b>		Fee \$ _____ State Fee _____	Fee \$ _____ Locally Adopted Fee _____
Name (last, first, MI)	JOSH SEYMOUR	Copy: [ ] Owner [ ] Town [ ] State	
Mailing Address of Owner/Applicant	19 BUFFUM ROAD, UNIT 6 NORTH BERWICK, ME 03906	The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.	
Daytime Tel. #	432-6000		
<b>OWNER OR APPLICANT STATEMENT</b>		<b>CAUTION: INSPECTION REQUIRED</b>	
I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a permit.		I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.	
Signature of Owner/Applicant _____ Date _____		Local Plumbing Inspector Signature _____ (1st) Date Approved _____	
		Municipal Tax Map # <u>28</u> Lot # <u>14-2</u>	
		(2nd) Date Approved _____	

PERMIT INFORMATION		
<b>TYPE OF APPLICATION</b> <input type="checkbox"/> 1. First Time System <input checked="" type="checkbox"/> 2. Replacement System Type Replaced: <u>ELJEN</u> Year Installed: <u>UNKNOWN</u> <input type="checkbox"/> 3. Expanded System <input type="checkbox"/> a. <25% Expansion <input type="checkbox"/> b. >25% Expansion <input type="checkbox"/> 4. Experimental System <input type="checkbox"/> 5. Seasonal Conversion	<b>THIS APPLICATION REQUIRES</b> <input checked="" type="checkbox"/> 1. No Rule Variance <input type="checkbox"/> 2. First Time System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 3. Replacement System Variance <input type="checkbox"/> a. Local Plumbing Inspector Approval <input type="checkbox"/> b. State & Local Plumbing Inspector Approval <input type="checkbox"/> 4. Minimum Lot Size Variance <input type="checkbox"/> 5. Seasonal Conversion Permit	<b>DISPOSAL SYSTEM COMPONENTS</b> <input checked="" type="checkbox"/> 1. Complete Non-Engineered System <input type="checkbox"/> 2. Primitive System (graywater & alt toilet) <input type="checkbox"/> 3. Alternative Toilet, specify: _____ <input type="checkbox"/> 4. Non-Engineered Treatment Tank (only) <input type="checkbox"/> 5. Holding Tank, _____ gallons <input type="checkbox"/> 6. Non-Engineered Disposal Field (only) <input type="checkbox"/> 7. Separated Laundry System <input type="checkbox"/> 8. Complete Engineered System (2000 gpd+) <input type="checkbox"/> 9. Engineered Treatment Tank (only) <input type="checkbox"/> 10. Engineered Disposal Field (only) <input checked="" type="checkbox"/> 11. Pre-treatment, specify: <u>(2) SOILAIR BLOWER UNITS</u> <input type="checkbox"/> 12. Miscellaneous components <u>RF39520C 1/2 #P</u>
<b>SIZE OF PROPERTY</b> 1.38 +/- <input type="checkbox"/> SQ. FT. <input checked="" type="checkbox"/> ACRES	<b>DISPOSAL SYSTEM TO SERVE</b> <input type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: _____ <input type="checkbox"/> 2. Multiple Family Dwelling, No of Units: _____ <input checked="" type="checkbox"/> 3. Other: <u>COFFEE SHOP, RETAIL AND OFFICE SPACE</u> (specify) Current Use <input type="checkbox"/> Seasonal <input checked="" type="checkbox"/> Year Round <input type="checkbox"/> Undeveloped	<b>TYPE OF WATER SUPPLY</b> <input type="checkbox"/> 1. Drilled Well <input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private <input checked="" type="checkbox"/> 4. Public <input type="checkbox"/> 5. Other: _____
<b>SHORELAND ZONING</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)			
4-20 RATED IF SUBJECTED TO VEHICULAR TRAFFIC <b>2 TREATMENT TANKS IN SERIES</b> <input checked="" type="checkbox"/> 1. Concrete <input type="checkbox"/> a. Regular <input type="checkbox"/> b. Low Profile <input type="checkbox"/> 2. Plastic <input type="checkbox"/> 3. Other: _____ CAPACITY: <u>2-1000's</u> GAL SEE NOTE ON PAGE 3	<b>DISPOSAL FIELD TYPE &amp; SIZE</b> <input type="checkbox"/> 1. Stone Bed <input type="checkbox"/> 2. Stone Trench <input checked="" type="checkbox"/> 3. Proprietary Device <input type="checkbox"/> a. Cluster array <input type="checkbox"/> c. Linear <input checked="" type="checkbox"/> b. Regular <input type="checkbox"/> d. H-20 loaded <input type="checkbox"/> 4. Other: <u>2 PODS</u> SIZE: <u>1236</u> sq. ft. <input type="checkbox"/> lin. ft. <u>120 LINEAR FEET OF GST 372</u>	<b>GARBAGE DISPOSAL UNIT</b> <input checked="" type="checkbox"/> 1. No <input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe If Yes or Maybe, specify one below: <input type="checkbox"/> a. Multi-compartment tank <input type="checkbox"/> b. _____ tanks in series <input type="checkbox"/> c. Increase in tank capacity <input type="checkbox"/> d. Filter on tank outlet	<b>DESIGN FLOW</b> <u>400</u> gallons per day BASED ON: <input type="checkbox"/> 1. Table 4A (dwelling unit(s)) <input type="checkbox"/> 2. Table 4C (other facilities) SHOW CALCULATIONS for other facilities COFFEE SHOP RETAIL & OFFICE SPACE
<b>SOIL DATA &amp; DESIGN CLASS</b> PROFILE CONDITION <u>POD A / POD B</u> <u>3-D 13" 12 - B</u> at Observation Hole # <u>TP 1 &amp; 2</u> Depth <u>13"</u> of Most Limiting Soil Factor	<b>DISPOSAL FIELD SIZING</b> 4-20 RATED IF SUBJECTED TO VEHICULAR TRAFFIC <input type="checkbox"/> 1. Medium - 2.6 sq.ft./gpd <input checked="" type="checkbox"/> 2. Medium-Large - 3.3 sq.ft./gpd <input type="checkbox"/> 3. Large - 4.1 sq.ft./gpd <input type="checkbox"/> 4. Extra-Large - 5.0 sq.ft./gpd	<b>DUPLEX PUMP STATION EFFLUENT PUMP</b> <input type="checkbox"/> 1. Not required <input type="checkbox"/> 2. May be required <input checked="" type="checkbox"/> 3. Required 5' DIA. MINIMUM Specify only for engineered systems: SEE NOTE ON PAGE 3 DOSE: _____ gallons	50% REDUCTION WITH ADVANCED TREATMENT <input checked="" type="checkbox"/> 3. Section 4G (meter readings) ATTACH WATER-METER DATA <b>LATITUDE AND LONGITUDE</b> at center of disposal area Lat. <u>N43</u> d <u>7</u> m <u>5.71</u> s Lon. <u>W70</u> d <u>45</u> m <u>27.89</u> s if g.p.e., state margin of error

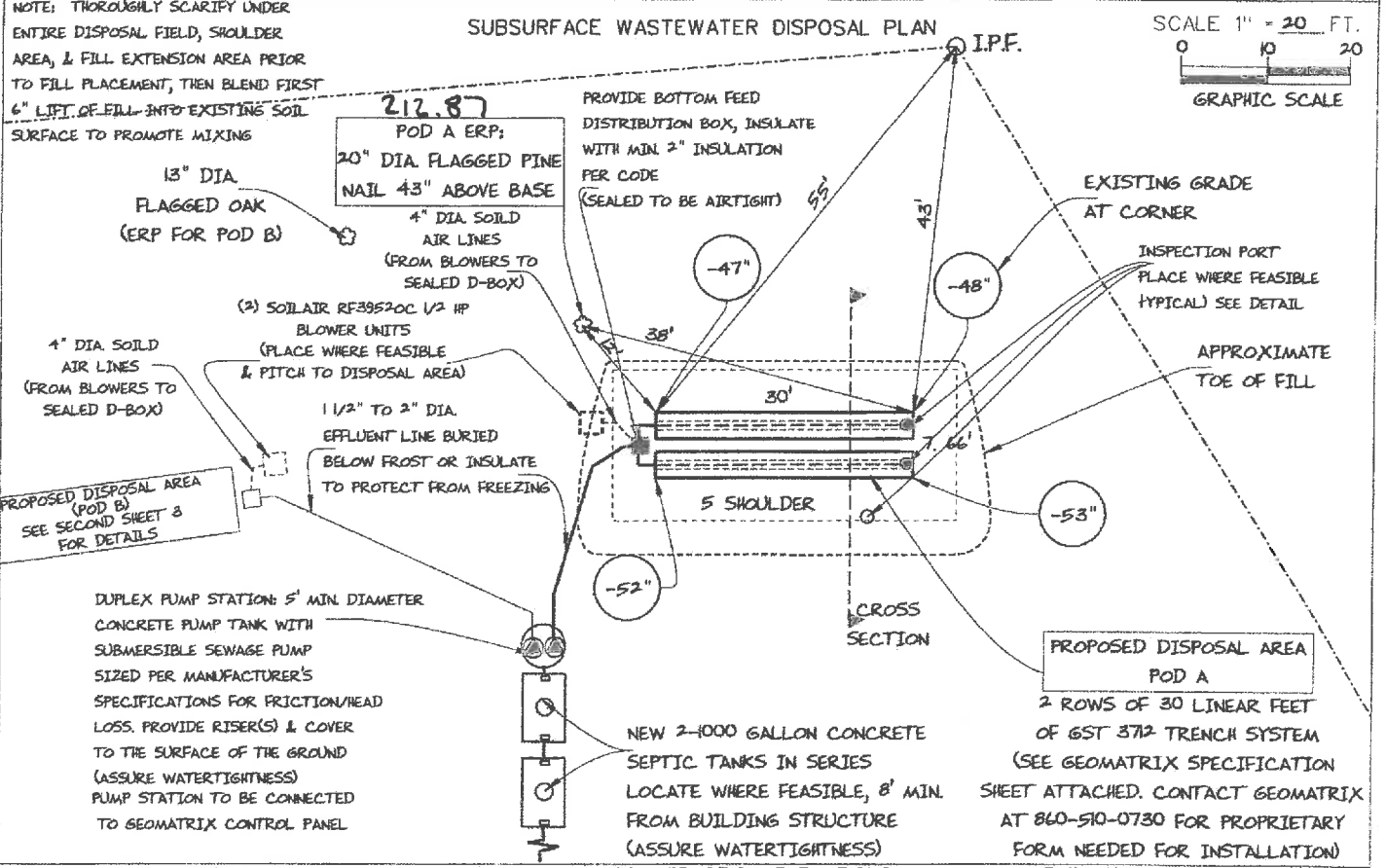
SITE EVALUATOR STATEMENT	
I certify that on <u>6/17/21</u> (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the Subsurface Wastewater Disposal Rules (10-144A/CMR 241).	
Site Evaluator Signature BRADY A. FRICK Site Evaluator Name Printed	352 SE # Date <u>7/13/21</u> Telephone Number <u>(207) 839-5563</u> E-mail Address <u>INFO@ALBERTFRICK.COM</u>
ALBERT FRICK ASSOCIATES - 731 FOSS ROAD, LIMERICK, MAINE 04048 - (207) 839-5563 Note: Changes to or deviations from the design should be confirmed with the Site Evaluator	



# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Health and Human Services  
 Division of Environmental Health  
 (207) 287-2070 FAX (207) 287-4172

Town, City, Plantation: **KITTERY** Street, Road, Subdivision: **89 ROUTE 236 POD A** Owner's Name: **JOSH SEYMOUR**



**FILL REQUIREMENTS**

Depth of Fill (Upslope)	: 3" - 4"
Depth of Fill (Downslope)	: 8" - 9"
DEPTHS AT CROSS-SECTION (shown below)	

**CONSTRUCTION ELEVATIONS**

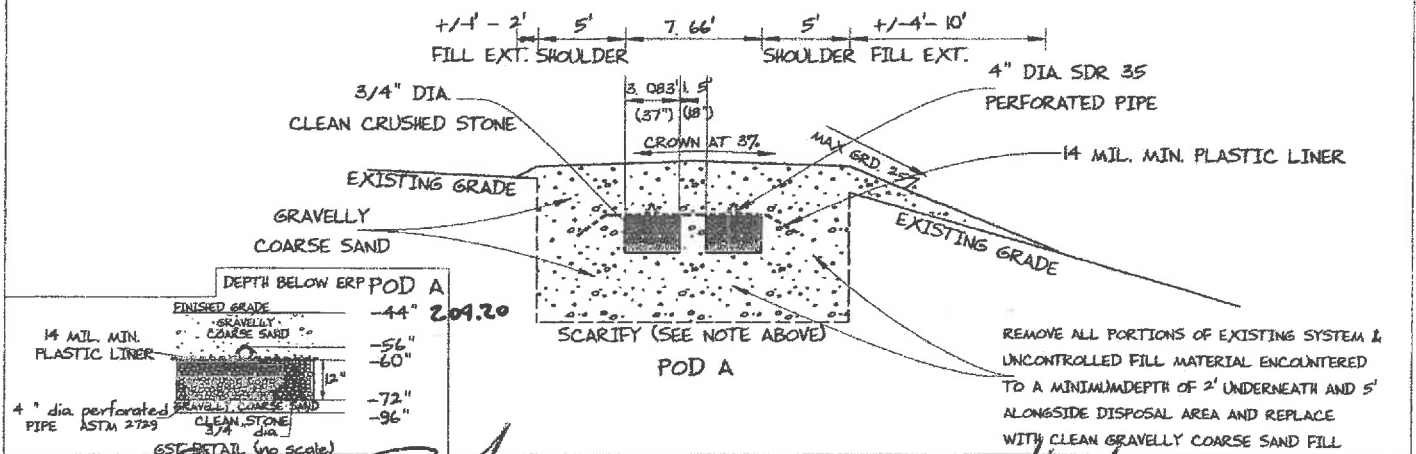
Finished Grade Elevation	SEE DETAIL BELOW
Top of Distribution Pipe or Proprietary Device	SEE DETAIL BELOW
Bottom of Disposal Area	SEE DETAIL BELOW

**ELEVATION REFERENCE POINT**

Location & Description 20" DIA. FLAGGED PINE, NAIL 43" ABOVE BASE  
 Reference Elevation is: 0.0' or -----

**POD A DISPOSAL AREA CROSS SECTION POD A**  
 SEE GEOMATRIX SPECIFICATION SHEET ATTACHED, CONTACT GEOMATRIX AT 860-510-0730 FOR PROPRIETARY FORM NEEDED FOR INSTALLATION

SCALE:  
 VERTICAL: 1" = 5 FT  
 HORIZONTAL: 1" = 10 FT



Site Evaluator Signature: *BAZ*

352  
 SE

Date: 7/13/21

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

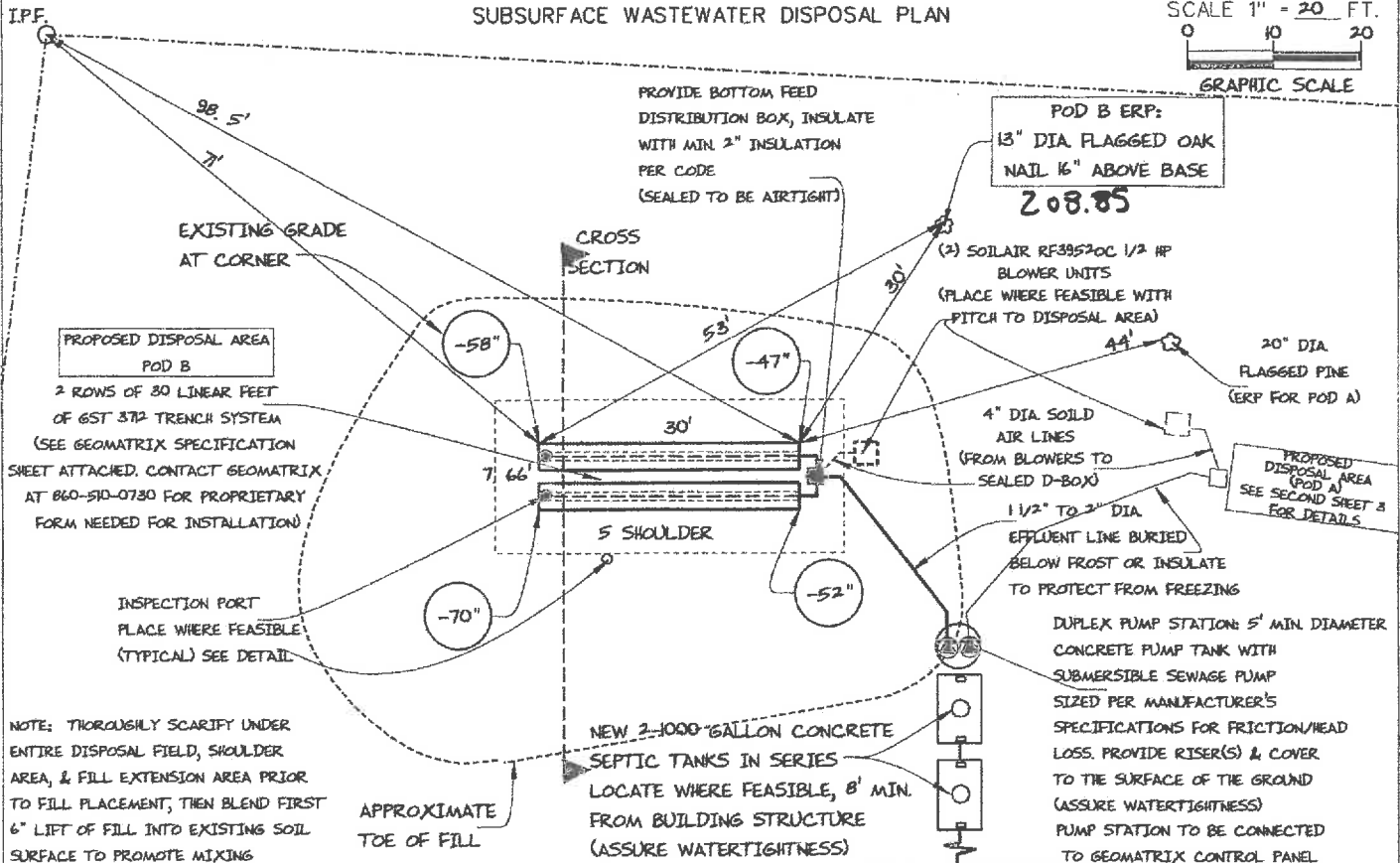
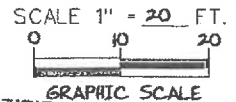
Department of Health and Human Services  
 Division of Environmental Health  
 (207) 287-2070 FAX (207) 287-4172

Town, City, Plantation  
**KITTERY**

Street, Road, Subdivision  
**89 ROUTE 236 POD B**

Owner's Name  
**JOSH SEYMOUR**

## SUBSURFACE WASTEWATER DISPOSAL PLAN



### FILL REQUIREMENTS

Depth of Fill (Upslope)	: 33" - 44"	Finished Grade Elevation
Depth of Fill (Downslope)	: 38" - 56"	Top of Distribution Pipe or Proprietary Device
DEPTHS AT CROSS-SECTION (shown below)		Bottom of Disposal Area

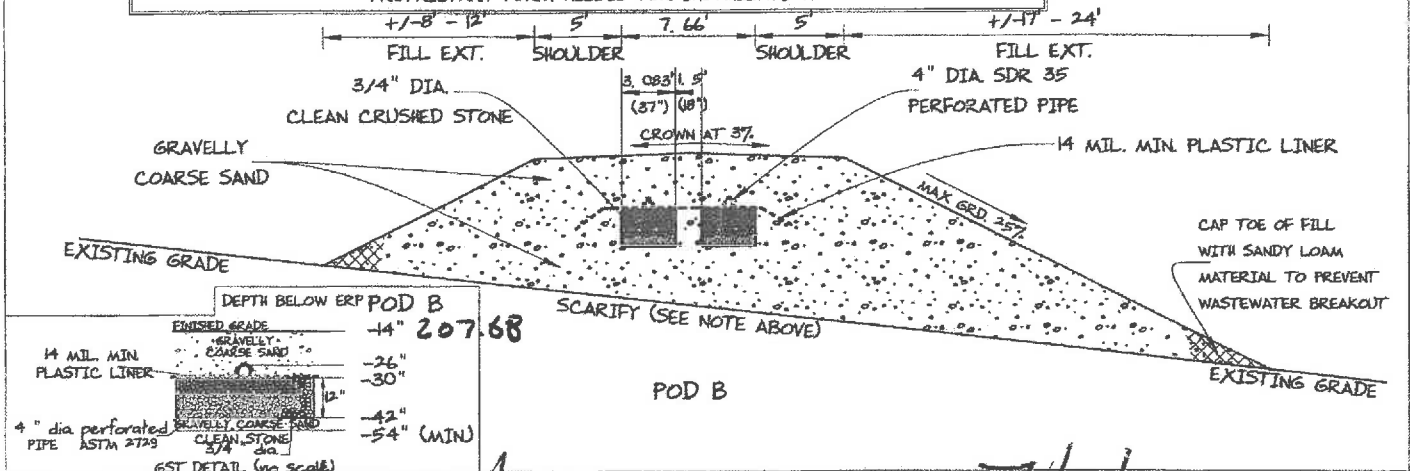
SEE  
 DETAIL  
 BELOW

### CONSTRUCTION ELEVATIONS

**ELEVATION REFERENCE POINT**  
 Location & Description 13" DIA. FLAGGED OAK, NAIL 16" ABOVE BASE  
 Reference Elevation is: 0.0" or -----

**POD B DISPOSAL AREA CROSS SECTION POD B**  
 SEE GEOMATRIX SPECIFICATION SHEET ATTACHED, CONTACT GEOMATRIX AT 860-510-0730 FOR PROPRIETARY FORM NEEDED FOR INSTALLATION

SCALE:  
 VERTICAL: 1" = 5 FT  
 HORIZONTAL: 1" = 10 FT

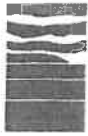


Site Evaluator Signature

352  
 SE

Date

7/13/21



Albert Frick Associates, Inc.  
Soil Scientists & Site Evaluators  
751 Foss Road Limerick, Maine 04048  
(207) 839-5563

KITTERY

89 ROUTE 236

JOSH SEYMOUR

TOWN

LOCATION

APPLICANT'S NAME

1) The Plumbing and Subsurface Wastewater Disposal Rules adopted by the State of Maine, Division of Health and Human Services pursuant to 22 M.R.S.A. § 42 (the "Rules") are incorporated herein by reference and made a part of this application and shall be consulted by the owner/applicant, the system installer and/or building contractor for further construction details and material specifications. The system installer should contact Albert Frick Associates, Inc. 839-5563, if there are any questions concerning materials, procedures or designs. The system installer and/or building contractor installing the system shall be solely responsible for compliance with the Rules and with all state and municipal laws and ordinances pertaining to the permitting, inspection and construction of subsurface wastewater disposal systems.

2) This application is intended to represent facts pertinent to the Rules only. It shall be the responsibility of the owner/applicant, system installer and/or building contractor to determine compliance with and to obtain permits under all applicable local, state and/or federal laws and regulations (including, without limitation, Natural Resources Protection Act, wetland regulations, zoning ordinances, subdivision regulations, Site Location of Development Act and Minimum Lot Size law) before installing this system or considering the property on which the system is to be installed a "buildable" lot. It is recommended that a wetland scientist be consulted regarding wetland regulations. Prior to the commencement of construction/installation, the local plumbing inspector or Code Enforcement Officer shall inform the owner/applicant and Albert Frick Associates, Inc of any local ordinances which are more restrictive than the Rules in order that the design may be amended. All designs are subject to review by local, state and/or federal authorities. Albert Frick Associates, Inc.'s liability shall be limited to revisions required by regulatory agencies pursuant to laws or regulations in effect at the time of preparation of this application.

3) All information shown on this application relating to property lines, well locations, subsurface structures and underground facilities (such as utility lines, drains, septic systems, water lines, etc.) are based upon information provided by the owner/applicant and has been relied upon by Albert Frick Associates, Inc. in preparing this application. The owner/applicant shall review this application prior to the start of construction and confirm this information. Well locations on abutting properties but not readily visible above grade should be confirmed by the owner/applicant prior to system installation to assure minimum setbacks.

4) Installation of a garbage (grinder) disposal is not recommended. If one is installed, an additional 1000 gallon septic tank or a septic tank filter shall be connected in series to the proposed septic tank. Risers and covers should be installed over the septic tank outlet per the "Rules" to allow for easy maintenance of filter.

5) The septic tank should be pumped within two years of installation and subsequently as recommended by the pump service, but in no event should the septic tank be pumped less often than every three years.

The system user shall avoid introducing kitchen grease or fats into this system. Chemicals such as septic tank cleaners and/or chlorine or water treatment backwash and controlled or hazardous substances shall not be disposed of in this system. Additives such as yeast or enzymes are discouraged, since they have not been proven to extend system life.

6) All septic tanks, pump stations and additional treatment tanks shall be installed to prevent ground water and surface water infiltration. Risers and covers should be properly installed to provide access while preventing surface water intrusion to within 6" of a finished ground surface.

Vehicular traffic over disposal system is prohibited unless specifically designed with H-20 rated components.

KITTERY

89 ROUTE 236

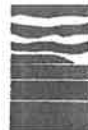
JOSH SEYMOUR

TOWN

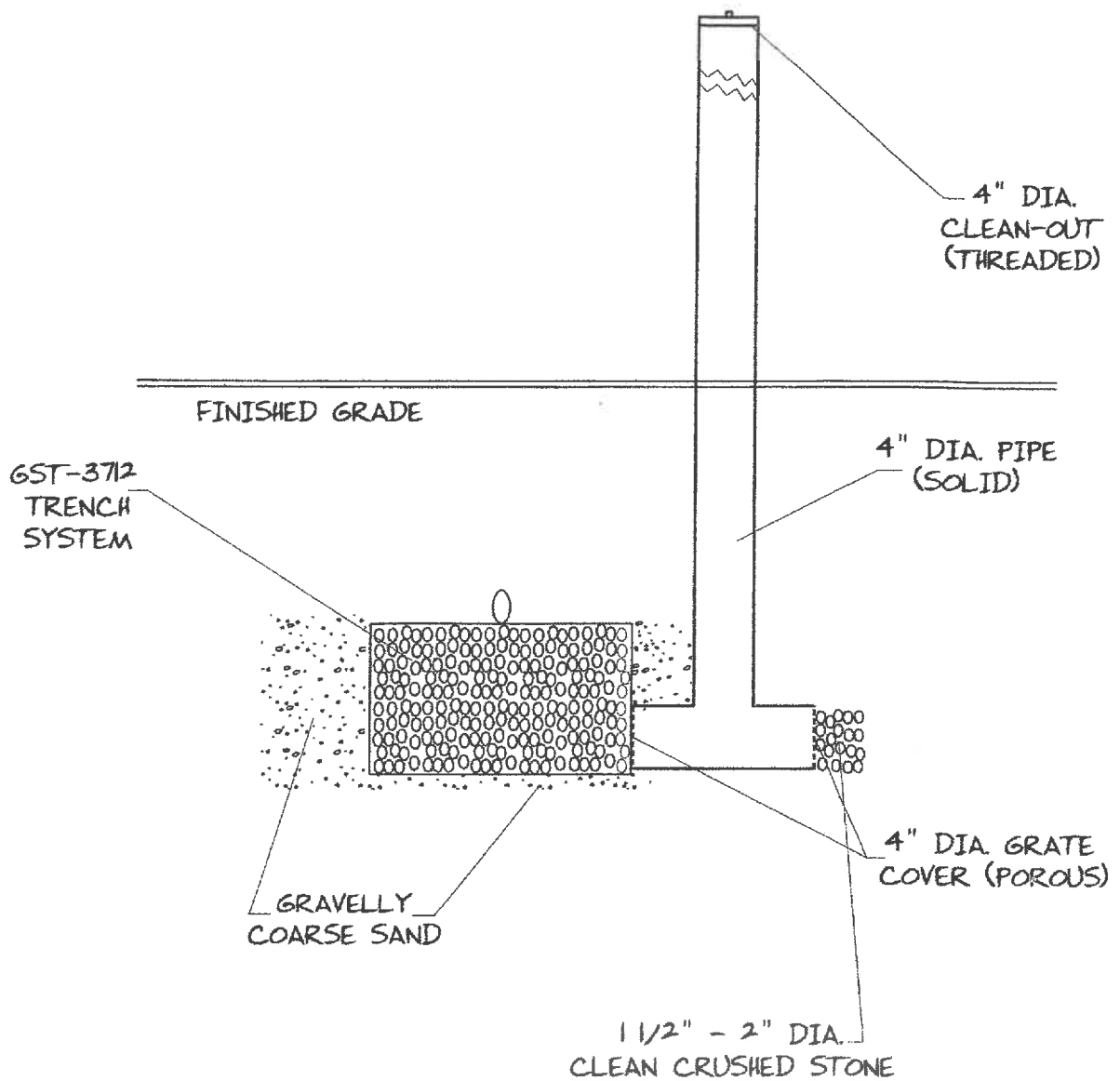
LOCATION

APPLICANT'S NAME

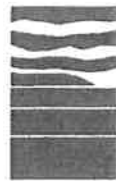
- 7) The actual waste water flow or number of bedrooms shall not exceed the design criteria indicated on this application without a re-evaluation of the system as proposed
- 8) The general minimum setbacks between a well (public or private) and septic system serving a single family residence is 100-300 feet, unless the local municipality has a more stringent requirement. A well installed by an abutter within the minimum setback distances prior to the issuance of a permit for the proposed disposal system may void this design.
- 9) When a gravity system is proposed: BEFORE CONSTRUCTION/INSTALLATION BEGINS, the system installer or building contractor shall review the elevations of all points given in this application and the elevation of the existing and/or proposed building drain and septic tank inverts for compatibility to minimum pitch requirements. In gravity systems, the invert of the septic tank(s) outlet(s) should be at least 4 inches above the invert of the distribution box outlet at the disposal area.
- 10) When an effluent pump is required: Pump stations should be sized per manufacturer's specifications to meet lift requirements and friction loss. Provisions shall be made to make certain that surface and ground water does not enter the septic tank or pump station, by sealing/grouting all seams and connections, and by placement of a riser and lid at or above grade. An alarm device warning of a pump failure shall be installed. Also, when pumping is required of a chamber system, install a 'T' connection in the distribution box and place 3 inches of stone or a splash plate in the first chamber. Insulate gravity pipes, pump lines and the distribution box as necessary to prevent freezing.
- 11) On all systems, remove the vegetation, organic duff and old fill material from under the disposal area and any fill extension. Additional fill beyond indicated on plan may be necessary to replace organic matter. On sites where the proposed system is to be installed in natural soil, scarify the bottom and sides of the excavated disposal area with a rake. Do not use wheeled equipment on the scarified soil surface. For systems installed in fill, scarify the native soil by roto-tilling or scarifying with teeth of backhoe to a depth of at least 8 inches over the entire disposal and fill extension area to prevent glazing and to promote fill bonding. Place fill in loose layers no deeper than 8 inches and compact before placing more fill (this ensures that voids and loose pockets are eliminated to minimize the chance of leakage or differential settling). Do not use wheeled equipment on the scarified soil area until after 12 inches of fill is in place. Keep equipment off proprietary devices. Divert the surface water away from the disposal area by ditching or shallow landscape swales.
- 12) Unless noted otherwise, fill shall be gravelly coarse sand, which contains no more than 5% fines (silt and clay). Crushed stone shall be clean and free of any rock dust from the crushing process.
- 13) Do not install systems on loamy, silty, or clayey soils during wet periods since soil smearing/glazing may seal off the soil interface.
- 14) Seed all filled and disturbed surfaces with perennial grass seed, with 4" min. soil or soil amendment mix suitable for growing, then mulch with hay or equivalent material to prevent erosion. Alternatively, bark or permanent landscape mulch may be used to cover system. Woody trees or shrubs are not permitted on the disposal area or fill extensions.
- 15) If an advanced wastewater treatment unit is part of the design, the system shall be operated and maintained per manufacturer's specifications.



**Albert Frick Associates, Inc.**  
 Soil Scientists & Site Evaluators  
 731 Fox Road Limerick, Maine 04048  
 (207) 839-3563



**INSPECTION PORT DETAIL**



**Albert Frick Associates, Inc.**  
 Soil Scientists & Site Evaluators  
 Gorham, Maine 04038

Date:	Revision Description

Drawn By: <b>B.J.</b>	Checked By: <b>B.F.</b>
Date: <b>6/24/21</b>	Scale: <b>NOT TO SCALE</b>



# 0 foot Abutters List Report

Kittery, ME  
July 26, 2021

## Subject Property:

Parcel Number: 28-14-2  
CAMA Number: 28-14-2  
Property Address: 89 ROUTE 236

Mailing Address: JD INVESTMENTS, LLC  
19 BUFFUM ROAD UNIT 6  
NORTH BERWICK, ME 03906

---

## Abutters:

Parcel Number: 28-14  
CAMA Number: 28-14  
Property Address: 93 ROUTE 236

Mailing Address: AMP REALTY HOLDINGS, LLC  
291 DOW HIGHWAY  
ELIOT, ME 03903

Parcel Number: 28-14-1  
CAMA Number: 28-14-1  
Property Address: 91 ROUTE 236

Mailing Address: ARENHALL CORP  
PO BOX 158  
WELLS, ME 04090-0339

Parcel Number: 28-25A  
CAMA Number: 28-25A  
Property Address: 42 ROUTE 236

Mailing Address: LANE, BRUCE C. TRUSTEE LANE,  
CASTANIA L. TRUSTEE  
29 SEELY LANE  
ELIOT, ME 03903

Parcel Number: 28-25C  
CAMA Number: 28-25C  
Property Address: 90 ROUTE 236

Mailing Address: CENTRAL MAINE POWER CO  
ONE CITY CENTER 5TH FLOOR  
PORTLAND, ME 04101

Parcel Number: 28-25D  
CAMA Number: 28-25D  
Property Address: ROUTE 236

Mailing Address: BRENNAN JR., ROBERT T.  
1911 SE 20TH STREET  
CAPE CORAL, FL 33990

Parcel Number: 28-7A  
CAMA Number: 28-7A  
Property Address: 28 FERNALD ROAD

Mailing Address: BUNTING, RUSSELL G BUNTING, ANITA  
R  
28 FERNALD ROAD  
KITTERY, ME 03904-5558

## Engineer/ Surveyor:

Jones & Beach Engineers  
ATTN: Erik Poulin  
PO Box 219  
Stratham, NH 03885

## Applicant:

Davis Drolet  
19 Buffum Road, Unit 6  
North Berwick, ME 03906



www.cai-tech.com

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7/26/2021

Page 1 of 1



AMP REALTY HOLDINGS, LLC  
291 DOW HIGHWAY  
ELIOT, ME 03903

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ELIOT, ME 03903

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ELIOT, ME 03903

ARENHALL CORP  
PO BOX 158  
WELLS, ME 04090-0339

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CAPE CORAL, FL 33990

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1911 SE 20TH STREET  
CAPE CORAL, FL 33990

BUNTING, RUSSELL G  
BUNTING, ANITA R  
28 FERNALD ROAD  
KITTERY, ME 03904-5558

BUNTING, RUSSELL G  
BUNTING, ANITA R  
28 FERNALD ROAD  
KITTERY, ME 03904-5558

BUNTING, RUSSELL G  
BUNTING, ANITA R  
28 FERNALD ROAD  
KITTERY, ME 03904-5558

CENTRAL MAINE POWER CO  
ONE CITY CENTER  
5TH FLOOR  
PORTLAND, ME 04101

CENTRAL MAINE POWER CO  
ONE CITY CENTER  
5TH FLOOR  
PORTLAND, ME 04101

CENTRAL MAINE POWER CO  
ONE CITY CENTER  
5TH FLOOR  
PORTLAND, ME 04101

LANE, BRUCE C. TRUSTEE  
LANE, CASTANIA L. TRUSTEE  
29 SEELY LANE  
ELIOT, ME 03903

LANE, BRUCE C. TRUSTEE  
LANE, CASTANIA L. TRUSTEE  
29 SEELY LANE  
ELIOT, ME 03903

LANE, BRUCE C. TRUSTEE  
LANE, CASTANIA L. TRUSTEE  
29 SEELY LANE  
ELIOT, ME 03903

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ATTN: Erik Poulin  
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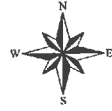
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ATTN: Erik Poulin  
PO Box 219  
Stratham, NH 03885

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Davis Drolet  
19 Buffum Road, Unit 6  
North Berwick, ME 03906

Davis Drolet  
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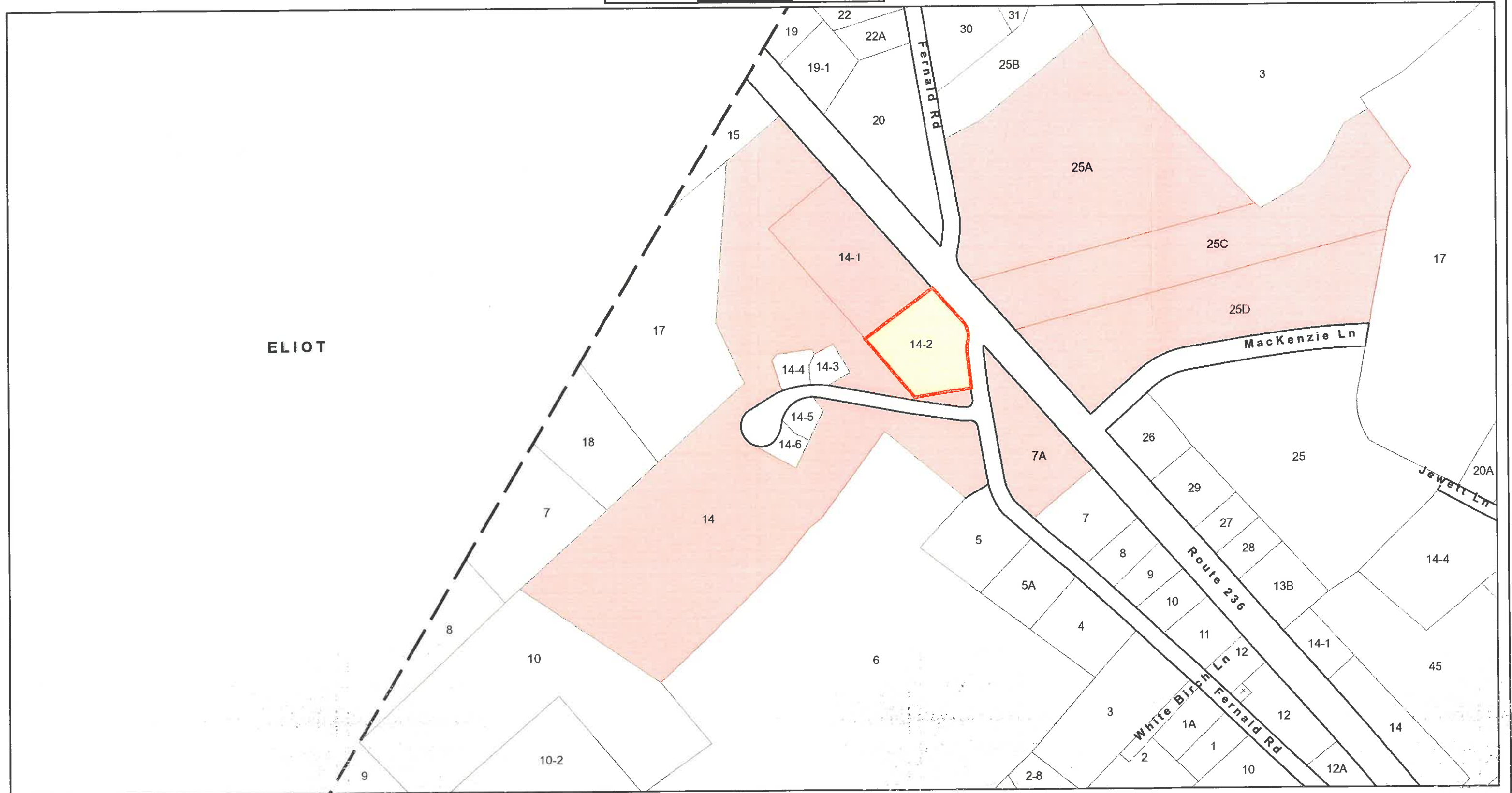
Davis Drolet  
19 Buffum Road, Unit 6  
North Berwick, ME 03906



July 26, 2021

Kittery, ME

1 inch = 275 Feet

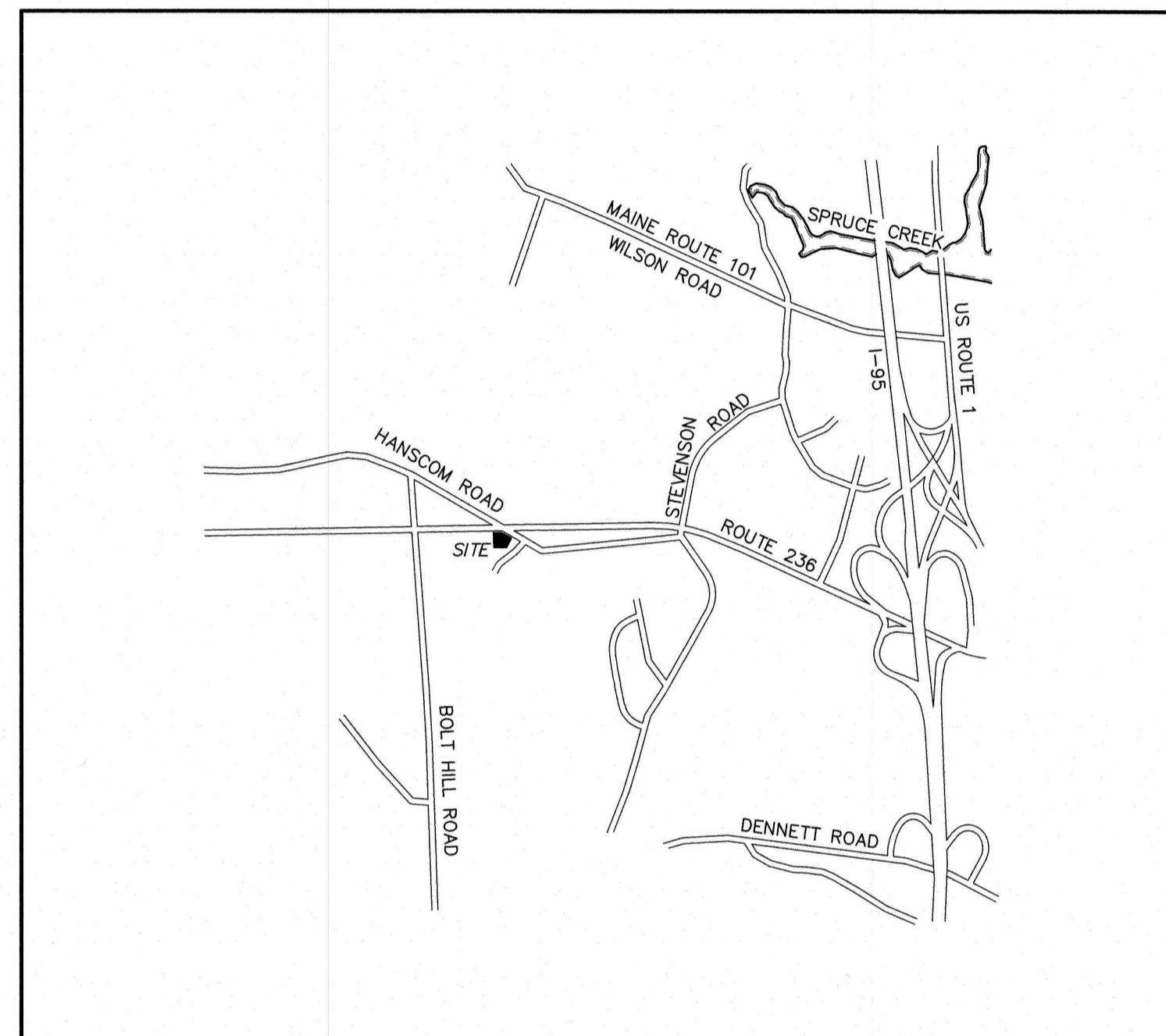


Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

# PARKING LOT EXPANSION TAX MAP 28, LOT 14-2 89 ROUTE 236, KITTERY, MAINE

## GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY LINES
---	---	SETBACK LINES
---	---	CENTERLINE
---	---	FRESHWATER WETLANDS LINE
---	---	TIDAL WETLANDS LINE
---	---	TREE LINE
---	---	STONEWALL
---	---	SOIL BOUNDARY
---	---	FLOOD PLAIN LINE
---	---	EASEMENT
---	---	MAJOR CONTOUR
---	---	MINOR CONTOUR
---	---	EDGE OF PAVEMENT
---	---	EDGE OF GRAVEL
---	---	CAPE COD BERM
---	---	SILT FENCE
---	---	DRAINAGE LINE
---	---	WATER LINE
---	---	OVERHEAD ELECTRIC
---	---	UNDERGROUND ELECTRIC
---	---	UNDERDRAIN
---	---	THRUST BLOCK
---	---	IRON PIPE/IRON ROD
---	---	DRILL HOLE
---	---	IRON ROD/DRILL HOLE
---	---	STONE/GRANITE BOUND
---	---	SPOT GRADE
---	---	PAVEMENT SPOT GRADE
---	---	SINGLE POST SIGN
---	---	WELL
---	---	TEST PIT
---	---	UTILITY POLE
---	---	LIGHT POLES
---	---	DRAIN MANHOLE
---	---	HYDRANT
---	---	WATER GATE
---	---	WATER SHUT OFF
---	---	REDUCER
---	---	SINGLE GRATE CATCH BASIN
---	---	DOUBLE GRATE CATCH BASIN
---	---	TRANSFORMER
---	---	CULVERT W/STRAIGHT HEADWALL
---	---	SEPTIC AREA
---	---	WETLAND IMPACT
---	---	RIPRAP
---	---	TIDAL WETLANDS
---	---	FRESHWATER WETLANDS
---	---	STABILIZED CONSTRUCTION
---	---	ENTRANCE



**LOCUS MAP**  
SCALE 1" = 2000'

### TYPE OF PERMIT

**KITTERY SITE PLAN APPROVAL:**  
TOWN OF KITTERY PLANNING BOARD  
200 ROGERS ROAD  
KITTERY, MAINE 03904  
(207) 439-0452  
RESPONSIBLE CONSULTANT:  
JONES & BEACH ENGINEERS, INC.

### STATUS

SUBMITTED: 08/19/21  
PERMIT NO.  
DATED:  
EXPIRATION:

### SHEET INDEX

CS	COVER SHEET
C1	EXISTING CONDITIONS PLAN
C2	SITE PLAN
C3	GRADING AND DRAINAGE PLAN
C4	UTILITY OVERVIEW PLAN
L1	LANDSCAPE AND LIGHTING PLAN
D1-D2	DETAIL SHEETS
E1	EROSION AND SEDIMENT CONTROL DETAILS

**CIVIL ENGINEER / SURVEYOR**  
JONES & BEACH ENGINEERS, INC.  
85 PORTSMOUTH AVENUE  
PO BOX 219  
STRATHAM, NH 03885  
(603) 772-4746  
CONTACT: ERIK POULIN  
EPOULIN@JONESANDBEACH.COM

**WATER**  
KITTERY WATER DISTRICT  
17 STATE ROAD  
KITTERY, ME 03904  
(207) 439-0775  
CONTACT: MICHAEL S. ROGERS

**ELECTRIC**  
CENTRAL MAINE POWER COMPANY  
162 CANCO ROAD  
PORTLAND, ME 04103  
(800) 750-4500  
CONTACT: HERBERT STEVENS

**OWNER OF RECORD**  
JD INVESTMENTS, LLC  
19 BUFFUM ROAD, UNIT 6  
NORTH BERWICK, ME 03906  
(603) 978-7159  
CONTACT: DAVIS DROLET

**TELEPHONE**  
FAIRPOINT COMMUNICATIONS  
155 GANNETT DRIVE  
SOUTH PORTLAND, ME 04106  
(866) 984-2001

APPLICANT	DATE:
OWNER	DATE:
KITTERY, MAINE PLANNING BOARD	APPROVAL DATE:
PLANNING BOARD CHAIR	DATE:

**PROJECT PARCEL**  
TOWN OF KITTERY  
TAX MAP 28, LOT 14-2

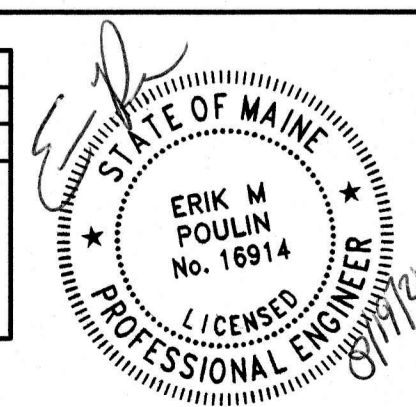
**APPLICANT/OWNER**  
JD INVESTMENTS, LLC  
19 BUFFUM ROAD, UNIT 6  
NORTH BERWICK, ME 03906  
BK 18278, PG 577

**TOTAL LOT AREA**  
60,402 SQ. FT.  
1.39 ACRES

**TAX MAP 28, LOT 14-2**

Design: EMP Draft: GDR Date: 7/6/21  
Checked: WGM Scale: AS NOTED Project No.: 21076  
Drawing Name: 21076-PLAN.dwg

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



REV.	DATE	REVISION	BY
0	08/17/21	ISSUED FOR REVIEW	EMP

Designed and Produced in NH

**J/B Jones & Beach Engineers, Inc.**

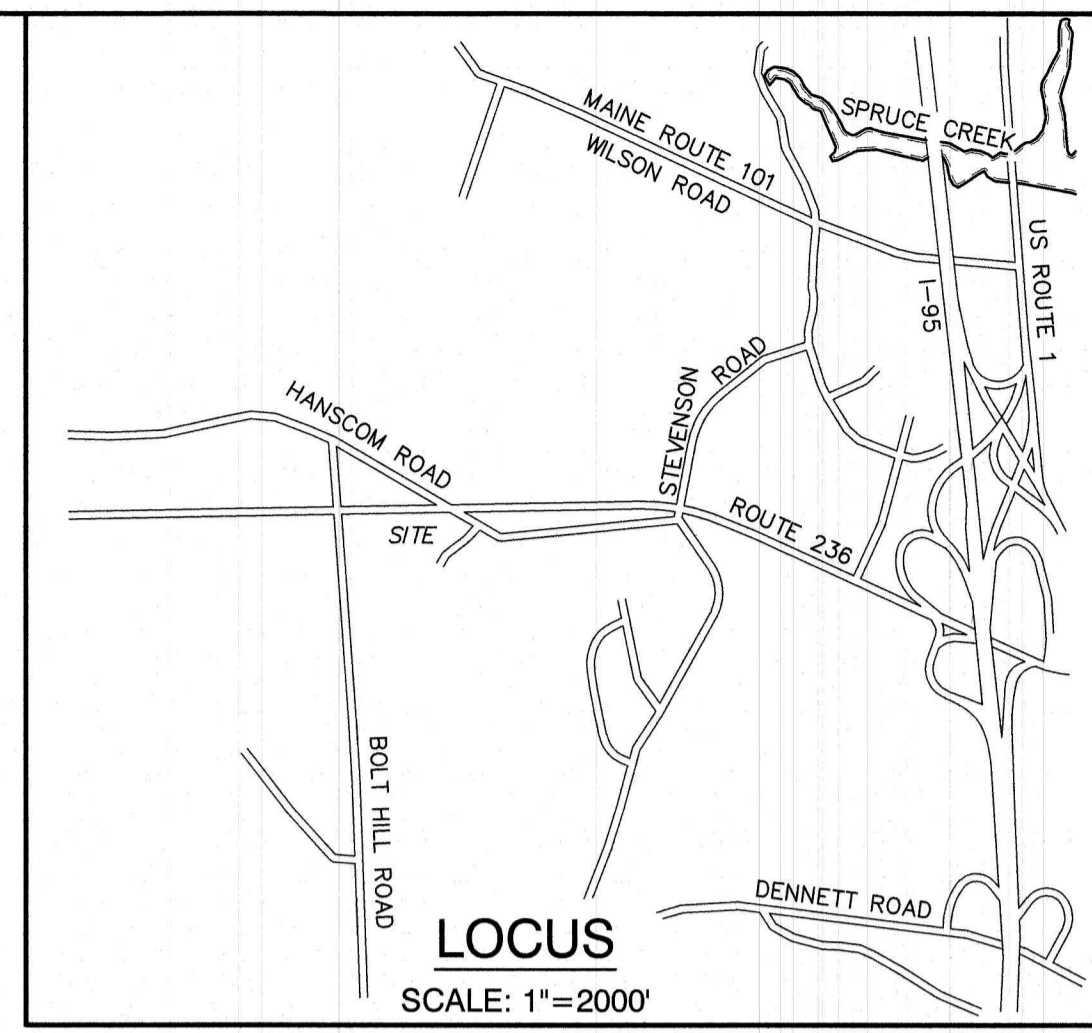
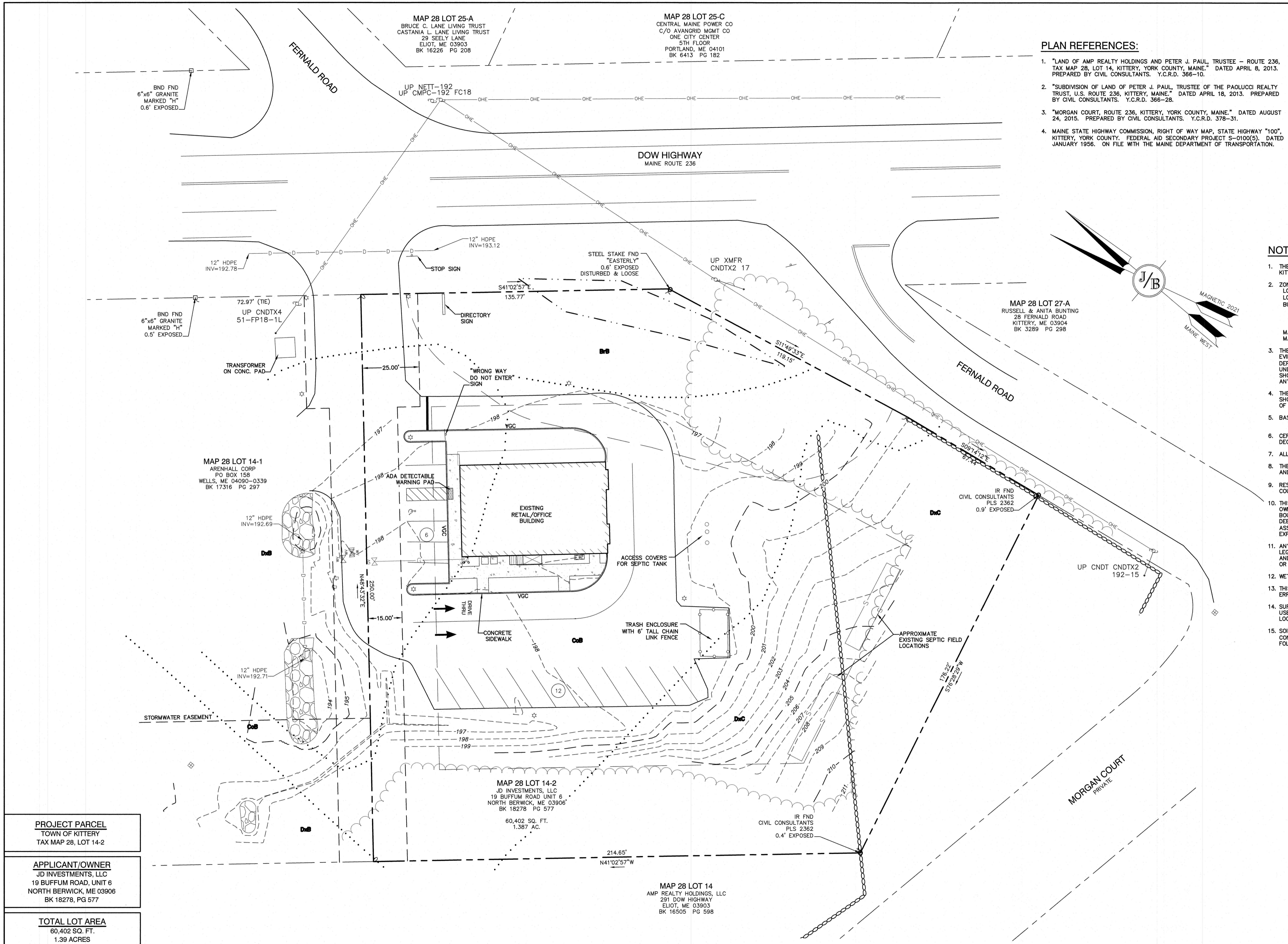
*Civil Engineering Services*

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885      603-772-4746 FAX: 603-772-0227 E-Mail: JBE@JONESANDBEACH.COM

Plan Name:	<b>COVER SHEET</b>
Project:	<b>PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, MAINE</b>
Owner of Record:	JD INVESTMENT ST, LLC NAME 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE

DRAWING No.	<b>CS</b>
SHEET 1 OF 9 JBE PROJECT NO. 21076	

JBE # 21076



<b>PROJECT PARCEL</b> TOWN OF KITTERY TAX MAP 28, LOT 14-2
<b>APPLICANT/OWNER</b> JD INVESTMENTS, LLC 19 BUFFUM ROAD, UNIT 6 NORTH BERWICK, ME 03906 BK 18278, PG 577
<b>TOTAL LOT AREA</b> 60,402 SQ. FT. 1.39 ACRES

Design: MJS Draft: EMP Date: 08/11/2021  
 Checked: WGM Scale: AS SHOWN Project No.: 21076  
 Drawing Name: 21076-EX-CONDITIONS.dwg

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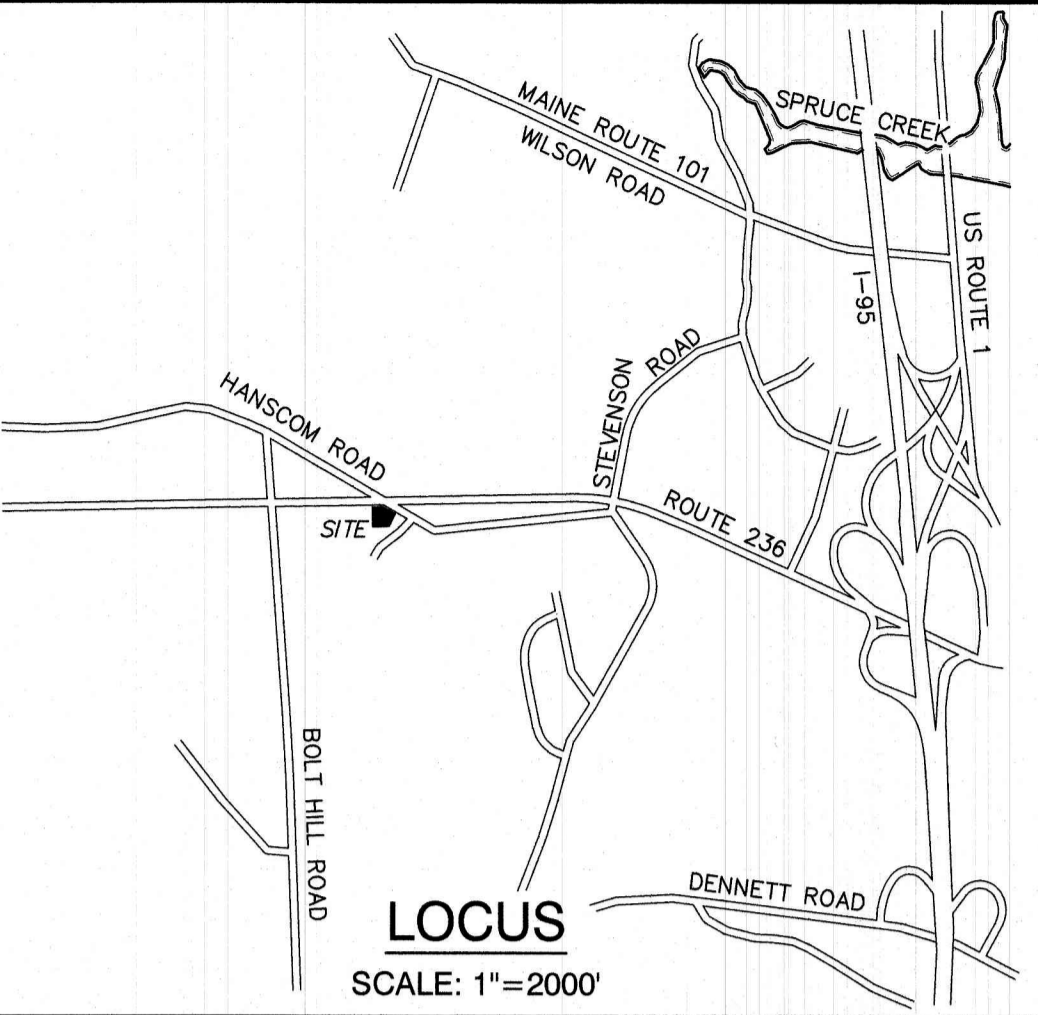
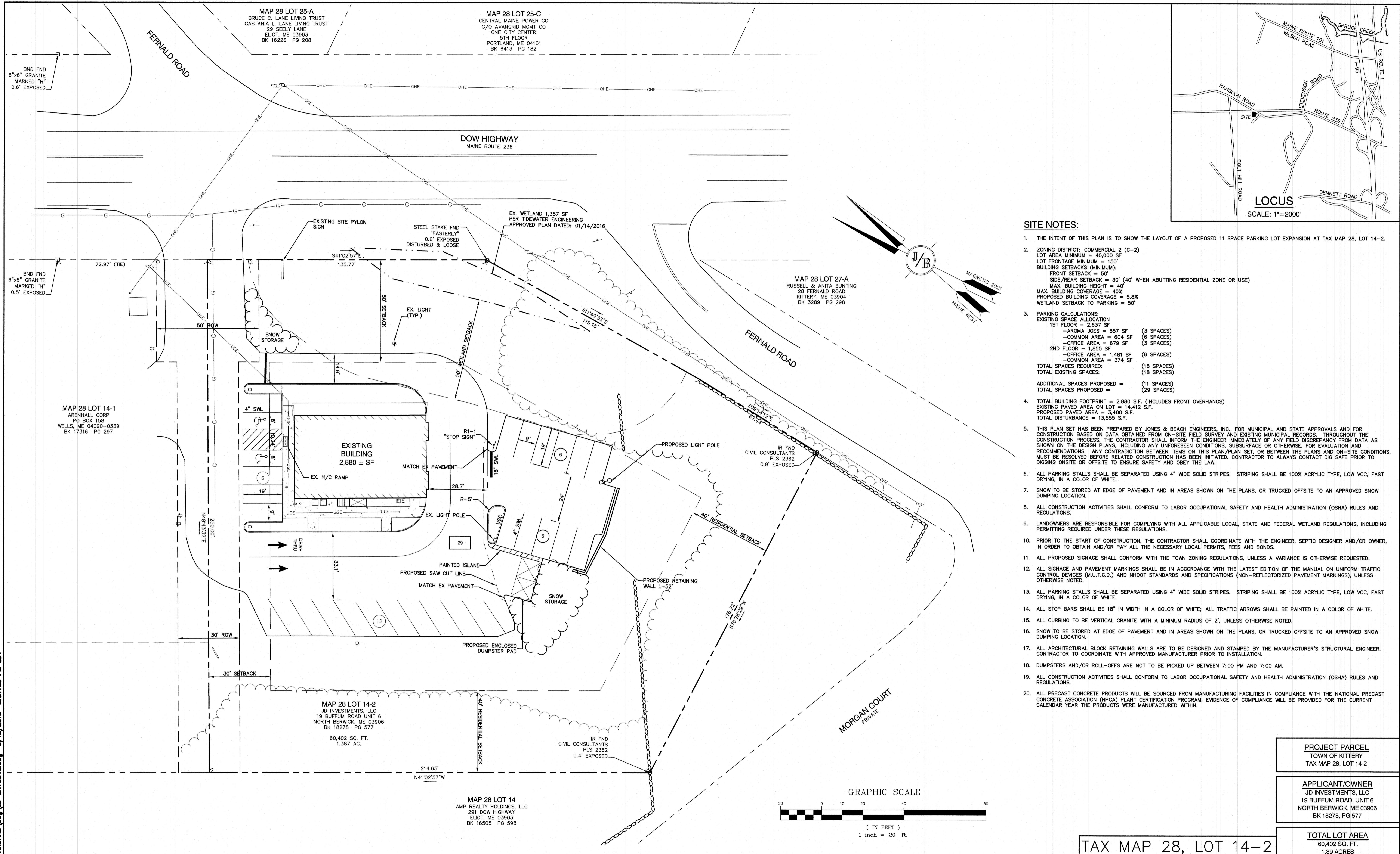
REV.	DATE	REVISION	BY
0		ISSUED FOR REVIEW	

**J/B Jones & Beach Engineers, Inc.**  
 Civil Engineering Services

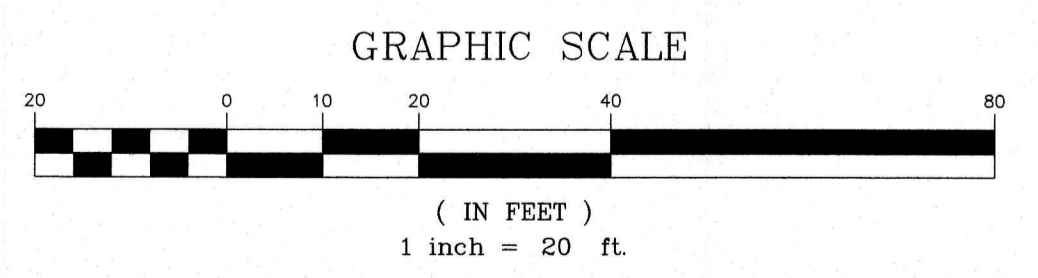
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885  
 603-772-4746 FAX: 603-772-0227  
 E-Mail: JBE@JONESANDBEACH.COM

Plan Name:	<b>EXISTING CONDITIONS PLAN</b>
Project:	NAME OF PROJECT 89 ROUTE 236, KITTERY, MAINE
Owner of Record:	JD INVESTMENTS, LLC 19 BUFFUM ROAD, UNIT 6, NORTH BERWICK, ME 03906

DRAWING No.  
**C1**  
SHEET 2 OF 9  
JBE PROJECT NO. 21076



- SITE NOTES:**
- THE INTENT OF THIS PLAN IS TO SHOW THE LAYOUT OF A PROPOSED 11 SPACE PARKING LOT EXPANSION AT TAX MAP 28, LOT 14-2.
  - ZONING DISTRICT: COMMERCIAL 2 (C-2)  
 LOT AREA MINIMUM = 40,000 SF  
 LOT FRONTAGE MINIMUM = 150'  
 BUILDING SETBACKS (MINIMUM):  
 FRONT SETBACK = 50'  
 SIDE/REAR SETBACK = 30' (40' WHEN ABUTTING RESIDENTIAL ZONE OR USE)  
 MAX. BUILDING HEIGHT = 40'  
 MAX. BUILDING COVERAGE = 40%  
 PROPOSED BUILDING COVERAGE = 5.8%  
 WETLAND SETBACK TO PARKING = 50'
  - PARKING CALCULATIONS:  
 EXISTING SPACE ALLOCATION  
 1ST FLOOR - 2,637 SF  
 -AROMA JOES = 857 SF (3 SPACES)  
 -COMMON AREA = 804 SF (6 SPACES)  
 -OFFICE AREA = 679 SF (3 SPACES)  
 2ND FLOOR - 1,855 SF  
 -OFFICE AREA = 1,481 SF (6 SPACES)  
 -COMMON AREA = 374 SF  
 TOTAL SPACES REQUIRED: (18 SPACES)  
 TOTAL EXISTING SPACES: (18 SPACES)  
 ADDITIONAL SPACES PROPOSED = (11 SPACES)  
 TOTAL SPACES PROPOSED = (29 SPACES)
  - TOTAL BUILDING FOOTPRINT = 2,880 S.F. (INCLUDES FRONT OVERHANGS)  
 EXISTING PAVED AREA ON LOT = 14,412 S.F.  
 PROPOSED PAVED AREA = 3,400 S.F.  
 TOTAL DISTURBANCE = 13,555 S.F.
  - THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ON-SITE OR OFF-SITE TO ENSURE SAFETY AND OBEY THE LAW.
  - ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL BE 100% ACRYLIC TYPE, LOW VOC, FAST DRYING, IN A COLOR OF WHITE.
  - SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.
  - ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
  - LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.
  - PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, SEPTIC DESIGNER AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
  - ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS A VARIANCE IS OTHERWISE REQUESTED.
  - ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NHDOT STANDARDS AND SPECIFICATIONS (NON-REFLECTORIZED PAVEMENT MARKINGS), UNLESS OTHERWISE NOTED.
  - ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL BE 100% ACRYLIC TYPE, LOW VOC, FAST DRYING, IN A COLOR OF WHITE.
  - ALL STOP BARS SHALL BE 18" IN WIDTH IN A COLOR OF WHITE; ALL TRAFFIC ARROWS SHALL BE PAINTED IN A COLOR OF WHITE.
  - ALL CURBING TO BE VERTICAL GRANITE WITH A MINIMUM RADIUS OF 2', UNLESS OTHERWISE NOTED.
  - SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.
  - ALL ARCHITECTURAL BLOCK RETAINING WALLS ARE TO BE DESIGNED AND STAMPED BY THE MANUFACTURER'S STRUCTURAL ENGINEER. CONTRACTOR TO COORDINATE WITH APPROVED MANUFACTURER PRIOR TO INSTALLATION.
  - DUMPSTERS AND/OR ROLL-OFFS ARE NOT TO BE PICKED UP BETWEEN 7:00 PM AND 7:00 AM.
  - ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
  - ALL PRECAST CONCRETE PRODUCTS WILL BE SOURCED FROM MANUFACTURING FACILITIES IN COMPLIANCE WITH THE NATIONAL PRECAST CONCRETE ASSOCIATION (NPCA) PLANT CERTIFICATION PROGRAM. EVIDENCE OF COMPLIANCE WILL BE PROVIDED FOR THE CURRENT CALENDAR YEAR THE PRODUCTS WERE MANUFACTURED WITHIN.



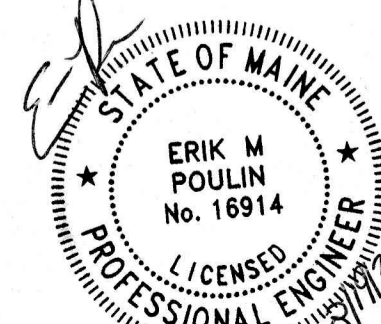
TAX MAP 28, LOT 14-2

**PROJECT PARCEL**  
 TOWN OF KITTERY  
 TAX MAP 28, LOT 14-2

**APPLICANT/OWNER**  
 JD INVESTMENTS, LLC  
 19 BUFFUM ROAD, UNIT 6  
 NORTH BERWICK, ME 03906  
 BK 18278, PG 577

**TOTAL LOT AREA**  
 60,402 SQ. FT.  
 1.39 ACRES

Design: EMP Draft: GDR Date: 7/6/21  
 Checked: WGM Scale: AS SHOWN Project No.: 21076  
 Drawing Name: 21076-PLAN.dwg  
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REV.	DATE	REVISION	BY
0	08/17/21	ISSUED FOR REVIEW	EMP

**J/B Jones & Beach Engineers, Inc.**  
 Civil Engineering Services  
 85 Portsmouth Ave. Stratham, NH 03885  
 603-772-4746  
 FAX: 603-772-0227  
 E-Mail: JBE@JONESANDBEACH.COM

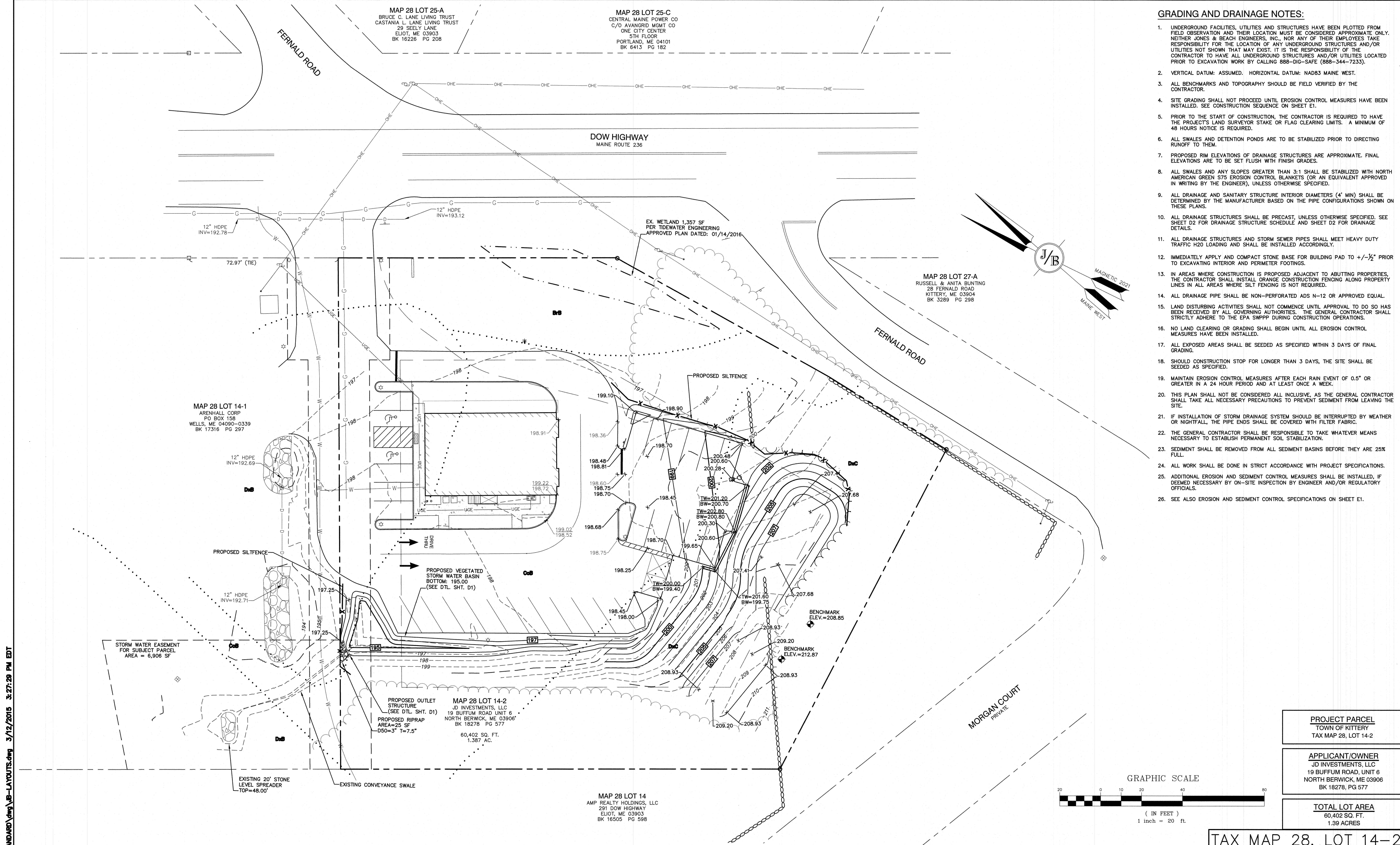
Plan Name:	<b>SITE PLAN</b>
Project:	<b>PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, MAINE</b>
Owner of Record:	<b>JD INVESTMENT, LLC NAME 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE</b>

DRAWING No.  
**C2**  
 SHEET 3 OF 9  
 JBE PROJECT NO. 21076

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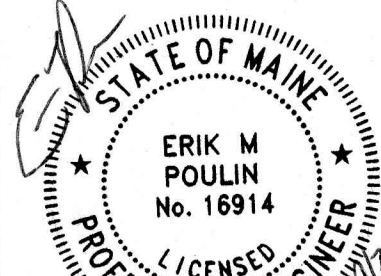
**GRADING AND DRAINAGE NOTES:**

- UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
- VERTICAL DATUM: ASSUMED. HORIZONTAL DATUM: NAD83 MAINE WEST.
- ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECT'S LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
- ALL SWALES AND DETENTION PONDS ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
- ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
- ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4" MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.
- ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED. SEE SHEET D2 FOR DRAINAGE STRUCTURE SCHEDULE AND SHEET D2 FOR DRAINAGE DETAILS.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC H20 LOADING AND SHALL BE INSTALLED ACCORDINGLY.
- IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE SILT FENCING IS NOT REQUIRED.
- ALL DRAINAGE PIPE SHALL BE NON-PERFORATED ADS N-12 OR APPROVED EQUAL.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
- NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING.
- SHOULD CONSTRUCTION STOP FOR LONGER THAN 3 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
- MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.5" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
- SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
- SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.



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Design: EMP Draft: GDR Date: 7/6/21  
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REV.	DATE	ISSUED FOR REVIEW	EMP
0	08/17/21	ISSUED FOR REVIEW	EMP
		REVISION	BY

Designed and Produced in NH

**J/B Jones & Beach Engineers, Inc.**

Civil Engineering Services

85 Portsmouth Ave. PO Box 219 Stratham, NH 03885

603-772-4746 FAX: 603-772-0227 E-Mail: JBE@JONESANDBEACH.COM

Plan Name: **GRADING AND DRAINAGE PLAN**

Project: **PARKING LOT EXPANSION  
89 ROUTE 236, KITTERY, MAINE**

Owner of Record: **JD INVESTMENT, LLC NAME  
19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE**

DRAWING No. **C3**

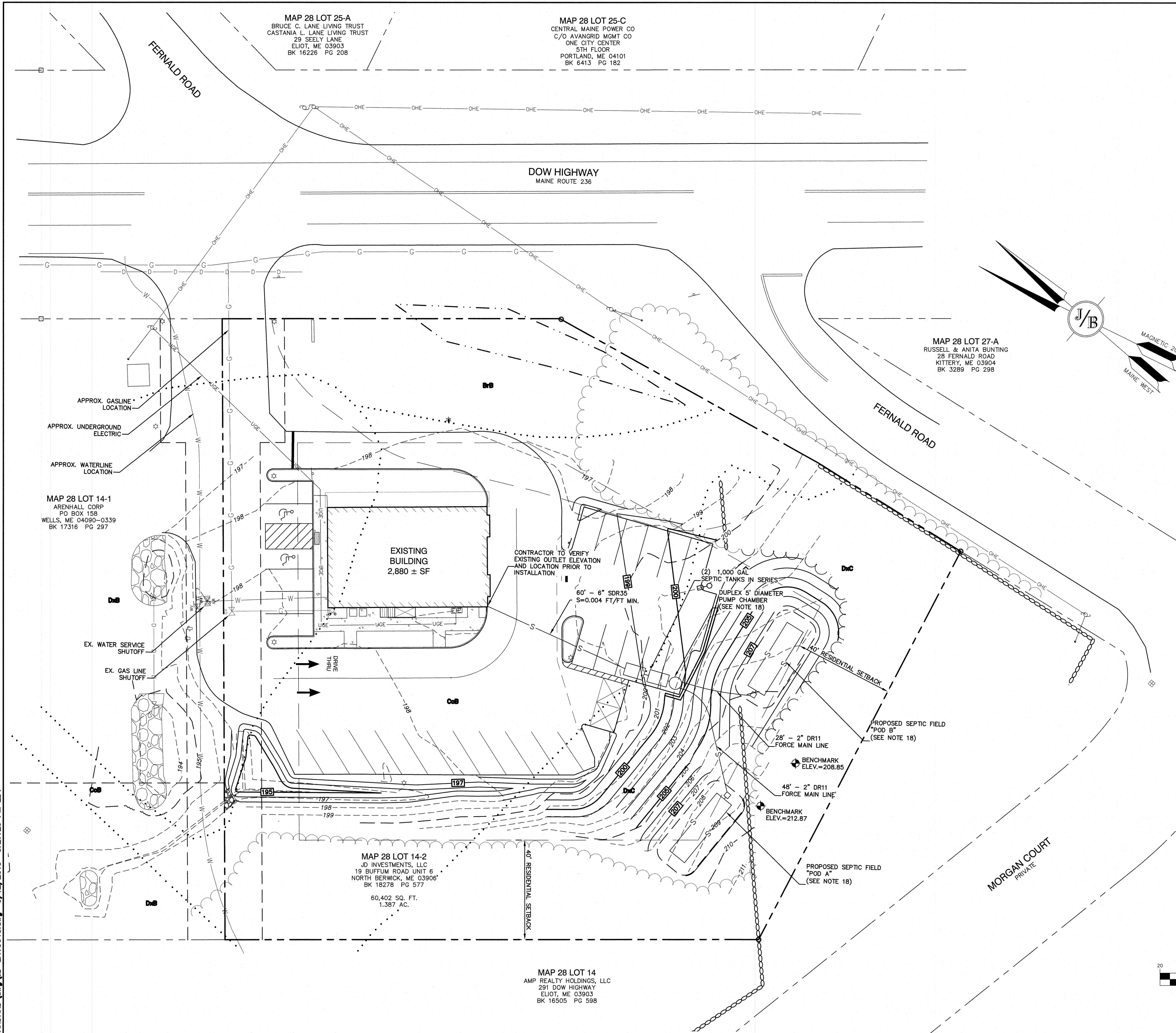
SHEET 4 OF 9  
JBE PROJECT NO. 21076

**PROJECT PARCEL**  
TOWN OF KITTERY  
TAX MAP 28, LOT 14-2

**APPLICANT/OWNER**  
JD INVESTMENTS, LLC  
19 BUFFUM ROAD, UNIT 6  
NORTH BERWICK, ME 03906  
BK 18278, PG 577

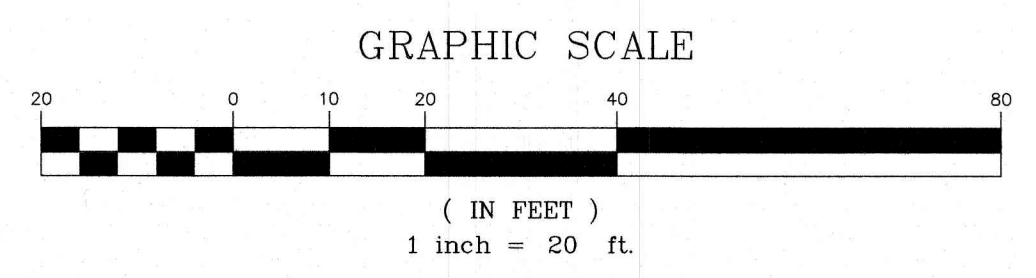
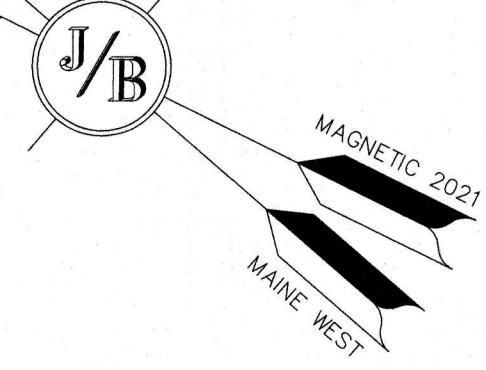
**TOTAL LOT AREA**  
60,402 SQ. FT.  
1.39 ACRES

**TAX MAP 28, LOT 14-2**



**UTILITY NOTES:**

- UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC. NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
- ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, CONNECTION FEES AND BONDS.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
- THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR STANDARDS OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, FIRE ALARM, GAS, WATER, AND SEWER).
- A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL CONFORM TO THE TOWN STANDARDS AND REGULATIONS, AND MDEP STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED.
- ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- BUILDINGS TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
- ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE AS SHOWN ON THE GRADING AND DRAINAGE PLAN.
- DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
- CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- EXISTING UTILITIES SHALL BE DIGSAFED BEFORE CONSTRUCTION.
- ALL WATER AND SANITARY LEADS TO BUILDING(S) SHALL END AT RIGHT OF WAY AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT END.
- ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
- ALL EXISTING UNDERGROUND UTILITIES (INCLUDING WATER, ELECTRICITY, AND TELEPHONE/COMMUNICATIONS) WILL BE MAINTAINED AND PROTECTED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO ANY WORK. OWNER/CONTRACTOR SHALL CONFIRM THE APPLICABLE CONTACTS FOR EACH UTILITY, AND UTILITY USERS PRIOR TO CONSTRUCTION, AND ESTABLISH PROTOCOLS FOR PROMPT RESPONSE IN THE EVENT THAT ANY UTILITY SERVICES ARE AFFECTED OR DISTURBED. SUCH PROTOCOLS WILL BE REVIEWED BY THE TOWN'S PEER REVIEW ENGINEER AT THE REQUIRED PRE-CONSTRUCTION MEETING.
- PROPOSED SUBSURFACE WASTEWATER DISPOSAL SYSTEM WAS DESIGNED BY BRADY FRICK, ALBERT FRICK ASSOCIATES INC. (LICENSE NUMBER SE#332). CONTRACTOR TO COORDINATE WITH SEPTIC DESIGNER LISTED AND REVIEW SUBSURFACE WASTEWATER DISPOSAL SYSTEM DESIGN PLANS, DATED: 07/13/21.



**PROJECT PARCEL**  
TOWN OF KITTERY  
TAX MAP 28, LOT 14-2

**APPLICANT/OWNER**  
JD INVESTMENTS, LLC  
19 BUFFUM ROAD, UNIT 6  
NORTH BERWICK, ME 03906  
BK 18278, PG 577

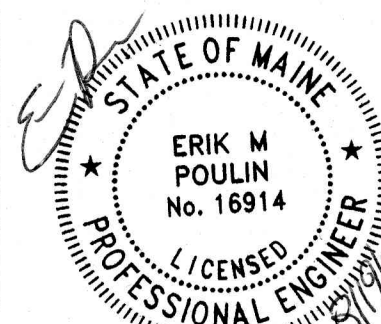
**TOTAL LOT AREA**  
60,402 SQ. FT.  
1.39 ACRES

**TAX MAP 28, LOT 14-2**

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Design: EMP    Draft: GDR    Date: 7/6/21  
Checked: WGM    Scale: AS SHOWN    Project No.: 21076  
Drawing Name: 21076-PLAN.dwg

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REV.	DATE	REVISION	BY
0	08/17/21	ISSUED FOR REVIEW	EMP

Designed and Produced in NH

**J/B Jones & Beach Engineers, Inc.**

Civil Engineering Services

85 Portsmouth Ave.    603-772-4746  
PO Box 219    Stratham, NH 03885    FAX: 603-772-0227  
E-Mail: JBE@JONESANDBEACH.COM

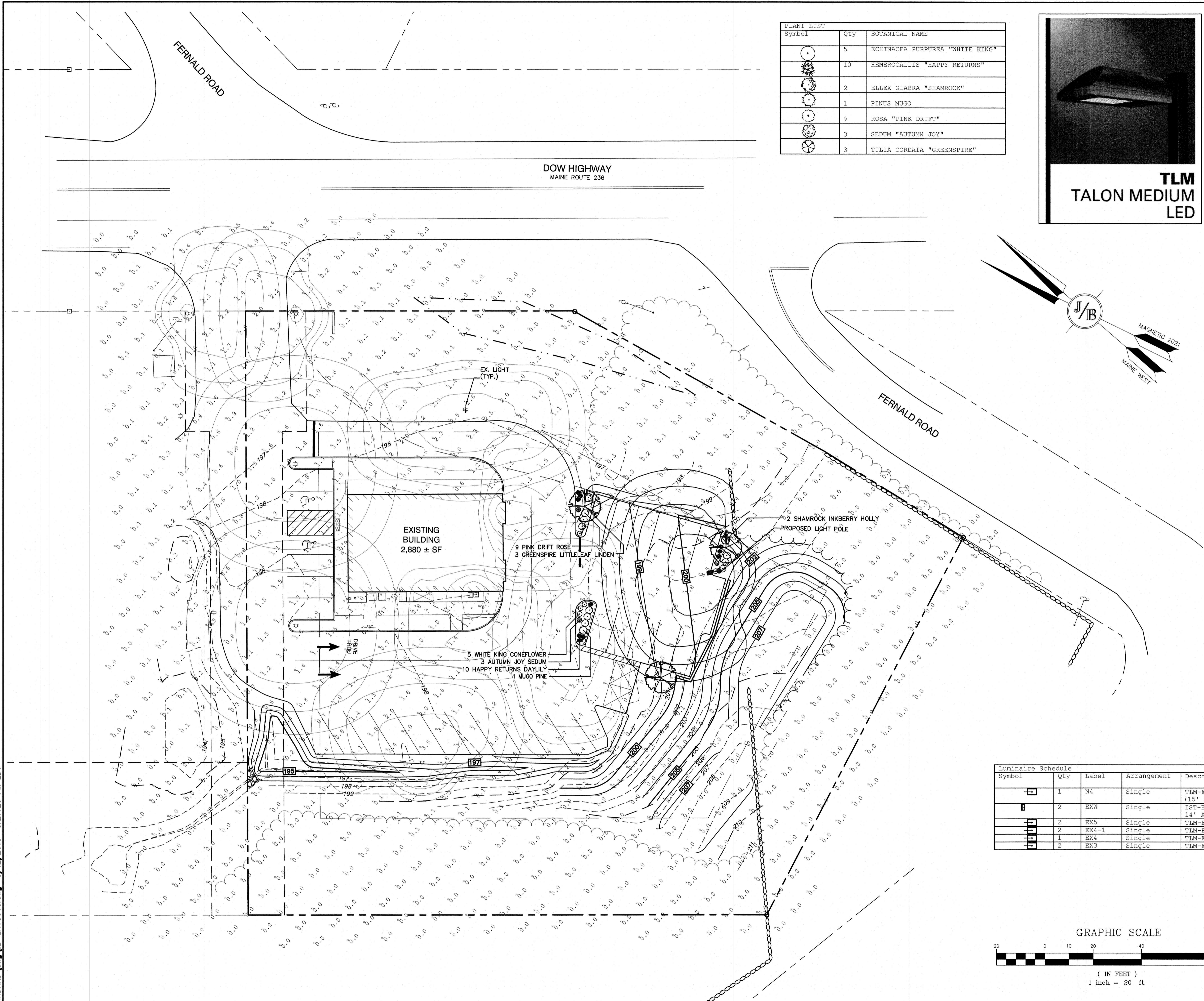
Plan Name: **SEPTIC OVERVIEW PLAN**

Project: **PARKING LOT EXPANSION  
89 ROUTE 236, KITTERY, MAINE**

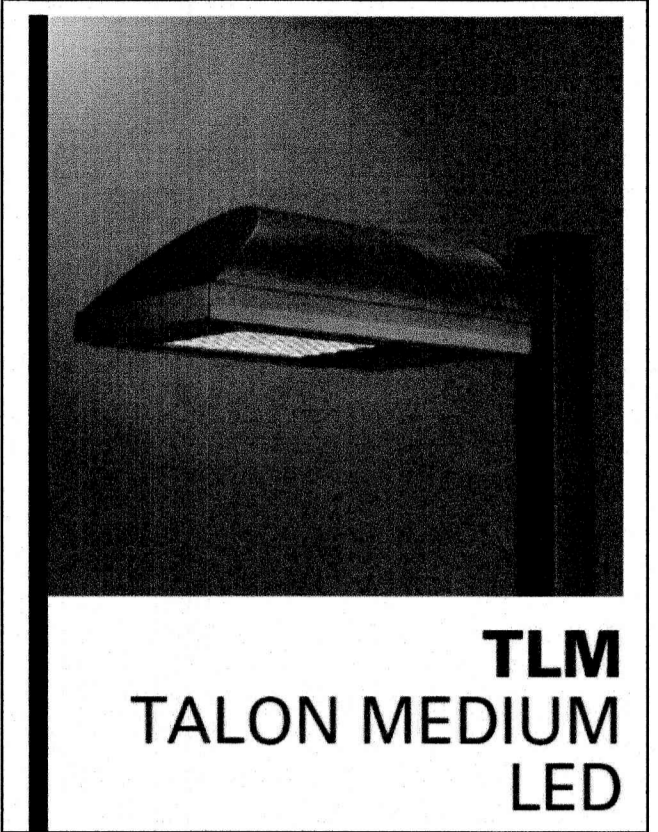
Owner of Record: **JD INVESTMENT, LLC NAME  
19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE**

DRAWING No. **C4**

SHEET 5 OF 9  
JBE PROJECT NO. 21076



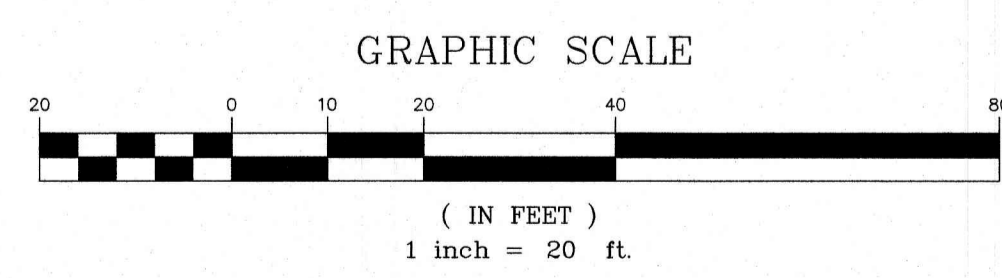
Symbol	Qty	BOTANICAL NAME
⊙	5	ECHINACEA PURPUREA "WHITE KING"
⊙	10	HEMEROCALLIS "HAPPY RETURNS"
⊙	2	ELLEX GLABRA "SHAMROCK"
⊙	1	FINUS MUGO
⊙	9	ROSA "PINK DRIFT"
⊙	3	SEDUM "AUTUMN JOY"
⊙	3	TILIA CORDATA "GREENSPIRE"



- LANDSCAPE NOTES:**
- THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
  - THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
  - ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN.
  - ALL PLANT SUBSTITUTIONS MUST BE APPROVED THE LANDSCAPE DESIGNER.
  - ALL PLANT MATERIALS SHALL BE EXACTLY AS SPECIFIED BY THE LANDSCAPE DESIGNER. IF PLANT SPECIES CULTIVARS ARE FOUND TO VARY FROM THAT SPECIFIED AT ANY TIME DURING THE GUARANTEE PERIOD, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO HAVE THE CONTRACTOR REPLACE THAT PLANT MATERIAL.
  - PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ON-GOING FOR CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
  - PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
  - NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE DESIGNER.
  - ALL WORK AND PLANTS SHALL BE DONE, INSTALLED AND DETAILED IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
  - ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
  - ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NOT LESS THAN ONE FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IF THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE LANDSCAPE DESIGNER IN WRITING OR OTHERWISE FORFEIT HIS CLAIM.
  - FINAL ACCEPTANCE BY THE LANDSCAPE DESIGNER WILL BE MADE UPON THE CONTRACTOR'S REQUEST AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.
  - BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING OR INADEQUATE OR IMPROPER CARE, OR THAT IS, IN THE OPINION OF THE LANDSCAPE DESIGNER, IN UNHEALTHY OR UNSIGHTLY CONDITION.
  - ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION, EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS SPECIFIED.
  - ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS WITH EDGE STRIPS TO SEPARATE TURF GRASS AREAS.
  - THE CONTRACTOR SHALL REMOVE WEEDS, ROCKS, CONSTRUCTION ITEMS, ETC. FROM ANY LANDSCAPE AREA SO DESIGNATED TO REMAIN, WHETHER ON OR OFF-SITE. GRASS SEED OR PINE BARK MULCH SHALL BE APPLIED AS DEPICTED ON PLANS.
  - FINISHED GRADES IN LANDSCAPED ISLANDS SHALL BE INSTALLED SO THAT THEY ARE 1" HIGHER THAN THE TOP OF THE SURROUNDING CURB.
  - ALL LANDSCAPING SHALL MEET THE TOWN STANDARDS AND REGULATIONS.
  - EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY SNOW FENCING AT THE DRIPLINE OF THE TREE. THE CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS WITHIN THE LANDSCAPED AREAS. ANY DAMAGE TO EXISTING TREES, SHRUBS OR LAWN SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
  - ALL MULCH AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH OVER A 10 MIL WEED MAT EQUAL TO "WEEDBLOCK" BY EASY GARDENER OR DEWITT WEED BARRIER.
  - ALL LANDSCAPED AREAS SHALL HAVE SELECT MATERIALS REMOVED TO A DEPTH OF AT LEAST 9" BELOW FINISH GRADE. THE RESULTING VOID IS TO BE FILLED WITH A MINIMUM OF 9" HIGH-QUALITY SCREENED LOAM AMENDED WITH 3" OF AGED ORGANIC COMPOST.
  - THIS PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO CIVIL/SITE DRAWINGS FOR OTHER SITE CONSTRUCTION INFORMATION.
  - IRRIGATION PIPING SYSTEM SHALL BE REVIEWED AND APPROVED BY OWNER AND ENGINEER PRIOR TO INSTALLATION.
  - ADDITIONAL PLANTING AND SEEDING MAY BE REQUIRED AS PART OF THE ON-SITE WETLANDS RESTORATION AND MITIGATION PACKAGE PREPARED BY WEST ENVIRONMENTAL. CONTRACTOR SHALL COORDINATE WITH PROJECT ENGINEER AND WETLAND CONSULTANT TO ENSURE THAT THESE ADDITIONAL REQUIREMENTS ARE PROPERLY ADDRESSED.
  - LANDSCAPE DESIGN PERFORMED BY LM LAND DESIGN LLC, 11 SOUTH ROAD, BRENTWOOD, NH 03833, ATTENTION: LISE MCNAUGHTON.

- LIGHTING AND ELECTRICAL NOTES:**
- SITE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
  - CONTRACTOR SHALL INSTALL PROPOSED LIGHT POLES ACCORDING TO TOWN REGULATIONS.
  - ALL OUTDOOR LIGHTING SYSTEMS SHALL BE EQUIPPED WITH TIMERS TO REDUCE ILLUMINATION LEVELS TO NON-OPERATIONAL VALUES PER TOWN REGULATIONS.
  - LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
  - ILLUMINATION READINGS SHOWN ARE BASED ON A TOTAL LLF OF 0.75 AT GRADE. ILLUMINATION READINGS SHOWN ARE IN UNITS OF FOOT-CANDLES.
  - LIGHTING CALCULATIONS SHOWN ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM AND SAFETY.
  - ALL LIGHTING FIXTURES SHALL BE FULL CUT-OFF DARK-SKY COMPLIANT, UNLESS OTHERWISE NOTED.
  - SEE SHEET D2 FOR LIGHTING DETAILS.
  - EXTEND A 480/277V, 3" DIAMETER SERVICE TO ROAD SIGN. INSTALL A 30A 3P NEMA 3R DISC. SWITCH (EACH LEG FUSED @ 20A). SIGN REQUIRES (3) 20A 277V CIRCUITS.
  - THE PROPOSED LIGHTING CALCULATIONS AND DESIGN WAS PERFORMED BY CHARRON, INC., P.O. BOX 4550, MANCHESTER, NH 03108, ATTENTION KEN SWEENEY. ALL LIGHTS SHOULD BE PURCHASED FROM THIS COMPANY, OR AN EQUAL LIGHTING DESIGN SHOULD BE SUBMITTED FOR REVIEW IF EQUAL SUBSTITUTIONS ARE PROPOSED BY THE CONTRACTOR OR OWNER.

Symbol	Qty	Label	Arrangement	Description	Luminaire Lumens	Luminaire Watts	Total Watts
⊙	1	N4	Single	TLM-E02-LED-E1-T4 / SSS4A15SFN1 (15' AFG)	6044	52.1	52.1
⊙	2	EXW	Single	IST-E01-LED-E1-BL4 / WALL MTD 14' AFG	2613	24.7	49.4
⊙	2	EX5	Single	TLM-E02-LED-E1-SWQ / 15' AFG	6367	52.1	104.2
⊙	2	EX4-1	Single	TLM-E01-LED-E1-T4 / 15' AFG	3022	24.7	49.4
⊙	1	EX4	Single	TLM-E02-LED-E1-T4 / 15' AFG	6044	52.1	52.1
⊙	2	EX3	Single	TLM-E02-LED-E1-T3 / 15' AFG	6168	52.1	104.2



**PROJECT PARCEL**  
TOWN OF KITTERY  
TAX MAP 28, LOT 14-2

**APPLICANT/OWNER**  
JD INVESTMENTS, LLC  
19 BUFFUM ROAD, UNIT 6  
NORTH BERWICK, ME 03906  
BK 18278, PG 577

**TOTAL LOT AREA**  
60,402 SQ. FT.  
1.39 ACRES

**TAX MAP 28, LOT 14-2**

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Design: EMP Draft: GDR Date: 7/6/21  
Checked: WGM Scale: AS SHOWN Project No.: 21076  
Drawing Name: 21076-PLAN.dwg  
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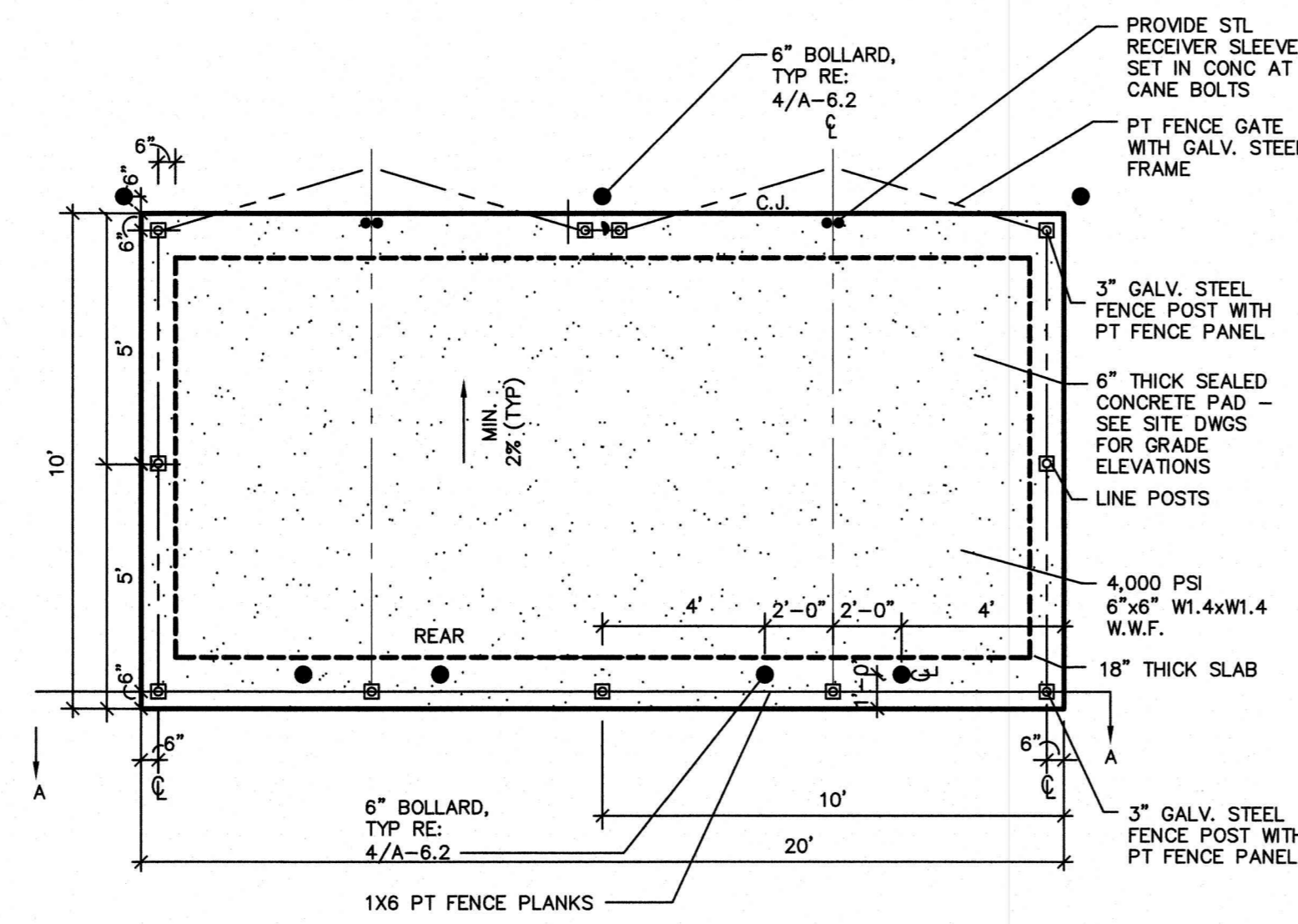
REV.	DATE	ISSUED FOR REVIEW	BY
0	08/17/21	ISSUED FOR REVIEW	EMP

**J/B Jones & Beach Engineers, Inc.**  
Civil Engineering Services  
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885  
603-772-4746 FAX: 603-772-0227 E-Mail: JBE@JONESANDBEACH.COM

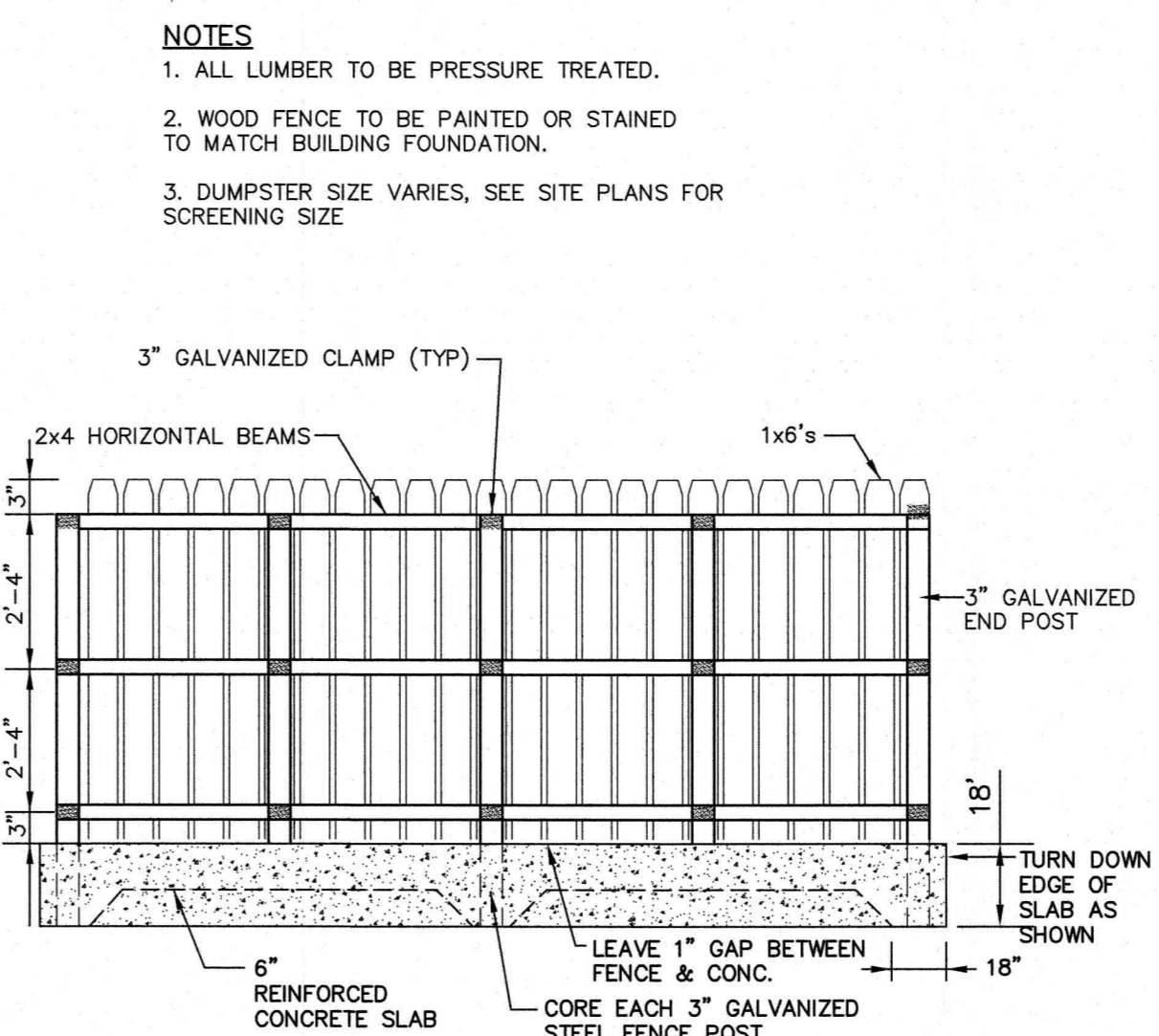
Plan Name: **LIGHTING AND LANDSCAPE PLAN**  
Project: **PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, MAINE**  
Owner of Record: **JD INVESTMENT, LLC NAME 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE**

DRAWING No. **L1**  
SHEET 6 OF 9  
JBE PROJECT NO. 21076



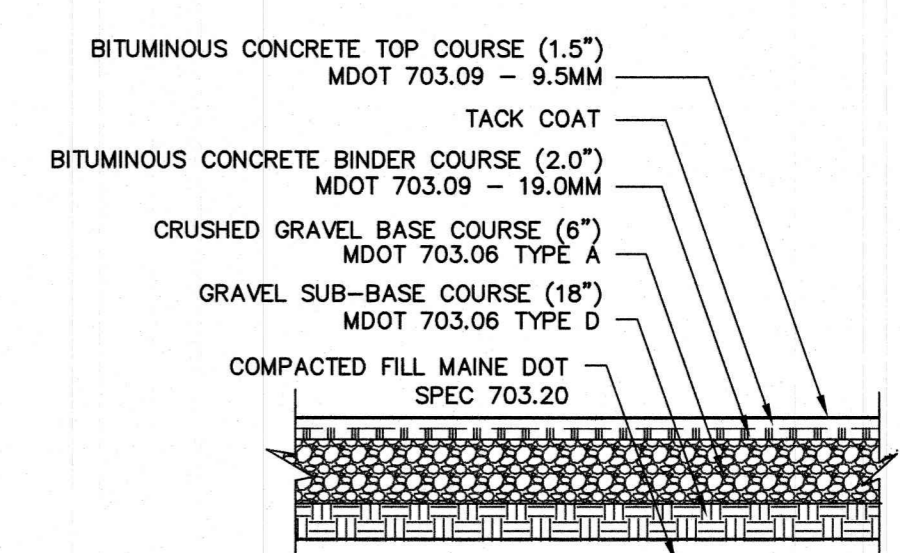


**DOUBLE DUMPSTER ENCLOSURE PLAN**  
NOT TO SCALE



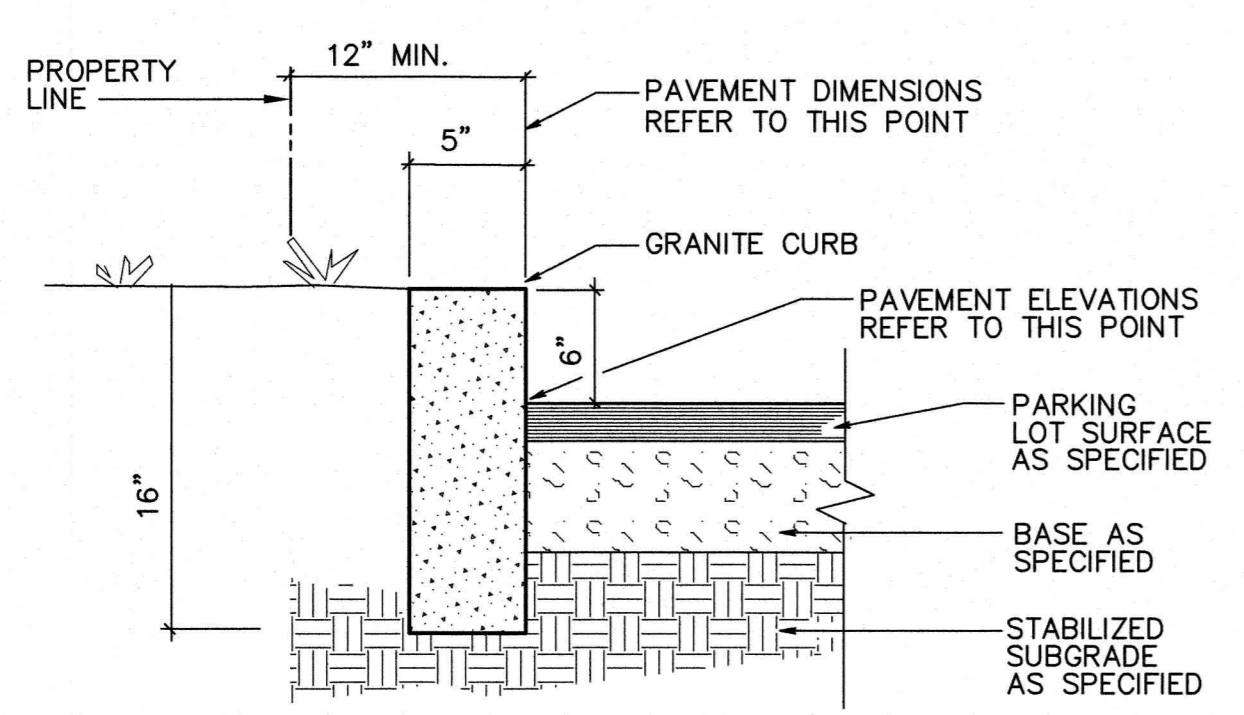
**SECTION A-A**

- NOTES**
1. ALL LUMBER TO BE PRESSURE TREATED.
  2. WOOD FENCE TO BE PAINTED OR STAINED TO MATCH BUILDING FOUNDATION.
  3. DUMPSTER SIZE VARIES, SEE SITE PLANS FOR SCREENING SIZE



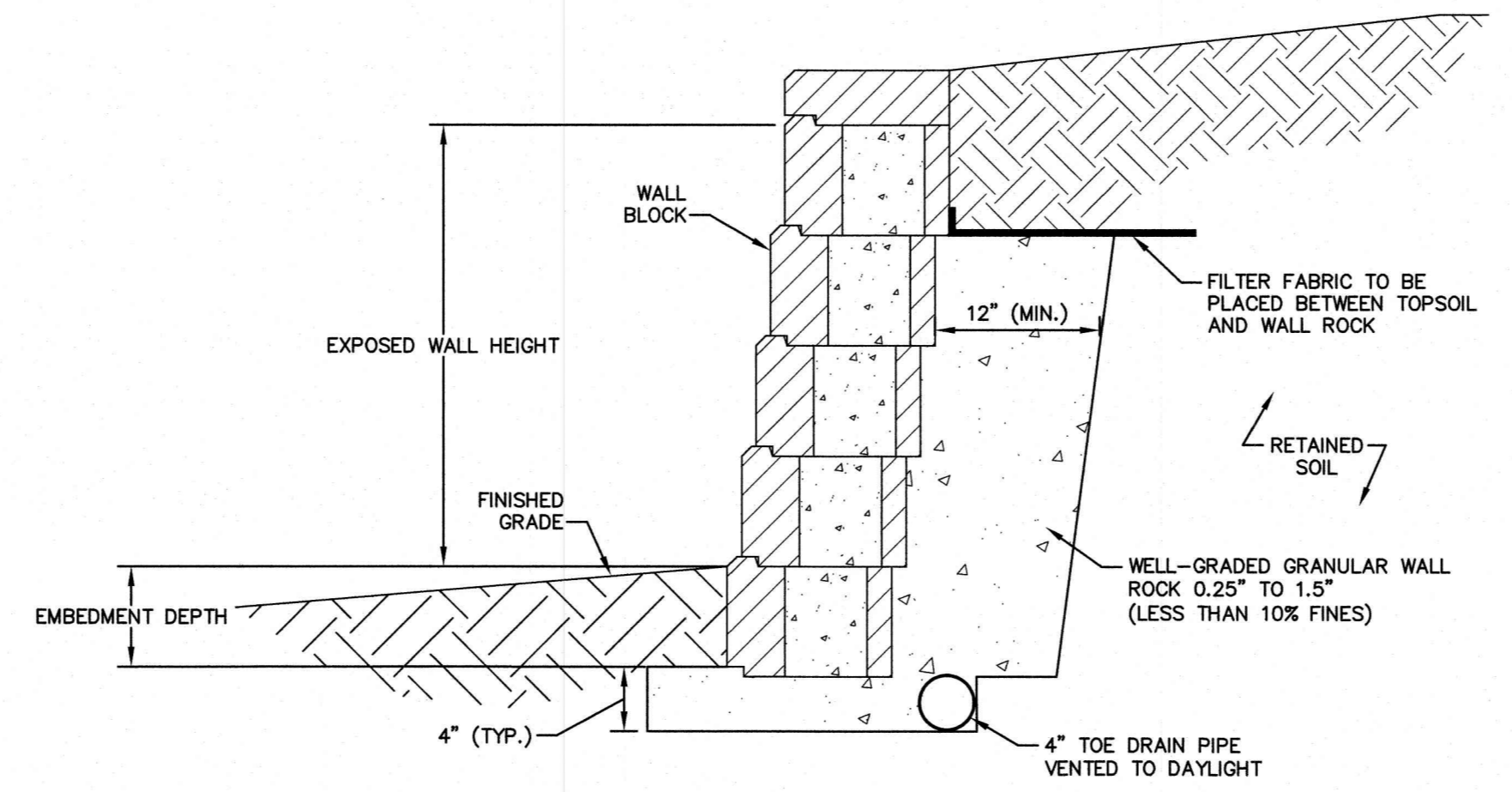
- NOTE:**
1. PAVEMENT SUBGRADES SHOULD BE PROOFROLLED IN ORDER TO DENSIFY THE SUBGRADES USING A MINIMUM OF 4 PASSES WITH A 10-TON VIBRATORY DRUM COMPACTOR. (SEE GEOTECH NOTE BELOW)
  2. THE GRAVEL BORROW SUB-BASE COURSE AND CRUSHED GRAVEL BASE COURSE SHALL BE COMPACTED TO A MINIMUM OF 98% RELATIVE COMPACTION OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557).
  3. HOT MIX ASPHALT PAVEMENT SHOULD BE COMPACTED TO 92 TO 97 PERCENT OF ITS THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D-2041.
  4. MDOT 703.06 TYPE D MAY CONTAIN 50% BY WEIGHT OF RECYCLED CONCRETE AGGREGATE. COMBINED MATERIAL MUST HAVE A MICRO-DEVAL VALUE OF LESS THAN 25% OR A WASHINGTON DEGRADATION VALUE OF 15 OR GREATER.

**STANDARD DUTY ASPHALT PAVEMENT SECTION**  
NOT TO SCALE

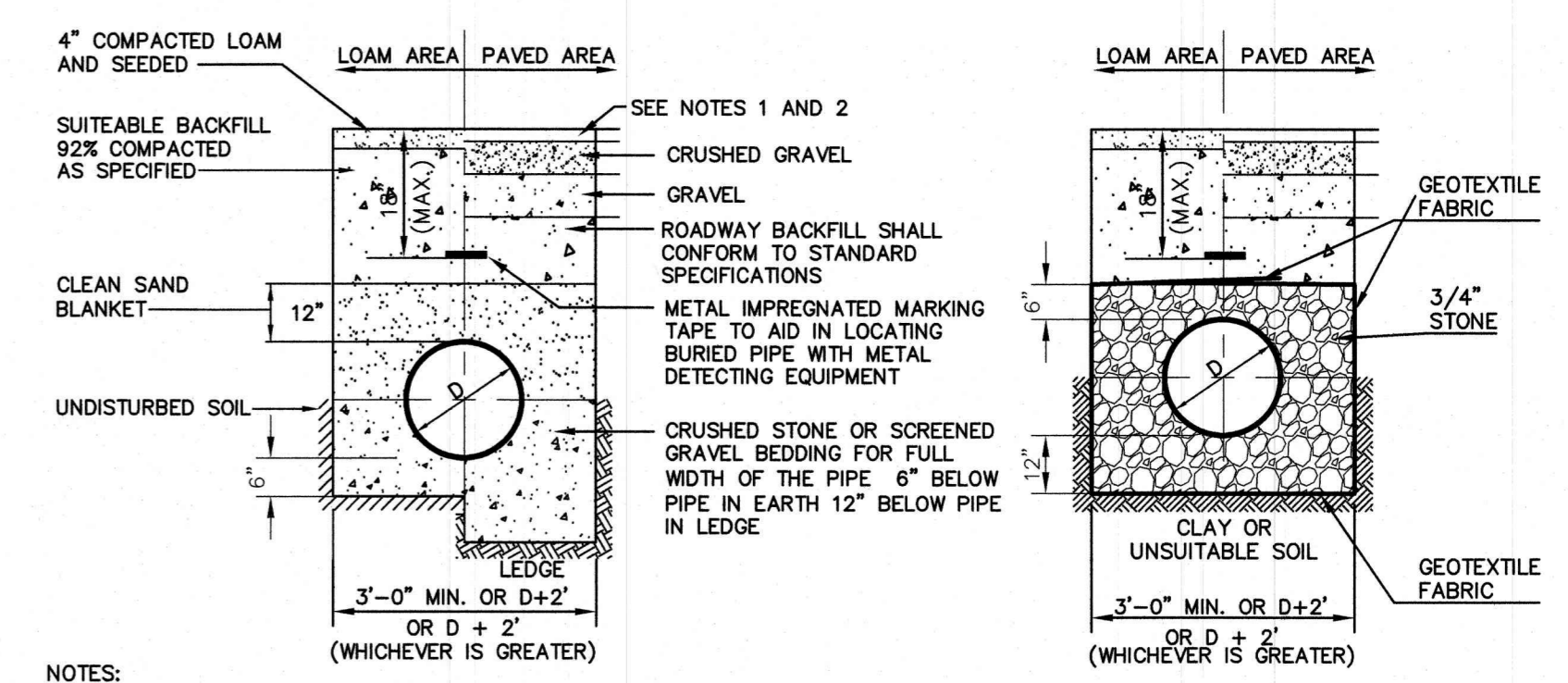


- NOTES:**
1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
  2. JOINTS BETWEEN STONES SHALL BE MORTARED.

**VERTICAL GRANITE CURB**  
NOT TO SCALE

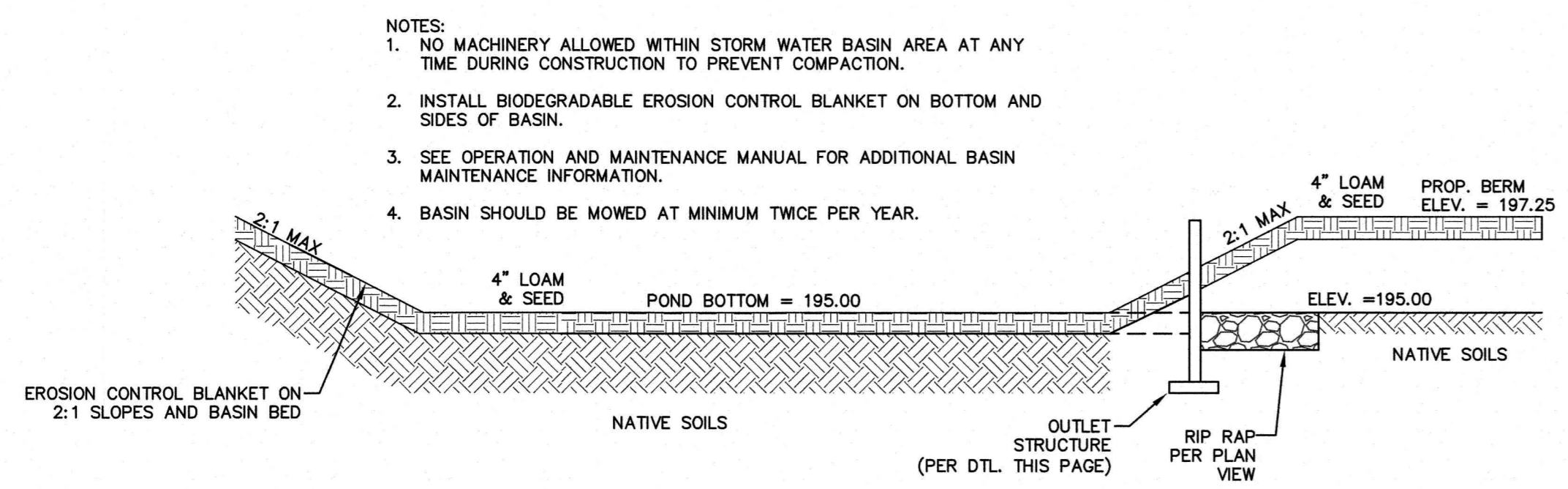


**TYPICAL GRAVITY WALL DETAIL**  
NOT TO SCALE

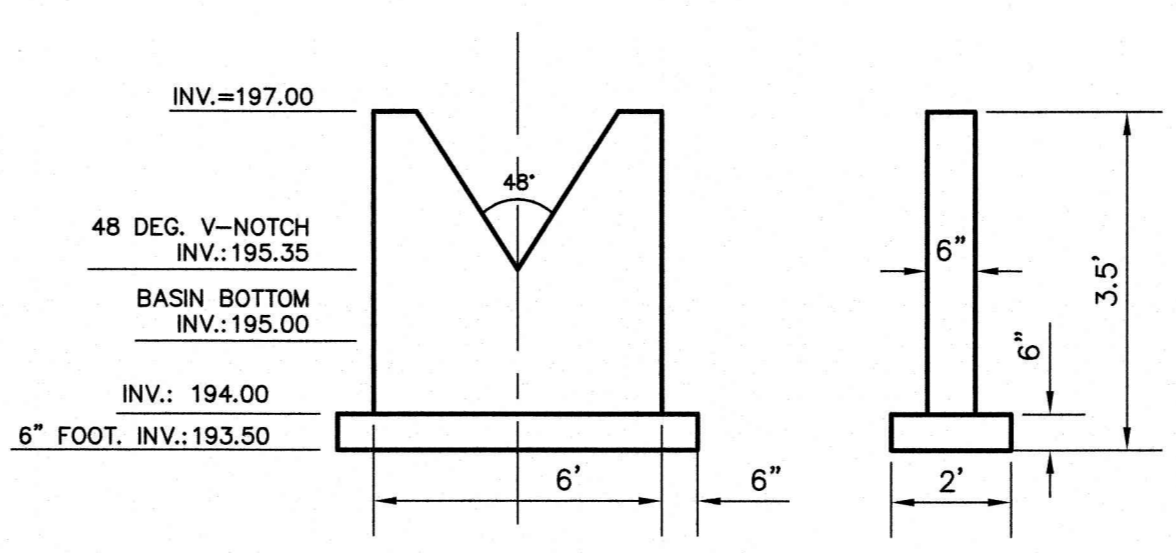


- NOTES:**
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
  2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
  3. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2" x 2" x 2" PIECE OF INSULATION OVER GAP.
  4. RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 5' AND CROSS COUNTRY IS LESS THAN 4'.
- NOTES:**  
IF CLAY OR UNSUITABLE IS PRESENT AT TRENCH BOTTOM:
1. OVER EXCAVATE 12" BELOW INVERT OF PIPE
  2. LAY GEOTEXTILE FABRIC IN BOTTOM OF EXCAVATION
  3. PLACE 3/4" STONE BETWEEN FABRIC AND PIPE
  4. LAY PIPE AT DESIRED SLOPE
  5. PLACE STONE OVER AND AROUND PIPE (MIN. 6")
  6. WRAP GEOTEXTILE AROUND STONE AS SHOWN

**SEWER TRENCH**  
NOT TO SCALE



**VEGETATED STORM WATER BASIN**  
NOT TO SCALE



- NOTES:**
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW AND APPROVAL.
  2. CONTRACTOR TO KEY ENDS OF OUTLET STRUCTURE INTO SIDE SLOPES.

**V-NOTCH OUTLET STRUCTURE**  
NOT TO SCALE

TAX MAP 28, LOT 14-2

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Design: EMP	Draft: GDR	Date: 7/8/21
Checked: WGM	Scale: AS NOTED	Project No.: 21076
Drawing Name: 21076-PLAN.dwg		
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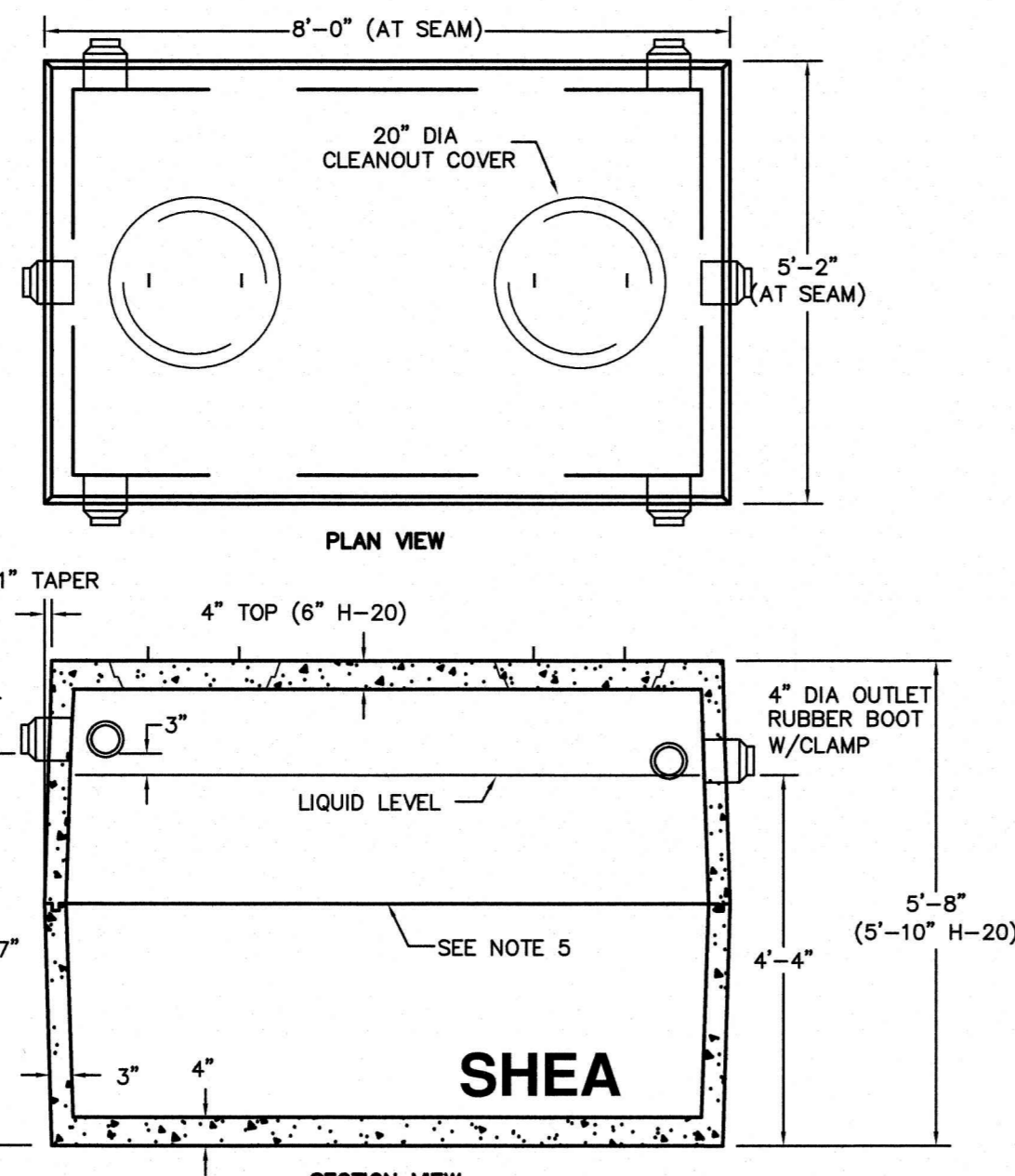
Plan Name:	<b>DETAIL SHEET</b>
Project:	<b>PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, MAINE</b>
Owner of Record:	JD INVESTMENT, LLC NAME 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE

DRAWING No.

D1

SHEET 7 OF 9  
JBE PROJECT NO. 21076

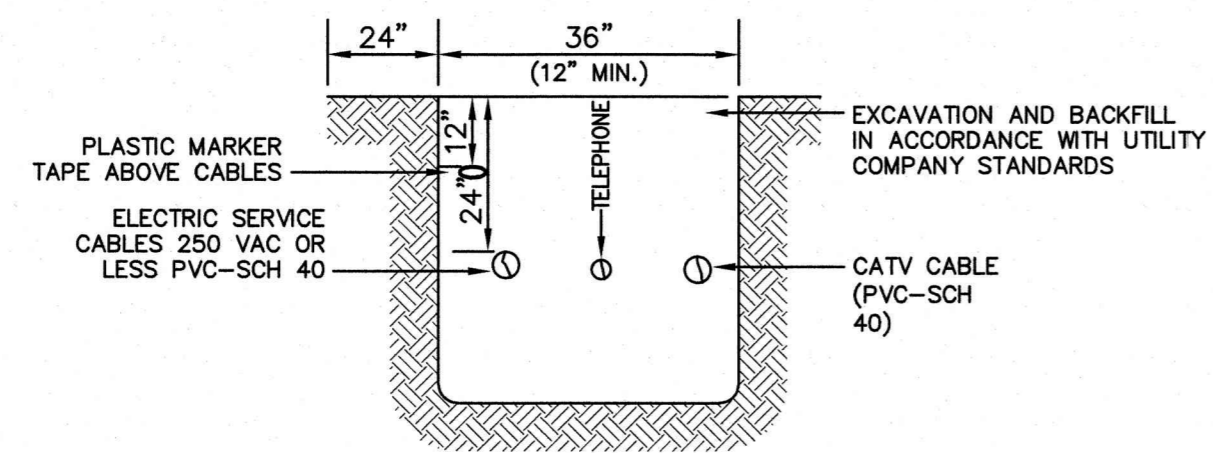
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- NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
  2. CONSTRUCTION OF SEPTIC TANK CONFORMS WITH DEP TITLE 5 REGS, 310 CMR, SECTION 15.226.
  3. ALL REINFORCEMENT PER ASTM C1227.
  4. TEES AND GAS BAFFLE SOLD SEPARATELY.
  5. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
  6. IF COVER EXCEEDS 4 FEET, HEAVY DUTY TANK REQUIRED. ALSO AVAILABLE IN AASHTO HS-20 LOADING.
  7. CONTRACTOR TO REVIEW SUBSURFACE WASTEWATER DISPOSAL SYSTEM DESIGN PLANS FOR ADDITIONAL SEPTIC INFORMATION (ALBERT FRICK ASSOCIATES INC.)

**1,000 GAL SEPTIC TANK**

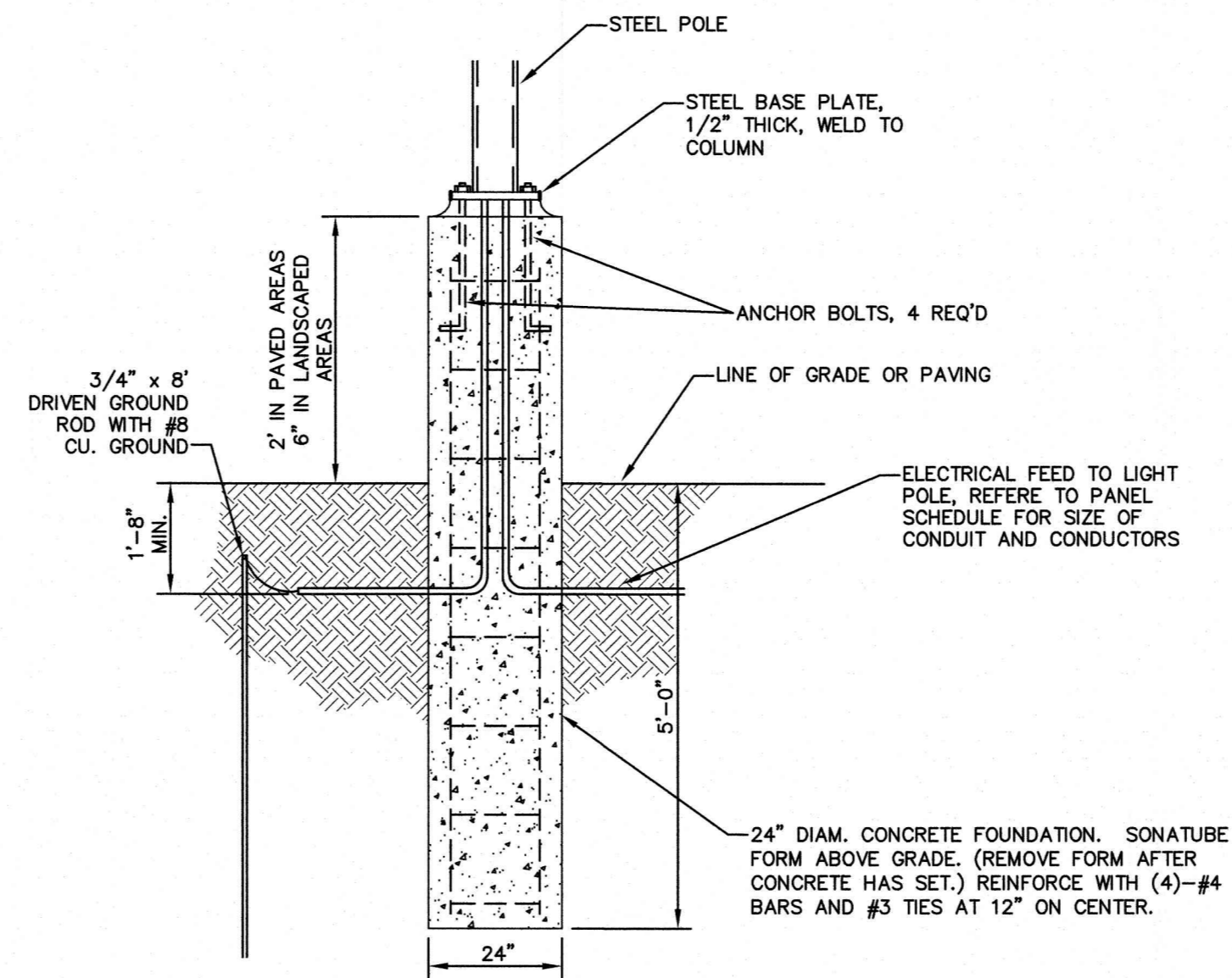
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NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

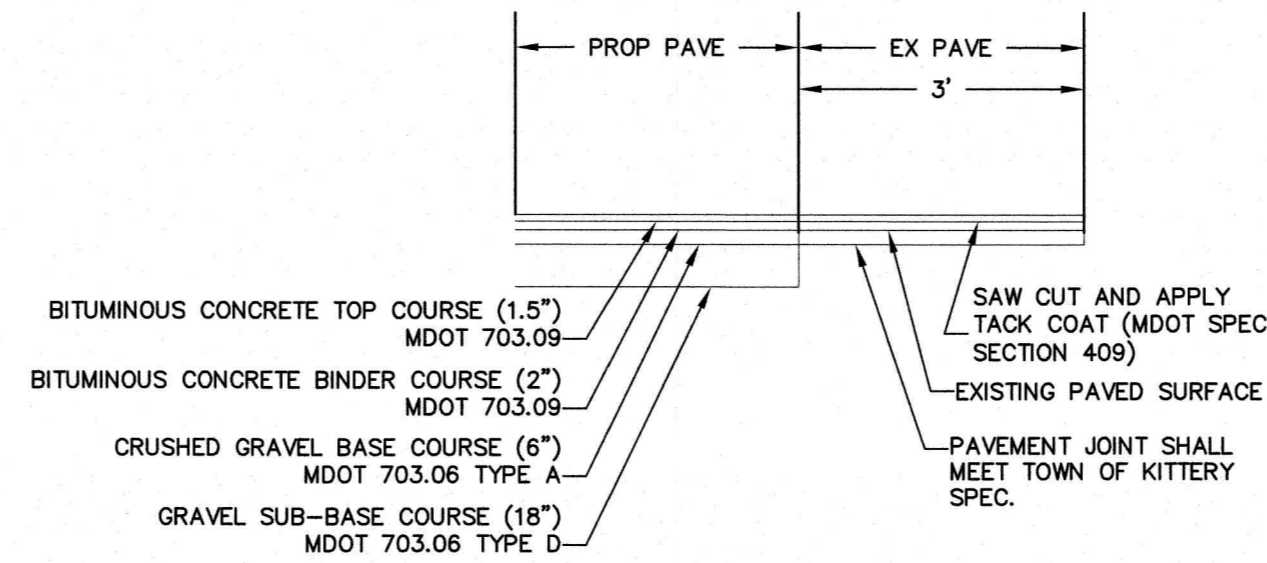
**UTILITY TRENCH**

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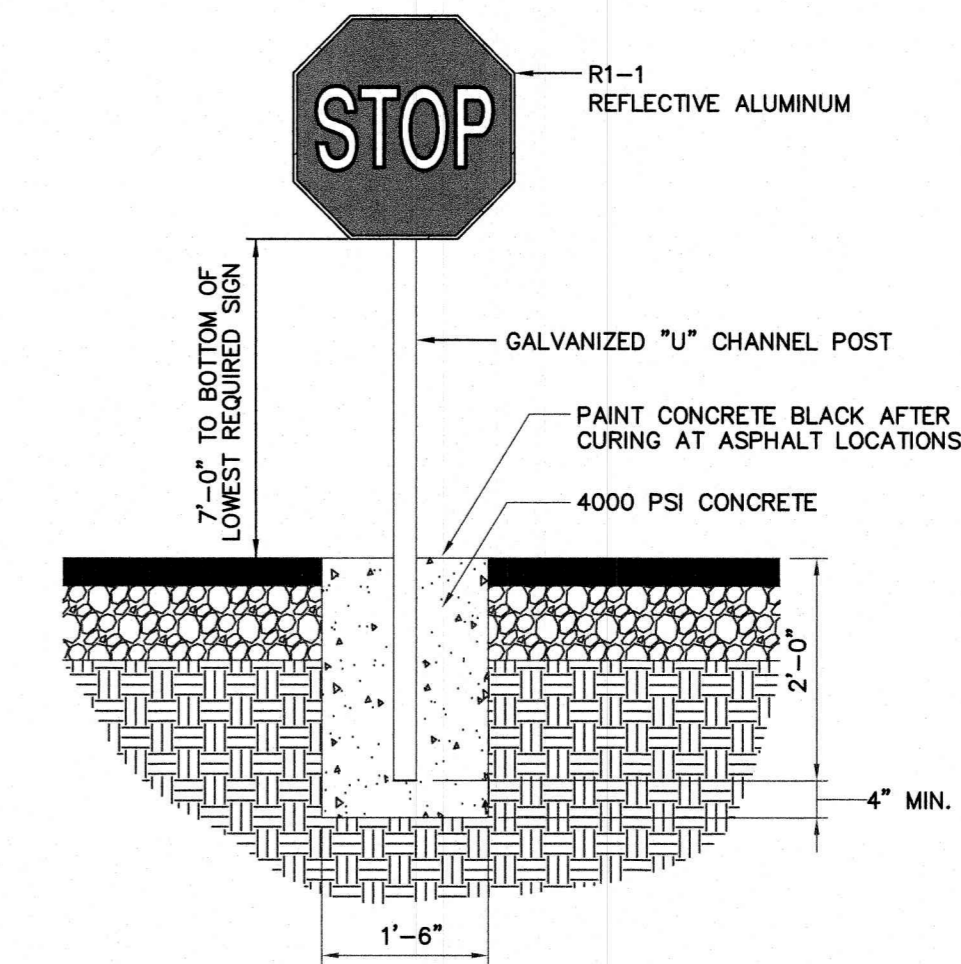
**LIGHT POLE BASE**

NOT TO SCALE



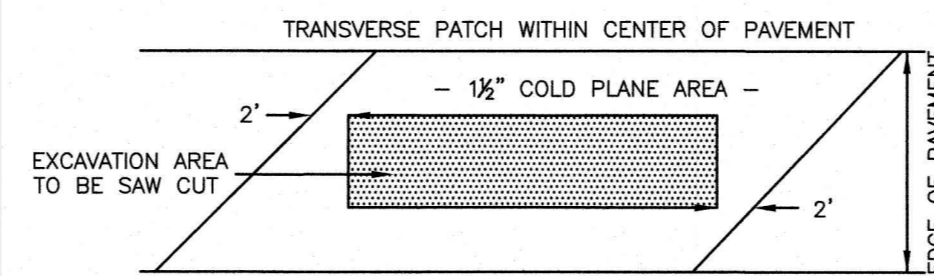
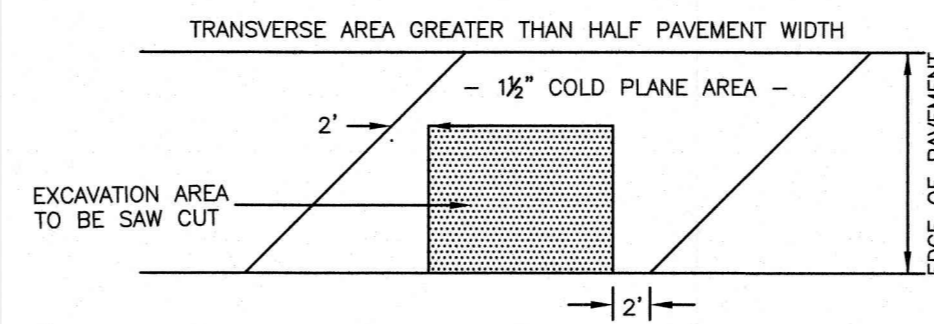
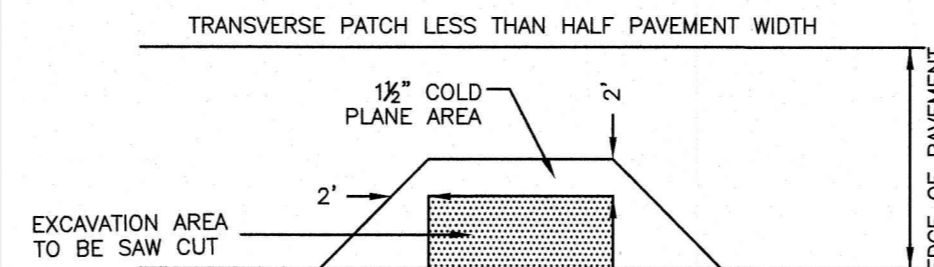
**TYPICAL PAVEMENT JOINT**

NOT TO SCALE



**STOP SIGN**

NOT TO SCALE



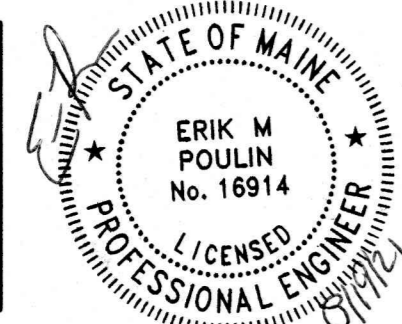
NOTE: WHERE LIMITS OF ADJACENT COLD PLANED AREAS ARE LESS THAN OR EQUAL TO 20', THE AREA BETWEEN SHALL BE COLD PLANED AND RESURFACED

**SAWCUT DETAIL**

NOT TO SCALE

TAX MAP 28, LOT 14-2

Design: EMP	Draft: GDR	Date: 7/6/21
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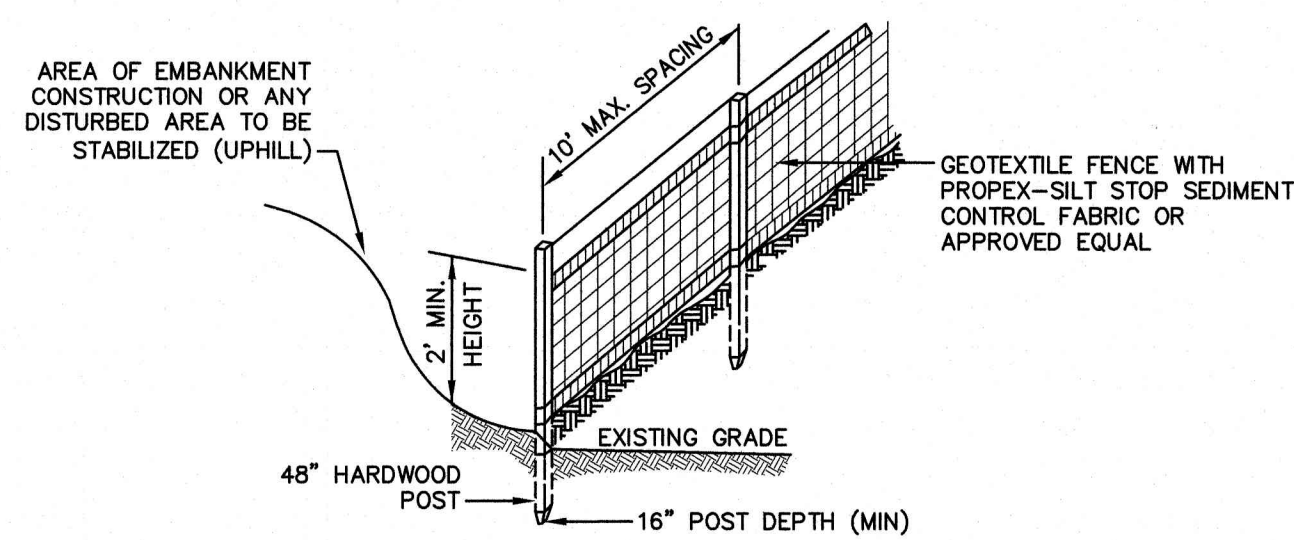
Plan Name:	<b>DETAIL SHEET</b>
Project:	PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, MAINE
Owner of Record:	JD INVESTMENT, LLC NAME 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE

DRAWING No.

D2

SHEET 8 OF 9  
JBE PROJECT NO. 21076

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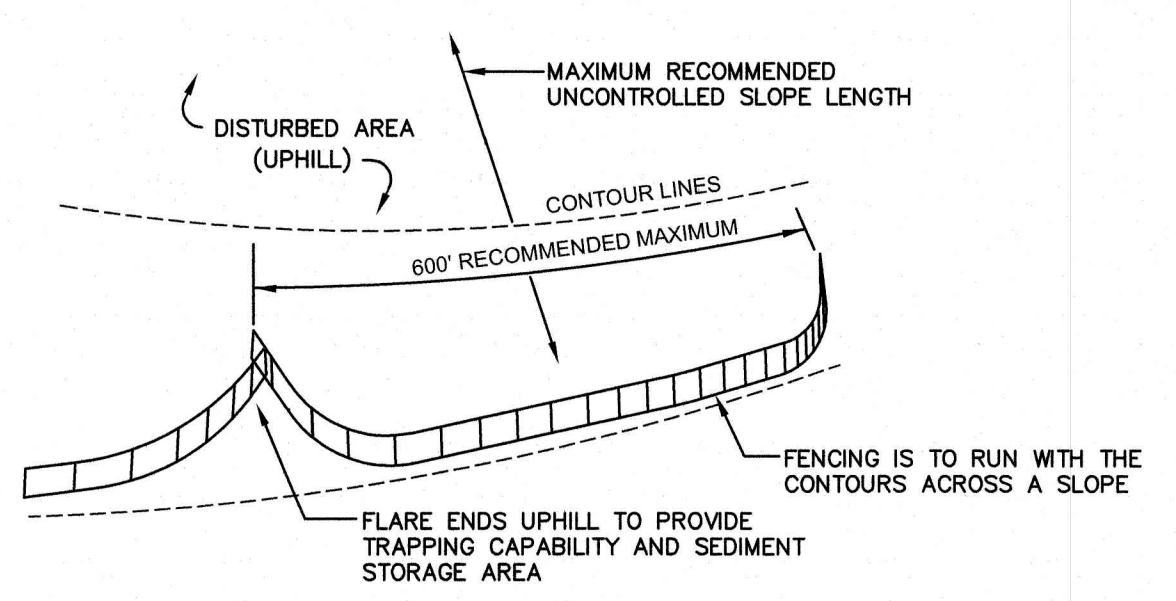


**CONSTRUCTION SPECIFICATIONS:**

- WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
- THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE.
- PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
- SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.

**SILT FENCE**

NOT TO SCALE



- SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

**MAINTENANCE:**

- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE DONE IMMEDIATELY.
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
- SEDIMENT DEPOSITS THAT ARE REMOVED, OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED, SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

**SEEDING SPECIFICATIONS**

- GRADING AND SHAPING**
  - SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
  - WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEEDBED PREPARATION**
  - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
  - STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
- ESTABLISHING A STAND**
  - LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES 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, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.  
 NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.  
 PHOSPHATE(P2O5), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.  
 POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.  
 (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
  - SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
  - REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDSFOOT, TREFLOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
  - WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
- MULCH**
  - HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
  - MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
- MAINTENANCE TO ESTABLISH A STAND**
  - PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
  - FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
  - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED		POORLY DRAINED
				GOOD	EXCELLENT	
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR	FAIR
	B	POOR	GOOD	FAIR	FAIR	GOOD
	C	POOR	GOOD	EXCELLENT	EXCELLENT	POOR
	D	FAIR	EXCELLENT	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	EXCELLENT	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR	FAIR
	B	GOOD	GOOD	EXCELLENT	EXCELLENT	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	EXCELLENT	2/
	F	FAIR	EXCELLENT	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.  
 1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.  
 2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

**SEEDING GUIDE**

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFLOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/2	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

**SEEDING RATES**

**TEMPORARY EROSION CONTROL NOTES**

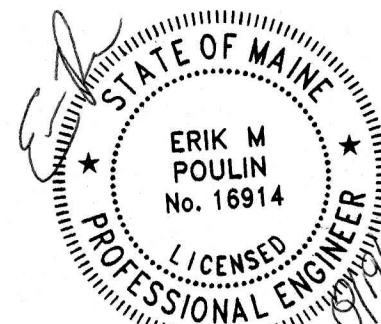
- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
- EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
- ALL DISTURBED AREAS SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
- SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.25" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
- AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. 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.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER NOVEMBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
  - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
  - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
  - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION.

**CONSTRUCTION SEQUENCE**

- A PRE-CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
- CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
- INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
- CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
- CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
- STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
- PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS.
- INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
- ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
- STORMWATER FLOWS ARE NOT TO BE DIRECTED TO TREATMENT PRACTICES UNTIL ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
- PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
- PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
- PERFORM ALL REMAINING SITE CONSTRUCTION (I.E. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
- LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (I.E. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
- FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
- ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
- CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
- INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
- ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY QUARTER-INCH OF RAINFALL.
- UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

TAX MAP 28, LOT 14-2

Design: EMP Draft: GDR Date: 7/6/21  
 Checked: WGM Scale: AS NOTED Project No.: 21076  
 Drawing Name: 21076-PLAN.dwg  
 THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



REV.	DATE	REVISION	BY
0	08/17/21	ISSUED FOR REVIEW	EMP

Designed and Produced in NH

**J/B Jones & Beach Engineers, Inc.**

Civil Engineering Services

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Plan Name: **EROSION AND SEDIMENT CONTROL DETAILS**

Project: **PARKING LOT EXPANSION  
 89 ROUTE 236, KITTEERY, MAINE**

Owner of Record: **JD INVESTMENT, LLC NAME  
 19 BUFFUM RD, UNIT 6, NORTH BERWICK, MAINE**

DRAWING No. **E1**

SHEET 9 OF 9  
 JBE PROJECT NO. 21076

# JONES & BEACH ENGINEERS INC.

## DRAINAGE ANALYSIS

## EROSION AND SEDIMENT CONTROL PLAN

**Parking Lot Expansion  
Tax Map 28, Lot 14-2  
89 Route 236  
Kittery, ME 03904**

**Prepared for:**

**JD Investments, LLC  
19 Buffum Road  
North Berwick, ME 03906**



**Prepared by:  
Jones & Beach Engineers, Inc.  
85 Portsmouth Avenue  
P.O. Box 219  
Stratham, NH 03885  
(603) 772-4746  
August 19, 2021  
JBE Project No. 21076**

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## 1. EXECUTIVE SUMMARY

This project proposes to construct a 11-space parking lot expansion in the Town of Kittery Tax Map 28, Lot 14-2. Two models were compiled, one for the area in its existing (pre-development) condition, and a second for its proposed (post-development) condition. The analysis was conducted using the USDA SCS TR-20 method within the HydroCAD Stormwater Modeling System environment. A summary of the existing and proposed conditions peak rates of runoff is as follows:

<b>PEAK RATE OF RUNOFF (CUBIC FEET/SECOND)</b>						
<b>Analysis Point</b>	<b>2-Year</b>		<b>10-Year</b>		<b>25-Year</b>	
	<b>Pre</b>	<b>Post</b>	<b>Pre</b>	<b>Post</b>	<b>Pre</b>	<b>Post</b>
AP #1	1.33	1.32	2.68	2.68	3.79	3.79
AP #2	1.54	1.44	2.60	2.49	3.09	2.95
Total	2.87	2.76	5.28	5.17	6.88	6.74

The drainage design intent for this site is to maintain the post-development peak flow to the pre-development peak flow conditions to the extent practicable and to effectively treat stormwater from the development of this project. This has been accomplished through the use of one (1) vegetative stormwater basin to maintain the peak discharge, and treat and infiltrate stormwater. Both analysis points drain to an existing wetland system to the Southwest of the property shortly after leaving the property. Due to this, the analysis point runoff totals have been included for review.

In addition, the potential for increased erosion and sedimentation is handled by way of erosion control blankets, vegetated swales, and riprap inlet and outlet protection aprons. Existing wetlands and abutting property owners will suffer minimal impact resultant from this development.

## **2. DRAINAGE ANALYSIS**

### **2.1 INTRODUCTION**

This project proposes to construct a 11-space parking lot expansion in the Town of Kittery Tax Map 28, Lot 14-2.

### **2.2 METHODOLOGY**

The existing and proposed watersheds were modeled utilizing HydroCad stormwater software, version 9.10. The watersheds were analyzed utilizing the SCS TR-20 methodology for hydrograph development and the TR-55 methodology for Time of Concentration (Tc) determination. The Dynamic-Storage-Indicating method for reach and pond routing was utilized. Type III, 24-hour hydrographs were developed for the 2-year, 10-year, and 25-year corresponding to rainfall events of 3.21", 4.07" 6.17", respectively.

Existing topography and site features were obtained through on-ground topography completed by Jones & Beach Engineers. Existing soil conditions were derived from NRCS Web Soil Survey and a soil survey conducted by JRK Soil Search Inc.

### **2.3 EXISTING CONDITIONS ANALYSIS**

The study area consists of the subject property and upstream contributing area. The study area consists of 2.362± acres including offsite contributing areas. The existing site is currently developed and primarily covered by an existing retail building with associated parking, drive lanes, and drainage. The remaining area to the rear is wooded terrain and some grass lands. The site drains to two locations. The front of the property drains North towards Route 236 into an existing culvert under the existing driveway. The remaining property drains West to the existing drainage basin on site. Both analysis points eventually drain into the Spinney Creek.

Soils on site are described as entirely Hydrological Soils "C".

Two (2) Analysis Points (AP) were defined for this project. Analysis Points are described as below:

Analysis Point #1 is the outfall point for the existing drainage basin to the rear of the property. This analysis point receives runoff from the rear half of the existing development, abutting properties, and woodland/grassland areas on site. This stormwater drains towards the drainage basin and discharges to the analysis point.

Analysis Point #2 is an existing culvert under the site driveway along Route 236. This analysis point receives runoff from the front half of the existing development, abutting properties, and woodland/grassland areas on site. This stormwater drains North though the property to an existing wetland system and then to the inlet of the existing culvert.

## 2.4 PROPOSED CONDITIONS ANALYSIS

This project proposes to construct a 11-space parking lot expansion in the Town of Kittery Tax Map 28, Lot 14-2.

The addition of the proposed impervious paved areas and buildings causes an increase in the curve number ( $C_n$ ) and a decrease in the time of concentration ( $T_c$ ), the net result being a potential increase in peak rates of runoff from the site. To mitigate the potential increase in the peak rate of runoff the following drainage systems have been employed at the Analysis Points as follows:

Analysis Point #1 is the outfall point for the existing drainage basin to the rear of the property. This analysis point receives runoff from the rear half of the existing development, the proposed parking lot expansion, abutting properties, and woodland/grassland areas on site. The proposed parking lot is graded to enter the existing drainage basin on the East end of the basin via a small swale. Stormwater drains towards the drainage basin and discharges to the analysis point.

Analysis Point #2 is an existing culvert under the site driveway along Route 236. This analysis point receives runoff from the front half of the existing development, abutting properties, and woodland/grassland areas on site. The grading of the proposed parking lot causes the watershed contributing to this analysis point to be reduced. This stormwater drains North through the property to an existing wetland system and then to the inlet of the existing culvert.

## 2.5 CONCLUSION

The proposed site development will have minimal adverse effect on abutting infrastructures or properties by way of stormwater runoff or siltation if properly constructed in accordance with this Drainage Analysis and approved project plan set. The post-construction peak rates of runoff for the site will be lower than the existing conditions for all analyzed storm events. Appropriate steps will be taken to control erosion and sedimentation; these will be accomplished through the construction of a drainage system consisting of site grading, jute matting, swales, drainage basin, and riprap outlet protection aprons.

Respectfully Submitted,  
**JONES & BEACH ENGINEERS, INC.**



Erik Poulin, P.E.  
Project Manager



# Extreme Precipitation Tables

## Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

<b>Smoothing</b>	Yes
<b>State</b>	New Hampshire
<b>Location</b>	
<b>Longitude</b>	70.763 degrees West
<b>Latitude</b>	43.072 degrees North
<b>Elevation</b>	0 feet
<b>Date/Time</b>	Mon, 16 Aug 2021 15:29:41 -0400

## Extreme Precipitation Estimates

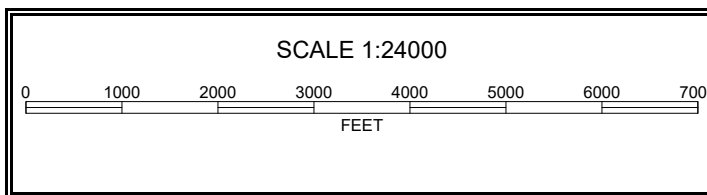
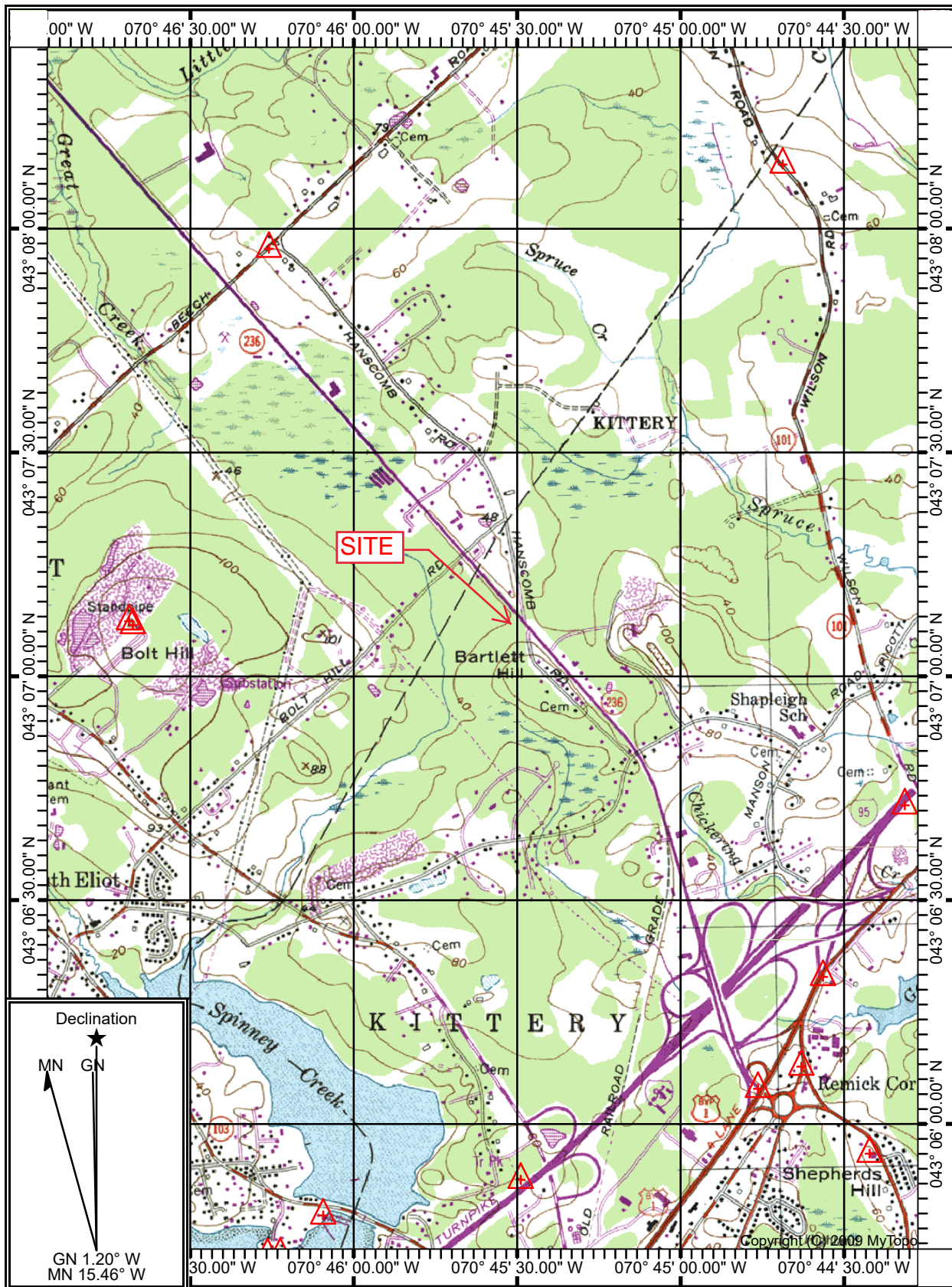
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.26	0.40	0.50	0.65	0.81	1.04	<b>1yr</b>	0.70	0.98	1.21	1.56	2.03	2.66	2.92	<b>1yr</b>	2.35	2.81	3.22	3.94	4.55	<b>1yr</b>
<b>2yr</b>	0.32	0.50	0.62	0.81	1.02	1.30	<b>2yr</b>	0.88	1.18	1.52	1.94	2.49	3.21	3.57	<b>2yr</b>	2.84	3.43	3.94	4.68	5.33	<b>2yr</b>
<b>5yr</b>	0.37	0.58	0.73	0.98	1.25	1.61	<b>5yr</b>	1.08	1.47	1.89	2.43	3.14	4.07	4.58	<b>5yr</b>	3.60	4.40	5.04	5.94	6.70	<b>5yr</b>
<b>10yr</b>	0.41	0.65	0.82	1.12	1.45	1.89	<b>10yr</b>	1.25	1.73	2.23	2.89	3.75	4.87	5.53	<b>10yr</b>	4.31	5.32	6.09	7.11	7.98	<b>10yr</b>
<b>25yr</b>	0.48	0.76	0.97	1.34	1.77	2.34	<b>25yr</b>	1.53	2.14	2.78	3.63	4.74	6.17	7.10	<b>25yr</b>	5.46	6.83	7.80	9.03	10.05	<b>25yr</b>
<b>50yr</b>	0.54	0.86	1.10	1.54	2.07	2.76	<b>50yr</b>	1.79	2.53	3.29	4.32	5.66	7.39	8.58	<b>50yr</b>	6.54	8.25	9.42	10.81	11.98	<b>50yr</b>
<b>100yr</b>	0.60	0.97	1.25	1.77	2.42	3.26	<b>100yr</b>	2.09	2.98	3.90	5.16	6.77	8.85	10.38	<b>100yr</b>	7.83	9.98	11.38	12.96	14.27	<b>100yr</b>
<b>200yr</b>	0.67	1.10	1.43	2.05	2.82	3.83	<b>200yr</b>	2.44	3.52	4.62	6.13	8.08	10.61	12.55	<b>200yr</b>	9.39	12.07	13.76	15.55	17.02	<b>200yr</b>
<b>500yr</b>	0.80	1.31	1.71	2.48	3.48	4.76	<b>500yr</b>	3.00	4.38	5.76	7.70	10.22	13.48	16.14	<b>500yr</b>	11.93	15.52	17.67	19.78	21.49	<b>500yr</b>

## Lower Confidence Limits

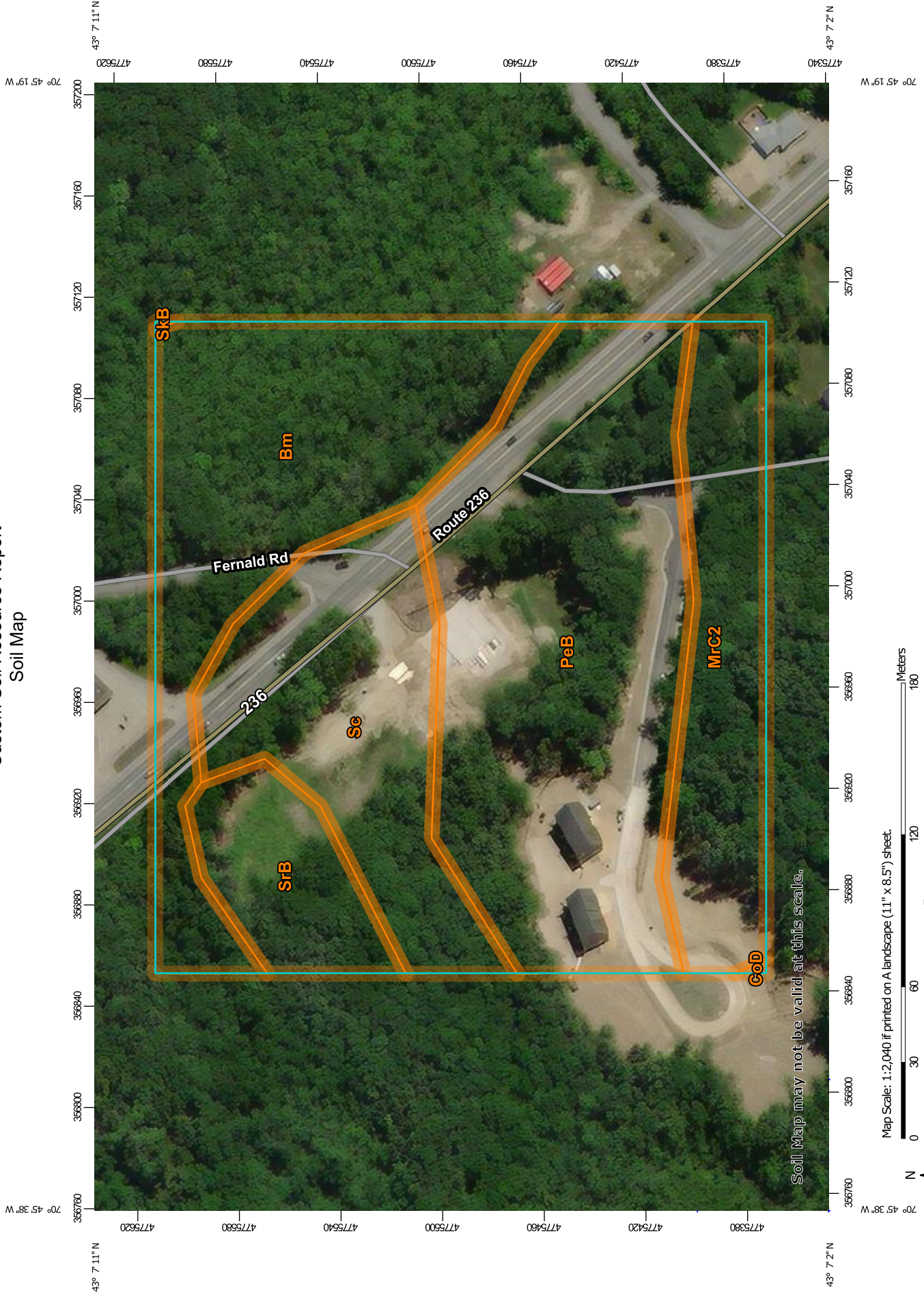
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.23	0.36	0.44	0.59	0.72	0.88	<b>1yr</b>	0.63	0.86	0.92	1.33	1.68	2.24	2.49	<b>1yr</b>	1.98	2.40	2.87	3.18	3.90	<b>1yr</b>
<b>2yr</b>	0.31	0.49	0.60	0.81	1.00	1.19	<b>2yr</b>	0.86	1.16	1.37	1.82	2.34	3.06	3.45	<b>2yr</b>	2.71	3.32	3.82	4.55	5.08	<b>2yr</b>
<b>5yr</b>	0.35	0.54	0.67	0.92	1.17	1.40	<b>5yr</b>	1.01	1.37	1.61	2.12	2.73	3.79	4.19	<b>5yr</b>	3.35	4.03	4.72	5.53	6.24	<b>5yr</b>
<b>10yr</b>	0.39	0.59	0.73	1.03	1.33	1.60	<b>10yr</b>	1.14	1.56	1.80	2.39	3.06	4.37	4.86	<b>10yr</b>	3.87	4.67	5.44	6.41	7.20	<b>10yr</b>
<b>25yr</b>	0.44	0.67	0.83	1.19	1.56	1.90	<b>25yr</b>	1.35	1.86	2.10	2.75	3.53	4.72	5.89	<b>25yr</b>	4.18	5.66	6.65	7.79	8.68	<b>25yr</b>
<b>50yr</b>	0.48	0.73	0.91	1.31	1.76	2.17	<b>50yr</b>	1.52	2.12	2.35	3.07	3.93	5.33	6.80	<b>50yr</b>	4.72	6.54	7.72	9.04	10.02	<b>50yr</b>
<b>100yr</b>	0.54	0.81	1.01	1.47	2.01	2.47	<b>100yr</b>	1.73	2.41	2.63	3.41	4.35	6.00	7.85	<b>100yr</b>	5.31	7.55	8.98	10.51	11.56	<b>100yr</b>
<b>200yr</b>	0.59	0.89	1.13	1.63	2.28	2.81	<b>200yr</b>	1.96	2.75	2.93	3.78	4.79	6.72	9.06	<b>200yr</b>	5.95	8.71	10.42	12.22	13.37	<b>200yr</b>
<b>500yr</b>	0.68	1.02	1.31	1.90	2.71	3.36	<b>500yr</b>	2.34	3.29	3.41	4.31	5.45	7.82	10.94	<b>500yr</b>	6.92	10.52	12.69	14.96	16.19	<b>500yr</b>

## Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.28	0.44	0.54	0.72	0.89	1.08	<b>1yr</b>	0.77	1.06	1.26	1.74	2.21	2.98	3.16	<b>1yr</b>	2.64	3.04	3.58	4.37	5.04	<b>1yr</b>
<b>2yr</b>	0.34	0.52	0.64	0.86	1.07	1.27	<b>2yr</b>	0.92	1.24	1.48	1.96	2.51	3.42	3.70	<b>2yr</b>	3.03	3.56	4.09	4.84	5.63	<b>2yr</b>
<b>5yr</b>	0.40	0.62	0.77	1.05	1.34	1.62	<b>5yr</b>	1.15	1.58	1.88	2.53	3.25	4.34	4.96	<b>5yr</b>	3.84	4.77	5.38	6.37	7.16	<b>5yr</b>
<b>10yr</b>	0.47	0.72	0.89	1.25	1.61	1.98	<b>10yr</b>	1.39	1.93	2.28	3.11	3.95	5.34	6.20	<b>10yr</b>	4.72	5.96	6.82	7.84	8.75	<b>10yr</b>
<b>25yr</b>	0.58	0.88	1.09	1.56	2.05	2.57	<b>25yr</b>	1.77	2.51	2.95	4.07	5.15	7.78	8.34	<b>25yr</b>	6.88	8.02	9.15	10.34	11.41	<b>25yr</b>
<b>50yr</b>	0.67	1.02	1.27	1.83	2.46	3.13	<b>50yr</b>	2.12	3.06	3.60	5.00	6.32	9.74	10.46	<b>50yr</b>	8.62	10.06	11.44	12.72	13.96	<b>50yr</b>
<b>100yr</b>	0.79	1.19	1.49	2.16	2.96	3.81	<b>100yr</b>	2.55	3.72	4.37	6.16	7.76	12.18	13.10	<b>100yr</b>	10.78	12.60	14.31	15.69	17.09	<b>100yr</b>
<b>200yr</b>	0.92	1.39	1.76	2.55	3.56	4.65	<b>200yr</b>	3.07	4.55	5.34	7.58	9.54	15.28	16.44	<b>200yr</b>	13.53	15.81	17.92	19.35	20.92	<b>200yr</b>
<b>500yr</b>	1.15	1.71	2.19	3.19	4.53	6.04	<b>500yr</b>	3.91	5.90	6.93	10.02	12.56	20.65	22.20	<b>500yr</b>	18.27	21.34	24.13	25.51	27.34	<b>500yr</b>



# Custom Soil Resource Report Soil Map







































Soil Map may not be valid at this scale.

Map Scale: 1:2,040 if printed on A landscape (11" x 8.5") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

## MAP LEGEND

<b>Area of Interest (AOI)</b>	 Area of Interest (AOI)	 Spoil Area
<b>Soils</b>	 Soil Map Unit Polygons	 Stony Spot
	 Soil Map Unit Lines	 Very Stony Spot
	 Soil Map Unit Points	 Wet Spot
<b>Special Point Features</b>	 Blowout	 Other
	 Borrow Pit	 Special Line Features
	 Clay Spot	<b>Water Features</b>
	 Closed Depression	 Streams and Canals
	 Gravel Pit	<b>Transportation</b>
	 Gravelly Spot	 Rails
	 Landfill	 Interstate Highways
	 Lava Flow	 US Routes
	 Marsh or swamp	 Major Roads
	 Mine or Quarry	 Local Roads
	 Miscellaneous Water	<b>Background</b>
	 Perennial Water	 Aerial Photography
	 Rock Outcrop	
	 Saline Spot	
	 Sandy Spot	
	 Severely Eroded Spot	
	 Sinkhole	
	 Slide or Slip	
	 Sodic Spot	

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: York County, Maine  
 Survey Area Data: Version 19, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bm	Biddeford mucky peat, 0 to 3 percent slopes	3.8	24.9%
CoD	Colton gravelly sandy loam, 15 to 25 percent slopes	0.0	0.1%
MrC2	Marlow fine sandy loam, 8 to 15 percent slopes	2.1	14.0%
PeB	Peru fine sandy loam, 3 to 8 percent slopes	5.6	36.3%
Sc	Scantic silt loam, 0 to 3 percent slopes	2.7	17.7%
SkB	Skerry fine sandy loam, 0 to 8 percent slopes	0.0	0.0%
SrB	Skerry fine sandy loam, 0 to 8 percent slopes, very stony	1.1	7.1%
<b>Totals for Area of Interest</b>		<b>15.4</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

## Custom Soil Resource Report

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# 89 Route 236

Kittery, Maine

Legend

236

Dow Hwy

Fernald Rd

Project Site

Google Earth

300 ft



# JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885  
603.772.4746 - JonesandBeach.com

## Photo Log

Photo #1: Property overview



Photo #2: Front of Property





Photo #3: Property interior site photo (existing parking)



Photo #4: Property interior site photo (proposed parking area)



Photo #5: Property interior of site (rear slope and basin)



# **STORMWATER MANAGEMENT OPERATION AND MAINTENANCE MANUAL**

**Parking Lot Expansion  
Tax Map 28, Lot 14-2  
89 Route 236  
Kittery, ME 03904**

**Prepared for:**

**JD Investments, LLC  
19 Buffum Road  
North Berwick, ME 03906**

**Prepared by:**

**Jones & Beach Engineers, Inc.  
85 Portsmouth Avenue  
P.O. Box 219  
Stratham, NH 03885  
(603) 772-4746  
August 19, 2021  
JBE Project No. 21076**

# **Inspection and Maintenance of Facilities and Property**

## **A. Maintenance of Common Facilities or Property**

1. The Project Developer JD Investments LLC is responsible for maintenance of all stormwater infrastructure associated with this site. This includes all temporary and permanent stormwater and erosion control facilities both during and after construction.

## **B. General Inspection and Maintenance Requirements**

1. The Owner shall perform all inspections and maintenance with greater than annual frequency as required by this report.
2. Inspection reports must be provided to the DES upon request.
3. Permanent stormwater and sediment and erosion control facilities to be maintained on the site include, but are not limited to, the following:
  - a. Culverts
  - b. Erosion
  - c. Vegetation and landscaping
  - d. Riprap inlet and outlet protection aprons
  - e. Vegetative Stormwater Basin

2. Maintenance of permanent measures shall follow the following schedule:

- a. **Culverts: Inspection** of culvert inlets and outlets at least **once per month** during the rainy season (March to November). Any debris is to be removed and disposed of properly.
- b. **Erosion: Annual inspection** of the site for erosion, destabilization, settling, and sloughing. Any needed repairs are to be conducted immediately.
- c. **Vegetation and Landscaping: Annual inspection** of site's vegetation and landscaping. Any areas that are bare shall be reseeded and mulched with hay or, if the case is extreme, loamed and seeded or sodded to ensure adequate vegetative cover. Landscape specimens shall be replaced in kind, if they are found to be dead or dying.
- d. **Riprap:** Rock riprap should be **inspected annually** and after every major storm event in order to ensure that it has not been displaced, undermined, or otherwise damaged. Displaced rock should be replaced, or additional rock added in order to maintain the structure(s) in their undamaged state. Woody vegetation should not be allowed to become established in riprap areas, and/or any debris removed from the void spaces between the rocks. If the riprap is adjacent to a stream or other waterbody, the water should be kept clear of obstructions, debris, and sediment deposits.
- e. **Vegetative Storm water Basin:** The bottoms, interior and exterior side slopes, and crest of earthen detention basins should be mowed, and the vegetation maintained in healthy condition, as appropriate to the function of the facility and type of vegetation.

Vegetated embankments that serve as “berms” or “dams” that impound water should be mowed at least once annually to prevent the establishment of woody vegetation.

Embankments should be inspected at least annually by a qualified professional for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.

Inlet and outlet pipes, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected at least annually by a qualified professional, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection;

Trash and debris should be removed from the basin and any inlet or outlet structures whenever observed by inspection;

Accumulated sediment should be removed when it significantly affects basin capacity.

See attached sample forms as a guideline.

Any inquiries in regards to the design, function, and/or maintenance of any one of the above mentioned facilities or tasks shall be directed to the project engineer:

Jones & Beach Engineers, Inc.  
85 Portsmouth Avenue  
P.O. Box 219  
Stratham, NH 03885

T#: (603) 772-4746

F#: (603) 772-0227

**STORM WATER POLLUTION PREVENTION PLAN**  
**INSPECTION PERIOD AND CRITERIA**  
 Tax Map 28 Lots 14-2  
 Parking Lot Expansion  
 Kittery, ME

Stormwater Component	Inspection Period	Inspection Criteria/Methods
Culverts	Once per month	Inspect inlet/outlet. Remove debris.
Erosion	Annually	Repair site erosion.
Vegetation	Annually	Repair bare unvegetated areas.
Riprap	Annually	Relocate displaced rocks, remove woody vegetation and debris.
Vegetative Stormwater Basin	Bi-annually	Inspect for sediment/debris collection, inspect inlets/outlets, inspection for erosion.

**STORM WATER OPERATIONS AND MAINTENANCE PLAN  
INSPECTION REPORT**

**Tax Map 28 Lots 14-2  
Parking Lot Expansion  
Kittery, ME**

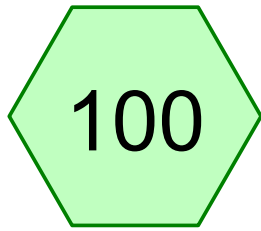
<b>Yearly Inspection Form</b>			
<b>Inspected Component</b>	<b>Date of Inspection</b>	<b>Inspector</b>	<b>Issue Detected / Action Taken</b>
Culverts			
Erosion			
Vegetation			
Riprap			
Vegetative Stormwater Basin			



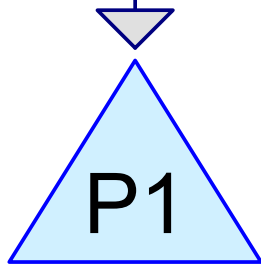
## 11.1 APPENDIX I

### PRE-DEVELOPMENT CONDITIONS ANALYSIS

- 11.1.1 2-Year 24-Hour Summary Analysis
- 11.1.2 10-Year 24-Hour Complete Analysis
- 11.1.3 25-Year 24-Hour Summary Analysis



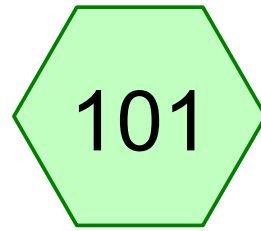
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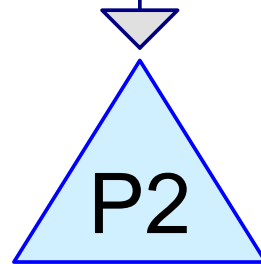
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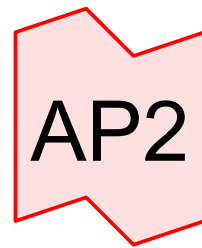
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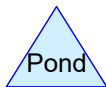
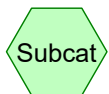
EX-WS-101



Pond #2



AP2



**Routing Diagram for 21076-EX**

Prepared by {enter your company name here}, Printed 8/19/2021  
HydroCAD® 10.00-22 s/n 10589 © 2018 HydroCAD Software Solutions LLC

**21076-EX**

Prepared by {enter your company name here}

HydroCAD® 10.00-22 s/n 10589 © 2018 HydroCAD Software Solutions LLC

Printed 8/19/2021

Page 2

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.845	74	>75% Grass cover, Good, HSG C (100, 101)
0.639	98	Paved parking, HSG C (100, 101)
0.069	98	Roofs, HSG C (100, 101)
0.809	70	Woods, Good, HSG C (100, 101)
<b>2.362</b>	<b>80</b>	<b>TOTAL AREA</b>

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.362	HSG C	100, 101
0.000	HSG D	
0.000	Other	
<b>2.362</b>		<b>TOTAL AREA</b>

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 100: EX-WS-100**

Runoff Area=39,558 sf 31.98% Impervious Runoff Depth>1.30"  
Flow Length=220' Tc=8.6 min CN=80 Runoff=1.33 cfs 0.098 af

**Subcatchment 101: EX-WS-101**

Runoff Area=63,352 sf 28.69% Impervious Runoff Depth>1.30"  
Flow Length=412' Tc=12.0 min CN=80 Runoff=1.94 cfs 0.157 af

**Pond P1: Pond #1**

Peak Elev=196.49' Storage=54 cf Inflow=1.33 cfs 0.098 af  
Outflow=1.33 cfs 0.098 af

**Pond P2: Pond #2**

Peak Elev=193.93' Storage=529 cf Inflow=1.94 cfs 0.157 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=1.54 cfs 0.157 af

**Link AP1: AP1**

Inflow=1.33 cfs 0.098 af  
Primary=1.33 cfs 0.098 af

**Link AP2: AP2**

Inflow=1.54 cfs 0.157 af  
Primary=1.54 cfs 0.157 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.256 af Average Runoff Depth = 1.30"**  
**70.05% Pervious = 1.655 ac 29.95% Impervious = 0.708 ac**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 100: EX-WS-100**

Runoff Area=39,558 sf 31.98% Impervious Runoff Depth>2.59"  
Flow Length=220' Tc=8.6 min CN=80 Runoff=2.67 cfs 0.196 af

**Subcatchment 101: EX-WS-101**

Runoff Area=63,352 sf 28.69% Impervious Runoff Depth>2.59"  
Flow Length=412' Tc=12.0 min CN=80 Runoff=3.87 cfs 0.314 af

**Pond P1: Pond #1**

Peak Elev=196.71' Storage=116 cf Inflow=2.67 cfs 0.196 af  
Outflow=2.68 cfs 0.196 af

**Pond P2: Pond #2**

Peak Elev=194.35' Storage=1,534 cf Inflow=3.87 cfs 0.314 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=2.60 cfs 0.314 af

**Link AP1: AP1**

Inflow=2.68 cfs 0.196 af  
Primary=2.68 cfs 0.196 af

**Link AP2: AP2**

Inflow=2.60 cfs 0.314 af  
Primary=2.60 cfs 0.314 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.510 af Average Runoff Depth = 2.59"**  
**70.05% Pervious = 1.655 ac 29.95% Impervious = 0.708 ac**

**Summary for Subcatchment 100: EX-WS-100**

Runoff = 2.67 cfs @ 12.12 hrs, Volume= 0.196 af, Depth> 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-YR Rainfall=4.87"

Area (sf)	CN	Description
14,755	70	Woods, Good, HSG C
11,346	98	Paved parking, HSG C
1,305	98	Roofs, HSG C
12,152	74	>75% Grass cover, Good, HSG C
39,558	80	Weighted Average
26,907		68.02% Pervious Area
12,651		31.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	12	0.0200	0.90		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.21"
2.2	29	0.0700	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.21"
4.6	34	0.1100	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 3.21"
1.5	125	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.1	20	0.4500	4.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.6	220	Total			

**Summary for Subcatchment 101: EX-WS-101**

Runoff = 3.87 cfs @ 12.17 hrs, Volume= 0.314 af, Depth> 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-YR Rainfall=4.87"

Area (sf)	CN	Description
20,501	70	Woods, Good, HSG C
16,472	98	Paved parking, HSG C
1,703	98	Roofs, HSG C
24,676	74	>75% Grass cover, Good, HSG C
63,352	80	Weighted Average
45,177		71.31% Pervious Area
18,175		28.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0200	0.92		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.21"
1.4	19	0.1000	0.23		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.21"
6.0	43	0.0900	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 3.21"
0.7	70	0.1200	1.73		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.9	97	0.0670	1.81		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.7	44	0.0450	1.06		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
2.1	126	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
12.0	412	Total			

**Summary for Pond P1: Pond #1**

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.908 ac, 31.98% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 2.67 cfs @ 12.12 hrs, Volume= 0.196 af  
 Outflow = 2.68 cfs @ 12.14 hrs, Volume= 0.196 af, Atten= 0%, Lag= 1.1 min  
 Primary = 2.68 cfs @ 12.14 hrs, Volume= 0.196 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 196.71' @ 12.14 hrs Surf.Area= 359 sf Storage= 116 cf  
 Flood Elev= 197.27' Surf.Area= 817 sf Storage= 448 cf

Plug-Flow detention time= 0.8 min calculated for 0.196 af (100% of inflow)  
 Center-of-Mass det. time= 0.6 min ( 790.6 - 790.0 )

Volume	Invert	Avail.Storage	Storage Description			
#1	195.89'	448 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
195.89	6	12.0	0	0	6	
196.00	28	111.0	2	2	975	
197.00	607	213.0	255	257	3,610	
197.27	817	230.0	192	448	4,212	

Device	Routing	Invert	Outlet Devices											
#1	Primary	196.00'	<b>60.0 deg x 1.0' long x 0.67' rise Sharp-Crested Vee/Trap Weir</b> Cv= 2.53 (C= 3.16)											
#2	Primary	196.67'	<b>15.0' long x 4.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32											



**Primary OutFlow** Max=2.62 cfs @ 12.14 hrs HW=196.70' TW=0.00' (Dynamic Tailwater)

- ↳ 1=Sharp-Crested Vee/Trap Weir (Orifice Controls 2.43 cfs @ 2.61 fps)
- ↳ 2=Broad-Crested Rectangular Weir (Weir Controls 0.20 cfs @ 0.42 fps)

**Summary for Pond P2: Pond #2**

Inflow Area = 1.454 ac, 28.69% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 3.87 cfs @ 12.17 hrs, Volume= 0.314 af  
 Outflow = 2.60 cfs @ 12.32 hrs, Volume= 0.314 af, Atten= 33%, Lag= 9.4 min  
 Primary = 2.60 cfs @ 12.32 hrs, Volume= 0.314 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 194.35' @ 12.32 hrs Surf.Area= 2,779 sf Storage= 1,534 cf  
 Flood Elev= 196.00' Surf.Area= 6,719 sf Storage= 9,131 cf

Plug-Flow detention time= 5.0 min calculated for 0.314 af (100% of inflow)  
 Center-of-Mass det. time= 4.7 min ( 797.4 - 792.7 )

Volume	Invert	Avail.Storage	Storage Description			
#1	193.12'	9,131 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
193.12	6	12.0	0	0	6	
194.00	2,162	310.0	669	669	7,643	
196.00	6,719	393.0	8,462	9,131	12,339	

Device	Routing	Invert	Outlet Devices	
#1	Primary	193.12'	<b>12.0" Round Culvert</b> L= 81.0' Ke= 0.500 Inlet / Outlet Invert= 193.12' / 192.78' S= 0.0042 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	

**Primary OutFlow** Max=2.59 cfs @ 12.32 hrs HW=194.35' TW=0.00' (Dynamic Tailwater)

- ↳ 1=Culvert (Barrel Controls 2.59 cfs @ 3.43 fps)

**Summary for Link AP1: AP1**

Inflow Area = 0.908 ac, 31.98% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 2.68 cfs @ 12.14 hrs, Volume= 0.196 af  
 Primary = 2.68 cfs @ 12.14 hrs, Volume= 0.196 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link AP2: AP2**

Inflow Area = 1.454 ac, 28.69% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 2.60 cfs @ 12.32 hrs, Volume= 0.314 af  
 Primary = 2.60 cfs @ 12.32 hrs, Volume= 0.314 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**21076-EX**

Type III 24-hr 25-YR Rainfall=6.17"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 100: EX-WS-100**

Runoff Area=39,558 sf 31.98% Impervious Runoff Depth>3.69"  
Flow Length=220' Tc=8.6 min CN=80 Runoff=3.76 cfs 0.279 af

**Subcatchment 101: EX-WS-101**

Runoff Area=63,352 sf 28.69% Impervious Runoff Depth>3.68"  
Flow Length=412' Tc=12.0 min CN=80 Runoff=5.46 cfs 0.446 af

**Pond P1: Pond #1**

Peak Elev=196.77' Storage=140 cf Inflow=3.76 cfs 0.279 af  
Outflow=3.79 cfs 0.279 af

**Pond P2: Pond #2**

Peak Elev=194.75' Storage=2,805 cf Inflow=5.46 cfs 0.446 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=3.09 cfs 0.446 af

**Link AP1: AP1**

Inflow=3.79 cfs 0.279 af  
Primary=3.79 cfs 0.279 af

**Link AP2: AP2**

Inflow=3.09 cfs 0.446 af  
Primary=3.09 cfs 0.446 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.726 af Average Runoff Depth = 3.69"**  
**70.05% Pervious = 1.655 ac 29.95% Impervious = 0.708 ac**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 100: EX-WS-100**

Runoff Area=39,558 sf 31.98% Impervious Runoff Depth>4.75"  
Flow Length=220' Tc=8.6 min CN=80 Runoff=4.80 cfs 0.360 af

**Subcatchment 101: EX-WS-101**

Runoff Area=63,352 sf 28.69% Impervious Runoff Depth>4.75"  
Flow Length=412' Tc=12.0 min CN=80 Runoff=6.97 cfs 0.575 af

**Pond P1: Pond #1**

Peak Elev=196.81' Storage=159 cf Inflow=4.80 cfs 0.360 af  
Outflow=4.77 cfs 0.359 af

**Pond P2: Pond #2**

Peak Elev=195.09' Storage=4,151 cf Inflow=6.97 cfs 0.575 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=3.59 cfs 0.575 af

**Link AP1: AP1**

Inflow=4.77 cfs 0.359 af  
Primary=4.77 cfs 0.359 af

**Link AP2: AP2**

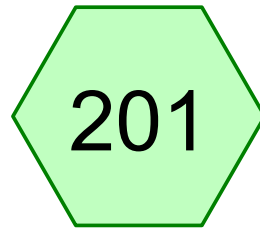
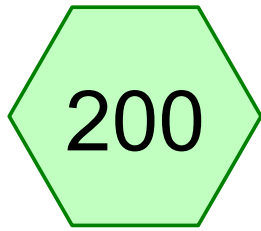
Inflow=3.59 cfs 0.575 af  
Primary=3.59 cfs 0.575 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.935 af Average Runoff Depth = 4.75"**  
**70.05% Pervious = 1.655 ac 29.95% Impervious = 0.708 ac**

## 11.2 APPENDIX II

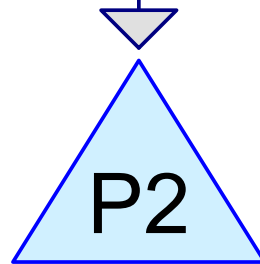
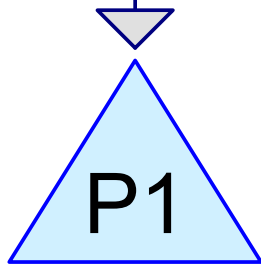
### POST-DEVELOPMENT CONDITIONS ANALYSIS

- 11.2.1 2-Year 24-Hour Summary Analysis
- 11.2.2 10-Year 24-Hour Complete Analysis
- 11.2.3 25-Year 24-Hour Summary Analysis



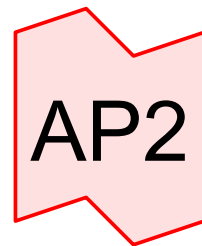
PR-WS-200

PR-WS-201



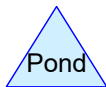
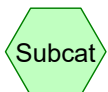
Pond #1

Pond #2



AP1

AP2



**Routing Diagram for 21076-PR**

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**21076-PR**

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**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.815	74	>75% Grass cover, Good, HSG C (200, 201)
0.717	98	Paved parking, HSG C (200, 201)
0.069	98	Roofs, HSG C (200, 201)
0.762	70	Woods, Good, HSG C (200, 201)
<b>2.362</b>	<b>81</b>	<b>TOTAL AREA</b>

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.362	HSG C	200, 201
0.000	HSG D	
0.000	Other	
<b>2.362</b>		<b>TOTAL AREA</b>

**21076-PR**

Type III 24-hr 2-YR Rainfall=3.21"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment200: PR-WS-200**

Runoff Area=43,439 sf 36.72% Impervious Runoff Depth>1.43"  
Flow Length=220' Tc=8.6 min CN=82 Runoff=1.61 cfs 0.119 af

**Subcatchment201: PR-WS-201**

Runoff Area=59,471 sf 30.73% Impervious Runoff Depth>1.30"  
Flow Length=448' Tc=13.0 min CN=80 Runoff=1.76 cfs 0.148 af

**Pond P1: Pond #1**

Peak Elev=196.41' Storage=836 cf Inflow=1.61 cfs 0.119 af  
Outflow=1.32 cfs 0.113 af

**Pond P2: Pond #2**

Peak Elev=193.90' Storage=471 cf Inflow=1.76 cfs 0.148 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=1.44 cfs 0.148 af

**Link AP1: AP1**

Inflow=1.32 cfs 0.113 af  
Primary=1.32 cfs 0.113 af

**Link AP2: AP2**

Inflow=1.44 cfs 0.148 af  
Primary=1.44 cfs 0.148 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.267 af Average Runoff Depth = 1.36"**  
**66.74% Pervious = 1.577 ac 33.26% Impervious = 0.786 ac**



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 200: PR-WS-200**

Runoff Area=43,439 sf 36.72% Impervious Runoff Depth>2.77"  
Flow Length=220' Tc=8.6 min CN=82 Runoff=3.12 cfs 0.230 af

**Subcatchment 201: PR-WS-201**

Runoff Area=59,471 sf 30.73% Impervious Runoff Depth>2.59"  
Flow Length=448' Tc=13.0 min CN=80 Runoff=3.52 cfs 0.295 af

**Pond P1: Pond #1**

Peak Elev=196.76' Storage=1,199 cf Inflow=3.12 cfs 0.230 af  
Outflow=2.68 cfs 0.224 af

**Pond P2: Pond #2**

Peak Elev=194.29' Storage=1,356 cf Inflow=3.52 cfs 0.295 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=2.49 cfs 0.294 af

**Link AP1: AP1**

Inflow=2.68 cfs 0.224 af  
Primary=2.68 cfs 0.224 af

**Link AP2: AP2**

Inflow=2.49 cfs 0.294 af  
Primary=2.49 cfs 0.294 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.525 af Average Runoff Depth = 2.67"**  
**66.74% Pervious = 1.577 ac 33.26% Impervious = 0.786 ac**

**Summary for Subcatchment 200: PR-WS-200**

Runoff = 3.12 cfs @ 12.12 hrs, Volume= 0.230 af, Depth> 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-YR Rainfall=4.87"

Area (sf)	CN	Description
13,633	70	Woods, Good, HSG C
14,646	98	Paved parking, HSG C
1,305	98	Roofs, HSG C
13,855	74	>75% Grass cover, Good, HSG C
43,439	82	Weighted Average
27,488		63.28% Pervious Area
15,951		36.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	12	0.0200	0.90		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.21"
2.2	29	0.0700	0.22		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.21"
4.6	34	0.1100	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 3.21"
1.5	125	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.1	20	0.4500	4.70		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
8.6	220	Total			

**Summary for Subcatchment 201: PR-WS-201**

Runoff = 3.52 cfs @ 12.18 hrs, Volume= 0.295 af, Depth> 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-YR Rainfall=4.87"

Area (sf)	CN	Description
19,564	70	Woods, Good, HSG C
16,571	98	Paved parking, HSG C
1,703	98	Roofs, HSG C
21,633	74	>75% Grass cover, Good, HSG C
59,471	80	Weighted Average
41,197		69.27% Pervious Area
18,274		30.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0200	0.92		<b>Sheet Flow</b> , Smooth surfaces n= 0.011 P2= 3.21"
1.4	19	0.1000	0.23		<b>Sheet Flow</b> , Grass: Short n= 0.150 P2= 3.21"
6.0	43	0.0900	0.12		<b>Sheet Flow</b> , Woods: Light underbrush n= 0.400 P2= 3.21"
0.6	47	0.0600	1.22		<b>Shallow Concentrated Flow</b> , Woodland Kv= 5.0 fps
1.1	89	0.0400	1.40		<b>Shallow Concentrated Flow</b> , Short Grass Pasture Kv= 7.0 fps
1.4	101	0.0600	1.22		<b>Shallow Concentrated Flow</b> , Woodland Kv= 5.0 fps
2.3	136	0.0200	0.99		<b>Shallow Concentrated Flow</b> , Short Grass Pasture Kv= 7.0 fps
13.0	448	Total			

**Summary for Pond P1: Pond #1**

Inflow Area = 0.997 ac, 36.72% Impervious, Inflow Depth > 2.77" for 10-YR event  
 Inflow = 3.12 cfs @ 12.12 hrs, Volume= 0.230 af  
 Outflow = 2.68 cfs @ 12.19 hrs, Volume= 0.224 af, Atten= 14%, Lag= 3.9 min  
 Primary = 2.68 cfs @ 12.19 hrs, Volume= 0.224 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 196.76' @ 12.19 hrs Surf.Area= 1,151 sf Storage= 1,199 cf  
 Flood Elev= 197.27' Surf.Area= 1,561 sf Storage= 1,880 cf

Plug-Flow detention time= 24.4 min calculated for 0.224 af (97% of inflow)  
 Center-of-Mass det. time= 13.9 min ( 799.4 - 785.4 )

Volume	Invert	Avail.Storage	Storage Description		
#1	195.00'	1,880 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
195.00	303	148.0	0	0	303
196.00	716	264.0	495	495	4,112
197.00	1,309	335.0	998	1,493	7,509
197.27	1,561	346.0	387	1,880	8,112

Device	Routing	Invert	Outlet Devices
#1	Primary	195.35'	<b>48.0 deg x 1.65' rise Sharp-Crested Vee/Trap Weir</b> Cv= 2.55 (C= 3.19)
#2	Primary	197.00'	<b>6.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)

**Primary OutFlow** Max=2.65 cfs @ 12.19 hrs HW=196.75' TW=0.00' (Dynamic Tailwater)

1=Sharp-Crested Vee/Trap Weir (Weir Controls 2.65 cfs @ 3.02 fps)

2=Sharp-Crested Rectangular Weir ( Controls 0.00 cfs)

**Summary for Pond P2: Pond #2**

Inflow Area = 1.365 ac, 30.73% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 3.52 cfs @ 12.18 hrs, Volume= 0.295 af  
 Outflow = 2.49 cfs @ 12.33 hrs, Volume= 0.294 af, Atten= 29%, Lag= 9.0 min  
 Primary = 2.49 cfs @ 12.33 hrs, Volume= 0.294 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 194.29' @ 12.33 hrs Surf.Area= 2,658 sf Storage= 1,356 cf  
 Flood Elev= 196.00' Surf.Area= 6,719 sf Storage= 9,131 cf

Plug-Flow detention time= 4.8 min calculated for 0.293 af (100% of inflow)  
 Center-of-Mass det. time= 4.5 min ( 798.0 - 793.5 )

Volume	Invert	Avail.Storage	Storage Description			
#1	193.12'	9,131 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
193.12	6	12.0	0	0	6	
194.00	2,162	310.0	669	669	7,643	
196.00	6,719	393.0	8,462	9,131	12,339	

Device	Routing	Invert	Outlet Devices	
#1	Primary	193.12'	<b>12.0" Round Culvert</b> L= 81.0' Ke= 0.500 Inlet / Outlet Invert= 193.12' / 192.78' S= 0.0042 ' S= 0.0042 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	

**Primary OutFlow** Max=2.48 cfs @ 12.33 hrs HW=194.28' TW=0.00' (Dynamic Tailwater)  
 1=Culvert (Barrel Controls 2.48 cfs @ 3.42 fps)

**Summary for Link AP1: AP1**

Inflow Area = 0.997 ac, 36.72% Impervious, Inflow Depth > 2.69" for 10-YR event  
 Inflow = 2.68 cfs @ 12.19 hrs, Volume= 0.224 af  
 Primary = 2.68 cfs @ 12.19 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link AP2: AP2**

Inflow Area = 1.365 ac, 30.73% Impervious, Inflow Depth > 2.59" for 10-YR event  
 Inflow = 2.49 cfs @ 12.33 hrs, Volume= 0.294 af  
 Primary = 2.49 cfs @ 12.33 hrs, Volume= 0.294 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 200: PR-WS-200**

Runoff Area=43,439 sf 36.72% Impervious Runoff Depth>3.89"  
Flow Length=220' Tc=8.6 min CN=82 Runoff=4.33 cfs 0.323 af

**Subcatchment 201: PR-WS-201**

Runoff Area=59,471 sf 30.73% Impervious Runoff Depth>3.68"  
Flow Length=448' Tc=13.0 min CN=80 Runoff=4.96 cfs 0.419 af

**Pond P1: Pond #1**

Peak Elev=196.97' Storage=1,454 cf Inflow=4.33 cfs 0.323 af  
Outflow=3.79 cfs 0.317 af

**Pond P2: Pond #2**

Peak Elev=194.66' Storage=2,502 cf Inflow=4.96 cfs 0.419 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=2.95 cfs 0.419 af

**Link AP1: AP1**

Inflow=3.79 cfs 0.317 af  
Primary=3.79 cfs 0.317 af

**Link AP2: AP2**

Inflow=2.95 cfs 0.419 af  
Primary=2.95 cfs 0.419 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.742 af Average Runoff Depth = 3.77"**  
**66.74% Pervious = 1.577 ac 33.26% Impervious = 0.786 ac**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 200: PR-WS-200**

Runoff Area=43,439 sf 36.72% Impervious Runoff Depth>4.97"  
Flow Length=220' Tc=8.6 min CN=82 Runoff=5.48 cfs 0.413 af

**Subcatchment 201: PR-WS-201**

Runoff Area=59,471 sf 30.73% Impervious Runoff Depth>4.75"  
Flow Length=448' Tc=13.0 min CN=80 Runoff=6.33 cfs 0.540 af

**Pond P1: Pond #1**

Peak Elev=197.11' Storage=1,642 cf Inflow=5.48 cfs 0.413 af  
Outflow=5.18 cfs 0.406 af

**Pond P2: Pond #2**

Peak Elev=194.99' Storage=3,720 cf Inflow=6.33 cfs 0.540 af  
12.0" Round Culvert n=0.013 L=81.0' S=0.0042 '/' Outflow=3.45 cfs 0.540 af

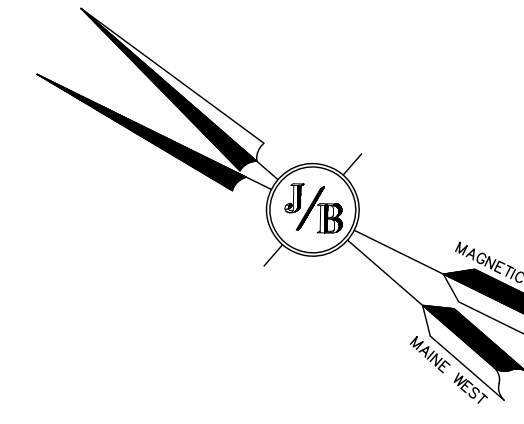
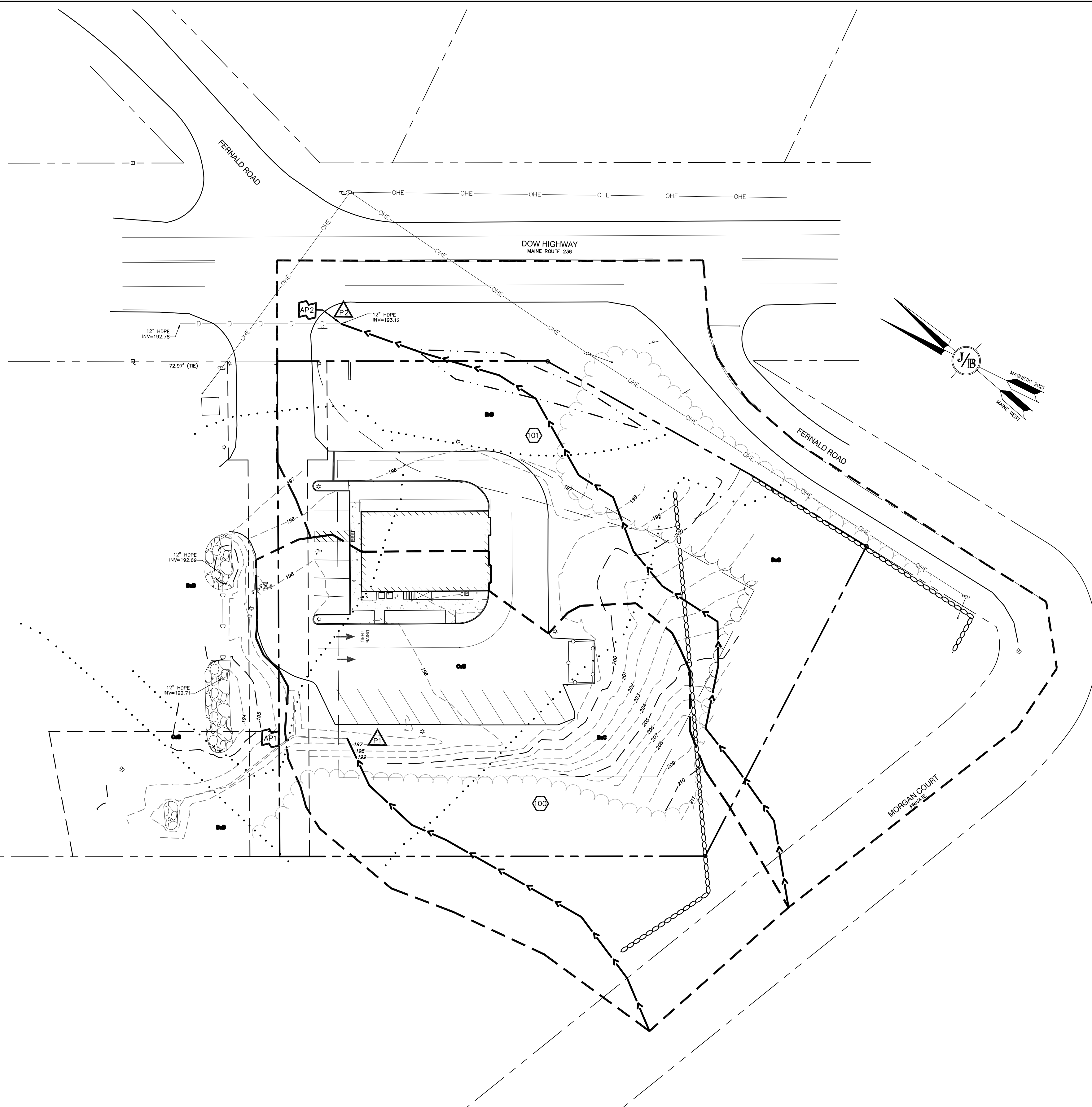
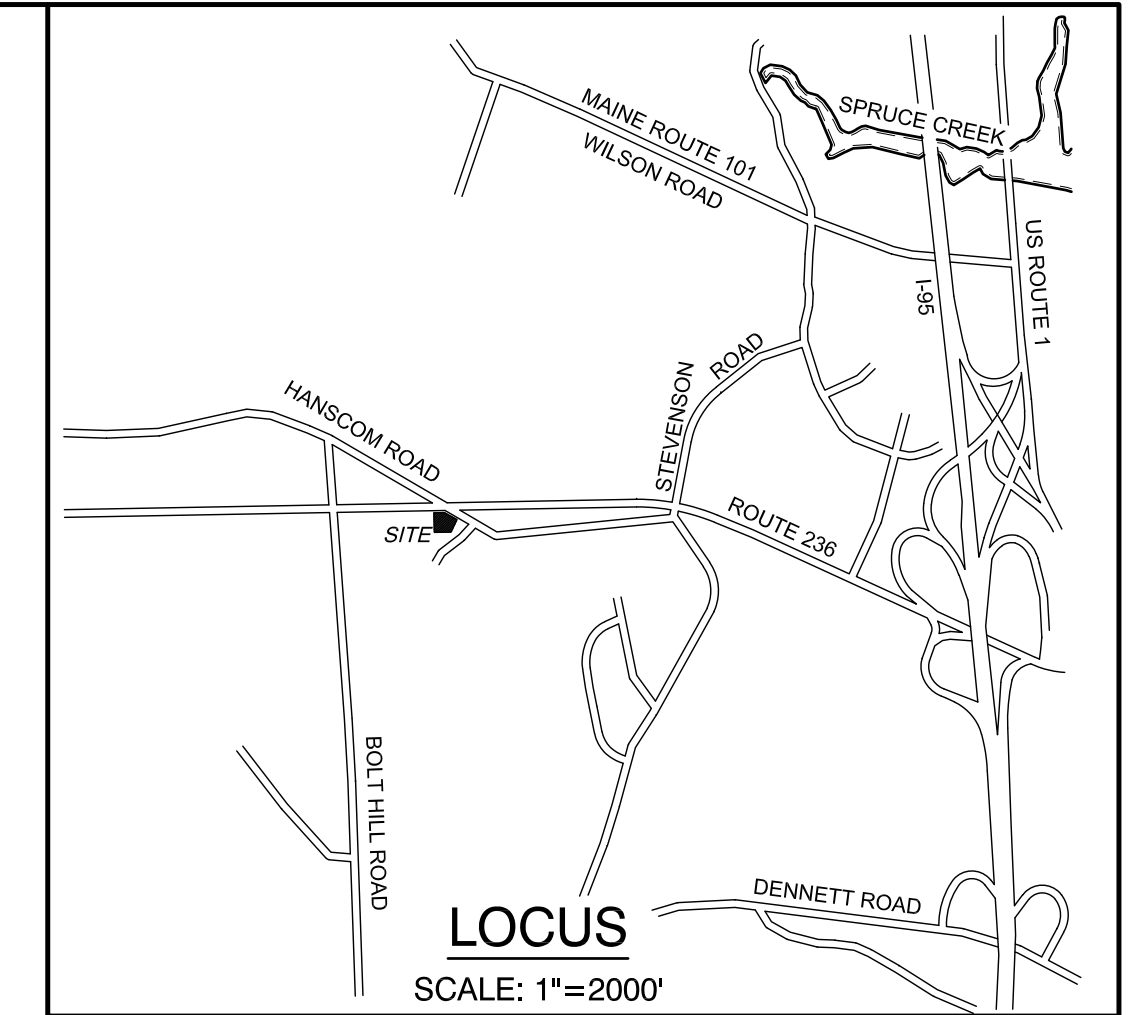
**Link AP1: AP1**

Inflow=5.18 cfs 0.406 af  
Primary=5.18 cfs 0.406 af

**Link AP2: AP2**

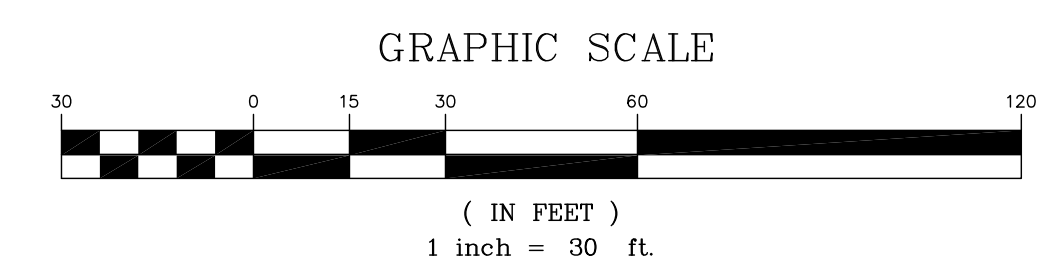
Inflow=3.45 cfs 0.540 af  
Primary=3.45 cfs 0.540 af

**Total Runoff Area = 2.362 ac Runoff Volume = 0.953 af Average Runoff Depth = 4.84"**  
**66.74% Pervious = 1.577 ac 33.26% Impervious = 0.786 ac**



**LEGEND**

- SUBCATCHMENT BOUNDARY
- SUBCATCHMENT
- REACH
- POND
- TC PATH
- WETLANDS
- HISS SOILS
- FLOW ARROW



<b>PROJECT PARCEL</b> TOWN OF KITTERY TAX MAP 28, LOT 14-2
<b>APPLICANT</b> DAVIS DROLET 19 BUFFUM ROAD, UNIT 6 NORTH BERWICK, ME 03906
<b>TOTAL LOT AREA</b> 60,402± SQ. FT. 1.39± ACRES

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Design: EMP	Draft: GDR	Date: 5/12/21
Checked: WGM	Scale: AS NOTED	Project No.: 21076
Drawing Name: 21076-WATERSHED.dwg		
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REV.	DATE	REVISION	BY
0	08/19/21	ISSUED FOR REVIEW	EMP

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**J/B Jones & Beach Engineers, Inc.**

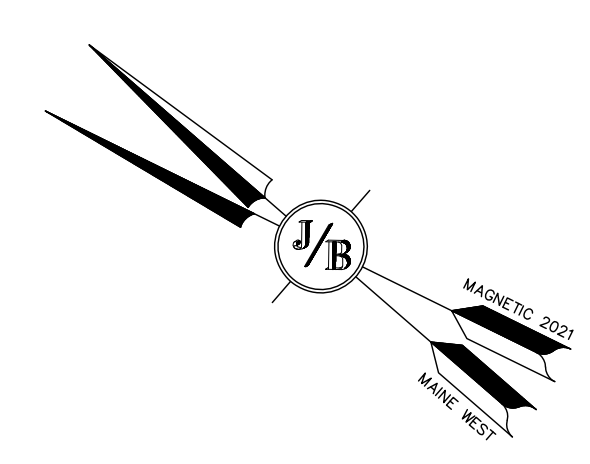
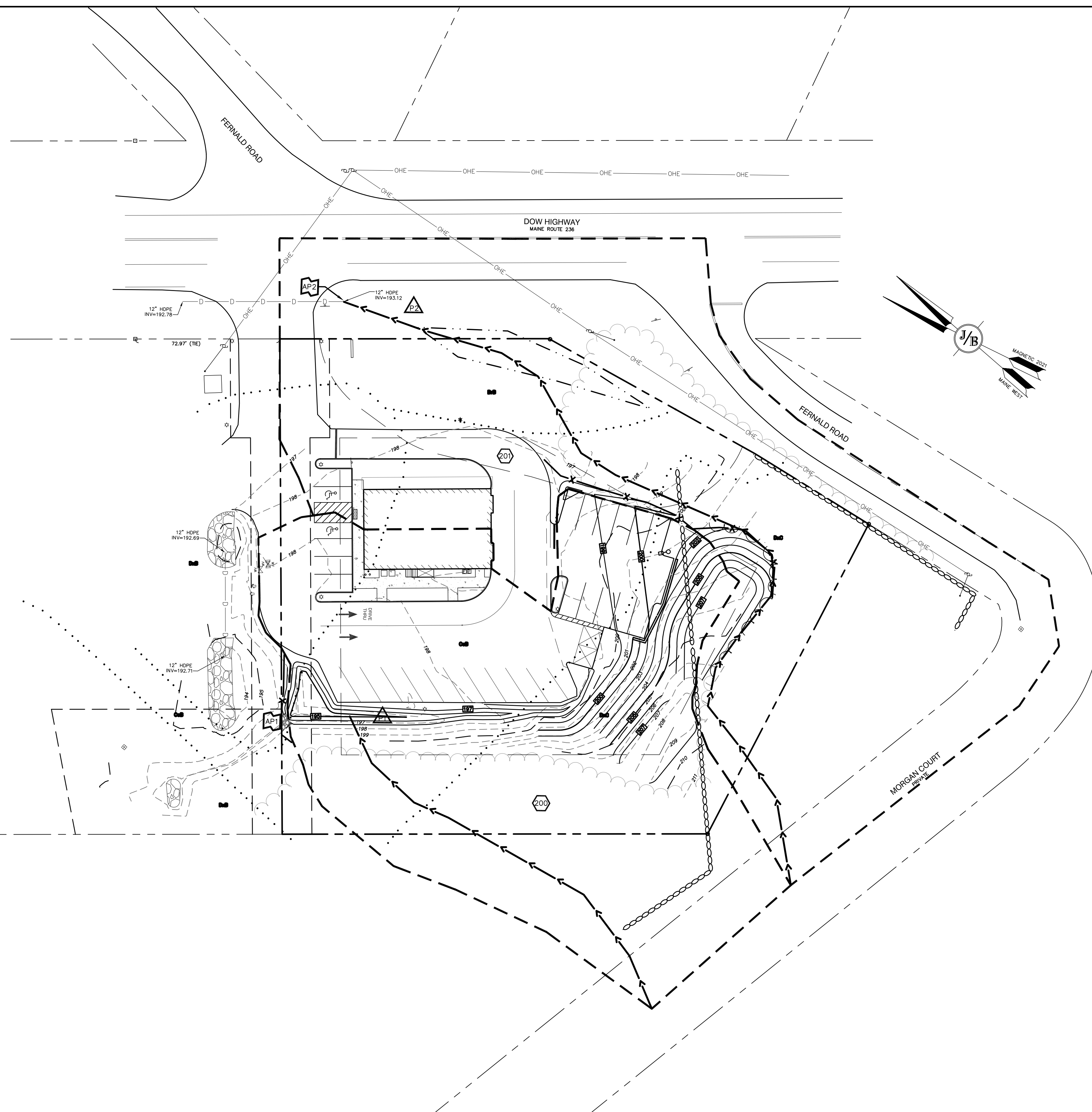
85 Portsmouth Ave.    *Civil Engineering Services*    603-772-4746  
 PO Box 219    FAX: 603-772-0227  
 Stratham, NH 03885    E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	<b>EXISTING WATERSHED PLAN</b>
Project:	<b>PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, ME</b>
Owner of Record:	<b>JD INVESTMENTS LLC 19 BUFFUM RD, UNIT 6, NORTH BERWICK, ME</b>

DRAWING No.

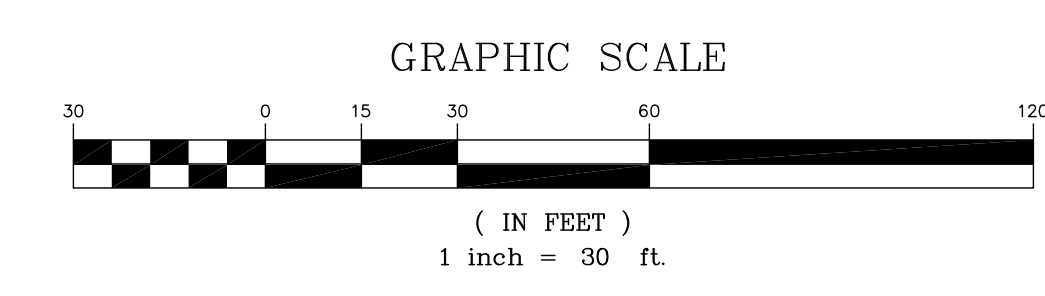
W1

SHEET 1 OF 2  
JBE PROJECT NO. 21076



**LEGEND**

SUBCATCHMENT BOUNDARY	
SUBCATCHMENT	
REACH	
POND	
TC PATH	
WETLANDS	
HISS SOILS	
FLOW ARROW	



<b>PROJECT PARCEL</b> TOWN OF KITTERY TAX MAP 28, LOT 14-2
<b>APPLICANT</b> DAVIS DROLET 19 BUFFUM ROAD, UNIT 6 NORTH BERWICK, ME 03906
<b>TOTAL LOT AREA</b> 60,402± SQ. FT. 1.39± ACRES

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Design: EMP	Draft: GDR	Date: 5/12/21
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Drawing Name: 21076-WATERSHED.dwg		
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REV.	DATE	REVISION	BY
0	08/19/21	ISSUED FOR REVIEW	EMP

Designed and Produced in NH

**J/B Jones & Beach Engineers, Inc.**

85 Portsmouth Ave.    *Civil Engineering Services*    603-772-4746  
 PO Box 219    FAX: 603-772-0227  
 Stratham, NH 03885    E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	<b>PROPOSED WATERSHED PLAN</b>
Project:	<b>PARKING LOT EXPANSION 89 ROUTE 236, KITTERY, ME</b>
Owner of Record:	<b>JD INVESTMENTS LLC 19 BUFFUM RD, UNIT 6, NORTH BERWICK, ME</b>

DRAWING No.	<b>W2</b>
SHEET 2 OF 2	JBE PROJECT NO. 21076