RESIDENTIAL SITE PLAN APPLICATION (townhouses, apts. etc.)

City of Rochester, New Hampshire

RECEIVED
OCT 27 2021

Date: October 26, 2021 Is a conditional use needed? Yes: X No: ____ Unclear: ____
(If so, we encourage you to submit an application as soon as possible.)

Property information

Tax map #: 137 ; Lot #('s): 35-1 ; Zoning district: Highway Commercial

Property address/location: 29 Wadleigh Road

Name of project (if applicable): Wadleigh Road Apartments

Size of site: 8.40 acres; overlay zoning district(s)? ____

Property owner

Name (include name of individual): SSG, LLC

Mailing address: 120 Washington Street, Suite 302, Rochester, NH 03839

Telephone #: ____ Email: ____

Applicant/developer (if different from property owner)

Name (include name of individual): Fenton Groen, Groen Construction

Mailing address: 120 Washington Street, Suite 302, Rochester, NH 03839

Telephone #: 603-330-7884 Email: fenton@groenconstruction.com

Engineer/designer

Name (include name of individual): Bradford Jones, Jones & Beach Engineers, Inc.

Mailing address: PO Box 219, Stratham, NH 03885

Telephone #: 603-772-4746 Fax #: ____

Email address: bjones@jonesandbeach.com Professional license #: ____

Proposed use

(You are not bound by information on bedrooms and type of ownership unless that is a condition of approval.)

Total number of proposed dwelling units: 52 ; number of existing dwelling units: 0

Proposed bedrooms/unit: 52 ; total number of proposed bedrooms: 90

New building(s)? 1 addition(s)/modifications to existing building(s)? _____

Townhouses/rowhouses:____ flats:X duplexes:____ freestanding detached units:____

Proposed ownership - leasehold: X fee simple conveyance: ____ condominiums: ____

Utility information

City water? yes X no ___; How far is City water from the site? 660'

City sewer? yes X no ___; How far is City sewer from the site? 680'

If City water, what are the estimated total daily needs? 13,500 gallons per day

Where will stormwater be discharged? Route 125 and on-site

Other information

parking spaces: existing: 0 total proposed: 103; Are there pertinent covenants? _____

Describe existing conditions/use (vacant land?): Vacant Land

Check any that are proposed: variance ____; special exception ____; conditional use ____

Wetlands: Is any fill proposed? X; area to be filled: 3,750; buffer impact? yes

Proposed *post-development* disposition of site (should total 100%)		
	Square footage	**% overall site**
Building footprint(s) – give for each building	17,874	4.9
Parking and vehicle circulation	71,150	19.4
Planted/landscaped areas (excluding drainage)	84,500	23.1
Natural/undisturbed areas (excluding wetlands)	156,810	42.9
Wetlands	32,670	8.9
Other – drainage structures, outside storage, etc.	2900	0.8

Comments

Please feel free to add any comments, additional information, or requests for waivers here: The developer has been in front of the ZBA for a variance.

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), *and/or* the agent.

I(we) hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the City of Rochester Site Plan Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner: Fenton Green, Manager, SSG, LLC

Date: 10/26/21

Signature of applicant/developer: Fenton Green, President, Green Construction

Date: 10/26/21

Signature of agent:

Date: 10/26/21

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner:

Fenton Green, Manager, SSG, LLC

Date: 10/26/21

JONES&BEACH
ENGINEERS INC.
85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

October 26, 2021

Rochester Planning Board
Attn. Nel Sylvain, Chair
31 Wakefield Street
Rochester, NH 03867

RE: Site Plan Application
29 Wadleigh Road, Rochester, NH
Tax Map 137, Lot 35-1
JBE Project No. 21137

Dear Mr. Sylvain,

Jones & Beach Engineers, Inc., respectfully submits a Site Plan Application for the above-referenced parcel on behalf of our client, Groen Construction. The intent of this application is to design a 52 unit, 17,874 sq ft apartment building that will be serviced by a new sewer and water connection extension off of Wadleigh Road. Currently, Jones & Beach has completed a boundary and topographical survey and located the wetland flags recently set by Gove Environmental Services, Inc.

The area of the parcel is 8.4 acres or 364,175 sq ft. in size and the northwest side of the property is bounded by the Axe Handel Brook. A portion of the property is within the floodplain and depicted on the site plans. A portion of the existing Wadleigh Road will be reconstructed and paved after utilities are installed. Our project will require one wetland crossing to access the property. The existing cell tower will remain and a new access road will be constructed to the tower. This project will require a DES AOT and Wetland permit.

The zoning for our parcel is Highway Commercial HC and there will be 104 parking spaces required. Currently the site has overhead power and communications from Wadleigh Road to the existing cell tower on the property. Underground power will be installed on our property to service the proposed apartment building.

Separate from this application the developer has approval by the Zoning Board of Adjustments for relief from the following sections of the Zoning Ordinance:

- **§275-20.2(K)(3),** which requires in relevant part that multifamily residential uses within commercial districts be only secondary uses, and that first floor consist of only commercial uses.

- **§275-19.2E,** which requires 7,500sq ft to be used as the minimum number of square feet of lot space per dwelling unit, given the location of the lot outside the density rings as shown on the zoning map.

- **Table 19-B Dimensional Standards** – Commercial Districts, which permits a maximum building height of three (3) stories.

Four (4) copies of the following are provided in support of this application with the following items:

1. Site Plan Application with Checklist.
2. Current Deed.
3. Signed Authorization.
4. Abutters List with Three (3) Sets of Mailing Labels.
5. Tax Map.
6. Two (2) Traffic Memo.
7. Two (2) Drainage Analysis.
8. Three (3) Full Size Plan Sets.
9. Four (4) Half-Size Plan Sets (folded).
10. Four (4) Architectural Plan Sets.
11. One (1) PDF of All Documents.

If you have any questions or need any additional information, please feel free to contact our office. Thank you very much for your time.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Bradford Jones
Vice President

cc: Fenton Groen, Groen Construction (application & plans via email)

Site Plan Checklist (residential and nonresidential)

**To be filled out by applicant/agent (with notes to be inserted by staff)*
See regulations for other specific requirements
City of Rochester Planning & Development Department

Project Name: Wadleigh Road Apartments Map: 137 Lot: 35-1 Date: 10/26/21

Applicant/agent: Groen Construction, Fenton Groen Signature: _____

(Staff review by: _____ Date: 10/27/21)

General items

	Yes	No	N/A	Waiver Requested	Comments
4 sets completed application	[x]	[ ]	[ ]	[ ]	
Total application fee	[x]	[ ]	[ ]	[ ]	
4 copies of narrative	[x]	[ ]	[ ]	[ ]	
3 sets of full-size plans	[x]	[ ]	[ ]	[ ]	
2 sets of 11 X 17 reductions	[x]	[ ]	[ ]	[ ]	
Completed abutters list	[x]	[ ]	[ ]	[ ]	
Copy of existing covenants, easements, deed restrictions	[x]	[ ]	[ ]	[ ]	
Plan Information Basic information including: • Title sheet • Name of Project • Date • North arrow • Scale • Legend • Revision block • Vicinity sketch -not less than 1" = 1,000'	[x]	[ ]	[ ]	[ ]	
Name and address of developer/applicant	[x]	[ ]	[ ]	[ ]	
Name, stamp, and NH license # of land survey, engineer, and/or architect	[x]	[ ]	[ ]	[ ]	
City tax map & lot #'s	[x]	[ ]	[ ]	[ ]	
Notation on plans: "For more information about this site plan contact…."	[ ]	[x]	[ ]	[ ]	

General items Continued

	Yes	No	N/A	Waiver Requested	Comments
Approval block (for signature by staff attesting to Planning Board approval)	[x]	[ ]	[ ]	[ ]	
References to neighboring plans and subdivisions	[ ]	[x]	[ ]	[ ]	
Surveyed property lines including: • existing and proposed bearings • existing and proposed distances • pins, stakes, bounds • monuments • benchmarks	[x]	[ ]	[ ]	[ ]	
Include error of closure statement	[ ]	[x]	[ ]	[ ]	
Information on abutting properties: • owner name • owner address • tax map and lot # • square footage of lots • approximate building footprints • use	[x]	[ ]	[ ]	[ ]	

Zoning

Zoning designations of subject tract and in vicinity of tract	[x]	[ ]	[ ]	[ ]	
Zoning requirements for district: • frontage • lot dimensions/density • all setbacks • lot coverage	[x]	[ ]	[ ]	[ ]	
Zoning overlay districts	[x]	[ ]	[ ]	[ ]	

Existing Topographic Features:

Contour lines a (not to exceed two-foot Intervals, except on steep slopes) and spot elevations	[x]	[ ]	[ ]	[ ]	
Soil types and boundaries	[ ]	[x]	[ ]	[ ]	
Soil test pit locations, profiles, and Depth to water table and ledge	[x]	[ ]	[ ]	[ ]	
Percolation test locations and results	[x]	[ ]	[ ]	[ ]	

Existing Topographic Features Continued:

	Yes	No	N/A	Waiver Requested	Comments
Water features (ponds, streams)	X				
Wetlands including name of certified Wetlands scientist who delineated		X			
Statement whether located in flood area, And if so, 100 year flood elevation	X				
Delineation of trees and open areas		X			
Overview of types of trees and vegetation		X			
Stone walls and archaeological features	X				
Locations of trails and paths	X				
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc)	X				

Building Information

Existing buildings/structures including square footage and use			X		
Proposed building/structures including • square footage • first floor elevation • use • # bedrooms per unit if residential	X				Previously Submitted
Elevation drawing of proposed buildings and structures as follows: • Showing all four sides • Drawn to scale with dimensions • Showing exterior materials • Showing exterior colors	X				Previously Submitted

Circulation and Parking Plans

Existing and proposed driveways and access points including: • Width of opening • Turning radii • Cross section of driveway		X			
Curbing & edge treatment	X				
Traffic control devices, if appropriate:		X			

Circulation and Parking Plans Continued:

	Yes	No	N/A	Waiver Requested	Comments
Number of parking spaces • required by ordinance • proposed	x				
Parking layout and dimensions of spaces	x				
Handicap spaces	x				
Loading area			x		
Pedestrian circulation plan (including existing sidewalks in vicinity, if any)		x			
Bicycle rack, if appropriate		x			
Buffers, landscaping & screening	x				
Snow storage areas/plan	x				

Utilities

Show all pertinent existing and proposed profiles, elevations, materials, sizes, and details

Water lines/well (with protective radius)	x				
Sewer lines/septic and leaching areas	x				
Pump stations			x		
Stormwater management system: pipes, culverts,, catch basins detention/ retention basins, swales, rip rap, etc.	x				
Fire hydrant location(s) and details	x				
Electric, telephone, cable TV (underground or overhead)	x				
Gas lines	x				
Fire alarm connections	x				
Treatment of solid waste (dumpsters?)	x				
Handing of oil, grease, chemicals hazardous materials/waste		x			

Landscaping Plan

	Yes	No	N/A	Waiver Requested	Comments
Demarcation of limits of construction, clear delineation of vegetation to be saved, and strategy for protecting vegetation	☐	☒	☐	☐	
Proposed ground cover, shrubbery, and trees including: • botanical and common names • locations and spacing • total number of each species • size at installation	☒	☐	☐	☐	
Planting plan (size of holes, depth of planting, soil amendments, etc.)	☒	☐	☐	☐	
Irrigation: system? soaker hose? Manual? underground, etc.	☐	☒	☐	☐	
Protection of landscaping from vehicles (Curb stops, berm, railroad ties, etc)	☐	☒	☐	☐	
Specification all finished ground surfaces and edges (greenspace, mulch, asphalt, concrete, etc.)	☒	☐	☐	☐	
Fencing/screening	☐	☒	☐	☐	

Signage

Location and type of signs: • Attached to building • Freestanding • Directional, if appropriate	☐	☒	☐	☐	
Dimensions of signs: • Height • Area • Setback	☐	☒	☐	☐	
Elevation drawings with colors & materials	☐	☐	☐	☐	
Type of Illumination, if proposed	☒	☐	☐	☐	

Outdoor Lighting

	Yes	No	N/A	Waiver Requested	Comments
Locations	X				
Height of fixtures		X			
Wattage	X				
Type of light (high pressure sodium, etc)		X			
Design/cut sheets of fixtures	X				
Illumination study, if appropriate		X			

Other Elements

Traffic study, if appropriate		X			
Drainage study with calculations, storm Water impact analysis, and mitigation plan		X			
Grading plan (including finish grades)	X				
Earth being removed from site(in cubic yards)		X			
Erosion and sedimentation plan	X				
Proposed covenants, easements, And deed restrictions, if any		X			
Fiscal impact study, if requested		X			

Additional Comments:

Doc # 0014166 Oct 1, 2018 2:47 PM
Book 4605 Page 0408 Page 1 of 5
Register of Deeds, Strafford County

C/H
L-CHIP
STA135272

Return to:
Wensley & Jones, P.L.L.C.
40 Wakefield Street
Rochester, NH 03867

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
****2 Thousand 6 Hundred 25 Dollars
DATE 10/01/2018 ST845662 $ ****2825.00
AMOUNT

DEED AND ASSIGNMENT AND ASSUMPTION OF EASEMENT(S)

KNOW ALL MEN BY THESE PRESENTS, that **JEN-SCOT REALTY, INC.**, a New Hampshire corporation with a mailing address of P. O. Box 632, New Castle, New Hampshire 03854 (hereinafter referred to as the "Grantor"), for consideration paid, grants to **SSG, LLC**, a New Hampshire limited liability company with an address of 120 Washington Street, Suite #302, Rochester, New Hampshire 03839 (hereinafter referred to as the "Grantee"), with *warranty covenants and quitclaim covenants* as to TRACT I and with *quitclaim covenants* as to TRACT II:

Rochester, New Hampshire (2 Tracts):

A. TRACT I (conveyed with *warranty covenants* and *quitclaim covenants*):

A certain tract or parcel of land, situated in the City of Rochester, County of Strafford and State of New Hampshire on the northeasterly side of the Spaulding Turnpike. Said parcel appearing on a plan of land for Normand Ramsey, Rochester, New Hampshire, prepared by Berry Const. Co. dated May 29, 1981.

This parcel is designated on said plan as "AREA 8.0 acres +/-", and bounded and described as follows:

Beginning at a point on the northeasterly side of the Spaulding Turnpike which point is the southerly corner of said lot and in the center of "Old Concord State Road", so-called, thence running by said Spaulding Turnpike along a curve to the right with a radius of two thousand eight hundred sixty-five (2865) feet, a distance of five hundred forty-seven (547) feet to a point; thence continuing by said Spaulding Turnpike North 21° 43' 07" West a distance of six hundred eighty-eight and ninety-three hundredths (688.93) feet to the southerly side of Axe Handle Brook; thence turning and following said Brook in a generally southeasterly direction a distance

of one thousand three hundred twenty (1320) feet to a point approximately in the center of Old Concord State Road, so-called; thence turning and running South 51° 31' 33" West a distance of one hundred ninety-two and eighty-eight hundredths (192.88) feet to a point; thence continuing South 52° 57' 45" West a distance of three hundred forty-two (342) feet to the point of beginning.

Said parcel containing eight (8) acres, more or less.

Meaning and intending to describe and convey the same premises conveyed in Warranty Deed of Normand H. Ramsey and Pamela H. Ramsey to Jen-Scot Realty, Inc. dated January 3, 1985 and recorded in the Strafford County Registry of Deeds at Book 1167, Page 674.

B. TRACT II (conveyed with *quitclaim covenants*):

A certain parcel of land located at the northerly end of Axe Handle Road (formerly, and sometimes currently, known and referred to as Wadleigh Road), and on the easterly sideline of the Spaulding Turnpike, now also known as New Hampshire Route 16, in the City of Rochester, Strafford County, State of New Hampshire; said parcel being shown as **"OLD GONIC ROAD, a.k.a OLD CONCORD STATE ROAD"** on a certain plan entitled "Plan of Land, Parcel No. 5, Tax Assessor's Map No. 59 and Parcel No. 2, Tax Assessor's Map No. 8, New Hampshire Route 125, a.k.a. Gonic Road, City of Rochester, County of Strafford, New Hampshire", dated September 7, 1989, as prepared by CIVILWORKS, INC., and recorded in the Strafford County Registry of Deeds as Plan No. 37A-28, and being more particularly bounded and described as follows:

Beginning at an iron rod set in the ground on the easterly sideline of said Spaulding Turnpike and the southwesterly corner of land now or formerly of Jen-Scot Realty, Inc. and the westerly corner of the herein conveyed premises; thence running North 37° 55' 18" East, 331.00 feet along a stone wall and land now or formerly of said Jen-Scot Realty, Inc. to a drill hole set in said stone wall; thence running on the same line North 37° 55' 18" East, 60.93 feet along land now or formerly of said Jen-Scot Realty, Inc. to an iron rod set in the ground; thence turning and running South 57° 58' 38" East, 31.98 feet along land now or formerly of said Jen-Scot Realty, Inc. to an iron rod set in the ground; thence running on the same line South 57° 58' 38" East, 31.97 feet along land now or formerly of said Jen-Scot Realty, Inc. to an iron rod set in the ground; thence turning and running South 37° 02' 44" West, 66.25 feet along the northerly end of said Axe Handle Road to a drill hole set in a stone wall; thence turning and running South 41° 51' 33" West, 337.13 feet along said stone wall and land now or formerly of said Jen-Scot Realty, Inc. to an iron rod set in the ground on the easterly sideline of said Spaulding Turnpike; thence turning and running on a curve to the right with a radius of 2,715.00 feet, an arc distance of 41.68 feet to an iron rod set in the ground and being the point of beginning.

Said parcel containing 21,800 square feet, more or less.

To the extent that the real property described as part of this TRACT II overlaps with the real property described as a part of TRACT I above, such real property is conveyed solely with

quitclaim covenants and without *warranty covenants*.

Meaning and intending to describe and convey with quitclaim covenants the same premises conveyed in Quitclaim Deed of the City of Rochester to Jen-Scot Realty, Inc. dated December 7, 1994 and recorded in the Strafford County Registry of Deeds at Book 1781, Page 669.

With regard to both TRACT I and TRACT II above, further reference is made to plan entitled, "Plan of Land, Parcel No. 5, Tax Assessor's Map 59 and Parcel No. 2, Tax Assessor's Map No. 8, New Hampshire Route 125 a.k.a. Gonic Road, City of Rochester, County of Strafford, New Hampshire as prepared for Owner of Record: Jen-Scot Realty, Inc." dated September 7, 1989 and recorded in the Strafford County Registry of Deeds as Plan #37A-28.

C. ASSIGNMENT AND ASSUMPTION OF EASEMENT(S):

WHEREAS, Grantor and Unison Site Management, L.L.C., a Delaware limited liability company ("Unison"), entered into that Easement and Assignment Agreement dated October 7, 2004 ("Easement Agreement"), which was recorded in Book 3107, Page 524 in the Strafford County Registry of Deeds ("Registry"), for that property located in Rochester, Strafford County, New Hampshire, in which Grantor granted to Unison an exclusive perpetual easement for an approximately 3,400 square foot portion (said portion being the "Communication Easement") of that property identified as Tax ID Number 65140-0137-0035-0001, and being described in Book 1167, Page 674 in the Registry (the "Grantor's Property"), together with a non-exclusive perpetual easement for ingress, egress and utilities over a portion of the Grantor's Property leading from Wadleigh Road to the Easement Area ("Access and Utility Easement"); and

WHEREAS, Unison assigned its right, title and interest in the Easement Agreement to Cell Tower Lease Acquisition LLC, a Delaware limited liability company ("Cell Tower"), pursuant to that Assignment of Easement dated October 13, 2004, and recorded in Book 3107, Page 536 in the Registry; and

WHEREAS, Cell Tower assigned its right, title and interest in the Easement Agreement to Global Signal Acquisitions IV LLC, a Delaware limited liability company ("Global"), pursuant to that Assignment and Assumption of Easements and Leases dated November 8, 2011, and recorded in Book 3970, Page 226 in the Registry; and

WHEREAS, Grantor and Global entered into a First Amendment to Easement and Assignment Agreement dated October 23, 2014 ("First Amendment"), which was recorded in Book 4266, Page 126 in the Strafford County Registry of Deeds ("Registry"), and, among other things, made certain changes and/or amendments to the provisions of the Easement and Assignment Agreement dated October 7, 2004 and recorded in the Registry at Book 3107, Page 524; and

WHEREAS, this conveyance is specifically made subject to the Easement Agreement referred to above, and dated October 7, 2004 and recorded in Book 3107, Page 524 of the

Registry, as the same shall have been modified, amended and/or otherwise changed since the Easement Agreement's execution on October 7, 2004 (the "Existing Easements").

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor, being the current owner of the real property described as above as TRACT I and TRACT II, and with respect to which the Existing Easements are located, the said Grantor does by these presents hereby grant, bargain, convey, sell, assign, transfer, set over and deliver unto the said Grantee, as Assignee, its successors, transferees, and assigns forever, and Grantee, as Assignee, does, by its acceptance hereof, assume and accept all of the rights, title, interest and responsibilities and obligations of said Grantor under, in and to the Existing Easements, together with any and all ingress/egress, utilities or other rights related to the said Existing Easements.

Dated this 28th day of September, 2018.

JEN-SCOT REALTY, INC.

By: _____
Normand H. Ramsey, Duly Authorized
President

STATE OF NEW HAMPSHIRE
Strafford, SS.

Sept. 28, 2018

Personally appeared Normand H. Ramsey, duly authorized President of Jen-Scot Realty, Inc., known to me or satisfactorily proven to be the same person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purposes therein contained on behalf of Jen-Scot Realty, Inc.

Before me,

JEROME H. GROSSMAN
MY COMMISSION EXPIRES APRIL 19, 2022
NOTARY PUBLIC
NEW HAMPSHIRE

_____
Notary Public/Justice of the Peace
Print Name: _____
My Commission Expires: _____

DEED AND ASSIGNMENT AND ASSUMPTION OF EASEMENT(S) ACCEPTED BY:

Date: 9/28/18

SSG, LLC, by
Groen Construction, as d/b/a for Groen Construction, Inc., Manager

By: _____

Print Name: Fenton Groen
Title: President of Groen Construction Inc.
Duly Authorized

STATE OF NEW HAMPSHIRE
COUNTY OF STRAFFORD

On SEPT 28, 2018, before me, the undersigned officer, personally appeared Fenton Groen, President of Groen Construction, Inc. d/b/a Groen Construction, and who acknowledged Groen Construction to be the Manager of SSG, LLC, and acting in said capacity, and being authorized so to do, executed the foregoing instrument on behalf of SSG, LLC as its voluntary act and deed for the purposes therein contained.

Before me, _____
~~Justice of the Peace/~~Notary Public
Print Name: _____
My Commission Expires: _____

JEROME H. GROSSMAN
MY COMMISSION EXPIRES APRIL 19, 2022
NOTARY PUBLIC
NEW HAMPSHIRE

Stephen G. Pernaw & Company, Inc.

P.O. Box 1721 • Concord, NH 03302
tel: (603) 731-8500 • fax: (866) 929-6094 • sgp@ pernaw.com

Transportation: Engineering • Planning • Design

MEMORANDUM

Ref: 2156A

To: Bradford Jones, Vice President
Jones & Beach Engineers, Inc.

From: Stephen G. Pernaw, P.E., PTOE

Subject: Proposed Wadleigh Road Apartments
Rochester, New Hampshire

Date: October 8, 2021

As requested, our office has conducted a trip generation analysis for the proposed residential development depicted on the plan entitled: *"Overview Site Plan,"* Sheet C2, dated 9/8/21, revised 9/21/21, by your office (see Attachment 1). Available traffic count data was also researched at the NHDOT. The purpose of this memorandum is to summarize the available count data in the trip generation analysis for the subject site. Our findings with respect to trip generation, traffic operations, capacity and safety. To summarize:

Proposed Development – According to Attachment 1, the proposed development involves the construction of a four-story apartment building on an extension of Wadleigh Road, which currently provides access to the Anchorage Inn. The proposed building will contain 52 dwelling units. The existing cell tower facility will remain. Figure 1 shows the location of the subject site with respect to the area roadway system, as well as the closest NHDOT traffic count station.

Existing Conditions – NH125 functions as a state-maintained minor arterial roadway and it carries through traffic in a general north-south direction from Barrington to the south, through Rochester to Milton to the north, and points beyond. In the immediate study area, NH125 is a three-lane facility that provides one through lane in each direction, a dual-use center turn lane, and paved shoulders on both sides of the highway. In the vicinity of the Wadleigh Road intersection, the horizontal alignment of NH125 follows a gradual eastbound horizontal curve to the right, and the vertical alignment is essentially flat. The speed limit on NH125 is posted at 30 miles per hour in both directions.

Existing Traffic Volumes - Research of available traffic count data in the area revealed that the NHDOT has conducted short-term traffic count on NH125 north of Brock Street in 2019. The Annual Average Daily Traffic (AADT) volume in 2019 was 17,078 vehicles per day (vpd), up from 15,640 vpd in 2018. The diagrams on Page 3 summarize the daily and hourly variations in traffic flow on NH125 during pre-Covid conditions. The raw traffic count data is attached (see Attachments 2-4). In all cases the PM peak hour represents a worst-case situation. Interesting to note, the 2020 AADT estimate was lower at 14,414 vpd due to the Covid-19 pandemic.

Letter of Authorization

I, Fenton Groen, Groen Construction, 120 Washington Street Suite 302, Rochester, NH 03839, developer of property located in Rochester, NH, known as Tax Map 137, Lot 35-1, 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 29 Wadleigh Road in Rochester, NH.

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

Fenton Groen
Groen Construction

Date

Letter of Authorization

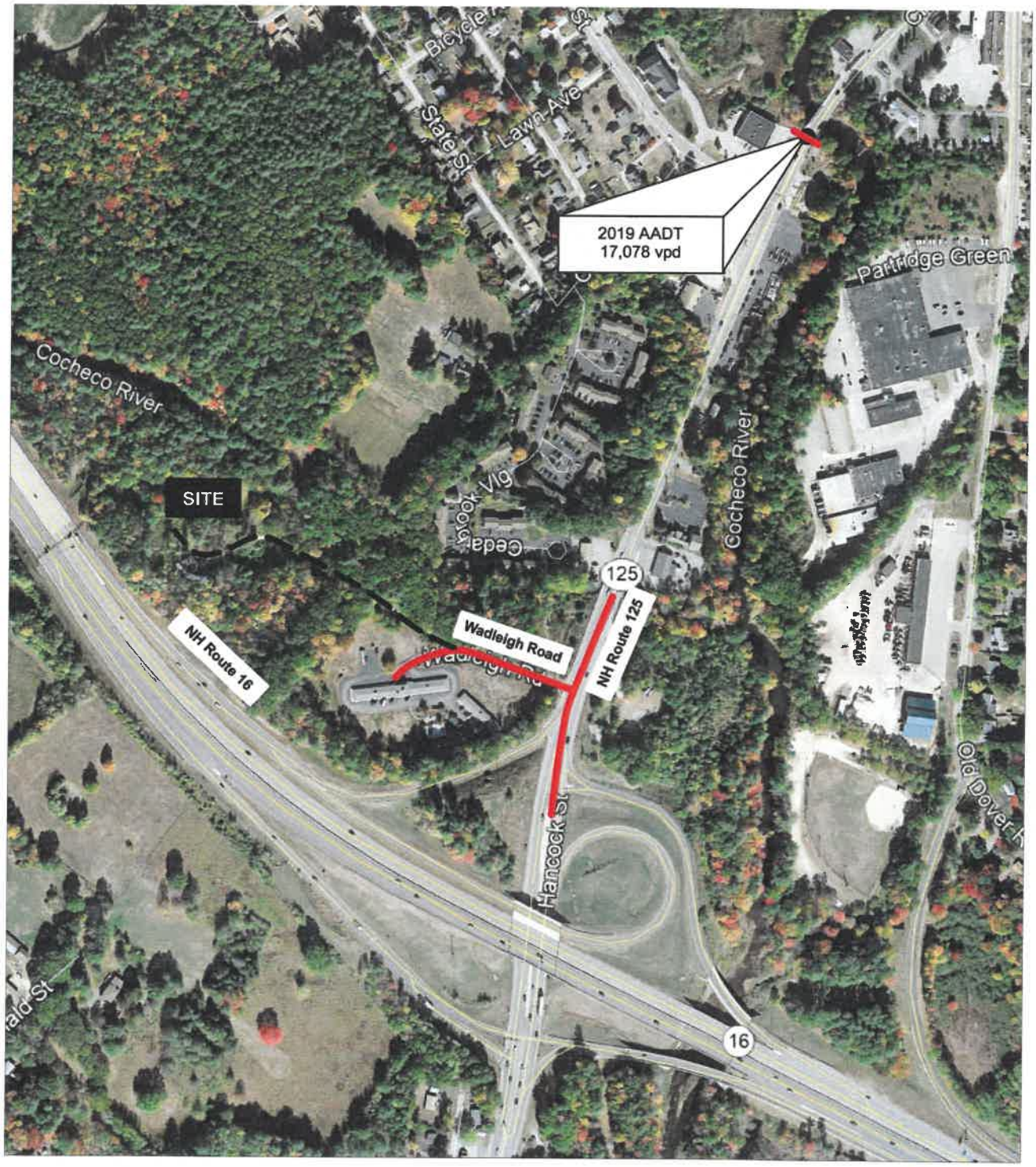
I, SSG, LLC, 120 Washington Street Suite 302, Rochester, NH 03839, owner of property located in Rochester, NH, known as Tax Map 137, Lot 35-1, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously-mentioned property. The parcel is located on 29 Wadleigh Road in Rochester, NH.

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

SSG, LLC

9/21/21
Date



= AUTOMATIC TRAFFIC RECORDER LOCATION (NHDOT)

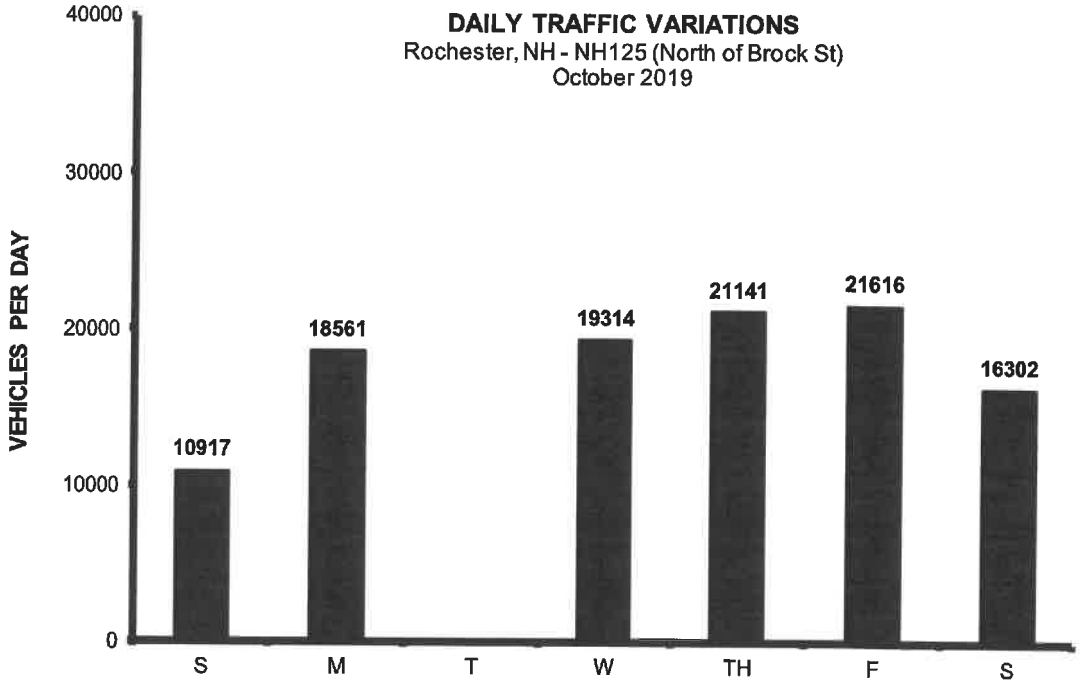
2156A

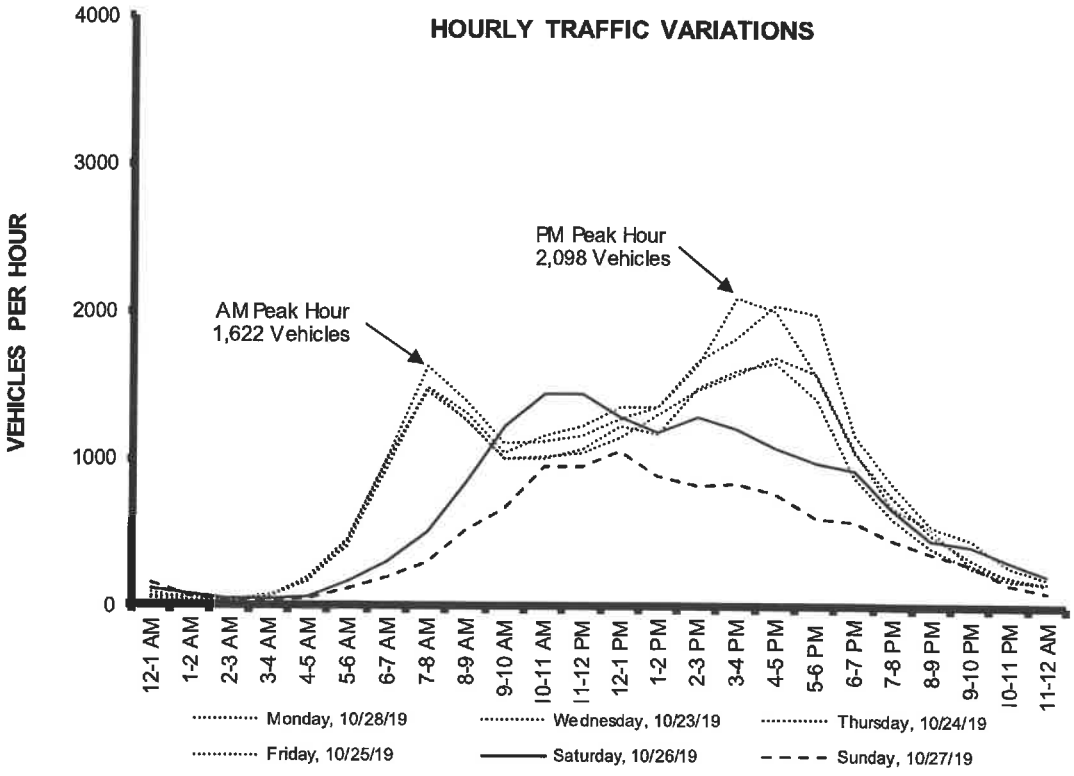
NORTH

Figure 1

Site Location

Traffic Evaluaton, Proposed Residential Development , Rochester, New Hampshire


DAILY TRAFFIC VARIATIONS
Rochester, NH - NH125 (North of Brock St)
October 2019
VEHICLES PER DAY
40000
30000
20000
10000
0
10917
18561
19314
21141
21616
16302
S
M
T
W
TH
F
S


HOURLY TRAFFIC VARIATIONS
VEHICLES PER HOUR
4000
3000
2000
1000
0
PM Peak Hour
2,098 Vehicles
AM Peak Hour
1,622 Vehicles
12-1 AM
1-2 AM
2-3 AM
3-4 AM
4-5 AM
5-6 AM
6-7 AM
7-8 AM
8-9 AM
9-10 AM
10-11 AM
11-12 PM
12-1 PM
1-2 PM
2-3 PM
3-4 PM
4-5 PM
5-6 PM
6-7 PM
7-8 PM
8-9 PM
9-10 PM
10-11 PM
11-12 AM
Monday, 10/28/19
Wednesday, 10/23/19
Thursday, 10/24/19
Friday, 10/25/19
Saturday, 10/26/19
Sunday, 10/27/19

Traffic Generation - To estimate the quantity of vehicle-trips that will be produced by the proposed residential development, Pernaw & Company, Inc. considered the standardized trip-generation rates and equations published by the Institute of Transportation Engineers (ITE)[1]. The most applicable land use category is ITE Land Use Code 221 (Multifamily Housing / Mid-Rise), which includes apartments. The following results are summarized on Table 1 and are based upon the number of dwelling units as the independent variable. This table shows that the proposed apartment building will generate approximately 11 vehicle-trips (2 entering, 9 departures) during the weekday PM peak hour period, and 21 vehicle-trips (13 arrivals, 8 departure) during the worst-case weekday PM peak hour period.

Table 1 — Trip Generation Summary

		52 Apartments [1]
Weekday Total (24 hrs.)		
	Entering	101 veh
	Exiting	101 veh
	Total	202 trips
Weekday AM Peak Hour		
	Entering	2 veh
	Exiting	9 veh
	Total	11 trips
Weekday PM Peak Hour		
	Entering	**13 veh**
	Exiting	**8 veh**
	Total	**21 trips**

[1] ITE Land Use Code 221- Multifamily Housing (Mid-Rise) 11th Edition

It is reasonable to expect that the majority of residents will utilize NH16 or NH125 to travel to/from points south depending upon their ultimate trip origin/destination. This means left-turn arrivals and right-turn departures will likely be the predominant traffic movements at the NH125/Wadleigh Road intersection. Favorably, there is an existing center turn lane to accommodate left-turn arrivals onto Wadleigh Road.

[1] Institute of Transportation Engineers, *Trip Generation Manual,* 11th edition (Washington, D.C., 2021).

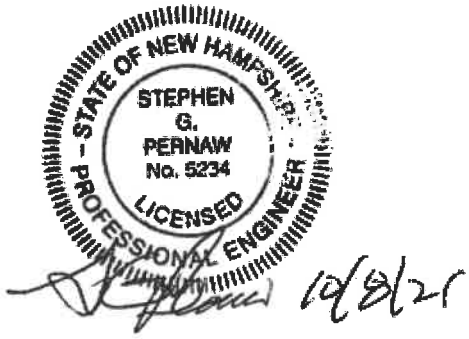
Findings & Conclusions:

1. According to data collected at the NHDOT count station that is located approximately 0.3 miles north of Wadleigh Road, this section of NH125 carried an AADT volume of approximately 17,078 vehicles per day in 2019, up from 15,640 vpd in 2018. The highest hourly traffic volumes occurred from 7:00 to 8:00 AM and from 3:00 to 4:00 or 4:00 to 5:00 PM on weekdays. The 2020 AADT was lower at 14,414 vpd due to the pandemic.

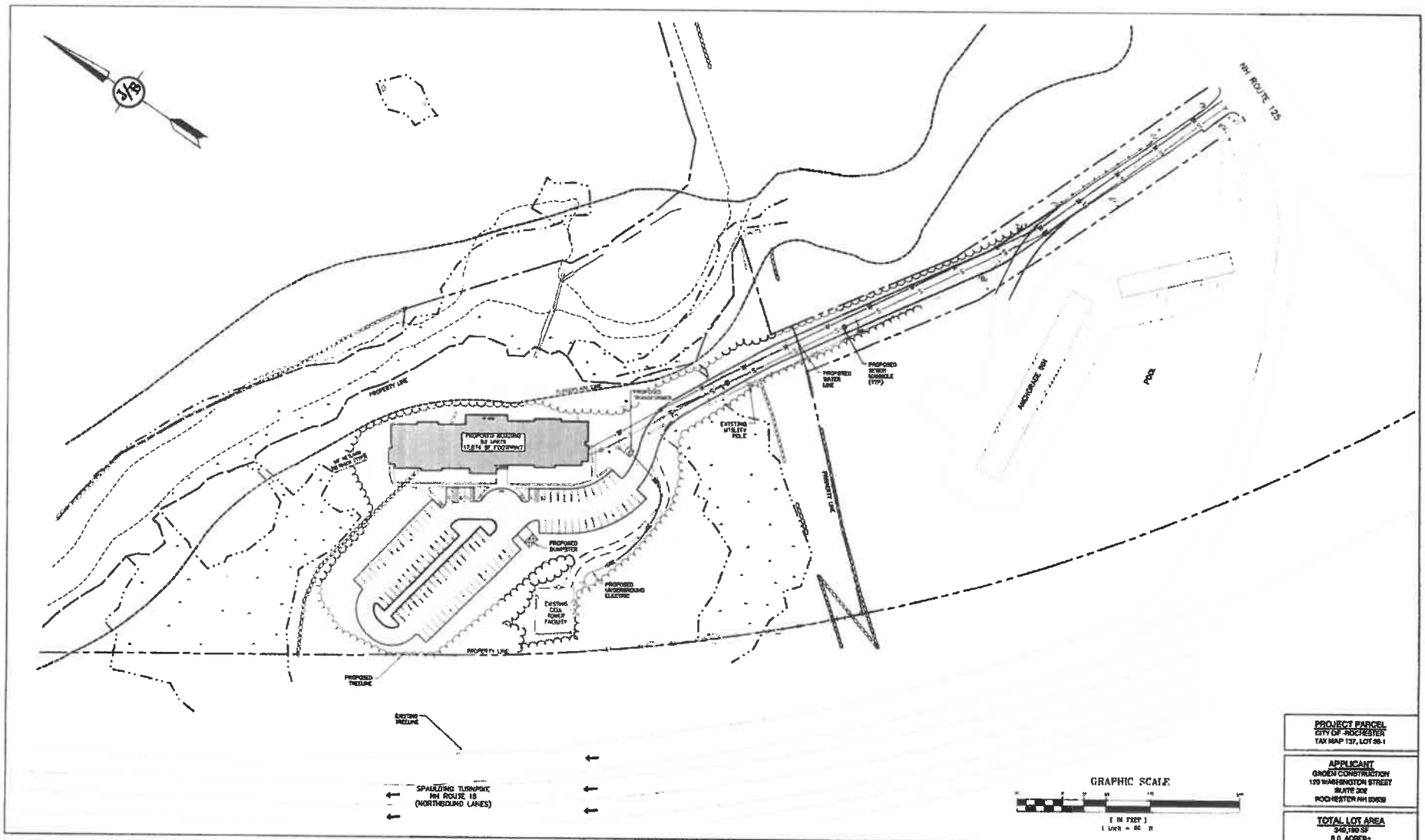
2. The trip generation analyses indicates that the proposed residential apartment building will generate approximately 11 vehicle-trips during the AM peak hour (2 arrivals, 9 departures) and 21 vehicle-trips during the PM peak hour (13 arrivals, 8 departures) when completed.

3. Development sites that generate fewer than 500 vehicle-trips per day are generally considered to be "low" volume traffic generators. Based on the daily estimate of 202 vehicle-trips per day (see Table 1), the proposed apartment building is not considered to be a major traffic generator.

Attachments



ATTACHMENTS



PROJECT PARCEL	CITY OF ROCHESTER TAX MAP 137, LOT 55-1
APPLICANT	GROEN CONSTRUCTION 120 WASHINGTON STREET SUITE 302 ROCHESTER NH 03839
TOTAL LOT AREA	349,780 SF 8.0 ACRES±

Designer: LAZ | Drafter: LAZ | Date: 8/6/21
Checked: BJQ | Scale: 1" = 30' | Project No: 21137
Drawing Name: 21137 PLAN.dwg

REV	DATE	REVISION	BY
1	8/31/21	ISSUED FOR PLANNING BOARD	LAZ
0	8/6/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603 772-4746
FAX: 603-772-0227
E-MAIL: JOE@JONESANDBEACH.COM

Plan Name:	OVERVIEW SITE PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C2
SHEET 1 OF 3
JBE PROJECT NO 21137

Attachment 1

New Hampshire DOT Department of Transportation

MS2

Transportation Data Management System

List View | All DIRs

Record 1 of 1 Goto Record go

Location ID	82389074	**MPO ID**	
Type	SPOT	**HPMS ID**	
On NHS	No	**On HPMS**	Yes
LRS ID	S0000125__	**LRS Loc Pt.**	
SF Group	04	**Route Type**	
AF Group	04	**Route**	NH 125
GF Group	E	**Active**	Yes
Class Dist Grp	Default	**Category**	3
Seas Clss Grp	Default		
WIM Group	Default		
QC Group	Default		
Fnct'l Class	Minor Arterial	**Milepost**	
Located On	Gonic Rd		
Loc On Alias	NH 125 (GONIC RD) NORTH OF BROCK ST (SB-NB) (81389037-81389038)		

More Detail

STATION DATA

Directions: 2-WAY | NB | SB

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2020	14,414[3]		12	51	13,117 (91%)	1,297 (9%)	Grown from 2019
	2019	17,078	2,098	12	51	15,645 (92%)	1,433 (8%)	
	2018	15,640[3]				14,420 (92%)	1,220 (8%)	Grown from 2017
	2017	15,333[3]				14,230 (93%)	1,103 (7%)	Grown from 2016
	2016	15,032[3]				13,710 (91%)	1,322 (9%)	Grown from 2015

> | >>| 1-5 of 16

Travel Demand Model

	Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV

VOLUME COUNT

	Date	Int	Total
	Mon 10/28/2019	60	18,561
	Sun 10/27/2019	60	10,917
	Sat 10/26/2019	60	16,302
	Fri 10/25/2019	60	21,616
	Thu 10/24/2019	60	21,141
	Wed 10/23/2019	60	19,314
	Thu 10/20/2016	60	19,627
	Wed 10/19/2016	60	19,717

VOLUME TREND

Year	Annual Growth
2020	-16%
2019	9%
2018	2%
2017	2%
2016	2%
2015	3%
2014	2%

New Hampshire DOT
Department of Transportation

MS2
Transportation Data Management System

Excel Version

Weekly Volume Report			
Location ID:	82389074	**Type:**	SPOT
Located On:	Gonic Rd	:	
Direction:	2-WAY		
Community:	ROCHESTER	**Period:**	Mon 10/21/2019 - Sun 10/27/2019
AADT:	17078		

Start Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Avg	Graph
12:00 AM			84	57	62	115	153	94	0.5%
1:00 AM			43	64	61	71	65	61	0.3%
2:00 AM			44	41	46	51	38	44	0.2%
3:00 AM			76	62	59	54	32	57	0.3%
4:00 AM			174	199	173	67	50	133	0.7%
5:00 AM			438	448	420	167	116	318	1.8%
6:00 AM			989	983	921	303	190	677	3.8%
7:00 AM			1460	1622	1482	513	304	1,076	6.0%
8:00 AM			1258	1389	1308	849	521	1,065	6.0%
9:00 AM			1007	1108	1046	1224	663	1,010	5.7%
10:00 AM			1018	1123	1152	1439	955	1,137	6.4%
11:00 AM			1046	1155	1222	1441	953	1,163	6.5%
12:00 PM			1145	1269	1353	1286	1056	1,222	6.8%
1:00 PM			1302	1353	1351	1189	879	1,215	6.8%
2:00 PM			1474	1646	1671	1284	816	1,378	7.7%
3:00 PM			1581	2098	1823	1214	835	1,510	8.5%
4:00 PM			1694	2004	2040	1084	768	1,518	8.5%
5:00 PM			1577	1565	1974	970	592	1,336	7.5%
6:00 PM			1052	1041	1153	925	578	950	5.3%
7:00 PM			671	742	836	669	455	675	3.8%
8:00 PM			533	500	543	448	364	478	2.7%
9:00 PM			285	323	454	409	282	351	2.0%
10:00 PM			211	200	277	307	151	229	1.3%
11:00 PM			152	149	189	223	101	163	0.9%
Total	**0**	**0**	**19,314**	**21,141**	**21,616**	**16,302**	**10,917**		
24hr Total			19314	21141	21616	16302	10917	17,858	
AM Pk Hr			7:00	7:00	7:00	11:00	10:00		
AM Peak			1460	1622	1482	1441	955	1,392	
PM Pk Hr			4:00	3:00	4:00	12:00	12:00		
PM Peak			1694	2098	2040	1286	1056	1,635	
% Pk Hr			8.77%	9.92%	9.44%	8.84%	9.67%	9.33%	

New Hampshire DOT
Department of Transportation

MS2
Transportation Data Management System

Excel Version

Weekly Volume Report			
Location ID:	82389074	**Type:**	SPOT
Located On:	Gonic Rd	:	
Direction:	2-WAY		
Community:	ROCHESTER	**Period:**	Mon 10/28/2019 - Sun 11/3/2019
AADT:	17078		

Start Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Avg	Graph
12:00 AM	56							56	0.3%
1:00 AM	33							33	0.2%
2:00 AM	31							31	0.2%
3:00 AM	58							58	0.3%
4:00 AM	175							175	0.9%
5:00 AM	406							406	2.2%
6:00 AM	962							962	5.2%
7:00 AM	1487							1,487	8.0%
8:00 AM	1262							1,262	6.8%
9:00 AM	1006							1,006	5.4%
10:00 AM	1003							1,003	5.4%
11:00 AM	1068							1,068	5.8%
12:00 PM	1224							1,224	6.6%
1:00 PM	1176							1,176	6.3%
2:00 PM	1485							1,485	8.0%
3:00 PM	1595							1,595	8.6%
4:00 PM	1648							1,648	8.9%
5:00 PM	1402							1,402	7.6%
6:00 PM	870							870	4.7%
7:00 PM	602							602	3.2%
8:00 PM	399							399	2.1%
9:00 PM	273							273	1.5%
10:00 PM	175							175	0.9%
11:00 PM	165							165	0.9%
Total	**18,561**	**0**	**0**	**0**	**0**	**0**	**0**		
24hr Total	18561							18,561	
AM Pk Hr	7:00								
AM Peak	1487							1,487	
PM Pk Hr	4:00								
PM Peak	1648							1,648	
% Pk Hr	8.88%							8.88%	

Query

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
221

LAND USE GROUP:
(200-299) Residential

LAND USE :
221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

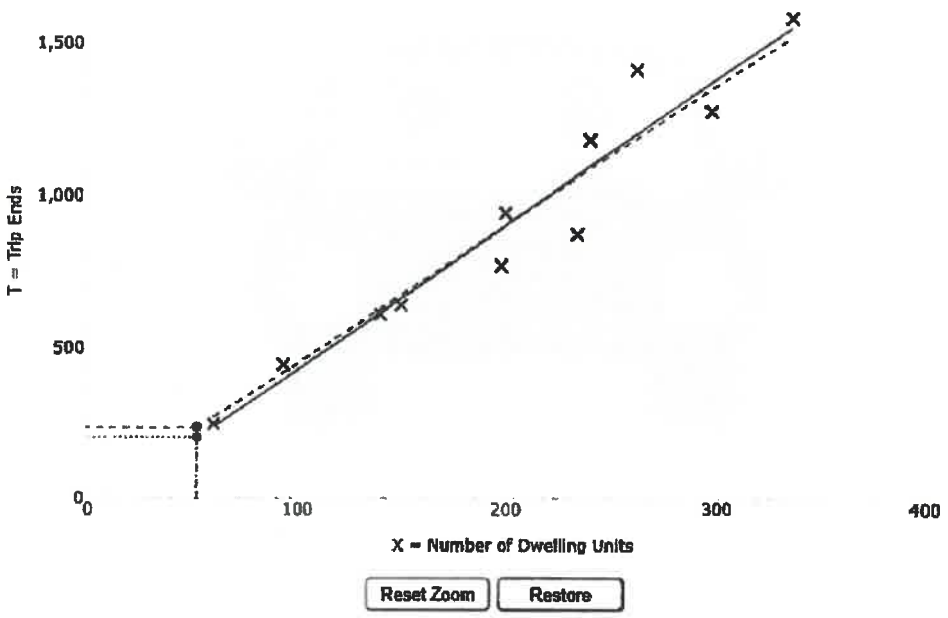
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
52 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) - Not Close to Rail Transit (221) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
11

Avg. Num. of Dwelling Units:
201

Average Rate:
4.54

Range of Rates:
3.76 - 5.40

Standard Deviation:
0.51

Fitted Curve Equation:
T = 4.77(X) - 46.46

R^2:
0.93

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 236 (Total), 118 (Entry), 118 (Exit)
Fitted Curve: 202 (Total), 101 (Entry), 101 (Exit)

Attachment 5

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
221

LAND USE GROUP:
(200-299) Residential

LAND USE:
221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

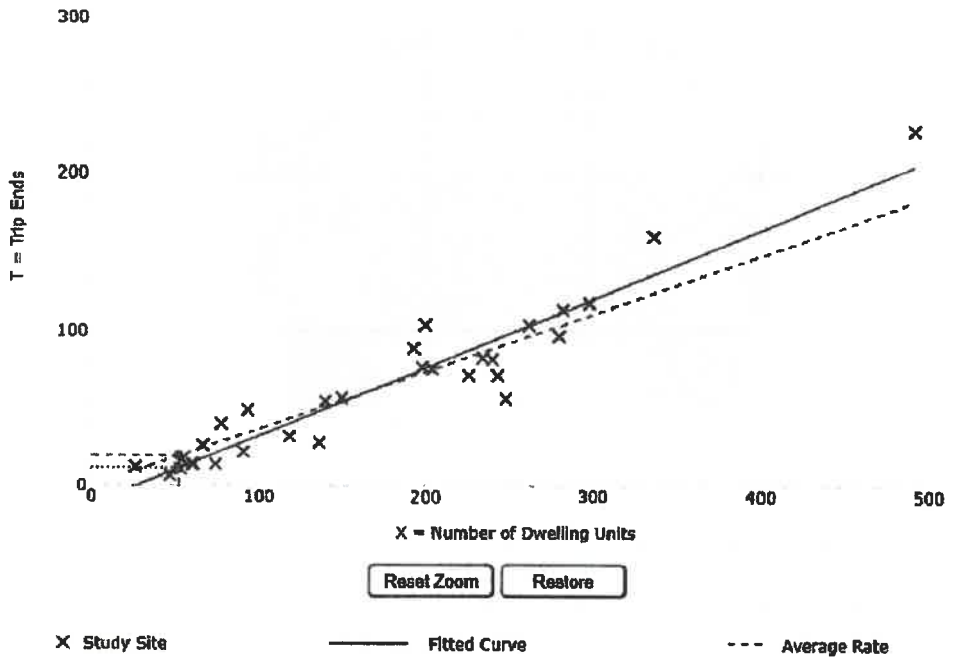
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
52 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) - Not Close to Rail Transit (221) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
30

Avg. Num. of Dwelling Units:
173

Average Rate:
0.37

Range of Rates:
0.15 - 0.53

Standard Deviation:
0.09

Fitted Curve Equation:
T = 0.44(X) - 11.61

R^2:
0.91

Directional Distribution:
23% entering, 77% exiting

Calculated Trip Ends:
Average Rate: 19 (Total), 4 (Entry), 15 (Exit)
Fitted Curve: 11 (Total), 2 (Entry), 9 (Exit)

Attachment 6

Query

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
221

LAND USE GROUP:
(200-299) Residential

LAND USE :
221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

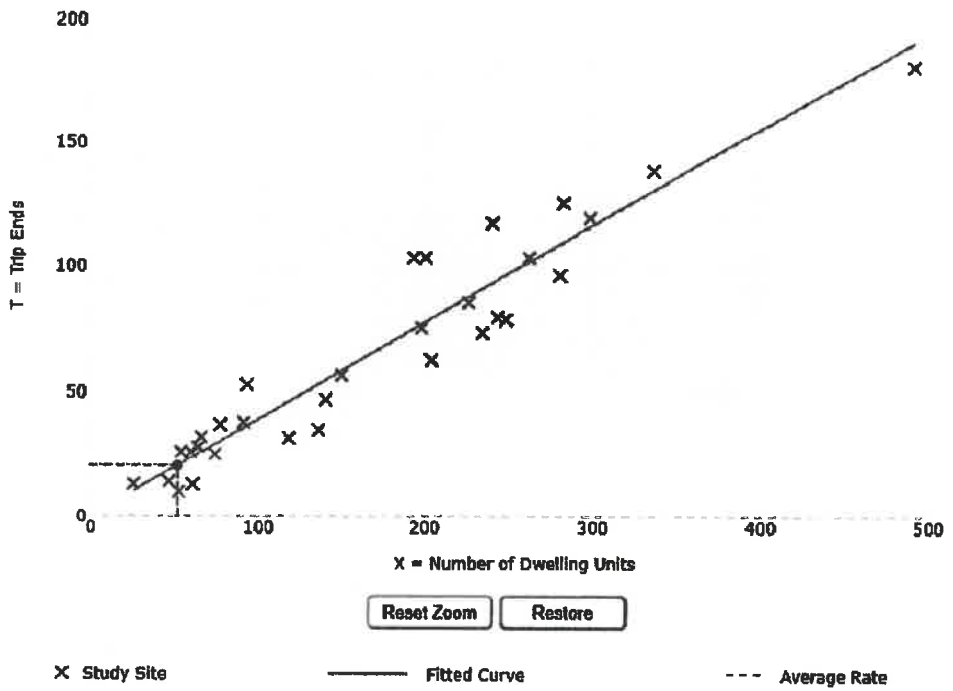
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
52 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) - Not Close to Rail Transit (221) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
31

Avg. Num. of Dwelling Units:
169

Average Rate:
0.39

Range of Rates:
0.19 - 0.57

Standard Deviation:
0.08

Fitted Curve Equation:
T = 0.39(X) + 0.34

R^2
0.91

Directional Distribution:
61% entering, 39% exiting

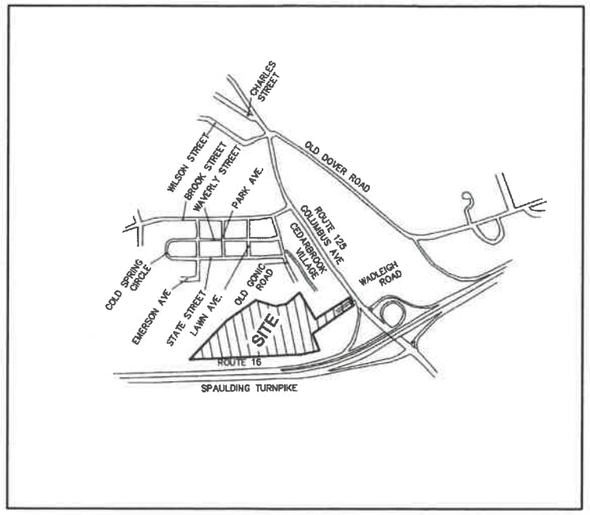
Calculated Trip Ends:
Average Rate 20 (Total), 12 (Entry), 8 (Exit)
Fitted Curve 21 (Total), 13 (Entry), 8 (Exit)

Attachment 7

RESIDENTIAL DEVELOPMENT
"WADLEIGH ROAD APARTMENTS"
TAX MAP 137, LOT 35-1
WADLEIGH ROAD, ROCHESTER, NH

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		SETBACK LINES
		CENTERLINE
		FRESHWATER WETLANDS LINE
		STREAM CHANNEL
		TREE LINE
		STONEWALL
		FENCE
		SOIL BOUNDARY
		FLOOD PLAIN LINE
		EASEMENT
100		MAJOR CONTOUR
98		MINOR CONTOUR
		EDGE OF PAVEMENT
		VERTICAL GRANITE CURB
		SLOPE GRANITE CURB
X	X	SILT FENCE
D	D	DRAINAGE LINE
S	S	SEWER LINE
		GAS LINE
		WATER LINE
		WATER SERVICE
		OVERHEAD ELECTRIC
		UNDERGROUND ELECTRIC
		GUARDRAIL
		UNDERDRAIN
		FIRE PROTECTION LINE
		THRUST BLOCK
		IRON PIPE/IRON ROD
		DRILL HOLE
		IRON ROD/DRILL HOLE
		STONE/GRANITE BOUND
100.00	100.00	PAVEMENT SPOT GRADE
		BENCHMARK (TBM)
		DOUBLE POST SIGN
		SINGLE POST SIGN
TP1		TEST PIT
		FAILED TEST PIT
		MONITORING WELL
		TREES AND BUSHES
		UTILITY POLE
		LIGHT POLES
		DRAIN MANHOLE
		SEWER MANHOLE
		HYDRANT
		WATER GATE
		WATER SHUT OFF
		REDUCER
		SINGLE GRATE CATCH BASIN
		DOUBLE GRATE CATCH BASIN
		TRANSFORMER
		CULVERT W/WINGWALLS
		CULVERT W/FLARED END SECTION
		CULVERT W/STRAIGHT HEADWALL
		STONE CHECK DAM
		DRAINAGE FLOW DIRECTION
		WETLAND IMPACT
		RIPRAP
		OPEN WATER
		FRESHWATER WETLANDS
		STABILIZED CONSTRUCTION ENTRANCE
		CONCRETE
		GRAVEL
		SNOW STORAGE
		RETAINING WALL



LOCUS MAP
SCALE 1" = 1000'

SHEET INDEX

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

TRAFFIC ENGINEER
STEPHEN G. PERNAW & COMPANY, INC.
P.O. BOX 1821
CONCORD, NH 03302
(603) 731-8500
CONTACT: STEPHEN G. PERNAW
EMAIL: SGP@PERNAW.COM

WETLAND CONSULTANT
GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DR., BUILDING 2, UNIT H
EXETER, NH 03833-7526
(603) 778-0644
CONTACT: JAMES GOVE
EMAIL: JGOVE@GESINC.BIZ

LANDSCAPE DESIGNER
LM LAND DESIGN, LLC
11 SOUTH ROAD
BRENTWOOD, NH 03833
(603) 770-7728
CONTACT: LISE McNAUGHTON
LMLANDDESIGN@GMAIL.COM

WATER AND SEWER
ROCHESTER DEPARTMENT OF PUBLIC WORKS
45 OLD DOVER ROAD
ROCHESTER, NH 03867
(603) 332-4096
CONTACT: MICHAEL BEZANSON, P.E.

ELECTRIC
EVERSOURCE ENERGY
74 OLD DOVER ROAD
ROCHESTER, NH 03867
(603) 555-5334
CONTACT: MARK BOUCHER

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

CABLE TV
COMCAST COMMUNICATION CORPORATION
334-B CALEF HIGHWAY
EPPING, NH 03042-2325
(603) 679-5695

NATURAL GAS
UNITIL SERVICE CORP.
325 WEST ROAD
PORTSMOUTH, NH 03801
(603) 294-5261
MACLEAND@UNITIL.COM

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

APPROVED - ROCHESTER, NH
PLANNING BOARD

DATE:

PRELIMINARY
NOT FOR
CONSTRUCTION

Design: LAZ	Draft: LAZ	Date: 8/8/21
Checked: BAJ	Scale: AS NOTED	Project No.: 21137
Drawing Name: 21137-PLAN.dwg		

STATE OF NEW HAMPSHIRE — MICHAEL J. KERVAN No. 9348 LICENSED PROFESSIONAL ENGINEER — 10/27/2021

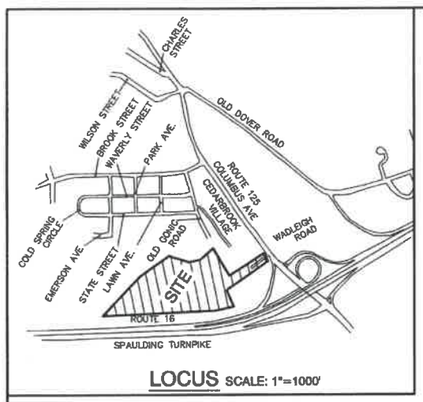
REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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

Plan Name:	COVER SHEET
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
CS
SHEET 1 OF 22
JBE PROJECT NO. 21137

PROJECT NAME AND LOCATION
JBE # 21137 REVISION X.XXXXXXX



LOCUS SCALE: 1"=1000'

J/B

TAX MAP 131 LOT 8
CEDARBROOK VILLAGE CONDO ASSOCIATION
14A CEDARBROOK VILLAGE
ROCHESTER, NH 03867
BK 1161 PG 202

TAX MAP 137 LOT 37
CITY OF ROCHESTER
31 WAKEFIELD STREET
ROCHESTER, NH 03839
BK 1224 PG 492

TAX MAP 131 LOT 10
WILLIAM B LACOUTURE
208 OLIVER CREEK ROAD
ELLIJAY, GA 30536
BK 4940 PG 24

TAX MAP 137 LOT 35
JRS, LLC.
479 GONIC ROAD
ROCHESTER, NH 03839
BK 4592 PG 695

AXE HANDEL BROOK

EXISTING DAM

EXISTING CELL TOWER FACILITY

ANCHORAGE INN

POOL

NH ROUTE 125

NH ROUTE 16

SPAULDING TURNPIKE
NH ROUTE 16
(NORTHBOUND LANES)

50' WETLAND SETBACK (TYP.)

PROPERTY LINE

PRELIMINARY NOT FOR CONSTRUCTION

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

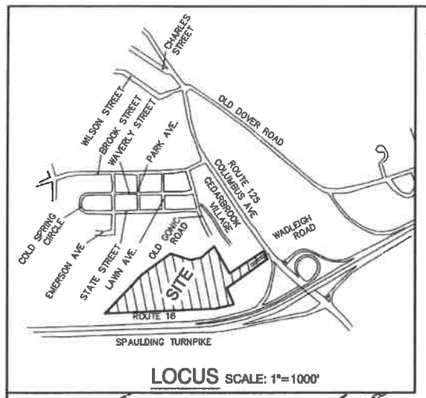
Design: LAZ	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Drawing Name: 21137-PLAN.dwg	Date: 9/8/21
	Project No.: 21137

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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: EXISTING CONDITIONS OVERVIEW PLAN
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
OVR EX
SHEET 2 OF 22
JBE PROJECT NO. 21137



LOCUS SCALE: 1"=1000'

PROJECT PARCEL
CITY OF - ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

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Date: 9/8/21
Project No.: 21137

STATE OF NEW HAMPSHIRE - MICHAEL J. KIRWAN No. 9340 - LICENSED PROFESSIONAL ENGINEER - 10/27/(02)

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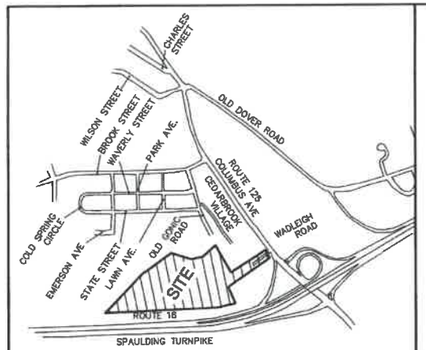
Plan Name: EXISTING CONDITIONS PLAN
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

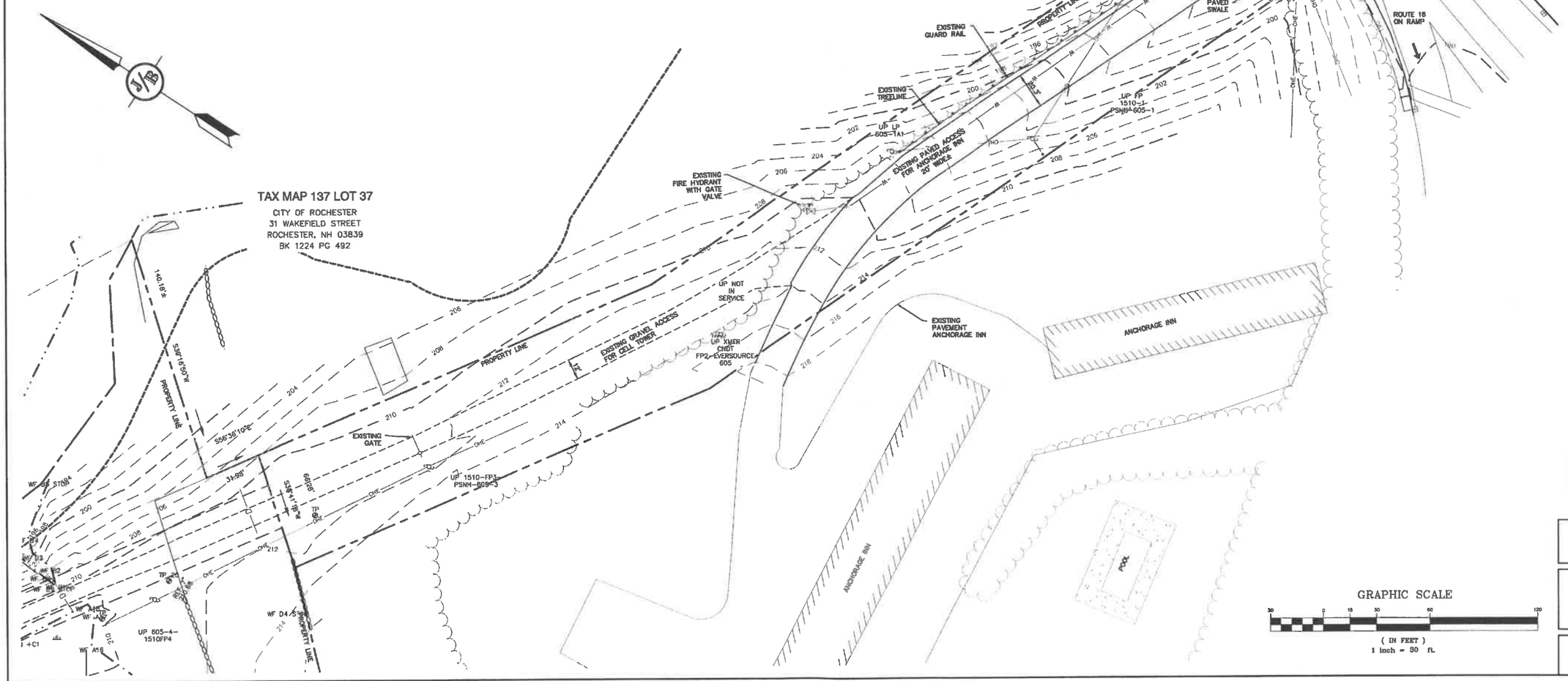
DRAWING No.
C1
SHEET 3 OF 22
JBE PROJECT NO. 21137



LOCUS SCALE: 1"=1000'

EXISTING CONDITIONS NOTES:

1. 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 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 1-888-DIG-SAFE (1-888-344-7233).
2. SUBJECT PROPERTY IS PARTIALLY LOCATED WITHIN FEDERALLY DESIGNATED 100 YEAR FLOOD HAZARD ZONE. REFERENCE FEMA COMMUNITY PANEL NO. 33017 C0211D, DATED MAY 17, 2005.
3. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL DURING SUMMER, 2021, USING (EQUIPMENT) AND IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
   - A. THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
   - B. THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
   - C. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
   - D. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.
7. A TEMPORARY CULVERT AND ROADBED SHALL BE IN PLACE PRIOR TO ANY USE OF A WETLAND CROSSING.
8. WETLAND IMPACTS SHALL NOT OCCUR UNTIL ALL PERMITS HAVE BEEN ACQUIRED AND IMPACT MITIGATION REQUIREMENTS HAVE BEEN SATISFIED.
9. TEST PITS PERFORMED BY BRAD JONES, JONES & BEACH ENGINEERS, INC., 10/1/21.
10. WETLAND BOUNDARIES AND CONSTRUCTION LIMITS ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.



PRELIMINARY NOT FOR CONSTRUCTION

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

Design: LAZ	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Drawing Name: 21137-PLAN.dwg	Date: 9/8/21
	Project No.: 21137

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0	9/8/21	ISSUED FOR REVIEW	LAZ

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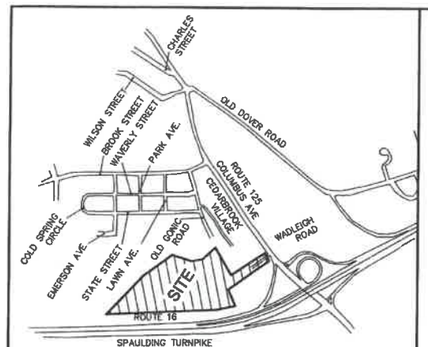
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	EXISTING CONDITIONS PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C2
SHEET 4 OF 22
JBE PROJECT NO. 21137



LOCUS SCALE: 1"=1000'

TAX MAP 131 LOT 8
CEDARBROOK VILLAGE CONDO ASSOCIATION
14A CEDARBROOK VILLAGE
ROCHESTER, NH 03867
BK 1161 PG 202

TAX MAP 131 LOT 10
WILLIAM B LACOUTURE
208 OLIVER CREEK ROAD
ELLIJAY, GA 30536
BK 4940 PG 24

TAX MAP 137 LOT 37
CITY OF ROCHESTER
31 WAKEFIELD STREET
ROCHESTER, NH 03839
BK 1224 PG 492

TAX MAP 137 LOT 35
JRS, LLC.
479 GONIC ROAD
ROCHESTER, NH 03839
BK 4592 PG 695

COLUMBUS AVE. AKA NH ROUTE 125

EXISTING 20'± ACCESS ROAD TO BE WIDENED TO 22' TRAVELWAY WITH 4' BIKE LANE

WADLEIGH ROAD

SLOPED GRANITE CURB BOTH SIDES

RETAINING WALL

ANCHORAGE INN

END ANCHORAGE INN DRIVEWAY RECONSTRUCTION

POOL

EXISTING DAM

AXE HANDEL BROOK

1355'± ALONG ALONG BROOK PROPERTY/PROPERTY LINE

FLOOD ELEV.

RETAINING WALL

PROPOSED BUILDING
82 UNITS
17,874 SF FOOTPRINT

SURVEY TIE-LINE S81°33'21"E 1214.42'

50' WETLAND SETBACK (TYP)

PROPOSED FENCED DUMPSTERS ON CONCRETE DUMPER PAD

EXISTING CELL TOWER FACILITY

PROPOSED TREELINE

PROPERTY LINE

N33°26'07"W 671.16'

RETAINING WALL 4' HIGH MAX.

NH ROUTE 16

L=573.61'
R=2715.00'
D=12°06'18"
S39°29'16"E
C=572.54'

FORMER OLD GONIC ROAD REFERENCE BK 1781 PG 869

S45°10'22"W 336.64'
PROPERTY LINE

S40°15'50"W 140.18'±

S56°36'10"E

SPAULDING TURNPIKE
NH ROUTE 16
(NORTHBOUND LANES)

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

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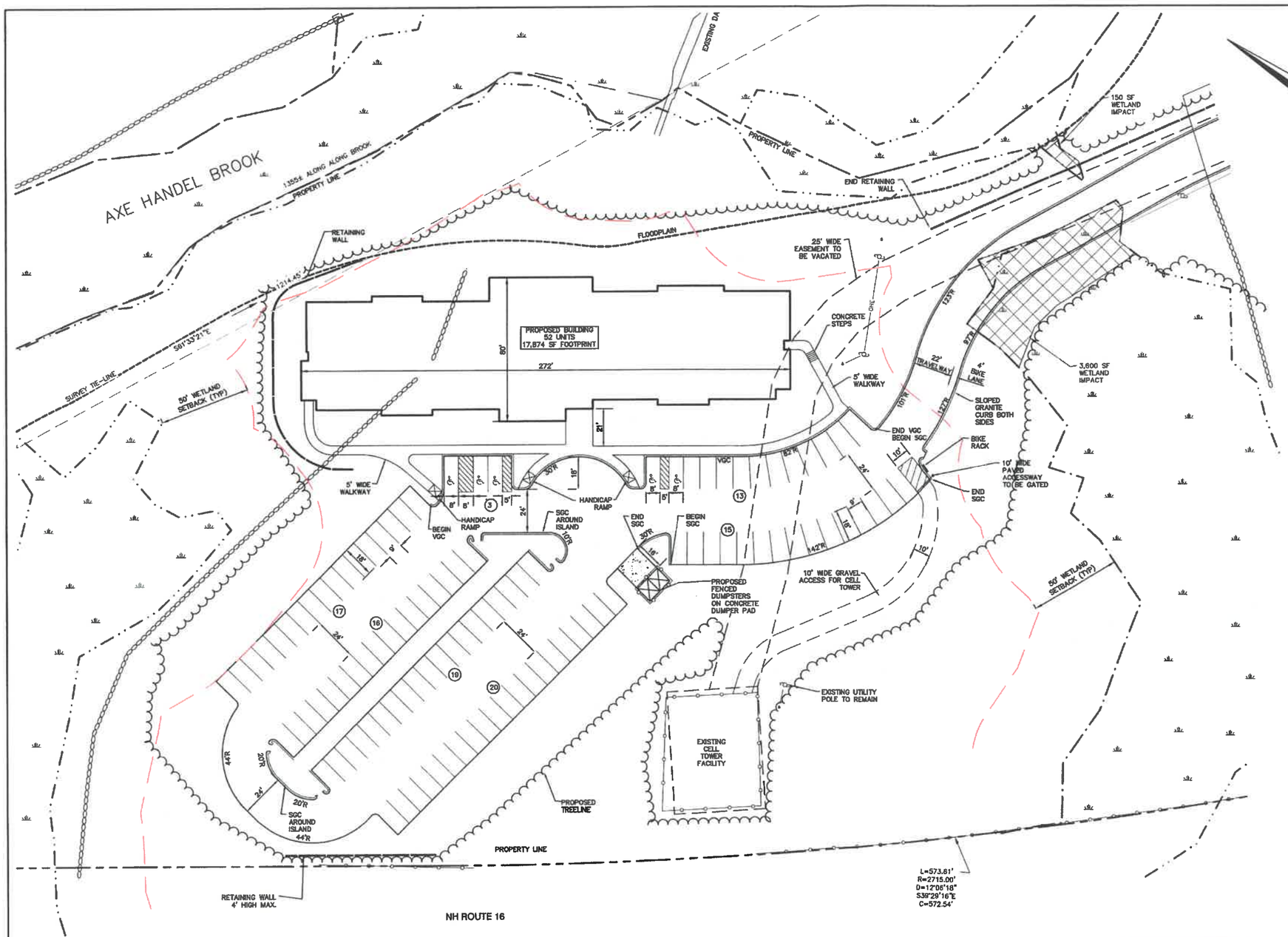
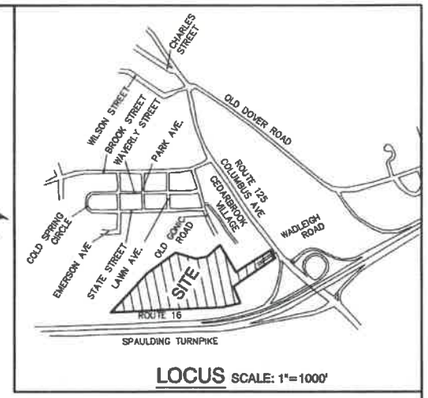
Plan Name: OVERVIEW SITE PLAN
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C2
SHEET 5 OF 22
JBE PROJECT NO. 21137





LOCUS SCALE: 1"=1000'

SITE NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW A LAYOUT FOR A FIFTY-TWO (52) UNIT APARTMENT COMPLEX ON TAX MAP 137, LOT 35-1. ACCESS FOR THE SITE WILL BE FROM WADLEIGH ROAD. PROJECT TO BE SERVED BY ELECTRIC, MUNICIPAL SEWER & PUBLIC WATER.

2. ZONING DISTRICT: HIGHWAY COMMERCIAL
   LOT AREA MINIMUM = 20,000 SF
   LOT FRONTAGE MINIMUM = 100'
   LOT AREA PER DWELLING UNIT = 7,500 SF
   BUILDING SETBACKS
   FRONT SETBACK = 20'
   SIDE SETBACK = 10'
   REAR SETBACK = 25'
   WETLAND SETBACK = 50
   PAVEMENT SETBACKS
   FRONT SETBACK = 10'
   SIDE SETBACK = 5'
   REAR SETBACK = 10'
   MAX. LOT COVERAGE = 85%

3. PARKING CALCULATIONS:
   TOTAL NUMBER OF UNITS = 52.
   2 SPACES PER UNIT = 104 SPACES REQUIRED
   SPACES PROVIDED = 104 SPACES (INCLUDING 5 HANDICAP ACCESSIBLE SPACES)

4. THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS AND LIDAR CONTOUR INFORMATION. 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 ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.

5. ALL CONSTRUCTION SHALL CONFORM TO TOWN STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.

6. SUBJECT PROPERTY IS PARTIALLY LOCATED WITHIN FEDERALLY DESIGNATED 100 YEAR FLOOD HAZARD ZONE A. REFERENCE FEMA COMMUNITY PANEL NO. 33017 C0211D, DATED MAY 17, 2005.

7. LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.

8. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.). THIS DOCUMENT IS TO BE KEPT ONSITE AT ALL TIMES AND UPDATED AS REQUIRED.

9. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.

10. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS A VARIANCE IS OTHERWISE REQUESTED.

11. 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.

12. 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.

13. ALL STOP BARS SHALL BE 18" IN WIDTH IN A COLOR OF WHITE; ALL TRAFFIC ARROWS SHALL BE PAINTED IN A COLOR OF WHITE.

14. ALL CURBING TO BE SLOPED GRANITE WITH A MINIMUM RADIUS OF 2', UNLESS OTHERWISE NOTED.

15. ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PROVIDED BY THE OWNER. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION. BUILDING DIMENSIONS AND AREAS TO BE TO OUTSIDE OF MASONRY, UNLESS OTHERWISE NOTED.

16. ALL OUTDOOR DISPLAY AREAS SHALL BE MAINTAINED IN A NEAT AND ORDERLY FASHION.

17. SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.

18. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

PRELIMINARY NOT FOR CONSTRUCTION

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

Design: LAZ	Draft: LAZ	Date: 9/8/21
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Drawing Name: 21137-PLAN.dwg		

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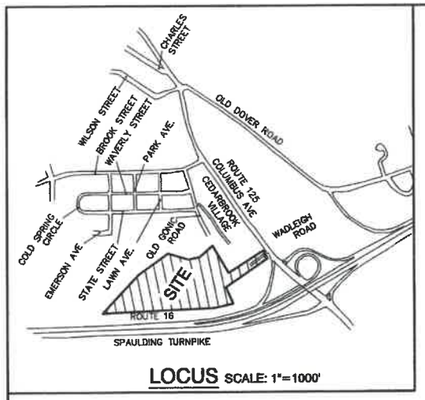
Plan Name:	SITE PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C3
SHEET 6 OF 22
JBE PROJECT NO. 21137



LOCUS SCALE: 1"=1000'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT PARCEL
CITY OF -ROCHESTER
TAX MAP 137, LOT 35-1

APPLICANT
GROEN CONSTRUCTION
120 WASHINGTON STREET
SUITE 302
ROCHESTER NH 03839

TOTAL LOT AREA
8.4 ACRES±

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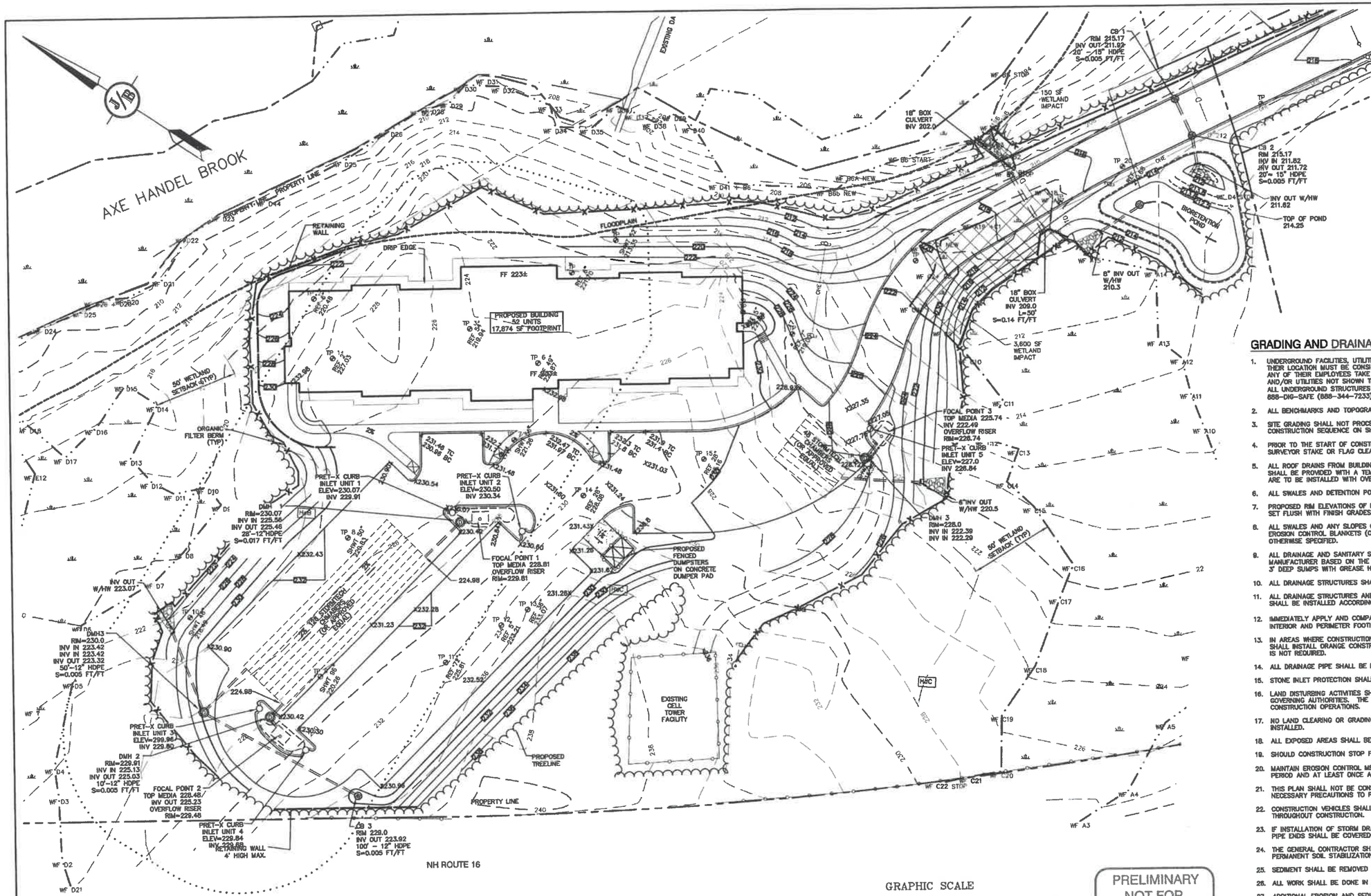
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	SITE PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C4
SHEET 7 OF 22
JBE PROJECT NO. 21137



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

PRELIMINARY NOT FOR CONSTRUCTION

GRADING AND DRAINAGE NOTES:

1. 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).
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
3. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
4. 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.
5. ALL ROOF DRAINS FROM BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT THE END. ALL EXTERIOR ROOF DOWNSPOUTS ARE TO BE INSTALLED WITH OVERFLOW DEVICES.
6. ALL SWALES AND DETENTION PONDS ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
7. PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
8. 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.
9. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 3' DEEP SUMPS WITH GREASE HOODS, UNLESS OTHERWISE NOTED.
10. ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED.
11. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC H20 LOADING AND SHALL BE INSTALLED ACCORDINGLY.
12. IMMEDIATELY APPLY AND COMPACT STONE BASE FOR BUILDING PAD TO +/-½" PRIOR TO EXCAVATING INTERIOR AND PERIMETER FOOTINGS.
13. 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.
14. ALL DRAINAGE PIPE SHALL BE NON-PERFORATED ADS N-12 OR APPROVED EQUAL.
15. STONE INLET PROTECTION SHALL BE PLACED AT ALL CATCH BASINS. SEE DETAIL WITHIN THE DETAIL SHEETS.
16. 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.
17. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
18. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING.
19. SHOULD CONSTRUCTION STOP FOR LONGER THAN 3 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
20. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.5" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
21. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
22. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION.
23. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
24. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
25. SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
26. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
27. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
28. SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.

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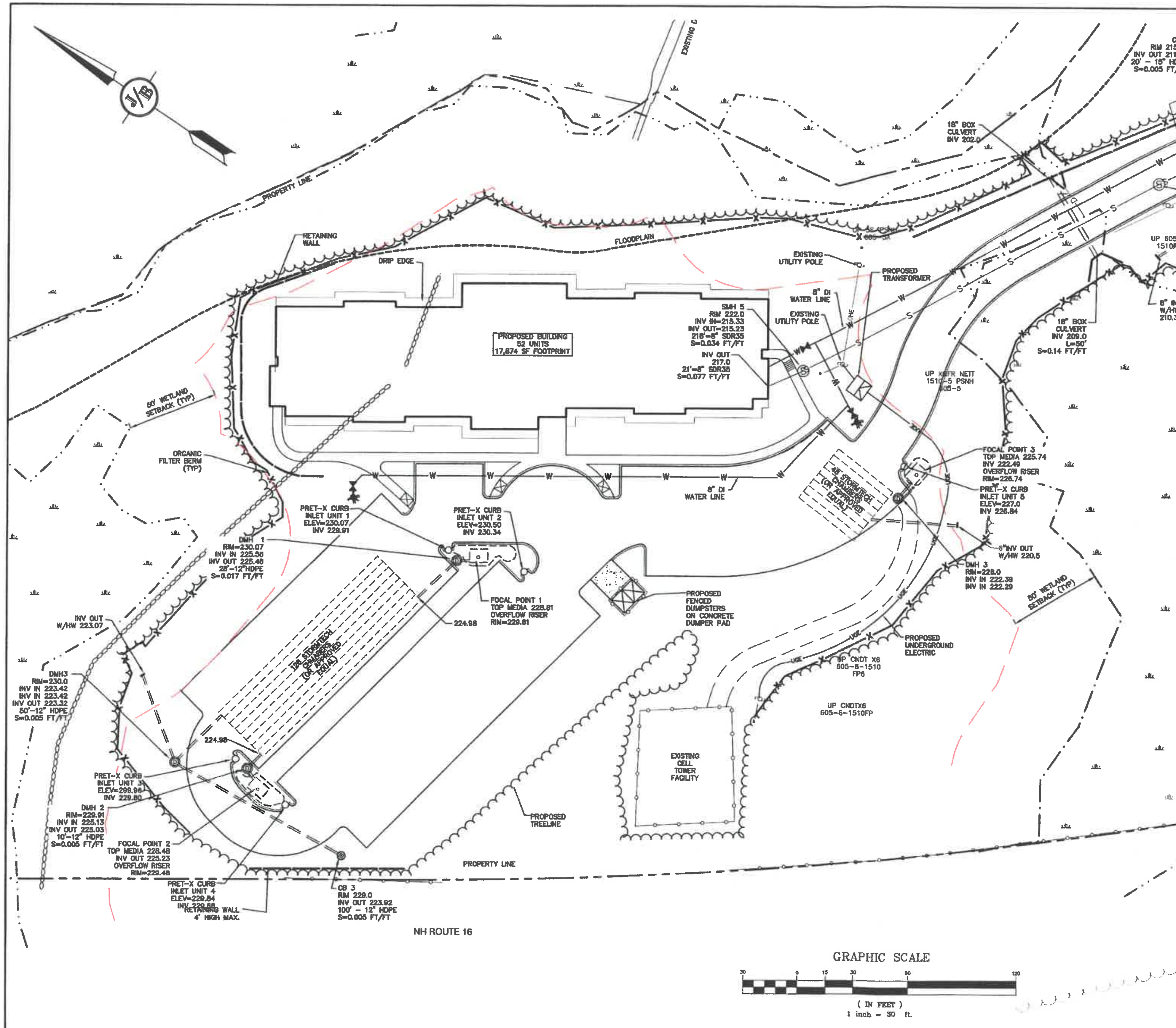
Plan Name:	GRADING AND DRAINAGE PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
C5
SHEET 8 OF 22
JBE PROJECT NO. 21137



UTILITY NOTES:

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, CONNECTION FEES AND BONDS.
2. 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.
3. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION 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).
4. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
5. ALL CONSTRUCTION SHALL CONFORM TO THE CITY STANDARDS AND REGULATIONS, AND NHDES STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED.
6. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
7. BUILDING TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
8. 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.
9. AS-BUILT PLANS SHALL BE SUBMITTED TO DEPARTMENT OF PUBLIC WORKS.
10. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT, AND SHELF SHALL CONSIST OF BRICK MASONRY.
11. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA, CLEAR OPENING. THE WORD "SEWER" OR DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
12. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H20 LOADS.
13. CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
14. SANITARY SEWER FLOW CALCULATIONS:
    38 – TWO BEDROOM UNITS @ 150 GPD/BEDROOM = 11,400 GPD
    14 – ONE BEDROOM UNITS @ 150/GPD/BEDROOM = 2,100 GPD
    TOTAL FLOW = 13,500 GPD
15. ALL SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.
16. PROPOSED RIM ELEVATIONS OF DRAINAGE AND SANITARY MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. 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.
17. ALL WATER MAINS AND SERVICE PIPES SHALL HAVE A MINIMUM 12" VERTICAL AND 24" HORIZONTAL SEPARATION TO MANHOLES, OR CONTRACTOR SHALL INSTALL BOARD INSULATION FOR FREEZING PROTECTION.
18. WATER MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKAGE PRIOR TO ACCEPTANCE. WATERMAINS SHALL BE TESTED AT 1.5 TIMES THE WORKING PRESSURE OR 150 PSI, WHICH EVER IS GREATER. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 4 OF AWWA STANDARD C 600. WATERMAINS SHALL BE DISINFECTED AFTER THE ACCEPTANCE OF THE PRESSURE AND LEAKAGE TESTS ACCORDING TO AWWA STANDARD C 651.
19. ALL WATER AND SANITARY LEADS TO BUILDING(S) SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT END.
20. IF THE BUILDING IS REQUIRED TO HAVE A SPRINKLER SYSTEM, A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, OWNER, ARCHITECT AND THE LOCAL FIRE DEPARTMENT PRIOR TO THE INSTALLATION.
21. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, MECHANICAL JOINTS AND FIRE HYDRANTS.
22. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
23. REFER TO FIRE PROTECTION SHEETS FOR LOCATION AND DETAIL OF FIRE LINE LEAD IN TO BUILDING.
24. FIRE LINE SHALL BE STUBBED UP 1' ABOVE FINISH FLOOR ELEVATION IN SPRINKLER ROOM.
25. THE CONTRACTOR SHALL HAVE THE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER FIRE PROTECTION SYSTEM PRIOR TO INSTALLATION.
26. CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
27. EXISTING UTILITIES SHALL BE DIGSAFED BEFORE CONSTRUCTION.
28. ALL WATER LINES SHOULD HAVE TESTABLE BACKFLOW PREVENTERS AT THE ENTRANCE TO BUILDING.
29. ALL GRAVITY SEWER PIPE, MANHOLES, AND FORCE MAINS SHALL BE TESTED ACCORDING TO NHDES STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWAGE AND WASTEWATER TREATMENT FACILITIES, CHAPTER ENV-WQ 700. ADOPTED ON 10-15-14.
30. ENV-WQ 704.06 GRAVITY SEWER PIPE TESTING: GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY USE OF LOW-PRESSURE AIR TESTS CONFORMING WITH ASTM F1417-92(2005) OR UNI-BELL PVC PIPE ASSOCIATION UNI-B-6. LINES SHALL BE CLEANED AND VISUALLY INSPECTED AND TRUE TO LINE AND GRADE. DEFLECTION TESTS SHALL TAKE PLACE AFTER 30 DAYS FOLLOWING INSTALLATION AND THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.
31. ENV-WQ 704.17 SEWER MANHOLE TESTING: SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST PRIOR TO BACKFILLING AND PLACEMENT OF SHELVES AND INVERTS.
32. SANITARY SEWER LINES SHALL BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM AN EXISTING OR PROPOSED WATER LINE. WHEN A SEWER LINE CROSSES UNDER A WATER LINE, THE SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATERMAIN. THE SEWER LINE SHALL ALSO MAINTAIN A VERTICAL SEPARATION OF NOT LESS THAN 18 INCHES.
33. SEWERS SHALL BE BURIED TO A MINIMUM DEPTH OF 6 FEET BELOW GRADE IN ALL ROADWAY LOCATIONS, AND TO A MINIMUM DEPTH OF 4 FEET BELOW GRADE IN ALL CROSS-COUNTRY LOCATIONS. PROVIDE TWO-INCHES OF R-10 FOAM BOARD INSULATION 2-FOOT WIDE TO BE INSTALLED 6-INCHES OVER SEWER PIPE IN AREAS WHERE DEPTH IS NOT ACHIEVED. A WAIVER FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER ENGINEERING BUREAU IS REQUIRED PRIOR TO INSTALLING SEWER AT LESS THAN MINIMUM COVER.
34. 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.
35. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTIONS TO THE EXISTING SEWER FLOWS AND THOSE INTERRUPTIONS SHALL BE LIMITED TO FOUR (4) HOURS OR LESS AS DESIGNATED BY THE TOWN SEWER DEPARTMENT.
36. LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRIC CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
37. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
38. DISINFECTION OF WATER MAINS SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH AWWA STANDARD C651, LATEST EDITION. THE BASIC PROCEDURE TO BE FOLLOWED FOR DISINFECTING WATER MAINS IS AS FOLLOWS:
    a. PREVENT CONTAMINATING MATERIALS FROM ENTERING THE WATER MAIN DURING STORAGE, CONSTRUCTION, OR REPAIR.
    b. REMOVE, BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAINS.
    c. CHLORINATE ANY RESIDUAL CONTAMINATION THAT MAY REMAIN, AND FLUSH THE CHLORINATED WATER FROM THE MAIN.
    d. PROTECT THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW DUE TO HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
    e. DETERMINE THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION.
    f. MAKE FINAL CONNECTION OF THE APPROVED NEW WATER MAIN TO THE ACTIVE DISTRIBUTION SYSTEM

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Drawing Name: 21137-PLAN.dwg		

STATE OF NEW HAMPSHIRE — MICHAEL J. KEARNS — No. 9640 — LICENSED PROFESSIONAL ENGINEER
10/27/2021

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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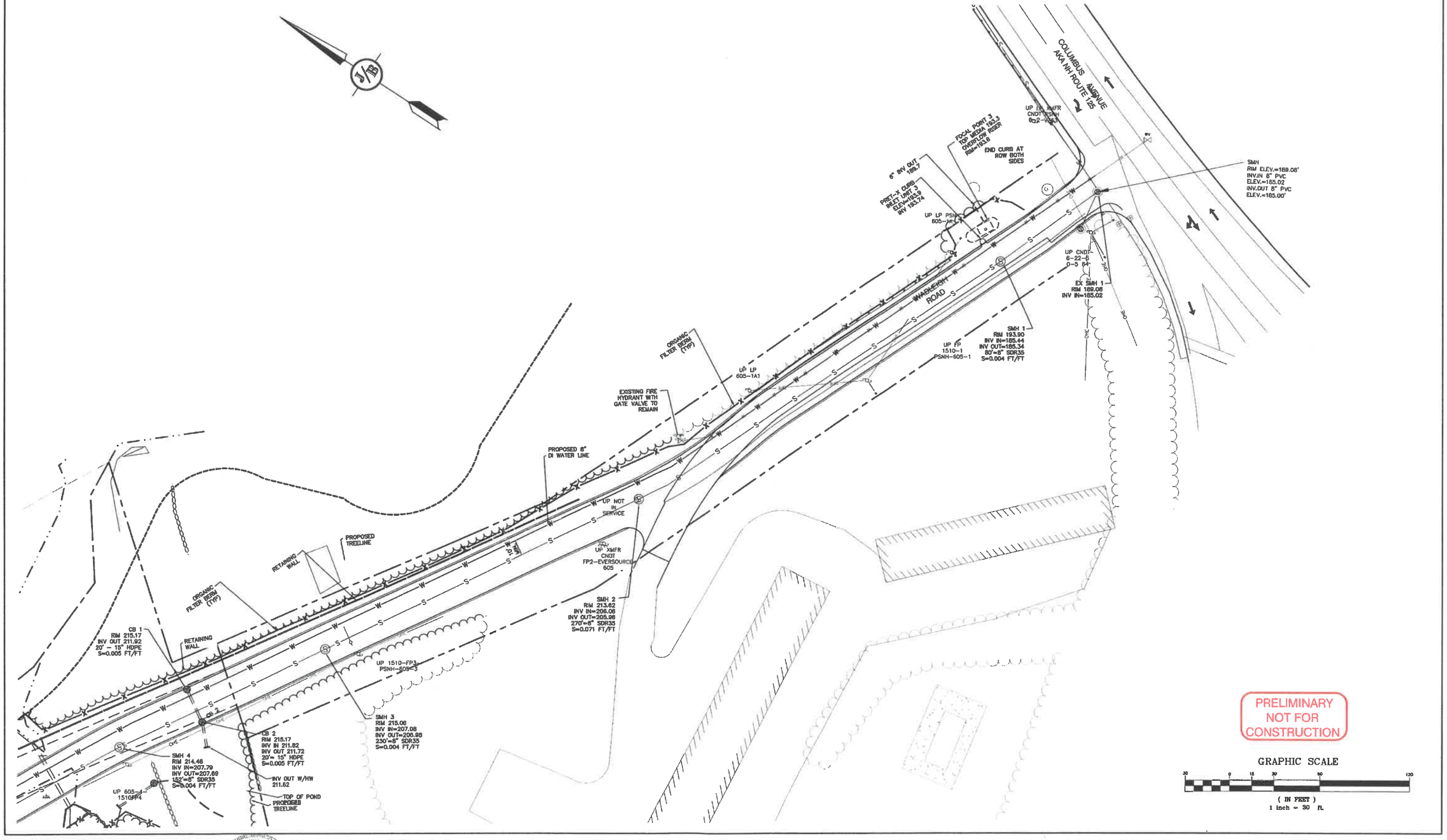
Plan Name: UTILITY PLAN
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No. U1
SHEET 9 OF 22
JBE PROJECT NO. 21137



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GRAPHIC SCALE

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(IN FEET)
1 inch = 30 ft.

Design: LAZ	Draft: LAZ	Date: 9/8/21
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Drawing Name: 21137-PLAN.dwg		

STATE OF NEW HAMPSHIRE
MICHAEL J. KERNAN
No. 9949
LICENSED
PROFESSIONAL ENGINEER
10/12/21

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
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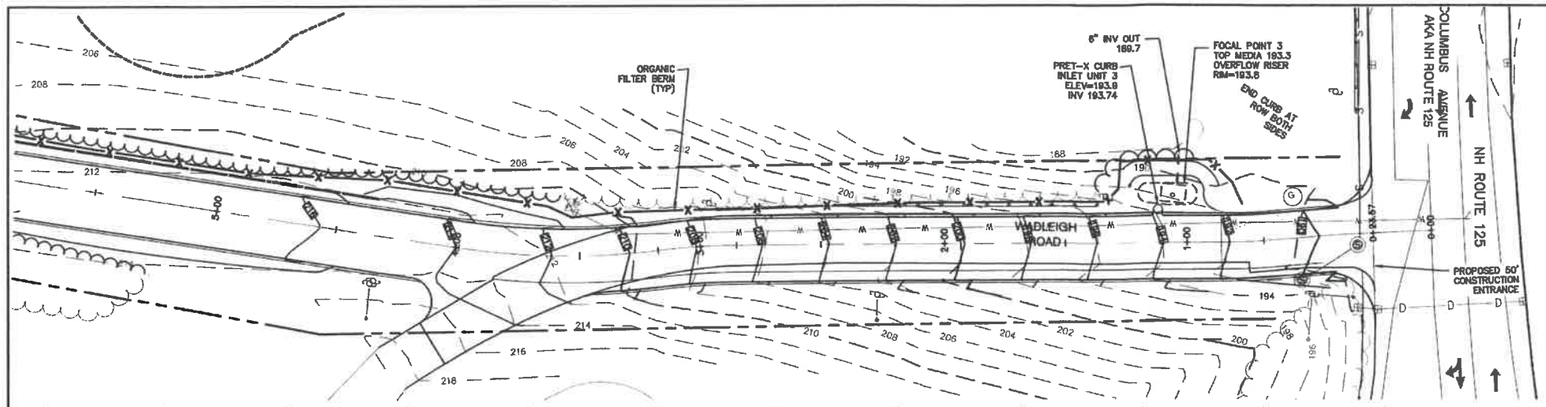
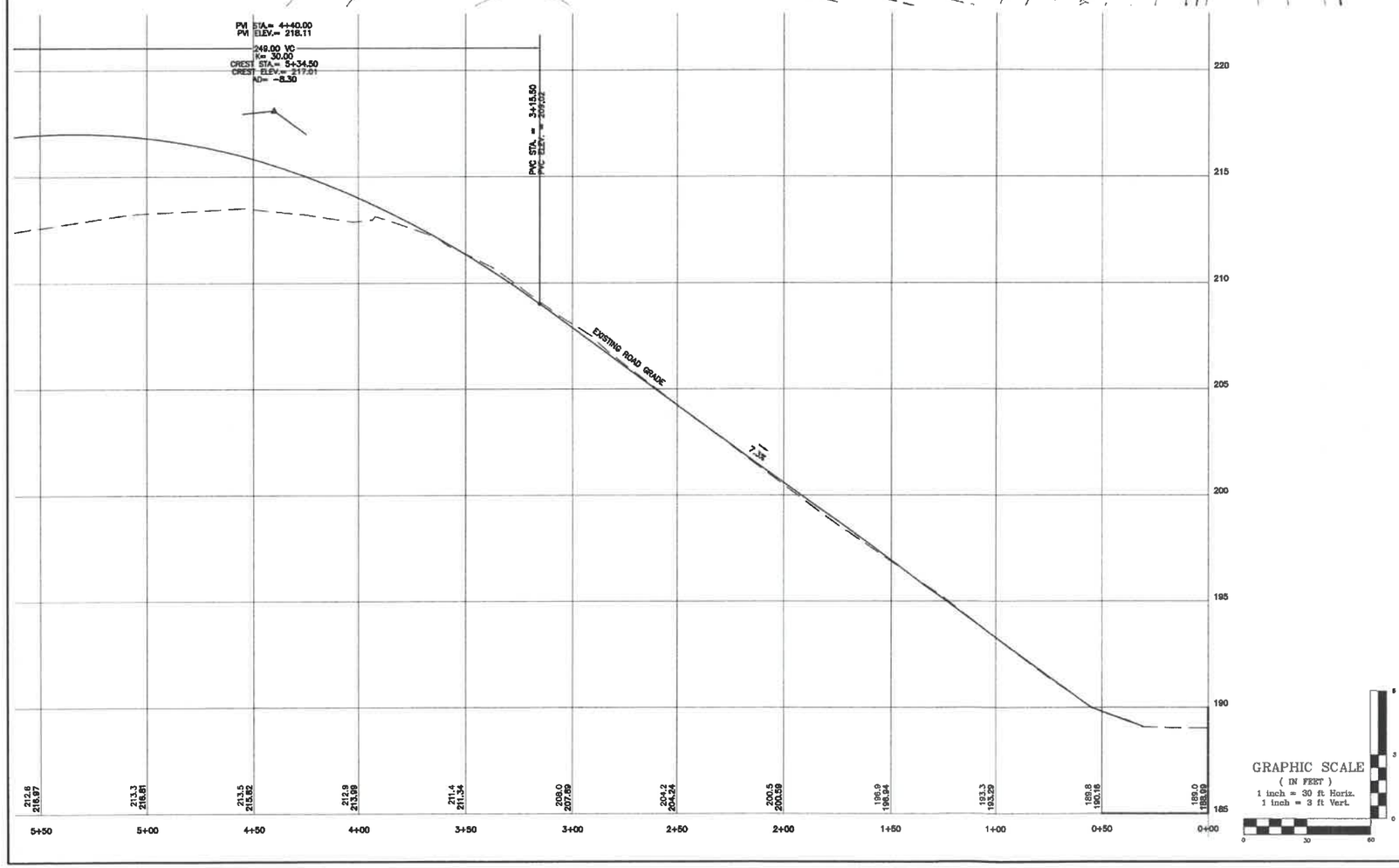
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
U2
SHEET 10 OF 22
JBE PROJECT NO. 21137





GRAPHIC SCALE
(IN FEET)
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1 inch = 3 ft Vert.

PRELIMINARY NOT FOR CONSTRUCTION

NOTES:

1. THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE CONSTRUCTION SITE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND BE MADE ACCESSIBLE TO THE PUBLIC. THE CONSTRUCTION SITE OPERATOR SHALL SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA REGIONAL OFFICE SEVEN DAYS PRIOR TO COMMENCEMENT OF ANY WORK ON SITE. EPA WILL POST THE NOI AT HTTP://CFPUB1.EPA.GOV/NPDES/STORMWATER/NOI/NOISEARCH.CFM. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE" STATUS ON THIS WEBSITE. A COMPLETED NOTICE OF TERMINATION SHALL BE SUBMITTED TO THE NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
   A. FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR
   A. ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED. PROVIDE DPW WITH A COPY OF THE NOTICE OF TERMINATION (NOT).
2. ALL ROAD AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR THE CITY, AND NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
3. DEVELOPER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
4. CONTRACTOR TO COORDINATE AND COMPLETE ALL WORK REQUIRED FOR THE RELOCATION AND/OR INSTALLATION OF ELECTRIC, CATV, TELEPHONE, AND FIRE ALARM PER UTILITY DESIGN AND STANDARDS. LOCATIONS SHOWN ARE APPROXIMATE. LOW PROFILE STRUCTURES SHALL BE USED TO THE GREATEST EXTENT POSSIBLE.
5. THIS PLAN 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 SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
6. SILTATION AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN UNTIL SITE HAS BEEN STABILIZED WITH PERMANENT VEGETATION. SEE DETAIL SHEET E1 FOR ADDITIONAL NOTES ON EROSION CONTROL.
7. ALL DISTURBED AREAS NOT STABILIZED BY NOVEMBER 1st SHALL BE COVERED WITH AN EROSION CONTROL BLANKET. PRODUCT TO BE SPECIFIED BY THE ENGINEER.
8. FINAL DRAINAGE, GRADING AND EROSION PROTECTION MEASURES SHALL CONFORM TO REGULATIONS OF THE PUBLIC WORKS DEPARTMENT.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES AND TO NOTIFY ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
10. ROADWAY INTERSECTIONS WITH SLOPE GRANITE CURB SHALL EXTEND AROUND RADIUS WITH 6" STRAIGHT PIECE ALONG TANGENT.
11. RETAINING WALLS SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER PRIOR TO INSTALLATION.
12. 6" PERFORATED ADS UNDER DRAIN PLACEMENT TO BE DETERMINED BY THE ENGINEER DURING TIME OF SUBGRADE INSPECTION. CONTRACTOR TO ADJUST LOCATION IN THE FIELD ONLY WITH PRIOR APPROVAL OF PROJECT ENGINEER OR PUBLIC WORKS DEPARTMENT. CONTRACTOR TO INCLUDE 3000 LF IN BID PRICE.
13. ENGINEER TO INSTALL PERMANENT BENCHMARK (REINFORCED GRANITE MARKER) AT LOCATIONS SHOWN ON PLANS. BENCH MARKS TO BE TIED TO STATE PLANE COORDINATE SYSTEM.
14. DRAINAGE INSPECTION AND MAINTENANCE SCHEDULE: SILT FENCING WILL BE INSPECTED DURING AND AFTER STORM EVENTS TO ENSURE THAT THE FENCE STILL HAS INTEGRITY AND IS NOT ALLOWING SEDIMENT TO PASS. SEDIMENT BUILD UP IN SWALES WILL BE REMOVED IF IT IS DEEPER THAN SIX INCHES, AND IS TO BE REMOVED FROM SUMPS BELOW THE INLET OF CULVERTS SEMIANNUALLY, AS WELL AS FROM CATCH BASINS. FOLLOWING MAJOR STORM EVENTS, THE STONE DISCHARGE OUTLET STRUCTURES ARE TO BE INSPECTED AND ANY DEBRIS REMOVED FROM THE ORIFICE, TRASH TRACK AND EMERGENCY SPILL WAY. INFREQUENTLY, SEDIMENT MAY ALSO HAVE TO BE REMOVED FROM THE SUMP OF THE STRUCTURE.
15. ALL DRAINAGE INFRASTRUCTURE SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING ANY RUNOFF TO IT.
16. DETENTION PONDS REQUIRE TIMELY MAINTENANCE AND SHOULD BE INSPECTED AFTER EVERY MAJOR STORM EVENT, AS WELL AS FREQUENTLY DURING THE FIRST YEAR OF OPERATION, AND ANNUALLY THEREAFTER. EVERY FIVE YEARS, THE SERVICES OF A PROFESSIONAL ENGINEER SHOULD BE RETAINED TO PERFORM A THOROUGH INSPECTION OF THE DETENTION POND AND ITS INFRASTRUCTURE. ANY DEBRIS AND SEDIMENT ACCUMULATIONS SHOULD BE REMOVED FROM THE OUTLET STRUCTURE(S) AND EMERGENCY SPILLWAY(S) AND DISPOSED OF PROPERLY. DETENTION POND BERMS SHOULD BE MOWED AT LEAST ONCE ANNUALLY SO AS TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION. TREES SHOULD NEVER BE ALLOWED TO GROW ON A DETENTION POND BERM, AS THEY MAY DESTABILIZE THE STRUCTURE AND INCREASE THE POTENTIAL FOR FAILURE. AREAS SHOWING SIGNS OF EROSION OR THIN OR DYING VEGETATION SHOULD BE REPAIRED IMMEDIATELY BY WHATEVER MEANS NECESSARY, WITH THE EXCEPTION OF FERTILIZER. RODENT BORROWS SHOULD BE REPAIRED IMMEDIATELY AND THE ANIMALS SHOULD BE TRAPPED AND RELOCATED IF THE PROBLEM PERSISTS.
17. THE DETENTION PONDS ARE TO BE CONSTRUCTED PRIMARILY THROUGH EXCAVATION. IN THOSE AREAS WHERE THE BERMS MUST BE CONSTRUCTED BY THE PLACEMENT OF FILL, THE ENTIRE EMBANKMENT AREA OF THE DETENTION PONDS SHALL BE EXCAVATED TO PROPOSED GRADE, STRIPPED OF ALL ORGANIC MATERIALS, COMPACTED TO AT LEAST 95% AND SCARIFIED PRIOR TO THE PLACEMENT OF THE EMBANKMENT MATERIAL. IN THE EVENT THE FOUNDATION MATERIAL EXPOSED DOES NOT ALLOW THE SPECIFIED COMPACTION, AN ADDITIONAL ONE FOOT (1') OF EXCAVATION AND THE PLACEMENT OF A ONE FOOT (1') THICK, TWELVE FOOT (12') WIDE PAD OF THE MATERIAL DESCRIBED IN THE NOTE BELOW, COMPACTED TO 95% OF ASTM D-1557 MAY BE NECESSARY. PLACEMENT AND COMPACTION SHOULD OCCUR AT A MOISTURE CONTENT OF OPTIMUM PLUS OR MINUS 3%, AND NO FROZEN OR ORGANIC MATERIAL SHOULD BE PLACED WITHIN FOR ANY REASON.
18. EMBANKMENT MATERIAL FOR THE BERMS SHALL BE CLEAN MINERAL SOIL WITH A CLAY COMPONENT FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER FOUR INCHES (4") IN DIAMETER. THIS MATERIAL SHOULD BE INSTALLED IN 6" LIFTS AND COMPACTED TO 95% OS ASTM D-1557, AND SHOULD MEET THE FOLLOWING SPECIFICATIONS: 4" PASSING 100%, #4 SIEVE 25-70%, #200 SIEVE 10-29% (IN TOTAL SAMPLE).
19. EMBANKMENT IS TO HAVE 3:1 SIDE SLOPES (MAX.) AND IS TO BE BROUGHT TO SPECIFIED GRADES PRIOR TO THE ADDITION OF LOAM (4" MINIMUM) SO AS TO ALLOW FOR THE COMPACTION OF THE STRUCTURE OVER TIME WHILE MAINTAINING THE PROPER BERM ELEVATION.
20. COMPACTION TESTING SERVICES (I.E. NUCLEAR DENSITY TESTS) ARE TO BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR FOR ROADWAY CONSTRUCTION, AND ON THE FOUNDATION OF THE BERM AND ON EVERY LIFT OF NEWLY PLACED MATERIAL.

Design: LAZ	Draft: LAZ	Date: 9/8/21
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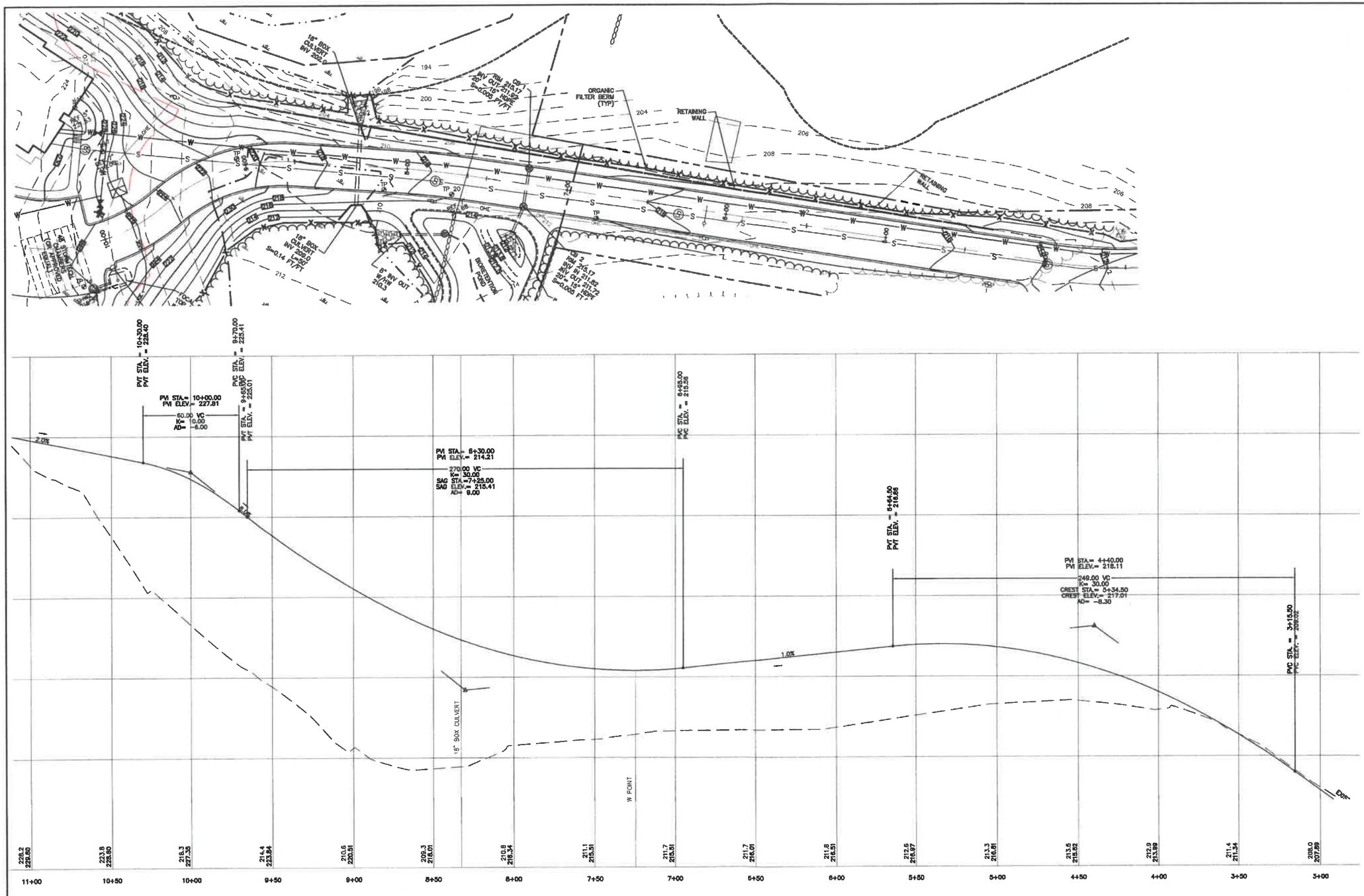
Plan Name:	PLAN AND PROFILE
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
P1
SHEET 11 OF 22
JBE PROJECT NO.21137



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(IN FEET)
1 inch = 30 ft Horiz.
1 inch = 3 ft Vert.
0 30 60
0 3 6

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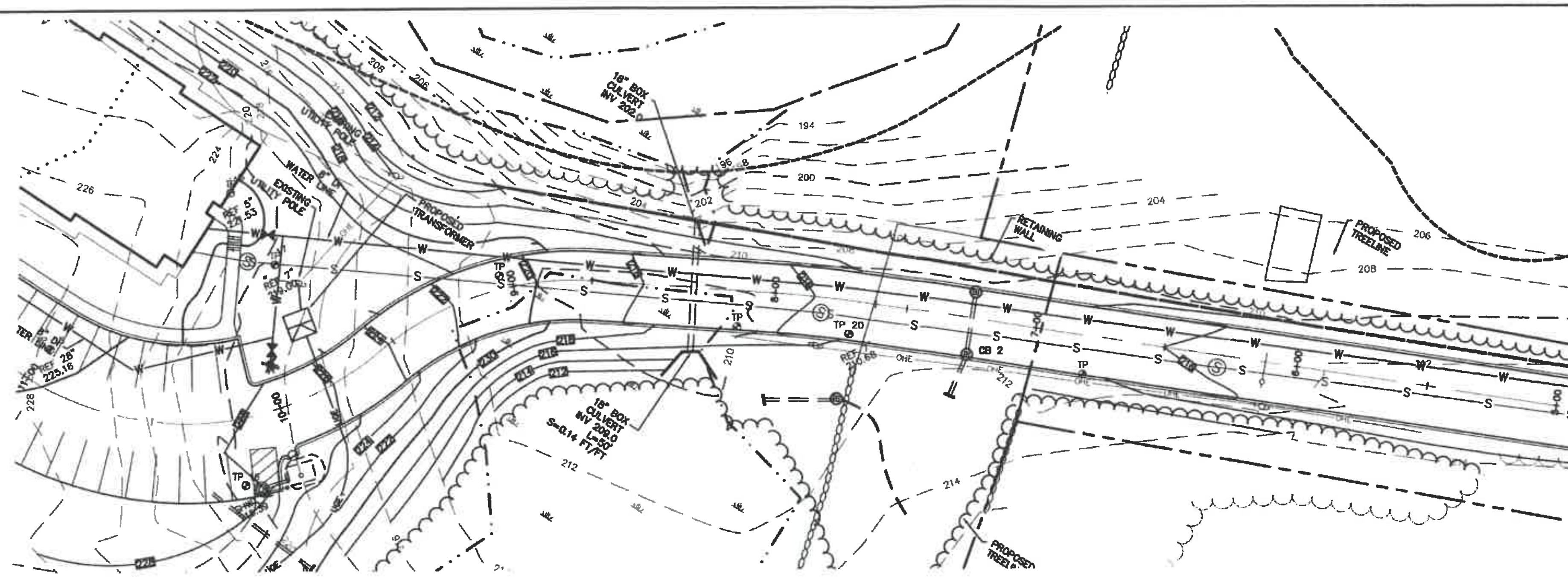
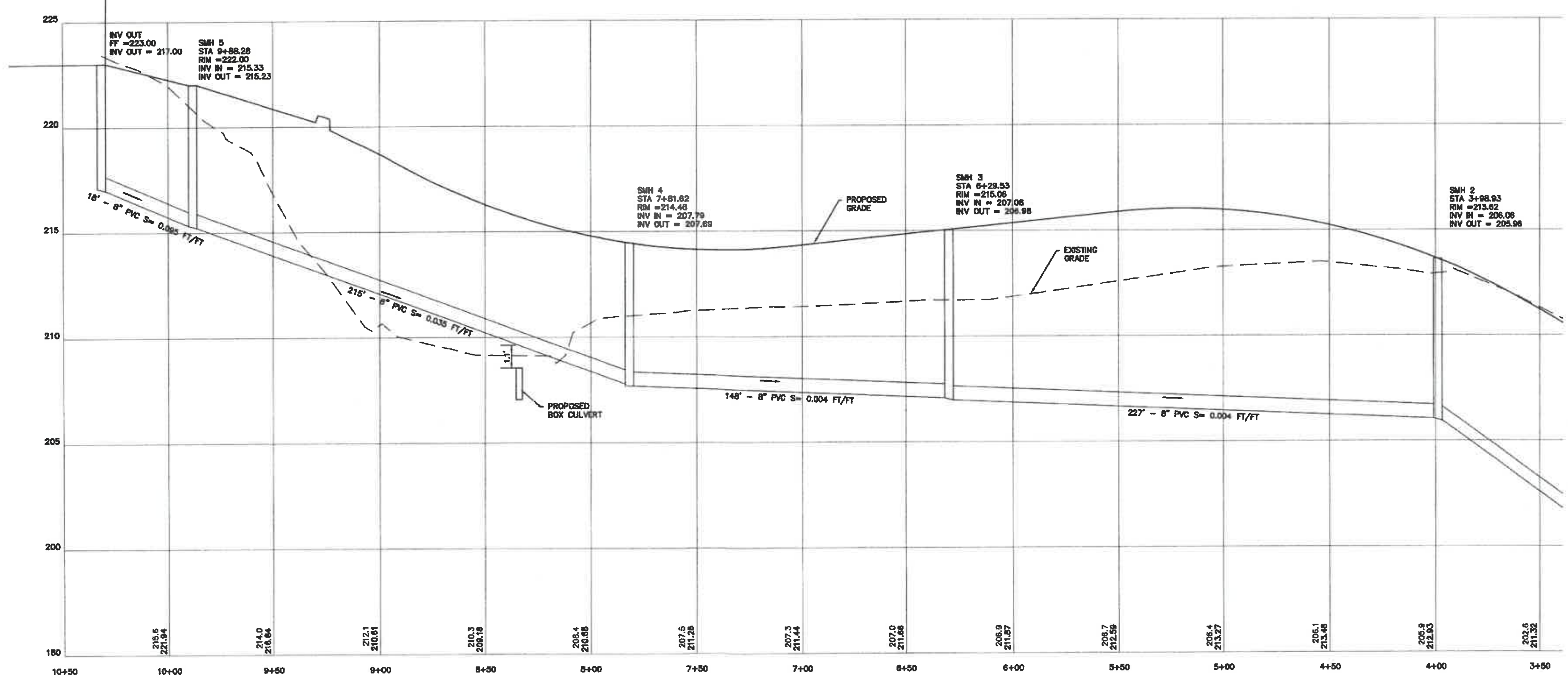
DRAWING No.
P2
SHEET 12 OF 22
JBE PROJECT NO.21137





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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.

STATE OF NEW HAMPSHIRE — MICHAEL J. KERIVAN — LICENSED — PROFESSIONAL ENGINEER 10/27/2021

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0	9/8/21	ISSUED FOR REVIEW	LAZ

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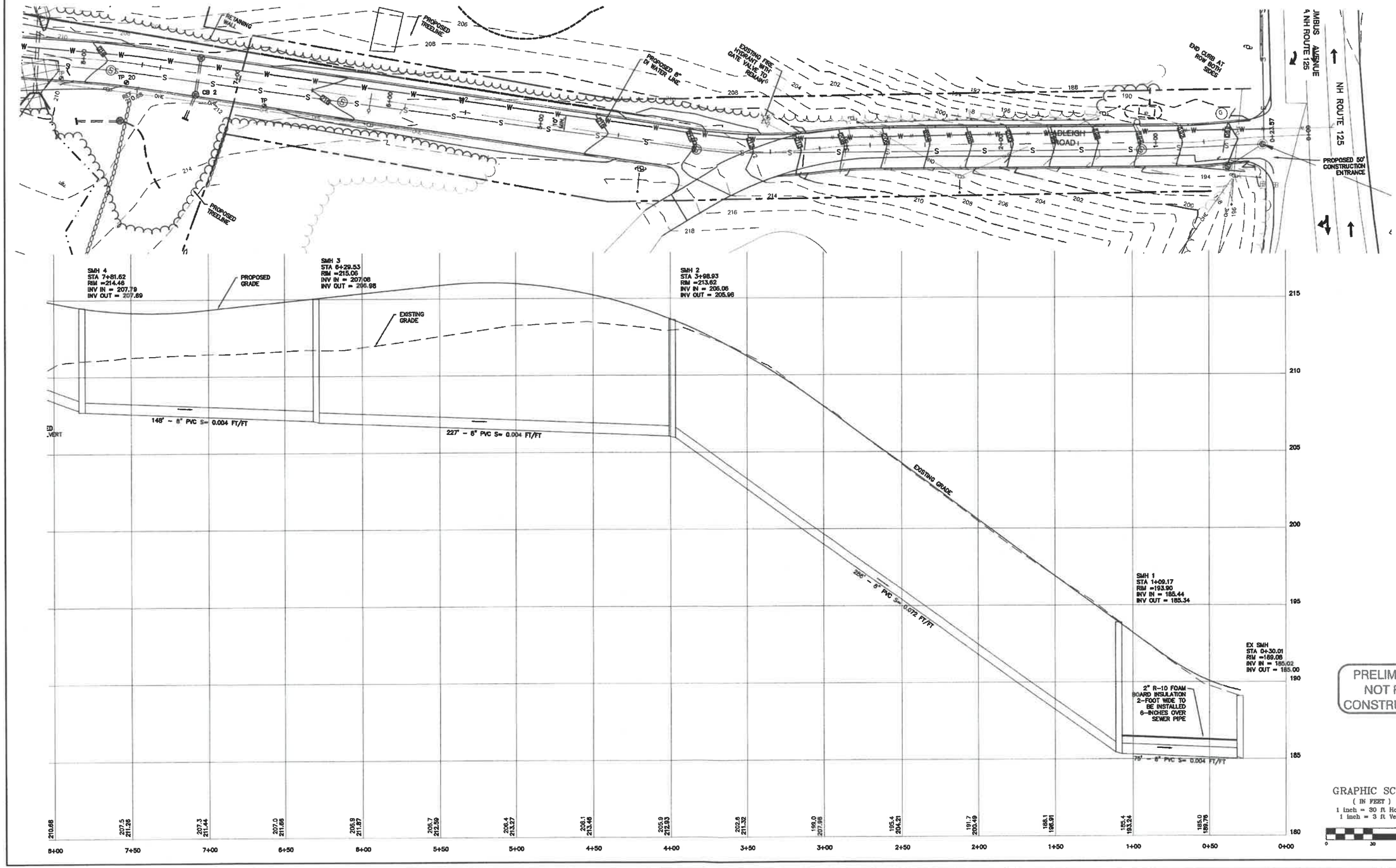
Plan Name:	SEWER PLAN AND PROFILE
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.

P3

SHEET 13 OF 22
JBE PROJECT NO.21137



PRELIMINARY
NOT FOR
CONSTRUCTION

Design: LAZ	Draft: LAZ	Date: 9/8/21	
Checked: BAJ	Scale: 1"=30'	Project No.: 21137	
Drawing Name: 21137-PLAN.dwg			

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

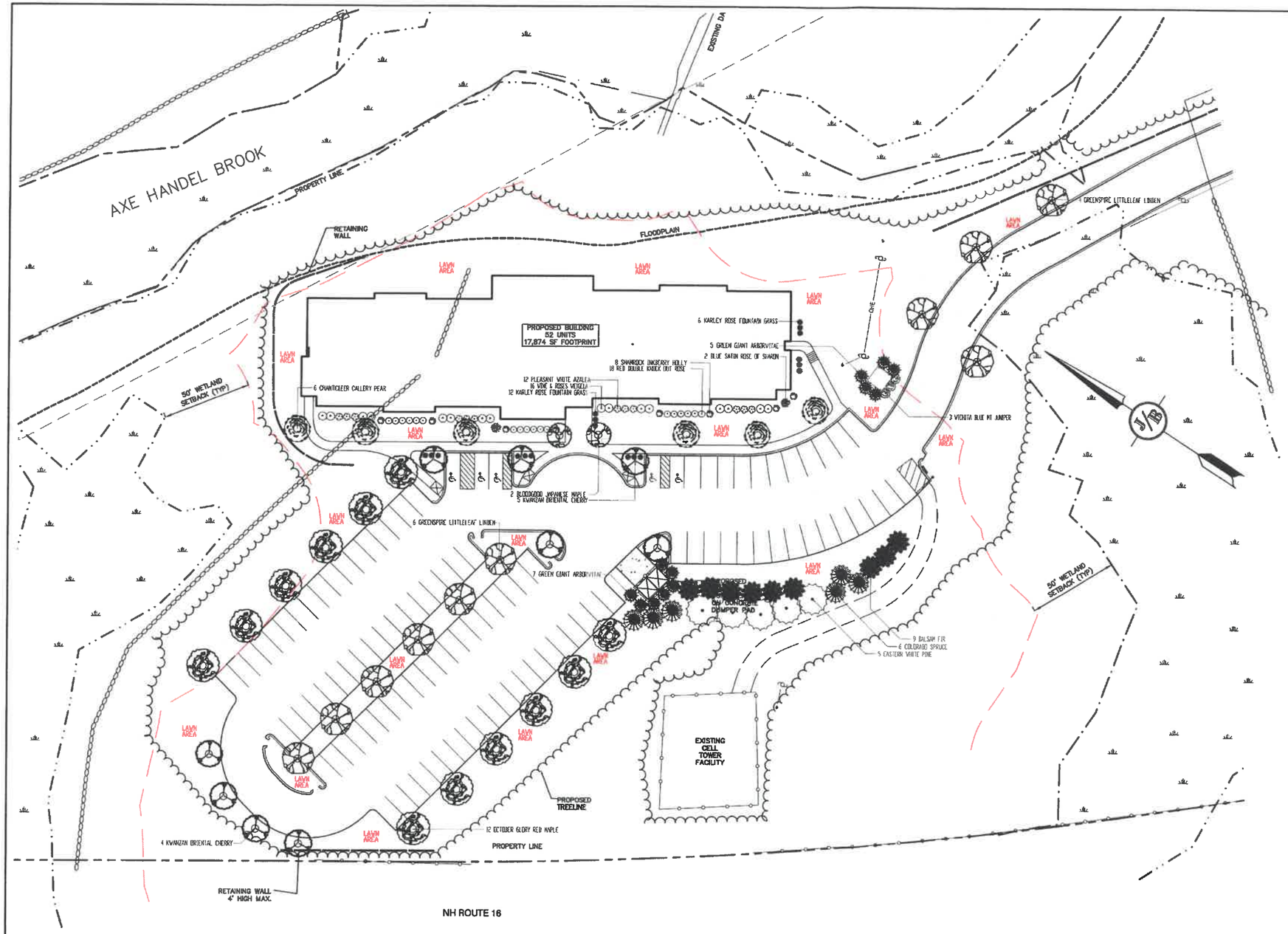
Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	SEWER PLAN AND PROFILE
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.

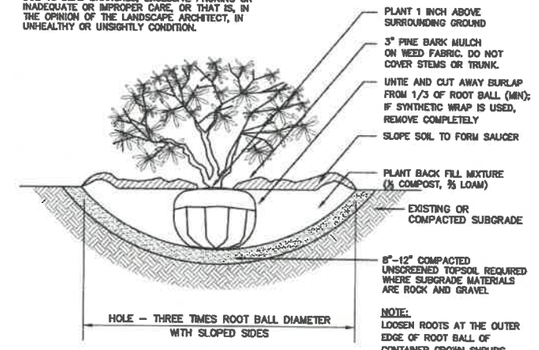
P4

SHEET 14 OF 22
JBE PROJECT NO.21137



LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. 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.
5. 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.
6. ALL WORK AND PLANTS SHALL BE DONE, INSTALLED AND DETAILED IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
7. 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.
8. 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 ARCHITECT, IN UNHEALTHY OR UNSIGHTLY CONDITION.
9. ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION, EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS SPECIFIED.
10. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS WITH EDGE STRIPS TO SEPARATE TURF GRASS AREAS.
11. 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.
12. ALL LANDSCAPING SHALL MEET THE TOWN STANDARDS AND REGULATIONS.
13. 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.
14. 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.
15. THIS PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO CIVIL/SITE DRAWINGS FOR OTHER SITE CONSTRUCTION INFORMATION.
16. IRRIGATION PIPING SYSTEM SHALL BE REVIEWED AND APPROVED BY OWNER AND ENGINEER PRIOR TO INSTALLATION.



NOTE: LOOSEN ROOTS AT THE OUTER EDGE OF ROOT BALL OF CONTAINER GROWN SHRUBS.

SHRUB PLANTING

NOT TO SCALE

WADLEIGH RD APARTMENT BUILDING PLANT LIST

Plants			
Quantity	Botanical Name	Common Name	Size
9	Abies balsamea	BALSAM FIR	8-10 FT. HT.
2	Acer palmatum 'Bloodgood'	BLOODGOOD JAPANESE MAPLE	15 GALLON
12	Acer rubrum 'October Glory'	OCTOBER GLORY RED MAPLE	3" CALIPER
3	Juniperus scopulorum 'Wichita Blue'	WICHITA BLUE MT JUNIPER	7-8 FT. HT.
6	Picea pungens	COLORADO SPRUCE	8-10 FT. HT.
5	Pinus strobus	EASTERN WHITE PINE	10-12 FT. HT.
9	Prunus serrulata 'Kwanzan'	KWANZAN ORIENTAL CHERRY	2.5" CALIPER
6	Pyrus calleryana 'Chanticleer'	CHANTICLEER CALLERY PEAR	2.5" CALIPER
12	Thuja plicata 'Green Giant'	GREEN GIANT ARBORVITAE	7-8 FT. HT.
10	Tilia cordata 'Greenspire'	GREENSPIRE LITTLELEAF LINDEN	3" CALIPER
12	Azalea 'Pleasant White'	PLEASANT WHITE AZALEA	3 GALLON
2	Hibiscus syriacus 'DVPazurri'	BLUE SATIN ROSE OF SHARON	5 GALLON
8	Ilex glabra 'Shamrock'	SHAMROCK INKBERRY HOLLY	5 GALLON
18	Pennisetum orientale 'Karley Rose'	KARLEY ROSE FOUNTAIN GRASS	2 GALLON
18	Rosa 'Red Double Knock Out'	RED DOUBLE KNOCK OUT ROSE	3 GALLON
16	Weigela florida 'Alexandra'	WINE & ROSES WEIGELA	5 GALLON

PRELIMINARY NOT FOR CONSTRUCTION

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Design: LAZ	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Drawing Name: 21137-PLAN.dwg	Date: 9/8/21
	Project No.: 21137

STATE OF NEW HAMPSHIRE — MICHAEL A. PERVIER No. 6349 — LICENSED PROFESSIONAL ENGINEER — 9/21

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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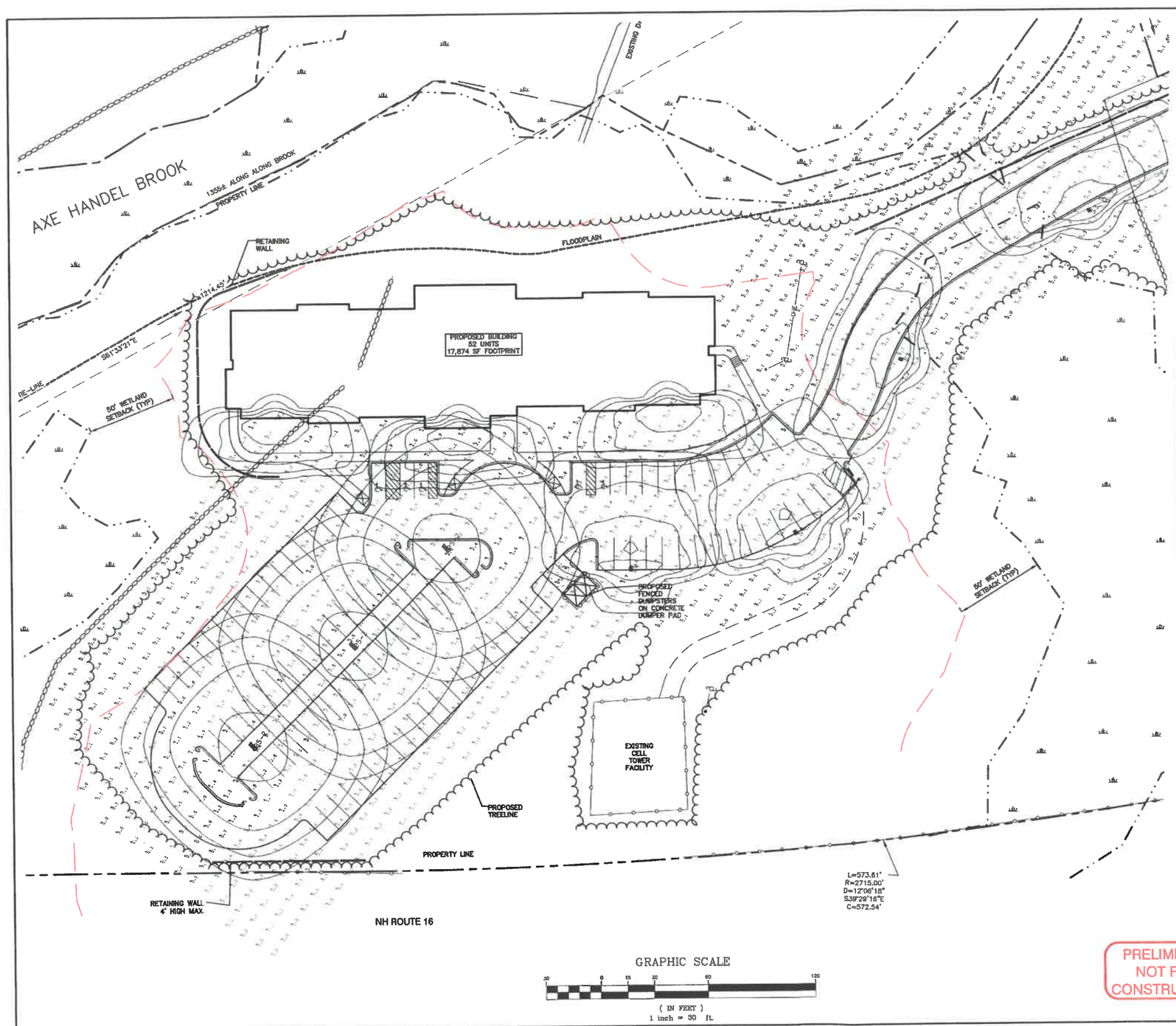
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	LANDSCAPE PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.

L1

SHEET 15 OF 22
JBE PROJECT NO. 21137



GRAPHIC SCALE

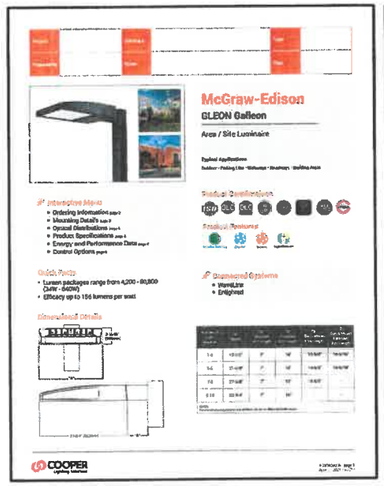
30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

LIGHTING AND ELECTRICAL NOTES:

1. SITE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
2. CONTRACTOR SHALL INSTALL PROPOSED LIGHT POLES ACCORDING TO TOWN REGULATIONS.
3. ALL OUTDOOR LIGHTING SYSTEMS SHALL BE EQUIPPED WITH TIMERS TO REDUCE ILLUMINATION LEVELS TO NON-OPERATIONAL VALUES PER TOWN REGULATIONS.
4. LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
5. ILLUMINATION READINGS SHOWN ARE BASED ON A TOTAL LLF OF 0.75 AT GRADE. ILLUMINATION READINGS SHOWN ARE IN UNITS OF FOOT-CANDLES.
6. LIGHTING CALCULATIONS SHOWN ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM AND SAFETY.
7. ALL LIGHTING FIXTURES SHALL BE FULL CUT-OFF DARK-SKY COMPLIANT, UNLESS OTHERWISE NOTED.
8. NL INDICATES THAT THIS LUMINAIRE SHALL BE ON A NIGHT LIGHT CIRCUIT. FL INDICATES THAT THIS LUMINAIRE SHALL BE A FLOOD LIGHT FIXTURE. MOUNTING BRACKET FOR THIS FL FIXTURE SHALL BE MOUNTED 25' ABOVE BOTTOM OF POLE BASE FOR ALL LIGHT POLES CLOSEST TO STOREFRONT. THESE DESIGNATIONS INDICATE WHAT PHASE LIGHTS ARE WIRED TO (TYP).
9. 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.



PRELIMINARY NOT FOR CONSTRUCTION

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	3	P5-2	Back-Back	GLEON-SA1D-740-U-5WQ / SSS4A20SFN2 (20' AFG)
	4	S3	Single	GLEON-SA1C-740-U-SL3 / SSS4A20SFN1 (20' AFG)
	2	S4	Single	GLEON-SA1C-740-U-T4FT / SSS4A20SFN1 (20' AFG)
	3	W3	Single	GWC-SA1A-740-U-SL3 / WALL MTD 15' AFG

Design: LAZ	Draft: LAZ	Date: 9/8/21
Checked: BAJ	Scale: 1"=30'	Project No.: 21137
Drawing Name: 21137-PLAN.dwg		

REV.	DATE	REVISION	BY
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0	9/8/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

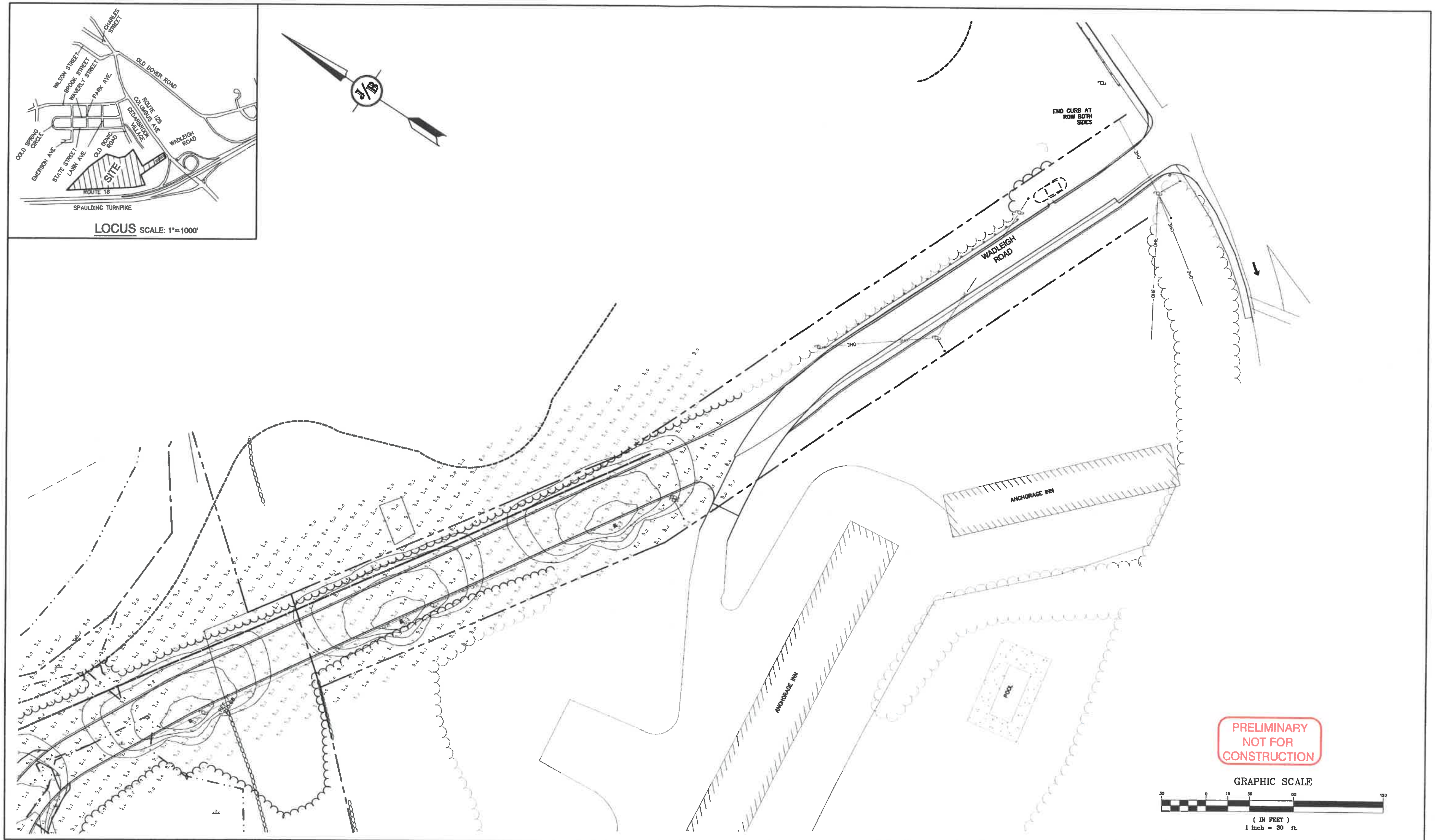
Plan Name:	LIGHTING PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.

L2

SHEET 16 OF 22

JBE PROJECT NO. 21137



Design: LAZ	Draft: LAZ	Date: 9/8/21
Checked: BAJ	Scale: 1"=30'	Project No.: 21137
Drawing Name: 21137-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.

STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9349 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

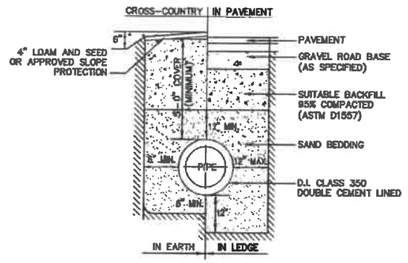
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	LIGHTING PLAN
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.

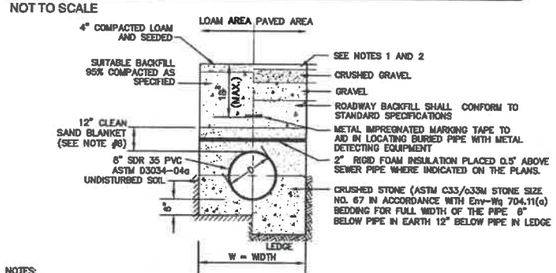
L3

SHEET 17 OF 22
JBE PROJECT NO. 21137



WATER SYSTEM TRENCH

NOT TO SCALE

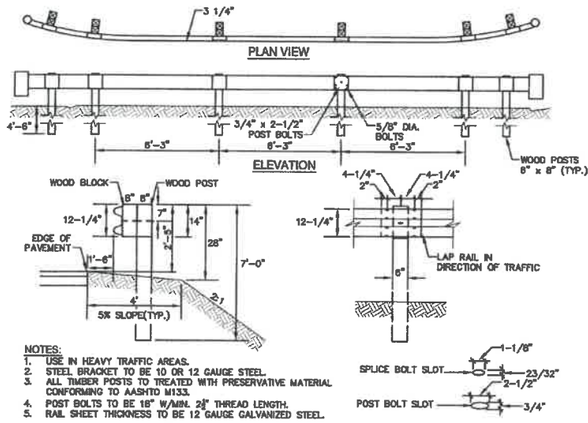


NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO PAVEMENT DETAILS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
3. TRENCH BACKFILL SHALL CONFORM WITH ENV. Wq 704.11(h) AND BE FREE OF DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE OR ROCKS OVER SIX INCHES.
4. W= MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12" INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, WIDTH SHALL BE NO MORE THAN 36"; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, WIDTH SHALL BE 24 INCHES PLUS PIPE O.D. WIDTH SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
5. RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 6' AND CROSS COUNTRY IS LESS THAN 4', PURSUANT TO DES WAIVER BEING ISSUED.
6. PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100% PASSES A 1/2 " SIEVE AND A MAXIMUM OF 15% PASSES A #200 SIEVE IN ACCORDANCE WITH Env-Wq 704.11(b).
7. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE PER Env-Wq 704.05 (e).

SEWER TRENCH

NOT TO SCALE

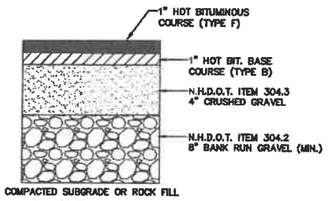


NOTES:

1. USE IN HEAVY TRAFFIC AREAS.
2. STEEL BRACKET TO BE 10 OR 12 GAUGE STEEL.
3. ALL TIMBER POSTS TO TREATED WITH PRESERVATIVE MATERIAL CONFORMING TO AASHTO M133.
4. POST BOLTS TO BE 18" W/MIN. 2#" THREAD LENGTH.
5. RAIL SHEET THICKNESS TO BE 12 GAUGE GALVANIZED STEEL.

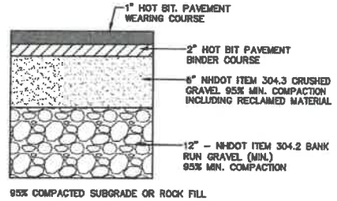
GUARD RAIL (STEEL)

NOT TO SCALE



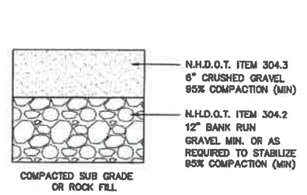
BITUMINOUS SIDEWALK DETAIL

NOT TO SCALE



TYPICAL BITUMINOUS PAVEMENT

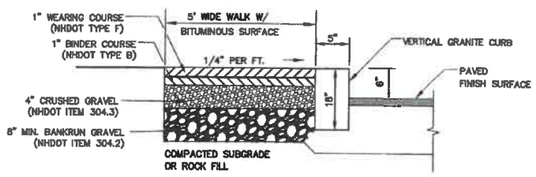
NOT TO SCALE



NOTE: IN AREAS OF ROCK EXCAVATION, MINIMUM 9" BANK RUN GRAVEL SHALL BE PLACED

GRAVEL SECTION

NOT TO SCALE

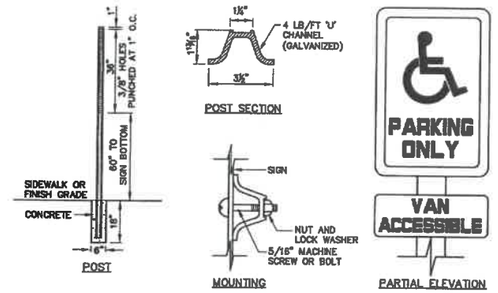


NOTES:

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

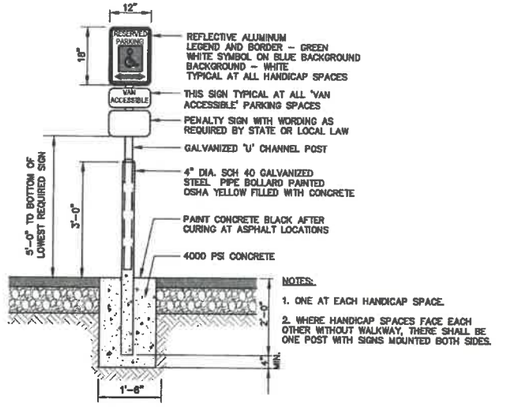
BIT. SIDEWALK W/ VERTICAL GRANITE CURB

NOT TO SCALE



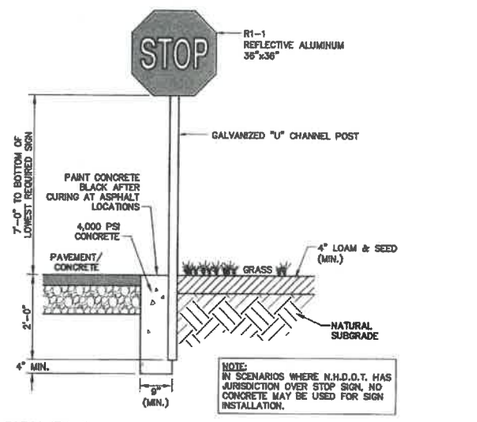
HANDICAP SIGN DETAILS

NOT TO SCALE



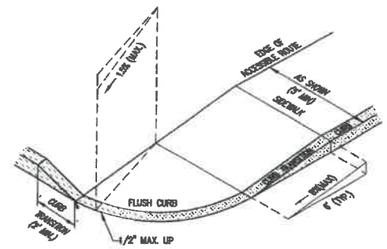
HANDICAP PARKING SIGN (R7-8)

NOT TO SCALE



STOP SIGN (R1-1)

NOT TO SCALE



NOTES:

1. THE MAXIMUM ALLOWABLE CROSS SLOPE OF ACCESSIBLE ROUTE (SIDEWALK) AND CURB SHALL BE 1.5%.
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE (SIDEWALK) CURB RAMPS SHALL BE 8%.
4. A MINIMUM OF 4 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (i.e., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. BASE OF RAMP SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SECTION FOR RAMP CONSTRUCTION.

ACCESSIBLE CURB RAMP (TYPE 'B')

NOT TO SCALE

1. PRE-FABRICATED WALL UNITS SHALL BE REDI-ROCK INTERNATIONAL AS PRODUCED BY A LICENSED MANUFACTURER, OR AN EQUIVALENT APPROVED IN WRITING BY THE CIVIL ENGINEER OF RECORD (JONES & BEACH ENGINEERS, INC.).
2. THE CONTRACTOR IS RESPONSIBLE FOR RETAINING THE SERVICES OF A LICENSED STRUCTURAL ENGINEER TO DESIGN ANY WALL THAT HAS A HEIGHT OVER 4.0'. JONES & BEACH ENGINEERS, INC. DOES NOT ACCEPT ANY LIABILITY FOR THE STRUCTURAL DESIGN AND/OR INSTALLATION OF ANY RETAINING WALL OF ANY TYPE ABOVE THIS HEIGHT. THIS DETAIL IS INTENDED TO PROVIDE AN EXAMPLE OF THE RETAINING WALL FOR PLANNING PURPOSES ONLY AND IS SPECIFICALLY NOT INTENDED FOR USE BY THE CONTRACTOR IN ANY CONSTRUCTION-RELATED ACTIVITY.
3. CONSTRUCTION OF THE RETAINING WALL(S) SHOULD FOLLOW THE SPECIFICATIONS OF REDI-ROCK INTERNATIONAL AND THE STRUCTURAL ENGINEER OF RECORD.
4. RETAINING WALL-RELATED CORRESPONDENCE SHOULD BE DIRECTED TO:

REDI-ROCK INTERNATIONAL
05481 SOUTH U.S. 31
CHARLEVOIX, MICHIGAN 49720

T# (231) 237-9500
F# (231) 237-9521
www.redi-rock.com

PRELIMINARY NOT FOR CONSTRUCTION

REDI-ROCK INTERNATIONAL RETAINING WALL DETAIL (STANDARD BLOCKS W/ NO GEOGRID)

NOT TO SCALE

Design: LAZ	Draft: LAZ	Date: 9/8/21
Checked: BAJ	Scale: AS NOTED	Project No.: 21137
Drawing Name: 21137-PLAN.dwg		

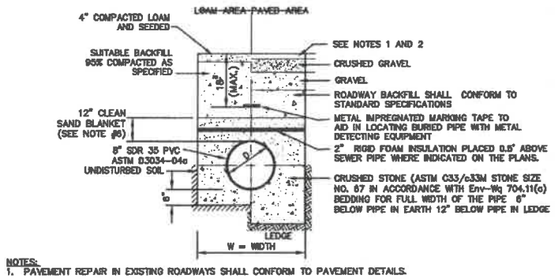
STATE OF NEW HAMPSHIRE — MICHAEL J. KERWIN No. 9393 LICENSED PROFESSIONAL ENGINEER — 9/27/21

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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

Plan Name:	DETAIL SHEET
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
D1
SHEET 18 OF 22
JBE PROJECT NO.21137

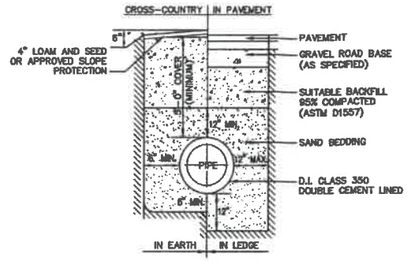


NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO PAVEMENT DETAILS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
3. TRENCH BACKFILL SHALL CONFORM WITH ENV. Wq 704.11(h) AND BE FREE OF DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE OR ROCKS OVER SIX INCHES.
4. W= MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12" INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, WIDTH SHALL BE NO MORE THAN 36"; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, WIDTH SHALL BE 24 INCHES PLUS PIPE O.D. WIDTH SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
5. RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 6' AND CROSS COUNTRY IS LESS THAN 4', PURSUANT TO DES WAIVER BEING ISSUED.
6. PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100% PASSES A 1/2 " SIEVE AND A MAXIMUM OF 15% PASSES A #200 SIEVE IN ACCORDANCE WITH Env-Wq 704.11(b).
7. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE PER Env-Wq 704.05 (a).

SEWER TRENCH

NOT TO SCALE



WATER SYSTEM TRENCH

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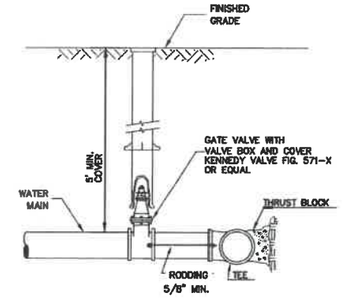
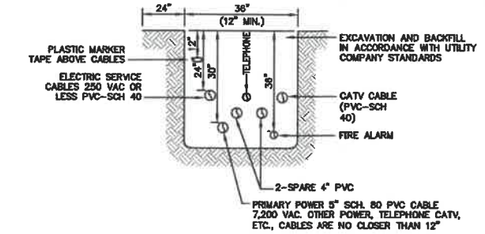


BURIED GATE VALVE DETAIL

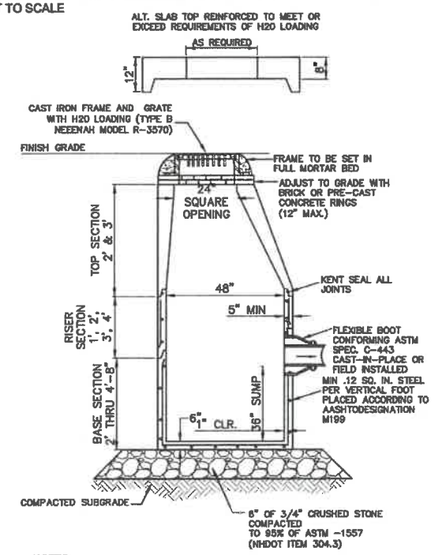
NOT TO SCALE



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

UTILITY TRENCH

NOT TO SCALE

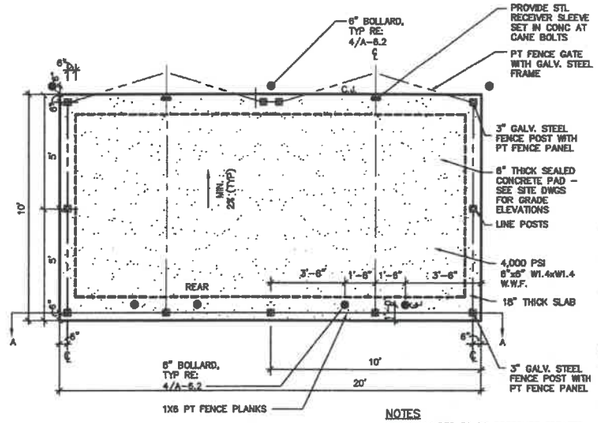


NOTES:

1. BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER.
2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING.
3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING
5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
7. ALL CATCH BASIN FRAMES AND GRATES SHALL BE NHDOT CATCH BASIN TYPE ALTERNATE 1 OR NEENAH R-3570 OR APPROVED EQUAL (24"x24" TYPICAL).
8. STANDARD CATCH BASIN FRAME AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE "DONUTS".

CATCH BASIN

NOT TO SCALE

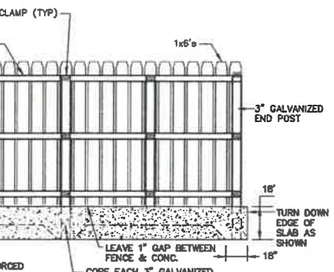


NOTES

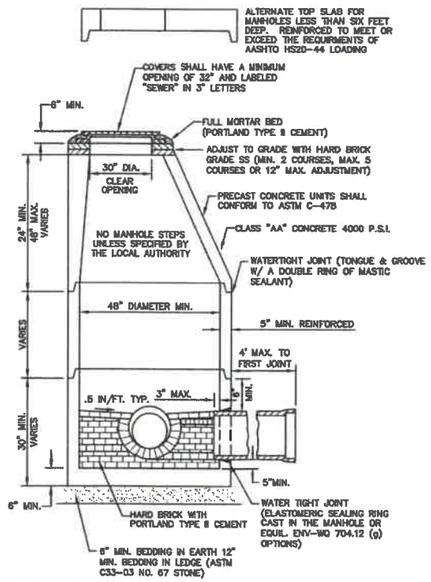
1. ALL LUMBER TO BE PRESSURE TREATED.
2. WOOD FENCE TO BE PAINTED OR STAINED TO MATCH BUILDING FOUNDATION.
3. DUMPSTER SIZE VARIES, SEE SITE PLANS FOR SCREENING SIZE

DUMPSTER ENCLOSURE PLAN

NOT TO SCALE



SECTION A-A



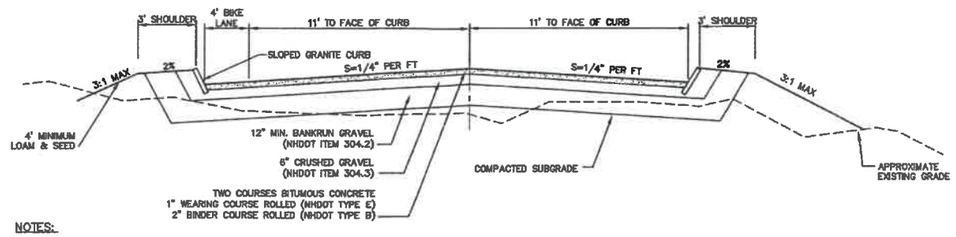
NOTES:

1. PER NHDES ENV-WQ 704.13(C), MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
   a. MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION
   b. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE PER TABLE 704-4:
      (1) 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
      (2) 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PART HYDRATED LIME;
   c. CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED
   d. HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED
   e. SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY 'STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES.
   f. CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AAA CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS AVAILABLE AT:

   HTTP://WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/SPECIFICATIONS/INDEX.HTM
2. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL IN ACCORDANCE WITH ENV-WQ 704.12 (K).
3. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH ENV-WQ 704.17 (a) THROUGH (e).
4. SEWER MANHOLE COVERS SHALL CONFORM TO ASTM A48/48M WITH A CASTING EQUAL TO CLASS 30 IN ACCORDANCE WITH ENV-WQ 704.13 (a) (8).
5. ALL PRECAST SECTIONS SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING IN ACCORDANCE WITH ENV-WQ 704.12 (J).
6. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL PER ENV-WQ 704.12(I).
7. BRICK MASONRY SHALL CONFORM TO ASTM C32 (ENV-WQ 704.12(c)(8))

SEWER MANHOLE

NOT TO SCALE



NOTES:

1. REMOVE ALL ORGANICS, TOPSOIL AND MATERIAL YIELDING TO A 10 TON ROLLER. SUBBASE AREAS THAT CONTAIN UNSUITABLE MATERIALS MUST BE EXCAVATED TO A DEPTH NO LESS THAN 36" BELOW FINISH GRADE AND BE REPLACED WITH GRAVEL COMPACTED TO 95%
2. ALL MATERIALS TO BE AS SPECIFIED PER TOWN STANDARDS AND NHDOT, WHICHEVER IS MOST STRINGENT. GRADATION AND COMPACTION TEST RESULTS (95% MIN.) SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
3. TOWN MAY REQUIRE UNDERDRAIN AND/OR ADDITIONAL DRAINAGE IF SOIL CONDITIONS WARRANT.
4. WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ABOVE SUBGRADE AT ALL WETLAND CROSSINGS.

TYPICAL ROADWAY SECTION W/CURBING

NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION

Design: LAZ	Draft: LAZ
Checked: BAJ	Scale: AS NOTED
Drawing Name: 21137-PLAN.dwg	Date: 9/8/21
	Project No.: 21137

STATE OF NEW HAMPSHIRE MICHAEL J. KERWIN No. 6949 LICENSED PROFESSIONAL ENGINEER 9/8/21

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR **REVIEW**	LAZ

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

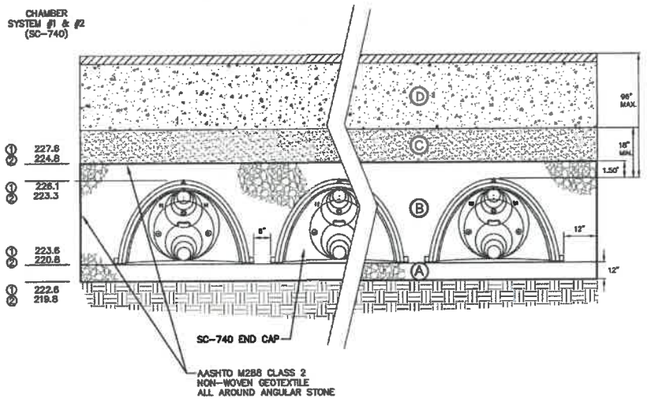
Plan Name:	DETAIL SHEET
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
D2
SHEET 19 OF 22
JBE PROJECT NO. 21137

ACCEPTABLE FILL MATERIALS
STORMTECH SC-310 AND SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
D	PAVEMENT SUBGRADE, DEPTH(S) PER SPECIFICATIONS	PAVEMENT SUBGRADE, MATERIALS PER SPECIFICATIONS	N/A	N/A	PREPARE PER SPECIFICATIONS AND PLANS. PAVED INSTALLATIONS HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	FILL MATERIAL FROM 1.50' ABOVE CHAMBERS TO BOTTOM OF PAVEMENT SUBGRADE	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES. <35% FINES.	3, 357, 4, 467, 5, 56, 67, 6, 67, 68, 7, 78, 8, 89, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
B	EMBEDMENT STONE SURROUNDING AND TO A 1.50' ELEVATION ABOVE CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED
A	12" FOUNDATION STONE BELOW CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE WASHED CRUSHED ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS WASHED, CRUSHED, ANGULAR NO. 4 STONE.

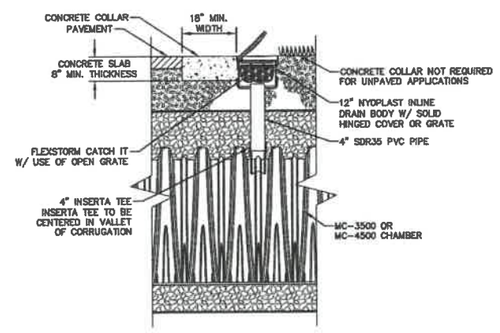


TYPICAL SC-740 CROSS-SECTION

NOT TO SCALE

NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
   PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

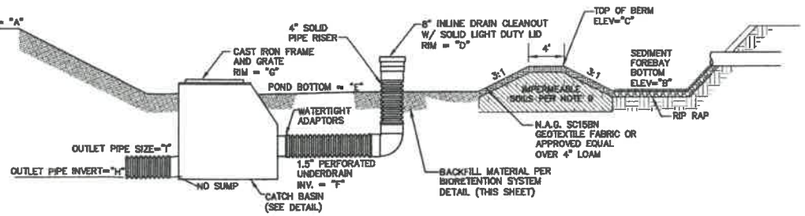


TYPICAL SC-740 4" INSPECTION PORT

NOT TO SCALE

STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. STORMTECH OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICE DEPARTMENT OR LOCAL STORMTECH REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 860-529-8188 TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 24 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 6.5 FEET INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 6.5 FEET.
4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
10. STORMTECH PRODUCT WARRANTY IS LIMITED. CONTACT STORMTECH FOR WARRANTY INFORMATION.



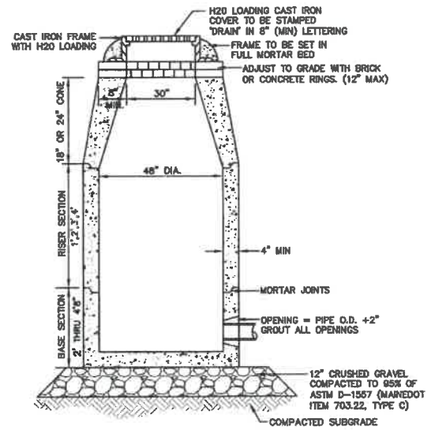
BIORETENTION SYSTEM TABLE

	ELEVATIONS/DIMENSIONS								
	A	B	C	D	E	F	G	H	I
SYSTEM P3	214.25	212.0	213.6	214.0	212.50	210.83	213.0	210.50	6"

nyloplast usa inc
3130 Verona Avenue - Buford, Georgia 30518
Tel. (770) 932-2443 - Fax (770) 932-2490

BIORETENTION SYSTEM SECTION

NOT TO SCALE



NOTES:

1. BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER.
2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING.
3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING.
5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
7. ALL DRAIN MANHOLE FRAMES AND GRATES SHALL BE NEENAH R-1798 OR APPROVED EQUAL (30" DIA. TYPICAL).
8. STANDARD FRAME(S) AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE 'DONUTS'.

DRAIN MANHOLE (4' DIAM.)

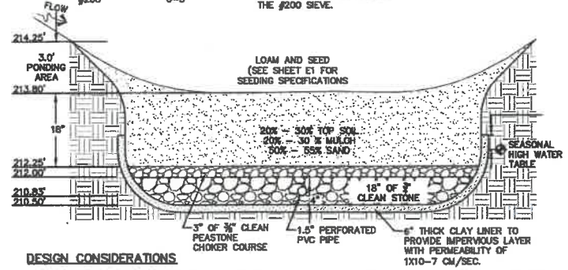
NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION

SAND SPECIFICATION	
SIEVE SIZE	% BY WEIGHT
3"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#60	10-30
#100	2-10
#200	0-5

TOPSOIL SPECIFICATION
LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15 TO 25% FINES PASSING THE #200 SIEVE.

MULCH SPECIFICATION
MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE.



DESIGN CONSIDERATIONS

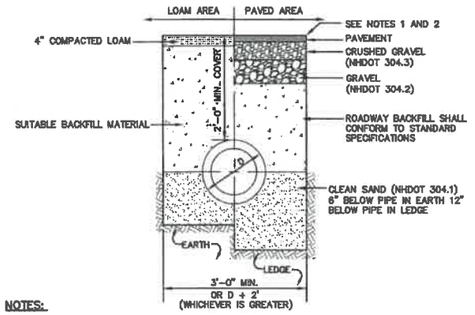
1. DO NOT PLACE BIORETENTION SYSTEMS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS:

1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
3. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
4. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
6. CLAY LINER MATERIAL SHALL BE CLEAN SILTY-CLAY BORROW FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER THREE INCHES (3") IN DIAMETER. THIS MATERIAL SHALL BE INSTALLED IN 6" LIFTS COMPACTED TO 92% OF ASTM D-1557, AND SHALL MEET THE FOLLOWING SPECIFICATIONS: 6" PASSING 100%, #4 SIEVE 95-100%, #40 SIEVE 60-90%, #100 SIEVE 40-60%, #200 SIEVE 25-45% (OF THE FRACTION PASSING THE #4 SIEVE). THE CLAY COMPONENT SHALL HAVE A PLASTICITY INDEX OF AT LEAST 8 AND A HYDRAULIC CONDUCTIVITY OF 10 TO THE -6 CM/SEC.
7. COMPACTION AND MATERIALS TESTING SERVICES SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

BIORETENTION SYSTEM (with clay bottom and pipe)

NOT TO SCALE



NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM WITH PROJECT AND TOWN SPECIFICATIONS.
3. ALL MATERIALS ARE TO BE COMPACTED TO 95% OF ASTM D-1557.

DRAINAGE TRENCH

NOT TO SCALE

Design: LAZ	Draft: LAZ	Date: 9/8/21
Checked: BAJ	Scale: AS NOTED	Project No.: 21137
Drawing Name: 21137-PLAN.dwg		

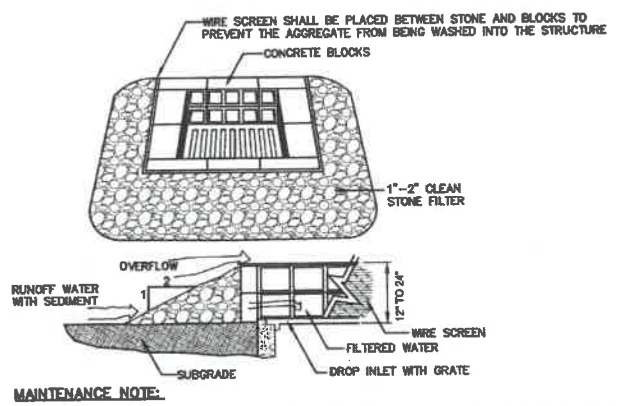
STATE OF NEW HAMPSHIRE — MICHAEL A. KERWIN No. 9946 LICENSED PROFESSIONAL ENGINEER — 12/9/21

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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

Plan Name:	DETAIL SHEET
Project:	WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record:	SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No.
D3
SHEET 20 OF 22
JBE PROJECT NO.21137

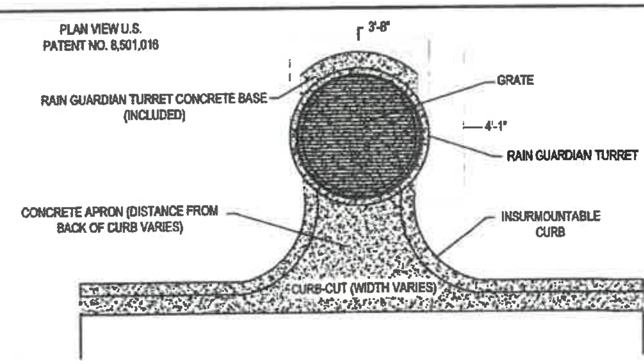


MAINTENANCE NOTE:

1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED IN A SUITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

TEMPORARY CATCH BASIN INLET PROTECTION
(Block and Gravel Drop Inlet Sediment Filter)

NOT TO SCALE

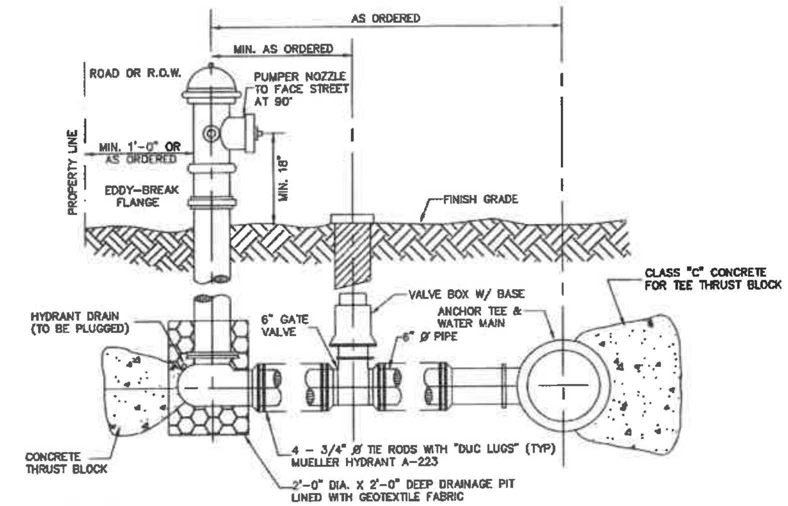


SPECIFICATIONS:

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS).
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (4 PERCENT TO 6 PERCENT BY VOLUME).
3. MANUFACTURED AND DESIGNED TO ASTM C858.
4. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.
5. SOIL UNDER BASE TO BE COMPACTED TO 95 PERCENT STANDARD PROCTOR.
6. TWO-PIECE FIBER GLASS TOP GRATE (16 LBS/PIECE) FOR 1,706 LB CONCENTRATED LOAD OR 409 LB/SQFT UNIFORM LOAD.
7. USE EXPANSION JOINT MATERIAL BETWEEN TURRET AND BIORETENTION INLET.

RAIN GUARDIAN - TURRET - TYPICAL DETAIL - PLAN VIEW

NOT TO SCALE



OPEN LEFT
EPPING WATER
DEPARTMENT SPECS.

NOTES

1. ALL PIPE FITTINGS TO BE D.I. PRESSURE CLASS 350, THICKNESS CLASS 52.
2. HYDRANT TO BE PAINTED RED WITH WHITE "REFLECTOR" PAINT ON BONNET.
3. MECHANICAL JOINTS SHALL HAVE MEGALUG RETAINING GLANDS AS MADE BY EBBA OR APPROVED EQUAL.
4. STEAMER NOZZLE TO BE "STORCH" TYPE.
5. NATIONAL STANDARD THREAD.

HYDRANT INSTALLATION

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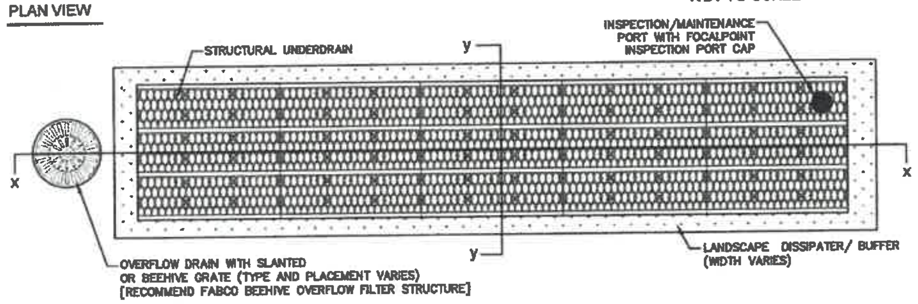
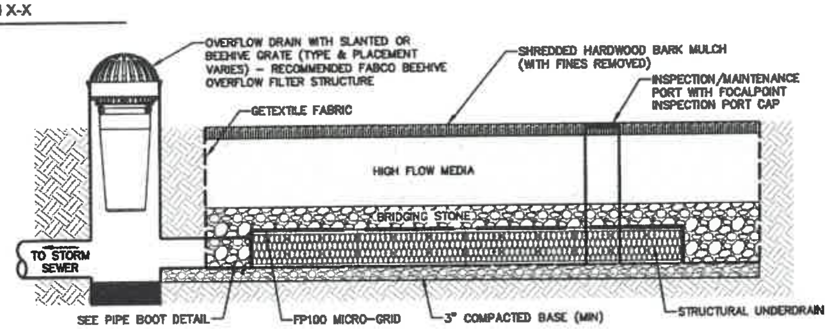
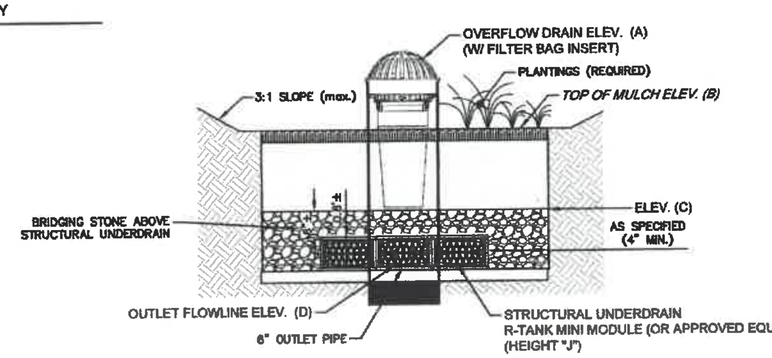
PLAN VIEW



SECTION X-X



SECTION Y-Y



FOCALPOINT BIOFILTRATION SYSTEM

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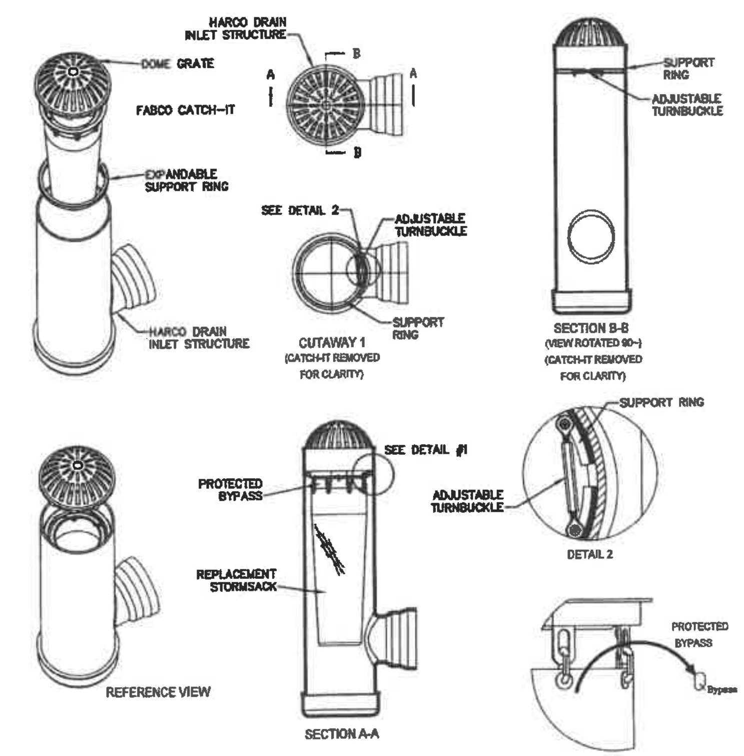

FABCO BEEHIVE OVERFLOW FILTER STRUCTURE DETAILS (FOCALPOINT)

NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION

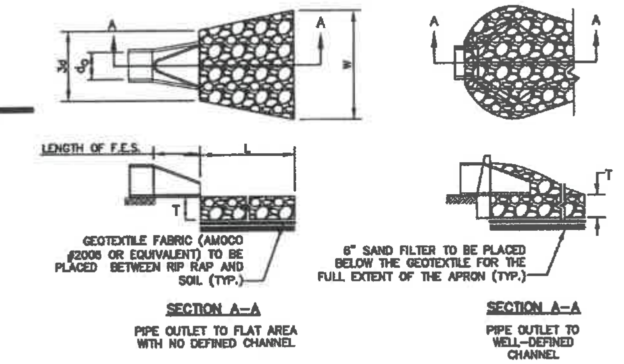

TABLE 7-24---RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 1.5 FEET		
d50 SIZE= 0.50	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM	TO
100%	9	12
85%	8	11
50%	6	9
15%	2	3

NOTES:

1. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. OUTLETS TO A DEFINED CHANNEL SHALL HAVE 2:1 OR FLATTER SIDE SLOPES AND SHOULD BEGIN AT THE TOP OF THE CULVERT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.
6. MAINTENANCE: THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.

RIP RAP OUTLET PROTECTION APRON

NOT TO SCALE

Design: LAZ | Draft: LAZ | Date: 9/8/21
Checked: BAJ | Scale: AS NOTED | Project No.: 21137
Drawing Name: 21137-PLAN.dwg

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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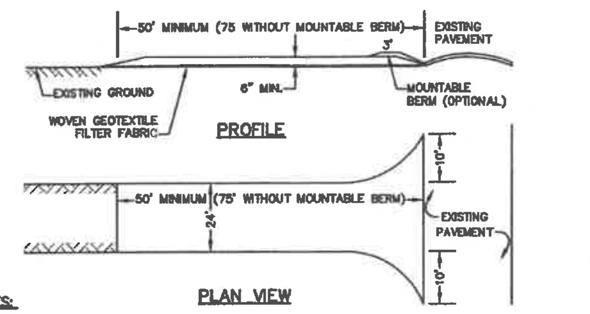
Plan Name: DETAIL SHEET
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No. D4

TEMPORARY EROSION CONTROL NOTES

1. 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.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS (INCLUDING POND AREAS BELOW THE PROPOSED WATERLINE) 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).
4. SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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 PER NHDOT ITEM 304.3.
10. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    - a. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    - b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    - c. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
    - d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
11. FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
12. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (SEE BELOW).
13. PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN.
14. 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, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP:
    - a. A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").
    - b. DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY ½ INCH OR GREATER RAIN EVENT (I.E. ½ INCH OF PRECIPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.
    - c. THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
    - d. WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK@DES.NH.GOV).
    - e. THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.

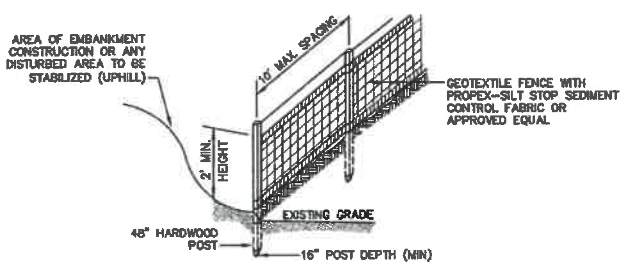


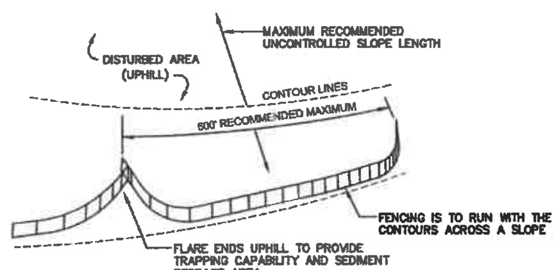
NOTES:

1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, 75' WITHOUT A MOUNTABLE BERM, AND EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE





CONSTRUCTION SPECIFICATIONS:

1. 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.
2. THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. 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.
4. 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.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
6. SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.
7. 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:

1. 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.
2. 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.
3. 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.
4. 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.

SILT FENCE

NOT TO SCALE

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
    - A. 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).
    - B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
    - A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
    - B. 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.
3. ESTABLISHING A STAND
    - A. 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.)
    - B. 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.
    - C. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT, TREFOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
    - D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
4. MULCH
    - A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
    - B. 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.
5. MAINTENANCE TO ESTABLISH A STAND
    - A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
    - B. 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.
    - C. 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
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	2/
	F	FAIR	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.

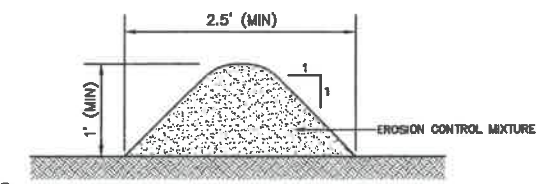
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

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 TREFOIL	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/	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



NOTES:

1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE, UNLESS OTHERWISE SPECIFIED.
2. THE EROSION CONTROL MIX USED IN THE FILTER BERMS SHALL BE A WELL-GRADED MIXTURE OF PARTICLE SIZES, MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, OR ACCEPTABEL MANUFACTURED PRODUCTS, AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH, AND SHALL MEET THE FOLLOWING STANDARDS:
    - a) THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
    - b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
    - c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
    - d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
    - e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
    - f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES STEEPER THAN 3:1, UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE), AND A MINIMUM OF 36" WIDE. ON LONGER OR STEEPER SLOPES, THE BERM SHALL BE WIDER TO ACCOMMODATE THE POTENTIAL ADDITIONAL RUNOFF.
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
7. STRUCTURES MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED.

ORGANIC FILTER BERM

NOT TO SCALE

CONSTRUCTION SEQUENCE

1. PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NOI) FORM WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) IN ORDER TO GAIN COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. A PRE CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
2. WETLAND BOUNDARIES ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION. AT LEAST A TEMPORARY CULVERT OR ROADBED TO BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
3. CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
4. 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.
5. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
6. 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.
7. 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.
8. PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS AND SOUND WALLS.
9. PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN.
10. 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.
11. INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
12. ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
13. 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.
14. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
15. PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
16. PERFORM ALL REMAINING SITE CONSTRUCTION (i.e. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
17. LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (i.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
18. FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
19. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
20. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
21. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
22. 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.
23. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
24. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
25. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
26. 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.

PRELIMINARY NOT FOR CONSTRUCTION

Design: LAZ	Draft: LAZ	Date: 9/8/21
Checked: BAJ	Scale: AS NOTED	Project No.: 21137
Drawing Name: 21137-PLAN.dwg		

STATE OF NEW HAMPSHIRE MICHAEL J. KERIAN No. 9943 LICENSED PROFESSIONAL ENGINEER 10/27/2021

REV.	DATE	REVISION	BY
1	9/21/21	ISSUED FOR PLANNING BOARD	LAZ
0	9/8/21	ISSUED FOR REVIEW	LAZ

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Plan Name: EROSION AND SEDIMENT CONTROL DETAILS
Project: WADLEIGH ROAD APARTMENTS ROCHESTER, NH
Owner of Record: SSG, LLC ATTN: FENTON GROEN 120 WASHINGTON STREET, ROCHESTER, NH 03839

DRAWING No. E1
SHEET 22 OF 22
JBE PROJECT NO. 21137