CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, December 23, 2021**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:15 AM: Site Review for Knox Marsh Development LLC., (Owner: 242 Central Ave), Assessor's Map H, Lots 46 & 50, zoned R-40, located at 51 & 65 Bellamy Road. (Proposal is to construct a private road which will provide access to the existing home as well as construct 13 new single-family homes and four 4-unit buildings as well as the existing duplex utility TDR).*[This item was previously heard on October 28, 2021]* (P21-66)

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – P21-65

Application Type:	Site Review
Applicant(s):	Knox Marsh Development LLC and Dove Development Group LLC
Owner(s):	Knox Marsh Development and Gary & Kim Bates
Location:	51 & 65 Bellamy Road (Assessor's Map H, Lots 46 & 50)
Date:	October 28, 2021

INTENT: To construct a residential TDR project to total 31 units including 13 single family houses, one duplex, and 4 4-unit buildings, with 47 surface parking spaces plus garage spaces. A related LLA plan will also appear before the Planning Board. Four units of the new 31 total were previously approved in March 2021.

UNITS PROPOSED: 31 units

AGENDA ITEM #: 1

ACREAGE: 7.79 acres between 2 lots

ZONING DISTRICT: R-40

EXISTING LAND USE: Residential

PROPOSED LAND USE: Residential

SURROUNDING LAND USE: Residential, and Industrial

ZBA ACTION: Z96-06 Variance granted on 4/18/1996 to allow 2 principle buildings on one lot

PERMITS REQUIRED:
-NHDES AOT
-US EPA NOI and SWPPP
-NHB
-NHDES Sewer Discharge

WAIVERS: N/A

ATTENDANCE:
Members: Donna Benton, Planning
Jim Maxfield, Inspection Services
Dave White, Engineering
Dan Barufaldi, Economic Development
Marn Speidel, Police
Frank Torr, Planning Board
Others: Chris Berry
Robert Baldwin
Dave and Bob Paolini
Don Chandler

Approval of Minutes from October 21, 2021:
J.Maxfield moved to approve the October 21, 2021 TRC minutes. D.White seconded. Vote U/A.

PLAN REVIEW:
Planning:

- Impact fees
- Sewer and water fees
- TDR request to PB on 11/9
- Passive and active recreation fees per Chapter 170-15
- Previous approval would be null and void if this becomes approved. Credit for previous TDR payment ($17,870)
- Revise note 10 on sheet 13 to include variance granted
- Provide:
  - Condo docs
  - Letters to serve
  - Draft Easement language
  - Lot line adjustment application
- Private trash pick-up for multifamily? –Toters? Where placed on garbage day?
- Have you considered shortening spur off Sophie or narrowing to a shared drive?
- Condos or rentals?
- Mail delivery?
- Revise Plans to:
  - Revise TDR note on Sheet 13. "The proposed R-40 yield allows for 9 units by right. The remaining 22 units are to be purchased utilizing TDR for a total of 31 units. X of which will be the HUD rental rate. The previous approvals for 4 units will become null and void but the payment will be credited.
    The Planning Board approved the use of the TDR which includes additional units per chapter 170-27.2 and relief to the abut a rear lot line from 30' to 10' within the single family lots, a TDR subdivision rather than OSS and 30' buffers instead of 50'."
  - Add Planning File number P21-65
  - Revise site work hours to also include no federal holidays
  - Note 38 sheet 13, typo "Bellamy"
  - Add Signature and stamps on each submission
  - Add Owners signatures on final plans
  - Overlap on title block on sheet 14
  - Screen transformer infront of unit 6
  - Add uniformity ratios for parking lots to sheet 28.

- Add common lighting note to sheet 28. Use residential part of the lighting table in regulations.
- Bike rack?
- EV readiness? 5% of new multi-family parking spaces
- Flag pole and structure shown in streetscape to be used? Add to plan and review lighting for flag and adjust lighting plan accordingly.

Engineering Comments:

- I am concerned about the parking spaces not being deep enough and the vehicles may block the sidewalk
- Are crosswalks and DWP needed on the private road for the sidewalks?
- Move the stop sign and no outlet signs
- I am concerned about possible overflows out of the ponds. We will review the drainage report in depth
- Discuss watermain tap in Bellamy
- Use flowable fill under ac mains
- Use square sign posts in row
- The roadway details pavement thickness don't match.

Police Department Comments:

- Traffic Impact Analysis (p.6) discusses a proposed crosswalk from the subject parcel to the sidewalk across the street, but plans do not show any detail. Do not install a marked crosswalk. However, the terminus of your sidewalk should include a tip-down and curb cut, and should correspond with a tip-down and curb cut that you install on the opposite side of the street. In other words, create the pedestrian connection, but do not provide a marked crosswalk here.
- Did you investigate the feasibility of bringing the new roadway directly off Cold Springs Road instead of creating a new intersection at Bellamy Road?
- How is refuse proposed to be stored and collected?

Fire/Inspection Services Comments:

- Clarify Sophie Drive ending at Map H Lot 47-A
- Expand on information regarding sheet 7 note 26
- Indicate the location of the accessible parking at the four multifamily structures
- Indicate the accessible route throughout the site and location of tip downs, etc.
- Plan notes on sheet L-02 shall be legible
- Clarify all utility installations for the proposed structures on sheet 29 of 47
- Indicate the location of the FDC at each four unit building
- Indicate a separate gate for domestic and suppression line at each four unit structure.
- Indicate location of sprinkler room
- Indicate recycle and waste disposal locations
- Clarify the location of accessible parking with van spaces throughout the site
- Provide a plan detail including the parking space dimensions with accompanying access aisle.
- Consider relocating the pole light at the four vehicle parking space at the circle and identifying the area in front of the area as snow storage.
- Multifamily structures consisting of four or more units are required to be type B units. Provide accessible route locations.
- Provide a site street view.
- Will review floorplans and elevations

Economic Development:

- Will review elevations and streetscape

Planning Board Comments:

- Consider lowering the elevation
- Existing duplex proposed to tie into sewer?

Next Steps:

Revise plans and create bulleted narrative of how each comment above has been addressed and return for a second TRC

Adjournment:

D.White moved to adjourn at 10:59 am. Seconded by D.Barufaldi
Vote: U/A

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

December 16, 2021

City of Dover
Planning Office
Attn: Donna Benton, City Planner
288 Central Ave
Dover, NH 03820

RE: Proposed TDR Subdivision, Site Plan, Lot Line Revision
Knox Marsh Development LLC
Dove Development Group LLC
51 & 65 Bellamy Road
Tax Map H, Lots 46 & 50

Mrs. Benton,

Enclosed please find the following required material in support of the TDR Subdivision, Site Plan Review and Lot Line Revision application off Bellamy Road known as Sophie Drive and Banner Drive:

- 9 Copies of the full size plans
- 9 Copies of architectural renderings
- 9 Copies of the subdivision application and checklist
- 9 Copies of the site plan application and checklist
- 9 Copies of the project narrative
- 3 Copies of the traffic analysis
- Drainage not modified from prior submission.

Thank you for your time and attention to this matter.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

City of Dover, New Hampshire
TRANSFER OF DEVELOPMENT RIGHTS APPLICATION

Units Previously Approved

[Revision Date: October 1, 2020]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Knox Marsh Development / Dove Development Telephone # 603-742-2121

Address of Applicant: 242 Central Ave, Dover, NH 03820

E-Mail Address: robert@centralfallsrealty.com

Name of Property Owner (if different from applicant): Knox Marsh Development ~~Gary & Kim Bates~~ Telephone # 603-742-2121 / 603-231-0929

Address of Property Owner: 242 Central Ave Dover NH / 52 Martel Road Chichester NH

PROPERTY INFORMATION

Assessor's Map # H Lot(s) # 46 & 50

Address of Property: 51 & 65 Bellamy Road

Zoning District(s) R40 Overlay District(s) Steep Slopes

Existing Use of Property: Duplex / residential

New impervious area (in s.f.): 29,679

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☐ Residential ☒ Residential (reduced size) ☐ Industrial | ☐ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☒ Lot Size ☒ Frontage ☒ Setback ☐ Increase by 18/22 units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

Please Find Narrative

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status:

AoT

Name of Professional That Prepared TDR Plans: Berry Surveying & Engineering

Address 335 Second Crown Point Road, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: LLS 805 E-mail address: crberry@metrocast.net

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board 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 or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Ow Gary Bates Kim Bates Date: 8/4/2021

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Knox Marsh Development LLC / Dove Development Group LLC Telephone # 603-742-2121

Address of Applicant: 242 Central Ave Dover NH

E-Mail Address: robert@centralfallsrealty.com

Name of Property Owner (*if different from applicant*): Knox Marsh Development / Gary & Kim Bates Telephone # 603-742-2121 / 603-231-0929

Address of Property Owner: 242 Central Ave Dover NH / 52 Martel Road Chichester NH

PROPERTY INFORMATION

Address of Property: 51 & 65 Bellamy Road

Assessor's Map # H Lot(s) # 46 & 50

Zoning District(s) R-40 Rural Residential Overlay District(s) N/A

Size of Parcel: 65,015 / 274,584 sq. ft. 1.49 / 6.30 ac. Property Deed: Book 4844 / 2557 Page: 417 / 210

Existing Use of Property: Lot 46: Single family home. / Lot 50: Existing duplex with detached barn and garages.

SITE PLAN INFORMATION

Describe Proposed Use: See attached narrative

Area of Parcel to be Developed: 214,073 SF total on both parcels sq. ft.

If Multi-family Residential: Number of Units 18 & Buildings Proposed 5

If lodging: Number of Units N/A & number of Buildings N/A

Number of Parking Spaces: Existing N/A Proposed 38

Highway Access (check where applicable): X City Street ____ State Highway

Number of Employees Total: 0 In Maximum Shift: 0

Disposition of Parcel: Proposed lot 50-6

Building Setbacks: TDR Subdivision

Building Footprint 11,732 sq. ft.

Front Yard 10 ft.

Total Building Area 11,732 sq. ft.

Rear Yard 10 ft.

Paved Area 17,947 sq. ft.

Side Yard: Right 10 ft. Left 10 ft.

City Water? X Yes ___ No How far is city water from the property? Bellamy Road

City Sewer? X Yes ___ No How far is city sewer from the property? Bellamy Road

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☒ Residential ☐ Residential (reduced size) ☐ Industrial | ☐ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☐ Lot Size ☐ Frontage ☐ Setback ☐ 30' Buffer ☒ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

See attached narrative

BUILDING INFORMATION

Type of Building to be Built: Single family, 4 unit buildings, existing barn and duplex to remain

Height of Building: 30' +/- Finished Floor Elevation: See plans

Number of Seats (where applicable) N/A

Estimated value of construction: 2,000,000 Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: [redacted] 153:14 E b. LIGHTING.

Justification for waiver request(s) (*attach additional sheets as needed*):

N/A

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Terrain Planting & Design LLC
Eric Buck

Address 311 Kast Hill Road, Hopkinton NH 03229 Telephone #: 603-491-2322

Professional License #: 78 E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) John P. Hayes III

Address 7 Limestone Way, North Hampton NH 03862 Telephone #: 603-205-4396

Professional License #: 87 E-mail address: johnphayes@comcast.net

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board 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. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: _____

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: Knox Marsh Development
Dove Development File Number: _____

PROJECT TITLE: Sophie Drive

PROPERTY LOCATION: 51 & 65 Bellamy Road Tax Map: H Lot: 46 & 50

	Where/How Provided	Reviewed
1. Completed and signed Application form	x	
2. Plan Review Fees are provided	x	
3. Electronic copy of the engineered/surveyed plan layout	x	
4. Electronic copy of supplementary materials and application	x	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	x	
6. Waiver requests to the Site Plan Review Regulations, with written justification	N/A	
7. Conditional Use Permit applications	N/A	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	x	
9. A colored architectural plan showing all sides of buildings	x	
10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:	x	
Location map at appropriate scale	x	
Proposed Project name and title and Planning File #	x	
Date, north arrow and scale	x	
Names of all abutting property owners	x	
Name and address of owners and/or applicants	x	
Signature & stamp of NH licensed land surveyor and/or engineer	x	
Zoning District boundaries, including any special or overlay districts	x	
Location of Conservation District areas	x	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	x	
Location and widths of existing & proposed easements & right of ways	x	
Location and width of existing and proposed access/egress ways	x	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	x	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	x	
Existing and proposed topographic information at two foot intervals	x	
Existing and proposed buildings and structure locations	x	
Minimum building setbacks or build to lines on all lots	x	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	x	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	x	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	x	
Existing and proposed stormwater lines and facilities	x	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	x	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	N/A	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	x	
Existing natural features and/or significant vegetation on property	x	
Depict existing contours up to 100 ft. beyond project limits	x	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	x	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	x	
Location, material and size of existing and proposed pavement area	x	
Location of proposed fire lanes	x	
Specify finished floor elevations of buildings	x	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	x	
Depict all service, storage, loading bays and utility areas	x	
All applicable Dover Common Site Plan notes	x	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	x	
Stormwater Management System Operation and Maintenance Plan	x	
Letter to Serve from Public and Private Utilities	Will provide	
Erosion and Sedimentation Control Plan	x	
Landscape Operation and Maintenance Plan	x	
Proposed restrictive covenants or homeowners association documents	Will provide	
Dates and permit numbers of all required state and federal permits	Will provide	
If wetland buffer, indicate placards locations, as applicable	N/A	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	x	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	Will provide as needed	

REVIEWED BY: _____ DATE_____ TRC DATE_____

City of Dover, New Hampshire
SUBDIVISION APPLICATION

[Revision Date: July 1, 2021]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Knox Marsh Development LLC
Dove Development Group LLC Telephone # 603-742-2121

Address of Applicant: 242 Central Ave Dover NH

Name of Property Owner (*if different from applicant*): Knox Marsh Development
Gary & Kim Bates Telephone # 603-742-2121
603-231-0929

Address of Property Owner: 242 Central Ave Dover NH
52 Martel Road Chichester NH

E-Mail Address: robert@centralfallsrealty.com

PROPERTY INFORMATION

Address of Property: 51 & 65 Bellamy Road

Assessor's Map # H Lot(s) # 46 & 50

Zoning District(s) R-40 Rural Residential Overlay District(s) N/A

Size of Parcel: 1.49 Lot 46
6.30 Lot 50 Property Deed: Book 4844 2557 Page: 417 210

Existing Use of Property:

SUBDIVISION INFORMATION

Subdivision Type: Conventional: _____ Open Space: _____ TDR: X

Existing Number of Lots: 2 Proposed Number of Lots: 17

TDR Relief sought (Check All That Apply): ☐ Lot Size ☐ Frontage ☐ Setback ☐ 30' Buffer ☒ Purchase ____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

See attached narrative

Circle one for each category:
Water: City/Well (circle one) How far is city water from the property? Bellamy Road

Sewer: City/Septic (circle one) How far is city sewer from the property? Bellamy Road

Highway Access City Street/State Highway (circle one) | Roadway Public or Private Road (circle one)

Refuse removal: Public/Private (circle one) | Estimated Length of Proposed Road: 1,186 feet

Estimated value of construction: 2,000,000 New impervious area (in s.f.): 29,679 Lot 50-6

WAIVER REQUESTS

Subdivision Regulations section(s) to be waived: N/A

Justification for waiver request(s) (*attach additional sheets as needed*): N/A

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) John P. Hayes III

Address 7 Limestone Way, North Hampton NH 03862 Telephone #: 603-205-4396

Professional License #: 87 E-mail address: johnphayes@comcast.net

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board 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. Furthermore, I/We submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take

City of Dover, New Hampshire
SUBDIVISION SUBMISSION CHECKLIST

[Revision Date: May 18, 2019]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Knox Marsh Development LLC / Dove Development Group LLS File Number: _____

PROJECT TITLE: Sophie Drive

PROPERTY LOCATION: Bellamy Road Tax Map: H Lot: 46 & 50

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	X	
6. Waiver requests to the Subdivision Regulations, with written justification	N/A	
7. Conditional Use Permit applications	N/A	
8. Narrative describing yield plan and cost analysis	X	
9. Folded copies of subdivision plan w/scale of not less than 1"=50' or 1"=100' for larger subdivisions. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale		
Proposed subdivision name and title and Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners and/or applicants	X	
Signature & stamp of NH licensed land surveyor and/or engineer	X	
Zoning District boundaries, including any special or overlay districts	X	
Location of Conservation District areas	X	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Location and widths of existing and proposed sidewalks	N/A	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed topographic information at two foot intervals	X	
Minimum building setbacks or build to lines on all lots	X	

	Explain How Provided	Reviewed
Existing and proposed buildings and structure locations	x	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	x	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	x	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	x	
Existing and proposed septic system, including test pit locations and results and NHDES subdivision permit number	N/A	
Existing and proposed stormwater lines and facilities	x	
Existing and proposed streetlights	x	
Location of Flood Hazard Zone	x (None)	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	N/A	
Neighborhood plan with aerial underlay showing how project relates to abutting uses	x	
Existing natural features and/or significant vegetation on property	x	
Depict existing contours up to 100 ft. beyond project limits	x	
Soil types	x	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	x	
Location of all land offered for dedication for public use or land to be held in common by property owners of the subdivision	x	
Location of all land offered for dedication for public use or land to be held in common by property owners of the subdivision	x	
Location, material and size of existing and proposed permanent monuments	x	
Existing railroad lines	N/A	
Note regarding solid waste disposal	x	
All applicable Dover Common Subdivision notes	x	
10. Construction Detail Sheets shall contain the following:		
Profiles showing existing & proposed elevations along the center lines of proposed streets & within 100' of intersections with existing streets	x	
Profiles showing the locations & a typical cross-section detail of streets	x	
Location of street trees, street lighting poles and street signs	x	
Location, size and invert elevations of existing and proposed sanitary sewers, stormwater drains and fire hydrants	x	
Location and size of all water, gas and other underground utilities	x	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing and proposed storm drainage system and engineered drainage analysis	x	
Stormwater Management System Operation and Maintenance Plan	x	
Letter to Serve from Public and Private Utilities	Will provide	
Erosion and Sedimentation Control Plan	x	
Perimeter Landscaping Plan	x	
Proposed restrictive covenants or homeowners association documents	Will provide	
Dates and permit numbers of all required state and federal permits	Will provide	
If wetland buffer, indicate placards locations, as applicable	N/A	
Hydrogeologic study if located in Groundwater Protection Zone	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	Will provide	

REVIEWED BY: _____ DATE_____ TRC DATE_____

City of Dover, New Hampshire
MINOR LOT LINE ADJUSTMENT APPLICATION

[Revision Date: June 4, 2019]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT INFORMATION

Name of Applicant: Dove Development / Knox Marsh Development Telephone # 603-742-2121

Address of Applicant: 242 Central Ave., Dover, NH 03820

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): Bates, Gary & Kim Telephone # 603-231-0929

Address of 1st Property Owner: 52 Martel Road, Chichester, NH

Address of Property: 65 Bellamy Road

Assessor's Map # H Lot(s) # 50

Property Deed: Book 2557 Page: 210

Zoning District(s) R40 Overlay District(s) Conservation District (Slopes)

Size of Existing Parcel (sq. ft.): 274,574 Size of Proposed Parcel (sq. ft.): 272,945

SECOND PROPERTY OWNER AND PARCEL INFORMATION

Name of 2nd Property Owner (*if different from applicant*): Knox Marsh Development Telephone # 603-742-2121

Address of 2nd Property Owner: 242 Central Ave., Dover, NH 03820

Address of Property: 51 Bellamy

Assessor's Map # H Lot(s) # 46-2

Property Deed: Book 4844 Page: 417

Zoning District(s) R40 Overlay District(s) None

Size of Existing Parcel (sq. ft.): 14,290 Size of Proposed Parcel (sq. ft.): 11,348

THIRD PROPERTY OWNER AND PARCEL INFORMATION

Name of 3rd Property Owner (*if different from applicant*): Knox Marsh Development Telephone # 603-742-2121

Address of 3rd Property Owner: 242 Central Ave, Dover, NH 03820

Address of Property: 51 Bellamy Road

Assessor's Map # H Lot(s) # 46-3

Property Deed: Book 4844 Page: 417

Zoning District(s) R40 Overlay District(s) None

Size of Existing Parcel (sq. ft.): 10,847 Size of Proposed Parcel (sq. ft.): 12,150

[Use additional application form if more than two lots are being adjusted]

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A. Berry LLS & Christopher R. Berry PM Berry Surveying & Engineering

Address 335 Second Crown Point Road Telephone #: 603-332-2863

Professional License #: 805 E-mail address: crberry@metrocast.net

CONSERVATION EASEMENT HOLDER (s)

Name of Easement Holder: None Telephone #_____

Address Easement Holder: _____

Name of 2nd Easement Holder: _____ Telephone #_____

Address 2nd Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board 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 or as agent, I attest that I am duly authorized to act in this capacity.

Signature of First Property Owner: _____ Date: _____

Signature of Second Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: _____

City of Dover, New Hampshire
LOT LINE ADJUSTMENT SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, 3 weeks prior to the Planning Board meeting. Abutter/Notice Fees will be invoiced and are due 28 hours prior to Planning Board.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: Bates & Knox Marsh File Number: _____

PROPERTY LOCATION: 51 & 65 Bellamy Road Tax Map: H Lot: 50 and Lot: 46-2 & 46-3

	Where/How Provided	Reviewed
1. Completed and signed Application form		
2. Plan Review Fees are provided		
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Fifteen copies of LLA plan w/scale of not less than 1"=50' or 1"=100' for larger adjustments. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale	X	
Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners	X	
Signature & stamp of NH licensed land surveyor	X	
Zoning District boundaries, including any special or overlay districts	X	
Location of Conservation District areas	X	
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed buildings and structure locations	X	
Minimum building setbacks or build to lines on all lots	X	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	X	
Location, material and size of existing and proposed permanent monuments	X	
All applicable Dover Common Subdivision notes	X	

REVIEWED BY: _____ DATE_____

place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby authorize the City of Dover and its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF PUBLIC ROADWAY ACCEPTANCE

I, and my successors, hereby certify that I understand that the acceptance of a roadway as a public road is an action of the City Council in its sole and complete discretion. In order for the City Council to consider accepting a road as public, it must be free of encumbrances. No roadway with private utility easements shall be accepted as a public road by the City unless the easements are expunged prior to the transfer of land to the City. License agreements for any and all private utilities within the right of way may be granted by the City upon acceptance of the unencumbered roadway consistent with applicable state law.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board 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. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: Gary Bates Kim Bates Date: 8/4/2021

Signature of Applicant (*if different from owner*): _____ Date: _____

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com
crberry@metrocast.net

December 16, 2021

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

Re: Proposed TDR Subdivision
Knox Marsh Development LLC
Dove Development Group LLC
51 & 65 Bellamy Road
Tax Map H, Lots 46 & 50

Dear Mrs. Benton,

On behalf of our client Knox Marsh Development LLC & Dove Development Group LLC, Berry Surveying & Engineering (BS&E) is submitting a proposed TDR Subdivision at 51 & 65 Bellamy Road.

Background and General Narrative:

Knox Marsh Development LLC, owns the parcel known as 51 Bellamy Road in Dover, NH (Tax Map H, Lot 46). Gary and Kim Bates own 65 Bellamy Road (Tax Map H, Lot 50). Berry Surveying & Engineering has conducted an on-site survey of the parcels which includes a topographic analysis as well as a wetlands analysis. No wetlands were found on site. Lot 46 has an existing driveway and house. Lot 50 has an existing driveway, duplex, barn and two detached garages. The sites contain very sandy soils with deep seasonal high water tables. Both sites generally slopes from the rear towards Bellamy Road.

The Proposal:

The project proposes 31 units, 9 units are allowed by right utilizing the R-40 Zoning, and 4 units have been recently approved under a previous TDR subdivision for Lot 46. Therefore, the applicant is proposing to purchase 20 additional units.

The applicant is proposing to construct a 24' wide private road known as Sophie Drive & Banner Drive. This private road will provide access to the existing home on Lot 46, 13 new single family homes, four 4 unit buildings and the existing duplex on Lot 50. A sidewalk will be constructed along the entire proposed road to allow for safe pedestrian traffic throughout the project.

The existing barn will be remain but will be refurbished into a 4 unit building. However, the design will be such that it will look like a barn, with barn doors on the front and a barn like roof line. Additionally, the proposed 4 unit buildings will look like single family homes from the street through the use of side entrance doors. The parking for these units will be set back from the road, in between the units and heavily landscaped, to look like a single driveway entrance.

The largest concern heard by the abutters through the TRC process, private meetings and the TDR Planning Board hearing on November 9th, was traffic. Specifically speeds in the area and the concentration of potential pedestrian use from this project coupled with the existing pedestrian infrastructure. In working with the applicant, we have designed a mid-block cross walk with 5' speed table, identical to the one found up Bellamy Road at the High School. The project will provide for a sidewalk tip-down with truncated domes and the opposite side of Bellamy will be modified to receive the walk the same fashion. The identical sign package is proposed for this crossing with the required pavement markings. This speed table will not only serve to allow for safe crossing, but will serve to slow traffic down in the immediate area of the project site.

Additionally it was requested that we review other traffic impacts from nearby projects and include those in the TIA provided. This was completed and there were no impacts to the safety warrants provided in the TIA.

Infiltration rain gardens will be used throughout the site to capture, treat and re-infiltrate the runoff back into the ground. This will help reduce the offsite impacts and allow for more ground water recharge to occur throughout the site. Additionally, a diversion berm will be installed behind the abutting lots along Bellamy Road in order to divert runoff away from the existing homes and towards proposed treatment areas.

The proposed development will be serviced by municipal water and sewer, which will be installed from Bellamy Road into the site. Fire hydrants will be placed throughout the site and the four unit buildings will be sprinkled with FDA connections in proposed utility doghouses on the sides of the buildings.

All proper erosion and sediment control measures will be taken to ensure that no sediment is tracked onto Bellamy Road or abutting lots. Perimeter control will be installed prior to any earth disturbing activities. Check dams, matting and rip-rap will be used throughout the construction process for stabilization.

The applicant is seeking TDR relief in order to increase the number of units by 18 and to seek relief to the rear lot line setback from 30' to 10'. All of the proposed single family lots will have a 30' exterior buffer between the rear lot lines and the existing lot lines. In the case of the 4 units buildings, and existing house on Lot 46, a 30' exterior buffer will be maintained on those lots.

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On November 9th the Planning Board approved the purchase of the units within the project. The project has the following submitted applications outstanding:

- Lot Line Revision
- Subdivision
- Site Review
- TDR Review of adjustments in setbacks.
- Waiver Request for Lighting in the R40 Zone

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

Christopher R. Berry SIT, Project Manager
Principal, President

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December 16, 2021

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

RE: Site Plan Waiver Request
Knox Marsh Development LLC
Dove Development Group LLC
51 & 65 Bellamy Road
Tax Map H, Lots 46 & 50

Chairperson & Members of the Dover Planning Board:

In accordance with the Site Review Regulations, the following waiver is hereby requested:

1. **Identification of Waiver Request**: 153:14 E (b)

    - Minimum Lumen calculated at the darkest point on the lot no less than 0.2 Foot Candles (FC) where 0.1 FC is proposed.

2. **Explanation:**

The proposal includes lamp style area lighting in the parking areas. This project is located in the R40 Zone which does not include lighting requirements, so the corresponding residential zone was used in referring to 153:14 E (b). The project keeps the low uniformity ratio of 4:1 however does so using the minimum lumen of 0.1 FC, where 0.2 FC is required. To meet both the uniformity ratio and the minimum lumen calculation the average amount of light on the site would need to *increased*, which is the opposite of the desired effect of the applicant. This site is located in a residential setting where the overall light should be kept as low as possible while meeting safety standards.

3. **Waiver Justification**:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of this regulation is to ensure that proper minimum light is provided in the parking areas while ensuring the light is uniformed in nature. In this case the 0.1FC at the darkest point is considered safe given the overall size of each of the parking areas, and the proximity to each

residential structure. The parking areas are not removed from the intended structures and has a dense population within the immediate area.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation will require the applicant increase the lighting onsite without regard for the abutting land owners putting the applicant at odds with the purpose and intent of the lighting requirements within the zone.

Thank you for your time and attention to this matter and we hope you look favorably upon the request.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry, SIT, Project Manager
Principal, President

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335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
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December 15, 2021

City of Dover
Attention: City Planner Donna Benton
288 Central Ave
Dover, NH 03820

RE: Site Plan Waiver Request
Knox Marsh Development LLC
Dove Development Group LLC
51 & 65 Bellamy Road
Tax Map H, Lots 46 & 50

Based on comments from the Technical Review Committee Minutes P21-65, we respectfully submit the following comments and revisions. Our comments are in **bold**.

PLANNING COMMENTS

1. Impact fees and water and sewer investment fees will be assessed.
   Understood. No comment required. COA

2. TDR Request to PB on 11/9
   The TDR Request was approved by the Planning Board on 11-9-21. The project requires TDR Subdivision, (with setback modifications) Site Review, Lot Line Revision, and action on one lighting waiver.

3. Passive and active recreation fees per Chapter 170-15.
   The plan has been modified to increase the passive recreation area. A table was added to Sheet 13 to key out the areas required and the areas which will require the fee applied.

4. Previous approval would be null and void if this becomes approved. Credit for previous TDR payment ($17,870)
   Understood. No Comment Required

5. Revise Note 10 on Sheet 13 to include variance granted.
   Note 10 on Sheet 13 has been updated.

6. Provide:
   a. Condo documents

i. **Prepared upon approval. COA**

b. Letters to serve
   i. **The work number has been added to the plan. COA**

c. Draft Easement language
   i. **Prepared upon approval. COA**

d. Lot Line adjustment application
   i. **Provided.**

7. Provide trash pick-up for multifamily? Toters? Where placed on garbage day?
   Toters are proposed to be used. Placements for the toters are now annotated on the plan.

8. Have you considered shortening spur off Sophie or narrowing to a shared drive?
   Sophie has now been narrowed at the intersection with the newly named Banner Drive. The spur remains in the event of future development on the abutting parcel, but the infrastructure has been reduced to give the appearance of a shared driveway.

9. Condos or rentals?
   The applicant currently intends to sell the units. The HUD rate ratio would apply to the sales within the project as discussed on November 9th with the Planning Board. Sales prices would be derived using common income / mortgage rate formulas.

10. Mail delivery?
    A mail kiosk has been added to the entrance area of Sophie Drive.

11. Revise Plans to:
    a. Revise TDR note on Sheet 13. "The proposed R-40 yield allows for 9 units by right. The remaining 22 units are to be purchased utilizing TDR for a total of 31 units. X of which will be the HUD rental rate. The previous approvals for 4 units will become null and void but the payment will be credited. – The Planning Board approved the use of the TDR which includes additional units per chapter 170-27.2 and relief to the abut a rear lot line from 30' to 10' within the single family lots, a TDR subdivision rather than OSS and 30' buffers instead of 50'."

    Updated as recommended with minor modification.

    b. Add Planning File number P21-65

    Add to the upper right hand corner of all sheets.

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c. Revise site work hours to also include no federal holidays.
Federal Holidays were added to this note.

d. Note 38 Sheet 13 typo "Bellamy"
Typo was corrected on Sheet 13.

e. Add signature and stamps on each submission.
Stamps and signatures of all professionals are now placed on the appropriate plans.

f. Add Owners signatures on final plans.
This will be added to final plans. COA

g. Overlap on title block on Sheet 14.
Overlap corrected.

h. Screen transformer in front of unit 6.
Screening was added to this transformer on the landscaping sheet.

i. Add uniformity ratios for parking lots to Sheet 28.
Lighting calculations have been re-run for the entire project. Fencing has been added to ensure no light trespass takes place onto Mr. Chandlers property. Uniformity ratios are now added as well as some additional details. A waiver request is included to allow the lowest foot candle to be 0.1 where 0.2 is required, however uniformity ratios are now met.

j. Add common lighting note to Sheet 28. Use residential part of the lighting table in regulations.
This now was on Sheet 13, and has now been added to Sheet 28.

k. Bike rack.
Bike racks are now provided with construction details found on Sheet 40 (C-103)

l. EV readiness? 5% of new multi-family parking spaces.
Two EV ready spaces are now provided in the larger of the parking areas, intended use for the entire site. This parking array was reduced in size due to it being larger than the maximum allowed on site. EV signs were added to the site plan as well as the sign legend. Utilities need to be shown on the utility plan.

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m. Flag pole and structure shown in streetscape to be used? Add to plan and review lighting for flag and adjust lighting plan accordingly.
Flag Pole and monument are now added to the site plan. Drainage structures were modified to accommodate the monument.

ENGINEERING COMMENTS

1. I am concerned about the parking spaces not being deep enough and the vehicles may block the sidewalk.
Parking spaces were slid forward 5' to allow for space between the rear of the vehicle and the cross walk.

2. Are crosswalks and DWP needed on the private road for the sidewalks?
The applicant would like to keep the shown cross walks. DWP's are only shown at the crossing of Sophie onto Banner, and the new Speed Table on Bellamy Road.

3. Move the stop sign and no outlet signs.
The Stop Sign is now moved out of the right of way and the No Outlet Sign is moved closer to the intersection of Sophie and Bellamy.

4. I am concerned about possible overflows out of the ponds. We will review the drainage report in depth.
As noted at TRC the ponds are designed to no overtop during the 100 Yr/24Hr storm event. Infiltration rates used are 3 In/Hr, which represents 50% of the lowest connectivity rate reported in the soils group range of values. On the larger pond if a connection to the municipal system is preferred over the use of an overflow weir we can modify the design.

5. Discuss water main tap in Bellamy.
The proposed valve has been moved to the tapping sleeve.

6. Use flowable fill under AC mains.
Flowable fill comment has been added to the plan profile in the area of the utility crossings.

7. Use square sign posts in row.
Sign posts have been noted as U-channel or Square on the sign legend. The typical detail has a note added for clarity that signs in the municipal right of way are to be square.

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8. The roadway details pavement thickness don't match.
Pavement thicknesses have been correlated throughout.

POLICE DEPARTMENT COMMENTS

1. Traffic Impact Analysis (p.6) discusses a proposed crosswalk from the subject parcel to the sidewalk across the street, but plans do not show any detail. Do not install a marked crosswalk. However, the terminus of your sidewalk should include a tip-down and curb cut, and should correspond with a tip-down and curb cut that you install on the opposite side of the street. In other words, create the pedestrian connection, but do not provide a marked crosswalk here.
The tip-downs and DWP's have been added to the plan on both sides of Bellamy and a speed table with integrated cross walk has been added. Updates have also been made to the Traffic Impact Analysis. (TIA)

2. Did you investigate the feasibility of bringing the new roadway directly off Cold Springs Road instead of creating a new intersection at Bellamy Road?
As discussed at TRC this is a private road with no potential connection.

3. How is refuse proposed to be stored and collected?
Toter location have been provided within the multi family portion of the project.

FIRE /INSPECTION COMMENTS

1. Clarify Sophie Drive ending at Map H Lot 47-A.
The right of way is proposed in the event there is potential for development in the future. The geometry of Sophie Drive has been updated to reduce down at this location and become a private shared driveway. Banner Drive was added in response to road name concerns in the even Sophie Drive is extended in the future.

2. Expand on information regarding Sheet 7 Note 26.
Construction types and styles have been added for clarity in the note to indicate the 4 unit structures will be constructed as townhouses.

3. Indicate the location of the accessible parking at the four multifamily structures.
2 accessible parking spaces were added to the larger lot, which represents the number needed for the entire site.

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4. Indicate the accessible route throughout the site and location of tip downs, etc.
All sidewalks have ramps as required to meet the ADA routes.

5. Plan notes on Sheet L-02 shall be legible.
This note was increased in size for legibility.

6. Clarify all utility installations for the proposed structures on Sheet 29 of 47.
This sheet is intended as an overview. Details were added to the subsequent utility pages. The applicant would like to change the water design to include services and stops to all units.

7. Indicate the location of the FDC at each four unit building.
FDC locations have been added to the site plans.

8. Indicate a separate gate for domestic and suppression line at each four unit structure.
See Comment above.

9. Indicate location of sprinkler room.
Noted on the Site Plans

10. Indicate recycle and waste disposal locations.
See Comment Above.

11. Clarify the location of accessible parking with can spaces throughout the site.
See Comment Above.

12. Provide a plan detail including the parking space dimensions with accompanying access aisle.
Details provided on Sheet 38

13. Consider relocating the pole light at the four vehicle parking space at the circle and identifying the area in front of the area as snow storage.
Great observation. This lamp has been relocated and the lighting plan updated accordingly.

14. Multifamily structures consisting of four or more units are required to be type B units. Provide accessible route locations.
These structures a proposed to built like townhouses and therefore do not need to meet this requirement.

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15. Provide a site street view.
Provided

16. Will review floorplans and elevations.
Understood.

ECONOMIC DEVELOPMENT COMMENTS

1. Will review elevations and streetscape.
No comment required.

PLANNING BOARD COMMENTS

1. Consider lowering the elevation.
Elevation is based on the ability to infiltrate storm water at the top of the site. There will be a large export of sandy material from this site.

2. Existing duplex proposed to tie into sewer?
Yes.

Very truly yours,
BERRY SURVEYING & ENGINEERING

Christopher R. Berry, SIT, Project Manager
Principal, President

BERRY SURVEYING & ENGINEERING

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SPEED
LIMIT
10





























Facsimile of Home to be Built



Facsimile of Home to be Built

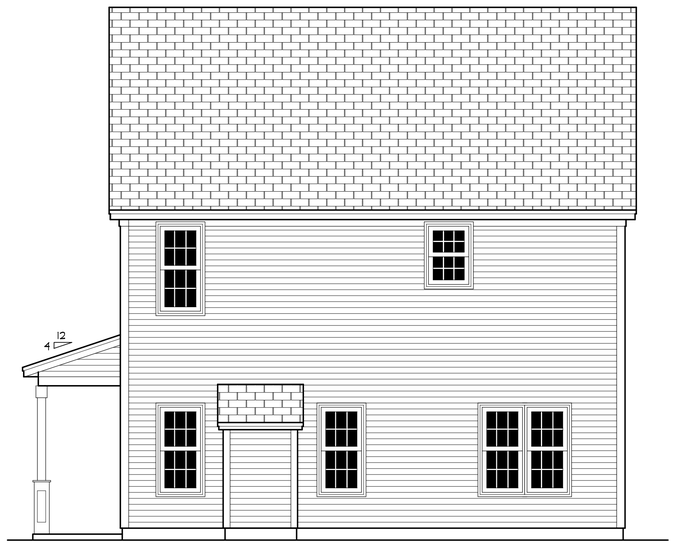
THESE PLANS WERE NOT DRAWN BY A LICENSED ARCHITECT OR ENGINEER
M. MORELAND CONSTRUCTION TAKES NO RESPONSIBILITY IN THE STRUCTURAL OR LIFE SAFETY DETAILING IN THESE PLANS.
ALL WORK SHALL COMPLY TO ALL LOCAL, STATE, & NATIONAL BUILDING CODES



1 REAR ELEVATION
SCALE 1/4"=1'0"



2 FRONT ELEVATION
SCALE 1/4"=1'0"



3 SIDE ELEVATION
SCALE 1/4"=1'0"



4 SIDE ELEVATION
SCALE 1/4"=1'0"

M. MORELAND CONSTRUCTION
ARCHITECTURAL DESIGNER

S. BERWICK ME
03908 PH.207-752-2498

NOTES:

V.I.F. ALL DIMENSIONS

CONTRACTOR IS RESPONSIBLE FOR ALL FINISHED DIMENSIONS

CONTRACTOR IS RESPONSIBLE FOR MEETING ALL STATE & NATIONAL BUILDING CODES

LOCATION

DRAWN BY

SIGNATURE | DATE

DRAWING LIST

A-1	FIRST FLOOR PLAN
	SECOND FLOOR PLAN
	FOUNDATION PLAN
A-2	SECOND FLOOR FRAMING
	ROOF FRAMING
	SECTION & DETAILS
A-3	ELEVATIONS

OWNER

PROJECT:

51 BELLAMY RD
GARAGE LEFT

PROJECT NUMBER:

ISSUE	DATE
DESIGN	5-24-21

SCALE
1/4"=1'-0"
0 5 10

STAMP

ELEVATIONS

A-3

THESE PLANS WERE NOT DRAWN BY A LICENSED ARCHITECT OR ENGINEER
M. MORELAND CONSTRUCTION TAKES NO RESPONSIBILITY IN THE STRUCTURAL OR LIFE SAFETY DETAILING IN THESE PLANS.
ALL WORK SHALL COMPLY TO ALL LOCAL, STATE, & NATIONAL BUILDING CODES

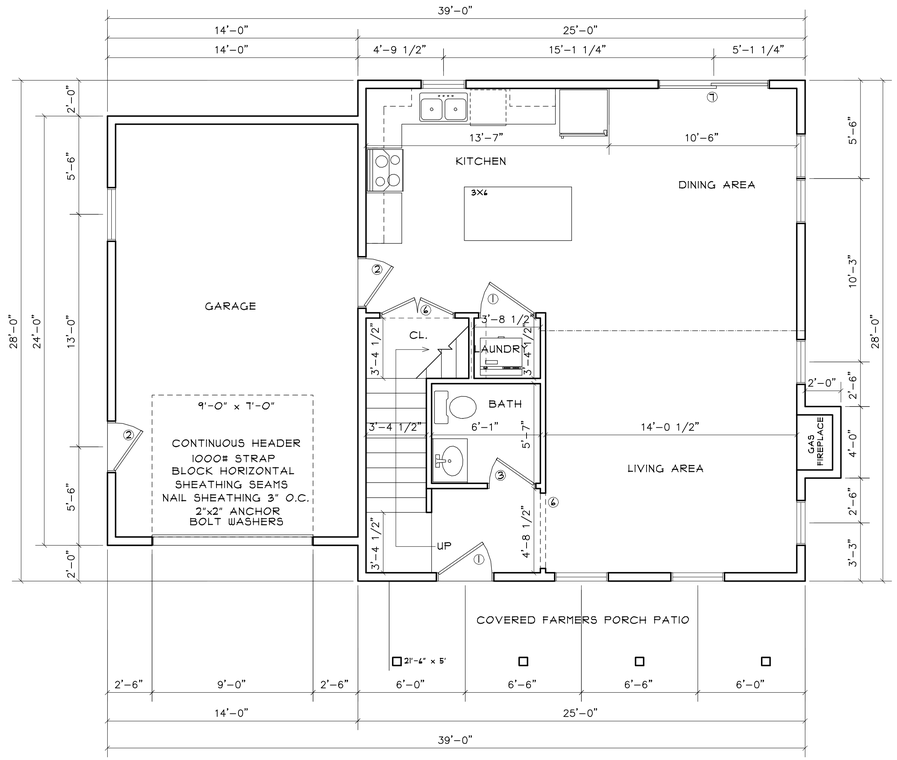
(E) WINDOWS WILL MEET OR EXCEED A CLEAR OPENABLE AREA OF 5.7 SQ. FT. & A CLEAR OPENABLE WIDTH OF 20" & A CLEAR OPENABLE HEIGHT OF 24"

(T) TEMPERED GLASS

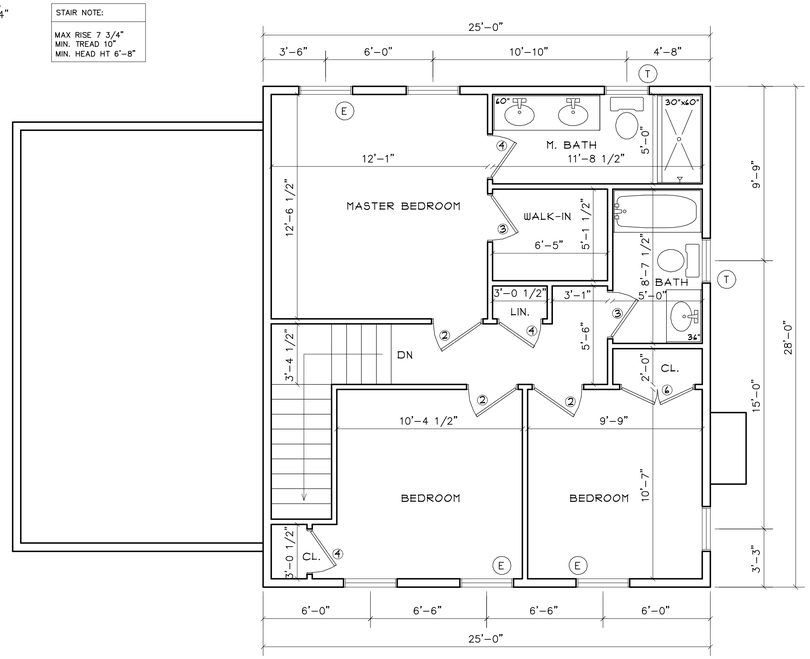
DOOR SCHEDULE			
1	3'-0" x 6'-8"	7	6'-0" x 6'-8"
2	2'-8" x 6'-8"		
3	2'-6" x 6'-8"		
4	2'-4" x 6'-8"		
5	5'-0" x 6'-8"		
6	4'-0" x 6'-8"		

STAIR NOTE:

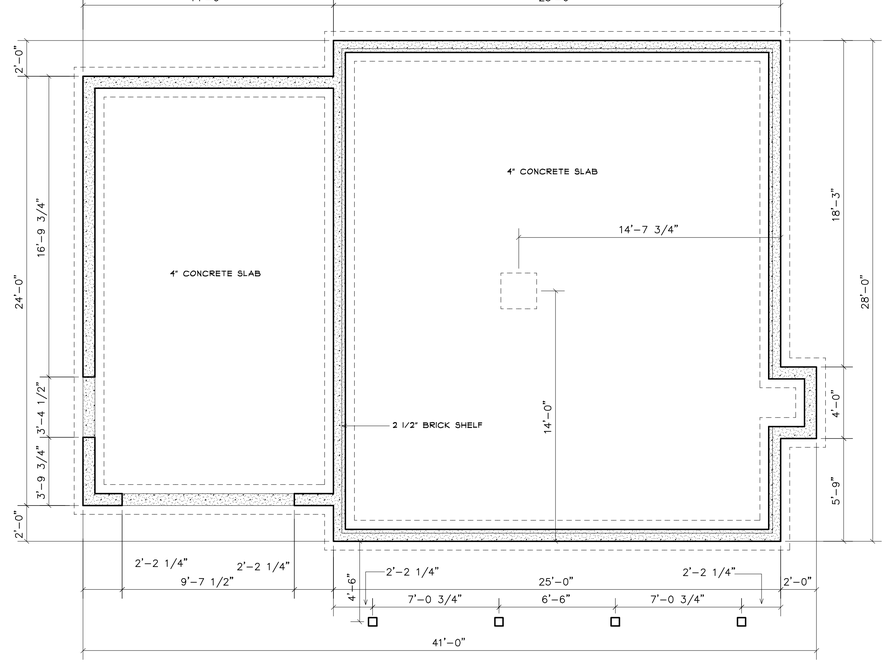
MAX RISE 7 3/4"
MIN. TREAD 10"
MIN. HEAD HT 6'-8"



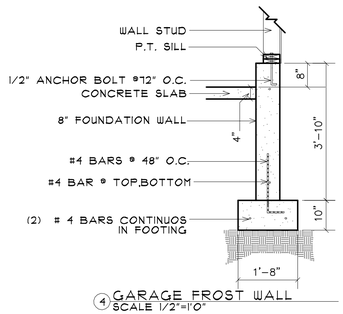
1 FIRST FLOOR PLAN
SCALE 1/4"=1'0"



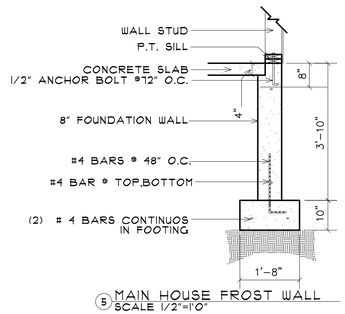
2 SECOND FLOOR PLAN
SCALE 1/4"=1'0"



3 FOUNDATION PLAN
SCALE 1/4"=1'0"



4 GARAGE FROST WALL
SCALE 1/2"=1'0"



5 MAIN HOUSE FROST WALL
SCALE 1/2"=1'0"

NOTES

1/2" ANCHOR BOLTS 1'-0" FROM CORNERS & 6'-0" O.C.

CONCRETE MIN STRENGTH NO LESS THAN 3000 PSI

VERIFY AND ADJUST FOUNDATION DROPS, BULKHEAD, AND BASEMENT WINDOW LOCATIONS PER SITE CONDITIONS

M. MORELAND CONSTRUCTION
ARCHITECTURAL DESIGNER
S. BERWICK ME
03908
PH.207-752-2498

NOTES:
V.I.F. ALL DIMENSIONS

CONTRACTOR IS RESPONSIBLE FOR ALL FINISHED DIMENSIONS

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LOCATION

DRAWN BY

SIGNATURE | DATE

DRAWING LIST

A-1	FIRST FLOOR PLAN
	SECOND FLOOR PLAN
	FOUNDATION PLAN
A-2	SECOND FLOOR FRAMING
	ROOF FRAMING
	SECTION & DETAILS
A-3	ELEVATIONS

OWNER

PROJECT:
51 BELLAMY RD
GARAGE LEFT

PROJECT NUMBER:

ISSUE	DATE
DESIGN	5-24-21

SCALE
1/4"=1'-0"
0 5 10

STAMP

FLOOR PLANS

A-1

"SOPHIE DRIVE"
TRANSFER OF DEVELOPMENT RIGHTS
SUBDIVISION PLAN
FOR
KNOX MARSH DEVELOPMENT LLC &
DOVE DEVELOPMENT LLC
51 & 65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

TABLE OF CONTENTS:

SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLANS
SHEETS 3 ~ DEMOLITION PLAN
SHEETS 4 ~ SITE SPECIFIC SOILS MAP
SHEETS 5 ~ R-40 YIELD PLAN
SHEETS 6 ~ LOT LINE REVISION*
SHEETS 7-12 ~ SUBDIVISION PLANS*
SHEETS 13-15 ~ SITE PLANS
SHEETS 16-19 ~ GRADING & DRAINAGE PLANS
SHEETS 20-22 ~ STORMWATER BMP PLANS (P-101 - P-105)
SHEETS 23-24 ~ EROSION AND SEDIMENT CONTROL PLANS
SHEETS 25-26 ~ LANDSCAPING PLANS
SHEETS 26-27 ~ LIGHTING PLANS
SHEETS 28-32 ~ UTILITY PLANS
SHEET 33-34 ~ SIGHT DISTANCE PLANS
SHEET 35 ~ CROSS SECTIONS
SHEETS 36-37 ~ EROSION & SEDIMENT CONTROL DETAILS (E-101 - E-102)
SHEETS 38-40 ~ CONSTRUCTION DETAILS (C-101 - C-103)
SHEETS 41-42 ~ DRAINAGE CONSTRUCTION DETAILS (D-101 - D-102)
SHEETS 43-44 ~ UTILITY CONSTRUCTION DETAILS (U-101 - U-102)
SHEET 45 ~ LANDSCAPING CONSTRUCTION DETAILS (L-101)
SHEET 46 ~ WILDLIFE IDENTIFICATION PLAN (W-101)
SHEETS 47-48 ~ TRUCK TURNING TEMPLATES

* INDICATES PLANS ARE TO BE RECORDED AT S.C.R.D.

SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

OWNERS: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820

GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

WETLAND SCIENTIST & SOIL SCIENTIST: JOHN P. HAYES III, CSS, CWS
7 LIMESTONE WAY
NORTH HAMPTON, NH 03862
(603) 205-4396

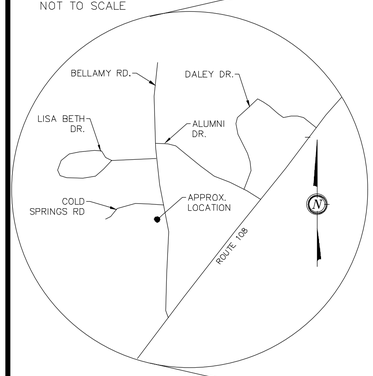
APPLICANTS: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820

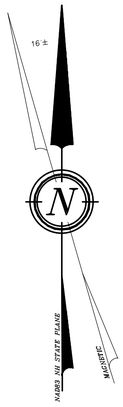
DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

NOTE:

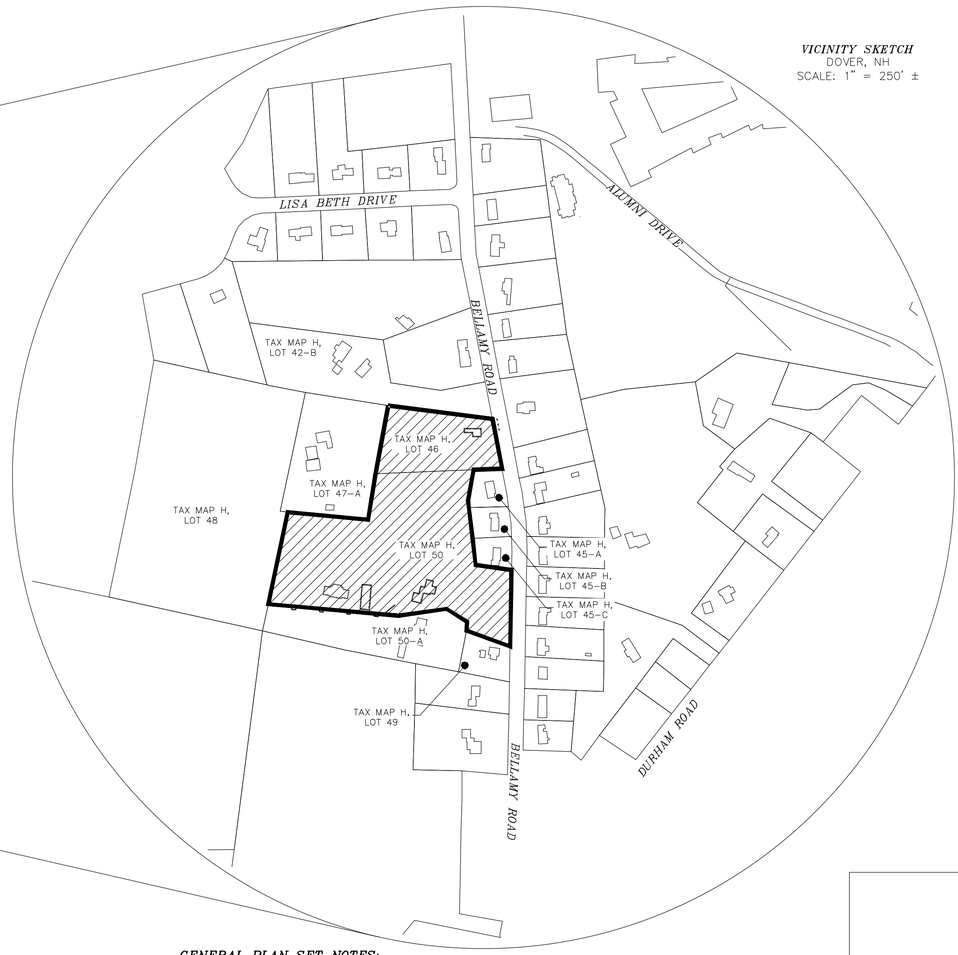
BERRY SURVEYING & ENGINEERING HAS PREPARED AN INSPECTION & MAINTENANCE MANUAL AS PART OF THIS PROJECTS DOCUMENTATION. ALL USERS ARE BOUND TO THIS DOCUMENT AS PART OF THE APPROVAL OF THE PLANNING BOARD. COPIES OF THE YEARLY INSPECTIONS ARE TO BE DELIVERED TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

LOCATION PLAN
DOVER, NH
NOT TO SCALE





VICINITY SKETCH
DOVER, NH
SCALE: 1" = 250' ±



WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE PLAN, THE SITE PLAN APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS AND SPECIFICATIONS OF THE CITY OF DOVER LAND SITE PLAN REGULATIONS AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED, IN ANY PARTICULAR, BELOW. NON - ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FOR SITE PLAN APPROVAL.

REQUIRED PERMITS:

~ NHDES ALTERATION OF TERRAIN PERMIT	(PENDING)
~ US EPA NOI & SWPPP	(PENDING)
~ NATURAL HERITAGE BUREAU	APPROVED NHB21-2384
~ NH DIVISION OF HISTORICAL RESOURCES	APPROVED 12971
~ NHDES SEWER DISCHARGE PERMIT	(PENDING)
~ EVERSOURCE WORK ORDER	6288326

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

APPROVED DOVER

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR
No. 805
KENNETH A. BERRY
SIGNATURE

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

TDR SUBDIVISION
LAND OF
KNOX MARSH DEVELOPMENT LLC &
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED
PROFESSIONAL ENGINEER

ABBREVIATION LEGEND:

E.O.P.	EDGE OF PAVEMENT
V.G.C.	VERTICAL GRANITE CURB
S.G.C.	SLOPED GRANITE CURB
ACP	ASBESTOS CLAY PIPE
BITUM.	BITUMINOUS
E.O.P.	EDGE OF PAVEMENT
E.S.H.W.T	ESTIMATE SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
U.G.E.	UNDER GROUND ELECTRIC / UTILITY
U.D.	UNDER DRAIN
INV.	INVERT
ELEV.	ELEVATION
F.E.S.	FLARED END SECTION
HDPE	HIGH DENSITY POLYETHYLENE
RECB	ROLLED EROSION CONTROL BLANKET
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
E.T.W.	EDGE OF TRAVELED WAY
T.B.R.	TO BE REMOVED
PL	PROPERTY LINE
EL	EASEMENT LINE
CL	CENTER LINE
CF	CUBIC FEET
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.V.C.	POINT OF VERTICAL CURVE
P.V.I.	POINT OF VERTICAL INTERSECTION
P.V.T.	POINT OF VERTICAL TANGENCY
EX.	EXISTING
PROP.	PROPOSED
STA.	STATION
'/.	FEET / FEET

{ } SSL ( ) ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } DSL ( ) ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } SSB ( ) ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } SBL ( ) ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } DBL ( ) ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

16° ±

N

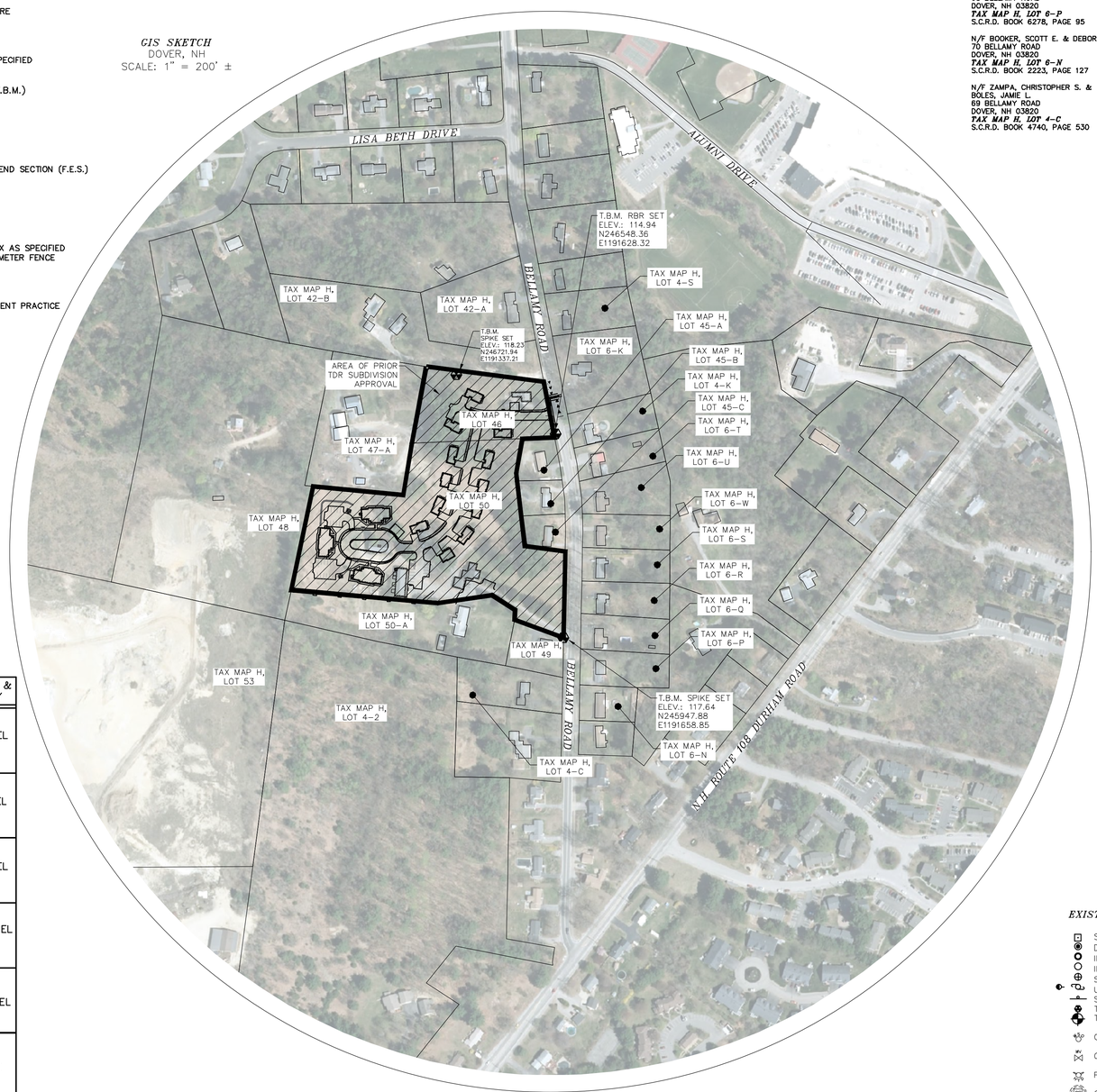
NAD83 NH STATE PLANE

MAGNETIC

PROPOSED LEGEND:

- UTILITY POLE
- SEWER MANHOLE W/STRUCTURE
- CATCH BASIN W/STRUCTURE
- SIGNAGE
- CHECK DAM–MATERIAL AS SPECIFIED
- FLOW ARROW
- TEMPORARY BENCHMARK (T.B.M.)
- E101 / E6 DETAIL SHEET / DETAIL
- MATCH POINT
- MATCH LINE
- CONTOUR MINOR, PROPOSED
- CONTOUR MAJOR, PROPOSED
- DRAIN CULVERT W/ FLARED END SECTION (F.E.S.)
- SHOULDER
- CENTER LINE
- BUILDING SETBACK LINE
- TRANSFORMER / J.BOX
- UNDERGROUND UTILITY
- UNDER DRAIN
- PERIMETER CONTROL
- FILTREXX 8" – 12" SILT SOXX AS SPECIFIED
- ORANGE CONSTRUCTION PERIMETER FENCE
- RIP RAP
- STORMWATER BEST MANAGEMENT PRACTICE
- BERM
- GATE VALVE
- CURB STOP
- HYDRANT
- THRUST BLOCKS
- F231.65 PROPOSED SPOT ELEVATION
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED GAS LINE

GIS SKETCH
DOVER, NH
SCALE: 1" = 200' ±



SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY
R1–1	30"x30"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	RED	WHITE	WHITE	U–CHANNEL (2)
R2–1	24"x30"	SPEED LIMIT 25	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	GREEN	GREEN	U–CHANNEL (1)
R6–1R	36"x12"	ONE WAY	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	BLACK W/ WHITE ARROW	BLACK	WHITE	U–CHANNEL (1)
R8–31	24"x30"	NO PARKING FIRE LANE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	3	WHITE	BLACK	BLACK	U–CHANNEL (3)
W14–2	30"x30"	NO OUTLET	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	YELLOW	BLACK	BLACK	U–CHANNEL (1)
W11–2	30"x30"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	YELLOW	BLACK	BLACK	SQUARE (2)
W16–7P	12"x24"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	YELLOW	BLACK	BLACK	SQUARE (0)
R7–8	12"x18"	RESERVED PARKING	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	WHITE	GREEN W/ WHITE SYMBOL ON BLUE	RED	U–CHANNEL (3)
R7–8a	12"x6"	VAN ACCESSIBLE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	GREEN	GREEN	U–CHANNEL (0)
D9–11b	24"x24"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	BLUE	WHITE	WHITE	U–CHANNEL (1)
W13–1P	12"x12"	15 MPH	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	YELLOW	BLACK	BLACK	U–CHANNEL (0)
W17–1	12"x6"	CAUTION SPEED TABLE AHEAD	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	YELLOW	BLACK	BLACK	U–CHANNEL (0)

ABUTTERS WITHIN 200' CONT.:

N/F MICHIELS, PETER L. & ANNE M.
68 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–P
S.C.R.D. BOOK 6278, PAGE 95

N/F BOOKER, SCOTT E. & DEBORAH MARIE
70 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–N
S.C.R.D. BOOK 2223, PAGE 127

N/F ZAMPA, CHRISTOPHER S. & BOLES, JAMIE L.
69 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 4–C
S.C.R.D. BOOK 4740, PAGE 530

ABUTTERS WITHIN 200':

N/F WEIDMANN, FREDDY R. & ELIZABETH A.
47 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 42–B
S.C.R.D. BOOK 2780, PAGE 846

N/F DOWALIBY FAMILY REV. TRUST
GEORGE & FRANCES DOWALIBY TRUSTEES
1 COLD SPRINGS ROAD
DOVER, NH 03820
TAX MAP H, LOT 47–A
S.C.R.D BOOK 2465, PAGE 266

N/F LABRIE, PATRICK & HELEN
55 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45–A
S.C.R.D. BOOK 2975, PAGE 475

N/F ALLEN, MICHAEL D. & PATRICIA A.
349 ROUTE 108
MADBURY, NH 03823
TAX MAP H, LOT 49
S.C.R.D. BOOK, 4770, PAGE 1006

N/F CHANDLER, DONALD S.
CHANDLER–JANUS, CHRISTINE A.
65A BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 50A
S.C.R.D. BOOK 1808, PAGE 720

N/F INVICTUS HOLDINGS LLC
C/O SUMMIT LAND DEVELOPMENT LLC
340 CENTRAL AVE. SUITE 202
DOVER, NH 03820
TAX MAP H, LOT 46
S.C.R.D. BOOK 4475, PAGE 717

N/F 153 MAST ROAD LLC
340 CENTRAL AVE. SUITE 202
DOVER, NH 03820
TAX MAP H, LOT 53
S.C.R.D. BOOK 4216, PAGE 317

N/F TORR, ROBERT H.
215 MAST ROAD
DOVER, NH 03820
TAX MAP H, LOT 4–2
S.C.R.D. BOOK 4253, PAGE 111

ABUTTERS WITHIN 200':

N/F BARBARA ROWE REVOCABLE TRUST
BARBARA S. ROWE, TRUSTEE
59 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45–C
S.C.R.D. BOOK 4438, PAGE 229

N/F TRASK, RUBY L.
57 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45–B
S.C.R.D BOOK 1157, PAGE 511

N/F KALWAY, STEVEN & KARYANN
54 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 4–K
S.C.R.D. BOOK, 2188, PAGE 594

N/F FELICIANO, JOSE
50 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–K
S.C.R.D. BOOK 4326, PAGE 196

N/F BARBARA A. ALLEN REV. TRUST
BARBARA A. ALLEN TRUSTEE
48 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 4–S
S.C.R.D. BOOK 3403, PAGE 669

ABUTTERS WITHIN 200' CONT.:

N/F ALLEN, STACY J.
56 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–T
S.C.R.D. BOOK 3920, PAGE 21

N/F ROBERT H. JR. & ROSALITA SMITH REV. TRUST
ROBERT H. SMITH JR. TRUSTEE
58 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–U
S.C.R.D. BOOK 4424, PAGE 757

N/F HOWARD, KAREN MARIE
45 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 42–A
S.C.R.D. BOOK 1860, PAGE 742

N/F FOLEY, DANIELE & PETER S.
60 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–W
S.C.R.D. BOOK 1245, PAGE 485

ABUTTERS WITHIN 200' CONT.:

N/F CILLEY FAMILY TRUST
DENNIS K. & SUSAN G. CILLEY, TRUSTEES
82 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–S
S.C.R.D. BOOK 2941, PAGE 635

N/F SIERPINA, ALICIA L.
64 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–R
S.C.R.D. BOOK 3974, PAGE 130

N/F HUPPE, STEPHEN C. & KATHY A.
66 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6–Q
S.C.R.D. BOOK 2098, PAGE 454

EXISTING LEGEND:

- STONE BOUND (FND)
- DRILL HOLE (FND)
- IRON BOUND (FND)
- IRON PIPE (FND)
- STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- >20% SLOPES
- STONE WALL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- NRCS SOIL LINE/LABEL
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- S.G.C SLOPED GRANITE CURB

DOVER PLANNING FILE #21–65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRG# COMMENT	12–16–21	

NEIGHBORHOOD PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

ABUTTERS LIST:

(A) N/F ALLEN, MICHAEL D. & PATRICIA A.
349 ROUTE 108
MADBURY, NH 03823
TAX MAP H, LOT 49
S.C.R.D. BOOK 4770, PAGE 1006

(B) N/F HUPPE, STEPHEN C. & KATHY A.
66 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-Q
S.C.R.D. BOOK 2098, PAGE 454

(C) N/F CARD, MICHAEL V. & CARD LINDELL, LEIA
64 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-R
S.C.R.D. BOOK 4857, PAGE 928

(D) N/F CILLEY FAMILY TRUST, CILLEY, DENNIS K. & SUSAN G. TRUSTEES
62 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-S
BOOK 2941, PAGE 635

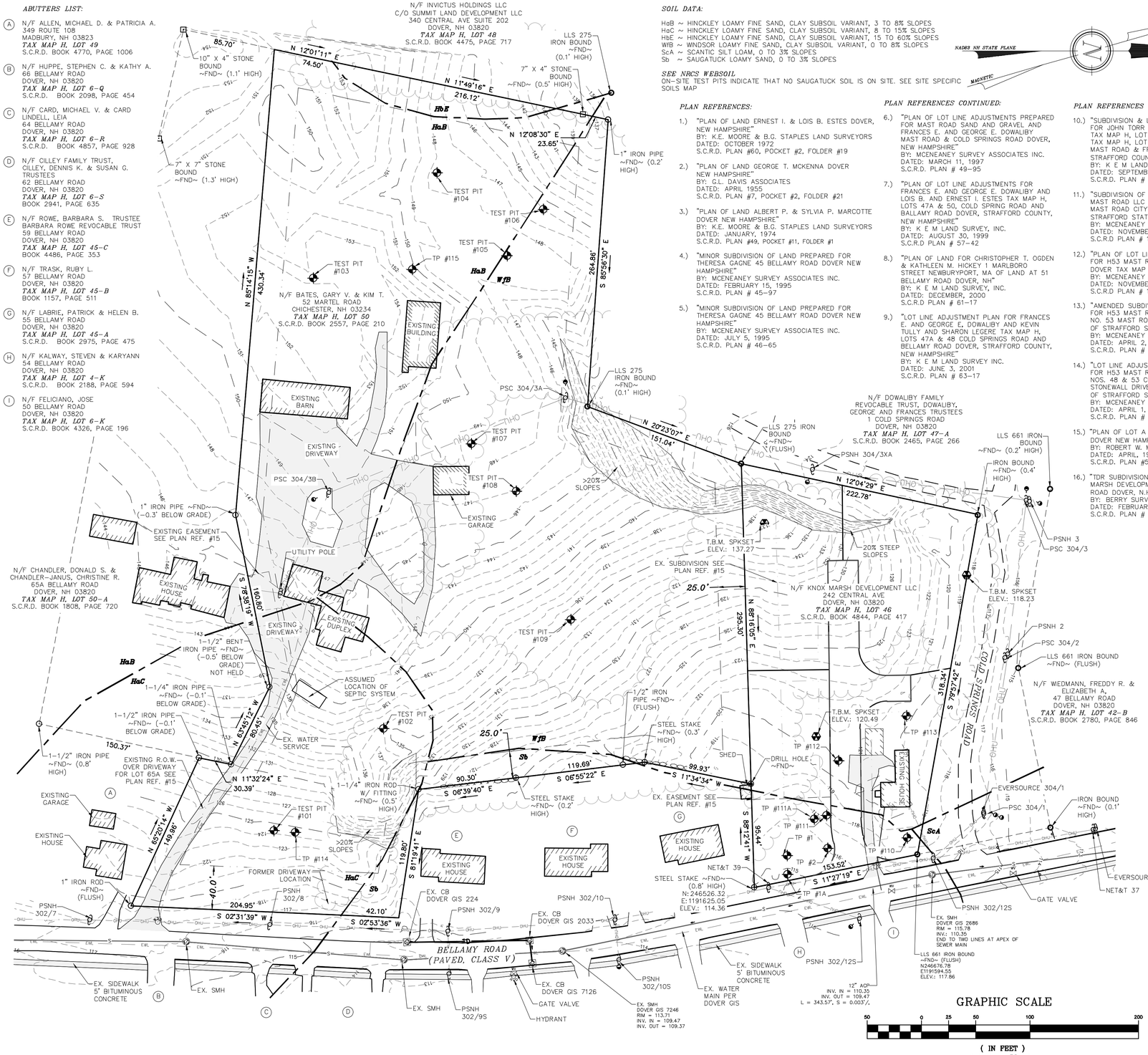
(E) N/F ROWE, BARBARA S. TRUSTEE BARBARA ROWE REVOCABLE TRUST
59 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-C
BOOK 4486, PAGE 353

(F) N/F TRASK, RUBY L.
57 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-B
BOOK 1157, PAGE 511

(G) N/F LABRIE, PATRICK & HELEN B.
55 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-A
S.C.R.D. BOOK 2975, PAGE 475

(H) N/F KALWAY, STEVEN & KARYANN
54 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 4-K
S.C.R.D. BOOK 2188, PAGE 594

(I) N/F FELICIANO, JOSE
50 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-K
S.C.R.D. BOOK 4326, PAGE 196

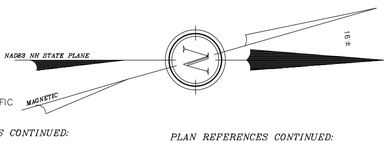


GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

SOIL DATA:

HaB ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 3 TO 8% SLOPES
HaC ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 8 TO 15% SLOPES
HbE ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 15 TO 60% SLOPES
WfB ~ WINDSOR LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES
ScA ~ SCANTIC SILT LOAM, 0 TO 3% SLOPES
Sb ~ SAUGATUCK LOAMY SAND, 0 TO 3% SLOPES

SEE NRCS WEBSOIL
ON-SITE TEST PITS INDICATE THAT NO SAUGATUCK SOIL IS ON SITE. SEE SITE SPECIFIC SOILS MAP



PLAN REFERENCES:

1.) "PLAN OF LAND ERNEST I. & LOIS B. ESTES DOVER, NEW HAMPSHIRE"
BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS
DATED: OCTOBER 1972
S.C.R.D. PLAN #60, POCKET #2, FOLDER #19

2.) "PLAN OF LAND GEORGE T. MCKENNA DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS ASSOCIATES
DATED: APRIL 1955
S.C.R.D. PLAN #7, POCKET #2, FOLDER #21

3.) "PLAN OF LAND ALBERT P. & SYLVIA P. MARCOTTE DOVER NEW HAMPSHIRE"
BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS
DATED: JANUARY, 1974
S.C.R.D. PLAN #49, POCKET #11, FOLDER #1

4.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: FEBRUARY 15, 1995
S.C.R.D. PLAN # 45-97

5.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: JULY 5, 1995
S.C.R.D. PLAN # 46-65

PLAN REFERENCES CONTINUED:

6.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR MAST ROAD SAND AND GRAVEL AND FRANCES E. AND GEORGE E. DOWALIBY MAST ROAD & COLD SPRINGS ROAD DOVER, NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: MARCH 11, 1997
S.C.R.D. PLAN # 49-95

7.) "PLAN OF LOT LINE ADJUSTMENTS FOR FRANCES E. AND GEORGE E. DOWALIBY AND LOIS B. AND ERNEST I. ESTES TAX MAP H, LOTS 47A & 50, COLD SPRING ROAD AND BALLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY, INC.
DATED: JANUARY, 30, 1999
S.C.R.D PLAN # 57-42

8.) "PLAN OF LAND FOR CHRISTOPHER T. OGDEN & KATHLEEN M. HICKEY 1 MARLBORO AND STREET NEWBURYPORT, MA OF LAND AT 51 BELLAMY ROAD DOVER, NH"
BY: K E M LAND SURVEY, INC.
DATED: DECEMBER, 2000
S.C.R.D PLAN # 61-17

9.) "LOT LINE ADJUSTMENT PLAN FOR FRANCES E. AND GEORGE E. DOWALIBY AND KEVIN TULLY AND SHARON LEGERE TAX MAP H, LOTS 47A & 48 COLD SPRINGS ROAD AND BELLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY INC.
DATED: JUNE 3, 2001
S.C.R.D. PLAN # 63-17

PLAN REFERENCES CONTINUED:

10.) "SUBDIVISION & LOT LINE ADJUSTMENT PLAN FOR JOHN TORR TRUSTEE & ROBERT TORR TAX MAP H, LOT NO. 4 AND ROBERT TORR TAX MAP H, LOT NO. 5A N.H. ROUTE 108, MAST ROAD & FRESHET ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY, INC.
DATED: SEPTEMBER, 2001
S.C.R.D. PLAN # 64-24

11.) "SUBDIVISION OF LAND PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NO. 53 MAST ROAD CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: NOVEMBER 17, 2014
S.C.R.D PLAN # 109-008

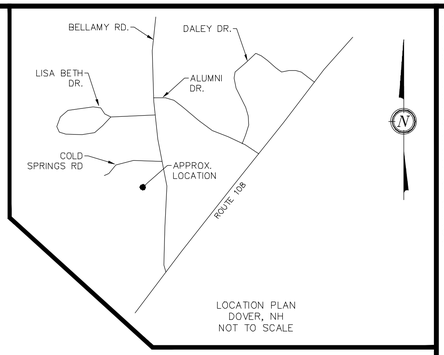
12.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR H53 MAST ROAD LLC AND THE CITY OF DOVER TAX MAP H, LOT NOS. 53 & 58"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: NOVEMBER 14, 2014
S.C.R.D PLAN # 109-009

13.) "AMENDED SUBDIVISION OF LAND PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NO. 53 MAST ROAD CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: APRIL 2, 2015
S.C.R.D. PLAN # 109-063

14.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NOS. 48 & 53 COLD SPRINGS ROAD & STONEWALL DRIVE CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: APRIL 1, 2019
S.C.R.D. PLAN # 12016

15.) "PLAN OF LOT A FOR GEORGE T. MCKENNA DOVER NEW HAMPSHIRE APRIL 1971"
BY: ROBERT W. MCCRONE
DATED: APRIL, 1971
S.C.R.D. PLAN #59, POCKET 2, FOLDER #21

16.) "TDR SUBDIVISION PLAN LAND OF KNOX MARSH DEVELOPMENT LLC 51 BELLAMY ROAD DOVER, N.H. TAX MAP H, LOT 46"
BY: BERRY SURVEYING & ENGINEERING
DATED: FEBRUARY 16, 2021
S.C.R.D. PLAN # 12408



LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING BOUNDARIES AND CONDITIONS OF TAX MAP H, LOTS 46 & 50, LOCATED IN DOVER, N.H., AS OF THE FIELD SURVEY IN JUNE 2021.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN
FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN FEBRUARY & JUNE 2021.

11.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

12.) NO WETLANDS WERE FOUND ON SITE, SEE WETLAND NOTE ON SITE SPECIFIC SOILS MAP

EXISTING LEGEND:

- STONE BOUND (FND)
- DRILL HOLE (FND)
- IRON BOUND (FND)
- IRON PIPE (FND)
- STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- >20% SLOPES
- STONE WALL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- NRCS SOIL LINE/LABEL
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- S.G.C SLOPED GRANITE CURB

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRG# COMMENT	12-16-21	

EXISTING CONDITIONS PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

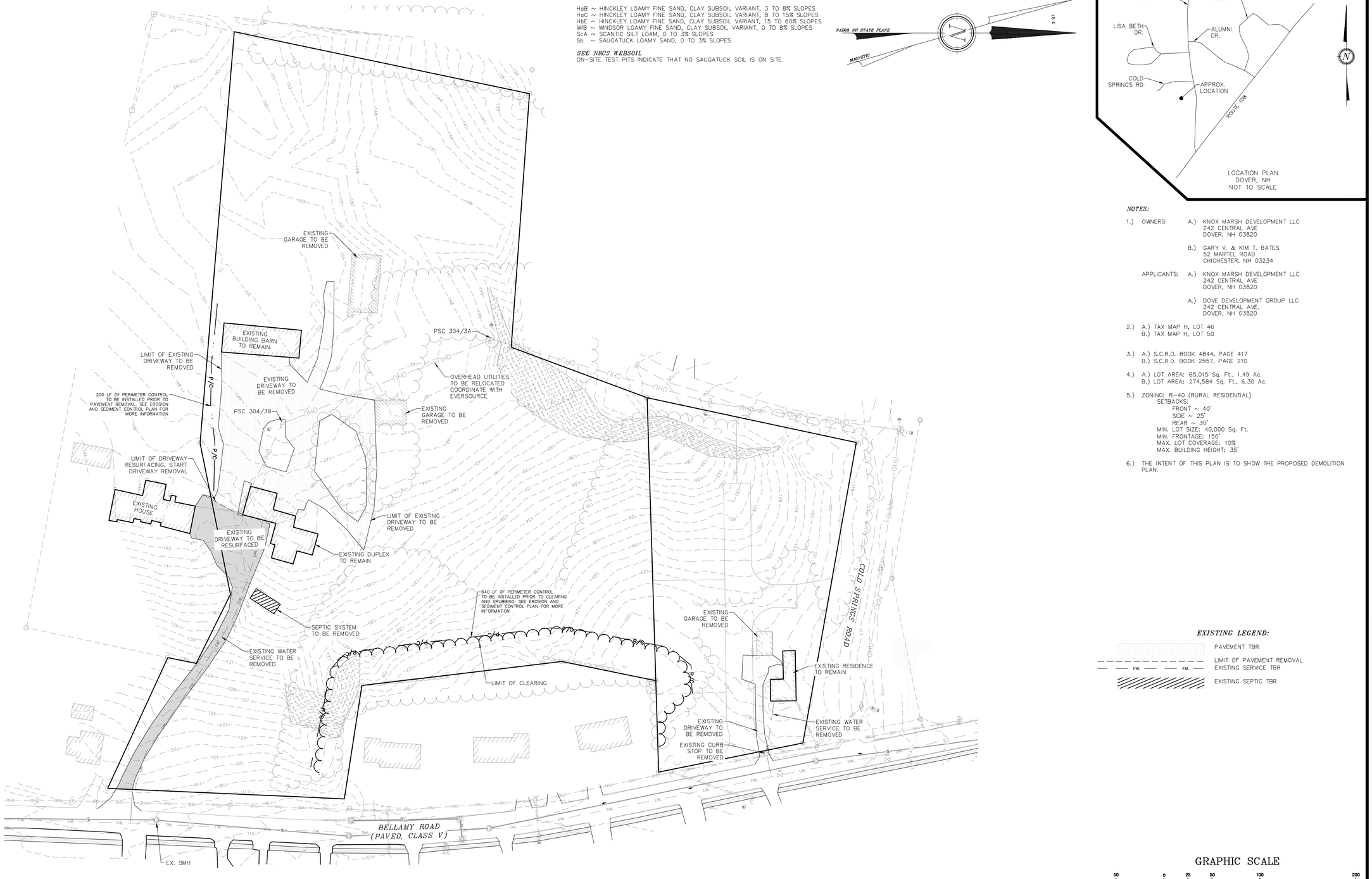
STATE OF NEW HAMPSHIRE — NO. 805 — KENNETH A. BERRY — LICENSED LAND SURVEYOR — SIGNATURE

SOIL DATA:

HaB ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 3 TO 8% SLOPES
HaC ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 8 TO 15% SLOPES
HbE ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 15 TO 60% SLOPES
WtB ~ WINDSOR LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES
ScA ~ SCANTIC SILT LOAM, 0 TO 3% SLOPES
Sb ~ SAUGATUCK LOAMY SAND, 0 TO 3% SLOPES

SEE NRCS WEBSOIL
ON-SITE TEST PITS INDICATE THAT NO SAUGATUCK SOIL IS ON SITE.

LOCATION PLAN
DOVER, NH
NOT TO SCALE



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING: R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED DEMOLITION PLAN.

EXISTING LEGEND:

PAVEMENT TBR
LIMIT OF PAVEMENT REMOVAL
EWL EWL EXISTING SERVICE TBR
EXISTING SEPTIC TBR

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

DOVER PLANNING FILE #21-65

#1	12-16-21	REVISED PER TRC#1 COMMENT	
REVISION	DATE	DESCRIPTION	

DEMOLITION PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR
No. 805
KENNETH A BERRY
SIGNATURE

TEST PIT CONDUCTED 2-12-21 BY APPLICANT WITH A TRACKED MINI WITNESSED BY CRB OF BS&E

TEST PIT #1

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-29 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
29-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-50" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
50"-52" ANGULAR ROCK / PARALYTHIC LEDGE DEPLETED SOILS FOUND AT 50"
TERMINATED: 50-52 "
E.S.H.W.T.: 50-52"
PARLITHIC LEDGE: 50"
ROOTS THROUGHOUT
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #1A

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-29 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
29-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-50" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
50"-52" ANGULAR ROCK / PARALYTHIC LEDGE DEPLETED SOILS FOUND AT 50"
TERMINATED: 50-52 "
E.S.H.W.T.: 50-52"
PARLITHIC LEDGE: 50"
ROOTS THROUGHOUT
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #2

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 7.5YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
32-54" 2.5Y 6/4 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
54-84" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
REDOX & DEPL FOUND.
TERMINATED: 84"+
E.S.H.W.T.: 54"
RESTRICTIVE LAYER: N/A
ROOTS TO 32"
GROUND WATER OBSERVED: N/A
P= 2 MIN./IN.

TEST PIT CONDUCTED 6-28-21 BY APPLICANT WITH A TRACKED MINI WITNESSED BY CRB OF BS&E

TEST PIT #101

0-10 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
10-29 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
29-69" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 69"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #102

0-10 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
10-29 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
29-72" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 72"
E.S.H.W.T.: N/A
ROOTS: 45"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #103

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
32-96" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 96"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #104

0-12 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12-34 " 2.5Y 5/8 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
34-96" 2.5Y 6/4 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 96"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #105

0-13 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12-30 " 2.5Y 5/8 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
30-96" 2.5Y 6/4 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 96"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #106

0-13 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
12-30 " 2.5Y 5/8 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
30-96" 2.5Y 6/4 COURSE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 96"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #107

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
32-90" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 90"
E.S.H.W.T.: 72"
ROOTS: 68"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #108

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
32-80" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 80"
E.S.H.W.T.: 68"
ROOTS: 68"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #109

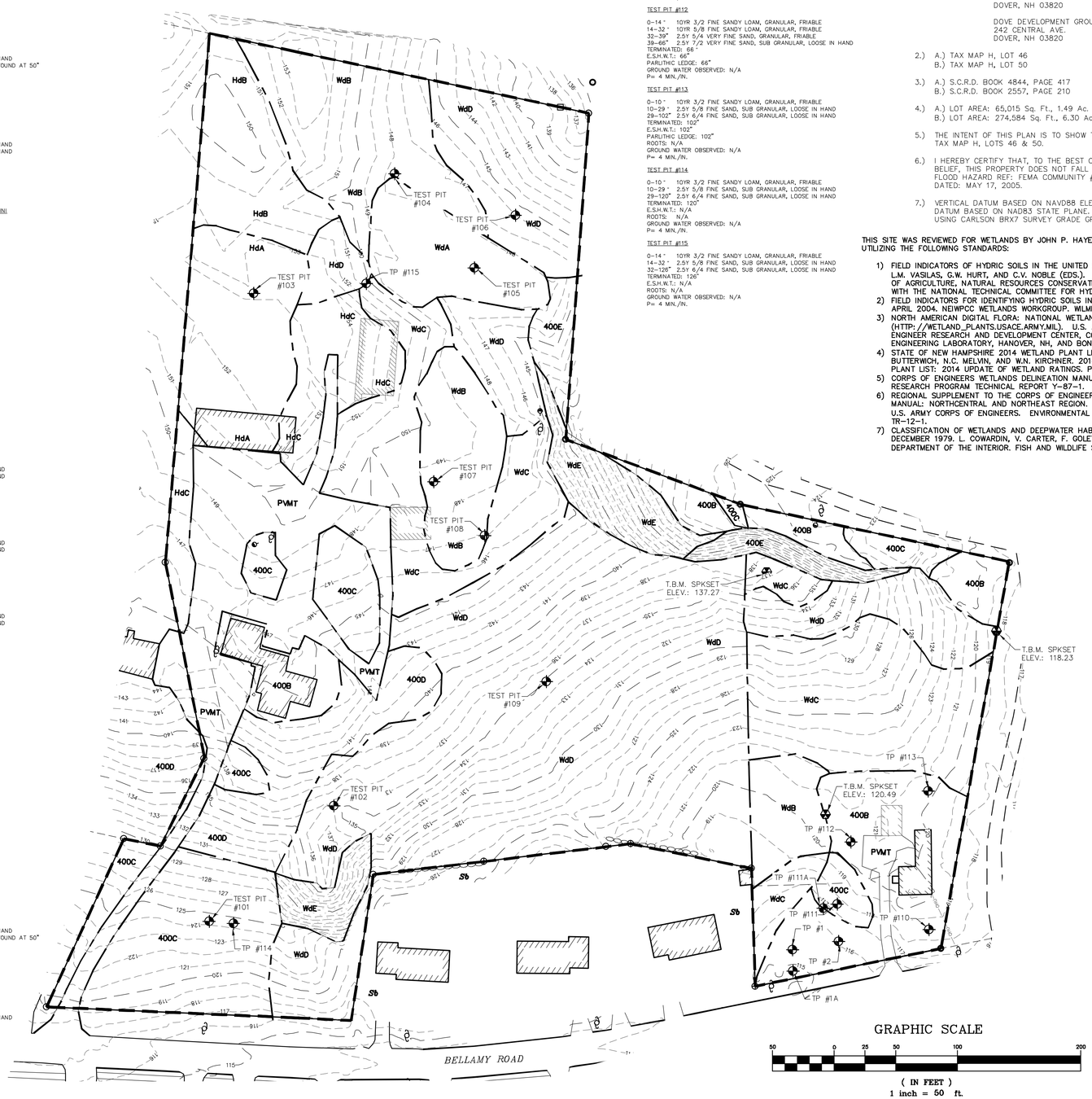
0-8 " 10YR 4/2 FINE SANDY LOAM, GRANULAR, FRIABLE
8-28 " 2.5Y 5/1 FINE SANDY LOAM, GRANULAR, FRIABLE
28-60" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
60-100" 2.5Y 5/3 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 100"
E.S.H.W.T.: 68"
ROOTS: 68"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #110

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-29 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
29-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-50" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
50"-58" ANGULAR ROCK / PARALYTHIC LEDGE DEPLETED SOILS FOUND AT 50"
TERMINATED: 56 "
E.S.H.W.T.: 56"
PARLITHIC LEDGE: 56"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #111

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-29 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
29-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-64" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 64 "
E.S.H.W.T.: 64"
PARLITHIC LEDGE: 64"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TEST PIT CONDUCTED 6-28-21 BY APPLICANT WITH A TRACKED MINI WITNESSED BY CRB OF BS&E

TEST PIT #111A

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-29 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
29-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-64" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 64 "
E.S.H.W.T.: 64"
PARLITHIC LEDGE: 64"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #112

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 10YR 5/8 FINE SANDY LOAM, GRANULAR, FRIABLE
32-39" 2.5Y 5/4 VERY FINE SAND, GRANULAR, FRIABLE
39-66" 2.5Y 7/2 VERY FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 66 "
E.S.H.W.T.: 66"
PARLITHIC LEDGE: 66"
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #113

0-10 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
10-29 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
29-102" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 102"
E.S.H.W.T.: 102"
PARLITHIC LEDGE: 102"
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #114

0-10 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
10-29 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
29-120" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 120"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

TEST PIT #115

0-14 " 10YR 3/2 FINE SANDY LOAM, GRANULAR, FRIABLE
14-32 " 2.5Y 5/8 FINE SAND, SUB GRANULAR, LOOSE IN HAND
32-126" 2.5Y 6/4 FINE SAND, SUB GRANULAR, LOOSE IN HAND
TERMINATED: 126"
E.S.H.W.T.: N/A
ROOTS: N/A
GROUND WATER OBSERVED: N/A
P= 4 MIN./IN.

NOTES:

1.) OWNERS: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

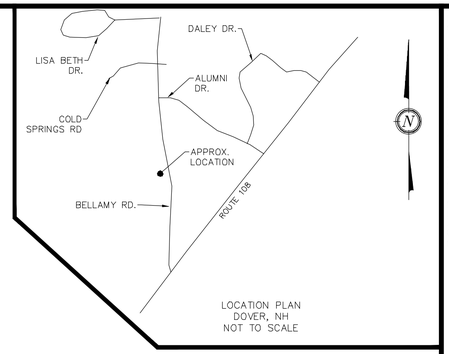
5.) THE INTENT OF THIS PLAN IS TO SHOW THE SITE SPECIFIC SOILS ON TAX MAP H, LOTS 46 & 50.

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

THIS SITE WAS REVIEWED FOR WETLANDS BY JOHN P. HAYES III, CWS, IN JULY OF 2021 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
2) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 3. APRIL 2004. NEIWPCC WETLANDS WORKGROUP. WILMINGTON, MA 01887.
3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
4) STATE OF NEW HAMPSHIRE 2014 WETLAND PLANT LIST. LICHVAR, R.W., M. BUTTERWICK, N.C. MELVIN, AND W.N. KIRCHNER. 2014. THE NATIONAL WETLAND PLANT LIST: 2014 UPDATE OF WETLAND RATINGS. PHYTONEURON 2014-41:1-42.
5) CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. JANUARY 1987. WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1.
6) REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. JANUARY 2012, VERSION 2. U.S. ARMY CORPS OF ENGINEERS. ENVIRONMENTAL LABORATORY ERDC/EL TR-12-1.
7) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. DECEMBER 1979. L. COWARDIN, V. CARTER, F. GOLET, AND E. LAROE. US DEPARTMENT OF THE INTERIOR. FISH AND WILDLIFE SERVICE. FWS/OBS-79/31.



LOCATION PLAN
DOVER, NH
NOT TO SCALE

JOHN P. HAYES III, CWS #18

JOHN P. HAYES III, CSS #87

LEGEND:

- IRON BOUND ~FND~
- IRON PIPE ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- BENCHMARK (T.B.M.)
- TEST PIT
- >20% SLOPES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- OFF SITE NRCS SOIL LINE
- SITE SPECIFIC SOIL DELINEATION
- LIMIT OF SOIL SURVEY

BzA SOIL LABEL
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
TYP. TYPICAL
FND FOUND
TBA TO BE ABANDONED
PVMT PAVEMENT

S.S.S.M. SOILS LEGEND

SYMBOL	SOIL TAXONOMIC NAME	HYDROLOGIC SOIL GROUP
HaA	HINCKLEY EXCESSIVELY DRAINED	A
HaB	HINCKLEY EXCESSIVELY DRAINED	A
HaC	HINCKLEY EXCESSIVELY DRAINED	A
HaD	HINCKLEY EXCESSIVELY DRAINED	A
WdA	WINDSOR EXCESSIVELY DRAINED	A
WdB	WINDSOR EXCESSIVELY DRAINED	A
WdC	WINDSOR EXCESSIVELY DRAINED	A
WdD	WINDSOR EXCESSIVELY DRAINED	A
WdE	WINDSOR EXCESSIVELY DRAINED	A
400A	UDORTHENTS EXCESSIVELY DRAINED	A
400B	UDORTHENTS EXCESSIVELY DRAINED	A
400C	UDORTHENTS EXCESSIVELY DRAINED	A
400D	UDORTHENTS EXCESSIVELY DRAINED	A
400E	UDORTHENTS EXCESSIVELY DRAINED	A

SLOPE: A = 0-3% B = 3-8% C = 8-15% D = 15-25% E = 25-50% F = 50%+

DENOMINATOR: /VPD = VERY POORLY DRAINED /PD = POORLY DRAINED /SWPD = SOMEWHAT POORLY DRAINED /MWD = MODERATELY WELL DRAINED

DOVER PLANNING FILE #21-65

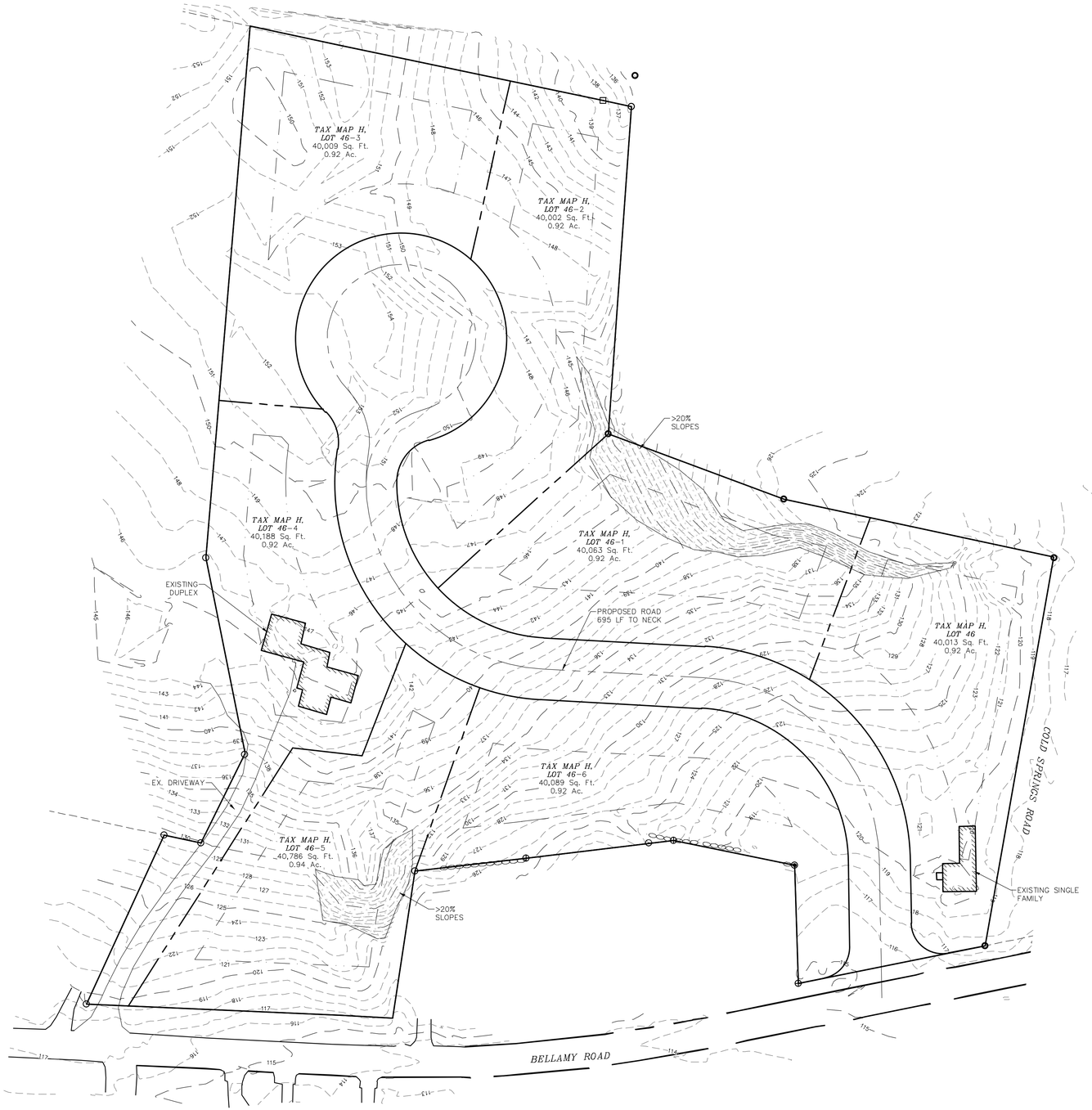
#	REVISION	DATE	DESCRIPTION
1		12-16-21	REVISED PER TRC#1 COMMENT

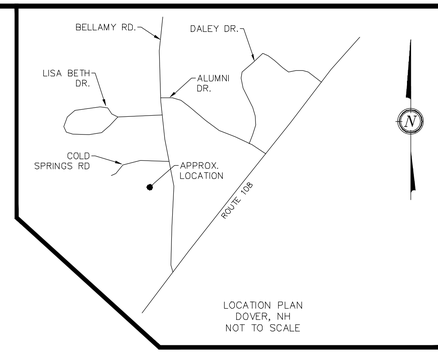
SITE SPECIFIC SOILS MAP
LAND OF
KNOX MARSH DEVELOPMENT LLC
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE





LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

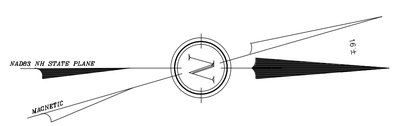
5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE THE PROPOSED YIELD USING DOVER R-40 ZONING AND THERE ARE 9 POTENTIAL UNITS.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC#1 COMMENT	12-16-21	

R-40 YIELD PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
No. 805
KENNETH A. BERRY
LICENSED LAND SURVEYOR
SIGNATURE

LEGEND:

- ● 3/4" REBAR W/ ID CAP ~TBS~
- ○ IRON BOUND/REBAR ~FND~
- ⊙ DRILL HOLE ~FND~
- ⊕ STEEL STAKE ~FND~
- UTILITY POLE/GUY WIRE

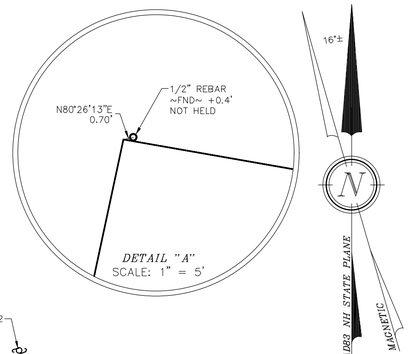
PERIMETER BOUNDARY LINE
PROPOSED BOUNDARY LINE
PRE EXISTING LOT LINE TBA
PROPOSED EASEMENT LINE

TBS TO BE SET
FND FOUND
TYP TYPICAL
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



PLAN REFERENCES:

1.) "PLAN OF LAND ERNEST I. & LOIS B. ESTES DOVER, NEW HAMPSHIRE" BY: K.E. MORRE & B.G. STAPLES LAND SURVEYORS DATED: OCTOBER 1972

2.) "PLAN OF LAND GEORGE T. MCKENNA DOVER NEW HAMPSHIRE" BY: G.L. DAVIS ASSOCIATES DATED: APRIL 1955

3.) "PLAN OF LAND ALBERT P. & SYLVIA P. MARCOTTE DOVER NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: JANUARY, 1974

4.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: FEBRUARY 15, 1995 S.C.R.D. PLAN # 45-97

5.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: JULY 5, 1995 S.C.R.D. PLAN # 46-65

PLAN REFERENCES CONTINUED:

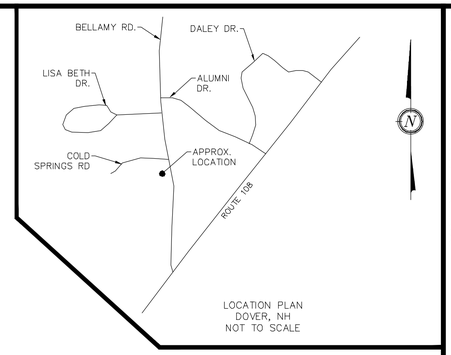
6.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR MAST ROAD SAND AND GRAVEL AND FRANCES E. AND GEORGE E. DOWALIBY MAST ROAD & COLD SPRINGS ROAD DOVER, NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: MARCH 11, 1997 S.C.R.D. PLAN # 49-95

7.) "PLAN OF LOT LINE ADJUSTMENTS FOR FRANCES E. AND GEORGE E. DOWALIBY AND LOIS B. AND ERNEST I. ESTES TAX MAP H, LOTS 47A & 50, COLD SPRING ROAD AND BALLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE" BY: K E M LAND SURVEY, INC. DATED: AUGUST 30, 1999 S.C.R.D PLAN # 57-42

8.) "PLAN OF LAND FOR CHRISTOPHER T. OGDEN & KATHLEEN M. HICKEY 1 MARLBORO STREET NEWBURYPORT, MA OF LAND AT 51 BELLAMY ROAD DOVER, NH" BY: K E M LAND SURVEY, INC. DATED: DECEMBER, 2000 S.C.R.D PLAN # 61-17

9.) "LOT LINE ADJUSTMENT PLAN FOR FRANCES E. AND GEORGE E, DOWALIBY AND KEVIN TULLY AND SHARON LEGERE TAX MAP H, LOTS 47A & 48 COLD SPRINGS ROAD AND BELLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE" BY: K E M LAND SURBEY INC. DATED: JUNE 3, 2001 S.C.R.D. PLAN # 63-17

10.) "TDR SUBDIVISION PLAN LAND OF KNOX MARSH DEVELOPMENT LLC 51 BELLAMY ROAD DOVER, N.H. TAX MAP H, LOT 46" BY: BERRY SURVEYING & ENGINEERING DATED: FEBRUARY 16, 2021 S.C.R.D. PLAN # 12408



LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC 242 CENTRAL AVE DOVER, NH 03820

B.) GARY V. & KIM T. BATES 52 MARTEL ROAD CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC 242 CENTRAL AVE DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC 242 CENTRAL AVE. DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.
PROPOSED LOT AREA: 272,945 Sq. Ft., 6.27 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED LOT LINE REVISION BETWEEN LOTS 46-2, 46-3 & 50.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE: NONE

11.) SEE OVERVIEW SUBDIVISION FOR PLAN REFERENCES RELATING TO LOT 50.

N/F WIEDMANN, FREDDY R. & ELIZABETH A.
47 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 42-B
S.C.R.D. BOOK 2780, PAGE 846

PSNH 2
PSC 304/2

COLD SPRINGS ROAD

EDGE OF TRAVELED WAY

EVERSOURCE 304/1
PSC 304/1

1/2" REBAR
~FND~ +0.4'
NOT HELD
SEE *DETAIL "A"*

N/F DOWALIBY FAMILY REVOCABLE TRUST, DOWALIBY GEORGE AND FRANCES TRUSTEES
1 COLD SPRINGS ROAD
DOVER, NH 03820
TAX MAP H, LOT 47-A
S.C.R.D. BOOK 2465, PAGE 266

TAX MAP H, LOT 46-1
16,352 Sq. Ft.
0.38 Ac.

TAX MAP H, LOT 46
9,917 Sq. Ft.
0.23 Ac.

EXISTING HOUSE

LLS 661 IRON BOUND
~FND~ FLUSH
N246676.78
E1191594.55

PSNH 302/12S

S.G.C.

N/F FELICIANO, JOSE
50 BELLAMY
DOVER, NH 03820
TAX MAP H, LOT 6-K
S.C.R.D. BOOK 4326, PAGE 196

EXISTING DRIVEWAY

PSNH 302/12S

BELLAMY ROAD

SOPHIE DRIVE
TAX MAP H, LOT 46-4
13,608 Sq. Ft.
0.31 Ac.

PSNH 304/3XA

TAX MAP H, LOT 46-2
EXISTING LOT AREA
14,290 Sq. Ft.
0.33 Ac.
PROPOSED LOT AREA
11,348 Sq. Ft.
0.26 Ac.

EX. LOT LINE TO BE ABANDONED SEE SUBDIVISION SHEETS FOR PROPOSED LOT LINES

TAX MAP H, LOT 46-3
EXISTING AREA
10,847 Sq. Ft.
0.25 Ac.
PROPOSED AREA
12,150 Sq. Ft.
0.28 Ac.

EX. EASEMENT LINE TBA

GRADING AND DRAINAGE EASEMENT #1
5,440 Sq.Ft.

N/F KALWAY, STEVEN & KARYANN
54 BELLAMY
DOVER, NH 03820
TAX MAP H, LOT 4-K
S.C.R.D. BOOK 2188, PAGE 594

EXISTING DRIVEWAY

NET 39

N12°04'29"E 40.81'

S76°13'05"E 124.14'

AREA TO BE TRANSFERRED TO LOT 50
2,942 Sq. Ft.
0.07 Ac.

3/4" REBAR W/ ID CAP ~TBS~ (TYP.)

S88°16'05"W 127.57'

S13°46'55"W 6.67'

S88°16'05"W 72.08'

N88°16'05"E 95.66'

DRILL HOLE ~FND~

APPARENT ENCROACHMENT

AREA TO BE TRANSFERRED TO LOT 46-3
1,303 Sq. Ft.
0.03 Ac.

N74°44'51"W 93.28'

EXISTING SHED

STEEL STAKE ~FND~ ~0.8
N246526.34
E1191625.04

LLS 275 IRON BOUND
~FND~ FLUSH

N/F BATES, GARY V. & KIM T.
52 MARTEL ROAD
CHICHESTER, NH 03234
TAX MAP H, LOT 50
S.C.R.D. BOOK 2557, PAGE 210
EX. AREA: 274,584 Sq.Ft.,
PROPOSED AREA: 272,945 Sq.Ft.

N/F LABRIE, PATRICK & HELEN B.
55 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-A
S.C.R.D. BOOK 2975, PAGE 475

EXISTING HOUSE

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21

KENNETH A. BERRY L.L.S. 805 DATE

DOVER PLANNING FILE #21-65

#	DATE	REVISION DESCRIPTION
1	12-16-21	REVISED PER TRC#1 COMMENT

LOT LINE REVISION
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE No. 805 KENNETH A BERRY LICENSED LAND SURVEYOR SIGNATURE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

ABUTTERS LIST:

(A) N/F ALLEN, MICHAEL D. & PATRICIA A.
349 ROUTE 108
MADBURY, NH 03823
TAX MAP H, LOT 49
S.C.R.D. BOOK 4770, PAGE 1006

(B) N/F HUPPE, STEPHEN C. & KATHY A.
66 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-Q
S.C.R.D. BOOK 2098, PAGE 454

(C) N/F CARD, MICHAEL V. & CARD LINDELL, LEIA
64 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-R
S.C.R.D. BOOK 4857, PAGE 928

(D) N/F CILLEY FAMILY TRUST,
CILLEY, DENNIS K. & SUSAN G. TRUSTEES
62 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-S
BOOK 2941, PAGE 635

(E) N/F ROWE, BARBARA S. TRUSTEE
BARBARA ROWE REVOCABLE TRUST
59 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-C
BOOK 4486, PAGE 353

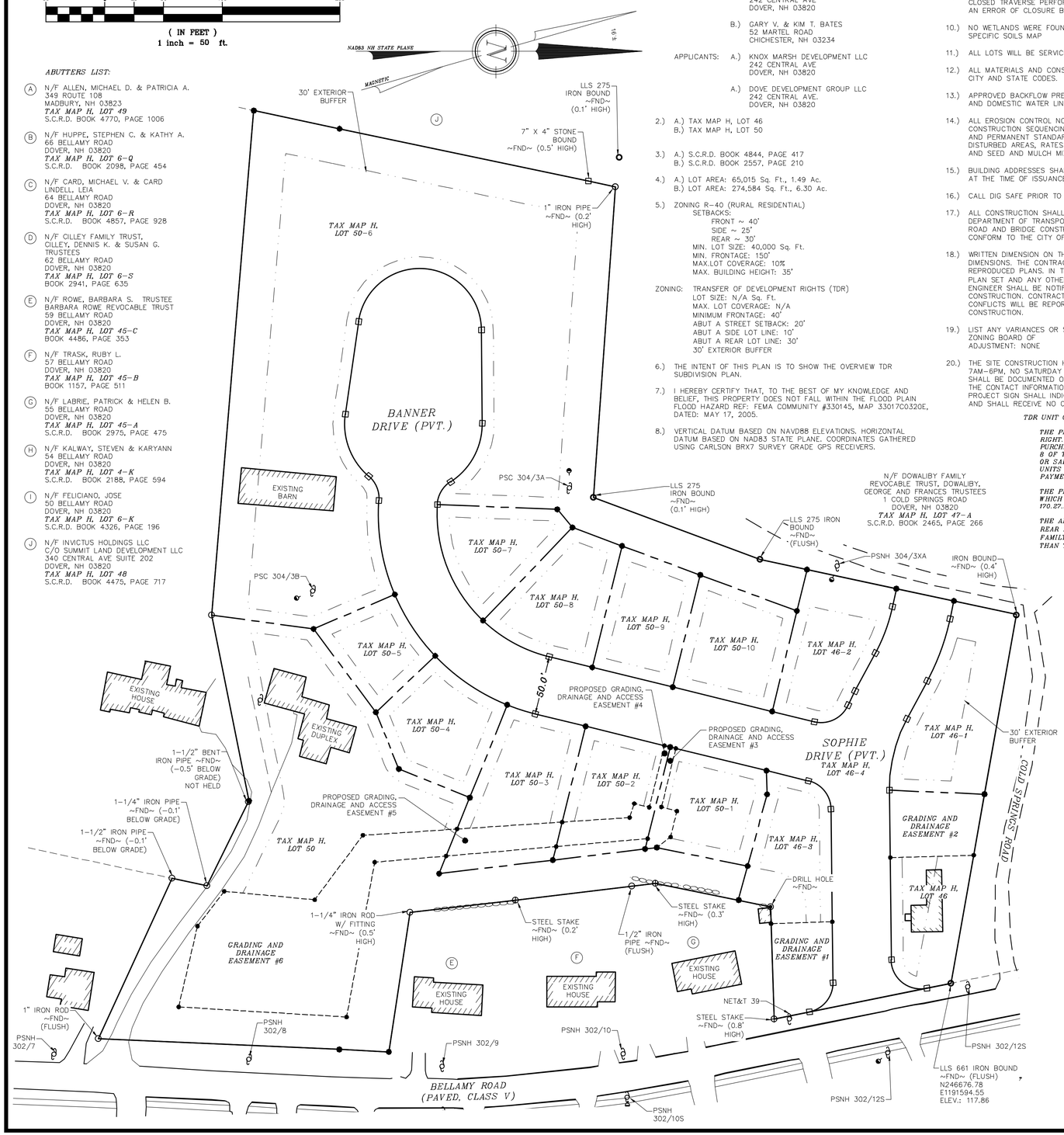
(F) N/F TRASK, RUBY L.
57 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-B
BOOK 1157, PAGE 511

(G) N/F LABRIE, PATRICK & HELEN B.
55 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-A
S.C.R.D. BOOK 2975, PAGE 475

(H) N/F KALWAY, STEVEN & KARYANN
54 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 4-K
S.C.R.D. BOOK 2188, PAGE 594

(I) N/F FELICIANO, JOSE
50 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 6-K
S.C.R.D. BOOK 4326, PAGE 196

(J) N/F INVICTUS HOLDINGS LLC
C/O SUMMIT LAND DEVELOPMENT LLC
340 CENTRAL AVE SUITE 202
DOVER, NH 03820
TAX MAP H, LOT 48
S.C.R.D. BOOK 4475, PAGE 717



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX.LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE OVERVIEW TDR SUBDIVISION PLAN.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS, HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

NOTES: CONTINUED:

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) NO WETLANDS WERE FOUND ON SITE, SEE WETLAND NOTE ON SITE SPECIFIC SOILS MAP

11.) ALL LOTS WILL BE SERVICED BY MUNICIPAL WATER AND SEWER.

12.) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.

13.) APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.

14.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.

15.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING INSPECTOR AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

16.) CALL DIG SAFE PRIOR TO BEGINNING WORK (1-888-344-7233)

17.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONSTRUCTION SHALL ALSO CONFORM TO THE CITY OF DOVER POLICIES AND PRACTICES.

18.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

19.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT: NONE

20.) THE SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM, NO SATURDAY & SUNDAY HOURS. HOURS OF CONSTRUCTION SHALL BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. THE PROJECT SIGN SHALL INDICATE THE ROAD IS PROPOSED TO BE PRIVATE AND SHALL RECEIVE NO CITY SERVICES.

TDR UNIT CALCULATIONS

THE PROPOSED R-40 YIELD ALLOWS FOR 9 UNITS BY RIGHT. THE REMAINING 22 UNITS ARE TO BE PURCHASED UTILIZING TDR FOR A TOTAL OF 31 UNITS. 8 OF THE PROJECT UNITS WILL BE HUD RENTAL RATE OR SALES RATE. THE PREVIOUS APPROVALS FOR 4 UNITS WILL BECOME NULL AND VOID BUT THE PAYMENT WILL BE CREDITED TO THE CURRENT PROJECT.

THE PLANNING BOARD APPROVED THE USE OF THE TDR WHICH INCLUDES ADDITIONAL UNITS PER CHAPTER 170.27.2 ON NOVEMBER 9, 2021

THE APPLICANT REQUESTS RELIEF TO THE ABUT A REAR LOT LINE FROM 30' TO 10' WITHIN THE SINGLE FAMILY LOTS. A TDR SUBDIVISION 30' BUFFER RATHER THAN THE OSS 50' BUFFER. (PENDING)

PLAN REFERENCES:

1.) "PLAN OF LAND ERNEST I. & LOIS B. ESTES DOVER, NEW HAMPSHIRE"
BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS
DATED: OCTOBER 1972
S.C.R.D. PLAN #60, POCKET #2, FOLDER #19

2.) "PLAN OF LAND GEORGE T. MCKENNA DOVER NEW HAMPSHIRE"
BY: G.L. DAVIS ASSOCIATES
DATED: APRIL 1955
S.C.R.D. PLAN #7, POCKET #2, FOLDER #21

3.) "PLAN OF LAND ALBERT P. & SYLVIA P. MARCOTTE DOVER NEW HAMPSHIRE"
BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS
DATED: JANUARY, 1974
S.C.R.D. PLAN #49, POCKET #11, FOLDER #1

4.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: FEBRUARY 15, 1995
S.C.R.D. PLAN # 45-97

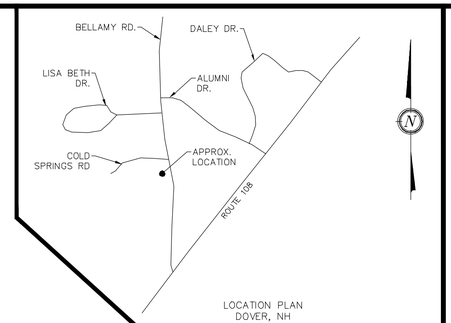
5.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: JULY 5, 1995
S.C.R.D. PLAN # 46-65

6.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR MAST ROAD SAND AND GRAVEL AND FRANCES E. AND GEORGE E. DOWALIBY MAST ROAD & COLD SPRINGS ROAD DOVER, NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES INC.
DATED: MARCH 11, 1997
S.C.R.D. PLAN # 49-95

7.) "PLAN OF LOT LINE ADJUSTMENTS FOR FRANCES E. AND GEORGE E. DOWALIBY AND LOIS B. AND ERNEST I. ESTES TAX MAP H, LOTS 47A & 50, COLD SPRING ROAD AND BALLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY, INC.
DATED: AUGUST 30, 1999
S.C.R.D PLAN # 57-42

8.) "PLAN OF LAND FOR CHRISTOPHER T. OGDEN & KATHLEEN M. HICKEY 1 MARLBORO STREET NEWBURYPORT, MA OF LAND AT 51 BELLAMY ROAD DOVER, NH"
BY: K E M LAND SURVEY, INC.
DATED: DECEMBER, 2000
S.C.R.D PLAN # 61-17

9.) "LOT LINE ADJUSTMENT PLAN FOR FRANCES E. AND GEORGE E. DOWALIBY AND KEVIN TULLY AND SHARON LEGERE TAX MAP H, LOTS 47A & 48 COLD SPRINGS ROAD AND BELLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY INC.
DATED: JUNE 3, 2001
S.C.R.D. PLAN # 63-17



LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES CONTINUED:

21.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED. SITE PLANS SHALL SHOW ANY EASEMENTS FOR THESE SERVICES.

22.) FROM GROUND BREAKING THE SITE SHALL REMAIN ACCESSIBLE YEAR ROUND IN ALL WEATHER CONDITIONS.

23.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS. NOT APPLICABLE.

24.) A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS. NOT APPLICABLE.

25.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

26.) THE PROPOSED USE FOR THE SITE IS A 16 LOT SUBDIVISION. 14 RESIDENTIAL LOTS CONTAINING 13 SINGLE FAMILY HOMES, 1 DUPLEX AND PROPOSED ROAD. THE 16TH LOT WILL BE FOR A CORRESPONDING SITE PLAN THAT WILL CONTAIN (4) FOUR UNIT BUILDINGS, FOR A TOTAL OF 31 UNITS. THE FOUR UNIT BUILDINGS WILL BE BUILT IN A TOWNHOUSE FASHION WITH NO COMMON INTERIOR CONNECTIONS.

27.) THIS IS A TDR SUBDIVISION. THE PLANNING BOARD APPROVED THE USE OF THE TDR ALLOWING FOR INCREASED DENSITY. THIS PROJECT IS REQUIRED TO ADHERE TO THE REQUIREMENTS OF CHAPTER 170-27-2. PENDING

28.) SOPHIE DRIVE IS PROPOSED TO BE PRIVATE. REFER TO THE HOA DOCUMENTS FOR ROAD & DRAINAGE RESPONSIBILITIES. 155-488 THERE ARE NO CITY SERVICES PROVIDED UNLESS THE ROADWAY CONFORMS WITH PUBLIC ROAD SPECIFICATIONS AND THE PLANNING BOARD HAS REVIEWED AND AGREED TO AMEND THE APPROVAL TO ALLOW A PUBLIC ROADWAY.

PLAN REFERENCES CONTINUED:

10.) "SUBDIVISION & LOT LINE ADJUSTMENT PLAN FOR JOHN TORR TRUSTEE & ROBERT TORR TAX MAP H, LOT NO. 4 AND ROBERT TORR TAX MAP H, LOT NO. 5A N.H. ROUTE 108, MAST ROAD & FRESHET ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE"
BY: K E M LAND SURVEY, INC.
DATED: SEPTEMBER, 2001
S.C.R.D. PLAN # 64-24

11.) "SUBDIVISION OF LAND PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NO. 53 MAST ROAD CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: NOVEMBER 17, 2014
S.C.R.D PLAN # 109-008

12.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR H53 MAST ROAD LLC AND THE CITY OF DOVER TAX MAP H, LOT NOS. 53 & 58"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: NOVEMBER 14, 2014
S.C.R.D PLAN # 109-009

PLAN REFERENCES CONTINUED:

13.) "AMENDED SUBDIVISION OF LAND PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NO. 53 MAST ROAD CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: APRIL 2, 2015
S.C.R.D. PLAN # 109-063

14.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NOS. 48 & 53 COLD SPRINGS ROAD & STONEWALL DRIVE CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE"
BY: MCENEANEY SURVEY ASSOCIATES, INC.
DATED: APRIL 1, 2019
S.C.R.D. PLAN # 12016

15.) "PLAN OF LOT A FOR GEORGE T. MCKENNA DOVER NEW HAMPSHIRE APRIL 1971"
BY: ROBERT W. MCCRONE
DATED: APRIL, 1971
S.C.R.D. PLAN #59, POCKET 2, FOLDER #21

16.) "TDR SUBDIVISION PLAN LAND OF KNOX MARSH DEVELOPMENT LLC 51 BELLAMY ROAD DOVER, N.H. TAX MAP H, LOT 46"
BY: BERRY SURVEYING & ENGINEERING
DATED: FEBRUARY 16, 2021
S.C.R.D. PLAN # 12408

LEGEND:

- ● 3/4" REBAR W/ ID CAP ~TBS~
- ▣ GRANITE BOUND ~TBS~
- ● 1/2" EASEMENT REBAR W/ ID CAP ~TBS~
- ⊗ DRILL HOLE ~FND OR SET~
- ○ IRON PIPE ~FND~
- ○ IRON BOUND ~FND~
- ○ UTILITY POLE
- ⊕ STEEL STAKE

STONE WALL
PERIMETER BOUNDARY
APPROX. ABUTTING LOT LINE
BUILDING SETBACK LINE
PROPOSED PROPERTY LINE
PROPOSED EASEMENT LINE

TBS TO BE SET
FND FOUND
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21

KENNETH A. BERRY L.L.S. 805 DATE

DOVER PLANNING FILE #21-65

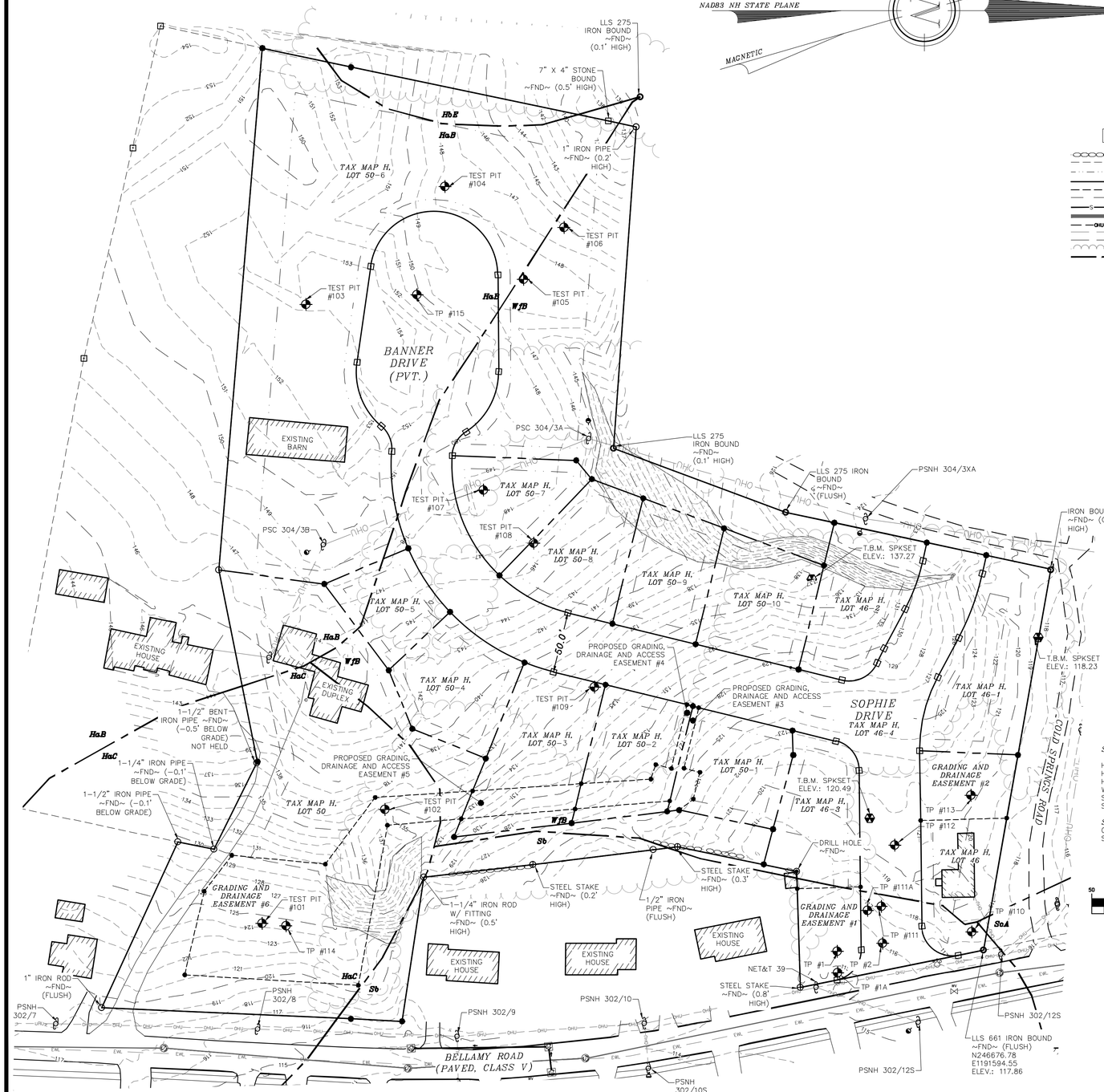
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

TDR SUBDIVISION & RE-SUBDIVISION PLAN
LAND OF
KNOX MARSH DEVELOPMENT LLC
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE No. 805 KENNETH A. BERRY LICENSED LAND SURVEYOR SIGNATURE



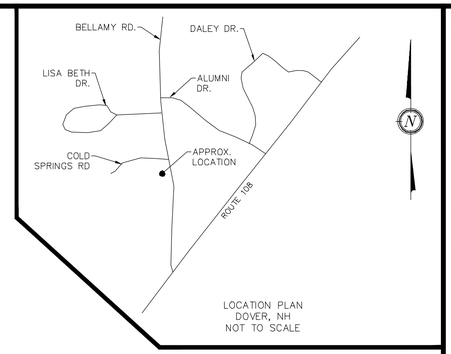
NAD83 NH STATE PLANE

MAGNETIC

+9.1°

EXISTING LEGEND:

- 3/4" REBAR W/ ID CAP ~TBS~
- GRANITE BOUND ~TBS~
- 1/2" EASEMENT REBAR W/ ID CAP ~TBS~
- DRILL HOLE (FND)
- IRON BOUND (FND)
- IRON PIPE (FND)
- STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- >20% SLOPES
- STONE WALL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- NRCS SOIL LINE/LABEL
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS



LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED TDR SUBDIVISION TOPOGRAPHY FOR LOTS 46 & 50.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN FEBRUARY & JUNE 2021.

11.) SEE OVERVIEW SUBDIVISION SHEETS FOR ALL OTHER STANDARD SUBDIVISION NOTES.

SOIL DATA:

HaB ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 3 TO 8% SLOPES
HaC ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 8 TO 15% SLOPES
HbE ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 15 TO 60% SLOPES
WfB ~ WINDSOR LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES
ScA ~ SCANTIC SILT LOAM, 0 TO 3% SLOPES
Sb ~ SAUGATUCK LOAMY SAND, 0 TO 3% SLOPES

SEE NRCS WEBSOIL
ON-SITE TEST PITS INDICATE THAT NO SAUGATUCK SOIL IS ON SITE. SEE SITE SPECIFIC SOILS MAP.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

KENNETH A. BERRY L.L.S. 805 DATE 12-16-21

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
#1	REVISED PER TRC#1 COMMENT	12-16-21	

TDR SUBDIVISION PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR
NO. 805
KENNETH A. BERRY
SIGNATURE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED TDR SUBDIVISION FOR LOTS 46 & 50.

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11.) SEE OVERVIEW SUBDIVISION SHEETS FOR ALL OTHER STANDARD SUBDIVISION NOTES.

ABUTTERS LIST:

(A) N/F ROWE, BARBARA S. TRUSTEE
BARBARA ROWE REVOCABLE TRUST
59 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-C
BOOK 4486, PAGE 353

(B) N/F TRASK, RUBY L.
57 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-B
BOOK 1157, PAGE 511

(C) N/F LABRIE, PATRICK & HELEN B.
55 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 45-A
S.C.R.D. BOOK 2975, PAGE 475

(D) N/F WIEDMANN, FREDDY R. &
ELIZABETH A,
47 BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 42-B
S.C.R.D. BOOK 2780, PAGE 846

(E) N/F CHANDLER, DONALD S. &
CHANDLER-JANUS, CHRISTINE R.
65A BELLAMY ROAD
DOVER, NH 03820
TAX MAP H, LOT 50-A
S.C.R.D. BOOK 1808, PAGE 720

PLAN REFERENCES:

1.) "PLAN OF LAND ERNEST I. & LOIS B. ESTES DOVER, NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: OCTOBER 1972

2.) "PLAN OF LAND GEORGE T. MCKENNA DOVER NEW HAMPSHIRE" BY: C.L. DAVIS ASSOCIATES DATED: APRIL 1955

3.) "PLAN OF LAND ALBERT P. & SYLVIA P. MARCOTTE DOVER NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: JANUARY, 1974

4.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: FEBRUARY 15, 1995 S.C.R.D. PLAN # 45-97

5.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: JULY 5, 1995 S.C.R.D. PLAN # 46-65

6.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR MAST ROAD SAND AND GRAVEL AND FRANCES E. AND GEORGE E. DOWALIBY MAST ROAD & COLD SPRINGS ROAD DOVER, NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: MARCH 11, 1997 S.C.R.D. PLAN # 49-95

7.) "PLAN OF LOT LINE ADJUSTMENTS FOR FRANCES E. AND GEORGE E. DOWALIBY AND LOIS B. AND ERNEST I. ESTES TAX MAP H, LOTS 47A & 50, COLD SPRING ROAD AND BALLAMY ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE" BY: K E M LAND SURVEY, INC. DATED: AUGUST 30, 1999 S.C.R.D PLAN # 57-42

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PLAN REFERENCES CONTINUED:

10.) "SUBDIVISION & LOT LINE ADJUSTMENT PLAN FOR JOHN TORR TRUSTEE & ROBERT TORR TAX MAP H, LOT NO. 4 AND ROBERT TORR TAX MAP H, LOT NO. 5A N.H. ROUTE 108, MAST ROAD & FRESHET ROAD DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE" BY: K E M LAND SURVEY, INC. DATED: SEPTEMBER, 2001 S.C.R.D. PLAN # 64-24

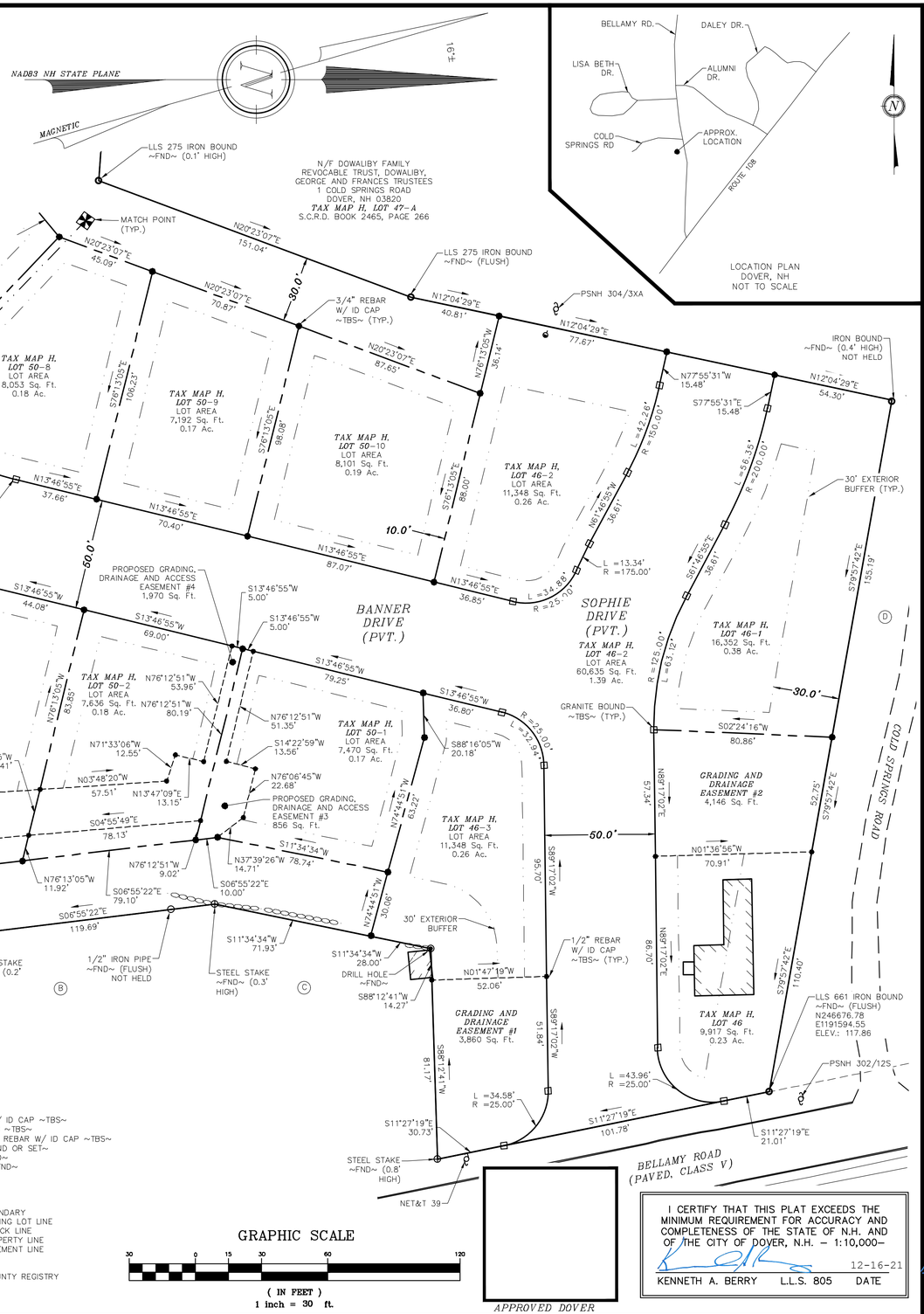
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13.) "AMENDED SUBDIVISION OF LAND PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NO. 53 MAST ROAD CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES, INC. DATED: APRIL 2, 2015 S.C.R.D. PLAN # 109-063

14.) "LOT LINE ADJUSTMENT PLAN PREPARED FOR H53 MAST ROAD LLC TAX MAP H, LOT NOS. 48 & 53 COLD SPRINGS ROAD & STONEWALL DRIVE CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES, INC. DATED: APRIL 1, 2019 S.C.R.D. PLAN # 12016

15.) "TDR SUBDIVISION PLAN LAND OF KNOX MARSH DEVELOPMENT LLC 51 BELLAMY ROAD DOVER, N.H. TAX MAP H, LOT 46" BY: BERRY SURVEYING & ENGINEERING DATED: FEBRUARY 16, 2021 S.C.R.D. PLAN # 12408



LEGEND:

- ● 3/4" REBAR W/ ID CAP ~TBS~
- ⊡ GRANITE BOUND ~TBS~
- ● 1/2" EASEMENT REBAR W/ ID CAP ~TBS~
- ◉ DRILL HOLE ~FND OR SET~
- ○ IRON PIPE ~FND~
- ◉ IRON BOUND ~FND~
- UTILITY POLE
- ⊕ STEEL STAKE

STONE WALL
PERIMETER BOUNDARY
APPROX. ABUTTING LOT LINE
BUILDING SETBACK LINE
PROPOSED PROPERTY LINE
PROPOSED EASEMENT LINE

TBS TO BE SET
FND FOUND
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

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

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21
KENNETH A. BERRY L.L.S. 805 DATE

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 805 KENNETH A. BERRY SIGNATURE

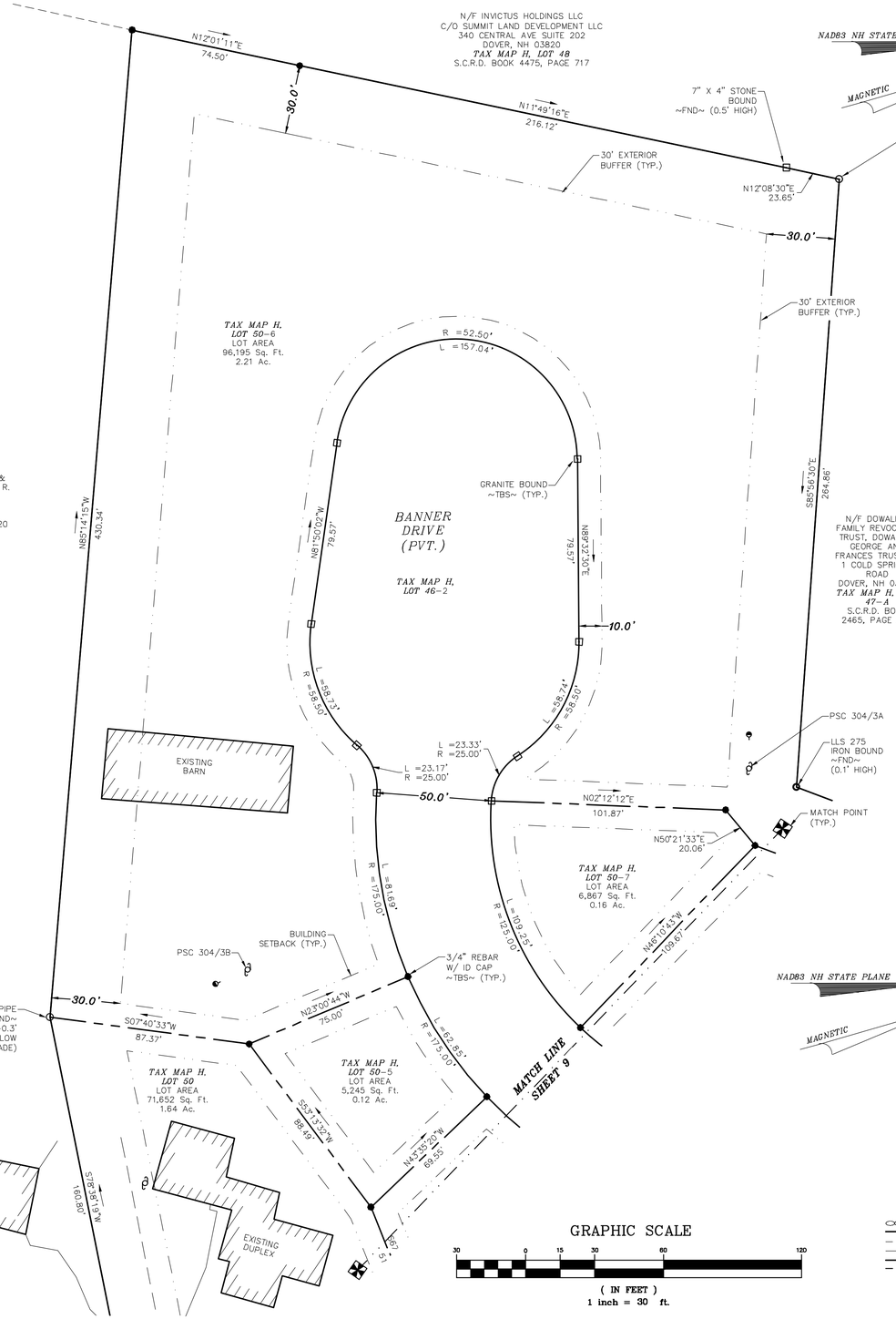
DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1		12-16-21	REVISED PER TRC#1 COMMENT

TDR SUBDIVISION PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120



PLAN REFERENCES:

1.) "PLAN OF LAND ERNEST I. & LOIS B. ESTES DOVER, NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: OCTOBER 1972

2.) "PLAN OF LAND GEORGE T. MCKENNA DOVER NEW HAMPSHIRE" BY: G.L. DAVIS ASSOCIATES DATED: APRIL 1955

3.) "PLAN OF LAND ALBERT P. & SYLVIA P. MARCOTTE DOVER NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: JANUARY, 1974

4.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: FEBRUARY 15, 1995 S.C.R.D. PLAN # 45-97

5.) "MINOR SUBDIVISION OF LAND PREPARED FOR THERESA GAGNE 45 BELLAMY ROAD DOVER NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: JULY 5, 1995 S.C.R.D. PLAN # 46-65

6.) "PLAN OF LOT LINE ADJUSTMENTS PREPARED FOR MAST ROAD SAND AND GRAVEL AND FRANCES E. AND GEORGE E. DOWALIBY MAST ROAD & COLD SPRINGS ROAD DOVER, NEW HAMPSHIRE" BY: MCENEANEY SURVEY ASSOCIATES INC. DATED: MARCH 11, 1997 S.C.R.D. PLAN # 49-95

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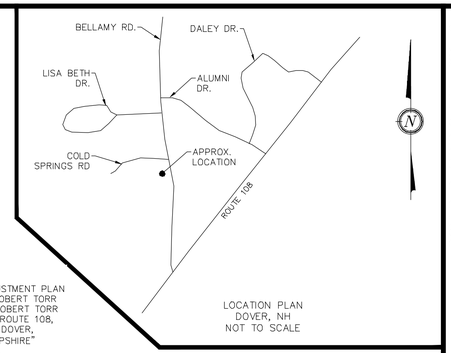
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LOCATION PLAN
DOVER, NH
NOT TO SCALE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE.
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED TDR SUBDIVISION FOR LOTS 46 & 50.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN FEBRUARY & JUNE 2021.

11.) SEE OVERVIEW SUBDIVISION SHEETS FOR ALL OTHER STANDARD SUBDIVISION NOTES.

LEGEND:

- ● 3/4" REBAR W/ ID CAP ~TBS~
- ⊡ GRANITE BOUND ~TBS~
- ● 1/2" EASEMENT REBAR W/ ID CAP ~TBS~
- ◉ DRILL HOLE ~FND OR SET~
- ○ IRON PIPE ~FND~
- ○ IRON BOUND ~FND~
- UTILITY POLE
- ⊕ STEEL STAKE

- STONE WALL
- PERIMETER BOUNDARY
- APPROX. ABUTTING LOT LINE
- BUILDING SETBACK LINE
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT LINE

TBS TO BE SET
FND FOUND
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

APPROVED DOVER

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21

KENNETH A. BERRY L.L.S. 805 DATE

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC#1 COMMENT	12-16-21	

TDR SUBDIVISION PLAN SOUTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE No. 805 KENNETH A. BERRY LICENSED LAND SURVEYOR SIGNATURE

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
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CHICHESTER, NH 03234

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242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

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SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

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LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
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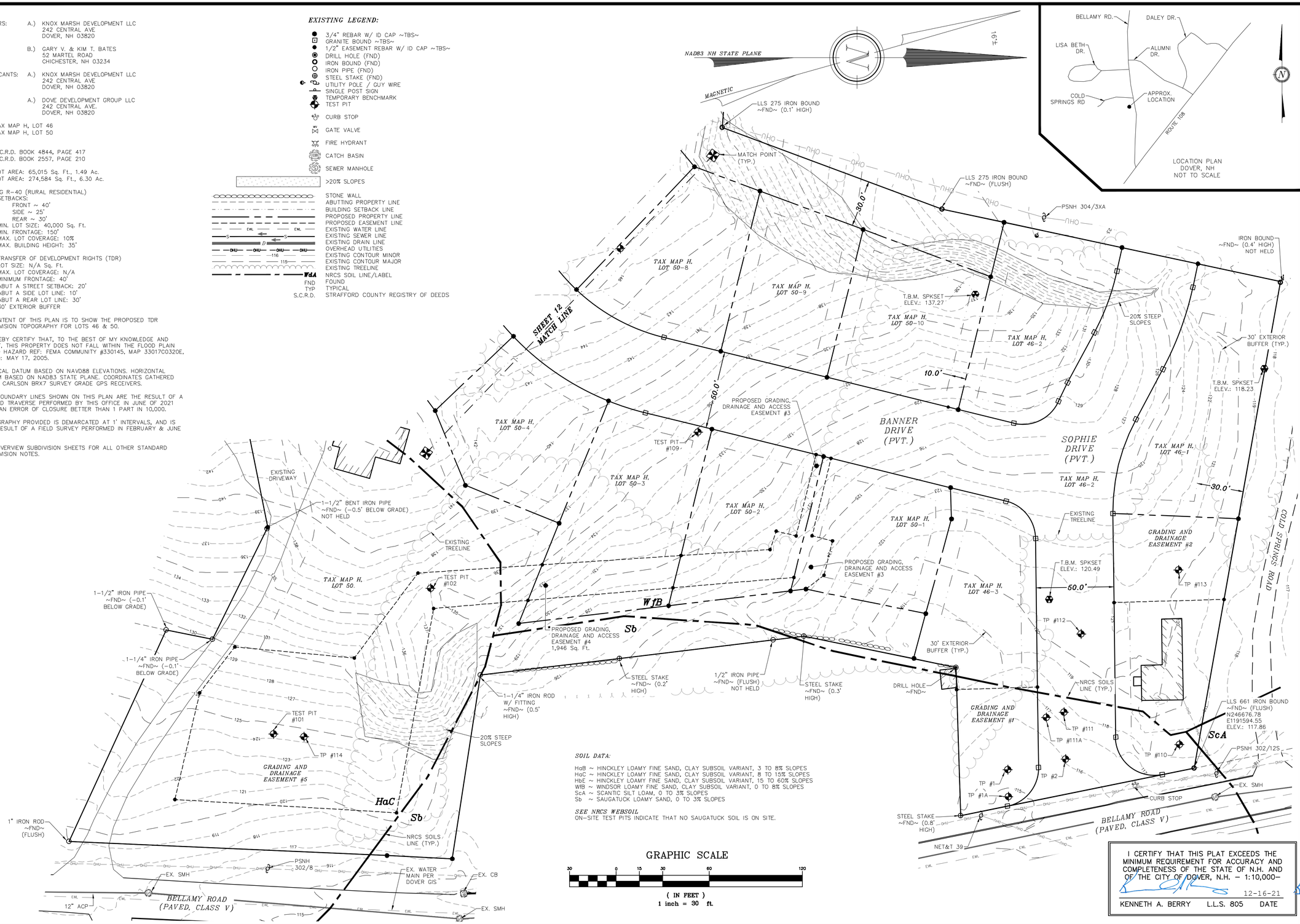
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- IRON BOUND (FND)
- IRON PIPE (FND)
- STEEL STAKE (FND)
- UTILITY POLE / GUY WIRE
- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- >20% SLOPES
- STONE WALL
- ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- NRCS SOIL LINE/LABEL
- FND FOUND
- TYP TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS



SOIL DATA:

HaB ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 3 TO 8% SLOPES
HaC ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 8 TO 15% SLOPES
HbE ~ HINCKLEY LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 15 TO 60% SLOPES
WfB ~ WINDSOR LOAMY FINE SAND, CLAY SUBSOIL VARIANT, 0 TO 8% SLOPES
ScA ~ SCANTIC SILT LOAM, 0 TO 3% SLOPES
Sb ~ SAUGATUCK LOAMY SAND, 0 TO 3% SLOPES

SEE NRCS WEBSOIL
ON-SITE TEST PITS INDICATE THAT NO SAUGATUCK SOIL IS ON SITE.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21

KENNETH A. BERRY L.L.S. 805 DATE

DOVER PLANNING FILE #21-65

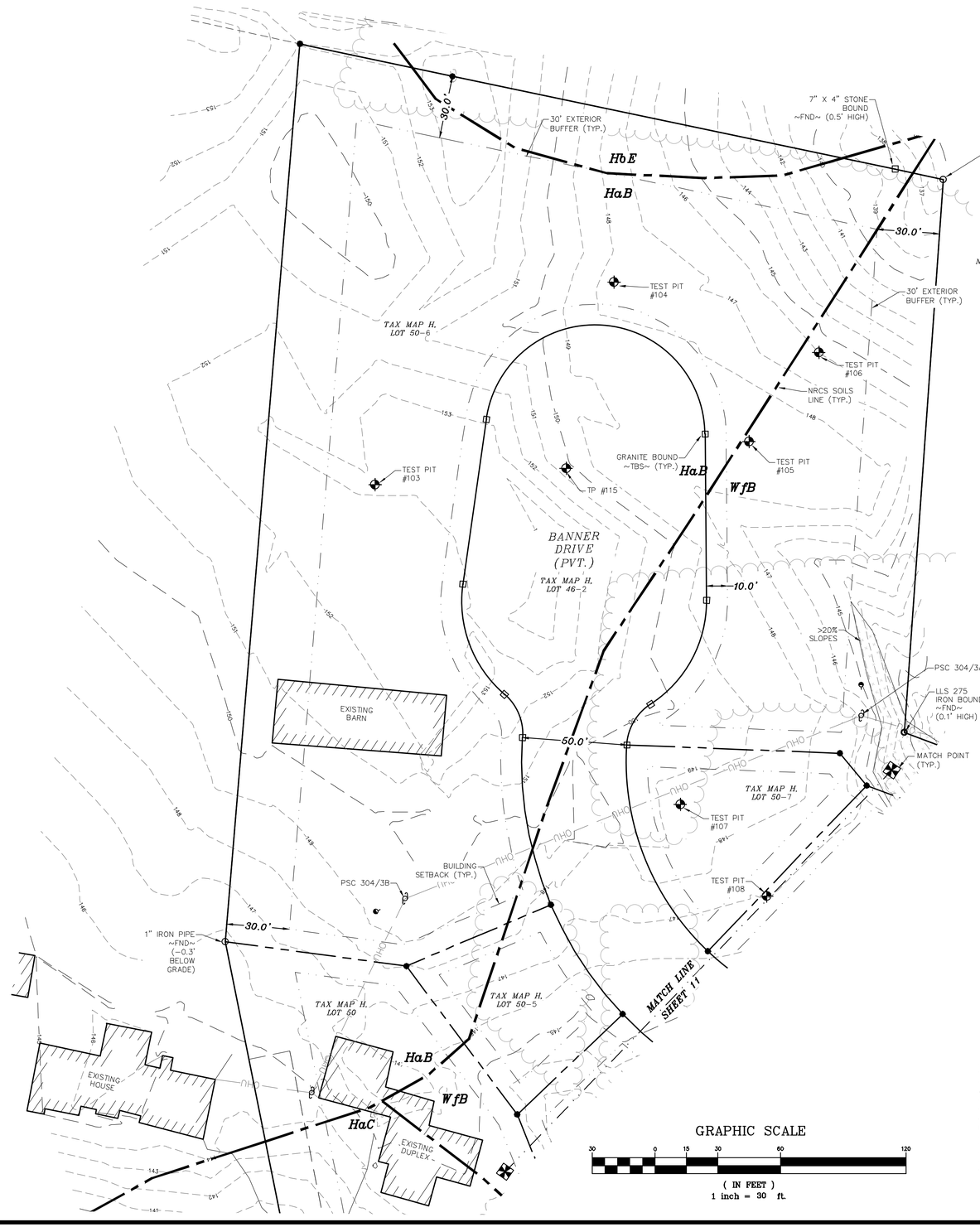
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

SUBDIVISION TOPOGRAPHY PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
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SCALE : 1 IN. EQUALS 30 FT.
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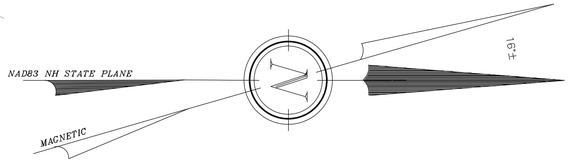
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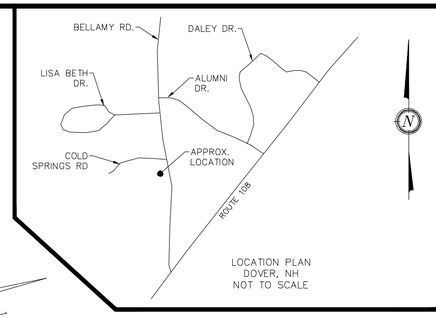


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LOCATION PLAN
DOVER, NH
NOT TO SCALE

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- IRON PIPE (FND)
- STEEL STAKE (FND)
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- SINGLE POST SIGN
- TEMPORARY BENCHMARK
- TEST PIT
- CURB STOP
- GATE VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
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- BUILDING SETBACK LINE
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING DRAIN LINE
- OVERHEAD UTILITIES
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING TREELINE
- NRCS SOIL LINE/LABEL
- FND FOUND
- TYP. TYPICAL
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000–

12-16-21
KENNETH A. BERRY L.L.S. 805 DATE

DOVER PLANNING FILE #21-65

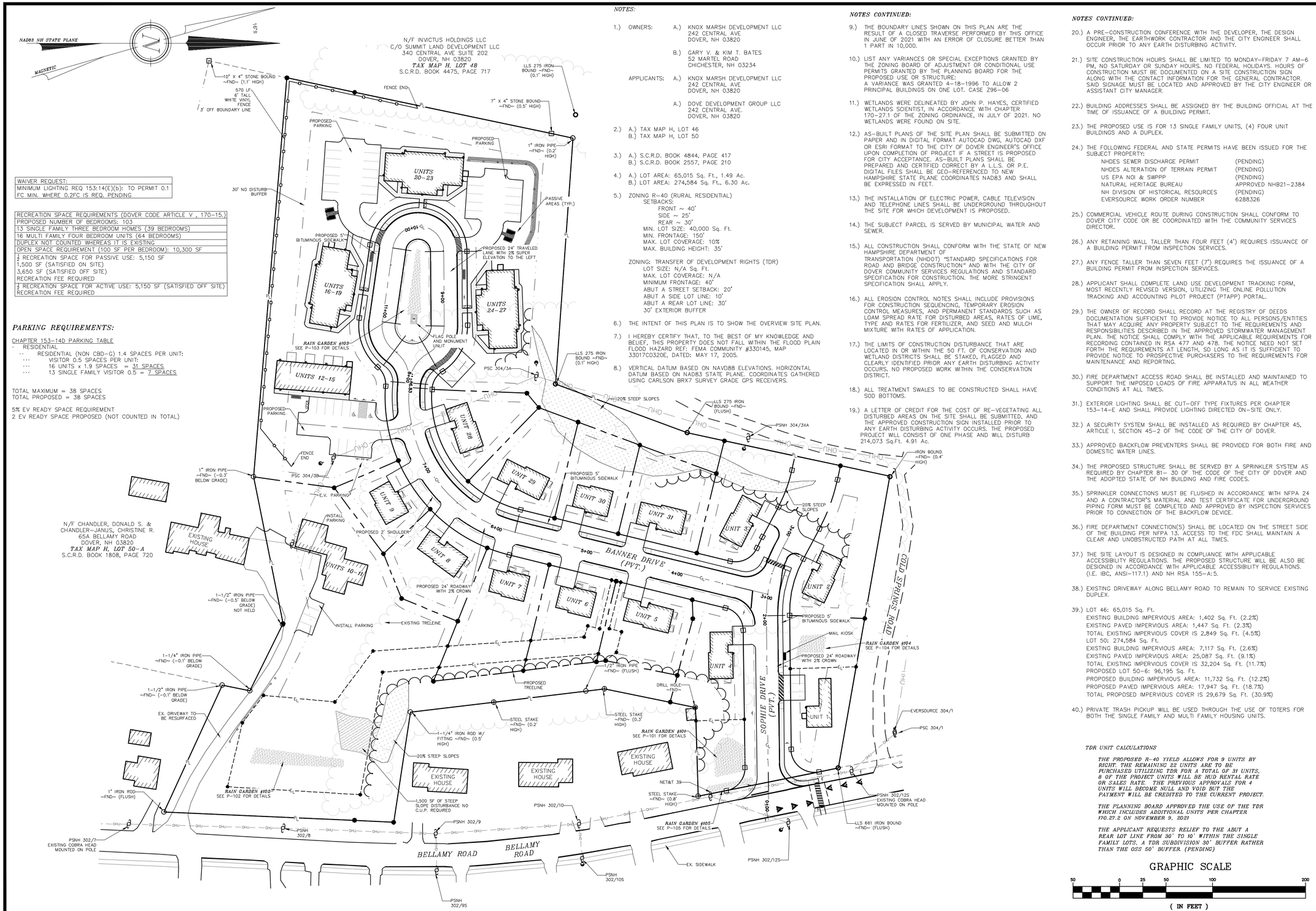
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

SUBDIVISION TOPOGRAPHY PLAN SOUTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE No. 805 KENNETH A BERRY LICENSED LAND SURVEYOR SIGNATURE



WAIVER REQUEST:
MINIMUM LIGHTING REQ 153:14(E)(b): TO PERMIT 0.1 FC MIN. WHERE 0.2FC IS REQ. PENDING

RECREATION SPACE REQUIREMENTS (DOVER CODE ARTICLE V , 170-15.)
PROPOSED NUMBER OF BEDROOMS: 103
13 SINGLE FAMILY THREE BEDROOM HOMES (39 BEDROOMS)
16 MULTI FAMILY FOUR BEDROOM UNITS (64 BEDROOMS)
DUPLEX NOT COUNTED WHEREAS IT IS EXISTING
OPEN SPACE REQUIREMENT (100 SF PER BEDROOM): 10,300 SF
½ RECREATION SPACE FOR PASSIVE USE: 5,150 SF 1,500 SF (SATISFIED ON SITE) 3,650 SF (SATISFIED OFF SITE) RECREATION FEE REQUIRED
½ RECREATION SPACE FOR ACTIVE USE: 5,150 SF (SATISFIED OFF SITE) RECREATION FEE REQUIRED

PARKING REQUIREMENTS:

CHAPTER 153-14D PARKING TABLE
RESIDENTIAL
RESIDENTIAL (NON CBD-G) 1.4 SPACES PER UNIT:
VISITOR 0.5 SPACES PER UNIT:
16 UNITS x 1.9 SPACES = 31 SPACES
13 SINGLE FAMILY VISITOR 0.5 = 7 SPACES

TOTAL MAXIMUM = 38 SPACES
TOTAL PROPOSED = 38 SPACES

5% EV READY SPACE REQUIREMENT
2 EV READY SPACE PROPOSED (NOT COUNTED IN TOTAL)

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE OVERVIEW SITE PLAN.

7.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: MAY 17, 2005.

8.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUM BASED ON NAD83 STATE PLANE. COORDINATES GATHERED USING CARLSON BRX7 SURVEY GRADE GPS RECEIVERS.

NOTES CONTINUED:

9.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2021 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

10.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE:
A VARIANCE WAS GRANTED 4-18-1996 TO ALLOW 2 PRINCIPAL BUILDINGS ON ONE LOT. CASE 296-06

11.) WETLANDS WERE DELINEATED BY JOHN P. HAYES, CERTIFIED WETLANDS SCIENTIST, IN ACCORDANCE WITH CHAPTER 170-27.1 OF THE ZONING ORDINANCE, IN JULY OF 2021. NO WETLANDS WERE FOUND ON SITE.

12.) AS-BUILT PLANS OF THE SITE PLAN SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT IF A STREET IS PROPOSED FOR CITY ACCEPTANCE. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E. DIGITAL FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.

13.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.

14.) THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.

15.) ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.

16.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.

17.) THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR ANY EARTH DISTURBING ACTIVITY OCCURS. NO PROPOSED WORK WITHIN THE CONSERVATION DISTRICT.

18.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.

19.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS. THE PROPOSED PROJECT WILL CONSIST OF ONE PHASE AND WILL DISTURB 214,073 Sq.Ft. 4.91 Ac.

NOTES CONTINUED:

20.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

21.) SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM-6 PM, NO SATURDAY OR SUNDAY HOURS. NO FEDERAL HOLIDAYS. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR ASSISTANT CITY MANAGER.

22.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

23.) THE PROPOSED USE IS FOR 13 SINGLE FAMILY UNITS, (4) FOUR UNIT BUILDINGS AND A DUPLEX.

24.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:

NHDES SEWER DISCHARGE PERMIT	(PENDING)
NHDES ALTERATION OF TERRAIN PERMIT	(PENDING)
US EPA NOI & SWPPP	(PENDING)
NATURAL HERITAGE BUREAU	APPROVED NHB21-2384
NH DIVISION OF HISTORICAL RESOURCES	(PENDING)
EVERSOURCE WORK ORDER NUMBER	6288326

25.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

26.) ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

27.) ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

28.) APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.

29.) THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.

30.) FIRE DEPARTMENT ACCESS ROAD SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.

31.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

32.) A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.

33.) APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.

34.) THE PROPOSED STRUCTURE SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81- 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.

35.) SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.

36.) FIRE DEPARTMENT CONNECTION(S) SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.

37.) THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL BE ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. (I.E. IBC, ANSI-117.1) AND NH RSA 155-A:5.

38.) EXISTING DRIVEWAY ALONG BELLAMY ROAD TO REMAIN TO SERVICE EXISTING DUPLEX.

39.) LOT 46: 65,015 Sq. Ft.
EXISTING BUILDING IMPERVIOUS AREA: 1,402 Sq. Ft. (2.2%)
EXISTING PAVED IMPERVIOUS AREA: 1,447 Sq. Ft. (2.3%)
TOTAL EXISTING IMPERVIOUS COVER IS 2,849 Sq. Ft. (4.5%)
LOT 50: 274,584 Sq. Ft.
EXISTING BUILDING IMPERVIOUS AREA: 7,117 Sq. Ft. (2.6%)
EXISTING PAVED IMPERVIOUS AREA: 25,087 Sq. Ft. (9.1%)
TOTAL EXISTING IMPERVIOUS COVER IS 32,204 Sq. Ft. (11.7%)
PROPOSED LOT 50-6: 96,195 Sq. Ft.
PROPOSED BUILDING IMPERVIOUS AREA: 11,732 Sq. Ft. (12.2%)
PROPOSED PAVED IMPERVIOUS AREA: 17,947 Sq. Ft. (18.7%)
TOTAL PROPOSED IMPERVIOUS COVER IS 29,679 Sq. Ft. (30.9%)

40.) PRIVATE TRASH PICKUP WILL BE USED THROUGH THE USE OF TOTERS FOR BOTH THE SINGLE FAMILY AND MULTI FAMILY HOUSING UNITS.

TDR UNIT CALCULATIONS

THE PROPOSED R-40 YIELD ALLOWS FOR 9 UNITS BY RIGHT. THE REMAINING 22 UNITS ARE TO BE PURCHASED UTILIZING TDR FOR A TOTAL OF 31 UNITS. 8 OF THE PROJECT UNITS WILL BE HUD RENTAL RATE OR SALES RATE. THE PREVIOUS APPROVALS FOR 4 UNITS WILL BECOME NULL AND VOID BUT THE PAYMENT WILL BE CREDITED TO THE CURRENT PROJECT.

THE PLANNING BOARD APPROVED THE USE OF THE TDR WHICH INCLUDES ADDITIONAL UNITS PER CHAPTER 170.27.2 ON NOVEMBER 9, 2021

THE APPLICANT REQUESTS RELIEF TO THE ABUT A REAR LOT LINE FROM 30' TO 10' WITHIN THE SINGLE FAMILY LOTS, A TDR SUBDIVISION 30' BUFFER RATHER THAN THE OSS 50' BUFFER. (PENDING)

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

DOVER PLANNING FILE #21-65

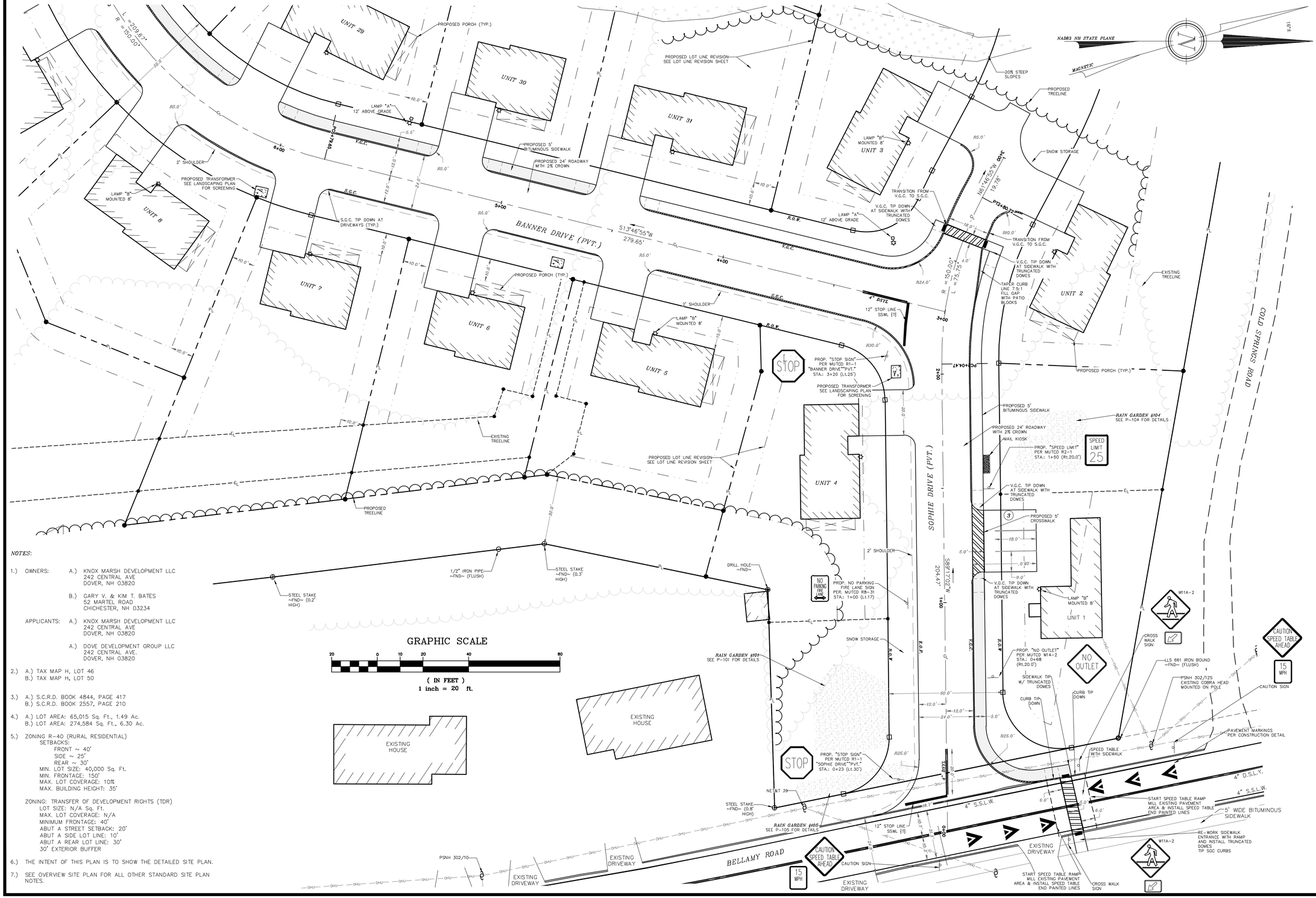
#	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

OVERVIEW SITE PLAN
LAND OF
KNOX MARSH DEVELOPMENT LLC
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7443
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE DETAILED SITE PLAN.

7.) SEE OVERVIEW SITE PLAN FOR ALL OTHER STANDARD SITE PLAN NOTES.

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

SITE PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT LLC
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14247
LICENSED PROFESSIONAL ENGINEER

SHEET 14 OF 48

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) ZONING R-40 (RURAL RESIDENTIAL)
SETBACKS:
FRONT ~ 40'
SIDE ~ 25'
REAR ~ 30'
MIN. LOT SIZE: 40,000 Sq. Ft.
MIN. FRONTAGE: 150'
MAX. LOT COVERAGE: 10%
MAX. BUILDING HEIGHT: 35'

ZONING: TRANSFER OF DEVELOPMENT RIGHTS (TDR)
LOT SIZE: N/A Sq. Ft.
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE DETAILED SITE PLAN.

7.) SEE OVERVIEW SITE PLAN FOR ALL OTHER STANDARD SITE PLAN NOTES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 NH STATE PLANE

MAGNETIC

DUPLEX DETAIL

DOVER PLANNING FILE #21-65

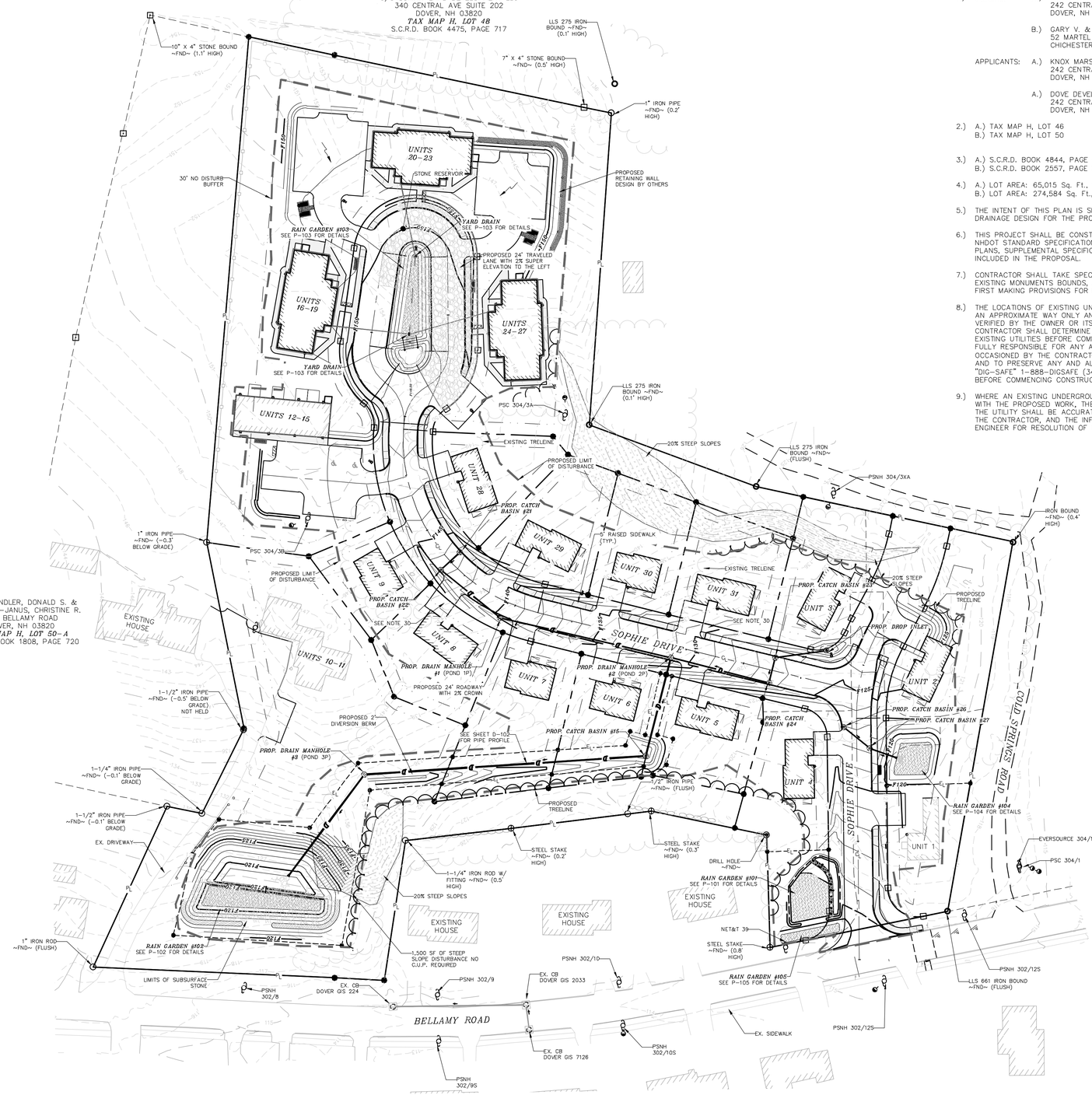
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

SITE PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7443
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) OWNERS:
- A.) KNOX MARSH DEVELOPMENT LLC
  242 CENTRAL AVE
  DOVER, NH 03820
- B.) GARY V. & KIM T. BATES
  52 MARTEL ROAD
  CHICHESTER, NH 03234

APPLICANTS:
- A.) KNOX MARSH DEVELOPMENT LLC
  242 CENTRAL AVE
  DOVER, NH 03820
- A.) DOVE DEVELOPMENT GROUP LLC
  242 CENTRAL AVE.
  DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS SHOW THE OVERVIEW GRADING AND DRAINAGE DESIGN FOR THE PROPOSED DEVELOPMENT.

6.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

7.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

8.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

9.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

NOTES CONTINUED:

10.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

11.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. LIMIT OF GRADING SHOULD NOT BE EXPANDED WITHOUT CONSULTING THE DESIGN ENGINEER. SEE ALSO E&SC PLAN.

12.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

13.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH §T§ SHALL BE THERMOPLASTIC.

14.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

15.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

16.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). BIWEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER AND AFTER STORM EVENTS OF OVER 0.25".

17.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASINS. SEE SHEET E102, DETAIL E18 FOR DEFINITION OF STABLE.

18.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

19.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS.

20.) ALL TREATMENT SWALE TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS UNLESS OTHERWISE INSTRUCTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.

21.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, AS MAY BE APPLICABLE.

22.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND DOVER CITY STAFF SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

23.) BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

24.) THE PROPOSED PROJECT WILL CONSIST OF ONE PHASE AND WILL DISTURB 214,073 Sq.Ft. 4.91 Ac.

25.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

26.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH CITY OF DOVER CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

27.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

28.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.

29.) GUTTERS FOR FOUR UNIT BUILDINGS ARE TO BE INSTALLED TO DIVERT ALL ROOF RUNOFF TO PROPOSED RAIN GARDEN #103.

30.) THE DESIGN INTENT IS FOR THE FRONT YARDS OF THE UNITS TO GRADE TOWARDS THE PROPOSED ROAD.

HAINES NW STATE PLANE

MAGNETIC

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

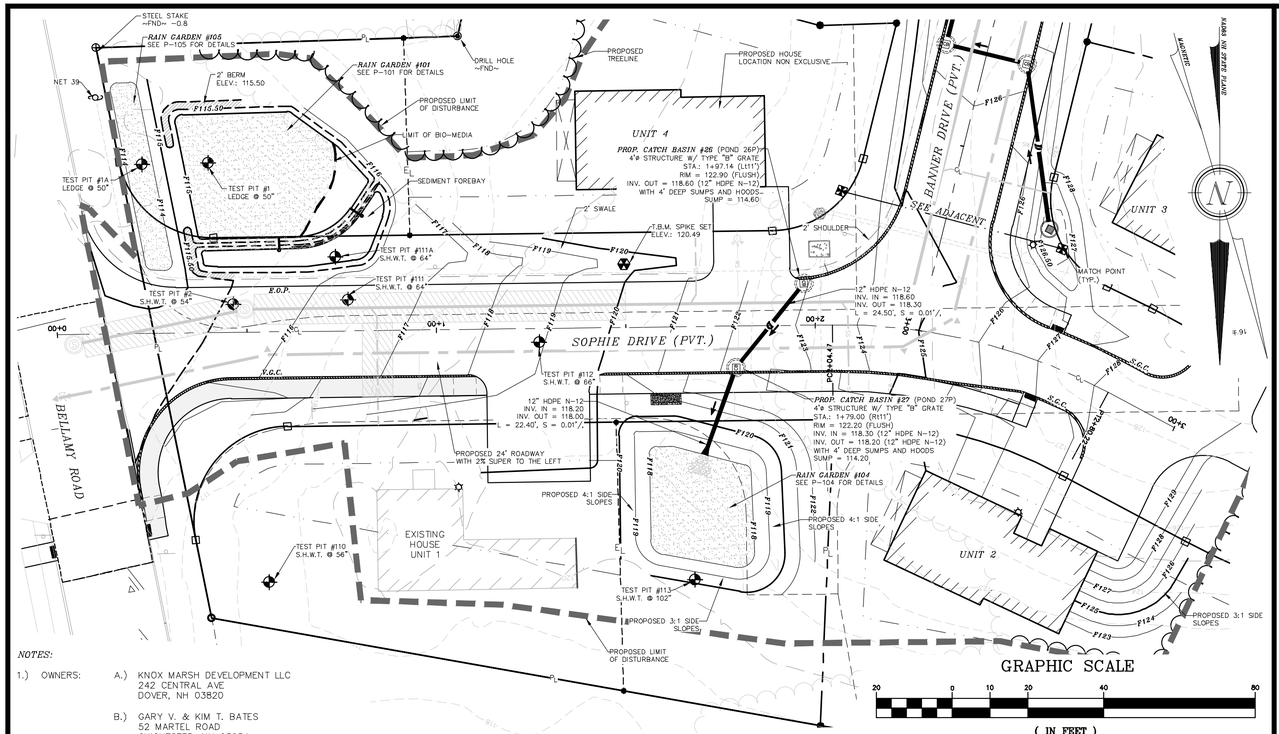
OVERVIEW GRADING PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

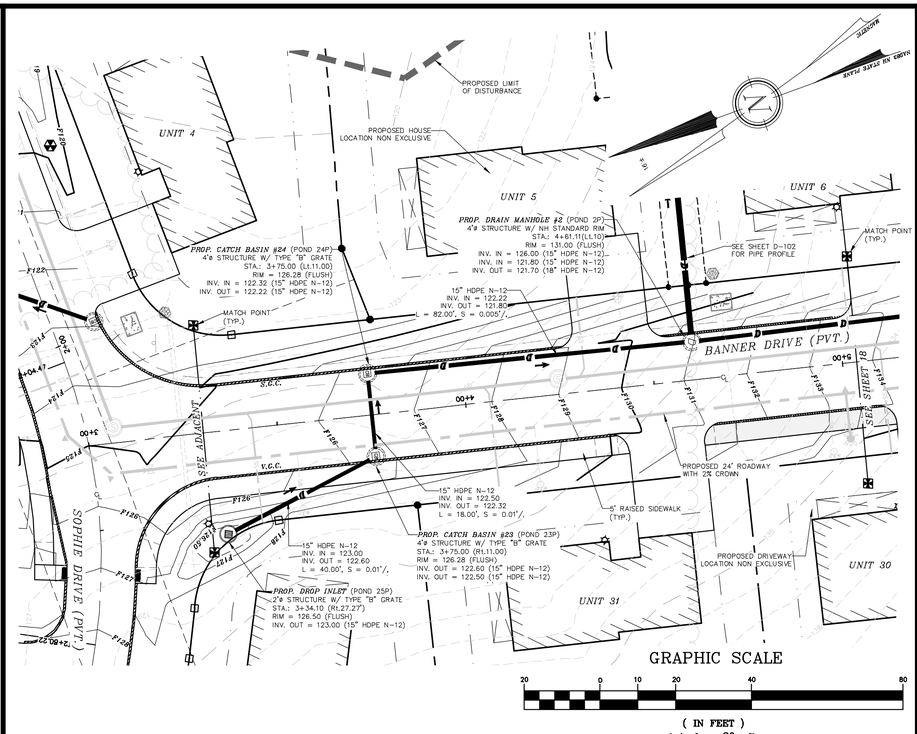
SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 19245
LICENSED PROFESSIONAL ENGINEER

SHEET 16 OF 48



PLAN VIEW SOPHIE DRIVE 0+00 TO 3+00



PLAN VIEW BANNER DRIVE 3+00 TO 5+00

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

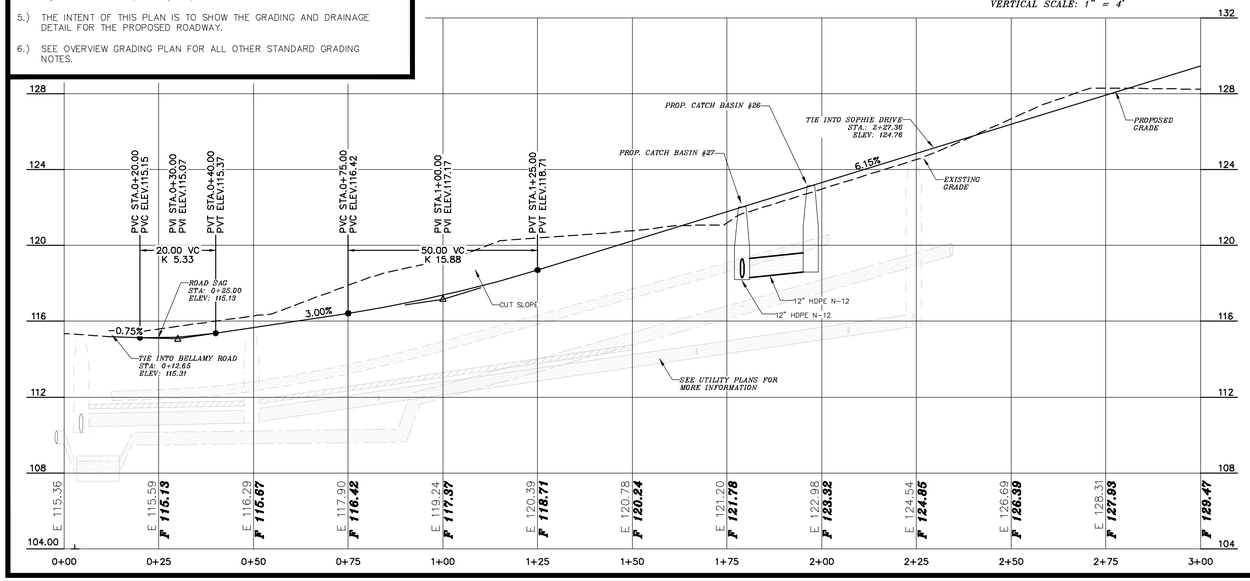
4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE GRADING AND DRAINAGE DETAIL FOR THE PROPOSED ROADWAY.

6.) SEE OVERVIEW GRADING PLAN FOR ALL OTHER STANDARD GRADING NOTES.

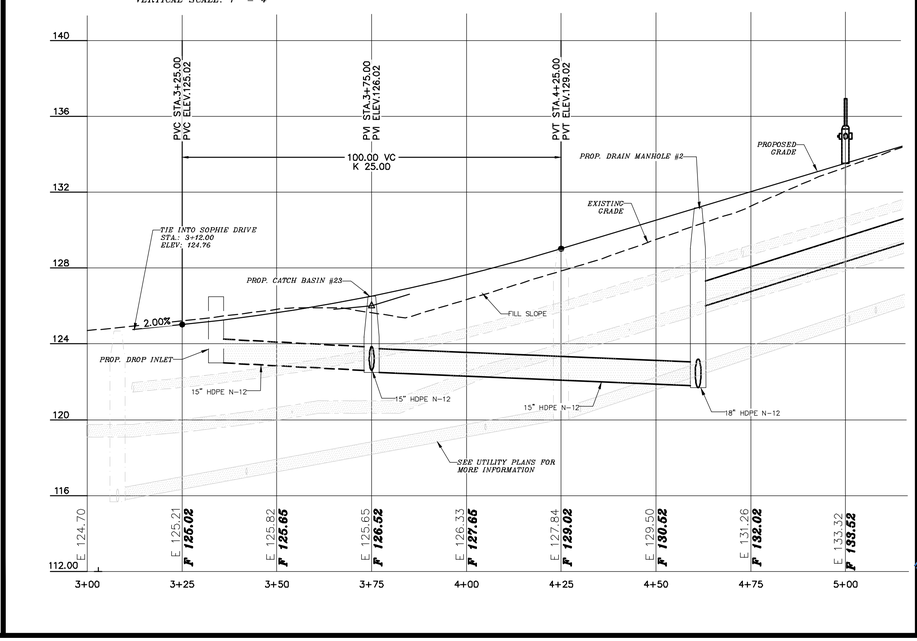
PROFILE VIEW SOPHIE DRIVE 0+00 TO 3+00

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



PROFILE VIEW BANNER DRIVE 3+00 TO 5+00

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



DOVER PLANNING FILE #21-65

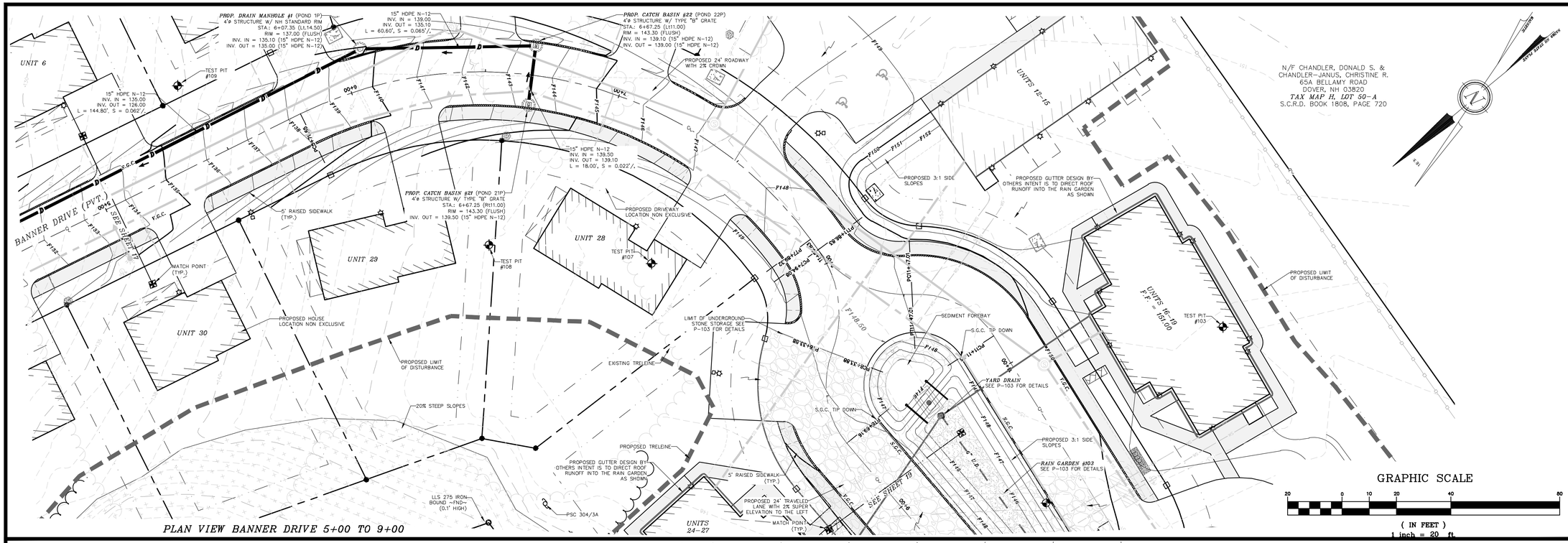
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

PLAN AND PROFILE SOPHIE & BANNER DRIVE
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

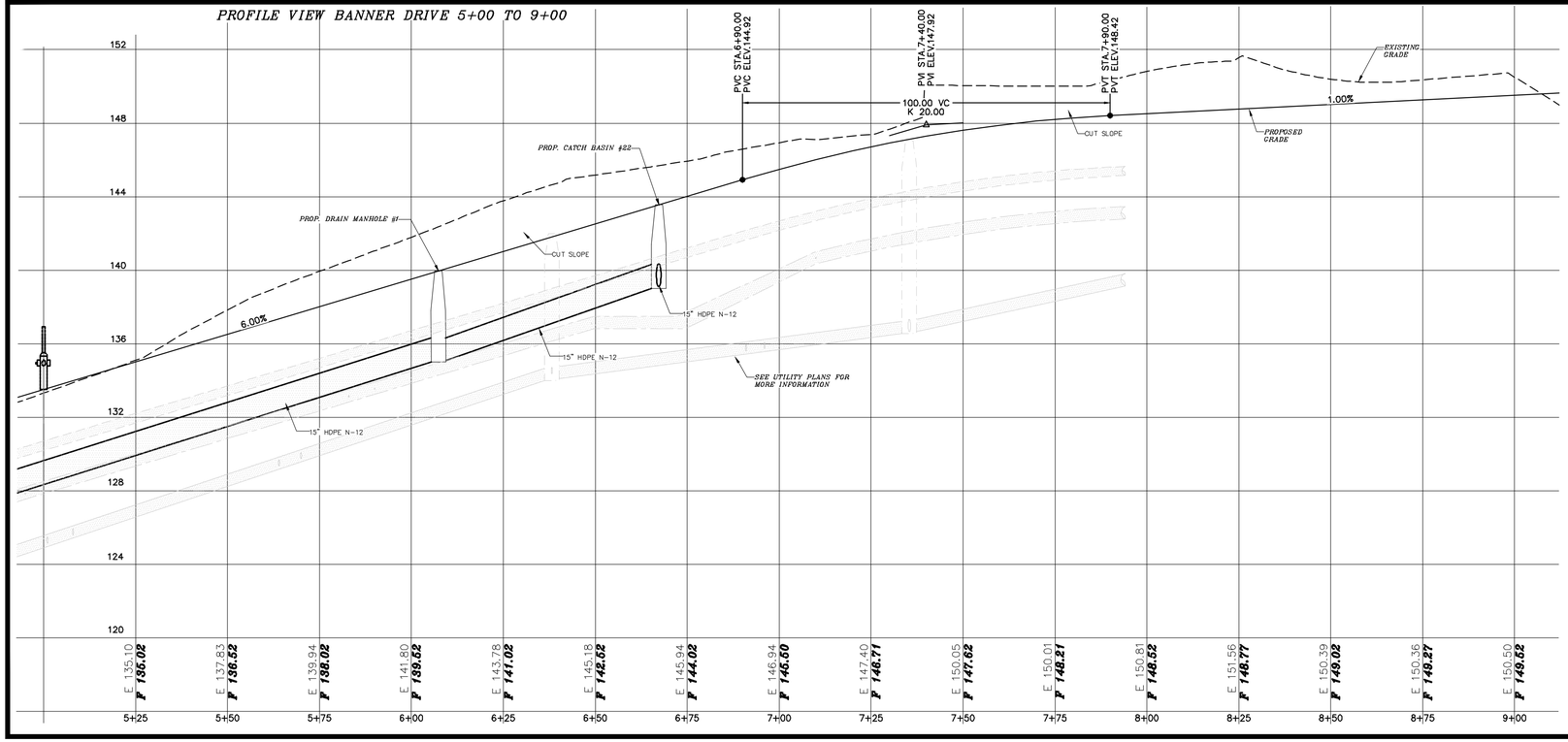
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED
PROFESSIONAL ENGINEER



PLAN VIEW BANNER DRIVE 5+00 TO 9+00



PROFILE VIEW BANNER DRIVE 5+00 TO 9+00

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE GRADING AND DRAINAGE DETAIL FOR THE PROPOSED ROADWAY.

6.) SEE OVERVIEW GRADING PLAN FOR ALL OTHER STANDARD GRADING NOTES.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

DOVER PLANNING FILE #21-65

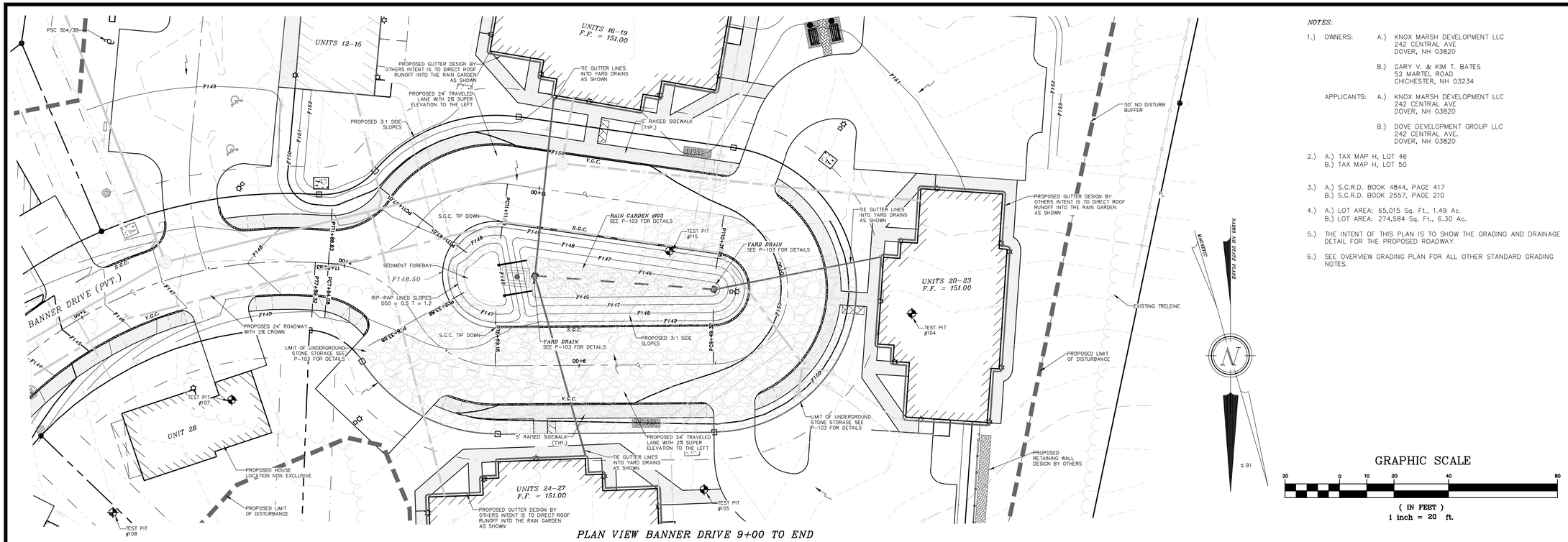
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

PLAN AND PROFILE BANNER DRIVE 5+00 TO 9+00
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
& KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7442
LICENSED PROFESSIONAL ENGINEER



PLAN VIEW BANNER DRIVE 9+00 TO END

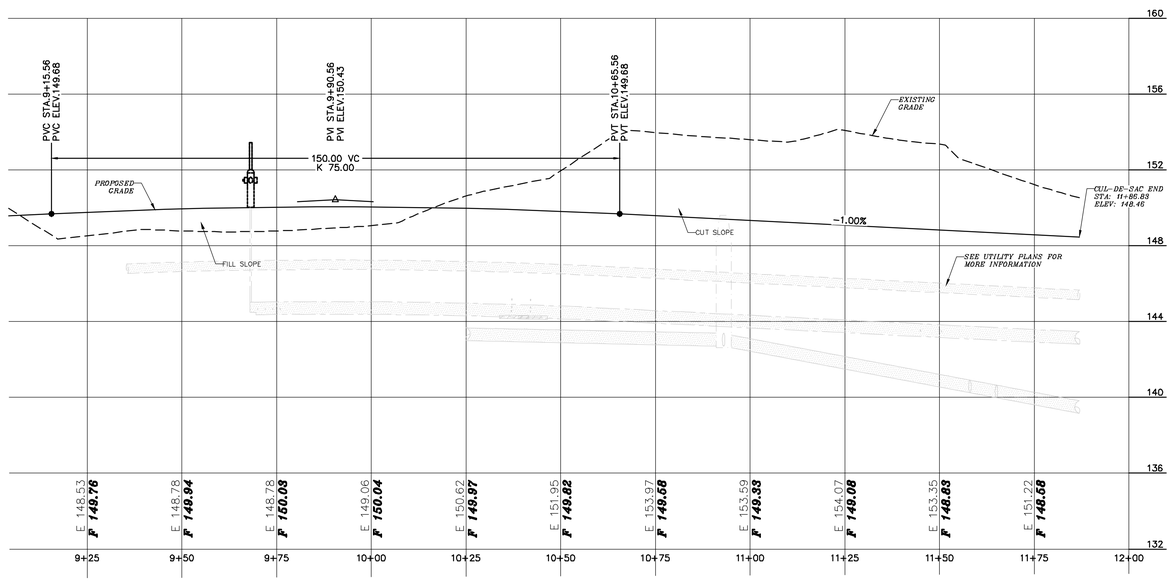
PROFILE VIEW BANNER DRIVE 9+00 TO END

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE GRADING AND DRAINAGE DETAIL FOR THE PROPOSED ROADWAY.

6.) SEE OVERVIEW GRADING PLAN FOR ALL OTHER STANDARD GRADING NOTES.

DOVER PLANNING FILE #21-65

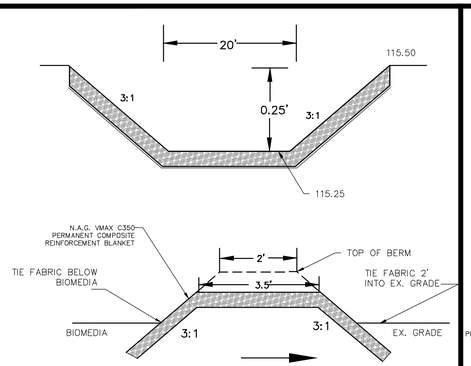
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

PLAN AND PROFILE BANNER DRIVE 9+00 TO END
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

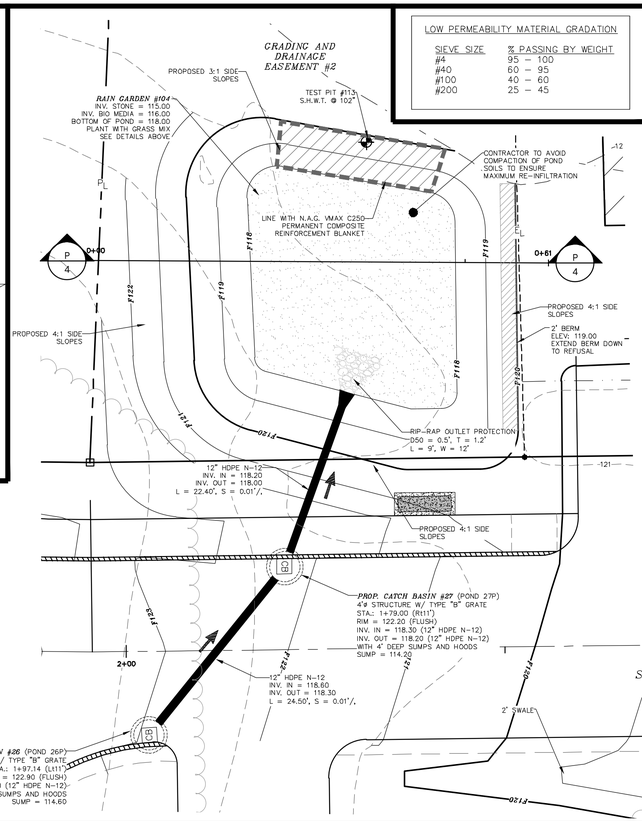
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 10248
LICENSED PROFESSIONAL ENGINEER



EMERGENCY SPILLWAY PROFILE

SPILLWAY DETAILS

NOT TO SCALE



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

LOW PERMEABILITY MATERIAL GRADATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45

BIORETENTION FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Bioretention Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5

3/8" WASHED CRUSHED STONE*	
SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*	
SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
3/4"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

RAIN GARDEN MIX

THE GRASS THAT IS PLANTED WITHIN A RAIN GARDEN BIO-FILTRATION SYSTEM WITHIN THE BIO-MEDIA MUST CONSIST OF A COMBINATION OF WARM SEASON GRASS SEED AND COLD SEASON GRASS SEED IN ORDER FOR THE GRASS TO START GROWING FOR STABILIZATION AND CONTINUE GROWING IN THE SANDY WELL-DRAINED ENVIRONMENT. PLANTING SPECIFICATION WILL MEET THE REQUIREMENTS AS OUTLINED IN "VEGETATION NEW HAMPSHIRE SAND AND GRAVEL PITS" MIX 1 (WARM SEASON GRASSES) (15 LBS/AC) AND INCLUDE ANNUAL AND PERENNIAL RYE GRASS SEED (15 LBS/AC); THE NEW ENGLAND NATIVE WARM SEASON GRASS MIX (23 LBS/AC) BY NEW ENGLAND WETLAND PLANTS, INC.; RAIN GARDEN MIX 180 (15 LBS/AC & 15 LBS/AC OF RYE) / RAIN GARDEN GRASS MIX 180-1 (20 LBS/AC & 10 LBS/AC OF RYE) BY ERNST CONSERVATION SEEDS; OR APPROVED EQUAL.

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL BIORETENTION FILTER MEDIA SHALL BE AS SHOWN ABOVE. "BIO MEDIA" MEANS BIORETENTION FILTER MADIA.
3. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
4. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
5. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOGF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
6. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE FILTRATION COMPONENTS OF THE SYSTEM.
7. CENTER CORE OF THE BERM IS TO BE CONSTRUCTED UNDERNEATH THE EMERGENCY SPILLWAY.

MAINTENANCE REQUIREMENTS

1 SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 0.25 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.

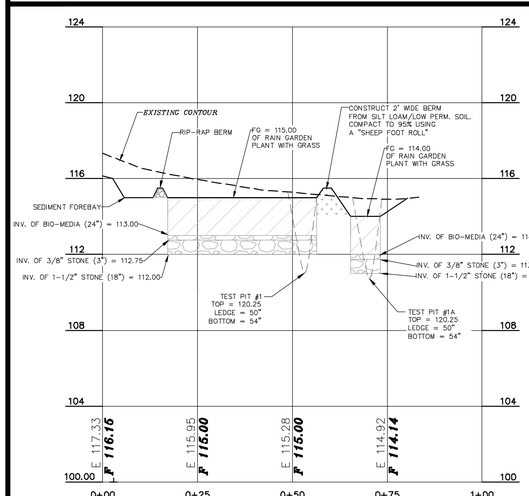
2 PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.

3 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.

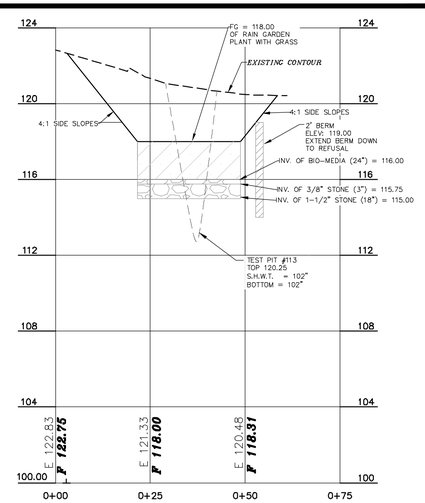
4 VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, PRUNING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

DESIGN REFERENCES

1 UNH STORMWATER CENTER
2 NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.



SECTION OF RAIN GARDEN 101 & 105



SECTION OF RAIN GARDEN 104

GRAPHIC SCALE

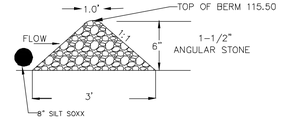
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



P-101 P-104
P105

DOVER PLANNING FILE #21-65

#	DATE	REVISION
1	12-16-21	REVISED PER TRC#1 COMMENT

RAIN GARDEN #101 #104 & #105
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

P1

BIORETENTION FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Bioretention Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
3/4"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
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3. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
4. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
5. DO NOT DISCHARGE SEDIMENT–LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOOF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
6. DO NOT TRAGFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE FILTRATION COMPONENTS OF THE SYSTEM.
7. CENTER CORE OF THE BERM IS TO BE CONSTRUCTED UNDERNEATH THE EMERGENCY SPILLWAY.

MAINTENANCE REQUIREMENTS

1 SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 0.25 INCHES IN A 24–HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A 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.

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4 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.

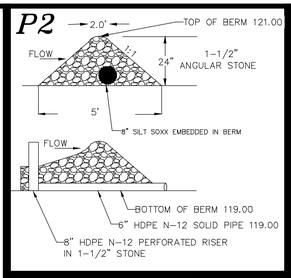
DESIGN REFERENCES

1 UNH STORMWATER CENTER
2 NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

RAIN GARDEN MIX

THE GRASS THAT IS PLANTED WITHIN A RAIN GARDEN BIO–FILTRATION SYSTEM WITHIN THE BIO–MEDIA MUST CONSIST OF A COMBINATION OF WARM SEASON GRASS SEED AND COLD SEASON GRASS SEED IN ORDER FOR THE GRASS TO START GROWING FOR STABILIZATION AND CONTINUE GROWING IN THE SANDY WELL–DRAINED ENVIRONMENT. PLANTING SPECIFICATION WILL MEET THE REQUIREMENTS AS OUTLINED IN 'VEGETATION NEW HAMPSHIRE SAND AND GRAVEL PITS' MIX 1 (WARM SEASON GRASSES) (15 LBS/AC) AND INCLUDE ANNUAL AND PERENNIAL RYE GRASS SEED (15 LBS/AC); THE NEW ENGLAND NATIVE WARM SEASON GRASS MIX (23 LBS/AC) BY NEW ENGLAND WETLAND PLANTS, INC.; RAIN GARDEN MIX 180 (15 LBS/AC & 15 LBS/AC OF RYE) / RAIN GARDEN GRASS MIX 180–1 (20 LBS/AC & 10 LBS/AC OF RYE) BY ERNST CONSERVATION SEEDS; OR APPROVED EQUAL.

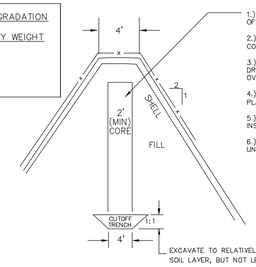
P2



P3

LOW PERMEABILITY MATERIAL GRADATION

SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45



1.) 2' CORE IS TO BE CONSTRUCTED OF COMPACTED LOW PERM MATERIAL.

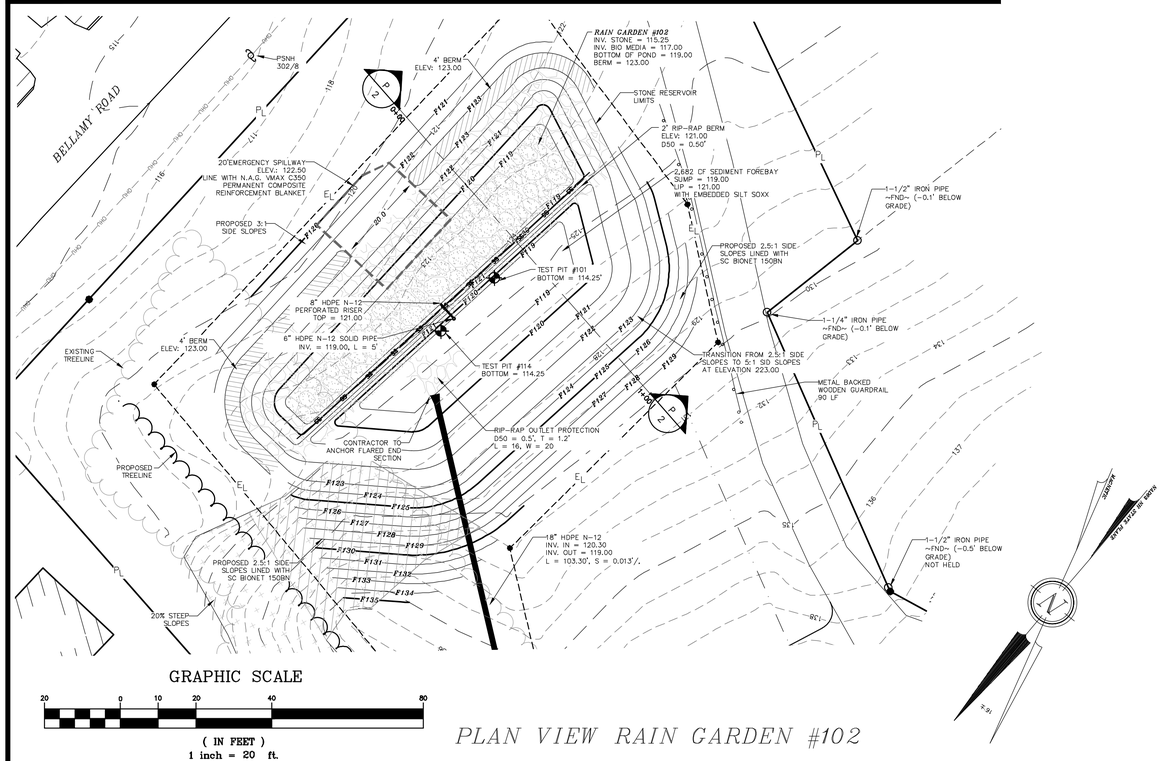
2.) CORE IS TO BE INSTALLED & COMPACTED IN 12" LIFTS.

3.) INSTALLATION OF ENTIRE DRAINAGE STRUCTURE IS TO BE OVERSEEN BY DESIGN ENGINEER.

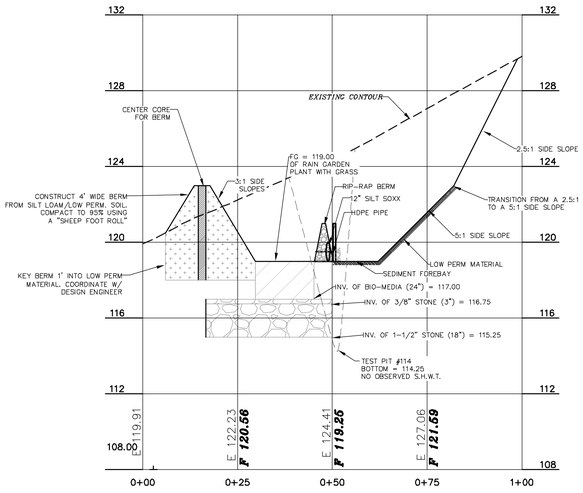
4.) GENERAL FILL MATERIALS ARE TO PLACED & COMPACTED IN 12" LIFTS.

5.) GENERAL FILL MATERIAL MAY BE INSTALLED USING ONSITE MATERIALS.

6.) CORE IS TO BE CONSTRUCTED UNDERNEATH THE PROPOSED SPILLWAY.



PLAN VIEW RAIN GARDEN #102





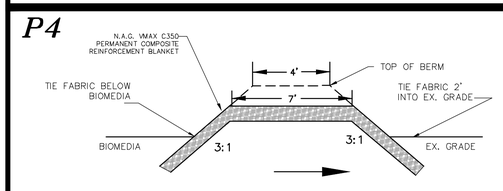
SECTION OF RAIN GARDEN 102

GRAPHIC SCALE

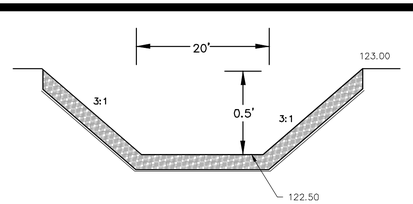
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

P4



EMERGENCY SPILLWAY PROFILE



SPILLWAY DETAILS

NOT TO SCALE

DOVER PLANNING FILE #21–65

#	REVISION	DATE	DESCRIPTION
1		12–16–21	REVISED PER TRC#1 COMMENT

RAIN GARDEN #102
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 – LICENSED PROFESSIONAL ENGINEER

P–102

P1

BIORETENTION FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Bioretention Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5

3/8" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1-1/2" WASHED CRUSHED STONE*

SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1-1/2"	90 – 100
1"	20 – 55
3/4"	0 –15
3/8"	0 –5

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL BIORETENTION FILTER MEDIA SHALL BE AS SHOWN ABOVE. "BIO MEDIA" MEANS BIORETENTION FILTER MADIA.
3. COMPACTION IS NOT TO OCCUR IN THE RAIN GARDEN AREAS PRIOR TO CONSTRUCTION. SCARIFICATION REQUIRED IN THE EVENT COMPACTION TAKES PLACE.
4. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
5. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOGF WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
6. DO NOT TRAGFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE FILTRATION COMPONENTS OF THE SYSTEM.
7. CENTER CORE OF THE BERM IS TO BE CONSTRUCTED UNDERNEATH THE EMERGENCY SPILLWAY.

MAINTENANCE REQUIREMENTS

1 SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 0.25 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A 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 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.

4 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.

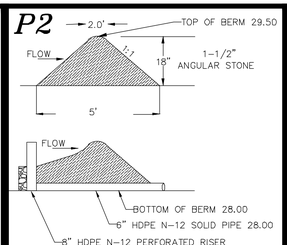
DESIGN REFERENCES

1 UNH STORMWATER CENTER
2 NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

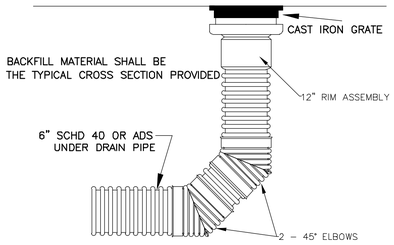
RAIN GARDEN MIX

THE GRASS THAT IS PLANTED WITHIN A RAIN GARDEN BIO-FILTRATION SYSTEM WITHIN THE BIO-MEDIA MUST CONSIST OF A COMBINATION OF WARM SEASON GRASS SEED AND COLD SEASON GRASS SEED IN ORDER FOR THE GRASS TO START GROWING FOR STABILIZATION AND CONTINUE GROWING IN THE SANDY WELL-DRAINED ENVIRONMENT. PLANTING SPECIFICATION WILL MEET THE REQUIREMENTS AS OUTLINED IN 'VEGETATION NEW HAMPSHIRE SAND AND GRAVEL PITS' MIX 1 (WARM SEASON GRASSES) (15 LBS/AC) AND INCLUDE ANNUAL AND PERENNIAL RYE GRASS SEED (15 LBS/AC); THE NEW ENGLAND NATIVE WARM SEASON GRASS MIX (23 LBS/AC) BY NEW ENGLAND WETLAND PLANTS, INC.; RAIN GARDEN MIX 180 (15 LBS/AC & 15 LBS/AC OF RYE) / RAIN GARDEN GRASS MIX 180-1 (20 LBS/AC & 10 LBS/AC OF RYE) BY ERNST CONSERVATION SEEDS; OR APPROVED EQUAL.

P2

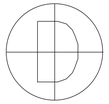


P3



ADS N-12 OR SCHD. 40 INLINE DRAIN

NOT TO SCALE USED FOR CLEANOUTS

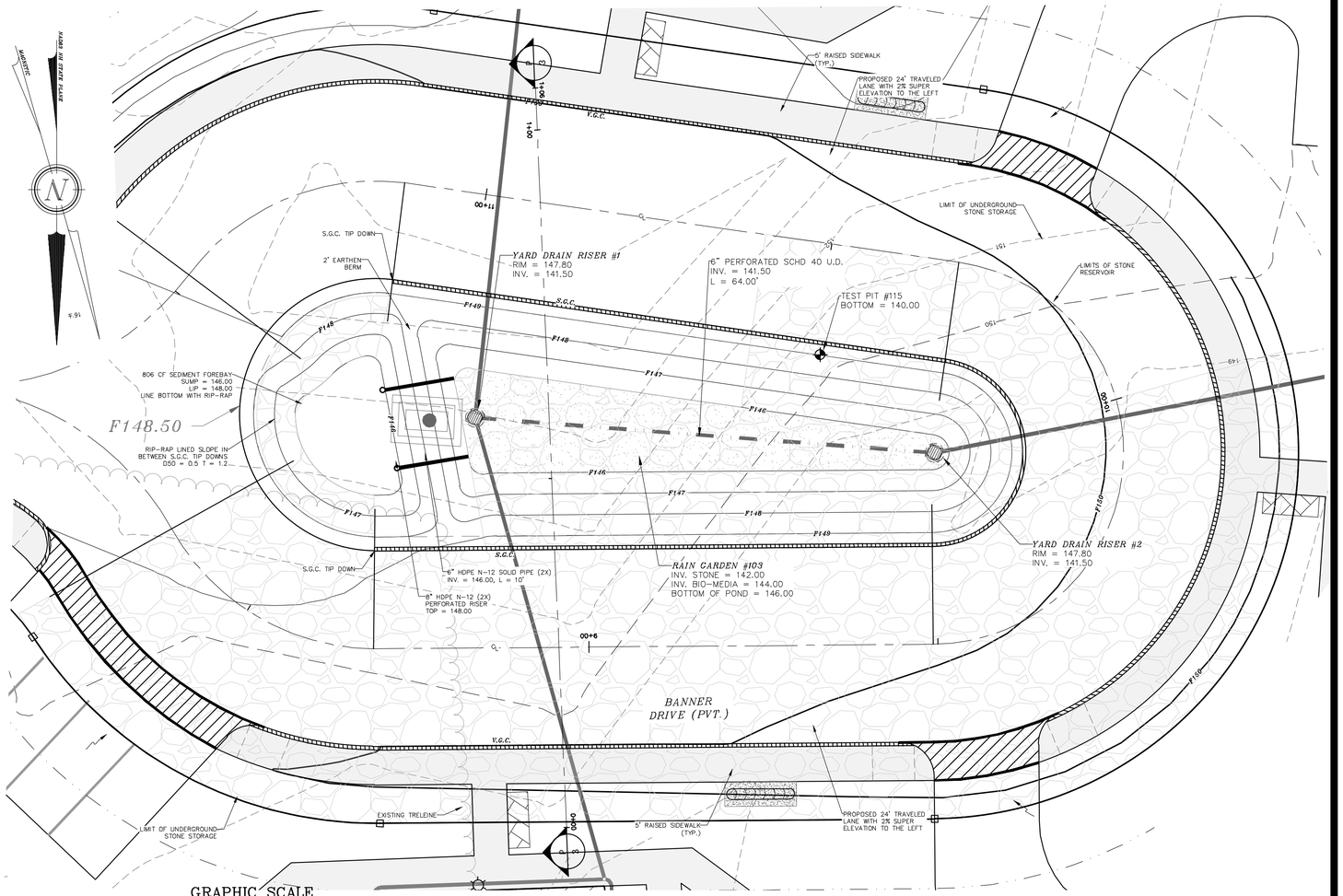


12" CAST IRON GRATE

NOT TO SCALE

CASTINGS ARE RATED FOR H20 WHEEL LOAD TRAFFIC

PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT

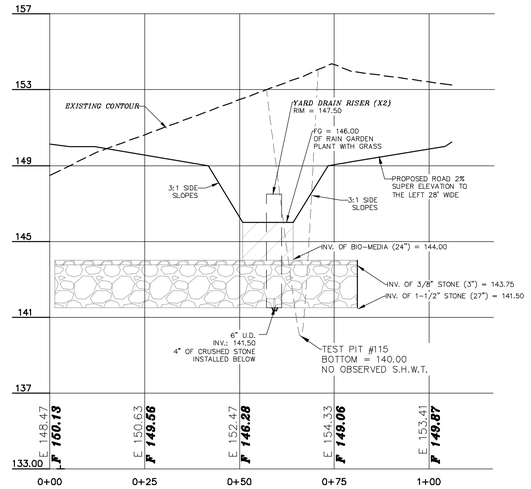


GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

PLAN VIEW RAIN GARDEN #103



P 3 P 3

SECTION OF RAIN GARDEN 103

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

DOVER PLANNING FILE #21-65

#	DATE	REVISION DESCRIPTION
#1	12-16-21	REVISED PER TRG# COMMENT

RAIN GARDEN #103
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER -

P–103

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS SHOW THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

NOTES CONTINUED:

6.) CONTRACTOR IS TO INSTALL A CONSTRUCTION ENTRANCE PRIOR TO EARTH DISTURBING ACTIVITIES.

7.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ANYTHING DISTURBED, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO BELLAMY ROAD OR THE EXISTING DRIVEWAY.

8.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

9.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV-A 1000.

10.) CONTRACTOR IT TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

11.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE CONSTRUCTION PROCESS, IN ACCORDANCE WITH ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.

12.) CATCH BASIN HOODS WILL BE INSTALLED AS SOON AS THE BASIN IS PUT ON LINE. RIM IS TO BE RAISED WITH FINAL GRADE SO THAT STORMWATER RUNOFF CAN DRAIN PROPERLY THROUGHOUT CONSTRUCTION.

NOTES CONTINUED:

13.) CITY OF DOVER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS (153-14) THE FOLLOWING
STORMWATER MEASURES ARE REQUIRED.

A.) ALL PROPOSED BMPs WILL CONFORM TO THE NH STORMWATER MANUAL VOLUME 3.
B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY COMMUNITY SERVICE.
C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN CALENDAR DAYS FOR EXPOSED SOILS AREAS THAT ARE WITHIN ONE HUNDRED FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOKL AREAS.
D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL STABILIZATION IS ACCOMPLISHED.
E.) COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS AND SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION, DURING NORMAL WORKING HOURS.
F.) THE PLANNING BOARD OR COMMUNITY SERVICES MAY REQUIRE THE DESIGN ENGINEER AND/OR AN INDEPENDENT, THIRD-PARTY INSPECTION AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIMENT CONTROL AT THEIR DISCRETION. THE OWNER / APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS.
G.) ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORMWATER INSPECTOR (CESSWI), OR A CERTIFIED PROFESSIONAL IN STORMWATER QUALITY (CPSWQ). INSPECTION REPORTS WILL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.

SOILS & DEWATERING:

WnB	***WINDSOR***	***LOAMY SAND***	***K= 0.17***
HnA	***HINCKLEY***	***LOAMY SAND***	***K= 0.17***

SEE SITE SPECIFIC SOILS MAP (SSSM)
SEE WEBSOIL USDA--NRCS
ERODIBILITY FACTOR -- K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC. &
ROCKINGHAM COUNTTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

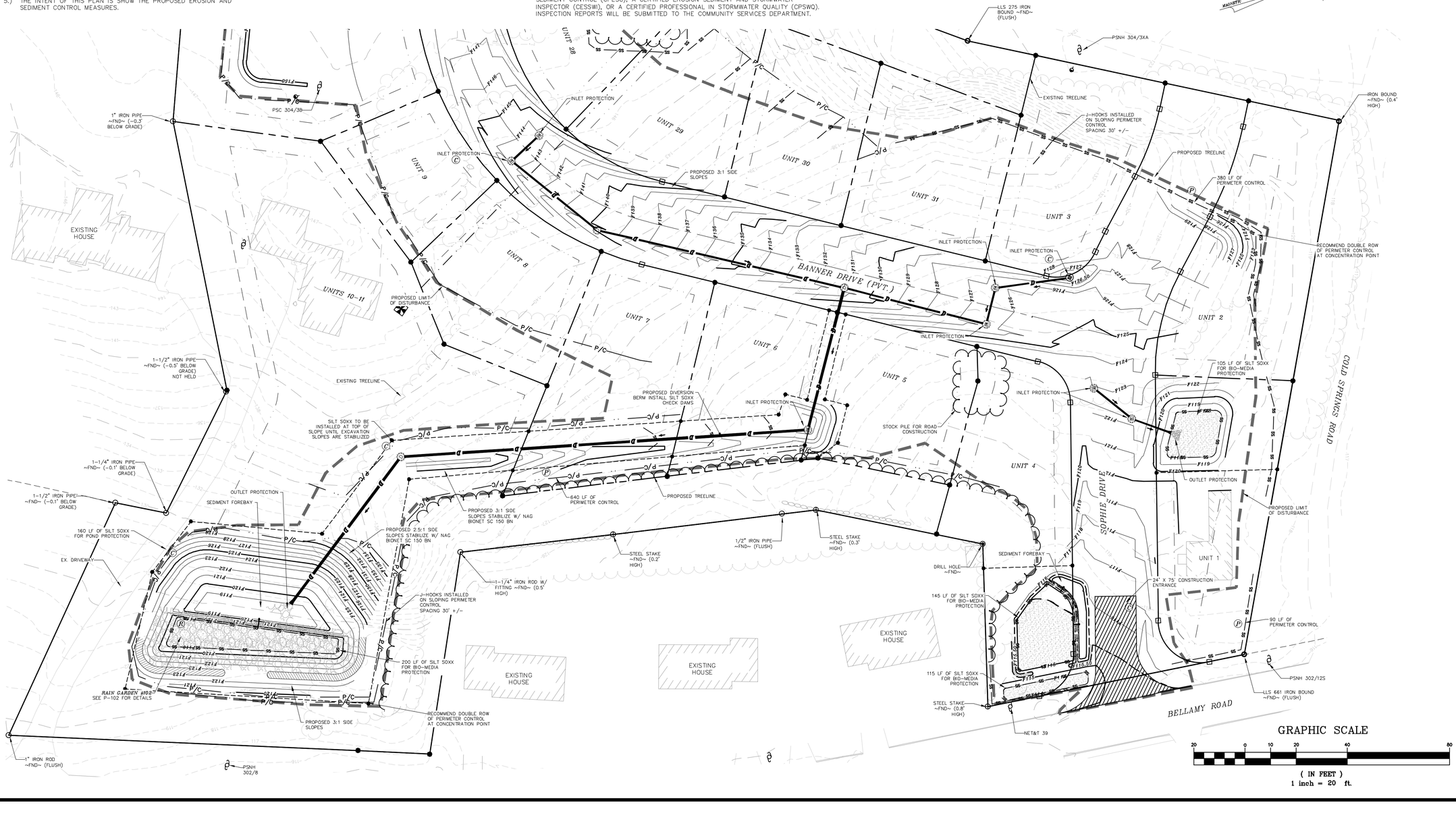
COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.

LEGEND:

- Ⓡ RAIN GARDEN BIO-MEDIA PROTECTION
- Ⓟ PERIMETER CONTROL
- Ⓒ RESIDENTIAL/ROADWAY CONSTRUCTION
- UTILITY POLE
- GUY WIRE
- P/C — PERIMETER CONTROL SEE E-101
- SF — SILT FENCE
- SS — SS — FILTREXX SILTSOXX OR APPROVED EQUAL

N
NAD83 NH STATE PLANE
MAGNETIC
15.5°



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

DOVER PLANNING FILE #21-65

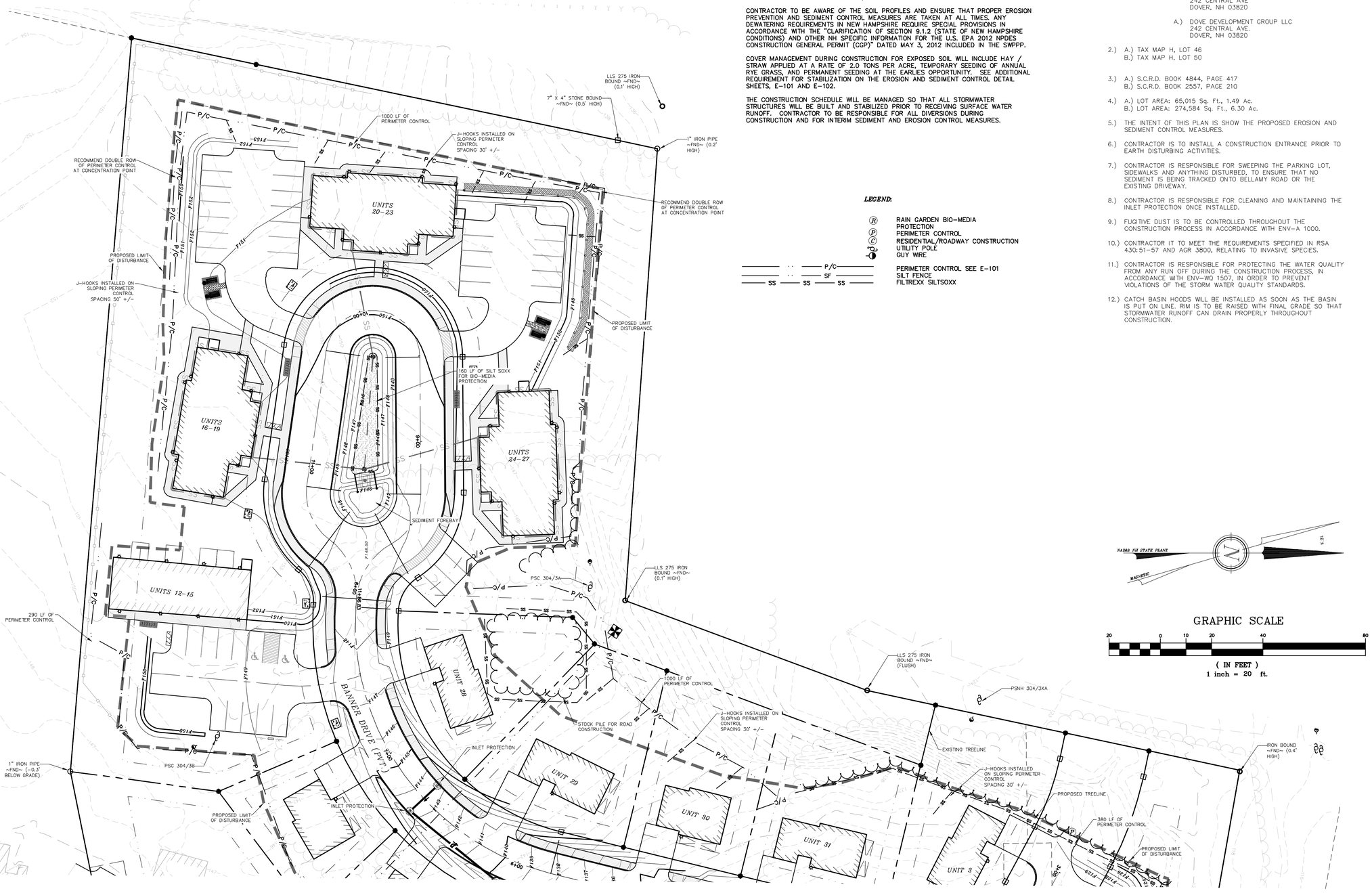
#	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRG# COMMENT

EROSION AND SEDIMENT CONTROL PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7424
LICENSED PROFESSIONAL ENGINEER



SOILS & DEWATERING:

WfB	***WINDSOR***	***LOAMY SAND***	***K= 0.17***
HoA	***HINCKLEY***	***LOAMY SAND***	***K= 0.17***

SEE SITE SPECIFIC SOILS MAP (SSSM)
SEE WEBSOIL USDA-NRCS
ERODIBILITY FACTOR – K, OPESC MANUAL, ENVIROCERT INTERNATIONAL INC. & ROCKINGHAM COUNTTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.

LEGEND:

- (R) RAIN GARDEN BIO-MEDIA PROTECTION
- (P) PERIMETER CONTROL
- (C) RESIDENTIAL/ROADWAY CONSTRUCTION
- UTILITY POLE
- GUY WIRE

P/C PERIMETER CONTROL SEE E-101
SF SILT FENCE
SS FILTREXX SILTSOXX

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS SHOW THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

6.) CONTRACTOR IS TO INSTALL A CONSTRUCTION ENTRANCE PRIOR TO EARTH DISTURBING ACTIVITIES.

7.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ANYTHING DISTURBED, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO BELLAMY ROAD OR THE EXISTING DRIVEWAY.

8.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

9.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV-A 1000.

10.) CONTRACTOR IT TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

11.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE CONSTRUCTION PROCESS, IN ACCORDANCE WITH ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.

12.) CATCH BASIN HOODS WILL BE INSTALLED AS SOON AS THE BASIN IS PUT ON LINE. RIM IS TO BE RAISED WITH FINAL GRADE SO THAT STORMWATER RUNOFF CAN DRAIN PROPERLY THROUGHOUT CONSTRUCTION.

DOVER PLANNING FILE #21-65

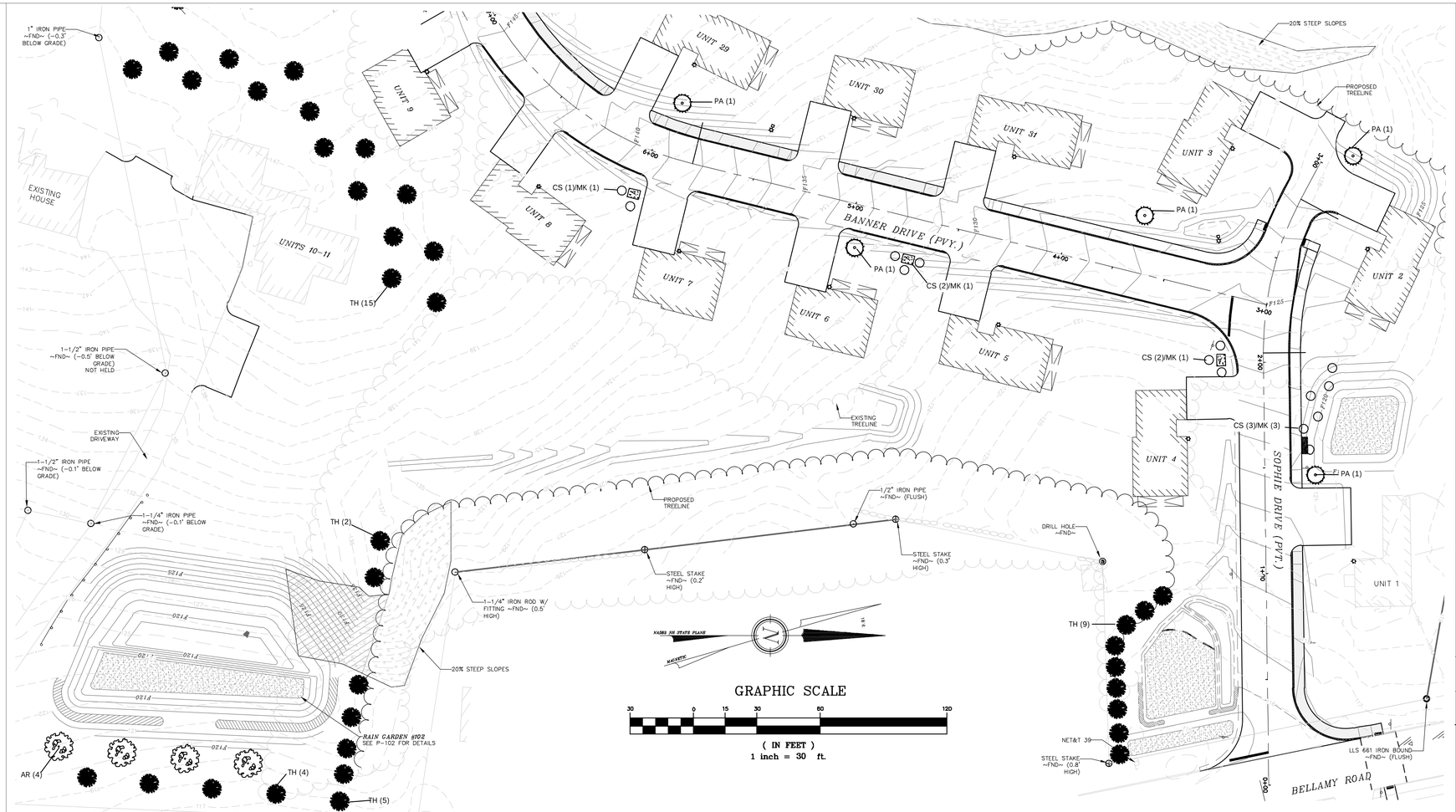
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

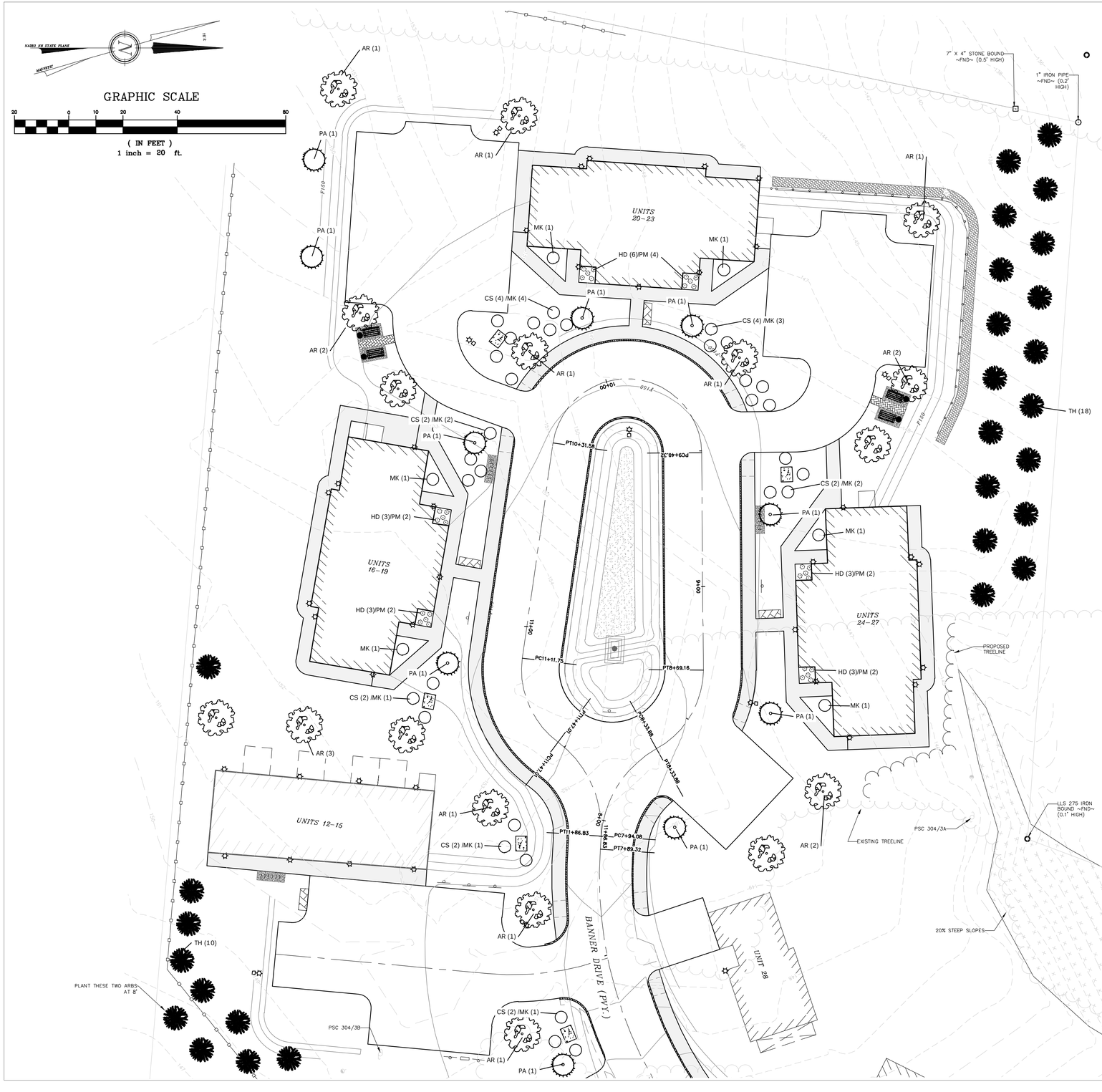
EROSION AND SEDIMENT CONTROL PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 243
LICENSED PROFESSIONAL ENGINEER


1" IRON PIPE ~FND~ (~0.3' BELOW GRADE)
EXISTING HOUSE
UNITS 10-11
UNIT 9
UNIT 8
UNIT 7
UNIT 6
UNIT 5
UNIT 4
UNIT 3
UNIT 2
UNIT 1
UNIT 29
UNIT 30
UNIT 31
PA (1)
CS (1)/MK (1)
CS (2)/MK (1)
CS (3)/MK (3)
TH (15)
TH (2)
TH (4)
TH (5)
TH (9)
AR (4)
1-1/2" IRON PIPE ~FND~ (~0.5' BELOW GRADE) NOT HELD
1-1/2" IRON PIPE ~FND~ (~0.1' BELOW GRADE)
1-1/4" IRON PIPE ~FND~ (~0.1' BELOW GRADE)
EXISTING DRIVEWAY
PROPOSED TREELINE
EXISTING TREELINE
1/2" IRON PIPE ~FND~ (FLUSH)
STEEL STAKE ~FND~ (0.2' HIGH)
STEEL STAKE ~FND~ (0.3' HIGH)
1-1/4" IRON ROD W/ FITTING ~FND~ (0.5' HIGH)
DRILL HOLE ~FND~
NAD83 NH STATE PLANE
MAGNETIC
20% STEEP SLOPES
RAIN GARDEN #102
SEE P-102 FOR DETAILS
BANNER DRIVE (PVT.)
SOPHIE DRIVE (PVT.)
BELLAMY ROAD
NET&T 39
STEEL STAKE ~FND~ (0.8' HIGH)
LLS 661 IRON BOUND ~FND~ (FLUSH)
9214
9216
9218
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9292



PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM L.A. PRIOR TO PURCHASING &/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.

2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY L.A. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.

3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY L.A. ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.

4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.

5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY & FLOURISHING CONDITION FOR ONE YEAR FROM THE DATE OF FINAL INSTALLATION APPROVAL BY L.A. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON-FLOURISHING PLANTS AS DETERMINED BY THE L.A. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY L.A.

6. ALL BEDS TO BE MULCHED WITH 3" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.

7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.

8. ALL PLANT MATERIAL TO COMPLY WITH THE CITY OF DOVER'S SITE REVIEW REGULATIONS, 153-14(G), SUCH THAT THERE SHALL BE DECIDUOUS SHADE TREES PLANTED 40 FEET O.C. ALONG THE PERIMETERS OF THE PARKING LOTS AND SHRUBS PLANTED 5 FEET O.C. WITHIN THE PERIMETER BUFFER. SEE PLANT LIST FOR SPECIES AND SIZE OF PLANTS.

TEMPORARY WATERING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR MAKING SURE ALL PLANT MATERIAL HAS ADEQUATE WATER DURING THE ESTABLISHMENT PERIOD.

2. THE USE OF GATOR BAGS, SOAKER HOSE, HAND WATERING AND OTHER TECHNIQUES SHOULD BE USED TO ASSURE PROPER HYDRATION OF THE PLANTINGS IS MAINTAINED.

3. TEMPORARY IRRIGATION SYSTEMS CAN BE SET UP TO ASSIST IN WATERING ACTIVITIES.

PLANTING SCHEDULE
Bellamy Road
Botanical Name/ Common Name

	Size	Qty	Label
Trees			
Plantanus acerifolia/london Planetree	3" Cal.	15	PA
Acer Rubrum / Red maple	3" Cal.	21	AR
Thuja / arborvitae	3" Cal.	71	TH
Shrubs			
Miss Kim Lilac	#3 3-4'	25	MK
Cornus sanguina 'Winter Flame' / Winter Flame Dogwood	2-3' B&B	24	CS
Perennials			
Hemerocallis 'Big Time Happy' / Big Time Happy Daylily	#1	18	HD
Hemerocallis 'Pardon Me' / Pardon Me Daylily	#1	12	PM

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General Plant Maintenance Guide

General Plant Bed Maintenance:

- All plant maintenance should be performed by a qualified horticulturalist or licensed arborist. Cleaning the dead material out of the planting bed in the fall helps keep litter from building up around the plants and in some cases killing the plants. Watering the first year during dry periods will help get the plants established. Mulching every year is not necessary. Raking the old mulch and turning it over is all that is needed. When necessary only install one inch of mulch and do not place the mulch closer than 3" to the trunks or stems of woody plants.

Trees

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the trunk.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after trees have dropped their leaves for the year.
- Prune dead wood once a year.
- Depending on the amount of compaction the bed area receives, deep root aeration may be needed over time

Woody Shrubs

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the stems.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after shrubs have dropped their leaves or gone dormant for the year.
- Prune dead wood once a year.

Grasses

- Grasses only need to be clipped back at the end of the growing season and all the clippings removed from the area.
- Do not over mulch. Too much mulch will prohibit the grass from developing into a strong clump.

Perennials

- All perennials need to be pruned back after the first or second hard frost. A two-step method: first dead head all the flower heads and let drop to the ground for re-seeding. Second cut the stems back to 3" above the ground and remove the stem and leaf litter and place in compost. Do not over mulch. Too much mulch will prohibit the growth and development
- Fertilizing perennials once in the spring with a low phosphate fertilizer will help the plants to get started in the spring.

www.terrainplanning.com 311 kast hill road hopkinton nh 03229 T:603-491-2322

terrain
planning & design llc
311 kast hill road
hopkinton, nh 03229
603. 491. 2322
terrainplanning.com

SOPHIE DRIVE

Site Location:
51 & 65 BELLAMY ROAD
Dover, NH
Tax Map: H, Lots 46 & 50

Prepared For:
Berry Surveying & Engineering
335 Second Crown Point Rd
Barrington, NH 03825

LANDSCAPE PLAN

DATE: August 5, 2021

SCALE: 1" = 30'

PROJECT #: 21-120

Drawn By: ID

Checked By: ERB

REVISIONS: #1 DATE: 12-16-21
Issued for Planning Submission

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L - 02

ERIC R BUCK 078 LICENSED LANDSCAPE ARCHITECT STATE OF NEW HAMPSHIRE



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS SHOW THE PROPOSED LIGHTING DESIGN.

6.) LAMP "A" IS MOUNTED 12' ABOVE GRADE
LAMP "B" IS MOUNTED 8' ON THE BUILDINGS

7.) SEE CONSTRUCTION DETAILS FOR LIGHT CUT SHEETS.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
A	A	9	STERNBERG VINTAGE LIGHTING	Sternberg 8830	CAST ALUMINUM HOUSING, TRANSLUCENT WHITE GLASS CHIMNEY SURROUNDING LAMP, CLEAR ACRYLIC ENCLOSURE.	ONE CLEAR VBD M57 175 WATT B17 METAL HALIDE LAMP RATED AT 14,000 LUMENS.	1	8830-FC ONLY-175MH(R).IES	14000	1	175
B	B	49	Lithonia Lighting	ODSL10 SRC	CRAFTSTON WALL MOUNTED SMALL DECORATIVE LANTERN, ONE LAMP 13W SPIRAL COMPACT FLUORESCENT, WHITE GLASS DIFFUSER 4.25" DIA. X 6.65" HIGH, ELECTRONIC BALLAST	ONE 13-WATT T4 SPIRAL COMPACT FLUORESCENT, VERTICAL BASE UP POSITION.	1	ODSL10_SRC.ies	900	1	12.6

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

LIGHTING PLAN NORTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14213
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

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B.) S.C.R.D. BOOK 2557, PAGE 210

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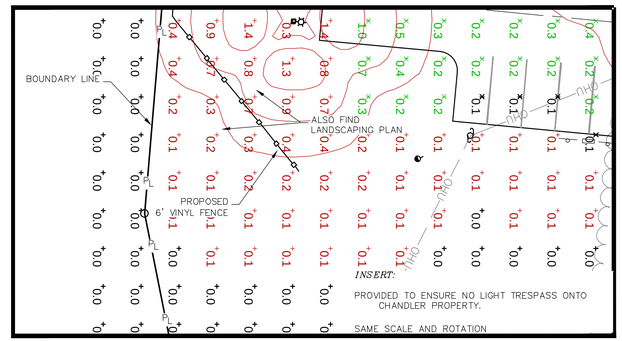
6.) LAMP "A" IS MOUNTED 12' ABOVE GRADE
LAMP "B" IS MOUNTED 8' ON THE BUILDINGS

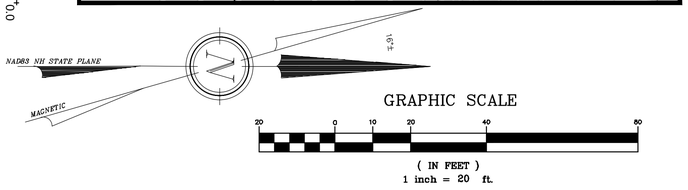
7.) SEE CONSTRUCTION DETAILS FOR LIGHT CUT SHEETS.

8.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.1 fc	1.5 fc	0.0 fc	N/A	N/A
Stat Zone # 1	×	0.4 fc	1.4 fc	0.1 fc	14.0:1	4.0:1
Stat Zone # 2	×	0.4 fc	1.4 fc	0.1 fc	14.0:1	4.0:1
Stat Zone # 3	×	0.4 fc	1.4 fc	0.1 fc	14.0:1	4.0:1
Stat Zone # 4	×	0.4 fc	0.9 fc	0.1 fc	9.0:1	4.0:1





Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	9	STERNBERG VINTAGE LIGHTING	Sternberg 8830	CAST ALUMINUM HOUSING, TRANSLUCENT WHITE GLASS CHIMNEY SURROUNDING LAMP, CLEAR ACRYLIC ENCLOSURE.	ONE CLEAR VBD M57 175 WATT B17 METAL HALIDE LAMP RATED AT 14,000 LUMENS.	1	8830-FC ONLY-175MH(R).IES	14000	1	175
	B	49	Lithonia Lighting	ODSL10 SRC	CRAFTSTON WALL MOUNTED SMALL DECORATIVE LANTERN, ONE LAMP 13W SPIRAL COMPACT FLUORESCENT, WHITE GLASS DIFFUSER 4.25" DIA. X 6.65" HIGH, ELECTRONIC BALLAST	ONE 13-WATT T4 SPIRAL COMPACT FLUORESCENT, VERTICAL BASE UP POSITION.	1	ODSL10_SRC.ies	900	1	12.6

DOVER PLANNING FILE #21-65

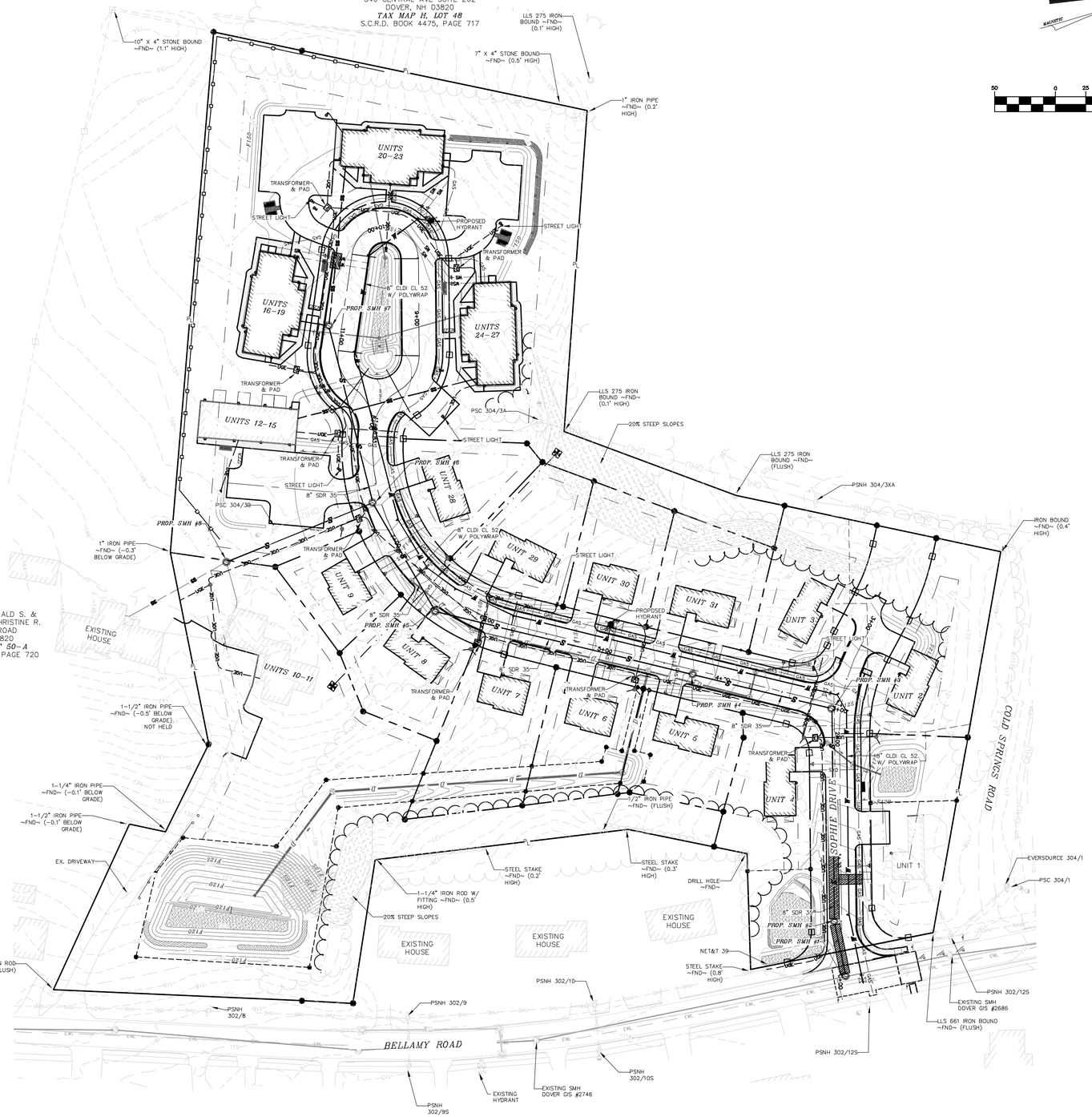
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

LIGHTING PLAN SOUTH
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7424
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED OVERVIEW UTILITY DESIGN.

6.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

7.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

8.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOGF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAGFIC IN SENSITIVE AREAS, AND MAINTAINING AN EGFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVNG OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

9.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.

10.) PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIGFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.

11.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

12.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

13.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS.

14.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

15.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.

16.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.

17.) CONTRACTOR SHALL COORDINATE ALL GAS INSTALLATIONS WITH UNITIL.

18.) ALL SEWER MAN HOLE RIMS & COVERS ARE TO BE NH STANDARD.

19.) ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IS STUBBED PRIOR TO BUILDING CONSTRUCTION.

20.) CURB BOXES SHOULD BE PLACED IN THE LAWN AREA, OR IF PLACED IN PAVEMENT, A ROAD BOX IS REQUIRED.

21.) SEE EXISTING CONDTIONS PLAN FOR DATUM. VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUS BASED ON NAD83 STATE PLANE COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

22.) MINIMUM SLOPE FOR ALL SEWER SERVICE CONNECTIONS IS TO BE NO LESS THAN 0.02'/..

23.) ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) FOR SDR 35 GRAVITY SEWER PIPE, CONFORM WITH ENV-WQ 704.08 FOR SDR 21 / 11 / 9 FORCE MAIN PRESSURE PIPE, AND CONFORM WITH ASTM D3034. PVC JOINT SEALS SHALL CONFORM WITH ASTM D3121. THE FORCE MAIN SHALL BE TESTED IN ACCORDANCE WITH ENV-WQ 704.09.

24.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

25.) CONTRACTOR TO TRANSFER TEMPORARY BENCHMARK TO A SUITABLE BENCHMARK TO CONTROL CONSTRUCTION. ANY ELEVATION DISCREPANCIES ARE TO BE REPORTED TO THE THE DESIGN ENGINEER IMMEDIATELY.

28.) ALL SEWER AND WATER CROSSINGS ARE TO MAINTAIN A 1.5' OF SEPARATION. OTHERWISE, 2" RIGID INSULATION WILL BE REQUIRED.

30.) IF DIGGING UNDER EXISTING AC WATERMAIN OCCURS, FLOWABLE FILL IS REQUIRED FOR PIPE SUPPORT.

DOVER PLANNING FILE #21-65

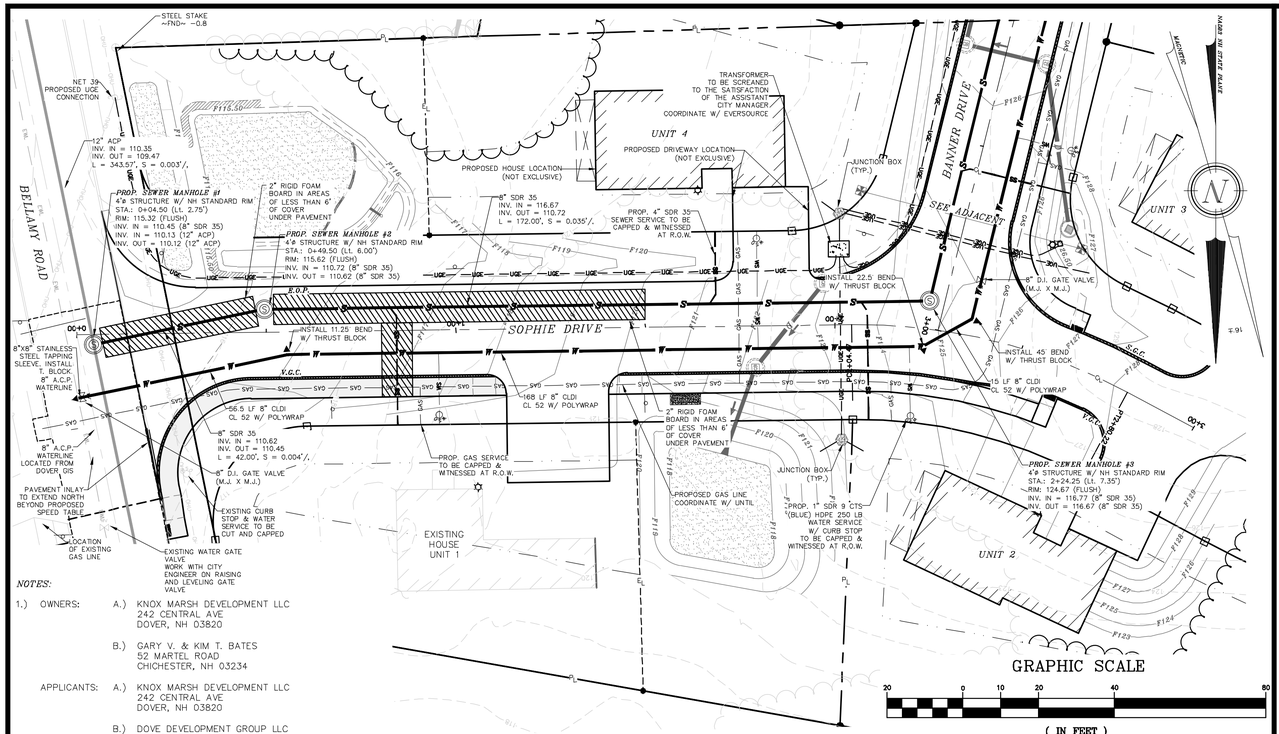
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

OVERVIEW UTILITY PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

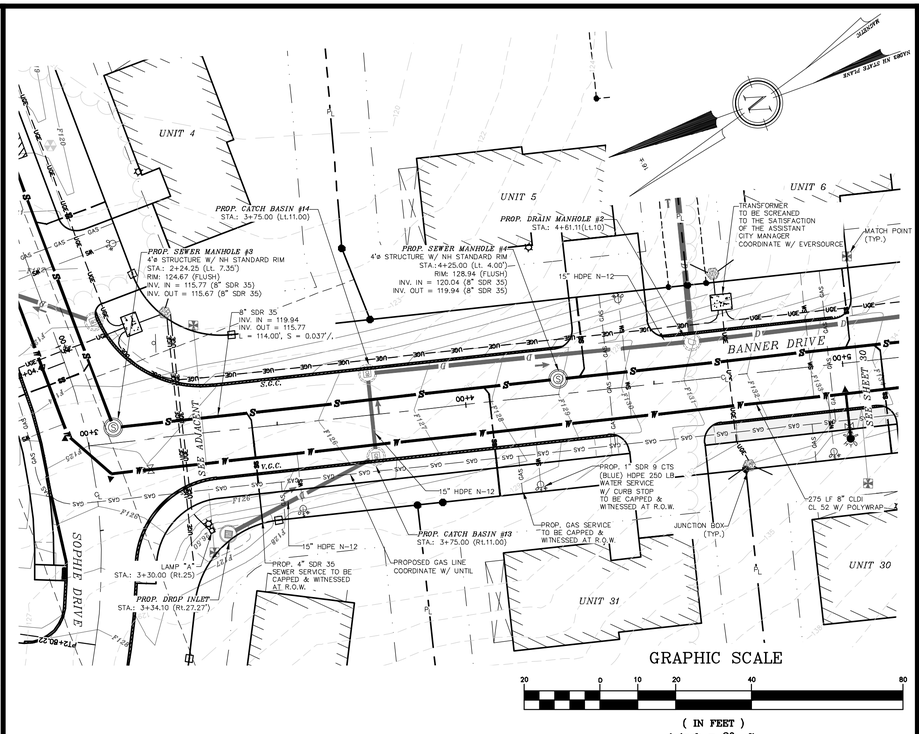
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER



PLAN VIEW SOPHIE DRIVE 0+00 TO 3+00



PLAN VIEW BANNER DRIVE 3+00 TO 5+00

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

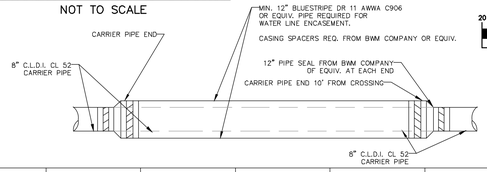
4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE UTILITY DETAIL FOR THE PROPOSED ROADWAY.

6.) SEE OVERVIEW UTILITY PLAN FOR ALL OTHER STANDARD UTILITY NOTES.

WATERLINE SLEEVE DETAIL

NOT TO SCALE



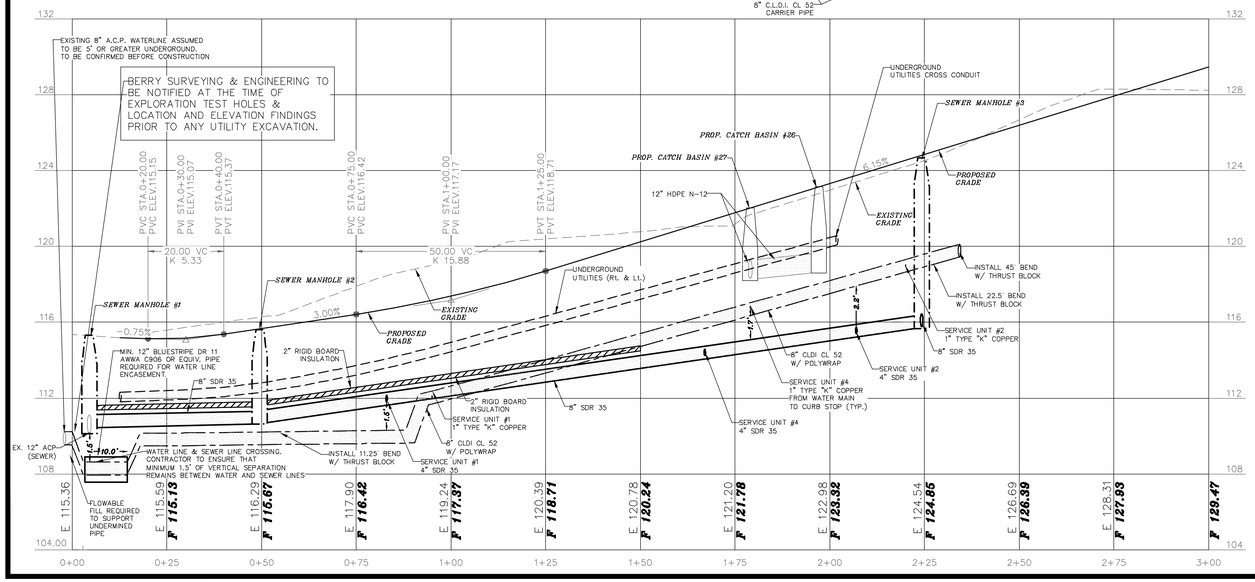
PROFILE VIEW SOPHIE DRIVE 0+00 TO 3+00

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'



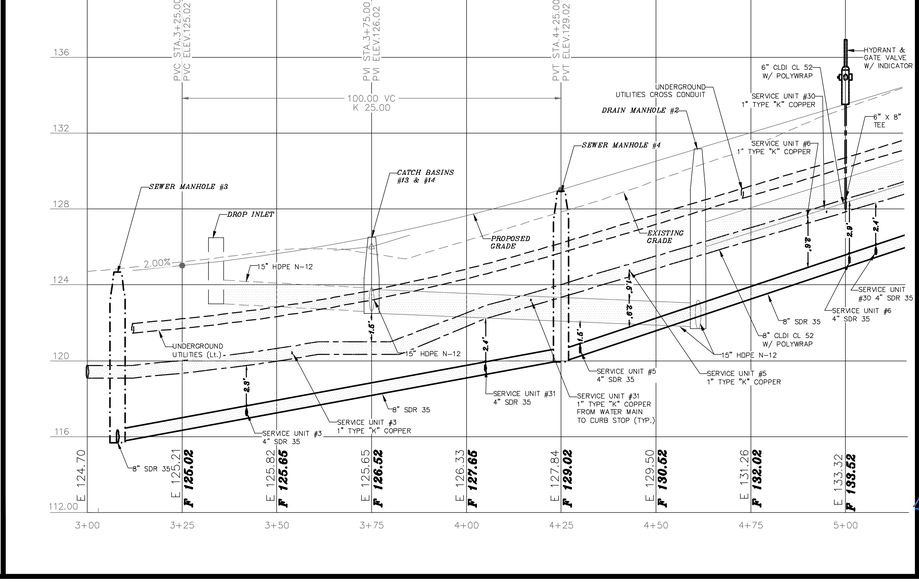
PROFILE VIEW BANNER DRIVE 3+00 TO 5+00

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'



DOVER PLANNING FILE #21-65

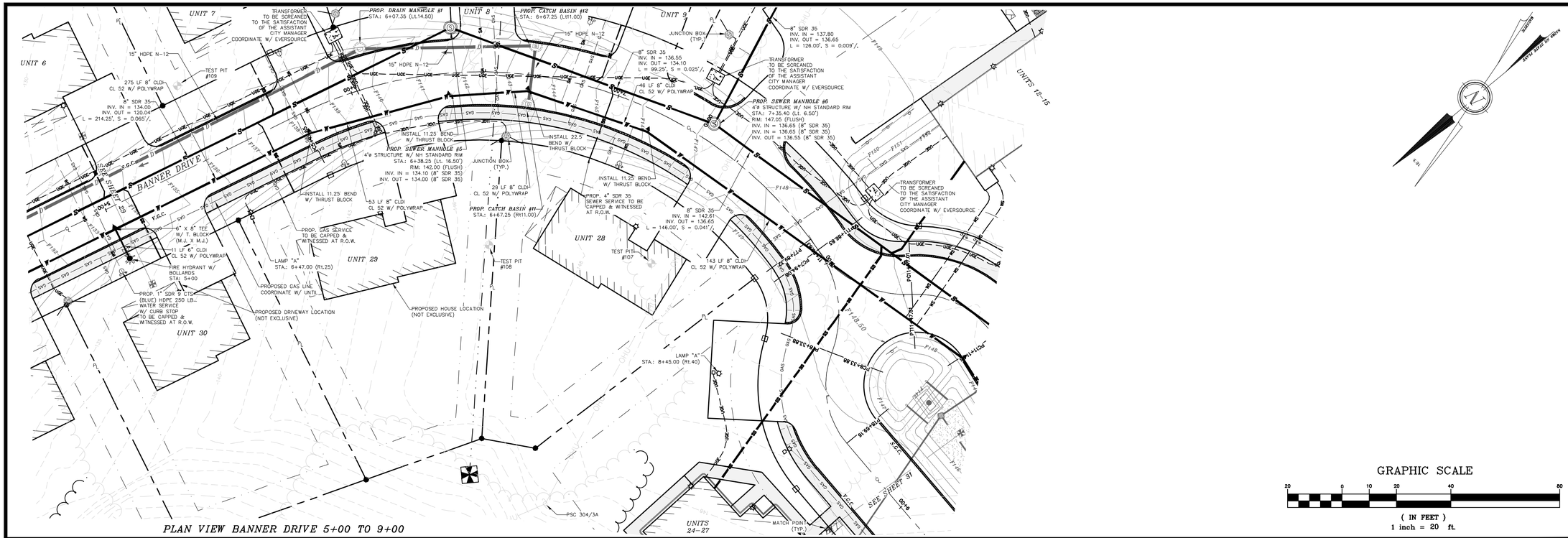
#	REVISION	DATE	DESCRIPTION
#1	REVISED PER TRC# COMMENT	12-16-21	

UTILITY PLAN AND PROFILE SOPHIE & BANNER DRIVE
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



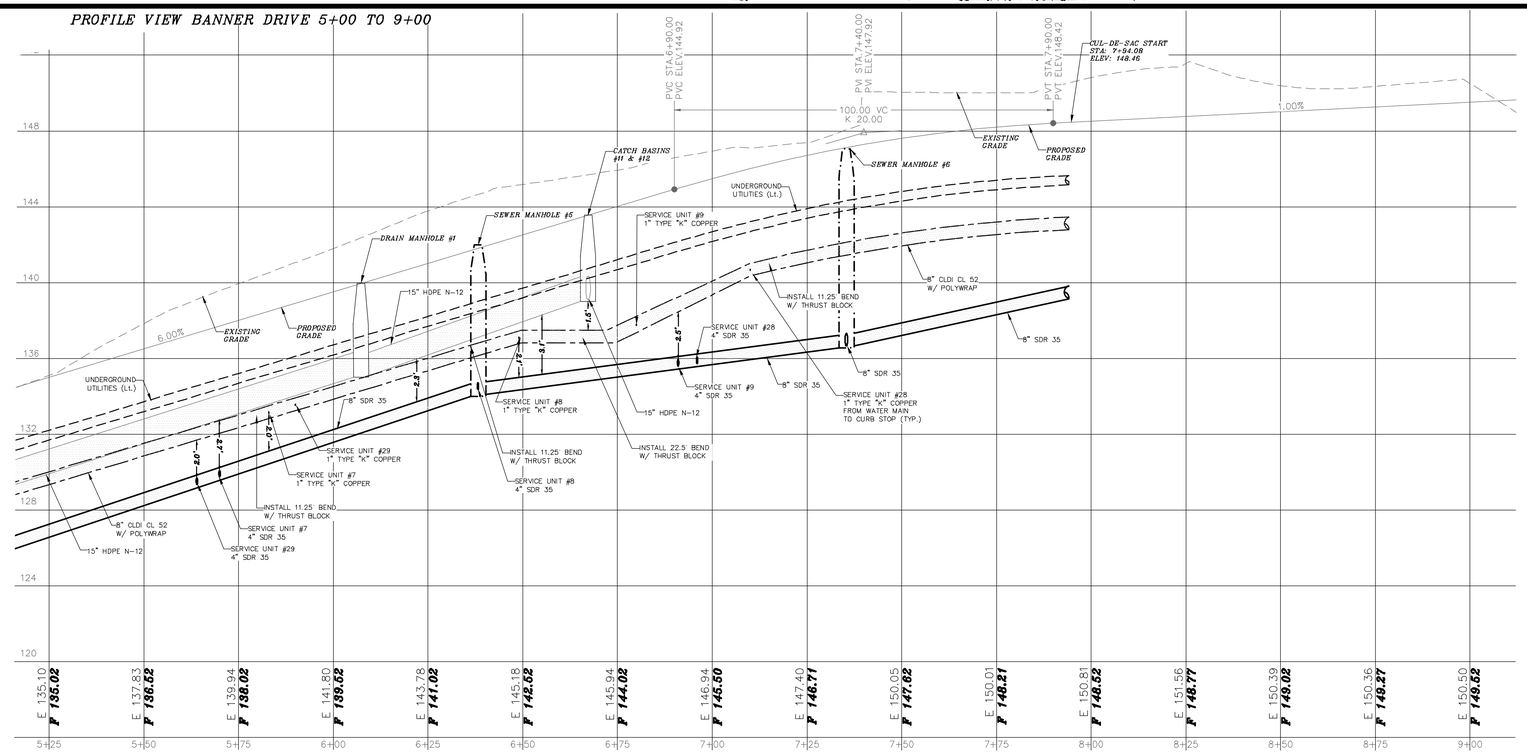
PLAN VIEW BANNER DRIVE 5+00 TO 9+00

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PROFILE VIEW BANNER DRIVE 5+00 TO 9+00



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE UTILITY DETAIL FOR THE PROPOSED ROADWAY.

6.) SEE OVERVIEW UTILITY PLAN FOR ALL OTHER STANDARD UTILITY NOTES.

DOVER PLANNING FILE #21-65

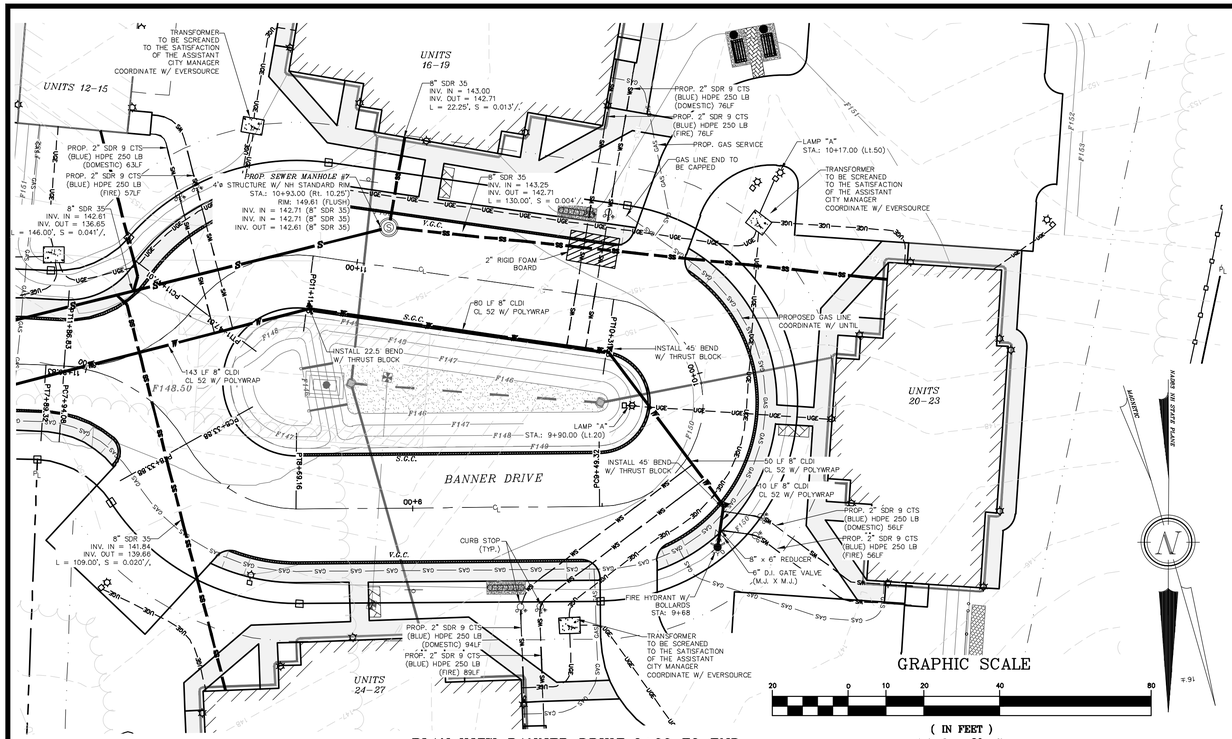
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

UTILITY PLAN AND PROFILE BANNER DRIVE 5+00 TO 9+00
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

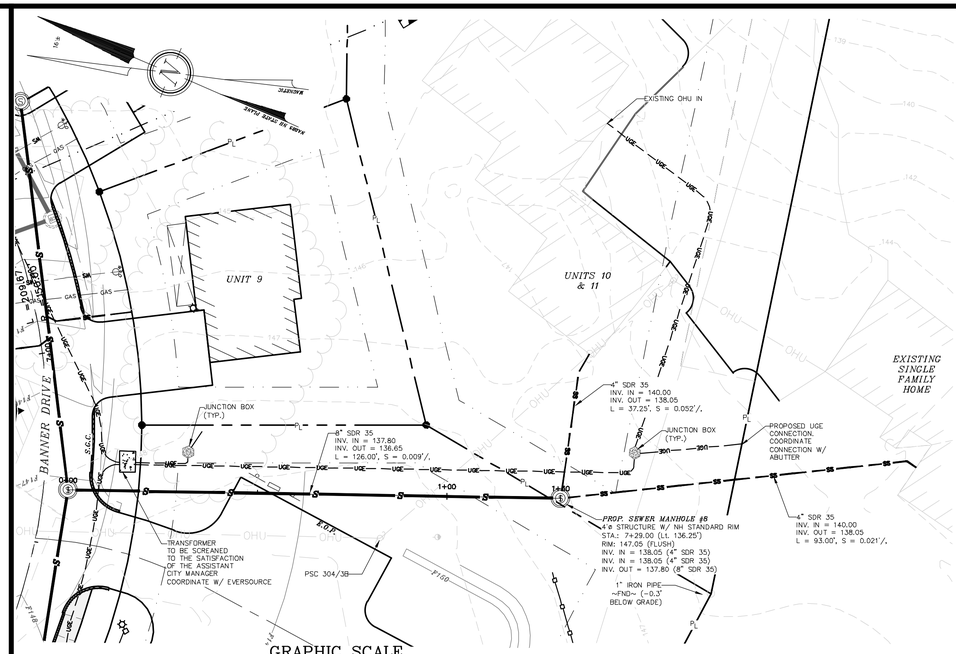
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



PLAN VIEW BANNER DRIVE 9+00 TO END



PLAN VIEW SMH #6 – SMH #8

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

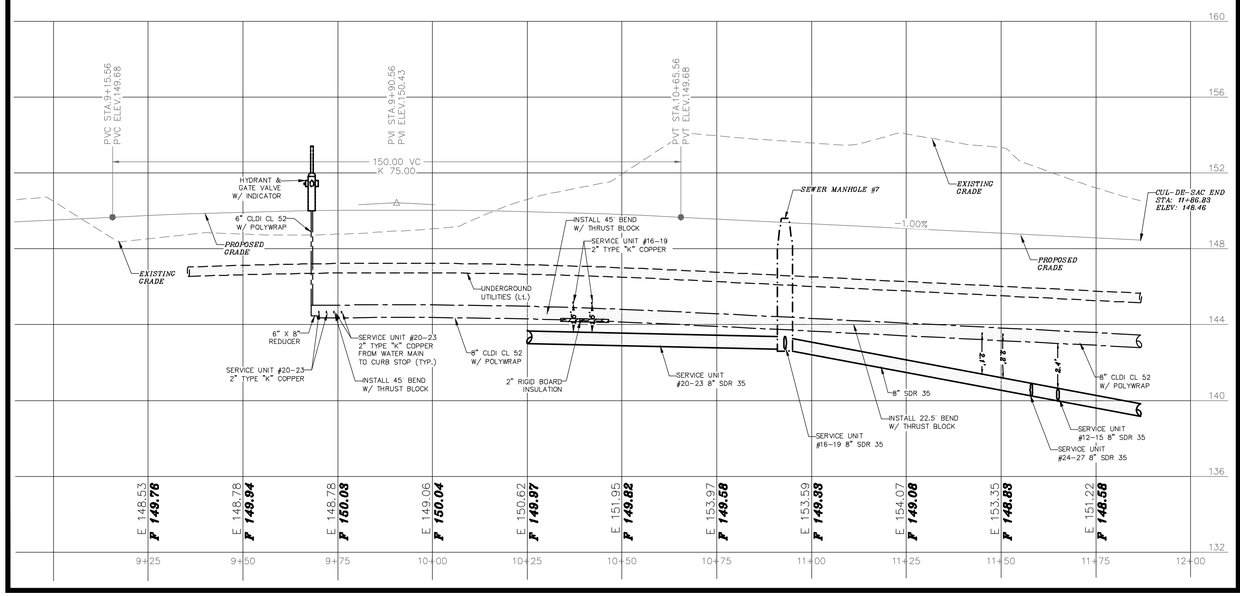
4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THE INTENT OF THIS PLAN IS TO SHOW THE UTILITY DETAIL FOR THE PROPOSED ROADWAY.

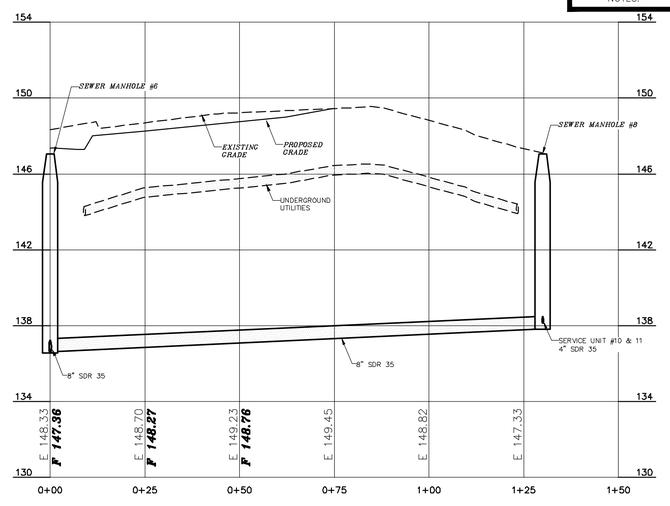
6.) SEE OVERVIEW UTILITY PLAN FOR ALL OTHER STANDARD UTILITY NOTES.

PROFILE VIEW BANNER DRIVE 9+00 TO END

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



PROFILE VIEW SMH #6 – SMH #8



DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC# COMMENT	12-16-21	

UTILITY PLAN AND PROFILE BANNER DRIVE 9+00 TO END
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THIS IS A RESIDENTIAL SUBDIVISION.

6.) THE INTENT OF THIS PLAN IS TO DEMONSTRATE THE AVAILABLE SIGHT DISTANCE FROM THE PROPOSED ROADWAY KNOWN AS WILDCAT DRIVE.

7.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE. EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

8.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016, CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

NOTES CONT.:

9.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

10.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

11.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

12.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

13.) ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.

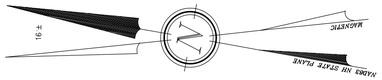
14.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH (T) SHALL BE THERMOPLASTIC.

15.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

16.) THE SPEED LIMIT ON BELLAMY ROAD IS 30 MPH.

LEGEND:

- DRILL HOLE ~FND OR SET~
- IRON PIPE ~FND~
- IRON BOUND ~FND~
- UTILITY POLE
- FIRE HYRANT
- WATER VALVE
- APPROX. ABUTTING LOT LINE
- BUILDING SETBACK LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- OVERHEAD UTILITIES
- WATER LINE
- FND FOUND
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS



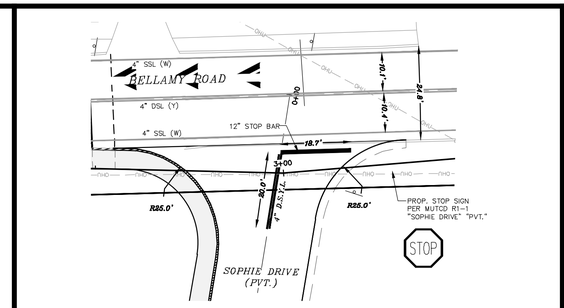
SIGHT DISTANCE REQUIREMENT:

DESIGN SPEED: 30 MPH / 85TH ASSUMED 35 MPH

FROM AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011) EXHIBIT 3.1

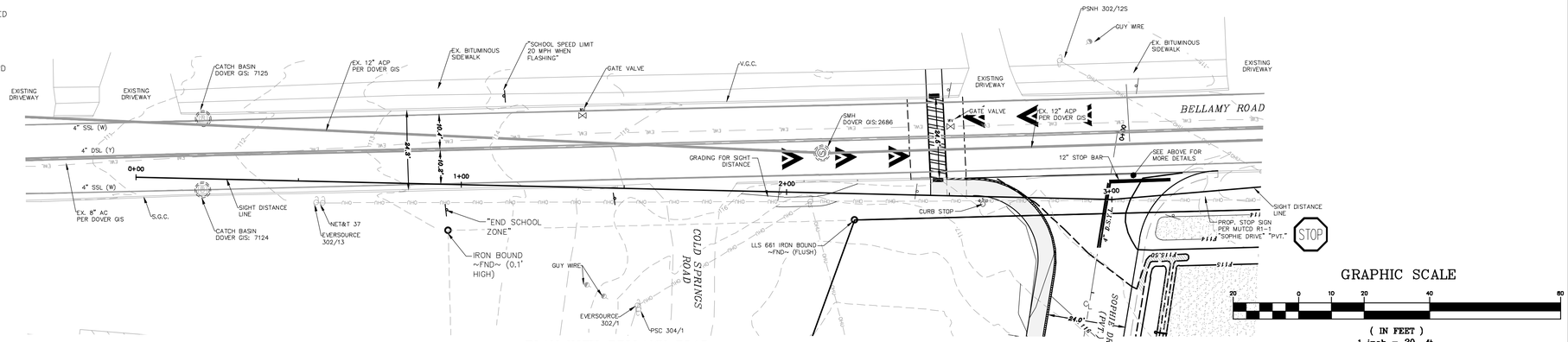
250' REQUIRED BY DOVER

300' PROVIDED



HORIZONTAL SCALE: 1" = 20'

PLAN VIEW ENTRANCE



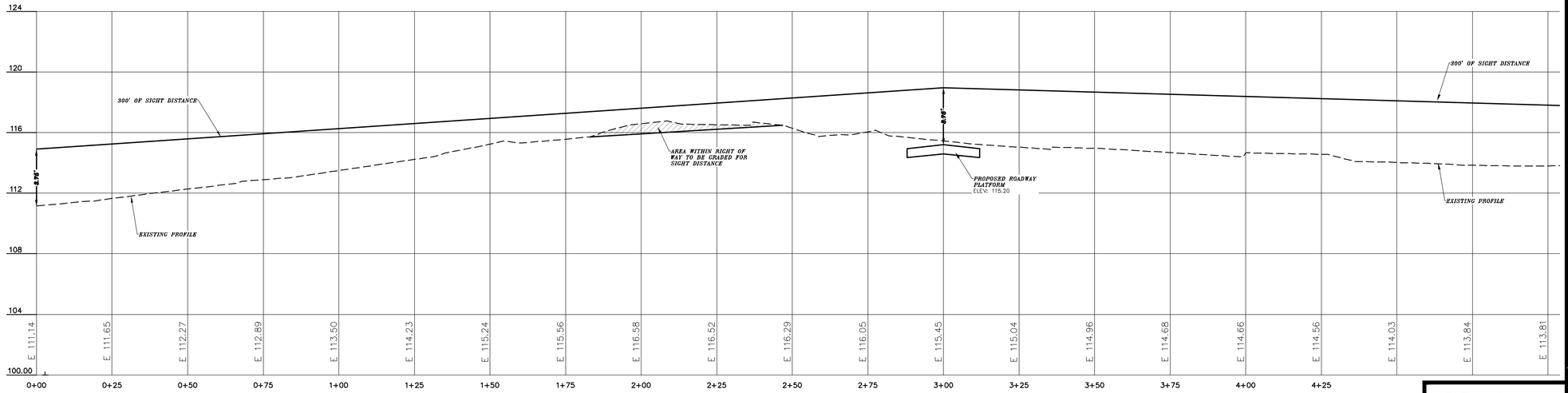
PLAN VIEW BELLAMY ROAD

PROFILE VIEW SIGHT LINE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



SD-1

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1		12-16-21	REVISED PER TRC#1 COMMENT

ROADWAY ACCESS PLAN SOUTHBOUND
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNERS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

B.) GARY V. & KIM T. BATES
52 MARTEL ROAD
CHICHESTER, NH 03234

APPLICANTS: A.) KNOX MARSH DEVELOPMENT LLC
242 CENTRAL AVE
DOVER, NH 03820

A.) DOVE DEVELOPMENT GROUP LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) A.) TAX MAP H, LOT 46
B.) TAX MAP H, LOT 50

3.) A.) S.C.R.D. BOOK 4844, PAGE 417
B.) S.C.R.D. BOOK 2557, PAGE 210

4.) A.) LOT AREA: 65,015 Sq. Ft., 1.49 Ac.
B.) LOT AREA: 274,584 Sq. Ft., 6.30 Ac.

5.) THIS IS A RESIDENTIAL SUBDIVISION.

6.) THE INTENT OF THIS PLAN IS TO DEMONSTRATE THE AVAILABLE SIGHT DISTANCE FROM THE PROPOSED ROADWAY KNOWN AS WILDCAT DRIVE.

7.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE. EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

NOTES CONT.:

8.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

9.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

10.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

11.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

12.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

13.) ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.

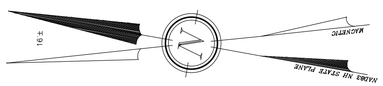
14.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH (T) SHALL BE THERMOPLASTIC.

15.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

16.) THE SPEED LIMIT ON BELLAMY ROAD IS 30 MPH.

LEGEND:

- DRILL HOLE ~FND OR SET~
- IRON PIPE ~FND~
- IRON BOUND ~FND~
- UTILITY POLE
- FIRE HYRANT
- WATER VALVE
- APPROX. ABUTTING LOT LINE
- BUILDING SETBACK LINE
- 175 MAJOR CONTOUR
- 176 MINOR CONTOUR
- OHU OVERHEAD UTILITIES
- CWL WATER LINE
- FND FOUND
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS



SIGHT DISTANCE REQUIREMENT:

DESIGN SPEED: 30 MPH / 85TH ASSUMED 35 MPH

FROM AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011) EXHIBIT 3.1

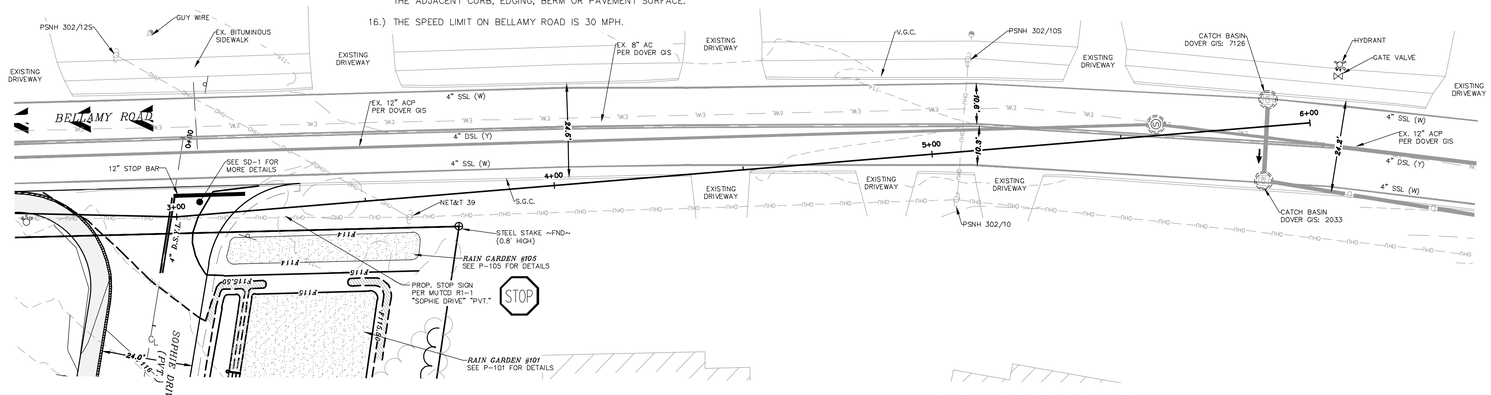
250' REQUIRED BY DOVER

300' PROVIDED

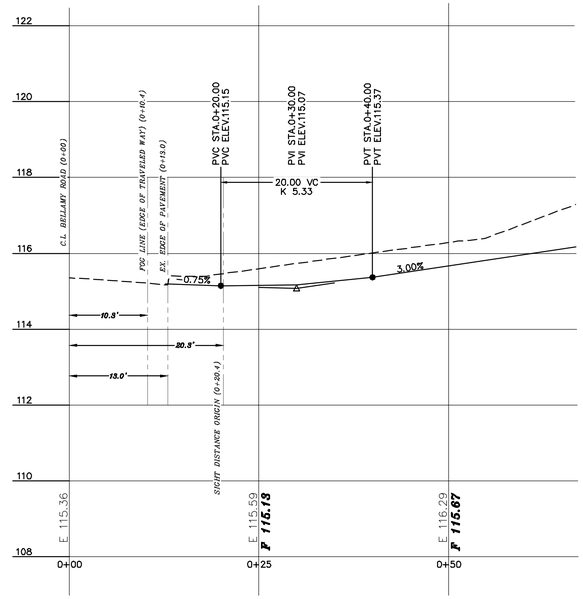
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



PLAN VIEW BELLAMY ROAD



PROFILE VIEW SOPHIE DRIVE

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

VERTICAL SCALE: 1" = 2'

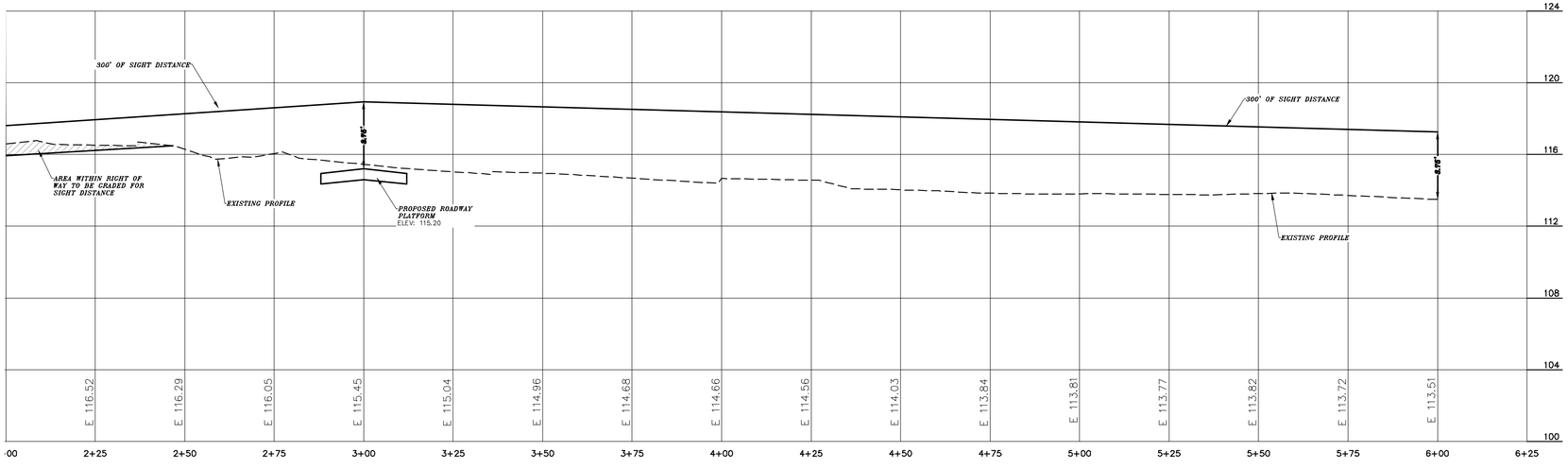
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'

PROFILE VIEW SIGHT LINE



SD-2

DOVER PLANNING FILE #21-65

#	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

ROADWAY ACCESS PLAN NORTHBOUND
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

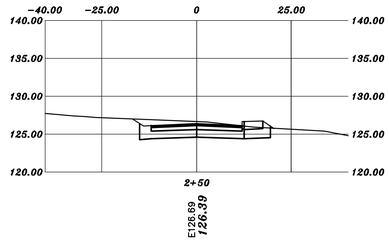
SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

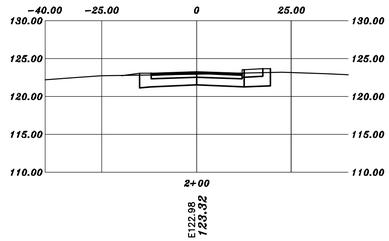
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

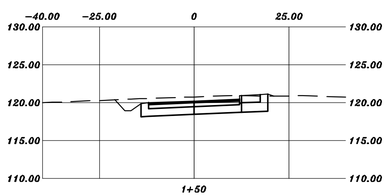
GRAPHIC SCALE

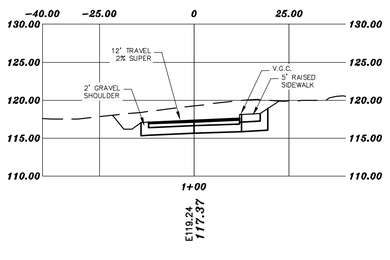
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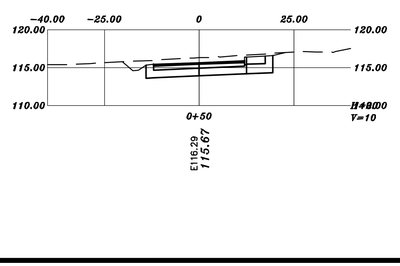
(IN FEET)
1 inch = 20 ft.
Vertical Scale 10

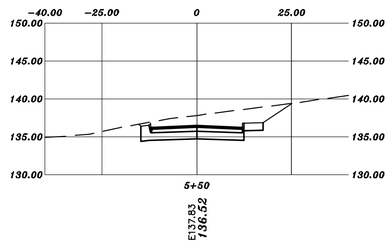


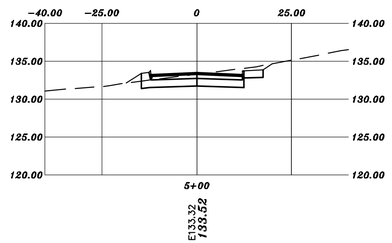


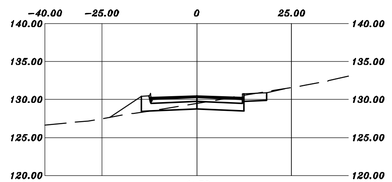


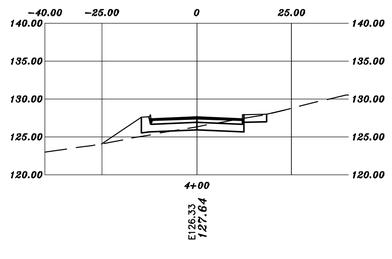


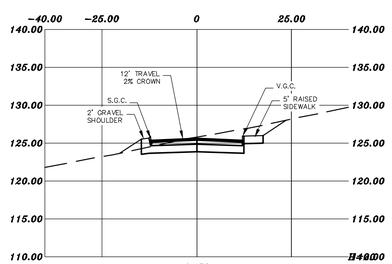


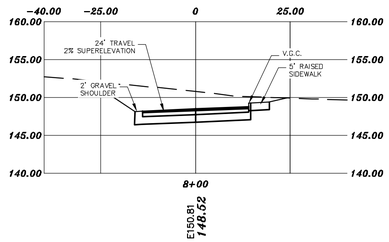


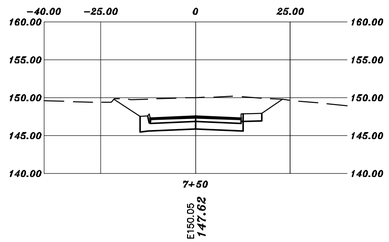


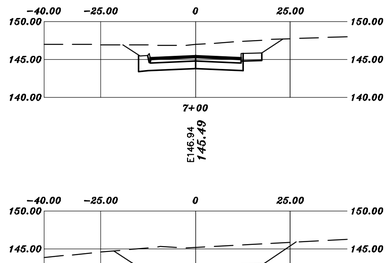


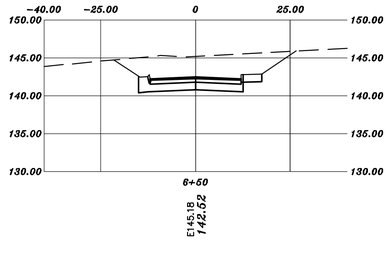


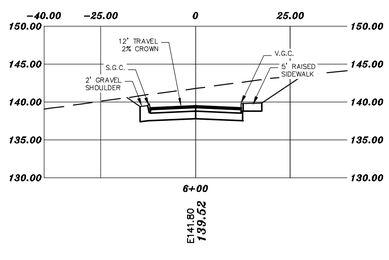


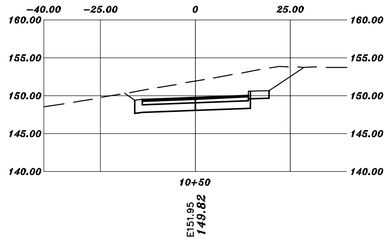


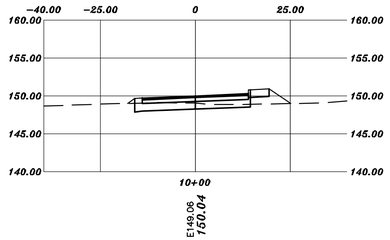


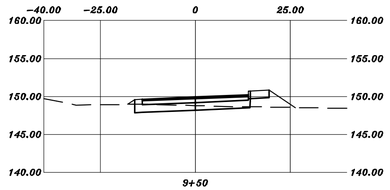


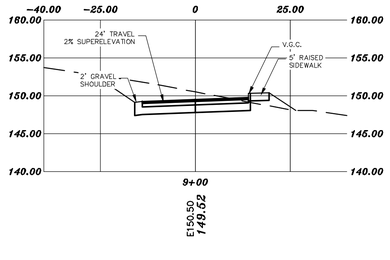


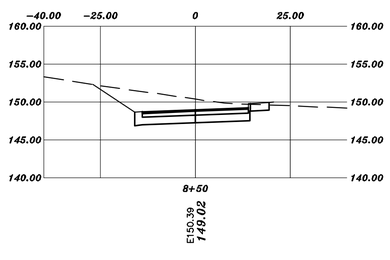


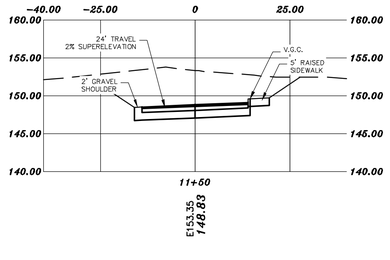


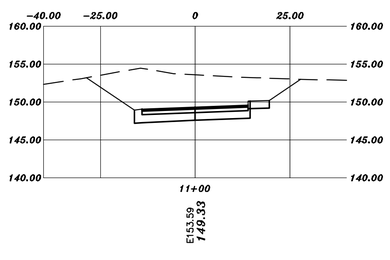












DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC#1 COMMENT	12-16-21	

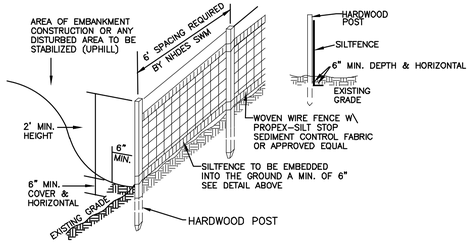
CROSS SECTIONS 0+00 – END
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

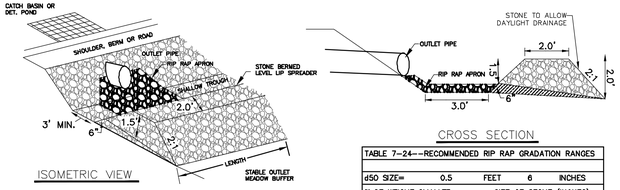
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 6' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW. REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE 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 MADE 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 REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
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 DETAIL
NOT TO SCALE

E2



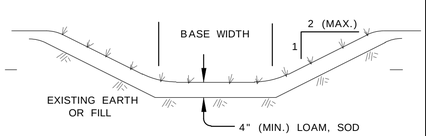
CROSS SECTION

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	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

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.
6. REFERENCE IS MADE TO NHDES SWM VOL. 2, 4-6, STONE BERM LEVEL SPREADERS, PAGE 162

STONE BERM LEVEL SPREADER
NOT TO SCALE

E3



GRASS CONVEYANCE SWALE
NOT TO SCALE

INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCATION

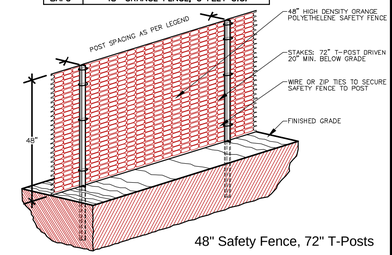
TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5 TREATMENT SWALES, PAGE 123.

E4

CONSTRUCTION SAFETY FENCE
NOT TO SCALE

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C..
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.

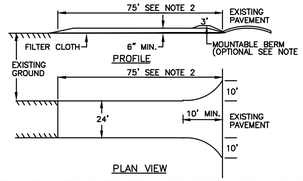


48" Safety Fence, 72" T-Posts

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHOULD BE FASTENED SEGURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

E5

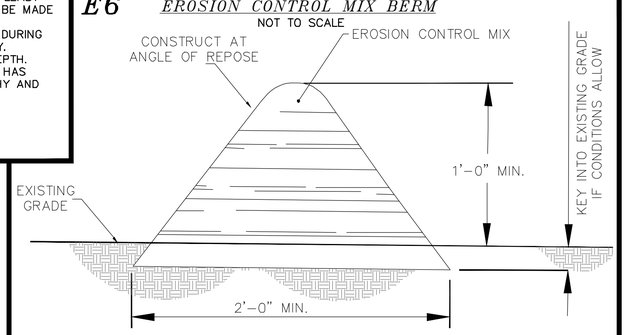
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



1. STONE FOR A 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 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE 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, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
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 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 PUBLIC RIGHTS-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 PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

E6

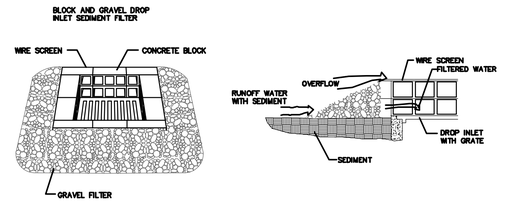
EROSION CONTROL MIX BERM
NOT TO SCALE



EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. BERMS SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE BERM.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSLY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%.
4. SUBJECT TO (E), BELOW, THE MIX SHALL HAVE AN ORGANIC PORTION BETWEEN 80 AND 100% DRY WEIGHT BASIS, AND BE FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS.
5. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL.
6. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
7. THE MIX SHALL HAVE A PARTICLE SIZE BY WEIGHT OF 70 TO 85% PASSING A 6-INCH SCREEN AND A MAXIMUM OF 85% PASSING THE 0.75-INCH SCREEN.
8. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
9. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
10. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM 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 OF IN A SUITABLE 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.

BLOCK & GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

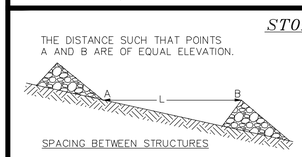
E8

TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
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 SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. (SEE SEED SPECIFICATIONS THIS SHEET)
4. ALL DISTURBED AREAS WILL BE RESTABILIZED WITHIN 45 DAYS. AT ANY ONE TIME, NO MORE THAN 5 ACRES, (217,800 Sq. Ft.) WILL BE DISTURBED.
5. SILT FENCES AND PERIMETER BARRIERS SHALL BE INSPECTED PERIODICALLY AND AFTER EVERY RAIN DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
6. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
7. PER THE EPA CGP REQUIREMENTS THERE WILL BE REPORTS OF THE EROSION CONTROL INSPECTIONS IAW SWPPP PREPARED BY BS&E. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OR GREATER RAIN EVENT.
8. DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
10. ROADWAYS, DRIVEWAYS AND CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.
11. STABILIZATION MEANS:
    - 11.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
    - 11.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED, OR
    - 11.3. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
12. THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
13. THE NHDES STORMWATER MANUAL, IN THREE VOLUMES, DATED DECEMBER 2008, IS A PART OF THIS PLAN SET AND THE MORE RESTRICTIVE WILL GOVERN. (NH SWM)

E9

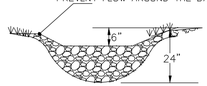
STONE CHECK DAM
NOT TO SCALE

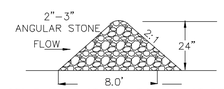


SPACING BETWEEN STRUCTURES

1.) CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2.) THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THEN ONE ACRE.
3.) THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET.
4.) THE CENTER OF THE DAM SHOULD BE AT LEAST SIX INCHES LOWER THAN THE OUTER EDGES.
5.) THE MAXIMUM SPACING IS AS SHOWN ON THE PROJECT SITE PLANS.
6.) CHECK DAMS WILL NOT BE USED IN A FLOWING STREAM.
7.) TEMPORARY CHECK DAMS WILL BE REMOVED ONCE THE SWALE OR DITCH IS DETERMINED STABLE.
8.) TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CHECK DAMS, PAGE 114.

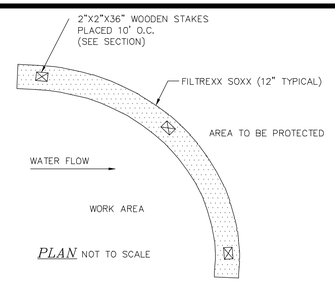
NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIUM OF 18" TO PREVENT FLOW AROUND THE DAM.





STONE GRADE STABILIZATION STRUCTURE

E10

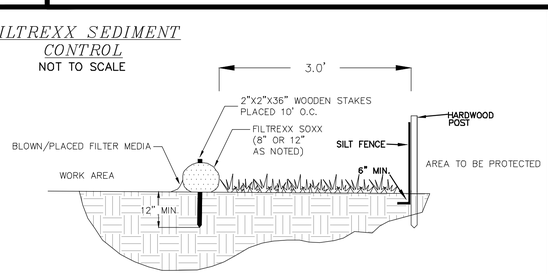


PLAN NOT TO SCALE

NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXXIN TERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1:EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL

FILTREXX SEDIMENT CONTROL
NOT TO SCALE

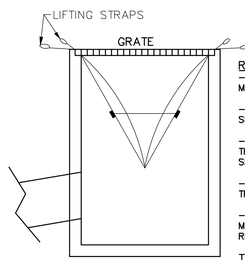


Filtrexx International, LLC
35481 Grafton Eastern Rd | Grafton, Oh 44044
440-926-2607 | fax: 440-926-4021
WWW.FILTREXX.COM
OR APPROVED EQUAL

NOTE: FOR AREAS REQUIRING DOUBLE PERIMETER CONTROL WITHIN 50' OF JURISDICTIONAL WETLANDS AND NOT FOR ALL SILT SOXX APPLICATIONS. THIS DUPLICATION MAY BE SPECIFIED AS 12" SILT SOXX OR ORANGE CONSTRUCTION FENCE AS NOTED.

SECTION NOT TO SCALE

E11



RECOMMENDED MAINTENANCE SCHEDULE

-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

SILTSACK DETAIL
NOT TO SCALE

E-101

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC#1 COMMENT	12-16-21	

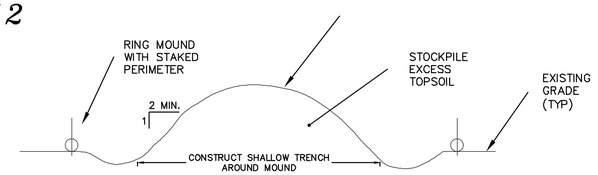
EROSION & SEDIMENT CONTROL DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

DATE : AUGUST 5, 2021
AS NOTED
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 10273 - LICENSED PROFESSIONAL ENGINEER

E12

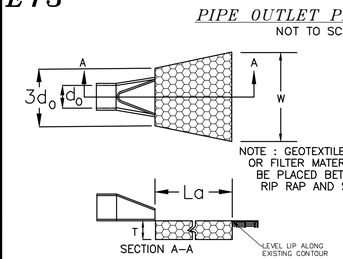


TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

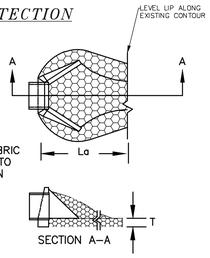
TOPSOIL STOCKPILE MOUND
NOT TO SCALE

E13

PIPE OUTLET PROTECTION
NOT TO SCALE



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL



PIPE OUTLET TO WELL-DEFINED CHANNEL

PIPE OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

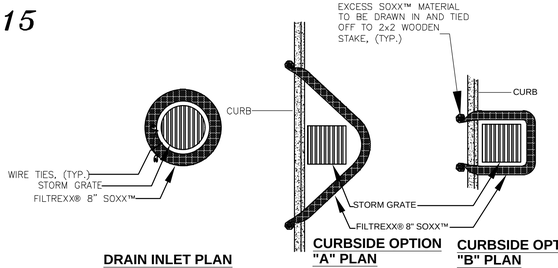
SPECIFIED GRADATION.

2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO NHDOT SECTION 583.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP 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. TO BE CONSTRUCTED IAW NH SWM #2 4-6 CONVEYANCE PRACTICES, 6. OUTLET PROTECTION, PAGE 172.

E14

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES		
d50 SIZE= 0.5 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

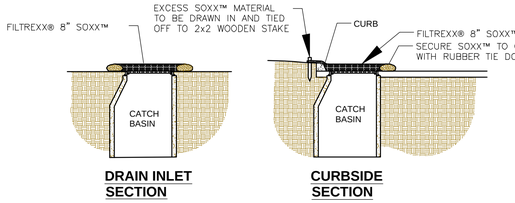
E15



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



DRAIN INLET SECTION

CURBSIDE SECTION

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION
NOT TO SCALE

E16

NOTE: THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

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 OCT. 15, if permanent seeding not yet complete.

SEEDING GUIDE

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
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	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
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	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 7-36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND athletic FIELDS.

RECOMMENDED *

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	4/	0.05
TOTAL	44	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	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
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

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
TALL FESCUE (35%)	15	0.35
CREEPING RED FESCUE (25%)	15	0.35
ANNUAL RYEGRASS (12%)	5	0.12
PERENNIAL RYEGRASS (10%)	5	0.12
KENTUCKY BLUEGRASS (10%)	15	0.35
WHITE CLOVER (3%)	7	0.16

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED.
   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 SEED BED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN 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 KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE,
   THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000LBS. 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 TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   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 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
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 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA 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 PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.
7. SEE RAIN GARDEN AND INFILTRATION DETAIL SHEETS FOR SPECIFIC PLANTING INSTRUCTIONS AND SEEDING.

E17

CONSTRUCTION SEQUENCE:

1.) CUT AND REMOVE TREES IN CONSTRUCTION AREA ONLY AS REQUIRED, RELOCATE ANY PROJECT T.B.M.

2.) CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS SPECIFIED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY THE COMMUNITY SERVICES DEPARTMENT.

3.) EROSION, SEDIMENT AND DETENTION CONTROL FACILITY SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.

4.) CLEAR, CUT AND DISPOSE OF DEBRIS IN APPROVED FACILITY

5.) CONSTRUCT TEMPORARY CULVERTS AS REQUIRED, OR DIRECTED

6.) CONSTRUCT ROADWAYS FOR ACCESS TO DESIRED CONSTRUCTION AREAS. ALL ROADS SHALL BE STABILIZED IMMEDIATELY. SEE BEST MANAGEMENT PRACTICES FOR BLASTING ON SHEET C-102.

7.) START BUILDING CONSTRUCTION.

8.) INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. INSTALL RAIN GARDENS. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.

9.) BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED. NO AREA IS ALLOWED TO BE DISTURBED FOR A LENGTH OF TIME THAT EXCEEDS 45 DAYS BEFORE BEING STABILIZED. DAILY, OR AS REQUIRED. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.

10.) CONSTRUCT TEMPORARY BERMS, DRAINS DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.

11.) INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORM WATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORM WATER QUALITY (CPSWQ). INSPECTION REPORTS SHALL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT. EROSION AND SEDITMENT CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.

12.) COMPLETE PERMANENT SEEDING AND LANDSCAPING.

13.) REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE.

14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

16.) LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

E18

DEFINITION OF STABLE:

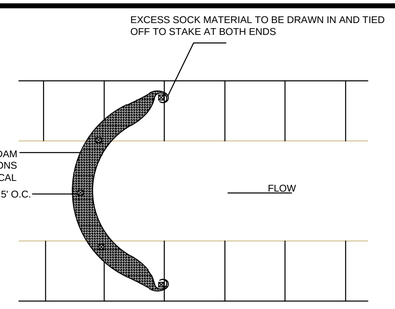
PER ENV-WQ 1500 ALTERATION OF TERRAIN

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
2. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED..
3. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
4. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ADDITION STABILIZATION NOTES:

5. HAY MULCH OR OTHER APPROVED METHODS SHALL BE USED TO CONTROL EROSION OF NEWLY GRADED AREAS. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS AFTER THEIR CONSTRUCTION.
6. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN (7) CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN ONE HUNDRED (100) FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHALL BE IN PLACE WITHIN THREE (3) CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

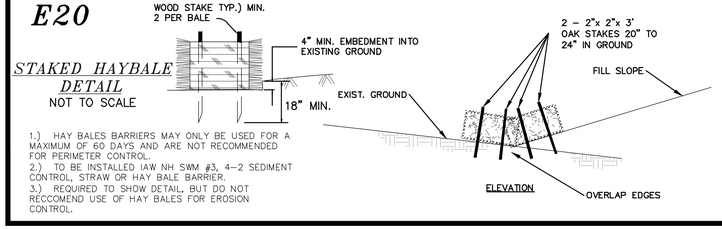
E19



FILTREXX CHECK DAM
NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 1 ACRE OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED™ INSTALLER.

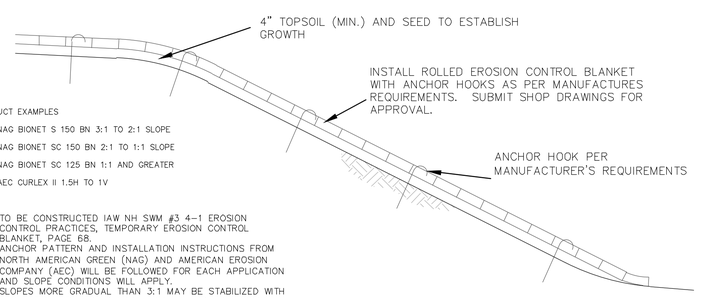
E20



STAKED HAYBALE DETAIL
NOT TO SCALE

1.) HAY BALES BARRIERS MAY ONLY BE USED FOR A MAXIMUM OF 60 DAYS AND ARE NOT RECOMMENDED FOR PERIMETER CONTROL.
2.) TO BE INSTALLED IAW NH SWM #3, 4-2 SEDIMENT CONTROL, STRAW OR HAY BALE BARRIER.
3.) REQUIRED TO SHOW DETAIL, BUT DO NOT RECCOMEND USE OF HAY BALES FOR EROSION CONTROL.

E21



PRODUCT EXAMPLES

1.) NAG BIONET S 150 BN 3:1 TO 2:1 SLOPE
2.) NAG BIONET SC 150 BN 2:1 TO 1:1 SLOPE
3.) NAG BIONET SC 125 BN 1:1 AND GREATER
4.) AEC CURLEX II 1.5H TO 1V

1. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68.
2. ANCHOR PATTERN AND INSTALLATION INSTRUCTIONS FROM NORTH AMERICAN GREEN (NAG) AND AMERICAN EROSION COMPANY (AEC) WILL BE FOLLOWED FOR EACH APPLICATION AND SLOPE CONDITIONS WILL APPLY.
3. SLOPES MORE GRADUAL THAN 3:1 MAY BE STABILIZED WITH VEGETATION OR HECP (HYDRAULICALLY APPLIED EROSION CONTROL MIX)/BONDED FIBER MATRIX. HOWEVER THE ENGINEER RESERVES THE RIGHT TO REQUEST INCREASED RECB TO BE INSTALLED ON ANY SLOPE.

ROLLED EROSION CONTROL BLANKET (RECB) SLOPE STABILIZATION DETAIL

E22

WINTER STABILIZATION NOTES

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.

2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.

3. PRIOR TO OCT. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

E-102

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1	REVISED PER TRC#1 COMMENT	12-16-21	

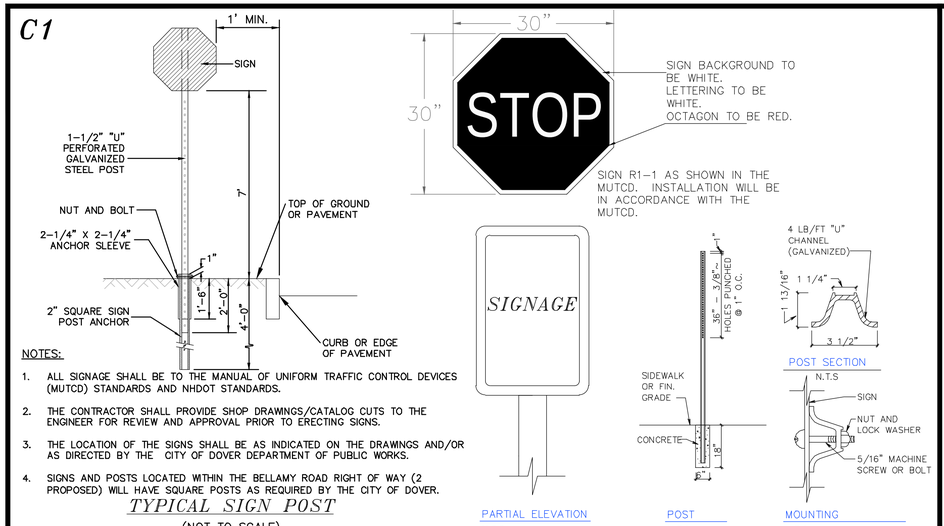
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TAX MAP 11, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

C1



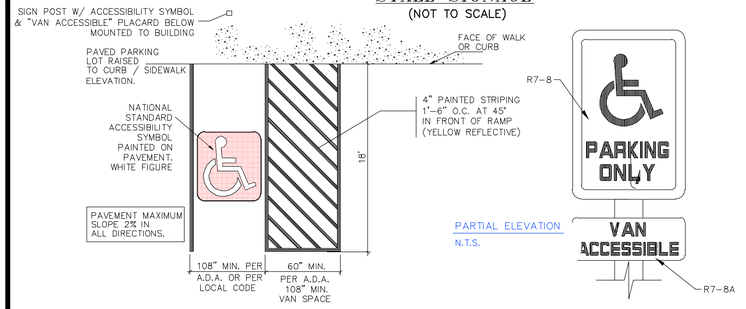
NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
3. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF DOVER DEPARTMENT OF PUBLIC WORKS.
4. SIGNS AND POSTS LOCATED WITHIN THE BELLAMY ROAD RIGHT OF WAY (2 PROPOSED) WILL HAVE SQUARE POSTS AS REQUIRED BY THE CITY OF DOVER.

TYPICAL SIGN POST
(NOT TO SCALE)

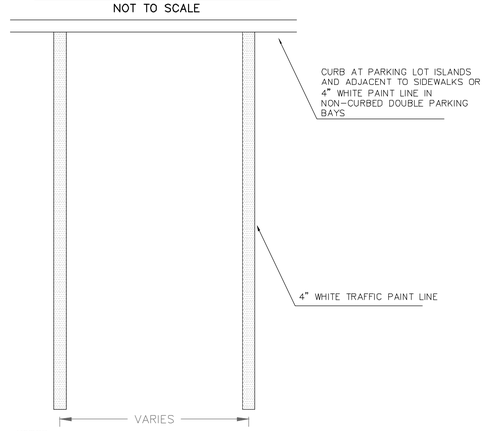
C2

ACCESSIBLE PARKING STALL SIGNAGE
(NOT TO SCALE)



C3

PARKING SPACE DETAIL
NOT TO SCALE



NOTES:

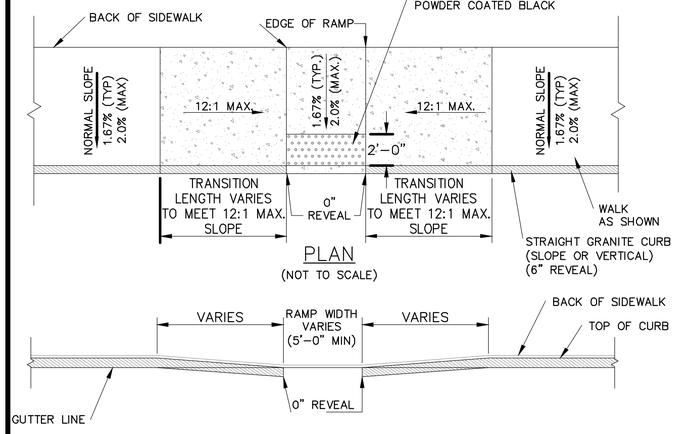
1.) PROVIDE TWO COATS OF PAINT ON ALL PARKING LINES.
2.) SEE PROPOSED SITE PLANS FOR LOCATION OF PARKING SPACES.
3.) PAINTED SPACES ONLY WHERE MARKED ON SITE PLAN

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
#1	REVISED PER TRC#1 COMMENT	12-16-21	

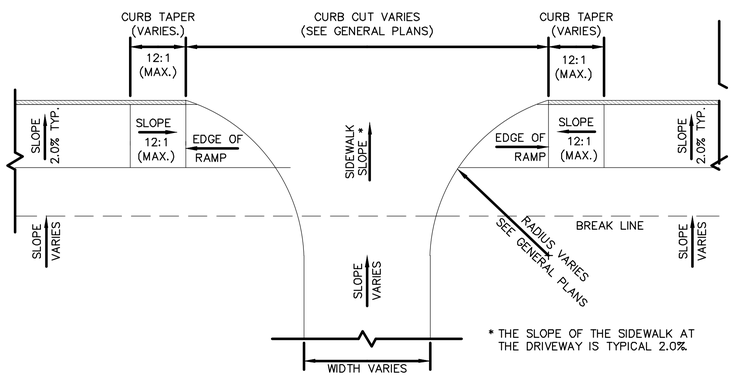
CONSTRUCTION DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

C4



TYPICAL DETAIL FOR WHEELCHAIR RAMP

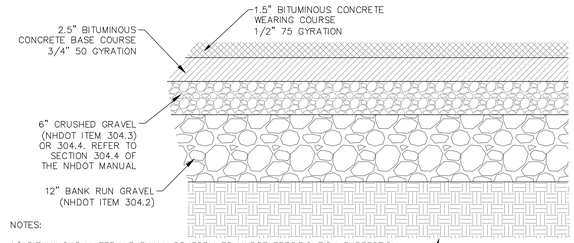
C5



* THE SLOPE OF THE SIDEWALK AT THE DRIVEWAY IS TYPICAL 2.0%.

PLAN VIEW (DRIVEWAY & SIDEWALK)
NOT TO SCALE

C6



NOTES:

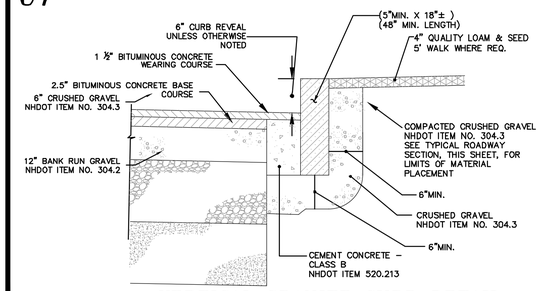
1.) BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SUBSECTION 401.3.6.

2.) PAVEMENT BASE COURSE AGGEGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.

3.) PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOFROLLED AND COMPABED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY. FOR NEW CONSTRUCTION AREAS ONLY. IN EXISTING PAVEMENT AREAS THE CONTRACTOR IS TO ENSURE THE BASE MATERIAL IS SUITABLE TO THE OWNER FOR RE-PAVING

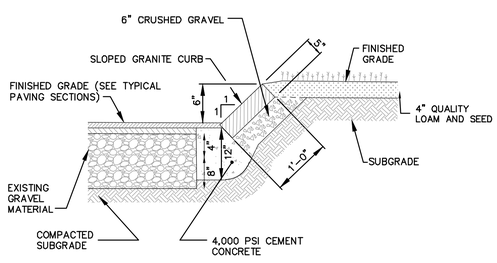
BITUMINOUS CONCRETE PAVEMENT SECTION
NOT TO SCALE

C7



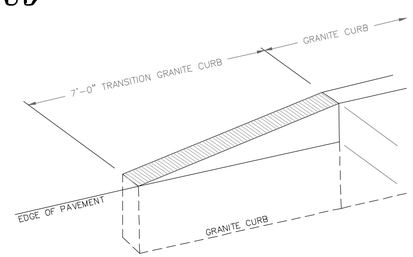
VERTICAL GRANITE CURB DETAIL
NOT TO SCALE

C8



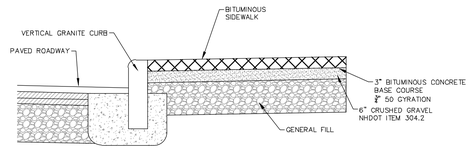
SLOPE GRANITE CURB DETAIL
NOT TO SCALE

C9



CURB TRANSITION DETAIL
NOT TO SCALE
TO BE USED FOR TRANSITION FROM GRANITE CURB TO EDGE OF PAVEMENT

C10



BITUMINOUS SIDEWALK RAISED

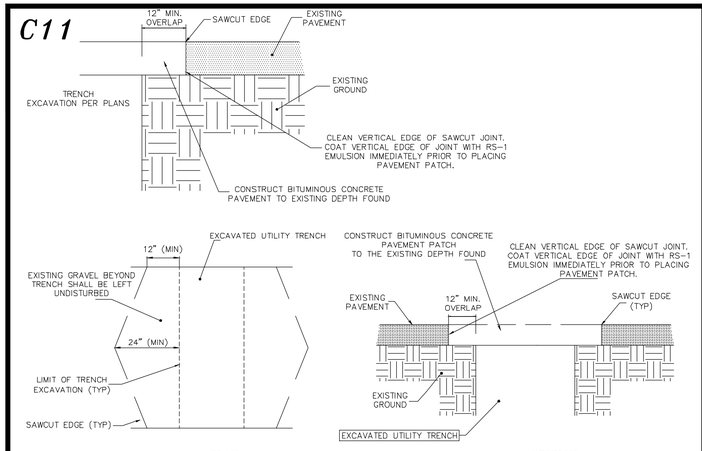
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
LICENSED PROFESSIONAL ENGINEER

C-101

C11



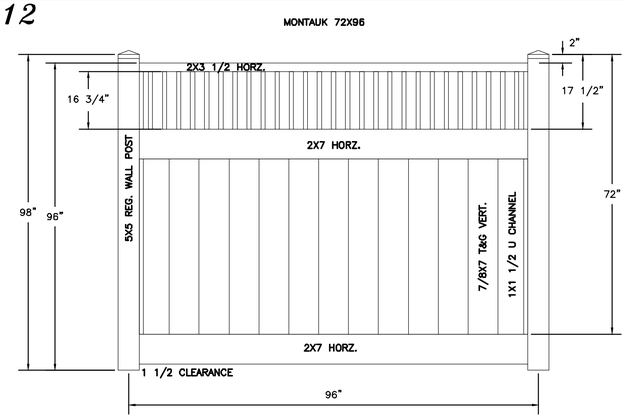
PLAN *SECTION*

NOTES
1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED, OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

TYPICAL TRENCH PATCH

NOT TO SCALE

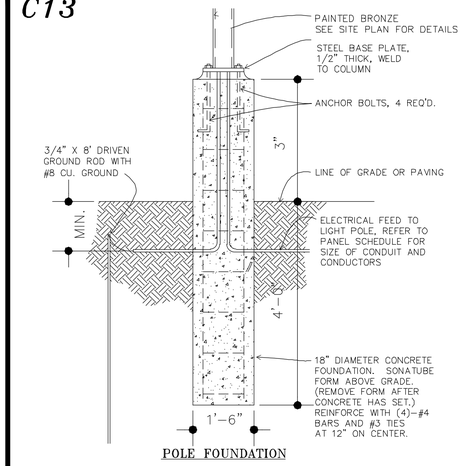
C12



WHITE VINYL FENCE DETAIL

NOT TO SCALE

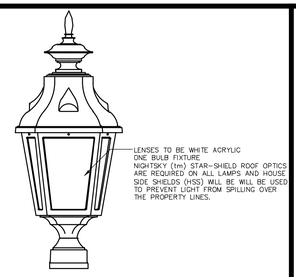
C13



POLE FOUNDATION

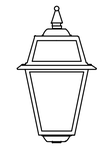
LIGHT BASE DETAIL

NOT TO SCALE



STREET LIGHTING LAMP "A"

NOT TO SCALE



TYPICAL RESIDENTIAL LAMP "B"

NOT TO SCALE

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
#1		12-16-21	REVISED PER TRC#1 COMMENT

C14

See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

NOTES:
1.) USE THE 41" BOTTOM BLOCK TO INSTALL THE FIRST COURSE. NOTE EMBEDMENT REQUIREMENT. COURSE DEPTH IS 1.5'

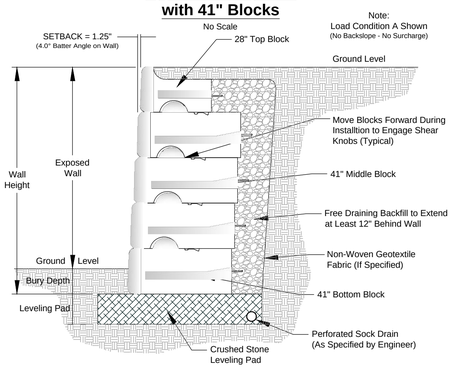
3.) USE 41" MIDDLE BLOCK FOR MIDDLE ROWS, APPROXIMATELY 7 COURSES DEPENDING ON WALL HEIGHT.

4.) USE 41" TOP BLOCK ALONG TOP OF WALL. NOTE WALL DROPS ARE TO BE FULL BLOCK DEPTHS.

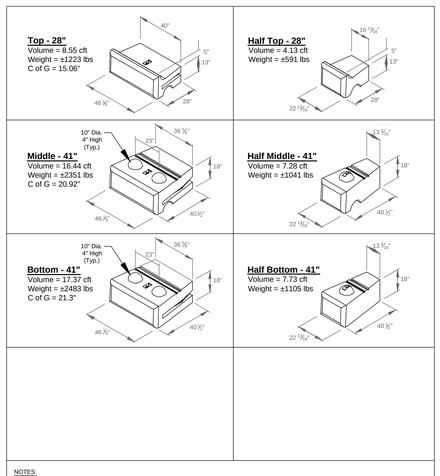
5.) USE 41" HALF BLOCKS FOR RADIAL TURNS AND END SECTIONS.

6.) THE WALL MANUFACTURER TYPICALLY PROVIDES WALL PROFILE AND BLOCK COUNT TO THE CONTRACTOR AS REQUIRED FOR CONSTRUCTION. THIS IS TO BE REVIEWED BY BOTH DPW AND DESIGN ENGINEER FOR CORRELATION WITH PROJECT SITE PLANS AND IS TO BE DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER (OTHERS).

Typical Gravity Wall with 41" Blocks



41" SERIES BLOCKS



NOTES:
Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.
Center of Gravity is measured from the back of the block.
Half blocks may include a fork lift slot on one side.
Actual weights and volumes may vary.
Weight shown is based on 143 pcf concrete.

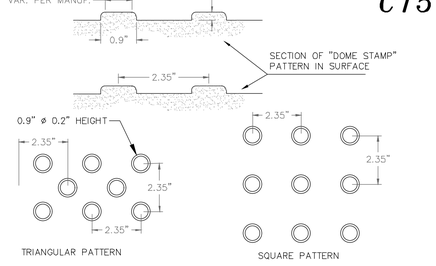
Redi-Rock® International, LLC

RETAINING WALL DETAIL

NOT TO SCALE

NOTE: RETAINING WALL TO BE DESIGNED BY A LICENSED PROFESSIONAL GEOTECHNICAL/STRUCTURAL ENGINEER.

C15



DETECTABLE WARNING SURFACE

NOT TO SCALE

CROSS SECTION NOTES

1. ALL ROADWAY FILL TO BRING ROAD TO SUBGRADE SHALL BE INSTALLED IN LIFTS NO GREATER THAN 12".

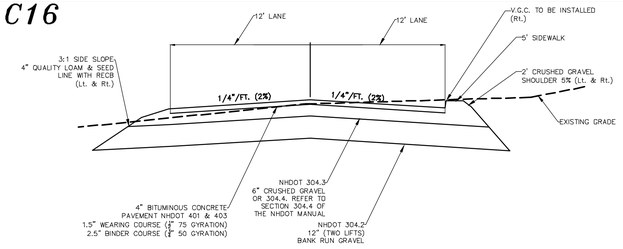
2. ALL FILL SHALL BE COMPACTED TO 95% MINIMUM. COMPACTION TESTS TO BE CONDUCTED AT THE START OF THE PROJECT AND NO FURTHER THAN 100 FEET APART.

3. GUARD RAIL REQUIRED AS NOTED ON PLAN & PROFILE SHEETS.

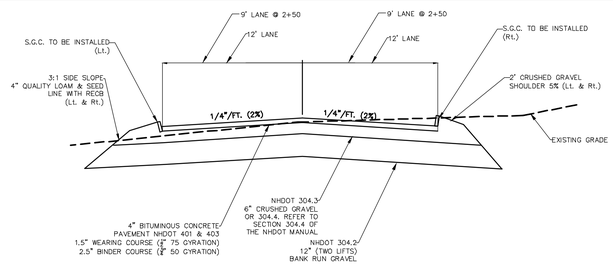
4. TEST PITTING WAS DONE WITHIN THE ROADWAY ALIGNMENT BY STONEY RIDGE ENVIRONMENTAL, AND NO UNSUITABLE MATERIALS WERE ENCOUNTERED IN THOSE TEST PITS.

COMPACTED SUBGRADE – CONTRACTOR SHALL SCARIFY SUBGRADE TO A DEPTH OF 30 INCHES BELOW F-GRADE. ALL STONES GREATER THAN 6" IN DIAMETER SHALL BE REMOVED FROM THE SCARIFIED LAYER. ANY IMPORTED FILL SHALL BE FREE OF ORGANICS AND FROST AND SHALL HAVE NO ROCKS LARGER THAN 6" IN DIAMETER. FILL MATERIAL SHALL BE APPROVED BY THE TOWNS AGENT AND/OR THE TOWNS ENGINEER.

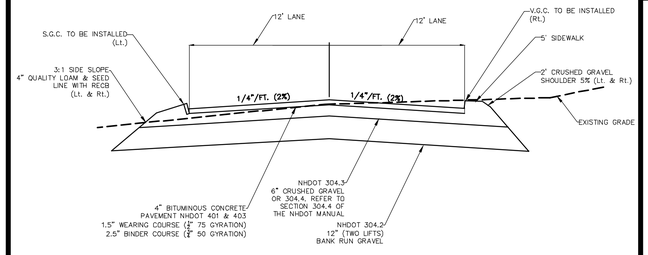
C16



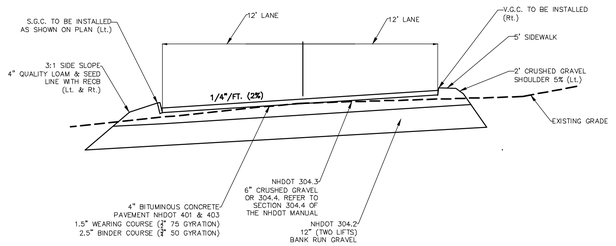
TYPICAL ROADWAY SECTION SOPHIE DRIVE
0+13.00–2+63.56



TYPICAL ROADWAY SECTION SOPHIE DRIVE
2+63.56–3+00

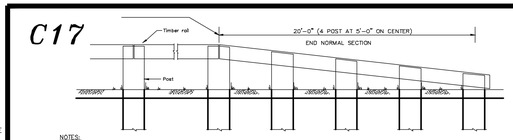


TYPICAL ROADWAY SECTION BANNER DRIVE
3+00–7+89.23



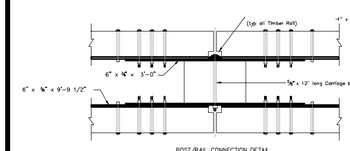
TYPICAL ROADWAY SECTION BANNER DRIVE
7+89.23–END

C17



NOTES:
1. POST TYPE : 10" x 12" WOOD
2. BEAM TYPE : 6" x 10" WOOD
3. POST SPACING : 5'-0" O.C.
4. NOMINAL BARRIER HEIGHT : 27"

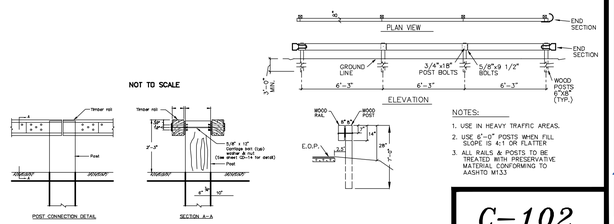
STEEL BACKED WOOD GUARD RAIL TERMINAL UNIT DETAIL



POST/RAIL CONNECTION DETAIL

NOTES:
1. POST TYPE : 10" x 12" WOOD
2. BEAM TYPE : 6" x 10" WOOD WITH STEEL PLATE BACKING
3. POST SPACING : 10'-0" O.C.
4. NOMINAL BARRIER HEIGHT : 27"
5. STEEL PLATE BACKING AND SPLICE PLATE – A36 GALVANIZED STEEL
6. ALL BOLTS & WASHERS TO BE GALVANIZED

GUARD RAIL STEEL PLATE BACKED (WOODEN RAIL)



NOTES:
1. USE IN HEAVY TRAFFIC AREAS.
2. USE 6'-0" POSTS WHEN FILL SLOPE IS 4:1 OR FLATTER
3. ALL RAILS & POSTS TO BE TREATED WITH PRESERVATIVE MATERIAL CONFORMING TO AASHTO M133

CONSTRUCTION DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

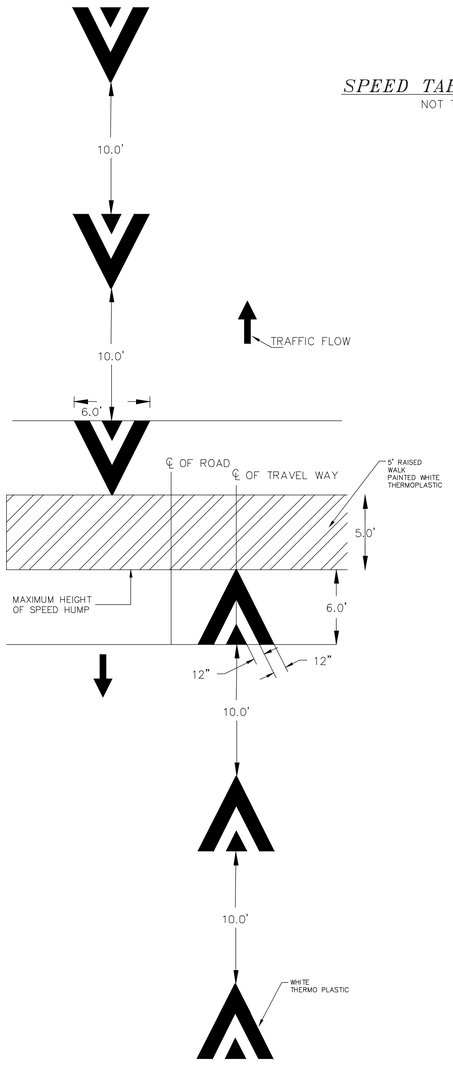
AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

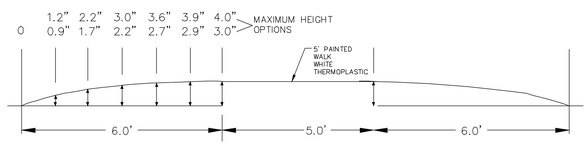
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14213
LICENSED PROFESSIONAL ENGINEER

C-102

C18

SPEED TABLE MARKINGS
NOT TO SCALE





DETAIL "A" – SPEED HUMP
NOT TO SCALE

C19

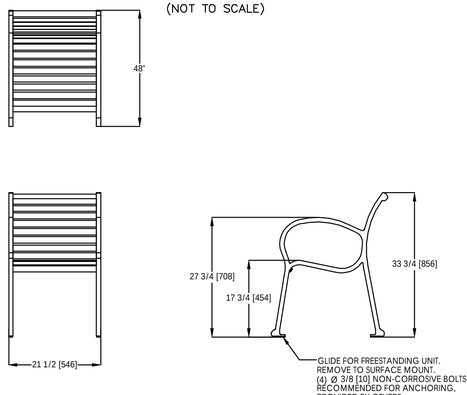
Scarborough™

Scarborough™ Bench, 24" Backed, with Horizontal Strap Seat
Product Drawing

www.landscapeforms.com

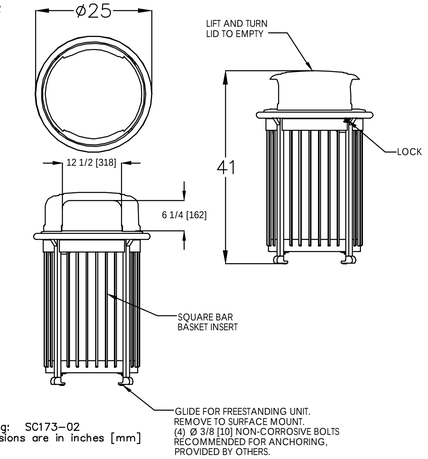
Date: 5/19/2010
Ph: 800.521.2546

BENCH DETAIL
(NOT TO SCALE)



landscapeforms® Drawing: SC173-02
Dimensions are in inches [mm]

BIN DETAIL
(NOT TO SCALE)



landscapeforms® Drawing: SC173-02
Dimensions are in inches [mm]

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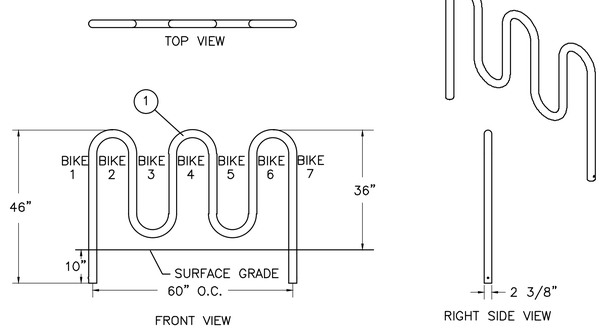
NOTES:
1. DUCTILE IRON CASTINGS COME WITH A TEN YEAR WARRANTY AGAINST BREAKAGE.
2. DRAWING NOT TO SCALE. DO NOT SCALE DRAWINGS.
3. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH COAT AVERAGES 8-10 MILS (200-250 MICRONS).
4. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. THIS LANDSCAPE FORMS, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
5. ANCHOR BOLTS NOT PROVIDED BY VICTOR STANLEY, INC.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

INTERMEDIATE & CENTER ARMRESTS
4', 6' & 8' AVAILABLE WITH OPTIONAL ARMRESTS

OR APPROVED EQUAL AS APPROVED BY THE DESIGN ENGINEER AND THE DIRECTOR OF PLANNING

C20

MATERIALS LIST
(1) TUBING – ø 2 3/8" x .154" Wall Steel Tubing



BIKE RACK
(NOT TO SCALE)

C-103

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

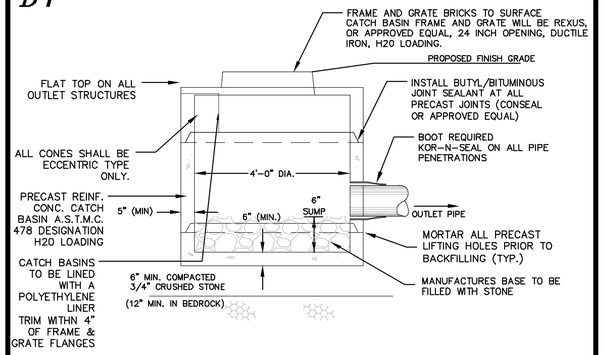
CONSTRUCTION DETAILS
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TAX MAP H, LOTS 46 & 50

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

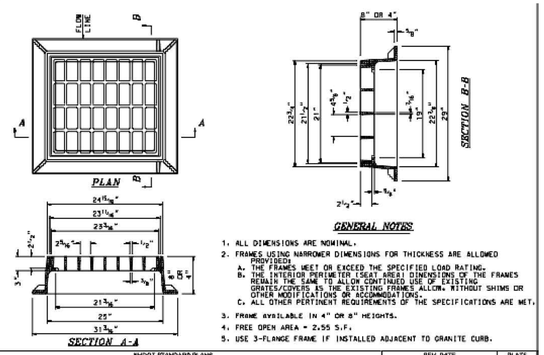
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7626
LICENSED PROFESSIONAL ENGINEER

D1



CATCH BASIN DETAIL
NOT TO SCALE

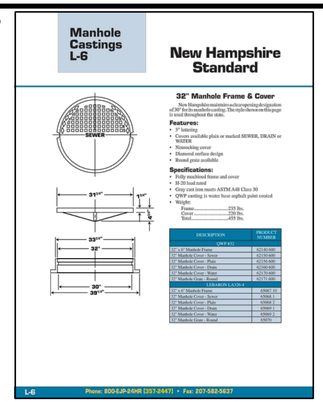
D2



NHDOT STANDARD PLANS	REV. DATE		PLATE
TYPE "B" GRATE & FRAME	04-16-2010		2
	08-14-2015		STANDARD DR-1

CATCH BASIN GRATE
NOT TO SCALE

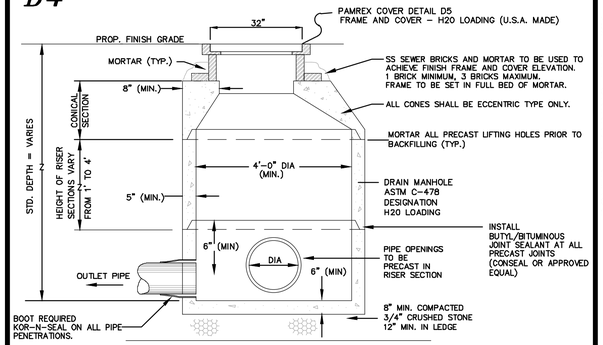
D3



DRAIN MANHOLE FRAME AND GRATE WILL BE NEW HAMPSHIRE STANDARD, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

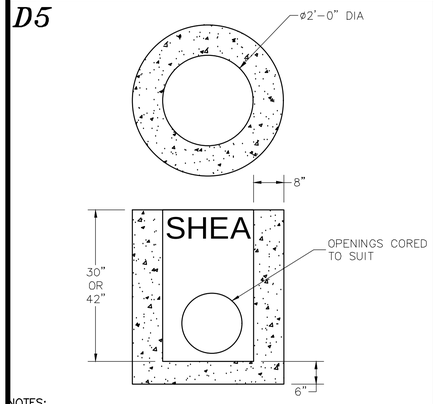
DRAIN MANHOLE COVER DETAIL
NOT TO SCALE

D4



PRECAST DRAIN MANHOLE DETAIL
NOT TO SCALE

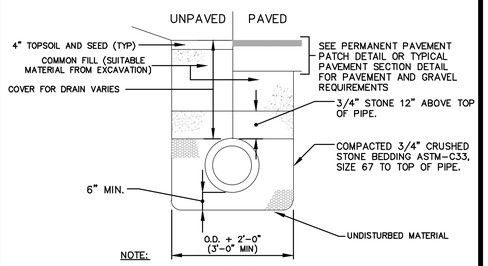
D5



NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR AASHTO HS-20 LOADING, 1 TO 5 FEET COVER.

GUTTER INLET DROP INLET TYPE B
NOT TO SCALE

D6



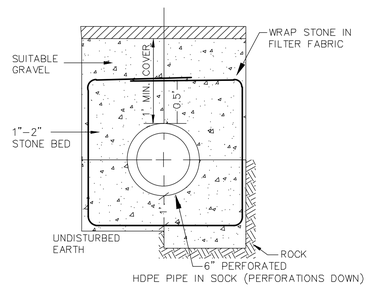
NOTE:
PLASTIC DRAIN PIPE (HDPE) SHALL BE ADS N-12 (CORRUGATED EXTERIOR/SMOOTH INTERIOR) OR EQUAL MEETING AASHTO M-252 AND H-20 LOADING.

DI DRAIN PIPE SHALL BE CL. 50.

RC DRAIN PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.

TYPICAL DRAIN PIPE TRENCH
NOT TO SCALE

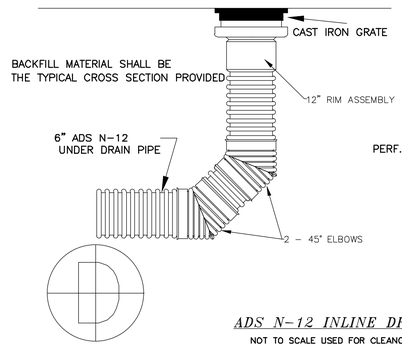
D7



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.

UNDERDRAIN TRENCH DETAIL
NOT TO SCALE

D8A



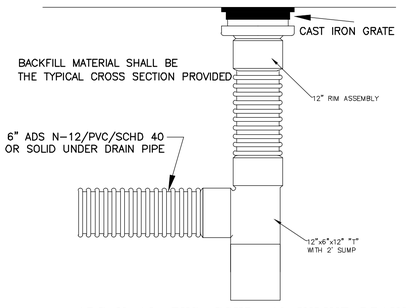
12" CAST IRON GRATE
NOT TO SCALE

CASTINGS ARE RATED FOR H20 WHEEL LOAD TRAFFIC

PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT

ADS N-12 INLINE DRAIN
NOT TO SCALE USED FOR CLEANOUTS

D8B



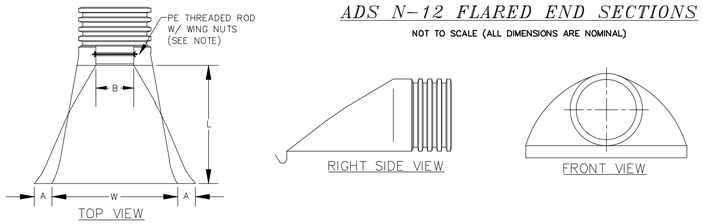
ADS N-12, PVC, SCHD. 40 INLINE DRAIN
NOT TO SCALE USED FOR GRAVEL WETLAND CLEANOUTS

D9

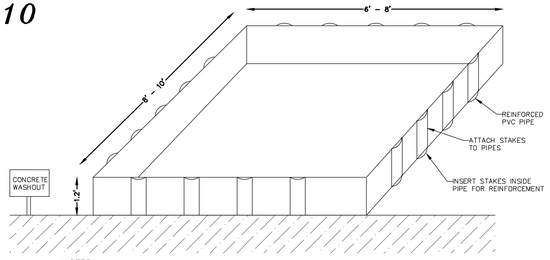
PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15" 375 mm	6.5" 165 mm	10" 254 mm	6.5" 165 mm	25" 635 mm	29" 735 mm
1810-NP	18" 450 mm	7.5" 190 mm	15" 380 mm	6.5" 165 mm	32" 812 mm	35" 890 mm
2410-NP	24" 600 mm	7.5" 190 mm	18" 450 mm	6.5" 165 mm	36" 900 mm	45" 1140 mm
3010-NP	30" 750 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm
3610-NP	36" 900 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm

NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15"-24". 30" & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.

ADS N-12 FLARED END SECTIONS
NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)



D10



NOTES:

1.) CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE POURS.

2.) SIGNS SHALL BE INSTILLED TO CLEARLY INDICATE WHERE THE LOCATION OF THE WASHOUT AREA IS.

3.) CONTRACTOR IS IRRESPONSIBLE TO MAINTAIN AND REPLACE WASHOUT AREA AS NEEDED.

4.) RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

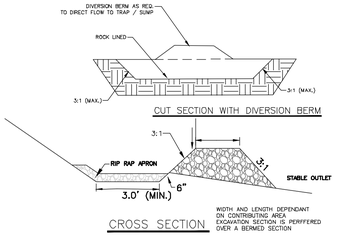
5.) DO NOT WASH CONCRETE TRUCKS OUT INTO DRAINAGE AREAS, SWALES, STREETS OR UNDISTURBED AREAS.

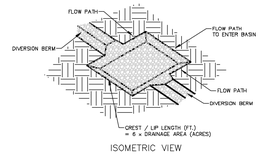
6.) WASHOUT AREA SHALL BE PLACED AWAY FROM DRAINAGE FEATURES AND OUTSIDE AND WETLAND BUFFERS.

CONCRETE WASHOUT
NOT TO SCALE

D11

1. TRAP TO BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.





ISOMETRIC VIEW

STONE LINED SEDIMENT TRAP
NOT TO SCALE

SIEVE DESIGNATION	SIZE OF STONE (INCHES)
100%	12
84-100%	6
68-83%	3
42-55%	1
8-12%	NO. 4

REFERENCE IS MADE TO A LONG TERM MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF ROCHESTER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-101

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
#1	REVISED PER TRC#1 COMMENT	12-16-21	

DRAINAGE DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP 11, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

D12

CONE GRATE
NOT TO SCALE

NOTE:
MUST BE HAALA INDUSTRIES INC.
OR EQUAL.

Cone Grates Top Mount



CG12TM
Part No. CG12TM

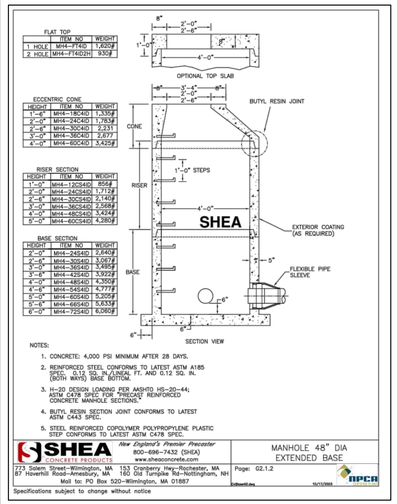
Save Trees

Top Mount Cone Grates are designed to mount on the top of round manhole inlet or outlet structures to keep debris from entering the storm water system. Top mount cone grates are easy to install and allow for at grade manhole installations but can be used in a variety of applications. Grates 96" and larger are made as a two piece, bolt together design.

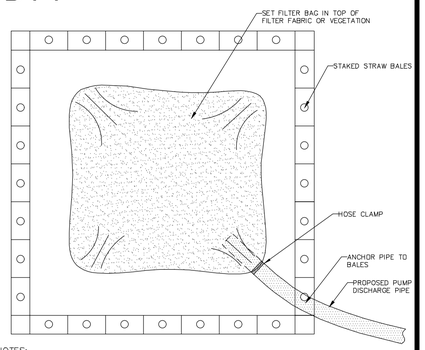
- Plate and bar hybrid design is both clean and cost effective
- Made from 1/2" plate with 3/4" or 1" round bars depending on grate size
- Anti vortex plate can be added upon request
- Hinged and lockable access doors can be added upon request
- Galvanized steel construction. Can be made from aluminum or stainless steel.

D13

48" MANHOLE ROUND EXTENDED BASE
NOT TO SCALE



D14



NOTES:

1.) ENSURE DISCHARGE POINT IS STABILIZED WITH VEGETATION OR PROPER EROSION AND SEDIMENT CONTROL PRACTICES.

2.) USE DIFFUSER NOZZLE OR LOW DISCHARGE RATE TO PREVENT SCOURING.

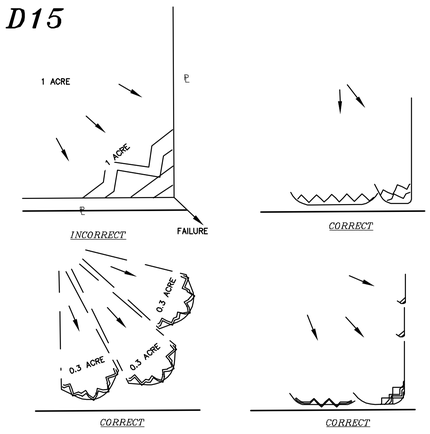
3.) TO BE PLACED AT AN UPLAND LOCATION THAT WILL ALLOW WATER TO DRAIN INTO THE GROUND.

4.) SIZE OF DE-WATERING AREA TO BE 10' X 10', ADJUST SIZE DEPENDING ON VOLUME AND USE.

5.) ADDITIONAL BALES MAY BE USED TO INCREASE RETENTION AND FILTERING.

DE-WATERING BASIN
NOT TO SCALE

D15



DESIGN CONSITERATIONS:

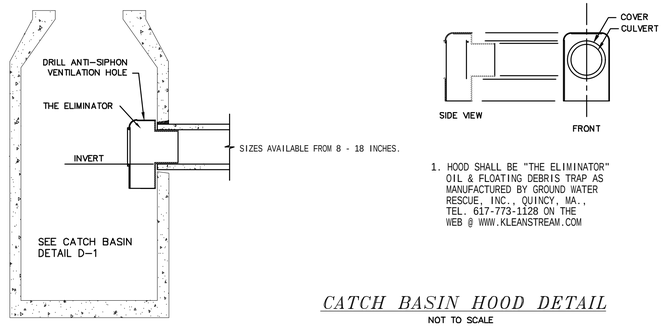
1. THE MAXIMUM LENGTH OF SLOPE ABOVE PERIMETER CONTROL IS 100 FEET.
2. THE MAXIMUM GRADIENT BEHIND CONTROL WILL NOT EXCEED 5%.
3. THE MAXIMUM CONTRIBUTING DRAINAGE AREA OF ONE-QUARTER ACRE PER 100-FEET OF PRACTICE LENGTH.
4. PERIMETER CONTROL IS TO BE INSTALLED PRIOR TO EARTH MOVING ACTIVITEIS, INCLUDING GRUBBING AND CLEARING.

NOTES

1. DO NOT LAYOUT PERIMETER CONTROL ALONG SLOPING PROPERTY PERIMETER WITHOUT INSTALLING "J HOOKS" AT HIGH CONCENTRATION AREAS. RUNOFF WILL CONCENTRATE AND CAUSE FAILURES ALONG THE PERIMETER.
2. "J HOOKS" CAN BE USED TO HELP LIMIT THE CONCENTRATION OF RUNOFF AND PROVIDE MORE STABILITY TO THE PERIMETER.
3. SILT FENCE AND EROSION CONTROL MULCH BERM MAY BE USED INTERCHANGEABLY. IN SPECIFIED AREA, SILT FENCE MAY NOT BE SUBSTITUTED FOR FILTREXX SILT SOXX OR APPROVED ALTERNATIVE.
4. SEE HAMPSHIRE STORM WATER MANUAL: VOLUME 3, PAGE 99 FOR FURTHER DETAILS AND SPECIFICATIONS

PERIMETER CONTROL
NOT TO SCALE

D16



1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM

CATCH BASIN HOOD DETAIL
NOT TO SCALE

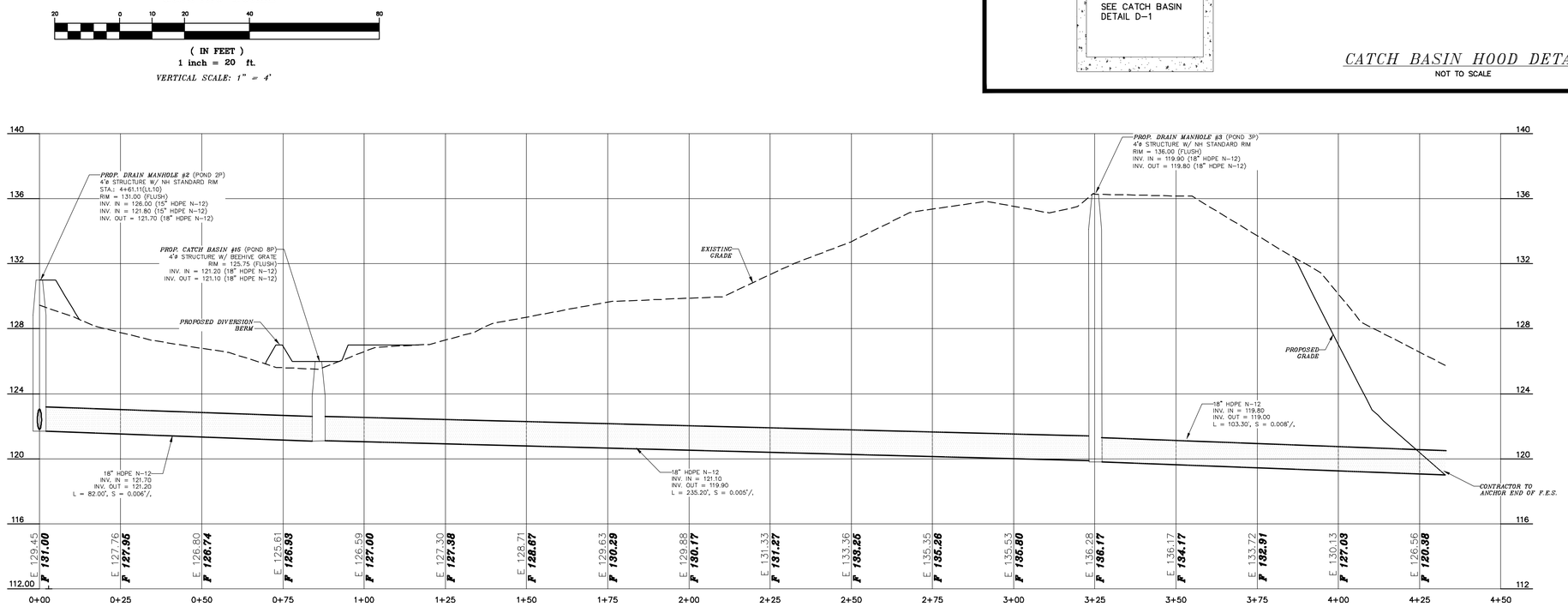
D17

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'



18" CULVERT FROM DMH #2 TO RAIN GARDEN #103

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
#1	REVISED PER TRC#1 COMMENT	12-16-21	

DRAINAGE DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP 11, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
LICENSED PROFESSIONAL ENGINEER

D-102

U1

NOTES ON MANHOLE AND SEWER CONSTRUCTION:

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE COVER. ALL SMH CONSTRUCTION AND MATERIALS WILL BE IAW ENV.-WQ 704.13 (a)(3) ADOPTED OCTOBER 15, 2014

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE. (IAW ENV.-WQ 704.12 (a))

3) SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.

4) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

5) GRAVITY SEWER PIPE TESTING WILL BE IN ACCORDANCE WITH ENV.-WQ 704.06 AND MAN HOLE TESTING IAW ENV.-WQ 704.17 DATED OCTOBER 15, 2014.

6) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. INVERT BRICKS SHALL BE LAID ON EDGE AND THE BASE SECTION SHALL BE FULL. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. BASE SECTION SHALL BE MONOLITHIC TO A POINT AT LEAST 6" ABOVE THE CROWN OF THE INCOMING PIPE PER ENV-WQ 704.12(e). CASTINGS SHALL CONFROM WITH ASTM A48/48M PER ENV-WQ 704.13 (a)(6). UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. (IAW ENV.-WQ 704.13 (a) (9)), MORTAR SHALL CONFORM WITH REQUIREMENTS OF IAW ENV.-WQ 704.13 (c).

7) FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER. (IAW ENV.-WQ 704.13 (a) (4-6)) SEWER MAN HOLE COVERS ARE TO PAMREX.

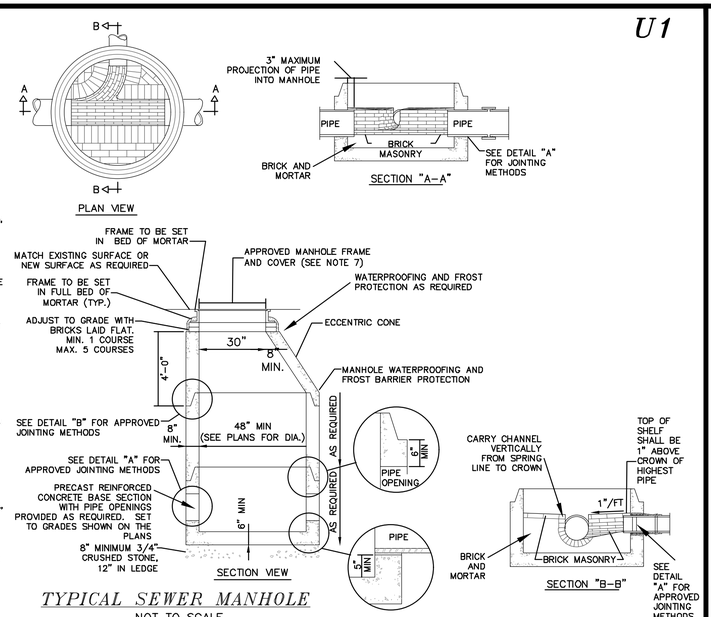
8) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

9) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE DOVER DPW, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON A DOUBLE ROW OF AN OVERLAPPING TYPE ELASTOMERIC OR MASTIC-LIKE GASKET. APPROVED ELASTOMERIC SEALANTS ARE: RAM-NEK, KENT SEAL NO. 2, EZ, OR EQUAL.

10) ALL FRAMES AND GRATES ARE TO BE U.S.A. MADE. MANHOLE STEPS ARE REQUIRED IN THIS MUNICIPALITY AND MUST CONFORM TO THE REQUIREMENTS OF ENV-WQ 704.14.

11) ANY WORK INVOLVING THE CUTTING INTO A.C. PIPE SHALL MEET THE REQUIREMENTS OF ENV-A 1800.

12) THE CONTRACTOR IS TO REVIEW THE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN DATED JULY 2018 FOR FURTHER DEFINED. SEE CHAPTER II-7.



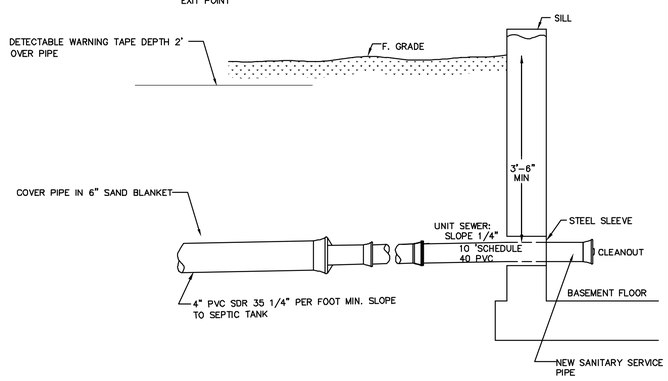
TYPICAL SEWER MANHOLE
NOT TO SCALE

U2

1.) SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS

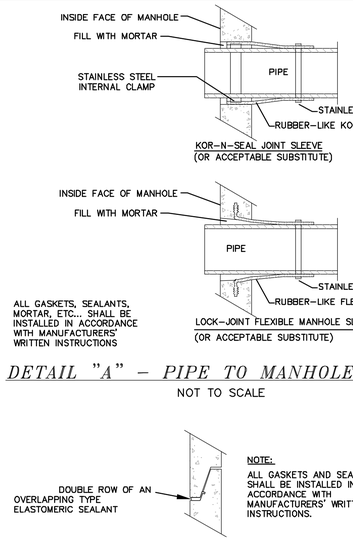
2.) SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3.) CLEANOUTS SHALL BE INSTALLED INSIDE EACH BUILDING EXIT POINT

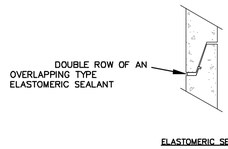


DETAIL OF UNIT SEWER SERVICE
NOT TO SCALE

U3



DETAIL "A" - PIPE TO MANHOLE JOINTS
NOT TO SCALE



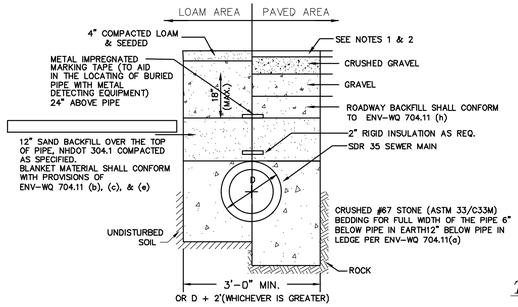
DETAIL "B" HORIZONTAL JOINTS
NOT TO SCALE

DOVER PLANNING FILE #21-65

#	REVISION	DATE	DESCRIPTION
1		12-16-21	REVISED PER TRC#1 COMMENT

UTILITY DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

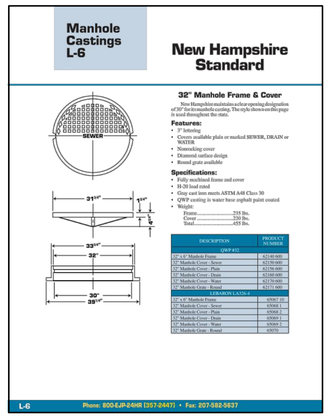
U4



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.
3. ANTI-SEEP COLLARS OR CLAY CHECK DAMS ON STEEP RUNS IN WET CONDITIONS.
4. ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & MUNICIPAL DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) AND CONFORM WITH ASTM D3034. PVC JOINT SEALS SHALL CONFORM WITH ASTM D3121. SDR-21 PVC FORCE MAIN PIPE MATERIAL IS REQUIRED IN LOCATIONS AS SHOWN. SDR-21 PVC FORCEMAIN PIPE WILL CONFORM TO ENV-WQ 704.08.
5. SEE DETAIL U11 BELOW FOR INSULATION DETAILS.
6. SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN CHAPTER II-8

TYPICAL SEWER PIPE TRENCH
NOT TO SCALE

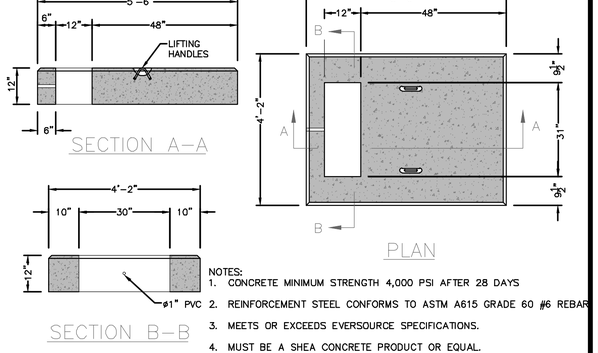
U5



SEWER MANHOLE FRAME AND GRATE WILL BE NEW HAMPSHIRE STANDARD, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

SEWER MANHOLE COVER DETAIL
NOT TO SCALE

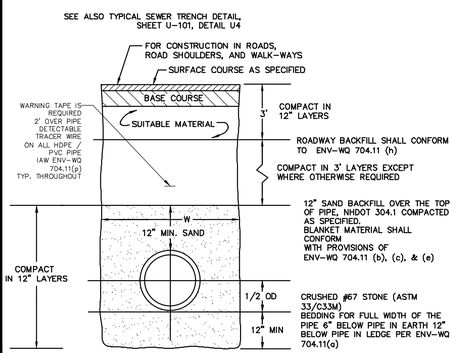
U6



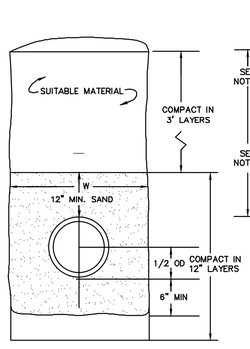
NOTES:
1. CONCRETE MINIMUM STRENGTH 4,000 PSI AFTER 28 DAYS
2. REINFORCEMENT STEEL CONFORMS TO ASTM A615 GRADE 60 #6 REBAR
3. MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS.
4. MUST BE A SHEA CONCRETE PRODUCT OR EQUAL.

TRANSFORMER AND PAD DETAIL
NOT TO SCALE

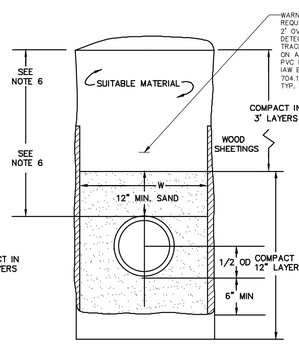
U7



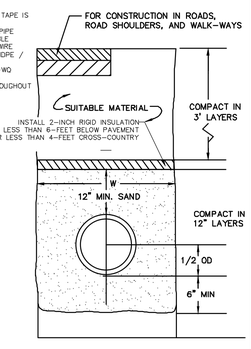
LEDGE CONSTRUCTION
NOT TO SCALE



EARTH CONSTRUCTION
NOT TO SCALE

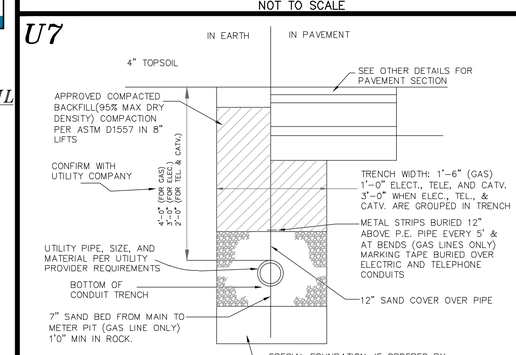


EARTH CONSTRUCTION WITH SHEETING
NOT TO SCALE



TRENCH INSULATION
NOT TO SCALE

U7



ELECTRICAL, TELEPHONE, AND GAS TRENCH
NOT TO SCALE

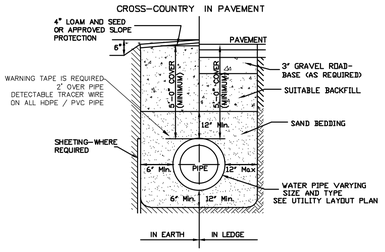
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 10243
LICENSED PROFESSIONAL ENGINEER

U-101

U8

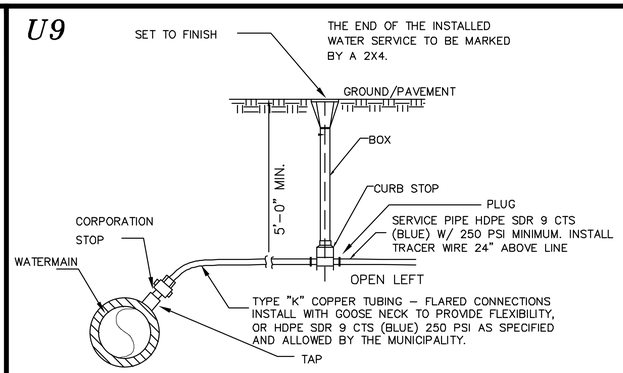


1.) PER THE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN I-5 ALL UTILITIES WITHIN THE PROPOSED MUNICIPAL RIGHT OF WAY WILL BE INSPECTED BY THE CITY OF DOVER ENGINEERING DEPARTMENT.

TYPICAL TRENCH DETAIL FOR WATER SYSTEM

NOT TO SCALE

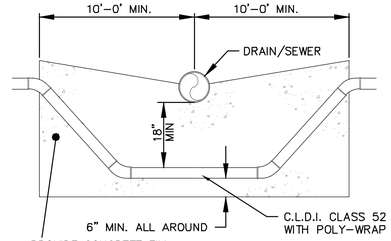
U9



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

U10



1.) SEE CHAPTER I-14 OF THE CITY OF DOVER STANDARDS OF INFRASTRUCTURE

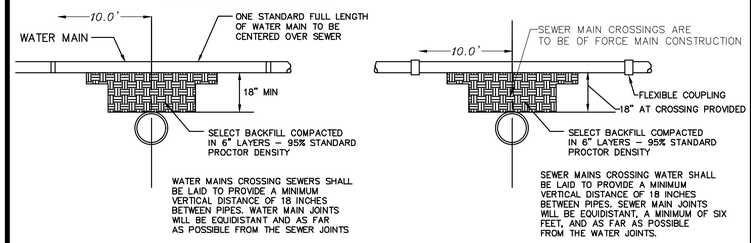
WATER MAIN INSTALLATION - BELOW DRAIN & SEWER

NOT TO SCALE

U11

SEPERATION NOTES:

1. WATER MAIN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS, ENV-WQ 700 ADOPTED OCTOBER 14, 2014.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPARATE TRENCH AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
3. VERTICAL SEPARATION REQUIREMENTS APPLY TO WATER AND SEWER MAINS AND SERVICE LINES. WHERE SEWER CROSSES WATER MAIN AND WATER SERVICE CROSSES SEWER MAIN, 18 INCH VERTICAL CLEARANCE SHALL BE PROVIDED WITH WATER OVER SEWER.



WATER MAIN ABOVE SEWER

WATER MAIN BELOW SEWER

TYPICAL WATER/SEWER SEPERATION DETAILS

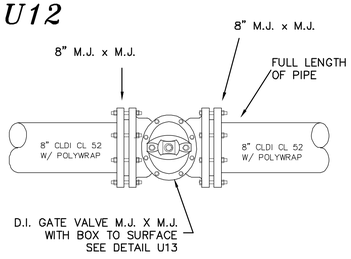
NOT TO SCALE

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

UTILITY DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

U12

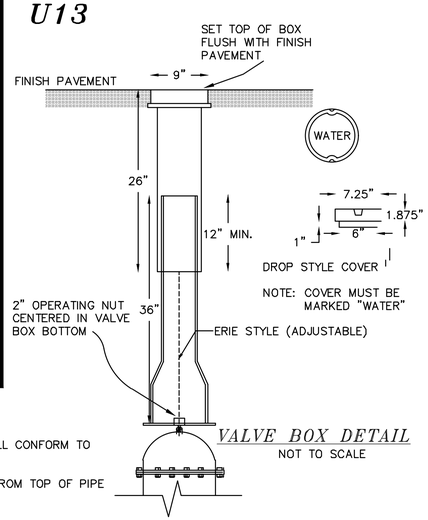


SHUTOFF VALVE DETAIL

NOT TO SCALE

1.) ALL VALVES ARE TO OPEN LEFT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

U13



VALVE BOX DETAIL

NOT TO SCALE

NOTES:

1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.

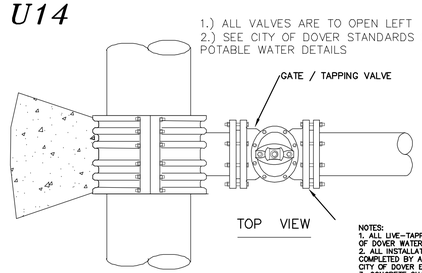
2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.

3.) ALL VALVES ARE TO OPEN LEFT

4.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

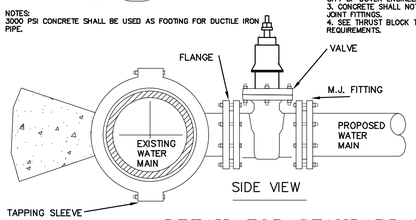
U14

1.) ALL VALVES ARE TO OPEN LEFT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS



NOTES:
1. ALL LIVE-TAPPING WILL BE COMPLETED IN ACCORDANCE WITH CITY OF DOVER WATER DEPARTMENT REGULATIONS.
2. ALL INSTALLATION AND TAPPING OF EXISTING WATER MAINS WILL BE COMPLETED BY AN INDIVIDUAL OR FIRM THAT IS APPROVED BY THE CITY OF DOVER ENGINEERING
3. CONCRETE SHALL NOT CONTACT BOLTS OR END OF MECHANICAL JOINT FITTINGS.
4. SEE THRUST BLOCK TABLES FOR AREA OF CONCRETE REQUIREMENTS.

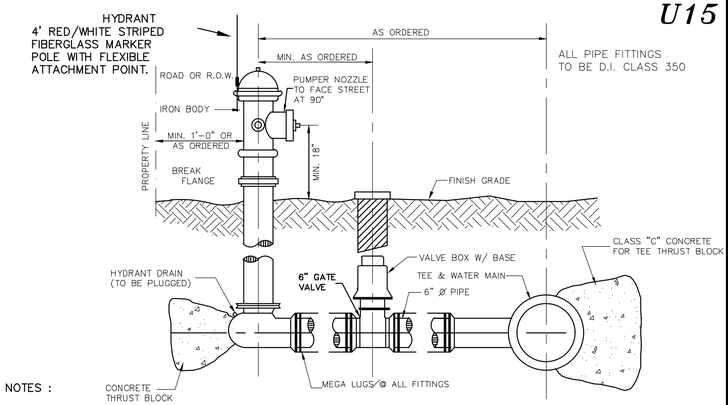
NOTES:
3000 PSI CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.



DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

NOT TO SCALE

U15



NOTES :

1.) THE FIRE HYDRANT IS TO BE PAINTED CITY OF DOVER STANDARD COLORS AND BE EQUIPPED WITH A HYDRANT LOCATOR. SEE CITY OF DOVER INFRASTRUCTURE STANDARDS I-13
2.) THE FIRE HYDRANT SHALL BE THE "KENNEDY" TYPE OR APPROVED EQUAL.
3.) HYDRANTS AND GATE VALVES OPEN LEFT. ALL FITTINGS TO BE D.I. CLASS 350
4.) HYDRANTS TO BE K81D WITH DRAIN-RING PLUGGED.

HYDRANT INSTALLATION DETAIL

NOT TO SCALE

U16

TYPICAL THRUST BLOCKS

NOT TO SCALE

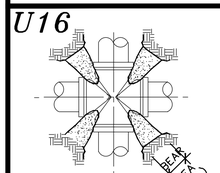


FIGURE 1
CROSS

(ONLY REQ'D IF ANY LEG IS LESS THAN 60 FT. LONG)

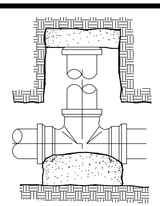


FIGURE 2
TEE, PLUG OR CAP

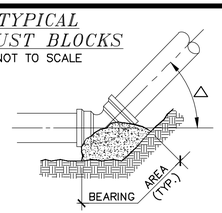


FIGURE 3
HORIZONTAL OR UPWARD VERTICAL BEND

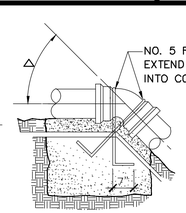


FIGURE 4
DOWNWARD VERTICAL BEND

PIPE I.D.	BEARING AREA, SQUARE FEET						VOLUME OF CONC. CU.YD		
	FIGURE 1	FIGURE 2	FIGURE 3, △				FIGURE 4, △		
			90°	45°	22-1/2°	11-1/4°	45°	22-1/2°	11-1/4°
4"	2	2	2	1	1	1	1.0	.5	.5
6"	2	3	3	2	1	1	1.5	1.0	.5
8"	2	5	6	3	2	1	2.0	1.0	.5
10"	3	7	10	5	3	1	4.0	2.0	1.0
12"	3	10	14	8	4	2			
14"	4	14	20	10	5	3			
16"	4	20	24	12	7	4			
18"	5	24	30	16	10	5			
20"	5	28	40	20	12	6			

GENERAL NOTES:

1. ALL FITTINGS & EXPOSED REBAR TO BE RAPPED W/ TWO LAYERS OF 6 MIL. POLYETHYLENE WHERE COVERED WITH CONCRETE.
2. ALL CONCRETE SHALL BE CLASS C 3000 P.S.I. MINIMUM 28 DAYS COMPRESSIVE STRENGTH.
3. PLACE CONCRETE AGAINST UNDISTURBED EARTH.
4. TABLE DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F.
5. VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.
6. KEEP CONCRETE AWAY FROM FLANGE BOLTS AND FITTINGS.
7. MECHANICAL JOINTS AT ALL FITTINGS IE: BENDS,
8. TEES, CROSSES, AND VALVES SHALL BE THRUST RESTRAINT. (MEGA-LUG OR APPROVED EQUAL.
9. SEE CITY OF DOVER CHAPTER I-17

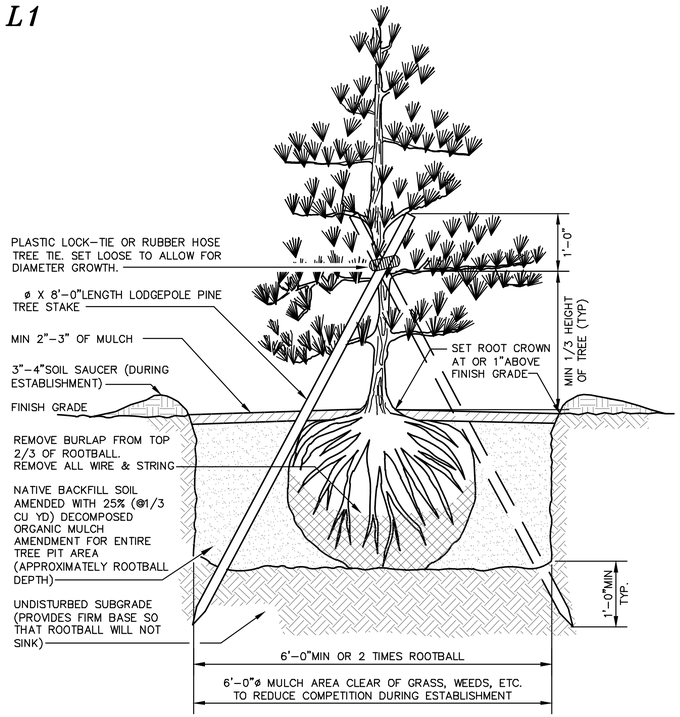
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No. 14243
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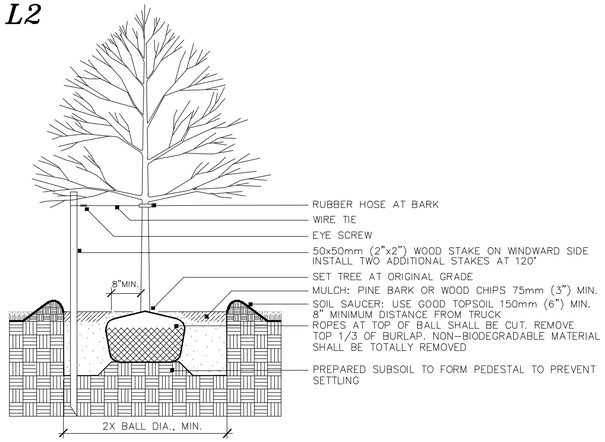
U-102

L1



CONIFEROUS TREE PLANTING

L2



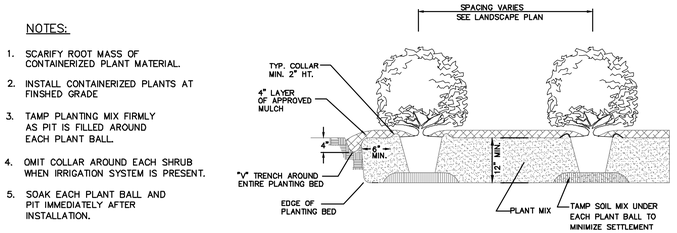
DECIDUOUS TREE PLANTING

NOTE: STAKING TO BE USED IN PARKING ISLANDS AND OTHER CONFINED AREAS AS NECESSARY TO AVOID CONFLICTS WITH PEDESTRIANS

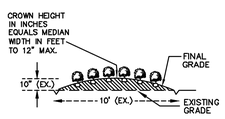
L3

NOTES:

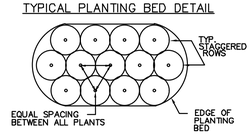
1. SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
2. INSTALL CONTAINERIZED PLANTS AT FINSHED GRADE
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED DETAIL



TYPICAL BED CROWNING

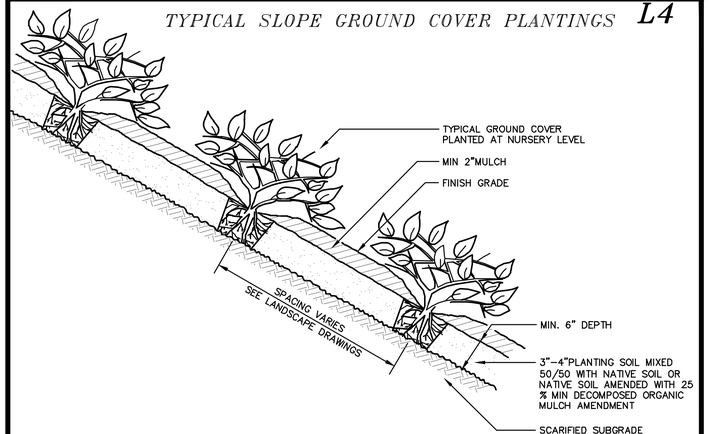


TYPICAL PLANTING BED PLAN

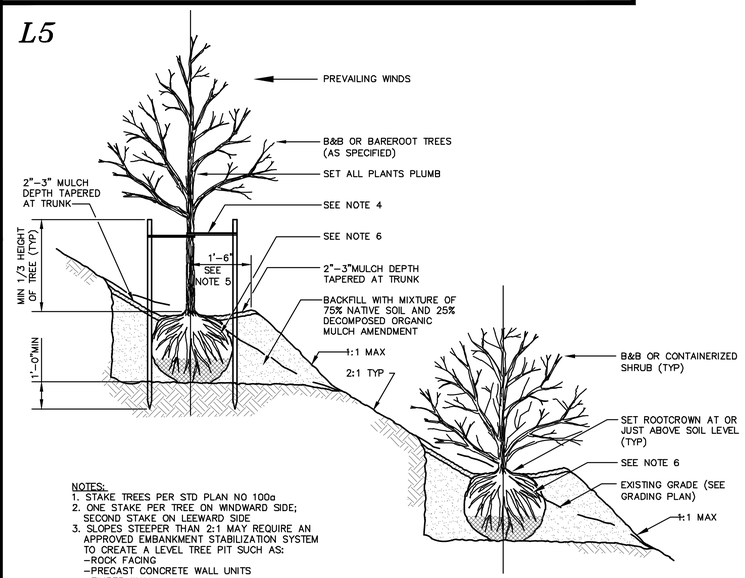
SHRUB & HEDGE PLANTING

L4

TYPICAL SLOPE GROUND COVER PLANTINGS



L5



NOTES:
1. STAKE TREES PER STD PLAN NO 100a
2. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE
3. SLOPES STEEPER THAN 2:1 MAY REQUIRE AN APPROVED EMBANKMENT STABILIZATION SYSTEM TO CREATE A LEVEL TREE PIT SUCH AS:
   –ROCK FACING
   –PRECAST CONCRETE WALL UNITS
   –TIMBER WALL
   –MANUFACTURED SLOPE RETENTION UNITS
4. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
5. SHAPE SOIL TO PROVIDE 3' DIAMETER OR ROOTBALL DIAMETER, WHICHEVER IS GREATER, WATERING RING.
6. REMOVE ALL WIRE AND STRING. REMOVE TOP 2/3 OF BURLAP.

TREE PLANTING ON SLOPES

L6

NOTES:

1.) CALL DIG SAFE PRIOR TO BEGINNING WORK. (1–888–344–7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.

2.) CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.

3.) PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.

4.) ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

5.) ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.

6.) ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.

7.) ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.

8.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.

9.) NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.

10.) ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.

11.) WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL–ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.

12.) MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.

13.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.

14.) THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWING SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.

15.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.

16.) ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.

17.) SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.

18.) ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.

19.) TREES ARE TO BE 2–2.5" CALIPER 6" OFF THE ROOT BALL.

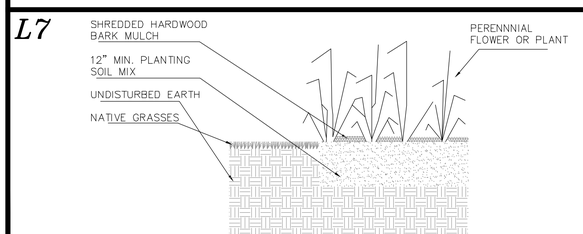
20.) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)

21.) 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY–PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

22.) PLANT–PIT BACK–FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON–SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.

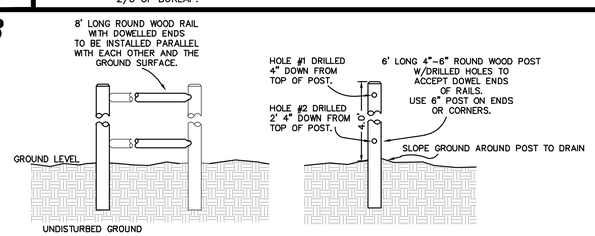
23.) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.

L7



PERENNIAL PLANTING DETAIL

L8



TYPICAL POST & RAIL FENCE DETAIL

NOT TO SCALE

DOVER PLANNING FILE #21–65

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#1	12–16–21	REVISED PER TRC#1 COMMENT

LANDSCAPING DETAILS
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
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TAX MAP H, LOTS 46 & 50

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STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 – LICENSED PROFESSIONAL ENGINEER

L–101



AMERICAN BUMBLE BEE

IDENTIFICATION/DESCRIPTION:

BOMBUS PENSYLVANICUS IS A LARGE BUMBLE BEE WITH THE QUEEN MEASURING 1 IN, THE WORKER FROM 0.5 IN, AND THE MALE FROM 0.75 IN IN LENGTH. THE QUEEN IS MOSTLY BLACK, INCLUDING THE LEGS, SPURS AND TEGULAE (BASE OF WING). TERGITE 1, OR THE MOST ANTERIOR BACK PORTION OF THE QUEEN IS OFTEN YELLOW ESPECIALLY IN THE MIDDLE. WORKER BEES' MIDDLE TERGITES ARE YELLOW, THE TAIL BLACK, AND FACE LONG. THEIR CHEEKS ARE SLIGHTLY LONGER THAN BROAD, AND THE CLYPEUS (NOSE) HAS LARGE PUNCTURES EXCEPT ON THE MID LINE. THE HAIR ON THE TOP OF THE HEAD IS BLACK, SHORT AND EVEN. MALES HAVE A YELLOW ABDOMEN WITH A BLACK HEAD AND BLACK STRIPING IN THE LOWER THORAX.



BLANDINGS TURTLE

IDENTIFICATION/DESCRIPTION:

A 7– TO 9–INCH TURTLE WITH YELLOW SPECKLES THAT OFTEN RUN TOGETHER TO FORM STREAKS ON THE CARAPACE. EASILY IDENTIFIED WHEN BASKING FROM ITS CHARACTERISTIC YELLOW THROAT AND CHIN.



NORTHERN BLACK RACER

IDENTIFICATION/DESCRIPTION:

A SLENDER BLACK SNAKE MEASURING 36–60 INCHES. BLACK RACERS ARE GLOSSY BLACK ON THE TOP AND BOTTOM WITH A WHITE THROAT AND CHIN. YOUNG RACERS ARE PATTERNED WITH BROWN OR REDDISH PATCHES ON A LIGHTER BASE OF GRAY.



SMOOTH GREEN SNAKE

IDENTIFICATION/DESCRIPTION:

A THIN, SLENDER BRIGHT–GREEN SNAKE MEASURING 10–20 INCHES. THE UNDERSIDE IS WHITE OR A PALE YELLOW.



LITTLE BROWN BAT

IDENTIFICATION/DESCRIPTION:

THE LITTLE BROWN BAT IS A SMALL MAMMAL WITH A BODY LENGTH OF 2 1/2 – 4" AND WEIGHING APPROXIMATELY 1/8 TO 1/2 AN OUNCE. THE WINGSPAN OF LITTLE BROWN BATS RANGE FROM 9 – 11". BATS ARE THE ONLY MAMMALS THAT ENGAGE IN TRULY ACTIVE FLIGHT. AS THEIR NAME SUGGESTS THEY ARE GLOSSY BROWN ABOVE WITH A LIGHTER GRAY COLOR BELOW. THESE BATS CAN LIVE 20 TO 30 YEARS.



NORTHERN LONG–EARED BAT

IDENTIFICATION/DESCRIPTION:

THE NORTHERN LONG–EARED BAT IS A MEDIUM–SIZED BAT WITH A BODY LENGTH OF 3 TO 3.7 INCHES BUT A WINGSPAN OF 9 TO 10 INCHES. THEIR FUR COLOR CAN BE MEDIUM TO DARK BROWN ON THE BACK AND TAWNY TO PALE–BROWN ON THE UNDERSIDE. AS ITS NAME SUGGESTS, THIS BAT IS DISTINGUISHED BY ITS LONG EARS, PARTICULARLY AS COMPARED TO OTHER BATS IN ITS GENUS, MYOTIS



EASTERN SMALL–FOOTED BAT

IDENTIFICATION/DESCRIPTION:

THE EASTERN SMALL–FOOTED BAT HAS BROWNISH FUR, OFTEN WITH A GOLDEN SHEEN, THAT CONTRASTS WITH ITS BLACKISH FACE AND EARS, AND BLACKISH–BROWN WINGS AND TAIL MEMBRANE. IT CAN BE DISTINGUISHED FROM OTHER MYOTIS SPECIES BY ITS BLACK MASK AND SMALL SIZE. THE BODY IS LITTLE MORE THAN 3½ INCHES LONG, INCLUDING A 1½–INCH TAIL. ITS SMALL FEET, WHICH PROVIDE THE COMMON NAME, ARE LESS THAN A HALF–INCH AND ITS WINGSPAN RANGES FROM 8¼ TO 9¾INCHES. THIS SPECIES FLIES SLOWLY AND ERRATICALLY, USUALLY ABOUT ONE TO THREE YARDS ABOVE THE GROUND.



SILVER HAIRED BAT

IDENTIFICATION/DESCRIPTION:

THE SILVER–HAIRED BAT IS A MEDIUM–SIZED BAT WITH VERY DARK FUR TIPPED WITH SILVER OR WHITE. THE WINGS AND TAIL MEMBRANE ARE BLACK. EARS ARE SHORT AND ROUND WITH A SHORT, BLUNT–TIPPED TRAGUS. THE DORSAL SURFACE OF THE TAIL MEMBRANE IS PARTIALLY FURRED AND THE CALCAR LACKS A KEEL



TRI–COLORED BAT

IDENTIFICATION/DESCRIPTION:

THE TRICOLORED BAT, FORMERLY KNOWN AS THE EASTERN PIPISTRELLE (PIPISTRELLUS SUBFLAVUS), IS A SMALL BAT WEIGHING 0.2 TO 0.3 OUNCES (5 TO 8 GR) AND HAS A WINGSPAN OF 8 TO 10 INCHES. THE TERM "TRICOLORED" REFERS TO THE BATS YELLOWISHBROWN COAT THAT IS DARK AT THE BASE, YELLOWISH–BROWN IN THE MIDDLE, AND DARK AT THE TIPS. THE WING MEMBRANES ARE BLACKISH, BUT THE FACE AND EARS HAVE A PINKISH COLOR. AN OBVIOUS IDENTIFYING CHARACTERISTIC OF THIS SPECIES IS THE PINK COLOR OF THE SKIN ON THE RADIUS BONE. THE FEET ARE ALSO RELATIVELY LARGE COMPARED TO ITS BODY SIZE.



SPOTTED TURTLE

IDENTIFICATION/DESCRIPTION:

A SMALL 3–5 INCH TURTLE RECOGNIZED BY NUMEROUS YELLOW SPOTS COVERING A DARK CARAPACE. THE NUMBER OF SPOTS IS VARIABLE. SPOTS CAN ALSO BE FOUND ON THE HEAD AND LIMBS.



WOOD TURTLE

IDENTIFICATION/DESCRIPTION:

A 5–8 INCH TURTLE CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WHERE EACH LARGE SCUTE TAKES AN IRREGULAR PYRAMIDAL SHAPE. THE NECK AND FORELIMBS ARE ORANGE.

W–101

DOVER PLANNING FILE #21–65

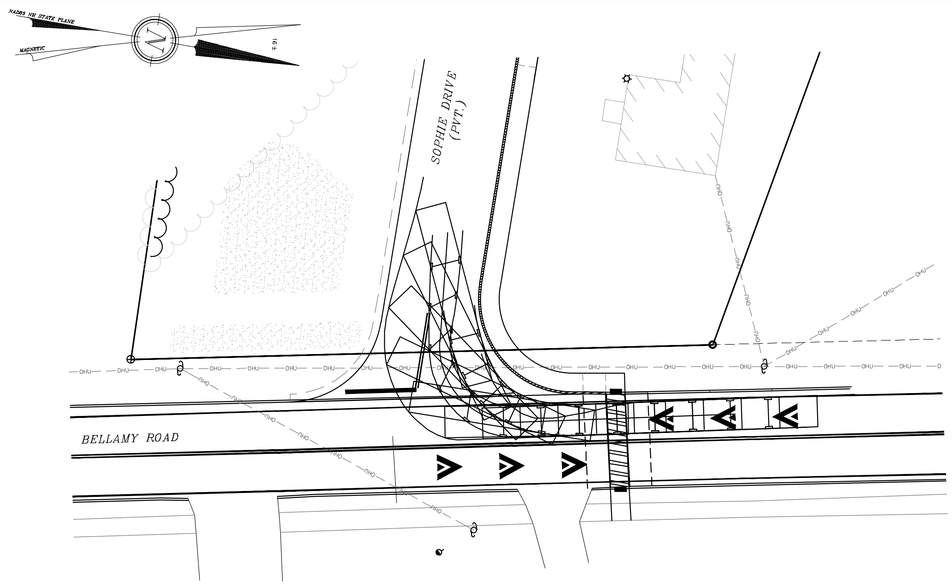
REVISION	DATE	DESCRIPTION
#1	12–16–21	REVISED PER TRC#1 COMMENT

WILDLIFE IDENTIFICATION PLAN
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP H, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

AS NOTED
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 – 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 7424
LICENSED PROFESSIONAL ENGINEER

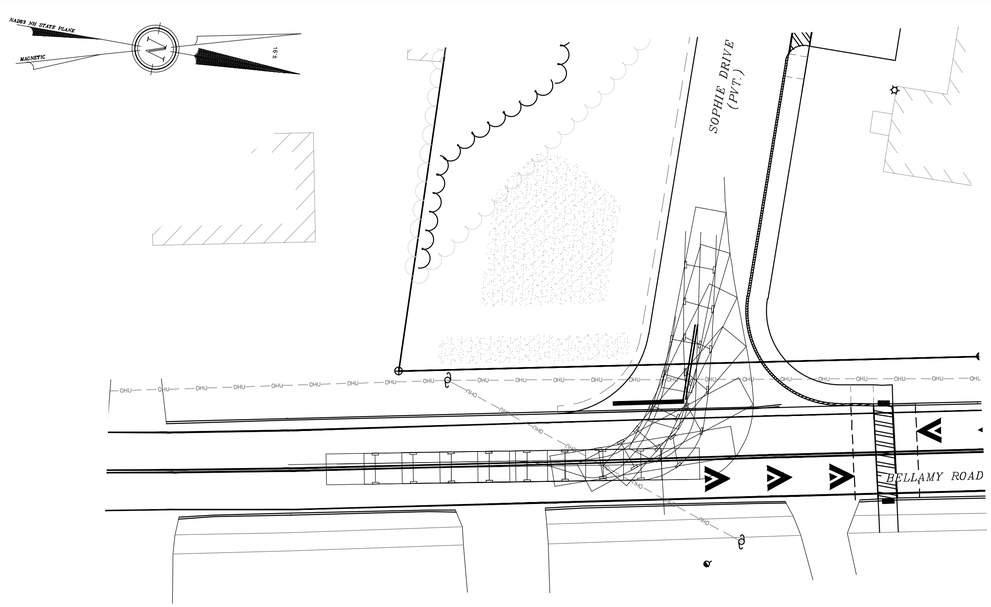


GRAPHIC SCALE

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(IN FEET)
1 inch = 20 ft.

FIRE TRUCK TURNING ENTRANCE RIGHT

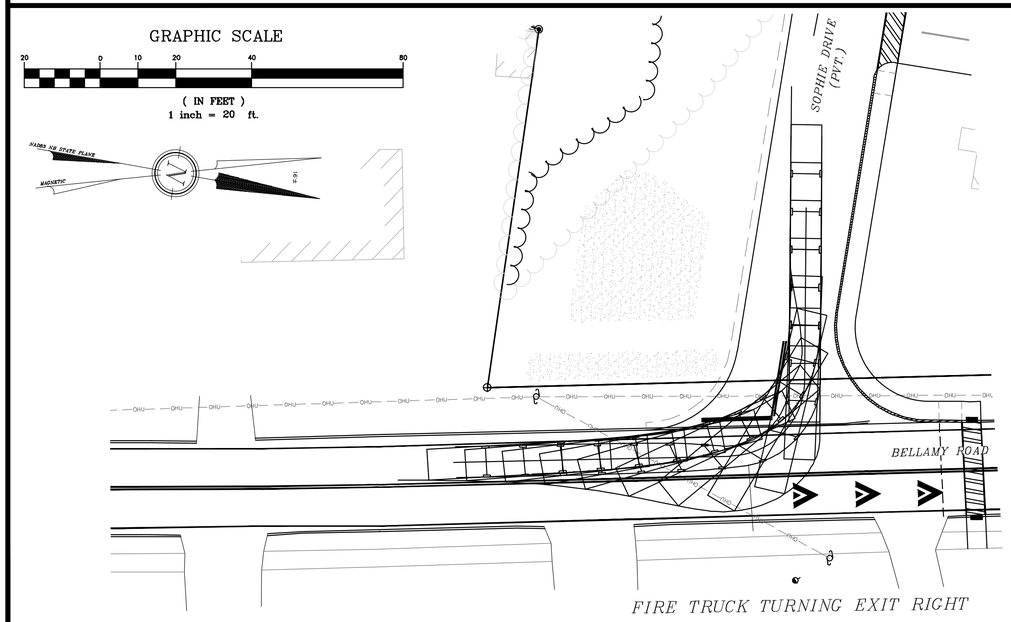


GRAPHIC SCALE

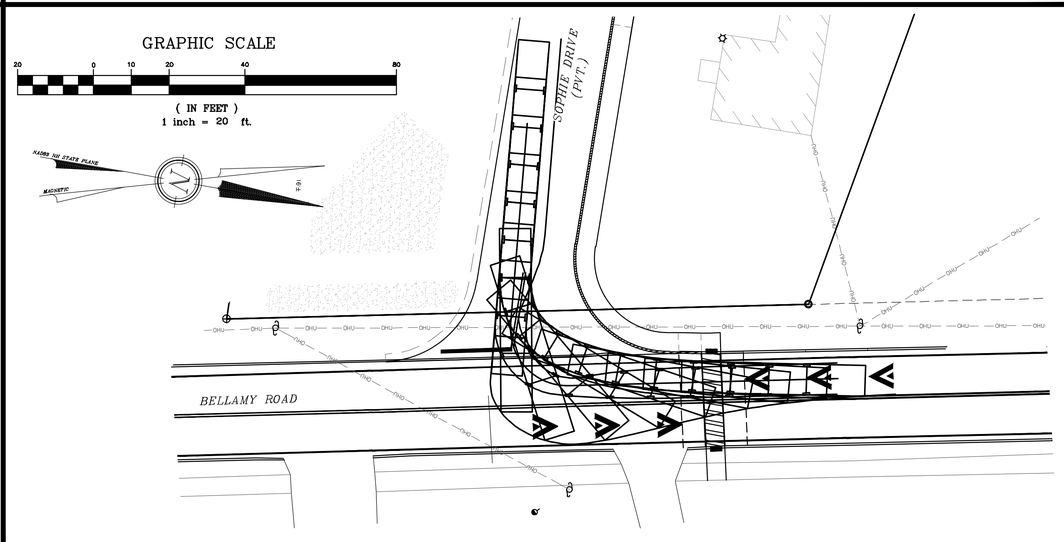
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

FIRE TRUCK TURNING ENTRANCE LEFT



FIRE TRUCK TURNING EXIT RIGHT



FIRE TRUCK TURNING EXIT LEFT

DOVER PLANNING FILE #21-65

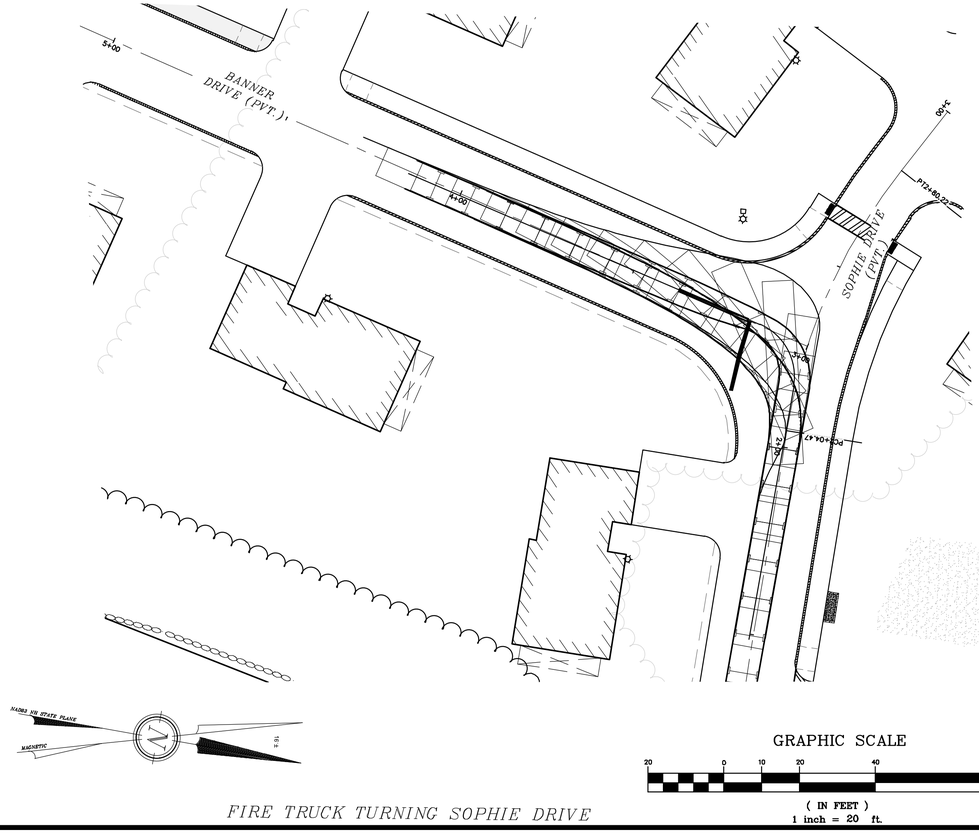
REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

FIRE TRUCK TURNING ENTRANCE BELLAMY
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP 11, LOTS 46 & 50

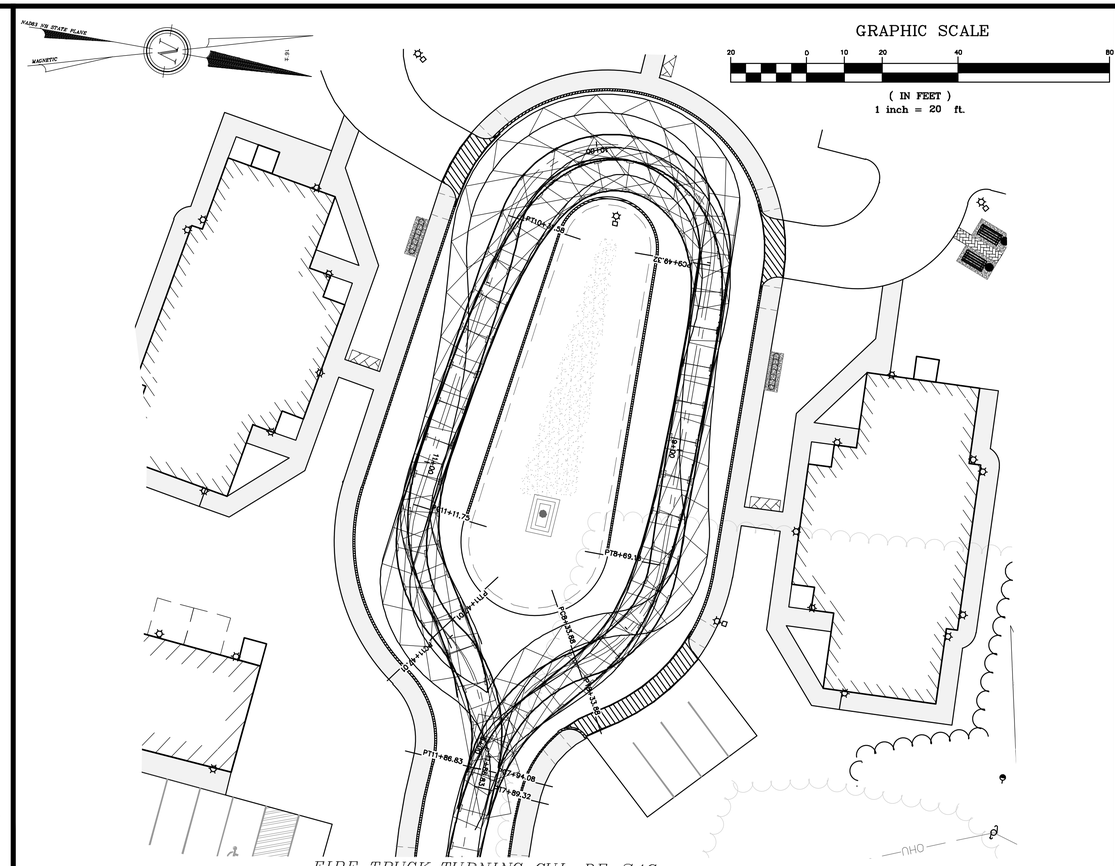
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



FIRE TRUCK TURNING SOPHIE DRIVE



FIRE TRUCK TURNING CUL-DE-SAC

DOVER PLANNING FILE #21-65

REVISION	DATE	DESCRIPTION
#1	12-16-21	REVISED PER TRC#1 COMMENT

FIRE TRUCK TURNING SOPHIE & BANNER DRIVE
LAND OF
KNOX MARSH DEVELOPMENT
51 BELLAMY ROAD
GARY V. & KIM T. BATES
65 BELLAMY ROAD
DOVER, N.H.
TAX MAP 11, LOTS 46 & 50

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : AUGUST 5, 2021
FILE NO. : DB 2021 - 120

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14213
LICENSED
PROFESSIONAL ENGINEER

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

City of Dover Planning Department
Attention: Assistant City Planner Donna Benton
288 Central Ave.
Dover, NH 03820

August 5, 2021; Rev: November 29, 2021

RE: Traffic Impact Analysis & Distribution
Knox Marsh Development, LLC
Dove Development Group, LLC
Tax Map H, Lots 46 & 50
51 & 65 Bellamy Road
Dover, NH 03820

Ms. Benton,

Pursuant to the City of Dover Site Review Regulations, Berry Surveying & Engineering (BS&E), on behalf of Knox Marsh Development, LLC and Dove Development Group, LLC, has prepared a Standard Traffic Impact Analysis for the development of thirteen single family homes and 18 multi-family units on Tax Map H, Lots 46 & 50. The point of analysis is the intersection of the proposed site entrance, Sophie Drive, and Bellamy Road.

The following conclusions were reached as a result Traffic Impact Analysis:

- A total of 17 vehicle trips (4 enter/13 exit) are predicted to occur at the weekday AM peak hour and 22 vehicle trips (14 enter/8 exit) at the PM peak hour.
- The 2022 and 2032 build traffic volumes DO NOT satisfy the NCHRP 457 guidelines for the implementation of a left-turn lane for all peak hours.
- The 2022 and 2032 build traffic volumes DO NOT satisfy the NCHRP 457 guidelines for the implementation of a right-turn lane for all peak hours.
- This is an increase of 16 weekday AM peak hour trips and 21 weekday PM peak hour trips.
- It is recommended that the surrounding infrastructure will be sufficient to handle the projected increase in vehicle trips and peak hour and all other hours.

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Proposed Development & Introduction

The proposal is to redevelop Tax Map H Lots 46 & 50 to contain a total of thirty-one units. Thirteen single family homes and eighteen multifamily low-rise housing units. Of these thirty-one, a single family home exists and will remain on Lot 46 and an existing duplex will remain on Lot 50. The remaining sixteen multi-family units will be in four, four-plex style buildings. The proposed access to the site is a 24 foot wide roadway, known as Sophie Drive, with 25 foot pavement entrance radii for vehicle turning. Sophie Drive is 794 LF to the neck of the cul-de-sac, and a total of 1,187 LF. The proposed entrance is located on Lot 46 adjacent to the existing single family home. The existing duplex on Lot 50 shares a driveway with a single family home on Tax Map H, Lot 50-A. Both will continue use of the existing driveway and the remaining units will utilize Sophie Drive to access Bellamy Road. The purpose of this analysis is to determine the maximum number of trips coming to and leaving the proposed project site during certain peak periods of the day. This information is then used in determining the impact on safety as it relates to the existing roadway infrastructure. The following components of the analysis are typical for a project of this size pursuant to the Institute of Traffic Engineers (ITE) manual.

Existing Conditions

Existing Site Description

The existing site consists of two lots, Tax Map H, Lot 46 & 50. These parcels contain 1.49 Ac. and 6.30 Ac. of land, respectively. Lot 46 contains a single family home and the right of way for Sophie Drive. Lot 46 consists of a duplex building with various garages and structures. These auxiliary garages and structures are proposed to be removed with the exception of the existing barn which will be converted into a four-plex style building and utilize Sophie Drive. The site is located in the R-40 zone, and is surrounded by single family homes. Located 0.2 miles to the north is Alumni Drive, with NH Route 16 accessed from the north and NH Route 108 accessed to the south. There are several residential driveway surrounding the site.

Bellamy Road Roadway Description

Bellamy Road is a two lane minor arterial roadway, according to the NHDOT MS2 Transportation Management System (NHDOT). This portion of Bellamy Road runs north to south, directly connecting to NH Route 155, NH Route 9, and NH Route 16 to the north and NH Route 108 to the south. It has an Annual Average Daily Traffic (AADT) of approximately 6,952 (2019) divided between north and south in the data provided by the NHDOT.

Bellamy Road in the area of the project is composed of a twenty-four foot wide paved surface with ten foot travel lanes, variable width paved shoulders and curbing on the east and west sides of the road with a sidewalk on the eastern side of the roadway. There is centerline delineation and fog / edge lines provided. The posted speed limit of the roadway is 30 miles per hour (MPH). The subject parcel is located next to the beginning of a school zone, which reduces the

speed limit to 20 MPH during school times. The geometry of Bellamy Road is relatively flat and straight in the project location. There is a proposed crosswalk from the subject parcel to the sidewalk across the street. This proposed crosswalk will help to provide safe access not only to Dover Middle & High School, but to the coast bus stop at the intersection of NH 108 and Bellamy Road which is ¼ of a mile south from the subject parcel.

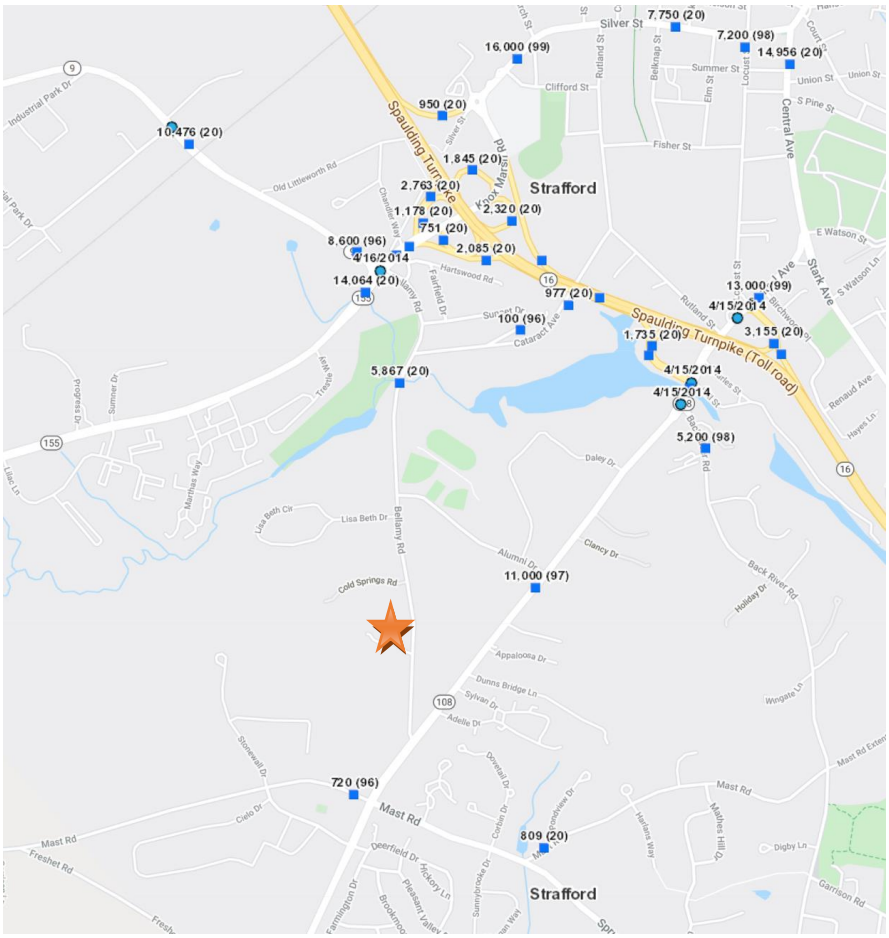


Figure 1: Bellamy Road with surrounding roadways (NHDOT)

Existing Traffic Volumes

According to traffic counts recorded the NHDOT for June 11th - 13th 2019, the Bellamy Road AM and PM weekday two-way peaks were 1,153 trips and 761 trips, respectively. It is shown by the NHDOT that this portion of Bellamy Road has an AADT of 6,952 vehicles (2019). Traffic counts provided by NHDOT only show two-way traffic volumes for these recent dates. Without this directional data, an assumption has been made that 75% of traffic in the AM weekday peak hour travels to the north towards NH Route 16 and 25% travels south towards NH Route 108. It has also been assumed that during the PM weekday peak hour that 75% of traffic travels south

from NH Route 16 and 25% travels north towards NH Route 16. NHDOT traffic counts from 2016 and 2013 were not used in determining a directional distribution because of the August traffic count time not coinciding with school generated traffic seen in the month of June. Using this 25/75 assumption results in the highest weekday peak hour traffic volume on this section of Bellamy Road northbound occurred from 7-8 AM with 865 vehicles and from 5-6 PM with 190 vehicles. Southbound highest weekday peak hour traffic volume occurred from 7-8 AM with 288 vehicles and from 5-6 PM with 571 vehicles. Traffic counts of Bellamy Road provided by the NHDOT are included in Appendix A as Figures 10-12.

Traffic Distribution Bellamy Road						
Date	Northbound		Southbound		Two-Way	
Tuesday 6/11/19	AM Peak	865	AM Peak	288	AM Peak	1153
	PM Peak	162	PM Peak	485	PM Peak	646
Wednesday 6/12/19	AM Peak	730	AM Peak	243	AM Peak	973
	PM Peak	190	PM Peak	571	PM Peak	761
Thursday 6/13/19	AM Peak	728	AM Peak	243	AM Peak	971
	PM Peak	147	PM Peak	441	PM Peak	588
Average Peak Hour Traffic	AM Peak	774	AM Peak	258	AM Peak	1063
	PM Peak	166	PM Peak	499	PM Peak	704
% Distribution	AM Peak	75.0	AM Peak	25.0		
	PM Peak	25.0	PM Peak	75.0		

Table 1: Assumed directional breakdown of trips occurring on Bellamy Road

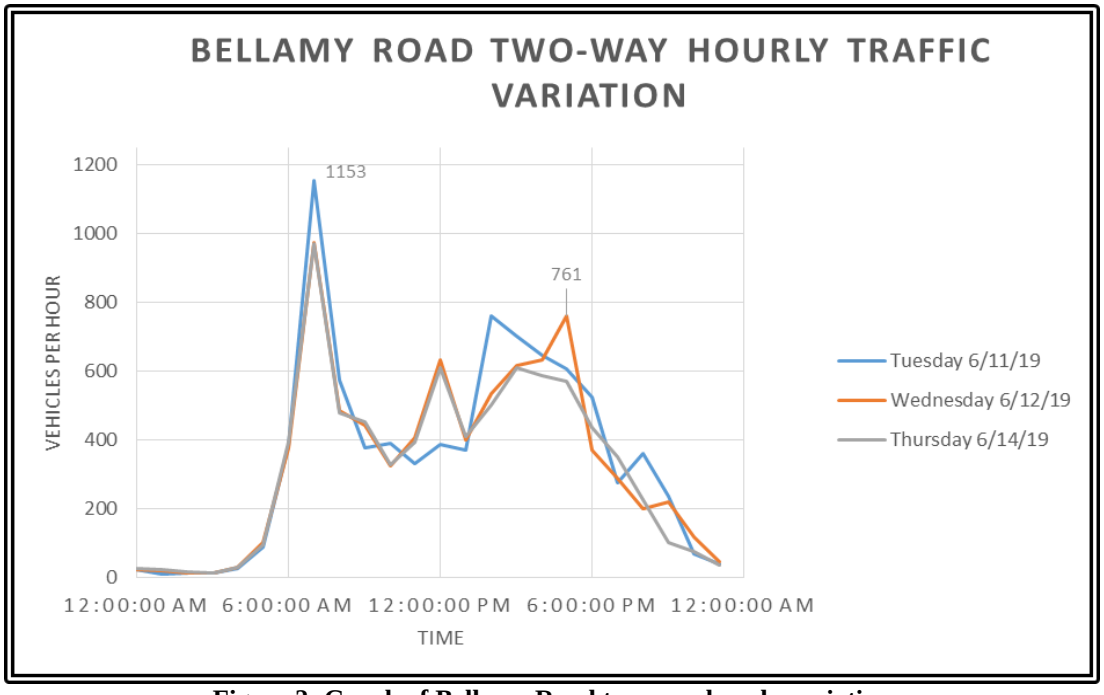


Figure 2: Graph of Bellamy Road two-way hourly variation

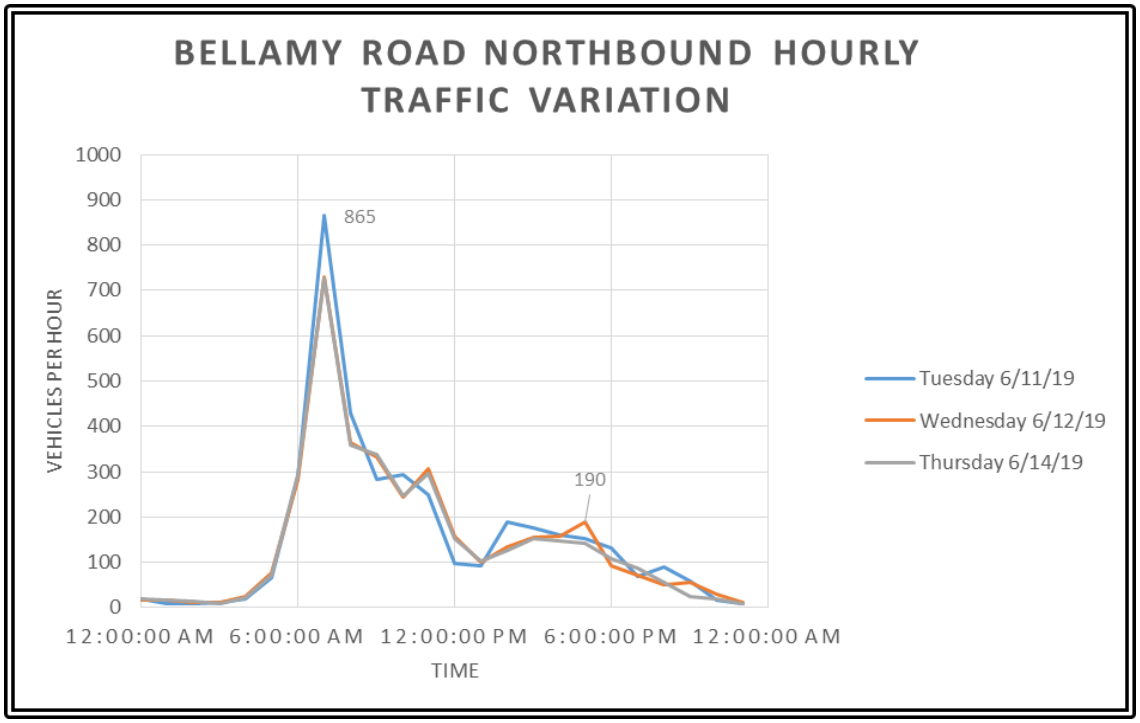


Figure 3: Graph of Bellamy Road northbound hourly variation with peak values

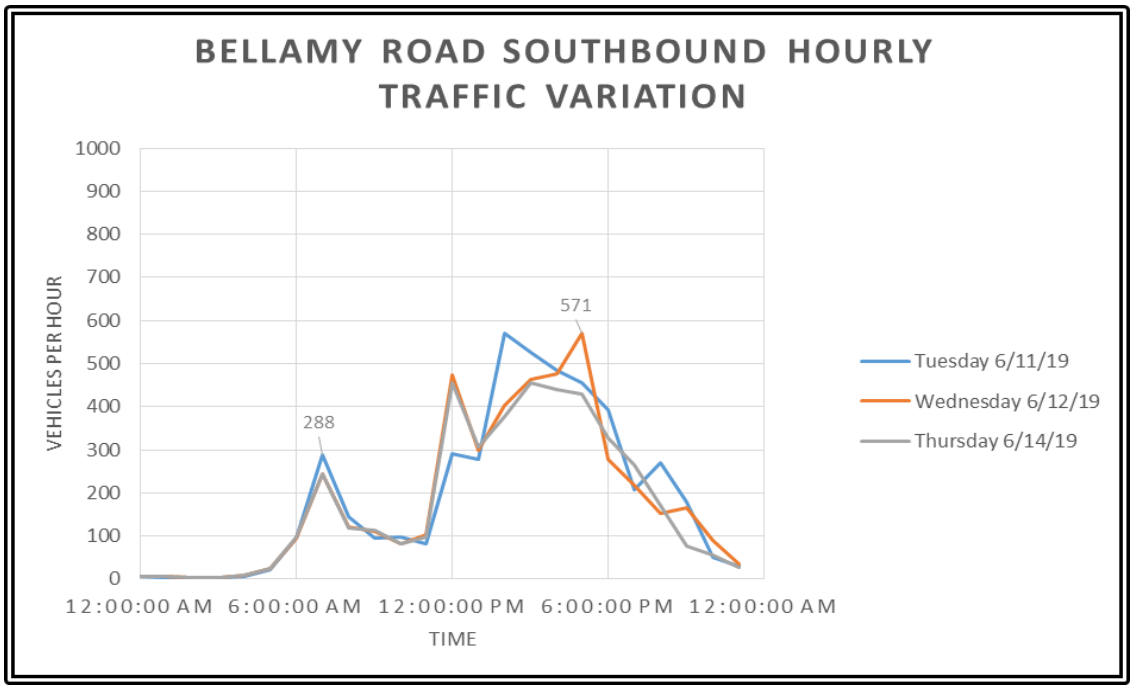


Figure 4: Graph of Bellamy Road southbound hourly variation with peak values

Traffic counts obtained from NHDOT in 2019 have been compared to 2021 traffic counts obtained by Pernaw & Company, Inc for a residential project proposed on Cataract Avenue that includes four apartment buildings (156 new dwelling units). Traffic counts were performed on June 10, 2021 and can be found in Appendix E under Supplemental Traffic Counts and Data[1]. The recently performed traffic counts have been adjusted with the proposed 156 dwelling units generation, generation from 10 single family lots on the recently approved Porch Light Drive project, and an estimate of student drivers from the Dover High School Senior class that may have been out of classes when the June 10th, 2021 traffic counts were performed. Table #2 shows the 2021 recorded traffic counts and the adjustment made from the previously mentioned factors.

	Northbound Vehicle Count Thursday 6/10/21		Southbound Vehicle Count Thursday 6/10/21		Two-Way Vehicle Count Thursday 6/10/21	
No-Build Condition Bellamy Road 2021 Count Pernaw	AM Peak	425	AM Peak	513	AM Peak	938
	PM Peak	403	PM Peak	286	PM Peak	689
Macintosh Commons Build Condition	AM Peak	434	AM Peak	522	AM Peak	956
	PM Peak	439	PM Peak	322	PM Peak	761
Porch Light Drive Build Condition	AM Peak	2	AM Peak	2	AM Peak	4
	PM Peak	3	PM Peak	2	PM Peak	5
Dover HS Senior Class Adjustment	AM Peak	120	AM Peak	120	AM Peak	240
	PM Peak	120	PM Peak	120	PM Peak	240
Peak Hour Adjusted Volumes Used in Analysis	AM Peak	556	AM Peak	644	AM Peak	1200
	PM Peak	562	PM Peak	444	PM Peak	1006
% Distribution	AM Peak	46.3	AM Peak	53.7		
	PM Peak	55.9	PM Peak	44.1		

Table 2: Adjustment of Pernaw & Company, Inc. 2021 Traffic Volumes Bellamy Road

The following table demonstrates the derivation of the Dover High School Senior class driving adjustment. In 2021, Dover High School has 1,319 students according to Publicschoolreview.com[2]. The assumption is made that approximately 25% of this population is Senior Students and assumed that 75% of Senior Students drive to school. Based upon this assumption, the ratio of AADT between NH Route 155 and Central Avenue is analyzed to determine a directional distribution volume. Using data from NHDOT, the Central Avenue and NH Route 155 AADTs are shown and a distribution of student direction is determined.

			Estimated Driving High School Seniors: 245	
Central Avenue AADT (2019):	18,047			
NH Route 155 AADT (2019):	17,366			
Combined AADT	35,413		Percentage	Value
Percent enter generated from Central Avenue			51.0	125
Percent enter generated from NH Route 155			49.0	120
Percent exit generated to Central Avenue			51.0	125
Percent exit generated to NH Route 155			49.0	120

Table 3: Dover Senior Student Volume Adjustment

Accouting for the three different peak hour adjustments of Macintosh Commons growth, Porch Light Drive growth, and potential Dover High School Senior Students, 2021 AM and PM Peak

hour northbound traffic volumes utilized are 556 and 562, respectively. Southbound 2021 AM and PM traffic volumes utilized are 664 and 444, respectively. The data obtained from Stephew G. Pernaw & Company, Inc. is also the perfered data set due to the availibility of a directional distrubution as opposed to utilizing the assumed distribution. While considering this factor, a comparison of the 2021 recorded traffic volumes compared to the data obtained from the NHDOT still shows the varibility of traffic volumes that are experienced in this roadway.

[1] Stephen G. Pernaw & Company, Inc., *Traffic Impact Assessment Proposed Residential Development, Dover, NH*, Prepared for Baker Properties, LLC. July 2021.

[2] Dover Senior High School (2021-22 Ranking): Dover, NH. (n.d.). Retrieved from https://www.publicschoolreview.com/dover-senior-high-school-profile

Existing Vehicle Speeds

As previously mentioned, the posted speed limit of Bellamy Road is 30 MPH. For the purposes of the safety analysis below, the 85th percentile of speed is required. This particular section of Bellamy Road was observed by Berry Surveying & Engineering to analyze the pass by traffic, reviewing speed. Excessive speeds were rare, and most operators obeyed the posted speed limits within a deviation of 10 MPH. This is consistent with speeds found on urban roads. The 85th percentile derived by observation and consistency with general practice is 40 MPH. As a conservative estimate, this 85th percentile speed of 40 MPH is used during school time and the AM weekday peak hour. The proposed Site Plan includes a speed table in front of Sophie Drive to further reduce speeds on Bellamy Road. Even with the addition of a speed table, BS&E has performed the left-turn and right-turn warrants analysis at 85th percentile speed of 40 MPH.

Existing Trip Generation

The10th Edition ITE Trip Generation Manual was used to determine the existing volume of trips, as well as the percentage of entrance-to-exit traffic experienced during the AM & PM peak hours between 7 and 9 AM and 4 and 6 PM. Land Use Codes Single Family Detached Housing (210) was used in deriving the trip generation for the existing site. Tables 4 and 5 provide average trip rate, total trips generated, enter to exit ratio, and the enter to exit distribution.

Single Family Detached Housing Existing Trip Generation:

Time Method	Weekday Total (Page 2) Dwelling Units			Time Method	AM Peak Adj. Street (Page 3) Dwelling Units			Time Method	PM Peak Adj. Street (Page 4) Dwelling Units		
# Units	1			# Units	1			# Units	1		
Avg. Rate	9.44			Avg. Rate	0.74			Avg. Rate	0.99		
Total Trips	9.4			Total Trips	0.7			Total Trips	1.0		
% Enter	50.0	Total Enter	4.7	% Enter	25.0	Total Enter	0.2	% Enter	63.0	Total Enter	0.6
% Exit	50.0	Total Exit	4.7	% Exit	75.0	Total Exit	0.6	% Exit	37.0	Total Exit	0.4

Table 4: (Single Family Detached Housing) Peak hour of adjacent street traffic AM & PM

Total Existing Trip Generation:

Time Method	Weekday Total (Page 2) Dwelling Units			Time Method	AM Peak Adj. Street (Page 3) Dwelling Units			Time Method	PM Peak Adj. Street (Page 4) Dwelling Units		
Total Trips	9.4			Total Trips	0.7			Total Trips	1.0		
% Enter	50.0	Total Enter	4.7	% Enter	25.0	Total Enter	0.2	% Enter	63.0	Total Enter	0.6
% Exit	50.0	Total Exit	4.7	% Exit	75.0	Total Exit	0.6	% Exit	37.0	Total Exit	0.4

Table 5: Total existing trip generation peak hour of adjacent street traffic AM & PM

Proposed Trip Generation

The 10th Edition ITE Trip Generation Manual was used to determine the proposed volume of trips. Included is the percentage of entrance-to-exit traffic experienced during the weekday AM & PM peak hours between 7 and 9 AM and 4 and 6 PM, Saturday peak hour between 11 AM and 1 PM, total weekday volume, and total Saturday volume. Land Use Code Single Family Detached Housing (210) and Multifamily Housing (Low-Rise) was used in deriving the proposed trip generation from the project site. Tables 6-10 provide average trip rate, total trips generated, enter to exit ratio, and the enter to exit distribution. The existing duplex on Lot 50 will continue to utilize the existing driveway and will not utilize Sophie Drive.

Single Family Detached Housing:

Time Method	Weekday Total (Page 2) Dwelling Units			Time Method	AM Peak Adj. Street (Page 3) Dwelling Units			Time Method	PM Peak Adj. Street (Page 4) Dwelling Units		
# Units	12			# Units	12			# Units	12		
Avg. Rate	9.44			Avg. Rate	0.74			Avg. Rate	0.99		
Total Trips	113.3			Total Trips	8.9			Total Trips	11.9		
% Enter	50.0	Total Enter	56.6	% Enter	25.0	Total Enter	2.2	% Enter	63.0	Total Enter	7.5
% Exit	50.0	Total Exit	56.6	% Exit	75.0	Total Exit	6.7	% Exit	37.0	Total Exit	4.4

Table 6: (Single Family Detached Housing) Peak hr of adjacent street traffic AM, PM, & weekday total

Multi-Family Housing (Low-Rise):

Time Method	Weekday Total (Page 2) Dwelling Units			Time Method	AM Peak Adj. Street (Page 3) Dwelling Units			Time Method	PM Peak Adj. Street (Page 4) Dwelling Units		
# Units	16			# Units	16			# Units	16		
Avg. Rate	7.32			Avg. Rate	0.46			Avg. Rate	0.56		
Total Trips	117.1			Total Trips	7.4			Total Trips	9.0		
% Enter	50.0	Total Enter	58.6	% Enter	23.0	Total Enter	1.7	% Enter	63.0	Total Enter	5.6
% Exit	50.0	Total Exit	58.6	% Exit	77.0	Total Exit	5.7	% Exit	37.0	Total Exit	3.3

Table 7: (Single Family Detached Housing) Peak hr of adjacent street traffic AM, PM, & weekday total

Total Additional Proposed Trip Generation:

Time Method	Weekday Total (Page 2) Dwelling Units			Time Method	AM Peak Adj. Street (Page 3) Dwelling Units			Time Method	PM Peak Adj. Street (Page 4) Dwelling Units		
Total Trips	230.4			Total Trips	16.2			Total Trips	20.8		
% Enter	50.0	Total Enter	115.2	% Enter	24.1	Total Enter	3.9	% Enter	63.0	Total Enter	13.1
% Exit	50.0	Total Exit	115.2	% Exit	75.9	Total Exit	12.3	% Exit	37.0	Total Exit	7.7

Table 8: Additional proposed trip generation from the project site during AM, PM, & weekday total

Total Existing & Proposed Trip Generation:

Time	Weekday Total Sophie Drive			Time	AM Peak Hour Sophie Drive			Time	PM Peak Hour Sophie Drive		
Total Trips	239.8			Total Trips	17.0			Total Trips	21.8		
% Enter	50	Total Enter	119.9	% Enter	24.1	Total Enter	4.1	% Enter	63.0	Total Enter	13.8
% Exit	50	Total Exit	119.9	% Exit	75.9	Total Exit	12.9	% Exit	37.0	Total Exit	8.1

Table 9: Proposed trip generation from the project site Saturday & Sunday peak hour

Changes in Trip Generation:

Changes in Trip Generation	
Time	# Trips Increased
Weekday AM Peak	16.2
Weekday PM Peak	20.8

Table 10: Changes in trip generation

Build Traffic Projections and Turning Analysis

Traffic data obtained from Pernaw & Company, Inc in 2021 has been projected to 2022 and ten years further to 2032. This has been done using a June peak seasonal adjustment factor of 1.02 (AM, PM) and using an annual growth rate of 1%, compounded annually. The derivation of the peak seasonal adjustment factor comes from an average series of values from other urban highways from across New Hampshire, which can be found as Table 17 in Appendix C. Figures 5 and 6 show the build turning movements to and from the proposed site during weekday AM and PM peak hours. These figures also show the projected volume of traffic northbound and southbound on Bellamy Road for 2022 and 2032. This data is then used to preform NCHRP 457 left-turn and right-turn bay warrant analyses. Appendix B contains the data that was used to conduct the analyses as Figures 13-14 and 19-20. A visual of these turning movements is shown in the following figures.

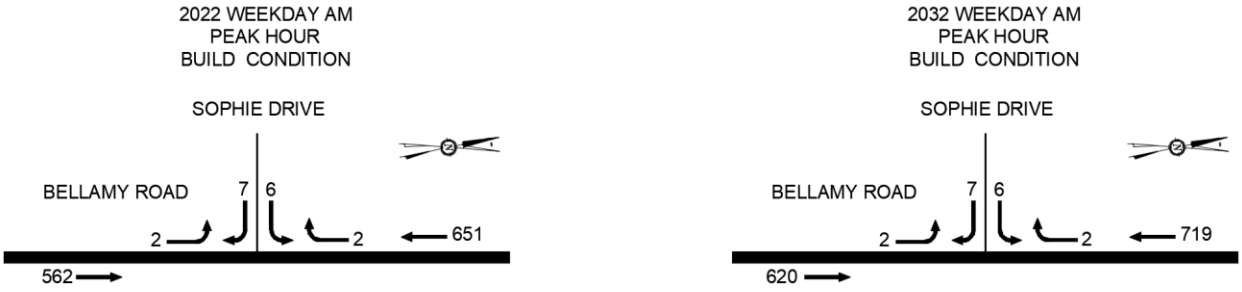


Figure 5: 2022 & 2032 build projected traffic volumes & turn movement weekday AM peak



Figure 6: 2022 & 2032 build projected traffic volumes & turn movement weekday PM peak

Tables 11 & 12 show in a tabular format the total trips that are calculated to occur to and from the proposed site entrance are shown at the weekday peak hours analyzed in a build situation. These trips are further broken down into enter and exit to and from the site as well as percentage of left and right turns.

Time	AM Peak Hour	# Trips	Turn Type	% Distribution
Total Trips	17.0			
Trips Enter from Bellamy Road Northbound		1.9	Left	11.2
Trips Enter from Bellamy Road Southbound		2.2	Right	13.0
Trips Exit to Bellamy Road Northbound		6.0	Left	35.2
Trips Exit to Bellamy Road Southbound		6.9	Right	40.7

Table 11: Weekday AM peak hour build turning movements to and from Sophie Drive

Time	PM Peak Hour	# Trips	Turn Type	% Distribution
Total Trips	21.8			
Trips Enter from Bellamy Road Northbound		7.7	Left	35.2
Trips Enter from Bellamy Road Southbound		6.1	Right	27.8
Trips Exit to Bellamy Road Northbound		4.5	Left	20.7
Trips Exit to Bellamy Road Southbound		3.6	Right	16.3

Table 12: Weekday PM peak hour build turning movements to and from Sophie Drive

Left-Turn Warrants Analysis

Depending on vehicle speed, advancing vehicular volumes, opposing vehicular volumes, and the percent of left turns that vehicles are predicted to make, certain roadways may require special treatment for vehicles making left turning maneuvers. The determination of this special treatment is determined by the NCHRP 457 left-turn bay guidelines. Calibration constants of 3.0 seconds are used for average left turn time, 5.0 seconds for critical headway, and 1.9 seconds for vehicles to clear the advancing lane. If warranted, the left turn bay would allow for deceleration of vehicles and storage in the queue to wait safely for advancing traffic to pass.

The traffic volumes obtained from Pernaw & Company, Inc from 2021 projected to 2022 and 2032 were used to determine if a left-turn bay is warranted to safely enter the site. It has been calculated that approximately 2 trips are to occur turning left into the site during the weekday AM peak hour and 8 trips during the PM peak hour. The projection of the traffic volumes and data used to conduct the left-turn bay warrant analyses are included in Appendix B as Figures 13-14. The full warrant analyses can be found in Appendix B as Figures 15-18. Tables 13 & 14 are summaries of the left-turn bay warrant analyses for the proposed site entrance. Using the 85th percentile speed of 40 MPH, it was determined that a left-turn bay IS NOT warranted to safely enter the proposed site. BS&E additionally evaluated the potential of an 85th percentile speed of 50 MPH for a conservative estimate. The result remained the same that left-turn bay IS NOT warranted to safely enter the proposed site

Left-Turn Lane Warrants Analysis Bellamy Road		
Factors	2022 Weekday AM Build Volume	2032 Weekday AM Build Volume
Left-Turn Volume (NB)	2	2
Advancing Volume (NB) (L+TR+R)	575	635
Opposing Volume (SB) (TR+R)	664	733
Percent Lefts	0%	0%
85th Percentile Speed (MPH)	40	40
Limiting Adv. Volume (veh/hr)	1,467	1,439
Left-Turn Bay Warranted	NO	NO

Table 13: Summary of Weekday AM peak hour NCHRP 457 left-turn bay analysis

Left-Turn Lane Warrants Analysis Bellamy Road		
Factors	2022 Weekday PM Build Volume	2032 Weekday PM Build Volume
Left-Turn Volume (NB)	8	8
Advancing Volume (NB) (L+TR+R)	591	651
Opposing Volume (SB) (TR+R)	461	510
Percent Lefts	1%	1%
85th Percentile Speed (MPH)	40	40
Limiting Adv. Volume (veh/hr)	958	911
Left-Turn Bay Warranted	NO	NO

Table 14: Summary of Weekday PM peak hour NCHRP 457 left-turn bay analysis

Right-Turn Warrants Analysis

Depending on vehicle speed, advancing vehicular volumes, and the percent of right turns that vehicles are predicted to make, certain roadways may require special treatment for vehicles making right turning maneuvers. The determination of this special treatment is determined by the NCHRP 457 right turn bay guidelines. If warranted, the right-turn bay would allow for deceleration of vehicles and storage in the queue to wait safely for right turning traffic to clear.

The traffic volumes obtained from Pernaw & Company, Inc from 2021 projected to 2022 and 2032 were used to determine if a right-turn bay is warranted to safely enter the site. It has been calculated that approximately 2 trips are to occur turning left into the site during the weekday AM peak hour and 6 trips during the PM peak hour. The projection of the traffic volumes and data used to conduct the right-turn bay warrant analyses are included in Appendix B as Figures 17-18. The full warrant analyses can be found in Appendix B as Figures 21-24. Tables 15 & 16 are summaries of the right-turn bay warrant analyses for the proposed site entrance. Using the 85th percentile speed of 40 MPH, it was determined that a right-turn bay IS NOT warranted to safely enter the proposed site. BS&E additionally evaluated the potential of an 85th percentile speed of 50 MPH for a conservative estimate. The result remained the same that right-turn bay IS NOT warranted to safely enter the proposed site

Right-Turn Lane Warrants Analysis Bellamy Road		
Factors	2022 Weekday AM Build Volume	2032 Weekday AM Build Volume
Right-Turn Volume (SB)	2	2
Advancing Volume (SB) (L+TR+R)	666	735
85th Percentile Speed (MPH)	40	40
Limiting Right-Turn Volume (veh/hr)	41	32
Right-Turn Bay Warranted	NO	NO

Table 15: Summary of Weekday AM peak hour NCHRP 457 right-turn bay analysis

Right-Turn Lane Warrants Analysis Bellamy Road		
Factors	2022 Weekday PM Build Volume	2032 Weekday PM Build Volume
Right-Turn Volume (SB)	6	6
Advancing Volume (SB) (L+TR+R)	585	645
85th Percentile Speed (MPH)	40	40
Limiting Right-Turn Volume (veh/hr)	58	45
Right-Turn Bay Warranted	NO	NO

Table 16: Summary of Weekday PM peak hour NCHRP 457 right-turn bay analysis

Sight Distance and Safety Analysis

Sight distance on Bellamy Road to the north and south, as well as roadway alignment are the two determining factors of safety. For the proposed entrance, sight distance to the north un-obstructed for well over 305 feet (measured), while sight distance to the south is un-obstructed for well over 305 feet (measured). In this instance both the northerly and southerly sight distances meet and exceed the standard AASHTO 40MPH standard practice of 305 feet. There are no improvements required to obtain this sight distance.

With respect to general safety of Bellamy Road in relation to the peak hour trip generation and AADT, it is our assessment that the cross section of pavement and shoulder widths are appropriate.
*****AASHTO Geometric Design of Highways and Streets (2018)

Conclusions and Recommendations

1.) A total of 17 vehicle trips (4 enter/13 exit) are predicted to occur at the weekday AM peak hour and 22 vehicle trips (14 enter/8 exit) at the PM peak hour.

2.) The 2022 and 2032 build traffic volumes DO NOT satisfy the NCHRP 457 guidelines for the implementation of a left-turn lane for all peak hours.

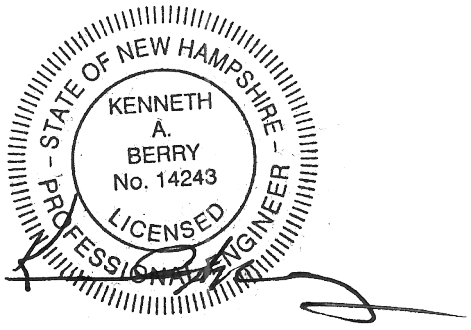
3.) The 2022 and 2032 build traffic volumes DO NOT satisfy the NCHRP 457 guidelines for the implementation of a right-turn lane for all peak hours.

4.) This is an increase of 16 weekday AM peak hour trips and 21 weekday PM peak hour trips.

5.) It is recommended that the surrounding infrastructure will be sufficient to handle the projected increase in vehicle trips and peak hour and all other hours.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING



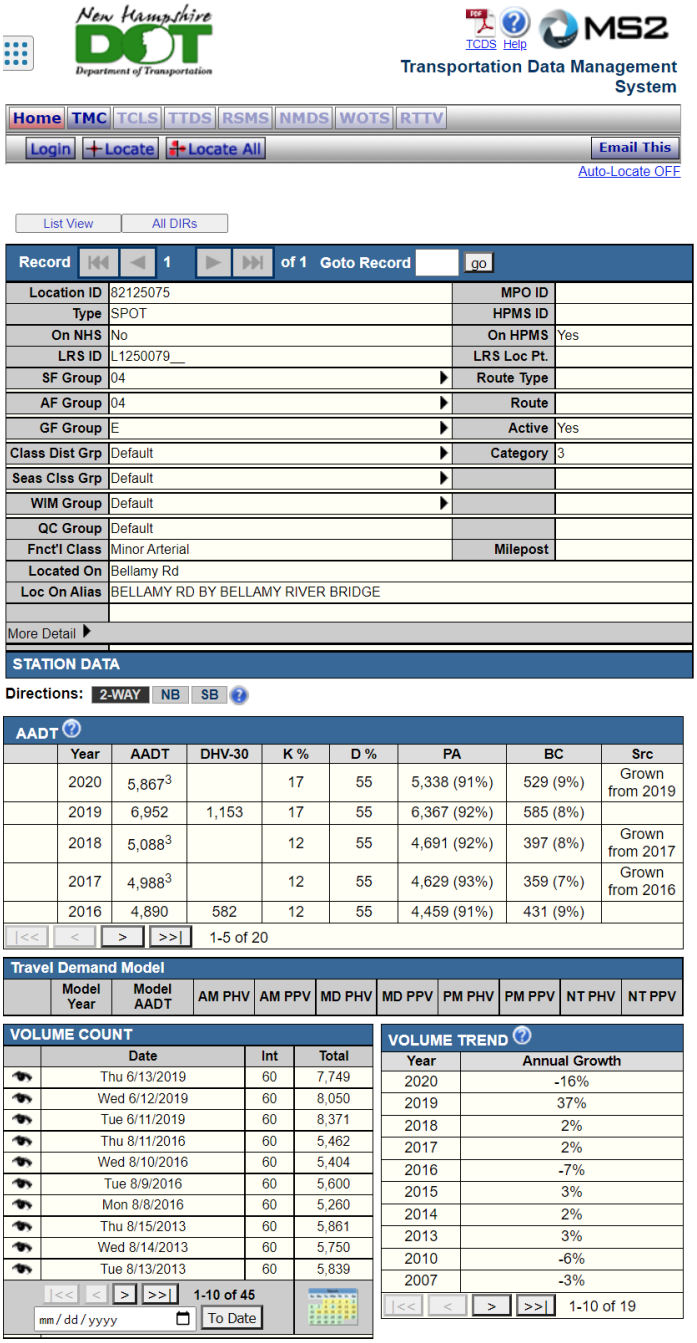
Christopher R. Berry, SIT
Principal, President

Kenneth A. Berry, PE, LLS,
CPSWQ, CPESC, CESSWI
Principal, VP-Technical Operations

KRP/krp

Appendix A

Traffic Counts



New Hampshire DOT Department of Transportation

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Record 1 of 1 Goto Record go

Location ID	82125075	MPO ID	
Type	SPOT	HPMS ID	
On NHS	No	On HPMS	Yes
LRS ID	L1250079__	LRS Loc Pt.	
SF Group	04	Route Type	
AF Group	04	Route	
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	Bellamy Rd		
Loc On Alias	BELLAMY RD BY BELLAMY RIVER BRIDGE		

More Detail

STATION DATA

Directions: 2-WAY | NB | SB

AADT

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2020	5,867[3]		17	55	5,338 (91%)	529 (9%)	Grown from 2019
2019	6,952	1,153	17	55	6,367 (92%)	585 (8%)	
2018	5,088[3]		12	55	4,691 (92%)	397 (8%)	Grown from 2017
2017	4,988[3]		12	55	4,629 (93%)	359 (7%)	Grown from 2016
2016	4,890	582	12	55	4,459 (91%)	431 (9%)	

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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
Thu 6/13/2019	60	7,749
Wed 6/12/2019	60	8,050
Tue 6/11/2019	60	8,371
Thu 8/11/2016	60	5,462
Wed 8/10/2016	60	5,404
Tue 8/9/2016	60	5,600
Mon 8/8/2016	60	5,260
Thu 8/15/2013	60	5,861
Wed 8/14/2013	60	5,750
Tue 8/13/2013	60	5,839

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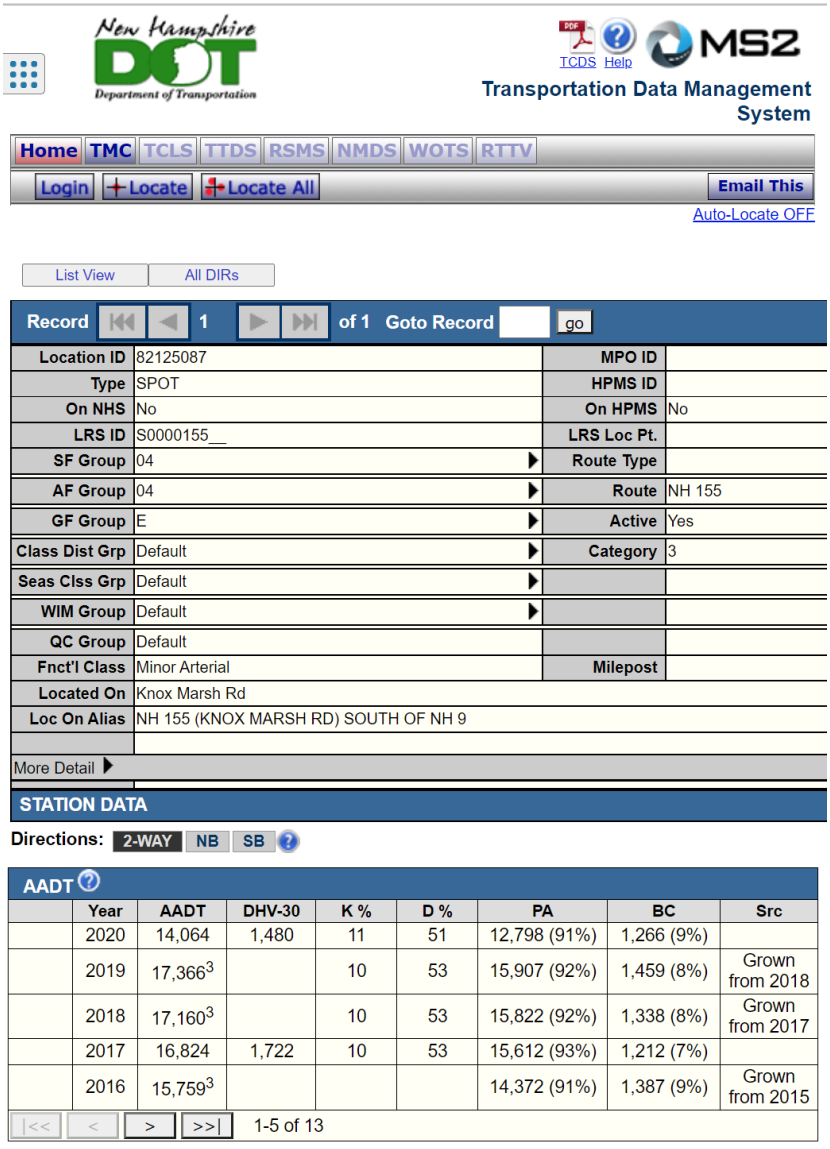
mm/dd/yyyy To Date

VOLUME TREND

Year	Annual Growth
2020	-16%
2019	37%
2018	2%
2017	2%
2016	-7%
2015	3%
2014	2%
2013	3%
2010	-6%
2007	-3%

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Figure 7: History of AADT values and classification for Bellamy Road



New Hampshire DOT Department of Transportation

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Record 1 of 1 Goto Record go

Location ID	82125087	MPO ID	
Type	SPOT	HPMS ID	
On NHS	No	On HPMS	No
LRS ID	S0000155__	LRS Loc Pt.	
SF Group	04	Route Type	
AF Group	04	Route	NH 155
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	Knox Marsh Rd		
Loc On Alias	NH 155 (KNOX MARSH RD) SOUTH OF NH 9		

More Detail

STATION DATA

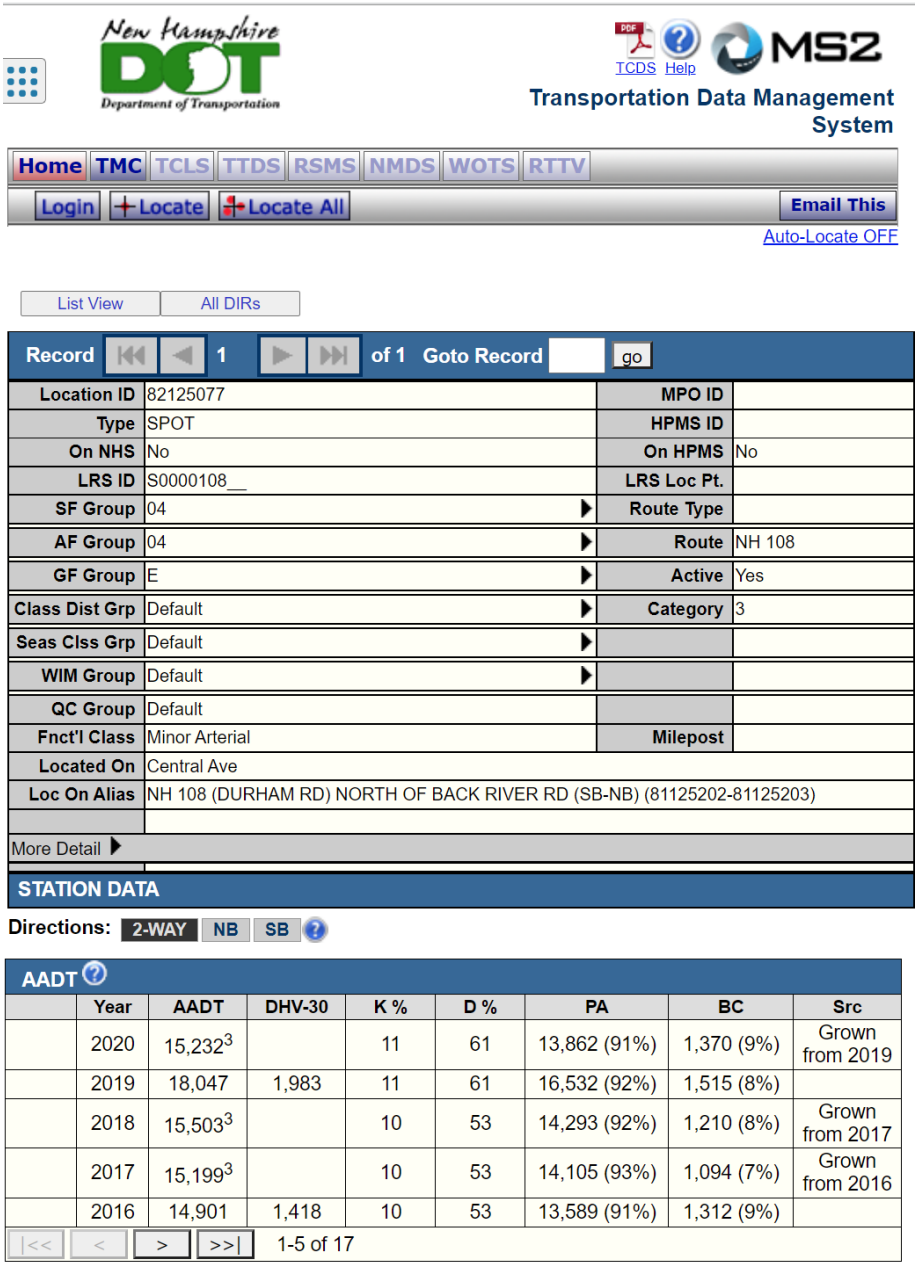
Directions: 2-WAY | NB | SB

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2020	14,064	1,480	11	51	12,798 (91%)	1,266 (9%)	
	2019	17,366[3]		10	53	15,907 (92%)	1,459 (8%)	Grown from 2018
	2018	17,160[3]		10	53	15,822 (92%)	1,338 (8%)	Grown from 2017
	2017	16,824	1,722	10	53	15,612 (93%)	1,212 (7%)	
	2016	15,759[3]				14,372 (91%)	1,387 (9%)	Grown from 2015

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Figure 8: History of AADT values and classification for NH Route 155



New Hampshire DOT Department of Transportation

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Record 1 of 1 Goto Record go

Location ID	82125077	MPO ID	
Type	SPOT	HPMS ID	
On NHS	No	On HPMS	No
LRS ID	S0000108__	LRS Loc Pt.	
SF Group	04	Route Type	
AF Group	04	Route	NH 108
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	Central Ave		
Loc On Alias	NH 108 (DURHAM RD) NORTH OF BACK RIVER RD (SB-NB) (81125202-81125203)		

More Detail

STATION DATA

Directions: 2-WAY | NB | SB

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2020	15,232[3]		11	61	13,862 (91%)	1,370 (9%)	Grown from 2019
	2019	18,047	1,983	11	61	16,532 (92%)	1,515 (8%)	
	2018	15,503[3]		10	53	14,293 (92%)	1,210 (8%)	Grown from 2017
	2017	15,199[3]		10	53	14,105 (93%)	1,094 (7%)	Grown from 2016
	2016	14,901	1,418	10	53	13,589 (91%)	1,312 (9%)	

|<< < > >>| 1-5 of 17

Figure 9: History of AADT values and classification for Central Ave

New Hampshire DOT Department of Transportation

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Transportation Data Management System

Home | TMC | TCLS | TTDS | RSMS | NMDS | WOTS | RTTV

Back | Login | +Locate | +Locate All

Auto-Locate OFF

Volume Count Report

LOCATION INFO	
Location ID	82125075
Type	SPOT
Fnct'l Class	4
Located On	Bellamy Rd
Loc On Alias	BELLAMY RD BY BELLAMY RIVER BRIDGE
Direction	2-WAY
County	STRAFFORD
Community	DOVER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Tue 6/11/2019
End Date	Wed 6/12/2019
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	nhdot
Station	821250750000
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	25
1:00-2:00	10
2:00-3:00	13
3:00-4:00	14
4:00-5:00	26
5:00-6:00	88
6:00-7:00	385
7:00-8:00	1,153
8:00-9:00	574
9:00-10:00	379
10:00-11:00	390
11:00-12:00	331
12:00-13:00	389
13:00-14:00	371
14:00-15:00	760
15:00-16:00	702
16:00-17:00	646
17:00-18:00	606
18:00-19:00	525
19:00-20:00	276
20:00-21:00	361
21:00-22:00	238
22:00-23:00	69
23:00-24:00	40
Total	8,371
AADT	7,359
AM Peak	07:00-08:00 1,153
PM Peak	14:00-15:00 760

Count Navigation: |<< < > >>| Count Type: VOLUME

Directions: 2-WAY NB SB

Figure 10: Tuesday June 11th, 2019 Bellamy Road two-way traffic count

New Hampshire DOT Department of Transportation

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Transportation Data Management System

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Back Login Locate Locate All

Auto-Locate OFF

Volume Count Report

LOCATION INFO	
Location ID	82125075
Type	SPOT
Fnct'l Class	4
Located On	Bellamy Rd
Loc On Alias	BELLAMY RD BY BELLAMY RIVER BRIDGE
Direction	2-WAY
County	STRAFFORD
Community	DOVER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 6/12/2019
End Date	Thu 6/13/2019
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	nhdot
Station	821250750000
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	23
1:00-2:00	21
2:00-3:00	15
3:00-4:00	15
4:00-5:00	32
5:00-6:00	103
6:00-7:00	378
7:00-8:00	973
8:00-9:00	485
9:00-10:00	444
10:00-11:00	324
11:00-12:00	408
12:00-13:00	633
13:00-14:00	399
14:00-15:00	536
15:00-16:00	617
16:00-17:00	634
17:00-18:00	761
18:00-19:00	371
19:00-20:00	290
20:00-21:00	202
21:00-22:00	220
22:00-23:00	120
23:00-24:00	46
Total	8,050
AADT	6,856
AM Peak	07:00-08:00 973
PM Peak	17:00-18:00 761

Count Navigation: |<< < > >>| Count Type: VOLUME

Directions: 2-WAY NB SB

Figure 11: Wednesday June 12th, 2019 Bellamy Road two-way traffic count

New Hampshire DOT Department of Transportation

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Transportation Data Management System

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Back | Login | Locate | Locate All

Auto-Locate OFF

Volume Count Report

LOCATION INFO	
Location ID	82125075
Type	SPOT
Fnct'l Class	4
Located On	Bellamy Rd
Loc On Alias	BELLAMY RD BY BELLAMY RIVER BRIDGE
Direction	2-WAY
County	STRAFFORD
Community	DOVER
MPO ID	
HPMS ID	
Agency	New Hampshire DOT

COUNT DATA INFO	
Count Status	Accepted
Start Date	Thu 6/13/2019
End Date	Fri 6/14/2019
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	nhdot
Station	821250750000
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:60-MIN	
Time	Hourly Count
0:00-1:00	26
1:00-2:00	23
2:00-3:00	18
3:00-4:00	13
4:00-5:00	30
5:00-6:00	96
6:00-7:00	393
7:00-8:00	971
8:00-9:00	479
9:00-10:00	452
10:00-11:00	330
11:00-12:00	395
12:00-13:00	609
13:00-14:00	410
14:00-15:00	503
15:00-16:00	609
16:00-17:00	588
17:00-18:00	572
18:00-19:00	436
19:00-20:00	353
20:00-21:00	228
21:00-22:00	103
22:00-23:00	76
23:00-24:00	36
Total	7,749
AADT	6,637
AM Peak	07:00-08:00 971
PM Peak	12:00-13:00 609

Count Navigation: |<< < > >>| Count Type: VOLUME

Directions: 2-WAY NB SB

Figure 12: Thursday June 13th, 2019 Bellamy Road two-way traffic count

Appendix B

Data Used in Left-Turn Bay Warrants Analysis

Year	Advancing Volume	Advancing Volume Peaked (TR)	Left Turns (L)	Right Turns (R)	Total Advancing Volume (L+TR+R)	% of Left Turn
2021	556	565.5	1.9	2.2	569.6	0.33
2022	562	571.1	1.9	2.2	575.2	0.33
2023	567	576.8	1.9	2.2	580.9	0.33
2024	573	582.6	1.9	2.2	586.7	0.32
2025	579	588.4	1.9	2.2	592.5	0.32
2026	585	594.3	1.9	2.2	598.4	0.32
2027	590	600.3	1.9	2.2	604.4	0.31
2028	596	606.3	1.9	2.2	610.4	0.31
2029	602	612.3	1.9	2.2	616.4	0.31
2030	608	618.4	1.9	2.2	622.5	0.30
2031	614	624.6	1.9	2.2	628.7	0.30
2032	620	630.9	1.9	2.2	635.0	0.30
Year	Opposing Volume	Opposing Volume Peaked (TR)	Right Turns (R)		Total Opposing Volume (TR+R)	
2021	644	654.9	2.2		657.1	
2022	651	661.5	2.2		663.7	
2023	657	668.1	2.2		670.3	
2024	664	674.8	2.2		677.0	
2025	670	681.5	2.2		683.7	
2026	677	688.4	2.2		690.6	
2027	684	695.2	2.2		697.4	
2028	691	702.2	2.2		704.4	
2029	698	709.2	2.2		711.4	
2030	704	716.3	2.2		718.5	
2031	712	723.5	2.2		725.7	
2032	719	730.7	2.2		732.9	
Seasonal Peaking Factor (June)		1.02				

Figure 13: Data used for Weekday AM peak hour left-turn warrant analyses

Year	Advancing Volume	Advancing Volume Peaked (TR)	Left Turns (L)	Right Turns (R)	Total Advancing Volume (L+TR+R)	% of Left Turn
2021	562	571.6	7.7	6.1	585.3	1.31
2022	568	577.3	7.7	6.1	591.0	1.30
2023	573	583.1	7.7	6.1	596.8	1.29
2024	579	588.9	7.7	6.1	602.6	1.27
2025	585	594.8	7.7	6.1	608.5	1.26
2026	591	600.7	7.7	6.1	614.5	1.25
2027	597	606.7	7.7	6.1	620.5	1.24
2028	603	612.8	7.7	6.1	626.6	1.23
2029	609	618.9	7.7	6.1	632.7	1.21
2030	615	625.1	7.7	6.1	638.9	1.20
2031	621	631.4	7.7	6.1	645.1	1.19
2032	627	637.7	7.7	6.1	651.4	1.18
Year	Opposing Volume	Opposing Volume Peaked (TR)	Right Turns (R)		Total Opposing Volume (TR+R)	
2021	444	451.6	6.1		457.7	
2022	449	456.1	6.1		462.2	
2023	453	460.7	6.1		466.7	
2024	458	465.3	6.1		471.3	
2025	462	469.9	6.1		476.0	
2026	467	474.6	6.1		480.7	
2027	471	479.4	6.1		485.4	
2028	476	484.2	6.1		490.2	
2029	481	489.0	6.1		495.1	
2030	486	493.9	6.1		500.0	
2031	491	498.8	6.1		504.9	
2032	496	503.8	6.1		509.9	
Seasonal Peaking Factor (June)		1.02				

Figure 14: Data used for Weekday PM peak hour left-turn warrant analyses

Left-Turn Bay Warrants Analysis

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

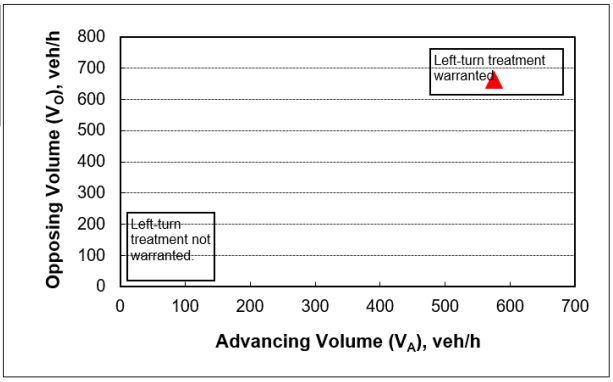
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	575
Opposing volume (V_O), veh/h:	664

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1467
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 15: 2022 Weekday AM peak hour NCHRP 457 left-turn bay warrant analysis

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

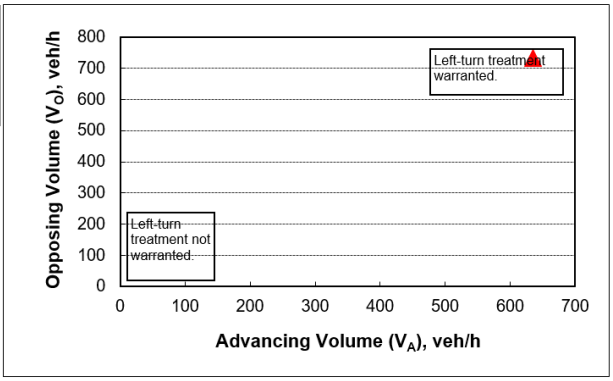
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	635
Opposing volume (V_O), veh/h:	733

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1439
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 16: 2032 Weekday AM peak hour NCHRP 457 left-turn bay warrant analysis

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

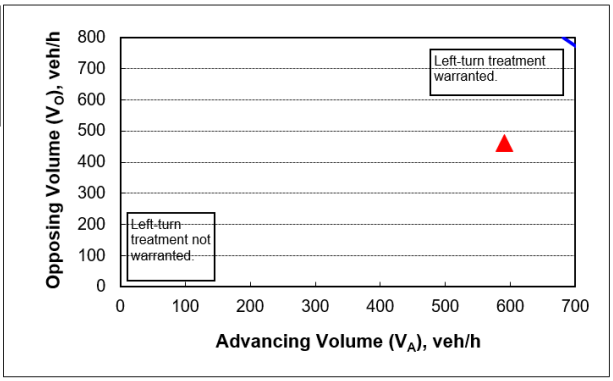
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	591
Opposing volume (V_O), veh/h:	462

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	958
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 17: 2022 Weekday PM peak hour NCHRP 457 left-turn bay warrant analysis

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

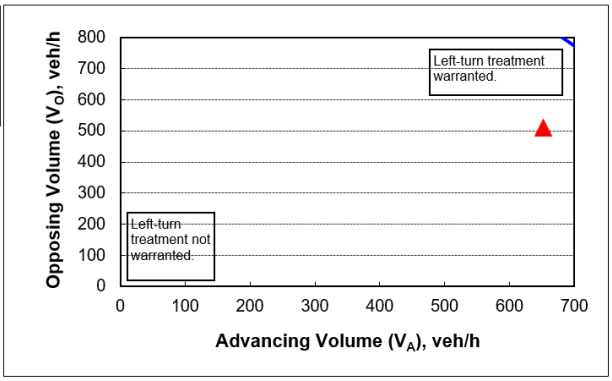
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	651
Opposing volume (V_O), veh/h:	510

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	911
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 18: 2032 Weekday PM peak hour NCHRP 457 left-turn bay warrant analysis

Data Used in Right-Turn Bay Warrants Analysis

Year	Advancing Volume	Advancing Volume Peaked (TR)	Left Turns (L)	Right Turns (R)	Total Advancing Volume (L+TR+R)
2021	644	654.9	1.9	2.2	659.0
2022	651	661.5	1.9	2.2	665.6
2023	657	668.1	1.9	2.2	672.2
2024	664	674.8	1.9	2.2	678.9
2025	670	681.5	1.9	2.2	685.6
2026	677	688.4	1.9	2.2	692.5
2027	684	695.2	1.9	2.2	699.3
2028	691	702.2	1.9	2.2	706.3
2029	698	709.2	1.9	2.2	713.3
2030	704	716.3	1.9	2.2	720.4
2031	712	723.5	1.9	2.2	727.6
2032	719	730.7	1.9	2.2	734.8
Seasonal Peaking Factor (June)		1.02			

Figure 19: Data used for Weekday AM peak hour right-turn warrant analyses

Year	Advancing Volume	Advancing Volume Peaked (TR)	Left Turns (L)	Right Turns (R)	Total Advancing Volume (L+TR+R)
2021	556	565.5	7.7	6.1	579.2
2022	562	571.1	7.7	6.1	584.9
2023	567	576.8	7.7	6.1	590.6
2024	573	582.6	7.7	6.1	596.4
2025	579	588.4	7.7	6.1	602.2
2026	585	594.3	7.7	6.1	608.1
2027	590	600.3	7.7	6.1	614.0
2028	596	606.3	7.7	6.1	620.0
2029	602	612.3	7.7	6.1	626.1
2030	608	618.4	7.7	6.1	632.2
2031	614	624.6	7.7	6.1	638.4
2032	620	630.9	7.7	6.1	644.6
Seasonal Peaking Factor (June)		1.02			

Figure 20: Data used for Weekday PM peak hour right-turn warrant analyses

Right-Turn Bay Warrants Analysis

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	666
Right-turn volume, veh/h:	2

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	41
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

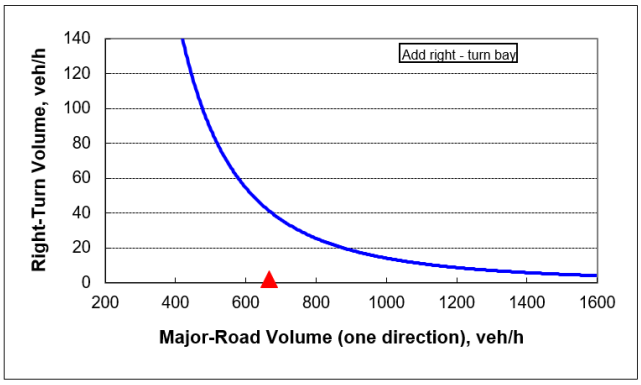


Figure 21: 2022 Weekday AM peak hour NCHRP 457 right-turn bay warrant analysis

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	735
Right-turn volume, veh/h:	2

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	32
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

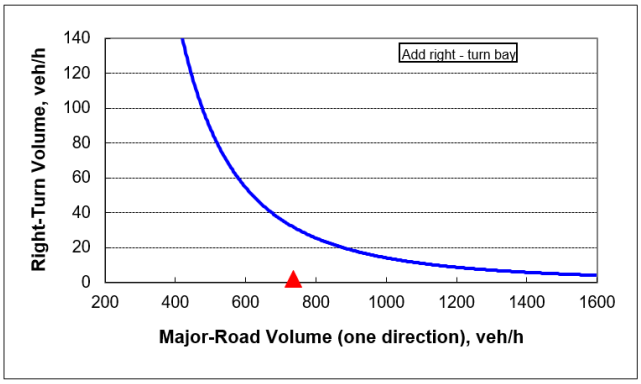


Figure 22: 2032 Weekday AM peak hour NCHRP 457 right-turn bay warrant analysis

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	585
Right-turn volume, veh/h:	6

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	58
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

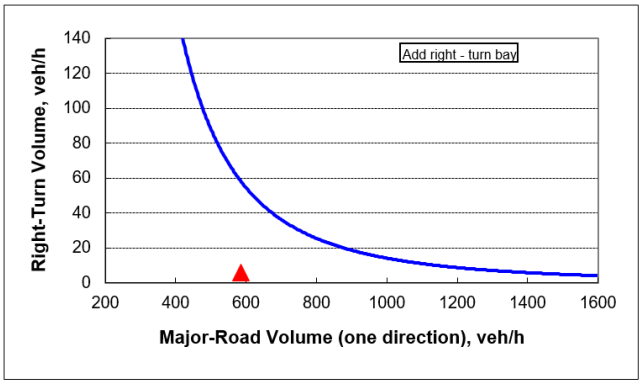


Figure 23: 2022 Weekday PM peak hour NCHRP 457 right-turn bay warrant analysis

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	645
Right-turn volume, veh/h:	6

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	45
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

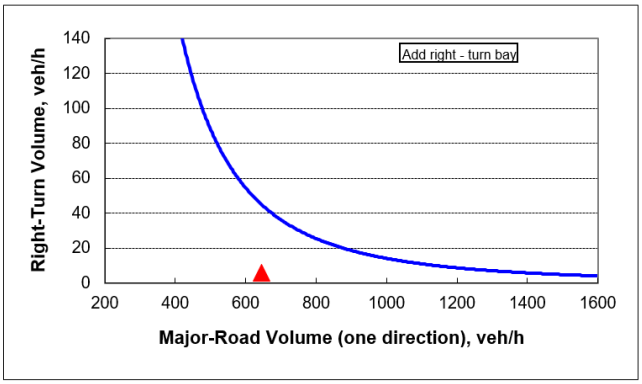


Figure 24: 2032 Weekday PM peak hour NCHRP 457 right-turn bay warrant analysis

Appendix C

Miscellaneous

Group 4 Averages:		Year 2019 Monthly Data Urban Highways	
		Adjustment to	
Month	ADT	Average	Peak
January	11,431	1.12	1.23
February	11,848	1.08	1.18
March	12,141	1.06	1.15
April	12,860	1.00	1.09
May	13,551	0.95	1.03
June	13,785	0.93	1.02
July	13,942	0.92	1.01
August	14,016	0.92	1.00
September	13,379	0.96	1.05
October	13,339	0.96	1.05
November	12,265	1.05	1.14
December	11,496	1.12	1.22
Average ADT:	12,838		
Peak ADT:	14,016		

Table 17: Derivation of the seasonal peaking factor

Table 3-1. Stopping Sight Distance on Level Roadways

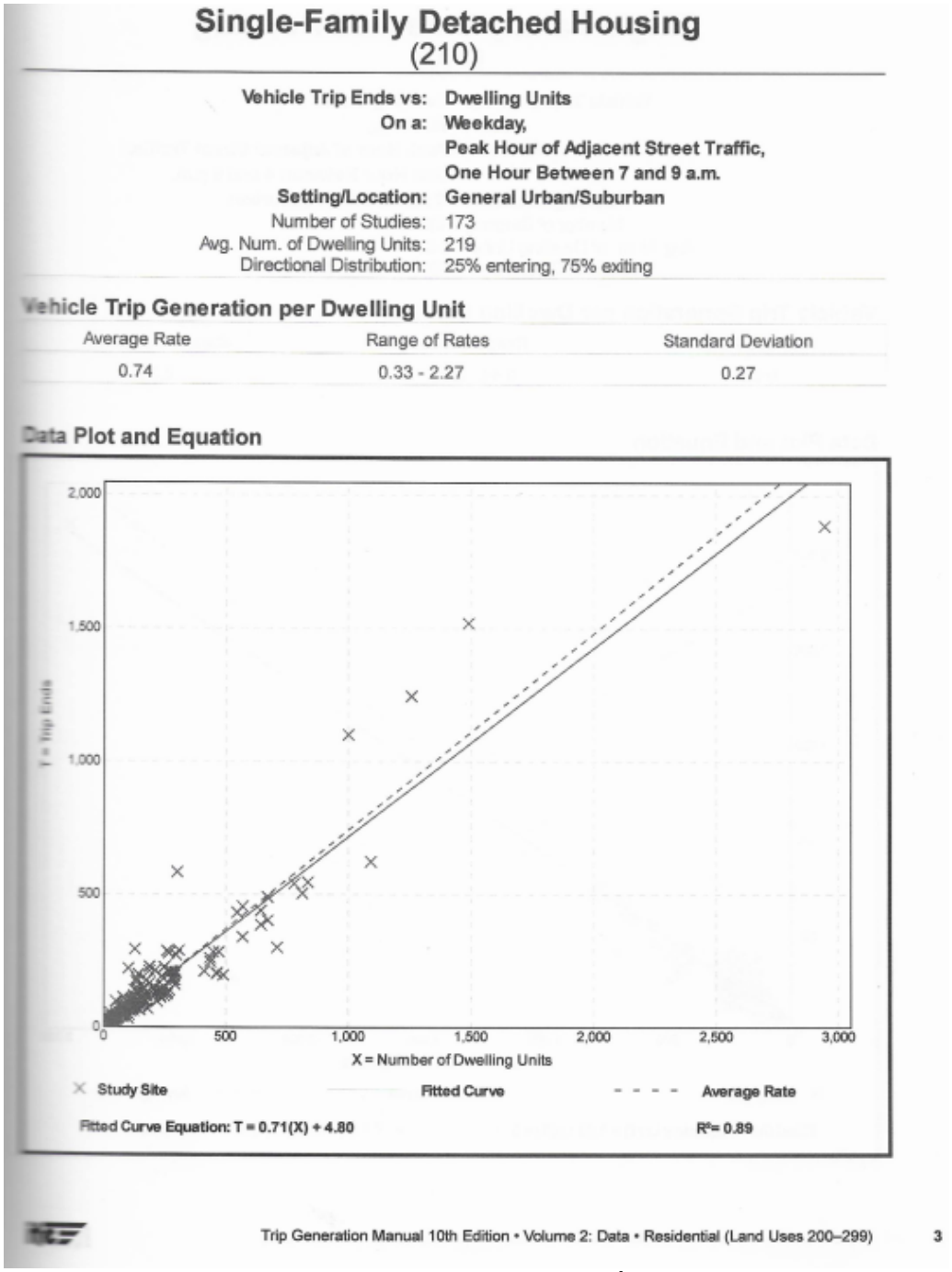
U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance		Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)				Calculated (m)	Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

Figure 25: Derivation of stopping sight distance requirements

Appendix D

Trip Generation Derivation



Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

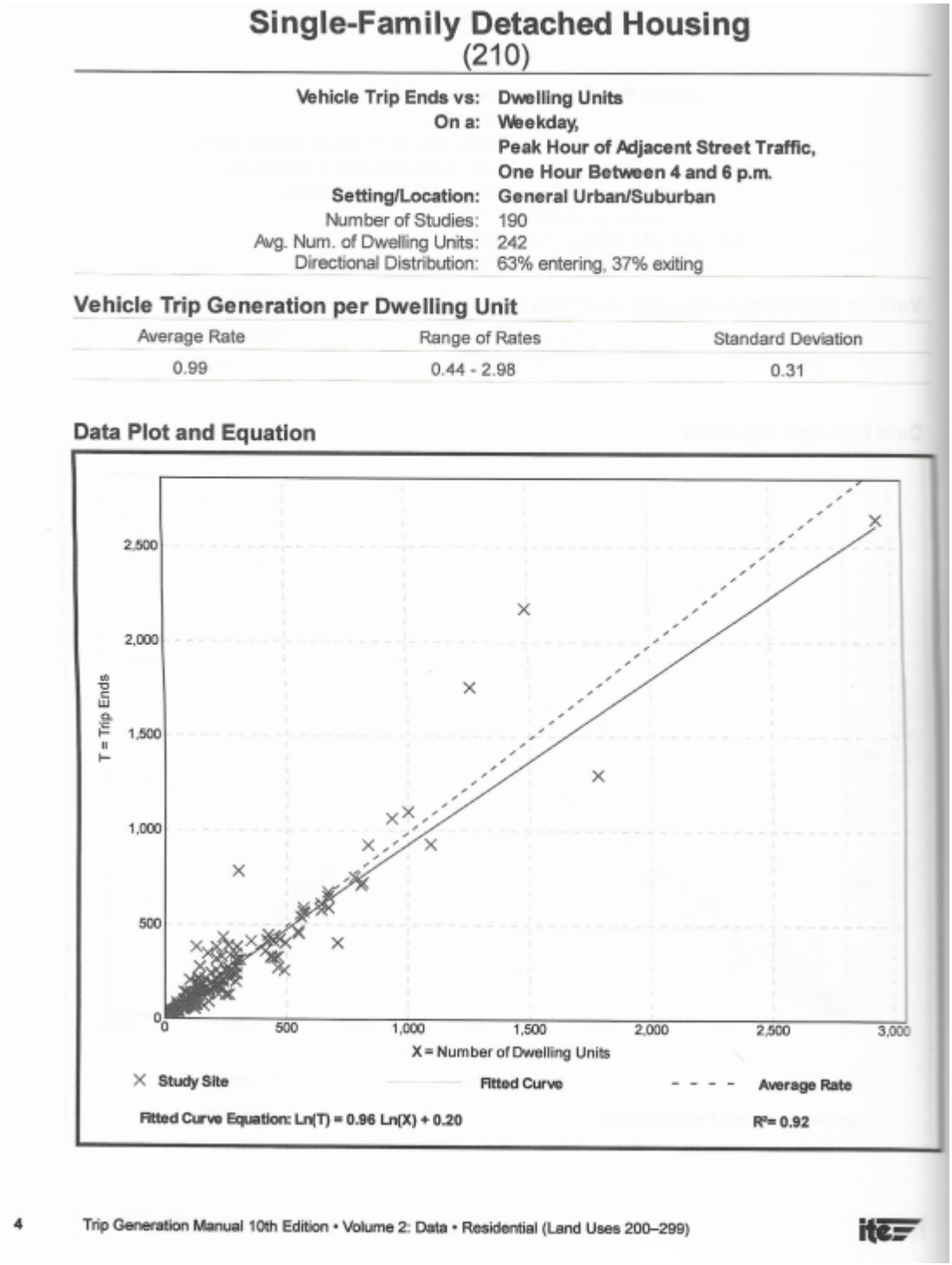
Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation

Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200–299) 3

Figure 26: ITE Trip Generation, 10th Edition



Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

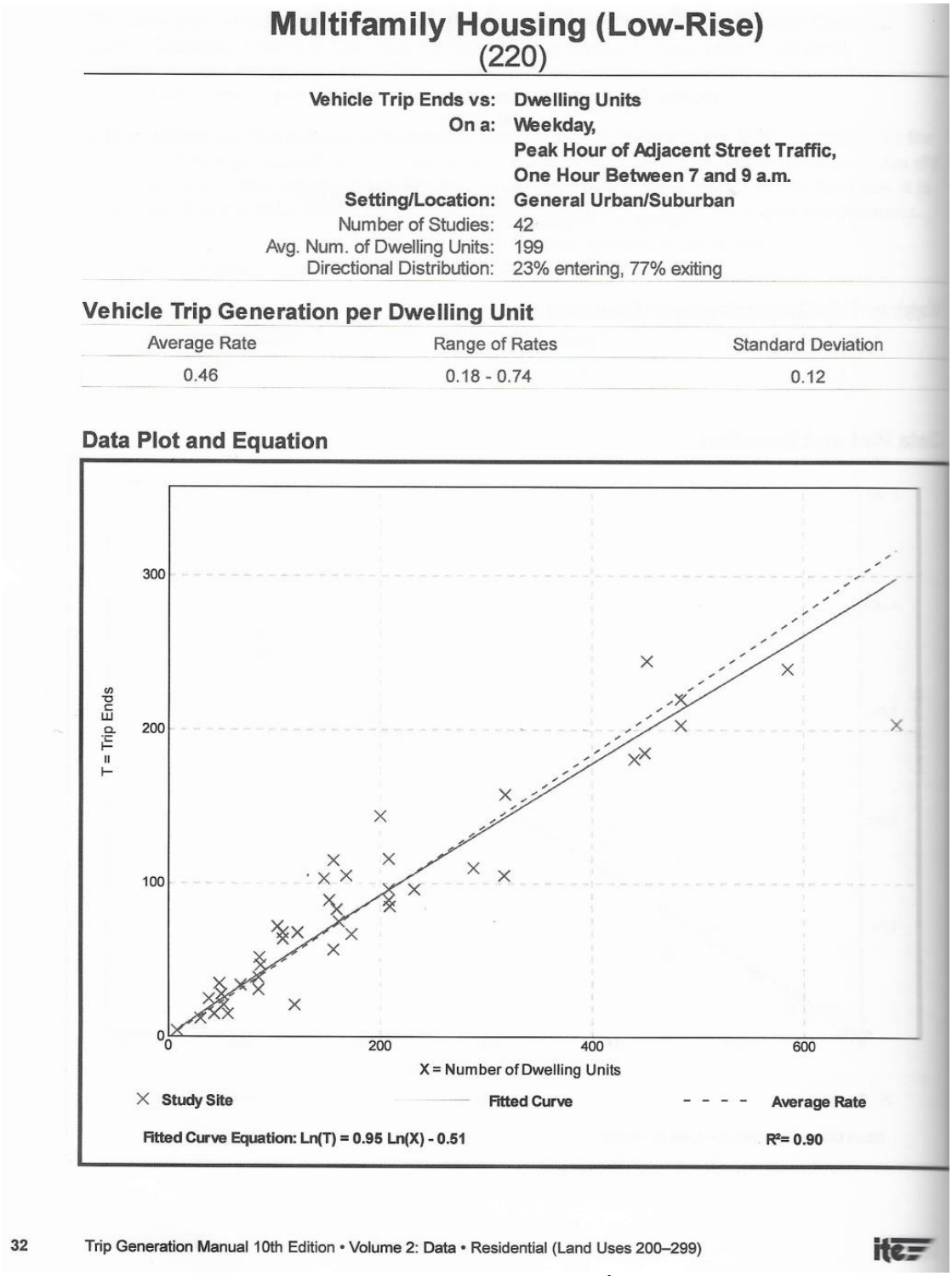
Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation

4 Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200–299)

Figure 27: ITE Trip Generation, 10th Edition



Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	42
Avg. Num. of Dwelling Units:	199
Directional Distribution:	23% entering, 77% exiting

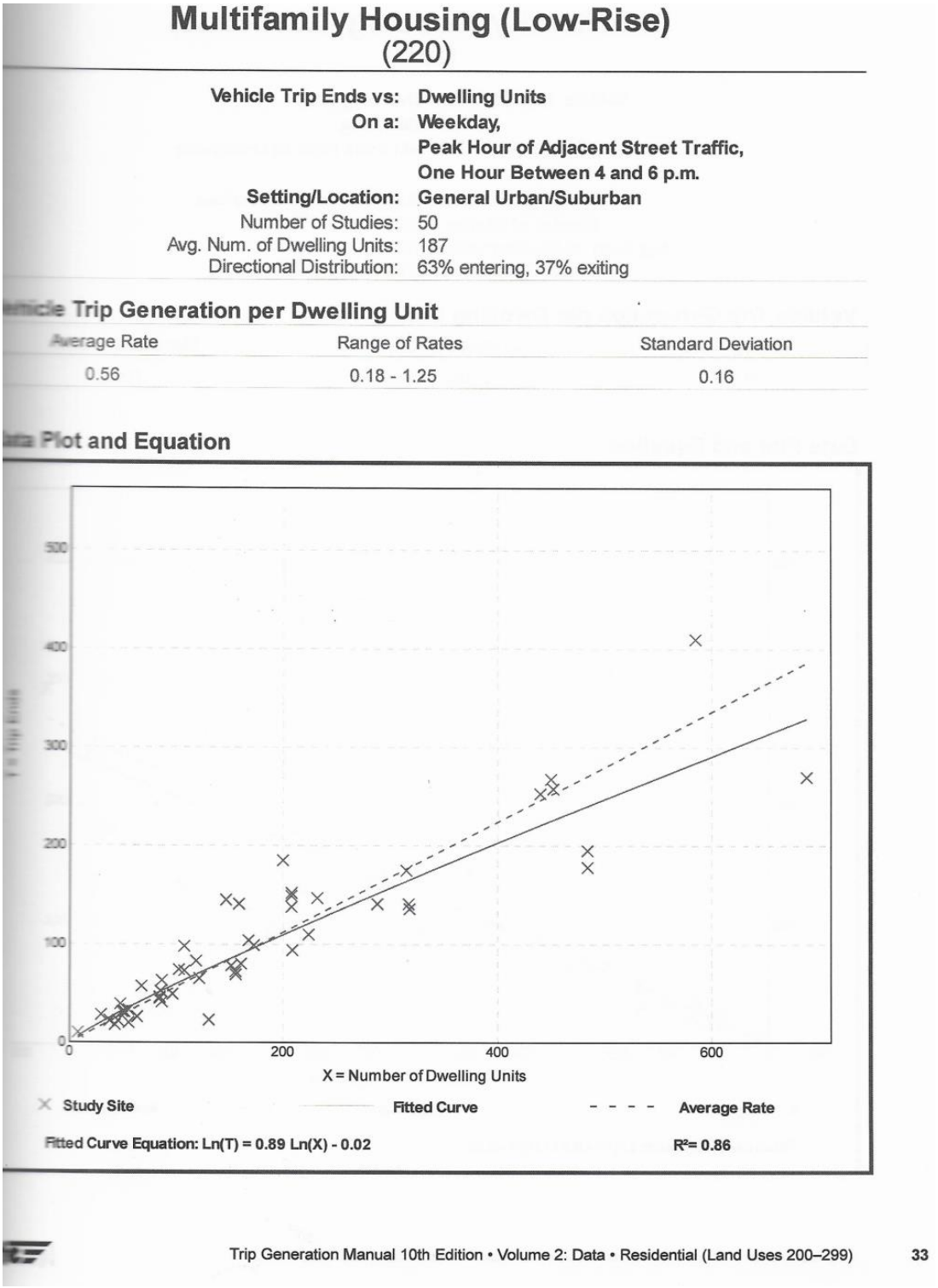
Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation

32 Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200–299)

Figure 28: ITE Trip Generation, 10th Edition



Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 50
Avg. Num. of Dwelling Units: 187
Directional Distribution: 63% entering, 37% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Plot and Equation

Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200–299) 33

Figure 29: ITE Trip Generation, 10th Edition

Appendix E

Supplemental Traffic Counts & Data

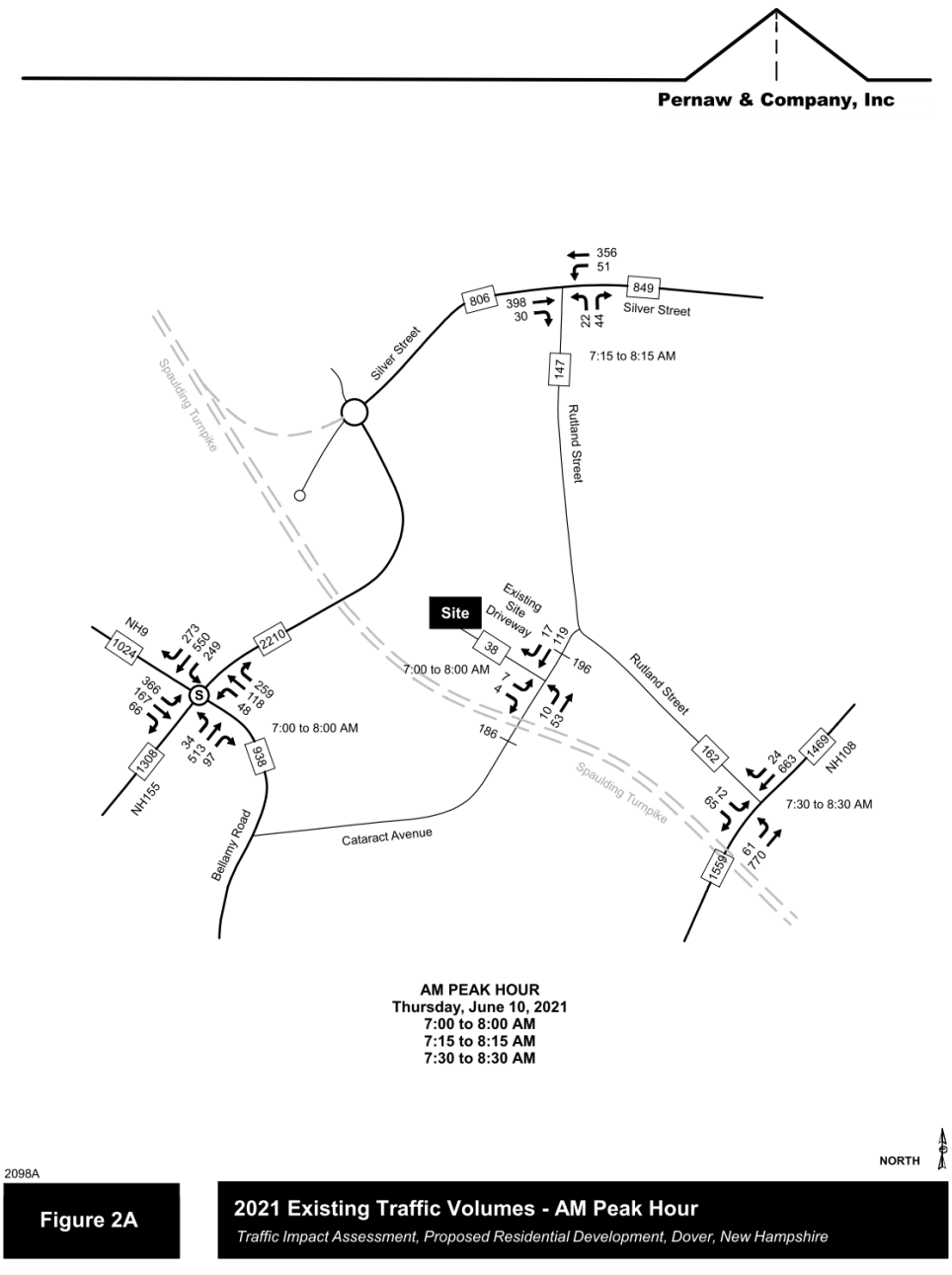


Figure 30: Pernaw & Company, Inc 2021 AM traffic Counts

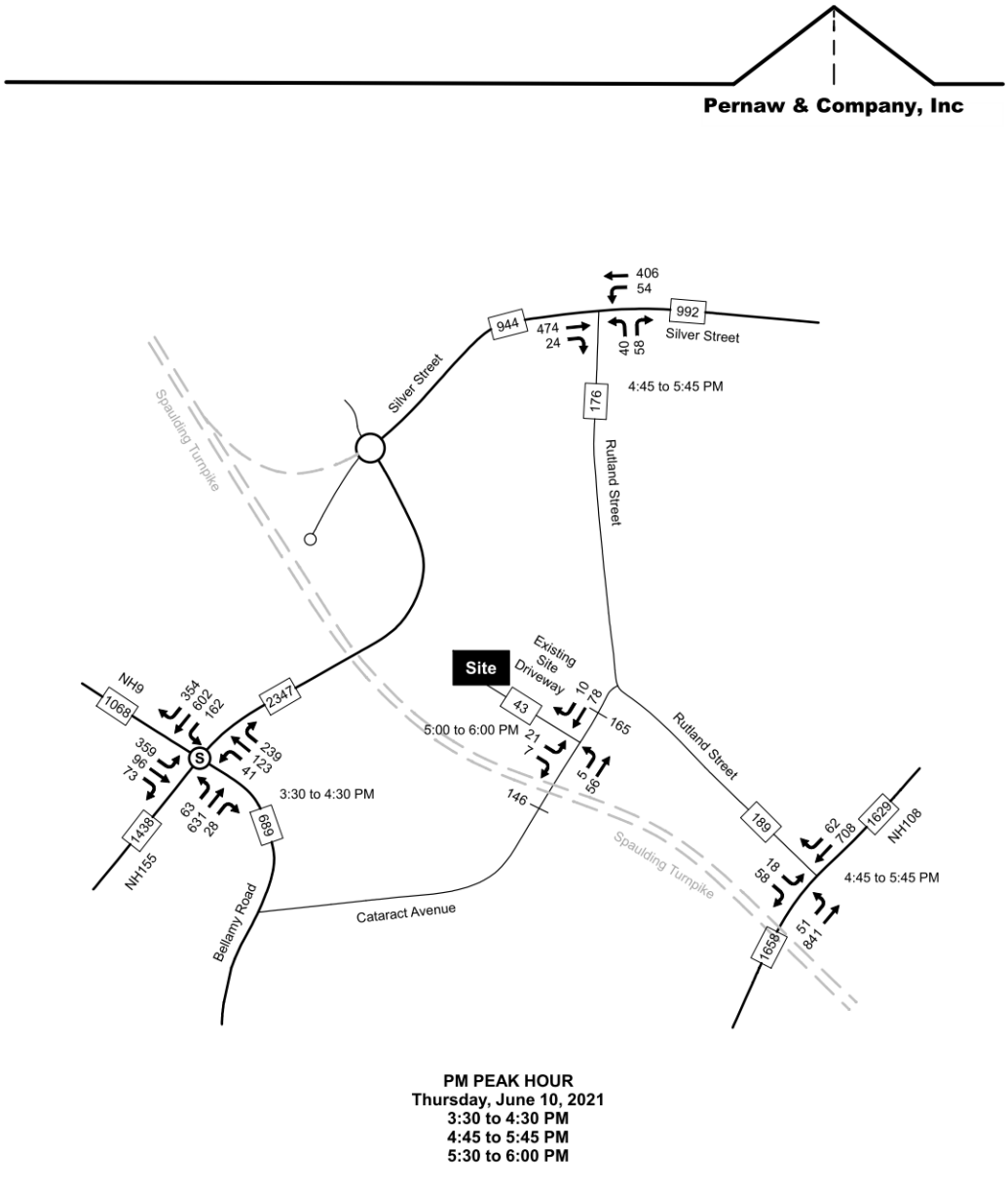
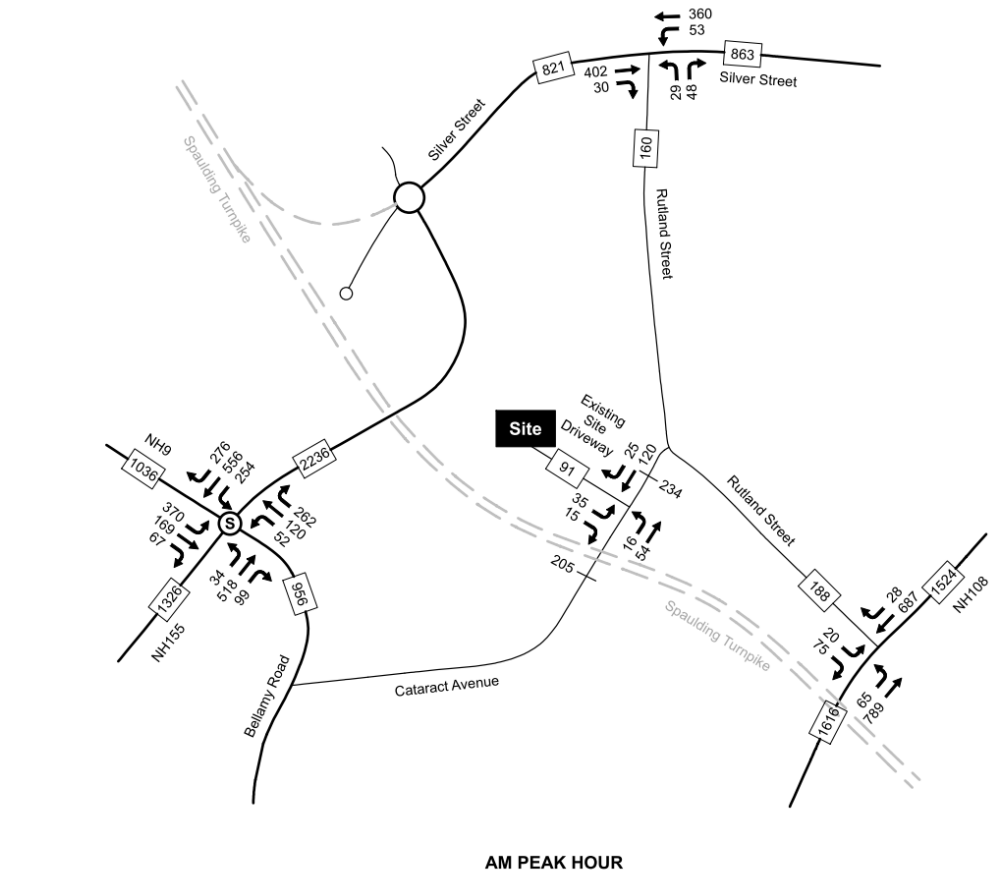


Figure 31: Pernaw & Company, Inc 2021 PM traffic Counts

Pernaw & Company, Inc



2098A

Figure 5A **2022 Build Traffic Volumes - AM Peak Hour**

Traffic Impact Assessment, Proposed Residential Development, Dover, New Hampshire

Figure 32: Pernaw & Company, Inc 2022 AM traffic Counts Macintosh adjusted

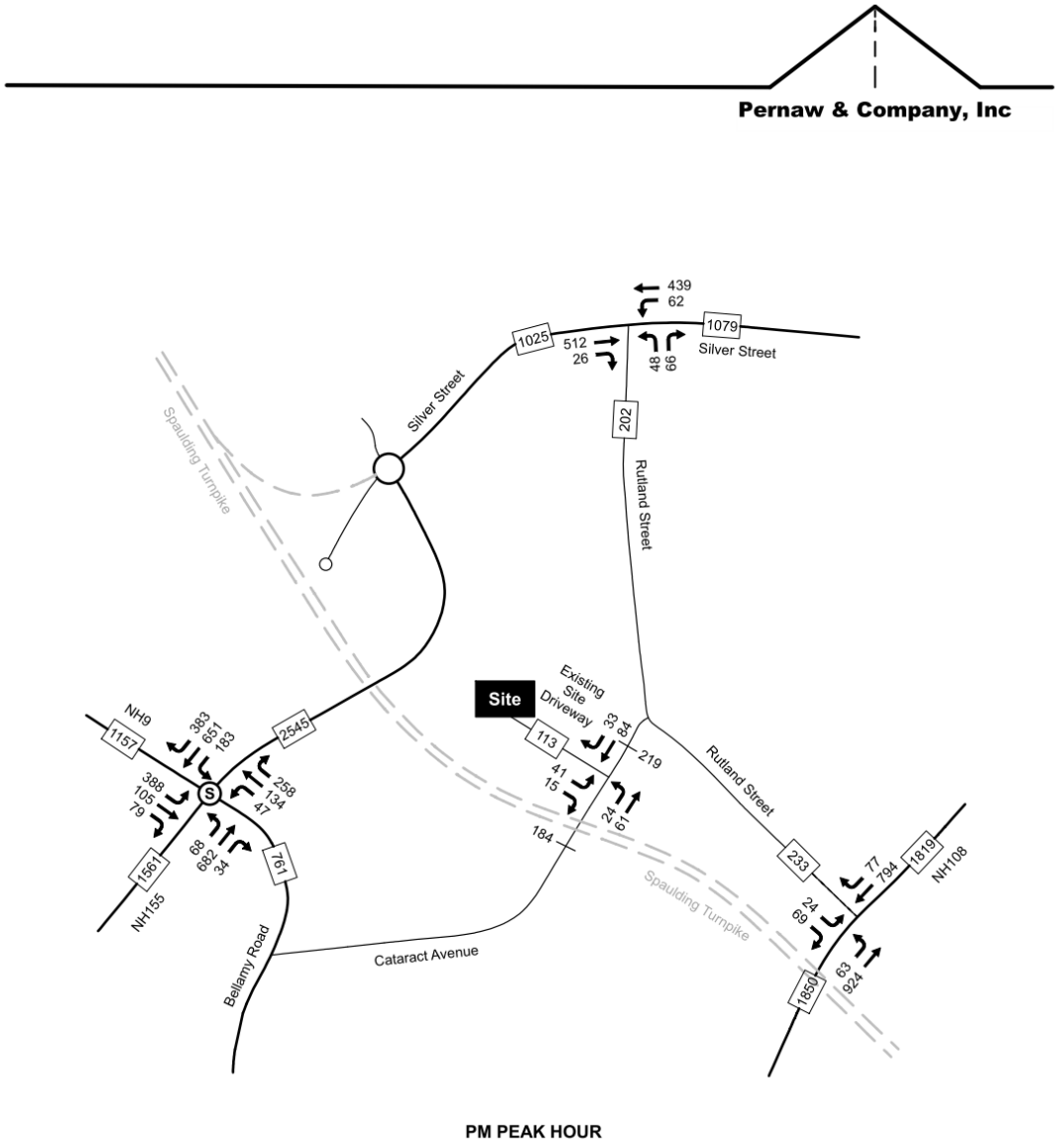


Figure 33: Pernaw & Company, Inc 2022 PM traffic Counts Macintosh adjusted

Time	AM Peak Hour Porch Light Drive	# Trips	Turn Type	% Distribution
Total Trips	7.4			
Trips Enter from Cataract Ave Eastbound		1.0	Right	13.7
Trips Enter from Cataract Ave Westbound		0.8	Left	11.3
Trips Exit to Cataract Ave Eastbound		3.1	Right	41.2
Trips Exit to Cataract Ave Westbound		2.5	Left	33.8

Time	PM Peak Hour Porch Light Drive	# Trips	Turn Type	% Distribution
Total Trips	9.9			
Trips Enter from Cataract Ave Eastbound		3.3	Right	33.7
Trips Enter from Cataract Ave Westbound		2.9	Left	29.3
Trips Exit to Cataract Ave Eastbound		2.0	Right	19.8
Trips Exit to Cataract Ave Westbound		1.7	Left	17.2

Figure 34: Porch Light Drive Trip Generation