

SITE PLAN

for

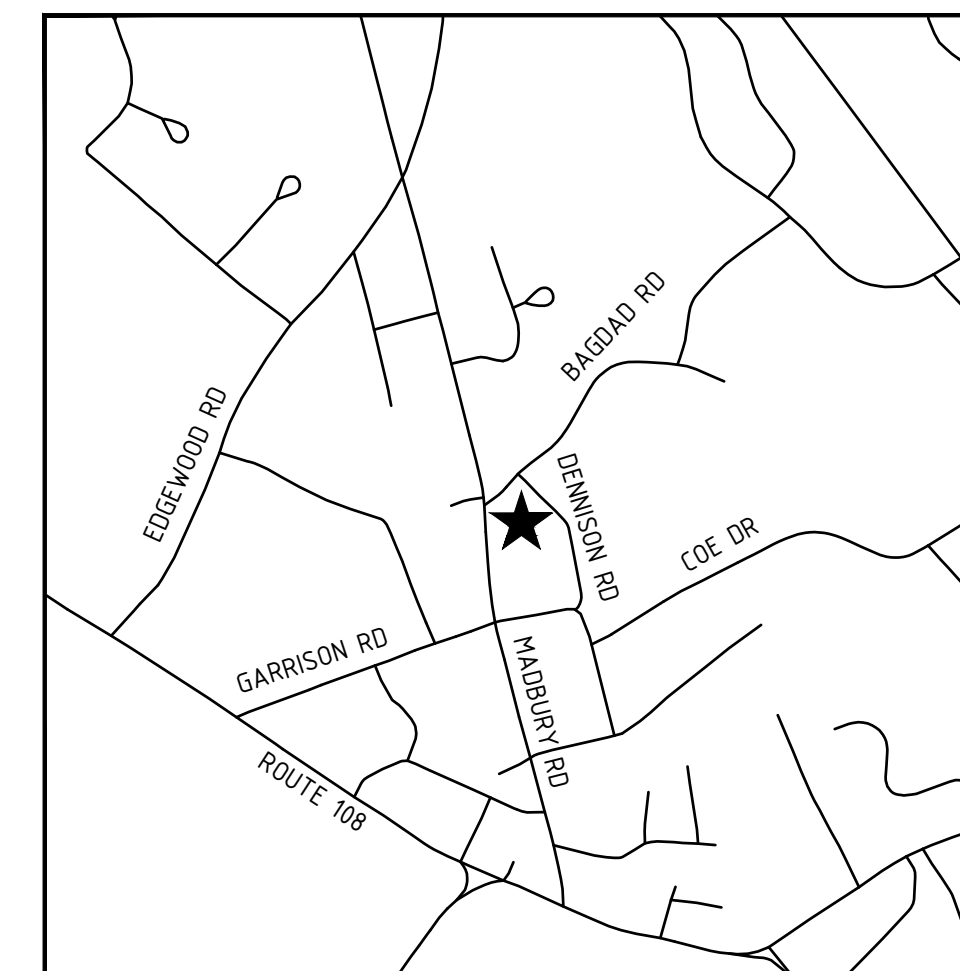
BW2, LLC

C/O HOUSING INITIATIVES OF NEW ENGLAND

38 BAGDAD ROAD

DURHAM, NH

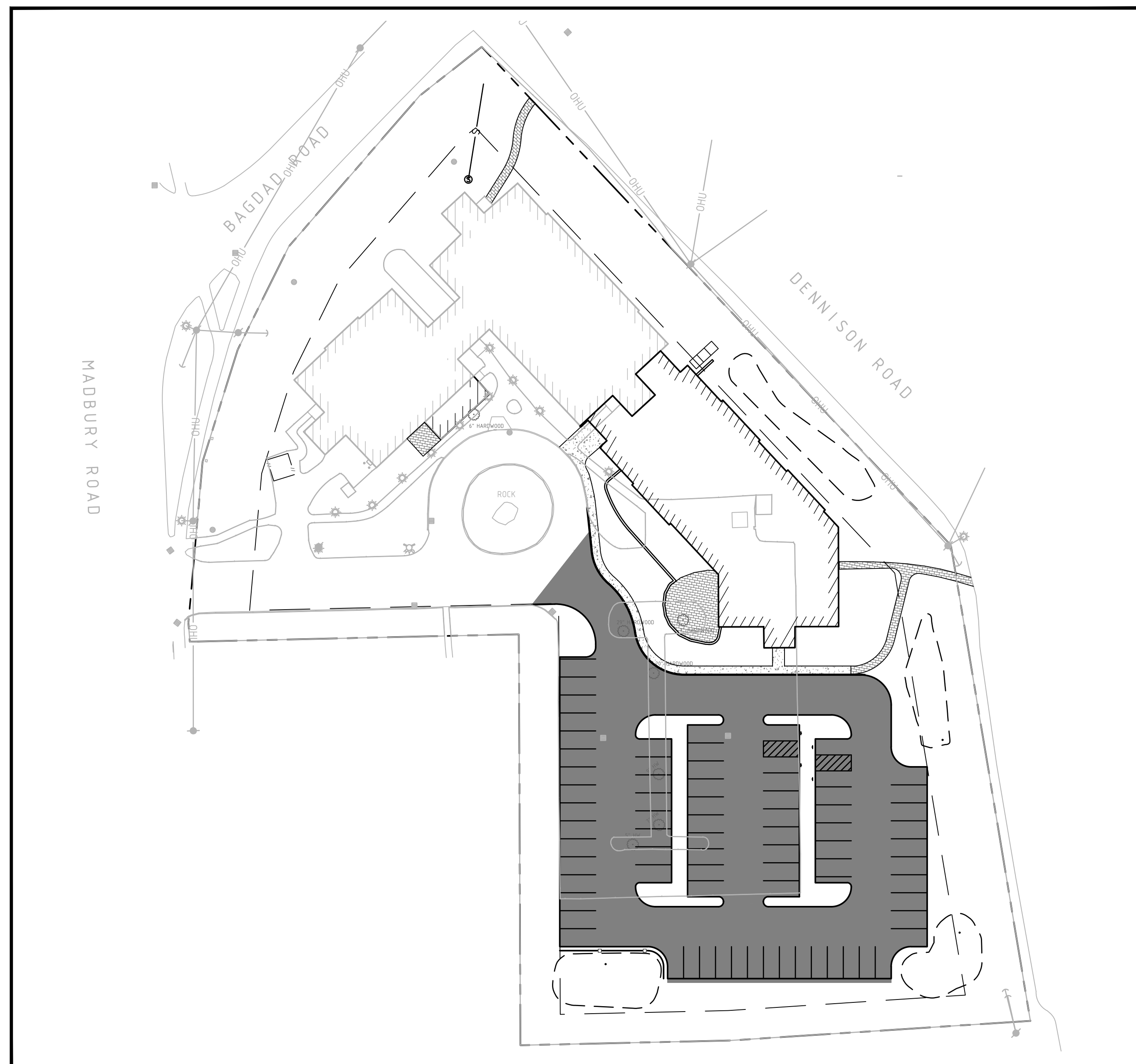
JUNE 3, 2020



LOCUS MAP
SCALE 1:12 000

TABLE OF CONTENTS

TITLE	SHEET
EXISTING CONDITIONS PLAN	S1
PROPOSED SITE PLAN	C101
UTILITY & GRADING PLAN	C102
LANDSCAPING PLAN	LA-1
LIGHTING PLAN	LT-1
CONSTRUCTION DETAILS	C501-C504
FLOOR PLANS	SD02-SD04
ROOF PLAN	SD05
ELEVATIONS	SD06-SD08



LEGEND

- PROPERTY LINES
- - - ABUTTER PROPERTY LINES
- SETBACK LINES
- SD STORM SEWER PIPING
- W MAIN DOMESTIC WATER PIPING
- OHU OVERHEAD ELECTRICAL UTILITY LINES
- UGU UNDERGROUND ELECTRICAL UTILITY LINES
- G NATURAL GAS PIPING
- S SEWER PIPE
- ⊕ FIRE HYDRANT
- ⊙ UTILITY POLE
- ⊙ SEWER MANHOLE
- ⊙ LIGHTS

OWNER

BW2, LLC
C/O HOUSING INITIATIVES OF NE CORP.
264 US ROUTE 1
BUILDING 300, SUITE 2A
SCARBOROUGH, ME 04074

CIVIL ENGINEER

MJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 Railroad St., P.O. Box 359
Newmarket, NH 03857
Phone: (603) 659-4979, Fax: (603) 659-4627
E-mail: mjs@mjs-engineering.com

ARCHITECT

LASSEL ARCHITECTS
370 MAIN STREET
SOUTH BERWICK, ME
(207) 384-2049

LANDSCAPE ARCHITECT

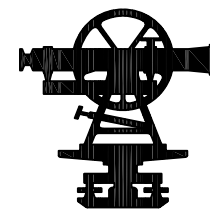
WOODBURN & COMPANY
103 KENT PLACE
NEWMARKET, NEW HAMPSHIRE
(603) 659-5949

SURVEYOR

NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BOULEVARD
ROCHESTER, NEW HAMPSHIRE
03867 (603) 335-3948

FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
CERTIFIED _____
DATE _____

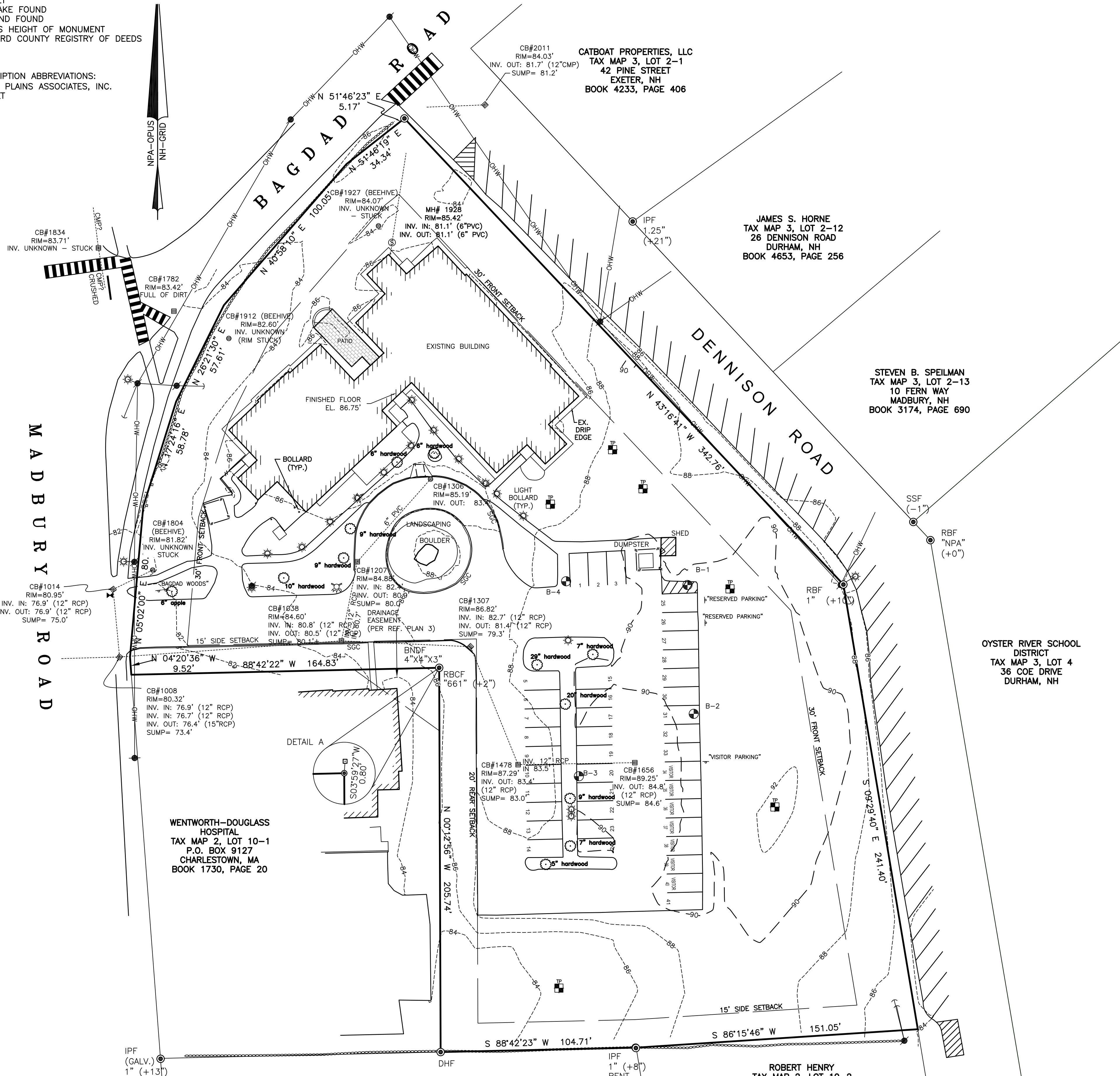
NO.	REVISIONS	DATE	INT.
0.	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	06/03/20	MJS



- LEGEND**
- MONUMENT
 - BOUND
 - ◆ UTILITY POLE
 - ▨ CATCH BASIN
 - ⊖ CATCH BASIN
 - CATCH BASIN
 - ⊙ DRAIN MANHOLE
 - ⊗ SEWER MANHOLE
 - ⊕ FIRE HYDRANT
 - ⊖ WATER SHUTOFF
 - ⊕ WATER GATE VALVE
 - ⊖ SIGN
 - ⊖ TEST PIT
 - N 89°56'30" E 425.61' — PROPERTY LINE
 - — — — — SETBACK LINE
 - D — — — — — DRAIN LINE
 - W — — — — — WATER LINE
 - S — — — — — SEWER LINE
 - G — — — — — GAS LINE
 - UE — — — — — UNDERGROUND ELECTRIC
 - OHW — — — — — OVERHEAD WIRES
 - // — // — FENCE
 - ⊖ — — — — — STONEWALL
 - — — — — EDGE OF PAVEMENT

ABBREVIATION LEGEND:
 DHF - DRILL HOLE FOUND
 IPF - IRON PIPE FOUND
 IPS - IRON PIPE SET
 RBF - REBAR FOUND
 RBS - REBAR SET
 SSF - STEEL STAKE FOUND
 BND FND - BOUND FOUND
 (+2") - DENOTES HEIGHT OF MONUMENT
 SCRD - STRAFFORD COUNTY REGISTRY OF DEEDS

MONUMENT INSCRIPTION ABBREVIATIONS:
 "NPA" - NORWAY PLAINS ASSOCIATES, INC.
 TBS - TO BE SET

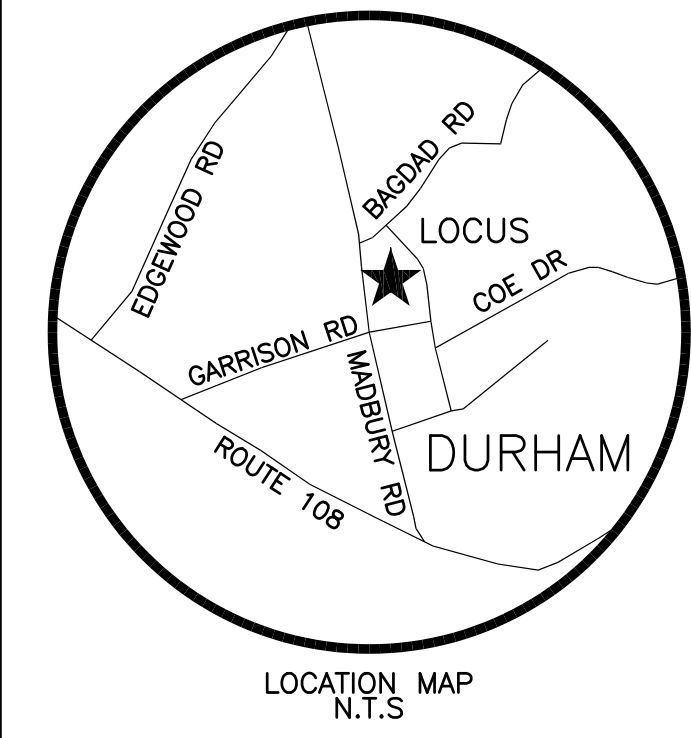
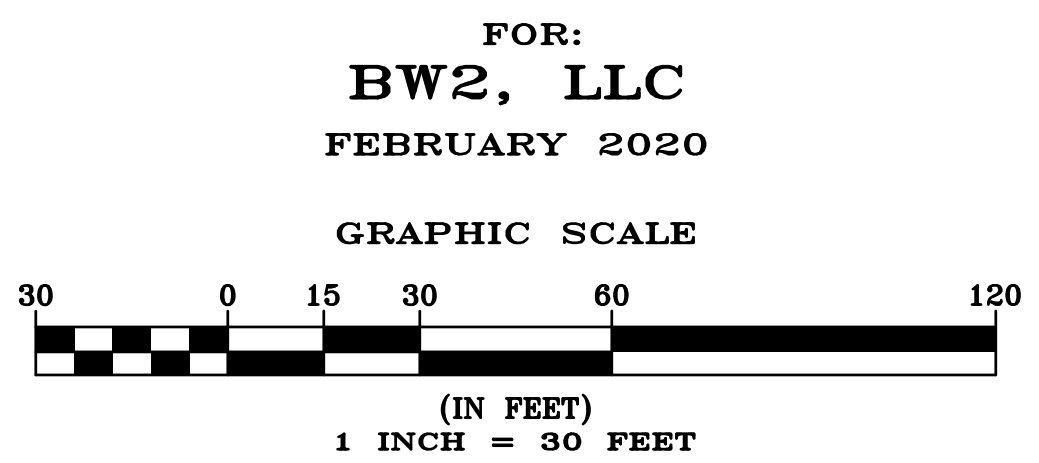


- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS OF THE PARCEL DESCRIBED IN STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK 1783, PAGE 539.
 - PARCEL AREA: 119,138 SQ. FT. / 2.74 ACRES
 - TAX MAP INFORMATION:
TOWN OF DURHAM TAX MAP 2, LOT 10-4.
 - THE SURVEYED PARCEL LIES WITHIN THE TOWN OF DURHAM PROFESSIONAL OFFICE (PO) DISTRICT. MINIMUM BUILDING SETBACKS ARE AS FOLLOWS:
FRONT YARD = 30 FT (50 FT FROM ARTERIAL STREET)
SIDE YARD = 15 FT
REAR YARD = 20 FT
MAX. BLD. HEIGHT = 30 FT (35 FT BY CONDITIONAL USE)
MAX. IMPERVIOUS RATIO = 50%
 - THE SURVEYED PARCEL IS LOCATED WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM), MAP NO. 33017C0318E, MAP REVISED SEPTEMBER 30, 2015.
 - BEARINGS SHOWN ON THIS PLAN ARE BASED ON GRID NORTH, NEW HAMPSHIRE STATE PLANE, NAD83. ELEVATIONS AND CONTOURS ARE BASED ON NAVD86(GEOD12B), BASED ON GPS OBSERVATIONS TAKEN JANUARY 31, 2020. DISTANCES SHOWN ARE GROUND DISTANCES.
 - THE LOCATION SHOWN ON THIS PLAN FOR ABOVE AND UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE VERIFIED BEFORE ANY EXCAVATION. FEDERAL AND STATE LAW REQUIRES ANYONE PERFORMING ANY SORT OF EXCAVATION, INCLUDING DIGGING, BACKFILLING, BORING, AND GRADING TO NOTIFY DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS BEFORE BEGINNING WORK.

- REFERENCE PLANS:**
- "PLAN OF LAND OF W. TUCKERMAN"
REVISED: FEB. 13, 1936 BY E.W. BOWLER
RECORDED: PLAN #35, POCKET #3, FOLDER #2
 - "PLAN OF LAND FOR OYSTER RIVER COOPERATIVE SCHOOL DISTRICT"
REVISED: APRIL 20, 1955 BY GRANT L. DAVIS
RECORDED: PLAN #15, POCKET #2, FOLDER #21
 - "SUBDIVISION OF THE LAND OF MARION E. JAMES"
REVISED: FEB. 6, 1981 BY DICKSON, HOLDEN, AND ASSOCIATES, INC.
RECORDED: PLAN NO. 21A-34

TAX MAP 2, LOT 10-4
 OWNER OF RECORD:
 BW2, LLC
 C/O HOUSING INITIATIVES OF NEW ENGLAND CORP.
 264 US ROUTE 1
 BUILDING 300 SUITE 2A
 SCARBOROUGH, ME 04074
 BOOK 1783, PAGE 539

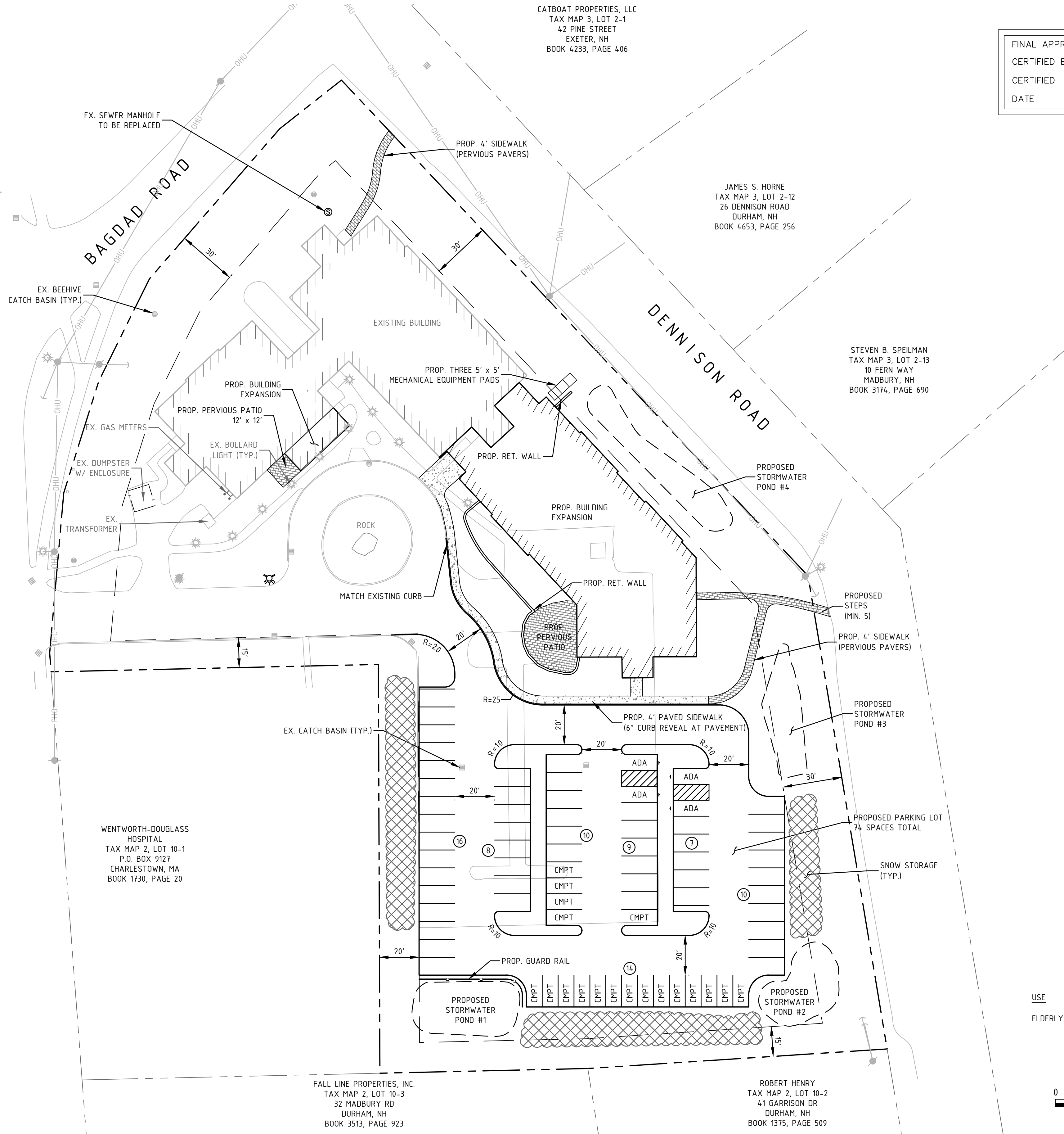
BOUNDARY & TOPOGRAPHIC SURVEY
38 MADBURY ROAD
DURHAM
STRAFFORD COUNTY
NEW HAMPSHIRE



FILE NO. 329
 PLAN NO. C-3050
 DWG. NO. 19203
 F.B. NO. 163



MADBURY ROAD



CATBOAT PROPERTIES, LLC
 TAX MAP 3, LOT 2-1
 42 PINE STREET
 EXETER, NH
 BOOK 4233, PAGE 406

JAMES S. HORNE
 TAX MAP 3, LOT 2-12
 26 DENNISON ROAD
 DURHAM, NH
 BOOK 4653, PAGE 256

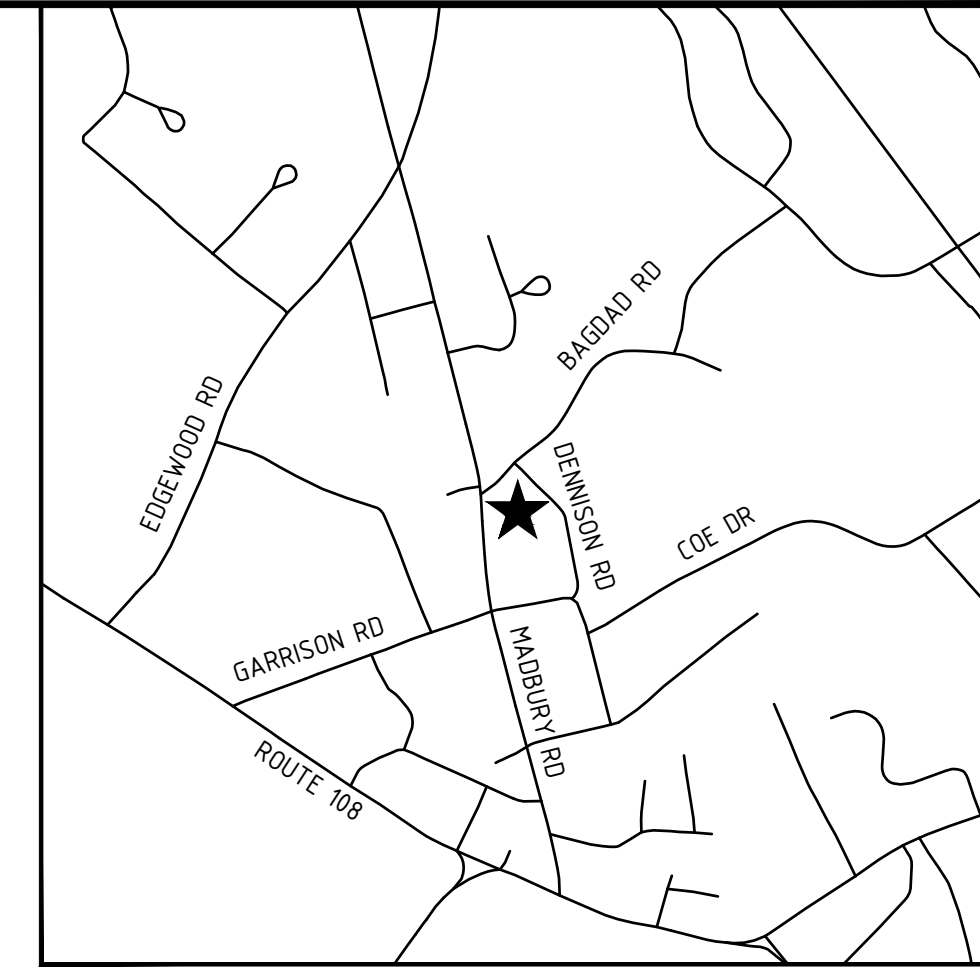
STEVEN B. SPEILMAN
 TAX MAP 3, LOT 2-13
 10 FERN WAY
 MADBURY, NH
 BOOK 3174, PAGE 690

WENTWORTH-DOUGLASS
 HOSPITAL
 TAX MAP 2, LOT 10-1
 P.O. BOX 9127
 CHARLESTOWN, MA
 BOOK 1730, PAGE 20

FALL LINE PROPERTIES, INC.
 TAX MAP 2, LOT 10-3
 32 MADBURY RD
 DURHAM, NH
 BOOK 3513, PAGE 923

ROBERT HENRY
 TAX MAP 2, LOT 10-2
 41 GARRISON DR
 DURHAM, NH
 BOOK 1375, PAGE 509

FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____



LOCUS MAP
 SCALE 1:12 000

NOTES:

- SUBJECT LOT:
 38 MADBURY ROAD
 TAX MAP 2, LOT 10-4
 S.C.R.D. BOOK 1783, PAGE 539
- OWNER OR RECORD:
 BW2 LLC
 C/O HOUSING INITIATIVES OF NEW ENGLAND CORP.
 264 US ROUTE 1
 BUILDING 300 SUITE 2A
 SCARBOROUGH, ME 04074
- LOT AREA: 2.74 ACRES / 119,138 SQ. FT.
- THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED CHANGES TO THE SUBJECT PARCEL FOR THE EXPANSION OF THE BAGDAD WOODS SENIOR HOUSING FACILITY.
- ZONING REQUIREMENTS:
 THE SUBJECT PARCEL IS LOCATED IN THE PROFESSIONAL OFFICE DISTRICT (PO) AND IS NOT WITHIN ANY OF THE ZONING OVERLAY DISTRICTS.

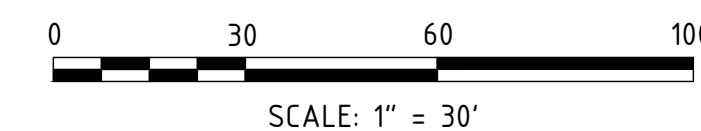
DIMENSIONAL STANDARDS FOR PO DISTRICT

MINIMUM LOT SIZE	10,000 SQ. FT.
MINIMUM LOT AREA PER DWELLING UNIT*	3,000 SQ. FT.*
MINIMUM FRONTAGE	100 FT
MINIMUM SETBACKS	
FRONT	30/30/50 FT
SIDE	15 FT
REAR	20 FT
MAXIMUM IMPERVIOUS SURFACE RATIO	50%

*PROPOSED DWELLING UNITS ARE SENIOR RESIDENTIAL AND SUBJECT TO THE SPECIAL DENSITY REQUIREMENTS IN DURHAM ZONING ORDINANCE 175-57(A).

- THE SURVEYED PARCEL IS LOCATED WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM), MAP NO. 33017C0318E, MAP REVISED SEPTEMBER 30, 2015.
- BEARINGS SHOWN ON THIS PLAN ARE BASED ON GRID NORTH, NEW HAMPSHIRE STATE PLANE, NAD83. ELEVATIONS AND CONTOURS ARE BASED ON NAVD88(GEOD12B), BASED ON GPS OBSERVATIONS TAKEN JANUARY 31, 2020. DISTANCES SHOWN ARE GROUND DISTANCES.
- FOR MORE INFORMATION ABOUT THIS SITE PLAN, OR TO SEE THE COMPLETE PLAN SET, CONTACT THE TOWN OF DURHAM PLANNING DEPARTMENT, 8 NEWMARKET ROAD, DURHAM, NH 03824. (603) 868-8064.
- ACCESS INTO THE SITE FOR FIRE APPARATUS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT 868-5531 WITH ANY QUESTIONS ABOUT ACCESS REQUIREMENTS.
- THE PROPOSED IMPERVIOUS SURFACE RATIO IS 49.8%

USE	STANDARD	REQUIRED	PROVIDED
ELDERLY HOUSING	1 SPACE/UNIT 1 SPACE/EMPLOYEE	72	74



NO.	REVISIONS	DATE	INT.
0	INITIAL SUBMISSION TO THE DURHAM PLANNING BOARD	6/3/20	MCS

SEAL

DATE ISSUED: 6/3/20
 SCALE: 1"=30'
 DESIGNED BY: MCS
 DRAWN BY: MCS
 APPROVED BY: MJS
 DWG FILE: 19057 C101.dwg

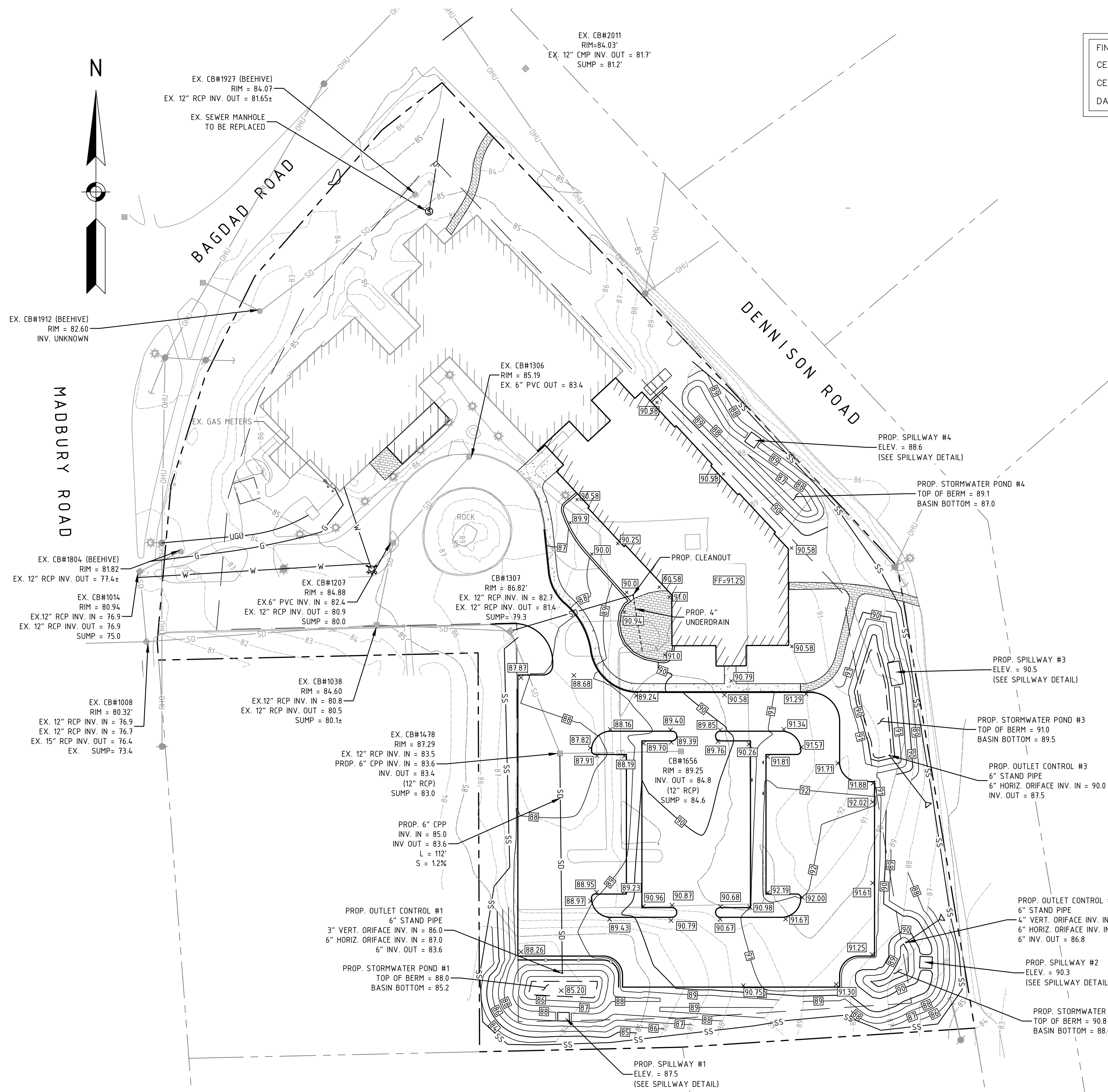
SITE PLAN
 prepared for
 BW2 LLC C/O
 HOUSING INITIATIVES OF NEW ENGLAND
 TAX MAP 2, LOT 10-4
 BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL

5 Railroad St., P.O. Box 359
 Durham, NH 03824
 Phone: (603) 659-4475; Fax: (603) 659-4427
 E-mail: mjs@mjs-engineering.com

JOB: 19-057

C101



FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____

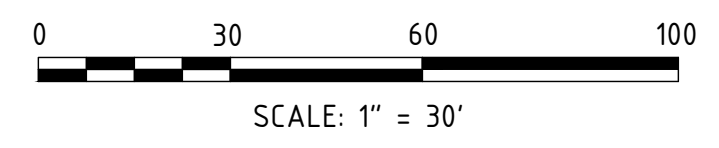
- NOTES:
- UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE PHYSICAL EVIDENCE, NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.
 - GEOSYNTHETIC FILTER BAGS SHOULD BE INSTALLED IN ALL CATCH BASINS LOCATED NEAR THE WORKING AREA. SEE DETAIL FOR MOST INFORMATION.

NO.	REVISIONS	DATE
0	INITIAL SUBMISSION TO THE DURHAM PLANNING BOARD	6/3/20
1		
2		
3		
4		
5		
6		
7		
8		
9		

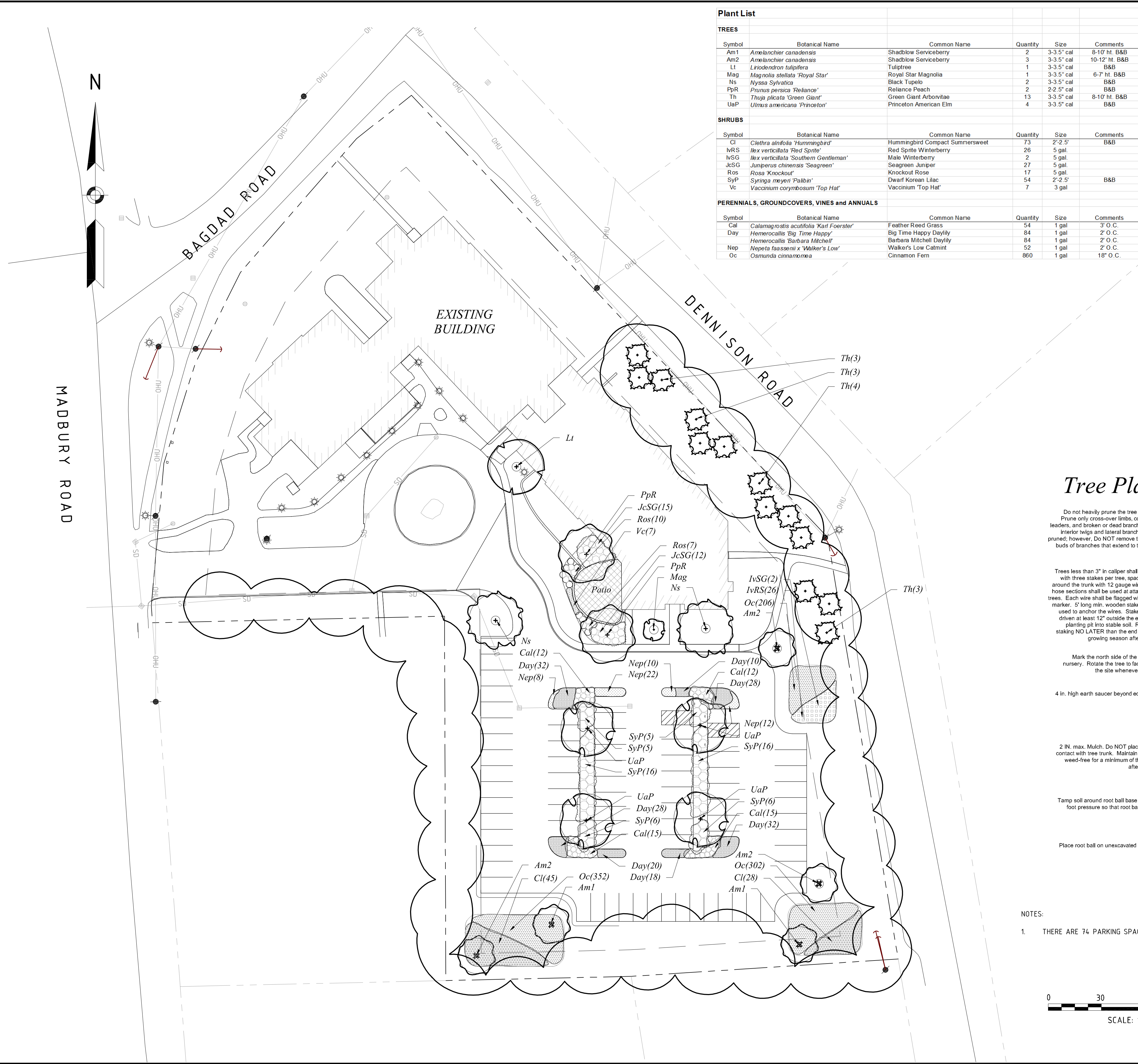
DATE ISSUED: 6/3/20
 SCALE: 1"=30'
 DESIGNED BY: MCS
 DRAWN BY: MCS
 APPROVED BY: MJS
 DWG FILE: 19057_C102.dwg

UTILITIES & GRADING PLAN
 prepared for
 BW2 LLC C/O
 HOUSING INITIATIVES OF NEW ENGLAND
 TAX MAP 2 LOT 10-4
 BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL
 5 Railroad St., P.O. Box 359
 Durham, NH 03824
 Phone: (603) 659-4475; Fax: (603) 659-4427
 E-mail: mjs@mjs-engineering.com



M:\current\project\svms_engr\bagdad woods 2020-06-03\bagdad woods landscape plan.dwg

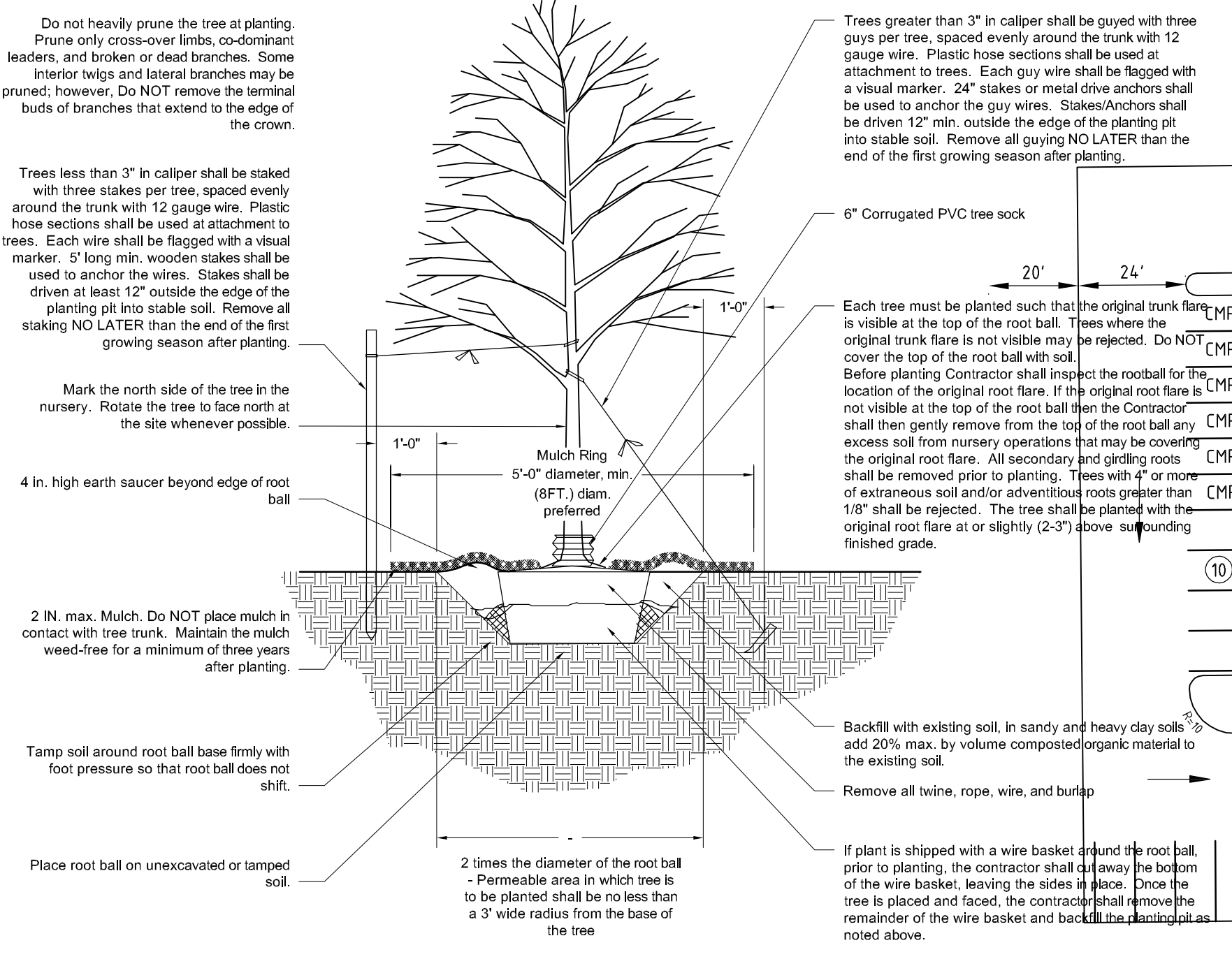


Plant List					
TREES					
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Am1	<i>Amelanchier canadensis</i>	Shadblow Serviceberry	2	3-3.5' cal	8-10' ht. B&B
Am2	<i>Amelanchier canadensis</i>	Shadblow Serviceberry	3	3-3.5' cal	10-12' ht. B&B
Lt	<i>Liriodendron tulipifera</i>	Tuliptree	1	3-3.5' cal	B&B
Mag	<i>Magnolia stellata 'Royal Star'</i>	Royal Star Magnolia	1	3-3.5' cal	6-7' ht. B&B
Ns	<i>Nyssa sylvatica</i>	Black Tupelo	2	3-3.5' cal	B&B
PpR	<i>Prunus persica 'Reliance'</i>	Reliance Peach	2	2-2.5' cal	B&B
Th	<i>Thuja plicata 'Green Giant'</i>	Green Giant Arborvitae	13	3-3.5' cal	8-10' ht. B&B
UaP	<i>Ulmus americana 'Princeton'</i>	Princeton American Elm	4	3-3.5' cal	B&B
SHRUBS					
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cl	<i>Clethra alnifolia 'Hummingbird'</i>	Hummingbird Compact Summersweet	73	2-2.5'	B&B
NRS	<i>Ilex verticillata 'Red Sprite'</i>	Red Sprite Winterberry	26	5 gal	
MSG	<i>Ilex verticillata 'Southern Gentleman'</i>	Male Winterberry	2	5 gal	
JcSG	<i>Juniperus chinensis 'Seagreen'</i>	Seagreen Juniper	27	5 gal	
Ros	<i>Rosa 'Knockout'</i>	Knockout Rose	17	5 gal	
SyP	<i>Syringa meyeri 'Palibin'</i>	Dwarf Korean Lilac	54	2-2.5'	B&B
Vc	<i>Vaccinium corymbosum 'Top Hat'</i>	Vaccinium 'Top Hat'	7	3 gal	
PERENNIALS, GROUNDCOVERS, VINES and ANNUALS					
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cal	<i>Calamagrostis acutiflora 'Karl Foerster'</i>	Feather Reed Grass	54	1 gal	3' O.C.
Day	<i>Hemerocallis 'Big Time Happy'</i>	Big Time Happy Daylily	84	1 gal	2' O.C.
Nep	<i>Hemerocallis 'Barbara Mitchell'</i>	Barbara Mitchell Daylily	84	1 gal	2' O.C.
Nep	<i>Nepeta faassenii 'Walker's Low'</i>	Walker's Low Catmint	52	1 gal	2' O.C.
Oc	<i>Osmunda cinnamomea</i>	Cinnamon Fern	860	1 gal	18" O.C.

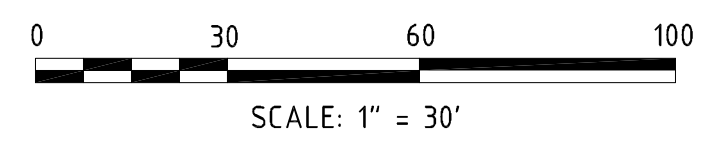
Landscape Notes:

- Design is based on drawings by MJS Engineering, P.C. dated May 13, 2020 and may require adjustment due to actual field conditions.
- The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
- Erosion Control shall be in place prior to construction.
- Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
- The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
- It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
- Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portables within the tree protection area.
- This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
- Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
- The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
- The Contractor shall procure any required permits prior to construction.
- Prior to any landscape construction activities contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
- Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
- The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
- A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
- All plants shall be legibly tagged with proper botanical name.
- The Contractor shall guarantee all plants for not less than one year from time of acceptance.
- Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
- No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
- All landscaping shall be provided with the following:
 - Outside hose attachments spaced a maximum of 150 feet apart, and
 - An underground irrigation system, or
 - A temporary irrigation system designed for a two-year period of plant establishment.
- If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
- The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of plant material once delivered to the site, and delivery of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
- All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
- Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and 1/2" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched with a 5" diameter mulch. Color of mulch shall be black.
- Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
- In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
- Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to a minimum of 5' from shrubs and trunks of trees.
- Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
- Landscape Architect is not responsible for the means and methods of the contractor.

Tree Planting Detail



NOTES:
1. THERE ARE 74 PARKING SPACES AS SHOWN



DATE ISSUED: 5/28/20	SCALE: 1"=30'	DESIGNED BY: RW	DRAWN BY: LF	APPROVED BY: RW	DWG FILE:
LANDSCAPE PLAN					
prepared for BW2, LLC					
c/o HOUSING INITIATIVES OF NE CORP.					
TAX MAP 2, LOT 10-4					
36 BAGDAD ROAD, DURHAM, NH					
MJS ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL 5 HIGHLAND ST., P.O. Box 369 Manchester, NH 03857 Phone: (603) 659-4979, Fax: (603) 659-4427 E-mail: mjs@mjs-engineering.com					
JOB: 19-057					
LA-1					

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Nesmarket, New Hampshire Phone: 603.659.5949



HOUSING INITIATIVES OF NEW ENGLAND Site Lighting Layout

STEVEN B. SPEILMAN
TAX MAP 3, LOT 2-13
10 FERN WAY
MADBURY, NH
BOOK 3174, PAGE 690

MADBURY ROAD

EXISTING BUILDING

DENNISON ROAD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

8" HARDWOOD

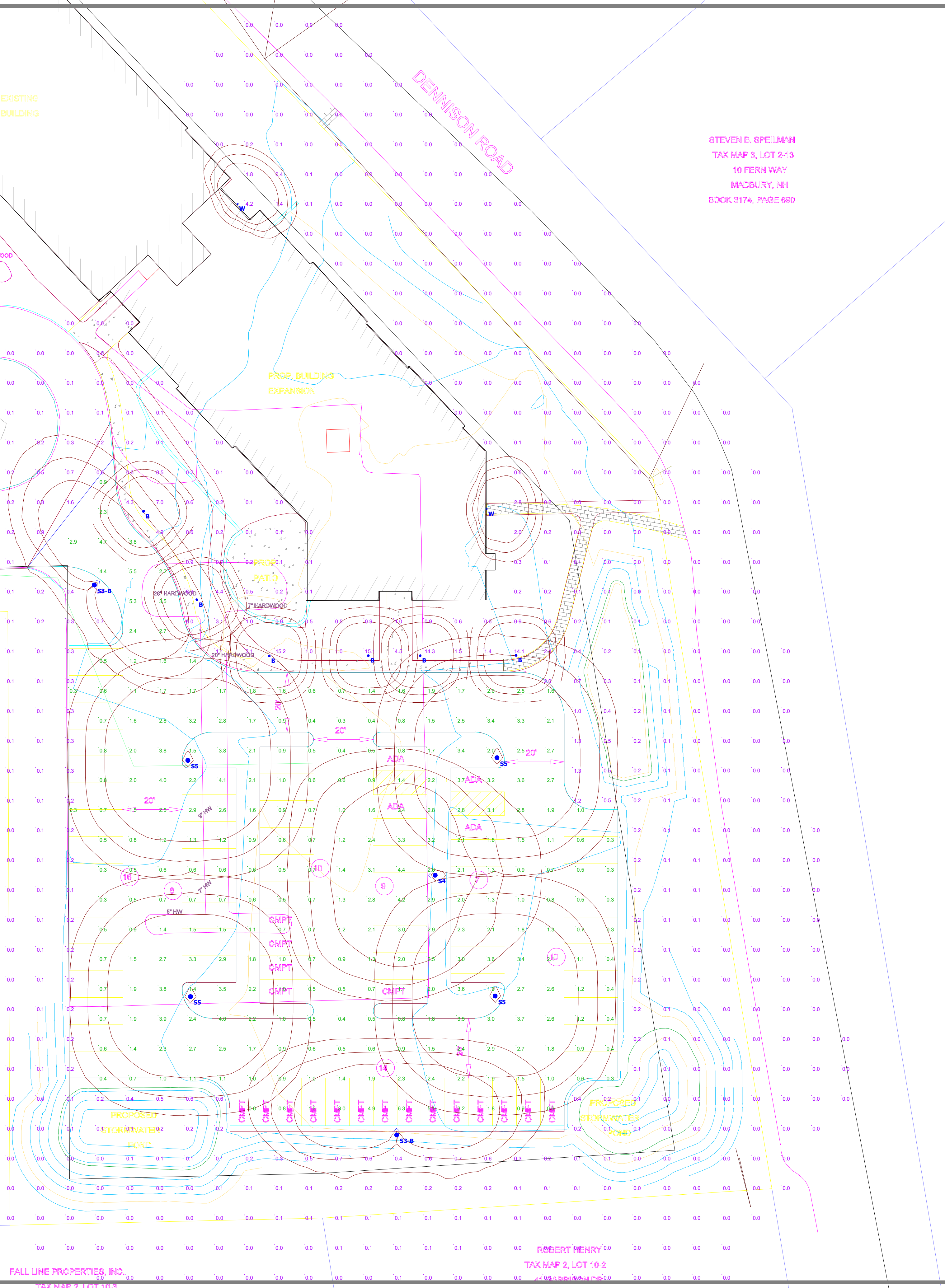
8" HARDWOOD

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Outside of Parking Lot	+	0.3 fc	15.2 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.7 fc	6.3 fc	0.3 fc	21.0:1	5.7:1

WENTWORTH-DOUGLASS
HOSPITAL
TAX MAP 2, LOT 10-1
P.O. BOX 9127
CHARLESTOWN, MA
BOOK 1730, PAGE 20

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	B	6	Sternberg Lighting	E260LED-FA-1RND45T5-MDL03	Euro series E260 LED Bollard; mounted at 3ft	LED	1	E260LED-FA-1RND45T5-MDL03.IES	2873	0.9	30.9
	S3-B	2	Sternberg Lighting	A880SRLED-24L40T3-MDL014-BLOC	A880SRLED Town Square Series Caged Acorn, T3, BLOC	LED	1	A880SRLED-24L40T3-MDL014-BLOC.IES	7535	0.9	87.8
	S4	1	Sternberg Lighting	A880SRLED-24L40T4-MDL014	A880SRLED Town Square Series Caged Acorn, T4	LED	1	A880SRLED-24L40T4-MDL014.IES	9202	0.9	88
	S5	4	Sternberg Lighting	A880SRLED-24L40T5-MDL014	A880SRLED Town Square Series Caged Acorn, T5	LED	1	A880SRLED-24L40T5-MDL014.IES	9610	0.9	87.9
	W	2	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VW	WDGE1 LED Wall Pack; mounted at 10ft	LED	1	WDGE1_LED_P1_30K_80CRI_V W.ies	1163	0.9	10.0002



FALL LINE PROPERTIES, INC.
TAX MAP 2, LOT 10-3
32 MADBURY RD.
DURHAM, NH

ROBERT PENRY
TAX MAP 2, LOT 10-2
24 99 & PENNY RD
DURHAM, NH

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
6/2/2020
Scale
1"=30'
Drawing No.
Summary

CONSTRUCTION SEQUENCING AND EROSION CONTROL NOTES:

AREA OF DISTURBANCE/STABILIZATION

- A. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL THE AREA OF UNSTABILIZED SOIL EXCEED 5 ACRES AT ANY ONE TIME BEFORE THE AREA IS STABILIZED.
B. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
1. IN AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM NO. 304.1 OR 304.2 HAVE BEEN INSTALLED;
2. IN AREAS NOT TO BE PAVED
2.A. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
2.B. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED.
2.C. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.03.
C. DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITHIN 45 DAYS AND PERMANENTLY STABILIZED NO LATER THAN 3 DAYS AFTER FINAL GRADING.

EROSION CONTROL PRACTICES:

- A. INSTALLATION:
1. INSTALL ALL EROSION CONTROLS AS SHOWN ON THE GRADING PLAN, TYPICAL DETAILS, AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED.
B. INSPECTION:
1. INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5 INCHES OR GREATER UNLESS OTHERWISE NOTED.
2. TEMPORARY STABILIZATION PRACTICES SHALL BE INSPECTED ONCE PER WEEK DURING CONSTRUCTION UNTIL EXPOSED SURFACES ARE STABILIZED.
3. ANY SIGNS OF RILL OR GULLY EROSION SHALL BE IMMEDIATELY REPAIRED.
C. MAINTENANCE:
1. MAINTAIN EROSION CONTROLS PER THE TYPICAL DETAILS AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE.
D. REMOVAL:
1. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 85% VEGETATIVE COVER HAS BEEN ESTABLISHED.
2. AFTER REMOVAL, ALL DISTURBED AREAS SHALL BE REGRADED, FERTILIZED, AND RESEEDED. MONITOR TO ENSURE VEGETATIVE GROWTH IS ESTABLISHED AND REPAIR AS NEEDED UNTIL MINIMUM OF 85% VEGETATIVE COVER IS ESTABLISHED.

COLD WEATHER SITE STABILIZATION

- A. TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION TECHNIQUES SPECIFIED IN THIS SECTION SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.
B. SUBJECT TO (C), BELOW, THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE:
1. LIMITED TO ONE ACRE; AND
2. PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT.
C. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN IS DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED TO THE DEPARTMENT FOR APPROVAL AS A REQUEST TO WAIVE THE ONE-ACRE LIMIT.
D. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING OR TACKIFIER OR WITH AT LEAST 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
E. SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF 15% OR GREATER THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH AT LEAST 4 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(B).
F. ANCHORED HAY MULCH OR EROSION CONTROL MIX THAT MEETS THE CRITERIA OF ENV-WQ 1506.05(B) SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH.
G. EROSION CONTROL BLANKETS SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
H. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH (D) OR (E), ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
I. ALL DITCHES OR SWALES THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
J. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3-INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, TABLE 304-1, ITEM NO. 304.1, 304.2, OR 304.3, AVAILABLE AS NOTED IN APPENDIX B.

TEMPORARY VEGETATION

- A. SITE PREPARATION
1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED ABOVE.
2. ENSURE RUNOFF IS DIVERTED FROM SEEDING AREA.
3. ON SLOPES OF 4:1 OR STEEPER, CREATE HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
B. SEED BED PREPARATION
1. REMOVE STONES AND TRASH FROM AREA TO BE SEEDING.
2. COMPACTED SOIL SHALL BE LOOSENEED TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED.
3. APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
C. SEEDING
1. SEED PER THE FOLLOWING RECOMMENDATIONS

Table with 4 columns: SEASON, APPLICATION DATE, MIXTURE TYPE, QUANTITY (lb./Ac.). Rows include EARLY SPRING (OATS, 80), LATE SPRING/FALL (PERENNIAL RYE, 30), EARLY SPRING/FALL (ANNUAL RYE, 40), and FALL (WINTER RYE, 112).

- 2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
3. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
4. AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
4.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
4.B. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
4.C. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
5. IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
D. MAINTENANCE
1. TEMPORARY SEEDING SHOULD BE INSPECTED WEEKLY AND AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHOULD ALSO BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD. BASED ON INSPECTION, AREAS SHOULD BE RESEEDING TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS, IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHOULD BE IMPLEMENTED.
2. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.
3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEEDING, WITH OTHER TEMPORARY MEASURES (E.G., MULCH) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION

- A. SITE PREPARATION
1. REFER TO SITE PREPARATION FOR TEMPORARY SEEDING.
B. SEED BED PREPARATION
1. REFER TO SEED BED PREPARATION FOR TEMPORARY SEEDING IN CONJUNCTION WITH THESE NOTES.
2. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TINE HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
3. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
4. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
5. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
6. APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.
C. SEEDING
1. UNLESS OTHERWISE NOTED, GRASS SEED MIXTURE 'C' SHALL BE APPLIED AT THE SPECIFIED RATE AS NOTED IN THE 'SEED MIXTURES FOR PERMANENT VEGETATION' TABLE.
2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.
3. WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
4. WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
5. SLOPES MUST BE NO STEEPER THAN 2 TO 1.
6. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
7. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDING WAS DISTURBED.
9. AREAS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:
9.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;
9.A. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;
9.B. MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
9.C. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;
10. IF VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL METHODS SHALL BE IMPLEMENTED.
D. MAINTENANCE
1. PERMANENTLY SEEDING AREAS SHOULD BE INSPECTED MONTHLY.
2. MOW SEEDING AREAS AS NECESSARY.
3. BASED ON INSPECTION, AREAS SHOULD BE REPAIRED AND/OR RESEEDING TO ENSURE 85% OF THE SOIL SURFACE IS COVERED BY VEGETATION.

MULCHING & EROSION CONTROL MATTING

- A. GENERAL
1. APPLY PRIOR TO A STORM EVENT. CLOSELY MONITOR THE WEATHER TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
2. MULCHING WITHIN A SPECIFIED TIME PERIOD FROM ORIGINAL SOIL EXPOSURE
2.A. WITHIN 100 FEET OF WETLANDS THE TIME PERIOD SHOULD BE NO GREATER THAN 7 DAYS.
2.B. IN OTHER AREAS IT SHALL BE NO GREATER THAN 14 DAYS.
3. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, FLOW CONDITIONS, AND TIME OF YEAR.
B. TEMPORARY MULCHING
1. HAY OR STRAW MULCHES
1.A. ORGANIC MULCH INCLUDING HAY AND STRAW SHALL BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS.
1.B. APPLICATION RATE SHALL BE 2 BALES/1,000 SF (70-90 POUNDS) OR 1.5-2.0 TONS/ACRE TO COVER 75-90% OF THE GROUND.
1.C. ANCHORING SHALL BE ONE OF THE FOLLOWING:
1.C.1. NETTING SHALL BE LUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
1.C.2. TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OR STRAW MULCH. APPLY PER MANUFACTURER'S SPECIFICATIONS. TYPICAL APPLICATION RATES ARE 40-60 LBS/ACRE FOR POLYMER MATERIAL AND 80-120 LBS/ACRE FOR ORGANIC LIQUID.
1.D. WINTER APPLICATION: APPLY TO A DEPTH OF 4 INCHES OR DOUBLE THE ABOVE LISTED APPLICATION RATE. NOTE THAT IF SEEDING IS NECESSARY, MULCH WILL NEED TO BE REMOVED AND THE AREA SEEDING AND MULCHED IN THE SPRING.
1.E. MAINTENANCE
1.E.1. INSPECT PERIODICALLY AND AFTER RAIN STORMS FOR RILLS OR DISPLACEMENT OF MULCH. REPAIR AS NECESSARY. CONTINUE INSPECTIONS UNTIL 85% VEGETATIVE COVER IS ESTABLISHED.
2. EROSION CONTROL BLANKET OR MATTING
2.A. REFER TO PLANS FOR TYPICAL EROSION CONTROL MATTING DETAIL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
2.B. APPLICATION AND TIMING
2.B.1. DURING THE GROWING SEASON (APRIL 15 - SEPTEMBER 15) USE ON THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER), ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS, AND WETLANDS.
2.B.2. DURING THE LATE FALL AND WINTER (SEPTEMBER 15 - APRIL 15) IN ADDITION TO THOSE LISTED ABOVE USE ON SIDE SLOPES OF GRASSED WATERWAYS AND MODERATE SLOPES (GREATER THAN 8%).
3. MAINTENANCE
3.A. INSPECT PERIODICALLY AND BEFORE AND AFTER STORM EVENTS TO ENSURE CONTACT WITH THE SOIL UNTIL 85% VEGETATIVE COVER IS ESTABLISHED. REPAIR AND RESTAPLE AS NECESSARY.
C. PERMANENT MULCHING
1. WOOD CHIPS OR GROUND BARK
1.A. APPLY TO A THICKNESS OF 2 TO 6 INCHES. APPLICATION RATES ARE 10-20 TONS/ACRE OR 460-920 POUNDS/1,000 SF.
1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.
2. EROSION CONTROL MIX
2.A. SHALL BE PLACED AT A THICKNESS OF 2 INCHES OR MORE FOR MULCHING.
2.B. COMPOSITION OF THE MIX SHALL BE AS FOLLOWS:
2.B.1. ORGANIC MATTER CONTENT SHALL BE BETWEEN 25-65% DRY WEIGHT BASIS.
2.B.2. PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING THE 3" SCREEN, 90-100% PASSING THE 1" SCREEN, 70-100% PASSING THE 0.75 INCH SCREEN, AND 30-75% PASSING THE 0.25 INCH SCREEN.
2.B.3. THE ORGANIC PORTION SHALL BE ELONGATED AND FIBROUS SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL NOT CONTAIN WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS.
2.B.4. THE MIX SHALL NOT CONTAIN SILTS, CLAYS, OR FINE SANDS.
2.B.5. SOLUBLE SALTS CONTENT SHALL BE < 4.0MMHOS/CM AND A pH OF 5.0-8.0.
2.C. PLACEMENT OF BERM
2.C.1. PLACE BERM ALONG A LEVEL CONTOUR. BERM MUST BE A MINIMUM OF 12" HIGH ON THE UPHILL SIDE AND 2 FEET WIDE. UPSLOPE AREA MUST HAVE A SLOPE OF LESS THAN 5%.
2.D. MAINTENANCE: INSPECT PERIODICALLY AND AUGMENT AS NEEDED TO MAINTAIN INITIAL THICKNESS. REPLACE IF NO LONGER FUNCTIONING AS INTENDED.

SOIL STOCKPILES

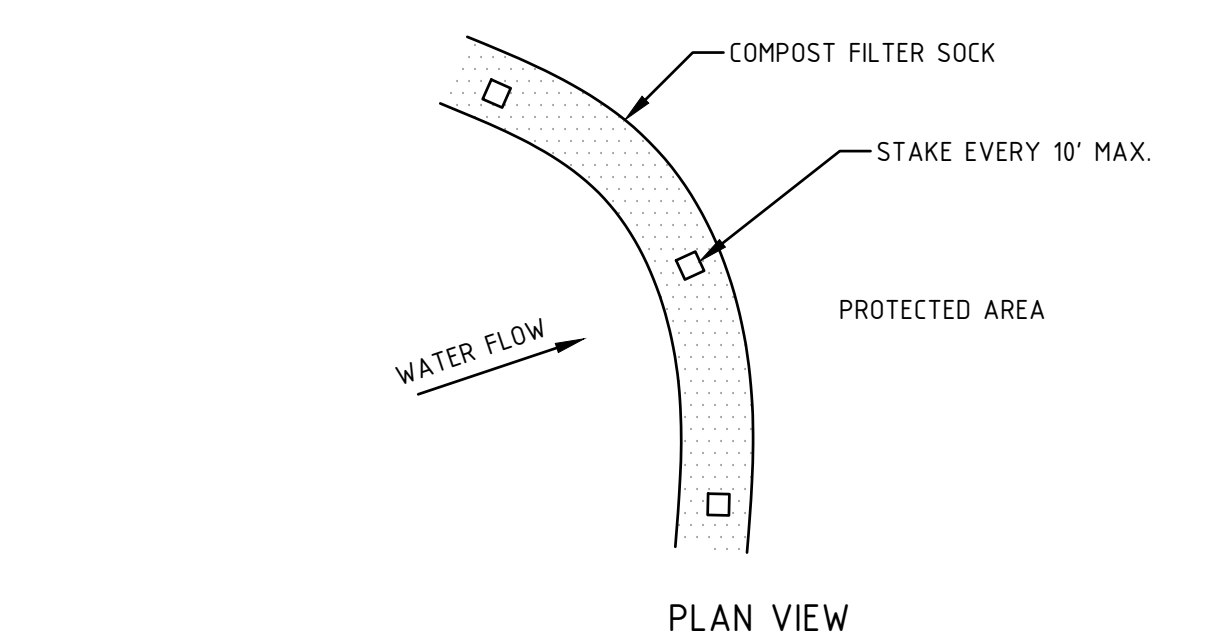
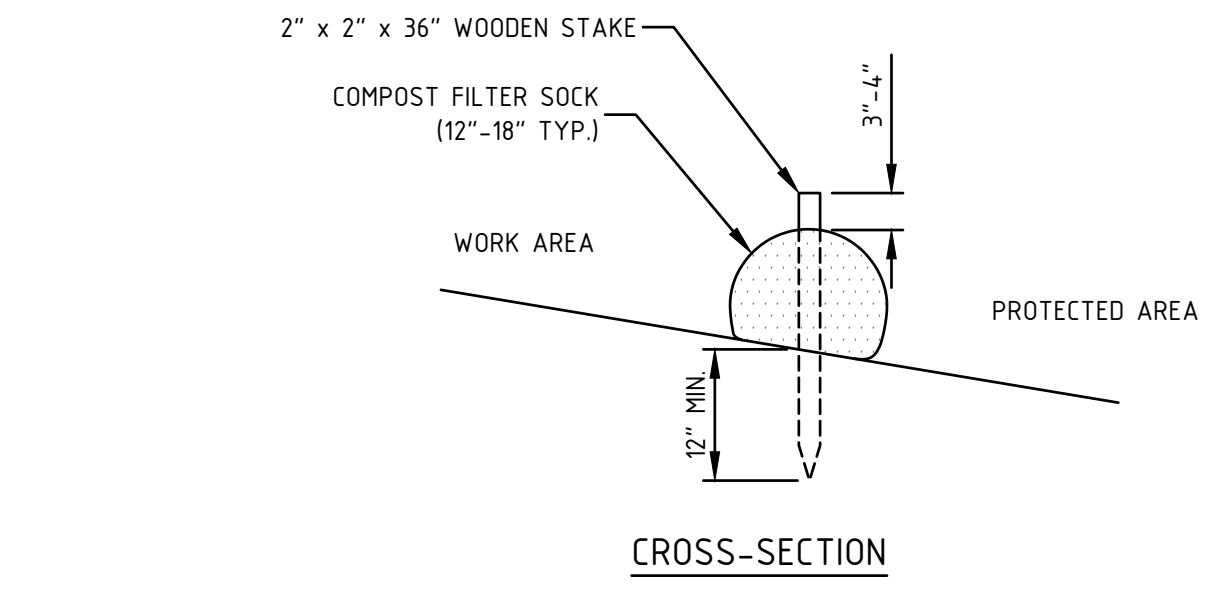
- A. GENERAL
1. STOCKPILES MUST BE LOCATED 50 FEET FROM DITCHES AND CULVERT INLETS.
B. PROTECTION OF STOCKPILES
1. PROTECT SOIL AND AGGREGATE STOCKPILES WITH TEMPORARY PERIMETER SEDIMENT BARRIER SUCH AS SILT FENCE OR SILT SOCK.
2. COVER ACTIVE STOCKPILES WITH ANCHORED PROTECTIVE COVERING PRIOR TO EXPECTED STORM EVENTS.
3. INACTIVE STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR TEMPORARILY SEEDING AND MULCHED PER THE TEMPORARY VEGETATION AND MULCHING NOTES ON THIS PAGE.
4. STOCKPILES THAT ARE A SOURCE OF DUST SHALL BE COVERED.

DUST CONTROL

- A. DUST SHALL BE CONTROLLED ON SITE DURING CONSTRUCTION BY IMPLEMENTING THE FOLLOWING DUST CONTROL MEASURES:
1. MULCHING AND VEGETATIVE COVER TO REDUCE DUST.
2. MECHANICAL SWEEPERS AND FINE WATER SPRAYS.
3. COVER SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.

Table: SEED MIXTURE SELECTION BASED ON SOIL TYPE. Columns: USE, SEEDING MIXTURE, DROUGHTY, WELL DRAINED, MODERATELY WELL DRAINED. Rows include STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS, WATERWAYS, EMERGENCY SPILLWAYS, LIGHTLY USED PARKING LOTS, PLAY AREAS AND ATHLETIC FIELDS.

Table: SEED MIXTURES FOR PERMANENT VEGETATION. Columns: MIXTURE, SPECIES, POUNDS PER ACRE, POUNDS PER 1,000 SF. Rows include A (TALL FESCUE, CREEPING RED FESCUE, BERTHOPE), B (TALL FESCUE, CREEPING RED FESCUE, CROWN VETCH), C (TALL FESCUE, CREEPING RED FESCUE, BIRDSEED TREFOIL), D (TALL FESCUE, ELATPEA), E (CREEPING RED FESCUE, KENTUCKY BLUEGRASS), F (TALL FESCUE).



- NOTES:
1. ALL COMPOST MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
2. FILTER SOCKS SHOULD BE INSTALLED FOLLOWING EXISTING CONTOURS.

COMPOST FILTER SOCK DETAIL N.T.S.

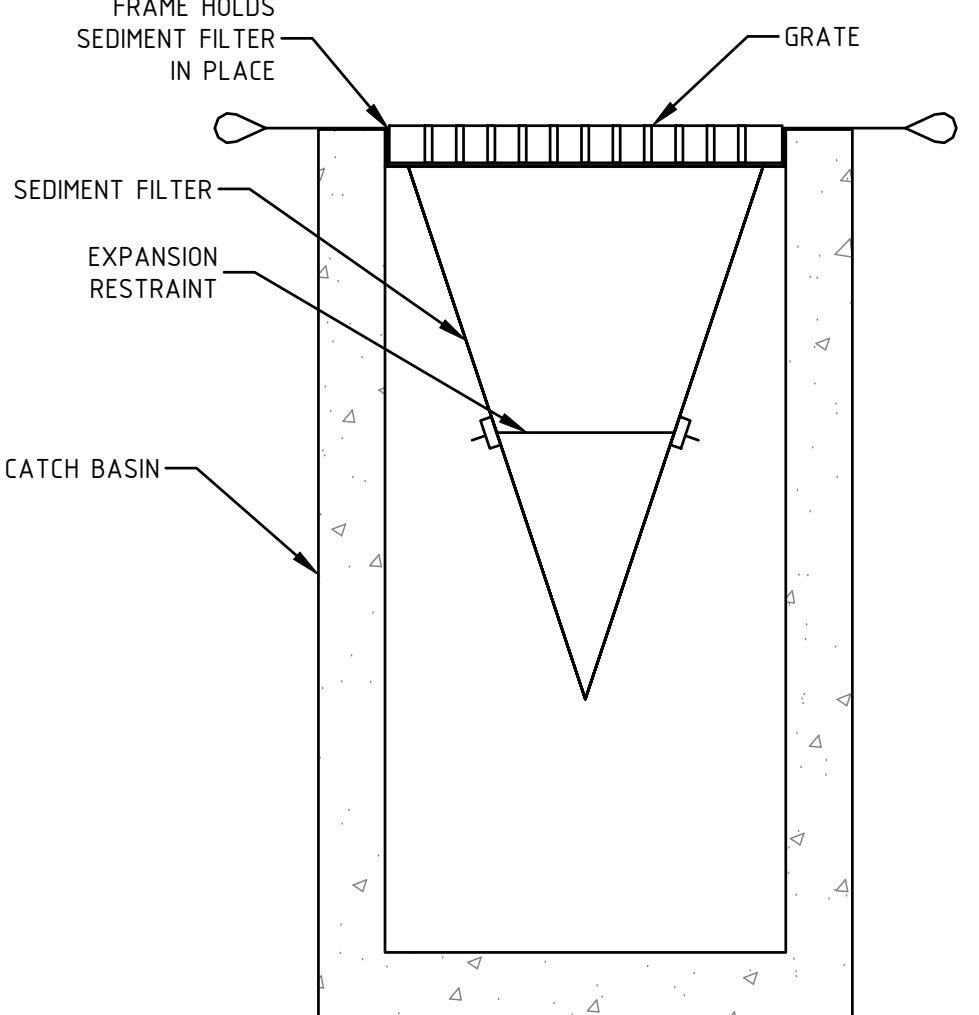
CONSTRUCTION SEQUENCING:

- 1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY OFFICIALS, OWNER, AND CONTRACTORS IF REQUIRED BY THE CONDITIONS OF APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
2. CONTACT DIG-SAFE, INDIVIDUAL UTILITIES, AND CITY DEPARTMENTS TO GET ALL UTILITIES MARKED PRIOR TO START OF CONSTRUCTION.
3. INSTALL PERIMETER CONTROLS PRIOR TO ALL EARTHMOVING WORK.
4. CLEAR/GRUB ONLY WITHIN THE LIMITS OF GRADING AS SHOWN ON THE PLANS. REMOVE ORGANICS ONLY FROM THOSE AREAS THAT CAN BE WORKED AND STABILIZED WITHIN 45 DAYS OF REMOVAL. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
5. CLEAR/GRUB
A. STUMPS MAY BE DISPOSED ON-SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
6. STOCKPILES
A. STOCKPILE LOAM FOR RE-USE AS NEEDED.
B. TEMPORARILY STABILIZE LOAM STOCKPILES WITH:
1. WINTER RYE GRASS- PRIOR TO SEPTEMBER 15TH
2. MULCH- FROM SEPTEMBER 15TH TO MAY 1ST
7. CONSTRUCT AND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION, AND STORMWATER CONTROL FACILITIES AS LISTED ABOVE.
A. THESE SHALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.
B. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED. REFER TO SEDIMENT TRAP DETAIL.
C. STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
D. REFER TO INDIVIDUAL DETAILS FOR CONSTRUCTION REQUIREMENTS.
10. PARKING LOT CONSTRUCTION
A. CUTS AND FILLS:
1. CONSTRUCT IN LOCATIONS AND TO GRADES AS SHOWN ON THE PLANS.
2. FILLS:
A. PLACE MAXIMUM 12" LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY.
B. ALL MATERIAL BASED ON PROCTOR TEST SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS LOAM, STUMPS, BRUSH, AND ROCKS LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING PLACED.
3. LOAM AND SEED SLOPES WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
B. DRAINAGE AND UTILITY STRUCTURES
1. INSTALL AS SHOWN IN ACCORDANCE WITH DETAILS AND DRY STABILIZE.
C. BASE MATERIALS: BANK RUN AND CRUSHED GRAVEL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY TO THE DEPTHS SPECIFIED IN THE PARKING LOTS CROSS-SECTION DETAILS.
D. STABILIZE ALL PARKING AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
11. INSPECT, MAINTAIN, AND IF NECESSARY, REPAIR ALL EROSION AND SEDIMENT CONTROL MEASURES AS STATED IN EROSION CONTROL NOTES ON THIS SHEET.
12. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES ONCE INITIAL GROWTH IS ESTABLISHED.

ADDITIONAL NOTES:

- 1. NO FUEL SHALL BE STORED ON SITE DURING CONSTRUCTION.
2. DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
3. ALL CONSTRUCTION MATERIALS THAT ARE SPILLED OR DEPOSITED ON THE PUBLIC ROADWAYS SHALL BE REMOVED BY THE CONTRACTOR.
4. DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

FINAL APPROVAL BY DURHAM PLANNING BOARD. CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER. CERTIFIED: DATE



- NOTES:
1. SEDIMENT FILTER TRAP SHALL BE ACF REGULAR FLOW SILTSACK OR APPROVED EQUAL.
2. FILTERS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.

CATCH BASIN SEDIMENT FILTER DETAIL N.T.S.

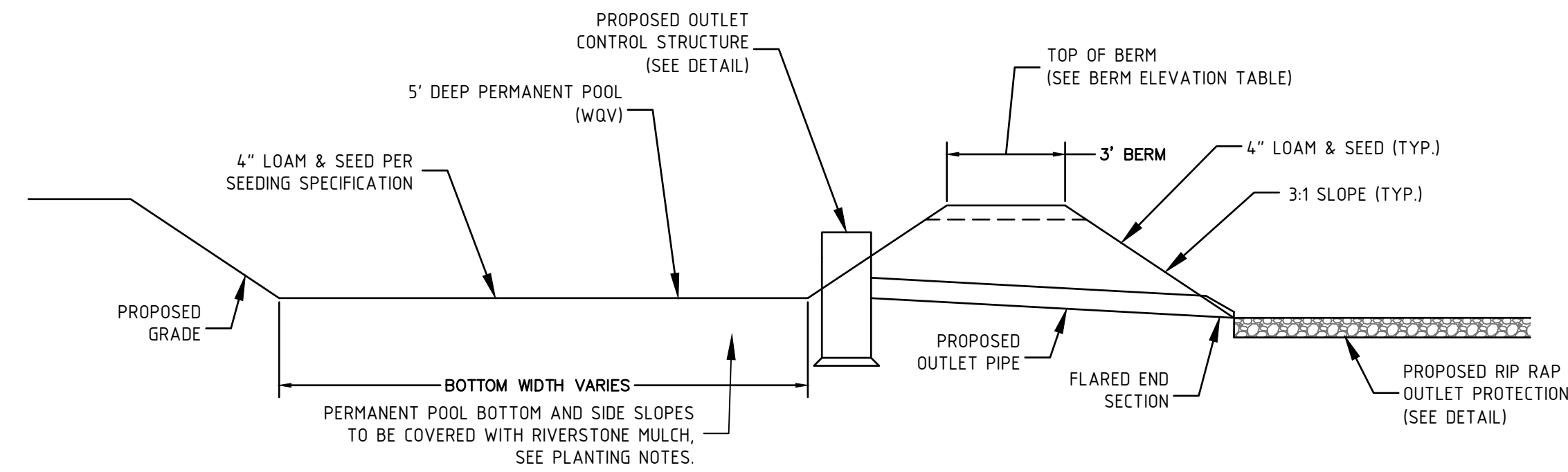
Table with columns: DATE, SCALE, DESIGNED BY, DRAWN BY, APPROVED BY, DWG FILE, REVISIONS, DATE. Includes a circular seal for Michael Behrendt, Town Planner, No. 6887.

DATE ISSUED: 6/3/20 SCALE: 1"=30' DESIGNED BY: MCS DRAWN BY: MCS APPROVED BY: MJS DWG FILE: 19057 Det1B.dwg

CONSTRUCTION DETAILS prepared for BW2 LLC C/O HOUSING INITIATIVES OF NEW ENGLAND TAX MAP 2 LOT 10-4 BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL 5 HALLROAD ST., DURHAM, NH 03824 PHONE: (603) 659-4979, FAX: (603) 659-4627 E-MAIL: MJS@MJS-ENGINEERING.COM

JOB: 19-057 C501



FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____

CONSTRUCTION NOTES:

- DO NOT PLACE STORMWATER POND INTO SERVICE UNTIL THE BMP HAS BEEN SEEDED AND STABILIZED. ALL CONTRIBUTING AREAS SHALL BE FULLY STABILIZED.
- CLEAR AND GRUB THE AREA WHERE THE STORMWATER POND IS TO BE LOCATED. STOCKPILE LOAM FOR REUSE LATER.
- THE FOUNDATION AREA SHALL BE SCARIFIED PRIOR TO PLACING FILL. ALL UNSUITABLE MATERIAL UNDER THE BERM SHALL BE REMOVED AND REPLACED WITH SUITABLE FOUNDATION MATERIAL.
- THE BERM SHALL BE CONSTRUCTED BEGINNING FROM THE LOWEST POINT UNIFORMLY ALONG ITS ENTIRE LENGTH. PLACE MATERIALS IN MAXIMUM 12" LOOSE LIFTS COMPACTED TO 95% MAXIMUM DRY DENSITY. EMBANKMENT SOIL SHALL HAVE NO ORGANIC MATTER OR FROZEN MATERIAL AND NO STONES LARGER THAN 2/3 OF THE MAXIMUM LOOSE LIFT THICKNESS. STONES AROUND ANY STRUCTURES AND/OR CONDUITS SHALL NOT EXCEED 3 INCHES. EMBANKMENT FILL MATERIAL SHALL HAVE THE FOLLOWING GRADATION:

SIEVE SIZE:	% PASSING:
#4	80-90
#40	50-80
#100	30-45
#200	15-30

- ALL PIPE TO PIPE CONNECTIONS SHALL BE WATER-TIGHT.
- ALL DISTURBED AREAS SHALL RECEIVE FOUR INCHES OF LOAM AND SEEDED PER THE CONSTRUCTION SEQUENCING AND EROSION CONTROL NOTES.

PLANTING NOTES:

- PERMANENT POOL BOTTOM AND SIDE SLOPES TO BE COVERED WITH 2" DEEP RIVERSTONE (1-1/2" TO 2" STONES).
- POD BOTTOM
POD BOTTOM EXCLUDING PERMANENT POOL TO BE SEEDED WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES (50 LBS./ACRE).
- POD BERM AND SIDE SLOPES
BERM AND SIDE SLOPES EXCLUDING PERMANENT POOL SHALL BE SEEDED WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX (30 LBS PER ACRE).

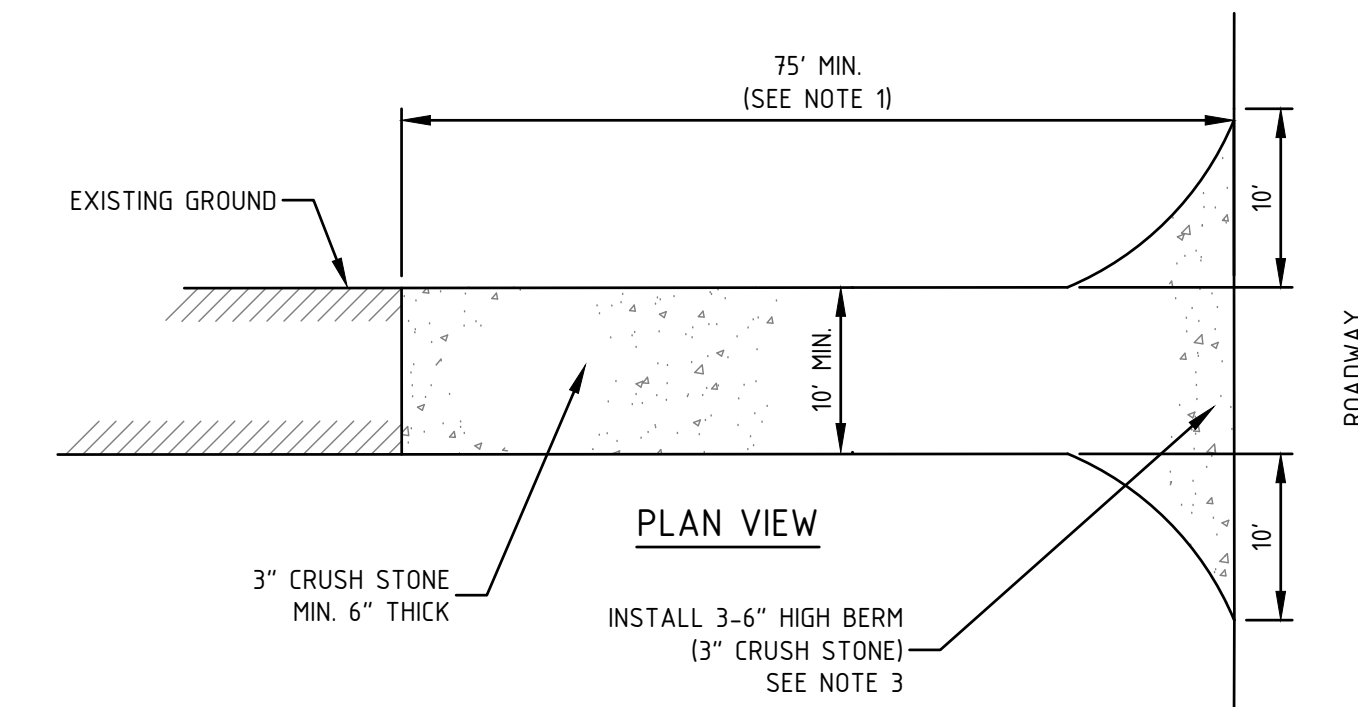
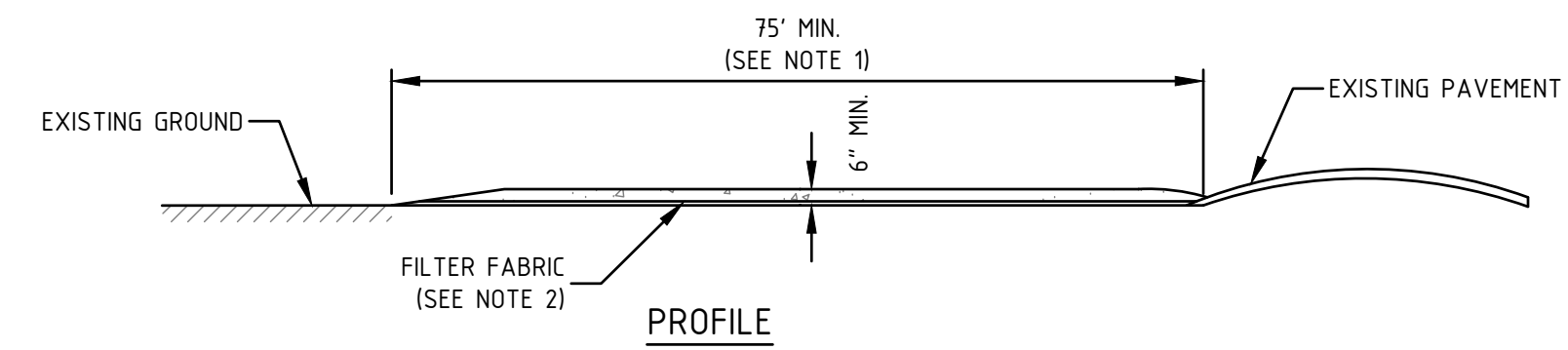
AVAILABLE FROM:
 NEW ENGLAND WETLAND PLANTS, INC.
 820 WEST STREET
 AMHERST, MA 01002
 (413)-548-8000

TYPICAL STORMWATER POND DETAIL

N.T.S.

STORMWATER POND MAINTENANCE:

- THE BOTTOM, SIDE SLOPES AND CREST SHALL BE MOWED AND THE VEGETATION MAINTAINED IN A HEALTHY CONDITION.
- EMBANKMENTS SHOULD BE INSPECTED ANNUALLY BY A QUALIFIED PROFESSIONAL FOR SETTLEMENT, EROSION, SEEPAGE, ANIMAL BURROWS, AND WOODY VEGETATION. REPAIR AS NECESSARY.
- A QUALIFIED PROFESSIONAL SHALL INSPECT THE OUTLET PIPE, SPILLWAY, AND OUTLET PROTECTION ANNUALLY. REPAIR AS NECESSARY.
- TRASH AND DEBRIS SHALL BE REMOVED FROM THE BASIN AND PIPE INLETS AND OUTLETS WHENEVER PRESENT.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH EXCEEDS 4 INCHES.

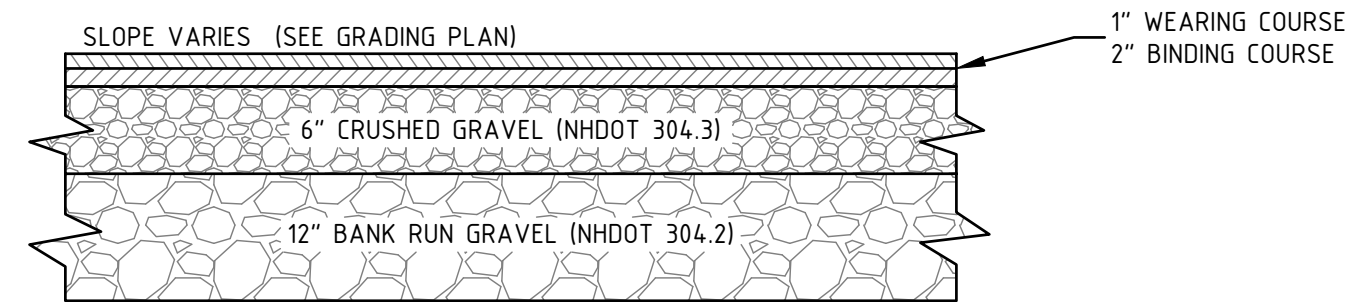


NOTES:

- LENGTH OF ENTRANCE MAY BE 50' WHERE DIVERSION RIDGE IS PROVIDED.
- GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY. PLACE FILTER FABRIC AND 6" OF 3" CRUSHED STONE TO MATCH SLOPE OF EXISTING ROAD.
- PROVIDE NECESSARY SWALES OR DIVERSIONS TO MINIMIZE DIRECT FLOW OF WATER ONTO STONE AREA.
- CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS NECESSARY TO REMOVE SILT FROM TIRES PRIOR TO ENTERING PUBLIC ROADS. A SMALL SWALE SHALL BE CONSTRUCTED ON THE DOWN GRADIENT SIDE TO TRAP ANY SILT WASHED FROM THE STONE ENTRANCE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

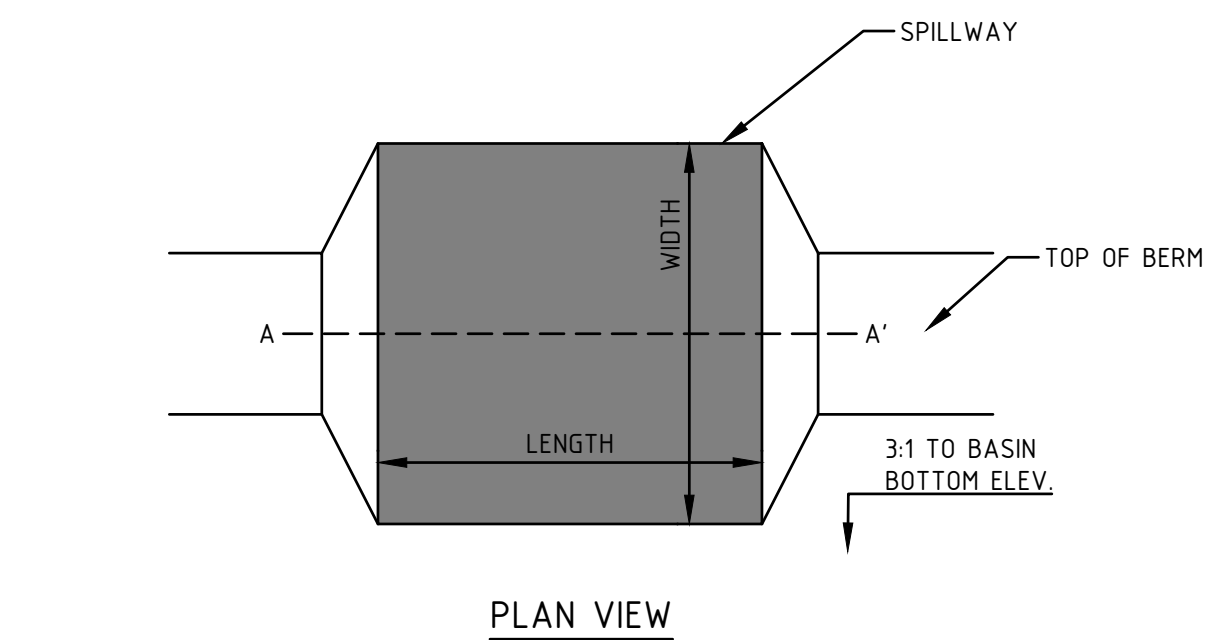
N.T.S.



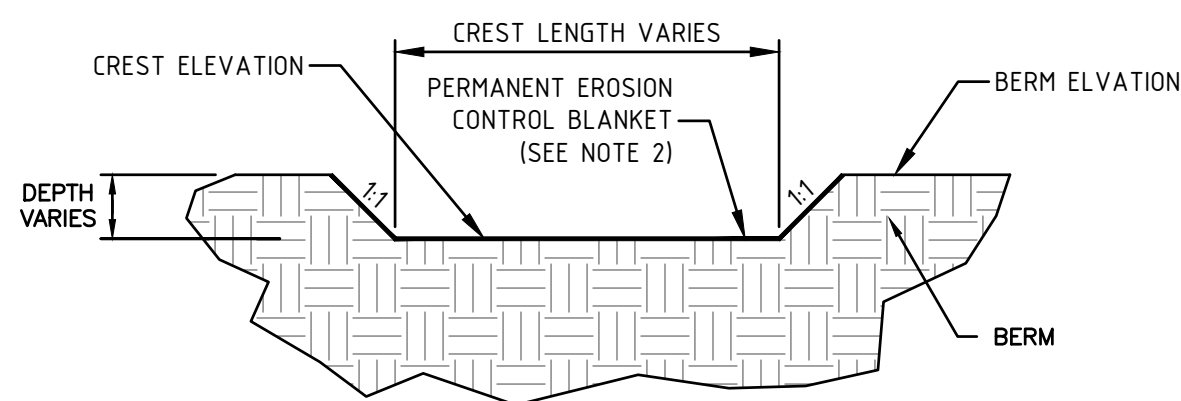
- NOTES:**
- DELETERIOUS MATERIALS ENCOUNTERED BELOW PARKING AREA SHALL BE COMPLETELY REMOVED.
 - COMPACT SUBGRADE TO 95% MAX. DRY DENSITY.

PAVED PARKING LOT CROSS SECTION

N.T.S.



PLAN VIEW



CROSS-SECTION A-A'

- NOTES:**
- SPILLWAYS ARE LOCATED AT SEDIMENT FOREBAY OUTLETS, STORMWATER POND AND INFILTRATION BASIN.
 - PERMANENT EROSION CONTROL BLANKET SHOULD BE TENSAR P300 OR APPROVED EQUAL.
 - INSTALL TURF REINFORCEMENT PER MANUFACTURER'S SPECIFICATIONS.

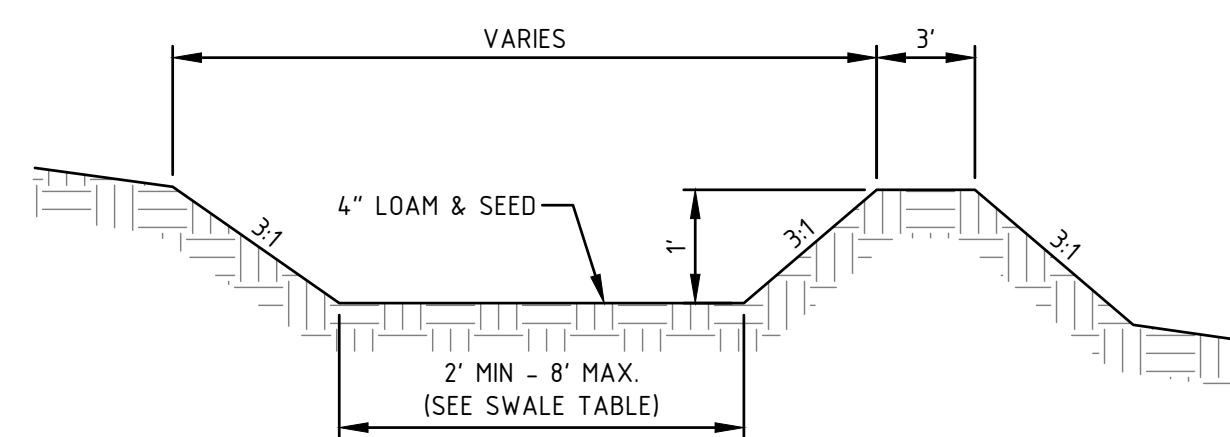
TYPICAL SPILLWAY DETAIL

N.T.S.

SPILLWAY DIMENSION TABLE

LOCATION	CREST ELEV.	BERM ELEV.	LENGTH* [FEET]	WIDTH* [FEET]
SPILLWAY #1 - STORMWATER POND #1	87.50	88.00	6.0	6.0
SPILLWAY #2 - STORMWATER POND #2	90.30	90.80	6.0	6.0
SPILLWAY #3 - STORMWATER POND #3	90.50	90.50	12.0	6.0

*REFER TO DETAIL ABOVE FOR LOCATION OF WIDTH AND LENGTH



CONSTRUCTION NOTES:

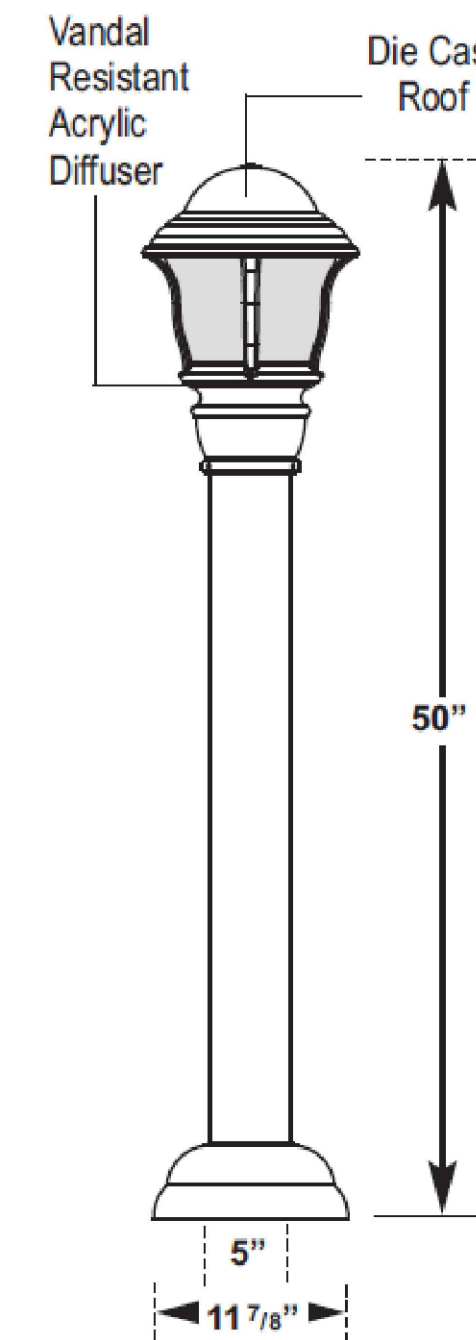
- REFER TO BERM CONSTRUCTION NOTES IN STORMWATER POND DETAIL FOR BERM CONSTRUCTION REQUIREMENTS.
- SWALE SHALL HAVE GREATER THAN 85% VEGETATIVE GROWTH PRIOR TO RECEIVING RUNOFF.
- BOTTOM OF THE SWALE MUST BE ABOVE SEASON HIGH WATER TABLE.

MAINTENANCE NOTES:

- INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATION, VEGETATION LOSS, AND PRESENCE OF INVASIVE SPECIES.
- PERFORM PERIODIC MOWING. DO NOT MOW GRASS SHORTER THAN 4 INCHES.
- REMOVE DEBRIS AND ACCUMULATED SEDIMENT BASED ON INSPECTION.
- REPAIR ERODED AREAS, REMOVE INVASIVE SPECIES AND DEAD VEGETATION, AND RESEED WITH APPLICABLE GRASS MIX AS WARRANTED BY INSPECTION.

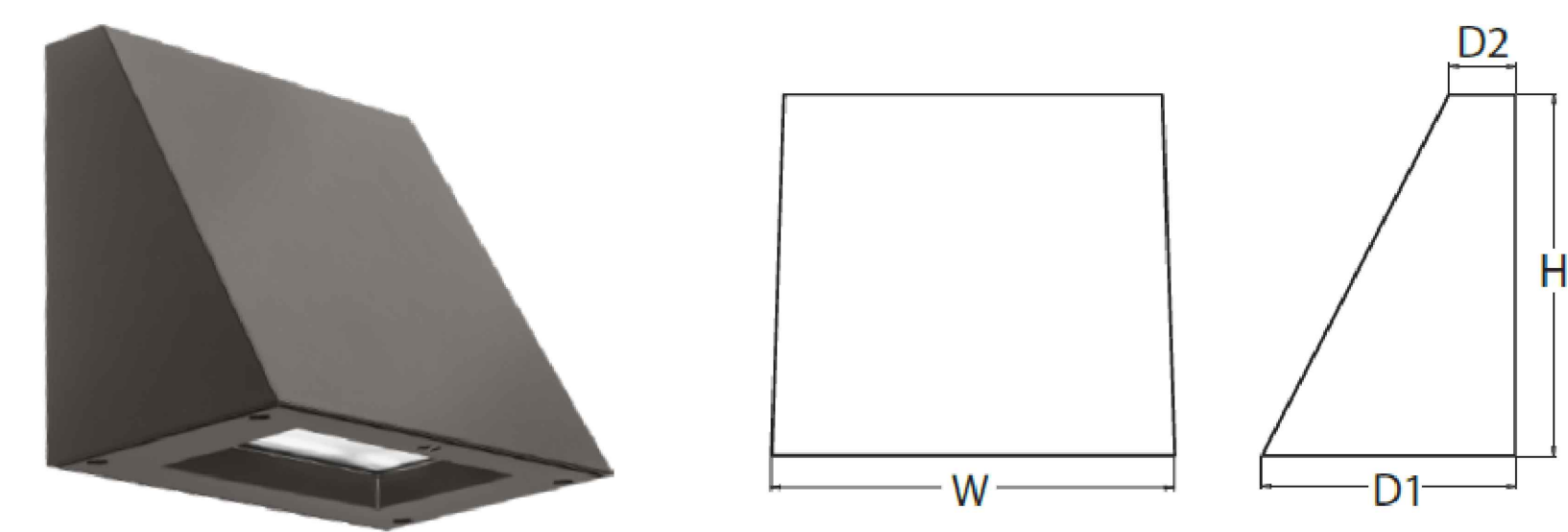
CONVEYANCE SWALE DETAIL

N.T.S.



EURO LED LIGHTED BOLLARD FIXTURE

N.T.S.



WDGE1 LED WALL MOUNTED LIGHT FIXTURE

N.T.S.



A880SRLED LIGHT FIXTURE

N.T.S.

NO.	REVISIONS	DATE
0	INITIAL SUBMISSION TO THE DURHAM PLANNING BOARD	6/3/20

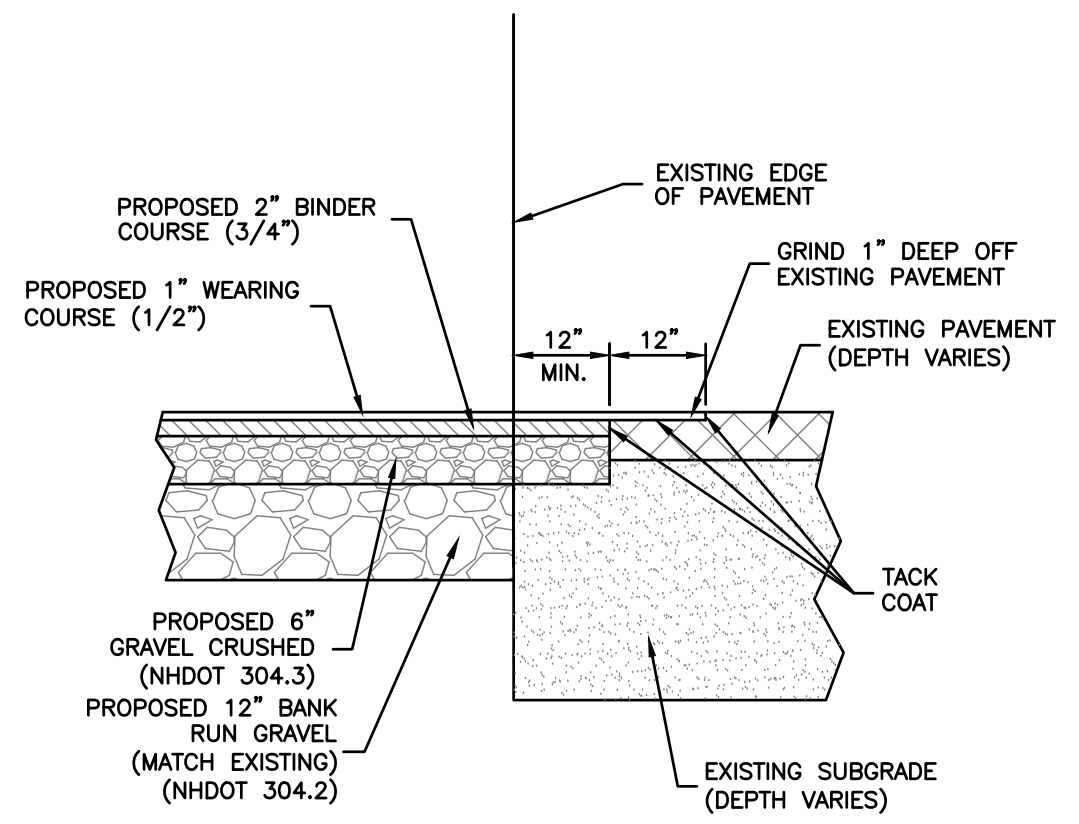
DATE ISSUED: 6/3/20
 SCALE: 1"=30'
 DESIGNED BY: MCS
 DRAWN BY: MCS
 APPROVED BY: MJS
 DWG FILE: 19057_DetIB.dwg

CONSTRUCTION DETAILS
 prepared for
 BW2 LLC C/O
 HOUSING INITIATIVES OF NEW ENGLAND
 TAX MAP 2 LOT 10-4
 BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL
 5 HALL ROAD ST., DURHAM, NH 03824
 PHONE: (603) 659-4979, FAX: (603) 659-4627
 E-MAIL: MJB@MJS-ENGINEERING.COM

JOB: 19-057

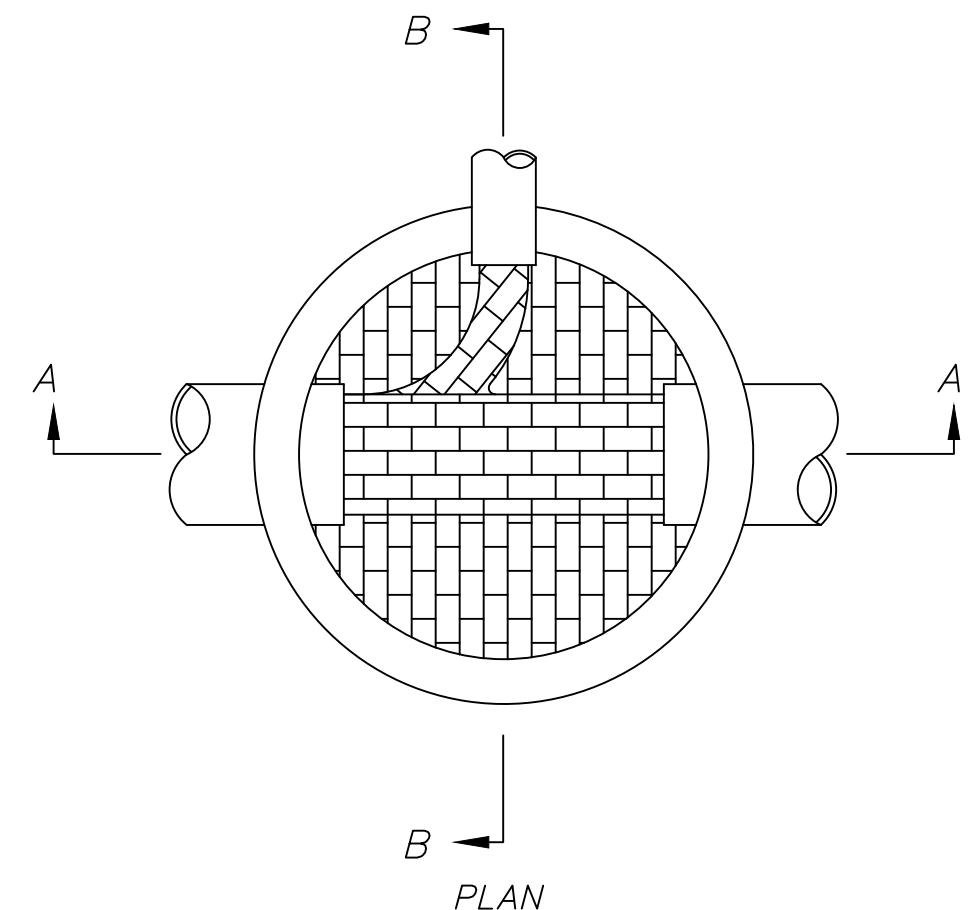
C502



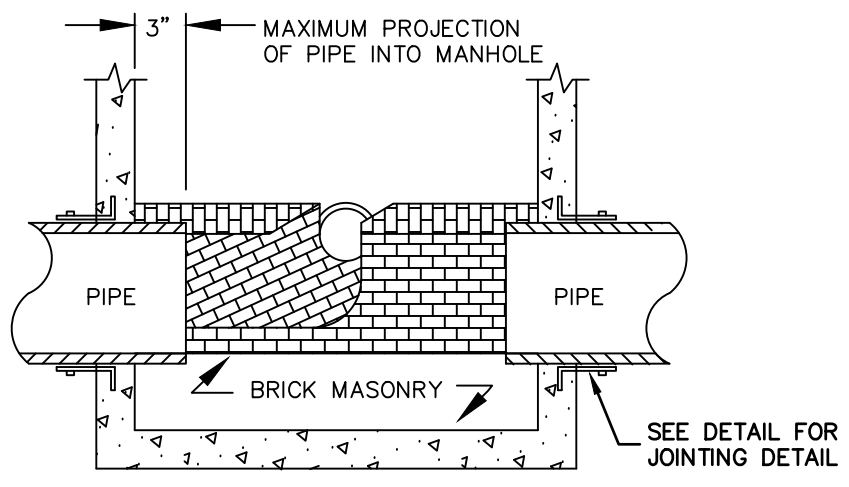
TYPICAL PAVEMENT SAWCUT DETAIL
N.T.S.

PAVEMENT SAWCUT NOTES:

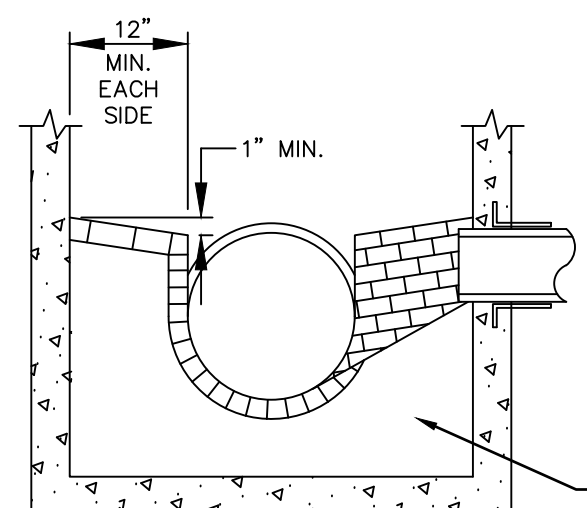
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED BY NHDOT.
2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
3. PLACE BINDER COURSE
4. GRIND EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.



PLAN



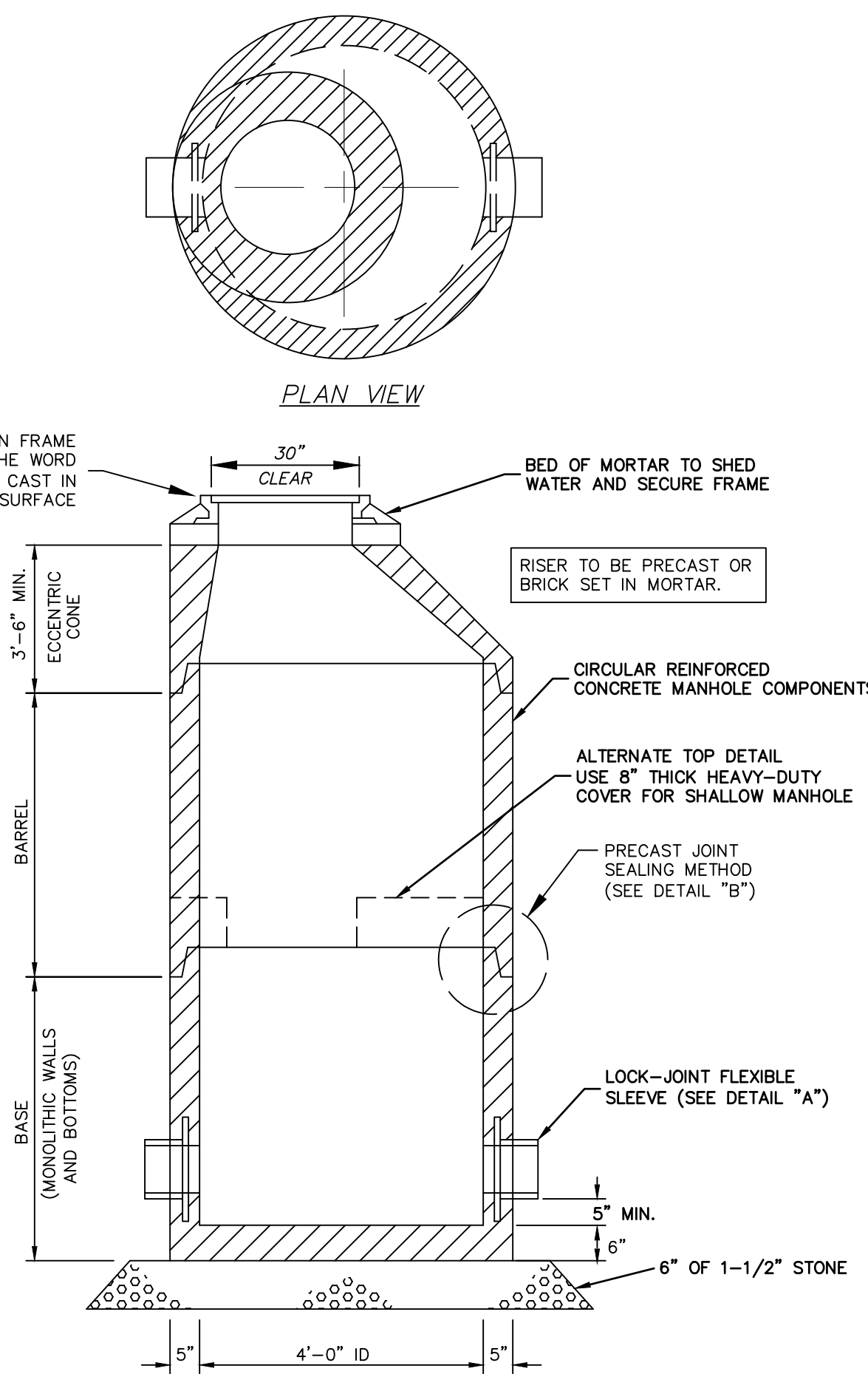
SECTION A-A



SECTION B-B

- NOTE:
1. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE.
 2. INVERT AND SHELVE TO BE PLACED AFTER LEAKAGE TEST.
 3. ALTERNATE INVERT DETAILS: REPLACE BRICK INVERT W/ CAST-IN-PLACE CONCRETE.

TYPICAL SEWER MANHOLE INVERT
N.T.S.



SECTION VIEW

STANDARD MANHOLE
N.T.S.

NOTES:

1. SMH #1 IS A STANDARD MANHOLE WITH ECCENTRIC CONE TOP.
2. THERE SHALL BE NO STEPS INSTALLED WITHIN THE MANHOLE.

SEWER NOTES:

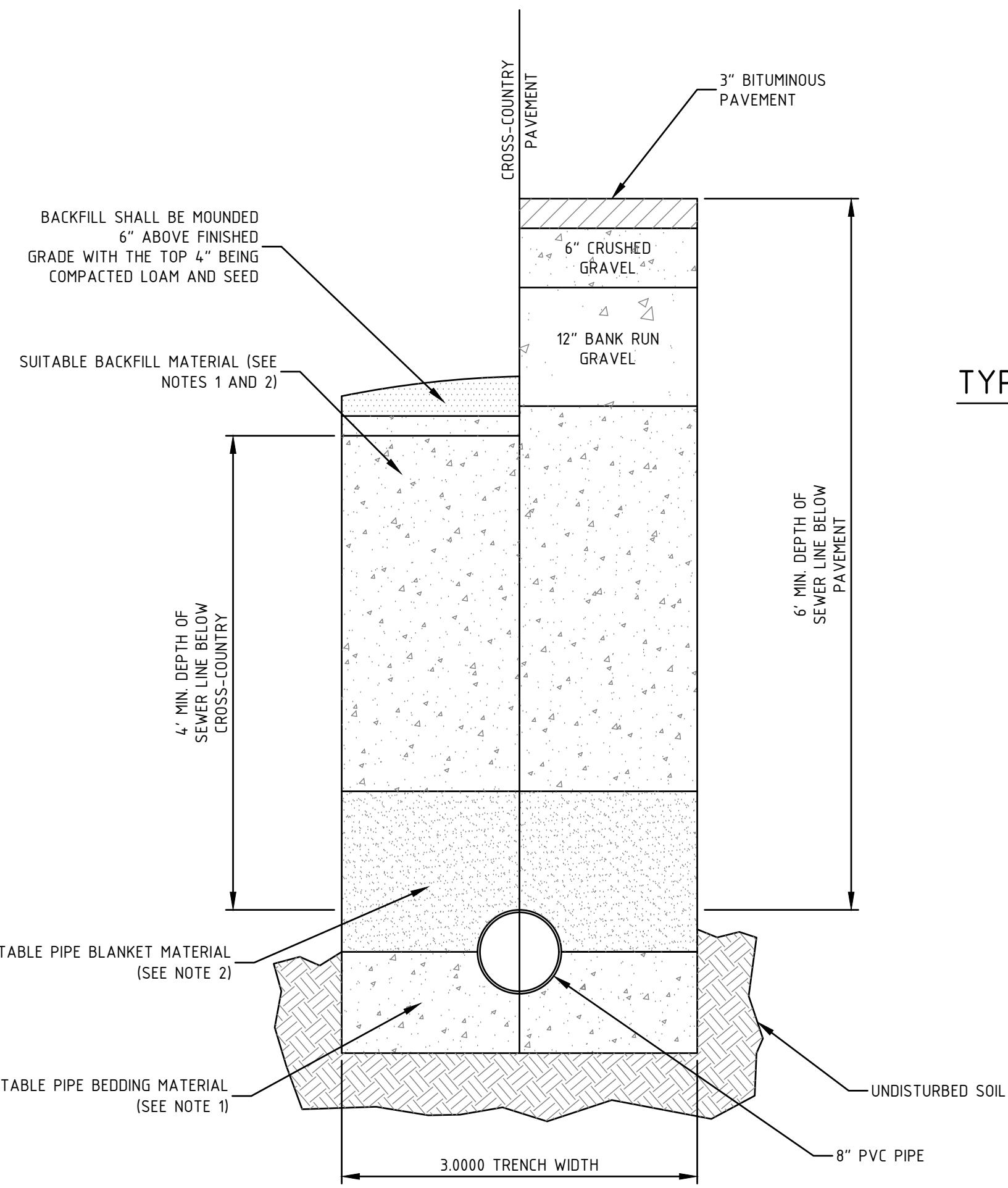
PER THE REQUIREMENTS OF "STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWERAGE AND WASTEWATER TREATMENT FACILITIES."

GRAVITY SEWER CONSTRUCTION MATERIALS (Env-Wq 704.05)

- (A) PLASTIC GRAVITY SEWER PIPE AND FITTINGS SHALL BE 8 INCH PVC SDR 35 SEWER PIPE (EXCEPT SEWER SERVICE SHALL BE 6" SRD 35 PVC) AND SHALL COMPLY WITH ASTM D3034-04a.
- (B) PLASTIC SEWER PIPE SHALL HAVE A PIPE STIFFNESS RATING OF AT LEAST 46 PSI AT 5 PERCENT PIPE DIAMETER DEFLECTION, AS MEASURED IN ACCORDANCE WITH ASTM D2412-02 DURING MANUFACTURE.
- (C) JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D3212-96(a)(2003)e1 AND SHALL BE PUSH-ON, BELL AND SPIGOT TYPE.

GRAVITY SEWER PIPE TESTING REQUIREMENTS (Env-Wq 704.07)

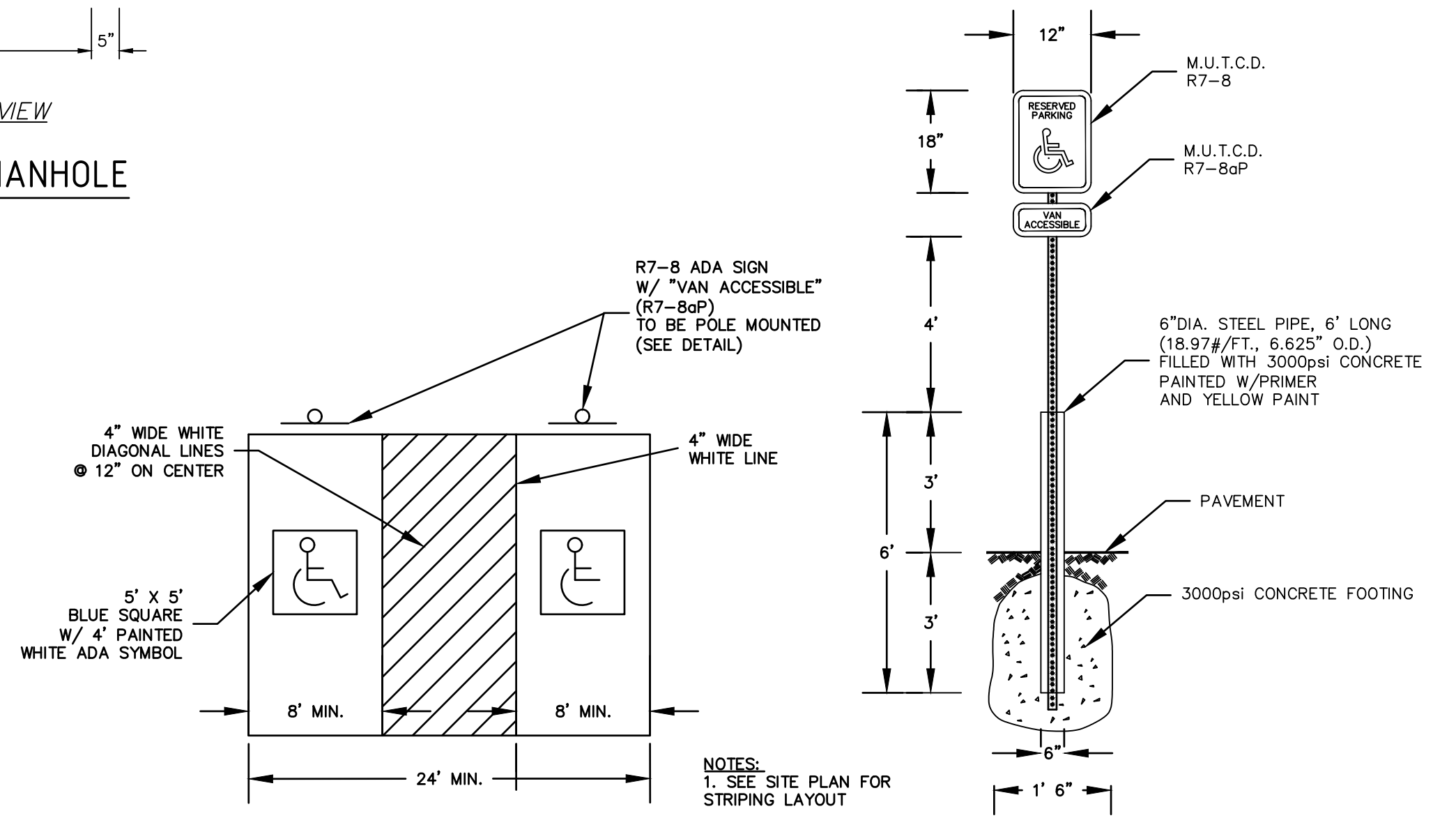
- (A) ALL NEW SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.
- (B) LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:
 - (1) ASTM F1417-92(2005) "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR"; OR
 - (2) UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (1998).
- (C) ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY INSPECTED AND SHALL BE TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
- (D) ALL PLASTIC SEWER PIPE SHALL BE DEFLECTION TESTED NOT LESS THAN 30 DAYS FOLLOWING INSTALLATION.
- (E) THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 7 1/2 PERCENT OF AVERAGE INSIDE DIAMETER.



STANDARD SEWER PIPE TRENCH
N.T.S.

NOTES (IN ACCORDANCE WITH Env-Ws 706.05)

1. PIPE TRENCH BEDDING MATERIAL AND FILL MATERIAL FOR ORDERED EXCAVATION BELOW GRADE SHALL BE SCREENED GRAVEL OR CRUSHED STONE TO ASTM C33 STONE SIZE NO. 67. THE PIPE BEDDING MATERIAL SHALL BE PLACED 6 INCHES BELOW THE BOTTOM OF THE PIPE. THE FILL MATERIAL SHALL BE PLACED ABOVE THE PIPE SAND BLANKET MATERIAL AND EXTEND TO THE FINISHED GRADE OR TO THE BOTTOM OF THE SELECT MATERIALS FOR A PAVED AREA.
2. PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, 100% OF WHICH SHALL PASS THROUGH A 1/2 INCH SIEVE AND A MAXIMUM OF 15% OF WHICH SHALL PASS THROUGH A #200 SIEVE. THE SAND BLANKET SHALL COVER THE PIPE TO A DEPTH OF 12 INCHES.
3. BEDDING AND BLANKET MATERIALS SHALL BE COMPACTED IN 12 INCH LAYERS. BACKFILL MATERIAL SHALL BE COMPACTED IN 3 FOOT LAYERS TO THE FINISHED SURFACE EXCEPT FOR PAVED AREAS WHERE THE DEPTH BELOW PAVEMENT CONSISTING OF THE SELECT MATERIALS SHALL BE COMPACTED PER THE APPLICABLE PAVEMENT CONSTRUCTION GUIDELINES.
4. TRENCH BACKFILL MATERIAL FOR PAVED AREAS SHALL CONSIST OF THE NATURAL MATERIAL EXCAVATED FOR THE TRENCH WITH THE EXCEPTION OF: DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OF CLAY, EXCAVATED LEDGE MATERIAL, ROCKS OVER 6 INCHES IN THE LARGEST DIMENSION, AND ANY MATERIAL NOT APPROVED BY THE ENGINEER. TRENCH BACKFILL FOR CROSS-COUNTRY SHALL BE AS DESCRIBED ABOVE WITH THE EXCEPTION THAT TOP SOIL, LOAM, AND MUCK OR PEAT MAY BE USED AS LONG AS SUCH MATERIAL PROVIDES STABLE CONSTRUCTION.
5. ADDITIONAL REQUIREMENTS MAY BE FOUND IN Env-Ws 706.05.



ADA STRIPING AND SIGN DETAIL
N.T.S.

FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____

PAVEMENT MARKINGS:

1. STRIPE PARKING AREAS AND DRIVES AS SHOWN, INCLUDING PARKING SPACES, HANDICAP SYMBOLS, AND PAINTED ISLANDS. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND AASHTO M248 TYPE "F". MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGN AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.
3. PAINTED ISLANDS SHALL BE 4 INCH WIDE DIAGONAL LINES SPACED AT 3 FT. O.C. BORDERED BY 4 INCH WIDE LINES.

NO.	REVISIONS	DATE
0	INITIAL SUBMISSION TO THE DURHAM PLANNING BOARD	6/3/20
		MCS

DATE ISSUED: 6/3/20
 SCALE: 1"=30'
 DESIGNED BY: MCS
 DRAWN BY: MCS
 APPROVED BY: MJS
 DWG FILE: 19057 Det1B.dwg

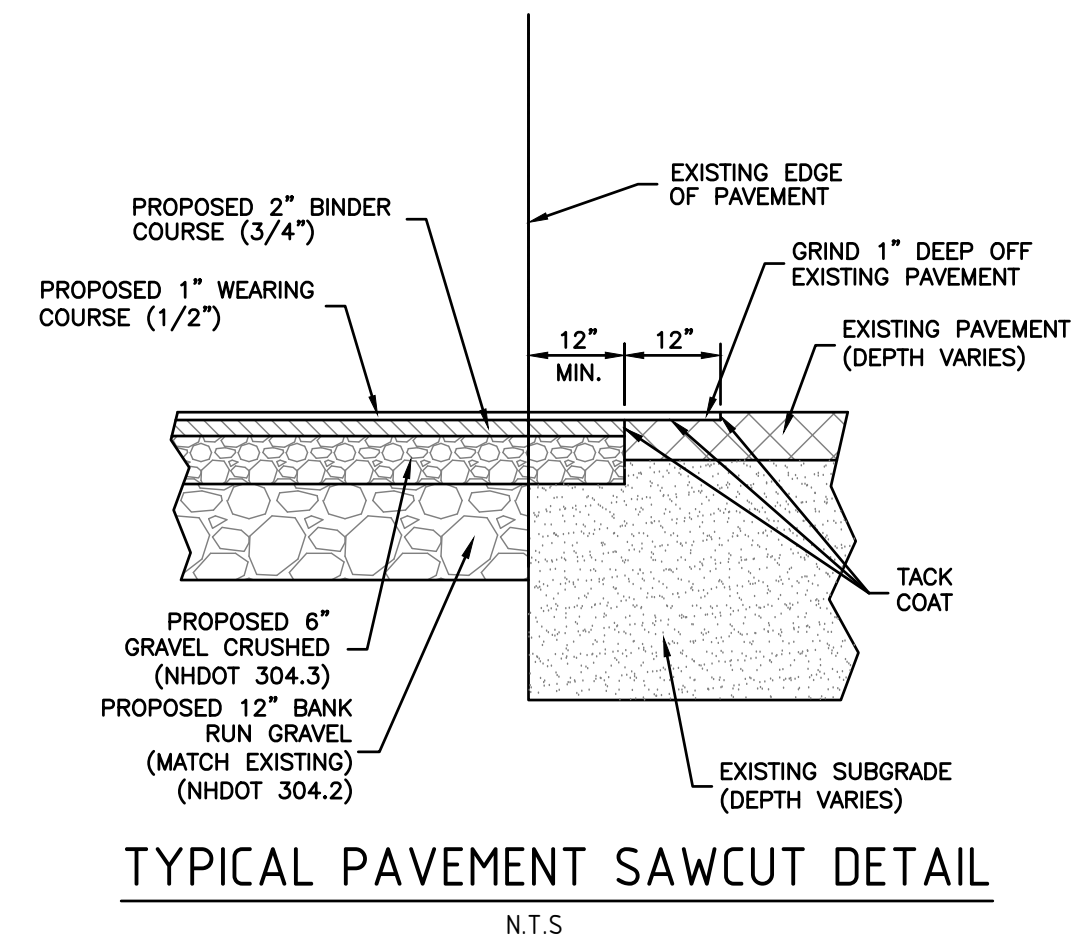
CONSTRUCTION DETAILS prepared for
 BW2 LLC C/O
 HOUSING INITIATIVES OF NEW ENGLAND
 TAX MAP 2 LOT 10-4
 BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL
 5 HALLROAD ST., DURHAM, NH 03827
 PHONE: (603) 659-4979, FAX: (603) 659-4627
 E-MAIL: MJS@MJS-ENGINEERING.COM



JOB: 19-057

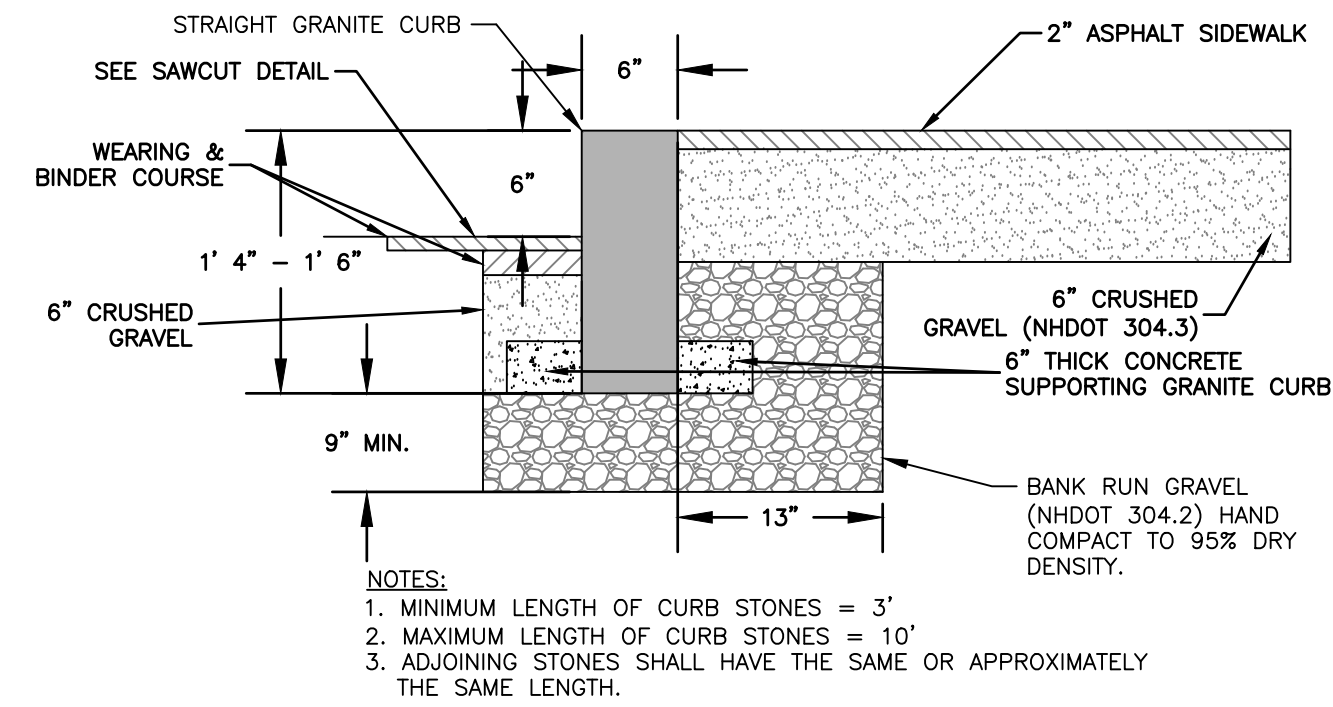
C503



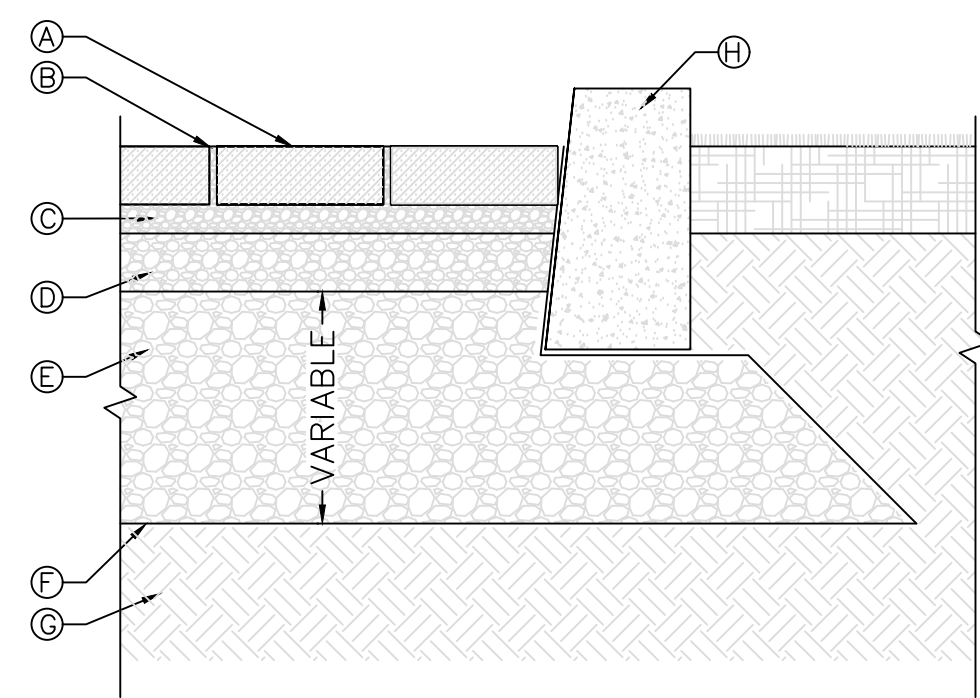
TYPICAL PAVEMENT SAWCUT DETAIL
N.T.S

PAVEMENT SAWCUT NOTES:

1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED BY NHDOT.
2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
3. PLACE BINDER COURSE.
4. GRIND EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.



ASPHALT SIDEWALK WITH VERTICAL GRANITE CURB
N.T.S



SECTION
CASE NO 1 - FULL INFILTRATION

LEGEND:

- A PERMEABLE PAVER FROM TECO-BLOC, 2 3/8" TO 3 15/16" (60 TO 100 MM) THICK INFLO, MISTA RANDOM, PURE, VICTORIEN
- B PERMEABLE, VILLAGIO OR VILLAGIO GRANDE CONFORMING TO ASTM C 936
- C JOINT FILLING MATERIAL, NO. 8 (FOR INFLO, PURE AND VILLAGIO) OR NO. 9 STONE (FOR MISTA RANDOM, VICTORIEN PERMEABLE AND VILLAGIO GRANDE) CONFORMING TO ASTM D 448
- D BEDDING COURSE, 2" (50 MM) THICK NO. 8 STONE CONFORMING TO ASTM D 448
- E BASE COURSE, 4" (100 MM) THICK NO. 57 STONE CONFORMING TO ASTM D 448
- F SUBBASE COURSE, THICKNESS AS PER DESIGN NO. 2 STONE CONFORMING TO ASTM D 448
- G GEOTEXTILE
- H SUBGRADE
- I EDGE RESTRAINT

TECO PERMEABLE PAVERS
N.T.S

FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
CERTIFIED _____
DATE _____

NO.	REVISIONS	DATE
0	INITIAL SUBMISSION TO THE DURHAM PLANNING BOARD	6/3/20

SEAL

DATE ISSUED: 6/3/20
SCALE: 1"=30'
DESIGNED BY: MCS
DRAWN BY: MCS
APPROVED BY: MJS
DWG FILE: 19057 Det1B.dwg

CONSTRUCTION DETAILS
prepared for
BW2 LLC C/O
HOUSING INITIATIVES OF NEW ENGLAND
TAX MAP 2 LOT 10-4
BAGDAD ROAD, DURHAM, NH

MJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 HALL ROAD ST., DURHAM, NH 03824
PHONE: (603) 659-4259
FAX: (603) 659-4627
E-MAIL: MJS@MJS-ENGINEERING.COM

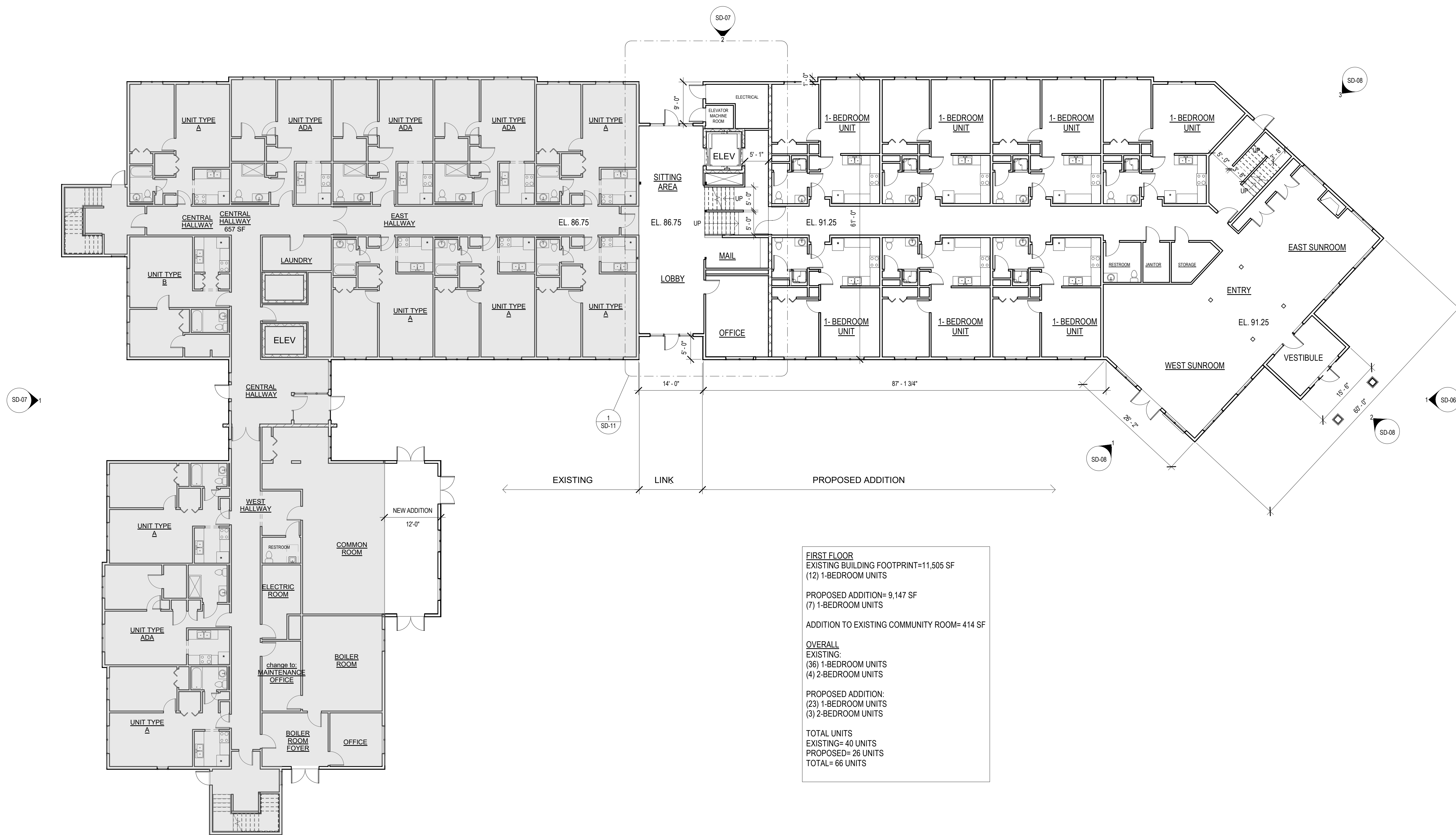
JOB: 19-057
C504



LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049

lasselarchitects.com



FIRST FLOOR
 EXISTING BUILDING FOOTPRINT=11,505 SF
 (12) 1-BEDROOM UNITS

PROPOSED ADDITION= 9,147 SF
 (7) 1-BEDROOM UNITS

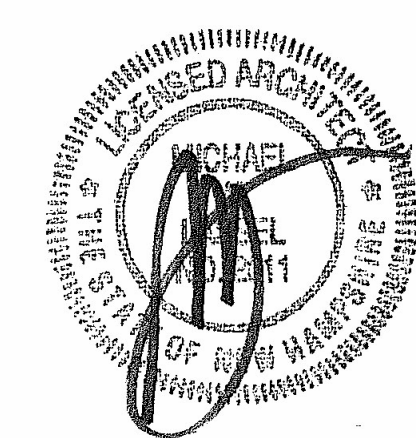
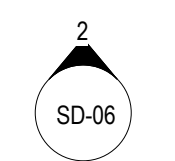
ADDITION TO EXISTING COMMUNITY ROOM= 414 SF

OVERALL
 EXISTING:
 (36) 1-BEDROOM UNITS
 (4) 2-BEDROOM UNITS

PROPOSED ADDITION:
 (23) 1-BEDROOM UNITS
 (3) 2-BEDROOM UNITS

TOTAL UNITS
 EXISTING= 40 UNITS
 PROPOSED= 26 UNITS
 TOTAL= 66 UNITS

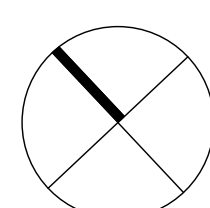
1 FIRST FLOOR PLAN
3/32" = 1'-0"



CLIENT:
BW2 LLC
C/o - HINEC

BAGDAD WOODS ADDITION

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:



DRAWING NAME:
FIRST FLOOR PLAN

DRAWING NUMBER:

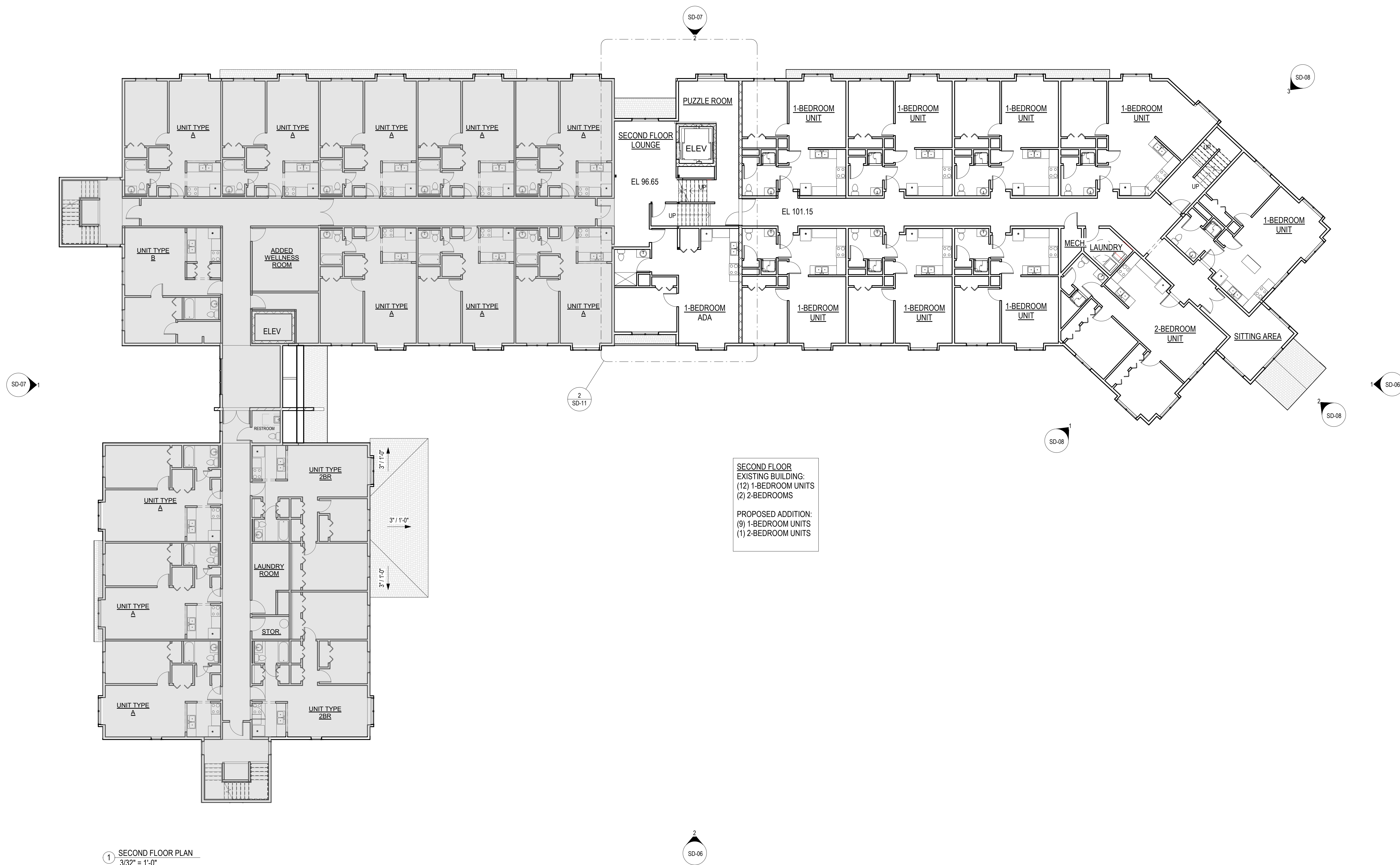
SD-02



LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049

lasselarchitects.com



SECOND FLOOR
EXISTING BUILDING:
(12) 1-BEDROOM UNITS
(2) 2-BEDROOMS

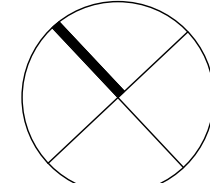
PROPOSED ADDITION:
(9) 1-BEDROOM UNITS
(1) 2-BEDROOM UNITS

1 SECOND FLOOR PLAN
3/32" = 1'-0"

CLIENT:
BW2 LLC
C/o - HINEC

PROJECT:
**BAGDAD WOODS
ADDITION**

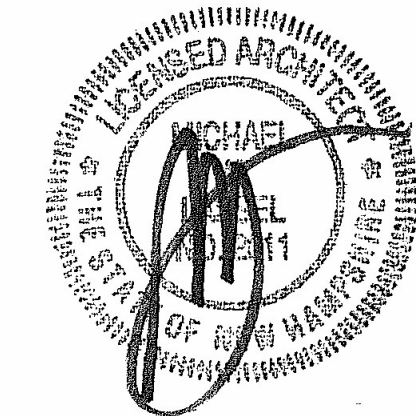
PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:



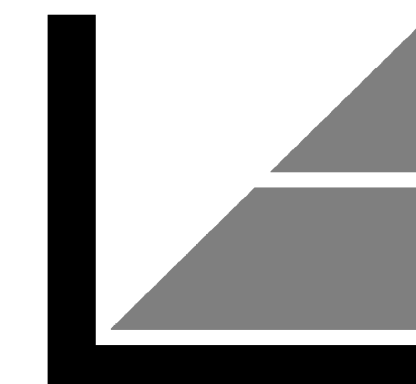
DRAWING NAME:
SECOND FLOOR PLAN

DRAWING NUMBER:

SD-03

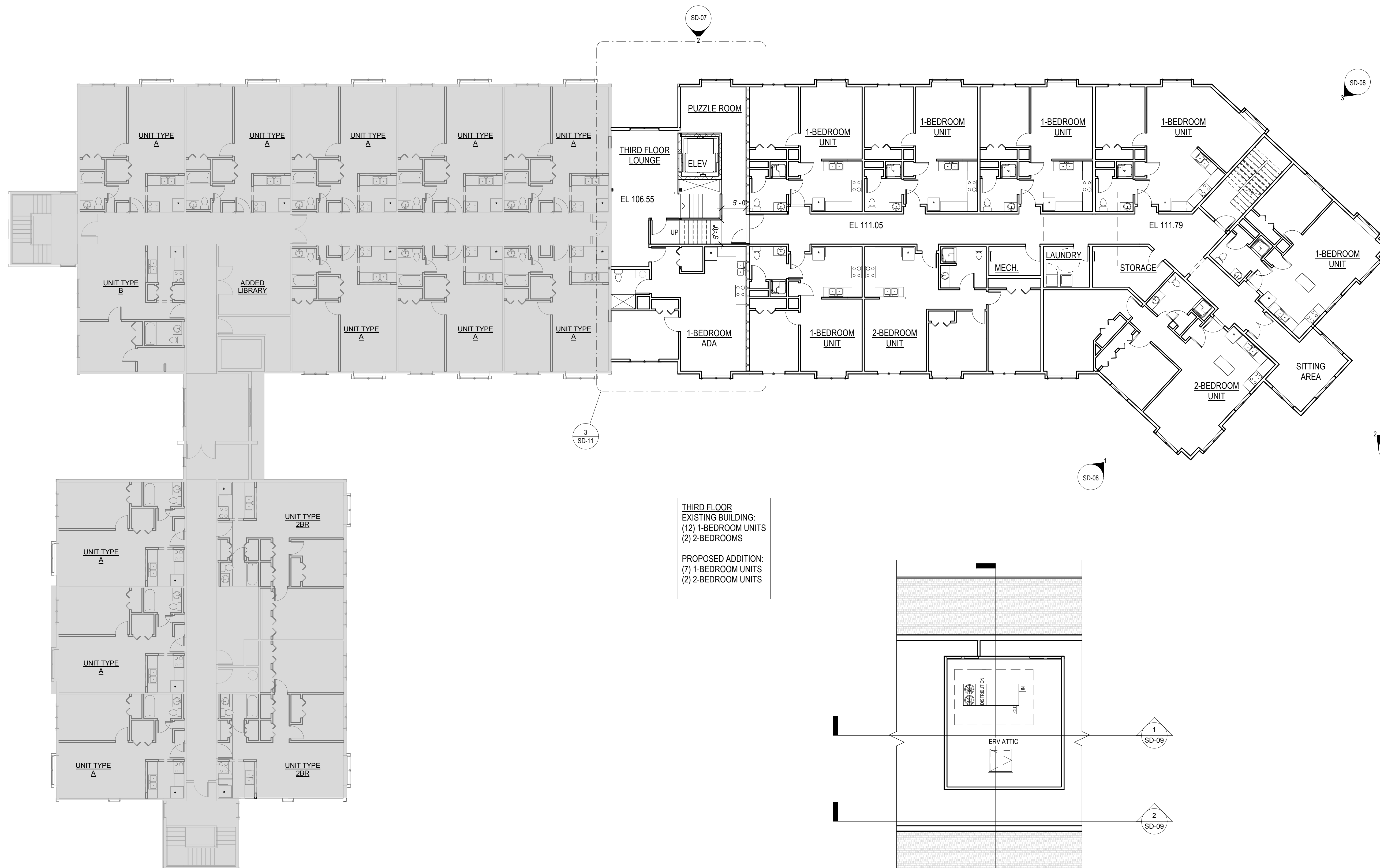


C:\Users\Bartley\Documents\Bagdad Woods- CURRENT_2_Battery.rvt
6/3/2020 3:17:47 PM



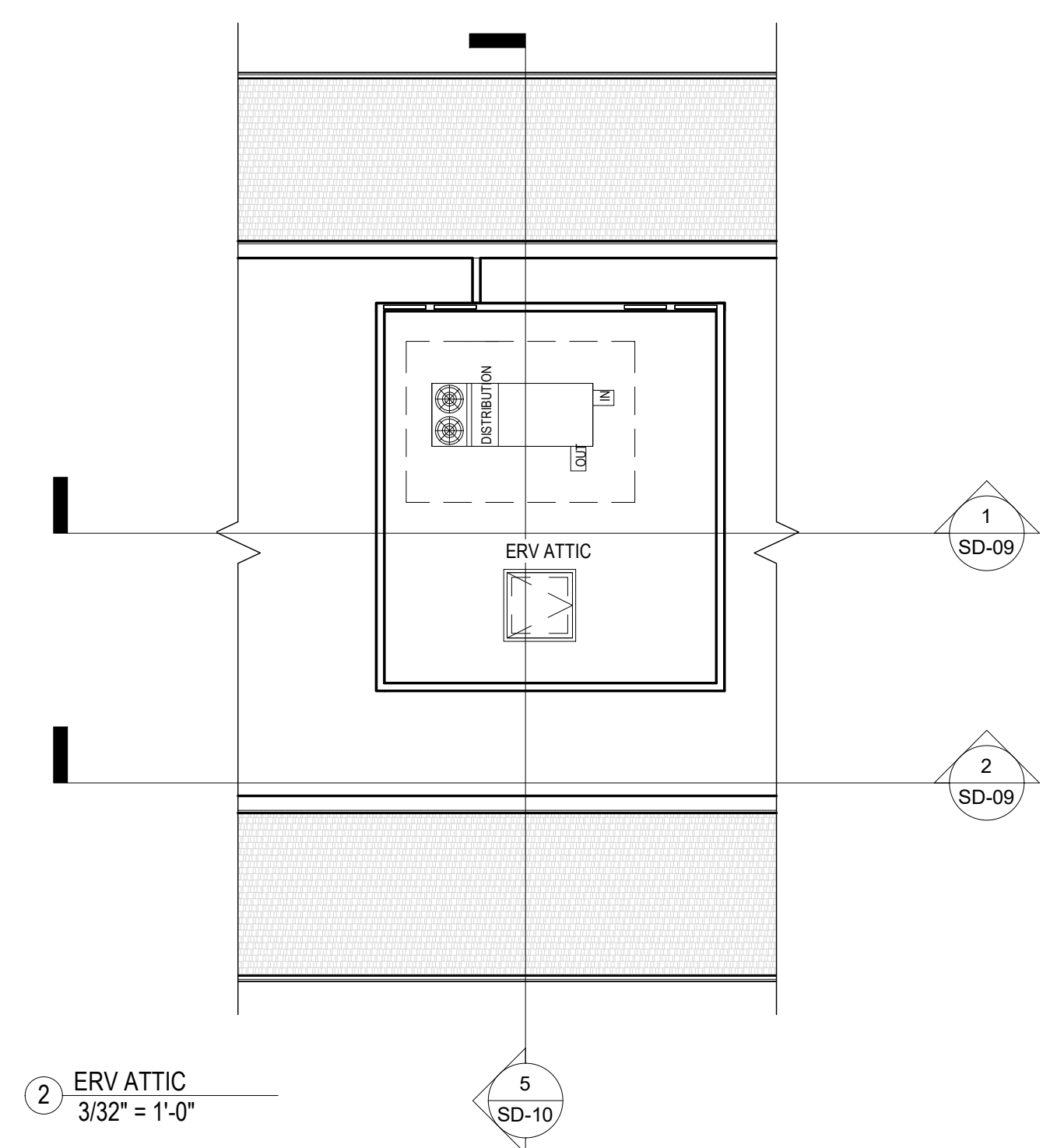
LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049
lasselarchitects.com



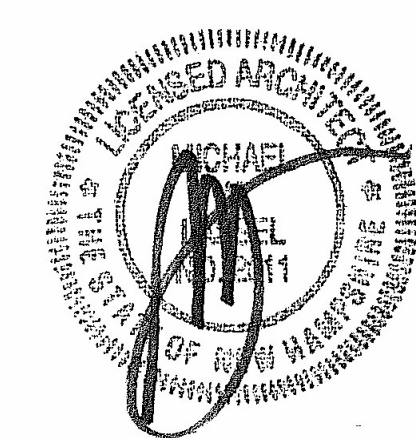
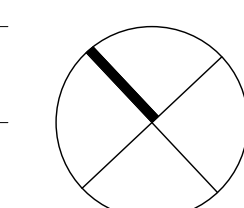
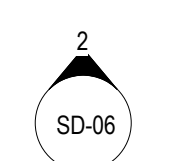
THIRD FLOOR
EXISTING BUILDING:
(12) 1-BEDROOM UNITS
(2) 2-BEDROOMS

PROPOSED ADDITION:
(7) 1-BEDROOM UNITS
(2) 2-BEDROOM UNITS



1 THIRD FLOOR PLAN
3/32" = 1'-0"

2 ERV ATTIC
3/32" = 1'-0"



CLIENT:
BW2 LLC
C/o - HINEC

BAGDAD WOODS ADDITION

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:

DRAWING NAME:
THIRD FLOOR
DRAWING NUMBER:

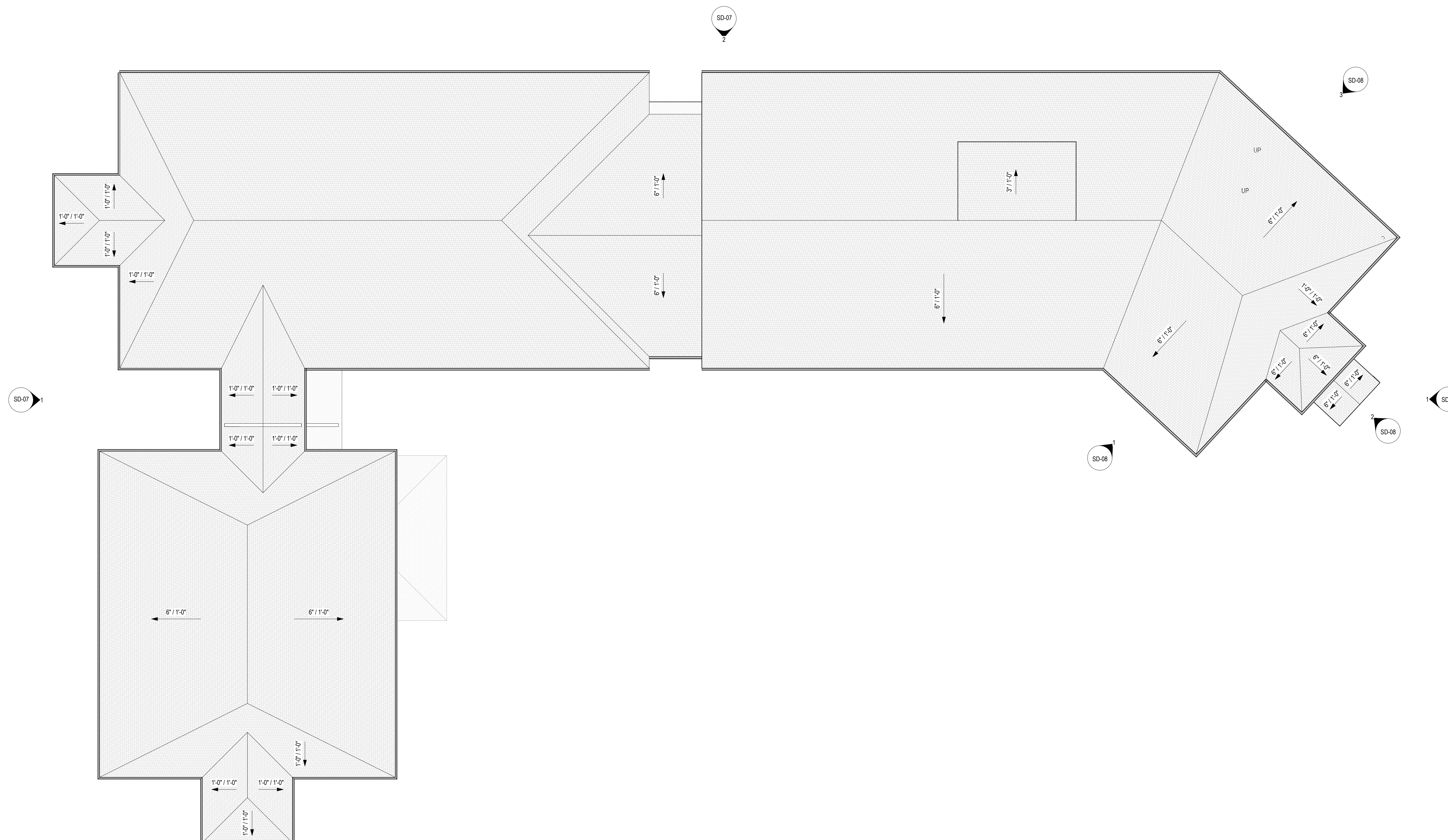
SD-04



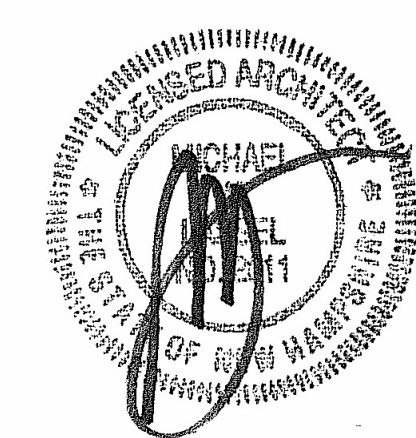
LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049

lasselarchitects.com



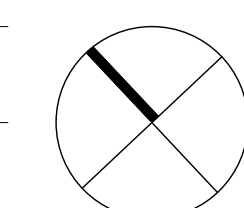
1 ROOF PLAN
3/32" = 1'-0"



PROJECT:
**BAGDAD WOODS
ADDITION**

CLIENT:
BW2 LLC
C/o - HINEC

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:



DRAWING NAME:
ROOF PLAN

DRAWING NUMBER:

SD-05



LASSEL
ARCHITECTS

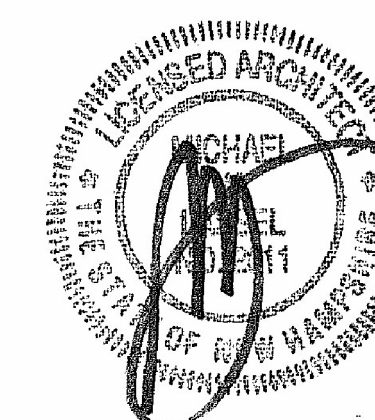
370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049
lasselarchitects.com



① SOUTH-EAST ELEVATION
3/32" = 1'-0"



② SOUTH-WEST ELEVATION
3/32" = 1'-0"



CLIENT:
BW2 LLC
C/o - HINEC

PROJECT:

BAGDAD WOODS ADDITION

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:

DRAWING NAME:
**ELEVATIONS - SOUTH-EAST &
SOUTH-WEST**
DRAWING NUMBER:

SD-06



LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049

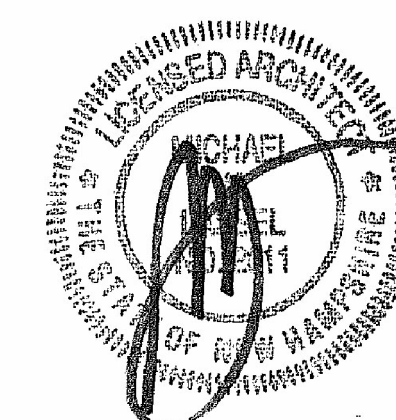
lasselarchitects.com



① NORTH-WEST ELEVATION
3/32" = 1'-0"



② NORTH-EAST ELEVATION
3/32" = 1'-0"



CLIENT:
BW2 LLC
C/o - HINEC

PROJECT:

BAGDAD WOODS ADDITION

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:

DRAWING NAME:
**ELEVATIONS - SOUTH &
NORTH-EAST**
DRAWING NUMBER:

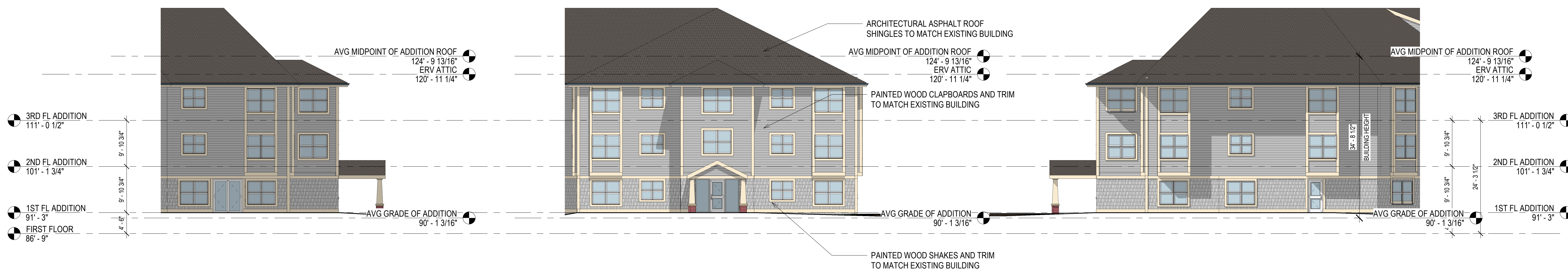
SD-07



LASSEL
ARCHITECTS

370 MAIN STREET
SOUTH BERWICK, ME 03908
207 384 2049

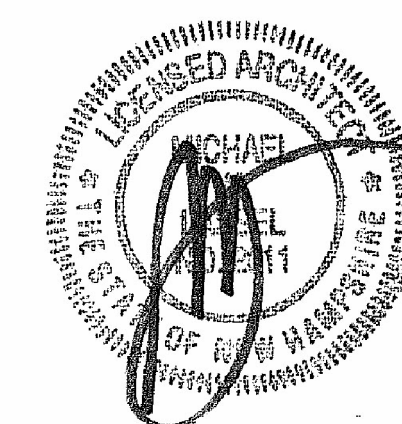
lasselarchitects.com



① WEST ELEVATION (PART)
3/32" = 1'-0"

② SOUTH ELEVATION (PART)
3/32" = 1'-0"

③ EAST ELEVATION (PART)
3/32" = 1'-0"



CLIENT:
BW2 LLC
C/o - HINEC

PROJECT:
**BAGDAD WOODS
ADDITION**

PROJECT NUMBER: 19.12
DATE: MAY 2020
SCALE: AS INDICATED
REVISION:

DRAWING NAME:
**ELEVATIONS - WEST, SOUTH &
EAST**

DRAWING NUMBER:

SD-08