

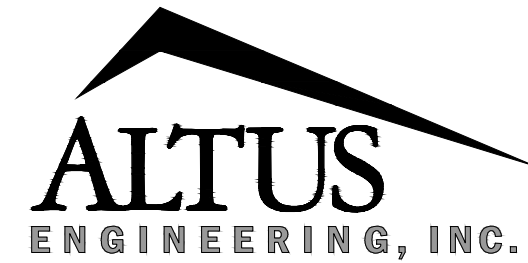
PROPOSED STORAGE BUILDING YATES ELECTRIC

88A Dover Road
Durham, New Hampshire
Assessor's Parcel 253 - 2A
ISSUED FOR PLANNING BOARD APPROVAL

Owner / Applicant:

William and Nancy Yates
Coyote Court, LLC
82 Chestnut Hill Road
Farmington, NH 03855

Civil Engineer:



133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

Plan Issue Date:

APRIL 30, 2021

Surveyor:

ERIC C. MITCHELL & ASSOC. INC.
PLANNING - SURVEYING - ENVIRONMENTAL
P.O. BOX 10298, 38 SO. RIVER RD., BEDFORD N.H. 03110-0298
PH. (603) 627-1181

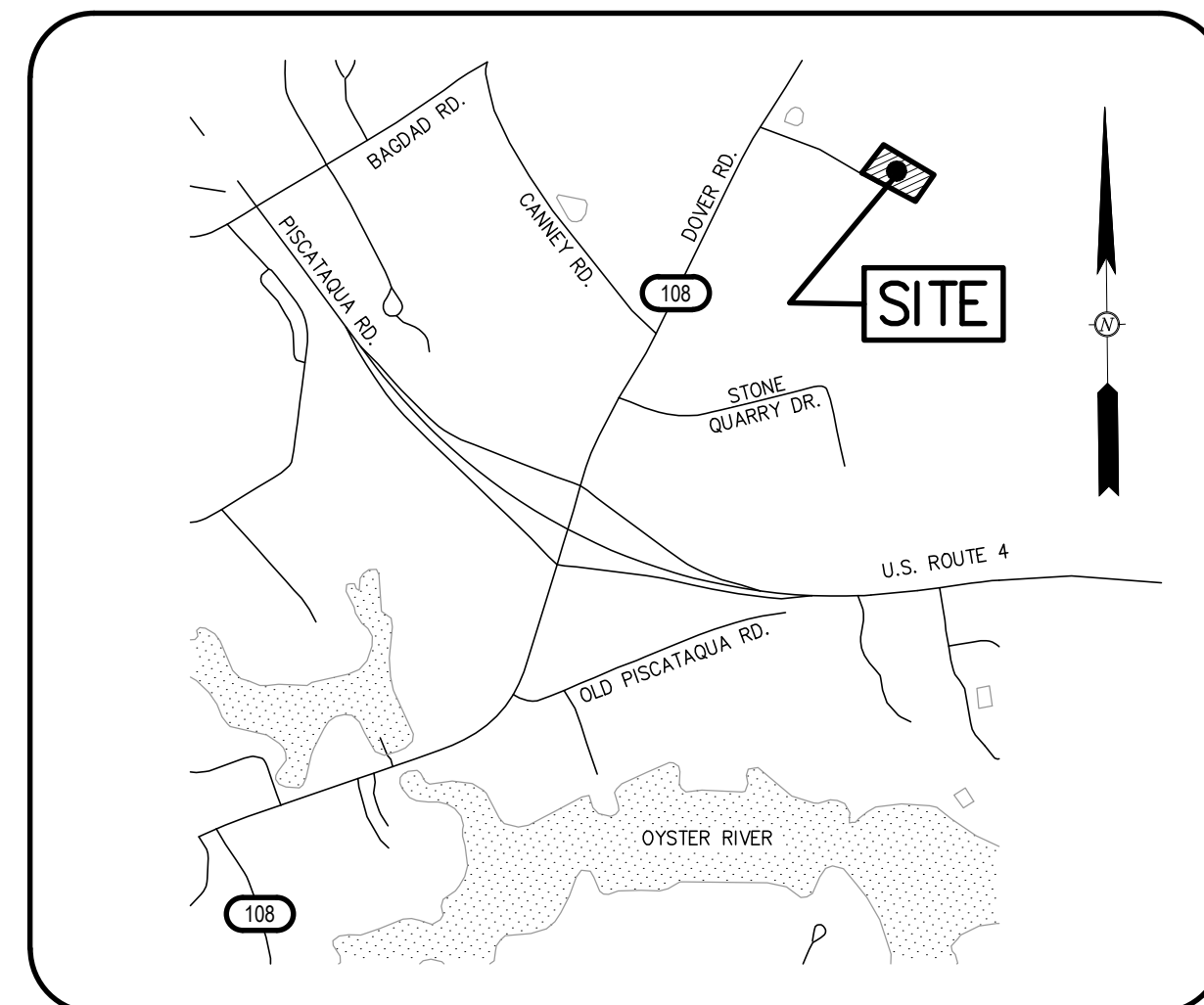
Wetland Scientist:

Joseph Noel
P.O. BOX 174
South Berwick, ME 03908
Phone: (207) 384-5587

Structural Engineer:



One Autumn Street
Portsmouth, NH 03801
Phone: (603) 433 - 8639
www.jsneng.com



LOCUS

NOT TO SCALE

Sheet Index

Title	Sheet No.:	Rev.	Date
Topographic Plan (by Eric Mitchell and Assoc.)	2 of 2	0	02/14/20
Site and Stormwater Management Plan	C-1	1	04/30/21
Detail Sheet	C-2	1	04/30/21
Detail Sheet	C-3	1	04/30/21
Plan of Shell (by JSN Associates, LLC)	A1.0	0	01/29/21
Front Elevation (by JSN Associates, LLC)	A1.1	0	01/29/21

MAP 10 LOT 9-2
RONALD F. &
DOROTHY M. JAMES
89 DOVER ROAD
DURHAM, NH 03824

MAP 10 LOT 9-3
LEONARDA H.A. MEIJER
85 DOVER ROAD
DURHAM, NH 03824
401/65

MAP 11 LOT 4-1
TOWN OF DURHAM
15 NEWMARKET ROAD
DURHAM, NH 03824
1877/668

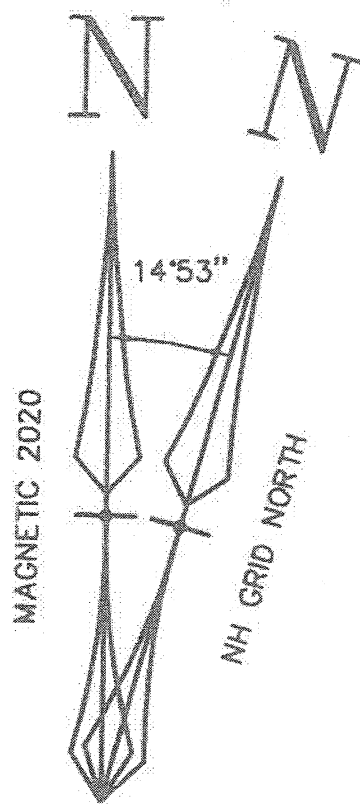
MAP 11 LOT 8-18
ROCKINGHAM PROPERTIES
PO BOX 423
BELMONT, MA 02478

31.7 ACRES ±
REMAINING LAND OF
MAP 11 LOT 3-2
JOHN M. & KATRINE B. MACGREGOR
92 DOVER ROAD, DURHAM, NH
3045/582

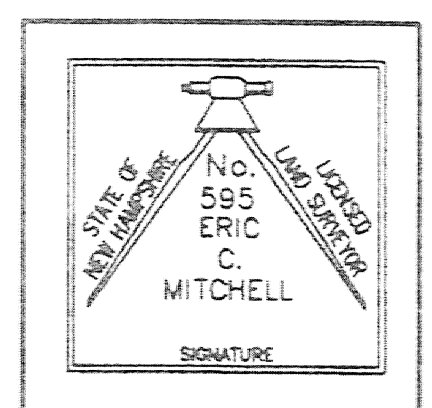
EXISTING LOT 4-2
0.92 Ac
40,282 S.F.
ADJUSTED LOT 4-2
1.97 Ac.
85,918 S.F.

PARCEL "A"
1.06 Ac.
46,000 S.F.
TO BE DEEDED
TO LOT 4-2

31.7 ACRES ±
REMAINING LAND OF
MAP 11 LOT 3-2
JOHN M. & KATRINE B. MACGREGOR
92 DOVER ROAD, DURHAM, NH
3045/582



- LEGEND**
- IRON ROD/DRILL HOLE TO BE SET
 - SSF ○ STEEL STAKE FOUND
 - IPF ○ IRON PIPE FOUND
 - DHS ○ DRILL HOLE SET
 - DHF ○ DRILL HOLE FOUND
 - STONEWALL
 - - - EDGE OF PAVEMENT
 - ~ ~ ~ APPROXIMATE EDGE OF WETLANDS
 - UILITY POLE/GUY WIRE
 - - - EXISTING OVERHEAD WIRES
 - ~ ~ ~ EXISTING TREE LINE
 - - - FENCE
 - - - 66 - - EXISTING CONTOUR



TOPOGRAPHIC PLAN
TAX MAP 11 LOTS 3-2 & 4-2
DOVER ROAD
DURHAM, NH

OWNER OF RECORD LOT 3-2:
JOHN M. & KATRINE B. MACGREGOR
92 DOVER ROAD, DURHAM, NH 03824
(SEE S.C.R.D. BOOK 3045 PAGE 582)
OWNER OF RECORD LOT 4-2:
COYOTE COURT LLC
82 CHESTNUT HILL ROAD, FARMINGTON, NH 03835
(SEE S.C.R.D. BOOK 3348 PAGE 223)
FEBRUARY 14, 2020

SCALE: 1" = 40'

PREPARED BY
ERIC C. MITCHELL & ASSOC. INC.
PLANNING - SURVEYING - ENVIRONMENTAL
P.O. BOX 10298, 38 SO. RIVER RD., BEDFORD N.H. 03110-0298
PH. (603) 627-1181

REV.	DATE	DESCRIPTION	BY
REVISIONS			

GRADING AND DRAINAGE NOTES

- DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE TOWN OF DURHAM AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
- ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION.
- UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBM) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
- PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY 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 RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, 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 OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.

- IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
- ALL SPOT GRADES ARE AT FINISH GRADE AND BOTTOM OF CURB WHERE APPLICABLE.
- IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
- PROVIDE BOLLARDS AT ALL OVERHEAD DOORS AND BUILDING CORNERS WHERE ADJACENT TO VEHICULAR WAYS.

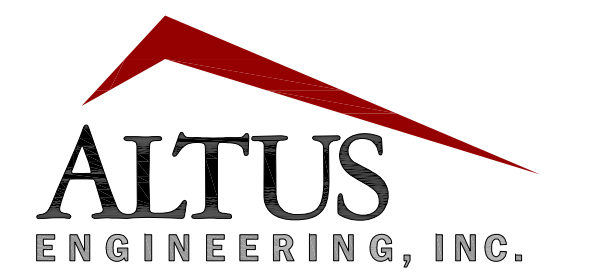
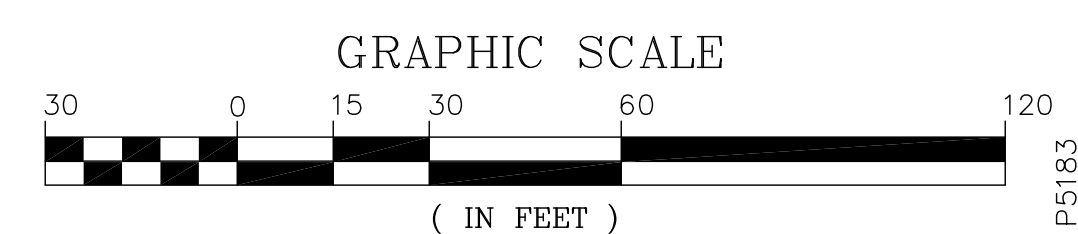
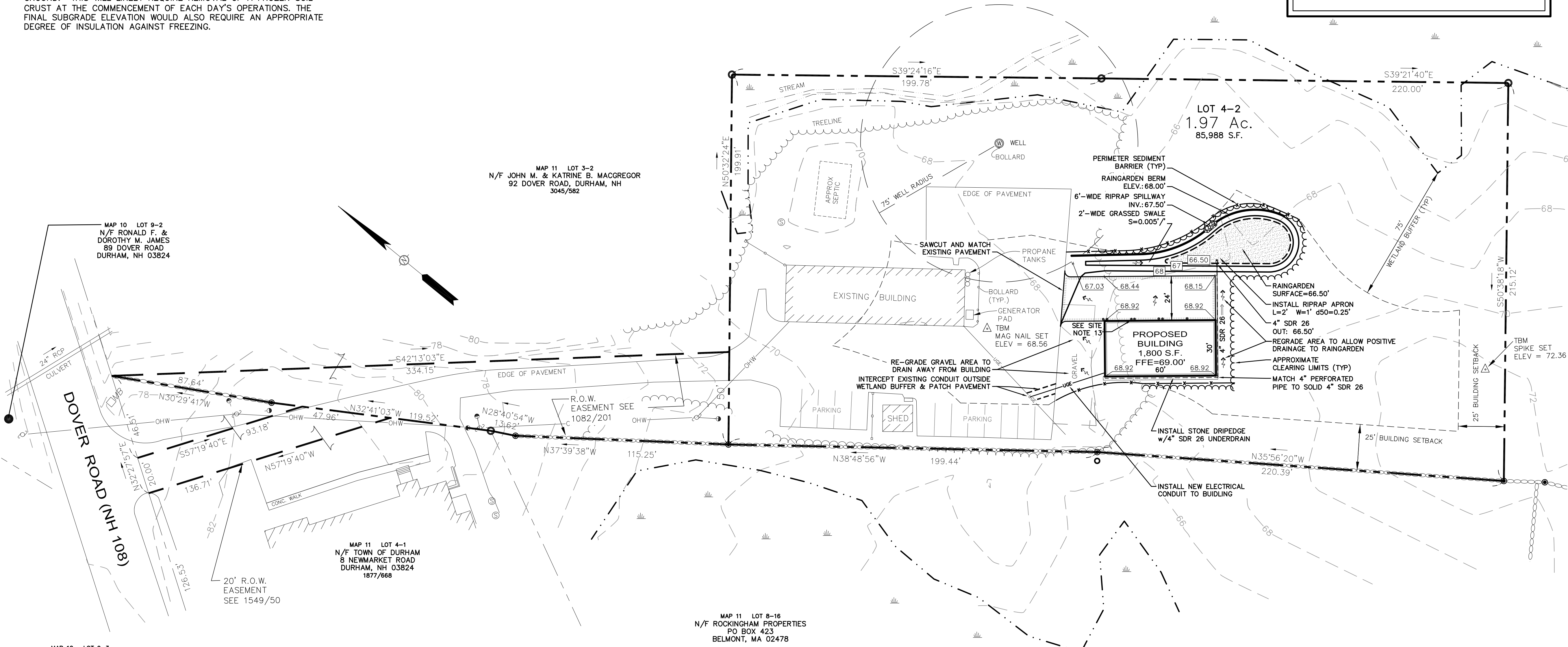
PLAN REFERENCE:

- "TOPOGRAPHIC PLAN, TAX MAP 11 LOTS 3-2 & 4-2, DOVER ROAD, DURHAM, NH" DATED FEBRUARY 14, 2020, BY ERIC C. MITCHELL & ASSOCIATES, INC.

SITE NOTES

- DESIGN INTENT - THIS PLAN SET IS INTENDED TO DEPICT A SITE PLAN FOR AN ADDITIONAL BUILDING AS AN ACCESSORY TO AN EXISTING BUSINESS.
- PROPERTY REFERENCE: MAP 4 LOT 2
- APPROXIMATE LOT AREA: ±85,988 S.F. (±1.97 AC.)
- ZONE: OR (OFFICE AND RESEARCH - ROUTE 108)
- DIMENSIONAL REQUIREMENTS:
 - MIN. LOT AREA: 80,000 S.F. (ALLOWED NONRESIDENTIAL)
 - MIN. ROAD FRONTAGE: 200' (ARTERIAL STREET)
 - MIN. FRONT SETBACK: 100' PLUS 2 FEET FOR EACH FOOT OF BUILDING HEIGHT IN EXCESS OF 25 FEET
 - MIN. SIDE SETBACK: 25'
 - MIN. REAR SETBACK: 25'
 - MAX. BUILDING HEIGHT: 50'
 - WETLAND SETBACK: 75' (WETLANDS GREATER THAN 3,000 SF)
 - MAX. IMPERVIOUS SURFACE RATIO: 50% 24.5% PROVIDED
 - OPEN SPACE: --- 75.5% PROVIDED
- JURISDICTIONAL WETLANDS SHOWN WERE DERIVED FROM PLAN REFERENCE #1 AND CONFIRMED BY JOSEPH NOEL ON MARCH 20, 2021.
- SITE SERVED BY ON-SITE PRIVATE WELL AND SEPTIC SYSTEM.
- EXISTING CONDITIONS INFORMATION SHOWN WAS DERIVED FROM PLAN REFERENCE #1.
- NO PROPOSED IMPACT TO WETLAND BUFFER, WETLAND CONDITIONAL USE PERMIT NOT REQUIRED.
- THE 75-FOOT WETLAND BUFFER SHALL NOT BE DISTURBED, INCLUDING DURING CONSTRUCTION FOR THIS PROJECT.
- THE USE OF SODIUM-CHLORIDE-BASED MATERIALS/SALT FOR WINTER MAINTENANCE SHALL BE THE MINIMUM NECESSARY FOR DRIVEWAY AND PARKING SAFETY.
- ALL STORMWATER INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER AS SPECIFIED IN THE APPROVED PLANS.
- 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.
- PROPOSED BOLLARDS SHALL BE PLACED AT EACH SIDE OF OVERHEAD DOORS AND AT FRONT CORNER TO PROTECT THE PROPOSED BUILDING.

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



133 Court Street Portsmouth, NH 03801
 (603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: APRIL 30, 2021

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	04/07/21
1	ADD P.B. C.O.A.	EBS	04/30/21

DRAWN BY: RLH
 APPROVED BY: EBS
 DRAWING FILE: 5183-SITE.dwg

SCALE:
 22" x 34" - 1" = 30'
 11" x 17" - 1" = 60'

OWNER/APPLICANT:
 WILLIAM AND NANCY YATES
 COYOTE COURT, LLC
 82 CHESTNUT HILL ROAD
 FARMINGTON, NH 03855

PROJECT:
PROPOSED STORAGE BUILDING
 YATES ELECTRIC
 TAX MAP 4 LOT 2
 88A DOVER ROAD
 DURHAM, NH

TITLE:
SITE AND STORMWATER MANAGEMENT PLAN

SHEET NUMBER:
C-1

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

88A DOVER ROAD
DURHAM, NEW HAMPSHIRE
TAX MAP 4 LOT 2

LATITUDE: 43-08-34' N
LONGITUDE: 70-54-22' W

OWNER/APPLICANT:

COYOTE COURT, LLC
C/O WILLIAM & NANCY YATES
82 CHESTNUT HILL ROAD
FARMINGTON, NH 03835

DESCRIPTION

The project consists of the construction of an accessory use building & associated site improvements.

DISTURBED AREA

The total area to be disturbed for the development is approximately ±5,000 S.F. (±0.11 acres). USEPA NPDES Phase II compliance not required.

PROJECT PHASING

The proposed building and associated driveway will be completed in one phase.

NAME OF RECEIVING WATER

The site drains over land to an unnamed wetland and eventually to the Oyster River.

SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control measures including perimeter controls as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
2. Remove vegetation from work limits. Strip loam and stockpile.
3. Rough grade site including placement of borrow materials.
4. Construct building and associated improvements.
5. Construct raingarden & drainage structures and pavement base course materials.
6. Install base course paving.
7. Install top course paving.
8. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
9. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 - 3", issued December 2008, as amended. As indicated in the sequence of Major Activities, perimeter controls shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area and permanent measures are established, perimeter controls shall be removed.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through appropriate perimeter controls. All storm drain inlets shall be provided with inlet protection measures.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.5 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built-up sediment shall be removed from perimeter barriers when it has reached one-third the height of the barrier or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
 - a. Base course gravels have been installed in areas to be paved;
 - b. A minimum of 85% vegetated growth as been established;
 - c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; - or -
 - d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing - In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
 - a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
 - b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

2. Guidelines for Winter Mulch Application -

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CONTINUED)

Jute and Fibrous Matting (Erosion Blanket)	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	<ul style="list-style-type: none"> • The organic matter content is between 80 and 100%, dry weight basis. • Particle size by weight is 100% passing a 6" screen and a minimum of 70 % maximum of 85% passing a 0.75" screen. • The organic portion needs to be fibrous and elongated. • Large portions of silts, clays or fine sands are not acceptable in the mix. • Soluble salts content is less than 4.0 mmhos/cm. • The pH should fall between 5.0 and 8.0.

3. Maintenance - All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. PERMANENT SEEDING -

1. Bedding - stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer - lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and organic 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 @ 100 lbs. per 1,000 s.f.	10-20-20 organic fertilizer @ 12 lbs. per 1,000 s.f.
--	--

Seed Mixture (recommended):

Type	Lbs. / Acre	Lbs. / 1,000 sf
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Seed Mixture (For slope embankments):

Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

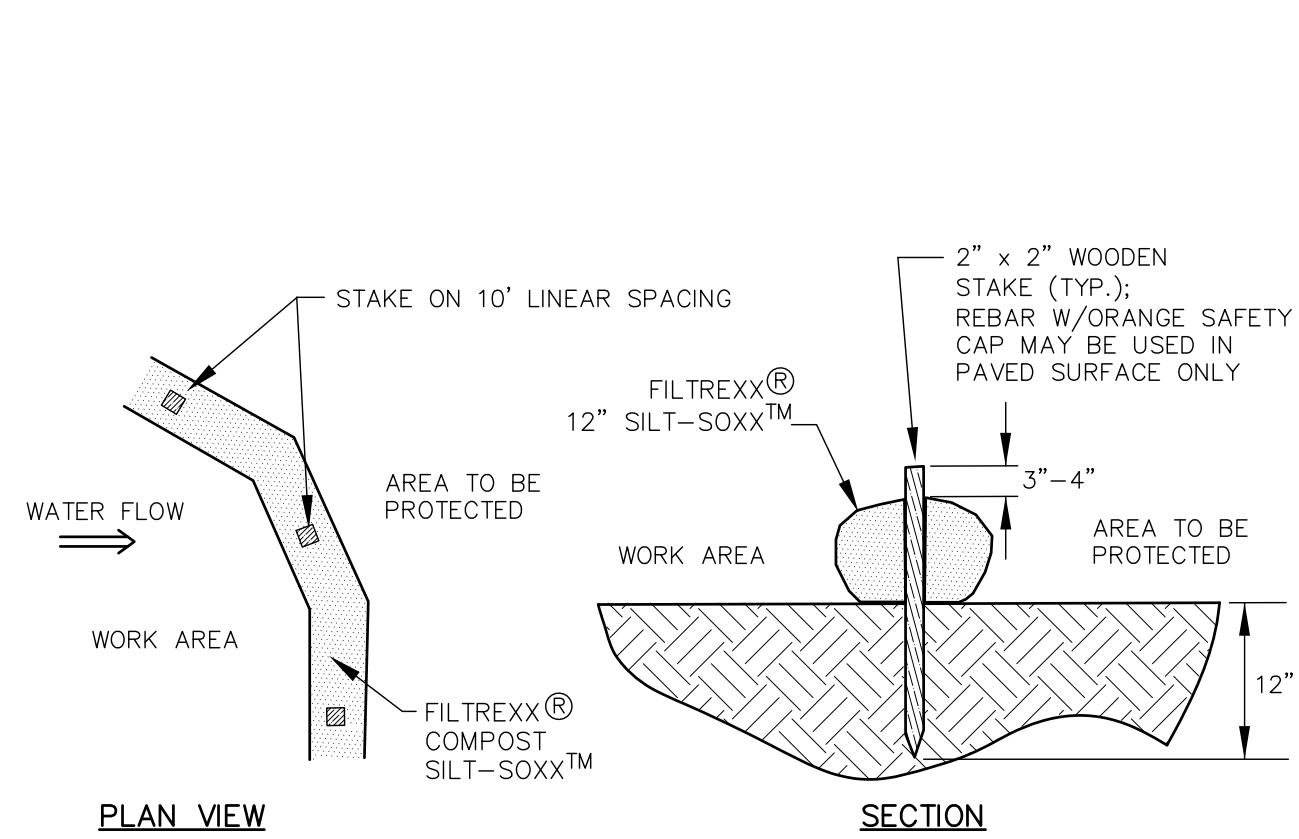
Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs./Acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
Total			90 (80)

Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs./Acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
Total			90 (80)

- a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
 - b. Fescue varieties shall include - Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.
4. Sodding - sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

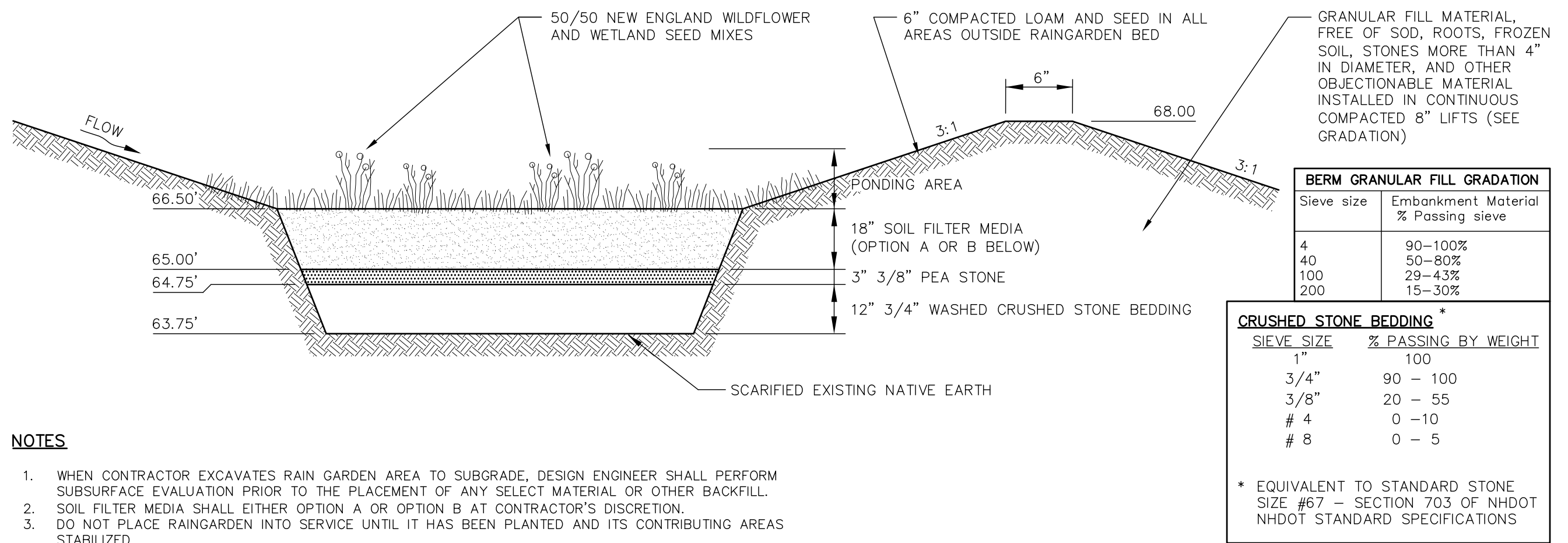
WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.



- NOTES:**
1. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
 2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
 3. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
 4. ALL SEDIMENT TRAPPED BY SILTSOXX SHALL BE DISPOSED OF PROPERLY.

TUBULAR SEDIMENT BARRIER NOT TO SCALE



NOTES

1. WHEN CONTRACTOR EXCAVATES RAINGARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.
3. DO NOT PLACE RAINGARDEN INTO SERVICE UNTIL IT HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE RAINGARDEN DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SURFACES OF RAINGARDEN WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.

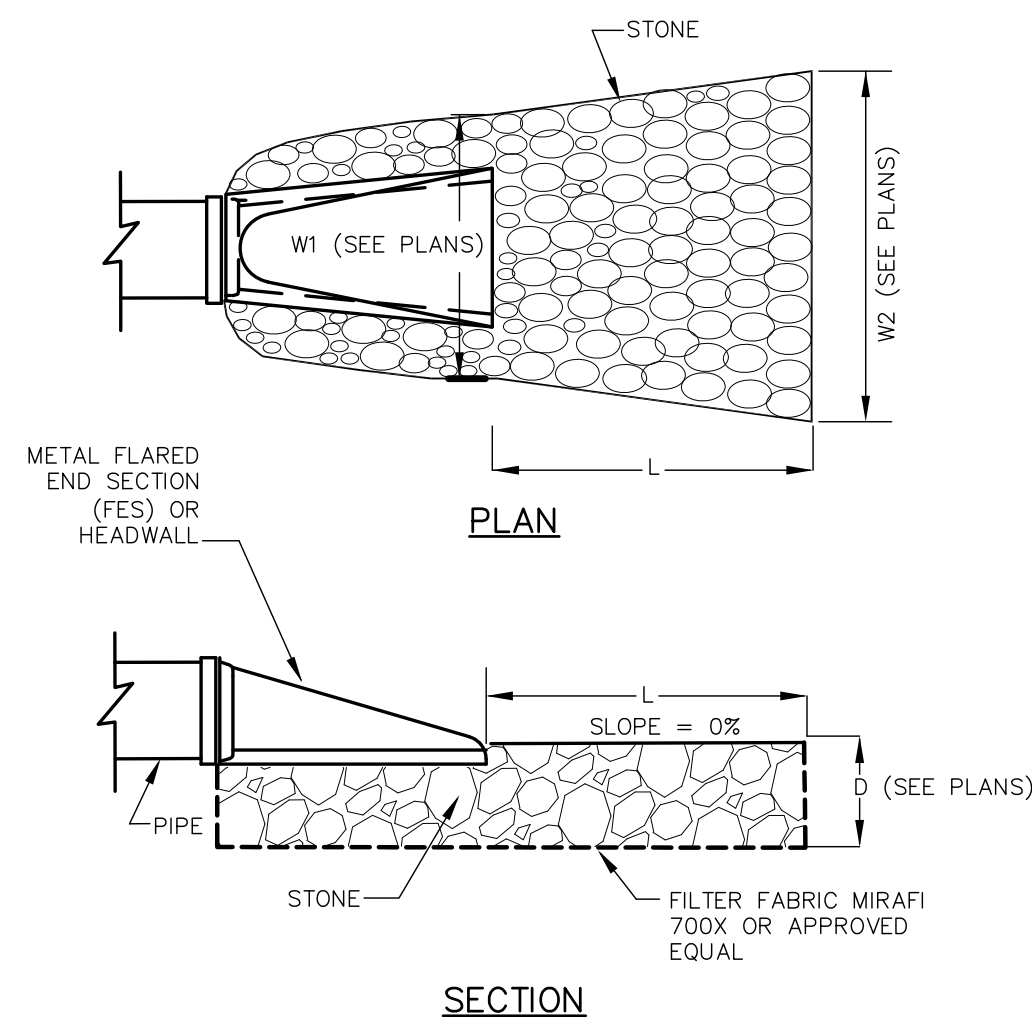
MAINTENANCE REQUIREMENTS

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- 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.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, WEED WHACKING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES. BERM AREAS ARE TO BE MOWED TWICE ANNUALLY.

DESIGN REFERENCES

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

TYPICAL RAINGARDEN



MAINTENANCE

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

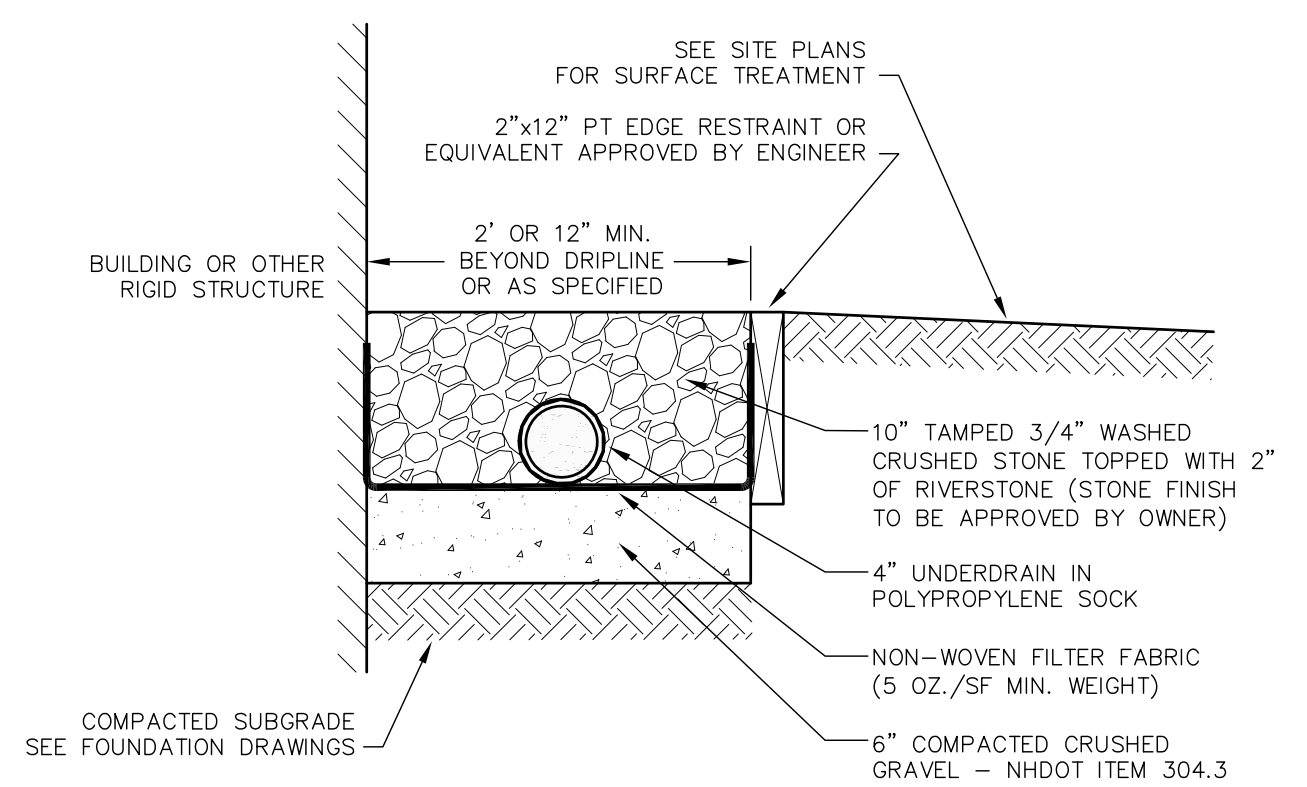
CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. 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 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.

RIPRAP OUTLET PROTECTION NOT TO SCALE

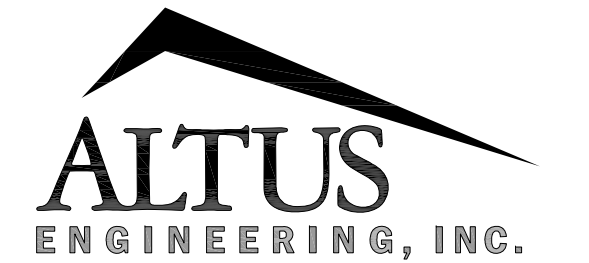
FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Loamy coarse sand	70 to 80	10	85 to 100
		20	70 to 100
		60	15 to 40
		200	8 to 15

NOT TO SCALE

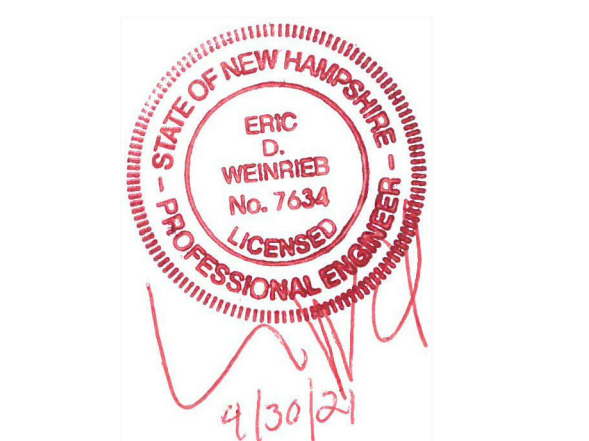


STONE DRIP EDGE NOT TO SCALE

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



133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: APRIL 30, 2021

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	04/07/21
1	CONDITIONS OF APPROVAL	EBS	04/30/21

DRAWN BY: RLH

APPROVED BY: EBS

DRAWING FILE: 5183-SITE.dwg

SCALE: NOT TO SCALE

OWNER/APPLICANT:

WILLIAM AND NANCY YATES
COYOTE COURT, LLC

82 CHESTNUT HILL ROAD
FARMINGTON, NH 03855

PROJECT:

PROPOSED STORAGE BUILDING

YATES ELECTRIC

TAX MAP 4 LOT 2

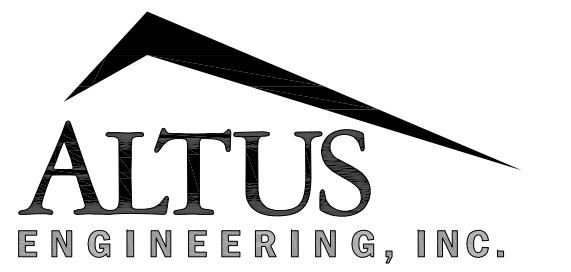
88A DOVER ROAD
DURHAM, NH

TITLE:

DETAILS

SHEET NUMBER: C-2

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



133 Court Street Portsmouth, NH 03801
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NOT FOR CONSTRUCTION

ISSUED FOR: **PLANNING BOARD**

ISSUE DATE: **APRIL 30, 2021**

NO.	DESCRIPTION	BY	DATE
0	PLANNING BOARD	EBS	04/07/21
1	CONDITIONS OF APPROVAL	EBS	04/30/21

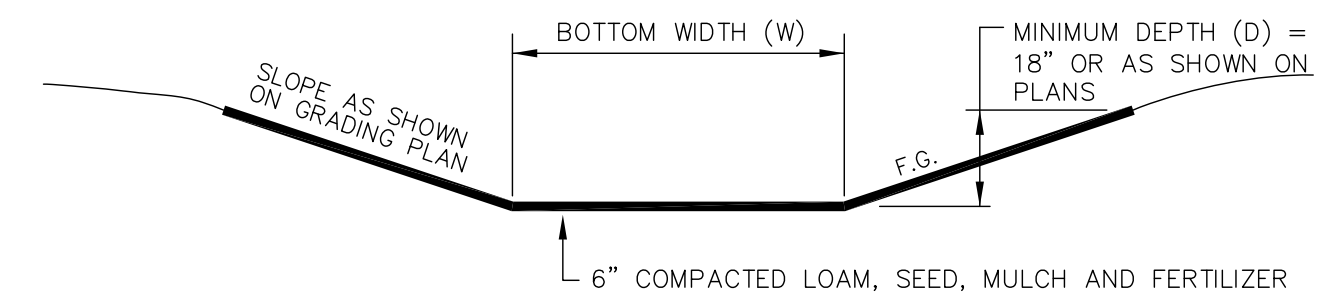
DRAWN BY: _____ RLH
 APPROVED BY: _____ EBS
 DRAWING FILE: _____ 5183-SITE.dwg

SCALE: **NOT TO SCALE**

OWNER/APPLICANT:
**WILLIAM AND NANCY YATES
 COYOTE COURT, LLC**
 82 CHESTNUT HILL ROAD
 FARMINGTON, NH 03855

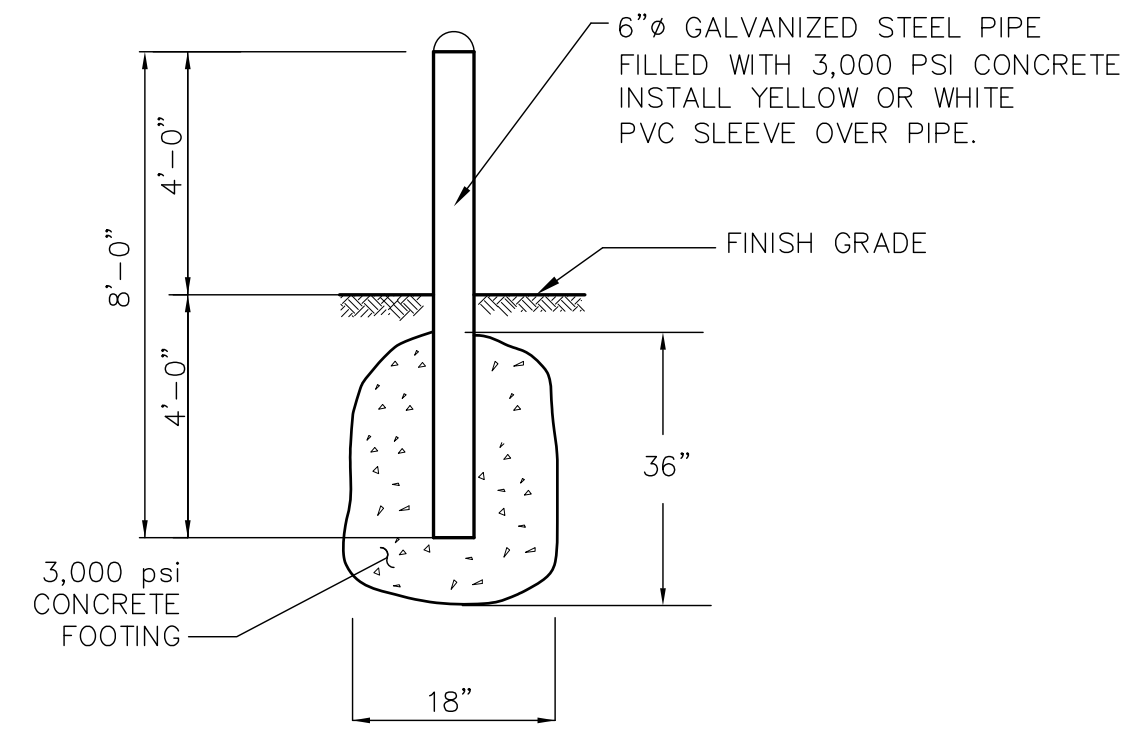
PROJECT:
**PROPOSED
 STORAGE
 BUILDING**
 YATES ELECTRIC
 TAX MAP 4 LOT 2
 88A DOVER ROAD
 DURHAM, NH

TITLE:
DETAILS
 SHEET NUMBER:
C-3

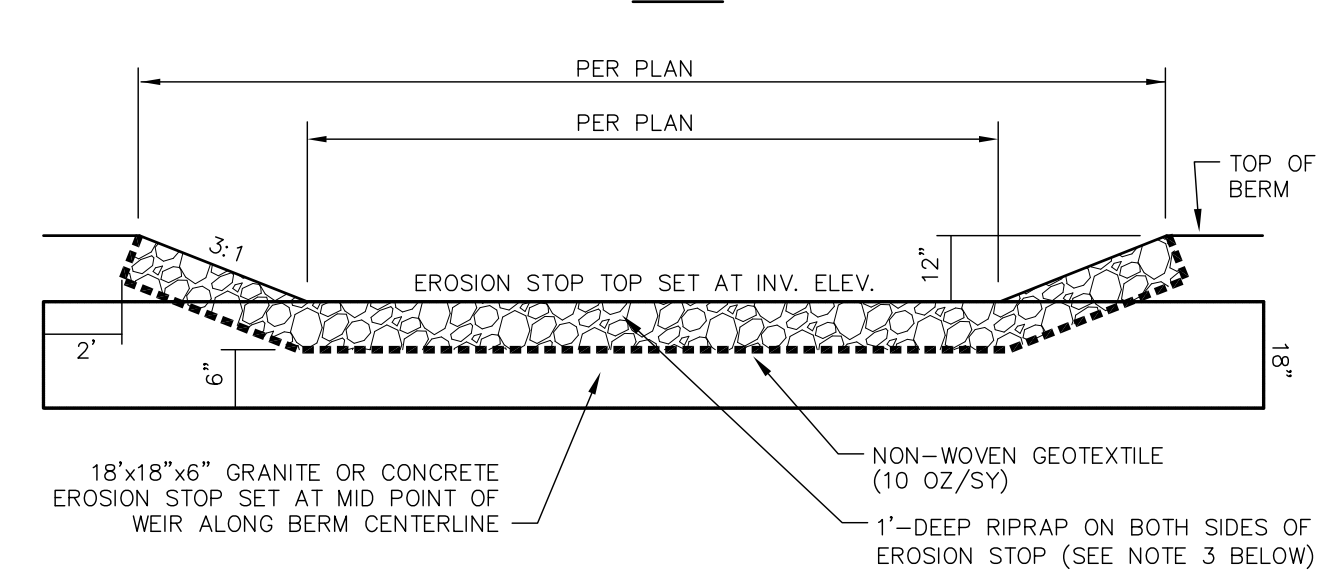
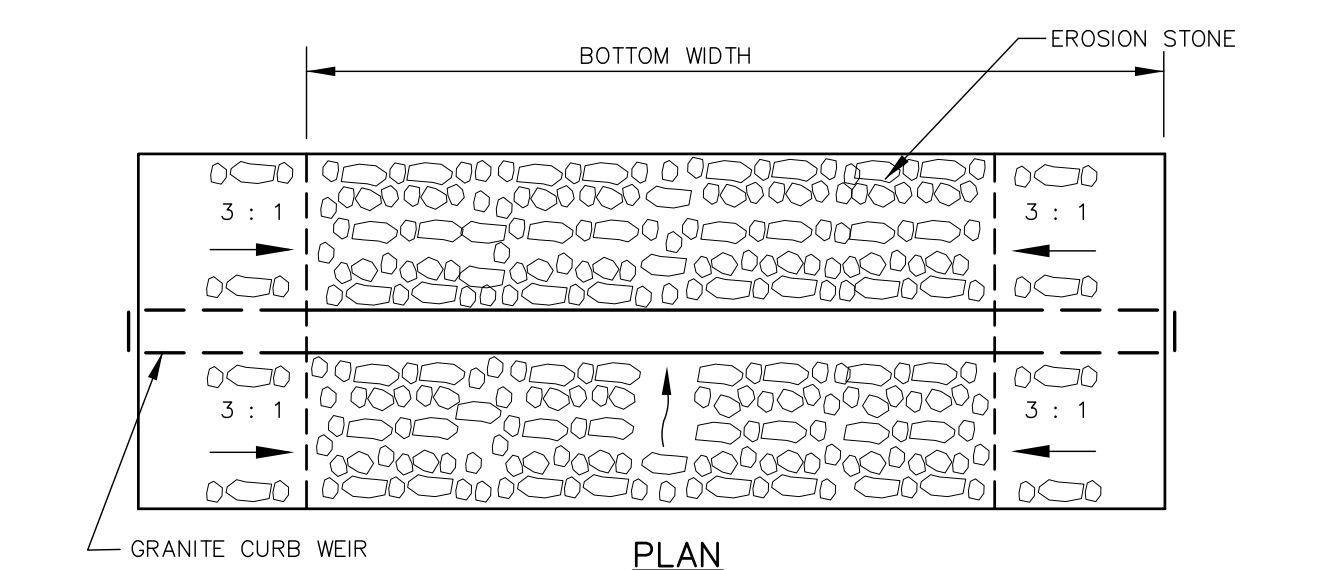


- NOTES**
1. THE FOUNDATION AREA OF THE SWALE SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
 2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF IRREGULARITIES.
 3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED SWALE.
 4. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO DIRECTING STORMWATER TO IT.
 5. MAINTENANCE OF THE VEGETATION IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE SWALE. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE SWALE.
 6. THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE ITS CONDITION. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

VEGETATED SWALE NOT TO SCALE



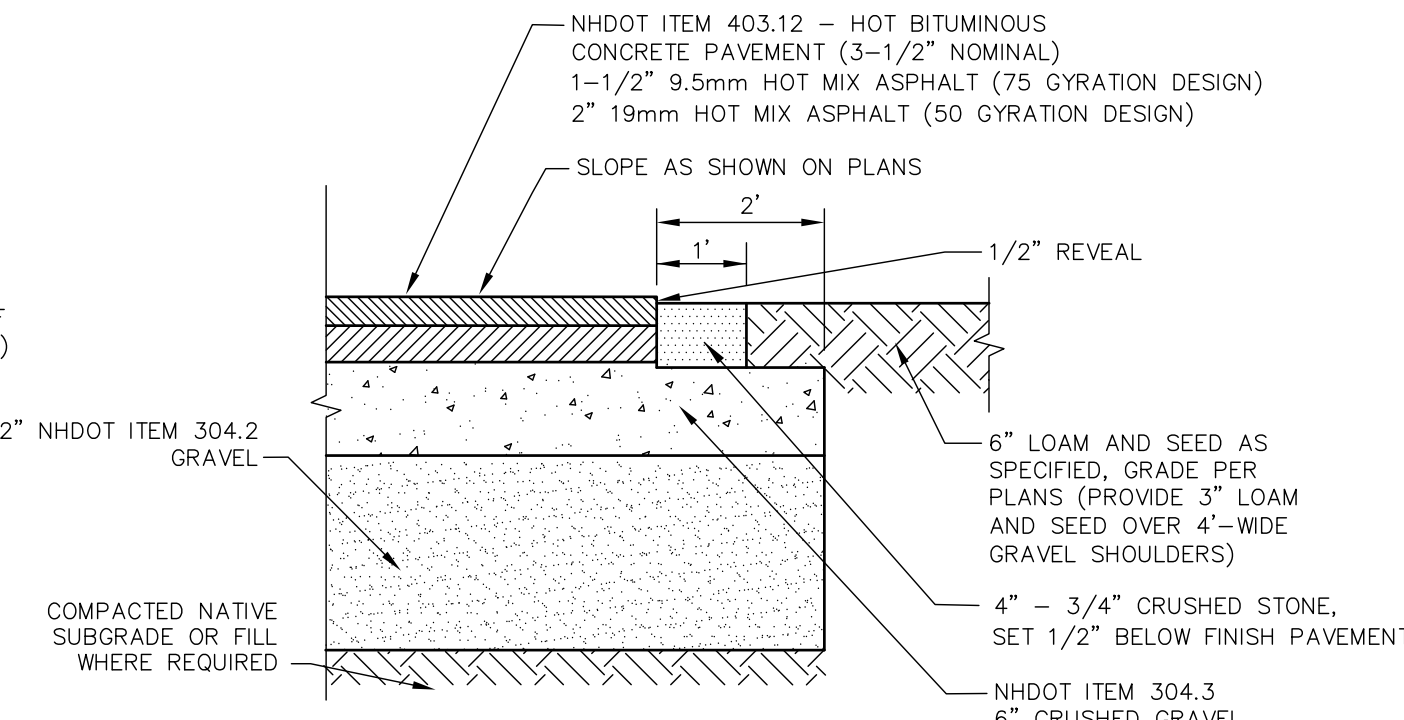
BOLLARD NOT TO SCALE



1. CONSTRUCT EMERGENCY OVERFLOW WEIR TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. UNLESS OTHERWISE SPECIFIED OR DIRECTED, RIPRAP USED FOR THE EMERGENCY OVERFLOW WEIR SHALL MEET THE FOLLOWING GRADATION:

SIZE	PERCENT PASSING BY WEIGHT
4"	90-100
2"	0-15
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. 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 18 INCHES.
5. THE EROSION STONE 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.

RIPRAP SPILLWAY / OVERFLOW WEIR NOT TO SCALE



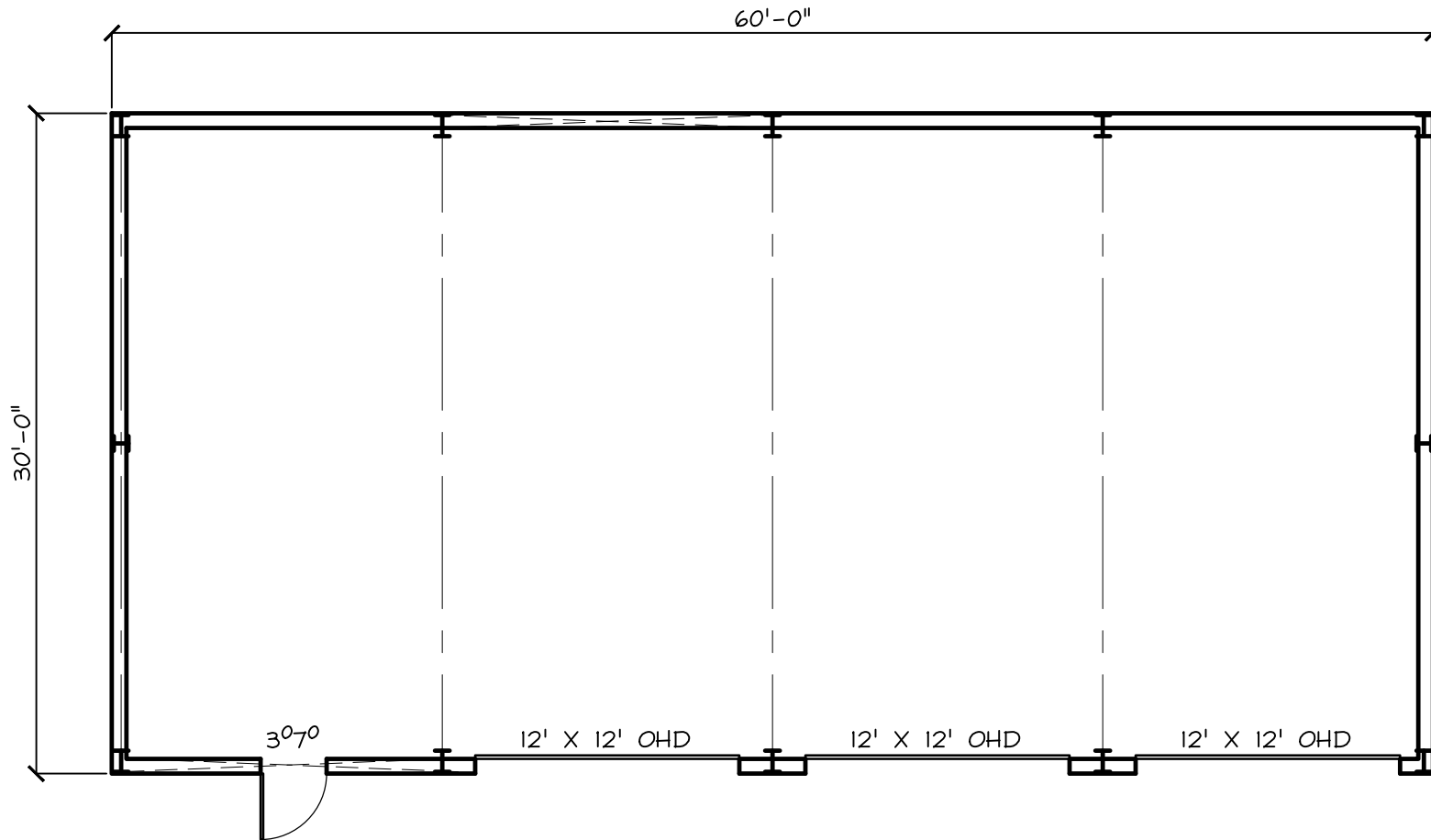
- NOTES:**
1. INSTALL TACK COAT TO BINDER COURSE PAVEMENT PRIOR TO INSTALLING WEARING COURSE.
 2. REMOVE LEDGE WITHIN 30" OF SURFACE.
 3. ALL LOAM, CLAY, MUCK, ORGANIC AND/OR YIELDING MATERIAL SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 21" BELOW FINISH GRADE. INSTALL COMPACTED SAND OR GRAVEL BORROW TO SUBGRADE, AS NECESSARY.
 4. SUBGRADE SHALL BE FREE OF VOIDS THAT ALLOW MOVEMENT/SETTLEMENT OF MATERIALS.
 5. SUBGRADE SHALL BE PROOF ROLLED WITH A FULLY LOADED DUMP TRUCK PRIOR TO PLACEMENT OF GRAVEL. PROOF ROLLING TO BE VIEWED AND APPROVED BY ENGINEER.

PAVEMENT CROSS SECTION NOT TO SCALE

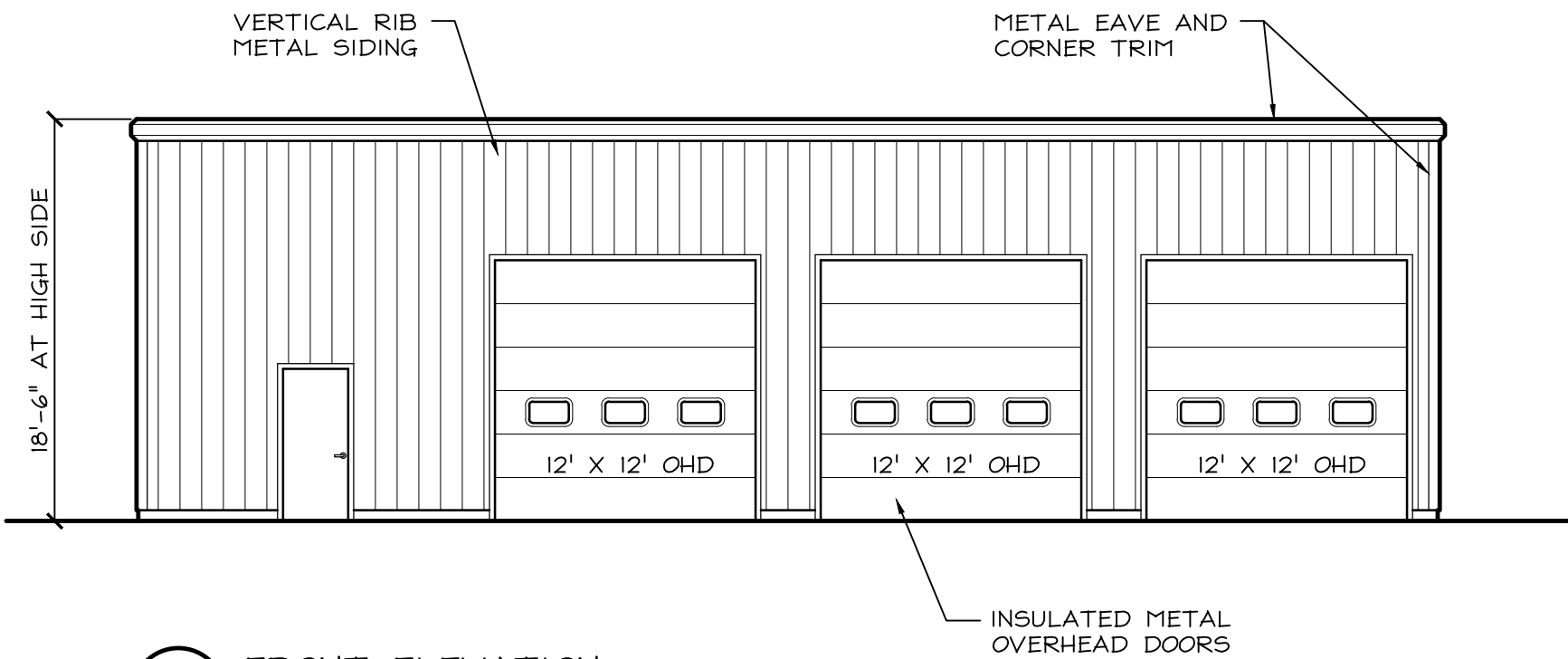
LEGEND

	PROPERTY LINE
	BUILDING SETBACK & WETLAND BUFFER
	WETLAND BOUNDARY
	EXISTING PAVEMENT
	PROP. PAVEMENT
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXIST. OVERHEAD/UNDERGROUND UTILITIES/POLE
	PROPOSED UNDERGROUND ELECTRIC/PHONE
	SILTFENCE/SEDIMENT BARRIER/CONST. FENCE
	TEMPORARY BENCHMARK
	DRAINAGE FLOW INDICATOR
	PROPOSED DRAINAGE PIPE
	PROPOSED SPOT GRADE

P5183



1 PLAN OF SHELL
 A1.0 SCALE: 1/8" = 1'-0"



1 FRONT ELEVATION
 A1.1 SCALE: 1/8" = 1'-0"