

MR. BRADLEY BENSON

TAX MAP 51 LOT 8

LAKE SUNAPEE SHORELAND / SEPTIC PERMITTING

NEW LONDON, NEW HAMPSHIRE

MAY 2018

OWNER:

BRADLEY BENSON
59 WINTER STREET
NORWELL, MA 02061

ENGINEER:

horizons
Engineering Inc.

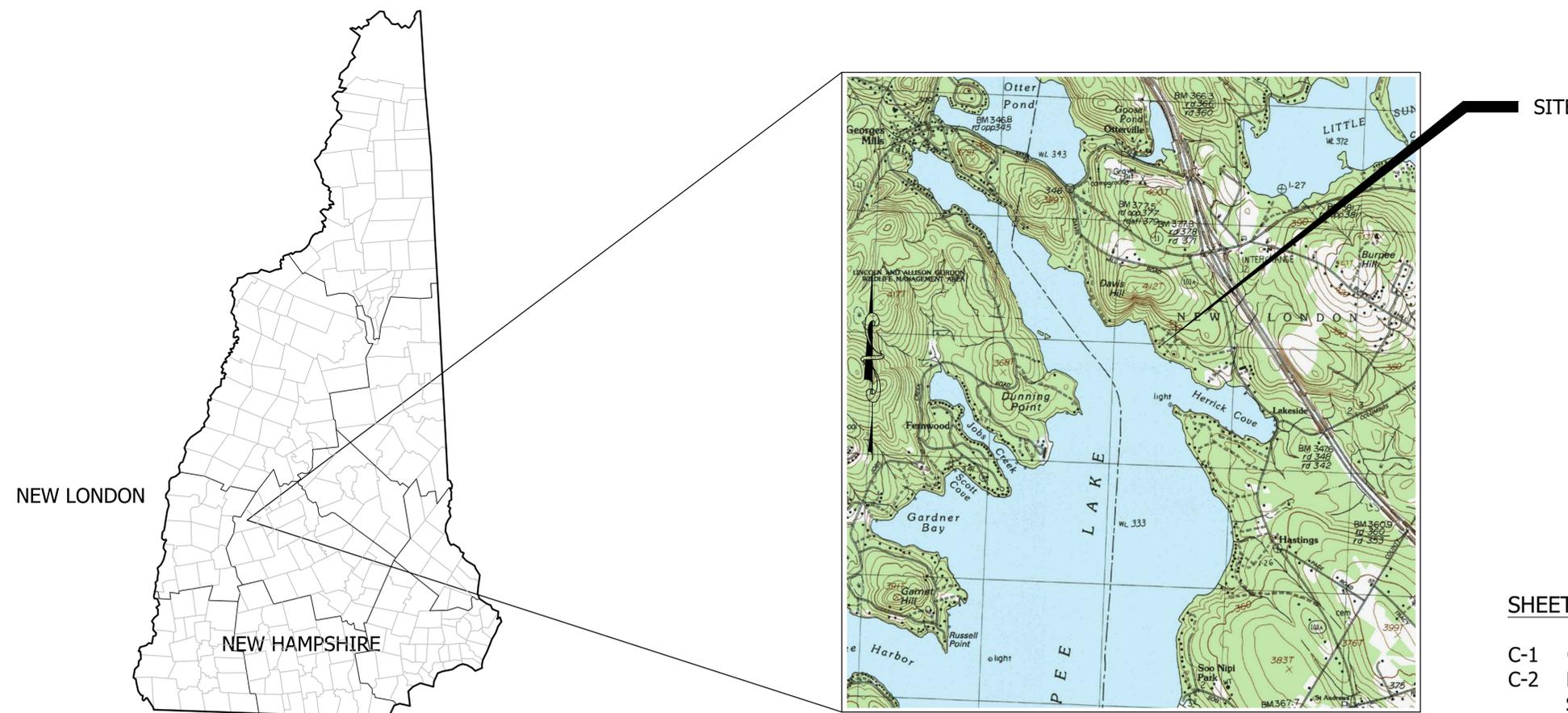
176 NEWPORT ROAD, PO BOX 1825
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210 MAIN STREET, PO BOX 2571
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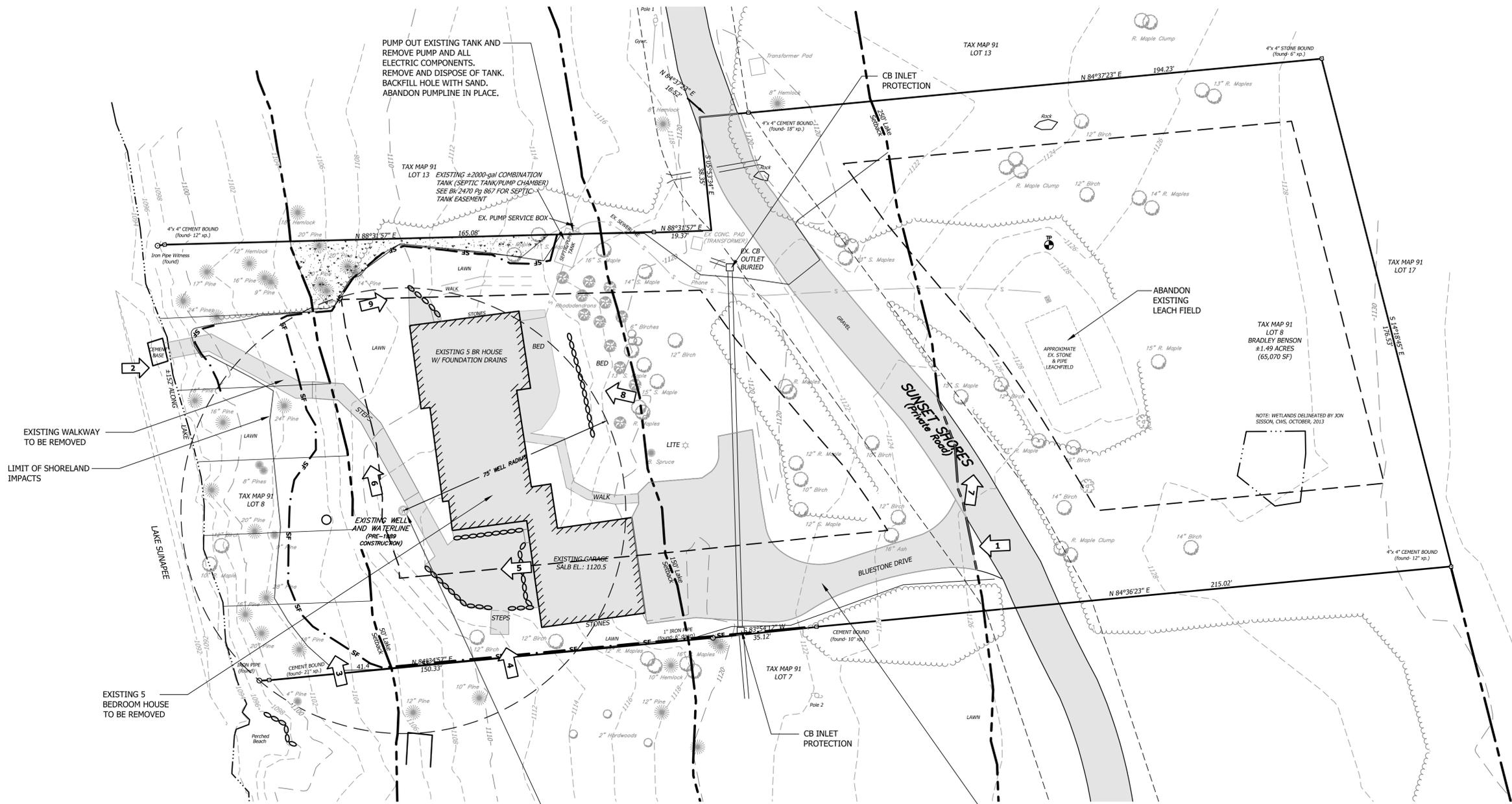
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LOCATION PLAN

SCALE: 1" = 2000'



PUMP OUT EXISTING TANK AND REMOVE PUMP AND ALL ELECTRIC COMPONENTS. REMOVE AND DISPOSE OF TANK. BACKFILL HOLE WITH SAND. ABANDON PUMPLINE IN PLACE.

TAX MAP 91 LOT 13 EXISTING ±2000-gal COMBINATION TANK (SEPTIC TANK/PUMP CHAMBER) SEE BK-2470 Pg 867 FOR SEPTIC TANK EASEMENT

TAX MAP 91 LOT 8 BRADLEY BENSON ±1.49 ACRES (65,070 SF)

NOTE: WETLANDS DELINEATED BY XON SEISSON, CWS, OCTOBER, 2013

EXISTING WALKWAY TO BE REMOVED
LIMIT OF SHORELAND IMPACTS

EXISTING 5 BEDROOM HOUSE TO BE REMOVED

ABANDONED WELL EXISTING WELL SHALL BE SEALED IN ACCORDANCE WITH We-604 OF THE NEW HAMPSHIRE WATER WELL BOARD RULES.

EXISTING GRAVEL DRIVEWAY TO BE REMOVED, RESURFACED WITH LOAM & SEED

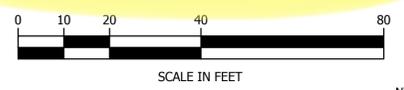
GENERAL NOTES

- NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- ALL WORK SHALL BE PERFORMED WITHIN THE PROPERTY OF, AND EASEMENTS SECURED BY, THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DATA COLLECTION AND PREPARATION OF RECORD DRAWINGS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTROLLING EROSION IN ALL AREAS DISTURBED BY HIS ACTIONS. COSTS FOR REQUIRED EROSION CONTROL, REGARDLESS OF WHETHER OR NOT SUCH MEASURES ARE SHOWN ON THE ENGINEERING DRAWINGS, SHALL BE BORNE BY HIM.
- UTILITY LOCATIONS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF EXISTING UTILITIES AND SHALL REPAIR ANY DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. ALL UTILITIES ENCOUNTERED SHALL BE LOCATED BY DEPTH AND TIES AND SHOWN BY THE CONTRACTOR ON HIS "AS BUILT" DRAWINGS. HAND EXCAVATION SHALL BE DONE WHEREVER UNDERGROUND UTILITIES ARE SHOWN OR ANTICIPATED. THE CONTRACTOR SHALL CONTACT DIG SAFE AND THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION IN ORDER TO VERIFY EXISTING CONDITIONS AND UTILITY LOCATIONS.
- PLANIMETRIC FEATURES, TOPOGRAPHY, AND PROPERTY LINE INFORMATION WAS PROVIDED ELECTRONICALLY BY BLAKEMAN ENGINEERING, INC., PO BOX 4, ROUTE 114, NORTH SUTTON, NH 03260.

PRE IMPERVIOUS AREA
UNALTERED AREA

AREA WITHIN 250' SETBACK = 38,173 SF
PRE IMPERVIOUS AREA WITHIN 250' SETBACK = 10,991 SF
= 28.8% PRE IMPERVIOUS AREA

AREA WITHIN THE NATURAL WOODLAND BUFFER (50' TO 150') = 14,471 SF
AREA IN AN UNALTERED STATE = 692 SF



LEGEND

- 98 --- 2 FOOT CONTOURS
- 100 --- 10 FOOT CONTOURS
- ~ ~ ~ TREELINE
- — — PROPERTY LINE
- - - WETLAND
- — — SEDIMENT FENCE
- — — DRAINAGE
- SF — UTILITY POLE
- WELL
- CATCH BASIN
- LIGHT POLE
- TREES
- ROCK WALL
- — — ORDINARY HIGH WATER
- ➔ PHOTO LOCATION

WATERFRONT SCORING (N TO S)			
TREES	SCORE	TOTAL SCORE	
12" Hemlock	10	65	
17" Pine	15		
24" Pine	15		
SEGMENT 1	16" Pine	15	45
9" Pine	10		
SEGMENT 2	24" Pine	15	15
18" Pine	15		
SEGMENT 3	16" Pine	15	45
24" Pine	15		
SEGMENT 4	8" Pine	10	35
8" Pine	10		
20" Pine	15		
SEGMENT 5	9" Pine	10	45
12" Birch	10		
10" Red Maple	10		
SEGMENT 6	28" Pine	15	45
16" Pine	15		
18" Pine	15		

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MR. BRADLEY BENSON
TAX MAP 91 LOT 8
LAKE SUNAPEE
SHORELAND / SEPTIC PERMITTING
NEW LONDON, NEW HAMPSHIRE

EXISTING CONDITIONS PLAN /
DEMOLITION PLAN
SHORELAND PROTECTIVE AREA

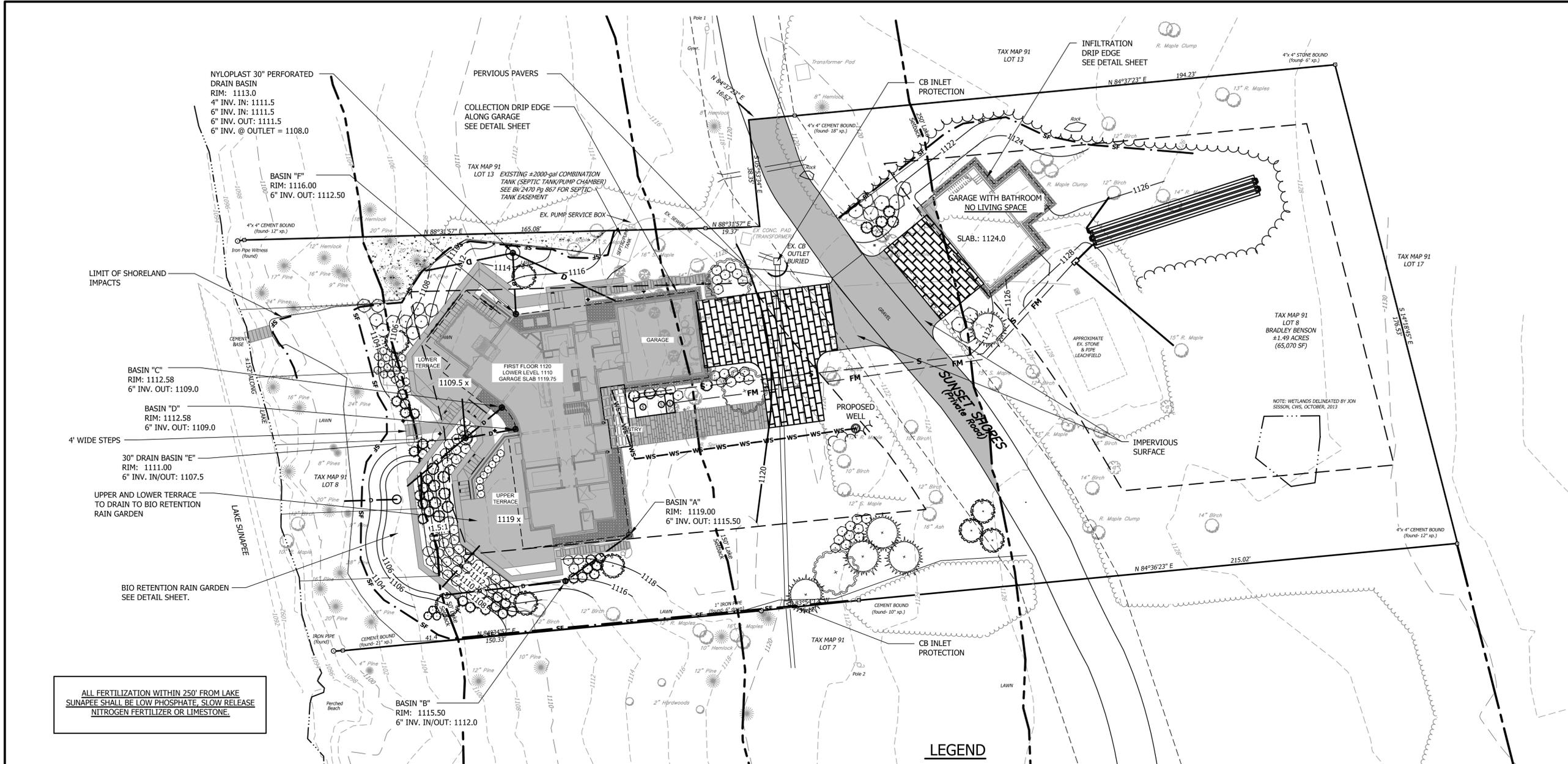
NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE: 05/11/2018	PROJECT #: 17846
ENGINE'D BY: JCD	DRAWN BY: JCD
CHECK'D BY: WD	ARCHIVE #: -

DATE: MAY 24 2018
HORIZONS ENGINEERING

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SHEET C-2



NYLOPLAST 30" PERFORATED DRAIN BASIN
RIM: 1113.0
4" INV. IN: 1111.5
6" INV. IN: 1111.5
6" INV. OUT: 1111.5
6" INV. @ OUTLET = 1108.0

BASIN "F"
RIM: 1116.00
6" INV. OUT: 1112.50

BASIN "C"
RIM: 1112.58
6" INV. OUT: 1109.0

BASIN "D"
RIM: 1112.58
6" INV. OUT: 1109.0

30" DRAIN BASIN "E"
RIM: 1111.00
6" INV. IN/OUT: 1107.5

UPPER AND LOWER TERRACE TO DRAIN TO BIO RETENTION RAIN GARDEN

BIO RETENTION RAIN GARDEN SEE DETAIL SHEET.

ALL FERTILIZATION WITHIN 250' FROM LAKE SUNAPEE SHALL BE LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER OR LIMESTONE.

BASIN "B"
RIM: 1115.50
6" INV. IN/OUT: 1112.0

BASIN "A"
RIM: 1119.00
6" INV. OUT: 1115.50

WATERFRONT SCORING (N TO S)		
TREES	SCORE	TOTAL SCORE
12" Hemlock	10	65
17" Pine	15	
24" Pine	15	
16" Pine	15	15
9" Pine	10	
24" Pine	15	45
18" Pine	15	
16" Pine	15	
24" Pine	15	35
8" Pine	10	
20" Pine	15	
9" Pine	10	45
12" Birch	10	
10" Red Maple	10	
28" Pine	15	45
16" Pine	15	
20" Pine	15	
18" Pine	15	

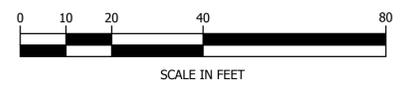
LEGEND

- | | | | |
|--|----------|--|-----------------------------|
| | EXISTING | | PROPOSED |
| | 98 | | 2 FOOT CONTOURS |
| | 100 | | 10 FOOT CONTOURS |
| | | | TREELINE |
| | | | PROPERTY LINE |
| | | | WETLAND |
| | | | DRAINAGE |
| | | | SEDIMENT FENCE |
| | | | IMPERVIOUS SURFACE |
| | | | H-20 PERVIOUS PAVERS |
| | | | PERVIOUS PAVERS |
| | | | WATER SERVICE |
| | | | 4" SDR 26 PVC GRAVITY SEWER |
| | | | 1 1/2" SEWAGE FORCEMAIN |
| | | | UTILITY POLE |
| | | | WELL |
| | | | CATCH BASIN |
| | | | NYLOPLAST DRAIN BASIN |
| | | | LIGHT POLE |
| | | | TREES |
| | | | ROCK WALL |
| | | | RETAINING WALL |
| | | | ORDINARY HIGH WATER |

POST IMPREVIOUS AREA
UNALTERED AREA

AREA WITHIN 250' SETBACK = 38,173 SF
POST IMPREVIOUS AREA WITHIN 250' SETBACK = 10,367 SF
= 27.1% POST IMPREVIOUS AREA

AREA WITHIN THE NATURAL WOODLAND BUFFER (50' TO 150') = 14,471 SF
MIN. AREA TO REMAIN IN AN UNALTERED STATE = 692 SF
AREA SHOWN TO REMAIN IN AN UNALTERED STATE = 692 SF



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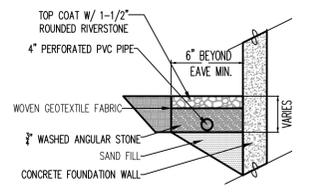
**PROPOSED CONDITIONS PLAN
SHORELAND PROTECTIVE AREA**

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

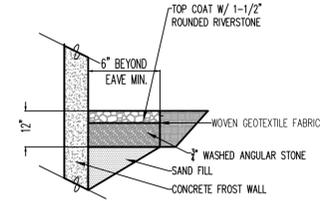
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SHEET C-3

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COLLECTION DRIP EDGE



INFILTRATION DRIP EDGE

POROUS PAVER NOTES

- GENERAL PURPOSE**

A. PURPOSE:
POROUS PAVERS PERMITS STORMWATER TO SEEP THROUGH THE AND INTO THE UNDERLYING SOIL. THE PURPOSE OF THIS PLAN IS TO PROVIDE GUIDANCE FOR THE PROPER MAINTENANCE OF POROUS PAVEERS TO ENSURE OPERATION AND DESIGN LIFE.
- MAINTENANCE REQUIREMENTS**

A. PERMEABILITY CHECK
1) THE FULL PERMEABILITY OF THE PAVER SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER AT THE RATE OF AT LEAST 5 GALLONS PER MINUTE OVER THE SURFACE, USING A HOSE OR OTHER DISTRIBUTION DEVICE. WATER USED FOR THE TEST SHALL BE CLEAN, FREE OF SUSPENDED SOLIDS AND DELETERIOUS LIQUIDS. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT LARGE PUDDLE FORMATION OR SURFACE RUNOFF.

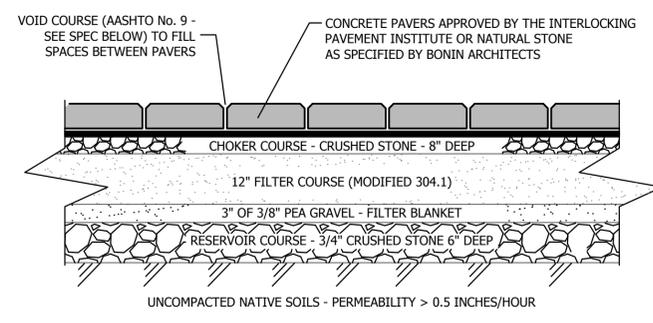
B. WINTER MAINTENANCE
1) WINTER MAINTENANCE MEASURES SHOULD NOT INCLUDE THE APPLICATION OF SAND OR GRAVEL. SALT SHOULD BE USED SPARINGLY TO MANAGE ICE.

B. SWEEPING & VACUUMING
1) THE AREA SHOULD BE SWEEPED AND VACUUMED TWICE A YEAR (SPRING AND FALL) IN ORDER TO AVOID CLOGGING.
a. IN ORDER TO REMOVE ANY REMAINING SALT, SPRING SWEEPING AND VACUUMING SHOULD OCCUR AFTER THE LAST SNOW FALL.
b. FALL SWEEPING AND VACUUMING SHOULD OCCUR LATE IN THE SEASON IN ORDER TO REMOVE ANY DEAD LEAVES THAT MAY CONTRIBUTE TO CLOGGING OF THE PAVEMENT VOIDS.
c. THE CONTRIBUTING AREA SHOULD BE KEPT CLEAR OF DEBRIS AND AREAS OF EROSION.

C. PRESSURE WASHING
2) THE AREA SHOULD BE PRESSURE WASHED ANNUALLY, PREFERABLY IN THE SPRING AFTER THE LAST SNOWFALL.

E. ACCESS
3) RESTRICT ACTIVITIES SUCH AS STOCKPILING SOIL DIRECTLY ON THE PAVERS OR ALLOWING VEHICLES WITH MUDDY TIRES TO DRIVE OVER PARKING LOT IN ORDER TO PREVENT CLOGGING OF THE PAVEMENT.
4) RESTRICT PARKING OF HEAVY EQUIPMENT OR VEHICLES FOR EXTENDED PERIODS OF TIME.

F. EROSION CONTROL
6) THE CONTRIBUTING AREA SHOULD BE KEPT CLEAR OF DEBRIS AND AREAS OF EROSION.
7) LANDSCAPED AREAS NEAR ANY POROUS PAVER AREAS SHOULD BE MONITORED AS TO PREVENT MULCH, LEAVES, OR OTHER DEBRIS FROM CLOGGING THE SURFACE OF THE PAVERS.



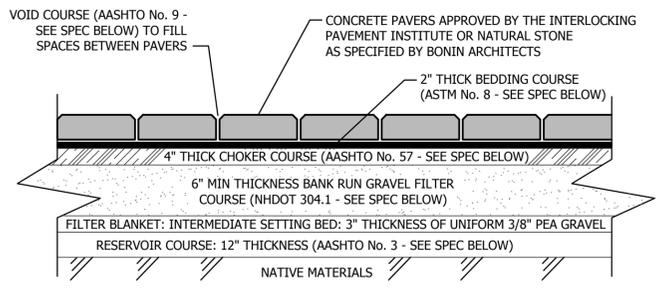
H-20 PERVIOUS PAVERS DETAIL

NOT TO SCALE
MAXIMUM FROST DEPTH = 4'
MIN. SYSTEM DEPTH > 0.65 x MAX. FROST DEPTH
0.65 x 4' = 2.6' OR 3'

U.S. STANDARD SIEVE SIZE	PERCENT PASSING (%)			
	CHOKER COURSE (AASHTO No. 57)	FILTER COURSE (MODIFIED NHDOT 304.1)	RESERVOIR COURSE (AASHTO No. 3)	RESERVOIR COURSE ALT.* (AASHTO No. 5)
6" (150mm)	-	100	-	-
2 1/2" (63mm)	-	-	100	-
2" (50mm)	-	-	90-100	-
1 1/2" (37.5mm)	100	-	35-70	-
1" (25mm)	95-100	-	0-15	100
3/4" (19mm)	-	-	-	90-100
1/2" (12.5mm)	25-60	-	0-5	20-55
3/8" (9.5mm)	-	-	-	0-10
#4 (4.75mm)	0-10	70-100	-	0-5
#8 (2.36mm)	0-5	-	-	-
#200 (0.075mm)	-	0-6**	-	-
% Compaction ASTM D698 / AASHTO T99	95	95	95	95

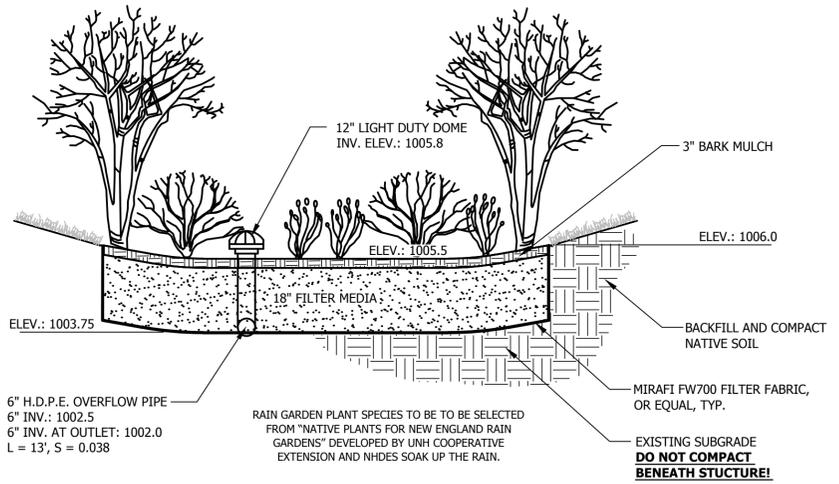
*ALTERNATE GRADATIONS (e.g. AASHTO No. 5) MAY BE ACCEPTED PENDING ENGINEER'S APPROVAL.
** PREFERABLY LESS THAN 4% FINES
NOTE: THE CONTRACTOR AND OWNER ARE ADVISED TO REFERENCE THE "UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS" FOR CONSTRUCTION AND MAINTENANCE OF THE PAVEMENT SECTION.

TYPICAL PATIO SECTION - PERVIOUS PAVERS



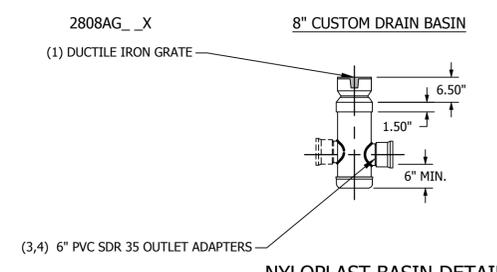
NOT TO SCALE

- NOTES:**
- BIORETENTION AREA PLANTINGS SHALL BE SPECIFIED BY BONIN ARCHITECTS IN COMPLIANCE WITH NEW HAMPSHIRE STORMWATER MANUAL GUIDANCE FOR BIORETENTION AREAS.
 - FILTER MEDIA SHALL MEET ONE OF THE FOLLOWING SPECIFICATIONS:
 - 50% TO 55% BY VOLUME SAND ALSO IDENTIFIED AS ASTM C-33 CONCRETE SAND, 20% TO 30% BY VOLUME OF LOAMY SAND TOPSOIL WITH 15% TO 25% FINES PASSING THE NUMBER 200 SIEVE, AND 20% TO 30% BY VOLUME MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE NUMBER 200 SIEVE;
 - 20% TO 30% BY VOLUME OF MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH THAT HAS NO MORE THAN 5% FINES PASSING THE NUMBER 200 SIEVE, WITH 70 TO 80% BY VOLUME LOAMY COARSE SAND USED IN THE MIXTURE MEETING THE FOLLOWING SIEVE ANALYSIS SPECIFICATION:
 - FROM 85 TO 100 PERCENT BY WEIGHT SHALL PASS THE NUMBER 10 SIEVE;
 - FROM 70 TO 100 PERCENT BY WEIGHT SHALL PASS THE NUMBER 20 SIEVE;
 - FROM 15 TO 40 PERCENT BY WEIGHT SHALL PASS THE NUMBER 60 SIEVE; AND
 - FROM 8 TO 15 PERCENT BY WEIGHT SHALL PASS THE NUMBER 200 SIEVE
 - DRAIN BASINS AS SHOWN ON SITE PLAN AND UPPER AND LOWER TERRACE TO BE DIRECTED TO BIORETENTION RAIN GARDEN.
 - THE BIORETENTION AREA FUNCTIONS BY INFILTRATING STORMWATER. ENSURE THAT ADJACENT FOUNDATION WALLS ARE ADEQUATELY WATERPROOFED FOR CONTINUAL CONTACT WITH SATURATED SOIL. SEE PLANS AND DETAILS BY OTHERS



BIORETENTION RAIN GARDEN DETAIL

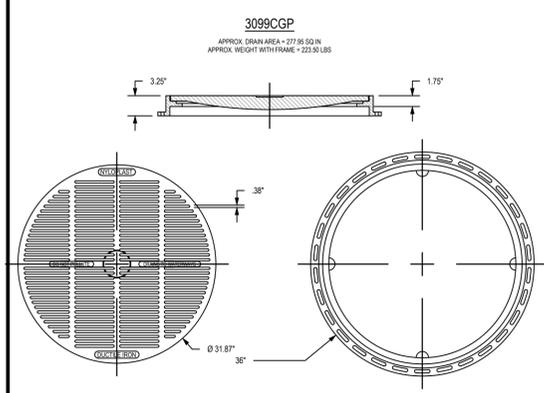
NOT TO SCALE



NYLOPLAST BASIN DETAIL

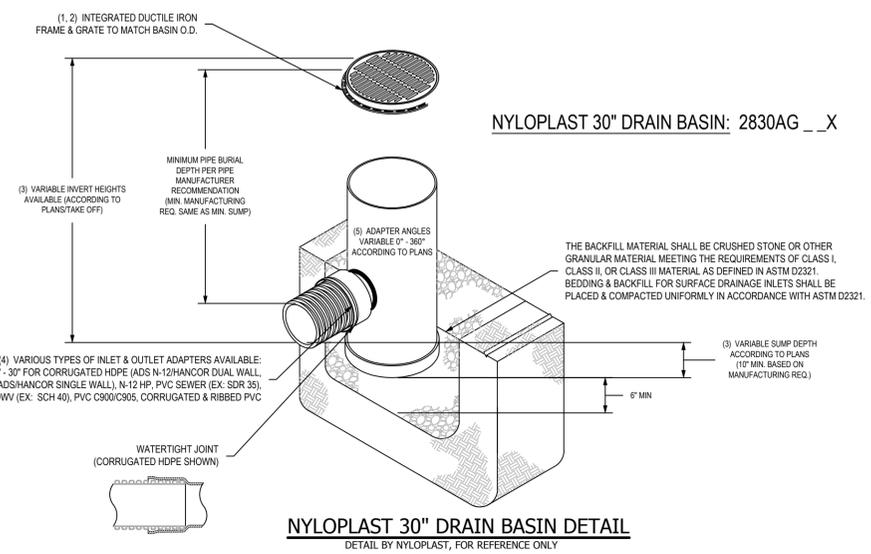
DETAIL BY NYLOPLAST, FOR REFERENCE ONLY

- GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
- CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
- DIMENSIONS ARE FOR REFERENCE ONLY ACTUAL DIMENSIONS MAY VARY



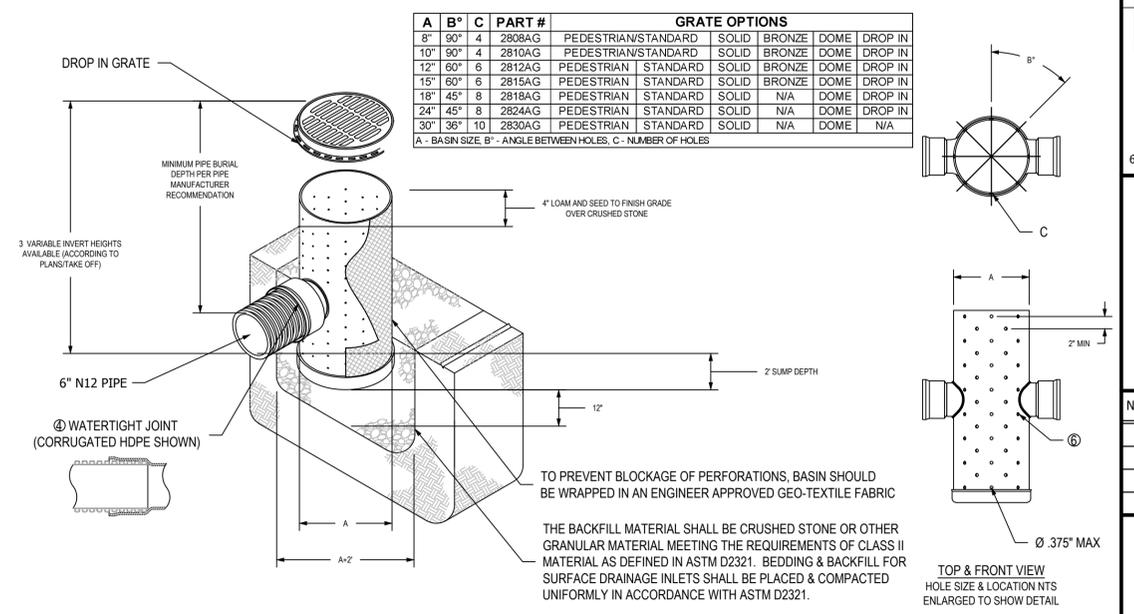
NYLOPLAST 30" PEDESTRIAN GRATE ASSEMBLY

NOT TO SCALE



NYLOPLAST 30" DRAIN BASIN DETAIL

DETAIL BY NYLOPLAST, FOR REFERENCE ONLY

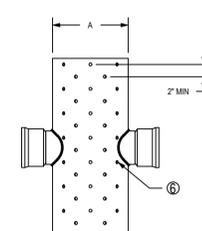
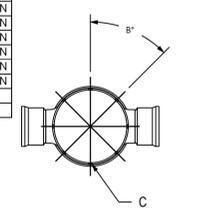


NYLOPLAST 30" PERFORATED DRAIN BASIN

NOT TO SCALE

A	B*	C	PART #	GRATE OPTIONS
8"	90°	4	2808AG	PEDESTRIAN/STANDARD SOLID BRONZE DOME DROP IN
10"	90°	4	2810AG	PEDESTRIAN/STANDARD SOLID BRONZE DOME DROP IN
12"	60°	6	2812AG	PEDESTRIAN/STANDARD SOLID BRONZE DOME DROP IN
15"	60°	6	2815AG	PEDESTRIAN/STANDARD SOLID BRONZE DOME DROP IN
18"	45°	8	2818AG	PEDESTRIAN/STANDARD SOLID N/A DOME DROP IN
24"	45°	8	2824AG	PEDESTRIAN/STANDARD SOLID N/A DOME DROP IN
30"	36°	10	2830AG	PEDESTRIAN/STANDARD SOLID N/A DOME N/A

A - BASIN SIZE, B* - ANGLE BETWEEN HOLES, C - NUMBER OF HOLES



NYLOPLAST 30" PERFORATED DRAIN BASIN

NOT TO SCALE

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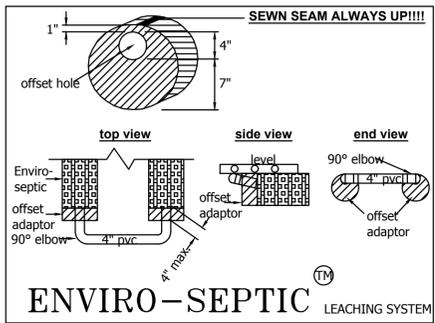
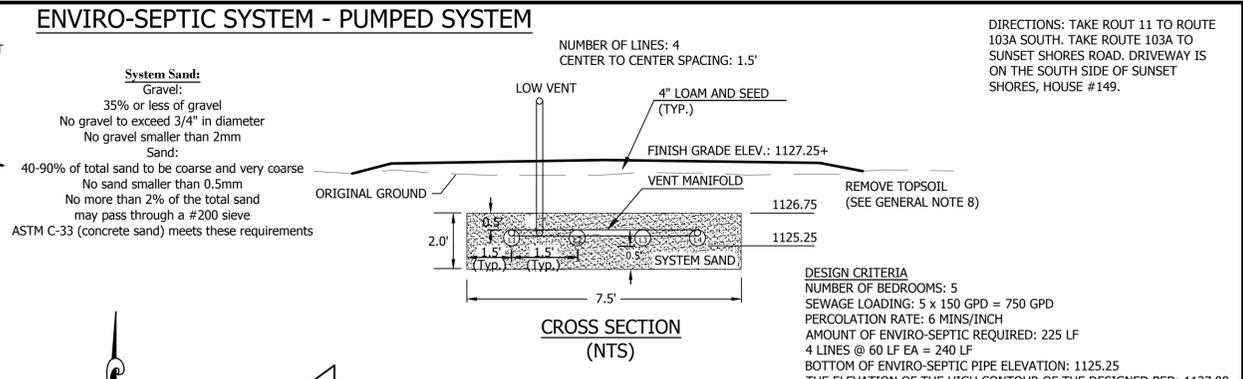
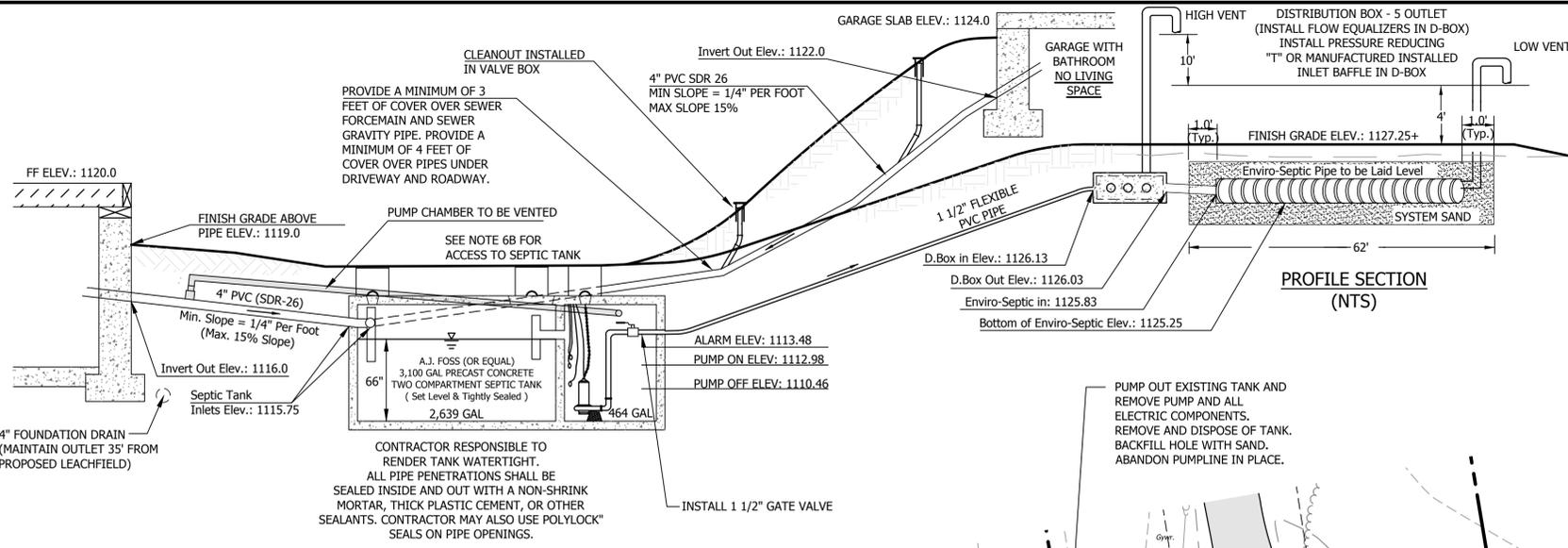
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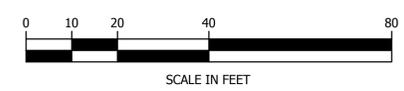
ENVIRO-SEPTIC SYSTEM - PUMPED SYSTEM



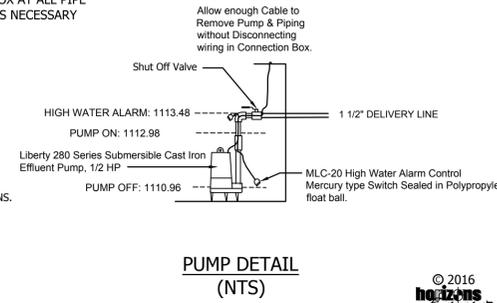
ENVIRO-SEPTIC LEACHING SYSTEM

- GENERAL NOTES**
- THE CONTRACTOR SHALL ADHERE STRICTLY TO THESE PLANS AND THE REGULATIONS SET FORTH IN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES MANUAL - "SUBDIVISION AND INDIVIDUAL SEWAGE DISPOSAL SYSTEM DESIGN RULES", CHAPTER ENV-WO 1000, DATED OCTOBER 1, 2016, CURRENT EDITION, AS WELL AS "THE PRESBY WASTEWATER TREATMENT SYSTEM, NEW HAMPSHIRE DESIGN AND INSTALLATION MANUAL", CURRENT EDITION
 - CALL DIG-SAFE PRIOR TO INSTALLATION.
 - SEPTIC SYSTEM SHALL BE INSTALLED BY A NHDES LICENSED INSTALLER.
 - THIS PLAN IS NOT MEANT TO REPRESENT A PROPERTY BOUNDARY SURVEY.
 - ENVIRO-SEPTIC LEACHING SYSTEM AS MANUFACTURED BY PRESBY ENVIRONMENTAL, INC., SUGAR HILL, NH.
 - COVER OVER PROPOSED SYSTEM:
 - 24" MINIMUM COVER SHALL BE PROVIDED OVER THE PIPE FROM THE HOUSE TO THE SEPTIC TANK OR THE PIPE SHALL BE INSULATED.
 - IF THE FINISH GRADE OVER THE SEPTIC TANK IS GREATER THAN 24" PROVIDE ACCESS WITH RISERS OVER TANK OPENINGS FOR FUTURE ACCESS TO THE TANK COVERS FOR MAINTENANCE.
 - EFFLUENT DISPOSAL AREA: MINIMUM COVER TO BE 6". THE FINISH GRADE IS TO BE SLOPED TO DRAIN OFF THE TOP OF THE SYSTEM AT MINIMUM OF 1%.
 - MAINTAIN 2" OF COVER OVER THE PIPE IN AND OUT OF THE DISTRIBUTION BOX OR THE PIPE SHALL BE INSULATED.
 - IF THE CONTRACTOR DETERMINES THAT EXISTING FIELD CONDITIONS ARE OTHER THAN SHOWN ON THESE PLANS, HE SHALL STOP WORK IMMEDIATELY AND NOTIFY THE OWNER AND DESIGNER FOR DIRECTIONS.
 - ALL TREES, ROOTS, LOAM AND OTHER ORGANIC MATTER SHALL BE REMOVED FROM UNDER LEACHFIELD AND SLOPE EXTENSIONS PRIOR TO PLACING FILL. PLACE FILL IN 16" LIFTS, CONSOLIDATE AND RAKE BACKFILL. SCARIFY SUBGRADE SOIL.
 - FILL USED TO RAISE THE EFFLUENT DISPOSAL AREA SHALL BE CLEAN BANK RUN SAND, FREE FROM TOPSOIL, HUMUS, DREDGINGS, OR STONES OR MATERIAL MORE THAN 6" IN DIAMETER.
 - ALL DISTURBED AREA SHALL BE LOAMED, SEEDED, FERTILIZED AND MULCHED (GRADE LOAM TO DRAIN 1% MIN SLOPE ON TOP OF LEACHFIELD).
 - RECOMMENDED OPERATING PROCEDURES:
 - PUMP SEPTIC TANKS ONCE EVERY TWO YEARS.
 - USE BIODEGRADABLE DETERGENTS.
 - WATER SAVING DEVICES AND PROCEDURES ARE RECOMMENDED.
 - ANY FUTURE REPLACEMENT SYSTEM, IF NEEDED, SHALL BE LOCATED IN THE SAME LOCATION AS THIS DESIGN UNLESS CONDITIONS AT THE TIME OF REPLACEMENT DICTATE OTHERWISE.
 - GARBAGE GRINDERS ARE PROPOSED TO BE INSTALLED.
 - PIPES AND CONNECTIONS OUTSIDE OF THE LEACHING AREA SHALL BE WATER TIGHT. THE CONNECTIONS SHALL BE SEALED WITH NON-SHRINK HYDRAULIC CEMENT.
 - THE DISTRIBUTION BOX SHALL HAVE S.S.I. INC. FLOW EQUALIZERS INSTALLED IN THE OUTLET PORTS.
 - THIS SYSTEM HAS NOT BEEN DESIGNED FOR VEHICULAR TRAFFIC. THEREFORE, THE SYSTEM SHOULD BE PROTECTED FROM ANY WHEEL VEHICLES.
 - THE SITE IS LOCATED WITHIN THE NHDES PROTECTIVE SHORELAND.

DESIGN INTENT:
 THE BOTTOM OF THE BED SHALL BE CONSTRUCTED AT ELEVATION 1125.25. THE ELEVATION OF THE HIGH CONTOUR OF THE DESIGNED BED: 1127.00, AND IS APPROXIMATELY 1.75 FEET BELOW EXISTING GROUND LEVEL.
 BENCHMARK AND ELEVATION DATA TO BE USED TO DETERMINE THE ACTUAL ELEVATION OF THE FIELD FOR GREATER ACCURACY.



- PUMP SPECIFIC NOTES:**
- PUMP STORAGE CHAMBER TO BE RENDERED WATERTIGHT.
 - UNDERGROUND WIRING TO BE PROPERLY SIZED FOR DISTANCE OF RUN AND PUMP SPECIFIED BY LICENSED ELECTRICIAN. WIRE TO BE SLEEVED IN PVC PIPE & BACKFILLED WITH CARE.
 - PROVIDE 3,100 GAL COMBINATION TANK AS MANUFACTURED BY A.J. FOSS OR EQUIVALENT.
 - FURNISH LIBERTY 280 SERIES 1/2 HP PUMP OR EQUIVALENT SUBMERSIBLE PUMP & INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ADJUST MANUAL ON/OFF SWITCH AS NECESSARY TO REFLECT THE DISTANCES SHOWN ON PUMP DETAIL. THESE DISTANCES ALLOW FOR 187.50 GAL/DOSE PRODUCED. REFLECTS 92.8 GAL/FOOT OF VOLUME IN CHAMBER. 6 HOURS OF STORAGE PROVIDED.
 - DISCHARGE LINE FROM PUMP CHAMBER TO LEACHFIELD SHALL BE 1 1/2" SDR 26 PVC FLEXIBLE PIPE OR EQUIVALENT.



TEST PIT #1

Forest Floor	Soil Profile	Soil Description
Dark Brown	10YR 3/3 6"	Topsoil, Friable, Weak, Granular
Light Olive Brown	2.5Y 5/4 38"	Loamy Sand, Friable, Weak, Granular
Yellowish Brown	10YR 5/4 52"	Loamy Sand, Friable, Weak, Blocky
Dark Yellowish Brown	10YR 3/4 65"	Loamy Sand, Friable, Weak, Blocky
Yellowish Brown	10YR 5/6 72"	Loamy Sand, Friable, Weak, Blocky

E.S.H.W.T.: 52"
 WATER OBSERVED: Seeps @ 52"
 LEDGE ENCOUNTERED: None
 INSPECTED BY: Joel Banaszak
 DATE: 12/20/17
 SOILS TYPE: 559B, Skerry Fine Sandy Loam
 REFERENCE: NRCS Web Soil Survey

PERCOLATION TEST
 DEPTH: 44"
 RATE: 6 min / inch

BENCHMARKS USED FOR TIE POINTS TO BE LEFT IN PLACE AND VISIBLE UNTIL THE NHDES INSPECTION HAS BEEN COMPLETED AND APPROVED. NO OPEN WATER, WELLS OR ABUTTING FOUNDATIONS WITHIN 75' OF THE PROPOSED EFFLUENT DISPOSAL AREA.

horizons Engineering Inc.
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MR. BRADLEY BENSON
 59 WINTER STREET
 NORWELL, MA 02061

ENVIRO-SEPTIC SYSTEM PUMPED SYSTEM 5 BEDROOM DESIGN
 149 SUNSET SHORES ROAD, NEW LONDON, NH
 COUNTY: MERRIMACK
 SUBDIVISION APPROVAL # N/A PRE 1955
 REGISTRY BOOK: 3574 PAGE: 2273

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	PROJECT #:
5/10/2018	17846
ENG'N'D BY:	DRAWN BY:
JCD	JCD
CHECK'D BY:	ARCHIVE #:

SHEET C-5

SEEDING RECOMMENDATIONS

- GRADING AND SHAPING**
A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEEDBED PREPARATION**
A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE AMENDED WITH ORGANIC MATTER AND TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME THOROUGHLY INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
- ESTABLISHING VEGETATION**
A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:

-AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ. FT.
-NITROGEN (N), 50 LBS., PER ACRE OR 1.1 LBS. PER 1,000 SQ. FT.
-PHOSPHATE (P₂O₅), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.
-POTASH (K₂O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.

(NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10).

- B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.

USE	SEEDING MIXTURE (SEE 3D)	SOIL TYPE			
		DROUGHTY	WELL DRAINED	MOD. WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	GOOD	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR

MIXTURE	SEEDING RATES:	
	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.
A TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
REDTOP	2	0.05
TOTAL:	42	0.95
B TALL FESCUE	15	0.35
CREeping RED FESCUE	10	0.25
CROWN VETCH OR FLATPEA	15 OR 30	0.35 OR 0.75
TOTAL:	40 OR 55	0.95 OR 1.35
C TALL FESCUE	20	0.45
FLATPEA	30	0.75
TOTAL:	50	1.20

- E. WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO SEPTEMBER 15. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

F. TEMPORARY SEEDING RATES:

SPECIES	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.	REMARKS
WINTER RYE	112	2.5	BEST FOR FALL SEEDING. SEED FROM AUGUST TO SEPTEMBER 5TH FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	80	2.0	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15TH FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYEGRASS	40	1.0	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE NOT IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. COVER SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYEGRASS	30	0.7	GOOD COVER WHICH IS LONGER LASTING THAN ANNUAL RYEGRASS. SEED BETWEEN APRIL 1ST AND JUNE 1ST AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. MULCHING WILL ALLOW SEEDING THROUGHOUT THE GROWING SEASON. SEED TO A DEPTH OF APPROXIMATELY 0.5 INCH.

4. MULCH

- A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING.

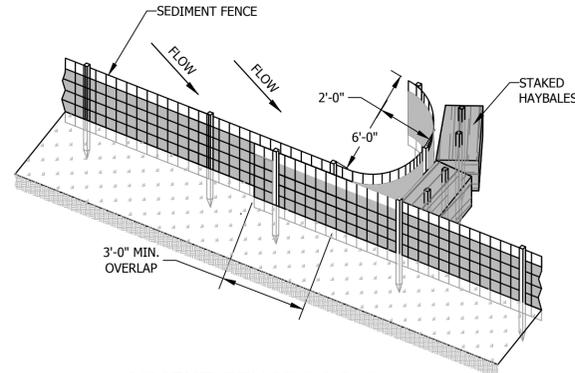
5. MAINTENANCE TO ESTABLISH A STAND

- A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ON SITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

COLD WEATHER SITE STABILIZATION REQUIREMENTS

TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:

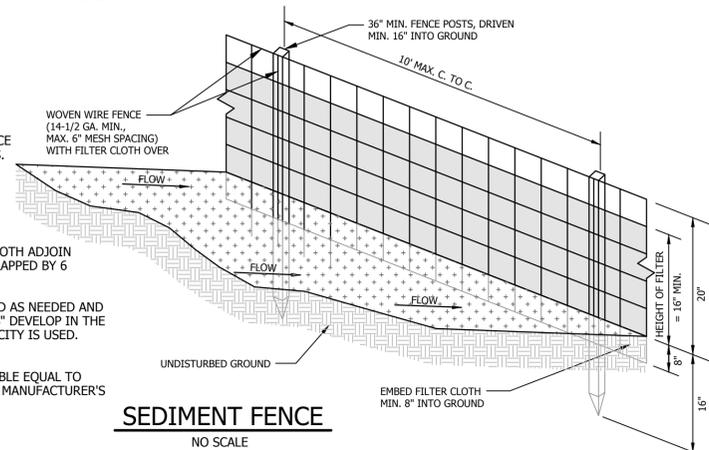
- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1 ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY NHDES.
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH 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 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH PROPERLY INSTALLED AND ANCHORED EROSION CONTROL MATTING OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
- INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX, MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H), SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
- INSTALLATION OF EROSION CONTROL MATTING SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
- ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN 1 DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
- 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, ITEM NO. 304.1 OR 304.2.



SEDIMENT FENCE POCKET
NO SCALE

CONSTRUCTION NOTES FOR SEDIMENT FENCE

- WOVEN WIRE FENCE, IF REQUIRED, TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SEDIMENT FENCE, OR 50% OF CAPACITY IS USED.
- 12" DIAMETER FILTREXX SILTSOXX SHALL BE CONSIDERED AN ACCEPTABLE EQUAL TO SEDIMENT FENCE IF INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



SEDIMENT FENCE
NO SCALE

EROSION CONTROL GENERAL NOTES

A. KEEP SITE MODIFICATION TO A MINIMUM

- CONSIDER FITTING THE BUILDINGS AND STREETS TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
- EXPOSE AREAS OF BARE SOIL TO EROSION ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
- SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
- LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
- AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.

B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES

- STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
- PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
- USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
- USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
- USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
- PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.

C. PROTECT AREA AFTER CONSTRUCTION.

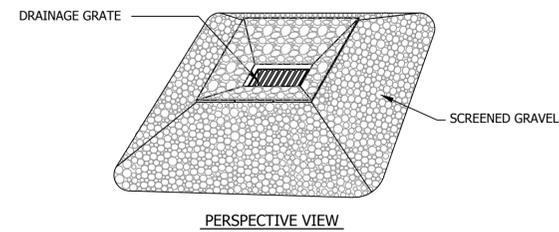
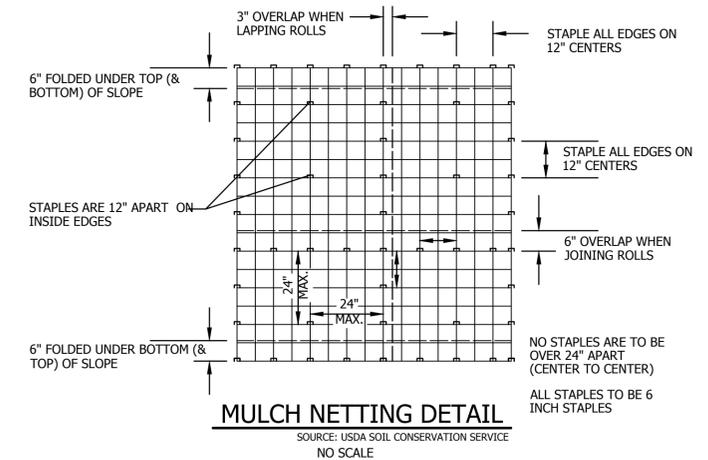
- ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEEDING WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
- MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
- MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
- DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
- IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, REFER TO 'COLD WEATHER SITE STABILIZATION REQUIREMENTS'.

D. INVASIVE SPECIES AND FUGITIVE DUST

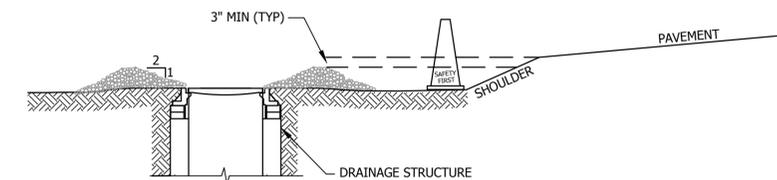
- THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:51-57 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE.
- FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

CONSTRUCTION SEQUENCE

- CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
 - INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
 - GRUB SITE WITHIN GRADING LIMITS.
 - STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
 - INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
 - CONSTRUCT PERMANENT STORMWATER CONTROLS AS SOON AS PRACTICAL. DO NOT DIRECT STORMWATER TOWARD TREATMENT BASINS, PONDS, SWALES, DITCHES AND LEVEL SPREADERS UNTIL THEY HAVE BEEN STABILIZED.
 - PROCEED WITH WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM OF UNCOVERED DISTURBED EARTH AT ANY ONE TIME IS ONE ACRE. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
 - BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 14 DAYS OF ACHIEVING FINISHED GRADE.
- 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 70% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
 - PAVE DRIVEWAYS. INSTALL PAVERS ON DRIVEWAYS AND/OR PARKING AREAS.
 - PLACE TOPSOIL, SEED AND MULCH.
 - COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.
 - MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.



PERSPECTIVE VIEW



SECTION

MATERIALS SPECIFICATIONS:
1. SCREENED GRAVEL: UNIFORMLY GRADED 1" TO 4" DIA. STONE.

CONSTRUCTION SPECIFICATIONS:

- INSTALL GRAVEL INLET PROTECTION WHERE INDICATED OR WARRANTED.
- FOR ALL INSTALLATIONS WHERE INLET PROTECTION IS WITHIN 8' OF EDGE OF PAVEMENT, A ROADWAY CONE SHALL BE USED BETWEEN CATCH BASIN AND SHOULDER.
- ENSURE CREST OF GRAVEL PLACED AROUND CATCH BASIN IS AT LEAST 3" BELOW ELEVATION OF EDGE OF PAVEMENT.

CATCH BASIN INLET PROTECTION DETAIL

NO SCALE

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MR. BRADLEY BENSON
TAX MAP 91 LOT 8
LAKE SUNAPEE
SHORELAND / SEPTIC PERMITTING
NEW LONDON, NEW HAMPSHIRE

**EROSION CONTROL NOTES
AND DETAILS**

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE: 05/11/2018	PROJECT #: 17846
ENGIN'D BY: JCD	DRAWN BY: JCD
CHECK'D BY: WD	ARCHIVE #: -

SHEET C-6