AMENDED MAJOR SUBDIVISION CANADA HILL SUBDIVISION

PREPARED BY:

CIVIL ENGINEER/SURVEYOR: TERRADYN CONSULTANTS, LLC 41 CAMPUS DR. SUITE 101 NEW GLOUCESTER, MAINE 04260 (207) 926-5111

HIGH INTENSITY SOIL SURVEY: RESULTS FROM PLAN TITLED: "CLASS "A" HIGH INTENSITY SOIL SURVEY, CANADA HILL SUBDIVISION" BY SEBAGO TECHNICS, SOUTH PORTLAND, MAINE

WETLANDS DELINEATION: SURVEY BY SEBAGO TECHNICS

APPLICANT:

BLESSED BY FOUR, LLC. P.O. BOX 897 WESTBROOK, MAINE 04098

OWNER:

CHASE CUSTOM HOLMES & FINANCE P.O. BOX 897 WESTBROOK, MAINE 04098

PROJECT PARCEL SITE

TOWN OF WINDHAM TAX ASSESSOR'S MAP & LOT NUMBERS <u>LOTS</u> 9, 9-14 $\frac{MAP}{4}$



WINDHAM, MAINE



SHEET INDEX

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C-0.0	COVER SHEET & LOCATION MAP
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LEGEND

EXISTING	DESCRIPTION	PROPOSED
	LOCUS PROPERTY LINE	
	PROPERTY LINE	
	INTERIOR PROPERTY LINE	
	BUFFER LINE	
	SETBACK LINE	
_ · _ · _ · _ · _ · _ · _	EASEMENT LINE	_ · · · · · ·
	CENTER LINE	
	ZONE LINE	
٠	MONUMENT	Ø
O	IRON ROD	٥
	STREET / SITE SIGN	—
	BUILDING]
	BUILDING OVERHANG	
	BITUMINOUS PAVEMENT CURBING	
	GRAVEL	······
0	CHAIN LINK FENCE	oo
o o	STOCKADE FENCE	0 0
-00000000000000000000000000000000000000	STONE WALL	
	METAL GUARD RAIL	
,	TREE LINE	
<u> </u>	WETLAND AREA	
	ROCK OUTCROP	
TP-A	TEST PIT	
MW-8	MONITORING WELL	мw-8
⊖ В-9	BORING	🔂 В-9
(W)	WELL	\bigotimes
124	MINOR CONTOUR LINE	
130	MAJOR CONTOUR LINE	
+ 30.20	SPOT GRADE	× — <u>30.20</u>
SDSD	STORM DRAIN	SD
	UNDER DRAIN	UD
OHUOHU	OVERHEAD UTILITY	OHU
	OVERHEAD ELECTRIC	OHE
	UNDERGROUND UTILITY	UGU
UGE	UNDERGROUND ELECT.	UGE
UGT-UGT-UGT-	UNDERGROUND TEL.	UGT
LT.	TRANSFORMER	[T]
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(<u> </u>		05
		FB
	SILT BARRIER	
	RIPRAP	
	EASEMENT	
	LIMITED DISTURBANCE	
	BUFFER	

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PERMIT DRAWING NOT FOR CONSTRUCTION	1					
PROJECT: AMENDED MAJOR SUBDIVISION CANADA HILL SUBDIVISION SHEET TITLE: CANADA HILL SUBDIVISION SHEET TITLE: COVER SHEET & LOCATION MAP COVER SHEET & LOCATION MAP DESIGNED: DESIGNED: DESIGNED:						
JOB NO: 2065						







TRENCH EXCAVATION NOTES

1. SAWCUT TRENCH AS NECESSARY TO REMOVE DAMAGED EDGE. COORDINATE WORK WITH FALMOUTH PUBLIC WORKS DEPARTMENT..

1+00

2. BACKFILL TRENCH PER PWD STANDARDS AND FALMOUTH PUBLIC WORKS DEPARTMENT.ROAD STANDARDS.

RECONSTRUCT

(SEE SHEET C-3.0)

3+00-

2+00

FILTER BASIN

- 3. COMPACT IN 8" LIFTS TO A MODIFIED PROCTOR DENSITY OF 95%.
- 4. PAVE TRENCH TO REQUIRED PAVEMENT THICKNESS TO MATCH EXISTING DEPTHS.
- 5. CONTRACTOR SHALL COORDINATE ALL WORK WITHIN BLACKSTRAP ROAD WITH TOWN OF FALMOUTH PUBLIC WORKS DEPARTMENT.

SITE GRADING NOTES:

- FINE GRADE ALL UNPAVED CONSTRUCTION AREAS TO PROVIDE SMOOTH, EVEN SURFACES CONFORMING TO SLOPE GRADIENTS NOTED BELOW. REMOVE ALL VISIBLE ROCK AND DEBRIS PRIOR TO FINE GRADING.
- AT GRASSED OR LANDSCAPED AREAS, PROVIDE A MINIMUM OF 6 INCHES FROM FINISH GRADE OUTSIDE OF STRUCTURES TO FINISH FLOOR ELEVATION, OR TO BASEMENT FLOOR ELEVATION FOR DAYLIGHT BASEMENTS.
- 3. PROVIDE A MINIMUM SLOPE OF 6 INCHES IN 10 FEET (5%) AWAY FROM STRUCTURES IN GRASSED AND LANDSCAPED AREAS, EXCEPT AS RESTRICTED BY WALKWAYS, DRAINAGE FEATURES OR OTHER SITE CONDITIONS.
- PROVIDE A MINIMUM SLOPE OF 6 INCHES IN 25 FEET (2%) IN ALL OTHER UNPAVED AREAS.
- FINE GRADE ALL UNPAVED AREAS TO SLOPE CONTINUOUSLY AT THE ABOVE GRADIENTS TO LOWER ELEVATIONS, DRAINAGE SWALES, OR DRAINAGE STRUCTURES.
- FOR ACCESS AND MAINTENANCE AROUND BUILDINGS, PROVIDE AN AREA AT LEAST 4 FEET WIDE WITH A GRADIENT NO STEEPER THAN 1 IN 10 (10%), EXCEPT WHERE GRADES SLOPE FROM UPPER TO LOWER BUILDING FLOOR LEVELS AS SHOWN ON GRADING PLAN.
- PROVIDE A MINIMUM SLOPE OF ¼" PER FOOT (2%) FOR AT LEAST 5 FEET AWAY FROM BUILDINGS IN PAVED AREAS.
- 8. DRIVEWAY GRADIENTS SHALL NOT BE LESS 1 % OR STEEPER THAN 8%. CHANGE OF LONGITUDINAL GRADE SHALL NOT EXCEED 8% OVER A LENGTH OF 6 FEET.
- 9. PROVIDE 1/2" LIP FROM GARAGE FLOOR ELEVATIONS TO ADJACENT DRIVEWAY PAVEMENT GRADE.







- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY FOR THE CANOPY COVERAGE
- AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR

- SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE.
- SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY. PERFORM A SIEVE ANALYSIS CONFORMING TO STM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER
- PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM

FILTER BASIN
NOT TO SCALE

SOIL FILTER MEDIA TABLE							
FILTER MEDIA	MIXTURE BY VOLUME	SPECIFICATION					
SAND	50%-55%	MEDOT SPEC. 703.01 FINE AGGREGATE FOR CONCRETE					
TOPSOIL	20%-30%	LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15-25% FINES PASSING THE #200 SIEVE.					
MULCH	20%-30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE					

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(IN FEET) 1 inch = 10 ft.

EROSION AND SEDIMENT CONTROL PLAN

Pre-Construction Phase

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 mrsa § 480-b. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

BMP Construction Phase

A. Sediment barriers. Prior to the beginning of any construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the proposed disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

B. Construction entrance: Prior to any clearing or grubbing, a construction entrance shall be constructed at the intersection with the proposed access drive and the existing roadway to avoid tracking of mud, dust and debris from the site.

C. Riprap: Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum delay. Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate. Maintain temporary riprap, such as temporary check dams until the disturbed area is permanently stabilized.

D. Temporary stabilization. Stabilize with temporary seeding, mulch, or other non-erodable cover any exposed soils that will remain unworked for more than 14 days except, stabilize areas within 100 feet of a wetland or waterbody within 7 days or prior to a predicted storm event, whichever comes first. If hay or straw mulch is used, the application rate must be 2 bales (70-90 pounds) per 1000 sf or 1.5 to 2 tons (90-100 bales) per acre to cover 75 to 90% of the ground surface. Hay mulch must be kept moist or anchored to prevent wind blowing. An erosion control blanket or mat shall be used at the base of grassed waterways, steep slopes (15% or greater) and on any disturbed soil within 100 feet of lakes, streams and wetlands. Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading. On large projects this should be accomplished by phasing the operation and completing the first phase up to final grading and seeding before starting the second phase, and so on.

E. Vegetated waterway. Upon final grading, the disturbed areas shall be immediately seeded to permanent vegetation and mulched and will not be used as outlets until a dense, vigorous vegetative cover has been obtained. Once soil is exposed for waterway construction, it should be immediately shaped, graded and stabilized. Vegetated waterways need to be stabilized early during the growing season (prior to september 15). If final seeding of waterways is delayed past september 15, emergency provisions such as sod or riprap may be required to stabilize the channel. Waterways should be fully stabilized prior to directing runoff to them.

Permanent stabilization defined

A. Seeded areas. For seeded areas, permanent stabilization means an 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

B. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

C. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

D. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

E. Agricultural use. For construction projects on land used for agricultural purposes (e.G., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

F. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed

G. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

General Construction Phase

The following erosion control measures shall be followed by the contractor throughout construction of this project:

A. All topsoil shall be collected, stockpiled, seeded with rve at 3 pounds/1,000 sf and mulched, and reused as required. Silt fencing shall be placed down gradient from the stockpiled loam. Stockpile to be located by designation of the owner and inspecting enginee

B. The inspecting engineer at his/her discretion, may require additional erosion control measures and/or supplemental vegetative provisions to maintain stability of earthworks and finish graded areas. The contractor shall be responsible for providing and installing any supplemental measures as directed by the inspecting engineer. Failure to comply with the engineer's directions will result in discontinuation of construction activities.

C. Erosion control mesh shall be applied in accordance with the plans over all finish seeded areas as specified on the design

D. All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.

E. All erosion, and sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved erosion and sediment control plan.

F. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

G. Areas shall be scarified to a minimum depth of 3 inches prior to placement of topsoil.

H. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.

I. All fills shall be placed and compacted in layers not to exceed 8 inches in thickness.

J. Except for approved landfills or non-structural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory lifts.

K. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

L. Fill shall not be placed on a frozen foundation.

M. Seeps or springs encountered during construction shall be handled appropriately.

N. All graded areas shall be permanently stabilized immediately following finished grading.

Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

Permanent vegetation

Permanent vegetative cover should be established on disturbed areas where permanent, long lived vegetative cover is needed to stabilize the soil, to reduce damages from sediment and runoff, and to enhance the environment.

Seedbed preparation

A. Grade as feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

B. Apply limestone and fertilizer according to soil tests such as those offered by the university of maine soil testing laboratory. Soil sample mailers are available from the local cooperative extension service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 800 pounds per acre or 18.4 pounds per 1,000 square feet using 10-20-20 (n-p2o5-k2o) or equivalent. Apply ground limestone (equivalent to 50% calcium plus magnesium oxide) at

a rate of 3 tons per acre (138 lb. Per 1,000 sq. Ft).

C. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth 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.D. 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 or other unsuitable material.

E. Inspect seedbed just before seeding. If traffic has left the soil compacted; the area must be tilled and firmed as above.

F. Permanent seeding should be made 45 days prior to the first killing frost or as a dormant seeding with mulch after the first killing frost and before snowfall. When crown vetch is seeded in later summer, at least 35% of the seed should be hard seed (unscarified). If seeding cannot be done within the seeding dates, mulch according to the temporary mulching bmp and overwinter stabilization and construction to protect the site and delay seeding until the next recommended seeding period.

G. Following seed bed prepartation, swale areas, fill areas and back slopes shall be seeded at a rate of 3 lbs./1,000 s.F. With a mixture of 35% creeping red h. Fescue, 6% red top, 24% kentucky bluegrass, 10% perennial ryegrass, 20% annual ryegrass and 5% white dutch clover.

I. Areas which have been temporarily or permanently seeded shall be mulched immediately following seeding.

J. Areas which cannot be seeded within the growing season shall be mulched for over-winter protection and the area should be seeded at the beginning of the growing season.

exposed to direct wind.

anv one time.

Maintenance and inspection phase

until areas are permanently stabilized.



STAPLED. OVERLAP B OVER A.

4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.





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