

NONRESIDENTIAL SITE PLAN APPLICATION

City of Rochester, New Hampshire

		[office use	only. Check #		_ Amount \$		Date paid]
Date: 12/11/2	018						Unclear: soon as possible.)
Property inform	nation						
Tax map #: 242	; Lo	t #('s):	6	; Zoning o	district:	IND	
Property address/le	ocation:	85 Inn	ovation	Dr, Roc	hester,	NH 038	367
Name of project (if	applicab	l e) :s	AFRAN In	ıfill Pa	rking		
Size of site: 49.3	acres	; overlay z	oning distr	rict(s)? _We	etland o	verlay	district
Property owner Name (include name			Nousing <i>R</i> Business				
Mailing address: _	2 Pill	sbury St	reet, Si	uite 101	, Conco	rd, NH	03301
Telephone #:				Email:			
Applicant/deve Name (include nam Mailing address: 8	ne of indi	vidual): _D	avid Arn	ist - Sa			
Telephone #:60							
Engineer/desig	ner						
Name (include nam	ne of indi	vidual): <u></u>	uss & O	'Neill,	Inc	Rick Lu	ındborn, PE
Mailing address:	Fleto	her Str	eet, Sui	te 1, K	ennebunk	ME 0	4043
Telephone #: 207	-363-0	669 x231	. 4	Fax #		***************************************	
Email address:r	undbor	n@fando	.com	Profe	ssional lic	ense #:	10943
Proposed activ	i ty (chec	k all that ap	oply)				
New building(s):		Site devel	opment (ot	ther struct	ures, parki	ng, utilitie	es, etc.):X
Addition(s) onto ex	sting bui	lding(s): _		Demolition		Change	e of use:
			Page 1 (of 3	3 pages)			

Macintosh HD:Users:jaredrose:Desktop:Site Plan, NonResidential Application 4/11/2013

Updated

(Continued Nonresidential Site Plan application Tax Map: 242 Lot: 6 Zone IND
Describe proposed activity/use: Add an additional 109 parking spaces along
existing drive aisles
Describe existing conditions/use (vacant land?):Safran Aerospace Composites
manufacturing facility
Utility information
City water? yes <u>x</u> no <u>;</u> How far is City water from the site? <u>On site</u>
City sewer? yes x no; How far is City sewer from the site?on site
If City water, what are the estimated total daily needs? $\underline{\hspace{0.3cm}}_{N/A}$ gallons per day
If City water, is it proposed for anything other than domestic purposes? yes no
If City sewer, do you plan to discharge anything other than domestic waste? yes no
Where will stormwater be discharged? _ Existing treatment BMPs
Building information Type of building(s): Existing no change
Building height: N/A Finished floor elevation: N/A
Other information # parking spaces: existing: 369 total proposed: 470; Are there pertinent covenants? Yes Number of cubic yards of earth being removed from the site 0 Number of existing employees: 400+/-; number of proposed employees total: 400+/- Check any that are proposed: variance ; special exception ; conditional use
<u>Wetlands</u> : Is any fill proposed? <u>X</u> ; area to be filled: <u>587 sf</u> ; buffer impact? <u>X</u>

Proposed post-development disposition of site (should total 100%)				
	Square footage	% overall site		
Building footprint(s) – give for each building	343,312	16		
Parking and vehicle circulation	237,299	11		
Planted/landscaped areas (excluding drainage)	193,055	9		
Natural/undisturbed areas (excluding wetlands)	959,654	45		
Wetlands	262,321	12		
Other – drainage structures, outside storage, etc.	151,905	7		

Macintosh HD:Users:jaredrose:Desktop:Site Plan, NonResidential Application 4/11/2013

Updated

Page 2 (of 3 pages)

(Continued Nonresidential Site Plan application Tax Map:	242 Lot: 6 Zone IND
Comments	
Please feel free to add any comments, additional i	information, or requests for waivers here:
Submission of application	
This application must be signed by the property ov property owner), and/or the agent.	wner, applicant/developer (if different from
I(we) hereby submit this Site Plan application to th	ne City of Rochester Planning Board
pursuant to the City of Rochester Site Plan Regula	ations and attest that to the best of my
knowledge all of the information on this application	
materials and documentation is true and accurate.	
property owner)/as agent, I attest that I am duly au	uthorized to act in this capacity.
Signature of property owner:* Stacy Sylv	Uce
	Date: 12-10-18
* Signature of applicant/developer:	
Signature of agent:	Date:
	Date: 12-10-18
Authorization to outer subject manager.	
Authorization to enter subject property	uning Poord Zoning Poord of Adjustment
I hereby authorize members of the Rochester Plan Conservation Commission, Planning Department, a	
boards and agencies to enter my property for the p	
including performing any appropriate inspections d	
post-approval phase, construction phase, and occu	
specifically to those particular individuals legitimate inspecting this specific application/project. It is und	
reasonable care, courtesy, and diligence when ent	
Signature of property owner: * stacy & r	ice
Macintosh HD:Users:jaredrose:Desktop:Site Plan, NonResidential Application 4/11/2013	Updated



December 11, 2018

Jim Campbell Planning & Development Director City Hall Annex 33 Wakefield Street Rochester, NH 03867-1917

Safran Aerospace Composites – Infill Parking Alteration of Terrain Permit Application Fuss & O'Neill Reference No. 20180581.A10

Dear Mr. Campbell:

On behalf of the Safran Aerospace Composites, Inc., Fuss & O'Neill is submitting an Alteration of Terrain permit application for the construction of 109 infill parking spaces at Safran Aerospace Composites manufacturing facility located at Tax Map 242 Lot 6, 85 Innovation Drive, Rochester, New Hampshire.

If you have any questions or concerns, please do not hesitate to contact me at (207) 363-0669x2318 or by email (PGere@fando.com).

Reviewed by:

Sincerely,

Patrick Gere, PE Project Engineer

Rick Lundborn, PE

Branch Manager

/BH

Enclosures:

AOT Permit Application

www.fando.com

f 860.533.5143

5 Fletcher Street Kennebunk, ME

> 04043 † 207.363.0669 800.286.2469

> > **NHDES**

California

Connecticut

Maine Massachusetts

New Hampshire

Rhode Island

Vermont

F:\P2018\0581\A10\Deliverables\AOT Permit\PB Cover Letter.docx



Conditional Use Permit Application City of Rochester, New Hampshire

Date: 12/11/2018
Property information Tax map #:242; Lot #('s):6; Zoning district:
Property address/location: 85 Innovation Drive, Rochester, NH
Name of project (if applicable): SAFRAN Infill Parking
Property owner Housing Authority of Rochester/ Name (include name of individual): Business Finance Authority of NH
Mailing address: 2 Pillsbury Street, Suite 101, Concord, NH 03301
Telephone #: Fax
Applicant/developer (if different from property owner) Name (include name of individual):David Arnst - SAFRAN Facility Manager Mailing address: _85 Innovation Drive, Rochester NH
Telephone #:603-330-7215 Fax #:
Engineer/designer Name (include name of individual): Fuss & O'Neill, Inc Rick Lundborn, PE Mailing address: 5 Fletcher Street, Ste 1, Kennebunk, ME 04043
Telephone #:207-363-0669 x2314
Email address:rlundborn@fando.comProfessional license #:10943
Proposed Project Please describe the proposed project: Add an additional 109 parking spaces along existing drive aisles

i lease describe the proposed project. <u>F</u>	add an addition	onal 109	parking spa	1Ce
along existing drive ais	sles			
N:\Forms\Applications\Conditional Use Permit.docx	1		[revised 5/	28/14

Please describe the existing conditions:	afran Aerospace Composites
manufacturing facility	
Submission of application	
This application must be signed by the proper from property owner), and/or the agent.	erty owner, applicant/developer (if different
I(we) hereby submit this Conditional Use app Board pursuant to the <u>City of Rochester Zoning</u> knowledge all of the information on this ap application materials and documentation is tru different from property owner)/as agent, I atte capacity.	Ordinance and attest that to the best of my oplication form and in the accompanying se and accurate. As applicant/developer (if est that I am duly authorized to act in this
Signature of property owner: * Stacily	Mice
	Date: 12-10-2018
Signature of applicant/developer:	
	Date:
Signature of agent:	
	Date:

85 INNOVATION DRIVE · ROCHESTER · NEW HAMPSHIRE

SITE PLANS

DECEMBER 11, 2018

PREPARED FOR

SAFRAN AEROSPACE COMPOSITES, INC.

85 INNOVATION DRIVE ROCHESTER, NH 03867



UPPER SQUARE BUSINESS CENTE 5 FLETCHER STREET, SUITE 1 KENNEBUNK, MAINE 04043 207.363.0669 www.fando.com

SHEET INDEX

 SHEET No.
 SHEET TITLE

 SHEET 1 of 11
 GI-001 COVER SHEET

 SHEET 2 of 11
 GI-002 GENERAL NOTES & LEGEND

SHEET 3 of 11 GI-100 INDEX PLAN
SHEET 4 of 11 CS-100 EXISTING CONDITIONS PLAN

SHEET 5-6 of 11 CS-101 - CS-102 SITE PLAN

CG-101 - CG-102 GRADING, DRAINAGE, &

EDGS(ON CONTROL PLAN)

SHEET 7-8 of 11 EROSION CONTROL PLAN
SHEET 9-11 of 11 CD-501 - CD-503 DETAILS

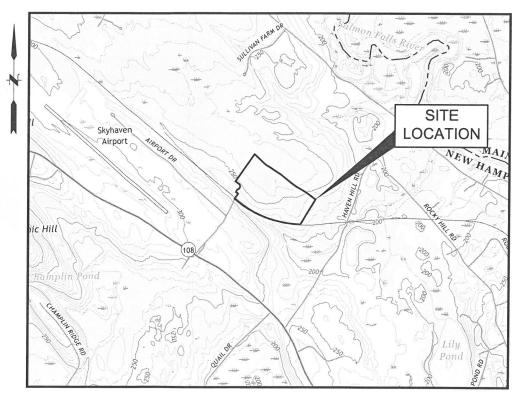
OWNER

603.415.0190

TAX MAP 242 LOT 6
HOUSING AUTHORITY
OF ROCHESTER
BUSINESS FINANCE
AUTHORITY OF NH
2 PILLSBURY STREET
SUITE 101
CONCORD, NH 03301

PROJECT TEAM

WETLAND SCIENTIST
BARRY KEITH, CWS
B.H. KEITH ASSOCIATES
11 ELM STREET
PO BOX 326
FREEDOM, NH 03836
603.539.8343



LOCATION MAP





CONTACT DIG SAFE 22 HOURS
PRIOR TO CONSTRUCTION

THE LOCATION OF ANY UTILITY INFORMATION SHOWN OF
THIS PLAN IS APPROXIMATE, FUSS & O'NELL IN
MAKES NO CLAIM TO THE ACCURACY CO
COMPLETENESS OF UTILITIES SHOWN, 72 HOURS PRIO

FINAL APPROVAL BY ROCHESTER PLANNING BOARD	FINAL	APPROVAL	BY	ROCHESTER	PLANNING	BOARD
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CERTIFIED	BY	DATE

PROJ. No.: 20180581.A10
DATE: 12/11/2018

GI-001
SHEET 1 OF 11

EXISTING FEATURES LEGEND

WETLAND

EXISTING SIGN

EXISTING GRANITE OR CONCRETE BOUND

EXISTING IRON PIN, PIPE OR STAKE

PROPOSED ITEMS LEGEND PROPOSED MONUMENT PROPOSED SIGN PROPOSED GAS VALVE \bowtie PROPOSED WATER GATE VALVE PROPOSED WATER SHUTOFF PROPOSED FIRE HYDRANT PROPOSED THRUST BLOCK (®) PROPOSED SEWER MANHOLE (O) PROPOSED DRAIN MANHOLE (\Box) PROPOSED CATCH BASIN (D) PROPOSED CATCH BASIN (D-FRAME, SEE DETAIL) PROPOSED CATCH BASIN (ROUND-FRAME) (0) PROPOSED FLARED END SECTION (FES) PROPOSED HEADWALL (D) PROPOSED TELEPHONE MANHOLE SINGLE DOUBLE PROPOSED LIGHT POLES * PROPOSED LAMP POST PROPOSED UTILITY POLE BEARING PROPOSED PROPERTY LINE PROPOSED TREE LINE PGC PROPOSED GRANITE CURB PGSC PROPOSED GRANITE SLOPED CURB PBC PROPOSED BITUMINOUS CURB PCC PROPOSED CONCRETE CURB P SSL (W) PROPOSED SINGLE SOLID WHITE LINE P SBL (W) PROPOSED SINGLE BROKEN WHITE LINE P SSL (Y) PROPOSED SINGLE SOLID YELLOW LINE P SBL (Y) PROPOSED SINGLE BROKEN YELLOW LINE P DSL (Y) PROPOSED DOUBLE SOLID YELLOW LINE PROPOSED GAS LINE ---- PROPOSED SEWER LINE PROPOSED SEWER FORCE MAIN - PROPOSED UNDERGROUND TELEPHONE - PROPOSED UNDERGROUND ELECTRIC PROPOSED UNDERGROUND UTILITIES PROPOSED OVERHEAD WIRES PROPOSED ACCESSIBLE PARKING SPACE PROPOSED PAINTED ISLAND PROPOSED PARKING SPACE COUNT SIZE=9-FT X 18-FT 10 100 PROPOSED CONTOURS 100.50 X PROPOSED SPOT GRADE 4 PROPOSED HAY BALES BB3 PROPOSED STONE CHECK DAM PROPOSED INLET PROTECTION PROPOSED INLET PROTECTION PROPOSED SILT FENCE

GENERAL SITE PLAN NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT PROPOSED INFILL PARKING FOR THE SAFRAN AEROSPACE COMPOSITES MANUFACTURING FACILITY LOCATED AT 85 INNOVATION DRIVE, ROCHESTER, NEW HAMPSHIRE 03867.

- 2. TOTAL PARCEL AREA: MAP 242, LOT 6 49.3 ACRES.
- 3. PARCEL IS ZONED GENERAL INDUSTRIAL.
- ALL EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO ANY WORK BEING PERFORMED.
- 5. THESE PLANS SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF SURVEY. THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. FROM THESE PLANS, BUT IN EXISTENCE, IS NOT INTENDED OR IMPLIED.
- 6. PLEASE REFER TO RECORD DRAWINGS FOR UTILITIES INFORMATION.
- 7. DIMENSIONAL REGULATIONS PER ZONING ORDINANCE:

GENERAL INDUSTRIAL ZONE:
MINIMUM LOT SIZE = 20,000 SF. (WITH WATER AND SEWER)
MINIMUM LOT FRONTAGE = 100 FEET
MINIMUM LOT FRONTAGE:
FRONT YARD = 25 FEET
SIDE = 20 FFEET
REAR = 25 FEET
MAXIMUM LOT COVERAGE = 75%
MAXIMUM BLDG HEIGHT = 55 FEET

- 8. PARCEL IS NOT LOCATED WITHIN ZONE A (100 YR FLOOD) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY MAP, COMMUNITY PANEL #33017502150 AND #3301023180
- A VARIANCE WAS GRANTED BY THE ROCHESTER ZBA ON APRIL 11, 2012 TO ALLOW THE ACCESS ROAD IN THE AGRICULTURAL ZONE.
- A VARIANCE WAS GRANTED BY THE ROCHESTER ZBA ON APRIL 11, 2012 TO ALLOW AN 8-FOOT HIGH FENCE WHERE ONLY 6-FEET HIGH IS ALLOWED.
- 11. ORIENTATION: HORIZONTAL AND VERTICAL DATUMS CITY OF ROCHESTER
- SOILS INFORMATION PROVIDED BY A SITE SPECIFIC SOIL SURVEY COMPLETED BY DAVID J. ALLAIN, CSS.
- FOR MORE INFORMATION ABOUT THIS SITE PLAN, CONTACT THE CITY OF ROCHESTER PLANNING DEPARTMENT, 31 WAKEFIELD ST., ROCHESTER, NH 03867. (603) 335-1338.
- 14. WETLANDS WERE DELINEATED BY B.H. KEITH, CWS IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATIONS MANUAL, TECHNICAL REPORT γ -87-1.
- 15. PARKING REQUIREMENTS (ZONING REGS. SECTION 42.9(b)(9):

TOTAL

343,412 SF GFA X 1 SPACE / 600 SF GFA = 573 SPACES 217 EMPLOYEES @ 1 SPACE /1.5 EMPLOYEES = 145 SPACES

*VARIANCE GRANTED BY THE ROCHESTER ZONING BOARD OF ADJUSTMENT ON APRIL 11, 2012 TO ALLOW 369 PARKING SPACES WHERE 573 ARE REQUIRED.

AN ADDITIONAL 109 INFILL PARKING SPACES ARE PROPOSED TO ALLEVIATE PARKING CONGESTION DURING SHIFT CHANGE. TOTAL PARKING SPACES PROVIDED SHALL BE 369 EXISTING SPACES + 109 PROPOSED SPACES = 478 PARKING SPACES.

ACCESSIBLE PARKING (PER FEDERAL REGULATIONS): THE SPACES ARE PART OF THE TOTAL ABOVE. ACCESSIBLE PARKING SPACES = 401 TO 500 = 9 SPACES TOTAL PROVIDED ACCESSIBLE SPACES = 16 SPACES

16. ALL CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS NOT RESTRICTED.

- 17. LOAM STOCKPILES SHALL BE SEEDED IN ACCORDANCE WITH THE SEEDING NOTES ON SHEET CO-502, IF STORED MORE THAN 30 DAYS, SILT FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT SIDE OF THE LOAM STOCKPILE AS SHOWN IN THE PLAN NEW AROUND AT LEAST ONE HALF THE CIRCUMFERENCE OF THE FILE.
- 18. DURING ALL PHASES OF CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
- THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF ANY OFFSITE IMPACTS ARE FOUND DURING CONSTRUCTION.
- 20. ALL UTILITIES MUST BE UNDERGROUND, INCLUDING UTILITIES EXTENDED ONTO THE SITE FROM EXISTING POLES NEAR THE SITE.
- 21. ACCESS INTO THE SITE FOR FIRE APPARATUS MUST BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THIS IS THE SOLE RESPONSIBILITY OF THE APPLICANT/DEVELOPER TO MAINTAIN THIS ACCESS. PLEASE CONTACT THE FIRE DEPARTMENT AT 330—7182 WITH ANY QUESTIONS ABOUT THE ACCESS REQUIREMENTS.
- 22. THIS DEVELOPMENT MUST BE IN COMPLIANCE WITH ALL APPLICABLE LAW INCLUDING ALL PERTIHENT PROVISIONS OF THE CITY OF ROCHESTER SITE PLAN REGULATIONS UNLESS OTHERMISE WAIVED.
- 23. FINAL SIGN APPLICATIONS MUST BE SUBMITTED TO THE CODE ENFORCEMENT OFFICER TO ENSURE COMPLANCE WITH ALL OFFICER TO ENSURE COMPLANCE WITH ALL OFFICER TO ENSURE COMPLANCE WITH ALL OFFICER THE ARM SIGNIFICANT CHANGES OR EXPANSION IS PROPOSED TO THE DESIGN OF THE APPROVED FREESTANDING SIGN OF TO THE OVERTILE OF THE STREET OF THE STREET OF THE STREET OF THE STREET OF THE PLANNING BOARD FOR REVIEW PRIOR TO ISSUANCE OF THOSE PERMIST.
- 24. A KNOX BOX SHALL BE PROVIDED AS SPECIFIED BY THE ROCHESTER FIRE
- 25. THIS SITE IS DESIGNED TO BE COMPLIANT WITH AMERICAN DISABILITY ACT FOR ACCESS TO THE PROPOSED BUILDING FROM THE PARKING AND UNLOADING ZONES.
- 26. ALL ELEMENTS SHOWN ON THE APPROVED SITE PLANS MUST BE PROPERLY COMPLETED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, UNLESS APPROPRIATE SURETY IS PLACED WITH THE PLANNING DEPARTMENT.

- 27. IF THE PROJECT PROPOSES TO DISTURB OVER ONE ACRE OF EXISTING GROUND COVER AND MEETS OTHER SPECIFIC REQUIREMENTS RELATED TO PERMIT CRITERIA FOR EPA NPDES COMPLIANCE, THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPMENT AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SMPPP), SUBMISSION OF A NOTICE OF INTENT (NOI) TO EPA, INSPECTIONS, AND WAINTENANCE OF SEDIMENT CONTROL MEASURES, DOCUMENTATION OF MAINTENANCE ACTIVITIES, AND SUBMISSION OF A NOTICE OF TERMINATION (NOT) TO EPA. THE CONTRACTOR IS ALSO RESPONSIBLE TO COMPTY WITH ANY OR ALL OTHER ASPECTS OF THE CURRENT FEDERAL, STATE AND LOCAL STORM WATER OR NPDES REGULATIONS OR REQUIREMENTS. NPDES REGULATIONS OR REQUIREMENTS
- 28. THE APPLICANT SHALL OBTAIN A STORMWATER MANAGEMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT (UNLESS DETERMINED TO BE UNNECESSARY BY THE CITY ENGINEER) AND FOLLOW THE REQUIREMENT OF CITY ORDINANCE CHAPTER SO. THE PERMITTEE SHALL PREPARE A WRITTEN PLAN FOR MANAGING STORWMATER THAT ENTERS THE CONSTRUCTION SITE AND SHALL PRESENT IT TO THE INSPECTION ENGINEER AT THE PRE—CONSTRUCTUION MEETING. THE PERMITTEE SHALL FOLLOW BEST MANAGEMENT PRACTICES TO PREVENT EROSION IN AREAS WHERE THE SOIL HAS BEEN DISTURBED.
- 29. NOTE THAT THIS APPROVAL IS FOR THE SITE PLAN ONLY.
- 30. AN ORANGE CONSTRUCTION FENCE MUST BE PLACED ALONGSIDE THE WETLAND BUFFER PRIOR TO THE START OF CONSTRUCTION (THIS IS NOT REQUIRED IF THE SILT FENCE IS ORANGE).

STATE OF NEW HAMPSHIRE PERMIT NUMBERS: St.
AOT—0415 (AMENDMENT PENDING)
2011—02858
(PENDING FOR FILL OF
MAN MADE DITCH)
NOT REQUIRED
NOT REQUIRED
NOT REQUIRED
NOT REQUIRED
NOT REQUIRED
NOT REQUIRED NHDES WETLANDS PERMIT:

NHDES DAM PERMIT: NHDES SUBDIVISION PERMIT: NHDES SUBSURFACE SYSTEMS PERMIT: NHDES SEWER CONNECTION PERMIT: NHDOT DRIVEWAY/ENTRANCE PERMIT:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE
DISTURBED AREA CRITERIA BELOW AND, HAVING A POINT SOURCE
STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WEILAND OR
WATER BODY (LIE, CULVERT, SWALE, ETC. OUTLETING TO A WEILAND, GREEK,

PENDING

PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.

FOR STATUS OF THIS PERMIT CONTACT THE PROJECT GENERAL

The state of the s	The state of the s	O H	MCHARD WHILL	LUNDBORN	Ma. 10943. / Call	S CENSED OF THE STATE OF THE ST	ONAL ENGINE	
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SAFRAN AEROSPACE COMPOSITES			GENERAL NOTES & LEGEND	3		85 INNOVATION DRIVE		OCHESTER NEW HAMPSHIRE

PROJ. No.: 20180581.A10

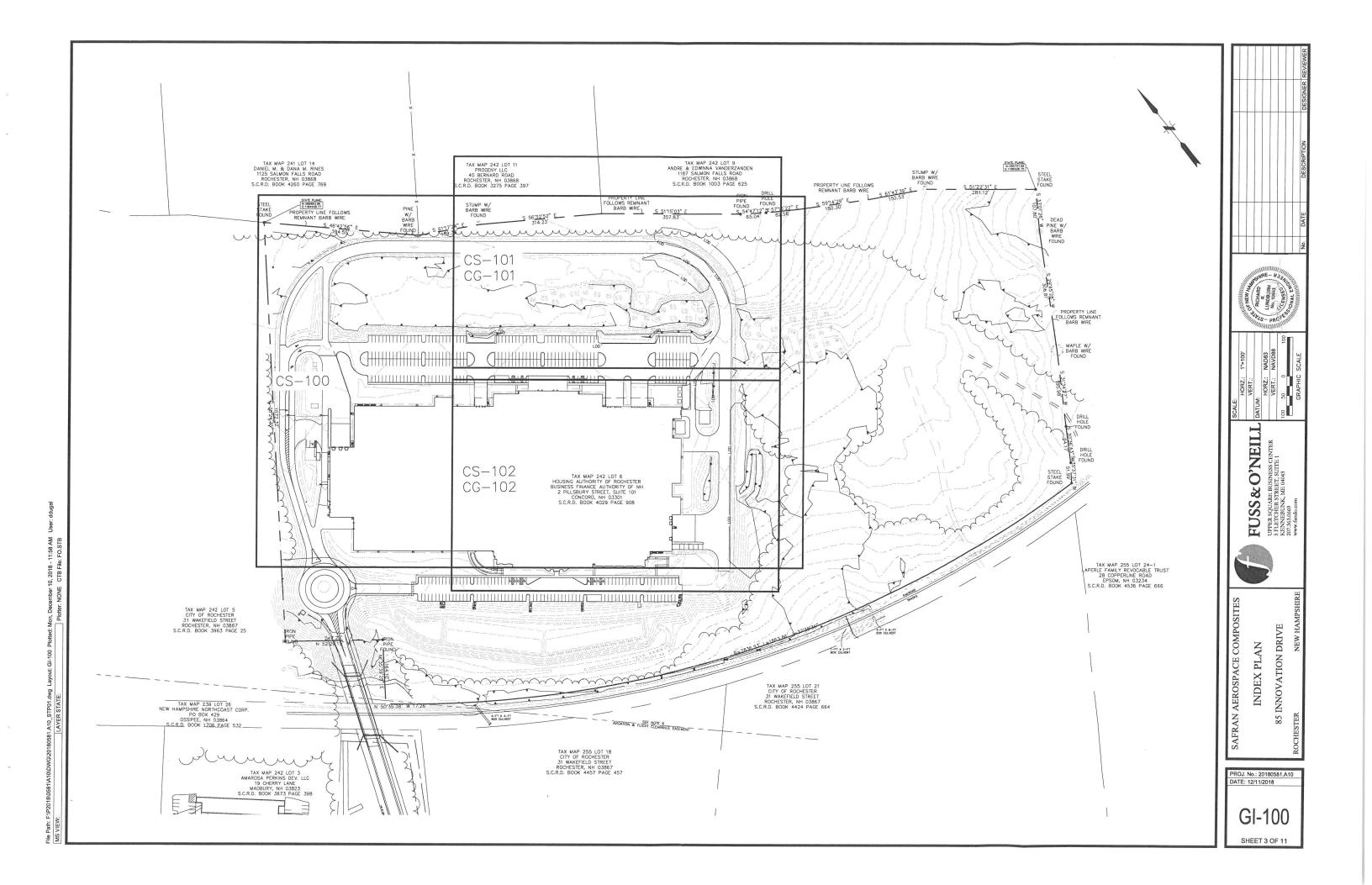
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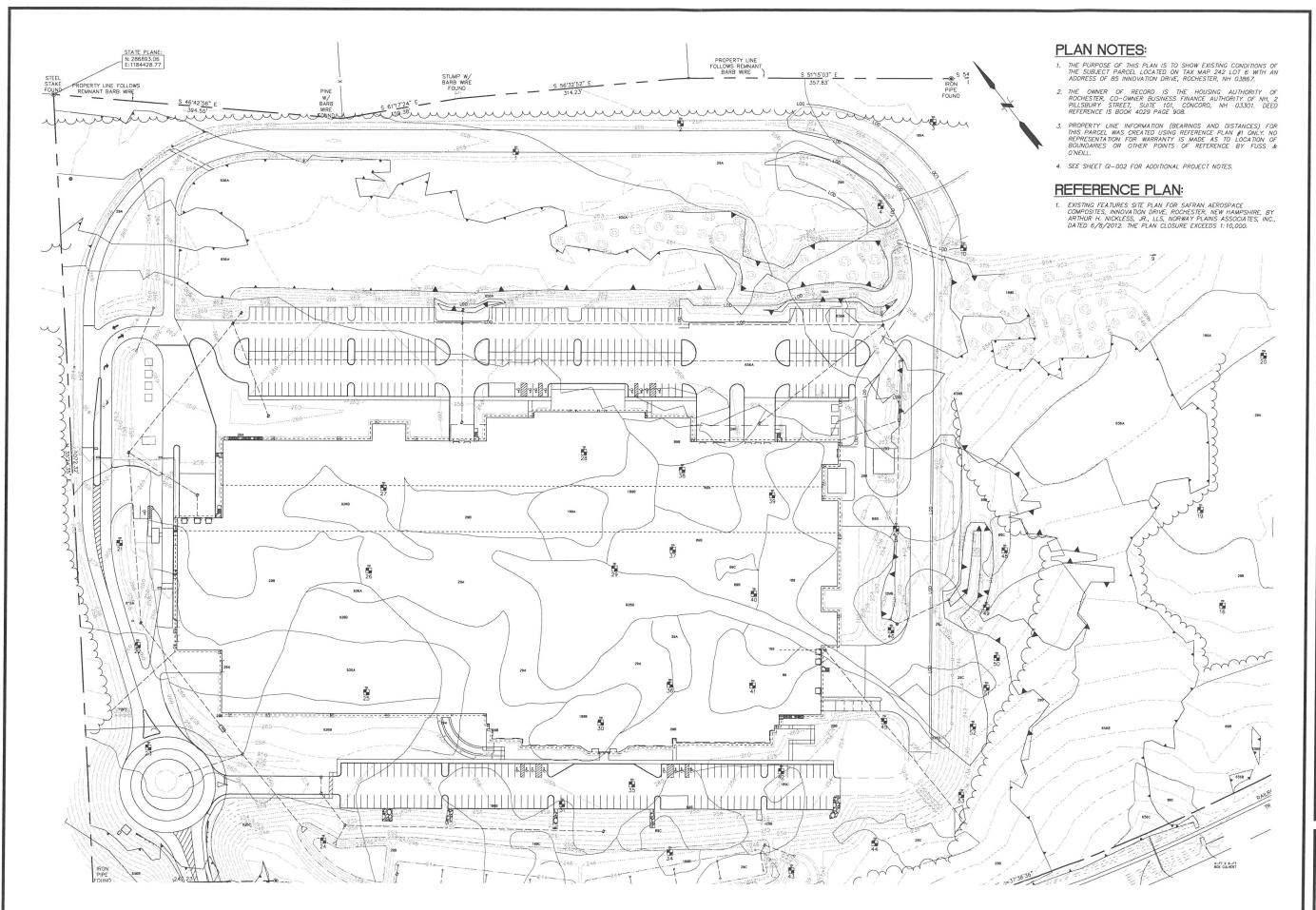
SHEET 2 OF 11

INAL	APPROVAL	BY	ROCHESTER	PLANNING	BOARD

DATE

CERTIFIED BY_





DATUM:

VERT.:
DATUM:
HORZ.:
VERT.: FUSS & O'NEILL EUPPER SQUARE BUSINESS CENTER STEATCHER STREET, SUITE 1 SENNEBUNK, ME 04043 CON 555.000 CON 555.000

SAFRAN AEROSPACE COMPOSITES EXISTING CONDITIONS PLAN

85 INNOVATION DRIVE ROCHESTER NEW HAI

PROJ. No.: 20180581.A10 DATE: 12/11/2018

CS-100

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SHEET 7 OF 11

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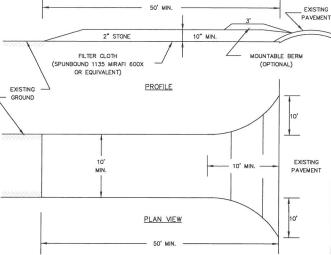
SHEET 8 OF 11

- SEDIMENT DEPOSITION SHOULD BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE SILT FENCE.
- SILT FENCES SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHOULD BE REPLACED WITH A TEMPORARY CHECK DAM.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE PREPARED AND SEEDED.
- IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
- CONSTRUCTION SPECIFICATIONS:

 1. FENCES SHOULD BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE FENCE. SEDIMENT BARRIERS SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
- THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHOULD BE LESS THAN 1A ACRE PER 100 LINEAR FEET OF FENCE;
- 3. THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET;
- 4. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1;
- 5. FENCES SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND A. THE ENDS OF THE FENCE SHOULD BE FLARED UPSLODE.

 B. THE FABRIC SHOULD BE EMBEDDED A MINIMUM OF 8 INCHES IN DEPTH AND 4 INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OF THE PRESENCE OF THE HEAVY ROOTS, THE BASE OF THE FABRIC SHOULD BE MERCEDED WITH A MINIMUM C. THE SQUESHOULD BE COMPACTED INVESTIGATED THE MINIMUM C. THE SQUESHOULD BE COMPACTED INVESTIGATED THE MINIMUM C. THE SQUESHOULD BE COMPACTED.
- SUPPORT POSTS SHOULD BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET; ADJOINING SECTIONS OF THE FENCE SHOULD BE OVERLAPPED BY A MINIMUM OF 6 INCHES (2
- INCHES IS PREFERRED), FOLDED AND STAPLED TO A SUPPORT POST. IF METAL POSTS ARE USED, FABRIC SHOULD BE WIRE-TIED DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
- SILT FENCING SHOULD NOT BE STAPLED OR NAILED TO TREES.
- . THE FILTER FABRIC SHOULD BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHOULD BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
- THE FILTER FABRIC SHOULD CONTAIN ULTRAWOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF O DEGREES FAHREMHEIT OF 120 DEGREES FAHREMHEIT.
- POSTS FOR SILT FENCES SHOULD BE EITHER 4—INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHOULD HAVE, PROJECTIONS FOR FASTENING WIRE TO THEM, POSTS SHOULD BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRUE.
- 10. THE HEIGHT OF A SILT FENCE SHOULD NOT EXCEED 36 INCHES AS HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
- THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF COINTS. WHEN JOINTS ARE NECESSARY; FILTER CLOTH SHOULD BE SPLICED TOCETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SCALED.
- 12. A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
- . A TRENCH SHOULD BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
- 15. THE STANDARD STRENGTH OF FILTER FABRIC SHOULD BE STAPLED OR WIRED TO THE POST, AND 8 INCHES OF THE FABRIC SHOULD BE EXTENDED INTO THE TRENCH. THE FABRIC SHOULD NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORGINAL GROUND SURFACE.
- 17. SILT FENCE MAY BE INSTALLED BY "SLICING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLICING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "PLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOLICI, THE SLICING METHOD MINIMALTY DISRUPTS THE SOIL. UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
- 18. SILT FENCES SHOULD BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
- SILT FENCES PLACED AT THE TOE OF A SLOPE SHOULD BE SET AT LEAST 6 FEET FROM THE TOE M ALLOW SPACE FOR SHALLOW PONDING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
- SILT FENCES SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILT FENCE BARRIER NOT TO SCALE



- MAINTENANCE REQUIREMENTS:

 1. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHOULD BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHOULD TEN BE RECONSTRUCTED.
- RECONSTRUCTED.
 THE CONTRACTOR SHOULD SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
 WHEN WHEEL WASHING IS REQUIRED, IT SHOULD BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT—TRAPPING DEVICE. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

- CONSTRUCTION SPECIFICATIONS:

 1. THE MINIMUM STONE USED SHOULD BE 3-INCH CRUSHED STONE.

 2. THE MINIMUM LENGTH OF THE PAD SHOULD BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT
- REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT STE.

 THE PAD SHOULD BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.

 THE PAD SHOULD SLOPE AWAY FROM THE EXISTING ROADWAY.

 THE PAD SHOULD BE AT LEAST 6 INCHES THICK.

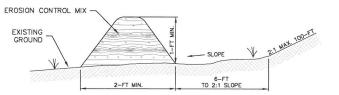
 THE GEOTEXTILE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE, PAD.

- BELOW THE PAD.

 THE PAD SHOULD BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN
 THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.

 NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND
 PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

JSDA-SCS STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE



EROSION CONTROL MIX BERM

CROSS SECTION

NOT TO SCALE

MAINTENANCE REQUIREMENTS:

1. EROSION CONTROL MIX BERMS SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST

- 1. EROSION CONTROL MIX BERMS SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

 2. EROSION CONTROL MIX BERMS SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM.

 3. IF THERE ARE SIGNS OF BEACHING OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM.

 4. EROSION CONTROL MIX BERMS SHOULD BE REPLACED WITH OTHER MEASURES TO INTERCEPT AND THE MEASURE TO INTERCEPT AND THE MEASURE TO INTERCEPT AND THE MEASURE TO I
- SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD (1/3) OF THE HEIGHT OF THE BARRIER.
 EROSION CONTROL MIX BERMS SHOULD BE RESHAPED OR REAPPLIED AS NEEDED.
 ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SECED.

ENGISION CONTROL MIX CAR BE MANUFACTURED ON OR OFF OF THE PROJECT STIE.

REGISION CONTROL MIX MUST CONSIST PRIMARILY OF GRANIC MARKILL, SEPARATED AT THE POINT OF
GENERATION, AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE
MANUFACTURED PRODUCTS.

WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE
ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

COMPOSITION OF THE FROSION CONTROL MIX SHOULD BE AS FOLLOWS:

A EROSION CONTROL MIX SHALL BE A WELL GRADED MIXTURE OF PARTICLE SIZES FREE OF REFUSE,
PHYSICAL CONTAININANTS, MATERIAL TOXIC TO PLAT GROWTH AND MAY NOT CONTAIN ROCKS LESS THAN

| PHYSICAL CONTAMINANTS, MATERIAL TOXIC 10 PLANT 4-INCHES IN DIAMETER | 25-65% DRY WEIGHT BASIS | C. PARTICLES PASSING BY WEIGHT: SCREEN: PASSING BY WEIGHT: 3-INCH | 100% | 1-INCH | 90-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-100% | 70-1

3/4-INCH 70-100%
1/4-INCH 30-75%
D. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
E. THE MIX SHOULD CONTAIN NO SILTS, CLAYS OR FINE SANDS.
F. SOLUBLE SALTS CONTENT < 4.0 mm/hos/cm
G. pH OF THE MIX SHOULD BE BETWEEN 5.0 AND 8.0
THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
THE BARRIER THAT WOLLD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS
BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS
BLADES OR PLANT STEMS.

BRIDGES IN THE BARRIER HALL WOULD EXPANDE THIS TO WHAT STREET HE BARRIER MUST BE A MINIMUM OF 12-INCHES TALL AS MEASURED ON THE UPHILL SIDE OF THE BARRIER. THE BARRIER MUST BE A MINIMUM OF 2-FT MIDE.

CONTINUOUS CONTAINED BERM (ALTERNATIVE):

1. AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINMENT AND STABILITY TO A BERM OF EROSION CONTROL MIX.

2. IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVEWED AND APPROVED BY THE DESIGN ENGINEE.

3. INSTALLATION OF CONTINUOUS CONTAINED BERMS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

EROSION CONTROL MIX BERM DETAIL

WINTER STABILIZATION & CONSTRUCTION PRACTICES

MAINTENANCE REQUIREMENTS:

1. MAINTENANCE MEASHES SHOULD BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE MAINTENANCE MEASHES SHOULD BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE SITE OF THANKING AND RUNOFF, THE SITE ON THACTOR SHOULD COMBUT INSPECTION OF ALL INSTALLED EROSION CONTROL PRACTICES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUED FUNCTION.

FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHOULD CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF THE VECETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, WICKDOLDS GROWTH.)

SPECIFICATIONS:
THE FOLLOWING STABILIZATION TECHNIQUES SHOULD BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15

- 1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO 1—ACRE AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN NHSMM, VOL. 3 AND ELSEWHERE IN THIS PLAN SET, PRIOR TO ANY THAW OR SPRING MELT EVENT. STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5
- DAYS:
 ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM 85% VEGETATVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MUCLH PER ACRE SECURED WITH ANOHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (REFER TO NHSMM, VOL. 3 FOR SPECIFICATION).
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15 SHOULD BE SEEDED AND COVERED WITH A PROPERTY INSTALLED EROSION CONTROL, BLANKET SHOW IN PROPERTY INSTALLED EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OF THEY MAY OVERHEAT. BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OF THEY MAY OVERHEAT.
- 5. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
- 6. ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (I.E. BY NETTING, TRACKING, WOOD CELLULOSE
- WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4 INCH LAYER OF REGION CONTROL MIX.

 MULCH SHOULD BE RE-ESTABLISHED PRIOR TO ANY RAIN OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE
 PLACED (EVEN COVERED WITH MULCH) WITHIN 100-FT OF ANY WETLAND OR OTHER WATER RESOURCE
 AREA.
- B. FROZEN MATERIAL (I.E. FROST LAYER REMOVED DURING WINTER CONSTRUCTION) SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION AWAY FROM ANY AREA NEEDING PROTECTION. FROZEN MATERIAL STOCKPILES CAN MELT IN SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO HIGH SOIL MOISTURE CONTENT.
- 9. INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
- 10. ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED BY SEPTEMBER 1. ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 18, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS AS DETERMINED BY A PROFESSIONAL ENGINEER. IF STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
- 11. ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
- 12. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION HAS STOPPED FOR THE WINTER SHOULD BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF SAND AND GRAVEL WITH A GRADATION THAT IS LESS THAN 12% OF THE SAND PORTION, OR MATERIAL PASSING THE NUMBER 4 SIEVE, BY WEIGHT, PASSES THE NUMBER 200 SIEVE.
- 13. SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTROL BERMS. SILT FENCES AND HAY BALES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.

DUST CONTROL PRACTICES:

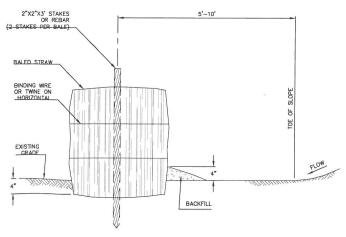
- 1. APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
- WATER APPLICATION:
 A) MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 B) AVOID EXCESSIVE APPLICATION OF WATER THAT WOULD RESULT IN MOBILIZING SEDIMENT AND SUBSEQUENT DEPOSITION IN NATURAL WATERBODIES.

3. STONE APPLICATION:
A) COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.

B) IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE. 4. REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (I.E. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

INVASIVE SPECIES NOTE:

THE CONTRACTOR SHALL TAKE STEPS TO PREVENT THE SPREAD OF INVASIVE PLANT, INSECT, AND FUNGAL SPECIES BY MEETING THE REQUIREMENTS AND INTENT OF RSA 450:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES. http://gencourt.stote.nus/rules/stote_agencies/agr3800.html



TOE OF SLOPE STRAW BALE BARRIER

GENERAL CONSTRUCTION PHASING:

. STABILIZATION:
A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10—YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:

A) IN AREAS THAT WILL NOT BE PAVED:
 A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;

- ii) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
- iii) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
- B) IN AREAS TO BE PAVED:
 i) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
- TEMPORARY STABILIZATION:
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE TEMPORARILY STABILIZED AS SOON AS
 PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A
 SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART
 OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- . <u>PERMANENT STABILIZATION:</u>
 ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- MAXIMUM AREA OF DISTURBANCE:
 THE AREA OF UNSTABILIZED SOIL SHOULD NOT EXCEED 5 ACRES AT ANY TIME.
- 5. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.
- A) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
- B) EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL
- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHOULD BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET CG-101.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHOULD BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED NSHETLOG-101.
- 8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHOULD BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
- STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE
- 10. SLOPES SHOULD NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SUPPAGE, SETTLEMENT SUBSIDENCE OR OTHER RELATED DAMAGE.
- 11. AREAS TO BE FILLED SHOULD BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
- 13. ALL FILLS SHOULD BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION SUPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHOULD BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 14. IN GENERAL, FILLS SHOULD BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKN THE CONTRACTOR SHOULD REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
- 15. ANY AND ALL FILL MATERIAL SHOULD BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHE OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTOR
- 16. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHOULD BE PERFORMED UNDER THE DIRECTION OF A PERCESSIONAL ENGINEER.
- 17. THE OUTER FACE OF THE FILL SLOPE SHOULD BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREAT GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHSUM. VOIL 3.
- 18. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
- 19. USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GUILLY EROSION. ALL BENCHES SHOULD BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCT
- 20. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHOULD BE EVALUATED BY A <u>PROFESSIONAL</u>
 <u>ENGINEER</u> (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHOULD BE
 REVISED TO PROPERLY MANAGE THE CONDITION.
- 21. STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, O OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
- 22. ALL GRADED AREAS SHOULD BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING ABOVE NOTES EXCERPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBE 2008" (NHSMM, VOL. 3)

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
- 2. PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUC AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
- STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHSMM VOL. 3. TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
- 4. IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL

- PROTECTION OF INACTIVE STOCKPILES:
 6. INACTIVE SOIL STOCKPILES SHOULD BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
- INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SMILAR MATERIALS SHOULD BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (SLT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHOULD ALSO COVERD.

PROTECTION OF ACTIVE STOCKPILES:

8. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIERS SHOULD BE INSPECTED AT THE END

WHEN A STORM IS PREDICTED, STOCKPILES SHOULD BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.





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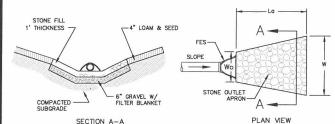




DETAILS INNOVATION

PROJ. No.: 20180581.A10

DATE: 12/11/2018



STONE: D50 = 6" WELL GRADED WITH SUFFICIENT SAND AND GRAVEL TO FILL THE VOIDS

THE HEIGHT OF THE STRUCTURAL LINING ALONG THE CHANNEL ISJES SHALL BEGIN AT THE ELEVATION EQUAL TO THE TOP OF THE CONDUIT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.

NOTES:

1. ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.

2. THE LARGEST RIP—RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.

3. APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.

CONSTRUCTION SPECIFICATIONS:

PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES

SHOWN ON THE PLANS.

MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP—RAP.

THE ROCK OR GRAVEL USED FOR FILTER OR RIP—RAP SHALL CONFORM TO THE SPECIFIED GRADATION.

GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF

ROCK RIP—RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC

OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED

FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.

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 OF STATE OF THE WORST CASE OF ALL OUTLETS. ALL RIP—RAP USED FOR PIPE OUTLET

PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

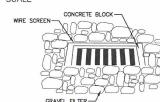
MAINTENANCE NOTES:

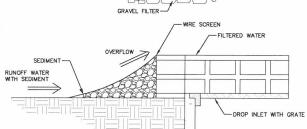
1. OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP—RAP SHALL BE REPAIRED IMMEDIATELY.

2. THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION

IS 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.

RIP RAP APRON OUTLET PROTECTION NOT TO SCALE





BLOCK AND GRAVEL INLET SEDIMENT FILTER NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4—INCH, 8—INCH AND 12—INCH MIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH

COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED

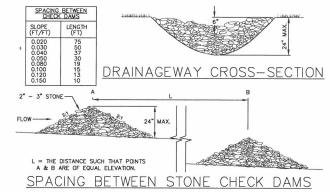
STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN ABOVE. STONE GRADATION SHALL BE WELL GRADED WITH THE MAXIMUM STONE SIZE OF 6 INCHES AND MINIMUM STONE SIZE OF 1 INCH.

<u>AINTENANCE NOTES:</u>
THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.

SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT EROOK.

STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SEDIMENTATION CONTROL AT CATCH BASINS NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.

CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.

3. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE NOTES:

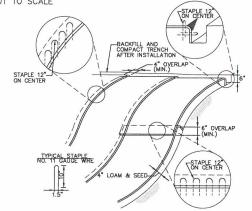
1. HUMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.

2. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE

WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE

STONE CHECK DAM INSTALLATION DETAIL

NOT TO SCALE



SLOPE INSTALLATION

MAINTENANCE REQUIREMENTS:

1. ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.

ANY FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEEDED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.

CONSTRUCTION SPECIFICATIONS:

1. MANUFACTURE'S INSTALLATION INSTRUCTIONS:

NUFACTURE'S INSTALLATION INSTRUCTIONS:

PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING
ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

NOTE: WHEN USING CELL—O—SEED DO NOT SEED PREPARED AREA. CELL—O—SEED MUST BE
INSTALLED WITH PAPER SIDE DOWN.

INSTALLED WITH PAPER SIDE DOWN.

BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6"

(15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP'S EXTENDED BEYOND THE

UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES

APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND

COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD

APPROXIMATELT 12 (30 CM) APART IN THE BUTTOM OF THE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.

(30 CM) APART ACROSS THE WIDTH OF THE RECP'S.

ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THORUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

THE EDGES OF PARALLE RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.

CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

SITE PREPARATION:

A. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.

B. GRADE AND SHAPE AREA IF INSTALLATION.

C. REMOVE ALL ROCKS, CLOOS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.

D. PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.

E. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.

SEEDING:

A. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TUPE REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEEDED.

B. WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

<u> EROSION CONTROL — BLANKET SLOPE PROTECTION</u> NOT TO SCALE

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.

GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION. AND MULCH ANCHORING.

3. RUNOFF SHOULD BE DIVERTED FROM THE SEEDBED AREA.

ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHOULD INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR O THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNGEF.

SEEDBED PREPARATION:

1. WORK LIME AND FESTILIZER 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 UNITLE A REASONABLY UNITORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.

REMOVE FROM THE SURFACE ALL STONES ZINCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS. SUCH AS WIRE. CABLE, TREE ROOTS, CONCRETE CLODS, LUMPS, TRASH OR OTHER UNSUITABLE

3. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.

IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHOULD BE APPLIED DURING THE GROWING SEASON.

APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT FEASBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*

*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 600 LB./ACRE (13.8 LB./1,000-SF)*

*LOW PHOSPHATE FERTILIZER (N-P205-K20) OR EQUIVALENT

FERTILIZER SHOULD BE RESTRICTED TO LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPUED TO AREAS BETWEEN 25 AND 250-FT FROM A SURFACE WATER BODY, NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHU 25-FT OF A SURFACE WATER BODY. THESE ARE THE REQUIREMENTS FOR ANY WATER BODY PROTECTION ACT.

SEEDING:

1. INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.

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.

SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDED IN LATE SUMMER AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL 3. AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERMOD.

5. AREAS SEEDED BETWEEN MAY 15 AND AUGUST 15 SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM. VOL 3.

VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15. II THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.

WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.

2. SLOPES BUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY.

3. 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.

4. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSFFDING.

MAINTENANCE REQUIREMENTS:

1. PERMANENT SEEDED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION, INSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.

SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.

3. BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.

4. AT A MINIMUM 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION

IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEDED, WITH OTHER TEMPORARY MEASURES (I.E. MUILCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VECETATION ESTABLISHMENT.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./ 1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 2 42	0.45 0.45 0.05 0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREEPING RED FESCUE KENTUCKY BLUEGRASS TOTAL	50 50 100	1.15 1.15 2.30

OURCES:

NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3

MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

TEMPORARY VEGETATION:

SPECIFICATIONS:

SITE_PREPARATION:

1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS AND SEDIMENT TRAPS.

GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.

3. RUNOFF SHOULD BE DIVERTED FROM THE SEEDBED AREA.

ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHOULD INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR O THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

1. STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.

WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.

3. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHOULD BE APPLIED DURING THE GROWING APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NO FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1.000-SF)*

*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 600 LB./ACRE (13.8 LB./1,000-SF)* *LOW PHOSPHATE FERTILIZER (N-P205-K20) OR FOLIVALENT

5. FERTILIZER SHOULD BE RESTRICTED TO LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 AND 250-FT FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25-FT OF A SURFACE WATER BODY. THESE ARE THE REQUIREMENTS FOR ANY WATER BODY PROTECTED BY THE COMPREHENSIVE SHORELAND PROTECTION ACT.

SEEDING:

1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO
SEEDER (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 BY 10% WHEN HYDROSEEDING.

2. TEMPORARY SEED SHOULD TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.

AREAS SEEDED BETWEEN MAY 15 AND AUGUST 15 SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VO

4. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVERWINEER PROTECTION.

MAINTENANCE REQUIREMENTS:

1. TEMPORARY SEEDING SHOULD BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHOULD 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 RESEEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOIL
IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY
STABILIZATION MEASURES SHOULD BE IMPLEMENTED.

3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSI PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYEGRASS	40 LBS.	1.0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYEGRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.

SOURCES:

1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE MINNICK, E.L. AND H.T. MARSHALL. (AUGUST 1992)

SWALE DIMENSION TABLE LOCATION B d Z T 4-FT 2-FT 3-FT 20-FT WHERE SHOWN 6" LOAM AND SEED EXISTING GROUND EXISTING GROUND EXISTING GROUND 3:1 1.5' MIN. EXISTING GROUND $*T = B + 2(Z \times d)$

MAINTENANCE NOTES:

1. THE SWALE(S) SHALL BE MOWED WITH THE REST OF THE SITES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT

THE ENVALE(S) SHALL BE MUDED WITH THE REST OF THE STIES LAWN AREAS TO PROMOTE HEALTHY GROWTH AND PREVENT THE ENCROACHMENT OF WEEDS AND WOODY VEGETATION. DO NOT MOW GRASS IN SWALE(S) TOO SHORT. THIS WITH CAPITY OF THE SWALE(S) THE SWALE(S) SHOULD BE FERTILIZED ON AN AS NECESSARY BASIS, TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION COULD RESULT IN THE SWALE(S) BECOMING A SOURCE OF POLLUTION TO THE SURROUNDING WEILAND AREAS.

3. THE SWALE(S) SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM, RILLS ADD AMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND RE-VEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

VEGETATED SWALE DETAIL NOT TO SCALE

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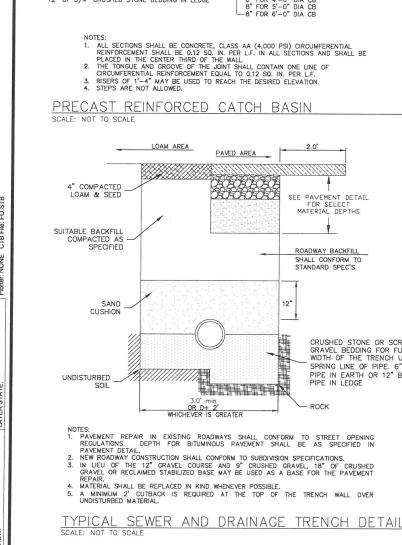
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DETAILS 85

EROSPACE

PROJ. No.: 20180581,A10 DATE: 12/11/2018

CD-502



ALTERNATE H-20 TOP SLAB

NOT TO SCALE

ADJUST TO GRADE WITH PRE-CAST SEWER BRICKS AS REQ'D (12" MAX)

PRECAST SECTIONS

PIPE JOINTS SHALL BE

LOCKJOINT FLEXIBLE SLEEVE KOR-N-SEAL FLEX. SLEEVE OR A-LOK RUBBER GASKET

CIRCUMFERENTIAL REINF SHALL

BE .12 SQ.-IN. PER L.F. FOR 4' DIA. CB AND .15 SQ.-IN.

BASE -

PER L.F. FOR 5' DIA. CB

CONCRETE STRUCTURE TO MEET H-20 LOAD RATING

TYPE B ALTERNATE GRATE -

2'-0"DIA 8"

ADD HOOD FOR DEEP SUMP

4'-0" DIA (MIN)

3'-0" SUMP

4'-0" SUMP FOR DEEP SUMP

MORTAR BED-

PROVIDE POLYETHYLENE

LINER AS SHOWN IN FRAME & GRATE DETAIL

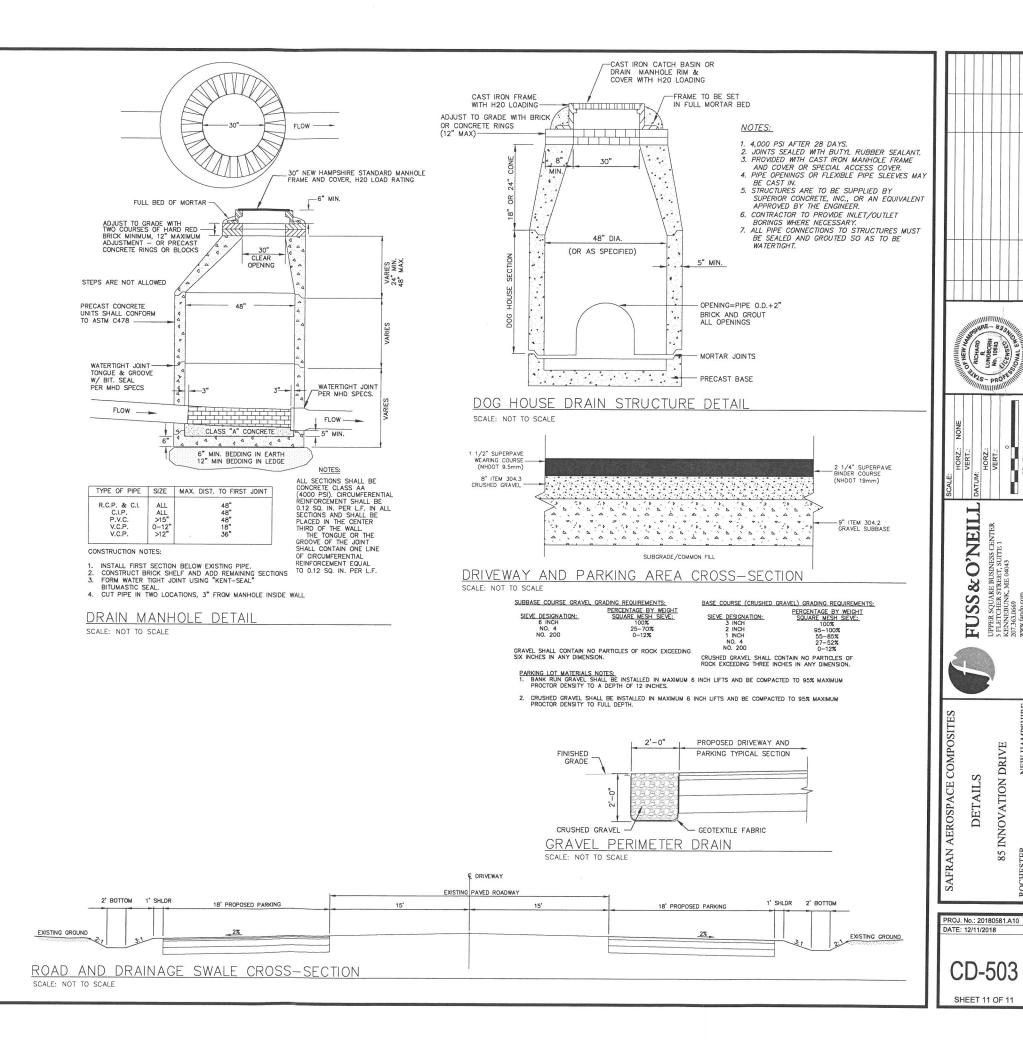
WATERTIGHT JOINT WITH "KENT-SEAL" BITUMASTIC SEALER OR EQUAL

HOLE CUT TO PLAN MORTAR JOINTS ARE ALLOWED

5" FOR 4'-0" DIA CB 6" FOR 5'-0" DIA CB 7" FOR 6'-0" DIA CB

CRUSHED STONE OR SCREENED GRAVEL BEDDING FOR FULL
WIDTH OF THE TRENCH UP TO
SPRING LINE OF PIPE. 6"BELOW PIPE IN EARTH OR 12" BELOW PIPE IN LEDGE

ROCK



O'NEII

8

FUSS

DETAILS

INNOVATION

85