

# NONRESIDENTIAL SITE PLAN APPLICATION City of Rochester, New Hampshire

Date:05/07/19 Is a conditional use needed? Yes: No:_x Unclear: (If so, we encourage you to submit an application as soon as possible.)
Property information  Tax map #: 0106 ; Lot #('s): 0003 ; Zoning district: NMU
Property address/location: 201 Highland Street, Rochester, NH
Name of project (if applicable): BlueBird Storage
Size of site: 5.81 acres; overlay zoning district(s)?
Property owner  Name (include name of individual): Bill Goodison, 201 Storage, LLC
Mailing address: 125 Ocean Road, Greenland, NH 03840-2409 bill.goodison@  Telephone #: 203-988-5247 Email:bluebirdstorage.com
Applicant/developer (if different from property owner)  Name (include name of individual): Fuss & O'Neill, Inc., Rick Lundborn, PE  Mailing address: 5 Fletcher St., Ste 1, Kennebunk, ME 04043  Telephone #: 207-363-0669 x2314 Email: rlundborn@fando.com
Engineer/designer  Fuss & O'Neill, Inc.  Name (include name of individual): Rick Lundborn, PE  Mailing address: 5 Fletcher Street, Ste 1, Kennebunk, ME 04043  Telephone #: 207-363-0669 x2314 Fax #:
Email address: <u>rlundborn@fando.com</u> Professional license #: <u>10943</u>
Proposed activity (check all that apply)  New building(s): Site development (other structures, parking, utilities, etc.):  Addition(s) onto existing building(s): Demolition: Change of use:
Page 1 (of 3 pages)

Updated

Removal of 1 story 2,800 sf storage  Describe proposed activity/use: building and 600-sf section of another.  Construction of 171x106, 18,126 sf, 2-story climate controlled building.
Describe existing conditions/use (vacant land?): Currently used as self
storage and paved access areas.
Utility information         City water? yes X no; How far is City water from the site? On site
City sewer? yes no _x_; How far is City sewer from the site?
If City water, what are the estimated total daily needs? gallons per day
If City water, is it proposed for anything other than domestic purposes? yes no _X
If City sewer, do you plan to discharge anything other than domestic waste? yes no
Where will stormwater be discharged? Porous pavement & an existing swale
Building information  Type of building(s): Metal Frame  Building height: <35 ft Finished floor elevation: 248.00
Other information
# parking spaces: existing: total proposed:; Are there pertinent covenants?  Number of cubic yards of earth being removed from the siteN/A  Number of existing employees:; number of proposed employees total:  Check any that are proposed: variance; special exception; conditional use
<u>Netlands</u> : Is any fill proposed? $N_{\odot}$ ; area to be filled:; buffer impact? $N_{\odot}$

Proposed <u>post-development</u> disposi	tion of site (should tota	al 100%)
是他们的"And Control of the Control of	Square footage	% overall site
Building footprint(s) – give for each building	Bld(1)27,782sf, Bld(2)24,128sf Bld 3)1,800sf, Bld(4)2,800sf Bld(5) 18,126 sf	29.5
Parking and vehicle circulation	60,604	24.0
Planted/landscaped areas (excluding drainage)	19,163	7.6
Natural/undisturbed areas (excluding wetlands)	78,941	31
Wetlands	19,441	77
Other – drainage structures, outside storage, etc.		

Updated

# Page 2 (of 3 pages)

Comments	
Please feel free to add any comments, additional information, or requests fo	r waivers here:
Submission of application	
This application must be signed by the property owner, applicant/developer property owner), and/or the agent.	(if different from
(we) hereby submit this Site Plan application to the City of Rochester Plann	ing Board
oursuant to the <u>City of Rochester Site Plan Regulations</u> and attest that to the	<del>=</del> 0
knowledge all of the information on this application form and in the accompa	
materials and documentation is true and accurate. As applicant/developer ( property owner)/as agent, I attest that I am duly authorized to act in this capa	
Signature of property owner:	
Date:	
Signature of applicant/developer:	
Signature of agent:	
Date:	
Authorization to enter subject property	
hereby authorize members of the Rochester Planning Board, Zoning Board Conservation Commission, Planning Department, and other pertinent City depoards and agencies to enter my property for the purpose of evaluating this ancluding performing any appropriate inspections during the application phase post-approval phase, construction phase, and occupancy phase. This authorspecifically to those particular individuals legitimately involved in evaluating, anspecting this specific application/project. It is understood that these individuals leasonable care, courtesy, and diligence when entering the property.	epartments, application e, review phase, rization applies reviewing, or
Signature of property owner:	
Date:	
roch-fileshare\plan\$\Forms\Applications\Site Plan - Nonresidential.doc	Updated



May 7, 2019

Seth Creighton, City Planner Planning Department City Hall Annex 33 Wakefield Street Rochester, NH 03867

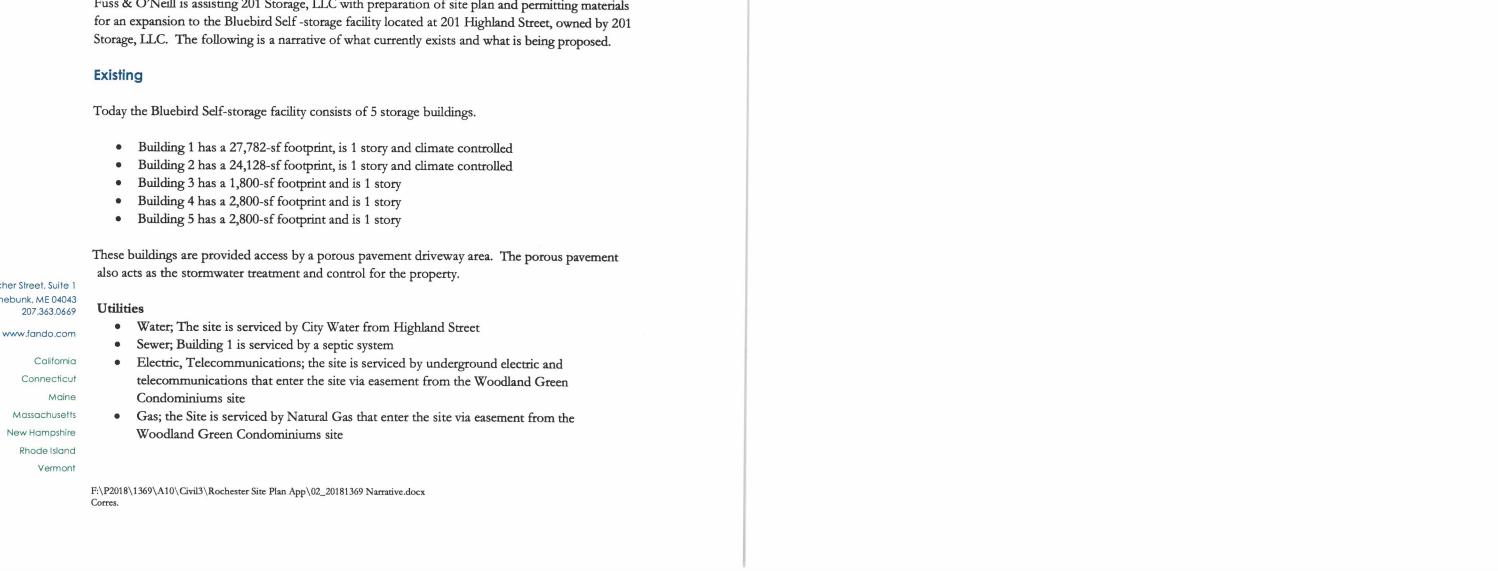
Narrative; Site Plan Application, 201 Storage, LLC (Bluebird Storage) 201 Highland Street / Route 202 Fuss & O'Neill Reference No. 20181369.A10

Dear Mr. Creighton:

Fuss & O'Neill is assisting 201 Storage, LLC with preparation of site plan and permitting materials

5 Fletcher Street, Suite 1 Kennebunk, ME 04043 207.363.0669

Massachusetts New Hampshire Rhode Island



Mr. Seth Creighton May 7, 2019 Page 2

# Previous Conditions To Be Respected

Previously the Zoning Board imposed a 50-ft rear setback against Woodland Green. This is to stay in effect.

# **Proposed Expansion**

The proposal for expansion to the Bluebird Self-storage facility consists of 5 storage buildings. Building 5 is being replaced and a small section 600-sf of building 4 is being removed. The new building 5 is being constructed over the area of the existing Building 5 and some of the porous pavement area.

- Building 1 has a 27,782-sf footprint, is 1 story and climate controlled
- Building 2 has a 24,128-sf footprint, is 1 story and climate controlled
- Building 3 has a 1,800-sf footprint and is 1 story
- Building 4 has a 2,200-sf footprint and is 1 story
- Building 5 has a 18,126-sf footprint is 2 story and climate controlled

These buildings will continue to be provided access by a porous pavement driveway area. The porous pavement also acts as the stormwater treatment and control for the property. Area of excavation for the foundations will be repaired with porous pavement.

# Utilities

Utilities will continue to be provided as discussed in Existing above. Gas and Electric will be rererouted around the front of the proposed Building 5.

Sincerely,

Rick Lundborn, PE Project Manager

file

/bh

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 $F:\P2018\1369\A10\Civil3\Rochester\ Site\ Plan\ App\02\_20181369\ Narrative.docx\ Corres.$ 





May 7, 2019

Seth Creighton, City Planner Planning Department City Hall Annex 33 Wakefield Street Rochester, NH 03867

Waiver Requests; Site Plan Application, 201 Storage, LLC (Bluebird Storage)

201 Highland Street / Route 202

Fuss & O'Neill Reference No. 20181369.A10

Dear Mr. Creighton:

Fuss & O'Neill is requesting the following waivers on behalf of 201 Storage, LLC for the site plan expansion to the Bluebird Self -storage facility located at 201 Highland Street.

# Article II, Section 5(c) Builling Elevations

A waiver is sought to the requirement for building elevations. The building will be similar in construction to Building 1, the existing 2 story climate controlled building and all materials and colors used will be the same.

# Article III, Section 5 Landscaping

A waiver is sought to the requirement for the preparation of a landscaping plan. The expansion of the facility will take place entirely within the footprint of the existing buildings and paved area. The existing landscaping is established and there is no intention to disturb it.

A waiver is sought to the requirement for the preparation of a lighting plan. No pole mounted

lighting is proposed, any lighting added will be to the building and will be for security purposes

and no lighting will be proposed on the read of the building where it would impact the abutters.

# **Article III Section 6 Lighting**

No other changes to lighting are sought.

5 Fletcher Street, Suite 1 Kennebunk, ME 04043 207.363.0669

www.fando.com

California Connecticut

Massachusetts

New Hampshire Rhode Island

Maine

A waiver is sought to the requirement of a full drainage analysis and report. The site is designed using porous pavement and the proposed building will be over existing developed areas and not reduce vegetated cover. The site currently operates better than the pre-development condition with regard to stormwater runoff and will continue to do so.

 $F: \ P2018 \ 1369 \ A10 \ Civil 3 \ Rochester \ Site \ Plan \ App \ Word \ Files \ 02\_20181369 \ Waivers. docx \ Papp \ Word \ Files \ Papp \ Word \ Files \ Papp \ Waivers. docx \ Papp \ Word \ Papp \ Waivers. docx \ Papp \$ Corres.

Article III, Section 13 Stormwater Management

Mr. Seth Creighton May 7, 2019 Page 2

Thank you for your consideration of this project and these waivers.

Sincerely,

Rick Lundborn, PE Project Manager

/bh

c: file

 $F: \ P2018\ 1369\ A10\ Civil3\ Rochester\ Site\ Plan\ App\ Word\ Files\ 02\_20181369\ Waivers. docx\ Corres.$ 

# 201 STORAGE, LLC

201 HIGHLAND STREET · ROCHESTER · NEW HAMPSHIRE

MAY 0 7 2019

**SITE PLANS** 

MAY, 2019

PREPARED FOR

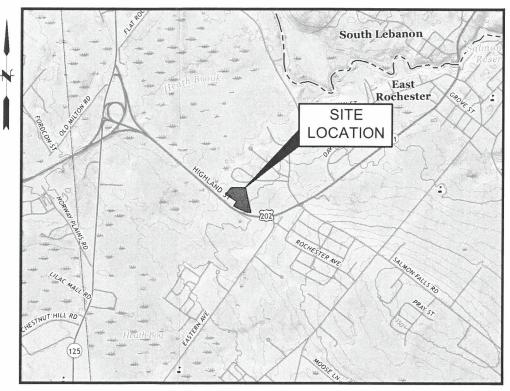
201 STORAGE, LLC

125 OCEAN ROAD GREENLAND, NH 03840



# **SHEET INDEX**

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CD-502 UTILITY DETAILS	
CD-503 EROSION CONTROL DETAILS	



LOCATION MAP

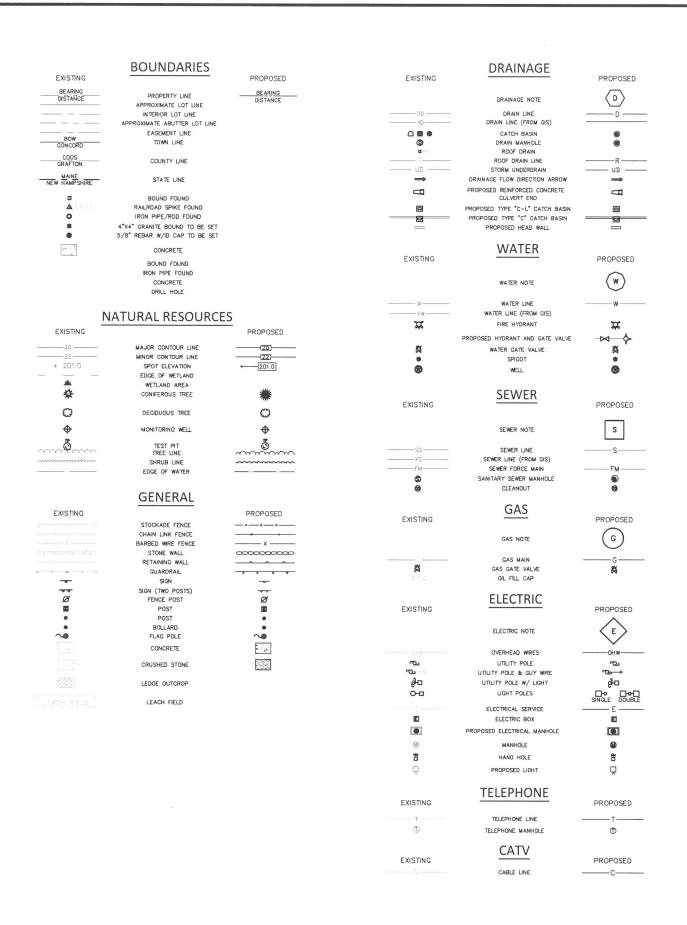


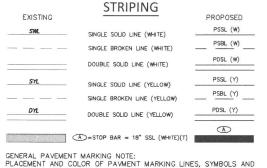
CUNIAU TUR SAFE Z' HOURS
FRIOR TO CONSTRUCTION
THE LOCATION OF ANY UNLITY INFORMATION SHOWN ON
THIS PLAN IS APPROXIMATE CLD CONSULTING ENG.
NO. MAKES NO CLAIM TO THE ACCURACY OR
COMPLETENESS OF UTILITIES SHOWN, 72 HOURS PRIOR
OF ANY EXCAVATION ON SITE, THE CONTRACTOR SHALL
ONNATOR TIME-SAFE AT I — BARR—NOWS SAFE



PROJ. No.: 20181369.A10 DATE: MAY 2019

GI-001



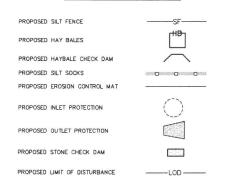


WORDS SHALL CONFORM TO THE (MUTCD) SECTION 632 OF MHDOT STANDARD SPECIFICATION BOOK, CONTRACT SUPPLEMENTAL SPECIFICATIONS, THE STATE OF NEW HAMPSHIRE PAVEMENT MARKING STANDARD DETAIL SHEETS, AND STANDARD PLAN SHEETS.

RETROREFLECTIVE PAINT PAYMENT MARKING KEY:
THE FOLLOWING PAYEMENT MARKINGS SHALL BE RETROREFLECTIVE
THERMOPLASTIC UNLESS OTHERWISE NOTIFIED BY THE STATE
STANDARD SYMBOLS AND WORDS

Ġ.	ACCESSIBLE PARKING SPACE	Ġ.
	PAINTED ISLAND	7////
	PARKING SPACE COUNT	10

# **EROSION CONTROL**



HORZ.: VERT.: HORZ.: VERT.: &O'NEILI

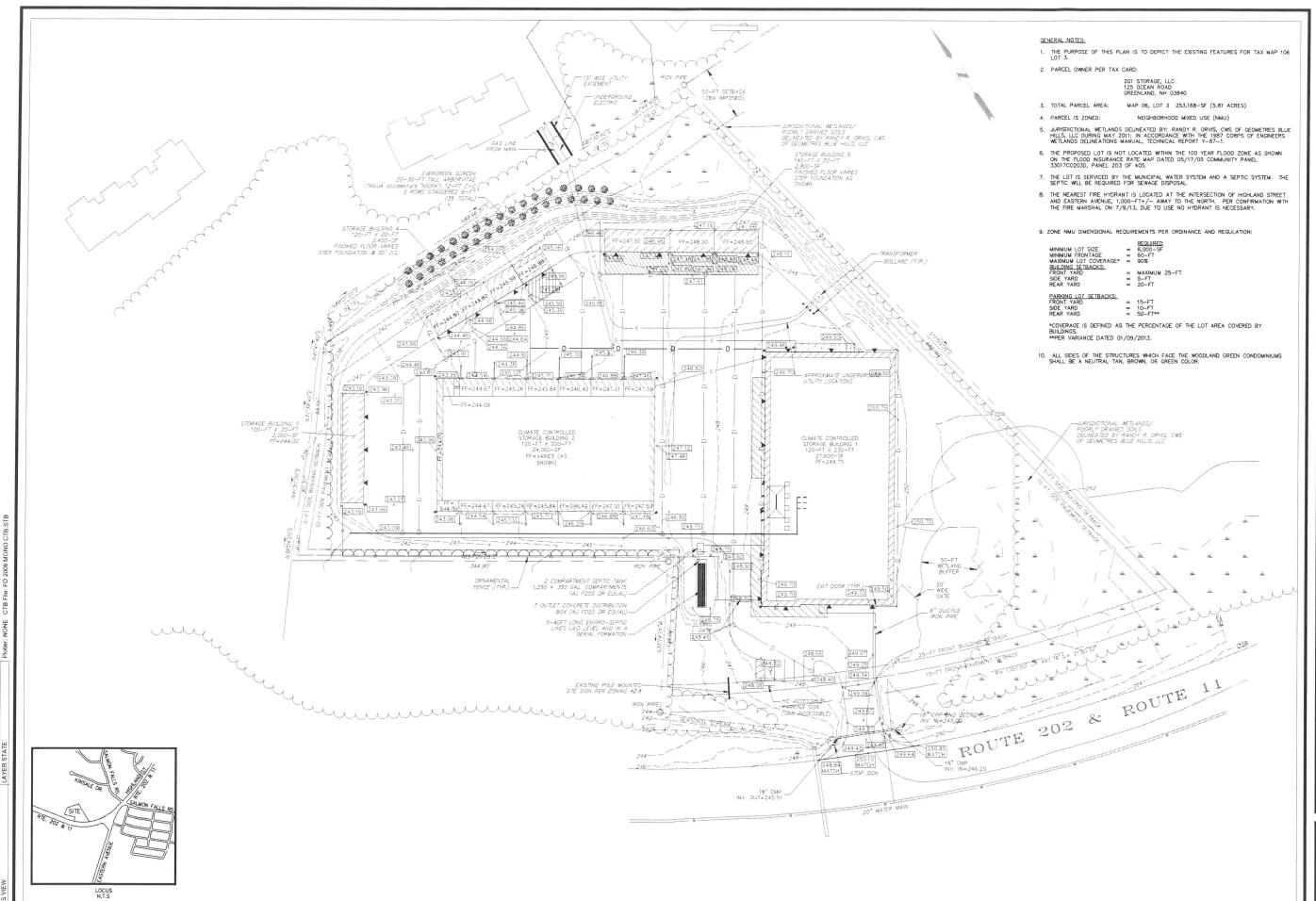
FUSS

STORAGE,

MAP

DATE: 05/07/19

CN-001



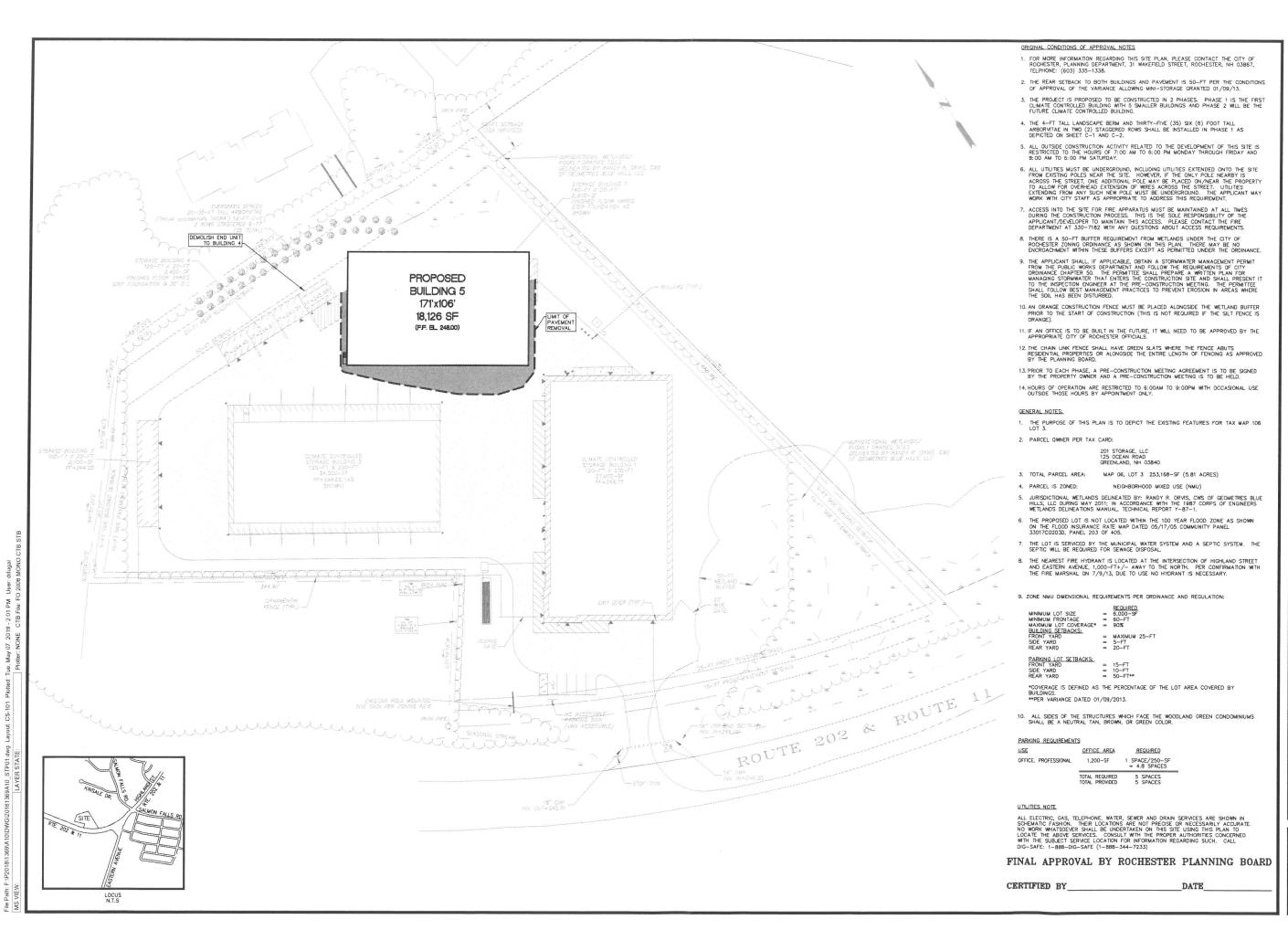
FUSS & O'NEILI PLAN

AS-BUILT EXISTING CONDITIONS

PROJ. No.: 20181369.A10 DATE: 05/07/19

CS-100

SHT X of XX



OF NEW JUNE OF NEW

SCALE;
HORZ: 1" = 40'
VERT:
DATUM:
HORZ: NADB3
VERT: NAVDB8
40 20 0 40

&O'NEILL DATE
THE BUSINESS CENTER
MANNE GRANT
40

FUSS & O'
UPPER SQUARE BUSINES
5. PLEICLER STREET, S
KENNEHUNG, MAINIGO



106 LOT 3

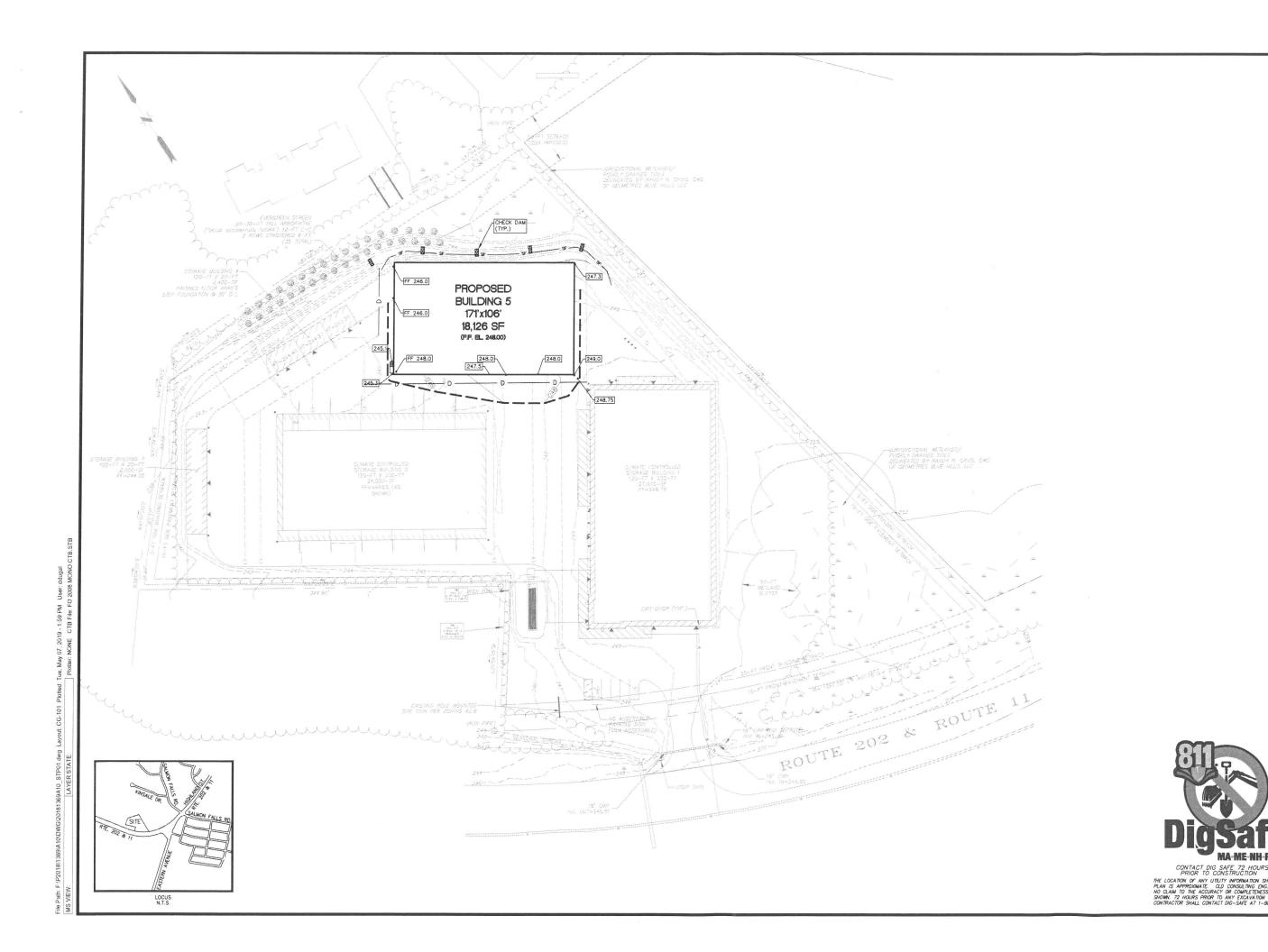
SITE PLAN TAX MAP 106 LC

TAX MAF

PROJ. No.: 20181369.A10 DATE: 05/07/19

CS-101

SHEET 1 OF 1



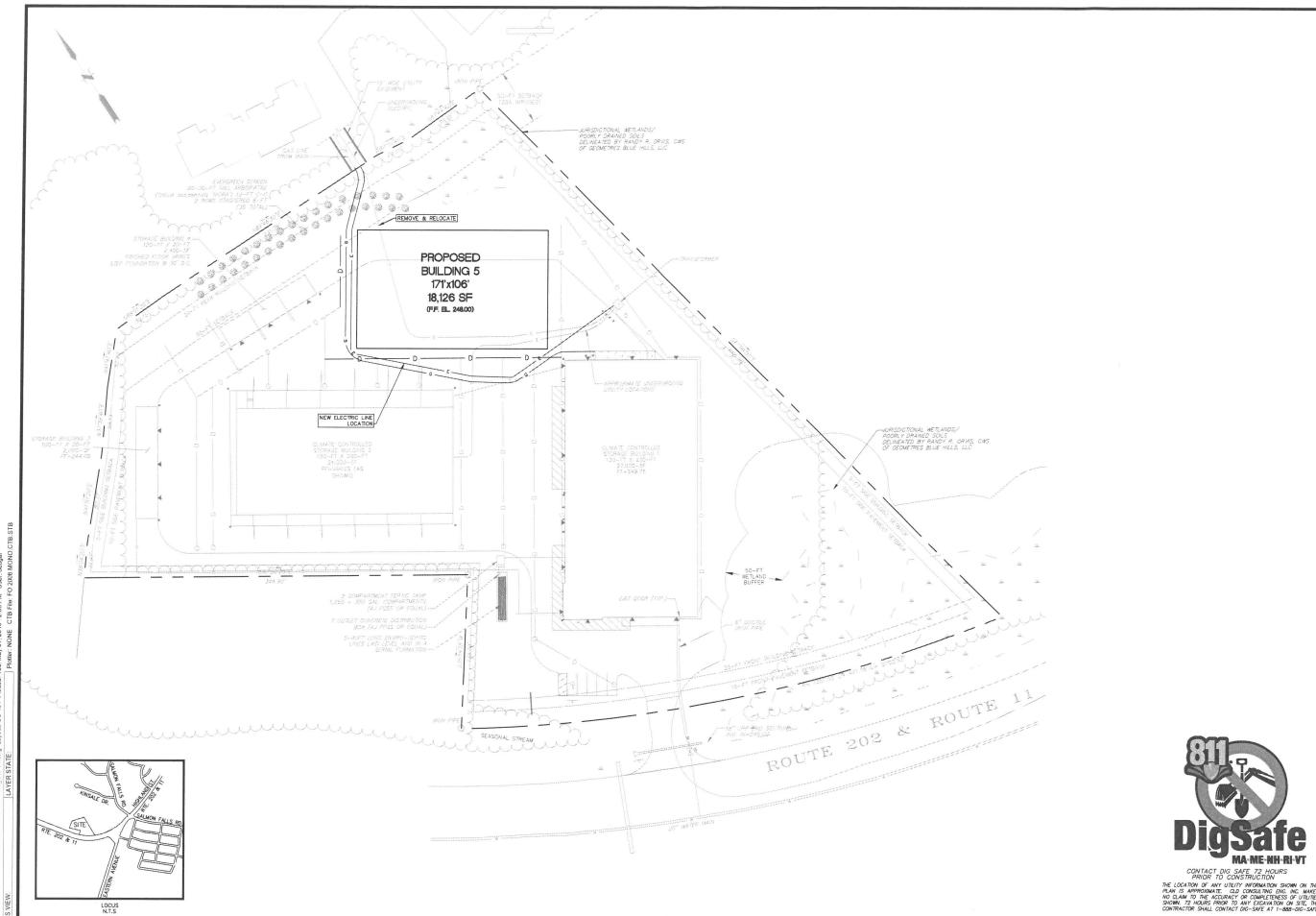
FUSS & O'NEILL

UPPER SQUARE BUSINESS CENTER
5 HEFCHR STREET SUITE GRADING, DRAINAGE & EROSION CONTROL PLAN TAX MAP 106 LOT 3

> PROJ. No.: 20181369.A10 DATE: 05/07/19

> > CG-101

SHEET 1 OF 1



FUSS & O'NEILL FAX MAP 106 LOT 3 UTILITIES PLAN 201 STORAGE, LLC

PROJ. No.: 20181369.A10
DATE: 05/07/19

CU-101
SHEET 1 OF 1

-CLAY BERM AND PIPE WRAPPED WITH NON-WOVEN GEOTEXTILE (MIRAFI 160N OR APPROVED EQUAL) APPROVED BY DESIGN ENGINEER) - 12" FILTER COURSE (NHDOT ITEM 304.1 MODIFIED) -3" FILTER BLANKET 3/8" DIA, PEA STONE " RESERVOIR COURSE (AASHTO NO. 3) W/ 4" DIA. PERF. UNDERDRAIN 4" PERFORATED PVC PIPE SPACED 2' FROM CLAY BERM SUBGRADE -CLAY BERM TO BE WRAPPED WITH NON-WOVEN GEOTEXTILE (SEE DETAIL ABOVE)

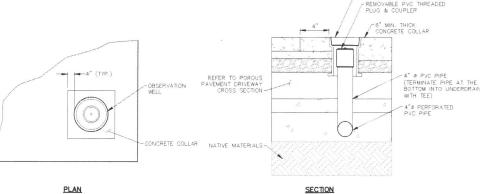
NOTES: CLAY BERM: TILL, SILTS, CLAY SOIL, OR ANY COMBINATIONS (SILTY CLAY, CLAYEY SILT) CAPABLE OF ACHIEVING A HYDRAULIC CONDUCTIVITY OF 1,0X10—7 CM/SEC OR LESS, SIEVE ANALYSIS BY WEIGHT:

SIEVE\_SIZE PERCENT\_PASSING

MOISTURE CONTENT OF THE MATERIAL AFFFECTS DENSITY AND HYDRAULIC CONDUCTIVITY. THE MOISTURE CONTENT OF THE MATERIAL AT THE TIME OF PLACEMENT SHALL BE SUFFICIENT TO ACHIEVE SPECIFIED PROPERTIES.

CLAY BERM

NOT TO SCALE



- VALVE BOX

OBSERVATION WELI

NOT TO SCALE

PORQUE PAVEMENT NOTES

JUS PANEMON TOTES:

THE MOST CARRENT SPECIFICATION FOR POROUS ASPHALE PANEMENT AND
INSTITUTION EETS FORDER AT THE UNIT STORMANTS COUTER ARBSITE
HTMP://WWW.UEU/SPECIFICATIONS.SPECIFICATION, SHALL BE
CONSIGERED PART OF THIS GEOMA CONTRICTOR THAT THE
SPECIFICATION OF THE THAN THOSE SPECIFIC THIS DE CETALS ON THIS
PHEET SMALL BE SUMMITTED TO THE DESIGN ENGINEER FOR APPROVAL.

ALL MATERIAL TO BE INSTALLED SHALL MEET THE SPECIFICATIONS DISCUSSED IN THE UNH STORMWATER SPECIFICATIONS FOUND IN THE ABOVE WEB ADDRESS AND BE FREE OF UNDUITABLE MATERIALS SUCH AS SILT. CLAY, ORGANIC MATERIAL, ROCKS LARGER THAN THE AGGREGATE SPECIFIED IN THE GRADATIONS, ETC.

ONCE THE AREA FOR THE POROUS PAVEMENT HAS BEEN PREPARED TO SUBGRADE, LINE THE SIDES OF THE EXCAVADON THAT MILL BE EXPOSED TO NATIVE MATERIALS OR MATERIALS USED FOR SLOPE FILL WITH FILTER

TO NATION WATERLAS OR WATERALS LISED FOR SLOPE FILL WITH FLITE FLARED, WARATH FOR THE AREA OF WEILAND SOULS OF POOR SOUL CONDITIONS ONLY.

DO NOT LIKE FLARED ASSOCIATION OF THE POPPINS PAYMENT AREA. SUCH CONDITIONS SHALL BE DETERMINED BY THE CONTRACTOR WHO DESIGN DISMETER. ASSOCIATION OF THE PROPERTY AREA SHOWN IN THE CETAL CORRESPONDED PAYMENT AREA. AS SHOWN IN THE CETAL CORRESPONDED PAYMENT AREA. AS SHOWN IN THE CETAL CORRESPONDED PAYMENT AND ASSOCIATION OF THE PROPERTY ASSOCIATION.

WHERE JOINTS ARE NECESSARY.
FOLD 4--FT OF FABRIC OUT OVER FILL SLOPE'S DURING

CONSTRUCTION OF THE POROUS MEDIA BED TO LIMIT INTRODUCTION OF SEDIMENT AND IMPURITIES TO THE FILTER. ONCE THE PLTER MATERIAL IS PLACED THROUGH THE CHOKER COURSE FOLD THE 4--FT OVERLAP OVER THE FILTER MATERIA TO PROTECT IT FROM SEDIMENT AND IMPURITIES UNTIL THE

PAVEMENT IS PLACED. PAVENENT IS FLACED.

ON OF PARK OPEN THE FLIER FAMINE.

FOLD OVERLAP OVER PALAMENT UNIX, VOCITATION IS

STANDLINGO ON ADACION'S AGE AGAS, ROLLOY

OVERLAPPING FAMINE ONE VOCITATION IS STANDLINGO

OVERLAPPING THEREOT OF DEPT AND OTHER MATERIALS

MORATHIS ONTO THE PAVENENT FROM THE LOAMED AREAS.

INSTALL RESERVOIR COURSE WATERIAL (AASHTO NO.3 OR AASHTO NO. 5) AREAS WHERE CALLED FOR IN MAXIMUM 6 INCH UFTS AND COMPACT TO 95% MAXIMUM PROCTOR DENSITY TO THE DEPTHS SPECIFED IN THE TYPICAL CROSS SECTIONS.

RESERVOIR COURSE MASHTO	NO. 3) ORADING REQUIREMENTS:
	PERCENTAGE BY WEIGHT
SIEVE DESIGNATION:	SQUARE WESH SIEVE:
21/2 INCH	100%
2 INCH	90100%
11/2 INCH	35-70%
1 INCH	0-15%
1/2 INCH	05%

RESERVOIR COURSE (AASHTO NO. 5) GRADING REQUIREMENTS:

	PERCENTAGE BY WEIGHT
SIEVE DESIGNATION:	SQUARE MESH SEVE
11/2 INCH	100%
1 INCH	90100%
3/4 INCH	20-55%
1/2 INCH	0-10%
3/8 INCH	0.5%

INSTALL FILTER BLANKET WATERIAL (3/8" PEA STONE: DSD = 3/8") IN AREAS WHERE CALLED FOR IN MAXIMUM 3 INCH LIFTS AND COMPACT TO 95% MAXIMUM PROCTOR DENSITY TO THE DEPTHS SPECIFIED IN THE OPICAL CROSS SECTIONS

INSTALL FILTER COURSE MATERIAL (ITEM 304.1 SAND) IN AREAS MAERE CALLED FOR IN MAXIMUM 8 INCH LIFTS AND COMPACT TO 99% MAXIMUM PROCTOR DENGTY TO THE DEPTHS SPECIFIED IN THE TYPICAL CROSS

FILTER COURSE NHOOT ITEM 304.1 MODIFIED (SAND) GRACING REQUIREMENTS: PERCENTAGE BY WEIGHT SIEVE DESIGNATION: SQUARE MESH SIEVE: NO. 4 NO .200 70--100% 0--6%

INSTALL CHOKER COURSE (AASHTO NO.37) IN AREAS OF PORGUS
PAYEMENT AS DEPICTED IN THE CROSS--SECTION, COMPACT TO 95%
MAKINUM PROCTOR DEVSITY.

OKER COL	RSE IASSHTO NO.	57) GRADING REQUIREMENTS:
		PERCENTAGE BY WEIGHT
SIEVE DES	IGNATION:	SQUARE MESH SIEVE:
11/	2 INCH	100%
1 (84)	ЭН	95190%
1/2 1	HOH	25-60%
NO. 4		0-10%
NO. 8		0-5%
OKER COU	RSE COMMONLY R	EFERED TO AS WASHED 3/4

SIEVE DESIGNATION:

PORGUS ASPHALT MIX SECONDATION

THE WORST CUMENTS SPECIATION FOR PORGUS ASPHALT PRODUCED BY
THE UNHS STORMANIER CENTERS SHALL BE USED FOR THE APPROVS
PASCHERT.

A LITERATURE SPECIAL TOOLS ARE ACCEPTABLE, WOST NOTABLY A NUMBER
OF LOCALE MIX PLANTS PRODUCE ROMOUS ASPHALT WITH PRIESE
REPRODUCEMENT IN ULD OF THE USED ACCIDINES SPECIFIED BY THE
STORMANIES CONTERN IN THE CHIEF AND ALTERNATE SPECIAL CONTS
TO BE USED IT SHALL BE SUBMITTED TO THE CESSION ENGINEER FOR
APPROVAL. APPROVAL.

ALL POROUS ASPHALT SPECIFICATIONS SHALL MEET THE AIR VOID

CONTENT BY CORELOK (ASTM D8752). AIR VOID SHALL BE BETWEEN CURRENT UNH POROUS ASPHALT MIX DESIGN CRITERIA\*

/B INCH	55-75%			
10.4	10-25%			
iO. 8	55-10%			
0. 200	2-44			
CRITERIA:				
ONTENT (AASHTO DI	66.5%			
CONTENT BY COREL	18-20%			

PERCENTAGE BY WEIGHT SQUARE MESH SEVE: 100% 85-100%

RETAINED TENSILE STRENGTH (AASHTO 283)\*\*

\*EITHER WETHOD IS ACCEPTABLE \*\*CELLULOSE OR MINERAL FIBERS MAY BE USED TO REDUCE DRAINDOWN TSR (RETAINED TENSILE STRENGTH) VALUES FALL BELOW BOX WHEN TESTED BY NAPA IS 131 (WITH A SINGLE FREEZE THAW CYCLE RATHER THAN 5). THE CONTRACTOR SHALL EMPLOY AN ANTI STRIP ADDITIVE, SUCH AS HYDRATED LIME (ASTM C877) OR A FATTY AMINE, TO RAISE THE TSR VALUE ABOVE 80%

THE DESIGN ENGINEER SHALL BE CONTACTED AND BE PRESENT FOR THE HISTALLATION OF EACH LATER OF THE PORGUS PAVEMENT SECTIONS TO INDUSE THAT THE SUB-HBASE, BANK PLIN GRAVEL AND CHCKER COURSES ARE NOT OVER COMPACTED.

TRANSFER OF OWNERSHIP;

IN THE EVENT THE SITE IS SOLD TO ANOTHER PARTY, THAT NEW PARTY SHOULD BE MADE AWARE OF THE POROUS PAVEMENT, ITS PURPOSE AND SPECIAL MAINTENANCE REQUIREMENTS. THIS NOTIFICATION SHOULD BE DONE BOTH IN WRITING WITH THE INCLUSION OF A COPY OF THESE DESIGN MATERIALS AND VERBAL

PLAN SETS AND OTHER INFORMATION ON THIS DESIGN CAN BE

EMAIL: PLUNDBORN@FANDO.COM

### EQUIPMENT NOTES:

HAULING EQUIPMENTS

1. THE OPEN GRADED MIX SHALL BE TRANSPORTED IN CLEAN VEHICLES WITH TIGHT, SMOOTH DUMP BEDS THAT HAVE BEEN SPRAYED WITH A NON--PETROLEUM RELEASE AGENT OR SCAP SOLUTION TO PREVENT THE MINERAL FILLER, FINE AGGREGATE, SLAG DUST, ETC. SHALL NOT BE USED

WHERE, FILER, FIME ACCEPTANT, SLAS DUST, ETC. SHALL NOT BE USED TO DUST THAN OR BES.

THE 99EN SHADED MIX SHALL BE CORPETE DEBIND THE AMPROPAT HIM A SUITABLE MATERIAL OF SUCH DEER SUITABLE HE PROTECT THE MIX FROM THE MEATHER AND ALSO TO WINNING COCUMED MAD SHEEDY LIMPS.

WHEN RECESSARY, TO ENSURE THE CRUMPER OF MATERIAL AT THE SPECIFIED THEMPERING. THE PROVIDED SHALL BE MIXILATED AND COURTS SHALL BE MIXILATED AND COURTS SHALL BE FORESTAND TO SHEED SHALL BE FASTERING SECURELY.

LONG HOURS, SPECIALLY THOSE INCRESS OF 25 MILES MAY RESULT IN SEPARATION OF THE MIX AND 11S RE-ECOTION.

PLACING EQUIPMENT.

1. THE PAVER SHALL BE A SELF-- PROPELLED UNIT WITH AN ACTIVATED.

SCREED OR STRIME OFF ASSEMBLY, CAPABLE OF SEING HEATED IF NECESSARY, AND CAPABLE OF SPREADING AND FINISHING THE MIX WITHOUT SECREGATION FOR THE WIDTHS AND THICKNESSES REQUIRED IN GENERAL. TRACKED PAVERS HAVE PROVED SUPERIOR FOR POROUS

THE SCREED SHALL BE ADJUSTABLE TO PROVIDE THE DESIRED ROSS--SECTIONAL SHAPE.

PROSS--SECTIONAL SHAPE.

THE PRINCED SUPFACE SHALL BE OF UNFORM TEXTURE AND EVENNESS
AND SHALL NOT SHOW ANY INSOCIATION OF TEARING, SHOWING, OR PULLING
OF THE MIX.

THE MACHINE SHALL AT ALL TIMES, BE IN GOOD MECHANICAL CONDITION.

AND OPERATED BY COMPETENT PERSONNEL.

PAVERS SHALL BE EQUIPPED WITH THE MECESSARY ATTACHMENTS,
DESIGNED TO OPERATE ELECTRONICALLY, FOR CONTROLLING THE GRADE OF

THE FINISHED SURFACE. AND APPROVED BY THE ENGINEER BEFORE PLACEMENT OF ASPHALT

PAVERS SHALL BE EQUIPPED WITH A SLOPED PLATE TO PRODUCE A ATTACHED TO THE PAVER SCREED EXTENSION.

ATTACHE TO THE PACE DISCIDIOUS ATTRIBUTE. THE STATE SHALL BY SO CONSTRUCTED AND THE SHALL BROWN AS THE SHALL BY SO CONSTRUCTED AS TO ACCOMMISSION EXPECTED, THE FAULT SHALL BY SO CONSTRUCTED AS TO ACCOMMISSION EXPECTED AS TO THE EXCRED PLACE SHALL BY MONITOR TO TO IS AN (3/8 TO 1/2 HOT) ABOVE THE EXCRED PLACE SHALL BY MONITOR TO TO TO SO MICE, SO THE EXCRED PLACE SHALL BY MONITOR TO TO TO SO THE EXCREDING PACKAGES AND THE ACCOUNT AND THE CONSTRUCTION. EXCREDING PACKAGES AND THE ACCOUNT AND THE CONSTRUCTION. EXCREDING THE PROPOSEY FACED MAT TO TAX SURVINCE TEMPORATION OF THE PROPOSEY FACED MAT WITH THE PROPOSEY. TO ACHIEVE ROMAND OF THE HEAVY PACED MAT WITH THE PREPAYING YEARS AND WALLE SO WE THAT OF THE SHALL BY SOME WHATOUR OWNERS OF THE PERM PACED MAT WITH THE PREPAYING YEARS AND THE SHALL BY SOME WHATOUR OWNERS ONLY SHALL BY SOME WHATOUR OWNERS OWNERS.

PLACED MAT. THIS SHALL BE DONE WITHOUT UNDUE BREAKING OF FRACTURING OF THE AGGRECATE AT THE INTERFACE. THE TEMPERATURE SHALL BE MEASURED IMMEDIATELY BEHIND THE JOINT HEATER.

THE JOINT HEATER SHALL BE EQUIPPED WITH AUTOMATED CONTROLS THAT SHUTOFF THE BURNERS WHEN THE PAVEMENT MACHINE STOPS AND BEIGNITE THEM WITH THE FORWARD MOVEMENT OF THE PAVE

THE JOHN HEATER SHALL HEAT THE ENTRE AREA OF THE PREVIOUSLY PLACED MEDGE TO THE RECUIRED TEMPERATURE.

HEATING SHALL IMMEDIATELY PRECEDE PLACEMENT OF THE ASPHALT

SOLLING EQUIPMENT:

1. ROLLERS SHALL BE IN GOOD MECHANICAL CONDITION, OFFRATED BY
COMPETENT PERSONNELL CAPABLE OF PEREPRING WITHOUT BACALISH, AND
OPERATED AT SPEEDS SLOW ENOUGH TO AVOID DISPLACEMENT OF THE

ROLLERS SHALL BE TWO--AKLE TANDEM ROLLERS WITH A GROSS MASS (WEICHT) OF NOT LESS THAM 7 METRIC TONS (8 TONS) AND NOT MORE THAN 10 METRIC TONS (12 TONS) AND SHALL BE CAPABLE OF PROVIDING A MINIMUM COMPACTIVE EFFORT OF 44 KN/M (250 POUNDS PER INCH) OF MOTH OF THE DRIVE POLLER. ALL ROLLERS SHALL BE AT LEAST 1 M (42

HOLLERS SHALL BE EQUIPPED WITH TANKS AND SPRINKLING BARS FOR

METING THE ROLLS.

A RUBBER TIRE ROLLER MILL NOT BE REQUIRED ON THE OPENGRADED ASPHALT FRICTION COURSE SURFACE.

PORCUS PAYMENT PARKING AREA MAINTEMANCE.

1. THE PORCUS PAYMENTY PARKING AREA SHALL BE VACUUM SMEPT
WITH A SWEEPER TRUCK THAT HAS A VACUUM CAPARILITY
BI-ANNUALLY, ONCE IN THE SPRING THE (APRIL 15-APRIL 30), AND ONCE IN THE FALL (OCTOBER 15 -- OCTOBER 30). THIS IS NECESSAR TO INSURE THE PROLONGED FUNCTION OF THE PAVEMENTS INFILTRATIVE CAPACITY.

IT IS RECOMMENDED THAT PLOWING BE PERFORMED BY A PLOW VEHICLE WITH A PLOW THAT HAS RUBBER BLADE EDGE. THIS WILL LIMIT THE SCARRING OF THE PAVEMENT, HOWEVER, THIS IS NOT NECESSARY AND IS OPTIONAL.

SANDING FOR MINTER TRACTION OS PROHIBITED, SALTING WITH NOCI SANDING FOR MINITER TRACTION OS PHONBITED SALTING MIN IS PRONBIETO DEF-CICHO ACENTS ARE PROHIBITED DUE TO THE PROXIMITY TO THE WETLANDS AND THE USE OF METAL STORAGE BUILDINGS THAT WOULD BE ADVERSELY AFFECTED.

SHOW SHALL NOT BE STORED ON AREAS OF POROUS PAVEMENT.
SHALL BE STORED OFF OF THE PAVED AREAS TO MINIMIZE FAILURE
DUE TO PREEZING WITHIN THE PAVEMENT.

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PLINTED AREAS (INCLUDING LAWN) ADJACENT TO THE PORQUS
PAYEMENT SHOULD BE WELL MAINTAINED TO PREVENT SOIL WASHOULD THE PAYEMENT, ANY OBSERVED BARE SPOTS OR EROODED
APEAS SHOULD BE REPLANTED AND STABILIZED AT OWCE.

ROUND INTO THE PORES OF THE ASPHALT CLOGS IT. THIS IS WHY

RACTOR TRAILERS AND HEAVY LOAD FIXED READ DIFFERENTIAL CONSTRUCTION STACING, SOIL/MULCH STORAGE, ETC. ON

VEHICLES ARE PROHIBITED AT THE SITE.

POPICUS PAREMENT SEPARS:

1. POTHOLES/DAMAGE AREAS OF THE PORCUS ASPHALT PAVEWENT
LESS THAN 50--90.FT. IN SIZE CAN BE PATCHED BY ANY MEANS
DUTABLE WITH STANDARD HOT MIK ASPHALT OR PORCUS ASPHALT

REPAIR OF DAMAGE GREATER THAN 50-SOLFT. IN AREA REQUIRES DESIGN OF A PATCH TYPE DESIGNED BY A QUALIFIED PROFESSIONAL

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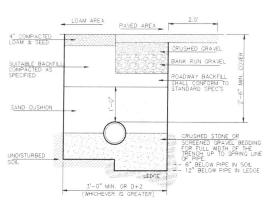
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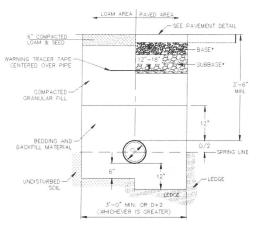
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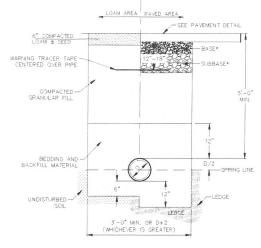
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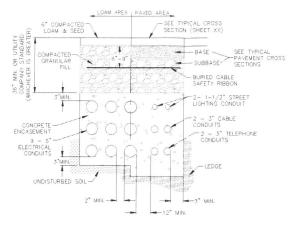
TYPICAL DRAINAGE PIPE TRENCH DETAIL NOT TO SCALE



GAS TRENCH NOT TO SCALE



WATER TRENCH SECTION NOT TO SCALE



# ELECTRICAL AND COMMUNICATION CONDUIT NOT TO SCALE

- 1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL OR AS SHOWN ON CONDUIT PLAN.
  2. DIMENSIONS SHOWN REPRESENTS OWNER'S MINIMUM REQUIREMENTS, ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT MAY NOT BE LESS THAN SHOWN.
  3. NO CONDUIT SHALL EXCECTED 360 DECREES IN TOTAL BEINS.
  4. AN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFED TO INSTALL CARRE. THE STRING SHOULD BE EQUIN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BUT DEADLY IN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BUT UNABLE TO INSTALL ITS CASE IN A SUITABLE MANNER.
  6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.



DATUM:

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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 READLY TRANSPORTED BOACK TOWARD THE SILT FENCE.

3. 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.

4. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY; THE FABRIC SHOULD BE REPLACED PRIMARY.

5. 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.

7. SILT FENCES HAVE A USEFUL LIFE OF ONE SEASON, ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHOULD BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.

CONSTRUCTION SPECIFICATIONS:

1. FERNÉS 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 CRAINAGE 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;
- 1. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1;
- TRUE SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND A THE ENDS OF THE FENCE SHOULD BE FLARED UPSLOPE;

  B. THE FARRIC SHOULD BE EMBEDDED A MINIMUM OF 8 INCHES IN DEPTH AND 4 INCHES IN WIDTH IN A TERNOH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE PROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FARRIC SHOULD BE EMBEDDED WITH A MINIMUM THE PRESENCE OF THE COMPACTED OVER THE EMBEDDED FABRIC.

  C. THE SOIL SHOULD BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 8 FEET;

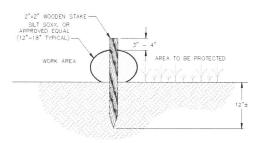
  E. ADJOINING SECTIONS OF THE FENCE SHOULD BE OVERLAPPED BY A MINIMUM OF 6 INCHES (24 INCHES) SPECEFER OF TABLED.
- SILT FENCING SHOULD NOT BE STAPLED OR NAILED TO TREES.
- THE FILTER FABRIC SHOULD BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHOULD BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
- . THE FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF O DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
- POSTS FOR SILT FENCES SHOULD BE EITHER 4-INCH DIAMETER WOOD OR 1,33 POUNDS PER LINEAL FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET, STEEL POSTS SHOULD HAVE, PROJECTIONS FOR FASTENING WHEE TO THEM, POSTS SHOULD BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRIC.
- 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.
- 11. THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS, WHEN JOINTS ARE NECESSARY; FILTER CLOTH SHOULD BY SPLICED TOGETHER OALY AT SUPPORT POST, WITH A MINIMUM 6—INCH OVERLAR, AND SECURELY?
- 12. A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
- 13. POST SPACING SHOULD NOT EXCEED 6 FEET.
- 14. 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 EXTENSED INTO THE TRENCH. THE FABRIC SHOULD NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- 16. THE TRENCH SHOULD BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC
- 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 SLIT FENCE MATERIAL INTO THE SOIL. THE SLICING METHOD MINIMALLY DISPLAYED THE SOIL UPWARD AND SLICHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
- 8. SILT FENCES SHOULD BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
- 19. THE ENDS OF THE FENCE SHOULD BE TURNED UPHILL.
- 20. 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

# PROJECT SPECIFIC CONSTRUCTION PHASING:

- REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
- INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE, EROSION CONTROL MIX BERMS, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET CO-101.
- CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED
  OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- 4. INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED DRIVEWAY EXTENSION. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.
- 5. STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILES PRACTICES". MAINTAIN THE STOCKPILES AS DIFFECTED IN THE "SOIL STOCKPILE PRACTICES".
- 6. PERFORM THE NECESSARY CUTS AND FILLS TO SUBGRADE IN THE BUILDING AND PARKING LOT AREAS.
- A) INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY
- AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (I.E. ADDITIONAL SILT FENCE, EROSION CONTROL MIX BERMS, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.)
- 8. INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. CATCH BASINS, PIPE CULVERTS, FLARED END SECTIONS, ETC.) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET 22. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON <u>SHEET C2</u>.
- ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEEDED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES." WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.
- INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
- THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
- 12. INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER INSTALLATION OF GRAVEL BASE AND CRUSHED GRAVEL INSTALLATION, IN ORDER TO LIMIT SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS. IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGH THE WINTER MONTHS.
- 13. ALL DISTURBED AREAS EXCLUDING AREAS TO BE PAVED SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "CENERAL CONSTRUCTION PHASING NOTES" AND NHSMM, VOL. 3 SHOULD BE EMPLOYED.
- MAINTENANCE AND INSPECTION:
  16. OURNO CONSTRUCTION ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY.
- 17. EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.
- 18. ALL DAMAGED TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATEL MANAGEMENT PRACTICES SHOULD BE REPAIRED OR REPLACED IMMEDIATELY UPON NOTICE.
- 19. SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE.
- PROJECT COMPLETION AND STABILIZATION:

  20. UPDN PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED),
  TEMPORARY SEDMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED.
  ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.
- 21. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS AND THE SEDIMENT FOREBAYS TO THE INFILTRATION BASINS.



NOTE: STAKE SILT SOXX, OR APPROVED EQUAL, AT 10 FT. SPACING. (ALTERNATE TO SILT FENCE)

SILT SOXX SECTION NOT TO SCALE

# WINTER STABILIZATION & **CONSTRUCTION PRACTICES:**

- MAINTENANCE REQUIPEMENTS:

  1. MAINTENANCE MEASURES SHOULD BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE WINTER PERIOD, AFTER EACH RAINFALL, SHOWSTORM, OR PERIOD OF THAMMG AND RUNOFF, THE SITE CONTRACTOR SHOULD CONDUCT INSPECTION OF ALL INSTALLED EROSION CONTROL PRACTICES AND PERFORM REPAIRS AS MEEDED 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 VEGETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESSED AS REQUIRED TO ACHEVE AIR ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY

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

- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO 1\_ACPE. AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN NHSMM, VOL. 3 AND ELSEMERE IN THIS PLAN SET, PRIOR TO ANY THAW OR SPRING MELT EVENT. STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE ORADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5
- DAYS: ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 18% WHICH DO NOT EXHIBIT A MINIMUM 85% VEGETATUS GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED 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 35% VEGETATIVE CROWTH BY OR ARE DISTURBED AFTER OCTOBER 15 SHOULD BE SEEDED AN COVERED WITH A PROPERTY INSTALLED GROSION CONTROL BLANKET OR WITH A MINIMUM OF 4 INCHES OF EROSION CONTROL MIX, UNLESS DITHERWISE SPECIFED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 WOMES IN HICKNESS OF THEY MAY OVERHEAT. ALL STONE COVERED SLOPES MUST BE CONSTRUCTED AND STABILED BY OCTOBER 15.
- 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 FIRER).
- 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 MOSTURE CONTENT.
- INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
- 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 SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSON CONTINUE BLANKETS APPROPRIATE OR DESIGN FLOW CONDITIONS AS DETERMINED BY A PROFESSIONAL ENGINEER. IF STONE LINING IS NECESS. THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
- 1. 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 WHITER 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, RASSES THE NUMBER 200 SIEVE.
- 13. SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSIC CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHOULD INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDWANT OF THESE BARRIERS.

- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
- WATER APPLICATION:

  A) MOISTEN EXPOSES 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 WATERBOOIES.
- 3. SIGNE 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.)

## **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 UNINATURAL 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:

  1) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
- IEMPORARY STABILIZATION:
  ALL AREAS OF EXPOSED OP 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 SPECIFED BY COCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS
  OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
- PERMANENT STABILIZATION: ALL AREAS OF EXPOSED OR DISTURBED SOIL SHOULD BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- . <u>MAXIMUM\_AREA\_OF\_DISTURBANCE:</u>
  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 VEGETATION.
- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHOULD BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL FLAN DEPICTED ON SLEET (S=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 ON SHEET CE-019.
- 9. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPIL
- SLOPES SHOULD NOT BE CPEATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMEN SUBSIDENCE OR OTHER RELATED DAMAGE.
- AREAS TO BE FILLED SHOULD BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
- 12. AREAS SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 3—INCHES PRIOR TO PLACEMENT OF TOPSOIL TOPSOIL SHOULD BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
- 3. ALL FILLS SHOULD BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSIC SUPPACE, 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 THICKNESS 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 OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTOR LIFTS.
- 16. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SLIT) MATERIALS ARE SUSCETBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHOULD BE PERFORMED UNDER THE DIRECTION OF A PEOFESSIONAL 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) CREATE GROOVES PEPEPNDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHSMM, VOL.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 CULT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT CULL! EROSION. ALL BENCHES SHOULD BE KEPT FREE OF SEDIMENT QUIRING ALL PHASES OF CONSTITUTION.
- 20. SEEPS OR SPRINGS ENCOUNTERED DUPING CONSTRUCTION SHOULD BE EVALUATED BY A <u>PROFESSIONA</u>
  <u>ENGINEE</u> (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHOULD BE
  REVISED TO PROPERLY MANAGE THE CONDITION.
- STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VECETATION, CRUSHED STONE, COMPOST BLANKET,
  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

# SOIL STOCKPILE PRACTICES:

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
- 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.
- 5. PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.

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 SIMILAR MATERIALS SHOULD BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.I. SLT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHOULD ALSO E COVERED.

PROTECTION OF ACTIVE STOCKPILES:

8. ALL STOCKPILES SHOULD BE SURPCUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SLT 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 BARRIER SHOULD BE INSPECTED AT THE ENC OF EACH WORKING DAY.

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

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MAINTENANCE REQUIREMENTS:

1. AMENT THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHOULD BE REMOVED ALONG WITH THE CONLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHOULD TEN BE CONTROLTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHOULD TEN BE CONTROLTED SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OF TRAVELED WAS ASSOCIATED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SCIDIMENT-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

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 NICHES THICK.

THE GAD TEXTULE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE
BELOW THE PAD.

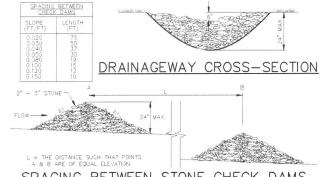
THE PAD SHOULD BE MAINTAINED OR REPLACED WHEN MUD AND SGIL PARTICLES CLOG THE VOIDS IN

THE STONE SUCH THAT MUD AND SGIL 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, MITH SUITABLE OUTLET PROTECTION.

# <u>USDA—SCS\_STABILIZED\_CONSTRUCTION\_ENTRANCE</u>



SPACING BETWEEN STONE CHECK DAMS

<u>ISTRUCTION SPECIFICATIONS:</u>
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.

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

MAINTENANCE NOTES:

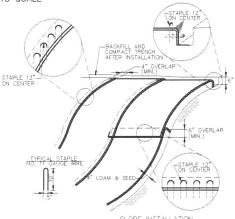
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPARED IMMEDIATELY.

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

WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED. SEEDED AND MULCHED

4. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT

# STONE CHECK DAM INSTALLATION DETAIL NOT TO SCALE



MAINTENANCE REQUIREMENTS:

1. ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY 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.

THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.

CONSTRUCTION SPECIFICATIONS:

1. MANUFACTURE'S INSTALLATION INSTRUCTIONS:

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

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

B. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 8" (15 CM) DEEP X 6" (15 CM) MOE 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 REMAINING 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH BACKFILL AND COMPACT THE TRENCH AFTER STAPLING, APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) APART IN THE BOTTOM OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE MOTH OF THE RECP'S.

C. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE, RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SUFFACE. ALL RECP'S MUST BE SECURELY PASTENED TO SOIL SUFFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOWN IN THE STAPLE PATTERN.

APPROPRIATE STAPLE PATTERN.
THE EDGES OF PARALLE REOP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM 12.5 CM) OVERLAP DEPENDING ON REOP'S TYPE.
CONSECUTIVE REOP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE
STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED APEA,
APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE REOP'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 REOP'S.

2. SITE PREPARATION:
A. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING MITH THE SOIL.
B. GRADE AND SHAPE AREA IF INSTALLATION.
C. REMOVE ALL ROCKS, CLODS. TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
D. PREPARE SEEDED BY LOOSCHIM 2-3 NOHES OF TOPSOIL ABOVE FINAL GRADE.
E. INCOMPORATE 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 MAI 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 SOLF FILLING IS SPECIFIED, SEED THE MAITING AND THE ENTIRE DISTURBED AREA AFTER

EROSION CONTROL - BLANKET SLOPE PROTECTION

# PERMANENT VEGETATION:

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.

RUNOFF SHOULD BE DIVERTED FROM THE SEEDBED AREA.

SECDED PSEPARATIONS.

1. WORK LINE AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DEPTH OF 4 INCHES WITH A DEPTH OF 5 INCHES WITH A DEPTH OF 5 INCHES PRINCE TOOL OF OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FIRE SECOND IS PREPARED. ALL BUT CLAY AND SILT SOILS SHOULD BE ROLLED TO FIRM THE SECOND WHEREVER FEASIBLE.

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

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

APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IF SOIL TESTING IS NOT
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-SE)\*

\*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

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

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

APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SQURRY INCLUDING SEED AND FERTILIZER), NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEDING THAT INCLUDES MULCIUM MAY BE LET ON SOIL SUPPROE.

WHERE FEASIBLE EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.

SPRING SEEDING USUALLY CIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LECUMES. 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 HAPD SEED (UNSCARFIED). 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 PERIOD.

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.

6. 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 OVERWINTER PROTECTION.

HYDROSEEDING:

1. WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOSEN 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 ACCE OF WOOD FIBER MULCH.

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 35% 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. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

# PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./ 1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	А	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
COLIBORO				

SOURCES:

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

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

## TEMPORARY VEGETATION:

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 0 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 2 INCHES BEFORE APPLYING FERRILIZER, LIME AND SEED.

3. 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 FEASIBLE ON SMALL OR VARNABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATEST.

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 APPLIED TO AREAS BETWEEN 25 AND 250-FT FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED MITHIN 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 (SLUPRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH.
HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SCIL 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, VOL

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 OVERWINTER 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 SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHOULD BE IMPLEMENTED.

IF ANY EMDENCE 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 EROSION PROTECTION DURING THE PERIOD OF VECETATION ESTABLISHMENT.

# TEMPORARY VEGETATION SFFDING 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 QR 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.	CROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETMEEN 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)

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SLOPE INSTALLATION

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.

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

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

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

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