SITE PLAN

TOOMERFS, LLC

18 MAIN STREET & 12 COWELL DRIVE
DURHAM, NH

REVISED JANUARY 3, 2019

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	IN 4-38-4 AMES C. ROUMAN 1 GOLD STREET HARTFORD, CT SCRD: SCRD: MEAR BUILT: 1952

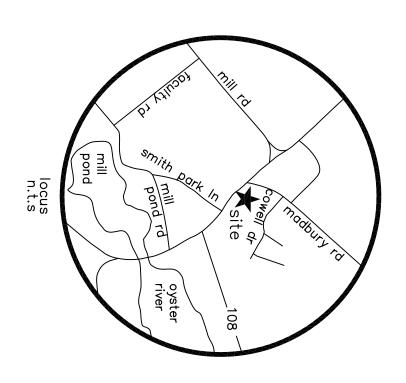


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CONSTRUCTION DETAILS	LIGHTING PLAN	LANDSCAPING PLAN	UTILITY & EROSION CONTROL PLAN	PROPOSED SITE PLAN	EXISTING CONDITIONS PLAN	TITLE
. D1-D3			C2	C1	•	SHEET

1					
NO.	0.	1.	2.		
REVISIONS	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	PLAN UPDATES	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING		
DATE	10/5/18	11/29/18	1/3/19		
l <u></u> .	_	_	_		

TOOMERFS, LLC 37 MAIN STREET UNIT O DURHAM, MH 03824

CIVIL ENGINEER

ENGINEERING, P.C.
CIVIL - STRUCTURAL - ENVIRONMENTAL

5 RAILROAD ST., P.O. BOX 359

NEWMARKET, NH 03857

NE: (603) 659-4979, FAX: (603) 659-4627

E-MAIL: MJS@MJS-ENGINEERING.COM

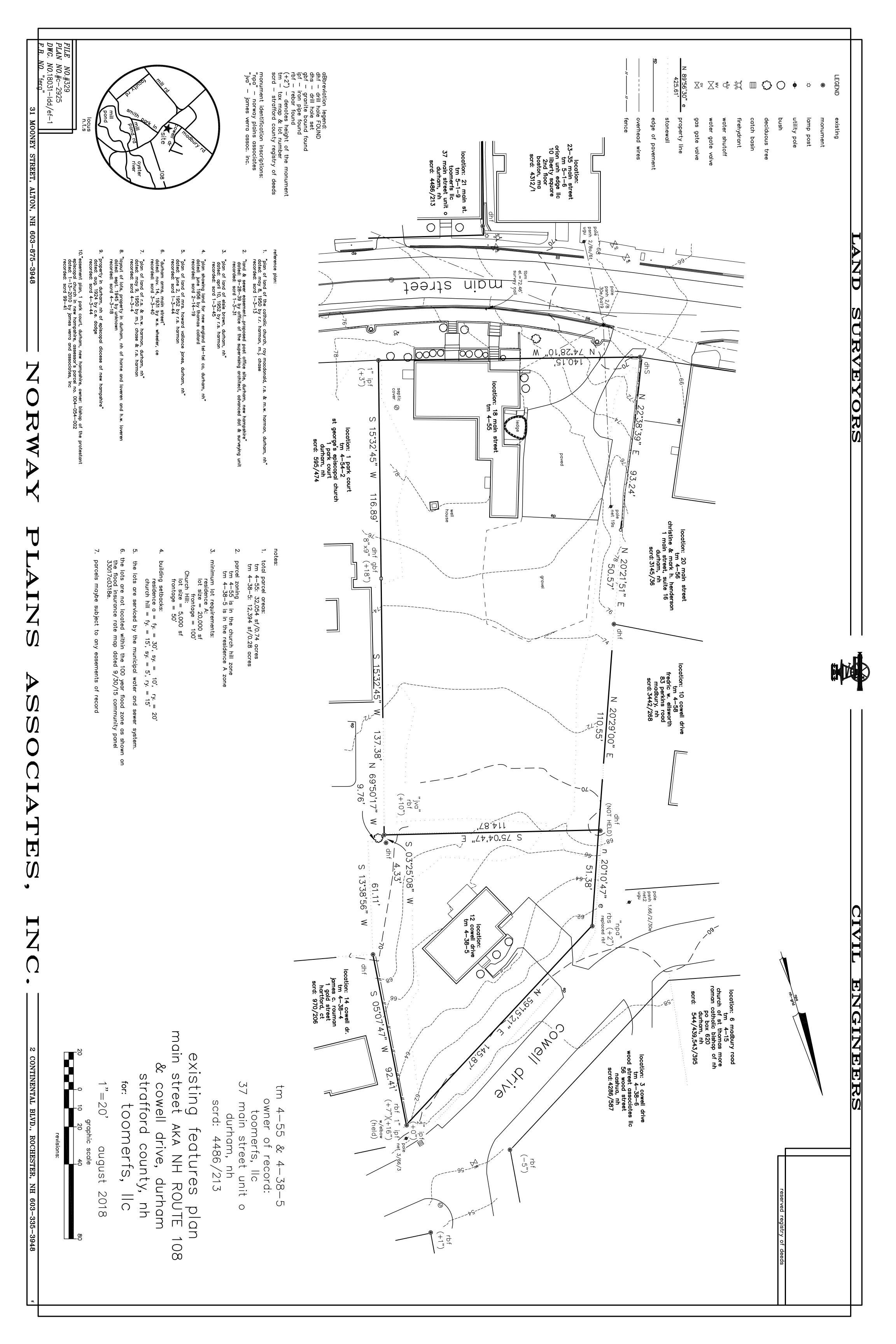
OWNER

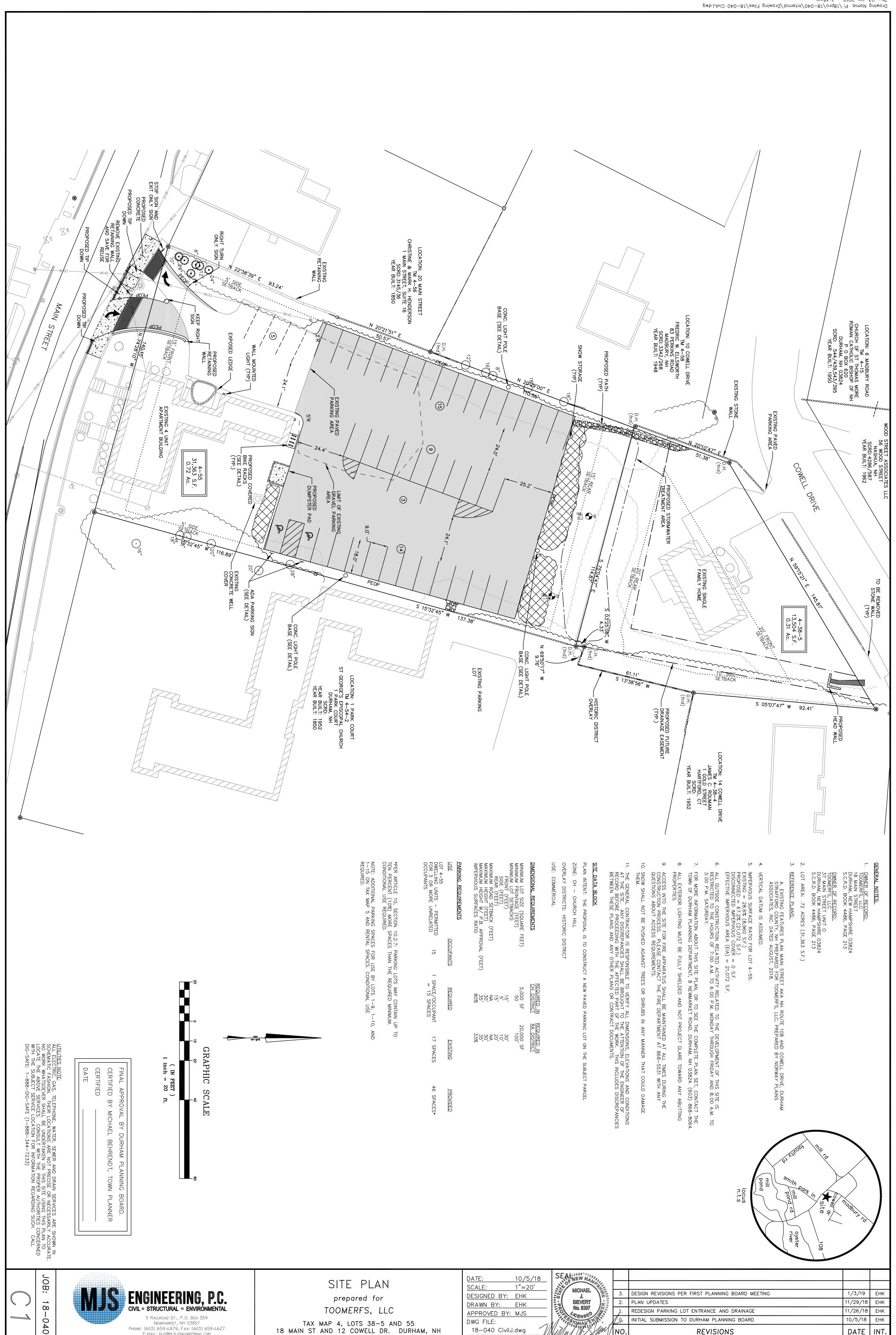
NORWAY PLAINS ASSOCIATES, INC. 2 CONTINENTAL BOULEVARD ROCHESTER, NEW HAMPSHIRE 03867 (603) 335-3948

SURVEYOR

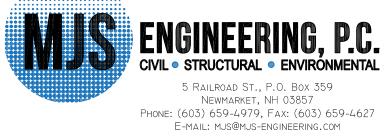
LANDSCAPE ARCHITECT

WOODBURN & COMPANY 103 KENT PLACE NEWMARKET, NEW HAMPSHIRE (603) 659-5949





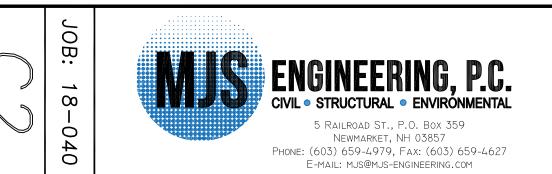




TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM, NH

DATE:	10/5/1	8	SEAL	HEW
SCALE:	1"=20'		34/	MICH
DESIGNED BY:	EHK		575	J.
DRAWN BY:	EHK		P	SIEVE No. 8
APPROVED BY:	MJS		201	CEN
DWG FILE:		1	1 1000	10MA
18-040 CivilJ	.dwg	-///	1/1/1/1	///

3.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
2.	PLAN UPDATES	11/29/18	EHK
1.	REDESIGN PARKING LOT ENTRANCE AND DRAINAGE	11/26/18	EHK
10	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK
NO.	REVISIONS	DATE	INT.

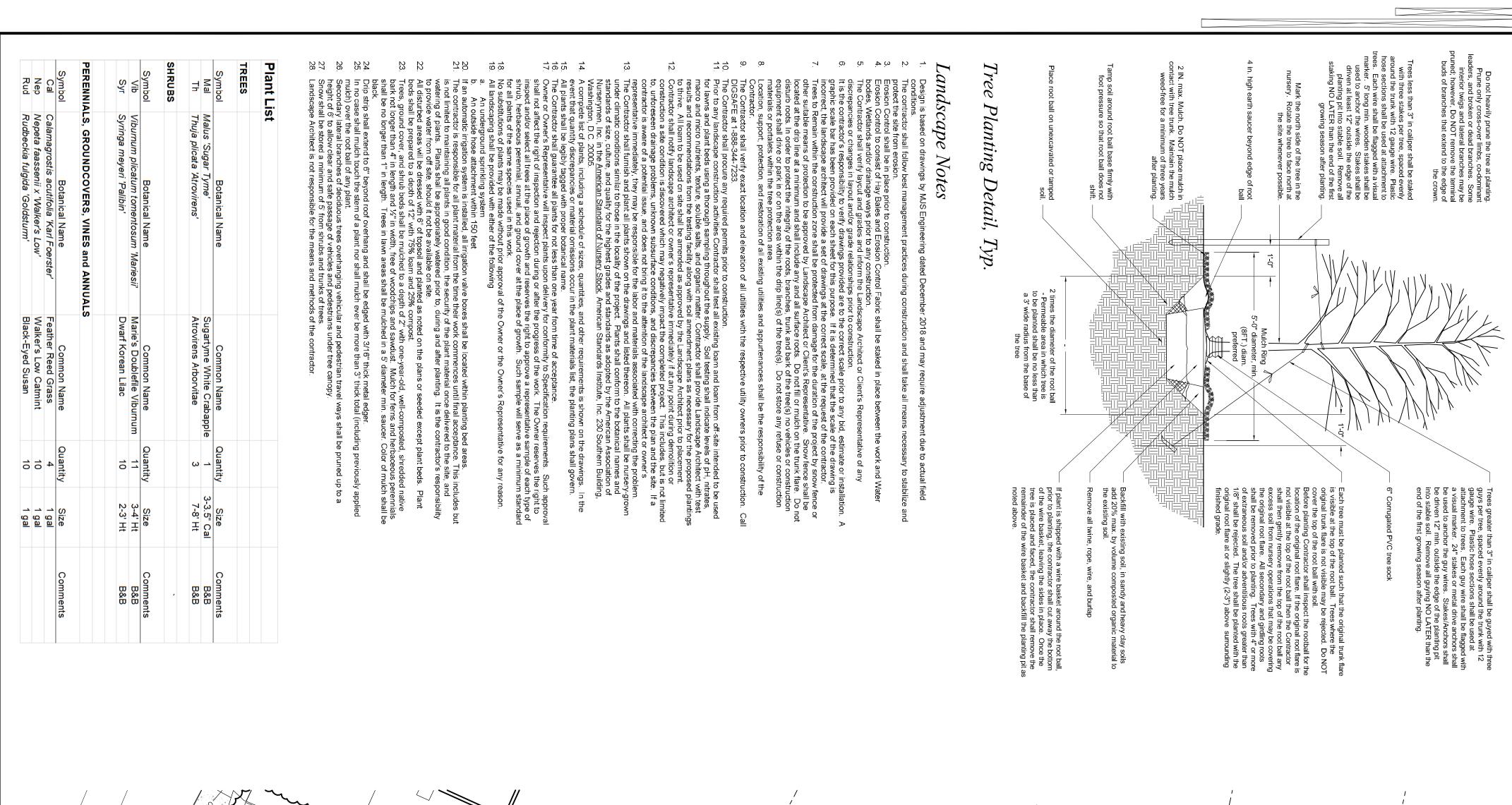


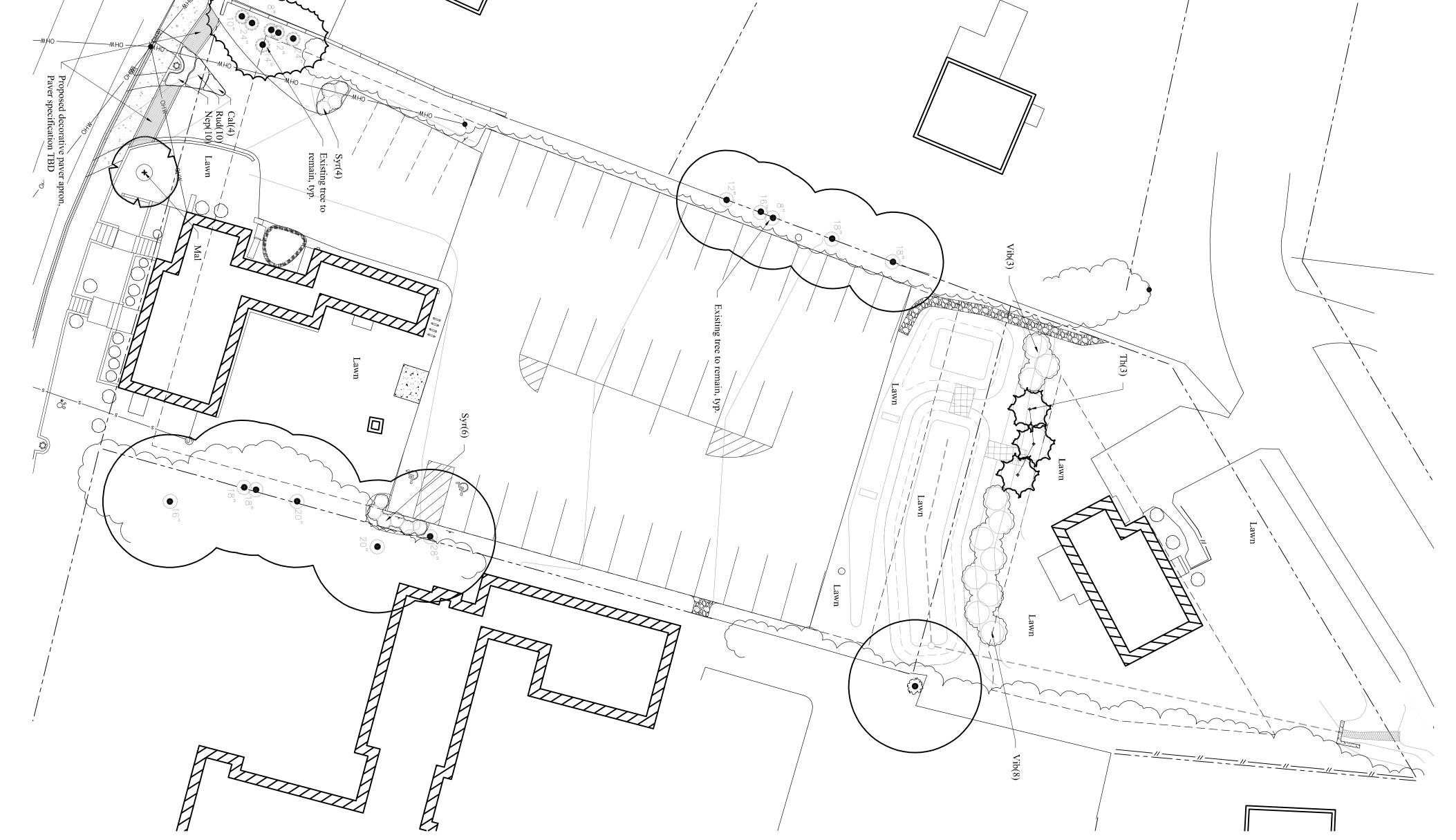
BOARD.

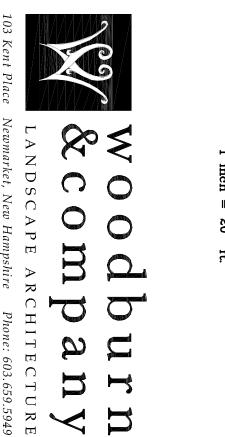
GRADING, DRAINAGE & EROSION CONTROL PLAN prepared for TOOMERFS, LLC TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM, NH

DATE:	10/5/1	18	SEA	HEW HA	9000
SCALE:	1"=20'		34	MICHAEL	O. L.
DESIGNED BY:	EHK		525	J.	ZO.
DRAWN BY:	EHK		P	SIEVERT No. 8397	ů
APPROVED BY:	MJS		= 0	(CENSE)	143
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9 9	3.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
000000	2.	PLAN UPDATES	11/29/18	EHK
0	1.	REDESIGN PARKING LOT ENTRANCE AND DRAINAGE	11/26/18	EHK
_	10	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK
1	NO.	REVISIONS	DATE	INT.







JOB:

700

040

GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

ENGINEERING, P.C.

CIVIL • STRUCTURAL • ENVIRONMENTAL

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NEWMARKET, NH 03857

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LANDSCAPE PLAN

prepared for TOOMERFS, LLC.

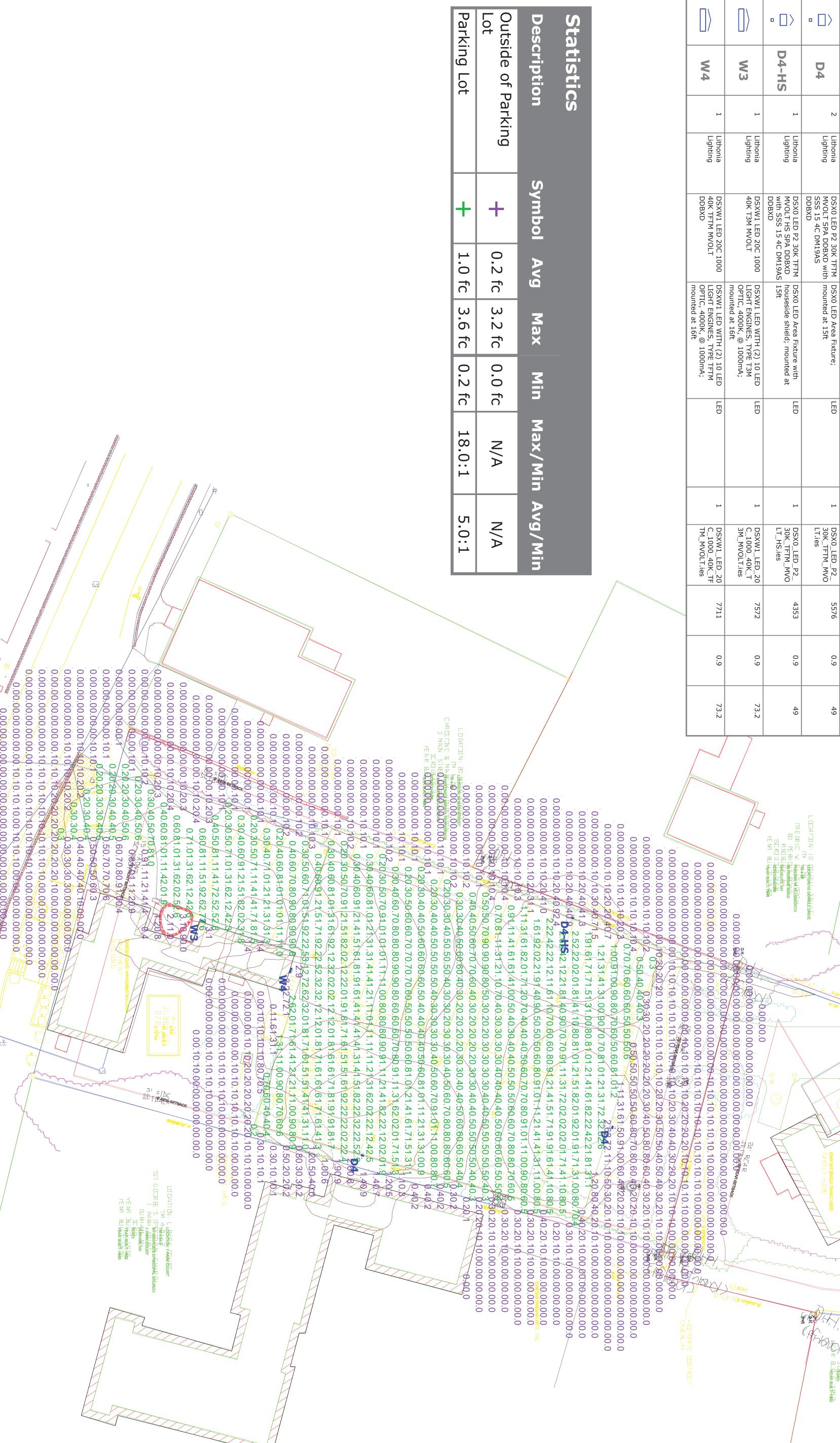
TAX MAP 4, LOTS 38-5 AND 55
18 MAIN ST AND 12 COWELL DR. DURHAM, NH

DATE.	0 /00 /10
DATE:	9/28/18
SCALE:	1"=20'
DESIGNED BY:	VM
DRAWN BY:	VM
APPROVED BY:	RW

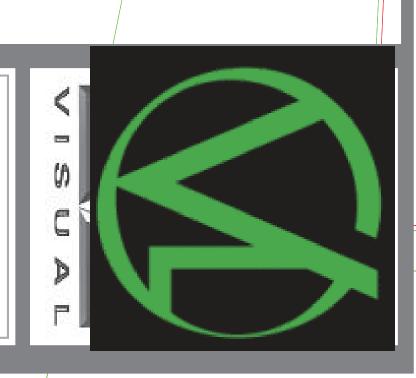
DWG FILE:

SEAL

1.	PER REVISED SITE PLAN	12/27/18	VM
0.	INITIAL SUBMISSION TO LEE PLANNING BOARD	9/28/18	VM
NO.	REVISIONS	DATE	INT.



18 WAIN ST Durham, NH Site Lighting Layout



Description

DSX0 LED Area Fixture;
mounted at 15ft

Summary

Date

12/27/2018

Hampton,

0.00.00.00.0

THE AREA OF UNSTABILIZED SUIL EACELD STABILIZED.

S STABILIZED.

EA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS
NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2006, ITEM
. 304.1 OR 304.2 HAVE BEEN INSTALLED;
AREAS NOT TO BE PAVED
. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
. A MINIMUM OF 3" OF NON—EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED IN ACCORDANCE WITH ENV—WQ
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1. INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY RAIN EVENT OF (
OR GREATER UNLESS OTHERWISE NOTED.
2. TEMPORARY STABILIZATION PRACTICES SHALL BE INSPECTED ONCE PER WEEK
CONSTRUCTION UNTIL EXPOSED SURFACES ARE STABILIZED.
3. ANY SIGNS OF RILL OR GULLY EROSION SHALL BE IMMEDIATELY REPAIRED.
MAINTENANCE:
1. MAINTAIN EROSION CONTROLS PER THE TYPICAL DETAILS AND IN CONFORMANC
EROSION AND SEDIMENT CONTROL NOTES ON THIS PAGE.

S OTHERWISE NOTED, GRASS SEED MIXTURE 'C' SHALL BE APPLIED AT THE SPECIFIED AS NOTED IN THE 'SEED MIXTURES FOR PERMANENT VEGETATION' TABLE.

SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.

G OPERATIONS SHOULD BE ON THE CONTOUR.

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

TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 85% VEGETATIVE VER HAS BEEN ESTABLISHED.

TER REMOVAL, ALL DISTURBED AREAS SHALL BE REGRADED, FERTILIZED, AND RESEEDED.

NITOR TO ENSURE VEGETATIVE GROWTH IS ESTABLISHED AND REPAIR AS NEEDED UNTIL

IMUM OF 85% VEGETATIVE COVER IS ESTABLISHED.

CONSTRUCTION SEQUENCING

AND

EROSION CONTROL

NOTE

RBED DUR 5 ACRES

CONSTRUCTION, BUT IN ANY ONE TIME BEFORE

CASE

ΒY BEHRENDT, TOWN

TYPICAL AVED PARKING LOT **CROSS** SECTION

SILTSOXX DETAIL
N.T.S.

CONCRETE SON

DΙΑ

(TYP.)

NOTE:
1. LOAM SHALL BE REMOVED TO A MINIMUM DEPTH OF
TO PLACING SELECT MATERIALS.
2. PROVIDE 1 FOOT GRAVEL SHOULDER ALONG LIMITS O
AREA.

15" PRIOR

304. ا ک Notes:

1. All material to meet Filtrexx® specifications.

2. Use Certified Filtrexx FilterMedia.

3. Compost material to be dispersed on site up slope from protected area.

9" BANK RUN GRAVEL (NHDOT 304.2) 6" CRUSHED GRAVEL (NHDOT

AS NECESSARY.

ANNELLING

MODD CHIPS OR GROUND BARK

1.A. APPLY TO A THICKNESS OF 2 TO 6 INCHES. APPLICATION RATES ARE 10-20

TONS/ACRE OR 460-920 POUNDS/1,000 SF.

1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN

A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.

1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE IN

A 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.

1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE FOR MULCHING.

2.B. 24 HOUR PERIOD. REPAIR/REPLACE AS NECESSARY.

1.B. MAINTENANCE: INSPECT ANNUALLY AND AFTER RAIN EVENTS OF 2.5 INCHES OR MORE FOR MULCHING.

2.B. 25 PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING THE 3." SCREEN,

2.B. 2.D. ARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING THE 0.75 INCHES OR SCREEN.

2.B. 3. THE ORGANIC PORTION SHALL BE ELONGATED AND FIBROUS SUCH AS FROM SHREDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. IT SHALL NOT CONTAIN WOOD AND BARK CHIPS, CROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS.

2.B. 3. SOLUBLE SALTS CONTENT SHALL BE < 4.0MMHOS/CM AND A pH OF 5.0-8.0,

2.C. 1. PLACE BERM ALONG A LEVEL CONTOUR. BERM MUST BE A MINIMUM OF 12" HIGH ON THE UPHILL SIDE AND 2 FEET WIDE. UPSLOPE AREA MUST HAVE A SLOPE OF LESS THAN 5%.

2.D. MAINTENANCE: INSPECT PERIODICALLY AND AUGMENT AS NEEDED TO MAINTAIN INITIAL THICKNESS. REPLACE IF NO LONGER FUNCTIONING AS INTENDED.

3" BITUMINOUS PAVEMENT
1" WEARING COURSE (NHDOT 1/2")
2" BINDER COURSE (NHDOT 3/4")

NOTION MATERIALS SHALL BE SELECTED BY NODITIONS, AND TIME OF YEAR; NODITIONS, AND TIME OF YEAR; YOR STRAW MULCH SHALL BE APPLIED FOR TO 70 TO 90 POUNDS TATED GROWTH COVERING AT LEAST 85 PRIOR TO OCTOBER 15TH, ONE OR SOME SHALL BE IMPLEMENTED.

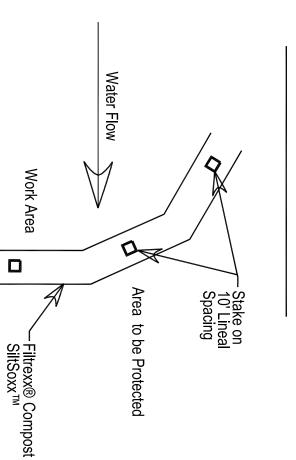
PLIED AT A RATE OF 1.5 TO 2 TONS PEINDS PER 1,000 SQUARE FEET;
85% OF THE DISTURBED AREA IS NOT OR MORE ADDITIONAL EROSION CONTROL

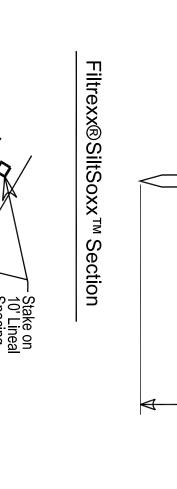
STH AND AUGUST 15TH SHALL BE COVERED WITH HAT OR LOWING CRITERIA:
SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER LOWN AWAY BY WIND OR WASHED AWAY BY FLOWING

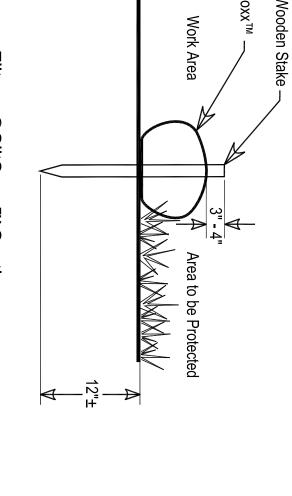
<u>1</u>.B

BASED UPON

Water Flow Work Area ®SiltSoxx™ Plan View D







	2" x 2" Wooden Stake — 8" Filtrexx® SiltSoxx™ — Work Area
12"±	3"-4" Area to be Protected

PROPOSED 12" BANK RUN GRAVEL (MINIMUM OR MATCH EXISTING DEPTH) (NHDOT 304.2)

TYPICAL

PAVEMENT CROSS
SAWCUT DETAIL

CROSS SECTION &

PROPOSED 2" BINDER COURSE (NHDOT 3/4")

GRIND 1" DEEP OFF EXISTING PAVEMENT

EXISTING PAVEMENT (DEPTH VARIES)

PROPOSED 1" WEARING COURSE (NHDOT 1/2")

П	Ш	D	0	₩	>	MIXTURE	
TALL FESCUE	CREPPING RED FESCUE KENTUCKY BLUEGRASS TOTAL	TALL FESCUE FLATPEA TOTAL	TALL FESCUE CREEPING RED FESCUE BIRDSFOOT TREFOIL TOTAL	TALL FESCUE CREEPING RED FESCUE CROWN VETCH OR FLATPEA TOTAL	TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	SPECIES	SEED MIXTURES FOR PERMANENT VEGETATION
150	50 <u>50</u> 100	20 <u>30</u> 50	20 20 8 48	15 10 15 - - 30 40 OR 55	20 20 2 2 42	POUNDS PER ACRE	NT VEGETATION
3.60	1.15 <u>1.15</u> 2.30	0.45 <u>0.75</u> 1.20	0.45 0.45 <u>0.20</u> 1.10	0.35 0.25 0.35 	0.45 0.45 0.05 0.95	POUNDS PER 1,000 SF	

D

OR LIGHT DRAG.

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

5. SLOPES MUST BE NO STEEPER THAN 2 TO 1.

6. 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.

7. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.

8. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15TH IN THE YEAR IN WHICH THE AREA BEING SEEDED WAS DISTURBED.

9. AREAS SEEDED BETWEEN MAY 15TH AND AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH MEETING THE FOLLOWING CRITERIA:

9.A. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKIFIER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER;

9.A. HAY OR STRAW MULCH SHALL BE SELECTED BASED UPON SOILS, SLOPE, FLOW CONDITIONS, AND TIME OF YEAR;

9.B. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE, EQUIVALENT TO 70 TO 90 POUNDS PER 1,000 SQUARE FEET;

10. If VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA IS NOT ACHIEVED PRIOR TO OCTOBER 15TH, ONE OR MORE ADDITIONAL EROSION CONTROL MAINTENANCE

1. PERMANEULY SEEDED AREAS SHOULD BE INSPECTED MONTHLY.

3. BASED ON INSPECTION, AREAS SHOULD BE INSPECTED MONTHLY.

3. BASED ON INSPECTION, AREAS SHOULD BE REPAIRED AND/OR RESEEDED TO ENSURE 85% OF THE SOIL SURFACE IS COVERED BY VEGETATION.

ITE PREPARATION

INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED AI INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED AI ENSURE RUNOFF IS DIVERTED FROM SEEDED AREA.

ON SLOPES OF 4:1 OR STEEPER, CREATE HORIZONTAL GROOVES PERFORECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

EED BED PREPARATION

REMOVE STONES AND TRASH FROM AREA TO BE SEEDED.

COMPACTED SOIL SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEIFERTILIZER, LIME, AND SEED.

APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10-10-10.

(EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A PER ACRE.

F 10-10-10.
1 OXIDE) AT A

APPLY LIMESTONE RATE OF 3 TONS

RAIN STORMS FOR RILLS OR DISPLACEMENT

MATTING DETAIL.

INSTALL PER

INCHES OR DOUBLE THE ABOVE LISTED NECESSARY, MULCH WILL NEED TO BE D IN THE SPRING.

TO

YEAK.

IPORARY MULCHING

HAY OR STRAW MULCHES

1.A. ORGANIC MULCHES INCLUDING HAY AND STRAW SHALL BE AIR—UKILU,

1.B. APPLICATION RATE SHALL BE 2 BALES/1,000 SF (70–90 POUNDS) OR 1.5–2.0

TONS/ACRE TO COVER 75–90% OF THE GROUND.

1.C. ANCHORING SHALL BE ONE OF THE FOLLOWING

1.C.1. NETTING SHALL BE JUTE, WOOD FIBER, OR BIODEGRADABLE PLASTIC NETTING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

1.C.2. TACKIFIER: APPLY POLYMER OR ORGANIC TACKIFIER TO ANCHOR HAY OR STR. MULCH. APPLY POLYMER OR ORGANIC TACKIFIER AND 80–120 LBS/ACRE FOR POLYMER MATERIAL RBOVE LIST

NG RIODEGRADABLE PLASTIC NETTING ECIFICATIONS.

NIC TACKIFIER TO ANCHOR HAY OR STRAW S SPECIFICATIONS. TYPICAL APPLICATION OLYMER MATERIAL AND 80—120 LBS/ACRE

æ

1. APPLY PRIOR TO A STORM EVENT. CLOSELY MONITOR THE WEATHER TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.

2. MULCHING WITHIN A SPECIFIED TIME PERIOD FROM ORIGINAL SOIL EXPOSURE

2.A. WITHIN 100 FEET OF WETLANDS THE TIME PERIOD SHOULD BE NO GREATER THAN 7

DAYS.

2.B. IN OTHER AREAS IT SHALL BE NO GREATER THAN 14 DAYS.

3. MULCH MATERIALS SHALL BE SELECTED BASED UPON SOILS, FLOW CONDITIONS, AND TIME OF YEAR.

TEMPORARY MULCHING

1. HAY OR STRAW MULCHES

1. A. ORGANIC MULCHES

CATION DATE

MIXTURE

N 5/15

RYE

30

2.B.2.

15 — SEPTEMBER 15) USE ON THE SLOPES (15% OR GREATER), ANY LAKES, STREAMS, AND WETLANDS. SEPTEMBER 15 — APRIL 15) IN E ON SIDE SLOPES OF GRASSED GREATER THAN 8%).

PERIODICALLY AND BEFORE AND AFTER STORM EVENTS TO ENSURE CONTACT SOIL UNTIL 85% VEGETATIVE COVER IS ESTABLISHED. REPAIR AND RESTAPLE

ANNUAL RYE

40

SEED MIXTURES FOR PERMANENT VEGETATION	POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREAS AND ATHLETIC FIEL	AREAS AND ATHLETIC FIELDS. (TOPSOIL SENTIAL FOR GOOD TURF.)	LY USED PARKING LOTS, ODD AREAS, ED LANDS, AND LOW INTENSITY USE EATION SITES.	TANNELS WITH FLOWING WAIET.
VEGETATION	E FOR USE ,	חת	08>	C
	AS PLAYING ARE	FAIR	G00D G00D G00D	GUUD
	AS AND ATHLET	EXCELLENT	GOOD GOOD EXCELLENT	EXCELLEN
	C FIEL	EXC XC	EXC	ЕXC

OUSLY WITH THE SEED. THE USE OF MENDED (UNLESS IT IS USED TO HOLD 3Y USING STRAW MULCH AND HOLDING IT ACRE OF WOOD FIBER MULCH. HYDROSEEDING.

NOTE:

			SOIL DRAINAGE	
USE	SEEDING MIXTURE	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED
STEEP CUTS AND FILLS, BORROW AND	B≯	FAIR POOR	G00D G00D	GOOD FAIR
DISPOSAL AREAS	DΩ	POOR FAIR	GOOD EXCELLENT	EXCELLENT EXCELLENT
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	CA	G00D G00D	GOOD EXCELLENT	GOOD EXCELLENT
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES	∩ ₪ >	GOOD GOOD	GOOD GOOD	GOOD FAIR FXCFI I FNT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	ח וד	FAIR FAIR	EXCELLENT EXCELLENT	EXCELLENT EXCELLENT

A. PLACE MAXIMUM 12" LIFTS AND COMPACT TO 95% MAXIMUM DRY DENSITY.

B. ALL MATERIAL BASED ON PROCTOR TEST SHALL BE FREE OF DELETERIOUS MATERIALS SUCH AS LC STUMPS, BRUSH, AND ROCKS LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING PLACED.

C. BASE MATERIALS: BANK RUN AND CRUSHED GRAVEL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 9 MAXIMUM DRY DENSITY TO THE DEPTHS SPECIFIED IN THE PARKING LOTS CROSS-SECTION DETAILS.

D. STABILIZE ALL PARKING AREAS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

E. PAVEMENT

1. PLACE S AS SOON AS POSSIBLE AFTER THE SELECT MATERIALS APF

13. INSPECT, MAINTAIN, AND IF NECESSARY ""

EROSION CONTROL NOTES ON"

14. REMOVE ALL TEMPO"

OT

SEED MI	XTURE SELECTIO	SEED MIXTURE SELECTION BASED ON SOIL TYPE	NL TYPE	
			SOIL DRAINAGE	
USE	SEEDING MIXTURE	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED
TS AND FILLS, BORROW AND	B ≯	FAIR POOR	G00D G00D	GOOD FAIR
AREAS	C D	POOR FAIR	GOOD EXCELLENT	EXCELLENT EXCELLENT
'S, EMERGENCY SPILLWAYS, AND ANNELS WITH FLOWING WATER.	A C	GOOD GOOD	GOOD EXCELLENT	GOOD EXCELLENT
SED PARKING LOTS, ODD AREAS,	. >	GOOD	GOOD	GOOD
ANDS, AND LOW INTENSITY USE ON SITES.	СВ	G00D G00D	GOOD EXCELLENT	FAIR EXCELLENT
AS AND ATHLETIC FIELDS. (TOPSOIL	ו ריז	FAIR	EXCELLENT	EXCELLENT

CONTROL

DUST SHALL BE CONTROLLED ON SITE DURING CONSTRUCTION FOLLOWING DUST CONTROL MEASURES
MULCHING AND VEGETATIVE COVER TO REDUCE DUST.
MECHANICAL SWEEPERS AND FINE WATER SPRAYS.
COVER SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.

WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.

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.

APPLY FERTILIZER AT A RATE OF 600 LBS PER ACRE OF 10—10—10. APPLY LIMESTONE PER ACRE.

(EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE.

GENERAL
STOCKPILES MUST BE LOCATED 50 FEET FROM DITCHES AND CULVERT INLETS.
PROTECTION OF STOCKPILES
PROTECT SOIL AND AGGREGATE STOCKPILES WITH TEMPORARY PERIMETER
SEDIMENT BARRIER SUCH AS SILT FENCE OR SILT SOCK.
COVER ACTIVE STOCKPILES WITH ANCHORED PROTECTIVE COVERING PRIOR
TO EXPECTED STORM EVENTS.
INACTIVE STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR
TEMPORARILY SEEDED AND MULCHED PER THE TEMPORARY VEGETATION
AND MULCHING NOTES ON THIS PAGE.
STOCKPILES THAT ARE A SOURCE OF DUST SHALL BE COVERED.

E-CONSTRUCTION MEETING WITH CITY OFFICIALS, OWNER, AND CONTRACTORS IF REQUIRI APPROVAL PRIOR TO BEGINNING CONSTRUCTION. AFE, INDIVIDUAL UTILITIES, AND CITY DEPARTMENTS TO GET ALL UTILITIES MARKED PRIOR

NG-SAFE, INDIVIDUAL CHELLE, AND PERMANENT SEDIMENT AND EROSION CONTROLS.

VID STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS.

VID STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT OF EARTH MOVING OPERATIONS.

VID STABILIZE ALL TEMPORARY AND PERMANENT TO EARTH MOVING OPERATIONS.

VID STABILIZE ALL TEMPORARY AND PERMANENT OF REMOVAL.

VID STABILIZE ALL TEMPORARY AND PERMANUS.

VID STATE REGILIATION.

VID STABILIZE ALL TEMPORARY AND PERMANUS.

VID STABILIZE ALL TEMPORARY AND PERMANUS.

VID STATE REGILIATIONS.

TO START OF

TYPICAL BIKE RACK DETAIL ATE: ASTM 136 % INCH THICK PLATE WITH THREE ¾ H DIA. HOLES AT 120 DEGREE SPACING.
LT: DRIVE TYPE ANCHOR BOLT MADE OF ZINC ATED AISI 1038 HEAT TREATED CARBON STEEL, ½ H DIA. BY 3 INCHES LONG.
NCRETE STRENGTH TO BE 3,000 PSI AT 28 DAYS. THEN FINISHED W/ POLYESTER POWDER

THEN FINISHED W/ POLYESTER POWDER ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL 5 RAILROAD ST., P.O. BOX 359 NEWMARKET, NH 03857 PHONE: (603) 659-4627

₩ STAND

JOB:

18-

040

2" STANDARD WEIGHT STEEL PIPE (TYP.)

E-MAIL: MJS@MJS-ENGINEERING.COM

CONSTRUCTION DETAILS prepared for

TOOMERFS, LLC TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM, NH

SEALNEW HAMPE 10/5/18 DATE: SCALE: AS SHOWN MICHAEL J. DESIGNED BY: EHK SIEVERT No. 8397 EHK DRAWN BY: APPROVED BY: MJS DWG FILE: 18-040 CivilJ.dwg

ADDITIONAL NOTES:

1. NO FUEL SHALL BE STORED ON SITE DURING CONSTRUCTION.

2. DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE IMPLEMENTATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.

3. ALL CONSTRUCTION MATERIALS THAT ARE SPILLED OR DEPOSITED ON THE PUBLIC ROADWAYS SHALL BE REMOVED BY THE CONTRACTOR.

4. DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

5. THE GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE SITE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

6. NO CONSTRUCTION VEHICLES SHALL USE MAIN ST. ENTRANCE

1.	DESIGN REVISIONS PER FIRST PLANNING BOARD MEETING	1/3/19	EHK
0	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	10/5/18	EHK
NO.	REVISIONS	DATE	INT.

ARILY STABILIZE LOAM STOCKPILES WITH:

ARILY STABILIZE LOAM STOCKPILES WITH:

WINTER RYE GRASS— PRIOR TO SEPTEMBER 15TH

WULCH— FROM SEPTEMBER 15TH TO MAY 1ST

AND STABILIZE ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROLS. CONSTRUCT SWALES

ENT FOREBAY AND STABILIZE. SEDIMENT FOREBAY SHALL BE USED AS A SEDIMENT TRAP WITH SPILLWAY

THE UNDISTURBED AREA DOWNSLOPE.

E SHALL BE INSTALLED BEFORE ANY MAJOR EARTH MOVING OPERATIONS.

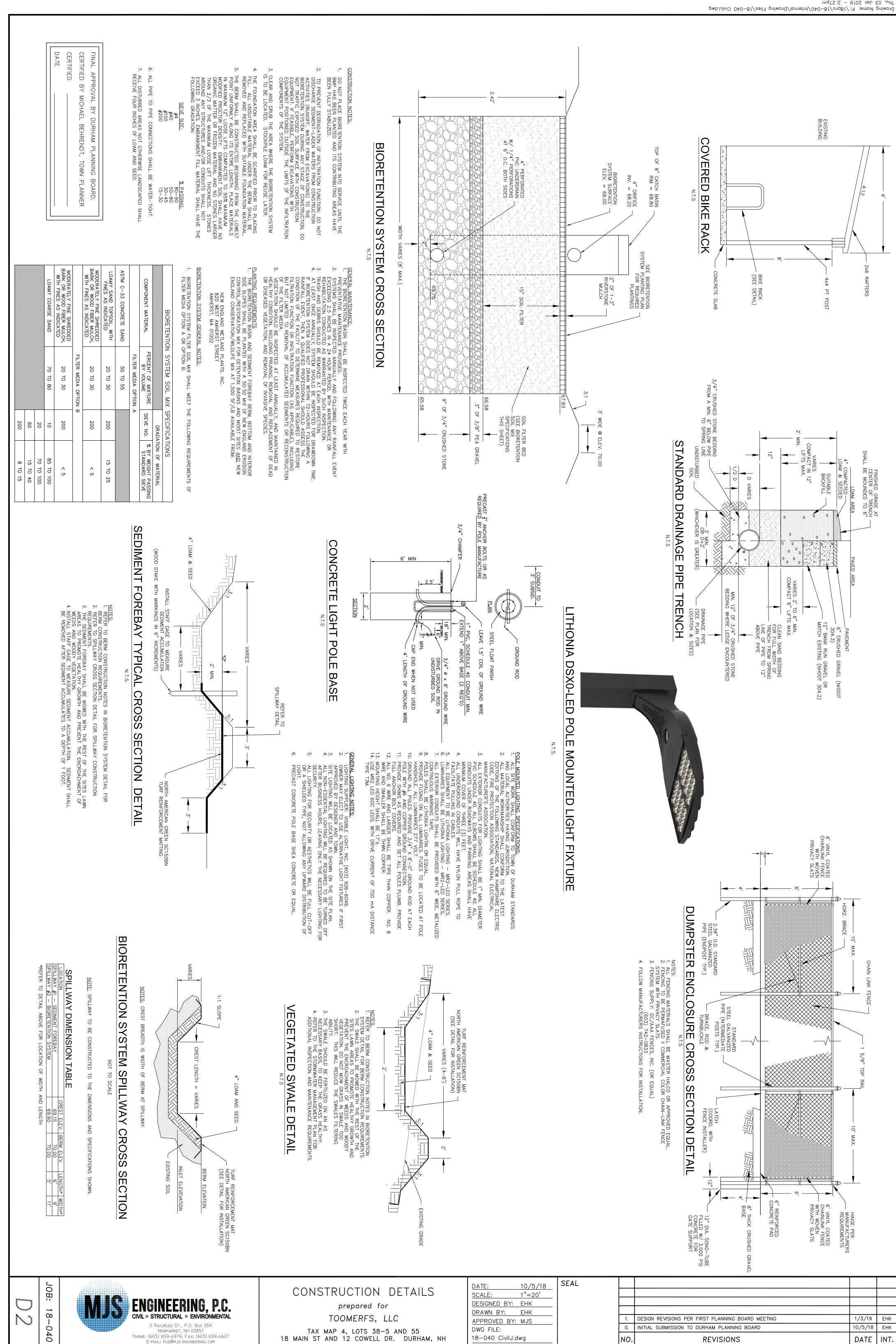
TENTION SYSTEM ALLOWS INFILTRATION OF RUNOFF. DO NOT CONSTRUCT THE BIORETENTION SYSTEM WILL DECREASE

PE AREAS ARE STABILIZED. UNSTABILIZED AREAS THAT DRAIN TO THE BIORETENTION SYSTEM WILL DECREASE

OT CONSTRUCTION

AND FILES.

AND STATE REGULATIONS



CATCH BASIN FRAME HOLDS SILT SACK IN PLACE

CATCHBASIN - GRATE

SPILLWAYS TO BE LINED WITH NORTH AMERICAN IN CONTROL BLANKET OR APPROVED EQUAL.

JOB:

18-040

TYPICAL TURF RE NFORCEMENT MATTING DETAIL

STONE CHECK DAM

(TYP.)

ES AS SHOWN, INCLUDING PARKING SPACES, ISLANDS. ALL TRAFFIC PAINT SHALL MEET HAMPSHIRE DEPARTMENT OF TRANSPORTATION E "F". MEDIAN ISLANDS AND CENTERLINES TO TRAFFIC PAINT.

GNS SHALL CONFORM TO THE LATEST SIFORM TRAFFIC CONTROL DEVICES", THE WAY SIGN AND PAVEMENT MARKINGS", AND ACT REQUIREMENTS.

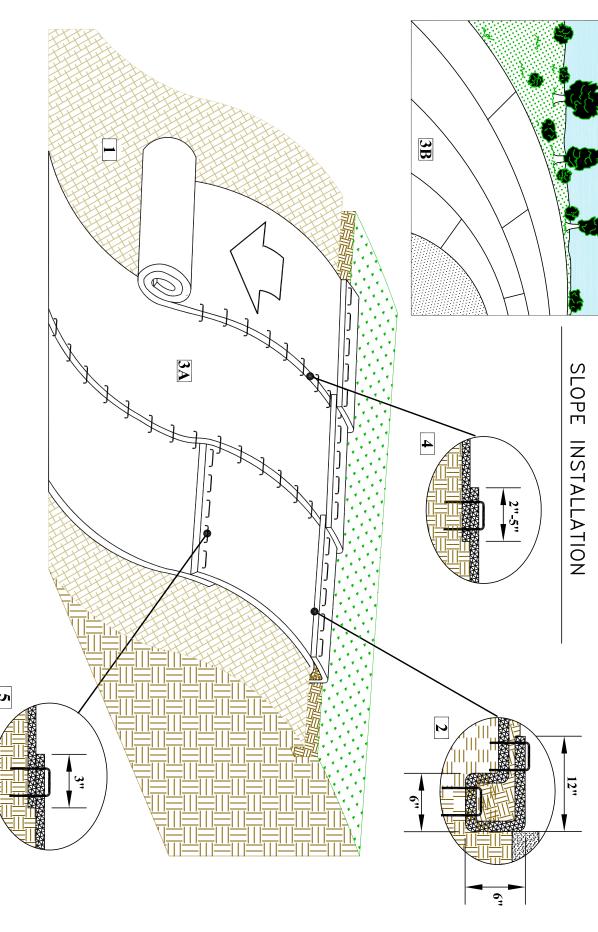
H WIDE DIAGONAL LINES SPACED IT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP—SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES MATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED COMPACTED SOIL AND FOLD THE REMAINING 12"(30CM) PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE EXAMPLES/STAKES SPACED APPROXIMATELY 12"(30CM) APART ACROSS THE WIDTH OF PS. RECPS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS ITHE STAPLE PATTERN GUIDE.

ITHE STAPLE PATTERN GUIDE.

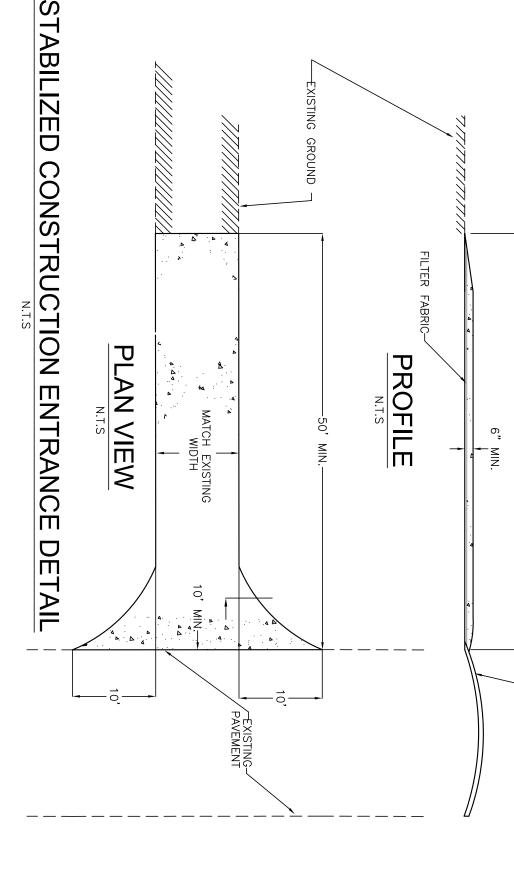
IS OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" — 5" (5—12.5CM) OVERLAP DEPENDING ON THE RECPS TYPE.

THY RECPS SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3"(7.5CM) OVERLAP.

HROUGH OVERLAPPED AREA, APPROXIMATELY 12"(30CM) APART ACROSS ENTIRE RECPS WIDTH.



R7-8 ADA SIGN
W/ "VAN ACCESSIBLE"
- (R7-8aP)
TO BE POLE MOUNTED
(SEE DETAIL) M.U.T.C.D. R7-8a NCE AS NECESSARY. NAL) AND PLACE 6" NG ROAD. S TO MINIMIZE DIRECT



= THE DISTANCE SUCH THAT POINTS A AND ARE OF EQUAL ELEVATION.

CONSTRUCTION SPECIFICATIONS:

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

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

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

5' X 5' BLUE SQUARE W/ 4' PAINTED TE ADA SYMBOL

PROFILE VIEW

(TYP.)

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 REPAIRED IMMEDIATELY.

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

3. 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 OF THE STRUCTURE.

ADA STRIPING AND SIGN DETAIL

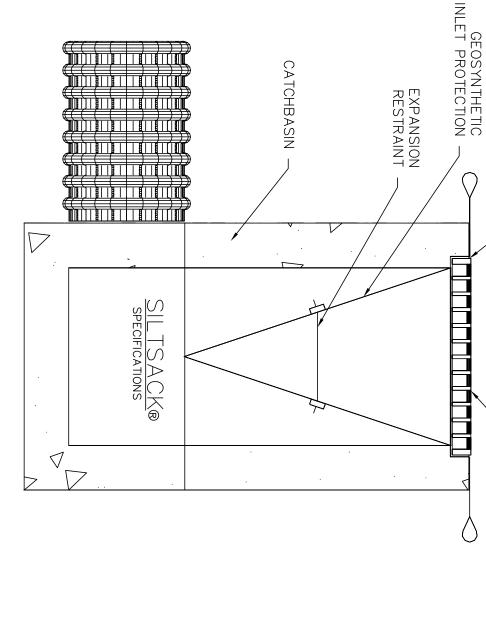
CATCH

BASIN GEOSYNTHETIC SEDIMENT TRAP

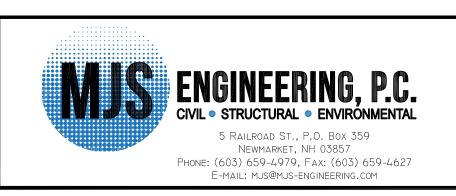
1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE 'REGULAR FLOW SILTSACK @' OR APPROVED EQUAL. SPECIFICATIONS FOR SILTSACK @ DETAILED. I. FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 1.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN EDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF ONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE ILTER TRAP TO MITIGATE PONDING.

GRAB TENSILE STRENGTH
GRAB TENSILE ELONGATION
PUNCTURE
MULLEN BURST
TRAPEZOID TEAR
UV RESISTANCE
APPARENT OPENING SIZE
FLOW RATE
PERMITTIVITY TEST METHOD 300 LBS 20 % 120 LBS 800 PSI 120 LBS 80 % 40 US SIEVE 40 GAL/MIN/SQ FT 0.55 SEC -1

REGULAR FLOW SILTSACK ® (FOR AREAS OF LOW TO MODERATE PRECIP

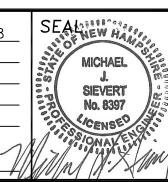


14649 HIGHWAY 41 NORTH EVANSVILLE, IN 47725 800-772-2040 www.nagreen.com AMERICAN GREEN \bigcirc CHANNEL INSTALLATION



CONSTRUCTION DETAILS prepared for TOOMERFS, LLC TAX MAP 4, LOTS 38-5 AND 55 18 MAIN ST AND 12 COWELL DR. DURHAM,

•	DATE:	10/5/1	8
	SCALE:	1"=20'	
	DESIGNED BY:	EHK	
	DRAWN BY:	EHK	
	APPROVED BY:	MJS	
	DWG FILE:		
NH	18-040 CivilJ.d	wg	



BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) 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 COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART IN THE RECP'S WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 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) ACROSS THE WIDTH OF THE RECP'S.

ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. 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 THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN GUIDE. APART AND 4" (10 CM) ON CENTER TO SECURE RECP'S.

FULL LENGTH EDGE OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) ADACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" — 5" (5 CM — 12.5 CM) (DEPENDING ON RECP'S TYPE) AND STAPLED.

IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M — 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGEERED 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.

PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, REA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

FERTILIZER, AND SEED.

TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

CONDITIONS, THE USE OF

STAPLE OR STAKE

LENGTHS GREATER

THAN 6" (15 CM) MAY BE NECESSARY NOTE:

TO PROPERLY

12" (30 CM) APART IN

(15

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE

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