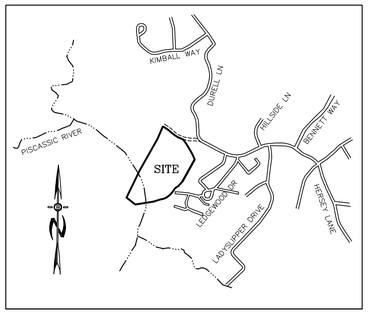
PROPOSED RESIDENTIAL DEVELOPMENT HERSEY LANE TAX MAP R4, LOT 3

NOT FOR CONSTRUCTION

APPLICANT:

CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, N.H. 03857

LOCATION MAP



NOT TO SCALE

INDEX

CIVIL ENGINEERS:

BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE,
STRATHAM, NEW HAMPSHIRE
PHN. 603-583-4860, FAX. 603-583-4863

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No. 9900
PROFESSIONAL ENGINEER

LAND SURVEYORS:

DOUCET SURVEY INC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857
(603) 659-6560 http://www.doucetsurvey.com

WETLAND / SOIL CONSULTANT:

GOVE ENVIRONMENTAL SERVICES INC.
8 CONTINENTAL DRIVE,
BLDG 2 UNIT H
EXETER, NH 03833
1-603-778-0644

STATE OF NEW HAMPSHIRE
LUKE HURLEY
No. 232
CERTIFIED WETLAND SCIENTIST

STATE OF NEW HAMPSHIRE
LUKE D. HURLEY
No. 095
CERTIFIED SOIL SCIENTIST

PLAN SET LEGEND

UTILITY POLE		FENCING	x
EXISTING LIGHT POLE		DRAINAGE LINE	D
EXISTING CATCH BASIN		STONE WALL	
EXISTING HYDRANT		TREE LINE	
SINGLE POST SIGN		ABUT. PROPERTY LINES	
PINES, ETC.		EXIST. PROPERTY LINES	
MAPLES, ETC.		BUILDING SETBACK LINES	
EXIST. SPOT GRADE	96x69	EXIST. CONTOUR	100
PROP. SPOT GRADE	96x69	PROP. CONTOUR	100
TEST PIT	TP#1A	SOIL LINES	

REQUIRED PERMITS
NHDES AoT APPROVAL NUMBER:
NHDES SEWER DISCHARGE PERMIT
EPA-CGP

OWNER OF RECORD
77 HERSEY LANE LLC.
WALTER CHENEY
76 EXETER ROAD, #B
NEWMARKET, NH 03857

	REVISIONS:	DATE:
	REVISED PER TRC COMMENTS	12-1-20
	REVISED PER REVIEW COMMENTS	9-28-20
	REVISED PER REVIEW COMMENTS	8-20-20
	REVISED PER TRC COMMENTS	3-2-20
	PLANS ISSUED	1-7-20

NH-1123 PROPOSED SUBDIVISION PLAN

NOTES:

1. REFERENCE: TAX MAP R4 LOT 3
2. TOTAL PARCEL AREA: 558,011 SQ. FT. OR 12.81 AC.
3. OWNER OF RECORD: 77 HERSEY LANE LLC
   76 EXETER STREET
   NEWMARKET NH 03857
   R.C.R.D. BOOK 5025, PAGE 703
4. ZONE: R2–RESIDENTIAL
   OPEN SPACE DIMENSIONAL REQUIREMENTS:
   - MIN. LOT AREA: N/A
   - MIN. FRONTAGE: 25 FT.
   - MIN. FRONT SETBACK: 25 FT. FROM PAVED ROAD
   - MIN. SIDE/REAR SETBACK: 30 FT. STRUCTURE SEPARATION
   - MAX. BUILDING HEIGHT: N/A
   - MAX. DENSITY: N/A

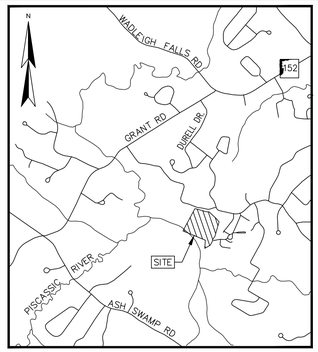
   WETLAND SETBACKS:
   - POORLY DRAINED: 25 FT.
   - VERY POORLY DRAINED: 50 FT.
   - PRIME WETLAND: 75 FT. NO DISTURB; 100 FT. NO STRUCTURE; 125 FT. NO SEPTIC

   ZONING INFORMATION LISTED HEREON IS BASED ON THE TOWN OF NEWMARKET ZONING ORDINANCE DATED MAY 23, 2018 AS AVAILABLE ON THE TOWN WEBSITE ON JANUARY 2, 2020. ADDITIONAL REGULATIONS APPLY, AND REFERENCE IS HEREBY MADE TO THE EFFECTIVE ZONING ORDINANCE. THE LAND OWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.
5. FIELD SURVEY PERFORMED BY DOUCET SURVEY DURING MARCH, 2005 USING A GEDIMETER 600 PRO TOTAL STATION. UPDATED WETLAND SURVEY PERFORMED DURING JULY 2018.
6. FLOOD HAZARD ZONE: "X", PER FIRM MAP #33013600005B, DATED MAY 2, 1991.
7. VERTICAL DATUM IS BASED ON NGVD29.
8. HORIZONTAL DATUM BASED ON REFERENCE PLAN 1.
9. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.
10. JURISDICTIONAL WETLANDS DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. DURING JULY, 2018 IN ACCORDANCE WITH THE FOLLOWING:
    - US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y–87–1 (JAN 1987)AND REGIONAL SUPPLEMENT TO CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
    - FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).
    - NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, CURRENT VERSION.
11. THE TOWN OF NEWMARKET PLANNING BOARD APPROVED A WAIVER FROM THE 100 FOOT WETLAND SETBACK REQUIREMENT AS SET FORTH IN SECTION 3.14 A(4) OF THE NEWMARKET SUBDIVISION REGULATIONS – OPEN SPACE EVALUATION CRITERA. ON OCTOBER 2, 2020.

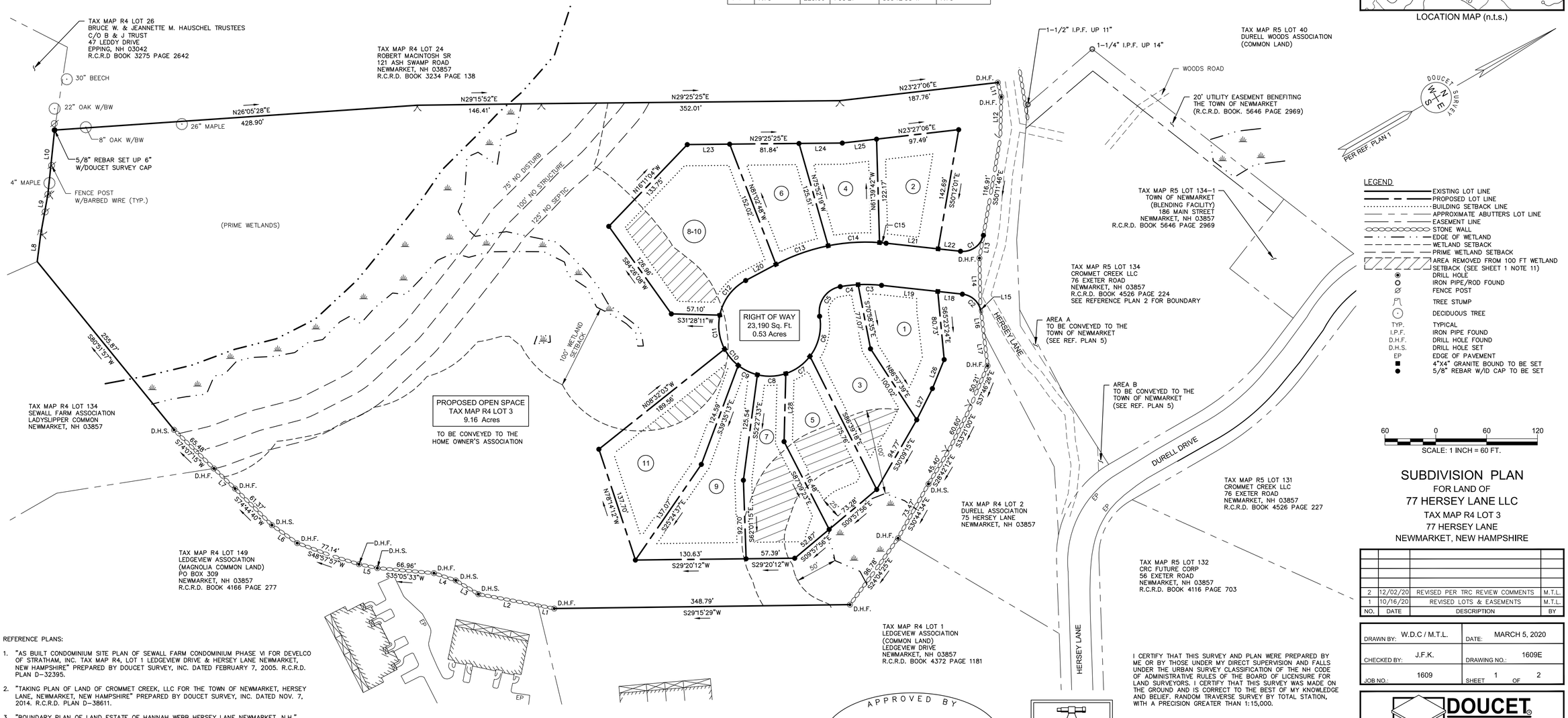
CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	35.95'	25.00'	82°23'55"	N04°59'46"W	32.93'
C2	33.53'	25.00'	76°50'20"	S74°37'21"W	31.07'
C3	27.70'	175.00'	9°04'14"	S31°40'05"W	27.68'
C4	21.10'	175.00'	6°54'25"	S23°40'45"W	21.08'
C5	47.43'	30.00'	90°35'07"	S25°04'01"E	42.64'
C6	50.14'	60.00'	47°53'03"	N46°25'03"W	48.70'
C7	35.50'	60.00'	33°53'53"	N05°31'34"W	34.98'
C8	34.03'	60.00'	32°29'58"	N27°40'21"E	33.58'
C9	25.29'	60.00'	24°08'49"	N55°59'45"E	25.10'
C10	25.29'	60.00'	24°08'49"	N80°08'34"E	25.10'
C11	41.25'	60.00'	39°23'21"	S68°05'21"E	40.44'
C12	52.77'	60.00'	50°23'38"	N23°11'52"W	51.09'
C13	65.60'	225.00'	16°42'17"	S10°21'05"W	65.37'
C14	60.97'	225.00'	15°31'30"	S26°27'59"W	60.78'
C15	7.75'	225.00'	1°58'27"	S35°12'58"W	7.75'

LINE TABLE			LINE TABLE		
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S41°12'49"W	19.71'	L15	S66°57'29"E	6.69'
L2	S40°32'30"W	71.50'	L16	S66°57'29"E	23.15'
L3	S61°20'19"W	31.20'	L17	S66°57'29"E	40.00'
L4	S48°22'26"W	27.16'	L18	S36°12'12"W	29.25'
L5	S41°53'40"W	22.11'	L19	S36°12'12"W	66.72'
L6	S65°13'12"W	36.47'	L20	N01°59'57"E	40.41'
L7	S73°33'48"W	34.39'	L21	N36°12'12"E	61.67'
L8	N52°36'04"W	32.26'	L22	N36°12'12"E	26.68'
L9	N49°52'20"W	48.20'	L23	N29°25'25"E	50.02'
L10	N54°02'17"W	76.22'	L24	N29°25'25"E	51.10'
L11	S73°30'48"E	17.44'	L25	N23°27'06"E	40.61'
L12	S58°35'43"E	48.10'	L26	S37°57'17"E	36.87'
L13	S50°11'46"E	27.39'	L27	S33°21'00"E	41.33'
L14	S61°09'59"E	57.62'	L28	S58°33'47"E	80.21'

LOT AREA TABLE			
LOT	SQ. FT.	ACRES	FRONTAGE
1	10,382	0.238	94.42
2	10,872	0.250	69.42
3	14,251	0.327	118.67
4	9,127	0.210	60.97
5	11,579	0.266	35.50
6	9,817	0.225	65.60
7	13,156	0.302	34.03
8–10	24,805	0.569	93.18
9	14,346	0.329	25.29
11	17,325	0.398	25.29



LOCATION MAP (n.t.s.)



LEGEND

- EXISTING LOT LINE
- PROPOSED LOT LINE
- BUILDING SETBACK LINE
- APPROXIMATE ABUTTERS LOT LINE
- EASEMENT LINE
- STONE WALL
- EDGE OF WETLAND
- WETLAND SETBACK
- PRIME WETLAND SETBACK
- AREA REMOVED FROM 100 FT WETLAND SETBACK (SEE SHEET 1 NOTE 11)
- DRILL HOLE
- IRON PIPE/ROD FOUND
- FENCE POST
- TREE STUMP
- DECIDUOUS TREE
- TYP. TYPICAL
- I.P.F. IRON PIPE FOUND
- D.H.F. DRILL HOLE FOUND
- D.H.S. DRILL HOLE SET
- EP EDGE OF PAVEMENT
- ■ 4"X4" GRANITE BOUND TO BE SET
- ● 5/8" REBAR W/ID CAP TO BE SET

60 0 60 120
SCALE: 1 INCH = 60 FT.

SUBDIVISION PLAN

FOR LAND OF
77 HERSEY LANE LLC
TAX MAP R4 LOT 3
77 HERSEY LANE
NEWMARKET, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
2	12/02/20	REVISED PER TRC REVIEW COMMENTS	M.T.L.
1	10/16/20	REVISED LOTS & EASEMENTS	M.T.L.

DRAWN BY:	W.D.C / M.T.L.	DATE:	MARCH 5, 2020
CHECKED BY:	J.F.K.	DRAWING NO.:	1609E
JOB NO.:	1609	SHEET	1 OF 2

REFERENCE PLANS:

1. "AS BUILT CONDOMINIUM SITE PLAN OF SEWALL FARM CONDOMINIUM PHASE VI FOR DEVELCO OF STRATHAM, INC. TAX MAP R4, LOT 1 LEDGEVIEW DRIVE & HERSEY LANE NEWMARKET, NEW HAMPSHIRE" PREPARED BY DOUCET SURVEY, INC. DATED FEBRUARY 7, 2005. R.C.R.D. PLAN D–32395.
2. "TAKING PLAN OF LAND OF CROMMET CREEK, LLC FOR THE TOWN OF NEWMARKET, HERSEY LANE, NEWMARKET, NEW HAMPSHIRE" PREPARED BY DOUCET SURVEY, INC. DATED NOV. 7, 2014. R.C.R.D. PLAN D–38611.
3. "BOUNDARY PLAN OF LAND ESTATE OF HANNAH WEBB HERSEY LANE NEWMARKET, N.H." PREPARED BY R.G. MOYNIHAN DATED MARCH 1986. R.C.R.D. PLAN D–15157.
4. "FINAL SUBDIVISION AND SITE PLAN SEWALL FARM NEWMARKET, N.H." PREPARED BY FREDERICK E. DREW ASSOCIATES DATED APRIL 1986 LAST REVISED SEPTEMBER 1986. R.C.R.D PLAN D–16121.
5. "LOT LINE REVISION PLAN, LAND OF CROMMET CREEK LLC, TAX MAP R5 LOT 134, 40 DURELL DRIVE AND THE TOWN OF NEWMARKET, HERSEY LANE NEWMARKET, NEW HAMPSHIRE" PREPARED BY DOUCET SURVEY, LLC DATED MARCH 5, 2020.

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

_____ L.L.S. #937

_____ DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

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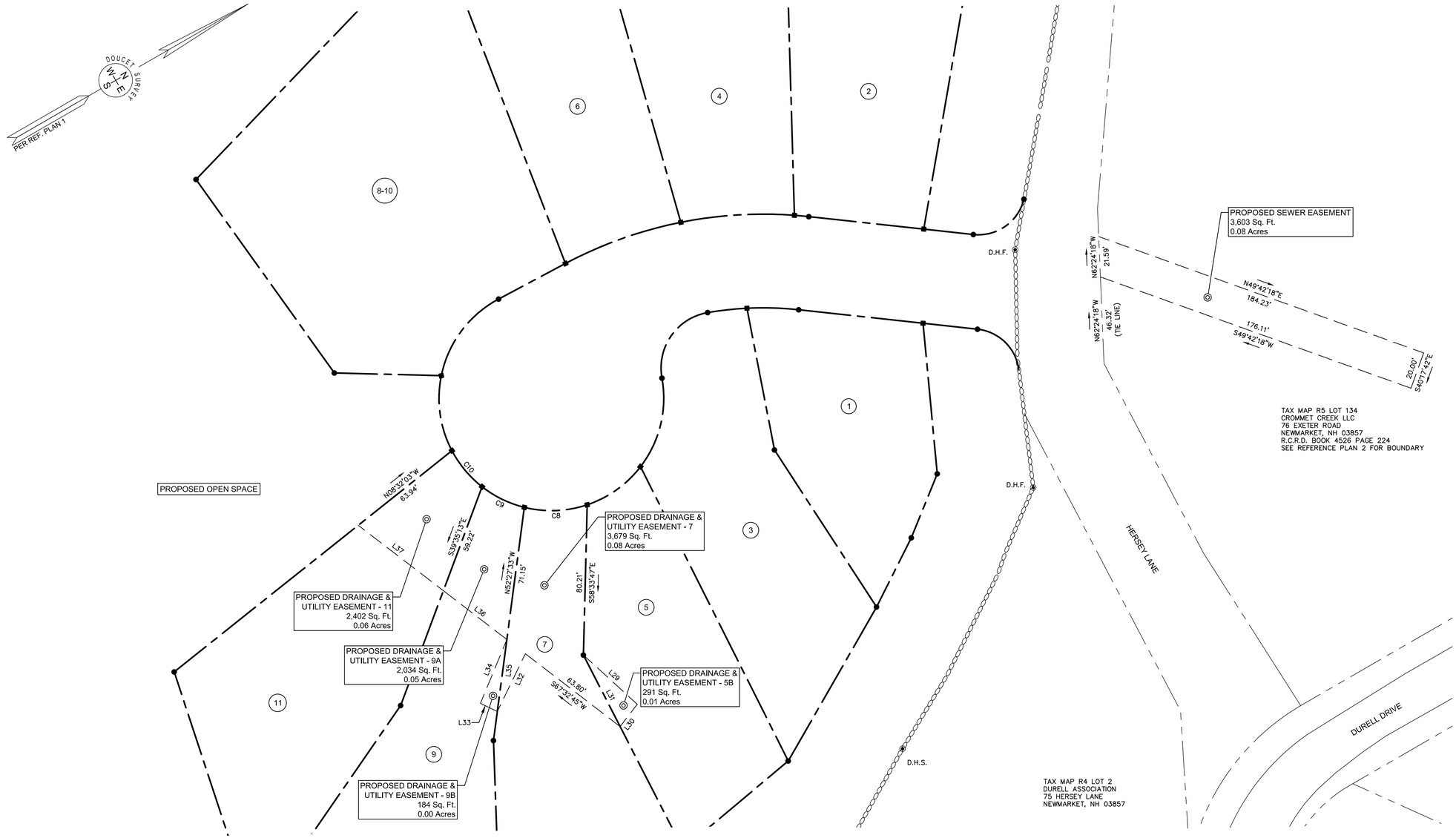

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C3	27.70'	175.00'	9°04'14"	S31°40'05"W	27.68'
C4	21.10'	175.00'	6°54'25"	S23°40'45"W	21.08'
C5	47.43'	30.00'	90°35'07"	S25°04'01"E	42.64'
C6	50.14'	60.00'	47°53'03"	N46°25'03"W	48.70'
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C9	25.29'	60.00'	24°08'49"	N55°59'45"E	25.10'
C10	25.29'	60.00'	24°08'49"	N80°08'34"E	25.10'

LINE TABLE		
LINE	BEARING	DISTANCE
L29	N72°27'48"E	38.94'
L30	S22°27'15"E	15.00'
L31	N87°09'23"W	42.91'
L32	S34°07'58"E	34.31'
L33	S55°52'02"W	10.00'
L34	N37°33'02"W	36.90'
L35	N52°27'33"W	38.80'
L36	S67°32'45"W	42.73'
L37	S67°32'45"W	57.32'

APPROVED BY

Chairman's Signature

Date

Planning Board
Newmarket, New Hampshire

STATE OF NEW HAMPSHIRE — No. 937 JOHN F. KAISER — LICENSED LAND SURVEYOR

SIGNATURE

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

_____ L.L.S. #937

_____ DATE

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PROPOSED EASEMENT PLAN

FOR LAND OF

77 HERSEY LANE LLC

TAX MAP R4 LOT 3

77 HERSEY LANE

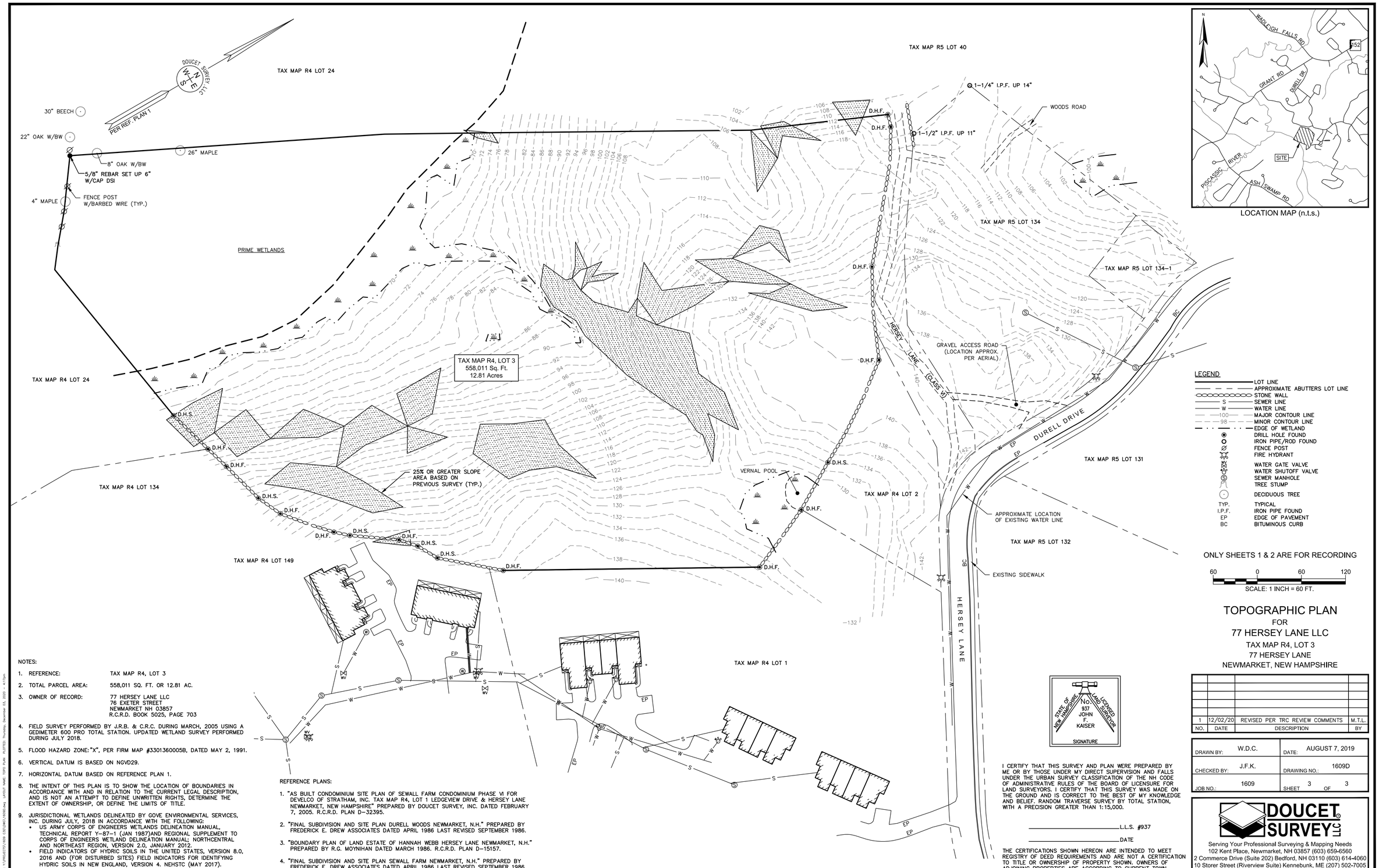
NEWMARKET, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
2	12/02/20	REVISED PER TRC REVIEW COMMENTS	M.T.L.
1	10/16/20	REVISED LOTS & EASEMENTS	M.T.L.

DRAWN BY:	W.D.C. / M.T.L.	DATE:	MARCH 5, 2020
CHECKED BY:	J.F.K.	DRAWING NO.:	1609E
JOB NO.:	1609	SHEET	2 OF 2

DOUCET SURVEY LLC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

FILE NAME: C:\Users\Mike\AppData\Local\Temp\AcPublish_13628\1609E DSBDIVISION2.dwg LAYOUT NAME: EASEMENT PLAN (2 of 2) PLOTTED: Wednesday, December 02, 2020 - 12:06pm



LOCATION MAP (n.t.s.)

LEGEND

- LOT LINE
- APPROXIMATE ABUTTERS LOT LINE
- STONE WALL
- S SEWER LINE
- W WATER LINE
- 100 MAJOR CONTOUR LINE
- 98 MINOR CONTOUR LINE
- EDGE OF WETLAND
- DRILL HOLE FOUND
- IRON PIPE/ROD FOUND
- FENCE POST
- FIRE HYDRANT
- WATER GATE VALVE
- WATER SHUTOFF VALVE
- SEWER MANHOLE
- TREE STUMP
- DECIDUOUS TREE
- TYP. TYPICAL
- I.P.F. IRON PIPE FOUND
- EP EDGE OF PAVEMENT
- BC BITUMINOUS CURB

NOTES:

1. REFERENCE: TAX MAP R4, LOT 3
2. TOTAL PARCEL AREA: 558,011 SQ. FT. OR 12.81 AC.
3. OWNER OF RECORD: 77 HERSEY LANE LLC
   76 EXETER STREET
   NEWMARKET NH 03857
   R.C.R.D. BOOK 5025, PAGE 703
4. FIELD SURVEY PERFORMED BY J.R.B. & C.R.C. DURING MARCH, 2005 USING A GEDIMETER 600 PRO TOTAL STATION. UPDATED WETLAND SURVEY PERFORMED DURING JULY 2018.
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2. "FINAL SUBDIVISION AND SITE PLAN DURELL WOODS NEWMARKET, N.H." PREPARED BY FREDERICK E. DREW ASSOCIATES DATED APRIL 1986 LAST REVISED SEPTEMBER 1986.
3. "BOUNDARY PLAN OF LAND ESTATE OF HANNAH WEBB HERSEY LANE NEWMARKET, N.H." PREPARED BY R.G. MOYNIHAN DATED MARCH 1986. R.C.R.D. PLAN D-15157.
4. "FINAL SUBDIVISION AND SITE PLAN SEWALL FARM NEWMARKET, N.H." PREPARED BY FREDERICK E. DREW ASSOCIATES DATED APRIL 1986 LAST REVISED SEPTEMBER 1986. R.C.R.D PLAN D-16121.

STATE OF NEW HAMPSHIRE — No. 937 JOHN F. KAISER — LICENSED LAND SURVEYOR — SIGNATURE

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

_____ L.L.S. #937

_____ DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

ONLY SHEETS 1 & 2 ARE FOR RECORDING

60 0 60 120

SCALE: 1 INCH = 60 FT.

TOPOGRAPHIC PLAN

FOR

77 HERSEY LANE LLC

TAX MAP R4, LOT 3

77 HERSEY LANE

NEWMARKET, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	12/02/20	REVISED PER TRC REVIEW COMMENTS	M.T.L.

DRAWN BY:	W.D.C.	DATE:	AUGUST 7, 2019
CHECKED BY:	J.F.K.	DRAWING NO.:	1609D
JOB NO.:	1609	SHEET	3 OF 3

DOUCET SURVEY LLC

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102 Kent Place, Newmarket, NH 03857 (603) 659-6560

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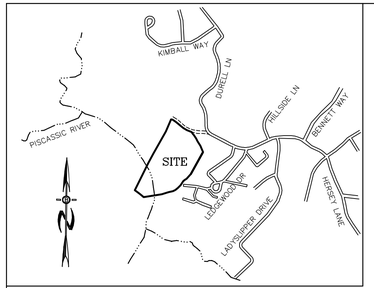


LOCATION MAP
SCALE 1"=1000'

OPEN SPACE NOTE
ALL OPEN SPACE LAND TO BE RESTRICTED SHALL INCLUDE A NOTATION ON THE RECORDED MYLAR INDICATING THAT "THIS LAND IS DESIGNATED AND RESTRICTED AS OPEN SPACE IN ACCORDANCE WITH RSA 674 21-A AND SHALL BE ENFORCEABLE BY THE TOWN OF NEWMARKET"

SLOPES GREATER THAN 25%

STATE OF NEW HAMPSHIRE
LUKE D. HURLEY
No. 095
CERTIFIED SOIL SCIENTIST
3/4/2020

ZONE: R2-RESIDENTIAL

DIMENSIONAL REQUIREMENTS:	OPEN SPACE
MIN. LOT AREA	N/A
MIN. FRONTAGE	25'
MIN. FRONT SETBACK	25' FROM EP
MIN. SIDE/REAR SETBACK	10' (30'SEPERATION)
MAX. BUILDING HEIGHT	35 ft.
MAX. DENSITY	2 UNITS/AC
WETLAND SETBACKS:	
POORLY DRAINED	25 ft.
VERY POORLY DRAINED	50 ft.
PRIME WETLAND	75 ft. NO DISTURB 100 ft. NO STRUCTURE 125 ft. NO SEPTIC

PREPARED FOR:

CHINBURG PROPERTIES INC
3 PENSTOCK WAY
NEWMARKET, NH 03857

BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

NOTES
1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN LOCATED FROM FIELD OBSERVATIONS AND THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. BEALS ASSOCIATES OR ANY OF THEIR EMPLOYEES TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN, THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND UTILITIES OR STRUCTURES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE
2. THIS PLAN HAS BEEN PREPARED FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
3. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
4. ALL ROAD AND DRAINAGE WORK TO CONFORM TO TOWN STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL PROPOSED UTILITIES TO BE UNDERGROUND.
5. ALL PROPOSED SIGNS SHALL CONFORM TO THE TOWN ZONING REGULATIONS.
6. DISTURBANCE GREATER THAN 100,000 SQ. FT., NHDES ALTERATION OF TERRAIN RSA 485:A-17 IS REQUIRED.
7. SEE DETAIL SHEET FOR STANDARD CONSTRUCTION NOTES AND DETAILS.

PRIME WETLANDS
(VERY POORLY DRAINED)

UTILITY NOTES
1. PROJECT IS PROPOSED TO BE SERVED BY MUNICIPAL WATER AND SEWER EXTENSIONS.

SIGHT DISTANCE NOTES
1. PER THE AASHTO SAFE SIGHT DISTANCE REQUIREMENTS FOR A 30 MPH ROAD THE REQUIRED SAFE SIGHT DISTANCE IS 200'. FIELD MEASUREMENTS AND OBSERVATIONS RESULT IN A 400'+ SIGHT DISTANCE TO THE EAST (ALONG HERSEY LANE) AND 272' TO THE NORTH (ALONG DURELL LANE).

PROPOSED LIMIT OF CLEARING PRIOR TO CONSTRUCTION
75' NO-CUT / NO-DISTURB
100' NO-STRUCTURE (PRIME)
TO REMAIN CLASS VI.
PROPOSED HERSEY LANE EXT. (TO BE A TOWN OWNED PUBLIC 50' ROW)
FUTURE APPROVED BUILDING
PROPOSED AREA DEEDED FROM CROMMET CREEK, LLC REQUIRED).
25' WETLAND SETBACK (TYP.).
V-POOL
TP 1A
TP 2
1 SILL @ 132
2 SILL @ 127
3 SILL @ 135
4 SILL @ 125
5 SILL @ 132
6 SILL @ 124
7 SILL @ 127
8 SILL @ 123
9 SILL @ 126
10 SILL @ 123
11 SILL @ 120
115A
115B(VPD)
135C
135D
140B
140C
140D
140E
547B(PD)
547C(PD)
HERSEY LANE
DURELL LANE

77 HERSEY LANE LLC
76 EXETER STREET
NEWMARKET NH 03857

40 0 20 40 80 160

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. It was produced by a professional soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a report that accompanies this map.
The site specific soil survey was produced May 6, 2019, and was prepared by James P. Gove, CSS # 004, Gove Environmental Services, Inc. for residential development off Hersey Lane, Newmarket, NH. GES project number 2018083
Soils were identified with the New Hampshire State-wide Numerical Soils Legend, USDA NRCS, Durham, NH. Issue # 10, January 2011. The numeric legend was amended to identify the correct soil components of the complex.

MAP UNIT	MAP NAME	HISS Conversion	HSG
115	Scarboro muck	621	D
135	Chatfield Variant (MWD) – Newfields Complex	328	B
140	Chatfield – Hollis – Canton Complex	228	B
547	Walpole, very stony	521	C

SLOPE PHASE:
A=0-3%, B=3-8%, C=8-15%, D=15-25%, E=25%+

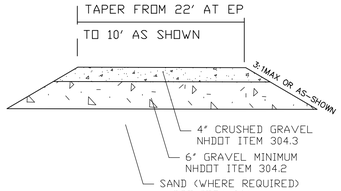
STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No. 9900
PROFESSIONAL ENGINEER
3/4/2020

REVISED PER TRC COMMENTS	12-1-20
REVISED PER REVIEW COMMENTS	9-28-20
REVISED PER REVIEW COMMENTS	8-20-20
ADD WET-BUFF IMPACT AREA HATCHING & LABELS	8-5-20
REVISED CONCEPT RE: WET-BUFF WAIVER	7-16-20
	DATE:

OPEN SPACE SITE PLAN

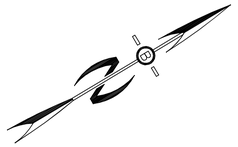
PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH
TAX MAP R4, LOT 3

DATE:	JAN, 2020	SCALE:	1"= 50'
PROJ. NO:	NH-1123	SHEET NO.	5



ALL MATERIALS TO BE INSPECTED AND APPROVED BY TOWN ENGINEER AND MEET NHDOT STANDARDS.

CLASS 6 ROAD CROSS SECTION



DRIVEWAY CULVERT DATA
CB DATA

CB 1
GRATE 132.8'
INV IN 126.9'
INV OUT 125.90'
SUMP ELEV. 124.58'
12" HDPE; L=180'
S=0.03'/'

CB 2
GRATE 126.0'
INV IN 120.48
INV OUT 120.38'
SUMP ELEV. 117.38'
12" HDPE; L=78'
S=0.04'/'

CB 3
GRATE 120.5'
INV IN 117.26' (CB2)
INV IN 117.26' (CB3A)
INV OUT 113.0'
SUMP ELEV. 110.0'
15" HDPE; L=70'
S=0.014'/'
INV OUT 112.00'

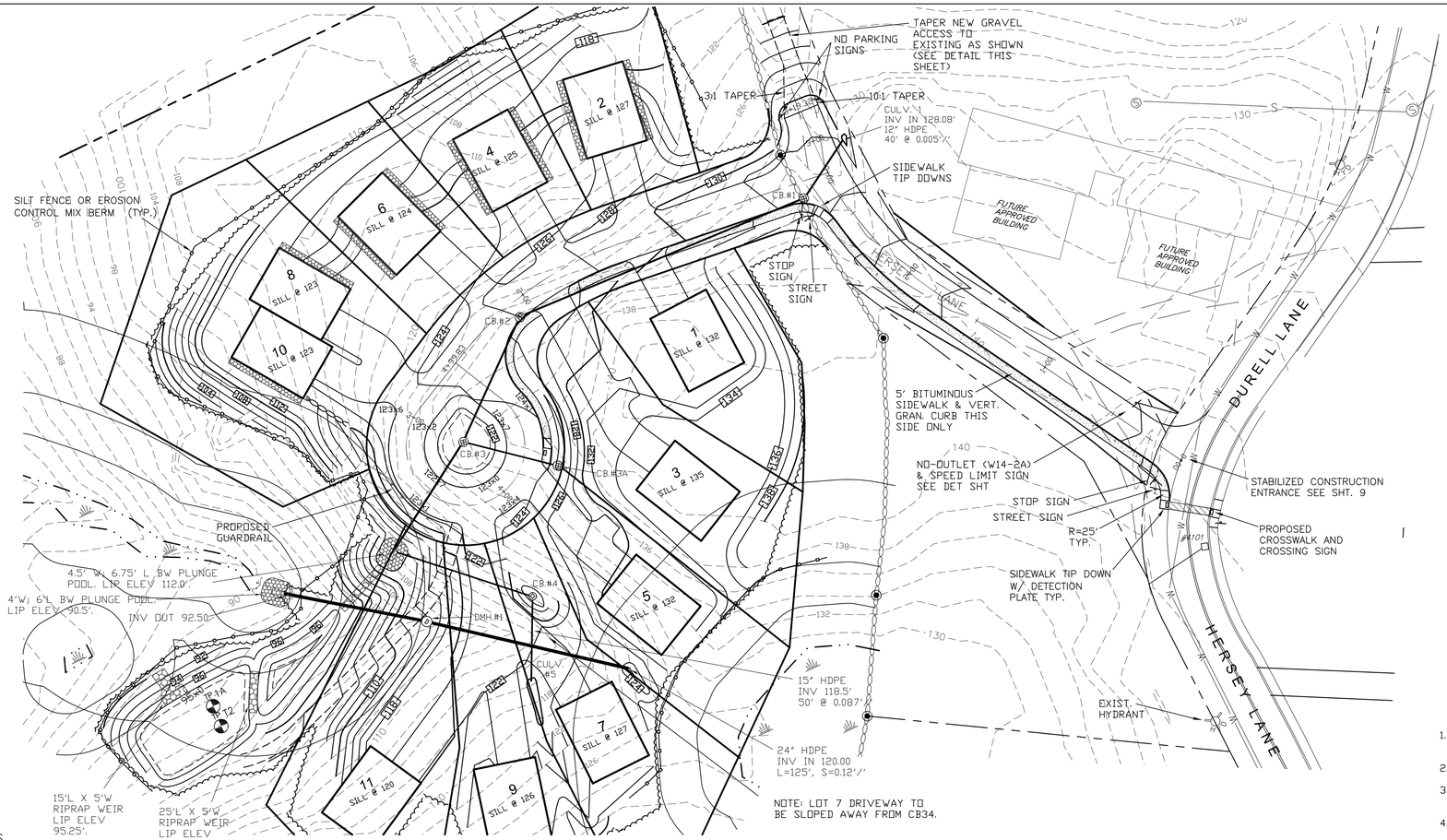
CB 3A
GRATE 122.5'
INV OUT 119.5'
SUMP ELEV. 116.5'
15" HDPE; L=54'
S=0.042'/'

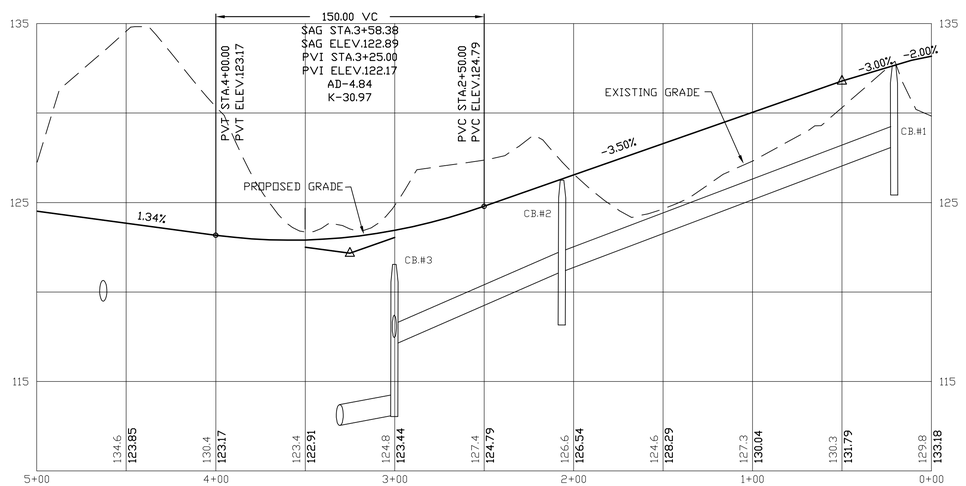
DMH 1
RIM 114.0'
INV IN 105.0'
INV OUT 94.10'
24" HDPE;
L=80', S=0.04'/'
INV OUT 90.90'

CB 4
GRATE 117.5'
INV IN 114.12
INV OUT 114.02'
SUMP ELEV. 111.02'
15" HDPE; L=84'
S=0.24'/'
INV OUT 112.00'

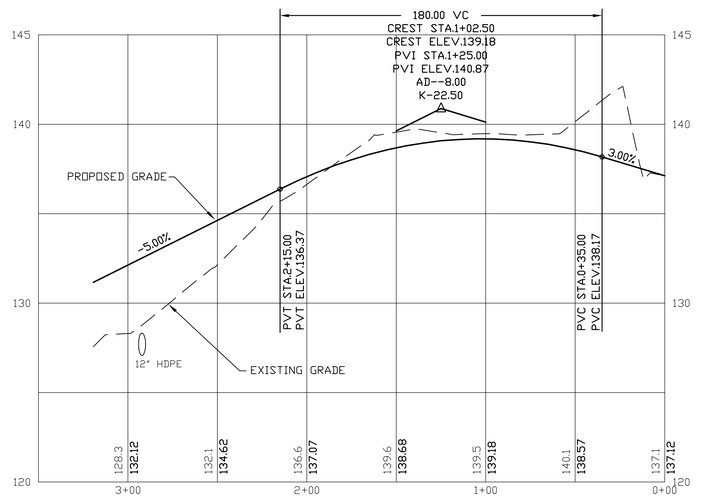
NOTE:
UNITS 2, 4, 6, 8 & 10 SHALL HAVE 4' WIDE BY 5' DEEP WASHED STONE DRIP EDGES FOR ROOF INFILTRATION

ALL 2:1 SLOPES TO BE ARMORED WITH CURLEX SINGLE NET MATTING STAPLED INTO THE TOPSOIL UNTIL VEGETATION IS FULLY ESTABLISHED.





PROPOSED ROAD PROFILE



HERSEY LANE UPGRADE PROFILE

PREPARED FOR:

CHINBURG PROPERTIES INC
3 PENSTOCK WAY
NEWMARKET, NH 03857

BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

CONSTRUCTION CRITERIA

SUBGRADE PREPARATION: AREA SHALL BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH; BOULDERS, SOD AND RUBBISH. SUBGRADE SURFACE TO BE ROLLED BEFORE PLACEMENT OF FILL MATERIAL. THE SURFACE SHALL HAVE MOISTURE ADDED OR IT SHALL BE COMPACTED IF NECESSARY SO THAT THE FIRST LAYER OF FILL MATERIAL CAN BE COMPACTED AND BONDED TO THE SUBBASE MATERIAL.

FILL PLACEMENT: FILL SHALL BE FREE OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIA., AND OTHER OBJECTIONABLE MATERIAL.
–FILL TO PLACED EQUALLY AROUND SUBSURFACE STRUCTURES & PIPES TO PREVENT DAMAGE FROM UNEQUAL LOADING.
–PLACING AND SPREADING OF FILL MATERIAL SHALL BE STARTED AT SUBGRADXE ELEVATION AND BROUGHT UP IN HORIZONTAL LAYERS OF THICKNESS' ALLOWING ADEQUATE COMPACTION.
–DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFER SUBSTANTIALLY IN TEXTURE OF GRADATION FROM SURROUNDING MATERIAL.
–MAXIMUM THICKNESS OF GRAVEL LIFTS TO 1 FOOT (12 INCHES).

MOISTURE CONTROL: MOISTURE CONTENT OF THE FILL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. IF THE MATERIAL IS TOO WET IT SHALL BE DRIED TO MEET THIS REQUIREMENT, IF THE MATERIAL IS TOO DRY IT SHALL HAVE WATER ADDED AND MIXED UNTIL REQUIREMENT IS MET.

COMPACTION: CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREAS OR EACH LAYER OF FILL TO INSURE THAT THE REQUIRED COMPACTION IS OBTAINED.
–EACH LAYER SHALL BE COMPACTED TO OBTAIN 95% OF THE PROTOR VALUE (ASTM 1557 OR AASHTO T180).
–FILL ADJACENT TO STRUCTURES, PIPES, ETC SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY THE MEANS OF HAND TAMPERING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS.

EROSION PROTECTION: A PROTECTIVE COVER OF VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SURFACES OF THE EMBANKMENT (CUT/FILL)SLOPE, SPILLWAY, AND BORROW AREA IF SOIL AND CLIMATIC CONDITIONS PERMIT. IF CONDITIONS PRECLUDE THE USE OF VEGETATION AND PROTECTION IS NEEDED, NON–VEGETATION MEANS, SUCH AS EROSION BLANKETS OR RIPRAP SLOPE PROTECTION, MAY BE USED.
–SEEDING, FERTILIZING, AND MULCHING SHALL COMPLY WITH THE APPROPRIATE VEGETATIVE BMP'S.

NOTES

1. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
2. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO N.H.D.O.T. STANDARDS AND REGULATIONS.
3. ALL DRAINAGE STRUCTURE AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
4. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION NOTES AND DETAILS.

PROFILE SCALES:
HORIZONTAL: 1"=40' VERTICAL: 1"=4'

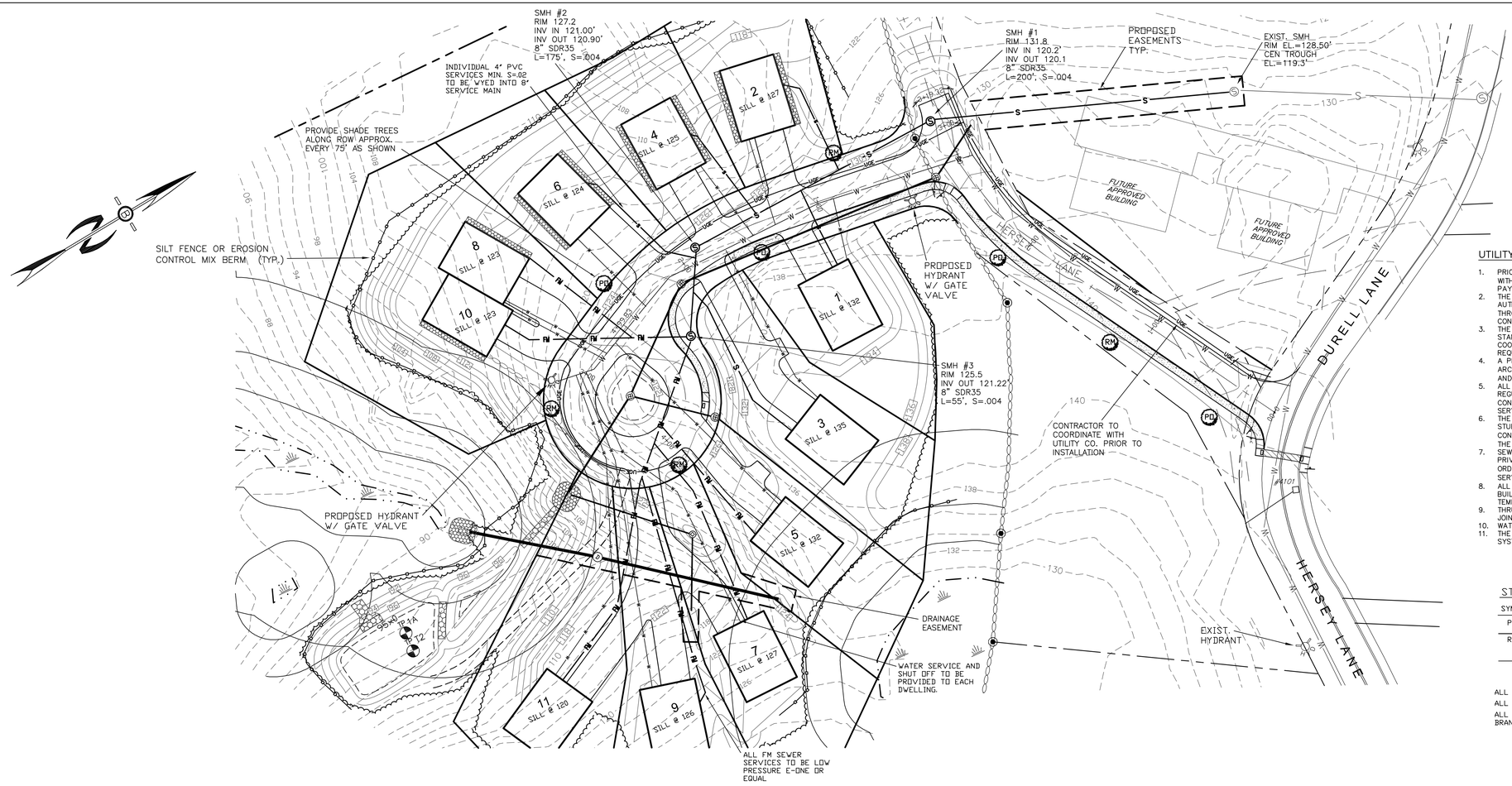
40 0 20 40 80 160

REVISED PER ENGINEERING REVIEW	12–11–20
REVISED PER TRC COMMENTS	12–1–20
REVISED PER REVIEW COMMENTS	9–28–20
REVISED PER REVIEW COMMENTS	8–20–20
REVISED PER TRC COMMENTS	3–2–20
	DATE:

PLAN AND PROFILE

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	JAN. 2020	SCALE:	1"= 40'
PROJ. N0:	NH-1123	SHEET NO.	6



PREPARED FOR:

CHINBURG PROPERTIES INC
3 PENSTOCK WAY
NEWMARKET, NH 03857

BEALS • ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

UTILITY NOTES

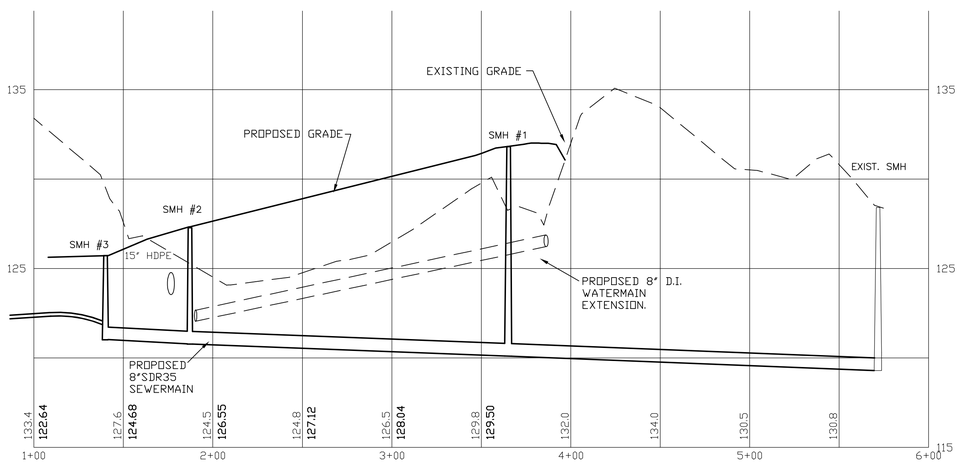
1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
2. THE CONTRACTOR SHALL PROVIDE NOTICE TO ALL COMPANIES AND LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
3. THE SPECIFICATIONS FOR PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY CO. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES FOR PROPER UTILITY CROSSING REQUIREMENTS.
4. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
5. ALL CONSTRUCTION SHALL CONFORM TO NEWMARKET STANDARDS AND REGULATIONS, UNLESS OTHERWISE SPECIFIED. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR (OSHA) RULES AND REGULATIONS. BUILDINGS ARE TO BE SERVICED BY UNDERGROUND UTILITIES.
6. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS (IF REQUIRED) IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS.
7. SEWER AND WATER INFRASTRUCTURE ON PRIVATE PROPERTY SHALL REMAIN PRIVATE, HOWEVER, THE TOWN RESERVES THE RIGHT TO ENTER THE PROPERTY IN ORDER TO INSPECT, REPAIR AND/OR TERMINATE INDIVIDUAL SEWER OR WATER SERVICES (AT OWNER'S EXPENSE).
8. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY CAP AND WITNESS AT END.
9. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES AND MECHANICAL JOINTS.
10. WATER VALVES ARE TO BE OPERATED ONLY BY MUNICIPAL STAFF.
11. THE INSTALLATION OF SMOKE, HEAT, FIRE , OR CARBON MONOXIDE ALARMS OR SYSTEMS SHALL COMPLY WITH NFPA 72 REQUIREMENTS.

STREET TREE KEY

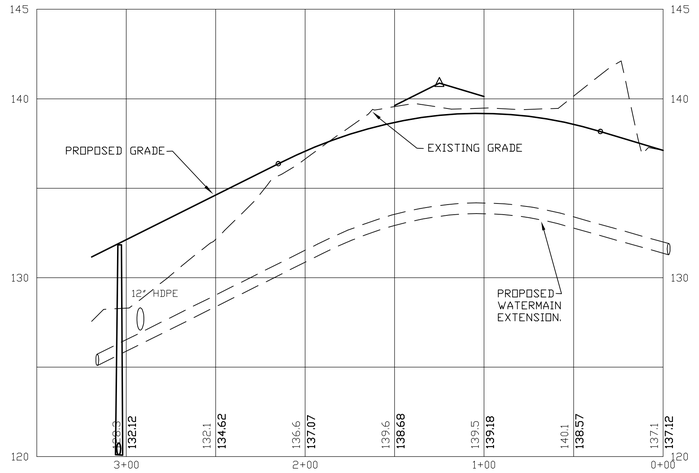
SYMBOL	NAME	QUANTITY
PD	PIN OAK Quercus Palustris 2 1/2 - 3" cal.	4 (PD)
RM	RED MAPLE Acer rubrum 'October Glory' 2 1/2 - 3" cal.	4 (RM)

NOTES:

ALL PLANTINGS TO BE ACCOMPLISHED BY A PROFESSIONAL LANDSCAPER.
ALL MASSED PLANTINGS TO BE IN MULCH BEDS UNLESS OTHERWISE SPECIFIED.
ALL DECIDUDUS TREE STOCK TO BE TRIMMED OF HORIZONTALLY PROJECTING BRANCHES UP TO 8' ABOVE GROUND.



SEWER PROFILE



HERSEY LANE UPGRADE PROFILE

PROFILE SCALES:
HORIZONTAL: 1"=40' VERTICAL: 1"=4'

40 0 20 40 80 160

REVISED PER TRC COMMENTS	12-1-20
REVISED PER REVIEW COMMENTS	9-28-20
REVISED PER REVIEW COMMENTS	8-20-20
	DATE:

UTILITY PLAN AND PROFILE

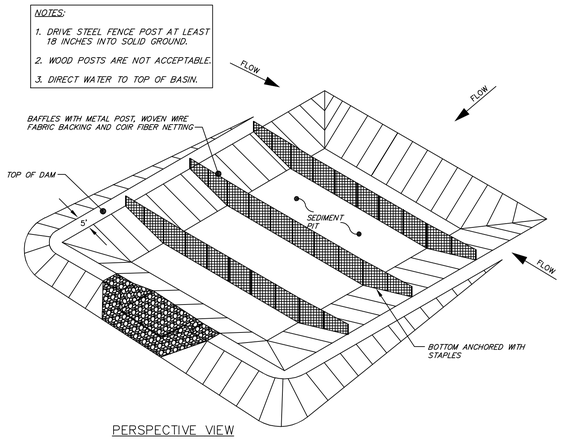
PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	MARCH, 2020	SCALE:	1"= 40'
PROJ. N0:	NH-1123	SHEET NO.	7

PREPARED FOR:

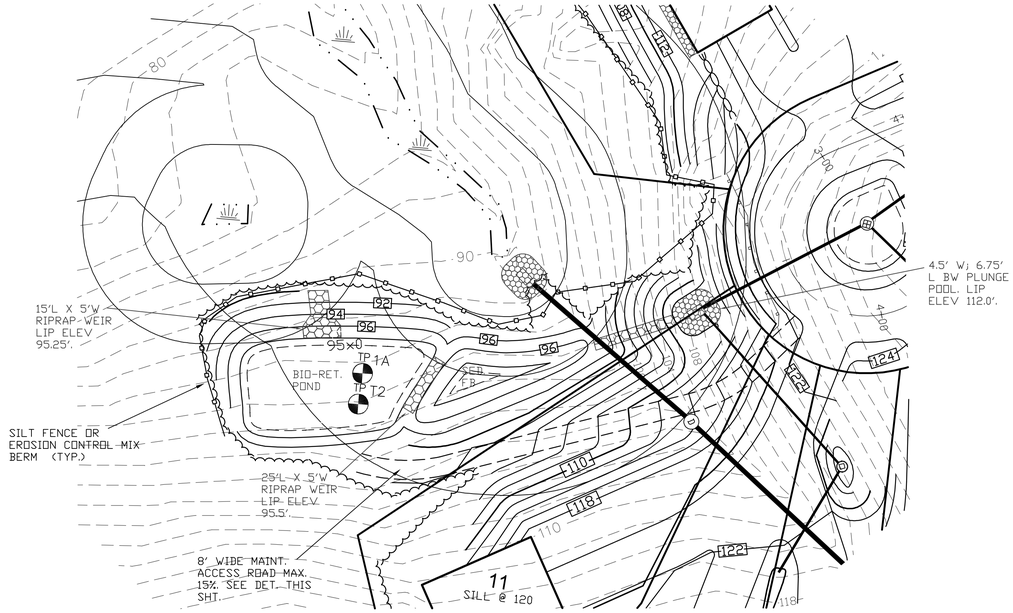
CHINBURG PROPERTIES INC
3 PENSTOCK WAY
NEWMARKET, NH 03857

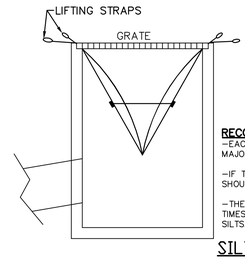
BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863



PERSPECTIVE VIEW

TEMPORARY SEDIMENT BASIN





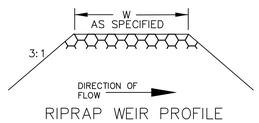
RECOMMENDED MAINTENANCE SCHEDULE
–EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT

–IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2–3 WEEKS

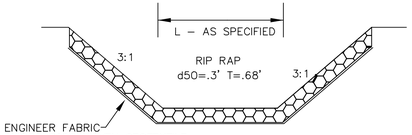
–THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

SILTSACK DETAIL
NOT TO SCALE

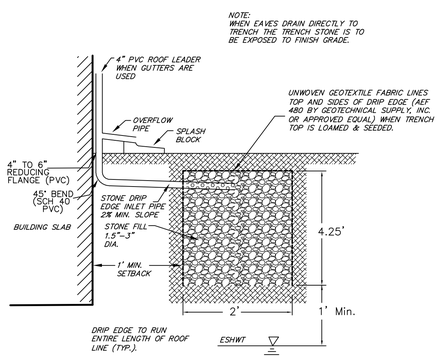
EROSION PROTECTION TYPE E



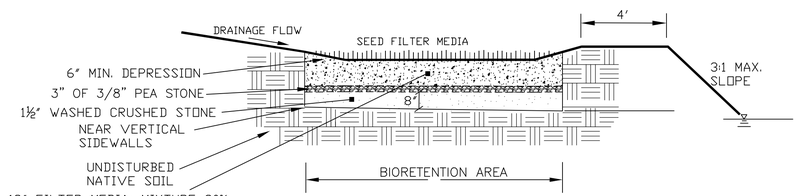
RIPRAP WEIR PROFILE



RIPRAP WEIR DETAIL



STONE DRIP EDGE SECTION
NOT TO SCALE



NOTES: 1. SCARIFY SIDES AND BOTTOM OF BIORETENTION AREA TO FACILITATE NATURAL INFILTRATION RATES.

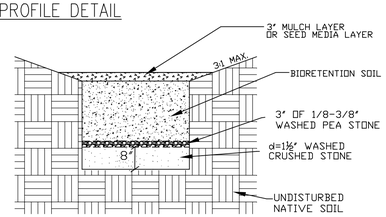
BIORETENTION AREA PROFILE DETAIL
NOT TO SCALE

DRAINAGE NOTES:

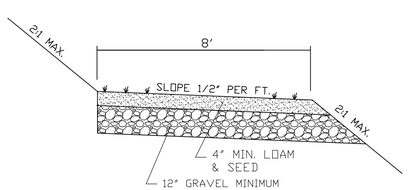
DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

DO NOT PLACE SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

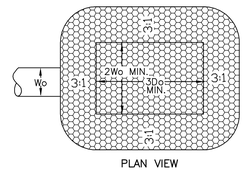
DO NOT DISCHARGE SEDIMENT–LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOF, WATER FROM EXCAVATIONS) TO THE BIO–RETENTION AREA DURING ANY STAGE OF CONSTRUCTION.



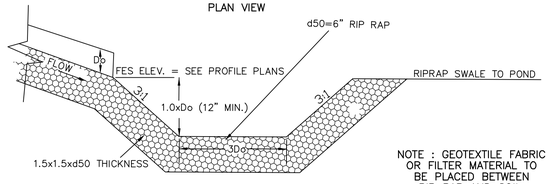
BIORETENTION SECTION
NOT TO SCALE



ACCESS ROAD CROSS SECTION



PLAN VIEW



NOTE : GEOTEXTILE FABRIC OR FILTER MATERIAL TO BE PLACED BETWEEN RIP RAP AND SOIL.

PLUNGE POOL DETAIL
NOT TO SCALE

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
THICKNESS OF RIP RAP = 1.125 FEET			
d50 SIZE=	0.50	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

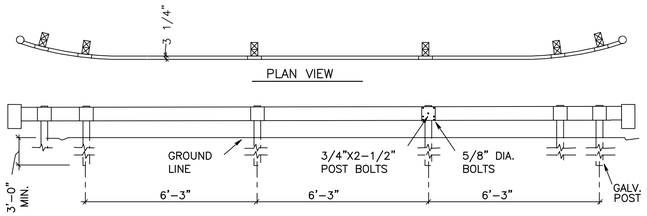
REVISED PER TRC COMMENTS	12–1–20
REVISED PER REVIEW COMMENTS	9–28–20
REVISED PER TRC COMMENTS	3–2–20
	DATE:

POND PLAN

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	JAN. 2020	SCALE:	1"= 30'
PROJ. NO:	NH-1123	SHEET NO.	8

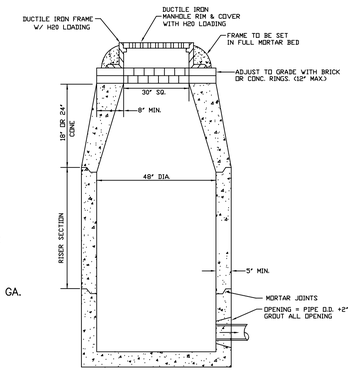
STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH No.9900
PROFESSIONAL ENGINEER



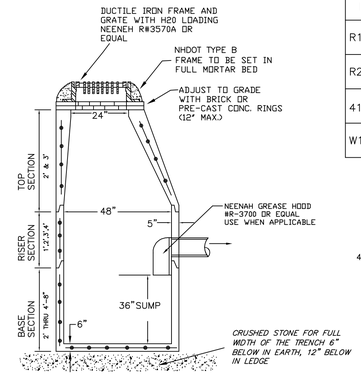
NOTES:

1. USE IN HEAVY TRAFFIC AREAS.
2. STEEL BRACKET TO BE 10 OR 12 GAGE STEEL.
3. USE 6'-0" POSTS WHEN FILL SLOPE IS 4:1 OR FLATTER
4. RAIL SHEET THICKNESS TO BE 12 GA.

BEAM GUARD RAIL
STANDARD SECTION-METAL POSTS
NOT TO SCALE



PRECAST DRAIN MANHOLE
NOT TO SCALE



PRECAST CATCH BASIN
NOT TO SCALE

TRAFFIC CONTROL SCHEDULE

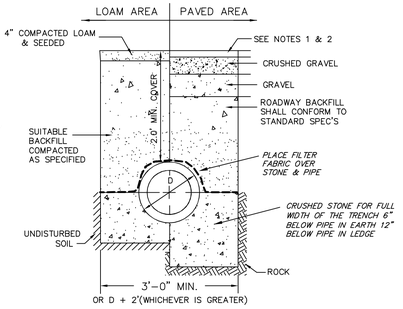
SIGN NUMBER	SIGN	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	DESCRIPTION	MOUNT TYPE	MOUNT HEIGHT
R1-1	STOP	30"	30"	WHITE ON RED	CHANNEL	7'-0"
R2-1	SPEED LIMIT 25	18"	24"	BLACK ON WHITE	CHANNEL	7'-0"
41-0342	25 AHEAD	30"	30"	BLACK ON YELLOW	CHANNEL	8'-6"
W14-2	NO OUTLET	24"	24"	BLACK ON YELLOW	CHANNEL	7'-0"

PREPARED FOR:

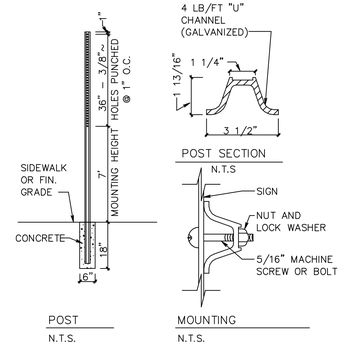
CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, N.H. 03857

BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

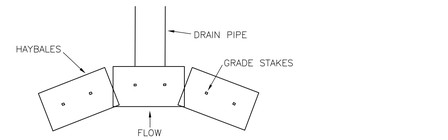
TYPICAL DRAINAGE TRENCH DETAIL



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.



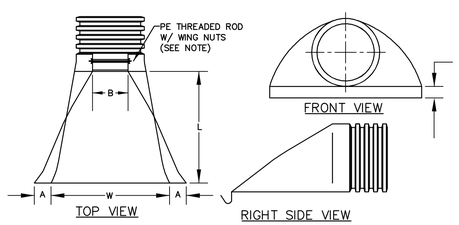
STREET SIGN DETAIL
NO-OUTLET W14-2A
STOP SIGN (R1-1) 30" x 30"
SPEED LIMIT SIGN (R2-1) 24" x 30"



PIPE INLET PROTECTION

SPECIFICATIONS

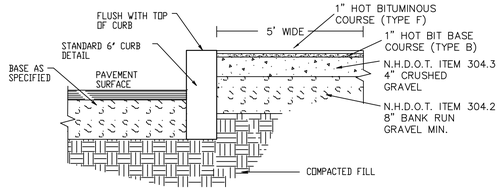
SEDIMENT BARRIERS SHOULD BE INSTALLED PRIORTO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
BALES SHOULD BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. THE ENDS OF THE BARRIER SHOULD BE FLARED UP SLOPE.
BARRIERS SHOULD NOT BE CONSTRUCTED MORE THAN ONE BALE HIGH.
ALL BALES SHOULD BE EITHER WIRE-BOUND OR STRING-TIED. BALES SHOULD BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES, PARALLEL TO THE GROUND SURFACE TO PREVENT DETERIORATION OF THE BINDINGS.
THE BARRIER SHOULD BE ENTRENCHED AND BACKFILLED. A TRENCH SHOULD BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES.
AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHOULD BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHOULD CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHOULD BE BUILT UP 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER. IDEALLY, BALES SHOULD BE PLACED
10 FEET AWAY FROM THE TOE OF SLOPE.
AT LEAST TWO STAKES DRIVEN THROUGH THE BALE AND PENETRATING AT LEAST 18 INCHES INTO THE GROUND, SHOULD SECURELY ANCHOR EACH BALE.
THE FIRST STAKE IN EACH BALE SHOULD BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
STAKES SHOULD BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
THE GAPS BETWEEN BALES SHOULD BE CHINKED (FILLED BY WEDGING) WITH HAY TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.
INSPECTION SHOULD BE FREQUENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED. BALE BARRIERS SHOULD BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.



PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15" 375 mm	6.5" 165 mm	10" 254 mm	6.5" 165 mm	25" 635 mm	29" 735 mm
1810-NP	18" 450 mm	7.5" 190 mm	15" 380 mm	6.5" 165 mm	32" 812 mm	35" 890 mm
2410-NP	24" 600 mm	7.5" 190 mm	18" 450 mm	6.5" 165 mm	36" 900 mm	45" 1140 mm
3010-NP	30" 750 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm
3610-NP	36" 900 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm

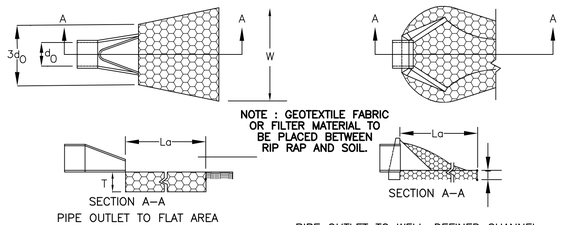
NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15"-24". 30" & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.

ADS N-12 FLARED END SECTIONS
NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)



VERT. GRANITE CURB/BIT. SIDEWALK DETAIL
NOT TO SCALE

NOTE: GRAVEL SPECIFICATIONS FOR SIDEWALK ARE THE SAME FOR THE GRAVEL ACCESS PATHS.

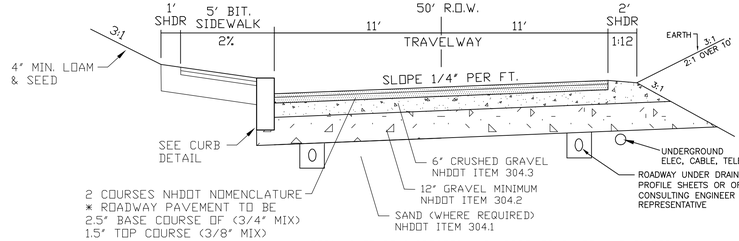


PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

PIPE OUTLET TO WELL-DEFINED CHANNEL

CONSTRUCTION SPECIFICATIONS
1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. STONE FOR RIRAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE-THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT.
6. FLAT ROCKS SHALL NOT USED FOR RIP RAP. VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

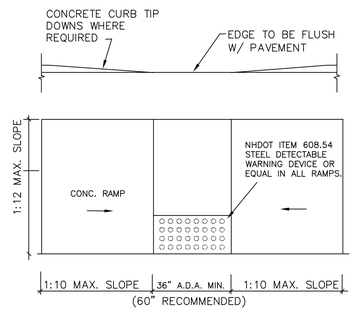
MAINTENANCE
1. THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.



ALL MATERIALS TO BE INSPECTED AND APPROVED BY TOWN ENGINEER AND MEET NHDOT STANDARDS.

TOWN MAY REQUIRE UNDERDRAIN OR ADDITIONAL DRAINAGE TO INCLUDE OVER EXCAVATION OF UNSUITABLE MATERIALS AND INSTALLATION OF GEOTEXTILE FABRIC. SEE ADDITIONAL NOTES ON DETAIL SHEETS.

TYPICAL CROSS SECTION



SIDEWALK RAMP DETAIL
NOT TO SCALE

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH No. 9900
PROFESSIONAL ENGINEER

REVISED PER TRC COMMENTS	12-1-20
REVISED PER REVIEW COMMENTS	9-28-20
REVISED PER TRC COMMENTS	3-2-20
REVISIONS:	DATE:

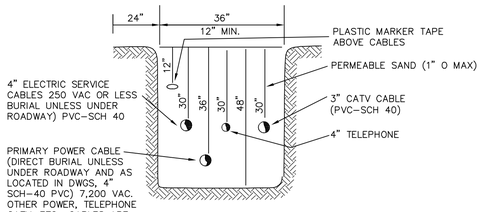
CONSTRUCTION DETAILS

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

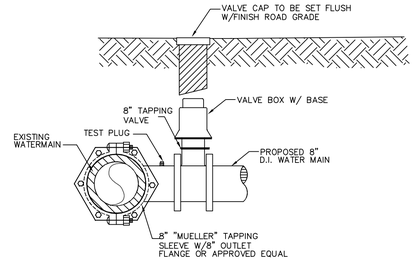
DATE:	JAN. 2020	SCALE:	AS NOTED
PROJ. N0:	NH-1123	SHEET NO.	9

NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT" TO GREATEST EXTENT POSSIBLE AND LOCATED AT PROPERTY LINE CORNERS.

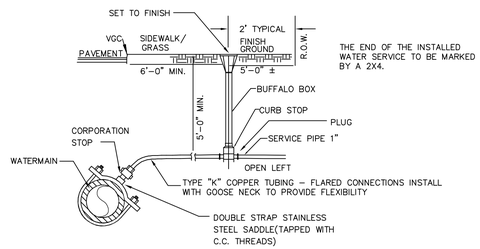


UTILITY TRENCH DETAIL

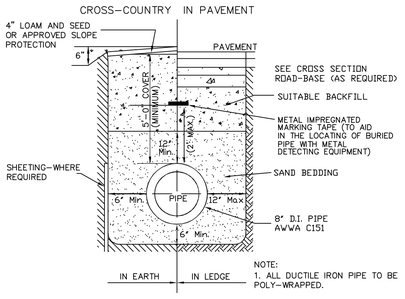


WATER MAIN TAPPING SLEEVE DETAIL

NOT TO SCALE



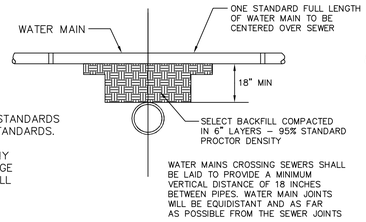
TYPICAL WATER SERVICE CONNECTION



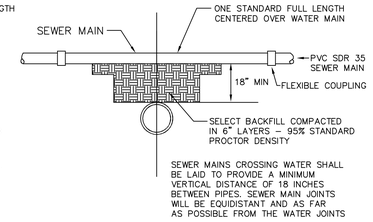
TYPICAL TRENCH DETAIL FOR WATER SYSTEM

SEPERATION NOTES:

1. WATER MAIN RELATIONS TO SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPERATE TRENCH WITH A VERTICAL SPERATION AT LEAST 18 INCHES APART.



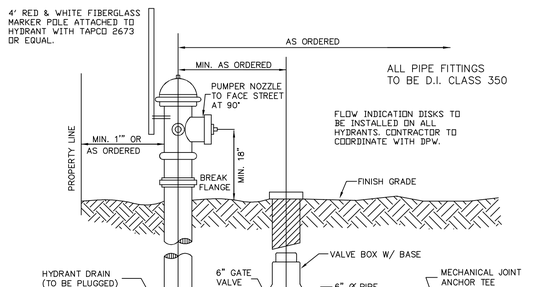
WATER MAIN ABOVE SEWER



WATER MAIN BELOW SEWER

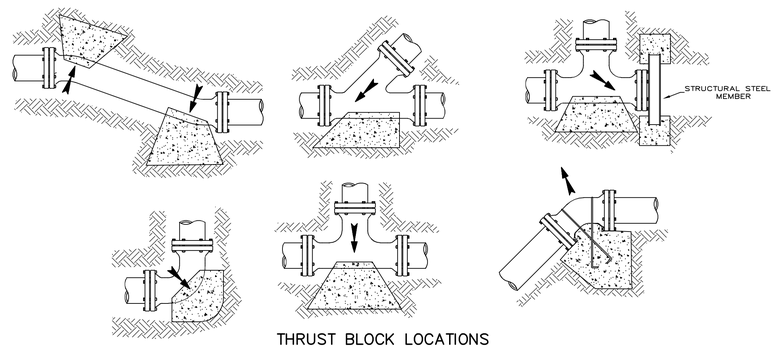
TYPICAL WATER/SEWER SEPERATION DETAILS

NOT TO SCALE



HIGH PRESSURE HYDRANTS SHALL BE RED WITH YELLOW CAPS.

HYDRANT INSTALLATION DETAIL



THRUST BLOCK LOCATIONS

TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING BLOCKS:

1. BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
2. PIPE JOINTS AND BOLTS MUST BE ACCESSIBLE.
3. CONCRETE SHOULD BE CURED AT LEAST 5 DAYS AND SHALL HAVE A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
4. BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.

RESTRAINED PUSH-ON AND MECHANICAL JOINTS ARE AVAILABLE FOR ALL PIPE SIZES AND PRESENT NO INSTALLATION PROBLEMS. THEY ARE USED FOR RESISITNG THRUST FORCES WHERE THERE IS NO SPACE OR WHERE SOIL BEHIND THE FITTING WILL NOT PROVIDE ADEQUATE SUPPORT. THIS RESTRAINING METHOD INVOLVES THE PLACEMENT OF THESE SPECIAL JOINTS AT APPROPRIATE FITTINGS AND FOR A PREDETERMINED NUMBER OF PIPE LENGTHS ON EACH SIDE.

TIE RODS MAY BE USED BY THEMSELVES OR IN COMBINATION WITH OTHER RESTRAINT DEVICES. WHEN TIE RODS ARE USED WITH STEEL BANDS AROUND THE PIPE BARREL, ONLY ONE(1) ROD SHALL BE ATTACHED TO EACH BAND AND THE BAND SHALL BE COCKED TO PREVENT SLIPPAGE ALONG THE PIPE BARREL. A BAND PLACED BEHIND A BELL MAY BE USED WITH TWO(2) RODS. FOR MECHANICAL JOINT PIPE, TIE RODS MAY BE THREADED THROUGH THE BOLT HOLES IN A FLANGE AND SECURED BY NUTS. ALL RODS SHALL BE MADE OF OR COATED WITH CORROSION RESISTANT MATERIALS TO PREVENT RUST AND DETERIORATION.

RESTRAINT MAY BE NECESSARY FOR MORE THAN ONE (1) PIPE LENGTH ON EACH SIDE OF ANY CHANGE IN DIRECTION, DEADEND OR TEE.

SOILS BEARING CAPACITY	
SOIL	BEARING LOAD(PSF)
MUCK	0
SOFT CLAY	1000
SILT	1500
SANDY SILT	3000
SAND	4000
SANDY CLAY	6000
HARD CLAY	9000

THRUST FORCES ARE CREATED IN A PIPELINE AT CHANGES IN DIRECTION, TEE, DEADENDS OR WHERE CHANGES IN PIPE SIZE OCCUR AT REDUCERS. AVAILABLE RESTRAINT METHODS INCLUDE CONCRETE THRUST BLOCKS, RESTRAINED JOINTSTAND TIE RODS. FORCES TO BE RESTRAINED ARE SHOWN BELOW:

RESULTANT THRUST AT FITTINGS @ 100 PSI (TOTAL POUNDS)

NOM. PIPE DIA. (IN.)	DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1810	2559	1385	706	355
6	4219	5968	2862	1459	733
8	6433	9097	4923	2510	1261
10	9472	13685	7406	3776	1897
12	13685	19351	10474	5340	2683
14	18583	26001	14077	7174	3604
16	23779	33628	18199	9278	4661
18	29865	42235	22858	11653	5855
20	37644	51822	28046	14298	7183
24	52279	73934	40013	20398	10249
30	80425	113738	61554	31380	15766
36	115209	162931	88177	44952	22585
42	155528	219950	119036	60684	30489
48	202683	286637	155127	79083	39733
54	256072	362140	195989	99914	50199

NOTE: TO DETERMINE THRUST AT PRESSURES OTHER THAN 100 PSI, MULTIPLY THE THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE TO 100. FOR EXAMPLE: THE THRUST ON A 12", 90° BEND @ 125 PSI IS: 19335X125/100 = 24191 LBS.

TO DETERMINE THE SIZE OF A CONCRETE THRUST BLOCK, DIVIDE THE TOTAL FORCE BY THE BEARING VALUE OF THE CONSTITUENT SOIL. THE QUOTIENT WILL BE THE SIZE OF THE BEARING OF THE THRUST BLOCK IN SQUARE FEET. APPROXIMATE VALUES FOR VARIOUS TYPES OF SOIL ARE LISTED BELOW. NO RESPONSIBILITY CAN BE ASSUMED FOR THE ACCURACY OF THE DATA REPRESENTED DUE TO THE WIDE VARIATION OF BEARING VALUES FOR EACH SOIL TYPE.

PREPARED FOR:

CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, N.H. 03857

BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

NOTES

1) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: REFILL WITH BEDDING MATERIAL. (SEE NOTE 6 ALSO)

2) BEDDING: MINIMUM 12" SAND BLANKET AS SPECIFIED AND REMAINING FILL AS SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C-33 STONE SIZE No. 67

100%	PASSING	1 INCH SCREEN
90-100%	PASSING	3/4 INCH SCREEN
20-50%	PASSING	3/8 INCH SCREEN
0-10%	PASSING	No. 4 SIEVE
0-5%	PASSING	No. 8 SIEVE

WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 3/4 INCH TO 1-1/2 INCH SHALL BE USED.

3) SUITABLE MATERIAL IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS: SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION.

4) BASE COURSE: IF ORDERED BY THE ENGINEER, SHALL MEET THE RE-QUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION.

5) WOOD SHEETING: IF REQUIRED, WHERE SHEETING IS PLACED ALONG SIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE.

6) W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D., W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.

7) FOR CROSS COUNTRY CONSTRUCTION: BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

8) DUCTILE-IRON PIPE, FITTINGS AND JOINTS:
   1- DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE
   ANSI A21.50/AWWA C150 THICKNESS DESIGN OF DUCTILE-IRON PIPE AND WITH ASTM A-536 DUCTILE-IRON CASTINGS
   ANSI A21.51/AWWA C151 DUCTILE-IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS
   2- JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE JOINTS AND GASKETS SHALL CONFORM TO ANSI A21.11/AWWA C111 RUBBER GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS

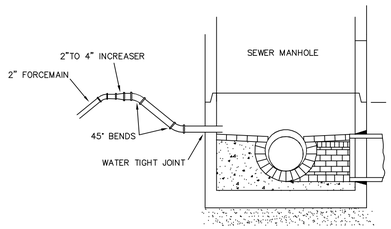
9) ALL WATER LINES SHALL BE DISINFECTED AND PRESSURE TESTED TO THE APPROVAL OF THE SEWER COMMISSION. MIN. TEST PRESSURE 150 PSI OR 1 1/2 TIMES THE WORKING PRESSURE WHICH EVER IS GREATER.

REVISIONS:	DATE:

UTILITY DETAILS

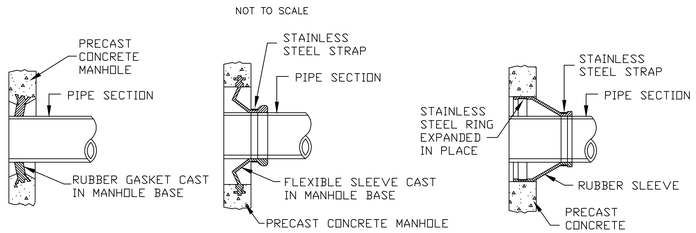
PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	JAN, 2020	SCALE:	NTS
PROJ. NO:	NH-1123	SHEET NO.	10

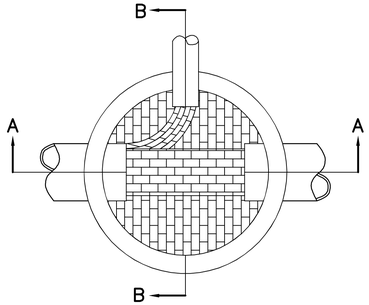


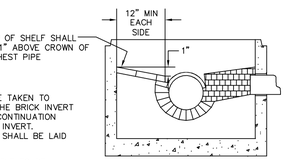
FM TO SEWER MANHOLE
TYPICAL SECTION

NOT TO SCALE



MANHOLE SEAL DETAILS
N.T.S.



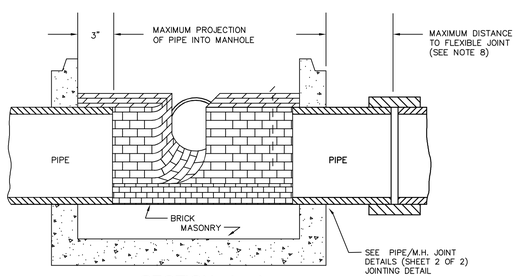


NOTES:

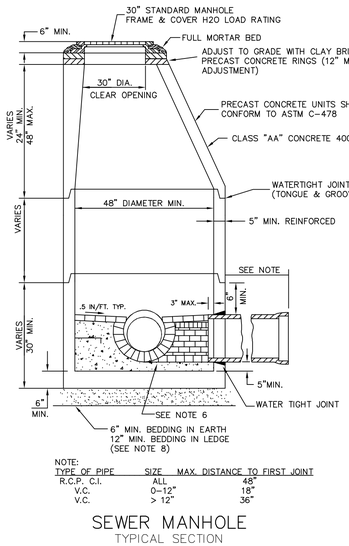
A) CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE

B) INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST.

SECTION B–B



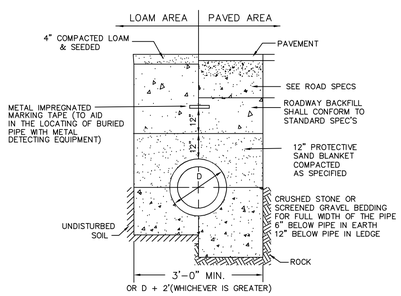
SECTION A–A



NOTE:

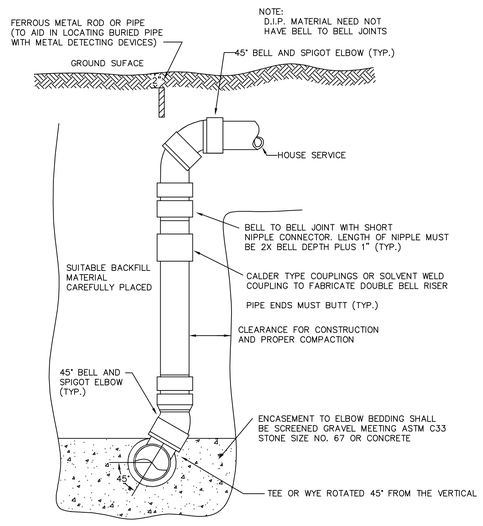
TYPE OF PIPE	SIZE	MAX. DISTANCE TO FIRST JOINT
R.C.P. C.I.	ALL	48"
V.C.	0–12"	18"
V.C.	> 12"	36"

SEWER MANHOLE
TYPICAL SECTION



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.

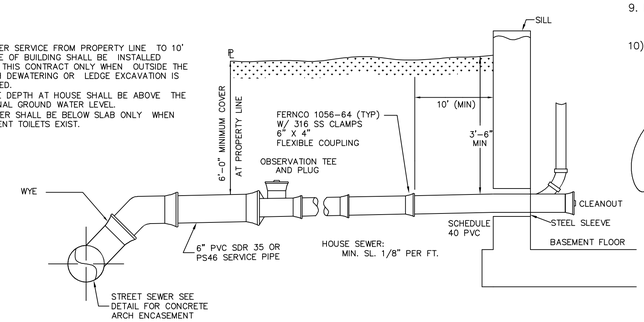
TYPICAL SEWER TRENCH DETAIL
NOT TO SCALE



NOTE:
IF THE VERTICAL DROP INTO A SEWER MAIN IS GREATER THAN 4 FT. A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION (A SLOPING CONNECTION OF 45° FROM THE SEWER TO THE PROPERTY MAY BE PERMITTED IN LIEU OF A VERTICAL DROP OR CHIMNEY.)

P.V.C. CHIMNEY DETAIL

NOTES:
1) SEWER SERVICE FROM PROPERTY LINE TO 10' OUTSIDE OF BUILDING SHALL BE INSTALLED UNDER THIS CONTRACT ONLY WHEN OUTSIDE THE TRENCH DEWATERING OR LEDGE EXCAVATION IS REQUIRED.
2) PIPE DEPTH AT HOUSE SHALL BE ABOVE THE SEASONAL GROUND WATER LEVEL.
3) SEWER SHALL BE BELOW SLAB ONLY WHEN BASEMENT TOILETS EXIST.



DETAIL OF HOUSE SEWER SERVICE

NOTES

1. IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS. HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING, MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H–20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.
3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478
4. LEAKAGE TEST:
   A) ALL NEW SEWERS, AND MANHOLES SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF EITHER WATER OR LOW–PRESSURE AIR TESTS.
   (B) LOW–PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH THE FOLLOWING TESTING STANDARDS IN EFFECT AT THE TIME THE TEST IS CONDUCTED:
      (1) ASTM F1417 "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW–PRESSURE AIR", AVAILABLE AS NOTED IN APPENDIX D; OR
      (2) UNI–BELL PVC PIPE ASSOCIATION UNI–B–6, "LOW–PRESSURE AIR TESTING OF INSTALLED SEWER PIPE", AVAILABLE AS NOTED IN APPENDIX D.
   (C) ALL NEW GRAVITY SEWERS SHALL BE:
      (1) CLEANED AND VISUALLY INSPECTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER; AND
      (2) TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
   (D) ALL PLASTIC SEWER PIPE SHALL BE VISUALLY INSPECTED AND DEFLECTION TESTED NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION.
   (E) THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% PERCENT OF AVERAGE INSIDE DIAMETER. A RIGID BALL OR MANDREL WITH A DIAMETER OF AT LEAST 95% OF THE AVERAGE INSIDE PIPE DIAMETER SHALL BE USED FOR TESTING PIPE DEFLECTION. THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.ENV–WQ 704.17
5. MANHOLES: TESTING.
   (A) MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH THE ASTM C1244 STANDARD IN EFFECT WHEN THE TESTING IS PERFORMED, AVAILABLE AS NOTED IN APPENDIX D. A MANHOLE MAY BE BACKFILLED PRIOR TO PERFORMING A VACUUM TEST, BUT IF THE MANHOLE FAILS THE VACUUM TEST, BACKFILL SHALL BE REMOVED SO REPAIRS TO THE MANHOLE CAN BE MADE FROM THE OUTSIDE OF THE MANHOLE PRIOR TO RETESTING.
   (B) THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
      (1) THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES HG; AND
      (2) THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1–INCH HG PRESSURE DROP TO 9 INCHES HG SHALL BE;
      A. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
      B. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
      C. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP;
   (C) THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (B), ABOVE.
   (D) INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
   (E) IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
6. INVERTS AND SHELVES:
   (A) MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
   (B) MATERIALS OF CONSTRUCTION FOR MANHOLE GRADE ADJUSTMENT SHALL BE AS FOLLOWS:
      (1) GRADE ADJUSTMENT RINGS SHALL BE CONSTRUCTED WITH EITHER GRADE SS HARD BRICK THAT HAS BEEN CERTIFIED BY ITS MANUFACTURER AS MEETING THE ASTM C32 STANDARD IN EFFECT AT THE TIME THE BRICK WAS MANUFACTURED OR REINFORCED CONCRETE MEETING THE REQUIREMENTS OF THIS SECTION;
      (2) GRADE ADJUSTMENT RINGS SHALL:
      A. BE SIZED TO THE OPENING OF THE MANHOLE; AND
      B. NOT OBSTRUCT THE ACCESS TO THE MANHOLE.
   (C) MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
      (1) MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION;
      (2) PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE AS SHOWN IN TABLE 704–4:
      (3) CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED;
      (4) HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED;
      (5) SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".
7. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN EQUAL TO CLASS 30 AND CERTIFIED BY THEIR MANUFACTURER AS COMPLYING WITH ASTM A48 AND PROVIDE A 30 INCH DIA, CLEAR OPENING. THE WORD "SEWER" OR DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
8. BEDDING: MINIMUM 12" SAND BLANKET. (SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100 % PASSES A ½–INCH SIEVE AND A MAXIMUM OF 15% PASSES A #200 SIEVE) AND REMAINING FILL AS SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C–33 STONE SIZE No. 67

100%	PASSING	1 INCH SCREEN
90–100%	PASSING	3/4 INCH SCREEN
20–50%	PASSING	3/8 INCH SCREEN
0–10%	PASSING	No. 4 SIEVE
0–5%	PASSING	No. 8 SIEVE

   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 3/4 INCH TO 1–1/2 INCH SHALL BE USED.
9. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
   P.V.C. PIPE – ALL SIZES – 48"
10. CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED GREEN PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS.

REVISIONS:	DATE:
REVISED PER TRC COMMENTS	3-2-20

SEWER DETAILS

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	JAN, 2020	SCALE:	NTS
PROJ. N0:	NH-1123	SHEET NO.	11

PIPE OUTLET PROTECTION

TABLE 7-24-RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.25	FEET	3 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE(INCHES) FROM		TO
100%	5		6
85%	4		5
50%	3		5
15%	1		2

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.50	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT NO MORE THAN 5 ACRES OF LAND SHALL BE EXPOSED BEFORE DISTURBED AREAS ARE STABILIZED*.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED OR DIRECTED BY THE ENGINEER ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS.
3. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN 1.10 POUNDS OF SEED PER 1000 SQUARE FEET OF AREA. (48 POUNDS PER ACRE) SEE SEED SPECIFICATIONS THIS SHEET.
4. SILT FENCES AND OTHER EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT GREATER THAN 0.5" DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
6. AREAS MUST BE SEEDED AND MULCHED WITHIN 3 DAYS OF FINAL GRADING, PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL.

* AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

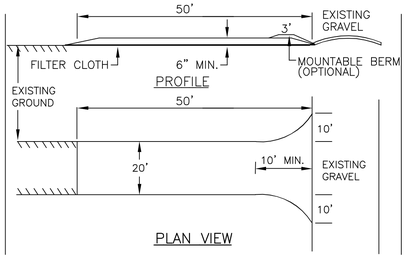
- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
- A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS RIPRAP HAS BEEN INSTALLED.
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

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 AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18" INTO THE SOIL.
4. STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" STAKES DRIVEN THROUGH THE BALES AND AT LEAST 18 INCHES IN TO THE SOIL.
5. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATED VEGETATIVE BMP.
6. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.
7. THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL TAKE PRECAUTIONS AND INSTRUCTIONS FROM THE PLANNING DEPARTMENT IN ORDER TO PREVENT, ABATE AND CONTROL THE EMISSION OF FUGITIVE DUST INCLUDING BUT NOT LIMITED TO WETTING, COVERING, SHIELDING, OR VACUUMING.
8. THE NH COMMISSIONER OF AGRICULTURE PROHIBITS THE COLLECTION, POSSESSION, IMPORTATION, TRANSPORTATION, SALE, PROPAGATION, TRANSPLANTATION, OR CULTIVATION OF PLANTS BANNED BY NH LAW RSA 430:53 AND NH CODE ADMINISTRATIVE RULES AGR 3800. THE PROJECT SHALL MEET ALL REQUIREMENTS AND THE INTENT OF . RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES
9. IN THE EVENT THAT GREATER THAN ONE ACRE OF CONTIGUOUS DISTURBANCE OCCURS, THE CONSTRUCTION SITE OPERATOR AND OWNER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO USEPA, WASHINGTON, DC, STORMWATER NOTICE PROCESSING CENTER AT LEAST FOURTEEN DAYS PRIOR TO COMMENCEMENT OF WORK ON SITE. EPA WILL POST THE NOI AT http://cfpubl.epa.gov/npdes/stormwater/noi/noisearch.cfm. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE STATUS".

CONSTRUCTION SEQUENCE

1. CUT AND REMOVE TREES IN CONSTRUCTION AREAS AS REQUIRED OR DIRECTED.
2. CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS REQUIRED. EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO ANY EARTH MOVING OPERATION AND PRIOR TO DIRECTING RUNOFF TO THEM.
3. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. STUMPS AND DEBRIS ARE TO BE REMOVED FROM SITE AND DISPOSED OF PER STATE AND LOCAL REGULATIONS.
4. EXCAVATE AND STOCKPILE TOPSOIL /LOAM. ALL AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
5. CONSTRUCT TEMPORARY CULVERTS AS REQUIRED OR DIRECTED.
6. CONSTRUCT THE ROADWAY AND ITS ASSOCIATED DRAINAGE STRUCTURES. ALL ROADWAYS, AND CUT/FILL SLOPES SHALL BE STABILIZED AND/OR LOAMED AND SEEDED WITHIN 72-HOURS OF ACHIEVING FINISH GRADE AS APPLICABLE.
7. INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.
8. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED.
9. DAILY OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE CHECK DAMS, DITCHES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS OR PROPERTY.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING
12. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND REVEGETATE ALL DISTURBED AREAS.
13. ALL SWALES AND DRAINAGE STRUCTURES WILL BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
14. FINISH PAVING ALL ROADWAYS.
15. LOT DISTURBANCE OTHER THAN THAT SHOWN ON THE APPROVED PLANS SHALL NOT COMMENCE UNTIL THE ROADWAY HAS THE CRUSHED STONE COURSE TO DESIGN ELEVATION/REQUIRED COMPACTION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER. 5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

STABILIZED CONSTRUCTION ENTRANCE

WINTER MAINTENANCE

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH, SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.

2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.

3. PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

SEEDING SPECIFICATIONS

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

     AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS PER 1,000 SQ. FT..

     NITROGEN(N), 50 LBS PER ACRE OR 1. 1 LBS PER 1,000 SQ.FT.

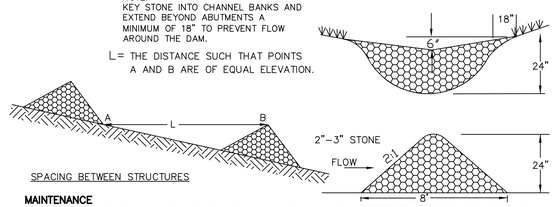
     PHOSPHATE(P2O5), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.

     POTASH(K2O), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.

     (NOTE: THIS IS THE EQUIVALENT OF 500 LBS PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS PER ACRE OF 5-10-10.)
   - B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   - C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDS FOOT TREFOIL, AND FLAT PEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   - D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   - A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   - B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 SQ. FT.
5. MAINTENANCE TO ESTABLISH A STAND
   - A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   - B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   - C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND BEYOND ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM.

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

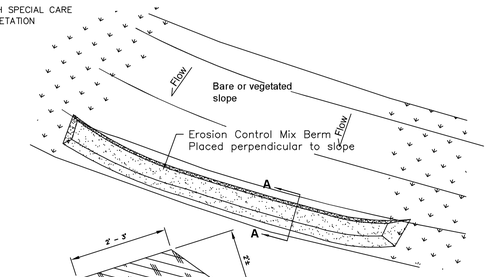


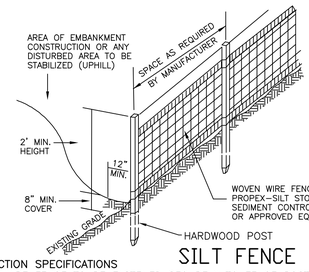
SPACING BETWEEN STRUCTURES

MAINTENANCE
TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

REMOVAL
AFTER VEGETATION HAS STABILIZED, THESE TEMPORARY STRUCTURES SHALL BE REMOVED WITH SPECIAL CARE AS TO AVOID DISTURBING ANY UNDERLYING EROSION CONTROL FABRIC AND/OR EXISTING VEGETATION

TEMPORARY STONE CHECK DAM





SILT FENCE

CONSTRUCTION SPECIFICATIONS
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8". 2. THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
6. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED

MAINTENANCE
1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

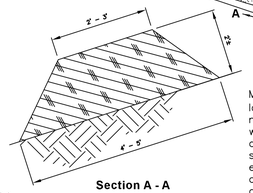
SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCT. 15, IF PERMANENT SEEDING NOT YET COMPLETE.



Section A - A

Mix material should consist of 30-50% large (1-3") particles. The organic matter content should be 25%-65%, dry weight basis. The organic matter may originate from a variety of vegetative sources, but needs to be fibrous and elongated. The mix shall be free of silt, clay, fine sand, refuse and contaminants or any material toxic to plant growth. Erosion Control Mix berms are effective filters for overland flow conditions and should not be used to filter concentrated flow such as that found in drainage ditchs, streams, etc.

Erosion Control Mix Berm

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

PREPARED FOR:

CHINBURG PROPERTIES, INC.
3 PENSTOCK WAY
NEWMARKET, N.H. 03857

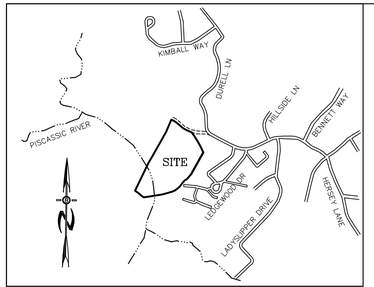
BEALS · ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

REVISIONS:	DATE:

EROSION CONTROL DETAILS

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH

DATE:	JAN, 2020	SCALE:	AS NOTED
PROJ. N0:	NH-1123	SHEET NO.	12



LOCATION MAP
SCALE 1"=1000'

SLOPES GREATER THAN 25%

UTILITY NOTES
1. PROJECT IS PROPOSED TO BE SERVED BY MUNICIPAL WATER AND SEWER EXTENSIONS.

ZONE: R2–RESIDENTIAL

DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA	1/2 AC.
MIN. FRONTAGE	100 ft.
MIN. FRONT SETBACK	25 ft.
MIN. SIDE/REAR SETBACK	15 ft.
MAX. BUILDING HEIGHT	35 ft.
MAX. DENSITY	2 UNITS/ACRE
WETLAND SETBACKS:	
POORLY DRAINED	25 ft.
VERY POORLY DRAINED	50 ft.
PRIME WETLAND	75 ft. NO DISTURB 100 ft. NO STRUCTURE 125 ft. NO SEPTIC

R-4-24
ROBERT & CATHY MACINTOSH
121 ASH SWAMP RD.
NEWMARKET, NH 03857

R-5-40
DURELL WOODS ASSOCIATION
DURELL WOODS COMMON LAND
NEWMARKET, NH 03857

R-4-134
SEWALL FARM ASSOCIATION
LADYSLIPPER COMMON
NEWMARKET, NH 03857

22" OAK W/BW
26" MAPLE
8" OAK W/BW
4" MAPLE

PRIME WETLANDS
(VERY POORLY DRAINED)

LEGEND
- UTILITY POLE
- LIGHT POLE
- TEST PIT W/ NO.
- STONE WALL
- TREE LINE
- EXISTING CONTOUR – 10'
- EXISTING CONTOUR – 2'
- SOILS BOUNDARY LINE
- ABUTTER PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- BUILDING SETBACK
- WETLAND BOUNDARY
- PRIME WETLAND BOUNDARY

JURISDICTIONAL WETLANDS DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. DURING JULY, 2018 IN ACCORDANCE WITH THE FOLLOWING:
US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y–87–1 (JAN 1987)AND REGIONAL SUPPLEMENT TO CORPS OF ENGINEERS WETLAND DELINEATION MANUAL; NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.0, 2016 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEHSTC (MAY 2017).
NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, CURRENT VERSION.

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. It was produced by a professional soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a report that accompanies this map.
The site specific soil survey was produced May 6, 2019, and was prepared by James P. Gove, CSS # 004, Gove Environmental Services, Inc. for residential development off Hersey Lane, Newmarket, NH. GES project number 2018083
Soils were identified with the New Hampshire State–wide Numerical Soils Legend, USDA NRCS, Durham, NH. Issue # 10, January 2011. The numeric legend was amended to identify the correct soil components of the complex.

MAP UNIT	MAP NAME	HISS Conversion	HSG
115	Scarboro muck(Very Poorly Drained)	621	D
135	Chatfield Variant (MVD) – Newfields Complex	328	B
140	Chatfield – Hollis – Canton Complex	228	B
547	Walpole, very stony (Poorly Drained)	521	C

SLOPE PHASE:
A=0–3%, B=3–8%, C=8–15%, D=15–25%, E–25%+

STATE OF NEW HAMPSHIRE
LUKE HURLEY
No. 232
CERTIFIED WETLAND SCIENTIST

STATE OF NEW HAMPSHIRE
LUKE D. HURLEY
no. 095
3/4/2020
CERTIFIED SOIL SCIENTIST

LOT #	FRONTAGE (FEET) MIN. 100'	LOT AREA (SF) MIN. 21780	–WETLAND PD (–SF)	–WETLAND VPD (–SF)	–25%> SLOPES (–SF)	WETLAND BUFFERS (–SF)	DEV. LAND (MIN. 16,335 SF)
1	107.59	21781	–	–	147	–	21634
2	138.86'	21930	–	–	2330	–	19600
3	101.41'	23948	–	–	–	372	23576
4	113.86'	43271	2116	2828	5018	14515	18794
5	206.40'	114448	14854	56048	–	21461	22085
6	101.14'	143008	6795	52810	19531	21216	42656
7	112.58'	23222	–	–	1277	–	21945
8	101.62'	24985	–	–	1239	–	23746
9	135.11'	27267	–	–	5236	–	22031
10	124.91'	28573	924	–	7148	3946	16555
11	108.87'	24425	4325	–	2411	1209	16480
12	100.00'	21780	905	–	632	1305	18938

R-4-1
LEDGEVIEW ASSOCIATION/
COMMON LAND
LEDGEVIEW DR.
NEWMARKET, NH 03857

R-4-149
LEDGEVIEW ASSOCIATION(MAGNOLIA)
COMMON LAND
PO BOX 309
NEWMARKET, NH 03857

R-5-134
CROMMET CREEK LLC.
76 EXETER RD.
NEWMARKET, NH 03857

R-4-2
BURELL ASSOCIATION
75 HERSEY LN.
NEWMARKET, NH 03857

PROPOSED SEWER CONNECTION LOCATION (EASEMENT FROM CROMMET CREEK, LLC REQUIRED).

PROPOSED ROW (LLA WITH CROMMET CREEK, LLC REQUIRED).

PROPOSED ROW (LLA WITH DURELL ASSOCIATION REQUIRED).

OWNER OF RECORD:
77 HERSEY LANE LLC
76 EXETER STREET
NEWMARKET NH 03857

PREPARED FOR:

CHINBURG PROPERTIES INC
3 PENSTOCK WAY
NEWMARKET, NH 03857

BEALS • ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX. 603-583-4863

NOTES
1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN LOCATED FROM FIELD OBSERVATIONS AND THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. BEALS ASSOCIATES OR ANY OF THEIR EMPLOYEES TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN, THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND UTILITIES OR STRUCTURES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1–888–DIG–SAFE
2. THIS PLAN HAS BEEN PREPARED FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON–SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON–SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
3. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
4. ALL ROAD AND DRAINAGE WORK TO CONFORM TO TOWN STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL PROPOSED UTILITIES TO BE UNDERGROUND.
5. ALL PROPOSED SIGNS SHALL CONFORM TO THE TOWN ZONING REGULATIONS.
6. PROPOSED DISTURBANCE IS UNDER 100,000 SQ. FT. MIN. ALTERATION TERRAIN RSA 485:A–17 NOT REQUIRED.
7. SEE DETAIL SHEET FOR STANDARD CONSTRUCTION NOTES AND DETAILS.

AREA CALCULATIONS

TOTAL LOT AREA = 12.81 ACRES

METHOD 1: NOT INCLUDED:

(A) OPEN WATER	0.00 ACRES
(B) VERY POORLY DRAINED SOILS	2.56 ACRES
(C) SLOPES EQUAL TO TO GREATER THAN 25%	1.34 ACRES

TOTAL AREA TO BE EXCLUDED: 3.9 ACRES (30.4%)

TOTAL DEVELOPABLE LAND BASE: 8.91 ACRES (69.6%)

LESS 10% FOR ROAD/UTILITIES = 8.91–0.89 = 8.02 ACRES

DENSITY = 8.02/0.5 ACRE = 16 LOTS

METHOD 2: INCLUDED UP TO 25%:

(A) POORLY DRAINED SOILS	0.69 ACRES
(B) LANDS THAT ARE WITHIN UTILITY EASEMENTS	0.00 ACRES
(C) LANDS WITHIN THE 100–YEAR FLOODPLAIN	0.00 ACRES

40% OF "DEVELOPABLE LAND BASE" =
MIN. DESIGNATED REQUIRED FOR OPEN SPACE

TOTAL DEVELOPABLE LAND BASE = 8.91 ACRES X 40% = 3.56 ACRES (4.97–AC PROVIDED).

TOTAL OPEN–SPACE = 8.95–ACRES

STATE OF NEW HAMPSHIRE
CHRISTIAN O. SMITH
No.9900
LICENSED LAND SURVEYOR
PROFESSIONAL ENGINEER

PER TRC COMMENTS AND REVIEW	10–28–19
	DATE:

ENVIRONMENTAL YIELD PLAN

PLAN FOR:
RESIDENTIAL DEVELOPMENT
HERSEY LANE
NEWMARKET, NH
TAX MAP R4, LOT 3

DATE:	MARCH, 2019	SCALE:	1"= 50'
PROJ. NO:	NH–1123	SHEET NO.	Y1