

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.S. #037
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 ADJACENT PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

SCALE: 1 INCH = 40 FT.

SUBDIVISION PLAN
BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
LAND OF
MAKRIS REAL ESTATE
DEVELOPMENT, LLC
TAX MAP 137, LOTS 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE

NO.	DATE	REVISION	PER	REVISION	BY
3	06/16/17	REVISED PER T.R.G. COMMENTS	J.F.K.		
2	06/28/17	REVISED PER T.R.G. COMMENTS	M.T.L.		
1	02/10/17	REVISED LOT LINES	M.T.L.		

DRAWN BY:	M.T.L.	DATE:	JANUARY 9, 2017
CHECKED BY:	J.F.K.	DRAWING NO.:	4380F
JOB NO.:	4380	SHEET	2 OF 13

DOUCET SURVEY
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4080
10 Storrs Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	44.78'	533.00'	4°48'54"	S86°48'45"W	44.78'
C2	43.98'	533.00'	4°43'38"	N88°24'59"W	43.98'
C3	18.16'	225.00'	4°06'52"	S19°37'41"E	18.15'
C4	47.46'	35.00'	77°41'46"	N56°25'08"W	43.91'
C5	32.46'	35.00'	53°07'48"	S58°10'06"W	31.30'
C6	32.46'	35.00'	53°07'48"	S88°42'07"E	31.30'
C7	46.16'	35.00'	76°36'53"	N46°55'33"E	42.91'
C8	31.73'	225.00'	8°04'47"	S13°09'30"W	31.70'
C9	35.42'	25.00'	81°10'36"	S35°55'11"E	32.53'
C23	29.70'	533.00'	3°11'32"	N74°54'44"W	29.69'

LINE TABLE	
LINE BEARING	DISTANCE
L1	N40°25'55"E 45.40'
L2	N36°03'06"E 20.98'
L3	N39°03'06"E 98.38'
L4	N89°55'12"E 44.56'
L5	N89°55'12"E 30.92'
L6	N17°11'54"E 143.54'
L7	N39°03'06"E 132.84'
L33	S17°11'54"W 95.73'

APPROVED BY THE ROCHESTER PLANNING BOARD ON _____ DATE _____
SIGNED BY _____ NAME _____ POSITION _____

LINE	BEARING	DISTANCE
L9	N44°58'03"E	22.95'
L30	N48°04'48"W	20.29'
L31	N60°22'13"W	19.87'

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C9	27.75'	175.00'	9°05'07"	N12°38'21"E	27.72'
C10	55.58'	35.00'	90°59'16"	N0°31'35"W	49.92'
C15	22.56'	425.00'	3°02'28"	N14°51'11"W	22.56'
C16	6.90'	175.00'	2°15'32"	S50°14'27"E	6.90'
C19	54.37'	35.00'	89°00'44"	S89°28'25"W	49.07'
C20	13.46'	175.00'	4°24'28"	S42°45'46"W	13.46'
C21	35.68'	225.00'	9°05'07"	N12°38'21"E	35.64'

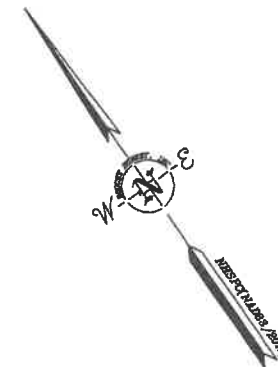
APPROVED BY THE ROCHESTER PLANNING BOARD ON _____ DATE _____

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L.L.S. #037
DATE _____

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SCALE: 1 INCH = 40 FT.

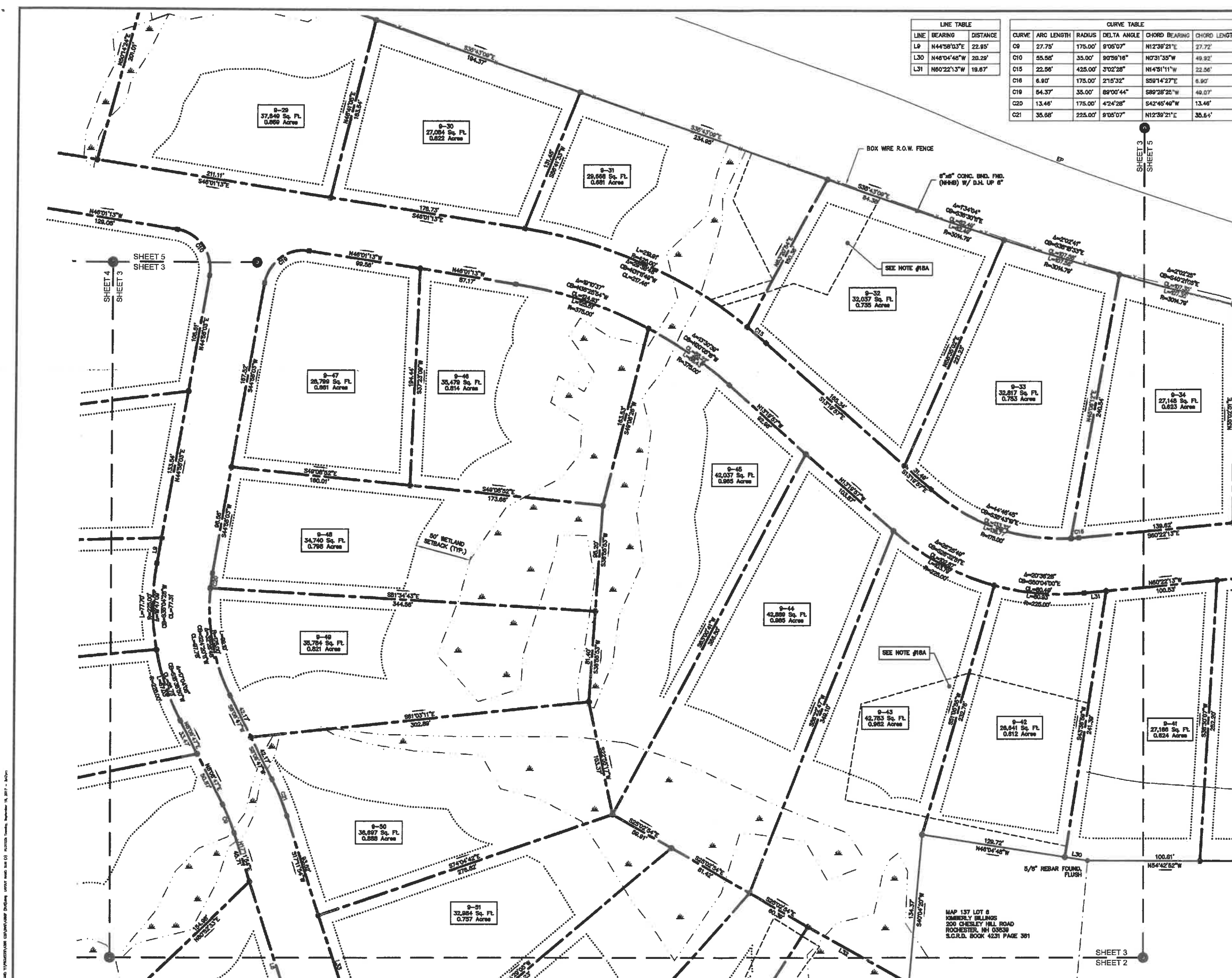
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BIRCHWOOD PONDS
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TAX MAP 137, LOTS 9, 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
3	06/16/17	REVISED PER T.R.Q. COMMENTS	J.F.K.
2	06/28/17	REVISED PER T.R.Q. COMMENTS	M.T.L.
1	02/10/17	REVISED LOT LINES	M.T.L.

DRAWN BY:	M.T.L.	DATE:	JANUARY 9, 2017
CHECKED BY:	J.F.K.	DRAWING NO.:	4380F
JOB NO.:	4380	SHEET	3 OF 13

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10 Storer Street (RiverView Suite) Kennebunk, ME (207) 502-7005
<http://www.doucetsurvey.com>

SHEETS 7-13 NOT FOR RECORDING



FILE NAME: \\P:\PROJECTS\137\137-1\137-1.dwg PLOT DATE: 06/16/17 PLOTTER: T. TOWNES, NEWHAMPSHIRE, 06/16/17 - 34x50

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C8	27.75'	175.00'	9°05'07"	N12°39'21"E	27.72'
C10	55.58'	35.00'	90°59'16"	N0°31'35"W	49.92'
C11	32.46'	35.00'	53°07'48"	S20°59'18"W	31.30'
C12	32.46'	35.00'	53°07'48"	N74°07'06"E	31.30'
C13	20.89'	225.00'	5°15'08"	S71°40'27"W	20.88'
C14	32.84'	225.00'	8°18'46"	N50°10'38"W	32.82'

LINE TABLE		
LINE	BEARING	DISTANCE
L4	N89°35'12"E	44.56'
L5	N89°55'12"E	30.92'
L7	N39°03'06"E	132.84'
L8	N30°31'14"E	49.32'
L9	N44°58'03"E	22.95'
L10	N42°29'21"E	29.79'
L11	N42°28'21"E	59.18'
L12	N48°20'38"W	53.33'
L13	N48°20'38"W	68.52'
L15	N48°44'33"W	75.31'
L16	N58°37'05"W	16.09'
L17	N49°48'38"W	74.50'
L18	N53°10'26"W	36.03'
L19	N80°43'04"W	19.53'
L20	N51°06'42"W	26.15'
L21	N53°20'06"E	81.16'
L22	S47°33'12"W	30.34'
L23	S47°33'12"W	7.23'
L24	N47°33'12"E	21.02'
L25	N47°33'12"E	18.55'
L28	N45°47'26"E	20.36'

SHEET 5
SHEET 4

MAP 246 LOT 20
CITY OF ROCHESTER
31 WAKEFIELD ST
ROCHESTER, NH 03607
S.C.R.D. BOOK 983 PAGE 571

MAP 246 LOT 25-1
DONALD GAGNON REV TRUST
9 FLAGG RD
ROCHESTER, NH 03639
S.C.R.D. BOOK 3204 PAGE 212

MAP 246 LOT 27
DAVID & DESTINY GREEN
138 CHESLEY HILL ROAD
ROCHESTER, NH 03639
S.C.R.D. BOOK 4264 PAGE 789

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DATE _____
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APPROVED BY THE ROCHESTER PLANNING BOARD ON _____ DATE _____

SIGNED BY _____ NAME _____ POSITION _____

SCALE: 1 INCH = 40 FT.

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RESIDENTIAL DEVELOPMENT
LAND OF
MAKRIS REAL ESTATE
DEVELOPMENT, LLC
TAX MAP 137, LOTS 9, 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
3	09/16/17	REVISED PER T.R.O. COMMENTS	J.F.K.
2	06/28/17	REVISED PER T.R.O. COMMENTS	M.T.L.
1	02/10/17	REVISED LOT LINES	M.T.L.

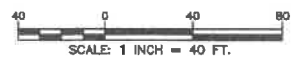
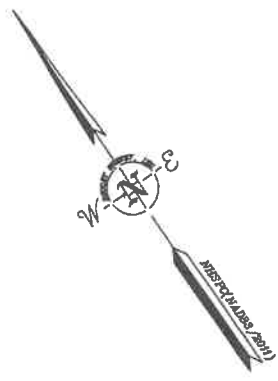
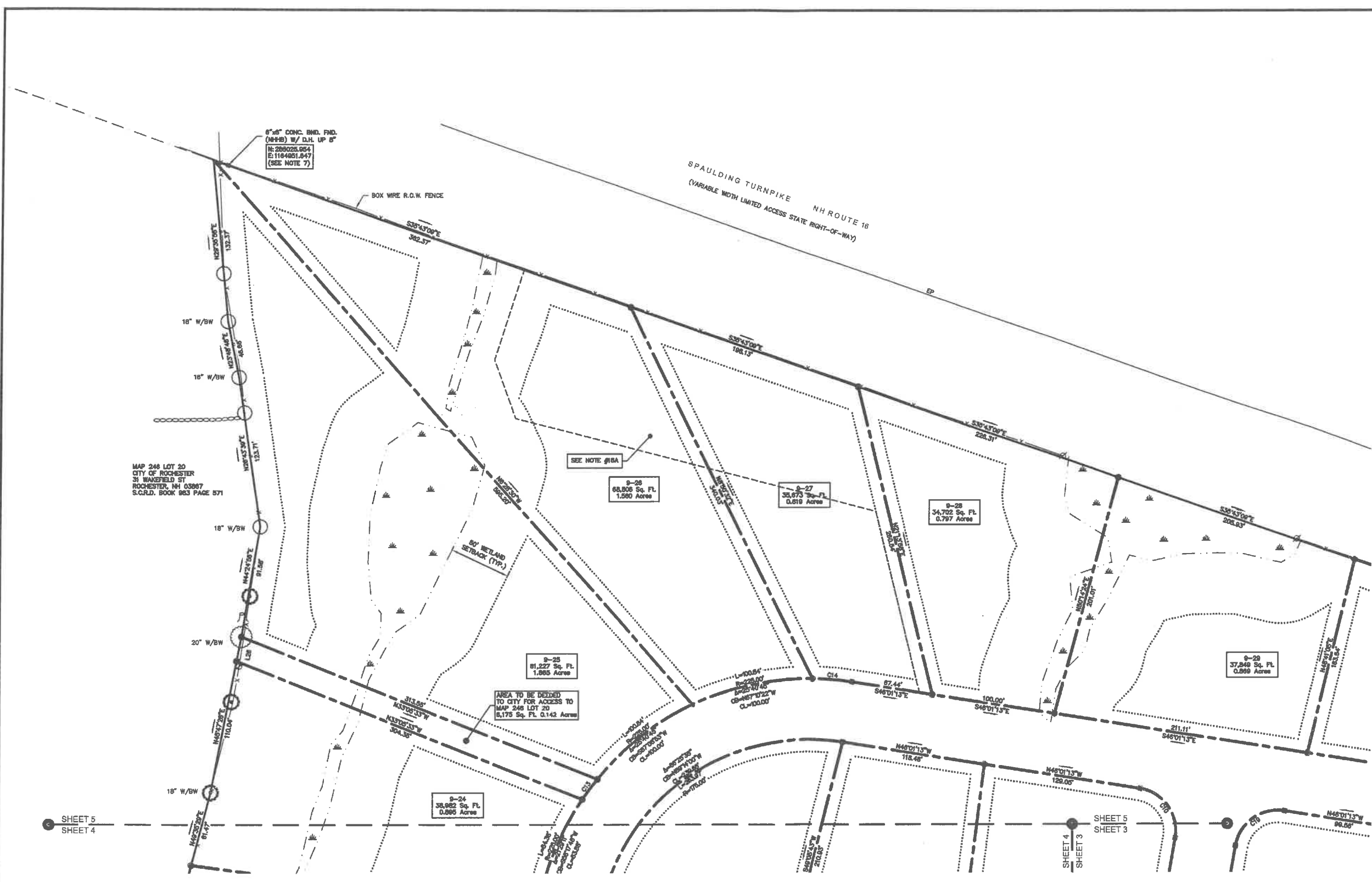
DRAWN BY:	M.T.L.	DATE:	JANUARY 9, 2017
CHECKED BY:	J.F.K.	DRAWING NO.:	4380F
JOB NO.:	4380	SHEET	4 OF 13



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SHEETS 7-13 NOT FOR RECORDING

FILE NAME: N:\PROJECTS\137\137-001\137-001.dwg USER: J.F.K. DATE: 01/09/2017 10:17:11



SUBDIVISION PLAN
BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
LAND OF
MAKRIS REAL ESTATE
DEVELOPMENT, LLC
TAX MAP 137, LOTS 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE

3	06/19/17	REVISED PER T.R.G. COMMENTS	J.F.K.
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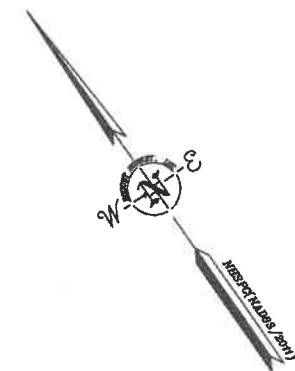
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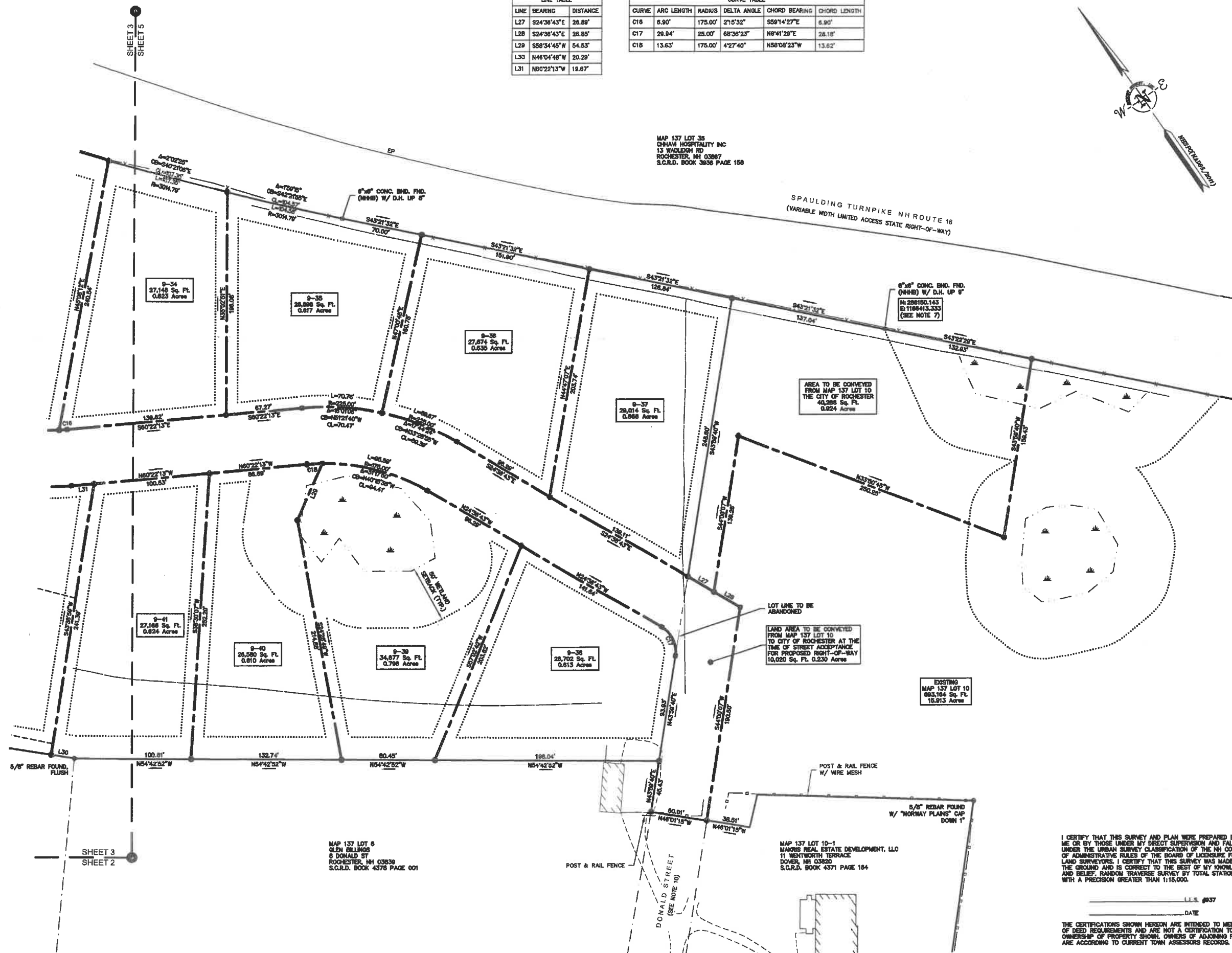
LINE TABLE		
LINE	BEARING	DISTANCE
L27	S24°36'43"E	26.89'
L28	S24°36'43"E	26.85'
L29	S58°34'45"W	54.53'
L30	N46°04'48"W	20.29'
L31	N80°22'13"W	18.67'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C16	8.90'	175.00'	21°5'32"	S59°14'27"E	6.90'
C17	29.94'	25.00'	68°36'23"	N9°41'29"E	26.18'
C18	13.63'	175.00'	4°27'40"	N58°08'23"W	13.62'



MAP 137 LOT 35
CHAM HOSPITALITY INC
13 WADLEIGH RD
ROCHESTER, NH 03867
S.C.R.D. BOOK 3636 PAGE 158

SPAULDING TURNPIKE NH ROUTE 16
(VARIABLE WIDTH LIMITED ACCESS STATE RIGHT-OF-WAY)



SCALE: 1 INCH = 40 FT.

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DRAWN BY: M.T.L. DATE: JANUARY 9, 2017			
CHECKED BY: J.F.K. DRAWING NO.: 4380F			
JCB NO.: 4380 SHEET 6 OF 13			

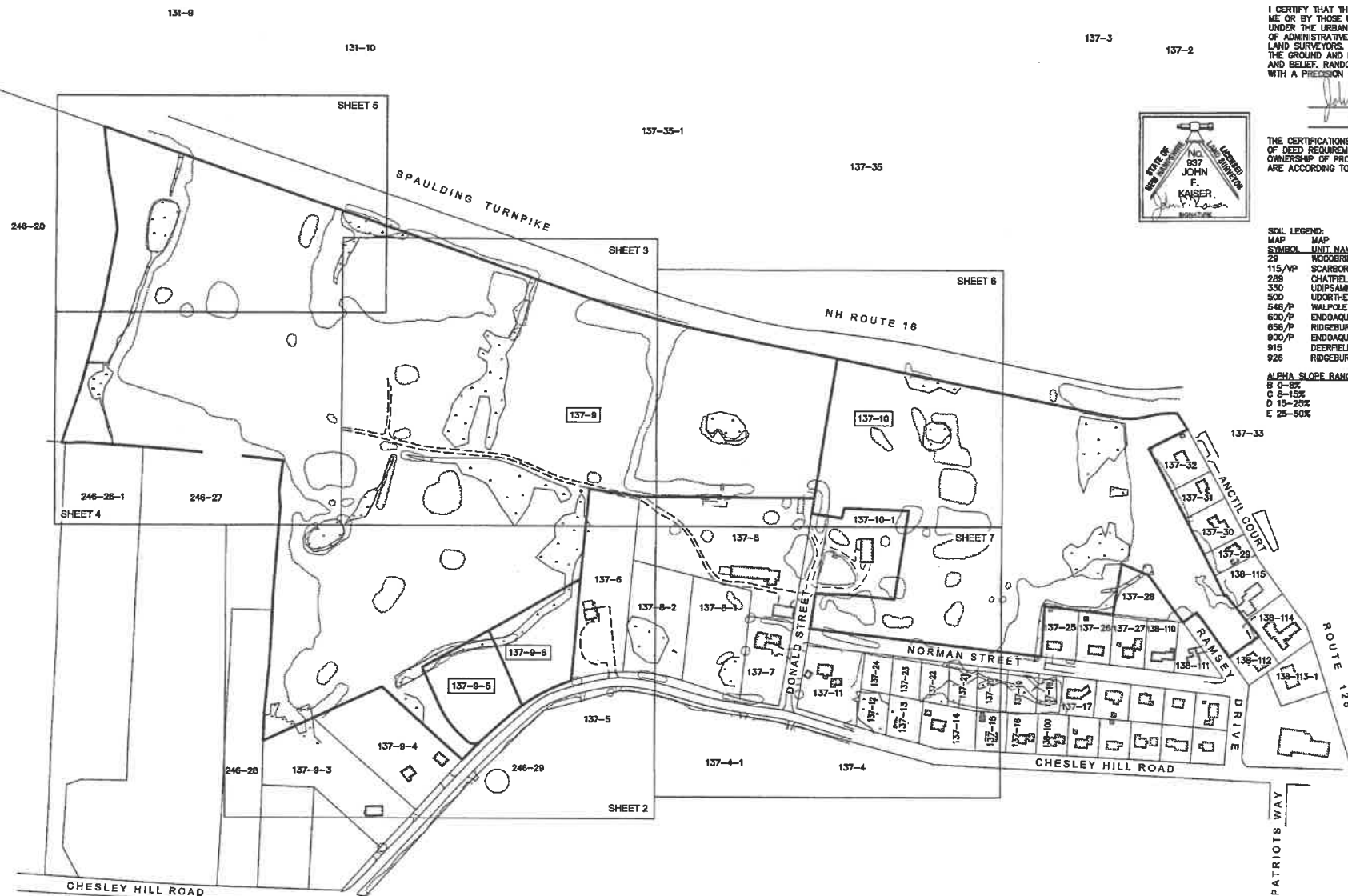
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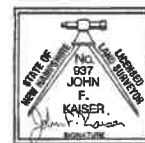
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SOIL LEGEND:	
MAP SYMBOL	MAP UNIT
29	WOOD
115/VP	SCA
289	CHA
350	UDIR
500	UDC
546/P	WAL
600/P	END
658/P	RIDG
900/P	END
915	DEE
926	RIDG

ALPHA SLOPE RANGE
B 0-8%
C 8-15%
D 15-25%
E 25-50%

HYDROLOGIC
GROUP
FINE SANDY LOAM C
MUCK D
(SWPD) C
WET SUBSTRATUM C
LOAMY C
LOAMY SAND C
LOAMY D
FINE SANDY LOAM C
SANDY D
(SWPD) C
(SWPD) C

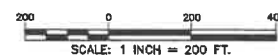
DRAINAGE
SWPD = SOMEWHAT POORLY DRAINED
PD = POORLY DRAINED
VPD = VERY POORLY DRAINED
W = WATER (POND)



LOCATION MAP (1" = 1,000')

LEGEND

LOT LINE
 APPROXIMATE ABUTTERS LOT LINE
 STONE WALL
 STOCKADE FENCE
 WIRE FENCE
 CHAIN LINK FENCE
 OVERHEAD WIRES
 DRAIN LINE
 MAJOR CONTOUR LINE
 MINOR CONTOUR LINE
 TREE LINE
 SHRUB LINE
 EDGE OF WETLAND
 EDGE OF WATER
 STREAM
 NRCS SOIL LINE
 NRCS SOIL DESIGNATION
 UTILITY POLE
 UTILITY POLE & GUY WIRE
 SIGN
 SIGN (TWO POSTS)
 GRANITE BOUND FOUND
 DRILL HOLE FOUND
 IRON PIPE/ROD FOUND
 FENCE POST
 WOOD POST
 POST
 WETLAND AREA
 TREE STUMP
 CONIFEROUS TREE
 DECIDUOUS TREE
 DECIDUOUS BUSH
 BOULDER
 TEST PIT
 CONCRETE
 BND. FND.
 D.H.S.
 L.P.F.
 I.R.-S.
 EP
 ECG
 W/BW
 NAD
 137-33
 NEW-SCORE HIGHWAY BOUND
 TAX MAP & LOT NUMBER



**EXISTING CONDITIONS PLAN
BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
LAND OF
MAKRIS REAL ESTATE
DEVELOPMENT, LLC
TAX MAP 137, LOTS 9, 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE**

No.	Date	Description			Sy
DRAWN BY:		M.T.L.	DATE:		JANUARY 9, 1917
CHECKED BY:		J.F.K.	DRAWING NO.:		4380F
JOB NO.:		4380	SHEET		7 OF 13



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THIS SHEET NOT FOR RECORDING

- NOTES:

1. REFERENCE: TAX MAP 137,
LOTS 9, 9-5A, 9-5* & 10
*THESE PARCELS DO NOT APPEAR ON THE CITY OF ROCHESTER TAX MAPS
2. TOTAL PARCEL AREA: 63.832 ACRES
3. OWNER OF RECORD: MAKRS REAL ESTATE DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820
S.C.R.D. BOOK 4371, PAGE 184
4. ZONE: RESIDENTIAL 1
DIMENSIONAL REQUIREMENTS:

MIN. LOT AREA	10,000 sq.ft.
MIN. FRONTAGE	100 ft.
MIN. FRONT SETBACK	10 ft.
MIN. SIDE SETBACK	10 ft.
MIN. REAR SETBACK	20 ft.
MAX. BUILDING HEIGHT	35 ft.

WETLAND SETBACKS
REFER TO CITY OF ROCHESTER ZONING ORDINANCE SECTION 42-12
5. FIELD SURVEY PERFORMED BY J.M.L. & L.P.S. DURING JANUARY & FEBRUARY, 2016 USING A TRIMBLE 5603 TOTAL STATION WITH A TRIMBLE TS3C3 DATA COLLECTOR. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
6. FIELD SURVEY PERFORMED BY J.F.K. DURING DECEMBER 2015 USING A TRIMBLE PRO XR SUB METER GPS UNIT WITH A RECON AND/OR A TSC-1 DATA COLLECTOR. ACCURACY UNDER IDEAL CONDITIONS IS +/- 3 FEET. ANY WETLAND PLACES NEAR PROPOSED DEVELOPMENT NEED TO BE CONVENTIONALLY SURVEY LOCATED PRIOR TO FINAL DESIGN AND/OR CONSTRUCTION.
7. FIELD SURVEY PERFORMED TO ESTABLISH HORIZONTAL DATUM AND AERIAL CONTROL BY C.S.S. DURING DECEMBER 2015 USING A TRIMBLE R6 SURVEY GRADE GPS UNIT WITH A TRIMBLE TS3C3 DATA COLLECTOR.
8. JURISDICTIONAL WETLANDS DELINEATED BY GOWE ENVIRONMENTAL SERVICES, INC. DURING DECEMBER 2015 IN ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1.
9. THE SITE SPECIFIC SOIL SURVEY WAS PROVIDED MARCH 9, 2016, AND WAS PREPARED BY JAMES P. GOWE, CSS # 004, GOWE ENVIRONMENTAL SERVICES, INC. FIELD WORK WAS CONDUCTED NOVEMBER AND DECEMBER OF 2015, AND JANUARY OF 2016. PROJECT IS GES # 2015170.
10. SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE IS 10, JANUARY 2011.
11. FLOOD HAZARD ZONE "X", PER FIRM PANEL 6330170C0210D, DATED MAY 16, 2005.

12. HORIZONTAL DATUM BASED ON NEW HAMPSHIRE STATE PLANE(2800) NAD83(2011) DERIVED FROM REDUNDANT GPS OBSERVATIONS UTILIZING THE KENT COUNTY DEED. THIS DATUM HAS BEEN FOUND TO BE CONSISTENT ± 2 WITH THE CITY OF ROCHESTER MGS COORDINATE SYSTEM.
13. VERTICAL DATUM IS BASED ON CITY OF ROCHESTER NAVD83 UTILIZING CITY OF ROCHESTER GEODETIC MONUMENT #225 HAVING A PUBLISHED ELEVATION OF 359.342'.
14. PROPER PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND CONJECTURE SURVEY, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION OR FOR DAMAGES INCURRED BY THE USER.
15. 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.
16. AERIAL TOPOGRAPHY WAS CONDUCTED BY EASTERN TOPOGRAPHICS FROM IMAGES TAKEN DURING DECEMBER 2015 WITH A PHOTO SCALE OF 1" = 40'. CONTOURS AND OBJECTS SHOWN WITHIN OBSERVED AREAS ARE APPROXIMATE AND SHOULD BE VERIFIED BEFORE USE FOR DESIGN OR CONSTRUCTION PURPOSES.
17. TAX MAP 177, LOT 9-8 IS SUBJECT TO A DRAINAGE EASEMENT TO THE CITY OF ROCHESTER RECORDED IN S.C.R.D. BOOK 1378, PAGE 388. THE EXACT LOCATION IS UNKNOWN. A 12" DRAINAGE PIPE WAS FOUND AND SHOWN HEREON IN THE EASEMENT VICINITY AS REFERENCED IN THE DEED.
18. ROADWAY NOTES:

ROADWAY STATUS RESEARCH WAS PERFORMED AT STRAFFORD COUNTY REGISTRY OF DEEDS, CITY OF ROCHESTER PLANNING DEPARTMENT AND CLERK'S OFFICE, AND THROUGH CORRESPONDENCE WITH CITY OF ROCHESTER ENGINEERING DEPARTMENT.

A. CHESLEY HILL ROAD (F.K.A. GROVE STREET): PAVED, PUBLIC, 4 RODS (66') WIDE PER HIGHWAY BOOK 3 PAGE 52 IN THE ROCHESTER CITY CLERK'S OFFICE.

B. NORMAN STREET: PAVED IN PART, 50' WIDE FROM RAMSEY DRIVE TO DONALD STREET AS DEEDED TO CITY OF ROCHESTER IN S.C.R.D. BOOK 767, PAGE 350. PRESUMED PUBLIC PER ABOVE RESEARCH. NO FORMAL ACCEPTANCE FOUND OR PROVIDED DURING RESEARCH.

C. RAMSEY DRIVE; PAVED, PRESUMED 50' PER REFERENCE PLAN #3. PRESUMED PUBLIC PER ABOVE RESEARCH. NO FORMAL ACCEPTANCE OR CONVEYANCE TO CITY FOUND OR PROVIDED DURING RESEARCH.

D. DONALD STREET: PAVED IN PART, PRESUMED 50' PER REFERENCE PLAN #8. PRESUMED PUBLIC PER ABOVE RESEARCH. NO FORMAL ACCEPTANCE OR CONVEYANCE TO CITY FOUND OR PROVIDED DURING RESEARCH.

REFERENCE PLANS:

1. "PROPOSED SUBDIVISION NORMAN A. & IRENE M. RAMSEY, NORMAN STREET, GONIC, ROCHESTER, N.H." DATED 27 NOV 1984 BY BERRY CONST. CO., INC. S.C.R.D. PLAN #25-48.
2. PLAN OF LAND OF GLEN & KIMBERLY BURLINGS, GROVE STREET, ROCHESTER, N.H.-DATED MAY 5, 1988 BY BERRY SURVEYING & ENGINEERING. S.C.R.D. PLAN #37-11.
3. SUBDIVISION PLAN OF LAND LOTS 13, 34, ASSESSOR'S MAP 13R, 68 GONIC ROAD, GONIC, NEW HAMPSHIRE, COUNTY OF STRAFFORD-DATED 9-3-04 BY CVM/ROCKS. S.C.R.D. PLAN #77-80.
4. HILLSIDE ACRES DEVELOPMENT, ROCHESTER, N.H. PLAN OF LOT LAYOUT ON LAND OF NORMAN RAMSEY, GONIC N.H.' ORIGINAL PRINT BY UNKNOWN, TRACED BY T.W. CHELSEA, DATED SEPT. 1955 REVISED APRIL 1958. S.C.R.D. PLAN #27, POCKET 3, FOLDER 4.
5. SUBDIVISION PLAN OF LAND ON CHESLEY--HILL-ROAD, ROCHESTER N.H. FOR RONALD P. LAVALLEE- DATED NOV 13, 1971. S.C.R.D. PLAN #4, POCKET 8, FOLDER 1
6. SUBDIVISION OF LAND, ROCHESTER, N.H. WINCENT J. & LAVERENE T. DENOBLE- DATED JAN 24, 1986 BY JOHN W. DUNBAR. S.C.R.D. PLAN #29-1E.
7. SUBDIVISION OF LAND, GROVE STREET, ROCHESTER, N.H. FOR RAMSEY REALTY CO., INC.- DATED SEPT. 1992 BY NORWAY PLAINS ASSOCIATES, INC. S.C.R.D. PLAN #40-25.
8. SUBDIVISION OF LAND, DONALD STREET, ROCHESTER, N.H. FOR NORMAN A. RAMSEY- DATED JUNE 1995 BY NORMAN PLAINS ASSOCIATES, INC. S.C.R.D. PLAN #47-1.
9. SUBDIVISION OF LAND, GROVE ST. & DONALD ST., ROCHESTER, N.H. FOR NORMAN A. RAMSEY- DATED JULY 2000 BY NORWAY PLAINS ASSOCIATES, INC. S.C.R.D. PLAN #61-8.
10. "SUBDIVISION OF LAND, GROVE STREET, ROCHESTER, N.H. FOR NORMAN A. RAMSEY" DATED MAR. 2000 BY NORWAY PLAINS ASSOCIATES, INC. S.C.R.D. PLAN #61-10.
11. "STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY PLANS NH PROJECT NO. 10620-D SPAULDING TURNPIKE NH ROUTE 16" DATED JANUARY 11, 2001. S.C.R.D. PLAN #101-001.
12. "PLAN OF PROPOSED LS 1826 (1) N.H. NO. P-2692--T SPAULDING TURNPIKE" DATED 1985. ON FILE THROUGH THE NHDOT ONLINE PROJECT VIEWER.

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.

John F. Kaiser U.S. #37
1/9/17 DATE

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



EXISTING CONDITIONS PLAN
BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
LAND OF
MAKRIS REAL ESTATE
DEVELOPMENT, LLC
TAX MAP 137, LOTS 9, 9-5, 9-6 & 10
CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

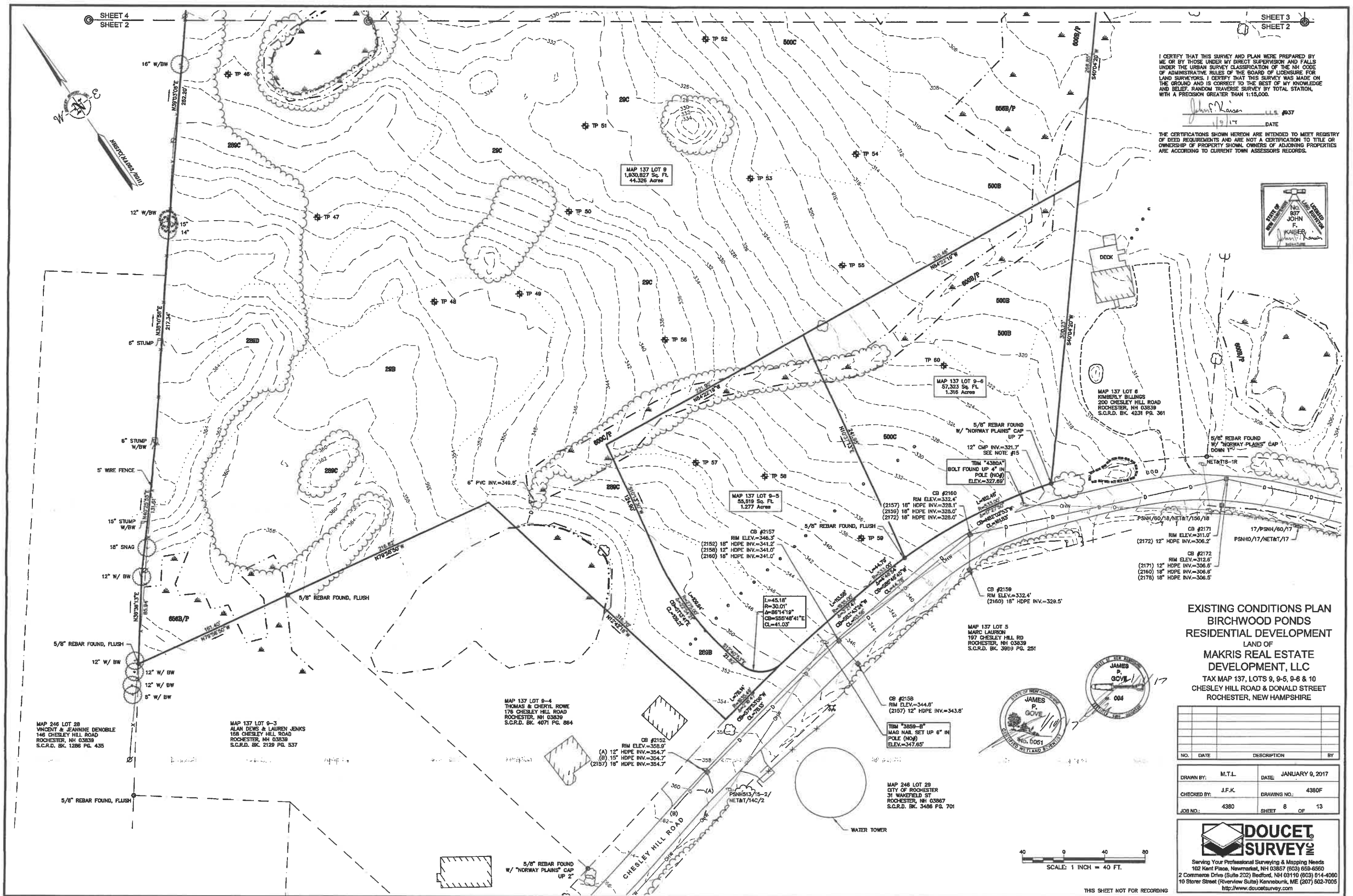
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CHECKED BY: J.F.K. DRAWING NO.: 4380F
JOB NO.: 4380 SHEET 8 OF 13



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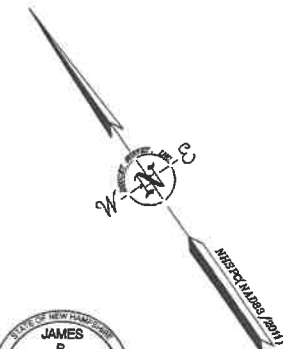
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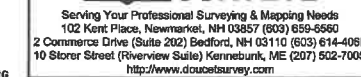
John F. Hansen U.S. #837
1/7/17 DATE

STATE OF
NEW HAMPSHIRE
No. 937
JOHN
F.
KAISER
LICENSED SURVEYOR
John F. Kaiser
SIGNATURE

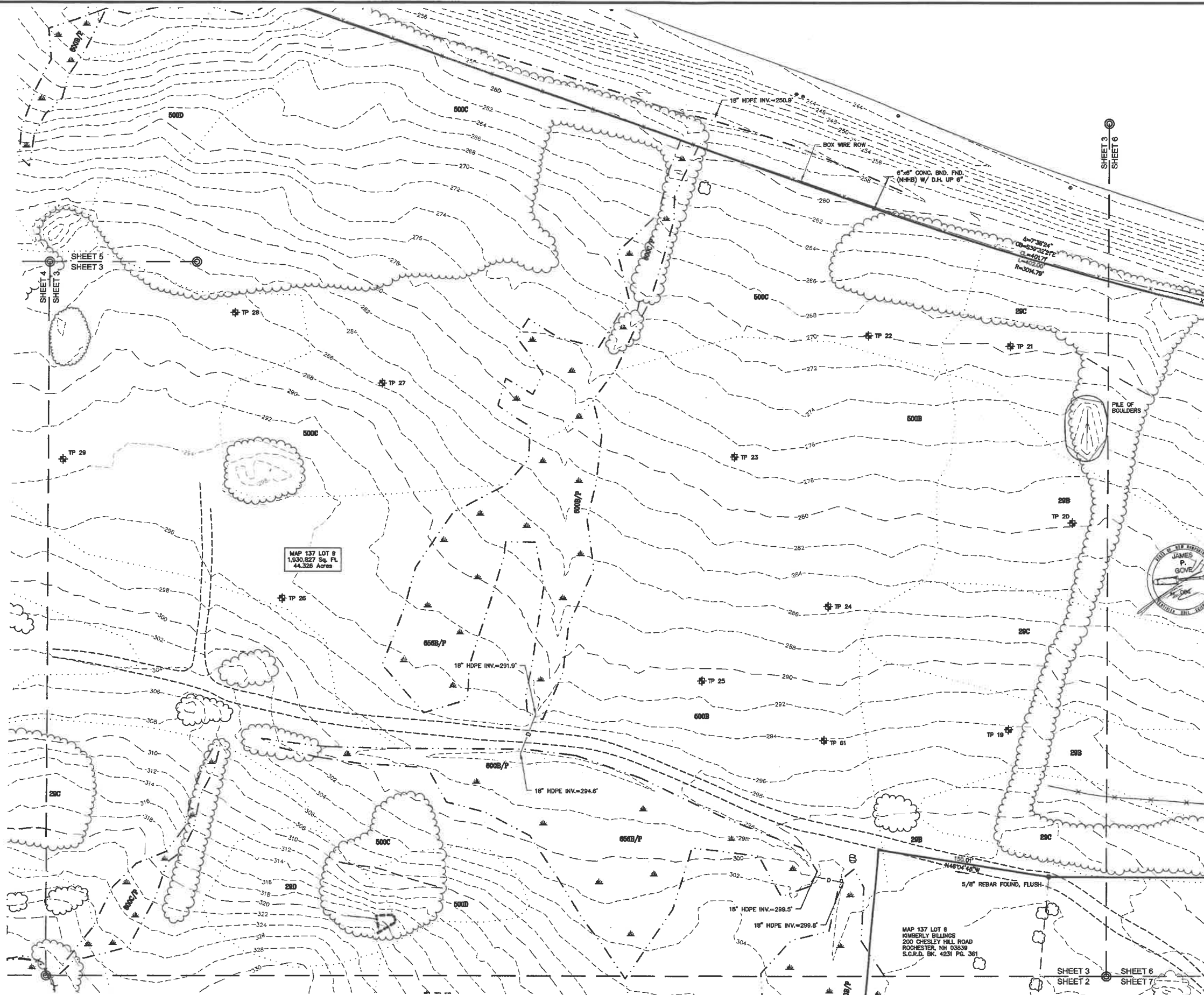


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CHESLEY HILL ROAD & DONALD STREET
ROCHESTER, NEW HAMPSHIRE**

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<table border="1"> <tr> <td>DRAWN BY:</td> <td>M.T.L.</td> <td>DATE:</td> <td colspan="2">JANUARY 9, 2017</td> </tr> <tr> <td>CHECKED BY:</td> <td>J.F.K.</td> <td>DRAWING NO.:</td> <td colspan="2">4380F</td> </tr> <tr> <td>JOB NO.:</td> <td>4380</td> <td>SHEET</td> <td>8</td> <td>OF 13</td> </tr> </table>					DRAWN BY:	M.T.L.	DATE:	JANUARY 9, 2017		CHECKED BY:	J.F.K.	DRAWING NO.:	4380F		JOB NO.:	4380	SHEET	8	OF 13
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FILE NAME	YUPOJECTS\360 EXCHANGES\2004	LASTMOD	MAINT	YUPO PROJ	REVISIONS	MODIFIED	DATE	BY
FILE NAME	YUPOJECTS\360 EXCHANGES\2004	LASTMOD	MAINT	YUPO PROJ	REVISIONS	MODIFIED	DATE	BY

LINE	BEARING	DISTANCE
L1	N30°31'14"E	49.32'
L2	N42°29'21"E	68.97'
L3	N52°58'36"W	31.28'
L4	N58°37'05"W	16.09'
L5	N53°10'26"W	36.03'
L6	N60°43'04"W	19.53'
L7	N51°06'42"W	26.15'

SHEET 5
SHEET 4

MAP 248 LOT 20
CITY OF ROCHESTER
31 WAKEFIELD ST
ROCHESTER, NH 03867
S.C.R.D. BK. 983 PG. 571

MAP 248 LOT 25-1
DONALD GAGNON REV TRUST
8 FLAGG RD
ROCHESTER, NH 03839
S.C.R.D. BK. 3204 PG. 212

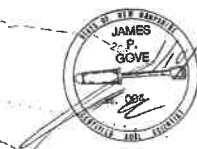
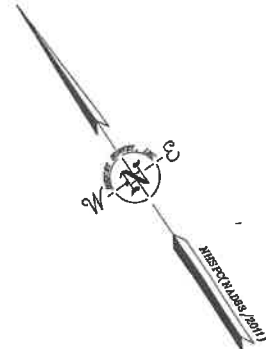
MAP 248 LOT 27
DAVID & DESTINY GROWN
136 CHESLEY HILL ROAD
ROCHESTER, NH 03839
S.C.R.D. BK. 4294 PG. 769

MAP 137 LOT 9
1,530,627 Sq. Ft.
44.325 Acres

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.

DATE 1/9/17
L.L.S. #937

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SCALE: 1 INCH = 40 FT.

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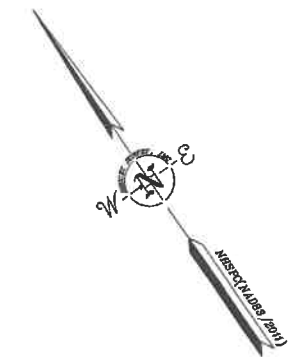
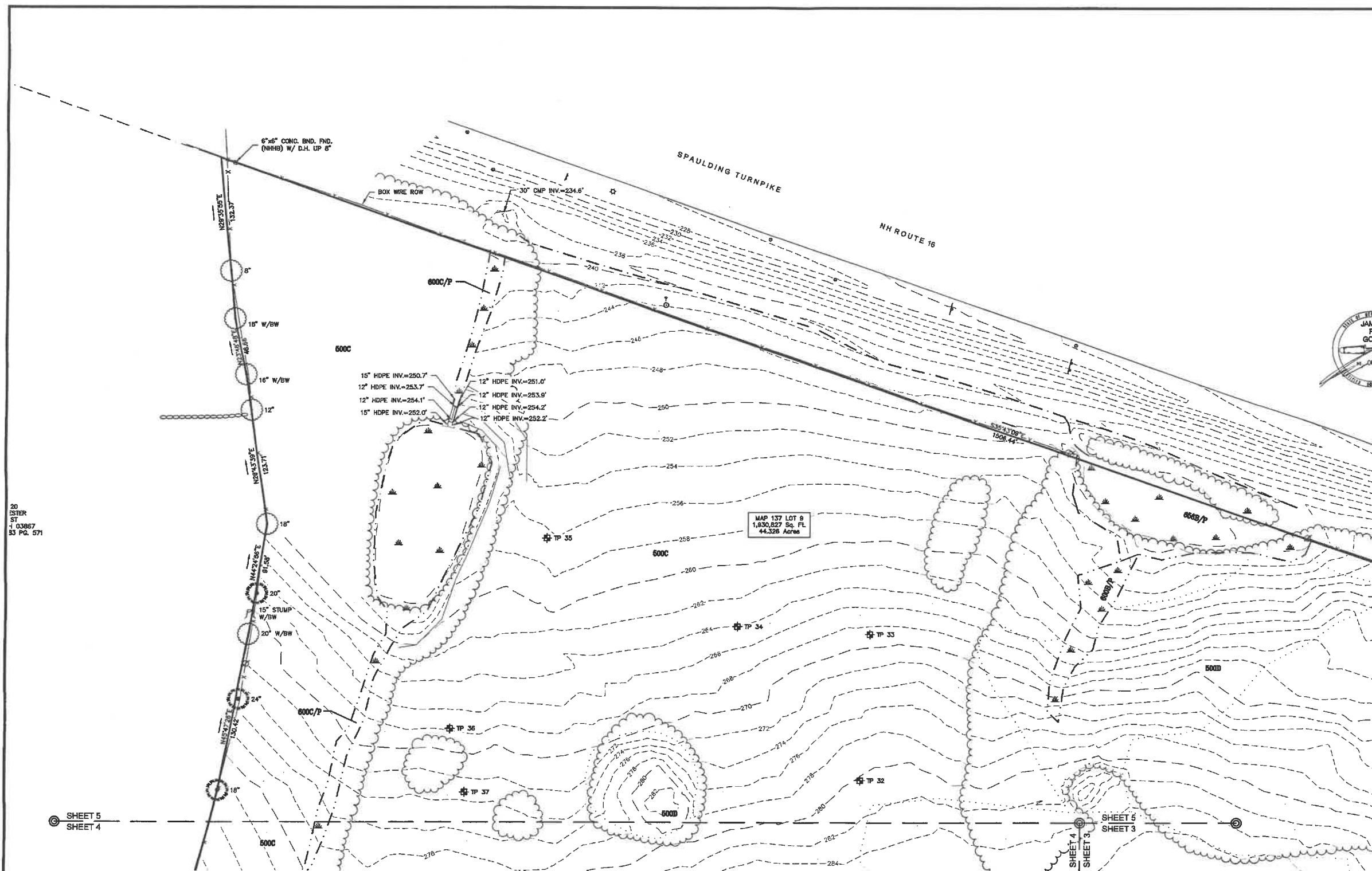
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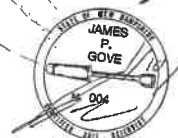
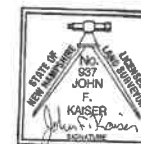
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John F. Lauer LLS #37
1/9/17 DATE

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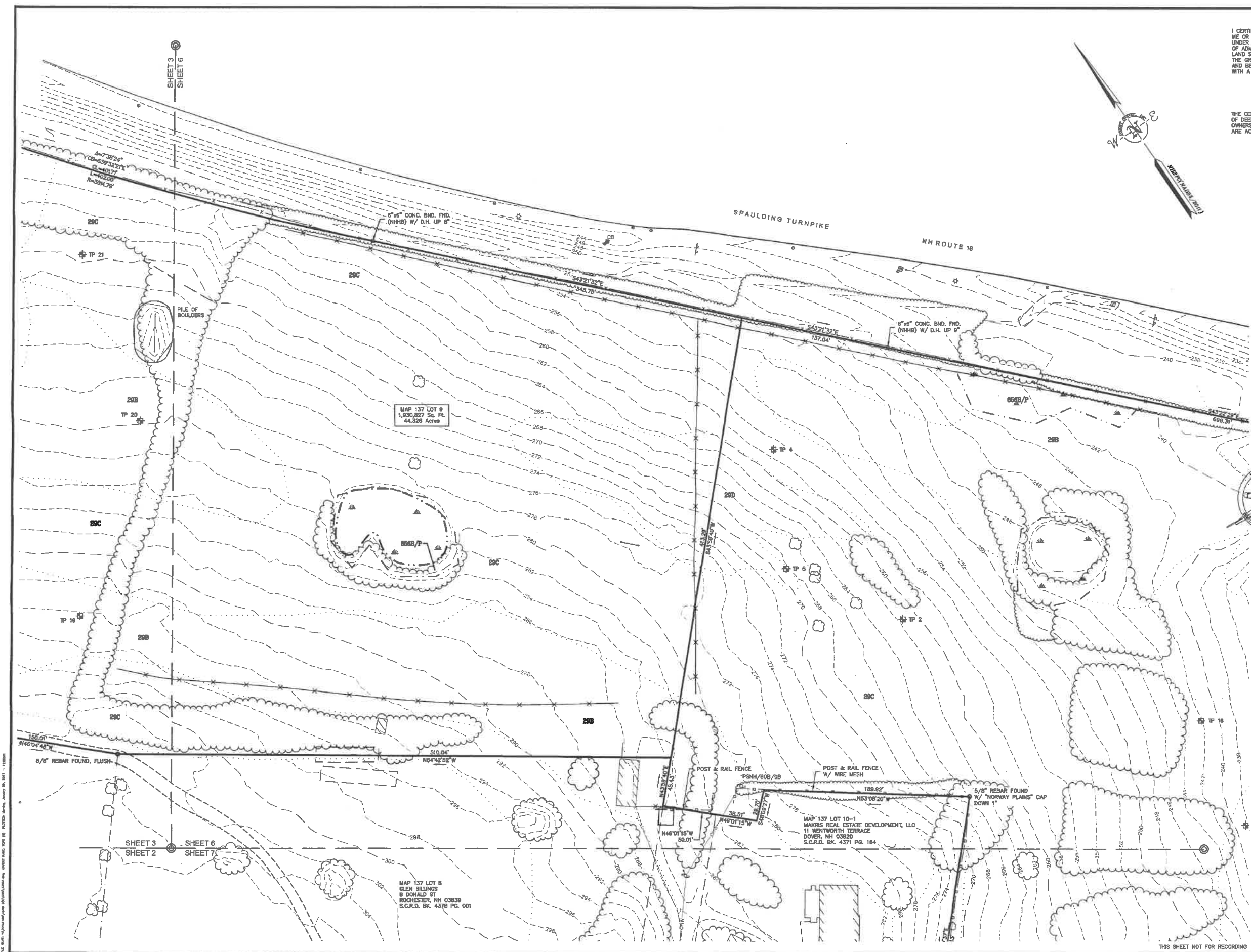
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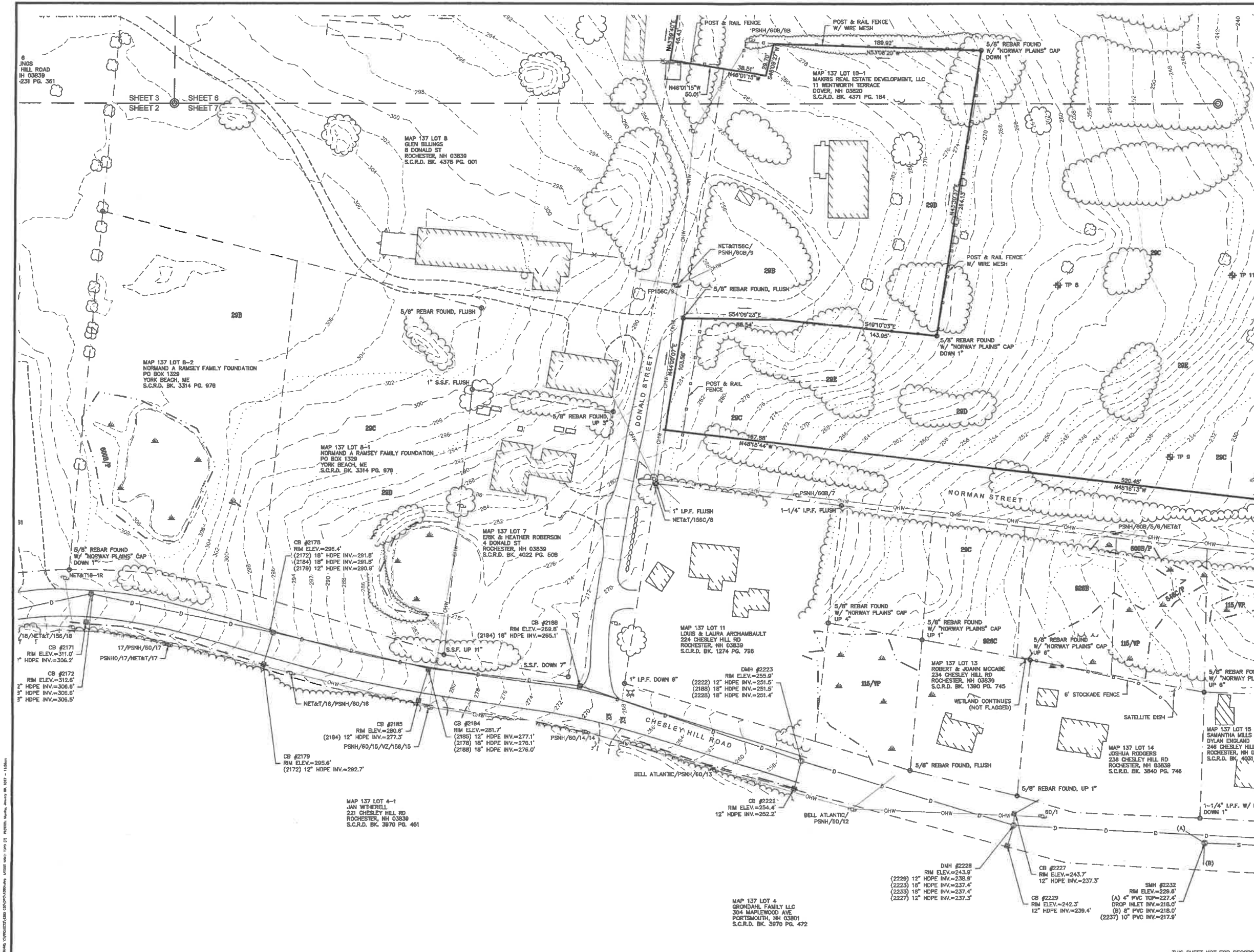
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MAKRIS REAL ESTATE DEVELOPMENT, LLC
 TAX MAP 137, LOTS 9, 9-5, 9-6 & 10
 CHESLEY HILL ROAD & DONALD STREET
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JOB NO.: 4380 SHEET 13 OF 13

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PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE AND SPECIFICATION
TREES		
ACER REBRUM RED SUNSET (SM)	RED SUNSET MAPLE	2.5"-3" CAL. B&B
PIRUS CALLERYANA REDSPIRE (RP)	REDSPIRE PEAR	2.5"-3" CAL. B&B
ULMUS X LIBERTY (LE)	LIBERTY ELM	2.5"-3" CAL. B&B
Abies concolor	WHITE FIR (WF)	6' HEIGHT
Juniperus virginiana	EASTERN RED CEDAR (ERC)	6-7' HEIGHT

SEPARATION NOTE

1. PER CITY OF ROCHESTER REQUIREMENTS, NO TWO DWELLING UNITS SHALL BE CONSTRUCTED CLOSER THAN 30' FROM ONE ANOTHER.

LEGEND

	UTILITY POLE
	LIGHT POLE
	TEST PIT W/ NO.
	STONE WALL
	TREE LINE
	EXISTING CONTOUR - 10'
	EXISTING CONTOUR - 2'
	MANMADE WETLAND BOUNDARY
	NATURAL WETLAND BOUNDARY
	25' NO DISTURB BUFFER
	50' WETLAND SETBACK
	SOILS BOUNDARY LINE
	SEPTIC SETBACK
	BUILDING SETBACK
	ABUTTER PROPERTY LINE
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	4,000 SF SEPTIC RESERVE AREA

PHASING CONSTRUCTION & EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL OBTAIN TREE CLEARING PERMIT FROM LOCAL AND STATE AUTHORITIES PRIOR TO START OF CONSTRUCTION (IF REQUIRED).
2. CLEARING FOR WATER MAIN EXTENSION SHOULD BE LIMITED TO THE ROAD SURFACE LIMITS. EROSION CONTROLS SHALL BE INSTALLED DOWN SLOPE OF THE LIMIT OF DISTURBANCE AND INSPECTED/APPROVED BY CITY OFFICIALS PRIOR TO STUMPING AND GRUBBING THE AREA FOR EXCAVATION.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND ANY EARTH MOVING OPERATIONS. SILT FENCE/SILT SOX/EROSION CONTROL BERM SHALL BE INSTALLED AT THE LIMITS OF IMPACT AREAS ACCORDING TO THE DETAILS SHOWN ON THE PROFILE PLANS.
4. IF DOWATERING OF THE UTILITY TRENCH IS REQUIRED, TEMPORARY SEDIMENT BASINS SHALL BE CONSTRUCTED AND LINED WITH GEOTEXTILE. IN THE EVENT SED. BASINS CANNOT BE REASONABLY ESTABLISHED, DOWATERING FILTER BAGS SHALL BE UTILIZED (BY GRANITE ENVIRONMENTAL OR APPROVED EQUIV).
5. EVERY EFFORT SHALL BE MADE TO CONSTRUCT WETLAND CROSSINGS DURING PERIODS OF LOW FLOW. IN THE EVENT THAT BYPASS PUMPING IS REQUIRED FOR WETLAND CROSSING, BYPASS WATER SHALL BE PUMPED TO A RIP RAP PLUNGE POOL UPGRADIENT OF THE DOWNSLOPE WETLAND TO ELIMINATE EROSION VELOCITIES.
6. THE WATER MAIN SHALL BE INSPECTED AND APPROVED BY WATER WORKS STAFF & BACKFILLED IMMEDIATELY. STABILIZATION OF THE DISTURBED AREA SHALL INCLUDE HYDRO SEEDING, USE OF EROSION CONTROL BLANKET AND/OR RIP RAP SLOPE STABILIZATION ON GEOTEXTILE AS NEEDED TO PREVENT POTENTIAL EROSION UNTIL PHASE 3 ROAD CONSTRUCTION IS UNDERWAY.
7. STORM WATER PONDS AND SWALES TO BE CONSTRUCTED PRIOR TO LOT DEVELOPMENT TO REDUCE THE POTENTIAL FOR EROSION. ALL SLOPES, PONDS AND SWALES TO BE LOAMED AND SEEDED IMMEDIATELY UPON COMPLETION OF FINISH GRADING (THE DRAINAGE STRUCTURES SHALL BE STABILIZED PRIOR TO RECEIVING STORM WATER FLOW).
8. ALL STOCKPILED EARTH MATERIAL SHALL BE ENCLOSED WITH SILT SOX OR EQUIVALENT OUTSIDE OF WETLAND BUFFERS AND 15% SLOPES. LONG TERM UNUSED PILES TO BE SEEDS AS REQUIRED.
9. UPON COMPLETION OF A GIVEN PHASE, ALL EROSION CONTROLS FOR THE NEXT PHASE OF CONSTRUCTION SHALL BE INSTALLED AND INSPECTED BY MUNICIPAL OFFICIALS PRIOR TO STUMPING AND GRUBBING THE SUBSEQUENT PHASE, EXCEPT TO FACILITATE NECESSARY UTILITY INSTALLATIONS.
10. ALL NATIVE VEGETATION BEYOND THE PROPOSED LIMITS OF DISTURBANCE IS TO REMAIN IN ITS EXISTING STATE.
11. DEAD-END CONSTRUCTION ROADS, OVER 150 FEET IN LENGTH MUST TERMINATE IN A T-TURN AROUND.
12. ANY CHANGES IN THE PROPOSED PHASING ORDER MUST BE APPROVED BY THE PLANNING BOARD AS A SITE PLAN AMENDMENT.
13. A PRE-CONSTRUCTION MEETING SHALL BE HELD W/ THE CITY PRIOR TO STARTING EACH SEPARATE PHASE.

MAINTENANCE PLAN:

1. All erosion and sediment control practices will be checked for stability and operation following every runoff-producing rainfall but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.
2. The sediment basin will be cleaned out when the level of sediment reaches 2.0 ft below the top of the riser. Gravel will be cleaned or replaced when the sediment pool no longer drains properly.
3. Sediment will be removed from the sediment trap and block and gravel inlet protection device when storage capacity has been approximately 50% filled. Gravel will be cleaned or replaced when the sediment pool no longer drains properly.
4. Sediment will be removed from behind the sediment fence when it becomes about 0.5 ft deep at the fence. The sediment fence will be repaired as necessary to maintain a barrier.
5. All seeded areas will be fertilized, reseeded as necessary, and mulched according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover.

ZONING REQUIREMENTS

ZONE = R1 (RESIDENTIAL)	10,000 SQ. FT. MINIMUM
LOT AREA	100 FT.
LOT FRONTAGE	10 FT.
FRONT YARD	20 FT. MINIMUM
REAR YARD	10 FT.
SIDE YARD	50 FT. (25' NO-DISTURB)
WETLAND SETBACK	35 FT.
BUILDING HEIGHT	35 FT.
COVERAGE (FOOTPRINT)	30% MAX.

PREPARED FOR:

MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

BEALS ASSOCIATES PLLC

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

THE SITE SPECIFIC SOIL SURVEY WAS PRODUCED MARCH 9, 2016, AND WAS PREPARED BY JAMES P. GOVE, CSS # 004, GOVE ENVIRONMENTAL SERVICES, INC. FIELD WORK WAS CONDUCTED NOVEMBER AND DECEMBER OF 2015, AND JANUARY OF 2016. PROJECT IS GES # 2015170.

SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE # 10, JANUARY 2011.

SOIL LEGEND:

MAP SYMBOL	UNIT NAME	HYDROLOGIC GROUP
29	WOODBIDGE	FINE SANDY LOAM C
115/VP	SCARBORO	MUCK D
289	CHAFFIELD VARIANT	(CSVPD) C
350	UDIPSAMMENTS,	WET SUBSTRATUM C
500	UDORTHENTS,	LOAMY C
546/P	VALPOLE	LOAMY SAND C
600/P	ENDOGUENTS,	LOAMY D
656/P	RIDGEBURY	FINE SANDY LOAM C
900/P	ENDOGUENTS,	SANDY
915	DEERFIELD VARIANT	(CSVPD) C
926	RIDGEBURY VARIANT	(CSVPD) C

ALPHA SLOPE RANGE

B 0-6%
C 8-15%
D 15-25%
E 25-50%

DRAINAGE

SWPD = SOMEWHAT POORLY DRAINED
PD = POORLY DRAINED
VPD = VERY POORLY DRAINED
V = WATER (POND)

SPECIFIC EROSION CONTROL MEASURES PER PHASE

1. Obtain plan approval and any other applicable permits.
2. Flag the work limits and mark the buffer area for protection.
3. Hold preconstruction conference at least one week prior to starting construction.
4. Install temporary gravel construction entrance/exit.
5. Install sediment basins as the first construction activity (Pond 1, 36" Storage Area #1 and #2, Grassed Drainage Channel, Rip rap Outlets).
6. Install storm drain with block and gravel inlet protection at construction entrance/exit.
7. Construct temporary diversions above proposed building sites. Install level spreader and sediment trap and vegetate disturbed areas.
8. Complete site clearing.
9. Rough grade site, stockpile topsoil, construct channels, install culverts and outlet protection, and install sediment fence as needed. Maintain diversions along top of fill slope daily. NOTE: A temporary diversion will be constructed across the middle of the graded area to reduce slope length and the bare areas mulched should grading be discontinued for more than 2 weeks.
10. Finish the slopes around buildings as soon as rough grading is complete. Leave the surface slightly roughened and vegetate and mulch immediately.
11. Complete final grading for roads and parking and stabilize with gravel.
12. Complete final grading for buildings.
13. Complete final grading of grounds, topsoil critical areas, and permanently vegetate, landscape, and mulch.
14. Install riprap outlet channel and outlet riprap to pipe outlet under entrance road.
15. All erosion and sediment control practices will be inspected weekly and after rainfall events. Needed repairs will be made immediately.
16. After site is stabilized, remove all temporary measures and install permanent vegetation on the disturbed areas.
17. Estimated time before final stabilization—9 months.

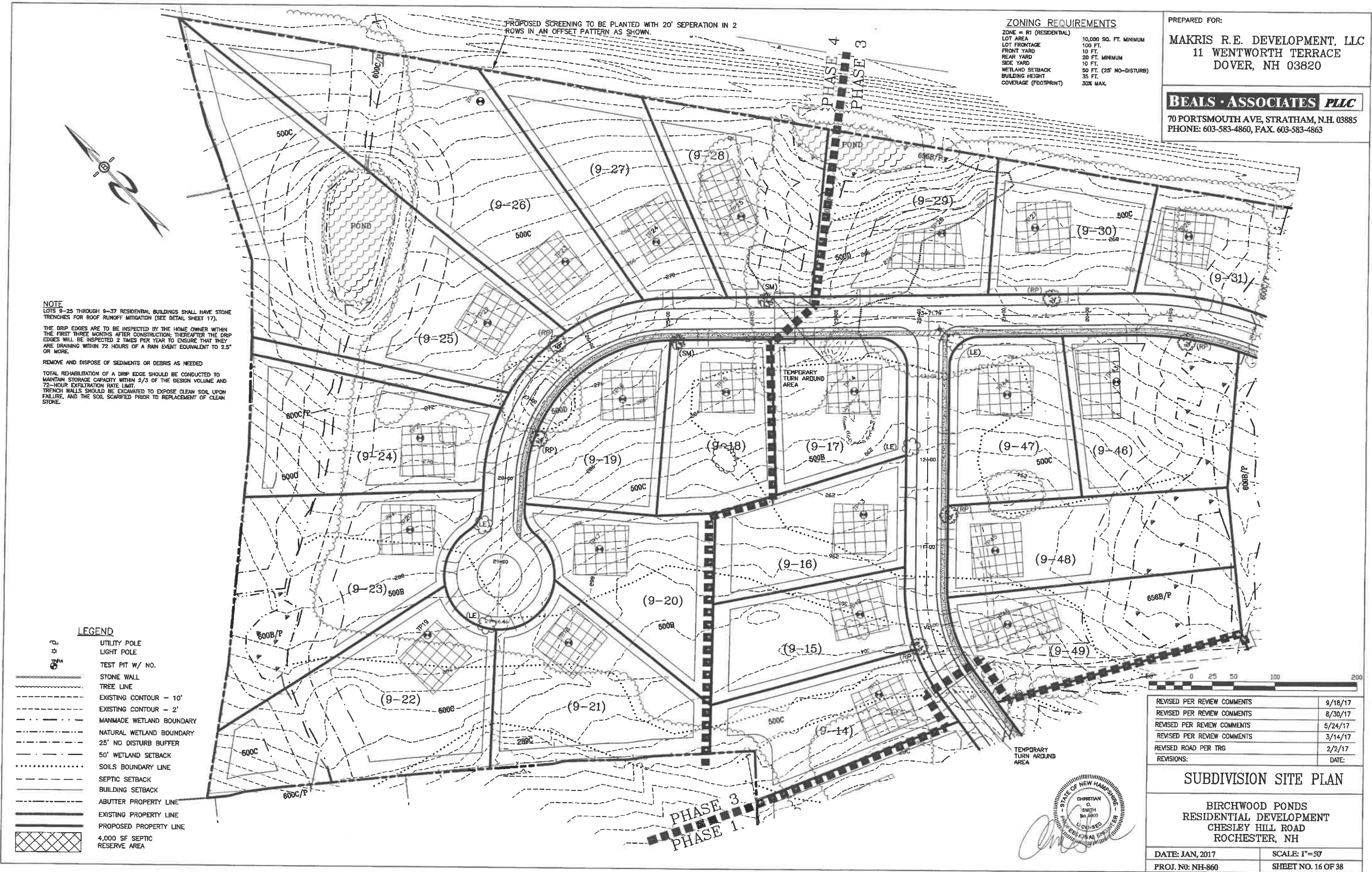
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REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	4/17/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

SUBDIVISION SITE PLAN

BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017	SCALE: 1"=50'
PROJ. NO: NH-860	SHEET NO. 15 OF 38



NOTE
LOTS 9-25 THROUGH 9-37 RESIDENTIAL BUILDINGS SHALL HAVE STONE TRENCHES FOR ROOF RUNOFF MITIGATION (SEE DETAIL SHEET 17).
THE DRIP EDGES ARE TO BE INSPECTED BY THE HOME OWNER WITHIN THE FIRST THREE MONTHS AFTER CONSTRUCTION; THEREAFTER THE DRIP EDGES WILL BE INSPECTED 2 TIMES PER YEAR TO ENSURE THAT THEY ARE DRAINING WITHIN 72 HOURS OF A RAIN EVENT EQUIVALENT TO 2.5" OR MORE.
REMOVE AND DISPOSE OF SEDIMENTS OR DEBRIS AS NEEDED
TOTAL REHABILITATION OF A DRIP EDGE SHOULD BE CONDUCTED TO MAINTAIN STORAGE CAPACITY WITHIN 2/3 OF THE DESIGN VOLUME AND 72-HOUR EXFILTRATION RATE LIMIT.
TRENCH WALLS SHOULD BE EXCAVATED TO EXPOSE CLEAN SOIL UPON FAILURE, AND THE SOIL SCARFED PRIOR TO REPLACEMENT OF CLEAN STONE.

ZONING REQUIREMENTS	
ZONE = R1 (RESIDENTIAL)	
LOT AREA	10,000 SQ. FT. MINIMUM
LOT FRONTAGE	100 FT.
FRONT YARD	10 FT.
REAR YARD	20 FT. MINIMUM
SIDE YARD	10 FT.
WETLAND SETBACK	50 FT. (25' NO-DISTURB)
BUILDING HEIGHT	35 FT.
COVERAGE (FOOTPRINT)	30% MAX.

PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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

LEGEND

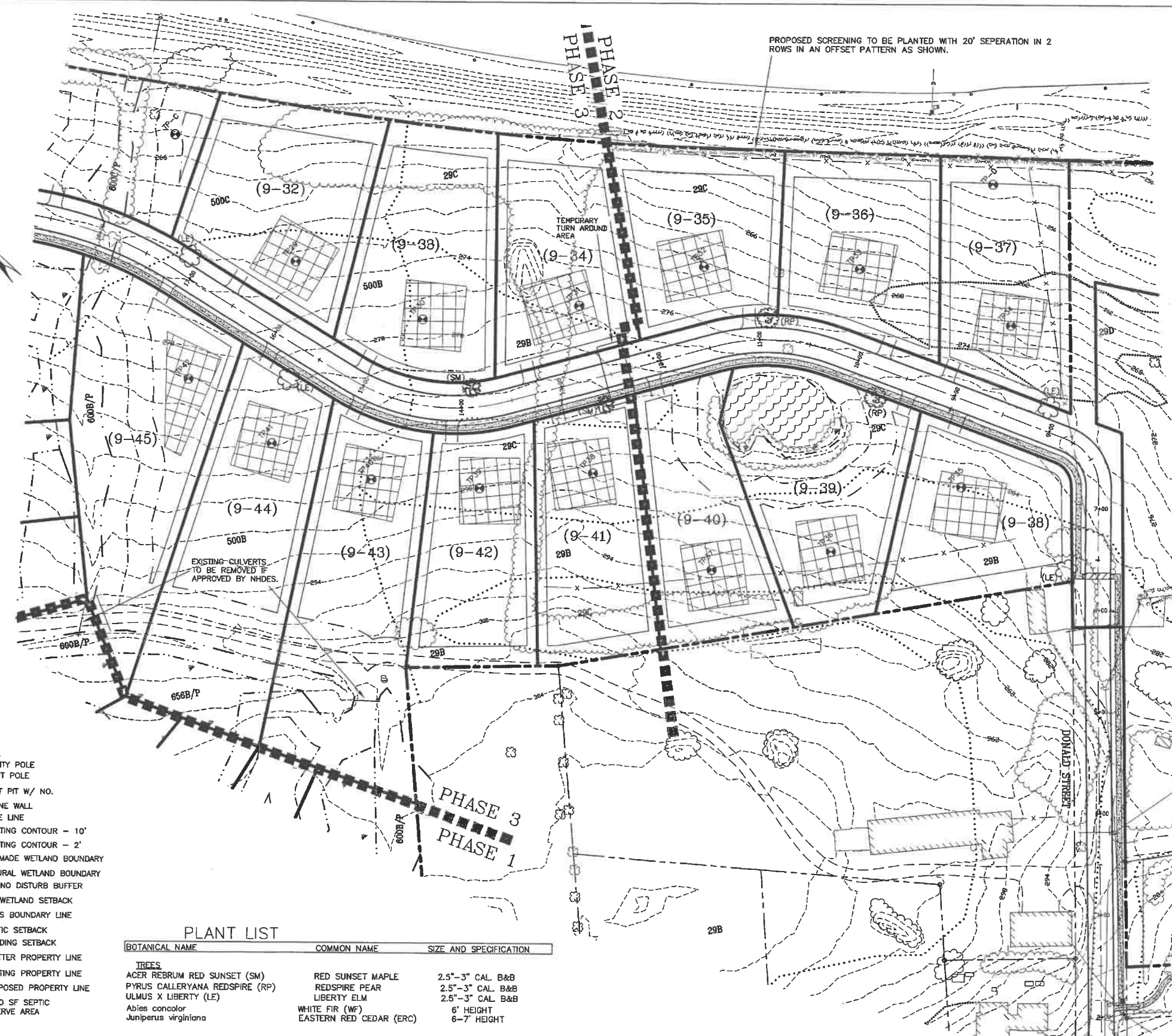
- UTILITY POLE
- LIGHT POLE
- TEST PIT W/ NO.
- STONE WALL
- TREE LINE
- EXISTING CONTOUR - 10'
- EXISTING CONTOUR - 2'
- MANMADE WETLAND BOUNDARY
- NATURAL WETLAND BOUNDARY
- 25' NO DISTURB BUFFER
- 50' WETLAND SETBACK
- SOILS BOUNDARY LINE
- SEPTIC SETBACK
- BUILDING SETBACK
- ABUTTER PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- 4,000 SF SEPTIC RESERVE AREA

REVISED PER REVIEW COMMENTS	9/18/17
REVISED PER REVIEW COMMENTS	8/30/17
REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

SUBDIVISION SITE PLAN

BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017	SCALE: 1"=50'
PROJ. NO: NH-860	SHEET NO. 16 OF 38

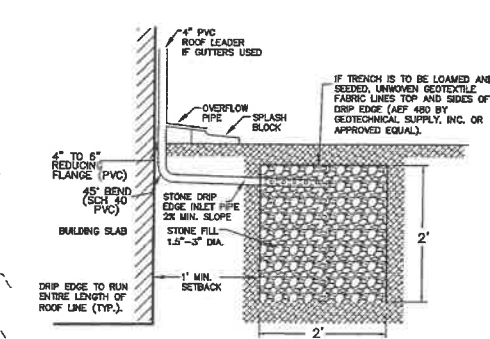


PREPARED FOR:
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11 WENTWORTH TERRACE
DOVER, NH 03820

BEALS ASSOCIATES PLLC
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PHONE: 603-583-4860, FAX: 603-583-4863

ZONING REQUIREMENTS

ZONE = R1 (RESIDENTIAL)	
LOT AREA	10,000 SQ. FT. MINIMUM
LOT FRONTAGE	100 FT.
FRONT YARD	10 FT.
REAR YARD	20 FT. MINIMUM
SIDE YARD	10 FT.
WETLAND SETBACK	50 FT. (25' NO-DISTURB)
BUILDING HEIGHT	35 FT.
COVERAGE (FOOTPRINT)	30% MAX.



STONE DRIP EDGE SECTION
NOT TO SCALE

NOTE
LOTS 9-25 THROUGH 9-37 RESIDENTIAL BUILDINGS SHALL HAVE STONE TRENCHES FOR ROOF RUNOFF MITIGATION (SEE DETAIL THIS SHEET).
THE DRIP EDGES WILL BE INSPECTED WITHIN THE FIRST THREE MONTHS AFTER CONSTRUCTION; THEREAFTER THE DRIP EDGES WILL BE INSPECTED 2 TIMES PER YEAR TO ENSURE THAT THEY ARE DRAINING WITHIN 72 HOURS OF A RAIN EVENT EQUIVALENT TO 2.5" OR MORE.
REMOVE AND DISPOSE OF SEDIMENTS OR DEBRIS AS NEEDED.
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TRENCH WALLS SHOULD BE EXCAVATED TO EXPOSE CLEAN SOIL UPON FAILURE, AND THE SOIL SCARIFIED PRIOR TO REPLACEMENT OF CLEAN STONE.



REVISED PER REVIEW COMMENTS	8/30/17
REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

SUBDIVISION SITE PLAN

**BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT**
CHESLEY HILL ROAD
ROCHESTER, NH

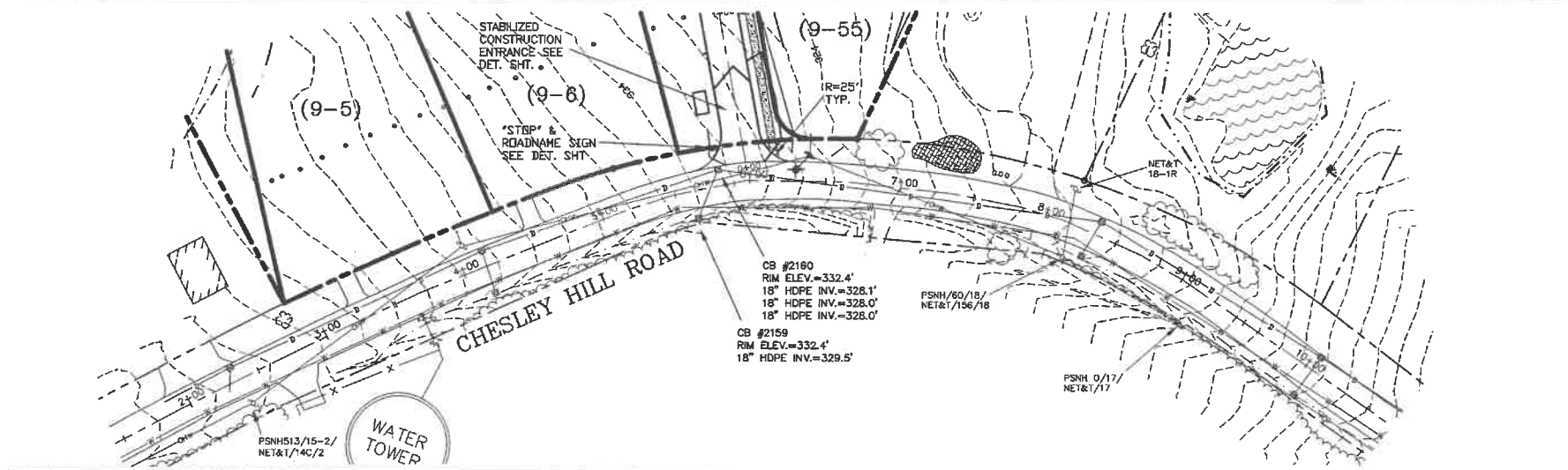
DATE: JAN, 2017	SCALE: 1"=50'
PROJ. NO: NH-860	SHEET NO. 17 OF 38

LEGEND

- UTILITY POLE
- LIGHT POLE
- TEST PIT W/ NO.
- STONE WALL
- TREE LINE
- EXISTING CONTOUR - 10'
- EXISTING CONTOUR - 2'
- MANMADE WETLAND BOUNDARY
- NATURAL WETLAND BOUNDARY
- 25' NO DISTURB BUFFER
- 50' WETLAND SETBACK
- SOILS BOUNDARY LINE
- SEPTIC SETBACK
- BUILDING SETBACK
- ABUTTER PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- 4,000 SF SEPTIC RESERVE AREA

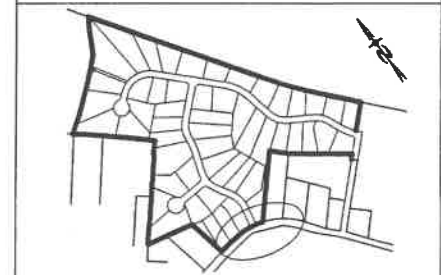
PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE AND SPECIFICATION
TREES		
ACER REBRUM RED SUNSET (SM)	RED SUNSET MAPLE	2.5"-3" CAL. B&B
PYRUS CALLERYANA REDSPIRE (RP)	REDSPIRE PEAR	2.5"-3" CAL. B&B
ULMUS X LIBERTY (LE)	LIBERTY ELM	2.5"-3" CAL. B&B
Abies concolor	WHITE FIR (WF)	6' HEIGHT
Juniperus virginiana	EASTERN RED CEDAR (ERC)	6-7' HEIGHT



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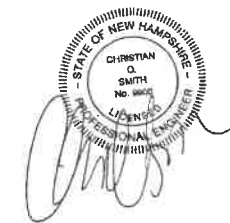
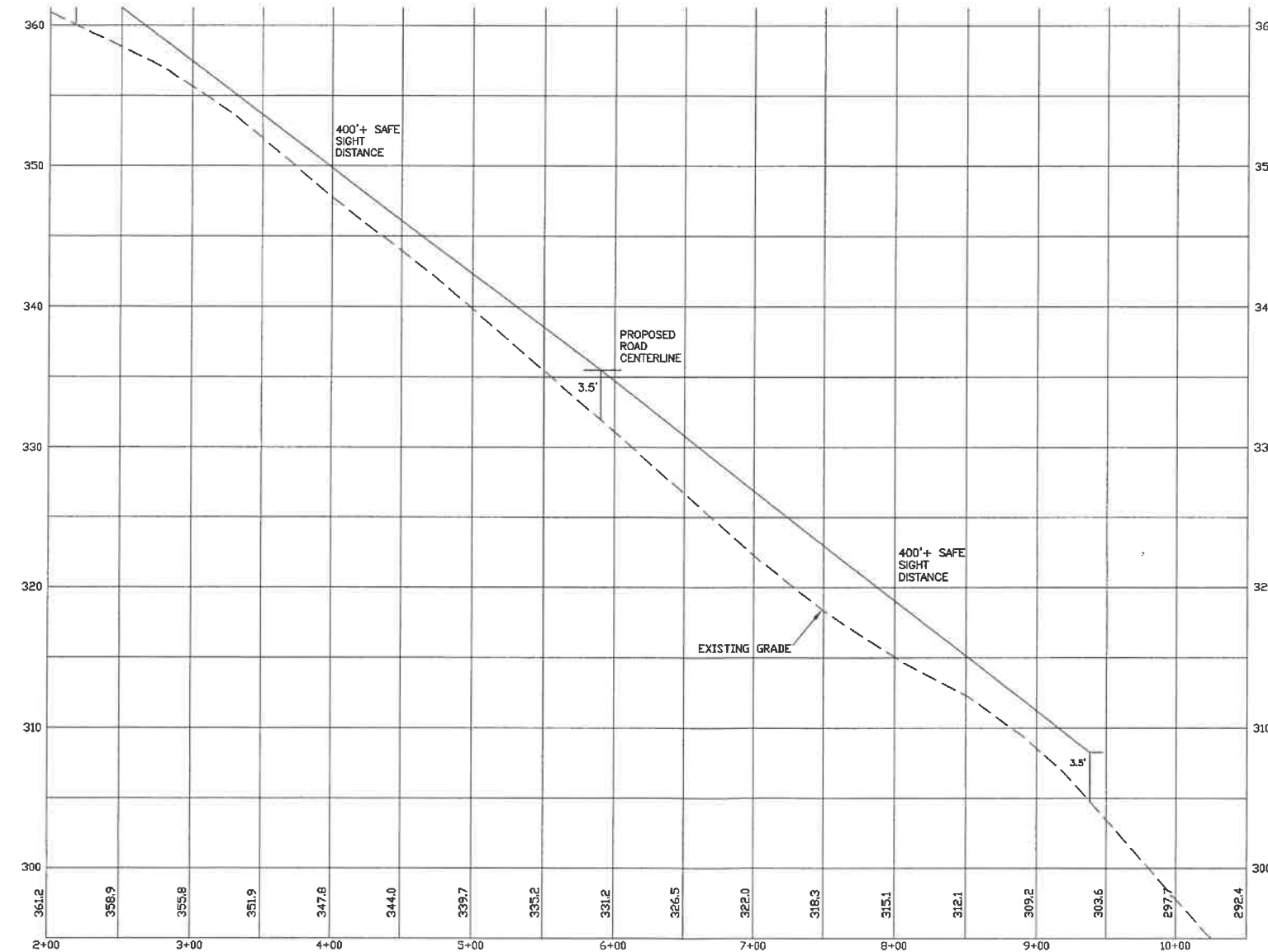


LOCATION LEGEND 1"=600'

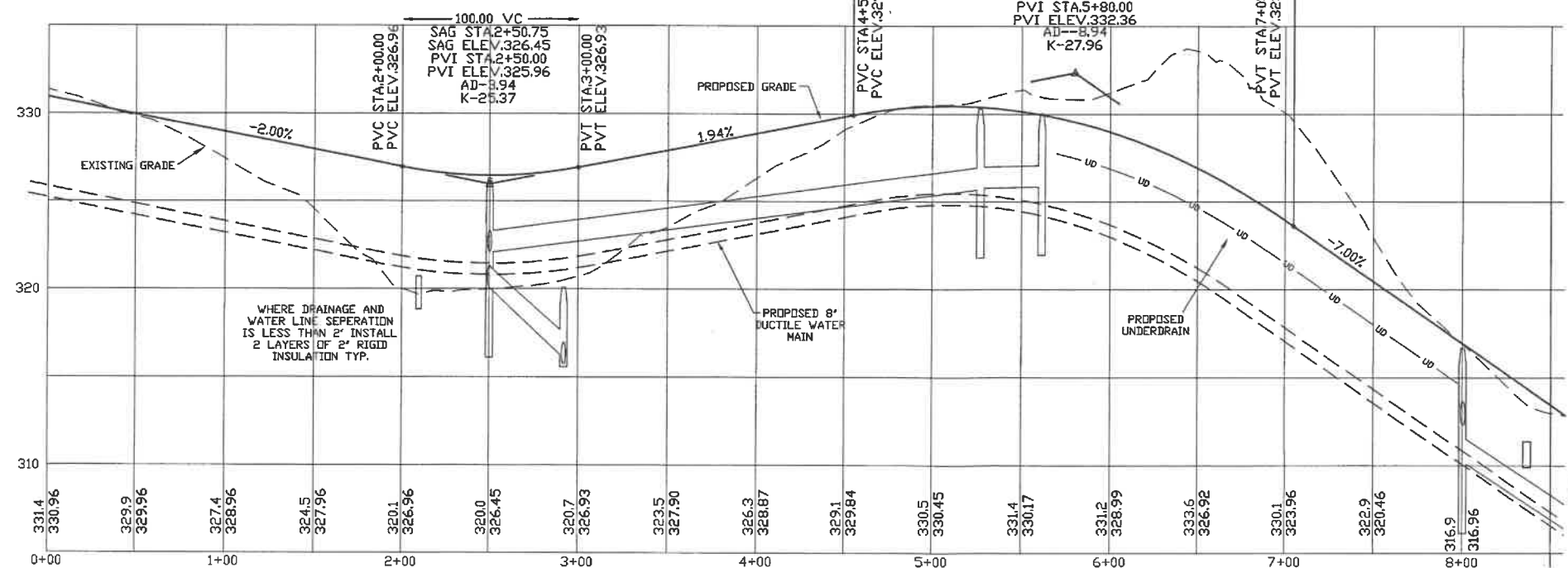
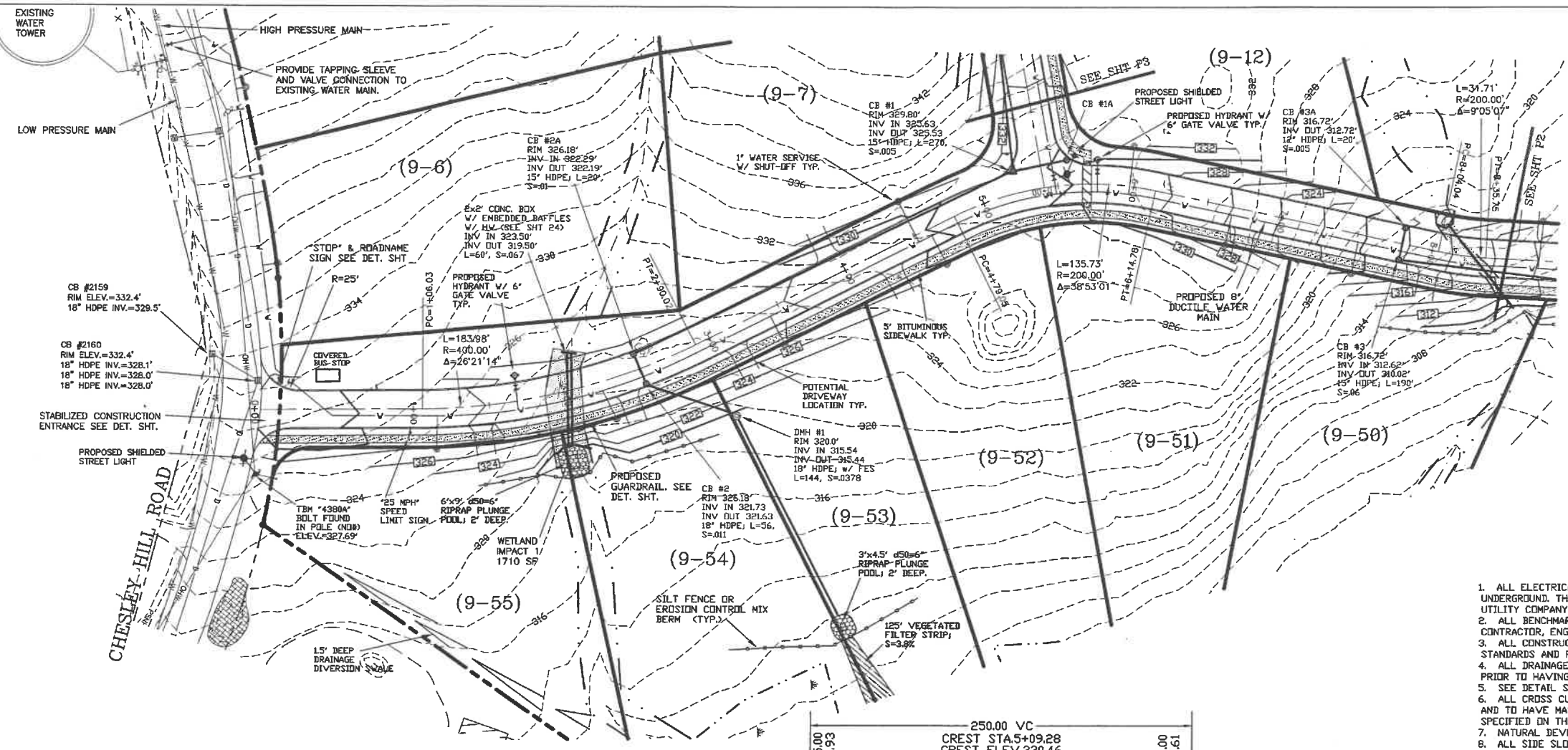
PROFILE SCALES:
 HORIZONTAL: 1"=50' VERTICAL: 1"=5'

NOTES

1. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION AND ALARM LINES TO BE UNDERGROUND. THE SIZE AND LOCATION IS TO BE DETERMINED BY APPROPRIATE UTILITY COMPANY.
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
3. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO STANDARD SPECIFICATIONS AND TO N.H.D.T. STANDARDS AND REGULATIONS.
4. ALL DRAINAGE STRUCTURE AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
5. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION NOTES AND DETAILS.

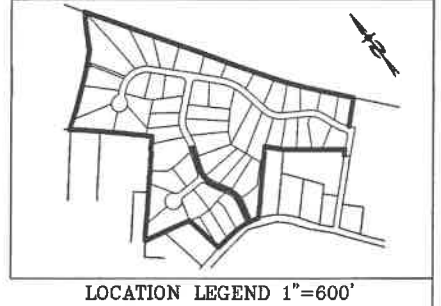


REVISIONS:	DATE:
ROADWAY ACCESS PLAN	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: JAN, 2017	SCALE: 1" = 50'
PROJ. NO: NH-860	SHEET NO. 18 OF 38



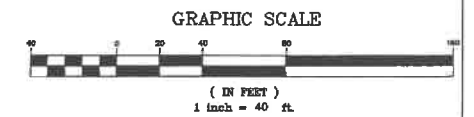
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

BEALS ASSOCIATES PLLC
 70 PORTSMOUTH AVE. STRATHAM, N.H. 03885
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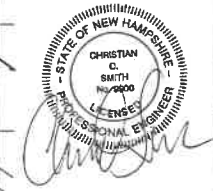


PROFILE SCALES:
 HORIZONTAL: 1"=40' VERTICAL: 1"=4'

- NOTES**
1. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION AND ALARM LINES TO BE UNDERGROUND. THE SIZE AND LOCATION IS TO BE DETERMINED BY APPROPRIATE UTILITY COMPANY.
 2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR, ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY.
 3. ALL CONSTRUCTION METHODS AND MATERIALS WILL CONFORM TO N.H.D.T. STANDARDS AND REGULATIONS.
 4. ALL DRAINAGE STRUCTURES AND SWALES WILL BE BUILT AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
 5. SEE DETAIL SHEETS FOR STANDARD CONSTRUCTION NOTES AND DETAILS.
 6. ALL CROSS CULVERTS & DRIVEWAY CULVERTS TO BE MIN. 12" ADS N-12 AND TO HAVE MASONRY HEADWALLS UNLESS FLARED END SECTIONS ARE SPECIFIED ON THE PLANS.
 7. NATURAL DEVELOPED AREA BUFFERS ARE TO REMAIN WOODED.
 8. ALL SIDE SLOPES STEEPER THAN 3:1 (WETLAND CROSSINGS) TO BE LINED WITH JUTE MATTING OR EQUAL.
 9. ALL SWALE MATTING WILL EXTEND TO THE LIP OF THE LEVEL SPREADER AT THE END OF EACH SWALE.
 10. ALL PERMANENT EROSION CONTROL SWALE LINING MATERIAL SHALL BE NAG C350 OR EQUIVALENT. ALL OTHER SWALES WILL BE PROTECTED WITH TEMPORARY STONE CHECK DAMS (S.C.D.) UNTIL THE VEGETATION HAS FULLY STABILIZED. AT THIS TIME THE S.C.D.'S WILL BE REMOVED.



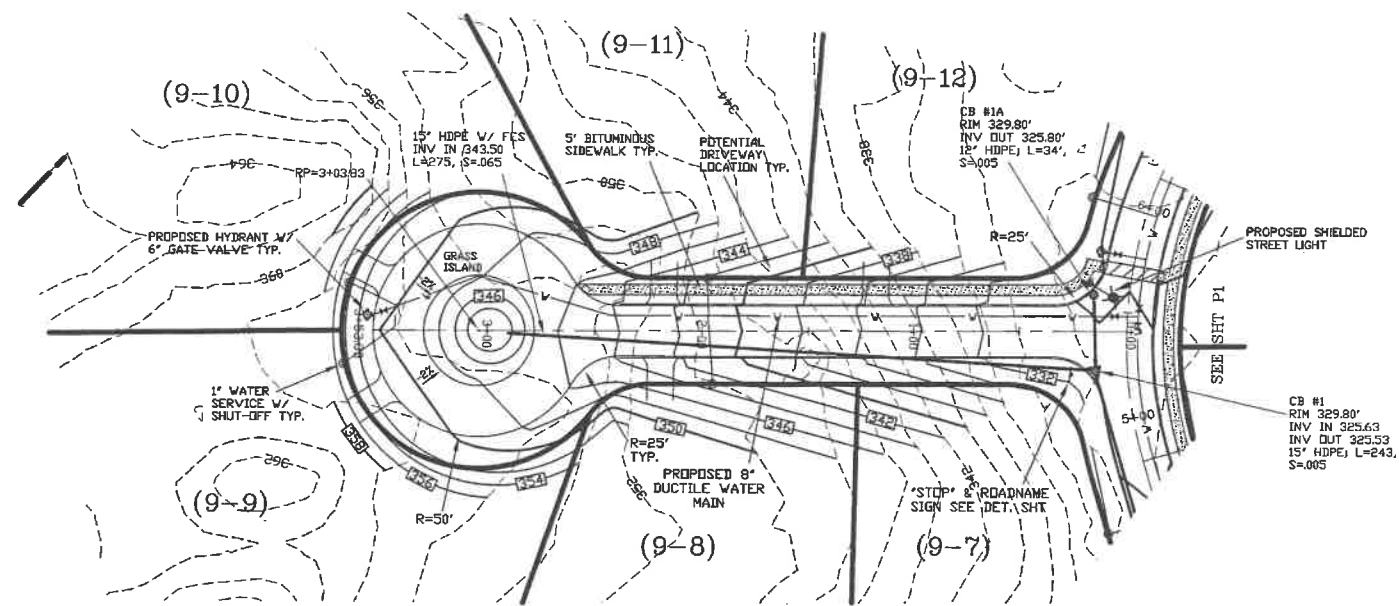
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REVISED PER REVIEW COMMENTS	3/14/17
REVISED WATER MAIN CONNECTION	2/28/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:



PLAN AND PROFILE-P1

**BIRCHWOOD PONDS
 RESIDENTIAL DEVELOPMENT
 CHESLEY HILL ROAD
 ROCHESTER, NH**

DATE: JAN, 2017 SCALE: 1" = 40'
 PROJ. NO: NH-860 SHEET NO. 19 OF 38



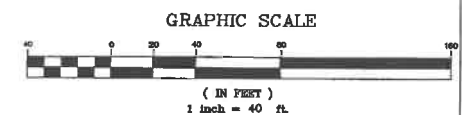
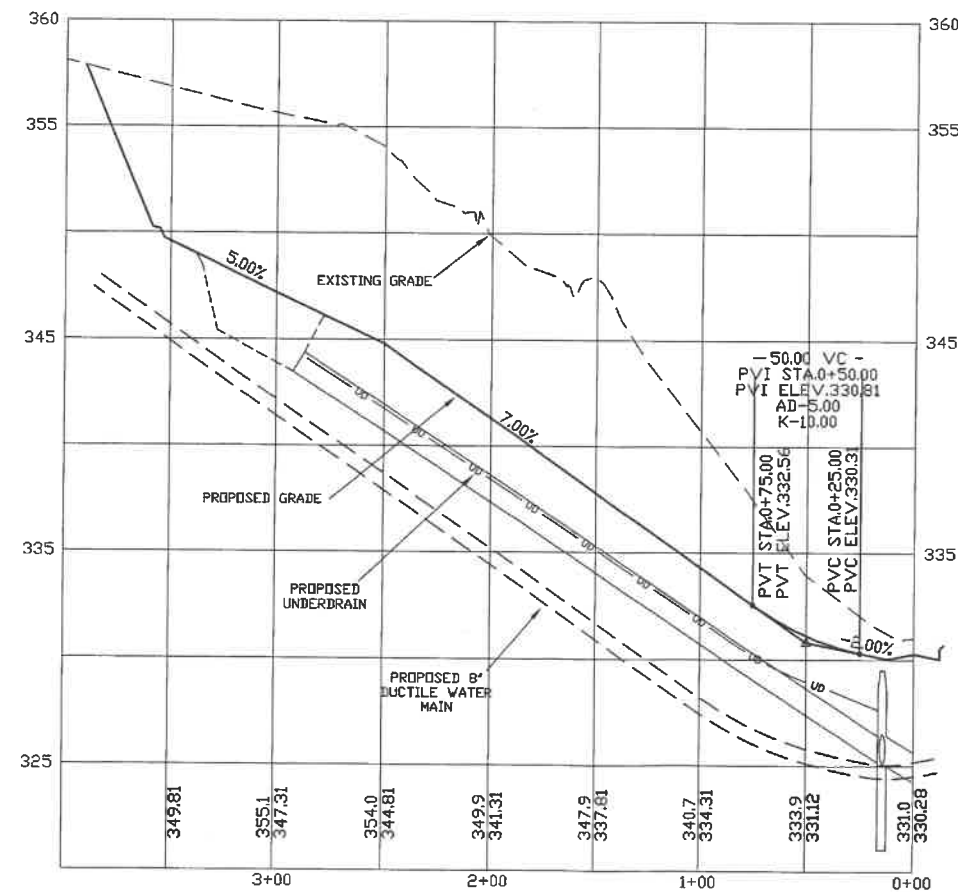
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

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



LOCATION LEGEND 1"=600'

PROFILE SCALES:
 HORIZONTAL: 1"=40' VERTICAL: 1"=54'



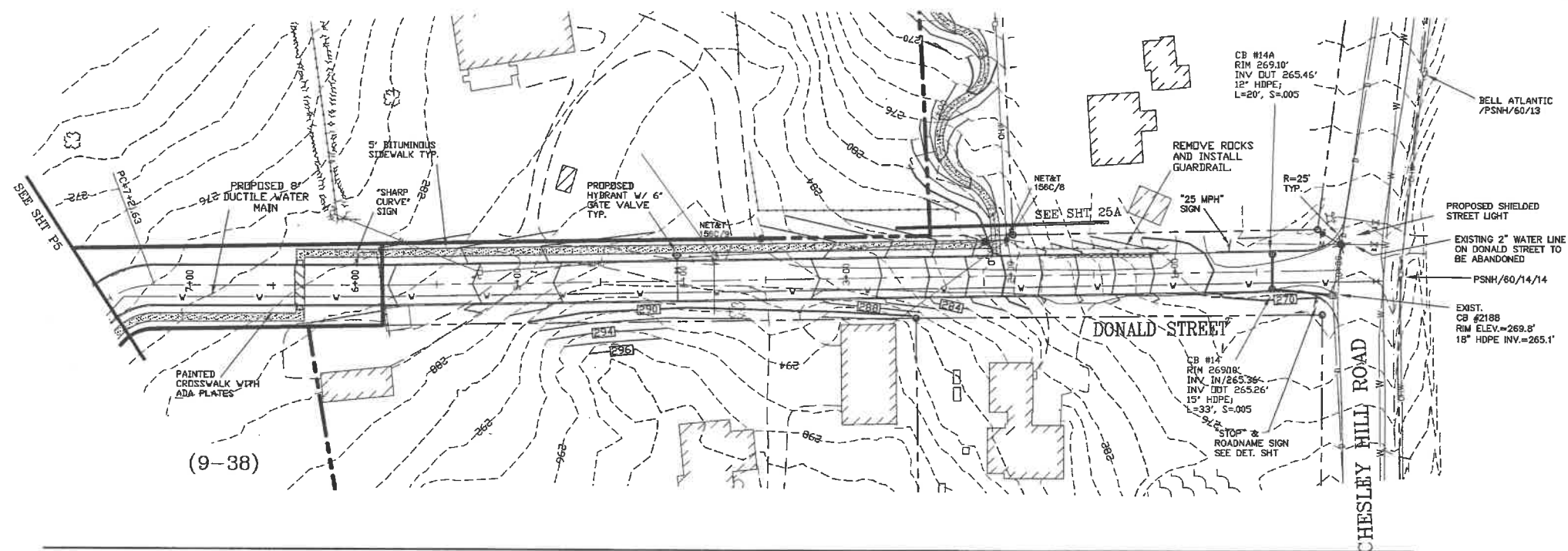
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UPDATED LOT NUMBERS	6/27/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

PLAN AND PROFILE-P3

BIRCHWOOD PONDS
 RESIDENTIAL DEVELOPMENT
 CHESLEY HILL ROAD
 ROCHESTER, NH

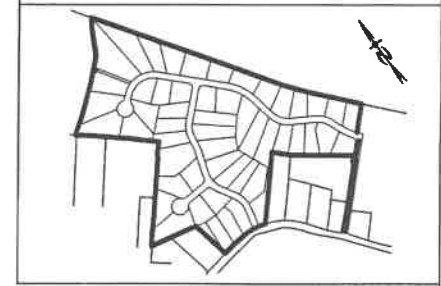
DATE: JAN, 2017	SCALE: 1" = 40'
PROJ. NO: NH-860	SHEET NO. 21 OF 38





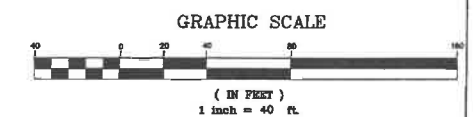
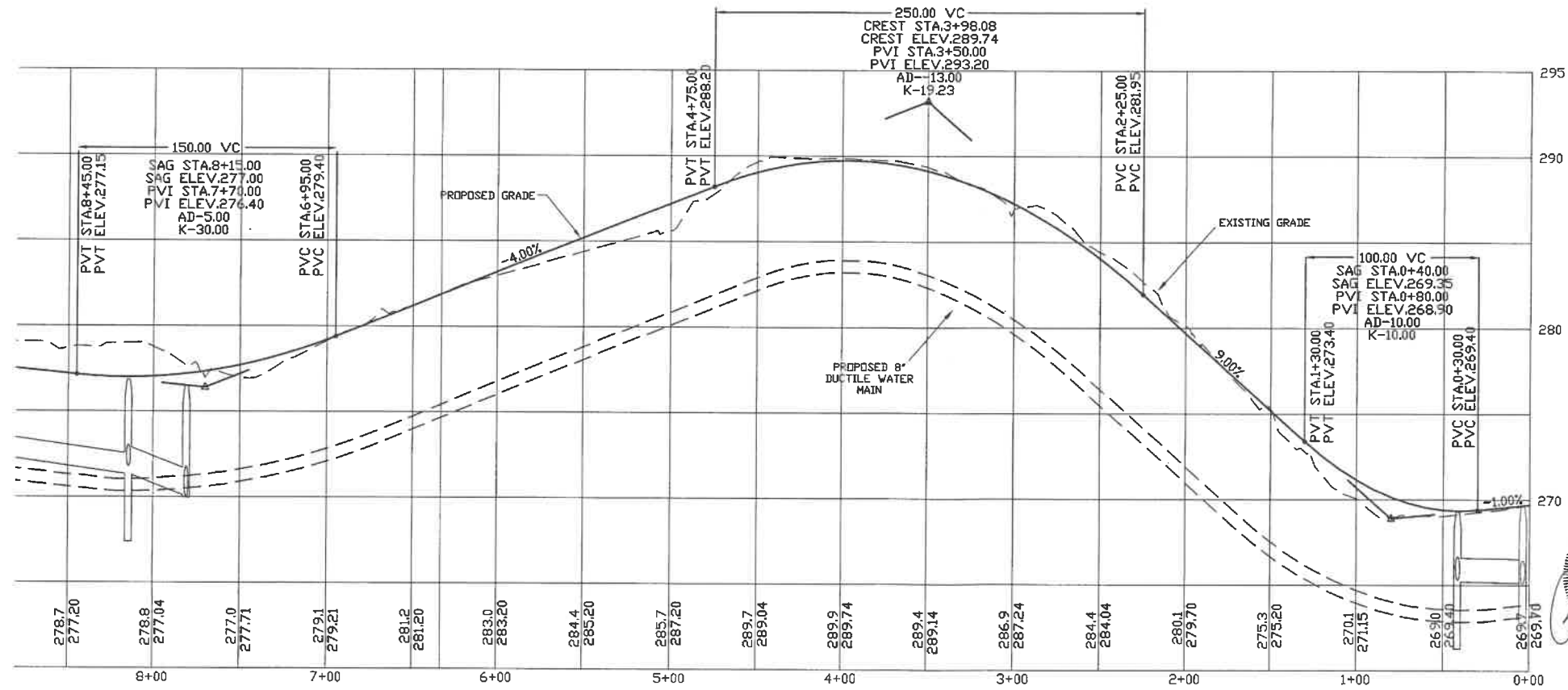
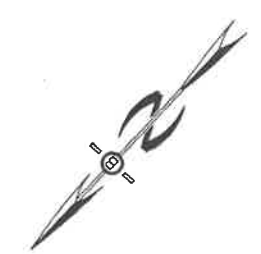
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

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



LOCATION LEGEND 1"=600'

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



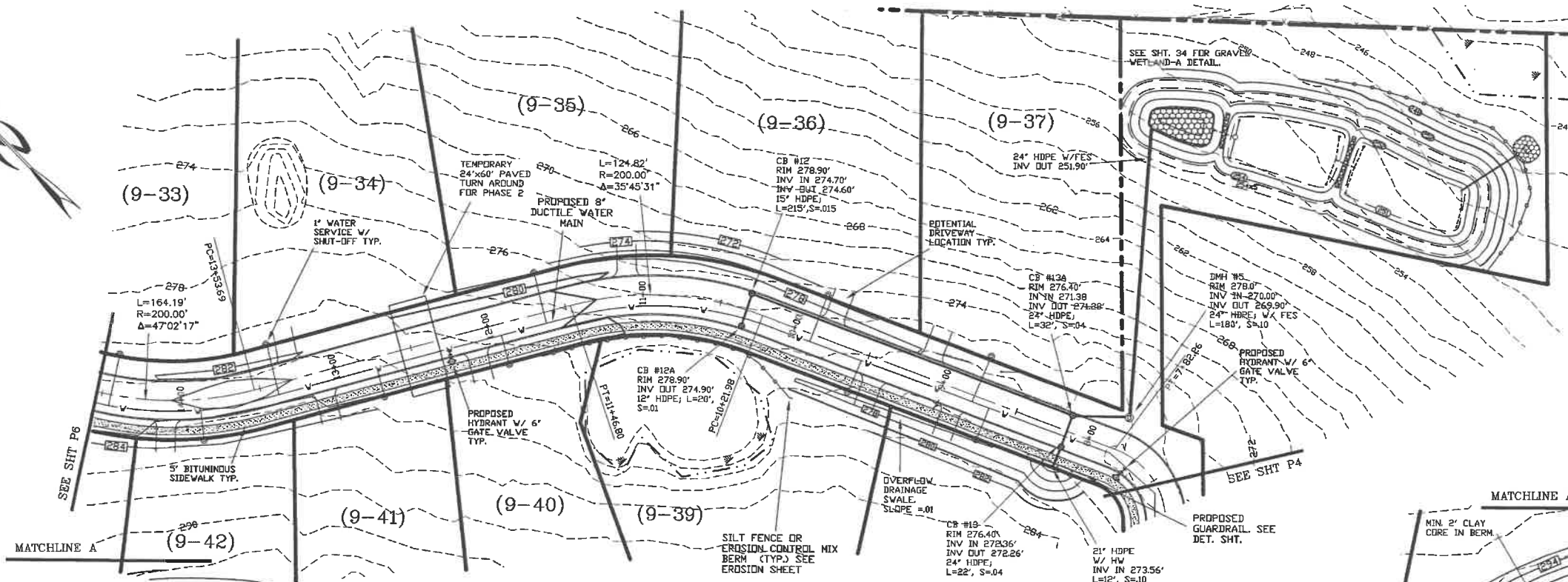
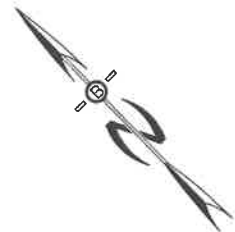
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REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:



PLAN AND PROFILE-P4

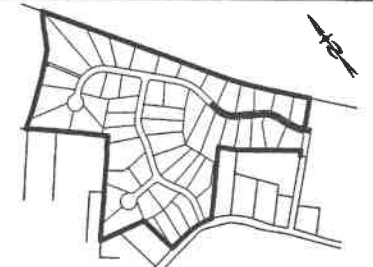
**BIRCHWOOD PONDS
 RESIDENTIAL DEVELOPMENT
 CHESLEY HILL ROAD
 ROCHESTER, NH**

DATE: JAN, 2017 SCALE: 1"=40'
 PROJ. NO: NH-860 SHEET NO. 22 OF 38



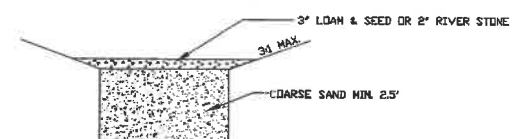
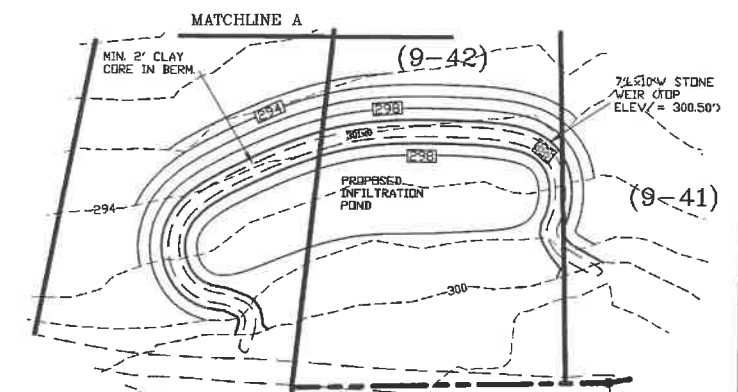
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

BEALS ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
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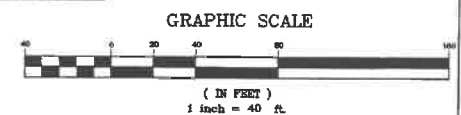
LOCATION LEGEND 1"=600'

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



NOTE: LAYERS OF MEDIA TO BE SCARIFIED
TO PROMOTE INFILTRATION

INFILTRATION SECTION
NOT TO SCALE

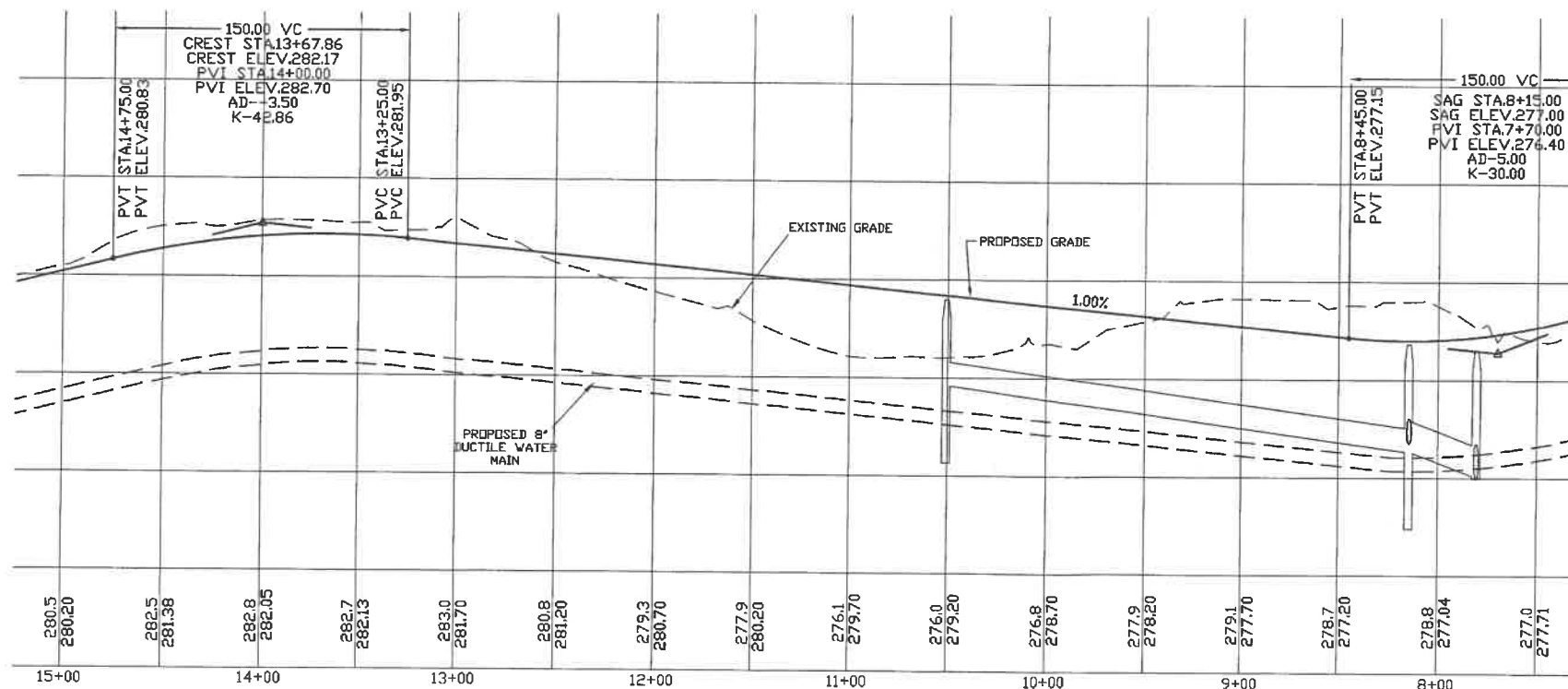


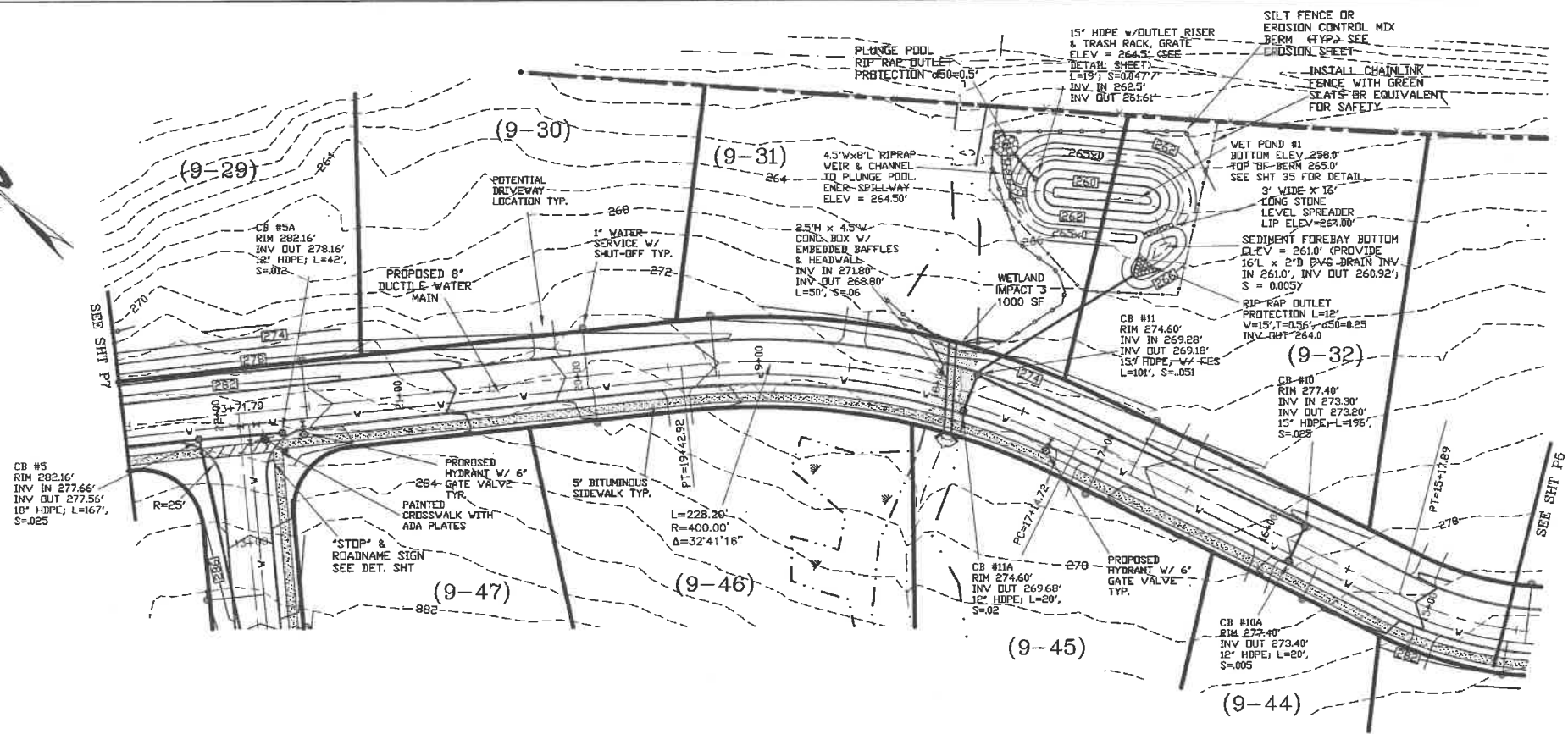
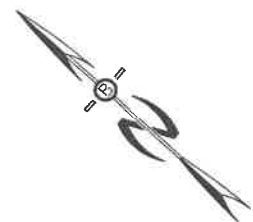
REVISED PER REVIEW COMMENTS	9/18/17
REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

PLAN AND PROFILE-P5

**BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT**
CHESLEY HILL ROAD
ROCHESTER, NH

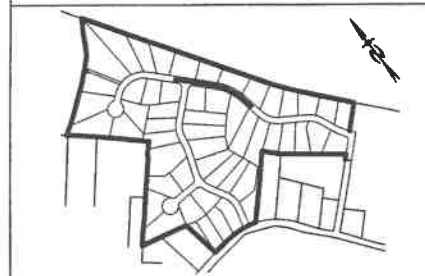
DATE: JAN, 2017	SCALE: 1" = 40'
PROJ. NO: NH-860	SHEET NO. 23 OF 38



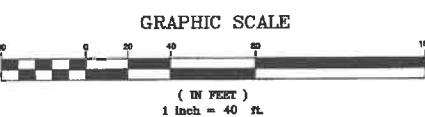
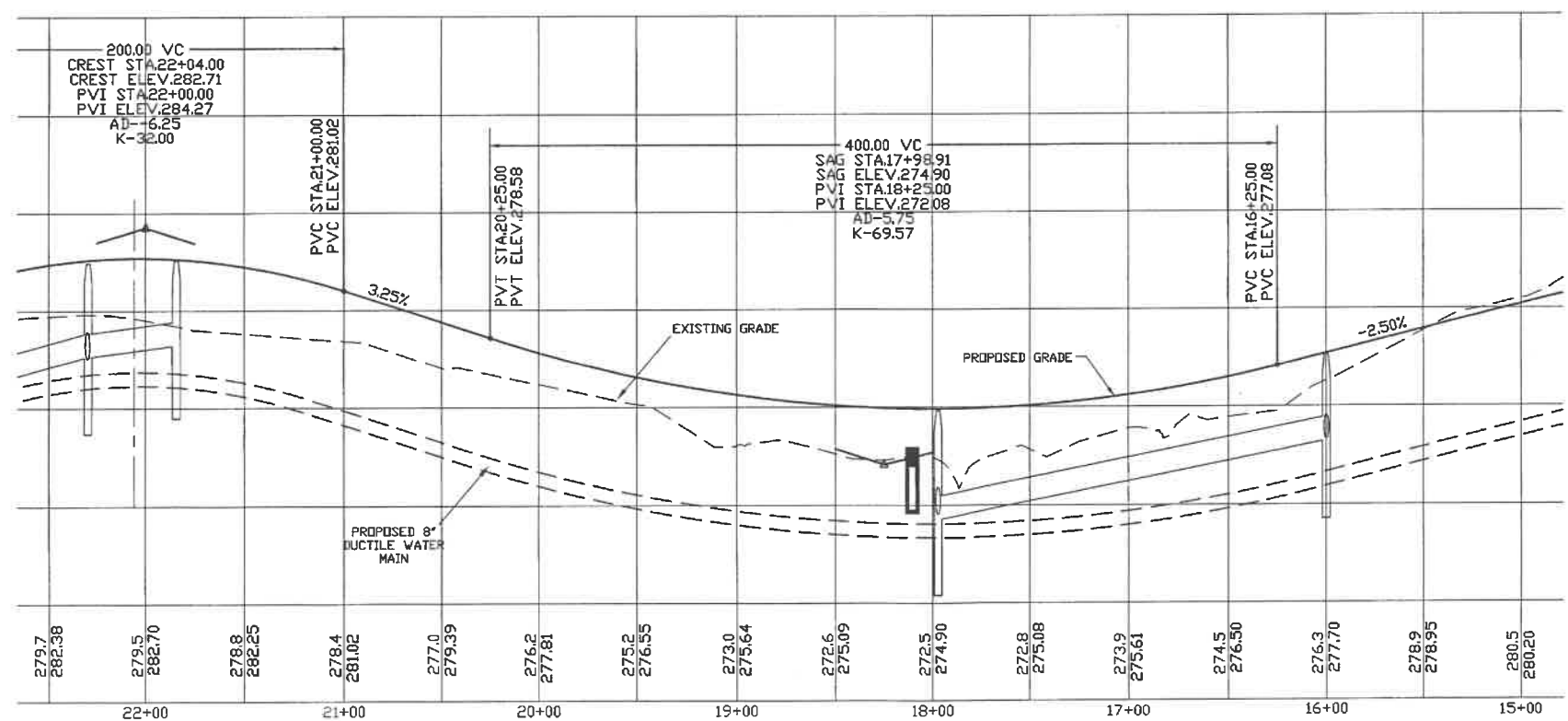
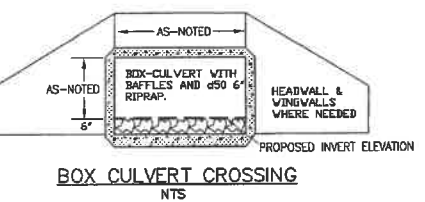


PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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



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



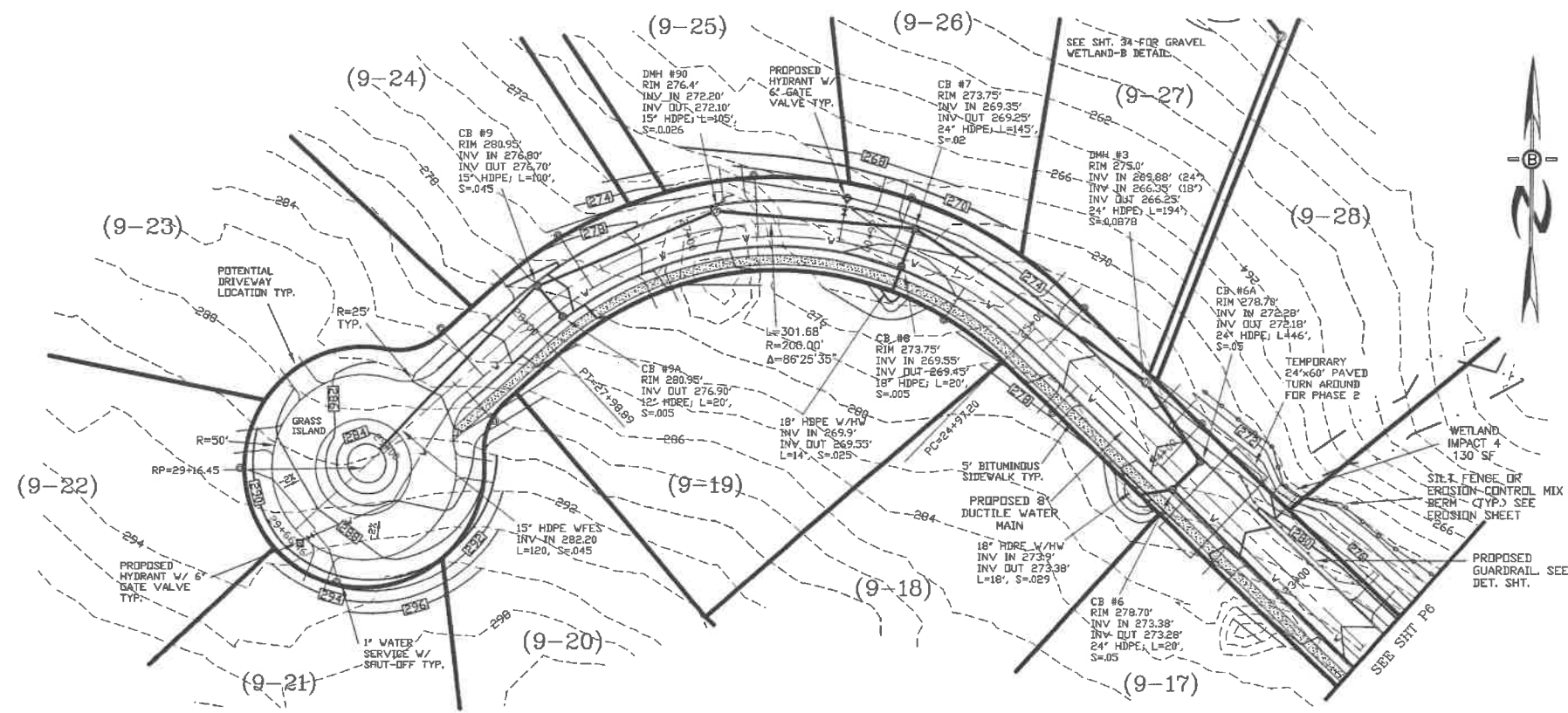
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REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	4/17/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISIONS:	DATE:

PLAN AND PROFILE-P6

BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017 SCALE: 1" = 40'
PROJ. NO: NH-860 SHEET NO. 24 OF 38





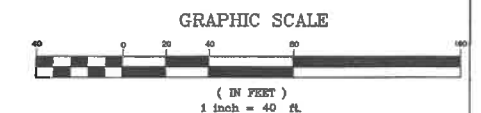
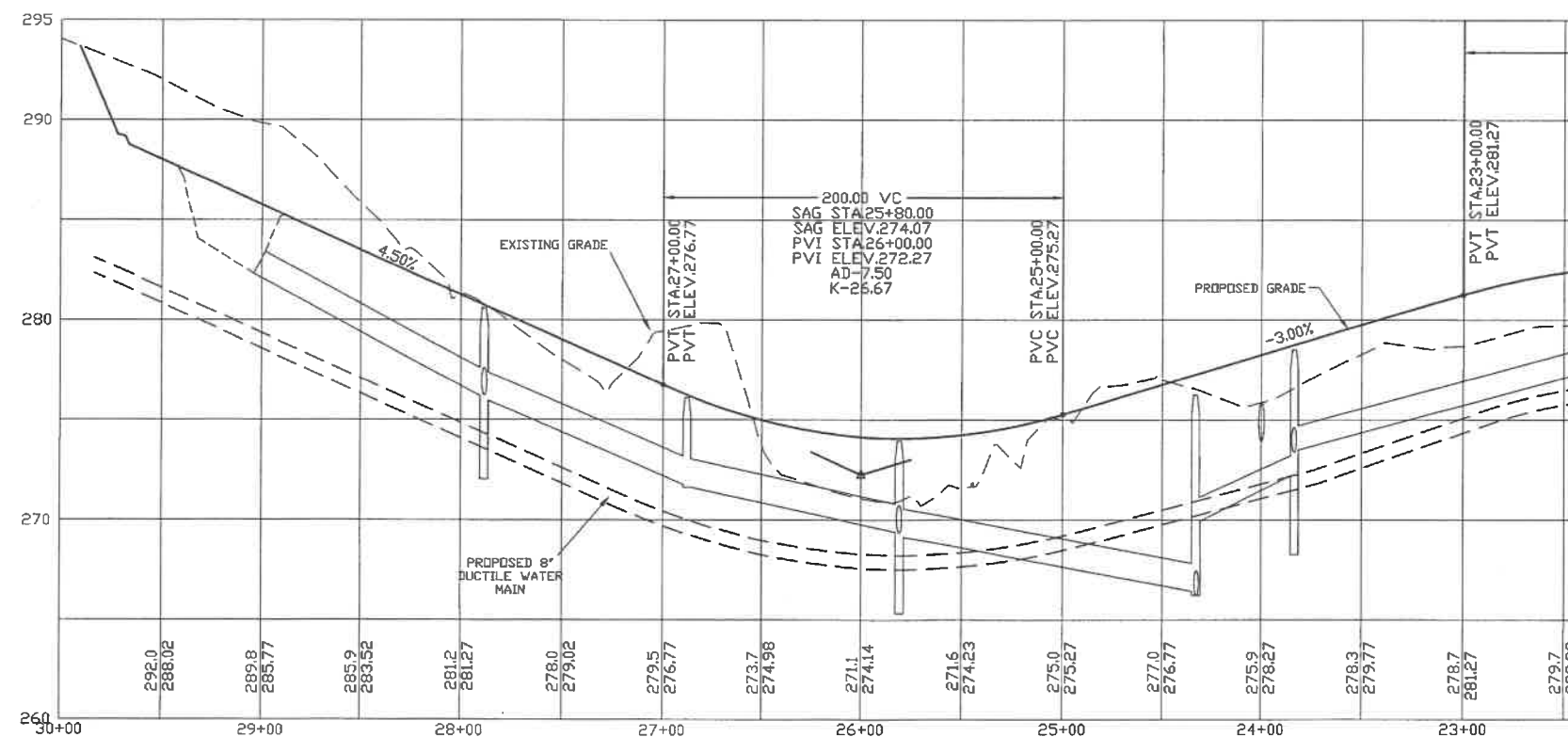
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

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



LOCATION LEGEND 1"=600'

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

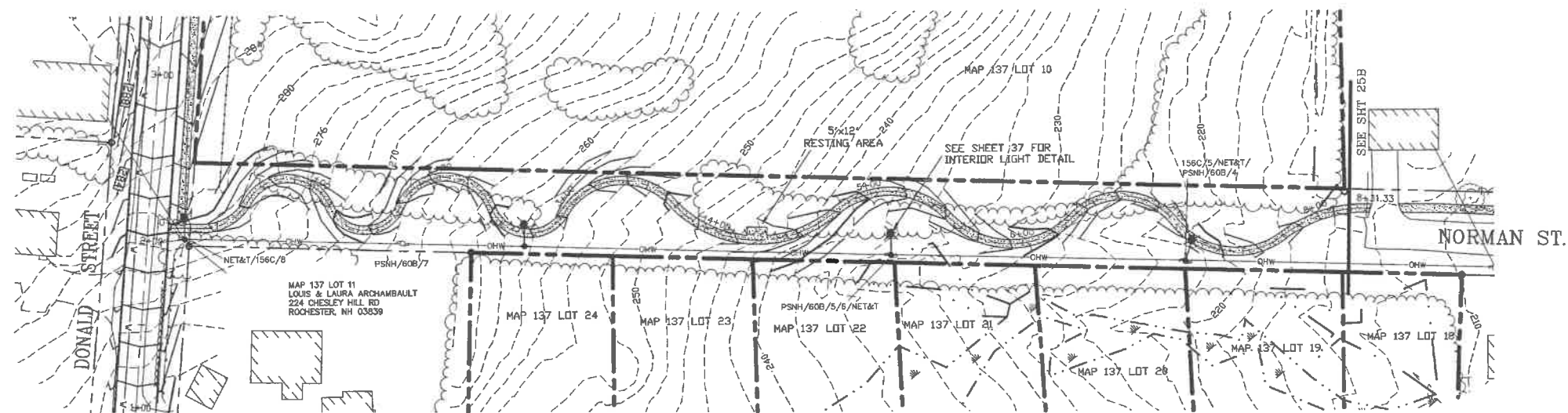


REVISED PER REVIEW COMMENTS	9/18/17
REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

PLAN AND PROFILE-P7

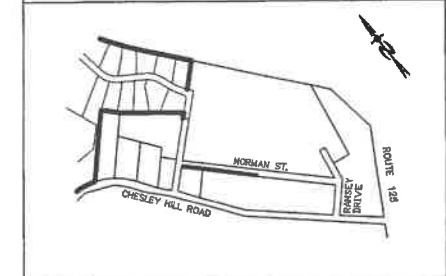
**BIRCHWOOD PONDS
 RESIDENTIAL DEVELOPMENT
 CHESLEY HILL ROAD
 ROCHESTER, NH**

DATE: JAN, 2017 SCALE: 1" = 40'
 PROJ. NO: NH-860 SHEET NO. 25 OF 38



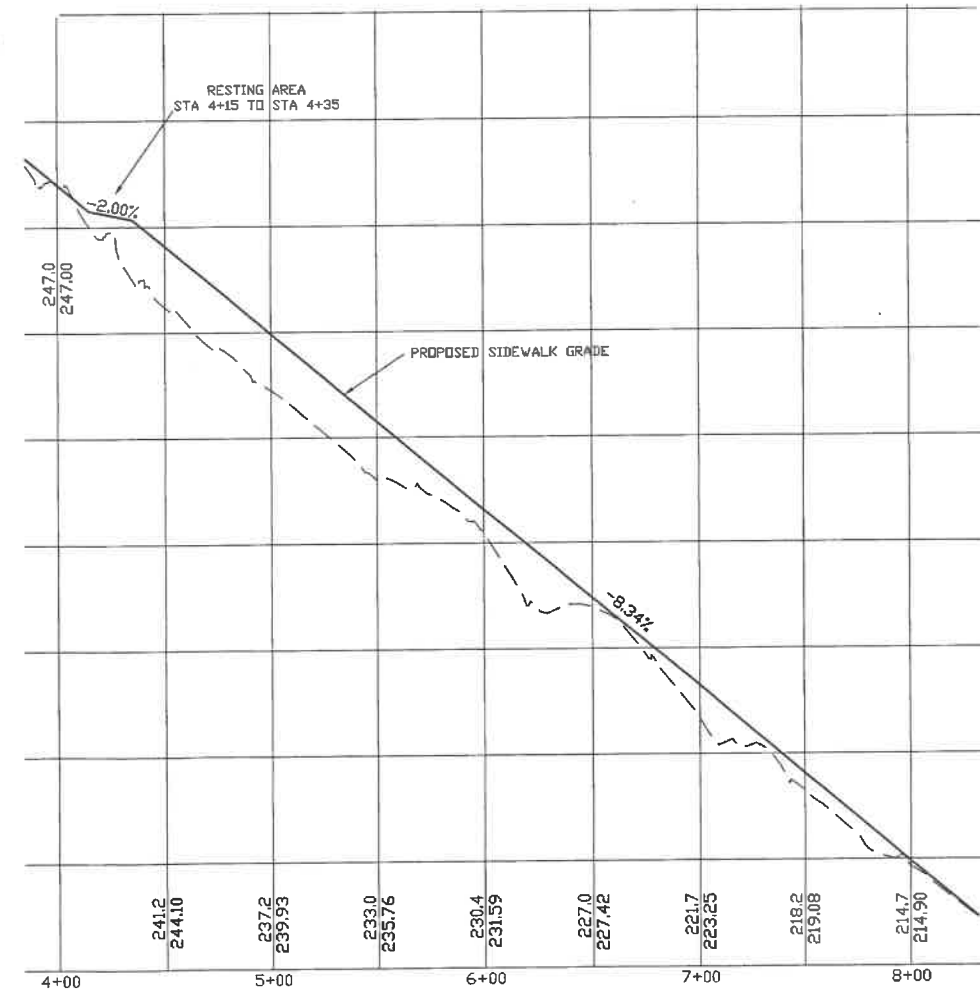
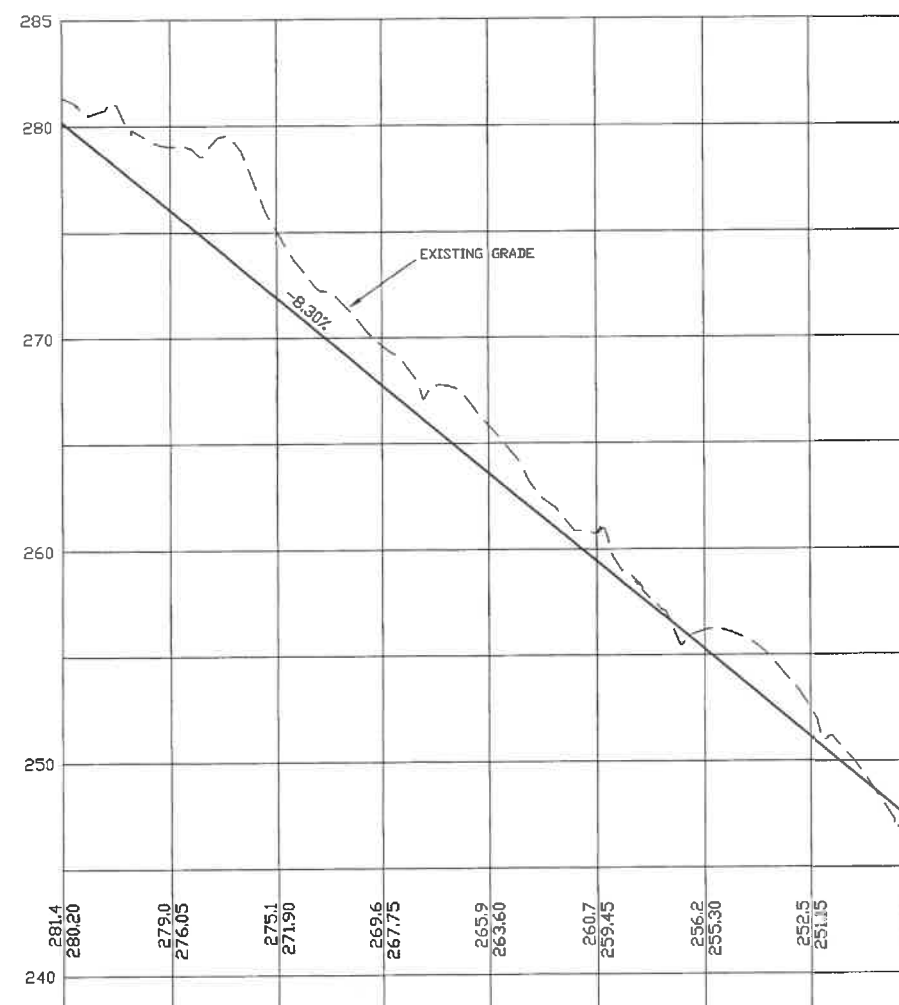
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

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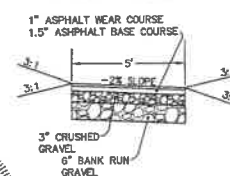


LOCATION LEGEND 1"=600'

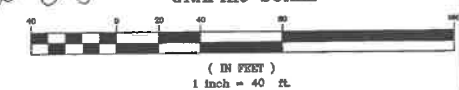
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 HORIZONTAL: 1"=40' VERTICAL: 1"=4'



SIDEWALK CROSS SECTION



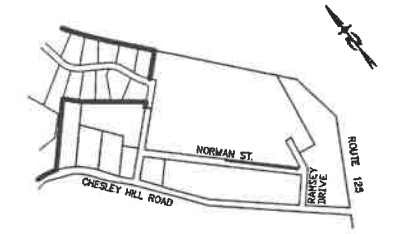
GRAPHIC SCALE



REVISED PER REVIEW COMMENTS	9/18/17
REVISED PER REVIEW COMMENTS	6/27/17
REVISIONS:	DATE:
SIDEWALK PLAN	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: MAY, 2017	SCALE: 1" = 40'
PROJ. NO: NH-860	SHEET NO. 25A OF 38

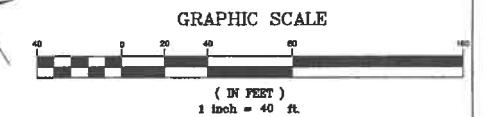
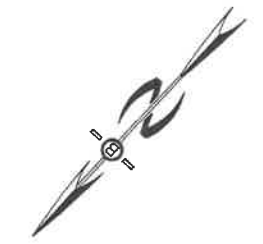
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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

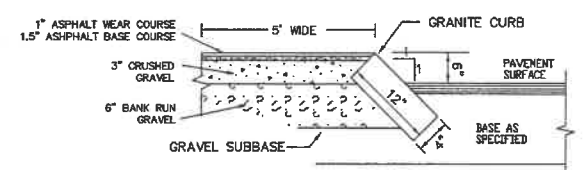
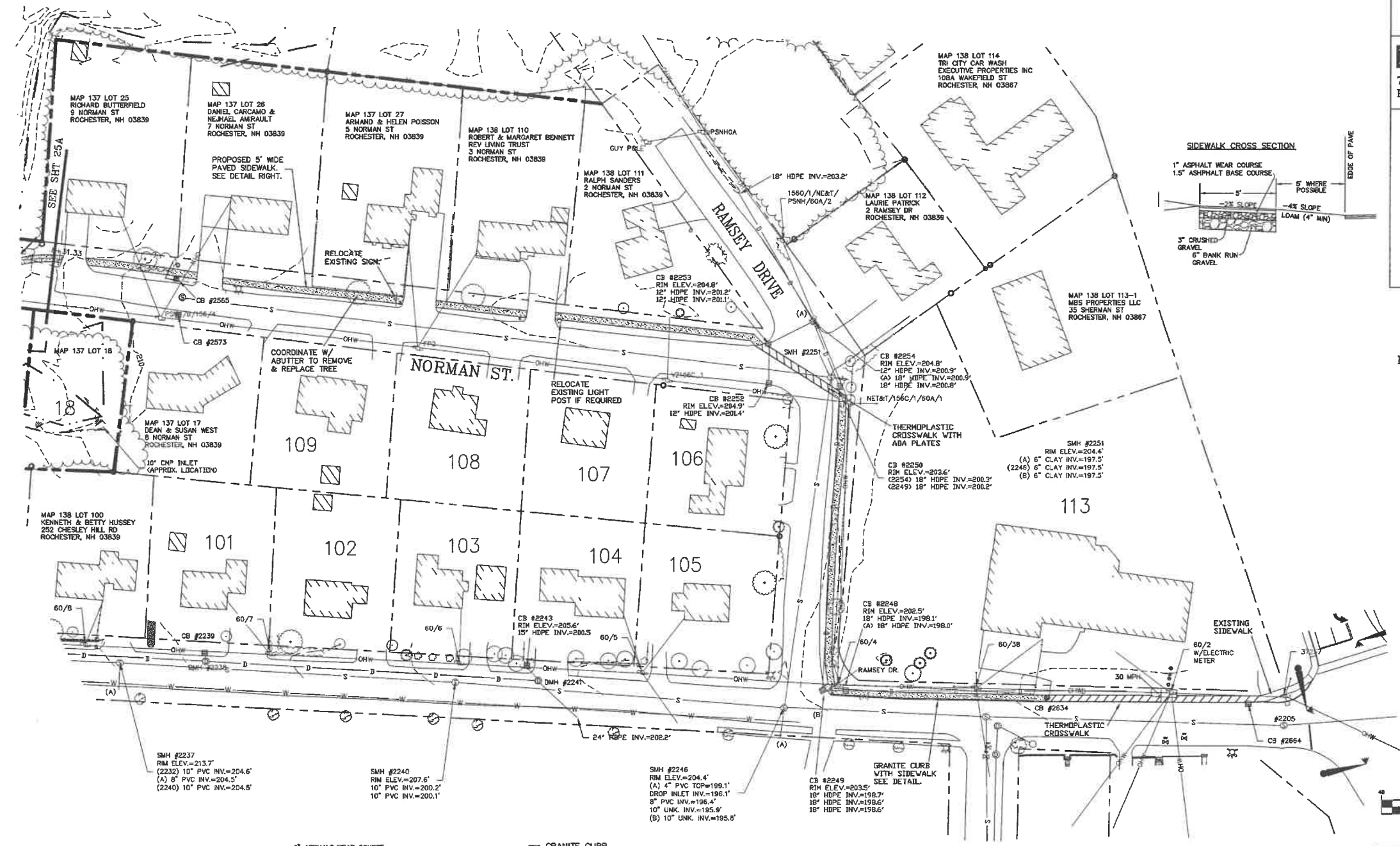


LOCATION LEGEND 1"=600'

PROFILE SCALES:
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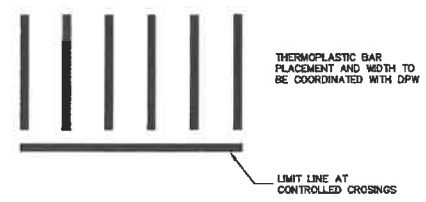


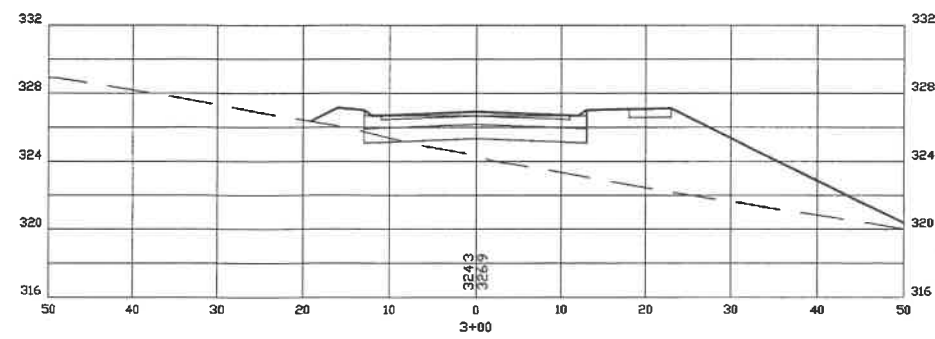
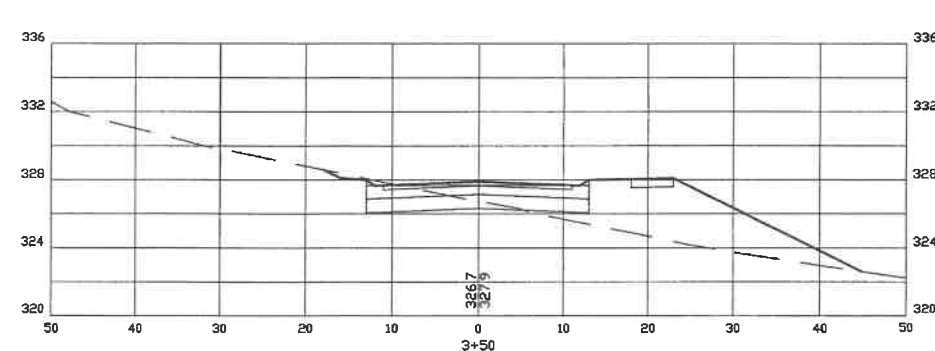
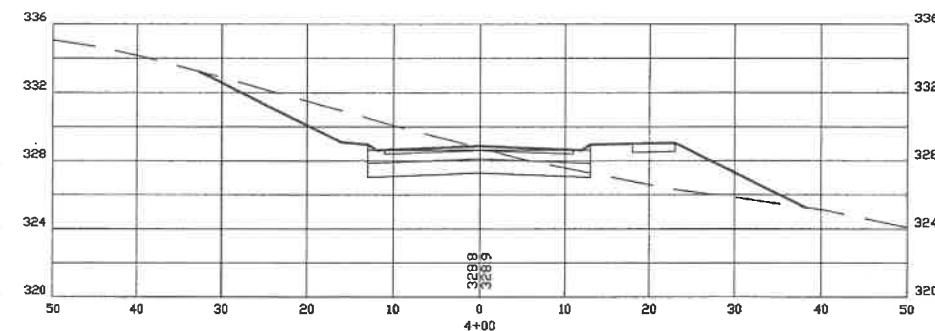
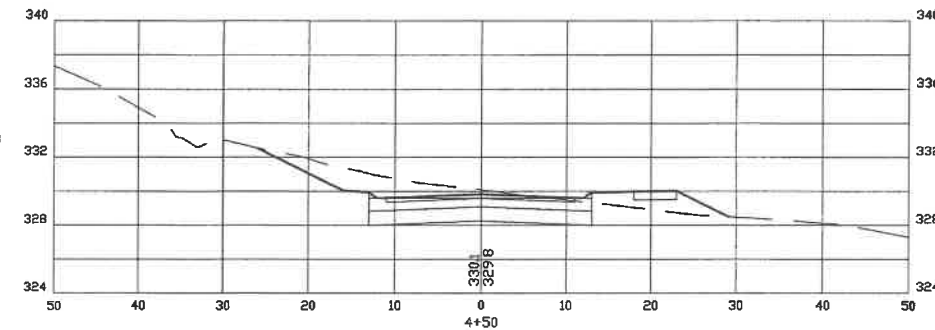
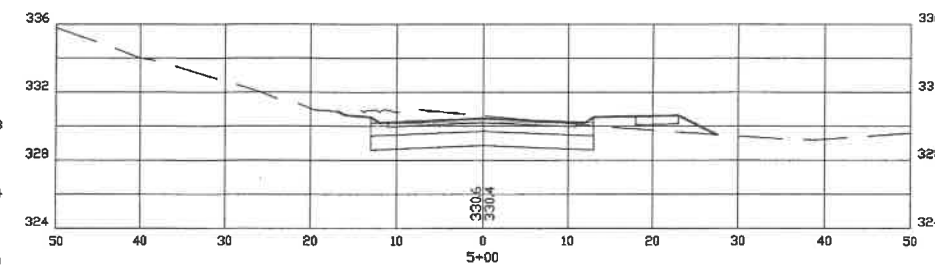
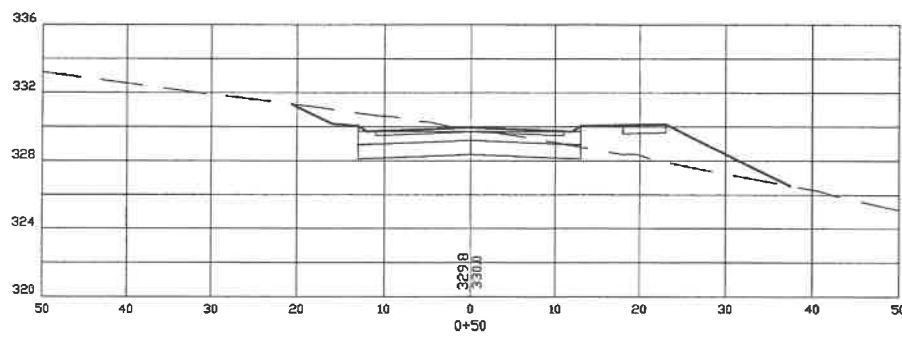
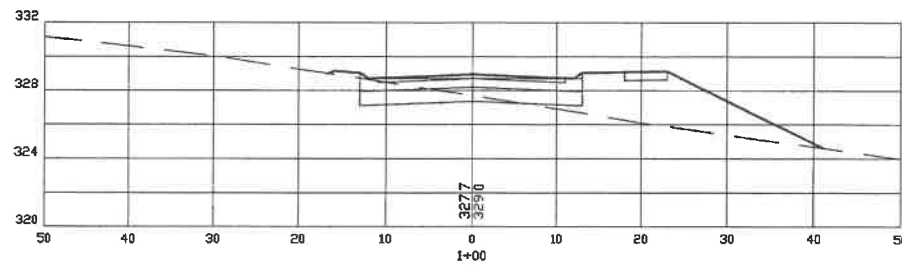
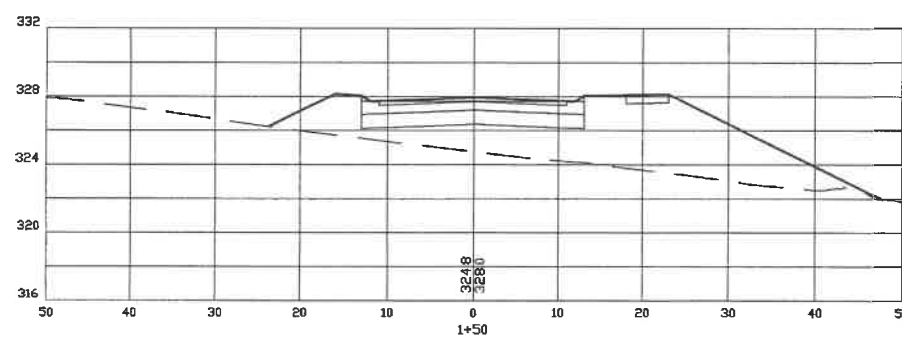
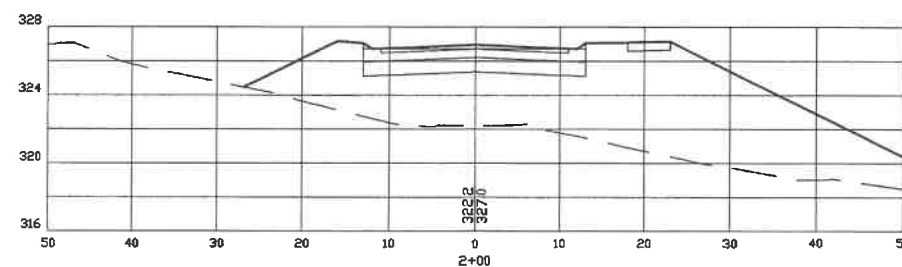
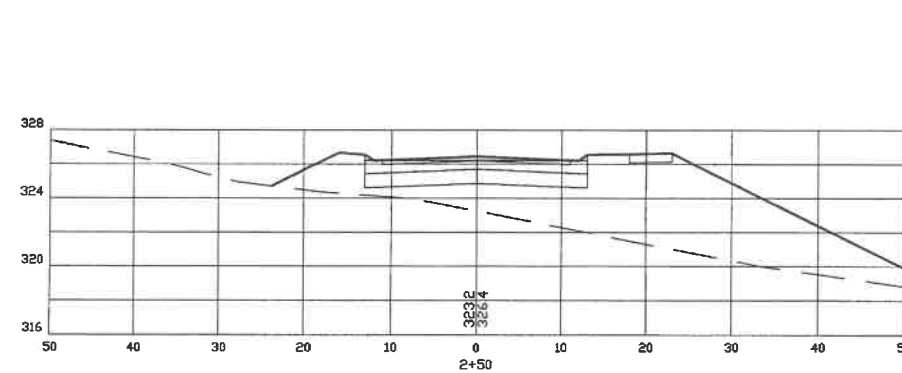
REVISED PER REVIEW COMMENTS		6/27/17
REVISIONS:		DATE:
SIDEWALK PLAN		
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH		
DATE: MAY, 2017	SCALE: 1" = 40'	
PROJ. NO: NH-860	SHEET NO. 25B OF 38	



- NOTES:
1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
 2. JOINTS BETWEEN STONES SHALL BE MORTARED.
 3. SALVAGE GRANITE CURBS ON-SITE AND RESET TO THE EXTENT POSSIBLE.

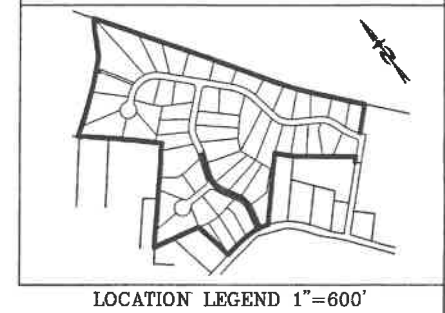
TYPICAL CONTINENTAL CROSSWALK MARKINGS



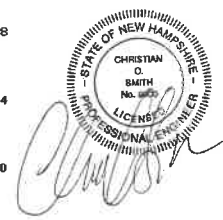


PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
 11 WENTWORTH TERRACE
 DOVER, NH 03820

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 PHONE: 603-583-4860, FAX: 603-583-4863



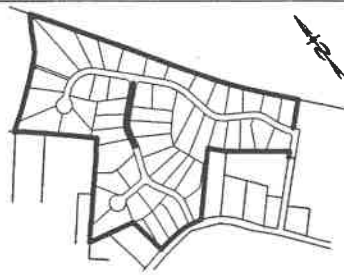
CROSS SECTION SCALES:
 HORIZONTAL: 1"=10'
 VERTICAL: 1"=5'



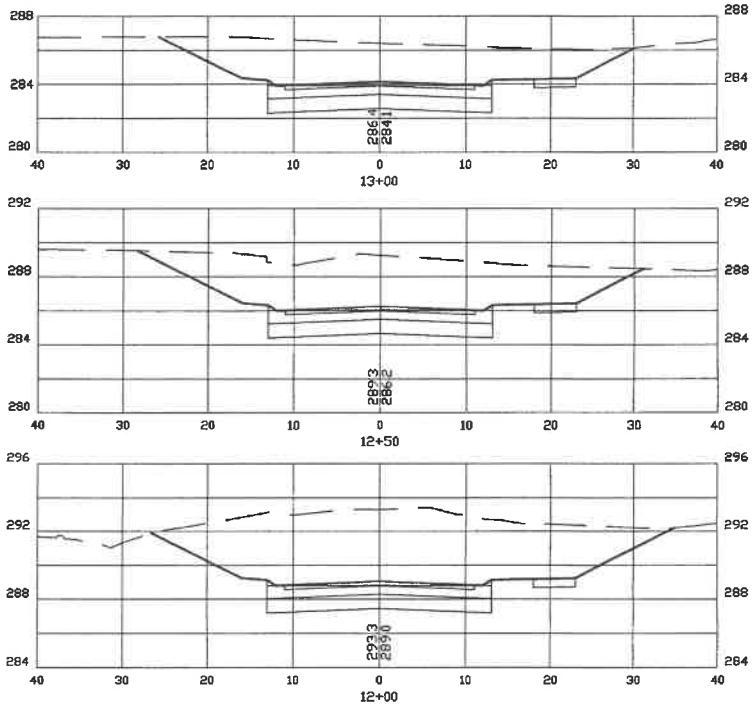
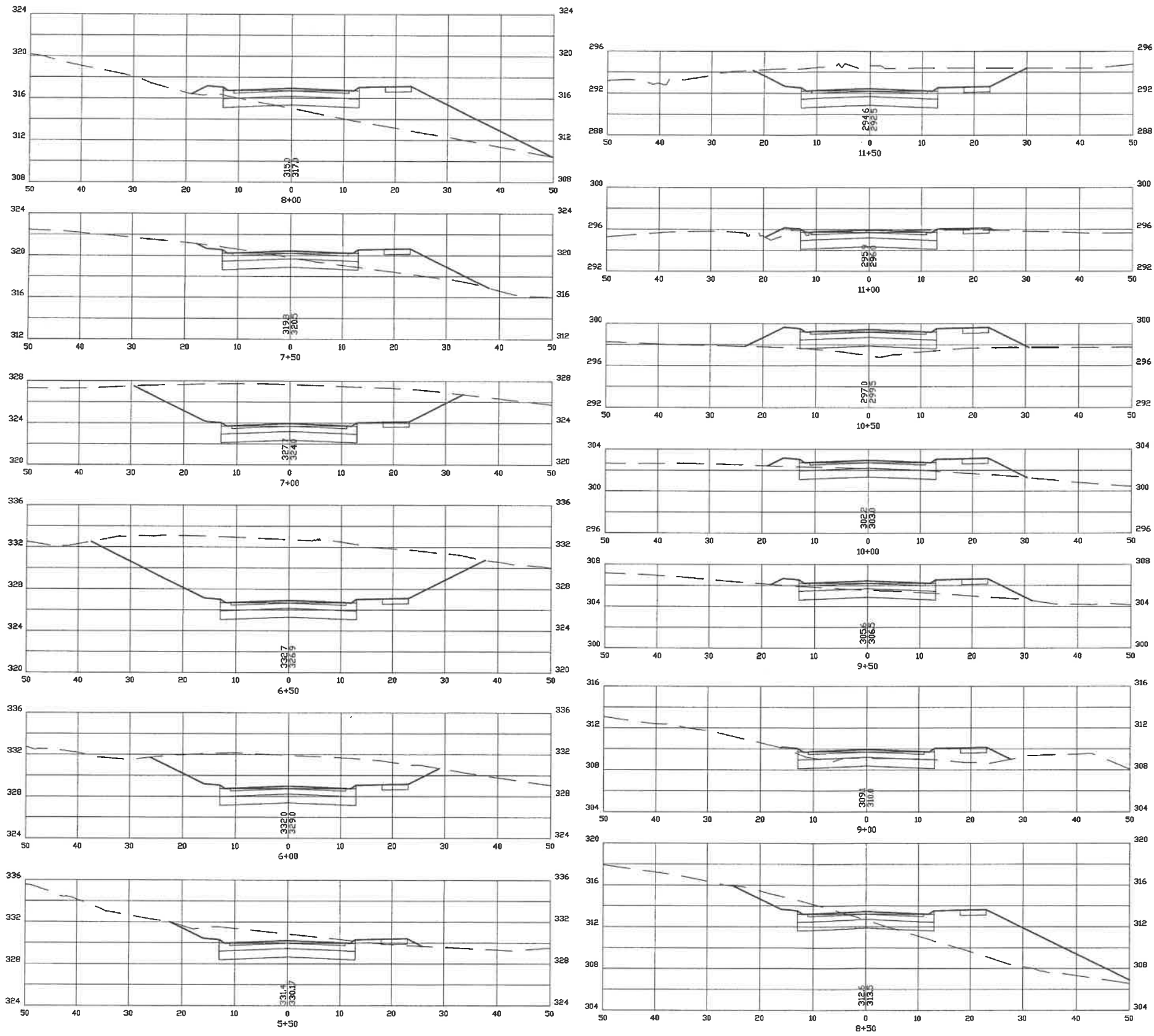
REVISIONS:	DATE:
ROADWAY CROSS SECTIONS	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: JAN, 2017	SCALE: 1" = 10'
PROJ. NO: NH-860	SHEET NO. 26 OF 38

PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
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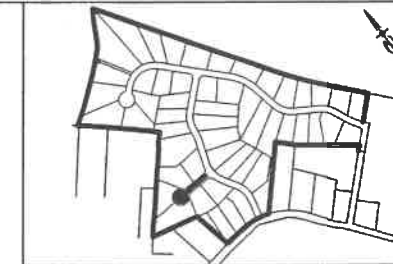


LOCATION LEGEND 1"=600'



CROSS SECTION SCALES:
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VERTICAL: 1"=5'

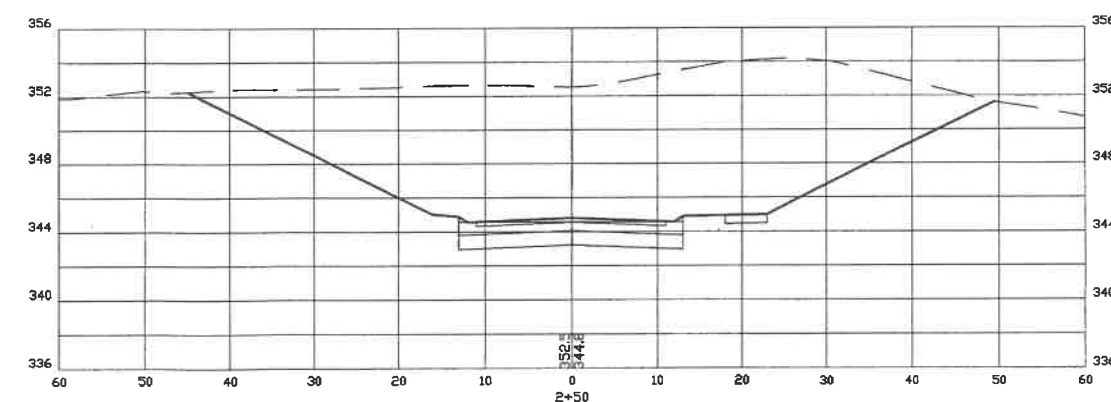
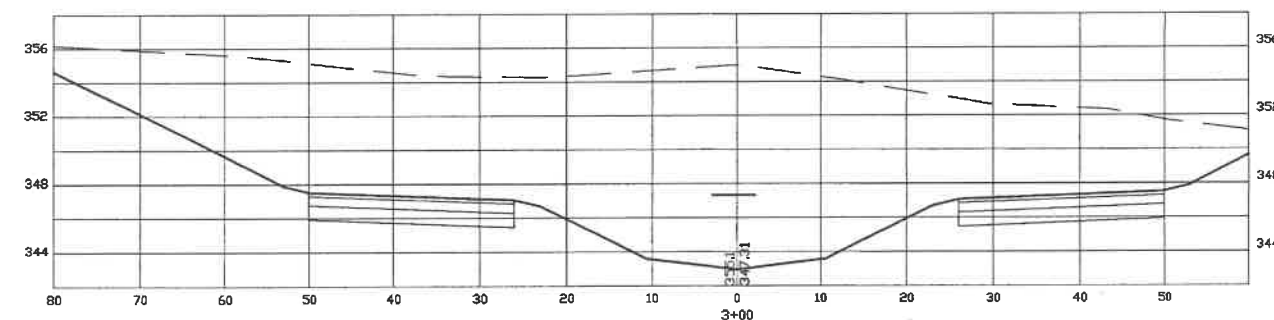
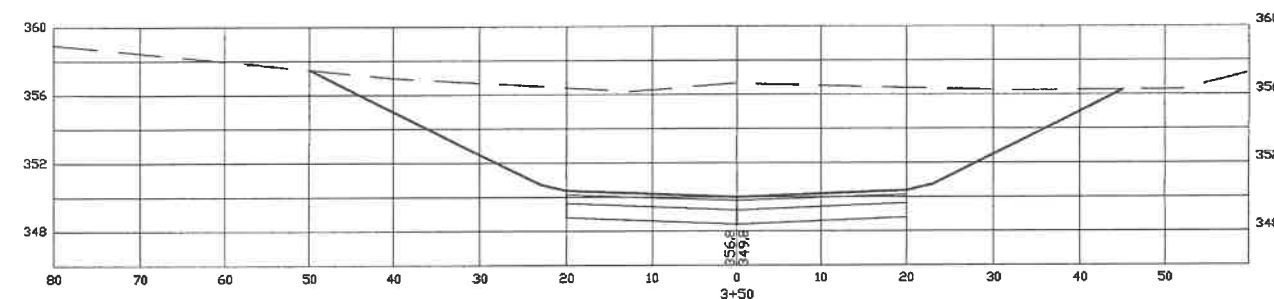
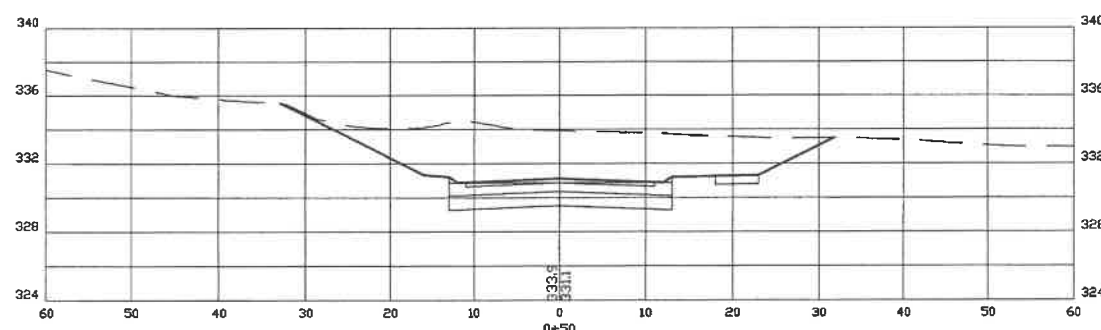
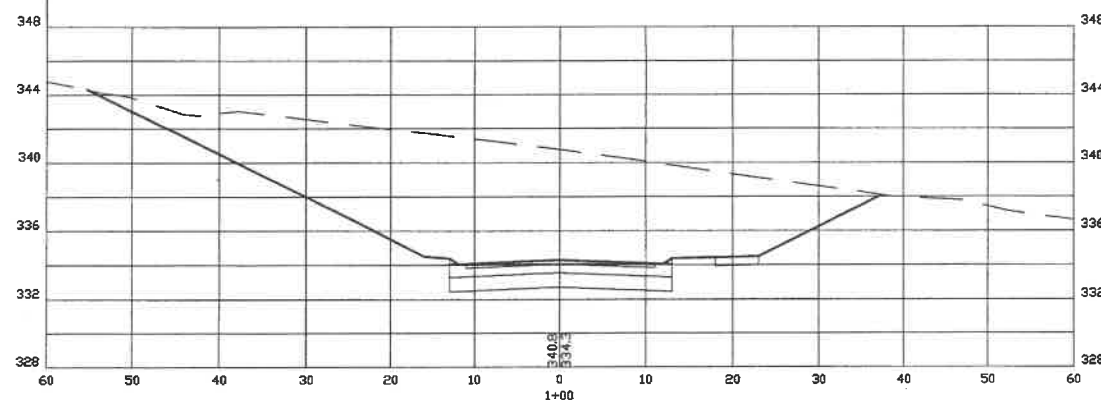
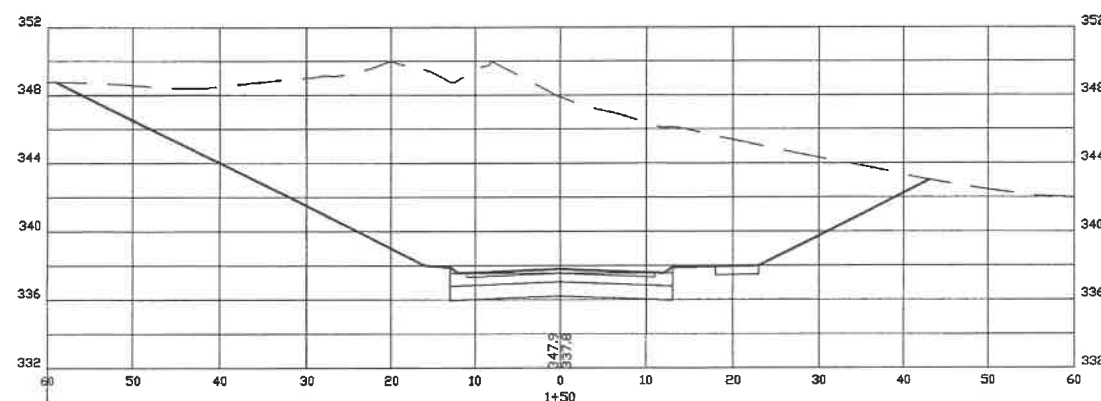
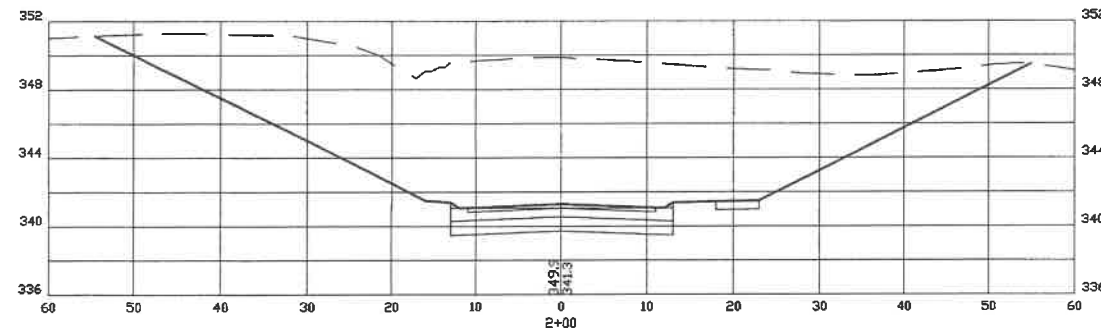
REVISIONS:		DATE:	
ROADWAY CROSS SECTIONS			
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH			
DATE: JAN, 2017		SCALE: 1" = 10'	
PROJ. NO: NH-860		SHEET NO. 27 OF 38	



LOCATION LEGEND 1"=600'

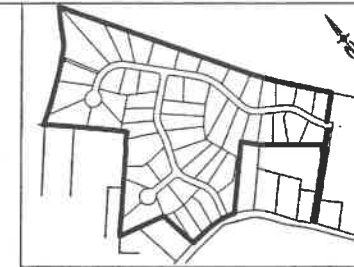
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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



CROSS SECTION SCALES:
HORIZONTAL: 1"=10'
VERTICAL: 1"=5'

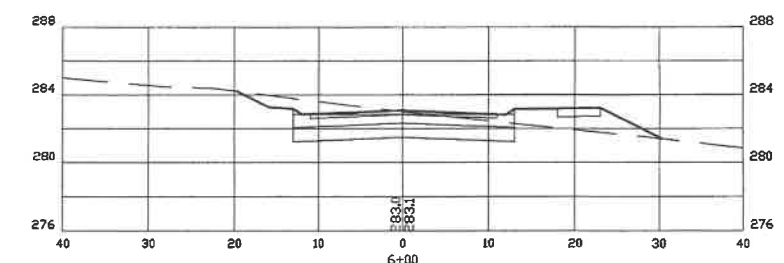
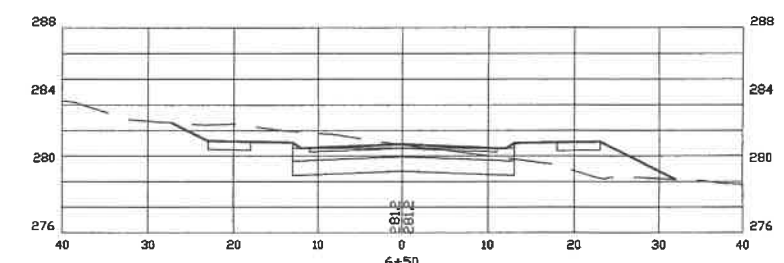
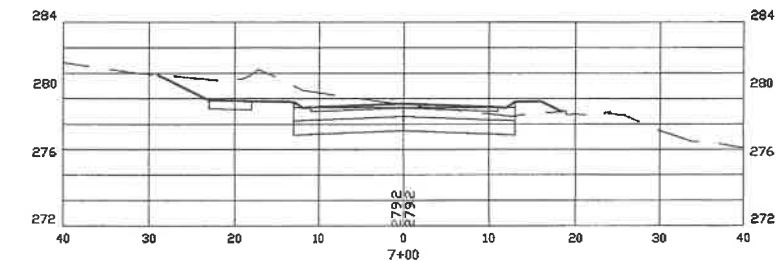
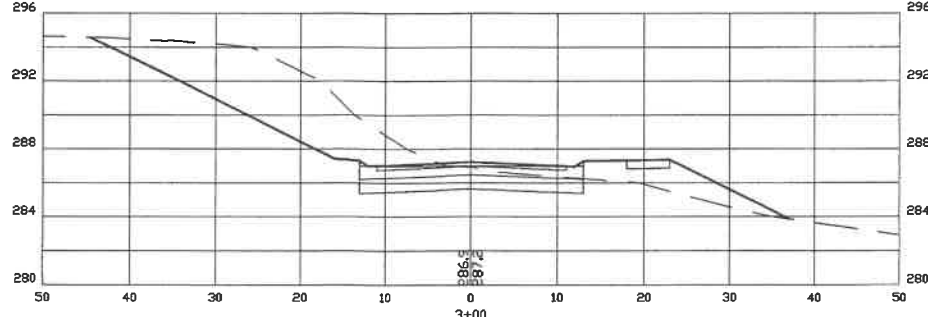
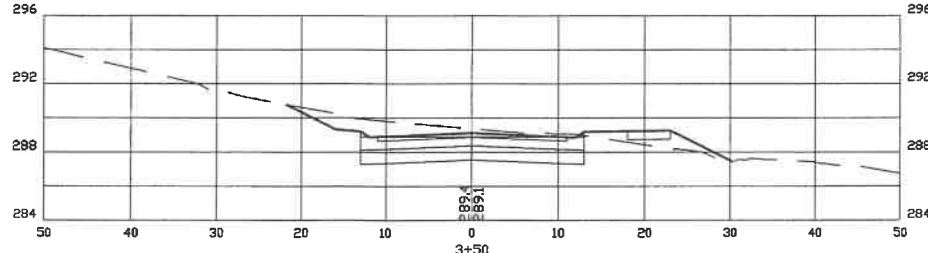
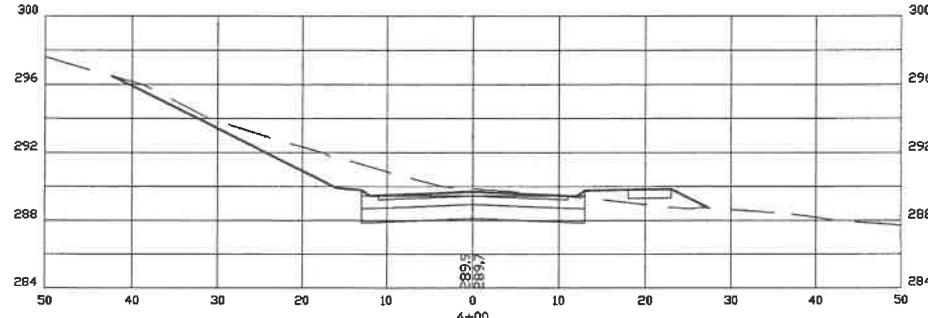
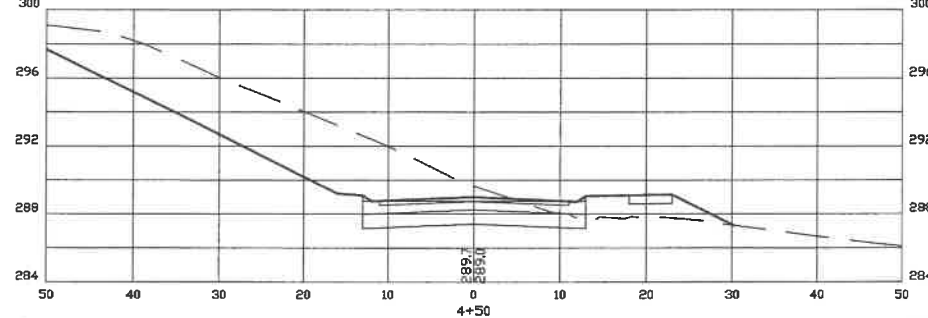
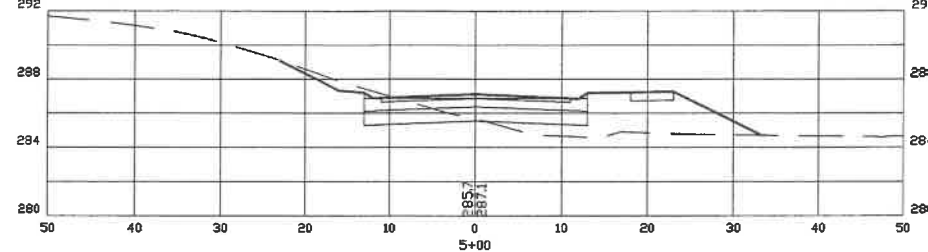
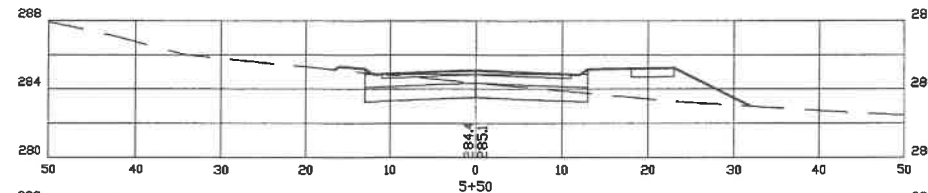
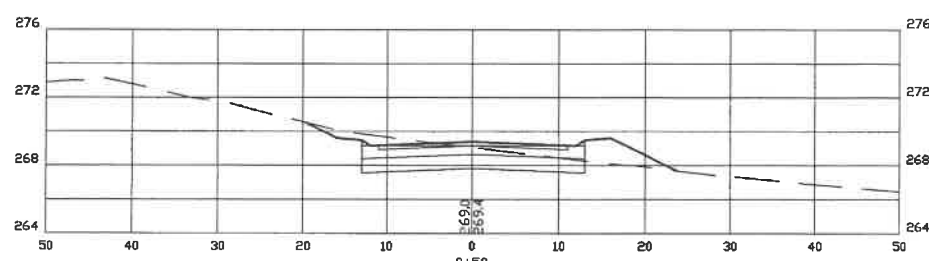
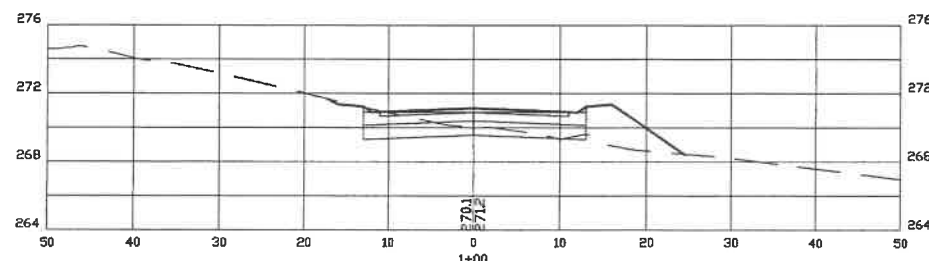
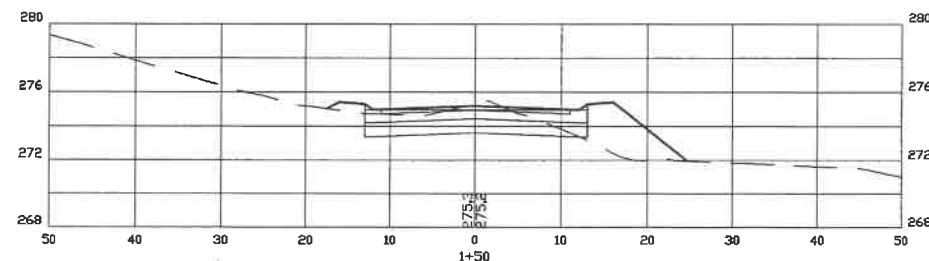
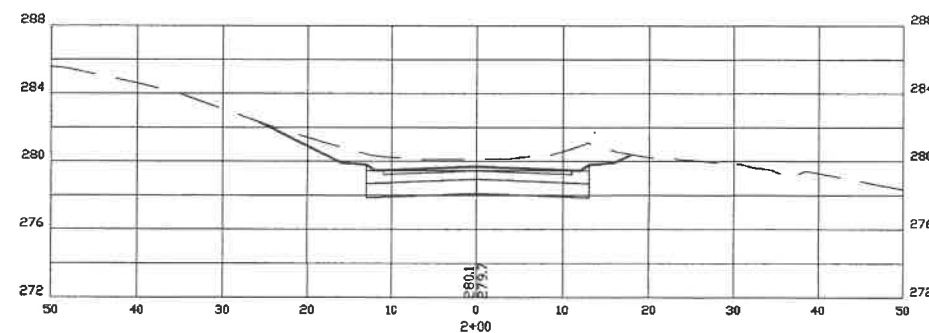
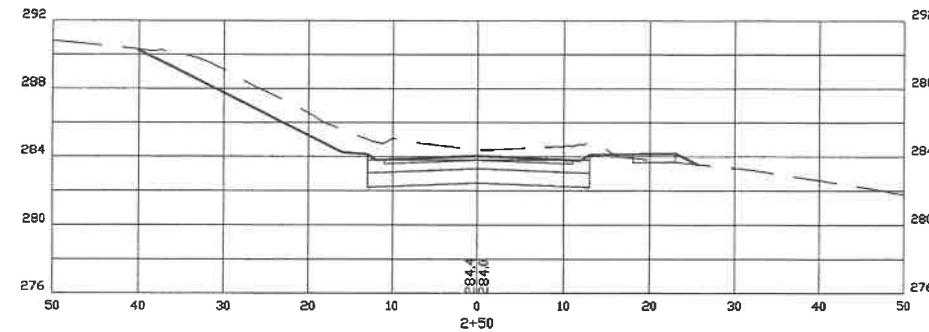
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:
ROADWAY CROSS SECTIONS	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: JAN, 2017	SCALE: 1" = 10'
PROJ. NO: NH-860	SHEET NO. 28 OF 38



PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

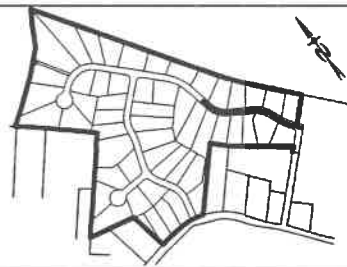
BEALS ASSOCIATES PLLC

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



CROSS SECTION SCALES:
HORIZONTAL: 1"=10'
VERTICAL: 1"=5'

REVISED ROAD PER TRG		2/2/17
REVISIONS:		DATE:
ROADWAY CROSS SECTIONS		
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH		
DATE: JAN, 2017	SCALE: 1" = 10'	
PROJ. NO: NH-860	SHEET NO. 29 OF 38	

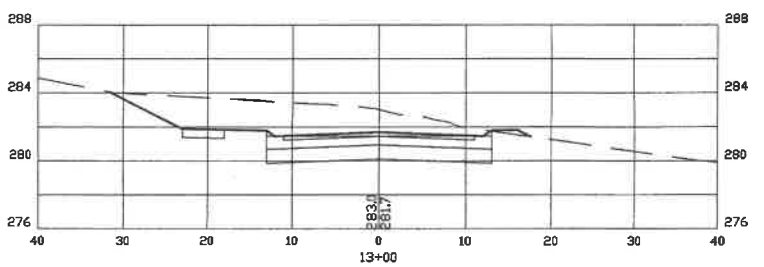
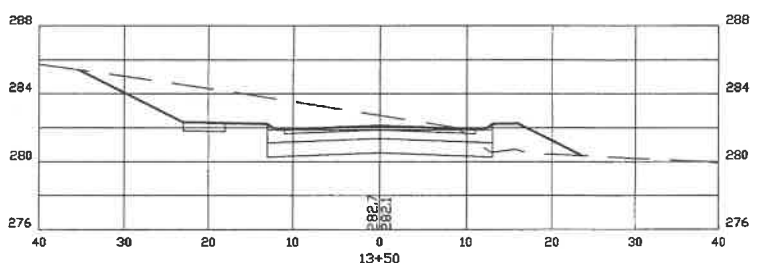
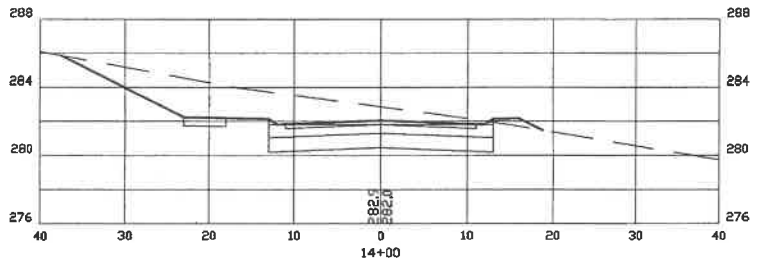
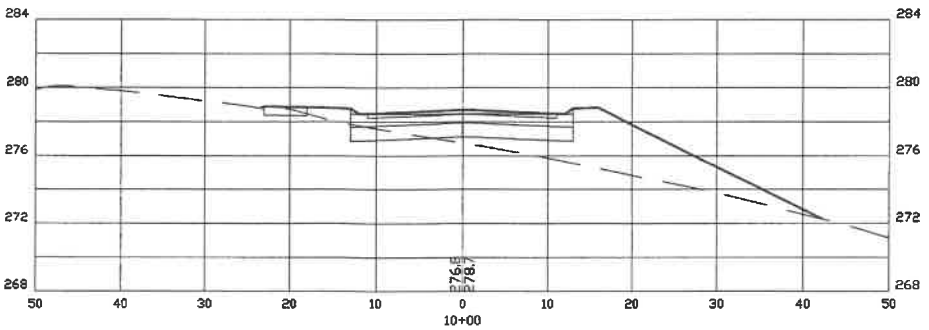
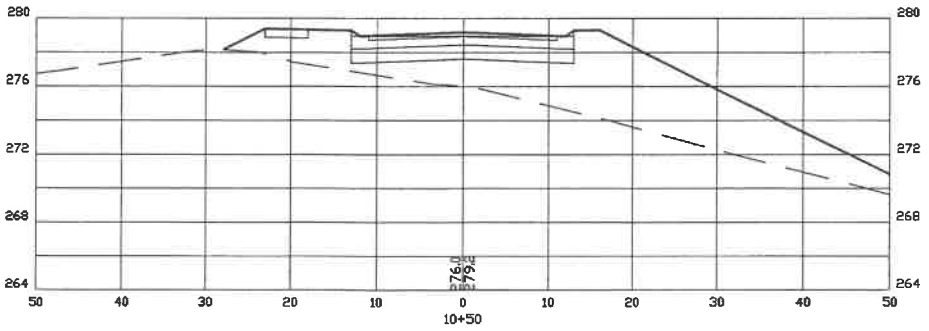
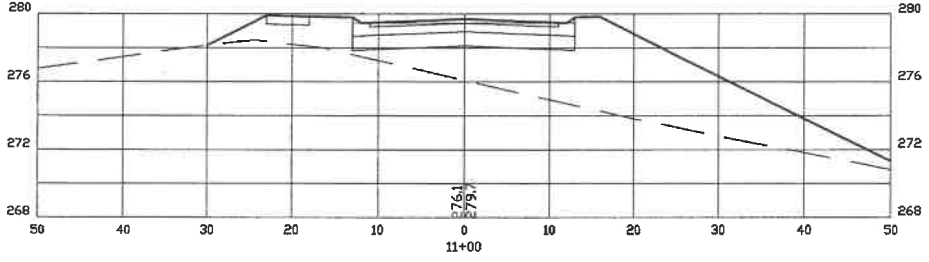
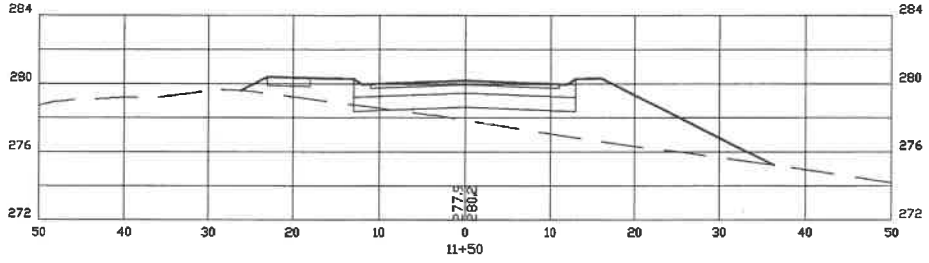
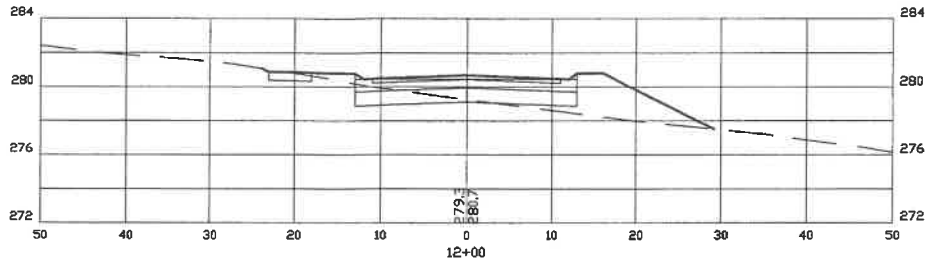
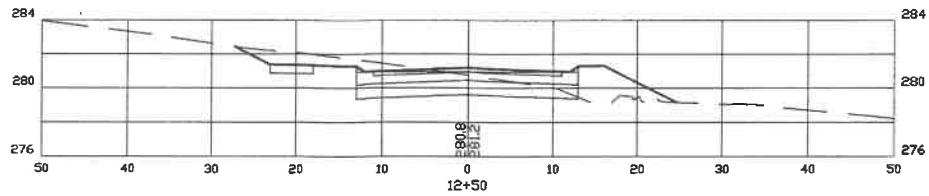
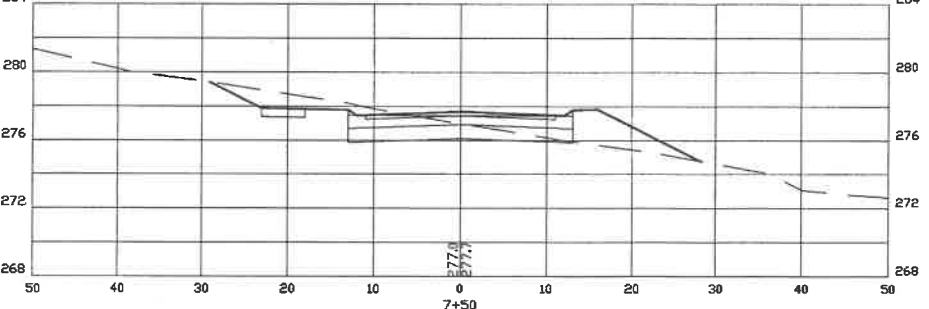
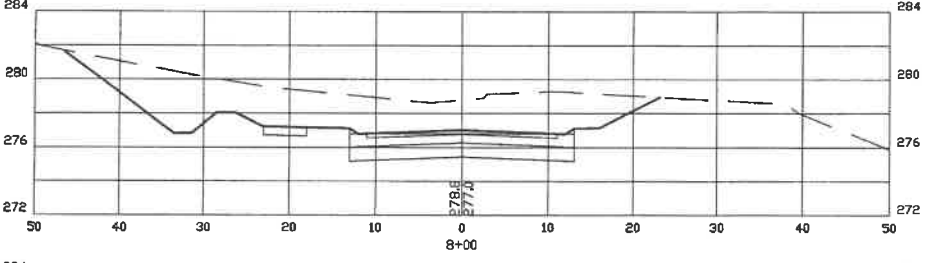
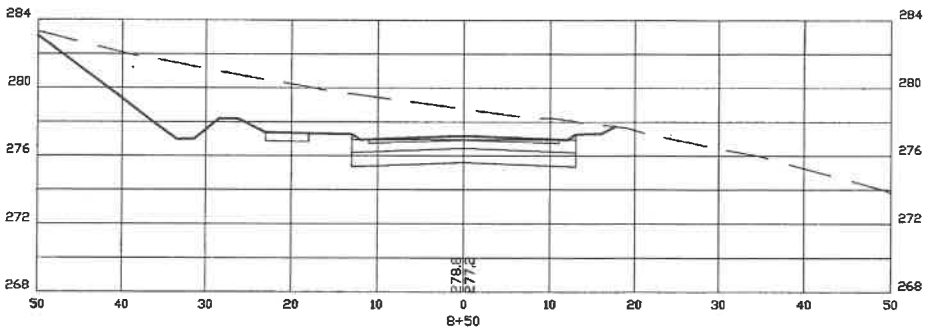
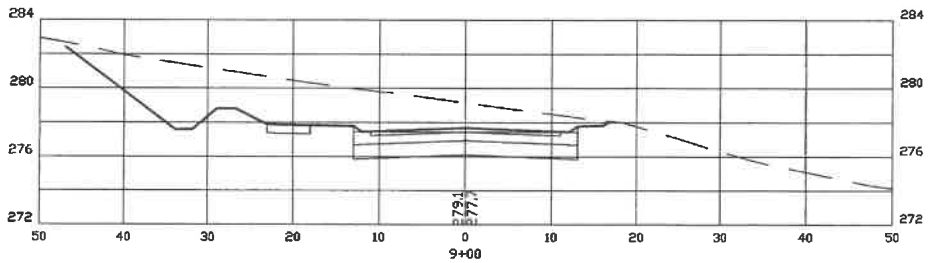
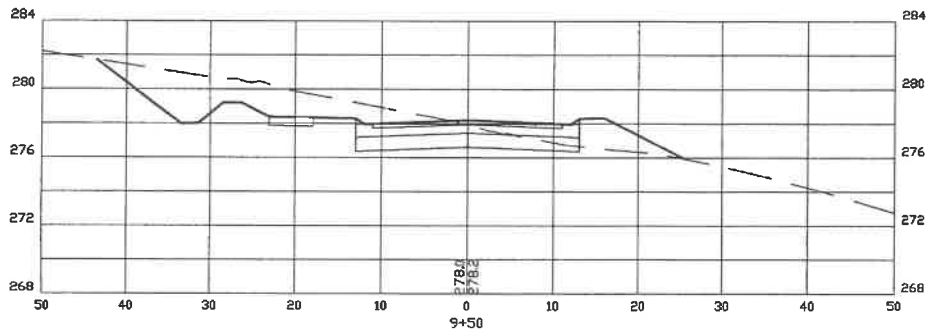


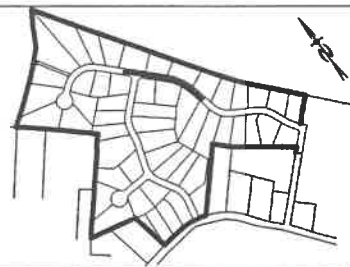
PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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



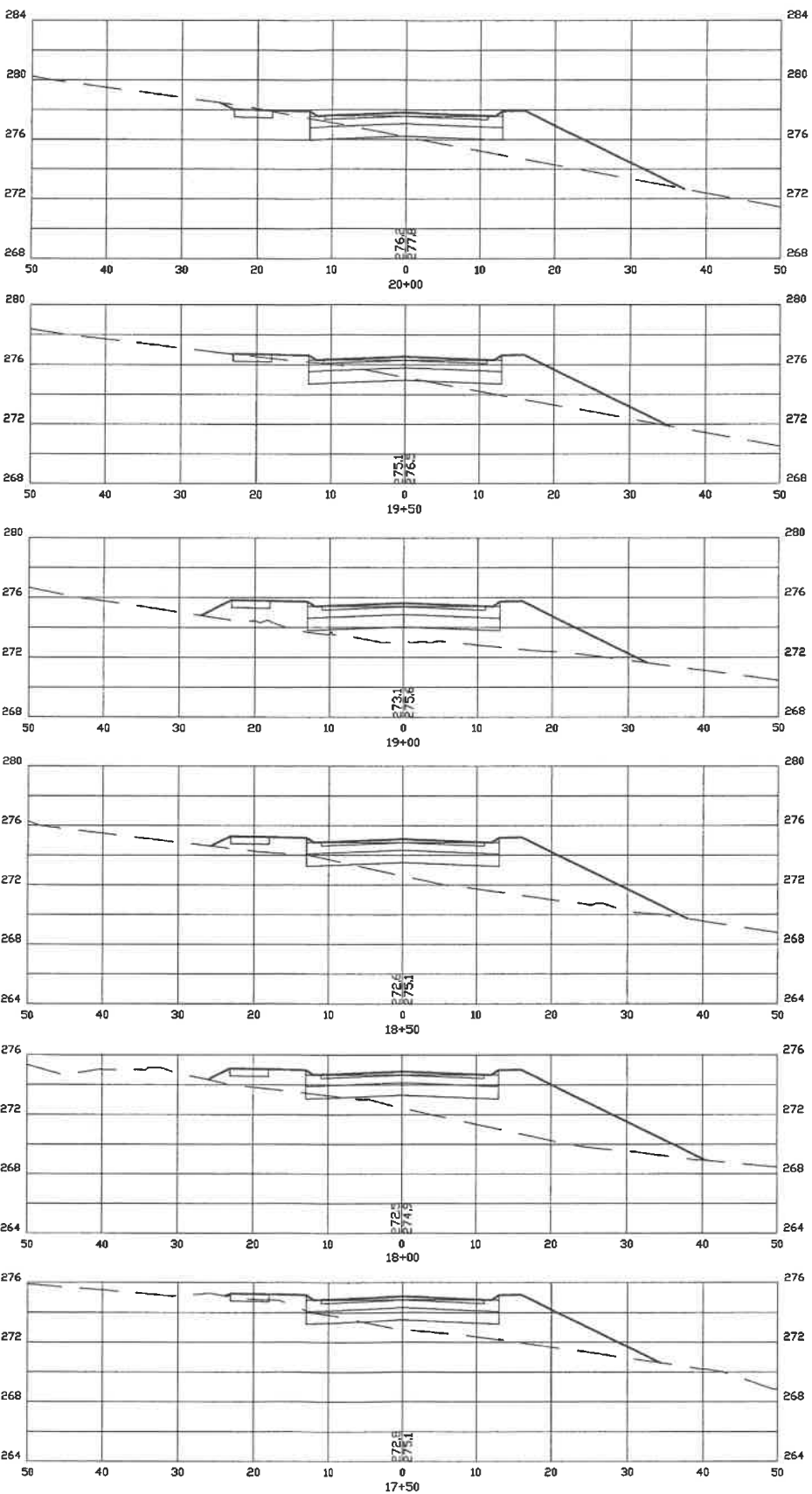
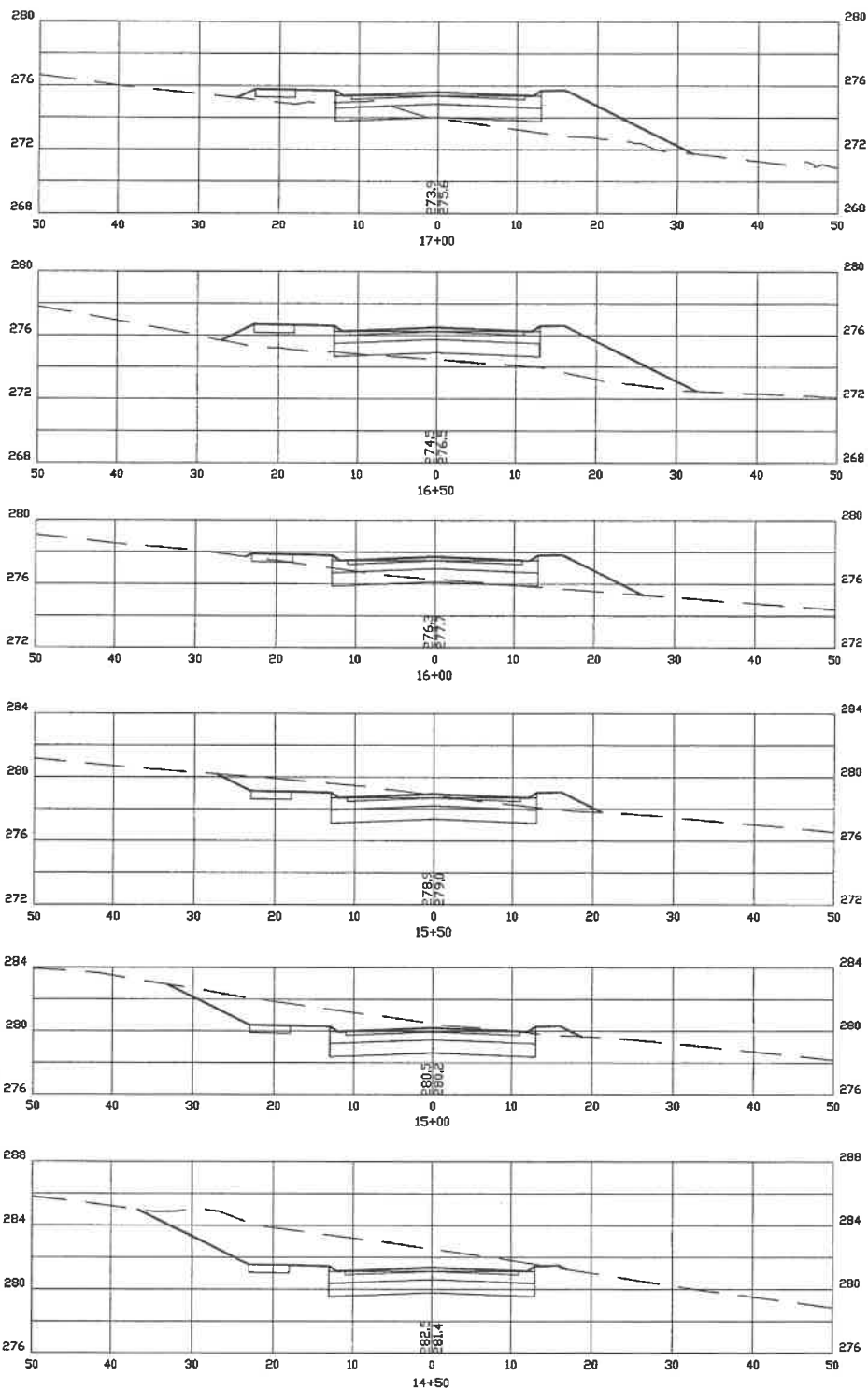
REVISED ROAD PER TRG		2/2/17
REVISIONS:		DATE:
ROADWAY CROSS SECTIONS		
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH		
DATE: JAN, 2017	SCALE: 1" = 10'	
PROJ. NO: NH-860	SHEET NO. 30 OF 38	



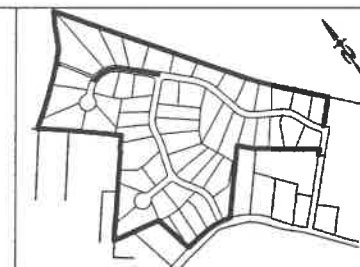
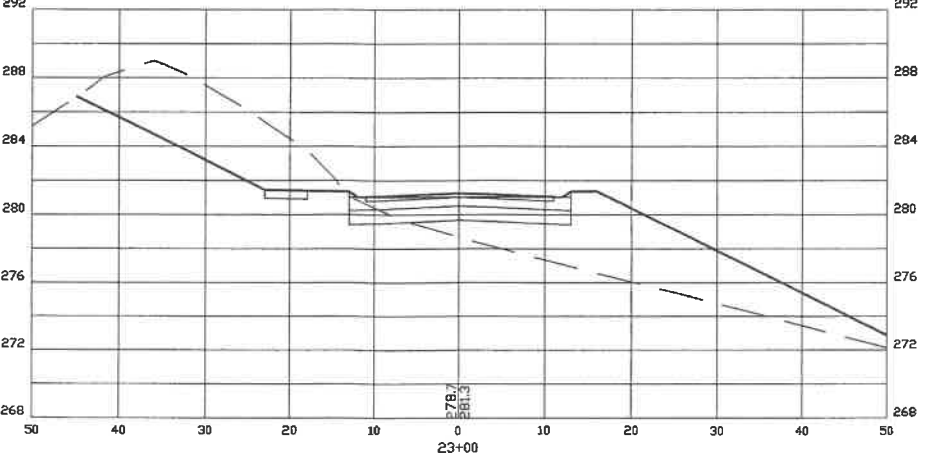
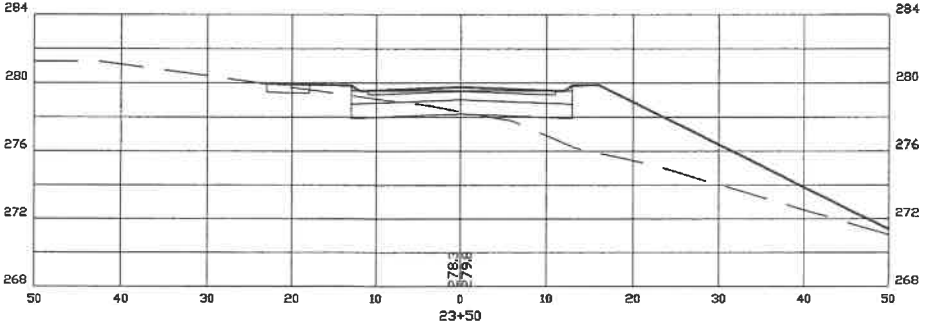
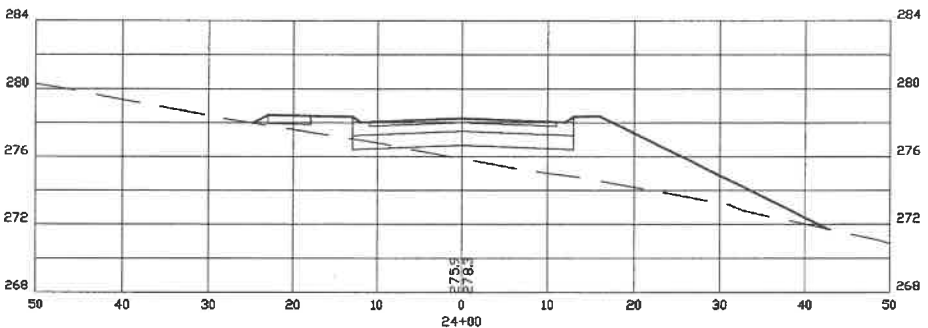
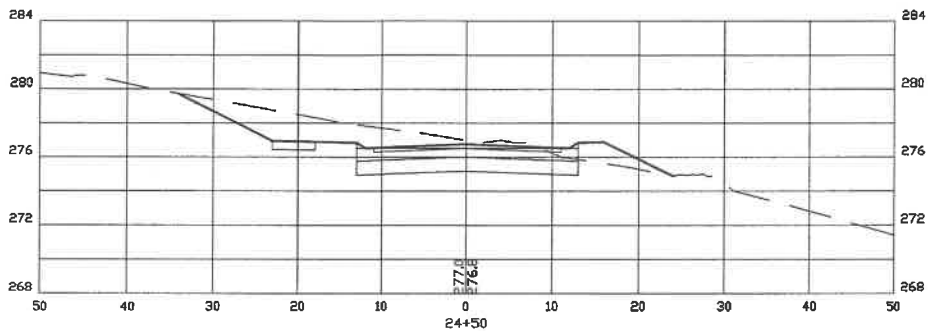
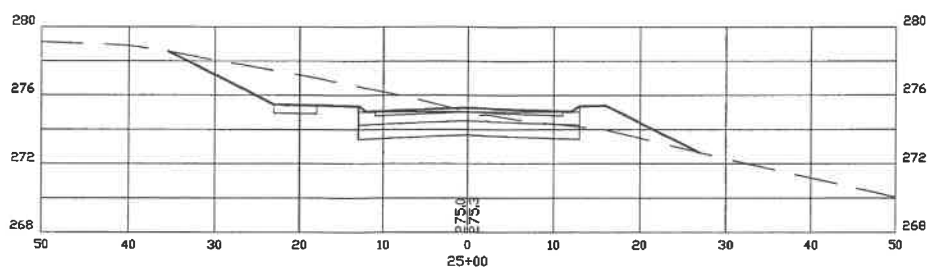
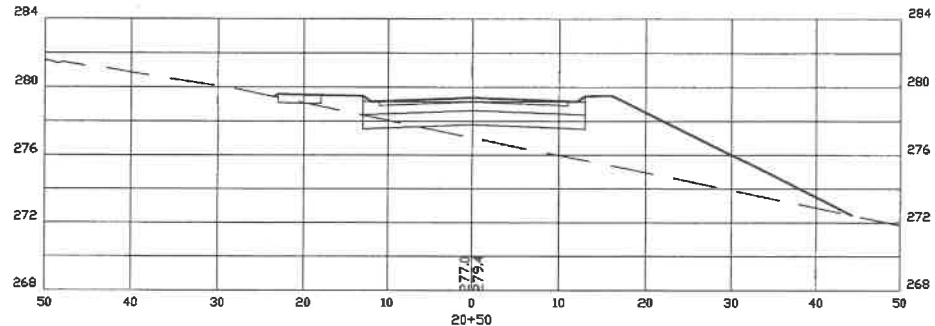
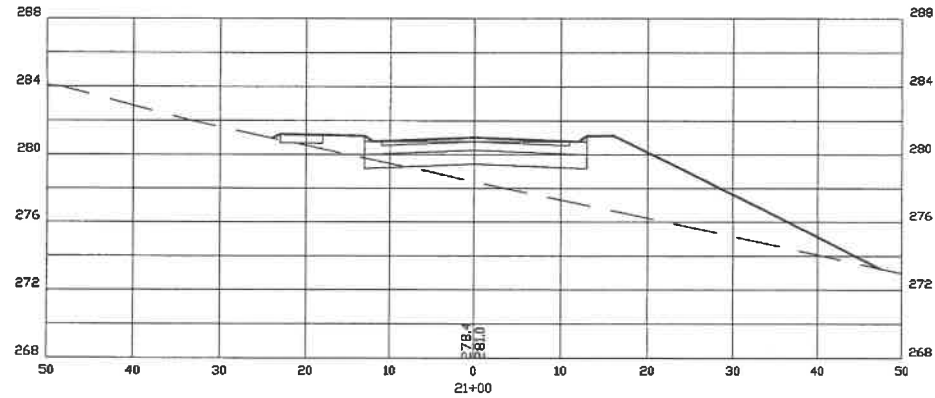
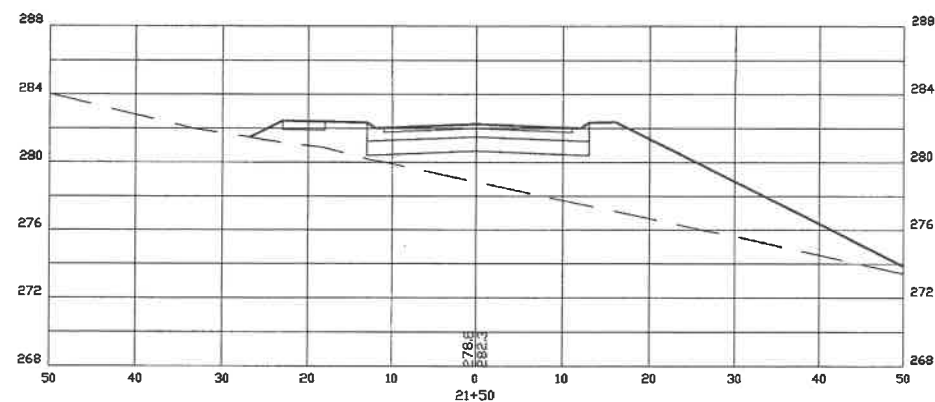
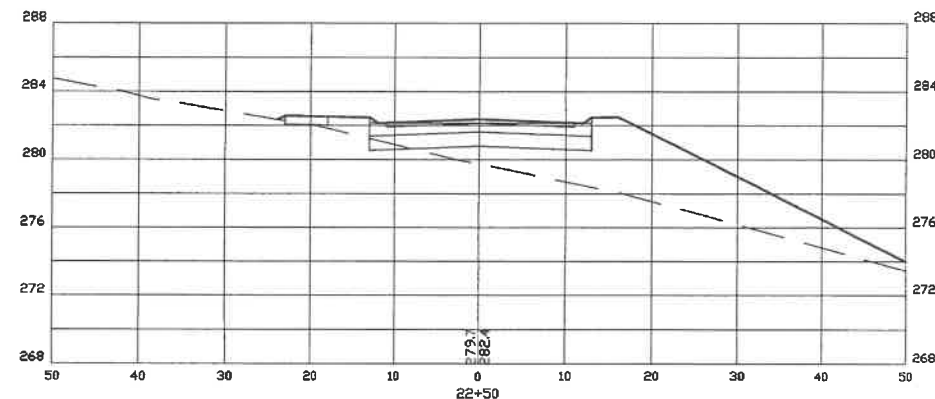


PREPARED FOR:
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70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX: 603-583-4863



REVISED ROAD PER TRC		2/2/17
REVISIONS:		DATE:
ROADWAY CROSS SECTIONS		
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH		
DATE: JAN, 2017	SCALE: 1" = 10'	
PROJ. NO: NH-860	SHEET NO. 31 OF 38	



PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

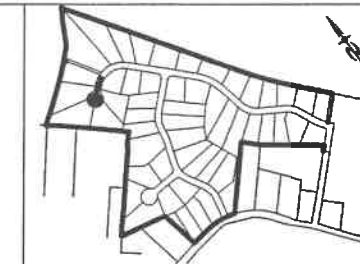
BEALS ASSOCIATES PLLC

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



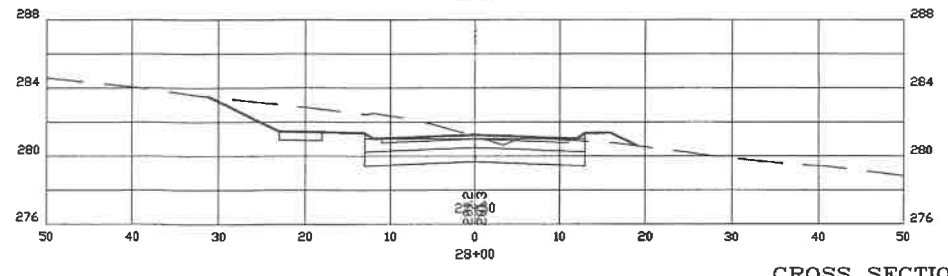
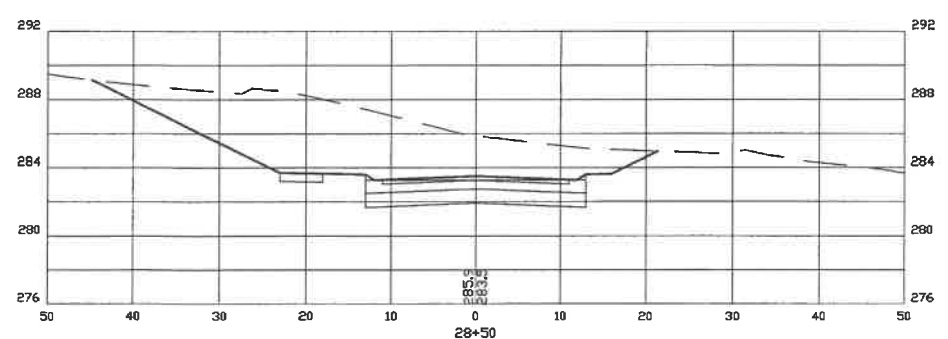
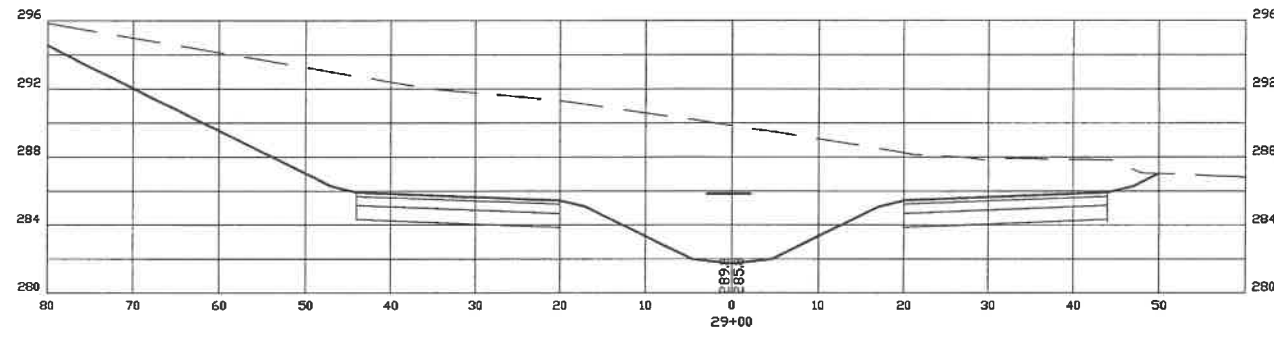
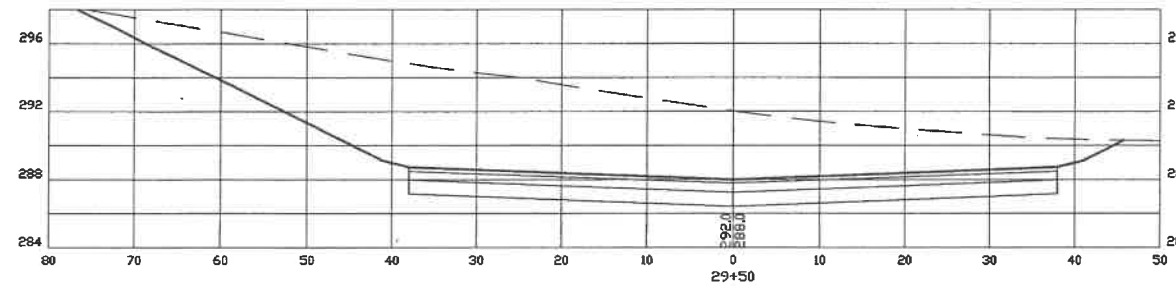
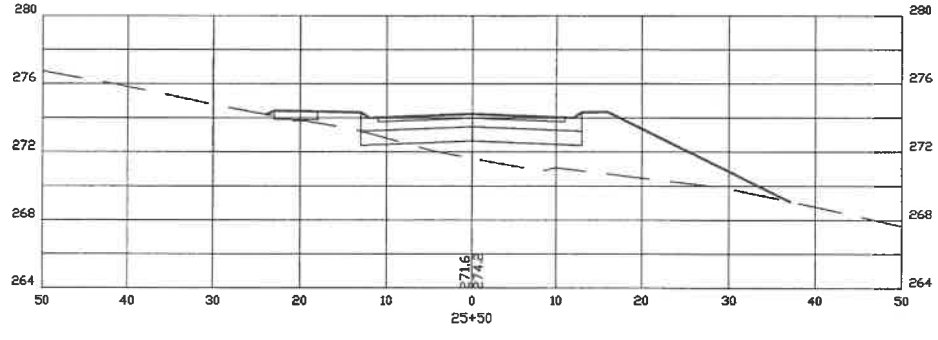
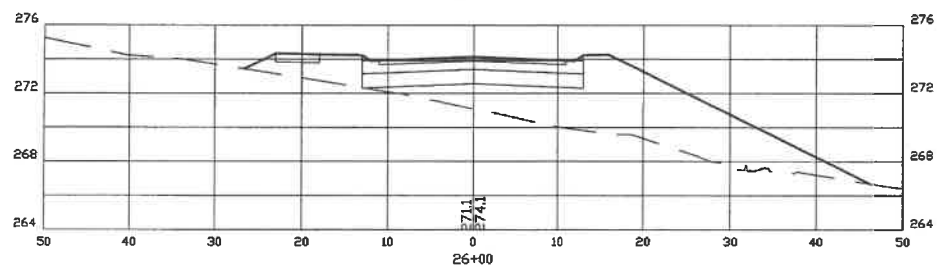
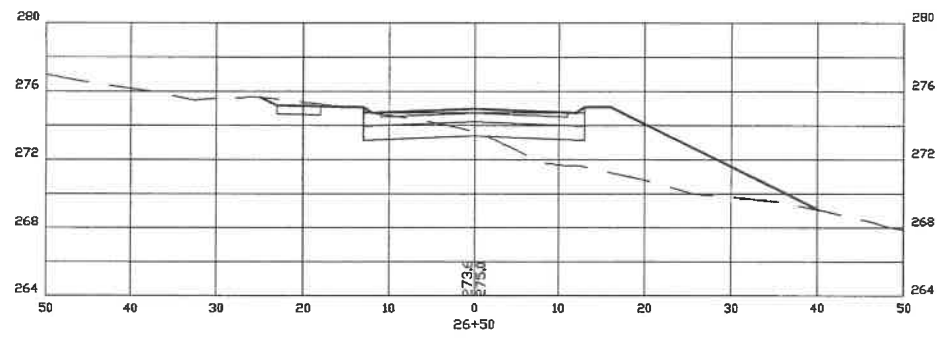
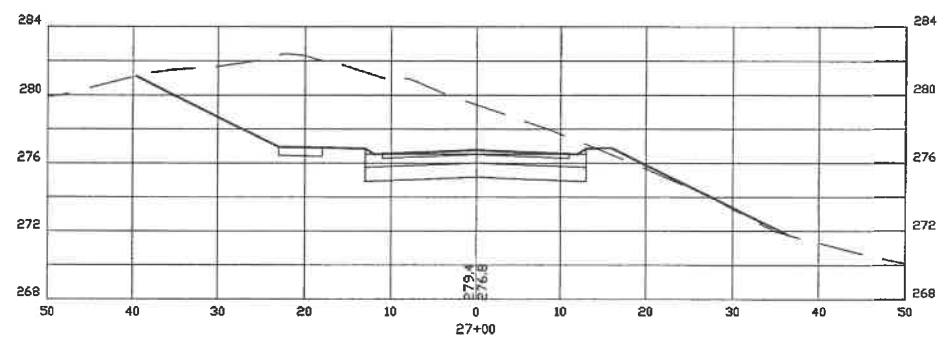
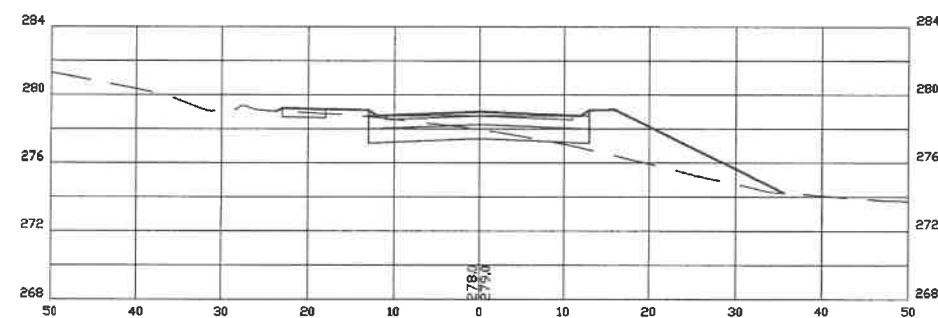
CROSS SECTION SCALES:
HORIZONTAL: 1"=10'
VERTICAL: 1"=5'

REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:
ROADWAY CROSS SECTIONS	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: JAN, 2017	SCALE: 1" = 10'
PROJ. NO: NH-860	SHEET NO. 32 OF 38

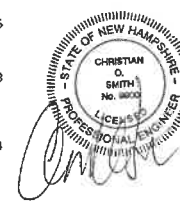


PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
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DOVER, NH 03820

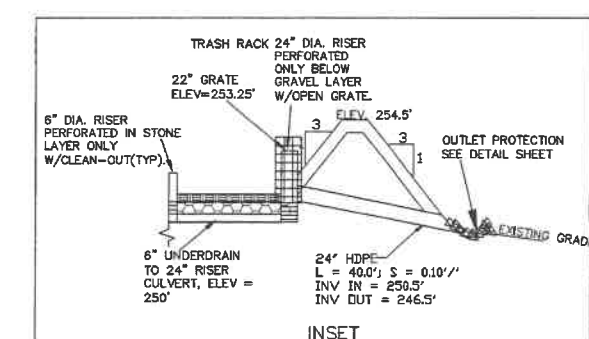
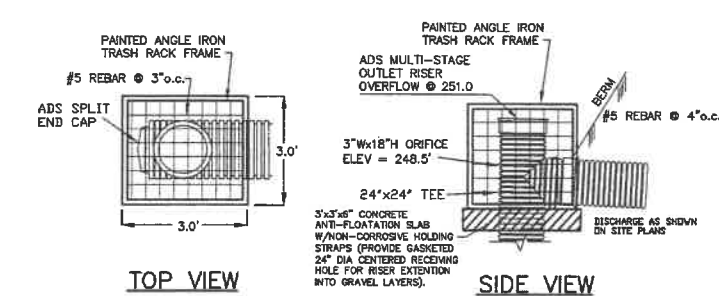
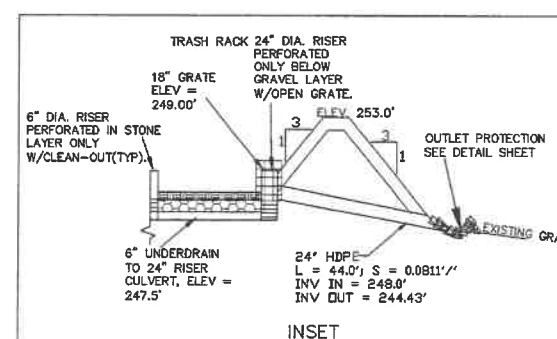
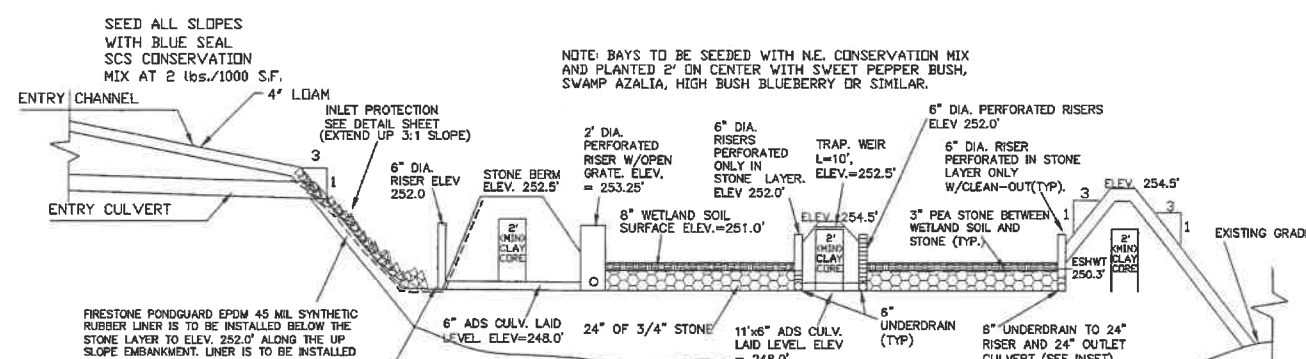
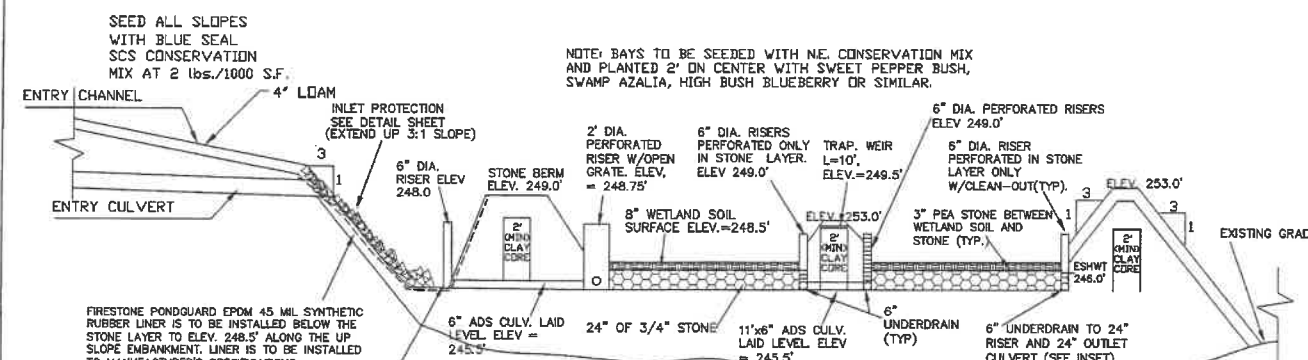
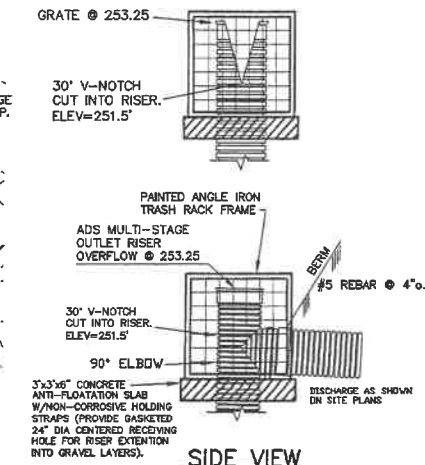
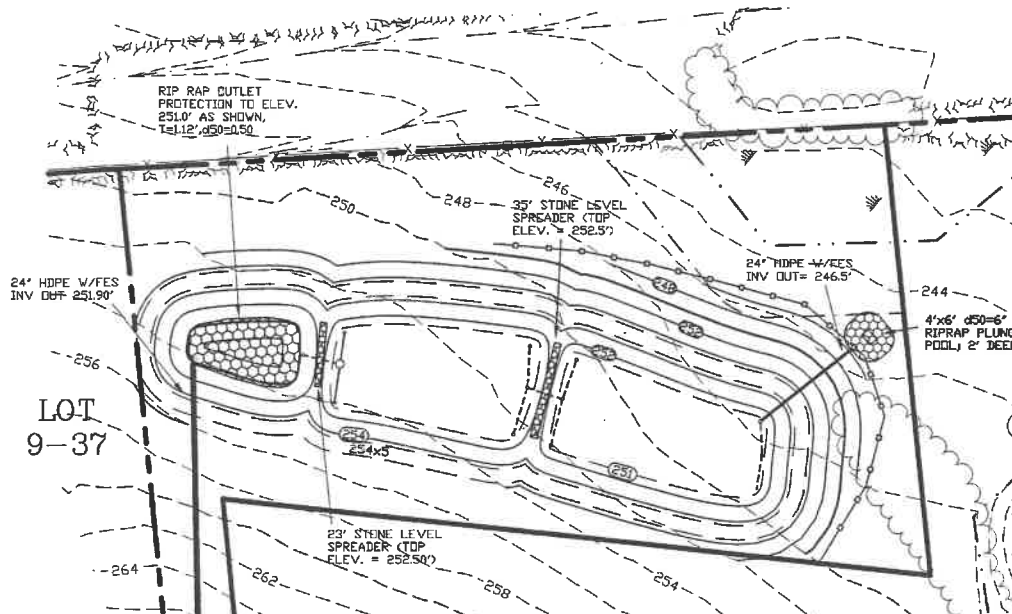
BEALS ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX: 603-583-4863



CROSS SECTION SCALES:
HORIZONTAL: 1"=10'
VERTICAL: 1"=5'

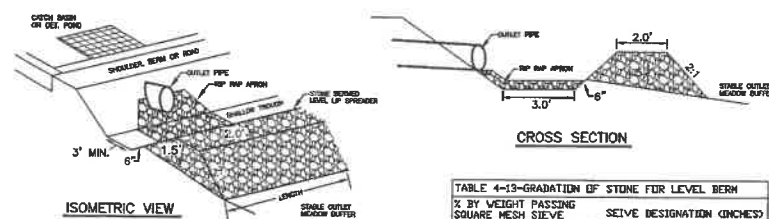


REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:
ROADWAY CROSS SECTIONS	
BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH	
DATE: JAN, 2017	SCALE: 1" = 10'
PROJ. NO: NH-860	SHEET NO. 33 OF 38



REVISED PER TRG	9/18/17
PER DRAINAGE REVIEW	8/28/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:
<h1>DRAINAGE POND PLAN</h1>	
<h2>BIRCHWOOD PONDS RESIDENTIAL DEVELOPMENT CHESLEY HILL ROAD ROCHESTER, NH</h2>	
DATE: JAN, 2017	SCALE: 1" = 30'
PROJ. NO: NH-860	SHT. 34 OF 38

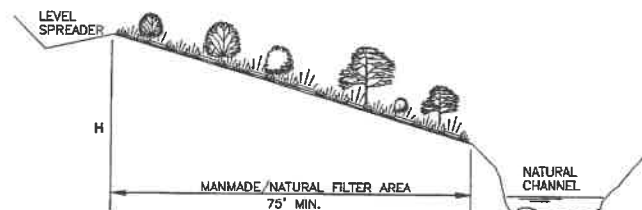
STONE BERM LEVEL SPREADER



% BY WEIGHT PASSING SQUARE MESH SIEVE	SIEVE DESIGNATION (INCHES)
100%	12
84%-100%	6
68%-83%	3
48%-62%	1
8%-12%	No. 4

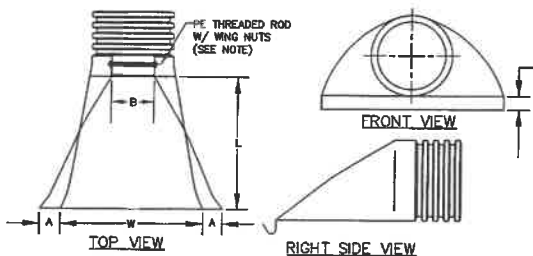
LEVEL SPREADER

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE ENTIRE LEVEL SPREADER LIP AREA SHALL BE PROTECTED BY PLACING EXCLOSOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.



- MAINTENANCE
1. FILTER STRIPS SHOULD BE MAINTAINED AS NATURAL AREAS ONCE THE VEGETATION IS ESTABLISHED. THE FILTER STRIP SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ON SITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO COMPLETE THE ESTABLISHMENT OF THE STRIP SINCE MOST SPECIES TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
 2. THE FILTER STRIP SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR RAINSTORM TO DETERMINE IF THE ENTRANCE CONDITIONS ARE STILL UNIFORM AND LEVEL AND TO SEE IF RILLS HAVE FORMED. ANY PROBLEM AREAS SHOULD BE REPAIRED PROMPTLY TO PREVENT FURTHER DETERIORATION.

DEVELOPED AREA BUFFER DETAIL

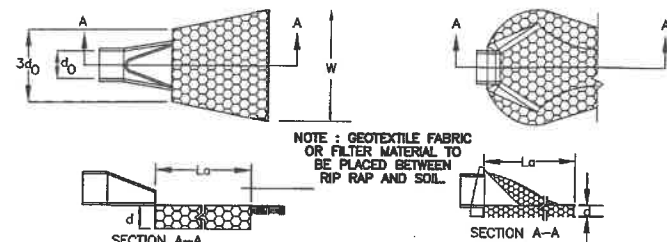


PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15"	6.5"	10"	6.5"	25"	29"
	375 mm	165 mm	254 mm	165 mm	635 mm	735 mm
1810-NP	18"	7.5"	15"	6.5"	32"	35"
	450 mm	190 mm	380 mm	165 mm	812 mm	890 mm
2410-NP	24"	7.5"	18"	6.5"	36"	45"
	600 mm	190 mm	450 mm	165 mm	900 mm	1140 mm
3010-NP	30"	10.5"	N/A	7.0"	53"	68"
	750 mm	268 mm	N/A	178 mm	1345 mm	1725 mm
3610-NP	36"	10.5"	N/A	7.0"	53"	68"
	900 mm	268 mm	N/A	178 mm	1345 mm	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

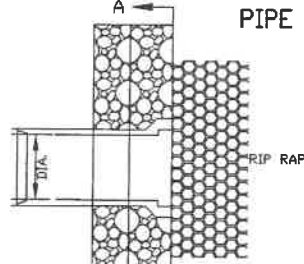
NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

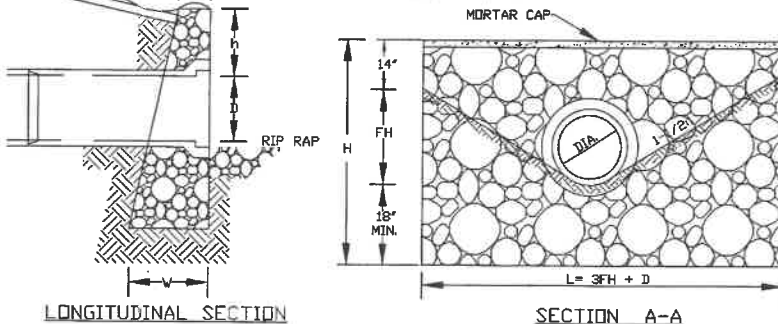
- CONSTRUCTION SPECIFICATIONS
1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
 2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION. 3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE 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 RIPRAP 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.

PIPE OUTLET PROTECTION



DIA.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL PIPE COVER	HEADWALL BOTTOM WIDTH
15"	6'-0"	4'-3"	1'-7"	1'-6"
18"	7'-0"	4'-6"	1'-10"	1'-6"
24"	9'-0"	5'-0"	2'-4"	1'-6"
30"	11'-0"	5'-6"	2'-10"	1'-6"
36"	13'-0"	6'-0"	3'-4"	1'-6"
42"	15'-0"	6'-6"	4'-1"	1'-9"
48"	17'-0"	7'-3"	4'-7"	2'-10"

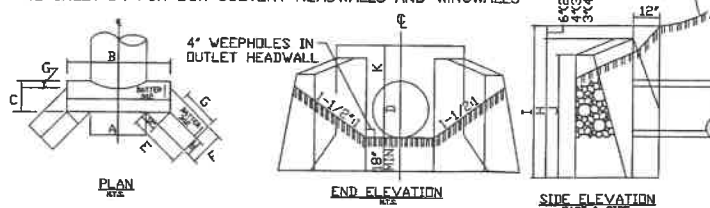
- NOTE:
1. ALL DIMENSIONS GIVEN IN FEET AND INCHES EXCEPT PIPE DIAMETER.
 2. PROVIDE BELL END AT INLET HEADWALL, AND SPIGOT END AT OUTLET END HEADWALL.
 3. RIP-RAP SHALL BE SIZED TO RESIST THE TRACTIVE VELOCITY FORCES.



MORTAR RUBBLE, MASONRY HEADWALL DETAIL

NOT TO SCALE

SEE SHEET D4 FOR BOX CULVERT HEADWALLS AND WINGWALLS



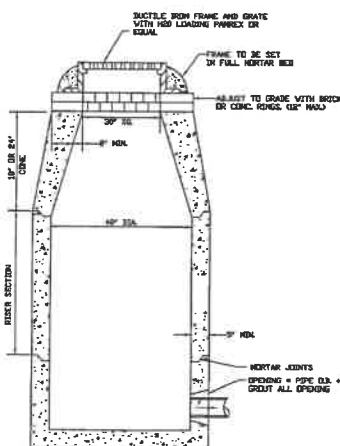
D	A	B	C	E	F	G	H	I	J	K
24"	2'-4"	5'-4"	2'-3"	2'-11"	1'-11"	0'-6"	5'-0"	4'-6"	3'-10"	1'-6"
30"	3'-1"	7'-11"	2'-5"	3'-6"	2'-0"	0'-5"	5'-6"	5'-0"	4'-1"	1'-6"
36"	3'-8"	6'-6"	2'-6"	4'-1"	2'-1"	0'-4"	6'-0"	5'-6"	4'-4"	1'-6"
42"	4'-3"	7'-1"	2'-8"	5'-0"	2'-2"	0'-3"	6'-9"	6'-3"	4'-10"	1'-9"
48"	4'-10"	7'-8"	2'-10"	5'-8"	2'-3"	0'-2"	7'-3"	6'-9"	5'-1"	1'-9"

MORTAR RUBBLE, MASONRY HEADWALL W/ 45° WINGWALLS

NOT TO SCALE

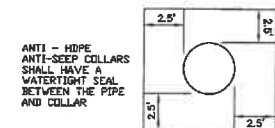
TABLE 7-24-RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 0.50 FEET	FEET	INCHES
d50 SIZE=	0.50	6
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	FROM	TO
100%	9	12
85%	8	11
50%	6	9
15%	2	3

TABLE 7-24-RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 0.75 FEET	FEET	INCHES
d50 SIZE=	0.75	9
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	FROM	TO
100%	14	18
85%	12	16
50%	9	14
15%	3	5



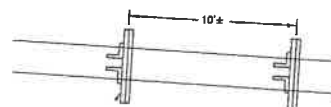
PRECAST DRAIN MANHOLE

NOT TO SCALE



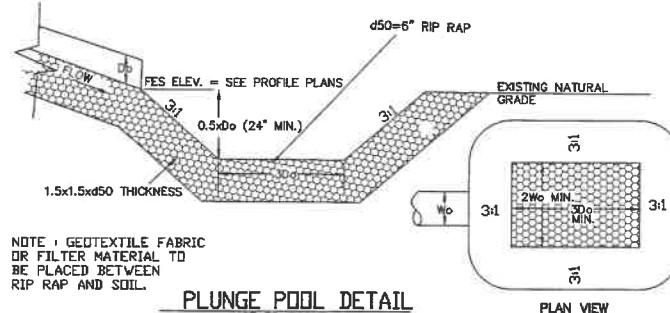
ANTI-SEEP COLLAR DETAIL

NOT TO SCALE



PLUNGE POOL DETAIL

NOT TO SCALE

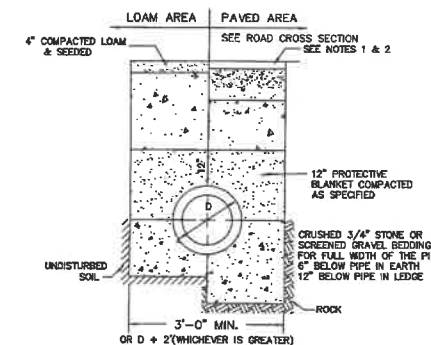


PREPARED FOR:

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DOVER, NH 03820

BEALS ASSOCIATES PLLC

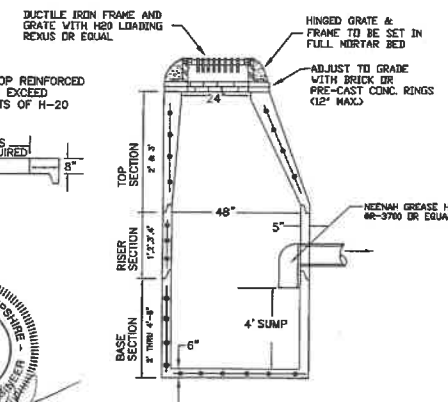
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX: 603-583-4863



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

TYPICAL DRAINAGE TRENCH

NOT TO SCALE



PRECAST CATCH BASIN

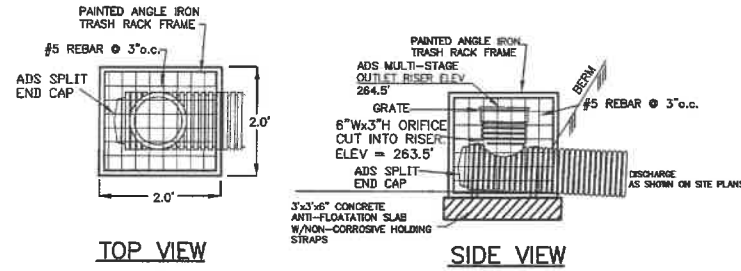
NOT TO SCALE

REVISED PER REVIEW COMMENTS	9/18/17
REVISED PER REVIEW COMMENTS	3/14/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

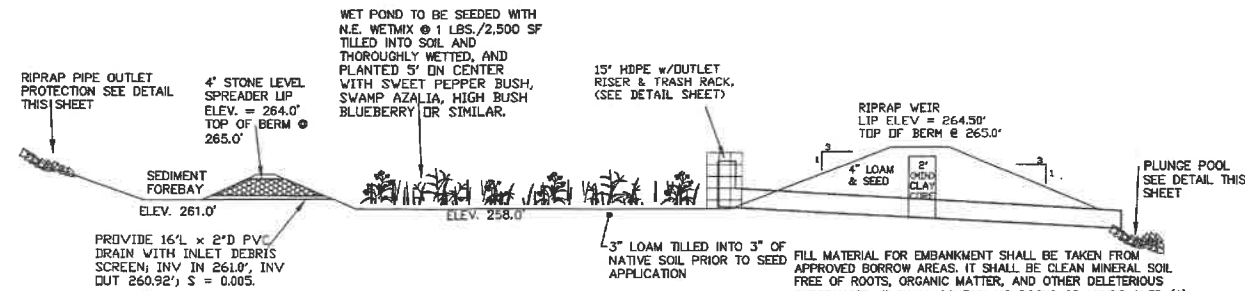
CONSTRUCTION DETAILS D1

BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017	SCALE: NTS
PROJ. NO: NH-860	SHEET NO. 35 OF 38



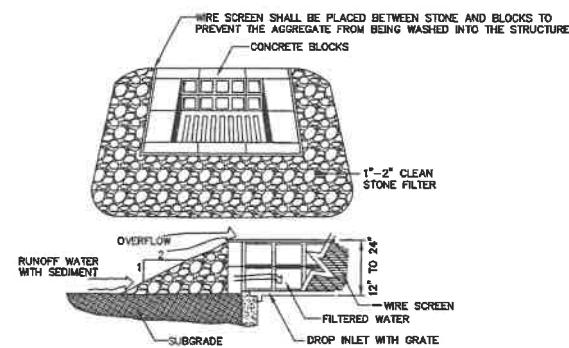
RISER-TRASH RACK DETAIL
NOT TO SCALE



WET POND #1 PROFILE
NTS

PREPARED FOR:
MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

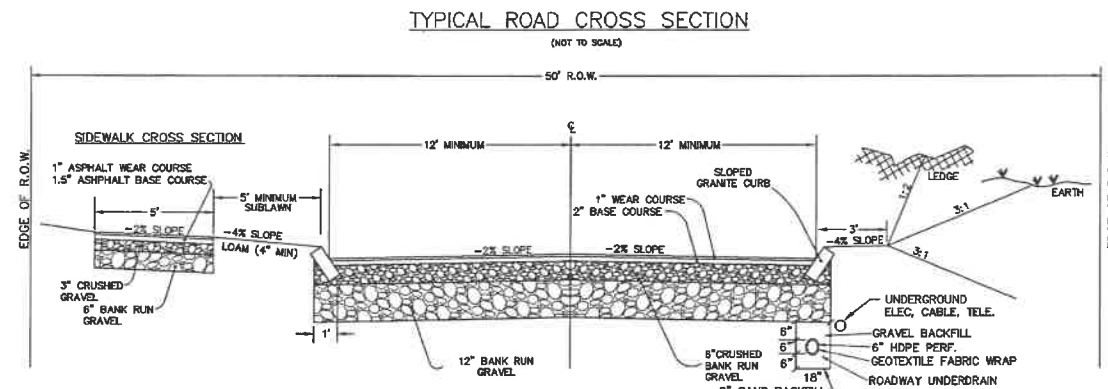
BEALS ASSOCIATES PLLC
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885
PHONE: 603-583-4860, FAX: 603-583-4863



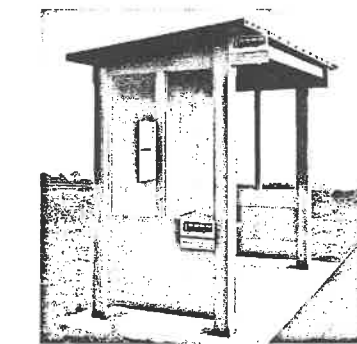
MAINTENANCE NOTE:
1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED IN A SUITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

TEMPORARY CATCH BASIN INLET PROTECTION
(Block and Gravel Drop Inlet Sediment Filter)

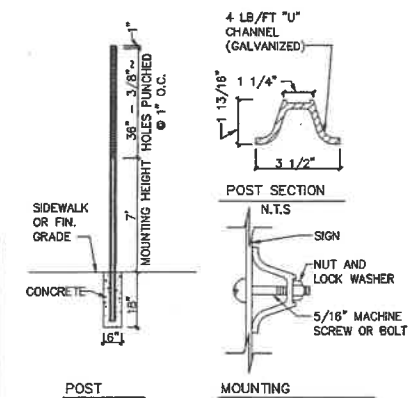
NOT TO SCALE



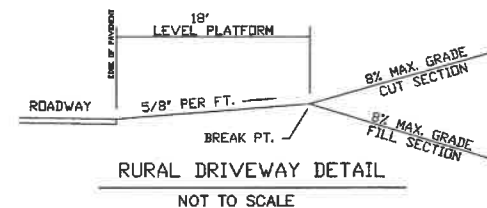
TYPICAL CROSS SECTION
NOT TO SCALE



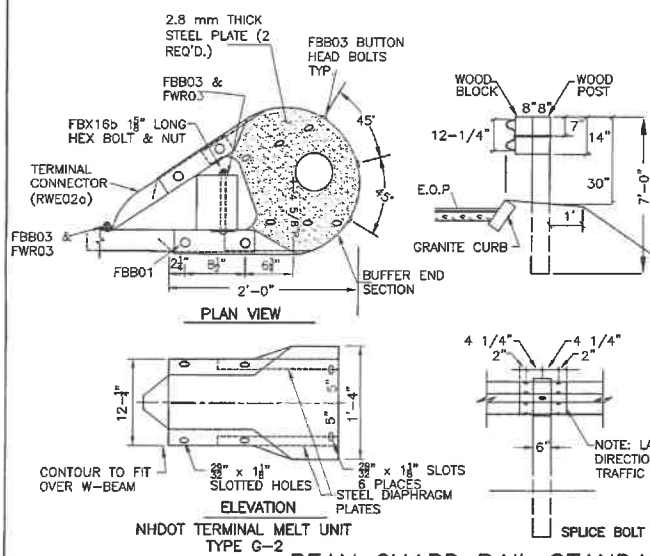
POSSIBLE 4' DEEP BY 8' WIDE BUS SHELTER
N.T.S.



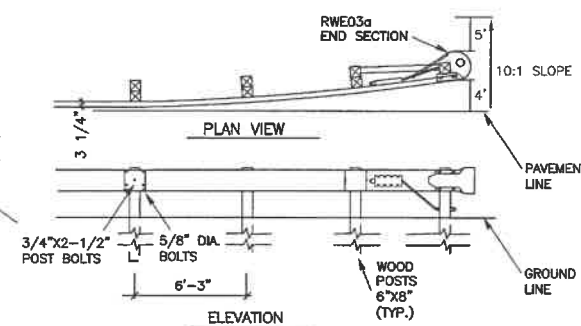
STREET SIGN DETAIL
N.T.S.



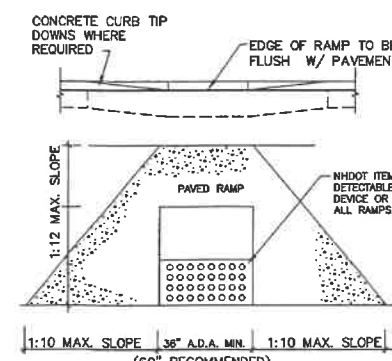
RURAL DRIVEWAY DETAIL
NOT TO SCALE



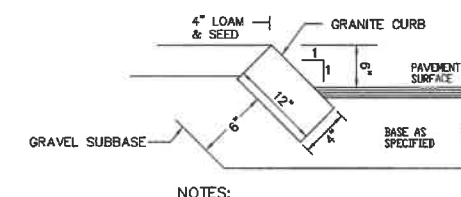
BEAM GUARD RAIL STANDARD SECTION-WOOD POSTS
NOT TO SCALE



NOTES:
1. USE AS DIRECTED IN THE PLANS.
2. STEEL BRACKET TO BE 10 OR 12 GAGE STEEL.
3. USE 6\"/>



SIDEWALK RAMP DETAIL
NOT TO SCALE



NOTES:
1. EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
2. JOINTS BETWEEN STONES SHALL BE MORTARED.
3. SALVAGE GRANITE CURBS ON-SITE AND RESET TO THE EXTENT POSSIBLE.

GRANITE SLOPE CURB DETAIL
NOT TO SCALE

TRAFFIC CONTROL SCHEDULE					
SIGN NUMBER	SIGN	SIZE OF SIGN WIDTH 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	W	30" 30"	BLACK ON YELLOW	CHANNEL	8'-6"
W14-2	NO U-TURN	24" 24"	BLACK ON YELLOW	CHANNEL	7'-0"

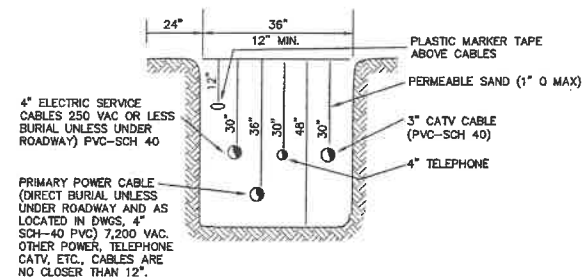
REVISED PER REVIEW COMMENTS	9/18/17
ADD GRANITE CURB DETAIL	5/24/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

CONSTRUCTION DETAILS D2

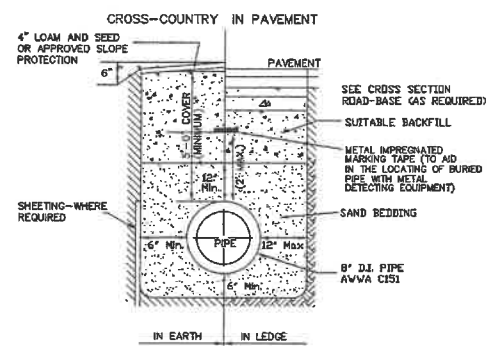
**BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH**

DATE: JAN, 2017	SCALE: NTS
PROJ. NO: NH-860	SHEET NO. 36 OF 38

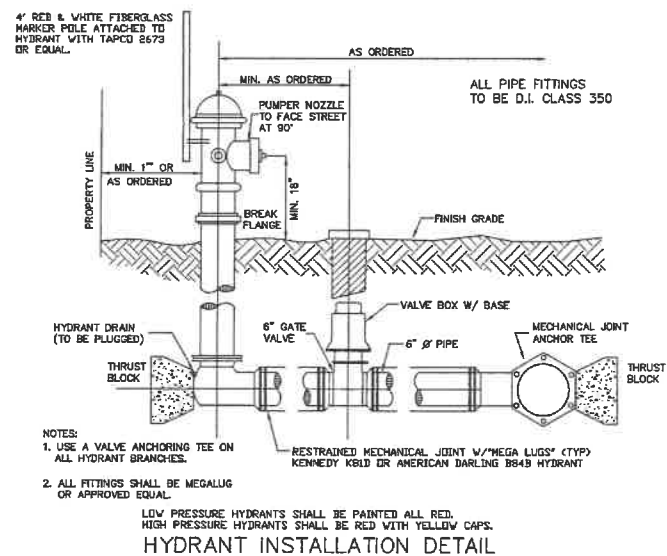
SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT"
TO GREATEST EXTENT POSSIBLE AND LOCATED
AT PROPERTY LINE CORNERS.



UTILITY TRENCH DETAIL

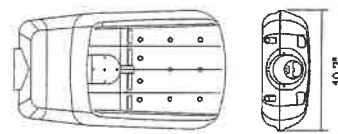


TYPICAL TRENCH DETAIL
FOR WATER SYSTEM




HYDRANT INSTALLATION DETAIL

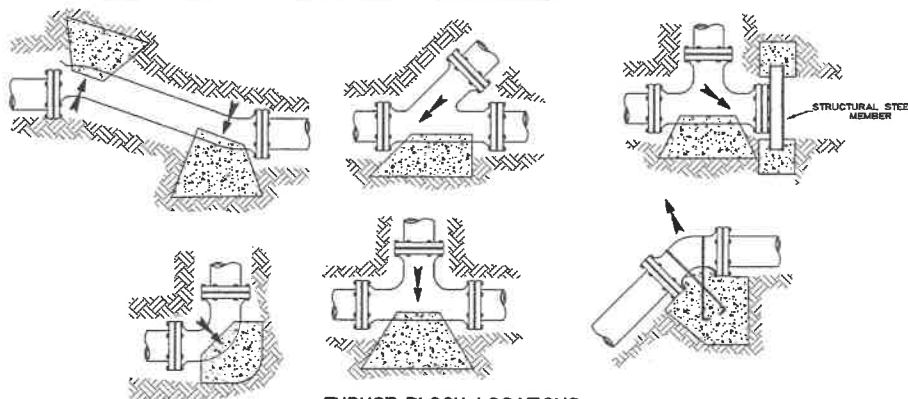
AFFINIT LIGHTING
S800 SERIES ROADWAY LUMINAIRE



Product Specifications

EXAMPLE: 880X-300V-300C-TX-10-30X-M  880D-650V-60K-T2-10-GR-M						
MODEL	POWERR	COLOR	DISTRIBUTION	CONTROL	PSHAW	DRIVER
8800	30W 40V 85W	30K 40K 58K	T2: Type II T3: Type III T6: Type V	10: 0-16V Eliminating	BL: Bronze BL: Black GR: Grey WH: White	It: Monomel
8801	80W 100V	57K 620K				

CHESLEY HILL INTERSECTION STREET LIGHT DETAIL



THRUST BLOCK LOCATIONS

TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

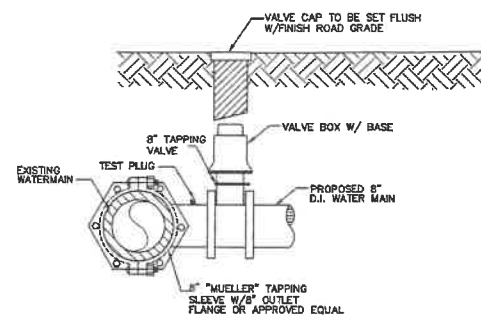
THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING BLOCKS:

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 RESISTING THRUST FORCES WHERE THERE IS NO SPACE OR WHERE SOLE STANDING 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.

THE RODS MAY BE USED BY THEMSELVES OR IN COMBINATION WITH OTHER RESTRAINT DEVICES WHEN THE RODS ARE USED TO RESTRAIN THE JOINTS. WHEN USED TO RESTRAIN THE JOINTS, THE RODS ARE USED TO RESTRAIN THE JOINTS. THE BAND SHALL BE COOKED TO PREVENT SLIPPAGE ALONG THE PIPE BARREL. A BAND PLACED BEHIND A BELL MAY BE USED WITH TWO (2) RODS FOR MECHANICAL JOINT PIPE. THE RODS MAY BE THREADED THROUGH THE BOLT HOLES IN THE BELL AND THE OTHER END OF THE RODS SHALL BE MADE OF OR COATED WITH CORROSION RESISTANT MATERIAL TO PREVENT RUST AND DETEIORATION.

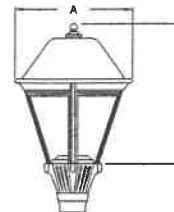
RESTRAINT MAY BE NECESSARY FOR MORE THAN ONE (1) PIPE LENGTH ON EACH SIDE OF ANY CHANGE IN DIRECTION, DEADEND OR TEE.



WATER MAIN TAPPING SLEEVE DETAIL

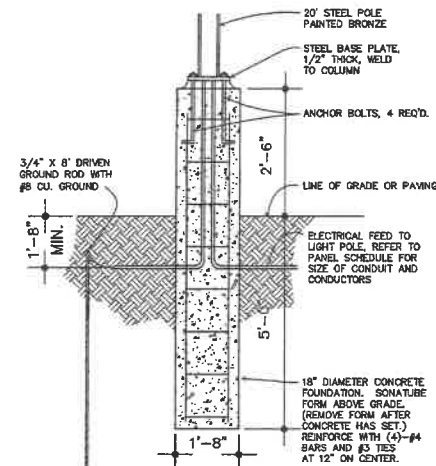
NOT TO SCALE

SUN VALLEY LIGHTING
SIGMA SERIES LED



FIXTURE	A	B
SIG 1	24"	37"
SIG 2	18.5"	28"

INTERIOR STREETS LIGHT DETAIL



POLE FOUNDATION

LIGHT BASE DETAIL
SCALE: NONE

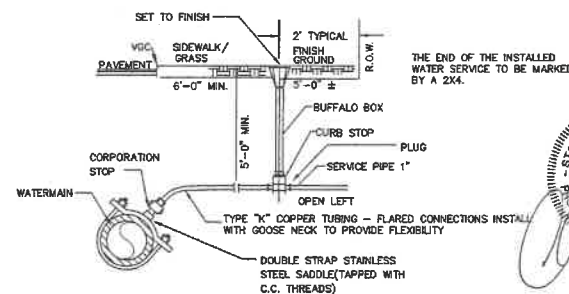
THRUST FORCES ARE CREATED IN A PIPELINE AT CHANGES IN DIRECTION, TEE, DEADENDS OR WHERE CHANGES IN PIPE SIZE OCCUR AT REDUCERS. AVAILABLE RESTRAINT METHODS INCLUDE CONCRETE THRUST BLOCKS, RESTRAINED JOINTSTAND TIE RODS. FORCES TO BE RESTRAINED ARE SHOWN BELOW:

RESULTANT THRUST AT FITTINGS @ 100 PS (TOTAL POUNDS)					
NOM. PIPE CL. (IN.)	DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/2° BEND
4	1810	2252	1385	708	355
6	2715	3378	2077	1062	532
8	3620	4504	2762	1416	710
10	4525	5630	3447	1800	895
12	5430	6756	4132	2160	1080
14	6335	7882	4817	2520	1265
16	7240	9008	5502	2880	1450
18	8145	10134	6187	3240	1635
20	9050	11260	6872	3600	1820
22	9955	12386	7557	3960	2005
24	10860	13512	8242	4320	2190
26	11765	14638	8927	4680	2375
28	12670	15764	9612	5040	2560
30	13575	16890	10297	5400	2745
32	14480	18016	10982	5760	2930
34	15385	19142	11667	6120	3115
36	16290	20268	12352	6480	3300
38	17195	21394	13037	6840	3485
40	18100	22520	13722	7200	3670
42	19005	23646	14407	7560	3855
44	19910	24772	15092	7920	4040
46	20815	25898	15777	8280	4225
48	21720	27024	16462	8640	4410
50	22625	28150	17147	9000	4595
52	23530	29276	17832	9360	4780
54	24435	30402	18517	9720	4965
56	25340	31528	19202	10080	5150
58	26245	32654	19887	10440	5335
60	27150	33780	20572	10800	5520
62	28055	34906	21257	11160	5705
64	28960	36032	21942	11520	5890
66	29865	37158	22627	11880	6075
68	30770	38284	23312	12240	6260
70	31675	39410	24000	12600	6445
72	32580	40536	24685	12960	6630
74	33485	41662	25370	13320	6815
76	34390	42788	26055	13680	7000
78	35295	43914	26740	14040	7185
80	36200	45040	27425	14400	7370
82	37105	46166	28110	14760	7555
84	38010	47292	28795	15120	7740
86	38915	48418	29480	15480	7925
88	39820	49544	30165	15840	8110
90	40725	50670	30850	16200	8295
92	41630	51796	31535	16560	8480
94	42535	52922	32220	16920	8665
96	43440	54048	32905	17280	8850
98	44345	55174	33590	17640	9035
100	45250	56300	34275	18000	9220

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: $19353 \times 125 / 100 = 24191$ LBS.

SOILS BEARING CAPACITY	
SOIL	BEARING LOAD
MUCK	0
POOR CLAY	1000
CLAY	2000
SANDY SILT	3000
SANDY CLAY	4000
CLAY	5000

TO DETERMINE THE SIZE OF A CONCRETE THRUST BLOCK, DIVIDE THE TOTAL LOAD 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 RECORD IS KEPT OF THE DATA BECAUSE OF THE ACCURACY OF THE DATA REPRESENTED DUE TO THE WIDE VARIATION OF BEARING VALUES FOR EACH SOIL TYPE.



TYPICAL WATER SERVICE CONNECTION

MAKRIS R.E. DEVELOPMENT, LLC
11 WENTWORTH TERRACE
DOVER, NH 03820

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, HUMUS, ORGANIC MATERIAL AND BEDDING 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 LEADY MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION.
 - 4) BASE COURSE: IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS 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 LEAD EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
 - 7) FOR CROSS COUNTRY CONSTRUCTION: BACKFILL OR FILL SHALL BE MOUNDING 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 C100 THICKNESS DESIGN OF DUCTILE-IRON PIPE AND WITH ASTM A-536 DUCTILE-IRON CASTINGS
ANSI A21.51/AWWA C151 DUCTILE-IRON PIPE, EXTRUSIONALLY CAST IN TWO MOLDS OR SAND-LEAD MOLDS FOR WATER OR OTHER LIQUIDS
 - 2- JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE JOINTS AND ALL JOINTS SHALL BE PROTECTED BY RUBBER GASKETS
ANSI A21.11/AWWA C111 RUBBER GASKET JOINTS FOR DUCTILE IRON PIPE
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.

REVISED PER REVIEW COMMENTS	5/24/17
REVISED PER REVIEW COMMENTS	4/17/17
REVISED ROAD PER TRG	2/2/17
REVISIONS:	DATE:

UTILITY DETAILS

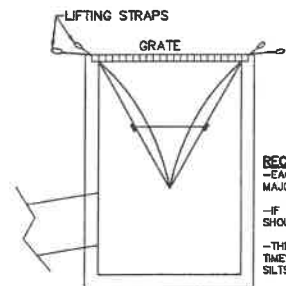
BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017

SCALE: NTS

PROJ. NO: NH-860

SHEET NO. 37 OF 38



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

TEMPORARY EROSION CONTROL MEASURES

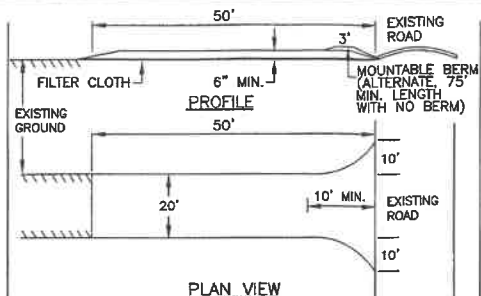
- THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT NO MORE THAN 5 ACRES OF LAND SHALL BE EXPOSED BEFORE DISTURBED AREAS ARE STABILIZED.*
- EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED OR DIRECTED BY THE ENGINEER. ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS.
- 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.
- SILT FENCES AND OTHER EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT GREATER THAN 0.25" DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
- 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.
- AREAS MUST BE SEEDED AND MULCHED IMMEDIATELY UPON FINAL GRADING, PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL. (IMMEDIATELY MEANS AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE NEXT WORK DAY, FOLLOWING THE DAY EARTH DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASED. * 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

- STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
- WHEN HAY BALES ARE USED, THE BALES SHALL BE EMBEDDED AT LEAST 4 INCHES INTO THE SOIL. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18" INTO THE SOIL.
- HAY OR 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.
- SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATED VEGETATIVE BMP.
- STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.
- 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.
- 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.
- THIS PROJECT IS REGULATED UNDER EPA NPDES CONSTRUCTION GENERAL PERMIT. THE CONSTRUCTION SITE OPERATOR AND OWNER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO USEPA, WASHINGTON, DC, STORMWATER NOTICE PROCESSING CENTER AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF WORK ON SITE. EPA WILL POST THE NOI AT <http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm>. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE STATUS".

CONSTRUCTION SEQUENCE

- CUT AND REMOVE TREES IN CONSTRUCTION AREAS AS REQUIRED OR DIRECTED.
- 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.
- 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 IN PHASES AS DIRECTED.
- EXCAVATE AND STOCKPILE TOPSOIL /LOAM. STOCKPILING SHALL NOT TAKE PLACE ON SLOPES GREATER THAN 10%. ALL AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
- CONSTRUCT TEMPORARY CULVERTS AS REQUIRED OR DIRECTED.
- CONSTRUCT THE ROADWAY/DRIVEWAYS AND ITS ASSOCIATED DRAINAGE STRUCTURES. ALL ROADWAYS, PARKING AREAS, AND CUT/FILL SLOPES SHALL BE STABILIZED AND/OR LOAMED AND SEEDED WITHIN 72-HOURS OF ACHIEVING FINISH GRADE AS APPLICABLE.
- INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
- BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED.
- 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.
- INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION
- COMPLETE PERMANENT SEEDING AND LANDSCAPING
- REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE AREAS ARE STABILIZED AND ESTABLISHED THEMSELVES TO NO LESS THAN 85%, AS DETERMINED BY THE CITY OF LACONIA PLANNING DEPARTMENT IN CONJUNCTION WITH THE SITE ENGINEER. NO EROSION CONTROL DEVICES CAN BE REMOVED UNLESS INSPECTED BY THE ENGINEER AND PLANNING DEPARTMENT.
- ALL SWALES AND DRAINAGE STRUCTURES WILL BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.
- FINISH PAVING ALL ROADWAYS/DRIVEWAYS.
- LOT DISTURBANCE OTHER THAN THAT SHOWN ON THE APPROVED PLANS SHALL NOT COMMENCE UNTIL THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.



- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE MIN. 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50-FOOT (3"-6" MOUNTABLE BERM REQUIRED), EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
- THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
- 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.
- 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.
- 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.

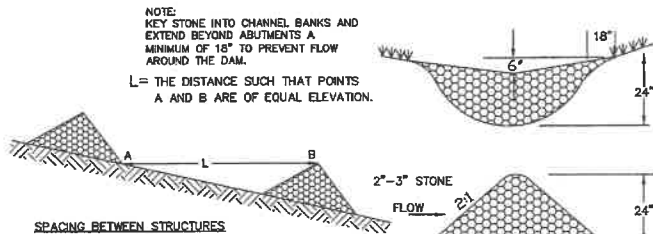
STABILIZED CONSTRUCTION ENTRANCE

WINTER MAINTENANCE

- 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.
- ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH NORTH AMERICAN GREEN 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.
- 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.
- 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

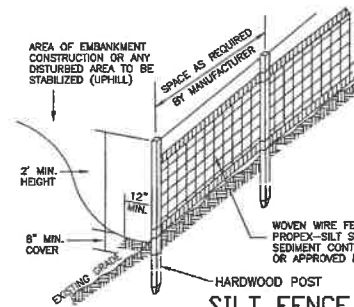
- GRADING AND SHAPING
 - SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEEDBED PREPARATION
 - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 - 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.
- ESTABLISHING A STAND
 - 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.)
 - 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.
 - 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.
- 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.
- MULCH
 - HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
 - 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.
- MAINTENANCE TO ESTABLISH A STAND
 - PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
 - 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.
 - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.



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

- 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.
- 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.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF.
- PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
- 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

- 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.
- 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.
- 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.
- 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 AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	EXCELLENT
	D	FAIR	EXCELLENT	EXCELLENT	EXCELLENT
WATERWAYS, EMERGENCY EROSION AREAS, CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
	C	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
	D	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
LIGHTLY USED PARKING LOTS, ODD AREAS, UNPAVED 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	GOOD
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-PH-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 AREAS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

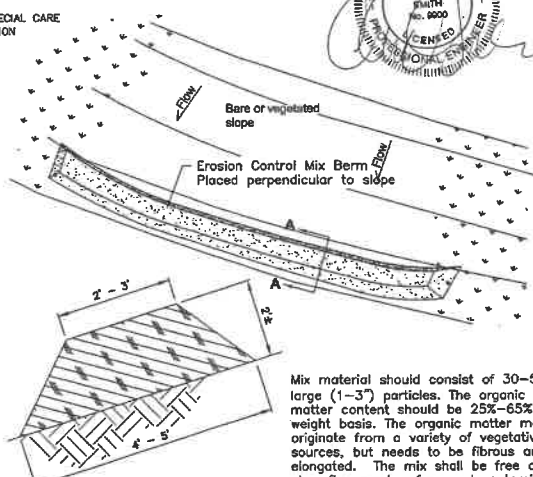
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR DATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCT. 15, IF PERMANENT SEEDING NOT YET COMPLETE.

PREPARED FOR:

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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 ditches, 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
REP. TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.38
CREeping RED FESCUE	10	0.25
CROWN VETCH	15	0.35
FLAT PEA	40	0.75
TOTAL	80	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.

REVISIONS: DATE:

EROSION & SEDIMENTATION

BIRCHWOOD PONDS
RESIDENTIAL DEVELOPMENT
CHESLEY HILL ROAD
ROCHESTER, NH

DATE: JAN, 2017 SCALE: NTS
PROJ. NO: NH-860 SHEET NO. 38 OF 38