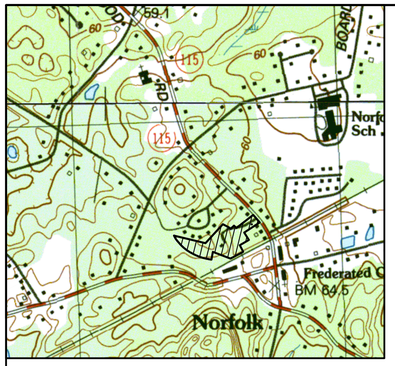
"THE VILLAGE AT NORFOLK"

A RESIDENTIAL DEVELOPMENT IN NORFOLK, MASSACHUSETTS



LOCUS
SCALE: 1" = 1000'

GENERAL NOTES

1. PROPERTY LINE & TOPOGRAPHIC SURVEY REFERENCES:
   A. PROPERTY LINE INFORMATION TAKEN FROM RECORDED PLANS FROM NORFOLK COUNTY REGISTRY OF DEEDS:
      a. PLAN OF LAND OF ERVIN D. WARE NORFOLK, MASS PLAN BK 202 NO. 1338.
      b. PLAN OF LAND IN NORFOLK, MASS DATED AUGUST 17, 1977 "PARCEL A" BY LANDMARK ENGINEERING OF NEW ENGLAND INC.

   B. THE TOPOGRAPHY SHOWN HEREON IS FROM A FIELD SURVEY PERFORMED BY OUTBACK ENGINEERING, INC. IN OCTOBER 2016.

   C. ALL EXISTING UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE ONLY, COMPILED FROM RECORD PLANS WHERE AVAILABLE AND/OR BY FIELD SURVEY OF DIGSAFE MARKINGS AS PERFORMED BY OUTBACK ENGINEERING. ALL EXISTING UTILITIES MAY NOT BE SHOWN, AND CONTRACTOR MUST VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION. CONTRACTORS SHALL NOTIFY DIGSAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO THE ONSET OF ANY CONSTRUCTION TO HAVE ALL EXISTING UTILITIES LOCATED AND CLEARLY MARKED.

   D. DRAINAGE INFORMATION TAKEN FROM "DRAINAGE DIAGRAM FOR EC NORFOLK BUSINESS DISTRICT" PREPARED BY COLER & COLANTONIO, INC. DATED 2/2/2010. (REFER TO "STORMWATER DRAINAGE ANALYSIS DOWNTOWN DEVELOPMENT DISTRICT NORFOLK, MASSACHUSETTS" PREPARED BY COLER & COLANTONIO, INC. DATED DECEMBER 2009.)

   E. ABUTTING SEPTIC INFORMATION TAKEN FROM RECORD PLANS AND IS APPROXIMATE ONLY.

   F. VERTICAL ELEVATIONS ARE BASED ON NAVD88. HORIZONTAL DATUM IS BASED ON NAD83.

3. THE LAND SHOWN HEREON FALLS WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR NORFOLK COUNTY, MA. (MAP NUMBER 25021C0322E, WITH AN EFFECTIVE DATE OF JULY 17, 2012)

4. SITE IS NOT LOCATED WITHIN A ZONE II OR IWPA GROUNDWATER RESOURCE PROTECTION AREA. SITE IS NOT LOCATED WITHIN A ZONE A, B, OR C SURFACE WATER PROTECTION AREA.

5. THE SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM (NHESP) PRIORITY HABITAT OF RARE SPECIES OR WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE AS DESIGNATED USING THE LATEST ON-LINE GIS MAPPING INFORMATION.

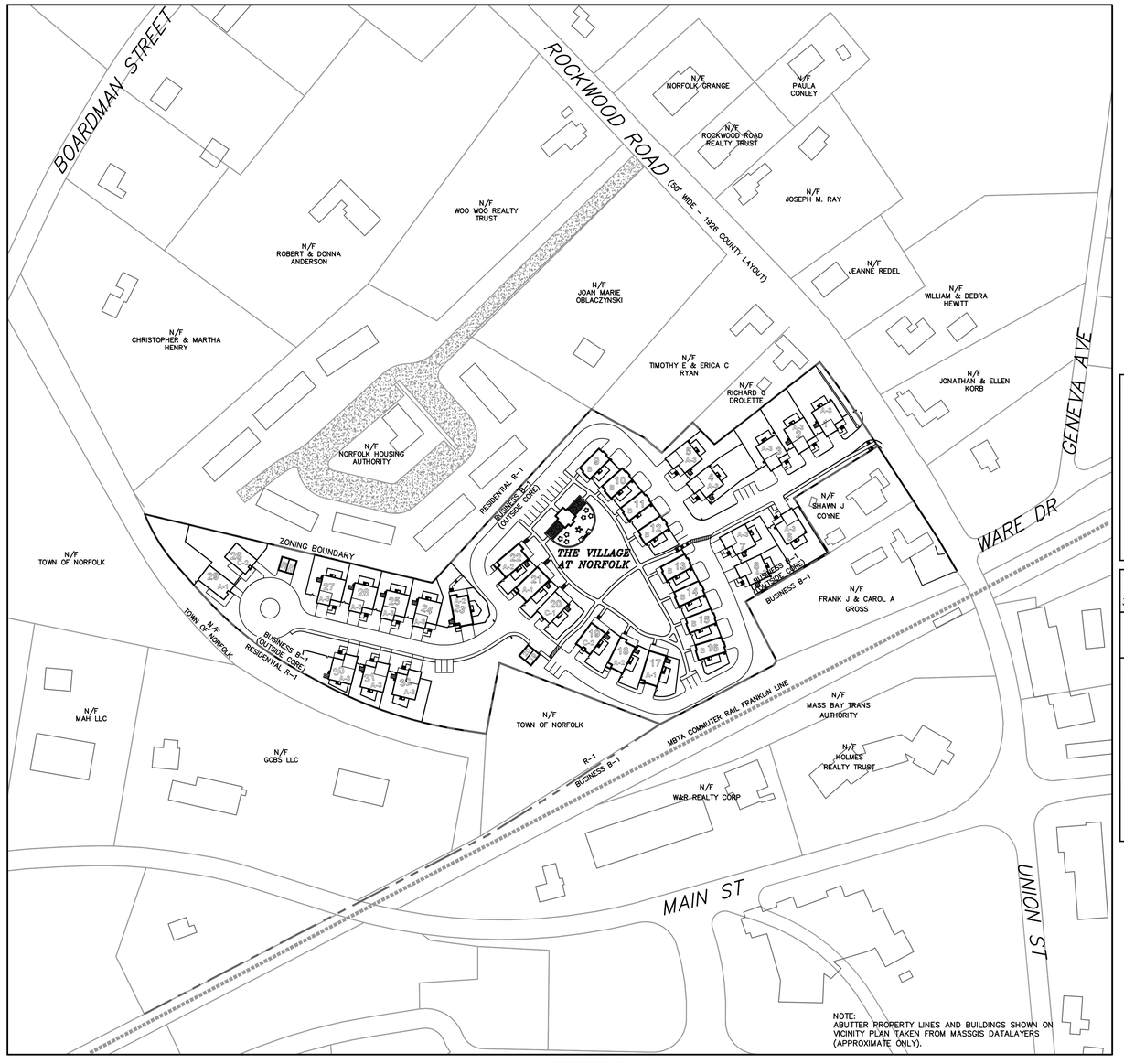
6. THE SITE IS NOT LOCATED WITHIN AN AREA OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.).

7. NO KNOWN PUBLIC OR COMMUNITY WATER SUPPLY WELLS ARE WITHIN 1000' OF THE SUBJECT PROPERTY.

8. SITE HAS TOWN WATER, ELECTRIC, CABLE & GAS SERVICE AVAILABLE IN ROCKWOOD ROAD

LEGEND

	EXISTING	PROPOSED
SPOT ELEVATION	100x0	100x0
MAJOR CONTOUR	80	80
MINOR CONTOUR	82	82
STOCKADE FENCE		
WATER	W	W
WATER GATE	WV	WV
HYDRANT		
GAS	G	G
GAS GATE	GV	GV
SEWER	S	S
SEWER MANHOLE	S	S
DRAIN	D	D
DRAIN MANHOLE	D	D
ELECTRIC	E	E
TELEPHONE	T	T
CABLE	C	C
ELEC/TEL/CABLE		ETC
CATCH BASIN		
UTILITY POLE		
ZONING BOUNDARY		
SILTFENCE		
TEST PITS	TP-6	



NOTE:
ABUTTER PROPERTY LINES AND BUILDINGS SHOWN ON VICINITY PLAN TAKEN FROM MASSGIS DATALAYERS (APPROXIMATE ONLY).

VICINITY PLAN
1"=100'

PROJECT SUMMARY

PROPOSED USE PER MGL Ch. 40B, SECTION 20-23: RESIDENTIAL CONDOS
32 CONDOMINIUM UNITS:
(10 X 2-BEDROOMS) + (22 X 3-BEDROOMS) = 86 BEDROOMS

TOTAL PARCEL AREA = 285,697. (6.56 AC)
CONTIGUOUS UPLAND AREA = 285,697 S.F. (6.56 AC.)
TOTAL FOOTPRINT AREA OF BLDGS* = 38,458 S.F.
*INCLUDES UNITS AND GARAGES
TOTAL BUILDING COVERAGE = 38,458 S.F./285,697 S.F. = 13.5%
TOTAL PAVEMENT AREA** = 72,670 S.F.
**INCLUDES DRIVEWAYS, SIDEWALKS AND WALKWAYS
TOTAL PAVEMENT COVERAGE = 72,670 S.F./285697 S.F.= 25.4%
TOTAL IMPERVIOUS AREA = 111,128 S.F.
TOTAL IMPERVIOUS COVERAGE = 111,128 S.F./285,697 S.F. = 38.9%
TOTAL LANDSCAPE/NATURAL AREA = 174,569 S.F.
TOTAL LANDSCAPE/NAT COVERAGE = 174,569 S.F./285,697 S.F.= 61.1%

WATER DEMAND ESTIMATE (PER ENV. PARTNERS GROUP)

32 RESIDENTIAL UNITS X 154 GPD/SERVICE =4,928 GPD (AVG. DAILY DEMAND)

SEWAGE DESIGN FLOW PER TITLE 5

32 UNITS (10 X 2-BEDROOMS & 22 X 3-BEDROOMS) = 86 BEDROOMS
86 BEDROOMS X 110 GPD/BEDROOM = 9,460 GPD PER TITLE V

PARKING SUMMARY

PARKING REQUIREMENTS PER ZONING BY-LAW:
1.5 SPACES PER DWELLING UNIT, OTHER THAN A SINGLE FAMILY DWELLING
SPACE SIZE: 9'W X 19'L

FOR PROPOSED USE WITH: 10 CONDOMINIUM UNITS (2 BEDROOMS EACH),
22 CONDOMINIUM UNITS (3 BEDROOMS EACH)
TOTAL PARKING REQUIRED = 32 UNITS X 1.5 SPACES/UNIT = 48 SPACES

TOTAL PARKING SPACES PROVIDED = 149 AS FOLLOWS:

60 GARAGE SPACES IN UNITS
4 GARAGE SPACES (DETACHED)
25 GENERAL SPACES (9' X 18' MIN.)
60 DRIVEWAY SPACES (9' X 18' MIN.)

THIS PROJECT IS TO BE PERMITTED PER A COMPREHENSIVE PERMIT UNDER M.G.L CH. 40B.

INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	LAYOUT PLAN
4	UTILITY PLAN
5	GRADING AND DRAINAGE PLAN
6-10	DETAIL SHEETS

ZONING INFORMATION

BUSINESS (B-1) DISTRICT (OUTSIDE CORE)

	REQUIRED	PROVIDED
LOT AREA	30,000 S.F.	285,697 S.F.
LOT FRONTAGE	100 FEET	156.19 FEET
FRONTYARD SETBACK	25 FEET	20± FEET
SIDEYARD SETBACK	0 FEET	9± FEET
REARYARD SETBACK	10 FEET	10± FEET
BUILDING HEIGHT	40 FEET	40 FEET
MAX. LOT COVERAGE	60 %	38.9%

FOR REGISTRY USE ONLY

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

DATE PROFESSIONAL LAND SURVEYOR

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COMPREHENSIVE PERMIT PER ZONING BOARD OF APPEALS DECISION, AS AUTHORIZED BY CHAPTER 40B OF THE MASSACHUSETTS GENERAL LAWS, SECTION 20-23

DATE:

NORFOLK ZONING BOARD

I CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE ZONING BOARD APPROVAL, AND THAT NO APPEAL HAS BEEN FILED AT THIS OFFICE.

TOWN CLERK - TOWN OF NORFOLK

REVISIONS

NO.	DATE	DESCRIPTION
1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS

PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
NORFOLK, MA 02056
ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

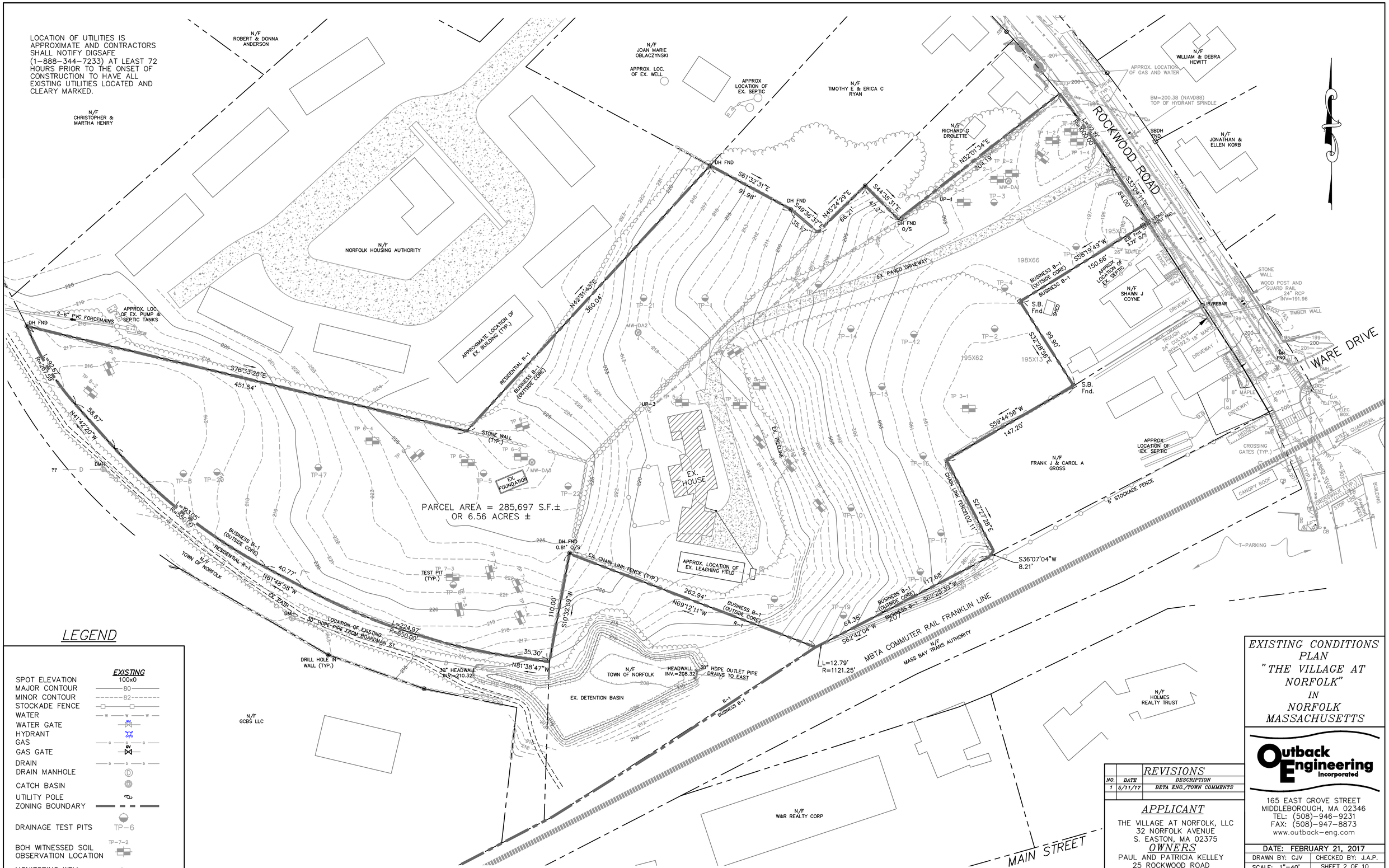
SITE PLANS
FOR
COMPREHENSIVE
PERMIT
"THE VILLAGE AT
NORFOLK"
IN
NORFOLK
MASSACHUSETTS

Outback Engineering Incorporated
165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: JAP
SCALE: 1"=100' | SHEET 1 OF 10
0' 100' 200' 300'

OE-3012

LOCATION OF UTILITIES IS APPROXIMATE AND CONTRACTORS SHALL NOTIFY DIGSAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO THE ONSET OF CONSTRUCTION TO HAVE ALL EXISTING UTILITIES LOCATED AND CLEARY MARKED.



LEGEND

	EXISTING
SPOT ELEVATION	100x0
MAJOR CONTOUR	80
MINOR CONTOUR	82
STOCKADE FENCE	
WATER	W
WATER GATE	WG
HYDRANT	
GAS	G
GAS GATE	GV
DRAIN	D
DRAIN MANHOLE	D
CATCH BASIN	CB
UTILITY POLE	
ZONING BOUNDARY	
DRAINAGE TEST PITS	TP-6
BOH WITNESSED SOIL OBSERVATION LOCATION	TP-7-2
MONITORING WELL	MW-DA2

NOTE:
ABUTTER PROPERTY LINES AND BUILDINGS SHOWN ON VICINITY PLAN TAKEN FROM MASSGIS DATALAYERS (APPROXIMATE ONLY).

EXISTING CONDITIONS PLAN "THE VILLAGE AT NORFOLK" IN NORFOLK MASSACHUSETTS

REVISIONS

NO.	DATE	DESCRIPTION
1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

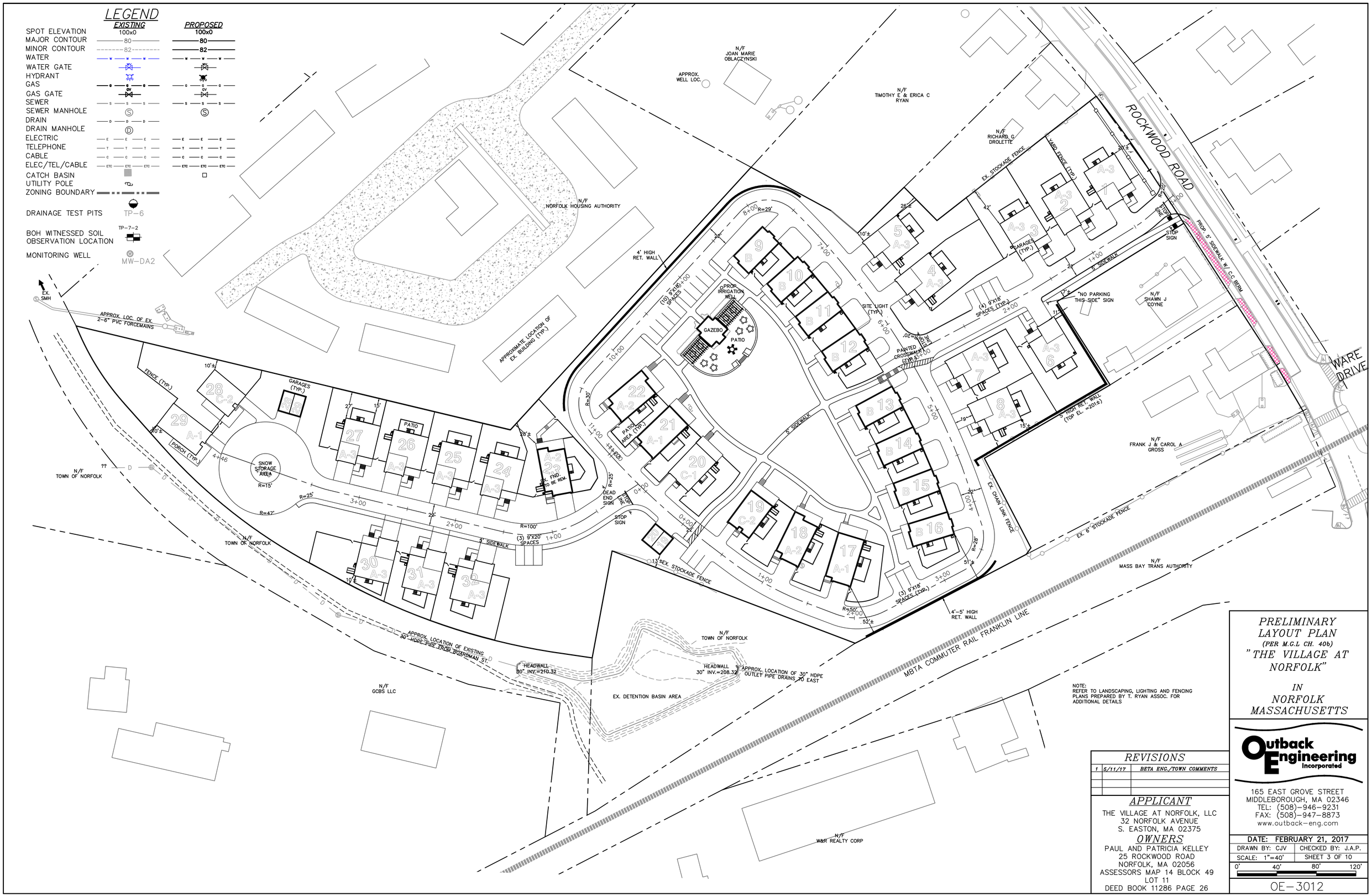
OWNERS

PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
NORFOLK, MA 02056
ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

Outback Engineering Incorporated
165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: J.A.P.
SCALE: 1"=40' | SHEET 2 OF 10
0' 40' 80' 120'

OE-3012



NOTE:
REFER TO LANDSCAPING, LIGHTING AND FENCING PLANS PREPARED BY T. RYAN ASSOC. FOR ADDITIONAL DETAILS

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS

PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
NORFOLK, MA 02056
ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

PRELIMINARY LAYOUT PLAN

(PER M.G.L CH. 40b)

"THE VILLAGE AT NORFOLK"

IN NORFOLK MASSACHUSETTS

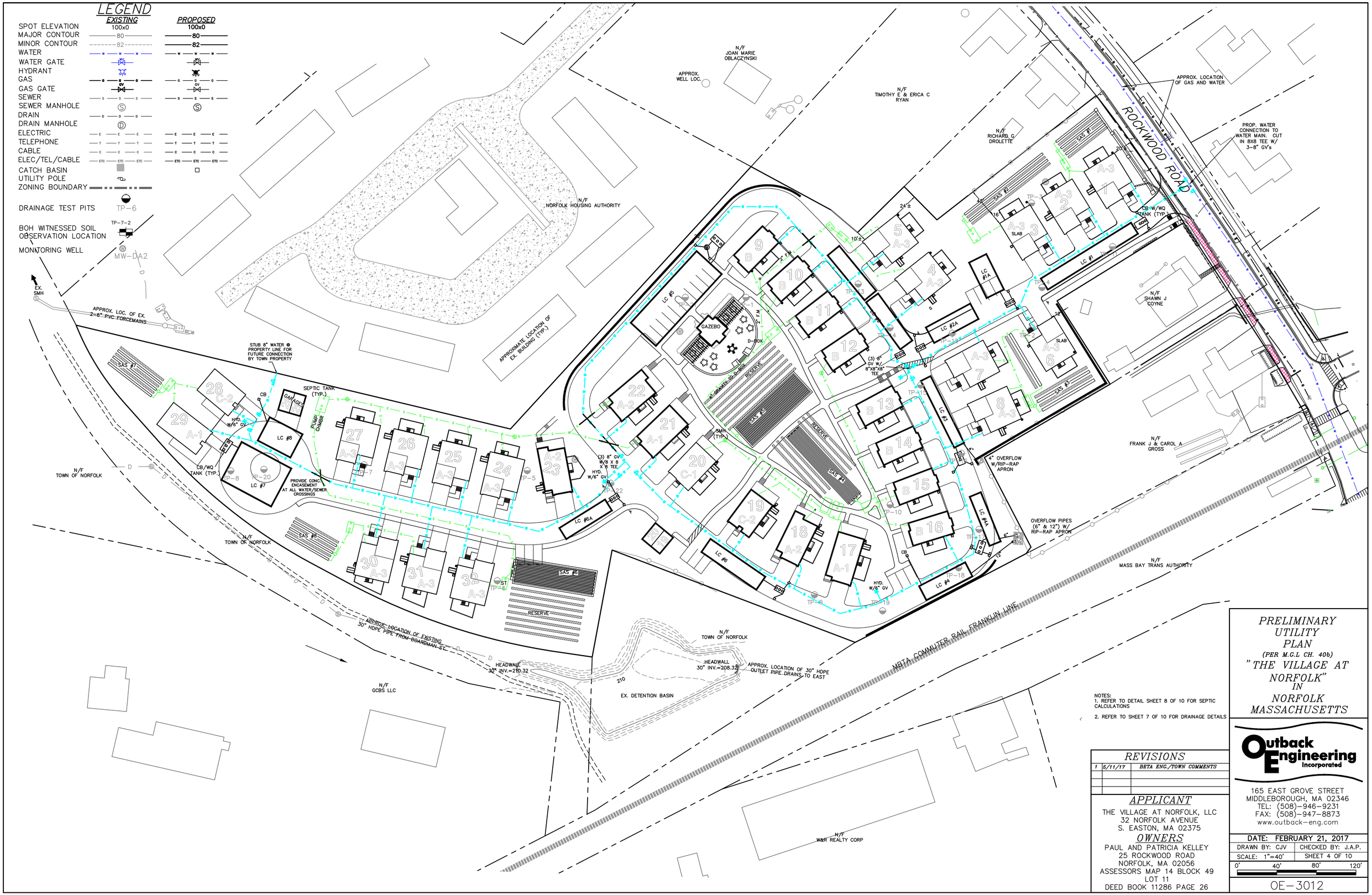
Outback Engineering Incorporated
165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: FEBRUARY 21, 2017

DRAWN BY: CJV	CHECKED BY: J.A.P.
SCALE: 1"=40'	SHEET 3 OF 10

0' 40' 80' 120'

OE-3012



NOTES:
1. REFER TO DETAIL SHEET 8 OF 10 FOR SEPTIC CALCULATIONS
2. REFER TO SHEET 7 OF 10 FOR DRAINAGE DETAILS

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS

PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
NORFOLK, MA 02056
ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

PRELIMINARY UTILITY PLAN

(PER M.G.L CH. 40b)

"THE VILLAGE AT NORFOLK"
IN
NORFOLK
MASSACHUSETTS

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TEL: (508)-946-9231
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DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: J.A.P.
SCALE: 1"=40' | SHEET 4 OF 10
0' 40' 80' 120'

OE-3012

LEGEND

EXISTING	PROPOSED 100x0
80	80
82	82
W W W	W W W
G G G	G G G
GV	GV
S S S	S S S
S	S
D D D	D D D
D	D
E E E	E E E
T T T	T T T
C C C	C C C
ETC ETC ETC	ETC ETC ETC

TP-1 DRAINAGE TP'S

SEPTIC TP'S W/PERCS (WITNESSED)

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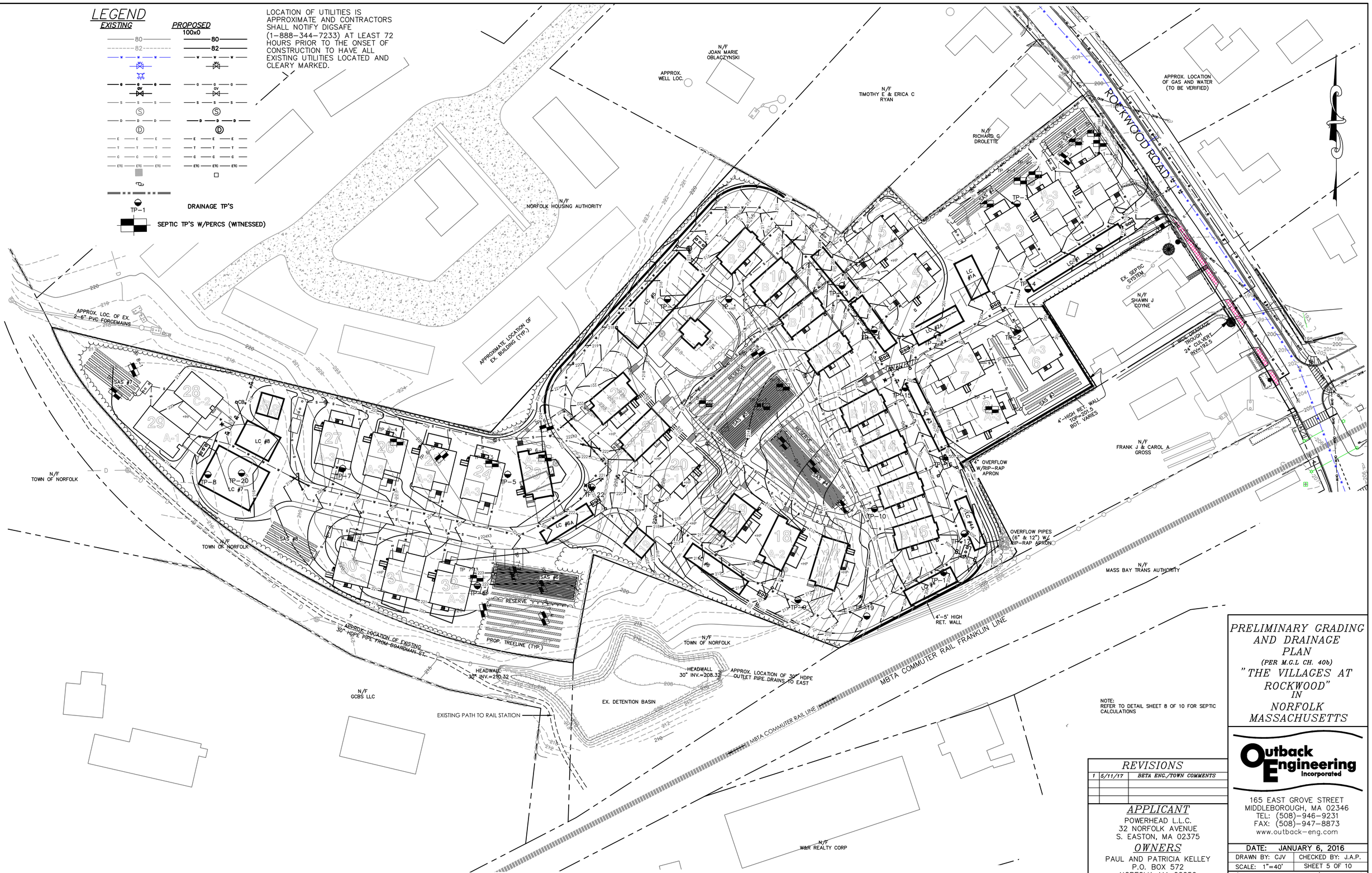


NOTE:
REFER TO DETAIL SHEET 8 OF 10 FOR SEPTIC CALCULATIONS

PRELIMINARY GRADING AND DRAINAGE PLAN

(PER M.G.L CH. 40b)

"THE VILLAGES AT ROCKWOOD"

IN

NORFOLK

MASSACHUSETTS

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

POWERHEAD L.L.C.
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS

PAUL AND PATRICIA KELLEY
P.O. BOX 572
NORFOLK, MA 02056

ASSESSORS MAP 14 BLOCK 49
LOT 11 (25 ROCKWOOD ROAD)
DEED BOOK 11286 PAGE 26

Outback Engineering Incorporated

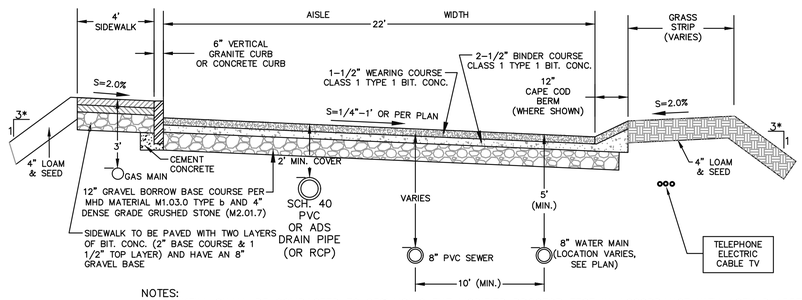
165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: JANUARY 6, 2016

DRAWN BY: CJV	CHECKED BY: J.A.P.
SCALE: 1"=40'	SHEET 5 OF 10

0' 40' 80' 120'

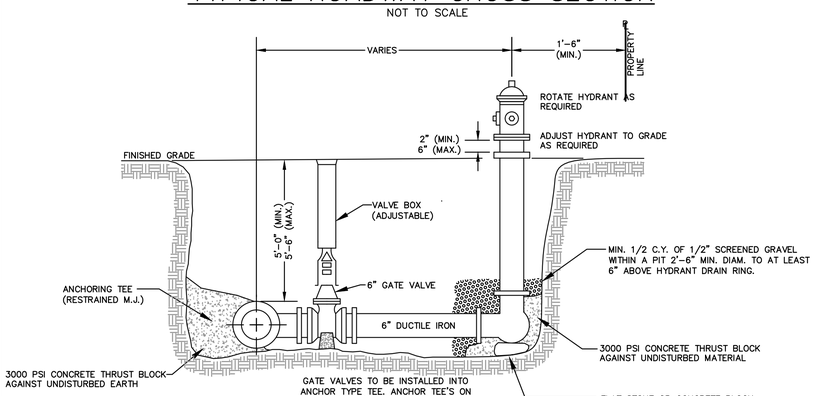
OE-3012



NOTES:
1. BACKFILL SHALL BE COMPACTED TO 95% USING THE MODIFIED PROCTOR TEST IN ACCORDANCE WITH ASTM D 1557-67T, METHOD D
2. WATER MAIN INSTALLATION SHALL CONFORM TO THE TOWNS GUIDELINES AND SPECIFICATIONS FOR A FIRE PROTECTION DISTRIBUTION SYSTEM(FPDS) LATEST EDITION

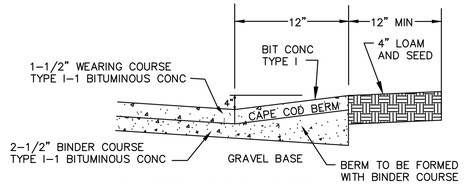
TYPICAL ROADWAY CROSS SECTION

NOT TO SCALE



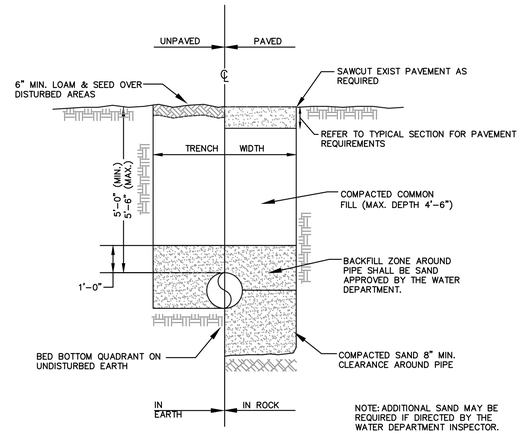
TYPICAL HYDRANT & VALVE

NOT TO SCALE



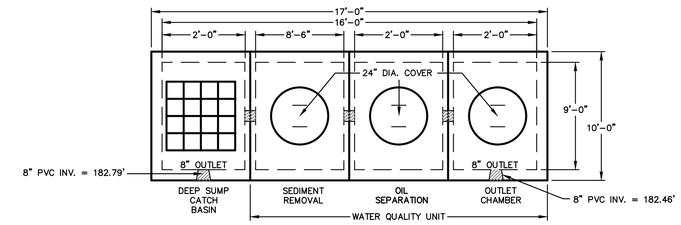
CAPE COD BERM

NOT TO SCALE

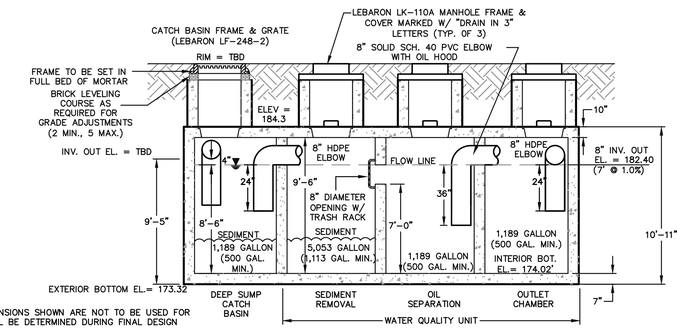


WATER TRENCH

NOT TO SCALE



ALL FRAMES AND GRATES SHALL BE GASKETED AND WATERTIGHT
TANK SHALL BE INSTALLED, WATERPROOFED, AND BACKFILLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.



NOTE: ELEVATIONS AND DIMENSIONS SHOWN ARE NOT TO BE USED FOR CONSTRUCTION, AND SHALL BE DETERMINED DURING FINAL DESIGN

TYPICAL CATCH BASIN/WATER QUALITY TANK

NOT TO SCALE

(SCITUATE RAY PRECAST 9,000 GALLON 9' X 16' H20 TANK [MODIFIED AS SHOWN], OR EQUIVALENT)

REVISIONS		
1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT
THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS
PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
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ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

DETAILS SHEET FOR "THE VILLAGE AT NORFOLK"

IN NORFOLK MASSACHUSETTS

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TEL: (508)-946-9231
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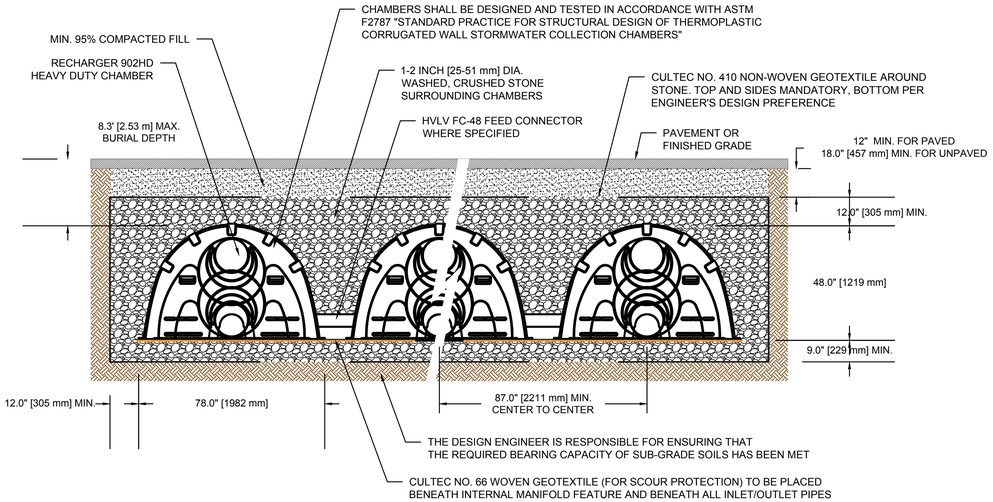
DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: J.A.P.
SCALE: NTS | SHEET 6 OF 10

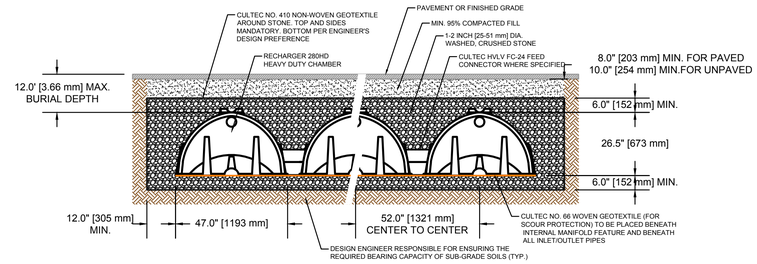
OE-3012



GENERAL NOTES
RECHARGER 902HD BY CULTEC, INC. OF BROOKFIELD, CT.
THE CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. ALL RECHARGER 902HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. CALL CULTEC, INC. AT (800) 428-5832 TO ARRANGE A PRE-CONSTRUCTION MEETING. USE RECHARGER 902HD HEAVY DUTY FOR TRAFFIC APPLICATIONS.

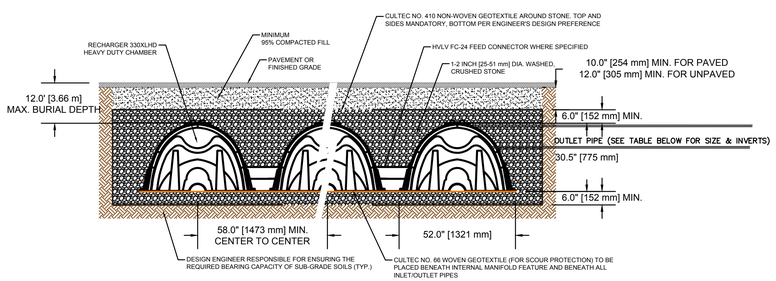
TYPICAL CULTEC RECHARGER 902HD CHAMBER BED DETAIL



ALL RECHARGER 280HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
ALL RECHARGER 280HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

GENERAL NOTES
RECHARGER 280HD BY CULTEC, INC. OF BROOKFIELD, CT.
STORAGE PROVIDED = 9.21 CF/FT [1.83 m^3/m] PER DESIGN UNIT.
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12' (3.65 m)
THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

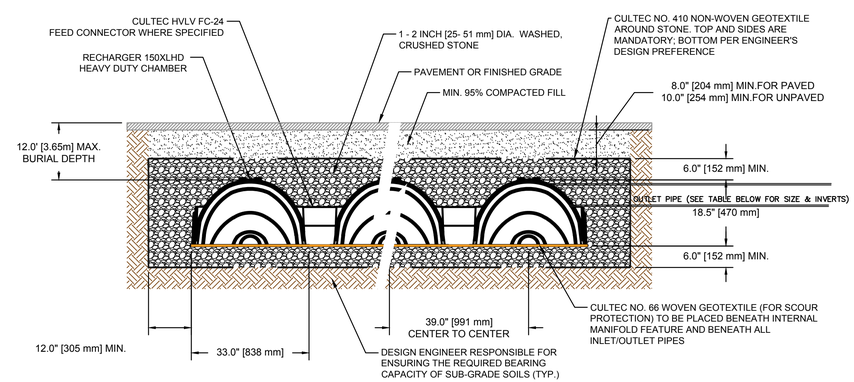
TYPICAL CULTEC RECHARGER 280HD HEAVY DUTY CHAMBER BED DETAIL



GENERAL NOTES
RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT.
STORAGE PROVIDED = 11.32 CF/FT [1.05 m^3/m] PER DESIGN UNIT.
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS

ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS

TYPICAL CULTEC RECHARGER 330XLHD HEAVY DUTY CHAMBER BED DETAIL



GENERAL NOTES
RECHARGER 150XLHD BY CULTEC, INC. OF BROOKFIELD, CT.
STORAGE PROVIDED = 4.89 CF/FT (0.45 m^3/m) PER DESIGN UNIT.
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 '(3.65m).
THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

ALL RECHARGER 150XLHD HEAVY DUTY UNITS ARE MARKED WITH A COLORED STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
ALL RECHARGER 150XLHD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

TYPICAL CULTEC RECHARGER 150XLHD CHAMBER BED DETAIL

LEACHING BED DETAILS

BED #	TYPE	TOTAL # OF CHAMBERS	BOT STONE (EL.)	BOT. CHMBR (EL.)	SIDE STONE (IN.)	END. STONE (IN.)	TOP CHMBR (EL.)	TOP STONE (EL.)	PEAK EL. (100 YR)	FINISH GRADE	GW	OUTLET EL.
LC-1	150XLHD	30 (3 X 10)	192.0	192.75	24	24	194.25	195.29	195.12	196.2-198.3	188.8 (TP-11)	NONE
LC-1A	902HD	18 (2 X 9)	192.5	193.5	36	36	197.5	198.5	198.04	199.5-200.5	189.9 (TP-12)	NONE
LC-2	330XLHD	32 (2) (2 X 8)	194.5	196.5	36	24	199.04	201.04	200.96	202.8-208.1	NONE (TP-13)	NONE
LC-2A	902HD	24 (2 X 12)	192.5	193.5	24	36	197.5	198.5	198.23	200.5-202.0	189.9 (TP-12)	NONE
LC-3	150XLHD	21 (3 X 7)	197.5	198.0	18	18	199.5	200.0	199.97	201.0-203.0	195.5 (TP 16)	4" @ 198.8
LC-4	330XLHD	21 (3 X 7)	199.0	199.75	12	12	202.29	203.29	203.18	204.8-205	196.3 (TP-18)	12" @ 200.90
LC-4A	330XLHD	21 (3 X 7)	196.5	197.0	18	18	199.54	200.04	200.02	201.2-203.0	194.2 (TP-17)	6" @ 198.8
LC-5	330XLHD	78 (6 X 13)	210.0	210.5	36	36	213.04	213.54	213.50	215.0-218.0	NONE (TP-21)	NONE
LC-6	280HD	27 (3 X 9)	210.0	210.5	20	20	212.71	213.21	213.07	214.1-217.0	NONE (TP-9)	NONE
LC-6A	330XLHD	14 (2 X 7)	217.5	218.0	24	24	220.54	221.04	220.84	222.5-223.2	NONE (TP-22)	NONE
LC-7	150XLHD	60 (5 X 12)	211.5	213.0	30	30	214.5	215.5	215.33	216.8-218.3	208.8 (TP-20)	NONE
LC-8	330XLHD	21 (3 X 7)	211.5	212.5	24	24	215.04	216.04	215.77	217.2-218.0	208.8 (TP-20)	NONE

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT
THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
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LOT 11
DEED BOOK 11286 PAGE 26

DETAILS SHEET
FOR
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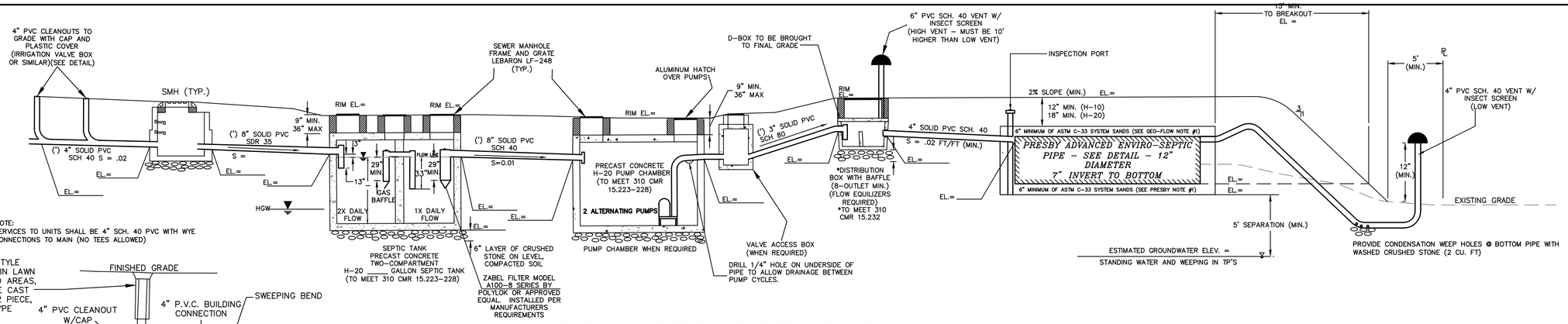
DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: J.A.P.
SCALE: NTS | SHEET 7 OF 10

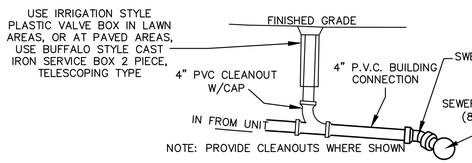
OE-3012



NOTE:
SERVICES TO UNITS SHALL BE 4" SCH. 40 PVC WITH WYE CONNECTIONS TO MAIN (NO TEES ALLOWED)

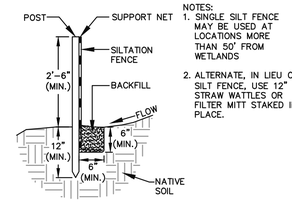
TYPICAL SEPTIC SYSTEM PROFILE

NOT TO SCALE



TYPICAL SEWER CONNECTION W/ CLEANOUT

NOT TO SCALE



NOTES:
1. SINGLE SILT FENCE MAY BE USED AT LOCATIONS MORE THAN 50' FROM WETLANDS
2. ALTERNATE, IN LIEU OF SILT FENCE, USE 12" STRAW WATTLES OR FILTER MITT STAKED IN PLACE.

SILTATION FENCE DETAIL

NOT TO SCALE

DESIGN CALCULATIONS FOR UNITS #1 AND 2:
SYSTEM #1
1.) ESTIMATED DAILY FLOW:
2 UNITS: 6 BEDROOMS X 110 GPD/BEDROOM = 660 GPD
(2-3 BEDROOMS)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FIRST COMPARTMENT = 48 HOUR DETENTION X 660 GPD = 1320 GAL. (MIN)
SECOND COMPARTMENT = 24 HOUR DETENTION X 660 GPD = 660 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 2,500 GAL

3.) 2'D X 2'W TRENCHES REQUIRED: <2 MPI (CLASS I)
660 GPD / 0.74 = 892 S.F. / 6 S.F./L.F. = 149 L.F.
USE (3) 2'D X 2'W X 50'L TRENCHES = 150 L.F.

DESIGN CALCULATIONS FOR UNITS #3:
SYSTEM #2
1.) ESTIMATED DAILY FLOW:
1 UNITS: 2 BEDROOMS X 110 GPD/BEDROOM = 220 GPD
(1-2 BEDROOM)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FIRST COMPARTMENT = 48 HOUR DETENTION X 220 GPD = 440 GAL. (MIN)
SECOND COMPARTMENT = 24 HOUR DETENTION X 220 GPD = 220 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 1,000 GAL

3.) 2'D X 2'W TRENCHES REQUIRED: 43 MPI (CLASS I)
220 GPD / 0.20 = 1110 S.F. / 6 S.F./L.F. = 183 L.F.
USE (2) 2'D X 2'W X 100'L TRENCHES = 200 L.F.

DESIGN CALCULATIONS FOR UNITS #6-8:
SYSTEM #3
1.) ESTIMATED DAILY FLOW:
3 UNITS: 8 BEDROOMS X 110 GPD/BEDROOM = 880 GPD
(2-3 BEDROOM AND 1-2 BEDROOM)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FIRST COMPARTMENT = 48 HOUR DETENTION X 880 GPD = 1760 GAL. (MIN)
SECOND COMPARTMENT = 24 HOUR DETENTION X 660 GPD = 880 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 3,000 GAL

3.) 2'D X 3'W TRENCHES REQUIRED: <2 MPI (CLASS I)
880 GPD / 0.74 = 1190 S.F. / 6.5 S.F./L.F. = 183 L.F.
USE (2) 2'D X 2.5'W X 61'L TRENCHES =183 L.F.

DESIGN CALCULATIONS FOR UNITS 12-16:
SYSTEM #4
1.) ESTIMATED DAILY FLOW:
5 UNITS: 14 BEDROOMS X 110 GPD/BEDROOM = 1,540 GPD
(4-3 BEDROOMS AND 1-2 BEDROOM)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FIRST COMPARTMENT = 48 HOUR DETENTION X 1,540 GPD = 3,080 GAL
SECOND COMPARTMENT = 24 HOUR DETENTION X 1,540 GPD = 1,540 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 5,000 GAL

3.) PRESBY ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:
USE 6 M.P.I. PERCOLATION RATE (CLASS II)
EFFLUENT LOADING RATE = 0.60 GPD/SF
PER TITLE V, AREA REQUIRED= 1,540 GPD / 0.60 GPD/SF = 2,567 S.F.
**USING ADVANCED PRESBY ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: 2,567 S.F. X 0.6 = 1,541 S.F.
USE (1) 92'L X 17'W LEACHING BEDS = 1,564 S.F.

RESERVE: 2,567 S.F REQUIRED
USE LEACHING FIELD TRENCHES
2'D X 2'W TRENCHES = 6 S.F./L.F OF LEACHING AREA
2,567 S.F /6 = 428 L.F OF TRENCHES REQUIRED
USE (6) 2'D X 2'W X 72'L TRENCHES = 432 L.F.

4.) PRESBY ADVANCED ENVIRO-SEPTIC PIPE REQUIREMENTS:
FOR A PERC RATE OF 1-60 MPI:
NEED 100 L.F. OF PRESBY AES SEPTIC PIPE FOR EACH 2 BEDROOMS
100 L.F. PER 2 BEDROOMS X 14 BEDROOMS = 700 LF OF AES PIPE REQ'D.
USE (8) 90' LENGTHS OF PIPE SPACED @ 2' O.C
WITH 1.0' OF SAND ALL AROUND.

DESIGN CALCULATIONS FOR UNITS #4-5, #9-11 & 17-22:
SYSTEM #5
1.) ESTIMATED DAILY FLOW:
9 UNITS: 21 BEDROOMS X 110 GPD/BEDROOM = 2,310 GPD
(3-3 BEDROOMS AND 6-2 BEDROOMS)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FOR UNITS #9-11 (7 BEDROOMS):
FIRST COMPARTMENT = 48 HOUR DETENTION X 770 GPD = 1,440 GAL
SECOND COMPARTMENT = 24 HOUR DETENTION X 770 GPD = 770 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 3,000 GAL
FOR UNITS #17-20 (9 BEDROOMS):
FIRST COMPARTMENT = 48 HOUR DETENTION X 990 GPD = 1,980 GAL
SECOND COMPARTMENT = 24 HOUR DETENTION X 990 GPD = 990 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 3,000 GAL
FOR UNITS #4-5 (5 BEDROOMS):
FIRST COMPARTMENT = 48 HOUR DETENTION X 550 GPD = 1100 GAL
SECOND COMPARTMENT = 24 HOUR DETENTION X 550 GPD = 550 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 2,500 GAL

3.) PRESBY ADVANCED ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:
USE <2 M.P.I. PERCOLATION RATE (CLASS II)
EFFLUENT LOADING RATE = 0.60 GPD/SF
PER TITLE V, AREA REQUIRED= 2,310 GPD / 0.60 GPD/SF = 3,850 SF
**USING PRESBY ADVANCED ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: SF X 0.6 = 2,310 S.F.
(2,310 S.F. MIN. REQUIRED PER PRESBY DESIGN MANUAL)
USE (1) 83' X 28.5' LEACHING BED = 2,502 S.F.

RESERVE: 4,033 S.F REQUIRED
USE LEACHING FIELD TRENCHES
2'D X 2'W TRENCHES = 6 S.F./L.F. OF LEACHING AREA
3,850 S.F./ 6 = 642 L.F OF TRENCHES REQUIRED
USE (7) 2'D X 2'W X 92'L TRENCHES = 644 L.F.

4.) PRESBY ADVANCED ENVIRO-SEPTIC PIPE REQUIREMENTS:
FOR A PERC RATE OF 1-60 MPI:
NEED 100LF OF PRESBY AES SEPTIC PIPE FOR EACH 2 BEDROOMS
100 L.F. PER 2 BEDROOMS X 22 BEDROOMS = 1050 LF OF AES PIPE REQ'D
USE (15) 80' LENGTHS OF PIPE SPACED @ 1.75' O.C
WITH 1.5' OF SAND ALL AROUND

DESIGN CALCULATIONS FOR UNITS #21-27 & #32:
SYSTEM #6
1.) ESTIMATED DAILY FLOW:
8 UNITS: 24 BEDROOMS X 110 GPD/BEDROOM = 2,640 GPD
(8 X 3 BEDROOM)
2.) REQUIRED SEPTIC TANK CAPACITY FOR UNITS #21-27 (24 BEDROOM): (PER TITLE 5)
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):
FIRST COMPARTMENT = 48 HOUR DETENTION X 2640 GPD = 5280 GAL
SECOND COMPARTMENT = 24 HOUR DETENTION X 2640 GPD = 2640 GAL
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 9000 GAL
REQUIRED SEPTIC TANK CAPACITY FOR UNITS #32 (3 BEDROOM): 330 GAL (1500 GAL MIN.)

3.) PRESBY ADVANCED ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:
USE <2 M.P.I. PERCOLATION RATE (CLASS I)
EFFLUENT LOADING RATE = 0.74 GPD/SF
PER TITLE V, AREA REQUIRED= 2640 GPD/ 0.74 GPD/SF = 3568 SF
**USING PRESBY ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: 3,568 SF X 0.6 = 2,141 S.F.
(2,156 S.F. MIN. REQUIRED PER PRESBY DESIGN MANUAL)
USE (1) 83'L X 26.5'W LEACHING BEDS = 2,200 S.F.

RESERVE: 3,568 S.F REQUIRED
USE LEACHING FIELD TRENCHES
2'D X 2'W TRENCHES = 6 S.F./L.F OF LEACHING AREA
3,568 S.F./ 6 = 595 L.F OF TRENCHES REQUIRED
USE (8) 2'D X 2'W X 90'L TRENCHES = 720 L.F.

4.) PRESBY ADVANCED ENVIRO-SEPTIC PIPE REQUIREMENTS:
FOR A PERC RATE OF 1-60 MPI:
NEED 100LF OF PRESBY AES SEPTIC PIPE FOR EACH 2 BEDROOMS
100 L.F. PER 2 BEDROOMS X 24 BEDROOMS = 1200 LF OF AES PIPE REQ'D
USE (21) 75' LENGTHS OF PIPE SPACED @ 1.5' O.C
WITH 1.5' OF SAND ALL AROUND

DESIGN CALCULATIONS FOR UNITS #28-29:
SYSTEM #7
1.) ESTIMATED DAILY FLOW:
2 UNITS: 5 BEDROOMS X 110 GPD/BEDROOM = 550 GPD
(1-3 BEDROOM AND 1-2 BEDROOM)

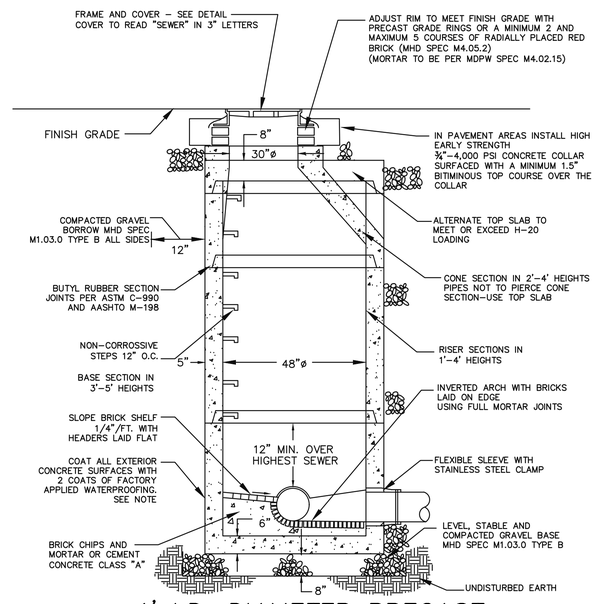
2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
SEPTIC TANK SIZE PROVIDED =1500 GAL

3.) 2'D X 2'W TRENCHES REQUIRED: 15 MPI (CLASS 11)
550 GPD / 0.56 = 982 S.F. / 6 S.F./L.F. = 164 L.F.
USE (3) 2'D X 2'W X 55'L TRENCHES = 165 L.F.

DESIGN CALCULATIONS FOR UNITS #30-31:
SYSTEM #8
1.) ESTIMATED DAILY FLOW:
2 UNITS: 6 BEDROOMS X 110 GPD/BEDROOM = 660 GPD
(2-3 BEDROOM)

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
SEPTIC TANK SIZE PROVIDED =1500 GAL

3.) 2'D X 2'W TRENCHES REQUIRED: (CLASS 11)
660 GPD / 0.74 = 892 S.F. / 6 S.F./L.F. = 149 L.F.
USE (3) 2'D X 2'W X 50'L TRENCHES = 150 L.F.



4' I.D. DIAMETER PRECAST CONCRETE SEWER MANHOLE

N.T.S.

NOTES:
1. EXCAVATION TO ALLOW FOR FREE TRAVEL OF COMPACTION EQIPMENT
2. ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY DETERMINED BY ASTM D1557. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
3. ALL PRECAST TO MEET OR EXCEED ASTM C-478 AND ASSHTO M 199 SPECIFICATIONS
4. REINFORCED STEEL TO MEET OR EXCEED ASTM A185 AND H-20 LOADING REQUIREMENTS
5. ALL PRECAST CONCRETE TO BE 4,000 PSI MIMIMUM AND MEET ASTM C-478 (6.1)

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT
THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
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DEED BOOK 11286 PAGE 26

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DATE: FEBRUARY 21, 2017
DRAWN BY: CJV | CHECKED BY: J.A.P.
SCALE: NTS | SHEET 8 OF 10

OE-3012

T.P.# 1-1

DEPTH		ELEV.
0		196.7
	A HORIZON SANDY LOAM 10 YR 3/2	
8"		196.0
	B HORIZON SANDY LOAM 10 YR 5/6	
19"		195.1
	C LAYER FINE MED. SAND 2.5Y 5/2	
112"	WEEPING	187.4
114"		187.2

PERC. RATE : OBSERVATION HOLE
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 1-2

DEPTH		ELEV.
0		196.4
	A HORIZON SANDY LOAM 10 YR 3/2	
14"		195.2
	B HORIZON SANDY LOAM 10 YR 5/6	
22"		194.6
	C1 LAYER MED. SAND 2.5Y 5/2	
80"		189.7
	C2 LAYER FINE LOAMY SAND 2.5Y 5/2	
108"	NO MOTTLES NO WATER	187.4

PERC. RATE : <2 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 1-3

DEPTH		ELEV.
0		196.2
	A HORIZON SANDY LOAM 10 YR 3/2	
24"		194.2
	B HORIZON SANDY LOAM 10 YR 5/6	
44"		192.5
	C LAYER FINE MED. SAND 2.5Y 5/2	
114"	STANDING WATER	186.7
120"		186.2

PERC. RATE : OBSERVATION HOLE
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 1-4

DEPTH		ELEV.
0		195.4
	A HORIZON SANDY LOAM 10 YR 3/2	
18"		193.9
	B HORIZON SANDY LOAM 10 YR 5/4	
40"		192.1
	C LAYER FINE MED. SAND 2.5Y 5/2	
118"	STANDING WATER	185.6
120"		185.3

PERC. RATE : <2 MPI
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 5-1

DEPTH		ELEV.
0		216.0
	FILL	
36"		213
	C LAYER SANDY LOAM 2.5Y 5/2	
90"	NO MOTTLES NO WATER	208.5

PERC. RATE : <2MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 5-2

DEPTH		ELEV.
0		217.7
	A HORIZON SANDY LOAM 10 YR 3/2	
26"		215.5
	B HORIZON SANDY LOAM 10 YR 5/4	
36"		214.7
	C LAYER MED. COARSE SAND 2.5Y 5/2	
99"	STANDING WATER	209.5
102"		209.2

PERC. RATE : <2 MPI
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 5-3

DEPTH		ELEV.
0		213.0
	A HORIZON SANDY LOAM 10 YR 3/2	
18"		211.5
	B HORIZON SANDY LOAM 10 YR 5/6	
32"		210.3
	C LAYER LOAMY SAND 2.5Y 5/3	
122"	NO MOTTLES NO WATER	202.8

PERC. RATE : 3 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 5-4

DEPTH		ELEV.
0		213.5
	A HORIZON SANDY LOAM 10 YR 3/2	
10"		212.6
	B HORIZON SANDY LOAM 10 YR 5/4	
26"		211.3
	C LAYER LOAMY SAND 2.5Y 5/2	
116"	NO MOTTLES NO WATER	203.8

PERC. RATE : <2 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 2-1

DEPTH		ELEV.
0		198.6
	A HORIZON SANDY LOAM 10 YR 3/2	
10"		197.8
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		196.6
	C1 LAYER MED. SAND 2.5Y 5/2	
58"		193.8
	C2 LAYER FINE SAND 2.5Y 6/2	
68"		192.9
	C3 LAYER SANDY LOAM 2.5Y 5/2	
105"	NO MOTTLES NO WATER	189.9

PERC. RATE : OBSERVATION HOLE
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 2-2

DEPTH		ELEV.
0		198.3
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		197.3
	B HORIZON SANDY LOAM 10 YR 5/6	
22"		196.5
	C1 LAYER COARSE SAND 2.5Y 5/2	
60"		193.3
	C2 LAYER SANDY LOAM 2.5Y 5/2	
120"	NO MOTTLES NO WATER	189.3

PERC. RATE : 23 MPI
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 2-3

DEPTH		ELEV.
0		198.3
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		197.3
	B HORIZON SANDY LOAM 10 YR 5/6	
34"		195.5
	C1 LAYER COARSE SAND 2.5Y 5/2	
40"		195.0
	C2 LAYER FINE SAND 2.5Y 5/2	
50"		194.1
	C3 LAYER MED. SAND 2.5Y 5/2	
70"		192.5
	C4 LAYER SANDY LOAM 2.5Y 5/2	
120"	NO WATER/NO MOTTLES	188.3

PERC. RATE : 43 MPI
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 3-1

DEPTH		ELEV.
0		195.1
	A HORIZON SANDY LOAM 10 YR 3/2	
16"		193.8
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		193.1
28"	MOTTLES	192.8
39"	WEEPING	191.9
	C LAYER COARSE SAND & GRAVEL 2.5Y 4/3	
120"		185.1

PERC. RATE : OBSERVATION HOLE
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 4-1

DEPTH		ELEV.
0		210.6
	A HORIZON SANDY LOAM 10 YR 3/2	
8"		209.9
	B HORIZON SANDY LOAM 10 YR 5/6	
19"		209.0
	C1 LAYER MED. COARSE SAND 2.5Y 5/2	
31"		208.0
	C2 LAYER SANDY LOAM 2.5Y 5/3	
120"	NO MOTTLES NO WATER	200.6

PERC. RATE : 3 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 4-2

DEPTH		ELEV.
0		213.4
	A HORIZON SANDY LOAM 10 YR 3/2	
14"		212.2
	B HORIZON SANDY LOAM 10 YR 5/6	
34"		210.5
	C1 LAYER MED. COARSE SAND 2.5Y 4/3	
108"		204.3
	C2 LAYER LOAMY SAND 2.5Y 5/2	
120"	NO MOTTLES NO WATER	203.3

PERC. RATE : 2 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 4-3

DEPTH		ELEV.
0		215.6
	A HORIZON SANDY LOAM 10 YR 3/2	
8"		214.3
	B HORIZON SANDY LOAM 10 YR 5/6	
30"		212.5
	C LAYER LOAMY SAND 2.5Y 5/3	
132"	NO MOTTLES NO WATER	204.0

PERC. RATE : 6 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 6-1

DEPTH		ELEV.
0		226.4
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		225.4
	B HORIZON SANDY LOAM 10 YR 5/6	
26"		224.2
	C LAYER SANDY LOAM 2.5Y 5/2	
120"	NO MOTTLES NO WATER	216.4

PERC. RATE : 5 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 6-2

DEPTH		ELEV.
0		226.0
	A HORIZON SANDY LOAM 10 YR 3/2	
10"		225.2
	B HORIZON SANDY LOAM 10 YR 5/6	
18"		224.5
	C1 LAYER GRAVEL 2.5Y 4/3	
32"		223.3
	C2 LAYER SANDY LOAM 2.5Y 5/2	
116"	NO MOTTLES NO WATER	216.3

PERC. RATE : 3 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 6-3

DEPTH		ELEV.
0		225.7
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		224.7
	B HORIZON SANDY LOAM 10 YR 5/6	
26"		223.5
	C1 LAYER GRAVEL 2.5Y 4/3	
80"		219.0
	C2 LAYER SANDY LOAM 2.5Y 5/2	
114"	NO MOTTLES NO WATER	216.2

PERC. RATE : <2MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 6-4

DEPTH		ELEV.
0		223.6
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		222.6
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		221.6
	C LAYER SANDY LOAM 2.5Y 5/2	
108"	NO MOTTLES NO WATER	214.6

PERC. RATE : 10 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 6-5

DEPTH		ELEV.
0		225.1
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		224.1
	B HORIZON SANDY LOAM 10 YR 5/6	
22"		223.3
	C1 LAYER GRAVEL 2.5Y 4/3	
34"		222.3
	C2 LAYER SANDY LOAM 2.5Y 5/2	
108"	NO MOTTLES NO WATER	216.1

PERC. RATE : OBSERVATION HOLE
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 7-1

DEPTH		ELEV.
0		220.2
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		219.2
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		218.2
	C LAYER GRAVEL 2.5Y 4/3	
120"	NO MOTTLES NO WATER	210.2

PERC. RATE : <2 MPI
DATE OF TEST : 4/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 7-2

DEPTH		ELEV.
0		220.1
	A HORIZON SANDY LOAM 10 YR 3/2	
10"		219.3
	B HORIZON SANDY LOAM 10 YR 5/6	
25"		218.0
	C LAYER COARSE SAND 2.5Y 4/3	
120"	NO MOTTLES NO WATER	210.1

PERC. RATE : <2 MPI
DATE OF TEST : 4/5/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 7-3

DEPTH		ELEV.
0		222.3
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		221.3
	B HORIZON SANDY LOAM 10 YR 5/6	
26"		220.1
	C1 LAYER SAND & GRAVEL 2.5Y 4/3	
74"		216.1
	C2 LAYER MED SAND 2.5Y 5/2	
116"	NO MOTTLES NO WATER	212.6

PERC. RATE : <2 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 7-4

DEPTH		ELEV.
0		219.4
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		218.4
	B HORIZON SANDY LOAM 10 YR 5/6	
27"		217.2
	C1 LAYER COARSE SAND & GRAVEL 2.5Y 4/3	
77"		213.0
	C2 LAYER MED SAND 2.5Y 5/2	
120"	NO MOTTLES NO WATER	209.4

PERC. RATE : <2 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 7-5

DEPTH		ELEV.
0		220.2
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		219.2
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		218.2
	C1 LAYER COARSE SAND&GRAVEL 2.5Y 4/3	
84"		213.2
	C2 LAYER MED SAND 2.5Y 4/3	
120"	NO MOTTLES NO WATER	210.2

PERC. RATE : OBS
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 8-1

DEPTH		ELEV.
0		215.9
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		214.9
	B HORIZON SANDY LOAM 10 YR 5/6	
28"		213.6
	C LAYER LOAMY SAND 2.5Y 5/3	
80"	STANDING WATER	209.3
108"		207.0

PERC. RATE : 12 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

T.P.# 8-2

DEPTH		ELEV.
0		215.6
	A HORIZON SANDY LOAM 10 YR 3/2	
12"		214.6
	B HORIZON SANDY LOAM 10 YR 5/6	
24"		213.6
	C LAYER LOAMY FINE SAND 2.5Y 5/3	
82"	STANDING WATER	208.8
108"	NO MOTTLES	206.6

PERC. RATE : 15 MPI
DATE OF TEST : 5/3/17
SOIL EVALUATOR: TOM MORRIS
WITNESS WADE SAUCIER

SEPTIC SYSTEM LOGS

NOT TO SCALE

REVISIONS		
1	5/11/17	BETA ENG./TOWN COMMENTS

APPLICANT

THE VILLAGE AT NORFOLK, LLC
32 NORFOLK AVENUE
S. EASTON, MA 02375

OWNERS

PAUL AND PATRICIA KELLEY
25 ROCKWOOD ROAD
NORFOLK, MA 02056
ASSESSORS MAP 14 BLOCK 49
LOT 11
DEED BOOK 11286 PAGE 26

DETAILS SHEET FOR "THE VILLAGE AT NORFOLK"

IN NORFOLK MASSACHUSETTS

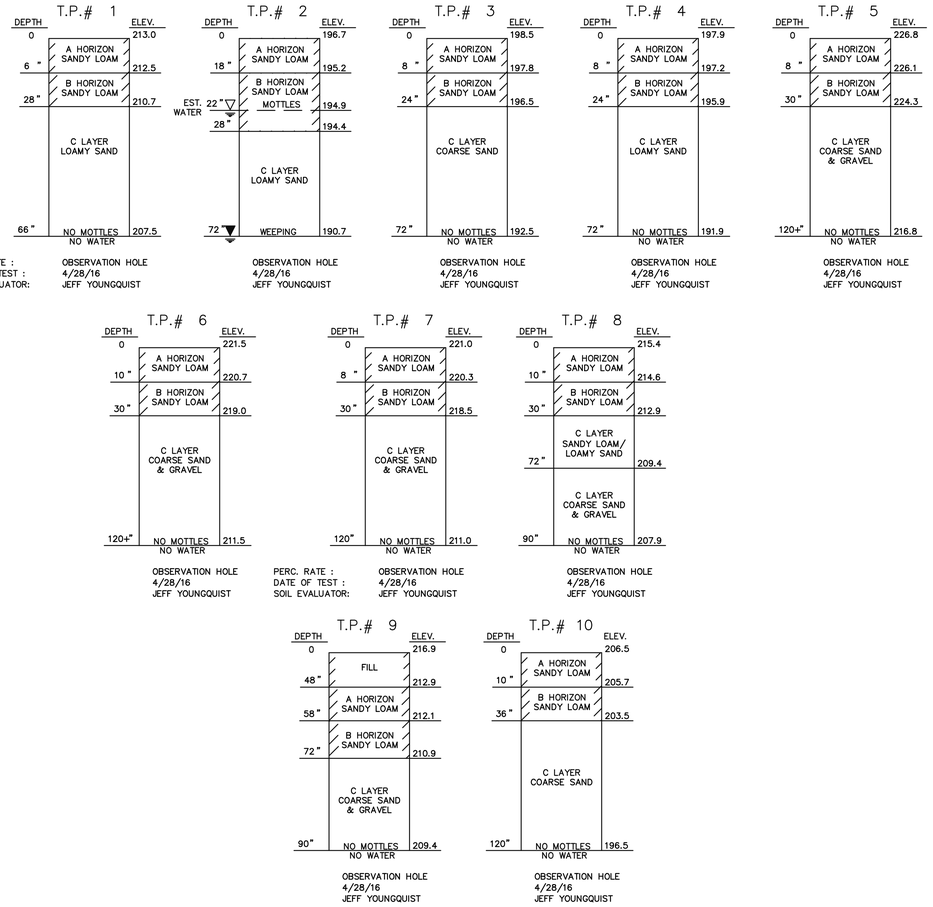
Outback Engineering Incorporated

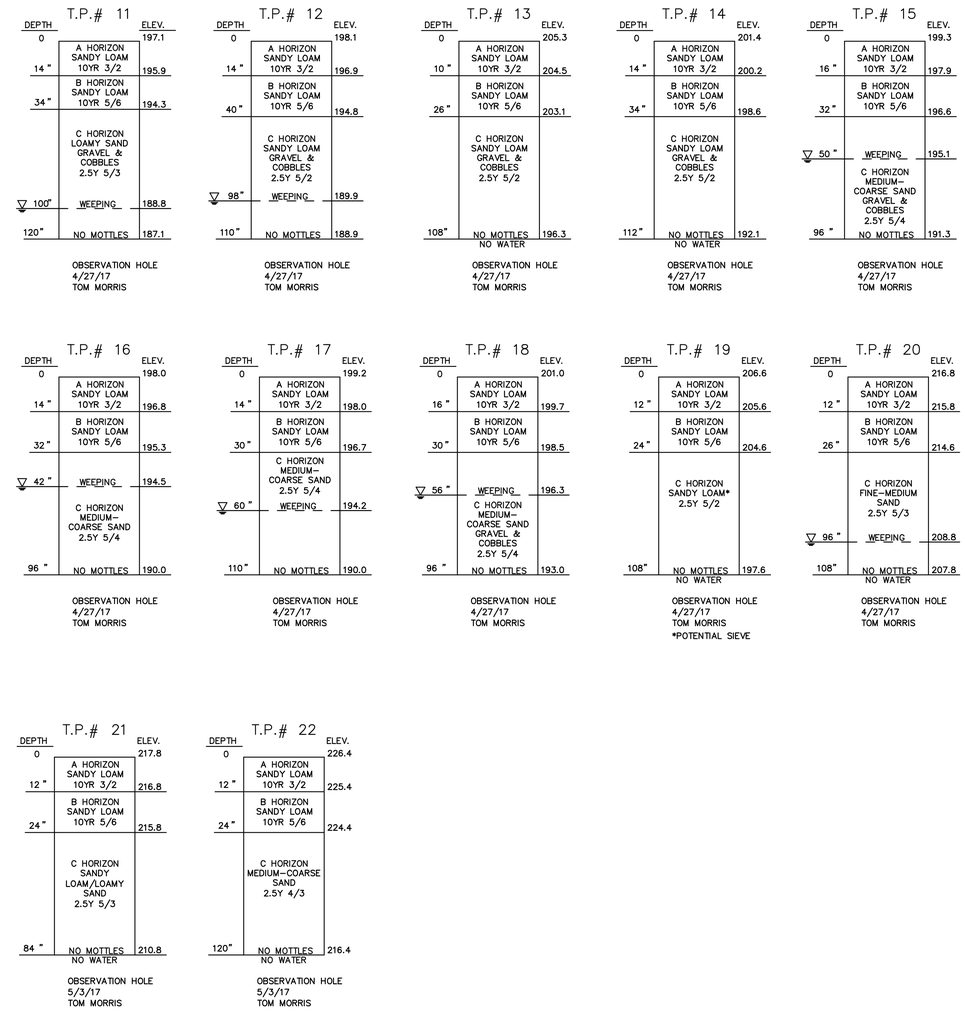
165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: FEBRUARY 21, 2017

DRAWN BY: CJV	CHECKED BY: J.A.P.
SCALE: NTS	SHEET 9 OF 10

OE-3012





DRAINAGE OBSERVATION HOLES

NOT TO SCALE

REVISIONS		
1	5/11/17	BETA ENG./TOWN COMMENTS

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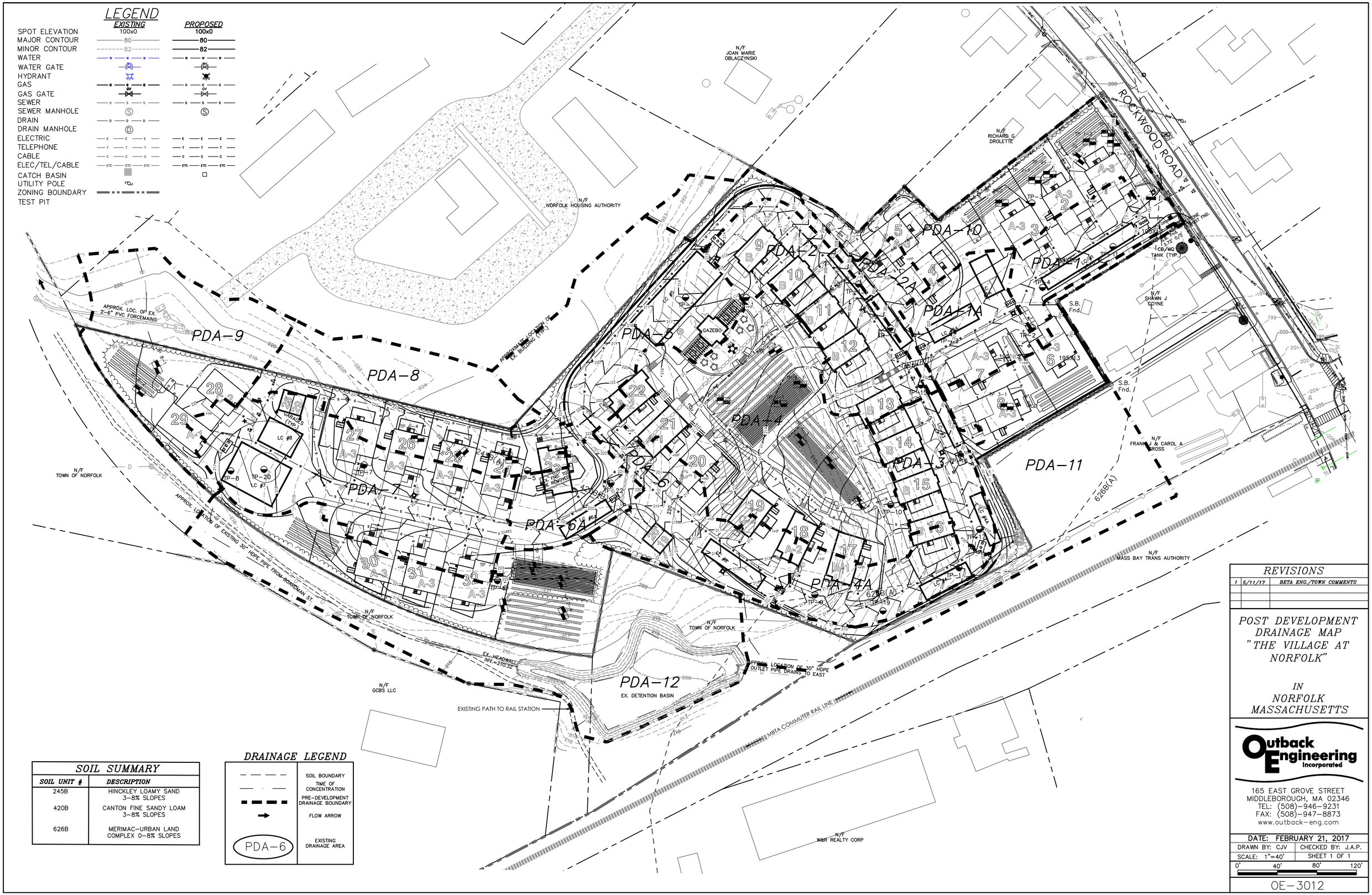

SOIL SUMMARY

SOIL UNIT #	DESCRIPTION
245B	HINCKLEY LOAMY SAND 3-8% SLOPES
420B	CANTON FINE SANDY LOAM 3-8% SLOPES
626B	MERIMAC-URBAN LAND COMPLEX 0-8% SLOPES

DRAINAGE LEGEND

	SOIL BOUNDARY
	TIME OF CONCENTRATION
	PRE-DEVELOPMENT DRAINAGE BOUNDARY
	FLOW ARROW
PDA-6	EXISTING DRAINAGE AREA

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

POST DEVELOPMENT DRAINAGE MAP "THE VILLAGE AT NORFOLK"

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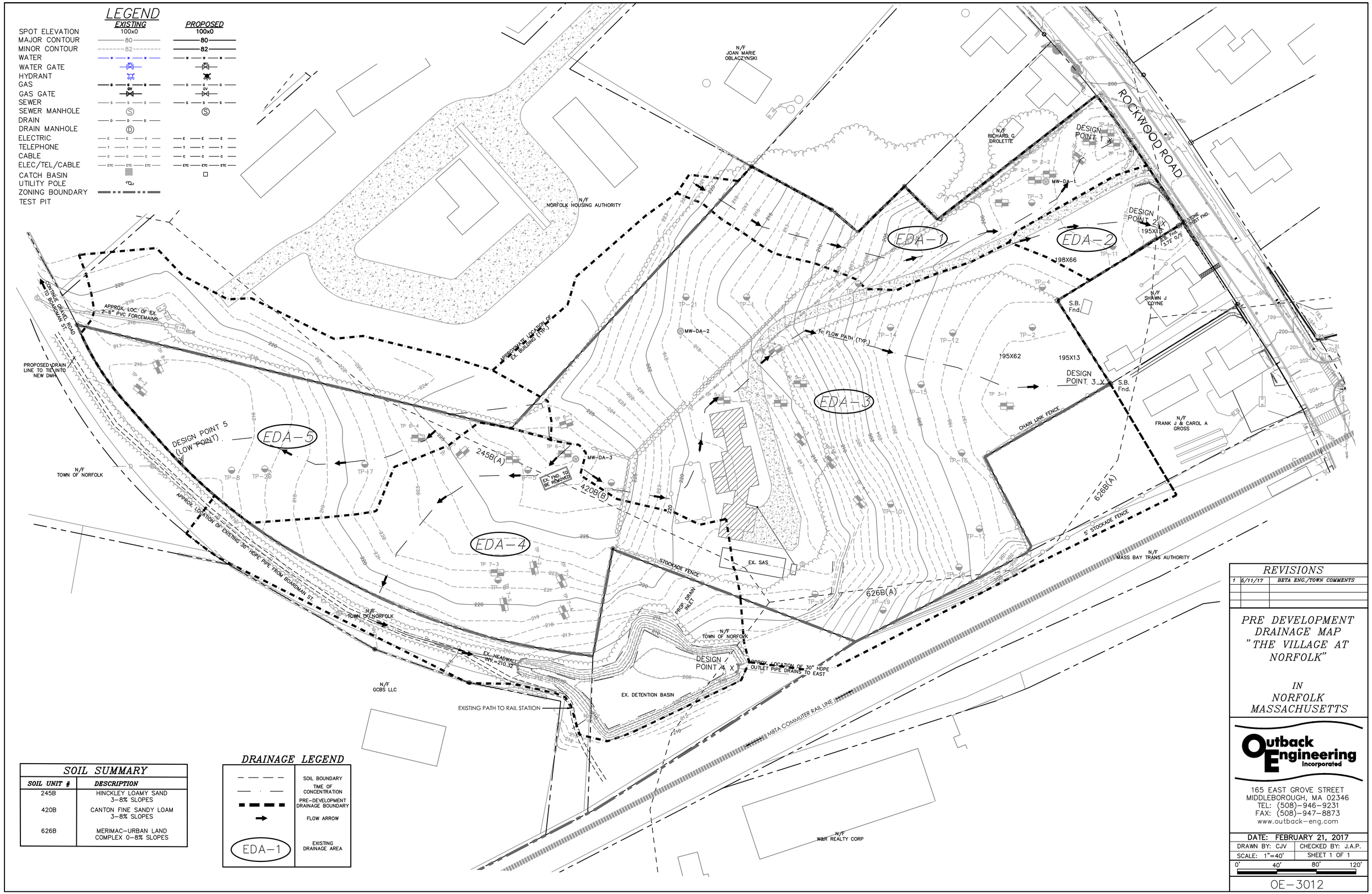
SCALE: 1"=40' | SHEET 1 OF 1

0' 40' 80' 120'

OE-3012



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DRAINAGE LEGEND

	SOIL BOUNDARY
	TIME OF CONCENTRATION
	PRE-DEVELOPMENT DRAINAGE BOUNDARY
	FLOW ARROW
EDA-1	EXISTING DRAINAGE AREA

REVISIONS

1	5/11/17	BETA ENG./TOWN COMMENTS

PRE DEVELOPMENT DRAINAGE MAP "THE VILLAGE AT NORFOLK"

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