

# " THE VILLAGE AT NORFOLK "

A RESIDENTIAL DEVELOPMENT IN  
NORFOLK, MASSACHUSETTS

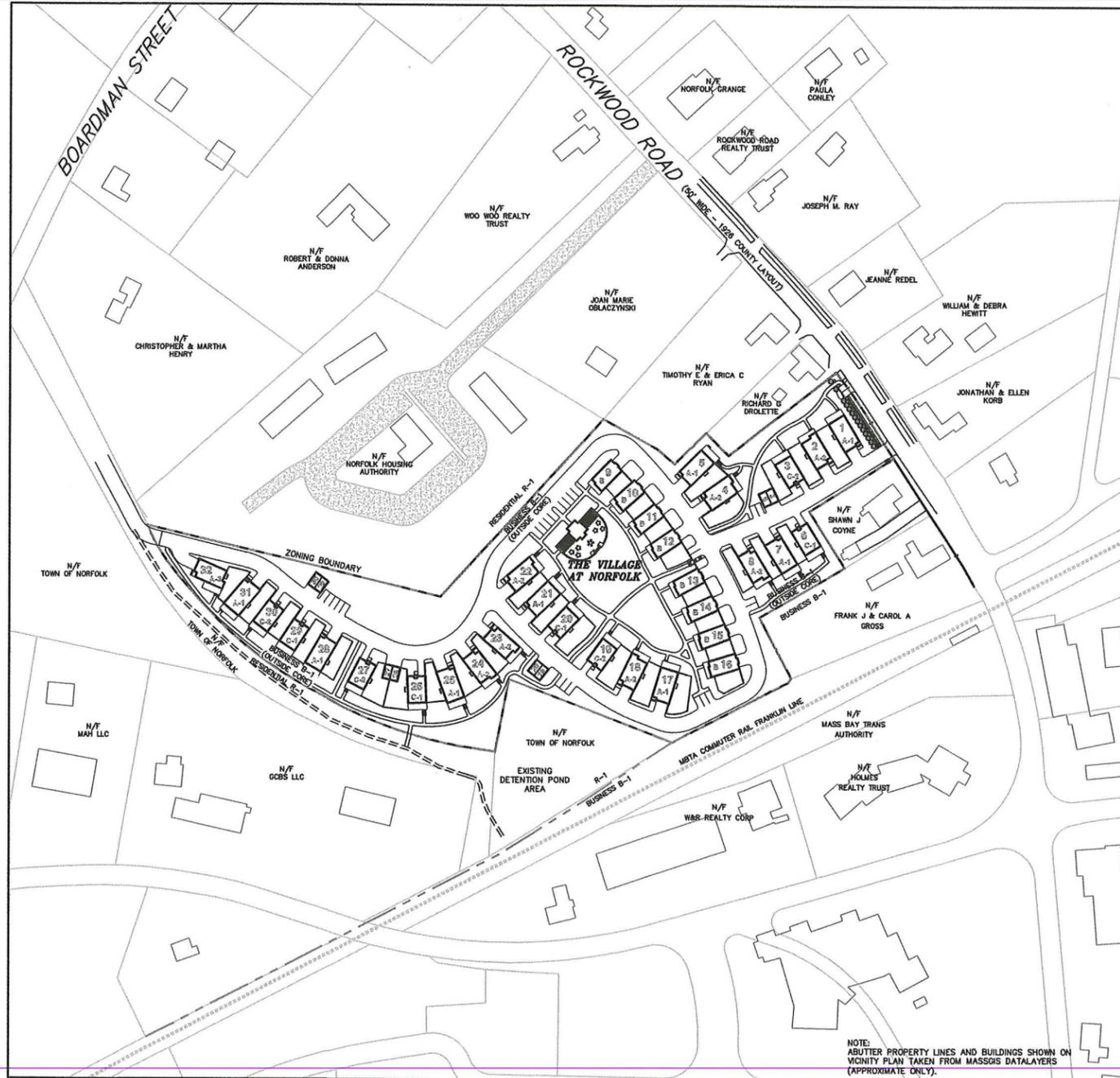
LOCUS  
SCALE: 1" = 1000'

### GENERAL NOTES

- 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 NAVD83. HORIZONTAL DATUM IS BASED ON NAD83.
- 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)
- 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.
- 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.
- THE SITE IS NOT LOCATED WITHIN AN AREA OF CRITICAL ENVIRONMENTAL CONCERN (A.C.E.C.).
- NO KNOWN PRIVATE WELLS ARE LOCATED WITHIN 200' OF THE SUBJECT PROPERTY.
- NO KNOWN PUBLIC OR COMMUNITY WATER SUPPLY WELLS ARE WITHIN 1000' OF THE SUBJECT PROPERTY.
- SITE HAS TOWN WATER, ELECTRIC, CABLE & GAS SERVICE AVAILABLE IN ROCKWOOD ROAD

### LEGEND

	EXISTING 100x0	PROPOSED 100x0
SPOT ELEVATION	—•—	—•—
MAJOR CONTOUR	—80—	—80—
MINOR CONTOUR	---82---	---82---
STOCKADE FENCE	—□—	—□—
WATER	—W—	—W—
WATER GATE	—W—	—W—
HYDRANT	—H—	—H—
GAS	—G—	—G—
GAS GATE	—G—	—G—
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	—E—	—E—
CATCH BASIN	—CB—	—CB—
UTILITY POLE	—UP—	—UP—
ZONING BOUNDARY	—ZB—	—ZB—
SILT FENCE	—SF—	—SF—
TEST PITS	—TP—	—TP—



VICINITY PLAN  
1" = 100'

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

#### PROJECT SUMMARY

PROPOSED USE PER MGL Ch. 40B, SECTION 20-23: RESIDENTIAL CONDOS	
32 CONDOMINIUM UNITS:	
(6 X 2-BEDROOMS) + (26 X 3-BEDROOMS) = 90 BEDROOMS	
TOTAL PARCEL AREA	= 285,697. (6.56 AC)
CONTIGUOUS UPLAND AREA	= 285,697 S.F. (6.56 AC.)
TOTAL FOOTPRINT AREA OF BLDGS*	= 42,176 S.F.
*INCLUDES UNITS AND GARAGES	
TOTAL BUILDING COVERAGE	= 42,176 S.F./285,697 S.F. = 14.8%
TOTAL PAVEMENT AREA**	= 72,670 S.F.
**INCLUDES DRIVEWAYS, SIDEWALKS AND WALKWAYS	
TOTAL PAVEMENT COVERAGE	= 72,670 S.F./285,697 S.F. = 25.4%
TOTAL IMPERVIOUS AREA	= 114,846 S.F.
TOTAL IMPERVIOUS COVERAGE	= 114,846 S.F./285,697 S.F. = 40.2%
TOTAL LANDSCAPE/NATURAL AREA	= 170,851 S.F.
TOTAL LANDSCAPE/NAT COVERAGE	= 170,851 S.F./285,697 S.F. = 59.8%

#### WATER DEMAND & SEWAGE FLOW ESTIMATES

32 UNITS (6 X 2-BEDROOMS & 26 X 3-BEDROOMS) = 90 BEDROOMS
90 BEDROOMS X 110 GPD/BEDROOM = 9,900 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:

6 CONDOMINIUM UNITS (2 BEDROOMS EACH),
26 CONDOMINIUM UNITS (3 BEDROOMS EACH)
TOTAL PARKING REQUIRED = 32 UNITS X 1.5 SPACES/UNIT = 48 SPACES

TOTAL PARKING SPACES PROVIDED = 149 AS FOLLOWS:

56 GARAGE SPACES IN UNITS
8 GARAGE SPACES (DETACHED)
29 GENERAL SPACES (9' X 18')
56 DRIVEWAY SPACES (9' X 16' MIN.)

THIS PROJECT IS TO BE PERMITTED PER A COMPREHENSIVE PERMIT UNDER M.G.L. CH40B

#### INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS SHEET
3	SITE PLAN
4-5	DETAIL SHEETS

#### ZONING INFORMATION

BUSINESS (B-1) DISTRICT (OUTSIDE CORE)	
REQUIRED	PROVIDED
LOT AREA	30,000 S.F.
FRONT YARD SETBACK	100 FEET
FRONT YARD SETBACK	25 FEET
SIDEYARD SETBACK	0 FEET
REAR YARD SETBACK	10 FEET
BUILDING HEIGHT	40 FEET
MAX. LOT COVERAGE	60 %

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

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

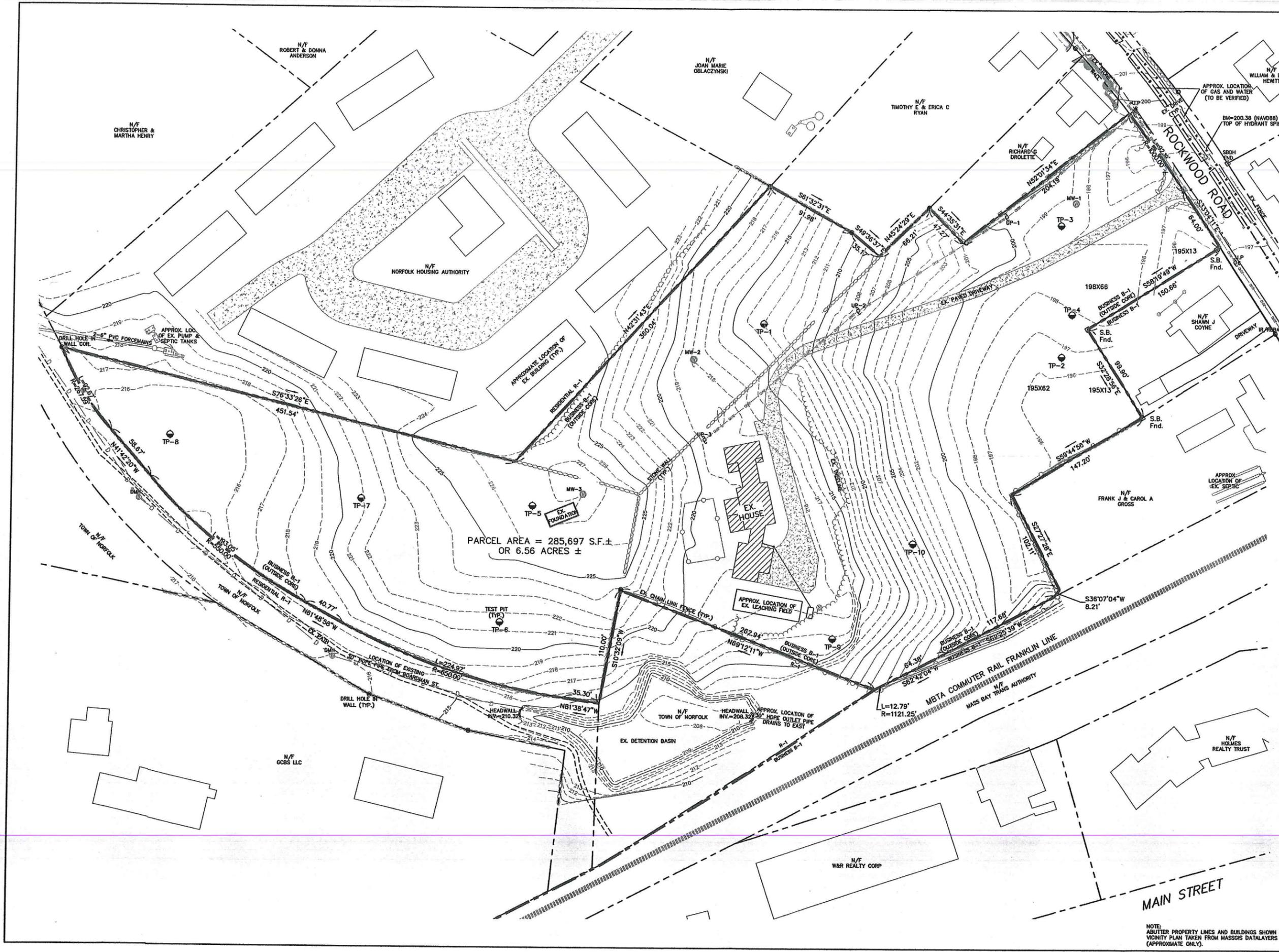
**OWNERS**  
PAUL AND PATRICIA KELLEY  
25 ROCKWOOD ROAD  
NORFOLK, MA 02056  
ASSESSORS MAP 14 BLOCK 49  
LOT 11  
DEED BOOK 11286 PAGE 26

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



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 5  
0' 100' 200' 300'  
OE-3012



PARCEL AREA = 285,697 S.F. ±  
OR 6.56 ACRES ±

REVISIONS		
NO.	DATE	DESCRIPTION

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

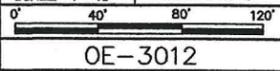
**OWNERS**  
PAUL AND PATRICIA KELLEY  
25 ROCKWOOD ROAD  
NORFOLK, MA 02056  
ASSESSORS MAP 14 BLOCK 49  
LOT 11  
DEED BOOK 11286 PAGE 26

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



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 5



MAIN STREET

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

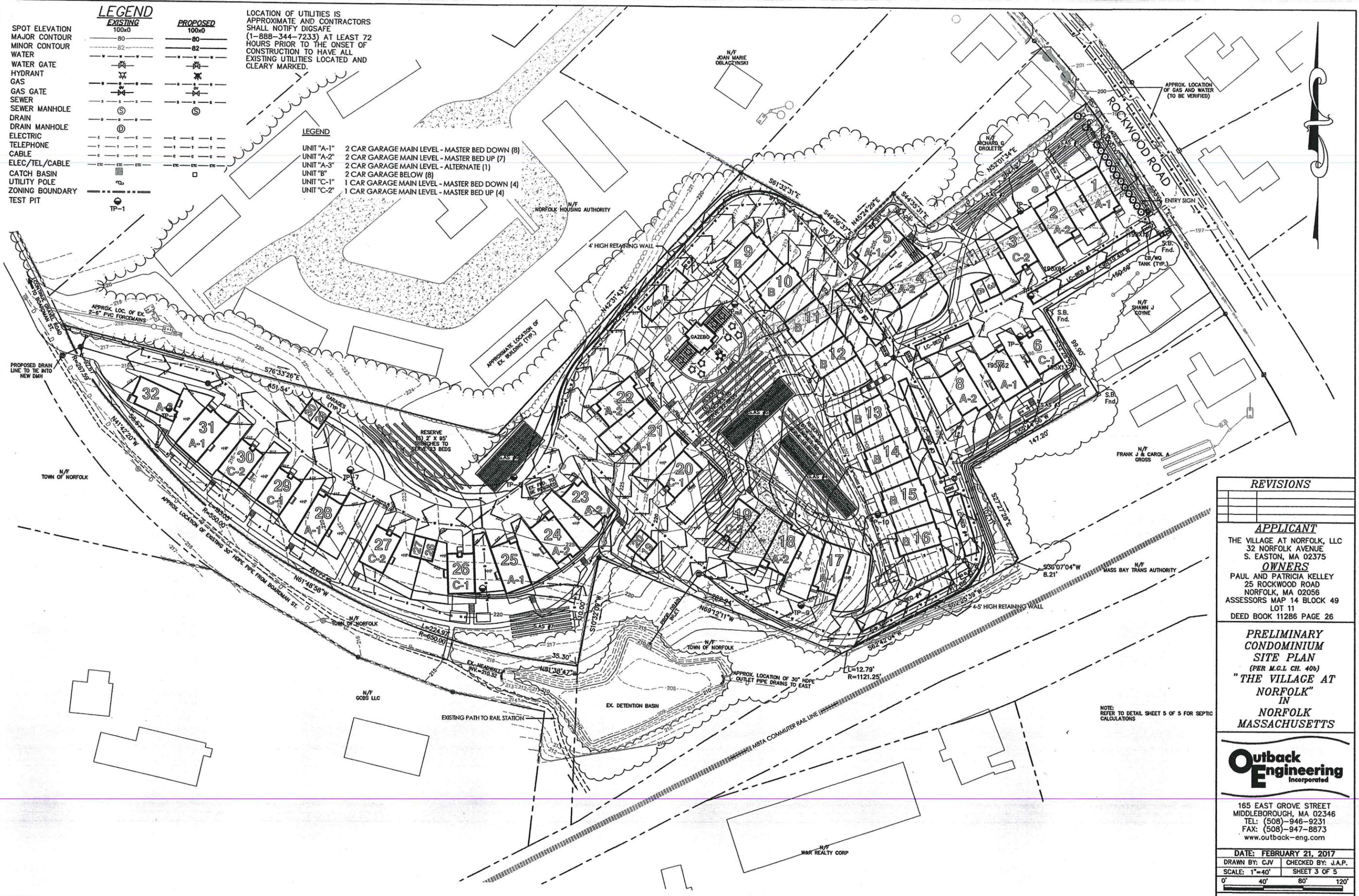
**LEGEND**

	EXISTING 100x0	PROPOSED 100x0
SPOT ELEVATION	80	80
MAJOR CONTOUR	82	82
MINOR CONTOUR		
WATER		
WATER GATE		
HYDRANT		
GAS		
GAS GATE		
SEWER		
SEWER MANHOLE		
DRAIN		
DRAIN MANHOLE		
ELECTRIC		
TELEPHONE		
CABLE		
ELEC/TEL/CABLE		
CATCH BASIN		
UTILITY POLE		
ZONING BOUNDARY		
TEST PIT		

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 CLEARLY MARKED.

**LEGEND**

- UNIT "A-1" 2 CAR GARAGE MAIN LEVEL - MASTER BED DOWN (8)
- UNIT "A-2" 2 CAR GARAGE MAIN LEVEL - MASTER BED UP (7)
- UNIT "A-3" 2 CAR GARAGE MAIN LEVEL - ALTERNATE (1)
- UNIT "B" 2 CAR GARAGE BELOW (8)
- UNIT "C-1" 1 CAR GARAGE MAIN LEVEL - MASTER BED DOWN (4)
- UNIT "C-2" 1 CAR GARAGE MAIN LEVEL - MASTER BED UP (4)



**REVISIONS**

NO.	DESCRIPTION

**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

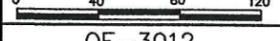
**PRELIMINARY  
CONDOMINIUM  
SITE PLAN**

(PER M.C.L. CH. 40b)  
"THE VILLAGE AT  
NORFOLK"  
IN  
NORFOLK  
MASSACHUSETTS



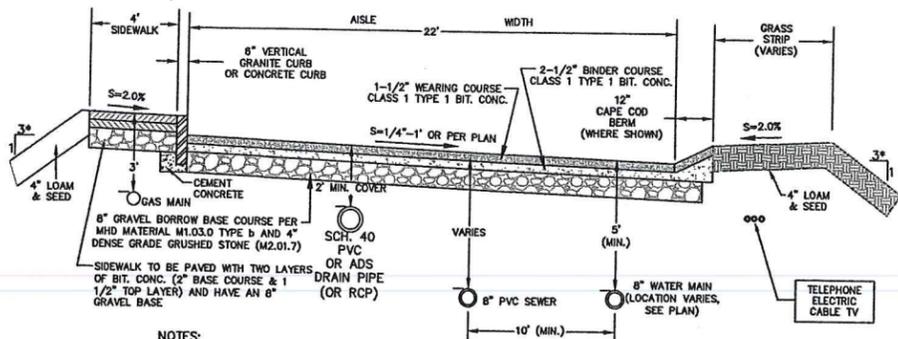
165 EAST GROVE STREET  
MIDDLEBOROUGH, MA 02346  
TEL: (508)-946-9231  
FAX: (508)-947-8873  
www.outback-eng.com

DATE: FEBRUARY 21, 2017  
DRAWN BY: CJV CHECKED BY: J.A.P.  
SCALE: 1"=40' SHEET 3 OF 5



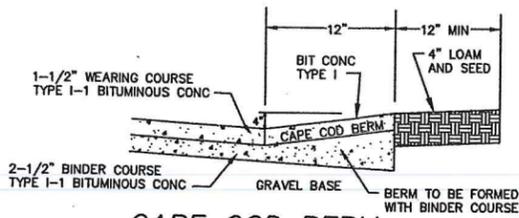
OE-3012

NOTE:  
REFER TO DETAIL SHEET 5 OF 5 FOR SEPTIC  
CALCULATIONS

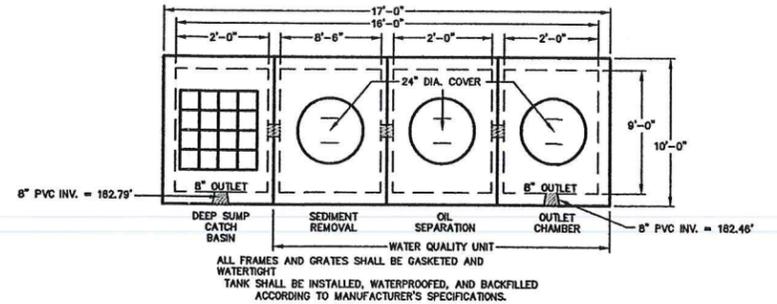


NOTES:  
 1. BACKFILL SHALL BE COMPACTED TO 95% USING THE MODIFIED PROCTOR TEST IN ACCORDANCE WITH ASTM D 1557-67T, METHOD D  
 2. WATER MAIN INSTALLATION SHALL CONFORM TO THE TOWNS GUIDELINES AND SPECIFICATIONS FOR A FIRE PROTECTION DISTRIBUTION SYSTEM (FPDS) LATEST EDITION

**TYPICAL ROADWAY CROSS SECTION**  
 NOT TO SCALE

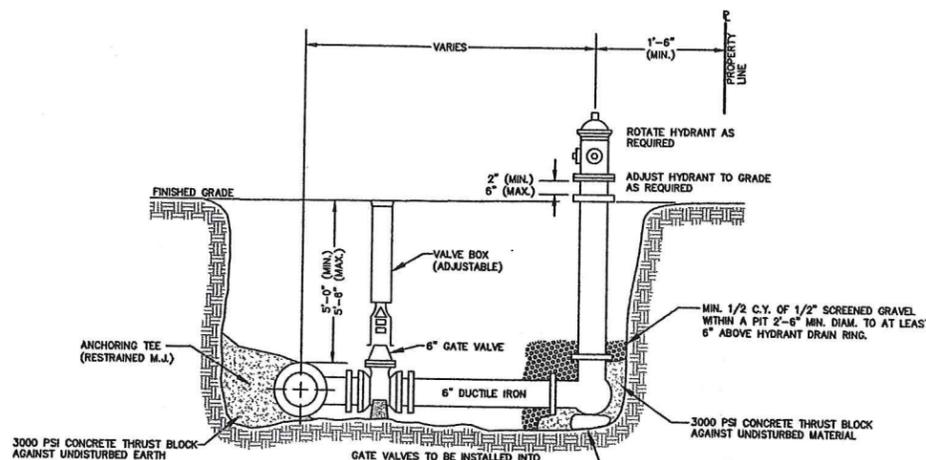


**CAPE COD BERM**  
 NOT TO SCALE

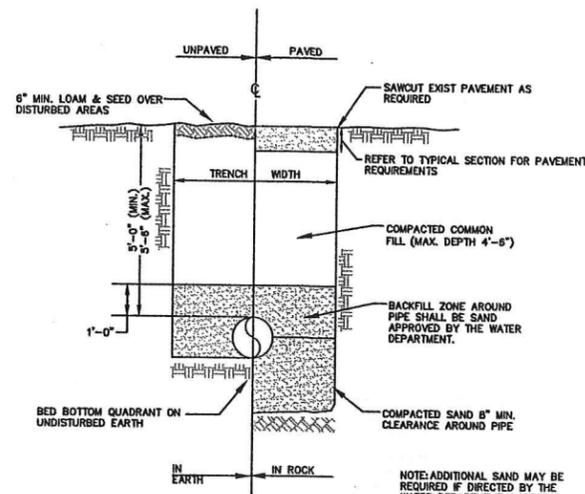


ALL FRAMES AND GRATES SHALL BE GASKETED AND WATERTIGHT  
 TANK SHALL BE INSTALLED, WATERPROOFED, AND BACKFILLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

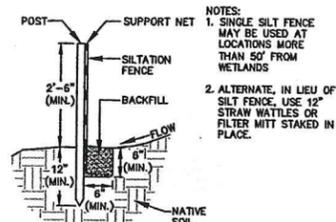
**TYPICAL CATCH BASIN/WATER QUALITY TANK**  
 NOT TO SCALE  
 (SOCIUTE RAY PRECAST 9,000 GALLON 9' X 16' H20 TANK [MODIFIED AS SHOWN] OR EQUIVALENT)



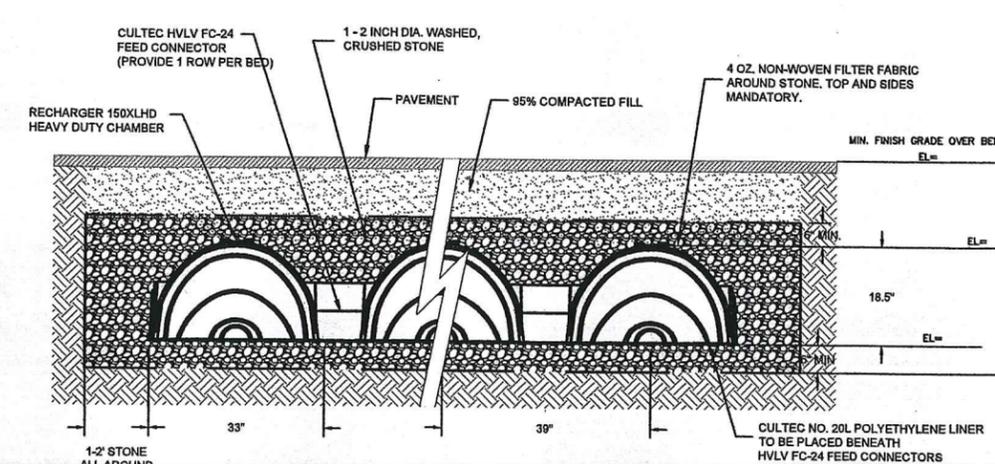
**TYPICAL HYDRANT & VALVE**  
 NOT TO SCALE



**WATER TRENCH**  
 NOT TO SCALE

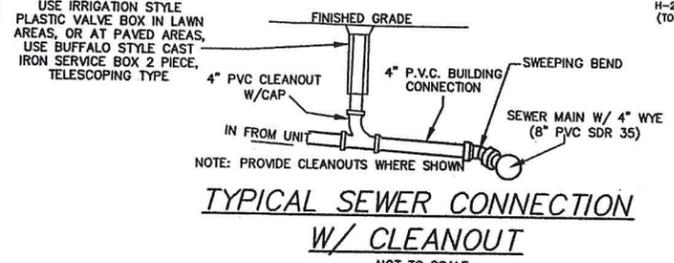
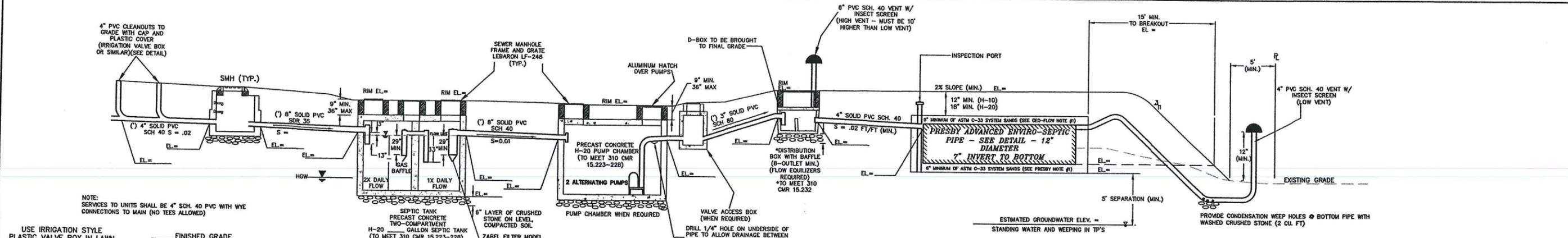


**SILTATION FENCE DETAIL**  
 NOT TO SCALE



**CULTEC RECHARGER 150XLHD CHAMBER BED DETAIL**

REVISIONS	
<b>APPLICANT</b> THE VILLAGE AT NORFOLK, LLC 32 NORFOLK AVENUE S. EASTON, MA 02375 <b>OWNERS</b> PAUL AND PATRICIA KELLEY 25 ROCKWOOD ROAD NORFOLK, MA 02056 ASSESSORS MAP 14 BLOCK 49 LOT 11 DEED BOOK 11286 PAGE 26	
<b>DETAILS SHEET FOR</b> <b>"THE VILLAGE AT NORFOLK"</b>  <b>IN</b> <b>NORFOLK</b> <b>MASSACHUSETTS</b>	
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 4 OF 5	
OE-3012	



T.P.#	DEPTH	ELEV.	SOIL STRATA	PERC. RATE	DATE OF TEST	SOIL EVALUATOR
T.P.# 1	0	213.0	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	6"	212.5	B HORIZON SANDY LOAM			
	28"	210.7	C LAYER LOAMY SAND			
T.P.# 2	0	196.7	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	18"	195.2	B HORIZON SANDY LOAM			
	28"	194.4	C LAYER LOAMY SAND			
T.P.# 3	0	198.5	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	8"	197.8	B HORIZON SANDY LOAM			
	24"	196.5	C LAYER COARSE SAND			
T.P.# 4	0	197.9	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	8"	197.2	B HORIZON SANDY LOAM			
	24"	195.9	C LAYER LOAMY SAND			
T.P.# 5	0	226.8	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	8"	226.1	B HORIZON SANDY LOAM			
	30"	224.3	C LAYER COARSE SAND & GRAVEL			

**DESIGN CALCULATIONS FOR UNITS #1 AND 2:**  
SYSTEM #1

- ESTIMATED DAILY FLOW:  
2 UNITS: 6 BEDROOMS X 110 GPD/BEDROOM = 660 GPD
- 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) = 2,000 GAL
- 2'D X 2'W TRENCHES REQUIRED:  
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.

**TOTAL SEPTIC SYSTEM DESIGN CRITERIA**

32 UNITS (6 X 2-BEDROOMS & 26 X 3-BEDROOMS) = 90 BEDROOMS  
TOTAL DESIGN FLOW = 90 BEDROOMS X 110 GPD/BEDROOM = 9,900 GPD

ESTIMATED EFFLUENT LOADING RATE BASED ON TEST PITS: 0.74 GPD/S.F.  
LEACHING AREA REQUIRED = 9,900 GPD / 0.74 GPD/S.F. = 13,379 S.F.  
CONVENTIONAL S.A.S.: 2' X 2' TRENCHES WITH A CAPACITY OF 6 S.F./L.F.  
LINEAR FEET OF TRENCH REQUIRED = 13,379 S.F. / 6 S.F./L.F. = 2,230 L.F.

USE PRESBY ADVANCED ENVIRO-SEPTIC SYSTEM BEDS FOR PRIMARY LEACHING AREAS AND TRENCHES FOR RESERVES AS SHOWN ON PLAN

**DESIGN CALCULATIONS FOR UNITS #3-5:**  
SYSTEM #2

- ESTIMATED DAILY FLOW:  
3 UNITS: 8 BEDROOMS X 110 GPD/BEDROOM = 880 GPD
- 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 880 GPD = 880 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 3,000 GAL
- 2'D X 2'W TRENCHES REQUIRED:  
880 GPD / 0.74 = 1189 S.F. / 6 S.F./L.F. = 199 L.F.  
USE (3) 2'D X 2'W X 100'L TRENCHES = 200 L.F.

**DESIGN CALCULATIONS FOR UNITS #26-32:**  
SYSTEM #6

- ESTIMATED DAILY FLOW:  
7 UNITS: 23 BEDROOMS X 110 GPD/BEDROOM = 2,530 GPD
- REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)  
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):  
FIRST COMPARTMENT = 48 HOUR DETENTION X 2,530 GPD = 5,060 GAL  
SECOND COMPARTMENT = 24 HOUR DETENTION X 2,530 GPD = 2,530 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 8,000 GAL
- PRESBY ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:  
USE < 2 M.P.I. PERCOLATION RATE  
EFFLUENT LOADING RATE = 0.74 GPD/SF (CLASS I)  
PER TITLE V, AREA REQUIRED = 2,530 GPD / 0.74 GPD/SF = 3,419 SF  
\*USING PRESBY ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: 3,419 SF X 0.6 = 2,052 S.F.  
(2,068 S.F. MIN. REQUIRED PER PRESBY DESIGN MANUAL)  
USE (1) 72'L X 29'W LEACHING BEDS = 2,088 S.F.

**DESIGN CALCULATIONS FOR UNITS #6 AND 7:**  
SYSTEM #3

- ESTIMATED DAILY FLOW:  
2 UNITS: 6 BEDROOMS X 110 GPD/BEDROOM = 660 GPD
- 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) = 2,000 GAL
- 2'D X 3'W TRENCHES REQUIRED:  
660 GPD / 0.74 = 892 S.F. / 7 S.F./L.F. = 128 L.F.  
USE (2) 2'D X 3'W X 64'L TRENCHES = 128 L.F.

**DESIGN CALCULATIONS FOR UNITS #9-11 & 17-22:**  
SYSTEM #5

- ESTIMATED DAILY FLOW:  
9 UNITS: 22 BEDROOMS X 110 GPD/BEDROOM = 2,420 GPD
- 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 = 1,540 GAL  
SECOND COMPARTMENT = 24 HOUR DETENTION X 770 GPD = 770 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 2,500 GAL  
FOR UNITS #17-22 (15 BEDROOMS):  
FIRST COMPARTMENT = 48 HOUR DETENTION X 1,650 GPD = 3,300 GAL  
SECOND COMPARTMENT = 24 HOUR DETENTION X 1,650 GPD = 1,650 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 5,000 GAL
- PRESBY ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:  
USE < 2 M.P.I. PERCOLATION RATE  
EFFLUENT LOADING RATE = 0.74 GPD/SF (CLASS I)  
PER TITLE V, AREA REQUIRED = 2,420 GPD / 0.74 GPD/SF = 3,271 SF  
\*USING PRESBY ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: 3,271 SF X 0.6 = 1,963 S.F.  
(1,978 S.F. MIN. REQUIRED PER PRESBY DESIGN MANUAL)  
USE (1) 83' X 24' LEACHING BED = 1,992 S.F.

**DESIGN CALCULATIONS FOR UNITS #23-25:**  
SYSTEM #7

- ESTIMATED DAILY FLOW:  
3 UNITS: 7 BEDROOMS X 110 GPD/BEDROOM = 770 GPD
- REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)  
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):  
FIRST COMPARTMENT = 48 HOUR DETENTION X 770 GPD = 1,540 GAL. (MIN)  
SECOND COMPARTMENT = 24 HOUR DETENTION X 770 GPD = 770 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 2,500 GAL
- 2'D X 2'W TRENCHES REQUIRED:  
770 GPD / 0.74 = 1041 S.F. / 6 S.F./L.F. = 174 L.F.  
USE (3) 2'D X 2'W X 58'L TRENCHES = 174 L.F.

**DESIGN CALCULATIONS FOR UNITS #8 AND 12-16:**  
SYSTEM #4

- ESTIMATED DAILY FLOW:  
6 UNITS: 18 BEDROOMS X 110 GPD/BEDROOM = 1,980 GPD
- REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)  
TWO TANKS IN SERIES (OR TWO COMPARTMENT TANK):  
FIRST COMPARTMENT = 48 HOUR DETENTION X 1,980 GPD = 3,960 GAL  
SECOND COMPARTMENT = 24 HOUR DETENTION X 1,980 GPD = 1,980 GAL  
SEPTIC TANK SIZE PROVIDED (2-COMPARTMENT TANK) = 6,000 GAL
- PRESBY ENVIRO-SEPTIC SYSTEM LEACHING REQUIREMENTS:  
USE < 2 M.P.I. PERCOLATION RATE  
EFFLUENT LOADING RATE = 0.74 GPD/SF (CLASS I)  
PER TITLE V, AREA REQUIRED = 1,980 GPD / 0.74 GPD/SF = 2,676 S.F.  
\*USING PRESBY ENVIRO-SEPTIC SYSTEM, EMPLOY 40% REDUCTION TO LEACHING SYSTEM AREA: 2,676 S.F. X 0.6 = 1,606 S.F.  
(1,616 S.F. MIN. REQUIRED PER PRESBY DESIGN MANUAL)  
USE (1) 102'L X 16'W LEACHING BEDS = 1,632 S.F.

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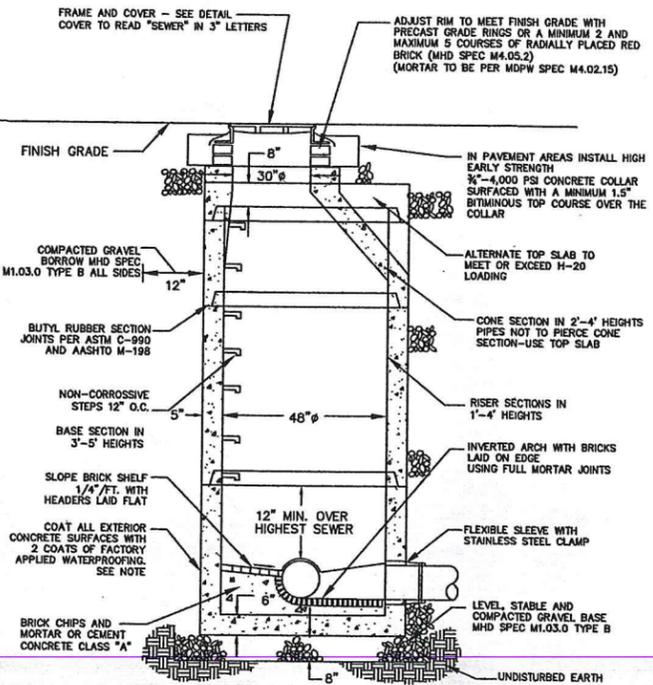
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**NOTES:**

- EXCAVATION TO ALLOW FOR FREE TRAVEL OF COMPACTION EQUIPMENT
- ALL COMPACTION TO A MINIMUM 95 PERCENT DRY DENSITY DETERMINED BY ASTM D1557. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
- ALL PRECAST TO MEET OR EXCEED ASTM C-478 AND ASSHTO M 199 SPECIFICATIONS
- REINFORCED STEEL TO MEET OR EXCEED ASTM A165 AND H-20 LOADING REQUIREMENTS
- ALL PRECAST CONCRETE TO BE 4,000 PSI MINIMUM AND MEET ASTM C-478 (6.1)

T.P.#	DEPTH	ELEV.	SOIL STRATA	PERC. RATE	DATE OF TEST	SOIL EVALUATOR
T.P.# 6	0	221.5	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	10"	220.7	B HORIZON SANDY LOAM			
	30"	219.0	C LAYER COARSE SAND & GRAVEL			
T.P.# 7	0	221.0	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	8"	220.3	B HORIZON SANDY LOAM			
	30"	218.5	C LAYER COARSE SAND & GRAVEL			
T.P.# 8	0	215.4	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	10"	214.6	B HORIZON SANDY LOAM			
	30"	212.9	C LAYER SANDY LOAM/ LOAMY SAND			
T.P.# 9	0	216.9	FILL	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	48"	212.9	A HORIZON SANDY LOAM			
	58"	212.1	B HORIZON SANDY LOAM			
T.P.# 10	0	206.5	A HORIZON SANDY LOAM	NO MOTTLING	4/28/16	JEFF YOUNGQUIST
	10"	205.7	B HORIZON SANDY LOAM			
	38"	203.5	C LAYER COARSE SAND			

**SOIL STRATA LOGS**  
NOT TO SCALE

**REVISIONS**


**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**



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 5 OF 5