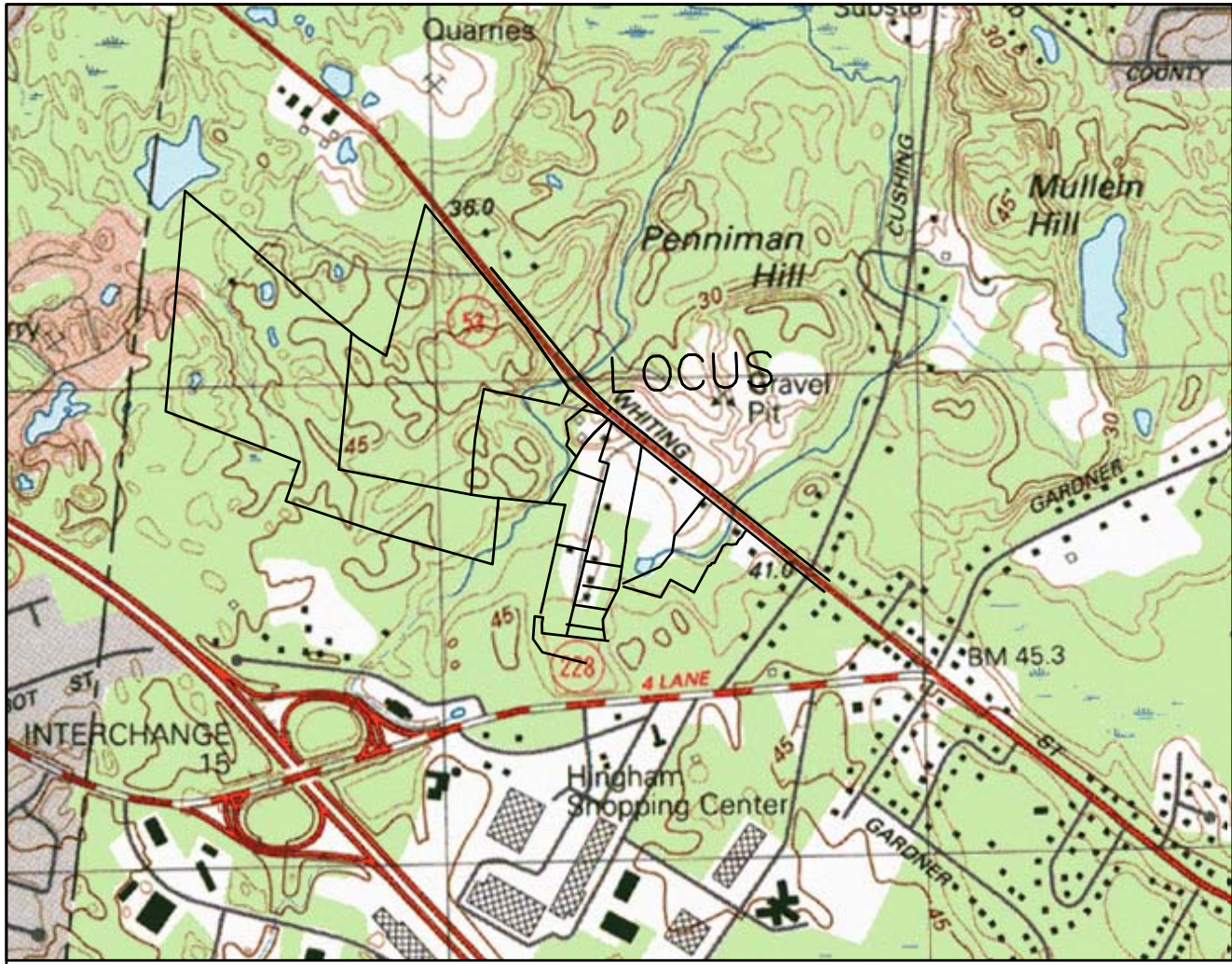




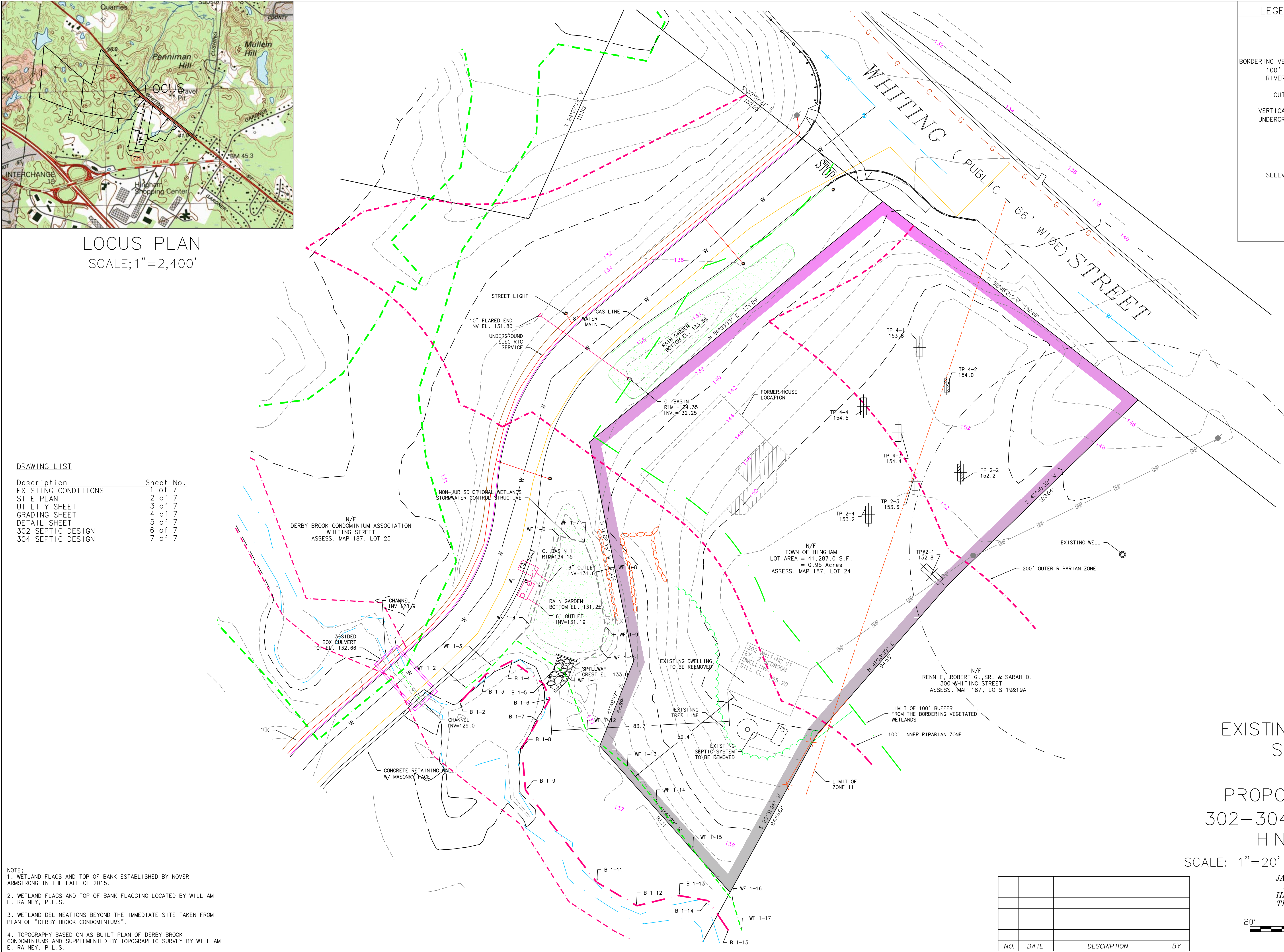
LOCUS PLAN
SCALE: 1"=2,400'

DRAWING LIST

Description	Sheet No.
EXISTING CONDITIONS	1 of 7
SITE PLAN	2 of 7
UTILITY SHEET	3 of 7
GRADING SHEET	4 of 7
DETAIL SHEET	5 of 7
302 SEPTIC DESIGN	6 of 7
304 SEPTIC DESIGN	7 of 7

NOTE:
1. WETLAND FLAGS AND TOP OF BANK ESTABLISHED BY NOVER ARMSTRONG IN THE FALL OF 2015.
2. WETLAND FLAGS AND TOP OF BANK FLAGGING LOCATED BY WILLIAM E. RAINEY, P.L.S.
3. WETLAND DELINEATIONS BEYOND THE IMMEDIATE SITE TAKEN FROM PLAN OF "DERBY BROOK CONDOMINIUMS".
4. TOPOGRAPHY BASED ON AS BUILT PLAN OF DERBY BROOK CONDOMINIUMS AND SUPPLEMENTED BY TOPOGRAPHIC SURVEY BY WILLIAM E. RAINEY, P.L.S.

LEGEND	
CONTOUR	---
10' CONTOUR	---
PROPERTY LINE	---
BUILDING SETBACK	---
BORDERING VEGETATED WETLANDS	---
100' BUFFER TO THE BW	---
RIVER HIGH WATER MARK	---
EDGE OF STREAM	---
OUTER RIPARIAN (200')	---
EDGE OF PAVEMENT	---
VERTICAL GRANITE CURBING	---
UNDERGROUND ELEC/TEL/CAT	---
TRANSFORMER	---
HAND HOLE	---
GAS MAIN	---
GAS GATE	---
WATER MAIN	---
WATER GATE	---
SLEEVED WATER SERVICE	---
ROOF DRAIN	---
STORM DRAIN	---
CATCH BASIN	---
DRAIN MANHOLE	---
UTILITY POLE	---
SITE LIGHTING	---



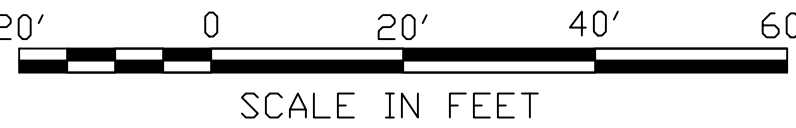
OWNER
TRUSTEES OF THE HINGHAM AFFORDABLE HOUSING TRUST
TOWN OFFICES
210 CENTRAL STREET
HINGHAM, MA 02043

APPLICANT
SOUTH SHORE HABITAT FOR HUMANITY
20 MATHESON DRIVE
WEYMOUTH, MA 02189

EXISTING CONDITIONS
SITE PLAN
FOR
PROPOSED DWELLINGS
302-304 WHITING STREET
HINGHAM, MASS.

SCALE: 1"=20' DATE: NOVEMBER 24, 2019

JAMES ENGINEERING, INC.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL: 1- (781)-878-1795



NO.	DATE	DESCRIPTION	BY

LOT USE SUMMARY

TOTAL LOT AREA	41,287.1 SQ. FT. 0.93 Acres	
UPLANDS	41,155.0 SQ. FT.	
WETLANDS	132.1 SQ. FT.	
LOT COVERAGE		
BUILDING AREAS	1,888 SQ. FT.	4.57%
PAVEMENT	3,730 SQ. FT.	9.03%
WALKWAYS	80 SQ. FT.	0.02%
TOTAL	5,698 SQ. FT.	13.62%
OPEN SPACE	35,589 SQ. FT.	

WETLANDS SUMMARY

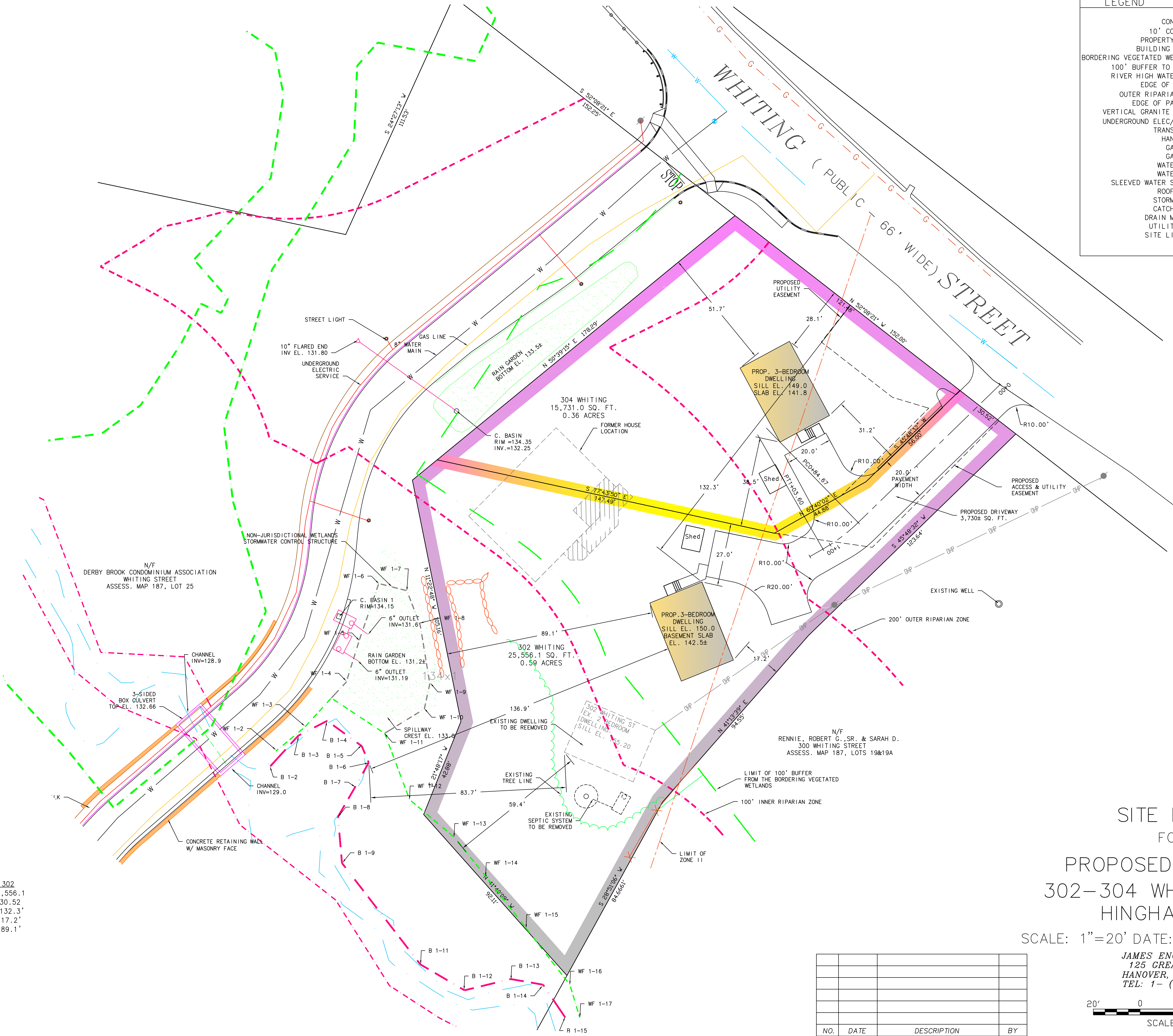
WETLANDS	132.1 SQ. FT.
100' BUFFER	12,976.0 SQ. FT.
RIVERFRONT ZONES	
INNER RIPARIAN AREA	10,720 SQ. FT.
OUTER RIPARIAN AREA	18,282 SQ. FT.

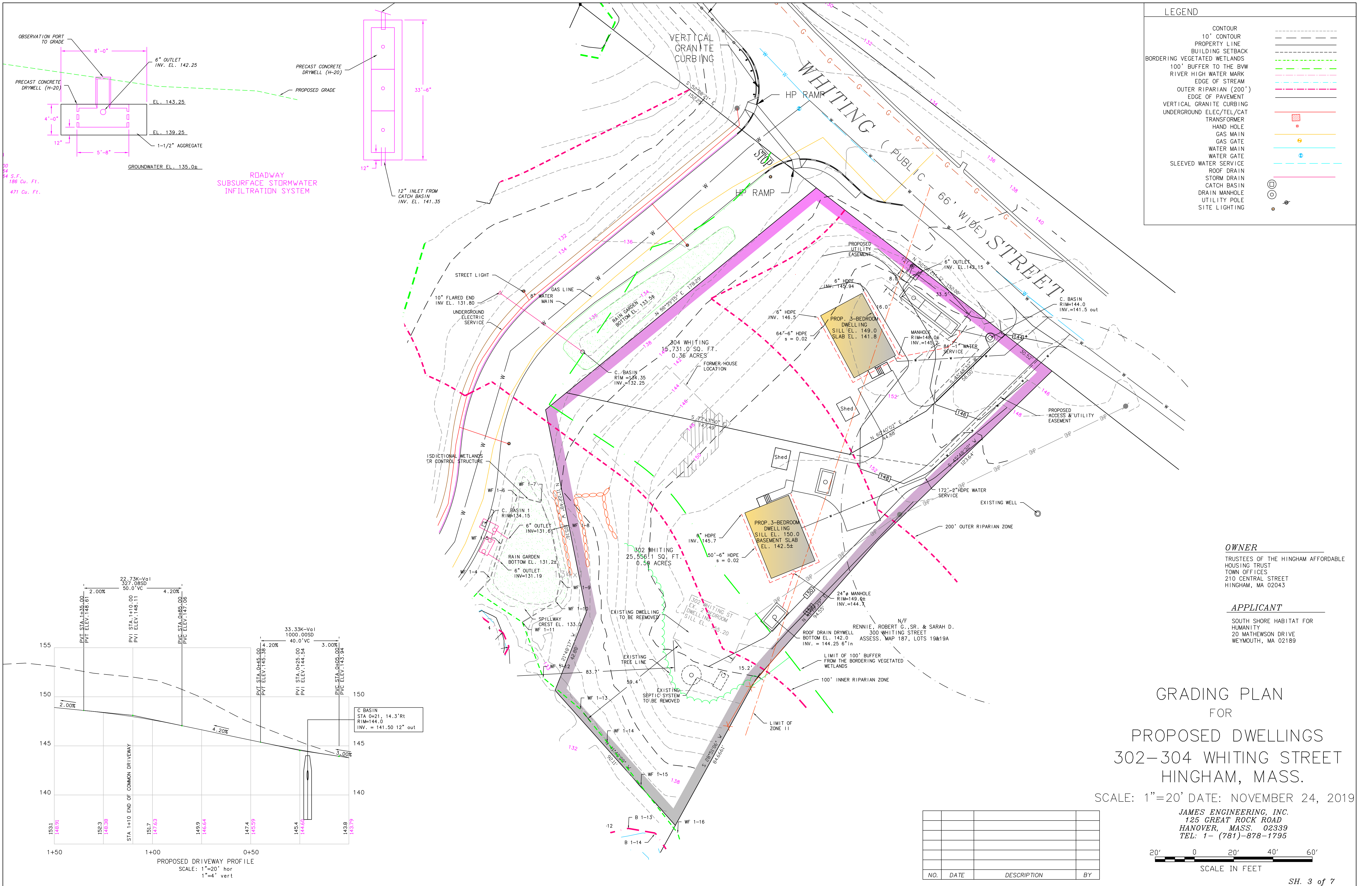
ZONING SUMMARY

ZONE-RESIDENCE C	REQUIRED	304	302
LOT AREA	40,000 S.F.	15,731.0	25,556.1
FRONTAGE	150'	121.48	30.52
FRONT YARD SETBACK	50'	28.1'	132.3'
SIDE YARD SETBACK	20'	31.2'	17.2'
REAR YARD SETBACK	20'	38.5'	89.1'

LEGEND

CONTOUR	---
10' CONTOUR	---
PROPERTY LINE	---
BUILDING SETBACK	---
BORDERING VEGETATED WETLANDS	---
100' BUFFER TO THE BVW	---
RIVER HIGH WATER MARK	---
EDGE OF STREAM	---
OUTER RIPARIAN (200')	---
EDGE OF PAVEMENT	---
VERTICAL GRANITE CURBING	---
UNDERGROUND ELEC/TEL/CAT	---
TRANSFORMER	---
HAND HOLE	---
GAS MAIN	---
GAS GATE	---
WATER MAIN	---
WATER GATE	---
SLEEVED WATER SERVICE	---
ROOF DRAIN	---
STORM DRAIN	---
CATCH BASIN	---
DRAIN MANHOLE	---
UTILITY POLE	---
SITE LIGHTING	---





LEGEND	
CONTOUR	
10' CONTOUR	
PROPERTY LINE	
BUILDING SETBACK	
BORDERING VEGETATED WETLANDS	
100' BUFFER TO THE BVW	
RIVER HIGH WATER MARK	
EDGE OF STREAM	
OUTER RIPARIAN (200')	
EDGE OF PAVEMENT	
VERTICAL GRANITE CURBING	
UNDERGROUND ELEC/TEL/CAT	
TRANSFORMER	
HAND HOLE	
GAS MAIN	
GAS GATE	
WATER MAIN	
WATER GATE	
SLEEVED WATER SERVICE	
ROOF DRAIN	
STORM DRAIN	
CATCH BASIN	
DRAIN MANHOLE	
UTILITY POLE	
SITE LIGHTING	

OWNER
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HINGHAM, MA 02043

APPLICANT
SOUTH SHORE HABITAT FOR HUMANITY
20 MATHEWSON DRIVE
WEYMOUTH, MA 02189

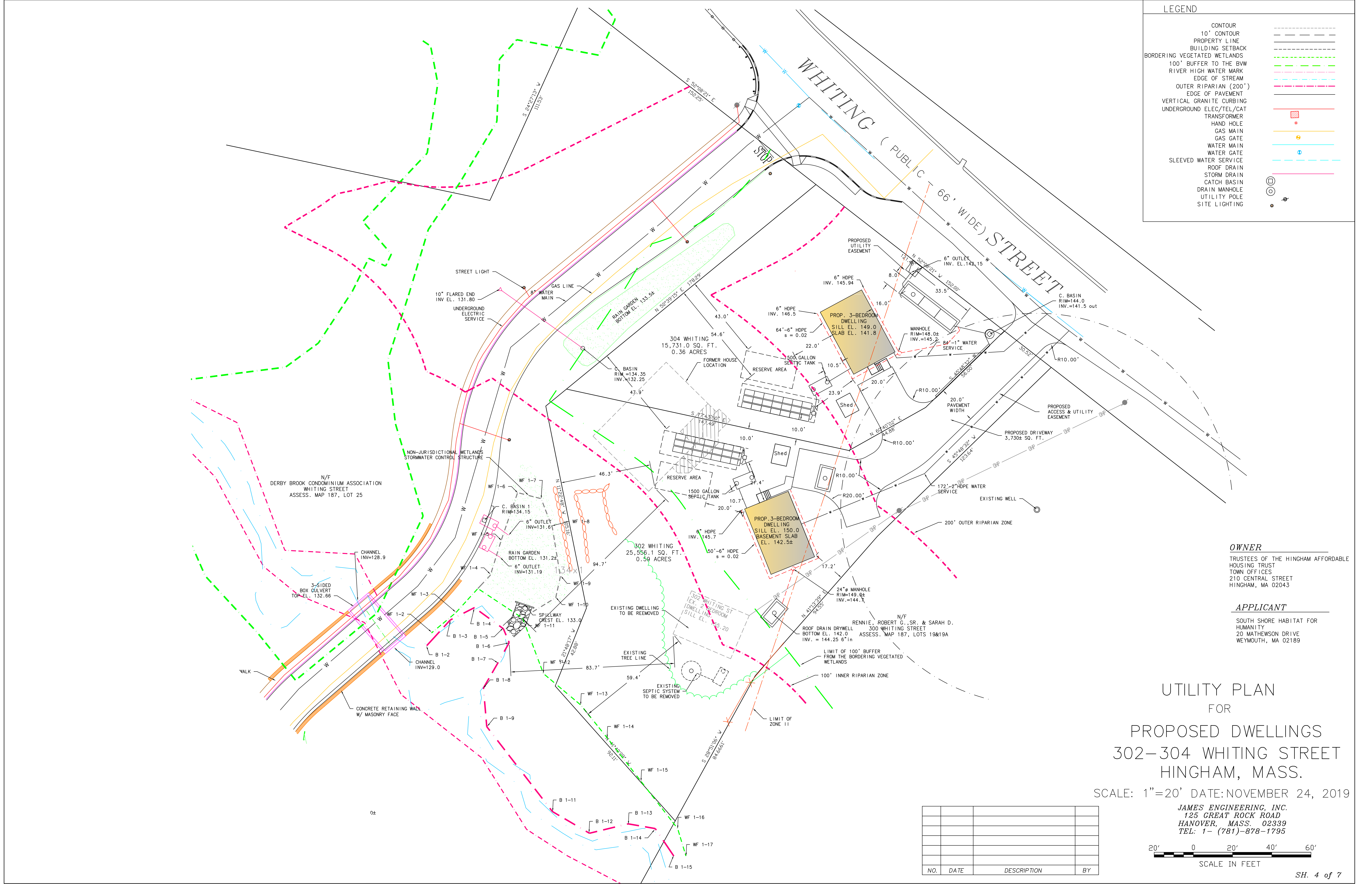
GRADING PLAN
FOR
PROPOSED DWELLINGS
302-304 WHITING STREET
HINGHAM, MASS.

SCALE: 1"=20' DATE: NOVEMBER 24, 2019

JAMES ENGINEERING, INC.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL: 1- (781)-878-1795



NO.	DATE	DESCRIPTION	BY



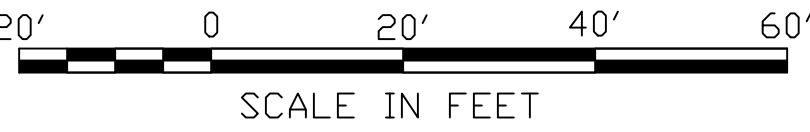
OWNER
TRUSTEES OF THE HINGHAM AFFORDABLE
HOUSING TRUST
TOWN OFFICES
210 CENTRAL STREET
HINGHAM, MA 02043

APPLICANT
SOUTH SHORE HABITAT FOR
HUMANITY
20 MATHEWSON DRIVE
WEYMOUTH, MA 02189

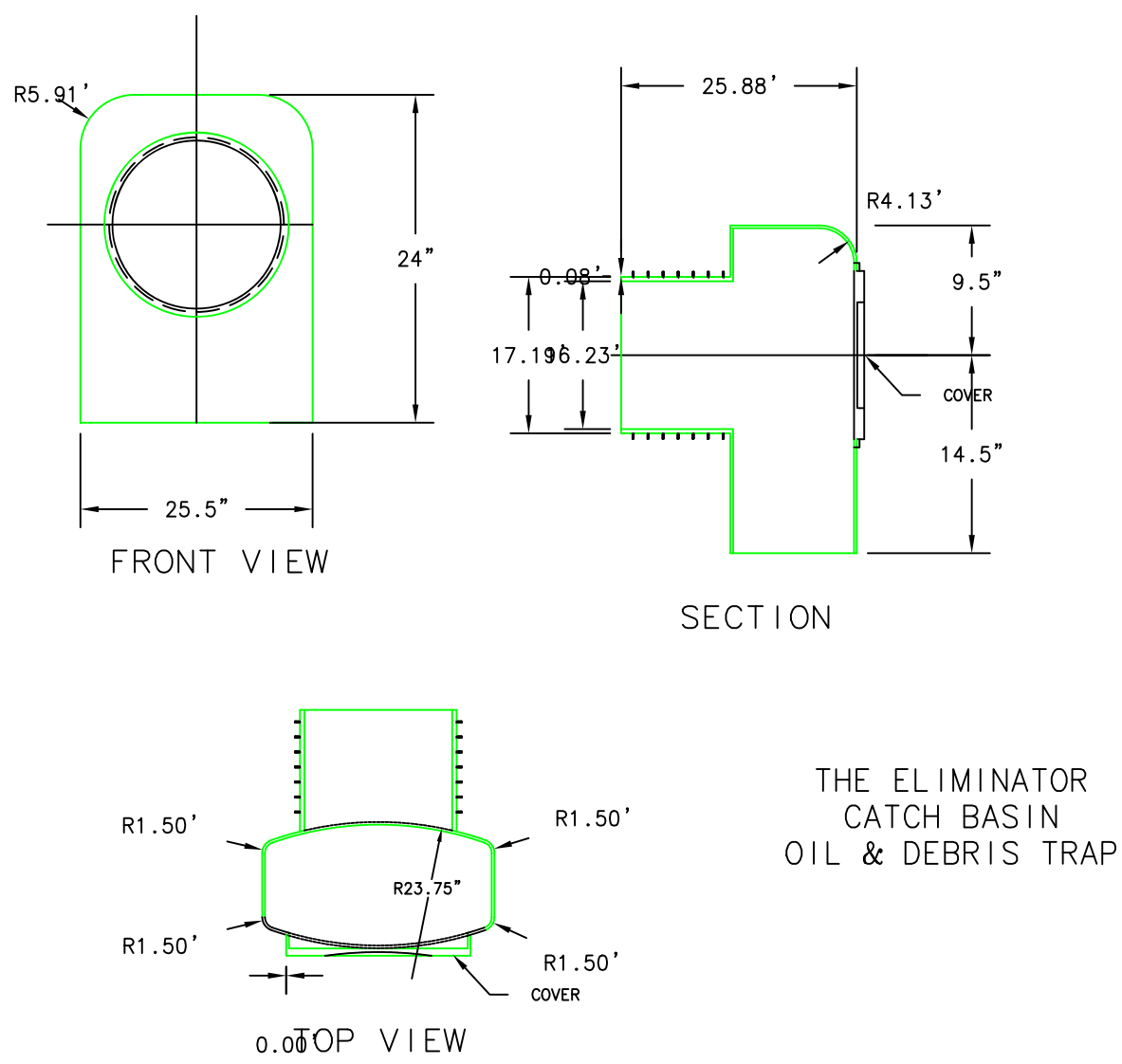
UTILITY PLAN
FOR
PROPOSED DWELLINGS
302-304 WHITING STREET
HINGHAM, MASS.

SCALE: 1"=20' DATE: NOVEMBER 24, 2019

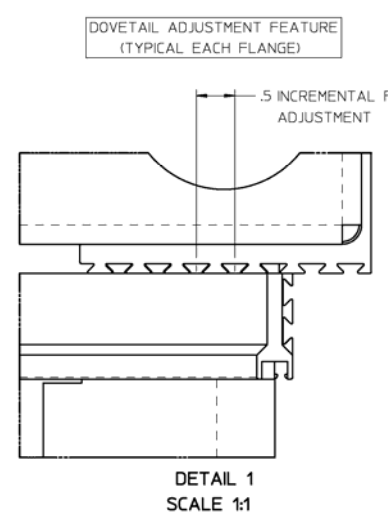
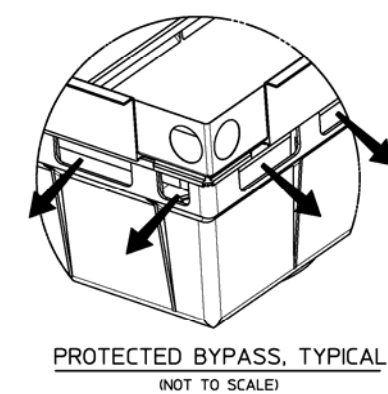
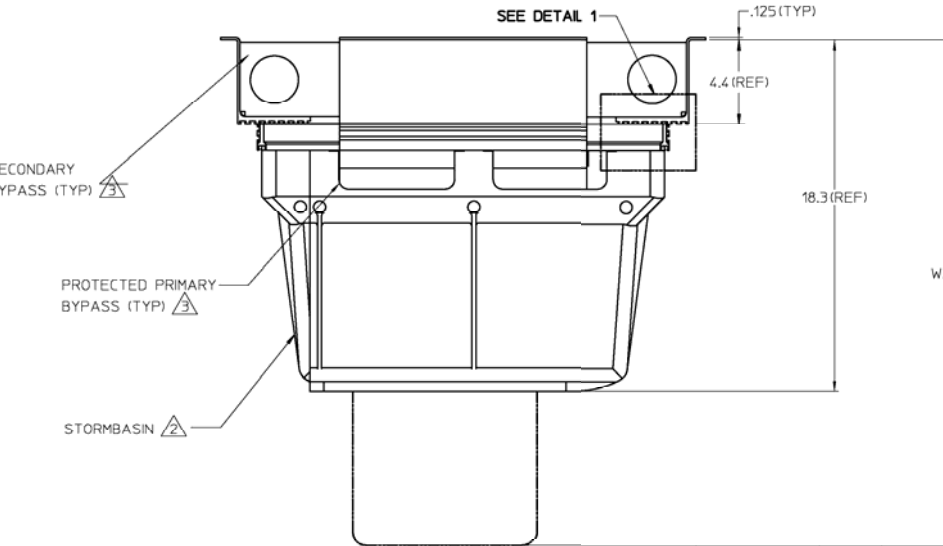
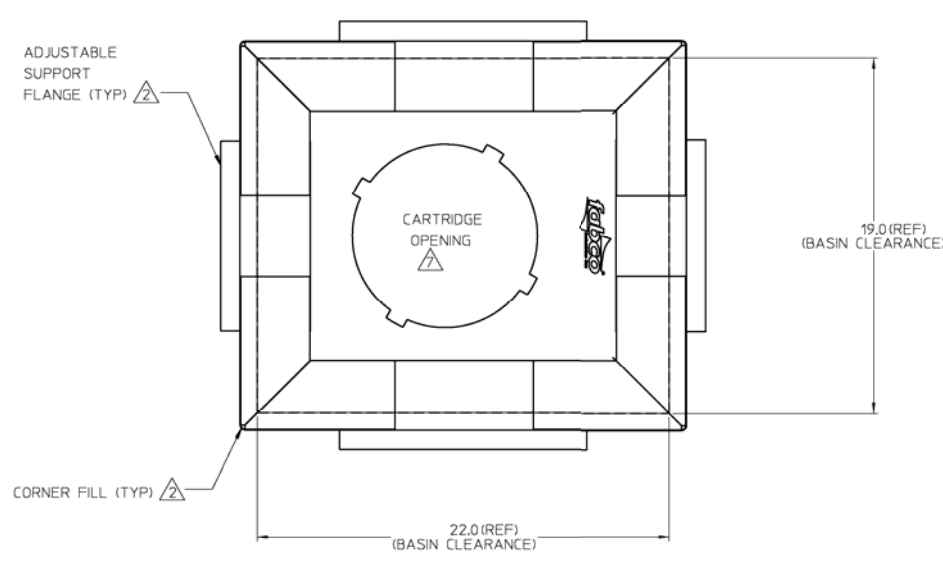
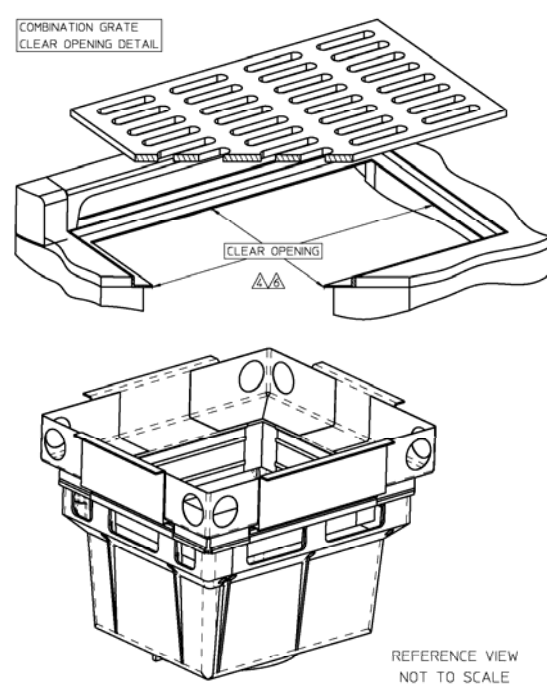
JAMES ENGINEERING, INC.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL: 1- (781)-878-1795



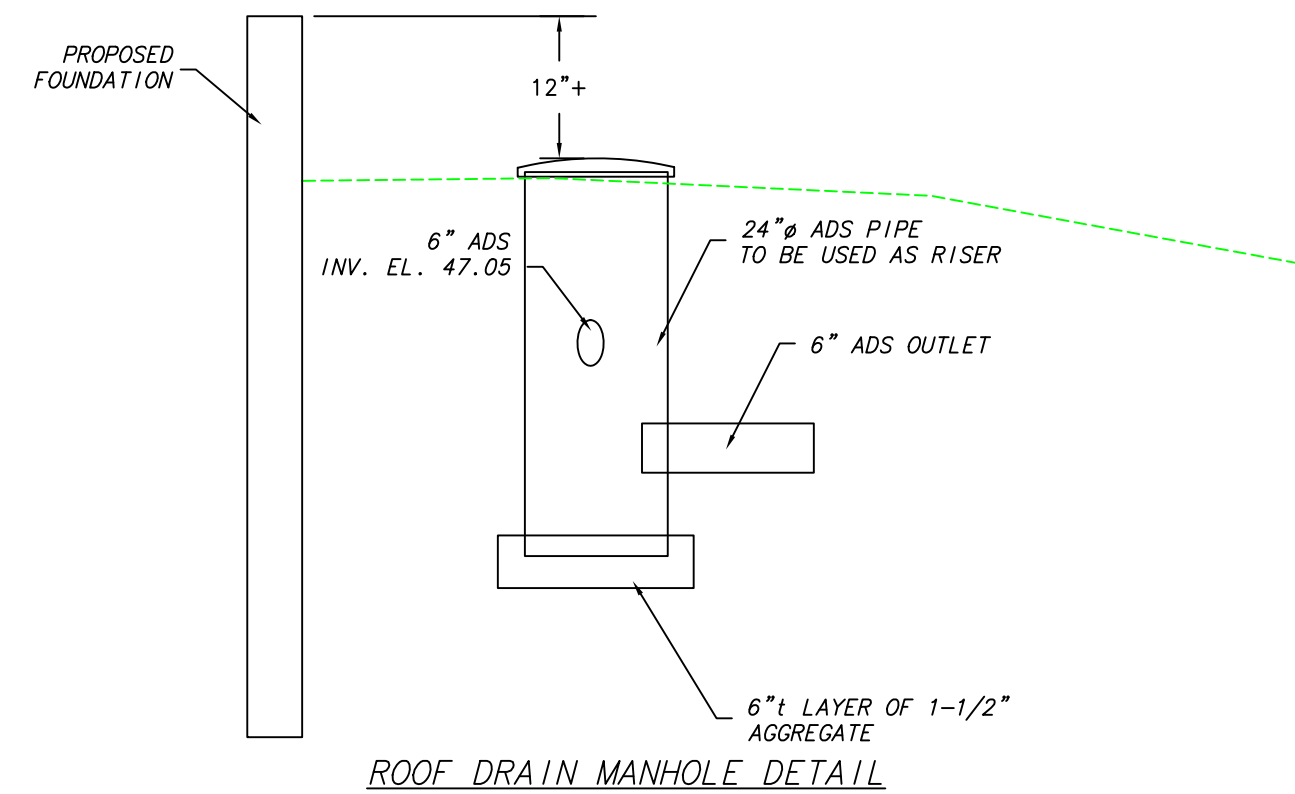
NO.	DATE	DESCRIPTION	BY



- NOTES:
1. WEIGHT (EMPTY): 25 LB MAX. NO CARTRIDGES
 2. MATERIAL:
 - A) ADJUSTABLE FLANGE AND DEFLECTOR: ALUMINUM ALLOY 6063-T6
 - B) BASIN: PLASTIC: POLYPROPYLENE POLYETHYLENE COPOLYMER
 - C) CORNER FILL: ALUMINUM ALLOY 5052 H32
 - D) SUPPORT HARDWARE: CRES 300 SERIES
 3. PERFORMANCE CHARACTERISTICS (TYP):
 - A) DENS. CAPACITY: 2.2 G/PT
 - B) FILTERED FLOW RATE (IF AN STANDARD CARTRIDGE): 115 GPM (2% CFS)
 - C) PRIMARY BYPASS FLOW RATE: 1073 GPM (24 CFS)
 - D) SECONDARY BYPASS FLOW RATE: 308 GPM (7.3 CFS)
 - E) TOTAL BYPASS FLOW RATE: 1401 GPM (31 CFS)
 4. CLEAR OPENING RANGE: 0.5 INCH INCREMENTS:
 - A) MINIMUM SIZE: 19.0 X 22.0
 - B) MAXIMUM SIZE: 24.0 X 27.0
 5. RECOMMENDED MINIMUM VAULT DEPTH: 2'-IN. BELOW CARTRIDGE
 6. TYPICAL INSTALLATION: REMOVE STORM GRATE, MEASURE CATCH BASIN FRAME CLEAR OPENING AND ADJUST FLANGES TO REST ON GRATE SUPPORT LEDGE. INSTALL STORMBASIN NOSET AND VERIFY THE ADJUSTABLE FLANGES ARE SECURELY RESTING ON THE GRATE SUPPORT LEDGES. INSTALL CORNER FILLER PIECES. REINSTALL THE STORM GRATE DIRECTLY ON THE STORMBASIN SUPPORT FLANGES.
 7. USE ONLY WITH FABCO REPLACEABLE MEDIA CARTRIDGES.

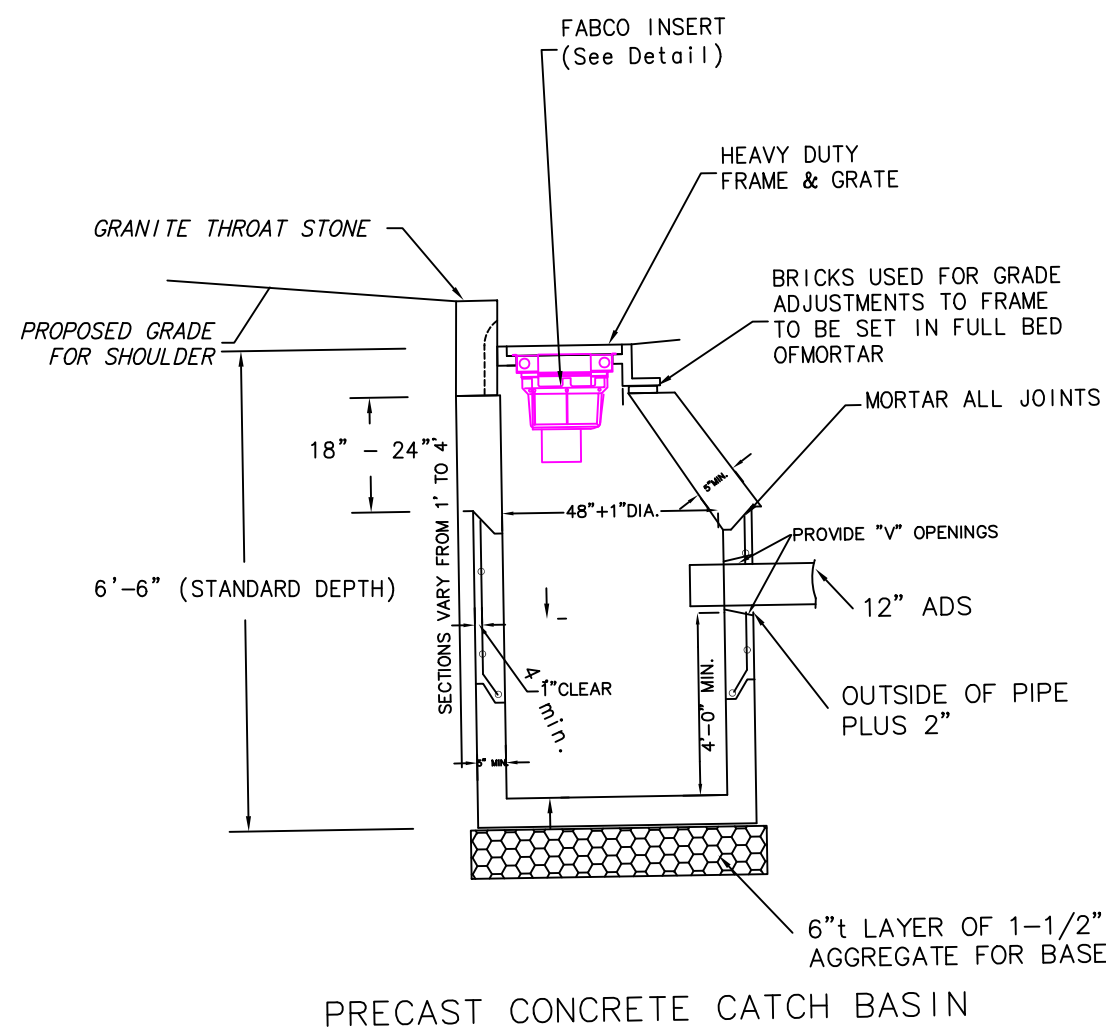
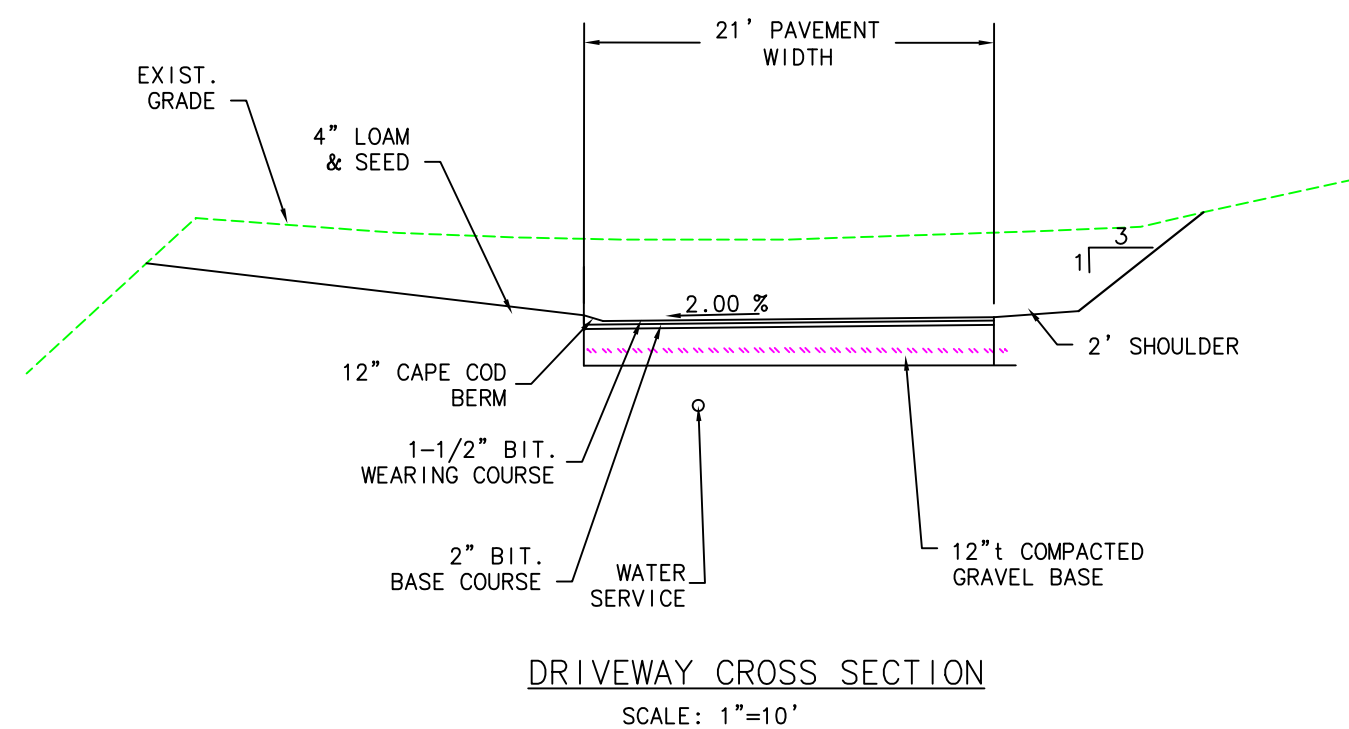


NO.	QTY	PART NUMBER	DESCRIPTION	REVISIONS
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2	1	1000000000	1000000000	2
3	1	1000000000	1000000000	3
4	1	1000000000	1000000000	4
5	1	1000000000	1000000000	5
6	1	1000000000	1000000000	6
7	1	1000000000	1000000000	7
8	1	1000000000	1000000000	8
9	1	1000000000	1000000000	9
10	1	1000000000	1000000000	10



OWNER
TRUSTEES OF THE HINGHAM AFFORDABLE
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TOWN OFFICES
210 CENTRAL STREET
HINGHAM, MA 02043

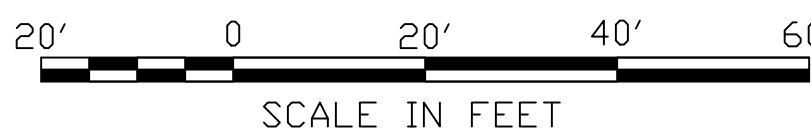
APPLICANT
SOUTH SHORE HABITAT FOR
HUMANITY
20 MATHEWSON DRIVE
WEYMOUTH, MA 02189



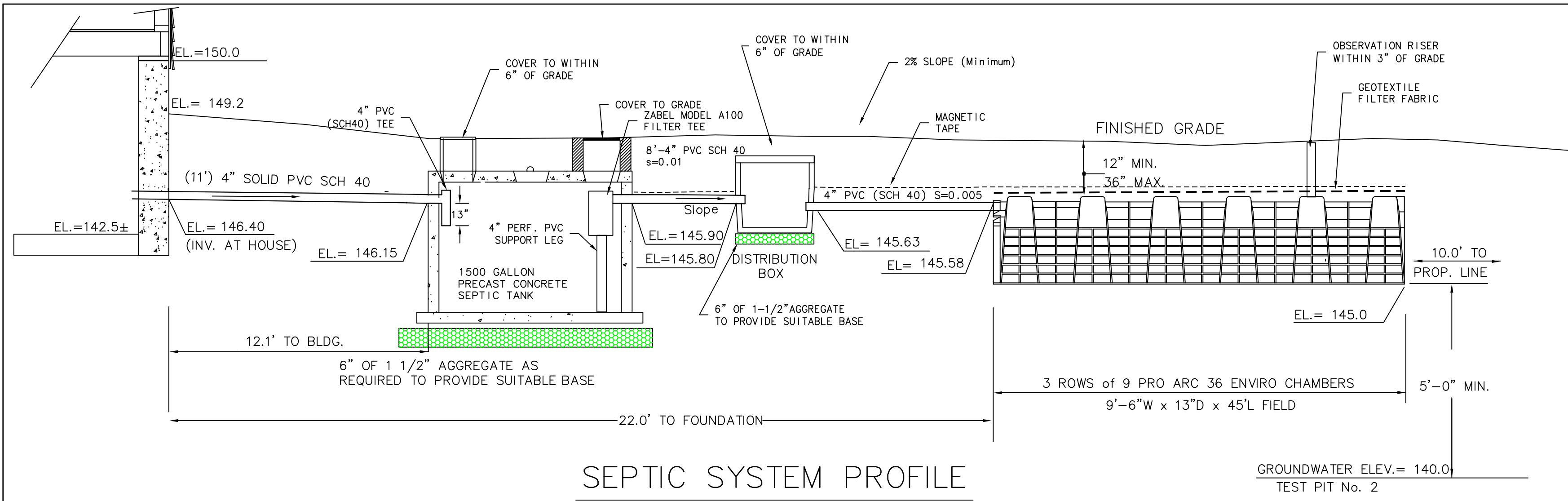
- NOTES
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON M.D.P.W. STD. 201.20, 201.3.0
 2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
 3. FOR DESCRIPTION, MATERIAL AND CONSTRUCTION METHOD, SEE SPECIFICATIONS.

DETAIL SHEET
FOR
PROPOSED DWELLINGS
302-304 WHITING STREET
HINGHAM, MASS.
SCALE: 1"=20' DATE: NOVEMBER 24, 2019

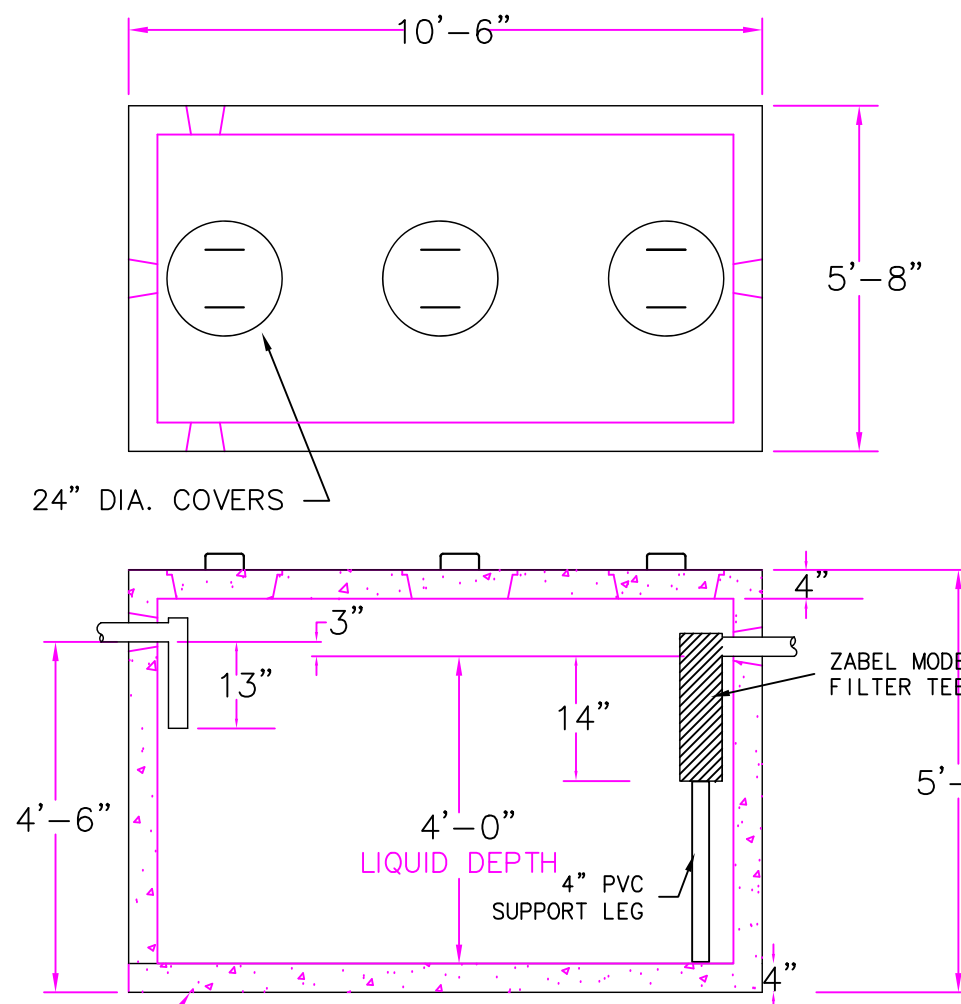
JAMES ENGINEERING, INC.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL: 1- (781)-878-1795



NO.	DATE	DESCRIPTION	BY



SEPTIC SYSTEM PROFILE



1500 GAL. SEPTIC TANK

302 WHITING STREET

TEST PIT # 1
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
8"	A	LOAM	10 YR 3/2		
20"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
36"	C ₁	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
115"	C ₂	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >115"
STANDING N/A

TEST PIT # 2
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
12"	A	LOAM	10 YR 3/2		
26"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
49"	C ₁	M-C SAND	5 Y 5/4		LOOSE, GRAIN 20-25% STONES
112"	C ₂	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >112"
STANDING N/A

TEST PIT # 3
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
12"	A	LOAM	10 YR 3/2		
25"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
36"	C ₁	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
115"	C ₂	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >115"
STANDING N/A

TEST PIT # 4
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

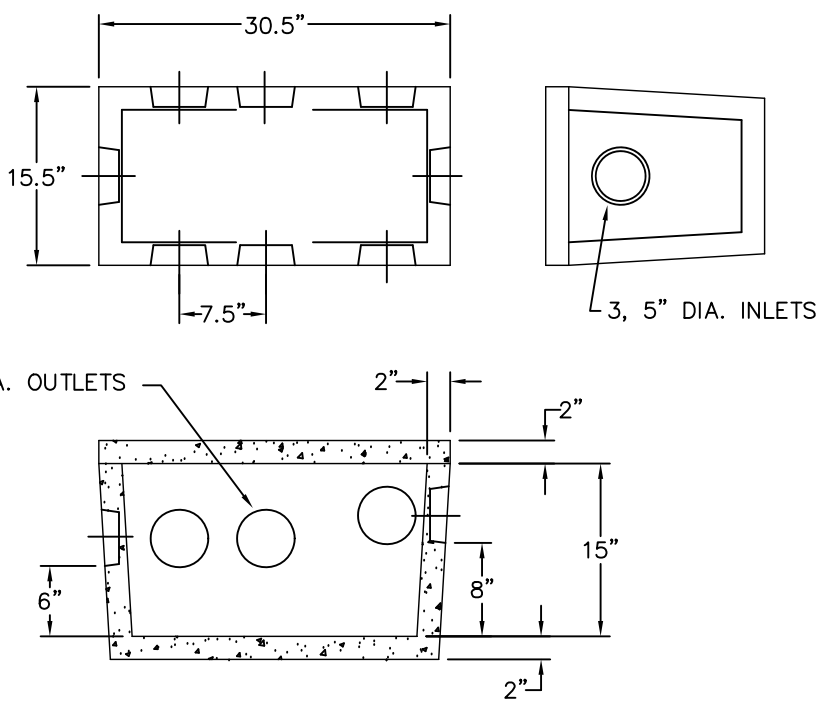
DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
13"	A	LOAM	10 YR 3/2		
25"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
52"	C ₁	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
110"	C ₂	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >110"
STANDING N/A

- NOTES CONTINUED:
14. LEACHING FACILITIES SHALL BE COVERED WITH A GEOTEXTILE FABRIC LAYER.
15. IN AREAS SHOWN ON THE PLAN, ALL TOPSOIL, PEAT AND OTHER IMPERVIOUS MATERIAL SHALL BE REMOVED AND REPLACED WITH A CLEAN GRANULAR SAND FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, WHICH SHALL BE GRADED SUCH THAT;
1. NO MATERIAL IS LARGER THAN 2 INCHES.
 2. NOT MORE THAN 45% IS RETAINED ON THE #4SIEVE;
 3. OF THE FRACTION PASSING THE #4 SIEVE, THE MATERIAL SHALL FALL WITHIN THE GRADATION LIMITS AS FOLLOWS:
- | SIEVE SIZE | PERCENT PASSING |
|------------|-----------------|
| #50 | 10-100% |
| #100 | 0-20% |
| #200 | 0-5% |
18. A SIEVE ANALYSIS OF THE MATERIAL SHALL BE PERFORMED TO DETERMINE THAT IT MEETS THE GRADATION REQUIREMENTS AS NOTED ABOVE.
17. A PERCOLATION TEST AND OBSERVATION HOLE SHALL BE CONDUCTED AT THE TIME OF CONSTRUCTION TO CONFIRM THE LTAR AND DETERMINE IF THERE ARE ANY UNSUITABLE SOILS TO BE REMOVED.

18. UNLESS OTHERWISE NOTED, ALL PIPING SHALL BE SCHEDULE 40 PVC AND SHALL BE COVERED BY A MAGNETIC TAPE TO ASSIST WITH LOCATING THE PIPE.
19. UNLESS OTHERWISE NOTED, THERE ARE NO KNOWN WELLS WITHIN 200' OF THE PROPOSED LEACHING FACILITIES.
20. ALL SYSTEM COMPONENTS SHALL BE COVERED WITH A MAGNETIC TAPE TO HELP IDENTIFY LOCATION AFTER INSTALLATION.
21. DESIGN ENGINEER SHALL BE CONTACTED TO INSPECT THE CONSTRUCTION PROGRESS OF THE SYSTEM ;
1. WHEN ALL UNSUITABLE MATERIALS HAVE BEEN REMOVED PRIOR TO REPLACEMENT TO INSPECT THE MATERIAL AT THE BOTTOM OF THE HOLE;
 2. WHEN THE SYSTEM COMPONENTS HAVE BEEN INSTALLED PRIOR TO BACKFILLING; AND
 3. WHEN THE SYSTEM FINAL GRADING HAS BEEN COMPLETED.
22. THE SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD AREA.

23. PRO ARC 36 CHAMBERS SHALL BE OPERATED AND MAINTAINED IN STRICT ACCORDANCE WITH THE GENERAL USE PERMIT ISSUED BY DEP ON AUGUST 27, 2017, AND THE STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS ISSUED BY DEP MARCH 5, 2018



DISTRIBUTION BOX

1. ELEVATIONS REFER TO NGVD
2. BENCH MARK GARAGE SLAB EL. 99.46
3. ESTIMATED DAILY FLOW
3 BEDROOMS X 110 GALLONS PER BEDROOM PER DAY= 330 GALLONS PER DAY.
4. SEPTIC TANK REQ'D CAPACITY = 1500 GALLONS
5. LEACHING AREA REQUIREMENTS RATE <5 M.P.I. CLASS I SOIL
APPLICATION RATE = 0.74 G/SF
USE INFILTRATOR CHAMBER ARC 36 STANDARD
AREA =4.80 S.F. / L.F.
AREA REQ. =330.0 ÷ 0.74 GAL/S.F. =445.9 S.F.
LNTH REQ. =445.9 S.F. ÷ 4.8 S.F./L.F. =92.9 L.F.
6. LEACHING AREA PROVIDED
USE ENVIRO CHAMBER BED 35'L X 9.5' W
3 ROWS OF CHAMBERS 35'L = 105'
EQUIV. AREA PROV. = 105 x 4.8 = 504 S.F.
CAP. PROV=504 X 0.74 G/S.F.= 373.0 G.P.D.

7. HEAVY GRADING MACHINERY SHALL NOT BE PERMITTED TO PASS OVER LEACHING AREAS.
8. ALL CONSTRUCTION TO CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF ENV. PROTECTION SANITARY CODE, TITLE 5, AND THE TOWN OF HINGHAM BOARD OF HEALTH.
9. PERCOLATION DATA
- | PERC RATE | DEPTH OF TEST | DATE |
|-------------|---------------|----------|
| 1. 7 MIN/IN | 36" | 06/04/14 |
| 2. | | |
10. THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE GRINDER.
11. THE FIRST TWO FEET OF EACH LINE EXITING FROM THE "D-BOX" SHALL BE LEVEL.
12. DESIGN ENGINEER TO BE NOTIFIED AT LEAST 48 HOURS PRIOR TO REQUIRED INSPECTIONS.
13. SEPTIC SYSTEM OWNER SHALL HAVE SEPTIC TANK INSPECTED AT LEAST ONCE EACH YEAR & PUMPED AS DEEMED NECESSARY BY THE INSPECTOR NOT LESS THAN ONCE EVERY THREE YEARS .

OWNER
TRUSTEES OF THE HINGHAM AFFORDABLE HOUSING TRUST
TOWN OFFICES
210 CENTRAL STREET
HINGHAM, MA 02043

APPLICANT

SOUTH SHORE HABITAT FOR HUMANITY
20 MATHEWSON DRIVE
WEYMOUTH, MA 02189

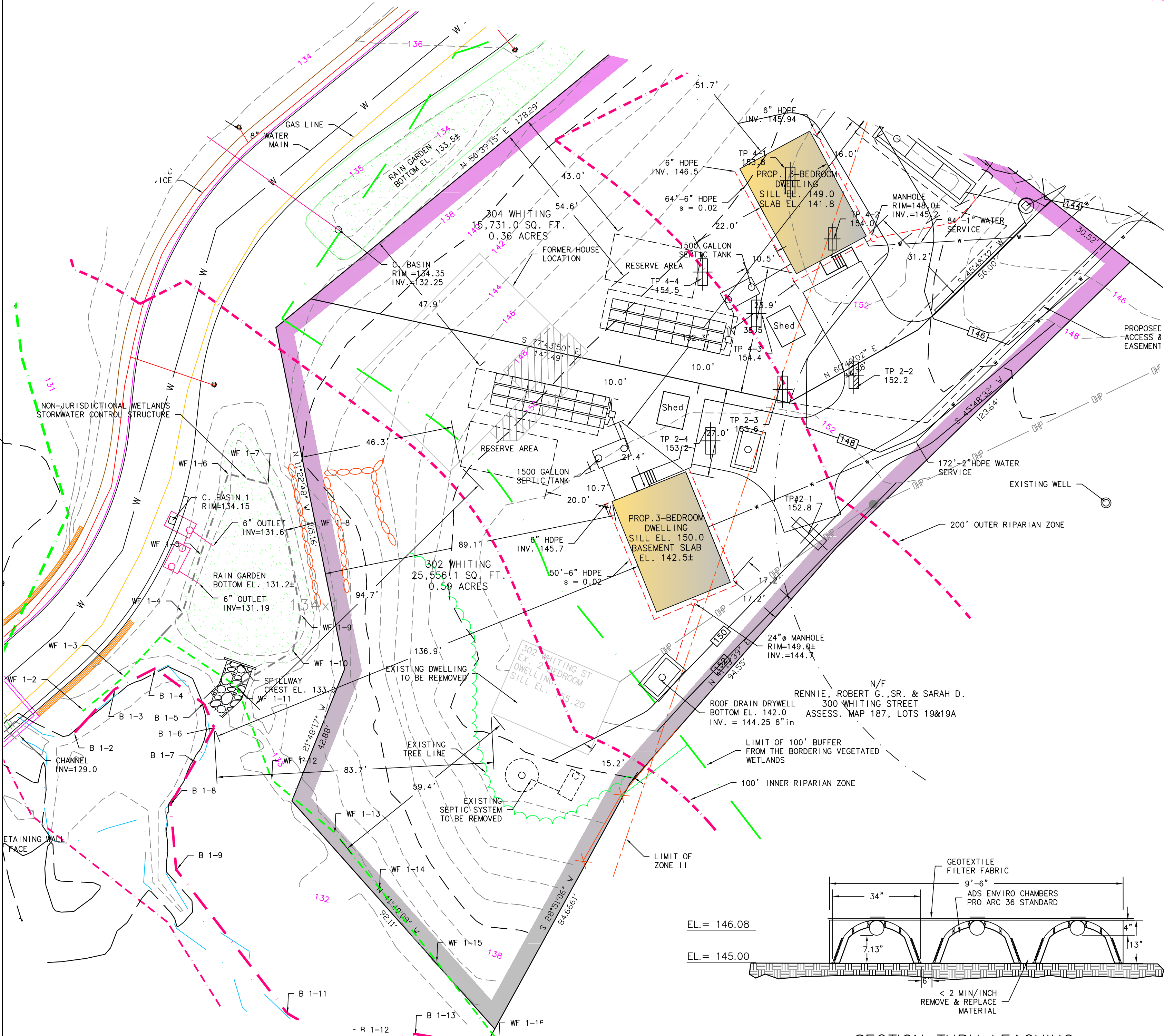
NO.	DATE	DESCRIPTION	BY

PROPOSED
SUBSURFACE DISPOSAL SYSTEM
302 WHITING STREET
HINGHAM, MA.

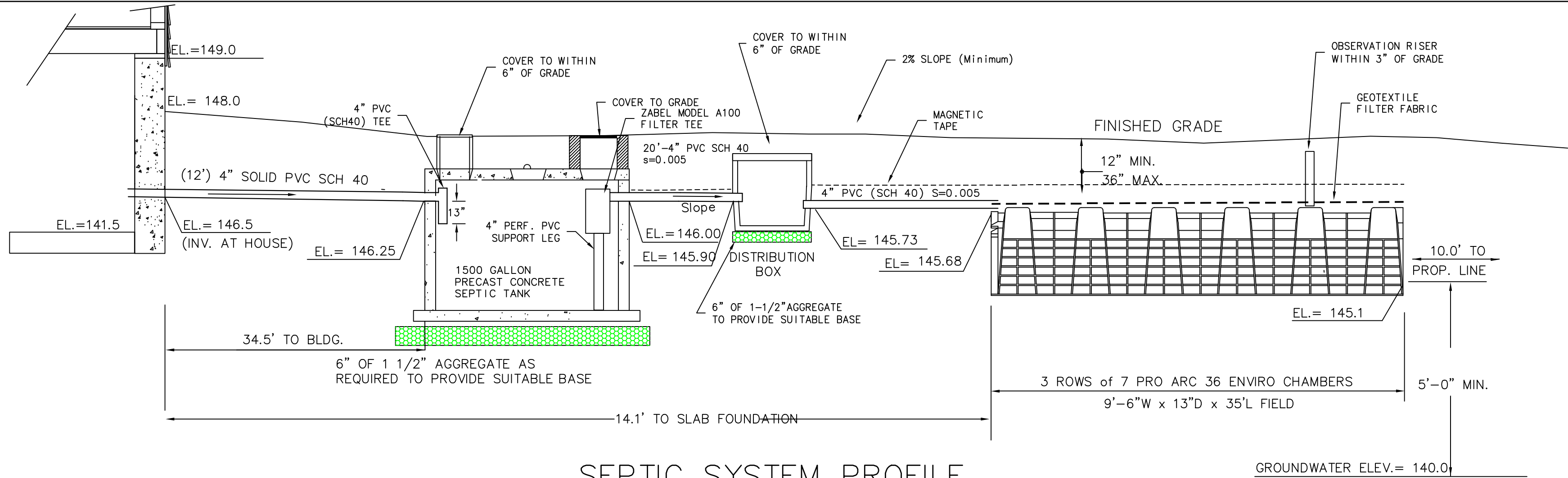
JAMES ENGINEERING, Inc.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL:1-(781) 293-2255

FEET 20 0 20 40 60

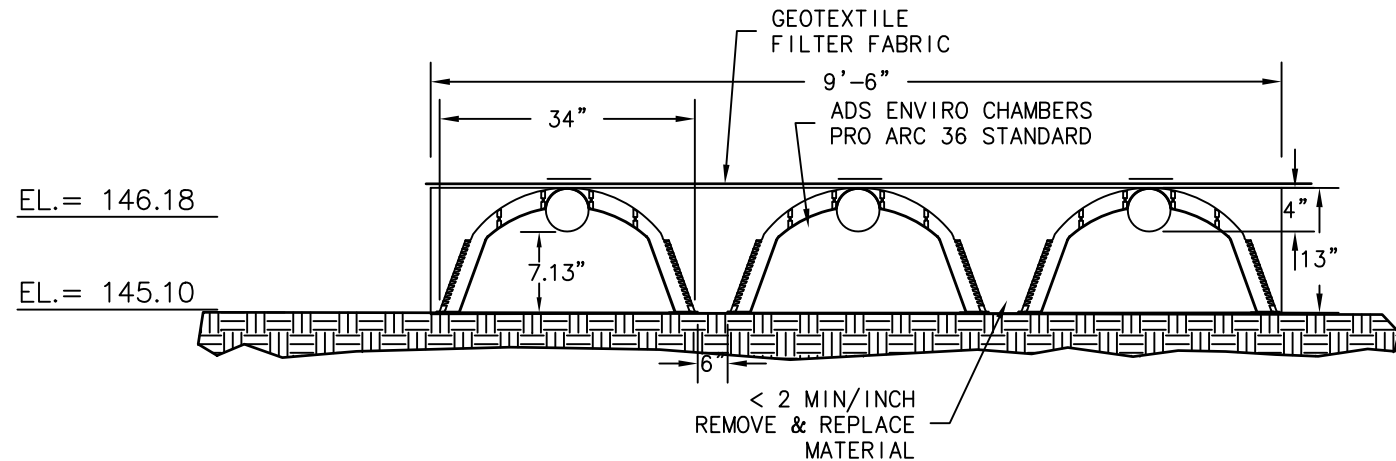
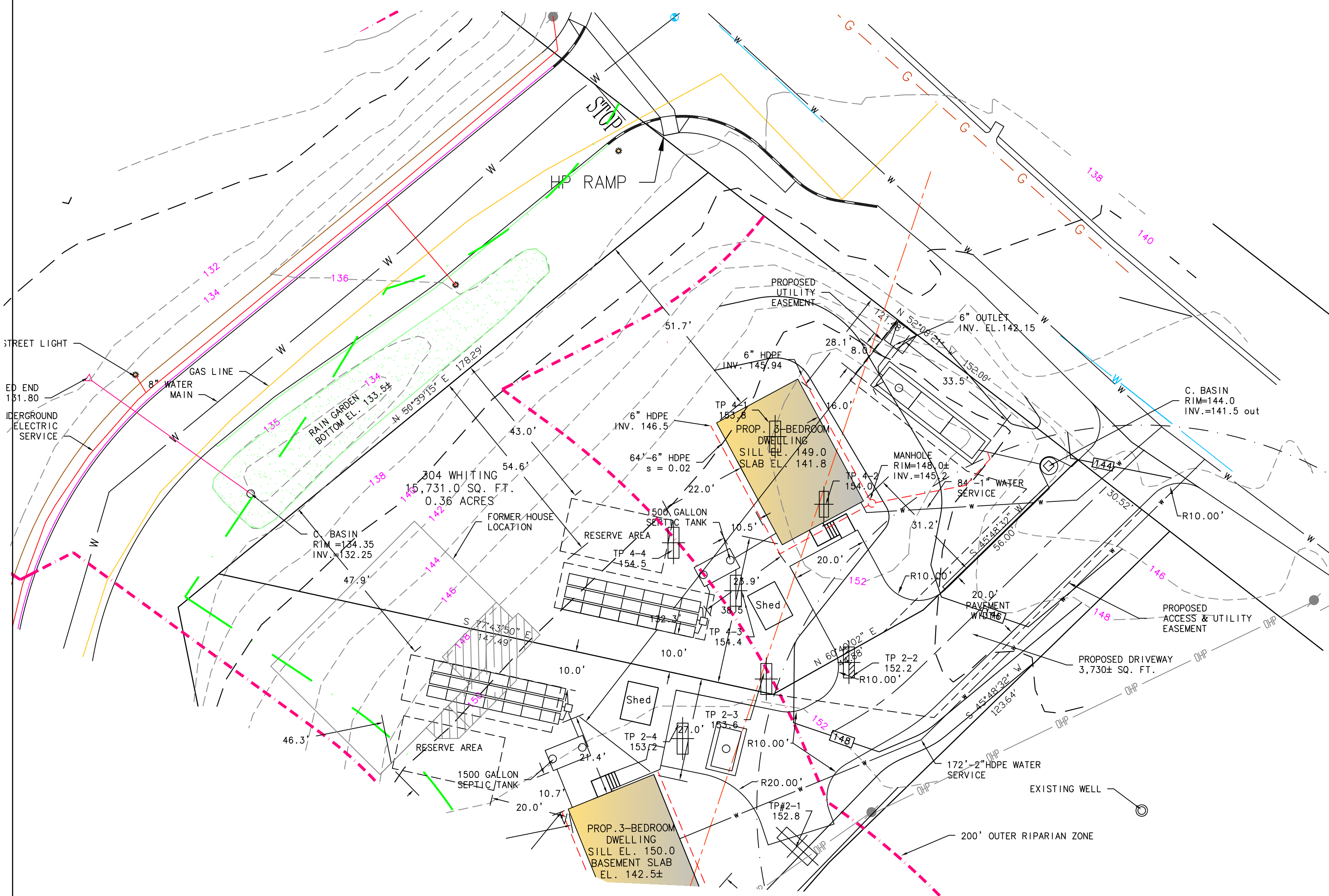
SHEET NUMBER
6 OF 7
SCALE: 1"=20'
DATE: 11/24/19
Penniman Knoll.dwg
DRAWN: NLJ/ACAD
CHECKED: G.D.J.



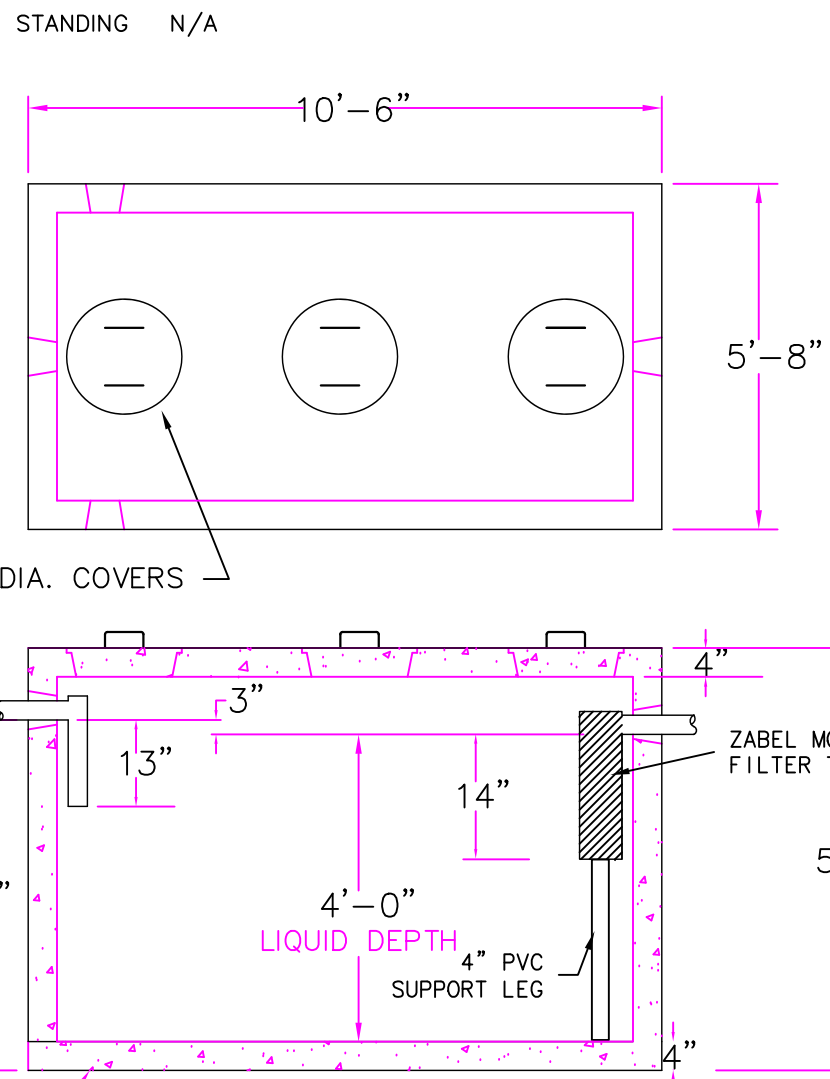
SECTION THRU LEACHING



SEPTIC SYSTEM PROFILE



SECTION THRU LEACHING



1500 GAL. SEPTIC TANK

304 WHITING STREET

TEST PIT # 1
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MANGEL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
10"	A	LOAM	10 YR 3/2		
24"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
49"	C1	M-C SAND	5 Y 5/4		LOOSE, GRAIN 20-25% STONES
115"	C2	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >115"
STANDING N/A

TEST PIT # 2
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MANGEL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
13"	A	LOAM	10 YR 3/2		
25"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
52"	C1	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
110"	C2	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >110"
STANDING N/A

TEST PIT # 3
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MANGEL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
13"	A	LOAM	10 YR 3/2		
29"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
48"	C1	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
115"	C2	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >115"
STANDING N/A

TEST PIT # 4
PERFORMED BY: GARY D. JAMES, P.E.
WITNESSED BY: M. MacDonald, B.O.H.
PERC RATE: <2 MIN./IN.
DATE 10/23/03

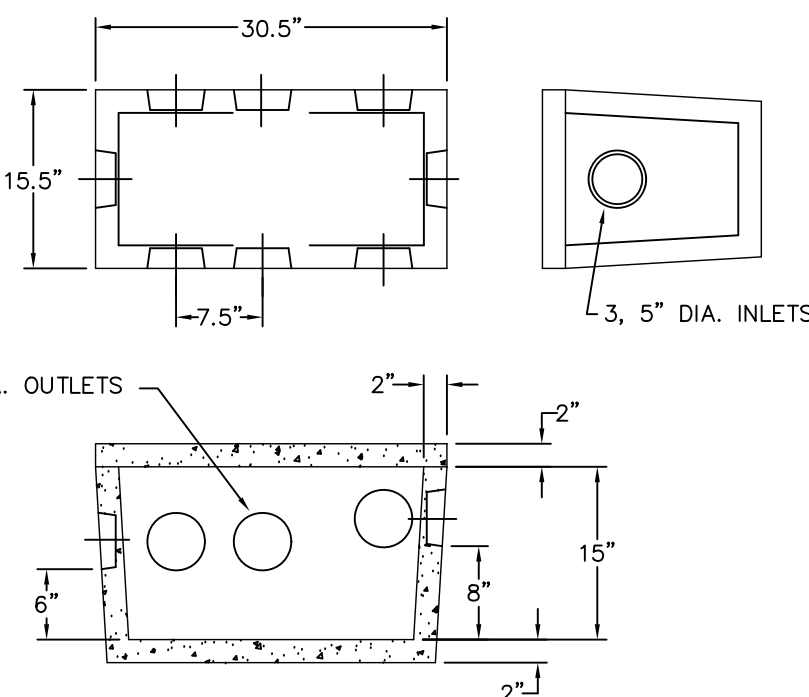
DEPTH FROM SURFACE (INCHES)	SOIL HORIZONS	SOIL TEXTURES (USDA)	SOIL COLOR (MANGEL)	SOIL MOTTLING	OTHER (STRUCTURES, CONSISTENCY & GRAVEL)
10"	A	LOAM	10 YR 3/2		
20"	B	LOAMY SAND	10 YR 5/6		FRIABLE, CRUMB 10-15% STONES
45"	C1	M-C SAND	5 Y 5/4		LOOSE, GRAIN 25-30% STONES
112"	C2	MED SAND	5 Y 5/4		LOOSE, GRAIN 0-5% STONES

WEeping FROM PIT FACE: N/A
ESTIMATED DEPTH TO MAX. G.W. >112"
STANDING N/A

- NOTES CONTINUED:
14. LEACHING FACILITIES SHALL BE COVERED WITH A GEOTEXTILE FABRIC LAYER.
15. IN AREAS SHOWN ON THE PLAN, ALL TOPSOIL, PEAT AND OTHER IMPERVIOUS MATERIAL SHALL BE REMOVED AND REPLACED WITH A CLEAN GRANULAR SAND FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, WHICH SHALL BE GRADED SUCH THAT;
1. NO MATERIAL IS LARGER THAN 2 INCHES.
 2. NOT MORE THAN 45% IS RETAINED ON THE #4SIEVE;
 3. OF THE FRACTION PASSING THE #4 SIEVE, THE MATERIAL SHALL FALL WITHIN THE GRADATION LIMITS AS FOLLOWS:
- | SIEVE SIZE | PERCENT PASSING |
|------------|-----------------|
| #50 | 10-100% |
| #100 | 0-20% |
| #200 | 0-5% |
16. A SIEVE ANALYSIS OF THE MATERIAL SHALL BE PERFORMED TO DETERMINE THAT IT MEETS THE GRADATION REQUIREMENTS AS NOTED ABOVE.
17. A PERCOLATION TEST AND OBSERVATION HOLE SHALL BE CONDUCTED AT THE TIME OF CONSTRUCTION TO CONFIRM THE LTAR AND DETERMINE IF THERE ARE ANY UNSUITABLE SOILS TO BE REMOVED.
18. UNLESS OTHERWISE NOTED, ALL PIPING SHALL BE SCHEDULE 40 PVC AND SHALL BE COVERED BY A MAGNETIC TAPE TO ASSIST WITH LOCATING THE PIPE.
19. UNLESS OTHERWISE NOTED, THERE ARE NO KNOWN WELLS WITHIN 200' OF THE PROPOSED LEACHING FACILITIES.
20. ALL SYSTEM COMPONENTS SHALL BE COVERED WITH A MAGNETIC TAPE TO HELP IDENTIFY LOCATION AFTER INSTALLATION.
21. DESIGN ENGINEER SHALL BE CONTACTED TO INSPECT THE CONSTRUCTION PROGRESS OF THE SYSTEM :
1. WHEN ALL UNSUITABLE MATERIALS HAVE BEEN REMOVED PRIOR TO REPLACEMENT TO INSPECT THE MATERIAL AT THE BOTTOM OF THE HOLE;
 2. WHEN THE SYSTEM COMPONENTS HAVE BEEN INSTALLED PRIOR TO BACKFILLING; AND
 3. WHEN THE SYSTEM FINAL GRADING HAS BEEN COMPLETED.
22. THE SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD AREA.
23. PRO ARC 36 CHAMBERS SHALL BE OPERATED AND MAINTAINED IN STRICT ACCORDANCE WITH THE GENERAL USE PERMIT ISSUED BY DEP ON AUGUST 27, 2017, AND THE STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS ISSUED BY DEP MARCH 5, 2018.

1. ELEVATIONS REFER TO NGVD
2. BENCH MARK GARAGE SLAB EL. 99.46
3. ESTIMATED DAILY FLOW
3 BEDROOMS X 110 GALLONS PER BEDROOM PER DAY= 330 GALLONS PER DAY.
4. SEPTIC TANK REQ'D CAPACITY = 1500 GALLONS
5. LEACHING AREA REQUIREMENTS RATE <5 M.P.I. CLASS I SOIL
APPLICATION RATE = 0.74 G/SF
USE INFILTRATOR CHAMBER ARC 36 STANDARD
AREA =4.80 S.F. / L.F.
AREA REQ. =330.0 ÷ 0.74 GAL/S.F. =445.9 S.F.
LNTH REQ. =445.9 S.F. ÷ 4.8 S.F./L.F. =92.9 L.F.
6. LEACHING AREA PROVIDED
USE ENVIRO CHAMBER BED 35'L X 9.5' W
3 ROWS OF CHAMBERS 35'L = 105'
EQUIV. AREA PROV. = 105 x 4.8 = 504 S.F.
CAP. PROV=504 X 0.74 G/S.F.= 373.0 G.P.D.

7. HEAVY GRADING MACHINERY SHALL NOT BE PERMITTED TO PASS OVER LEACHING AREAS.
8. ALL CONSTRUCTION TO CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF ENV. PROTECTION SANITARY CODE, TITLE 5, AND THE TOWN OF HINGHAM BOARD OF HEALTH.
9. PERCOLATION DATA
- | PERC RATE | DEPTH OF TEST | DATE |
|--------------|---------------|----------|
| 1. <2 MIN/IN | 30" | 10/23/03 |
| 2. <2 MIN/IN | 30" | 10/23/03 |
| 3. <2 MIN/IN | 28" | 10/23/03 |
| 4. <2 MIN/IN | 36" | 10/23/03 |
10. THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE GRINDER.
11. THE FIRST TWO FEET OF EACH LINE EXITING FROM THE "D-BOX" SHALL BE LEVEL.
12. DESIGN ENGINEER TO BE NOTIFIED AT LEAST 48 HOURS PRIOR TO REQUIRED INSPECTIONS.
13. SEPTIC SYSTEM OWNER SHALL HAVE SEPTIC TANK INSPECTED AT LEAST ONCE EACH YEAR & PUMPED AS DEEMED NECESSARY BY THE INSPECTOR NOT LESS THAN ONCE EVERY THREE YEARS .



DISTRIBUTION BOX

OWNER
TRUSTEES OF THE HINGHAM AFFORDABLE HOUSING TRUST
TOWN OFFICES
210 CENTRAL STREET
HINGHAM, MA 02043

APPLICANT
SOUTH SHORE HABITAT FOR HUMANITY
20 MATHEWSON DRIVE
WEYMOUTH, MA 02189

NO.	DATE	DESCRIPTION	BY

PROPOSED
SUBSURFACE DISPOSAL SYSTEM
304 WHITING STREET
HINGHAM, MA.

JAMES ENGINEERING, Inc.
125 GREAT ROCK ROAD
HANOVER, MASS. 02339
TEL:1-(781) 878-1795

20 0 20 40 60
FEET

SHEET NUMBER
7 OF 7

SCALE: 1"=20'

DATE: 11/24/19

PennimanKnoll.dwg

DRAWN: NLJ/ACAD

CHECKED: G.D.J.