

**TEST PITS
FOR
SCRIBNER ROAD
FREMONT, NEW HAMPSHIRE
NOVEMBER 12, 2020
JBE Project No. 19175.1**

Performed by: Wayne Morrill, Jones & Beach Engineers, Inc., SSD #1358
Witnessed by: Larry Miner, Fremont Building Inspector

Test Pit #6021

0" - 9"		topsoil
9" - 19"	10YR 4/4	dark yellowish brown fine sandy loam granular, friable
19" - 34"	10YR 5/6	yellowish brown loamy sand granular, friable
34" - 60"	2.5Y 5/3	light olive brown loamy sand granular, friable

SHWT = 32"
Roots to 34"
No H₂O observed
No Refusal observed
Perc Rate = 8 min/inch

Test Pit #6022

0" - 12"		topsoil
12" - 21"	10YR 4/4	dark yellowish brown fine sandy loam granular, friable
21" - 38"	2.5Y 5/6	yellowish brown loamy sand granular, friable
38" - 60"	5Y 6/3	pale olive loamy sand granular, friable

SHWT = 38"
Roots to 38"
No H₂O observed
No Refusal observed
Perc Rate = 6 min/inch

Test Pit #6023

0" - 6"		topsoil
6" - 14"	10YR 5/4	dark yellowish brown loamy sand granular, friable
14" - 63"	5Y 5/3	olive loamy sand granular, firm

SHWT = 14"
Roots to 14"
No H₂O observed
No Refusal observed
Perc Rate = 30 min/inch

Test Pit #6024

0" - 9"		topsoil
9" - 22"	10YR 5/6	yellowish brown loamy sand granular, friable
22" - 60"	5Y 5/2	olive gray loamy sand granular, firm

SHWT = 29"
Roots to 29"
No H₂O observed
No Refusal observed
Perc Rate = 14 min/inch

JONES & BEACH ENGINEERS INC.

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

September 21, 2020

Fremont Planning Board
Attn: Paul Powers, Chairman
295 Main Street
PO Box 120
Fremont, NH 03044

**RE: Subdivision Application
Scribner Road, Fremont, NH
Tax Map 1, Lot 82
JBE Project No. 19175.1**

Dear Mr. Powers:

Jones & Beach Engineers, Inc. respectfully submits a Waiver Request for the above-referenced parcel on behalf of our client, Haus Emily, LLC.

Subdivision Regulations: Section 6. B. 2 & 3 – Well Radius on Lot:

Jones & Beach Engineers is requesting a waiver from the requirement that all well radius be located on the subject lot. The proposed subdivision is a Open Space Preservation Subdivision which allows for a reduction in lot sizes in exchange for the preservation of open space. This allowable reduction in lot sizes along with the nature of the existing lot being long and narrow requires a waiver from the required requirement that the protective well radius be located totally on the subject lot.

Subdivision Regulations: Section 10. 02. R. – Cul-de-sac Road Length:

Jones & Beach Engineers is requesting a waiver from the requirement that the maximum cul-de-sac length be limited to 800'. The subject property is a long-narrow parcel which widens approximately 750' into the subject property. In addition, the narrow section of the subject lot is bisected by wetlands. The requested relief will allow the applicant to access the wider portion of the subject lot for development. Total proposed cul-de-sac length = 1,042 linear feet inclusive of cul-de-sac bulb.

Subdivision Regulations: Section 3. L. – Site Specific Soil Mapping:

Jones & Beach Engineers is requesting a waiver from the requirement to complete Site Specific Soil Mapping of the subject lot. With the exception of the wetland areas, the subject property contains very homogenous soils associated with a typical farm site. This information was

confirmed by test pits completed throughout the development area. The requirement for Site Specific Soil Mapping would therefore be an undo burden to be required.

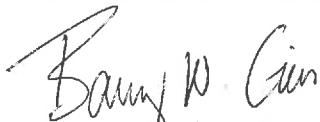
Subdivision Regulations: Section 10.03.F (3). – Minimum Pipe Cover:

Jones & Beach Engineers is requesting a waiver from the requirement that the minimum cover for storm drain lines be thirty-six (36) inches from the top of pipe to finished grade. Proposed culvert P-202 located at approximate Sta 0+30 is provided with 2.45' of cover in the current design. Elevations for the proposed culvert are restricted due to the existing culvert crossing of Scribner Road. In order to provide 36" of cover as required would require the proposed road slope to be increased to approximately 4% at the entrance. The minimum cover as required by the manufacturer is 12". It is our professional opinion that providing 2.45' of cover is preferable to modifying the entrance at the proposed road to approximately 4%.

If you have any questions or need any additional information, please feel free to contact our office. Thank you very much for your time.

Very truly yours,

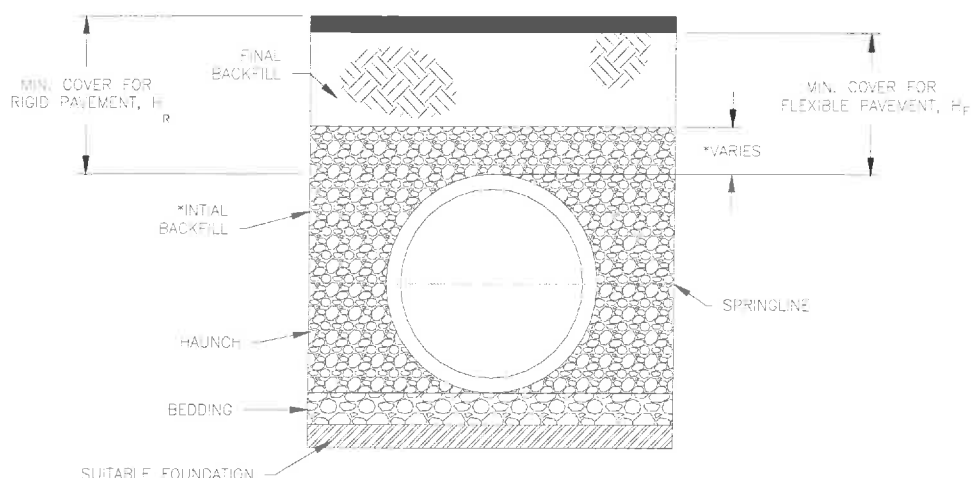
JONES & BEACH ENGINEERS, INC.



Barry W. Gier, PE
Vice President

JONES & BEACH
ENGINEERS INC.

Figure 5-2
Typical Backfill Structure



$H_R, H_F = 12"$ (0.15m) FOR PIPE DIAMETERS UP TO 48" (1200mm)
 $= 24"$ (0.6m) FOR PIPE DIAMETERS 54" (1350mm) AND 60" (1500mm)

BEDDING = 4" (100mm) MIN

*INITIAL BACKFILL, TYPE AND AMOUNT ABOVE CROWN VARIES DEPENDING ON PRODUCT AND APPLICATION. SEE TABLE A-5-2 OF APPENDIX A-5 FOR DETAILS.



FILL AS SPECIFIED BY
DESIGN ENGINEER



STRUCTURAL BACKFILL
(SEE NOTE)

STRUCTURAL BACKFILL
SEE TABLE A-5-2 OR APPENDIX A-5 FOR
MATERIAL AND COMPACTION REQUIREMENTS BASED
ON PIPE MATERIAL AND APPLICATION

Haunch Backfill

The next layer of backfill, the haunching, is the most important since it is this layer that provides the pipe with support against the soil and traffic loadings. Haunching shall be placed in lifts of 4- to 6-inches (0.10 - 0.15m) and compacted in accordance with product specific guidelines listed in Appendix A-5, Table A-5-2 to achieve required depth of fill. Construction of each lift should be repeated up to the spring line.

Initial Backfill

Initial backfill extends from the spring line, and depending on product and application, to the crown of the pipe or six inches (0.15m) above the crown of the pipe. This area of the backfill anchors the pipe and ensures that loads are distributed as evenly as possible into the haunching. The same material used in the haunching shall be used for the initial backfill. Where differing materials are used, backfill material size should be selected as to prevent migration of fines or a geosynthetic shall be used to separate the backfill zones. Additionally, it is crucial to obtain similar backfill strength between fill zones if differing materials are used. Using the same material throughout the embedment zone is recommended for all ADS products; however, using different materials between the haunch and initial backfill zones may be accomplished under strict guidelines that