David A. Olson, CMC
Newton, MA 02459

1. Letter from Albert Pinkhasov. ✓
2. Letter from GC James Morse. ✓
3. Letter from Peter Nolan. ✓
4. Letter from Neighbors. ✓
5. Wall installation guide ✓
6. Pictures in proses installation. ✓
7. Original ISD plan (Exhibit B) ✓
8. 78 Lovett rd original plot (Exhibit A). ✓
9. As-Built (Exhibit C). ✓
10. Original proposal cost. ✓
11. Actual cost ✓
12 Restore backyard cost. ✓
13. Land scape design 2 and cost ✓
14. Additional cost ✓
15. Affidavit from structural Engineer.
16. ISD proposal / Wall special permit
17. Storm Water.

Albert Pinkshov
78 Lovett Rd.
Newton, MA 02459



2/24/14

To Board of Alderman:

Chairman and honorable members of the board on February 11th 2014 I came upon the board unprepared to explain in detail the wall project located at 78 Lovett Rd. On October 1st 2012 I received a building permit from the town to build a single dwelling on parcel number 78. My engineers drew up a plan including a 4' retaining wall at the back of the property the complete width of the parcel. Attached to this letter is a couple plans first plan I will call Exhibit A which is the original plot plan before construction, exhibit B which is original engineered plan with proposed wall, and exhibit C as built plan. Taking a look at exhibit A you can see the hill starts at grade 188 and on exhibit B the new construction ends at 187.49. As per exhibit B the existing hill had to be cut back to 191.5 leaving an 18' back yard area and making wall 4' in height.

I hired AJT Projects to construct the wall and during construction we had a meeting with General Contractor Jim Morse and team members from AJT Projects. After the hill was cut back it was nearly impossible to build only a 4' retaining wall to hold back the hill at the angle it was cut; leaving us the options: 1) either build a near 5.5' retaining wall. 2) move the wall back almost 3' closer to the house, 3) build terraces with under 4' walls. I chose option number three because of the following: The original 18' backyard would have become a 12' foot yard because the wall would have to be moved back three feet and the stairs from the rear of the house would have taken three feet as well. At the same time to have the option to expand the backyard to have a more proportionate backyard -- which is what I did. Before any decision was made I immediately called my engineering team and my surveyor and he came out to property and told me it was ok to build the terraced walls without any special permits being required by the city.

After I was advised this we started constructing with the terrace design. During construction one day inspector Allen Gifford from the city came onto the property and was questioning wall and set back requirements. I told him that we were in line with setbacks as my surveyor had told me I was. The following day me and my General Contractor Jim Morse called the surveyor and told him about the questions and concerns Mr. Gifford had and yet again my surveyor told me not to worry that we were fine. After this we felt confident to proceed and completed the project as seen on exhibit C.

Original cost of wall was supposed to be around $96,000.00 and my actual cost was almost triple. I was not happy when I found this out however it had to be done to make sure the hill was secure and there was no danger to the newly constructed home.

This was not intentionally done and I do realize I may have made a mistake by not seeking the help of the city. I do ask the board again for forgiveness of this mistake.

Albert Pinkhasov

James Morse 2/27/14

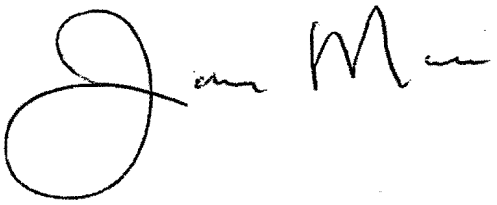
210 north main street

Sharon, MA. 02067

To Board of Alderman ;

Chairman and honorable members of the board, I James Morse , construction supervisor license #cs-072337 contractor working for Albert Pinkshov at 78n Lovett Rd. have read his letter addressed to the chairman and honorable members of the board concerning the retaining wall at the back of his property, and agree with Mr. Pinkshov in that he has described the entire process of building the retaining wall in his letter to be true and accurate.

James Morse



Peter Nolan & Associates LLC
697 Cambridge Street, Suite 103
Brighton, MA. 02135
Phone: 857-891-7478/617-782-1533 Fax: 617-202-5691

February 26, 2014

Board of Aldermen,
1000 Commonwealth Ave,
Newton, MA 02459



RE: Wall Special Permit Application,
78 Lovett Rd,
Newton, MA

Dear Mr. Chairman,

Please be advised that we, Peter Nolan & Associates, LLC, carried out the civil site plan for 78 Lovett Road for Mr. Pinkshov. This civil plan showed a single retaining wall at the rear of the building and was approved by ISD, City of Newton. During the course of construction and when Mr. Pinkoshov saw the proposed location of the wall in real life, he decided his back yard area was too small and not in proportion with the house he was building, so he called Edmond at our office and discussed the possibility of moving back the wall and creating terraces. Edmond informed Mr. Pinkhosov at that time that he could move back and potentially terrace the wall as he was not close to the rear yard setback. Edmond was under the assumption that the second terrace on the side walls would be built outside of the setback and would not cause a violation and was under that assumption until Mr. Gifford, building inspector, City of Newton raised the issue when Mr. Pinkshov was attempting to collect his certificate of occupancy.

We assure you that this incident occurred due to a breakdown of communication between Edmond and Mr. Pinkshov. He certainly did not intentionally create a violation in constructing the walls and he was bitterly disappointed when he realized that a violation had been created.

We have also learned about the potential for a breakdown in communication due to verbal instruction during this process and we assure the board, with future clients and projects where we learn of the potential, for the client, to deviate from the approved plans, we will be strongly recommending them to have their plans revised, thus reviewd by ourselves, by the client, and most importantly reviewed by the City of Newton, ISD thus virtually eliminating the potential for zoning violation.

We thank you very much for your time on this matter.

If you have any questions or desire additional information please feel free to call.

Sincerely,

Peter Nolan

Raviv and Gil Chalamish

70 Lovett Rd

Newton, MA 02459



To: City of Newton

Date: 12/11/2013

RE: Zoning Department

We have come to understand that our neighbor, Albert Pinkhasov (78 Lovett Rd), has an issue with the zoning department regarding the retaining wall which is next to our property. We have no issue with the current structure of the wall and find the wall is pleasing aesthetically. We would like you to know that Mr. Pinkhasov replaced our fence as a courtesy during the building process.

Thank you,

Raviv & Gil Chalamish


12/15/14

TO WHOM IT MAY CONCERN.
OUR NEIGHBOR ALBERT PINKHASOV IS A HARD WORKING RESPONSIBLE PERSON.
I BELIEVE HE + HIS FAMILY WILL BE A WONDERFULL ADDITION TO OUR NEIGHBORHOOD.

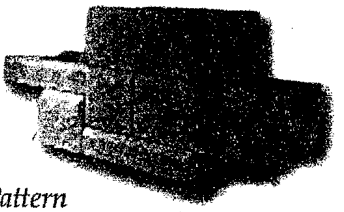
YOURS TRULY
HANK ABBOTT
108 LOVETT RD
NEWTON, MA 02459



PCAB ACCREDITED
Compounding Pharmacy
401 Great Plain Avenue, Needham, MA 02492 *phone* 781.449.0550 *fax* 781.449.7993 *toll free* 1.888.500.2660
*email* birdshillpharmacy@verizon.net


## *AB® Collection*

The ***AB Collection*** gives a smooth fluid finish to any outdoor living space. Use the blocks individually or blend them together to create patterned walls that will define your space for years to come. Enjoy the beauty and durability of this collection's classic cut stone look that adds distinguished style to any landscape.



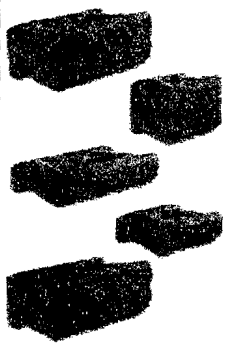
*AB Ashlar Blend™ Pattern*

From the AB Collection, blend the AB Classic, AB Lite Stone, AB Jumbo Junior and the AB Junior Lite (if available) together to create patterned walls.



Table 3

**AB® Collection**

| Classic Cut Stone | Name | Setback | Coverage | Weight | Approximate Dimensions |
|---|---|---|---|---|---|
|  | AB Stones *Best Single Block Choice* | 12° | 1 sq ft. approx.<br>11 blk per m² | 75 lbs<br>34 kg | 8 in. H x 12 in. D x 18 in. L<br>200mm H x 300mm D x 460mm L |
| | AB Jumbo Jr | 6° | 0.5 sq ft. approx.<br>22 blk per m² | 35 lbs<br>16 kg | 8 in. H x 9.5 in. D x 9 in. L<br>200mm H x 240mm D x 230mm L |
| | AB Lite Stone | 6° | 0.5 sq ft. approx.<br>22 blk per m² | 35 lbs<br>16 kg | 4 in. H x 12 in. D x 18 in. L<br>100mm H x 300mm D x 460mm L |
| | AB Junior Lite | 6° | 0.25 sq ft. approx.<br>45 blk per m² | 18 lbs<br>8 kg | 4 in. H x 12 in. D x 9 in. L<br>100mm H x 300mm D x 230mm L |
| | AB Classic | 6° | 1 sq ft. approx.<br>11 blk per m² | 75 lbs<br>34 kg | 8 in. H x 12 in. D x 18 in. L<br>200mm H x 300mm D x 460mm L |

Actual dimensions, weights and setbacks will vary by manufacturer. Check with your local Allan Block Dealer for exact specifications and color availability. Caps and corner blocks are also available.

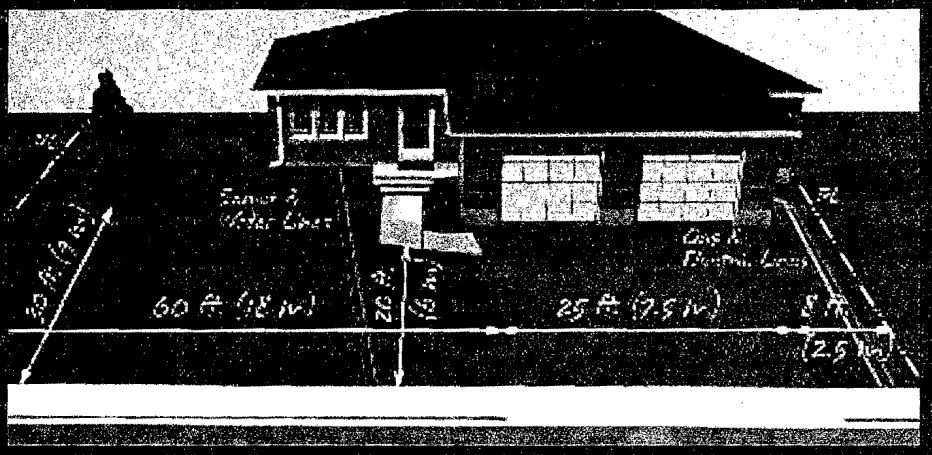


Visit allanblock.com for more information.

# Plan for Potential

ALLAN

allanblock.com




A detailed site plan drawn to scale will help foresee design and construction challenges and provide an accurate reference for estimating. This will become your working or approved plans for the project.

## Job Site Considerations

### Lot Lines

Your city will have a copy of your lot survey on file. The survey will not only identify property lines, but will provide an accurate scaled template of your site to help with planning.

### Utilities

Buried utility lines are not only dangerous, they may prevent you from locating your landscape project where you want. Call the local utility companies and have these lines marked.

### Permits

Building permits may be required if the wall is above a certain height. Check to see what your local city code requires. An approved engineered wall design or an Allan Block pre-engineered solution may be needed in order to get a building permit. Contact your local AB Dealer for more details.

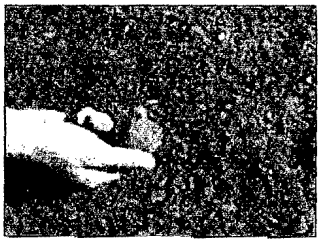
### Neighbors

It's always nice (and smart too) to let your neighbors know about your project before you begin.

### Soils

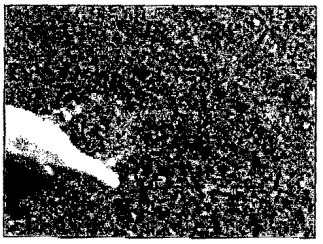
***Clay soils put more pressure on a wall than sandy soils because they hold moisture. Identify the soils at your site.***

To identify the soils, a good test is to pick up a small handful of the soil in the palm of your hand and squeeze it to form a ball. Take a sample from at least 12 in. (300 mm) below the surface.



### Clay Soils

Clay soil will stick together to form a ball. Clay soils retain moisture which will add pressure behind the walls. Typically most soils will be classified as clay and can be used in your project. However, they may require additional reinforcement.



### Sandy Soils

Sandy soil, will not stick together because they are granular with no silty fine particles. These soils allow for good drainage and are ideal for building walls.

### Organic Soils

Organic soils will stick together but will not hold once the pressure is released. They should only be used to finish off the top 8 in. (200 mm) of a wall.

***NEVER use organic soils to build the wall.***

# Getting Ready

ALLAN

allanblock.com

**Always build on solid ground.**

## Remember

*Safety always comes first.*

## Tools & Equipment you may need

**HAND TOOLS** Safety glasses, gloves, dust mask, ear protection, knee pads, 4' level, torpedo level, tape measure, string line, chisel, hand tamper, dead blow hammer, shims, broom, round and square shovel.

**POWER TOOLS** Plate compactor, concrete saw with diamond blade, skid loader, transit/site level.



# Job Site Considerations

### *Site Access*

When planning your project, make sure you can access your wall site with construction equipment and materials. For sites with restricted access, plan out where you will stage and store your block, wall rock and other materials.

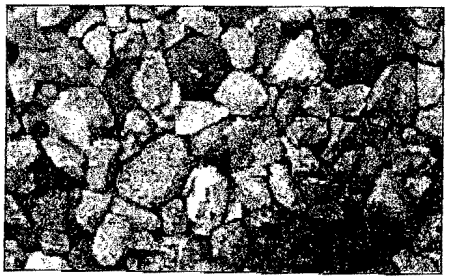
### *Rental Equipment*

Plate compactors, concrete saws, skid loaders and transit levels are very useful when building a landscape wall. These are available at most equipment rental centers.

### *Wall Rock*

To build a quality wall, use a clean, granular rock underneath the base course to create a firm foundation for your project. Good drainage and compaction will add to the quality and performance of your finished wall.

We refer to the material used for the base, within and behind the block as "Wall Rock". Wall Rock is a gravel in varying sizes, ideally from 0.25 in. to 1.5 in. (6 to 38 mm), of angular or smooth compactible aggregates with no sands, silts or clay material that would limit the free draining nature of the aggregate. Your AB Dealer will have what you need.

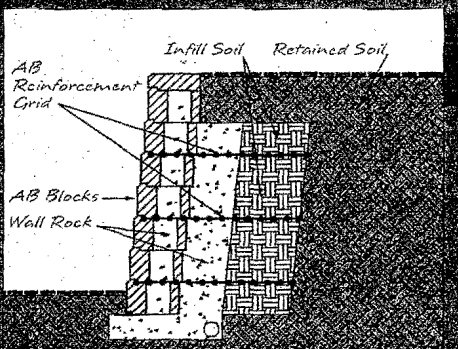


Visit allanblock.com for more information.

# Soils

## *Working with Soils*

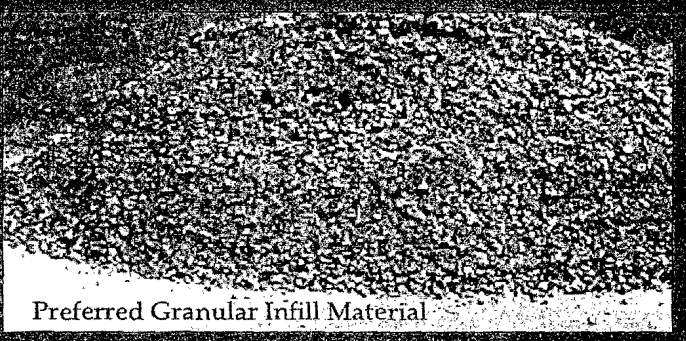
**The soils used below and behind the wall are a critical part of the total wall structure.** A reinforced landscape wall contains four basic building materials - the AB blocks, wall rock, geogrid reinforcement, and the infill soils surrounding the geogrid layers.




## *Soils*

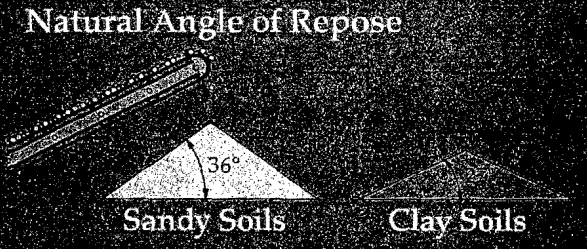
Understanding the properties and characteristics of soils is key to building better walls. Different soil types will dictate the amount of time needed for compaction, the amount of reinforcement required, and potentially the cost of the wall.

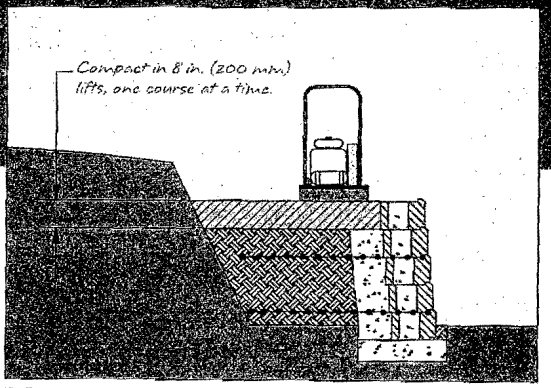
Granular soils are better to build with than clay soils. Sand and gravel will compact better, drain better, and often will need less reinforcement. Soils are typically defined by a friction angle or measurement of the internal strength of the soil. This angle is approximately the natural angle of repose. As soil falls off a conveyor to make a pile, the angle it creates represents the natural angle of repose. Check with a qualified geotechnical engineer to obtain an accurate soil classification.

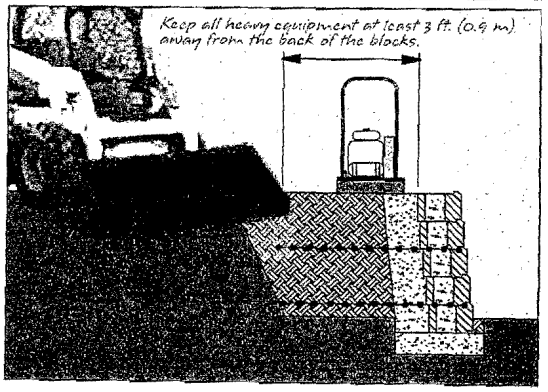

Preferred Granular Infill Material

## *Soil Selection*

If the on-site soils are of a very low quality under or behind the wall, you should remove and replace them with stronger soils. Using stronger soils will reduce reinforcement, allow faster compaction and have better long-term performance. Heavy clays and organic soils are both unsuitable in the reinforced zone and should be removed and replaced. Silty sands and sand with clay will require additional care, and attention to water management when placed and compacted.



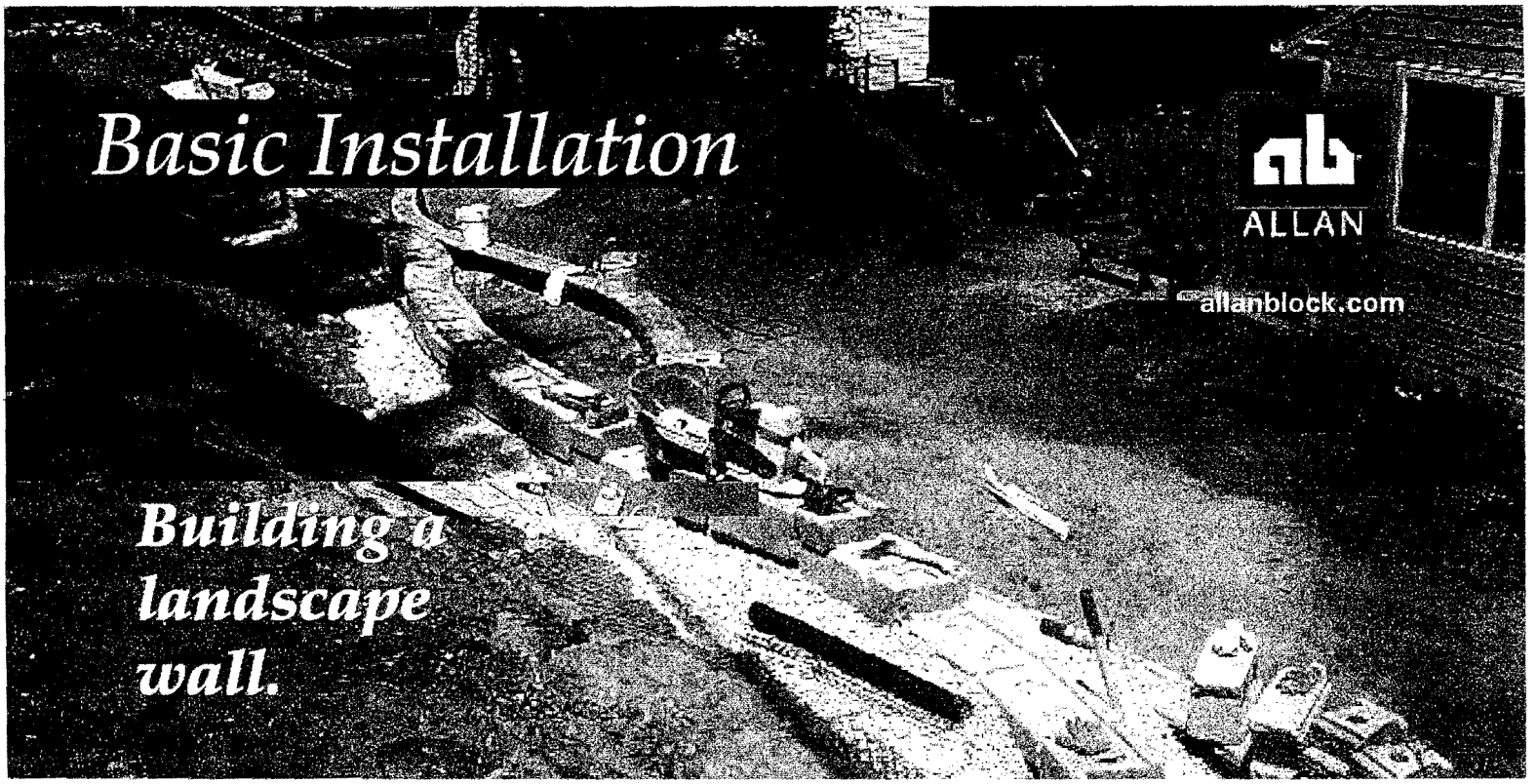




## *Compaction*

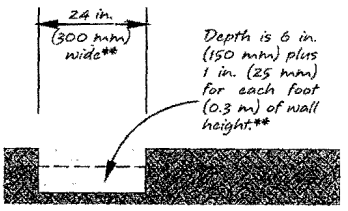
**Proper placement and compaction of the infill soils is critical.** The most important step in getting proper compaction is the placement of the soil in "lifts". Compacting in lifts, or layers, of less than 8 in. (200 mm) will facilitate quality compaction. Placement and compaction in lifts that exceed 8 in. (200 mm) will result in less than adequate soil strength. Compaction equipment must be sized according to the type of material being compacted. Always backfill and compact after each course of block is placed. Consult with a local equipment supplier to ensure that proper compaction equipment is used.

The consolidation zone runs from the back of the block back 3 ft. (0.9 m) into the infill soil. Only walk behind plate compaction equipment is allowed within the consolidation zone. A minimum of two passes with a walk behind plate compactor is required, starting on top of the block and compacting in paths that run parallel with the wall to the back of the excavated area.




## Base Preparation

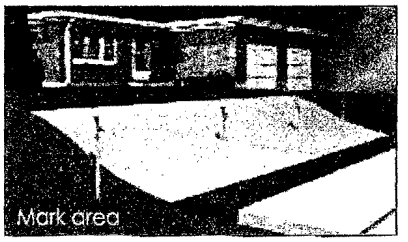
- To start your layout, place stakes to represent the location of the front of the wall. Using a string line or paint, mark out the entire length. A garden hose is an excellent tool to use when laying out curved walls.
- Excavate the area by removing all surface vegetation and organic materials from the area. **These cannot be used as backfill material.**
- If reinforcement is needed excavate behind the wall to accommodate the design length of the geogrid. Refer to your approved plans for exact length.
- Starting at the lowest point, dig a base trench the length of the wall. *For walls where the base trench steps up a slope see page 36 for more information.*
- Dig a base trench 24 in. (600 mm) wide the length of the wall.**
- The depth of the trench will be 6 in. (150 mm) plus an additional 1 in. (25 mm) for each 1 ft. (300 mm) of wall height for the amount of buried block that is needed.**
- Compact the base trench making a minimum of two passes with a walk behind plate compactor.
- **Foundation soils at the bottom of the base trench must be firm and solid.** If the soils are made up of heavy clay or wet soils, or the areas have been previously excavated, remove this material and replace with a granular material, compacting in 8 in. (200 mm) lifts or less.



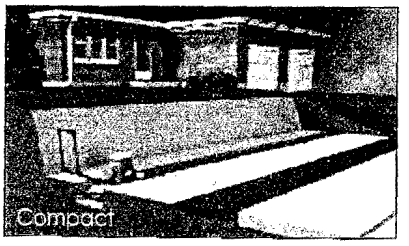

** *For walls under 4 ft. (1.2 m) dig the base trench 18 in. wide (460 mm) and 4 in. deep (100 mm) plus additional to account for the amount of buried block needed.*

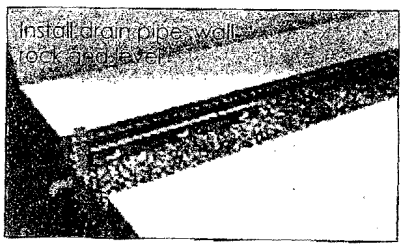
## Base Material

- A drain pipe is required for any reinforced wall, gravity walls over 4 ft. (1.2 m) tall or sites with poor drainage. Place the drain pipe at the lowest possible point toward the back of the trench and vent to daylight every 50 ft. (15 m). See approved plans for location and specifications. *See page 17 for more information.*
- Place a minimum of 6 in. (150 mm) of wall rock in the base trench and rake smooth.
- Compact the wall rock making a minimum of two passes with a plate compactor.
- Check the entire length for level, and adjust as needed.



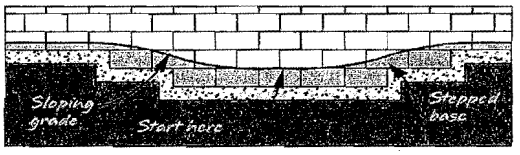




## *Install Base Course - AB and AB Europa Collection*

See page 27 for AB Fieldstone walls.




- Begin the base course at the lowest wall elevation. *For more information on stepping up the base course see page 36.*
- Place all blocks with the raised front lip facing up and forward on the base material near the front of the base trench.
- Check and adjust each block for level and alignment as it is installed. Check the blocks for level frequently from side-to-side and front-to-back. Verify the proper position of all the AB blocks by examining a string line across the back of the blocks or by sighting down the back of the raised front lip.
- Make minor adjustments by tapping the AB blocks with a dead blow hammer or by placing up to 0.5 in. (13 mm) of coarse sand under the blocks.
- Irregularities in the base course become larger as the wall stacks up. Careful attention to a straight and level base course will ensure a quality finished wall.

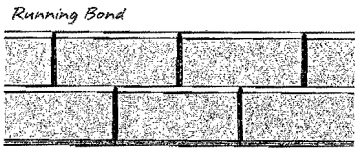
## *Backfilling and Compaction*

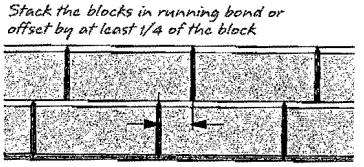
- Fill in the area in front of the blocks with on-site soils. This will keep the base course blocks from shifting while filling and compacting.
- Fill the hollow cores of the base course and 12 in. (300 mm) behind the block with wall rock to the height of the block.
- Use infill or approved on-site soils to backfill behind the wall rock in lifts of no more than 8 in. (200 mm).
- Use a plate compactor to consolidate the wall rock directly behind the block then compact in a path parallel to the wall, working from the back of the block to the back of the excavated area with a minimum of 2 passes. *See page 19 for additional details on compaction.*
- Check the base course for level and adjust as necessary.
- Every course after the first course requires compaction starting on the block.

## *Additional Courses*

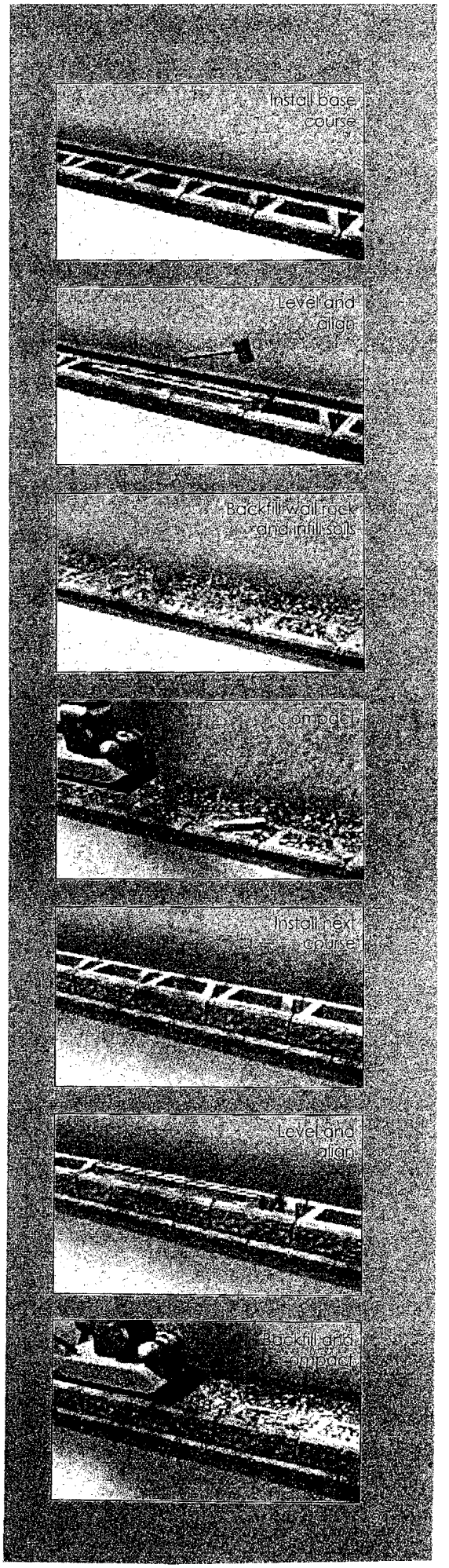
See page 24 for building patterned walls.

- Remove all excess material from the top surface of all blocks. This can be done when installing the next course of block, by sliding the block into place.
- ***If reinforcement is needed go to page 22 to continue the installation process.***
- Stack the next course of blocks so that the vertical seams are offset from the blocks below by at least 1/4 the length of the block.
- Check each block for level and alignment and make adjustments as needed.
- Fill the hollow cores and 12 in. (300 mm) behind the block with wall rock to the height of the block.
- Use infill or approved on-site soils to backfill behind the wall rock in lifts of no more than 8 in. (200 mm).

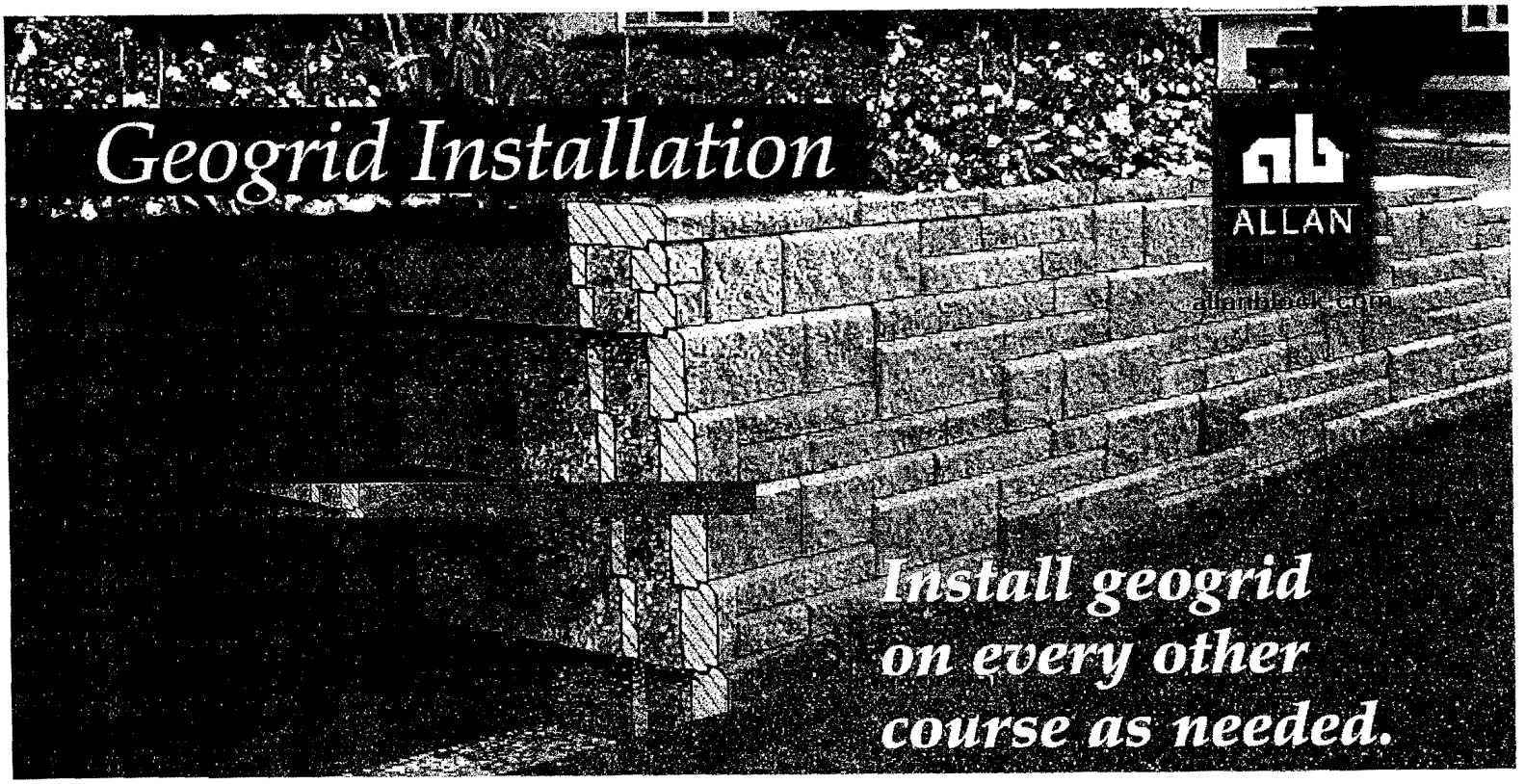



- From the 2nd course and above use a plate compactor to compact directly on the blocks as well as the area behind the blocks. Compact in lifts of 8 in. (200 mm) or less.
- Repeating these steps, complete the wall to the desired height. On the last course, fill behind the blocks with organic soils in place of infill or approved on-site soils. This will assist in any plantings above the wall and also to direct water from running behind the blocks. *See page 48 for information on finishing wall options.*

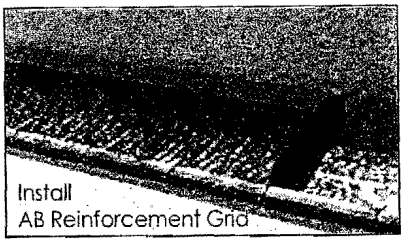


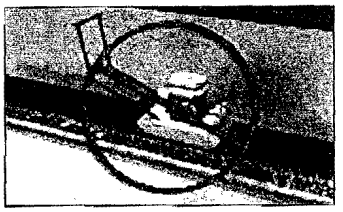
# Geogrid Installation

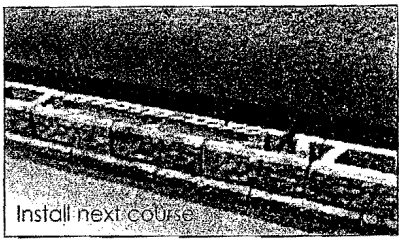



## *Install Reinforcement*

- Once the base course is complete, begin installing the first layer of AB Reinforcement Grid. When using the AB or AB Europa Collection begin by placing the edge of the geogrid against the back of the raised front lip and rolling it out along the wall. For AB Fieldstone, place the edge of the geogrid in the middle of the facing unit. Refer to your approved plans for exact size and location.
- Stack the next course of blocks so that the vertical seams are offset from the blocks below by at least 1/4 the length of the block.
- Sight down the wall line to check for alignment. Blocks may be adjusted slightly to form straight lines or smooth flowing curves.
- Pull on the back of the geogrid to remove any slack. If necessary, stake it in place. Never drive or compact directly on the geogrid. This will cause damage to the geogrid.

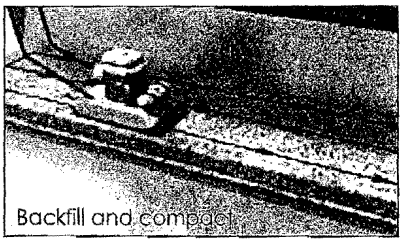

Install
AB Reinforcement Grid




Install next course

## *Backfilling and Compaction*

- Install wall rock in the block cores and 12 in. (300 mm) behind the block. Use infill or approved on-site soils to backfill behind the wall rock to the height of the block.
- The wall rock and infill soils behind the wall must be properly compacted using a plate compactor. Compact in lifts of 8 in. (200 mm) or less, this time starting on the block and working in a path that runs parallel to the block and towards the back of the excavated area. **Always make a minimum of two passes with a plate compactor. Compaction should be continued to achieve solid, movement-free soil.**
- Remove all excess material from the top surface of all blocks. This prepares a clean, smooth surface for placement of the next course.


Backfill and compact

## *Additional Courses*

- Continue installing your next courses of block using the steps shown above. Per your approved plans, install geogrid on every other course of the wall.
- Using these steps complete the wall to the desired height. On the last course, fill behind the blocks with organic soils in place of infill or approved on-site soils. This will assist in any plantings above the wall and also to direct water from running behind the blocks. *See page 48 for information on finishing wall options.*


Install next course of block and layer of geogrid

## *Reinforcement Chart*

Match your wall to the conditions below to find which width and the number of layers of AB Reinforcement Grid you will need. To determine the number of rolls needed, multiply the length of your wall (in feet) by the number of layers needed, and then divide by 50 (the length of a roll of AB Reinforcement Grid). Typically most soils will be considered clay, for sandy conditions outlined in the table the soil must be a clean, granular material. *See page 8 for information on soil types and descriptions.*

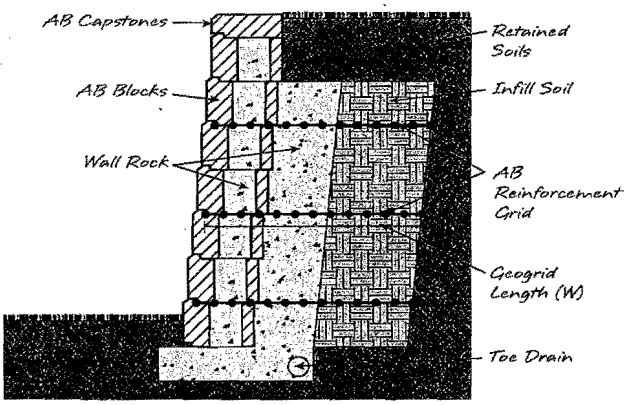



**Table 5**

**Soil Reinforcement Chart for Residential Wall Applications**

| CONDITION ABOVE WALL | WALL HEIGHT** | AB Stones of the AB Collection only | | | | AB Collection (except AB Stones), AB Europa Collection and AB Fieldstone Collection | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CLAY SOIL | | SANDY SOIL | | CLAY SOIL | | SANDY SOIL | |
| | | No. of Layers | Width (W) | No. of Layers | Width (W) | No. of Layers | Width (W) | No. of Layers | Width (W) |
| Level | **3ft** (0.9 m) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **4ft** (1.2 m) | 2 | 3 ft | 0 | 0 | 2 | 3 ft | 0 | 0 |
| | **5ft** (1.5 m) | 3 | 3 ft | 0 | 0 | 3 | 4 ft | 3 | 3 ft |
| | **6ft** (1.8 m) | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft |
| Surcharge* 100 psf | **2ft** (0.6 m) | 1 | 3 ft | 0 | 0 | 1 | 3 ft | 0 | 0 |
| | **3ft** (0.9 m) | 2 | 3 ft | 0 | 0 | 2 | 3 ft | 0 | 0 |
| | **4ft** (1.2 m) | 2 | 3 ft | 0 | 0 | 2 | 3 ft | 2 | 3 ft |
| | **5ft** (1.5 m) | 3 | 3 ft | 3 | 3 ft | 3 | 3 ft | 3 | 3 ft |
| | **6ft** (1.8 m) | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft |
| Slope 3:1 | **3ft** (0.9 m) | 2 | 3 ft | 0 | 0 | 2 | 3 ft | 0 | 0 |
| | **4ft** (1.2 m) | 2 | 3 ft | 0 | 0 | 2 | 3 ft | 2 | 3 ft |
| | **5ft** (1.5 m) | 3 | 4 ft | 0 | 0 | 3 | 4 ft | 3 | 3 ft |
| | **6ft** (1.8 m) | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft | 4 | 4 ft |

** Wall heights are for reference only.

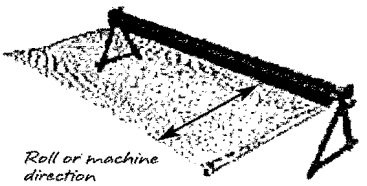
Table 5 is based on Clay soil having an internal friction angle of 27° (Ref) or better and a Sandy soil having an internal friction angle of 32° (Ref) or better. Soil reinforcement increases the strength of the wall by creating a reinforced mass of soil behind the blocks. The weight of the reinforced soil mass combines with the blocks for a heavier, stronger wall. Table 5 is for estimating geogrid quantities only. For walls in the Surcharge loading category above, on the last (top) layer of geogrid, it is typical to lengthen this grid by an additional 2 ft (600mm). To achieve these longer grid lengths, the Allan Block reinforcing grid must be installed perpendicular to the wall (rolled out from the front of the block to the back of the excavated area). * The Surcharge loading category above assumes a solid surface such as concrete, asphalt or pavers having a suitable supporting subgrade.

### *Example*

Using a block from the AB Collection, a 5 ft high wall (1.5 m) built in sandy soil with a level surface above the wall requires three layers of geogrid, 3 ft wide (0.9 m), but will require review by a local professional engineer.

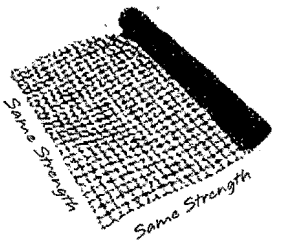
## *Larger Geogrid Rolls*

Large roll geogrids are strongest along the roll or machine direction and are cut to the design length. They are best suited for walls over 6 ft. (1.8 m) high.




## *AB Reinforcement Grid™*

AB Reinforcement Grid is biaxial which means it has the same strength in both directions and can be simply rolled out along the wall. It is available in 3 ft. and 4 ft. rolls and is 50 ft. long (0.9 m and 1.2 m by 15 m) and is best used for residential walls under 6 ft. (1.8 m)tall as outlined in the table above.




When placing geogrid along curving walls, the geogrid should follow the back of the lip. Simply slit the geogrid with a utility knife and either feather out or overlap to follow the curve. *See page 34 for more information.*

When placing geogrid at corners, simply lay the geogrid into the corner and cut to fit with a utility knife. *See page 35 for more information.*

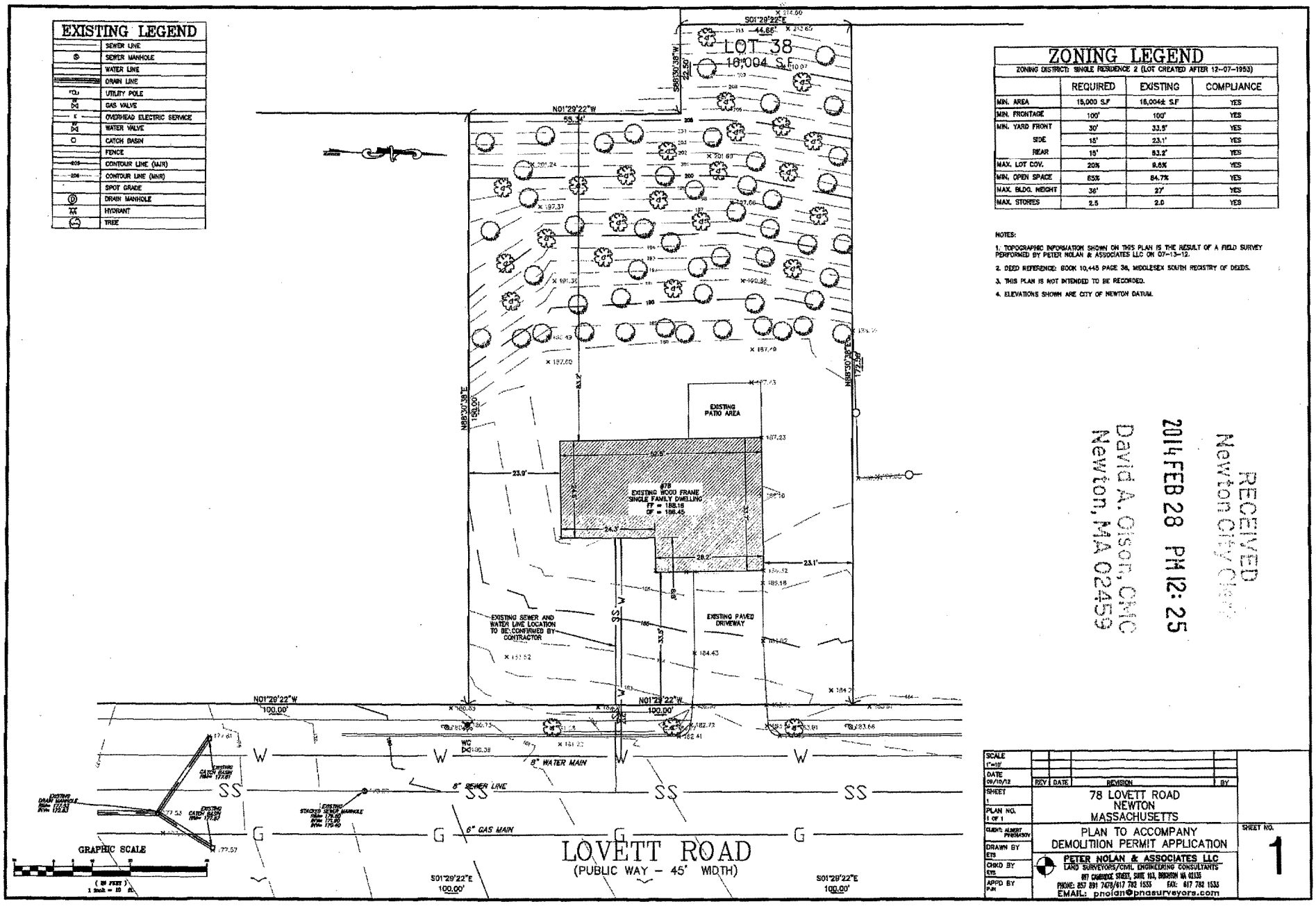
Outside Curves

Inside Curves

Inside Corners

Outside Corners

Original Lot (Exhibit A)




## ZONING LEGEND

ZONING DISTRICT: SINGLE RESIDENCE 2 (LOT CREATED AFTER 12-07-1953)

| | REQUIRED | EXISTING | COMPLIANCE |
|---|---|---|---|
| MIN. AREA | 15,000 S.F | 18,004± S.F | YES |
| MIN. FRONTAGE | 100' | 100' | YES |
| MIN. YARD FRONT | 30' | 33.5' | YES |
| SIDE | 15' | 23.1' | YES |
| REAR | 15' | 83.2' | YES |
| MAX. LOT COV. | 20% | 9.6% | YES |
| MIN. OPEN SPACE | 65% | 84.7% | YES |
| MAX. BLDG. HEIGHT | 36' | 27' | YES |
| MAX. STORIES | 2.5 | 2.0 | YES |

NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC ON 07-13-12.
2. DEED REFERENCE: BOOK 10,448 PAGE 36, MIDDLESEX SOUTH REGISTRY OF DEEDS.
3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
4. ELEVATIONS SHOWN ARE CITY OF NEWTON DATUM.



| | | | |
|---|---|---|---|
| SCALE 1"=10' | | | |
| DATE 09/10/12 | REV | DATE | REVISION BY |
| SHEET 1 | | | |
| PLAN NO. 1 OF 1 | | | |
| CHKD BY EYS | | | |
| APPD BY PJN | | | |

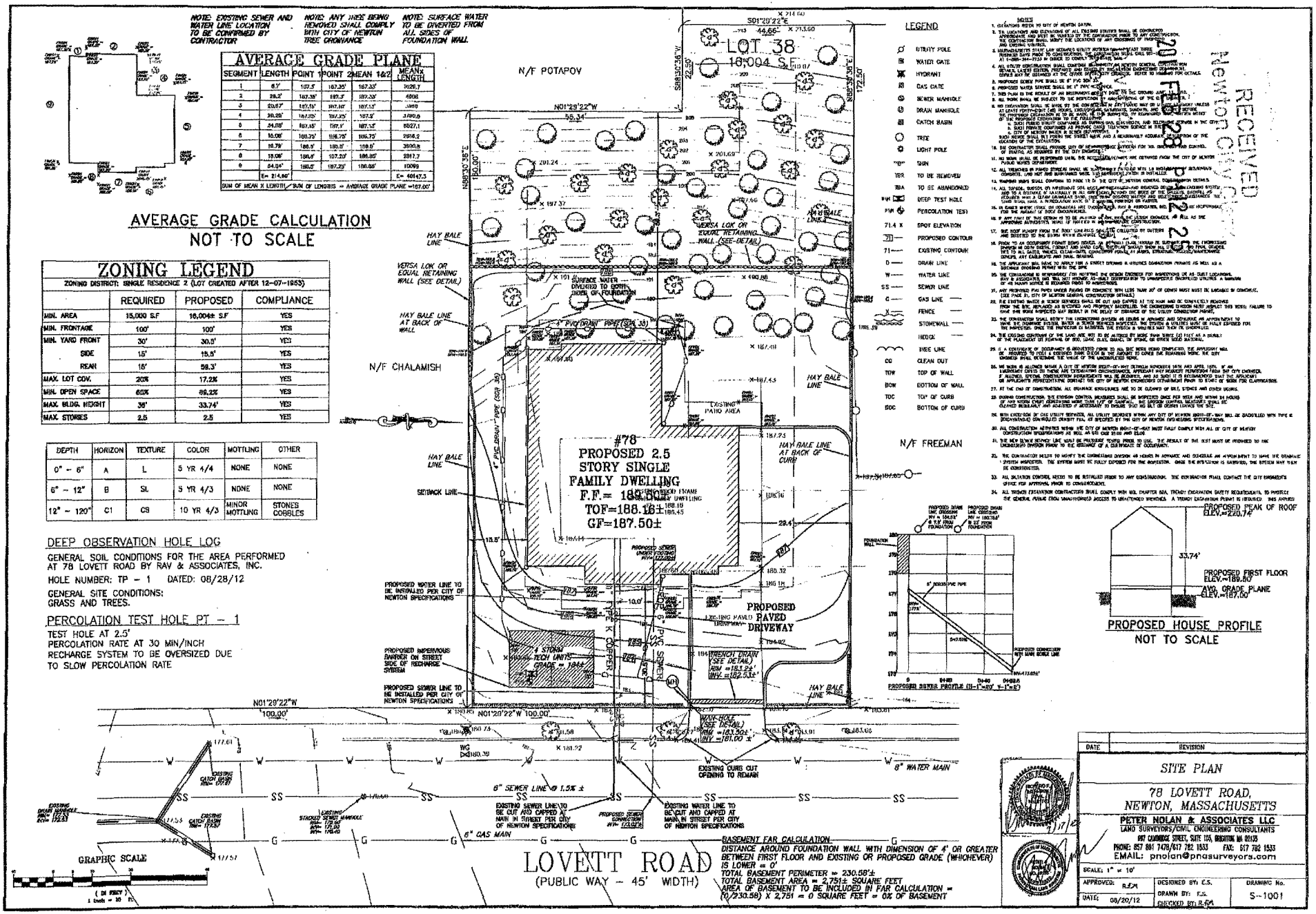
78 LOVETT ROAD
NEWTON
MASSACHUSETTS

PLAN TO ACCOMPANY
DEMOLITION PERMIT APPLICATION

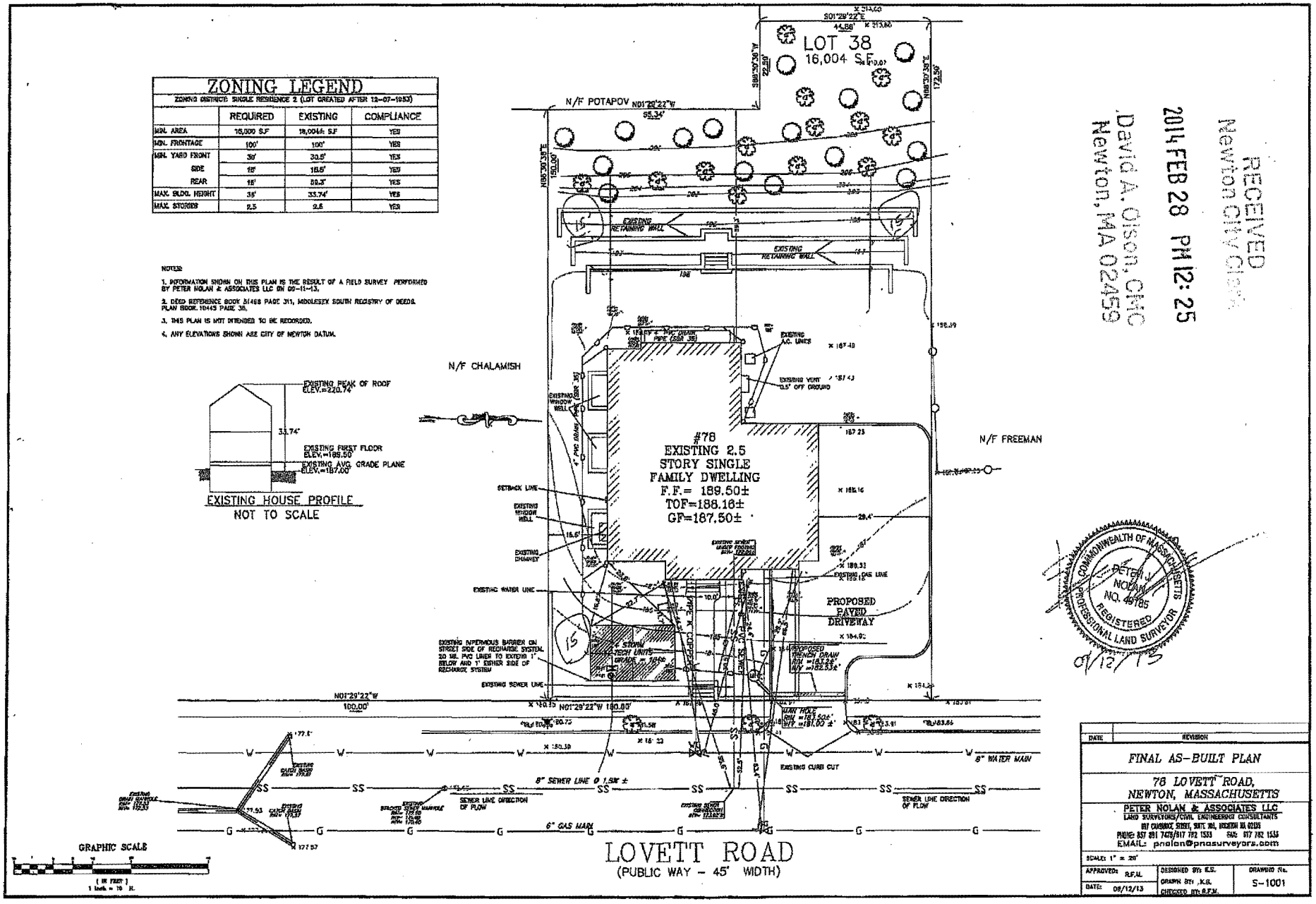
SHEET NO. 1

PETER NOLAN & ASSOCIATES LLC
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS
697 CAMBRIDGE STREET, SUITE 103, BRIGHTON MA 02135
PHONE: 857 891 7478/617 782 1533 FAX: 617 782 1533
EMAIL: pnolan@pnasurveyors.com

Original ISD (Exhibit D)



As-Built (Exhibit C)



# AJT Projects

67 Neponset Avenue, Foxborough, MA02035 ~ 508-203-5945

## PROPOSAL

**Proposal Submitted To:**

Albert Pinksov
78 Lovett Road
Newton, MA02459

**Date: May 10, 2013**

**Invoice # 051013**



**Work Completed:**

**Back Yard Retaining Wall & Landscaping:**

**A:** Dig out aprox 800 yards of clay fill.

**B:** Dig 1' trench for base of wall and place ¾ stone for base.

**C:** Install aprox 1000 sq ft of Allen Block (Rose Color) tying back with geogrid at every 2 ½' as specd by engineer.

**D:** Backfill wall with aprox 80 tons of ¾ stone compacting at every 1" and wrap with mesh fiber fabric.

**E:** Install aprox 140 ln ft of Rose Allen Block Cap

**F:** Install 120 yards of screened loam and underground irrigation system

Total Cost $66,430.00

**Concrete Paver Driveway and Patio:**

**A:** Remove aprox. 12" of clay fill and place 6-8" of crusher run.

**B:** Place 1" of fine mason sand

**C:** Install aprox 2000 sq ft of Cambridge Ledgestone 3 Pc Kit (T/O Color)

Total Cost $30,000.00

**Total Cost for Entire Project** $96,430.00

**Contractor:** _____ **Home Owner:** _____

# AJT Projects

67 Neponset Avenue, Foxborough, MA02035 ~ 508-203-5945

## PROPOSAL

**Proposal Submitted To:**

Albert Pinksov
78 Lovett Road
Newton, MA02459

**Date: July 9, 2013**

**Invoice # 070913**

**Work Completed:**

**Back Yard Retaining Wall & Landscaping:**

**A:** Dig out aprox 3,400 yards of clay fill.

**B:** Dig 1' trench for base of wall and place ¾ stone for base.

**C:** Install aprox 2,8000 sq ft of Allen Block (Rose Color) tying back with geogrid at every 2 ½' as specd by engineer.

**D:** Backfill wall with aprox 350 tons of ¾ stone compacting at every 1" and wrap with mesh fiber fabric.

**E:** Install aprox 370 ln ft of Rose Allen Block Cap

**F:** Install 250 yards of screened loam and underground irrigation system

Total Cost $204,710.00

**Concrete Paver Driveway and Patio:**

**A:** Remove aprox. 12" of clay fill and place 6-8" of crusher run.

**B:** Place 1" of fine mason sand

**C:** Install aprox 3200 sq ft of Cambridge Ledgestone 3 Pc Kit (T/O Color)

Total Cost $45,000.00

**Total Cost for Entire Project** $249,710.00

**Contractor:** _____ **Home Owner:** _____

GOT MULCH? ™

AJT Supplies

GOT STONE? ™

**Office: 877-4-MULCH-1 · Fax: 800-693-4147**
**ajtsupplies.com**

2/24/14

To whom it may Concern:

This letter is in response to a request made by Albert Pinkshov owner of a certain residential parcel located at 78 Lovett Rd. Newton MA 02459. The cost to restore the backyard of this parcel and make the wall fit inside of the set back requirements from the town will cost approximately $95,000.00 at a minimum. The reason for the high cost to make the adjustment in the wall is because the retaining wall is an interlocking system and in order to bring in the sides of the wall we actually will have to go aprox. 25' in and in order to do that aprox 40% of the wall will have to be taken down and re-built so it interlocks correctly. Also we have to keep in mind there is now a newly placed 3,200 square foot driveway and patio that will most likely be damaged in the process.

If you have any questions you can contact us at the number mentioned above.

Albert Todesca

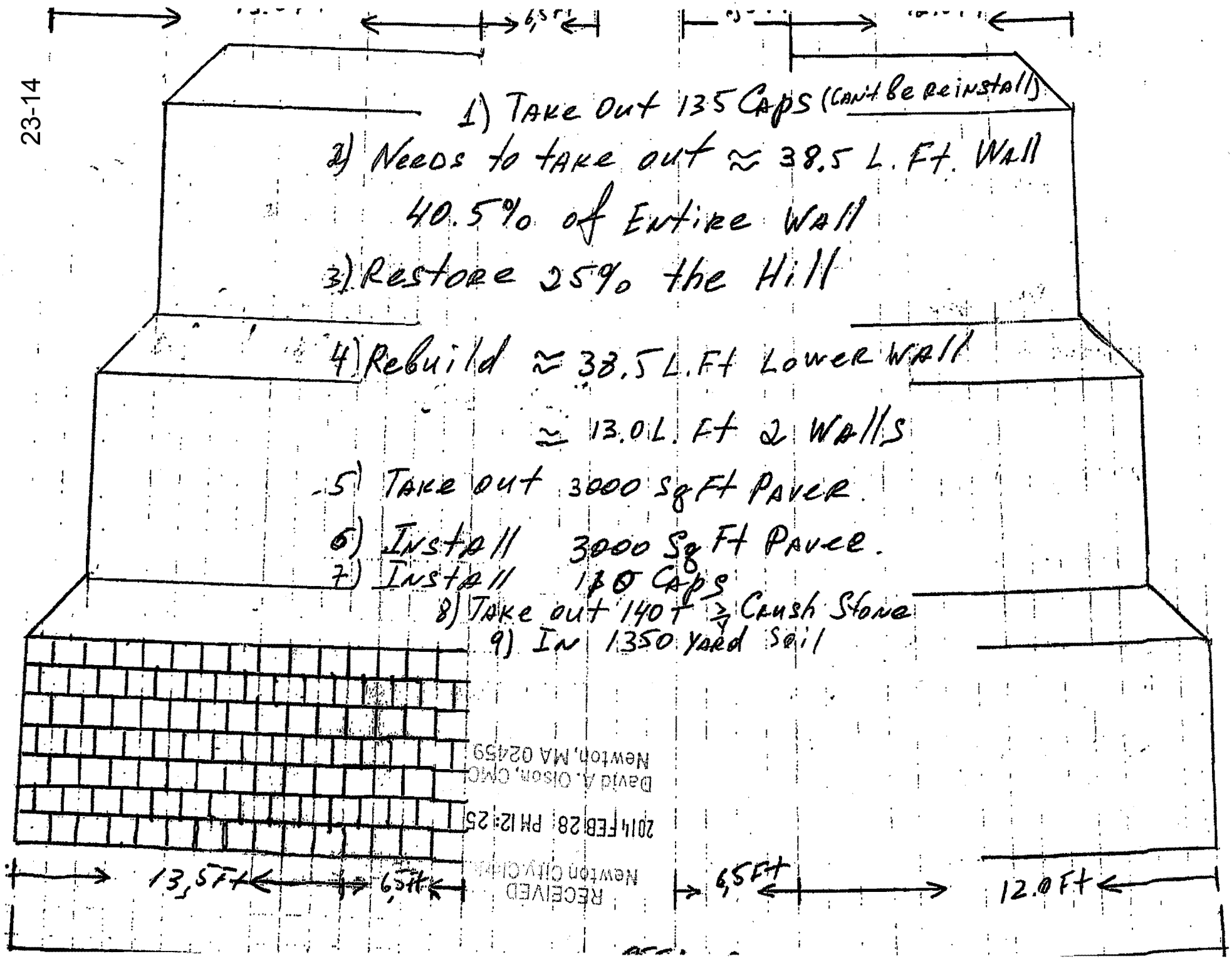


67 Neponset Ave
Foxborough, MA 02035

1700 Hyde Park Ave.
Hyde Park, MA 02136

210 Providence Hwy
Westwood, MA 02090

23-14



# AJT Projects

**67 Neponset Avenue, Foxborough, MA 02035 ~ 508-203-5945**

## Proposal

**Proposal Submitted To:**

Albert Pinksov
78 Lovett Road
Newton, MA 02459

**Date: February 9, 2014**

**Proposal # 010914**

**We hereby submit specifications and estimates for:**

**Complete Property Landscape Design:**

**A:** Install (16) GGA 5-6' @ $246 = $3,936.00

**B:** Install (17) RYTD #3 @ $54.75 = $930.75

**C:** Install (17) CB 18-24" @ $132.75 = $2,256.75

**D:** Install (6) CWR 2.5-3' @ $180.00 = $1,080.00

**E:** Install (16) GWY 24-30" @ $138.75 = $2,220.00

**F:** Install (4) HRB 12-14' @ $765.00 = $3,060.00

**G:** Install (2) NSH 7-8' @ $945.00 = $1,890.00

**H:** Install (7) CBR 2.5-3' @ $180.00 = $1,260.00

**I:** Install (1) CSP 3-3.5' Cal @ $1,080.00 = $1,080.0

**J:** Install (7) SFV #7 @ $139.50 = $976.50

**K:** Install (7) WLC #3 @ $62.25 = $435.75

**L:** Install (4) VB 18-24" @ $202.50 = $810.00

**M:** Install assorted grasses and perennials @ $1,800.00 = $3,000.00

**N:** Install 3 Large Landscape Boulders @ $250.00 = $750.00

**O:** Miscellaneous Soils, Mulches, and Fertilizer = $2,500.00

**Total Estimate for Design $26,185.75**

**To accept this Proposal sign here:** _____

GOT MULCH? ™

AJT Supplies

GOT STONE? ™

**Office: 877-4-MULCH-1 · Fax: 800-693-4147**
**ajtsupplies.com**

2/25/14

To whom it may Concern:

This letter is in response to a request made by Albert Pinkshov owner of a certain residential parcel located at 78 Lovett Rd. Newton MA 02459 at the request of the city of Newton to add more screening to drawing 0001 to impede any visibility of the retaining wall in the back of his property. The additional screening is as follows:

P). Install (8) GGA 4-5' @ $180.00 EA = $1,440.00
Q). Install (1) CEH 2.5-3" cal @ $900 EA = $900.0

Total Additional Cost to Proposal#010914 is $2,340.00

After looking at many alternative screening options for this property we believe a solid fence would not work at a screen due to the height of the wall in the rear of the property.

Albert Todesca

RECEIVED
Newton City Clerk
2014 FEB 28 PM 12: 25
David A. Olson, CMC
Newton, MA 02459

# RAV & ASSOCIATES, INC.

PO BOX 359
CANTON, MA 02021

21 HIGHLAND AVENUE
NEEDHAM, MA 02494

TEL: (781) 449-8200 FAX: (781) 449-8205

February 7, 2014

## CIVIL/STRUCTURAL AFFIDAVIT

I hereby certify that I, Richard A. Volkin, a Commonwealth of Massachusetts Registered Professional Engineer, Number 22282, that the civil/structural rear walls were reviewed by me at:

78 Lovett Road
Newton Center, Massachusetts

I further certify that I made inspections of the wall structure on August 13, 2013 and February 6, 2014 and found that the rear wall was completed in accordance with the the manufacturer's specifications and stability.

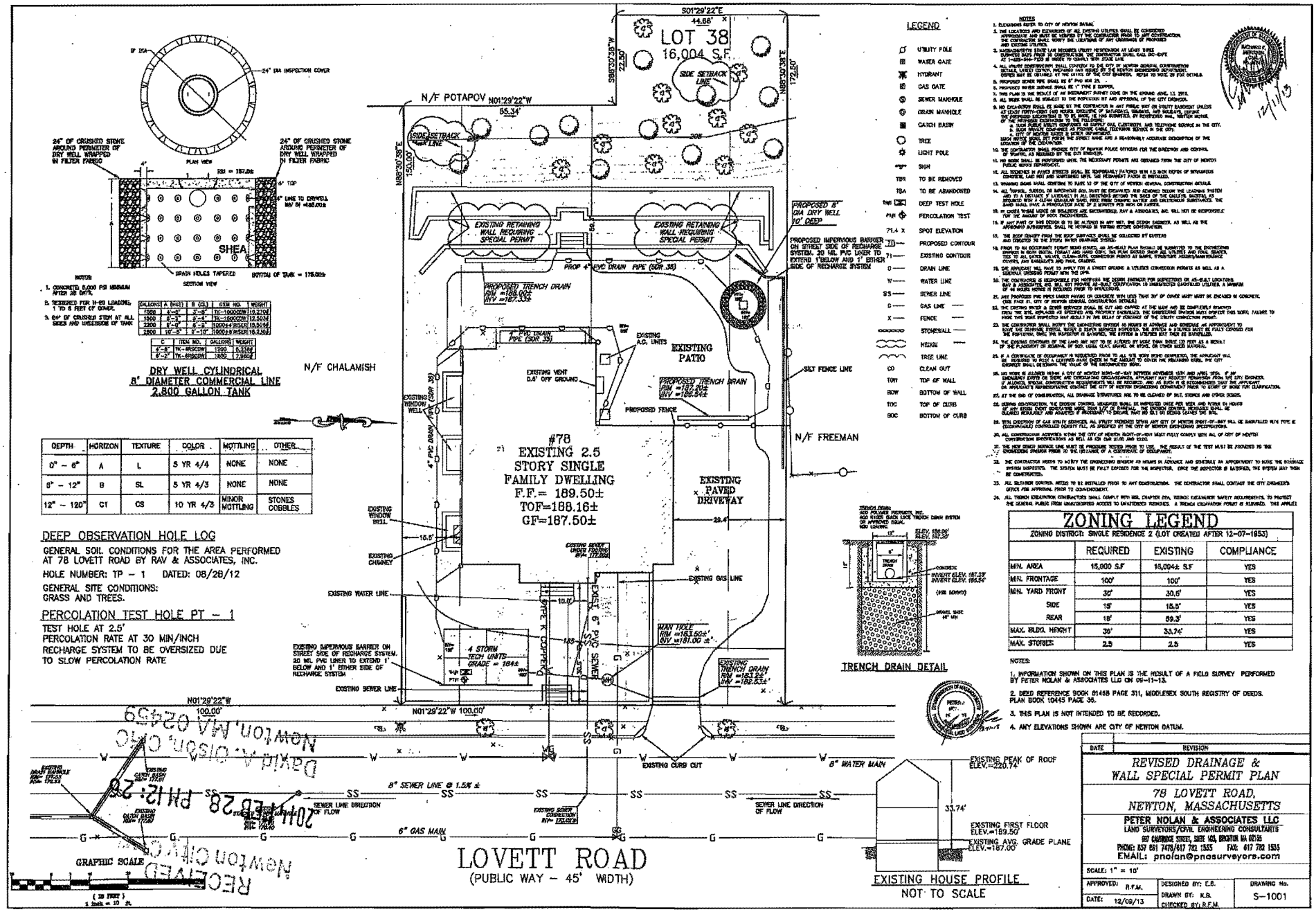
All the structural work satisfies the structural requirements of the 780 CMR Massachusetts State Building Code, 8th edition, International Residential Code (2009) with Massachusetts Amendments and City of Newton Zoning By-laws.

February 7, 2014
Date

Original Signature and Seal

COMMONWEALTH OF MASSACHUSETTS
RICHARD A. VOLKIN
No. 22282
REGISTERED PROFESSIONAL ENGINEER
MECHANICAL

RECEIVED
Newton City Clerk
2014 FEB 28 PM 12:26
David A. Olson, CMC
Newton, MA 02459







| GALLONS | A (HIGH) | B (DIA) | ITEM NO. | WEIGHT |
|---|---|---|---|---|
| 1000 | 4'-4" | 3'-9" | TK-1000DW | 10,270# |
| 1500 | 5'-3" | 5'-4" | TK-1500DW | 12,500# |
| 2200 | 6'-0" | 6'-2" | 1000+4'RISER | 10,505# |
| 2800 | 10'-5" | 5'-10" | 1000+8'RISER | 10,230# |

| C | ITEM NO. | GALLONS | WEIGHT |
|---|---|---|---|
| 4'-5" | TK-4RISER | 1200 | 5,035# |
| 8'-3" | TK-8RISER | 1800 | 7,895# |

NOTES:
1. CONCRETE 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR H-20 LOADING, 1 TO 6 FEET OF COVER.
3. 6x6 OF CRUSHED STONE AT ALL SIDES AND UNDERSIDE OF TANK

**DRY WELL CYLINDRICAL 8' DIAMETER COMMERCIAL LINE 2,800 GALLON TANK**

| DEPTH | HORIZON | TEXTURE | COLOR | MOTTLING | OTHER |
|---|---|---|---|---|---|
| 0" - 8" | A | L | 5 YR 4/4 | NONE | NONE |
| 8" - 12" | B | SL | 5 YR 4/3 | NONE | NONE |
| 12" - 120" | CT | CS | 10 YR 4/3 | MINOR MOTTLING | STONES COBBLES |

## DEEP OBSERVATION HOLE LOG

GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 78 LOVETT ROAD BY RAV & ASSOCIATES, INC.

HOLE NUMBER: TP - 1 DATED: 08/28/12

GENERAL SITE CONDITIONS:
GRASS AND TREES.

## PERCOLATION TEST HOLE PT - 1

TEST HOLE AT 2.5'
PERCOLATION RATE AT 30 MIN/INCH
RECHARGE SYSTEM TO BE OVERSIZED DUE TO SLOW PERCOLATION RATE

LEGEND

| | |
|---|---|
| | UTILITY POLE |
| | WATER GATE |
| | HYDRANT |
| | GAS GATE |
| | SEWER MANHOLE |
| | DRAIN MANHOLE |
| | CATCH BASIN |
| | TREE |
| | LIGHT POLE |
| | SIGN |
| TBR | TO BE REMOVED |
| TBA | TO BE ABANDONED |
| TH# | DEEP TEST HOLE |
| PT# | PERCOLATION TEST |
| 71.4 X | SPOT ELEVATION |
| 71 | PROPOSED CONTOUR |
| 71 | EXISTING CONTOUR |
| D | DRAIN LINE |
| W | WATER LINE |
| SS | SEWER LINE |
| G | GAS LINE |
| X | FENCE |
| | STONEWALL |
| | HEDGE |
| | TREE LINE |
| CO | CLEAN OUT |
| TOW | TOP OF WALL |
| BOW | BOTTOM OF WALL |
| TOC | TOP OF CURB |
| BOC | BOTTOM OF CURB |

NOTES
1. ELEVATIONS REFER TO CITY OF NEWTON DATUM.
2. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.
3. MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG-SAFE AT 1-888-344-7233 OR DIGSAFE.COM TO COMPLY WITH STATE LAW.
4. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS. LATEST EDITION, PREPARED AND SIGNED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 28 FOR DETAILS.
5. PROPOSED SEWER PIPE SHALL BE 8" PVC SDR 35.
6. PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.
7. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND JUNE 13, 2011.
8. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.
9. NO EXCAVATION SHALL BE MADE BY THE CONTRACTOR IN ANY PUBLIC WAY OR UTILITY EASEMENT UNLESS AT LEAST FORTY-EIGHT (48) HOURS, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS, BEFORE THE PROPOSED EXCAVATION IS TO BE MADE, HE HAS NOTIFIED, BY REGISTERED MAIL, TELEPHONE OR OTHERWISE, THE SUPERINTENDENT OF EACH OF THE FOLLOWING:
   A. ALL PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE CITY.
   B. BLOCK SIGNAL CONTRACTOR AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.
   C. CITY OF NEWTON FIRE & POLICE DEPARTMENT.
   EACH NOTICE SHALL SET FORTH THE STREET NAME AND A REASONABLY ACCURATE DESCRIPTION OF THE LOCATION OF THE EXCAVATION.
10. THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER.
11. NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.
12. ALL RESIDENTS IN PAVED STREETS SHALL BE TEMPORARILY PATCHED WITH 1.5 INCH DEPTH OF BITUMINOUS CONCRETE, LAID HOT AND MAINTAINED UNTIL THE PERMANENT PATCH IS INSTALLED.
13. WARNING SIGNS SHALL CONFORM TO PART 10 OF THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.
14. ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE 5' LATERALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS, BACKFILL AS SPECIFIED WITH A FLOW GRADE SAND, FREE FROM TRASH, MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
15. IN CASES WHERE LEDGE OR BOULDERS ARE ENCOUNTERED, RAV & ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK EXCAVATED.
16. IF ANY CHANGE OF THESE DESIGNS IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER, AS WELL AS THE APPROVING AUTHORITIES, SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION.
17. THE ROOF DRAINS FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND CONDUCTED TO THE STORM WATER DRAINAGE SYSTEM.
18. PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHOWING BE SUBMITTED TO THE ENGINEERING DEPARTMENT. THE PLAN SHALL BE IN DIGITAL AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES, INCLUDING SERVICES TIES TO ALL GATES, VALVES, CLEAN-OUTS, CONNECTION POINTS AS BUILT, STORM WATER MANAGEMENT SYSTEMS, AND EASEMENTS AND FINAL GRADING.
19. THE APPLICANT WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT WITH THE DPW.
20. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. RAV & ASSOCIATES, INC. WILL NOT PROVIDE AS-BUILT CONSTRUCTION TO UNINSPECTED BACKFILLED UTILITIES. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO INSPECTIONS.
21. ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS)
22. THE EXISTING SEWER & DRAIN SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROPERLY BACKFILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK. FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
23. THE CONTRACTOR SHALL NOTIFY THE EXCAVATING CONTRACTOR AS MUCH IN ADVANCE AND SCHEDULE AN APPOINTMENT TO LOCATE THE EXISTING SEWER SERVICE. THE SEWER & DRAIN SERVICE MUST BE FULLY EXPOSED FOR THE INSPECTION, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.
24. THE EXISTING CONTOURS OF THE LAND SHALL NOT TO BE ALTERED, BY MORE THAN THREE (3) FEET AS A RESULT OF THE PLACEMENT OF BUILDING, OF SOIL, LOAM, CLAY, GRAVEL OR STONE, OR OTHER SIMILAR MATERIAL.
25. IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A SECURITY (BANK CHECK OR "BOND") SUFFICIENT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.
26. NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EXCEPTION IS GRANTED BY THE CITY ENGINEER, APPLICANT MAY REQUEST TEMPORARY PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED, AND AN ESCROW IS RECOMMENDED. SEE APPLICANT'S REPRESENTATIVE ENGINEER TO DISCUSS THE CITY OF NEWTON ENGINEERING DEPARTMENT WHEN TO STAMP OF WORK FOR CLARIFICATION.
27. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
28. EROSION AND SEDIMENTATION CONTROLS MEASURES SHALL BE IMPLEMENTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY RAIN EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROLS, REPAIRED, SHALL BE CLEANED REGULARLY AND MAINTAINED IN GOOD WORKING ORDER TO THE SATISFACTION OF THE CITY.
29. TOTAL DISTURBANCE OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY SHALL BE BACKFILLED WITH TYPE B (CONTROLLED LOAD) CONCRETE DENSITY FILL AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING DEPARTMENT.
30. ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL OF CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS ICC CHAPTER 33.00 AND 3300.
31. THE NEW SEWER SERVICE LINE MUST BE PRESSURE TESTED PRIOR TO USE. THE RESULT OF THE TEST MUST BE PROVIDED TO THE ENGINEERING DIVISION PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
32. THE CONTRACTOR NEEDS TO NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM INSPECTED. THE SYSTEM MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM MAY THEN BE CONSTRUCTED.
33. ALL SILTATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER'S OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT.
34. ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MGL CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. A TRENCH EXCAVATION PERMIT IS REQUIRED. THIS APPLIES

**TRENCH DRAIN DETAIL**

## ZONING LEGEND

ZONING DISTRICT: SINGLE RESIDENCE 2 (LOT CREATED AFTER 12-07-1953)

| | REQUIRED | EXISTING | COMPLIANCE |
|---|---|---|---|
| MIN. AREA | 15,000 S.F | 16,004± S.F | YES |
| MIN. FRONTAGE | 100' | 100' | YES |
| MIN. YARD FRONT | 30' | 30.5' | YES |
| SIDE | 15' | 15.5' | YES |
| REAR | 15' | 59.3' | YES |
| MAX. BLDG. HEIGHT | 36' | 33.74' | YES |
| MAX. STORIES | 2.5 | 2.5 | YES |

NOTES:
1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC ON 09-11-13.
2. DEED REFERENCE BOOK 61468 PAGE 311, MIDDLESEX SOUTH REGISTRY OF DEEDS. PLAN BOOK 10445 PAGE 36.
3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
4. ANY ELEVATIONS SHOWN ARE CITY OF NEWTON DATUM.




EXISTING HOUSE PROFILE
NOT TO SCALE

| DATE | REVISION |
|---|---|

*REVISED DRAINAGE & WALL SPECIAL PERMIT PLAN*

*78 LOVETT ROAD, NEWTON, MASSACHUSETTS*

PETER NOLAN & ASSOCIATES LLC
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS
697 CAMBRIDGE STREET, SUITE 103, BRIGHTON MA 02135
PHONE: 857 891 7478/617 782 1535 FAX: 617 782 1535
EMAIL: pnolan@pnasurveyors.com

SCALE: 1" = 10'

| APPROVED: R.F.M. | DESIGNED BY: E.S. | DRAWING No. |
|---|---|---|
| DATE: 12/09/13 | DRAWN BY: K.B. | S-1001 |
| | CHECKED BY: R.F.M. | |

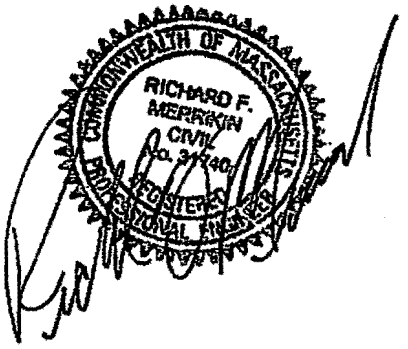
# STORM WATER MANAGEMENT PROGRAM
## (VOLUME BASED)

78 LOVETT ROAD,
NEWTON, MASSACHUSETTS.

FEBRUARY 26, 2014

PETER NOLAN & ASSOCIATES, LLC.

REVISION B



# PETER NOLAN & ASSOCIATES, LLC.

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Project:
78 LOVETT ROAD,
NEWTON,
MASSACHUSETTS.

Calculations by: ES
Date: February 26, 2014,

## STORMWATER MANAGEMENT PROGRAM

Lot = 16,004 SF .367Acres

Proposed Roof- Original Roof = 2,752 - 1560 = 1,192 SF = .027Acres

Proposed Pavement- Original Pavement = 3455 – 936 = 2519 SF = - 0.57 Acres

STORMWATER MANAGEMENT REPORT UTILIZING RATIONALE METHOD FOR 78 LOVETT ROAD, NEWTON, MASSACHUSETTS – 100 YEAR STORM.

Runoff Coefficients:

| | |
|---|---|
| Roof | 0.95 |
| Pavement | 0.90 |

Q = CIA
Q = Quantity, CFS
C = Runoff Coefficient
I = Rainfall Intensity (7")
A = Area, Acres

Roof:

Q = CiA
Q = (0.95) (0.583 F) (1,192SF) = 660 CF

Pavement:

Q = CiA
Q = (0.9) (0.583 F) (2519 SF) = 1322 CF

**TOTAL PROPOSED DESIGN RUNOFF FROM 78 LOVETT ROAD, NEWTON, MA**

660 + 1322 = 1982 CF

**CAPACITY OF STORM TECH SYSTEM**

Capacity of single STORMTECH UNIT = 49 CF

Quantity of storage in crushed stone = (11'x 7' x $4_{units}$ x $8'_{depth}$) x .4

Capacity of 8' crushed stone below 4 STORMTECH UNIT'S = 985.6 CF

Total Capacity for 4 STORMTECH UNITS = 196CF

**PERCOLATION CREDIT OF STORM TECH SYSTEM**

Available area for percolation (bottom & 3 sides of system) = 700SF

Using 30 min/inch:

700SF x 0.16'/H = 112CF/H Percolated

Volume Percolated in one hour = 112CF/H

Total capacity needed for storage = 1982 –112 = 1870 CF/H

**TOTAL QUANTITY OF STORAGE PROVIDED BY STORMTECH SYSTEM = 1181 CF < TOTAL QUANTITY OF STORAGE REQUIRED = 1870 CF**

Therefore additional volume required due to increase in impervious area = 689CF

**TOTAL QUANTITY OF STORAGE PROVIDED BY PROPOSED DRYWELL & SURROUNDING CRUSHED STONE**

Volume of drywell = $\Pi$ x $4^2$ x 10 = 502 CF

Volume of crushed stone = (($\Pi$ x $6^2$ x 10) - ($\Pi$ x $4^2$ x 10)) x 0.4 = 251 CF

Total Capacity for drywell and crushed stone = 753CF

**PERCOLATION CREDIT FOR DRYWELL**

Available area for percolation (bottom & sides of system)

$(\Pi \times 12 \times 10) + (\Pi \times 6^2) = 490SF$

Using 30 min/inch:

490SF x 0.16'/H = 78 CF/H Percolated

Volume Percolated in one hour = 78CF/H

**TOTAL QUANTITY OF STORAGE PROVIDED BY COMBINED SYSTEMS = 1934 CF > TOTAL QUANTITY OF STORAGE REQUIRED = 1870 CF**

Note: Proposed additional design based on 8' diameter & 10' deep dry well with 2' of crushed stone around full perimeter. It is also based on the percolation results from August of 2012 which were carried out for the initial recharge system.

There is a city requirement for proposed recharge systems to be within 20' of the test pit and for the proposed concrete drywell this is not the case. We suggest carrying out an additional test pit directly over the area the proposed drywell is supposed to go, prior to any work being carried out and witnessed by a City of Newton official, to ensure the soil properties there are as good as, or better than designed for.
John Daghlian, of the City of Newton, Engineering Department has been notified of our intention and has no objection.