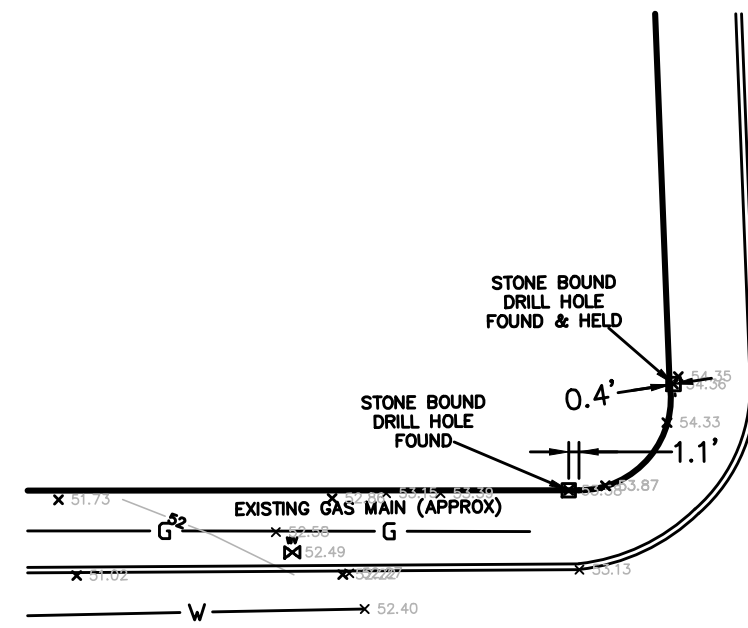


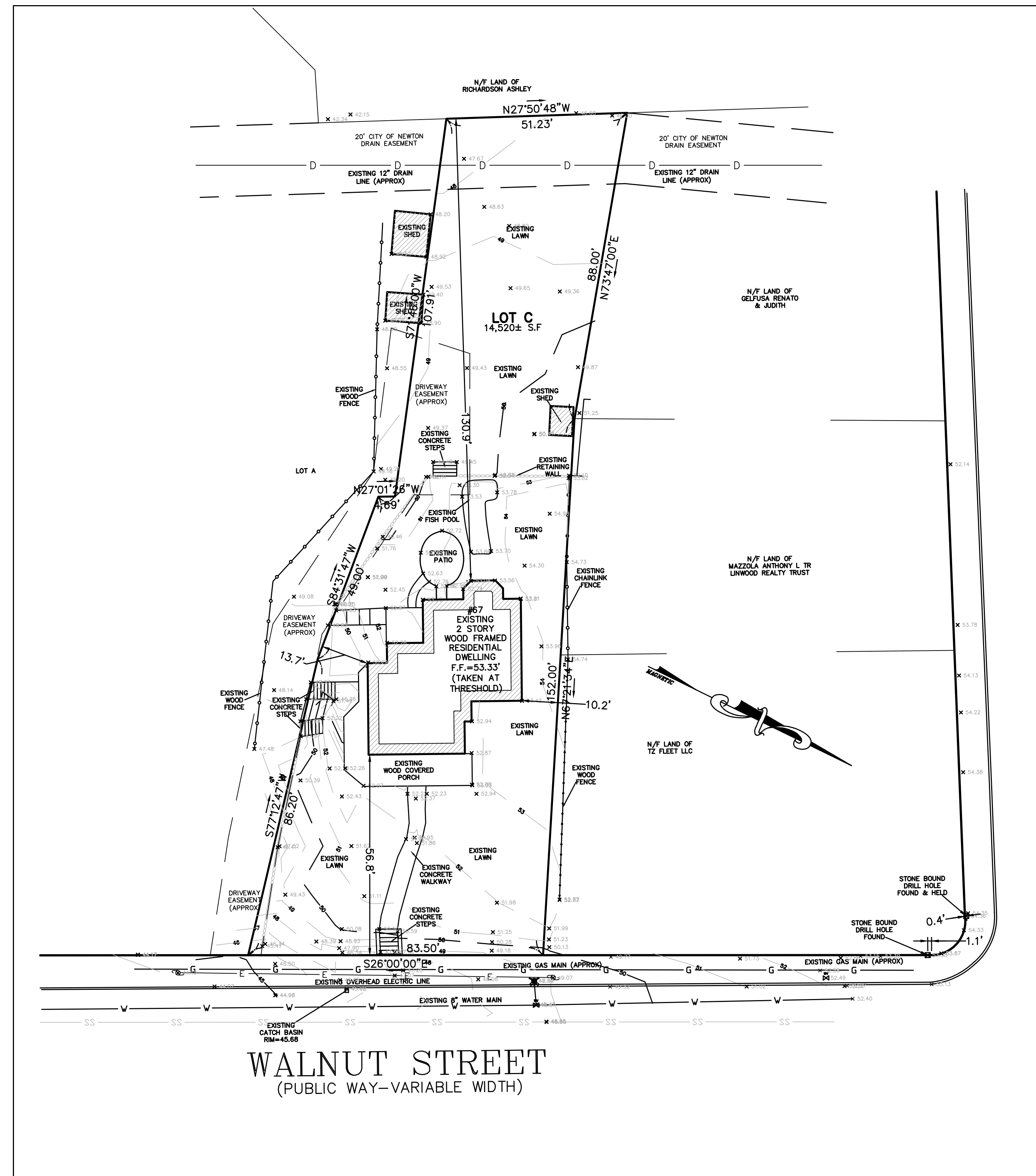
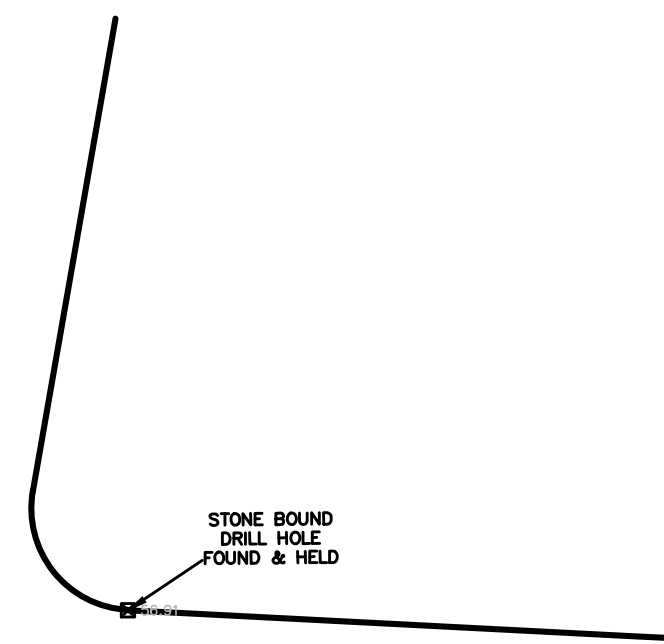
### EXISTING LEGEND

SS	SEWER LINE
⊙	SEWER MANHOLE
W	WATER LINE
G	GAS LINE
⊕	UTILITY POLE
⊗	GAS VALVE
E	OVERHEAD ELECTRIC SERVICE
⊕	WATER VALVE
□	CATCH BASIN
○	FENCE
-205	CONTOUR LINE (MJR)
-195	CONTOUR LINE (MNR)
X	SPOT GRADE
⊕	DRAIN MANHOLE
⊕	HYDRANT
⊕	TREE

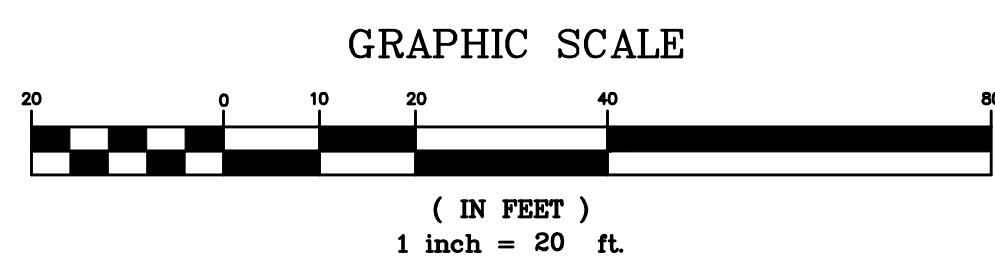
\*\* STONE BOUND DRILL HOLES FOUND & HELD AT INTERSECTION OF WALNUT STREET & LINWOOD AVENUE



\*\* STONE BOUND DRILL HOLE FOUND & HELD AT INTERSECTION OF WALNUT STREET & WATERTOWN STREET



WALNUT STREET  
(PUBLIC WAY-VARIABLE WIDTH)



### NOTES:

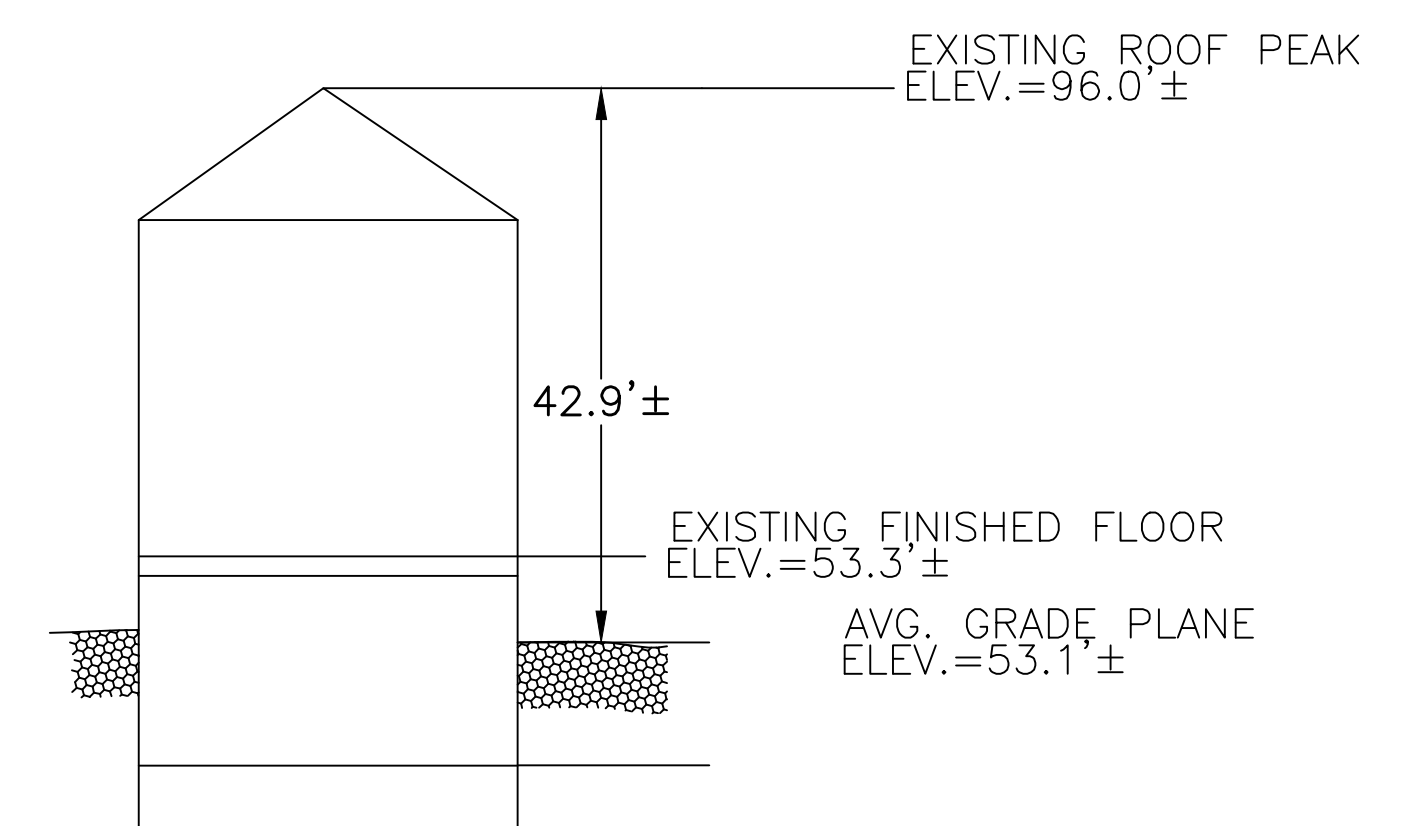
- INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC AS OF 7/17/2018.
- DEED REFERENCE BOOK 25713 PAGE 242, PLAN REFERENCE PLAN BOOK 12149 PAGE 374 MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS.
- THIS PLAN IS NOT INTENDED TO BE RECORDED.
- I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0552E, PANEL NUMBER 0552E, COMMUNITY NUMBER: 250208, DATED JUNE 4, 2010.
- THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAN NO SUCH EASEMENTS EXIST.
- FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
- NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS PETER NOLAN & ASSOCIATES LLC ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
- ZONING DISTRICT = M.R. - 1

### ZONING LEGEND

ZONING DISTRICT: MULTI RESIDENCE MRI (LOT CREATED AFTER 12/07/1953)

	REQUIRED	EXISTING
MIN. AREA	15,000S.F.	14,520±S.F.
MIN. FRONTAGE	80'	83.50'±
MIN. YARD FRONT	25'	56.8'
SIDE	25'	10.2'
REAR	25'	130.9'
MAX LOT COVERAGE	25%	13.3%
MIN OPEN SPACE	50%	86.3%
MAX. BLDG. HEIGHT	36'	42.9'

\* REQUIRED DIMENSIONS UNDER SPECIAL PERMIT



EXISTING PROFILE  
NOT TO SCALE

SCALE 1"=20'			
DATE 9/12/2018	REV	DATE	REVISION
SHEET 1	67 WALNUT STREET NEWTON MASSACHUSETTS EXISTING CONDITIONS SITE PLAN		BY
PLAN NO. 1 OF 9			
CLIENT:			
DRAWN BY			
CHKD BY P.J.N.			SHEET NO.
APPD BY P.J.N.	<b>PETER NOLAN &amp; ASSOCIATES LLC</b> LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS 697 CAMBRIDGE STREET, SUITE 103 BRIGHTON MA 02135 PHONE: 857 891 7478/617 782 1533 FAX: 617 202 5691 EMAIL: pnolan@pnasurveyors.com		<b>1</b>

EXISTING LEGEND

Table with 2 columns: Symbol and Description. Includes Sewer Line, Sewer Manhole, Water Line, Gas Line, Utility Pole, Gas Valve, Overhead Electric Service, Water Valve, Catch Basin, Fence, Contour Line (M/R), Contour Line (M/R), Spot Grade, Drain Manhole, Hydrant, Tree.

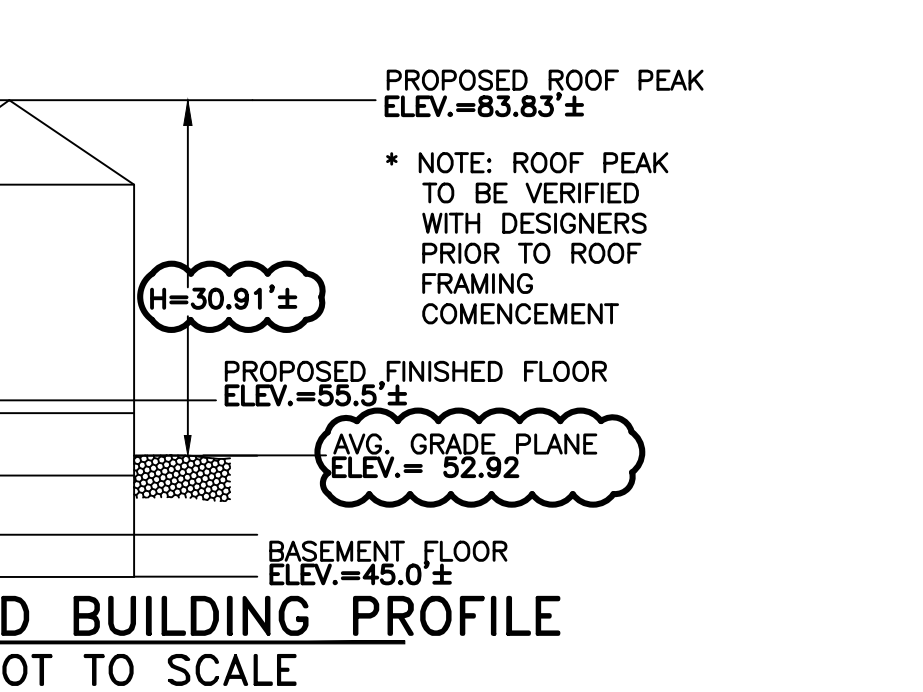
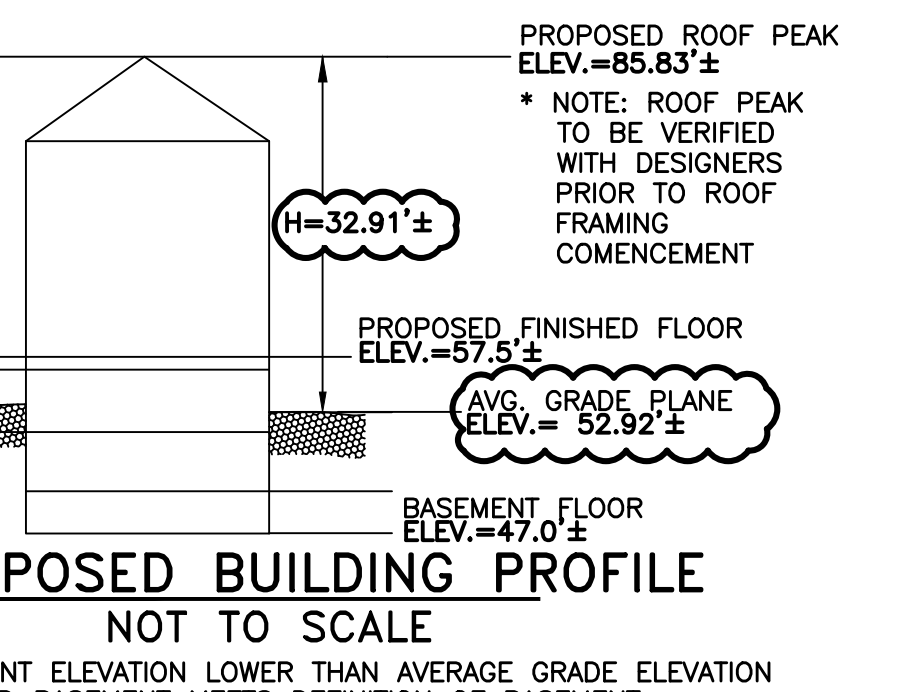
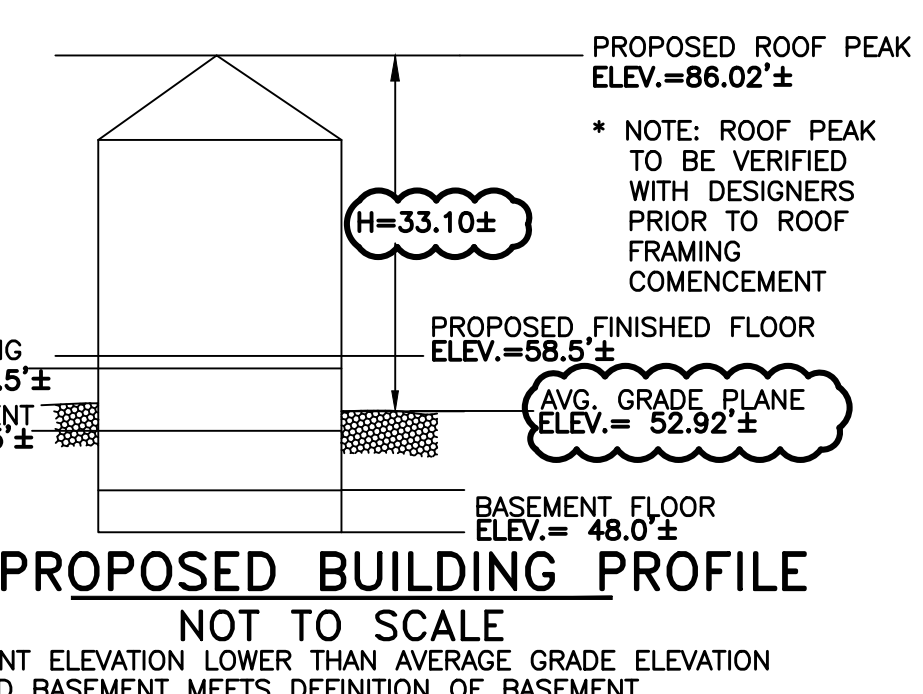
NOTE: CONTRACTOR TO CONFIRM LOCATION OF DOWN SPOUTS PRIOR TO CARRYING OUT ANY DRAINAGE WORKS. NOTE: SURFACE WATER TO BE DIVERTED FROM ALL SIDES OF FOUNDATION WALL. NOTE: ANY TREE BEING REMOVED SHALL COMPLY WITH CITY OF NEWTON TREE ORDINANCE. NOTE: CONTRACTOR TO ENSURE SEWER LINE IS FITTED AT AN EQUAL SLOPE OF BETWEEN 2% AND PROPOSED ARCHITECTURAL 10% FROM HOUSE TO MAIN CONNECTION.

NOTE: CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE SLOPE OF BETWEEN 2% AND PROPOSED ARCHITECTURAL 10% FROM HOUSE TO MAIN CONNECTION. NOTE: PETER NOLAN & ASSOCIATES LLC AND SPRUHAN ENGINEERING, P.C. ACCEPT NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT.

LEGEND table with 2 columns: Symbol and Description. Includes Utility Pole, Water Gate, Hydrant, Gas Gate, Sewer Manhole, Drain Manhole, Catch Basin, Light Pole, Sign, To Be Removed, To Be Abandoned, Top of Wall, Bottom of Wall, Finished Grade, Spot Grade, Deep Test Hole, Percolation Test, Spot Elevation, Proposed Contour, Existing Contour, Drain Line, Water Line, Sewer Line, Gas Line, Fence.

ZONING LEGEND

Table with 4 columns: Zoning District, Required, Proposed, Existing. Rows include Min. Area, Min. Frontage, Min. Yard Front, Side, Rear, Max Lot Coverage, Min Open Space, Max Bldg. Height.



AVERAGE GRADE PLANE & CALCULATION

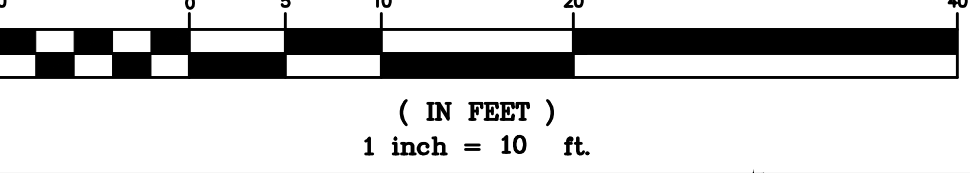
Table with 5 columns: Segment, Length, Point 1, Point 2, Mean Length. Includes a summation row: SUM OF MEAN LENGTH / SUM OF LENGTHS = AVERAGE GRADE PLANE = 52.92.

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. 3. MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. 4. ALL UTILITIES SHALL BE PROTECTED AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES. 5. PROPOSED SEWER PIPE SHALL BE 1" PVC SDR 35. 6. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND APRIL 30, 2018. 7. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER. 8. 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. 9. SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE AREA SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR. 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. PAYMENT PROGRESS FOR ALL TEMPORARY TRENCHES WITHIN A CITY RIGHT-OF-WAY MUST MATCH THE EXISTING DEPTH OF ASPHALT ON THE ROADWAY. 13. WARNING SIGNS SHALL CONFORM TO PAGE 12 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 CLEANED AND PLACED AS SPECIFIED AND PROTECTED BY A CERTIFICATE OF OCCUPANCY. 15. IN CASES WHERE LEDGE OR Boulders are encountered, SPRUHAN ENGINEERING, P.C. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED. 16. IF ANY PART OF THIS DESIGN 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 RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM. 18. PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHOULD BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. 19. THE APPLICANT WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A GENERAL CROSSING PERMIT AND A TRENCH PERMIT WITH THE CITY. 20. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. 21. ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST BE ENCASED IN CONCRETE. 22. THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE. 23. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. 24. THE EXISTING CONTOURS OF THE LAND ARE NOT TO BE ALTERED BY MORE THAN THREE (3) FEET AS A RESULT OF THE GRADING OR EXCAVATION. 25. IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. 26. NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. 27. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. 28. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY EVENT GENERATING MORE THAN 1/2" OF RAINFALL. 29. WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE E (EXCAVATED) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS. 30. ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 924 CMR 21.00 AND 22.00. 31. THE NEW SEWER SERVICE LINE MUST BE PRESSURE TESTED PRIOR TO USE. 32. THE CONTRACTOR NEEDS TO NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM INSPECTED. 33. ALL SITUATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. 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. 35. APPROVAL OF THIS PLAN BY CITY OF NEWTON ENGINEERING DIVISION IMPLIES THAT THE PLAN MEETS THE MINIMUM DESIGN STANDARDS OF THE CITY OF NEWTON. HOWEVER, THE ENGINEERING DIVISION MAKES NO REPRESENTATION AND ASSUMES NO RESPONSIBILITY FOR THE DESIGNER'S IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR OF THE FUNCTIONALITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED IN ACCORDANCE WITH THE DESIGN(S). THE CITY OF NEWTON ASSUMES NO LIABILITY FOR DESIGN ASSUMPTIONS, ERRORS OR OMISSIONS BY THE ENGINEER OF RECORD.

WALNUT STREET

GRAPHIC SCALE (PUBLIC WAY-VARIABLE WIDTH)



REVISION BLOCK table with 3 columns: Revision, Description, Date. Includes REV A for 4 PARKING SPACES on 11/16/18.

SCALE table with 2 columns: Scale and Date. Includes 1"=10' and 8/27/19.

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C.

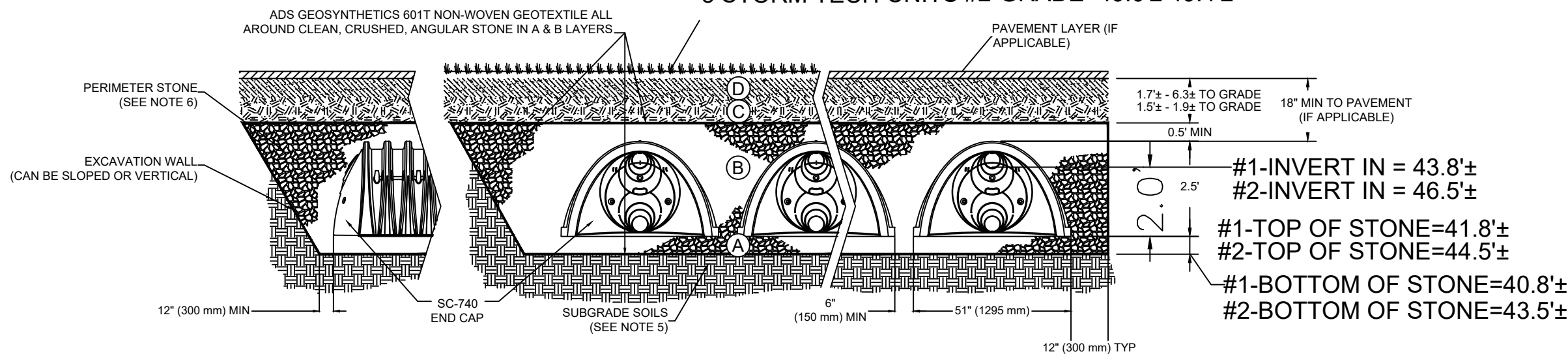
67 WALNUT STREET, NEWTON, MASSACHUSETTS. PROPOSED CIVIL PLAN.

Professional seals and logos for Peter Nolan & Associates, LLC and Spruhan Engineering, P.C. Includes contact information for both firms.

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE TO LAYER 'B' TO THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 90% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>1</sup>

3 STORM TECH UNITS #1-GRADE=46.5± 51.1±  
3 STORM TECH UNITS #2-GRADE=49.0± 49.4±

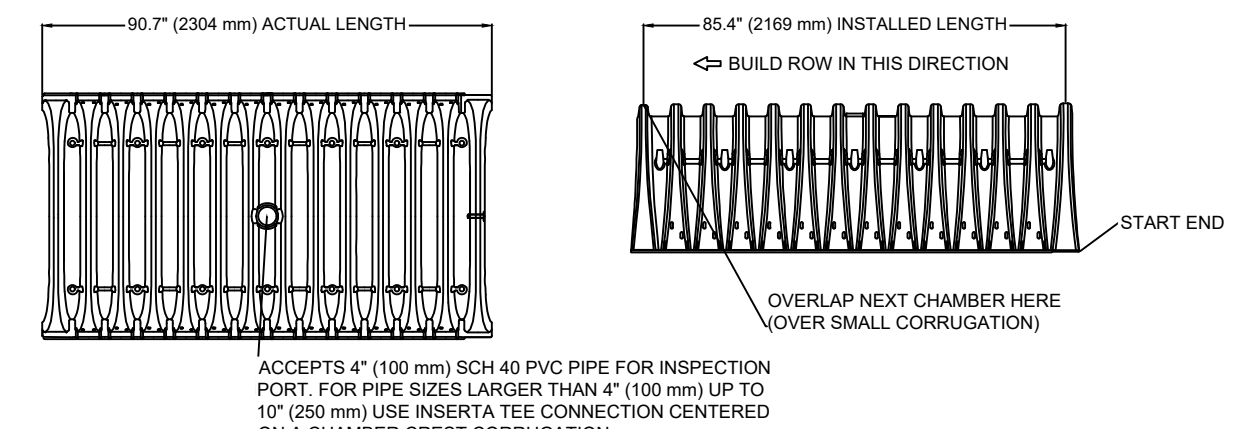


- NOTES:**
- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2118 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
  - SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
  - "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
  - THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
  - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
  - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
  - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

**STORMTECH GENERAL NOTES**

- STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE. CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPES AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

**SC-740 TECHNICAL SPECIFICATION**



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE <sup>1</sup>	WEIGHT
51.0" X 30.0" X 85.4"	45.9 CUBIC FEET (1,300 m <sup>3</sup> )	74.9 CUBIC FEET (2,120 m <sup>3</sup> )	75.0 lbs (33.6 kg)
(1295 mm X 762 mm X 2169 mm)			

<sup>1</sup> ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

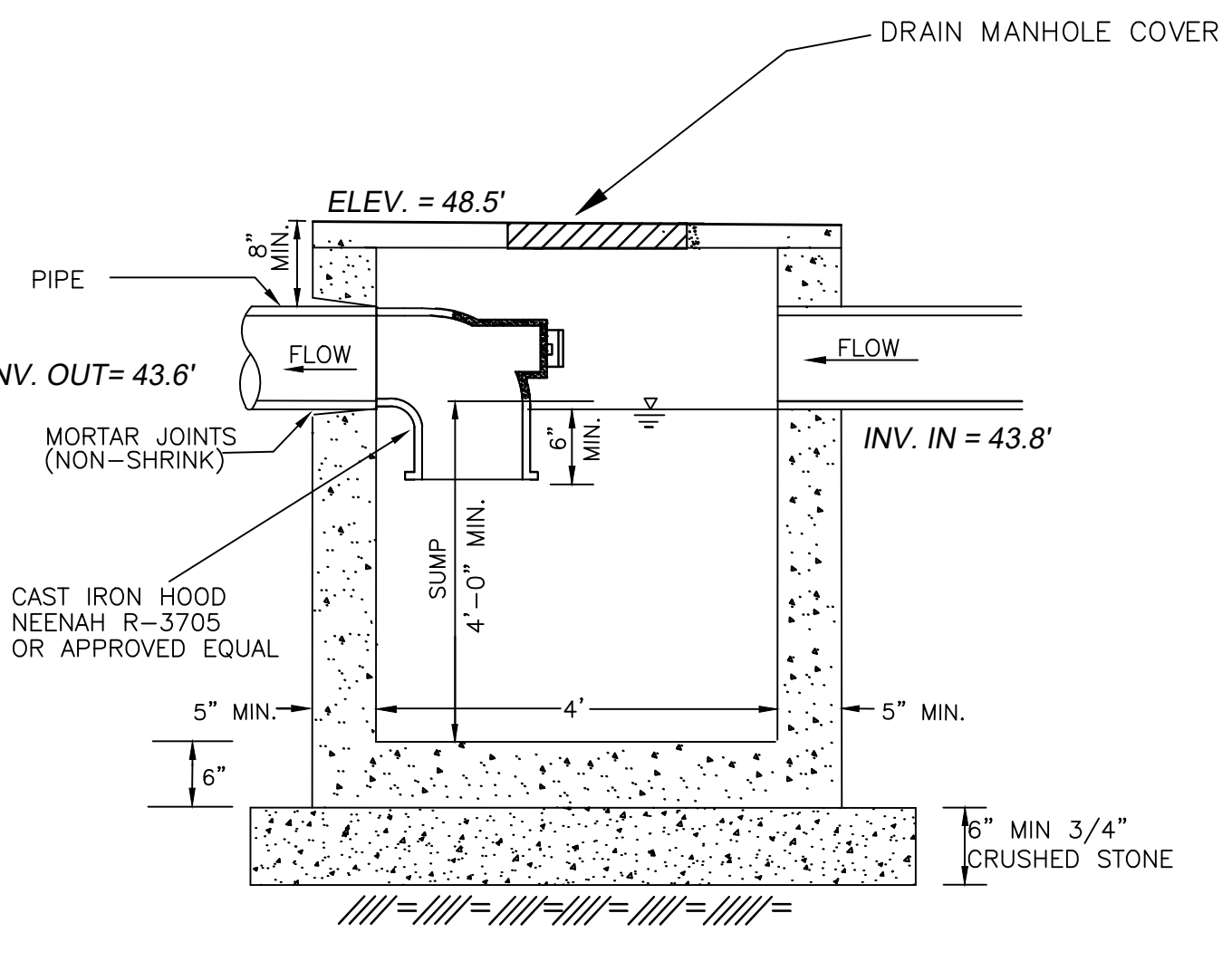
**STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"**

PART #	STUB	A	B	C
SC740EP08T / SC740EP08TC	6" (150 mm)	10.6" (277 mm)	18.5" (470 mm)	—
SC740EP08B / SC740EP08BC	—	—	—	0.5" (13 mm)
SC740EP08T / SC740EP08TC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	—
SC740EP08B / SC740EP08BC	—	—	—	0.6" (15 mm)
SC740EP10T / SC740EP10TC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EP10B / SC740EP10BC	—	—	—	0.7" (18 mm)
SC740EP12T / SC740EP12TC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EP12B / SC740EP12BC	—	—	—	1.2" (30 mm)
SC740EP15T / SC740EP15TC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EP15B / SC740EP15BC	—	—	—	1.3" (33 mm)
SC740EP18T / SC740EP18TC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EP18B / SC740EP18BC	—	—	—	1.5" (41 mm)
SC740EP24B <sup>1</sup>	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

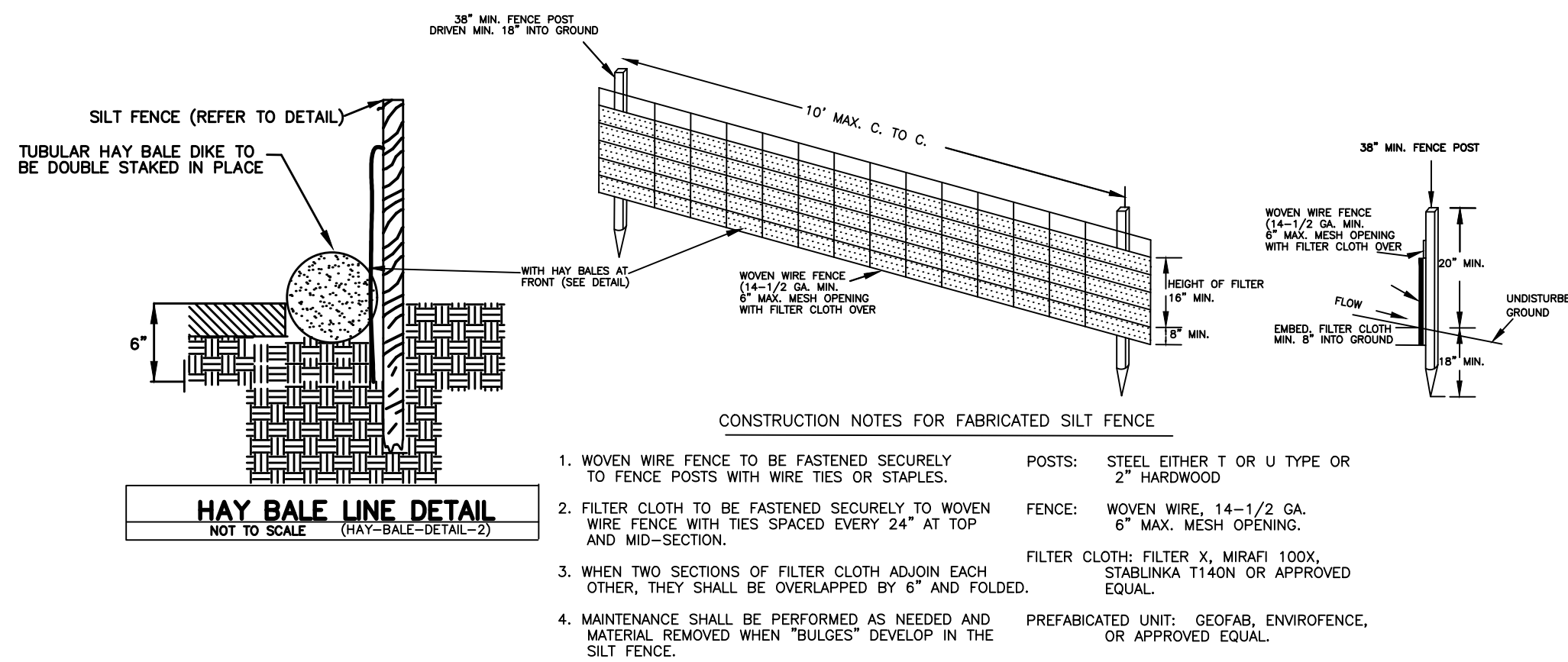
ALL STUBS, EXCEPT FOR THE SC740EP24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-800-802-2094.

<sup>1</sup> FOR THE SC740EP24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

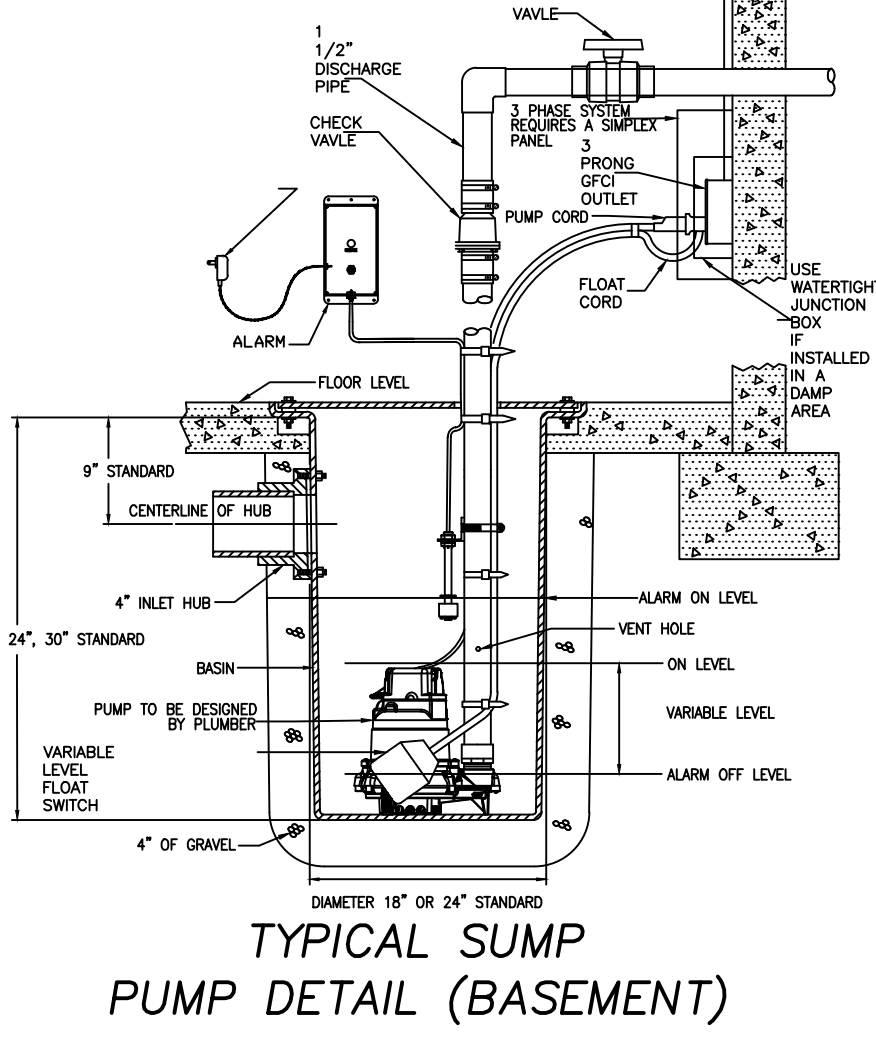
NOTE: ALL DIMENSIONS ARE NOMINAL.



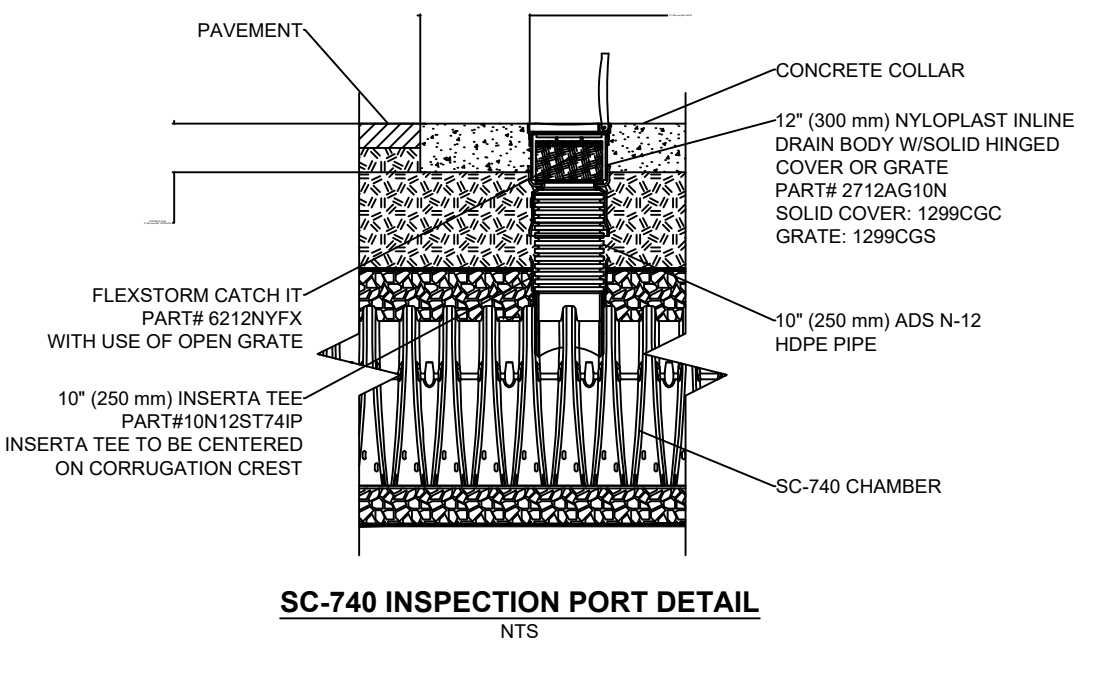
**DRAIN MANHOLE DETAIL**



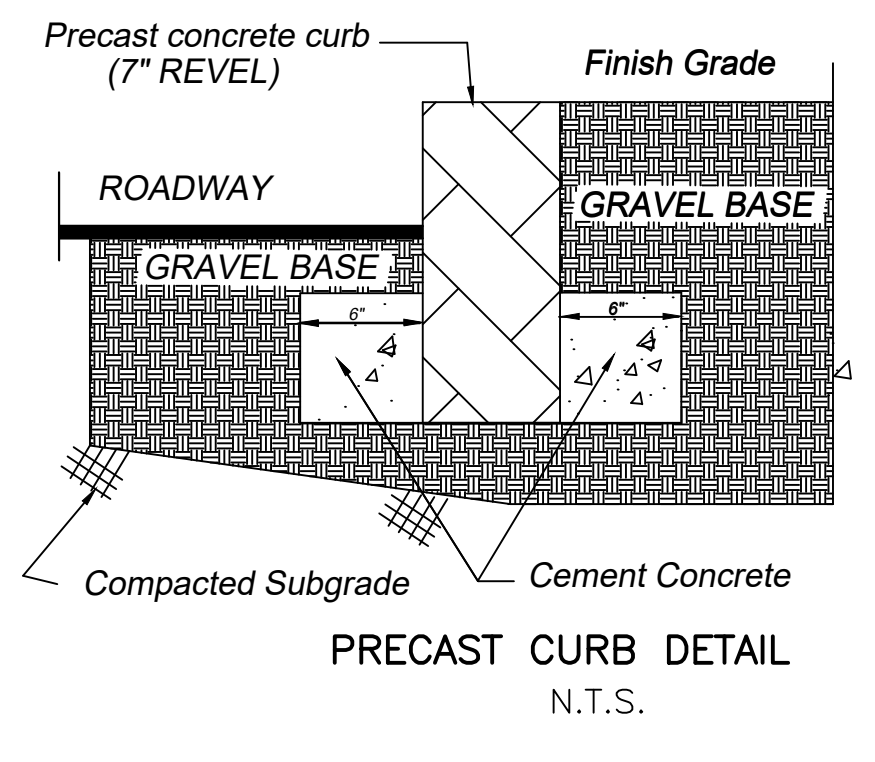
**SILT FENCE DETAIL**



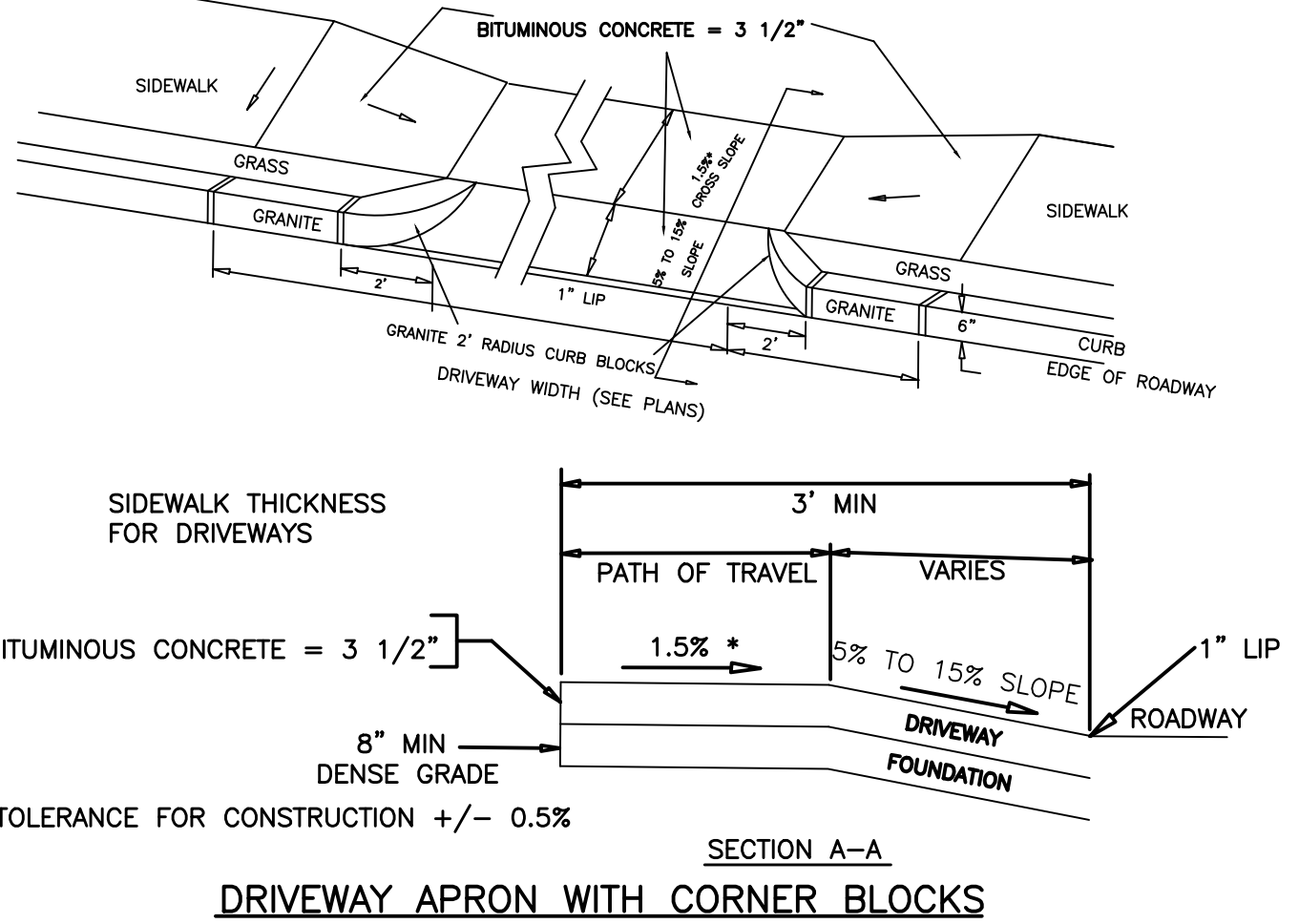
**TYPICAL SUMP PUMP DETAIL (BASEMENT)**



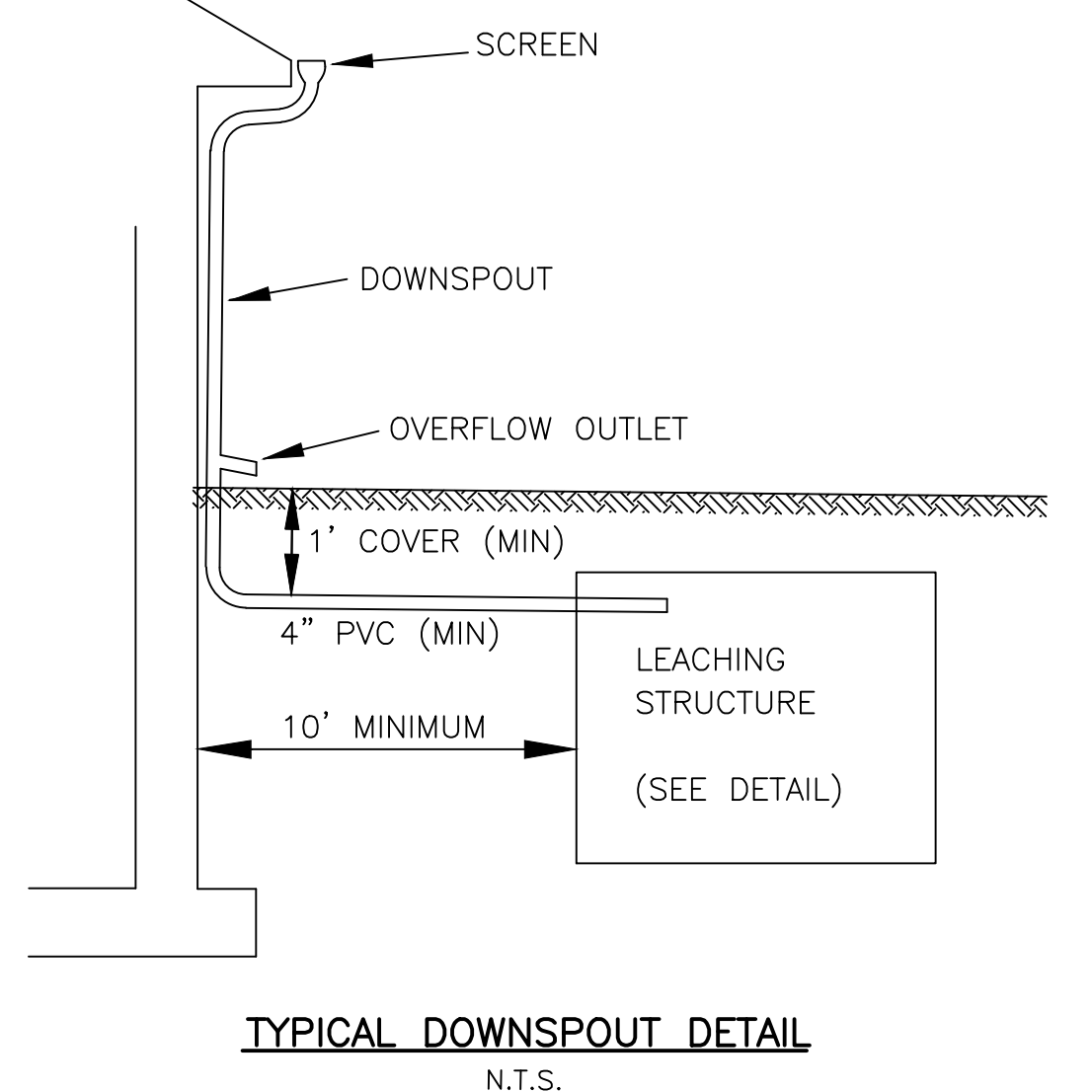
**SC-740 INSPECTION PORT DETAIL**



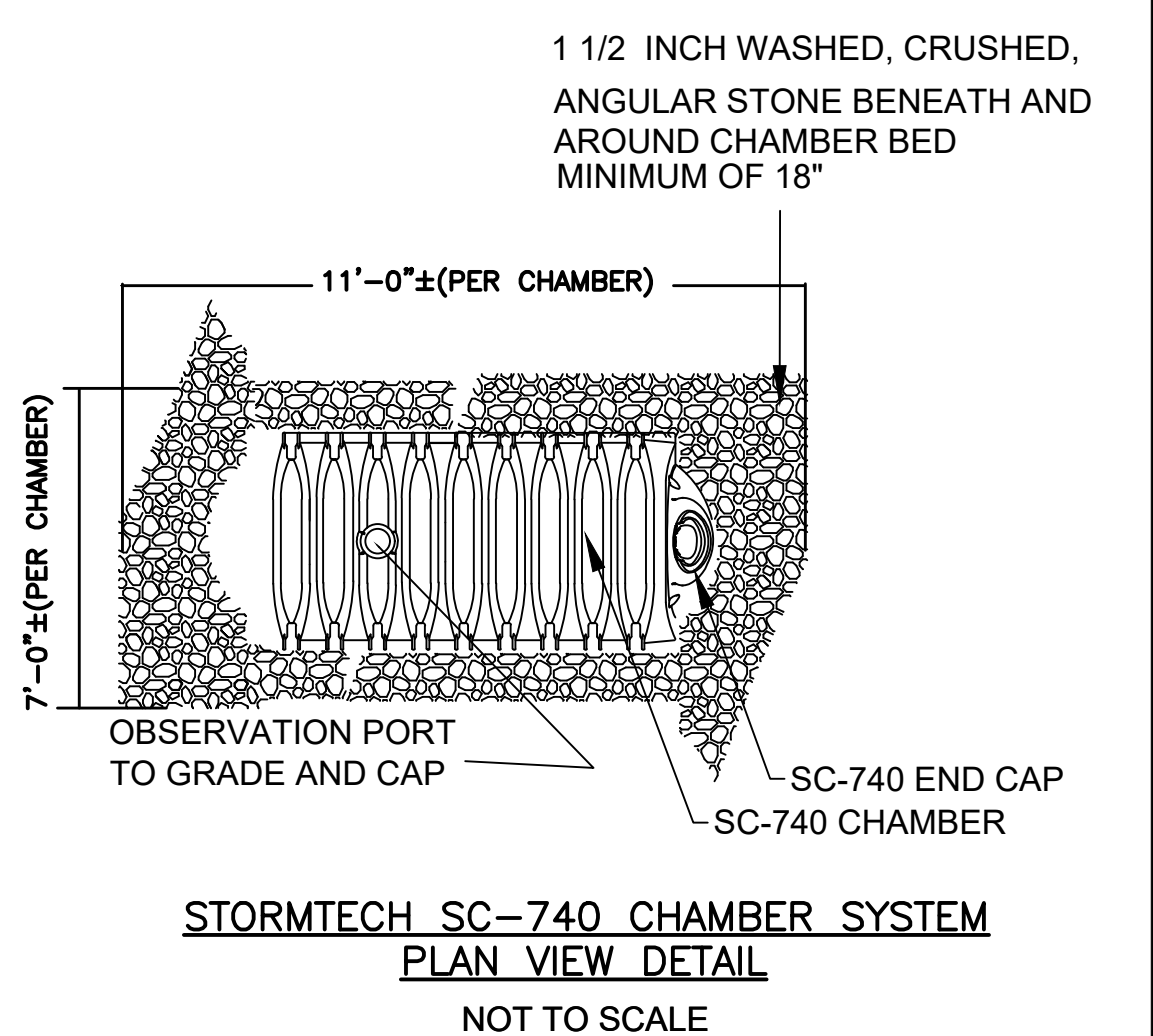
**PRECAST CURB DETAIL**



**DRIVEWAY APRON WITH CORNER BLOCKS**



**TYPICAL DOWNSPOUT DETAIL**



**STORMTECH SC-740 CHAMBER SYSTEM PLAN VIEW DETAIL**

**REVISION BLOCK**

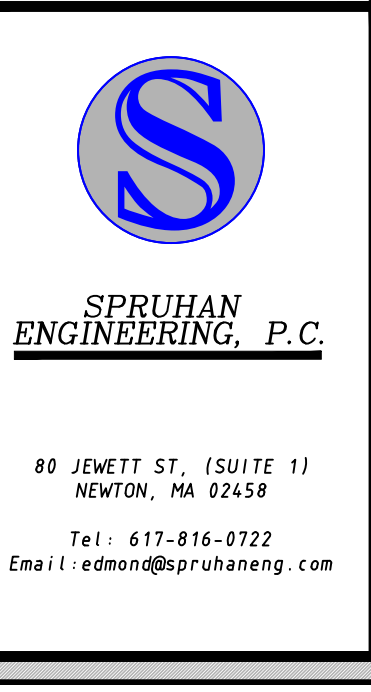
NO.	DESCRIPTION	DATE

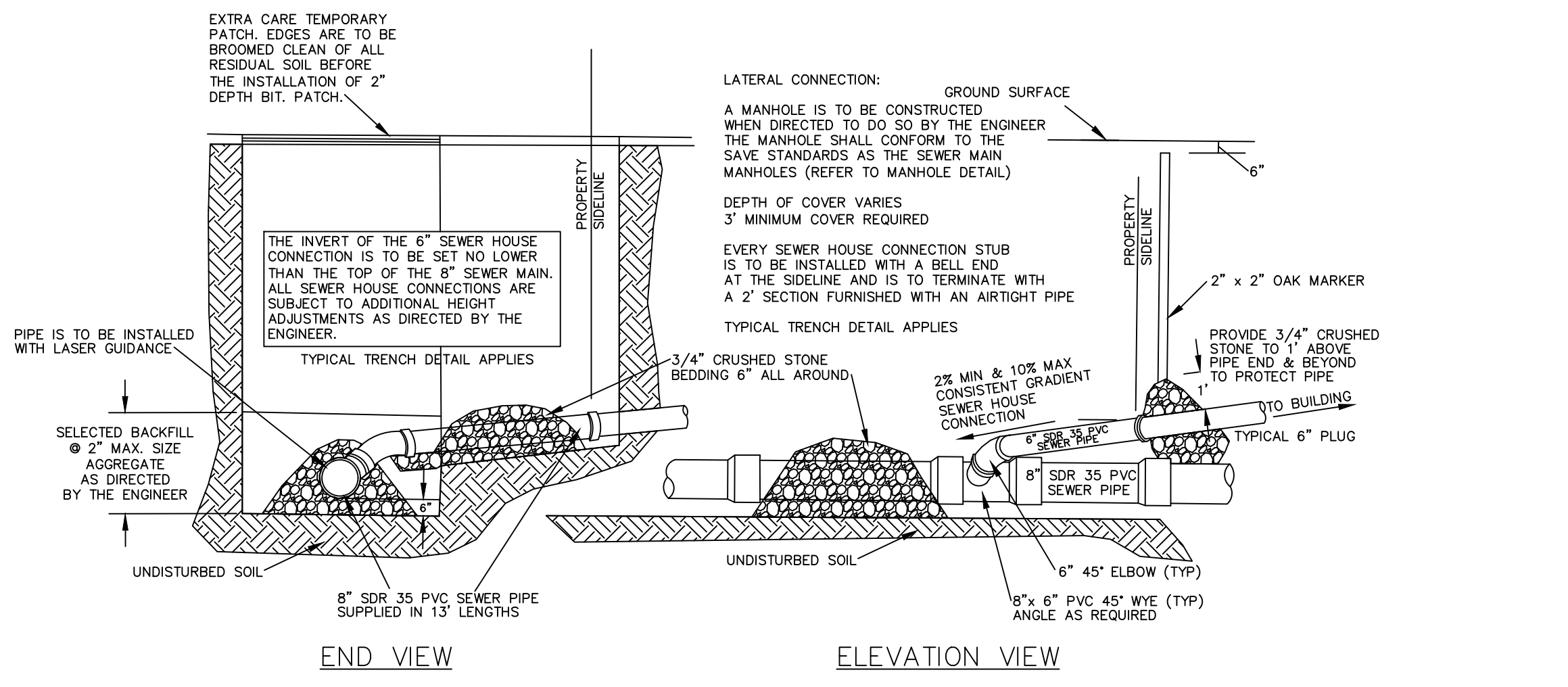
SCALE	1"=10'
DATE	8/27/19
DRAWN BY	PS
CHECKED BY	ETS
APPROVED BY	ETS
SHEET	3
PLAN NO.	3 OF 9
CLIENT:	
SHEET:	<b>3</b>

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C.. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.

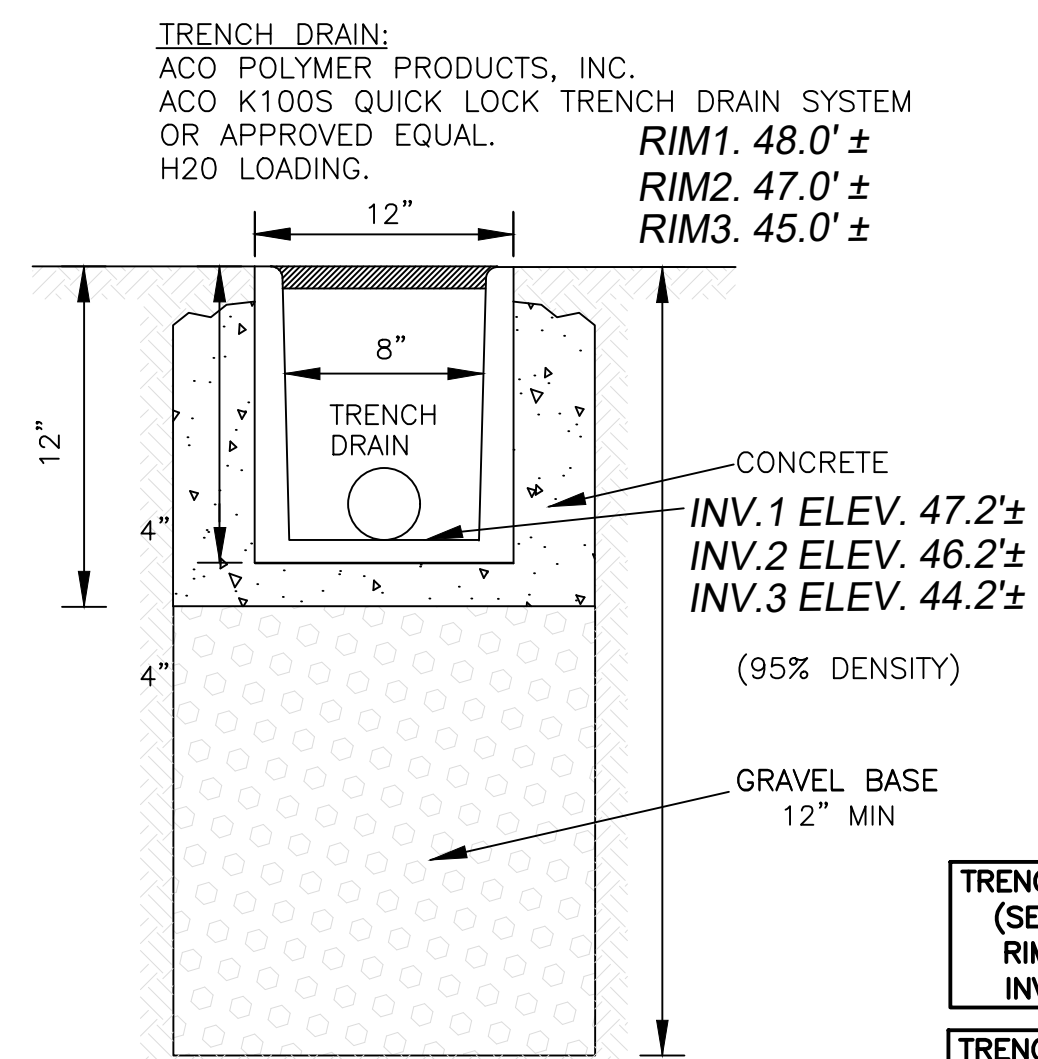
**67 WALNUT STREET,  
NEWTON,  
MASSACHUSETTS**

**DETAILS**

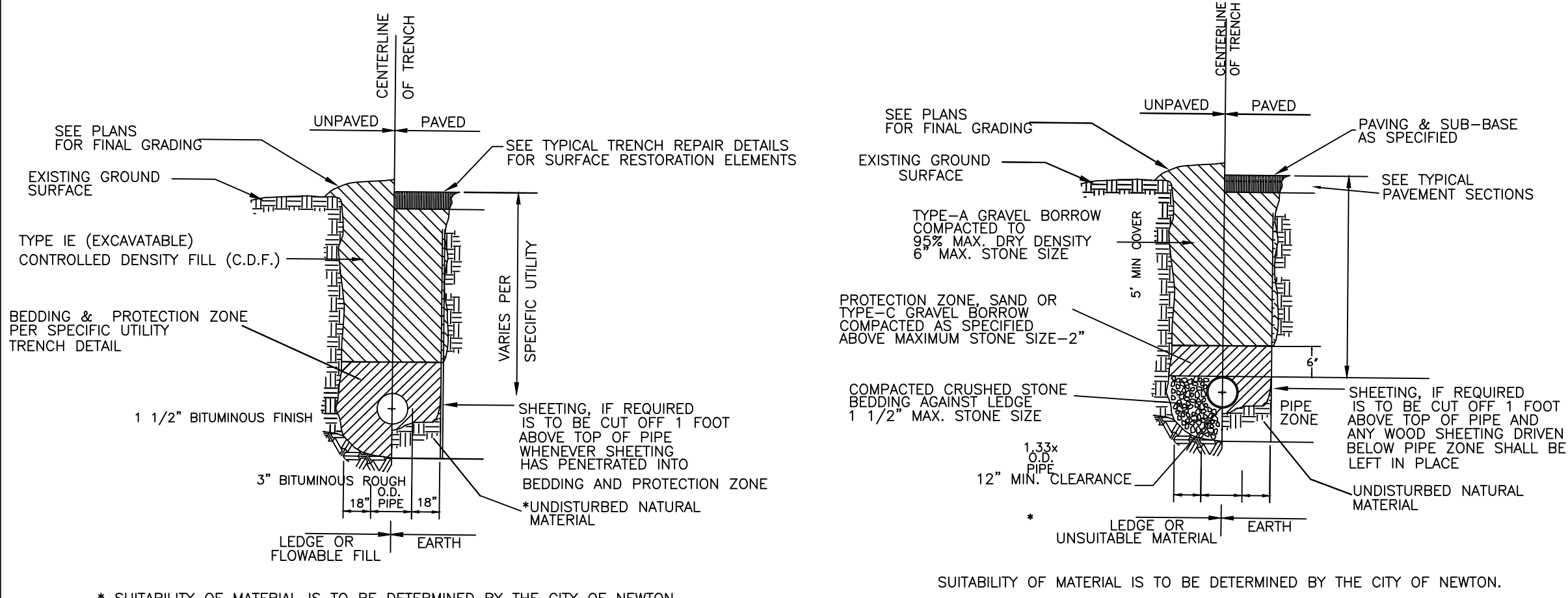




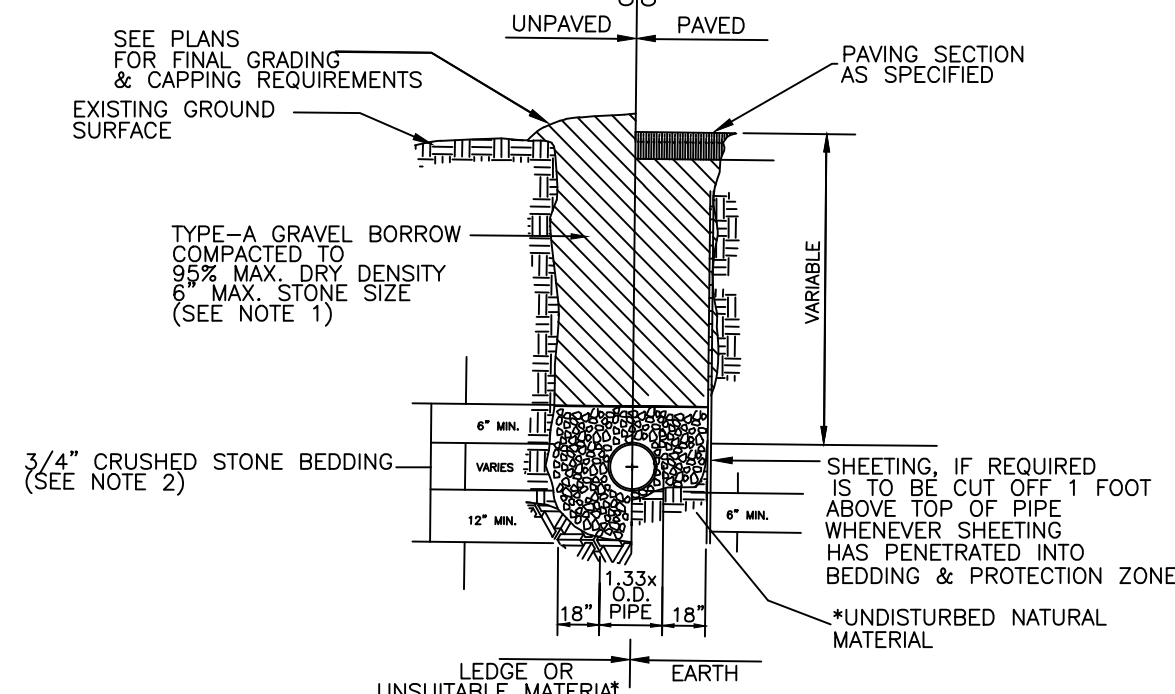
TYPICAL PVC SEWER HOUSE CONNECTION



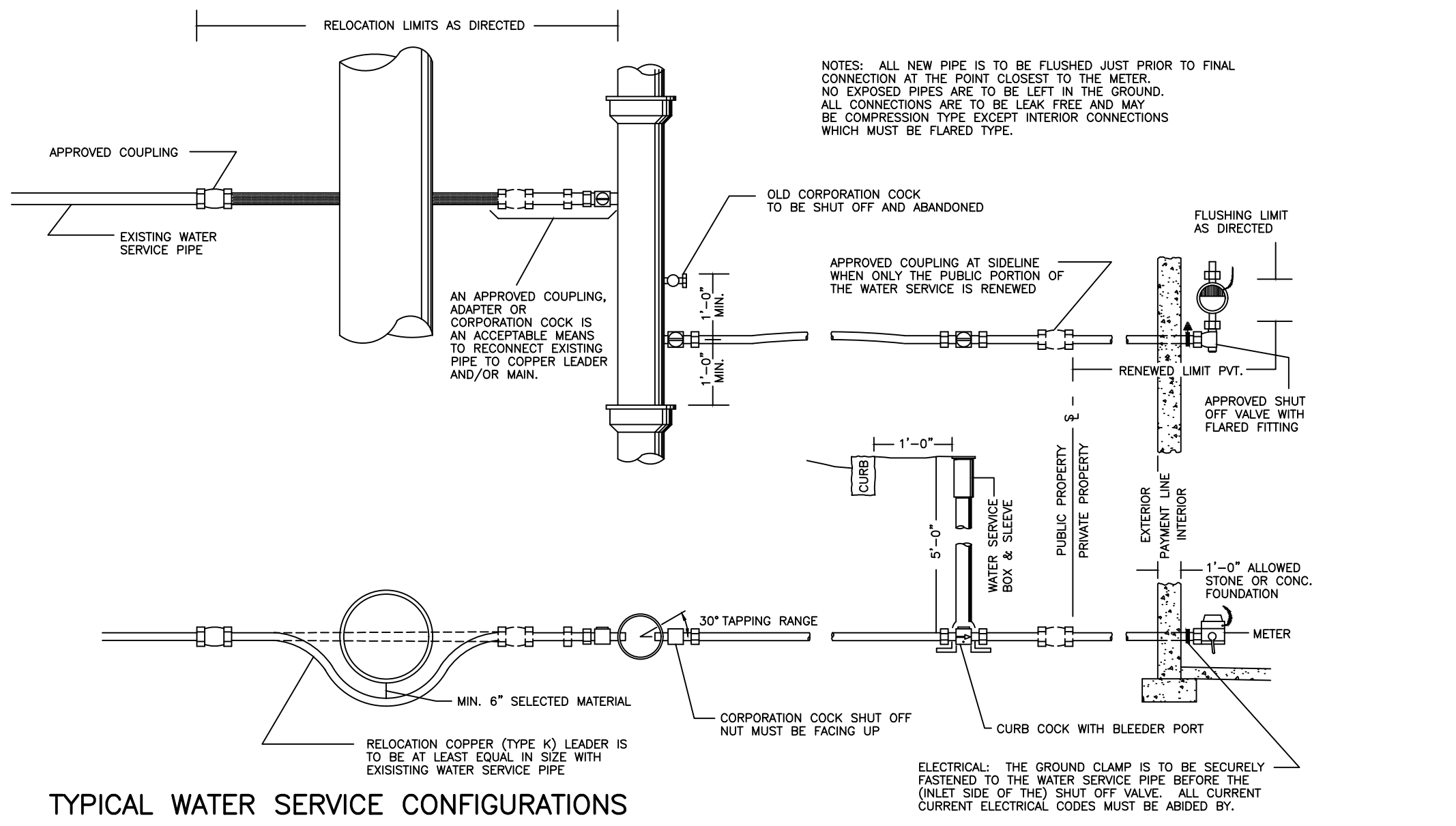
TRENCH DRAIN DETAIL



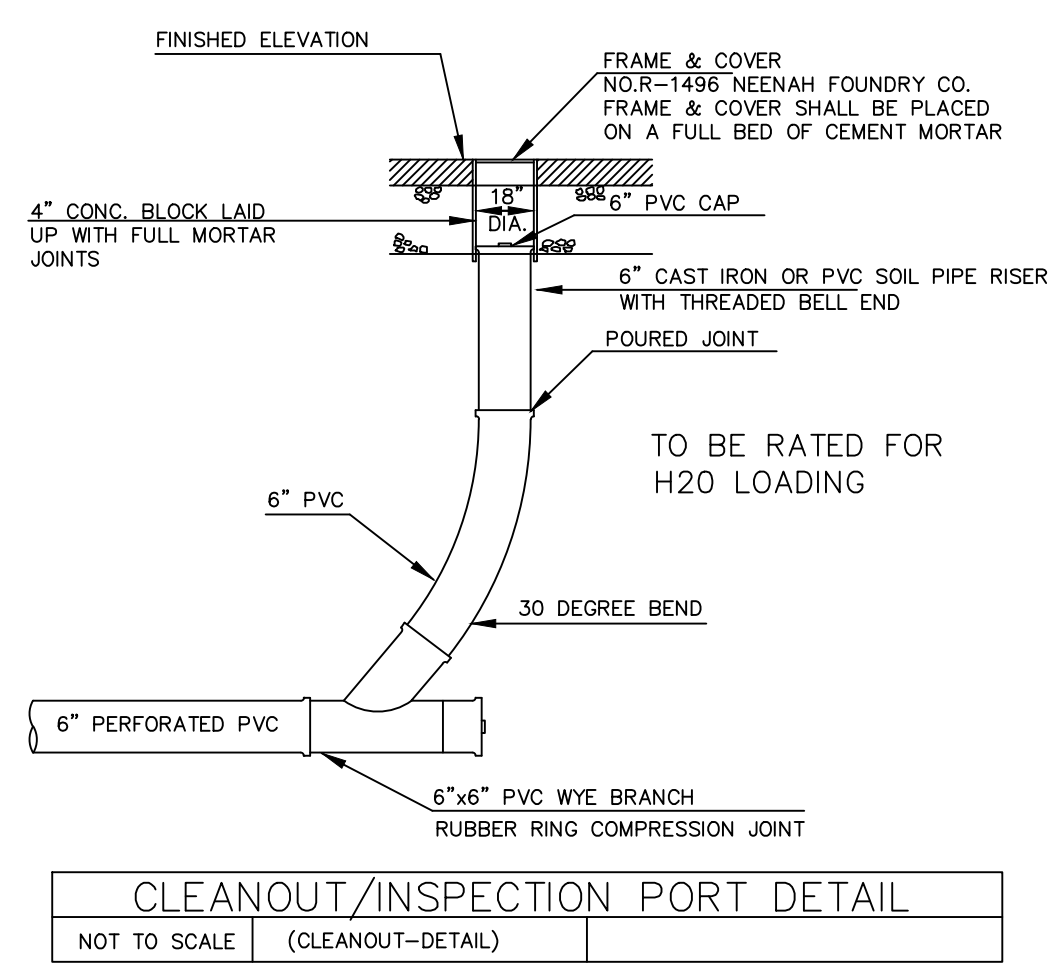
TYPICAL WATER TRENCH DETAIL



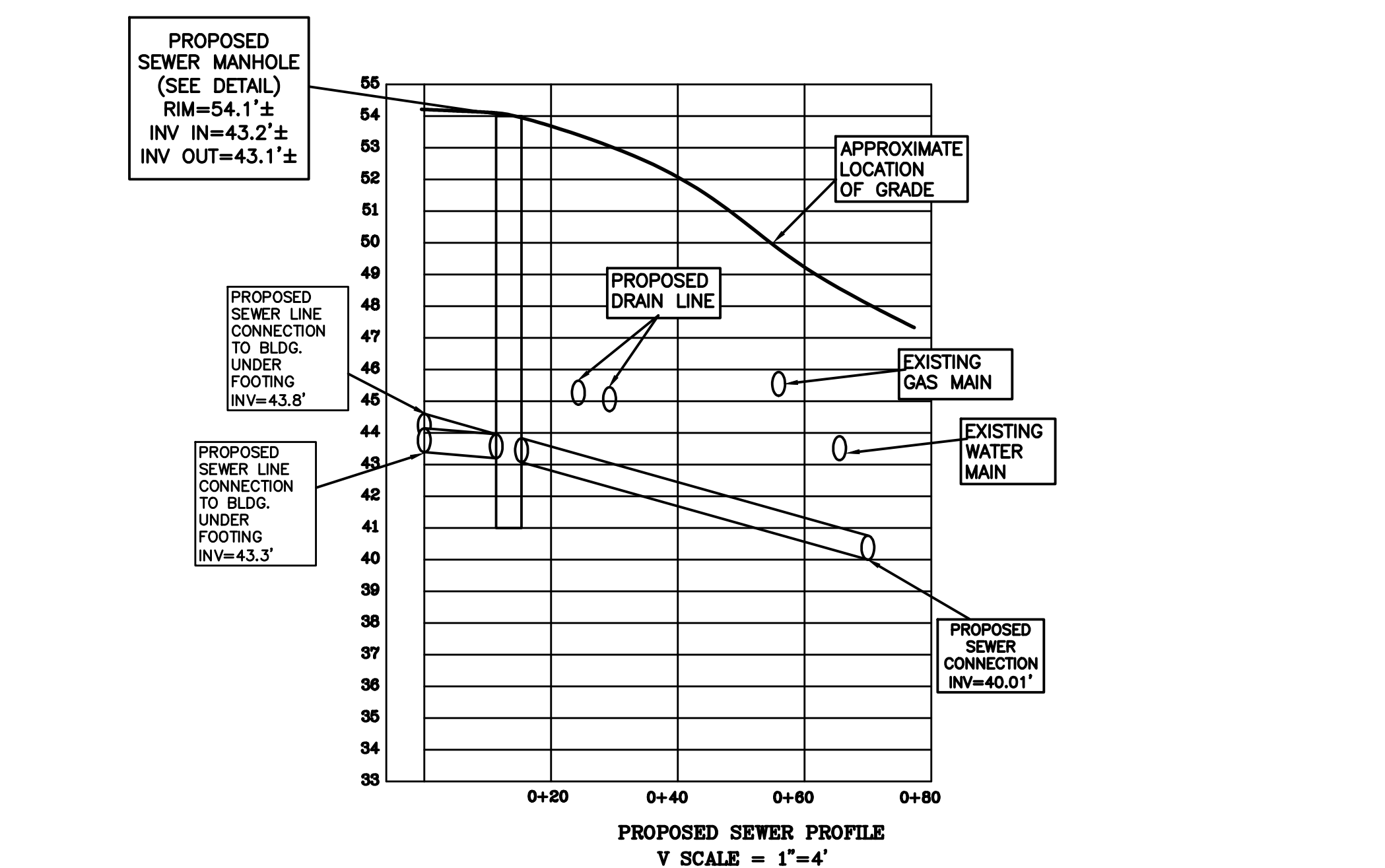
GRAVITY SEWER TRENCH DETAIL



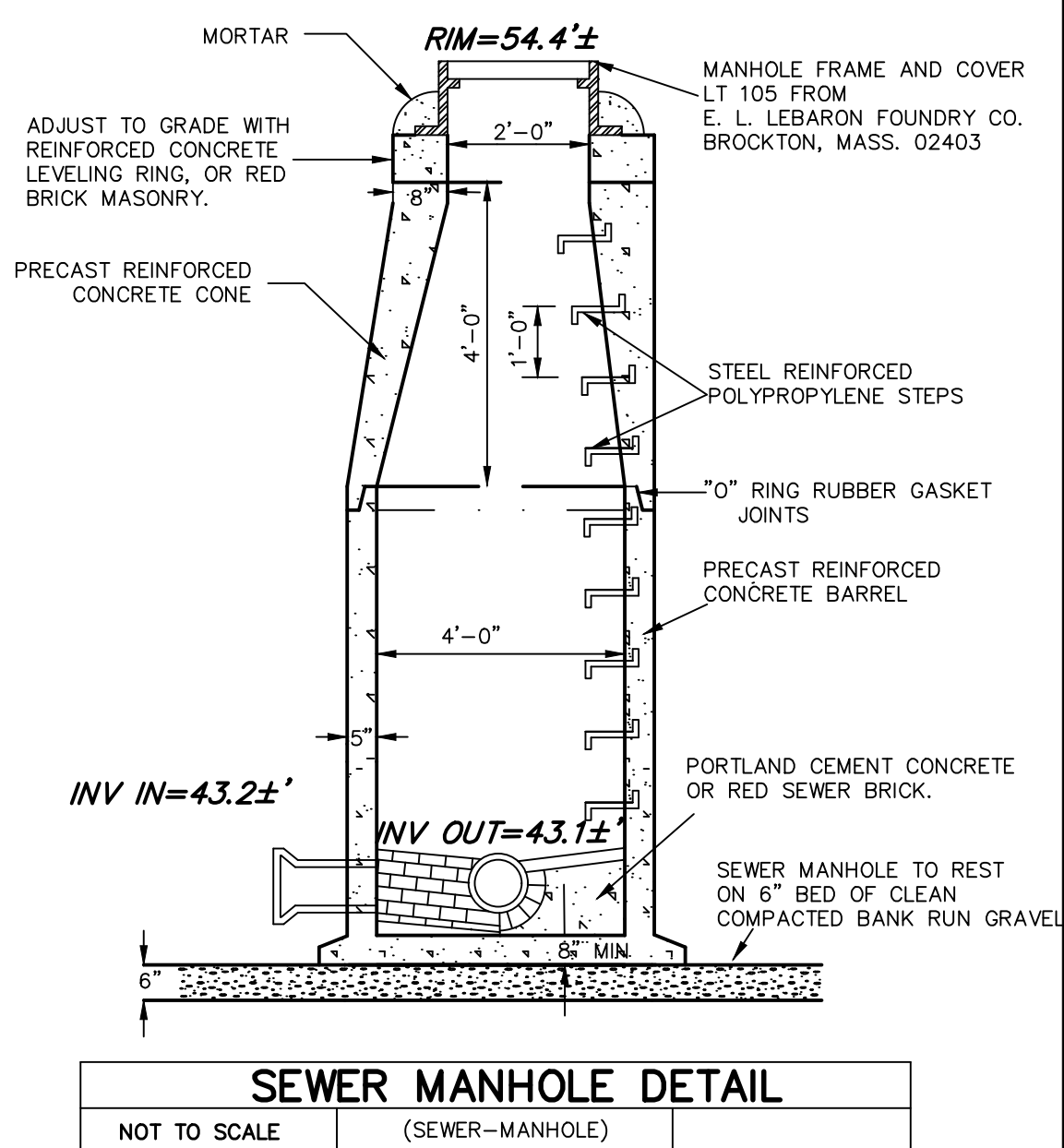
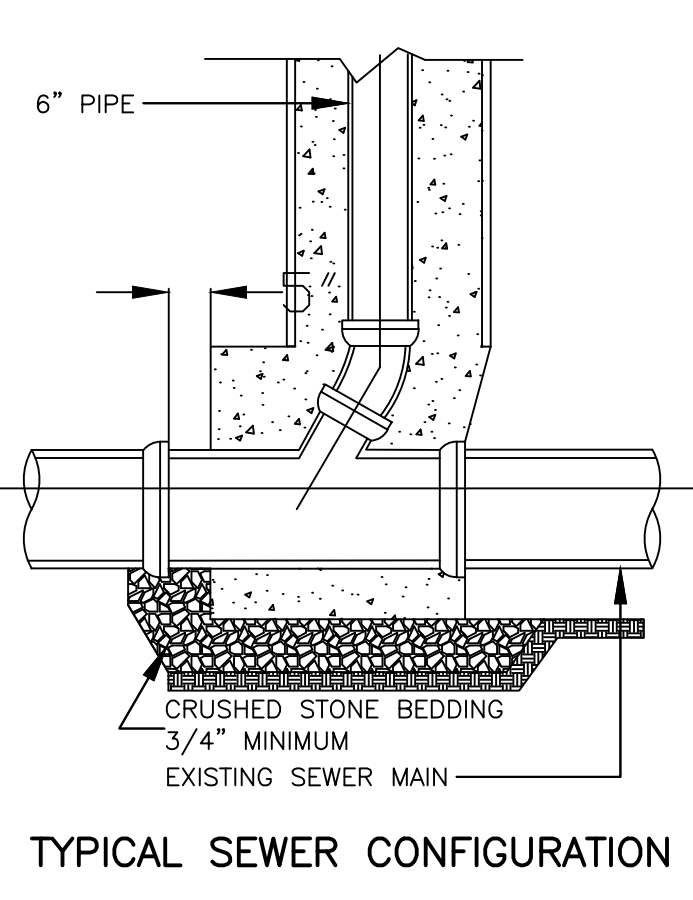
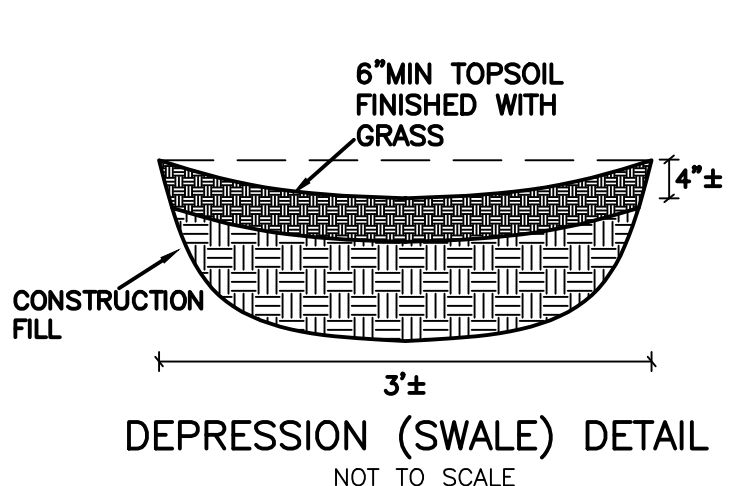
TYPICAL WATER SERVICE CONFIGURATIONS



CLEANOUT/INSPECTION PORT DETAIL



DEEP OBSERVATION HOLE LOG  
GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 67 WALNUT STREET, NEWTON BY PETER NOLAN & ASSOCIATES, LLC. AND SPRUHAN ENGINEERING, P.C.  
HOLE NUMBER: TP - 1 DATED: 6/26/19  
GENERAL SITE CONDITIONS: GRASS AND TREES.



67 WALNUT STREET,  
NEWTON,  
MASSACHUSETTS

DETAILS

PETER NOLAN & ASSOCIATES, LLC  
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS  
697 CAMBRIDGE STREET,  
SUITE 1103,  
BRIGHTON, MA 02135  
Tel: 857-891-7478  
617-782-1533  
Fax: 617-2025691

SPRUHAN ENGINEERING, P.C.  
80 JEWETT ST. (SUITE 11)  
NEWTON, MA 02458  
Tel: 617-816-0722  
Email: edmond@spruhaneng.com

REVISION BLOCK		SCALE	1"=10'
DESCRIPTION	DATE	DATE	8/27/19
		DRAWN BY	PS
		CHECKED BY	ETS
		APPROVED BY	ETS
		SHEET	4
		PLAN NO.	4 OF 9
		CLIENT:	
		SHEET:	4

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C.. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.

**EXISTING LEGEND**

⊙	SEWER LINE
⊙	SEWER MANHOLE
—	WATER LINE
—	GAS LINE
⊙	UTILITY POLE
⊙	GAS VALVE
—	OVERHEAD ELECTRIC SERVICE
⊙	WATER VALVE
⊙	CATCH BASIN
—	FENCE
—	CONTOUR LINE (MUR)
—	CONTOUR LINE (MNR)
×	SPOT GRADE
⊙	DRAIN MANHOLE
⊙	HYDRANT
—	TREE

NOTE: CONTRACTOR TO CONFIRM LOCATION OF DOWN SPOUTS PRIOR TO CARRYING OUT ANY DRAINAGE WORKS.

NOTE: SURFACE WATER TO BE DIVERTED FROM ALL SIDES OF FOUNDATION WALL.

NOTE: ANY TREE BEING REMOVED SHALL COMPLY WITH CITY OF NEWTON TREE ORDINANCE.

NOTE: CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL/STRUCTURAL PLANS AND INCORPORATES ALL OVERHANDS, CANTILEVERS AND ANY COMPONENT THAT IS SUBJECT TO ZONING RESTRICTIONS. IF THIS IS FOUND NOT TO BE THE CASE THE CONTRACTOR MUST CONTACT THE ENGINEER/SURVEYOR AND REQUEST A REVISED PLAN WHICH MUST BE RESUBMITTED TO U.S.D. CITY OF NEWTON.

NOTE: CONTRACTOR TO ENSURE ALL RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES.

NOTE: CONTRACTOR TO ENSURE THAT THE WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

NOTE: CONTRACTOR TO REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL/STRUCTURAL PLANS AND INCORPORATES ALL OVERHANDS, CANTILEVERS AND ANY COMPONENT THAT IS SUBJECT TO ZONING RESTRICTIONS. IF THIS IS FOUND NOT TO BE THE CASE THE CONTRACTOR MUST CONTACT THE ENGINEER/SURVEYOR AND REQUEST A REVISED PLAN WHICH MUST BE RESUBMITTED TO U.S.D. CITY OF NEWTON.

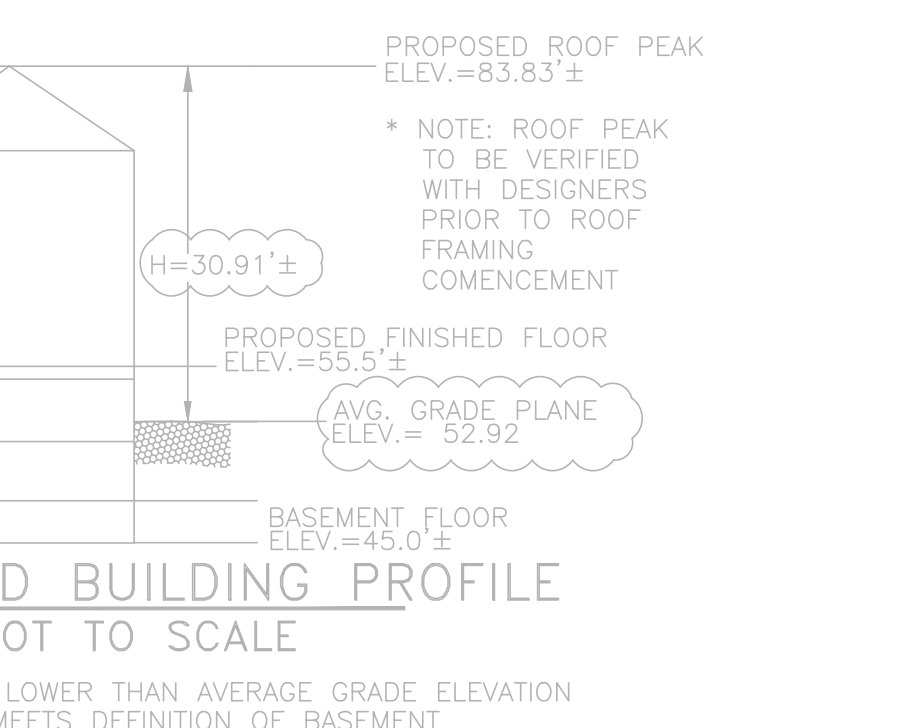
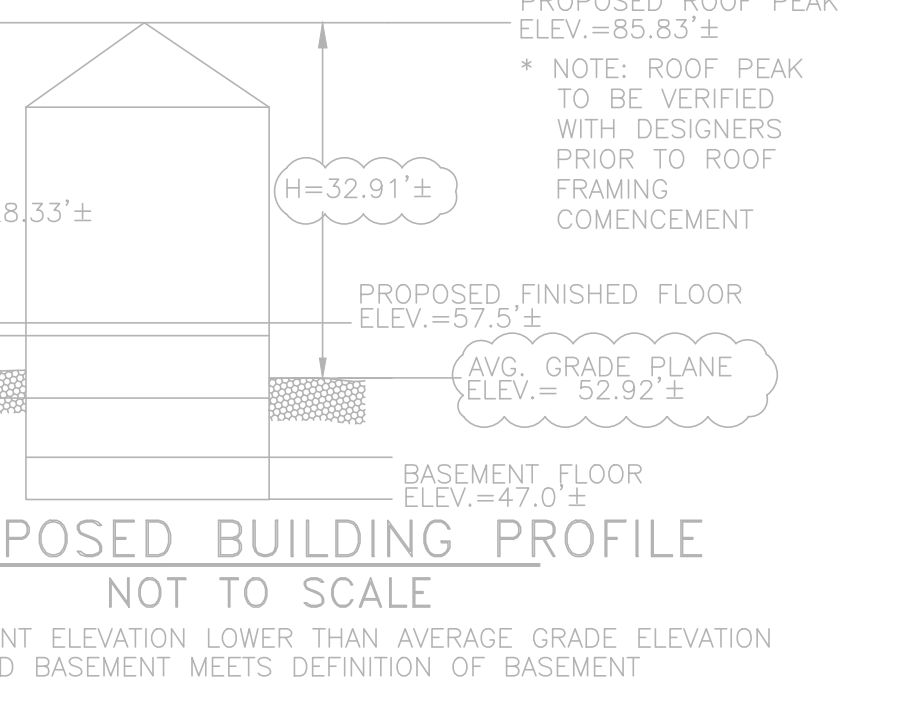
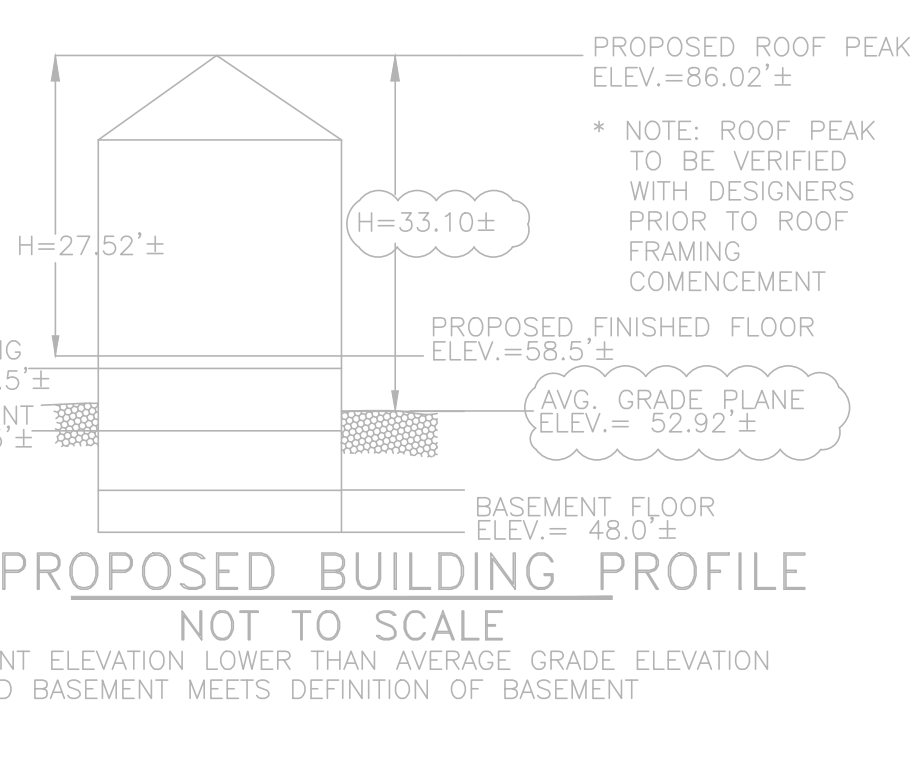
**LEGEND**

⊙	UTILITY POLE
⊙	WATER GATE
⊙	HYDRANT
⊙	GAS GATE
⊙	SEWER MANHOLE
⊙	DRAIN MANHOLE
⊙	CATCH BASIN
⊙	SIGN
⊙	TO BE REMOVED
⊙	TO BE ABANDONED
⊙	TOP OF WALL
⊙	BOTTOM OF WALL
⊙	FINISHED GRADE
⊙	SPOT GRADE
⊙	DEEP TEST HOLE
⊙	PERCOLATION TEST
⊙	SPOT ELEVATION
⊙	PROPOSED CONTOUR
⊙	EXISTING CONTOUR
⊙	DRAIN LINE
⊙	WATER LINE
⊙	SEWER LINE
⊙	GAS LINE
⊙	FENCE

**ZONING LEGEND**

	REQUIRED	PROPOSED	EXISTING
MIN. AREA	15,000± S.F.	14,520± S.F.	14,520± S.F.
MIN. FRONTAGE	80'	83.90'±	83.90'±
MIN. YARD FRONT	25'	25'±	56.8'
SIDE	25'	8.0'	10.2'
REAR	25'	110.2'	130.9'
MAX LOT COVERAGE	25%	24.7%	13.3%
MIN OPEN SPACE	50%	61.4%	86.3%
MAX. BLDG. HEIGHT	36'	33.10'±	42.9'±

\* REQUIRED DIMENSIONS UNDER SPECIAL PERMIT



**AVERAGE GRADE PLANE & CALCULATION**

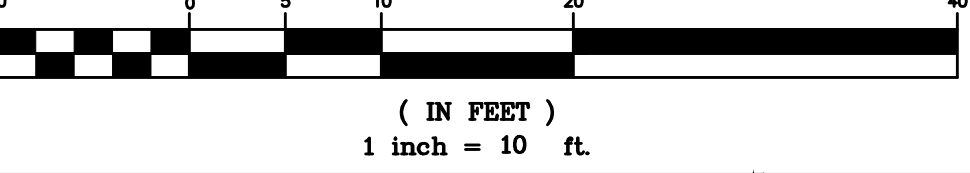
SEGMENT	LENGTH	POINT 1	POINT 2	MEAN ±	LENGTH
1	19.30	52.30	54.40	53.35	1,029.66
2	37.30	56.50	56.40	56.45	2,105.59
3	31.70	56.50	54.50	55.50	1,759.35
4	32.10	54.10	53.30	53.70	1,723.77
5	22.70	52.90	52.40	52.65	1,195.16
6	12.30	53.00	52.00	52.50	645.75
7	14.00	51.60	51.60	51.60	722.40
8	11.60	45.60	45.70	45.65	529.54
9	11.80	53.00	53.00	53.00	625.40
10	7.40	52.90	54.50	53.70	397.38
11	12.40	48.30	48.10	48.20	597.68
12	7.70	52.60	54.50	53.55	412.34
13	7.70	52.90	52.90	52.90	407.33
14	7.10	52.90	52.40	52.65	373.82
15	16.90	48.50	49.30	48.90	876.41
16	12.30	49.00	54.10	51.55	634.07
17	5.70	54.60	53.70	54.15	302.86
SUM	270.00				15,885.58

SUM OF MEAN X LENGTH / SUM OF LENGTHS = AVERAGE GRADE PLANE = 52.92

**NOTES**

- ELEVATIONS REFER TO CITY OF NEWTON DATUM.
- 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 LOCATION OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.
- MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL 800-SAFE AT 1-888-344-7333 IN ORDER TO COMPLY WITH STATE LAW.
- ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS, LATEST EDITION, PREPARED AND ISSUED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 29 FOR DETAILS. NOTE: A TRENCH PERMIT MUST BE OBTAINED PRIOR TO ANY EXCAVATION BEING CARRIED OUT.
- PROPOSED SEWER PIPE SHALL BE 8" PVC SDR 35.
- PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.
- THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND APRIL 30, 2018.
- ALL WORK SHALL BE SUBJECT TO THE SUPERVISION AND APPROVAL OF THE CITY ENGINEER.
- 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 EXCAVATION BEGINS OR BEGINS TO BE MADE. HE HAS SUBMITTED, VIA PHONE CALL OR IN PERSON, NOTICE OF THE PROPOSED EXCAVATION TO THE FOLLOWING:
  - SUCH PRIVATE COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE AREA.
  - SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.
  - CITY OF NEWTON WATER & SEWER DEPARTMENT (SUCH NOTICE SHALL SET FORTH THE STREET NAME AND A REASONABLY ACCURATE DESCRIPTION OF THE LOCATION OF THE EXCAVATION).
- THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC AS REQUIRED BY THE CITY ENGINEER.
- NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.
- WARNING SIGNS SHALL CONFORM TO PAGE 12 OF THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.
- ALL TRENCHES, EXCEPT FOR SEWER, SHALL BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE OF LATERALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLIES, BACKFILL AS REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND UNDESIRABLE SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
- IN CASES WHERE LEGS OR BUILDINGS ARE ENCOUNTERED, SPRUHAN ENGINEERING, P.C. WILL BE RESPONSIBLE FOR THE METHOD OF ROCK ENCOUNTERS.
- IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER, AS WELL AS THE APPROVING AUTHORITIES, SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION.
- THE ROOF RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM.
- PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHOULD BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND PERMITS/NOTICES FROM THE CITY ENGINEER, EXCEPT FOR PERMITS/NOTICES FROM THE CITY ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. PETER NOLAN & ASSOCIATES, LLC, WILL NOT PROVIDE AS-BUILT CERTIFICATION TO UNSUPERVISED BAKERS/UTLITIES. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO INSPECTIONS.
- ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS).
- THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROTECTED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK. FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE CITY ENGINEER DEPARTMENT PERMIT TO START WORK FOR CLARIFICATION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM MAY THEN BE COVERED. ALL UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.
- THE EXISTING CONTOURS OF THE LAND ARE NOT TO BE ALTERED BY MORE THAN THREE (3) FEET AS A RESULT OF THE PLACEMENT OF BRICK, BLOCK, OR STONE, OR OTHER SOLID MATERIAL, UNLESS A PROPOSED RETAINING WALL OR WALL IS INSTALLED AFTER IT IS APPROVED BY BOTH CITY OF NEWTON ENGINEERING DEPARTMENT & CITY OF NEWTON L.S.D.
- IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.
- NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY REQUEST PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED, AND AS SUCH IT IS RECOMMENDED THAT THE APPLICANT OR APPLICANT'S REPRESENTATIVE CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.
- AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORAGE OF MATERIALS MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE II (EXCAVatable) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING DEPARTMENT.
- ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 521 CMR 21.00 AND 22.00.
- 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. THE CONTRACTOR NEEDS TO NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE TESTING WITHIN A CITY OF NEWTON ENGINEERING DEPARTMENT REPRESENTATIVE.
- 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 COVERED. ALL UTILITY TRENCHES MUST BE FULLY EXPOSED FOR THE INSPECTOR, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED. A TRENCH EXCAVATION PERMIT IS REQUIRED.
- APPROVAL OF THIS PLAN BY CITY OF NEWTON ENGINEERING DIVISION IMPLIES THAT THE PLAN MEETS THE MINIMAL DESIGN STANDARDS OF THE CITY OF NEWTON. HOWEVER, THE ENGINEERING DIVISION MAKES NO REPRESENTATION AND ASSUMES NO RESPONSIBILITY FOR THE DESIGN(S) IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR OF THE FEASIBILITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED. IN ACCORDANCE WITH THE DESIGN(S), THE CITY OF NEWTON ASSUMES NO LIABILITY FOR DESIGN, ACQUISITION, ENGINEERING OR CONSTRUCTION BY THE ENGINEER OF RECORD.

**67 WALNUT STREET (PUBLIC WAY-VARIABLE WIDTH)**



**REVISION BLOCK**

REV	DESCRIPTION	DATE
REV A	4 PARKING SPACES	11/16/18

SCALE	1"=10'
DATE	8/27/19
DRAWN BY	PS
CHECKED BY	ETS
APPROVED BY	PJN
SHEET	5
PLAN NO.	5 OF 9
CLIENT:	
SHEET:	<b>5</b>

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.

**67 WALNUT STREET,  
NEWTON,  
MASSACHUSETTS**

**GRADING PLAN**

**PETER NOLAN & ASSOCIATES, LLC**

LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS  
697 CAMBRIDGE STREET,  
SUITE 1103  
BRIGHTON, MA 02295  
Tel: 617-891-7478  
617-782-1538  
Fax: 617-2025691

**SPRUHAN ENGINEERING, P.C.**

80 JEWETT ST. (SUITE 11)  
NEWTON, MA 02458  
Tel: 617-876-0722  
Email: edmond@spruhaneng.com

**EXISTING LEGEND**

⊙	SEWER LINE
⊙	SEWER MANHOLE
—	WATER LINE
—	GAS LINE
—	UTILITY POLE
—	GAS VALVE
—	OVERHEAD ELECTRIC SERVICE
—	WATER VALVE
—	CATCH BASIN
—	FENCE
—	CONTOUR LINE (MUR)
—	CONTOUR LINE (MNR)
—	SPOT GRADE
—	DRAIN MANHOLE
—	HYDRANT
—	TREE

NOTE: CONTRACTOR TO CONFIRM LOCATION OF DOWN SPOUTS PRIOR TO CARRYING OUT ANY DRAINAGE WORKS.

NOTE: SURFACE WATER TO BE DIVERTED FROM ALL SIDES OF FOUNDATION WALL.

NOTE: ANY TREE BEING REMOVED SHALL COMPLY WITH CITY OF NEWTON TREE ORDINANCE.

NOTE: CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL /STRUCTURAL PLANS AND INCORPORATES ALL OVERHANDS, CANTILEVERS AND ANY COMPONENT THAT IS SUBJECT TO ZONING RESTRICTIONS. IF THIS IS FOUND NOT TO BE THE CASE THE CONTRACTOR MUST CONTACT THE ENGINEER /SURVEYOR AND REQUEST A REVISED PLAN WHICH MUST BE RESUBMITTED TO U.S.D. CITY OF NEWTON.

NOTE: PETER NOLAN & ASSOCIATES LLC AND SPRUHAN ENGINEERING, P.C. ACCEPT NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT.

**LEGEND**

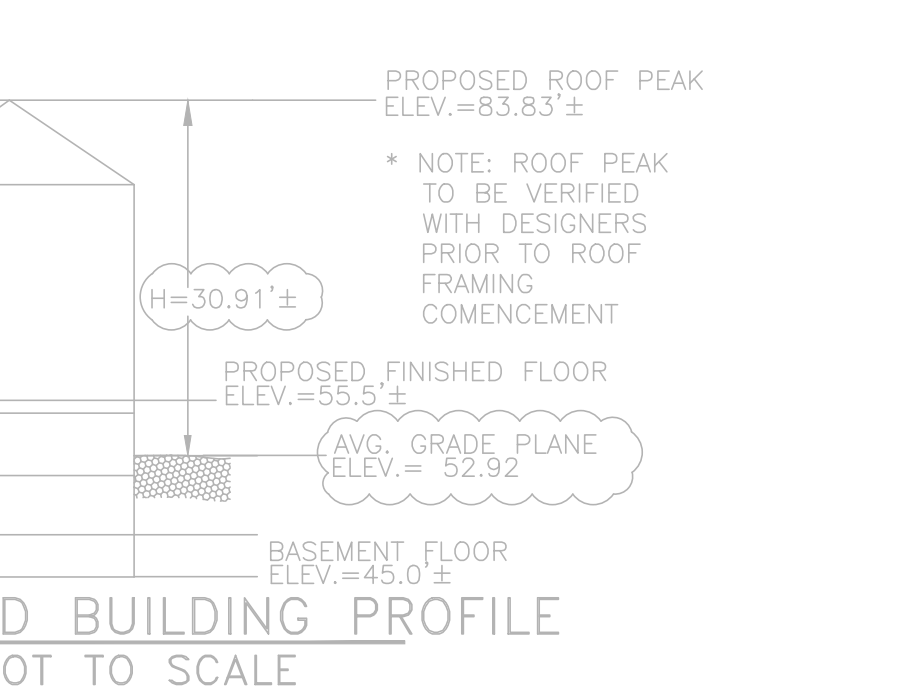
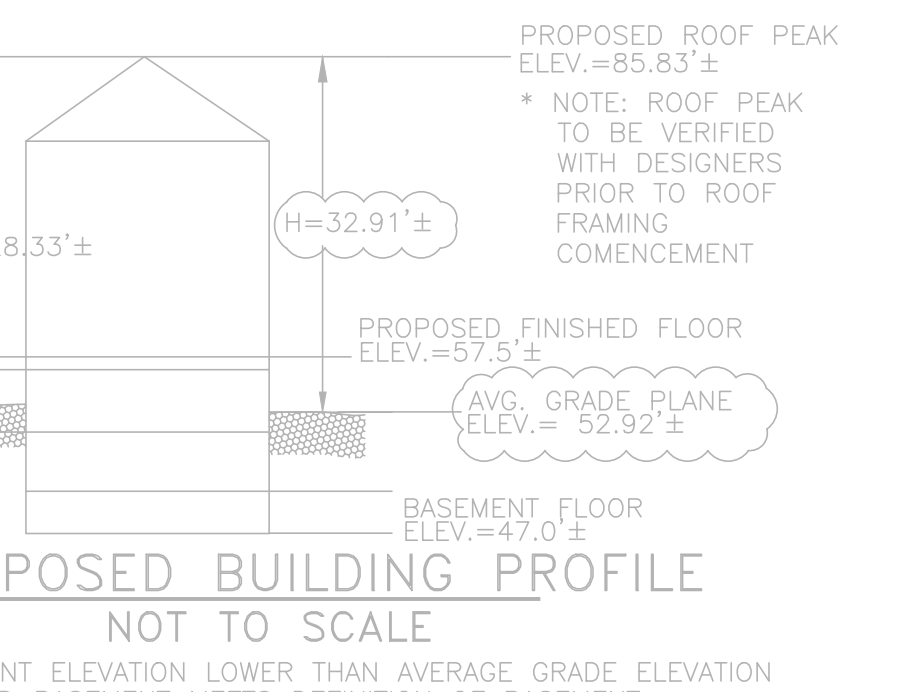
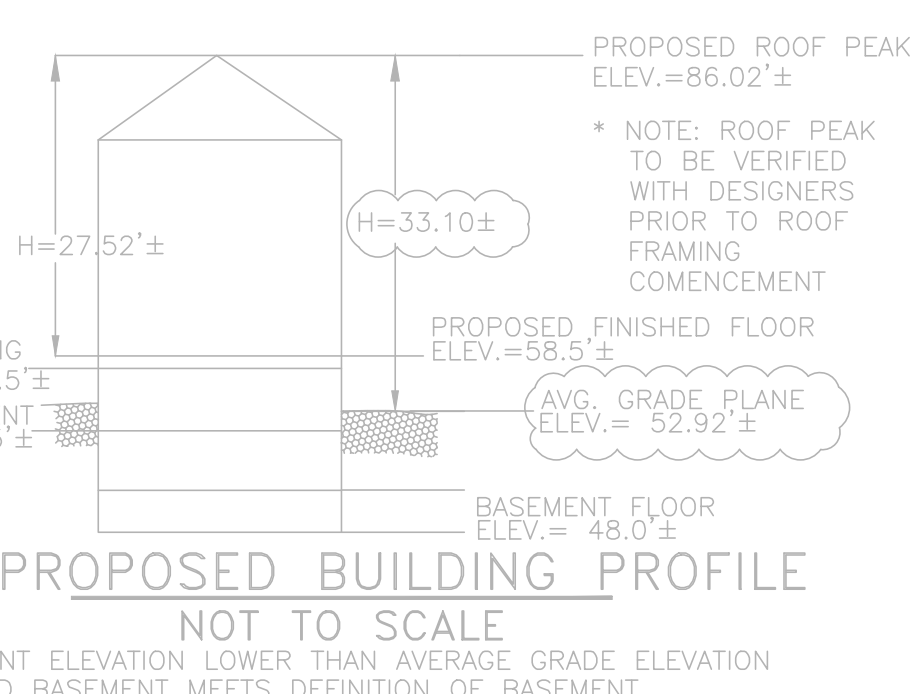
—	UTILITY POLE
—	WATER GATE
—	HYDRANT
—	GAS GATE
—	SEWER MANHOLE
—	DRAIN MANHOLE
—	CATCH BASIN
—	LIGHT POLE
—	TO BE REMOVED
—	TO BE ABANDONED
—	TOP OF WALL
—	TOW
—	BOW
—	BOTTOM OF WALL
—	FINISHED GRADE
—	SPOT GRADE
—	DEEP TEST HOLE
—	PERCOLATION TEST
—	SPOT ELEVATION
—	PROPOSED CONTOUR
—	EXISTING CONTOUR
—	DRAIN LINE
—	WATER LINE
—	SEWER LINE
—	GAS LINE
—	FENCE

**ZONING LEGEND**

ZONING DISTRICT: MULTI RESIDENCE MRL (LOT CREATED AFTER 12/07/1953)

	REQUIRED	PROPOSED	EXISTING
MIN. AREA	15,000± S.F.	14,520± S.F.	14,520± S.F.
MIN. FRONTAGE	80'	83.50'±	83.50'±
MIN. YARD FRONT	25'	25.5'	56.8'
SIDE	25'	8.0'	10.2'
REAR	25'	110.2'	130.9'
MAX LOT COVERAGE	25%	24.7%	13.3%
MIN OPEN SPACE	50%	61.4%	86.3%
MAX. BLDG. HEIGHT	36'	33.10'±	42.9'±

\* REQUIRED DIMENSIONS UNDER SPECIAL PERMIT



**AVERAGE GRADE PLANE & CALCULATION**

SEGMENT	LENGTH	POINT 1	POINT 2	MEAN ± 1/2	MEAN ± LENGTH
1	19.30	52.30	54.40	53.35	1,029.66
2	37.30	56.50	56.40	56.45	2,105.59
3	31.70	56.50	54.50	55.50	1,739.35
4	32.80	54.10	53.30	53.70	1,723.77
5	22.70	52.80	53.00	52.90	1,195.16
6	12.30	53.00	53.00	53.00	645.75
7	14.00	51.60	51.60	51.60	722.40
8	11.60	45.60	45.70	45.65	529.56
9	13.80	53.00	53.00	53.00	654.40
10	7.40	52.90	54.50	53.70	397.38
11	12.40	48.30	48.10	48.20	597.68
12	7.70	52.60	54.50	53.55	412.34
13	7.70	52.90	53.90	53.90	407.83
14	7.10	52.90	52.40	52.65	373.82
15	16.90	48.50	49.30	48.90	826.41
16	12.30	49.00	54.10	51.55	634.07
17	5.20	54.60	53.70	54.15	302.96
SUM	270.00				14,288.58

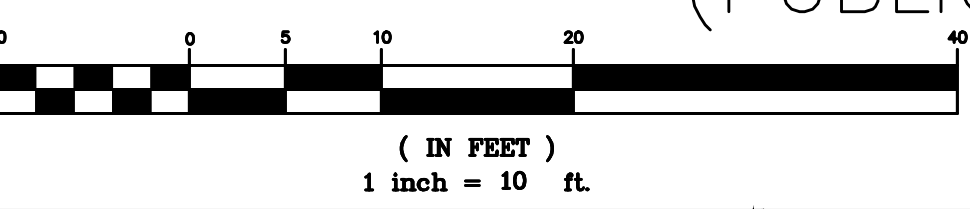
SUM OF MEAN ± LENGTH / SUM OF LENGTHS = AVERAGE GRADE PLANE = 52.92

**NOTES**

- ELEVATIONS REFER TO CITY OF NEWTON DATUM.
- 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 LOCATION OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.
- MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL 800-SAFE AT 1-888-344-7233 IN ORDER TO COMPLY WITH STATE LAW.
- ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS, LATEST EDITION, PREPARED AND ISSUED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 25 FOR DETAILS. NOTE: A TRENCH PERMIT MUST BE OBTAINED PRIOR TO ANY EXCAVATION BEING CARRIED OUT.
- PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.
- PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.
- THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND APRIL 30, 2018.
- ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.
- 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 EXCAVATION IS TO BE MADE. HE HAS SUBMITTED, VIA PHONE CALL OR IN PERSON, NOTICE OF THE PROPOSED EXCAVATION TO THE FOLLOWING:
  - SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE AREA.
  - SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.
- THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC AS REQUIRED BY THE CITY ENGINEER.
- NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.
- PAVEMENT THICKNESS FOR ALL TEMPORARY TRENCHES WITHIN A CITY RIGHT-OF-WAY MUST MATCH THE EXISTING DEPTH OF ASPHALT ON THE ROADWAY.
- WARNING SIGNS SHALL CONFORM TO PAGE 12 OF THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.
- ALL TRENCHES, SUBSOL, OR SUPERVISOR'S SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE OF LATERALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS, BACKFILL AS REQUIRED WITH CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND VOLATILE SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
- IN CASES WHERE LEGS OR BUILDERS ARE ENCOUNTERED, SPRUHAN ENGINEERING, P.C. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED.
- IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER, AS WELL AS THE APPROVING AUTHORITIES, SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION.
- THE ROOF SURFACE FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM.
- PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHOULD BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL CONSTRUCTION DETAILS, INCLUDING ALL EASEMENTS, CATCH BASINS, AND POINTS AT WHICH STRUCTURE ACCESS/MAINTENANCE COVERS, ANY EASEMENTS AND FINAL GRADING.
- THE APPLICANT WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A GENERAL CROSSING PERMIT AT A TRENCH POINT WITHIN THE CITY OF NEWTON.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. PETER NOLAN & ASSOCIATES, LLC WILL NOT PROVIDE AS-BUILT CERTIFICATION TO UNINSPECTED BACKFILLED UTILITIES. A MINIMUM OF 48 HOURS NOTICE PRIOR TO INSPECTIONS.
- ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS).
- THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAN AND BE COMPLETELY REMOVED FROM THE SITE, RELOCATED 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 UTILITY CONNECTION PERMIT.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.
- THE EXISTING CONTOURS OF THE LAND ARE NOT TO BE ALTERED BY MORE THAN THREE (3) FEET AS A RESULT OF THE PLACEMENT OR REMOVAL OF SOIL, GRAVEL, OR STONE, OR OTHER SOIL MATERIAL, UNLESS A PROPOSED RETAINING WALL OR SLOPE IS INSTALLED AFTER IT IS APPROVED BY BOTH CITY OF NEWTON ENGINEERING DEPARTMENT & CITY OF NEWTON U.S.D.
- IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.
- NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH, IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY REQUEST PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED, AND AS SUCH IT IS RECOMMENDED THAT THE APPLICANT OR APPLICANT'S REPRESENTATIVE CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.
- AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORAGE GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE II (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING DEPARTMENT.
- ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 521 CMR 21.00 AND 22.00.
- NO 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. THE CONTRACTOR NEEDS TO NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR, ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM MAY THEN BE CONSTRUCTED. ALL SILENTATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER'S OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT.
- 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.
- APPROVAL OF THIS PLAN BY CITY OF NEWTON ENGINEERING DIVISION IMPLIES THAT THE PLAN MEETS THE MINIMUM DESIGN STANDARDS OF THE CITY OF NEWTON. HOWEVER, THE ENGINEERING DIVISION MAKES NO REPRESENTATION AND ASSUMES NO RESPONSIBILITY FOR THE DESIGNER'S IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR OF THE FEASIBILITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED IN ACCORDANCE WITH THE DESIGN. THE CITY OF NEWTON ASSUMES NO LIABILITY FOR DESIGN ASSUMPTIONS, ERRORS OR OMISSIONS BY THE ENGINEER OF RECORD.

**WALNUT STREET**

GRAPHIC SCALE (PUBLIC WAY-VARIABLE WIDTH)



**REVISION BLOCK**

REV	DESCRIPTION	DATE
REV A	4 PARKING SPACES	11/16/18

**SCALE**

DATE	8/27/19
DRAWN BY	PS
CHECKED BY	ETS
APPROVED BY	PJN
SHEET	6
PLAN NO.	6 OF 9
CLIENT:	

SHEET: **6**

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.

**67 WALNUT STREET, NEWTON, MASSACHUSETTS**

**UTILITY PLAN**

PETER NOLAN  
REGISTERED PROFESSIONAL LAND SURVEYOR

EDMUND SPRUHAN  
REGISTERED PROFESSIONAL ENGINEER

PETER NOLAN & ASSOCIATES, LLC  
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS  
697 CAMBRIDGE STREET, SUITE 1103  
BRIGHTON, MA 02135  
Tel: 857-891-7478  
617-782-1537  
Fax: 617-2025691

SPRUHAN ENGINEERING, P.C.  
80 JEWETT ST. (SUITE 11)  
NEWTON, MA 02458  
Tel: 617-816-0722  
Email: edmon@spruhaneng.com

EXISTING LEGEND

Table with symbols and descriptions for existing infrastructure like sewer lines, water lines, utility poles, and fences.

Notes regarding contractor responsibilities for confirming locations, ensuring rainwater diversion, and adhering to zoning regulations.

Notes regarding contractor responsibilities for ensuring rainwater diversion, ensuring splash blocks, and ensuring proper footing.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

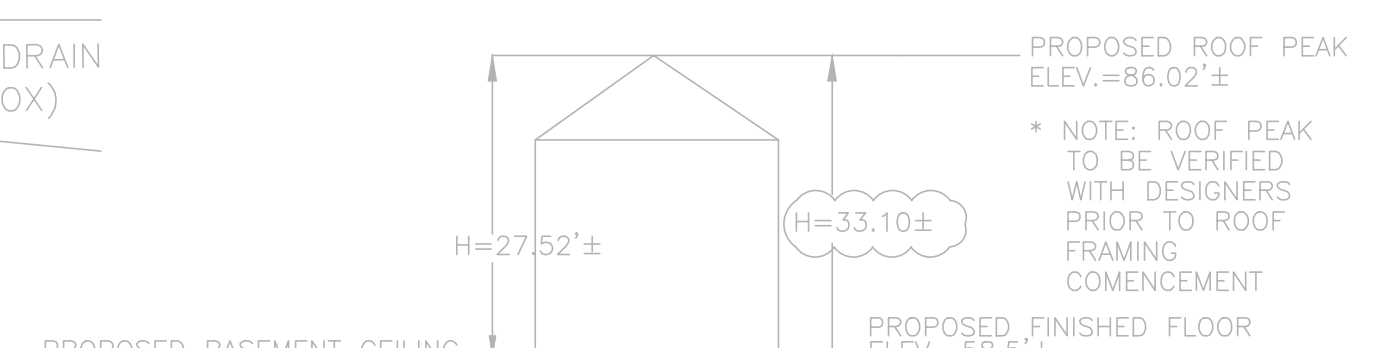
Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

Notes regarding contractor responsibilities for ensuring proper footing, represented on this plan as the same as the proposed architectural plan.

ZONING LEGEND

Zoning legend table with columns for Required, Proposed, and Existing dimensions for various metrics like min. area, min. frontage, min. yard front, etc.

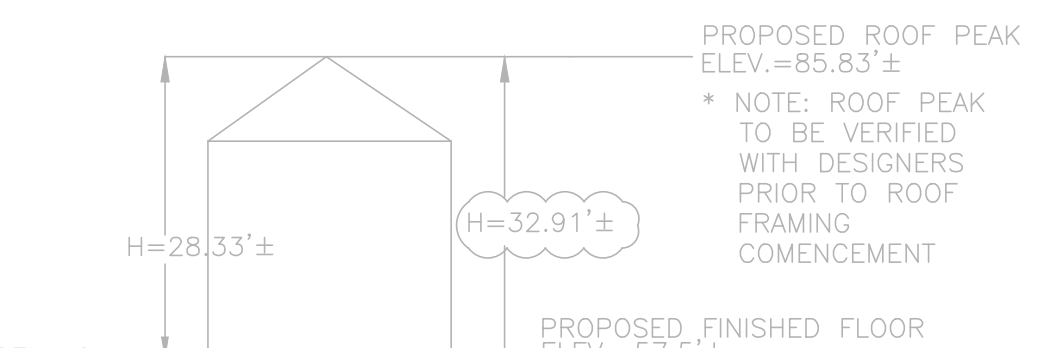
REQUIRED DIMENSIONS UNDER SPECIAL PERMIT



#1-PROPOSED BUILDING PROFILE

NOT TO SCALE

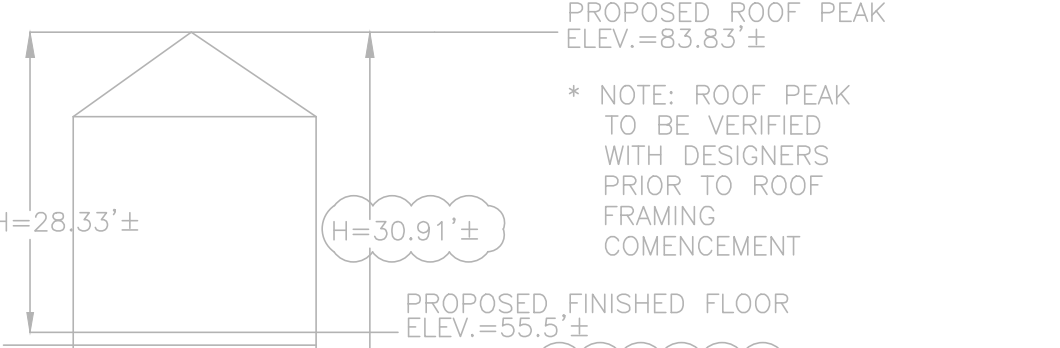
\* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT



#2-PROPOSED BUILDING PROFILE

NOT TO SCALE

\* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT



#3-PROPOSED BUILDING PROFILE

NOT TO SCALE

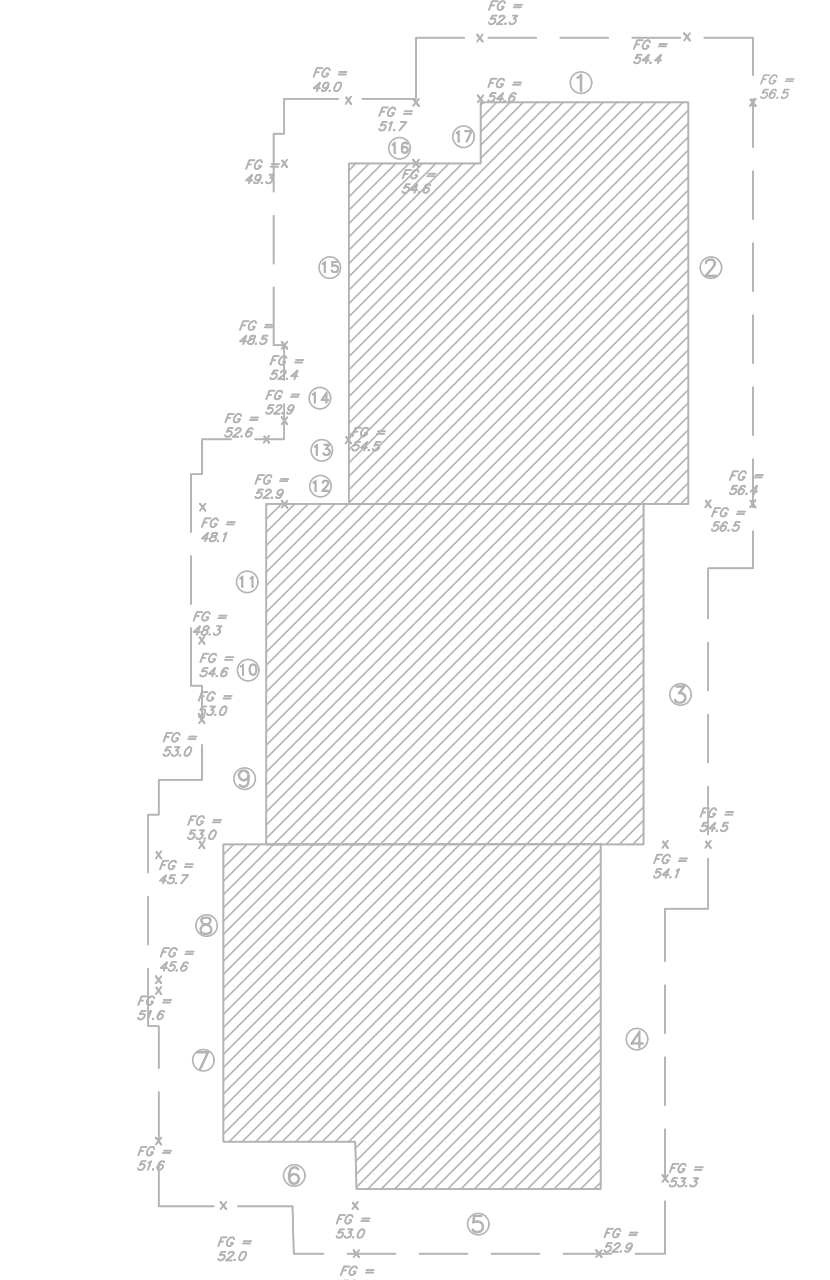
\* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT

AVERAGE GRADE PLANE & CALCULATION

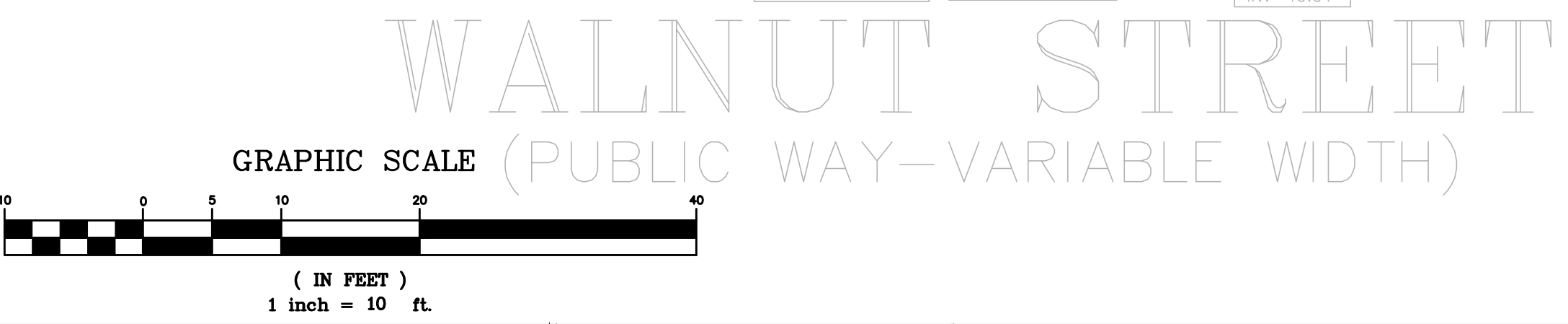
Table showing the calculation of the average grade plane with columns for segment, length, point 1, point 2, mean, and length.

NOTES

- List of 35 notes detailing construction requirements, including utility notifications, excavation standards, and safety protocols.



- Notes regarding the field survey and information shown on the plan, including references to zoning laws and specific project details.



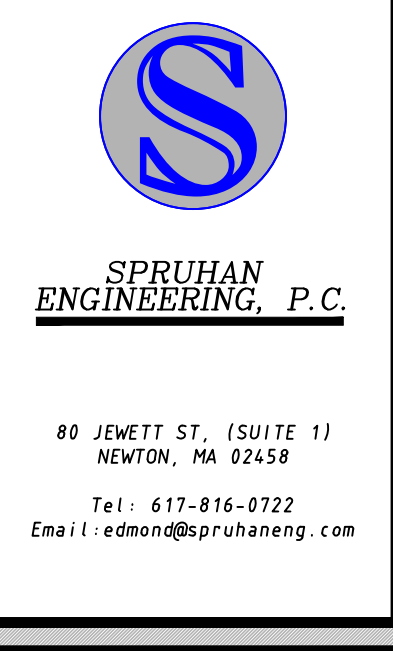
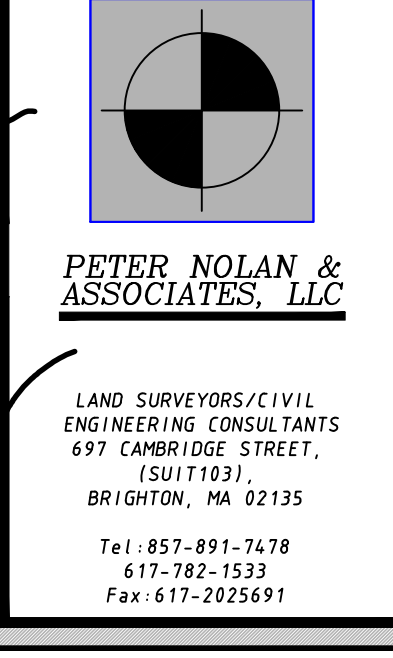
Revision block table with columns for revision number, description, and date.

Scale table with columns for date, drawn by, checked by, approved by, sheet number, plan number, and client.

Legal disclaimer text stating that all rights are reserved and that the document is the property of Peter Nolan & Associates, LLC or Spruhan Engineering, P.C.

67 WALNUT STREET, NEWTON, MASSACHUSETTS

ZONING PLAN



Contact information for Spruhan Engineering, P.C., including address and phone numbers.

EXISTING LEGEND

Table with 2 columns: Symbol and Description. Includes Sewer Line, Sewer Manhole, Water Line, Gas Line, Utility Pole, Gas Valve, Overhead Electric Service, Water Valve, Catch Basin, Fence, Contour Line (M/R), Spot Grade, Drain Manhole, Hydrant, Tree.

NOTE: CONTRACTOR TO CONFIRM LOCATION OF DOWN SPOUTS PRIOR TO CARRYING OUT ANY DRAINAGE WORKS. NOTE: SURFACE WATER TO BE DIVERTED FROM ALL SIDES OF FOUNDATION WALL. NOTE: ANY TREE BEING REMOVED SHALL COMPLY WITH CITY OF NEWTON TREE ORDINANCE.

NOTE: CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL /STRUCTURAL PLANS AND INCORPORATES ALL OVERHANDS, CANTILEVERS AND ANY COMPONENT THAT IS SUBJECT TO ZONING RESTRICTIONS. P. THIS IS FOUND NOT TO BE THE CASE THE CONTRACTOR MUST CONTACT THE ENGINEER /SURVEYOR AND REQUEST A REVISED PLAN WHICH MUST BE RESUBMITTED TO U.S.D. CITY OF NEWTON.

NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

NOTE: PETER NOLAN & ASSOCIATES LLC AND SPRUHAN ENGINEERING, P.C. ACCEPT NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT.

LEGEND table with symbols for Utility Pole, Water Gate, Hydrant, Gas Gate, Sewer Manhole, Drain Manhole, Catch Basin, Light Pole, Sign, To Be Removed, To Be Abandoned, Top of Wall, Bottom of Wall, Finished Grade, Spot Grade, Deep Test Hole, Percolation Test, Spot Elevation, Proposed Contour, Existing Contour, Drain Line, Water Line, Sewer Line, Gas Line, Fence.

NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

NOTE: PETER NOLAN & ASSOCIATES LLC AND SPRUHAN ENGINEERING, P.C. ACCEPT NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT.

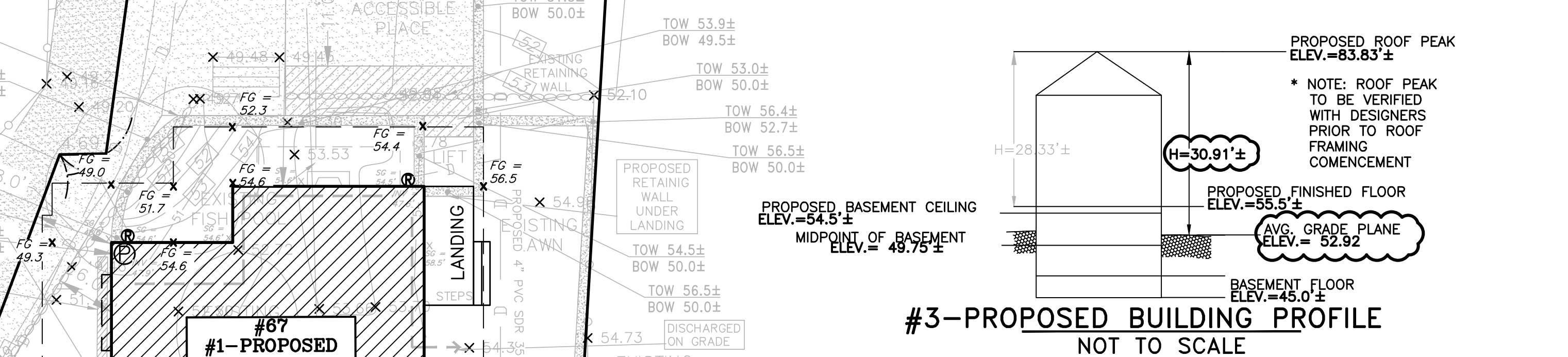
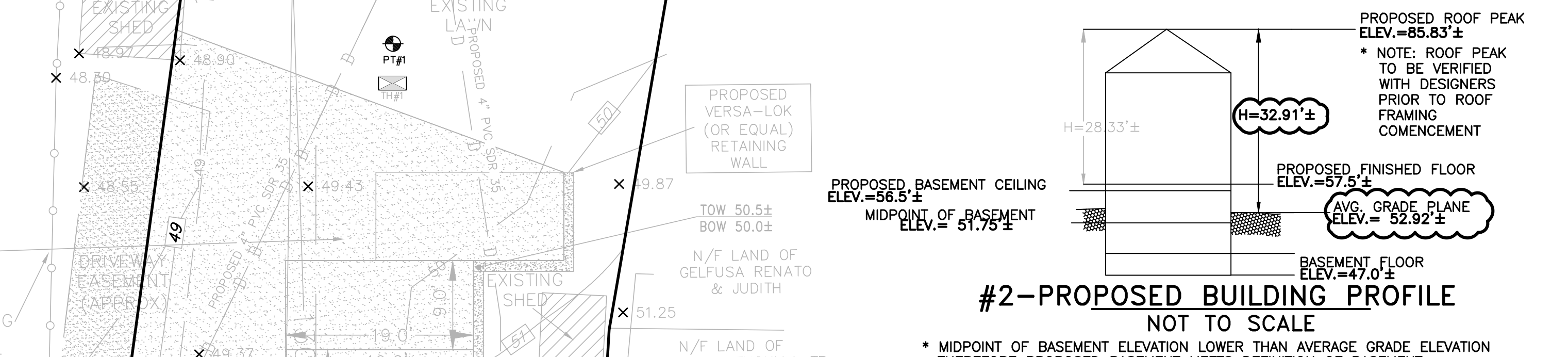
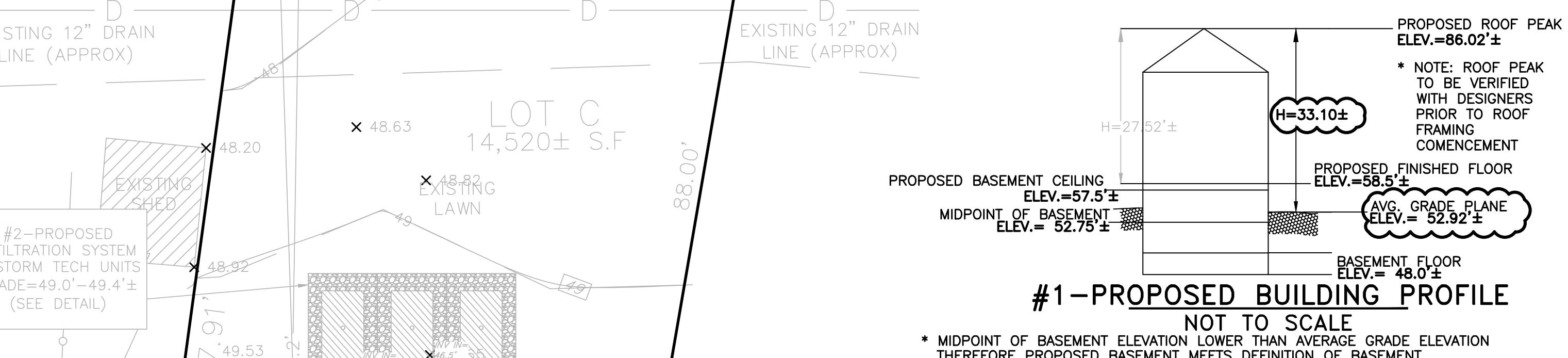
NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

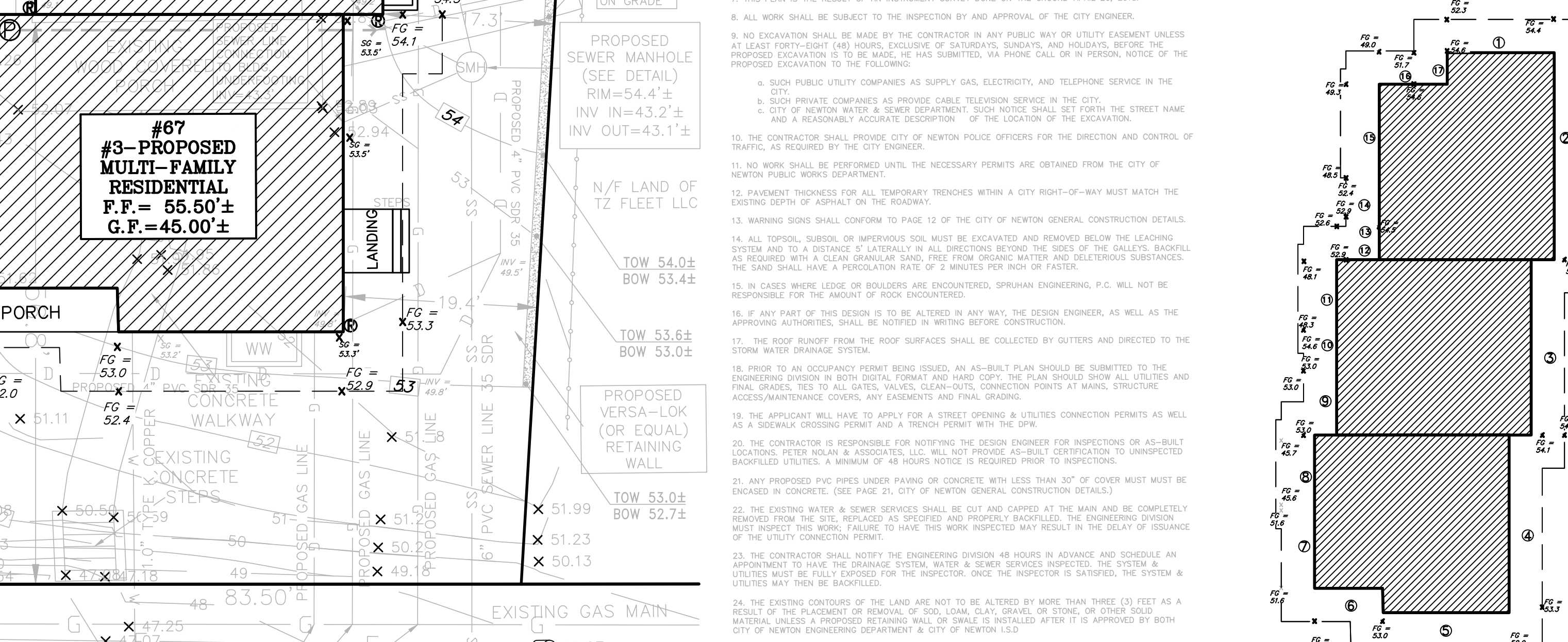
NOTE: CONTRACTOR TO ENSURE THAT RAIN WATER FROM SPLASH BLOCKS (IF ANY) IS DIVERTED AWAY FROM BUILDING FOUNDATION AND DIVERTED AWAY FROM NEIGHBORING PROPERTIES. NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR.

ZONING LEGEND table with columns: Required, Proposed, Existing. Rows: Min. Area, Min. Frontage, Min. Yard Front, Side, Rear, Max Lot Coverage, Min Open Space, Max Bldg. Height.



AVERAGE GRADE PLANE & CALCULATION

Table for Average Grade Plane Calculation with columns: Segment, Length, Point 1, Point 2, Mean Length, and Sum of Mean Length / Sum of Lengths = Average Grade Plane = 52.92.



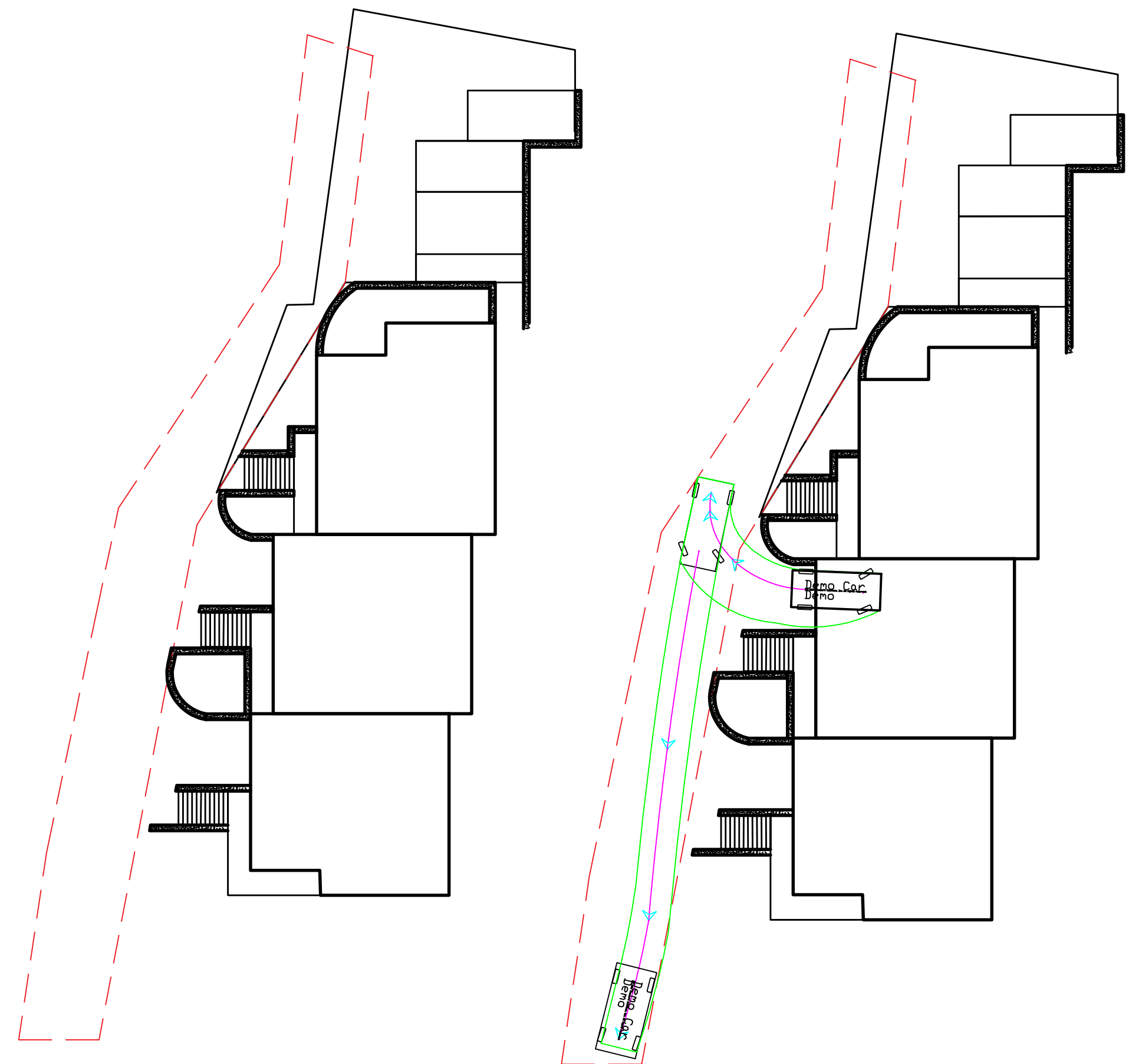
NOTES section containing 35 numbered items detailing construction requirements, utility locations, and zoning compliance.

Revision Block table, Scale (1"=10'), and project information including address (67 Walnut Street, Newton, MA) and building height calculation plan title.

Professional seals for Peter Nolan & Associates, LLC and Spruhan Engineering, P.C., along with contact information.



# HOUSE-2



# HOUSE-3

## EXAPMLE CARS & DIMENSIONS

<p>New Mercedes-Benz GLC SUV 2019</p>  <p>1644 mm 4655 mm 1890 mm (2096 mm)</p> <p>L x W x H: 4655 x 1890 x 1644 mm Boot capacity: 550 dm<sup>3</sup></p>	<p>New Mercedes-Benz CLA Shooting Brake 2019</p>  <p>1442 mm 4688 mm 1830 mm (1999 mm)</p> <p>L x W x H: 4688 x 1830 x 1442 mm Boot capacity: 505 dm<sup>3</sup></p>
<p>New Mercedes-Benz GLC Coupé 2019</p>  <p>1600 mm 4731 mm 1890 mm (2096 mm)</p> <p>L x W x H: 4731 x 1890 x 1600 mm Boot capacity: 500 dm<sup>3</sup></p>	<p>New BMW 3 Series Saloon 2019</p>  <p>1435 mm 4709 mm 1827 mm (2068 mm)</p> <p>L x W x H: 4709 x 1827 x 1435 mm Boot capacity: 375 - 480 dm<sup>3</sup></p>
<p>New Mercedes-Benz EQC 2019</p>  <p>1624 mm 4762 mm 1884 mm</p> <p>L x W x H: 4762 x 1884 x 1624 mm Boot capacity: 500 dm<sup>3</sup></p>	<p>Honda CR-V</p>  <p>1689 mm 4600 mm 1855 mm (2117 mm)</p> <p>L x W x H: 4600 x 1855 x 1689 mm Up to 7 seater. With 5 seater: 472 - 561 dm<sup>3</sup></p>

# HOUSE-1



**CAR USED IN THE ANALYSIS**  
15.7'(4785mm)X6.5'(1981.2mm)

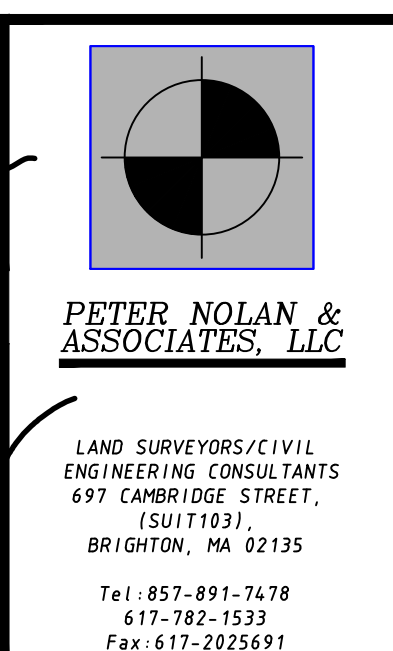
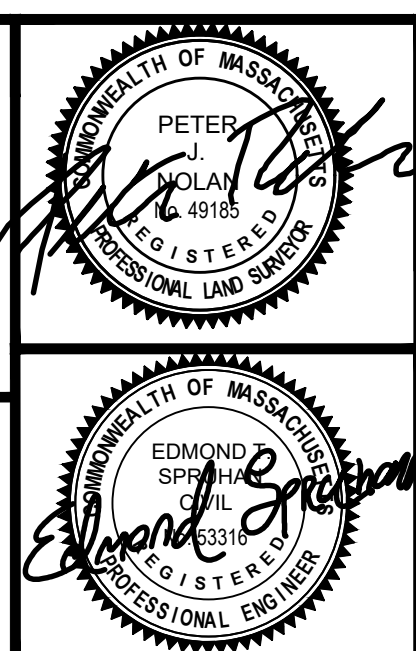
REVISION BLOCK		SCALE	
DESCRIPTION	DATE	DATE	SCALE
REV A 4 PARKING SPACES	11/16/18	8/27/19	1"=10'
		DRAWN BY	PS
		CHECKED BY	ETS
		APPROVED BY	PJN
		SHEET	9
		PLAN NO.	9 OF 9
		CLIENT:	
		SHEET:	<b>9</b>

DATE: 8/27/19  
DRAWN BY: PS  
CHECKED BY: ETS  
APPROVED BY: PJN  
SHEET: 9  
PLAN NO.: 9 OF 9  
CLIENT:  
SHEET: **9**

All legal rights including, but not limited to, copyright and design patent rights, in the designs, arrangements and plans shown on this document are the property of Peter Nolan & Associates, LLC, or Spruhan Engineering, P.C. They may not be used or reused in whole or in part, except in connection with this project, without the prior written consent of Spruhan Engineering, P.C.. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on this project, and Spruhan Engineering, P.C., must be notified of any variation from the dimensions and conditions shown by these drawings.

67 WALNUT STREET,  
NEWTON,  
MASSACHUSETTS

PARKING ANALYSIS



**PETER NOLAN & ASSOCIATES, LLC**  
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS  
697 CAMBRIDGE STREET, SUITE 1103B  
BRIGHTON, MA 02135  
Tel: 617-851-7478  
617-782-1533  
Fax: 617-2025691

**SPRUHAN ENGINEERING, P.C.**  
80 JEWETT ST., SUITE 11  
NEWTON, MA 02458  
Tel: 617-816-0722  
Email: edmond@spruhaneng.com