NOTES:

1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 7/7/2022.

2. DEED REFERENCE: BOOK 80218, PAGE 553
PLAN REFERENCE 1: PLAN 1105 OF 1962
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS

3. THIS PLAN IS NOT INTENDED TO BE RECORDED.

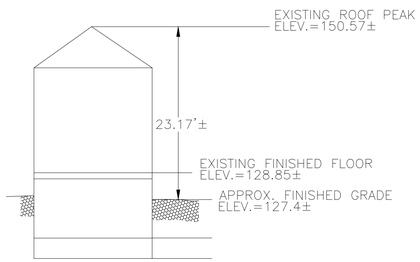
4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0566E, IN COMMUNITY NUMBER: 250208, DATED 6/4/2010.

5. 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 THAT NO SUCH EASEMENTS EXIST.

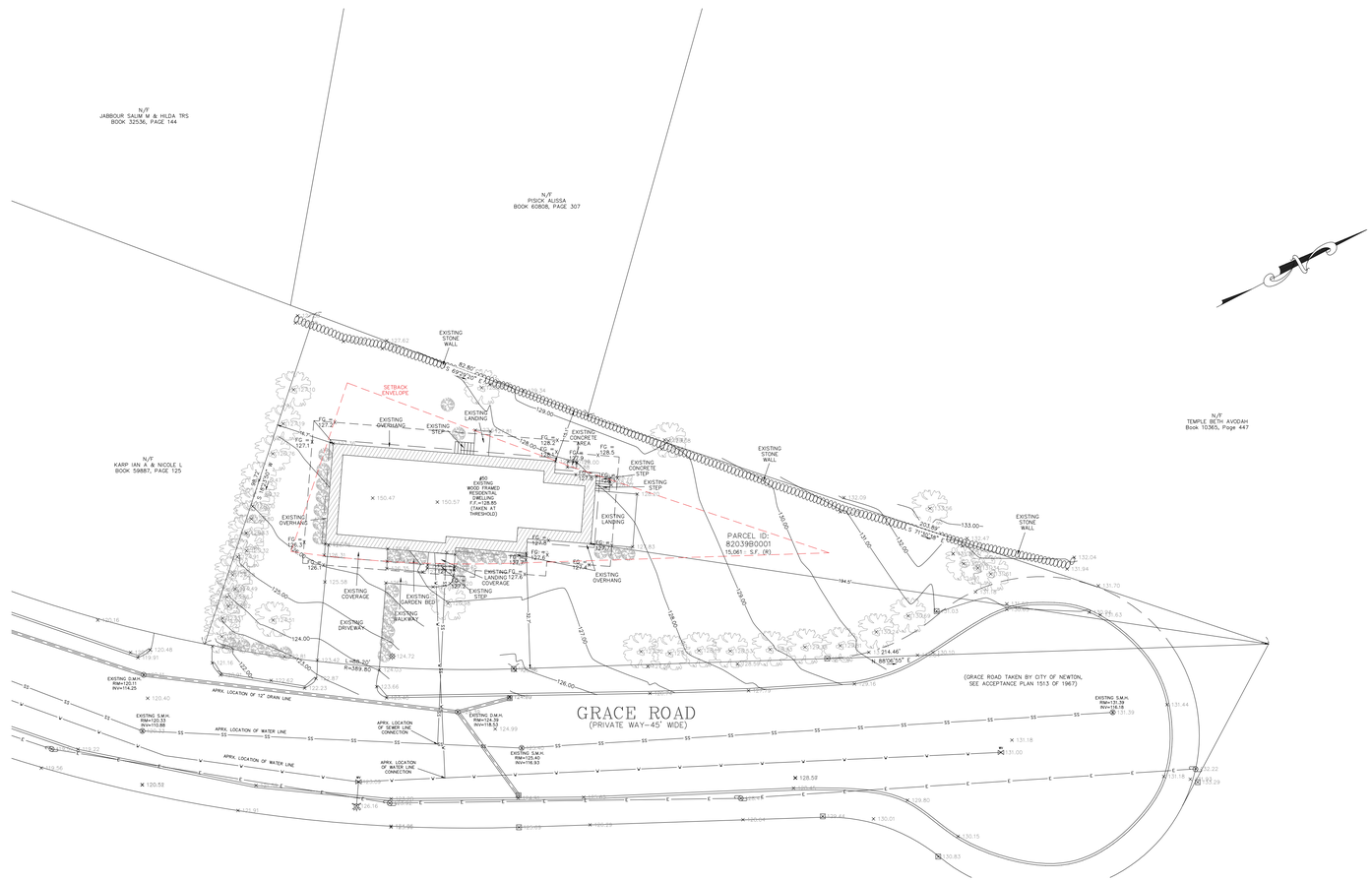
6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.

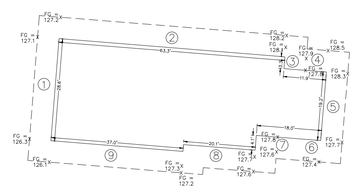
7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.

8. THE ELEVATIONS SHOWN ARE ON A CITY OF NEWTON DATUM.



EXISTING PROFILE
NOT TO SCALE





LEGEND

	BOUND
	IRON PIN/PIPE
	WOOD POST
	TREE
	TREE STUMP
	SHRUBS/FLOWERS
	SIGN
	BOLLARD
S	SEWER MANHOLE
D	DRAIN MANHOLE
	CATCH BASIN
W	WATER MANHOLE
	WATER VALVE
	HYDRANT
G	GAS VALVE
E	ELECTRIC MANHOLE
EH	ELECTRIC HANDHOLE
	UTILITY POLE
	LIGHT POLE
M	MANHOLE
148.00	SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
	EXISTING BUILDING
	RETAINING WALL
	STONE WALL
	FENCE
	TREE LINE
S	SEWER LINE
D	DRAIN LINE
W	WATER LINE
G	GAS LINE
E	UNDERGROUND ELECTRIC LINE
OHW	OVERHEAD WIRES
	CONTOUR LINE (MJR)
	CONTOUR LINE (MNR)

ZONING LEGEND

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

	REQUIRED	EXISTING
MIN. AREA	15,000 S.F	15,061 S.F.± (MEASURED)
MIN. FRONTAGE	100'	302.66'
MIN. YARD FRONT	30'	32.7'
SIDE	15'	16.7'
REAR	15'	15.1'
MAX. LOT COV.	20%	15.7%
MIN. OPEN SPACE	65%	78.1%
MAX. BLDG. HEIGHT	36'	23.17'±

AVERAGE GRADE PLANE (ALL UNITS IN FEET)

SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	28.60	126.30	127.10	126.70	3,623.62
2	63.30	127.20	128.20	127.70	8,083.41
3	3.30	127.90	127.80	127.85	421.91
4	11.90	128.10	128.50	128.30	1,526.77
5	19.20	128.30	127.70	128.00	2,457.60
6	18.00	127.40	127.70	127.55	2,295.90
7	4.10	127.80	127.60	127.70	523.57
8	20.10	127.60	127.30	127.45	2,561.75
9	37.00	127.20	126.10	126.65	4,686.05
SUM =	205.50				26,180.57
SUM OF MEAN x LENGTH/ SUM OF LENGTHS = AVERAGE GRADE PLANE =					**127.40**

GRAPHIC SCALE

20 0 5 10 20 40

(IN FEET)
1 inch = 20 ft.

Spruhan Engineering, P.C.
80 JEWETT ST, (SUITE 2)
NEWTON, MA 02458
Tel: 617-816-0722
Email:edmond@spruhaneng.com

50 GRACE ROAD
NEWTON
MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

DESCRIPTION	DATE

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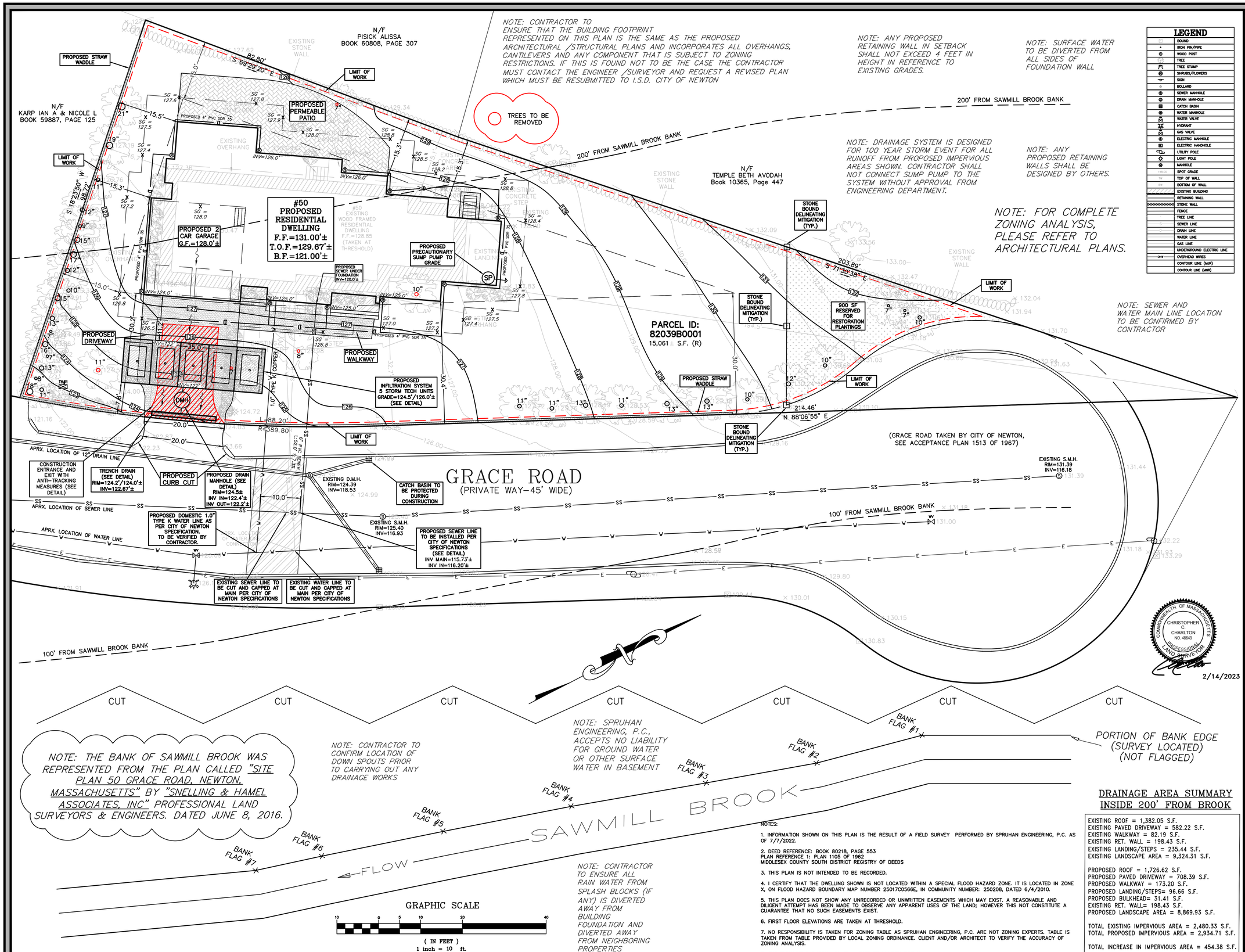
COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER C. CHARLTON
NO. 48649
PROFESSIONAL LAND SURVEYOR

DATE:	8/30/2022
DRAWN BY:	D.O.K
CHECKED BY:	C.C
APPROVED BY:	E.S

EXISTING CONDITIONS

SHEET 1 OF 1



NOTE: CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL /STRUCTURAL PLANS AND INCORPORATES ALL OVERHANGS, 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 I.S.D. CITY OF NEWTON

NOTE: ANY PROPOSED RETAINING WALL IN SETBACK SHALL NOT EXCEED 4 FEET IN HEIGHT IN REFERENCE TO EXISTING GRADES.

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

NOTE: DRAINAGE SYSTEM IS DESIGNED FOR 100 YEAR STORM EVENT FOR ALL RUNOFF FROM PROPOSED IMPERVIOUS AREAS SHOWN. CONTRACTOR SHALL NOT CONNECT SUMP PUMP TO THE SYSTEM WITHOUT APPROVAL FROM ENGINEERING DEPARTMENT.

NOTE: ANY PROPOSED RETAINING WALLS SHALL BE DESIGNED BY OTHERS.

NOTE: FOR COMPLETE ZONING ANALYSIS, PLEASE REFER TO ARCHITECTURAL PLANS.

NOTE: SEWER AND WATER MAIN LINE LOCATION TO BE CONFIRMED BY CONTRACTOR

LEGEND

	BOUND
	IRON PIN/PIPE
	WOOD POST
	TREE
	TREE STUMP
	SHRUBS/FLOWERS
	SIGN
	BOLLARD
	SEWER MANHOLE
	DRAIN MANHOLE
	CATCH BASIN
	WATER MANHOLE
	WATER VALVE
	HYDRANT
	GAS VALVE
	ELECTRIC MANHOLE
	ELECTRIC HANDHOLE
	UTILITY POLE
	LIGHT POLE
	MANHOLE
144.00	SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
	EXISTING BUILDING
	RETAINING WALL
	STONE WALL
	FENCE
	TREE LINE
S	SEWER LINE
D	DRAIN LINE
W	WATER LINE
	GAS LINE
	UNDERGROUND ELECTRIC LINE
OHW	OVERHEAD WIRES
	CONTOUR LINE (MAJR)
	CONTOUR LINE (MINR)

NOTE: THE BANK OF SAWMILL BROOK WAS REPRESENTED FROM THE PLAN CALLED "SITE PLAN 50 GRACE ROAD, NEWTON, MASSACHUSETTS" BY "SNELLING & HAMEL ASSOCIATES, INC" PROFESSIONAL LAND SURVEYORS & ENGINEERS. DATED JUNE 8, 2016.

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

NOTE: SPRUHAN ENGINEERING, P.C., ACCEPTS NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT

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

NOTES:

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PLAN REFERENCE 1: PLAN 1105 OF 1962
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8. THE ELEVATIONS SHOWN ARE ON A CITY OF NEWTON DATUM.

DRAINAGE AREA SUMMARY INSIDE 200' FROM BROOK

EXISTING ROOF = 1,382.05 S.F.
EXISTING PAVED DRIVEWAY = 582.22 S.F.
EXISTING WALKWAY = 82.19 S.F.
EXISTING RET. WALL = 198.43 S.F.
EXISTING LANDING/STEPS = 235.44 S.F.
EXISTING LANDSCAPE AREA = 9,324.31 S.F.

PROPOSED ROOF = 1,726.62 S.F.
PROPOSED PAVED DRIVEWAY = 708.39 S.F.
PROPOSED WALKWAY = 173.20 S.F.
PROPOSED LANDING/STEPS= 96.66 S.F.
PROPOSED BULKHEAD= 31.41 S.F.
EXISTING RET. WALL= 198.43 S.F.
PROPOSED LANDSCAPE AREA = 8,869.93 S.F.

TOTAL EXISTING IMPERVIOUS AREA = 2,480.33 S.F.
TOTAL PROPOSED IMPERVIOUS AREA = 2,934.71 S.F.

TOTAL INCREASE IN IMPERVIOUS AREA = 454.38 S.F.

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER C. CHARLTON
NO. 48649
PROFESSIONAL LAND SURVEYOR
2/14/2023

Spruhan Engineering, P.C.
80 JEWETT ST, (SUITE 2)
NEWTON, MA 02458
Tel: 617-816-0722
Email:edmond@spruhaneng.com

50 GRACE ROAD NEWTON MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

DESCRIPTION	DATE
REVISED AS PER CITY COMMENTS	2/13/23
MITIGATION AREA ADDED	2/14/23

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COMMONWEALTH OF MASSACHUSETTS
EDMOND SPRUHAN
CIVIL
No. 53316
REGISTERED PROFESSIONAL ENGINEER
2/14/2023

DATE:	1/18/2023
DRAWN BY:	O.G
CHECKED BY:	C.C
APPROVED BY:	E.S

CIVIL PLAN

SHEET 2 OF 4

DEEP OBSERVATION HOLE LOG:

GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 50 GRACE ROAD, NEWTON, MA. BY MATTHEW MUI, SOIL EVALUATOR #14259 REPRESENTING SPRUHAN ENGINEERING, P.C.

DATED: 12/17/2022
HOLE NUMBER: TP-1

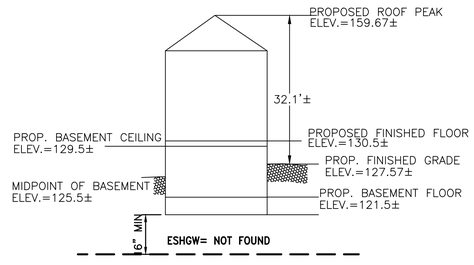
GENERAL SITE CONDITIONS: BUILDINGS, PAVED/GRASS AREAS.

GRADE AT TEST PIT = 123.0'±
ESTIMATED SEASONAL HIGH GROUNDWATER TABLE AT NOT OBSERVED

DEEP OBSERVATION HOLE LOG

DEEP OBSERVATION HOLE NUMBER:			TP-2			GROUND ELEVATION:					—
Depth (in)	Horizon/ Layer	Matrix Color-Moist	Redoximorphic Features			Texture (USDA)	Coarse Fragments (Percent by Volume)		Structure	Consistence (Moist)	Other
			Depth (in)	Color	Percent		Gravel	Cobbles & Stones			
0-9	Ap	10 YR 3/1	--	--	--	SANDY LOAM	10	--	MASS	FRI	--
9-19	Bw	10 YR 5/1	--	--	--	LOAMY SAND	10	15	GRAN	LOOSE	--
19-80	C	10YR 6/1	--	--	--	LOAMY SAND	5	40	GRAN	LOOSE	1, 2

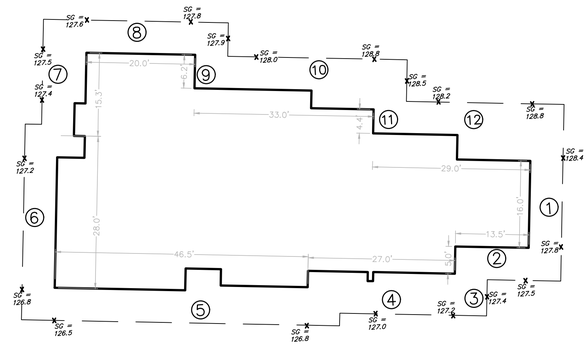
NOTES:
1. NO REDOX OBSERVED
2. REFUSAL @ 80"-LARGE BOULDERS
3. LOGGED BY MATTHEW MUI, SE14259 ON 12/17/2022.



PROPOSED PROFILE
NOT TO SCALE

* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION

THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT



AVERAGE GRADE PLANE (ALL UNITS IN FEET)					
SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	16.00	128.40	127.80	128.10	2,049.60
2	13.50	127.80	127.50	127.65	1,723.28
3	5.00	127.50	127.40	127.45	637.25
4	27.00	127.20	127.00	127.10	3,431.70
5	46.50	126.80	126.50	126.65	5,889.23
6	28.00	126.80	127.20	127.00	3,556.00
7	15.30	127.40	127.50	127.45	1,949.99
8	20.00	127.60	127.80	127.70	2,554.00
9	6.20	127.80	127.90	127.85	792.67
10	33.00	128.00	128.80	128.40	4,237.20
11	4.40	128.80	128.50	128.65	566.06
12	29.00	128.20	128.80	128.50	3,726.50
SUM =	243.90				31,113.47
SUM OF MEAN x LENGTH/SUM OF LENGTHS = AVERAGE GRADE PLANE =					**127.57**

NOTES

1. ELEVATIONS REFER TO CITY OF NEWTON DATUM.
2. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND ON **JULY 7TH, 2022.**
3. 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.
4. 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 IN ORDER TO COMPLY WITH STATE LAW.
5. 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.
6. PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.
7. PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.
8. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.
9. ALL WORK MUST BE DONE IN ACCORDANCE WITH "CITY OF NEWTON STANDARD SPECIFICATIONS" AND "CITY OF NEWTON CONSTRUCTION DETAILS"; COPIES OF WHICH MAY BE OBTAINED AT THE ENGINEERING OFFICE. ALL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF NEWTON ENGINEERING DEPARTMENT.
10. AS OF JANUARY 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES, BOTH ON PUBLIC AND/OR PRIVATE PROPERTY.
11. 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 SUBMITTED, NOTICE OF THE PROPOSED EXCAVATION TO THE FOLLOWING:

    a. SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE CITY.
    b. SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.
    c. 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.
12. THE CONTRACTOR MUST PROVIDE POLICE DETAILS, SCHEDULED 48 HOURS IN ADVANCE, FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER. ALL ROADS AFFECTED BY CONSTRUCTION SHALL ALWAYS REMAIN OPEN TO EMERGENCY VEHICLES. CONTRACTOR IS TO COORDINATE WITH POLICE AND FIRE DEPARTMENT TO ENSURE PUBLIC SAFETY.
13. NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.
14. ALL TRENCHES IN PAVED STREETS SHALL BE TEMPORARILY PATCHED WITH PAVEMENT OF EXISTING PAVEMENT THICKNESS OR AS DIRECTED BY THE CITY ENGINEERING INSPECTOR, LAID HOT AND MAINTAINED UNTIL THE PERMANENT PATCH IS INSTALLED.
15. WARNING SIGNS SHALL CONFORM TO 2020 MUTCD STANDARD HIGHWAY SIGNS.
16. 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 REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
17. IN CASES WHERE LEDGE OR BOULDERS ARE ENCOUNTERED, SPRUHAN ENGINEERING, P.C. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED.
18. 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.
19. THE ROOF RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM.
20. 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 GRADES, TIES TO ALL GATES, VALVES, CLEAN-OUTS, CONNECTION POINTS AT MAINS, STRUCTURE ACCESS/MAINTENANCE COVERS, ANY EASEMENTS AND FINAL GRADING.
21. THE APPLICANT WILL HAVE TO APPLY FOR STREET OPENING, UTILITIES CONNECTION, SIDEWALK CROSSING AND AN INSTALL CURB & SIDEWALK PERMIT WITH THE DPW PRIOR TO START OF WORK.
22. AFTER ALL ENGINEERING PERMITS ARE OBTAINED, THE CONTRACTOR NEEDS TO NOTIFY THE ENGINEERING DIVISION CONSTRUCTION INSPECTOR A MINIMUM OF 48-HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE SITE UTILITIES AND STORMWATER COMPONENTS INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY BE BACKFILLED
23. 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 IS REQUIRED PRIOR TO INSPECTIONS.
24. 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.)
25. THE EXISTING WATER SERVICE MUST BE COMPLETELY REMOVED FROM THE DWELLING TO THE CORPORATION AT THE MAIN. THE CORPORATION SHALL BE CAPPED, AND A NEW TAP SHALL BE MADE FOR THE NEW SERVICE. EACH PHASE OF THIS PROCESS MUST BE INSPECTED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. FAILURE TO HAVING THIS INSPECTION PERFORMED, MAY RESULT IN THE DELAY OR DENIAL OF A WATER SERVICE PERMIT.
26. THE EXISTING CESSPOOL ABANDONMENT MUST BE WITNESSED BY THE CITY OF NEWTON HEALTH DEPARTMENT PER REGULATIONS. THE REMAINING PORTIONS OF THE SERVICE MUST BE COMPLETELY REMOVED FROM THE CESSPOOL TO THE DWELLING. THE NEW SEWER SERVICE CONNECTION TO CITY MAIN SEWER MUST BE INSPECTED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. FAILURE TO HAVING THESE INSPECTIONS PERFORMED, MAY RESULT IN THE DELAY OR DENIAL OF A SEWER SERVICE PERMIT.
27. THE EXISTING SEWER SERVICE MUST BE COMPLETELY REMOVED FROM THE DWELLING TO THE MAIN. THE REMOVAL, ALONG WITH THE NEW CONNECTION MUST BE INSPECTED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. FAILURE TO HAVING THESE INSPECTIONS PERFORMED, MAY RESULT IN THE DELAY OR DENIAL OF A SEWER SERVICE PERMIT.
28. THE NEW SEWER SERVICE(S) AND/OR STRUCTURE(S) SHALL BE PRESSURE TESTED OR VIDEOTAPED AFTER FINAL INSTALLATION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE CONSTRUCTION INSPECTOR FROM THE CITY ENGINEERING DIVISION. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED, A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL ALL PIPING AND STRUCTURES ARE TESTED AND PASS.
29. THE NEW WATER SERVICE SHALL BE INSTALLED IN CONJUNCTION WITH THE CITY OF NEWTON UTILITIES DIVISION. THE OWNER/CONTRACTOR MAY OBTAIN A WATER SERVICE APPLICATION BY CONTACTING THE UTILITIES DIVISION (617) 796-1640 OR BY VISITING THE CITY OF NEWTON WEBSITE AND CLICK THE LINK FOR PUBLIC WORKS / UTILITIES DIVISION. AFTER THE APPLICATION IS PAID IN FULL THE OWNER/CONTRACTOR SHALL FOLLOW THE INSTRUCTIONS PLAN NOTES MENTIONED AND FOLLOWING.
30. 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.
31. 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 SOD, LOAM, CLAY, GRAVEL OR STONE, OR OTHER SOLID MATERIAL UNLESS A PROPOSED RETAINING WALL OR SWALE IS INSTALLED AFTER IT IS APPROVED BY BOTH CITY OF NEWTON ENGINEERING DEPARTMENT & CITY OF NEWTON I.S.D
32. NO EXCAVATION IS ALLOWED WITHIN ANY CITY RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY SEEK PERMISSION FOR SUCH WORK FROM THE CITY DPW COMMISSIONER VIA THE CITY ENGINEER. IF PERMISSION IS GRANTED, SPECIAL CONSTRUCTION STANDARDS WILL BE APPLIED. APPLICANT OR APPLICANT'S REPRESENTATIVE MUST CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.
33. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
34. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT 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.
35. EXCEPT FOR GAS SERVICES, ALL UTILITY TRENCHES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY WILL BE BACK FILLED WITH TYPE IE (EXCAVATABLE) CONTROLLED DENSITY FILL AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS. EXCAVATABLE FLOW FILL WITH EXTEND TO WITHIN 18" OF ROADWAY ASPHALT.
36. 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 521 CMR 21.00 AND 22.00.
37. 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.
38. 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.
39. 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 FUNCTIONABILITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED IN ACCORDANCE WITH THE DESIGN(S). THE CITY OF NEWTON ASSUMES NO LIABILITIES FOR DESIGN ASSUMPTION, ERRORS OR OMISSIONS BY THE ENGINEER OF RECORD.
40. PER CITY OF NEWTON ORDINANCE NO.B-42, COUNCIL ITEM #251-19, BUILDING SEWER, WATER SERVICE PIPE & SIDEWALK/CURB REPLACEMENT ORDINANCE, THE APPLICANT IS REQUIRED TO INSTALL/REPLACE SIDEWALK & CURB ALONG THE ENTIRE FRONTAGE. THIS SHALL INCLUDE APPROPRIATE TRANSITION TO ADJOINING CURBING & WALKWAYS, INCLUDING ACCESSIBLE CURB CUTS & OTHER ACCESS AS REQUIRED. THE ENGINEERING CONSTRUCTION INSPECTOR MAKES A DETERMINATION, BASED ON THE MATERIAL & MANNER OF CONSTRUCTION OF THE EXISTING SIDEWALK & CURB, THAT THE EXISTING SIDEWALK & CURB HAS THE ABILITY TO BE RE-SET OR REUSED WITHOUT REPLACEMENT.
41. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS AND AS-BUILT LOCATIONS; THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE ON-SITE INSPECTION(S) OF ALL SUBSURFACE STRUCTURES. THIS INCLUDES BUT NOT LIMITED TO DRAINAGE, UTILITIES (INCLUDING SEWER PIPE SLOPE), ROOF LEADER COLLECTION SYSTEM, TRENCH DRAINS, MANHOLES ETC. ENGINEER OF RECORD MUST ALSO CONDUCT "BOTTOM OF HOLE" INSPECTION(S) PRIOR TO SUBSURFACE DRAINAGE SYSTEM(S) BEING INSTALLED. **CONTRACTOR TO NOTIFY ENGINEER BEFORE BACKFILL OR SIGN OFF CANNOT OCCUR WITHOUT RE-EXCAVATION.**
42. PLEASE SEE SECTION 6-C REQUIREMENT #6 OF THE STORMWATER MANAGEMENT AND EROSION CONTROL RULES & REGULATIONS PAGE 11 OF 17, POST CONSTRUCTION OPERATION AND MAINTENANCE PLAN (O&M). THE O & M PLAN MUST BE RECORDED AT THE APPROPRIATE REGISTRY OF DEEDS AND THAT PROOF OF RECORDING MUST BE PROVIDED TO THE ENGINEERING DIVISION PRIOR TO THE RECOMMENDATION OF THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
43. PRIOR TO THE ENGINEERING DIVISION RECOMMENDING THAT A CERTIFICATE OF OCCUPANCY BE ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED IN BOTH DIGITAL AND IN HARD COPY TO THE ASSIGNED ENGINEERING CONSTRUCTION INSPECTOR. THE AS-BUILT PLAN MUST SHOW DIMENSIONAL TIES FROM FIXED POINTS (FOUNDATION CORNERS) TO ALL SUBSURFACE COMPONENTS AS WELL AS FINAL GRADING. THE AS-BUILT PLAN MUST BE STAMPED, SIGNED, AND DATED BY THE ENGINEER OF RECORD.
44. THE FOLLOWING STATEMENT MUST BE ON ALL AS-BUILT PLANS SUBMITTED TO THE ENGINEERING DIVISION (SIGNED, DATED AND STAMPED):

I CERTIFY THAT THE CONSTRUCTION SO SHOWN WAS INSPECTED PRIOR TO BACKFILL & THAT ALL WORK CONFORMS WITH THE APPROVED PLAN & MEETS OR EXCEEDS THE CITY OF NEWTON CONSTRUCTION STANDARDS.

SIGNATURE: DATE

45. 5 YEAR MORATORIUM – IF AT TIME OF CONSTRUCTION THE ROADWAY IS UNDER A 5 YEAR MORATORIUM, THE ROADWAY MUST BE MILLED & PAVED GUTTER-TO-GUTTER FOR A DISTANCE OF 25 FEET IN EACH DIRECTION FROM THE OUTERMOST TRENCHES OR AS DIRECTED BY THE ENGINEERING INSPECTOR.

NOTE:
IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO CONTACT THE ENGINEER OF RECORD FOR ALL INSPECTIONS OUTLINED IN NOTE 41 ON THIS PLAN

Spruhan Engineering, P.C.
80 JEWETT ST, (SUITE 2)
NEWTON, MA 02458
Tel: 617-816-0722
Email:edmond@spruhaneng.com

50 GRACE ROAD
NEWTON
MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

DESCRIPTION	DATE
REVISED AS PER CITY COMMENTS	2/13/23
MITIGATION AREA ADDED	2/14/23

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COMMONWEALTH OF MASSACHUSETTS
EDMOND E. SPRUHAN
CIVIL
No. 33316
REGISTERED PROFESSIONAL ENGINEER
2/14/2023

DATE:	1/18/2023
DRAWN BY:	O.G
CHECKED BY:	C.C
APPROVED BY:	E.S

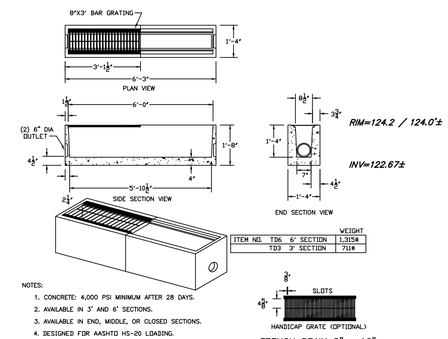
DETAILS

SHEET 3 OF 4

ZONING LEGEND

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

	REQUIRED	PROPOSED
MIN. AREA	15,000 S.F	15,061 S.F.± (MEASURED)
MIN. FRONTAGE	100'	302.66'
MIN. YARD FRONT	30'	30.2'
SIDE	15'	15.3'
REAR	15'	15.3'
MAX. LOT COV.	20%	18.01%
MIN. OPEN SPACE	65%	73.81%
MAX. BLDG. HEIGHT	36'	32.1'±



NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. AVAILABLE IN 3' AND 6' SECTIONS.
3. AVAILABLE IN END, MIDDLE, OR CLOSED SECTIONS.
4. DESIGNED FOR AASHTO HS-20 LOADING.

TRENCH DRAIN DETAIL N.T.S.

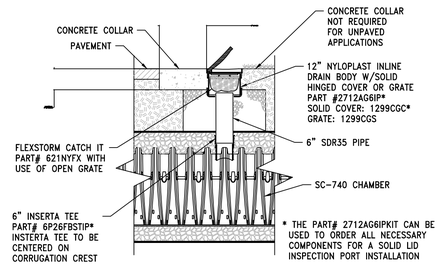
DRAINAGE AREA SUMMARY

EXISTING ROOF = 1,965.33 S.F.
EXISTING PAVED DRIVEWAY = 582.22 S.F.
EXISTING WALKWAY = 82.19 S.F.
EXISTING RET. WALL = 397.96 S.F.
EXISTING LANDING/STEPS = 283.46 S.F.
EXISTING LANDSCAPE AREA = 11,749.84 S.F.

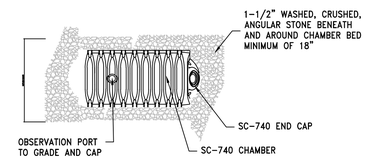
PROPOSED ROOF = 2,712.71 S.F.
PROPOSED DRIVEWAY = 708.39 S.F.
PROPOSED WALKWAY = 173.20 S.F.
PROPOSED PERMEABLE PATIO= 736.25 S.F.
PROPOSED LANDING/STEPS= 96.66 S.F.
PROPOSED BULKHEAD= 31.41 S.F.
EXISTING RET. WALL= 397.96 S.F.
PROPOSED LANDSCAPE AREA = 10,207.42 S.F.

TOTAL EXISTING IMPERVIOUS AREA = 3,311.16 S.F.
TOTAL PROPOSED IMPERVIOUS AREA = 4,120.33 S.F.

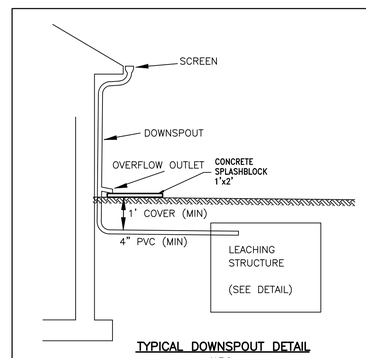
TOTAL INCREASE IN IMPERVIOUS AREA = 809.17 S.F.



SC-740 6" INSPECTION PORT DETAIL
N.T.S.



STORMTECH SC-740 CHAMBER SYSTEM
PLAN VIEW DETAIL



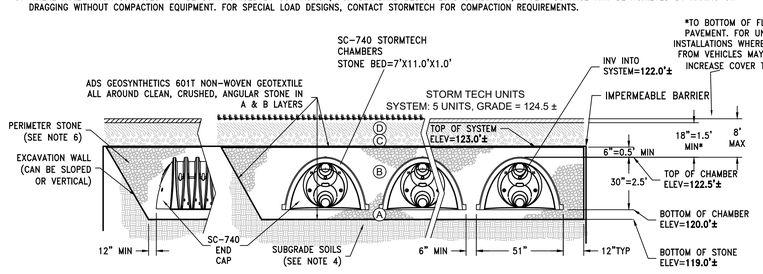
TYPICAL DOWNSPOUT DETAIL
N.T.S.

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	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	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 ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 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. 95% 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.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 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.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.

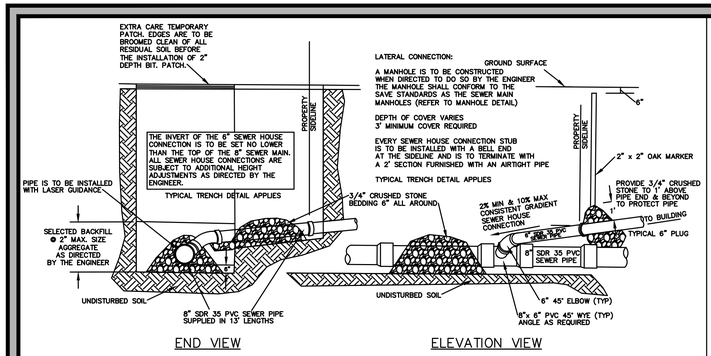
PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



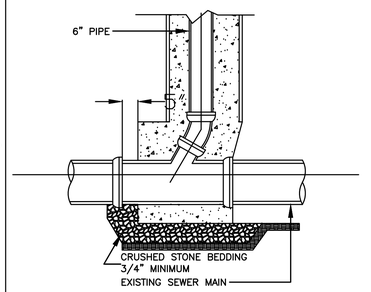
NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTAB



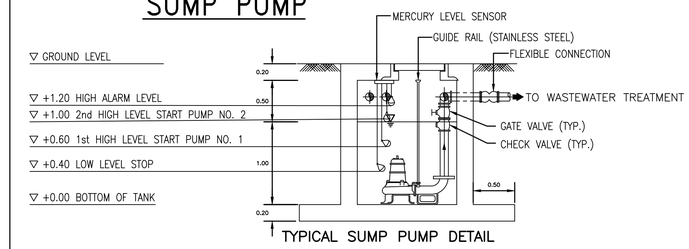
TYPICAL PVC SEWER HOUSE CONNECTION

N.T.S.

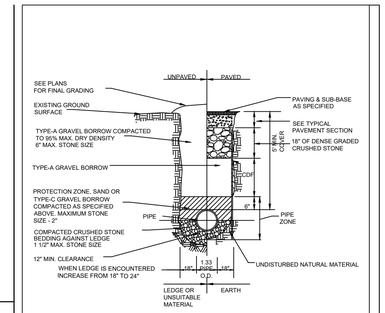


TYPICAL SEWER CONFIGURATION

SUMP PUMP



TYPICAL SUMP PUMP DETAIL



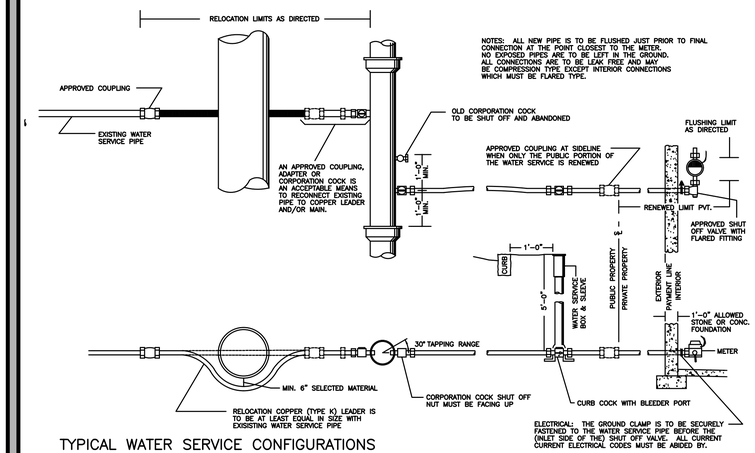
* SUITABILITY OF MATERIALS IS TO BE DETERMINED BY THE CITY OF NEWTON

1. GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
2. CRUSHED STONE BEDDING SHALL CONFORM TO MASSDOT SPECIFICATION M2.01.1

NOTE: TRENCHBOX OR SHEETING SHALL MEET OSHA STANDARDS.

TYPICAL WATER TRENCH DETAIL

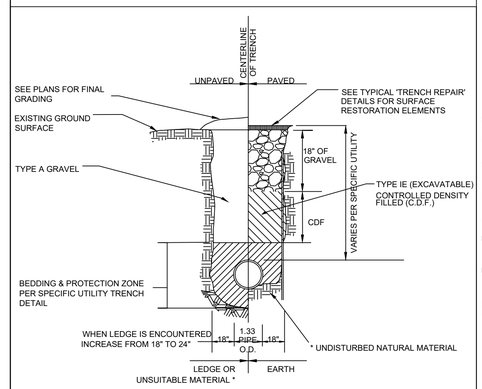
22



NOTES: ALL NEW PIPE IS TO BE FLUSHED JUST PRIOR TO FINAL CONNECTION AT THE POINT CLOSEST TO THE METER. NO EXPOSED PIPES ARE TO BE LEFT IN THE GROUND. ALL CONNECTIONS ARE TO BE LEAK FREE AND MAY BE COMPRESSION TYPE EXCEPT INTERIOR CONNECTIONS WHICH MUST BE FLARED TYPE.

ELECTRICAL: THE GROUND CLAMP IS TO BE SECURELY FASTENED TO THE WATER SERVICE PIPE BEFORE THE (INLET SIDE OF THE) SHUT OFF VALVE. ALL CURRENT CURRENT ELECTRICAL CODES MUST BE ABIDED BY.

TYPICAL WATER SERVICE CONFIGURATIONS

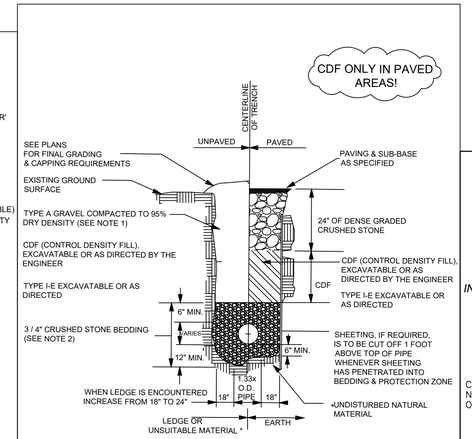


* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

NOTE: TRENCHBOX OR SHEETING SHALL MEET OSHA STANDARDS.

TYPICAL C.D.F. (CONTROL DENSITY FILL) TRENCH SECTION

23

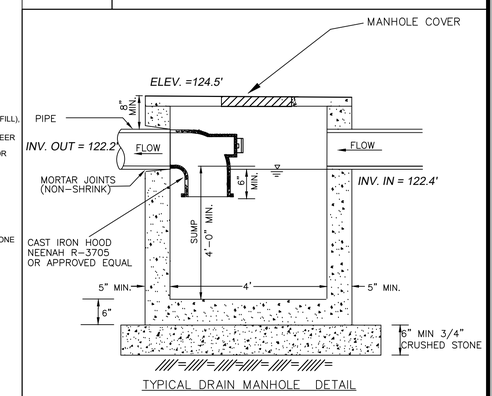


* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

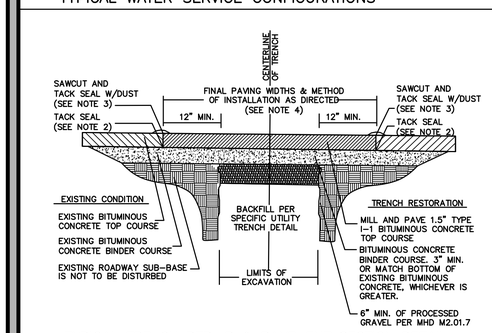
1. GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0
2. CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

GRAVITY SEWER TRENCH DETAIL

21

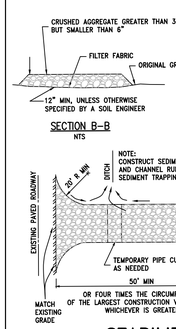


TYPICAL DRAIN MANHOLE DETAIL



TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL

1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASSDOT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2020 AS AMENDED.
2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MASSDOT PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATIONS.
3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
4. ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BOX SPREADER WHEN & AS DIRECTED BY THE CITY OF NEWTON.
5. SUPER PAVE FOR PAVEMENT



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

RUMBLE STRIPS MAY BE USED AS AN ALTERNATIVE SUBJECT TO THE APPROVAL OF THE CITY PRIOR TO INSTALLATION

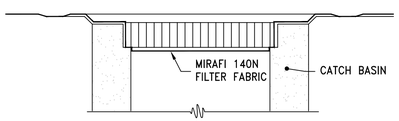
CONSTRUCTION SPECIFICATIONS:
1. THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 2-3 INCH (50-75 MM) STONE. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
2. THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES (152 MM). USE GEOTEXTILE FABRICS, IF NECESSARY, TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.
3. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS AND IN ANY CASE SHALL NOT BE LESS THAN 12 FEET (3.6 M) WIDE.
4. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET (15.2 M).
5. LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID ENTRANCES WHICH HAVE STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR MAINTENANCE OF ANY MEASURES USED TO TRAP SEDIMENT.
7. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
9. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. SEE SEDIMENT BASIN BMP.
10. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, STRAW BALES, OR OTHER APPROVED METHODS.

INSPECTION AND MAINTENANCE:
11. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
12. REPLACE GRAVEL MATERIAL WHEN SURFACE VOIDS ARE NOT VISIBLE.
13. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
14. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS WITHIN 24 HOURS.

NOTE: DIMENSIONS ± SUBJECT TO SITE PARAMETERS & CONDITIONS

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.

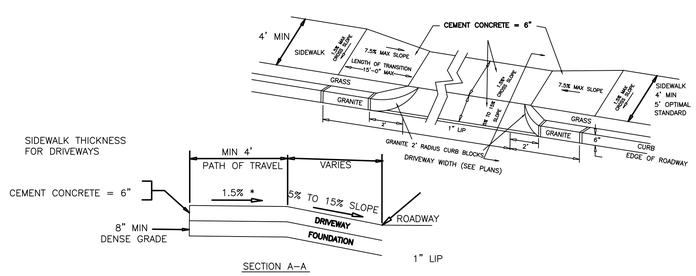


INSPECTION AND MAINTENANCE:

1. FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM - 1 INCH RAINFALL (25.4 MM) IN 24 HOUR PERIOD. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 0.5" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.
3. THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ON-SITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.

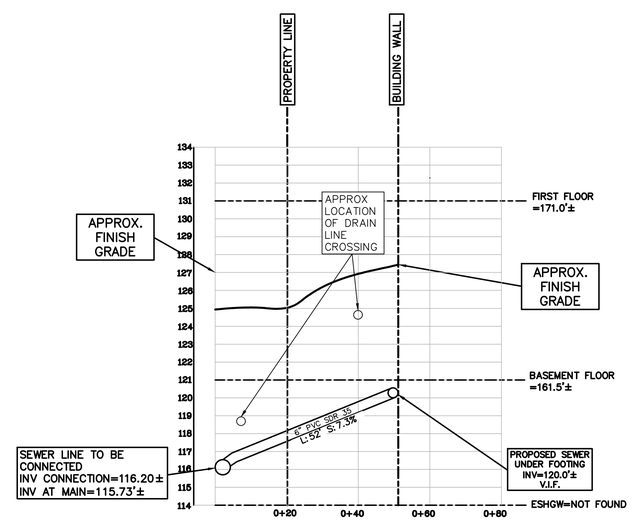
CATCH BASIN PROTECTION

NTS



* TOLERANCE FOR CONSTRUCTION +/- 0.5%

DRIVEWAY APRON WITH CORNER BLOCKS



PROPOSED SEWER PROFILE

V SCALE = 1"=4'
H SCALE = 1"=20'

Spruhan Engineering, P.C.
80 JEWETT ST, (SUITE 2)
NEWTON, MA 02458
Tel: 617-816-0722
Email:edmond@spruhaneng.com

50 GRACE ROAD
NEWTON
MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

DESCRIPTION	DATE
REVISED AS PER CITY COMMENTS	2/13/23
MITIGATION AREA ADDED	2/14/23

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COMMONWEALTH OF MASSACHUSETTS EDMOND SPRUHAN CIVIL No. 53316 REGISTERED PROFESSIONAL ENGINEER

2/14/2023

DATE:	1/18/2023
DRAWN BY:	O.G
CHECKED BY:	C.C
APPROVED BY:	E.S

DETAILS

SHEET 4 OF 4