NOTES:

1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 03/30/2022.

2. DEED REFERENCE: BOOK 75738, PAGE 215
PLAN REFERENCE 1: BOOK 1404 OF 1964
PLAN REFERENCE 2: PLAN 4926 OF 1893
PLAN REFERENCE 3: PLAN 4927 OF 1893
PLAN REFERENCE 4: 34 BROOKSIDE AVE. SEWER, WD 3 OF 1919
PLAN REFERENCE 5: 34 BROOKSIDE AVE. WATER, WD 2 OF 1919
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 06/04/2010.

5. THE ORDINANCE FLOODPLAIN ASSOCIATED WITH CHEESE CAKE BROOK NEAR THE SITE (30' FROM CENTERLINE OF THE CHANNEL) DOES NOT EXTEND ONTO THE SUBJECT SITE.

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.

7. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.

8. 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.

9. THE ELEVATIONS SHOWN ARE BASED ON CITY OF NEWTON DATUM.

10 ZONING INFORMATION: MR1. LOT WAS CREATED BEFORE 1953.

ZONING LEGEND

ZONING DISTRICT: MULTI RESIDENCE–1
(LOT CREATED BEFORE 12/07/1953)

	REQUIRED	PROPOSED
MIN. AREA	7,000 S.F	10,539 S.F
MIN. FRONTAGE	70'	70.26'
MIN. YARD FRONT	25'	57.1'
SIDE	7.5'	8.3'
REAR	15'	15.5'
MAX. LOT COV.	30%	27.28%
MIN. OPEN SPACE	50%	59.56%
MIN. LOT AREA PER UNIT	3,500 SF	5,269.5 SF

EXISTING DEGRADED AREA WITHIN THE RIVERFRONT AREA

	EXISTING
HOUSE, PORCH, WINDOW WELL	902 S.F
FRONT AND REAR LANDINGS AND STEPS	127 S.F
PAVED AND GRAVEL DRIVEWAY	492 S.F
FRONT CONCRETE WALKWAY	169 S.F
TOTAL:	**1,690 S.F**

PROPOSED DEGRADED AREA WITHIN THE RIVERFRONT AREA

	PROPOSED
HOUSE, PORCH, GARAGE, BH	1,702 S.F
DRIVEWAY	1,342 S.F
WALKWAYS	20 S.F
RETAINING WALL	18 S.F
TOTAL:	**3,082 S.F**

INCREASE IN DEGRADED AREA IN RIVERFRONT AREA: 3,082 –1,690 = 1,392 SF
EXISTING DEGRADED AREA IN RIVERFRONT AREA TO BE RESTORED: 162 SF
REQUIRED ENHANCEMENT IN RIVERFRONT AREA= 1,392–162= 1,230 SF x2= 2,460 SF
TOTAL RESTORATION/ENHANCEMENT PLANTING AREA REQUIRED= 2,460+162= 2,622 SF
TOTAL PROVIDED RESTORATION/ENHANCEMENT PLANTING AREA = 2,765 SF

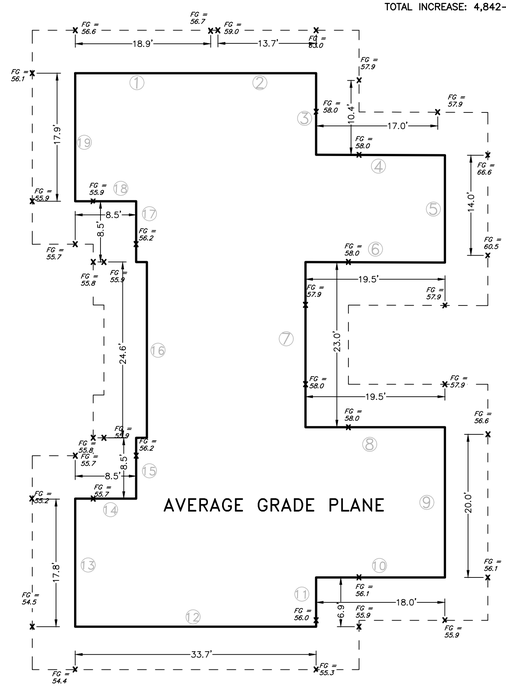
EXISTING IMPERVIOUS AREA

	EXISTING
HOUSE, PORCH, WINDOW WELL	902 S.F
GARAGE	287 S.F
PAVED DRIVEWAY	341 S.F
GRAVEL DRIVEWAY	481 S.F
FRONT AND REAR LANDINGS AND STEPS	127 S.F
FRONT CONCRETE WALKWAY	169 S.F
RETAINING WALLS	295 S.F
TOTAL:	**2,602 S.F**

PROPOSED IMPERVIOUS AREA

	PROPOSED
HOUSE, PORCH, GARAGE, BH	2876 S.F
DRIVEWAY	1387 S.F
PATIO	447 S.F
RETAINING WALL	107 S.F
WALKWAY	25 S.F
TOTAL:	**4,842 S.F**

TOTAL INCREASE: 4,842–2602= 2,240 SF



GRAPHIC SCALE

10 0 5 10 20 40

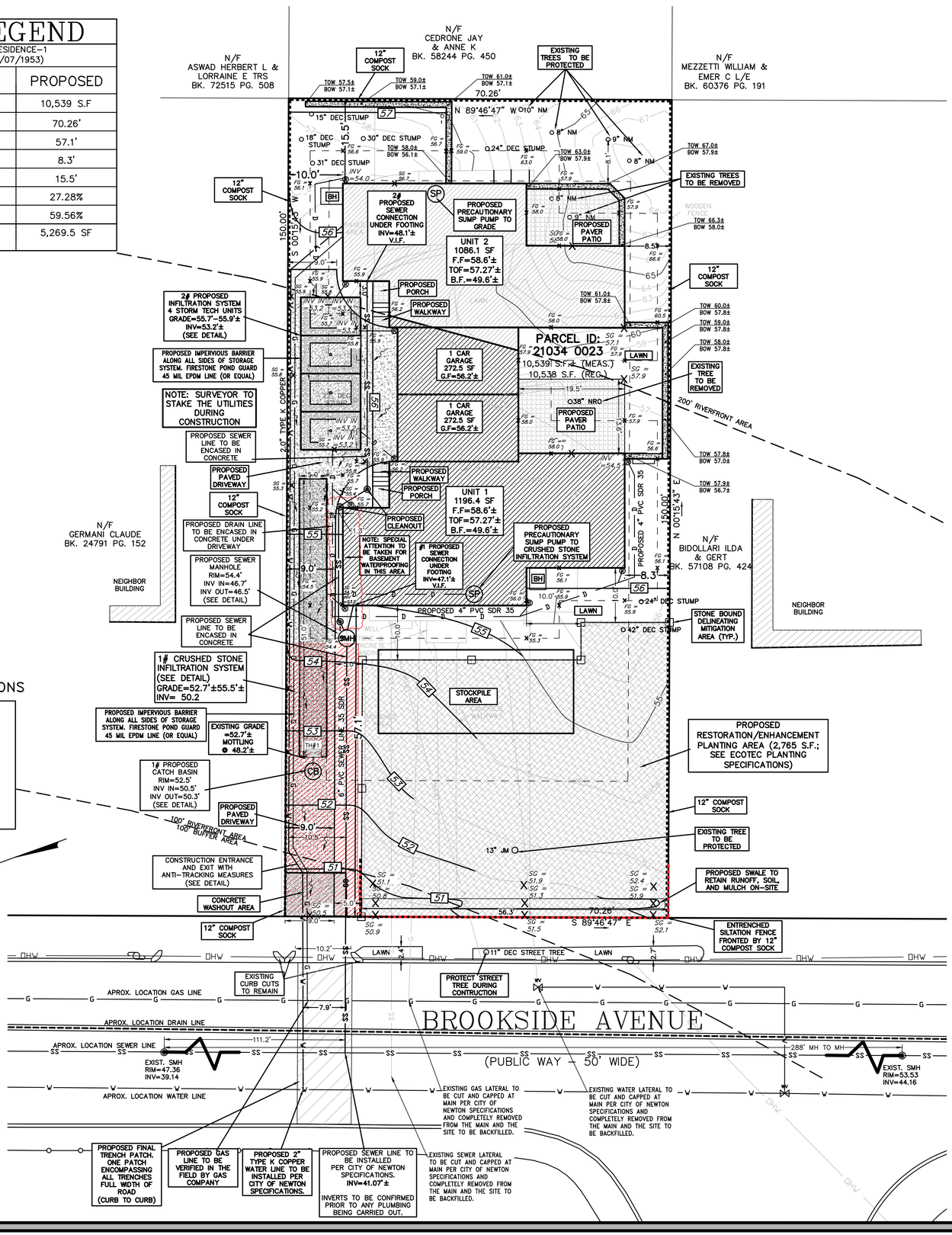
(IN FEET)
1 inch = 10 ft.

AVERAGE GRADE CALCULATIONS

AVERAGE GRADE PLANE (ALL UNITS IN FEET)

SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	18.90	56.60	56.70	56.65	1,070.69
2	13.70	56.70	57.90	57.30	785.01
3	10.40	57.90	58.00	57.95	602.68
4	17.00	58.00	57.90	57.95	985.15
5	14.00	57.90	60.50	59.20	828.70
6	19.50	57.90	57.90	57.90	1,128.05
7	23.00	58.00	58.00	58.00	1,334.02
8	19.50	58.00	57.90	57.95	1,130.03
9	20.00	58.80	56.10	56.35	1,127.00
10	18.00	55.90	56.00	55.95	1,007.10
11	6.90	56.10	55.90	56.00	386.40
12	33.70	55.30	54.40	54.85	1,848.45
13	17.80	54.30	56.20	55.25	983.45
14	8.50	56.20	56.20	56.20	477.70
15	8.50	55.70	55.80	55.75	473.88
16	24.60	55.90	55.90	55.90	1,375.14
17	8.50	55.80	55.90	55.85	474.73
18	8.50	55.20	55.70	55.45	470.58
19	17.90	56.60	56.10	56.35	1,008.40
SUM =	308.00			17,566.58	

SUM OF MEAN x LENGTH/ SUM OF LENGTHS = AVERAGE GRADE PLANE = **56.97**



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

34 BROOKSIDE AVE
NEWTON
MASSACHUSETTS

PROPOSED PLOT PLAN

REVISION BLOCK

DESCRIPTION	DATE

COMMONWEALTH OF MASSACHUSETTS
EDMOND SPRUHAN
CIVIL
No. 45315
REGISTERED PROFESSIONAL ENGINEER
07/18/2022

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER C. CHARLTON
NO. 48649
PROFESSIONAL LAND SURVEYOR
07/18/2022

DATE:	07/18/2022
DRAWN BY:	P.S.
CHECKED BY:	C.C.
APPROVED BY:	E.S

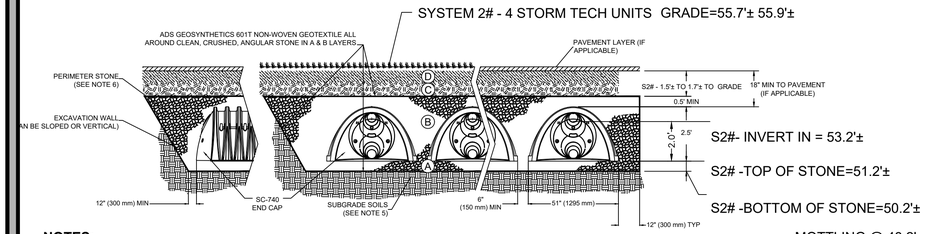
PROPOSED PLOT PLAN

SHEET 1

DRAINAGE SYSTEM–2 (REAR)

ROOF

	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, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	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, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2 3]

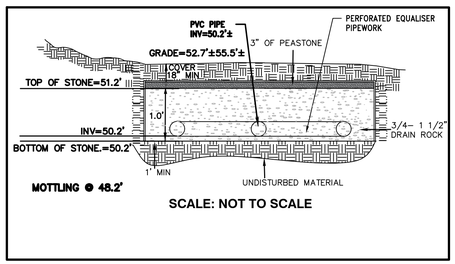


NOTES:

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. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. 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.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. 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.

DRAINAGE SYSTEM–1 (FRONT)

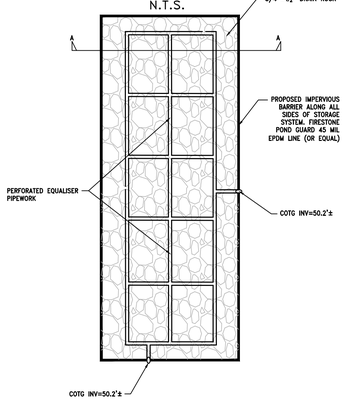
DRIVEWAY

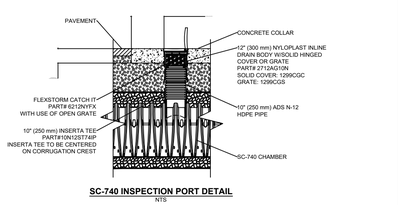


DRAINAGE SYSTEM NOTES:

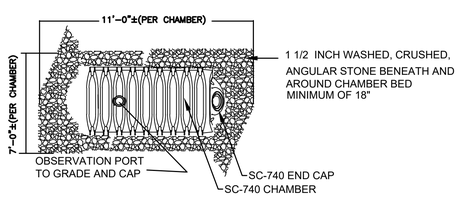
1. TOP OF SYSTEM SHALL BE ENCASED IN FILTER FABRIC.
2. LOCATION OF SYSTEM PER PLANS.
3. DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS. CONTRACTOR TO NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE FOR DRAINAGE SYSTEM INSPECTION PRIOR TO BACKFILLING.

PLAN VIEW
DRAINAGE SYSTEM DETAIL
N.T.S.





SC-740 INSPECTION PORT DETAIL
NTS



STORMTECH SC–740 CHAMBER SYSTEM PLAN VIEW DETAIL
NOT TO SCALE

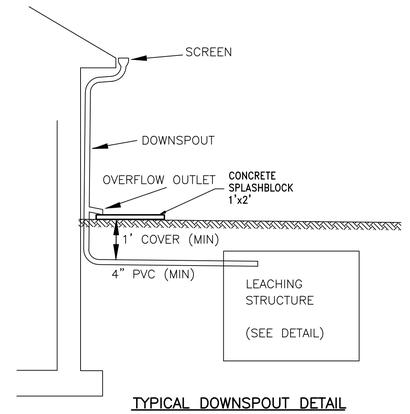
DEEP OBSERVATION HOLE LOG

DEEP OBSERVATION HOLE NUMBER:			TP-1			GROUND ELEVATION:					52.88
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			
0-7	A	10 YR 4/4	--	--	--	LOAMY SAND	<2	<2	MASSIVE	FRIABLE	--
7-19	Bw	10 YR 5/6	--	--	--	LOAMY SAND	<2	<2	MASSIVE	FRIABLE	--
19-60	C1	7.5 YR 6/4	54	7.5 YR 5/8	15	COBBLEY SAND	5-10	20-25	SINGLE GRAIN	LOOSE	1, 2
60-108	C2	7.5 YR 5/4	--	--	--	COBBLEY SAND	5-10	20-25	SINGLE GRAIN	LOOSE	--

NOTES:
1. REDOX OBSERVED @ 54"
2. DAMP SAND OBSERVED BELOW REDOX
3. LOGGED BY MATTHEW MUI, SE14259 ON 7/01/2022.

STORMTECH GENERAL NOTES

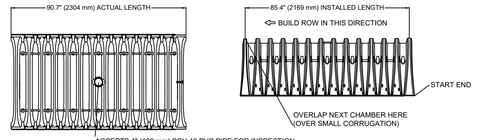
1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING 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.
3. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
4. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
5. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
6. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. 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 TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
8. 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.



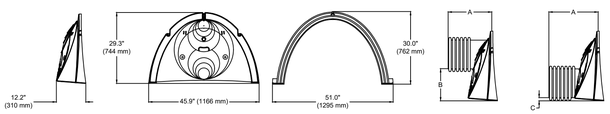
TYPICAL DOWNSPOUT DETAIL
N.T.S.

SC-740 TECHNICAL SPECIFICATION

NTS



ACCEPTS 4" (100 mm) SCH 40 PVC PIPE FOR INSPECTION PORT. FOR PIPE SIZES LARGER THAN 4" (100 mm) UP TO 10" (250 mm) USE INSERTA TEE CONNECTION CENTERED ON A CHAMBER CREST CORRUGATION



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*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"

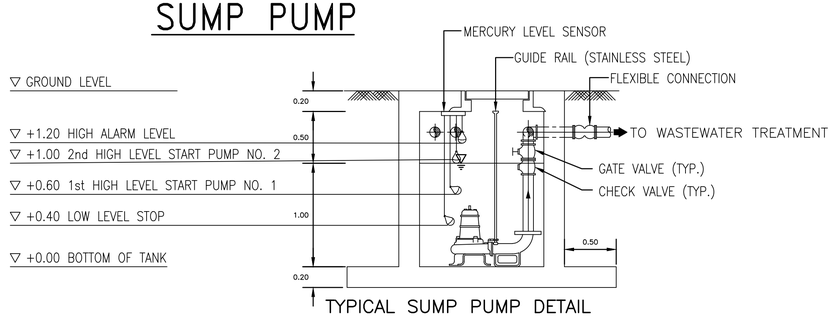
PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B 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 1-888-892-2694.

* FOR THE SC740EPE24B 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

SUMP PUMP



TYPICAL SUMP PUMP DETAIL

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

34 BROOKSIDE AVE
NEWTON
MASSACHUSETTS

DETAILS

REVISION BLOCK

DESCRIPTION	DATE

COMMONWEALTH OF MASSACHUSETTS
EDMOND R. SPRUHAN
CIVIL
33318
REGISTERED PROFESSIONAL ENGINEER

07/18/2022

DATE:	07/18/2022
DRAWN BY:	P.S.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS

SHEET 2

NOTES

1. ELEVATIONS REFER TO CITY OF NEWTON DATUM.

2. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.

3. MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG-SAFE AT 1-888-344-7233 IN ORDER TO COMPLY WITH STATE LAW.

4. 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.

5. PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.

6. PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.

7. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND ON MARCH 30TH, 2022.

8. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.

9. NO EXCAVATION SHALL BE MADE BY THE CONTRACTOR IN ANY PUBLIC WAY OR UTILITY EASEMENT UNLESS AT LEAST FORTY-EIGHT (48) HOURS, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS, BEFORE THE PROPOSED EXCAVATION IS TO BE MADE, HE HAS 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.

10. THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER.

11. NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.

12. ALL 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.

13. WARNING SIGNS SHALL CONFORM TO PAGE 66 OF THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.

14. ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE 5' LATERALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS. BACKFILL AS 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.

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. 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.

19. THE APPLICANT WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT AND A TRENCH PERMIT WITH THE DPW.

20. 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.

21. ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.)

22. THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROPERLY BACKFILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK; FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE UTILITY CONNECTION PERMIT.

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. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.

24. 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

25. 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.

26. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.

27. 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.

28. WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE IE (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS.

29. 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.

30. ALL NEW SEWER SERVICE AND/OR STRUCTURES 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. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITHNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION, A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.

31. 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.

32. 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.

33. 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.

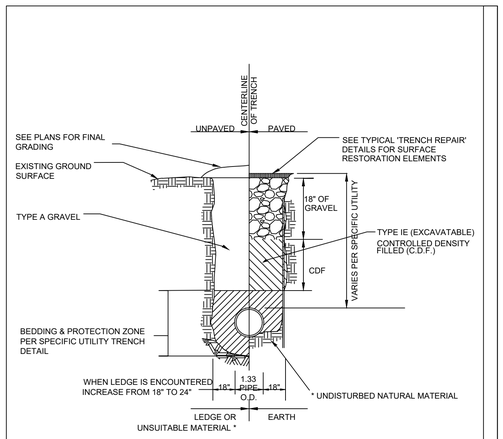
34. PER CITY OF NEWTON ORDINANCE NO.B-42, COUNCIL ITEM #251-19, BUILDING SEWER, WATER SERVICE PIPE & SIDEWALK/CURB REPLACEMENT ORDINANCE. THE APPLICANT IS REQUIRED TO INSTALL/REPLACE SIDEWALK & CURB ALONG THE ENTIRE FRONTAGE. THIS SHALL INCLUDE APPROPRIATE TRANSITION TO ADJOINING CURBING & WALKWAYS, 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.

35. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE ON-SITE INSPECTION(S) OF ALL SUBSURFACE STRUCTURES. THIS INCLUDES BUT IS 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.

36. PRIOR TO THE ENGINEERING DIVISION RECOMMENDING THAT A CERTIFICATE OF OCCUPANCY BE ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED. 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 & DATED BY THE ENGINEER OF RECORD. THE FOLLOWING STATEMENT MUST BE ON ALL AS-BUILT PLANS SUBMITTED TO THE ENGINEERING DIVISION: 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 _____

37. 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.

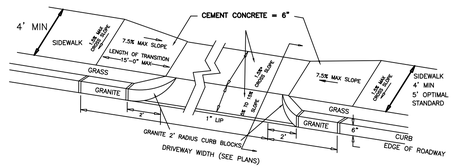


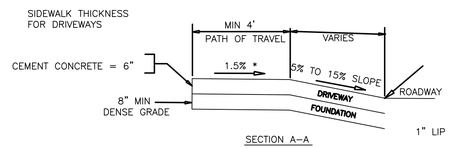
* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

NOTE: TRENCHBOX OR SHEETING SHALL MEET OSHA STANDARDS.

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

23

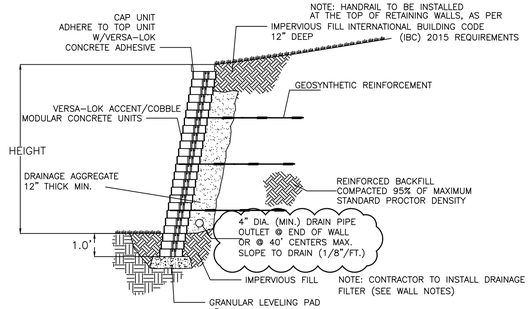




SECTION A-A

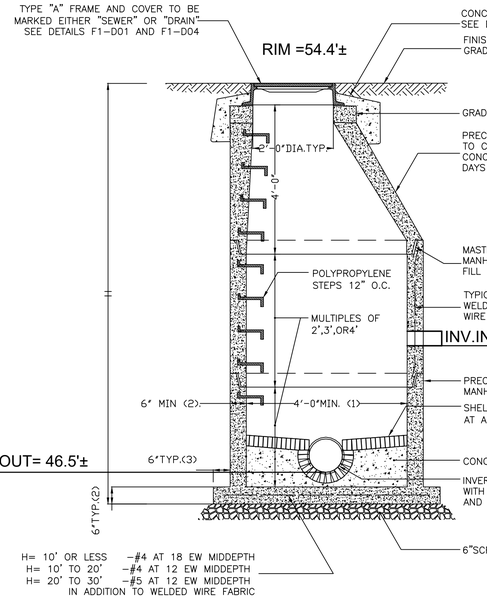
* TOLERANCE FOR CONSTRUCTION +/- 0.5%

DRIVEWAY APRON WITH CORNER BLOCKS

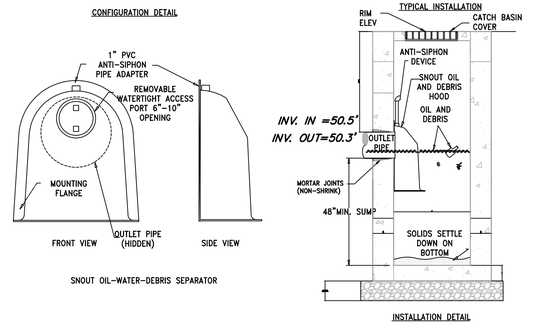


TYPICAL SECTION-REINFORCED RETAINING WALL

SCALE: NONE



SEWER MANHOLE DETAIL

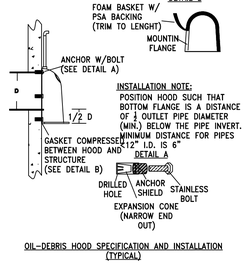


SNOUT OIL-WATER-DEBRIS SEPARATOR

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860)434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888)354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPED WITH A WATERTIGHT ACCESS PORT. A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO ½ THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US PATENT # 6126817



OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)

DEEP SUMP CATCH BASIN WITH DEBRIS COLLECTOR DETAIL

N.T.S.

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

34 BROOKSIDE AVE
NEWTON
MASSACHUSETTS

DETAILS

REVISION BLOCK

DESCRIPTION	DATE

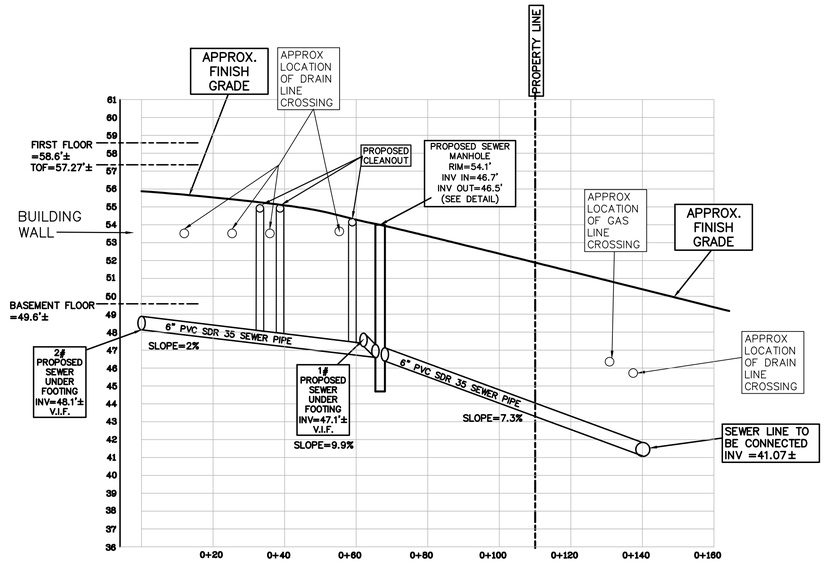
COMMONWEALTH OF MASSACHUSETTS EDMOND SPRUHAN No. 43316 REGISTERED PROFESSIONAL ENGINEER

07/18/2022

DATE:	7/18/2022
DRAWN BY:	P.S
CHECKED BY:	E.S
APPROVED BY:	E.S

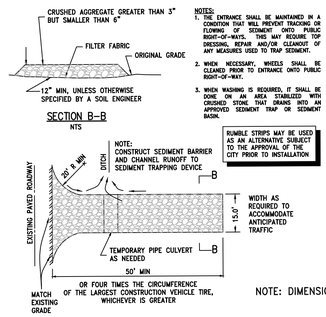
DETAILS

SHEET 3



PROPOSED SEWER PROFILE

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



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

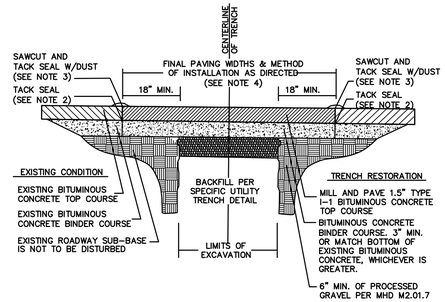
CONSTRUCTION SPECIFICATIONS:
1. THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 2–3 INCH (50–75 MM) STONE. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT..
2. THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES (150 MM). USE GEOTEXTILE FABRICS, IF 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 IMP..
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

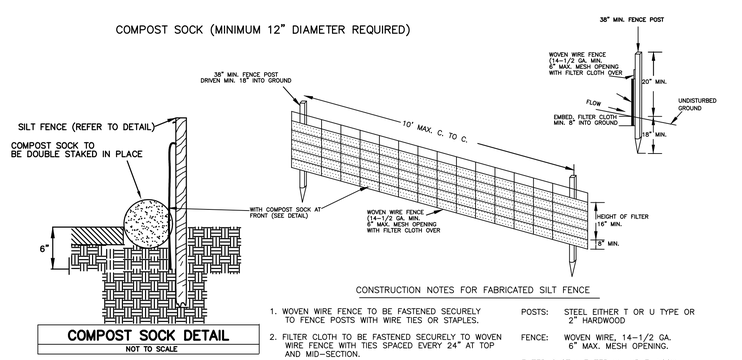
STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.



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 HOT LIQUID 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

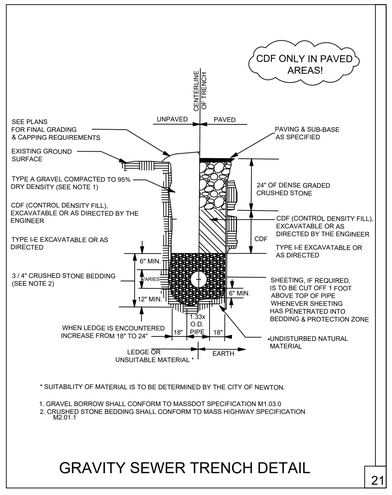


CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID–SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABLINKA T140N OR APPROVED EQUAL.
PREFABICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE DETAIL

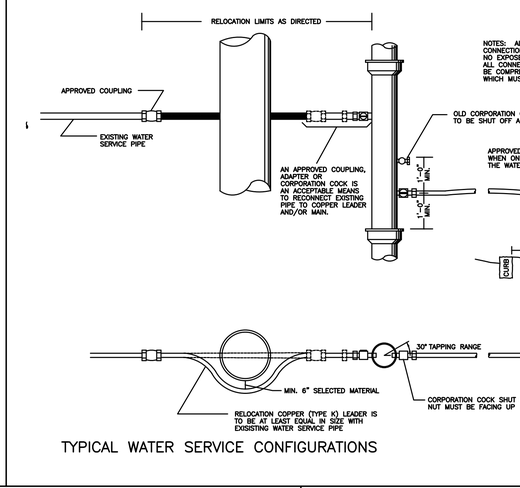


* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

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

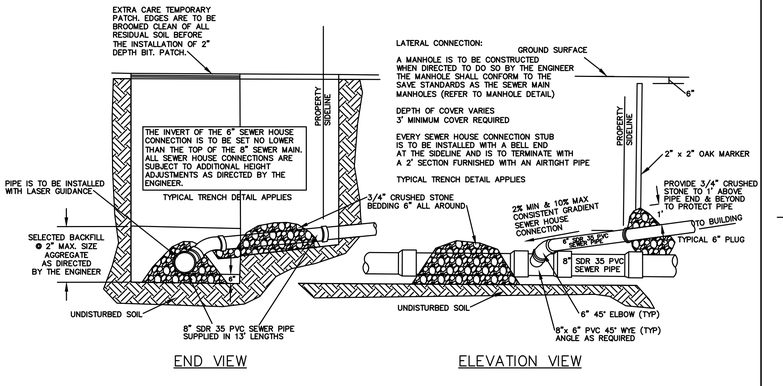
GRAVITY SEWER TRENCH DETAIL

21



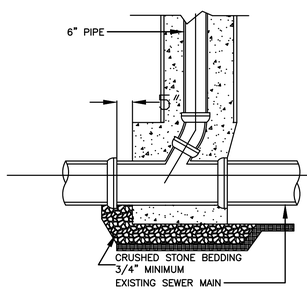
NOTES: ALL NEW PIPE IS TO BE FLUSHED JUST PRIOR TO FINAL CONNECTION AT THE POINT CLOSEST TO THE METER. NO EXPOSED PIPES ARE TO BE LEFT IN THE GROUND. ALL CONNECTIONS ARE TO BE LEAK FREE AND MAY BE COMPRESSION TYPE EXCEPT INTERIOR CONNECTIONS WHICH MUST BE FLARED TYPE.

TYPICAL WATER SERVICE CONFIGURATIONS

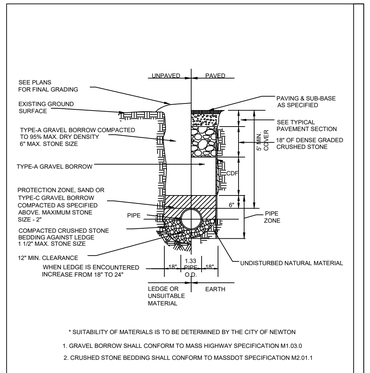


TYPICAL PVC SEWER HOUSE CONNECTION

N.T.S.



TYPICAL SEWER CONFIGURATION



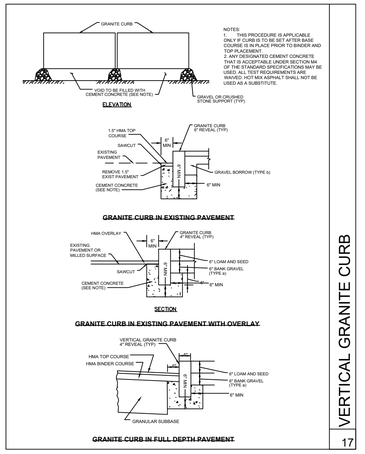
* SUITABILITY OF MATERIALS IS TO BE DETERMINED BY THE CITY OF NEWTON.

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:
1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT.
2. ANY DESIGNATED CEMENT CONCRETE MAY BE REPLACED WITH HMA AND ALL OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

VERTICAL GRANITE CURB

17

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

34 BROOKSIDE AVE
NEWTON
MASSACHUSETTS

DETAILS

REVISION BLOCK

DESCRIPTION	DATE

COMMONWEALTH OF MASSACHUSETTS
EDMOND SPRUHAN
CIVIL
33318
REGISTERED PROFESSIONAL ENGINEER

07/18/2022

DATE:	7/18/2022
DRAWN BY:	P.S.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS

SHEET 4