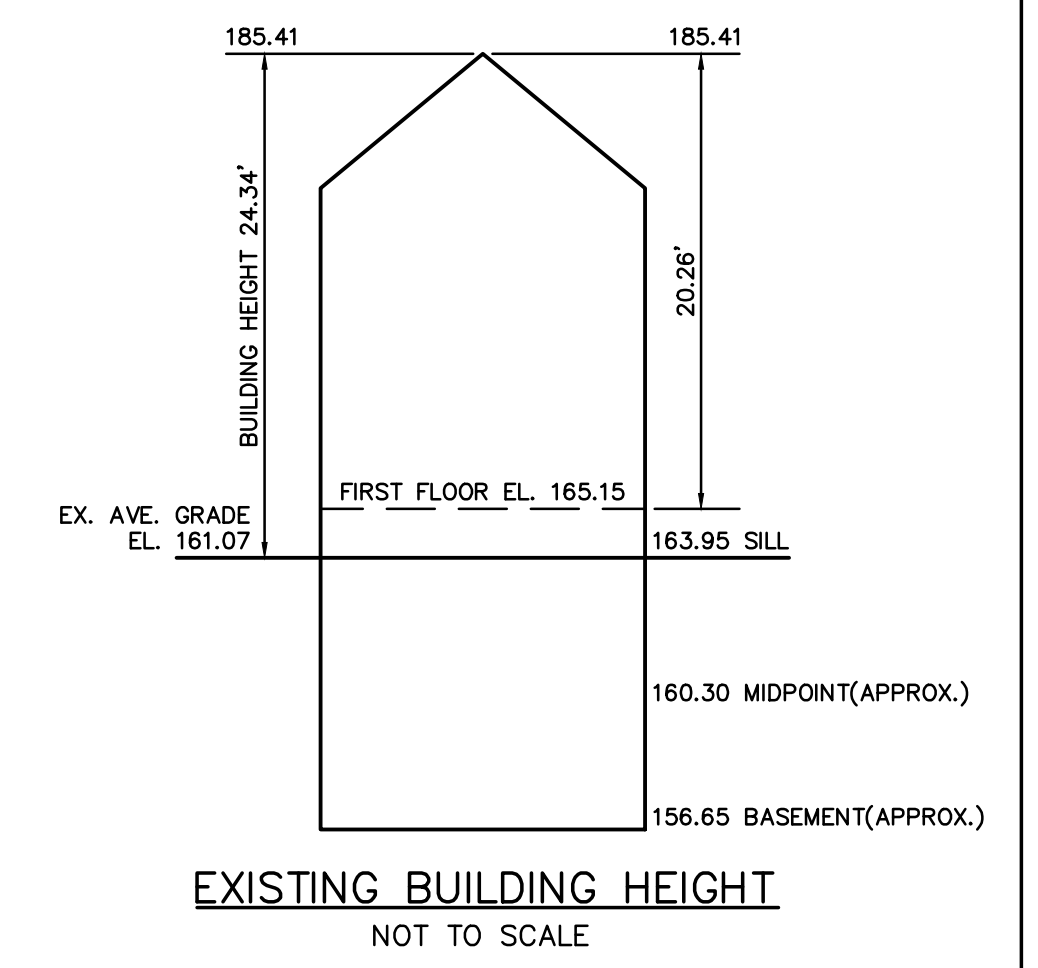
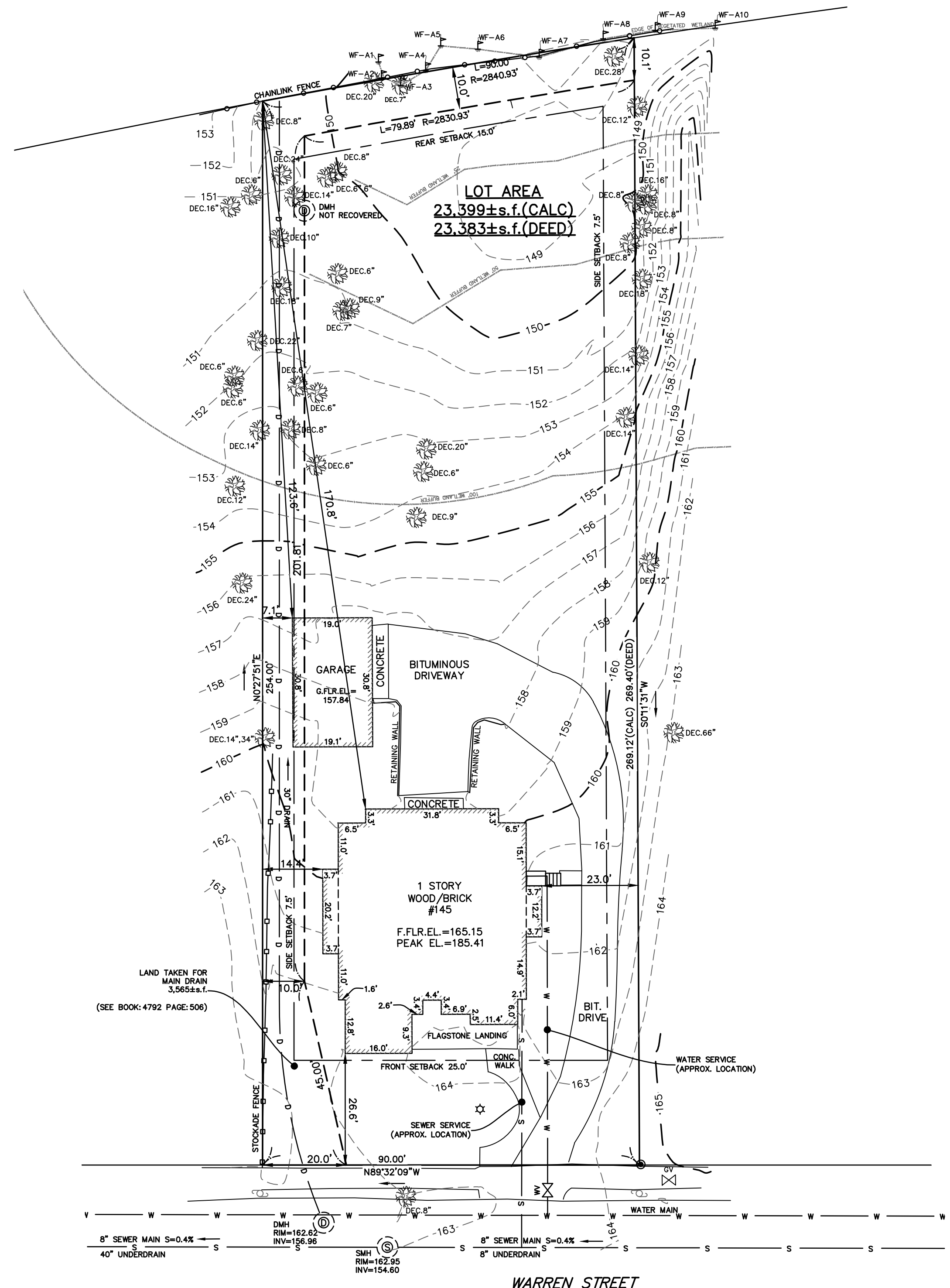


217115.ec.dwg (2/2017)

LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	70
STOCKADE FENCE	
CHAINLINK FENCE	
SEWER LINE	S
DRAIN LINE	D
WATER LINE	W
GAS LINE	C
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	DEC. 22"
CONIFEROUS TREE	CON. 12"
HYDRANT	



**Length Weighted Mean
Existing Conditions Average Grade Calculation**

A Segment	B Length Of Segment in Feet	C Height of High Point of Segment	D Height of Low Point of Segment	E E(C)+D/2 Average Segment Height	F F=BxL/E
1	11.36	163.87	163.17	163.52	1857.59 Sq. Ft.
2	6.90	163.70	163.56	163.63	1129.04 Sq. Ft.
3	9.30	164.07	163.43	163.75	1522.85 Sq. Ft.
4	15.95	163.89	163.05	163.47	2607.30 Sq. Ft.
5	12.80	162.64	162.11	162.38	2078.41 Sq. Ft.
6	11.00	162.12	161.28	161.70	1778.71 Sq. Ft.
7	4.00	161.37	161.07	161.22	644.87 Sq. Ft.
8	13.69	161.07	160.02	160.54	2197.85 Sq. Ft.
9	2.52	160.02	159.83	159.93	403.02 Sq. Ft.
10	11.00	159.74	158.91	159.33	1752.59 Sq. Ft.
11	6.55	158.78	158.58	158.68	1039.26 Sq. Ft.
12	9.37	158.48	157.59	158.04	1480.79 Sq. Ft.
13	14.01	157.69	157.59	157.64	2208.54 Sq. Ft.
14	8.39	158.53	157.67	158.10	1326.45 Sq. Ft.
15	6.55	159.20	158.57	158.88	1040.88 Sq. Ft.
16	11.56	160.92	160.05	160.48	1855.18 Sq. Ft.
17	3.50	160.97	160.92	160.95	563.31 Sq. Ft.
18	12.19	161.86	161.69	161.77	1972.03 Sq. Ft.
19	14.90	162.51	161.81	162.16	2416.20 Sq. Ft.
20	6.00	162.73	162.58	162.66	975.94 Sq. Ft.
Total	191.54				30850.68 Sq. Ft.

Total Column F / Total Column B = Average Grade
Average Grade: 161.07'

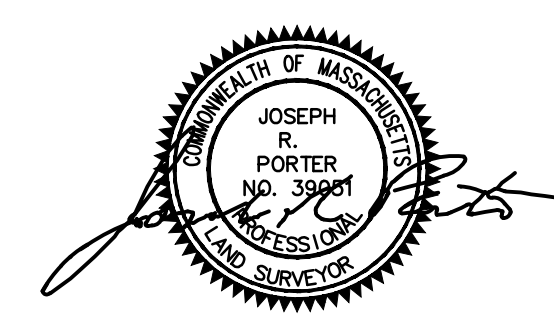
ZONING CHART
NEWTON, MASSACHUSETTS

REGULATION	REQUIRED	EXISTING
ZONE:	MR-1 (OLD)	SUBMISSION: EXISTING
LOT AREA	7,000s.f.	23,399±s.f.
LOT FRONTAGE	70.0'	90.0'
FRONT SETBACK	25.0'	26.6'
SIDE SETBACK	7.5'	14.4'
REAR SETBACK	15.0'	170.8'
BUILDING HEIGHT	36.0'	24.34'
AVERAGE GRADE	-	161.07
LOT COVERAGE	30.0%(7,019±sf)	12.9%
OPEN SPACE	50.0%(11,699±sf)	77.2%
MAX. FAR	0.4	-
MAX. GROSS FLOOR AREA	9,360 SF	-

TOPOGRAPHIC SITE PLAN
NEWTON, MASSACHUSETTS
SHOWING EXISTING CONDITIONS AT
#145 WARREN STREET

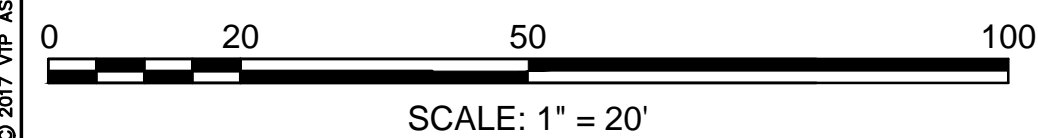
SCALE: 1in.=20ft. DATE: APRIL 6, 2017
REVISED: OCTOBER 17, 2018;
NOVEMBER 4, 2020

PROJECT: 217115

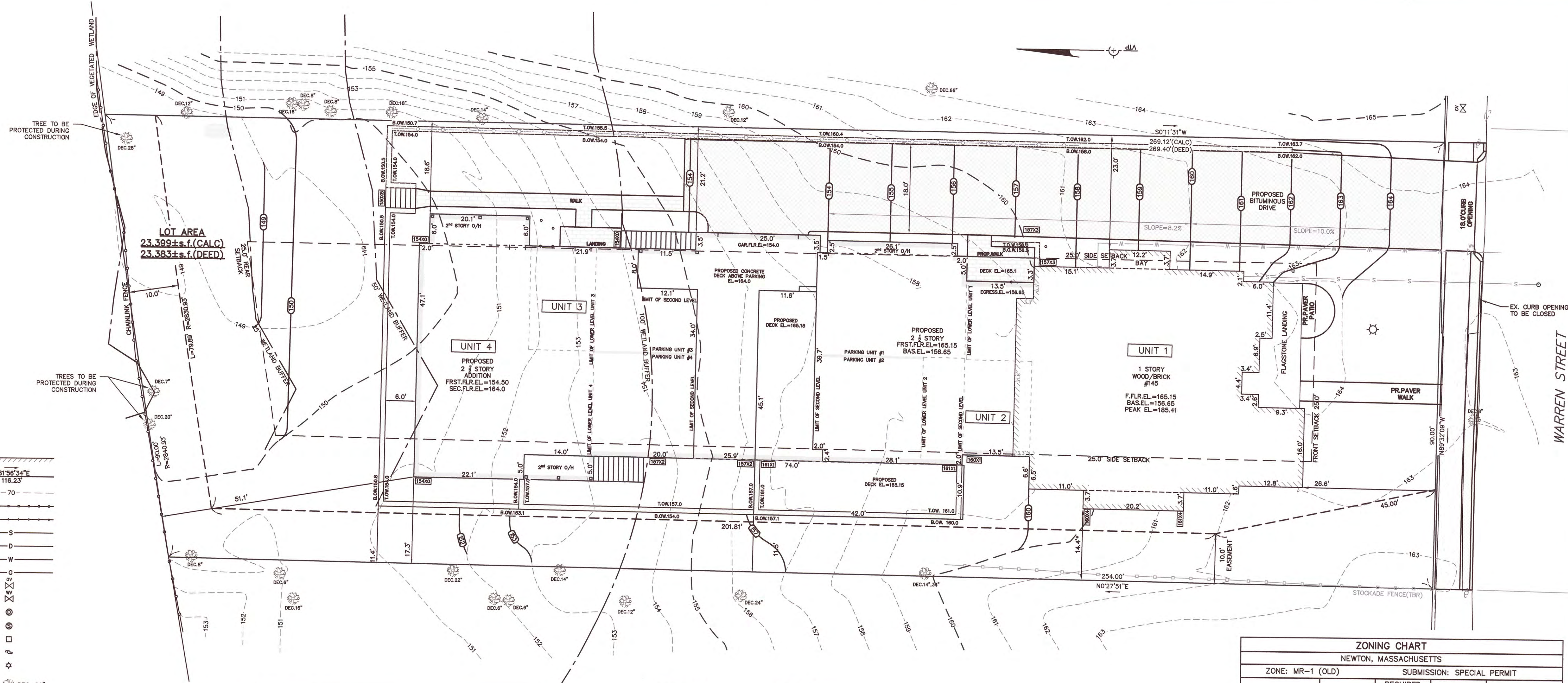


VTP
ASSOCIATES
INC.

LAND SURVEYORS - CIVIL ENGINEERS. 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271



217115_dpt16.dwg (2.2017)
 © 2019 VTP ASSOCIATES, INC.



LEGEND

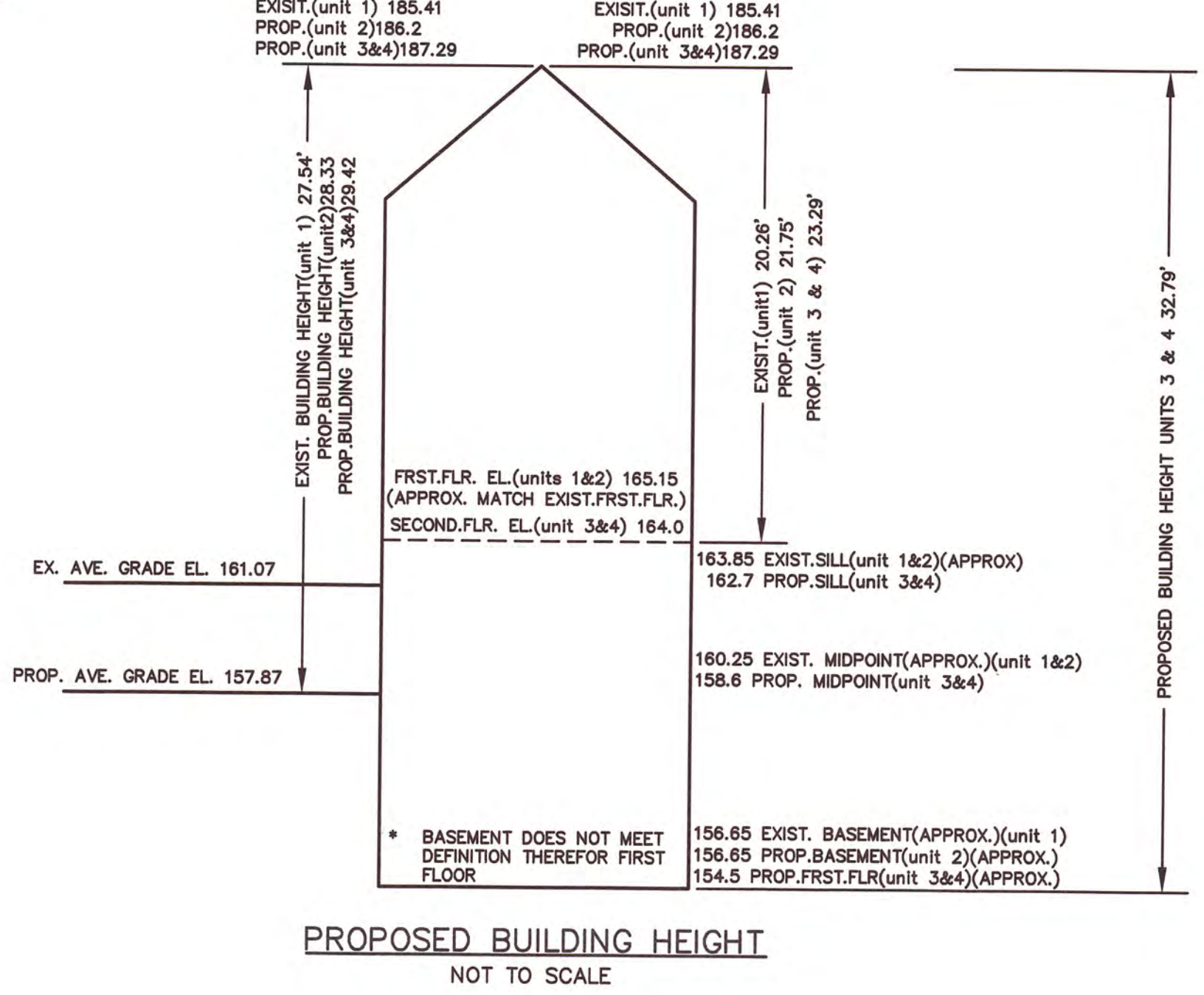
BUILDING	[Symbol]
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	-70-
STOCKADE FENCE	[Symbol]
CHAINLINK FENCE	[Symbol]
SEWER LINE	[Symbol]
DRAIN LINE	[Symbol]
WATER LINE	[Symbol]
GAS LINE	[Symbol]
GAS VALVE	[Symbol]
WATER VALVE	[Symbol]
DRAIN MANHOLE	[Symbol]
SEWER MANHOLE	[Symbol]
CATCH BASIN	[Symbol]
UTILITY POLE	[Symbol]
LIGHT POLE	[Symbol]
DECIDUOUS TREE	DEC. 22"
CONIFEROUS TREE	CON. 12"
HYDRANT	[Symbol]

Address: #145 Warren Road, Newton

Length Weighted Mean Proposed Average Grade Calculation

Segment	A	B	C	D	E	F
	Length of Segment in Feet	Height of High Point of Segment	Height of Low Point of Segment	Average Height E=(C+D)/2	Area F=BxE	
1	11.36	164.67	163.20	163.94	1862.30 Sq. Ft.	
2	6.90	164.54	164.27	164.41	1134.39 Sq. Ft.	
3	9.30	164.54	164.45	164.50	1529.80 Sq. Ft.	
4	15.95	164.02	163.14	163.58	2609.10 Sq. Ft.	
5	12.80	163.05	162.24	162.65	2081.86 Sq. Ft.	
6	11.00	162.26	161.40	161.83	1780.13 Sq. Ft.	
7	20.20	161.30	160.30	160.80	3248.16 Sq. Ft.	
8	11.00	160.30	160.00	160.15	1761.65 Sq. Ft.	
9	6.60	160.10	160.00	160.05	1056.33 Sq. Ft.	
10	13.50	160.10	160.00	160.05	2160.68 Sq. Ft.	
11	28.10	161.00	161.00	161.00	4524.10 Sq. Ft.	
12	13.60	161.00	161.00	161.00	2189.60 Sq. Ft.	
13	12.40	157.10	157.10	157.10	1949.04 Sq. Ft.	
14	20.00	157.10	157.00	157.05	3141.00 Sq. Ft.	
15	14.00	157.10	157.00	157.05	2198.70 Sq. Ft.	
16	1.00	157.00	157.00	157.00	157.00 Sq. Ft.	
17	21.10	154.00	154.00	154.00	3249.40 Sq. Ft.	
18	47.10	154.00	154.00	154.00	7253.40 Sq. Ft.	
19	2.00	154.00	154.00	154.00	308.00 Sq. Ft.	
20	20.10	154.50	154.50	154.50	3105.45 Sq. Ft.	
21	18.40	154.00	154.00	154.00	2833.60 Sq. Ft.	
22	3.50	154.00	154.00	154.00	539.00 Sq. Ft.	
23	11.50	154.00	154.00	154.00	1771.00 Sq. Ft.	
24	25.00	154.00	153.90	153.95	3848.75 Sq. Ft.	
25	29.60	156.20	154.00	155.10	4590.96 Sq. Ft.	
26	13.50	156.80	156.50	156.65	2113.43 Sq. Ft.	
27	1.00	156.00	156.00	156.00	156.00 Sq. Ft.	
28	15.10	156.50	156.50	156.50	2364.29 Sq. Ft.	
29	12.20	159.50	159.50	159.50	1939.80 Sq. Ft.	
30	14.90	161.20	159.60	160.40	2389.96 Sq. Ft.	
31	6.00	161.80	161.10	161.45	968.70 Sq. Ft.	
Total	448.71				70836.58 Sq. Ft.	

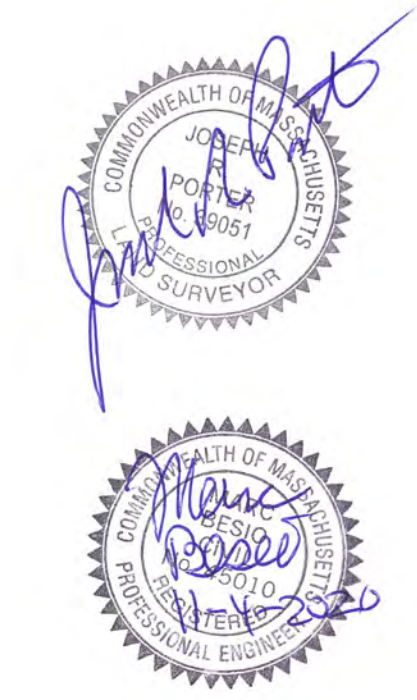
Total Column F / Total Column B = Average Grade
Average Grade: 157.87'



ZONING CHART
 NEWTON, MASSACHUSETTS
 ZONE: MR-1 (OLD) SUBMISSION: SPECIAL PERMIT

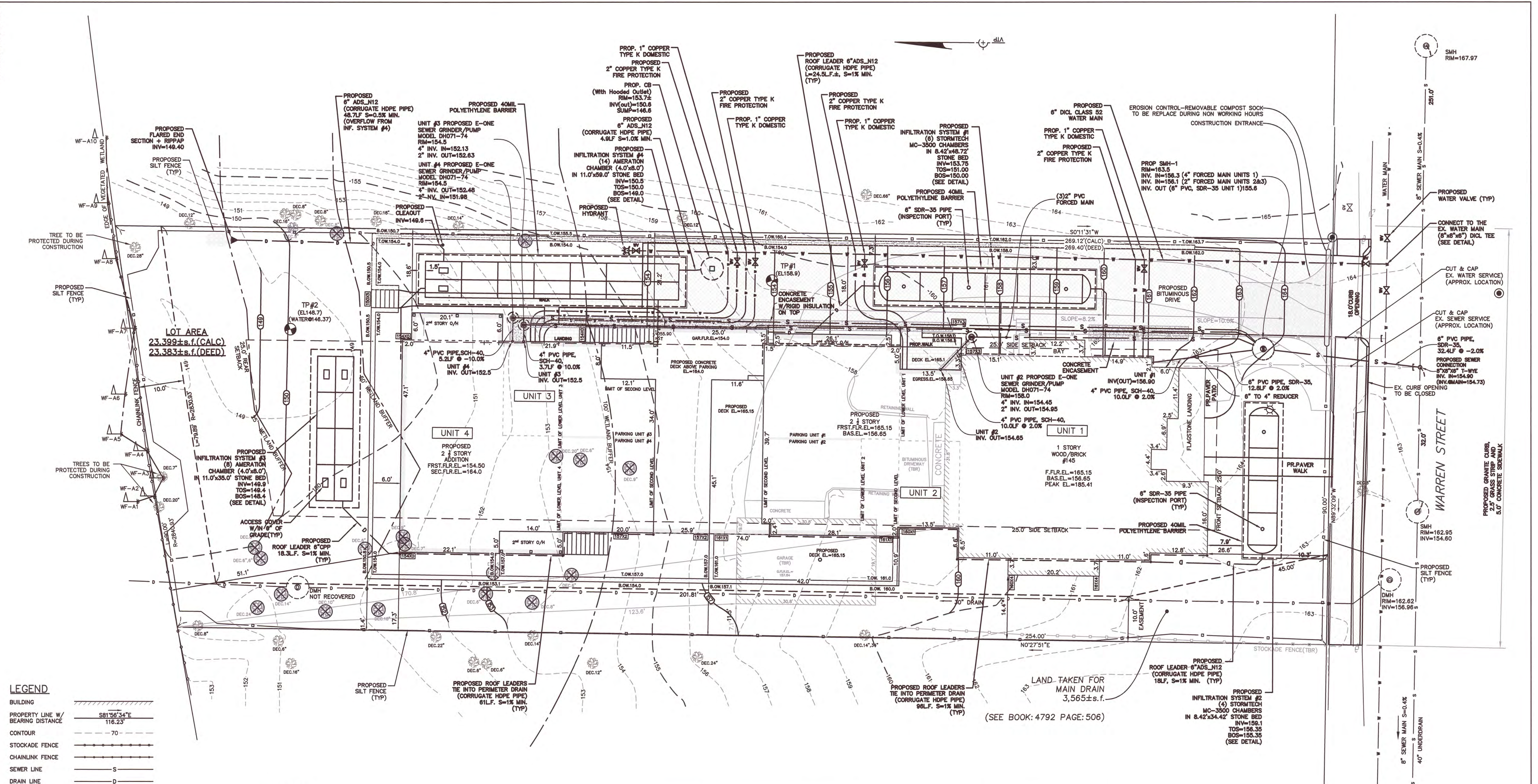
REGULATION	REQUIRED	REQUIRED WITH SPECIAL PERMIT	EXISTING	PROPOSED
LOT AREA	7,000s.f.	15,000s.f.	23,399±s.f.	N/C
LOT AREA/PER UNIT	3,500s.f.	4,000s.f./unit	23,399±s.f.	7,799±s.f.
LOT FRONTAGE	70.0'	80.0'	90.0'	N/C
FRONT SETBACK	25.0'	25.0'	26.6'	N/C
SIDE SETBACK	7.5'	25.0'	14.4'	14.4'*EX/11.5'PR.**
REAR SETBACK	15.0'	25.0'	170.8'	51.1'
BUILDING HEIGHT BUILDING	36.0'/2.5 STORY	36.0'/3.0 STORY**	24.34'	29.42'/2 1/2 STRY.
AVERAGE GRADE	-	-	-	157.87
LOT COVERAGE	30.0%(7,019±sf)	25.0%	12.9%	33.6%
OPEN SPACE	50.0%(11,699±sf)	50.0%	77.2%	51.9%
MAX. GROSS FLOOR AREA	9,359.6 SF	9,359.6 SF	-	-

* NON CONFORMING EXISTING
 ** NON-CONFORMING WAIVER REQUIRED



ZONING PLAN
 NEWTON, MASSACHUSETTS
 SHOWING PROPOSED CONDITIONS AT
 #145 WARREN STREET
 SCALE: 1in.=10ft. DATE: NOVEMBER 4, 2020
 PROJECT: 217115
VTP ASSOCIATES
 INC.
 LAND SURVEYORS - CIVIL ENGINEERS, 132
 ADAMS STREET 2ND FLOOR SUITE 3
 NEWTON, MA 02458
 (617) 332-8271
 SHEET 1 OF 4

217115_1up16.dwg (2-2017)



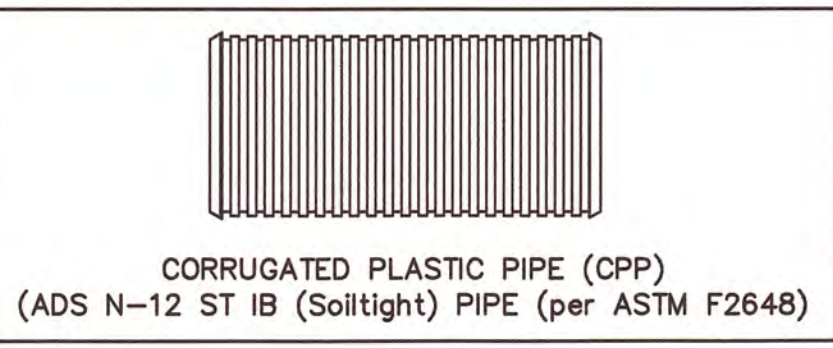
LEGEND

BUILDING	[Symbol]
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	-70-
STOCKADE FENCE	[Symbol]
CHAINLINK FENCE	[Symbol]
SEWER LINE	S
DRAIN LINE	D
WATER LINE	W
GAS LINE	G
GAS VALVE	[Symbol]
WATER VALVE	[Symbol]
DRAIN MANHOLE	[Symbol]
SEWER MANHOLE	[Symbol]
CATCH BASIN	[Symbol]
UTILITY POLE	[Symbol]
LIGHT POLE	[Symbol]
DECIDUOUS TREE	DEC. 22"
CONIFEROUS TREE	CON. 12"
HYDRANT	[Symbol]

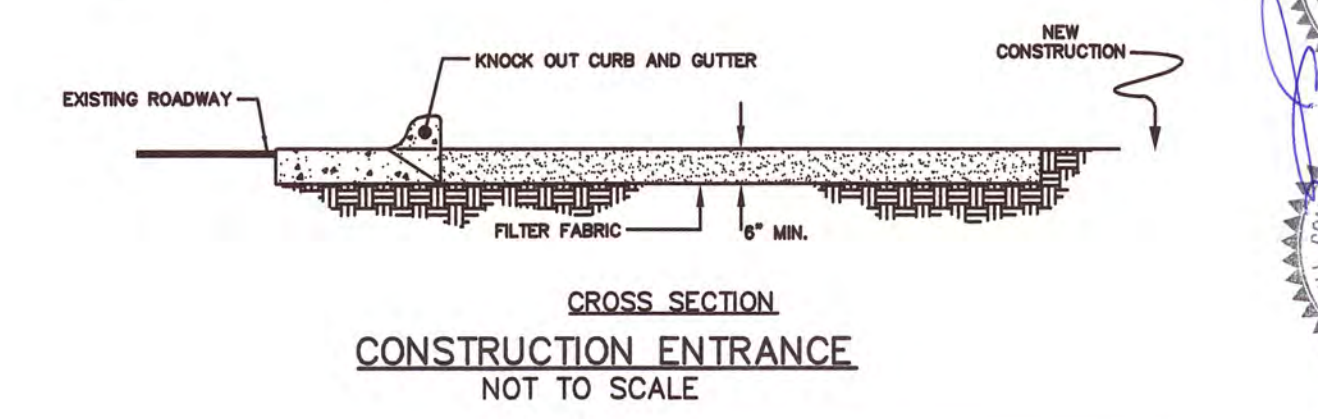
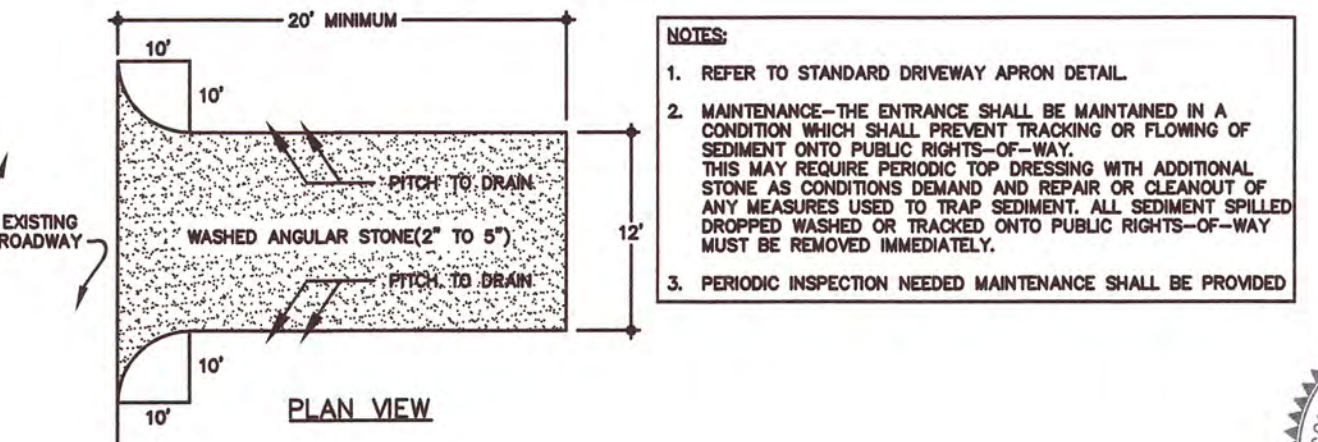
DIG SAFE
EXCAVATORS
BEFORE YOU DIG CONTACT THE DIG SAFE CENTER TO PREVENT DAMAGE TO TELEPHONE, GAS OR ELECTRIC UNDERGROUND FACILITIES OF MEMBER UTILITIES. CALL TOLL FREE 1-888-322-4844. MASSACHUSETTS STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE YOU START DIGGING OPERATIONS. IN AN EMERGENCY, CALL IMMEDIATELY



TESTPIT #1 = 158.9 (JAN 28, 2019)
0-12" TOP SOIL
12"-36" SUBSOIL
36"-114" MEDIUM LOAMY SAND W/GRAVEL
NO WATER
NO REFUSAL
NO MOTTLING
PERC. RATE < 2 mpi
TESTPIT #2 ELEV=148.7 (JAN 28, 2019)
0-15" TOP SOIL
15"-30" SUBSOIL
30"-44" SANDY LOAM W/GRAVEL
WATER @ 28"
NO REFUSAL

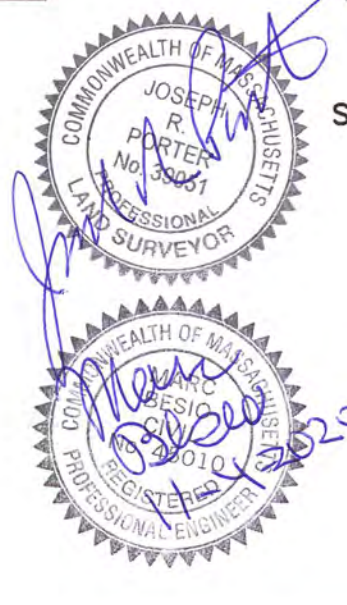


- NOTES:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THIS PLAN. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BEFORE PROCEEDING WITH THE WORK.
 2. THE LOCATION OF ALL UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASE ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC. AND GOVERNMENT AGENCIES.



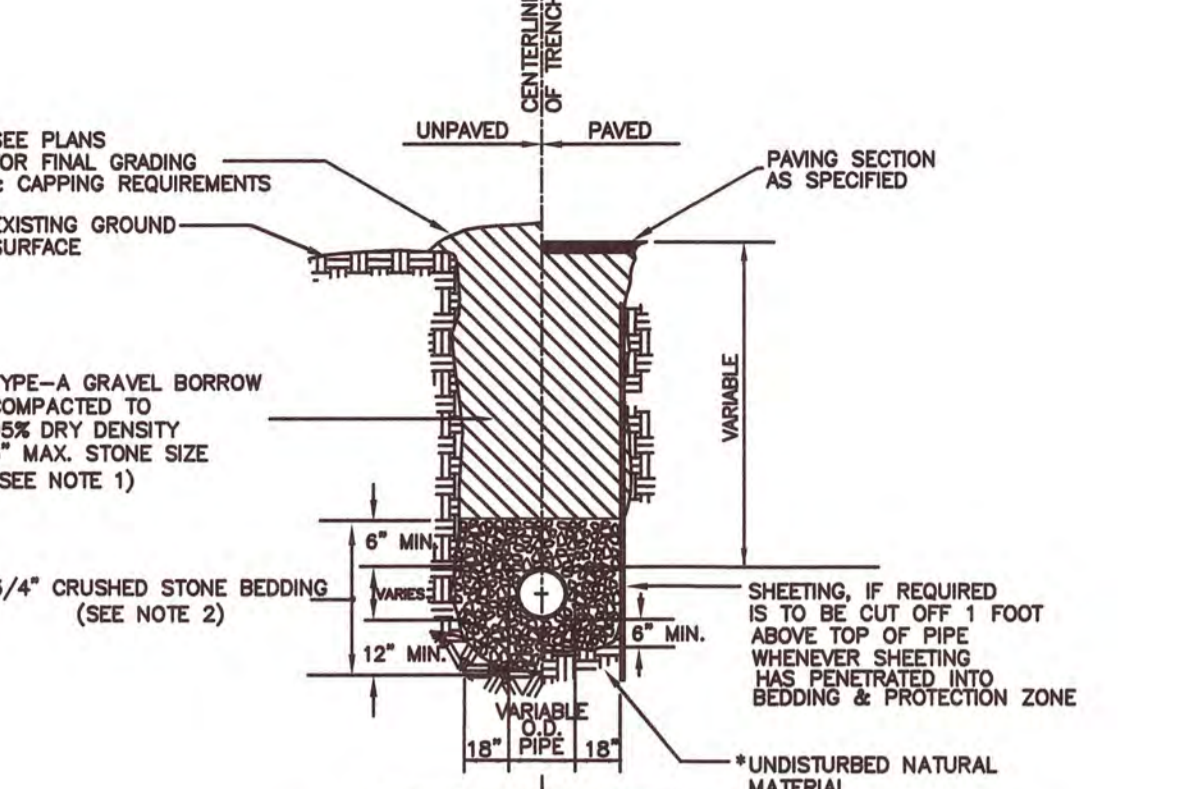
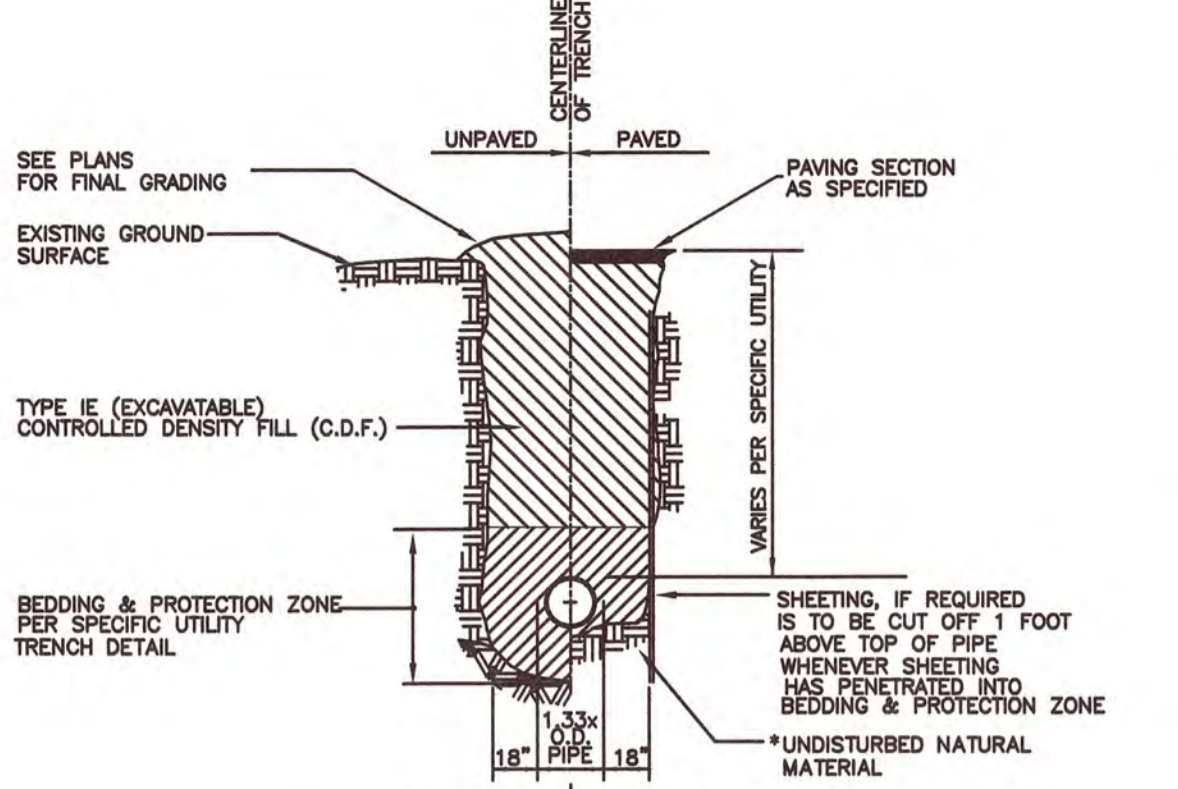
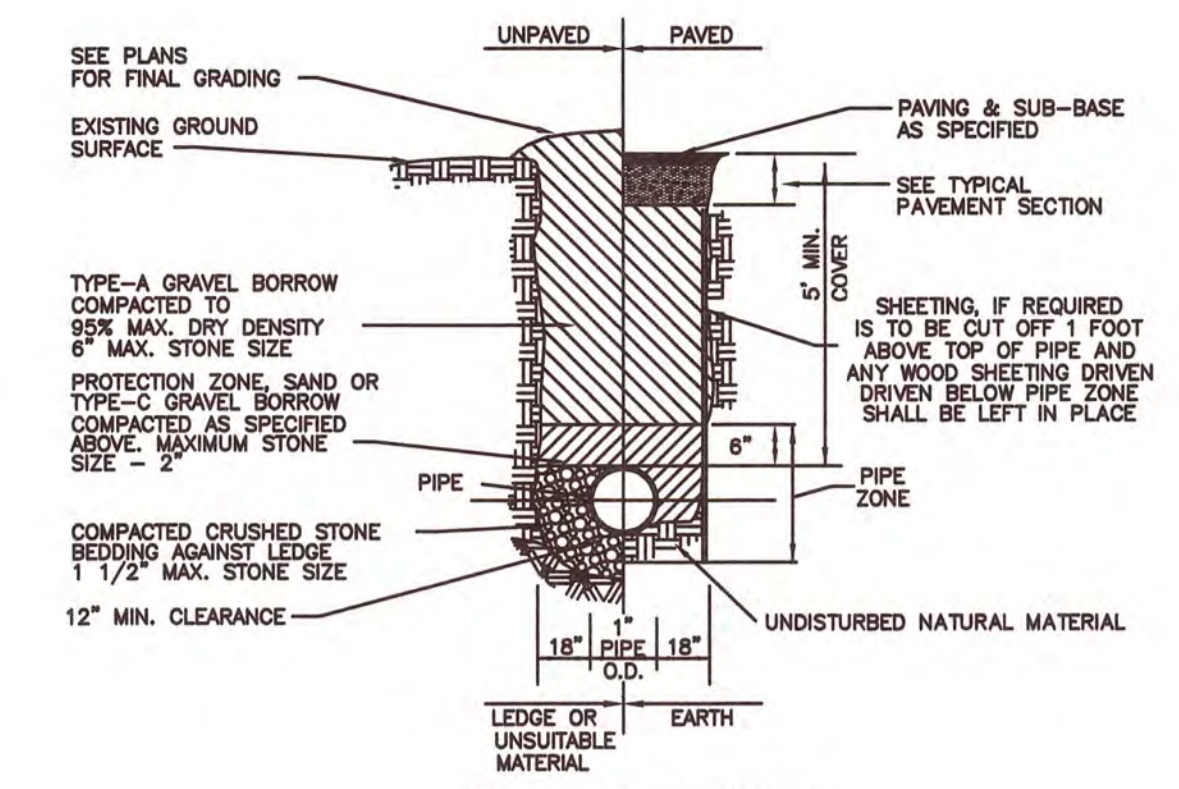
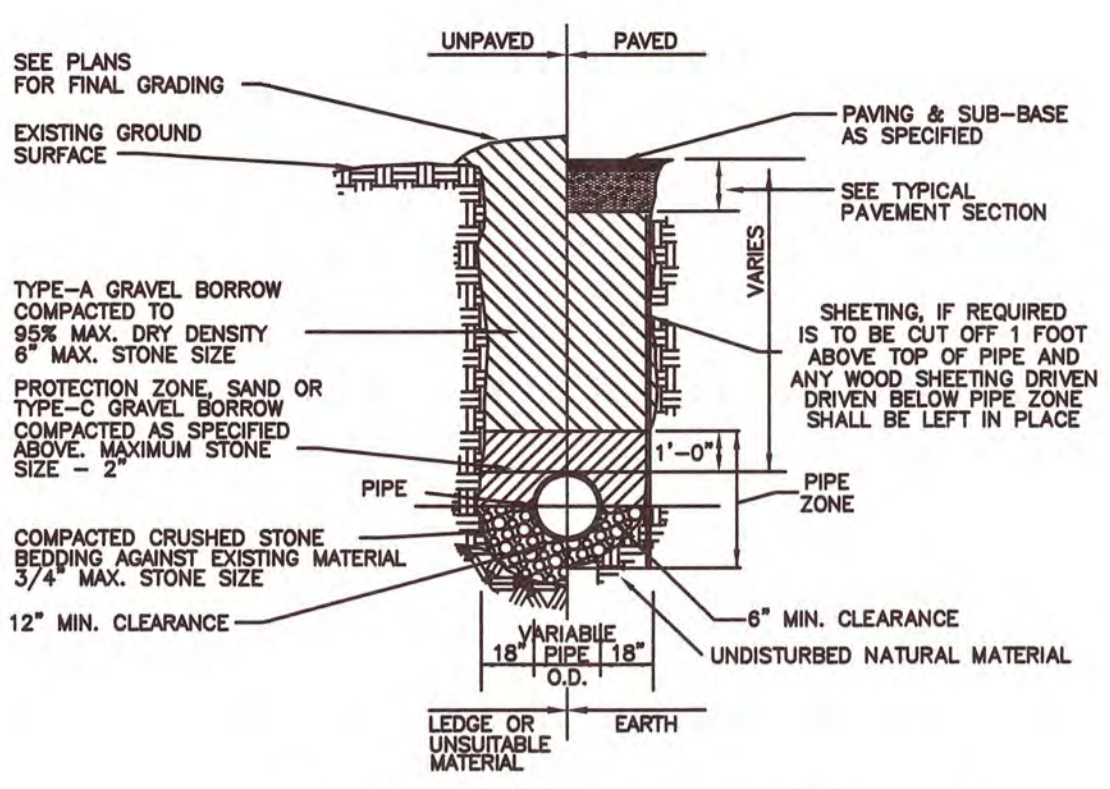
GRADING, DRAINAGE & UTILITY PLAN
NEWTON, MASSACHUSETTS
SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET
SCALE: 1in.=10ft. DATE: NOVEMBER 4, 2020

PROJECT: 217115
VTP ASSOCIATES INC.
LAND SURVEYORS - CIVIL ENGINEERS, 132 ADAMS STREET 2ND FLOOR SUITE 3 NEWTON, MA 02458 (617) 332-8271
SHEET 2 OF 4



GENERAL & UTILITIES NOTES:

- ALL NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEO TAPPED 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 WITNESSED 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.
- THE SEWER SERVICES AND WATER SERVICES NEED TO BE COMPLETELY REMOVED FROM THE MAINS TO THE EXISTING DWELLING AND PROPERLY BACK-FILLED. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO HAVE THIS ABANDONMENT INSPECTED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION, FAILING TO HAVE THESE INSPECTIONS MAY RESULT IN THE DELAY OR DENIAL OF ISSUING NEW UTILITY CONNECTION PERMITS.
- AS OF MARCH 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEERING DIVISION AND SCHEDULING AN APPOINTMENT 48 HOURS PRIOR TO THE DATE WHEN THE UTILITIES WILL BE MADE AVAILABLE FOR AN INSPECTION OF WATER SERVICES, SEWER SERVICES, AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IS QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW; BACKFILLING SHALL ONLY TAKE PLACE WHEN THE CITY'S INSPECTOR HAS GIVEN THEIR APPROVAL.
- PRIOR TO OCCUPANCY PERMIT ISSUED, AN AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES ANY EASEMENTS AND FINAL GRADING IMPROVEMENTS AND LIMITS OF RESTORATION WORK. THE PLAN SHALL ALSO INCLUDE PROFILES OF THE VARIOUS NEW UTILITIES, INDICATING RIM & INVERT ELEVATIONS, SLOPES OF PIPES, PIPE MATERIAL, AND SWING TIES FROM PERMANENT BUILDING CORNERS.
- 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.
- ALL SITE WORK INCLUDING TRENCH RESTORATION MUST BE COMPLETED BEFORE A CERTIFICATION OF OCCUPANCY IS ISSUED.
- THE APPLICANT WILL HAVE TO APPLY FOR STREET OPENING, UTILITY CONNECTION AND TRENCH PERMITS AS WELL AS AN INSTALL CURB & SIDEWALK PERMIT WITH THE DPW PRIOR TO START OF WORK.
- WITH THE EXCEPTION OF GAS SERVICES, ALL UTILITY TRENCHES WITHIN THE 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.
- APPROVAL OF THIS PLAN BY THE 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 REPRESENTATIONS AND ASSUMES NO RESPONSIBILITY FOR THE DESIGN(S) IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR THE FUNCTIONALITY 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.
- ALL SILTATION CONTROL SYSTEMS SHALL BE INSTALLED AND INSPECTED BY THE CONSERVATION COMMISSION AGENT(S) PRIOR TO ANY CONSTRUCTION.



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

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

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

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

TYPICAL P.V.C. DRAIN TRENCH DETAIL

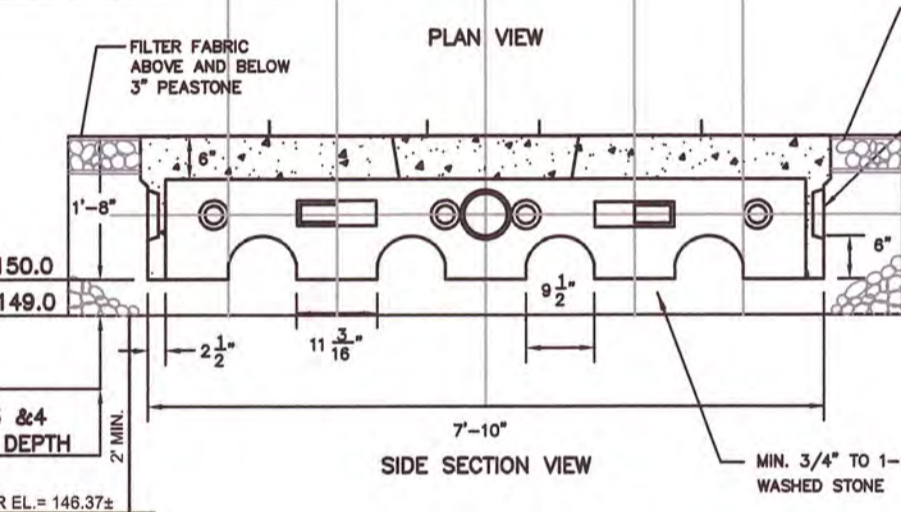
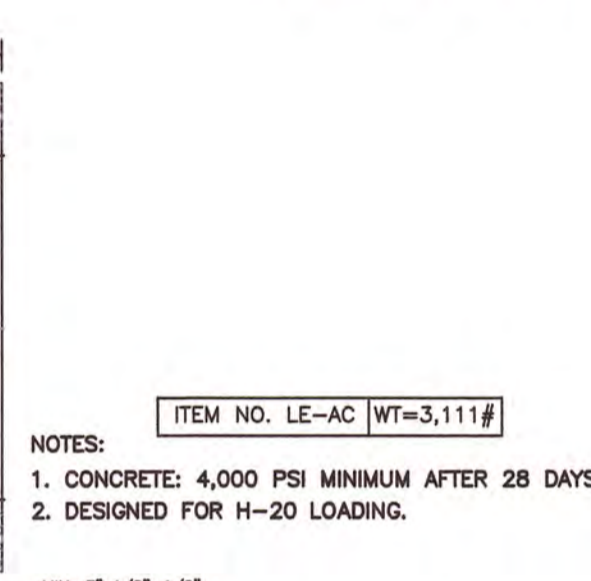
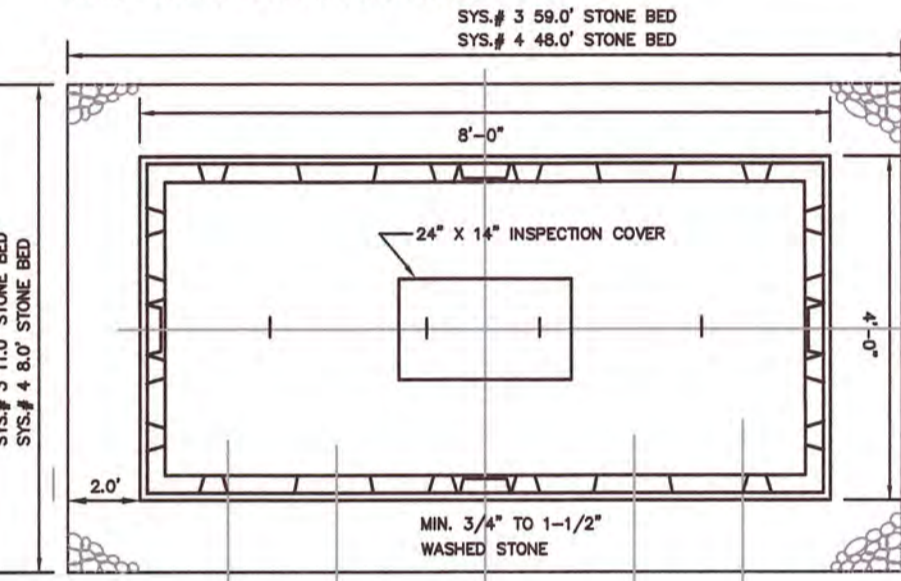
- GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

TYPICAL C.D.F. TRENCH DETAIL

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

GRAVITY SEWER TRENCH DETAIL

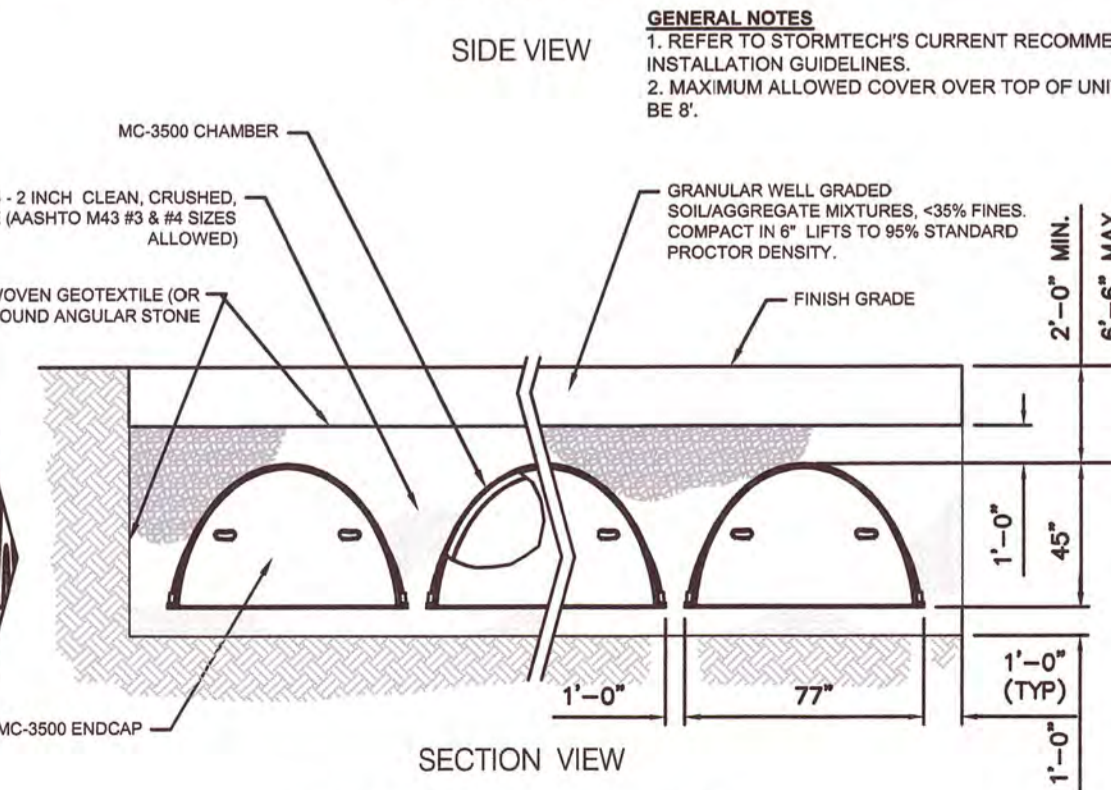
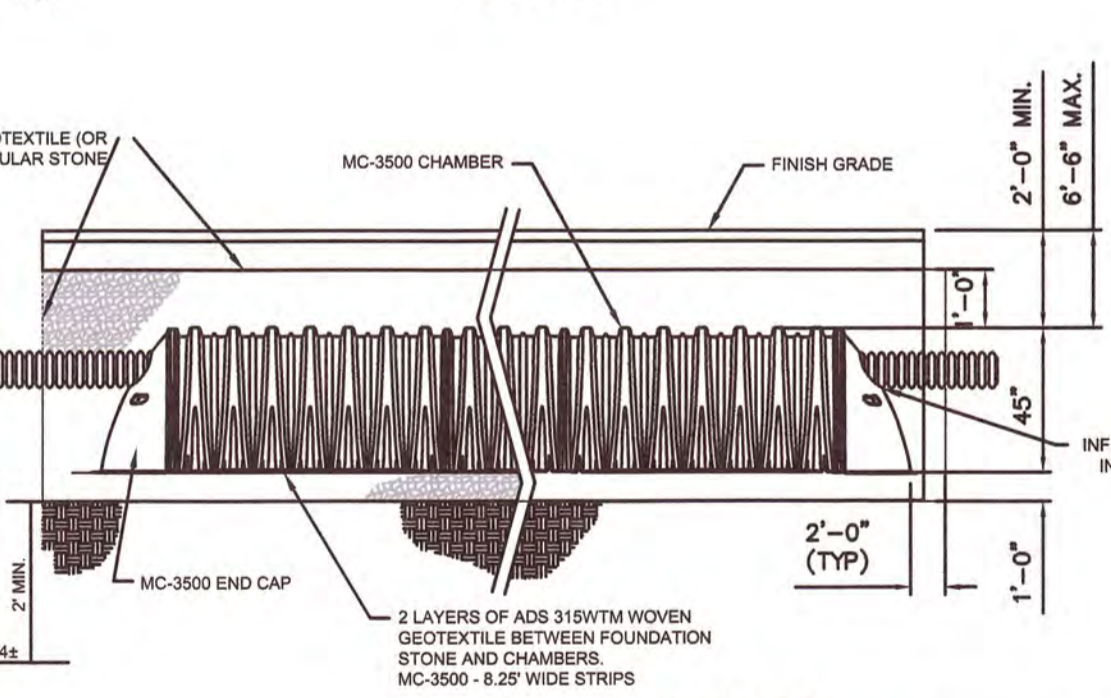
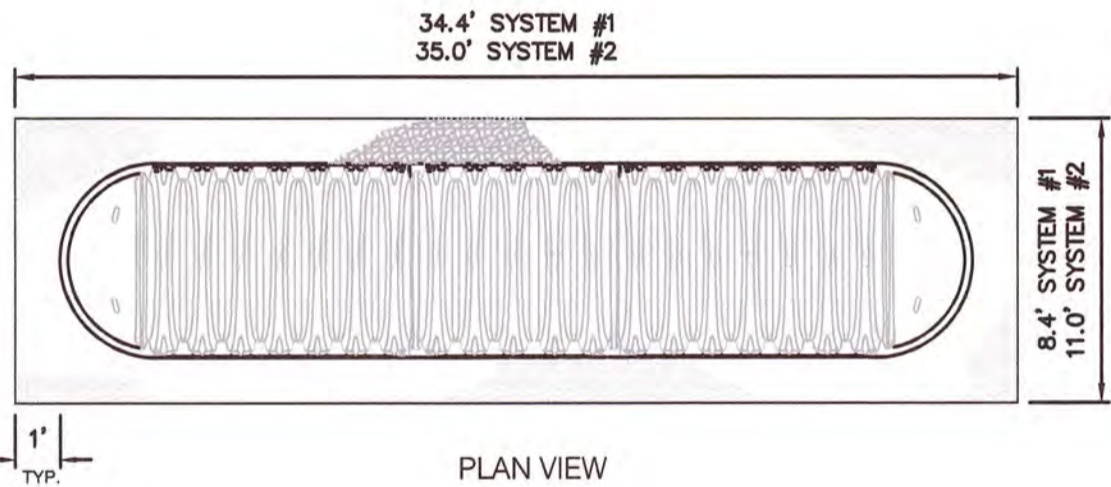
- GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1



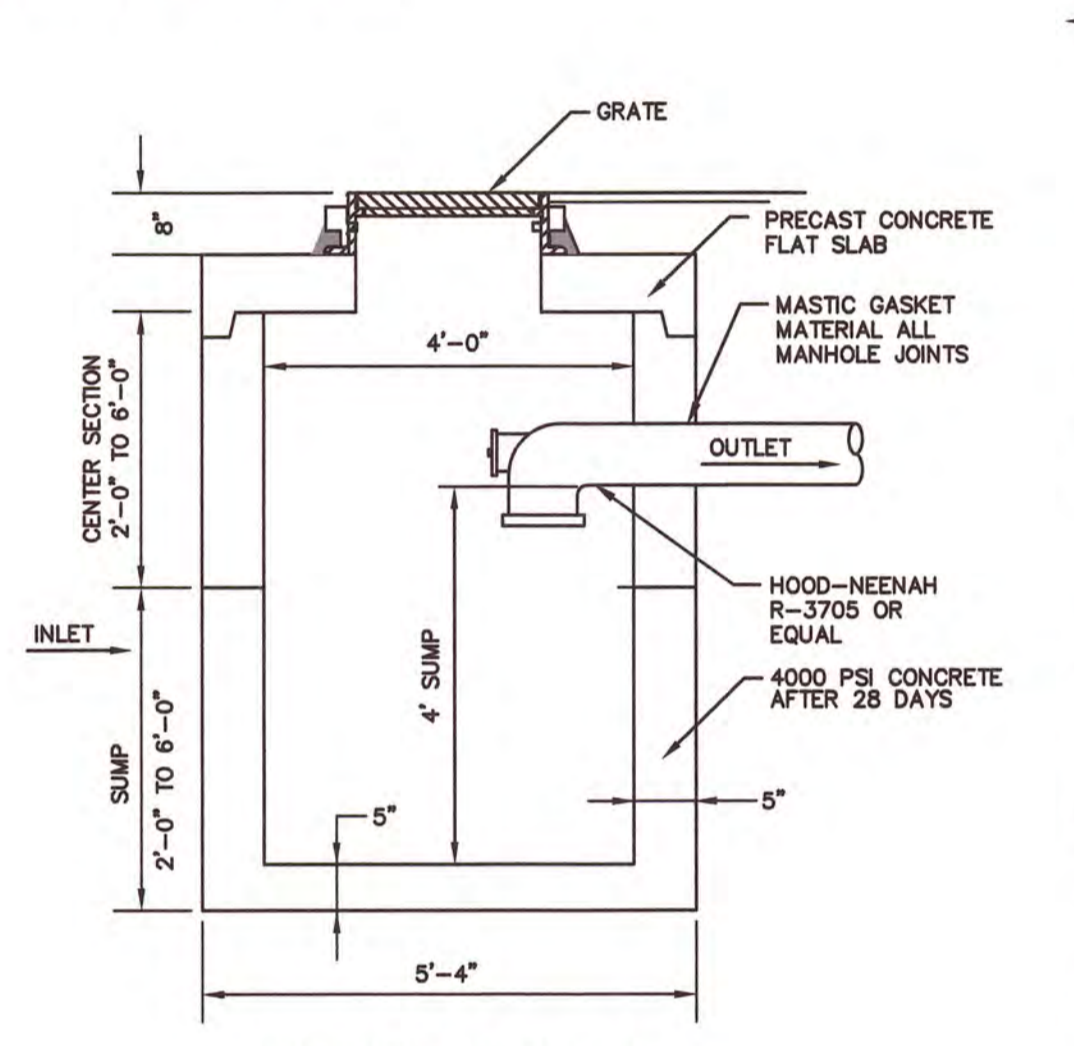
T.O.S. SYS.#3 = 149.4 SYS.#4 EL = 150.0
B.O.S. SYS.#3 = 148.4 SYS.#4 EL = 149.0

INF. SYSTEM #3 & 4
STONE BASE 12\"/>

GROUNDWATER EL = 148.971

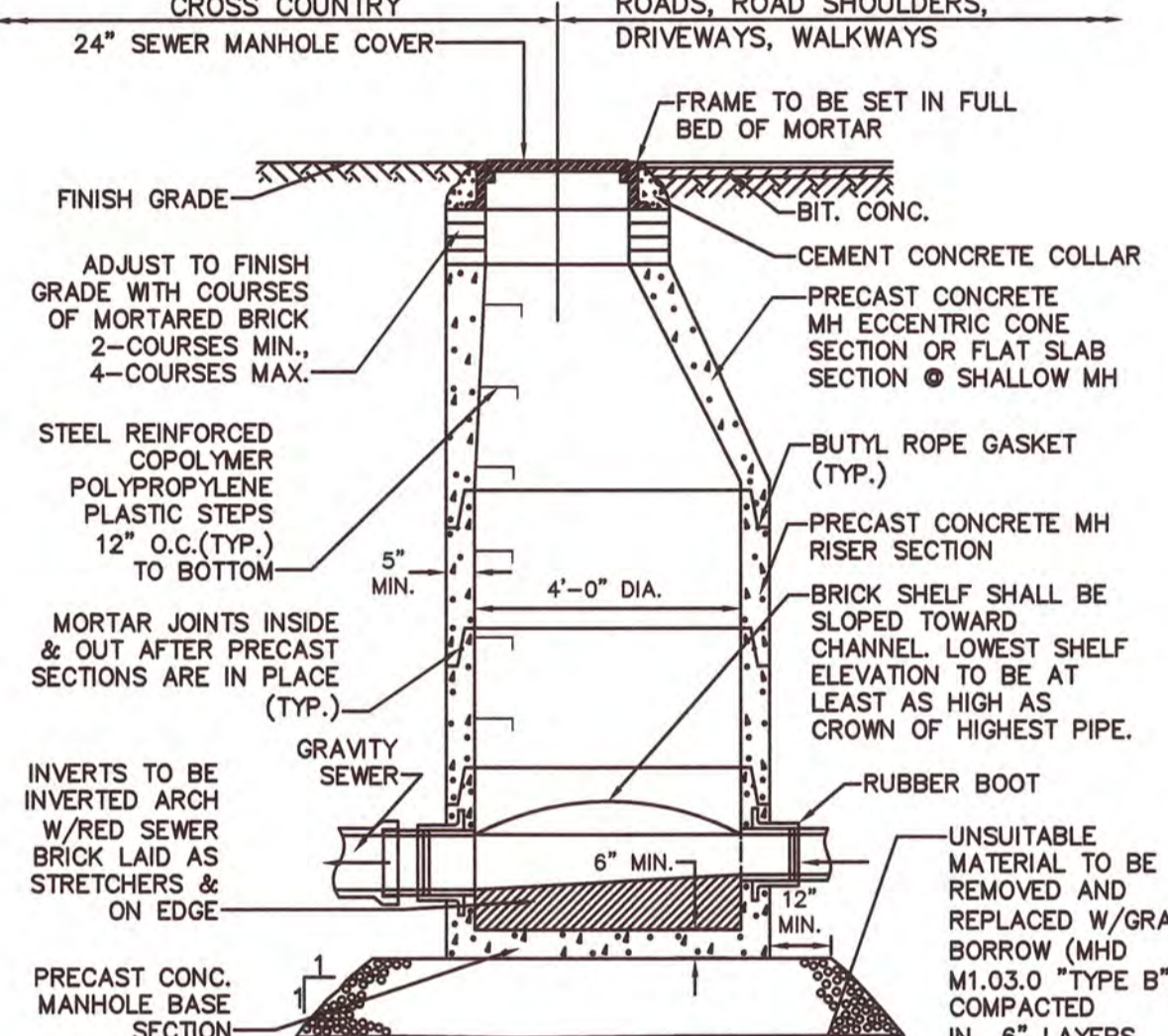


INFILTRATION SYSTEM #1 & #2
STORMTECH MC-3500 CHAMBER
SCALE: NOT TO SCALE



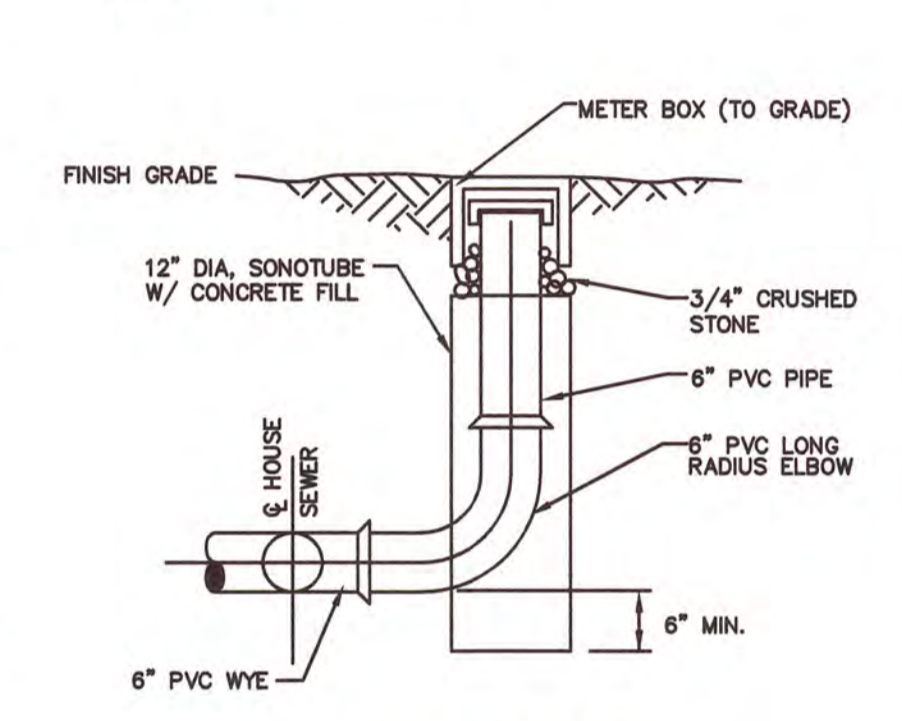
PRECAST CONCRETE CATCH BASIN MANHOLE #1 WITH OIL TRAP OUTLET

NOT TO SCALE



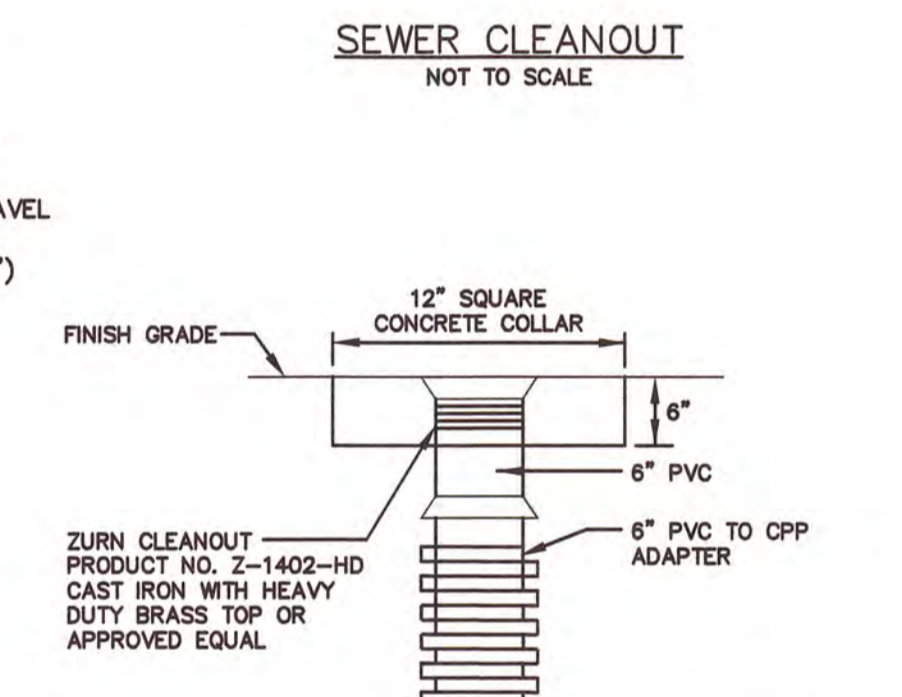
TYPICAL SEWER MANHOLE DETAIL

NOT TO SCALE



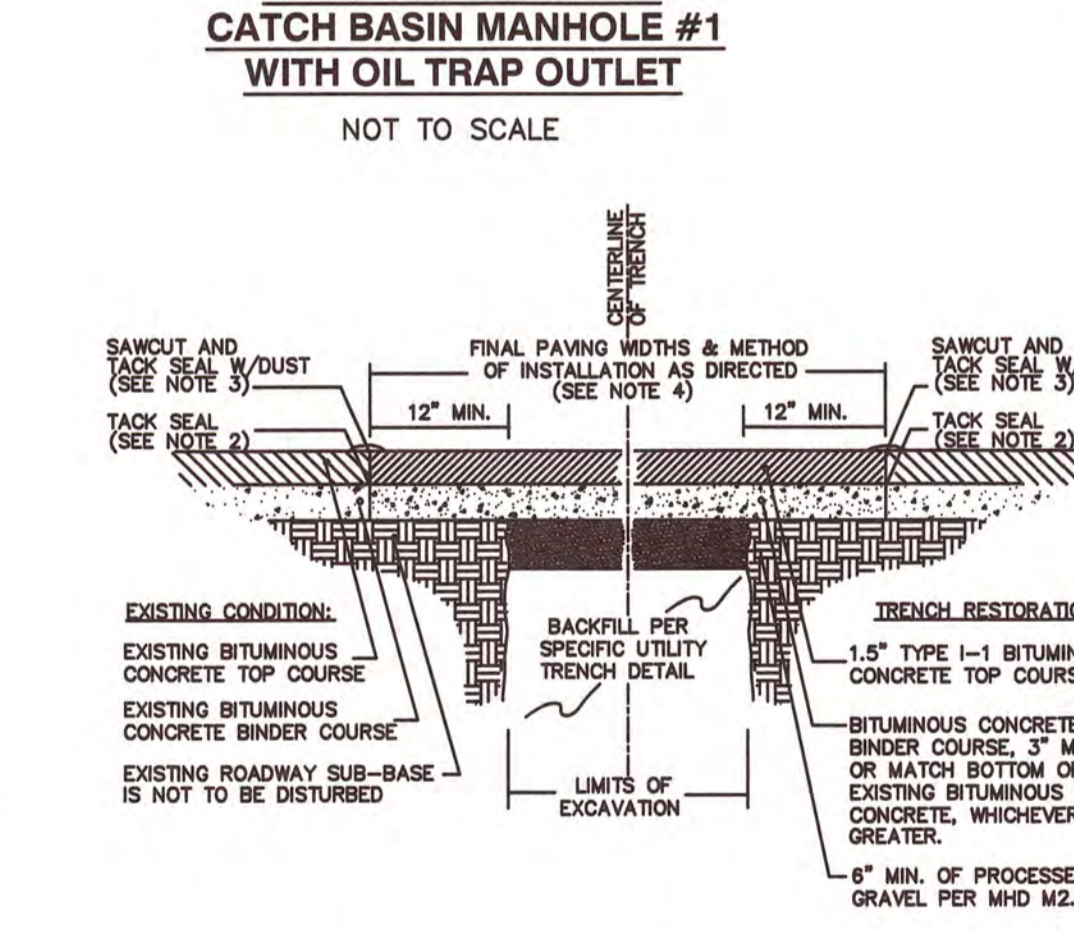
SEWER CLEANOUT

NOT TO SCALE



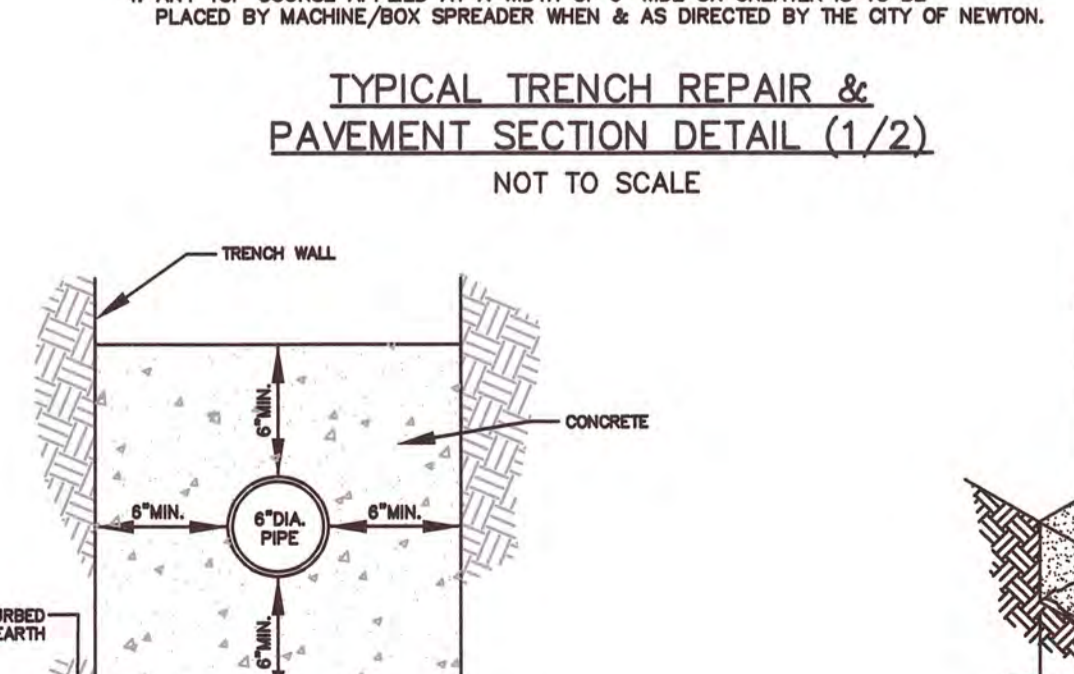
DRAIN CLEANOUT

NOT TO SCALE



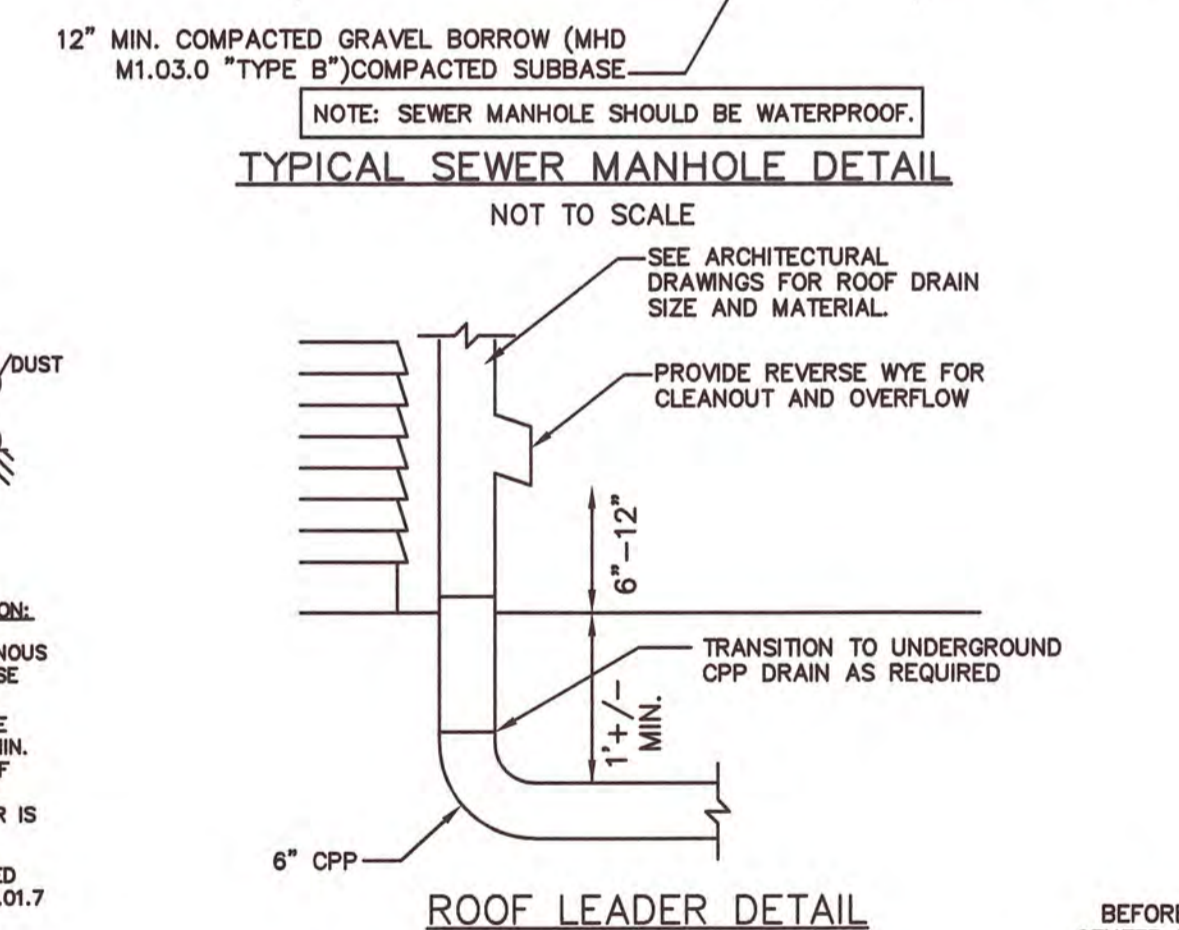
TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL (1/2)

NOT TO SCALE



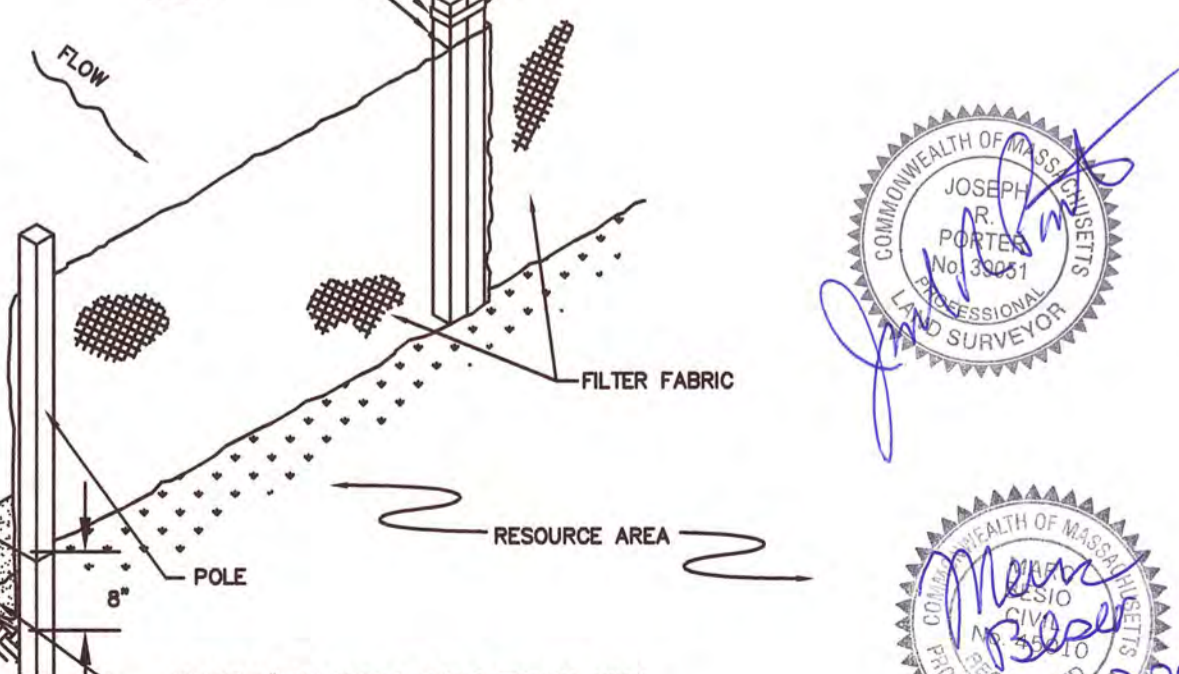
SEWER ENCASEMENT DETAIL

NOT TO SCALE



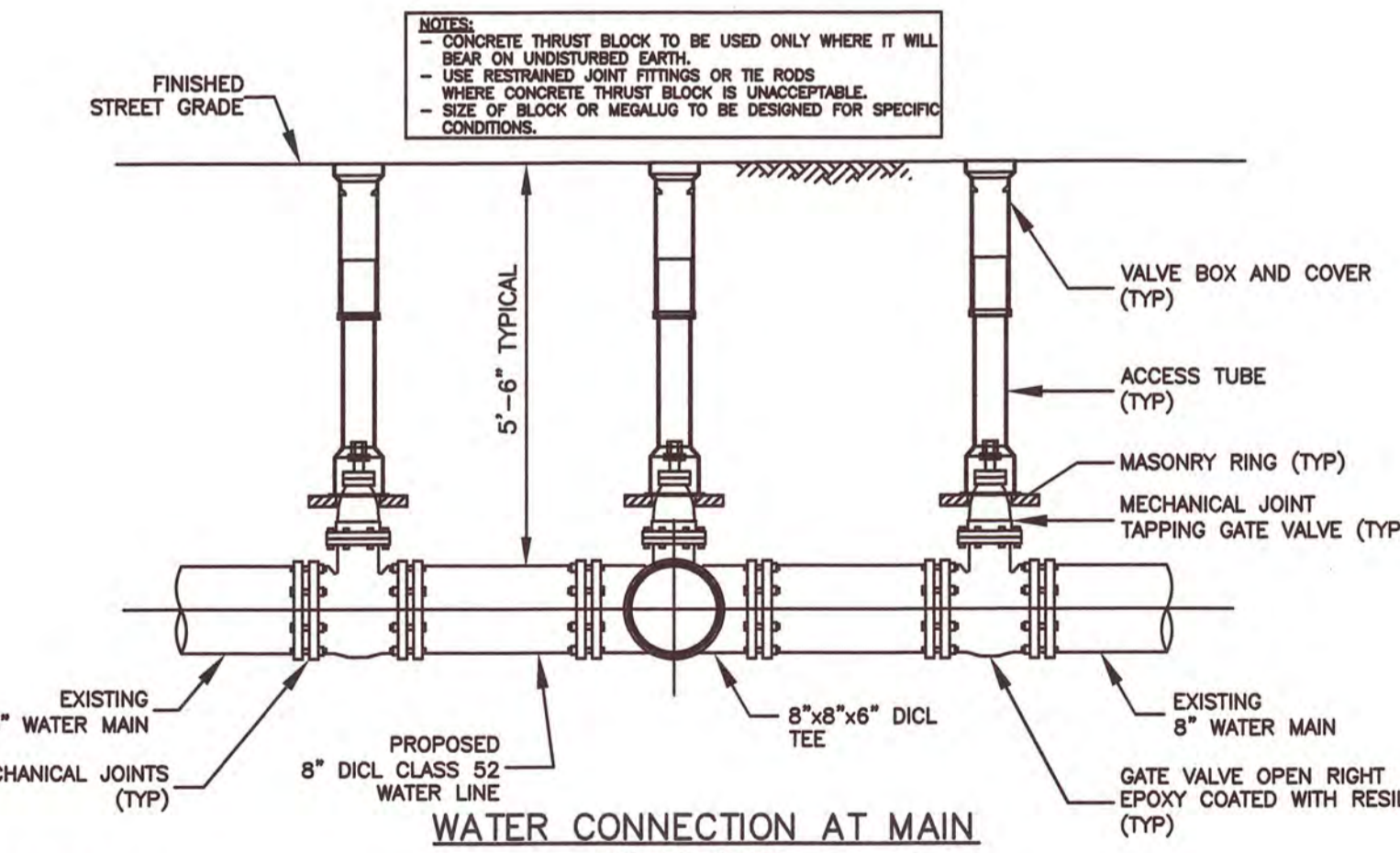
ROOF LEADER DETAIL

NOT TO SCALE



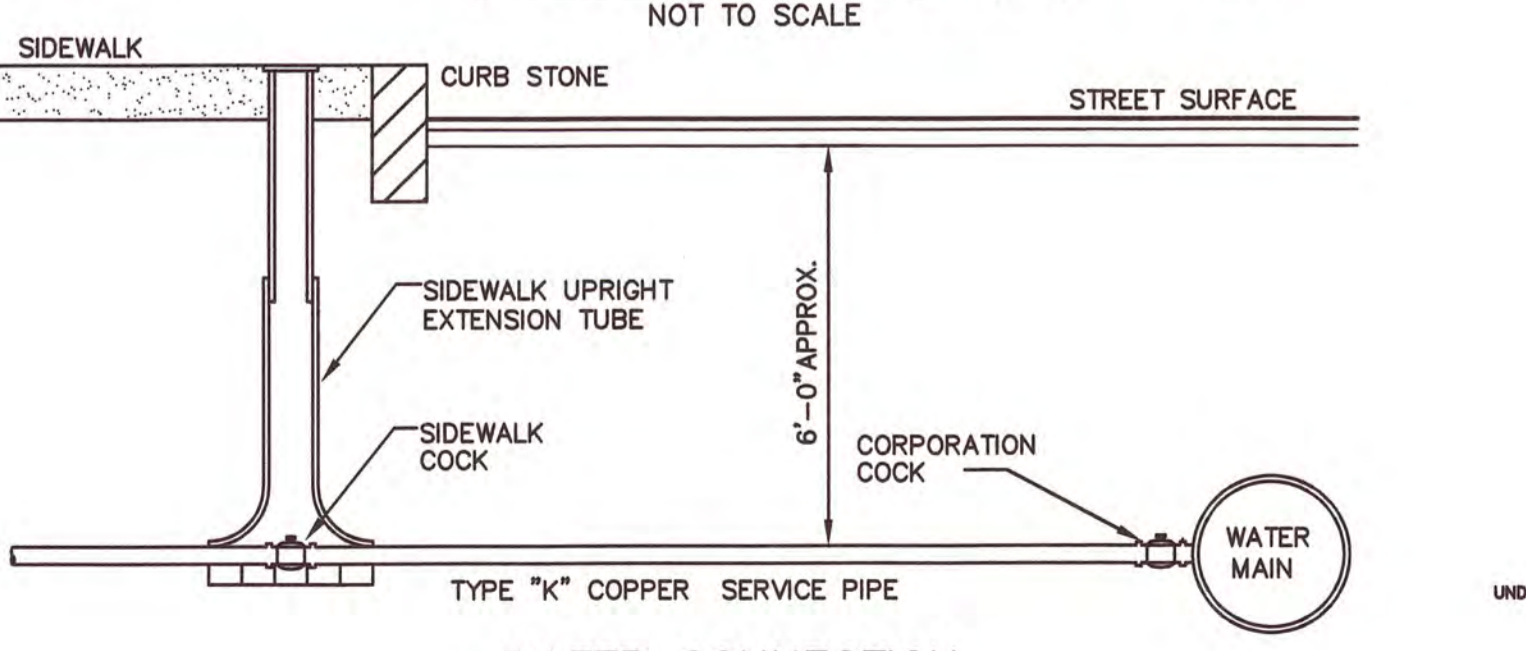
SILT FENCE

NOT TO SCALE



WATER CONNECTION AT MAIN

NOT TO SCALE



WATER CONNECTION 1\"/>

NOT TO SCALE

DIG SAFE

EXCAVATORS BEFORE YOU DIG CONTACT THE DIG SAFE CENTER TO PREVENT DAMAGE TO TELEPHONE, GAS OR ELECTRIC UNDERGROUND FACILITIES OF MEMBER UTILITIES. CALL TOLL FREE 1-888-322-4844. MASSACHUSETTS STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE YOU START DIGGING OPERATIONS. IN AN EMERGENCY, CALL IMMEDIATELY.

DETAILS-1
NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET

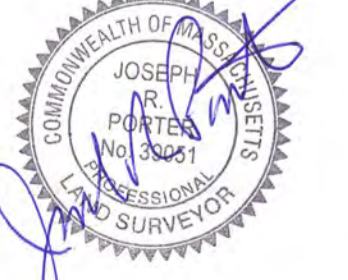
SCALE: AS-SHOWN DATE: NOVEMBER 4, 2020

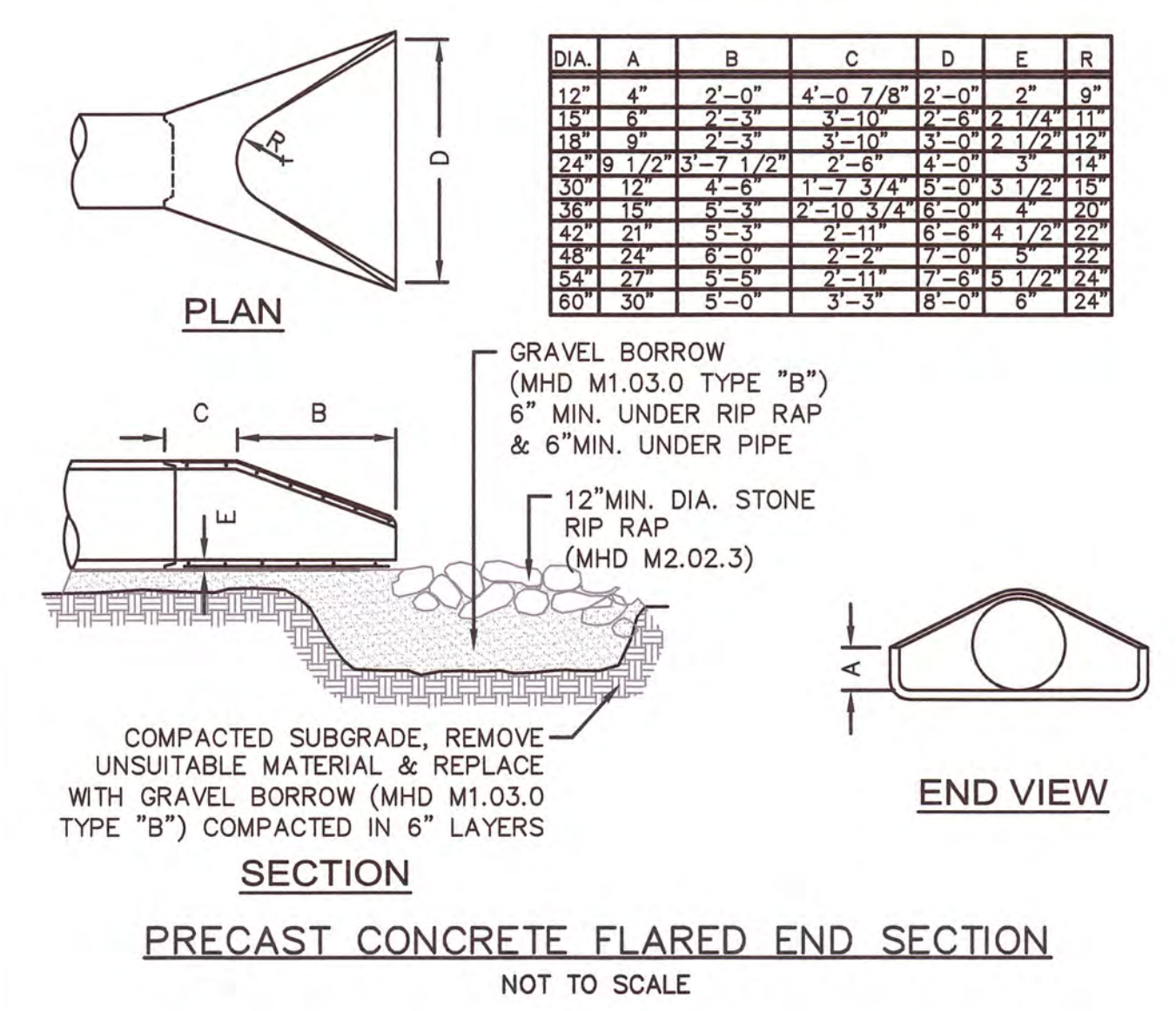
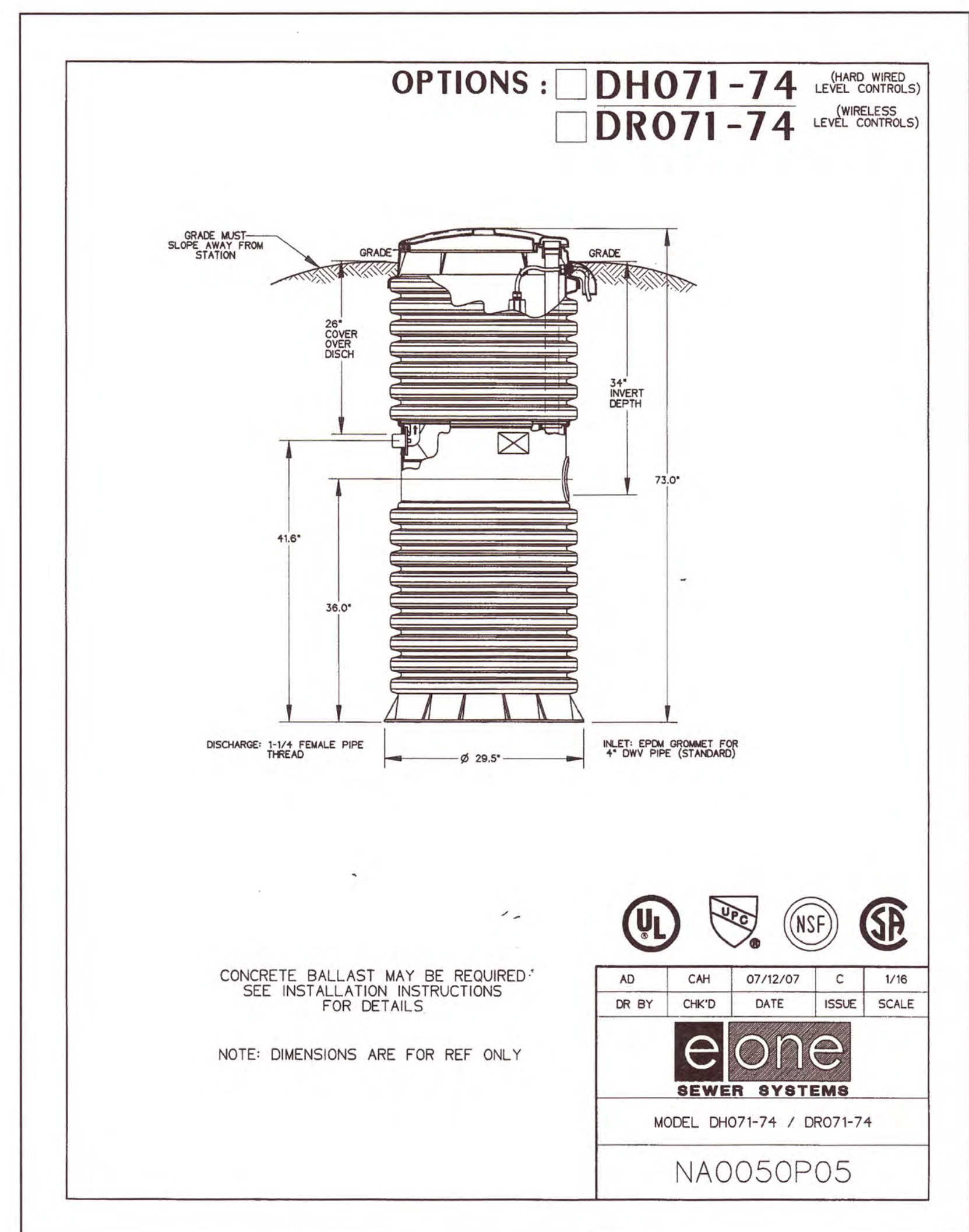
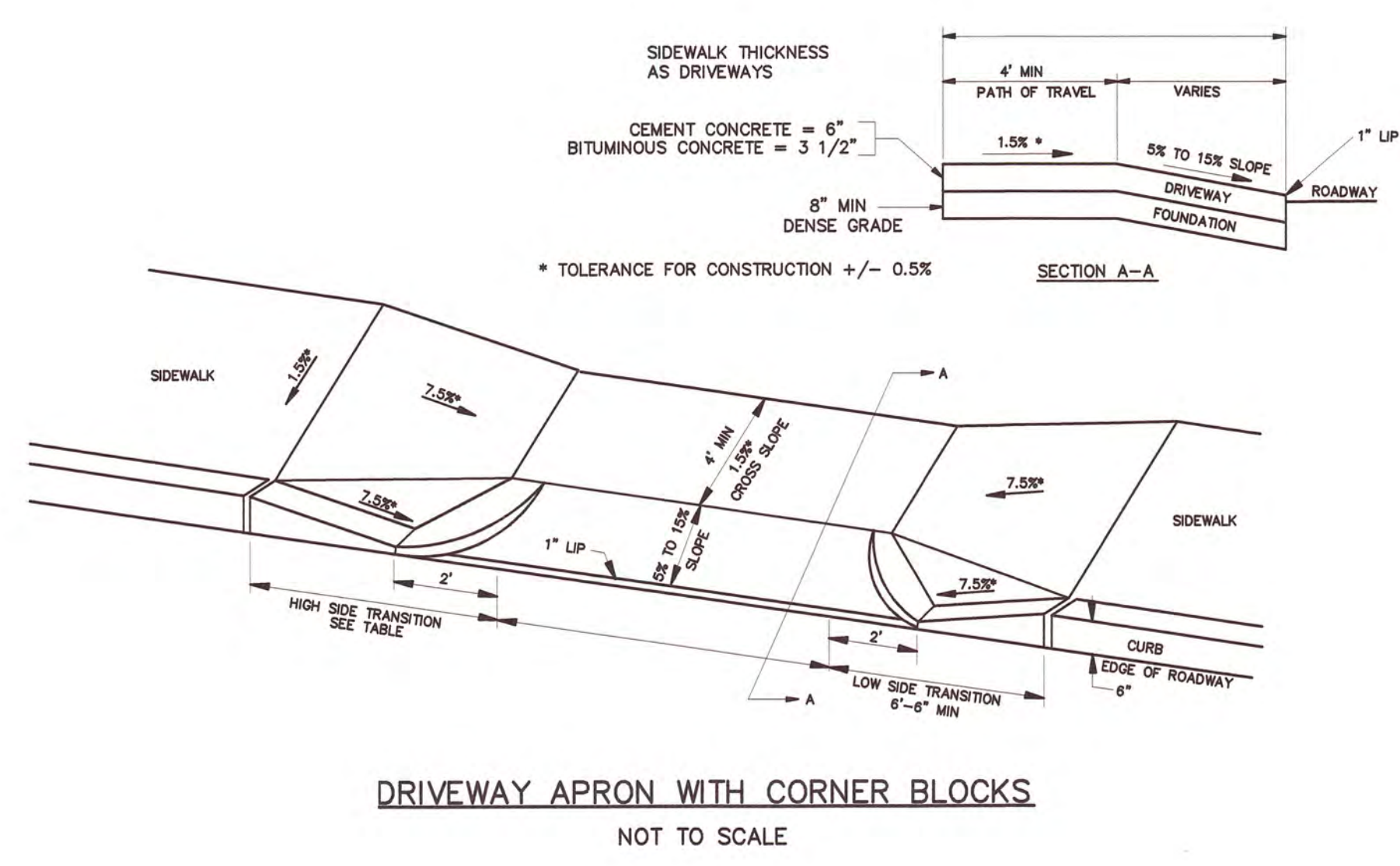
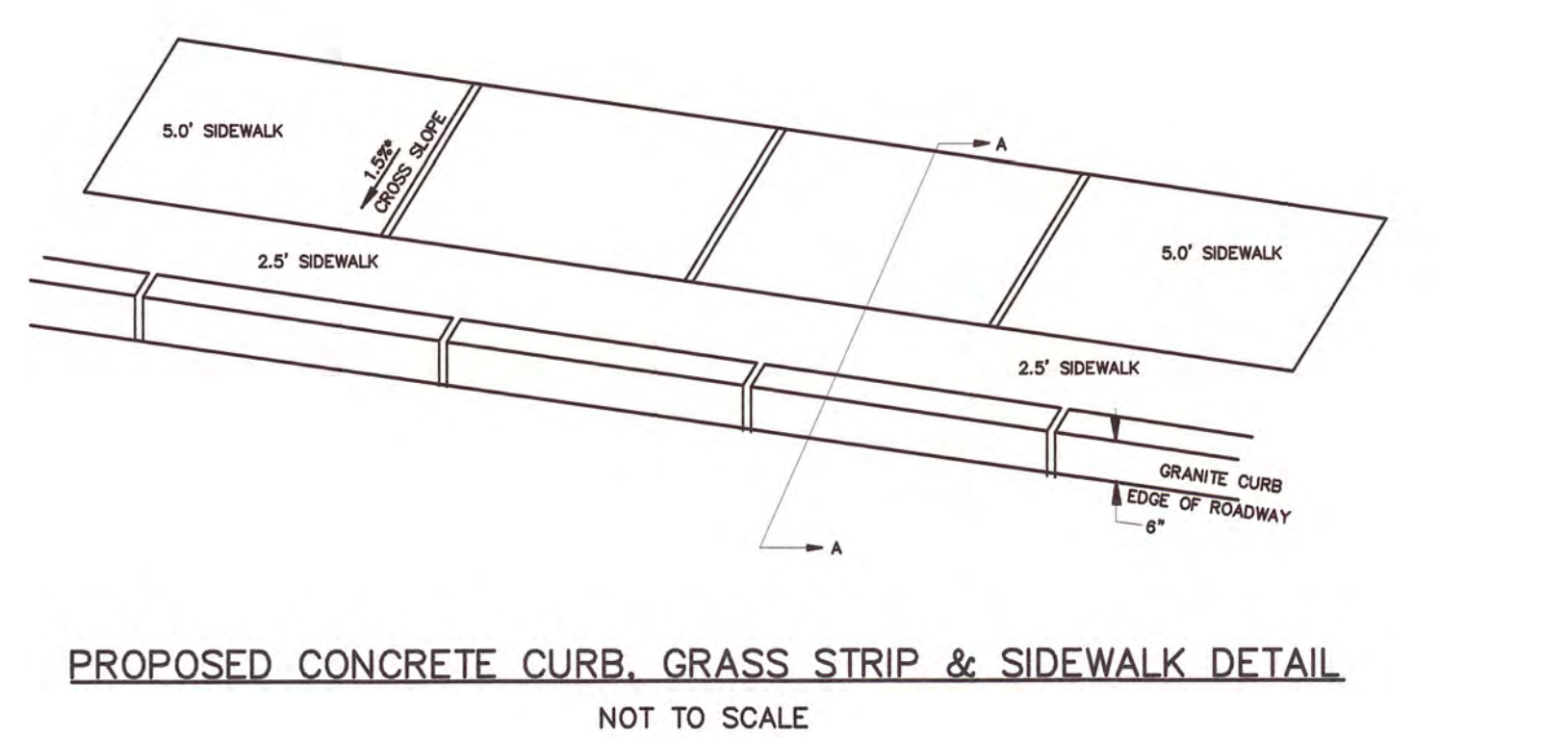
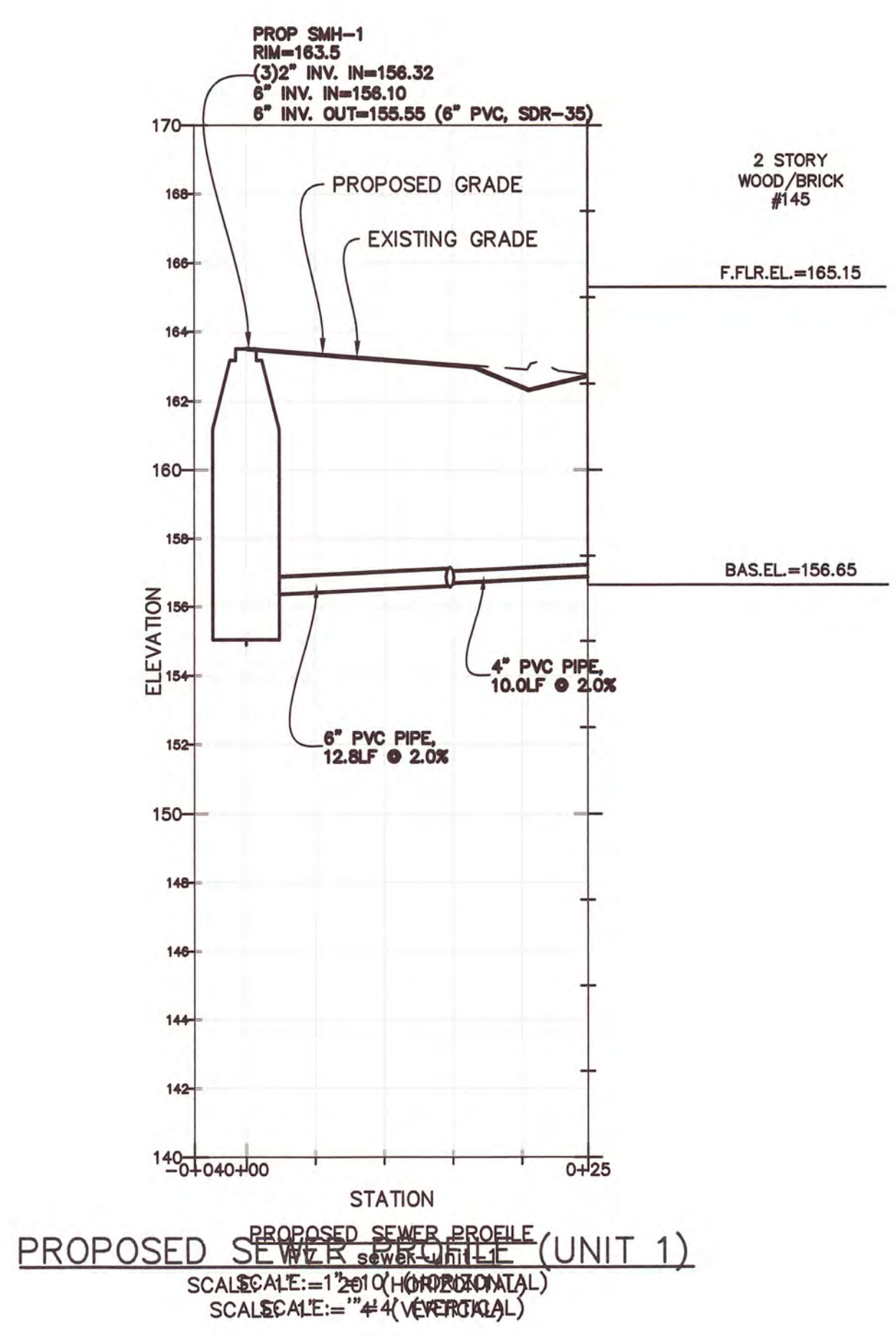
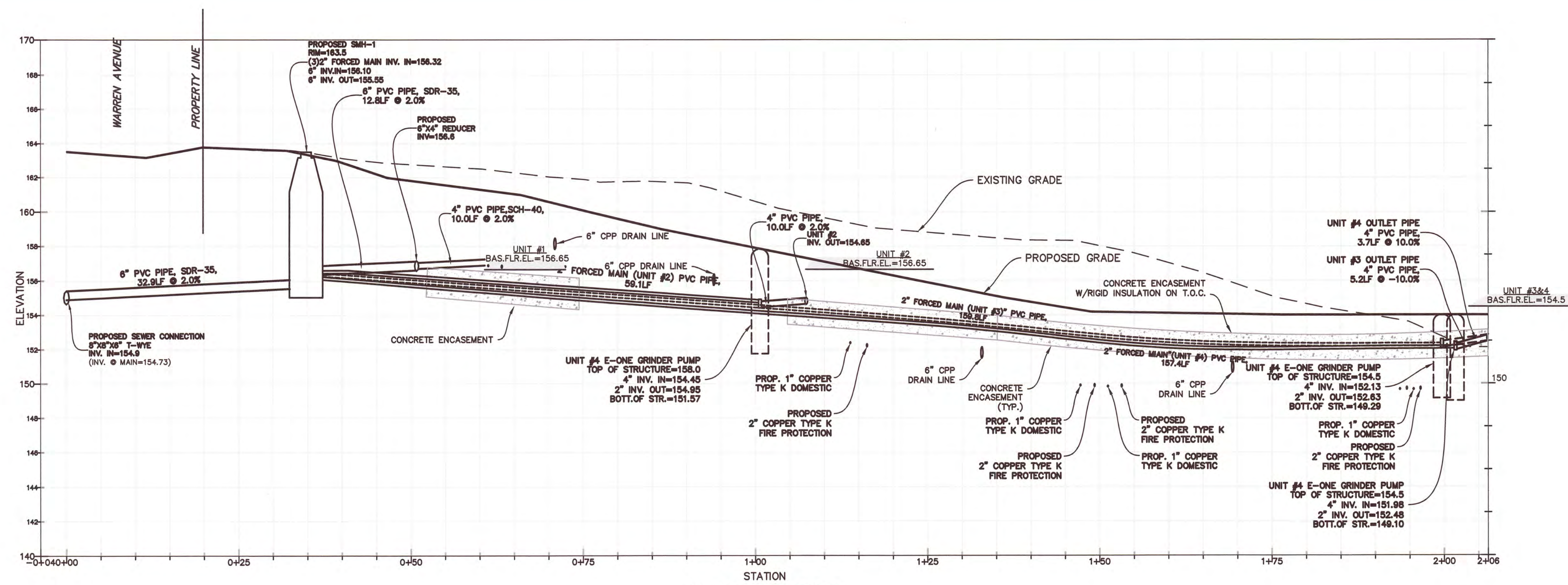
PROJECT: 217115

VTP ASSOCIATES INC.

LAND SURVEYORS - CIVIL ENGINEERS. 132 ADAMS STREET 2ND FLOOR SUITE 3 NEWTON, MA 02458 (617) 332-8271

SHEET 3 OF 4





DETAIL-2
 NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET
 SCALE: AS-SHOWN DATE: NOVEMBER 4, 2020

PROJECT: 217115
VTP ASSOCIATES
 INC.

LAND SURVEYORS - CIVIL ENGINEERS, 132 ADAMS STREET 2ND FLOOR SUITE 3 NEWTON, MA 02458 (617) 332-8271

SHEET 4 OF 4