

Address: #400 Langley Road

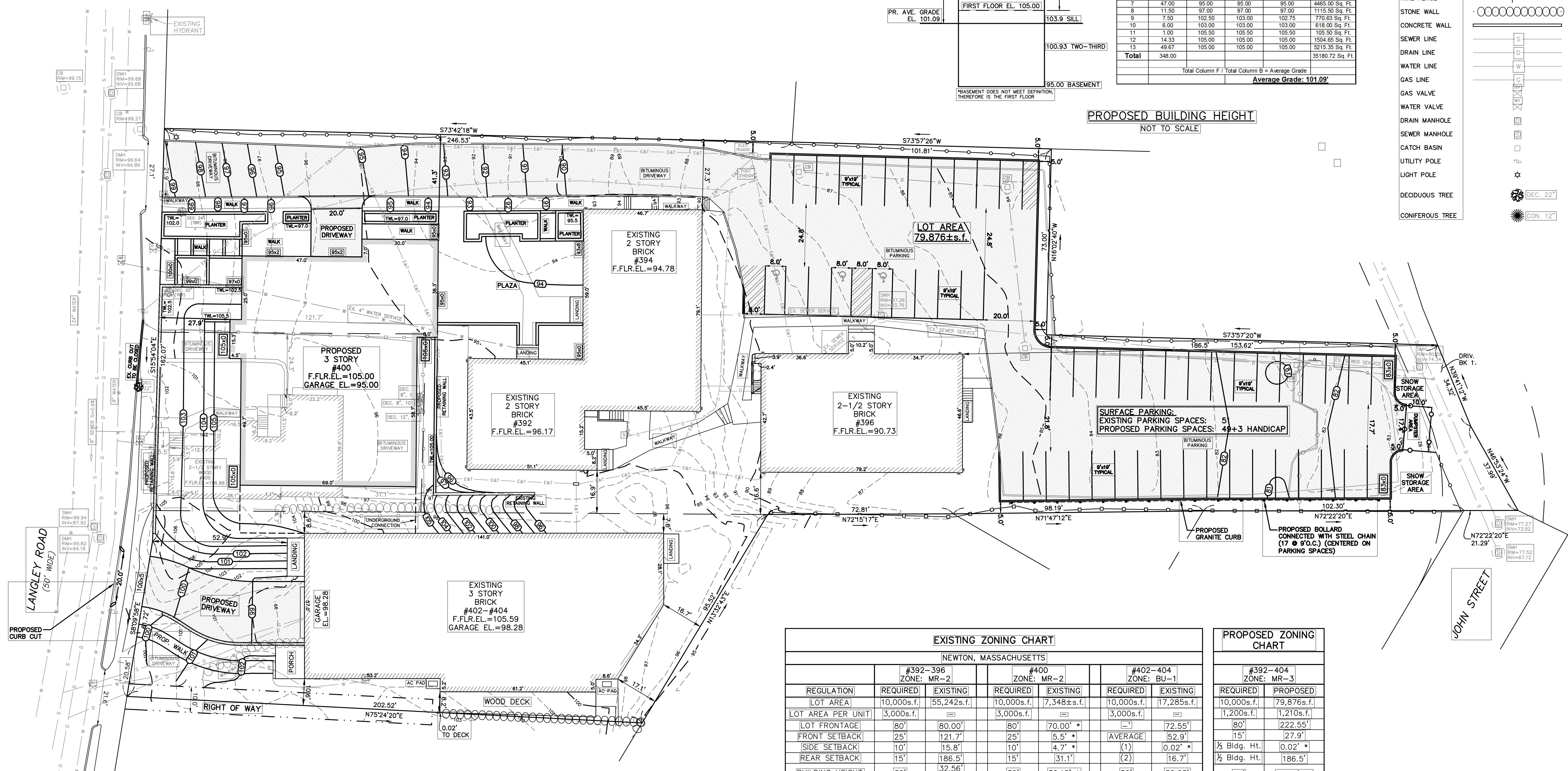
Length Weighted Mean Proposed Conditions Average Grade Calculation					
Segment	Length of Segment in Feet	Height of High Point of Segment	Height of Low Point of Segment	E=(C+D)/2	F=BxE
1	69.00	103.00	104.70	103.85	7234.65 Sq. Ft.
2	58.70	105.00	105.00	105.00	6163.50 Sq. Ft.
3	8.00	105.00	105.00	105.00	840.00 Sq. Ft.
4	38.30	94.91	94.80	94.86	3632.95 Sq. Ft.
5	30.00	95.00	95.00	95.00	2850.00 Sq. Ft.
6	7.00	95.00	95.00	95.00	665.00 Sq. Ft.
7	47.00	95.00	95.00	95.00	4465.00 Sq. Ft.
8	11.50	97.00	97.00	97.00	1115.50 Sq. Ft.
9	7.50	102.50	103.00	102.75	770.63 Sq. Ft.
10	6.00	103.00	103.00	103.00	618.00 Sq. Ft.
11	1.00	105.50	105.50	105.50	105.50 Sq. Ft.
12	14.33	105.00	105.00	105.00	1504.65 Sq. Ft.
13	49.67	105.00	105.00	105.00	5215.35 Sq. Ft.
Total	348.00				35180.72 Sq. Ft.

Total Column F / Total Column B = Average Grade
Average Grade: 101.09'

LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	
CONTOUR	
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
WIRE FENCE	
STONE WALL	
CONCRETE WALL	
SEWER LINE	
DRAIN LINE	
WATER LINE	
GAS LINE	
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	
CONIFEROUS TREE	

PROPOSED BUILDING HEIGHT
NOT TO SCALE



EXISTING ZONING CHART						
NEWTON, MASSACHUSETTS						
	#392-396 ZONE: MR-2		#400 ZONE: MR-2		#402-404 ZONE: BU-1	
REGULATION	REQUIRED	EXISTING	REQUIRED	EXISTING	REQUIRED	EXISTING
LOT AREA	10,000s.f.	55,242s.f.	10,000s.f.	7,348±s.f.	10,000s.f.	17,285s.f.
LOT AREA PER UNIT	3,000s.f.	=	3,000s.f.	=	3,000s.f.	=
LOT FRONTAGE	80'	80.00'	80'	70.00' *	-	72.55'
FRONT SETBACK	25'	121.7'	25'	5.5' *	AVERAGE	52.9'
SIDE SETBACK	10'	15.8'	10'	4.7' *	(1)	0.02' *
REAR SETBACK	15'	186.5'	15'	31.1'	(2)	16.7'
BUILDING HEIGHT	36'	32.56' 34.09'	36'	36.18' *	36'	32.23'
AVERAGE GRADE	=	93.03 87.93	=	100.49	=	99.93
LOT COVERAGE	30%	17.3%	30%	28.0%	=	47.7%
OPEN SPACE	50%	45.6% *	50%	34.3% *	-%	39.1%

PROPOSED ZONING CHART		
#392-404 ZONE: MR-3		
REQUIRED	PROPOSED	
LOT AREA	10,000s.f.	79,876s.f.
LOT AREA PER UNIT	1,200s.f.	1,210s.f.
LOT FRONTAGE	80'	222.55'
FRONT SETBACK	15'	27.9'
1/2 Bldg. Ht.		0.02' *
1/2 Bldg. Ht.		186.5'
BUILDING HEIGHT	36'	34.41' **
AVERAGE GRADE	=	101.09
LOT COVERAGE	45%	30.6%
OPEN SPACE	30%	39.1%

* DOES NOT MEET REQUIREMENTS
** NEW PROPOSED BUILDING HEIGHT

NOTES:
(1) 1/2 bldg ht or equal to abutting side yard setback; abutting residential district: greater of 1/2 bldg ht or 15'
(2) Abutting residential or Public Use district: Greater of 1/2 bldg ht or 15'

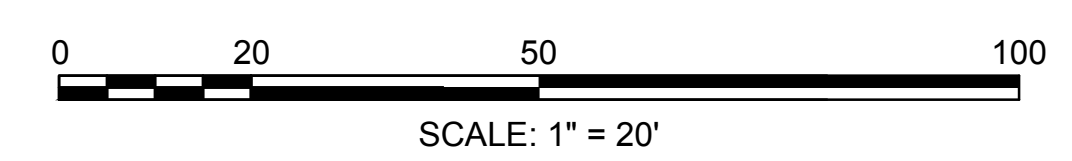
TOPOGRAPHIC SITE PLAN
NEWTON, MASSACHUSETTS
SHOWING PROPOSED CONDITIONS AT
#392-396, #400, #402-404 LANGLEY ROAD
SCALE: 1in.=20ft. DATE: OCTOBER 19, 2017

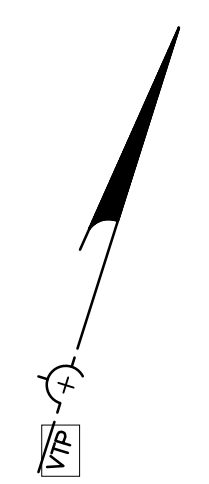
PROJECT: 217133

VTP
ASSOCIATES
INC.

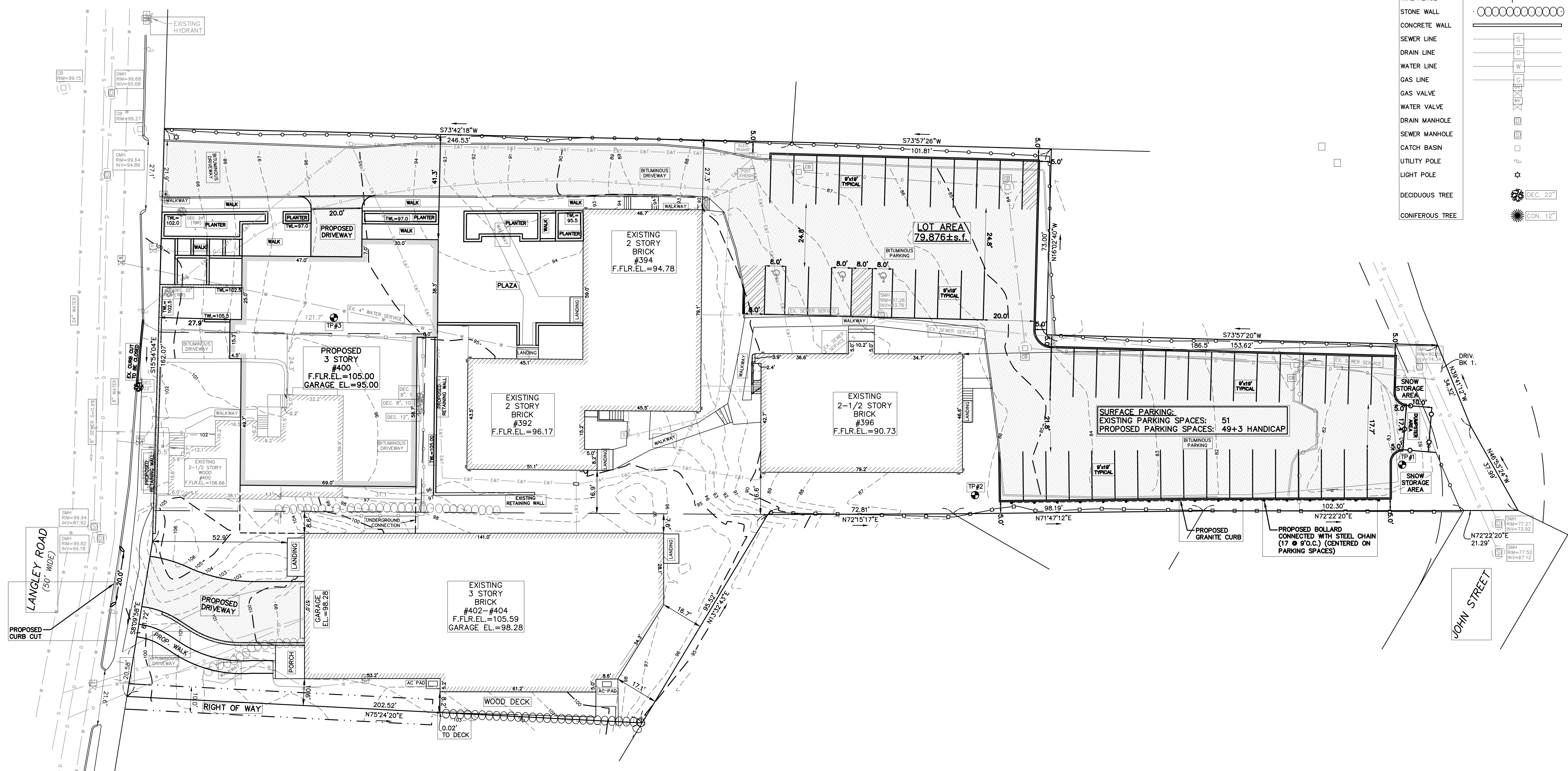
LAND SURVEYORS - CIVIL ENGINEERS 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271

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.

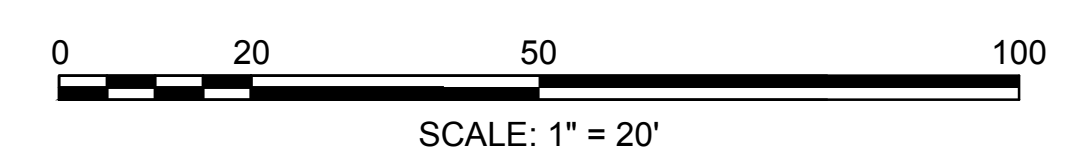




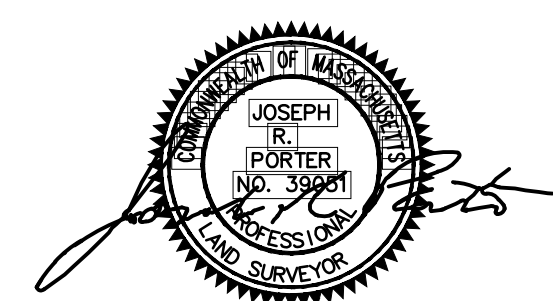
LEGEND	
BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	70'
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
WIRE FENCE	
STONE WALL	
CONCRETE WALL	
SEWER LINE	
DRAIN LINE	
WATER LINE	
GAS LINE	
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	DEC. 22'
CONIFEROUS TREE	CON. 12'



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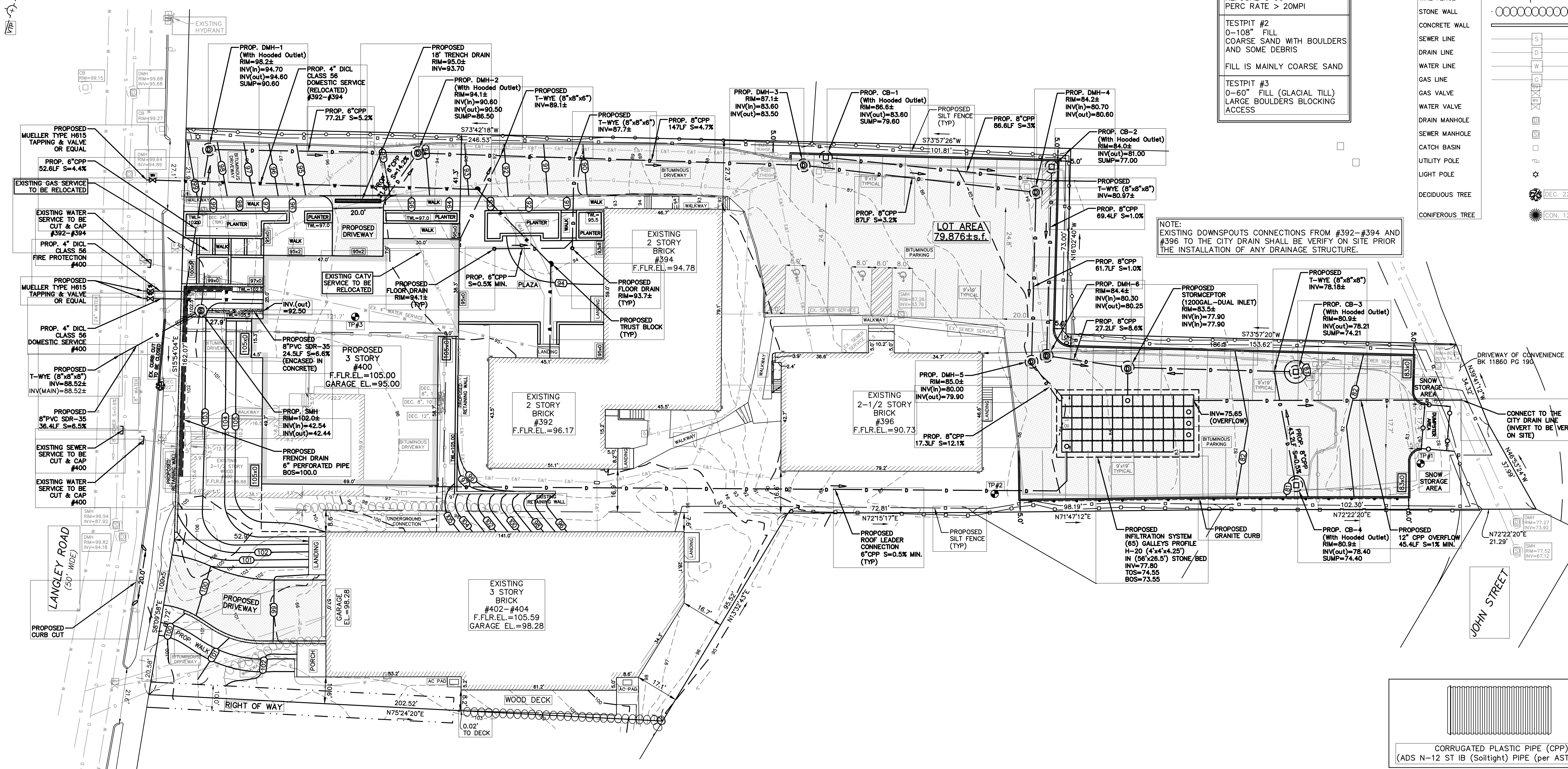
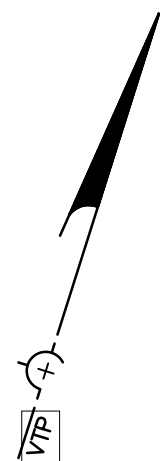


**PARKING PLAN
NEWTON, MASSACHUSETTS**
SHOWING PROPOSED CONDITIONS AT
#392-396, #400, #402-404 LANGLEY ROAD
SCALE: 1in.=20ft. DATE: SEPTEMBER 22, 2017
REVISED: OCTOBER 5, 2017; OCTOBER 19, 2017



PROJECT: 217133
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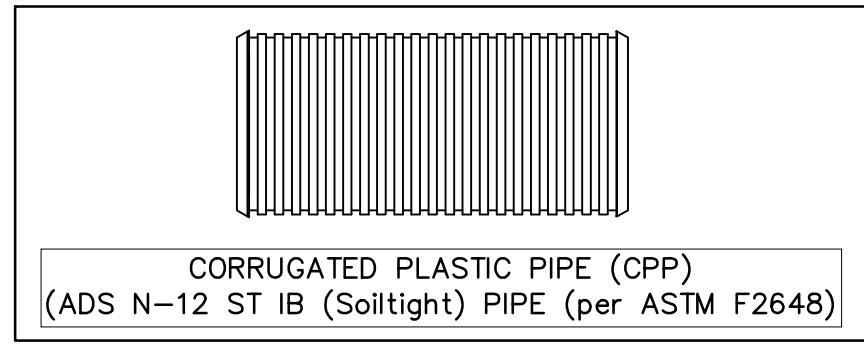
LAND SURVEYORS - CIVIL ENGINEERS, 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271



TESTPIT LOG	
TESTPIT #1	0-72" FILL
	72-80" SUBSOIL
	80-90" SILTY LOAM (GLACIAL TILL)
NO WATER REFUSAL @ 90" PERC RATE > 20MPI	
TESTPIT #2	0-108" FILL
	COARSE SAND WITH BOULDERS AND SOME DEBRIS
FILL IS MAINLY COARSE SAND	
TESTPIT #3	0-60" FILL (GLACIAL TILL)
	LARGE BOULDERS BLOCKING ACCESS

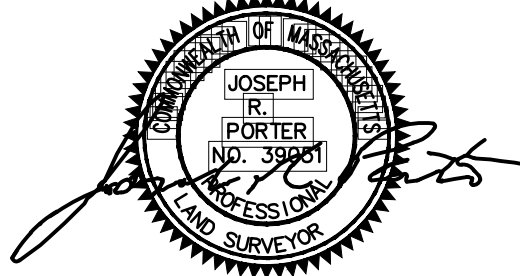
LEGEND	
BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	
CONTOUR	
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
WIRE FENCE	
STONE WALL	
CONCRETE WALL	
SEWER LINE	
DRAIN LINE	
WATER LINE	
GAS LINE	
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	
CONIFEROUS TREE	

NOTE: EXISTING DOWNSPOUTS CONNECTIONS FROM #392-#394 AND #396 TO THE CITY DRAIN LINE SHALL BE VERIFY ON SITE PRIOR TO THE INSTALLATION OF ANY DRAINAGE STRUCTURE.



GRADING, DRAINAGE & UTILITY PLAN
 NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT
 #392-396, #400, #402-404 LANGLEY ROAD
 SCALE: 1in.=20ft. DATE: SEPTEMBER 21, 2017
 REVISED: OCTOBER 5, 2017; OCTOBER 19, 2017
 PROJECT: 217133

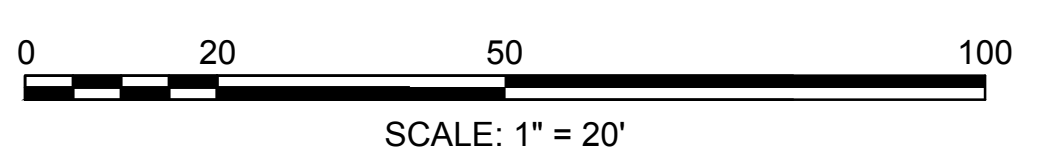


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LAND SURVEYORS - CIVIL ENGINEERS: 132
 ADAMS STREET, 2ND FLOOR, SUITE 3
 NEWTON, MA 02458
 (617) 332-8271

- 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.
 3. ALL THE PROPOSED DOWNSPOUTS OF THE BUILDING #400 TO BE CONNECTED INTO ONSITE INFILTRATION SYSTEM.

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 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.



UTILITY NOTES:

THE NEW SEWER SERVICE(S) AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIBROTAPED 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 THIS TEST IS COMPLETED. 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.

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 SERVICE AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IN QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW. BACK FILLING SHALL ONLY TAKE PLACE WHEN THE CITY INSPECTOR HAS GIVEN THEIR APPROVAL.

PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, THE APPLICANT'S ENGINEER SHALL SUBMIT TO THE ENGINEERING DIVISION AN AS BUILT DRAWING IN DIGITAL AND HARD COPY FORMAT.

IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.

No 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.

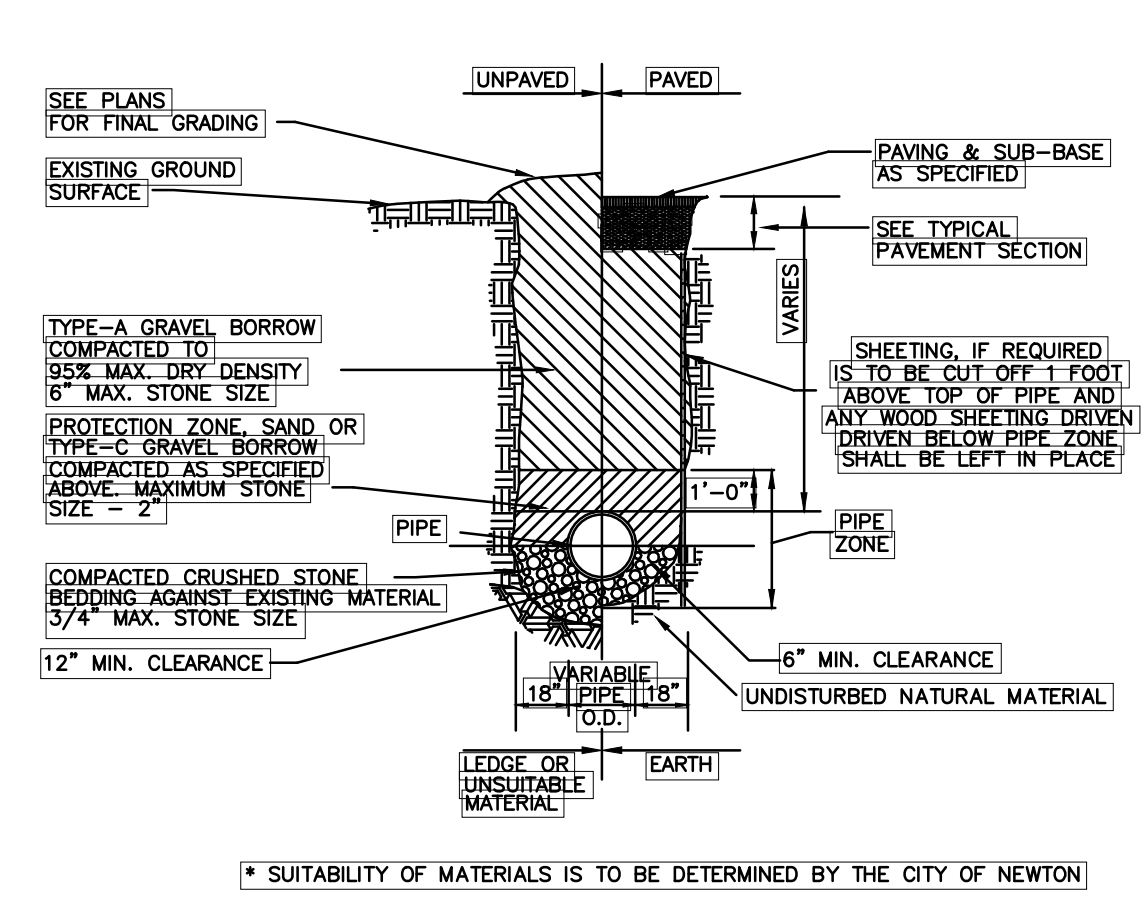
The new water and sewer services must be in-place AND accepted by the Engineering Division prior to the issuance of the Certificate of Occupancy.

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.

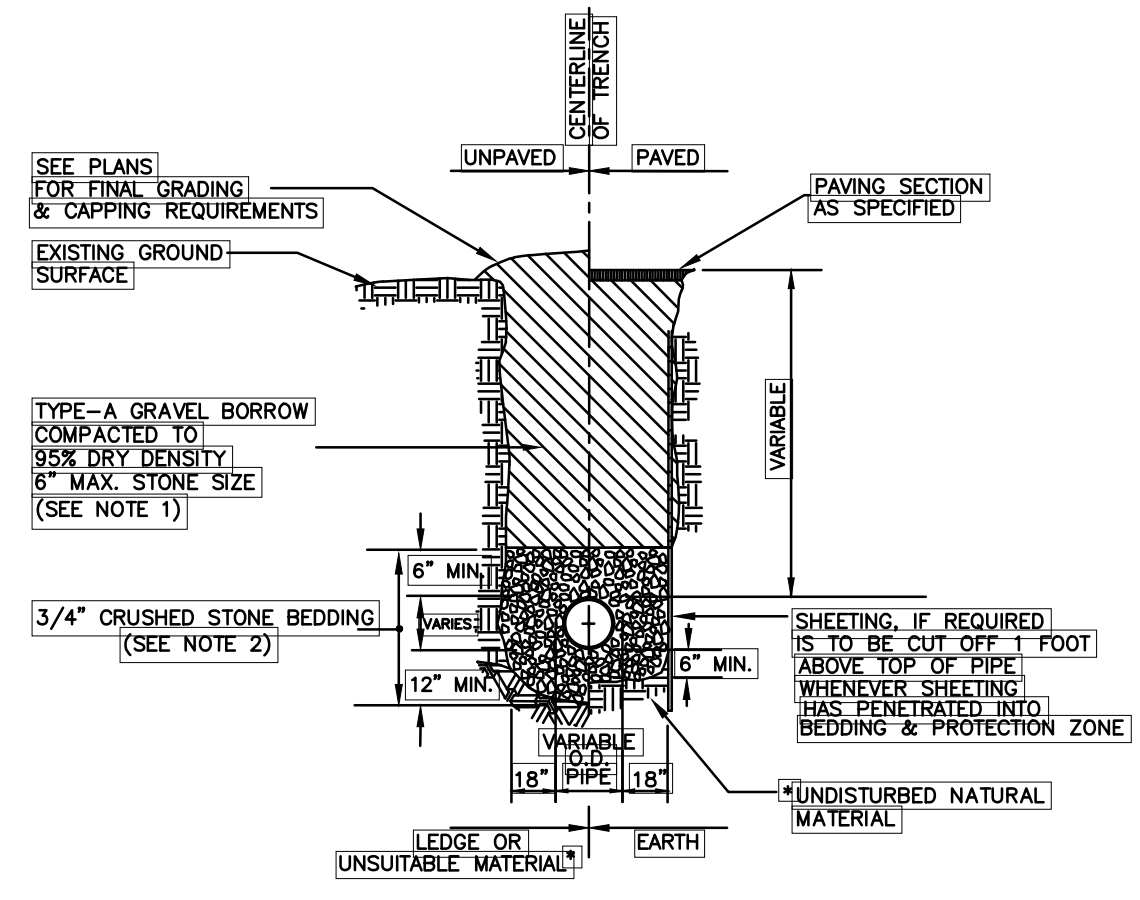
The Applicant will have to apply for Street Opening, Utility Connection and Trench Permits as well as an Install Curb & Sidewalk Permit with the DPW prior to start of work.

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.

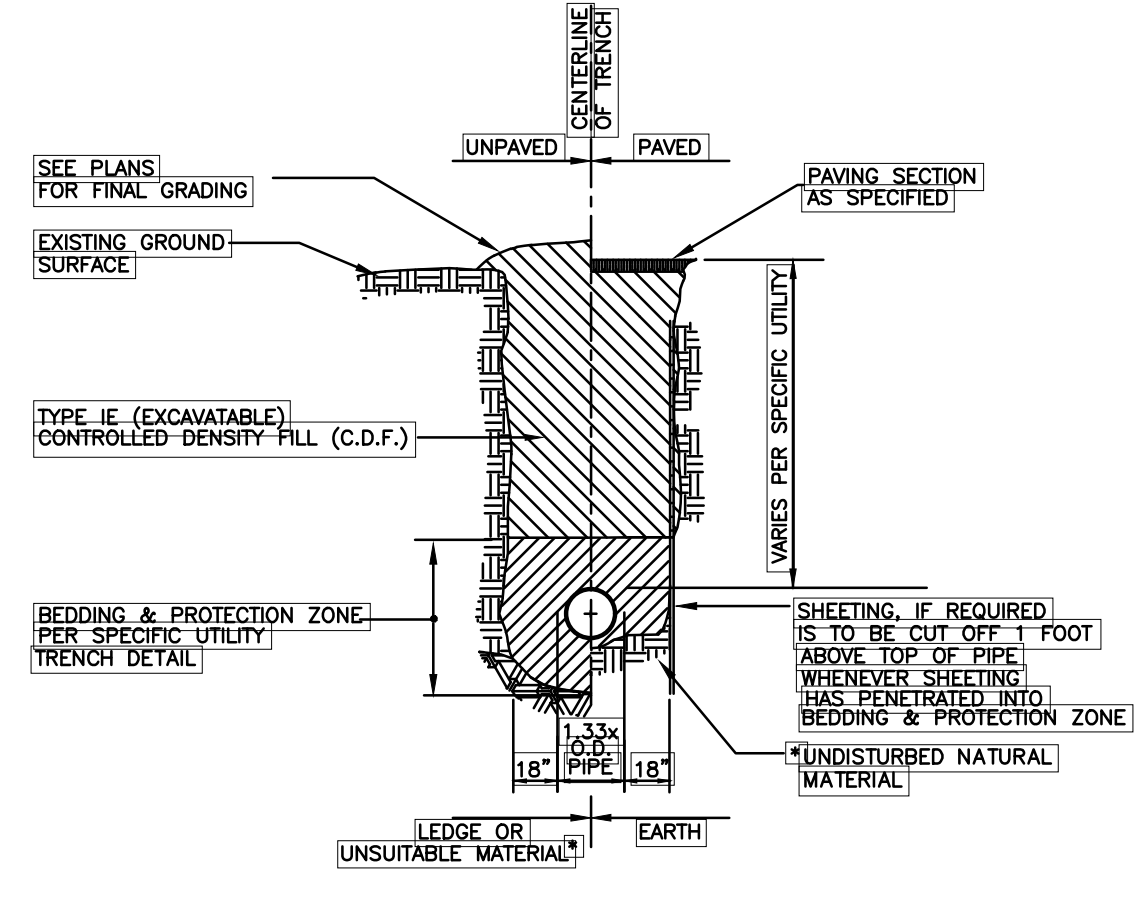
Approval of this plan by the City of Newton Engineering Division implies that the plan meets the minimum design standards of the City of Newton. However, the Engineering Division makes no representations and assumes no responsibility for the design(s) in terms of suitability for the particular site conditions or of 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.



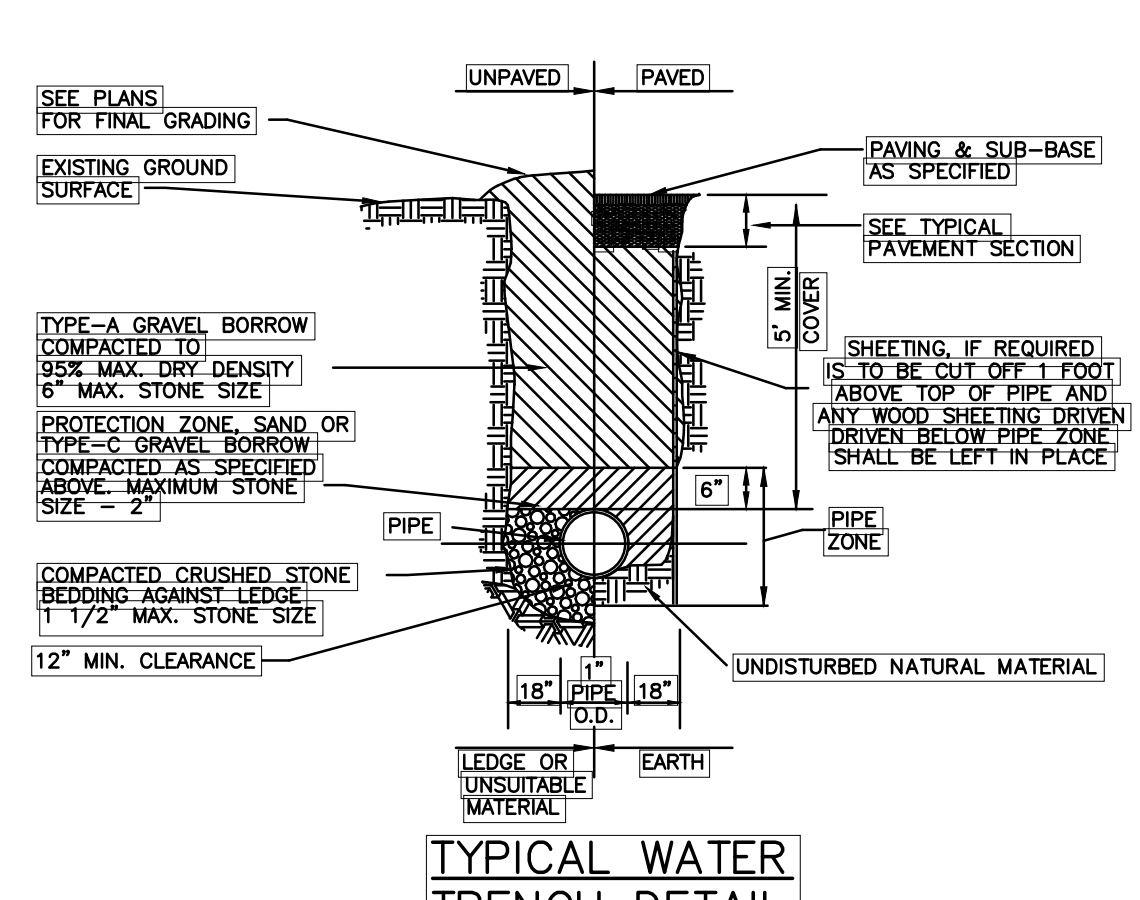
TYPICAL P.V.C. DRAIN TRENCH DETAIL
NOT TO SCALE



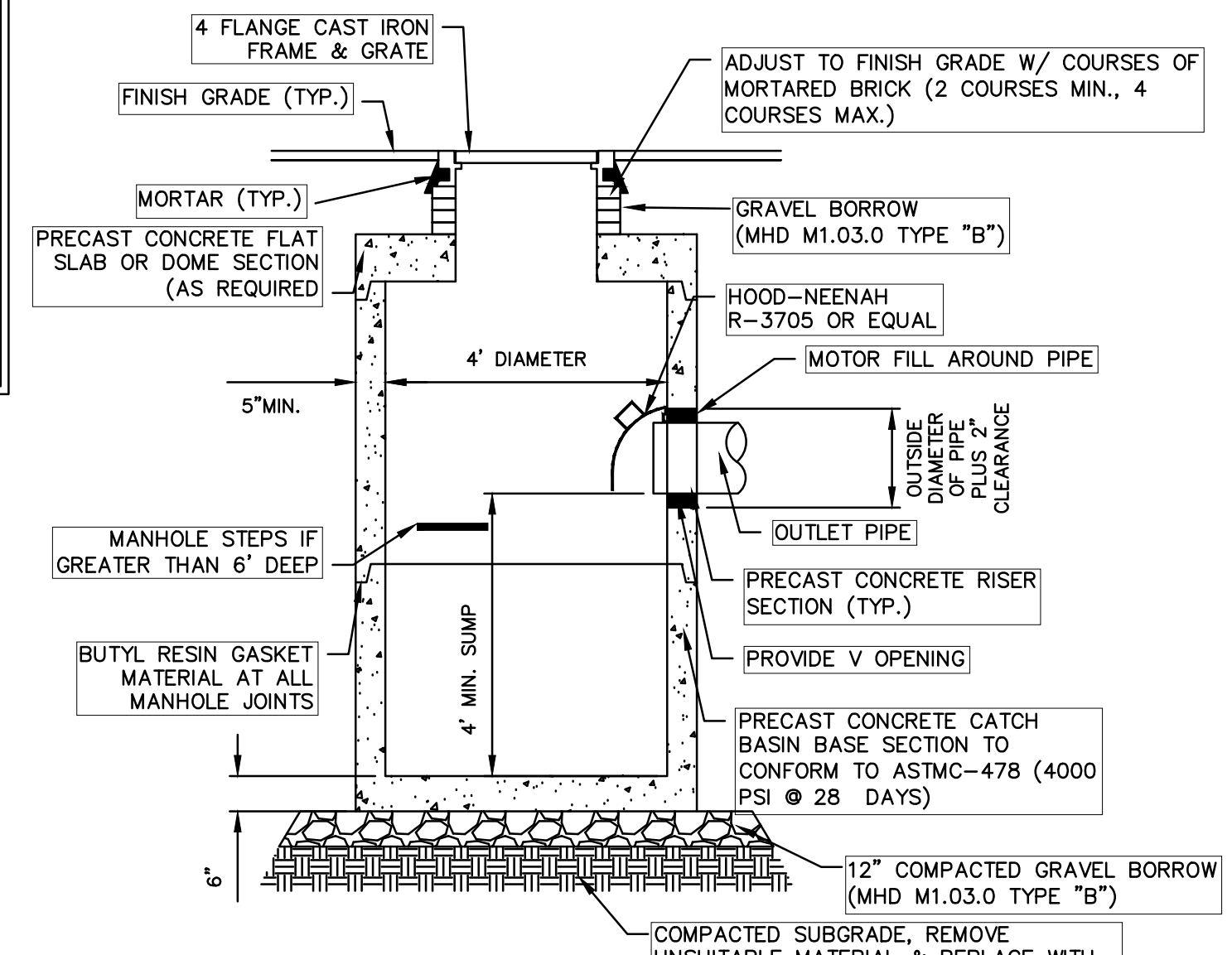
GRAVITY SEWER TRENCH DETAIL
NOT TO SCALE



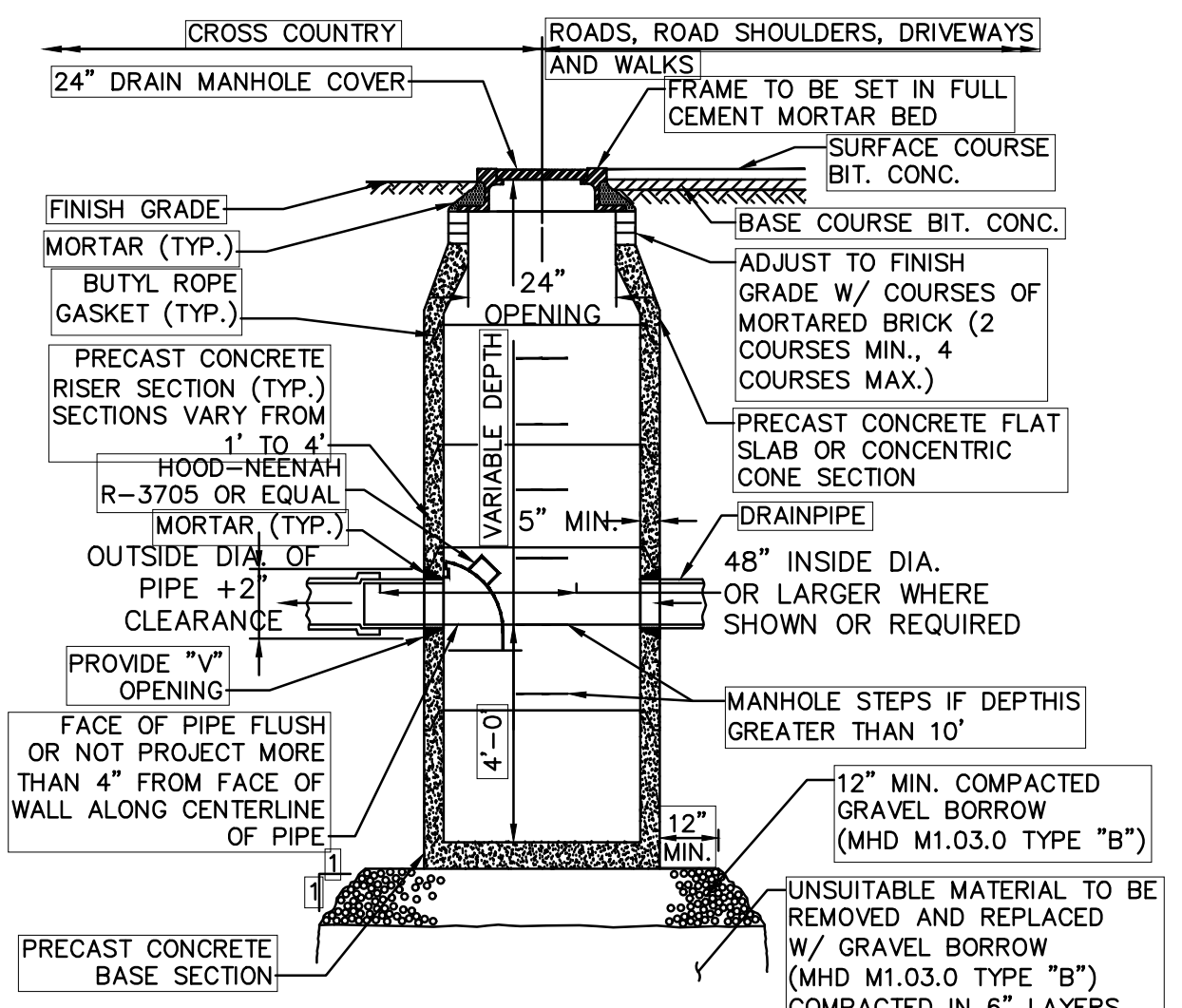
TYPICAL C.D.F. TRENCH DETAIL
NOT TO SCALE



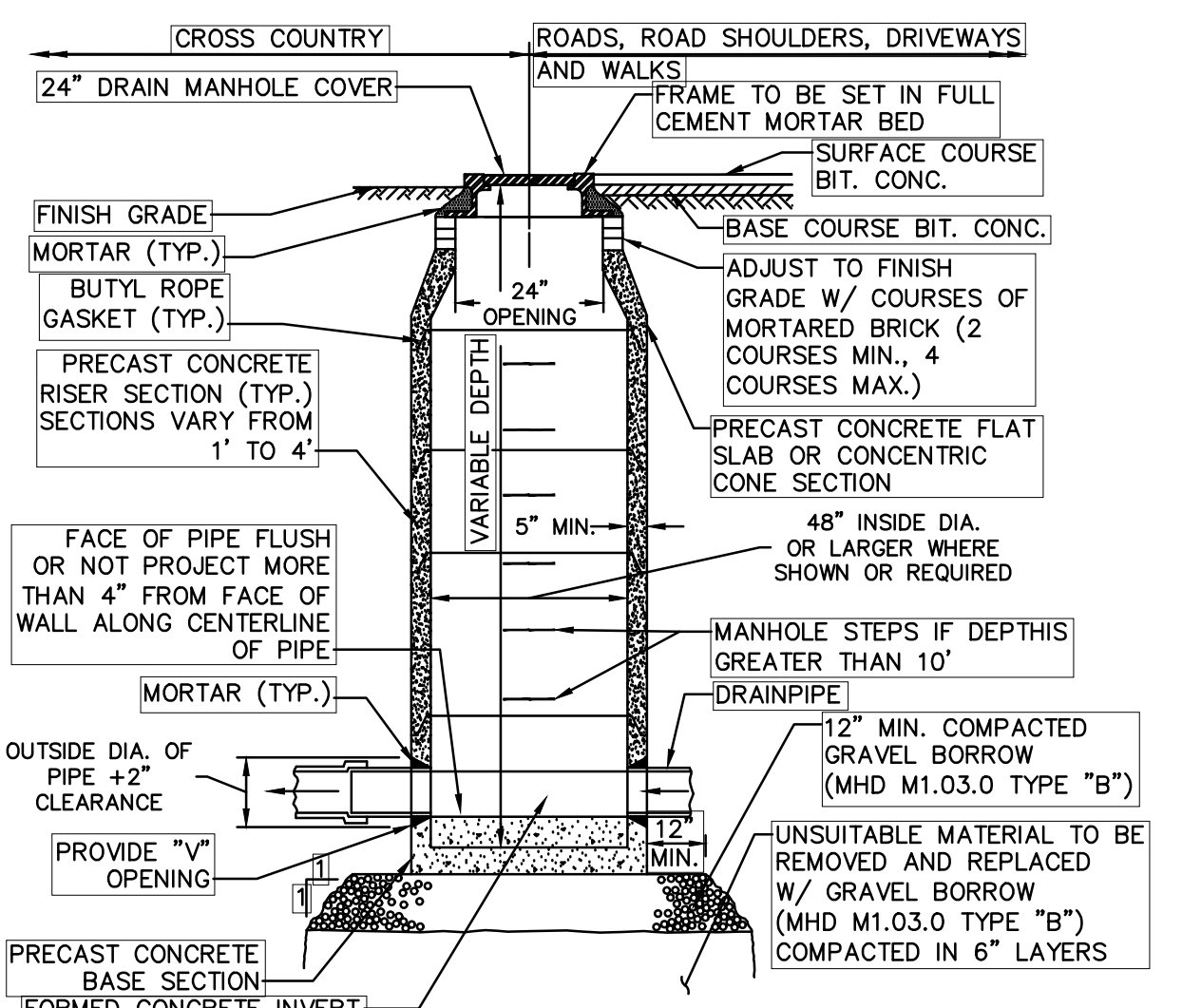
TYPICAL WATER TRENCH DETAIL
NOT TO SCALE



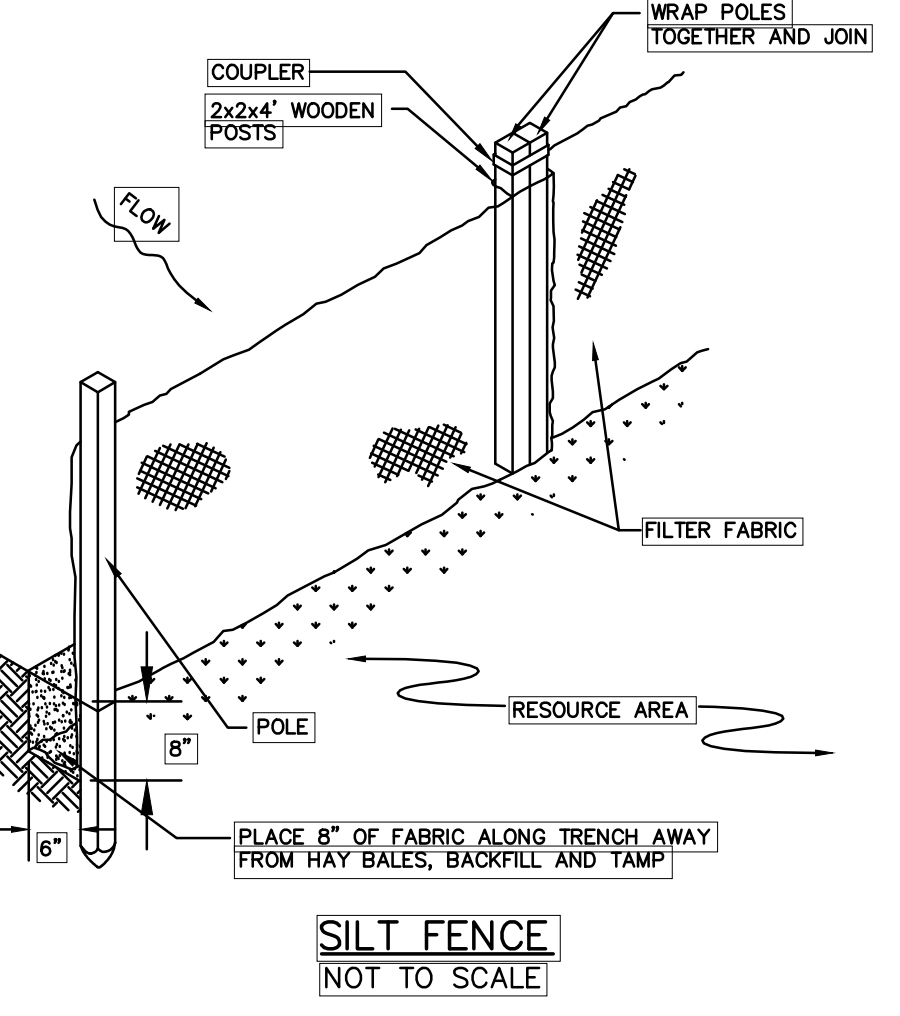
TYPICAL CATCH BASIN DETAIL
NOT TO SCALE



DRAIN MANHOLE WITH SUMP DETAIL
NOT TO SCALE



TYPICAL DRAIN MANHOLE DETAIL
NOT TO SCALE



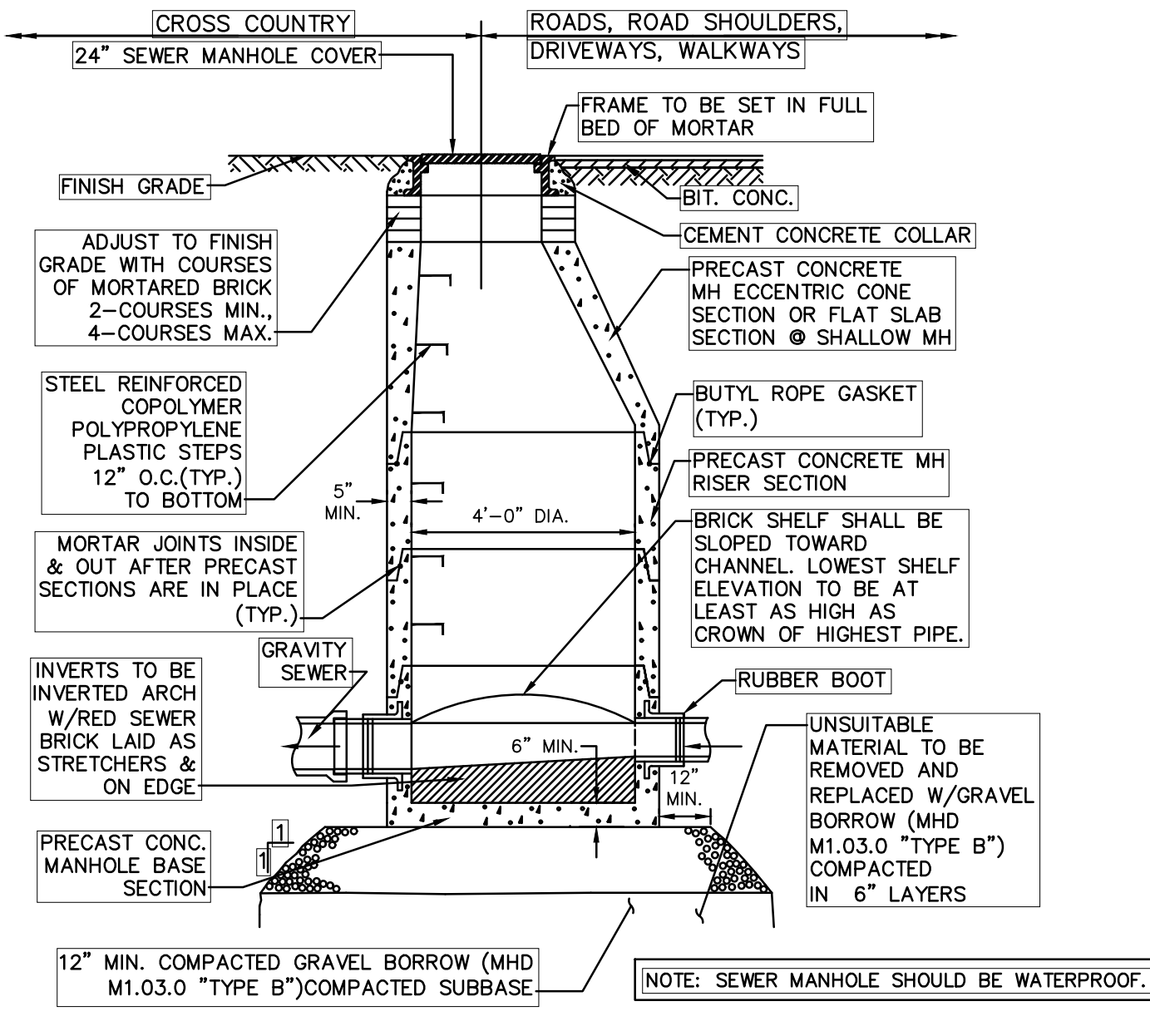
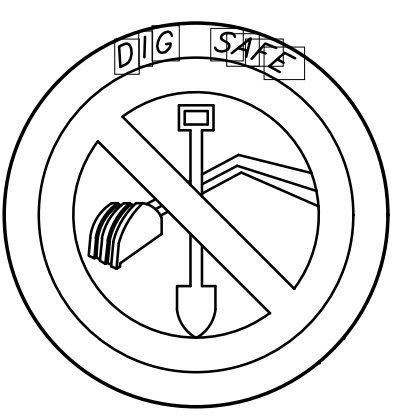
SILT FENCE DETAIL
NOT TO SCALE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
02"	12"	28.5	6.78	1,036.00	1,431.00	1,493.00	51																		
03"	12"	28.5	6.98	1,036.00	1,431.00	1,493.00	51																		
04"	12"	28.5	7.18	1,036.00	1,431.00	1,493.00	51																		
05"	12"	28.5	7.38	1,036.00	1,431.00	1,493.00	51																		
06"	12"	28.5	7.58	1,036.00	1,431.00	1,493.00	51																		

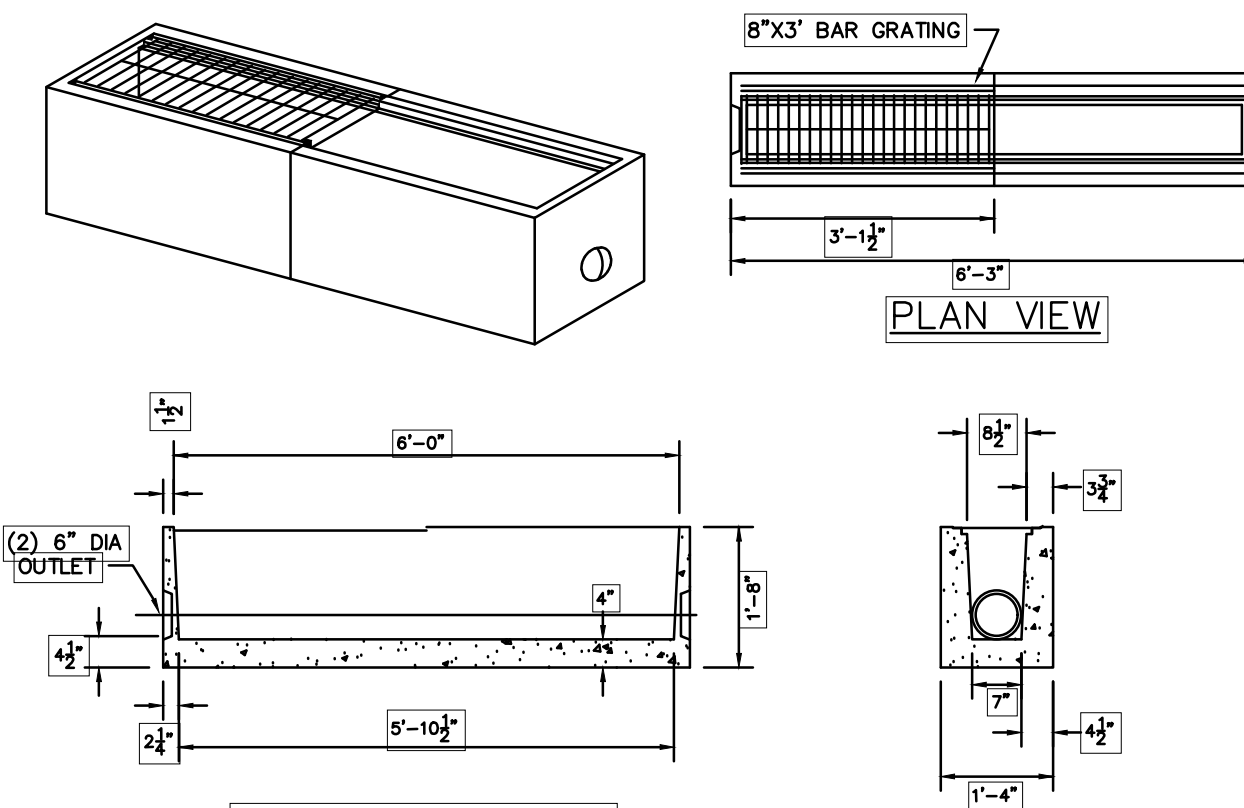
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
02, 03, 04	12"	29	15 1/4"	695.00	1,090.00	1,152.00	45																		
05, 06"	12"	29	15 1/4"	695.00	1,090.00	1,152.00	47																		

DIG SAFE

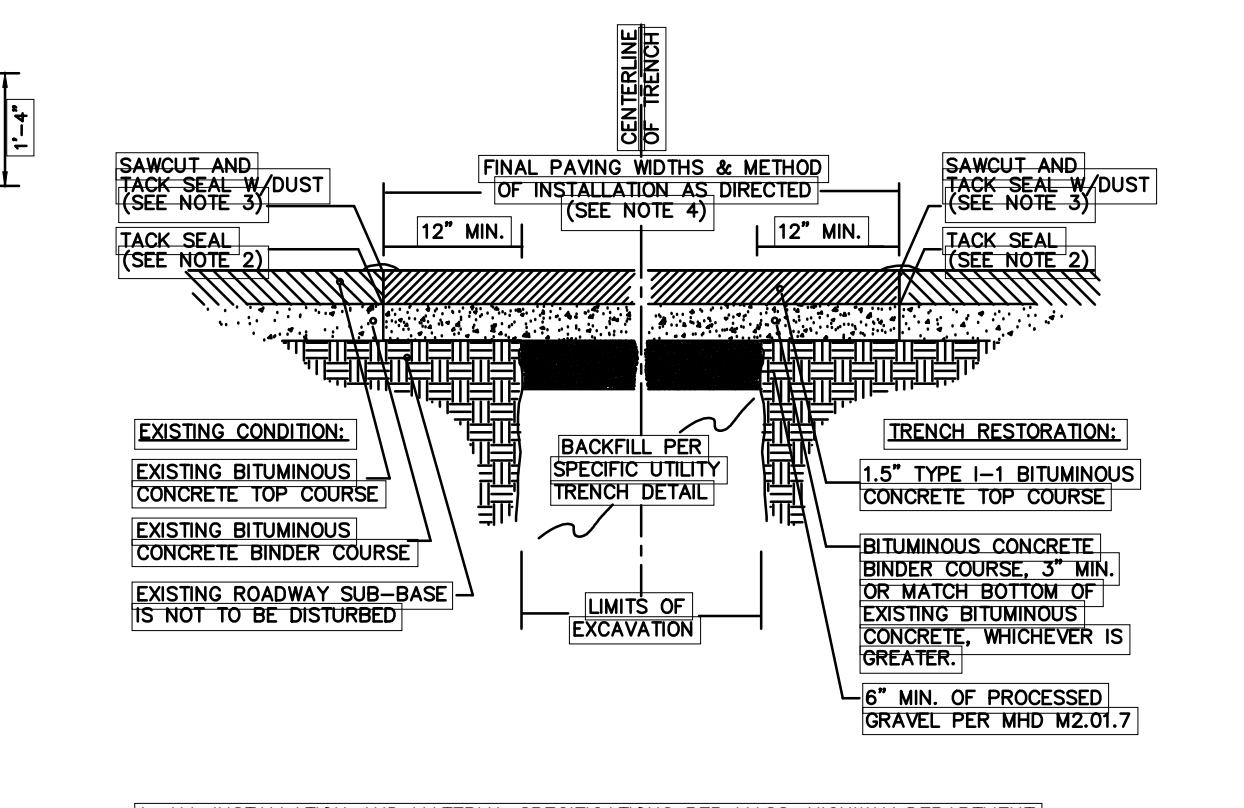
BEFORE YOU DIG CONTACT THE DIG SAFE CENTER TO PREVENT DAMAGE TO TELEPHONE, GAS OR ELECTRIC UNDERGROUND FACILITIES OF MEMBER UTILITIES. CALL TOLL FREE 1-888-322-4844. MASSACHUSETTS STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE YOU START DIGGING OPERATIONS. IN AN EMERGENCY, CALL IMMEDIATELY!



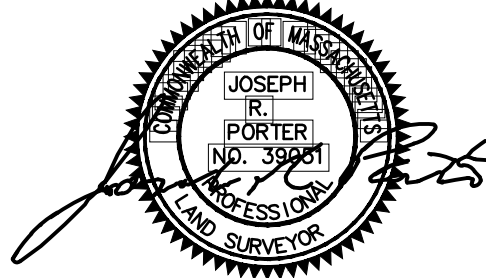
TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



TRENCH DRAIN DETAIL
NOT TO SCALE



TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL (1/2)
NOT TO SCALE

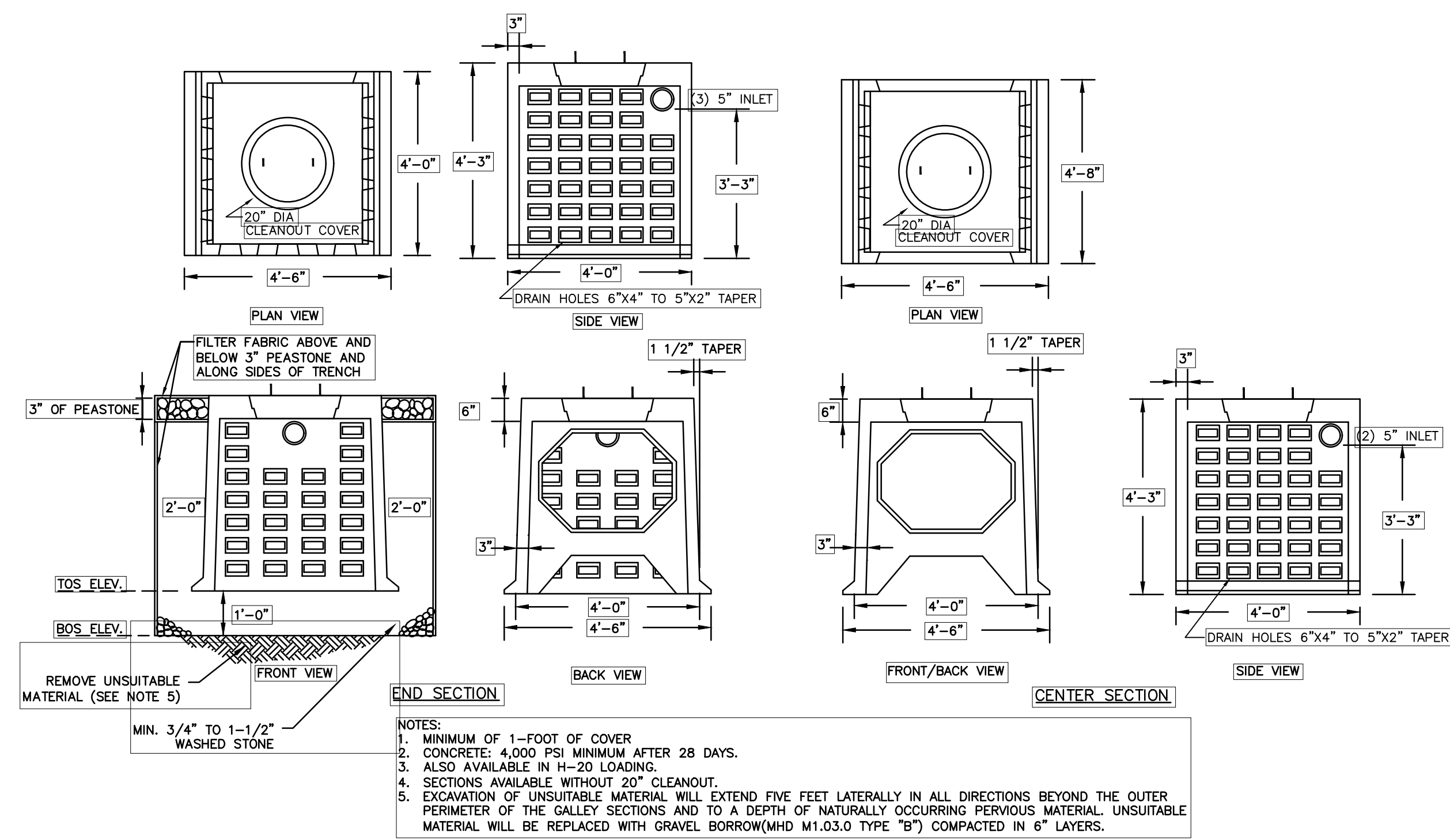


DETAIL-1
NEWTON, MASSACHUSETTS
SHOWING PROPOSED CONDITIONS AT
#392-396, #400, #402-404 LANGLEY ROAD
SCALE: AS-SHOWN DATE: SEPTEMBER 22, 2017

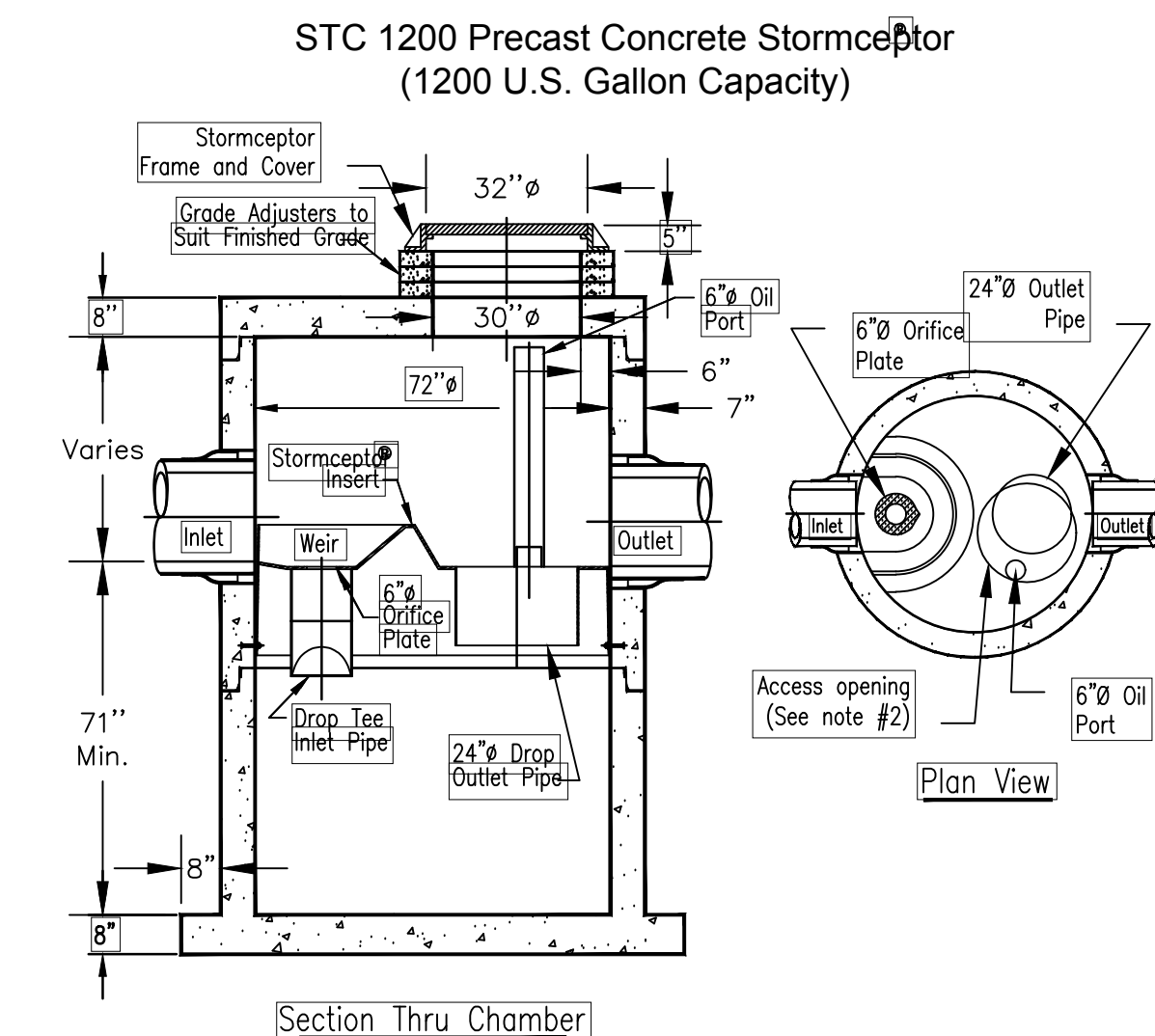
PROJECT: 217133

VTP ASSOCIATES INC.

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



Rinker
Materials
Concrete Pipe Division



- Notes:**
- The Use of Flexible Connection is Recommended at the Inlet and Outlet Where Applicable.
 - The Cover Should be Positioned Over the Outlet Drop Pipe and the Oil Port.
 - The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6088765, #6371690.
 - Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 029

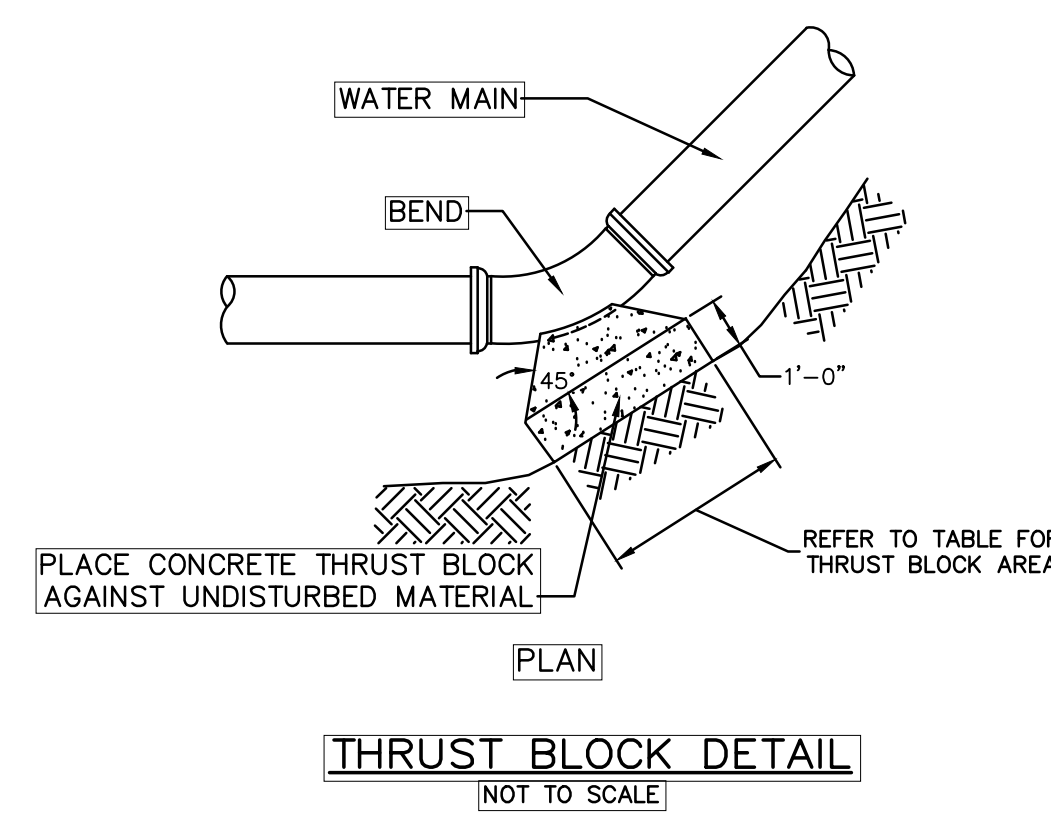
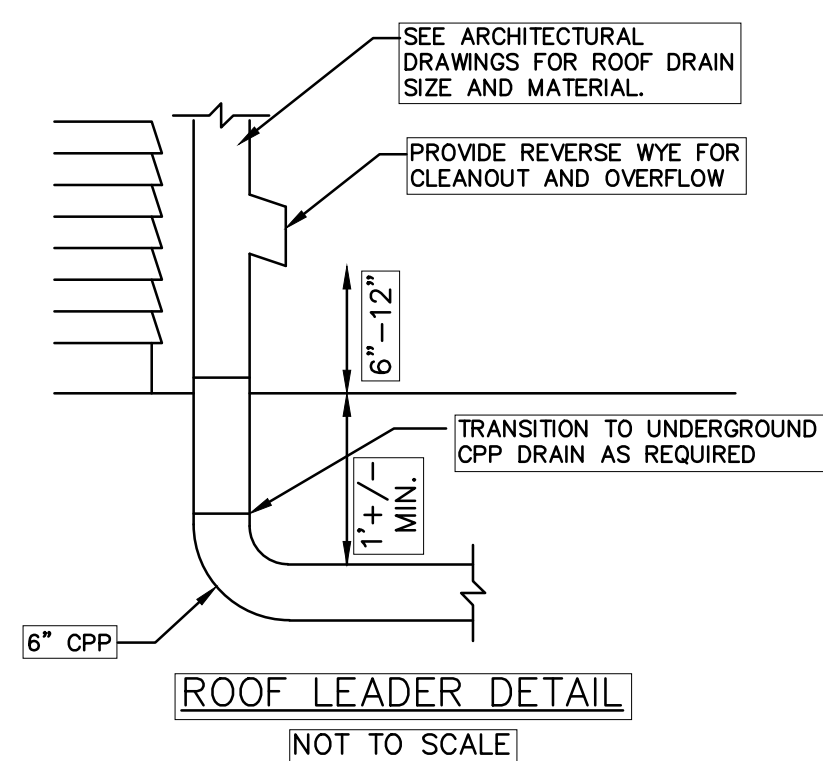
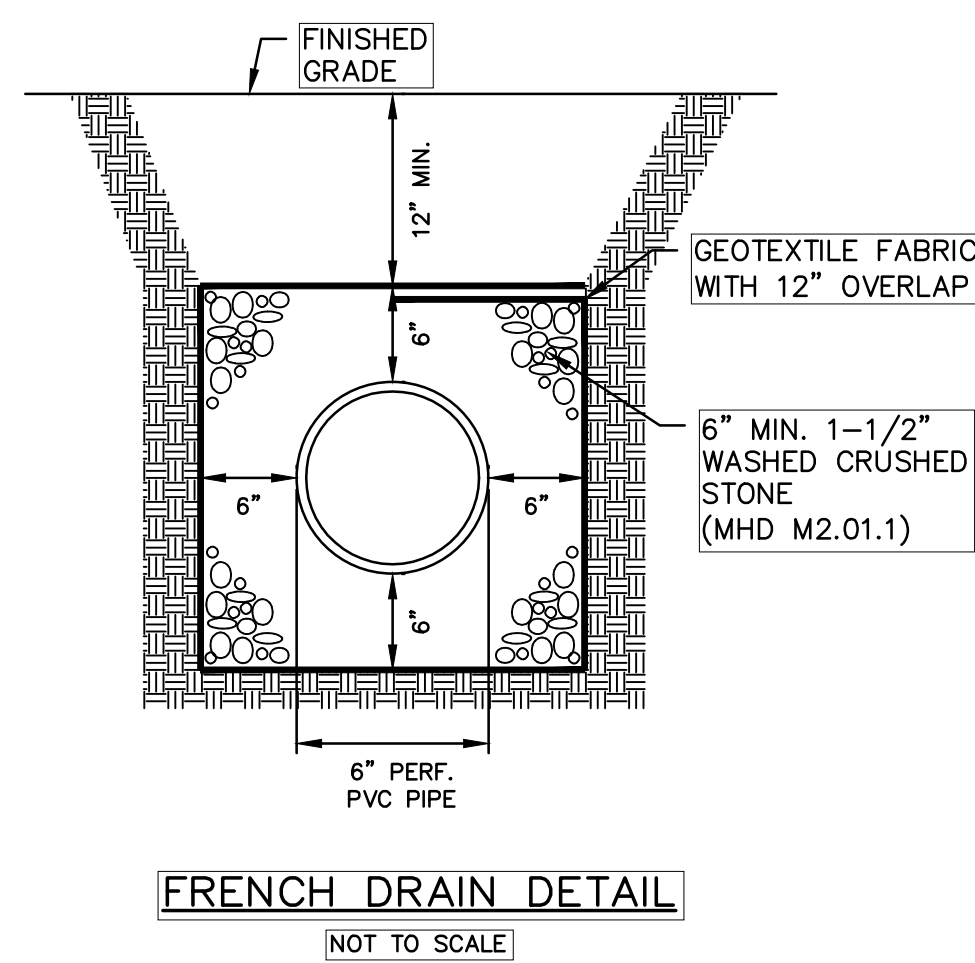
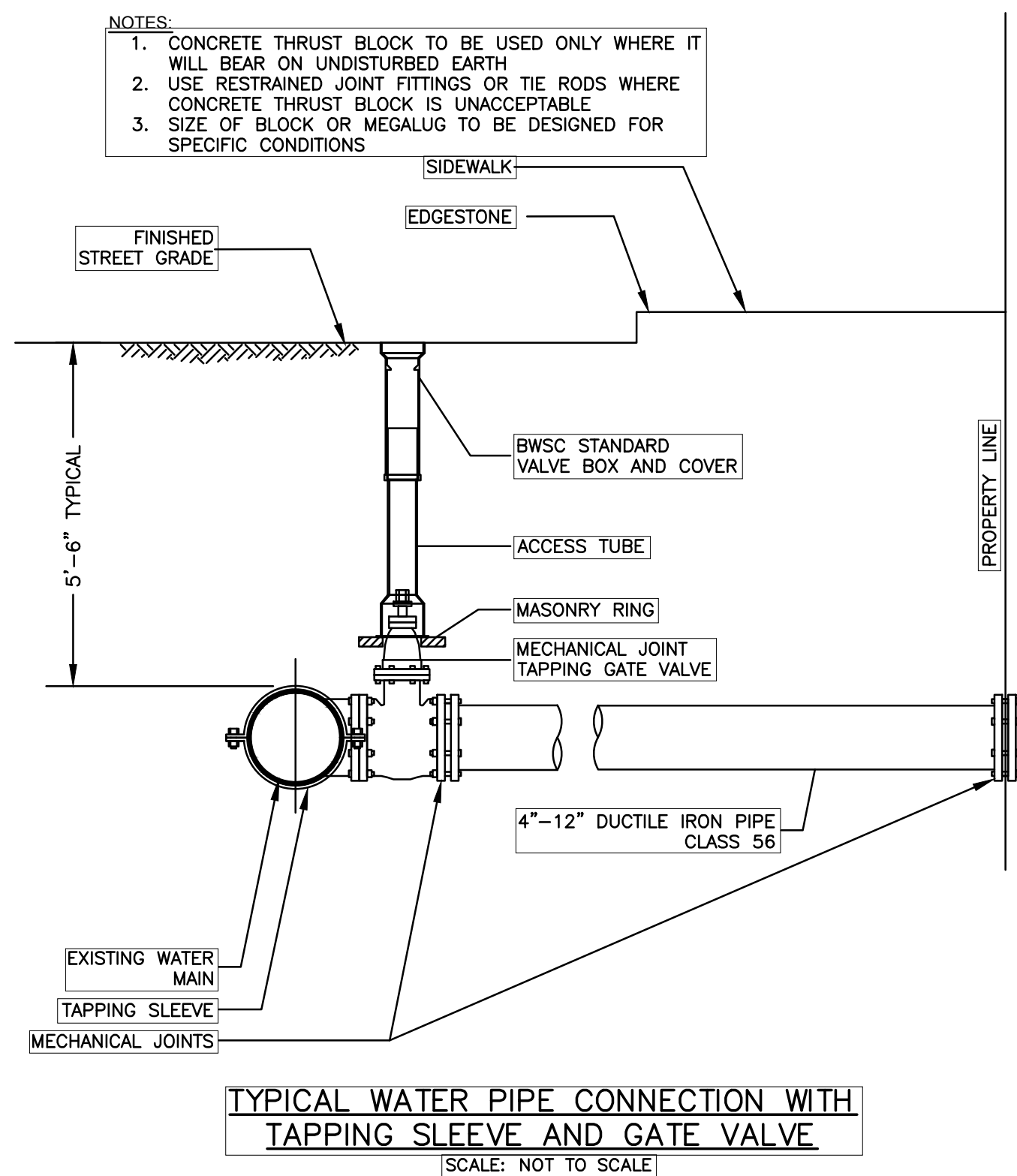
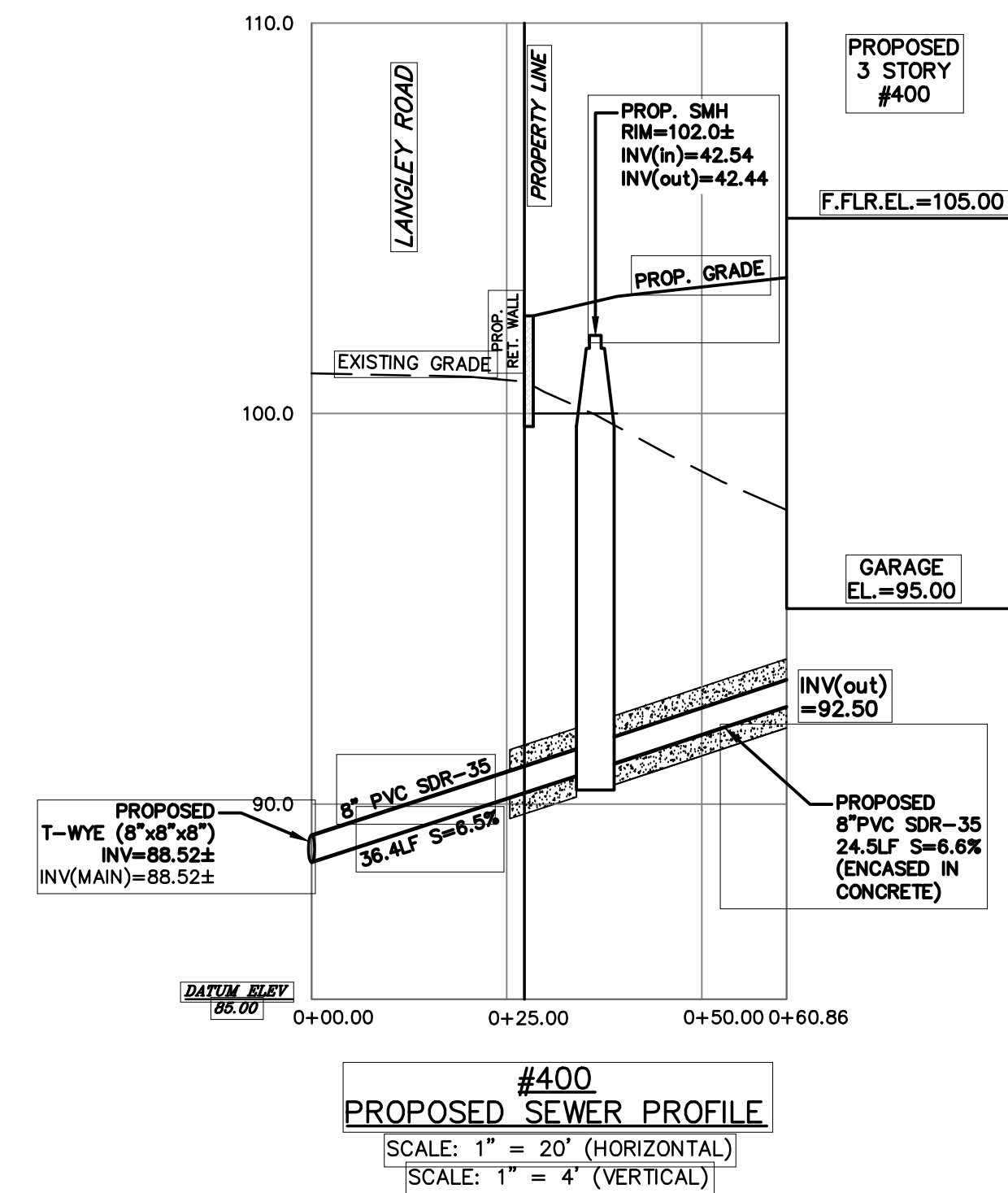
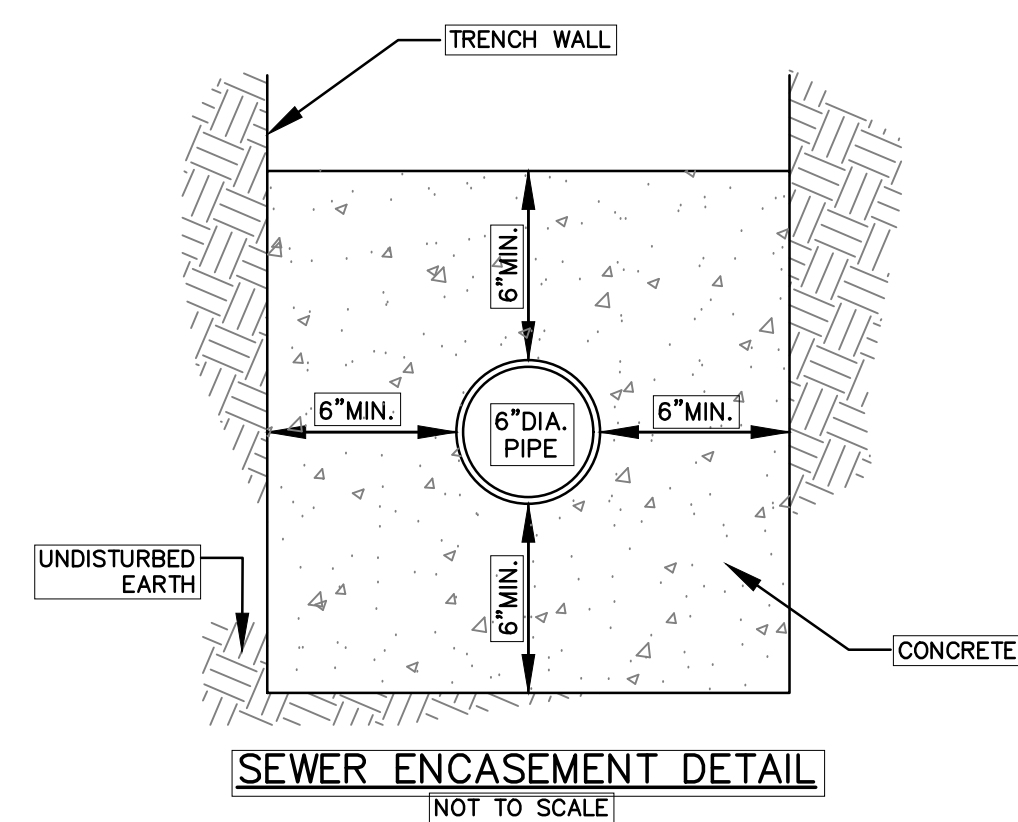


TABLE OF BEARING AREAS IN SQUARE FEET AGAINST UNDISTURBED MATERIAL FOR FITTING. *

SIZE OF MAIN (INCHES)	90° BEND (S.F.)	45° BEND (S.F.)	DEAD END (S.F.)
4	2.3	1.3	1.6
6	4.7	2.5	3.3
8	8.0	4.5	6.0
12	17.0	9.5	12.0

- NOTES:**
- FOR FITTINGS WITH LESS THAN 45° DEFLECTION USE BEARING AREAS FOR 45° BEND.
 - BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 PSF AND A MINIMUM INTERNAL WATER PRESSURE OF 175 PSIG. JOINTS SHALL NOT BE ENCASED IN CONCRETE. BEARING AREAS MAY BE DISREGARDED FOR TRENCHES IN ROCK WHERE THE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN THE PIPE AND ROCK FACE.

THRUST BLOCK BEARING AREAS FOR PIPE
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!



DETAIL-2
NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT
#392-396, #400, #402-404 LANGLEY ROAD
SCALE: AS-SHOWN DATE: SEPTEMBER 22, 2017

PROJECT: 217133

VTP
ASSOCIATES
INC.

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

SHEET 5 OF 5

