

Highway

- Concrete mix: 4,000 psi concrete, ¾-inch stone, 2 ½-lbs lampblack per cubic yard.
- Asphalt patches shall have a minimum depth of 5-inches, or match existing road depth.
- All curbing and sidewalk work shall be inspected by the DPW prior to pouring.
- All work shall comply with ADA requirements.
- Flowable fill required as backfill in the public way.

Water and Sewer

- Cut and cap existing water and sewer services at the main prior to any building demolition.
- Use of fire hydrants for demolition or construction is not permitted unless approved beforehand by the Department of Public Works.
- Water pipes shall be installed at a minimum depth of 5-feet.
- A minimum separation of 5-feet is required between all utilities.

Drainage and Stormwater Management

- All erosion and sediment controls shall be installed and inspected by DPW prior to commencement of any earth moving activities.
- The Engineer-of-record shall witness installation of any sub-surface infiltration system. If sub-surface soil conditions differ from that shown on the plan, the design shall be modified and resubmitted to the Town for approval prior to continuing installation.

As-built

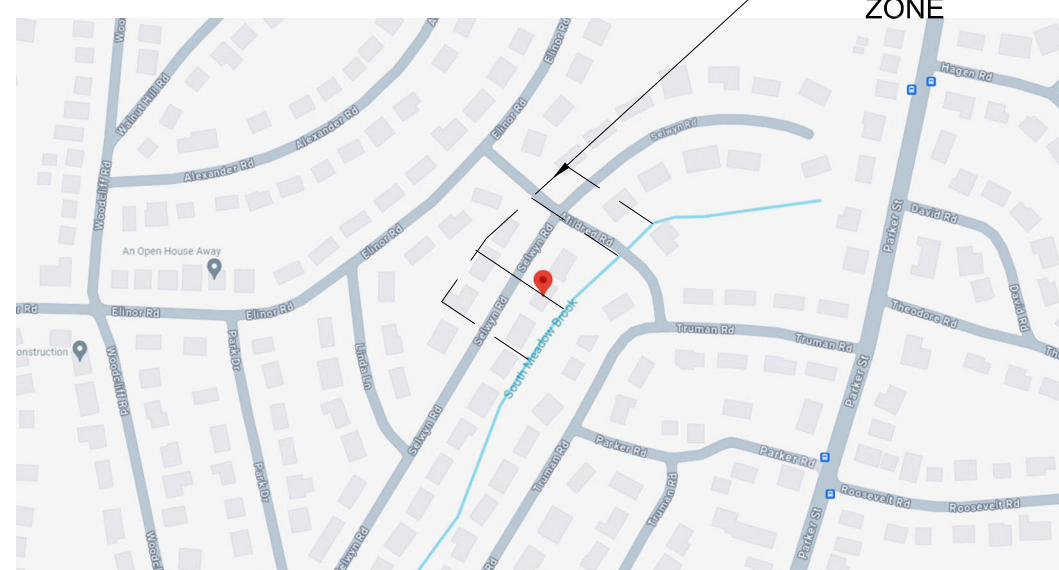
- Upon completion of the work, as-built drawings shall be submitted in both paper and electronic format. The drawings shall be based upon a field survey of actual as-built locations, and shall be stamped by a Professional Land Surveyor registered in the Commonwealth of Massachusetts.

The as-built drawing shall depict all buildings, paved surfaces, topography, and major landscape features. Water, sewer, and drainage features, as well as other underground utilities installed by others, shall be located on the plan, including size and material.

All stormwater management controls, both structural and non-structural, designed to manage the stormwater associated with the completed site shall also be included.

ARBORIST PLAN:

- NO Dumping of storage materials such as building supplies, soil, waste items, vehicles, or equipment;
- NO Parking or maneuvering vehicles;
- A Certified Arborist will be on site during any and all excavation activities within the TPZ;
- Hand-held concrete removal and digging tools, such as concrete saws, jack-hammers, shovels, or air spades will be used, whereas, seated driven machines such as excavators, backhoes, and the like will not be used;
- No circular pavements will be created around the trees,
- Refer to plan prepared by arborist.



LOCUS PLAN - SCALE 1" = 300FT

WATER SHEDS - PROPOSED:

WS1 - ROOF	-	1,647SF
WS2 - DRIVEWAY	-	421SF
WS3 - PATH AND DECK	-	152SF
TOTAL PROPOSED IMPERVIOUS AREA	=	2,220SF

WS4 - YARD - Pervious Lawn - 5,780SF

WATER SHEDS - EXISTING:

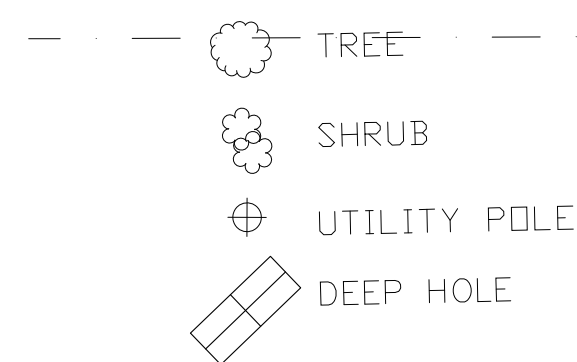
WS1 - YARD - Pervious Lawn	-	5,832SF
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WS2 - DRIVE	-	421SF
WS3 - ROOF	-	1,603SF
WS4 - PATIO+PATH	-	144SF
TOTAL EXISTING IMPERVIOUS AREA	=	2,168SF

PROPOSED RECHARGE VOLUME:

2YR	-	991CF
REQUIRED 1/2" FOR ROOF AREA 1647SF	-	69CF
REQUIRED 1" FOR THE PAVED AREA 573SF	-	48CF

LOT AREA: 8000 SF +/-
 LOT COVER 22 %
 OPEN SPACE 72 %
 SEE NEWTON ORDINANCE REF 1-23
 FLOOD EL. = 120.4(FEMA 114)



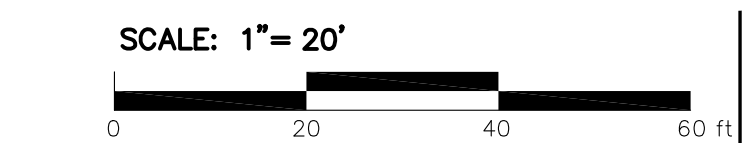
50FT BUFFER ZONE

100FT RIPARIAN ZONE

EXISTING 8" SEWER MAIN

EXISTING WATER MAIN

EXISTING 8" SEWER MAIN



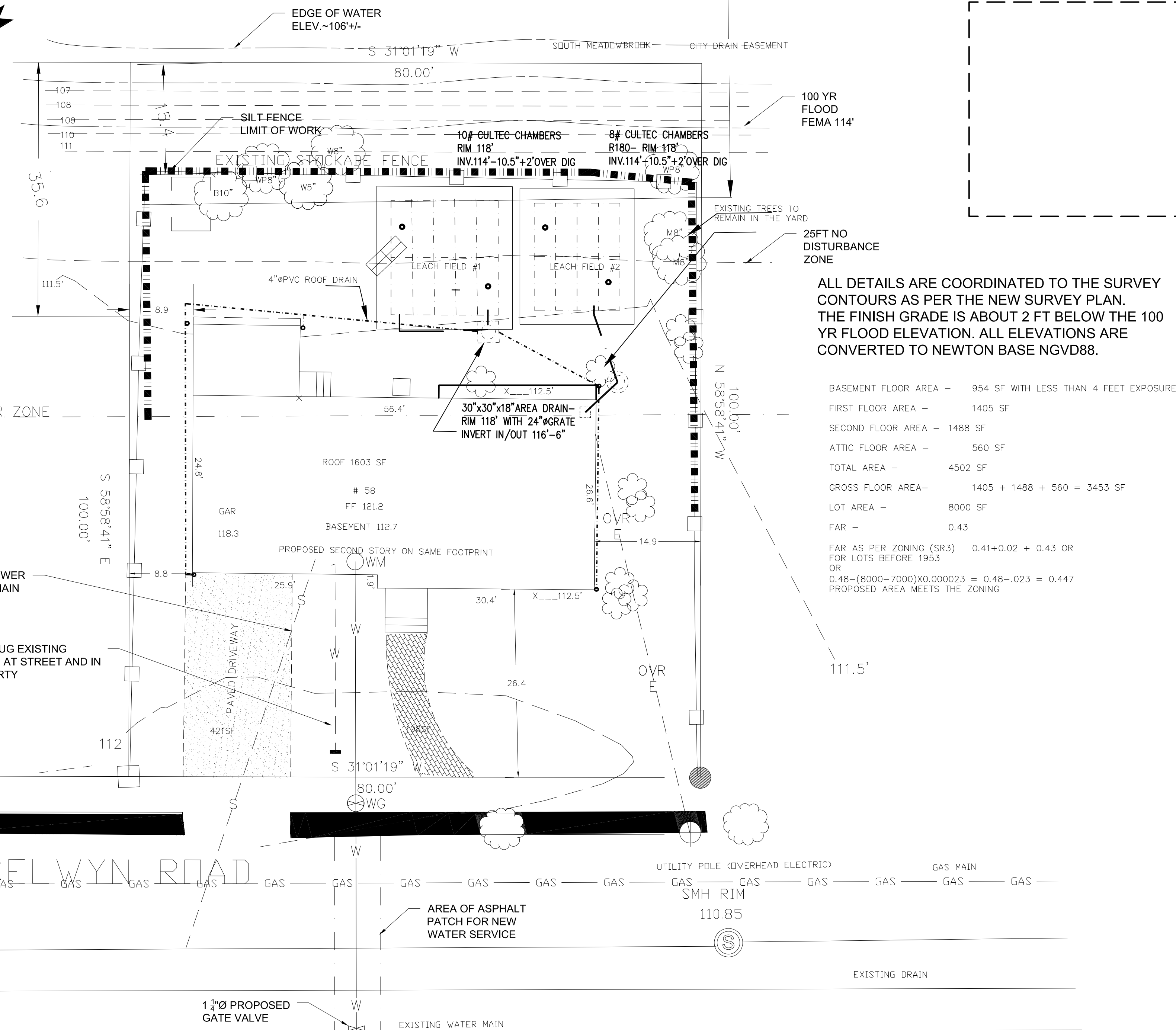
UTILITY PLAN
 1"=10'

TEST HOLE# 1		
ELEVATION 118.0'		DATE 5/8/2024
DEPTH	G.W.	DESCRIPTION
0 - 8"		Ap, FSL, 10YR 3/2
- 72"		C, SANDY SILT (WITH STONES), 5Y 5/2
72"		ESHGW@72" (EL. =112.0")

SIEVE ANALYSIS PROVIDED IN STORMWATER REPORT.

PROPOSED ROOF & YARD RUNOFF RATES:
 2YR - 0.09CFS
 25 YR - 0.21
 100YR - 0.43
 ALL ROOF RUNOFF SENT TO LEACHING FIELD AND INFILTRATED IN TO THE GROUND
DRIVEWAY & PATH RUNOFF DISCARDED:
 2YR - 0.01CFS- REDUCED 96%
 25 YR - 0.03CFS- REDUCED 94%
 100YR - 0.04CFS- REDUCED 96%

EXISTING RUNOFF RATES:
 2YR - 0.26CFS
 25 YR - 0.56
 100YR - 1.05
 ALL RUNOFF SENT TO NEIGHBORS / STREET DOWNSTREAM



ALL DETAILS ARE COORDINATED TO THE SURVEY CONTOURS AS PER THE NEW SURVEY PLAN. THE FINISH GRADE IS ABOUT 2 FT BELOW THE 100 YR FLOOD ELEVATION. ALL ELEVATIONS ARE CONVERTED TO NEWTON BASE NGVD88.

BASEMENT FLOOR AREA	-	954 SF WITH LESS THAN 4 FEET EXPOSURE
FIRST FLOOR AREA	-	1405 SF
SECOND FLOOR AREA	-	1488 SF
ATTIC FLOOR AREA	-	560 SF
TOTAL AREA	-	4502 SF
GROSS FLOOR AREA	-	1405 + 1488 + 560 = 3453 SF
LOT AREA	-	8000 SF
FAR	-	0.43
FAR AS PER ZONING (SR3)	-	0.41+0.02 + 0.43 OR
FOR LOTS BEFORE 1953	-	OR
	-	0.48-(8000-7000)X0.000023 = 0.48-.023 = 0.447
PROPOSED AREA MEETS THE ZONING	-	

FIXTURE VALUES AS PER 240 CMR 10.14

	FV	
BATH TUB -	1	2 4
DISHWASHER-	1	2 2
KITCHEN SINK -	1	2 4
LAVATORY -	5	2 20
SHOWER -	2	2 8
LAUNDRY-	1	2 2
TOILETS -	3	2 6
TOTAL		46
DEMAND FACTOR =	0.5	23
1 1/4" Ø PIPE IS ADEQUATE FOR THE DEMAND		

EXISTING SEWER PIPE 6" DIA SDR 35 IN THE PROPERTY TO REMAIN.

WATER DEMAND & PIPE FLOW:
 FOUR BEDROOMS EACH @110 GPD = 440 GPD FLOW

THE 1 1/4" Ø SERVICE FOR WATER SUPPLY IS ADEQUATE AT 5.87GPM WITH MINIMUM 55 PSI PRESSURE AT THE MAIN.
 THE 6" PVC DRAIN AT 2% PITCH IS ADEQUATE FOR THE PEAK FLOW OF 320" X 440 = AT 5.87 GPM

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CIVIL, ELECTRICAL & STRUCTURAL ENGINEERING SERVICES

LIC. #40460-C (EXP. DATE 6-30-2026)



Description	Date
1. LEACHING PIT MOVED	6/12/2024



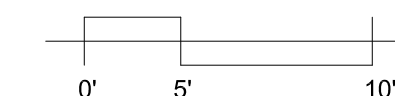
SHAWN DOUNG

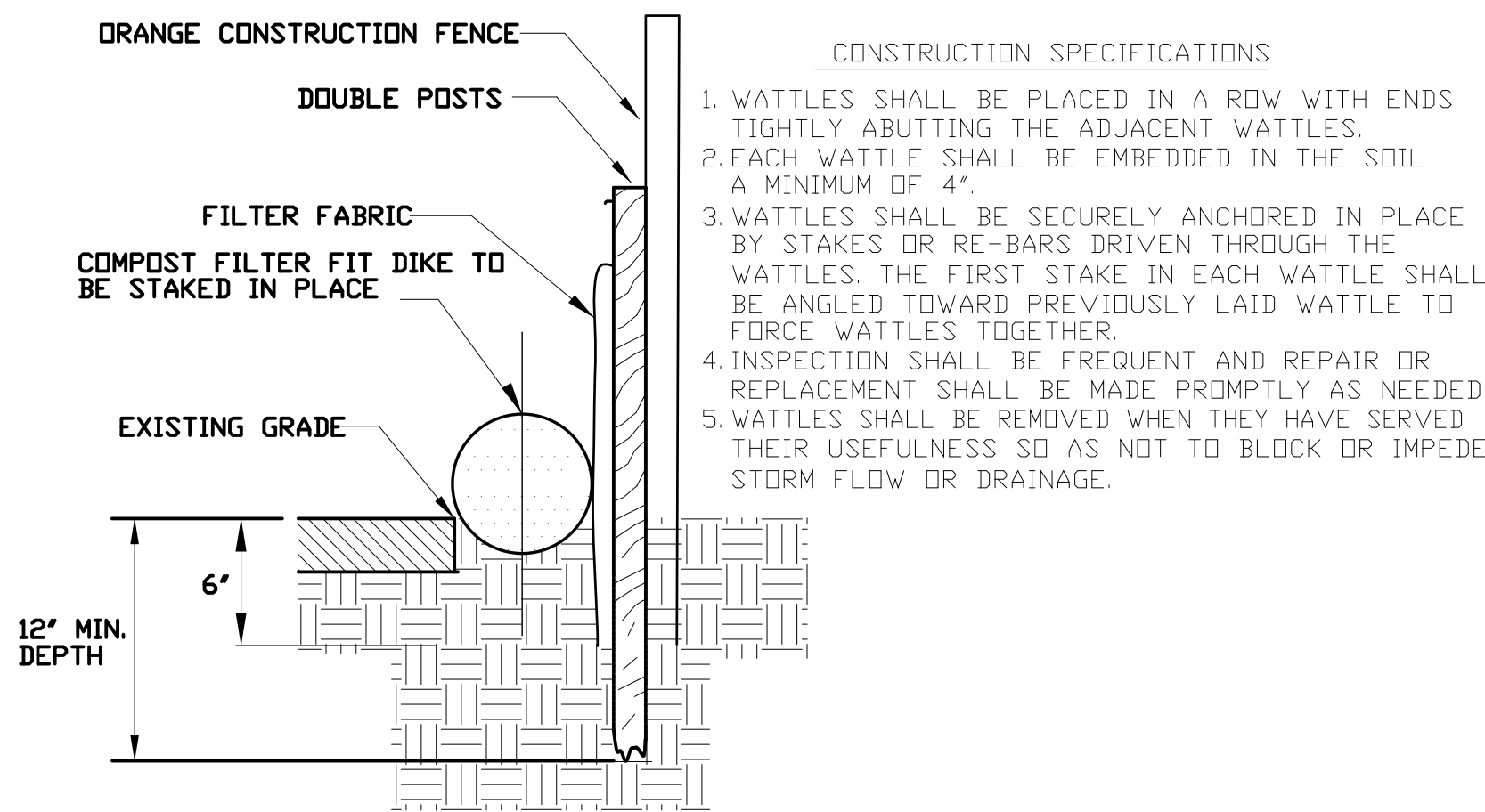
DRAINAGE PLAN

Project number	24025
Date	5/24/2024
Drawn by	MC/KL
Checked by	SK

C1

Scale As indicated

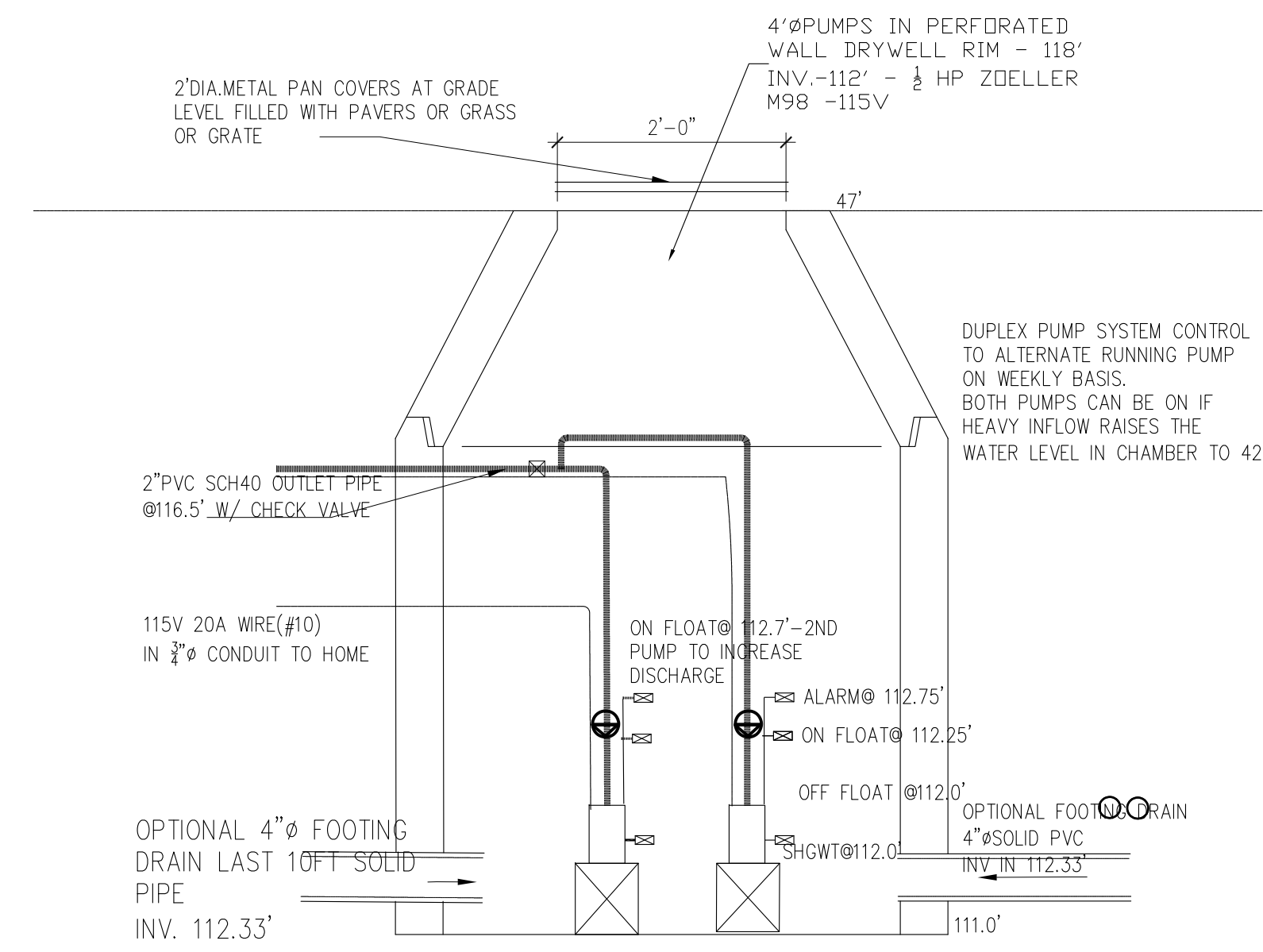




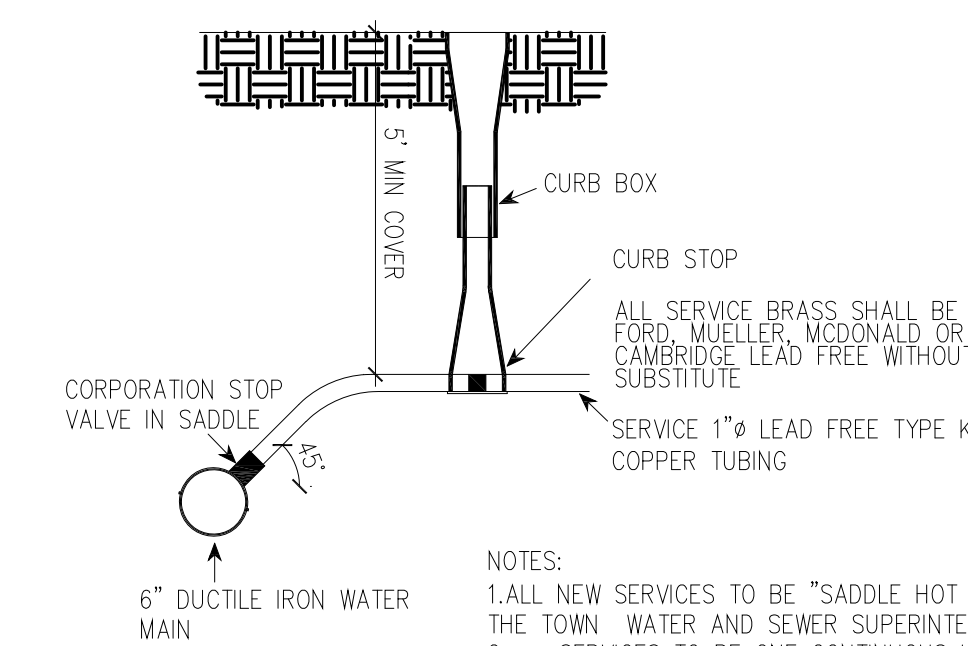
A SILT FENCE LINE DETAIL
C2 N.T.S.



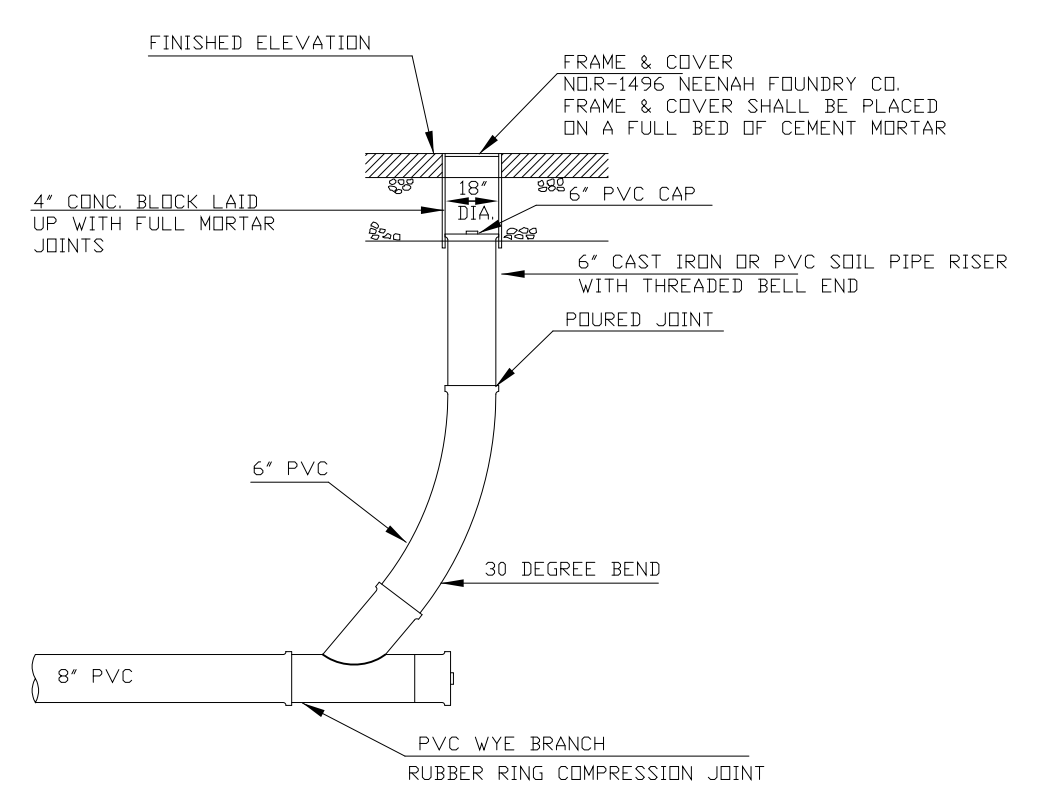
E DOWNSPOUT CLEANOUT
C2 N.T.S.



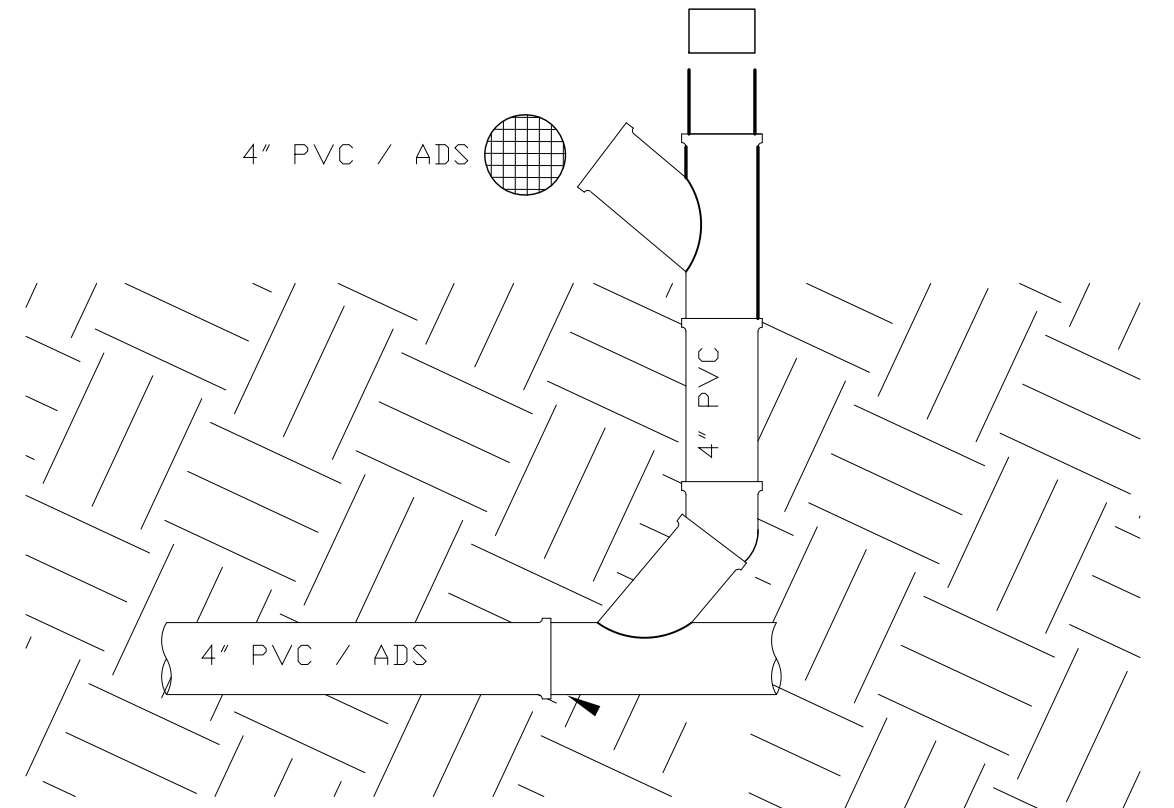
A PUMP CHAMBER DETAILS W/ DUPLEX PUMP SYSTEM & BACKUP GENERATOR
C2



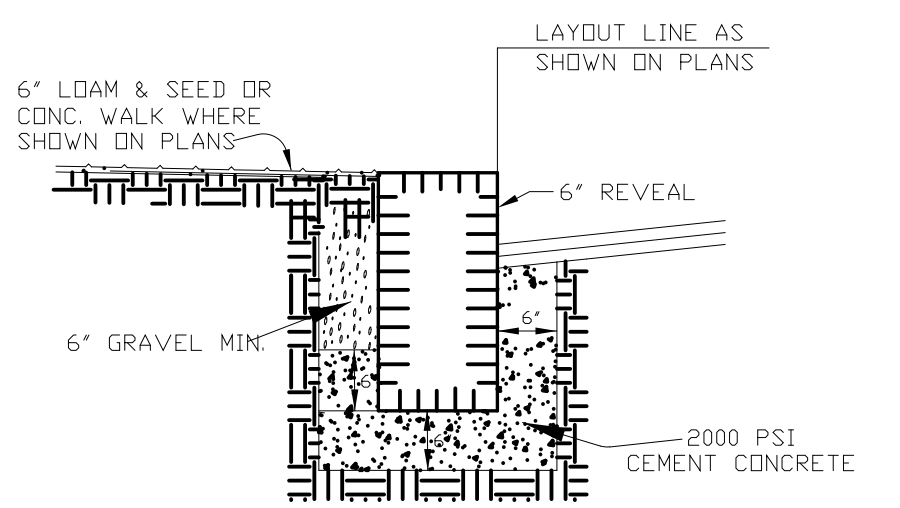
K SERVICE TUBING CONNECTION
C2



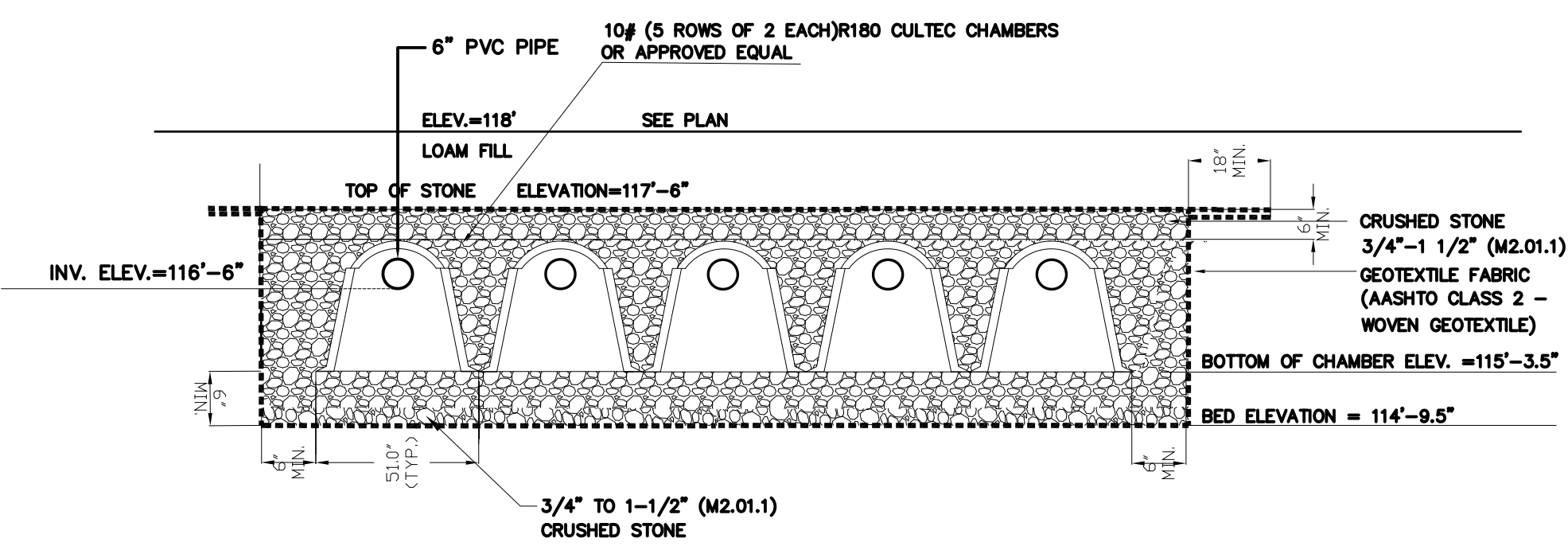
D DOWNSPOUT CLEANOUT
C2 N.T.S.



C PVC WYE BRANCH @ DOWNSPOUT TO LEADER CONNECTION
C2

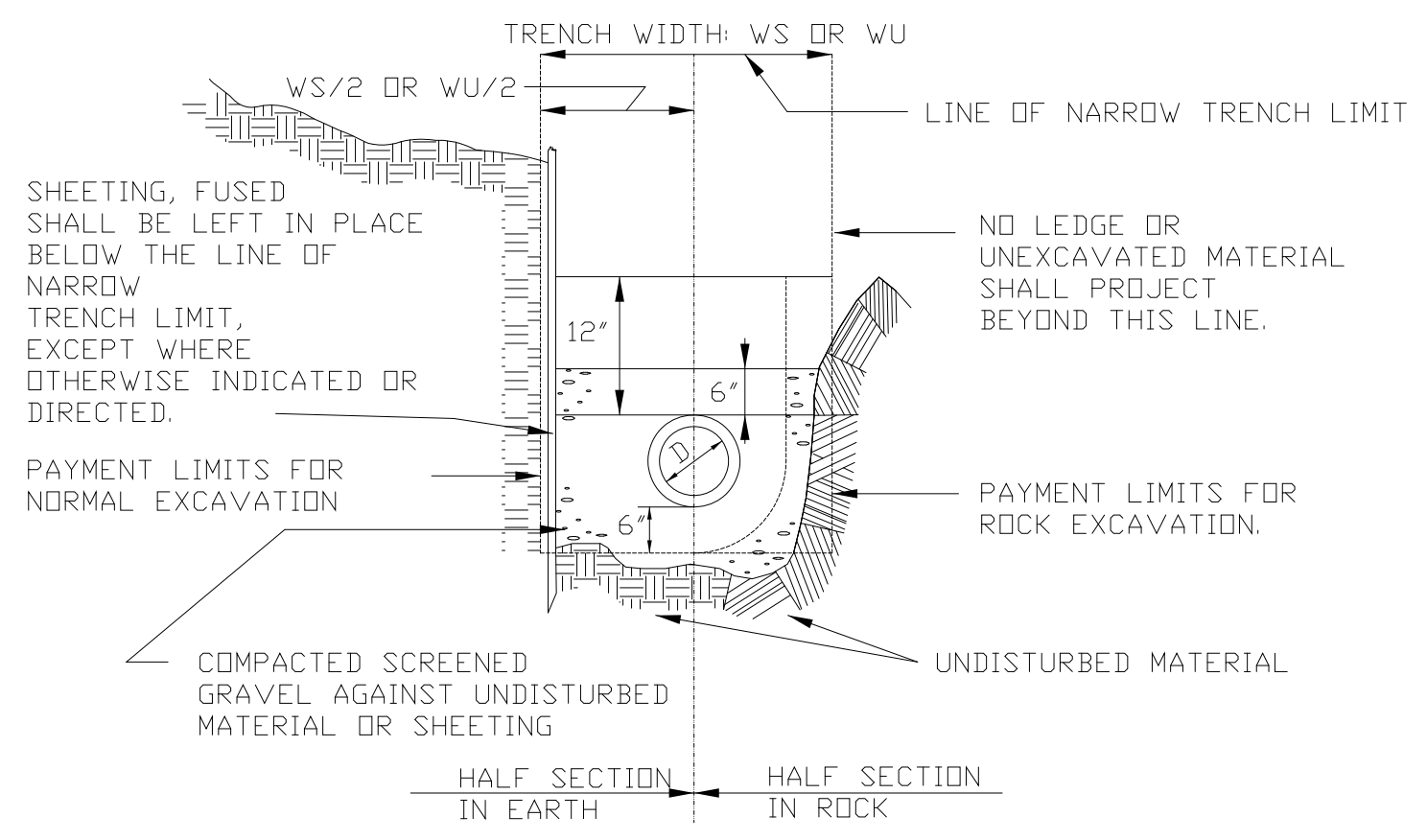


VERTICAL CURB DETAIL @ DRIVEWAY BOTH SIDES
C2 N.T.S.

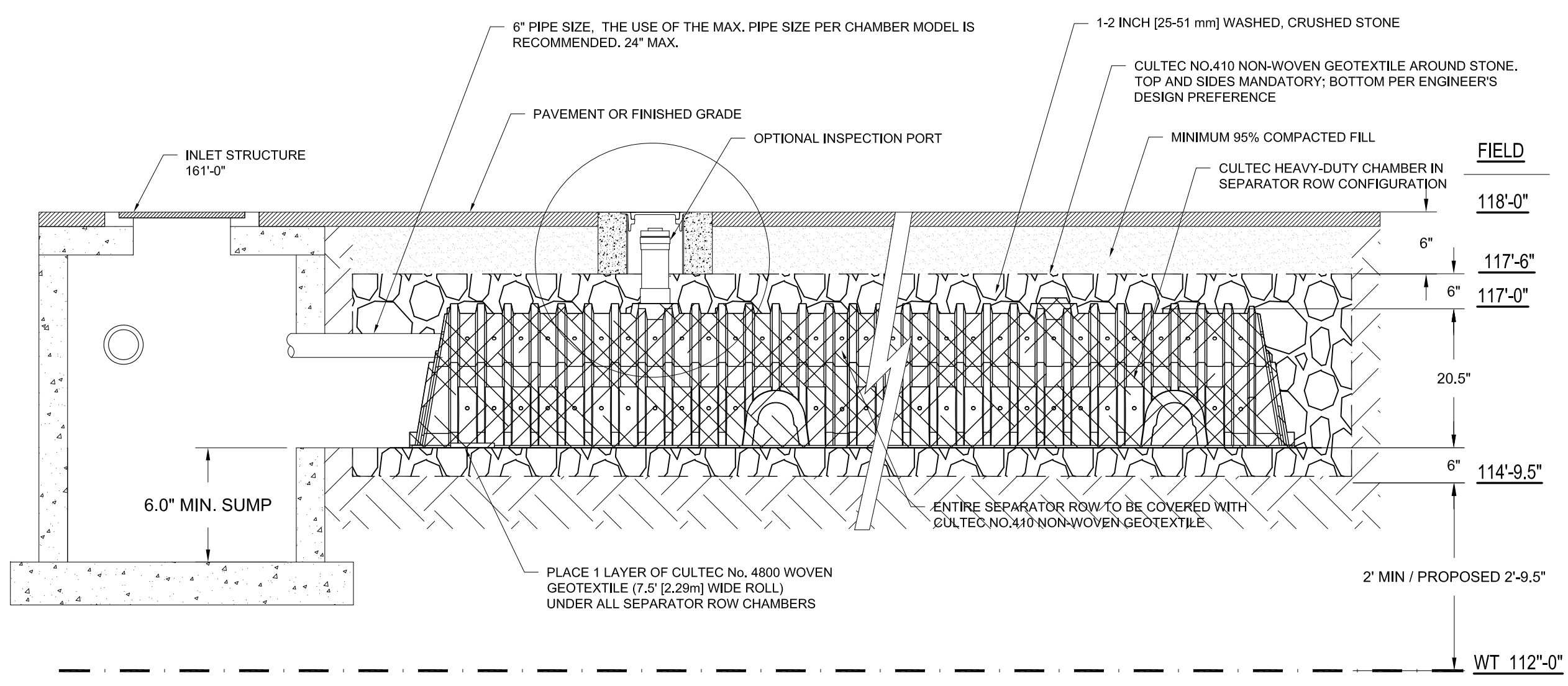


A CROSS SECTION LEACHING FIELD #1
C2 N.T.S.

TRENCH WIDTH WS OR WU		
DIAM. OF PIPE	WU UNSHEEDED	WS SHEEDED
12" AND SMALLER	3'-0"	4'-2"
15" AND LARGER	O.D.+20"	O.D.+36"



WATER AND SEWER TRENCH SECTION
C2 N.T.S.



J THE RECHARGER R-330XLHD LONGITUDINAL SECTION LEACHING FIELD (ROOF+DRIVEWAY)
C2

DRAINAGE STRUCTURES - "OPERATION & MAINTENANCE PLAN"

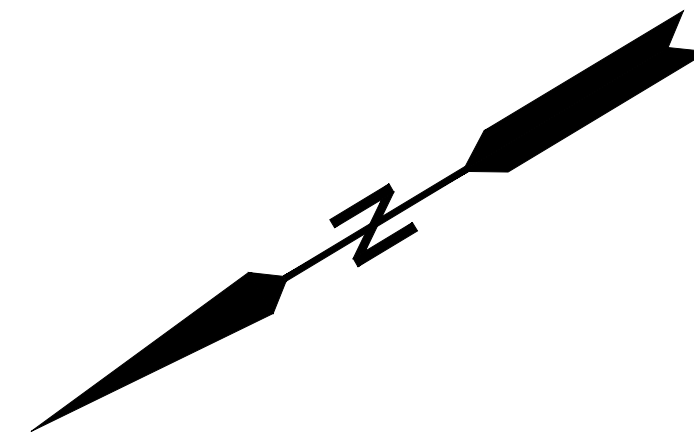
1. THE AREA DRAIN MUST BE CLEANED TWICE A YEAR, 1ST AT THE END OF FALL SEASON AND 2ND AT THE BEGINNING OF THE SPRING SEASON.
2. THE DRYWELLS MUST BE INSPECTED FOR THE SILT DEPOSITS AT THE BOTTOM AT THE END OF THE WINTER. IF REQUIRED BOTTOM LAYER OF SILT BE PROPERLY REMOVED IF MORE THAN ONE INCH IN DEPTH.
3. THE DRYWELLS MUST BE INSPECTED ONCE EVERY YEAR AND CLEANED AS DESCRIBED IN LINE 2 ABOVE. THE FREQUENCY OF INSPECTION MAY BE DECREASED TO ONCE EVERY THREE YEARS IF THERE ARE INSIGNIFICANT SILT DEPOSITS.
4. THE ITEMS TO BE ROUTINELY MAINTAINED ARE - A. CATCH BASINS (1), B. LEACHING FIELDS(2), C. DRYWELL WITH PUMPS

SHAWN DOUNG




DRAINAGE DETAILS

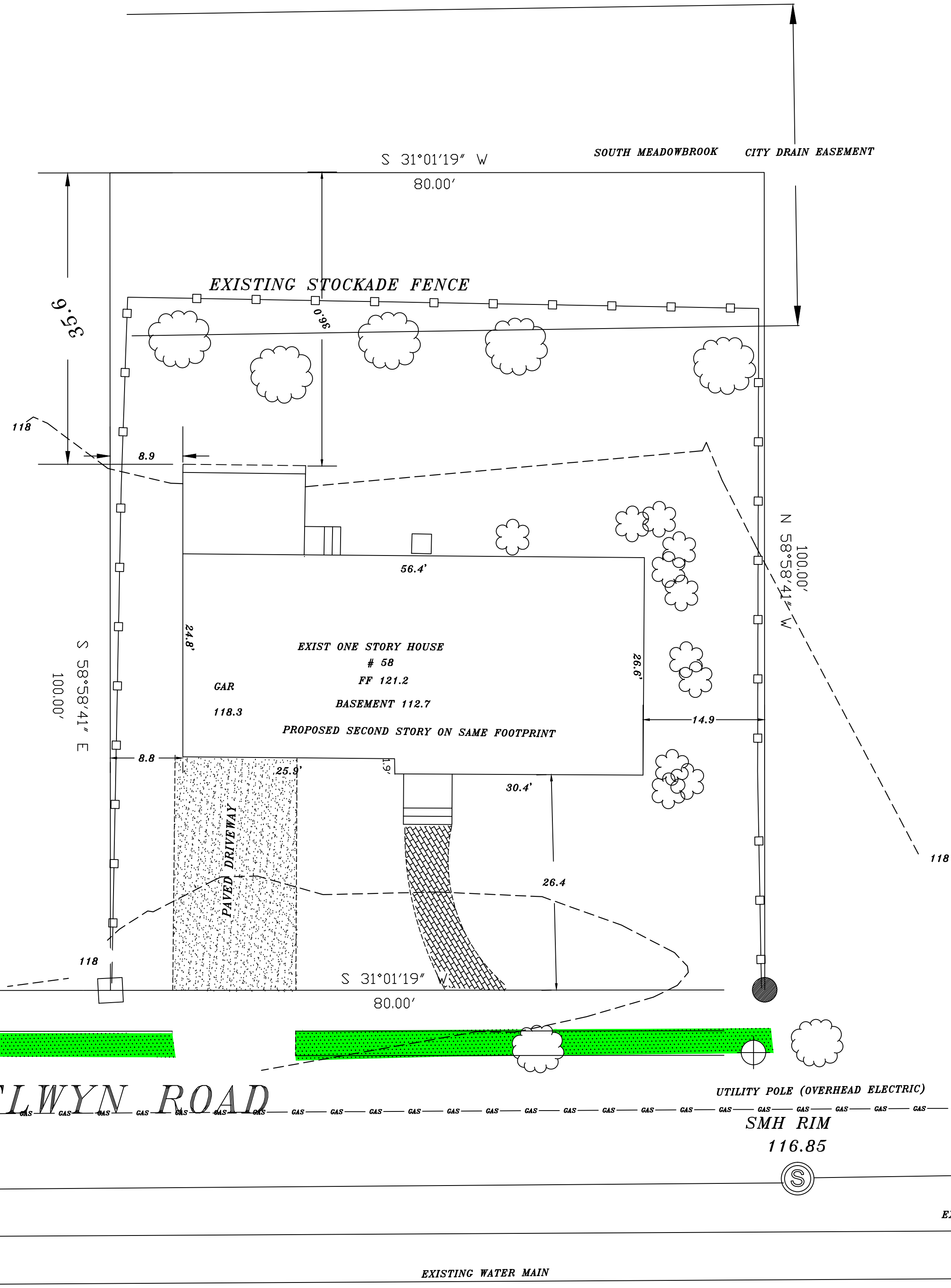
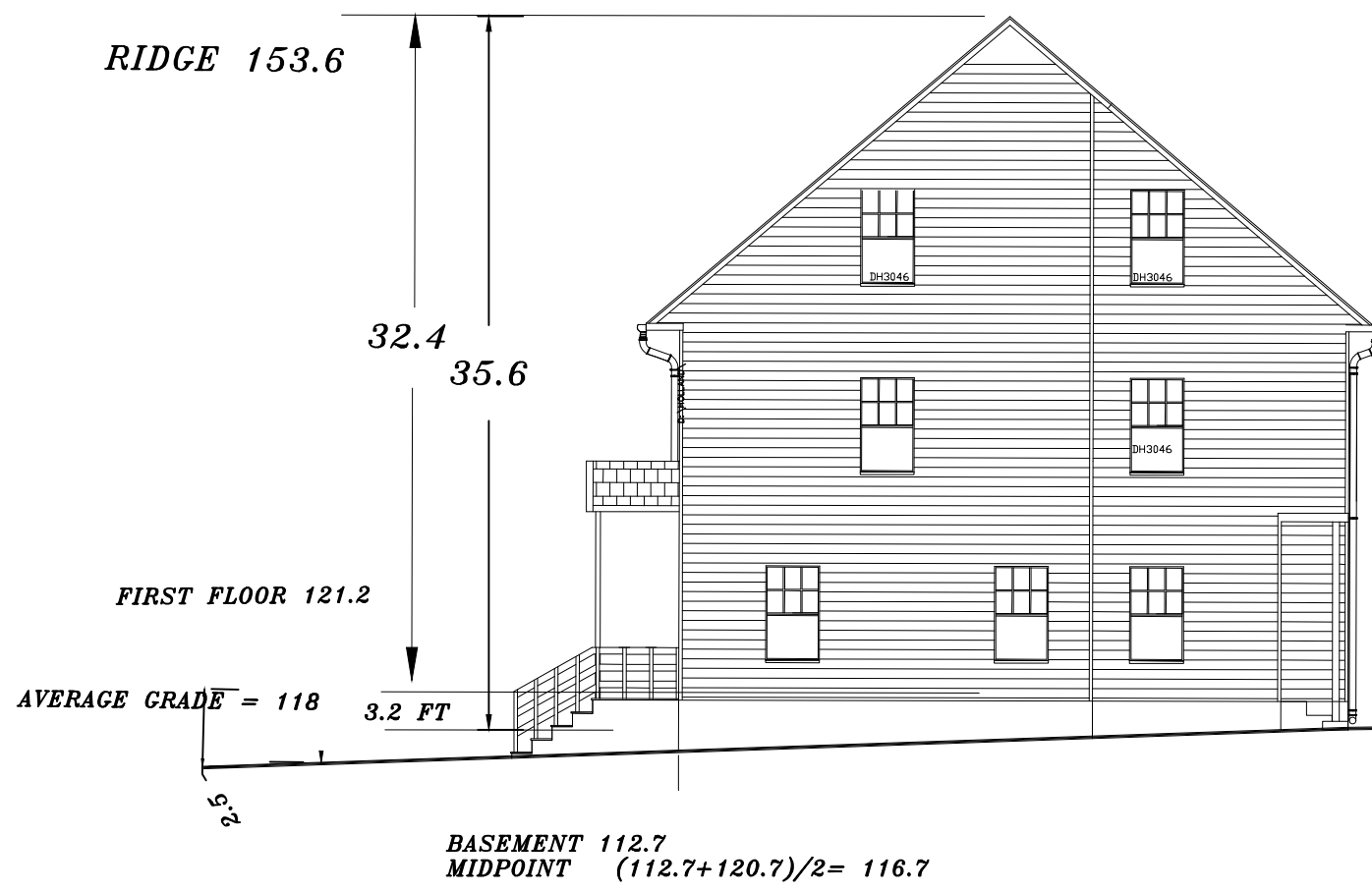
Project number	24025
Date	5/24/2024
Drawn by	MC/KL
Checked by	SK

C2



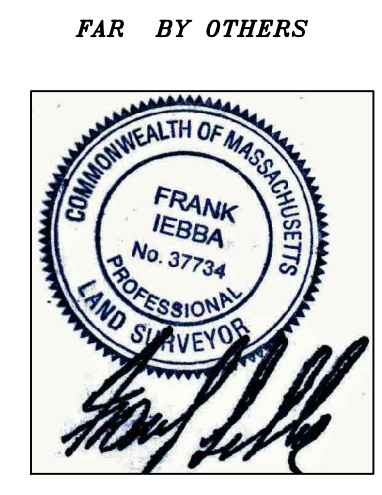
LOT AREA: 8000 SF +/-
 LOT COVER 22 %
 OPEN SPACE 72 %
 SEE NEWTON
 ORDINANCE REF 1-23
 FLOOD EL. = 120.4

-  TREE
-  SHRUB
-  UTILITY POLE



ZONING CHART

	REQUIRED: OLD LOT/NEW LOT		PROVIDED
	7000 SF	10000 SF	7000 SF
LOT AREA	7000 SF	10000 SF	7000 SF
FRONT YARD	25 FT	35 FT	26.4 FT
SIDE YARD	7.5 FT	10 FT	8.8 FT
REAR YARD	15 FT	15 FT	36 FT
LOT COVER	30 %	30 %	20 %
OPEN SPACE	50 %	50 %	74 %
BUILDING HEIGHT	36 FT	36 FT	35.6 FT
FRONTAGE	70 FT	80 FT	70 FT



TOPOGRAPHIC PLAN
 58 SELWYN ROAD
 NEWTON, MA
 SCALE 1 IN = 10 FT
 MAY 7, 2024



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