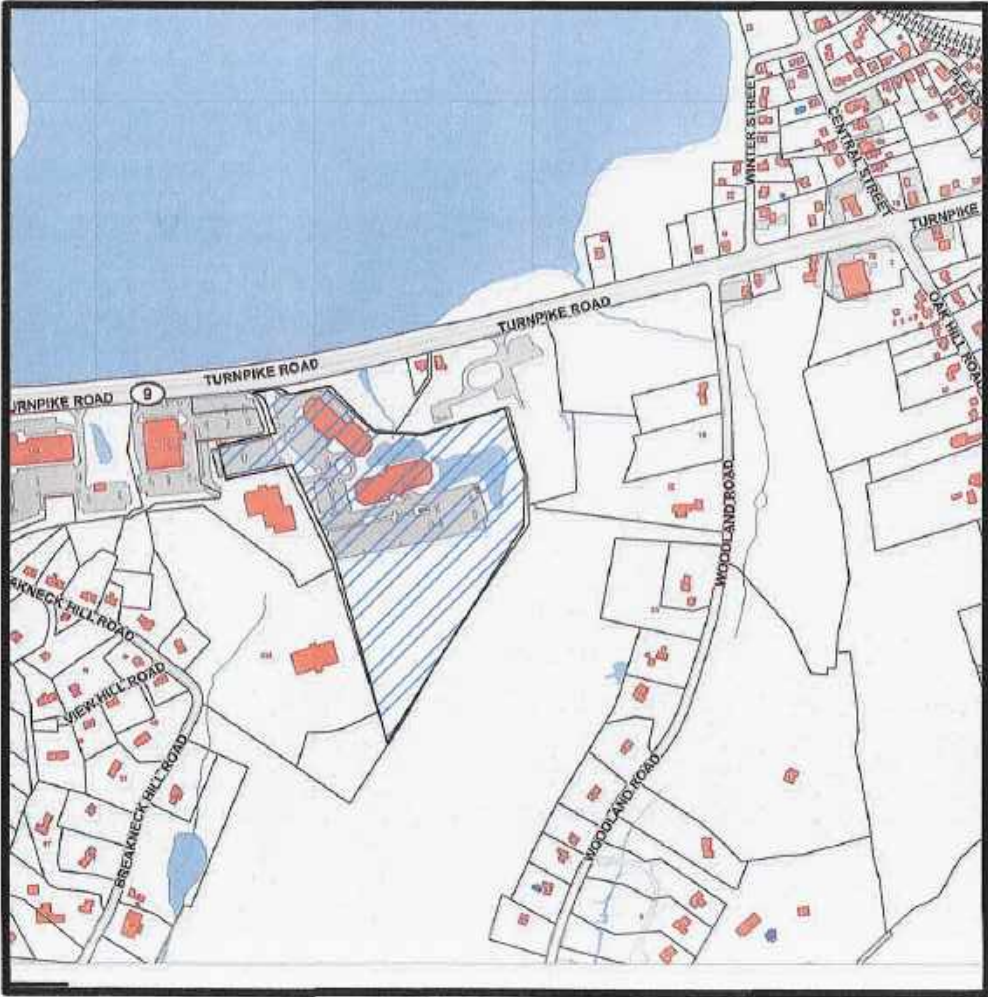


# SITE PLAN OF LAND AT 120 TURNPIKE ROAD

IN  
SOUTHBOROUGH, MASSACHUSETTS



LOCUS MAP

1" = 1,000'

**ZONING COMPLIANCE TABLE**

THE SITE IS LOCATED IN THE RESIDENCE A ZONING DISTRICT. THE FOLLOWING TABLE COMPARES THE RESIDENCE A ZONING REQUIREMENTS AND DIMENSIONS PROPOSED AT THIS SITE:

DIMENSION	REQUIREMENT	PROPOSED
MIN. LOT AREA	43,560	349,526 S.F.
MIN. FRONTAGE	150'	0'
MIN. FRONT YARD	35'	1,202(TO TURNPIKE RD)
MIN. SIDE YARD	25'	78'
MIN. REAR YARD	50'	30'
MAX. FLOOR AREA RATIO	0.18	0.24
MAX. BUILDING HEIGHT	35'	43.5'

**PROPOSED SCOPE:**

RESIDENTIAL:	
ONE BEDROOM FLATS:	37
TWO BEDROOM FLATS:	17
THREE BEDROOM FLATS:	6
TOTAL UNITS:	60
TOTAL BEDROOMS:	89

OFF-STREET PARKING:	
PARKING SPACES PROVIDED - RESIDENTIAL	114
PARKING SPACES PROVIDED	
GARAGES	20
SURFACE SPACES	94
TOTAL:	114

HC SPACES REQUIRED:	5
HC SPACES PROVIDED:	5(ALL VAN ACCESSIBLE)

UNIT SUMMARY						
STYLE	BEDROOMS	BATHROOMS	AREA(S.F.)	DISTRIBUTION BY AREA	NUMBER	DISTRIBUTION BY TYPE
UNIT A	1	1	915	53.1%	37	61.7%
UNIT B	2	2	1,178	5.5%	3	5.0%
UNIT C	2	2	1,273	16.0%	8	13.3%
UNIT D	2	2	1,292	6.1%	3	5.0%
UNIT E	2	2	1,346	6.3%	3	5.0%
UNIT F	3	2	1,355	6.4%	3	5.0%
UNIT G	3	2	1,386	6.5%	3	5.0%
TOTAL	89	83	63,710	--	60	--

OWNER & APPLICANT:

FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MASSACHUSETTS 01772

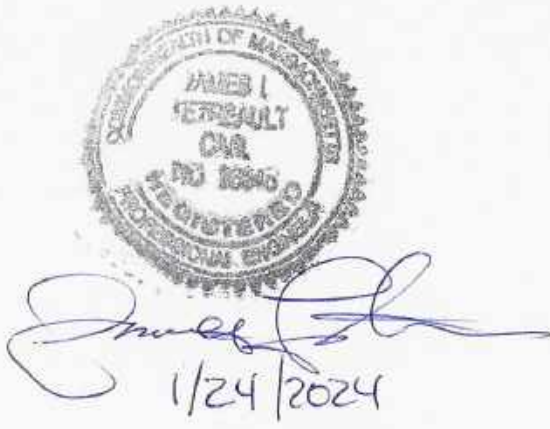
CLIENT NUMBER: 502  
JOB NUMBER: 245-502  
DRAWING : 250TURNPIKECURRENT.dwg

PREPARED BY

AZIMUTH LAND DESIGN, LLC  
118 TURNPIKE ROAD, SUITE 200  
SOUTHBOROUGH, MASSACHUSETTS 01772  
TELEPHONE (508) 485-0137  
EMAIL: james@azimuthlanddesign.co

DATE:

OCTOBER 25, 2023  
REVISED JANUARY 24, 2024



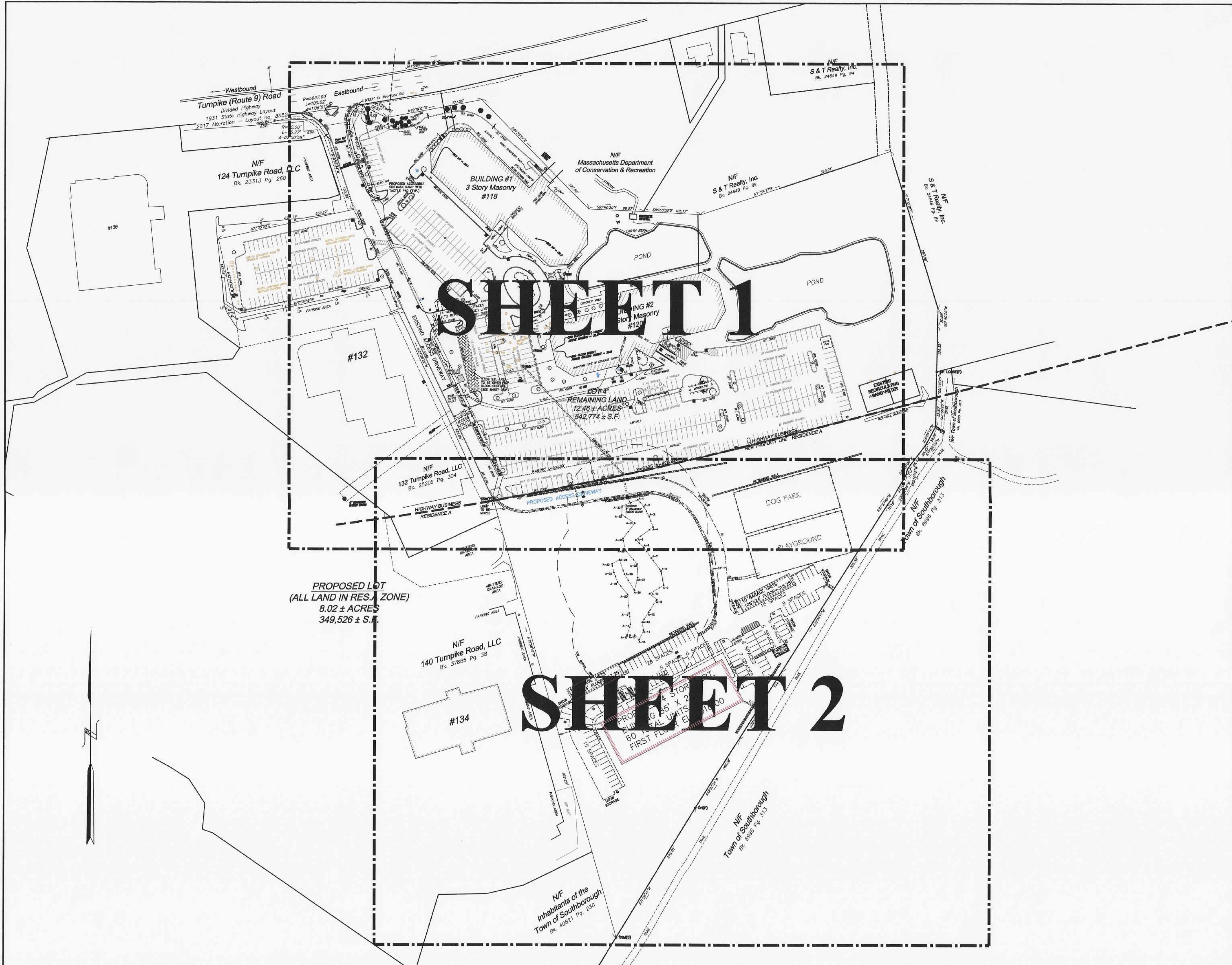
COMPREHENSIVE PERMIT PLAN APPROVED BY  
THE SOUTHBOROUGH ZONING BOARD OF  
APPEALS ON \_\_\_\_\_

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**SHEET DIRECTORY**

TITLE SHEET	(THIS SHEET)
KEY SHEET	
EXISTING CONDITIONS PLAN	E1 - E2
SITE LAYOUT PLAN	S1 - S2
GRADING & DRAINAGE PLAN	G1 - G2
UTILITY PLAN	U1 - U2
EROSION & SEDIMENTATION CONTROL PLAN	ESC1 - ESC2
PLAN AND PROFILE OF DRIVEWAY	P1
LANDSCAPING & LIGHTING PLANS (UNCHANGED)	LS1 - LS2
DETAIL SHEETS	D1 - D5





COMPREHENSIVE PERMIT PLAN APPROVED BY  
THE SOUTHBOROUGH ZONING BOARD OF  
APPEALS ON \_\_\_\_\_

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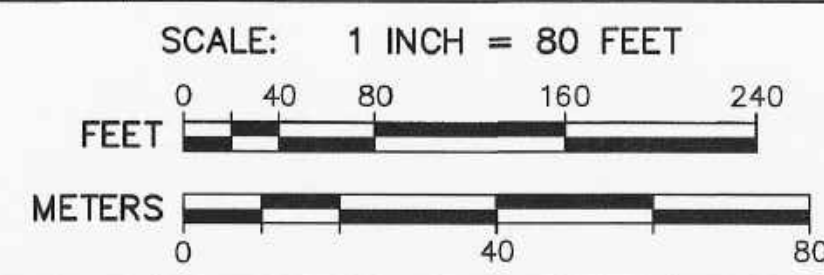
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**AZIMUTH LAND DESIGN, LLC**

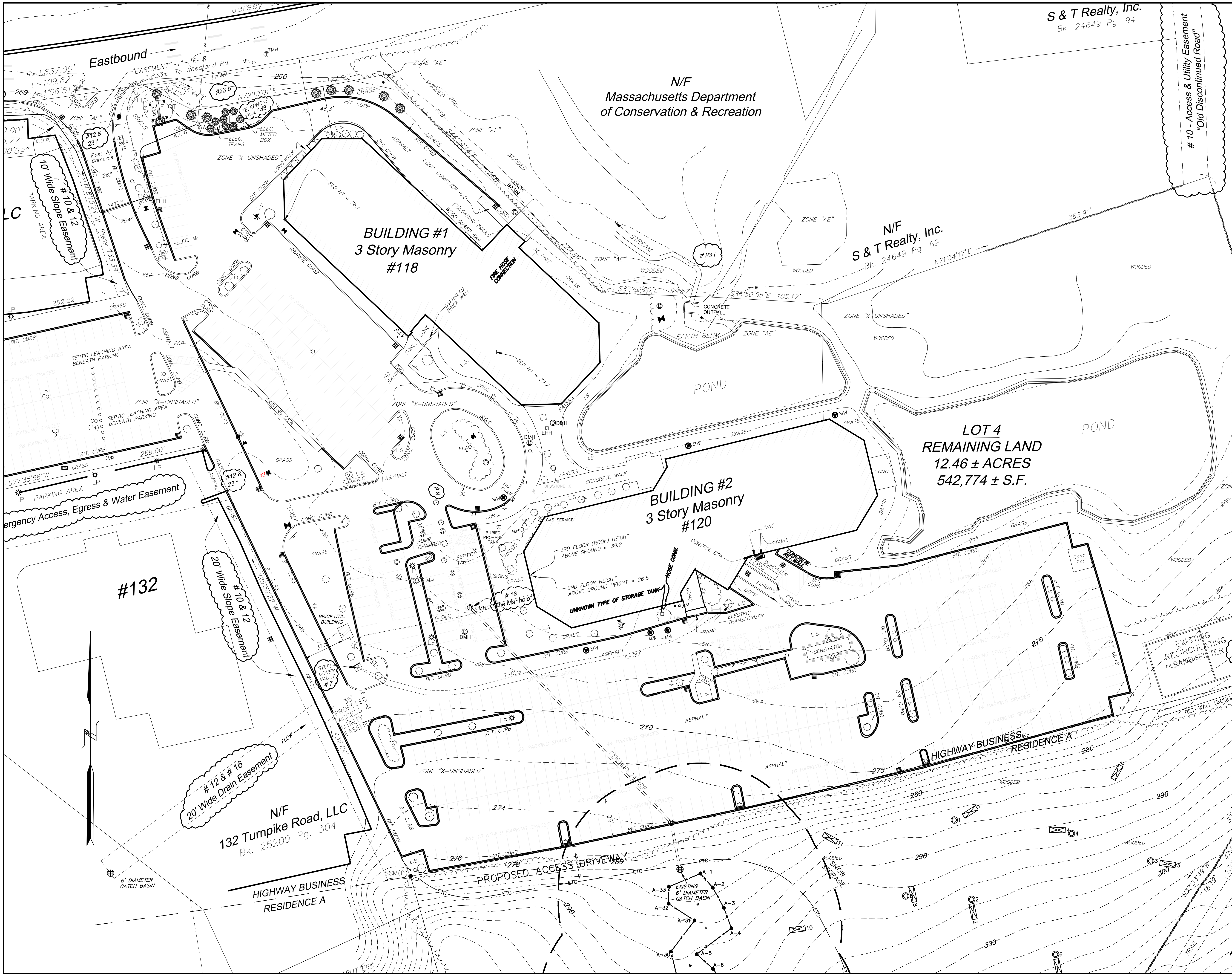
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-485-0137 jverreault@azimuthlanddesign.com

CLT. NO.	504	JOB NO.	290-504
DATE:	OCTOBER 25, 2023	DWG NO.	120TURNPIKECURRENT
REVISIONS			
DATE:	DESCRIPTION		
1/24/24	TOWN REVIEW		



**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
**FD 120 TURNPIKE, LLC**  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772





KEY

- EXISTING 2' ELEVATION CONTOUR
- EXISTING EDGE OF PAVEMENT
- UTILITY POLE
- OHW
- OVERHEAD WIRES
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING TREE LINE
- OFFICIAL DEEP OBSERVATION HOLE
- OFFICIAL PERCOLATION TEST

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1) THE APPLICANT'S DEED TO THIS PROPERTY CAN BE FOUND AT THE WORCESTER DISTRICT REGISTRY OF DEEDS AT BOOK 63088 PAGE 248. THAT DEED REFERENCES THE PLAN RECORDED AT PLAN BOOK 517 PLAN 120 FOR PROPERTY BOUNDARIES. THIS SITE IS SHOWN AS LOT 120 PARCEL 4 ON SOUTHBOROUGH ASSESSOR'S MAP 37.

2) OVERALL SITE AREA IS 20.48 ACRES AND THE PROPERTY IS LOCATED IN BOTH THE HIGHWAY BUSINESS AND RESIDENCE A ZONING DISTRICTS.

3) THE SUBJECT OF THIS SITE PLAN IS THE CREATION OF SEPARATE LOT AT THE SOUTH END OF THIS PROPERTY WITH THE NEW BOUNDARY BEING THE ZONING DISTRICT BOUNDARY AND THE CONSTRUCTION OF AN APARTMENT BUILDING WITH APPURTENANT PARKING AND UTILITIES ON THAT NEW LOT.

4) THERE WILL BE NO CHANGE TO THE EXISTING SEPTIC SYSTEM OR OTHER INFRASTRUCTURE ON THE PROPERTY.

5) THE WETLAND RESOURCE AREA SHOWN SOUTH OF THE EXISTING PARKING AREA WAS DELINEATED BY GODDARD CONSULTING, LLC.



**AZIMUTH LAND DESIGN, LLC**  
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508) 485-0137 jamest@azimuthlanddesign.co

CLT. NO.	504	JOB NO.	290-504
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DATE:	DESCRIPTION		
1/24/24	TOWN REVIEW		

SCALE: 1 INCH = 40 FEET

0 20 40 80 120

FEET

0 20 40

METERS

**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

EXISTING CONDITIONS PLAN E1





KEY

EXISTING 2' ELEVATION CONTOUR

EXISTING EDGE OF PAVEMENT

UTILITY POLE

OVERHEAD WIRES

WETLAND EDGE

100' BUFFER ZONE EDGE

STONE WALL

EXISTING TREE LINE

OFFICIAL DEEP OBSERVATION HOLE

OFFICIAL PERCOLATION TEST

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

\_\_\_\_\_

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- NOTES:
- 1) THE APPLICANT'S DEED TO THIS PROPERTY CAN BE FOUND AT THE WORCESTER DISTRICT REGISTRY OF DEEDS AT BOOK 63088 PAGE 248. THAT DEED REFERENCES THE PLAN RECORDED AT PLAN BOOK 517 PLAN 120 FOR PROPERTY BOUNDARIES. THIS SITE IS SHOWN AS LOT 120 PARCEL 4 ON SOUTHBOROUGH ASSESSOR'S MAP 37.

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118 Turnpike Road, Suite 200, Southborough, MA 01772

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DATE:	DESCRIPTION		
1/24/24	TOWN REVIEW		

SCALE: 1 INCH = 40 FEET

0204080120

FEET

02040

METERS

SITE PLAN OF LAND

AT 120 TURNPIKE ROAD

IN

SOUTHBOROUGH, MASS.

OWNER & APPLICANT:

FD 120 TURNPIKE, LLC

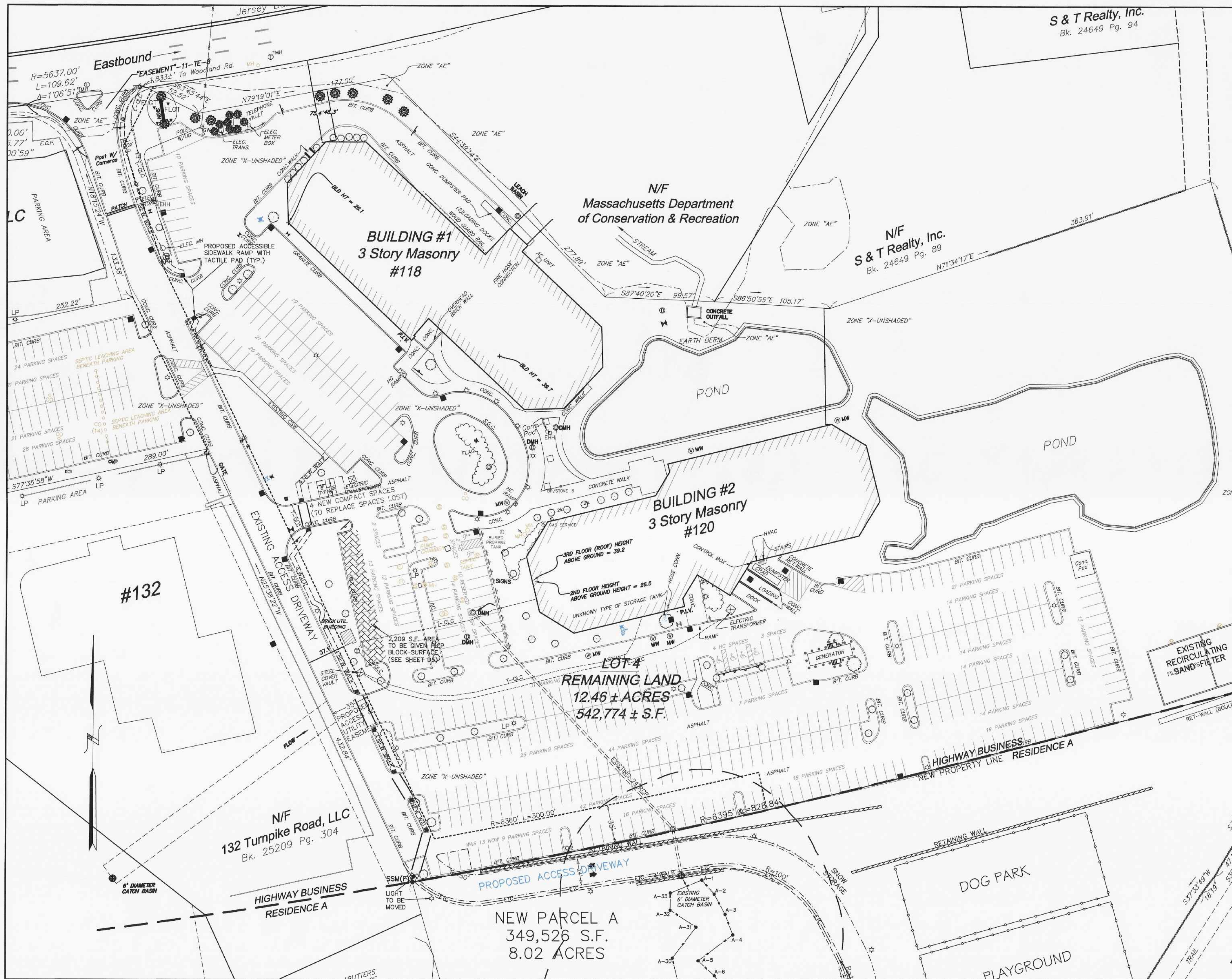
118 TURNPIKE ROAD, SUITE 300

SOUTHBOROUGH, MA 01772

EXISTING CONDITIONS PLAN

E2





**KEY**

- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING GRADE CONTOUR
- OFFICIAL DEEP OBSERVATION HOLE
- OFFICIAL PERCOLATION TEST
- PROPOSED CURB
- PROPOSED RETAINING WALL
- PROPOSED GUARD RAIL
- PROPOSED POLE LIGHT

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

\_\_\_\_\_

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**NOTES:**

- 1) THE NEW PROPERTY BOUNDARY WILL BE CREATED IN THE EXACT LOCATION OF THE ZONING DISTRICT BOUNDARY. THE PROPOSED APARTMENT BUILDING AND ASSOCIATED DEVELOPMENT WILL BE ON THE 349,526 S.F. OR 8.02 ACRE PARCEL SOUTH OF THAT ZONING AND PROPERTY BOUNDARY LINE. IT WILL TAKE UP ALL THE LAND ZONED RESIDENCE A.
- 2) THE REMAINING LAND NORTH OF THAT LINE WILL BE ALL THE LAND ZONED HIGHWAY BUSINESS AND WILL HAVE AN AREA OF 542,774 S.F. OR 12.46 ACRES.
- 3) THE NEW PARCEL WILL GAIN ACCESS TO ROUTE 9 VIA A PROPOSED 35 FOOT WIDE ACCESS AND UTILITY EASEMENT.

**AZIMUTH LAND DESIGN, LLC**  
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-485-0137 jamest@azimuthlanddesign.co

CLT. NO. 504

DATE: OCTOBER 25, 2023

1/24/24 TOWN REVIEW

JOB NO. 290-504

DWG NO. 120TURNPIKECURRENT

REVISIONS

DATE:	DESCRIPTION
1/24/24	TOWN REVIEW

SCALE: 1 INCH = 40 FEET

0 20 40 80 120

FEET

0 20 40

METERS

**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

SITE LAYOUT PLAN

S1









**KEY**

- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING GRADE CONTOUR
- OFFICIAL DEEP OBSERVATION HOLE
- OFFICIAL PERCOLATION TEST
- PROPOSED CURB
- PROPOSED RETAINING WALL
- PROPOSED GUARD RAIL
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED SEWER MANHOLE
- PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED POLE LIGHT
- PROPOSED ELEVATION CONTOUR
- PROPOSED SPOT GRADE

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

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**NOTES:**

- 1) THE MAXIMUM GRADE OF THE PROPOSED ACCESS DRIVEWAY WILL BE 9% IN THE STRETCH WEST OF THE PROPOSED PLAYGROUND.
- 2) THE GRADES OF THE DRIVING AISLE AMID PARKING SPACES ARE 5% OR LESS.
- 3) GRADES IN THE AREA OF THE HANDICAPPED ACCESSIBLE PARKING SPACES WILL NOT EXCEED 2%.
- 4) ALL PROPOSED RETAINING WALLS SHALL BE CONGLIARO BLOCK (OR APPROVED EQUAL) AND WHERE OVER 4 FEET A STAMPED DESIGN SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT.

**AZIMUTH LAND DESIGN, LLC**  
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Telephone (508) 485-0137 james@azimuthlanddesign.com

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REVISIONS			
DATE:	1/24/24	DESCRIPTION	TOWN REVIEW

SCALE: 1 INCH = 40 FEET

0 20 40 80 120

FEET

0 20 40

METERS

**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772  
GRADING & DRAINAGE PLAN G1





KEY	
	EXISTING EDGE OF PAVEMENT
	WETLAND EDGE
	100' BUFFER ZONE EDGE
	STONE WALL
	EXISTING GRADE CONTOUR
	OFFICIAL DEEP OBSERVATION HOLE
	OFFICIAL PERCOLATION TEST
	PROPOSED CURB
	PROPOSED RETAINING WALL
	PROPOSED GUARD RAIL
	PROPOSED DRAIN MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED SEWER MANHOLE
	PROPOSED WATER LINE
	PROPOSED HYDRANT
	PROPOSED POLE LIGHT
	PROPOSED ELEVATION CONTOUR
	PROPOSED SPOT GRADE

COMPREHENSIVE PERMIT PLAN APPROVED BY  
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APPEALS ON \_\_\_\_\_

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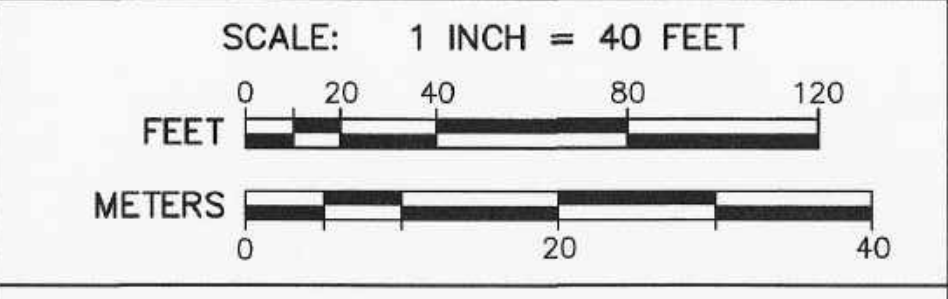
- NOTES:
- 1) THE MAXIMUM GRADE OF THE PROPOSED ACCESS DRIVEWAY WILL BE 9% IN THE STRETCH WEST OF THE PROPOSED PLAYGROUND.
  - 2) THE GRADES OF THE DRIVING AISLE AMID PARKING SPACES ARE 5% OR LESS.
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**AZIMUTH LAND DESIGN, LLC**

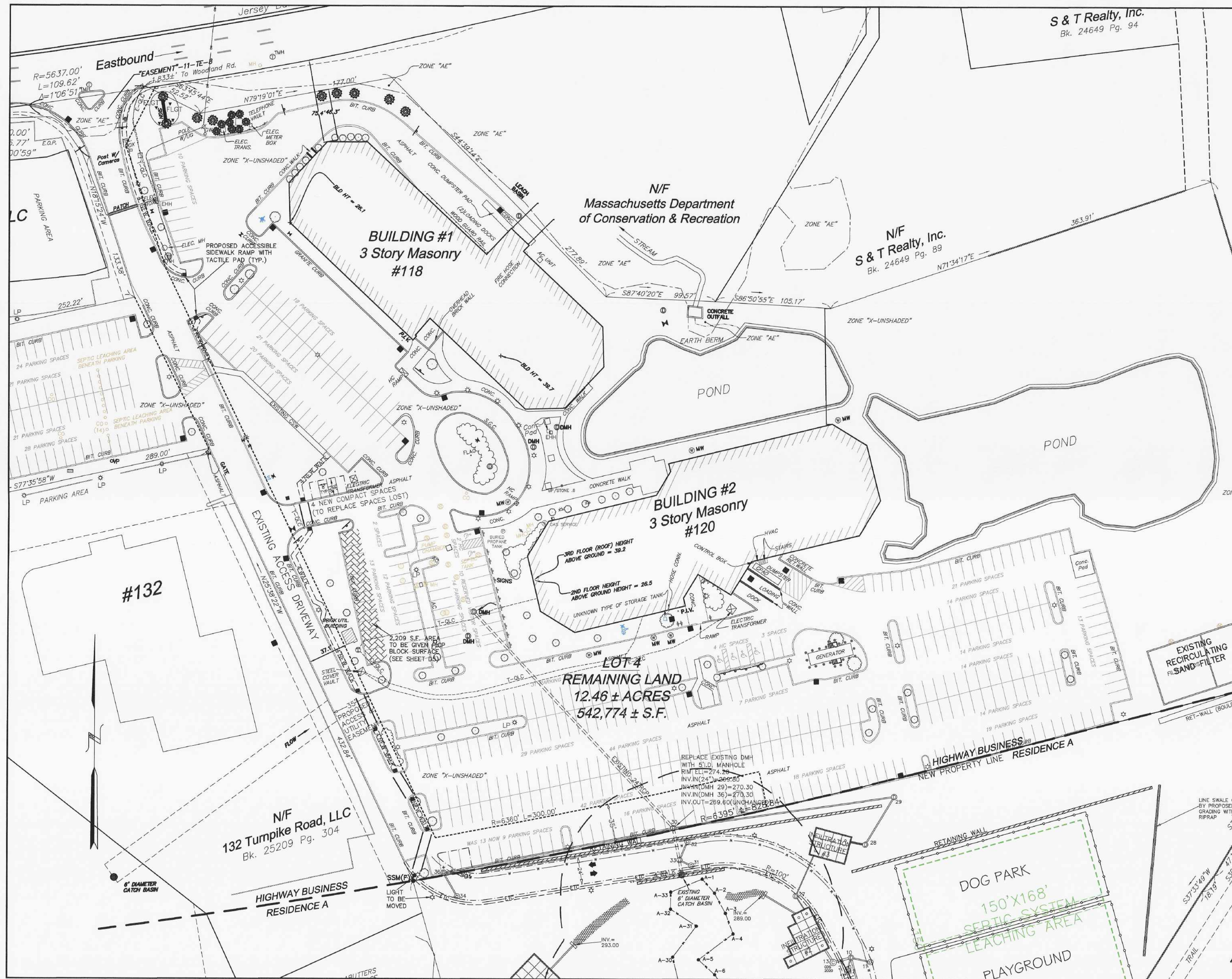
*Professional Engineers & Erosion Control Specialists*  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-455-0137 james@azimuthlanddesign.co

CLT. NO.	504	JOB NO.	290-504
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DATE:	DESCRIPTION		
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**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
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OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772  
GRADING & DRAINAGE PLAN G2





**KEY**

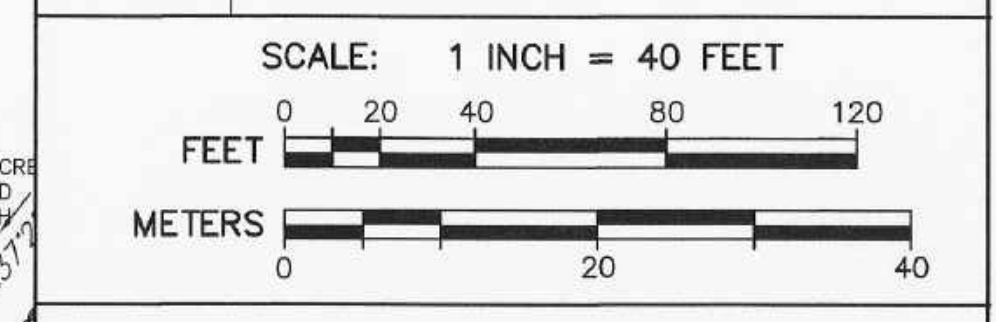
- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- PROPOSED CURB
- PROPOSED RETAINING WALL
- PROPOSED GUARD RAIL
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED SEWER MANHOLE
- PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED POLE LIGHT
- ETC
- PROPOSED ELECTRIC CONDUIT

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_



**AZIMUTH LAND DESIGN, LLC**  
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508) 455-0137 james@azimuthlanddesign.com

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DATE:	1/24/24	DESCRIPTION	TOWN REVIEW



**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
**FD 120 TURNPIKE, LLC**  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

UTILITY PLAN U1





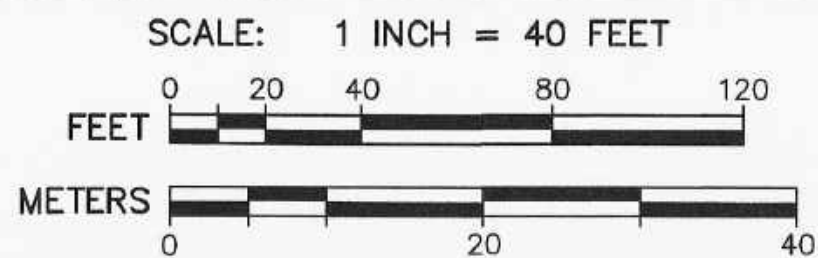
**KEY**

- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
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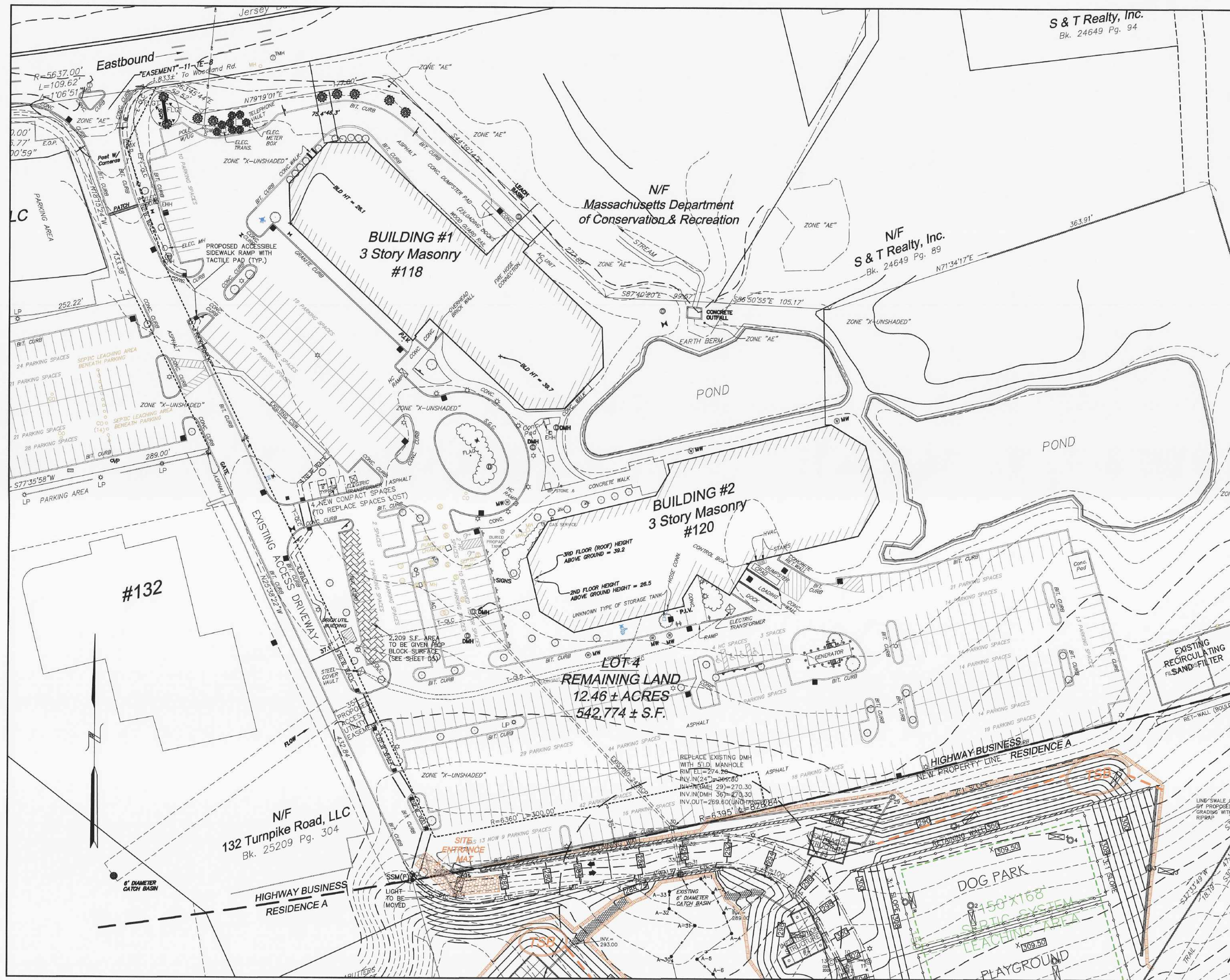
**AZIMUTH LAND DESIGN, LLC**  
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118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-455-0137 james@azimuthlanddesign.co

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**SITE PLAN OF LAND**  
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IN  
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OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772  
UTILITY PLAN U2





S & T Realty, Inc.  
Bk. 24649 Pg. 94

N/F  
S & T Realty, Inc.  
Bk. 24649 Pg. 89

N/F  
132 Turnpike Road, LLC  
Bk. 25209 Pg. 304

**KEY**

- EXISTING EDGE OF PAVEMENT
- WFL
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING GRADE CONTOUR
- OFFICIAL DEEP OBSERVATION HOLE
- OFFICIAL PERCOLATION TEST
- PROPOSED CURB
- PROPOSED RETAINING WALL
- PROPOSED GUARD RAIL
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
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- PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED POLE LIGHT
- PROPOSED ELEVATION CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED SEDIMENT CONTROL BARRIER
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED INTERCEPTOR SWALE

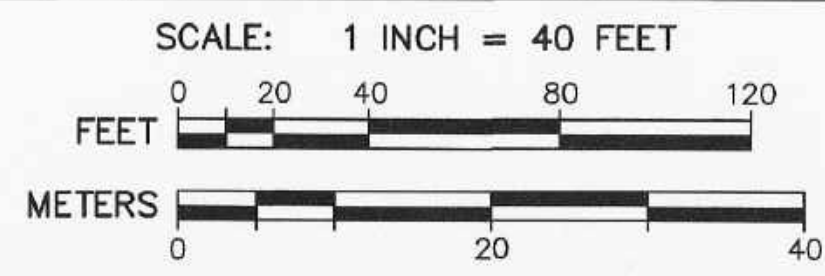
**TSB**

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

**AZIMUTH LAND DESIGN, LLC**

Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone 508-485-0137 jamest@azimutlanddesign.co

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**SITE PLAN OF LAND**  
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IN  
SOUTHBOROUGH, MASS.

OWNER & APPLICANT:  
**FD 120 TURNPIKE, LLC**  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

**EROSION & SEDIMENTATION CONTROL PLAN**

ESC1





**KEY**

- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING GRADE CONTOUR
- OFFICIAL DEEP OBSERVATION HOLE
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- PROPOSED SPOT GRADE
- PROPOSED EROSION CONTROL BARRIER
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED INTERCEPTOR SWALE

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

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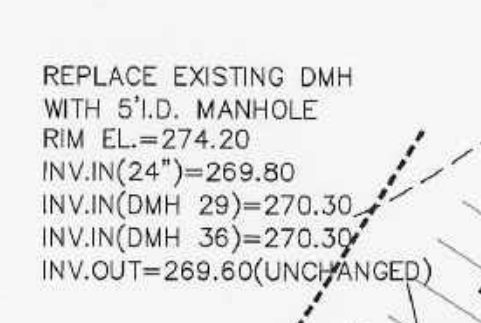
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118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-485-0137 james@azimuthlanddesign.co

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1/24/24		TOWN REVIEW	
SCALE: 1 INCH = 40 FEET			
FEET 			
METERS 			

**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
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OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772  
EROSION & SEDIMENTATION  
CONTROL PLAN





\_\_\_\_\_ 100' BUFFER ZONE EDGE  
 - - - - - 2' CONTOUR  
 \_\_\_\_\_ 10' CONTOUR

----- PROPOSED CURB

7④ PROPOSED CATCH BASIN

PROPOSED SEWER MAINS  
EXISTING UTILITY POLE

\_\_\_\_ ETC \_\_\_\_

PROPOSED GUARD RAIL

PROPOSED RETAINING WALL

STONE WALL

\_\_\_\_\_

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CLT. NO.	JOB NO.
502	245-502

DATE: JANUARY 24, 2024	DWG NO. 120TURNPIKECURRENT
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HORIZONTAL SCALE: 1 INCH = 40 FEET  
VERTICAL SCALE: 1 INCH = 1 FEET

VERTICAL SCALE: 1 INCH = 4 FEET

0 10 20 40 80 120

FEET

A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 10, 20, 40, 80, and 120. The bar is divided into 12 equal segments, each representing 10 feet. The first segment (0-10) is black, the second (10-20) is white, and the third (20-40) is black. The fourth segment (40-80) is white and is twice the length of the others. The fifth segment (80-120) is black and is also twice the length of the others.

	0	5	10	20	30	40
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OWNER & APPLICANT:

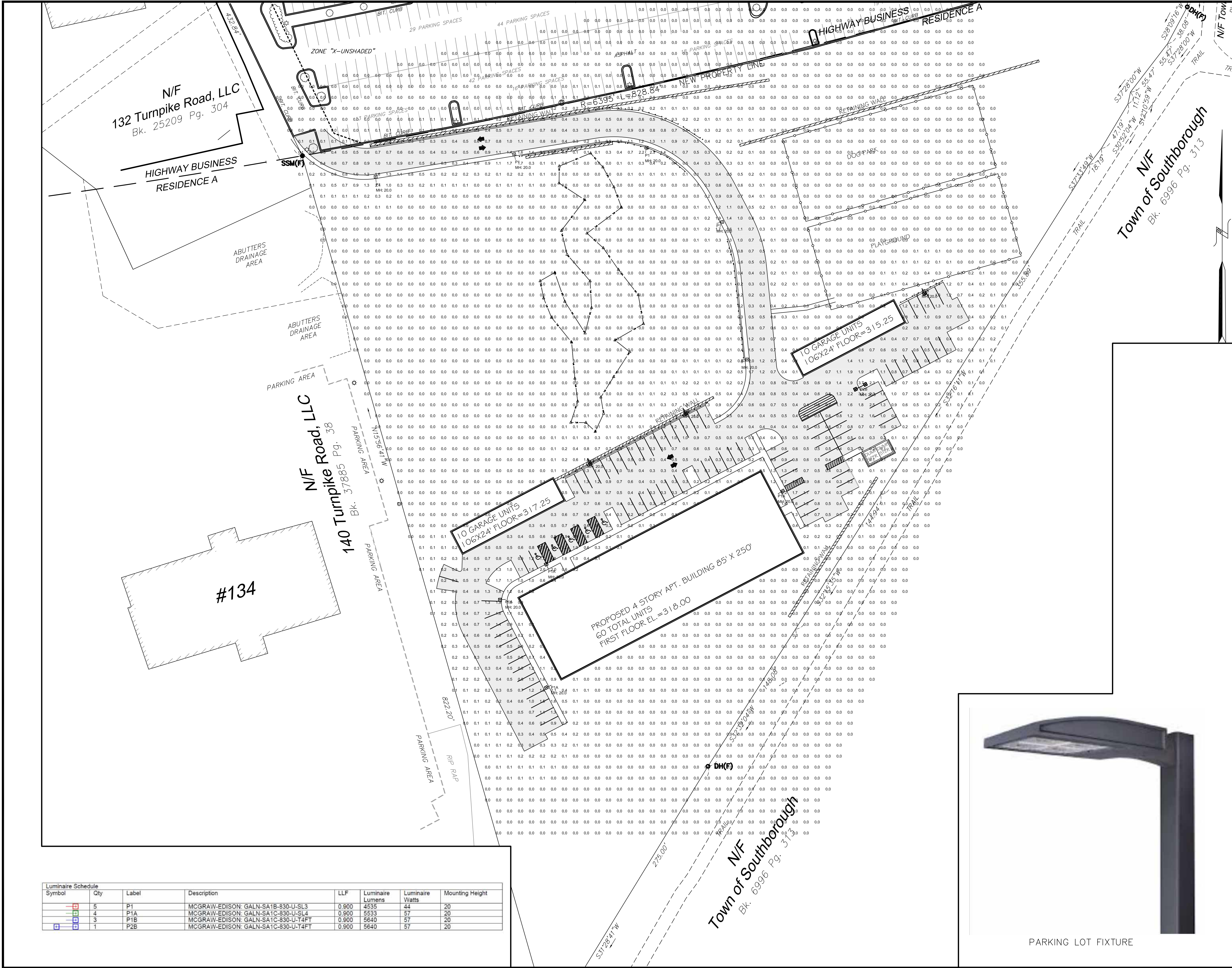
PLAN AND PROFILE OF ACCESS DRIVEWAY  
P1





LANDSCAPE PLAN LS1





**KEY**

- EXISTING EDGE OF PAVEMENT
- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- STONE WALL
- EXISTING GRADE CONTOUR
- OFFICIAL DEEP OBSERVATION HOLE
- OFFICIAL PERCOLATION TEST
- PROPOSED CURB
- PROPOSED RETAINING WALL
- PROPOSED GUARD RAIL
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED SEWER MANHOLE
- PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED POLE LIGHT
- PROPOSED ELEVATION CONTOUR
- PROPOSED SPOT GRADE

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

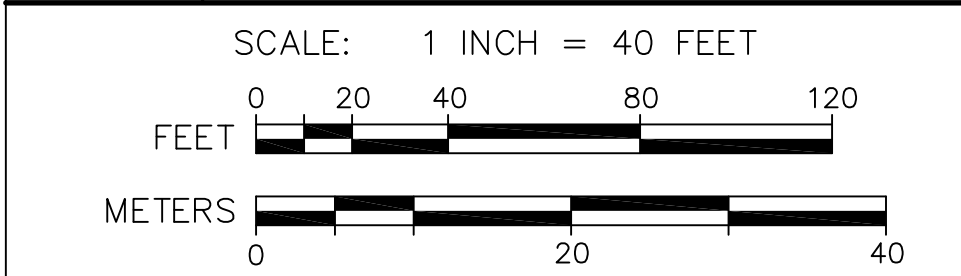
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**AZIMUTH LAND DESIGN, LLC**  
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, Suite 200, Southborough, MA 01772  
Telephone (508)-485-0137 james@azimuthlanddesign.co

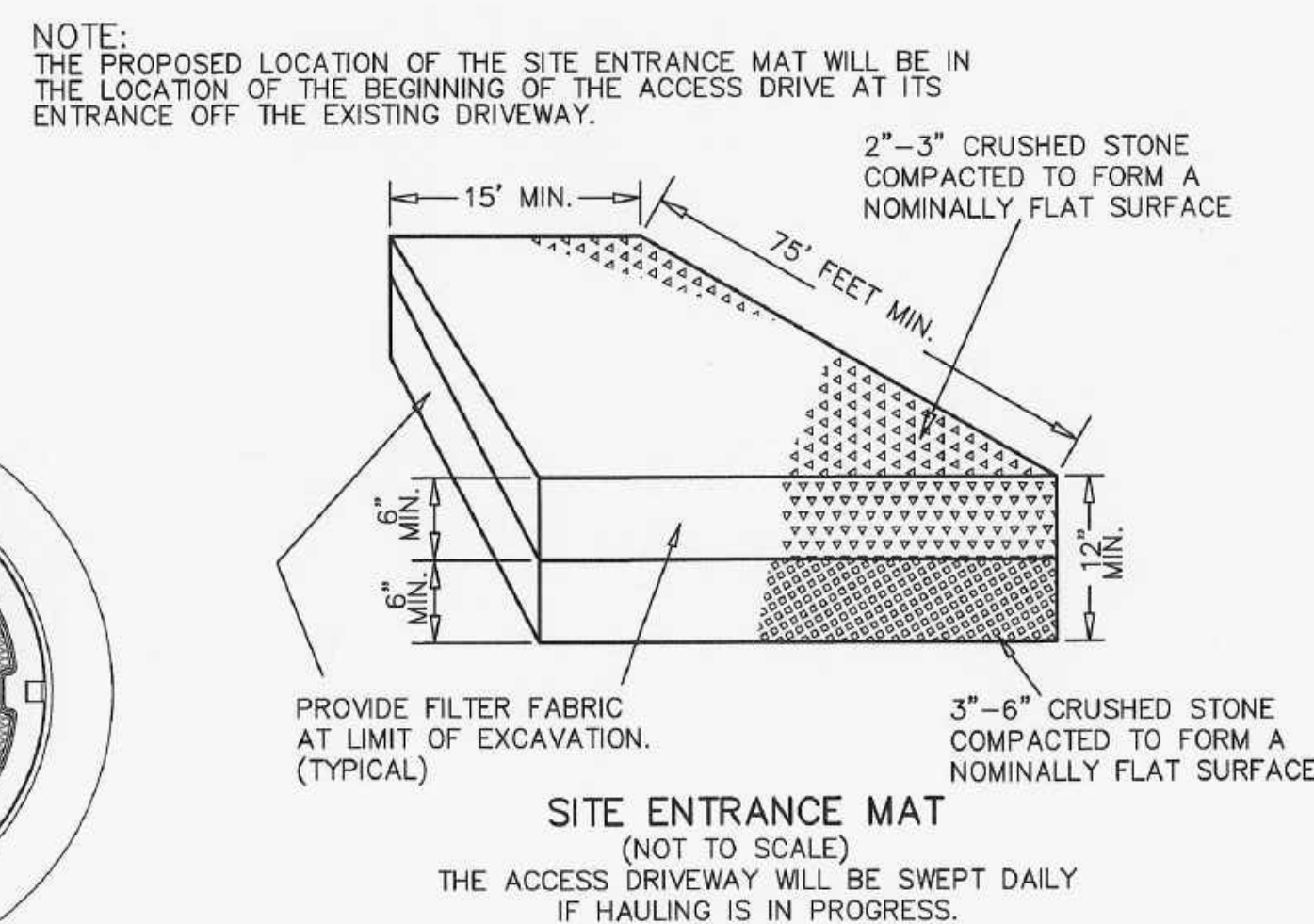
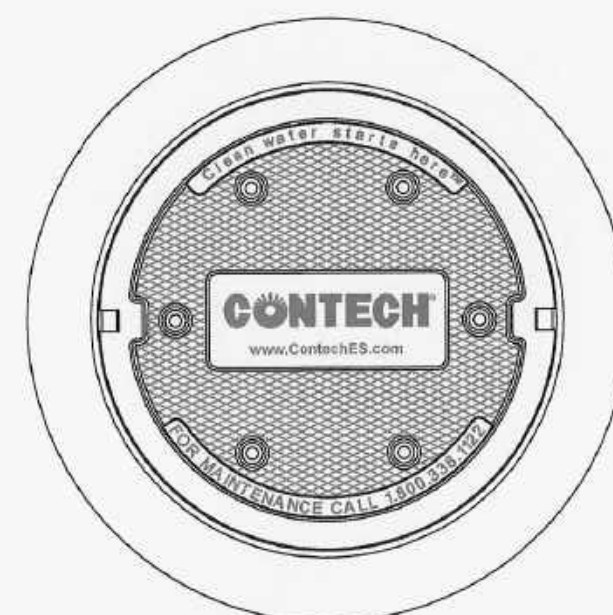
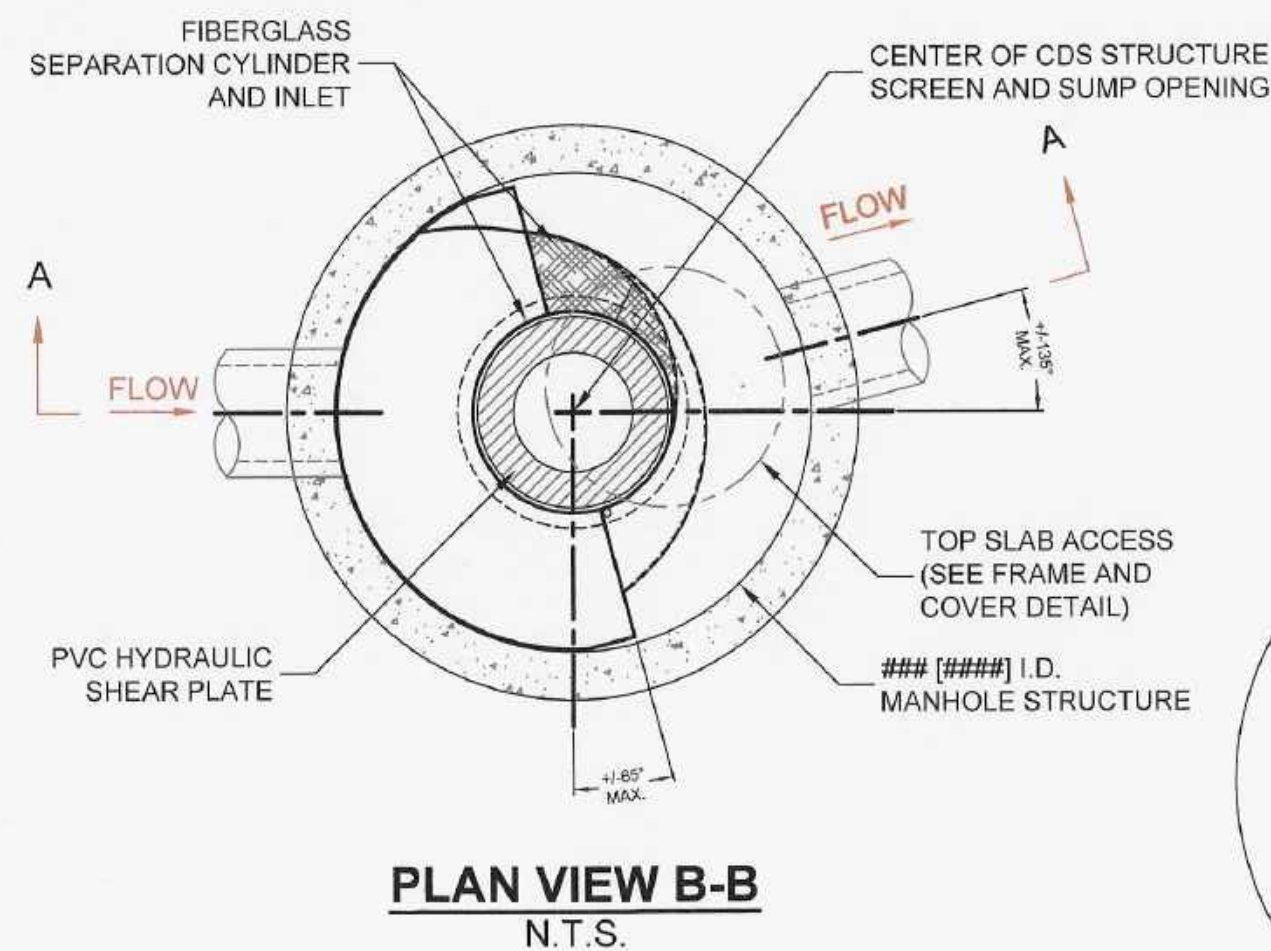
CLT. NO.	504	JOB NO.	290-504
DATE:	OCTOBER 25, 2023	DWG NO.	120TURNPIKECURRENT
REVISIONS			
DATE:	DESCRIPTION		
1/24/2024	Town Review		



**SITE PLAN OF LAND**  
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.  
OWNER & APPLICANT:  
FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772  
LIGHTING PLAN LS2

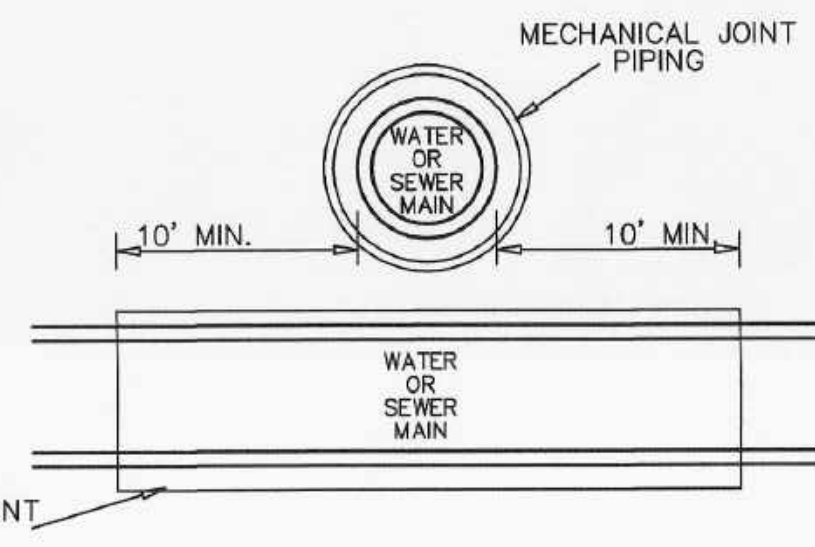
Luminaire Schedule							
Symbol	Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	5	P1	MCGRAW-EDISON: GALN-SA1B-830-U-SL3	0.900	4535	44	20
	4	P1A	MCGRAW-EDISON: GALN-SA1C-830-U-SL4	0.900	5533	57	20
	3	P1B	MCGRAW-EDISON: GALN-SA1C-830-U-T4FT	0.900	5640	57	20
	1	P2B	MCGRAW-EDISON: GALN-SA1C-830-U-T4FT	0.900	5640	57	20





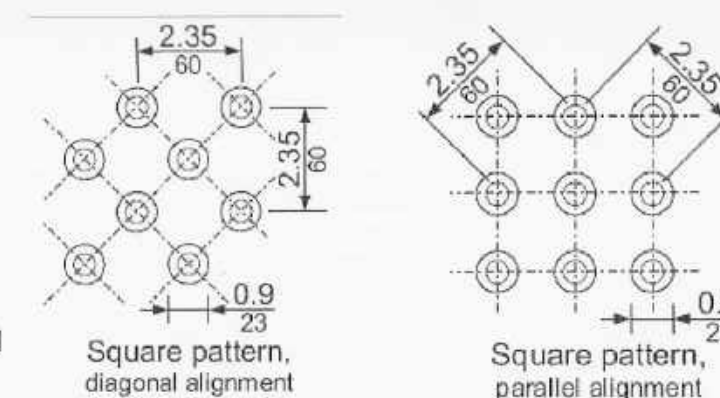
NOTE: SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET TO ALL WATER SUPPLY LINES. WHEN A 10 FOOT HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN.

HOWEVER, WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHOULD BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SEE DETAIL.



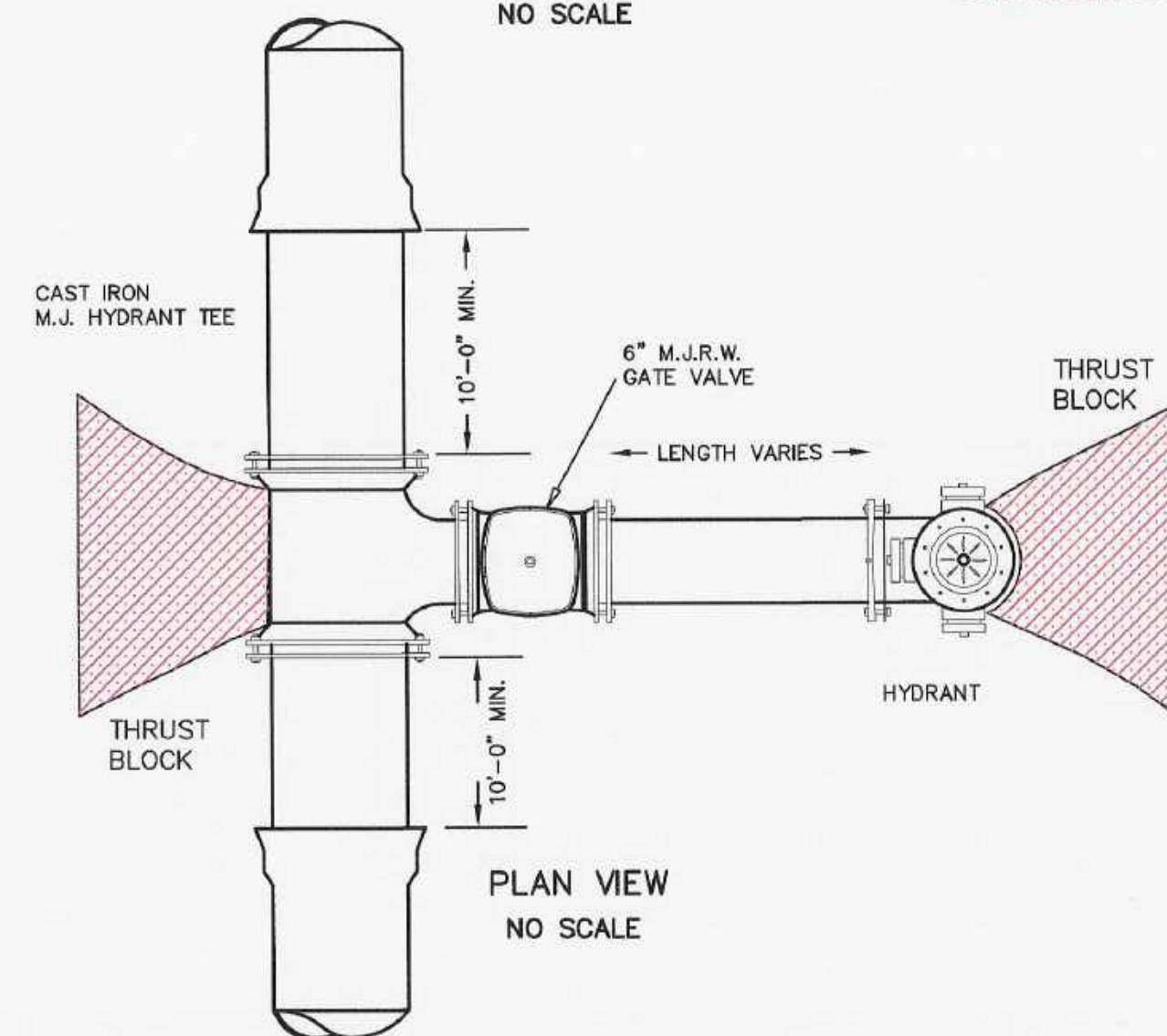
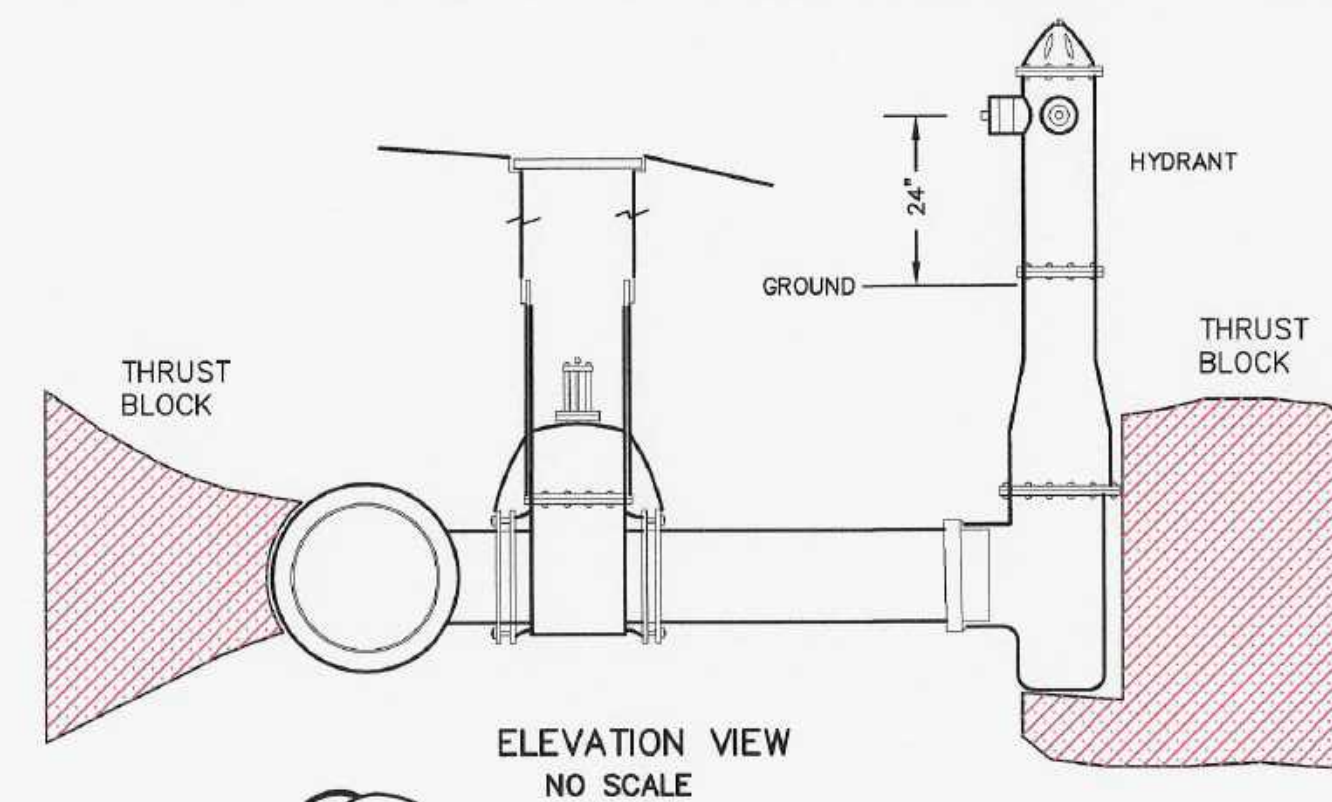
MECHANICAL JOINT PIPING OF BOTH WATER AND SEWER SHALL EXTEND FOR 10 FEET FROM THE INTERSECTION OF THE MAINS AND ALONG EACH MAIN. CENTER ONE FULL PIPE LENGTH OF BOTH WATER AND SEWER OVER THE INTERSECTION.

**WATER MAIN/SEWER MAIN CROSSING**  
WHERE 18" VERTICAL CLEARANCE IS NOT PROVIDED  
(NOT TO SCALE)

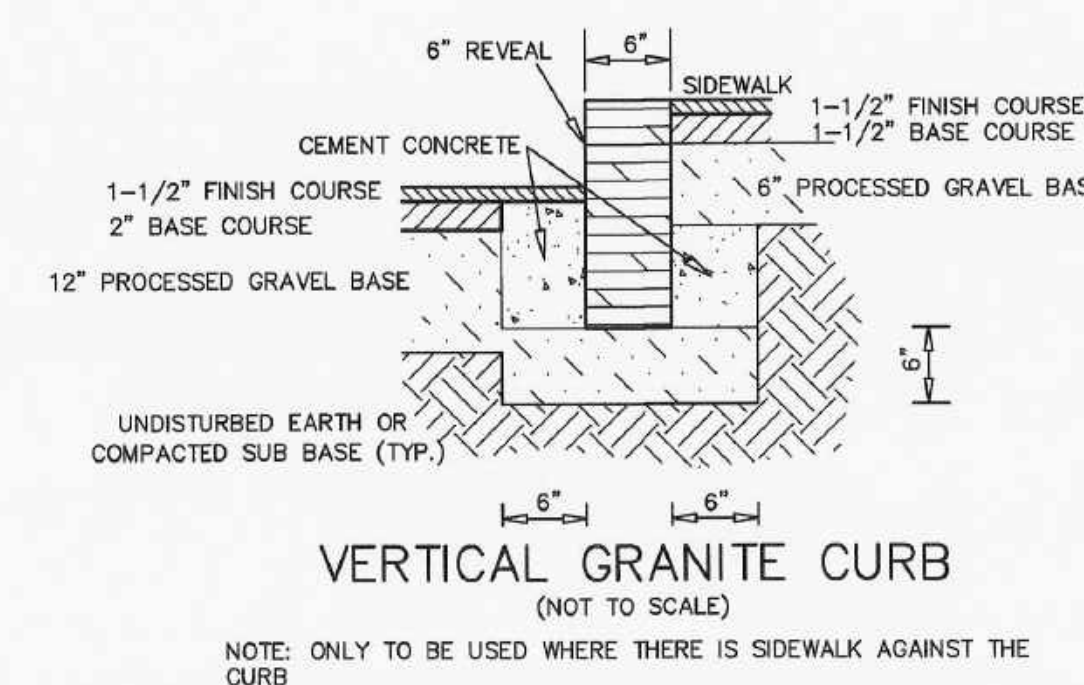
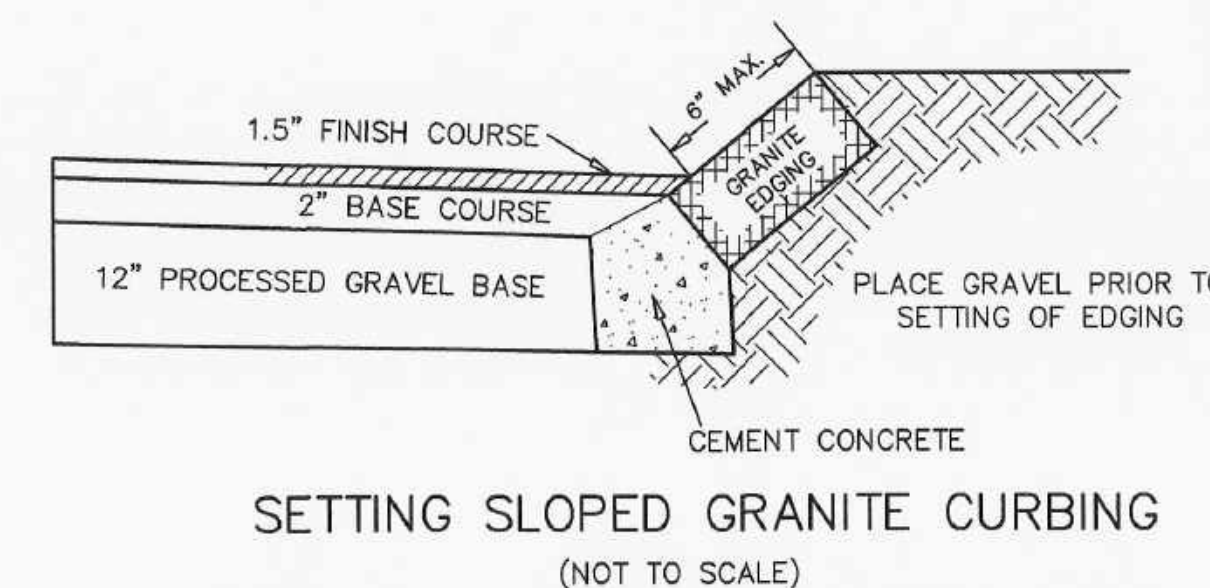
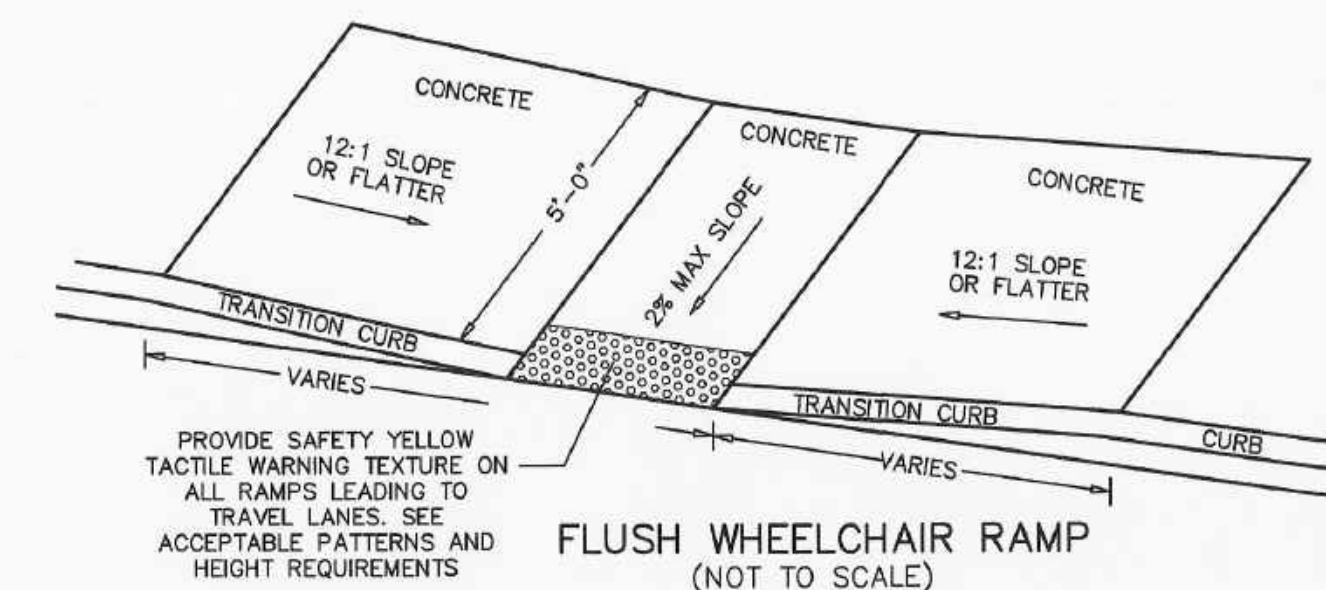


Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light.

The material used to provide contrast shall be an integral part of the walking surface. Detectable warnings used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact. ADAAG 4.29.2



**TYPICAL HYDRANT W/GATE**  
(NOT TO SCALE)



NOTE: ONLY TO BE USED WHERE THERE IS SIDEWALK AGAINST THE CURB

COMPREHENSIVE PERMIT PLAN APPROVED BY THE SOUTHBOROUGH ZONING BOARD OF APPEALS ON \_\_\_\_\_

#### GENERAL NOTES:

- 1) THERE ARE NO FEMA FLOOD ZONES ON THE NEW 8 ACRE PARCEL.
- 2) ACCORDING TO THE MASSMAPPER WEB SITE, THERE ARE NO ENDANGERED SPECIES HABITATS AND NO VERNAL POOLS ON OR ADJACENT TO THIS SITE.
- 3) THE PROJECT SITE IS SHOWN AS PARCEL 120-4 ON ASSESSOR MAP 37.
- 4) TOTAL SITE ALTERATION IS EXPECTED TO BE 5.5 ACRES.
- 5) TOPSOIL WILL BE STOCKPILED IN THE AREA EAST OF THE PROPOSED BUILDING AS SHOWN ON SHEET ESC2.

#### DIG SAFE:

EXCEPT FOR VISIBLE STRUCTURES (MANHOLES, GATES, POLES, ETC.) LOCATED BY THE PROJECT SURVEYOR, ALL UNDERGROUND UTILITIES SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING OR INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING.

ALL UTILITY COMPANIES, PUBLIC & PRIVATE, MUST BE CONTACTED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN.

AZIMUTH LAND DESIGN, LLC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. CALL "DIG SAFE" AT 811 OR 1-888-DIG-SAFE.

**AZIMUTH LAND DESIGN, LLC**  
Professional Engineers & Erosion Control Specialists  
118 Turnpike Road, 200, Southborough, MA 01772  
Telephone (508) 485-0137 jamest@azimuthtlanddesign.com

CLT. NO.	JOB NO.
504	290-504
DATE:	DWG NO.
OCTOBER 25, 2023	120TURNPIKECURRENT
REVISIONS	
DATE:	DESCRIPTION
1/24/24	TOWN REVIEW

SCALE: AS NOTED

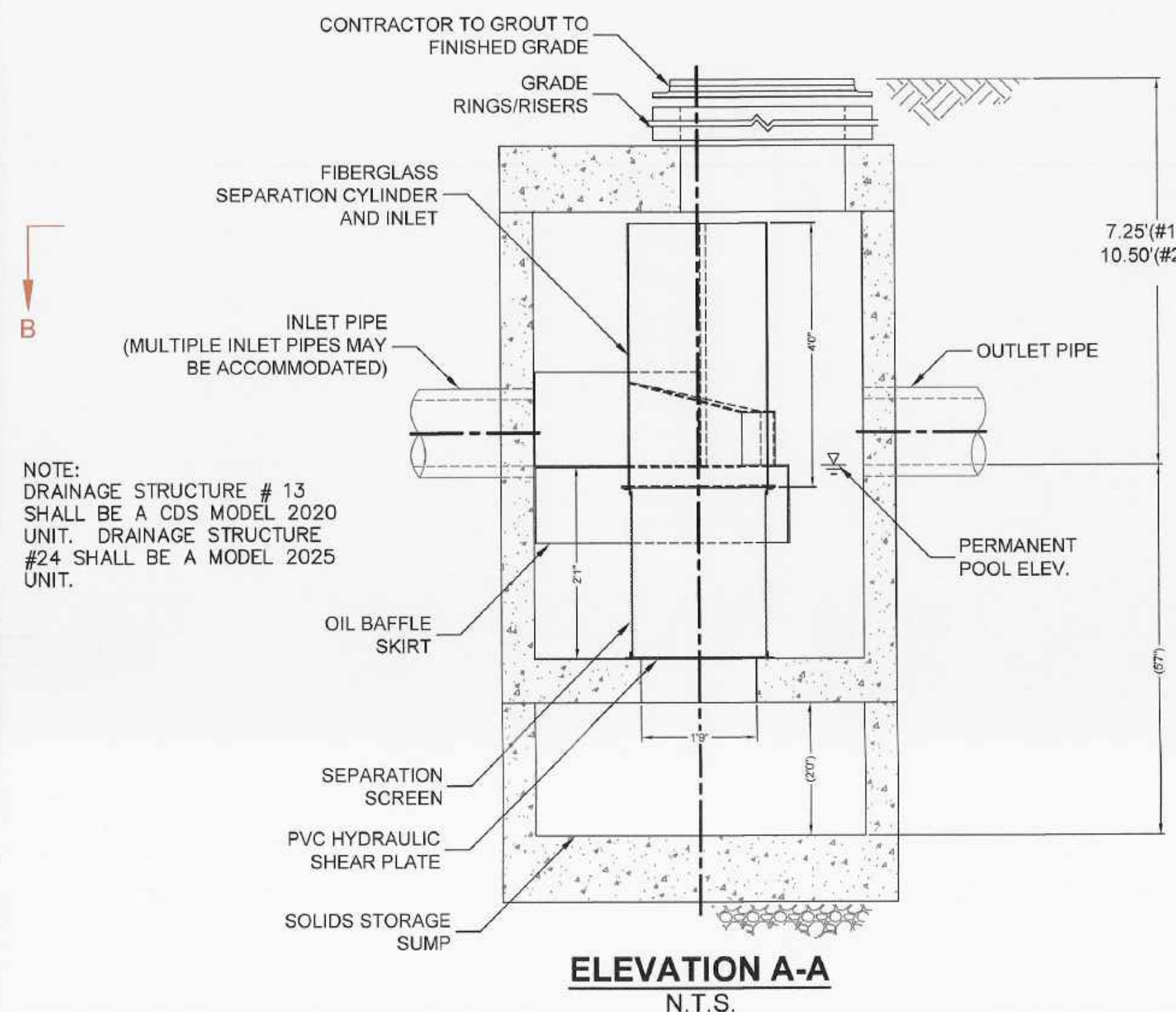
#### SITE PLAN OF LAND

AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.

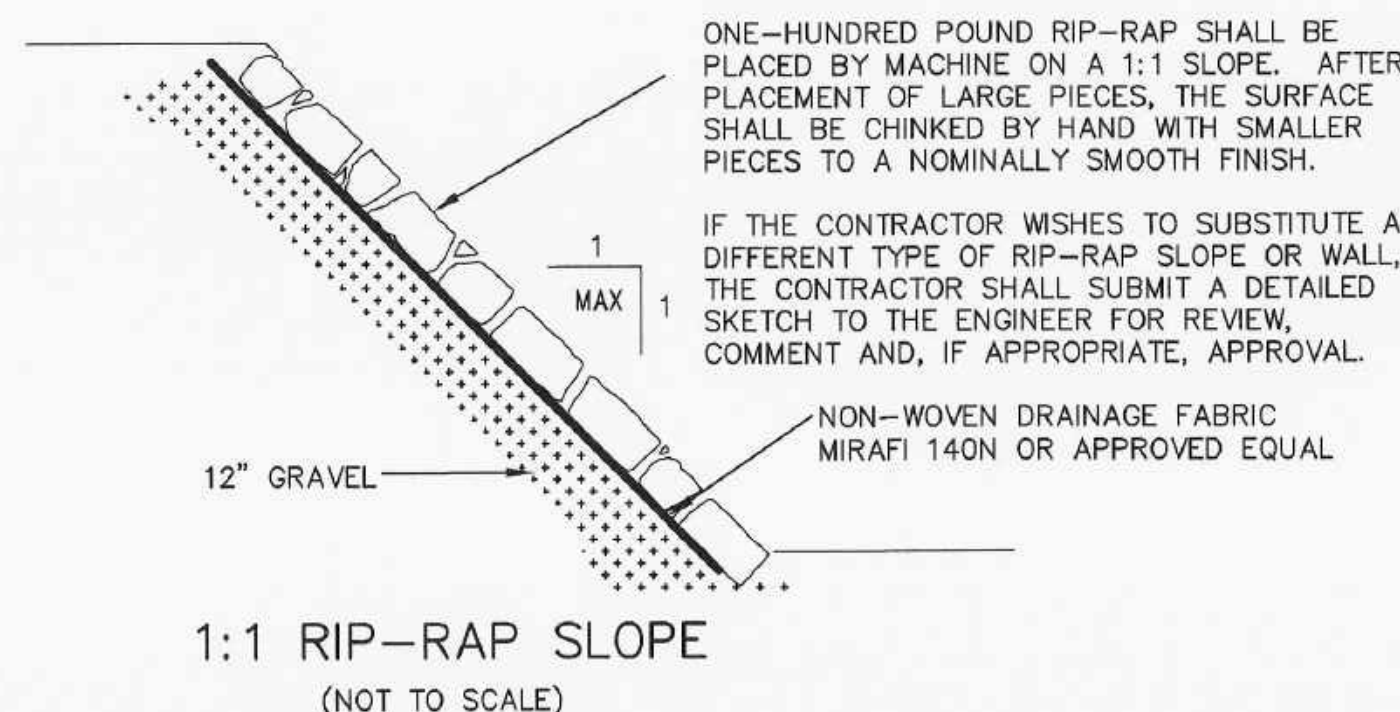
OWNER & APPLICANT:

FD 120 TURNPIKE, LLC  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

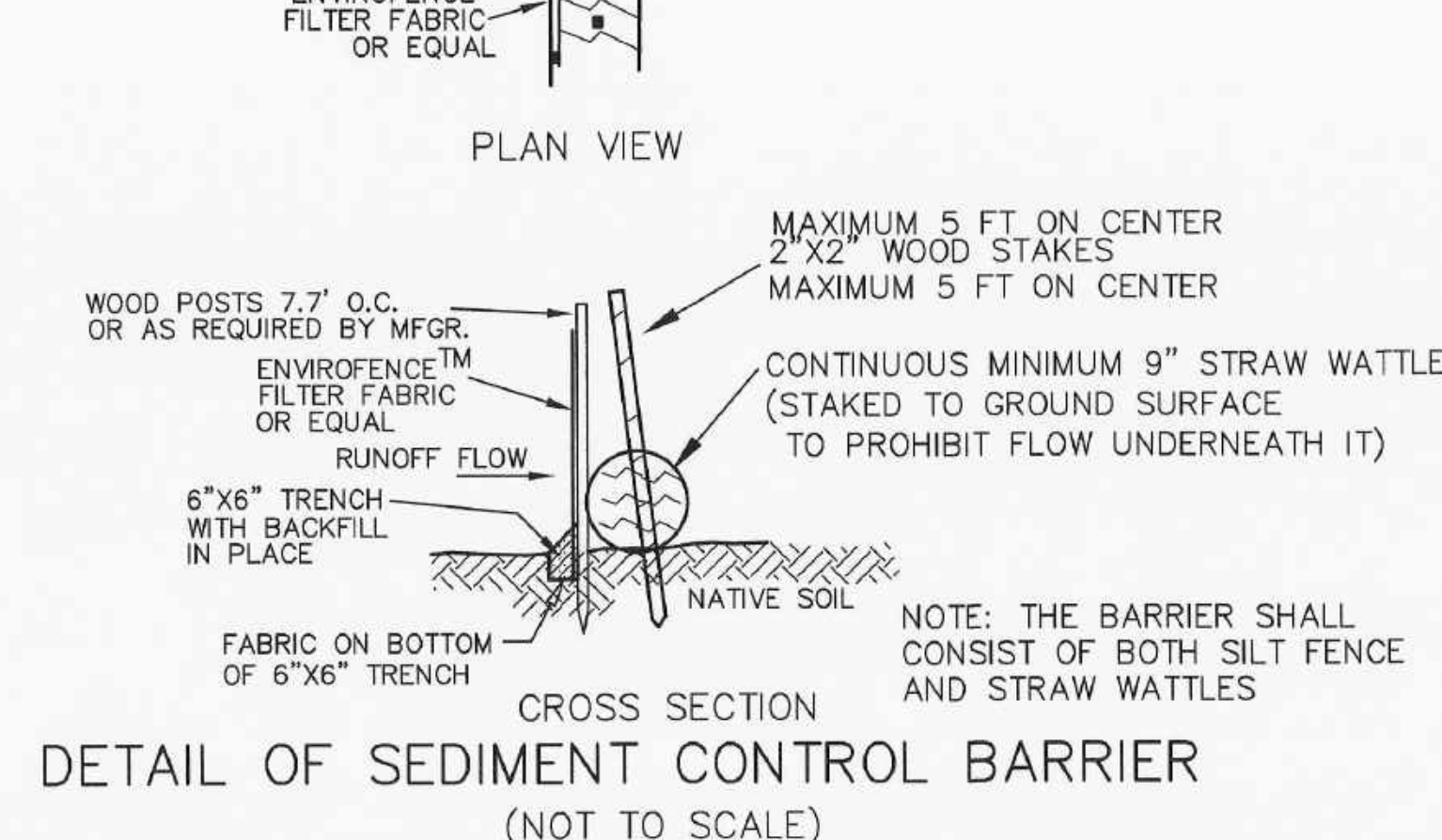
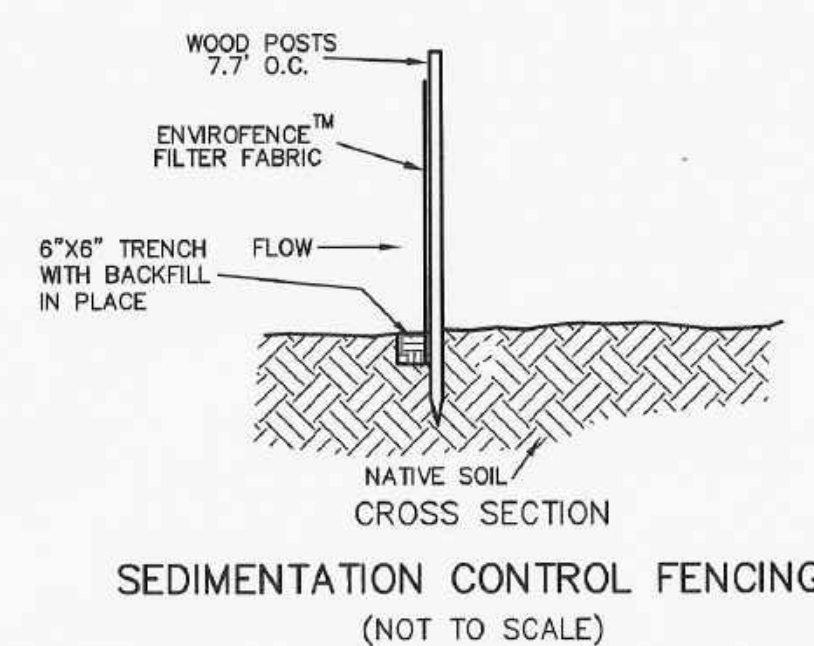
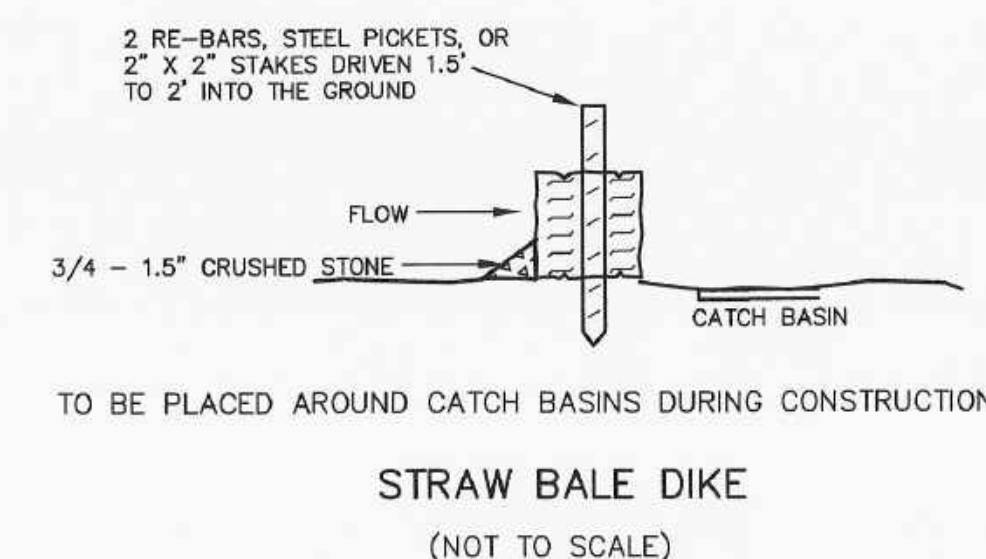
NOTE: DRAINAGE STRUCTURE # 13 SHALL BE A CDS MODEL 2020 UNIT. DRAINAGE STRUCTURE #24 SHALL BE A MODEL 2025 UNIT.



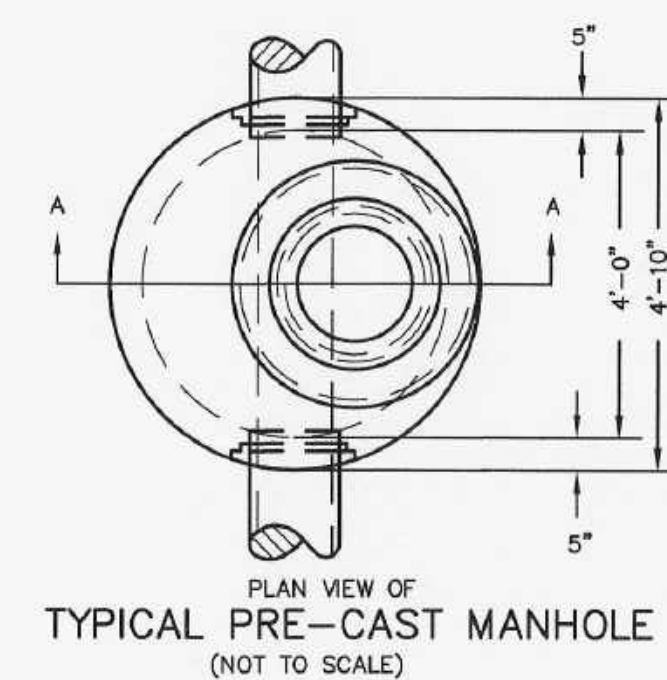
**CONTECH CDS MODEL 2025 STORMWATER FILTRATION UNIT**  
(NOT TO SCALE)



**3:1 TO 1:1 SLOPE VEGETATIVE TREATMENT**  
(NOT TO SCALE)







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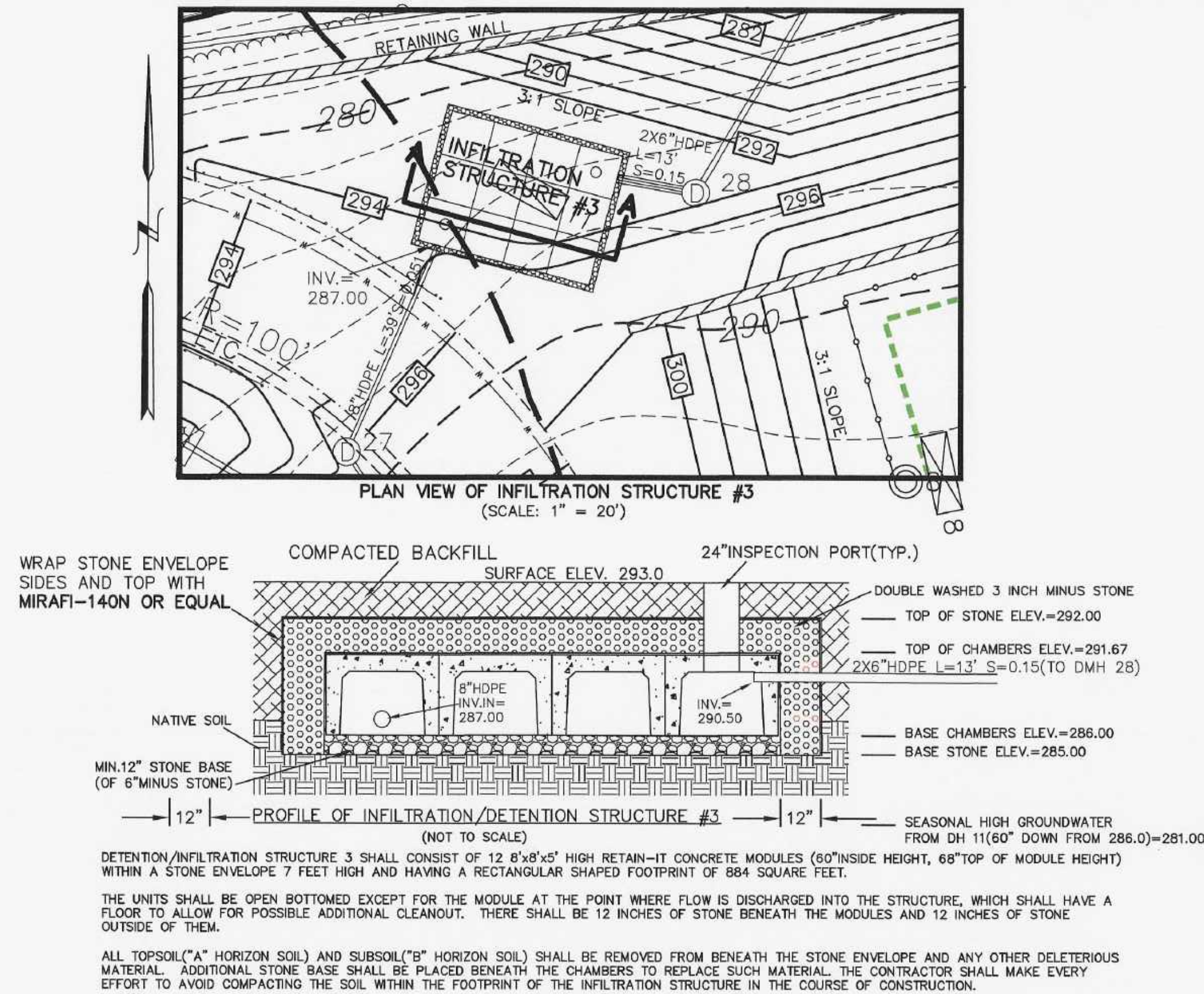
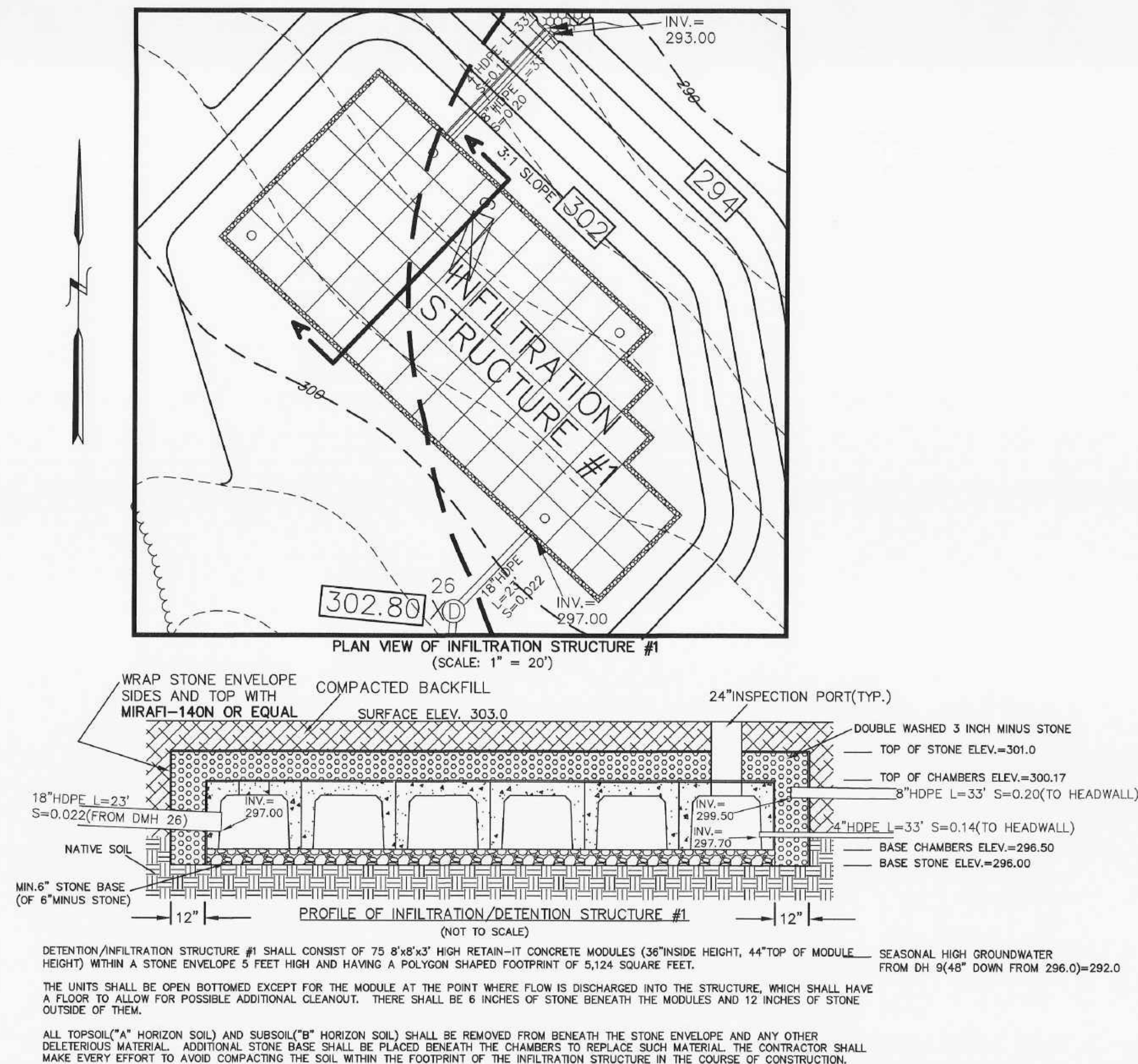
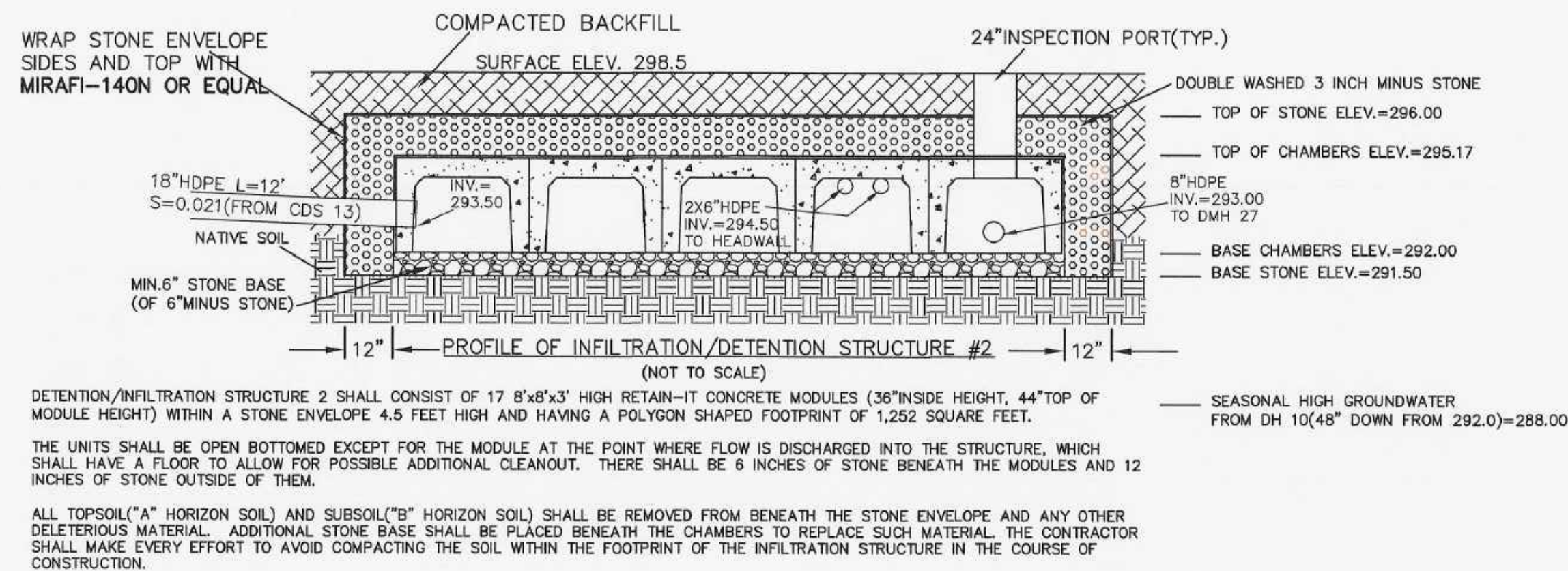
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DETAIL SHEET D2





SANITARY SEWER PIPE AND INVERT TABLE								
FROM			PIPE			TO		
STRUCTURE	RIM/GRATE	INVERT OUT	LENGTH (FT.)	SIZE (IN.)	SLOPE (FT./FT)	TYPE	STRUCTURE	INVERT
BUILDING	N/A	315.00	28'	6"	0.029	PVC	SEPTIC TANK 1	314.20
S.TANK 1	316.50	313.95	20'	6"	0.020	PVC	SEPTIC TANK 2	313.55
S.TANK 2	315.80	313.90	52'	6"	0.083	PVC	SMH 1	309.00
SMH 1	315.20	313.00	13'	8"	0.130	PVC	SMH 2	301.50
SMH 2	305.00	301.30	19'	8"	0.016	PVC	PUMP CHAMBER	301.00

DRAINAGE PIPE AND INVERT TABLE									
FROM			PIPE			TO			
STRUCTURE	RIM/GRATE	INVERT OUT	LENGTH (FT.)	SIZE (IN.)	SLOPE (FT./FT.)	TYPE	STRUCTURE	INVERT IN	
TO DISCHARGE AT HEADWALL SOUTH OF WEILAND FLAG A17									
DICE	A	332.10	3.26	55	12"	0.125	HDPE	DMH	B 315.50
DMH	B	319.80	315.20	25	15"	0.028	HDPE	DMH	C 314.50
HEADWALL		N/A	314.50	16	18"	0.031	HDPE	DMH	C 314.00
DMH	C	318.25	313.75	17	18"	0.015	HDPE	DMH	D 312.00
BLOC SUBDR		N/A	314.50	28	8"	0.054	HDPE	DMH	E 313.00
DMH	D	317.00	313.80	47	12"	0.021	HDPE	DMH	F 313.80
DMH	E	316.00	310.55	18	18"	0.028	HDPE	DMH	F 310.05
DMH	F	315.25	309.50	140	18"	0.018	HDPE	HEADWALL	307.00

TO DISCHARGE AT HEADWALL SOUTHEAST OF WETLAND FLAG A14										
HEADWALL	N/A	315.00	14'	12"	0.321	HDPE	DMH	G	310.50	
DMH	G	314.50	310.30	112'	12"	0.012	HDPE	DMH	H	309.00
BLOG SUBDRAIN	N/A	314.50	46'	8"	0.087	HDPE	DMH	H	310.50	
DMH	H	315.85	308.75	82'	15"	0.010	HDPE	DMH	I	301.75
DMH	I	306.00	301.75	83'	15"	0.012	HDPE	HEADWALL		300.75

TO PROPOSED IN GROUND INFILTRATION AREA #2 EAST OF WETLAND FLAG #4										
CB	1	313.50	309.50	125'	12"	0.010	HOPE	DMH	2	308.30
CB	3	315.30	311.30	22'	12"	0.014	HOPE	DMH	2	311.00
DMH	2	315.05	308.10	70'	12"	0.013	HOPE	DMH	4	307.20
CB	5	315.00	311.00	23'	12"	0.022	HOPE	DMH	4	310.50
DMH	4	314.50	307.00	47'	011"	0.013	HOPE	DMH	6	308.50
CB	7	312.30	308.00	14'	12"	0.021	HOPE	DMH	6	307.70
CB	8	312.30	308.00	8'	12"	0.038	HOPE	DMH	6	307.70
DMH	6	312.20	304.30	75'	15"	0.047	HOPE	DMH	9	300.80
DMH	9	305.20	298.50	31'	15"	0.032	HOPE	DMH	10	297.50
CB	12	302.70	298.30	14'	021"	0.021	HOPE	DMH	10	298.00
CB	12	302.70	298.30	8'	12"	0.038	HOPE	DMH	10	298.00
DMH	10	302.00	294.15	13'	18"	0.031	HOPE	CDS 2020	13	293.75
CDS2020	13	301.00	293.75	12'	18"	0.021	HOPE	INFILTRATION	2	293.50

TO PROPOSED IN GROUND INFILTRATION AREA #1 EAST OF WEILAND FLAG ADZ										
CB	14	314.70	310.70	8"	8"	0.038	HOPE	DMH	16	310.40
DWH	15	314.70	310.70	10"	8"	0.014	HOPE	DMH	16	310.40
DWH	16	315.00	310.00	12"	12"	0.010	HOPE	DMH	17	309.00
BLDG ROOF	N/A	N/A	314.00	48"	8"	0.042	HOPE	DMH	17	310.00
DMH	17	317.10	308.80	111"	15"	0.007	HOPE	DMH	18	308.00
CB	19	316.50	312.50	10"	8"	0.030	HOPE	DMH	18	312.20
DWH	18	316.90	307.70	57"	18"	0.011	HOPE	DMH	20	307.10
CB	20	316.80	312.80	11"	8"	0.050	HOPE	DMH	23	312.50
CB	22	316.80	312.80	11"	8"	0.027	HOPE	DMH	23	312.50
DWH	23	316.90	312.00	27"	12"	0.011	HOPE	DMH	20	311.70
DWH	20	317.60	308.90	11"	8"	0.018	HOPE	CD52025	24	306.70
CD52025	24	317.20	307.70	24"	24"	0.021	HOPE	DMH	24	307.20
DWH	25	315.00	300.70	151"	18"	0.020	HOPE	DMH	26	297.70
DMH	26	313.80	297.50	23"	18"	0.022	HOPE	INFILTRATION	1	297.00


BETWEEN INFILTRATION 2 AND INFILTRATION 3									
INFILTRATION 2	N/A	293.00	13'	8"	0.038	HDPE	DMH	27	292.50
DMH	27	296.50	289.00	39'	8"	0.051	HDPE	INFILTRATION 3	287.00

BETWEEN INFILTRATION 3 AND EXISTING DRAINAGE SYSTEM										
INFILTRATION 3	N/A	290.50	13'	2X6"	0.154	HDPE	DMH	28	288.50	
DMH	28	293.75	274.40	46'	12"	0.041	HDPE	DMH	29	272.50
DMH	29	276.50	272.30	199'	12"	0.010	HDPE	DMH	30	270.30


IN DRIVEWAY AT DISCHARGE FROM EXISTING STRUCTURE										
CB	31	290.10	286.10	8'	8"	0.038	HOPE	DMH	33	285.80
CB	32	290.10	286.10	14'	8"	0.021	HOPE	DMH	33	285.80
EXIST. STRUCTURE	N/A	271.95	271.95	9'	24"	0.057	HOPE	DMH	33	271.45
DMH	33	289.70	271.25	25'	24"	0.058	HOPE	DMH	30	269.80

AT BEGINNING OF DRIVEWAY TO EXISTING DRAINAGE SYSTEM											
CB	34	277.90	273.40	21'	8"	0.014	HDPE	DMH	36	273.10	
CB	35	277.90	273.40	15'	8"	0.020	HDPE	DMH	36	273.10	
DMH	36	277.10	272.30	209'	12"	0.010	HDPE	DMH	30	270.30	

COMPREHENSIVE PERMIT PLAN APPROVED BY  
THE SOUTHBOROUGH ZONING BOARD OF  
APPEALS ON \_\_\_\_\_.



**AZIMUTH LAND DESIGN, LLC**



*James I. Tetreault*  
1/24/2024

*Professional Engineers & Erosion Control Specialists*  
118 Turnpike Road, 200, Southborough, MA 01772  
Telephone (508)-485-0137    james@azimuthlanddesign.co

CLT. NO. <div style="text-align: center; font-size: 1.2em;">504</div>	JOB NO. <div style="text-align: center; font-size: 1.2em;">290-504</div>
DATE: <div style="text-align: center; font-size: 1.2em;">OCTOBER 25, 2023</div>	DWG NO. <div style="text-align: center; font-size: 1.2em;">120TURNPIKECURRENT</div>

REVISIONS	
DATE:	DESCRIPTION
1/24/24	TOWN REVIEW

SCALE:      AS NOTED

**SITE PLAN OF LAND**

AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.

OWNER & APPLICANT:

**FD 120 TURNPIKE, LLC**  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772

DETAIL SHEET
D3



POLLUTION PREVENTION PLAN  
FOR  
120 TURNPIKE ROAD, SOUTHBOROUGH, MA

PROJECT DESCRIPTION

This is a proposal to develop this site and construct an apartment building having 60 units along with associated parking and driving aisles and necessary utility infrastructure on this 8.0 acre site.

Construction will take place in a single phase and is expected to last from the spring 2024 into the summer of 2026. Total site alteration will be approximately 5.5 acres.

Construction Process

Before construction begins, erosion control barriers consisting of silt fencing attached to posts and backed by staked straw wattles will be placed at the limit of work as shown on the Erosion & Sediment Control Plans, Sheets ESC1-ESC2.

The first step of the construction process will be the cutting of trees within the limits of proposed development. After this has been accomplished in the demarcated areas, clearing and grubbing will take place and loam will be stockpiled in the area indicated on sheet ESC2. Stumps will be ground on site to use the grindings as temporary stabilization. Temporary settling basins will be installed downgradient of work in the locations shown on sheets ESC1 and ESC2.

The time of construction requiring the most attention and care occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of stormwater runoff causing erosion.

The contractor will, to the extent possible, leave natural cover untouched at the edges of the property and surrounding the wetland. The contractor will limit to the shortest time possible the time that areas are exposed. The landscaping will be completed as early as weather and building construction allow. During the times between clearing and landscaping, soils will be stabilized with a combination of stump grindings, wood chips, hay/straw mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of soils.

Soil stockpile areas will be kept out of the 100 foot buffer zone associated with the delineated wetland on site. Soil stockpiles shall be surrounded by staked silt fence placed at least 5 foot off the toe of slope of the stockpile. One suitable stockpile location is in the area northwest of the existing home and in front of proposed building #1.

In conjunction with the site grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the erosion of soils and the transport of sediments to adjacent properties and eventually to wetland resource areas off site.

Stabilization

Temporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the areas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

- Work is not complete in that area,
- Work will remain incomplete for a period of three weeks or more, and
- The planting season has not been reached in areas which will be re-vegetated.

Permanent stabilization will take place when:

- Work is complete in that area and
- The planting season has been reached and areas can be revegetated.

Best Management Practices Employed

To guard against the transport of soils offsite several Best Management Practices (BMP's) may be employed. Sediment control barriers, sediment sumps, temporary settling basins, straw bale check dikes, swales, a site entrance mat, flocculants in both crystal and block forms, and organic media for capture of silt below flocculants may be used on this site as appropriate. All of these measures are temporary. The site's permanent protection against erosion and the deposition of sediment off site at resource areas is the permanent stabilization of formerly exposed surfaces with pavement, lawn and other landscaping.

Soils

According to the MassMapper web site the soils underlying this site are mostly Woodbridge series soils which are categorized as hydrologic soil group C soils. However, official nd unofficial soil tests on site showed more gravel and a better soil texture than typically seen in areas of Woodbridge series soils.

Resource Areas

There is a bordering vegetated wetland associated with an intermittent stream flow running northerly just west of the center of the new parcel.

SITE PLAN DEVELOPMENT

As part of the Site Plans submitted to the Town of Southborough, Azimuth Land Design, LLC has prepared this erosion and sediment control plan calling for permanent and temporary erosion control measures. The site has an existing drainage system at the northerly end of it collection drainage flowing to the north and conveying it to the drainage system under the parking area on the developed portion of 120 Turnpike Road.

PHASING

Construction of the project will take place in one phase. Total site alteration will be approximately 5.5 acres.

POLLUTION PREVENTION SITE PLAN

The Site Plans prepared by Azimuth Land Design, LLC contain Erosion & Sediment Control Plans. Various Best Management Practices (BMP's) are described herein and/or shown on the Erosion & Sediment Control Plans or the Detail Sheets and will be used to prevent or to mitigate erosion and pollution.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

1. At all times, siltation fabric fencing, straw wattles or straw bales and stakes sufficient to construct an erosion control barrier a minimum 25 feet long will be stockpiled on the site in order to repair established barriers which may have been damaged or breached.

2. The Developer will designate as Inspector a person or entity other than the site supervisor. The Inspector must be accessible seven days a week and be responsible for inspecting and coordinating the maintenance and repair of all erosion control systems on the site.

3. An inspection of all erosion control measures shall be conducted by the Inspector at least once each week until the completion of construction of the subdivision. The Contractor shall inspect all erosion control systems daily and shall notify the Inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.

4. The Inspector shall inspect all erosion control systems on the site before, during and after any storm event reaching one of the following thresholds:

- a. Any storm in which rain is predicted to last for 12 consecutive hours or more.
- b. Any storm for which a flash flood watch or warning is issued.
- c. Any single storm predicted to have a cumulative rainfall greater than 1/2 inch.
- d. Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.

5. The Inspector shall inspect erosion control measures at times of significant increase in runoff due to rapid thawing when the risk of failure of those measures is significant.

6. In such instances as remedial action is necessary, the Inspector shall cause to be repaired within seven days, any and all significant deficiencies in erosion control measures.

7. The Southborough Conservation Commission shall be notified of any significant failure of erosion control measures and shall be notified of any release of pollutants.

SEPTIC SYSTEM DESIGN:

1) THE 60 PROPOSED UNITS WILL HAVE A TOTAL OF 89 BEDROOMS. UNDER TITLE 5, THIS CREATES A SEWAGE FLOW GENERATION OF 89X110=9,790 GALLONS PER DAY.

2) PERCOLATION TESTS #'S 2, 4, 6, 7 AND 8 IN THE PROPOSED SOIL ABSORPTION SYSTEM AREA, HAD OFFICIALLY OBSERVED PERCOLATION RATES OF 3, 15, 5, 7, 3 AND 4 MINUTES PER INCH. THE SYSTEM DESIGN WILL BE BASED ON A 15 MINUTE PER INCH PERCOLATION RATE WHICH, ACCORDING TO THE TABLE AT 310CMR 15.242(1) GIVES A LONG TERM ACCEPTANCE RATE OF 0.56 GPD/S.F. TO THE PROPOSED SOIL ABSORPTION SYSTEM.

3) 9,790 GPD REQUIRES A SYSTEM SURFACE AREA OF 9,790/0.56 =17,482 S.F. USING 2' WIDE AND 2' DEEP TRENCHES, EACH 1' LENGTH OF TRENCH HAS 6 S.F. OF SURFACE AREA. SO 17,482/6=2,914 FEET OF TRENCH THAT IS REQUIRED.

4) SO, OUR DESIGN WILL PROPOSE 42 TRENCHES EACH 70 FEET LONG, SPLIT HALF NORTH AND HALF SOUTH OF A CENTRAL MANIFOLD THAT WILL BE FED FROM A PUMP CHAMBER. WITH RESERVE TRENCHES IN BETWEEN, 21 TRENCHES REQUIRES A WIDTH OF 168 FEET. WITH A SPACE OF 10 FEET IN BETWEEN EACH GROUP OF TRENCHES, NORTH AND SOUTH, THE REQUIRED AREA FOR THE SOIL ABSORPTION SYSTEM IS 150'X168'.

PARKING

60 UNITS ARE PROPOSED, CONSISTING OF 37 ONE BEDROOM UNITS, 17 TWO BEDROOM UNITS AND 6 THREE BEDROOM UNITS. 112 PARKING SPACES ARE PROPOSE(INCLUDING 5 VAN ACCESSIBLE HC SPACES), A RATIO OF 1.87 PER UNIT.

EROSION CONTROL DEVICES OR PROCESSES

1. Sediment Control Barrier

The sediment control barrier will consist of an approved siltation fabric fencing installed on posts according to the manufacturer's instructions and backed by staked straw wattles. The barriers will be placed in a manner that prevents the passage of soil materials under, around or over it. Sediment will be removed from against the barrier when the accumulated sediment has reached one third of the original installed height of the barrier.

2. Straw Bale Diversion Dike

Straw bales will be placed in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or running off stockpile or fill areas. Straw bale diversion dikes will also be placed within developing rills to reduce surface runoff velocities and to shift the path of the water flow. The locations where straw bale diversion dikes are installed will be determined in the field at the Inspector's discretion.

3. Slope Stabilization

Slopes or surfaces that are created due to excavation or filling along the edge of the parking or loading areas will be temporarily stabilized with one or more of the following:

- Hay or straw mulch with tackifier
- Soft wood and hard wood chips or stump grindings.

Permanent stabilization of slopes and surfaces will employ one or more of the following:

- 6 inches of loam and grass
- Sod
- Riprap
- Erosion control blankets such as Tensar North American Green SC150BN or approved equal and vegetation
- Mulch and landscaping plantings
- A combination of grasses, riprap and/or plants and shrubbery
- In areas that will be steeper than 2:1, after construction, the slope will be stabilized by the placement of heavy riprap or by the installation of erosion control matting specifically rated by the manufacturer for use on a 1:1 slope. The riprap slope will be formed by placing heavy stone on a one foot thick layer of gravel that is covered by an approved filter fabric.

4. Diversion Swale

Runoff diversion swales may be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties or Rice Road. The swales will direct runoff to sediment sumps or temporary settling basins. The swales will be approximately 5 feet wide and one foot deep. Straw bale diversion dikes may be installed on the downhill side of the swales to assist in containing the water flow.

5. Sediment Sumps

Sediment sumps are excavated depressions of 10 foot diameter and 2 foot depth. The sumps will collect runoff from unfinished drives and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment has reached one half of the original depth of the sump.

6. Temporary Settling Basins

Temporary settling basins (TSB's)are larger excavations made at locations that will receive significant stormwater runoff flow. They are used to capture and detain stormwater in the construction phase to settle out some eroded material and to lessen the rate of flow of stormwater from construction phase work areas. Temporary settling basins are larger than sediment sumps and shall have silt fence or straw bale dikes at their entrance and exit to control flow. They shall be sized according to the DEP Stormwater management standards which requires that they have sufficient capacity to hold 1 inch of runoff from the watershed contributing flow to them. For example, a TSB receiving flow from 1 acre of land should have a volume capacity of at least 3,630 square feet. TSB's should have flocculant blocks and at least three layers of jute mesh matting at their outlet. TSB's should be cleaned out whenever the accumulated sediment has reached more than 6 inches deep. No TSB shall be located where the proposed infiltration structures are proposed. Expected locations for TSB's are shown on the Erosion & Sediment Control Plans.

7. Flocculants

If the capture of flows in sediment sumps and temporary settling basins does not sufficiently reduce the turbidity of runoff before it leaves the site, flocculant blocks shall be installed at the outlet of any sediment sump, TSB or swale discharge flow to the site's drainage system. Immediately downstream of the flocculant blocks, a suitable organic media such as jute mesh matting shall be installed over stone for runoff that has contacted the flocculant blocks to flow. This will allow capture of silts.

In addition, crystal flocculants may be used to reduce turbidity of captured runoff in sediment sumps and temporary settling basins.

SEQUENCE OF INSTALLATION AND CONSTRUCTION

The following is a sequence for the construction of the project. The actual schedule may vary somewhat from that stated if site or weather conditions require.

An example of a logical change to the schedule would be deviating from the sequence below to allow the laying of berms prior to a freeze in order to better control the site drainage.

1. The Developer will hold a preconstruction meeting with representatives of the Town of Southborough in order to review permits, procedures and construction methods.

2. The Developer will hold a preconstruction meeting with the Engineer, Contractor's employees and the Inspector in order to review permits, procedures and construction methods.

3. Establish the construction entrance to the site off the south end of the existing access drive running north to Turnpike Road.

4. Install the site entrance mat in the location of the proposed entrance off the end of that access drive and sediment control barriers at the limit of work as shown on the Erosion & Sediment Control Plans.

5. Cut trees as necessary for the proposed development but no further. Chip wood and then remove existing pavement and dispose of it at an appropriate facility. Then, clear and grub where trees were cut. Grind stumps for use of the grindings as a temporary stabilization cover.

6. Stockpile and compact excavated loam in an area surrounded by staked straw bales or siltation fencing. We suggest the proposed location of units 35&36. Place the straw bales or fencing at least five feet from the base of the loam pile.

7. Begin earthwork to bring grades to the subgrade elevations for the proposed driving aisles and parking areas.

8. Begin construction of the apartment building and install the utility connections to the proposed apartment building.

9. Install the new drainage system, new septic system, new water line services to the building and new electric connections and, when complete, lay the binder course of pavement.

10. Continue construction of the building.

11. Permanently stabilize exposed slopes with riprap, 6 inches of loam and grass, other vegetation and landscaping.

12. Finish interior construction of the proposed building and lay a finish course of pavement. Install new sidewalks from the beginning of the new driveway north to the entrance off Turnpike Road.

13 Remove accumulated sediment and temporary erosion control measures after all slopes have been permanently stabilized and the risk of erosion has passed.

14. Prepare and submit an as-built survey of the work to the Town of Southborough.

COMPREHENSIVE PERMIT PLAN APPROVED BY  
THE SOUTHBOROUGH ZONING BOARD OF  
APPEALS ON \_\_\_\_\_

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**AZIMUTH LAND DESIGN, LLC**

*Professional Engineers & Erosion Control Specialists*  
118 Turnpike Road, 200, Southborough, MA 01772  
Telephone (508)-485-0137    james@azimuthlanddesign.co

CLT. NO.	504	JOB NO.	290-504
DATE:	OCTOBER 25, 2023	DWG NO.	120TURNPIKECURRENT
REVISIONS			
DATE:	DESCRIPTION		
1/24/24	TOWN REVIEW		

SCALE: AS NOTED

SITE PLAN OF LAND

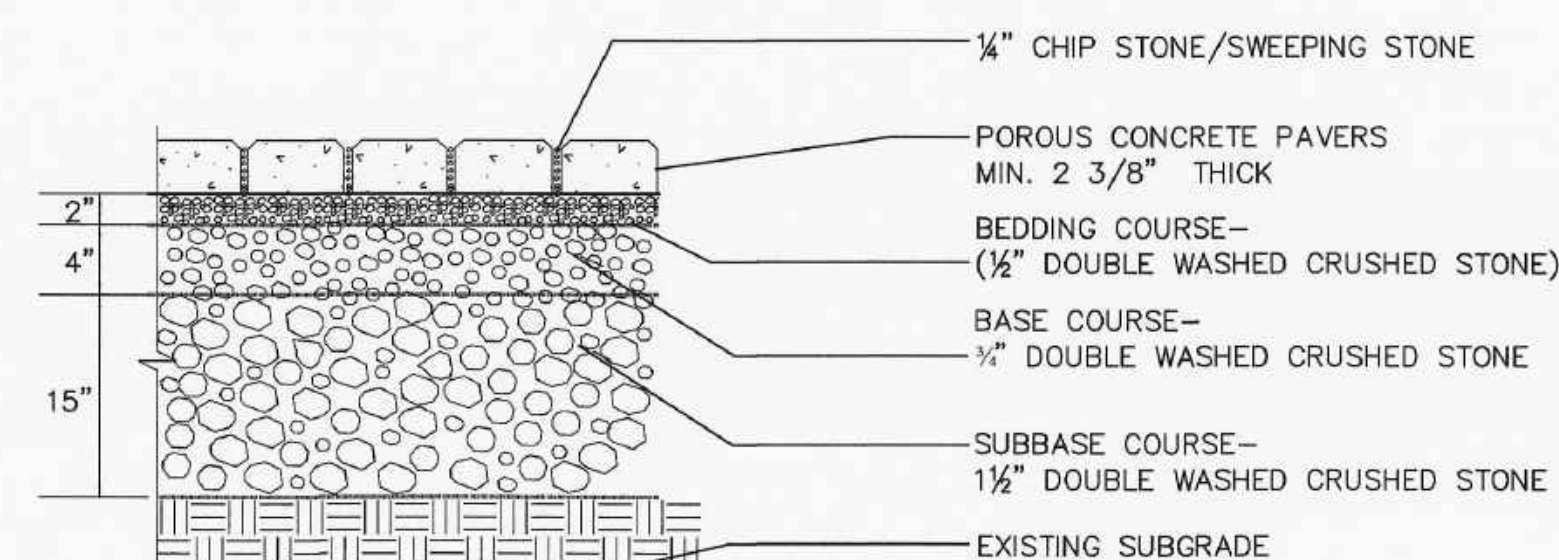
AT 120 TURNPIKE ROAD  
IN  
SOUTHBOROUGH, MASS.

OWNER & APPLICANT:  
**FD 120 TURNPIKE, LLC**  
118 TURNPIKE ROAD, SUITE 300  
SOUTHBOROUGH, MA 01772





- 1) THE PROPOSED EXTENSION OF THE EXISTING DRIVEWAY INTO THE PART OF THE SITE ZONED RESIDENCE A WILL CAUSE THE ELIMINATION OF 4 EXISTING PARKING SPACES, 4 NEW SPACES HAVE TO BE CREATED. THE APPLICANT WILL CREATE 4 COMPACT SPACES ON THE SOUTH SIDE OF AN EXISTING LANDSCAPED ISLAND.
- 2) PROPOSED ADDITIONAL SIDEWALKS ON THE REMAINING LOT CREATING PEDESTRIAN ACCESS TO TURNPIKE ROAD FROM THE NEW PROJECT WILL RESULT IN THE CONVERSION OF 2,148 SQ.FT. OF LAWN SURFACE TO IMPERVIOUS SIDEWALK. IN COMPENSATION, THE APPLICANT SHALL RESURFACE 2,209 SQ.FT. OF EXISTING PARKING AREA WITH PERMEABLE INTERLOCKING CONCRETE PAVING BLOCKS (PICP'S) TO AVOID AN INCREASE IN STORMWATER RUNOFF. A CROSS SECTION DETAIL OF THE PAVING BLOCKS AND STONE BASE IS BELOW.



NOTES:  
1. PAVERS TO IDEAL PAVERS AQUA-BRIC OR APPROVED EQUAL INSTALLED IN A BASKET WEAVE PATTERN.

2. JOINT BETWEEN THE PAVERS SHALL BE BETWEEN 1/16" - 3/16" JOINT

PERMEABLE INTERLOCKING CONCRETE PAVING BLOCK DETAIL

NOT TO SCALE

DETAIL SHEET D5