DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET

IN

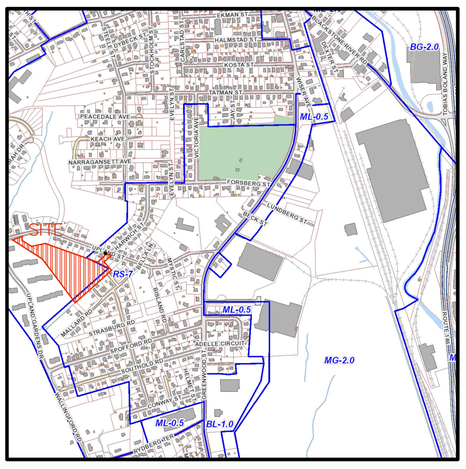
WORCESTER, MASSACHUSETTS

OWNER & APPLICANT:

HENCHEY, LLC

5 EDGEMERE BOULEVARD

SHREWSBURY, MASSACHUSETTS 01545



LOCUS MAP

CLIENT NUMBER: 523
JOB NUMBER: 348-523
DRAWING : UPLANDSTREETCURRENT.dwg

PREPARED BY

AZIMUTH LAND DESIGN, LLC

118 TURNPIKE ROAD, SUITE 200

SOUTHBOROUGH, MASSACHUSETTS 01772

TELEPHONE (508) 485-0137

EMAIL: jamest@azimuthlanddesign.co

DATE:

SEPTEMBER 25, 2023

REVISED DECEMBER 26, 2023

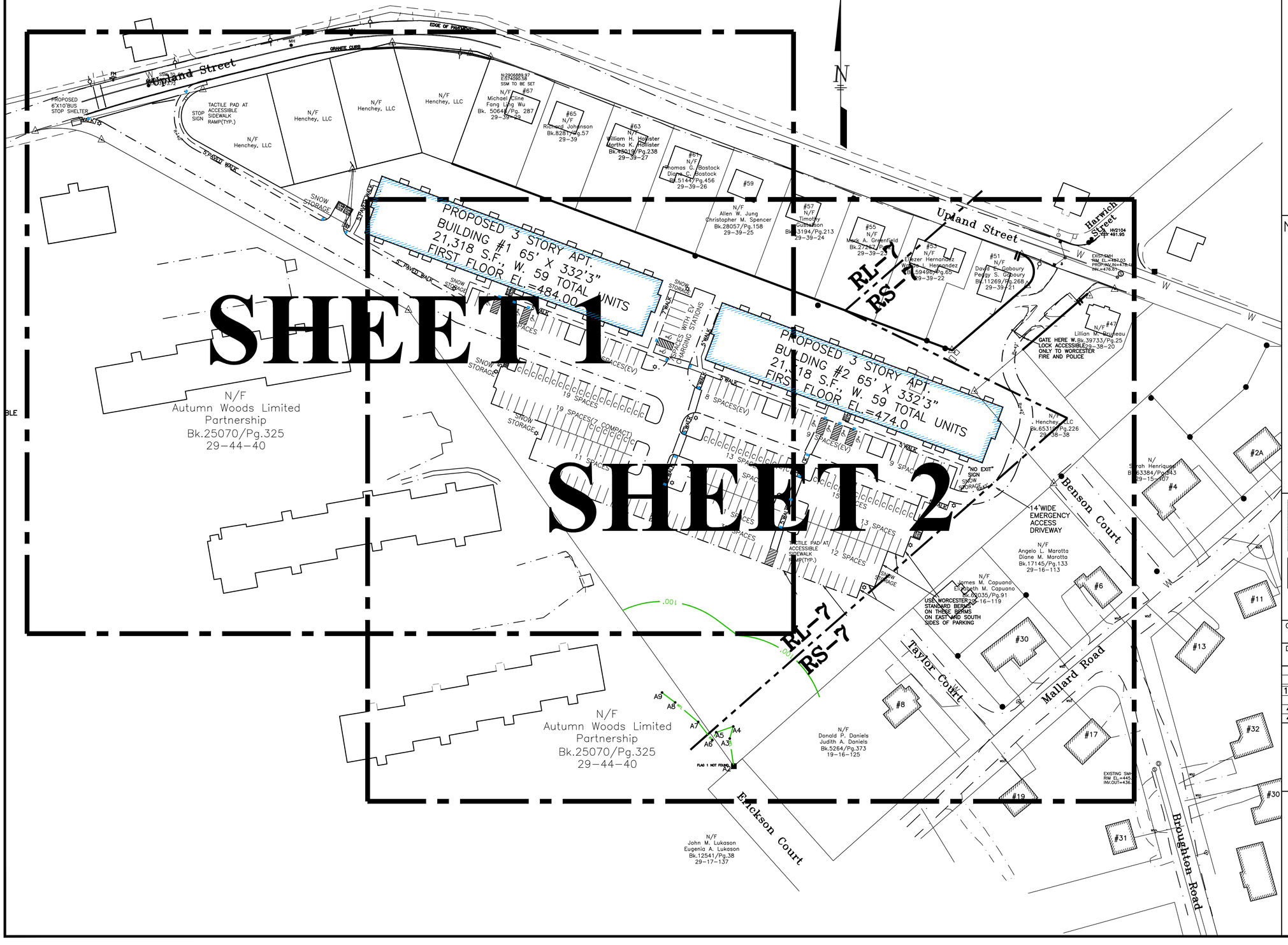
REVISED FEBRUARY 6, 2024

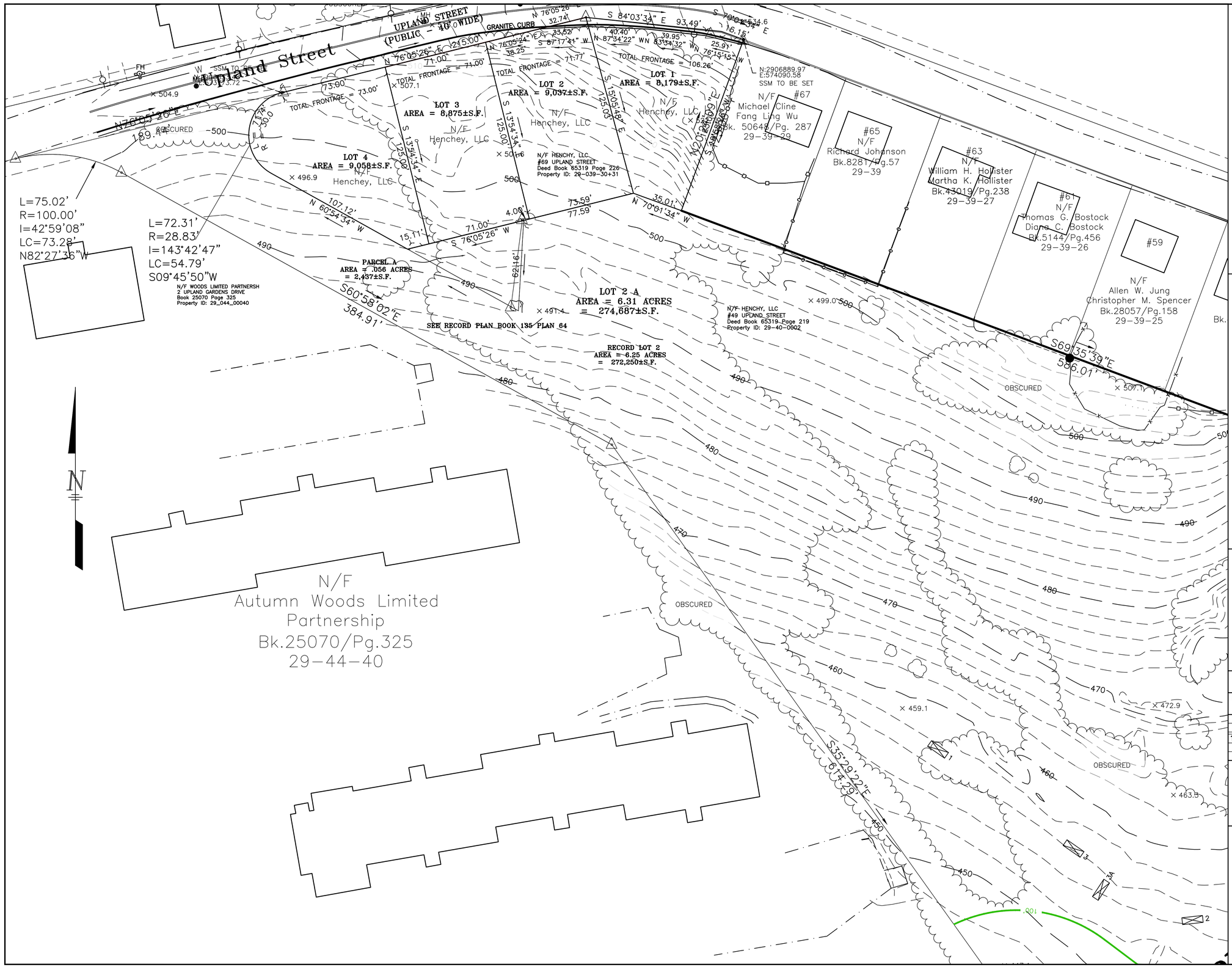
REVISED APRIL 10, 2024

REVISED APRIL 19, 2024

COMMONWEALTH OF MASSACHUSETTS
JAMES L. TETREAULT
CIVIL
No. 38548
PROFESSIONAL ENGINEER

SHEET DIRECTORY


SHEET 1
SHEET 2
KEY
WETLAND EDGE
100' BUFFER ZONE EDGE
EXISTING EDGE OF PAVEMENT
PROPOSED PAVEMENT CURB
UTILITY POLE
OVERHEAD WIRES
NOTES:
1) THIS SITE IS LOCATED IN THE RL-7 ZONING DISTRICT EXCEPT FOR THE MORE EASTERLY ENTRANCE BEING IN THE RS-7 DISTRICT. IN THE RL-7 DISTRICT A LOW-RISE MULTIFAMILY USE IS ALLOWED WITH A SPECIAL PERMIT.
2) THE SITE CONSISTS OF 49 UPLAND STREET, 39 UPLAND STREET AND A SMALL PORTION OF THE PARCEL WITH THE ADDRESS OF 69 UPLAND STREET.
3) THE APPLICANT PROPOSES TO CREATE TWO APARTMENT BUILDINGS, EACH OF 3 STORIES, EACH WITH 59 UNITS FOR A TOTAL OF 118 UNITS.
4) 212 PARKING SPACES ARE PROPOSED INCLUDING 7 WITH ELECTRIC VEHICLE CHARGING STATIONS, ANOTHER 37 THAT ARE EV READY, 54 COMPACT SPACES AND A TOTAL OF 8 HANDICAPPED VAN ACCESSIBLE SPACES.
5) THE SITE WILL BE SERVED BY CITY WATER AND SANITARY SEWER SERVICES, THE FORMER FROM CONNECTION TO THE EXISTING MAIN IN UPLAND STREET, THE LATTER VIA DISCHARGE FROM A PRIVATE SEWER PUMPING STATION TO THE MAIN IN UPLAND STREET IN FRONT OF #47.
6) EACH BUILDING WILL HAVE A FOOTPRINT OF 21,318 SQ.FT. FOR A TOTAL SITE GROSS FLOOR AREA OF 127,908 SQ.FT.
PROPOSED 3 STORY APT. BUILDING #1 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR EL.=484.00
PROPOSED 3 STORY APT. BUILDING #2 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR EL.=474.0
Upland Street
Harwich Street
Benson Court
Taylor Court
Mallard Road
Erickson Court
Broughton Road
RL-7
RS-7
N/F Autumn Woods Limited Partnership Bk.25070/Pg.325 29-44-40
N/F Henchey, LLC
N/F Michael Cline Fang Ling Wu Bk. 50644/Pg. 287 29-39-23
N/F Richard Johnson Bk.8281/Pg.57 29-39
N/F William H. Hollister Martha K. Hollister Bk.43019/Pg.238 29-39-27
N/F Thomas G. Bostock Diane C. Bostock Bk.5147/Pg.456 29-39-26
N/F Allen W. Jung Christopher M. Spencer Bk.28057/Pg.158 29-39-25
N/F Timothy Donaldson Bk.43194/Pg.213 29-39-24
N/F Mark A. Greenfield Bk.27262/Pg. 29-39-23
N/F Eliezer Hernandez Wanda I. Hernandez Bk.59436/Pg.65 29-39-22
N/F David E. Caboury Peggy S. Caboury Bk.11269/Pg.268 29-39-21
N/F Lillian M. Brigeau Bk.39733/Pg.25 29-38-20
N/F Henchey, LLC Bk.65310/Pg.226 29-38-38
N/F Sarah Henriquez Bk.53384/Pg.343 29-15-107
N/F Angelo L. Marotta Diane M. Marotta Bk.17145/Pg.133 29-16-113
N/F James M. Capuano Elizabeth M. Capuano Bk.62035/Pg.91 29-16-119
N/F Donald P. Daniels Judith A. Daniels Bk.5264/Pg.373 19-16-125
N/F John M. Lukason Eugenia A. Lukason Bk.12541/Pg.38 29-17-137
GRANITE CURB
EDGE OF PAVEMENT
PROPOSED 6'X10' BUS STOP SHELTER
TACTILE PAD AT ACCESSIBLE SIDEWALK RAMP(TYP.)
STOP SIGN
5' PAVED WALK
SNOW STORAGE
19 SPACES(7 COMPACT)
11 SPACES
13 SPACES
12 SPACES
15 SPACES
8 SPACES(EV)
9 SPACES(EV)
7 SPACES WITH EV CHARGING STATIONS
"NO EXIT" SIGN
14' WIDE EMERGENCY ACCESS DRIVEWAY
GATE HERE W. LOCK ACCESSIBLE ONLY TO WORCESTER FIRE AND POLICE
USA WORCESTER STANDARD BERMS ON THREE BERMS ON EAST AND SOUTH SIDES OF PARKING
EXISTING SMH RIM EL.=487.03 PROP.INV.IN=478.13 INV.=476.93
EXISTING SMH RIM EL.=491.95
EXISTING SMH RIM EL.=445 INV.OUT=436.
FLAG 1 NOT FOUND
N:2906889.97 E:674090.58 SSM TO BE SET
SSM To Be Set
#65
#63
#61
#59
#57
#55
#53
#51
#47
#4
#2A
#6
#11
#13
#30
#8
#17
#19
#32
#31
AZIMUTH LAND DESIGN, LLC
Professional Engineers & Erosion Control Specialists
118 Turnpike Road, 200, Southborough, MA 01772
Telephone (508)-485-0137 jamest@azimuthlanddesign.co
COMMONWEALTH OF MASSACHUSETTS JAMES L TETREAULT CIVIL No. 38548 PROFESSIONAL ENGINEER
CLT. NO. 523
JOB NO. 348-523
DATE: SEPTEMBER 25, 2023
DWG NO. UPLANDSTREETCURRENT
REVISIONS
DATE: DESCRIPTION
12/26/23 CITY REVIEW
2/6/24 NO CHANGES TO THIS SHEET
4/10/24 CITY REVIEW
4/19/24 NO CHANGES TO THIS SHEET
SCALE: 1 INCH = 50 FEET
FEET 0 25 50 100 150
METERS 0 25 50
DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET
IN
WORCESTER, MASS.
OWNER & APPLICANT:
HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545
KEY SHEET



KEY

- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- EXISTING EDGE OF PAVEMENT
- PROPOSED PAVEMENT CURB
- UTILITY POLE
- OVERHEAD WIRES
- 2' CONTOUR
- 10' CONTOUR
- EXISTING SPOT GRADE
- STONE WALL
- EXISTING GUARD RAIL
- DEEP HOLE TEST
- EXISTING HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING WATER MAIN

NOTE:
PROPERTY LINE INFORMATION, EXISTING TOPOGRAPHY AND EXISTING FEATURE INFORMATION ARE THE WORK PRODUCT OF REALMAPINFO, LLC.

COMMONWEALTH OF MASSACHUSETTS
TODD P. CHAPIN
P.No.37558
REGISTERED PROFESSIONAL LAND SURVEYOR

Todd Chapin

4-10-24

AZIMUTH LAND DESIGN, LLC
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SCALE: 1 INCH = 30 FEET

FEET 0 15 30 60 90

METERS 0 15 30

DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET

IN

WORCESTER, MASS.

OWNER & APPLICANT:

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

EXISTING CONDITIONS PLAN E1

LOT 2-A
AREA = 6.31 ACRES
= 274,687±S.F.

RECORD LOT 2
AREA = 6.25 ACRES
= 272,250±S.F.

N/F HENCHY, LLC
#49 UPLAND STREET
Deed Book 65319-Page 219
Property ID: 29-40-0002

N/F
Allen W. Jung
Christopher M. Spencer
Bk.28057/Pg.158
29-39-25

#57
N/F
Timothy
Gustafson
Bk.43194/Pg.213
29-39-24

#55
N/F
Mark A. Greenfield
Bk.27267/Pg.
29-39-23

#53
N/F
Eliezer Hernandez
Wanda I. Hernandez
Bk.59496/Pg.65
29-39-22

#51
N/F
David E. Gaboury
Peggy S. Gaboury
Bk.11269/Pg.268
29-39-21

#47
N/F
Lillian M. Bruneau
Bk.39733/Pg.25
29-38-20

N/F
Henchey, LLC
Bk.65319/Pg.226
29-38-38

N/F
Autumn Woods Limited
Partnership
Bk.25070/Pg.325
29-44-40

N/F
Angelo L. Marotta
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29-16-113

N/F
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29-16-119

N/F
Donald P. Daniels
Judith A. Daniels
Bk.5264/Pg.373
19-16-125

Upland Street

Harwich Street

Benson Court

Taylor Court W

Mallard Road W

RL-7
RS-7

S69°35'39"E
586.01'

S69°42'17"E
163.44'

N49°11'25"W
105.89'

S48°31'00"W
468.24'

N40°42'51"W
133.20'

S35°29'22"E
614.29'

CB 2 RIM EL.=492.73'
12" CMP INV OUT=488.7
OBSCURED

DMH 1 RIM EL. = 492.08'
12" CMP INV (1) IN = 488.6'
BRICK INV (2) IN = 481.1'
12" CMP INV (3) IN = 487.6'
24" SMH INV OUT = 480.8'
EXIST.SMH
RIM EL.=487.03
INV.=476.61

CB 1 RIM EL. = 491.82'
12" CMP INV OUT=484.3'

DMH 2 RIM EL. = 488.32'
BRICK INV IN = 476.3'
INV. OUT = 476.25'

EXISTING SMH
RIM EL.=445.0
INV.OUT=436.2

FLAG 1 NOT FOUND

OBSCURED

× 499.0 × 507.1 × 484.6 × 479.2 × 476.8 × 467.5 × 472.9 × 459.1 × 463.5 × 464.3 × 459.2 × 447.1 × 444.9

KEY

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- 100' BUFFER ZONE EDGE
- EXISTING EDGE OF PAVEMENT
- PROPOSED PAVEMENT CURB
- UTILITY POLE
- OHW — OVERHEAD WIRES
- 2' CONTOUR
- 10' CONTOUR
- EXISTING SPOT GRADE
- STONE WALL
- EXISTING GUARD RAIL
- DEEP HOLE TEST
- EXISTING HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- W — EXISTING WATER MAIN

NOTE:

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COMMONWEALTH OF MASSACHUSETTS
TODD P. CHAPIN
No.37558
PROFESSIONAL LAND SURVEYOR

4-10-24

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Professional Engineers & Erosion Control Specialists
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523	348-523
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REVISIONS

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4/10/24	CITY REVIEW

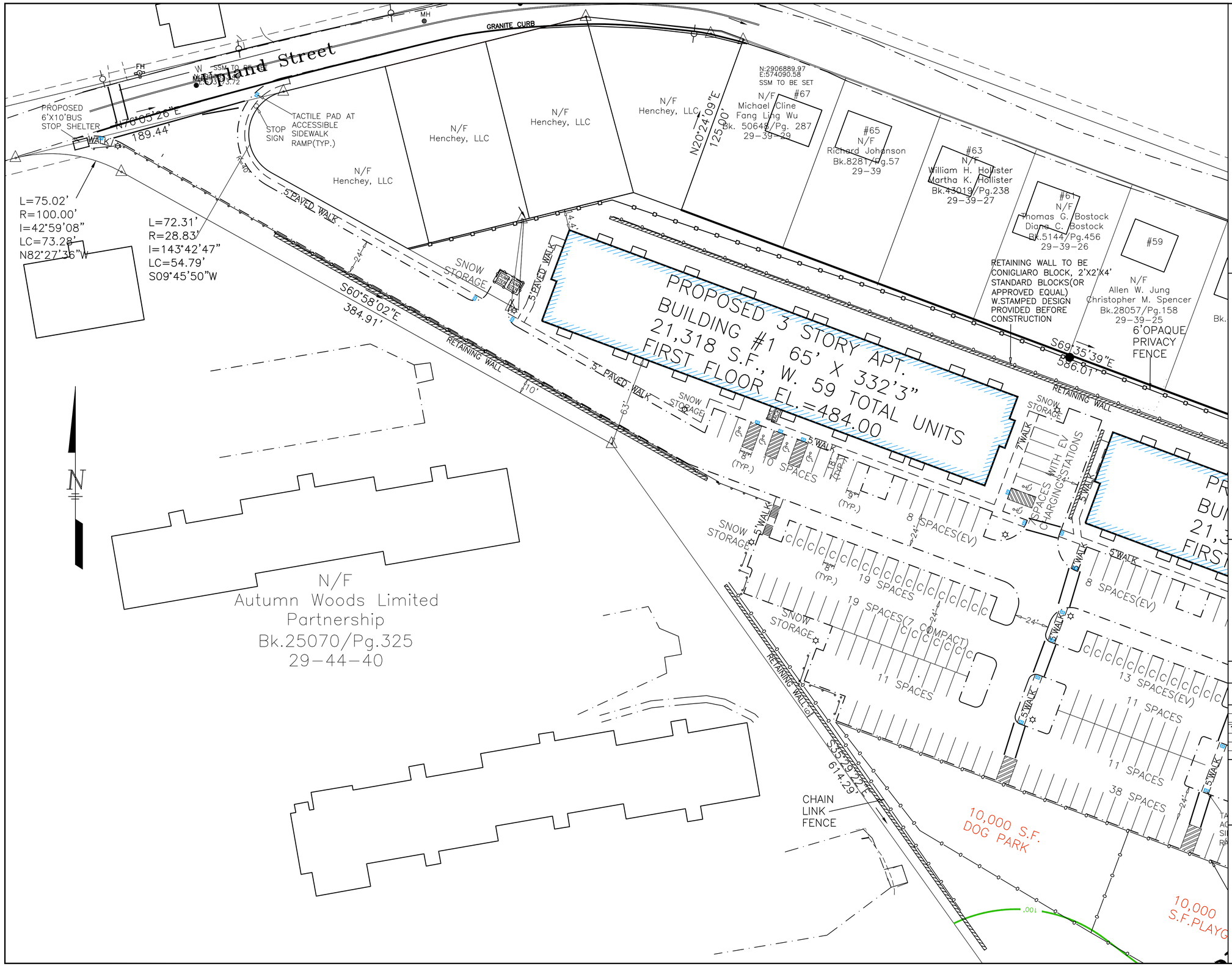
SCALE: 1 INCH = 30 FEET

FEET 0 15 30 60 90
METERS 0 15 30

DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET IN WORCESTER, MASS.

OWNER & APPLICANT:
HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

EXISTING CONDITIONS PLAN E2



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- PROPOSED SPOT GRADE
- EXISTING HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- EXISTING WATER MAIN
- TACTILE PAD AT ADA COMPLIANT SIDWALK RAMP

NOTES:

1)THE EMERGENCY ACCESS DRIVE SHALL BE GATED AND LOCKED JUST BELOW THE DRIVEWAYS TO #'S 47 AND 51 UPLAND STREET WITH THE LOCK ONLY OPERABLE BY WORCESTER POLICE, FIRE AND EMT PERSONNEL. THERE SHALL ALSO BE A 24"X24" "NO EXIT" SIGN BEYOND THE MOST EASTERLY PARKING SPACES IN FRONT OF BUILDING #2.

2)ALL HANDICAPPED ACCESSIBLE PARKING SPACES SHALL MEASURE 9'X18' AND HAVE AN 8' WIDE VAN ACCESSIBLE AISLE BESIDE IT. ALL COMPACT PARKING SPACES PROPOSED SHALL MEASURE 8'X16' AND ALL REGULAR PARKING SPACES SHALL MEASURE 9'X18'.

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JAMES L TETREAULT CIVIL No. 38548 COMMONWEALTH OF MASSACHUSETTS PROFESSIONAL ENGINEER

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IN

WORCESTER, MASS.

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5 EDGEMERE BOULEVARD
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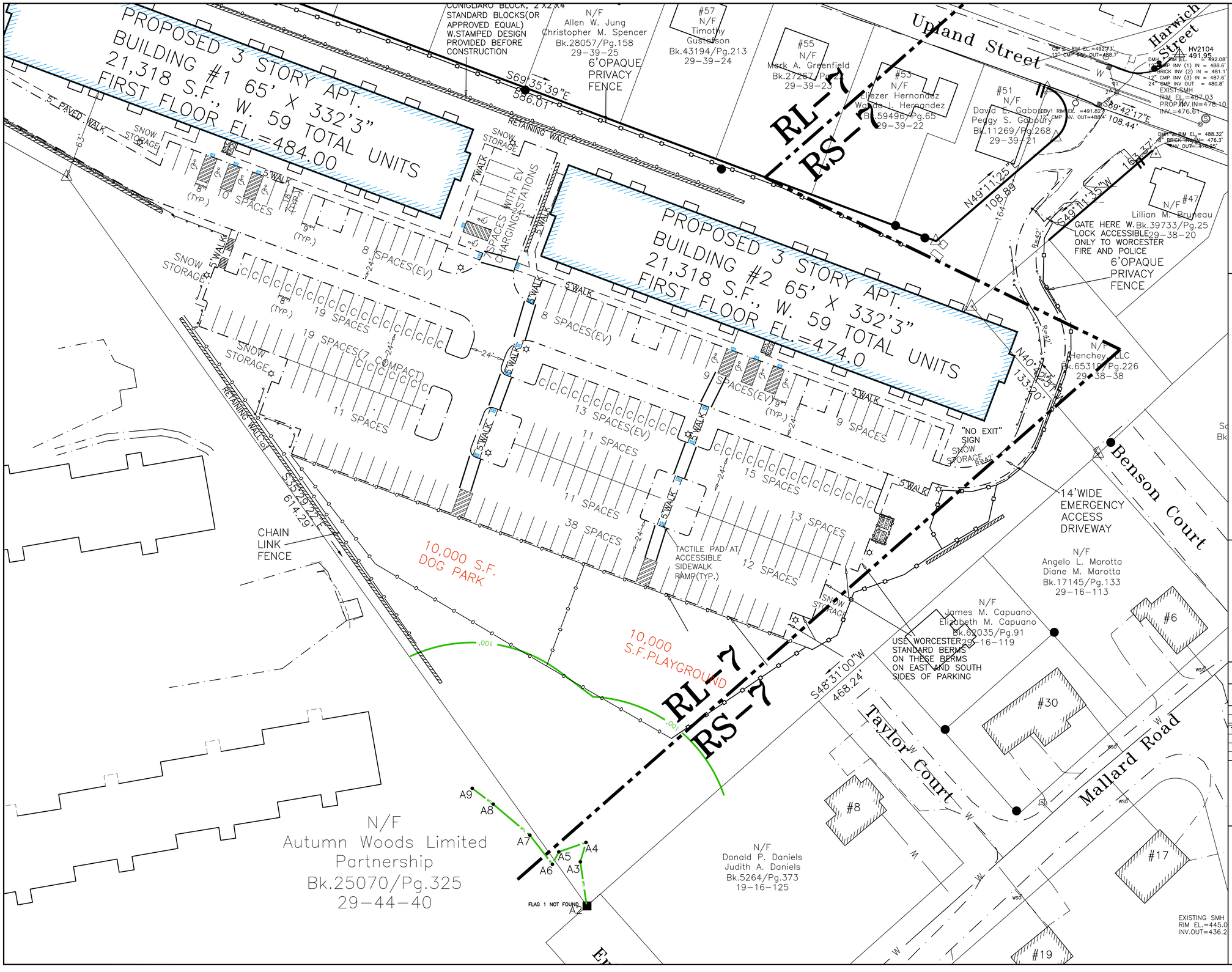
SITE LAYOUT PLAN S1



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- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
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NOTES:

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2)ALL HANDICAPPED ACCESSIBLE PARKING SPACES SHALL MEASURE 9'X18' AND HAVE AN 8' WIDE VAN ACCESSIBLE AISLE BESIDE IT. ALL COMPACT PARKING SPACES PROPOSED SHALL MEASURE 8'X16' AND ALL REGULAR PARKING SPACES SHALL MEASURE 9'X18'.

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SHREWSBURY, MA 01545

SITE LAYOUT PLAN S2

Upland Street

GRANITE CURB

PROPOSED 6'X10' BUS STOP SHELTER

TACTILE PAD AT ACCESSIBLE SIDEWALK RAMP(TYP.)

STOP SIGN

L=75.02'
R=100.00'
I=42°59'08"
LC=73.28'
N82°27'36"W

L=72.31'
R=28.83'
I=143°42'47"
LC=54.79'
S09°45'50"W

S60°58'02"E
384.91'

N:2906889.97
E:574090.58
SSM TO BE SET

N/F #67
Michael Cline
Fang Ling Wu
Bk. 50642/Pg. 287
29-39-29

N20°22'09"E
256.66'

#65
N/F
Richard Johanson
Bk.8281/Pg.57
29-39

#63
N/F
William H. Hollister
Martha K. Hollister
Bk.43019/Pg.238
29-39-27

#61
N/F
Thomas G. Bostock
Diana C. Bostock
Bk.5144/Pg.456
29-39-26

#59
N/F
Allen W. Jung
Christopher M. Spencer
Bk.28057/Pg.158
29-39-25

N/F
Henchey, LLC

N/F
Autumn Woods Limited Partnership
Bk.25070/Pg.325
29-44-40

PROPOSED 3 STORY APT. BUILDING #1 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR FL.=484.00

RETAINING WALL TO BE CONIGLIARO BLOCK, 2'X2'X4' STANDARD BLOCKS(OR APPROVED EQUAL) W.STAMPED DESIGN PROVIDED BEFORE CONSTRUCTION

6'OPAQUE PRIVACY FENCE

S69°35'39"E
386.91'

1.0' SLOPE

5' PAVED WALK

RETAINING WALL

SNOW STORAGE

1.93% GRADE

3.8% GRADE

19 SPACES

13 SPACES(EX)

11 SPACES

38 SPACES

OBSCURED

S35°49'22"E
64.29'

CHAIN LINK FENCE

INFILTRATION STRUCTURE 60'X180'X8'DEEP WITH 154 RETAIN-IT PRECAST CONCRETE MODULES 8'X8'X5'

10,000 S.F. DOG PARK

10,000 S.F. PLAYG

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- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- TACTILE PAD AT ADA COMPLIANT SIDWALK RAMP

NOTES:

1) 212 PARKING SPACES ARE PROPOSED INCLUDING 7 WITH ELECTRIC VEHICLE CHARGING STATIONS AND A TOTAL OF 8 HANDICAPPED VAN ACCESSIBLE SPACES.
2) THE SITE WILL BE SERVED BY CITY WATER AND SANITARY SEWER SERVICES, THE FORMER FROM CONNECTION TO THE EXISTING MAIN IN UPLAND STREET, THE LATTER VIA DISCHARGE FROM A PRIVATE SEWER PUMPING STATION TO THE MAIN IN UPLAND STREET IN FRONT OF #47.
3) STORMWATER RUNOFF WILL BE CAPTURED BY 20 CATCH BASINS AND CONVEYED, THROUGH A SERIES OF DRAIN MANHOLES, TO A CDS STORMWATER FILTRATION UNIT AND THEN DISCHARGED INTO AN IN GROUND INFILTRATION/DETENTION STRUCTURE WHICH WILL ONLY START TO HAVE PIPED DISCHARGE IN THE 2 YEAR STORM EVENT.
4) THROUGH THE USE OF THE IN GROUND DETENTION/INFILTRATION STRUCTURE, SPACE WILL BE PROVIDED FOR THE CREATION OF SEPARATE DOG PARK AND PLAYGROUND AREAS OFF THE SOUTH END OF THE PARKING.

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SCALE: 1 INCH = 30 FEET

FEET 0 15 30 60 90

METERS 0 15 30

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OWNER & APPLICANT:
HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

GRADING PLAN G1

PROPOSED 3 STORY APT. BUILDING #1 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR EL.=484.00

PROPOSED 3 STORY APT. BUILDING #2 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR EL.=474.0

Upland Street

Harwich Street

Benson Court

Taylor Court

Mallard Road

CONIGLIARO BLOCK, 2'X2'X4' STANDARD BLOCKS(OR APPROVED EQUAL) W.STAMPED DESIGN PROVIDED BEFORE CONSTRUCTION

1:1 SLOPE

RETAINING WALL

6'OPAQUE PRIVACY FENCE

S69°35'39"E 500.00'

N/F
Allen W. Jung
Christopher M. Spencer
Bk.28057/Pg.158
29-39-25

#57
N/F
Timothy Gustafson
Bk.43194/Pg.213
29-39-24

#55
N/F
Mark A. Greenfield
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29-39-23

#53
N/F
Eliezer Hernandez
Wanda I. Hernandez
Bk.59496/Pg.65
29-39-22

#51
N/F
David E. Gaboury
Peggy S. Gaboury
Bk.11269/Pg.268
29-39-21

N/F #47
Lillian M. Bruneau
Bk.39733/Pg.25
29-38-20

GATE HERE W. LOCK ACCESSIBLE ONLY TO WORCESTER FIRE AND POLICE

6'OPAQUE PRIVACY FENCE

N49°11'25"W 105.89'

S69°42'17"E 108.44'

N/F
Henchey, LLC
Bk.65519/Pg.226
29-38-38

"NO EXIT" SIGN

14' WIDE EMERGENCY ACCESS DRIVEWAY

N/F
Angelo L. Marotta
Diane M. Marotta
Bk.17145/Pg.133
29-16-113

N/F
James M. Capuano
Elizabeth M. Capuano
Bk.62035/Pg.91
29-16-119

USE WORCESTER STANDARD BERMS ON THESE BERMS ON EAST AND SOUTH SIDES OF PARKING

S48°31'00"W 468.24'

N/F
Autumn Woods Limited Partnership
Bk.25070/Pg.325
29-44-40

N/F
Donald P. Daniels
Judith A. Daniels
Bk.5264/Pg.373
19-16-125

S14°29'21"W 814.29'

CHAIN LINK FENCE

INFILTRATION STRUCTURE 60'X180'X8'DEEP WITH 154 RETAIN-IT PRECAST CONCRETE MODULES 8'X8'X5'

10,000 S.F. DOG PARK

10,000 S.F. PLAYGROUND

TACTILE PAD AT ACCESSIBLE SIDEWALK RAMP (TYP.)

INV.OUT= 450.00 2X10"& 2X15" PIPES

FLAG 1 NOT FOUND

A2 A3 A4 A5 A6 A7 A8 A9

1.93% GRADE

3.8% GRADE

4.2% GRADE

212 SPACES

19 SPACES

13 SPACES

11 SPACES

18 SPACES

12 SPACES

38 SPACES

OBSCURED

SNOW STORAGE

RESIDENTIAL SUPERINTENDENT

WATER FILTERING STATION

EXISTING SMH RIM EL.=445.0 INV/OUT=436.2

HV2104 491.95

EXISTING SMH RIM EL.=487.03 PROP.W.IN=478.10 INV.=478.80

KEY

- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- EXISTING EDGE OF PAVEMENT
- PROPOSED PAVEMENT CURB
- UTILITY POLE
- OVERHEAD WIRES
- 2' CONTOUR
- 10' CONTOUR
- EXISTING SPOT GRADE
- STONE WALL
- EXISTING GUARD RAIL
- DEEP HOLE TEST
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- EXISTING HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- TACTILE PAD AT ADA COMPLIANT SIDWALK RAMP

NOTES:

1) 212 PARKING SPACES ARE PROPOSED INCLUDING 7 WITH ELECTRIC VEHICLE CHARGING STATIONS AND A TOTAL OF 8 HANDICAPPED VAN ACCESSIBLE SPACES.
2) THE SITE WILL BE SERVED BY CITY WATER AND SANITARY SEWER SERVICES, THE FORMER FROM CONNECTION TO THE EXISTING MAIN IN UPLAND STREET, THE LATTER VIA DISCHARGE FROM A PRIVATE SEWER PUMPING STATION TO THE MAIN IN UPLAND STREET IN FRONT OF #47.
3) STORMWATER RUNOFF WILL BE CAPTURED BY 20 CATCH BASINS AND CONVEYED, THROUGH A SERIES OF DRAIN MANHOLES, TO A CDS STORMWATER FILTRATION UNIT AND THEN DISCHARGED INTO AN IN GROUND INFILTRATION/DETENTION STRUCTURE WHICH WILL ONLY START TO HAVE PIPED DISCHARGE IN THE 2 YEAR STORM EVENT.
4) THROUGH THE USE OF THE IN GROUND DETENTION/INFILTRATION STRUCTURE, SPACE WILL BE PROVIDED FOR THE CREATION OF SEPARATE DOG PARK AND PLAYGROUND AREAS OFF THE SOUTH END OF THE PARKING.

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

JAMES L TETREAULT CIVIL No. 38548 COMMONWEALTH OF MASSACHUSETTS PROFESSIONAL ENGINEER

CLT. NO.	JOB NO.
523	348-523
DATE: SEPTEMBER 25, 2023	DWG NO. UPLANDSTREETCURRENT

REVISIONS

DATE:	DESCRIPTION
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4/10/24	CITY REVIEW
4/19/24	NO CHANGES TO THIS SHEET

SCALE: 1 INCH = 30 FEET

FEET 0 15 30 60 90

METERS 0 15 30

DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET

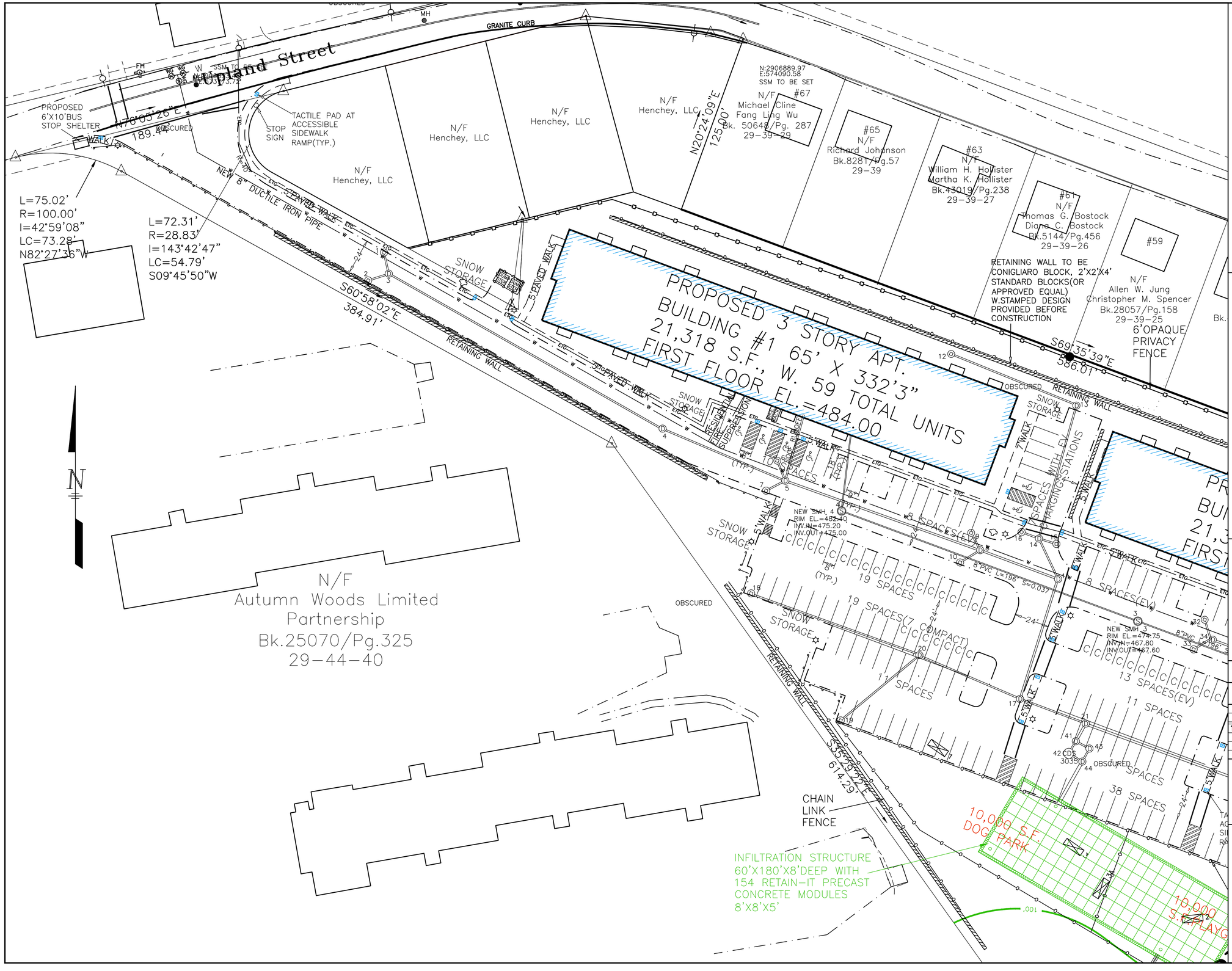
IN

WORCESTER, MASS.

OWNER & APPLICANT:

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

GRADING PLAN G2



KEY

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- 100' BUFFER ZONE EDGE
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- PROPOSED PAVEMENT CURB
- UTILITY POLE
- OVERHEAD WIRES
- 2' CONTOUR
- 10' CONTOUR
- EXISTING SPOT GRADE
- STONE WALL
- EXISTING GUARD RAIL
- DEEP HOLE TEST
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- EXISTING HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- EXISTING WATER MAIN
- PROPOSED WATER MAIN

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DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET IN WORCESTER, MASS.

OWNER & APPLICANT:

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

UTILITY PLAN U1

PROPOSED 3 STORY APT. BUILDING #1 65' X 332'3" 21,318 S.F.; W. 59 TOTAL UNITS FIRST FLOOR EL.=484.00

PROPOSED 3 STORY APT. BUILDING #2 65' X 332'3" 21,318 S.F.; W. 59 TOTAL UNITS FIRST FLOOR EL.=474.0

CONIGLIARO BLOCK, 2 X2 X4 STANDARD BLOCKS(OR APPROVED EQUAL) W.STAMPED DESIGN PROVIDED BEFORE CONSTRUCTION

N/F
Allen W. Jung
Christopher M. Spencer
Bk.28057/Pg.158
29-39-25

#57
N/F
Timothy Gustafson
Bk.43194/Pg.213
29-39-24

#55
N/F
Mark A. Greenfield
Bk.27267/Pg.22
29-39-23

#53
N/F
Eliezer Hernandez
Wanda I. Hernandez
Bk.59496/Pg.65
29-39-22

#51
N/F
David E. Gaboury
Peggy S. Gaboury
Bk.11269/Pg.268
29-39-21

#47
N/F
Lillian M. Bruneau
Bk.39733/Pg.25
29-38-20

N/F
Henchey, LLC
Bk.65319/Pg.226
29-38-38

N/F
Angelo L. Marotta
Diane M. Marotta
Bk.17145/Pg.133
29-16-113

N/F
James M. Capuano
Elizabeth M. Capuano
Bk.62035/Pg.91
29-16-119

N/F
Autumn Woods Limited Partnership
Bk.25070/Pg.325
29-44-40

N/F
Donald P. Daniels
Judith A. Daniels
Bk.5264/Pg.373
19-16-125

Upland Street

Harwich Street

Benson Court

Taylor Court

Mallard Road

S69°35'39"E 586.01'

S35°29'22"E 614.29'

N49°11'25"E 108.89'

S49°11'25"W 108.44'

N40°48'35"W 133.00'

S48°31'00"W 468.24'

6'OPAQUE PRIVACY FENCE

CHAIN LINK FENCE

RETAINING WALL

SNOW STORAGE

RESIDENTIAL FIRE SUPPRESSION

TACTILE PAD AT ACCESSIBLE SIDEWALK RAMP(TYP.)

GATE HERE W. LOCK ACCESSIBLE ONLY TO WORCESTER FIRE AND POLICE

"NO EXIT" SIGN

14'WIDE EMERGENCY ACCESS DRIVEWAY

VALVE VAULT

PUMPING STATION WET WELL W. TWO 5HP PUMPS

CONTROL PANEL SHELTER

GENERATOR

USE WORCESTER STANDARD BERMS ON THESE BERMS ON EAST AND SOUTH SIDES OF PARKING

3"FORCE MAIN

NEW SMH A (REMODELED MANHOLE) RIM EL.=489.20 FM INV.IN=483.00 8"INV.OUT=479.50

NEW SMH 1 RIM EL.=471.80 INV.IN=462.30 INV.OUT=462.08

NEW SMH 2 RIM EL.=471.60 INV.IN=464.50 INV.OUT=464.30

NEW SMH 3 RIM EL.=478.75 INV.IN=467.80 INV.OUT=467.60

NEW SMH 4 RIM EL.=482.40 INV.IN=475.20 INV.OUT=475.00

EXISTING SMH RIM EL.=445.0 INV.OUT=436.2

10,000 S.F. DOG PARK

10,000 S.F. PLAYGROUND

INFILTRATION STRUCTURE 60'X180'X8'DEEP WITH 154 RETAIN-IT PRECAST CONCRETE MODULES 8'X8'X5'

INV.OUT= 450.00 2X10"& 2X15" PIPES

FLAG 1 NOT FOUND

A1 A2 A3 A4 A5 A6 A7 A8 A9

#6 #8 #17 #19 #30

KEY

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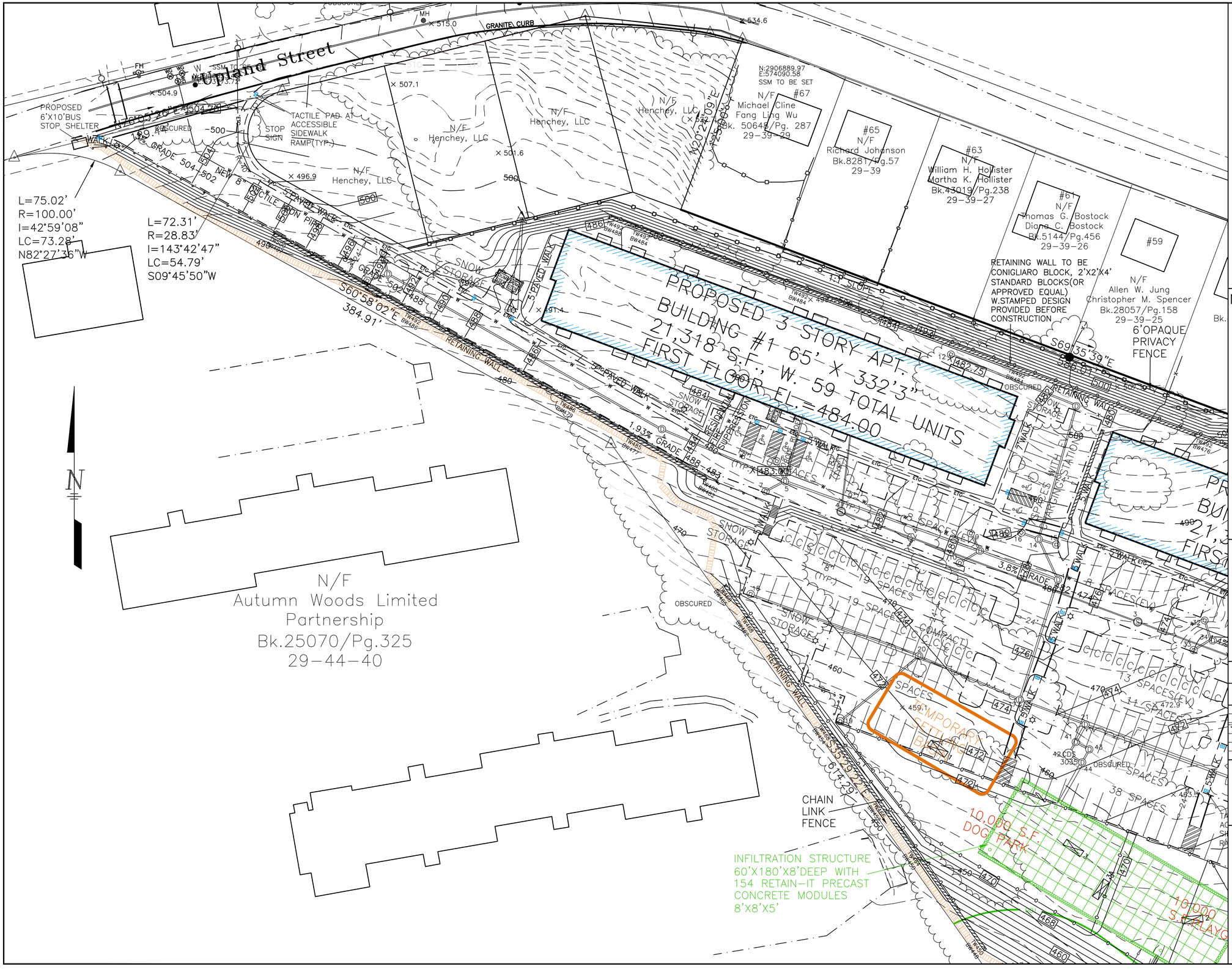
UTILITY PLAN U2



NOTES:

1) TEMPORARY SETTLING BASINS MUST BE SIZED TO MEET DEP STANDARDS, AT A MINIMUM, OF 3600 CUBIC FEET PER ACRE OF DRAINAGE AREA FROM WHICH RUNOFF IS RECEIVED.
2) THE SOIL STOCKPILE AREA SHALL BE SURROUNDED BY EROSION CONTROL BARRIERS 5 FEET OFF ITS BASE.
3) EXPOSED SOIL AREAS SHALL BE GIVEN TEMPORARY STABILIZATION COVER IF LEFT EXPOSED MORE THAN 2 WEEKS. THE PREFERRED TEMPORARY STABILIZATION ON SITE SHALL BE STUMP GRINDINGS.

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COMMONWEALTH OF MASSACHUSETTS JAMES L. TETREAULT CIVIL No. 38548 PROFESSIONAL ENGINEER

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EROSION & SEDIMENT CONTROL PLAN ESC1

PROPOSED 3 STORY APT. BUILDING #1 65' X 332'3" 21,318 S.F., W. 59 TOTAL UNITS FIRST FLOOR EL.=484.00

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CONIGLIARO BLOCK, 2'X2'X4' STANDARD BLOCKS(OR APPROVED EQUAL) W.STAMPED DESIGN PROVIDED BEFORE CONSTRUCTION

1:1 SLOPE

RETAINING WALL

6'OPAQUE PRIVACY FENCE

S69°35'39"E 500.00'

N/F
Allen W. Jung
Christopher M. Spencer
Bk.28057/Pg.158
29-39-25

#57
N/F
Timothy Gustafson
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29-39-24

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Wanda I. Hernandez
Bk.59496/Pg.65
29-39-22

#51
N/F
David E. Gaboury
Peggy S. Gaboury
Bk.11269/Pg.268
29-39-21

Upland Street

S69°42'17"E 108.44'

N49°11'25"E 105.89'

Harwich Street

HV2104
491.95
DMH EL.= 492.08'
12" EMP INV (1) IN = 488.6'
BRICK INV (2) IN = 481.1'
12" EMP INV (3) IN = 487.6'
24" EMP INV OUT = 480.8'
EXIST.SMH
RIM EL.=487.03
PROP.W.IN=478.10
INV.=478.85'

DMH EL.= 488.32'
BRICK INV.= 476.3'
INV. OUT= 476.05'

CB #2 RIM EL.=492.73'
12" CMP INV. OUT=488.7'

CB #1 RIM EL.=491.62'
12" CMP INV. OUT=488.4'

OBSCURED

N/F #47
Lillian M. Bruneau
Bk.39733/Pg.25
29-38-20

GATE HERE W. LOCK ACCESSIBLE ONLY TO WORCESTER FIRE AND POLICE

6'OPAQUE PRIVACY FENCE

N/F
Henchey, LLC
Bk.65519/Pg.226
29-38-38

"NO EXIT" SIGN

SNOW STORAGE

1.93% GRADE

3.8% GRADE

4.2% GRADE

2 WALK

5' WALK

SPACES(EV)

19 SPACES

13 SPACES

14 SPACES

38 SPACES

12 SPACES

TEMPORARY SETTLING BASIN

10,000 S.F. DOG PARK

10,000 S.F. PLAYGROUND

TACTILE PAD AT ACCESSIBLE SIDEWALK RAMP (TYP.)

INFILTRATION STRUCTURE 60'X180'X8'DEEP WITH 154 RETAIN-IT PRECAST CONCRETE MODULES 8'X8'X5'

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14' WIDE EMERGENCY ACCESS DRIVEWAY

Benson Court

Taylor Court

Mallard Road

#6 #30 #8 #17 #19

EXISTING SMH
RIM EL.=445.0
INV/OUT=436.2

KEY

- WETLAND EDGE
- 100' BUFFER ZONE EDGE
- EXISTING EDGE OF PAVEMENT
- PROPOSED PAVEMENT CURB
- UTILITY POLE
- OHW — OVERHEAD WIRES
- 2' CONTOUR
- 480 — 10' CONTOUR
- 362o7 — EXISTING SPOT GRADE
- STONE WALL
- EXISTING GUARD RAIL
- 1 — DEEP HOLE TEST
- 362 — PROPOSED CONTOUR
- 481.60 X — PROPOSED SPOT GRADE
- EXISTING HYDRANT
- S — EXISTING SANITARY SEWER MANHOLE
- S — PROPOSED SANITARY SEWER MANHOLE
- CB — PROPOSED CATCH BASIN
- D — PROPOSED DRAIN MANHOLE
- W — EXISTING WATER MAIN
- PROPOSED WATER MAIN
- PROPOSED SEDIMENT CONTROL BARRIER

NOTES:

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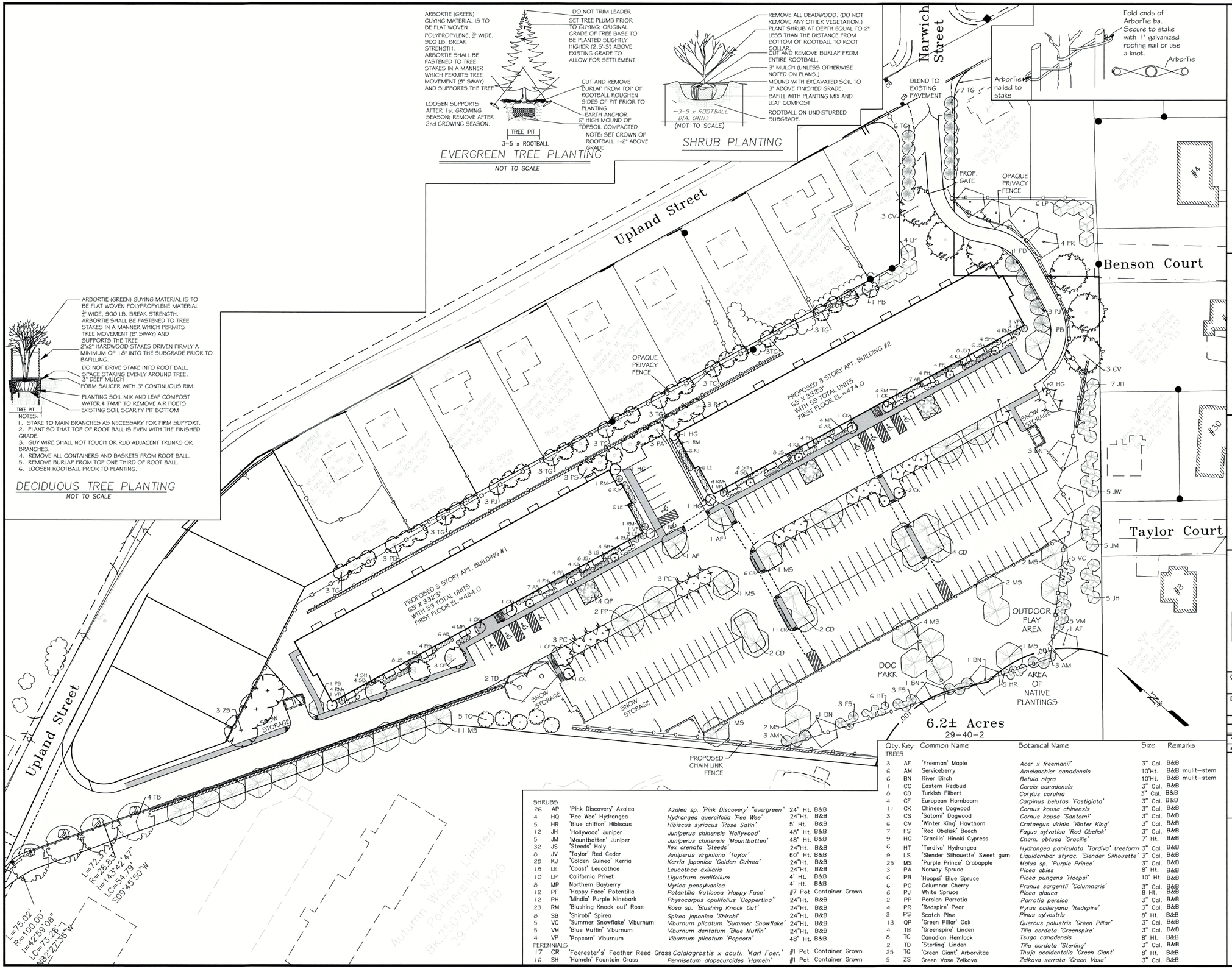
EROSION & SEDIMENT CONTROL PLAN ESC2



ARBORTIE (GREEN) GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL 3" WIDE, 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO TREE STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT (8" SWAY) AND SUPPORTS THE TREE
2"x2" HARDWOOD STAKES DRIVEN FIRMLY A MINIMUM OF 18" INTO THE SUBGRADE PRIOR TO BAFFLING.
DO NOT DRIVE STAKE INTO ROOT BALL. SPACE STAKING EVENLY AROUND TREE.
3" DEEP MULCH FORM SAUCER WITH 3" CONTINUOUS RIM.
PLANTING SOIL MIX AND LEAF COMPOST WATER & TAMP TO REMOVE AIR POETS
EXISTING SOIL SCARIFY PIT BOTTOM
TREE PIT

NOTES:
1. STAKE TO MAIN BRANCHES AS NECESSARY FOR FIRM SUPPORT.
2. PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.
3. GUY WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.
4. REMOVE ALL CONTAINERS AND BASKETS FROM ROOT BALL.
5. REMOVE BURLAP FROM TOP ONE THIRD OF ROOT BALL.
6. LOOSEN ROOTBALL PRIOR TO PLANTING.

DECIDUOUS TREE PLANTING
NOT TO SCALE

ARBORTIE (GREEN) GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE, 3" WIDE, 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO TREE STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT (8" SWAY) AND SUPPORTS THE TREE
LOOSEN SUPPORTS AFTER 1st GROWING SEASON; REMOVE AFTER 2nd GROWING SEASON.
DO NOT TRIM LEADER
SET TREE PLUMB PRIOR TO GUYING; ORIGINAL GRADE OF TREE BASE TO BE PLANTED SLIGHTLY HIGHER (2.5"-3") ABOVE EXISTING GRADE TO ALLOW FOR SETTLEMENT
CUT AND REMOVE BURLAP FROM TOP OF ROOTBALL ROUGHEN SIDES OF PIT PRIOR TO PLANTING
EARTH ANCHOR
6" HIGH MOUND OF TOPSOIL COMPACTED
NOTE: SET CROWN OF ROOTBALL 1-2" ABOVE GRADE
TREE PIT
3-5 x ROOTBALL

EVERGREEN TREE PLANTING
NOT TO SCALE

REMOVE ALL DEADWOOD. (DO NOT REMOVE ANY OTHER VEGETATION.)
PLANT SHRUB AT DEPTH EQUAL TO 2" LESS THAN THE DISTANCE FROM BOTTOM OF ROOTBALL TO ROOT COLLAR.
CUT AND REMOVE BURLAP FROM ENTIRE ROOTBALL.
3" MULCH (UNLESS OTHERWISE NOTED ON PLANS.)
MOUND WITH EXCAVATED SOIL TO 3" ABOVE FINISHED GRADE.
BAFILL WITH PLANTING MIX AND LEAF COMPOST
ROOTBALL ON UNDISTURBED SUBGRADE.
3-5 x ROOTBALL DIA. (MIN.)
(NOT TO SCALE)

SHRUB PLANTING

Fold ends of ArborTie ba. Secure to stake with 1" galvanized roofing nail or use a knot.
ArborTie
ArborTie nailed to stake

Qty.	Key	Common Name	Botanical Name	Size	Remarks
SHRUBS					
26	AP	'Pink Discovery' Azalea	*Azalea sp. 'Pink Discovery' "evergreen"*	24" Ht.	B&B
4	HQ	'Pee Wee' Hydrangea	*Hydrangea quercifolia 'Pee Wee'*	24"Ht.	B&B
5	HR	'Blue chiffon' Hibiscus	*Hibiscus syriacus 'Rose Satin'*	5' Ht.	B&B
12	JH	'Hollywood' Juniper	*Juniperus chinensis 'Hollywood'*	48" Ht.	B&B
5	JM	'Mountbatten' Juniper	*Juniperus chinensis 'Mountbatten'*	48" Ht.	B&B
32	JS	'Steeds' Holy	*Ilex crenata 'Steeds'*	24"Ht.	B&B
8	JV	'Taylor' Red Cedar	*Juniperus virginiana 'Taylor'*	60" Ht.	B&B
28	KJ	'Golden Guinea' Kerria	*Kerria japonica 'Golden Guinea'*	24"Ht.	B&B
18	LE	'Coast' Leucothoe	*Leucothoe axillaris*	24"Ht.	B&B
10	LP	California Privet	*Ligustrum ovalifolium*	4' Ht.	B&B
8	MP	Northern Bayberry	*Myrica pensylvanica*	4' Ht.	B&B
12	PF	'Happy Face' Potentilla	*Potentilla fruticosa 'Happy Face'*	#7 Pot	Container Grown
12	PH	'Mindia' Purple Ninebark	*Physocarpus opulifolius "Coppertino"*	24"Ht.	B&B
23	RM	'Blushing Knock out' Rose	*Rosa sp. 'Blushing Knock Out'*	24"Ht.	B&B
8	SB	'Shirobi' Spirea	*Spirea japonica 'Shirobi'*	24"Ht.	B&B
5	VC	'Summer Snowflake' Viburnum	*Viburnum plicatum 'Summer Snowflake'*	24"Ht.	B&B
5	VM	'Blue Muffin' Viburnum	*Viburnum dentatum 'Blue Muffin'*	24"Ht.	B&B
4	VP	'Popcorn' Viburnum	*Viburnum plicatum 'Popcorn'*	48" Ht.	B&B
PERENNIALS					
17	CR	'Foerester's' Feather Reed Grass	*Calalagrostis x acuti. 'Karl Foer.'*	#1 Pot	Container Grown
16	SH	'Hameln' Fountain Grass	*Pennisetum alopecuroides 'Hameln'*	#1 Pot	Container Grown
TREES					
3	AF	'Freeman' Maple	*Acer x freemanii'*	3" Cal.	B&B
6	AM	Serviceberry	*Amelanchier canadensis*	10'Ht.	B&B mulit-stem
6	BN	River Birch	*Betula nigra*	10'Ht.	B&B mulit-stem
1	CC	Eastern Redbud	*Cercis canadensis*	3" Cal.	B&B
8	CD	Turkish Filbert	*Corylus corulna*	3" Cal.	B&B
4	CF	European Hornbeam	*Carpinus belutas 'Fastigiata'*	3" Cal.	B&B
11	CK	Chinese Dogwood	*Cornus kousa chinensis*	3" Cal.	B&B
3	CS	'Satomi' Dogwood	*Cornus kousa 'Santomi'*	3" Cal.	B&B
6	CV	'Winter King' Hawthorn	*Crataegus viridis 'Winter King'*	3" Cal.	B&B
7	FS	'Red Obelisk' Beech	*Fagus sylvatica 'Red Obelisk'*	3" Cal.	B&B
9	HG	'Gracilis' Hinoki Cypress	*Cham. obtusa 'Gracilis'*	7' Ht.	B&B
6	HT	'Tardiva' Hydrangea	*Hydrangea paniculata 'Tardiva' treeform*	3" Cal.	B&B
9	LS	'Slender Silhouette' Sweet gum	*Liquidambar styrac. 'Slender Silhouette'*	3" Cal.	B&B
25	MS	'Purple Prince' Crabapple	*Malus sp. 'Purple Prince'*	3" Cal.	B&B
3	PA	Norway Spruce	*Picea abies*	8' Ht.	B&B
6	PB	'Hoopsi' Blue Spruce	*Picea pungens 'Hoopsi'*	10' Ht.	B&B
6	PC	Columnar Cherry	*Prunus sargentii 'Columnaris'*	3" Cal.	B&B
6	PJ	White Spruce	*Picea glauca*	8 Ht.	B&B
2	PP	Persian Parrotia	*Parrotia persica*	3" Cal.	B&B
4	PR	'Redspire' Pear	*Pyrus calleryana 'Redspire'*	3" Cal.	B&B
3	PS	Scotch Pine	*Pinus sylvestris*	8' Ht.	B&B
13	QP	'Green Pillar' Oak	*Quercus palustris 'Green Pillar'*	3" Cal.	B&B
4	TB	'Greenspire' Linden	*Tilia cordata 'Greenspire'*	3" Cal.	B&B
8	TC	Canadian Hemlock	*Tsuga canadensis*	8' Ht.	B&B
2	TD	'Sterling' Linden	*Tilia cordata 'Sterling'*	3" Cal.	B&B
25	TG	'Green Giant' Arborvitae	*Thuja occidentalis 'Green Giant'*	8' Ht.	B&B
5	ZS	Green Vase Zelkova	*Zelkova serrata 'Green Vase'*	3" Cal.	B&B

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.	JOB NO.
517	348-517
DATE: SEPTEMBER 25, 2023	DWG NO. UPLANDSTWORCCURRENT

REVISIONS	
DATE:	DESCRIPTION
12-26-23	REVISIONS
4-49-24	REVISIONS

SCALE: 1 INCH = 40 FEET
FEET 0 20 40 80 120
METERS 0 20 40

CONCEPT PLAN OF LAND AT UPLAND STREET IN WORCESTER, MASS.

PREPARED FOR:
HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

LANDSCAPE PLAN L-1

Luminaire Schedule							
Symbol	Qty	Label	Description	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	1	P1A	MCGRAW-EDISON: (1) GLEON-SA1C-830-U-5WQ	0.900	6198	59	25
	5	P1B	MCGRAW-EDISON: (2) GLEON-SA1C-830-U-5WQ	0.900	6198	59	25
	10	P2	MCGRAW-EDISON: GLEON-SA1B-830-U-SL4-HSS	0.900	3860	44	25

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Fc	0.21	1.5	0.0	N.A.	N.A.
DRIVE LEFT	Fc	0.57	1.1	0.2	2.85	5.50
DRIVE RIGHT	Fc	0.83	1.2	0.2	4.15	6.00
PARKING	Fc	0.72	1.5	0.3	2.40	5.00

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SCALE: 1 INCH = 40 FEET

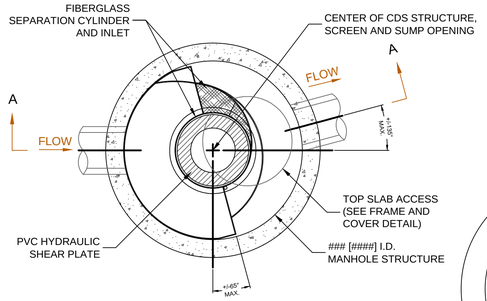
FEET 0 20 40 80 120

METERS 0 20 40

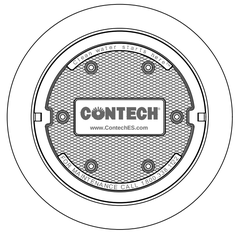
CONCEPT PLAN OF LAND
AT UPLAND STREET
IN
WORCESTER, MASS.

PREPARED FOR:
HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

LIGHTING PLAN L-2

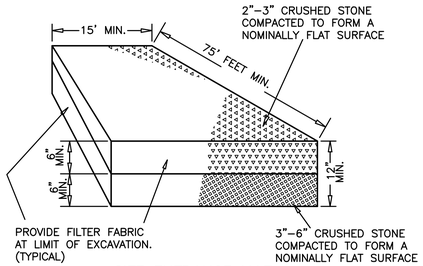


PLAN VIEW B-B
N.T.S.

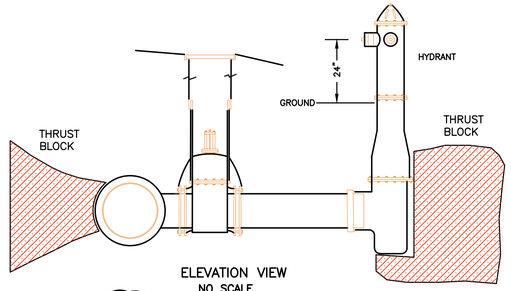


FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

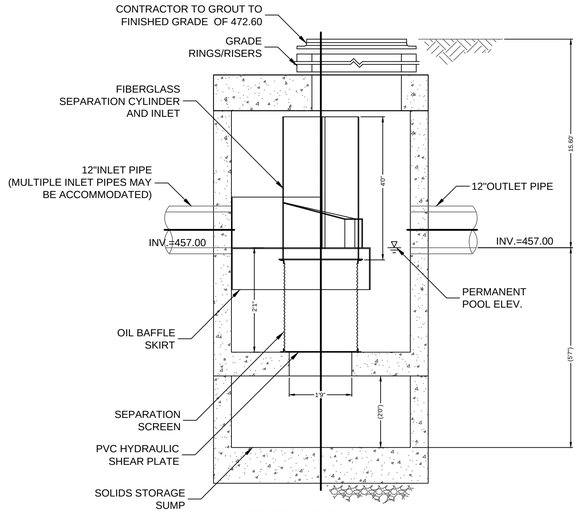
NOTE:
THE PROPOSED LOCATION OF THE SITE ENTRANCE MAT WILL BE IN THE LOCATION OF THE PROPOSED DRIVEWAY ENTRANCE OFF UPLAND STREET.



SITE ENTRANCE MAT
(NOT TO SCALE)
UPLAND STREET WILL BE SWEPT DAILY WHEN HAULING IS IN PROGRESS.



ELEVATION VIEW
NO SCALE

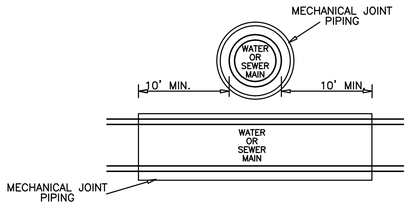


ELEVATION A-A
N.T.S.

CONTECH CDS MODEL 3035
STORMWATER FILTRATION UNIT
(NOT TO SCALE)

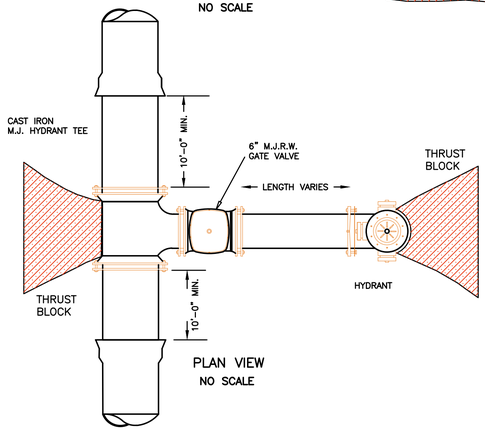
NOTE:
SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET TO ALL WATER SUPPLY LINES. WHEN A 10 FOOT HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION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

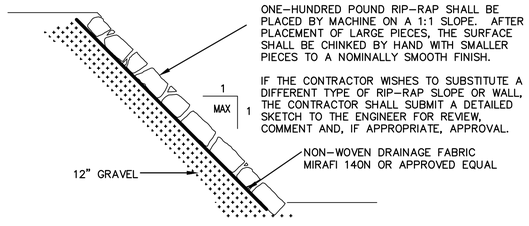


PLAN VIEW
NO SCALE

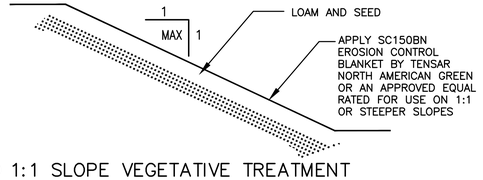
TYPICAL HYDRANT W/GATE
(NOT TO SCALE)

DIG SAFE:

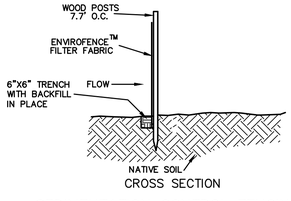
EXCEPT FOR VISIBLE STRUCTURES (MANHOLES, GATES, POLES, ETC.) LOCATED BY REALMAPINFO, LLC, INC., ALL UNDERGROUND UTILITIES SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE 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.



1:1 RIP–RAP SLOPE
(NOT TO SCALE)

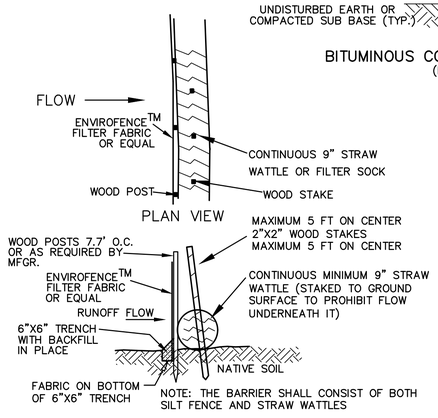


3:1 TO 1:1 SLOPE VEGETATIVE TREATMENT
(NOT TO SCALE)

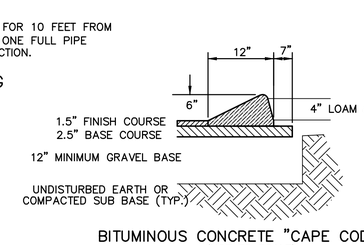


CROSS SECTION

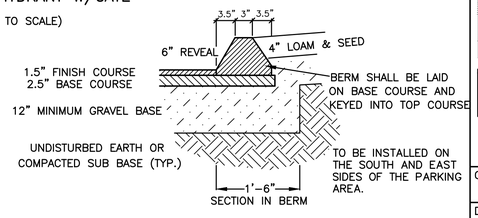
SEDIMENTATION CONTROL FENCING
(NOT TO SCALE)



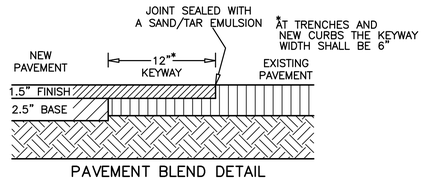
CROSS SECTION
DETAIL OF SEDIMENT CONTROL BARRIER
(NOT TO SCALE)



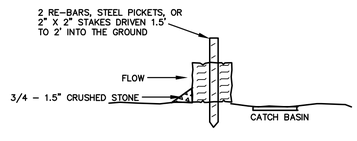
BITUMINOUS CONCRETE "CAPE COD" BERM
(NOT TO SCALE)



WORCESTER STANDARD BITUMINOUS CONCRETE BERM
NOT TO SCALE



PAVEMENT BLEND DETAIL
(NOT TO SCALE)



TO BE PLACED AROUND CATCH BASINS DURING CONSTRUCTION

STRAW BALE DIKE
(NOT TO SCALE)

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Telephone (508)-485-0137 jamest@azimuthlanddesign.co

COMMONWEALTH OF MASSACHUSETTS
JAMES L TETREAULT
CIVIL
No. 38548
PROFESSIONAL ENGINEER

CLT. NO.	JOB NO.
523	348–523
DATE: SEPTEMBER 25, 2023	DWG NO. UPLANDSTREETCURRENT

REVISIONS	
DATE:	DESCRIPTION
12/26/23	CITY REVIEW
2/6/24	CITY REVIEW
4/10/24	CITY REVIEW
4/19/24	NO CHANGES TO THIS SHEET

SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

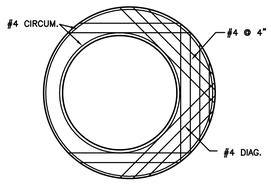
IN

WORCESTER, MASSACHUSETTS

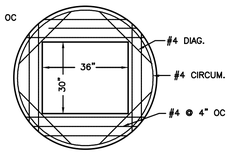
PREPARED FOR OWNER & APPLICANT

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

DETAIL SHEET D1



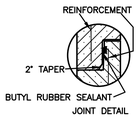
8" TOP SLAB

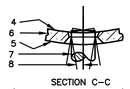


CONTRACTOR SHALL VERIFY DIMENSIONS AND SUBMIT SHOP DRAWINGS

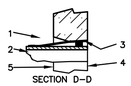
6" TOP RING

1. KOR-N-SEAL RESILIENT CONNECTION - SIZED TO MEET CLASS AND TYPE OF PIPE
2. PIPE SECTION
3. BEVEL TO ALLOW FOR MISALIGNMENT
4. INNER SURFACE OF PRECAST CONCRETE MANHOLE
5. OUTER SURFACE OF PRECAST CONCRETE MANHOLE
6. PRECAST CONCRETE MANHOLE (A.S.T.M. C478-68)
7. PVC, CLAY, CAST IRON OR CONCRETE PIPE
8. 9" ALLOWABLE MISALIGNMENT OFF CENTER IN ANY DIRECTION



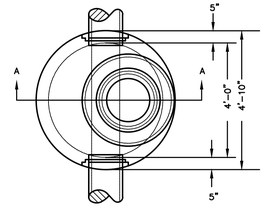


SECTION C-C
(RESILIENT SEAL OMITTED)

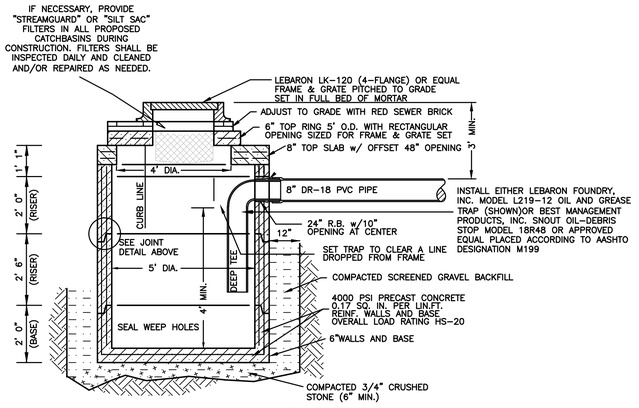


SECTION D-D
THRU RESILIENT SEAL AND MANHOLE

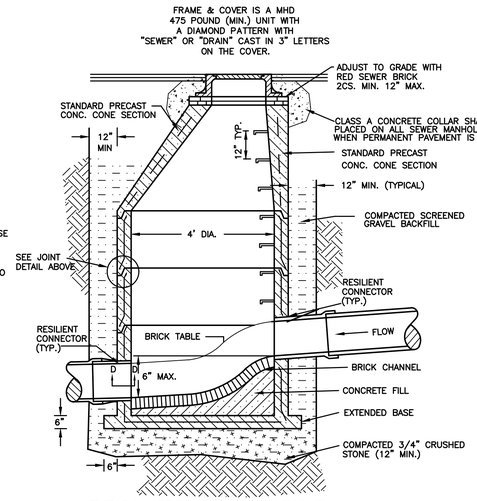
DETAILS
(NOT TO SCALE)
(SEE NOTES TO LEFT)



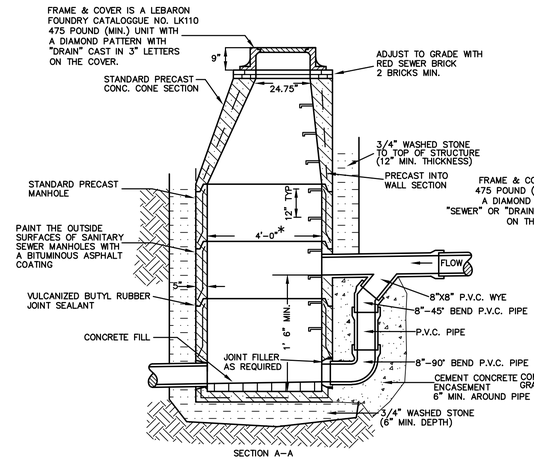
PLAN VIEW OF
TYPICAL PRE-CAST MANHOLE
(NOT TO SCALE)



TYPICAL 4 FLANGE GRATE PRE-CAST CATCH BASIN
(NOT TO SCALE)

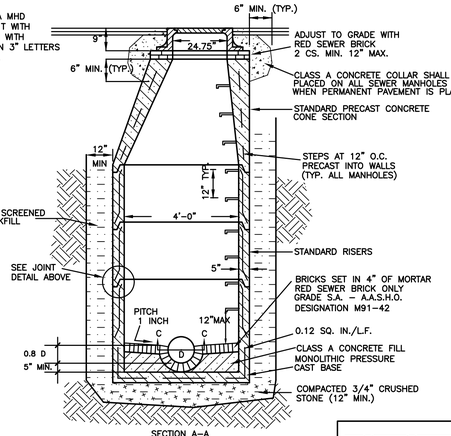


TYPICAL STEP DRAIN MANHOLE
(NOT TO SCALE)



SECTION A-A

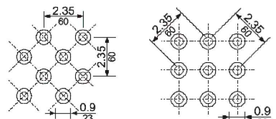
TYPICAL DROP MANHOLE
(NOT TO SCALE)



SECTION A-A

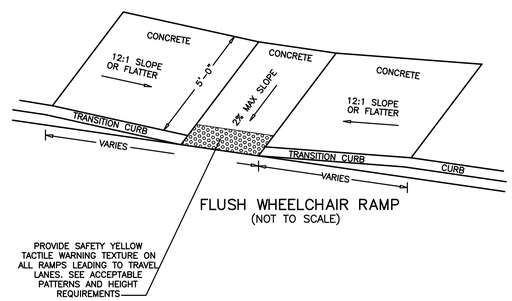
TYPICAL PRE-CAST MANHOLE
(NOT TO SCALE)

PRECAST CATCHBASIN W. GRANITE THROAT INLET
(NOT TO SCALE)

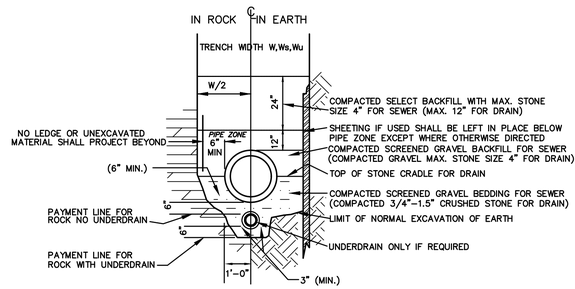


Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light.

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

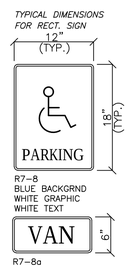


FLUSH WHEELCHAIR RAMP
(NOT TO SCALE)



TYPICAL TRENCH SECTION
ONE PIPE
(NOT TO SCALE)

TRENCH DEPTH TO INVERT	TRENCH WIDTH, W FOR SEWER
0'-12'	5'
12'-20'	7'
>20'	9'

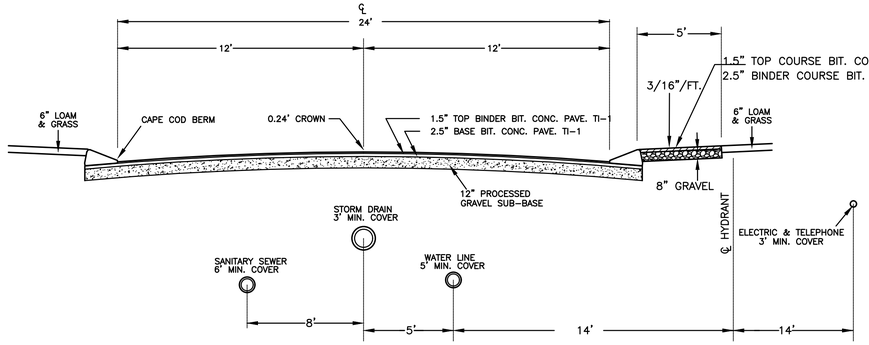


NOTES:
THE SIGN SHALL BE PERMANENTLY LOCATED AT A HEIGHT OF NOT LESS THAN FIVE FEET NOR MORE THAN EIGHT FEET TO THE TOP OF THE SIGN.

THE SIGN SHALL BE LOCATED AT THE HEAD OF THE SPACE AND NO MORE THAN TEN FEET AWAY FROM THE SPACE. THE SIGN SHALL BE MOUNTED ON A NOMINAL 2"X2" GALVANIZED STEEL POST.

THE PROPOSED ACCESS AISLE NEXT TO THE SPACE SHALL BE 8 FEET WIDE.

HC PARKING SIGN
(NOT TO SCALE)



DRIVEWAY CROSS-SECTION IN FRONT OF BUILDINGS
NOT TO SCALE

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COMMONWEALTH OF MASSACHUSETTS
JAMES L. TETREAULT
CIVIL
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PROFESSIONAL ENGINEER

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SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

IN

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT

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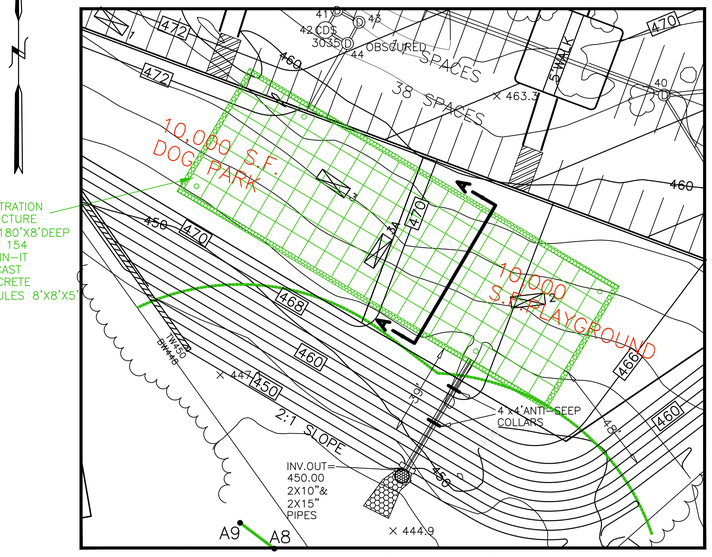
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

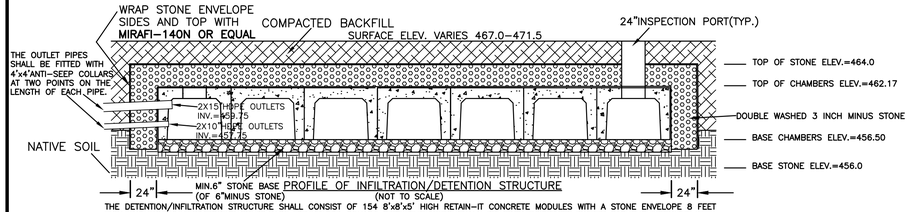
DETAIL SHEET D2

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 PROPOSED IN GROUND INFILTRATION/DETENTION CHAMBERS UNDER DOG PARK AND PLAYGROUND										
CB	1	494.10	490.10	11'	8"	0.027	HDPE	DMH	3	489.80
CB	2	494.10	490.10	11'	8"	0.027	HDPE	DMH	3	489.80
DMH	3	493.40	485.00	212'	12"	0.024	HDPE	DMH	4	480.00
DMH	4	484.40	479.50	88'	12"	0.017	HDPE	DMH	5	478.00
CB	6	482.75	478.80	13'	8"	0.023	HDPE	DMH	5	478.50
CB	7	482.75	478.80	13'	8"	0.023	HDPE	DMH	5	478.50
BLDG 1 ROOF		N/A	481.00	45'	8"	0.067	HDPE	DMH	5	478.00
DMH	5	482.80	477.50	138'	15"	0.020	HDPE	DMH	8	474.70
CB	9	479.50	475.50	13'	8"	0.023	HDPE	DMH	8	475.20
CB	10	479.50	475.50	13'	8"	0.023	HDPE	DMH	8	475.20
DMH	8	479.30	474.00	53'	15"	0.028	HDPE	DMH	11	472.50
CB	12	482.75	478.50	90'	12"	0.022	HDPE	DMH	13	476.50
DMH	13	481.20	476.00	91'	12"	0.022	HDPE	DMH	14	474.00
CB	15	478.20	474.20	9'	8"	0.033	HDPE	DMH	14	473.90
CB	16	479.30	475.30	9'	8"	0.033	HDPE	DMH	14	473.90
DMH	14	478.90	473.00	30'	15"	0.017	HDPE	DMH	11	472.50
DMH	11	477.10	471.50	79'	18"	0.024	HDPE	DMH	17	469.60
CB	18	470.50	466.50	119'	12"	0.008	HDPE	DMH	20	465.60
CB	19	470.40	466.40	66'	12"	0.012	HDPE	DMH	20	465.60
DMH	20	473.60	465.40	72'	12"	0.010	HDPE	DMH	17	464.70
DMH	17	474.50	464.20	45'	18"	0.013	HDPE	DMH	21	463.60
CB	22	473.50	469.00	136'	12"	0.010	HDPE	DMH	23	467.60
CB	24	479.20	475.20	8'	8"	0.025	HDPE	DMH	23	475.00
CB	25	479.30	475.20	8'	8"	0.025	HDPE	DMH	23	475.00
DMH	23	478.90	467.40	80'	12"	0.010	HDPE	DMH	26	466.80
DMH	26	473.90	466.60	27'	12"	0.015	HDPE	DMH	27	466.20
DMH	27	472.30	466.00	58'	15"	0.009	HDPE	DMH	28	465.50
CB	29	470.80	466.80	12'	8"	0.025	HDPE	DMH	28	466.50
CB	30	470.80	466.80	12'	8"	0.025	HDPE	DMH	28	466.50
DMH	28	471.10	465.90	49'	15"	0.012	HDPE	DMH	31	465.30
BLDG 2 ROOF		N/A	471.00	46'	8"	0.086	HDPE	DMH	31	467.00
CB	32	473.60	469.60	13'	8"	0.023	HDPE	DMH	34	469.30
CB	33	473.60	469.60	13'	8"	0.023	HDPE	DMH	34	469.30
DMH	34	473.70	469.00	109'	12"	0.029	HDPE	DMH	31	465.80
DMH	31	471.90	465.00	60'	18"	0.023	HDPE	DMH	35	463.60
CB	36	466.10	462.00	51'	8"	0.014	HDPE	DMH	35	461.30
DMH	35	468.10	460.80	36'	18"	0.014	HDPE	DMH	40	460.30
CB	37	464.50	460.60	21'	8"	0.014	HDPE	DMH	39	460.30
CB	38	464.50	460.60	16'	8"	0.019	HDPE	DMH	39	460.30
DMH	39	465.80	459.80	57'	15"	0.007	HDPE	DMH	40	459.40
DMH	40	468.80	458.90	135'	24"	0.010	HDPE	DMH	21	457.50
DMH	21	473.40	457.30	10'	24"	0.020	HDPE	DMH	41	457.10
DMH	41	473.00	457.10	5'	12"	0.009	HDPE	CDS3035	42	457.00
DMH	41	473.00	458.10	7'	24"	0.014	HDPE	DMH	43	458.00
CDS3035	42	472.60	457.00	6'	12"	0.017	HDPE	DMH	44	456.90
DMH	43	472.60	456.90	6'	24"	0.017	HDPE	DMH	44	456.80
DMH	44	472.30	456.70	31'	30"	0.007	HDPE	INFILRATION		456.50

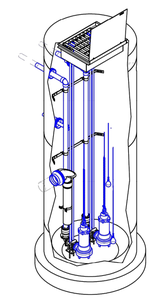


PLAN VIEW OF INFILTRATION STRUCTURE
(SCALE: 1" = 30')

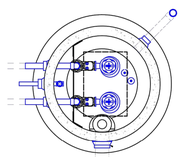


PROFILE OF INFILTRATION/DETENTION STRUCTURE
(NOT TO SCALE)

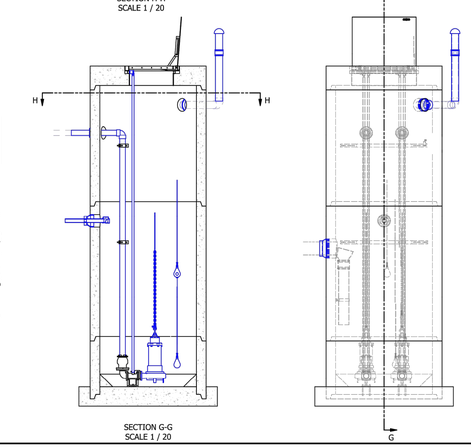
THE DETENTION/INFILTRATION STRUCTURE SHALL CONSIST OF 154 8'x8'x5' HIGH RETAIN-IT CONCRETE MODULES WITH A STONE ENVELOPE 8 FEET HIGH AND HAVING A FOOTPRINT OF 60'X180' OR 10,800 SQUARE FEET. THE UNITS SHALL BE OPEN BOTTOMED EXCEPT FOR THE MODULES AT THE TWO POINTS WHERE FLOW IS DISCHARGED INTO THE STRUCTURE, WHICH SHALL HAVE FLOORS TO ALLOW FOR POSSIBLE ADDITIONAL CLEANOUT. THERE SHALL BE 6 INCHES OF STONE BENEATH THE MODULES AND 2 FEET OF STONE OUTSIDE OF THEM. ALL TOPSOIL AND SUBSOIL SHALL BE REMOVED FROM BENEATH THE STONE ENVELOPE AND ANY OTHER DELETERIOUS MATERIAL. ADDITIONAL STONE BASE SHALL BE PLACED BENEATH THE CHAMBERS TO REPLACE SUCH MATERIAL. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO AVOID COMPACTING THE SOIL WITHIN THE FOOTPRINT OF THE INFILTRATION STRUCTURE IN THE COURSE OF CONSTRUCTION.



VIEW8
SCALE 1 / 25



SECTION H-H
SCALE 1 / 20



SECTION G-G
SCALE 1 / 20

DESIGN CRITERIA	
RIM ELEVATION	471'
INFLUENT INVERT	462.25'
PEAK INFLOW	64.2 GPM
TOTAL DYNAMIC HEAD	33.64'
PUMP CONFIGURATION	DUPLEX
FORCE MAIN DIAMETER	3" PVC SCH80
WATERTYPE	WASTERWATER
SUPPLY POWER	480V/THREE-PHASE

COLOR LEGEND

MAJOR CONCRETE COMPONENTS WITH PRE-INSTALLED COMPONENTS.

COMPONENTS PRE-ASSEMBLED TO THE EXTENT POSSIBLE AND WILL NEED TO BE FIELD INSTALLED.

NOTE: PRE-ASSEMBLY IS DONE AT ROMTEC UTILITIES' DISCRETION AND MAY CHANGE AT THE TIME OF PRODUCTION.

NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

ALL MATERIALS SHOWN ON THIS SHEET WILL BE SUPPLIED BY ROMTEC UTILITIES AND DELIVERED TO THE SITE AFTER THE HOLE HAS BEEN EXCAVATED AND SHORED. THE CONTRACTOR SHALL SUPPLY A CRANE OF SUFFICIENT SIZE TO LOWER ALL THE CONCRETE PIECES INTO THE HOLE SAFELY. THE CONTRACTOR SHALL INSTALL THE WET WELL (AND VALVE VAULT AND METERING VAULT IF APPLICABLE). ROMTEC UTILITIES WILL PROVIDE A REPRESENTATIVE FOR TECHNICAL ASSISTANCE ON THE DAY OF INSTALLATION TO ANSWER ANY QUESTIONS THAT MAY ARISE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING AND ELECTRICAL CONNECTIONS AND INSTALLATION. ITEMS NOTED AS "BY OTHERS" WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ROMTEC UTILITIES WILL NOT INSTALL ANY OF THE COMPONENTS SHOWN ON THIS PAGE.

ROMTEC UTILITIES

1. PREFABRICATED WET WELL AND MECHANICAL
1.1 Package pump station supplier is responsible for the prefabrication of the wet well structure and associated interior wet well mechanical equipment prior to shipment to the jobsite.
1.2 Wet Well to be designed and sized by the package pump station supplier to ensure proper fitment, clearance, active volume, and operation with all internal mechanical equipment. Wet well design to include the precast wet well, top slab with hatch, base, and all associated risers.
1.3 The precast concrete wet well shall be constructed of 4,000 psi concrete and 60,000 psi steel conforming to ASTM C478 standard specifications for precast reinforced concrete manhole sections.
1.4 All joints between wet well sections shall be a single offset joint with R-3 rubber gasket conforming to ASTM C443 and C478.
1.5 The precast top slab & hatch shall be designed in accordance with the owner's and site requirements relative to load ratings.
1.6 The wet well base slab shall be pre-fabricated, self-cleaning and include this first barrel section as one monolithic piece.
1.7 Each cored hole shall have an associated Kor-N-Seal for each particular pipe size entering and exiting the wet well to ensure no water leakage outside the wet well.
1.8 Sealant and tapecoat shall be provided for each section of the wet well to ensure no water leakage through the joints.
1.9 The access hatch shall be designed and supplied with the minimum opening to ensure proper clearance for the pumps and level sensing and in accordence with the load ratings.
1.10 The safety grate shall be hinged but non-removable and provide fall-through protection per OSHA standards.
1.11 The hatch shall be able to accommodate pump guide brackets and lifting chains.
1.12 The package pump station will provide prefabricated alignment pins & brackets for proper orientation during installation.
1.13 The package pump station will be supplying all in-well discharge piping and fittings from the pump discharge elbow up and through the wet well structure.

2. SUBMERSIBLE PUMPS
2.1 The pump discharge elbows and associated anchors shall be pre-installed in the base at the manufacturer's facility to provide a complete and integrated installation.
2.2 Pumps, mechanical seals and motor units provided shall be from the same pump manufacturer in order to achieve standardization of operation, maintenance, spare parts, service and warranty.
2.3 Pumping equipment shall be furnished with all motors, power cables, pump bases, guide bars and brackets, discharge piping, fittings, anchors, anchor bolts, anchor bolt sleeves and other appurtenances as specified or required for complete installation and for satisfactory operation.
2.4 Each pump to be furnished with a guide rail system consisting of a dual rail system connected to the discharge head and to an upper guide bar holder mounted to the access frame. The guide rail system shall consist of stainless steel guide bar brackets and Schedule 40 type 304 stainless steel pipe.
2.5 Each pump shall be equipped with complete attachments necessary for lifting the pump and motor from the wet well.

A. Manufacturer: Ebara
B. Model: 80DVCPM43.7
C. Pumping Rate: 80gpm each pump
D. Setup: Duplex
E. Motor characteristics are as follows:
F. Horsepower: 5HP
G. Power: 480V/Three-Phase
H. Cable Length: 75 ft.

3. LEVEL CONTROL SYSTEM
3.1 The primary level sensing for pump control shall be in accordance with the owner's requirements and integrate with the system control panel for duplex operation
3.2 The wet well hatch shall include provisions for hanging/suspension of level sensing cables.

GENERAL SPECIFICATIONS & SCOPE
A. The package pump station supplier of the sewer lift station shall be Romtec Utilities. The package pump station supplier shall design and draw the complete lift station including the wet well structure and associated piping and valves along with the control panel and the associated schematics.
B. The package pump station supplier shall be solely responsible for proper prefabrication, integration, supply, performance, and warranty of all package pump station components delineated in this specification and on the drawings, which shall be used as a guide of the minimum product specifications that shall be met.
C. The package pump station supplier work shall include designing and supplying the piping, mechanical, and appurtenances within and adjacent to the wet well as a complete, predesigned, packaged pump station as described herein.
D. The drawings shall be of sufficient detail for the Engineer to review for conformity to the contract. All drawings shall include elevations on the same datum point as in the contract plans.
E. Romtec Utilities will manufacture and deliver the pump station as described below to the job site for the contractor. A representative of Romtec Utilities will be present the day of the underground installation.
F. The package pump station supplier is responsible for overseeing all start-up, testing and training procedures.
G. A representative of the package pump station supplier must be present on the day the lift station is installed to provide technical advice to the contractor.
H. After installation, a package pump station start-up shall be performed by the installing contractor under the supervision of the package pump station supplier's authorized representative.
I. Start-up to include two (2) days of on-site field service.
J. Services shall include, but not be limited to, inspection of the completed package pump station installation to ensure that it has been performed in accordance with the Pump Manufacturer's instructions and recommendations, supervision of all field-testing and activation of the warranty.
K. The Contractor shall be responsible for coordinating the required field services with the package pump station supplier.
L. The package pump station supplier shall provides support for the installing electrician over the phone both prior to and during installation of the pumps station.
M. The package pump station supplier's electrical engineering staff shall help troubleshoot issues encountered on-site during construction as well as during normal operation of the pump station. This service is available to both the installing contractor as well as the owner and their maintenance personnel.
N. The package pump station supplier is to supply an electronic copy of the Operation & Maintenance manual for all components in this prepackaged pump station. Separate sections include, but not limited to the following: pumps, controls, mechanical components, schematics, troubleshooting instructions, and data sheets for every supplied component.
O. The package pump station supplier shall provided a minimum of 1-year warranty on materials and workmanship for the pumping system.

NO.	DATE	DESCRIPTION BY
		REVISION HISTORY

VERIFY SCALE BAR IS 1" IF NOT SCALE ACCORDINGLY
0 1"
DRAWN: JM
CHK'D: JM
DATE:

ROMTEC UTILITIES
ROMTEC UTILITIES, INC.
26640 S.W. 95TH AVE.
WILSONVILLE, OREGON 97070
PHONE: (503) 682-7746
WWW.ROMTECUTILITIES.COM

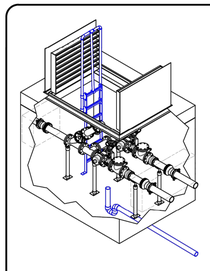
WET WELL COMPONENTS

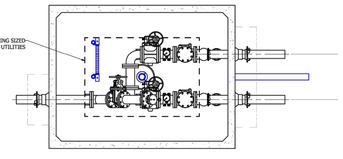
MECHANICAL SHEET 1

PUMP STATION NOTES:

1) THE PUMP CONTROLS AND ALARMS SHALL ALL BE MANUFACTURED BY ROMTEC UTILITIES(OR APPROVED EQUAL).
2) THE DUPLEX PUMPS WITHIN THE WET WALL SHALL BE 5HP PUMPS WITH A PERFORMANCE CURVE SHOWING THE ABILITY TO PUMP AT 80 GPM AGAINST A TOTAL DYNAMIC HEAD OF 35 FEET.
3) THE INSTALLATION SHALL INCLUDE A GENERATOR TO PROVIDE POWER IN THE EVENT OF A POWER OUTAGE.
4) THE CONTROL PANEL AND ALARMS SHALL BE ABOVE GROUND ON A WALL PANEL BENEATH A SHELTERING STRUCURE.

CAST-IN-PLACE CONCRETE THRUST RESTRAINT COLLAR ON EACH END.(BY OTHERS)





SECTION E-E

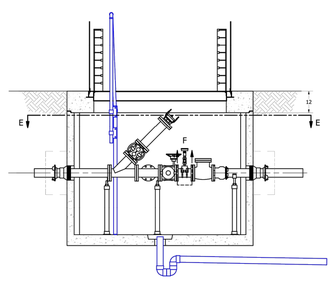
DESIGN CRITERIA	
PIPING SIZE	3" PVC SCH80
VAULT SIZE	4' x 6.5' x 6'
LOAD RATING	H-20 Occasional
CHECK VALVES	Y
SHUT-OFF VALVES	Y
LININGS/COATINGS	EXTERIOR COATING
OPTIONS	LADDER
OPTIONS	PUMPING PORT
OPTIONS	SAFETY GRATE

COLOR LEGEND

MAJOR CONCRETE COMPONENTS WITH PRE-INSTALLED COMPONENTS.

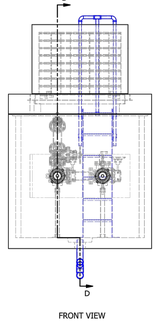
COMPONENTS PRE-ASSEMBLED TO THE EXTENT POSSIBLE AND WILL NEED TO BE FIELD INSTALLED.

ALL MATERIALS SHOWN ON THIS SHEET WILL BE SUPPLIED BY ROMTEC UTILITIES AND DELIVERED TO THE SITE AFTER THE HOLE HAS BEEN EXCAVATED AND SHORED. THE CONTRACTOR SHALL SUPPLY A CRANE OF SUFFICIENT SIZE TO LOWER ALL THE CONCRETE PIECES INTO THE HOLE SAFELY. THE CONTRACTOR SHALL INSTALL THE WET WELL (AND VALVE VAULT AND METERING VAULT IF APPLICABLE). ROMTEC UTILITIES WILL PROVIDE A REPRESENTATIVE FOR TECHNICAL ASSISTANCE ON THE DAY OF INSTALLATION TO ANSWER ANY QUESTIONS THAT MAY ARISE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING AND ELECTRICAL CONNECTIONS AND INSTALLATION. ITEMS NOTED AS "BY OTHERS" WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ROMTEC UTILITIES WILL NOT INSTALL ANY OF THE COMPONENTS SHOWN ON THIS PAGE.



SECTION D-D

12" THICK CAST-IN-PLACE CONCRETE THRUST RESTRAINT COLLAR ON EACH END. (BY OTHERS)



FRONT VIEW

1. PREFABRICATED VALVE VAULT AND MECHANICAL
Package pump station supplier is responsible for designing and supplying a prefabricated valve vault structure. Valves shall be located inside the precast concrete valve vault as shown on the drawings.

2. DESIGN
A. Design shall include complete component drawings to-scale on the site plan.
B. The precast concrete valve vault structure shall be designed to resist all soil and hydraulic pressures, including lateral and hydraulic uplift pressure.
C. All piping and valving to be drawn to-scale showing proper location, orientation, and configuration of equipment.
D. The package pump station supplier shall prove the Total Dynamic Head calculations as affected by the piping and valving through the valve vault.
E. The package pump station supplier shall design for the proper top slab & hatch loading requirements as necessary for the system application and location.
F. All pre-cast concrete shall be 4,500 psi at 28 days. All bar reinforcing shall be grade 60 deformed bars conforming to ASTM A-615 or ASTM-616. Pre-cast valve vault base slab, top slabs and riser sections rings shall conform to the requirements of ASTM C857

3. PREFABRICATION & SERVICES
A. Pump station supplier shall provide full prefabrication, assembly, and pressure testing prior to delivery.
B. All pipe stands, bracing, valves, piping, gauges, cores, and associated appurtenances shall be installed prior to delivery.
C. Each cored hole shall have an associated Kor-N-Seal for each particular pipe size entering and exiting the valve vault to ensure no water leakage outside the valve vault.
D. Sealant shall be provided for each section of the valve vault to ensure no water leakage through the joints.
E. Package pump station supplier shall provide an on-site advisor at the time of delivery & installation to provide a report of all delivered equipment and provide technical knowledge of correct installation procedures.

NO.	DATE	DESCRIPTION BY
		REVISION HISTORY

VERIFY SCALE BAR IS 1" IF NOT SCALE ACCORDINGLY
0 1"
DRAWN: JM
CHK'D: JM
DATE:

ROMTEC UTILITIES
ROMTEC UTILITIES, INC.
26640 S.W. 95TH AVE.
WILSONVILLE, OREGON 97070
PHONE: (503) 682-7746
WWW.ROMTECUTILITIES.COM

VALVE VAULT ASSEMBLY SAMPLE DRAWING

MECHANICAL SHEET 2

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

COMMONWEALTH OF MASSACHUSETTS
JAMES L TETREAULT
CIVIL
No. 38548
PROFESSIONAL ENGINEER

CLT. NO.	JOB NO.
523	348-523
DATE: SEPTEMBER 25, 2023	DWG NO. UPLANDSTREETCURRENT

REVISIONS

DATE:	DESCRIPTION
12/26/23	CITY REVIEW
2/6/24	CITY REVIEW
4/10/24	CITY REVIEW
4/19/24	NO CHANGES TO THIS SHEET

SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

IN

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

DETAIL SHEET D3

POLLUTION PREVENTION PLAN
FOR
49 UPLAND STREET, WORCESTER, MA

PROJECT DESCRIPTION

This is a proposal to develop this site and construct two apartment buildings each of three stores with a total, between them, of 120 rental units on this 6.6 acre site.

Construction will take place in a single phase and is expected to last from the winter of 2023/2024 into the summer of 2025. Total site alteration will be approximately 5.8 acres of which approximately 0.4 acres was previously altered.

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

The first step of the construction process will be the cutting of any 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.

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. 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 south of building 2.

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 MassGIS Oliver web site the soils underlying this site are almost entirely Paxton series soils which are categorized as hydrologic soil group C soils. There is also an area at the southerly limit of the site, adjacent to the delineated wetland, identified as a Scarboro series soil and this is categorized as hydroloic soil group D soil.

Resource Areas
There is a bordering vegetated wetland at the southerly limit of the property associated with an intermittent stream on the adjacent property.

SITE PLAN DEVELOPMENT
As part of the Site Plans submitted to the City of Worcester, Azimuth Land Design, LLC has prepared this erosion and sediment control plan calling for permanent and temporary erosion control measures. The site has no existing drainage system.

PHASING
Construction of the project will take place in one phase. Total site alteration will be approximately 5.8 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 sheets ESC1 and ESC2 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 Worcester Conservation Commission shall be notified of any significant failure of erosion control measures and shall be notified of any release of pollutants.

SOIL TEST RESULTS:

UNOFFICIAL SOIL TEST RESULTS
DH1 – SANDY LOAM WITH MOTTLING AT 48"
DH2 – LOAMY SAND WITH MOTTLING AT 60"
DH3 – LOAMY SAND WITH MOTTLING >98"
DH3A – LOAMY SAND WITH MOTTLING AT 66"

PARKING CALCULATION

PER THE WORCESTER ZONING ORDINANCE, 2 PARKING SPACES ARE REQUIRED PER DWELLING UNIT. 118 UNITS ARE NOW PROPOSED WHICH REQUIRE A TOTAL OF 236 PARKING SPACES.

THE APPLICANT IS REQUESTING A SPECIAL PERMIT TO ALLOW A 10% REDUCTION FROM THIS REQUIREMENT. THIS WOULD ALLOW A TOTAL OF 212 PARKING SPACES AND THIS SITE PLAN PROPOSES 212 PARKING SPACES INCLUDING THE FOLLOWING:

8 HANDICAPPED VAN ACCESSIBLE PARKING SPACES
54 COMPACT CAR (8'X16') PARKING SPACES
7 EV AND A FURTHER 38 EV READY PARKING SPACES

ZONING COMPLIANCE TABLE

THE PROPOSED BUILDINGS WILL BE LOCATED IN THE RL–7 ZONING DISTRICT. THE FOLLOWING TABLE COMPARES THE RL–7 ZONING REQUIREMENTS AND DIMENSIONS PROPOSED AT THIS SITE:

DIMENSION	REQUIREMENT	PROPOSED
MIN. LOT AREA	7,000 + 2,000 PER D.U. = 7,000+238,000=245,000	287,304 S.F.
MIN. FRONTAGE	65' + 5' PER D.U. TO 140'; 65'+595';USE 140'	189.44 @W'LY FRONTAGE
MIN. FRONT YARD	20'	164'(BUILDING 2)
MIN. SIDE YARD	10'	14.4'(BUILDING 1)
MIN. REAR YARD	20'	63'(BUILDING 1)
MAX. BUILDING HEIGHT	50',3 STORIES	45', 3 STORIES

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 C125BN 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 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 structure is to be installed. Expected locations for TSB's include both east and west of that proposed infiltration structure location.

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 City of Worcester 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(s) to the site off Upland Street.

4. Install the site entrance mat in the location of the proposed entrance(s) of Upland Street and sediment control barriers at the limit of work as shown on the Erosion & Sediment Control Plans.

5. Remove any debris from the site and disposing of it in appropriate facilities according to applicable regulations.

6. 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.

7. Stockpile and compact excavated loam in an area surrounded by staked straw bales or siltation fencing. We suggest the proposed location south of building 2. Place the straw bales or fencing at least five feet from the base of the loam pile.

8. Begin earthwork to bring grades to the subgrade elevations for the proposed access drive and parking area.

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

10. Install the new drainage system, new sanitary sewer, new water line services to the buildings and new electric connections and, when complete, lay the binder course of pavement.

11. Continue construction of the buildings.

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

13. Finish interior construction of the proposed buildings and lay a finish course of pavement.

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

15. Prepare and submit an as–built survey of the work to the City of Worcester.

GENERAL NOTES:

1) THERE ARE NO FEMA FLOOD ZONES ON THIS SITE.
2) ACCORDING TO THE MASS GIS OLIVER WEB SITE, THERE ARE NO ENDANGERED SPECIES HABITATS AND NO VERNAL POOLS ON OR ADJACENT TO THIS SITE.
3) THE PROJECT SITE IS COMPRISED OF 49 AND 39 UPLAND STREET.
4) TOTAL SITE ALTERATION IS EXPECTED TO BE 5.8 ACRES.
5) THE PROPOSED WATER MAIN EXTENDED INTO THE SITE SHALL MEET THE REQUIREMENTS OF ANSI/AWWA A21.5/C151 CLASS 52.
6) BOTH BUILDINGS SHALL HAVE STANDPIPES INSTALLED TO AID IN FIRE FIGHTING.
7) EACH OF THE TWO BUILDINGS COVERS 21,318 SQUARE FEET(NOT INCLUDING BALCONIES).
8) THE APPLICANT SHALL COMPLY WITH THE CITY'S INCLUSIONARY ZONING REGULATIONS BY MAKING AT LEAST 15% OF THE UNITS AVAILABLE AS "AFFORDABLE" UNITS MARKETED TO HOUSEHOLDS EARNING 80% OR LESS OF THE AREA MEDIAN INCOME.
9) PROPOSED RETAINING WALLS SHALL BE COMPRISED OF CONIGLIARO BLOCK COMPONENTS, OR APPROVED EQUAL. ENGINEERED, STAMPED DESIGNS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL BEFORE ANY INSTALLATION BEGINS.

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

JAMES L TETREAULT CIVIL No. 38548 COMMONWEALTH OF MASSACHUSETTS PROFESSIONAL ENGINEER

CLT. NO.	JOB NO.
523	348–523
DATE: SEPTEMBER 25, 2023	DWG NO. UPLANDSTREETCURRENT

REVISIONS

DATE:	DESCRIPTION
12/26/23	CITY REVIEW
2/6/24	CITY REVIEW
4/10/24	CITY REVIEW
4/19/24	NO CHANGES TO THIS SHEET

SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

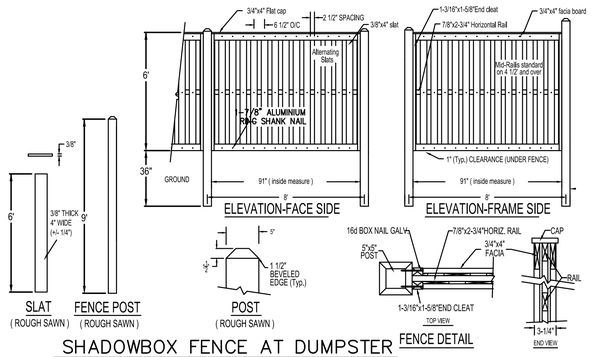
IN

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT

HENCHEY, LLC
5 EDGEMERE BOULEVARD
SHREWSBURY, MA 01545

DETAIL SHEET D4

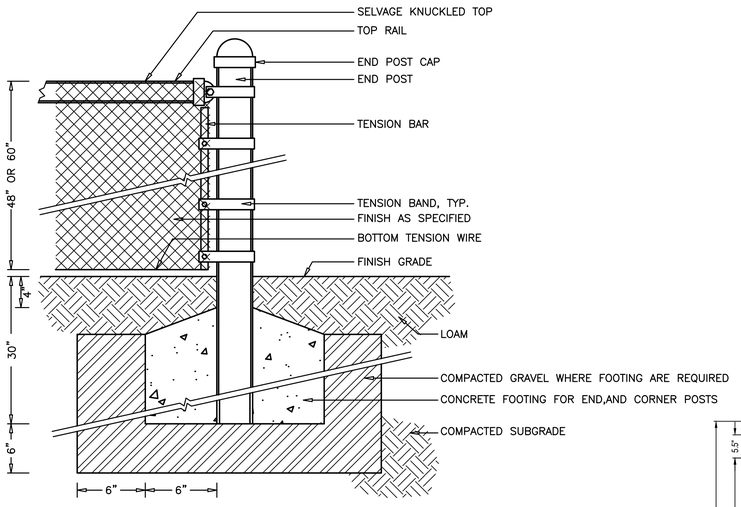


SHADOWBOX FENCE AT DUMPSTER

(NOT TO SCALE)

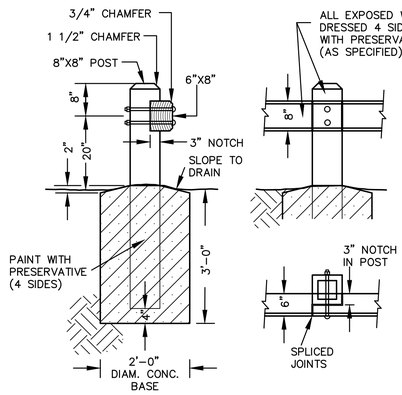
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. SHADOW BOX FENCE TO BE 4' WALPOLE SHADOWBOX SCREEN FENCE, WALPOLE WOODWORKERS, O.O. BOX 151 WALPOLE, MA 02081, PHONE 1-800-343-6948, OR APPROVED EQUAL
3. WOOD MATERIAL TO BE NORTHERN WHITE CEDAR



CHAIN LINK SAFETY FENCE 48" AT TOP OF STEEP SLOPES AND RETAINING WALLS

NOT TO SCALE

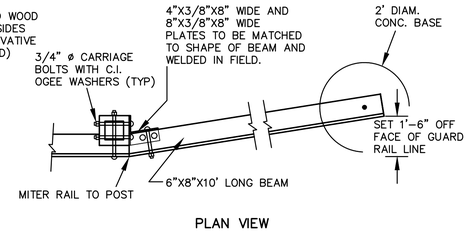


NOTE:

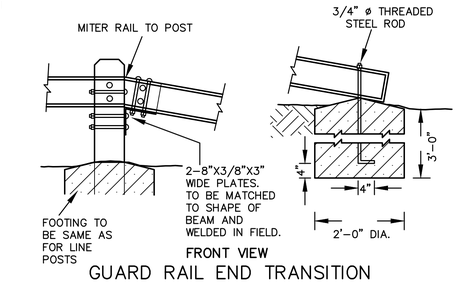
1. POST SPACING OF 7'-4" ALLOWS USE OF 8'-0" LENGTH TIMBER RAILS FOR CONSTRUCTION. USE THIS AS MAXIMUM SPACING.
2. FOR CONCRETE BASES OVER CULVERTS USE 2' DIAMETER AND 2' DEEP.
3. NICK THREADS ON BOLTS.
4. USE C.I. OGEE WASHERS WITH ALL NUTS.

TIMBER GUARD RAIL

NOT TO SCALE



PLAN VIEW



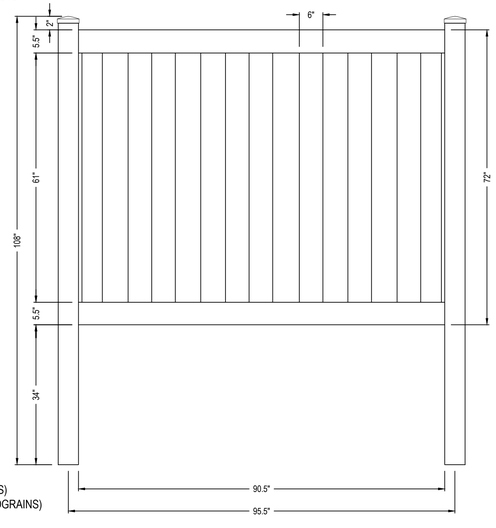
FRONT VIEW

GUARD RAIL END TRANSITION

NOT TO SCALE

NOTES:

1) THIS PLAN IS IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT AND THE REQUIREMENTS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD.
2) A 4 FOOT HIGH SAFETY FENCE SHALL BE INSTALLED ON TOP OF ALL PROPOSED RETAINING WALLS.

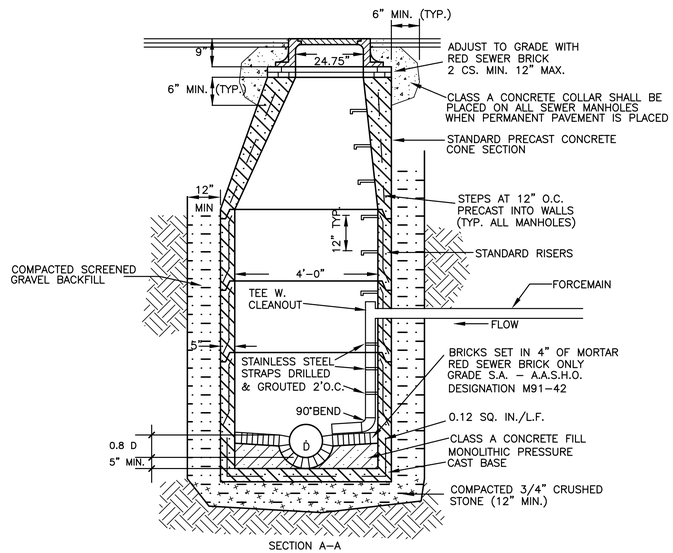


NOTES:

1. ALL PRIVACY FENCES SHALL BE ILLUSIONS VINYL FENCES, OR APPROVED EQUAL AND ASTM F964-09 COMPLIANT
2. AVAILABLE IN GRAND ILLUSIONS COLOR SPECTRUM (35 COLORS) AND GRAND ILLUSIONS VINYL WOODBOND (5 AUTHENTIC WOODGRAINS)
3. INCLUDES METAL REINFORCEMENT BOTTOM RAIL
4. VERTICAL POSTS MEASURE 5"X5" SQUARE.

6 FOOT HIGH PRIVACY FENCE

NOT TO SCALE



SECTION A-A

REMODELED MANHOLE SHOWING FORCEMAIN

(NOT TO SCALE)

AZIMUTH LAND DESIGN, LLC
Professional Engineers & Erosion Control Specialists
118 Turnpike Road, Suite 200, Southborough, MA 01772
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COMMONWEALTH OF MASSACHUSETTS
JAMES I. TETREAULT
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SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

IN

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT

HENCHEY, LLC
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DETAIL SHEET D5