Doc:1,548,427 02-13-2025 1:58
Ctf#:212984

Property Address: 679 Worcester St., Wellesley, MA Deed Certificate #212984

TOWN OF WELLESLEY MASSACHUSETTS

ZONING BOARD OF APPEALS

888 WORCESTER STREET • SUITE 160 • WELLESLEY, MA 02482

ZBA 2024-80
Petition of Amos Ami Saada
679 Worcester Street (ABLS)

Pursuant to due notice, the Special Permit Granting Authority held a Remote Public Hearing on Thursday, December 5, 2024 at 7:30 pm, on the petition of Amos Ami Saada requesting a Special Permit pursuant to the provisions of Section 2.1.A.8.b and Section 6.3 of the Zoning Bylaw for an Educational Use, namely Applied Behavioral Learning Services (ABLS), in a portion of an existing two-family dwelling at 679 Worcester Street, which is a use not allowed by right in a 20,000 square foot Single Residence District.

On November 4, 2024, the petitioner filed a request for a hearing before this Authority, and thereafter, due notice of the hearing was given by mailing and publication.

Present at the public hearing were David Himmelberger, Esq. and Mariela Vargas-Irwin.

Mr. Himmelberger said that the matter was initially filed by Ms. Vargas-Irwin for a special permit for other than non-profit educational purposes, namely services to provide children with special needs, that are allowed by special permit in a single residence district. He said that after his review of Ms. Vargas-Irwin's proposal, he became convinced that this is an as of right use for child care facilities under Section 2.1.A.3A of the Zoning Bylaw (ZBL), with the exception of the two or three students who are 16 years or older. He discussed the ZBL and Massachusetts General Law (MGL) definitions of Child Care Facility. He said that the scope of the requested relief pertains to a special permit for up to five students who are 16 years or older to receive services at the facility. He said that the Applicant chose to pursue the matter as a special permit rather than under the Dover Amendment. He said that the proposed use will comply with Section 6.3.D. Special Use Permit Standards of the ZBL.

A Board member asked about the number of staff and students. Ms. Vargas-Irwin said that not everyone will be on site at the same time. She said that there may be four students in the morning and six in the afternoon. She said that 15 staff members is ideal but hard to achieve. She said that some of the staff members also serve some facilities in their own homes. She said that ABLS does not provide transportation.

WILLIAM P. O'DONNELL ASSISTANT RECORDER
NORFOLK COUNTY LAND COURT
RECEIVED & RECORDED ELECTRONICALLY

ZBA 2024-80
Petition of Amos Ami Saada
679 Worcester Street (ABLS)

A Board member discussed concerns about egress and separation of the living and ABLS spaces. He said that the Board will need to see a fully vetted set of plans that identify separations between the three functions of the building and how they interface. He suggested that the Applicant speak with the Building Inspector regarding Building Code implications.

The Board voted unanimously to continue the matter to January 9, 2025.

January 9, 2025

Mr. Himmelberger said that while going through the process to develop plans that delineate the internal uses within the building, namely, the two dwelling units and the space for Ms. Vargas-Irwin's child care and educational program, Ms. Vargas-Irwin decided that it would make sense to build an addition on the first floor at the rear of the building. He said that no relief is required for the proposed conforming addition. He said the request is for a special permit under the provisions of the ZBL for an educational use in a Single Family District to offer services to students who are 16 years of age and older.

Mr. Himmelberger said that he spoke with Michael Grant, Building Inspector, about the program qualifying as a child care facility. He said that Mr. Grant will enforce the bylaw with regard to the enumerated conditions that are required for the operation of any child care facility, which is what Ms. Vargas-Irwin will be providing to students who are less than 16 years of age. He said that the Building Inspector has jurisdiction over parking circulation around the building with respect to operation of the child care facility. He said that a plot plan was submitted that shows the design of the parking spaces and drop off area.

The Chairman discussed MGL Chapter 15, Section 6. He said that his understanding is that the State does not deal with the students who are over 16 years of age. Ms. Vargas-Irwin said that in many ways, the students who are over 16 years old fall under the same definition as younger children because they have special needs. She said that they come to the center because they can't live independently. She said that the reason that the regulations are the same, even though the students might be 18 years old, is that they are not competent. She said that the Autism Commission, the Insurance Commission and Mass Health all see them as equivalent, regardless of age. She said that the parents have custody of them. She said that early childhood and care is not regulated because none of her students sleep at the center.

The Chairman questioned whether the proposed use could be done as of right under Section 2.1.A.3A of the Zoning Bylaw. Mr. Himmelberger said that his understanding is that child care facility only applies to children up to the age of 16 if they have special needs but individuals 16 years or older with special needs don't fall within the State's definition of child care facility, which is what the Town uses as the basis for Section 2.1.3A of the ZBL. He said that he believes that a special permit under Section 2.1.A.8,b of the ZBL is needed for those special needs students who are 16 years and older, not Section 2.1.A.3A.

The Chairman asked about permitting from the State for the facility that Ms. Vargas-Irwin currently operates at 110 Cedar Street in Wellesley. Ms. Vargas-Irwin said that her two students who are over 16 years of age are funded by insurance. She said that there is some regulation by the Autism Commission but the insurance company has jurisdiction.

ZBA 2024-80
Petition of Amos Ami Saada
679 Worcester Street (ABLS)

Mr. Himmelberger discussed the revised plans. He said that the plans show how the interior spaces are segregated. He said that Plan A-6 shows the proposed first floor, which includes the single story addition to the right rear and also shows a ramp at the front right. He said that the parking plan shows two ADA parking spaces adjacent to the ramp, which is one more than required. He said that the second floor will remain as is. He said that the layout is further delineated in color segments on Plan A-8. He said that the white areas are the ABLS Facility, with basement space as well as space on the right side of the first floor. He said that the green and yellow areas on the first and second floors are residential areas that have nothing to do with the use permit that is being sought. He said that the Section 2.1.A.8.b use is confined to the white areas shown on Plan A-8.

Ms. Vargas-Irwin said that the proposed white space on the first floor consists of a waiting room where students or parents come in, her office, and a designated classroom with three bathrooms for the younger students. She said that older students will be in the white portion of the basement. She said that the green portion of the basement will remain unfinished. She said that she will live in the green area with her senior in Wellesley High and her freshman in college who will come home on break occasionally. She said that the smaller apartment is currently rented and she plans to keep the tenant at least through construction. She said that once the center moves to 679 Worcester Street, they will decide whether to keep the tenant.

A Board member asked about the pinch point off Worcester Street that is shown on Plan A-4. He asked if 18 feet at its narrowest is enough to let two cars through. Mr. Himmelberger said that according to the design standards for off-street parking in Section 5.17 of the ZBL, the minimum width for two-way use is 18 feet. He said that they have 25 feet at the mouth onto Route 9 but 18 feet as you come in. He said that a benefit of its location is that there is a traffic light that stops traffic going west at the turnaround every minute or so. He said that there are always breaks in the traffic.

A Board member asked if the building is regulated by the Historic Commission. Mr. Himmelberger said that it is an eligible building because it is pre-1949 but because less than 50 percent of its exterior elevations will be covered up or removed, it doesn't qualify as a demolition and is therefore not subject to further demolition review by the Historic Commission.

No member of the public wished to speak to the petition.

Statement of Facts

The Petitioner is requesting a Special Permit pursuant to the provisions of Section 2.1.A.8.b and Section 6.3 of the Zoning Bylaw for an Educational Use, namely, Applied Behavioral Learning Services (ABLS), in a portion of an existing two-family dwelling, which is a use not allowed by right in a 20,000 square foot Single Residence District.

The subject premises is located at 679 Worcester Street, on a 36,598 square foot lot. The property contains a main house and a one-story detached garage. ABLS offers full-time, extensive behavior analytic intervention and specialized weekly sessions focusing on social skills development for members of the Autism community. Group sessions typically last two to three hours, with most students being dropped off. The Center would host ABLS Theatrical, a nonprofit organization led by Wellesley High School students to provide inclusive, affordable community theater.

ZBA 2024-80
Petition of Amos Ami Saada
679 Worcester Street (ABLS)

Letter to Zoning Board of Appeals, dated 11/26/24, from David Himmelberger, Esq., Letter to Zoning Board of Appeals, dated 1/2/25, from David Himmelberger, Esq., Letter to Zoning Board of Appeals from Mariela Vargas-Irwin, Aerial Photograph, Parking Layout, Floor Plans, prepared by Cubicasa, Biography of Mariela Vargas-Irwin, Plot Plan, Floor Plans & Elevations Drawings, dated 1/2/25, revised 1/7/25, prepared by Emily's Interiors, were submitted.

On December 3, 2024, the Planning Board reviewed the petition and recommended that the Board delay action.

Decision

This Authority has made a careful study of the materials submitted and the information presented at the hearing.

The Petitioner is requesting a Special Permit to allow a portion of the existing two-family dwelling at 679 Worcester Street to be used as an Applied Behavioral Learning Services center in a Single Residence District.

It is the opinion of this Authority that the use of a portion of the property as an Applied Behavioral Learning Services center shall not disturb or disrupt the customary character of the residential neighborhood, and is in harmony with the intent and purpose of the Zoning Bylaw.

Therefore, a Special Permit is granted for the requested use, as voted unanimously by this Authority at the Public Hearing, in accordance with the submitted plans.

ZBA 2024-80
Petition of Amos Ami Saada
679 Worcester Street (ABLS)

APPEALS FROM THIS DECISION, IF ANY, SHALL BE MADE PURSUANT TO GENERAL LAWS, CHAPTER 40A, SECTION 17, AND SHALL BE FILED WITHIN 20 DAYS AFTER THE DATE OF FILING OF THIS DECISION IN THE OFFICE OF THE TOWN CLERK.

J. Randolph Becker (RM)
J. Randolph Becker, Chairman

Walter B. Adams (RM)
Walter B. Adams

Peter Covo (RM)
Peter Covo

2025 JAN 23 PM 12:31

ZBA 2024-80
Applicant Amos Ami Saada
Address 679 Worcester Street

NOT VALID FOR RECORDING UNTIL CERTIFIED BY TOWN CLERK

In accordance with Section 11 of Chapter 40A of the Massachusetts General Laws, I hereby certify that twenty (20) days have elapsed after the within decision was filed in the office of the Town Clerk for the Town of Wellesley, and that no appeal has been filed, or that if such appeal has been filed, that it has been dismissed or denied.

Date: February 13, 2025

Attest: Cathryn J. Kato
Cathryn Jane Kato
Town Clerk

cc: Planning Board
Inspector of Buildings
lrm

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

S 77°41'30" E 67.30'
N 82°58'42" E 55.00'
N 34°28'42" E 52.98'
S 26°17'10" E 148.7'
S 22°07'20" E 134.43'
N 15°12'50" W 230.73'
S 74°47'10" W 191.66'

WF B11 END
WF B10
WF B9
WF B8
WF B7
WF B6
WF B5
WF B4
WF B3
WF B2

C.B. FOUND

FLARED END WITH RIP RAP (SEE DETAIL) INV=147.8'±

ADS BARRACUDA S3
RIM=151.0'±
INV IN=148.0'±
INV OUT=148.0'±

TEST PIT #2
GRADE @ 151.1'±
–MOTTLING @ 146.1'±

TRENCH DRAIN #2
RIM=150.0'
INV=148.5'

PROPOSED CATCH BASIN #1
RIM=151.0'±
INV IN=148.23'±
INV OUT=148.23'±

PROPOSED CATCH BASIN#2
RIM=152.1'±
INV=150.1'±

25' NO DISTURBANCE ZONE BOUNDARY
50' WETLAND BUFFER
100' WETLAND BUFFER

PROPOSED CLEANOUT
PROPOSED DOWNSPOUT
INV=152.0'±
PROPOSED ADDITION
STEPS
LANDING
DECK
#679 EXISTING MULTIFAMILY
DECK
PORCH
CONC. WALK
PROPOSED DRIVEWAY

PROPOSED INFILTRATION SYSTEM–#2
12–CULTEC R–902HD V2
WITH SEPARATOR ROW
LOWEST GRADE=155.0'±
T.O.S.=153.6'±
INV IN=148.6±
B.O.S.=147.9'±
E.S.H.G.W.=NOT FOUND
B.O.T.P=145.50'±
(SEE DETAIL)

TEST PIT #1
GRADE @ 155.5'±
BOTTOM OF TEST PIT=145.50'±
–ESHGW NOT FOUND

PROPOSED 3'' ASPHALT BERM

SYSTEM#1
CULTEC C–100HD
RIM=152.00'
TOS=149.50'
TOC=149.00'
BOC=148.00'
BOS=147.50'

PROPOSED CATCH BASIN#3
RIM=155.0'±
INV IN=153.0'±

INV IN=148.6'±
INV IN=148.6'±

TRENCH DRAIN #1
RIM=150.30'
INV=148.80'

DM#1
RIM=150.60'
INV IN=148.60'
INV OUT=148.60'

MA DOT LAYOUT LINE
U.P. FOUND

SG 152.2'±
SG 153.0'±
SG 154.0'±
SG 155.5'±
SG 153.5'±
SG 155.8'±
SG 155.2'±

V.G.C. E.O.P.
V.G.C. E.O.P.
WORCESTER STREET

CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF ANY GROUNDWATER IS FOUND DURING EXCAVATION/CONSTRUCTION.

ALL SURFACE WATER RUNOFF SHALL BE DIRECTED AWAY FROM BUILDING FOUNDATION AND AWAY FROM NEIGHBORING PROPERTY.

ALL SURFACE WATER RUNOFF SHALL BE DIRECTED AWAY FROM BUILDING FOUNDATION AND AWAY FROM NEIGHBORING PROPERTY

BACKFLOW PREVENTERS MUST BE INSTALLED IN ALL NEW BASEMENT FIXTURES

CONTRACTOR SHALL ENSURE BASEMENT IS FULLY WATERPROOFED

EXCAVATION FOR THE INFILTRATION SYSTEM MUST BE INSPECTED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION. THE ENGINEER MUST BE NOTIFIED AT LEAST 72 HOURS IN ADVANCE TO SCHEDULE THIS INSPECTION.

POWER BACKUP AND BACKFLOW PREVENTER MUST BE INSTALLED IN ALL SUMP PUMPS.

CONTRACTOR SHALL ENSURE THAT THE EXISTING AND PROPOSED FOUNDATIONS ARE NOT UNDERMINED BY THE PROPOSED INFILTRATION SYSTEMS

CONTRACTOR SHALL ENSURE THAT ALL DRAIN PIPES ARE INSTALLED WITH A MINIMUM SLOPE OF 1.0%.

RAIN FALL	RUNOFF RATE		VOLUME OF RUNOFF	
	EXISTING	PROPOSED	EXISTING	PROPOSED
2 year	0.16	0.02	1,058	298
10 year	1.06	0.33	3,674	1,619
25 year	1.81	0.76	5,815	2,846
50 year	2.43	1.13	7,570	3,899
100 year	3.52	1.55	10,702	5,095

EXISTING AREAS		
LOT AREA	36,589.1	S.F.
EXISTING IMPERVIOUS AREA		
BUILDING	1,401.0	S.F.
DRIVEWAY	3,502.0	S.F.
GARAGE	392.1	S.F.
COVER LANDING	22.4	S.F.
STEPS	71.6	S.F.
PORCH	104.0	S.F.
WALKWAY	89.6	S.F.
RETAINING WALL	19.3	S.F.
BULKHEAD	21.8	S.F.
DECK	374.3	S.F.
TOTAL	***5,998.1***	***S.F.***
TOTAL		***S.F.***
LANDSCAPE AREA	30,591.0	S.F.

LOT AREA	36,589.1	S.F.
PROPOSED IMPERVIOUS AREA		
STING BUILDING TO REN	1,275.3	S.F.
EXISTING GARAGE	392.1	S.F.
EXISTING STEPS	43.7	S.F.
EXISTING PORCH	104.0	S.F.
EXISITNG WALKWAY	53.1	S.F.
EXISTING RETAINING W	188.6	S.F.
EXISTING BULKHEAD	21.8	S.F.
EXISTING DECK	374.3	S.F.
BUIDLING	988.6	S.F.
DRIVEWAY	10,389.0	S.F.
LANDING	42.7	S.F.
STEPS	53.12	S.F.
TOTAL	***13,926.1***	***S.F.***
PROPOSED PERVIOUS AREA		
TOTAL	***0.0***	***S.F.***
LANDSCAPE AREA	22,662.9	S.F.

TOTAL EXISTING IMPERVIOUS AREA = 5,998.1 S.F.
TOTAL PROPOSED IMPERVIOUS AREA = 13,926.0 S.F.

TOTAL INCREASE IN IMPERVIOUS AREA = 7,928.1 S.F.

DEEP OBSERVATION HOLE NUMBER:			
TEST PIT	#1	GROUND ELEVATION	155.5' ±
Depth (in)	Depth (ft)	Horizon/Layer	Texture
0.0-18.0	0.0-1.5	Ap	--
18.0-36.0	1.5-3.0	Bw	FINE SAND
36.0-90.0	3.0-7.5	C1	COARSE SAND
90.0-120.0	7.5-10.0	C2	FINE SAND

NOTES:
BOTTOM OF TEST PIT: 145.50 ft
ESHGW: NOT FOUND
PREFORMED BY: EDMOND SPRUHAN SE 14235

DEEP OBSERVATION HOLE NUMBER:			
TEST PIT	#2	GROUND ELEVATION	151.1' ±
Depth (in)	Depth (ft)	Horizon/Layer	Texture
0.0-12.0	0.0-1.0	Ap	--
12.0-24.0	1.0-2.0	Bw	--
24.0-96.0	3.0-7.5	C1	LOAMY SAND WITH COBBLES

NOTES:
BOTTOM OF TEST PIT: 143.1 ft
MOTTLING AT 146.1 FT
PREFORMED BY: EDMOND SPRUHAN SE 14235

SPRUHAN ENGINEERING, P.C.
80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458
Tel: 617–816–0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

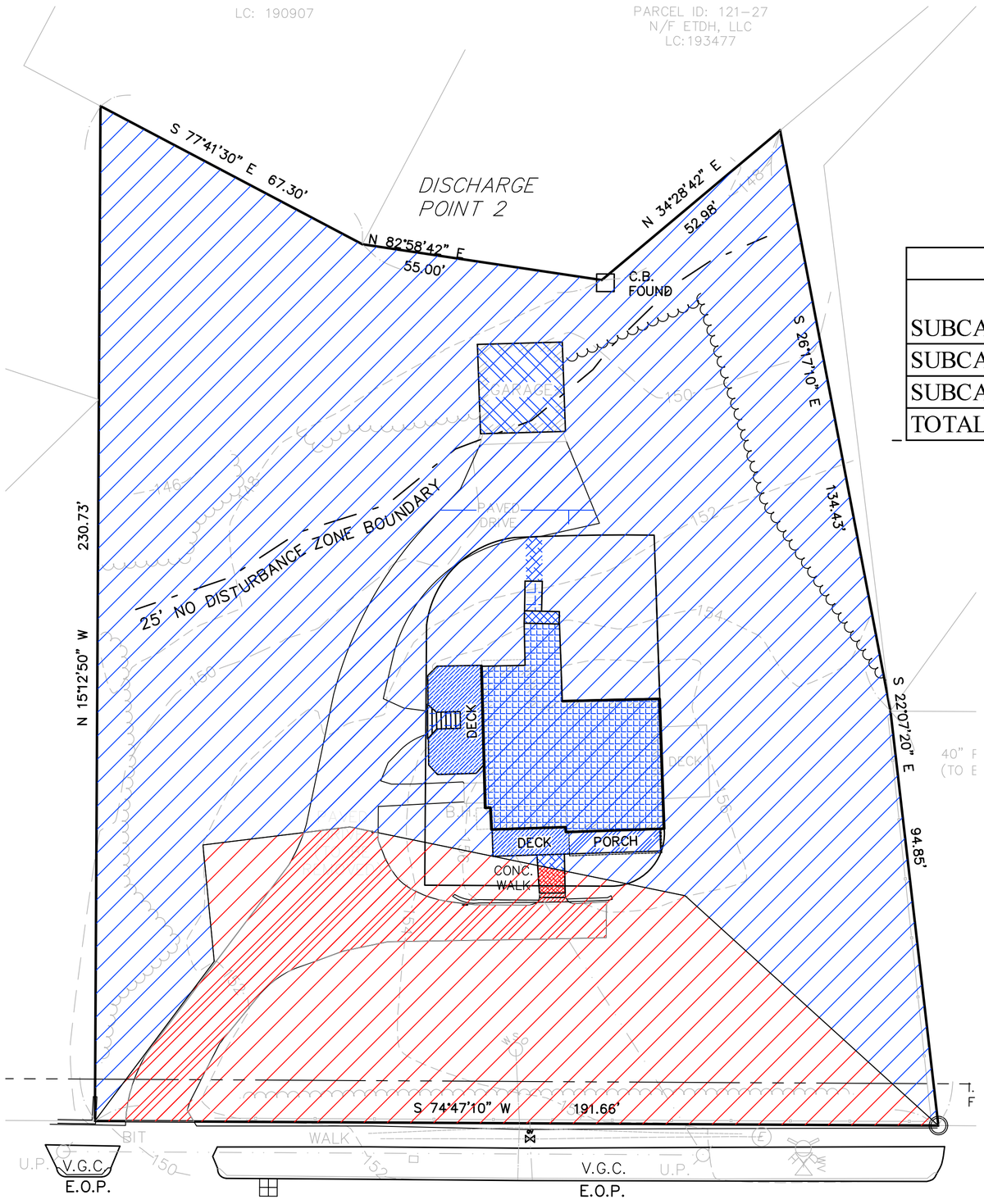
BY	DESCRIPTION	DATE
Y.L	UPDATED PER DPW COMMENTS	11.7.25

DATE:	9/24/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

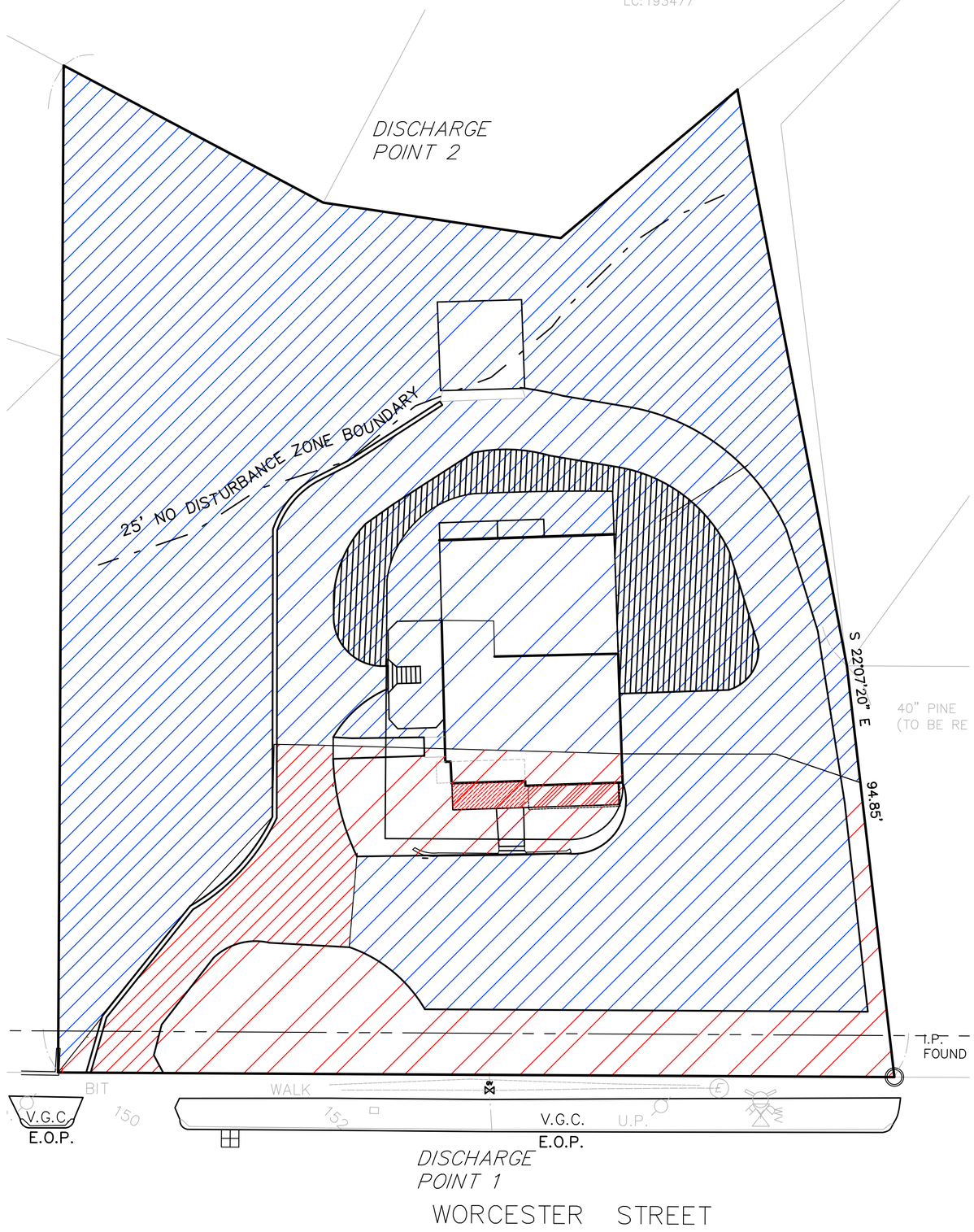
CIVIL PLAN

SHEET C1.0

COMMONWEALTH OF MASSACHUSETTS
EDMOND SPRUHAN
CIVIL
53316
REGISTERED PROFESSIONAL ENGINEER



EXISTING SUBCATCHMENT CALCULATIONS						
SUBCATCHMENT	LANDSCAPE	BUILDINGS	DRIVEWAY	GENERAL IMPERVIOUS	GARAGE	TOTAL
SUBCATCHMENT 1	6,719.0	-	1,806.0	46.0	-	**8,571.0**
SUBCATCHMENT 2	23,871.00	1,401.0	1,697.0	657.0	392.1	**28,018.1**
TOTAL	30,590.0	1,401.0	3,503.0	703.0	392.1	36,589.1



PROPOSED SUBCATCHMENT CALCULATIONS						
SUBCATCHMENT	LANDSCAPE	BUILDINGS	DRIVEWAY	GENERAL IMPERVIOUS	GARAGE	TOTAL
SUBCATCHMENT 1	4,444.0	290.0	1,472.0	209.0	-	**6,415.00**
SUBCATCHMENT 2	18,220.0	1,972.0	8,917.0	673.0	392.1	**30,174.10**
TOTAL	22,664.0	2,262.0	10,389.0	882.0	392.1	**36,589.10**

Discharge points summary table (HydroCAD results)					
DISCHARGE POINT	STORM EVENT	RUNOFF RATE		VOLUME OF RUNOFF	
		EXISTING	PROPOSED	EXISTING	PROPOSED
#1	100-Year	0.92	0.18	2,768.0	668.0
#2	100-Year	2.60	1.37	7,934.0	4,426.0

SPRUHAN ENGINEERING, P.C.

80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458

Tel: 617-816-0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE

DATE:	11/5/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

WATERSHED MAPS

SHEET C2.0

COMMONWEALTH OF MASSACHUSETTS
EDMOND Z. SPRUHAN
CIVIL
53316
REGISTERED
PROFESSIONAL ENGINEER

CULTEC RECHARGER® / 902HD SPECIFICATIONS

GENERAL

CULTEC RECHARGER®/ 902HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
   A. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
3. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
5. THE INSTALLED CHAMBER SYSTEMS SHALL BE STRUCTURALLY DESIGNED TO PROVIDE RESISTANCE TO THE LIVE LOADS AS DEFINED BY THE AASHTO H-20/HL-93 SPECIFICATION WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
6. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
7. THE CHAMBER SHALL BE ARCHED IN SHAPE.
8. THE CHAMBER SHALL BE OPEN-BOTTOMED.
9. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
10. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® /902HD SHALL BE 48 INCHES (1219 MM) TALL, 78 INCHES (1981 MM) WIDE AND 4.25 FEET (1.30 M) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 902HD SHALL BE 3.67 FEET (1.12 M).
11. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER®/ 902HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 MM) HDPE OR 36 INCHES (900 MM) PVC.
12. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCHES (250 MM) HDPE AND 12 INCHES (300 MM) PVC.
13. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 MM) WIDE AND 49 INCHES (1245 MM) LONG.
14. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 902HD CHAMBER SHALL BE 17.31 FT3 // FT (1.61 M3/ / M) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 902HD SHALL BE 63.47 FT3/ / UNIT (1.80 M3/ / UNIT) - WITHOUT STONE.
15. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT3/ / FT (0.085 M3/ / M) - WITHOUT STONE.
16. THE RECHARGER 902HD CHAMBER SHALL HAVE 5 CORRUGATIONS.
17. THE CHAMBER SHALL BE CAPABLE OF ACCEPTING A 6 INCH (150 MM) INSPECTION PORT OPENING AT THE TOP CENTER OF EACH CHAMBER, CENTERED ON THE CORRUGATION CREST.
18. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
19. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 8.3 FEET (2.53 M).

END CAP PARAMETERS

1. THE CULTEC RECHARGER® 902HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
2. THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
3. THE END CAP SHALL BE ARCHED IN SHAPE.
4. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
5. THE END CAP SHALL HAVE 5 CORRUGATIONS.
6. THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 48.5 INCHES (1231 mm) TALL, 78 INCHES (1982 mm) WIDE AND 28.0 INCHES (711 mm) LONG. WHEN JOINED WITH A RECHARGER 902HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 24.0 INCHES (610 mm).
7. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 9.01 FT3 / FT (0.83 m3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 18.02 FT3 / UNIT (1.67 m3 / UNIT) - WITHOUT STONE.
8. MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 mm) HDPE OR 36 INCHES (900 mm) PVC.
9. THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL

CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 902HD STORMWATER CHAMBERS.

FEED CONNECTOR PARAMETERS

1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

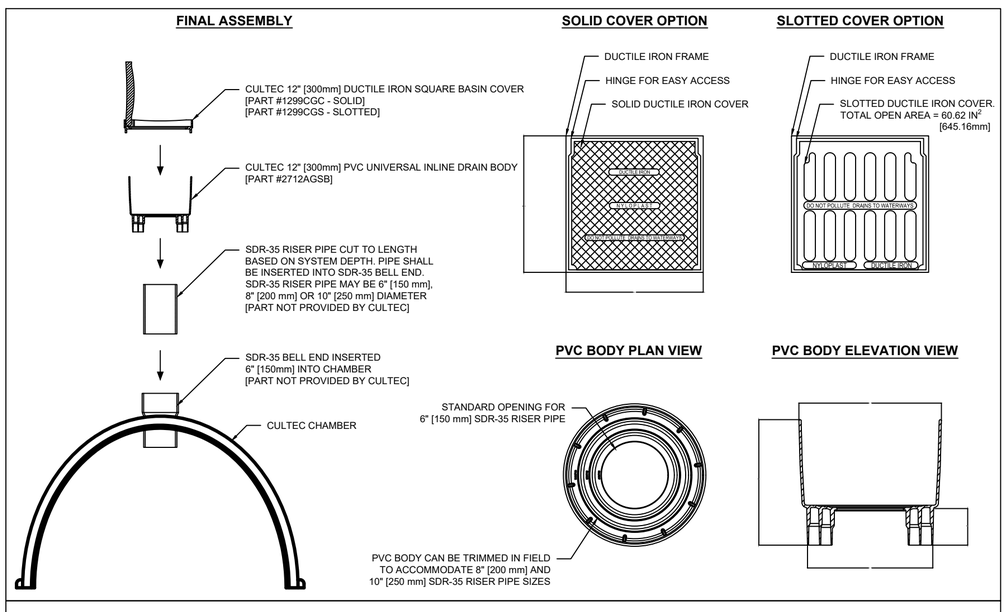
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC AFAB-HPF™ WOVEN GEOTEXTILE

CULTEC AFAB-HPF WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

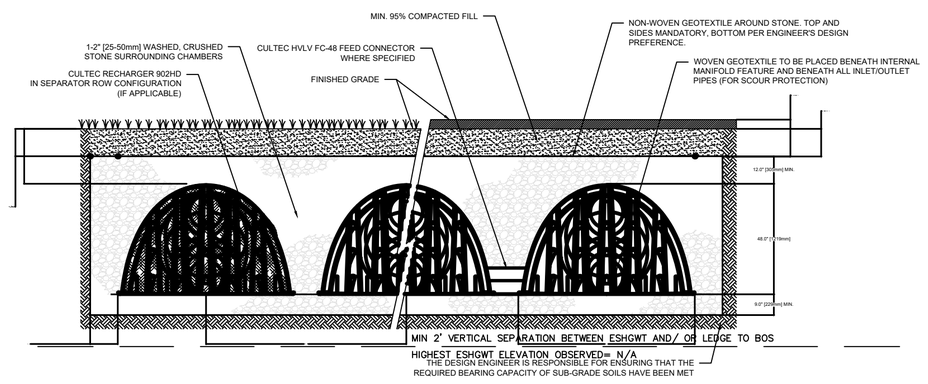
GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 320 X 320 LBS (1,420 X 1,420 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 15 X 15% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 3,563 X 3,563 LBS/FT (52 X 52 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,500 LBS (6,670 N) PER ASTM D6241 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 120 X 120 LBS (540 X 540 N) PER ASTM D4533 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 30 US STD. SIEVE (0.60 MM) PER ASTM D4751 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.2 SEC-1 PER ASTM D4491 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 22 GPM/FT2 (900 LPM/M2) PER ASTM D4491 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.



CULTEC UNIVERSAL INSPECTION PORT KIT DETAIL

NOT TO SCALE

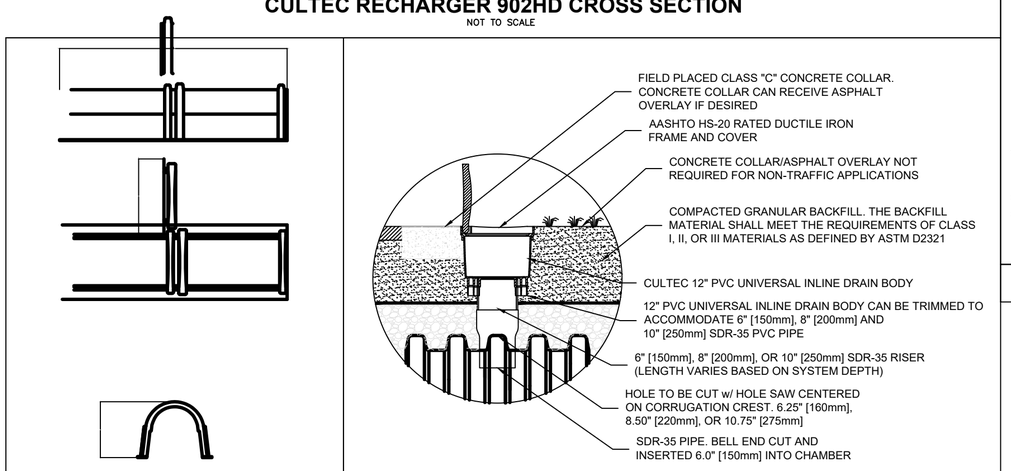


NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

SYSTEM:	LOWEST GRADE	TOS	TOC	INV. IN=	BOC	BOS	STONE BASE
#2	155.0'±	153.6'±	152.6'±	148.6'±	148.6'±	147.9'±	25.33'X27.67'X5.75'

CULTEC RECHARGER 902HD CROSS SECTION

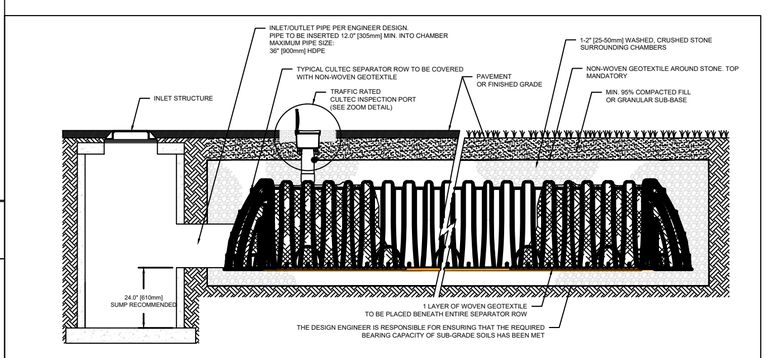
NOT TO SCALE



CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW

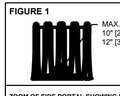
OPTIONAL CULTEC INSPECTION PORT - ZOOM DETAIL

NOT TO SCALE



NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

FIGURE 1

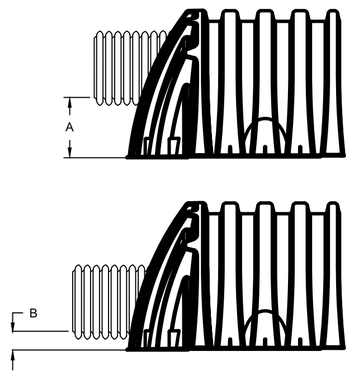


MAX. PIPE:
10" [250mm] HDPE
12" [300mm] PVC

ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D.

CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)

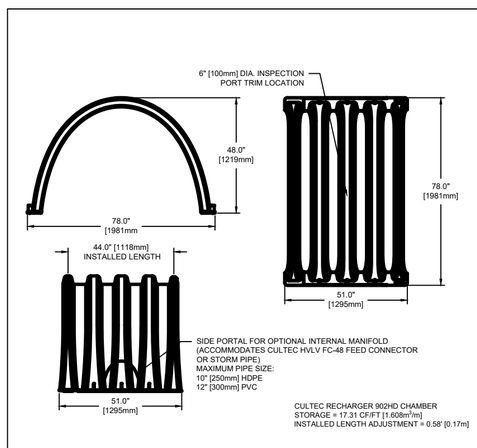
PIPE	A	B
6" [150 mm]	38.00" [965 mm]	1.00" [25 mm]
8" [200 mm]	36.00" [914 mm]	1.00" [25 mm]
10" [250 mm]	33.80" [858 mm]	1.25" [32 mm]
12" [300 mm]	29.25" [743 mm]	1.75" [44 mm]
15" [375 mm]	25.75" [654 mm]	2.00" [50 mm]
18" [450 mm]	21.75" [552 mm]	2.50" [64 mm]
21" [525 mm]	18.75" [476 mm]	2.50" [64 mm]
24" [600 mm]	15.75" [400 mm]	2.50" [64 mm]
30" [750 mm]	7.75 [197 mm]	3.50" [89 mm]
36" [900 mm]	N/A	3.50" [89 mm]



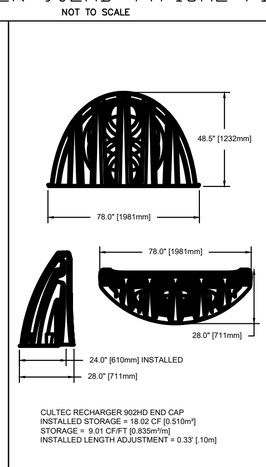
*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 4" (100mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.

CULTEC RECHARGER 902HD TYPICAL PIPE INVERTS

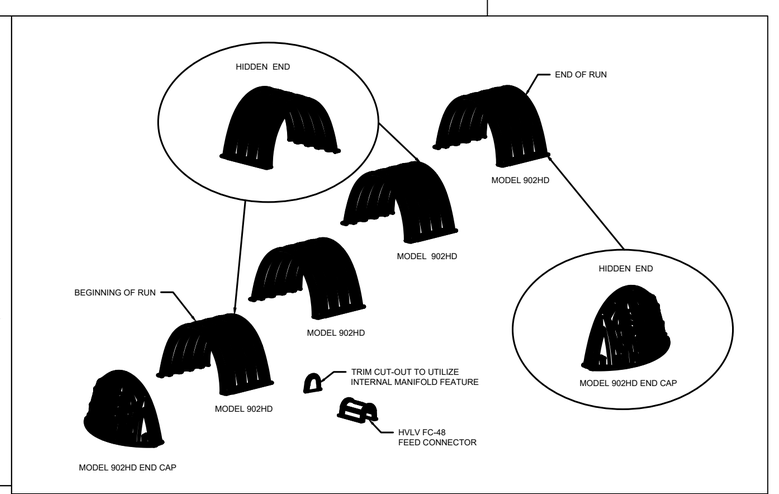
NOT TO SCALE



CULTEC RECHARGER 902HD HEAVY DUTY THREE VIEW



CULTEC RECHARGER 902HD HEAVY DUTY END CAP THREE VIEW



CULTEC RECHARGER 902HD HEAVY DUTY TYPICAL INTERLOCK

SPRUHAN ENGINEERING, P.C.

80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458

Tel: 617-816-0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
Y.L	UPDATED PER DPW COMMENTS	11.7.25

DATE:	9/24/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

DETAILS I

SHEET C3.0

COMMONWEALTH OF MASSACHUSETTS
EDMOND J. SPRUHAN
CIVIL
53316
REGISTERED PROFESSIONAL ENGINEER

CULTEC C-100HD

RESIDENTIAL SYSTEM APPLICATION SPECIFICATIONS

1.0 GENERAL

RESIDENTIAL STORMWATER MANAGEMENT IS THE PRACTICE OF CONTROLLING STORMWATER RUNOFF GENERATED BY RESIDENTIAL PROPERTIES. IMPERVIOUS SURFACES LIKE ROOFS, PATIOS, DRIVEWAYS, AND HEAVILY COMPACTED PERVIOUS SURFACES SUCH AS LAWNS PREVENT RAINFALL FROM BEING EVENLY DISTRIBUTED ACROSS THE GROUND AND EVENTUALLY ABSORBING INTO THE NATIVE SOIL. THESE IMPERVIOUS SURFACES INCREASE THE VOLUME OF RUNOFF AND THE RATE AT WHICH THE RUNOFF OCCURS. THE INCREASED VOLUME AND RUNOFF RATES CAN HAVE NEGATIVE IMPACTS DOWNSTREAM INCLUDING CHANNEL EROSION AND FLOODING OF ADJACENT PROPERTIES. ADDITIONALLY, RUNOFF FROM THESE SURFACES CAN CONTAIN SEDIMENT, NUTRIENTS, HEAVY METALS, AND OTHER POLLUTANTS THAT NEGATIVELY AFFECT THE DOWNSTREAM WATERCOURSES. A WELL-DESIGNED AND IMPLEMENTED RESIDENTIAL DRAINAGE SYSTEM WILL REDUCE THE OVERALL VOLUME OF DOWNSTREAM RUNOFF, REDUCE PEAK FLOWS FROM THE SITE AND WILL ACHIEVE WATER QUALITY CONTROLS THROUGH A VARIETY OF BEST MANAGEMENT PRACTICES.

1.1 APPLICATIONS

CULTEC CHAMBERS CAN BE USED IN THE FOLLOWING RESIDENTIAL APPLICATIONS:

- INFILTRATION OF STORMWATER RUNOFF
- DETENTION OF STORMWATER RUNOFF
- RAINWATER HARVESTING AND REUSE
- SUMP PUMP AND WATER SOFTENER DISCHARGE
- POOL BACKWASH AND DRAWDOWN DISCHARGE

CULTEC STORMFILTER T-80 WATER QUALITY UNIT SPECIFICATIONS

2.0 GENERAL

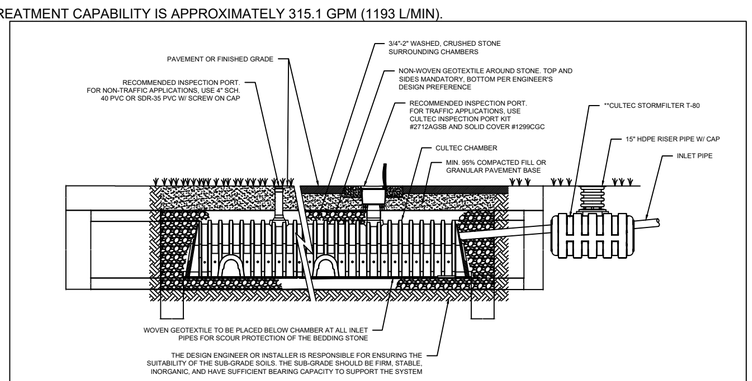
CULTEC STORMFILTER® T-80 MAY BE USED AS A STORMWATER FILTRATION UNIT, HOLDING TANK OR CATCH BASIN.

2.1 CHAMBER PARAMETERS

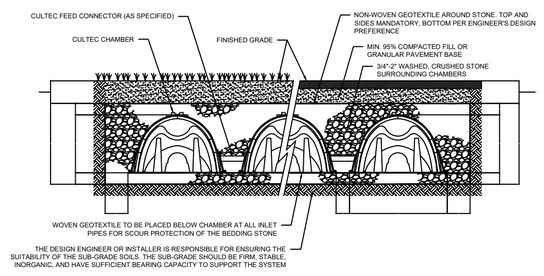
1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832).
2. THE CHAMBER SHALL BE FORMED OF BLACK POLYETHYLENE.
3. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC STORMFILTER® T-80 SHALL BE 26.38 INCHES (670 MM) TALL, 31 INCHES (787 MM) WIDE AND 42 INCHES (1067 MM) LONG.
4. THE CHAMBER SHALL HAVE A 12.5 INCH (318 MM) DIAMETER ACCESS OPENING LOCATED AT THE TOP OF THE UNIT.
5. MAXIMUM INLET OPENING ON THE CHAMBER END WALL IS 4 INCHES (100 MM).
6. THE NOMINAL STORAGE VOLUME OF THE STORMFILTER™ T-80 SHALL BE 90 GAL / UNIT (340.7 L / UNIT).
7. THE STORMFILTER® T-80 CHAMBER SHALL HAVE 5 CORRUGATIONS.
8. THE STORMFILTER® T-80 SHALL HAVE A MAXIMUM FILTERING CAPACITY OF 315.1 GPM (1193 L/MIN).
9. THE CHAMBER SHALL BE DESIGNED FOR NON-TRAFFIC APPLICATIONS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.

2.2 FILTERING SPECIFICATIONS

1. THE FILTER REMOVES MORE THAN 70% OF THE TOTAL SUSPENDED SOLIDS TYPICALLY PRESENT IN STORMWATER RUNOFF.
2. CONTINUOUS FILTRATION CAPABILITY FOR CLEAN FILTERS IS RATED AT 0.70 CFS (0.02 M3/S).
3. TREATMENT CAPABILITY IS APPROXIMATELY 315.1 GPM (1193 L/MIN).



TYPICAL SYSTEM PROFILE DETAIL

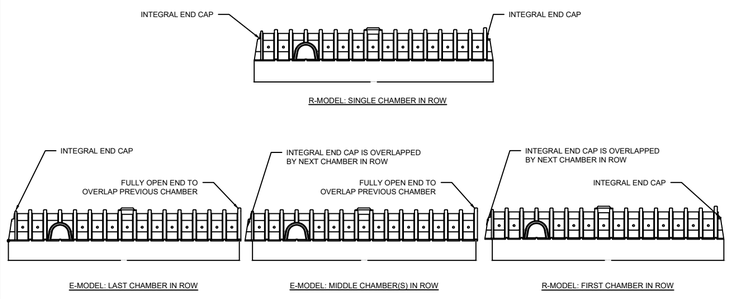


*FOR NON-TRAFFIC APPLICATIONS, THE DEPTH OF COVER ABOVE THE EMBEDMENT STONE LAYER MAY BE REDUCED TO 6.0"

SYSTEM:	LOWEST GRADE	TOS	TOC	INV. IN=	BOC	BOS	STONE BASE
#1	152.0'±	149.5'±	149.0'±	148.0'±	148.0'±	147.5'±	13.33'X21.50'X2.04'

SPECIFICATION TABLE				
		CONTACTOR 100HD	RECHARGER 180HD	RECHARGER 330XLHD
REF.	BARE CHAMBER VOLUME	1.87 FT³/FT 14.00 FT³/UNIT 105 GAL	3.45 FT³/FT 21.81 FT³/UNIT 163 GAL	7.46 FT³/FT 52.21FT³/UNIT 391 GAL
A	STONE BORDER (IN)	12	12	12
B	CHAMBER WIDTH (IN)	36	36	52
C	ROW SPACING (IN)	6	6	6
D	CHAMBER HEIGHT (IN)	12	20	30
E	EFFECTIVE DEPTH (IN)	24	32	42

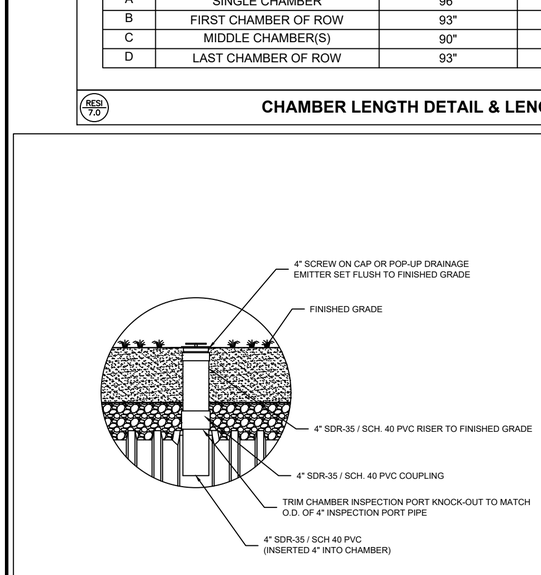
TYPICAL SYSTEM CROSS-SECTION DETAIL & SPECIFICATION TABLE



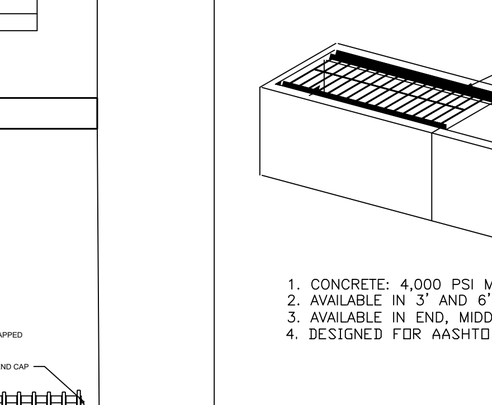
CHAMBER LENGTH TABLE				
REF.	LOCATION	CONTACTOR 100HD	RECHARGER 180HD	RECHARGER 330XLHD
A	SINGLE CHAMBER	96"	88"	102"
B	FIRST CHAMBER OF ROW	93"	82"	93"
C	MIDDLE CHAMBER(S)	90"	76"	84"
D	LAST CHAMBER OF ROW	93"	82	93"

RESI 7.0

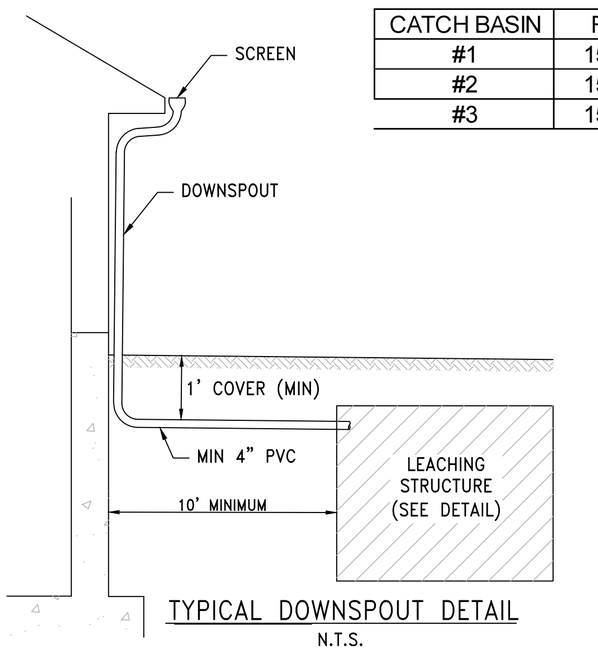
CHAMBER LENGTH DETAIL & LENGTH TABLE



NON-TRAFFIC INSPECTION PORT ZOOM DETAIL

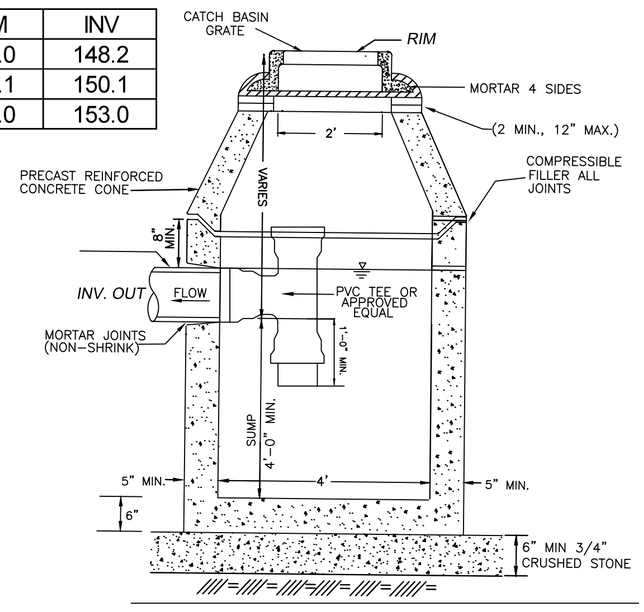


CULTEC INSPECTION PORT - ZOOM DETAIL

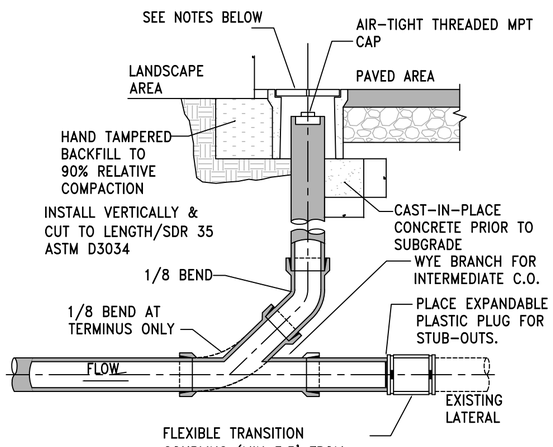


TYPICAL DOWNSPOUT DETAIL
N.T.S.

CATCH BASIN	RIM	INV
#1	151.0	148.2
#2	152.1	150.1
#3	155.0	153.0



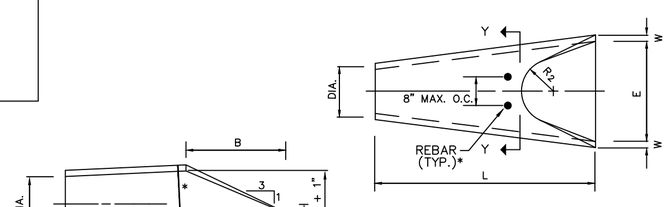
STANDARD CATCH BASIN # 1, 2 & 3
NOT TO SCALE



CLEANOUT TO GRADE
NOT TO SCALE

NOTES:

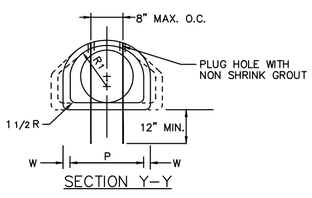
1. RECTANGULAR OR CIRCULAR BOXES ARE PERMITTED.
2. CONCRETE/FIBERLYTE LIDS ARE ACCEPTABLE IN NON-VEHICULAR AREAS. H-20 CAST IRON TRAFFIC LIDS AND BOXES IN VEHICULAR AREAS.
3. ALL CLEANOUT LIDS SHALL BE MARKED WITH AN "S" OR THE WORD "SEWER" FOR SANITARY SEWER CLEANOUTS
4. CLEANOUT PIPE SHALL BE THE SAME DIAMETER AS THE CONNECTED SITE PIPE.
5. TERMINATE C.O. AT CLOSEST JOINT TO SURFACE WITH TEMPORARY PLUG. AFTER ALL BACKFILL IS COMPLETE AND SUB-GRADE MADE IN AREAS TO BE PAVED, THE FINAL RISER PIPE AND BOX SHALL BE INSTALLED AS SHOWN.



PLAN

SECTION

NOTES:
1. JOINT TYPE SHALL BE COMPATIBLE WITH MAIN RUN OF PIPE.
2. SEE OUTLET EROSION PROTECTION DETAIL FOR INSTALLATION OF RIPRAP AT FLARED END SECTION.

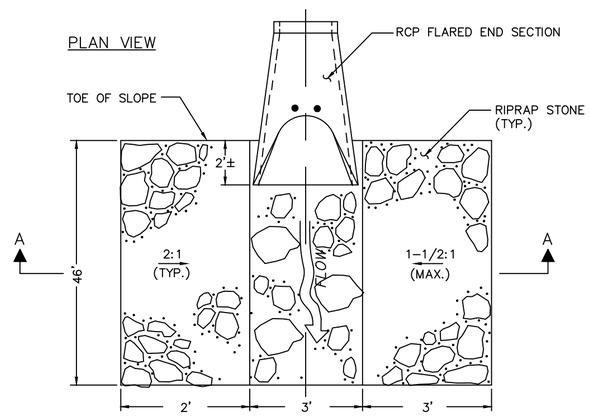


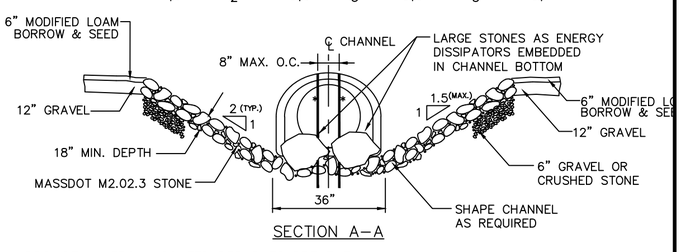
SECTION Y-Y

DIAMETER INCHES	W	A	B	D	E	P	DIA. +1"	R1	R2
12"	2"	4"	2'-0"	6'-0"	2'-0"	19 15/16"	13"	10 1/8"	9"
15"	2 1/4"	6"	2'-3"	6'-0"	2'-6"	24 5/16"	16"	12 1/2"	11"
18"	2 1/2"	9"	2'-3"	6'-0"	3'-0"	29"	19"	15 1/2"	12"
21"	2 3/4"	9"	2'-11"	6'-0"	3'-6"	31 5/8"	22"	16 1/8"	13"
24"	3"	9 1/2"	3'-7 1/4"	6'-0"	4'-0"	33 3/16"	25"	16 13/16"	14"
27"	3 1/4"	10 1/2"	4'-0"	6'-0"	4'-6"	36"	28"	18 9/16"	14 1/2"
30"	3 1/2"	12"	4'-6"	6'-0"	5'-0"	37"	31"	18 1/2"	15"
36"	4"	15"	5'-3"	8'-0"	6'-0"	47 13/16"	37"	24 5/16"	20"
42"	4 1/2"	21"	5'-3"	8'-0"	6'-6"	53 7/8"	43"	27 1/2"	22"
48"	5"	24"	6'-0"	8'-0"	7'-0"	56 1/2"	49"	28 1/2"	22"

* PROVIDE #4 EPOXY COATED REBAR TO PREVENT A CHILD FROM CRAWLING INTO PIPE (MAXIMUM SPACING 8" O.C.)

REINFORCED CONCRETE FLARED END SECTION
N.T.S.

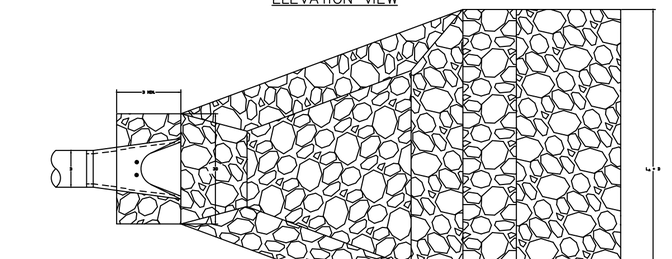




SECTION A-A

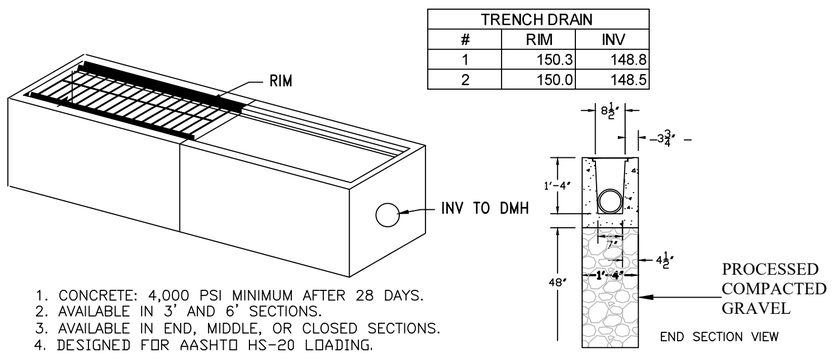
* PROVIDE #4 EPOXY COATED REBAR TO PREVENT A CHILD FROM CRAWLING INTO PIPE (MAXIMUM SPACING 8" O.C.)

RIPRAP VELOCITY DISSIPATOR
N.T.S.



ELEVATION VIEW

TRENCH DRAIN		
#	RIM	INV
1	150.3	148.8
2	150.0	148.5



1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. AVAILABLE IN 3' AND 6' SECTIONS.
3. AVAILABLE IN END, MIDDLE, OR CLOSED SECTIONS.
4. DESIGNED FOR AASHTO HS-20 LOADING.

END SECTION VIEW

TRENCH DRAIN DETAIL
N.T.S.

PLAN VIEW

NOTES:
* PROVIDE #4 EPOXY COATED REBAR TO PREVENT A CHILD FROM CRAWLING INTO PIPE (MAXIMUM SPACING 8" O.C.)
1. THE TABLES IN THE FOLLOWING DETAILS ASSUME PIPE IS FLOWING FULL. FOR PARTIAL FLOW OR USE WITH OPEN CHANNELS, USE VELOCITY AND REFER TO CURVES PROVIDED IN "DESIGN GUIDE MD #6, RIPRAP DESIGN METHODS" (NRCS, JAN 2004).

STONE OUTLET PROTECTION
N.T.S.

ADS BARRACUDA MAX S3

PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.

ADS BARRACUDA S3	
RIM	151
INV IN	148
INV OUT	148

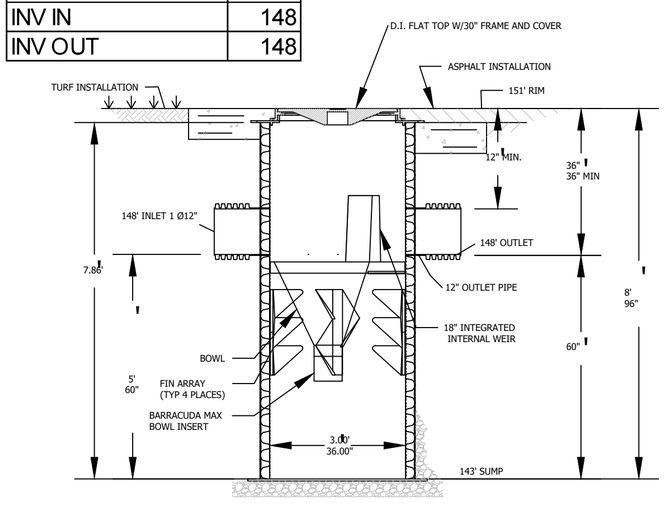
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.

-OR -

THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d/50=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.

-OR -

THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER PREVIOUS 2013 NJDEP/NJCAT HDS PROTOCOL.



SECTION VIEW A-A
N.T.S.

PLAN VIEW
N.T.S.

SPRUHAN ENGINEERING, P.C.

80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458

Tel: 617-816-0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
Y.L	UPDATED PER DPW COMMENTS	11.7.25

DATE:	9/24/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

DETAILS II

SHEET C3.1

COMMONWEALTH OF MASSACHUSETTS
EDMOND T. SPRUHAN
CIVIL
NO. 53316
REGISTERED PROFESSIONAL ENGINEER

EROSION CONTROL NOTES

1. THE EROSION CONTROL PLANS IN THIS SET SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL WORK WITH THE PROJECT'S ENGINEER THROUGHOUT CONSTRUCTION TO ENSURE THE SITE IS PROPERLY PROTECTED FROM POSSIBLE POLLUTANTS. THE ENGINEER HAS AUTHORIZATION TO ADD OR REMOVE BMP MEASURES THROUGHOUT CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SITE EROSION CONTROL AT ALL TIMES.
3. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE PERMITTEE TO ENSURE THAT EROSION DOES NOT OCCUR FROM ANY ACTIVITY DURING OR AFTER PROJECT CONSTRUCTION. ADDITIONAL MEASURES, BEYOND THOSE SPECIFIED, MAY BE REQUIRED BY THE PLANNING DIRECTOR AS DEEMED NECESSARY TO CONTROL ACCELERATED EROSION.
4. AT THE END OF EACH WORKDAY, AT THE END OF EACH WORKWEEK, THE CONTRACTOR SHALL IMPLEMENT ALL TEMPORARY MEASURES NECESSARY TO PREVENT EROSION AND SILTATION, UNTIL THE PROJECT HAS BEEN FINALIZED. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, DIRECT SEEDING OF THE AFFECTED AREAS, STRAW MULCHING, AND/OR INSTALLATION OF STRAW BALES DAMS/SILT FENCES.
5. DURING CONSTRUCTION, NO TURBID WATER SHALL BE PERMITTED TO LEAVE THE SITE. USE OF SILT AND GREASE TRAPS, FILTER BERMS, HAY BALES OR SILT FENCES SHALL BE USED TO PREVENT SUCH DISCHARGE.
6. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR SEEDING.
7. ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
8. ANY MATERIAL STOCKPILED, FOR LONGER THAN 14 DAYS, DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.
9. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.
11. ALL SPILLS AND/OR LEAKS SHALL BE IMMEDIATELY CLEANED UP AND MITIGATED.

FIBER ROLL CONSTRUCTION SPECIFICATIONS

1. PREPARE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
2. DIG SMALL TRENCHES ACROSS SLOPE ON CONTOUR, TO PLACE WATTLES IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE WATTLE. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE WATTLE 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE. IT IS CRITICAL THAT WATTLES ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR.
3. START BUILDING TRENCHES AND INSTALL WATTLES FROM THE BOTTOM OF THE SLOPE AND WORK UP.
4. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF THREE TO EIGHT FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES.
5. LAY THE WATTLE ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WOODEN STAKES.
6. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE WATTLE. IF USING WILLOW STAKES REFER TO USDA SOIL CONSERVATION SERVICE TECHNICAL GUIDE, BIOENGINEERING, FOR GUIDELINES TO PREPARING LIVE WILLOW MATERIAL.
7. INSTALL STAKES AT LEAST EVERY FOUR FEET APART THROUGH WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSIVE OR VERY STEEP SLOPES.

FIBER ROLL INSTALLATION AND MAINTENANCE

8. INSPECT THE STRAW WATTLE AND THE SLOPES AFTER SIGNIFICANT STORMS. MAKE SURE THE WATTLES ARE IN CONTACT WITH THE SOIL.
9. REPAIR ANY RILLS OR GULLIES PROMPTLY.
10. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED.

CONSTRUCTION MATERIALS

- ALL LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, FLY-ASH, STUCCO, HYDRATED LIME, ETC.) SHALL BE COVERED AND BERMED.
- ALL CHEMICALS SHALL BE STORED IN WATERTIGHT CONTAINERS (WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT ANY SPILLAGE OR LEAKAGE) OR IN A STORAGE SHED (COMPLETELY ENCLOSED).
- EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED. THIS DOES NOT INCLUDE MATERIALS AND EQUIPMENT THAT ARE DESIGNED TO BE OUTDOORS AND EXPOSED TO ENVIRONMENTAL CONDITIONS (I.E. POLES, EQUIPMENT PADS, CABINETS, CONDUCTORS, INSULATORS, BRICKS, ETC.).
- BEST MANAGEMENT PRACTICES TO PREVENT THE OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS SHALL BE IMPLEMENTED.

WASTE MANAGEMENT

- DISPOSAL OF ANY RINSE OR WASH WATERS OR MATERIALS ON IMPERVIOUS OR PERVIOUS SITE SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE PREVENTED.
- SANITATION FACILITIES SHALL BE CONTAINED (E.G. PORTABLE TOILETS) TO PREVENT DISCHARGES OF POLLUTANTS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER, AND SHALL BE LOCATED A MINIMUM 20 FEET AWAY FROM AN INLET, STREET OR DRIVEWAY, STREAM, RIPARIAN AREA OR OTHER DRAINAGE FACILITY.
- SANITATION FACILITIES SHALL BE INSPECTED REGULARLY FOR LEAKS AND SPILLS AND CLEANED OR REPLACED AS NECESSARY.
- COVER WASTE DISPOSAL CONTAINERS AT THE END OF EVERY BUSINESS DAY AND DURING A RAIN EVENT.
- DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER SHALL BE PREVENTED.
- STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.

  PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON-HAZARDOUS SPILLS SHALL BE IMPLEMENTED.EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE AND THAT SPILLS AND LEAKS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OF PROPERLY; AND
- CONCRETE WASHOUT AREAS AND OTHER WASHOUT AREAS THAT MAY CONTAIN ADDITIONAL POLLUTANTS SHALL BE CONTAINED SO THERE IS NO DISCHARGE INTO THE UNDERLYING SOIL AND ONTO THE SURROUNDING AREAS.

VEHICLE STORAGE AND MAINTENANCE

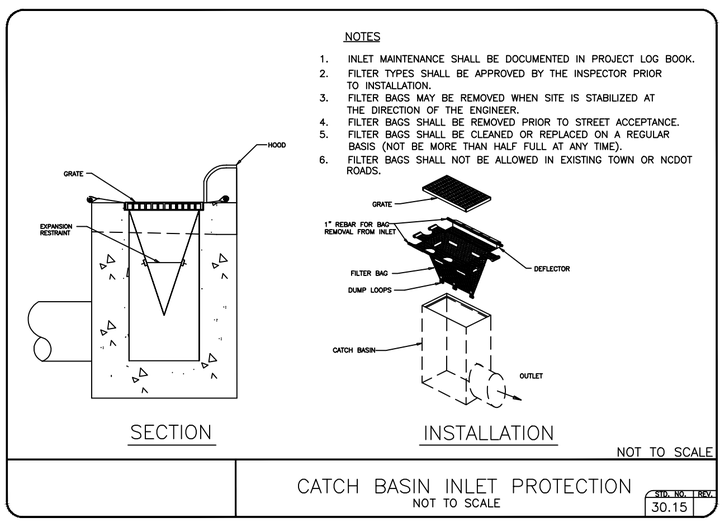
- MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE, OR FUEL TO LEAK IN TO THE GROUND, STORM DRAINS OR SURFACE WATERS.
- ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED, MAINTAINED AND STORED ONSITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMPs.
- LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.

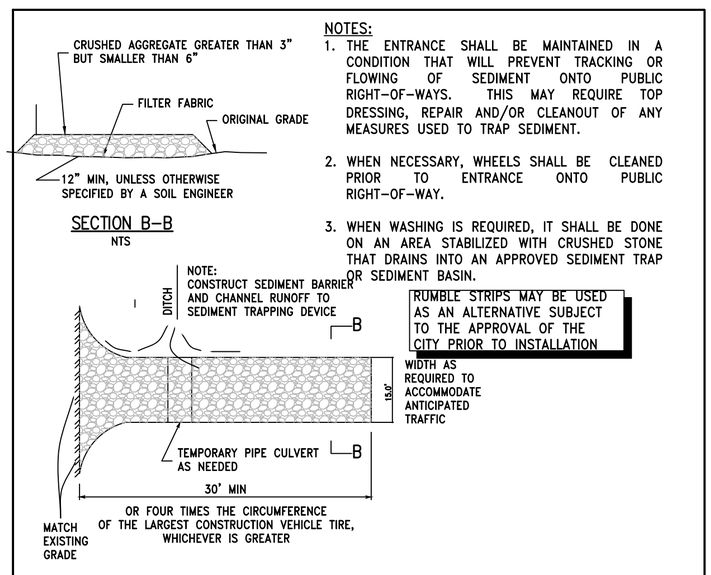
LANDSCAPE MATERIALS

- CONTAIN STOCKPILED MATERIALS SUCH AS MULCHES AND TOPSOIL WHEN THEY ARE NOT ACTIVELY BEING USED
- CONTAIN FERTILIZERS AND OTHER LANDSCAPE MATERIALS WHEN THEY ARE NOT ACTIVELY BEING USED.
- DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.
- APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURE RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL.
- STACK ERODIBLE LANDSCAPE MATERIAL ON PALLETS AND COVERING OR STORING SUCH MATERIALS WHEN NOT BEING USED OR APPLIED.

INSPECTION AND MAINTENANCE:

1. FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM - 1 INCH RAINFALL (25.4 MM) IN 24 HOUR PERIOD. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 0.5" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.
3. THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ON-SITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.





CONSTRUCTION SPECIFICATIONS:

1. THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 2-3 INCH (50-75 MM) STONE. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
2. THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES (152 MM). USE GEOTEXTILE FABRICS, IF NECESSARY, TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.
3. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS AND IN ANY CASE SHALL NOT BE LESS THAN 12 FEET (3.6 M) WIDE.
4. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET (15.2 M).
5. LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID ENTRANCES WHICH HAVE STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR MAINTENANCE OF ANY MEASURES USED TO TRAP SEDIMENT.
7. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
9. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. SEE SEDIMENT BASIN BMP.
10. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, STRAW BALES, OR OTHER APPROVED METHODS.

INSPECTION AND MAINTENANCE:

11. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
12. REPLACE GRAVEL MATERIAL WHEN SURFACE VOIDS ARE NOT VISIBLE.
13. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
14. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS WITHIN 24 HOURS.

NOTE: DIMENSIONS ± SUBJECT TO SITE PARAMETERS & CONDITIONS

SPRUHAN ENGINEERING, P.C.
80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458
Tel: 617-816-0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE

DATE:	9/24/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

EROSION CONTROL & DEMOLITION PLAN (NOTES)

SHEET C4.0

COMMONWEALTH OF MASSACHUSETTS
EDMOND T. SPRUHAN
CIVIL
53316
REGISTERED PROFESSIONAL ENGINEER

S 77°41'30" E 67.30'

N 82°58'42" E 55.00'

N 34°28'42" E 52.98'

WF B1 START

WF B2

WF B3

WF B4

WF B5

WF B6

WF B7

WF B8

WF B9

WF B10

WF B11 END

C.B. FOUND

230.73'

S 26°17'10" E 134.43'

S 22°07'20" E

S 74°47'10" W 191.66'

FR — FIBER ROLLS

PROPOSED FIBER ROLLS TO BE INSTALLED AROUND PERIMETER OF CONSTRUCTION (SEE DETAIL)

EXISTING TREES TO REMAIN AND BE PROTECTED

EXISTING DRIVEWAY TO BE RENEW

SNOW STORAGE

SNOW STORAGE

SNOW STORAGE

25' NO DISTURBANCE ZONE BOUNDARY

50' WETLAND BUFFER

100' WETLAND BUFFER

EXISTING TREES TO REMAIN OUTSIDE OF BUFFER ZONE – TYP ALONG FENCE

GARAGE

DECK

#679 EXISTING MULTIFAMILY

DECK

DECK

PORCH

CONC. WALK

WALKWAY TO BE DEMOLISHED

TREE TO BE REMOVED

STEPS & DECK TO BE DEMOLISHED

PORTION OF BUILDING TO BE DEMOLISHED

TREES TO BE REMOVED

PROPOSED FIBER ROLLS TO BE INSTALLED AROUND PERIMETER OF CONSTRUCTION (SEE DETAIL)

40" PINE (TO BE REN

MA DOT LAYOUT LI

FOUND

V.G.C.

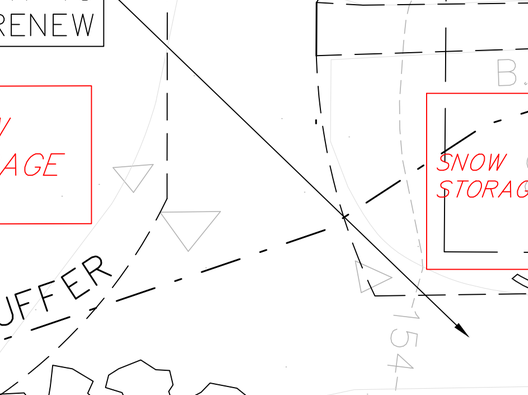
E.O.P.

V.G.C.

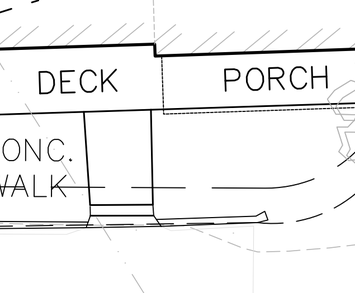
E.O.P.

WORCESTER STREET

EXISTING EOP TO BE USED FOR ENTRANCE CONSTRUCTION AND EXIT WITH ANTI-TRACKING MEASURE (PREVENT SEDIMENT FROM LEAVING SITE)



TYPICAL INSTALLATION
NOT TO SCALE



ENTRENCHMENT DETAIL
NOT TO SCALE

ALL EROSION MITIGATION MEASURES SHALL BE IN PLACE PRIOR TO MAJOR CONSTRUCTION OR SOIL DISTURBANCE COMMENCING ON THE SITE.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FIBER ROLLS
NTS

SPRUHAN ENGINEERING, P.C.

80 JEWETT ST, (SUITE 1)
NEWTON, MA 02458

Tel: 617-816-0722
Email:
edmond@spruhaneng.com

679 WORCESTER STREET, WELLESLEY MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
Y.L	UPDATED PER DPW COMMENTS	11.7.25

DATE:	9/24/2025
DRAWN BY:	Y.L.
CHECKED BY:	G.B.
APPROVED BY:	E.S

EROSION CONTROL & DEMOLITION PLAN

SHEET C4.1

COMMONWEALTH OF MASSACHUSETTS
EDMOND SPRUHAN
CIVIL
53316
REGISTERED PROFESSIONAL ENGINEER

TABLE OF CONTENTS

SCOPE OF WORK:

ADDITION, INTERIOR REMODEL, SIDING,
ROOFING, EXTERIOR HARDSCAPE.

GENERAL NOTES:

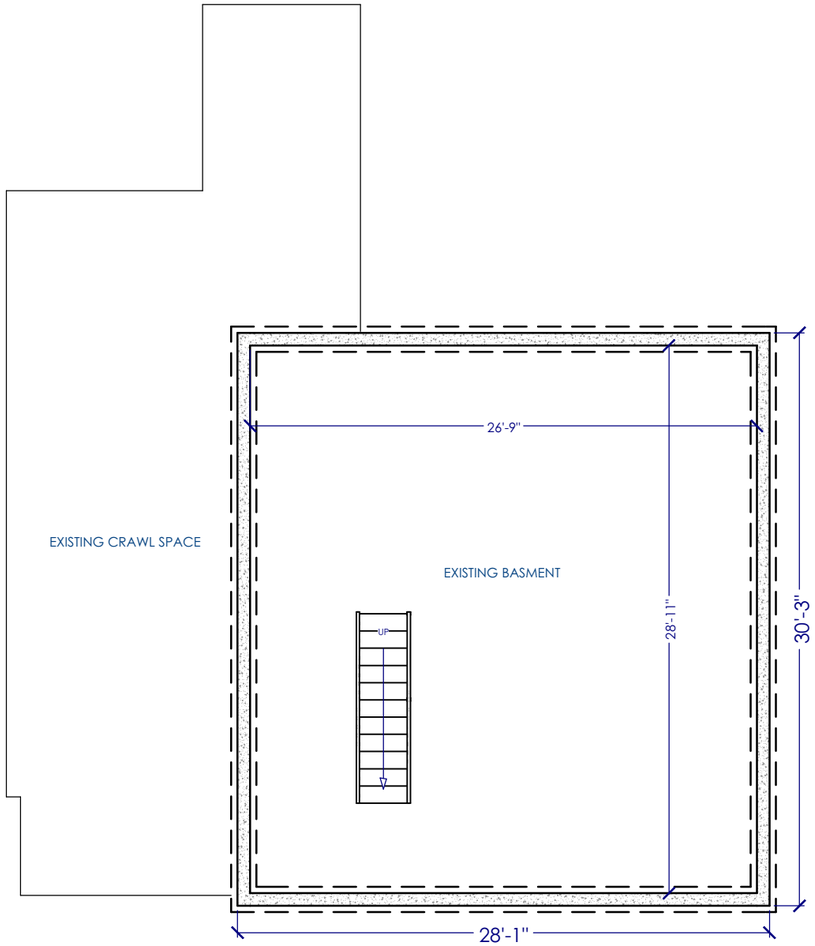
1: ALL DIMENSIONS ARE TO/FROM FINISH TO FINISH UNLESS OTHERWISE NOTED.
2: ALL DIMENSIONS TO BE VERIFIED IN FIELD DURING DEMOLITION PHASE.
3: THESE DRAWINGS WERE PRODUCED WITH THE INTENTION TO BE USED FOR REMODELWERKS DESIGN/BUILD SYSTEM, AND THEY DO NOT CONTAIN SUFFICIENT DETAILS FOR USE BY OTHER BUILDING/ REMODELING COMPANIES. RW AND THE DESIGNER SHALL NOT BE HELD LIABLE OR FINANCIALLY RESPONSIBLE FOR ANY REASON IF OTHER CONTRACTORS PERFORM THE CONSTRUCTION. THESE DRAWINGS MUST BE FIELD VERIFIED FOR ANY AND ALL CONDITIONS, DIMENSIONS, CONFORMITY WITH CODES, ETC.
4: THIS IS A SCHEMATIC SET OF DRAWINGS AND ARE NOT TO BE USED FOR CONSTRUCTION.

ABLS / VARGAS-IRWIN

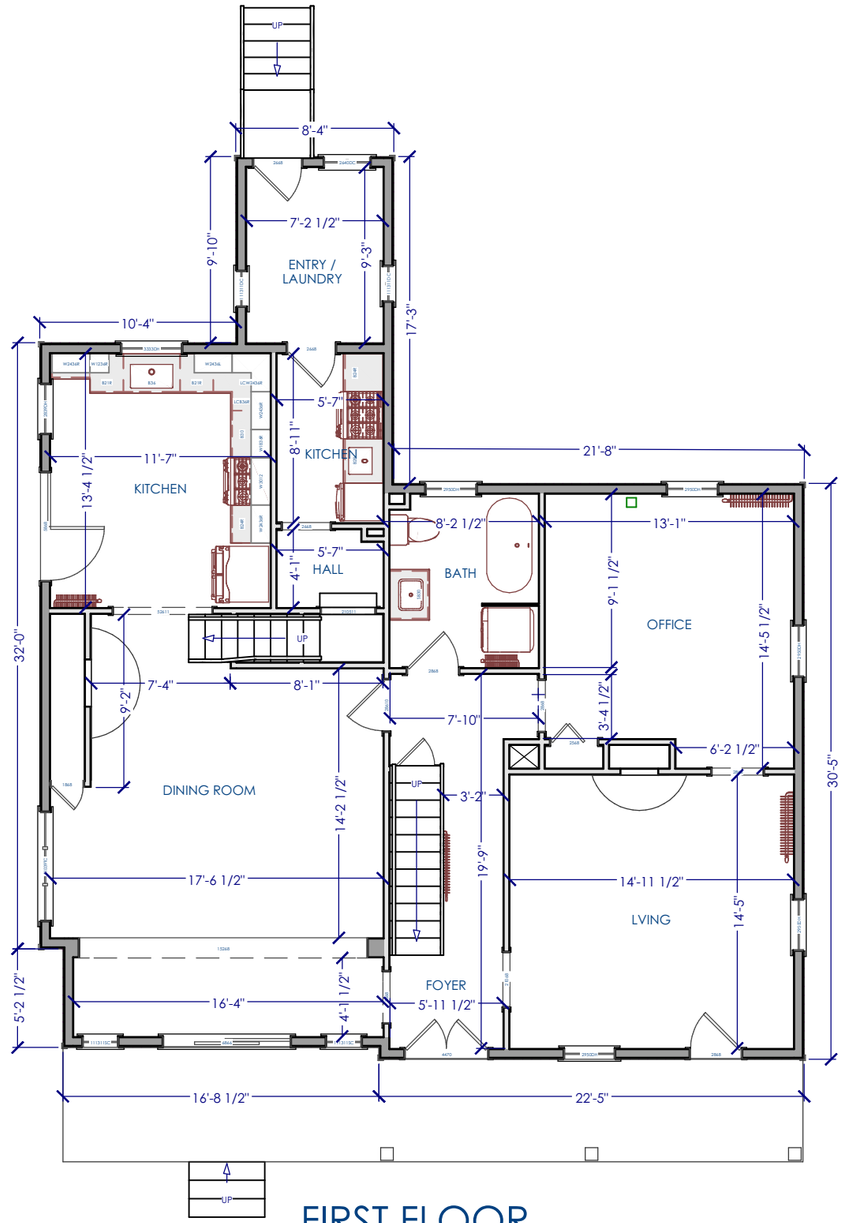
679 WORCESTER STREET, WELLESLEY, MA 02482

DRAWINGS PREPARED BY:

EMILY's Interiors



BASEMENT



FIRST FLOOR

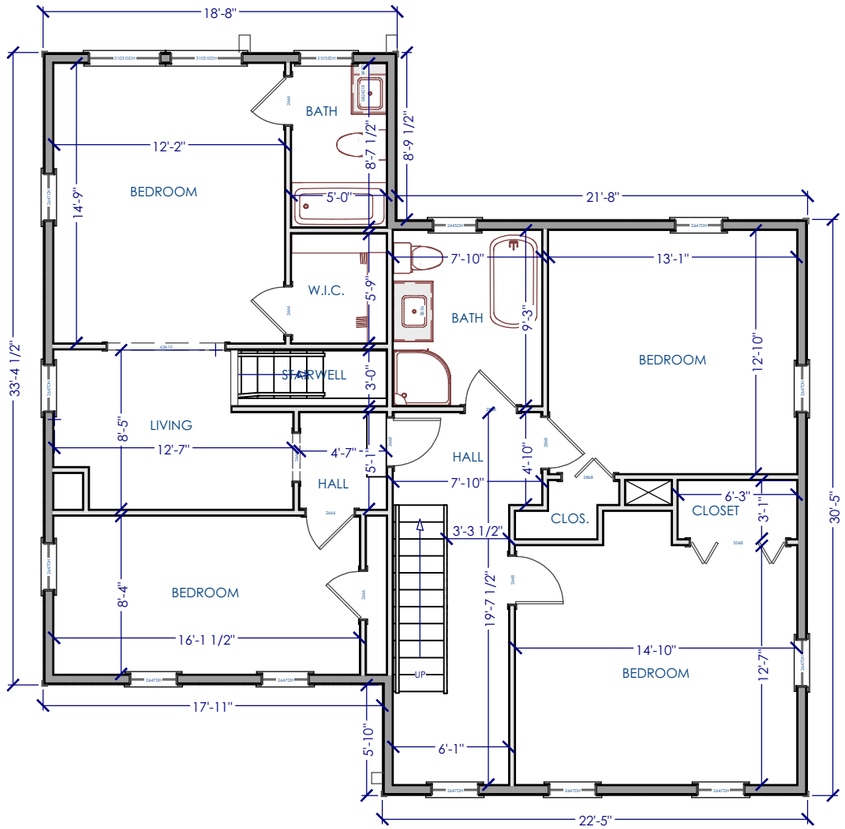
EXISTING FLOOR PLANS
1/8" = 1'-0"

EMILY's Interiors

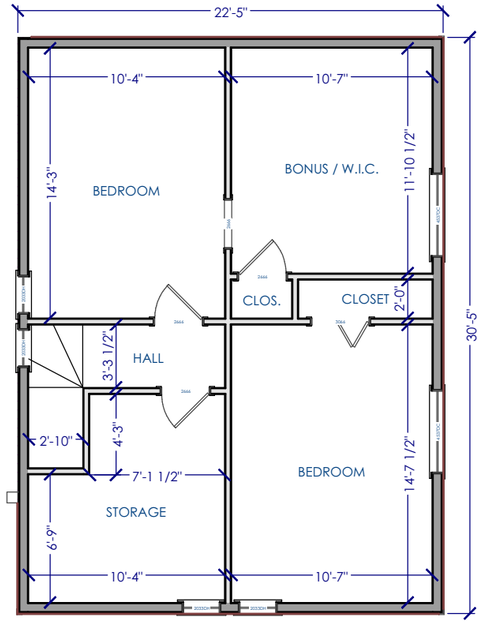
PROJECT DESCRIPTION:	SHEET TITLE:
ABLS / VARGAS-IRWIN	EXISTING FLOOR PLANS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE:	DATE:	
AS NOTED	01.07.25	A-2



SECOND FLOOR



THIRD FLOOR

EXISTING FLOOR PLANS
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

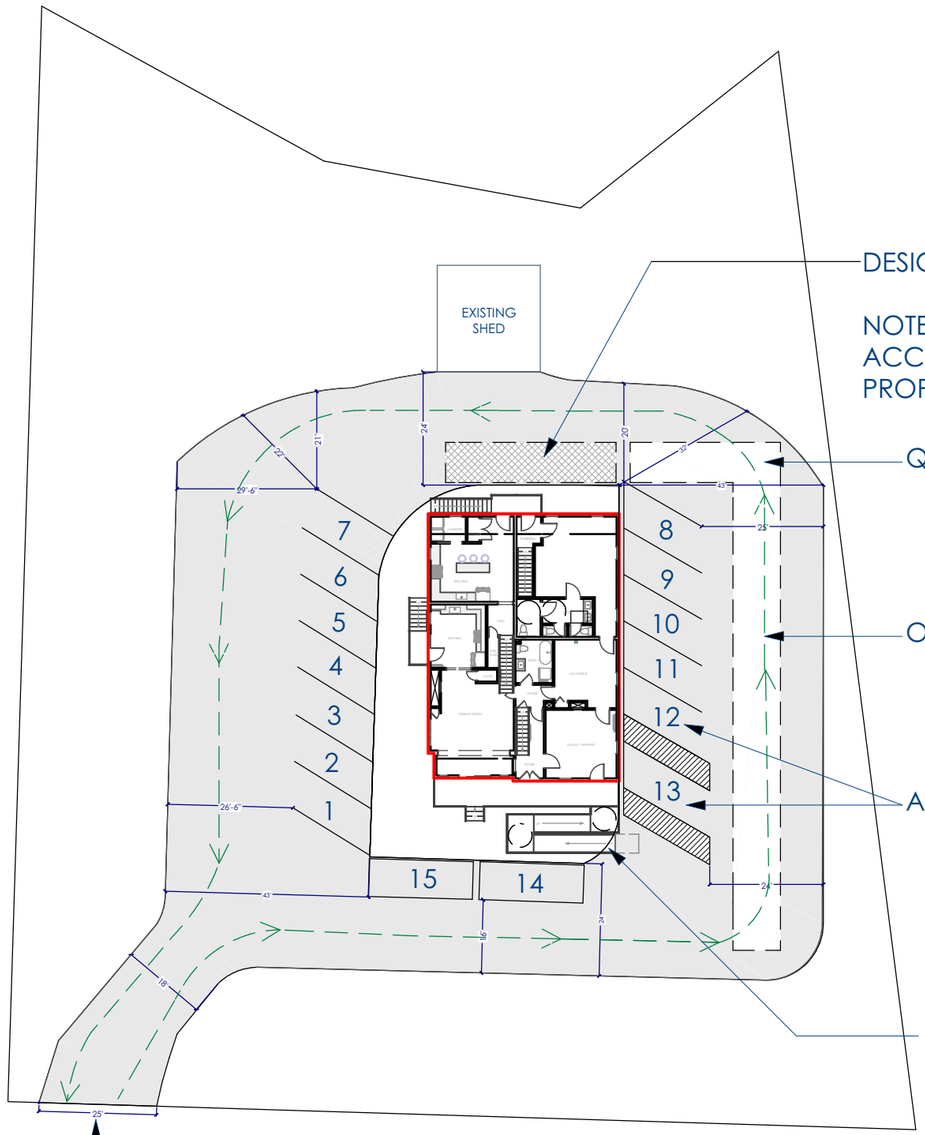
SHEET TITLE: EXISTING FLOOR PLANS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-3



DESIGNATED DROP-OFF / PICK-UP ZONE

NOTE: DROP-OFF/PICK-UP FOR THOSE WHO NEED ADA ACCESSIBLE ACCOMMODATIONS WILL BE PROVIDED AT PROPOSED ADA PARKING SPACES.

QUEUING LANE FOR DROP-OFFS/PICK-UPS

ONE-WAY FLOW OF TRAFFIC

ADA PARKING SPOT & AISLE

NEW ADA CCESSIBLE RAMP

WORCESTER STREET / RTE 9

EXISTING CURB-CUT WIDTH WHERE DRIVEWAY MEETS RTE. 9 IS TO REMAIN

PROPOSED PLOT PLAN
NOT TO SCALE

EMILY'S Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

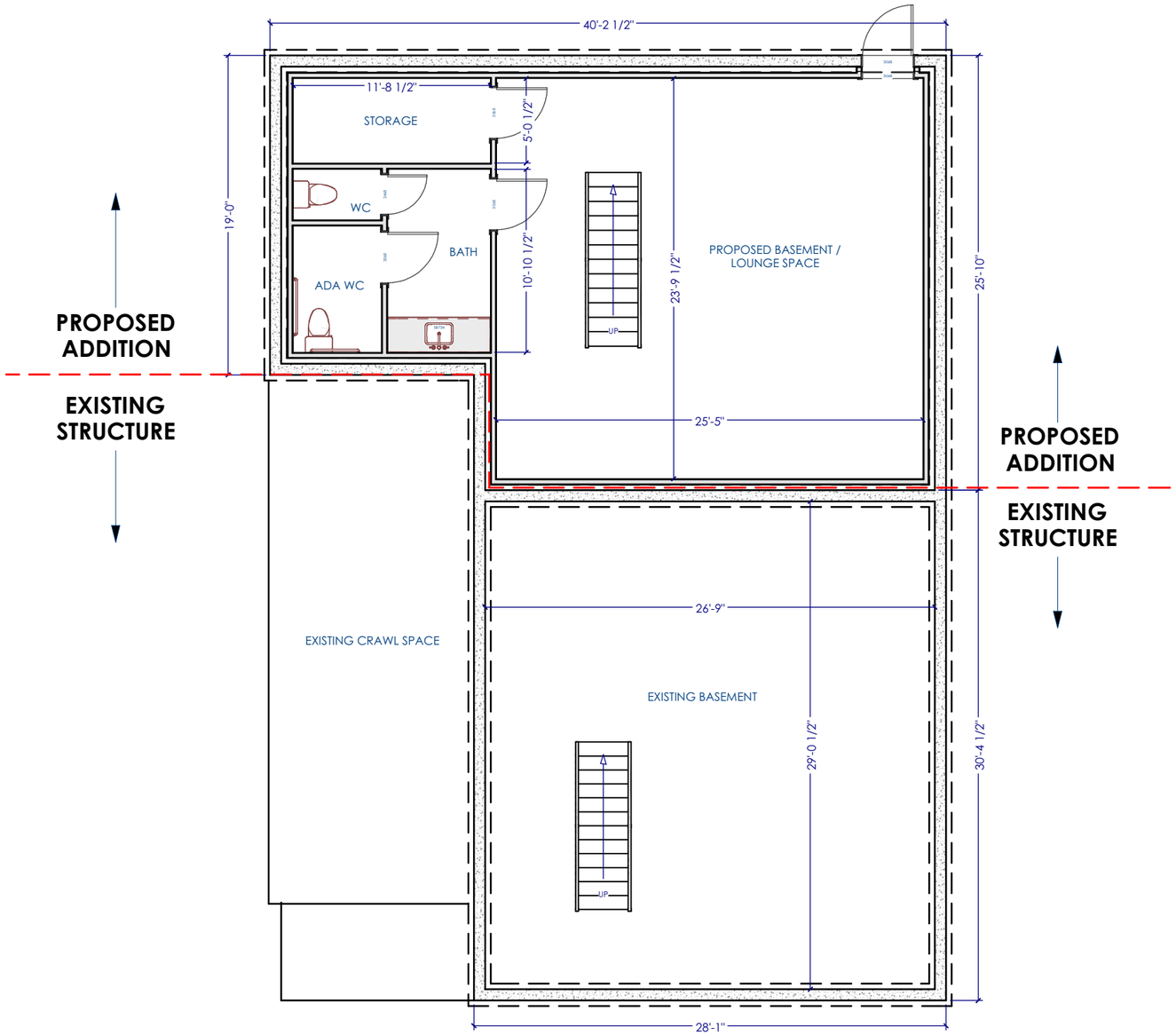
SHEET TITLE: PROPOSED PLOT PLAN

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-4



PROPOSED BASEMENT PLAN
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

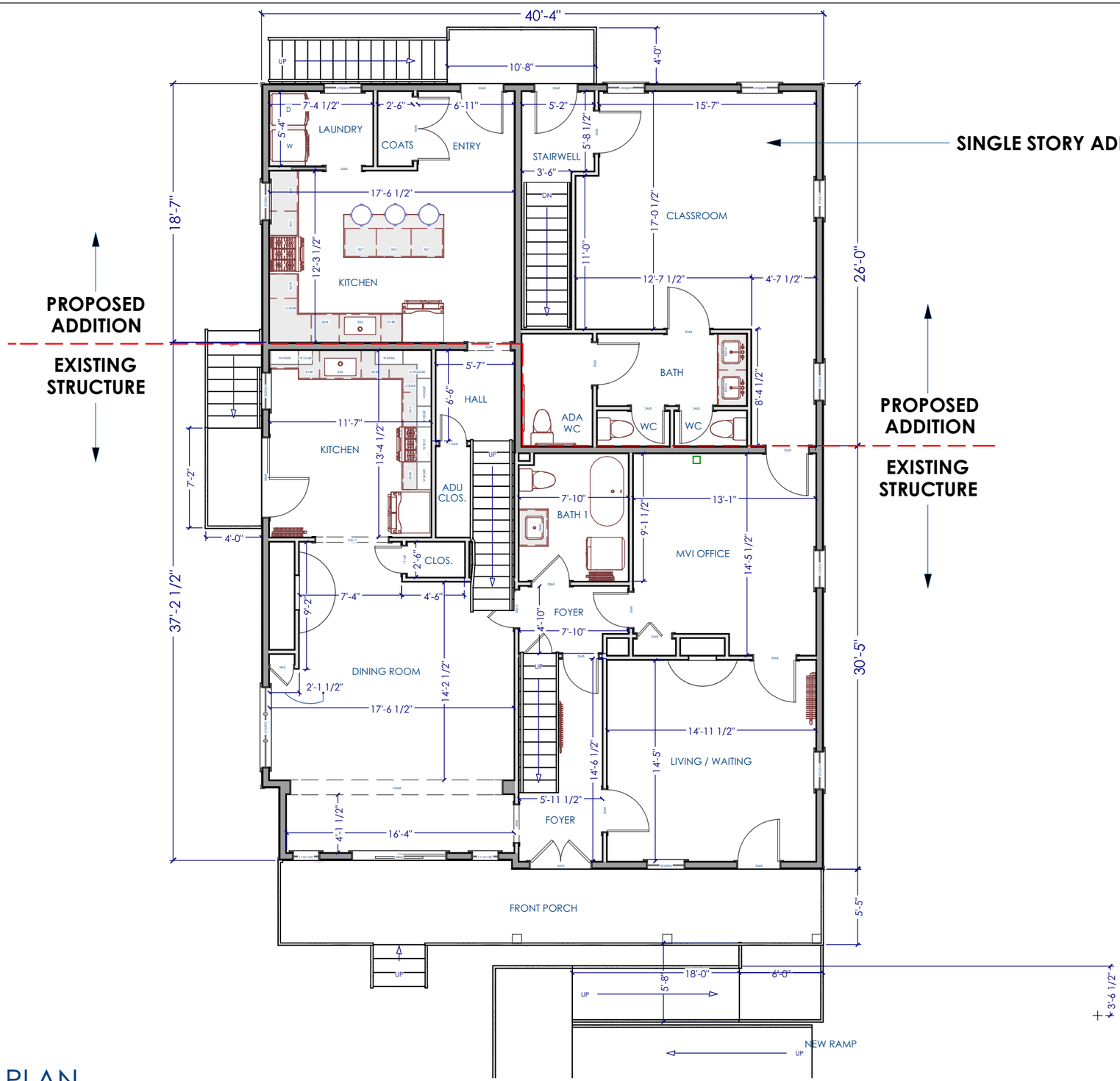
SHEET TITLE: PROPOSED BASEMENT PLAN

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-5



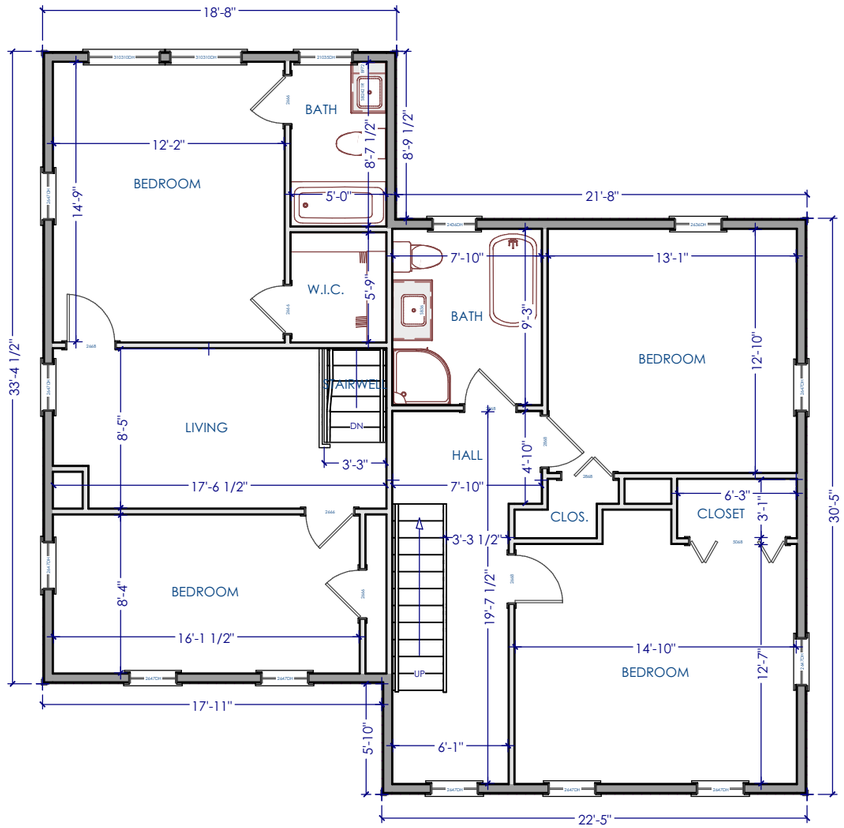
PROPOSED FIRST FLOOR PLAN
1/8" = 1'-0"

EMILY's Interiors

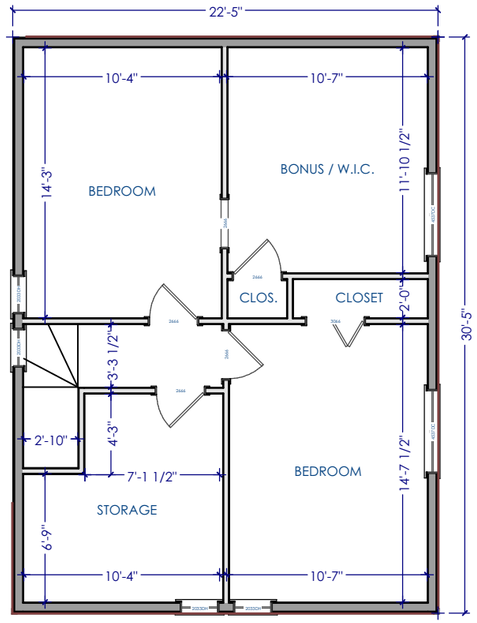
PROJECT DESCRIPTION:	ABLS / VARGAS-IRWIN
SHEET TITLE:	PROPOSED FIRST FLOOR PLAN

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE:	DATE:	
AS NOTED	01.07.25	A-6



SECOND FLOOR



THIRD FLOOR

PROPOSED SECOND & THIRD FLOOR PLANS
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

SHEET TITLE: PROPOSED SECOND & THIRD FLOOR PLAN

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

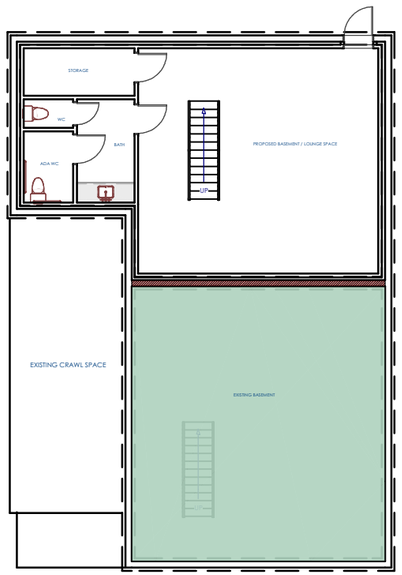
SCALE: AS NOTED

DATE: 01.07.25

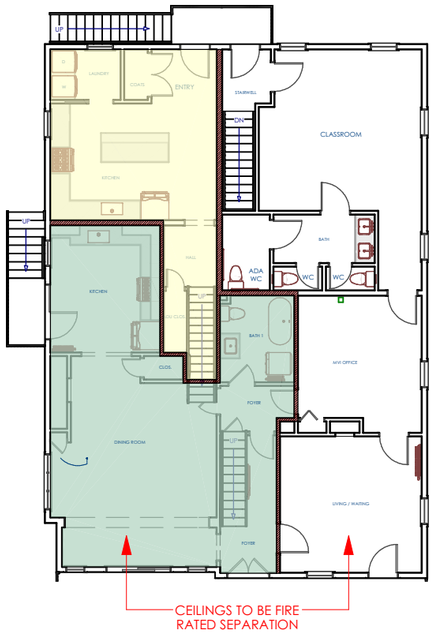
A-7

LEGEND

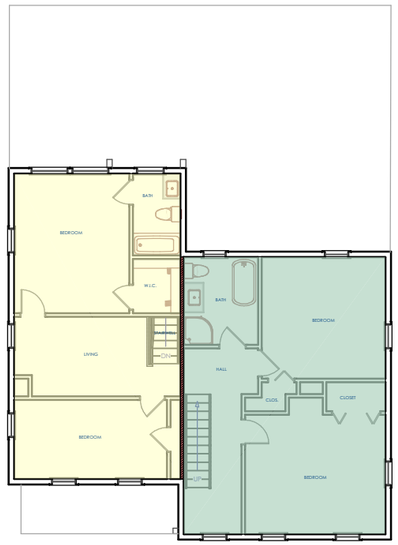
- ABLS FACILITY
- DWELLING UNIT #1
- DWELLING UNIT #2
- FIRE RATED SEPARATION



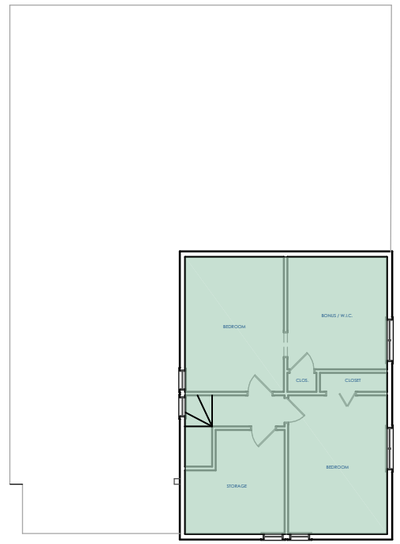
BASMENT



FIRST FLOOR



SECOND FLOOR



THIRD FLOOR

DIAGRAM - DU #1 VS. DU #2 VS. ABLS
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

SHEET TITLE: DIAGRAM: DU #1 VS. DU #2 VS. ABLS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-8

FRONT ELEVATION

RIGHT ELEVATION

EXISTING EXTERIOR ELEVATIONS
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION:
ABLS / VARGAS-IRWIN

SHEET TITLE:
EXISTING EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-9

REAR ELEVATION

LEFT ELEVATION

EXISTING EXTERIOR ELEVATIONS
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION: ABLS / VARGAS-IRWIN

SHEET TITLE: EXISTING EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-10

PROPOSED EXTERIOR ELEVATIONS - FRONT
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION:
ABLS / VARGAS-IRWIN

SHEET TITLE:
PROPOSED EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-11

PROPOSED EXTERIOR ELEVATIONS - RIGHT
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION:
ABLS / VARGAS-IRWIN

SHEET TITLE:
PROPOSED EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-12

PROPOSED EXTERIOR ELEVATIONS - REAR
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION:
ABLS / VARGAS-IRWIN

SHEET TITLE:
PROPOSED EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-13

PROPOSED EXTERIOR ELEVATIONS - LEFT
1/8" = 1'-0"

EMILY's Interiors

PROJECT DESCRIPTION:
ABLS / VARGAS-IRWIN

SHEET TITLE:
PROPOSED EXTERIOR ELEVATIONS

NO.	DESCRIPTION	BY	DATE
1	SCHEMATIC	GEF	01.07.25

SCALE: AS NOTED

DATE: 01.07.25

A-14