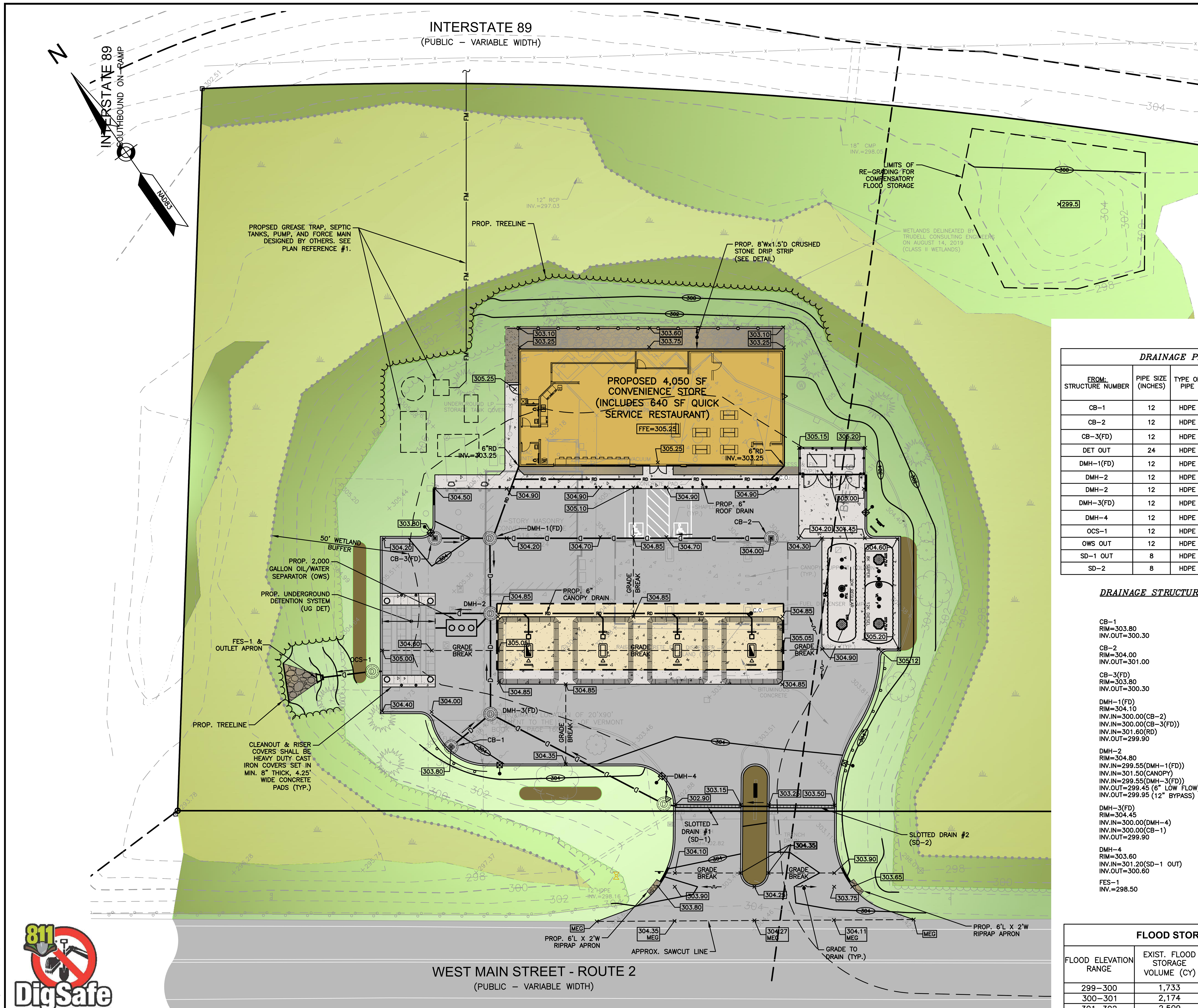

LOCATION MAP

(NOT TO SCALE)

DRAINAGE PIPE SCHEDULE					
FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
CB–1	12	HDPE	19	0.016	DMH–3(FD)
CB–2	12	HDPE	102	0.010	DMH–1(FD)
CB–3(FD)	12	HDPE	20	0.015	DMH–1(FD)
DET OUT	24	HDPE	4	0.000	OCS–1
DMH–1(FD)	12	HDPE	27	0.013	DMH–2
DMH–2	12	HDPE	20	0.047	DET IN–1
DMH–2	12	HDPE	7	0.014	OWS IN
DMH–3(FD)	12	HDPE	36	0.010	DMH–2
DMH–4	12	HDPE	71	0.008	DMH–3(FD)
OCS–1	12	HDPE	20	0.025	FES–1
OWS OUT	12	HDPE	4	0.025	DET IN–2
SD–1 OUT	8	HDPE	4	0.047	DMH–4
SD–2	8	HDPE	10	0.010	SD–1 IN

DRAINAGE STRUCTURES

CB–1
RIM=303.80
INV.OUT=300.30

CB–2
RIM=304.00
INV.OUT=301.00

CB–3(FD)
RIM=303.80
INV.OUT=300.30

DMH–1(FD)
RIM=304.10
INV.IN=300.00(CB–2)
INV.IN=300.00(CB–3(FD))
INV.IN=301.60(RD)
INV.OUT=299.90

DMH–2
RIM=304.80
INV.IN=299.55(DMH–1(FD))
INV.IN=301.50(CANOPY)
INV.IN=299.55(DMH–3(FD))
INV.OUT=299.45 (6" LOW FLOW)
INV.OUT=299.95 (12" BYPASS)

DMH–3(FD)
RIM=304.45
INV.IN=300.00(DMH–4)
INV.IN=300.00(CB–1)
INV.OUT=299.90

DMH–4
RIM=303.60
INV.IN=301.20(SD–1 OUT)
INV.OUT=300.60

FES–1
INV.=298.50

SLOTTED DRAIN #1 (SD–1)
T/GRATE=302.90–303.15
INV.OUT=301.40

SLOTTED DRAIN #2 (SD–2)
T/GRATE=303.25–303.50
INV.OUT=301.75

2,000 GAL OIL/WATER SEPARATOR (OWS)
RIM=304.60±
INV.IN=299.45
INV.OUT=299.10

UNDERGROUND DETENTION SYSTEM (UG DET)
36"ø SOLID (WT) PIPES
4 ROWS + 2 HEADERS
32.00'L x 19.25'W
S=0.000 FT/FT
INV.PIPE=299.00
INV'S.IN=299.00
INV.OUT=299.00
(SEE DETAIL)

OUTLET CONTROL STRUCTURE (OCS–1)
RIM=305.30
INV.IN=299.00
INV.OUT=299.00
(SEE DETAIL)

(FD) DENOTES FIRST DEFENSE FD–4HC HYDRODYNAMIC PARTICLE SEPARATOR OR APPROVED EQUAL.

(WT) DENOTES WATERTIGHT PIPE JOINTS

FLOOD STORAGE SUMMARY			
FLOOD ELEVATION RANGE	EXIST. FLOOD STORAGE VOLUME (CY)	PROP. FLOOD STORAGE VOLUME(CY)	CHANGE IN FLOOD STORAGE VOLUME (CY)
299–300	1,733	1,784	+51
300–301	2,174	2,259	+85
301–302	2,509	2,591	+82
302–303	2,816	2,918	+102
303–304	3,255	3,304	+49
304–305	4,480	4,494	+14
305–306	5,842	5,978	+136

THE ABOVE TABLE SUMMARIZES THE VOLUME COMPUTATIONS FOR THE 100–YEAR FLOOD ELEVATION OF 306.0 AS SHOWN ON THE FLOOD INSURANCE RATE #50007C0292E FOR THE TOWN OF RICHMOND.

NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH–DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL–WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN. THE UNDERGROUND DETENTION SYSTEM SHALL HAVE WATERTIGHT JOINTS MEETING ASTM D3212 SPECIFICATIONS.
2) ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC(SDR–35) AS SHOWN ON PLAN. MINIMUM SLOPE = 1%.
3) ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
4) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
5) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LOCAL AUTHORITIES AND THE DEVELOPER PRIOR TO INSTALLATION.
6) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG–SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.
9) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION IF THE DISTURBANCE EXCEEDS ONE ACRE (ACTUAL DISTURBANCE = 45,000 SF). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
10) ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH "THE ELIMINATOR" OIL HOODS OR APPROVED EQUAL.
11) CONTRACTOR TO REFER TO THE OPERATION & MAINTENANCE (O&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS FOR SITE MAINTENANCE & INSPECTIONS DURING AND AFTER CONSTRUCTION.
12) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.
13) SEE EROSION & SEDIMENT CONTROL PLAN FOR DETAILED EROSION CONTROL MEASURES.
14) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO VTrans AND RICHMOND DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT–OF–WAY.
15) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, RAMPS CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND HC PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
16) THE TOWN OF RICHMOND ZONING ORDINANCE REQUIRES THE BUILDING TO BE ONE FOOT ABOVE THE BASE FLOOD ELEVATION OR BE FLOOD PROOFED TO AN ELEVATION 2 FEET ABOVE THE BASE FLOOD ELEVATION. THE BASE FLOOD ELEVATION AT THIS LOCATION IS 306.0. THE BUILDING SHALL BE FLOOD PROOFED TO ELEVATION 308.0.
17) THE INTENT OF THIS PLAN IS TO COMPLY WITH RICHMOND ZONING ORDINANCE SECTION 6.8 FLOOD HAZARD OVERLAY DISTRICT, SPECIFICALLY SECTION 6.8.16(S) "FILL, CAN BE MOVED FROM ONE PLACE TO ANOTHER WITHIN THE SPECIAL FLOOD HAZARD AREA...IF THERE IS NO NET LOSS IN THE FLOODWATER HOLDING CAPACITY OF THE LAND." REFER TO THE FLOOD STORAGE SUMMARY TABLE.

LEGEND

VCC – VERTICAL CONCRETE CURB
DSLY – DOUBLE SOLID LINE YELLOW
SSLW – SINGLE SOLID LINE WHITE
GAS LINE
WATER LINE
UTILITY POLE
GUY WIRE
ELECTRIC METER
MONITORING WELL
LIGHT POLE
OVERHEAD WIRE
PULL BOX
GAS VALVE
CATCH BASIN
WELL
ROOF DRAIN
CLEANOUT
VENT
SPOT ELEVATION
CONTOUR ELEVATION
METAL GUARDRAIL
TREELINE
TREE
SIGN
BOLLARD
WETLAND LINE
DITCH LINE
EASEMENT LINE
PROPERTY LINE
ABUTTER PROPERTY LINE
BUILDING SETBACK
C.O. – PROP. CLEANOUT
CB–1 – PROP. CATCH BASIN
DMH–1 – PROP. DRAIN MANHOLE
SMH–1 – PROP. SEWER MANHOLE
MEG – MEET EXISTING GRADE
331.25 – PROP. SPOT ELEVATION
PROP. CONTOUR ELEVATION
PROP. SILT FENCE
PROP. GATE VALVE

0 20 50 100
SCALE: 1" = 20'

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PROPOSED REDEVELOPMENT ASSESSORS MAP 3 LOT WM1436
1436 WEST MAIN STREET RICHMOND, VERMONT

STATE OF VERMONT – NO. 135316 – CIVIL – LICENSED PROFESSIONAL ENGINEER

REVISIONS		
NO.	REVISION	DATE

JUNE 22, 2022

DRAWN/DESIGN BY	CHECKED BY
SJB	HS

GRADING & DRAINAGE PLAN

SCALE: 1"=20'

NEX-465419