

LOCATION PLAN
SCALE: 1" = 2,000'

ZONING INFORMATION

PARCEL ID: W0065
 ZONED: GATEWAY RESIDENTIAL/COMMERCIAL DISTRICT
 DIMENSIONAL REQUIREMENTS:

MINIMUM LOT AREA:	10,000 SF
LOT AREA:	4.10 AC
MINIMUM LOT FRONTAGE:	75 FT OR ACCESS TO PUBLIC/PRIVATE ROAD W/ DRB APPROVAL
MAXIMUM ALLOWED COVERAGE:	60%
PROPOSED COVERAGE:	1.40 AC EXISTING 0.74 AC PROPOSED 2.14 AC TOTAL (52%)

SETBACKS: REQUIRED MIN. PROVIDED

FRONT:	15'	53.8'
SIDE:	10'	11.0'
REAR:	10'	12.3'

WAREHOUSE UNIT W/ INDOOR STORAGE COUNT

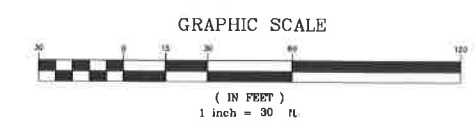
10' X 25':	21
10' X 20':	12
10' X 15':	20
10' X 10':	24
TOTAL:	77

LEGEND

	PROPERTY BOUNDARY
	ABUTTING PROPERTY BOUNDARY
	EXISTING EASEMENT
	BUILDING SETBACK
	EXISTING MAJOR CONTOUR (U.S.G.S. DATUM)
	EXISTING MINOR CONTOUR (U.S.G.S. DATUM)
	PROPOSED CONTOUR
	EXISTING EDGE OF GRAVEL
	APPROXIMATE CLASS II WETLAND
	APPROXIMATE CLASS II WETLAND BUFFER
	EXISTING EDGE OF STREAM BANK
	EXISTING RIPARIAN BUFFER
	USDA MAPPED SOILS AND SOIL TYPE

NOTES:
 1. THIS PLAN IS NOT INTENDED TO CONVEY PROPERTY BOUNDARIES.

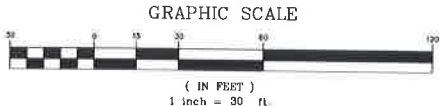
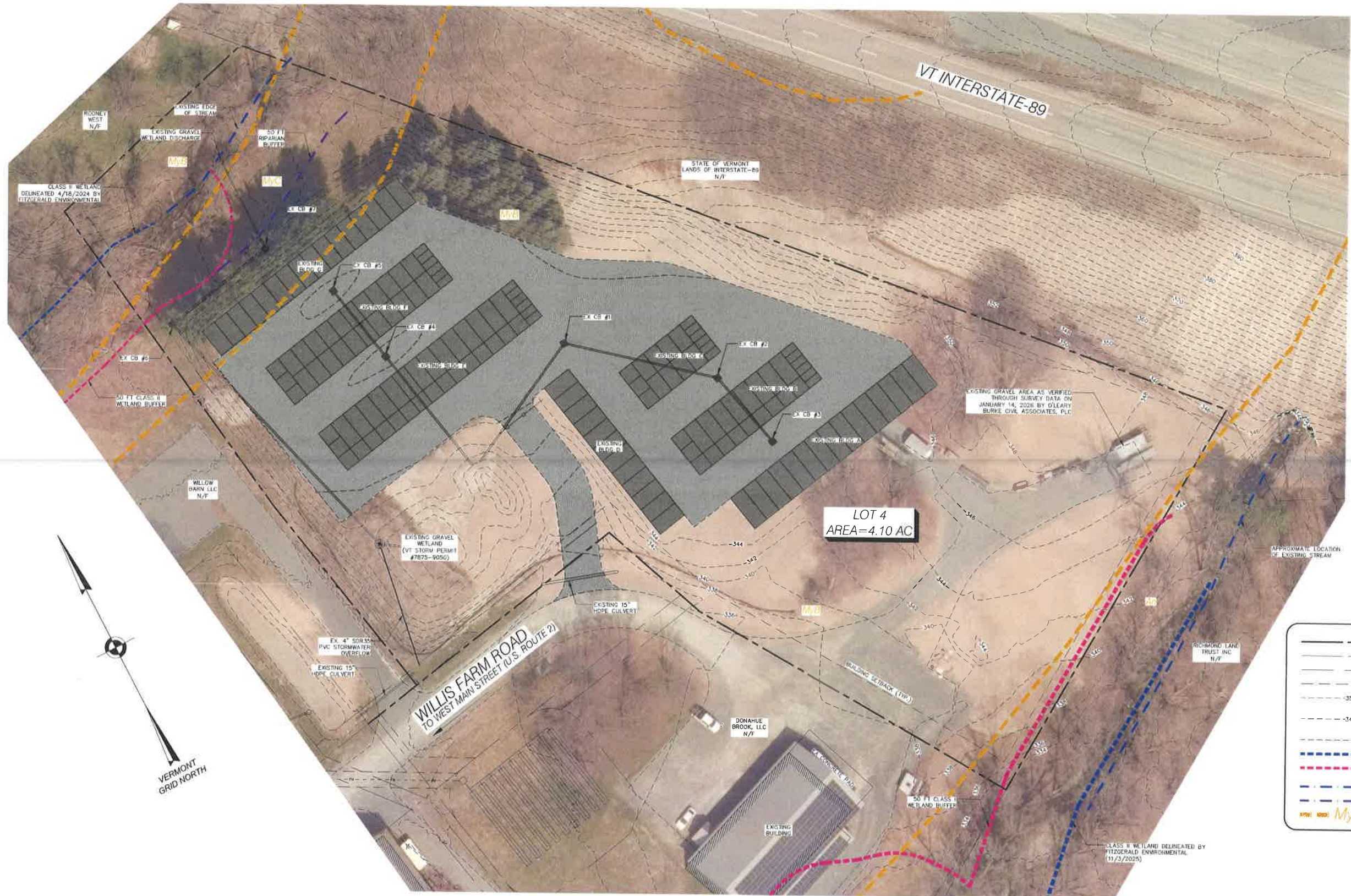
THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



OWNER/APPLICANT
 ROBERT & JOY REAP
 PO BOX 442
 RICHMOND, VT 05477



DATE: 03/20/24	REVISION: 1	BY: JFW
SURVEY: ORCA	RECORD DRAWING	DATE: 03/20/24
DESIGN: JFW	PRELIMINARY	FILE: 2014_14
DRAWN: JFW	SKETCH/CONCEPT	PLAN SHEET #
CHECKED: SMC		1
SCALE: 1" = 30'	LOT 4 WILLIS FARM ROAD - PHASE 2 WILLIS FARM ROAD RICHMOND, VT LOT 4 OVERALL SITE PLAN	



LEGEND

	PROPERTY BOUNDARY
	ABUTTING PROPERTY BOUNDARY
	EXISTING EASEMENT
	BUILDING SETBACK
	EXISTING MAJOR CONTOUR (U.S.G.S. DATUM)
	EXISTING MINOR CONTOUR (U.S.G.S. DATUM)
	EXISTING EDGE OF GRAVEL
	APPROXIMATE CLASS II WETLAND
	APPROXIMATE CLASS II WETLAND BUFFER
	EXISTING EDGE OF STREAM BANK
	EXISTING RIPARIAN BUFFER
	USDA MAPPED SOILS AND SOIL TYPE

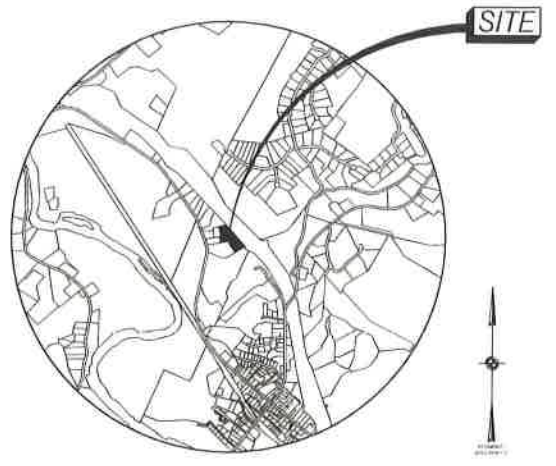
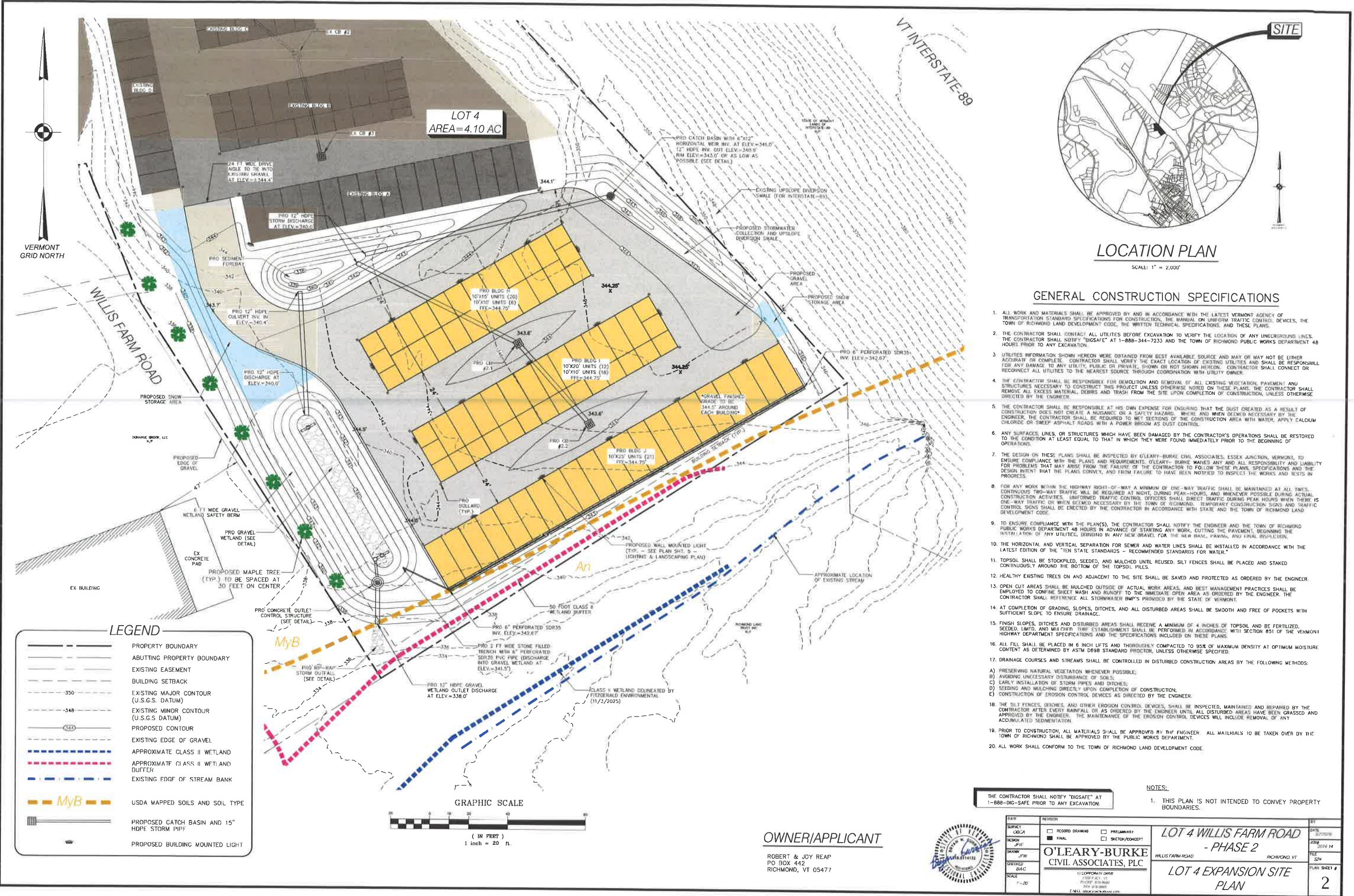
NOTES:

1. THIS PLAN IS NOT INTENDED TO CONVEY PROPERTY BOUNDARIES.

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



DATE	REVISION	BY
SUBJECT: ORCA	<input type="checkbox"/> RECORD DRAWING <input type="checkbox"/> PRELIMINARY	DATE: 08/08/24
DESIGN: JFW	<input checked="" type="checkbox"/> FINAL <input type="checkbox"/> SKETCH/CONCEPT	FILE: 2414
DRAWN: JFW	O'LEARY-BURKE CIVIL ASSOCIATES, P.L.C.	PLAN SHEET #
CHECKED: BAC	WILLIS FARM ROAD - PHASE 2	EX
SCALE: 1"=30'	LOT 4 EXISTING CONDITIONS PLAN	

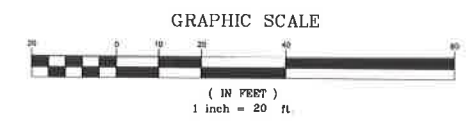


GENERAL CONSTRUCTION SPECIFICATIONS

1. ALL WORK AND MATERIALS SHALL BE APPROVED BY AND IN ACCORDANCE WITH THE LATEST VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE TOWN OF RICHMOND LAND DEVELOPMENT CODE, THE WRITTEN TECHNICAL SPECIFICATIONS, AND THESE PLANS.
2. THE CONTRACTOR SHALL CONTACT ALL UTILITIES BEFORE EXCAVATION TO VERIFY THE LOCATION OF ANY UNDERGROUND LINES. THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-344-7233 AND THE TOWN OF RICHMOND PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO ANY EXCAVATION.
3. UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH UTILITY OWNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING VEGETATION, PAVEMENT AND STRUCTURES NECESSARY TO CONSTRUCT THIS PROJECT UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL, DEBRIS AND TRASH FROM THE SITE UPON COMPLETION OF CONSTRUCTION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ENDURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR A SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER, APPLY CALCIUM CHLORIDE OR SWEEP ASPHALT ROADS WITH A POWER BROOM AS DUST CONTROL.
6. ANY SURFACES, LINES, OR STRUCTURES WHICH HAVE BEEN DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THE CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS.
7. THE DESIGN ON THESE PLANS SHALL BE INSPECTED BY O'LEARY-BURKE CIVIL ASSOCIATES, ESSEX JUNCTION, VERMONT, TO ENSURE COMPLIANCE WITH THE PLANS AND REQUIREMENTS. O'LEARY-BURKE WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT MAY ARISE FROM THE FAILURE OF THE CONTRACTOR TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THAT THE PLANS CONVEY, AND FROM FAILURE TO HAVE BEEN NOTIFIED TO INSPECT THE WORKS AND TESTS IN PROGRESS.
8. FOR ANY WORK WITHIN THE HIGHWAY RIGHT-OF-WAY A MINIMUM OF ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTINUOUS TWO-WAY TRAFFIC WILL BE REQUIRED AT NIGHT, DURING PEAK HOURS, AND WHENEVER POSSIBLE DURING ACTUAL CONSTRUCTION ACTIVITIES. UNIFORMED TRAFFIC CONTROL OFFICERS SHALL DIRECT TRAFFIC DURING PEAK HOURS WHEN THERE IS ONE-WAY TRAFFIC OR WHEN DEEMED NECESSARY BY THE TOWN OF RICHMOND. TEMPORARY CONSTRUCTION SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE ERECTED BY THE CONTRACTOR IN ACCORDANCE WITH STATE AND THE TOWN OF RICHMOND LAND DEVELOPMENT CODE.
9. TO ENSURE COMPLIANCE WITH THE PLAN(S), THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE TOWN OF RICHMOND PUBLIC WORKS DEPARTMENT 48 HOURS IN ADVANCE OF STARTING ANY WORK, CUTTING THE PAVEMENT, BEGINNING THE INSTALLATION OF ANY UTILITY, OR BIDDING IN ANY NEW GRAVEL FOR THE NEW BASE, FAWALL, AND FINAL ASPHALT/CONCRETE.
10. THE HORIZONTAL AND VERTICAL SEPARATION FOR SEWER AND WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE "TEN STATE STANDARDS - RECOMMENDED STANDARDS FOR WATER."
11. TOPSOIL SHALL BE STOCKPILED, SEEDED, AND MULCHED UNTIL REUSED. SILT FENCES SHALL BE PLACED AND STAKED CONTINUOUSLY AROUND THE BOTTOM OF THE TOPSOIL PILES.
12. HEALTHY EXISTING TREES ON AND ADJACENT TO THE SITE SHALL BE SAVED AND PROTECTED AS ORDERED BY THE ENGINEER.
13. OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER. THE CONTRACTOR SHALL REFERENCE ALL STORMWATER BMP'S PROVIDED BY THE STATE OF VERMONT.
14. AT COMPLETION OF GRADING, SLOPES, DITCHES, AND ALL DISTURBED AREAS SHALL BE SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
15. FINISH SLOPES, DITCHES AND DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL AND BE FERTILIZED, SEEDED, LIMED, AND MULCHED. TREE ESTABLISHMENT SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 851 OF THE VERMONT HIGHWAY DEPARTMENT SPECIFICATIONS AND THE SPECIFICATIONS INCLUDED ON THESE PLANS.
16. ALL FILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR, UNLESS OTHERWISE SPECIFIED.
17. DRAINAGE COURSES AND STREAMS SHALL BE CONTROLLED IN DISTURBED CONSTRUCTION AREAS BY THE FOLLOWING METHODS:
 - A) PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE;
 - B) AVOIDING UNNECESSARY DISTURBANCE OF SOILS;
 - C) EARLY INSTALLATION OF STORM PIPES AND DITCHES;
 - D) SEEDING AND MULCHING DIRECTLY UPON COMPLETION OF CONSTRUCTION;
 - E) CONSTRUCTION OF EROSION CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
18. THE SILT FENCES, DITCHES, AND OTHER EROSION CONTROL DEVICES, SHALL BE INSPECTED, MAINTAINED AND REPAIRED BY THE CONTRACTOR AFTER EVERY RAINFALL OR AS ORDERED BY THE ENGINEER UNTIL ALL DISTURBED AREAS HAVE BEEN GRASSED AND APPROVED BY THE ENGINEER. THE MAINTENANCE OF THE EROSION CONTROL DEVICES WILL INCLUDE REMOVAL OF ANY ACCUMULATED SEDIMENTATION.
19. PRIOR TO CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER. ALL MATERIALS TO BE TAKEN OVER BY THE TOWN OF RICHMOND SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT.
20. ALL WORK SHALL CONFORM TO THE TOWN OF RICHMOND LAND DEVELOPMENT CODE.

LEGEND

- PROPERTY BOUNDARY
- ABUTTING PROPERTY BOUNDARY
- EXISTING EASEMENT
- BUILDING SETBACK
- EXISTING MAJOR CONTOUR (U.S.G.S DATUM)
- EXISTING MINOR CONTOUR (U.S.G.S DATUM)
- PROPOSED CONTOUR
- EXISTING EDGE OF GRAVEL
- APPROXIMATE CLASS II WETLAND
- APPROXIMATE CLASS II WETLAND DUFFER
- EXISTING EDGE OF STREAM BANK
- USDA MAPPED SOILS AND SOIL TYPE
- PROPOSED CATCH BASIN AND 15" HDPE STORM PIPE
- PROPOSED BUILDING MOUNTED LIGHT



OWNER/APPLICANT

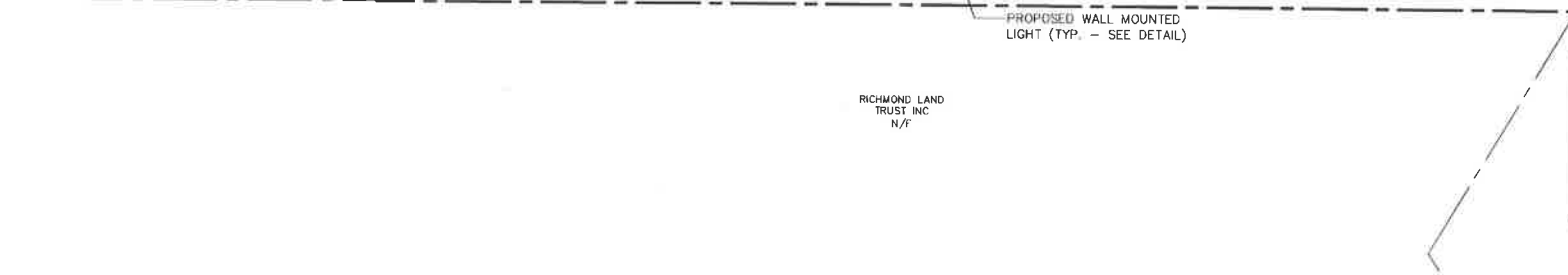
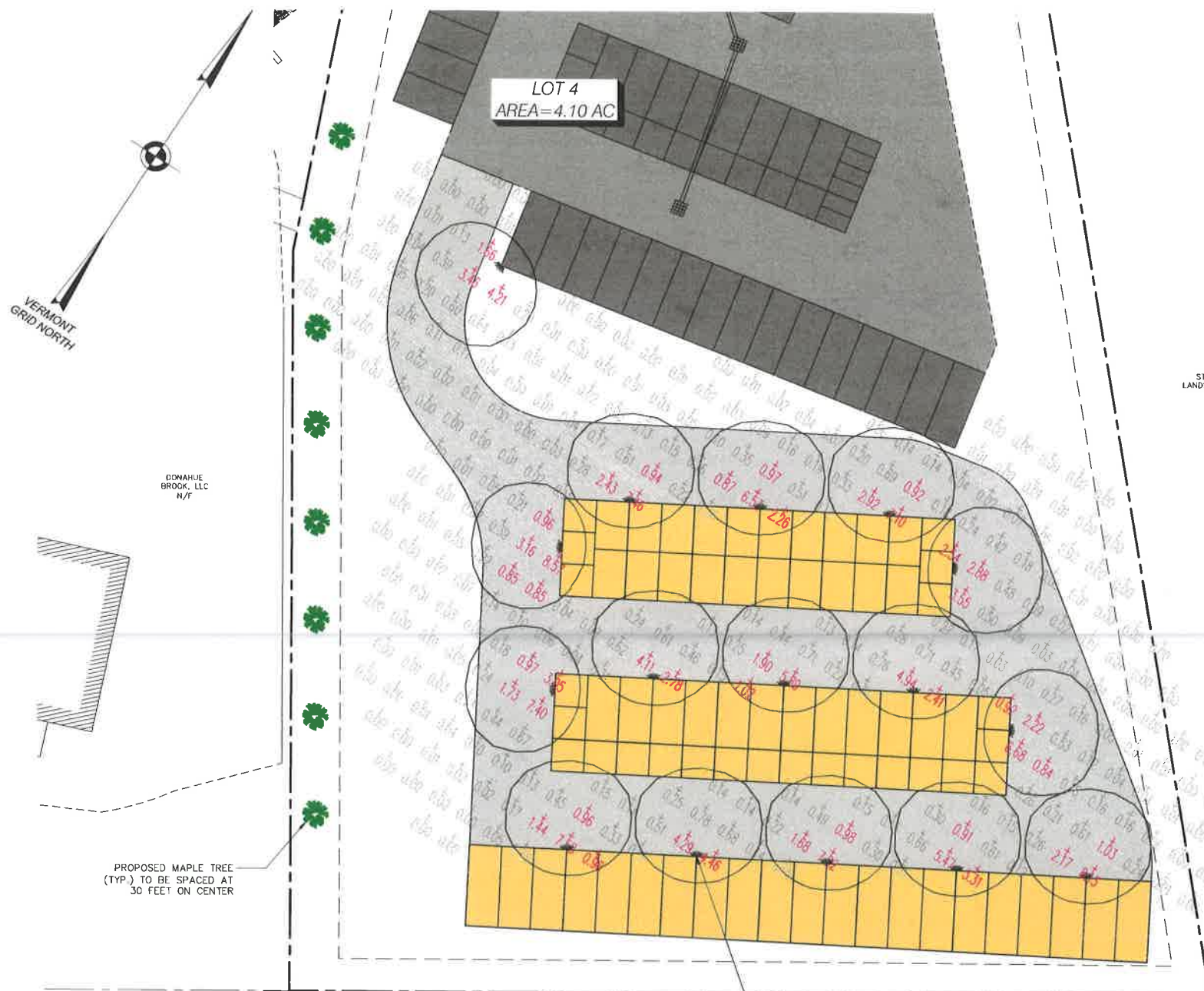
ROBERT & JOY REAP
PO BOX 442
RICHMOND, VT 05477



DATE: 08/24	REVISION: RECORD DRAWING	BY: JTB
DESIGN: JFW	SCALE: 1"=20'	DATE: 08/24/14
DRAWN: JFW	PROJECT: LOT 4	FILE: S24
CHECKED: BAC	SCALE: 1"=20'	PLAN SHEET #
SCALE: 1"=20'	PROJECT: LOT 4	2

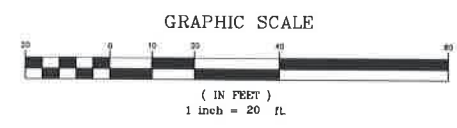
NOTES:
1. THIS PLAN IS NOT INTENDED TO CONVEY PROPERTY BOUNDARIES.

LOT 4 WILLIS FARM ROAD - PHASE 2
WILLIS FARM ROAD RICHMOND, VT
LOT 4 EXPANSION SITE PLAN



LEGEND

---	PROPERTY BOUNDARY
---	ABUTTING PROPERTY BOUNDARY
---	BUILDING SETBACK
---	EXISTING EDGE OF GRAVEL
●	PROPOSED WALL MOUNTED LIGHT



STATE OF VERMONT
LANDS OF INTERSTATE-89
N/F

RICHMOND LAND
TRUST INC
N/F

WPLED13N RAB WPLED13N RAB

Project: []
Team: []
Prepared By: []
Date: []

Client: []
Type: []
Scale: []
Status: []

Technical Specifications (continued)

Materials

Performance

Notes

LANDSCAPING SPECIFICATIONS

ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS. ANY WORK PERFORMED AFTER NOVEMBER 1 OF EACH YEAR SHALL BE STABILIZED WITH MULCH OR NETTING SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS IN THE SPRING. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND BE SEEDED, FERTILIZED, LIMED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:

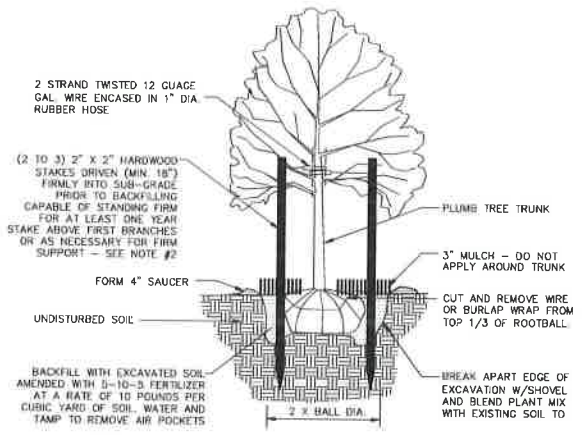
- SEED MIXTURE IN ALL AREAS SHALL BE URBAN MIX CONFORMING TO THE TABLE SHOWN ON THE PLANS FOR SEEDING BETWEEN SEPTEMBER 1 AND NOVEMBER 1, WINTER RYE SHALL BE USED AT AN APPLICATION RATE OF 100 POUNDS PER ACRE.
- FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-2-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE, AND 100 POUNDS OF POTASH PER ACRE.
- LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE OR AS DIRECTED.
- WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIME, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AS ORDERED BY THE ENGINEER.

URBAN MIX GRASS SEED

% BY WEIGHT	LB. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREeping RED FESCUE
31.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120 #	LIVE SEED PER ACRE

TREE PLANTING SCHEDULE

SYMBOL	QUANTITY	COMMON NAME	SIZE	COST
●	8	MAPLE	2-1/2" CALIPER	\$600 EACH / \$4,800
TOTAL	8			\$4,800



- NOTE:**
- PLANT TREE SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.
 - STAKING AS REQUIRED ONLY IN SITUATIONS WHERE TREES WILL BE SUBJECTED TO WINDY CONDITIONS AS DETERMINED BY THE PROJECT LANDSCAPE ARCHITECT.
 - TREES SHALL BE GUARANTEED FOR A PERIOD OF THREE YEARS AFTER PLANTING.
 - EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING AND SURVEYORS TAPE PRIOR TO PLANTING TO PREVENT GRIDLING.

TREE PLANTING DETAIL

LIGHTING CALCULATIONS

NO.	TYPE	WATTAGE	FOOT COUNCILS	FOOT COUNCILS	FOOT COUNCILS	FOOT COUNCILS	FOOT COUNCILS	FOOT COUNCILS	FOOT COUNCILS
1	WALL MOUNTED LIGHT	100	100	100	100	100	100	100	100

NOTE: LIGHTING VALUES SHOWN IN **BLACK** ILLUSTRATE THE LIGHTING COVERAGE, WHILE THE LIGHTING VALUES SHOWN IN **RED** HAVE BEEN USED TO PERFORM THE LIGHTING CALCULATIONS

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



DATE: 10/14/14	REVISION: []	BY: []
DESIGN: J-W	RECORD DRAWING: []	DATE: 10/14/14
DRAWN: J-W	PRELIMINARY: []	SCALE: 1"=20'
CHECKED: BAC	SKETCH/CONCEPT: []	
SCALE: 1"=20'		

O'LEARY-BURKE CIVIL ASSOCIATES, P.C.

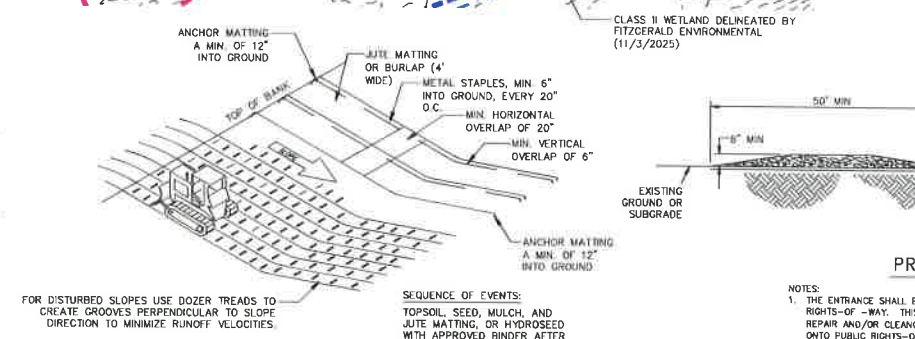
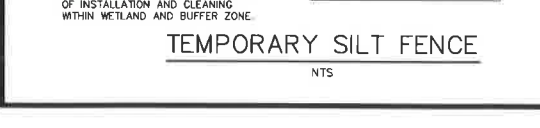
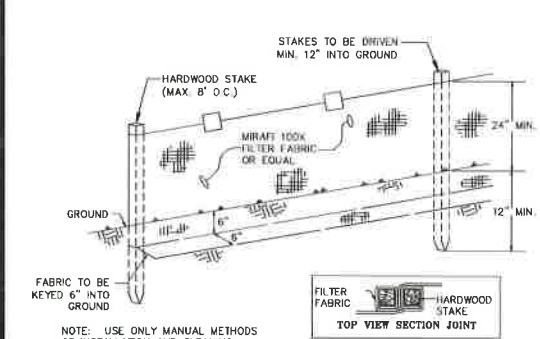
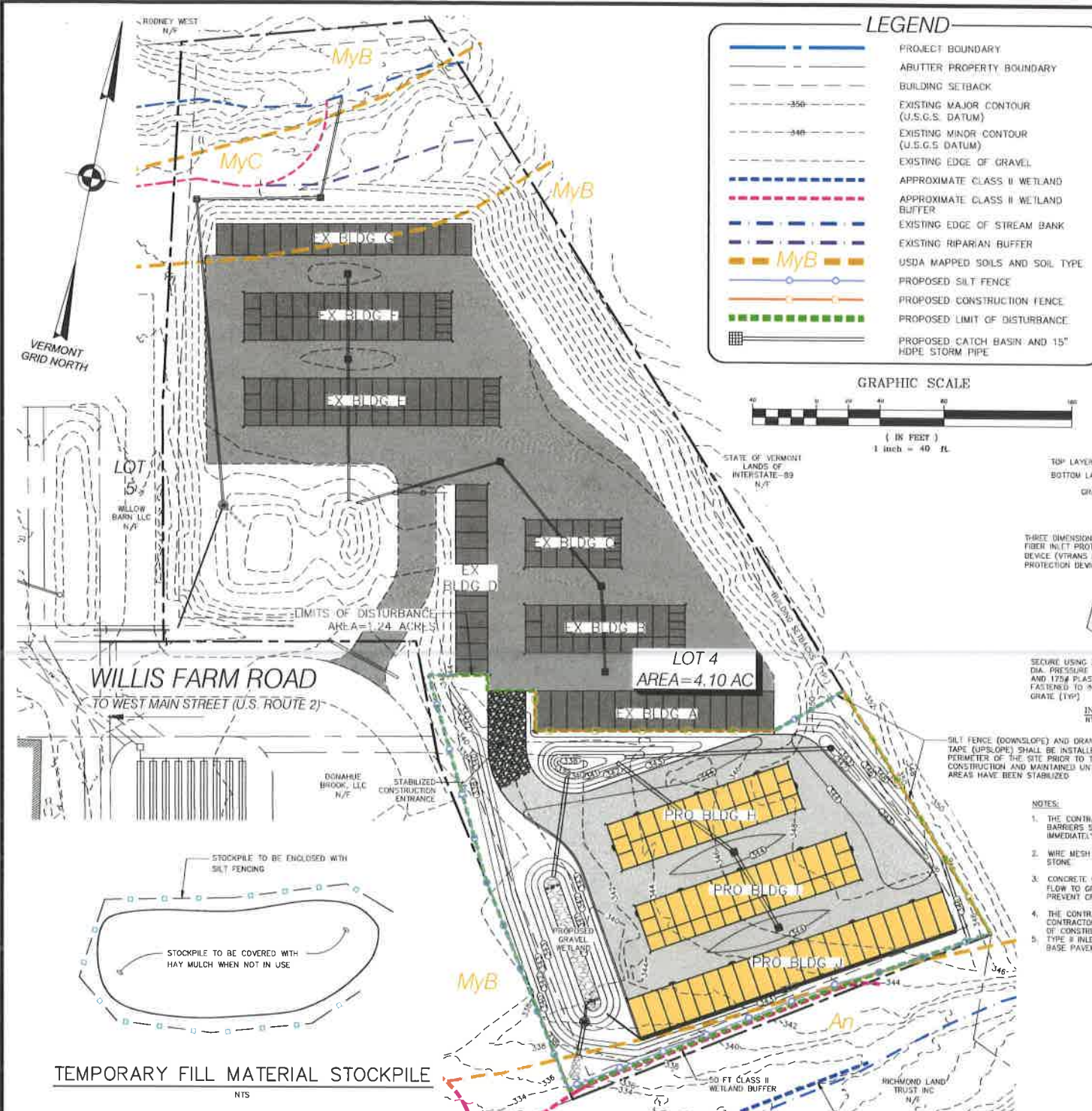
10 CORPORATE DRIVE
BURLINGTON, VT 05401
PHONE: 802-249-8888
WWW.OLEARYBURKE.COM

LOT 4 WILLIS FARM ROAD - PHASE 2

WILLIS FARM ROAD RICHMOND, VT

LIGHTING AND LANDSCAPING PLAN

PLAN SHEET # **3**



LEGEND

- PROJECT BOUNDARY
- ABUTTER PROPERTY BOUNDARY
- BUILDING SETBACK
- EXISTING MAJOR CONTOUR (U.S.G.S. DATUM)
- EXISTING MINOR CONTOUR (U.S.G.S. DATUM)
- EXISTING EDGE OF GRAVEL
- APPROXIMATE CLASS II WETLAND
- APPROXIMATE CLASS II WETLAND BUFFER
- EXISTING EDGE OF STREAM BANK
- EXISTING RIPARIAN BUFFER
- USDA MAPPED SOILS AND SOIL TYPE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CATCH BASIN AND 15' HDPE STORM PIPE

MULCHING SPECIFICATIONS

DISTURBED AREAS ARE TO BE MULCHED WITHIN A WEEK OF DISTURBANCE. HAY MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AT A RATE THAT IS SUFFICIENT TO PROVIDE ADEQUATE COVERAGE.

WITHIN 48 HOURS OF FINAL GRADING, THE EXPOSED SOIL MUST BE SEEDED AND MULCHED.

URBAN MIX GRASS SEED		
X BY WEIGHT	LIBS. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREeping RED FESCUE
31.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120	# LIVE SEED PER ACRE

- ### EROSION CONTROL SPECIFICATIONS
- SEE OTHER DRAWINGS OF THESE PLANS FOR ADDITIONAL STORMWATER AND EROSION CONTROL SPECIFICATIONS AND DETAILS.
 - THE ROADWAY AND YARD FINISH GRADE SLOPES SHALL NOT BE STEEPER THAN 3 ON 1. THE FINISHED GRADE SLOPES SHALL BE IMMEDIATELY GRADED AND MULCHED.
 - ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS OUTSIDE OF THE ROADWAY SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 14 DAYS OF INITIAL DISTURBANCE.
 - THE EROSION CONTROL METHODS USED DURING CONSTRUCTION OF THE DEVELOPMENT SHALL PROCEED IN THE FOLLOWING SEQUENCE:
 - THE CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCES, AND OTHER EROSION CONTROL MEASURES, IF REQUIRED, AS ORDERED BY THE ENGINEER. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AFTER EVERY RAINFALL UNTIL THE NEW IMPROVEMENTS ARE PAVED AND ALL DISTURBED AREAS HAVE BEEN RECLAIMED. THE REPAIR OF THE EROSION CONTROL MEASURES WILL INCLUDE REMOVING ANY SEDIMENTATION. THE SEDIMENT MAY BE PLACED AS FILL IN THE LOW AREAS, IF APPROVED BY THE ENGINEER.
 - THE TOPSOIL SHALL BE REMOVED FROM THE AREAS TO BE GRADED AND STOCKPILED. A SILT FENCE SHALL BE PLACED CONTINUOUSLY AROUND THE BOTTOM OF THE PILE.
 - IN AREAS NEAR THE NEW CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE TRUNKS OF TREES TO BE SAVED WITH WOODEN SNOW FENCING ALONG THE DRIPLINE TO PROTECT FROM INJURY.
 - THE SITE GRADING AND BUILDING/UTILITY INFRASTRUCTURE SHALL BE CONSTRUCTED. THE CONTRACTOR WILL INSTALL INLET PROTECTION AROUND THE CATCH BASINS UNTIL THE ROADWAY HAS BEEN PAVED AND GRASS HAS BEEN ESTABLISHED ON THE SLOPES.
 - THE CONTRACTOR WILL TOPSOIL, SEED, AND MULCH THE DISTURBED AREAS AS SOON AS POSSIBLE FOLLOWING COMPLETION OF ADJACENT CONSTRUCTION.
 - OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND SILT FENCE SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER.
 - DURING CONSTRUCTION, THE PROJECT SHALL BE IN COMPLIANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.

- ### STUMP DISPOSAL SPECIFICATIONS
- ALL SUITABLE TREES THAT MUST BE CUT WILL BE USED AS FIREWOOD. THE STUMPS, BRUSH, & EXCESS UNSUITABLE EARTH WILL BE DISPOSED OF AT THE LOCATION DESIGNATED BY THE ENGINEER, CONTINGENT UPON APPROVAL FROM THE TOWN BUILDING INSPECTOR. SAID AREA(S) SHALL BE A MINIMUM OF TWO FEET ABOVE THE SEASONAL HIGH GROUNDWATER OR THE STUMPS SHALL BE HAULED OFF-SITE TO A STATE-APPROVED LANDFILL. IF ON-SITE STUMP DISPOSAL IS IMPLEMENTED, THE FOLLOWING GUIDELINES SHALL BE MET:
- WHENEVER POSSIBLE, STUMP DISPOSAL SITES SHOULD BE LOCATED ON NEARLY LEVEL TO MODERATELY SLOPING LANDS (SLOPES LESS THAN 12%).
 - DISPOSAL SITES WILL NOT BE LOCATED IN OR WITHIN 100 FEET OF FLOWING WATERCOURSES OR STREAMS OR IN ACTIVELY ERODING GULLIES.
 - DISPOSAL SITES SHALL NOT BE LOCATED IN FLOODED OR FLOOD PRONE LANDS, MARSHES, OR OTHER ADJACENT RECHARGE AREAS.
 - STUMPS WILL BE PLACED ON THE SITE IN A SINGLE LIFT PRIOR TO BACKFILLING. WHEN ADDITIONAL STUMPS ARE TO BE DEPOSITED ON THE SAME SITE, EACH SUCCESSIVE LAYER OR LIFT OF STUMPS WILL BE BACKFILLED.
 - STUMPS DEPOSITED IN DRAINAGE LAYERS OR DEPRESSIONS SHALL BE BACKFILLED AND BERMED SO AS TO DIVERT OVERLAND FLOWS FROM THE DISPOSAL AREA.
 - A MINIMUM OF TWO FEET (2') OF OVERBURDEN WILL BE PLACED OVER ALL DISPOSAL SITES.
 - THE TWO FEET OF OVERBURDEN WILL BE COVERED WITH A MINIMUM OF FOUR INCHES (4") OF TOPSOIL, GRADED, SEEDED, AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS.

- ### LANDSCAPING SPECIFICATIONS
- ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS. ANY WORK PERFORMED AFTER NOVEMBER 1 OF EACH YEAR SHALL BE STABILIZED WITH MULCH (SEE NOTE 2) SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS IN THE SPRING. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND BE SEEDED, FERTILIZED, LIMED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:
- SEED MIXTURE IN ALL AREAS SHALL BE URBAN MIX CONFORMING TO THE TABLE SHOWN ON THE PLANS FOR SEEDING BETWEEN SEPTEMBER 1 AND NOVEMBER 1. WINTER RYE SHALL BE USED AT AN APPLICATION RATE OF 100 POUNDS PER ACRE.
 - FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-1-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE, AND 100 POUNDS OF POTASH PER ACRE.
 - LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE OR AS ORDERED BY THE ENGINEER.
 - WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIMC, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AS ORDERED BY THE ENGINEER.

- ### WINTER CONSTRUCTION REQUIREMENTS
- IF CONSTRUCTION ACTIVITIES INVOLVING EARTH DISTURBANCE CONTINUE PAST OCTOBER 15 OR BEGIN BEFORE APRIL 15, THE FOLLOWING EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE FOLLOWED:
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.
 - PROVIDE ENLARGED ACCESS POINTS, STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
 - A MINIMUM 25 FT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE.
 - DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
 - SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROW GROUND.
 - MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
 - TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY. WITH THE FOLLOWING EXCEPTIONS: - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY. - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
 - PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1 INCH THICKNESS.
 - USE STONE TO STABILIZE AREAS SUCH AS THE PERIMETER OF BUILDINGS UNDER CONSTRUCTION OR WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE 10-20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.
 - IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, TWO ROWS OF SILT FENCE MUST BE INSTALLED ALONG THE CONTOUR.

WINTER INSPECTION SCHEDULE

INSPECTION	AFTER A THAW OR A RAINFALL GENERATING RUNOFF FROM SITE
INSPECT SILT FENCING WITH SKI TAPE	X
INSPECT AREAS TEMPORARILY MULCHED	X
INSPECT TEMPORARY STOCKPILES	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED & MULCHED	X
INSPECT STORMWATER SWALES, SPREADERS, OUTFLOW DEVICES	X

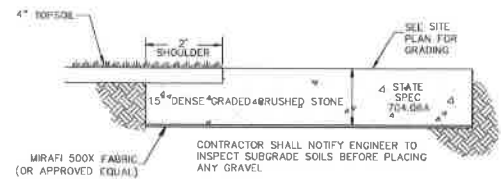
THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



DATE	REVISION	BY
02/14/2024	RECORD DRAWING	JKW
02/14/2024	PRELIMINARY	JKW
02/14/2024	FINAL	JKW
02/14/2024	SKETCH/CONCEPT	JKW

O'LEARY-BURKE CIVIL ASSOCIATES, PLC
 155 W. CANTON ST. SUITE 100
 RICHMOND, VT 05477
 TEL: 802-896-1111
 FAX: 802-896-1112
 WWW.OLEARYBURKE.COM

LOT 4 WILLIS FARM ROAD - PHASE 2
 EROSION PREVENTION AND SEDIMENT CONTROL PLAN
 PLAN SHEET # 5



DRIVEWAY AND DRIVE AISLE AREA DETAIL

NTS

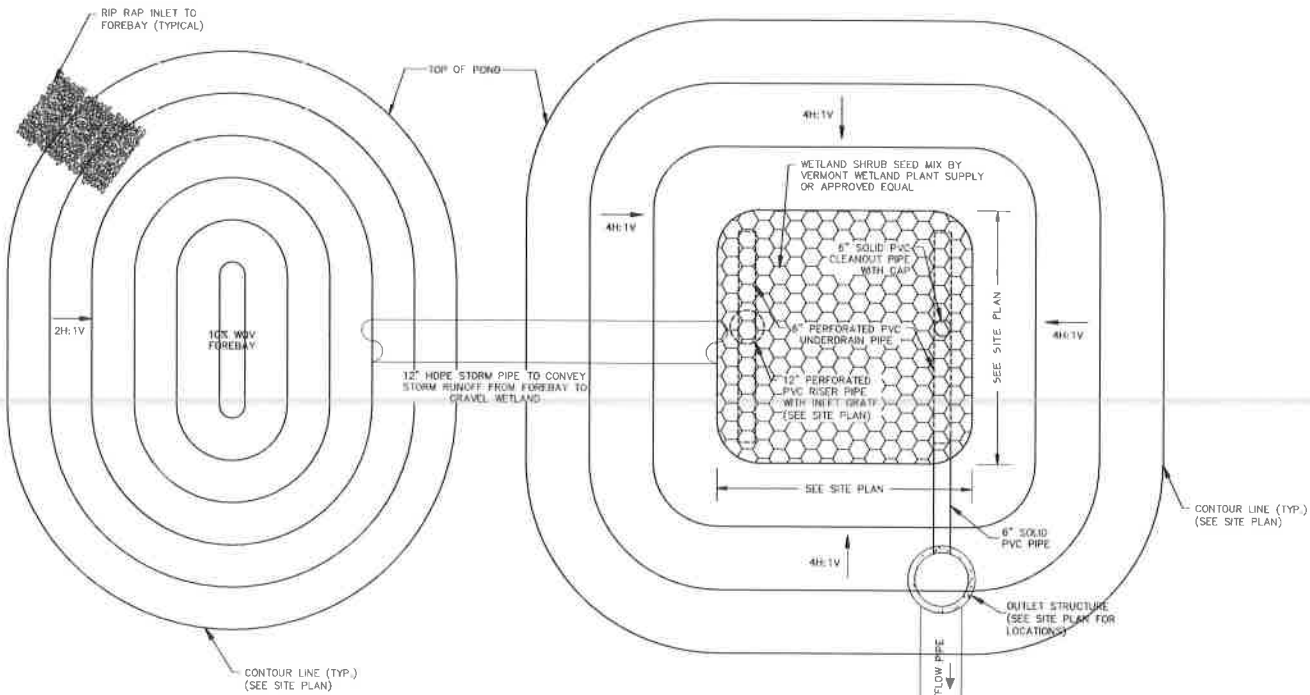
GRAVEL WETLAND VOLUMETRIC CALCULATIONS:

WATER QUALITY TREATMENT VOLUME REQUIRED (PER VT STANDARD COMPLIANCE WORKBOOK) = 0,0598 AC-FT * 43,560 SF / AC = 2,605 CF

2,605 CF / 866 SF (BOT, POND AREA) = 3.00 FT OF STONE REQUIRED

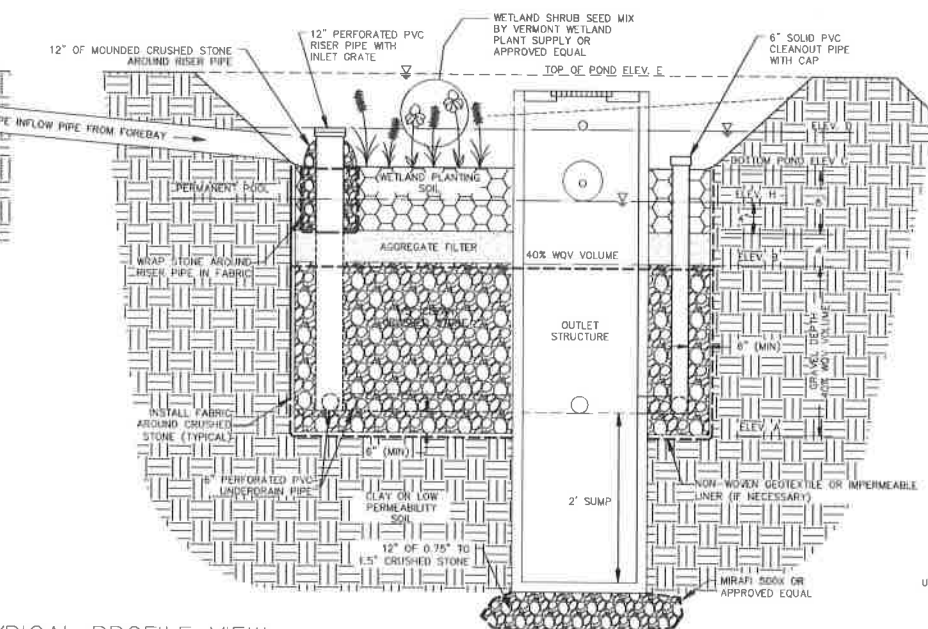
3.00 FT OF STONE PROVIDED

3.00 * 866 SF = 2,605 CF = 0,0598 AC-FT OF UNDERGROUND TREATMENT VOLUME



GRAVEL WETLAND TYPICAL PLAN VIEW

NTS

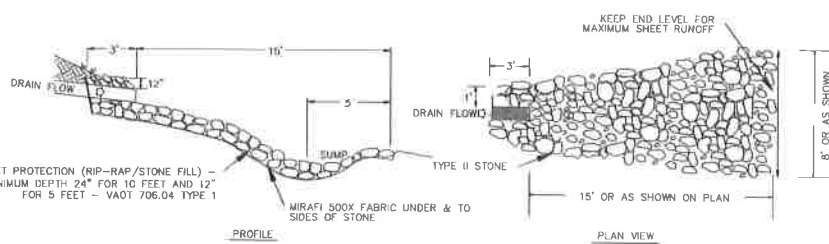


GRAVEL WETLAND TYPICAL PROFILE VIEW

NTS

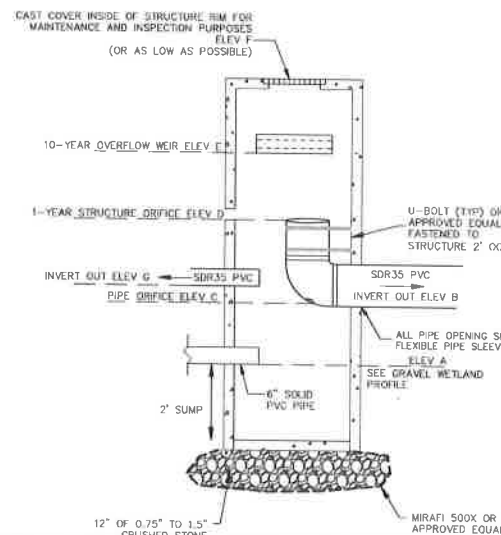
GRAVEL WETLAND SCHEDULE

ITEM	GRAVEL WETLAND #1
ELEV A	336.00'
ELEV B	339.00'
ELEV C	340.00'
ELEV D	340.83'
ELEV E	343.00'
ELEV F	338.00'
ELEV H	339.67'



STORM OUTFALL DETAIL

NTS



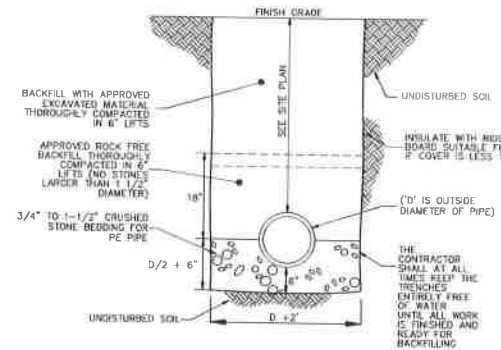
OUTLET STRUCTURE PROFILE

NTS

OUTLET STRUCTURE SCHEDULE

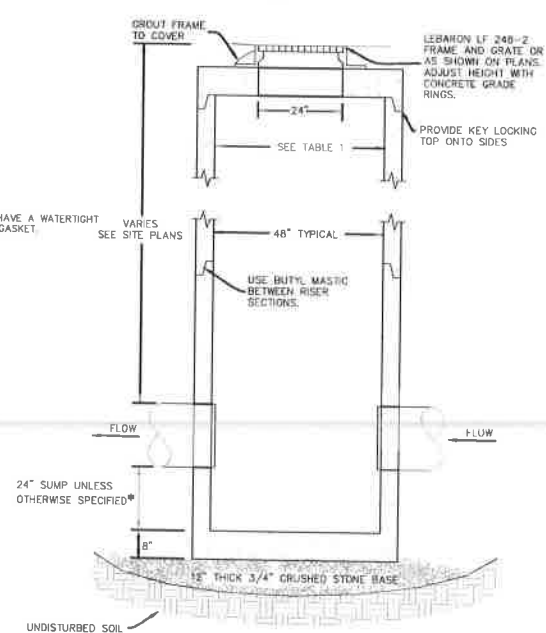
ITEM	GRAVEL WETLAND #1	
	ELEV	SIZE
ELEV A	336.50'	6.0"
ELEV B	339.67'	12.0"
ELEV C	339.75'	1.0"
ELEV D	340.83'	1.0"
ELEV E	341.56'	12"x6"
ELEV F	343.56'	24"x24"

OUTLET STRUCTURE SCHEDULE



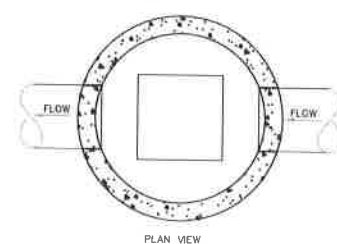
GRAVITY STORM TRENCH DETAIL

NTS



CATCH BASIN DETAIL

NTS



BOLLARD

NTS

TABLE 1

STORM CATCH BASIN DIAMETER	MINIMUM WALL THICKNESS	LARGEST PIPE DIA. ALLOWED	MINIMUM CONCRETE COVER THICKNESS
48"	5"	30"	10"
60"	6.75"	36"	12"
72"	7"	48"	18"



DATE: NTS	REVISION: NTS	BY: DATE: 2/21/2026
<input type="checkbox"/> RECORD DRAWING <input type="checkbox"/> PRELIMINARY <input type="checkbox"/> FINAL <input type="checkbox"/> SKETCH/CONCEPT		LOT 4 WILLIS FARM ROAD - PHASE 2 WILLIS FARM ROAD RICHMOND, VT CONSTRUCTION DETAILS
O'LEARY-BURKE CIVIL ASSOCIATES, P.C. 13 CORPORATE DRIVE FLETCHER, VT 05632 TEL: 802-888-1111 FAX: 802-888-1112 E-MAIL: OBC@OLEARYBURKE.COM		SHEET NO: 2014.14 FILE: 204 PLAN SHEET # 6

GRAVEL WETLAND NOTES AND SOIL MEDIA TESTING GUIDANCE:

GRAVEL WETLANDS ARE COMPOSED OF A SURFACE GRAVEL WETLAND SOIL LAYER, A TRANSITION LAYER BETWEEN THE WETLAND SOIL AND THE GRAVEL CELLS(S), AND A SUBSURFACE GRAVEL LAYER. THESE LAYERS SHOULD MEET THE FOLLOWING GUIDELINES:

- THE GRAVEL WETLAND SOIL LAYER ENSURES THAT RUNOFF DOES NOT INFILTRATE THROUGH THE SOIL TO THE SUBSURFACE GRAVEL WETLAND TREATMENT MEDIA. RUNOFF SHOULD PREDOMINANTLY ENTER THE GRAVEL WETLAND TREATMENT MEDIA THROUGH THE PERFORATED RISER PIPES AND SECONDARY STONE INLET. THE SOIL LAYER SHALL HAVE A MINIMUM THICKNESS OF 8 INCHES AND SHALL BE LEVEL, CONSTRUCTED WITH A SURFACE SLOPE OF ZERO.
- THE SOIL MEDIA SHALL HAVE A LOW SATURATED HYDRAULIC CONDUCTIVITY (Ksat) MEASURED BETWEEN 0.1-0.01 FT/DAY OR WITH A SOIL TEXTURE CONFORMING TO HYDROLOGIC SOIL GROUP D.
- SOIL pH SHOULD BE BETWEEN 6.0 AND 7.0.
- UTILIZATION OF ON-SITE MATERIAL TO MANUFACTURE THE SOIL LAYER IS ENCOURAGED PROVIDED THE SOIL MEETS SPECIFICATIONS, EITHER AS A STANDARD PRODUCT OR BY AMENDMENT WITH OUTSIDE MATERIAL.
- IN ALL CASES, THE GRAVEL WETLAND SOIL SHALL BE TESTED IN ACCORDANCE WITH THE P-TESTING PROCEDURE DESCRIBED BELOW.

THE TRANSITION LAYER, WHEN PRESENT, IS LOCATED BETWEEN THE GRAVEL WETLAND SOIL LAYER AND THE SUBSURFACE GRAVEL CELLS(S) AND SERVES TO PREVENT WETLAND SOIL FROM MIGRATING TO THE GRAVEL CELLS BELOW.

- THE TRANSITION LAYER MAY BE COMPOSED OF EITHER FEA GRAVEL OR A COMBINATION OF SAND AND PEA GRAVEL.
- THE SUBSURFACE GRAVEL LAYER IS DESIGNED TO ACCEPT STORMWATER INFLOW THROUGH THE PERFORATED RISER PIPE IN EACH CELL AND FROM ANY SECONDARY STONE INLET. IT IS ESSENTIAL THAT DISCHARGE FROM THE GRAVEL CELLS LEAVES ONLY VIA THE OUTLET STRUCTURE.
- THE SUBSURFACE GRAVEL LAYER SHALL BE A MINIMUM OF 24 INCHES IN DEPTH AND CONSIST OF 3/4-INCH CRUSHED STONE.
- DISPOSERS MUST DOCUMENT THROUGH GRIEZE SOIL CHARACTERIZATION THAT NATIVE SUBSOILS ARE SUFFICIENTLY IMPERMEABLE TO SUPPORT A SEASONAL HIGH-WATER TABLE (SHWT) WITHIN THE GRAVEL LAYER. A LAYER BELOW THE SUBSURFACE GRAVEL LAYER IS REQUIRED IN CASES WHERE NATIVE SUBSOILS CANNOT SUPPORT THIS SHWT.

PHOSPHOROUS TESTING REQUIREMENTS:

P-TESTING IS REQUIRED FOR UPPER MEDIA LAYER OF BIOTRETENTION SYSTEMS AND GRAVEL WETLAND SOIL LAYERS. FINAL MIXES MUST HAVE A PHOSPHOROUS SATURATION RATIO (PSR) LESS THAN OR EQUAL TO 0.10. PSR IS TO BE DETERMINED USING THE FOLLOWING PROTOCOL:

1. SAMPLES ARE TO BE AIR DRIED AND SIEVED THROUGH 2 MM PRIOR TO TESTING.
2. AIR-DRIED, SIEVED SOIL SAMPLES ARE TO THEN BE EXTRACTED WITH THE MEHLICH-3 SOLUTION (0.2 M CH₃COOH + 0.25 M NH₄OH + 0.25 M NH₄NO₃ + 0.013 M HNO₃ + 0.001 M EDTA) BY SHAKING A SOIL-SOLUTION SUSPENSION FOR 5 MINUTES AT A 1:10 RATIO (SOIL MASS IN GRAMS, SOLUTION VOLUME IN ML), FOLLOWED BY FILTERING TO REMOVE PARTICLES (PORE SIZE OF 2µM IS RECOMMENDED, MAX PORE SIZE = 0.4µM).
3. EXTRACTS FROM THE MEHLICH-3 PROCEDURE ARE TO BE ANALYZED FOR P, Fe, AND AI BY ICP-OES.
4. THE PHOSPHOROUS SATURATION RATIO (PSR) IS THEN CALCULATED AS FOLLOWS:

$$PSR = (P_{M3} / J) / [(P_{M3}/56) + (A_{M3}/27)]$$

- P_{M3} = MEHLICH-3 P IN MG P PER KG DRY SOIL
- Fe_{M3} = MEHLICH-3 Fe IN MG Fe PER KG DRY SOIL
- A_{M3} = MEHLICH-3 AI IN MG AI PER KG DRY SOIL

MEHLICH-3 EXTRACTIONS FOLLOW THE ABOVE PROTOCOL. (FOR MORE DETAILS, SEE WOLF AND BEEGLE, 2009). OTHER SOIL TEST EXTRACTIONS, INCLUDING MODIFIED MORGAN TESTS, DIALATE EXTRACTIONS, WATER EXTRACTIONS, OR EXTRACTIONS USED TO QUANTIFY TOTAL ELEMENTS, ARE NOT ACCEPTABLE FOR THIS REQUIREMENT.

IN CASES WHERE INGREDIENT MIXING HAS NOT YET OCCURRED, INGREDIENTS CAN BE MIXED AT THE INTENDED VOLUMETRIC PROPORTIONS IN A SMALL BATCH (AT LEAST ONE QUART IN VOLUME) FOR TESTING PURPOSES. IF THIS SMALL BATCH TESTING APPROACH IS TAKEN, THE FINAL MATERIAL TO BE USED DURING INSTALLATION MUST BE RE-TESTED TO CONFIRM ACCEPTABLE PSR.

SOIL SAMPLES FOR P, Fe, AND AI ANALYSIS VIA MEHLICH-3 EXTRACTION CAN BE SUBMITTED TO THE AGRICULTURAL AND ENVIRONMENTAL TESTING LABORATORY (AETL) LOCATED AT UVM. EACH SAMPLE COSTS \$15. PLEASE ALLOW AT LEAST 3-4 WEEKS FOR ANALYSIS.

FOR HOW TO TAKE A SOIL SAMPLE PLEASE VISIT [GO.UVM.EDU/SOIL-SAMPLING] FOR SUBMITTING A SOIL SAMPLE PLEASE VISIT [GO.UVM.EDU/UVM-SOIL-LAB]

STORM SYSTEM MAINTENANCE

STORM SYSTEM MAINTENANCE IS IMPORTANT FOR TREATMENT AND CONTROL OF STORM RUNOFF FROM THE IMPERVIOUS SURFACES (BUILDINGS, ROAD, DRIVEWAY, AND SIDEWALKS). THE FOLLOWING ELEMENTS FORM THE MINIMUM REQUIREMENTS:

1. THE OWNER (OR REPRESENTATIVE) SHALL PERFORM INSPECTIONS ANNUALLY AND FOLLOWING SIGNIFICANT (LARGE) STORM EVENTS. THE FOLLOWING ITEMS SHALL BE REVIEWED: CONDITION OF THE VEGETATION, CONDITION OF THE DITCH SURFACES, DEPTH OF ACCUMULATED SEDIMENT (IF ANY), THE PRESENCE OF EROSION (IF ANY), CONDITION OF THE STORM PIPES, AND THE CONDITION OF THE PIPE INLETS AND OUTLETS. ANY OBSERVABLE DEGRADATION OF THE STORM SYSTEM SHALL BE NOTED.
2. THE OWNER (OR REPRESENTATIVE) SHALL COMPLETE REPAIR OF ANY ITEMS AS REQUIRED TO MAINTAIN OPTIMAL SYSTEM OPERATION. AT A MINIMUM, THE FOLLOWING ITEMS SHALL BE INCLUDED:
 - 2.1. FOLLOWING ANY MAJOR STORM EVENTS ANY EROSION GULLIES 6 INCHES OR DEEPER SHALL BE FILLED AND VEGETATION ESTABLISHED IN THE DISTURBED AREA.
 - 2.2. SEDIMENT ACCUMULATED TO A DEPTH OF MORE THAN 6 INCHES IN ANY CONVEYANCE SWALES OR IN THE SEDIMENT FOREBAY SHALL BE REMOVED AND DISPOSED OF IN AN UPLAND AREA THAT IS NOT WITHIN 100 FEET OF WATERS OF THE STATE. VEGETATION SHALL BE ESTABLISHED IN ALL DISTURBED AREAS.
 - 2.3. VEGETATION SHALL BE ESTABLISHED AS NEEDED, IN AREAS OF BARE SOIL. THIS IS PARTICULARLY IMPORTANT IN FLOW AREAS WHERE VEGETATION PROMOTES SEDIMENT REMOVAL.
 - 2.4. THE CATCH BASIN SUMPS SHALL BE CLEANED WHEN THE ACCUMULATED SEDIMENT EXCEEDS 12" IN DEPTH (THE SUMPS ARE 24" IN DEPTH).
 - 2.5. SILT FENCES SHALL BE USED IF NEEDED TO PREVENT EROSION AND AID IN THE ESTABLISHMENT OF VEGETATION. THESE TEMPORARY MEASURES SHALL BE REMOVED AFTER THE SITE IS STABILIZED AND THE RISK OF EROSION IS REDUCED.
 - 2.6. THE GRASSED AREAS SHALL BE MOWED AS NEEDED TO PREVENT THE ESTABLISHMENT OF WOODY VEGETATION.
 - 2.7. INSPECT THE PVC RISER PIPES WITHIN THE GRAVEL WETLAND FOR CLOGGING AND DEBRIS.
 - 2.8. ANY SIGNIFICANT BUILDUP OF SEDIMENT IN THE WETLAND AREA SHALL BE REMOVED TO PREVENT THE GRAVEL BASE FROM BECOMING CLOGGED.
 - 2.9. NO WOODY VEGETATION 3/2" IN DIAMETER SHALL BE PLANTED OR ALLOWED TO GROW WITHIN THE TREATMENT PRACTICE.
3. THE OWNER SHALL MECHANICALLY SWEEP AND REMOVE SEDIMENTS IN THE ROADWAY AREAS AND CATCH BASIN SUMPS AS NECESSARY PRIOR TO MAY 15TH.