

MR. PAUL & MS. CARRIE ELIZABETH SOHIGIAN

217 OWLS NEST ROAD

NEW LONDON, NEW HAMPSHIRE

APRIL 2021

LATEST REVISION: JUNE 8, 2021

OWNER:

PAUL & CARRIE E. SOHIGIAN
46 GRAMATAN ROAD
PLEASANTVILLE, NY 10570

ENGINEER & SURVEYOR:

horizons
Engineering

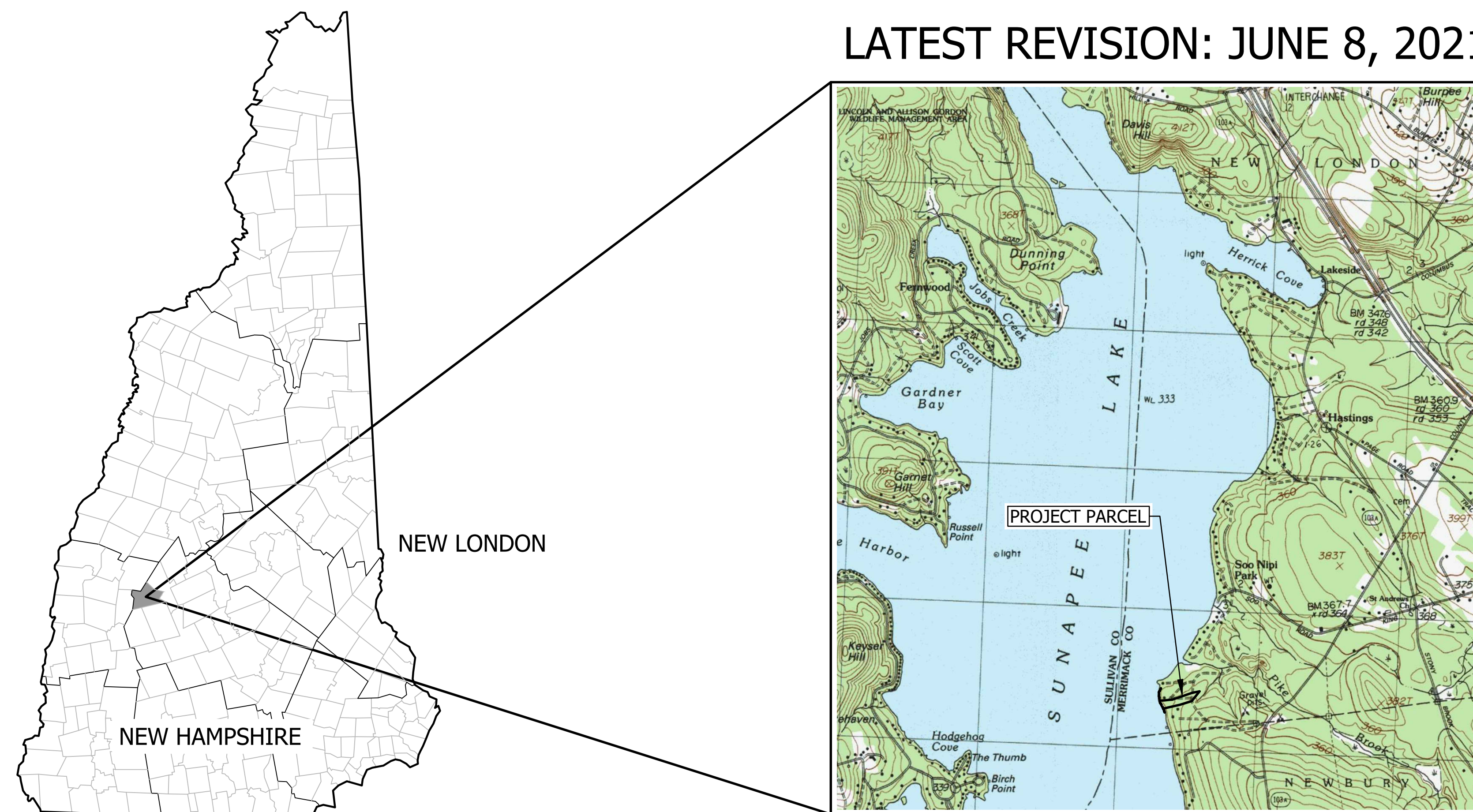
176 NEWPORT ROAD, PO BOX 1825
NEW LONDON, NH 03257
(603) 877-0116

ARCHITECT:

BONIN ARCHITECTS & ASSOCIATES
210 MAIN STREET
NEW LONDON, NH 03257
(603) 526-6200

SHEET LIST

COVER	
C1.01	EXISTING CONDITIONS PLAN
C2.01	SITE PLAN
C3.01	EROSION CONTROL NOTES & DETAILS
C3.02	DETAILS
C3.03	DETAILS



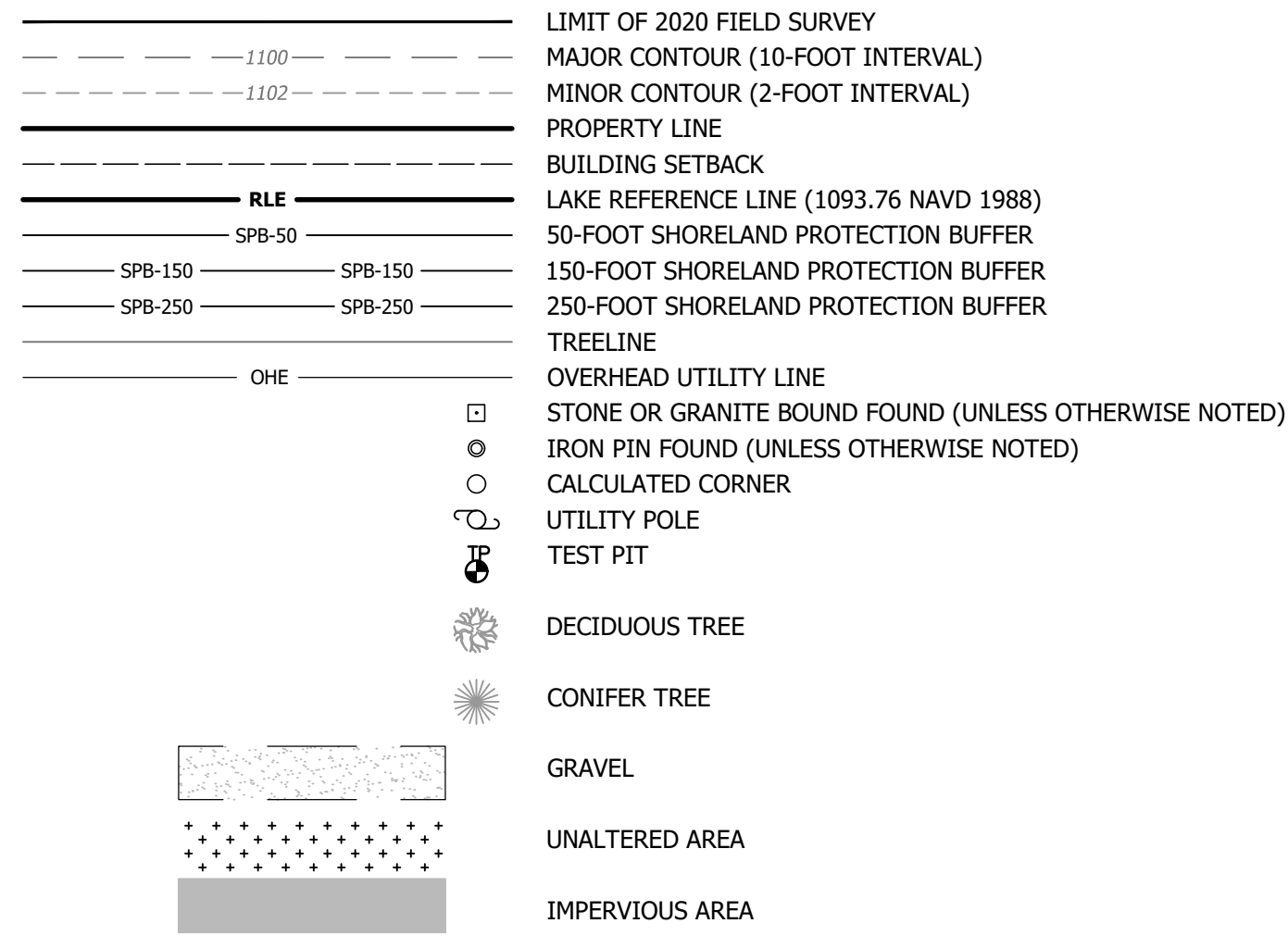
LOCATION PLAN

SCALE: 1" = 2000'

GENERAL NOTES

- OWNER OF RECORD
PAUL AND CARRIE SOHIGIAN
46 GRAMATAN ROAD
PLEASANTVILLE, NY 10570
- REFERENCE DEED:
A. WARRANTY DEED FROM DAVID B. BREWSTER AND OLEANNA KLEIN TO PAUL AND CARRIE E. SOHIGIAN, DATED AUGUST 10, 2020 AND RECORDED IN THE MERRIMACK COUNTY REGISTRY OF DEEDS (MRCD) BOOK 3690 PAGE 2907.
- REFERENCE PLANS:
A. "PLAN OF LAND SUBDIVISION IN NEW LONDON, NH" PREPARED BY PENNY ROYAL HILL LAND SURVEYING & FORESTRY LLC DATED NOVEMBER 22, 2016 AND RECORDED IN THE MRCD PLAN NUMBER 201700012018.
B. "EASEMENT PLAN, PROPERTY OF DAVID BREWSTER AND OLEANNA KLEIN" PREPARED BY PENNY ROYAL HILL LAND SURVEYING & FORESTRY LLC DATED JULY 28, 2020 AND RECORDED IN THE MRCD PLAN NUMBER 202000016668.
- RECORD EASEMENTS:
A. RIGHT OF WAY OVER EXISTING AND FUTURE ROADS GRANTED BY SUNAPEE CORPORATION IN 1938 AND RECORD IN THE MRCD BOOK 562 PAGE 345.
B. RIGHT OF WAY TO PUBLIC HIGHWAY GRANTED IN 1930 AND RECORDED IN THE MRCD BOOK 509 PAGE 573.
C. UTILITY RIGHTS GRANTED TO NIT BY SOO NIPU PARK INC. IN 1919 AND RECORDED IN THE MRCD BOOK 440 PAGE 349.
D. VIEW EASEMENT BENEFIT OVER MAP 135 LOT 1 DESCRIBED IN REFERENCE DEED ABOVE (3690/2907) AND SHOWN ON REFERENCE PLAN B AND HEREON.
E. SUBJECT TO A VIEW EASEMENT FOR THE BENEFIT OF MAP 135 LOT 1 DESCRIBED IN REFERENCE DEED ABOVE (3690/2907) AND SHOWN ON REFERENCE PLAN B AND HEREON.
F. SUBJECT TO MANAGED VEGETATION HEIGHT EASEMENT FOR THE BENEFIT OF MAP 135 LOT 1 DESCRIBED IN REFERENCE DEED ABOVE (3690/2907) AND SHOWN ON REFERENCE PLAN B AND HEREON.
- THE HORIZONTAL DATUM IS ON THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83 (2011). THE VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE ORTHOMETRIC HEIGHT WAS COMPUTED USING GEOID 12B. THE CONTOUR INTERVAL IS 2FT. THE DATUMS WERE DERIVED FROM REAL TIME KINEMATIC GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELD SURVEY WITH A LEICA ZENO.
- THE AREA SHOWN ON THIS PLAN WITHIN THE "2020 SURVEY LIMIT" IS BASED ON A FIELD SURVEY COMPLETED IN SEPTEMBER OF 2020 WITH A LEICA ROBOTIC TOTAL STATION. TOPOGRAPHIC FEATURES OUTSIDE THE "2020 SURVEY LIMIT" ARE BASED ON STATE OF NH LIDAR PROJECT'S BARE EARTH DEM DATA, DATED 2015. OTHER PLANIMETRIC FEATURES OUTSIDE OF THE "2020 SURVEY LIMIT" ARE REPRESENTATIVE OF PLANS REFERENCED ABOVE.
- THE AREA OF THE SURVEYED PARCEL BETWEEN THE REFERENCE LINE, ELEVATION 1094.15 NAVD OF 1988 AND 1094.9 NAVD OF 1988 IS MAPPED AS LYING INSIDE OF THE FLOOD ZONE PER F.E.M.A. FIRM MAP NUMBER 33013C0095E DATED APRIL 10, 2010.
- PREMISES ARE LOCATED IN THE R-2 RESIDENTIAL ZONING DISTRICT AND THE SHORELAND OVERLAND DISTRICT.
MINIMUM FRONT SETBACK: 25 FEET
MINIMUM REAR SETBACK: 15 FEET
MINIMUM SIDE SETBACK 20 FEET, AGGREGATE OF 50 FEET
MINIMUM LAKE SETBACK: 50 FEET FROM REFERENCE LINE

LEGEND

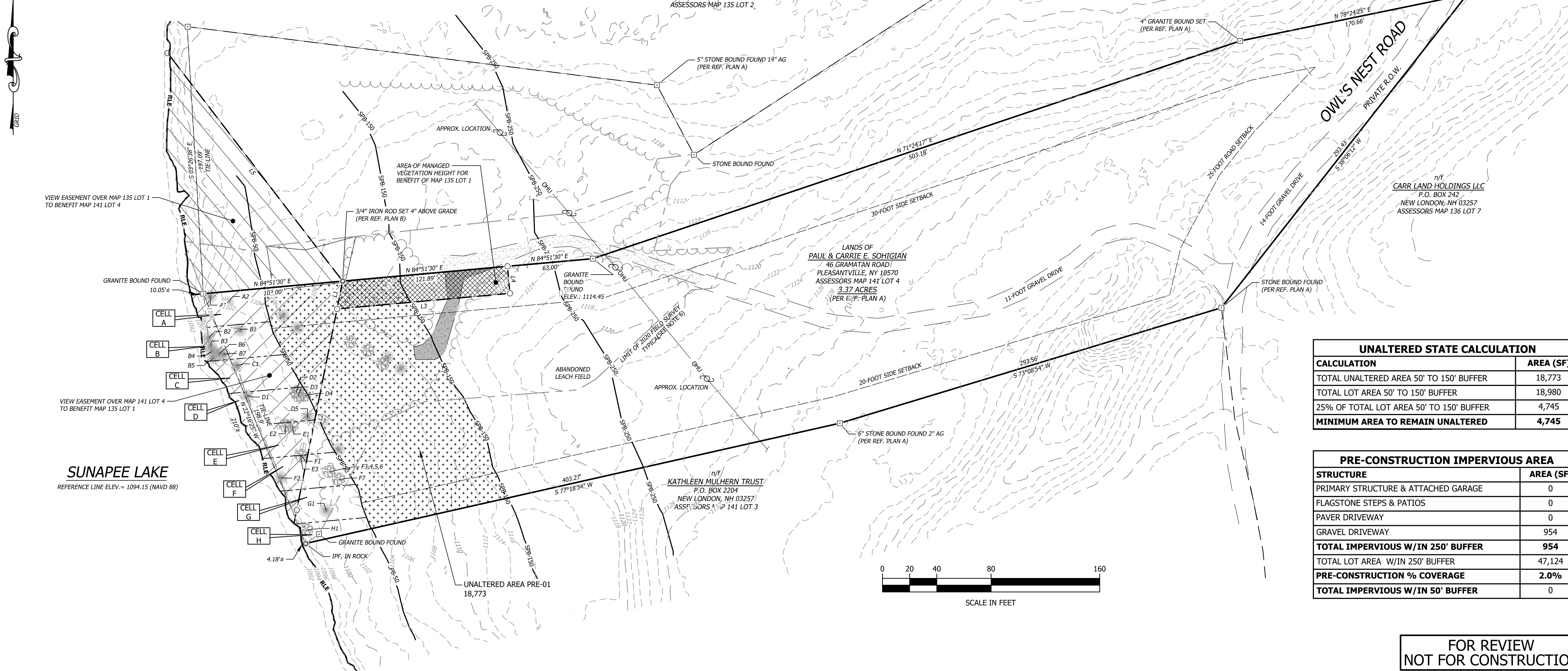


PRE- NHDES TREE COUNT SUMMARY					
GRID SEGMENT	1" to 3"	>3" to 6"	>6" to 12"	>12"	POINT TOTALS
	1 pt each	5 pts each	10 pts each	15 pts each	
A			1	1	25
B	3			4	63
C			1		10
D			1	3	55
E			2	1	35
F	1	3	1	2	56
G				1	15
H			1		10

*MINIMUM TREE SCORE OF AT LEAST 25 POINTS SHALL BE MAINTAINED FOR EACH 25'x50' SEGMENT

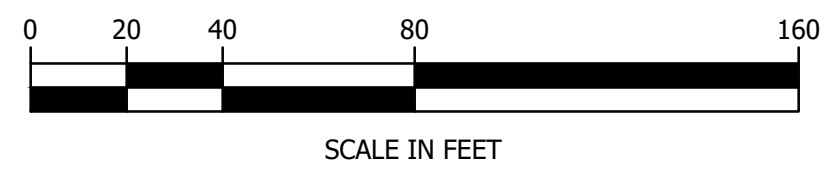
NEW LONDON TREE COUNT SUMMARY				
GRID SEGMENT	1" to 6"	>6 to 12"	>12"	POINT TOTALS
	1pt each	5pt each	10 pts each	
A		1	1	15
B	3		4	43
C		1		5
D		1	3	31
E		2	1	20
F	4	1	2	29
G			1	10
H		1		5

TREE LISTING		
TREE ID	SPECIES	DIAMETER (IN)
A1	WHITE PINE	24
A2	WHITE PINE	10
B1	SPRUCE	12
B2	WHITE PINE	35
B3	HEMLOCK	2
B4	HEMLOCK	2
B5	HEMLOCK	22
B6	HEMLOCK	2
B7	WHITE PINE	18
C1	WHITE PINE	11
D1	WHITE PINE	16
D2	ELM	22
D3	BEECHWOOD	8
D4	ELM	21
E1	MAPLE	7
E2	MAPLE	12
E3	MAPLE	7
F1	MAPLE	9
F2	HEMLOCK	16
F3	BASSWOOD	3
F4	BASSWOOD	4
F5	BASSWOOD	4
F6	BASSWOOD	6
F7	BEECHWOOD	18
G1	SPRUCE	16
H1	ELM	7



UNALTERED STATE CALCULATION	
CALCULATION	AREA (SF)
TOTAL UNALTERED AREA 50' TO 150' BUFFER	18,773
TOTAL LOT AREA 50' TO 150' BUFFER	18,980
25% OF TOTAL LOT AREA 50' TO 150' BUFFER	4,745
MINIMUM AREA TO REMAIN UNALTERED	4,745

PRE-CONSTRUCTION IMPERVIOUS AREA	
STRUCTURE	AREA (SF)
PRIMARY STRUCTURE & ATTACHED GARAGE	0
FLAGSTONE STEPS & PATIOS	0
PAVER DRIVEWAY	0
GRAVEL DRIVEWAY	954
TOTAL IMPERVIOUS W/IN 250' BUFFER	954
TOTAL LOT AREA W/IN 250' BUFFER	47,124
PRE-CONSTRUCTION % COVERAGE	2.0%
TOTAL IMPERVIOUS W/IN 50' BUFFER	0



**FOR REVIEW
NOT FOR CONSTRUCTION**

DATE OF PRINT
JUNE 08 2021
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217 OWLS NEST ROAD
NEW LONDON, NEW HAMPSHIRE

EXISTING CONDITIONS PLAN

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
Δ	05/2021	SHORELAND PERMIT RFP#1	CEW	CEW

DATE: APRIL 2021 PROJECT #: 20863
 ENG'ND BY: - DRAWN BY: XXX
 CHECK'D BY: RTC ARCHIVE #: H-____

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LEGEND

- 1100 --- LIMIT OF 2020 FIELD SURVEY
- 1102 --- MAJOR CONTOUR (10-FOOT INTERVAL)
- 1102 --- MINOR CONTOUR (2-FOOT INTERVAL)
- --- PROPERTY LINE
- --- BUILDING SETBACK
- --- LAKE REFERENCE LINE (1093.76 NAVD 1988)
- SPB-50 --- 50-FOOT SHORELAND PROTECTION BUFFER
- SPB-150 --- 150-FOOT SHORELAND PROTECTION BUFFER
- SPB-250 --- 250-FOOT SHORELAND PROTECTION BUFFER
- --- TREELINE
- --- OVERHEAD UTILITY LINE
- --- STONE OR GRANITE BOUND FOUND (UNLESS OTHERWISE NOTED)
- --- IRON PIN FOUND (UNLESS OTHERWISE NOTED)
- --- CALCULATED CORNER
- --- UTILITY POLE
- --- TEST PIT
- --- DECIDUOUS TREE
- --- CONIFER TREE
- --- GRAVEL
- --- UNALTERED AREA
- --- IMPERVIOUS AREA

POST-NHDES TREE COUNT SUMMARY

GRID SEGMENT	1" to 3"	>3" to 6"	>6" to 12"	>12"	POINT TOTALS
	1 pt each	5 pts each	10 pts each	15 pts each	
A			1	1	25
B	3			4	63
C			1		10
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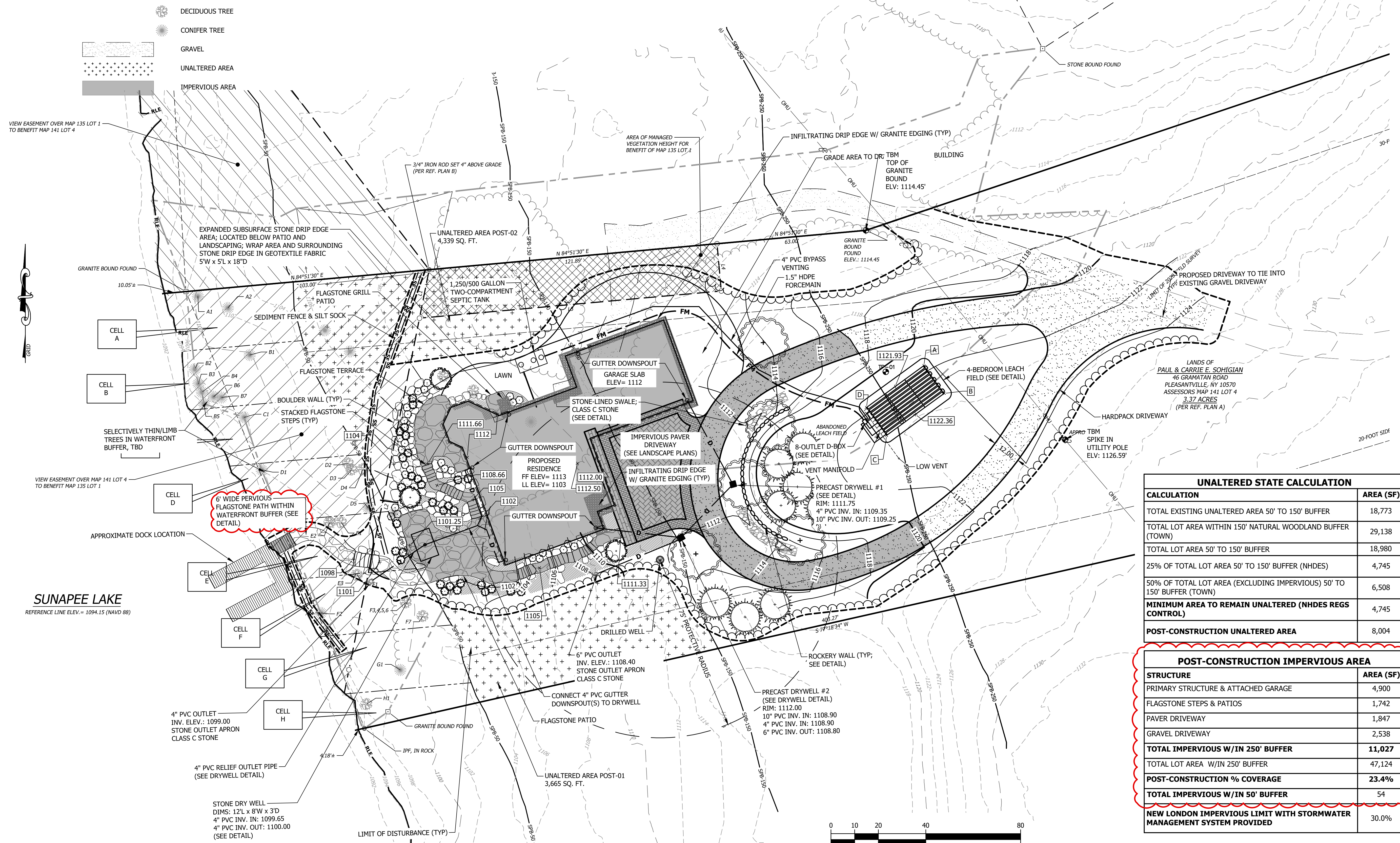
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TREE LISTING

TREE ID	SPECIES	DIAMETER (IN)
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F5	BASSWOOD	4
F6	BASSWOOD	6
F7	BEECHWOOD	18
G1	SPRUCE	16
H1	ELM	7



UNALTERED STATE CALCULATION

CALCULATION	AREA (SF)
TOTAL EXISTING UNALTERED AREA 50' TO 150' BUFFER	18,773
TOTAL LOT AREA WITHIN 150' NATURAL WOODLAND BUFFER (TOWN)	29,138
TOTAL LOT AREA 50' TO 150' BUFFER	18,980
25% OF TOTAL LOT AREA 50' TO 150' BUFFER (NHDES)	4,745
50% OF TOTAL LOT AREA (EXCLUDING IMPERVIOUS) 50' TO 150' BUFFER (TOWN)	6,508
MINIMUM AREA TO REMAIN UNALTERED (NHDES REGS CONTROL)	4,745
POST-CONSTRUCTION UNALTERED AREA	8,004

POST-CONSTRUCTION IMPERVIOUS AREA

STRUCTURE	AREA (SF)
PRIMARY STRUCTURE & ATTACHED GARAGE	4,900
FLAGSTONE STEPS & PATIOS	1,742
PAVER DRIVEWAY	1,847
GRAVEL DRIVEWAY	2,538
TOTAL IMPERVIOUS W/IN 250' BUFFER	11,027
TOTAL LOT AREA W/IN 250' BUFFER	47,124
POST-CONSTRUCTION % COVERAGE	23.4%
TOTAL IMPERVIOUS W/IN 50' BUFFER	54
NEW LONDON IMPERVIOUS LIMIT WITH STORMWATER MANAGEMENT SYSTEM PROVIDED	30.0%

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217 OWLS NEST ROAD
NEW LONDON, NEW HAMPSHIRE

SITE PLAN

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1	05/2021	SHORELAND PERMIT RFP#1	CEW	CEW
2	06/2021	SHORELAND CORRESPONDENCE 6/7/21 REV	CEW	CEW

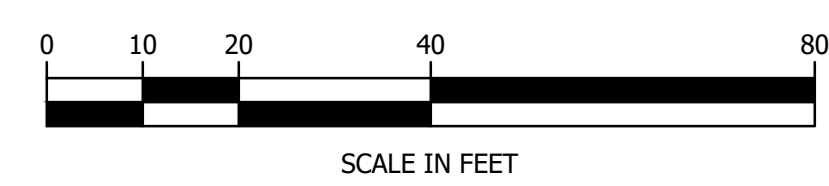
DATE:	PROJECT #:
APRIL 2021	20863
ENG'D BY:	DRAWN BY:
WTD	CEW
CHECK'D BY:	ARCHIVE #:
WTD	H---

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JUNE 08 2021
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EROSION CONTROL GENERAL NOTES

- A. KEEP SITE MODIFICATION TO A MINIMUM**
- CONSIDER FITTING THE BUILDINGS AND STREETS TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
 - EXPOSE AREAS OF BARE SOIL TO ERODIBLE ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
 - SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
 - LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
 - AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.
- B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES**
- STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
 - PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
 - USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
 - USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
 - USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
 - PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.
- C. PROTECT AREA AFTER CONSTRUCTION.**
- ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEEDED WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
 - MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
 - MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
 - DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
 - IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, REFER TO 'COLD WEATHER SITE STABILIZATION REQUIREMENTS'.
- D. INVASIVE SPECIES AND FUGITIVE DUST**
- THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:51-57 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE.
 - FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

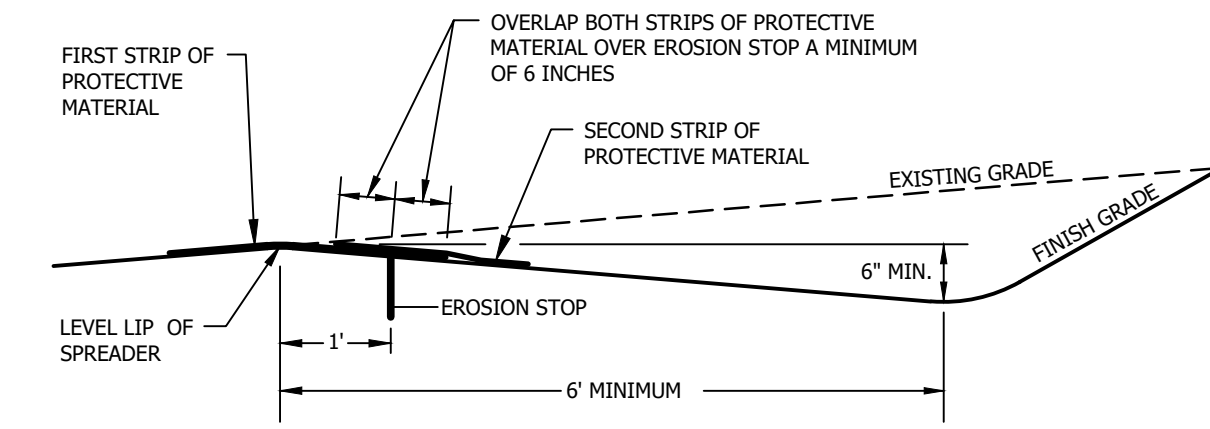
COLD WEATHER SITE STABILIZATION REQUIREMENTS

TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:

- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1 ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY NHDES.
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE, SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH PROPERLY INSTALLED AND ANCHORED EROSION CONTROL MATTING OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
- INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX, MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H), SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
- INSTALLATION OF EROSION CONTROL MATTING SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
- ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN 1 DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
- AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM NO. 304.1 OR 304.2.

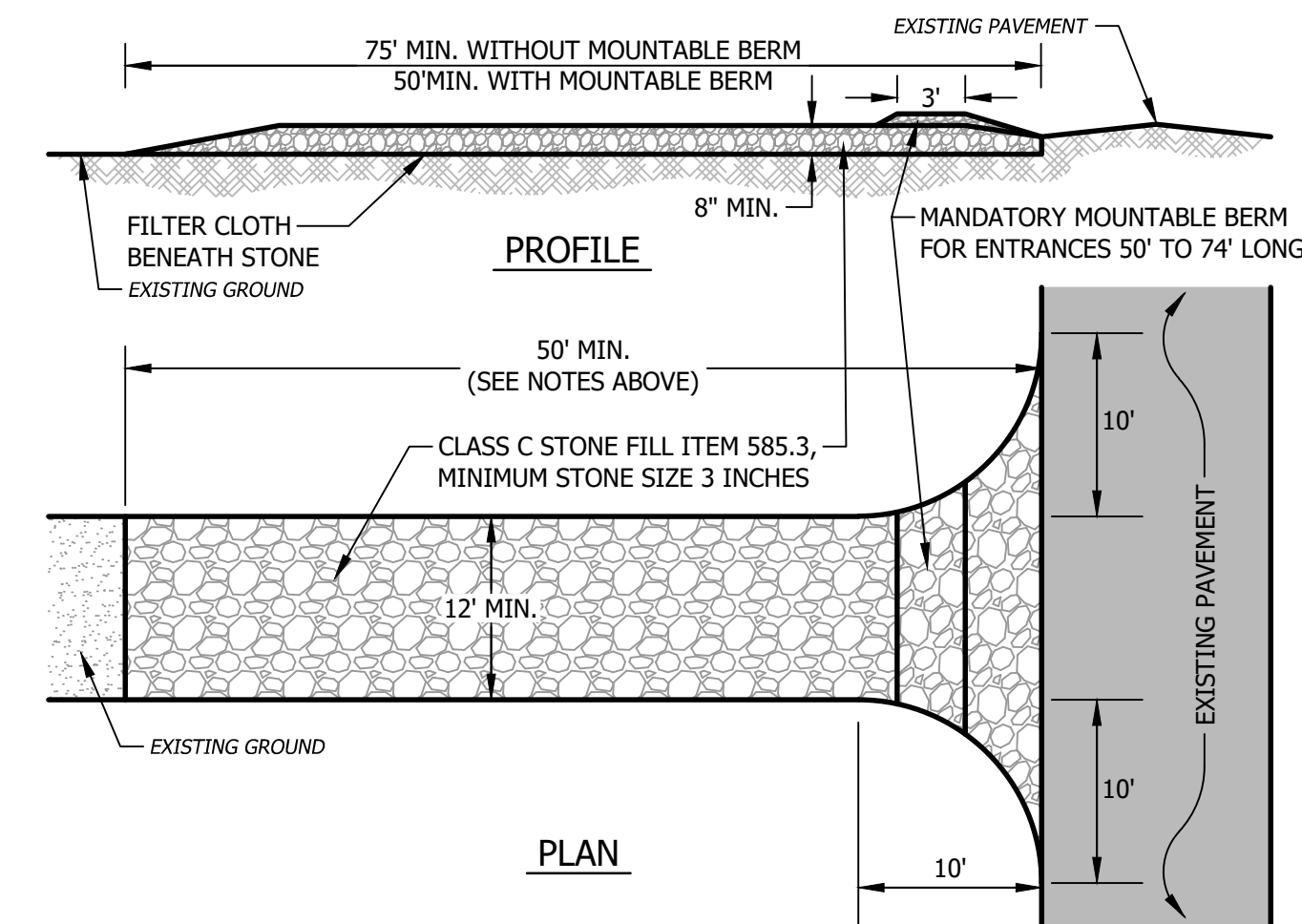
LEVEL LIP SPREADER INSTALLATION

- CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
- LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
- AN EROSION STOP SHALL BE PLACED VERTICALLY A MINIMUM OF SIX INCHES DEEP IN A SLIT TRENCH ONE FOOT BACK OF THE LEVEL LIP AND PARALLEL TO THE LIP. THE EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP.
- THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING TWO STRIPS OF JUTE OR EXCELSIOR MATTING ALONG THE LIP. EACH STRIP SHALL OVERLAP THE EROSION STOP BY AT LEAST SIX INCHES.
- THE ENTRANCE CHANNEL TO THE LEVEL SPREADER SHALL NOT EXCEED A 1 PERCENT GRADE FOR AT LEAST 50 FEET BEFORE ENTERING INTO THE SPREADER.
- THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED.
- PROTECTIVE MATERIAL AND EROSION STOP SHALL BE NORTH AMERICAN GREEN C125 EROSION CONTROL BLANKET OR APPROVED EQUAL.



LEVEL SPREADER DETAIL

NO SCALE
SOURCE: ROCKINGHAM COUNTY CONSERVATION SERVICE



STABILIZED CONSTRUCTION ENTRANCE

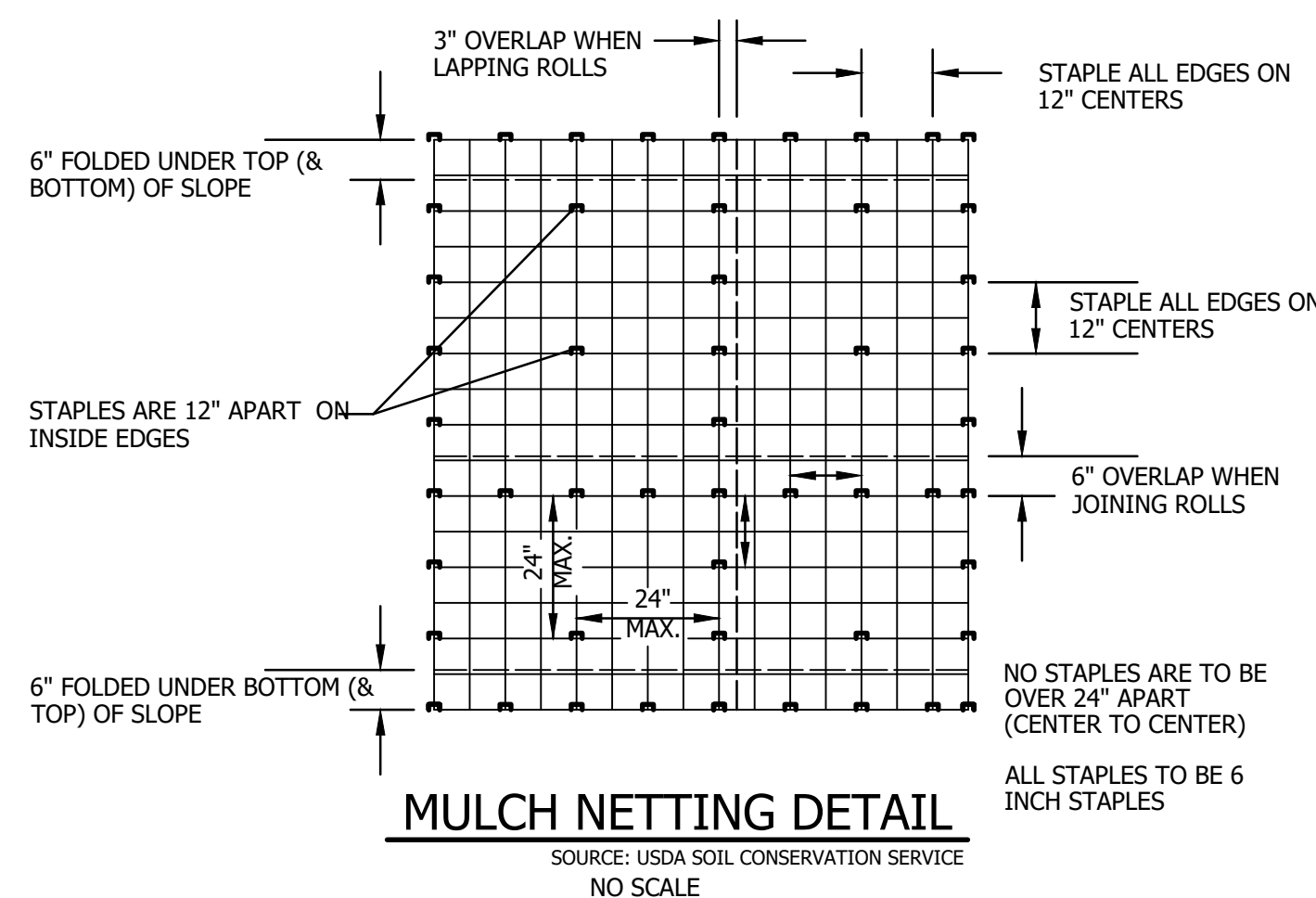
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CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
- CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
- INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
- GRUB SITE WITHIN GRADING LIMITS.
- STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
- INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
- CONSTRUCT PERMANENT STORMWATER CONTROLS AS SOON AS PRACTICAL. DO NOT DIRECT STORMWATER TOWARD TREATMENT BASINS, PONDS, SWALES, DITCHES AND LEVEL SPREADERS UNTIL THEY HAVE BEEN STABILIZED.
- PROCEED WITH WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM OF UNCOVERED DISTURBED EARTH AT ANY ONE TIME IS FIVE ACRES. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
- BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 14 DAYS OF ACHIEVING FINISHED GRADE.

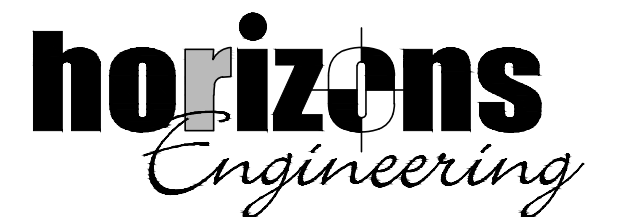
AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
B) A MINIMUM OF 70% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

- INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
- FINISH PAVED DRIVEWAYS AND PARKING AREAS.
- PLACE TOPSOIL, SEED AND MULCH.
- COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.
- MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.



MULCH NETTING DETAIL

SOURCE: USDA SOIL CONSERVATION SERVICE
NO SCALE



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NEW LONDON NH • POMFRET VT • KENNEBUNK ME

MR. PAUL & MS. CARRIE ELIZABETH SOHIGIAN

217 OWLS NEST ROAD

NEW LONDON, NEW HAMPSHIRE

EROSION CONTROL NOTES AND DETAILS

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

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HORIZONS ENGINEERING

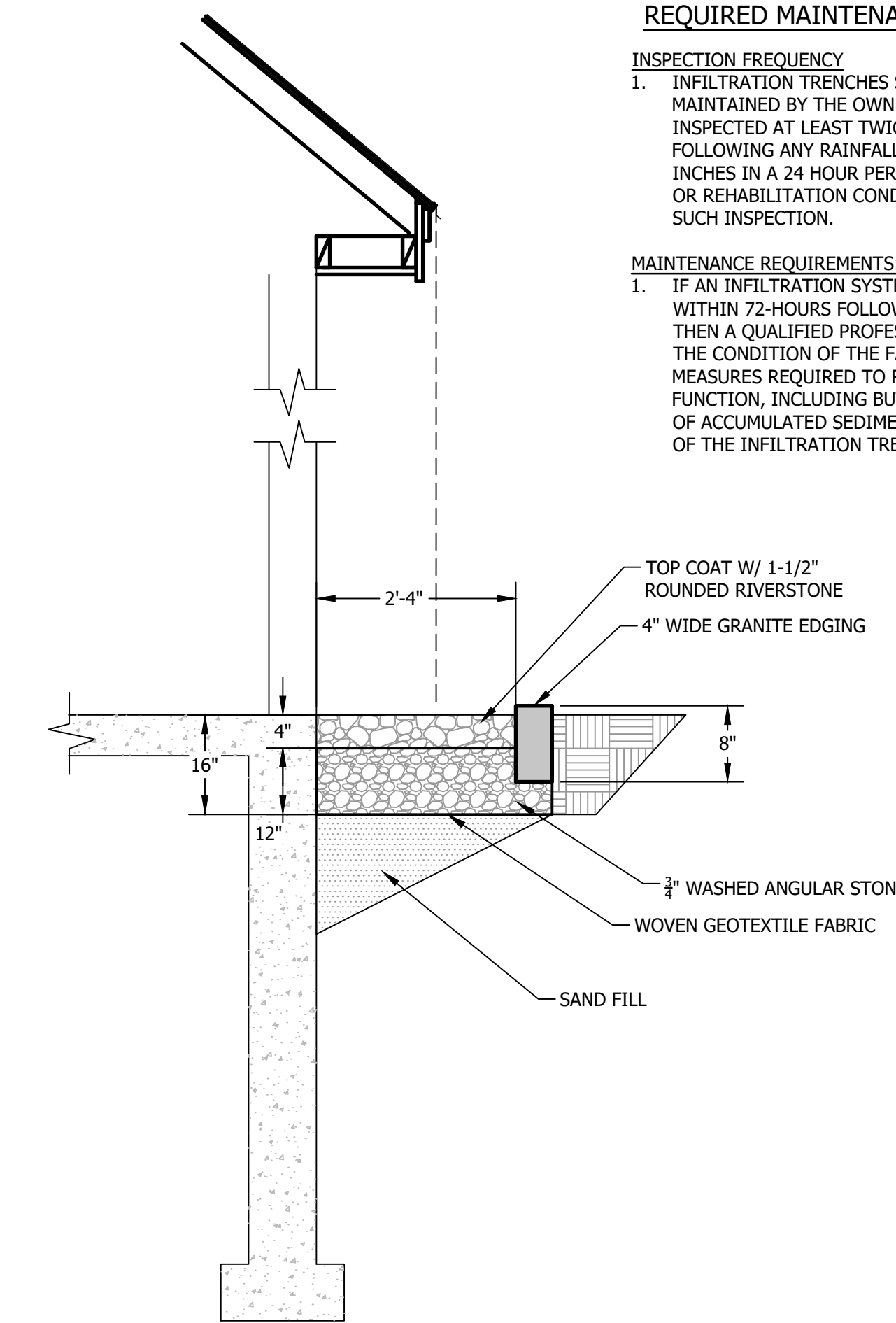
PROJECT #:
20863
DRAWN BY:
CEW
ARCHIVE #:
H-____
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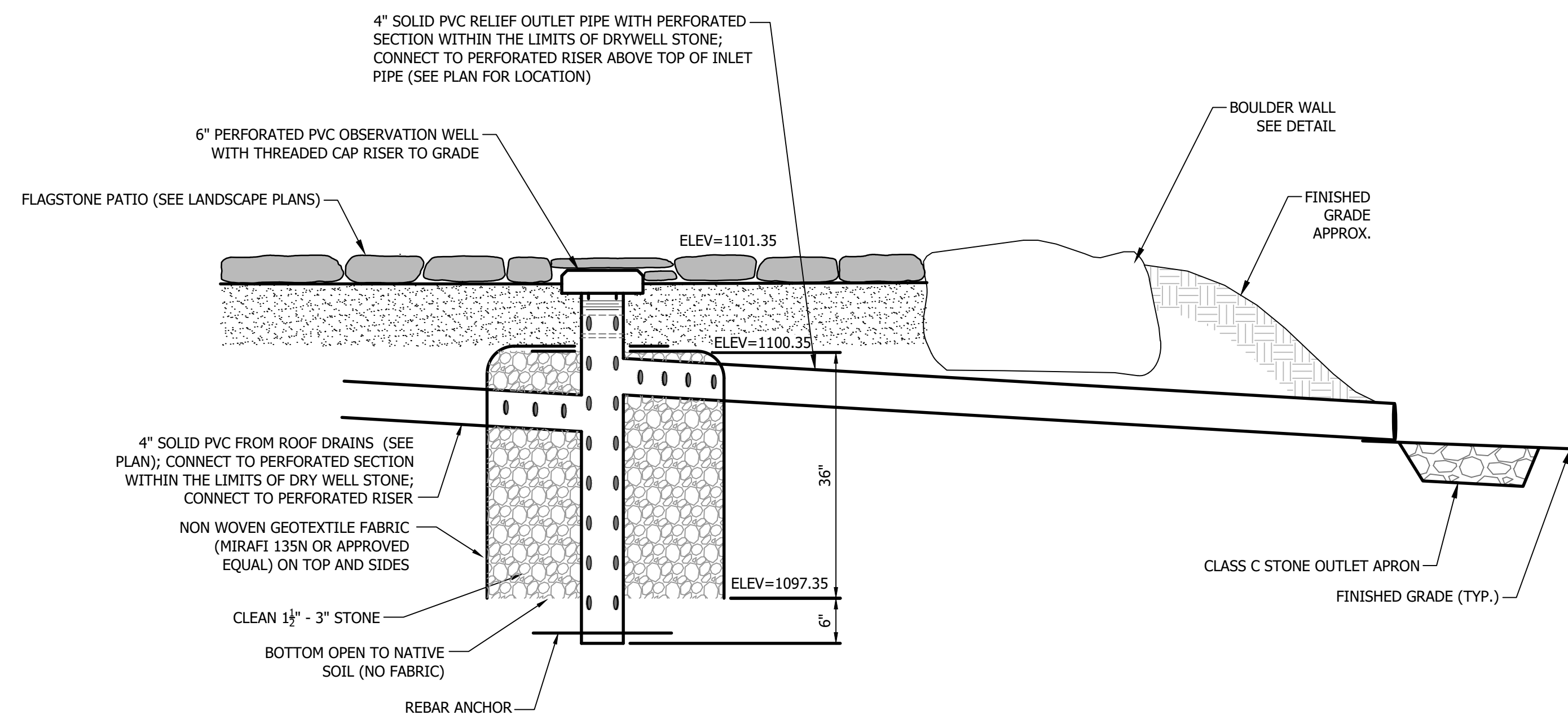
**STONE DRIP EDGE
REQUIRED MAINTENANCE NOTES**

INSPECTION FREQUENCY
1. INFILTRATION TRENCHES SHALL BE REGULARLY MAINTAINED BY THE OWNER. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.

MAINTENANCE REQUIREMENTS:
1. IF AN INFILTRATION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE INFILTRATION TRENCH.

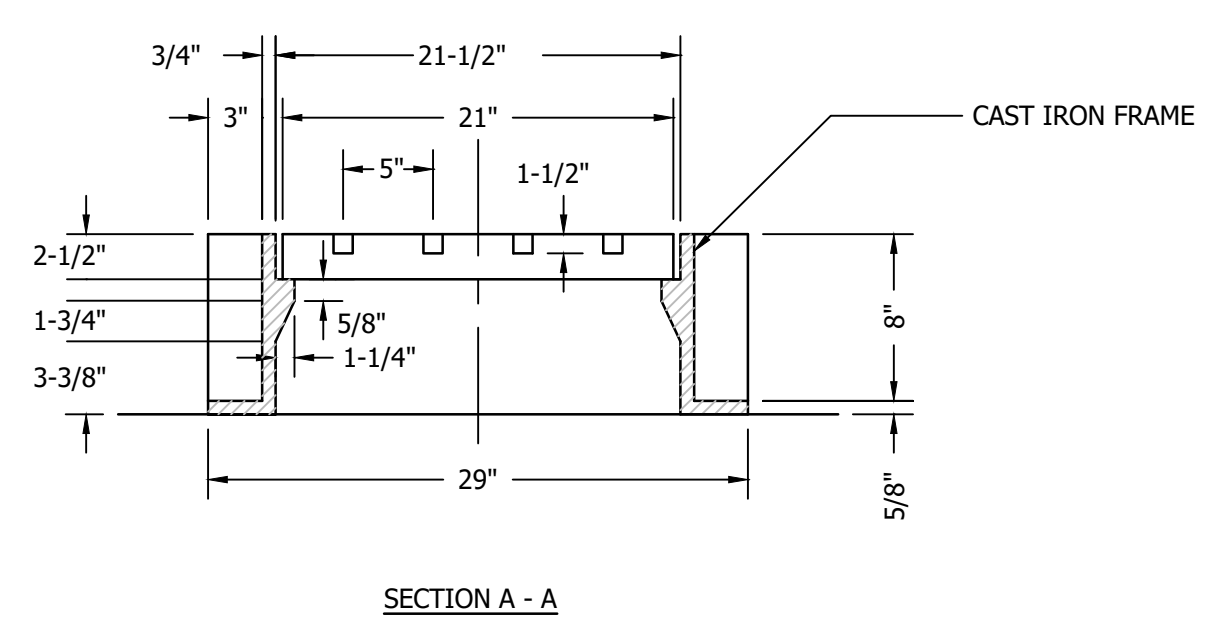
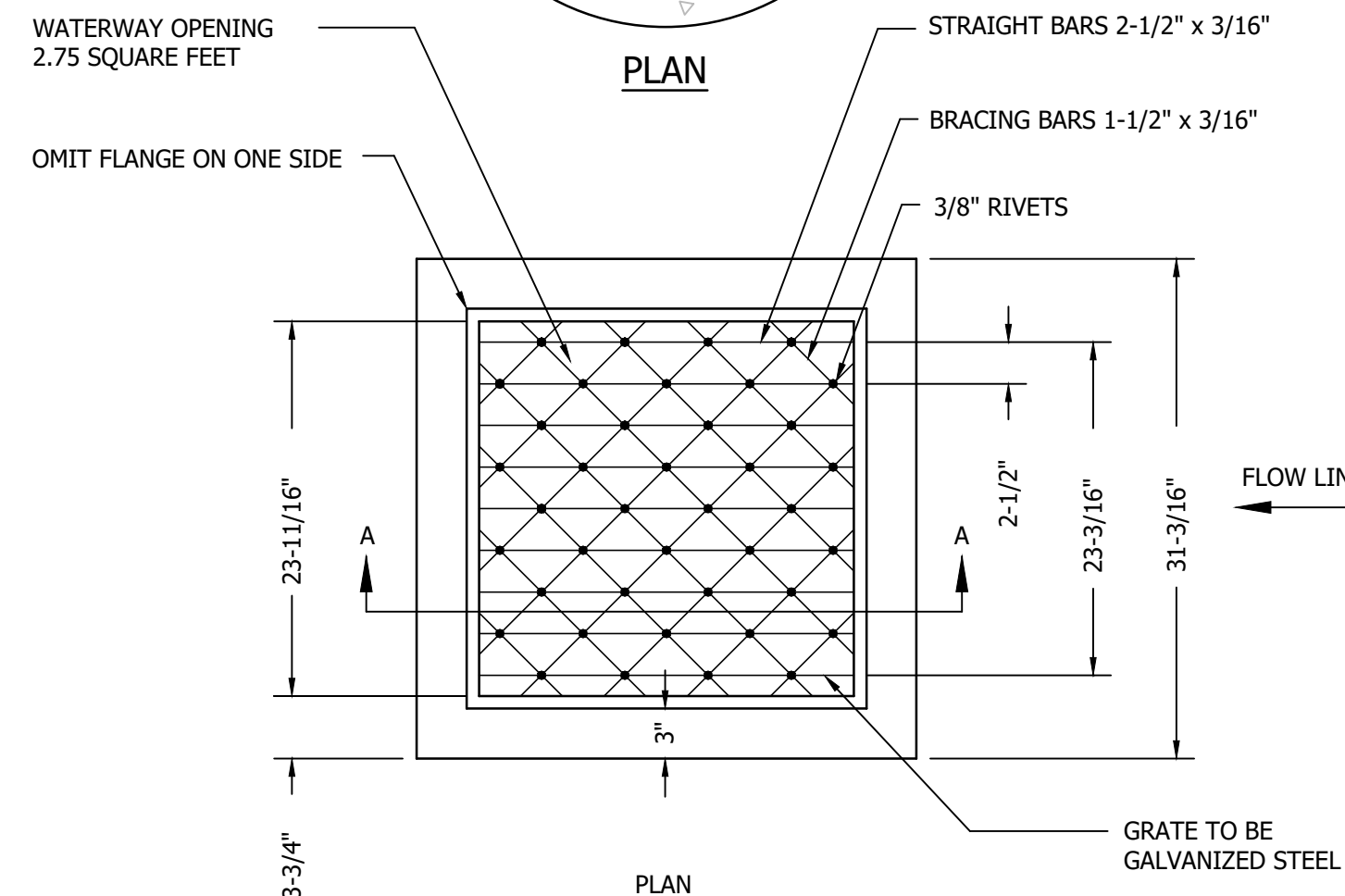
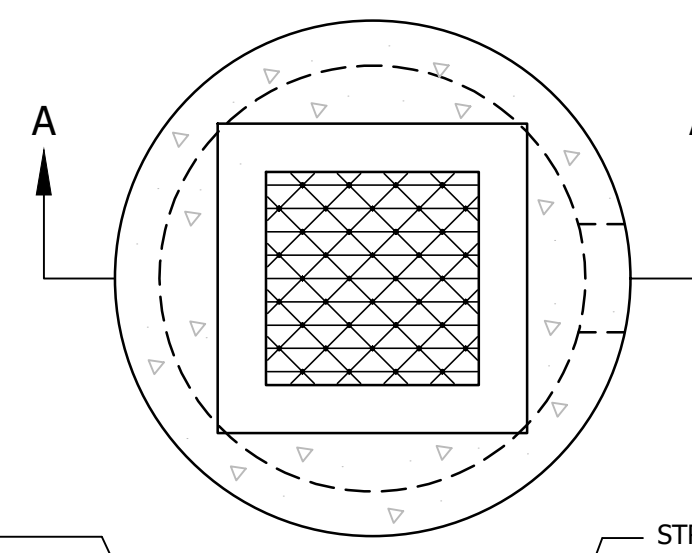


STONE INFILTRATION DRIP EDGE DETAIL
NOT TO SCALE



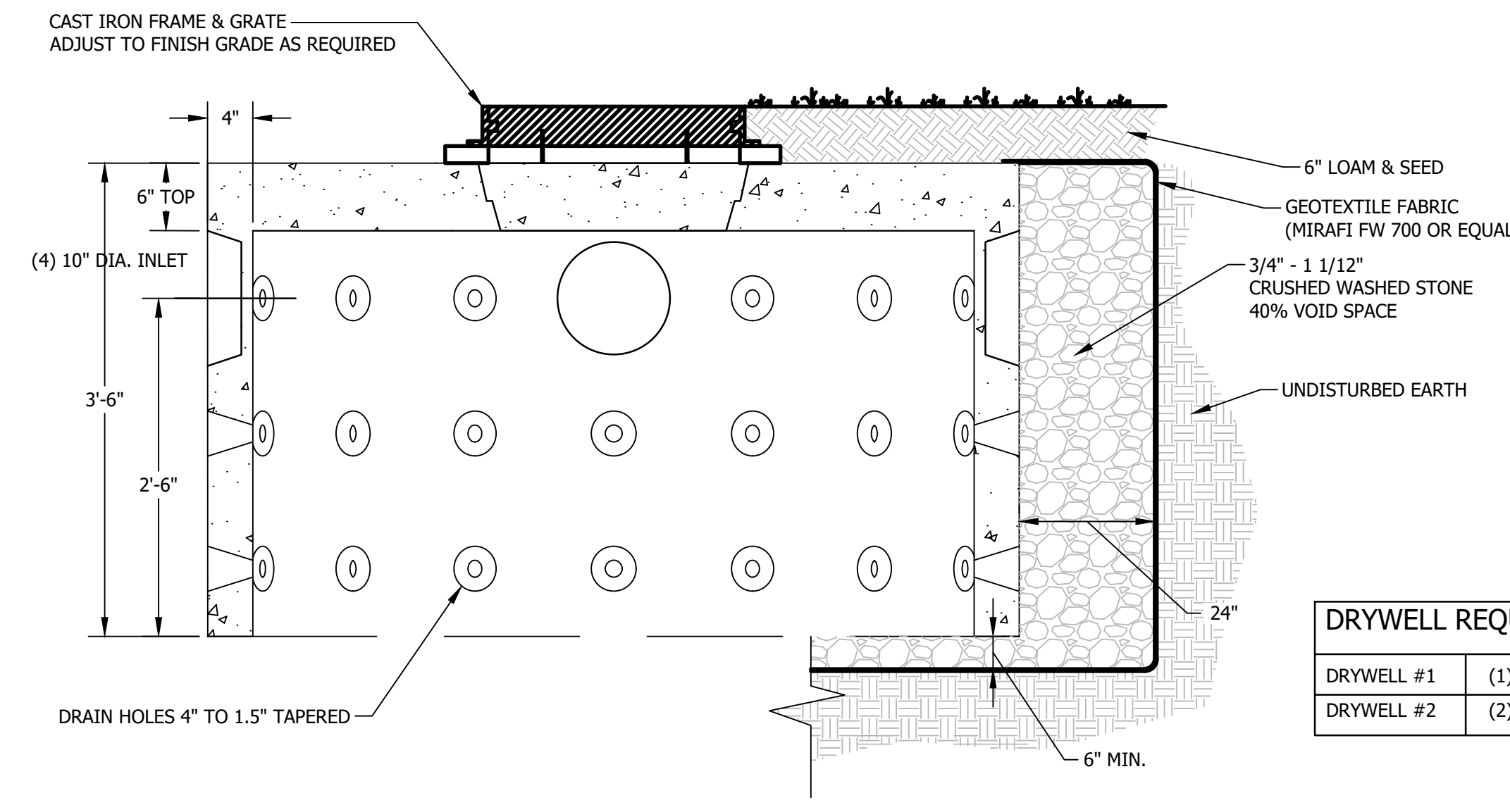
- NOTES:**
1. SEE PLAN FOR SIZE AND LOCATION OF DRYWELL.
 2. PLACE ONE OBSERVATION WELL IN THE CENTER OF THE DRYWELL.

STONE DRY WELL DETAIL
NOT TO SCALE



TYPE "B" GRATE DETAIL
NOT TO SCALE

REFERENCE:
NH DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
PLATE 2 OF STANDARD NO. 3



DRYWELL REQUIREMENTS	
DRYWELL #1	(1) CYLINDRICAL SECTION REQ'D
DRYWELL #2	(2) CYLINDRICAL SECTIONS REQ'D

NOTES:

1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. ALSO AVAILABLE IN AASHTO HS-20 LOADING
3. CAPACITY INCREASING IN INCREMENTS OF 500 GALLONS FOR EVERY 3' SECTION ADDED.

DRYWELL CYLINDRICAL 500 GALLON STACKABLE
NOT TO SCALE
SOURCE: SHEA CONCRETE PRODUCTS (NOTTINGHAM, NH) - ITEM NO. MDWH

LITTLETON NH • NEWPORT VT
NEW LONDON NH • POMFRET VT • KENNEBUNK ME

**MR. PAUL & MS. CARRIE
ELIZABETH SOHIGIAN**

217 OWLS NEST ROAD
NEW LONDON, NEW HAMPSHIRE

DETAILS			
NO.	DATE	REVISION DESCRIPTION	ENG DWG

DATE: APRIL 2021	PROJECT #: 20863
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CHECK'D BY: WTD	ARCHIVE #: H-___
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STONE SPECIFICATIONS

2.1 MATERIALS - STONE FILL

A. MATERIALS SHALL MEET THE REQUIREMENTS OF SECTION 585, STONE FILL, NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (NHS) FOR THE APPROPRIATE ITEM AS INDICATED ON THE DRAWINGS.

B. STONE FOR STONE FILL SHALL BE APPROVED QUARRY STONE, OR BROKEN ROCK OF A HARD, SOUND, AND DURABLE QUALITY. THE STONES AND SPALLS SHALL BE SO GRADED AS TO PRODUCE A DENSE FILL WITH A MINIMUM OF VOIDS.

1. **CLASS A STONE** SHALL BE IRREGULAR IN SHAPE WITH APPROXIMATELY 50 % OF THE MASS HAVING A MINIMUM VOLUME OF 12 CUBIC FEET, APPROXIMATELY 30 % OF THE MASS RANGING BETWEEN 3 AND 12 CUBIC FEET, APPROXIMATELY 10 % OF THE MASS RANGING BETWEEN 1 AND 3 CUBIC FEET, AND THE REMAINDER OF THE MASS COMPOSED OF SPALLS.

2. **CLASS B STONE** SHALL BE IRREGULAR IN SHAPE WITH APPROXIMATELY 50 % OF THE MASS HAVING A MINIMUM VOLUME OF 3 CUBIC FEET, APPROXIMATELY 40 % OF THE MASS RANGING BETWEEN 1 AND 3 CUBIC FEET, AND THE REMAINDER OF THE MASS COMPOSED OF SPALLS.

3. **CLASS C STONE** SHALL CONSIST OF CLEAN, DURABLE FRAGMENTS OF LEDGE ROCK, OF UNIFORM QUALITY, REASONABLY FREE FROM THIN OR ELONGATED PIECES. THE STONE SHALL BE MADE FROM ROCK WHICH IS FREE FROM TOPSOIL AND OTHER ORGANIC MATERIAL. THE STONE SHALL BE GRADED AS FOLLOWS:

SIEVE SIZE	PERCENTAGE PASSING BY WEIGHT
12 INCH	100
4 INCH	50-90
1-1/2 INCH	0-30
3/4 INCH	0-10

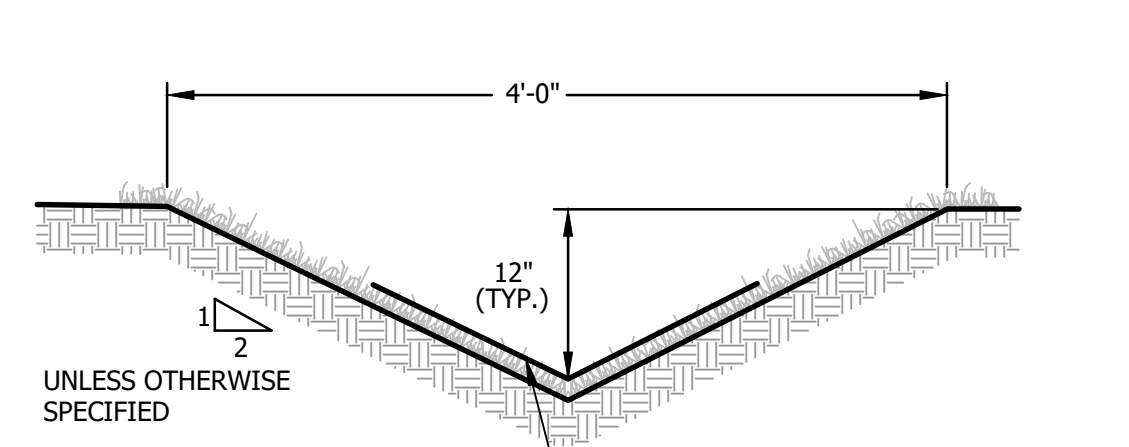
4. **CLASS D STONE** SHALL CONSIST OF CRUSHED STONE, GRAVEL, OR OTHER APPROVED INERT MATERIALS WITH SIMILAR CHARACTERISTICS OR COMBINATIONS THEREOF, HAVING HARD, STRONG, DURABLE PARTICLES, FREE FROM SURFACE COATING AND INJURIOUS AMOUNTS OF SOFT, FRIABLE, OR LAMINATED PIECES, AND FREE OF ALKALINE, ORGANIC, OR OTHER HARMFUL MATTER. THE STONE SHALL BE STANDARD STONE SIZE 467 (NO. 4 TO 1-1/2").

5. **EROSION STONE** SHALL BE IRREGULAR IN SHAPE WITH APPROXIMATELY 50% OF THE MASS HAVING A MINIMUM DIMENSION BETWEEN 6-INCHES AND 8-INCHES, APPROXIMATELY 40% OF THE MASS HAVING A MINIMUM DIMENSION BETWEEN 2-INCHES AND 6-INCHES AND THE REMAINDER OF THE MASS COMPOSED OF SPALLS.

6. **SPALLS** FOR FILLING VOIDS SHALL CONSIST OF A MIXTURE OF STONES OR ROCK FRAGMENTS AND PARTICLES WITH 95 TO 100% PASSING THE 3-INCH SIEVE AND 25 TO 70% PASSING THE NO. 4 SIEVE.

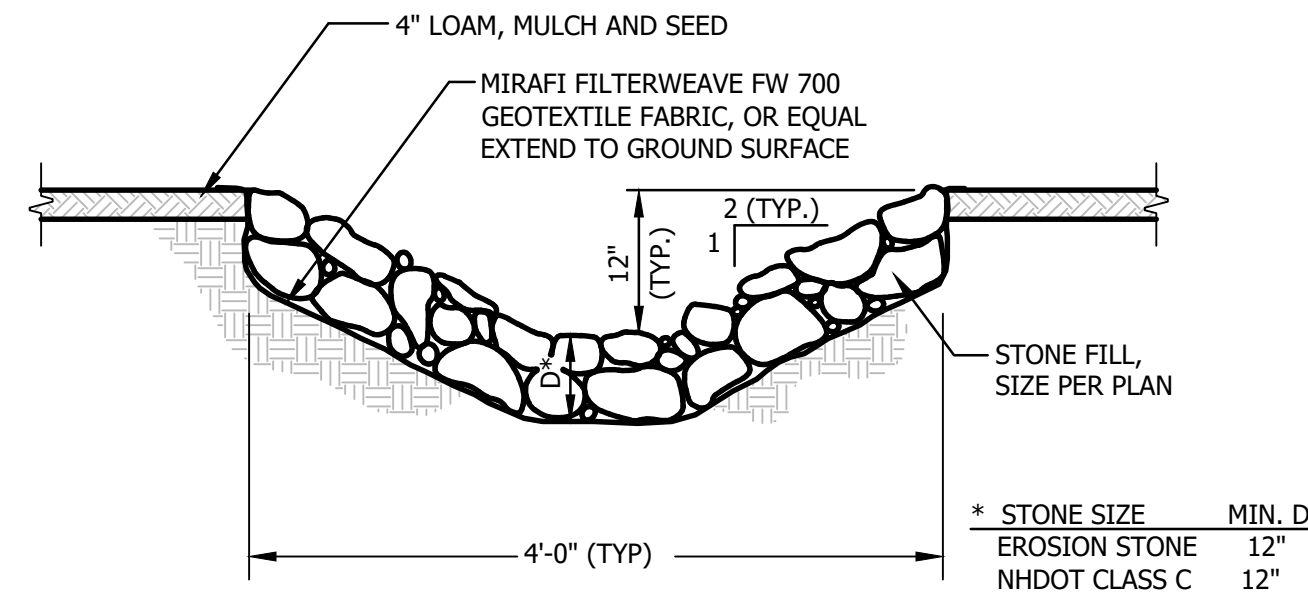
C. MINIMUM DEPTH OF STONE LAYER SHALL CONFORM TO THE FOLLOWING

STONE SIZE CLASS	MIN. DEPTH
EROSION STONE	12"
CLASS C	12"
CLASS B	18"
CLASS A	30"



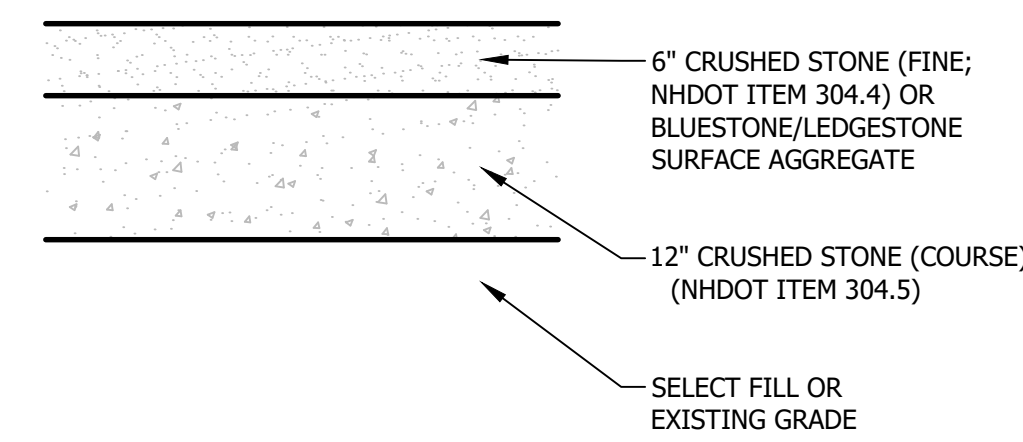
GRASS LINED DITCH DETAIL

NOT TO SCALE



STONE LINED DITCH DETAIL

NOT TO SCALE



TYPICAL GRAVEL SECTION

NOT TO SCALE

ROCK SIZE DESIGNATION

WALL HEIGHT	A	B	C	D
≤ 2'-0"	2	1	-	-
≤ 4'-0"	2	1	1	-
≤ 6'-0"	3	2	1	-
≤ 8'-0"	3	2	2	1

NOTE: NUMBER IN TABLE IS EQUAL TO ROCK SIZE

ROCK SIZE

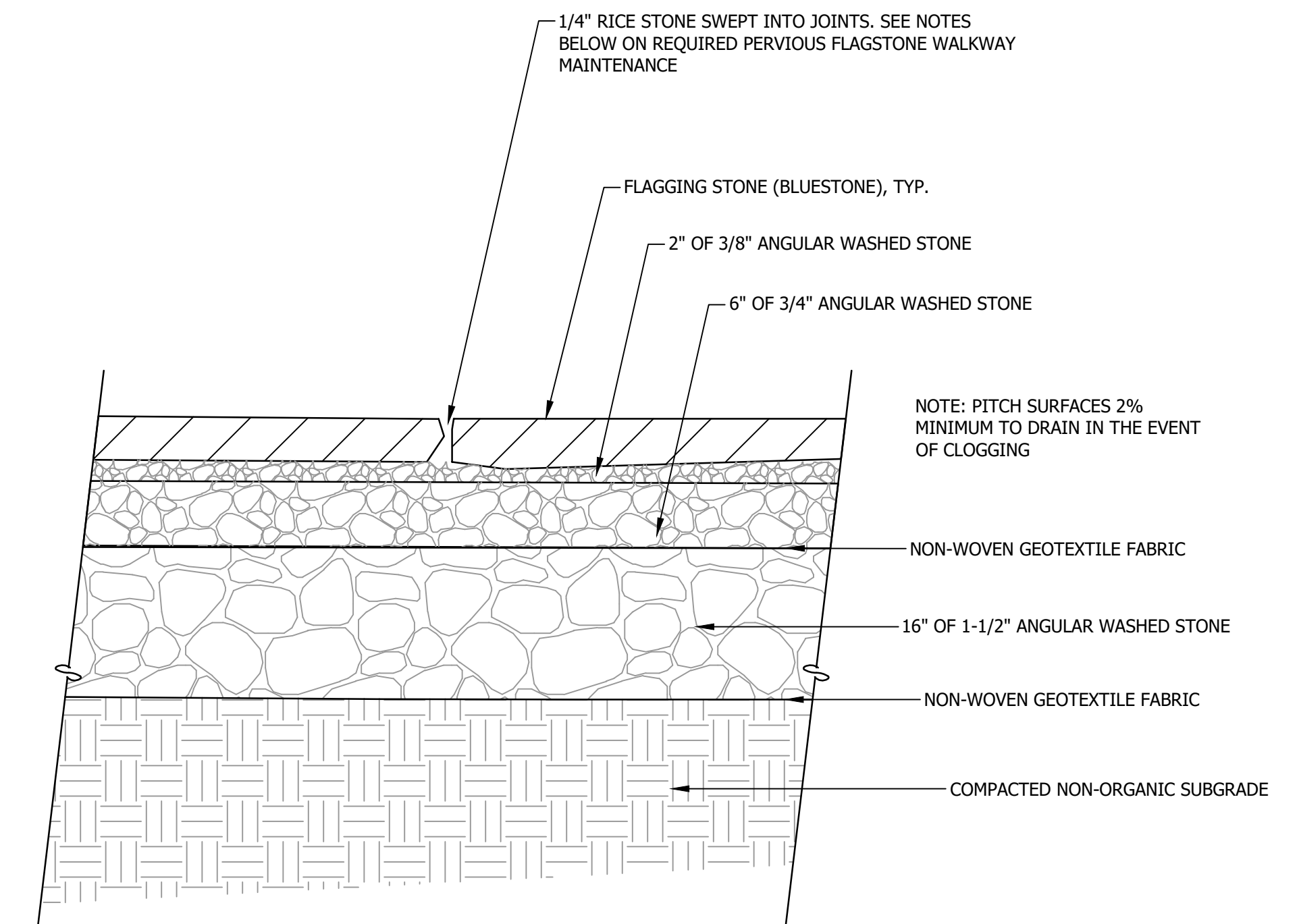
ROCK SIZE	ROCK WEIGHT (LB)	AVERAGE ROCK DIAMETER (FT)
1	200 - 600	1.5 - 2.5
2	600 - 2000	2.5 - 3
3	2000 - 4000	3 - 4

ROCKERY WALL NOTES

- THE WALL DETAIL(S) DEPICTED ON THESE PLANS ARE CONCEPTUAL. SITE SPECIFIC DESIGN SHOULD BE COMPLETED BY A GEOTECHNICAL ENGINEER BASED ON SITE SPECIFIC SOIL AND GROUNDWATER CONDITIONS AT THE WALL LOCATIONS.
- WALL CONSTRUCTION AND INSPECTION SHOULD BE COMPLETED IN ACCORDANCE WITH ROCKERY DESIGN AND CONSTRUCTION GUIDELINES, FHWA-CFL/TD-06-006, NOVEMBER 2006.
- EXCAVATIONS SHALL BE EXTENDED TO AT LEAST 2.5 FEET BELOW FINISH GRADE TO ALLOW FOR WALL EMBEDMENT AND LEVELING COURSE. THE BASE OF THE EXCAVATION SHALL BE INCLINED BACK AWAY FROM THE FACE OF THE ROCKERY, AT 5 PERCENT.
- ROCKS SHOULD BE PLACED IN ROWS SUCH THAT BASE ROCKS CONSIST OF LARGEST DIAMETER AND WEIGHT ROCKS AND EACH SUCCEEDING ROW CONSISTS OF SMALLER DIAMETER ROCKS. BASE ROCKS SHALL BE EQUAL TO ABOUT 1/2 THE WALL HEIGHT AND NOT LESS THAN 4 FEET IN DIAMETER. CAP ROCKS SHALL BE EQUAL TO ABOUT 1/3 THE WALL HEIGHT AND NOT LESS THAN 19 INCHES IN DIAMETER.
- ROCKS SHALL BE HARD, ANGULAR AND DURABLE. THEY MUST BE ABLE TO RESIST PHYSICAL, CLIMATIC, AND CHEMICAL DECOMPOSITION. ROCKS SHOULD BE ROUGHLY RECTANGULAR, TABULAR OR CUBIC IN SHAPE. ROUNDED COBBLES OR BOULDERS MUST NOT BE USED.
- ROCKS SHOULD BE PLACED WITH LONGEST DIMENSION PERPENDICULAR TO ROCKERY FACE. THE ROCKS SHOULD BE PLACED SUCH THAT THEY SLOPE DOWNWARD AT LEAST 5 PERCENT TOWARDS THE BACK OF THE ROCKERY.
- THE ROCKERY FACE BATTER SHOULD BE 4V:1H OR FLATTER.
 - EACH ROCK SHOULD BEAR ON AT LEAST TWO OTHER ROCKS.
 - EACH ROCK SHOULD HAVE AT LEAST THREE BEARING POINTS - TWO IN FRONT AND ONE IN BACK.
 - THE FRONT-MOST BEARING POINTS FOR EACH ROCK SHOULD BE WITHIN 150MM (6IN) OF THE AVERAGE FACE OF THE ROCKERY.
 - THE REAR OF THE ROCKS SHOULD BE ALIGNED ALONG AN IMAGINARY VERTICAL PLANE. IF ROCKS LARGER THAN THE MINIMUM SPECIFIED BASE WIDTH (B) ARE USED, THEY CAN EXTEND BEYOND THIS IMAGINARY PLANE PROVIDED THEY DO NOT INTERFERE WITH ROCKERY DRAINAGE OR REINFORCED ZONE.
- THERE SHOULD BE NO VERTICAL COLUMNS OF ROCK OR CONTINUOUS VERTICAL JOINTS BETWEEN MULTIPLE ROWS OF ROCKS.
- ROCK WIDTH SHALL BE LARGE ENOUGH TO EXTEND FROM THE FRONT FACE TO THE BACK OF THE ROCKERY AT EACH LEVEL.
- PLACE BASE, FACING AND CAP ROCKS SO THAT THEIR HEIGHT DIMENSION IS NOT GREATER THAN THEIR WIDTH. THE LONGEST DIMENSION OF THE BASE, FACING, AND CAP ROCKS IS PERPENDICULAR TO FACE OF ROCKERY.
- VOIDS BETWEEN ROCKS SHOULD BE AVOIDED AS MUCH AS POSSIBLE. HOWEVER, IN AREAS WHERE VOIDS EXIST, THE VOIDS SHALL BE CHINKED. CHINK ROCKS SHOULD CONSIST OF SPALLS FROM THE PARENT (FACING) ROCK. CHINK ROCKS SHOULD NOT BE MOVABLE BY HAND AND SHOULD BE GROUTED IN PLACE WHERE APPROPRIATE. CHINKING ROCKS SHOULD NOT BE USED AS A MEANS OF SUPPORT FOR OVERLYING FACING ROCKS.
- CAP ROCKS ARE THE TOP ROW OF FACING ROCKS FOR ROCKERIES. CAP ROCKS ARE TYPICALLY SMALLER AND FLATTER THAN THE OTHER FACING ROCKS USED IN THE ROCKERY. CAP ROCKS SHALL HAVE A WEIGHT OF AT LEAST 200 POUNDS. CAP ROCKS SHOULD NOT BE MOVABLE BY HAND. REGARDLESS OF SIZE, CAP ROCKS SHALL BE GROUTED IN PLACE TO REDUCE THE POTENTIAL FOR DISLODGING.
- CRUSHED ROCK SHOULD CONSIST OF CRUSHED, WASHED, HARD, DURABLE ROCK MEETING THE FOLLOWING GRADATION REQUIREMENTS:

CRUSHED ROCK	
SIEVE SIZE	PERCENT FINER BY WEIGHT
150MM (6IN)	100
100MM (4 IN)	0.0 - 25
19.0MM (3/4 IN)	0.0 - 15
4.75MM (NO. 4)	0.0 - 5.0
75MM (NO. 200)	0.0 - 2.0

- WHERE LOOSE, SOFT, OR OTHERWISE UNSUITABLE FOUNDATION SOIL CONDITIONS ARE ENCOUNTERED, CONTACT THE ENGINEER FOR SUPPLEMENTAL RECOMMENDATIONS.
- DISCHARGE OUTLET PIPES TO A PROTECTED OUTLET OR OTHER PERMANENT DRAINAGE STRUCTURE AT LOW POINTS IN THE ROCKERY. DRAIN OUTLETS SHOULD NOT EMPTY INTO STORM DRAINS THAT ARE DESIGNED TO BACK-UP DURING HEAVY FLOWS.
- STABILITY OF TEMPORARY CUT SLOPES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- DO NOT CONSTRUCT ROCKERIES OR SLOPES EXCEEDING THE HEIGHTS SHOWN ON THE PLAN.
- DO NOT CONSTRUCT ANY STRUCTURES OR BUILDINGS WITHIN 20' OF ROCKERY WALL.



PERVIOUS FLAGSTONE WALKWAY

DETAIL PREPARED BY BONIN ARCHITECTS

PERVIOUS FLAGSTONE WALKWAY REQUIRED MAINTENANCE NOTES

INSPECTION FREQUENCY

- PERVIOUS FLAGSTONE WALKWAY SHALL BE REGULARLY MAINTAINED BY THE OWNER. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY (PREFERABLY AFTER A STORM EVENT), DOCUMENTING THE GENERAL APPEARANCE WITH PHOTOGRAPHS AND/OR NOTES. MAINTENANCE OR REHABILITATION SHOULD BE CONDUCTED AS WARRANTED BY SUCH INSPECTION. TAKE NOTE OF ANY PERVIOUS FLAGSTONE WALKWAY MANUFACTURE SPECIFIC GUIDANCE CONTAINED IN THE PRODUCT INFORMATION.

MAINTENANCE REQUIREMENTS:

ROUTINE MAINTENANCE

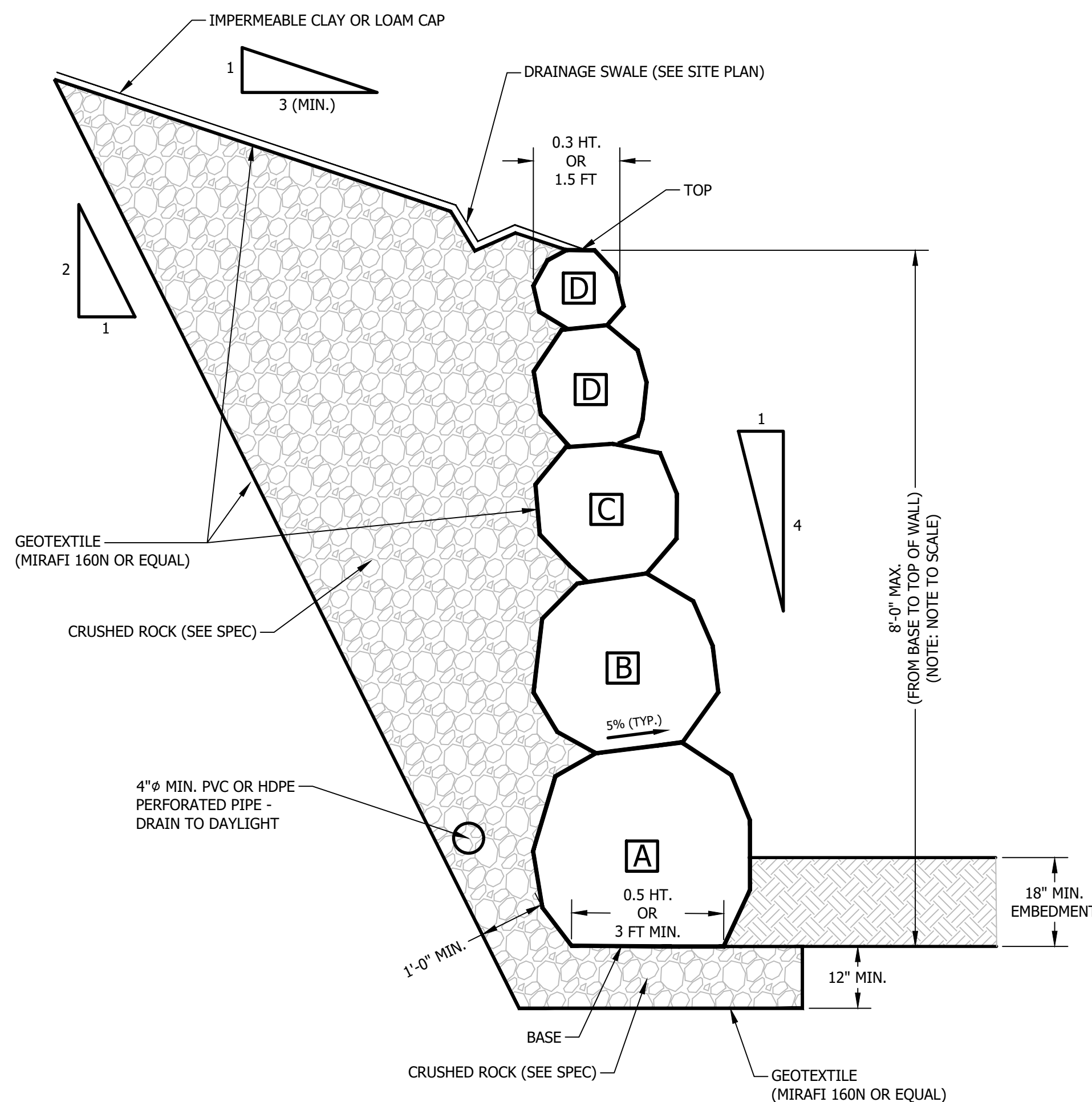
- INSPECT, AND IF NECESSARY, CLEAN THE SURFACE UTILIZING REGENERATIVE AIR EQUIPMENT TO REMOVE DEBRIS AND SEDIMENT IN THE SPRING & LATE FALL.
- REPAIR/REPLANT VEGETATIVE COVER FOR AREAS UP SLOPE AND SURROUNDING THE PERVIOUS FLAGSTONE WALKWAY AREA.
- REPLENISH AGGREGATE IN JOINTS IF DEPTH TO VOID COURSE AGGREGATE EXCEEDS 1/2" FROM FINISHED FLAGSTONE WALKWAY SURFACE.
- REPAIR DAMAGED, CRACKED, AND MISALIGNED FLAGSTONE TO ENSURE FREE DRAINING STRUCTURE.

REMEDIAL MAINTENANCE

- IF PERVIOUS FLAGSTONE WALKWAY SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO VACUUMING THE SURFACE TO REMOVE SEDIMENT JAMMED INTO JOINTS AND SOILED AGGREGATE. FOLLOWING VACUUMING, A CLEAN AGGREGATE VOID COURSE SHOULD BE INSTALLED.

WINTER MAINTENANCE

- AVOID THE USE OF WINTER SAND FOR TRACTION; IF USED, REMOVE WITH REGENERATIVE AIR CLEANING EQUIPMENT IN THE SPRING (REGENERATIVE EQUIPMENT SHOULD NOT EVACUATE VOID COURSE AGGREGATE MATERIAL)
- REMOVE SNOW WITH STANDARD PLOW/SNOW BLOWING EQUIPMENT WITH SNOW STORAGE AREAS OUTSIDE OF THE PERVIOUS FLAGSTONE WALKWAY STRUCTURE.
- ANTI-ICING MATERIALS SUCH AS SODIUM CHLORIDE AND CALCIUM CHLORIDE CAN BE APPLIED BUT USED SPARINGLY AS TO PROTECT WATER QUALITY.



ROCKERY WALL DETAIL

(NOTE: NOT TO SCALE)

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217 OWLS NEST ROAD

NEW LONDON, NEW HAMPSHIRE

DETAILS

NO.	DATE	REVISION DESCRIPTION	ENG	DWG
1	06/2021	SHORELAND CORRESPONDENCE 6/7/21 REV	CEW	CEW

DATE:	PROJECT #:
APRIL 2021	20863
ENG'ND BY:	DRAWN BY:
WTD	CEW
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WTD	H-___

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