

**TOWN OF ENFIELD, NH
BRIDGE CONSTRUCTION PROJECT**

**OAK HILL ROAD OVER MEADOW BROOK
TOWN OF ENFIELD, NEW HAMPSHIRE**

PREPARED FOR OWNER:

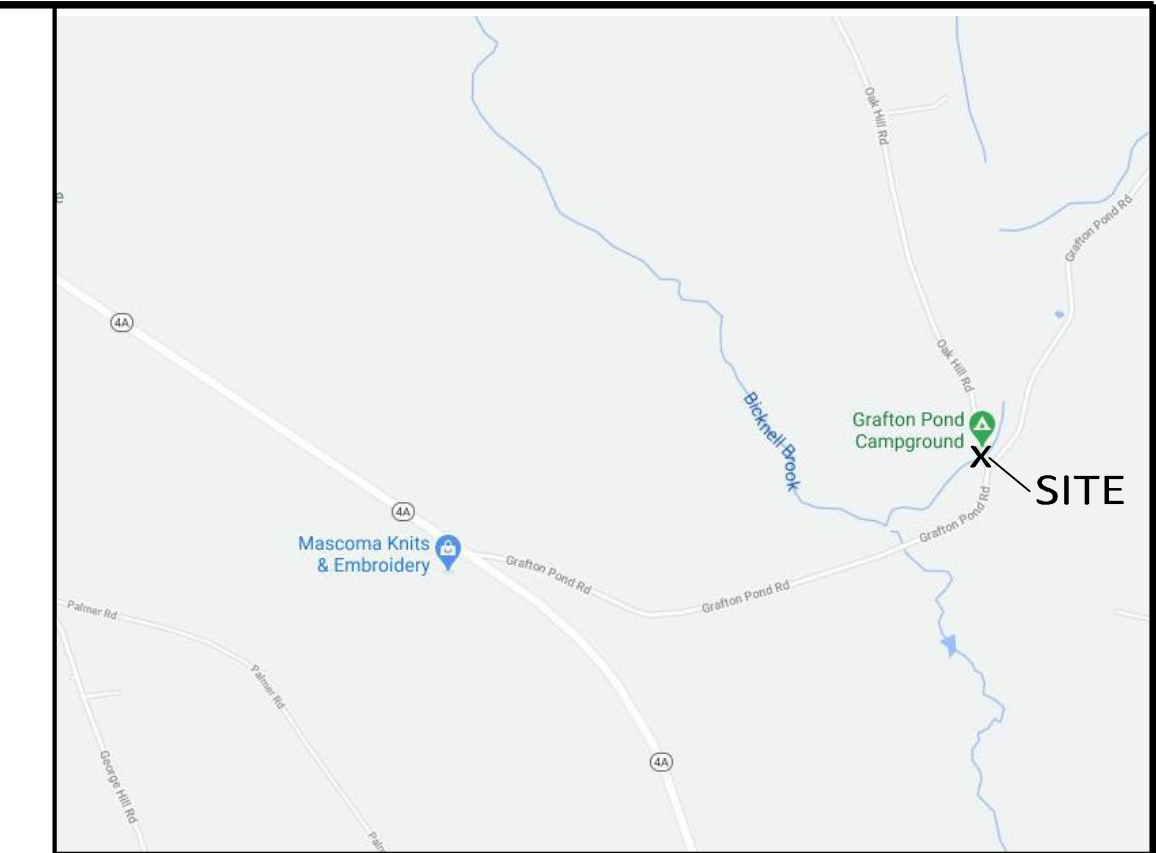
Town of Enfield
Department of Public Works
Jim Taylor, Director
74 Lockehaven Road
P.O. Box 373
Enfield, NH 03748
(603) 632-4605
jtaylor@enfield.nh.us

PREPARED BY ENGINEER:

Right Angle Engineering, PLLC
Erin Darrow, P.E., C.P.E.S.C.
152 Main Street
New London, NH 03257
(603) 526-2807 Office
(603) 443-7815 Mobile
Erin@RightAngle.Engineering

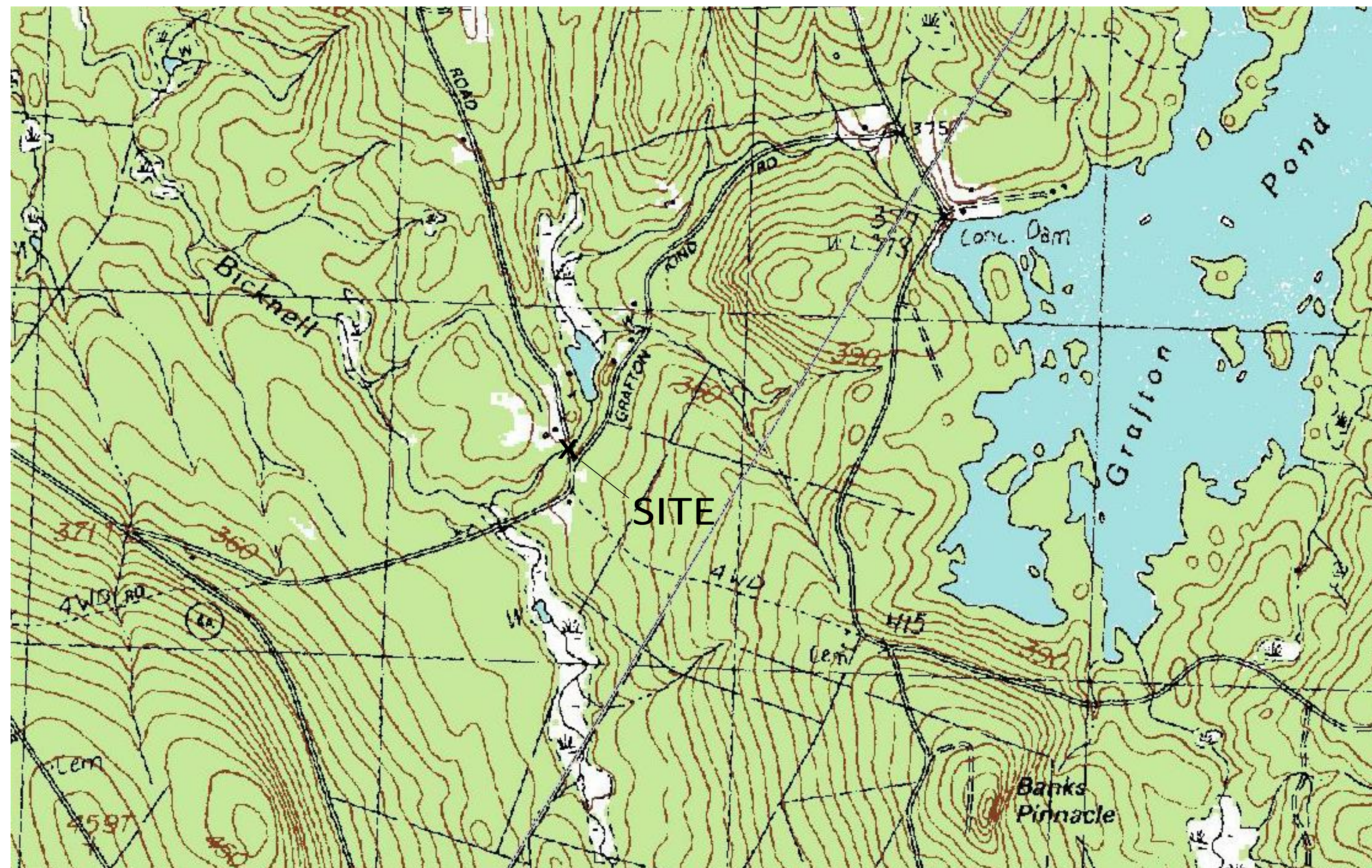
SURVEYOR:
Cardigan Mountain Land Surveys, LLC
Scott Sanborn, L.L.S.
32 Peaslee Road
Orange, NH 03741
(603) 523-7535
scott.sanborn@cardigansurveys.com

WETLANDS SCIENTIST:
Beaver Tracks, LLC
Jonathan Sisson, C.W.S., C.S.S.
408 Randolph Hill Road
Randolph, NH 03593
(603) 313-4925
beavertrackslc@yahoo.com



SITE LOCATION MAP
NOT-TO-SCALE

JANUARY 18, 2022



PLANSET CONTENTS:

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GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK SHOWN ON THE DRAWINGS, UNLESS OTHERWISE NOTED. THE CONTRATOR SHALL PROVIDE AND INSTALL ALL MATERIALS REQUIRED TO COMPLETE PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR REPORTING CONDITIONS IDENTIFIED ON-SITE THAT IMPACT THE PHASING, IMPLEMENTATION, FINAL CONDITIONS, AND/OR OVERALL CONSTRUCTION OF THIS PROJECT.
3. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITES, MATERIALS STORAGE, AND EQUIPMENT STAGING AREAS WITH THE ENGINEER.
4. NHDOT ITEM 692, MOBILIZATION, SHALL INCLUDE THE DESIGN, CONSTRUCTION, AINTENANCE, REMOVAL, AND RESTORATION OF THE SITE AREA FOR CONSTRUCTION.
5. ALL DISTURBED AREAS WITHIN PROJECT LIMITS NOT COVERED BY HARD SURFACES, LANDSCAPING, OR STORMWATER TREATMENT SHALL BE FINISHED WITH 4" OF LOAM (NHDOT ITEM 641) AND TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS (NHDOT ITEM 646.31).
6. SITE SECURITY AND JOB SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
7. THE CONTRACTOR SHALL PROVIDE SUBMITTALS (GRADATIONS, PROCTORS, PRODUCT DATA, ETC.) FOR ALL MATERIALS TO BE INCORPORATED INTO THE WORK.
8. THE ENGINEER SHALL HAVE FULL ACCESS TO THE SITE WHEN THE WORK IS IN PREPARATION AND PROGRESS. THEY MAY OBSERVE THE WORK ON A PERIODIC OR FULL-TIME BASIS.
9. THE CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION SCHEDULE TO THE ENGINEER PRIOR TO CONSTRUCTION.
10. ENGINEER SHALL BE NOTIFIED OF ANY DESIGN CHANGES. NO CHANGES SHALL BE MADE TO THE SITE PLAN WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
11. ALL MATERIALS SHALL CONFORM TO THE MOST RECENT SPECIFICATION OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORATION UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ALL DAMAGES CAUSED DURING CONSTRUCTION.
13. THE CONTRACTOR IS RESPONSIBLE TO RESTORATION TO ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK TO PRE-CONSTRUCTION CONDITIONS.
14. FINAL RESOLUTION TO CONFLICTS WITHIN THE SPECIFICATIONS OR ANY SUBSTITUTIONS SHALL BE DETERMINED BY THE ENGINEER.
15. THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING PROPERTY CORNER, MONUMENT, SURVEY MARKER, OR BENCHMARK WITHOUT FIRST MAKING PROVISIONS FOR ITS REPLACEMENT OR RELOCATION.
16. ALL TESTING SHALL BE ORDERED BY THE ENGINEER AND COORDINATED BY THE CONTRACTOR IN ACCORDANCE WITH NHDOT, AASHTO, AND THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL GIVE THE ENGINEER 48 HOURS ADVANCE NOTICE PRIOR TO PLACING MATERIALS REQUIRING TESTING.
17. CONCRETE AND SOIL TESTING IS TO BE PERFORMED BY A QUALIFIED PERSON OR FIRM APPROVED BY THE ENGINEER. A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE PROVIDED IN ADVANCE OF ANY CONCRETE POURS, UNLESS OTHERWISE APPROVED BY ENGINEER.
18. DETERMINATION OF MAXIMUM DENSITIES FOR SAND AND GRAVELS ARE THE RESPONSIBILITY OF THE CONTRACTOR. PROCTOR TESTS ORDERED BY THE ENGINEER SHALL BE SAMPLED AND PERFORMED BY AN INDEPENDENT TESTING LABORATORY, OBSERVED BY THE ENGINEER.
19. BRIDGE AND SITE LAYOUT ARE SUBSIDIARY AND ARE THE RESPONSIBILITY OF THE CONTRACTOR, AND SUBJECT TO VERIFICATION BY ENGINEER AND SURVEYOR.
20. BASE PLAN INFORMATION BASED ON DATA COLLECTED BY CARDIGAN MOUNTAIN LAND SURVEY, LLC, SCOTT SANBORN, LLS.

CONSTRUCTION SEQUENCE NOTES:

1. INSTALL SEDIMENT AND EROSION CONTROL FACILITIES. ALL PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
2. ALL SEDIMENT AND EROSION CONTROL SHALL BE IN ACCORDANCE WITH NEW HAMPSHRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES) BEST MANAGEMENT PRACTICES, AND ACCORDING TO THE CONDITIONS OF THE NHDES WETLANDS PERMIT.
3. INSPECT SITE REGULARLY TO ENSURE PROPER FUNCTION OF SEDIMENT AND EROSION CONTROLS. SITE SHALL BE INSPECTED WEEKLY, AT A MINIMUM, AND ALSO AFTER/DURING SEVERE STORM EVENT(S), AFTER/DURING ANY RAINFALL THAT EXCEEDS ½ INCH IN 24 HOURS.
4. TURBIDITY CONTROL AND/OR SEDIMENT CONTROL MEASURES SHALL BE INSTALLED DOWNGRADIENT FROM ALL IMPACTS.
5. REMOVE UNSUITABLE MATERIAL, VEGETATION AND LOOSE DEBRIS FROM THE AREA OF BRIDGE CONSTRUCTION.
6. REMOVE UNSUITABLE MATERIAL TO AN APPROPRIATE OFF-SITE LOCATION.
7. STOCKPILE MATERIAL TO BE RE-USED ONSITE AS APPLICABLE.
8. EXISTING CULVERT SHALL REMAIN IN-PLACE FOR THE CONSTRUCTION OF THE REPLACEMENT BRIDGE ABUMENTS, AND FOOTINGS. THEY SHALL ALSO REMAIN IN-PLACE WHEN THE MATERIAL IS EXCAVATED IN FRONT OF THE NEW ABUTMENTS AND THE RIP-RAP AND BIOCOVER IS USED TO PROVIDE THE NECESSARY SCOUR AND FROST PROTECTION FOR THE ABUTMENTS.
9. INSTALL COFFERDAM, AND PUMP TO A DES-COMPLIANT SEDIMENT BASIN, IF NECESSARY, FOR THE REMOVAL OF THE EXISTING CULVERTS AND PLACEMENT OF SIMULATED STREAM BED MATERIAL.
10. SIMULATED STREAM BED MATERIAL SHALL BE INSTALLED AT ELEVATION 1108 AND LOWER; RIPRAP SHALL BE COVERED WITH NON-WOVEN STABILIZATION MATTING AT ELEVATIONS HIGHER THAN 1108 AND SEEDED WITH THE NHDOT CONSERVATION SEEDING MIXTURE.
11. REMOVE EXISTING CULVERT AND HEADWALLS. EXCAVATE TO NATIVE MATERIAL BASE. IF NEEDED, INSTALL SIMULATED STREAM BED MATERIAL IN LOCATION OF EXISTING CULVERT TO RESTORE STREAM CHANNEL.
- INSTALL ABUTMENTS ON BOTH SIDES OF THE CULVERT.
9. REMOVE EXISTING CULVERT. REMOVAL OF THE CULVERT SHALL OCCUR "IN THE DRY," THE SITE AREA SHALL BE DEWATERED DURING THE CULVERT REMOVAL.
10. INSTALL SLOPE STABILIZATION ALONG THE ABUTMENTS.
11. INSTALL SIMULATED STREAM BED MATERIAL AS NEEDED.
12. INSTALL BRIDGE SUPERSTRUCTURE.
13. RECONSTRUCT ROADWAY.
14. RESTORE DISTURBED AREAS AS NEEDED.
15. REMOVE TURBIDITY, SEDIMENT AND EROSION CONTROL MEASURES UPON SITE STABILIZATION.
16. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF UTILITIES AND AVOIDING DAMAGE DURING CONSTRUCTION. DIGSAFE SHALL BE CONTACTED BY CONTRACTOR PRIOR TO COMMENCING EXCAVATION.

ENVIRONMENTAL NOTES:

1. THESE GUIDELINES DO NO RELIEVE THE CONTRACTOR FROM COMPLIANCE IWTH ANY CONTRACT PROVISIONS, OR APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
2. THIS PROJECT WILL BE SUBJECT TO THE US EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER CONSTRUCTION GENERAL PERMIT AS ADMINISTERED BY HE EPA. THIS PROJECT IS SUBJECT OT REQUIRMENTS IN THE MOST RECENT CONSTRUCTION GENERAL PERMIT (CGP).
3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NHDES WETLANDS PERMIT, THE US ARMY CORPS OF ENGINEERS PERMIT, WATER QUALITY CERTIFICATION AND THE SPECIAL ATTENTION ITEMS INCLUDED IN THE CONTRACT DOCUMENTS.
4. ALL STORM WATER, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NH STORMWATER MANUAL, VLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL COMPLY WITH RSA 485-A:17, AND ALL PUBLISHED NHDES REQUIREMENTS.

SEDIMENT AND EROSION CONTROL NOTES:

1. PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO EARTH DISTURBING ACTIVITES. PERIMETER CONTROLS AND STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AS SHOWN IN THE BMP MANUAL AND AS DIRECTED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARER.
2. EROSION, SEDIMENTATION CONTROL MEASURES AND INFILTRATION BASINS SHALL BE CLEANED, REPLACED AND AUGMENTED AS NECESSARY TO PREVENT SEDIMNETATION BEYOND PROJECT LIMITS THROUGHOUT THE PROJECT DURATION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT.
4. 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 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- (C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED;
- (D) TEMPORARY SLOPE STABILIZATION CONFORMING TO TABLE 1 HAS BEEN PROPERLY INSTALLED.
5. ALL STOCKPILES SHALL BE CONTAINED IWTH A PERIMETER CONTROL. IF THE STOCKPILE IS TO REMAIN UNDISTURBED FOR MORE THAN 14 DAYS, MULCHING WILL BE REQUIRED.
6. A WATER TRUCK SHALL BE AVAILABLE TO CONTROL EXCESSIVE DUST AT THE DIRECTION OF THE ENGINEER.
7. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEAURES SHALL REMAIN UNTIL THE AREA HAS BEEN PERMANENTLY STABILIZED.
8. CONSTRUCTION PERFORMED ANY TIME BETWEEN NOVEMENT 30 AND MAY 1 OF ANY YEAR SHALL BE CONSIDERED WINTER CONSTRUCTION AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
- (A) ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15 SHALL BE STABILIZED IN ACCORDANCE WITH TABLE 1.
- (B) 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 IWTH STONE OR IN ACCORDANCE WITH TABLE 1.
- (C) AFTER NOVEMBER 30, INCOMPLETE ROAD SURFACES, WHERE WORK HAS STOPPED FOR THE SEASON, SHALL BE PROTECTED ACCORDING IN ACCORDANCE WITH TABLE 1.
- (D) WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE PROJET IS WITHOUT STAABILIZATION A TONE TIME, UNLESS A WINTER CONSTRUCITON PLAN HAS BEEN APPROVED THT MEETS THE REQUIREMENTS OF ENV-WQ 1505.02 AND ENV-WQ 1505.05.
- (E) A SWPPP AMENDMENT SHALL BE SUBMITTED ADDRESSING COLD WEATHER STABILIZATION (ENV-WQ 1505) AND INCLUDING THE REQUIREMENTS OF NO LESS THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK SCHEDULED AFTER NOVEMBER 30.
9. PLAN ACTIVITIES TO ACCOUNT FOR SENSITIVE SITE CONDITIONS.
- (A) CLEARLY FLAG AREAS TO BE PROTECTED IN THE FIELD AND PROVIDE CONTRUCTION BARRIERS TO PREVENT TRAFFICKNG OUTSIDE OF WORK AREAS.
- (B) CONSTRUCTION SHALL BE SEQUENCED OT LIMIT THE DURATION AND AREA OF EXPOSED SOILS.
- (C) PROTECT AND MAXIMIZE EXISTING NATIVE VEGETATION AND NATURAL FOREST BUFFERS BETWEEN CONSTRUCTION ACTIVITY AND SENSITIVE AREAS.
- (D) WHEN WORK IS PERFORMD WITHIN 50 FEET OF SURFACE WATERS, PERIMETER CONTROL SHALL BE ENHANCED CONSISTENT IWTH SECION 2.1.2.1 OF THE NPDES CGP.
10. PROTECT SLOPES:
- (A) INTERCEPT AND DIVERT STORM RUNOFF FROM UPSLOPE DRAINAGE AREAS AWAY FROM UNPROTECTED AND NEWLY ESTABLISHED AREAS AND SLOPES TO A STABILIZED OUTLET OR CONVEYANCE.
- (B) CONSIDER HOW GROUNDWATER SEEPAGE ON CUT SLOPES MAY IMPACT SLOPE STABILITY AND INCORPORATE APPROPRIATE MEASURES TO MINIMIZE EROSION.
- (C) CONVEY STORMWATER DOWN THE SLOPE IN A STABILIZED CHANNEL OR SLOPE DRAIN.
- (D) THE OURTER FACE OF THE FILL SLOPE SHOULD BE IN A LOOSE RUFFLED CONDITIONS PRIOR TO TURF ESTABLISHMENT.
11. INSTALL AND MAINTAIN CONSTRUCTION EXITS ANYWHERE TRAFFIC LEAVEDS A CONSTRUCTION SITE ONTO A PUBLIC RIGHT-OF-WAY. SWEEP ALL CONSTRUCTION RELATED BEBRIS AND SOIL FROM THE ADJACENT PAVED ROADWAYS AS NECESSARY.
12. SOIL STABILIZATION:
- (A) WITHIN THREE DAYS OF THE LAST ACTIVITY IN AN AREA ALL EXPOSED SOILS AREAS WHERE CONTRUCTION ACTIVITES ARE COMPLETE, SHALL BE STABILIZED.
- (B) EROSION CONTROL SEED MIX SHALL BE SOWN IN ALL INACTIVE CONSTRUCTION AREAS THAT WILL NOT BE PERMANENTLY SEEDED WITHIN 2 WEEKS OF DISTURBANCE AND PRIOR TO SEPTEMBER 15 OF ANY GIVEN YEAR, IN ORDER TO ACHIEVE VEGETATIVE STABILIZAITON PRIOR TO THE END OF THE GROWING SEASON.
- (C) SOIL TACKIFIERS MAY BE APPLIED IN ACCORDANCE TO MANUFACTURER SPECIFICATIONS AN REAPPLIED AS NECESSARY TO MINIMIZE SOIL AND MULCH LOSS UNTIL PERMENTN VEGETATION IS ESTABLISHED.

TABLE 1
GUIDANCE ON SELECTING TEMPORARY SOIL STABILIZATION MEASURES

APPLICATION AREAS	DRY MULCH METHODS				HYDRAULICALLY APPLIED MULCHES				ROLLED EROSION CONTROL BLANKETS			
	HMT	WC	SG	CB	HM	SMM	BFM	FRM	SNSB	ONSB	ONSCB	ONCB
STEEPER THAN 2:1	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES
2:1 SLOPE	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES	YES	YES
3:1 SLOPE	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO
4:1 SLOPE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
WINTER STABILIZATION	4T/AC	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES
LOW FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
HIGH FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE
HMT	HAY MULCH & TACK	HM	HYDRAULIC MULCH	SNSB	SINGLE NET STRAW BLANKET
WC	WOOD CHIPS	SMM	STABILIZED MULCH MATRIX	DNSB	DOUBLE NET STRAW BLANKET
SG	STUMP GRINDINGS	BFM	BONDED FIBER MATRIX	DNSCB	2 NET STRAW COCONUT BLANKET
CB	COMPOST BLANKET	FRM	FIBER REINFORCED MEDIUM	DNCB	2 NET COCONUT BLANKET

NOTES:

1. ALL SLOPE STABILIZATION OPTIONS ASSUME A SLOPE LENGTH <10 TIMES THE HORIZONTAL DISTANCE OF THE SLOPE, IN FEET.
2. PRODUCTS CONTAINNG POLYACRLAMIDE (PAM) SHALL NOT BE APPLIED DIRECTLY TO OR WITHIN 10 FEET OF ANY SURFACE WATER.
3. ALL EROSION CONTROL BLANKETS SALL BE MADE WITH WILDLIFE FRIENDLY BIODEGRADABLE NETTING.
4. ALL MEASURES SHALL COMPLY WITH NHDES BEST MANAGEMENT PRACTICES AND NHDOT STANDARD SPECIFICATION REQUIREMENTS.

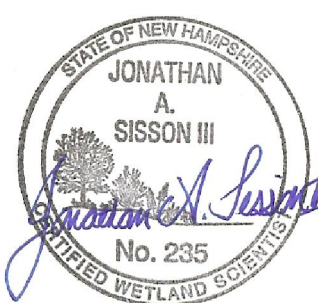
GENERAL UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION PROCEDURE. THERE ARE OVERHEAD POWER TRANSMISSION LINES AND OTHER UTILITIES WITH ROADWAY CROSSING AND LINES IN THE IMMEDIATE VICINITY OF THE BRIDGE. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, EXPECIALLY CRANES. CONTACT DIG-SAFE AT 1-888-DIG-SAFE.
2. ALL UTILITY INSTALLATIONS, INCLUDING THE LOCATION, SIZE, DEPTH, AND SPICIFICATION FOR CONSTRUCTION OF THE PROPOSED UTILITY SERVICES SHALL BE INSTALLED UNDER THE SUPERVISION OF AND COMPLYING WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE, ETC.)
3. DAMAGE TO ANY UTILITY BY THE CONTRACTOR SHALL BE REPORTED TO THE UTILITY COMPANY. REPAIR OF THE UTILITY SHALL BE PAID FOR BY THE CONTRACTOR.
4. PROPOSED UNDERGROUND UTILITY LINE LOCATION IS APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED IN THE FIELD AND WILL BE IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

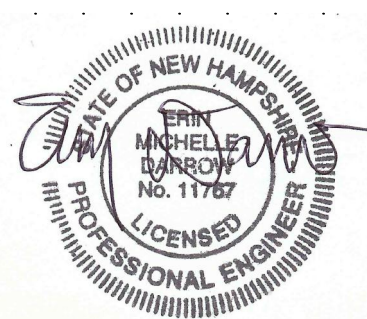
GEOTECHNICAL NOTES:

1. GEOTECHNICAL TESTING HAS NOT BEEN COMPLETED.
2. VERIFICATION OF GEOTECHNICAL SOIL CONDITIONS SHALL BE COMPLETED PRIOR TO POURING ABUTMENTS DURING CONSTRUCTION WORK BY A QUALIFIED GEOTECHNICAL ENGINEER.

2			
1			
NO.	DATE	DESCRIPTION	BY



WETLAND SCIENTIST:
Beaver Tracks, LLC
Jonathon Sisson, C.W.S., C.S.S.
408 Randolph Hill Road
Randolph, NH 03593
(603) 313-4925 phone
BeaverTracksLLC@yahoo.com



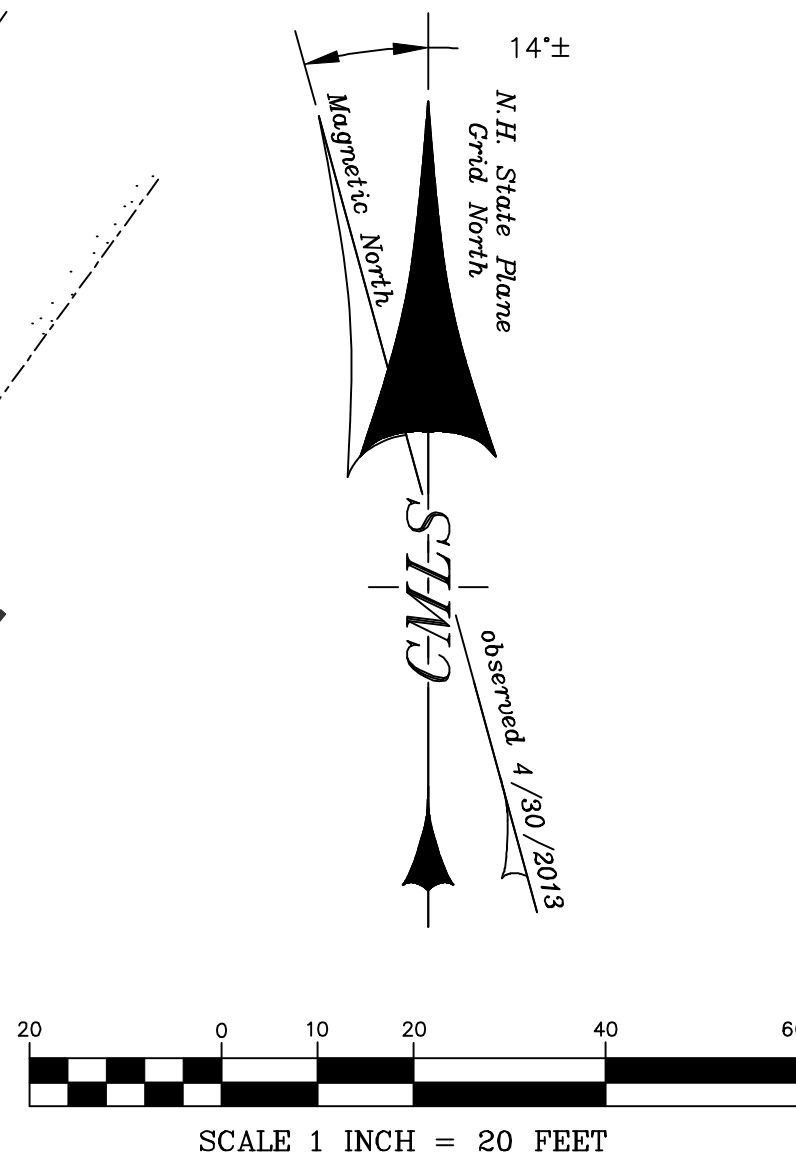
PREPARED BY ENGINEER:
Right Angle Engineering, PLLC
Erin Darrow, P.E.
152 Main Street
New London, NH 03257
(603) 526-2807 office
(603) 443-7815 mobile
(603) 523-8811 fax
Erin@RightAngle.Engineering

CONSTRUCTION DETAILS
CULVERT REMOVAL FOR BRIDGE INSTALLATION
OAK HILL ROAD OVER MEADOW BROOK
ENFIELD, NEW HAMPSHIRE

JANUARY 18, 2022

PREPARED FOR OWNER:
Town of Enfield, NH
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74 Lockehaven Road
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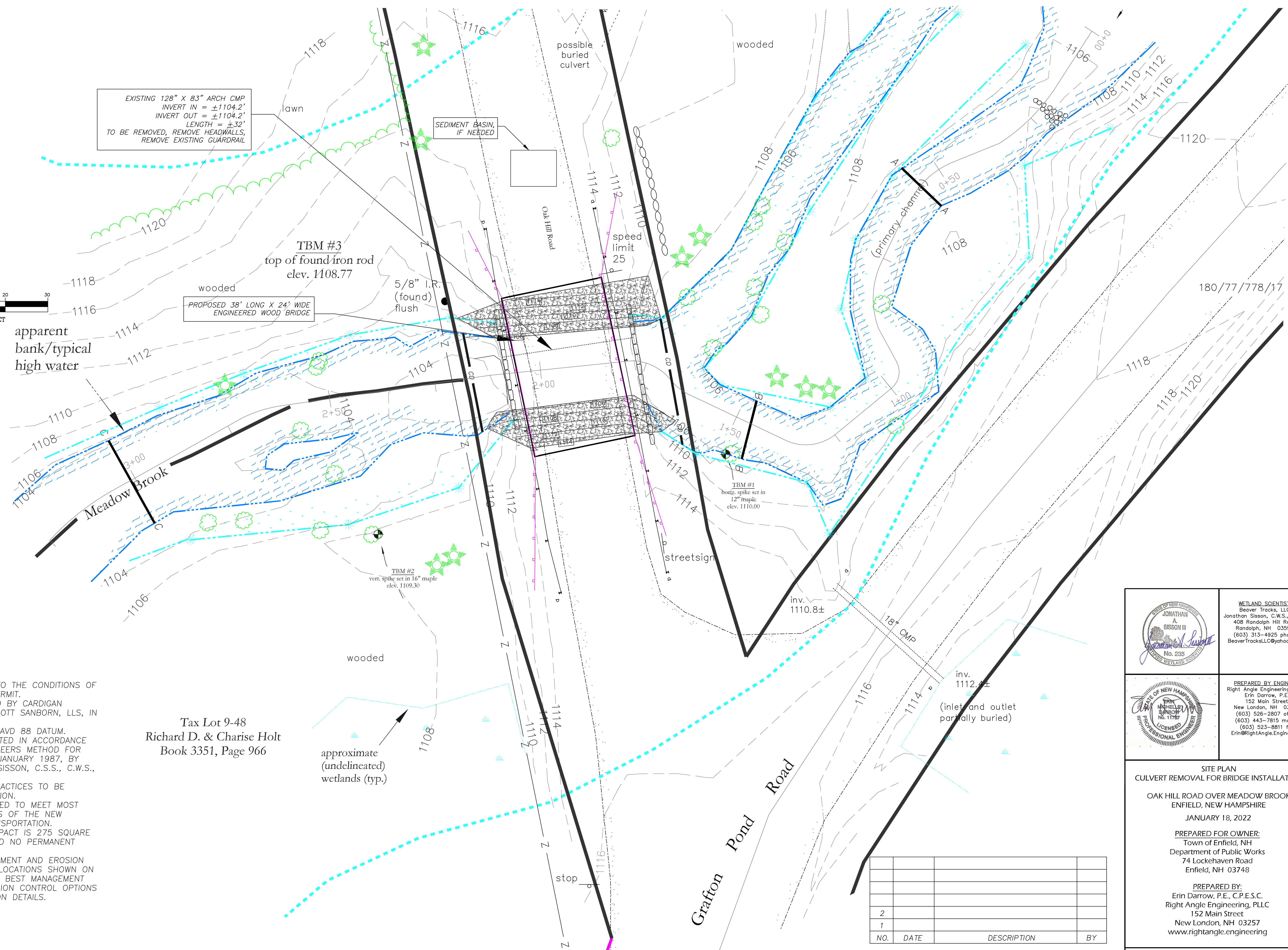
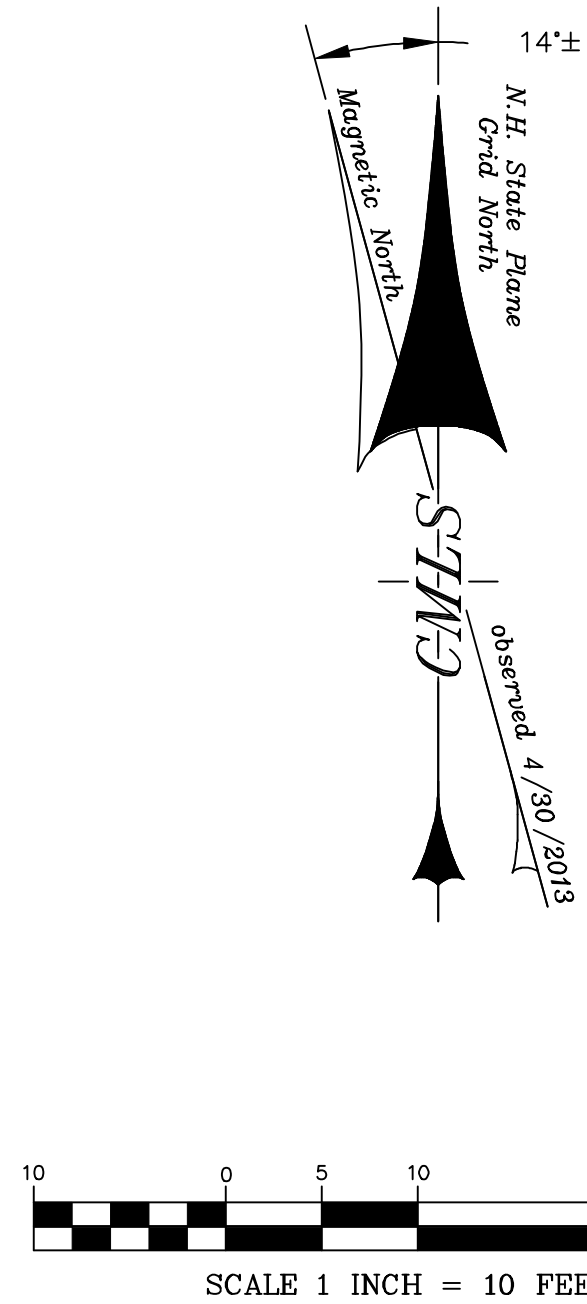


GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE CONDITIONS OF THE NHDES DREDGE AND FILL (WETLANDS) PERMIT.
2. SITE SURVEY DATA COLLECTED BY CARDIGAN MOUNTAIN LAND SURVEY, LLC, SCOTT SANBORN, LLS, IN DECEMBER 2019.
3. ELEVATIONS ARE BASED ON NAVD 88 DATUM.
4. ALL WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE ARMY CORPS OF ENGINEERS METHOD FOR THE DELINEATION OF WETLANDS, JANUARY 1987, BY BEAVER TRACKS LLC, JONATHAN SISSON, C.S.S., C.W.S., IN JULY 2019.
5. NHDES BEST MANAGEMENT PRACTICES TO BE IMPLEMENTED DURING CONSTRUCTION.
6. GUARDRAIL SHALL BE INSTALLED TO MEET MOST RECENT SPECIFICATION STANDARDS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
7. TOTAL AREA OF WETLANDS IMPACT IS 275 SQUARE FEET OF TEMPORARY IMPACTS AND NO PERMANENT IMPACTS.
8. CONTRACTOR SHALL USE SEDIMENT AND EROSION CONTROL AT A MINIMUM AT THE LOCATIONS SHOWN ON THE PLAN, ACCORDING TO NHDES BEST MANAGEMENT PRACTICES. SEDIMENT AND EROSION CONTROL OPTIONS ARE SHOWN IN THE CONSTRUCTION DETAILS.

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	<p>WETLAND SCIENTIST: Beaver Tracks, LLC Jonathan Sisson, C.W.S., C.S.S. 408 Randolph Hill Road Randolph, NH 03593 (603) 313-4925 phone BeaverTracksLLC@yahoo.com</p>
	<p>PREPARED BY ENGINEER: Right Angle Engineering, PLLC Erin Darrow, P.E. 152 Main Street New London, NH 03257 (603) 526-2807 office (603) 443-7815 mobile (603) 523-8811 fax Erin@RightAngleEngineering</p>
<p style="text-align: center;">SITE PLAN CULVERT REMOVAL FOR BLAND CULVERT INSTALLATION OAK HILL ROAD OVER MEADOW BROOK ENFIELD, NEW HAMPSHIRE</p> <p style="text-align: center;">JANUARY 18, 2022</p> <p style="text-align: center;"><u>PREPARED FOR OWNER:</u> Town of Enfield, NH Department of Public Works 74 Lockeaven Road Enfield, NH 03748</p> <p style="text-align: center;"><u>PREPARED BY:</u> Erin Darrow, P.E., C.P.E.S.C. Right Angle Engineering, PLLC 152 Main Street New London, NH 03257 www.rightangle.engineering</p>	
<p style="text-align: center;">SHEET 3</p>	



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Tax Lot 9-48
Richard D. & Charise Holt
Book 3351, Page 966

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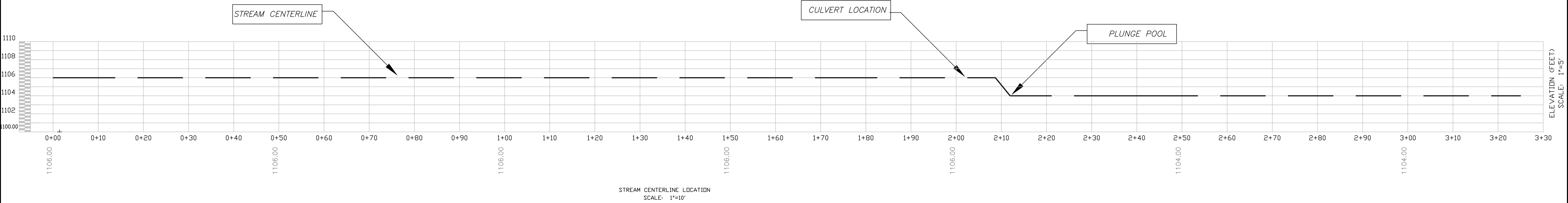
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SHEET 4

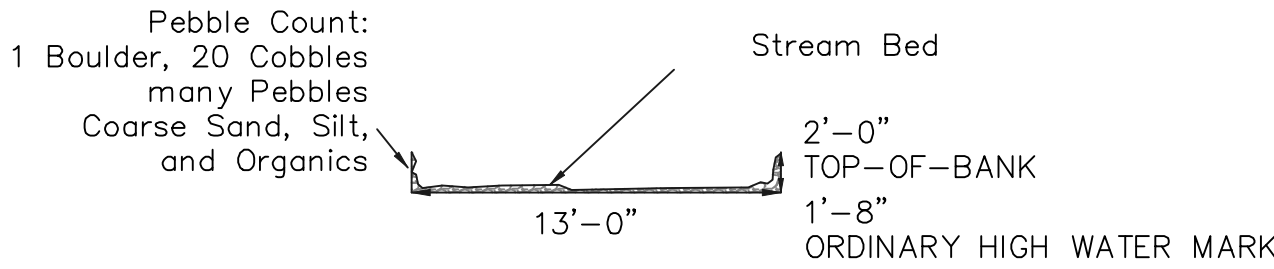
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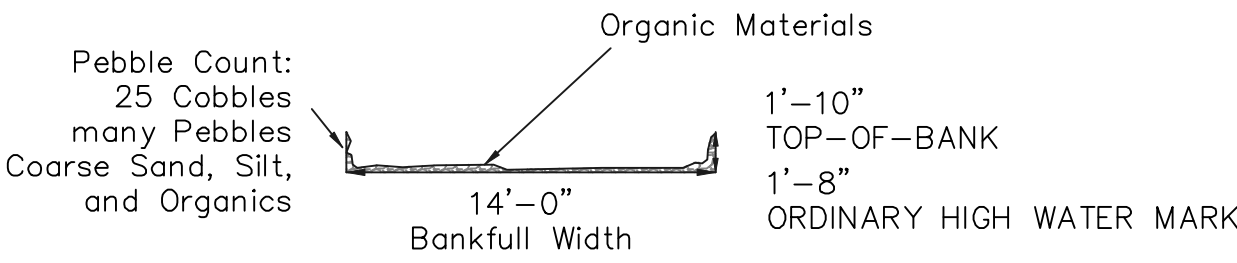
LEGEND

- WETLAND BOUNDARY/TOP-OF-BANK
- ORDINARY HIGH WATER MARK
- EXISTING 2' GRADE CONTOUR
- PROPOSED 2' GRADE CONTOUR
- SEDIMENT CONTROL (SILT LOG)
- AREA OF PERMANENT WETLAND IMPACT
- AREA OF TEMPORARY WETLAND IMPACT
- EDGE OF EXISTING GRAVEL ROAD
- PROPERTY LINE/ROW LIMITS
- PROPOSED COFFERDAM
- 100-YEAR FLOOD ZONE LIMITS
- EXISTING RETAINING WALL
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE
- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL
- EXISTING SIGN
- OVERHEAD UTILITY WIRES

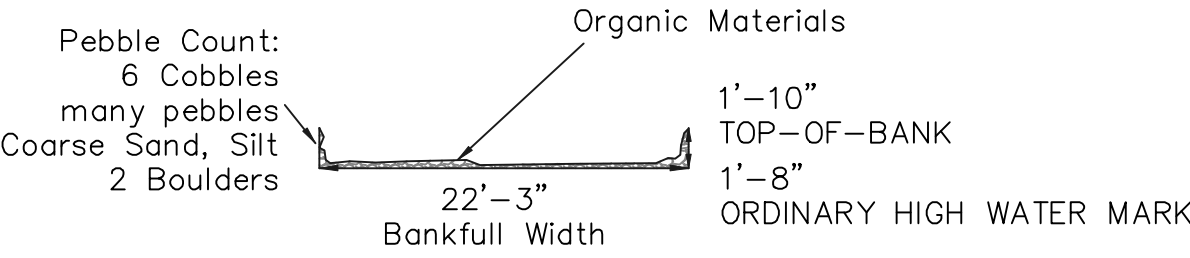
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not-to-scale



CROSS-SECTION B
not-to-scale



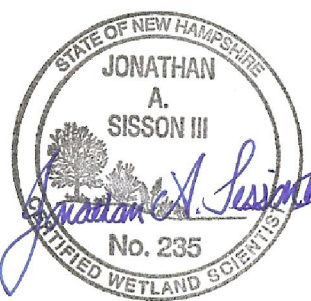
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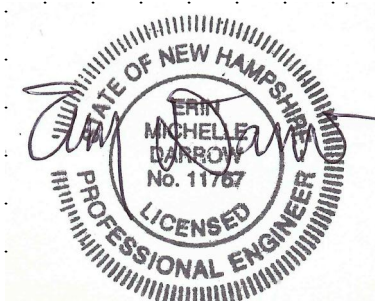
STREAMBED MATERIAL

SIEVE SIZE	PERCENT PASSING
36" SQUARE	100
24" SQUARE	85-100
12" SQUARE	50-85
6" SQUARE	50-65
2½" SQUARE	35-55
2" SQUARE	35-45
1" SQUARE	30-40
U.S. No. 4	20-30
U.S. No. 40	16 MAX.
U.S. No. 200	5-9

- NOTES
- AGGREGATE LARGER THAN 1" SQUARE SHALL CONSIST OF ROUNDED STONE.
 - THE PORTION OF SEDIMENT RETAINED IN U.S. No. 4 SIEVE SHALL NOT CONTAIN MORE THAN 0.2 PERCENT WOOD WASTE.
 - ALL PERCENTAGES ARE BY MASS.



WETLAND SCIENTIST:
Beaver Tracks, LLC
Jonathon Sisson, C.W.S., C.S.S.
408 Randolph Hill Road
Randolph, NH 03593
(603) 313-4925 phone
BeaverTracksLLC@yahoo.com



PREPARED BY ENGINEER:
Right Angle Engineering, PLLC
Erin Darrow, P.E.
152 Main Street
New London, NH 03257
(603) 526-2807 office
(603) 443-7815 mobile
(603) 523-8811 fax
Erin@RightAngle.Engineering

GEOTECHNICAL NOTES:

- GEOTECHNICAL TESTING WAS NOT COMPLETED PRIOR TO COMMENCING WORK ON THIS PROJECT.
- VERIFICATION OF GEOTECHNICAL SOIL CONDITIONS SHALL BE COMPLETED PRIOR TO ABUTMENT CONSTRUCTION.

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NO.	DATE	DESCRIPTION	BY

CONSTRUCTION DETAILS
CULVERT REMOVAL FOR BRIDGE INSTALLATION

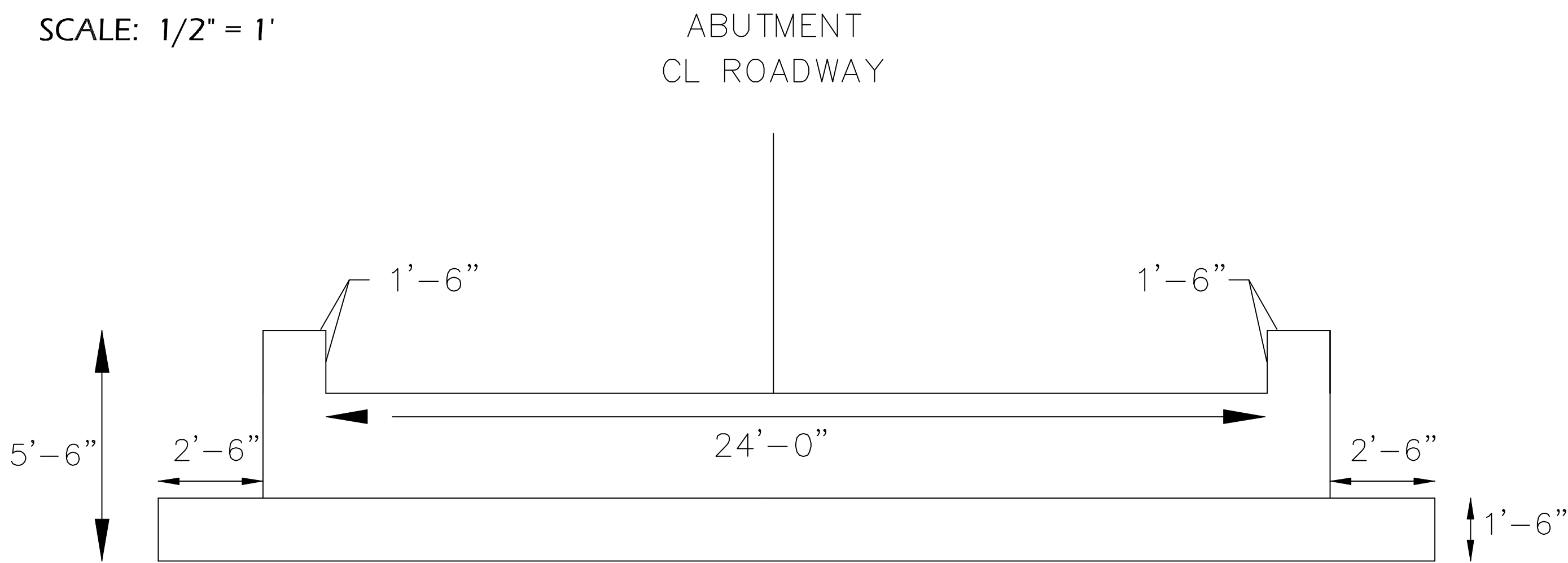
OAK HILL ROAD OVER
ENFIELD, NEW HAMPSHIRE
JANUARY 18, 2022

PREPARED FOR OWNER:
Town of Enfield, NH
Department of Public Works
74 Lockehaven Road
Enfield, NH 03748

PREPARED BY:
Erin Darrow, P.E., C.P.E.S.C.
Right Angle Engineering, PLLC
152 Main Street
New London, NH 03257
www.rightangle.engineering

ABUTMENT
PLAN VIEW

SCALE: 1/2" = 1'



CONCRETE NOTES:

1. THIS ABUTMENT DESIGN IS INTENDED FOR THE 24' X 38" ENGINEERED WOOD BRIDGE SUPERSTRUCTURE TO BE INSTALLED AT THE PROJECT SITE.
2. IT IS ANTICIPATED THAT ABUTMENTS WILL BE SET ON NATIVE SILTY SAND SOIL. THE DESIGN BEARING CAPACITY IS 2000 PSF. ALL ABUTMENTS SHALL BE A MINIMUM OF 4'-6" FROM FINISHED GRADE TO THE BOTTOM OF THE ABUTMENT. THE ABUTMENT ELEVATIONS ARE SUBJECT OT REVISION WHEN TRUE SOIL CONDITIONS ARE EXPOSED BY EXCAVATION. RIGHT ANGLE ENGINEERING, PLLC, AND M&W SOILS ENGINEERING, INC., SHALL BE NOTIFIED PROMPTLY OF ANY WEAK STRATA, WATER CONDITIONS, OR OTHER POOR BEARING CONDITIONS, AND/OR IF LEDGE OR LARGE BOULDERS ARE EXPOSED.
3. ALL ABUTMENT DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SITE AND SUPERSTRUCTURE DRAWINGS AND SPECIFICATIONS.
4. CONCRETE SHALL BE NORMAL WEIGHT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS WITH THE FOLLOWING REQUIREMENTS:
 - PORTLAND CEMENT – ASTM C150, TYPE II, SUPPLEMENTAL CEMENTITIOUS MATERIALS (SLAB AND FLY ASH) ARE PRMITTED WITH APPROVED CONCRETE MIX DESIGN.
 - AGGREGATE – ASTM C33, 1 1/2" MAXIMUM SIZE.
 - WATER – POTABLE
 - SLUMP – 2" TO 4"
 - ADMIXTURES – USE AIR ENTRAINING AGENT CONFORMING TO ASTM 260 WITH 4-6% TOTAL AIR. USE WATER REDUCING AGENT CONFORMING TO ASTM C494 IN ALL CONCRETE. CALCIUM CHLORIDE MAY NOT BE USED TO ACCELERATE THE SETTING TIME.
 - DESIGN MIX – SUBMIT A CURRENT DESIGN MX, WITH 28 DAY COMPRESSIVE STRENGTH TEST, TO THE ENGINEER FOR APPROVAL, PRIOR TO STARTING CONSTRUCTION.

5. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60 EXCEPT STIRRUPS AND TIES TO BE GRADE 40. WELDED WIRE FABRIC TO CONFORM TO ASTM A185.
6. LAP ALL BARS 30 DIAMETERS MINIMUM AT SPLICES UNLESS INDICATED OTHERWISE ON THE DRAWINGS. WELDED WIRE FABRIC TO BE LAPPED ONE FULL MESH AT SIDES AND ENDS.
7. REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPER PLACE BEFORE AND DURING POURING OPERATIONS USING APPROVED CHAIRS AND SPCERS AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
8. WHERE CONTINUOUS BARS ARE CALLED FOR, INDICATED OR REQUIRED, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS, DOWELED INTO INTERSECTING WALLS AND LAPPED AT NECESSARY SPLICES WITH SPLICES STAGGERED WHEREVER POSSIBLE.
9. 10. THE CONCRETE CONTRACTOR SHALL INSTALL (OR GIVE OTHER TRADES AMPLE OPPORTUNITY TO INSALL) ALL ANCHORS, BOLTS, PLATES, NAILERS, SLOTS, CHASES, PIPE SLEEVES, ETC. AS REQUIRED BY OTHER TRADES.
10. FOOTINGS SHALL BE CONSTRUCTED ON A PREPARED FOUNDATION BASE CONSISTING OF PLACING AND COMPACTING 3" MIN. OF 3/4" CRUSHED STONE OVER UNDISTURBED NATIVE SOIL. THE DESIGN BEARING PRESSURE IS 2000 PSF, ELEVATIONS OF BOTTOM OF FOOTINGS ARE SHOWN ON PLANS, BUT AREA SUBJECT TO REVISION WHEN TRUE SOIL CONDITIONS ARE SHOWN ON PLANS, AND ARE SUBJECT TO REVISION WHEN TRUE SOIL CONDITIONS ARE EXPOSED BY EXCAVATION. THE ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY WEAK STRATA, WATER CONDITIONS OR OTHER POOR BEARING CONDITIONS.
11. PROPER VIBRATION OF CONCRETE IS IMPORTANT IN THE PLACEMENT OF ALL CONCRETE, THE CONCRETE CONTRACTOR SHALL MAKE PROVISIONS FOR BACK-UP VIBRATION EQUIPMENT.
12. CONCRETE TEMPERATURE DURING THE FIRST SEVEN DAYS SHALL BE MAINTAINED BETWEEN 50 DEGREES FAHRENHEIT AND 90 DEGREE FAHRENHEIT. RAPID DRYING MUST BE PREVENTED ALL COLD WEATHER CONCRETE CONSTRUCITON SHALL BE IN ACCORDANCE WITH ACI 308.
13. OWNER SHALL EMPLOY A QUALIFIED TESTING FIRM TO PERFORM STANDARD FIELD TESTING DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO TESTING.
14. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
 - #5 AND SMALLER: 1 1/2"
 - #6 AND LARGER: 2"

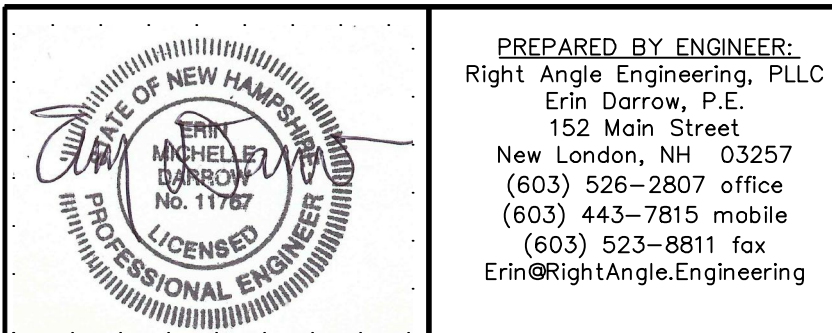
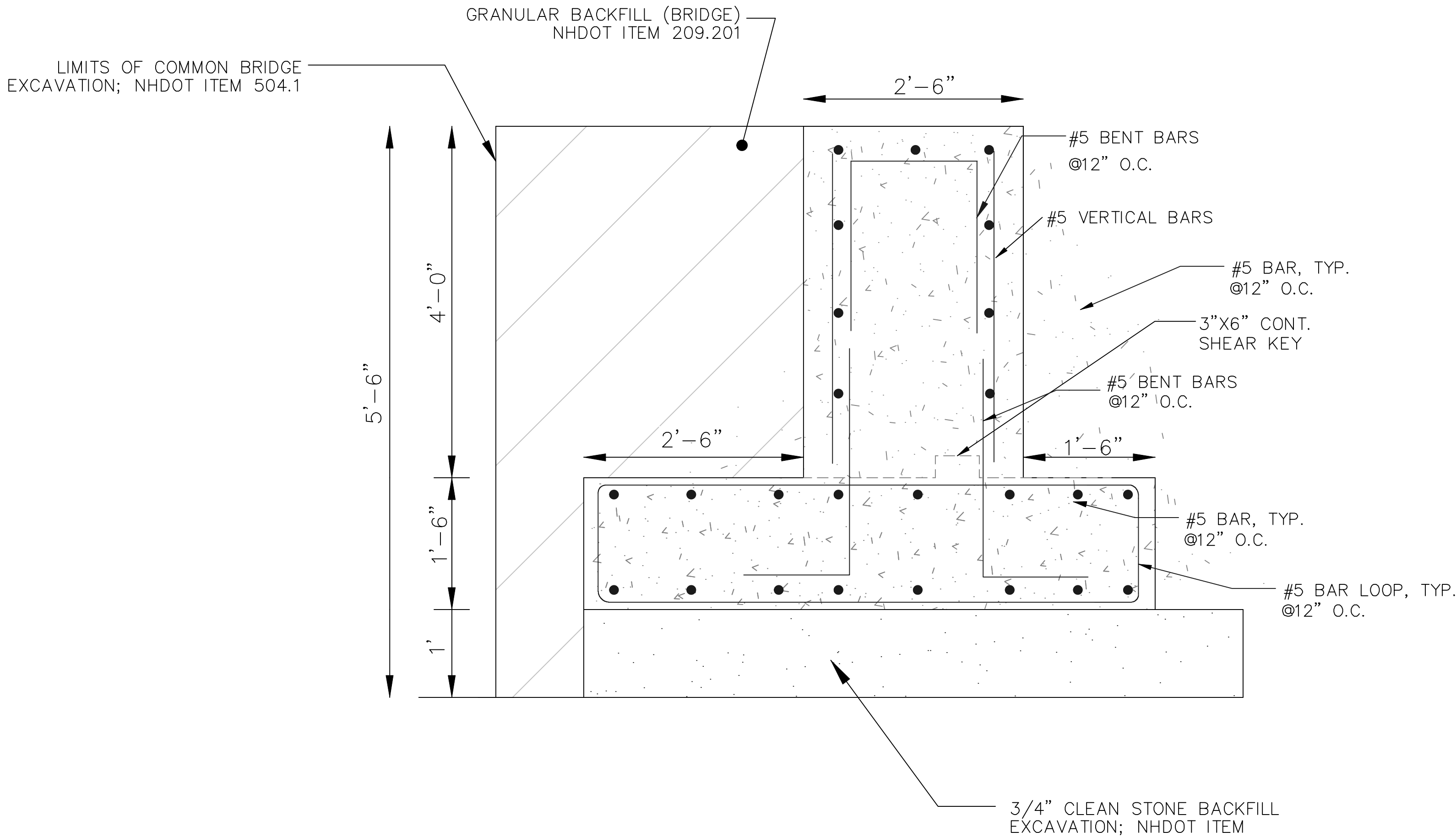
BACKFILL NOTES:

1. 1. PRIOR TO PLACING STRUCTURAL FILL ALL ORGANIC MATERIAL, TOPSOIL, BEBRIS AND ANY OTHER DELETERIOU MATERIAL SHALL BE REMOVED.
2. 2. STRUCTURAL FILL SHALL COMPLY WITH NHDOT SPECIFICATION REQUIREMENTS.
3. 3. THE MATERIAL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED OT 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM 01557, MODIFIED PROCTOR.
4. 4. SAND SHALL BE MATERIAL FREE FROM SILT, LOAM, CLAY OR ORGANIC MATTER, PLACE IN 8" MAXIMUM LIFTS, AND COMPACTED TO 95% ASTM 0698, OR STANDARD PROCTOR.

ABUTMENT
SECTION VIEW

SCALE: 1" = 1'

ABUTMENT
SECTION VIEW



PREPARED BY ENGINEER:
Right Angle Engineering, PLLC
Erin Darrow, P.E.
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(603) 526-2807 office
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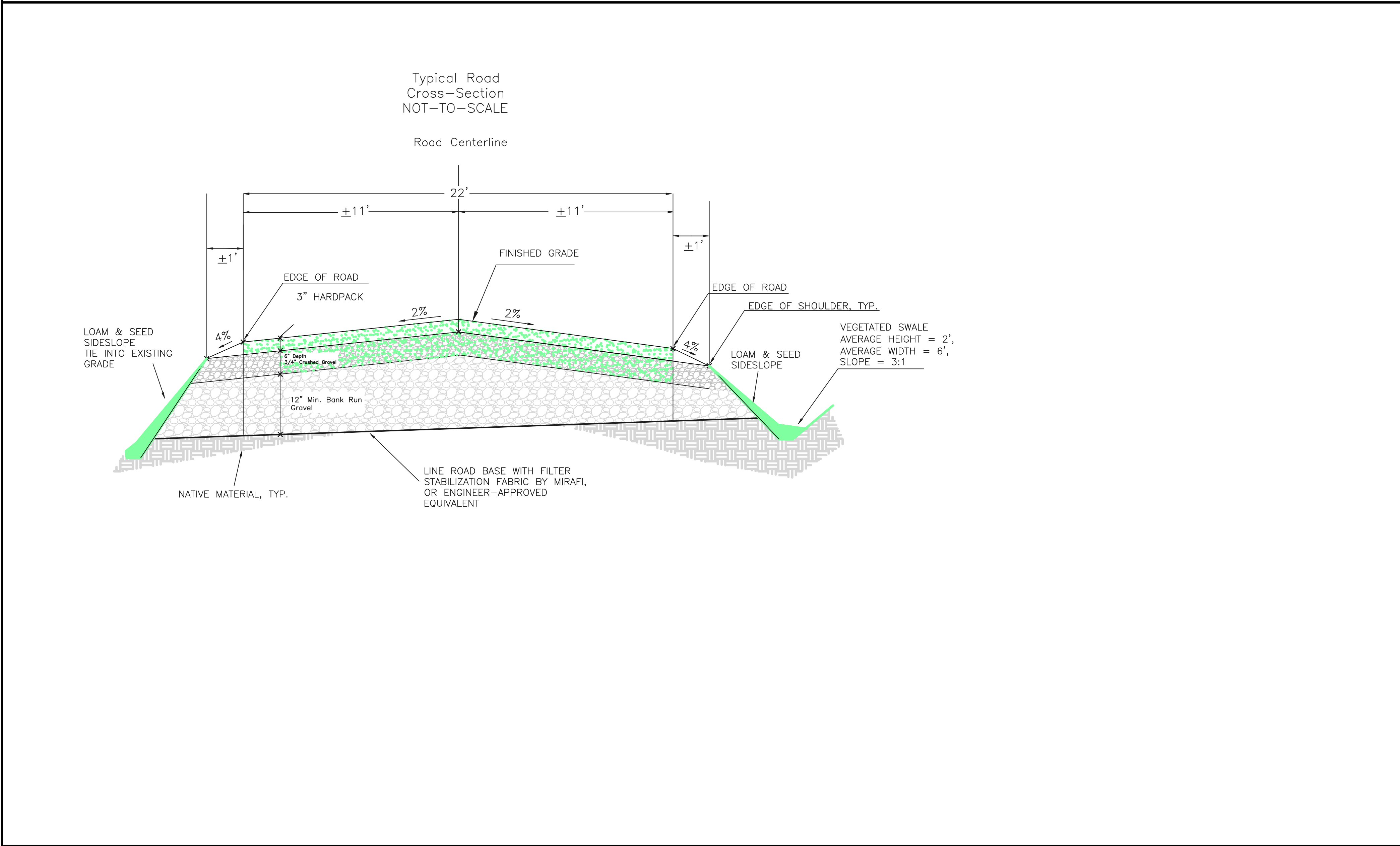
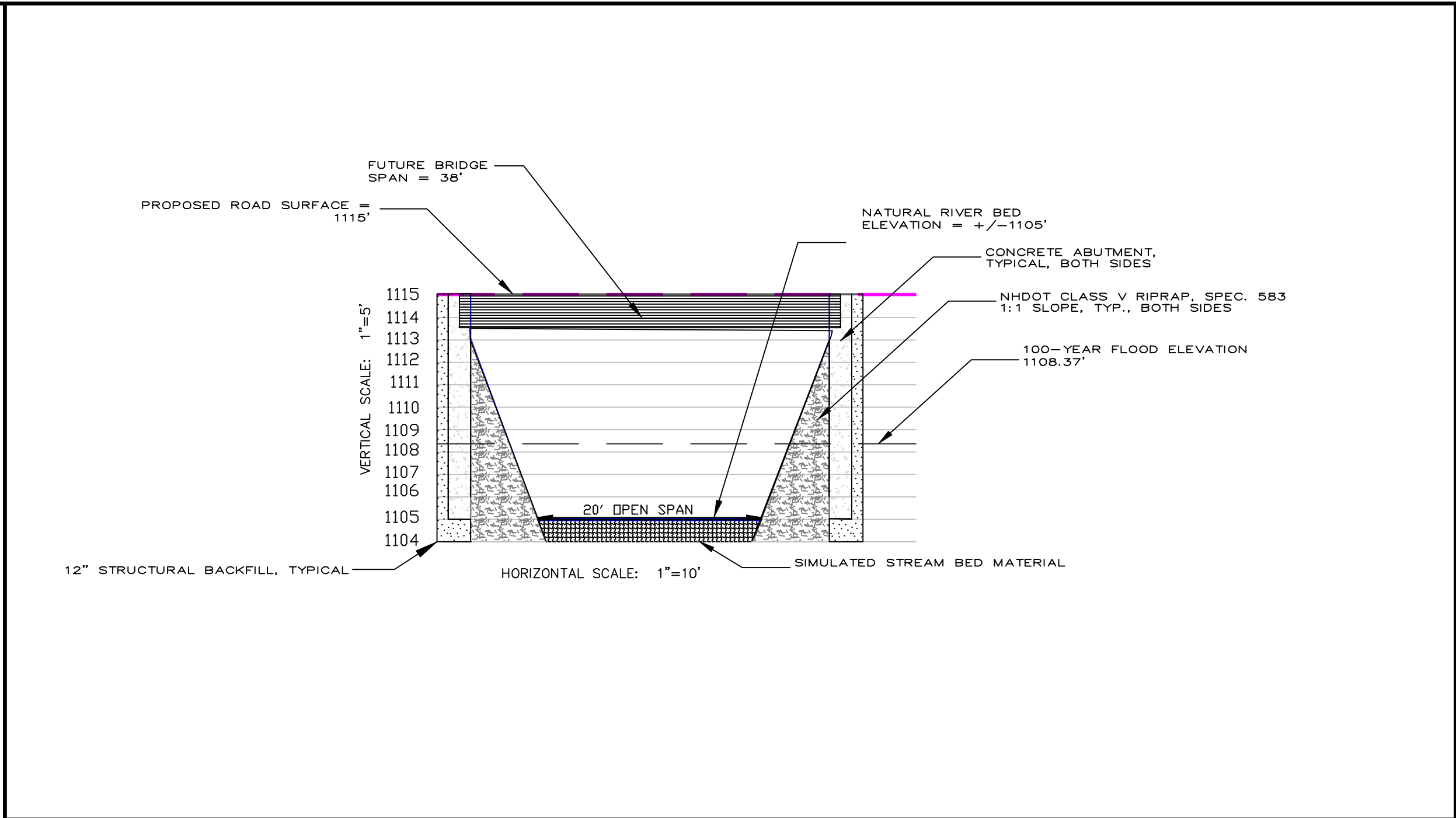
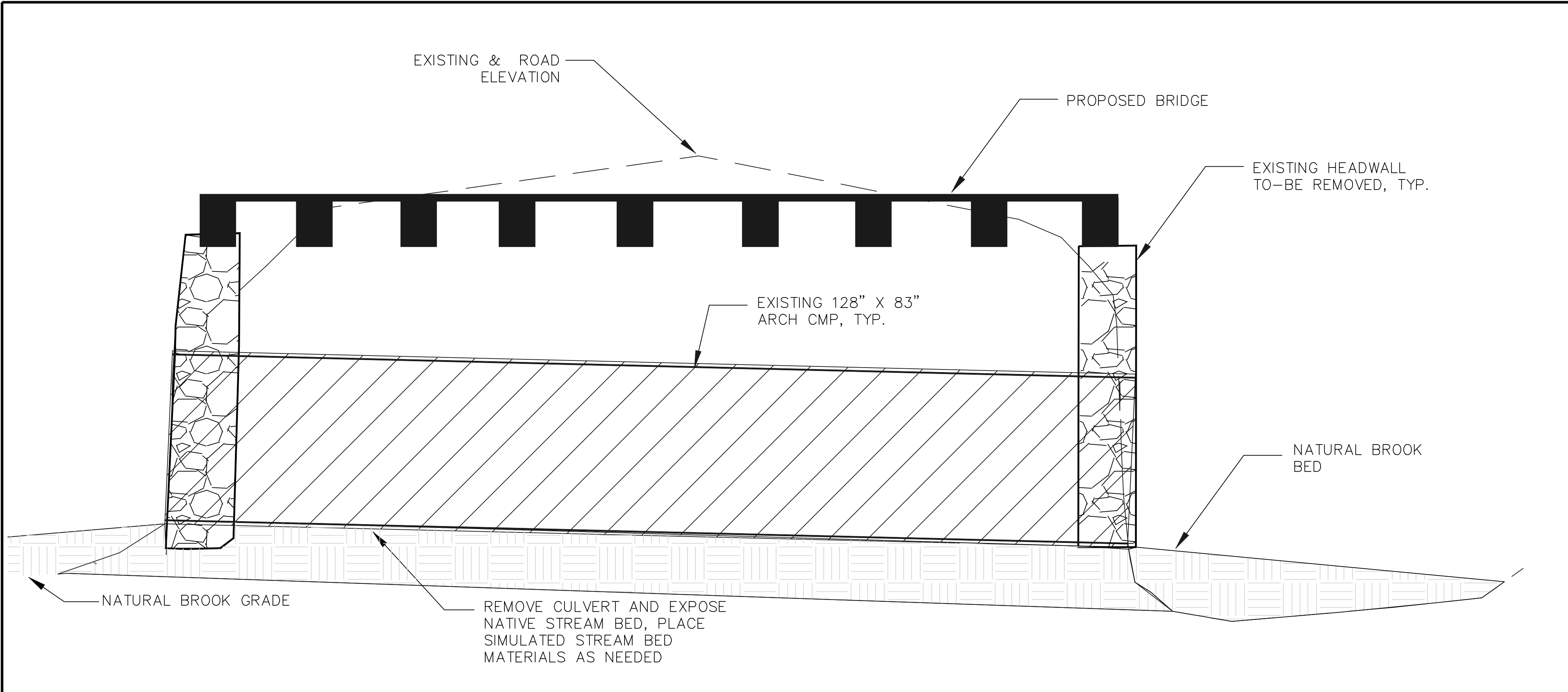
ABUTMENT DETAILS
CULVERT REMOVAL FOR BRIDGE INSTALLATION

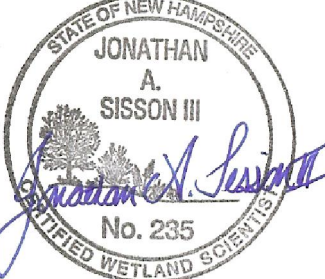
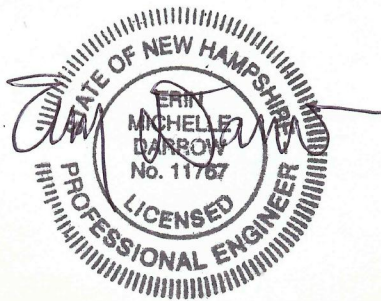
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Erin Darrow, P.E., C.P.E.S.C.
Right Angle Engineering, PLLC
152 Main Street
New London, NH 03257
www.rightangle.engineering



	WETLAND SCIENTIST: Beaver Tracks, LLC Jonathon Sisson, C.W.S., C.S.S. 408 Randolph Hill Road Randolph, NH 03593 (603) 313-4925 phone BeaverTracksLLC@yahoo.com
	PREPARED BY ENGINEER: Right Angle Engineering, PLLC Erin Darrow, P.E. 152 Main Street New London, NH 03257 (603) 526-2807 office (603) 443-7815 mobile (603) 523-8811 fax Erin@RightAngleEngineering

CONSTRUCTION DETAILS
CULVERT REMOVAL FOR BRIDGE INSTALLATION

OAK HILL ROAD OVER
ENFIELD, NEW HAMPSHIRE

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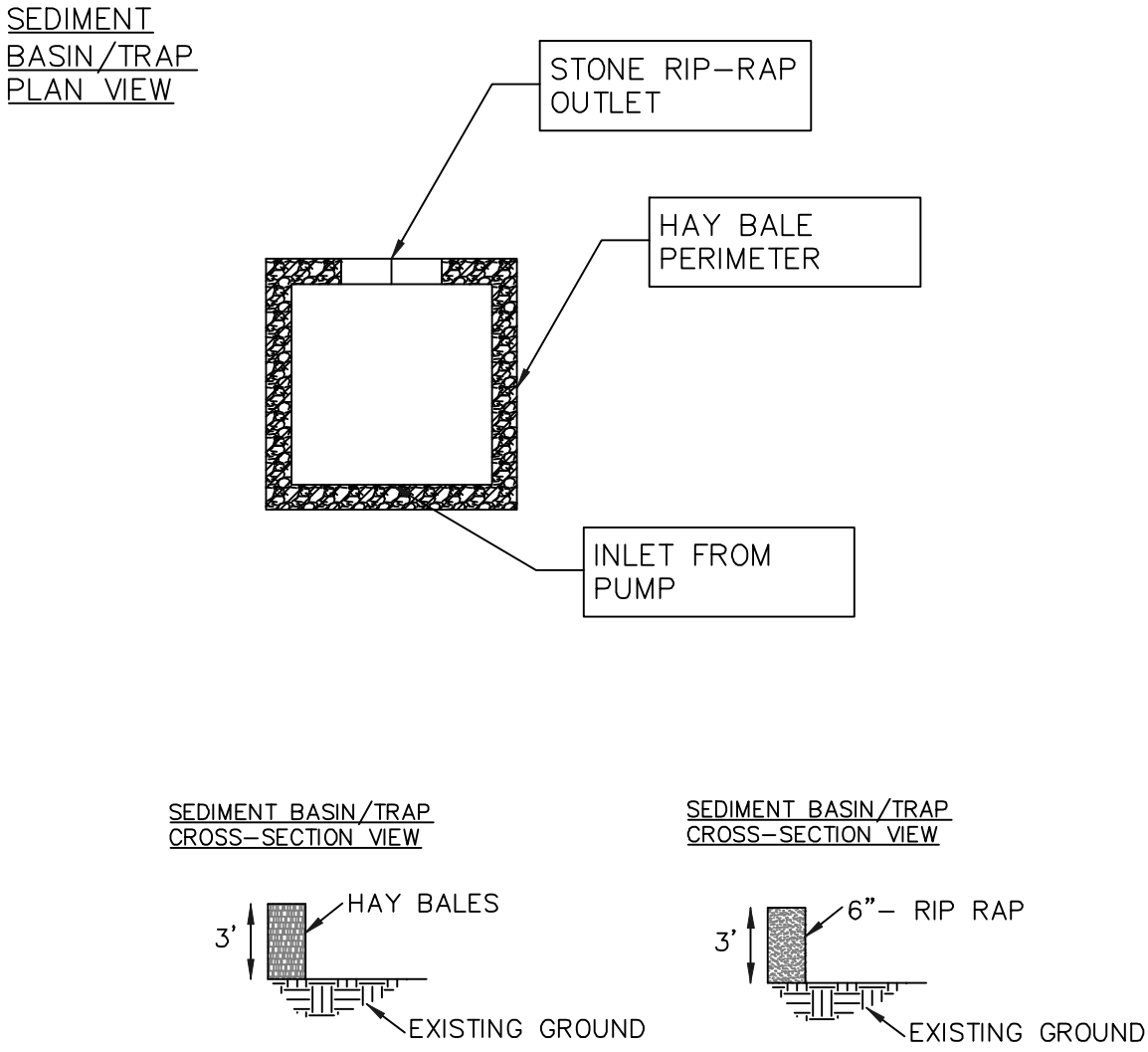
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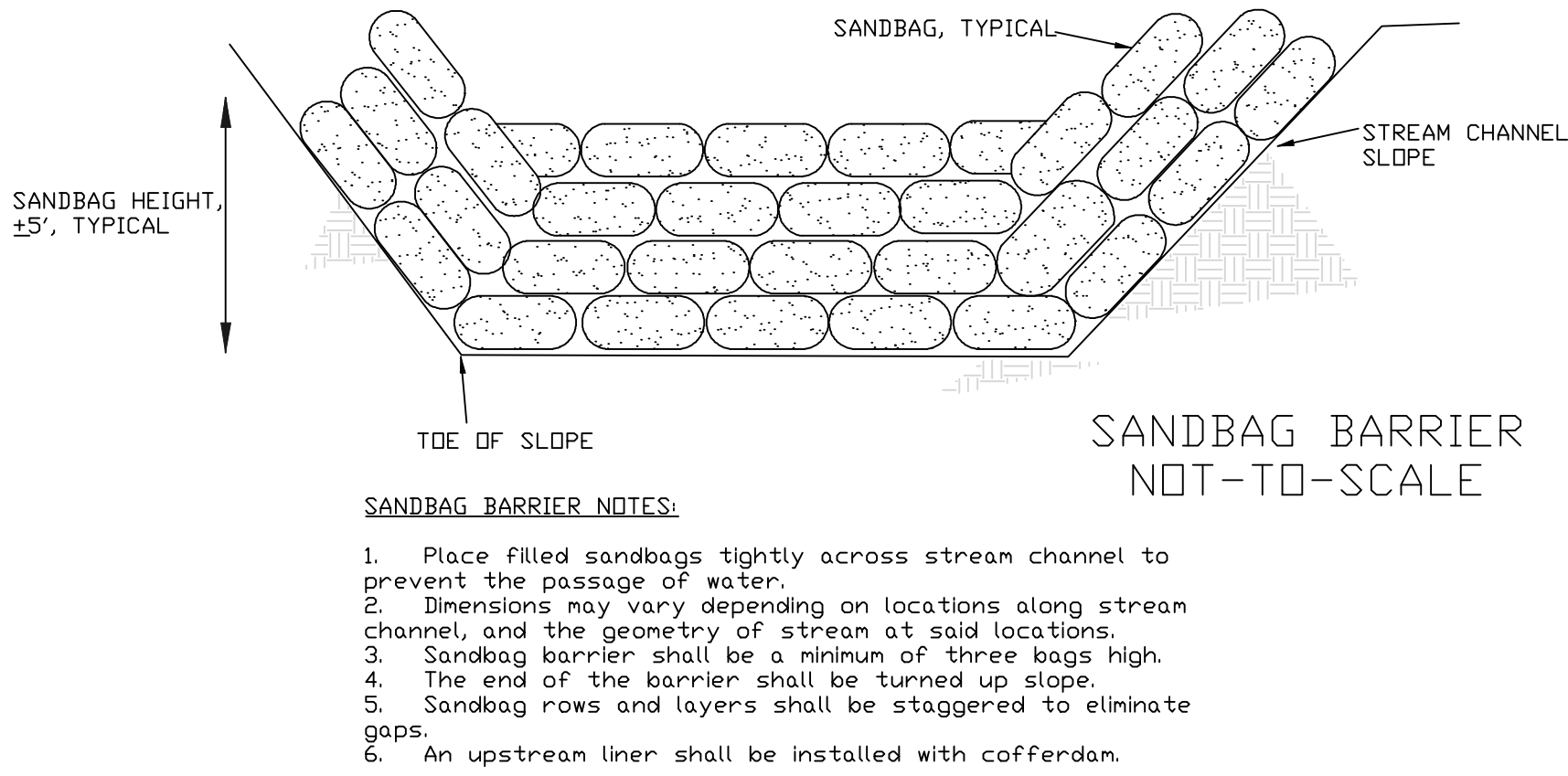
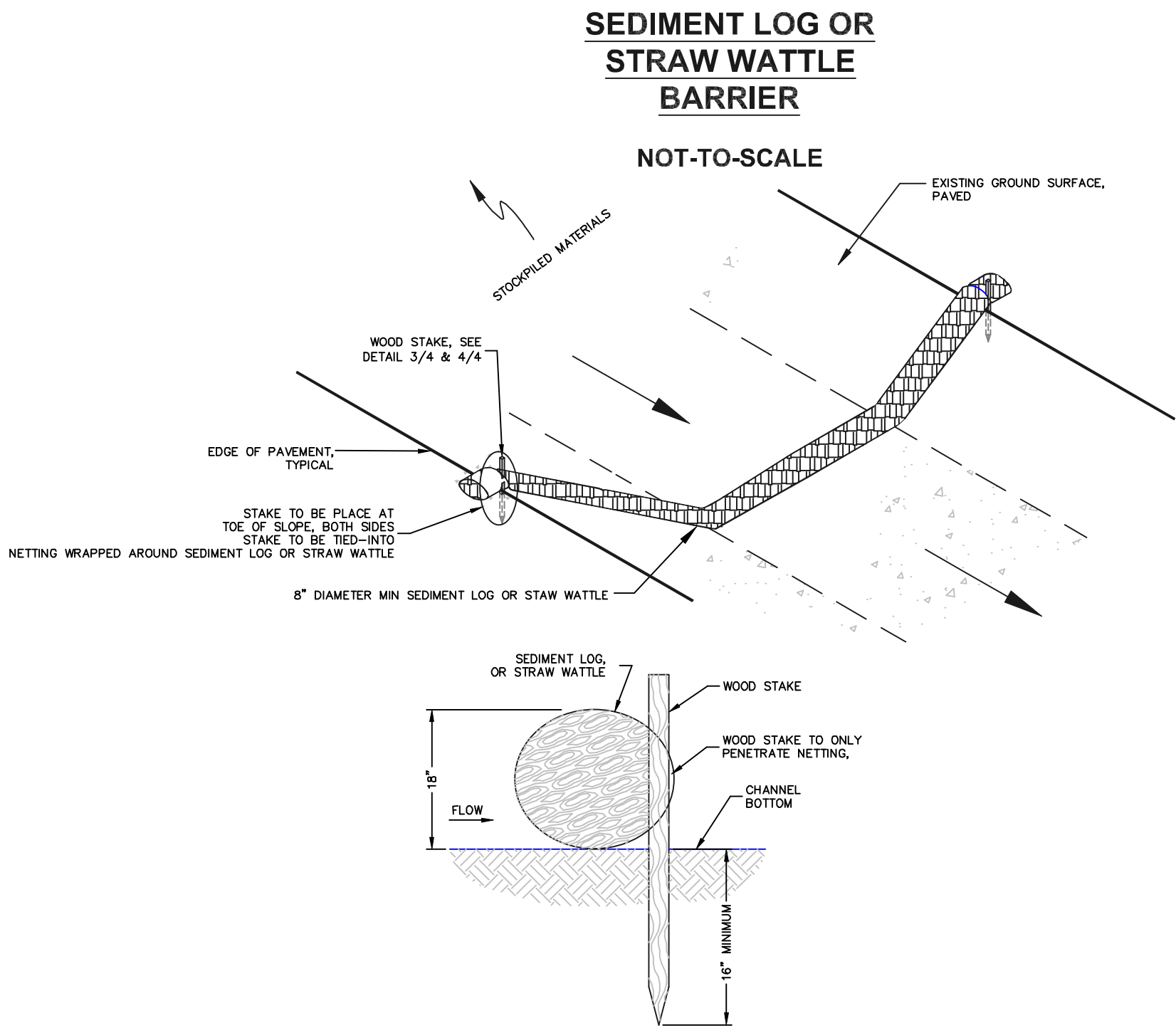
Erin Darrow, P.E., C.P.E.S.C.
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NO.	DATE	DESCRIPTION	BY
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NOTES:

1. SEDIMENT TRAPS TO BE INSTALLED IN ACCORDANCE WITH ENV-WT RULE REQUIRMENTS, AND IN CONFORMANCE IWTH THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, MOST RECENT EDITION.
2. PURPOSE OF SEDIMENT TRAP IS FOR RECEIVING WATERS DURING PUMPING FOR THE INSTALLATION OF THE SLIP-LINING.
3. SEDIMENT TRAP SHALL BE INSTALLED PRIOR TO THE START OF DEWATERING.
4. PERIMETER HAY BALES SHALL BE EKP CLEAN DURING CONSTRUCTION AND REMOVED UPONS SITE COMPLETION.



VEGETATIVE MEASURES

TOPSOIL STOCKPILING: TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR LATER USE ON CRITICAL AREAS AND ALL OTHER AREAS TO BE SEEDED. THE STOCK PILE WILL NOT BE COMPACTED AND SHALL BE STABILIZED AGAINST EROSION WITH TEMPORARY SEEDING.

TEMPORARY SEEDING:

A) BEDDING: REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT THREE INCHES TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.

B) FERTILIZER: FERTILIZER SHOULD BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. A 10-10-10 MIX OF FERTILIZER SHOULD BE APPLIED AT A RATE OF 300 POUNDS PER ACRE (OR 7 POUNDS PER 1,000 S.F.)

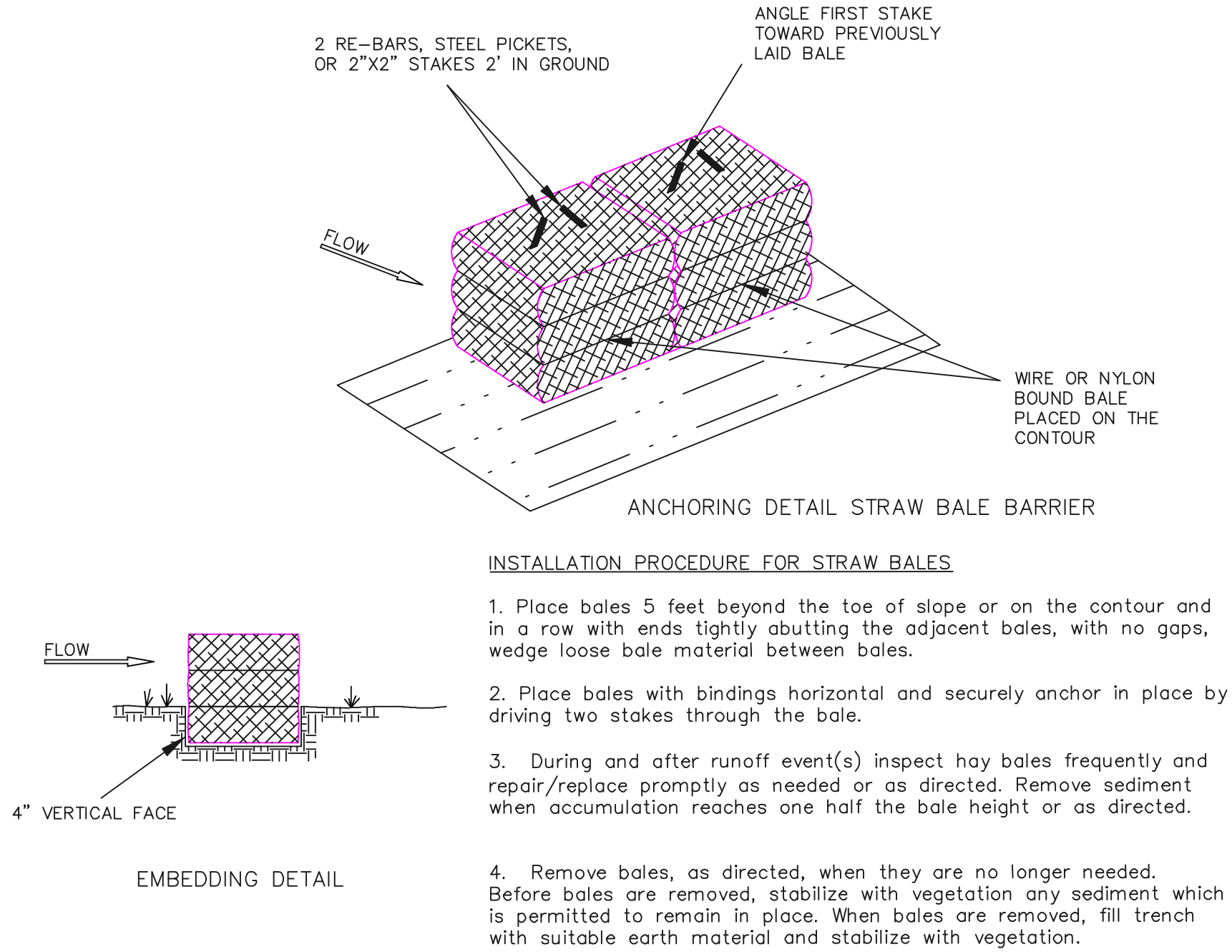
C) SEED MIXTURE: USE ANY OF THE FOLLOWING:

SPECIES	PER ACRE	PER 1000 S.F.	DATES
WINTER RYE	112 LBS.	2.6 LBS.	8/15 - 10/1 (FALL)
OATS	80 LBS.	2.0 LBS.	4/1 - 7/1 ; 8/15 - 9/15
RYEGRASS (ANNUAL)	40 LBS.	1.0 LBS.	4/1 - 6/1
RYEGRASS (PERENIAL)	30 LBS.	0.7 LBS.	4/1 - 6/1 ; 8/15 - 9/15

D) MULCHING: MULCH SHALL BE USED ON HIGHLY ERODABLE SOIL, ON CRITICALLY ERODING AREAS, AND ON AREAS WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT.

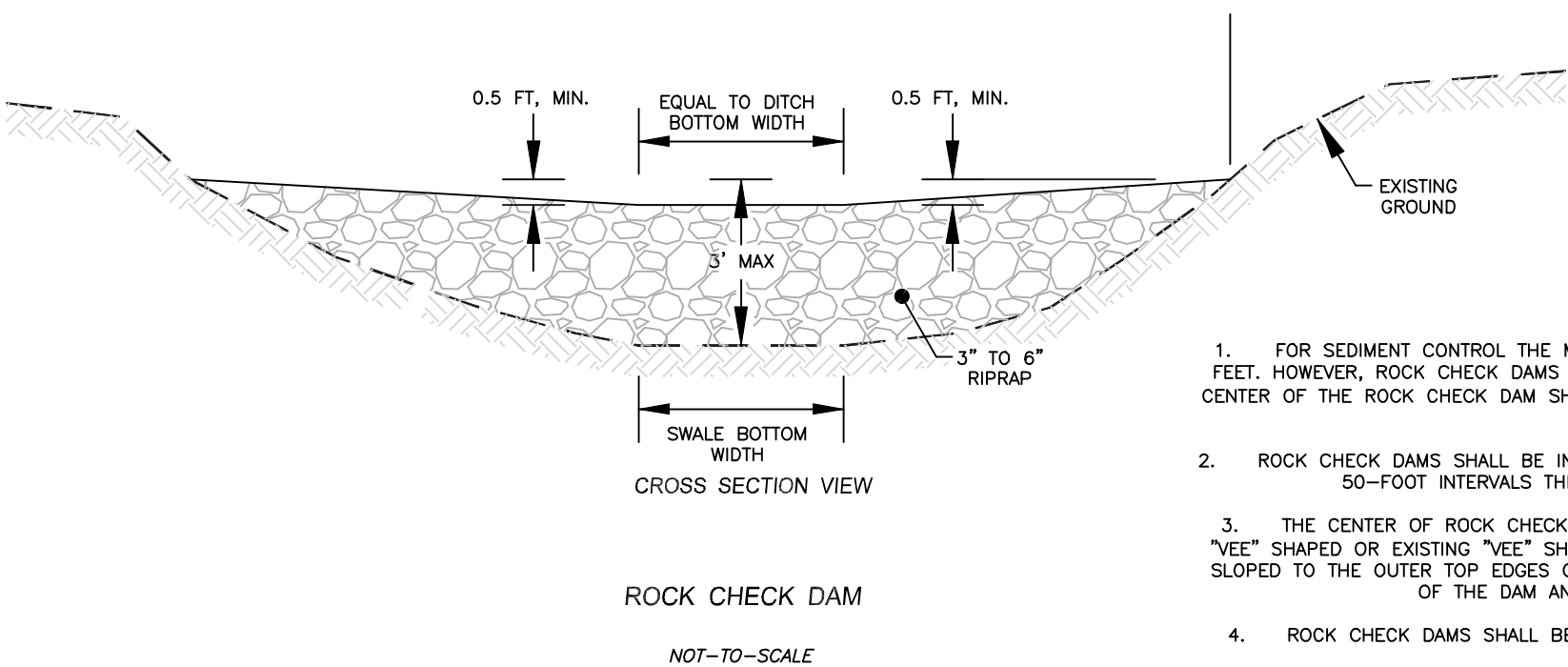
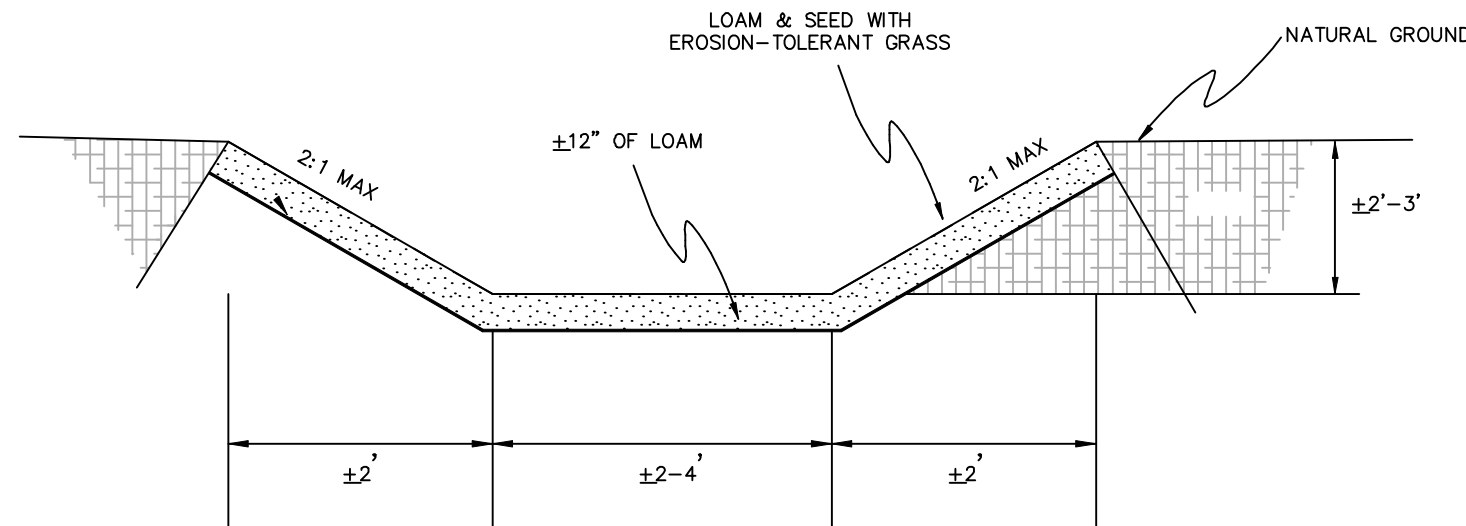
TYPE	RATE PER 1,000 S.F.	USE AND COMMENTS
HAY OR STRAW	70 TO 90 LBS.	MUST BE DRY AND FREE OF MOLD. MAY BE USED WITH PLANTINGS.
WOOD CHIPS OR BARK MULCH	160 TO 920 LBS.	USED MOSTLY WITH TREES AND SHRUBS PLANTINGS.
JUTE AND FIBROUS MATTING	AS PER MANUFACTURERS SPECIFICATIONS	USED IN SCOPE AREAS. WATER COURSED AND OTHER AREAS.
CRUSHED STONE ½" TO 1½" DIA.	SPREAD MORE THAN ½" THICK	EFFECTIVE IN CONTROLLING WIND AND WATER EROSION.

STRAW BALE



VEGETATED SWALE

NOT-TO-SCALE



NO.	DATE	DESCRIPTION	BY
2			
1			

STATE OF NEW HAMPSHIRE
JONATHAN A. SISSON III
No. 235
REGISTERED WETLAND SCIENTIST

WETLAND SCIENTIST:
Beaver Tracks, LLC
Jonathan Sisson, C.W.S., C.S.S.
408 Randolph Hill Road
Randolph, NH 03593
(603) 313-4925 phone
BeaverTracksLLC@yahoo.com

STATE OF NEW HAMPSHIRE
ERIN DARROW
No. 11767
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY ENGINEER:
Right Angle Engineering, PLLC
Erin Darrow, P.E.
152 Main Street
New London, NH 03257
(603) 526-2807 office
(603) 443-7815 mobile
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