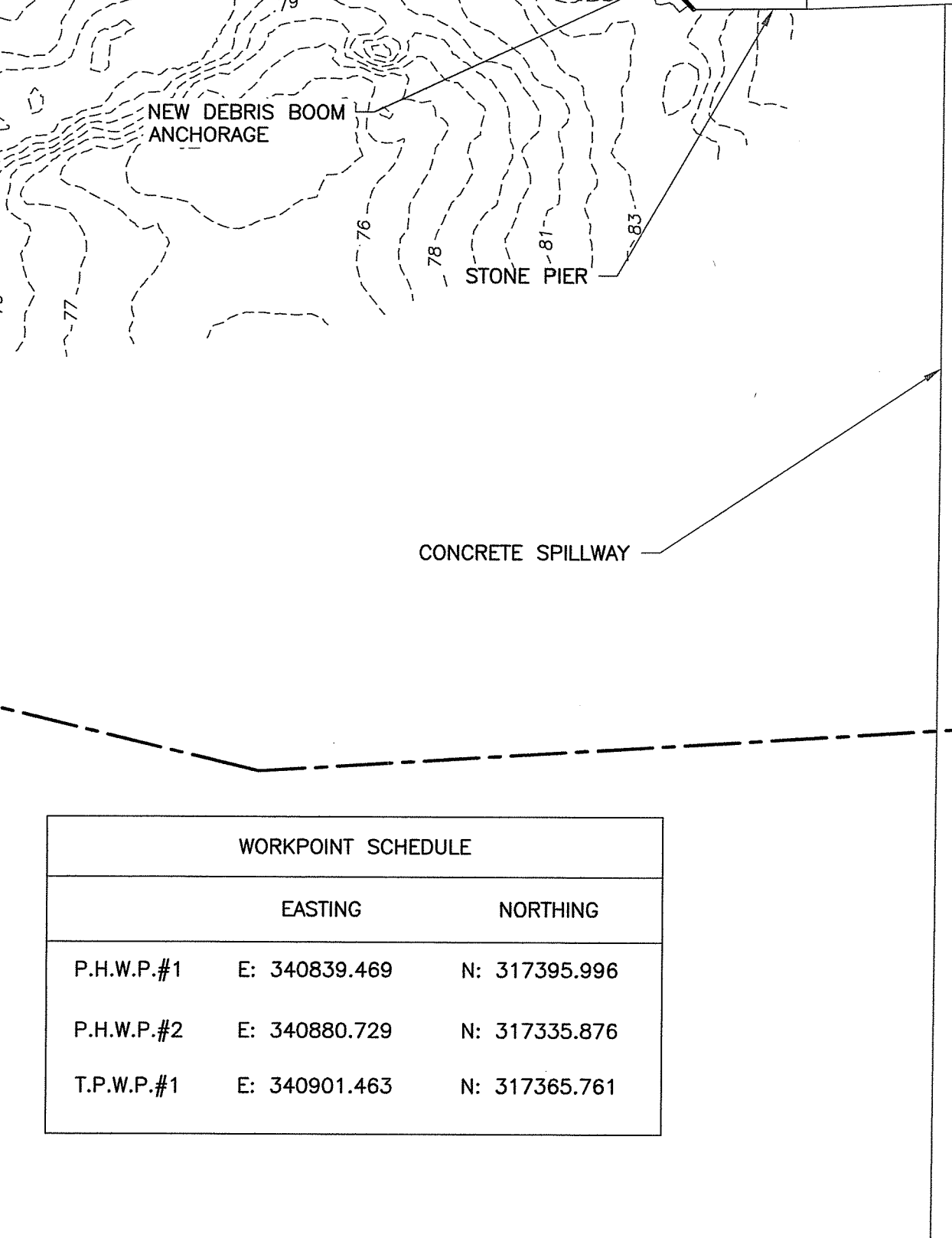
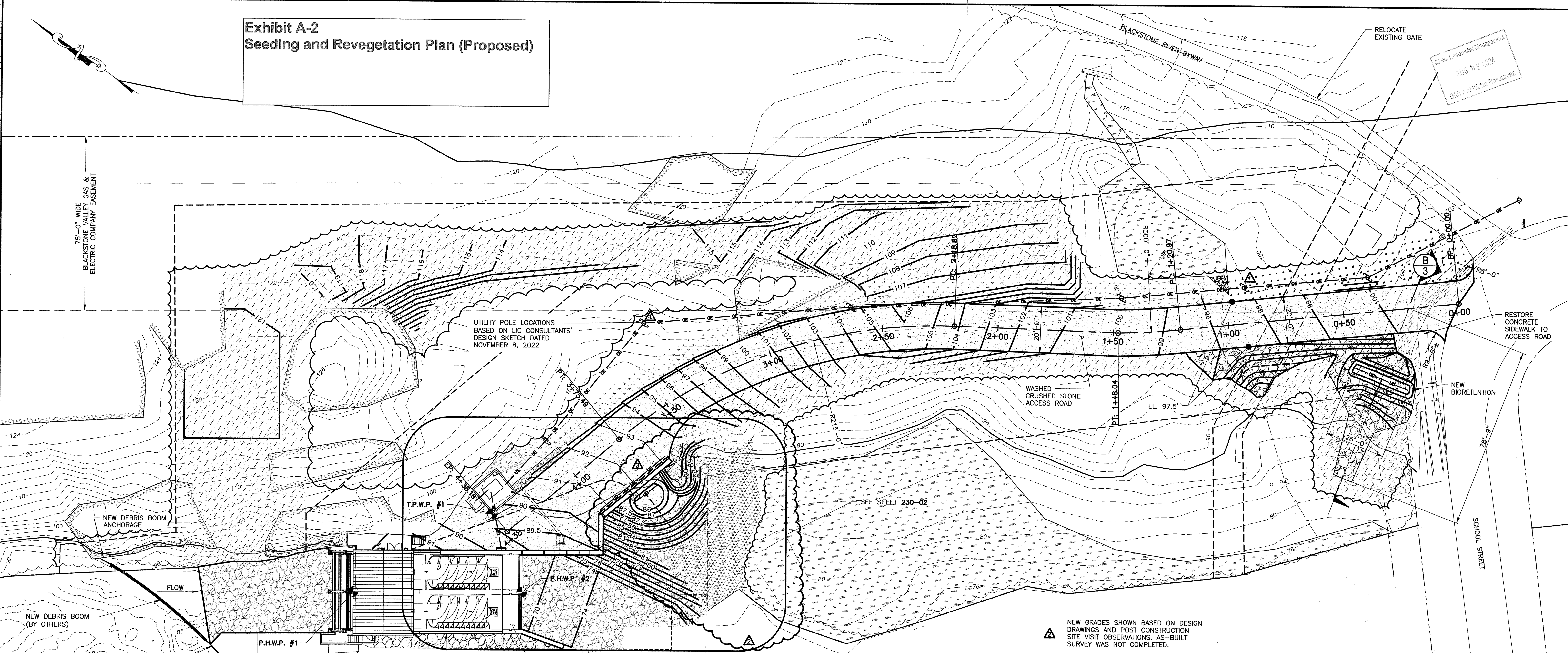


**Exhibit A-2
Seeding and Revegetation Plan (Proposed)**

24x36 = FULL SCALE

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PERMANENT PLANTING TABLE				
ZONE	APPROX. AREA (SQ. FT.)	TREES (1" MIN. CALIPER, PLANTED @ 15' O.C.)	SHRUBS (1 GAL. POT, PLANTED @ 10' O.C.)	SEED MIX (APPLICATION RATE)
Upland Revegetation	5,243	N/A	N/A	Emst Partially Shaded Area Roadside Mix (20 lb per acre, or 1/2 lb per 1,000 sq ft)
Upland Reforestation	18,881	Red Maple (<i>Acer rubrum</i>) Red Oak (<i>Quercus rubra</i>)	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Emst Partially Shaded Area Roadside Mix (20 lb per acre, or 1/2 lb per 1,000 sq ft)
Wetland Revegetation	32	N/A	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Emst Wetland Mix for Shaded OBL-FACW Areas (ERNMX-137; 20 lb per acre)
Wetland Reforestation	1,392	Red Maple (<i>Acer rubrum</i>) Swamp White Oak (<i>Quercus bicolor</i>)	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Emst Wetland Mix for Shaded OBL-FACW Areas (ERNMX-137; 20 lb per acre)

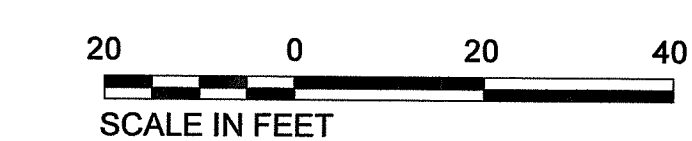
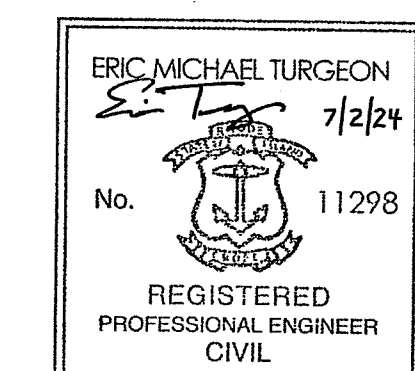
TEMPORARY PLANTING TABLE			
Zone	APPROX. AREA (SQ. FT.)	Erosion Control Matting (for slopes 3:1 or steeper)	APPLICATION RATE
Upland	As needed	NAG SC150BN	40 percent Annual Ryegrass and 60 percent Perennial Ryegrass (RIDOT M18.10.5)
Wetland	As needed	NAG SC150BN	40 percent Annual Ryegrass and 60 percent Perennial Ryegrass (RIDOT M18.10.5)

Note: All product names provided for reference, equivalent products may be submitted for review and approval by the Owner's

SEEDING AND REVEGETATION PLAN

- UPON COMPLETION OF SITE CONSTRUCTION, ALL AREAS PREVIOUSLY DISTURBED SHALL BE TREATED AS STATED BELOW. THESE AREAS SHALL BE CLOSELY MONITORED BY THE CONTRACTOR UNTIL SUCH TIME AS A SATISFACTORY GROWTH OF VEGETATION IS ESTABLISHED. SATISFACTORY GROWTH SHALL MEAN A MINIMUM OF 90% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH. TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS AND GRADED TO A MINIMUM UNIFORM DEPTH OF FOUR (4") INCHES.
- PRIOR TO PLACING TOPSOIL, THE SUBSOIL SHALL BE SCARIFIED AT LEAST FOUR (4") INCHES.
- PERMANENT SEEDING SHALL BE COMPLETED BETWEEN THE DATES OF APRIL 1 AND JUNE 15 OR AUGUST 15 TO SEPTEMBER 30. TEMPORARY SEEDING MAY OCCUR UNTIL OCTOBER 15.
- STRAW MULCH SHALL BE APPLIED AT THE RATE OF 100 LBS. PER 1,000 SQ. FT. FOR SMALL AREAS OF 2 TONS/ACRE FOR LARGER AREAS, FOLLOWING SEEDING. MULCH SHALL BE ANCHORED BY WATERING OR USING ANCHORING EMULSION. STEEP SLOPES (3:1 AND STEEPER) SHALL BE STABILIZED BY INSTALLING EROSION CONTROL BLANKET (E.G. NORTH AMERICAN GREEN SC150 BN OR EQUIVALENT). ALL SEDIMENT CONTROL STRUCTURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. ESTABLISHED SHALL MEAN A MINIMUM OF 90% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH. DISTURBED AREAS SHALL BE SEEDING IN ACCORDANCE WITH RIDEM REQUIREMENTS AND THE TEMPORARY PLANTING TABLE FOR THIS PROJECT.
- SEEDING SHOULD BE PLANTED TO A DEPTH OF 1/4 TO 1/2 INCHES. SEEDING METHODS MAY BE DRILL SEEDING, BROADCAST, OR HYDRO-SEEDING. THE SEED SHALL BE EMBEDDED BY BROADCASTING, DRILLING, CULTIPACK TYPE, OR HYDROSEEDING.
- ENSURE DISTURBED WALKING TRAILS ARE RESTORED TO PRE-CONSTRUCTION CONDITION.

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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: NOV 20 2024 FILE #: 167-0181
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



LEGEND	
---	WATERLINE
---	100 YR FLOODPLAIN
---	200 FT RIVERBANK SETBACK
---	CONTOUR
---	PROPERTY LINES
---	BLACKSTONE VALLEY GAS AND ELECTRIC EASEMENT
---	EASEMENT
---	TOWN LINE
---	PROPERTY LINE SETBACK
---	ASSF THALWEG
---	UNDER DRAIN
---	OVERHEAD ELECTRICAL
---	UNDERGROUND ELECTRICAL
---	TREE LINE
---	TREE CLEARING LINE
---	POWER POLE
---	EXPOSED LEDGE
---	WETLAND
---	RESTORATION AREAS
---	UPLAND REFORESTATION
---	UPLAND REVEGETATION
---	WETLAND REFORESTATION
---	WETLAND REVEGETATION
---	NEW SURFACE AREAS
---	CRUSHED STONE ACCESS ROAD
---	RIPRAP

NOT FOR CONSTRUCTION

BLACKSTONE RIVER HYDRO HOLDINGS, LLC
CHAMHASSEN, MN

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
POWERHOUSE DESIGN

**NEW CONDITIONS
FINAL SITE PLAN**

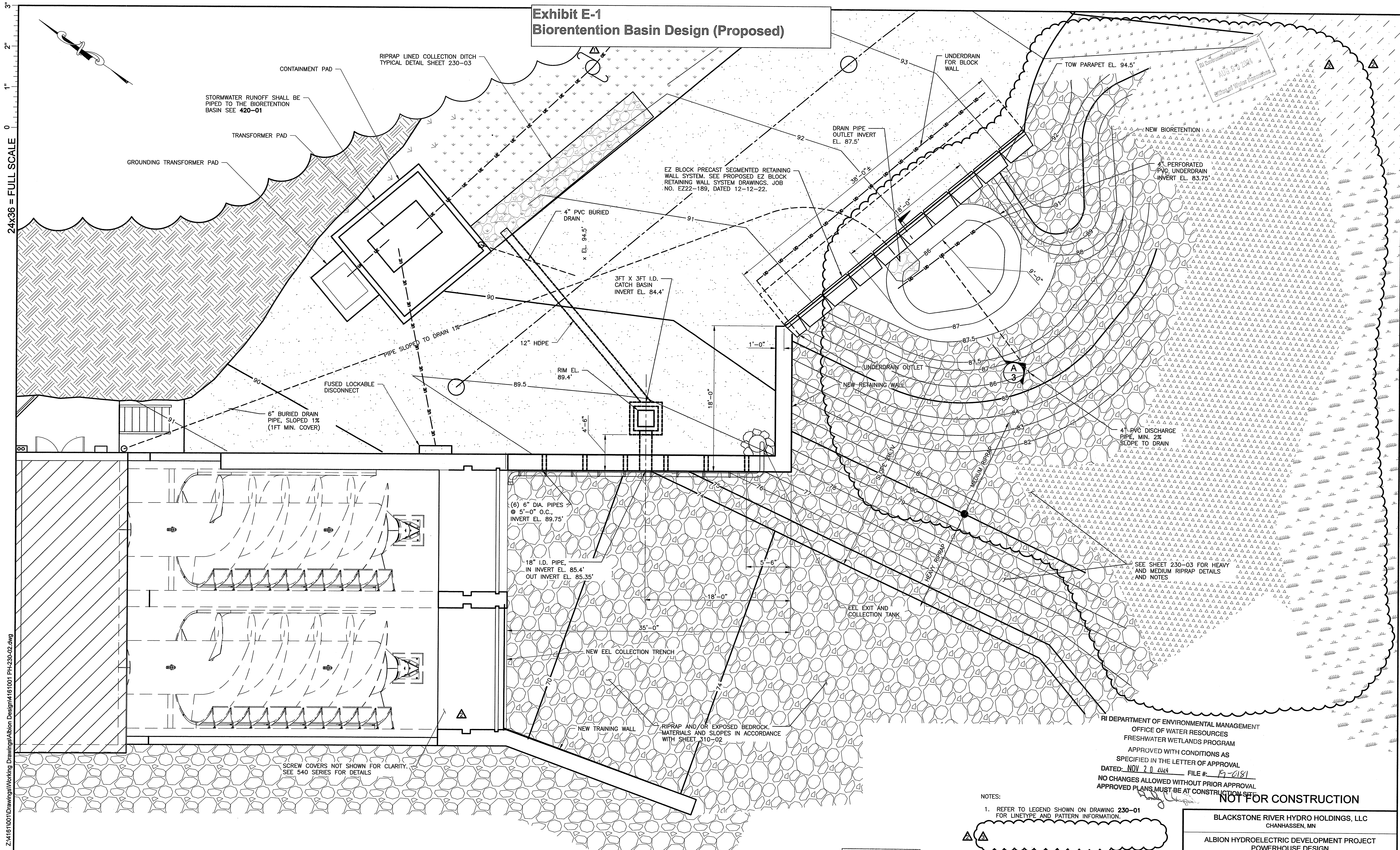
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Project No.	Date Revised	Drawing No.
4161001	07-02-24	230-01

No.	Revision	Date	Drawn	Checked
3	PERMIT MINOR MODIFICATION REQUEST	07-02-24	JCH	EMT
2	REVISED BIO RETENTION BASIN LOCATION/GRADING	06-12-24	JCH	EMT
1	UTILITY POLE LOCATION UPDATE	01-12-24	AJC	EMT
-	RECORD DRAWING	12-01-23	JCH	EMT

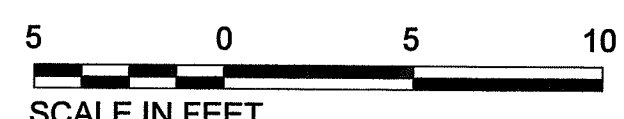
DESIGNED: TAK
DRAWN: CFT
CHECKED: EMT

Exhibit E-1 Bioretention Basin Design (Proposed)



24x36 = FULL SCALE

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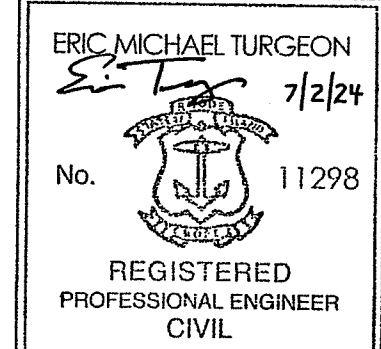
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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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SPECIFIED IN THE LETTER OF APPROVAL
DATED: NOV 20 2024 FILE #: 19-0181
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CHANHASSEN, MN
ALBION HYDROELECTRIC DEVELOPMENT PROJECT
POWERHOUSE DESIGN

NEW CONDITIONS
POWERHOUSE AREA FINAL SITE PLAN

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3	PERMIT MINOR MODIFICATION REQUEST	07-02-24	JCH	EMT
2	REVISED BIO RETENTION BASIN LOCATION/GRADING	06-12-24	JCH	EMT
1	UTILITY POLE LOCATION UPDATE	01-12-24	AJC	EMT
-	RECORD DRAWING	12-01-23	JCH	EMT

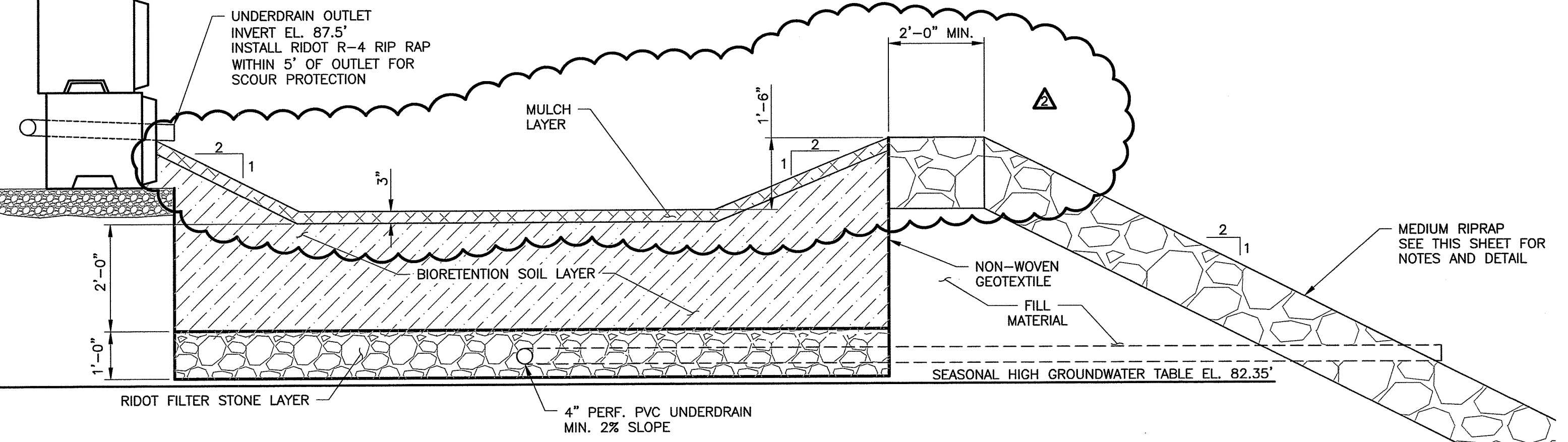
Designed	Drawn	Checked	Project No.	Date Revised	Drawing No.
TAK	CFT	EMT	4161001	07-02-24	230-02

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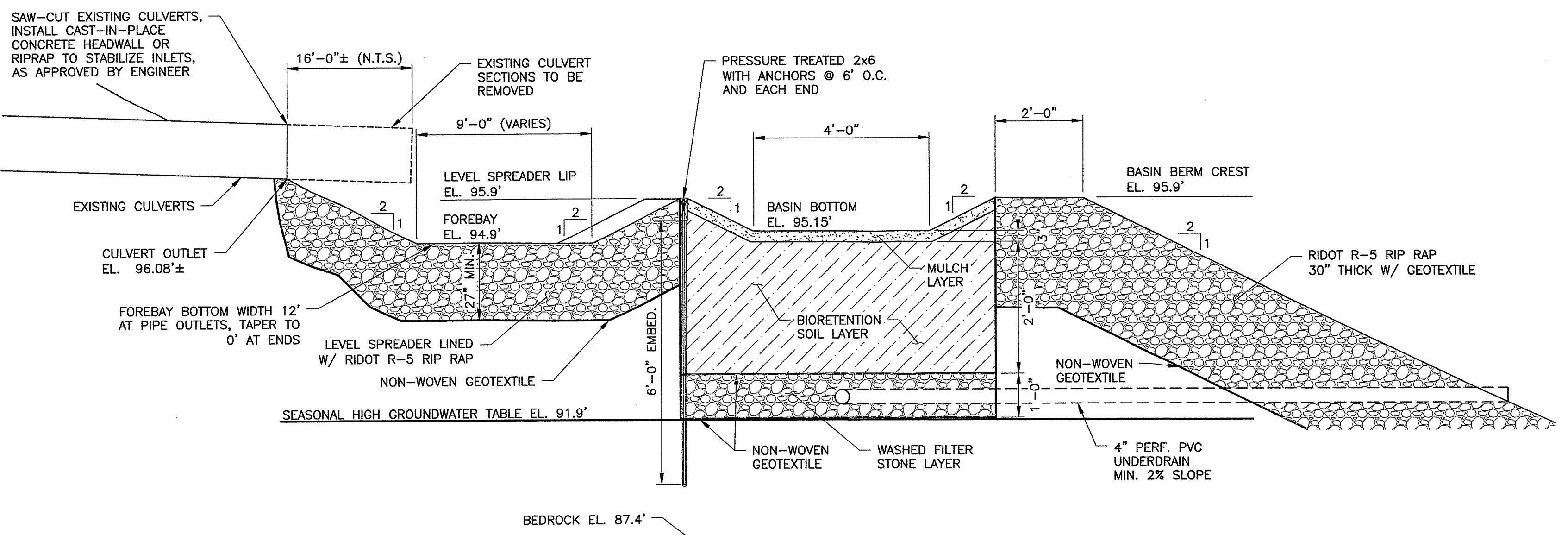
24x36 = FULL SCALE

3"
2"
1"
0

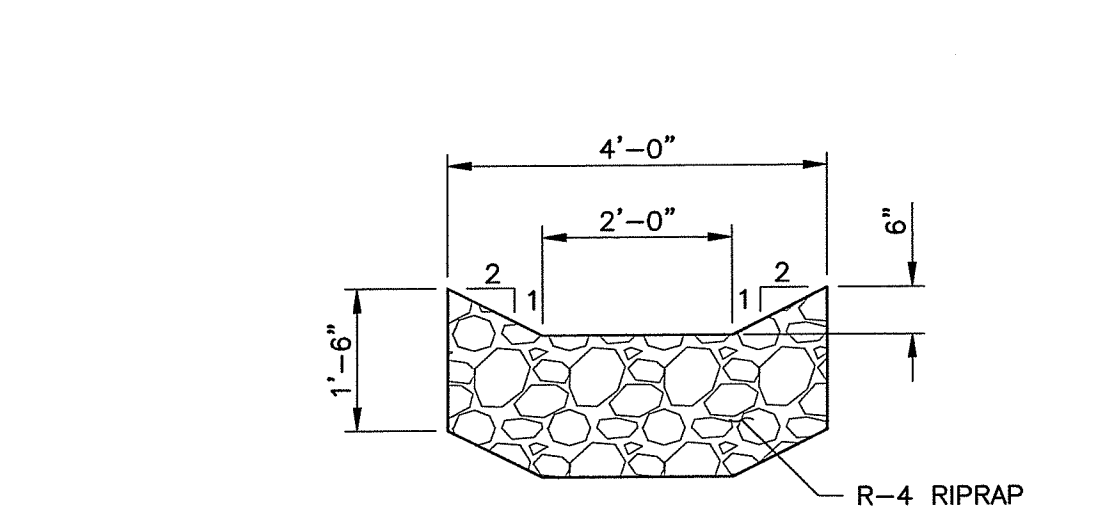
Exhibit E-2 Bioretention Basin Design Details (Proposed)



SECTION A
1:2

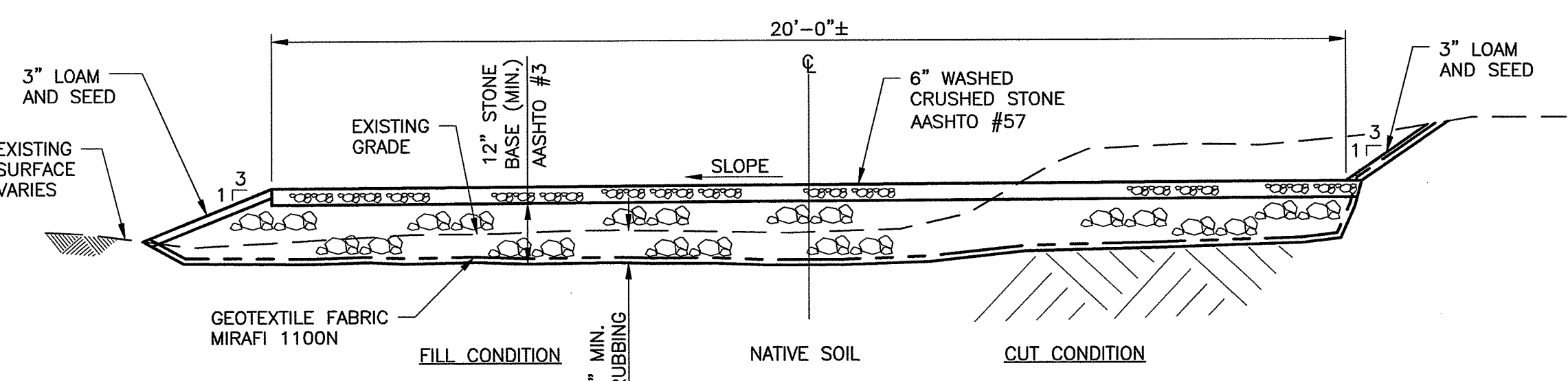


SECTION B
1:2



TYPICAL COLLECTION DITCH DETAIL
1:2

NOTE:
1. DITCH LONGITUDINAL SLOPE CONSISTENT AND IN-LINE WITH EXISTING GRADES (APPROX. 0.0933 ft/ft)



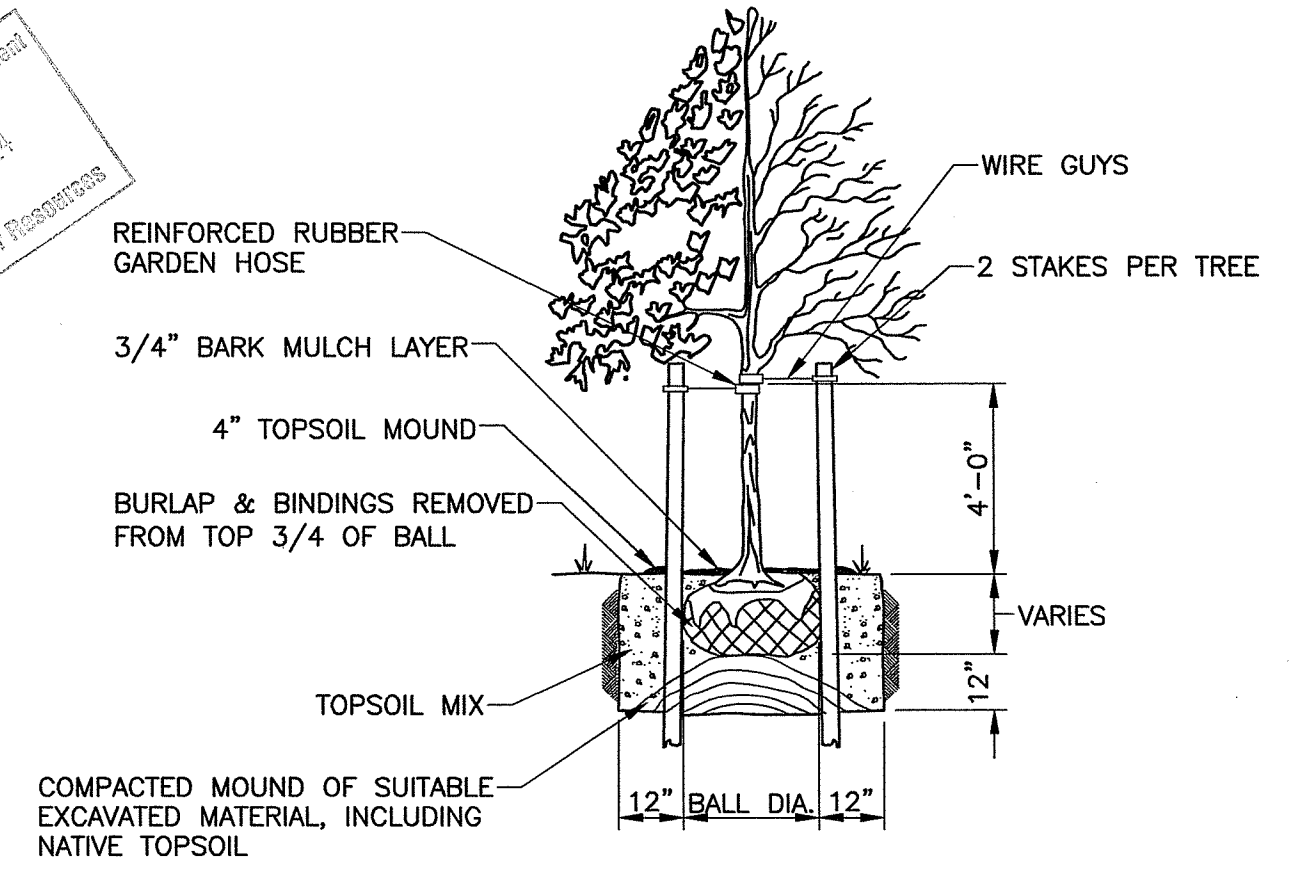
TYPICAL PERMANENT ACCESS ROAD - POST CONSTRUCTION
N.T.S.

NOTE:
1. REMOVE ANY SOIL DEPOSITS TO SATISFACTION OF ENGINEER PRIOR TO PLACEMENT OF WASHED CRUSHED STONE

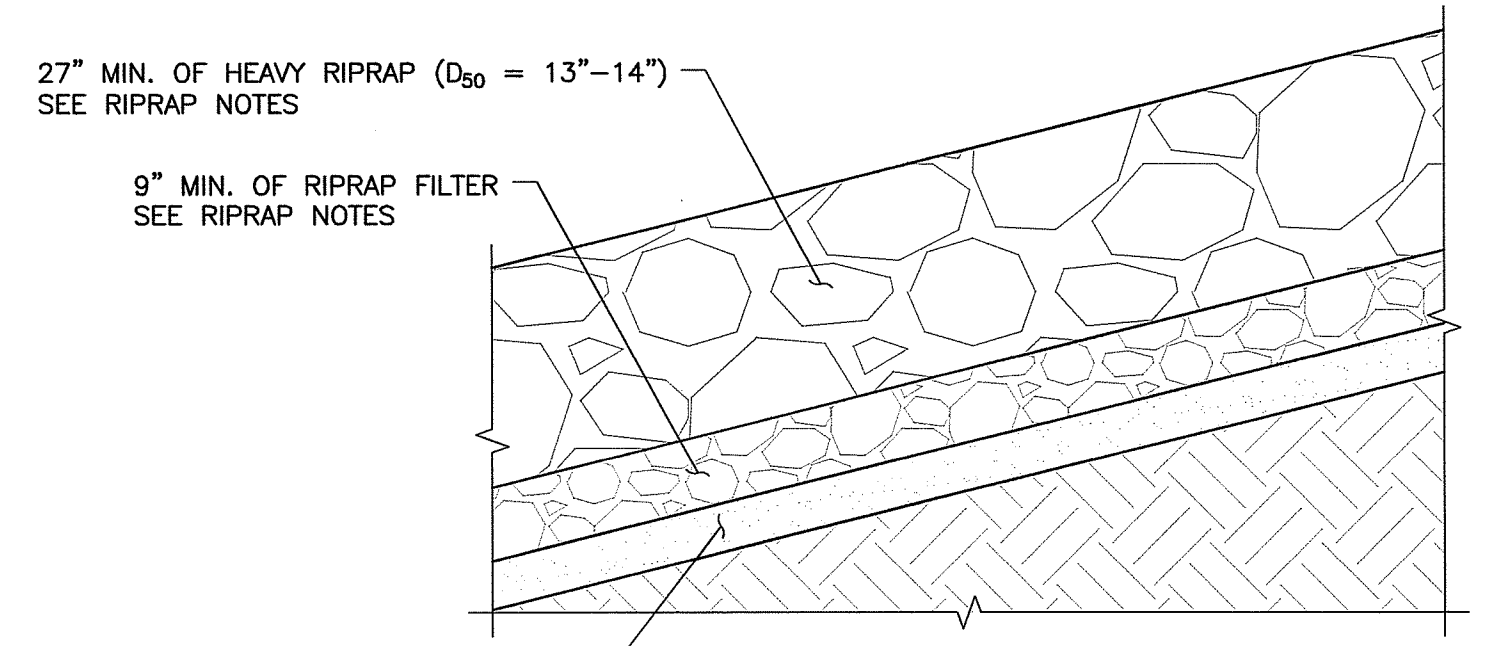
BIORETENTION BASIN NOTES:

- INSTALLATION AND MATERIALS SHALL BE PER RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, OR AN APPROVED EQUIVALENT, INCLUDING:
 - SOIL MEDIA: SOILS SHALL CONSIST OF USDA LOAMY SAND OR SANDY LOAM CLASSIFICATION AND MEET THE FOLLOWING GRADATION: SAND 85-88%, SILT 8-12%, CLAY 0-2%, AND ORGANIC MATTER (LEAF COMPOST) 3-5%. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS, OTHER WOODY MATERIAL OVER 1 INCH IN DIAMETER, OR BRUSH/SEEDS FROM NOXIOUS WEEDS
 - MULCH: MULCH SHALL CONSIST OF WELL AGED SHREDDED HARDWOOD (STOCKPILED OR STORED FOR AT LEAST SIX (6) MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC.
 - PLANTINGS: SHALL BE 4" DIA. CONTAINERS, PLANTED 2.5' O.C. AND MIXTURE OF: *SOLIDAGO VIRGAUREA* (COMMON NAME: GOLDENROD), *CAREX STRICTA* (COMMON NAME: TUSSOCK SEDGE), *IRIS VERSICOLOR* (COMMON NAME: BLUE FLAG), AND *OCLEMEGA ACUMINATA* (COMMON NAME: WOOD ASTER) OR EQUIVALENT APPROVED SPECIES.
 - STONE: RIDOT FILTERSTONE
 - GEOTEXTILE: MIRAFIX S600 OR EQUIVALENT.
- INSTALLED BIORETENTION BASIN DIMENSIONS SHALL BE TO TOP OF SLOPE, AS SHOWN.
- PLACEMENT OF SOIL MEDIA SHALL BE IN LIFTS OF 12 TO 18 INCHES, LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET).
- DEEP RIP OR DEEP AERATE (TO DEPTH OF 1') CLAY-BASED SUBSOIL (IF ENCOUNTERED) PRIOR TO PLACEMENT OF WASHED STONE.
- BIORETENTION FILTERS SHALL BE INSTALLED ONCE UPGRADIENT CONTRIBUTING AREA HAS BEEN PERMANENTLY STABILIZED.

RI Department of Environmental Management
Office of Water Resources
AUG 29 2024



TREE PLANTING DETAIL
N.T.S.



HEAVY RIPRAP DETAIL
1:2 (SEE TABLE BELOW FOR SPECS)

RIPRAP NOTES:

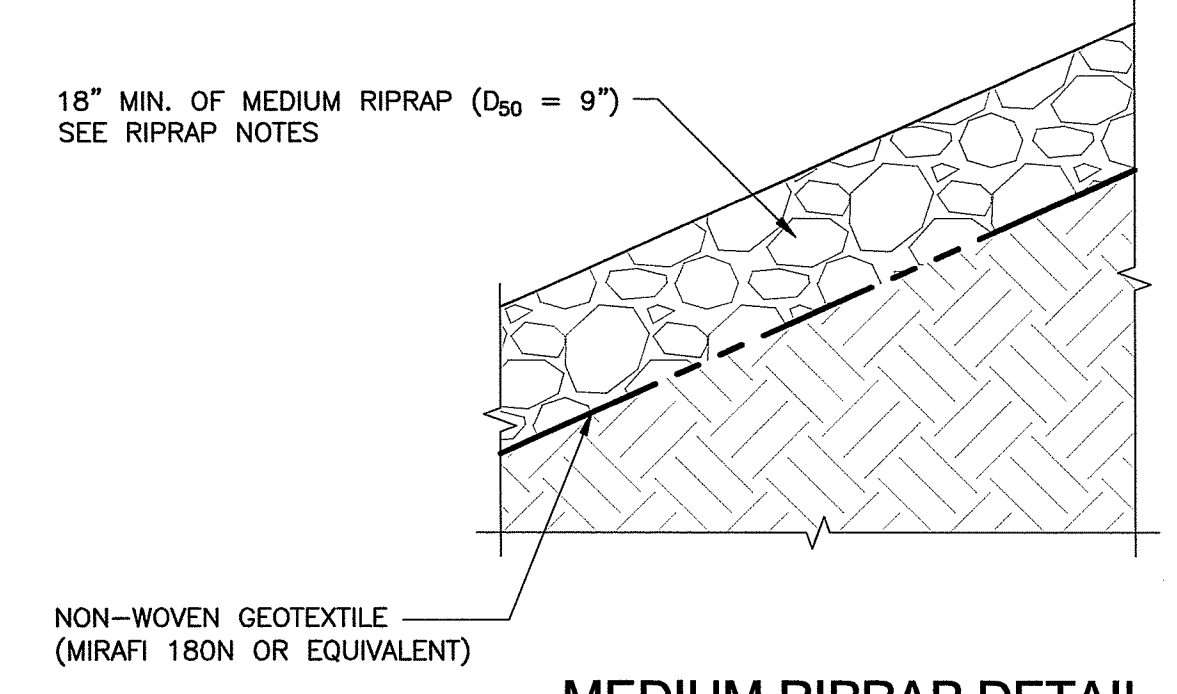
- A. GENERAL:
- SANDY GRAVEL MAY BE OMITTED, AS APPROVED BY OWNER'S REPRESENTATIVE, IN AREAS WHERE BEDROCK IS ENCOUNTERED AND/OR EXPOSED SUBGRADE SOILS ARE GRAVELLY/GRAVULAR.
 - RIPRAP FILTER MAY BE OMITTED, AS APPROVED BY OWNER'S REPRESENTATIVE, IN AREAS WHERE COMPETENT BEDROCK IS ENCOUNTERED.
 - HEAVY RIPRAP MAY BE OMITTED, AS APPROVED BY OWNER'S REPRESENTATIVE, IN AREAS WHERE COMPETENT BEDROCK IS ENCOUNTERED AT FINAL DESIGN GRADE.

B. RIPRAP (AND RIPRAP FILTER) MATERIALS:

- RIPRAP AND RIPRAP FILTER MATERIALS SHALL BE HARD, DURABLE, AND ANGULAR STONE THAT IS NOT SUBJECT TO WEATHERING OR BREAKING DOWN WHEN EXPOSED TO WATER.
- RIPRAP AND RIPRAP FILTER MATERIALS SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6.
- RIPRAP FILTER SHALL MEET THE GRADATION REQUIREMENTS LISTED IN THE TABLE BELOW.

SIEVE DESIGNATION	PERCENT PASSING BY WEIGHT
6-INCH	100
3-INCH	100
2-INCH	60-85
1 1/2-INCH	30-55
3/4-INCH	10-30
NO. 4	0-10

- RIPRAP SIZE SHALL BE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED IN THE TABLE TO RIGHT.



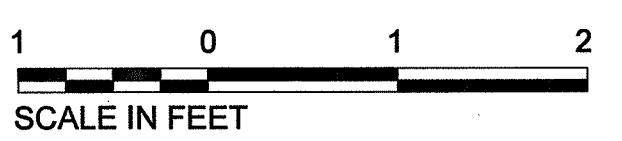
MEDIUM RIPRAP DETAIL
1:2 (SEE TABLE BELOW FOR SPECS)

DESCRIPTION/NAME	WEIGHT (LBS)	ROCK SIZE (INCHES)	PERCENT FINER BY WEIGHT
LIGHT RIPRAP (D50=6 INCHES)	80	10	100
WHERE INDICATED	30	8	70-90
	15	6	35-55
	2	3	0-20
MEDIUM RIPRAP (D50=9 INCHES)	240	15	100
	120	12	70-90
	60	9	35-55
HEAVY RIPRAP (D50=15-14 INCHES)	7.5	4.5	0-20
	800	22	100
	400	18	70-90
TAILRACE AREAS BELOW EL. 80 FT	200	13-14	35-55
	25	8	0-20

5. RIPRAP SHALL BE STOCKPILED ACCORDING TO THE SIZES/CLASSIFICATIONS INDICATED. THE OWNER'S REPRESENTATIVE SHALL VISUALLY INSPECT STOCKPILES FOR CONFORMANCE WITH THE SPECIFICATIONS.

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ERIC MICHAEL TURGEON
7/2/24
No. 11298
REGISTERED PROFESSIONAL ENGINEER CIVIL



NOT FOR CONSTRUCTION

BLACKSTONE RIVER HYDRO HOLDINGS, LLC
CHANHASSEN, MN
ALBION HYDROELECTRIC DEVELOPMENT PROJECT
POWERHOUSE DESIGN

NEW CONDITIONS
BIORETENTION BASIN & MISCELLANEOUS DETAILS

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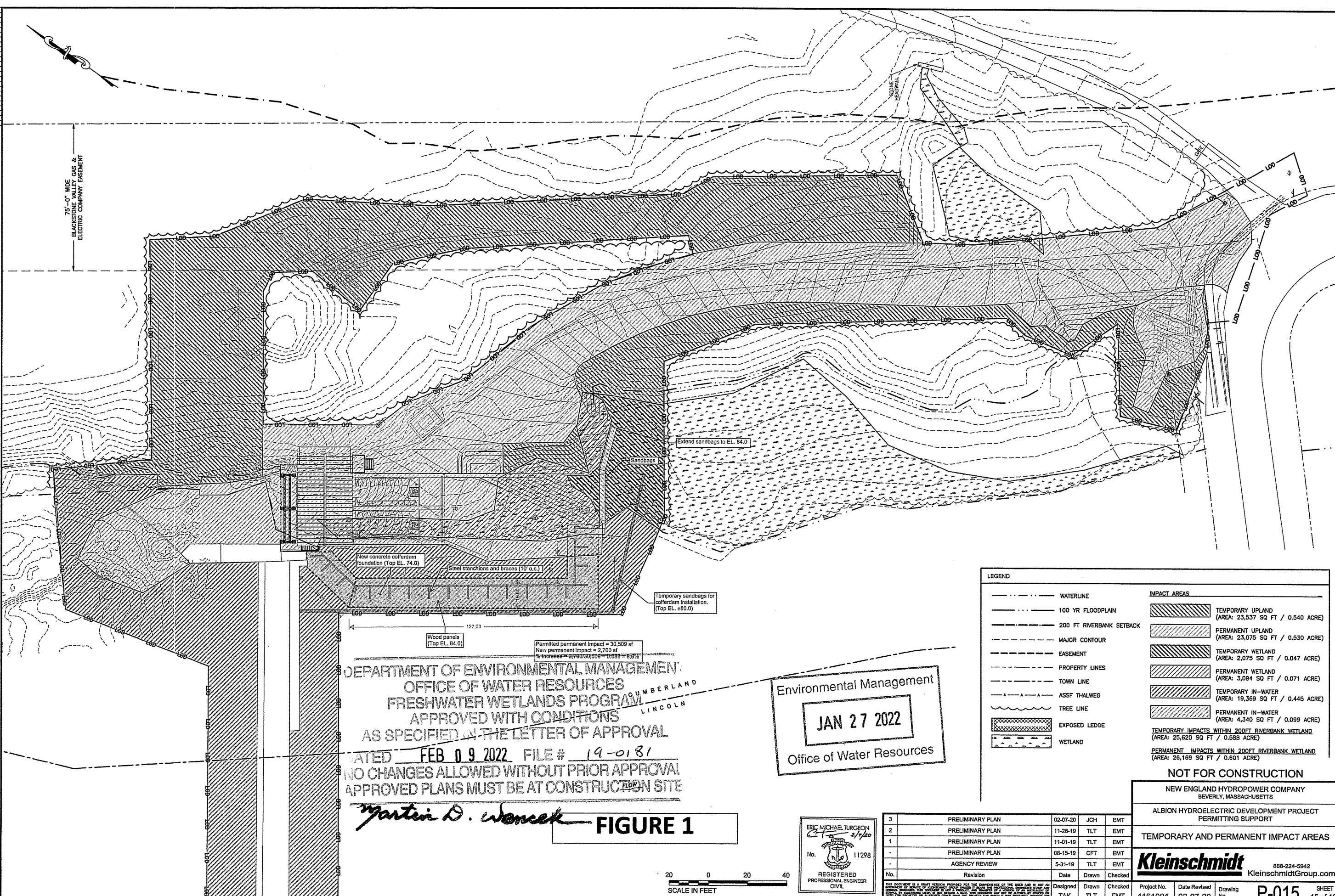
No.	Revision	Date	Drawn	Checked
2	PERMIT MINOR MODIFICATION REQUEST	07-02-24	JCH	EMT
1	REVISED BIO RETENTION BASIN	08-12-24	JCH	EMT
-	RECORD DRAWING	12-01-23	JCH	EMT

Project No. 4161-001 Date Revised 07-02-24 Drawing No. 230-03

REVISED: July 2, 2024 - 4:34 PM Z:\4161\001\Drawings\Working Drawings\Albion Design\4161001 PH-230-03.dwg

24x36 = FULL SCALE

Feb. 7, 2020 - 3:55 PM
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75'-0" WIDE
 BLACKSTONE VALLEY GAS &
 ELECTRIC COMPANY EASEMENT

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 DATED FEB 09 2022 FILE # 19-0131
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Martin D. Wencak

FIGURE 1

Environmental Management
JAN 27 2022
 Office of Water Resources

20 0 20 40
 SCALE IN FEET

ERIC MICHAEL TURGEON
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 No. 11298

No.	Revision	Date	Drawn	Checked
3	PRELIMINARY PLAN	02-07-20	JCH	EMT
2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

LEGEND

Symbol	Description
--- --	WATERLINE
--- --	100 YR FLOODPLAIN
--- --	200 FT RIVERBANK SETBACK
--- --	MAJOR CONTOUR
--- --	EASEMENT
--- --	PROPERTY LINES
--- --	TOWN LINE
--- --	ASSF THALWEG
--- --	TREE LINE
--- --	EXPOSED LEDGE
--- --	WETLAND

IMPACT AREAS

[Hatched Pattern]	TEMPORARY UPLAND (AREA: 23,537 SQ FT / 0.540 ACRE)
[Hatched Pattern]	PERMANENT UPLAND (AREA: 23,075 SQ FT / 0.530 ACRE)
[Hatched Pattern]	TEMPORARY WETLAND (AREA: 2,075 SQ FT / 0.047 ACRE)
[Hatched Pattern]	PERMANENT WETLAND (AREA: 3,094 SQ FT / 0.071 ACRE)
[Hatched Pattern]	TEMPORARY IN-WATER (AREA: 19,369 SQ FT / 0.445 ACRE)
[Hatched Pattern]	PERMANENT IN-WATER (AREA: 4,340 SQ FT / 0.099 ACRE)
[Hatched Pattern]	TEMPORARY IMPACTS WITHIN 200FT RIVERBANK WETLAND (AREA: 25,620 SQ FT / 0.588 ACRE)
[Hatched Pattern]	PERMANENT IMPACTS WITHIN 200FT RIVERBANK WETLAND (AREA: 26,169 SQ FT / 0.601 ACRE)

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NEW ENGLAND HYDROPOWER COMPANY
 BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
 PERMITTING SUPPORT

TEMPORARY AND PERMANENT IMPACT AREAS

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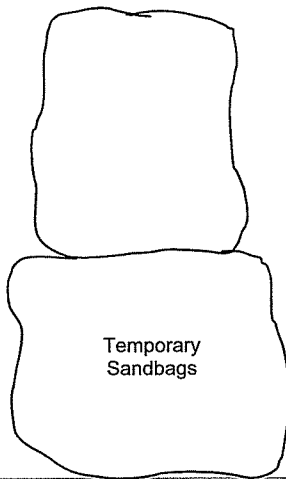
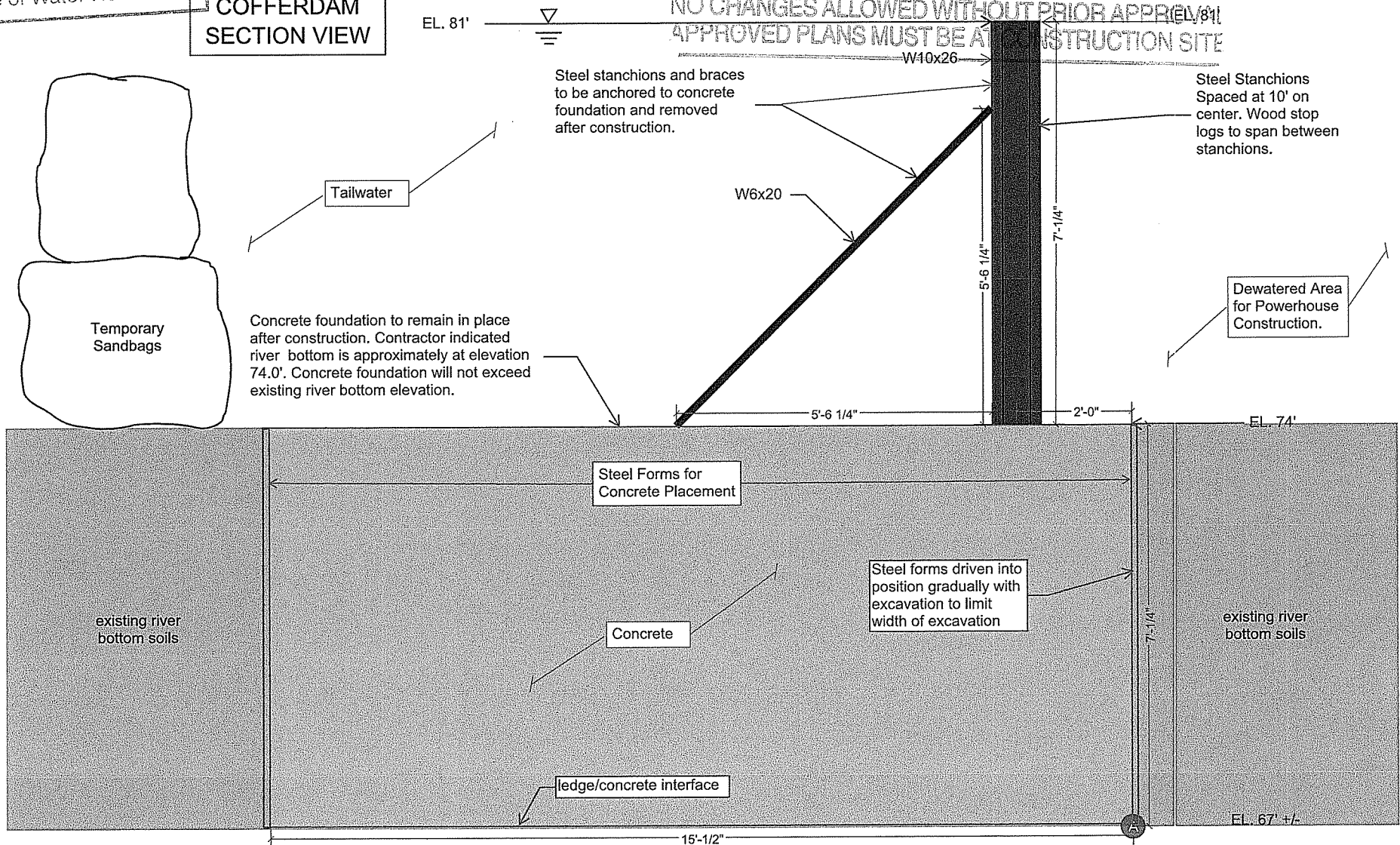
Project No. 4161001 Date Revised 02-07-20 Drawing No. P-015 SHEET 15 of 16

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**FIGURE 2
 COFFERDAM
 SECTION VIEW**



Concrete foundation to remain in place after construction. Contractor indicated river bottom is approximately at elevation 74.0'. Concrete foundation will not exceed existing river bottom elevation.

Steel stanchions and braces to be anchored to concrete foundation and removed after construction.

Steel Stanchions Spaced at 10' on center. Wood stop logs to span between stanchions.

Dewatered Area for Powerhouse Construction.

ALBION HYDROELECTRIC DEVELOPMENT PROJECT

SCHOOL STREET, CUMBERLAND, RHODE ISLAND

PERMITTING DRAWING SET

PRELIMINARY PLAN 02-07-2020

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Matthew D. ...

Environmental Management
 APR 15 2020
 Office of Water Resources

Environmental Management
 FEB 13 2020
 Office of Water Resources

PREPARED BY :

Kleinschmidt

141 MAIN STREET
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NEHC

New England
 Hydropower
 Company, LLC

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 BEVERLY FARMS, MASSACHUSETTS 01915
 978-360-2547
 www.nehydropower.com

SHEET INDEX:

SHEET NO.	DRAWING NAME	DATE	REVISION	STATUS
P-001	COVER SHEET	2/7/2020	3	PRELIMINARY PLAN
P-002	PROJECT NOTES I	11/1/2019	1	PRELIMINARY PLAN
P-003	PROJECT NOTES II	11/1/2019	1	PRELIMINARY PLAN
P-004	EXISTING SITE LOCATION	2/7/2020	2	PRELIMINARY PLAN
P-005	EXISTING CONDITIONS PLAN	2/7/2020	3	PRELIMINARY PLAN
P-006	SITE ACCESS, EROSION CONTROL, AND WATER MANAGEMENT PLAN	2/7/2020	2	PRELIMINARY PLAN
P-007	CONSTRUCTION SEQUENCING	11/1/2019	1	PRELIMINARY PLAN
P-008	FINAL SITE GRADING PLAN	2/7/2020	3	PRELIMINARY PLAN
P-009	FINAL SITE GRADING AND RESTORATION PLAN	2/7/2020	3	PRELIMINARY PLAN
P-010	PROPOSED CONDITIONS SITE CROSS SECTIONS	11/1/2019	1	PRELIMINARY PLAN
P-011	PROPOSED POWERHOUSE GENERAL LAYOUT	11/1/2019	1	PRELIMINARY PLAN
P-012	SOIL EROSION AND SEDIMENT CONTROL DETAILS	11/1/2019	1	PRELIMINARY PLAN
P-013	MISCELLANEOUS CONSTRUCTION DETAILS	2/7/2020	2	PRELIMINARY PLAN
P-014	BIORETENTION DETAILS	11/26/2019	2	PRELIMINARY PLAN
P-015	TEMPORARY AND PERMANENT IMPACT AREAS	2/7/2020	3	PRELIMINARY PLAN
P-016	FLOODPLAIN/FLOODWAY BOUNDARIES	2/7/2020	1	PRELIMINARY PLAN

PROJECT TEAM

POWER FACILITY AND
 PROPERTY OWNER /
 PERMIT APPLICANT:
**NEW ENGLAND HYDROPOWER
 COMPANY, LLC**
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 978-360-2547
 www.nehydropower.com

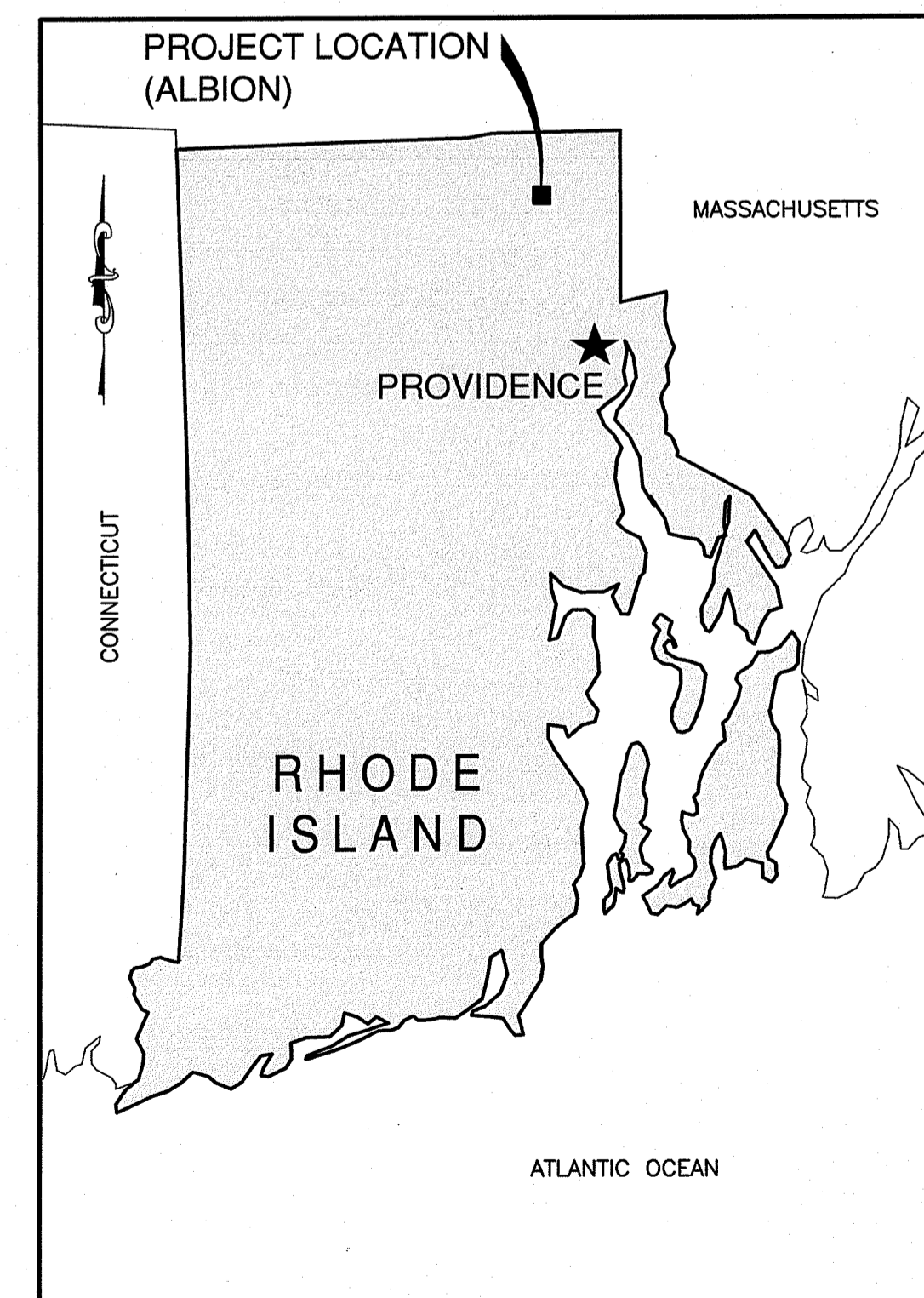
HYDRO FACILITY DESIGNER /
 OPERATOR:
**NEW ENGLAND HYDROPOWER
 COMPANY, LLC**

DESIGN ENGINEER:
KLEINSCHMIDT
 141 MAIN STREET
 P.O. BOX 650
 PITTSFIELD, MAINE 04967
 888-224-5942
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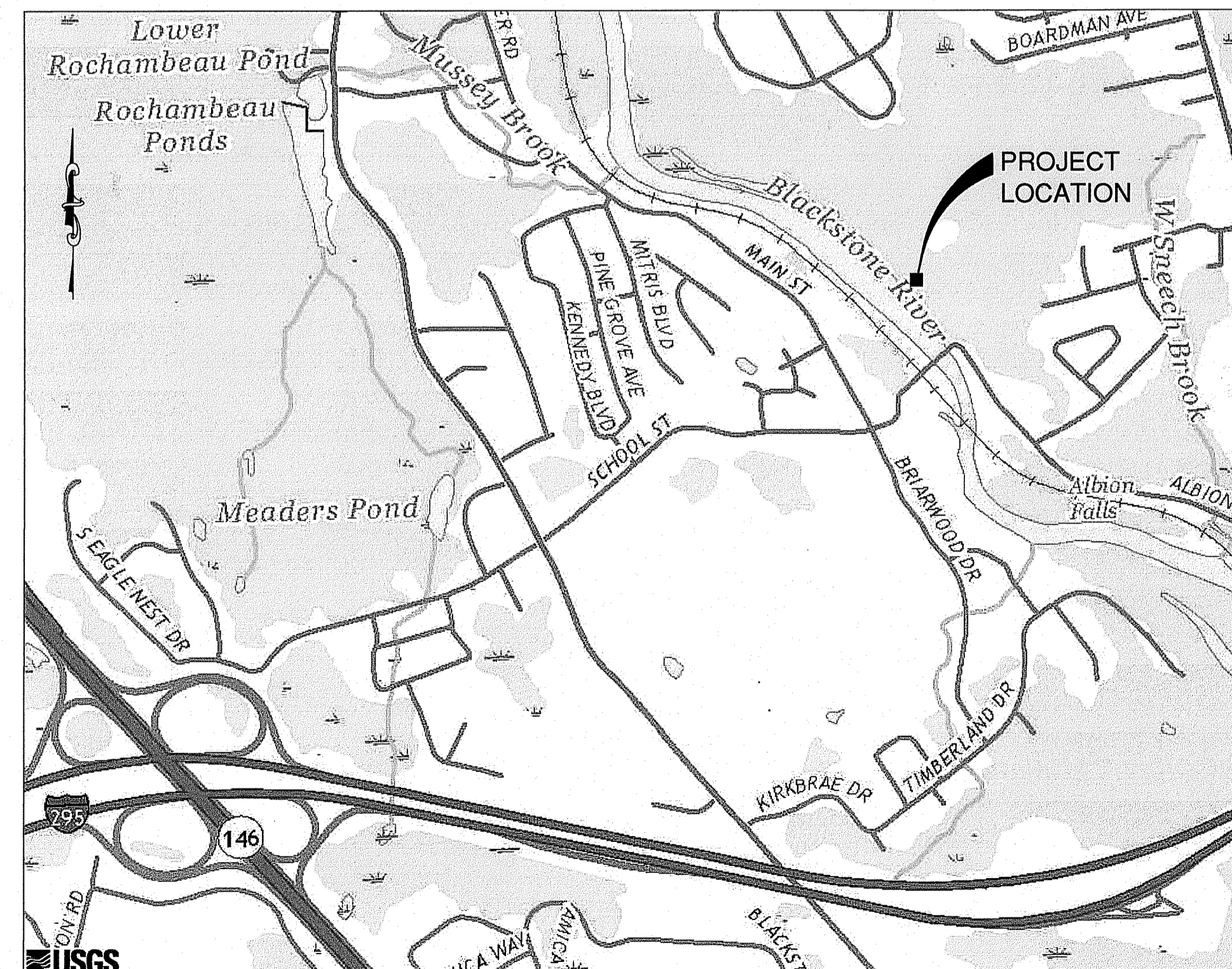
PERMITTING BIOLOGIST:
**NATURAL RESOURCE
 SERVICES, INC.**
 P.O. BOX 311
 HARRISVILLE, RI 02830
 401-568-7390
 www.nrswetlands.com

LAND SURVEYOR:
DGT ASSOCIATES
 255 PARK AVENUE
 WORCESTER, MA 01609
 508-762-9470
 www.DGTassociates.com

ERIC MICHAEL TURGEON
 2/7/20
 No. 11298
 REGISTERED
 PROFESSIONAL ENGINEER
 CIVIL



STATE MAP



VICINITY MAP 1000 FT



SITE MAP 400 FT

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24x36 = FULL SCALE

GENERAL NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS, SPECIFICATIONS, AND REFERENCED DOCUMENTS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED IN THE DRAWINGS AND IN FULL COMPLIANCE WITH NATIONAL, STATE, AND LOCAL REGULATIONS AND CODES.
- ALL MATERIALS SHALL BE PROVIDED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT VERSION) UNLESS NOTED OTHERWISE.
- ALL MATERIALS SHALL BE PROVIDED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (CURRENT VERSION), UNLESS NOTED OTHERWISE.
- ALL WORK SHALL BE PERFORMED AND COORDINATED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER OR OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL CONSTRUCTION STAKEOUT AND SURVEY WORK. ANY DISCREPANCIES FOUND DURING THE COURSE OF THE SURVEY WORK SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER/ENGINEER.
- ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING, MAINTAINING, AND SUBMITTING TO THE OWNER ALL REQUIRED DOCUMENTS, INCLUDING, BUT NOT LIMITED TO, A SPILL PREVENTION AND CONTROL PLAN, CONSTRUCTION SCHEDULE, AND SAFETY PLAN.
- THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS CONTAINED IN RELEVANT PERMITS.
- AREAS OUTSIDE OF THE LIMITS OF PROPOSED WORK THAT ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION. CONTRACTOR SHALL SUBMIT ANY VARIANCES TO THE LIMIT OF PROPOSED WORK FOR APPROVAL TO THE OWNER.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING UNDERGROUND UTILITY CHECKS, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH RHODE ISLAND DIG SAFE SYSTEM, INC. (811, or 1-800-344-7233) A MINIMUM OF THREE FULL WORKING DAYS IN ADVANCE OF ANY DIGGING ACTIVITY. IF UTILITIES ARE ENCOUNTERED OR DETERMINED TO OCCUR IN THE PROJECT WORK AREA, THE CONTRACTOR SHALL REPORT SUCH FINDINGS IMMEDIATELY IN WRITING TO THE ENGINEER.
- THE LOCATION OF ALL EXISTING UTILITIES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OF EXCAVATION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS TO LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO MEET EXISTING CONDITIONS. CONTRACTOR TO LOCATE PRIVATE LINES WHICH MAY NOT BE LOCATED BY MARKING SERVICE.
- DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY SYSTEMS. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS DURING SITE ACTIVITY, UNLESS APPROVED IN WRITING BY THE OWNER.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITIES.
- ALL TEMPORARY FACILITIES ARE AT CONTRACTOR'S OPTION, EXCEPT SANITATION FACILITIES ARE TO BE PROVIDED BY CONTRACTOR AS REQUIRED BY LAW, MINIMUM OF ONE.
- CONTRACTOR SHALL PROVIDE SECURITY FOR EQUIPMENT AND MATERIALS. THE OWNER SHALL NOT BE RESPONSIBLE FOR THEFT OR VANDALISM OF CONTRACTOR'S PROPERTY.
- SURVEY DATA BASED ON FIELD SURVEY BY NBYNE, WITH STAMPED SURVEY PROVIDED BY DGT ASSOCIATES, SURVEYING & ENGINEERING, COLLECTED IN NOVEMBER 2016 AND APRIL 2019; PROVIDED TO KLEINSCHMIDT ASSOCIATES IN MAY 2019.
- THESE DRAWINGS HAVE BEEN PREPARED BASED ON SURVEY INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND REPORT ANY DEVIATIONS FROM THESE DRAWINGS TO THE OWNER PRIOR TO COMMENCING ANY WORK.
- HORIZONTAL COORDINATES ARE EXPRESSED IN U.S. SURVEY FEET AND REFERENCED TO THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983, (NAD83). VERTICAL ELEVATIONS ARE SHOWN IN NAVD83 DATUM, AS COLLECTED WITH AN RTK-GPS.
- WETLAND BOUNDARIES WERE DELINEATED BY NATURAL RESOURCE SERVICES, INC. IN MARCH 2019.
- CONTRACTOR SHALL TAKE CARE TO ASSURE THAT ALL EQUIPMENT IS CLEAN AND FREE FROM INVASIVE PLANT MATERIAL PRIOR TO ACCESSING THE SITE. CONTRACTOR SHALL TAKE CARE NOT TO SPREAD INVASIVE SPECIES WITH EQUIPMENT. CARE SHALL BE TAKEN TO ASSURE NO CONTAMINATION OF THE SITE WITH INVASIVE PLANT MATERIAL FROM ANY SOURCE (RIP-RAP, IMPORTED SOILS, MATTING, ETC.).
- THE CONTRACTOR SHALL BE ADVISED THAT THE PROJECT IS LOCATED IN AN AREA PRONE TO FLOODING. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THE PROJECT WHILE UNDER CONSTRUCTION, WHICH MAY INCLUDE SEQUENCING THE PROJECT TO PROTECT TEMPORARY AND PERMANENT STRUCTURES. THIS INCLUDES, BUT IS NOT LIMITED TO, PROTECTION FROM STORMS, FLOODS, BOAT WAKES, CURRENT, WIND, AND RECREATIONAL USERS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF THE PROJECT SITE, TEMPORARY FACILITIES, FALSEWORK, TURBIDITY CURTAIN, EQUIPMENT, PERSONNEL, WORK, MATERIALS, AND OTHER PROPERTIES, BOATS, THE PUBLIC, OR INDUSTRY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR THE WEATHER AND INFORM THE OWNER OF ANY ANTICIPATED WEATHER THAT MAY COMPROMISE THE PROJECT SITE OR TEMPORARY FACILITIES AS SOON AS THE CONTRACTOR BECOMES AWARE OF SUCH CONDITIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CONSTRUCTION SAFETY RULES, INCLUDING OSHA TITLE 29 CFR PART 1926, LATEST EDITION. THE WORK AREA SHALL BE ADEQUATELY ISOLATED FROM ACCESS TO THE GENERAL PUBLIC.
- CONTRACTOR SHALL LOCATE, MARK, AND SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND R.O.W. MONUMENTS IN THE AREAS OF CONSTRUCTION.
- THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING AT THE PROJECT SITE WITH THE OWNER AND REPRESENTATIVES FROM THE TOWN OF CUMBERLAND PRIOR TO COMMENCING CONSTRUCTION.

EXCAVATION, SUB-GRADE PREP, AND FILL PLACEMENT

- EXCAVATION MATERIALS SHALL BE DISPOSED OF IN A LEGAL MANNER. CONTRACTOR SHALL PLACE ALL EXCESS CUT SOIL IN A SOIL PLACEMENT LOCATION CHOSEN BY THE OWNER.
- BEARING CAPACITY OF EXISTING SOILS WAS DETERMINED BY ON-SITE BORINGS FOR ALL FOUNDATIONS. CONTRACTOR TO REVIEW BORINGS AND INFORM THE OWNER IF CONDITIONS SUBSTANTIALLY DEVIATE FROM CONDITIONS FOUND IN BORINGS.
- COMPACT EXISTING GRADE TO 95% MODIFIED PROCTOR MAXIMUM DENSITY PRIOR TO PLACEMENT OF BASE MATERIALS.
- COMPACT PLACED SOIL FILL TO 90% MODIFIED PROCTOR MAXIMUM DENSITY IN LIFTS OF NO MORE THAN 8" LOOSE DEPTH.
- PLACE STONE MATERIAL IN 8" LOOSE DEPTH (MAX) LIFTS COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DENSITY EQUIVALENT.
- IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, EXCAVATE & MANAGE SUMP 2-3 FEET AWAY FROM SUBGRADE TO COLLECT GROUNDWATER SEEPAGE DURING CONSTRUCTION.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR MAKING ALL EXCAVATIONS IN SAFE MANNER. PROVIDE APPROPRIATE MEASURES TO RETAIN EXCAVATION SIDE SLOPES TO ENSURE THAT PERSONNEL IN OR NEAR THE EXCAVATION ARE PROTECTED. INSTALL & MAINTAIN SHORING, SHEETING, BRACING, AND SLOPING NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO PREVENT MOVEMENT THAT MAY DAMAGE ADJACENT STRUCTURE OR FOUNDATIONS, DELAY THE WORK, OR ENDANGER LIFE AND HEALTH.

STORMWATER MAINTENANCE PROGRAM

- THE POST-CONSTRUCTION MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM SHOULD THE RESPONSIBILITY OF THE OWNER.
- IN THE EVENT OF A DEFICIENCY REPORT, REPAIRS AND REPLACEMENTS TO THE STORMWATER MANAGEMENT MEASURES SHOULD BE COMPLETED WITHIN 30 DAYS.
- DURING CONSTRUCTION THE BIORETENTION FILTER AREA SHOULD BE PROTECTED TO PREVENT SOIL-LADEN RUNOFF FROM REACHING THE FACILITY. THE BIORETENTION FILTER SHOULD BE INSTALLED AFTER THE CONTRIBUTING AREA HAS BEEN STABILIZED. FOR THE FIRST SIX MONTHS AFTER CONSTRUCTION, THE BIORETENTION FILTER SHOULD BE INSPECTED AT LEAST TWICE AND FOLLOWING PRECIPITATION EVENTS GREATER THAN 1.0 INCH OVER A 24-HOUR PERIOD. THEREAFTER, INSPECTIONS SHOULD BE CONDUCTED ON AN ANNUAL BASIS AND AFTER STORMS GREATER THAN OR EQUAL TO THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (EVENT THAT GENERATES 2.7 INCHES OF RAINFALL OR GREATER IN A 24-HOUR PERIOD). THE INSPECTION AND MAINTENANCE PROGRAM SHOULD INCLUDE THE FOLLOWING COMPONENTS:
 - SOIL EROSION:** SOIL EROSION AND AREAS OF CONCENTRATED FLOW SHOULD BE REPAIRED WHEN THEY OCCUR. THIS INCLUDE RESEEDING AND STABILIZING THESE SPOTS IN ACCORDANCE WITH THE RESTORATION PLAN.
 - WOODY VEGETATION:** PRUNING OR REPLACEMENT OF WOODY VEGETATION SHOULD OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
 - HERBACEOUS VEGETATION:** SPERATION OF HERBACEOUS VEGETATION ROOTSTOCK SHOULD OCCUR WHEN OVER-CROWDING IS OBSERVED, OR APPROXIATLY OVCE EVERY 3 YEARS.
 - MULCH:** THE MULCH LAYER SHOULD BE REPLENISHED (TO THE ORIGINAL DESIGN DEPTH) EVERY OTHER YEAR, AS DIRECTED BY INSPECTION REPORTS. THE PREVIOUS MULCH LAYER SHOULD BE REMOVED, AND PROPERLY DISPOSED OF, OR ROTO-TILLED INTO THE SOIL SURFACE.
 - VEGETATION COVERAGE:** IF AT LEAST 50% OF THE VEGETATION COVERAGE IS NOT ESTABLISHED AFTER TWO YEARS, A REINFORCEMENT PLANTING SHOULD BE PERFORMED. IF
 - PROPER DRAINAGE:** IF THE SURFACE OF THE BIORETENTION FILTER BECOMES CLOGGED TO THE POINT THAT STANDING WATER IS OBSERVED ON THE SURFACE 48 HOURS AFTER PRECIPITATION EVENTS, THE SURFACE SHOULD BE ROTOTILLED OR CULTIVATED TO BREAKUP ANY HARD-PACKED SEDIMENT AND THEN RE-VEGETATED.
- DURING CONSTRUCTION THE CRUSHED WASHED STONE (PERMEABLE) DRIVEWAY AND PARKING AREA SHOULD BE PROTECTED TO PREVENT SOIL-LADEN RUNOFF FROM REACHING THE FACILITY. THE PERMEABLE DRIVEWAY SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION DUE TO SITE CONSTRAINTS. AFTER CONSTRUCTION OF THE POWERHOUSE HAS BEEN COMPLETED, THE TOP THREE (3) INCHES OF CRUSHED STONE SHALL BE REMOVED. THE EXPOSED SURFACE SHALL BE TESTED TO ENSURE IF THE INFILTRATION CAPACITY IS ADEQUATE (NO PONDING OF WATER OR RUNOFF). IF THE INFILTRATION CAPACITY IS ADEQUATE, A TOP SIX (6) INCH LAYER OF WASHED CRUSHED STONE WILL BE INSTALLED. IF THE INFILTRATION CAPACITY IS NOT ADEQUATE, FURTHER REPLACEMENT OF STONE WILL BE NECESSARY. A ROW OF COMPOST FILTER SOCK SHALL BE INSTALLED UP-GRADIENT OF THE PERMEABLE DRIVEWAY AFTER THE INSTALLATION OF THE DRIVEWAY AND PARKING AREA TO PREVENT SEDIMENT LADEN RUNOFF FROM UNSTABILIZED UP-GRADIENT AREAS FROM ENTERING THE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE PERMEABLE DRIVEWAY AND PARKING AREA SHOULD CLOGGING OR DAMAGE OCCUR.

A LEGALLY BINDING AND ENFORCEABLE MAINTENANCE AGREEMENT SHALL BE EXECUTED BY THE FACILITY OWNER AND THE RESPONSIBLE AUTHORITY DEEMED APPROPRIATE BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEMA). AN EXAMPLE MAINTENANCE AGREEMENT HAS BEEN PROVIDED WITHIN APPENDIX C. SUBSEQUENT TO COMPLETION OF CONSTRUCTION, THE FOLLOWING INSPECTION AND MAINTENANCE PROGRAM IS REQUIRED FOR THE WASHED CRUSHED STONE DRIVEWAY AND PARKING AREA:

- DAMAGE AND RUTTING:** INSPECT THE WASHED CRUSHED STONE SURFACE QUARTERLY FOR THE PURPOSE OF IDENTIFYING AREAS OF RUTTING AND POT HOLES. IF RUTTING OR POT HOLES OCCUR DUE TO INADEQUATE BASE PREPARATION OR SETTLEMENT, THEN GRAVEL SHOULD BE REMOVED FROM THE AFFECTED SECTION. THE BASE SHOULD BE BROUGHT UP TO THE PROPER GRADE AND COMPACTION. THE WASHED CRUSHED STONE SURFACE SHOULD BE REINSTALLED TO A MINIMUM DEPTH OF 6 INCHES.
 - WINTER MAINTENANCE:** SNOW SHOULD NOT BE STOCKPILED ON THE WASHED CRUSHED STONE DRIVEWAY OR PARKING AREA IN ORDER TO PROTECT THE WASHED CRUSHED STONE SURFACE. THE SNOW REMOVAL SHOULD UTILIZE A STANDARD TRUCK-MOUNTED SNOW PLOW WITH EITHER SMALL SKIDS ON THE CORNER OF THE BLADES OR ROLLERS TO KEEP THE BLADE OFF THE SURFACE APPROXIMATELY ONE INCH. THE WASHED CRUSHED STONE SHOULD BE REPLACED, AND THE SURFACE RE-LEVELLED WHEN PLOW DAMAGE OCCURS.
 - LEAVE/LITTER/WEEDS REMOVAL:** LEAVES AND/OR GARBAGE SHOULD BE RAKED OR REMOVED WITH A BLOWER FROM THE PERMEABLE SURFACE AT A MINIMUM OF THREE TIMES PER YEAR (OCTOBER, DECEMBER, AND APRIL) AND AS NECESSARY TO PREVENT THE DECAY OF SUCH MATERIAL ON THE SURFACE. IF WEEDS APPEAR, WEED KILLER SHOULD BE APPLIED AND THE WEEDS REMOVED ONCE DEAD.
 - PROPER DRAINAGE:** INSPECT THE SURFACE QUARTERLY FOR THE PRESENCE OF STANDING WATER. ADDITIONALLY, IF DURING MONITORING THE WASHED CRUSHED STONE SURFACE IS OBSERVED TO BE PONDING WATER THEN THE SURFACE SHOULD BE SCARIFIED EVERY THREE (3) YEARS TO MAINTAIN ADEQUATE VOID SPACE.
- INSPECT RIP RAP PERIODICALLY TO DETERMINE IF SCOUR HAS OCCURRED BENEATH THE RIPRAP OR FILTER BLANKET OR DISLODGED ANY OF THE RIPRAP OR FILTER BLANKET MATERIALS. ONCE A RIPRAP INSTALLATION HAS BEEN COMPLETED, IT SHOULD REQUIRE VERY LITTLE MAINTENANCE. PERIODIC REMOVAL OF WOODY VEGETATION (E.G. ANNUAL) MAY BE REQUIRED TO INSURE THE INTEGRITY OF THE RIPRAP.
 - IF SLIPPAGE OR DISPLACEMENT OF RIPRAP OCCURS, CONDUCT AN ENGINEERING ANALYSIS TO DETERMINE THE CAUSE. OVERLAND WATER FLOW, EXCESSIVE SEEPAGE, DEEP SLOPE FAILURE OR SURFICIAL STRUCTURAL FAILURE SHOULD BE INVESTIGATED BY AN ENGINEER. REPAIR FAILED AREAS AND/OR IMPLEMENT ALTERNATE MEASURES TO OBTAIN STABILITY.
 - DISPOSAL OF ACCUMULATED SEDIMENT AND DEBRIS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

POLLUTION PREVENTION (POST-CONSTRUCTION)

- THE SITE SHALL BE OPERATED AND MAINTAINED TO PREVENTION POLLUTION TO THE ADJACENT BLACKSTONE RIVER. THE FOLLOWING POLLUTION PREVENTION MEASURES SHALL BE UTILIZED FOR THE SITE.
 - SOIL WASTE CONTAINMENT:** THE SITE IS PROPOSED AS LOW USE AND SHOULD NOT CREATE SOLID WASTE. SHOULD THERE EVER BE A CHANGE IN USE, WHICH RESULTS IN THE CREATION OF SOLID WASTE, THE REQUIREMENTS OF RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL APPENDIX G SHALL BE FOLLOWED.
 - SNOW STOCKPILING:** SNOW SHALL NOT BE STOCKPILED ON THE WASHED CRUSHED STONE SURFACE, OR WITHIN 50 FEET OF THE RIVER.
 - DEICING:** THE USE OF SAND AND/OR SALT SHALL BE MINIMIZED FOR THE PURPOSES OF WATER MAINTENANCE. IF SAND AND SALT ARE STORED ONSITE, THEY SHALL BE STORED IN THE POWERHOUSE TO PREVENT CONTAMINATION OF STORMWATER.
 - FERTILIZER:** FERTILIZER SHALL NOT BE UTILIZE ON THIS PROJECT BEYOND THE AMOUNTS SPECIFIC IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK FOR TEMPORARY AND PERMANENT VEGETATIVE COVER.

Environmental Management
APR 15 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 26 2020 FILE # 19-0181
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature

NOT FOR CONSTRUCTION

NEW ENGLAND HYDROPOWER COMPANY BEVERLY, MASSACHUSETTS	
ALBION HYDROELECTRIC DEVELOPMENT PROJECT PERMITTING SUPPORT	
PROJECT NOTES I	
Kleinschmidt 888-224-5942 KleinschmidtGroup.com	
Project No. 4161-001	Date Revised 10-31-19
Designing EMT	Drawn JCH
Checked EMT	Checked EMT
Drawing No. P-002	SHEET 2 of 16

ERIC MICHAEL TURGEON
Signature
No. 11298
REGISTERED PROFESSIONAL ENGINEER
CIVIL

No.	Revision	Date	Drawn	Checked
1		11-01-19	TLT	EMT
-		08-15-19	CFT	EMT
-		5-31-19	TLT	EMT

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SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES

- THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR CONTROLLING SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROPOSED DEVELOPMENT. THIS PLAN IS BASED ON RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (2016).
- AT NO TIME SHALL SEDIMENT BE PERMITTED TO LEAVE THE SITE.
- ALL POLLUTION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ALL SOIL OR STONE WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE WILL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- TURBIDITY CURTAIN SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND PER PROJECT SPECIFICATIONS.
- ALL WORK SHALL BE PERFORMED WITHIN THE LIMIT OF DISTURBANCE THAT HAS BEEN MARKED IN THE FIELD BY THE CONTRACTOR.
- KEY ACTIONS:
 - DELINEATE/MARK SOIL DISTURBANCE LIMITS
 - INSTALL SEDIMENT BARRIERS BEFORE DISTURBING ANY SOILS
 - INSTALL A STABILIZED CONSTRUCTION ENTRANCE BEFORE ANY HAUL TO OR FROM THE SITE
 - CREATE UPGRADIENT STORM WATER DIVERSIONS TO MINIMIZE FLOW OVER EXPOSED SLOPES
 - DIVERT AND DISPERSE STORM RUNOFF TO UNDISTURBED AREAS WHEREVER POSSIBLE
 - MULCH DISTURBED AREAS
 - PROTECT SLOPES
 - INSPECT AND REPAIR EROSION CONTROLS AND SEDIMENT BARRIERS
 - STABILIZE DISTURBED SOILS BEFORE WINTER
 - LIMIT EARTH WORK IN WINTER
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO SCHEDULE EARTHWORK OPERATIONS SUCH THAT THE AREA OF EXPOSED AND DISTURBED SOIL IS MINIMIZED. CONSTRUCTION SHALL BE PHASED TO REDUCE THE AREA OF DISTURBED SOIL AT ANY ONE TIME. UPGRADIENT STORM WATER DIVERSION AND DISPERSION MEASURES SHALL BE INSTALLED WHERE APPROPRIATE. AFTER ACHIEVING ROUGH GRADE OF A PORTION OF THE SITE AND PRIOR TO EXTENDING EARTHWORK OPERATIONS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS BY TEMPORARY SEEDING AND MULCHING UNTIL FINAL GRADE IS REACHED. SLOPES 3:1 OR GREATER SHALL ALSO BE STABILIZED WITH EROSION CONTROL BLANKETS. ALL CUT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION.
- THE OPERATOR SHALL PROVIDE A QUALIFIED INSPECTOR RESPONSIBLE TO SEE THAT THE SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN IS IMPLEMENTED PROPERLY.
- EROSION CONTROL BLANKET SHALL BE INSTALLED IN ALL DRAINAGE SWALES AND DITCHES. ALL SLOPES STEEPER THAN 3:1 SHALL BE COVERED WITH EROSION CONTROL BLANKET TO PREVENT EROSION DURING CONSTRUCTION AND TO FACILITATE REVEGETATION AFTER TOPSOILING AND SEEDING.
- ANY DISTURBED LAND AREA SHALL BE STABILIZED WITHIN FOURTEEN CALENDAR DAYS AFTER FINAL GRADING HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE OR PRACTICAL TO PERMANENTLY STABILIZE DISTURBED LAND, TEMPORARY EROSION CONTROL MEASURES SHALL BE EMPLOYED TO PROTECT DISTURBED AREAS INCLUDING STOCKPILES WITHIN FOURTEEN CALENDAR DAYS OF EXPOSURE, OR FORMATION OF STOCKPILES UNLESS THESE AREAS ARE TO BE SUBSEQUENTLY SURFACED. ALL DISTURBED AREAS SHALL BE MULCHED FOR EROSION CONTROL UPON COMPLETION OF ROUGH GRADING.
- RIPRAP OUTLET PROTECTION SHALL BE INSTALLED AT THE ENDS OF ALL STORM DRAINS AS SHOWN ON THE PLANS AND DETAILS.
- PUMPED DISCHARGE FROM CONSTRUCTION DEWATERING OPERATIONS, SHALL BE DIRECTED TO SEDIMENT CONTROL DEVICES ADJACENT TO THE ACTIVITY. SEDIMENT CONTROL DEVICES SHALL BE TEMPORARY FACILITIES SUCH AS PORTABLE SEDIMENT TANK, OR OTHER SIMILAR DEVICES THAT DO NOT REQUIRE ADDITIONAL SOIL DISTURBANCE.
- NATIVE TOPSOIL OR EROSION CONTROL MIX SEDIMENT BERM SHALL BE SAVED, STOCKPILED, MULCHED, AND REUSED AS MUCH AS POSSIBLE ON THE SITE. SILTATION FENCE SHALL BE INSTALLED AT THE BASE OF STOCKPILES AT THE DOWNHILL LIMIT TO PROTECT AGAINST EROSION. STOCKPILES SHALL BE STABILIZED BY SEEDING AND MULCHING UPON FORMATION OF THE PILES. UPGRADIENT OF THE STOCKPILES, STABILIZED DITCHES AND/OR BERMS SHALL BE CONSTRUCTED TO DIVERT STORMWATER RUNOFF AWAY FROM THE PILES.
- ALL SEDIMENT BARRIERS SHALL BE INSPECTED BY THE CONTRACTOR ON A WEEKLY BASIS OR WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER. ALL DAMAGED SEDIMENT BARRIERS SHALL BE REPAIRED OR REPLACED IMMEDIATELY. TRAPPED SEDIMENT SHALL BE REMOVED BEFORE IT HAS ACCUMULATED ONE-HALF FOOT DEEP AT THE INSTALLED SEDIMENT BARRIER. DEVICES NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION SHALL ALSO BE REPAIRED OR REPLACED AS REQUIRED.
- PERMANENT SEEDING SHALL BE COMPLETED BY SEPTEMBER 30 OF ANY CALENDAR YEAR. ALL EXPOSED SOIL PRIOR TO OCTOBER 15 SHALL BE SEEDED IF VEGETATIVE MEASURES ARE THE INTENDED SOIL STABILIZATION METHOD. ANY SUCH AREA THAT IS NOT ADEQUATELY STABILIZED, AS DETERMINED BY THE QUALIFIED INSPECTOR, BY NOVEMBER 15, MUST BE STABILIZED THROUGH THE USE OF NON-VEGETATIVE EROSION CONTROL MEASURES. TEMPORARY AND PERMANENT VEGETATIVE AND NON-VEGETATIVE CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH THE SESC PLAN. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON STEEP SLOPES (3:1 AND STEEPER) AND ON AREAS OF CONCENTRATED FLOWS.
- INTERCEPTED SEDIMENT SHALL BE REMOVED AND SHALL BE DEPOSITED TO AN AREA THAT SHALL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

DUST CONTROL

- IF DUSTY CONDITIONS OCCUR ON-SITE AS A RESULT OF INCREASED VEHICULAR TRAFFIC DURING DRY CONDITIONS, DUST CONTROL MEASURES SHALL BE IMPLEMENTED.
- WATER: WATER SHOULD BE APPLIED AT A RATE SUFFICIENT ENOUGH TO MOISTEN EXPOSED SOIL TO PREVENT DUST TRANSPORT BUT NOT AT A RATE THAT PRODUCES ANY AMOUNT OF SILT-LADEN RUNOFF OR MUDDY POOLS IN THE TRAVEL WAY. REPEAT AS OFTEN AS REQUIRED TO MAINTAIN MOISTURE.
- STONE: REPLACE MATERIAL AS VOIDS IN STONE BECOME FILLED AND TRACKING OCCURS.
- AREAS WITH DUST CONTROL MEASURES IN PLACE SHOULD BE INSPECTED DAILY.

SPILL PREVENTION AND CONTROL PROGRAM

- THE APPLICANT (OWNER AND OPERATOR) SHALL ESTABLISH SPILL PREVENTION AND CONTROL MEASURES TO REDUCE THE CHANCE OF SPILLS, STOP THE SOURCE OF SPILLS, CONTAIN AND CLEAN-UP SPILLS, AND DISPOSE OF MATERIALS CONTAMINATED BY SPILLS.
- THE OPERATOR SHALL ENSURE THAT ALL WORKERS ARE TRAINED ENOUGH TO FOLLOW PROCEDURES OUTLINED IN THE SPILL PREVENTION AND CONTROL PROGRAM. THE CONTRACTOR SHALL MAKE EQUIPMENT AND MATERIAL FOR CLEANUP READILY AVAILABLE AND CLEAR MARKED SO WORKERS CAN FOLLOW PROCEDURES QUICKLY AND EFFECTIVELY.
- MATERIAL DELIVERY AND STORAGE SHALL OCCUR WITHIN THE TEMPORARY LAYDOWN AREA.
- THE AREA WHERE POTENTIAL SPILL WILL OCCUR WILL BE WITHIN THE REQUIRED CONTAINMENT SYSTEM IN THE TEMPORARY LAYDOWN AREA. THE LAYDOWN AREA WILL BE GRADED WITH A HIGH POINT IN THE CENTER. THE DISCHARGE POINT WILL BE ON THE PERIMETER NEAREST TO THE DESIGNATED DELIVER, STORAGE, AND VEHICLE MAINTENANCE/FUELING AREA.
- THE OPERATOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW A SITE SPECIFIC SPILL PREVENTION AND CONTROL PROGRAM SUITABLE FOR ALL PROPOSED ACTIVITIES AT THE SITE.
- THE OPERATOR SHALL AMEND THE SPILL PREVENTION AND CONTROL PROGRAM TO INCLUDE ALL NECESSARY CHEMICALS AND/OR HAZARDOUS WASTE MATERIAL FOR THE COMPLETION OF THIS PROJECT, INCLUDING PROPER AND LEGAL STORAGE WITHIN A COVERED AREA AND CONTAINMENT SYSTEMS.

VEHICLE FUELING, MAINTENANCE, AND WASHING

- THE PERIMETER OF THE VEHICLE FUELING AND MAINTENANCE AREA SHALL BE FLAGGED IN THE FIELD. ALL VEHICLE WASHING SHALL OCCUR OFF-SITE.
- BERMS, SANDBAGS, OR OTHER BARRIERS SHALL BE USED AROUND THE VEHICLE FUELING AND MAINTENANCE AREA TO PREVENT STORMWATER CONTAMINATION AND CONTAIN SPILLS.
- IF VEHICLE MAINTENANCE MUST OCCUR OUTSIDE OF THE DESIGNATED VEHICLE FUELING AND MAINTENANCE AREA (DUE TO VEHICLE BREAKDOWN), THEN THE REQUIRED CONTROL MEASURES SHALL BE INSTALLED AT THE LOCATION WHERE THE VEHICLE MAINTENANCE MUST OCCUR.
- STORED FUEL SHALL BE ENCLOSED AND COVERED. PROPERLY COVER AND PROVIDE SECONDARY CONTAINMENT FOR FUEL DRUMS AND TOXIC MATERIALS. VEHICLE WASTE SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF-SITE.
- THE OPERATOR SHALL PROPERLY TRAIN EMPLOYEES AND SUBCONTRACTORS IN THE PROPER PROCEDURES OF VEHICLE FUELING, MAINTENANCE, AND WASHING.
- THE OPERATOR SHALL FOLLOW THESE FUELING PROCEDURES:
 - DISCOURAGE "TOPPING-OFF" OF FUEL TANKS.
 - MAKE AVAILABLE ABSORBENT SPILL CLEANUP MATERIALS AND SPILL KITS IN FUELING AREAS AND ON FUELING TRUCKS, AND SHOULD BE DISPOSED OF PROPERLY AFTER USE.
 - USE DRIP PANS OR ABSORBENT PADS DURING VEHICLE AND EQUIPMENT FUELING, UNLESS THE FUELING IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED FUELING AREA.
 - USE ABSORBENT MATERIALS ON SMALL SPILLS. DO NOT HOSE DOWN OR BURY THE SPILL. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY.
 - AVOID MOBILE OF MOBILE CONSTRUCTION EQUIPMENT AROUND THE SITE; RATHER, TRANSPORT THE EQUIPMENT TO THE DESIGNATED FUELING AREAS.
 - TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING AND CLEANUP PROCEDURES.
 - EQUIP NOZZLES USED IN VEHICLE AND EQUIPMENT FUELING WITH AN AUTOMATIC SHUTOFF TO CONTROL DRIPS. FUELING OPERATIONS SHOULD NOT BE LEFT UNATTENDED.
 - USE VAPOR RECOVERY NOZZLES TO HELP CONTROL DRIPS AS WELL AS AIR POLLUTION WHERE REQUIRED.
 - FEDERAL, STATE, AND LOCAL REQUIREMENTS SHOULD BE OBSERVED FOR ANY STATIONARY ABOVE GROUND STORAGE TANKS.

WASHOUT

- VEHICLE WASHING AND WASHING OF PAINT, STUCCO, AND OTHER CHEMICALS SHALL OCCUR OFFSITE. THE CONTRACTOR SHALL COMPLETE WASHING IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- CONCRETE WASHOUT SHALL OCCUR ONSITE AT THE CONCRETE WASHOUT AREA WITHIN THE TEMPORARY LAYDOWN AREA.
 - INSPECT AND VERIFY THAT CONCRETE WASHOUT SESC MEASURES ARE IN PLACE PRIOR TO THE COMMENCEMENT OF CONCRETE WORK.
 - DURING PERIODS OF CONCRETE WORK, INSPECT DAILY TO VERIFY CONTINUED PERFORMANCE.
 - INSPECTION SHALL INCLUDE THE FOLLOWING:
 - CHECK OVERALL CONDITION AND PERFORMANCE.
 - CHECK REMAINING CAPACITY (% FULL).
 - IF USING SELF-INSTALLED WASHOUT FACILITIES, VERIFY PLASTIC LINERS ARE INTACT AND SIDEWALLS ARE NOT DAMAGED.
 - IF USING PREFABRICATED CONTAINERS, CHECK FOR LEAKS.

MONITORING PROGRAM

- SEDIMENTATION AND EROSION CONTROL STRUCTURES SHALL BE INSPECTED CONTINUALLY BY THE CONTRACTOR AND ALL STRUCTURES DAMAGED BY CONSTRUCTION EQUIPMENT, VANDALS, OR THE ELEMENTS SHALL BE REPAIRED IMMEDIATELY. FOLLOWING RAINSTORMS AND DURING RUNOFF EVENTS, THE SITE AND ALL STRUCTURES SHALL BE INSPECTED FOR EROSION AND DAMAGE. ALL DAMAGED STRUCTURES SHALL BE REPAIRED AND/OR ADDITIONAL EROSION CONTROL STRUCTURES SHALL BE INSTALLED PRIOR TO CONTINUING THE CONSTRUCTION.
- THE QUALIFIED INSPECTOR SHALL COMPLETE AND MAINTAIN THE INSPECTIONS REPORTS W/ CORRECTIVE ACTION LOG, IN ACCORDANCE WITH THE SESC PLAN.
- FOLLOWING THE FINAL SEEDING, THE SITE SHALL BE INSPECTED TO ENSURE THAT THE VEGETATION HAS BEEN ESTABLISHED. IN THE EVENT OF ANY UNSATISFACTORY GROWTH, RE-SEEDING SHALL BE CARRIED OUT, WITH FOLLOW-UP INSPECTION.
- AFTER THE CONSTRUCTION INSPECTOR HAS DETERMINED THAT THE PROJECT AREA HAS STABILIZED, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SEDIMENTATION BARRIERS, CONTROL RISERS, AND ANY OTHER TEMPORARY EROSION CONTROL MEASURES.

WASTE MANAGEMENT

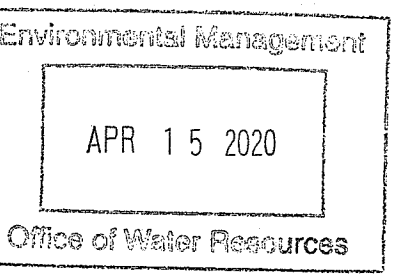
- THE CONTRACTOR SHALL PLAN AND PROVIDE CONTROL MEASURES FOR THE PROPER MANAGEMENT OF EVERY TYPE OF WASTE GENERATED FROM THE PROJECT. CONTROL MEASURES SHALL BE CONSTRUCTED, OPERATED, AND MAINTAINED IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
- ALL CONSTRUCTION SITE WASTES SHALL BE DISPOSED OF AT AUTHORIZED DISPOSAL AREAS. CONTRACTOR SHALL CONTACT A LOCAL ENVIRONMENTAL AGENCY TO IDENTIFY THESE DISPOSAL AREAS.
- THE FOLLOWING CONTROL MEASURES FOR SOLID WASTE SHALL BE IMPLEMENTED BY THE CONTRACTOR:
 - THE CONTRACTOR SHALL PROVIDE A WASTE COLLECTION CONTAINER(S) LOCATED IN THE TEMPORARY LAYDOWN AREA. THE CONTAINER(S) SHALL HAVE A LID TO PREVENT RAIN FROM ENTERING THE CONTAINER.
 - THE CONTRACTOR SHALL ENSURE THAT THE CONTAINER(S) IS/ARE COVERED PRIOR TO PERIODS OF RAIN.
 - WASTE COLLECTION SHALL BE SCHEDULED TO PREVENT OVERFILLING THE CONTAINER(S).

NON-STORMWATER DISCHARGE

- THE CONTRACTOR SHALL ISOLATE AND PREVENT ANY NON-STORMWATER DISCHARGES FROM THE FOUNDATION DRAINS ASSOCIATED WITH THE DAM.
- THE CONTRACTOR SHALL WASH CLEAN THE DUST CONTROL WATER APPLICATOR PRIOR TO USE, TO PREVENT POLLUTANT DISCHARGE FROM THE SITE.

BUILDING MATERIAL STAGING AREA

- THE BUILDING MATERIAL STAGING AREA WILL BE LOCATED WITHIN THE TEMPORARY LAYDOWN AREA AND WILL BE MARKED BY FLAGS IN THE FIELD.
- THE BUILDING MATERIAL STAGING AREA SHALL BE PROTECTED BY TEMPORARY SEDIMENT BARRIER SUCH AS BERMS, DIKES, FIBER ROLLS, SILT FENCES, SANDBAGS, GRAVEL BAGS, OR STRAW BALES.
- THE SIDE SLOPES OF STOCKPILES MATERIALS THAT ARE ERODIBLE SHALL BE NO STEEPER THAN 2:1.
- DURING THE RAINY SEASON, THE STOCKPILES SHALL BE COVERED AT ALL TIME.
- DURING THE NON-RAINY SEASON, THE STOCKPILES SHALL BE COVERED PRIOR TO THE ONSET OF PRECIPITATION.
- STOCKPILE COVERS SHALL BE 3MM PLASTIC OR A COMPARABLE MATERIAL.

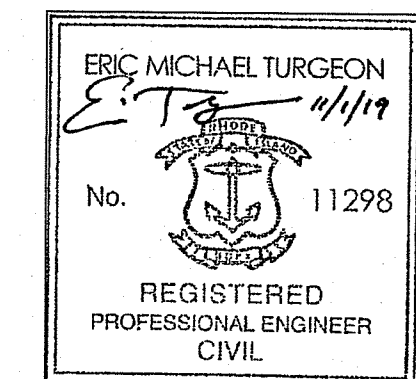


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED AUG 26 2020 FILE # 19-0181
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature

NOT FOR CONSTRUCTION

NEW ENGLAND HYDROPOWER COMPANY
 BEVERLY, MASSACHUSETTS
 ALBION HYDROELECTRIC DEVELOPMENT PROJECT
 PERMITTING SUPPORT
 PROJECT NOTES II



No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT
			Designed	Drawn
			JCH	EMT

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 Project No. 4161-001 Date Revised 10-31-19 Drawing No. P-003 SHEET 3 of 16

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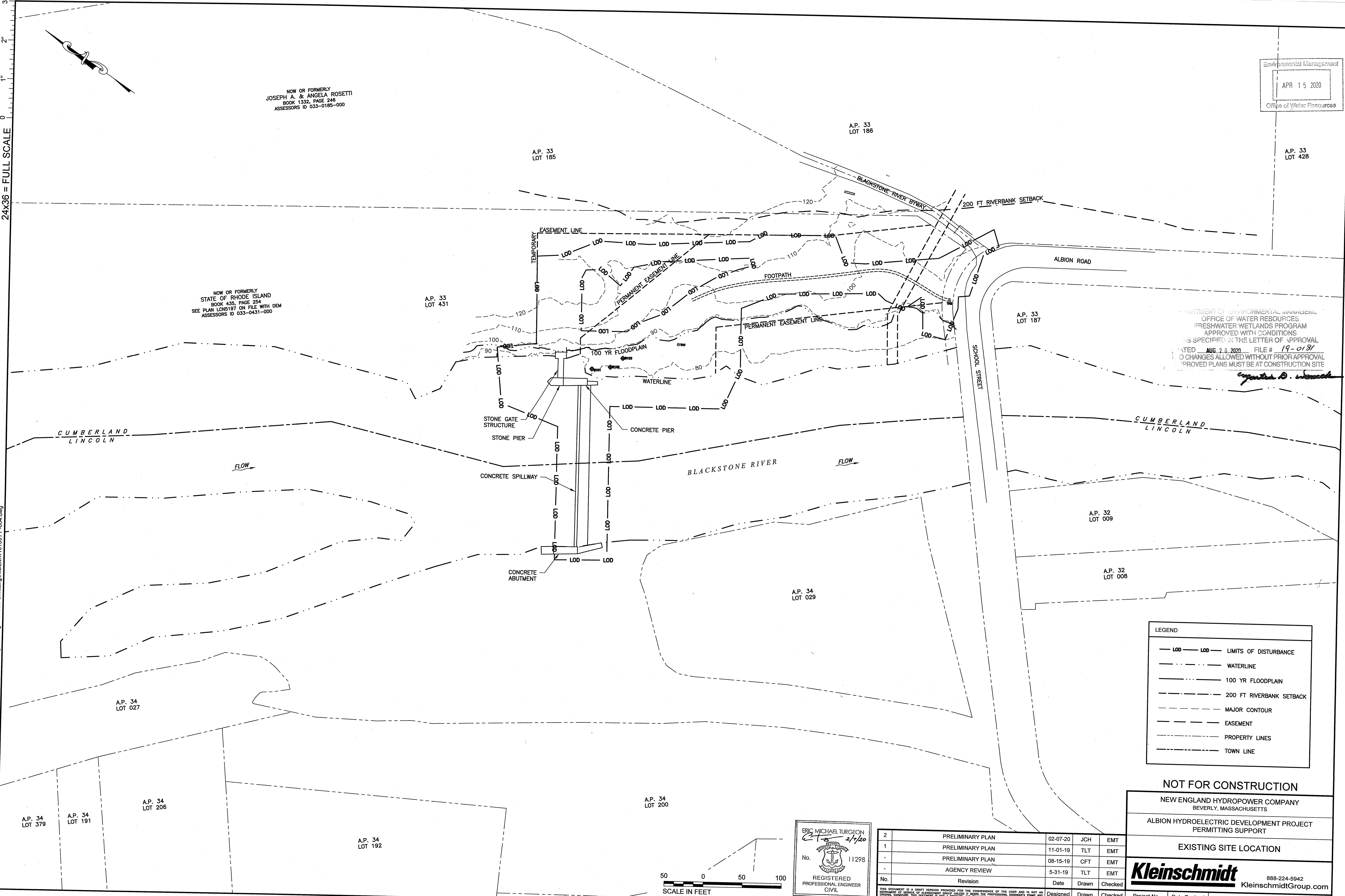
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NOW OR FORMERLY
JOSEPH A. & ANGELA ROSETTI
BOOK 1332, PAGE 246
ASSESSORS ID 033-0185-000

NOW OR FORMERLY
STATE OF RHODE ISLAND
BOOK 435, PAGE 254
SEE PLAN LENS 197 ON FILE WITH DEM
ASSESSORS ID 033-0431-000

Environmental Management
APR 15 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 25 2020 FILE # 19-0187
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Jonathan D. Womack



LEGEND

- LOD --- LIMITS OF DISTURBANCE
- WATERLINE
- 100 YR FLOODPLAIN
- 200 FT RIVERBANK SETBACK
- MAJOR CONTOUR
- EASEMENT
- PROPERTY LINES
- TOWN LINE

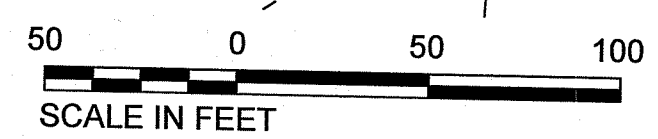
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NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS
ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT

EXISTING SITE LOCATION

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ERIC MICHAEL TURGEON
ET 2/7/20
No. 11298
REGISTERED PROFESSIONAL ENGINEER
CIVIL



No.	Revision	Date	Drawn	Checked
2	PRELIMINARY PLAN	02-07-20	JCH	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT
No.	Revision	Date	Drawn	Checked
-			Designed	Checked
-			Drawn	EMT
-			CFT	

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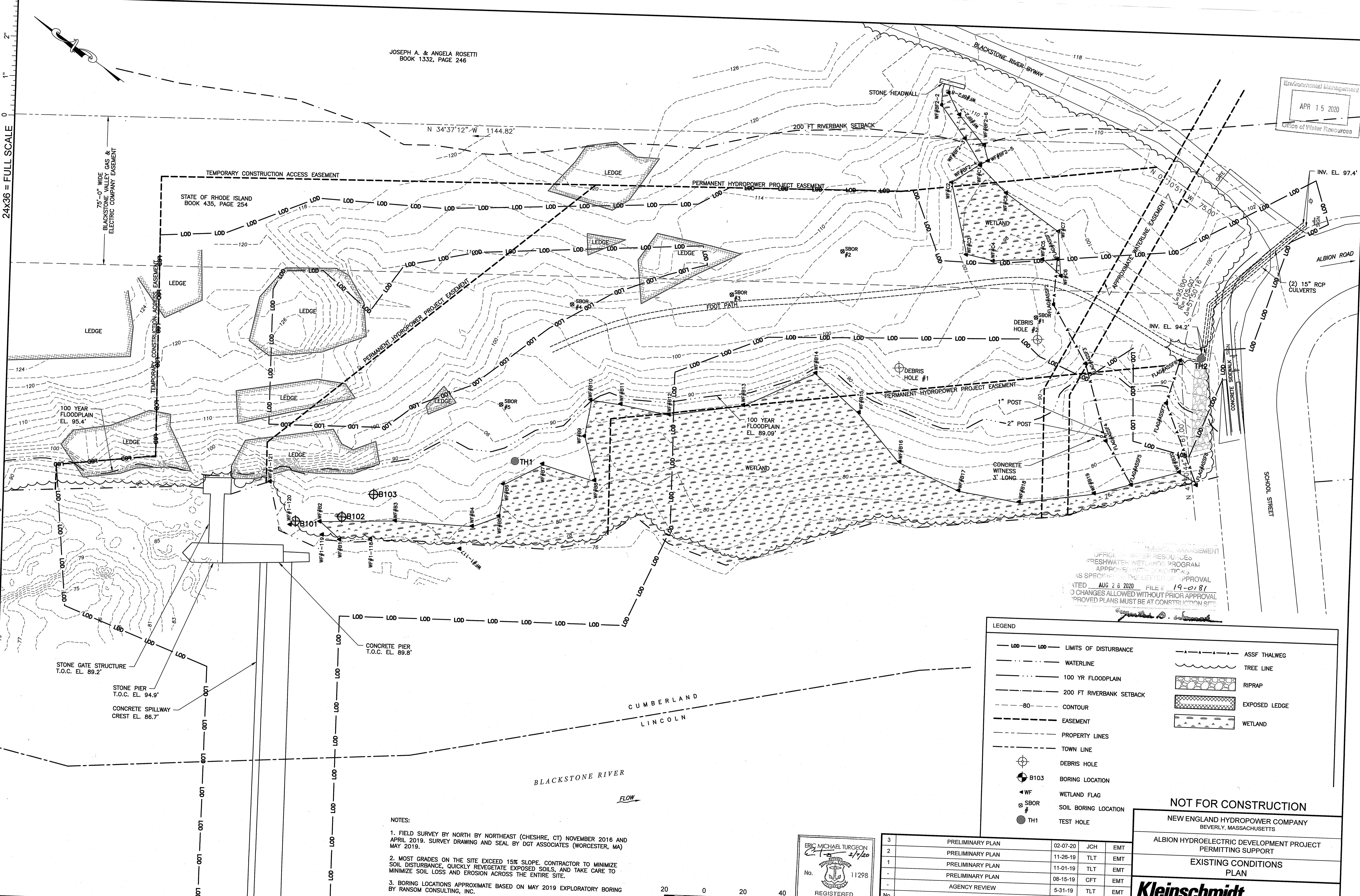
Project No. 4161-001 Date Revised 02-07-20 Drawing No. P-004 SHEET 4 of 16

JOSEPH A. & ANGELA ROSETTI
BOOK 1332, PAGE 246

Environmental Management
APR 15 2020
Office of Water Resources

24x36 = FULL SCALE

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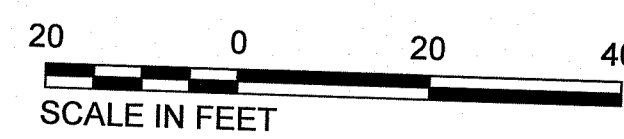


OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 26 2020 FILE # 19-0181
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LEGEND

- LOD --- LIMITS OF DISTURBANCE
- WATERLINE
- 100 YR FLOODPLAIN
- 200 FT RIVERBANK SETBACK
- 80 --- CONTOUR
- EASEMENT
- PROPERTY LINES
- TOWN LINE
- ⊕ DEBRIS HOLE
- ⊕ B103 BORING LOCATION
- ⊕ WF WETLAND FLAG
- ⊕ SBOR SOIL BORING LOCATION
- ⊕ TH1 TEST HOLE
- - - - - ASSF THALWEG
- ~ ~ ~ ~ ~ TREE LINE
- [Pattern] RIPRAP
- [Pattern] EXPOSED LEDGE
- [Pattern] WETLAND

- NOTES:**
- FIELD SURVEY BY NORTH BY NORTHEAST (CHESHIRE, CT) NOVEMBER 2016 AND APRIL 2019. SURVEY DRAWING AND SEAL BY DGT ASSOCIATES (WORCESTER, MA) MAY 2019.
 - MOST GRADES ON THE SITE EXCEED 15% SLOPE. CONTRACTOR TO MINIMIZE SOIL DISTURBANCE, QUICKLY REVEGETATE EXPOSED SOILS, AND TAKE CARE TO MINIMIZE SOIL LOSS AND EROSION ACROSS THE ENTIRE SITE.
 - BORING LOCATIONS APPROXIMATE BASED ON MAY 2019 EXPLORATORY BORING BY RANSOM CONSULTING, INC.



ERIC MICHAEL TURGEON
2/15/20
No. 11298
REGISTERED PROFESSIONAL ENGINEER CIVIL

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3	PRELIMINARY PLAN	02-07-20	JCH	EMT
2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

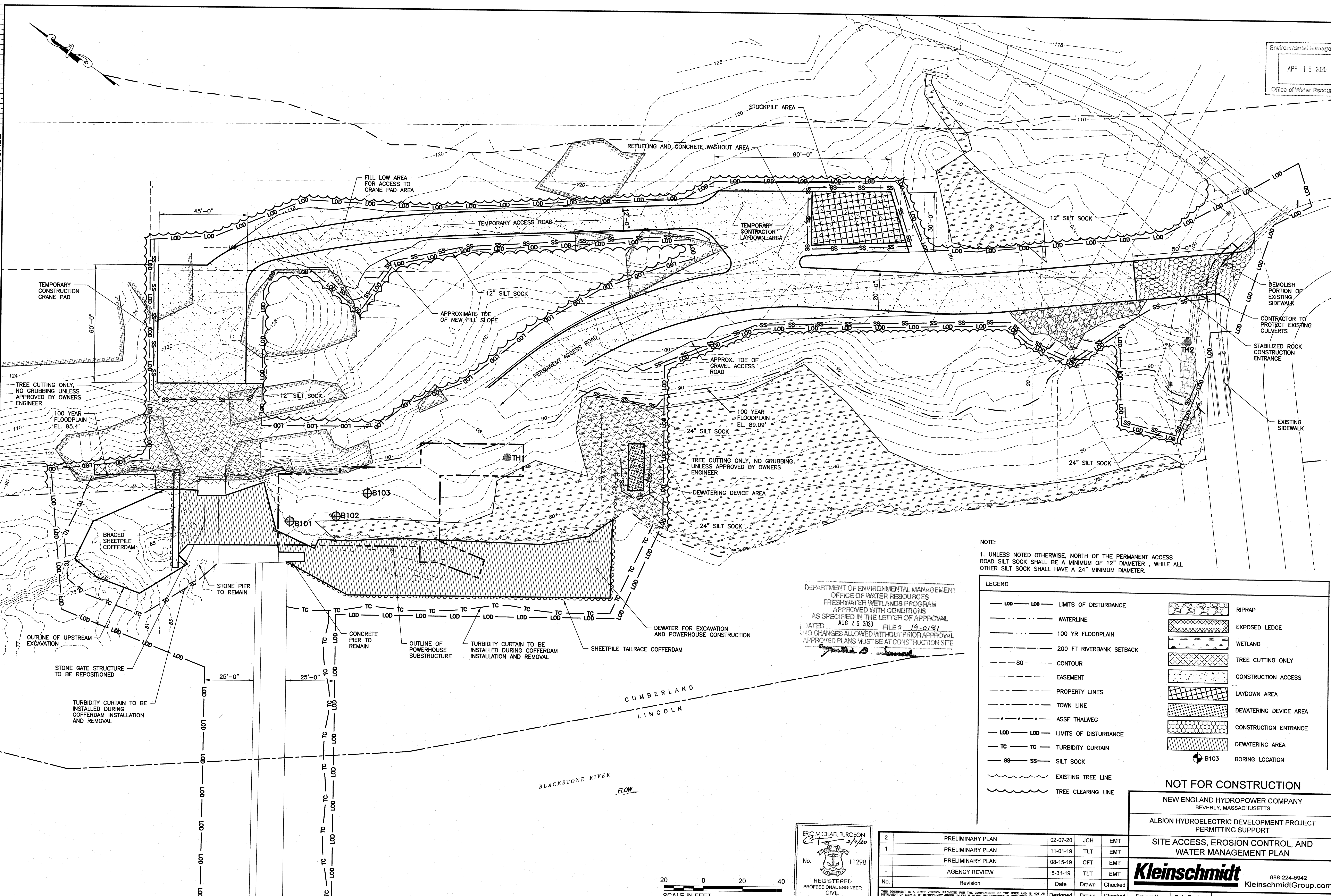
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NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS
ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT
EXISTING CONDITIONS
PLAN

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Project No. 4161-001
Date Revised 02-07-20
Drawing No. P-005
SHEET 5 of 16

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NOTE:
1. UNLESS NOTED OTHERWISE, NORTH OF THE PERMANENT ACCESS ROAD SILT SOCK SHALL BE A MINIMUM OF 12" DIAMETER, WHILE ALL OTHER SILT SOCK SHALL HAVE A 24" MINIMUM DIAMETER.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

LEGEND			
— LOD — LOD —	LIMITS OF DISTURBANCE		RIPRAP
— — — — —	WATERLINE		EXPOSED LEDGE
— — — — —	100 YR FLOODPLAIN		WETLAND
— — — — —	200 FT RIVERBANK SETBACK		TREE CUTTING ONLY
— 80 —	CONTOUR		CONSTRUCTION ACCESS
— — — — —	EASEMENT		LAYDOWN AREA
— — — — —	PROPERTY LINES		DEWATERING DEVICE AREA
— — — — —	TOWN LINE		CONSTRUCTION ENTRANCE
— A — A —	ASSF THALWEG		DEWATERING AREA
— LOD — LOD —	LIMITS OF DISTURBANCE		BORING LOCATION
— TC — TC —	TURBIDITY CURTAIN		
— SS — SS —	SILT SOCK		
— — — — —	EXISTING TREE LINE		
— — — — —	TREE CLEARING LINE		

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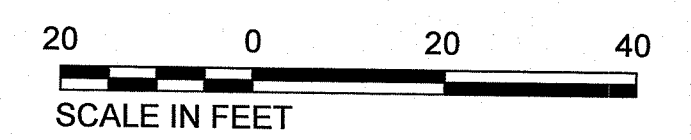
NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT

**SITE ACCESS, EROSION CONTROL, AND
WATER MANAGEMENT PLAN**

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Project No.	Date Revised	Drawing No.	SHEET
4161001	02-07-20	P-006	6 of 16

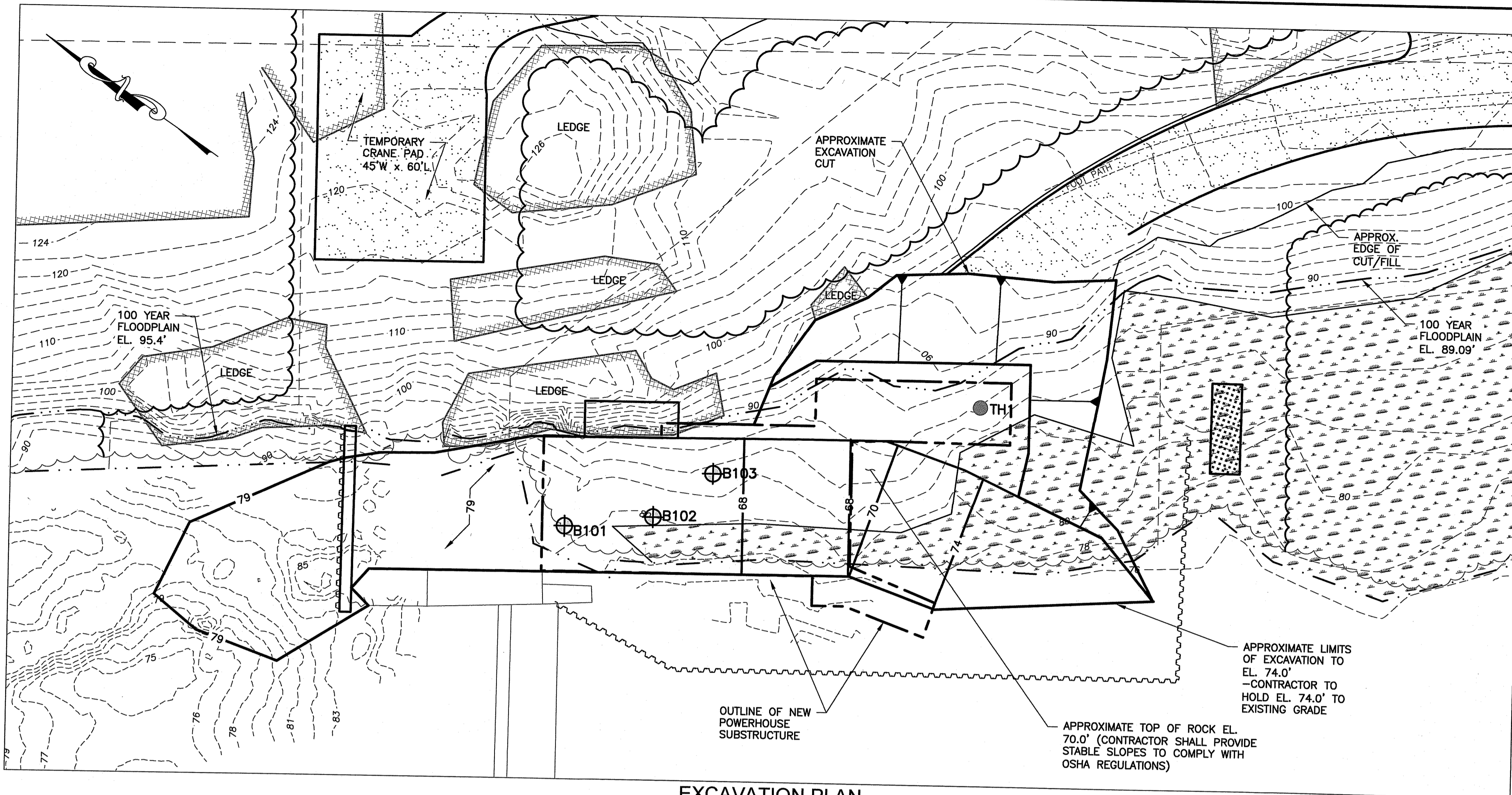


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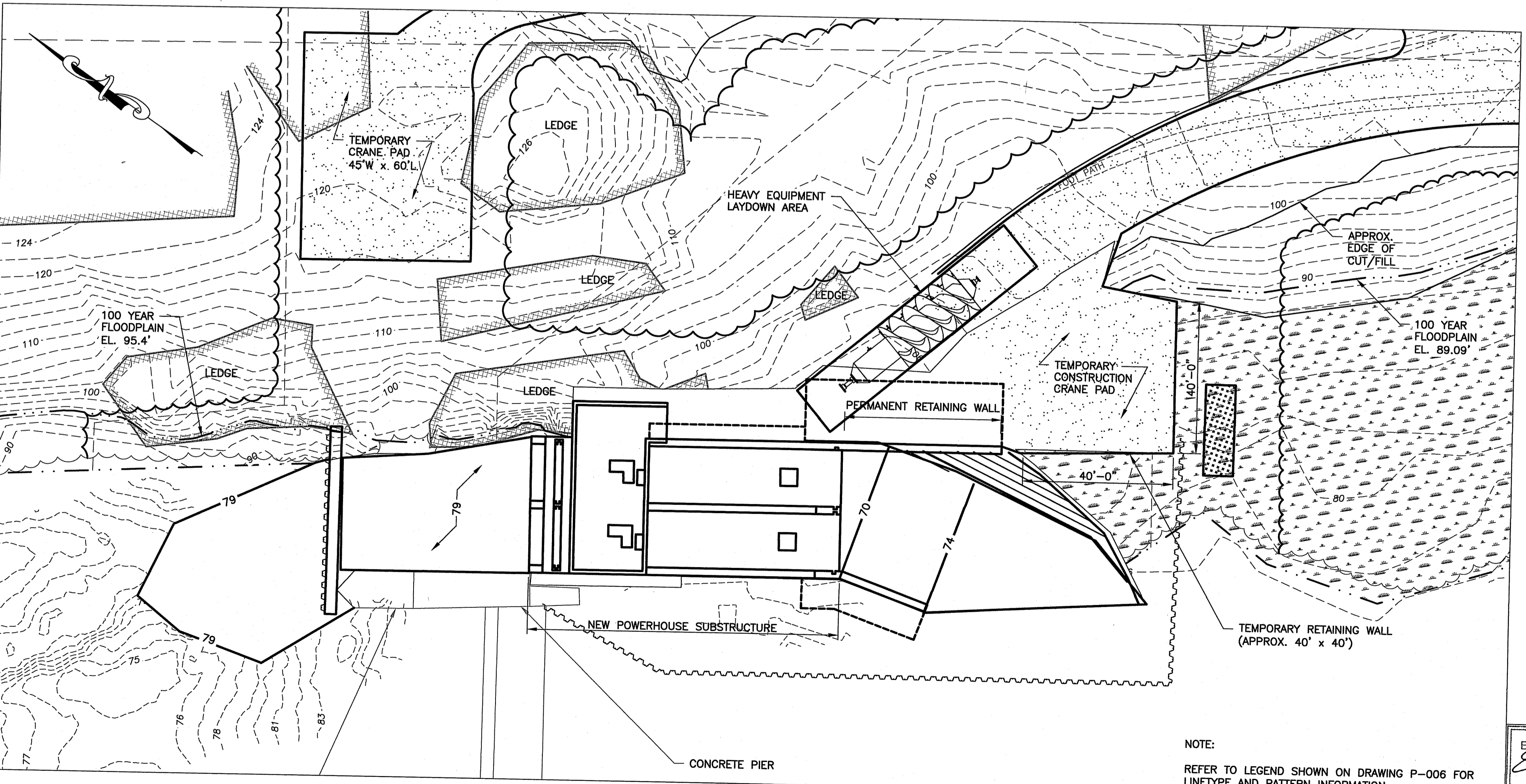
No.	Revision	Date	Drawn	Checked
2	PRELIMINARY PLAN	02-07-20	JCH	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

DESIGNED: TAK
DRAWN: TLT
CHECKED: EMT

24x36 = FULL SCALE



EXCAVATION PLAN
1"=20'



CONSTRUCTION PLAN
1"=20'

NOTE:
REFER TO LEGEND SHOWN ON DRAWING P-006 FOR
LINETYPE AND PATTERN INFORMATION.

GENERAL WATER CONTROL AND CONSTRUCTION SEQUENCE NOTES

- IN-RIVER WORK SHALL OCCUR DURING LOW-FLOW PERIODS TO THE EXTENT POSSIBLE. CONTRACTOR SHALL TAKE CARE TO MONITOR THE WEATHER AND REMOVE EQUIPMENT AND POTENTIAL CONTAMINANTS FROM AREAS THAT MAY BE INUNDATED IN ADVANCE OF POTENTIAL FLOOD CONDITIONS. WORK SHALL NOT OCCUR IN OR DIRECTLY ADJACENT TO THE RIVER IF THE PROJECT SITE CAN NOT BE ISOLATED FROM THE RIVER DURING HIGH FLOWS.
- THIS PLAN SHOWS A CONCEPT FOR WATER MANAGEMENT FOR CONSTRUCTION OF THE PROJECT. ANY SUBSTANTIAL MODIFICATIONS OR REVISIONS TO WATER CONTROLS FOR THIS PROJECT (BY THE CONTRACTOR) SHALL BE SUBMITTED TO RIEM A MINIMUM OF TWO WEEKS PRIOR TO CONSTRUCTION FOR REVIEW.
- THIS SEQUENCE OF WORK IS NOT INTENDED TO COVER ALL TASKS NECESSARY TO COMPLETE THE PROJECT AND RELIES ON A COMPETENT CONTRACTOR TO DEVELOP ANY FINAL MEANS AND METHODS TO ACHIEVE THE LINES AND GRADES SHOWN ON THE PROJECT DRAWINGS, WHILE WORKING WITHIN THE BOUNDS AND PARAMETERS OF THE PERMITS ISSUED FOR THE PROJECT.
- ANY TEMPORARY GRADING, SHORING OR OTHER CONDITIONS SHOWN ON THE PROJECT DRAWINGS ARE CONCEPTUAL AND MAY CHANGE DEPENDING ON SITE CONDITIONS AND CONTRACTOR MEANS AND METHODS. THEY ARE SHOWN HERE ONLY TO INDICATE THE GENERAL APPROACH TO CONSTRUCTING THE PROJECT.
- ROCK ANCHORS WILL NEED TO BE INSTALLED IN THE DAM TO IMPROVE THE DAM STABILITY. ANCHOR DETAILS SUCH AS ANCHOR BAR SIZE, ANGLE, EMBEDMENT DEPTH, AND SPACING WILL BE FURTHER DEFINED DURING DEVELOPMENT OF FINAL DESIGN AND CONSTRUCTION PLANS. INSTALLATION OF THE ANCHORS WILL OCCUR AS FOLLOWS:
 - ACCESS TO THE SITE FOR THE EQUIPMENT AND MATERIALS ASSOCIATED WITH THE ANCHOR INSTALLATION WILL BE VIA THE SAME ACCESS ROAD CONSTRUCTED FOR CONSTRUCTION OF THE POWERHOUSE.
 - DAM ANCHORS WILL BE INSTALLED AFTER COMPLETION OF POWERHOUSE CONSTRUCTION SO THAT THE POWERHOUSE TURBINES CAN BE USED TO PASS FLOW AND MINIMIZE FLOW OVER THE DAM.
 - A TEMPORARY STEEL FRAME WILL BE MOUNTED TO THE DAM TO SUPPORT DRILLING EQUIPMENT, WATER DIVERSION, AND DEBRIS MANAGEMENT. THE FRAME WILL BE INSTALLED USING A CRANE SET UP ON THE TEMPORARY CONSTRUCTION CRANE PAD ON THE LEFT BANK JUST UPSTREAM OF THE DAM.
 - A FLOATING WORK PLATFORM WILL LIKELY BE REQUIRED UPSTREAM OF THE DAM TO PROVIDE SPACE FOR STAGING WORKERS AND MATERIALS. NO GAS OR OIL POWERED EQUIPMENT WILL BE FUELED ON THE FLOAT. A PERIMETER BARRIER WILL PREVENT DEBRIS FROM THE FLOAT ENTERING THE WATER.
 - THE ANCHORS WILL BE INSTALLED USING A REMOTELY OPERATED SURFACE DRILL RIG THAT WILL TRAVERSE AND SIT ON THE TEMPORARY STEEL FRAME ATTACHED TO THE DAM.
 - ANCHOR INSTALLATION WILL BE INSTALLED DURING A LOW FLOW PERIOD WITHOUT WATER FLOWING OVER THE DAM. BOARDS AND PLASTIC WILL BE TEMPORARILY FIXED TO THE CREST OR UPSTREAM FACE OF THE DAM TO DIVERT WATER AROUND THE IMMEDIATE WORK AREA IN THE EVENT OF HIGH FLOWS.
 - BOARDS AND PLASTIC OR FABRIC WILL BE USED TO COLLECT DRILL CUTTINGS AND DEBRIS FROM ENTERING THE WATER. CONCRETE AND OTHER DEBRIS WILL BE REMOVED AND DISPOSED OFF SITE.
 - A TURBIDITY CURTAIN WILL BE PLACED NEAR THE TOE OF THE DAM AND REMAIN FOR THE DURATION OF THE ANCHOR INSTALLATION WORK.

WATER MANAGEMENT AND CONSTRUCTION SEQUENCE

- PRIOR TO GRUBBING OR ANY EARTH MOVING OPERATION, THE COMPOST FILTER SOCK, LIMIT OF DISTURBANCE FENCE, AND ROCK CONSTRUCTION ENTRANCE SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS. INSTALL ALL EROSION AND SEDIMENT CONTROLS PRIOR TO UPSLOPE SOIL DISTURBANCE.
- CLEAR AND GRUB WITHIN THE LIMIT OF DISTURBANCE AS NECESSARY, WITH THE EXCEPTION OF THE AREAS OF MINIMIZED GRUBBING SHOWN ON SHEET P-006. STOCKPILE ALL TOPSOIL ON SITE, WITH ANY WETLAND TOPSOIL STORED SEPARATELY FROM UPLAND TOPSOIL. ALL WOODY DEBRIS SHALL BE PROPERLY DISPOSED.
- CONSTRUCT THE ACCESS ROADS AND TEMPORARY FACILITIES TO THE EXTENTS SHOWN ON THE PROJECT DRAWINGS, INCLUDING ANY RIP RAP SLOPE STABILIZATION, STRIP TOPSOIL AND STOCKPILE WITHIN THE STAGING AREA, AS SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER. STABILIZE ALL CUT/FILL SLOPES IMMEDIATELY.
- INSTALL TURBIDITY CURTAIN, FOLLOWED BY INSTALLATION OF THE COFFERDAMS. AFTER INSTALLATION OF COFFERDAMS, REMOVE TURBIDITY CURTAIN.
- DEWATER EXCAVATION AREA WITHIN THE COFFERDAMS. PUMP DISCHARGE FROM DEWATERING OPERATION SHALL BE DIRECTED INTO SEDIMENT CONTAINMENT DEVICE, AS SHOWN ON THE PLANS. CONTRACTOR SHALL DEWATER EXCAVATION AREA AS NECESSARY FROM COFFERDAM LEAKAGE, MAINTAINING SUITABLE DEWATERING CAPABILITIES AT THE SITE.
- SELECTIVELY DISMANTLE THE HISTORIC GRANITE GATE STRUCTURE TO PRESERVE EXISTING GRANITE PIER. INSTALL SALVAGED STONE BLOCKS ON THE EXISTING CONCRETE PIER.
- PERFORM EXCAVATION AND ROCK REMOVAL FOR THE POWERHOUSE FOUNDATION, INTAKE CHANNEL, AND DISCHARGE CHANNEL AS NECESSARY FOR CONSTRUCTION OF THE PROJECT AND PER THE PERMITTED EXTENTS. INSTALL RIP RAP IN FOREBAY AND TAILRACE. EXCAVATED MATERIAL SHALL BE STOCKPILED ON-SITE FOR REUSE OR ON-SITE, PLACED TO GRADES INDICATED ON PROJECT DRAWINGS, OR HAULED OFFSITE FOR DISPOSAL.
- CONSTRUCT POWERHOUSE SUBSTRUCTURE, CONCRETE WALLS, CONCRETE CHANNELS (FOR SCREWS), UNDERGROUND UTILITIES/DRAINAGE, AND PERMANENT RETAINING WALL.
- PLACE FILL FOR PARKING AREA AND INSTALL TEMPORARY RETAINING STRUCTURE AND TEMPORARY CONSTRUCTION CRANE PAD.
- INSTALL SCREW TURBINES, GENERATORS, AND ACCESSORIES. INSTALL HEAD GATES AND TRASHRACKS. CONSTRUCT REMAINING POWERHOUSE SUPERSTRUCTURE. CONSTRUCT TRANSFORMER PAD AND INSTALL ELECTRICAL CONNECTIONS, TRANSFORMER, AND OVERHEAD ELECTRIC LINES.
- RESTORE CONCRETE SIDEWALK TO EDGE OF PERMANENT ACCESS ROAD.
- FILL THE CONSTRUCTION SITE WITH WATER TO BALANCE WATER LEVELS ON EITHER SIDE OF COFFERDAM. INSTALL TURBIDITY CURTAIN PRIOR TO REMOVAL OF THE COFFERDAMS. REMOVE COFFERDAMS. AFTER REMOVAL OF COFFERDAMS, REMOVE AND DISPOSE OF SEDIMENT AND MATERIALS UPSTREAM OF THE COFFERDAM AND OUTSIDE THE TURBIDITY CURTAIN.
- REMOVE TEMPORARY CONSTRUCTION CRANE PAD AND TEMPORARY RETAINING STRUCTURE.
- CONSTRUCT THE POWERHOUSE BIORETENTION BASIN ONCE THE UPSLOPE AREA IS STABILIZED.
- RELOCATE THE BLACKSTONE RIVER BYWAY GATE AND CONSTRUCT THE WASHED CRUSHED STONE PARKING AREA ADJACENT TO THE BLACKSTONE RIVER BYWAY.
- REMOVE GRAVEL AND FILL USED FOR TEMPORARY ROADS AND CRANE PADS FOR DISPOSAL OFF-SITE. PERFORM FINAL GRADING WITH SUITABLE FILL.
- SPREAD UPLAND/WETLAND TOPSOIL ON THEIR RESPECTIVE AREAS AND STABILIZE THE SITE WITH SEEDING AND EROSION CONTROL BLANKETS IN ACCORDANCE WITH THE RESTORATION PLAN.
- UPON STABILIZATION OF THE UPSLOPE AREA, REMOVE TOP 3" LAYER OF STONE ON THE PERMANENT ACCESS ROAD. COMPLETE THE FOLLOWING WATER INFILTRATION EVALUATION ON THE EXPOSED STONE SURFACE EVERY 100 FEET ALONG THE ROADWAY:
 - DUMP TEN GALLONS OF WATER ON A FOUR SQUARE-FOOT AREA OF THE STONE SURFACE WITHIN 2 MINUTES.
 - IF PONDING AND/OR RUNOFF OCCURS, REMOVE AN ADDITIONAL 3" OF STONE OR DECOMPACT SOIL AFTER CONSULTATION WITH ENGINEER.
 - REPEAT WATER INFILTRATION EVALUATION.
 - UPON SATISFACTORY WATER INFILTRATION EVALUATION RESULTS (NO PONDING AND/OR RUNOFF OF WATER) THAT ARE VERIFIED BY THE ENGINEER, INSTALL WATER INFILTRATION CURTAIN.
- UPON STABILIZATION OF THE UPSLOPE AREA, CONSTRUCT THE ROADSIDE BIORETENTION BASIN.
- REMOVE ROCK CONSTRUCTION ENTRANCE, PLACE ASPHALT PAVEMENT AT THE ENTRANCE AND INSTALL GATE ACROSS PERMANENT ACCESS ROAD.
- INSTALL TREES AND HERBACEOUS PLANTINGS IN ACCORDANCE WITH THE RESTORATION PLAN AND THE BIORETENTION BASIN DETAILS. TREE PLANTING SHALL BE DONE PRIOR TO THE GROWING SEASON OR AFTER LEAF-OFF. HERBACEOUS PLANTING SHALL OCCUR BETWEEN MAY 15 AND AUGUST 15 FOR OPTIMAL GROWTH.
- MAINTAIN VEGETATIVE COVER, HERBACEOUS PLANTINGS, AND PLANTED TREES UNTIL THEY ARE WELL ESTABLISHED.
- AFTER THE SITE MEETS THE VEGETATED COVER REQUIREMENTS, REMOVE THE REMAINING EROSION CONTROL MEASURES AFTER RECEIPT OF APPROVAL FROM THE ENGINEER.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 26 2020 FILE # 19-0181
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

APR 15 2020
Environmental Management
Water Resources

ERIC MICHAEL TURGEON
11298
REGISTERED PROFESSIONAL ENGINEER
CIVIL

No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	REVISED NOTES	6-21-19	TLT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

NOT FOR CONSTRUCTION

NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT

CONSTRUCTION SEQUENCING

Kleinschmidt 888-224-5842
KleinschmidtGroup.com

Project No.	Date Revised	Drawn
4161001	10-31-19	No.

P-007 SHEET 7 of 16

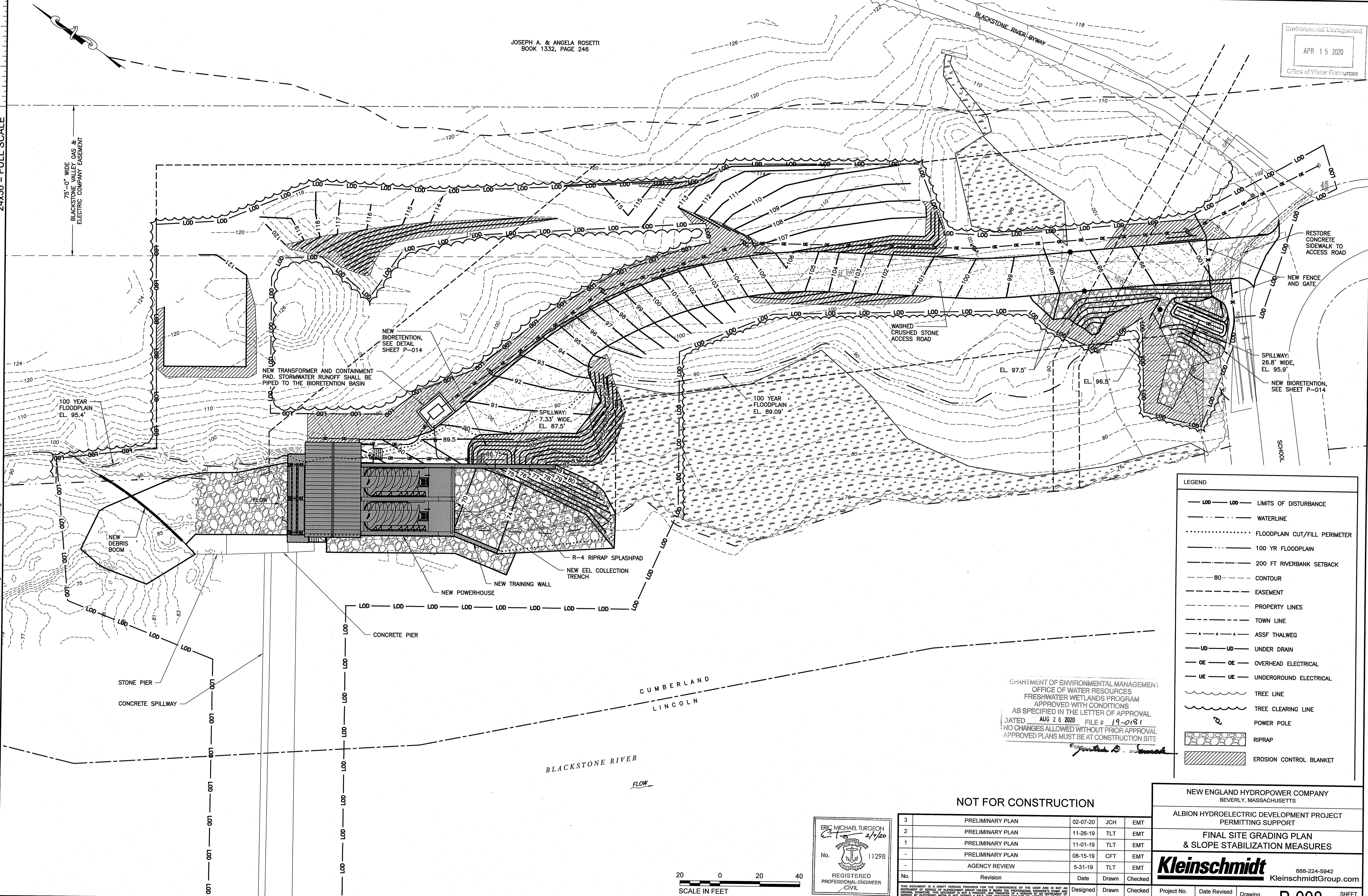
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24x36 = FULL SCALE

JOSEPH A. & ANGELA ROSETTI
BOOK 1332, PAGE 248

Environmental Management
APR 15 2020
Office of Water Resources

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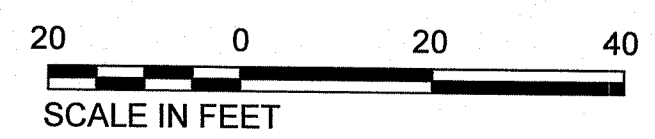
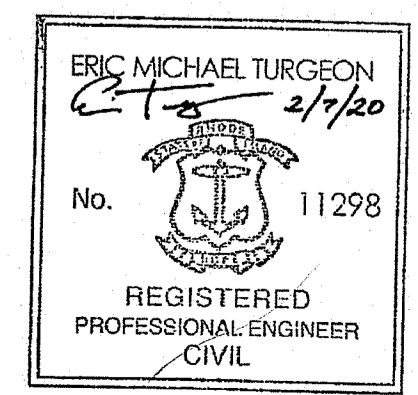


LEGEND

- LOD — LOD — LIMITS OF DISTURBANCE
- WATERLINE
- FLOODPLAIN CUT/FILL PERIMETER
- 100 YR FLOODPLAIN
- 200 FT RIVERBANK SETBACK
- 80 — CONTOUR
- EASEMENT
- PROPERTY LINES
- TOWN LINE
- A — A — ASSF THALWEG
- UD — UD — UNDER DRAIN
- OE — OE — OVERHEAD ELECTRICAL
- UE — UE — UNDERGROUND ELECTRICAL
- TREE LINE
- TREE CLEARING LINE
- POWER POLE
- RIPRAP
- EROSION CONTROL BLANKET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
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NOT FOR CONSTRUCTION



No.	Revision	Date	Drawn	Checked
3	PRELIMINARY PLAN	02-07-20	JCH	EMT
2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT

FINAL SITE GRADING PLAN
& SLOPE STABILIZATION MEASURES

Kleinschmidt 888-224-5942
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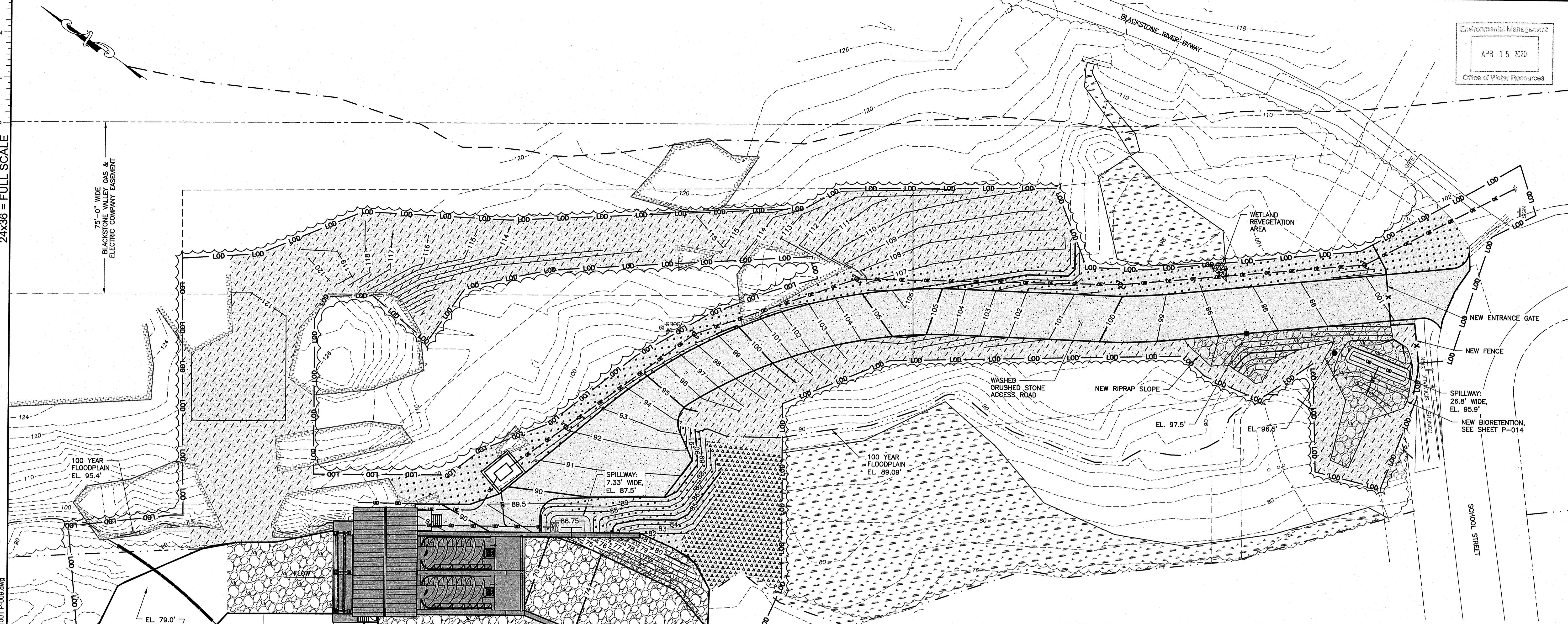
Project No. 4161001 Date Revised 02-07-20 Drawing No. P-008 SHEET 8 of 16

Designated	Drawn	Checked	Project No.	Date Revised	Drawing No.
TAK	TLT	EMT	4161001	02-07-20	P-008

24x36 = FULL SCALE

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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 AUG 26 2020 FILE #
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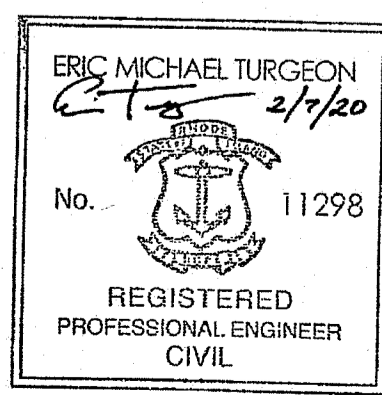
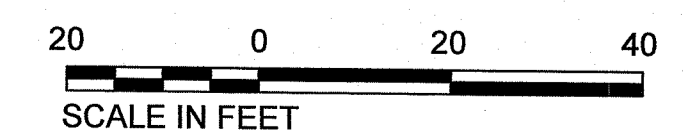
LEGEND		RESTORATION AREAS	
---	WATERLINE	[Pattern]	UPLAND REFORESTATION
---	100 YR FLOODPLAIN	[Pattern]	UPLAND REVEGETATION
---	200 FT RIVERBANK SETBACK	[Pattern]	WETLAND REFORESTATION
---	80' CONTOUR	[Pattern]	WETLAND REVEGETATION
---	PROPERTY LINES	[Pattern]	NEW SURFACE AREAS
---	TOWN LINE	[Pattern]	CRUSHED STONE ACCESS ROAD
---	ASSF THALWEG	[Pattern]	RIPRAP
---	UNDER DRAIN		
---	OVERHEAD ELECTRICAL		
---	UNDERGROUND ELECTRICAL		
---	TREE LINE		
---	TREE CLEARING LINE		
---	POWER POLE		
---	EXPOSED LEDGE		
---	WETLAND		

- ### SEEDING AND REVEGETATION PLAN
- UPON COMPLETION OF SITE CONSTRUCTION, ALL AREAS PREVIOUSLY DISTURBED SHALL BE TREATED AS STATED BELOW. THESE AREAS SHALL BE CLOSELY MONITORED BY THE CONTRACTOR UNTIL SUCH TIME AS A SATISFACTORY GROWTH OF VEGETATION IS ESTABLISHED. SATISFACTORY GROWTH SHALL MEAN A MINIMUM OF 90% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH. TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS AND GRADED TO A MINIMUM UNIFORM DEPTH OF FOUR (4") INCHES.
 - PRIOR TO PLACING TOPSOIL, THE SUBSOIL SHALL BE SCARIFIED AT LEAST FOUR (4") INCHES.
 - PERMANENT SEEDING SHALL BE COMPLETED BETWEEN THE DATES OF APRIL 1 AND JUNE 15 OR AUGUST 15 TO SEPTEMBER 30. TEMPORARY SEEDING MAY OCCUR UNTIL OCTOBER 15.
 - STRAW MULCH SHALL BE APPLIED AT THE RATE OF 100 LBS. PER 1,000 SQ. FT. FOR SMALL AREAS OF 2 TONS/ACRE FOR LARGER AREAS, FOLLOWING SEEDING. MULCH SHALL BE ANCHORED BY WATERING OR USING ANCHORING EMULSION. STEEP SLOPES (3:1 AND STEEPER) SHALL BE STABILIZED BY INSTALLING EROSION CONTROL BLANKET (E.G. NORTH AMERICAN GREEN SC150 BN OR EQUIVALENT).
 - ALL SEDIMENT CONTROL STRUCTURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. ESTABLISHED SHALL MEAN A MINIMUM OF 90% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH. DISTURBED AREAS SHALL BE SEEDING IN ACCORDANCE WITH RIDEM REQUIREMENTS AND THE TEMPORARY PLANTING TABLE FOR THIS PROJECT.
 - SEEDING SHOULD BE PLANTED TO A DEPTH OF 1/4 TO 1/2 INCHES. SEEDING METHODS MAY BE DRILL SEEDING, BROADCAST, OR HYDRO-SEEDED. THE SEED SHALL BE EMBEDDED BY BROADCASTING, DRILLING, CULTIPACK TYPE, OR HYDROSEEDING.

PERMANENT PLANTING TABLE				
ZONE	APPROX. AREA (SQ. FT.)	TREES (1" MIN. CALIPER, PLANTED @ 15' O.C.)	SHRUBS (1 GAL. POT, PLANTED @ 10' O.C.)	SEED MIX (APPLICATION RATE)
Upland Revegetation	6,122	N/A	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Ernst Partially Shaded Area Roadside Mix (20 lb per acre, or 1/2 lb per 1,000 sq ft)
Upland Reforestation	21,380	Red Maple (<i>Acer rubrum</i>) Red Oak (<i>Quercus rubra</i>)	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Ernst Partially Shaded Area Roadside Mix (20 lb per acre, or 1/2 lb per 1,000 sq ft)
Wetland Revegetation	32	N/A	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Ernst Wetland Mix for Shaded OBL-FACW Areas (ERNMX-137; 20 lb per acre)
Wetland Reforestation	2,719	Red Maple (<i>Acer rubrum</i>) Swamp White Oak (<i>Quercus bicolor</i>)	Witch Hazel (<i>Hamamelis virginiana</i>) Arrowwood (<i>Viburnum dentatum</i>) Sweet-pepper Bush (<i>Clethra alnifolia</i>)	Ernst Wetland Mix for Shaded OBL-FACW Areas (ERNMX-137; 20 lb per acre)

TEMPORARY PLANTING TABLE				
Zone	APPROX. AREA (SQ. FT.)	Erosion Control Matting (for slopes 3:1 or steeper)	SEED MIX	APPLICATION RATE
Upland	As needed	NAG SC150BN	40 percent Annual Ryegrass and 60 percent Perennial Ryegrass (RIDOT M18.10.5)	75 lb per acre (by hand) or 85 lb per acre (by hydroseeder)
Wetland	As needed	NAG SC150BN	40 percent Annual Ryegrass and 60 percent Perennial Ryegrass (RIDOT M18.10.5)	75 lb per acre (by hand) or 85 lb per acre (by hydroseeder)

Note: All product names provided for reference, equivalent products may be submitted for review and approval by the Owner's



No.	Revision	Date	Drawn	Checked
3	PRELIMINARY PLAN	02-07-20	JCH	EMT
2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

NOT FOR CONSTRUCTION

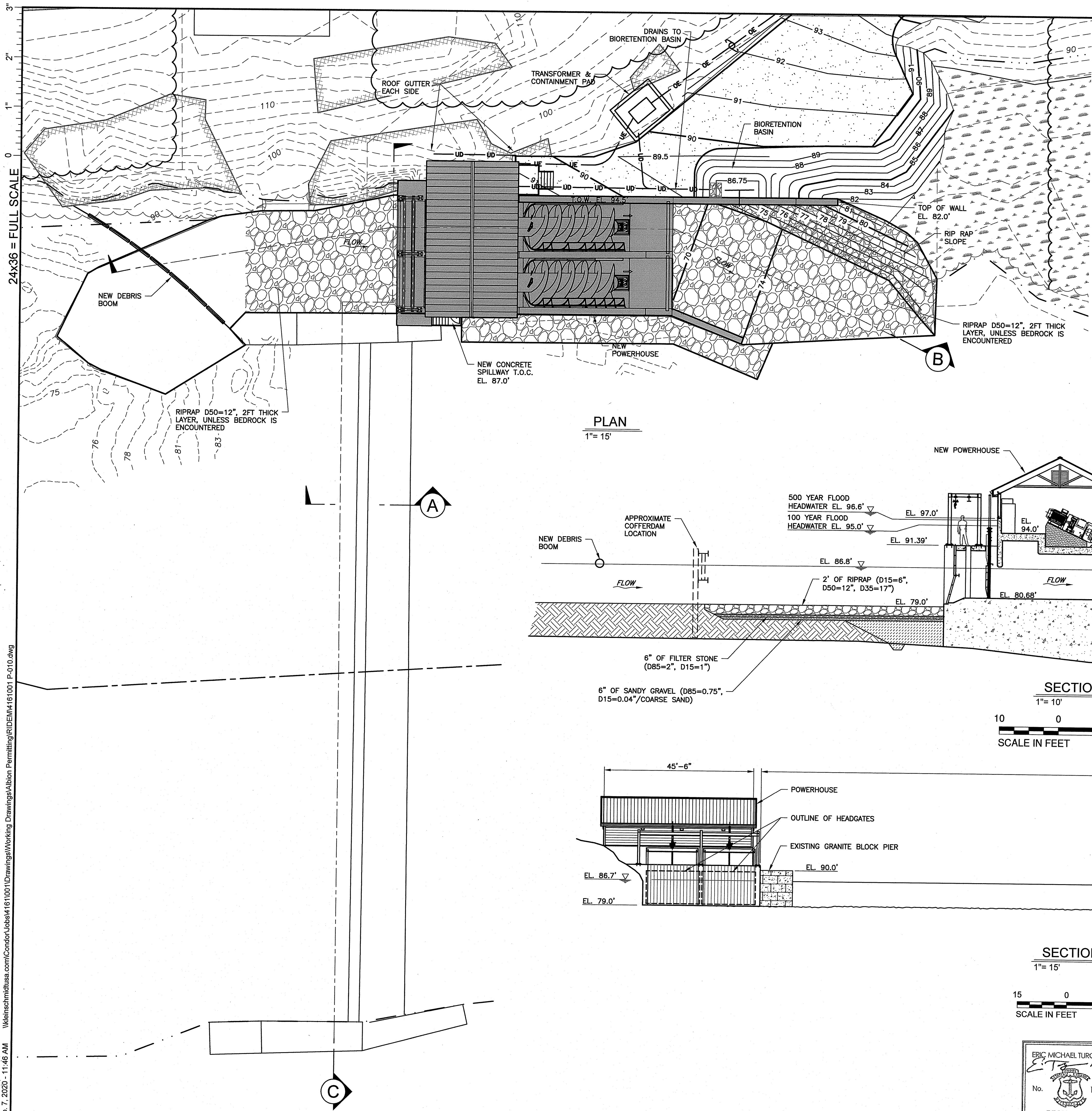
NEW ENGLAND HYDROPOWER COMPANY
 BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
 PERMITTING SUPPORT

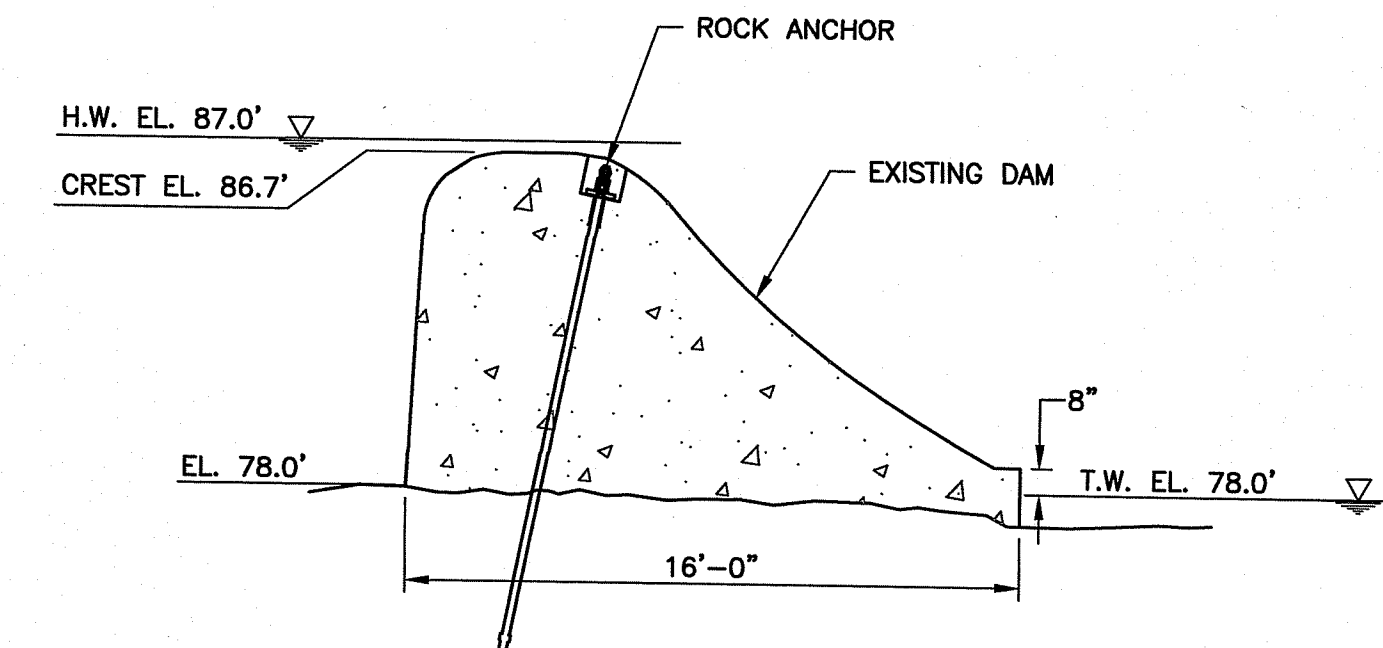
FINAL SITE GRADING AND RESTORATION PLAN

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Project No. 4161001 Date Revised 02-07-20 Drawing No. P-009 SHEET 9 of 16



24x36 = FULL SCALE
 1" = 5'
 1" = 15'
 1" = 10'
 1" = 15'
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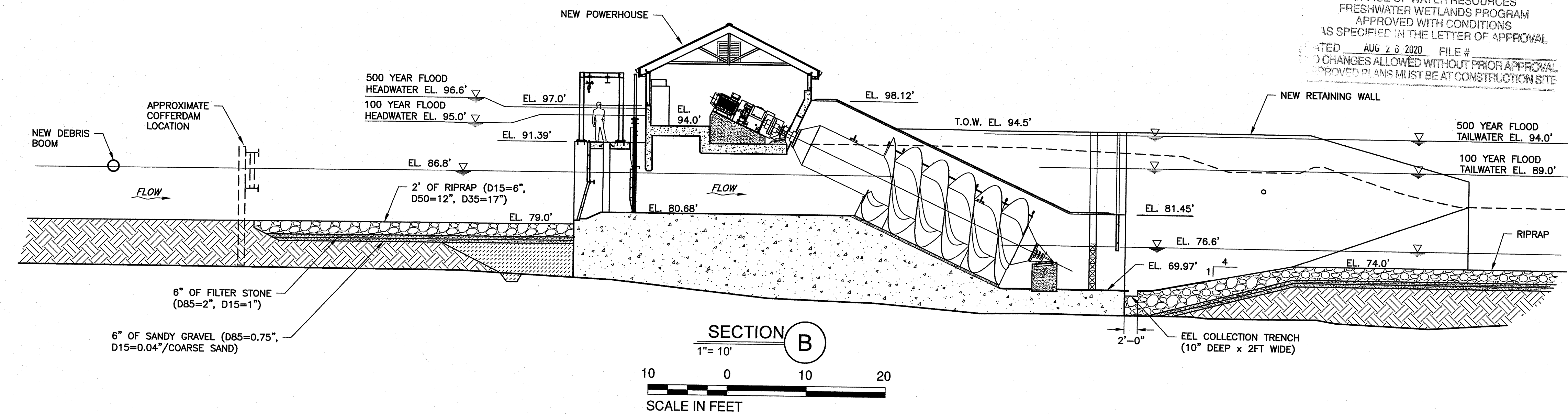


SECTION A
1" = 5'

NOTE:
 EXISTING DAM GEOMETRY AND DIMENSIONS ARE PRELIMINARY AND APPROXIMATE. LIMITED HISTORICAL REFERENCE INFORMATION EXISTS FOR THE DAM. SOME FIELD SURVEY OF THE EXISTING STRUCTURES ABOVE THE WATERLINE WAS COMPLETED. OTHER GEOMETRY AND DIMENSIONS WERE ESTIMATED/EXTRAPOLATED FROM THE SURVEY DATA, VISUAL OBSERVATIONS, AND ENGINEERING EXPERIENCE.

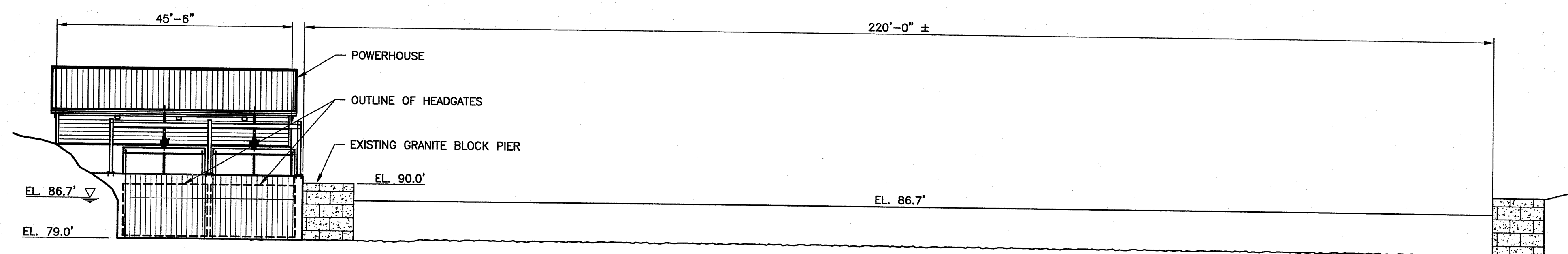
Environmental Management
 APR 15 2020
 Office of Water Resources

PLAN
1" = 15'



SECTION B
1" = 10'

SCALE IN FEET
 10 0 10 20



SECTION C
1" = 15'

SCALE IN FEET
 15 0 15 30

NOT FOR CONSTRUCTION

NEW ENGLAND HYDROPOWER COMPANY
 BEVERLY, MASSACHUSETTS
 ALBION HYDROELECTRIC DEVELOPMENT PROJECT
 PERMITTING SUPPORT

PROPOSED CONDITIONS
 SITE CROSS SECTIONS

ERIC MICHAEL TURGEON
 No. 11298
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	REVISED ROCK ANCHOR	6-21-19	TLT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

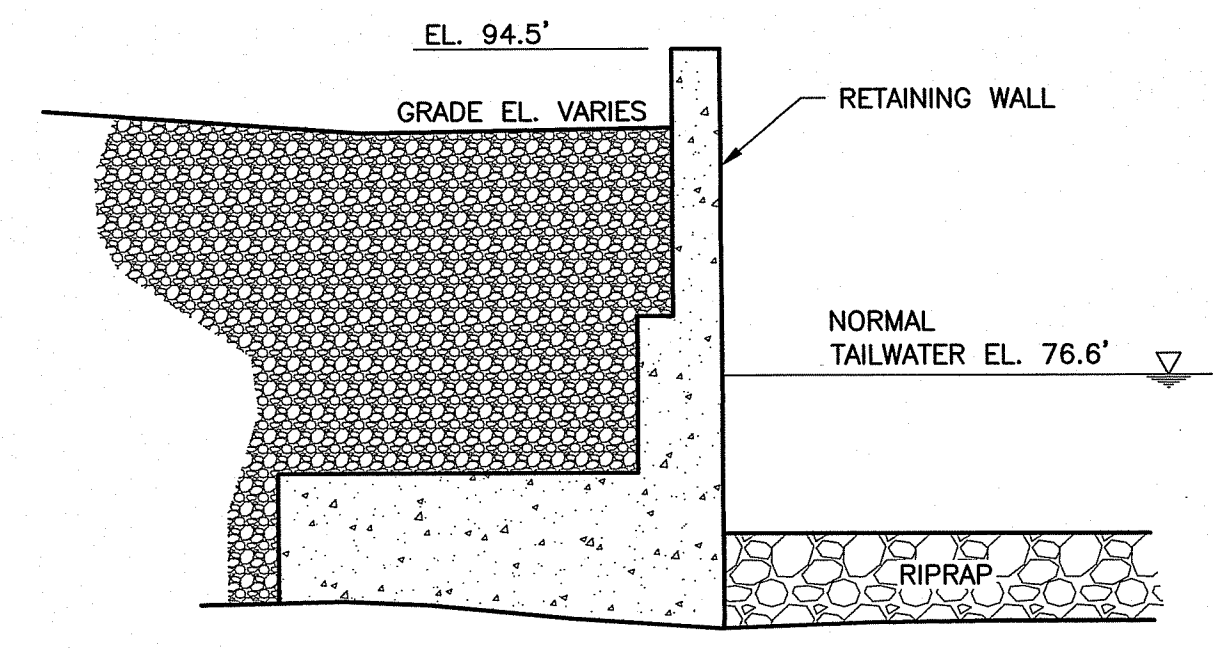
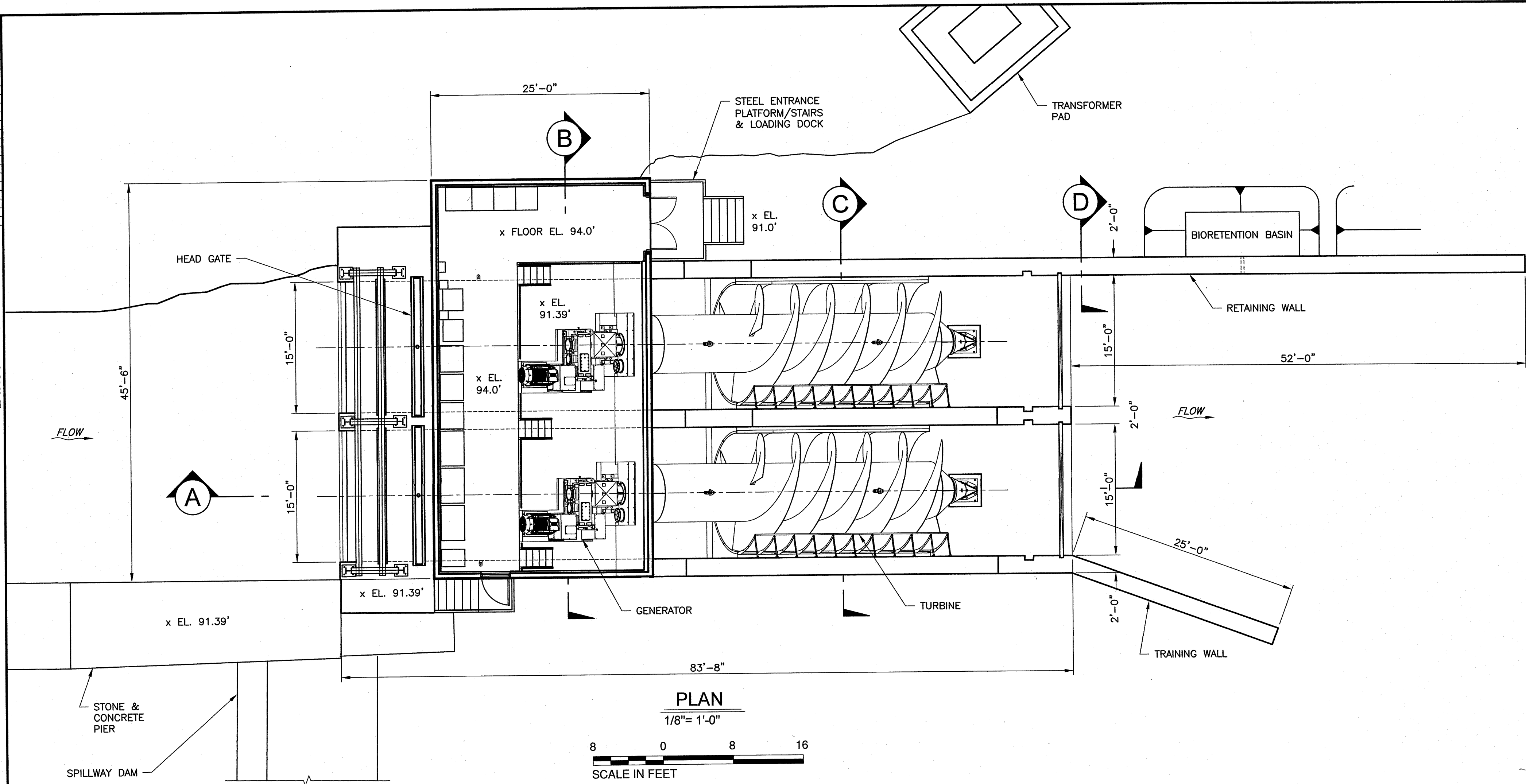
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Project No. 4161-001
 Date Revised 10-31-19
 Drawing No. P-010
 SHEET 10 of 16

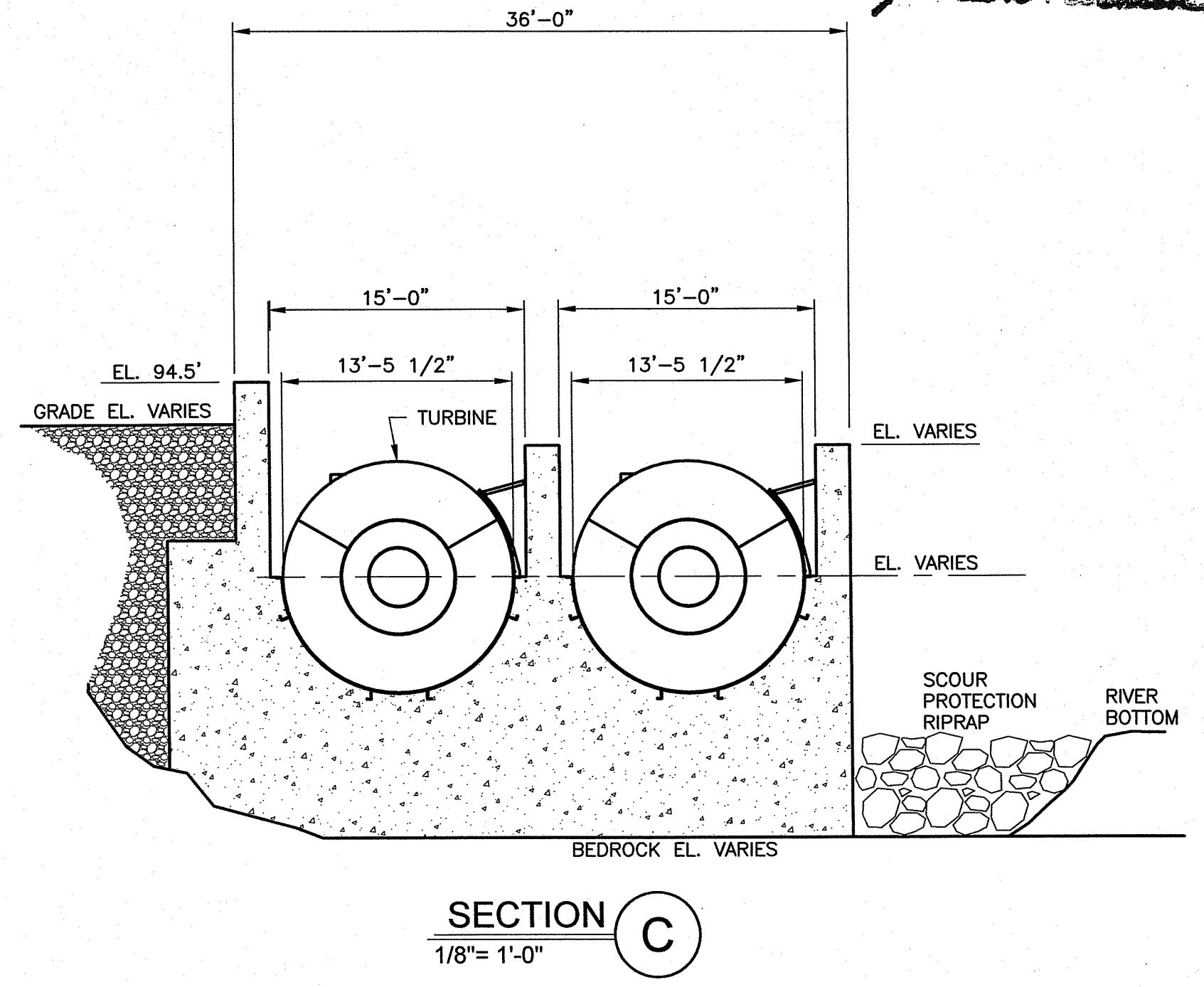
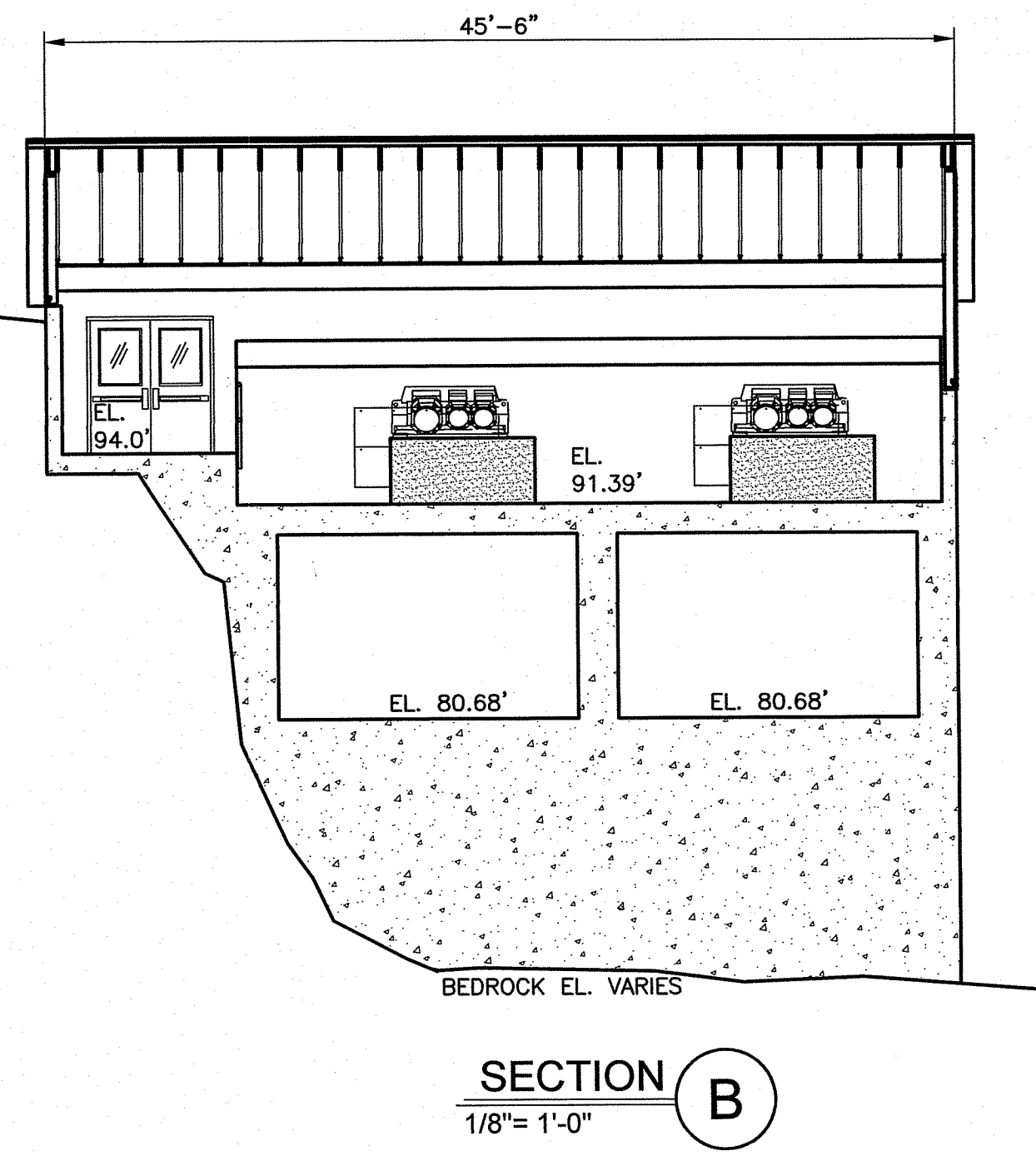
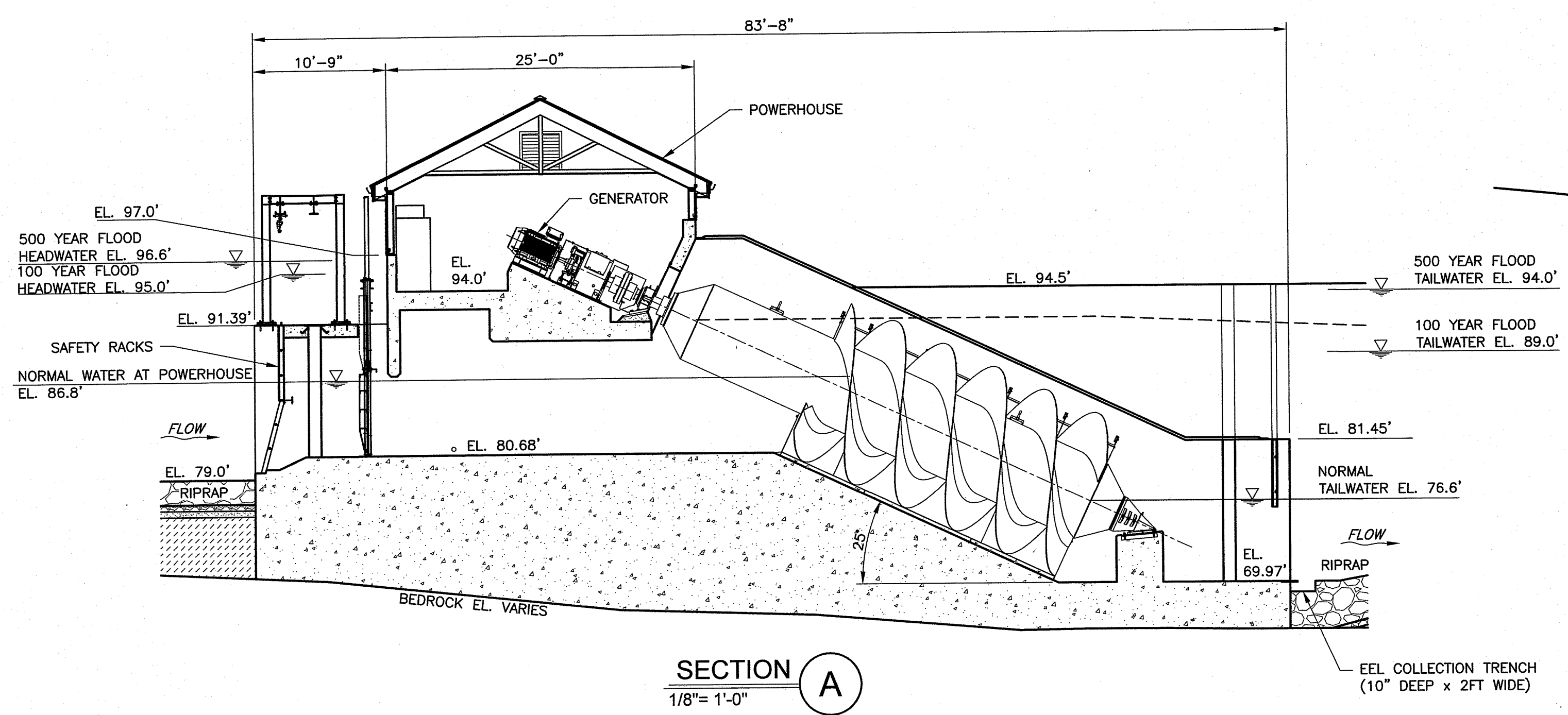
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Environmental Management
APR 15 2020
Office of Water Resources



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 26 2020 FILE # 19-0181
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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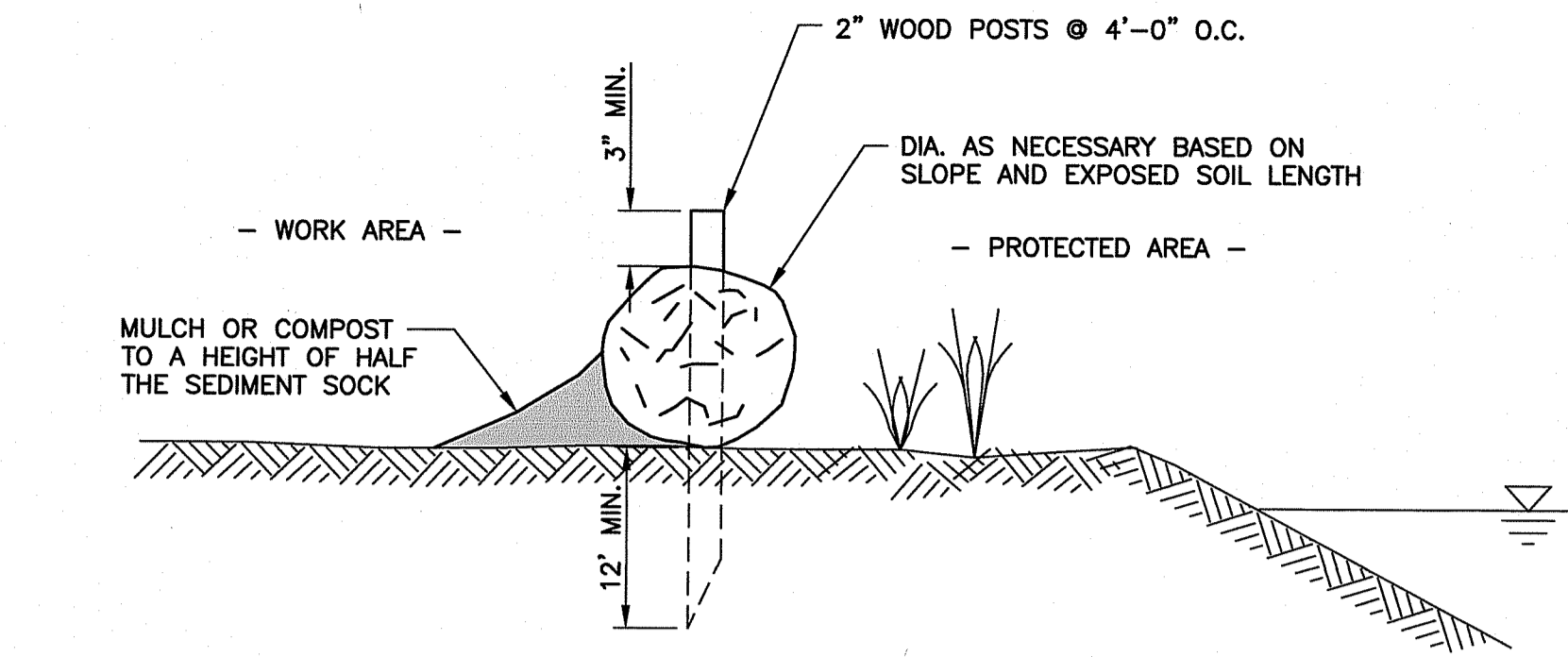
NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS
ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT
PROPOSED POWERHOUSE
GENERAL LAYOUT

ERIC MICHAEL TURGEON
REGISTERED PROFESSIONAL ENGINEER
CIVIL

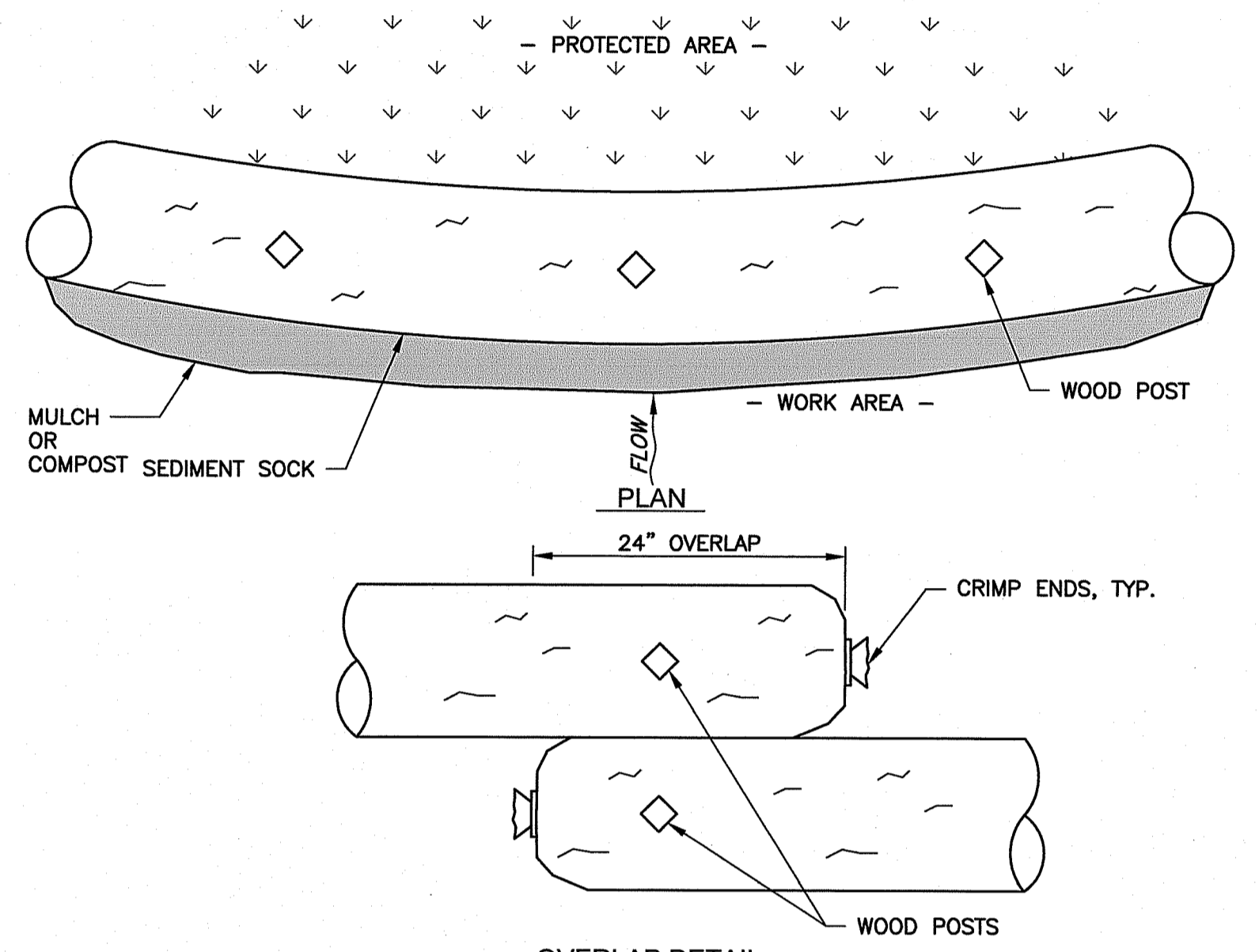
No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	8-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT
No.	Revision	Date	Drawn	Checked
-			TLT	EMT

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TYPICAL SECTION

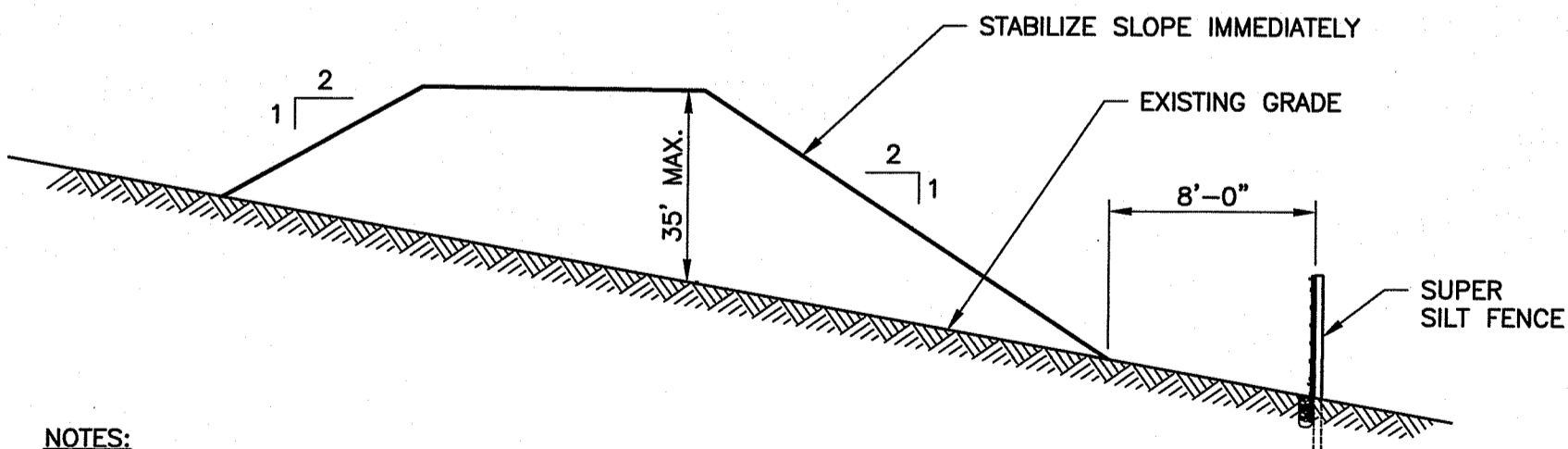


OVERLAP DETAIL

- NOTES:
- FABRIC SHALL BE HEAVY DUTY BIODEGRADABLE MESH.
 - FILLER SHALL BE FREE OF SEED AND LOW IN MOISTURE CONTENT, AND MAY CONSIST OF WOOD CHIPS OR COMPOST MATERIAL.
 - ENSURE SOCK RETAINS SHAPE FOR DURATION OF PROJECT. RESHAPE BY HAND AS NEEDED.
 - ENSURE SOCK MAINTAINS GROUND CONTACT. IF LOSS OF CONTACT, FILL DEPRESSIONS WITH CHIPS.
 - REGULARLY INSPECT SEDIMENT SOCK FOR DAMAGE OR SEDIMENT BUILDUP. REMOVE SEDIMENT BUILDUP WHEN MORE THAN 1/2 SOCK HEIGHT IS REACHED.
 - REPAIR ANY DAMAGE TO SOCK MATERIAL WITH ZIP TIES. DAMAGE OVER 12" LONG REQUIRED REPLACEMENT.
 - SOCK SHALL TURN UPHILL FOR AT LEAST 6 FEET AT EACH END OF THE SOCK AND SHALL RUN ALONG THE GRADE CONTOURS.

TYPICAL SEDIMENT SOCK DETAIL

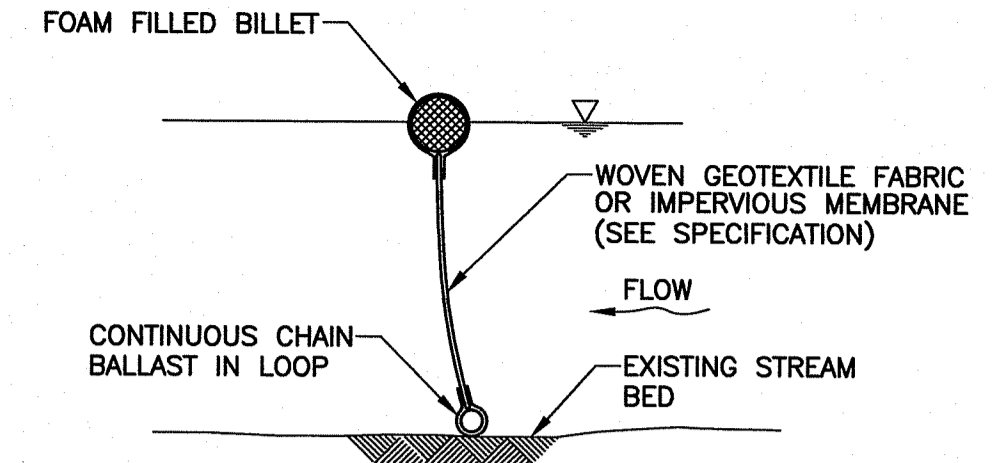
N.T.S.



- NOTES:
- INSTALL SUPER SILT FENCE OR SEDIMENT SOCK AROUND PERIMETER OF STOCKPILE, OR ON DOWNSLOPE OF AREA OF STOCKPILE.
 - PLACE STOCKPILE IN AREAS WITHOUT BLOCKING NATURAL DRAINAGE PATTERNS.
 - FOLLOW DIMENSIONS SHOWN ABOVE. HEIGHT SHOULD NOT EXCEED 35 FT. SIDE SLOPES SHOULD NOT BE STEEPER THAN 2(H):1(V).
 - STABILIZE IMMEDIATELY PER RIDEM REQUIREMENTS.
 - PERFORM WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
 - APPLY TEMPORARY SEEDING OR POLETHYLENE COVER IF STOCKPILE WILL NOT BE DISTURBED FOR 14 DAYS.

TEMPORARY STOCKPILE DETAIL

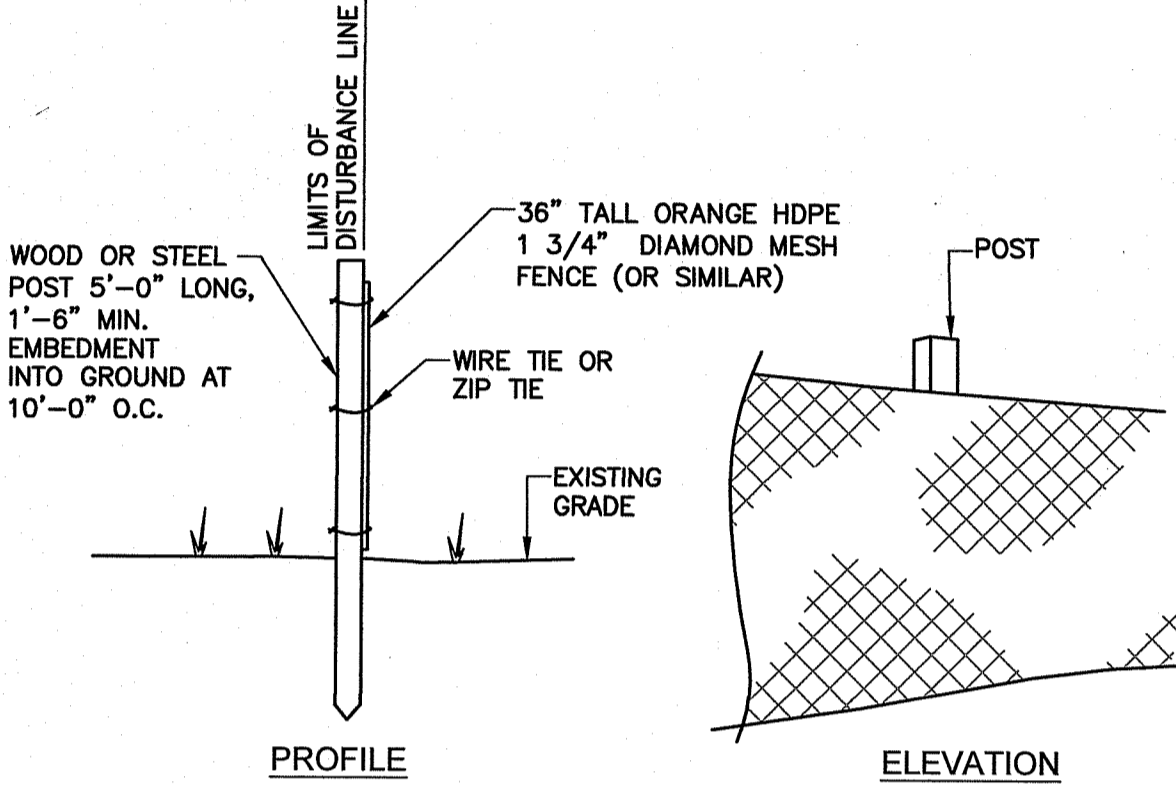
N.T.S.



TURBIDITY CURTAIN DETAIL

N.T.S.

- NOTES:
- ANCHOR TURBIDITY CURTAIN SECURELY AT EACH END AND SEAL ENDS.
 - TURBIDITY CURTAIN SHALL EXTEND THE FULL WATER DEPTH FOR STILL WATER CONDITIONS, ALLOWING 15% EXTRA DEPTH FOR WATER LEVEL FLUCTUATIONS.



PROFILE

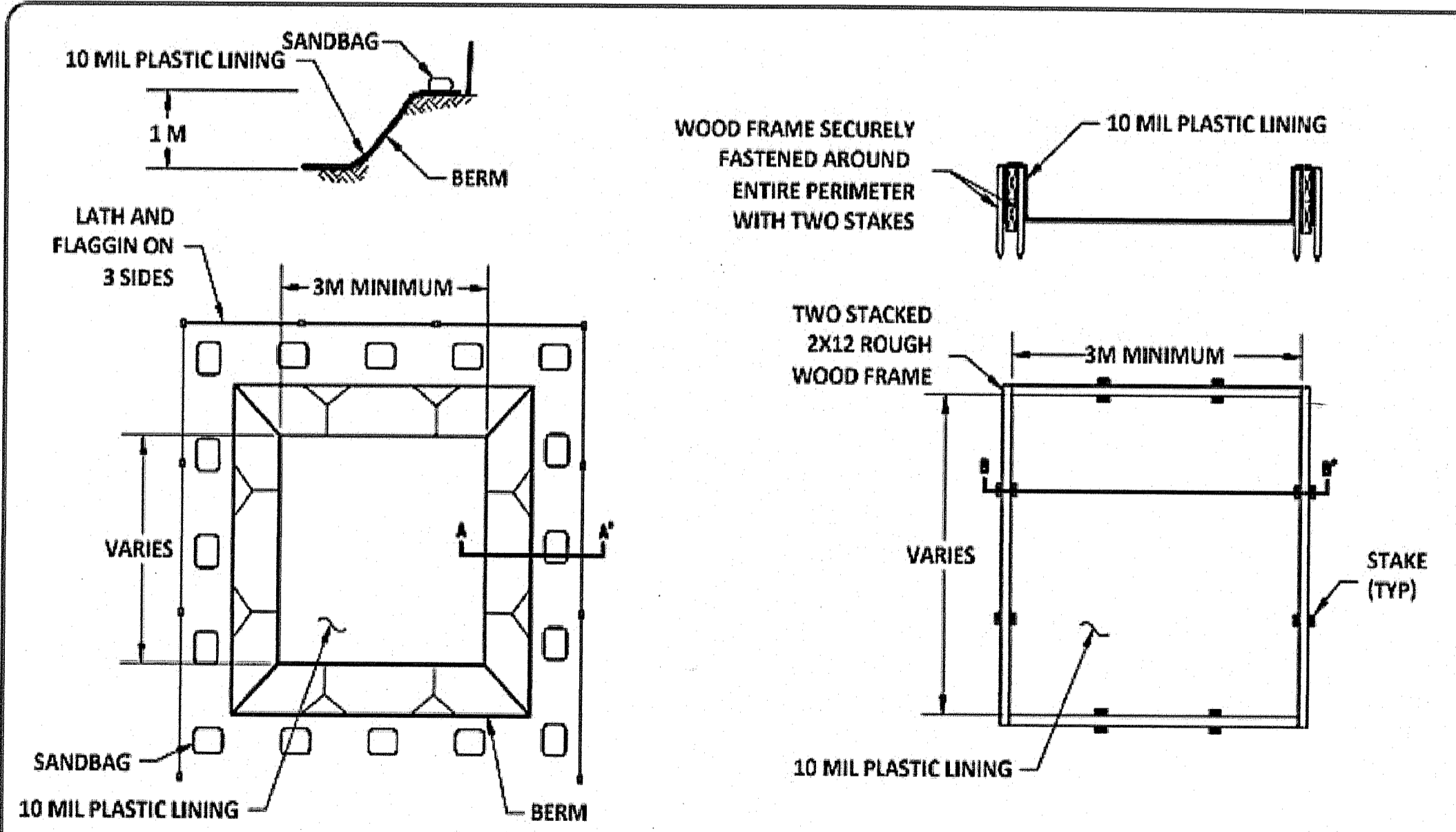
ELEVATION

- NOTES:
- LOD FENCE SHALL RUN THE ENTIRE LENGTH/PERIMETER AS SHOWN IN THE PLANS. SILT FENCE OR SEDIMENT SOCK MAY SERVE AS THE LOD MARKER WHERE THEY COINCIDE.
 - MAINTAIN FENCE, REPAIR AREAS THAT ENCOUNTER DAMAGE DURING CONSTRUCTION.
 - NO ACTIVITY TO BE ALLOWED OUTSIDE THE DEMARCATED L.O.D. WITHOUT ENGINEER REVIEW AND ALL OWNER/PERMIT APPROVALS.

LIMITS OF DISTURBANCE FENCE DETAIL

N.T.S.

Temporary Concrete Washout Facility

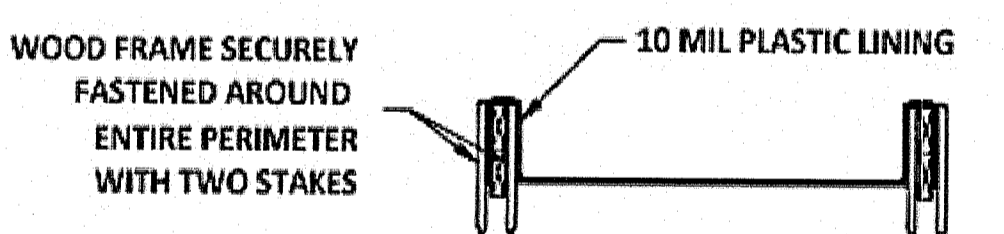


PLAN NOT TO SCALE

TYPE "BELOW GRADE"

SECTION A-A' NOT TO SCALE

- NOTES:
- ACTUAL LAYOUT DETERMINED IN THE FIELD.
 - FOR REFERENCE PURPOSES ONLY. NOT FOR CONSTRUCTION PURPOSES.



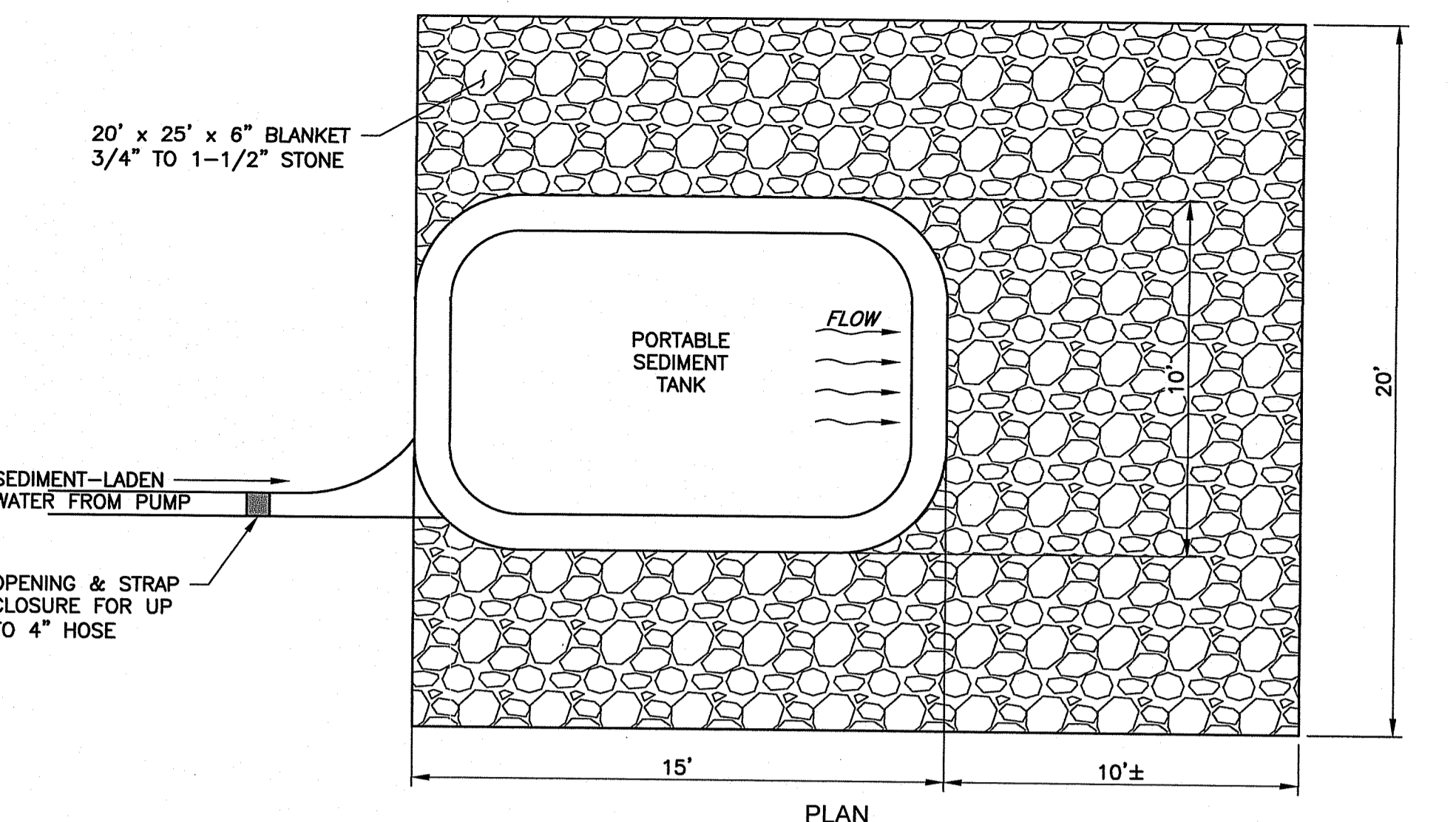
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TYPE "ABOVE GRADE" WITH WOOD PLANKS

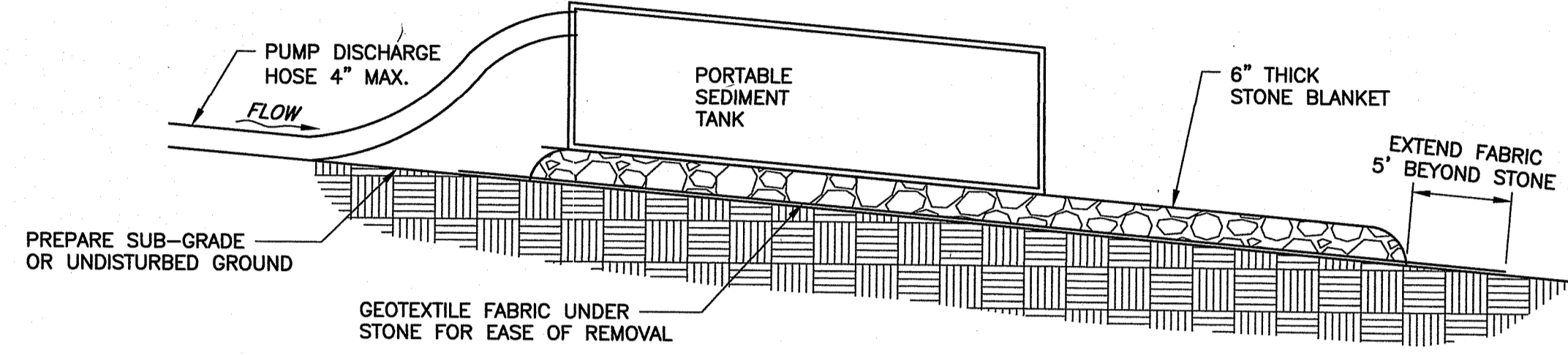
SECTION B-B' NOT TO SCALE

PLAN NOT TO SCALE

SECTION B-B' NOT TO SCALE



PLAN

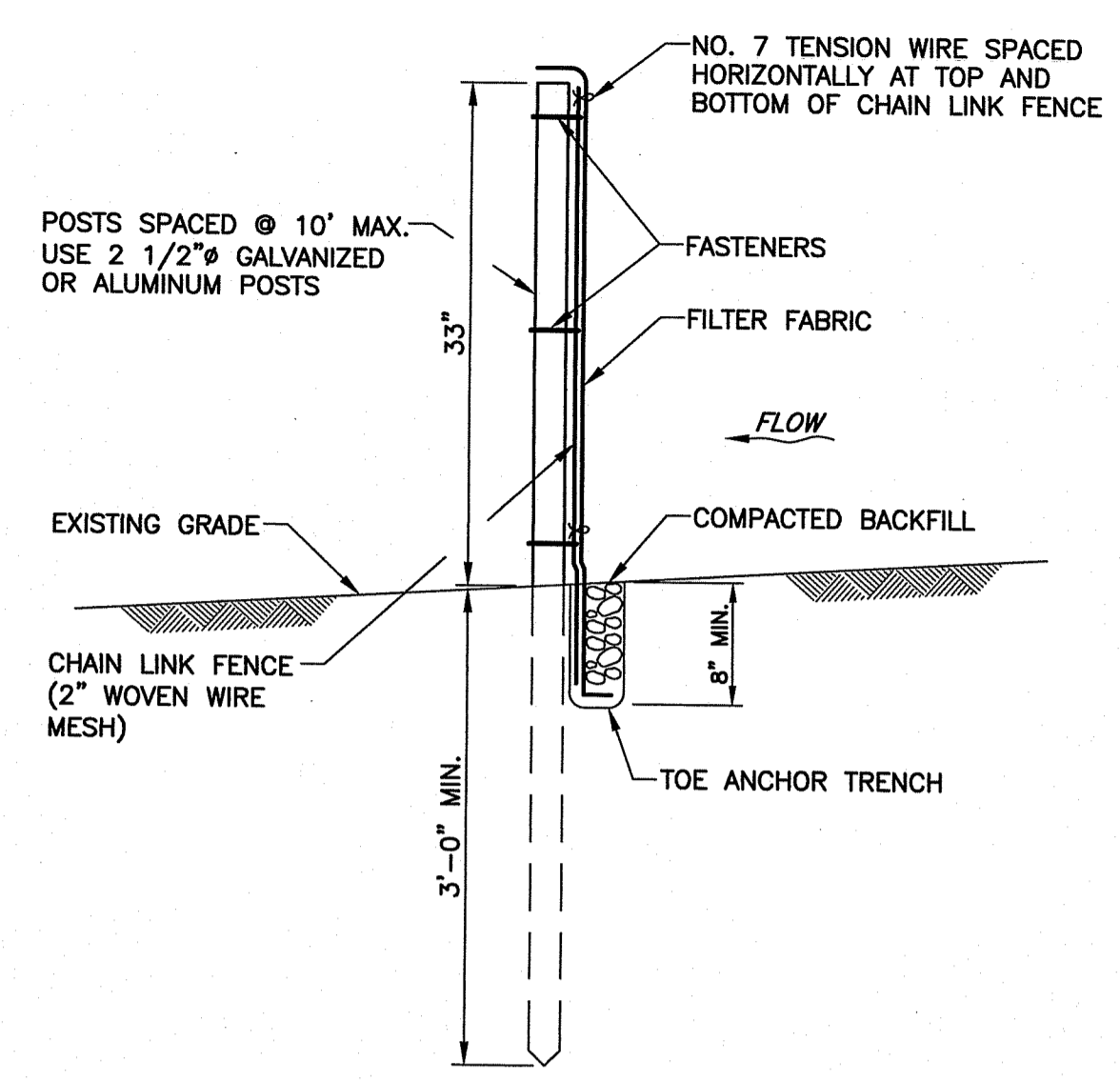


PROFILE

- NOTES:
- WATER PUMPED FROM EXCAVATIONS SHALL BE DISCHARGED INTO A PORTABLE SEDIMENT TANK.
 - PORTABLE SEDIMENT TANK SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
 - GRADE THE EROSION CONTROL STONE PAD SO THE SURFACE IS SLOPED SLIGHTLY (1%-2%) AWAY FROM THE HOSE OPENING.
 - SET TANK IN PLACE AND CONNECT HOSE FROM DEWATERING PUMP. TIE OFF THE NECK OF THE BAG TO THE HOSE TIGHT ENOUGH TO PREVENT WATER FROM FLOWING OUT THROUGH THE HOSE UNFILTERED.
 - INSPECT THE TANK PERIODICALLY AND REPLACE WHEN NO LONGER EFFECTIVE.
 - ACCUMULATED SEDIMENT MAY BE USED TO BACKFILL EXCAVATIONS EXCEPT WHERE SPECIFIC MATERIALS OTHER THAN NATIVE SOILS ARE SPECIFIED.
 - PROPERLY MAINTAIN TANK.

PORTABLE SEDIMENT TANK DETAIL

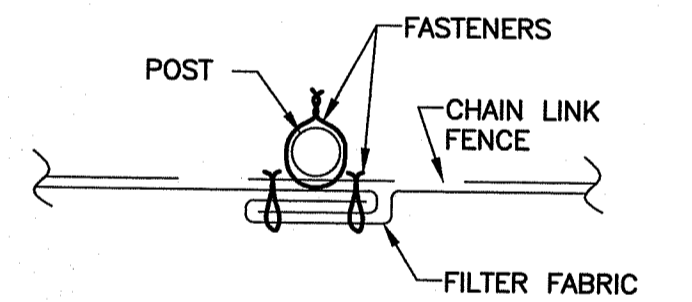
N.T.S.



SUPER SILT FENCE DETAIL

N.T.S.

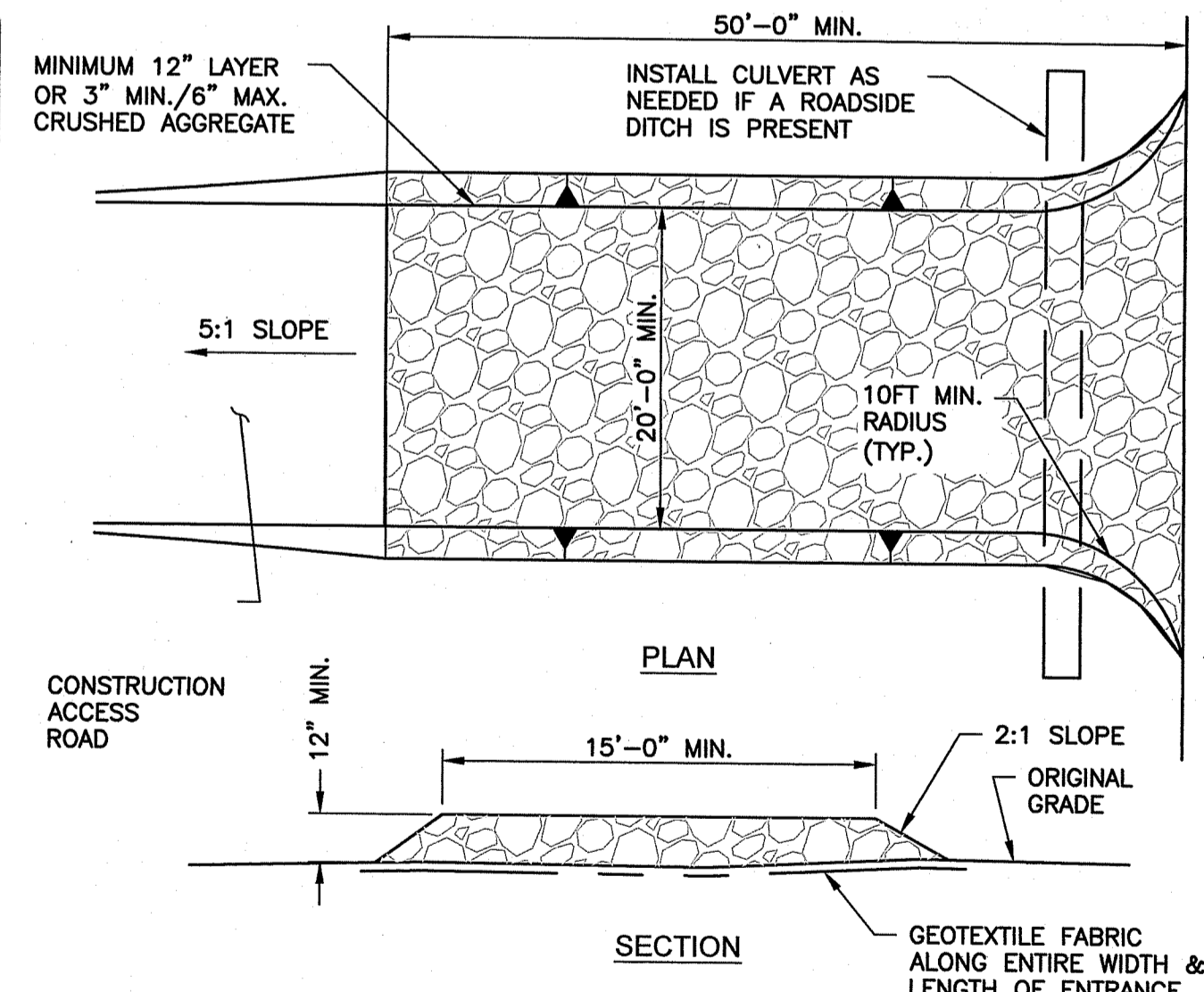
- NOTES:
- CHAIN LINK TO POST FASTENERS SPACED AT 14" MAX. USE NO. 6 ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL PRE-FORMED CLIPS. CHAIN LINK TO TENSION WIRE FASTENERS SPACED AT 60" MAX. USE NO. 10 GA. GALVANIZED STEEL WIRE. FABRIC TO CHAIN FASTENERS SPACED AT 24" O.C. MAX.
 - FILTER FABRIC FENCE MUST BE INSTALLED AT EXISTING LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
 - SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE FENCE.
 - SILT FENCE TO BE INSPECTED AFTER EACH RUNOFF EVENT AND AT LEAST WEEKLY.
 - IF NEEDED TO CONTROL WATER CONTAMINATION, CONFORMING TO THE FOLLOWING:
EQUIVALENT OPENING - SIZE OF A U.S. STANDARD SIEVE SIZE 40 (MAX), 70 (MIN).
MULLEN BURST STRENGTH - 200 PSI.
GRAB STRENGTH - 120 LBS MIN.
SPUN-BONDED NYLON FABRIC - REINFORCED WITH POLYESTER NETTING.



JOINING FENCE SECTION

N.T.S.

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PLAN

SECTION

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.

ERIC MICHAEL TURGEON
REGISTERED PROFESSIONAL ENGINEER
CIVIL

No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT
No.	Revision	Date	Drawn	Checked
Designated	Drawn	Checked	Drawn	Checked
JCH	EMT			

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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 28 2020 FILE # 19-0187
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NOT FOR CONSTRUCTION

NEW ENGLAND HYDROPOWER COMPANY
BEVERLY, MASSACHUSETTS

ALBION HYDROELECTRIC DEVELOPMENT PROJECT
PERMITTING SUPPORT

SOIL EROSION AND SEDIMENT CONTROL DETAILS

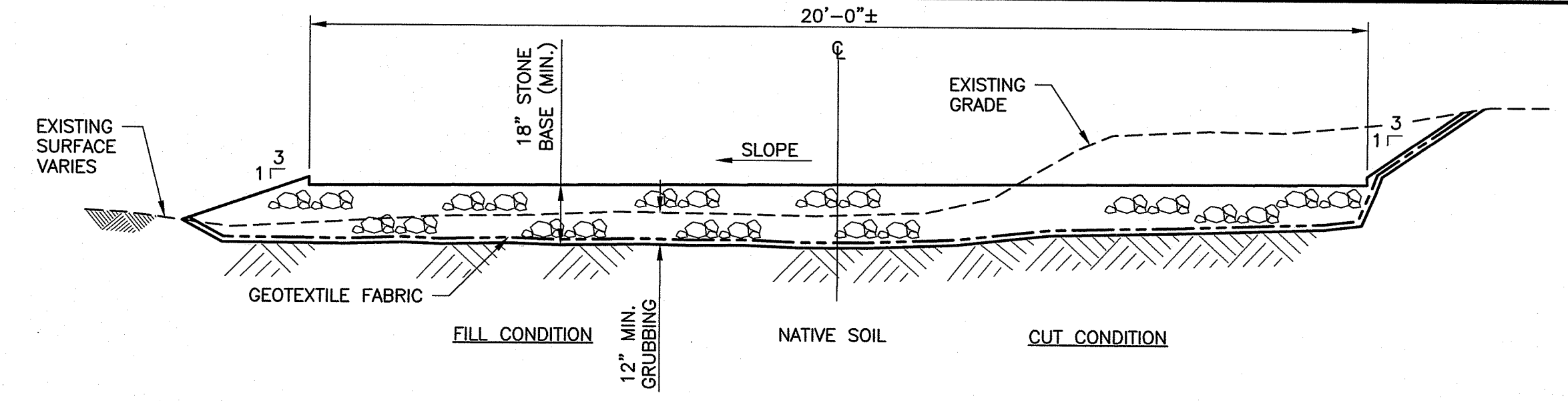
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Project No. 4161-001
Date Revised 10-31-19
Drawing No. P-012 SHEET 12 of 16

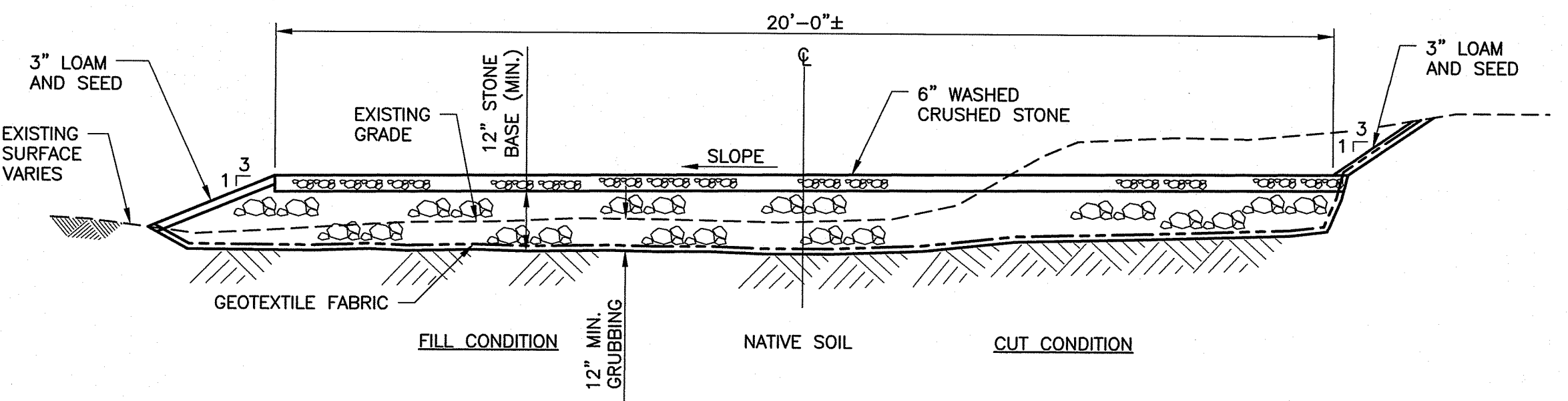
(Credit: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control)

24x36 = FULL SCALE

Environmental Management
 APR 15 2020
 Office of Water Resources

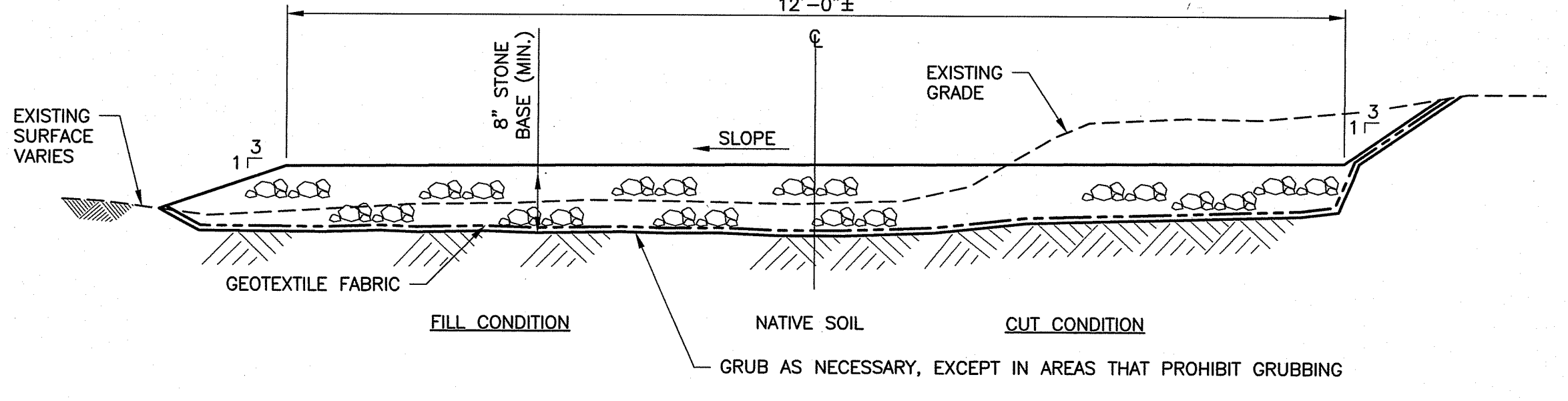


TYPICAL PERMANENT ACCESS ROAD - DURING CONSTRUCTION
 N.T.S.

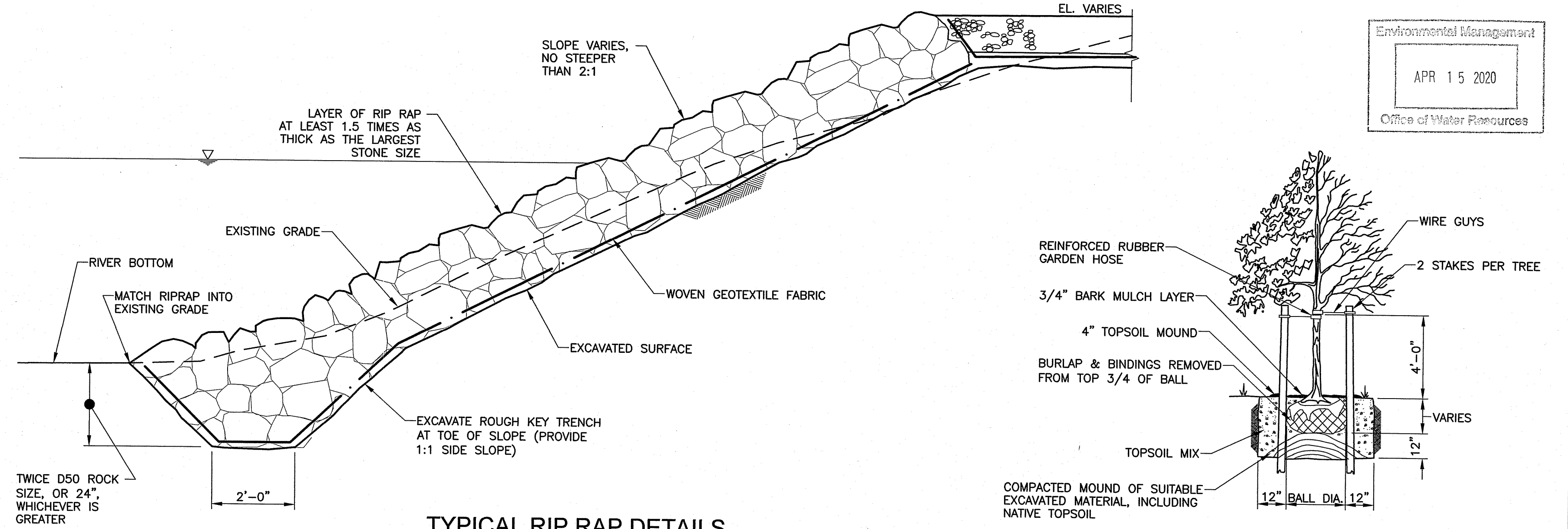


TYPICAL PERMANENT ACCESS ROAD - POST CONSTRUCTION
 N.T.S.

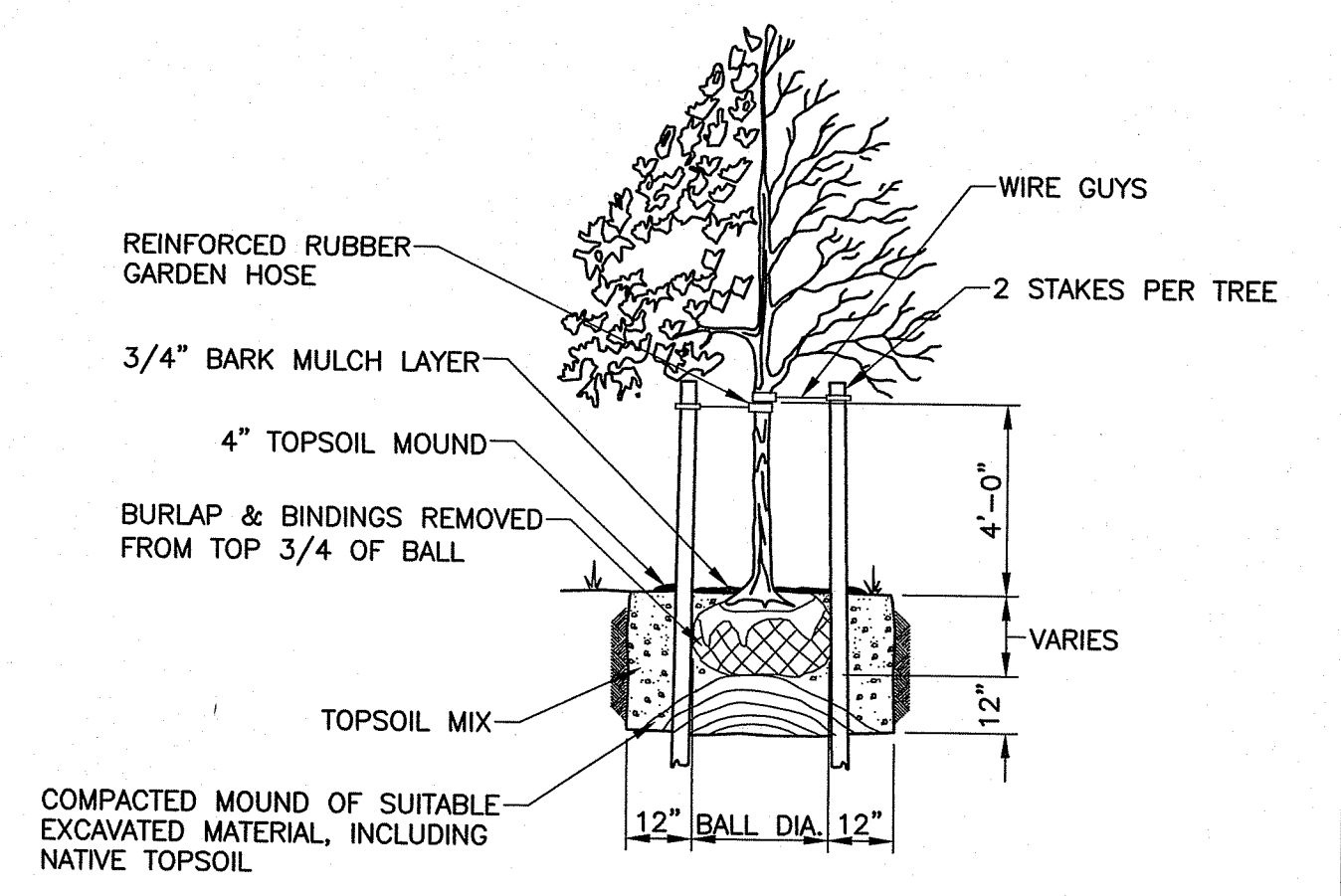
NOTE:
 1. REMOVE ANY SOIL DEPOSITS TO SATISFACTION OF ENGINEER PRIOR TO PLACEMENT OF WASHED CRUSHED STONE



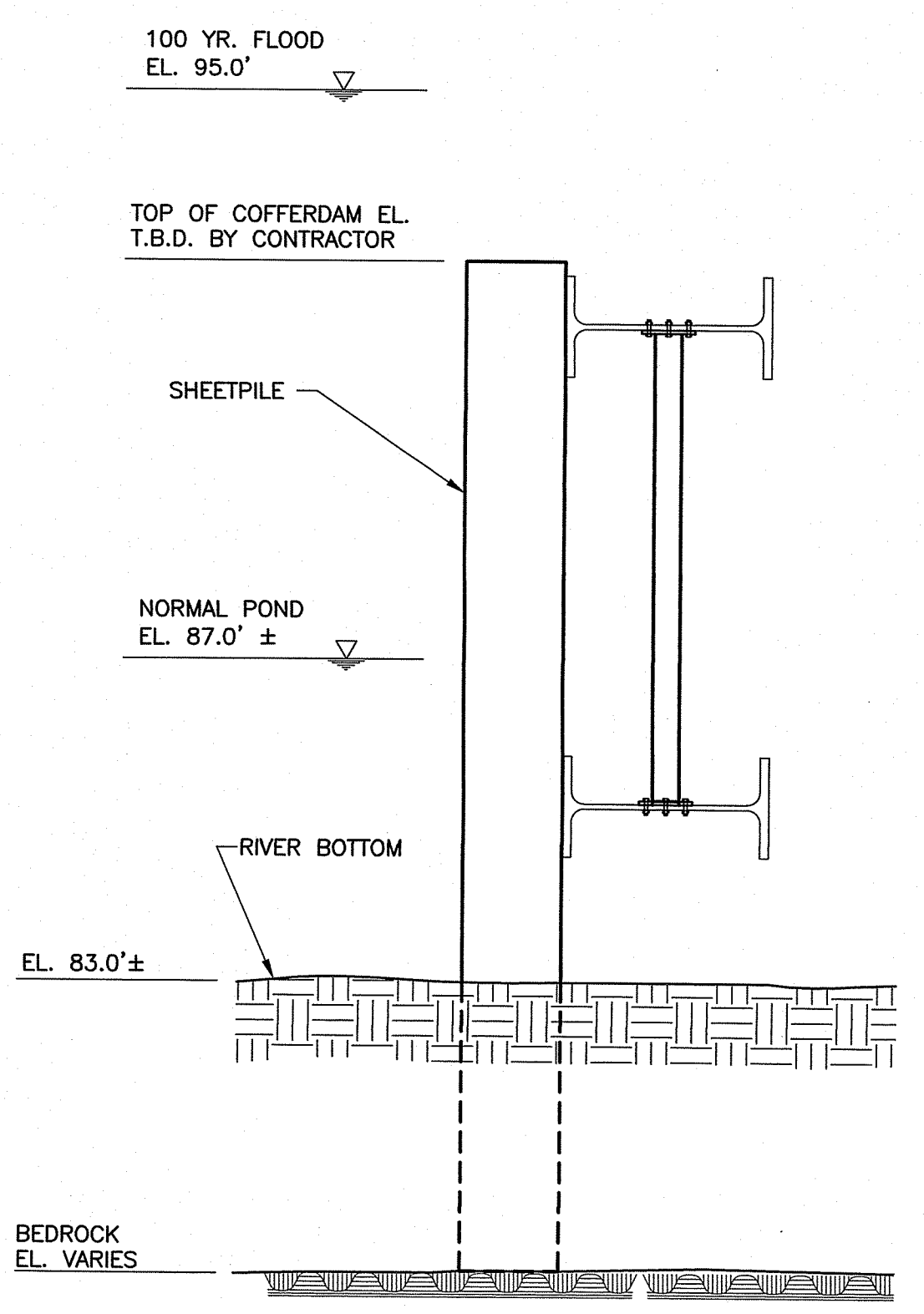
TEMPORARY ACCESS ROAD, LAYDOWN AREA, AND CRANE PAD
 N.T.S.



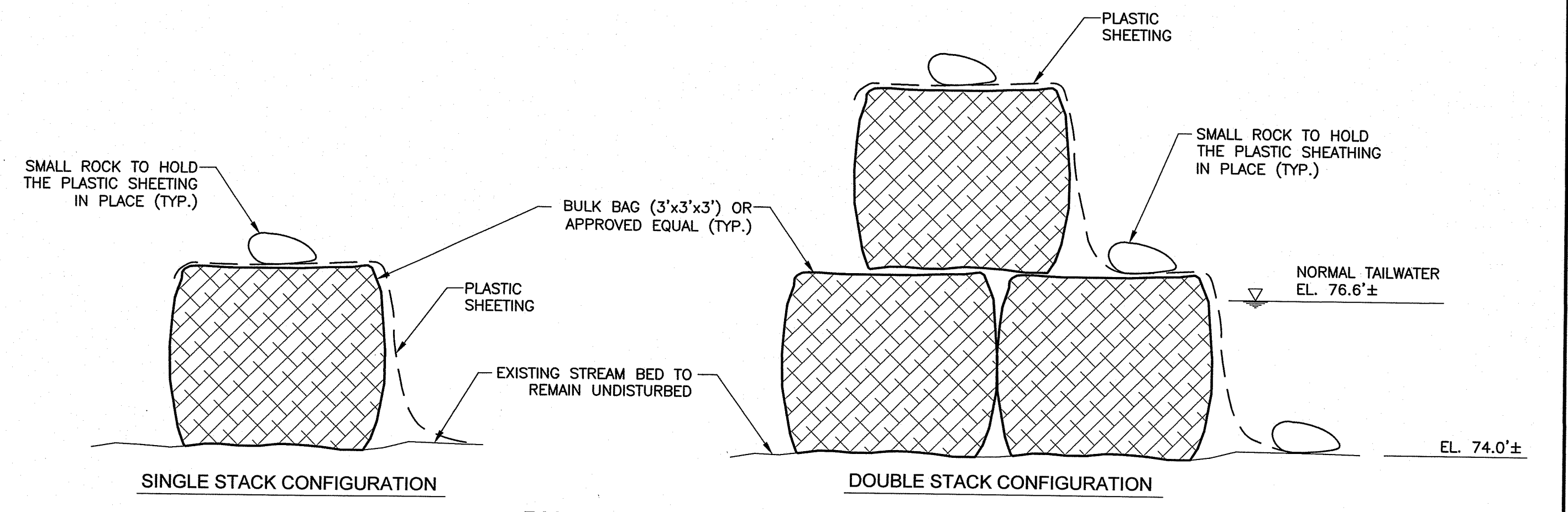
TYPICAL RIP RAP DETAILS
 N.T.S.



TREE PLANTING DETAIL
 N.T.S.

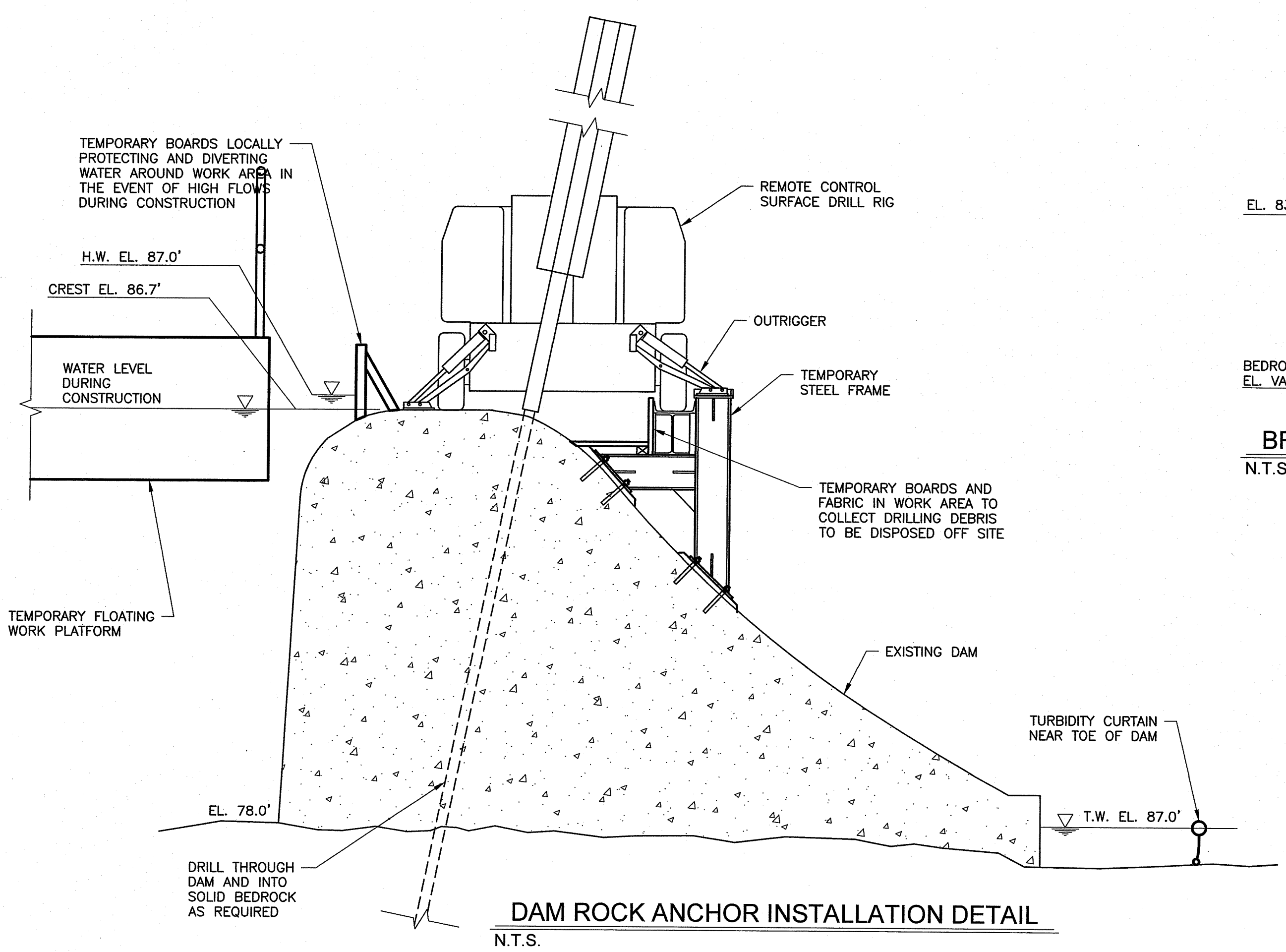


BRACED SHEETPILE COFFERDAM DETAIL
 N.T.S.



BULK BAG COFFERDAM DETAIL
 N.T.S.

NOTE:
 1. COFFERDAM CONFIGURATIONS SHOWN ARE CONCEPTUAL. FINAL CONFIGURATIONS OF COFFERDAMS WILL BE DETERMINED BY CONTRACTOR. FINAL DESIGN DETAILS WILL BE BY CONTRACTOR, SUBMITTED TO OWNER/ENGINEER FOR APPROVAL.



DAM ROCK ANCHOR INSTALLATION DETAIL
 N.T.S.

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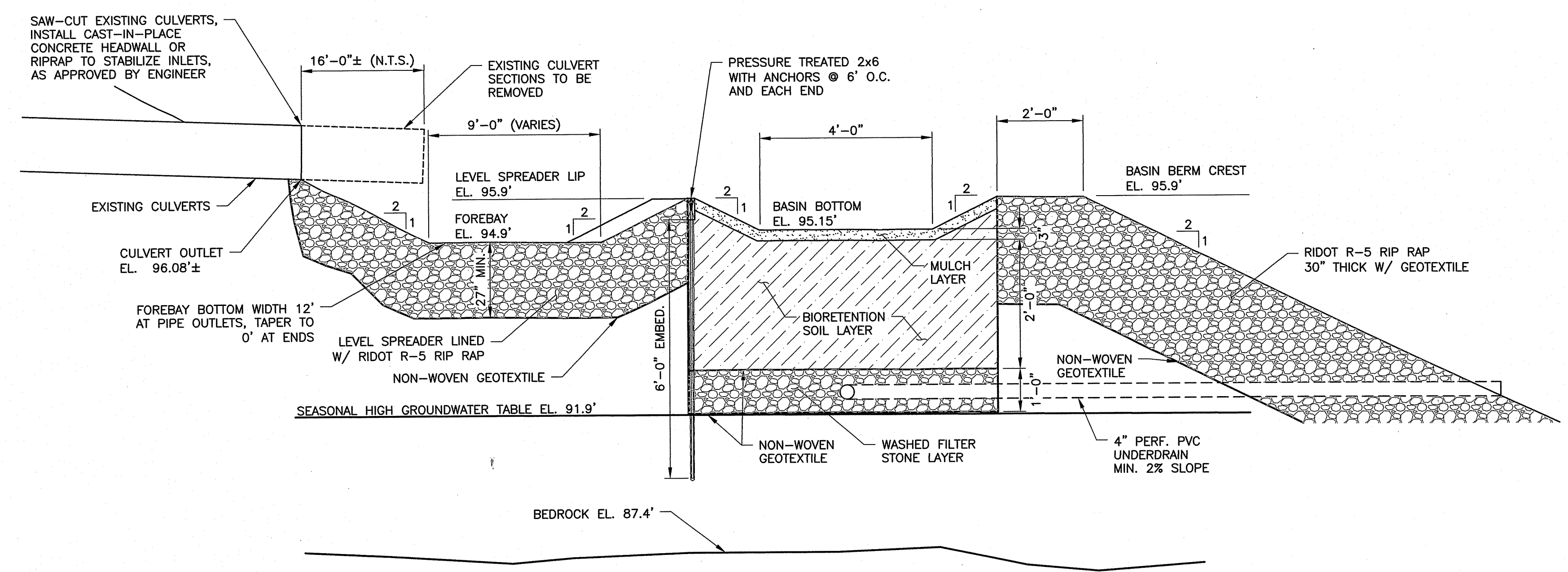
ERIC MICHAEL TURGEON
 2/1/20
 No. 11298
 REGISTERED
 PROFESSIONAL ENGINEER
 CIVIL

No.	Revision	Date	Drawn	Checked
2	PRELIMINARY PLAN	02-07-20	JCH	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	ADDED ROCK ANCHOR INSTALLATION DETAIL	6-21-19	TLT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT
No.	Revision	Date	Drawn	Checked
			Designed	Drawn
			JZA	EMT

Project No. 4161-001
 Date Revised 02-07-20
 Drawing No. P-013
 SHEET 13 of 16

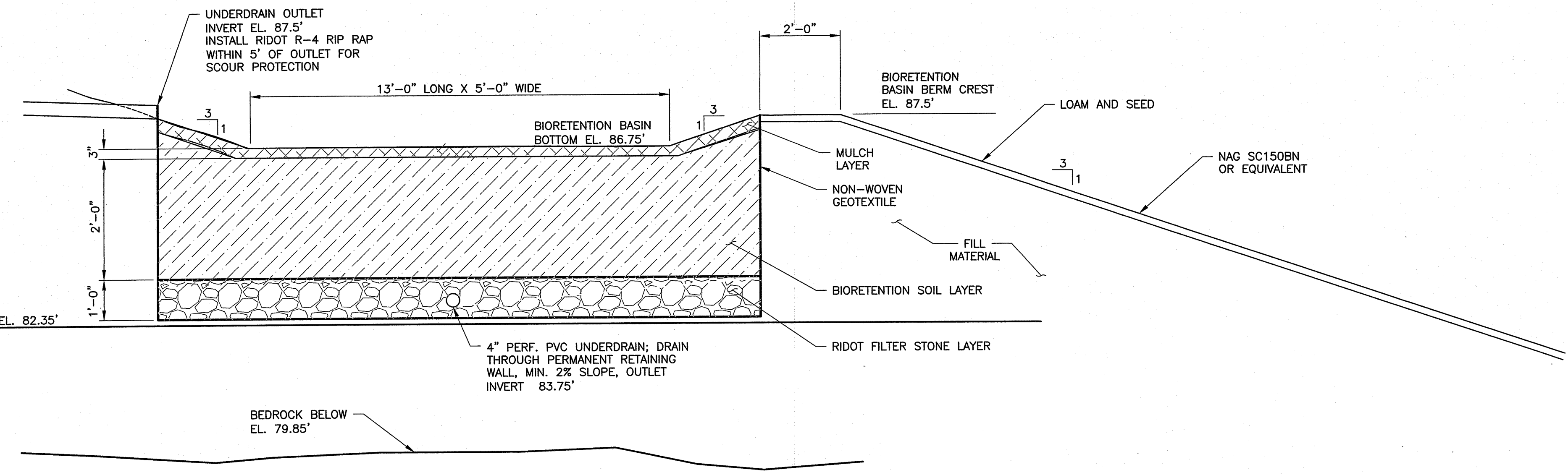
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24x36 = FULL SCALE



ROAD BIORETENTION BASIN SECTION
 N.T.S.

- BIORETENTION BASIN NOTES:**
- INSTALLATION AND MATERIALS SHALL BE PER RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, OR AN APPROVED EQUIVALENT, INCLUDING:
 - SOIL MEDIA: SOILS SHALL CONSIST OF USDA LOAMY SAND OR SANDY LOAM CLASSIFICATION AND MEET THE FOLLOWING GRADATION: SAND 85-88%, SILT 8-12%, CLAY 0-2%, AND ORGANIC MATTER (LEAF COMPOST) 3-5%. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS, OTHER WOODY MATERIAL OVER 1 INCH IN DIAMETER, OR BRUSH/SEEDS FROM NOXIOUS WEEDS
 - MULCH: MULCH SHALL CONSIST OF WELL AGED SHREDDED HARDWOOD (STOCKPILED OR STORED FOR AT LEAST SIX (6) MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC.
 - PLANTINGS: SHALL BE 4" DIA. CONTAINERS, PLANTED 2.5' O.C. AND MIXTURE OF: *SOLIDAGO VIRGAUREA* (COMMON NAME: GOLDENROD), *CAREX STRICTA* (COMMON NAME: TUSSOCK SEDGE), *IRIS VERSICOLOR* (COMMON NAME: BLUE FLAG), AND *OCLEMEA ACUMINATA* (COMMON NAME: WOOD ASTER) OR EQUIVALENT APPROVED SPECIES.
 - STONE: RIDOT FILTERSTONE
 - GEOTEXTILE: MIRAFI S600 OR EQUIVALENT.
 - INSTALLED BIORETENTION BASIN DIMENSIONS SHALL BE TO TOP OF SLOPE, AS SHOWN.
 - PLACEMENT OF SOIL MEDIA SHALL BE IN LIFTS OF 12 TO 18 INCHES, LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET).
 - DEEP RIP OR DEEP AERATE (TO DEPTH OF 1') CLAY-BASED SUBSOIL (IF ENCOUNTERED) PRIOR TO PLACEMENT OF WASHED STONE.
 - BIORETENTION FILTERS SHALL BE INSTALLED ONCE UPGRADIENT CONTRIBUTING AREA HAS BEEN PERMANENTLY STABILIZED.



POWERHOUSE BIORETENTION BASIN SECTION
 N.T.S.

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 BIORETENTION DETAILS

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2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

Project No.	Date Revised	Drawn	Checked
4161-001	11-26-19	JZA	EMT

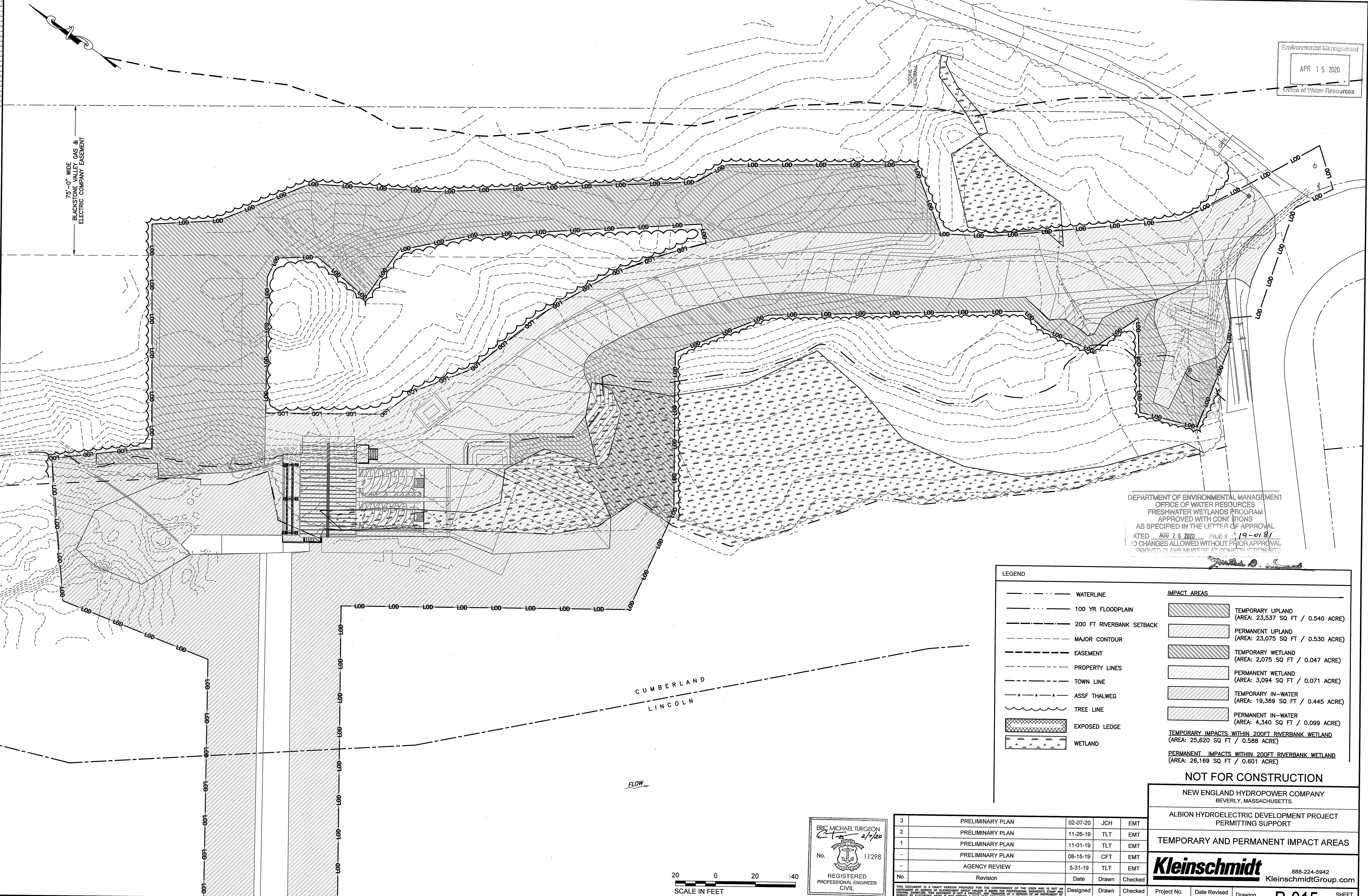
Project No. 4161-001
 Date Revised 11-26-19
 Drawing No. P-014
 SHEET 14 of 16

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LEGEND		IMPACT AREAS	
	WATERLINE		TEMPORARY UPLAND (AREA: 23,537 SQ FT / 0.540 ACRE)
	100 YR FLOODPLAIN		PERMANENT UPLAND (AREA: 23,075 SQ FT / 0.530 ACRE)
	200 FT RIVERBANK SETBACK		TEMPORARY WETLAND (AREA: 2,075 SQ FT / 0.047 ACRE)
	MAJOR CONTOUR		PERMANENT WETLAND (AREA: 3,094 SQ FT / 0.071 ACRE)
	EASEMENT		TEMPORARY IN-WATER (AREA: 19,369 SQ FT / 0.445 ACRE)
	PROPERTY LINES		PERMANENT IN-WATER (AREA: 4,340 SQ FT / 0.099 ACRE)
	TOWN LINE		
	ASSF THALWEG		
	TREE LINE		
	EXPOSED LEDGE		
	WETLAND		

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TEMPORARY AND PERMANENT IMPACT AREAS

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No.	Revision	Date	Drawn	Checked
3	PRELIMINARY PLAN	02-07-20	JCH	EMT
2	PRELIMINARY PLAN	11-26-19	TLT	EMT
1	PRELIMINARY PLAN	11-01-19	TLT	EMT
-	PRELIMINARY PLAN	08-15-19	CFT	EMT
-	AGENCY REVIEW	5-31-19	TLT	EMT

DESIGNED: TAK
 DRAWN: TLT
 CHECKED: EMT

Project No. 4161001
 Date Revised 02-07-20
 Drawing No. P-015 SHEET 15 of 16

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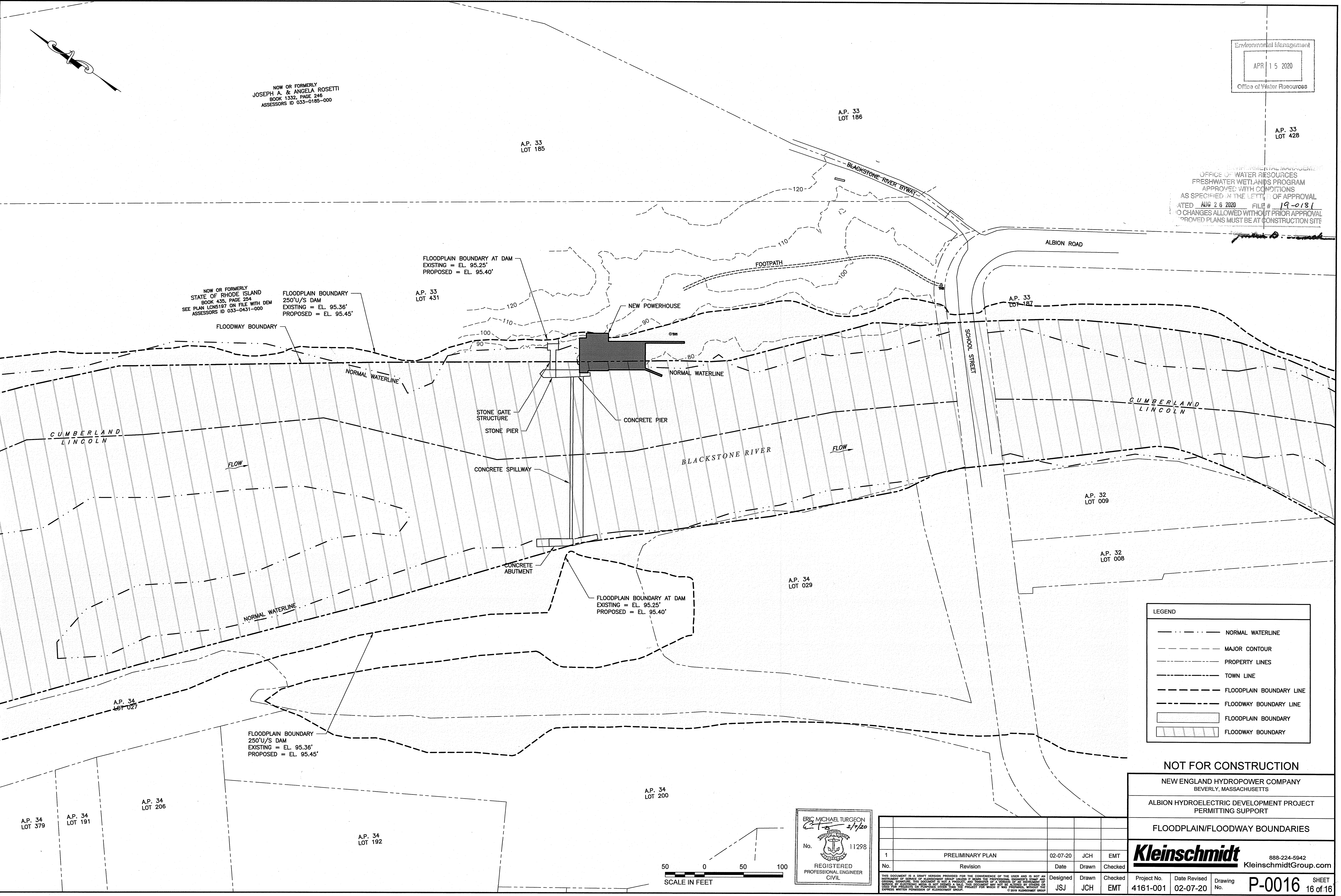
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APR 15 2020
Office of Water Resources

NOW OR FORMERLY
JOSEPH A. & ANGELA ROSETTI
BOOK 1332, PAGE 248
ASSESSORS ID 033-0185-000

A.P. 33
LOT 428

OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED AUG 26 2020 FILE # 19-0181
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NOW OR FORMERLY
STATE OF RHODE ISLAND
BOOK 435, PAGE 254
SEE PLAN LON5197 ON FILE WITH DEM
ASSESSORS ID 033-0431-000

FLOODPLAIN BOUNDARY
250'U/S DAM
EXISTING = EL. 95.36'
PROPOSED = EL. 95.45'

FLOODPLAIN BOUNDARY AT DAM
EXISTING = EL. 95.25'
PROPOSED = EL. 95.40'

A.P. 33
LOT 431

A.P. 33
LOT 185

A.P. 33
LOT 186

A.P. 33
LOT 187

A.P. 32
LOT 009

A.P. 32
LOT 008

A.P. 34
LOT 029

FLOODPLAIN BOUNDARY AT DAM
EXISTING = EL. 95.25'
PROPOSED = EL. 95.40'

FLOODPLAIN BOUNDARY
250'U/S DAM
EXISTING = EL. 95.36'
PROPOSED = EL. 95.45'

A.P. 34
LOT 027

A.P. 34
LOT 206

A.P. 34
LOT 200

A.P. 34
LOT 379

A.P. 34
LOT 191

A.P. 34
LOT 192

LEGEND

- NORMAL WATERLINE
- - - MAJOR CONTOUR
- PROPERTY LINES
- TOWN LINE
- - - FLOODPLAIN BOUNDARY LINE
- - - FLOODWAY BOUNDARY LINE
- ▭ FLOODPLAIN BOUNDARY
- ▨ FLOODWAY BOUNDARY

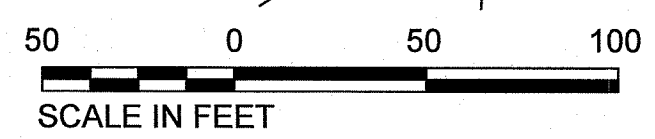
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PERMITTING SUPPORT
FLOODPLAIN/FLOODWAY BOUNDARIES

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Project No.	Date Revised	Drawing No.	SHEET
4161-001	02-07-20	P-0016	16 of 16

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No.	Revision	Date	Drawn	Checked
1	PRELIMINARY PLAN	02-07-20	JCH	EMT

DESIGNED: JSJ
DRAWN: JCH
CHECKED: EMT

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