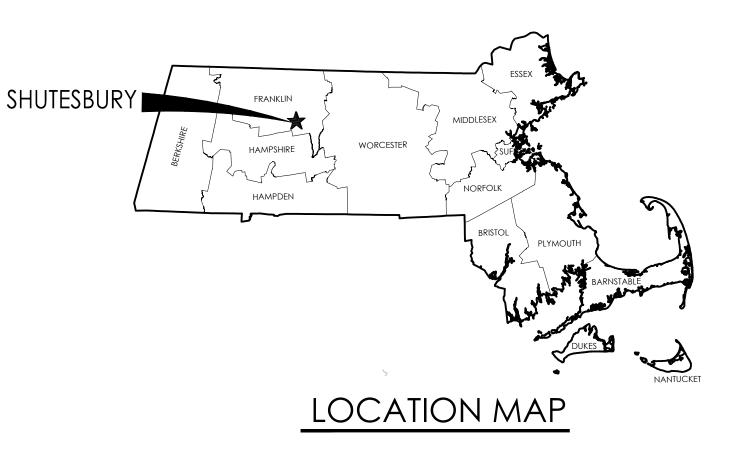
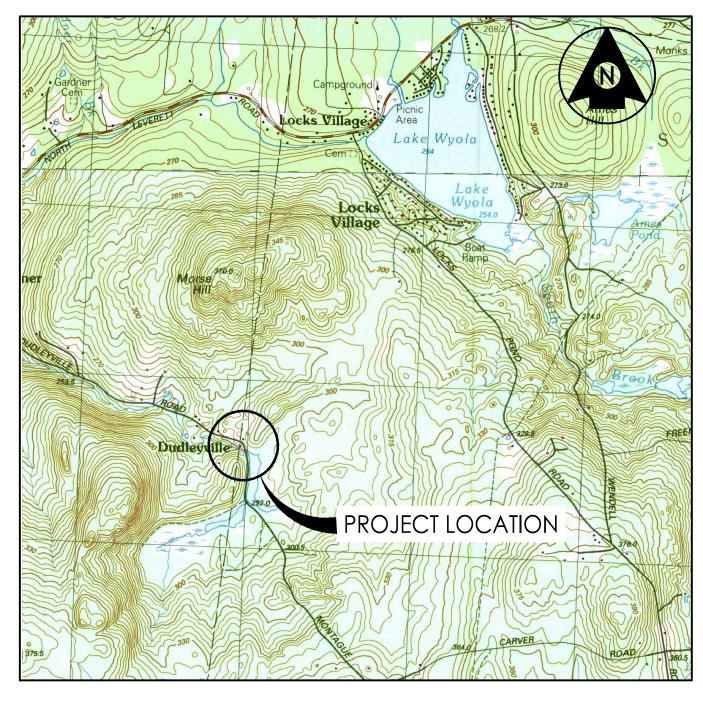


Division of Ecological Restoration Dudleyville Dam Removal Preliminary Design

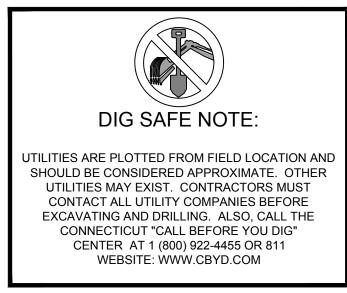
Shutesbury, Massachsuetts
Dam ID# MA00512

INDEX OF SHEETS	S
DRAWING NO.	<u>TITLE</u>
G-001	COVER SHEET
G-002	GENERAL NOTES
C-100	EXISTING CONDITIONS PLAN
C-101A/B	DEMOLITION PLANS (PHASE 1/PHASE 2)
C-102	PROPOSED CONDITIONS
C-103	CROSS-SECTIONS AND PROFILE
C-104	EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS









Division of Ecological Restoration Massachusetts Department of Fish and Game 100 Cambridge Street, 6th Floor Boston, MA 02114



2024.05.17

PROJECT NUMBER: 195602930

GENERAL NOTES:

- 1. INFORMATION DEPICTED ON THESE PLANS DOES NOT CONSTITUTE AN AGREEMENT TO ACCESS OR WORK ON PROPERTIES DEPICTED ON THESE PLANS. ACCESS PERMISSION IS THE RESPONSIBILITY OF LOIS BROWN (OWNER) AND MUST BE CONFIRMED BY THE CONTRACTOR.
- 2. VERTICAL DATUM IS IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) FEET. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH AMERICAN DATUM OF 1983 (NAD83) MASSACHUSETTS STATE PLANE COORDINATE SYSTEM.
- 3. CONTOURS ARE BASED ON THE 2015 LIDAR DATA SET DOWNLOADED FROM MASSGIS ONLINE WEB
- 4. SUPPLEMENTAL SURVEY DATA IS BASED ON FIELD DATA COLLECTED BY STANTEC AND SHALL BE CONSIDERED APPROXIMATE.
- CONSIDERED APPROXIMATE.

 5. AERIAL IMAGERY IS BASED ON 2021 ORTHOPHOTOGRAPHS DOWNLOADED FROM THE MASSGIS
- ONLINE WEB PORTAL.

 6. EDGE OF WATER LINES WERE BASED ON FIELD DATA COLLECTED ON MARCH 14, 2024, AND SHALL BE CONSIDERED APPROXIMATE.
- 7. PROPERTY LINES ARE BASED ON THE LEVEL-3 PARCEL DATA DOWNLOADED FROM MASSGIS
- ONLINE WEB PORTAL.

 8. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, PROTECTION, AND MAINTENANCE OF
- FOR CONFORMANCE WITH PROJECT PERMITS.

 9. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL PERMIT CONDITIONS RELATED TO THIS WORK. IN THE EVENT OF CONFLICT BETWEEN PERMIT CONDITIONS AND THESE DRAWINGS, NOTIFY

ALL EROSION AND SEDIMENTATION CONTROLS AS SPECIFIED IN THE DRAWINGS AND AS REQUIRED

- THE OWNER FOR RESOLUTION.

 10. ALL STOCKPILED MATERIALS SHALL BE PLACED WITHIN THE DESIGNATED STAGING AND STORAGE
- AREAS UNLESS OTHERWISE INDICATED BY THE OWNER OR ENGINEER.

 11. EXCAVATED MATERIAL MAY BE REUSED ON SITE AND INCORPORATED INTO THE FINISHED WORK
- AS INDICATED IN THE DRAWINGS.

 12. PERFORM ALL EXCAVATION WORK IN ACCORDANCE WITH OSHA TRENCHING AND EXCAVATION
- STANDARDS AND PROVIDE A DESIGNATED QUALIFIED PROFESSIONAL TO OVERSEE EXCAVATIONS.

 13. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY AS WELL AS MEANS, METHODS,
- AND SEQUENCING OF CONSTRUCTION OPERATION.

 14. PRIOR TO MOBILIZATION TO THE PROJECT SITE, CONTRACTOR SHALL BE REQUIRED TO PROVIDE
- 14. PRIOR TO MOBILIZATION TO THE PROJECT SITE, CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE ADVANCE NOTICE TO DIGSAFE, THE TOWN OF SHUTESBURY, AND UTILITY COMPANIES TO ALLOW FOR FIELD LOCATION OF UTILITIES IN THE VICINITY OF THE PROJECT.
- 15. CONTRACTOR SHALL DEVELOP, INSTALL, AND MAINTAIN TEMPORARY MEASURES AS NECESSARY TO ADEQUATELY PROTECT AND PRESERVE EXISTING INFRASTRUCTURE WITHIN AND ADJACENT TO ACCESS / EGRESS ROUTES AND PROJECT WORK AREAS.
- 16. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN EQUIPMENT PRIOR TO MOBILIZATION TO THE PROJECT SITE TO AVOID INTRODUCTION OF INVASIVE PLANT PROPAGULES TO THE PROJECT SITE.
- 17. ALL MATERIALS TRANSPORTED TO THE PROJECT SITE SHALL BE FREE OF INVASIVE PLANT PROPAGULES. CONTRACTOR SHALL CERTIFY THAT THE IMPORTED MATERIAL IS FREE OF INVASIVE PLANT PROPAGULES.
- 18. CONTRACTORS EQUIPMENT SHALL BE SOUND, CLEAN, AND LEAK-FREE PRIOR TO MOBILIZATION TO THE PROJECT SITE AND SHALL BE MAINTAINED IN A LEAK-FREE CONDITION WHILE ON SITE.
- 19. A COMPLETE SPILL KIT SHALL BE MAINTAINED AT THE PROJECT SITE. ALL CONSTRUCTION EQUIPMENT SHALL HAVE A MOUNTED FIRE EXTINGUISHER.
- 20. ALL EQUIPMENT USED WITHIN THE JURISDICTIONAL RESOURCE AREAS SHALL HAVE BIODEGRADABLE HYDRAULIC FLUIDS.
- 21. SITE ACCESS / EGRESS ROUTES USED BY THE CONTRACTOR SHALL BE LEFT IN A CONDITION EQUAL TO OR BETTER THAN THE CONDITION ENCOUNTERED AT THE BEGINNING OF THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS TO RESTORE ACCESS / EGRESS ROUTES AND RELATED INFRASTRUCTURE PRIOR TO DEMOBILIZING FROM THE SITE.
- 22. WORK SHALL COMPLY WITH ALL APPLICABLE ENVIRONMENTAL REGULATIONS AND PERMIT CONDITIONS.
- 23. EQUIPMENT STAGING AND REFUELING SHALL OCCUR ON UPLAND AREAS OUTSIDE OF REGULATED RESOURCES AREAS. CONTRACTOR SHALL MAINTAIN OIL AND DIESEL FUEL SPILL KITS AS APPLICABLE TO THE TYPE(S) AND AMOUNT(S) OF OIL AND DIESEL FUEL USED. KITS SHALL BE READILY ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION AND ALL OPERATORS SHALL BE TRAINED IN THE USE OF THE SPILL KITS.
- 24. MOBILE HEAVY EQUIPMENT WORKING IN REGULATED RESOURCE AREAS SHALL NOT BE STORED, MAINTAINED OR REPAIRED IN REGULATED RESOURCE AREAS, EXCEPT THAT REPAIRING OR REFUELING IN A REGULATED RESOURCE AREA IS ALLOWED IF EQUIPMENT CANNOT PRACTICABLY BE REMOVED AND SECONDARY CONTAINMENT IS PROVIDED.
- 25. ALL MACHINERY, EQUIPMENT, SUPPLIES, AND PROJECT MATERIALS SHALL BE STORED OUTSIDE OF THE 100-YEAR FLOODPLAIN OF THE RIVER WHEN NOT IN ACTIVE USE OR DURING BREAKS IN WORK GREATER THAN 6 HOURS, OR AS OTHERWISE APPROVED IN THE MAINTENANCE OF FLOW PLAN (SEE WATER MANAGEMENT NOTES BELOW).

GENERAL CONSTRUCTION SEQUENCE:

THE GENERAL CONSTRUCTION SEQUENCING SHALL BE AS DESCRIBED BELOW. THIS OUTLINE IS NOT COMPREHENSIVE, IS INTENDED FOR PROJECT PERMITTING, AND IS NOT INTENDED TO DICTATE CONSTRUCTION MEANS AND METHODS.

- PRE-MOBILIZATION COORDINATION SHALL INCLUDE THE FOLLOWING:
- a. COORDINATE WITH DIGSAFE, THE TOWN OF SHUTESBURY, AND UTILITY COMPANIES TO LOCATED AND MARK UTILITIES IN THE PROJECT VICINITY.
- b. DEVELOP AND SUBMIT MAINTENANCE OF FLOW PLAN TO THE OWNER AND ENGINEER FOR REVIEW.
- 2. SITE ACCESS AND PREPARATION SHALL INCLUDE THE FOLLOWING:
- a. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS, INCLUDING EROSION CONTROL BARRIERS AND TURBIDITY CURTAIN. INSTALL ADDITIONAL EROSION CONTROL BARRIERS AND TURBIDITY CURTAINS AS NECESSARY BASED ON OBSERVED CONDITIONS AS IDENTIFIED BY OWNER, ENGINEER, OR CONTRACTOR.
- b. INSTALL TURBIDITY CURTAINS TO ISOLATE ACTIVE WORK AREAS.
- c. Breach beaver dam on the left side of the dam to convey water through the open hole at the intake to the low-level outlet and lower the impoundment water surface elevation. Excavated beaver dam material shall be placed on the upstream side of the existing earthen embankment near the edge of the impoundment for dewatering. Coordinate on site disposal of the beaver-deceiver components with the owner and town.

- 3. PHASE 1 CONSTRUCTION SHALL INCLUDE THE FOLLOWING GENERAL SEQUENCING
- a. REMOVE THE EXPOSED REBAR MATERIAL ALONG THE DAM RIGHT WALL. DISPOSE OF REBAR MATERIAL OFFSITE UNLESS OTHERWISE DIRECTED BY OWNER.
- b. INITIATE DEMOLITION OF THE RIGHT SIDE OF THE DAM CONCRETE AND STONE MASONRY WALLS. PULL WALLS BACK AND BEGIN FILLING IN THE EXISTING EXCAVATED VOID SPACE BEHIND THE RIGHT WALL WITH CONCRETE AND STONE MASONRY DEMOLITION MATERIAL. BLEND COARSE AND FINER MATERIAL AND INSTALL IN LIFTS TO MINIMIZE VOID SPACES IN FILL. TRACK OVER LIFTS TO COMPACT FILL AS THE FILLING PROGRESSES.
- c. SALVAGE AND STOCKPILE ROUNDED ROCKS WHICH MAY BE USED FOR CONSTRUCTION OF A GRADE CONTROL AS PART OF PHASE 2 CONSTRUCTION.
- d. FLOW IS MAINTAINED THROUGH THE LOW-LEVEL OUTLET.
- 4. PHASE 2A CONSTRUCTION SHALL INCLUDE THE FOLLOWING GENERAL SEQUENCING:
- a. PHASE 2A CONSTRUCTION INCLUDES COMPLETION OF DEMOLITION OF THE DAM AND CHANNEL CONSTRUCTION ON THE LEFT HALF OF THE DAM.
- b. FLOW IS INITIALLY MAINTAINED THROUGH THE LOW-LEVEL OUTLET FOLLOWING COMPLETION OF THE INITIAL DEMOLITION WORK AS PART OF PHASE 1 CONSTRUCTION (SEE SHEET C-101A).
- c. INSTALL TEMPORARY COFFERDAM OR TURBIDITY CURTAINS AS NEEDED TO ISOLATE THE ACTIVE WORK AREAS AS PART OF PHASE 2 CONSTRUCTION.
- d. CONTINUE DEMOLITION OF THE DAM ON THE LEFT SIDE OF THE DAM. GRADE BACK THE EXISTING EARTHEN EMBANKMENT AND INCREMENTALLY DEMOLISH THE LEFT SPILLWAY STONE MASONRY TRAINING WALL TO ACCESS THE SPILLWAY. DEMOLITION MATERIAL SHALL BE USED TO FILL THE EXISTING EXCAVATED VOID SPACE BEHIND THE RIGHT SPILLWAY STONE MASONRY TRAINING WALL.
- e. USING TURBIDITY CURTAINS OR A TEMPORARY COFFERDAM TO SEGREGATE THE LEFT HALF OF THE DAM, COMPLETE DEMOLITION IN THE ISOLATED AREA AND CONSTRUCT THE LEFT HALF OF THE CHANNEL AT THE PROPOSED GRADES (SEE SHEET C-102 AND C-103).
- f. INSTALL THE STOCKPILED NATIVE ROCK MATERIAL IN THE LEFT PORTION OF THE PROPOSED CHANNEL FOR THE GRADE CONTROL.
- 5. PHASE 2B CONSTRUCTION SHALL INCLUDE THE FOLLOWING GENERAL SEQUENCING:
- a. PHASE 2B CONSTRUCTION INCLUDES COMPLETION OF DEMOLITION OF THE RIGHT SIDE OF THE DAM AND CONSTRUCTION OF THE PROPOSED CHANNEL THROUGH THE FORMER LOCATION OF THE DAM SPILLWAY
- b. FLOW IS INITIALLY MAINTAINED THROUGH THE COMPLETED LEFT PORTION OF THE WORK PERFORMED AS PART OF PHASE 2A.
- c. FOLLOWING DEMOLITION OF THE LEFT PORTION OF THE DAM AND CONSTRUCTION OF THE LEFT HALF OF THE PROPOSED CHANNEL, USE TURBIDITY CURTAINS OR A TEMPORARY COFFERDAM TO DIRECT FLOW TOWARDS THE LEFT HALF OF THE PROPOSED CHANNEL AND ISOLATE THE RIGHT PORTION OF THE DAM.
- d. COMPLETE DEMOLITION OF THE REMAINING RIGHT PORTIONS OF THE DAM AND CONSTRUCT THE REMAINING PORTIONS OF THE PROPOSED CHANNEL.
- e. FOLLOWING COMPLETION OF PHASE 2 CONSTRUCTION, FLOW IS MAINTAINED THROUGH THE CONSTRUCTED CHANNEL.
- 6. FINAL GRADING AND SITE RESTORATION SHALL INCLUDE THE FOLLOWING:
- a. COMPLETE GRADING IN AREAS OUTSIDE OF THE CHANNEL FOLLOWING PHASE 2 CONSTRUCTION.
- b. INSTALL 4—INCHES OF LOAM IN AREAS OUTSIDE OF THE CHANNEL AND APPLY SEED AT MANUFACTURER'S RECOMMENDED RATES. INSTALL STRAW MULCH OR EROSION CONTROL BLANKETS ON DISTURBED SLOPES OF 1.5H:1V OR STEEPER.
- 7. SITE CLEAN-UP SHALL INCLUDE THE FOLLOWING:
- a. CONDUCT SITE CLEANUP.
- b. REMOVE EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING SITE STABILIZATION AND RECEIPT OF APPROVALS.

WATER MANAGEMENT NOTES:

- 1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR TEMPORARY WATER MANAGEMENT AND MAINTENANCE OF FLOW THROUGH THE DURATION OF THE WORK.
- 2. THE CONTRACTOR SHALL DEVELOP AND SUBMIT A "MAINTENANCE OF FLOW PLAN" THAT DEPICTS THE TEMPORARY WATER MANAGEMENT APPROACH FOR THE DURATION OF THE WORK FOR REVIEW BY OWNER AND ENGINEER.
- . WATER MANAGEMENT FOR THE PROJECT SHALL INCLUDE A TEMPORARY WATER MANAGEMENT SYSTEM. THE TEMPORARY WATER MANAGEMENT SYSTEM SHALL BE AS GENERALLY DEPICTED ON THE DRAWINGS HEREIN AND SHALL MEET THE REQUIREMENTS OF ALL RELEVANT CODES, PERMITS, AND REGULATORY AGENCIES HAVING JURISDICTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, INSTALLATION, OPERATION AND MAINTENANCE, SAFETY, AND REMOVAL OF A TEMPORARY WATER MANAGEMENT SYSTEM INSTALLED AND MAINTAINED BY THE CONTRACTOR FOR MAINTENANCE OF FLOW. THE CONTRACTOR SHALL HAVE THE EXPERIENCE AND EXPERTISE TO DESIGN, OPERATE AND MAINTAIN THE TEMPORARY WATER MANAGEMENT SYSTEM.
- 5. IN THE EVENT OF A FORECASTED STORM EVENT THAT MAY RESULT IN FLOODING OF WORK AREAS, INCLUDING ANY FORECASTED STORM EVENT EQUAL TO OR GREATER THAN THE 2—YEAR EVENT OR INVOLVING PRECIPITATION IN EXCESS OF 2 INCHES IN THE UPSTREAM WATERSHED, THE CONTRACTOR SHALL, AT A MINIMUM, MOVE EQUIPMENT AND MATERIALS TO THE STAGING AND STORAGE AREAS DEPICTED ON THE DRAWINGS AT LEAST 24 HOURS PRIOR TO THE FORECASTED STORM EVENT. CONTINGENCY PROCEDURES FOR STORM EVENTS, AS OUTLINED IN THE MAINTENANCE OF FLOW PLAN, SHALL BE ENACTED AS APPROPRIATE TO STABILIZE THE WORK SITE PRIOR TO THE FORECASTED STORM EVENT.

MAINTENANCE OF FLOW PLAN REQUIREMENTS:

- 1. THE CONTRACTOR SHALL DEVELOP A MAINTENANCE OF FLOW PLAN TO BE SUBMITTED TO THE OWNER AND ENGINEER. THE MAINTENANCE OF FLOW PLAN SHOULD GENERALLY INCLUDE THE MEANS AND METHODS, SEQUENCE OF PROCEDURES, TASKS, PRODUCTS, AND WORK TO ENSURE MAINTENANCE FLOW FOR THE DURATION OF THE WORK. THE MAINTENANCE OF FLOW PLAN SHALL BE SUBMITTED PRIOR TO INITIATING WORK AND SHALL BE IMPLEMENTED THROUGHOUT THE DURATION OF THE WORK.
- MAINTENANCE OF FLOW PLAN SHALL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS:
- a. MEANS AND METHODS FOR CONSTRUCTION, MAINTENANCE, AND OPERATION OF A TEMPORARY WATER MANAGEMENT SYSTEM FOR MAINTAINING QUANTITY AND QUALITY OF FLOWS IN WATERCOURSE THROUGH THE WORK AREA IN COMPLIANCE WITH ALL PERMIT CONDITIONS.
- b. PHYSICAL COMPONENTS OF THE TEMPORARY WATER MANAGEMENT SYSTEM, SUCH AS THE NUMBER, SIZE, TYPE, AND MATERIAL OF CONDUITS AND BARRIERS, FOR DIVERSION OF FLOW.
- c. LOCATIONS AND MEANS AND METHODS FOR INSTALLATION, OPERATION, MAINTENANCE, AND REMOVAL UPON COMPLETION OF CONSTRUCTION OF THE TEMPORARY WATER MANAGEMENT
- d. PLAN FOR DAILY MONITORING OF WEATHER AND RUNOFF CONDITIONS THROUGHOUT THE DURATION OF THE WORK.
- e. PLAN FOR PREVENTING OCCLUSION OF THE DOWNSTREAM CULVERT OR MEANS TO SAFELY AND EXPEDITIOUSLY REMOVE OBSTRUCTIONS FROM THE CULVERT.
- f. HIGH FLOW CONTINGENCY PLAN, INCLUDING PLAN FOR TEMPORARY REMOVAL OR DECOMMISSIONING OF TEMPORARY WATER MANAGEMENT SYSTEM PRIOR TO FLOWS ANTICIPATED TO EXCEED THE DESIGN CAPACITY OF THE TEMPORARY WATER MANAGEMENT SYSTEM AND FOR SUBSEQUENT REPLACEMENT OF THE TEMPORARY WATER MANAGEMENT SYSTEM FOLLOWING HIGH-FLOW EVENTS.
- g. FLOOD / EMERGENCY WARNING AND RESPONSE PROCEDURES.
- h. UNWATERING AND DEWATERING DISCHARGE PLAN.

EROSION AND SEDIMENT CONTROL NOTES:

EROSION AND SEDIMENT CONTROL PLAN:

THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR CONTROLLING SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROPOSED PROJECT. THIS PLAN IS BASED ON "EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" (MAY 2003) PREPARED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AVAILABLE ONLINE AT https://www.mass.gov/doc/complete-erosion-

AND-SEDIMENTATION-CONTROL-GUIDELINES-A-GUIDE-FOR-PLANNERS-DESIGNERS-AND/DOWNLOAD>.

GENERAL CONSTRUCTION NOTES:

THE EQUIPMENT ANTICIPATED TO BE USED FOR CONSTRUCTION MAY INCLUDE THE FOLLOWING: EXCAVATOR, FRONT—END LOADER, TRUCKS. ON—SITE EROSION CONTROL METHODS WILL BE UTILIZED. THE FOLLOWING METHODS WILL BE UNDERTAKEN TO PROVIDE PROTECTION TO THE SOIL, WATER, AND ABUTTING LANDS:

- 1. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA WILL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AFTER FINAL GRADING HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE OR PRACTICAL TO PERMANENTLY STABILIZE DISTURBED LAND, TEMPORARY EROSION CONTROL MEASURES WILL BE IMPLEMENTED WITHIN THREE (3) CALENDAR DAYS OF EXPOSURE OF SOIL. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE AT A MINIMUM THE APPLICATION OF WOOD FIBER MULCH AT A RATE OF 75-90 LBS PER 1000 SF. WITHIN 75 FEET OF WETLAND AREA, APPLY MULCH WITHIN 48 HOURS, OR PRIOR TO ANY STORM EVENT, WHICHEVER IS FIRST.
- 2. PRIOR TO GRUBBING OR ANY EARTHMOVING OPERATION, SILT FENCE OR SIMILAR MEASURE (E.G. STAKED FIBER ROLLS) WILL BE INSTALLED ACROSS THE SLOPE ON THE CONTOUR AT THE DOWNHILL LIMIT OF THE WORK OR AS SHOWN ON PLAN AS PROTECTION AGAINST CONSTRUCTION RELATED EROSION AND ON THE OUTER EDGE OF THE WORKSPACE AS NEEDED OR AS DETERMINED BY THE ENGINEER OR ENGINEER'S REPRESENTATIVE. INSTALL J-HOOKS AS NEEDED WHERE SILT FENCE IS NOT PARALLEL TO THE CONTOUR.
- 3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE WILDLIFE FRIENDLY AND CONSIST OF MATERIAL THAT IS ORGANIC OR DEGRADABLE. AVOID THE USE OF WELDED PLASTIC OR BIODEGRADABLE NETTING OR THREAD.
- 4. ALL SILT FENCE/ TEMPORARY SEDIMENT CONTROL MEASURES WILL BE INSPECTED BY THE CONTRACTOR ON A WEEKLY BASIS, FOLLOWING ANY SIGNIFICANT RAINFALL (1/2 INCH OR MORE) OR SNOWMELT, AND DAILY DURING PROLONGED RAINFALL. ALL DAMAGED SILT FENCE WILL BE REPAIRED AND/OR REPLACED IMMEDIATELY. TRAPPED SEDIMENT WILL BE REMOVED BEFORE IT HAS ACCUMULATED TO ONE HALF OF THE INSTALLED CONTROL DEVICE HEIGHT. SILT FENCE THAT IS NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION WILL ALSO BE REPAIRED AND/OR REPLACED AS NECESSARY. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE REMOVED OR INCORPORATED INTO THE EXISTING GRADE, SEEDED AND MULCHED.
- 5. REMOVAL OF SILT FENCE / TEMPORARY SEDIMENT CONTROL MEASURES SHALL OCCUR WITHIN THIRTY (30) DAYS FOLLOWING ESTABLISHMENT OF VEGETATION IN COMPLIANCE WITH PROJECT PERMITS AND IN ACCORDANCE WITH THE REQUIREMENTS HEREIN.
- 6. ALL SEDIMENT CONTROL STRUCTURES WILL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. "ESTABLISHED" MEANS A MINIMUM OF 75% OF EACH WORK AREA IS VEGETATED WITH VIGOROUS GROWTH.
- 7. THE CONTRACTOR WILL FOLLOW SPILL PREVENTION CONTROL AND COUNTERMEASURES DESIGNED TO AVOID EFFECTS TO WETLANDS FROM HAZARDOUS MATERIALS ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THESE MEASURES WILL INCLUDE:
- a. VEHICLE REFUELING SHALL OCCUR MORE THAN 100 FT FROM ANY WATERCOURSE OR ELSE WILL EMPLOY USE OF SECONDARY CONTAINMENT.
- b. VEHICLE REFUELING SHALL OCCUR OUTSIDE OF WETLANDS OR WITH USE OF SECONDARY CONTAINMENT IN WETLANDS.
 c. CONTRACTOR SHALL SUPPLY A SPILL KIT FULLY STOCKED WITH SPECIFIC FOUIPMENT AND
- c. CONTRACTOR SHALL SUPPLY A SPILL KIT FULLY STOCKED WITH SPECIFIC EQUIPMENT AND MATERIALS NEEDED TO CONTAIN OR CLEAN UP ANY INCIDENTAL SPILLS AT THE PROJECT SITE. EQUIPMENT AND MATERIALS SHALL BE APPROPRIATELY SIZED FOR SPECIFIC QUANTITIES OF FUEL, SHOVELS, ABSORBENT PADS, STRAW BALES, CONTAINMENT STRUCTURES AND LINERS, AND/OR BOOMS.
- d. DURING REFUELING, USE, AND STORAGE, PUMPS, GENERATORS, ETC. SHALL HAVE SECONDARY SPILL CONTAINMENT STRUCTURES IN PLACE.
- e. ALL EQUIPMENT USED FOR WORK IN WETLANDS SHALL BE CLEANED OF EXTERNAL OIL, GREASE, DIRT, AND MUD. ANY LEAKS OR ACCUMULATIONS OF GREASE WOULD BE CORRECTED BEFORE WORKING NEAR OR IN STREAMS OR AREAS THAT DRAIN DIRECTLY TO STREAMS OR WETLANDS.

SEEDING AND REVEGETATION PLAN

UPON COMPLETION OF SITE CONSTRUCTION, ALL AREAS PREVIOUSLY DISTURBED WILL BE TREATED AS DESCRIBED BELOW.

- 1. AS APPROPRIATE TO SOIL CONDITIONS, UPLAND DISTURBED AREAS WILL BE SEEDED ACCORDING TO THE "EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" (MAY 2003).
- 2. UPLAND AREAS WHERE SOIL DISTURBANCE AND SEEDING OCCURS WILL BE MULCHED WITH WEED-FREE STRAW.
- . PRIOR TO SEEDING, THE CONTRACTOR SHALL SUBMIT SEED MIX LABELS TO ENGINEER.
- 4. UPLAND MOIST SITE SEED MIX SHALL BE "NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES (UPLAND MOIST SITE SEED MIX)" AVAILABLE FROM NEW ENGLAND WETLAND PLANTS, AMHERST, MASSACHUSETTS, OR APPROVED EQUAL.
- 5. APPLICATION RATES SHALL BE BASED ON MANUFACTURER'S RECOMMENDED APPLICATION RATES.
- 6. SEED SHALL BE FROM THE SAME OR PREVIOUS YEAR'S CROP AND SHALL NOT HAVE MORE THAN 1% WEED CONTENT.
- 7. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED MAY NOT BE ACCEPTED.
- 8. SEEDING SHALL BE COMPLETED BETWEEN MAY 15 AND SEPTEMBER 15.
- 9. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.
- 10. WEED FREE STRAW MULCH WILL BE APPLIED AT THE RATE OF 90 LBS PER 1000 SF.
- 11. ALL MULCHES SHALL BE INSPECTED PERIODICALLY, PARTICULARLY AFTER RAINFALL. IF LESS THAN 90% OF THE DISTURBED AREA IS COVERED, ADDITIONAL MULCH WILL BE SPREAD.
- 12. ALL SEDIMENTATION CONTROL STRUCTURES WILL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 75% OF EACH WORK AREA IS VEGETATED WITH VIGOROUS GROWTH.
- 13. STATE LISTED PLANT SPECIES SHALL NOT BE PLANTED.

BE THE RESPONSIBILITY OF THE CONTRACTOR.

MONITORING PROGRAM:

- 1. EROSION AND SEDIMENTATION CONTROL STRUCTURES WILL BE INSPECTED DAILY BY THE CONTRACTOR, AND ALL DAMAGED STRUCTURES SHALL BE REPAIRED IMMEDIATELY. FOLLOWING RAINSTORMS AND DURING RUNOFF EVENTS, THE SITE AND ALL STRUCTURES WILL BE INSPECTED FOR EROSION AND DAMAGE. ALL DAMAGED STRUCTURES WILL BE REPAIRED AND/OR ADDITIONAL EROSION CONTROL STRUCTURES WILL BE INSTALLED IMMEDIATELY UPON DISCOVERY.
- 2. FOLLOWING THE FINAL SEEDING, THE CONTRACTOR SHALL INSPECT THE PROJECT SITE TO ENSURE THAT THE VEGETATION IS ESTABLISHED AS REQUIRED BY PROJECT PERMITS. RESEEDING WILL BE CARRIED OUT, WITH FOLLOW-UP INSPECTIONS, IN THE EVENT OF ANY UNSATISFACTORY GROWTH
- 3. AFTER THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED, AND UPON DETERMINATION OF SATISFACTORY GROWTH BY THE OWNER AND ENGINEER, THE CONTRACTOR SHALL REMOVE ALL SILT FENCE AND ANY OTHER TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES.

IMPLEMENTATION AND MONITORING OF EROSION AND SEDIMENTATION CONTROL MEASURES WILL



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Consultant

Notes



PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

Revision

By Appd YYYY.MM.DD

B FINAL PRELIMINARY DESIGN
A DRAFT PRELIMINARY DESIGN FOR REVIEW
GEC MRC 2024.05.17

A DRAFT PRELIMINARY DESIGN FOR REVIEW
By Appd YYYY.MM.DD

File Name: 02930G-002
GEC GEC/MRC RES 2024.05.17

Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

Client/Project Logo

Client/Project

Division of Ecological Restoration

Massachusetts Department of Fish & Game

Dudleyville Dam Removal Preliminary Design Dam ID# MA00512

Shutesbury, MA

Title

GENERAL NOTES

Project No. 195602930

Revision Sheet

0 2 of 8

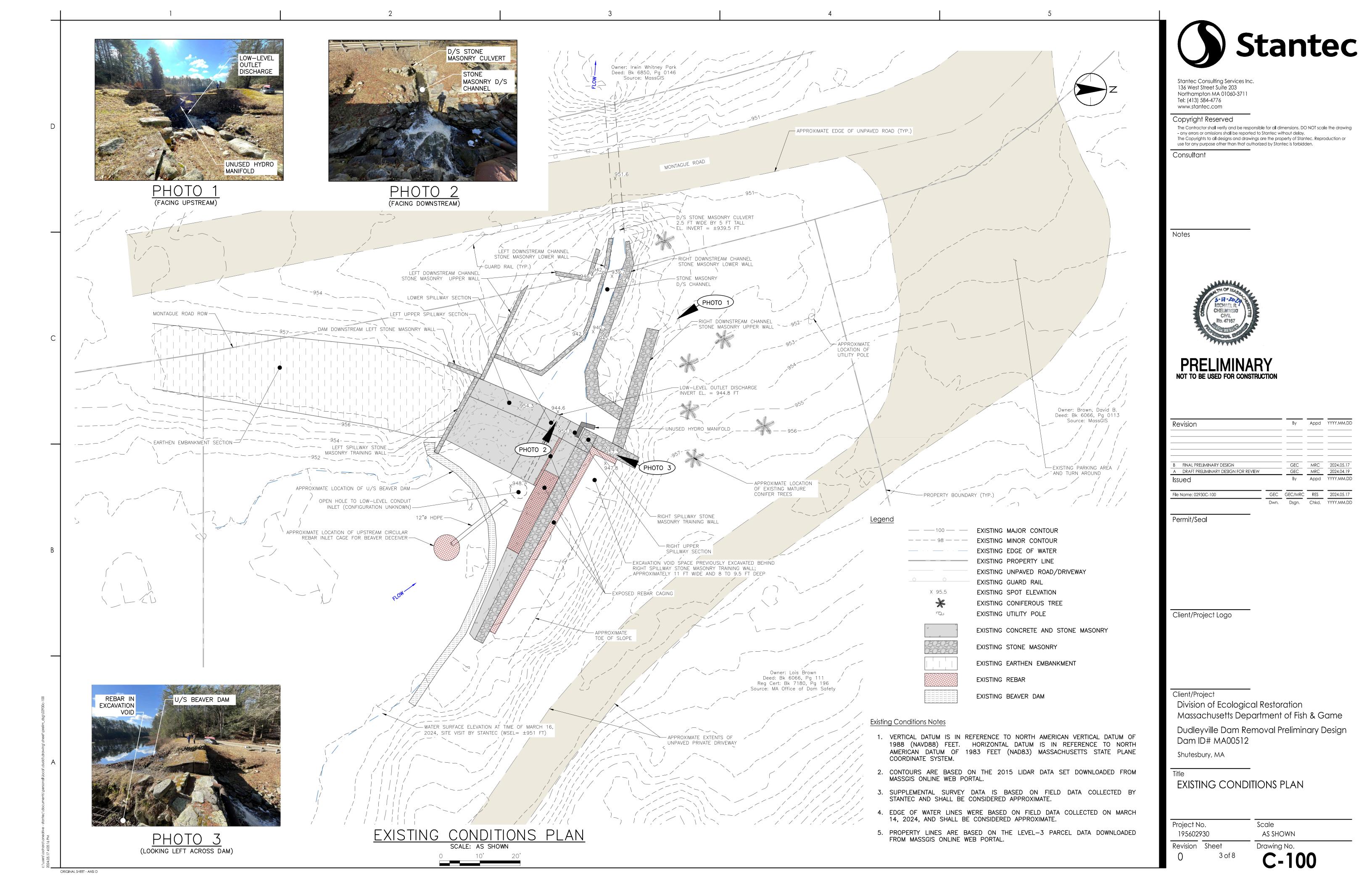
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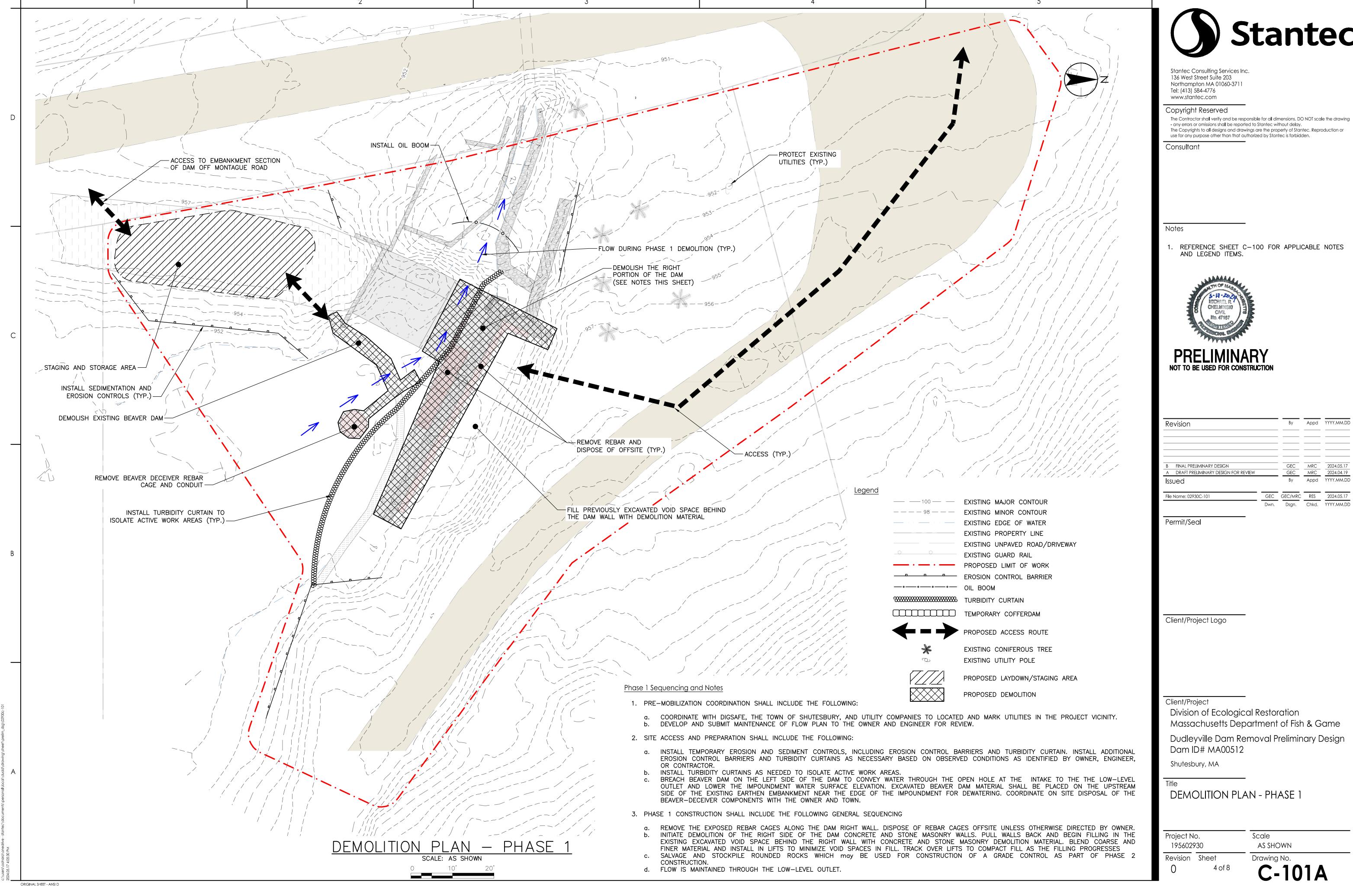
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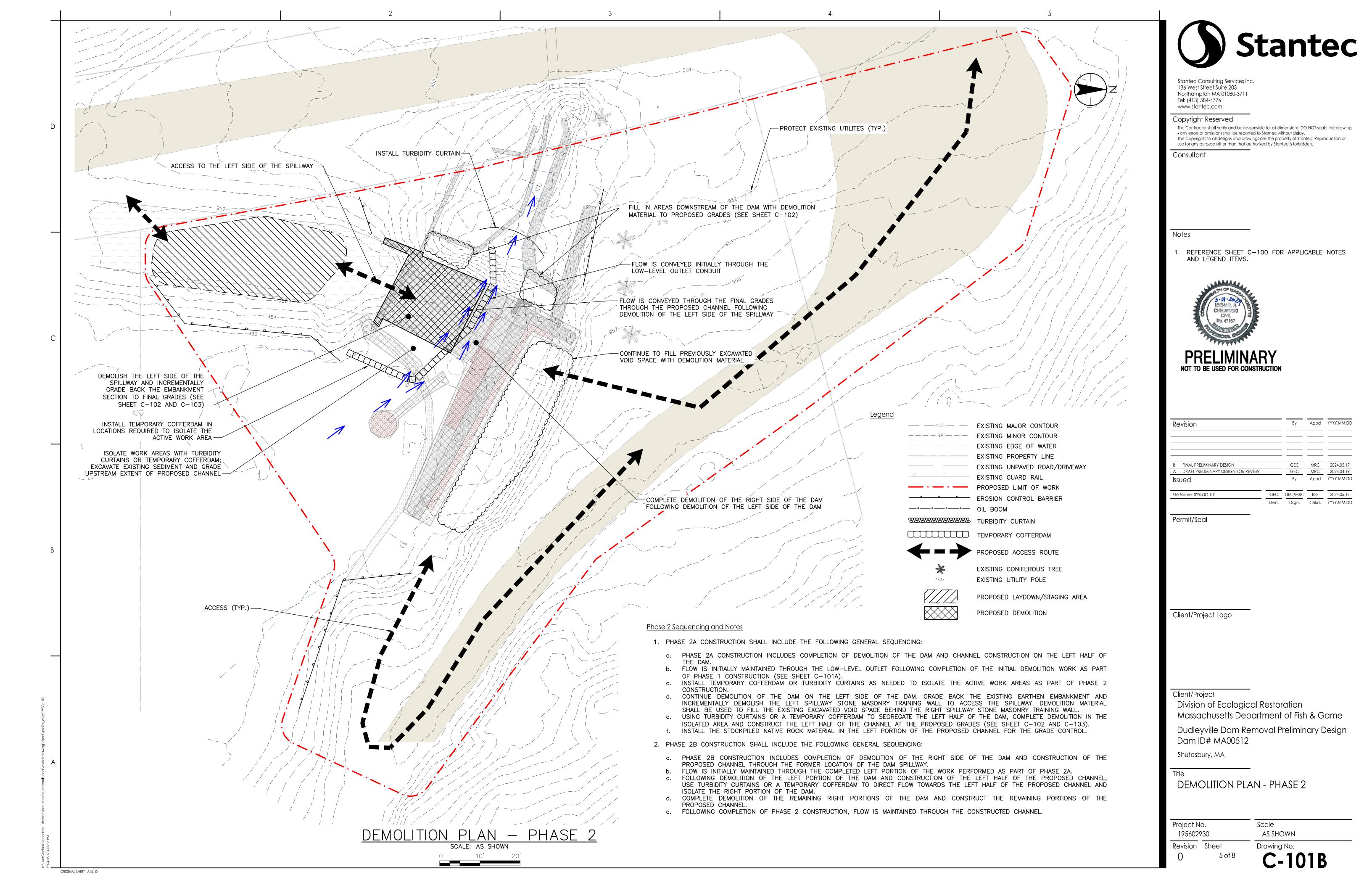
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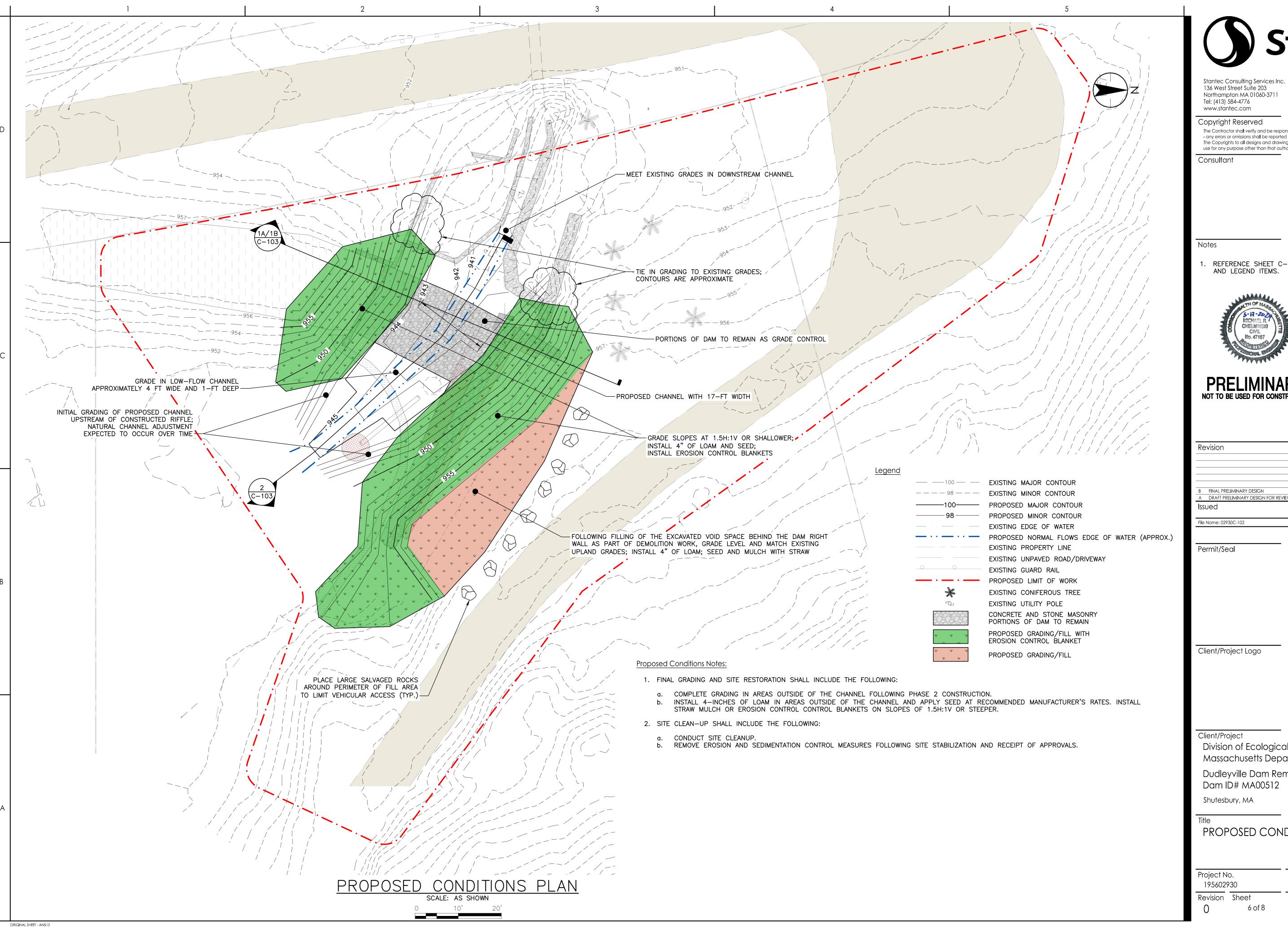




Re	evision	Ву	Appd	YYYY.MM.DI
	FINAL PRELIMINARY DESIGN	GEC	-MRC	2024.05.17
A	DRAFT PRELIMINARY DESIGN FOR REVIEW	GEC	MRC	2024.04.19
Issued		Ву	Appd	YYYY.MM.DI

Dudleyville Dam Removal Preliminary Design





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REFERENCE SHEET C-100 FOR APPLICABLE NOTES



Re	evision		By	Appd	YYYY.MM.DD
 	FINAL PRELIMINARY DESIGN		GEC	MRC	2024.05.17
Α	DRAFT PRELIMINARY DESIGN FOR REVIEW		GEC	MRC	2024.04.19
lss	ued		Ву	Appd	YYYY.MM.DD
File	Name: 02930C-102	GEC	GEC/MRC	RES	2024.05.17

Division of Ecological Restoration Massachusetts Department of Fish & Game

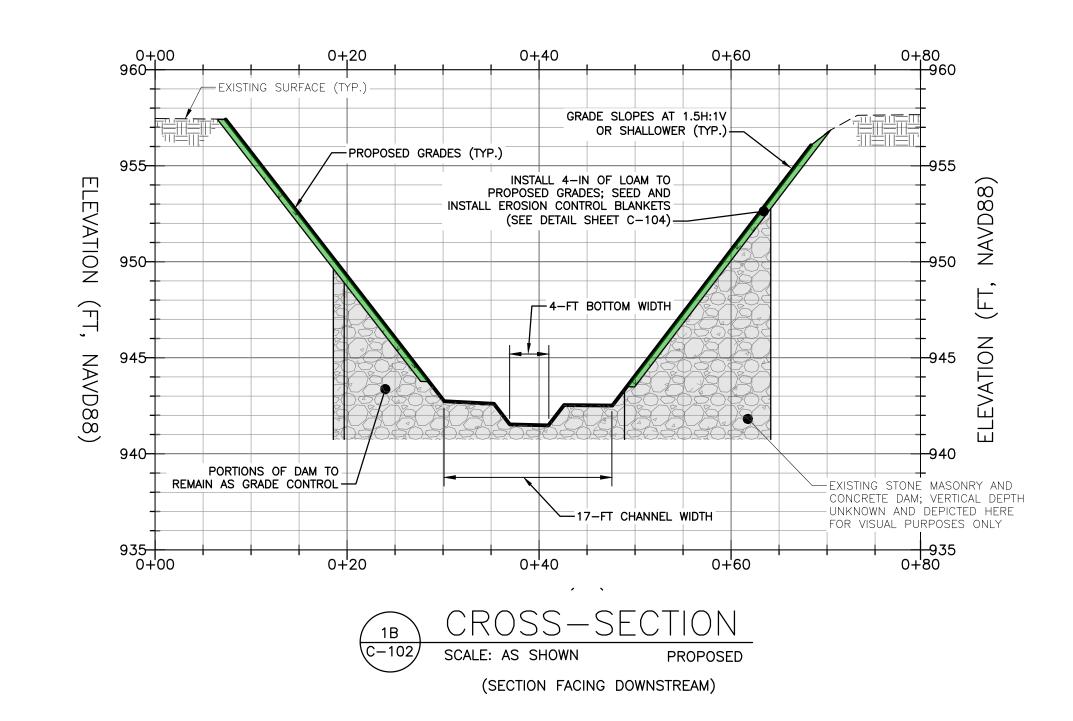
Dudleyville Dam Removal Preliminary Design

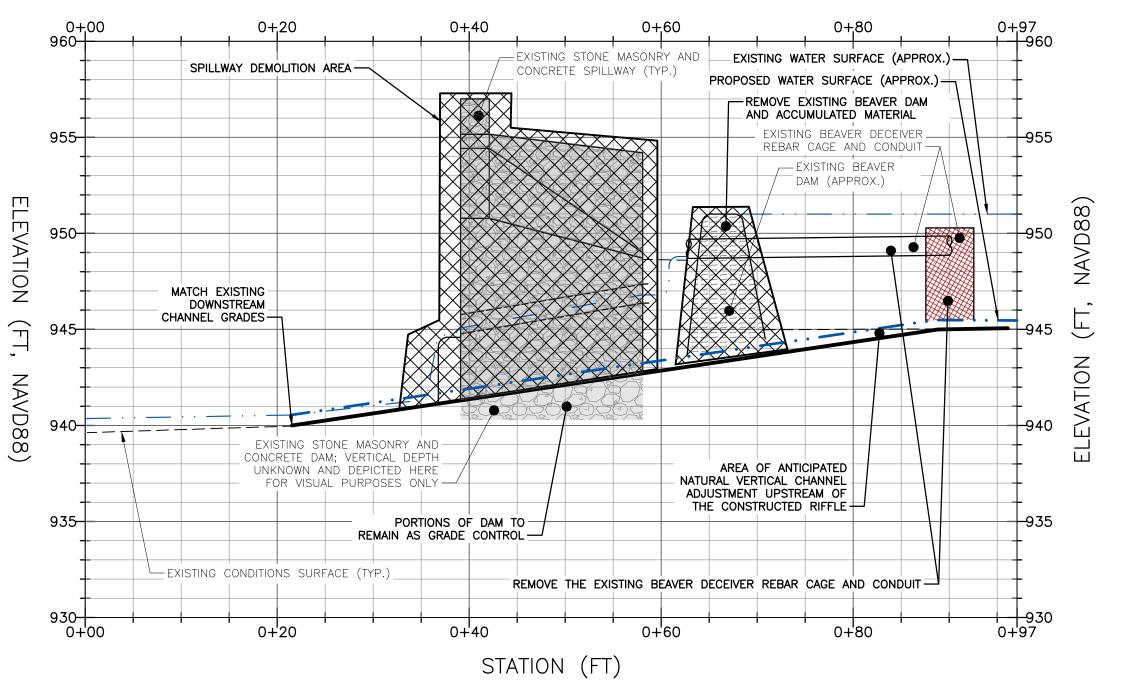
PROPOSED CONDITIONS

Scale AS SHOWN

Drawing No.

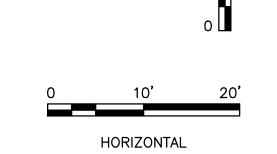
EXISTING SURFACE (TYP.) SPILLWAY DEMOLITION AREA -— GRADE SLOPES AT 1.5H:1V OR $_-$ SHALLOWER (TYP.) $_+$ -PROPOSED GRADES (TYP.) 940 940 17-FT WIDTH PROPOSED CHANNEL EXISTING STONE MASONRY AND CONCRETE DAM; VERTICAL DEPTH UNKNOWN AND DEPICTED HERE PROPOSED 4-FT BOTTOM WIDTH FOR VISUAL PURPOSES ONLY LOW-FLOW CHANNEL SCALE: AS SHOWN DEMOLITION (SECTION FACING DOWNSTREAM)







(FLOW IS FROM RIGHT TO LEFT)





Stantec Consulting Services Inc. 136 West Street Suite 203 Northampton MA 01060-3711 Tel: (413) 584-4776 www.stantec.com

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Consultant

Notes



PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

Revision		Ву	Appd	YYYY.MM.DD
B FINAL PRELIMINARY DESIGN A DRAFT PRELIMINARY DESIGN FOR REVIEW		GEC	MRC MRC	2024.05.17
Issued		Ву	Appd	YYYY.MM.DD
File Name: 02930C-103	GEC Dwn.	GEC/MRC Dsgn.	RES Chkd.	2024.05.17 YYYY.MM.DD

Permit/Seal

Client/Project Logo

Client/Project

Division of Ecological Restoration

Massachusetts Department of Fish & Game

Dudleyville Dam Removal Preliminary Design Dam ID# MA00512

Shutesbury, MA

Title

CROSS-SECTIONS AND PROFILE

Project No.
195602930

Revision Sheet
7 of 8

Scale
AS SHOWN

Drawing No.

C-103

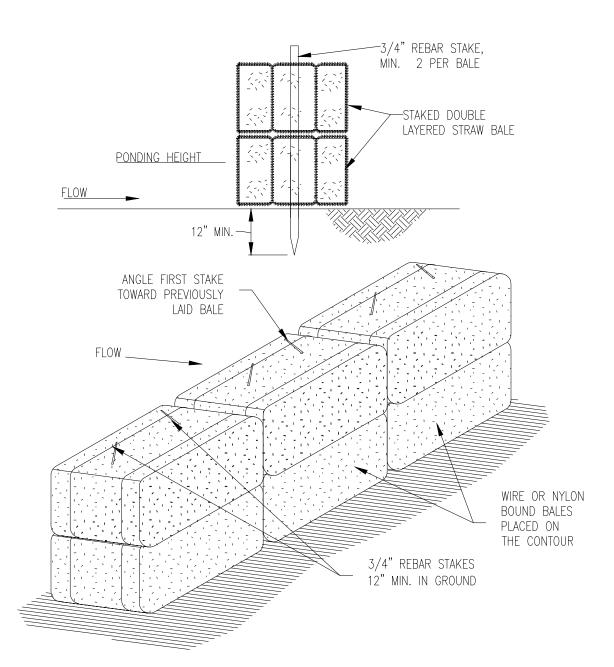
::\users\oohara\onedrive - stantec\documents\pers n74.n5.17.4-15-36.PM

C:\u00e405:17

NOTES:

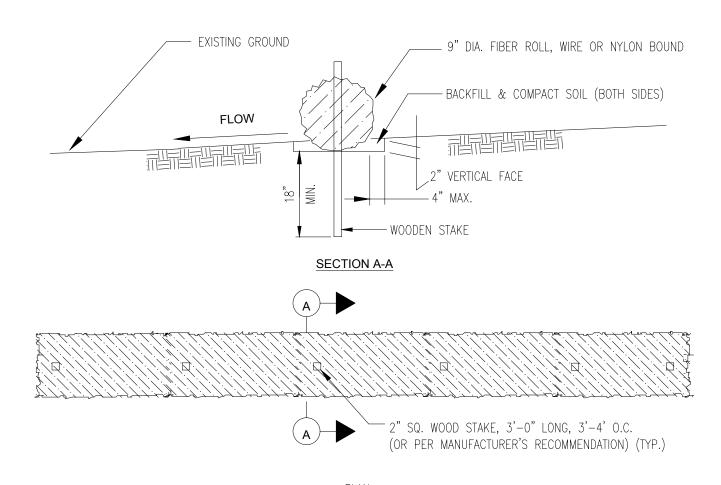
- 1. SEDIMENTATION CONTROL BARRIER SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
- 2. SEDIMENTATION CONTROL BARRIER SHALL BE STRAW BALES OR SHALL BE CERTIFIED FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.
- 3. EACH STRAW BALE SHALL BE STAKED WITH AT LEAST 2 STAKES. BUTT BALES TOGETHER TO CREATE A TIGHT FIT. IN THAT CONDITIONS PREVENTING A TIGHT FIT BETWEEN BALES, OR BETWEEN BALES AND THE GROUND, ARE ENCOUNTERED (E.G., EXCESSIVE ROOTS, BEDROCK, OR FROZEN GROUND) THE CONTRACTOR SHALL UTILIZE THE SEDIMENTATION CONTROL FILTER BERM (SEE DETAIL, THIS SHEET).
- 4. STRAW BALES SHALL BE REMOVED AND REPLACED WHEN CLOGGED WITH SOIL PARTICLES OR AS DIRECTED BY THE ENGINEER.
- 5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN STORAGE HEIGHT HAS BEEN REDUCED TO 9 INCHES. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT IS NOT WITHIN JURISDICTIONAL RESOURCE AREA, WILL NOT CONTRIBUTE SEDIMENT OFF-SITE, AND CAN BE PERMANENTLY STABILIZED.

STAKED SEDIMENTATION CONTROL BARRIER NOT TO SCALE



- 1. SEDIMENTATION CONTROL BARRIER SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
- 2. SEDIMENTATION CONTROL BARRIER SHALL BE STRAW BALES OR SHALL BE CERTIFIED FREE FROM WEEDS, INVASIVE SPECIES PROPAGULES, AND OTHER DELETERIOUS MATERIALS.
- 3. EACH STRAW BALE SHALL BE STAKED WITH AT LEAST 2 STAKES. BUTT BALES TOGETHER TO CREATE A TIGHT FIT. IN THAT CONDITIONS PREVENTING A TIGHT FIT BETWEEN BALES, OR BETWEEN BALES AND THE GROUND, ARE ENCOUNTERED (E.G., EXCESSIVE ROOTS, BEDROCK, OR FROZEN GROUND) THE CONTRACTOR SHALL UTILIZE THE SEDIMENTATION CONTROL FILTER BERM (SEE DETAIL, THIS SHEET).
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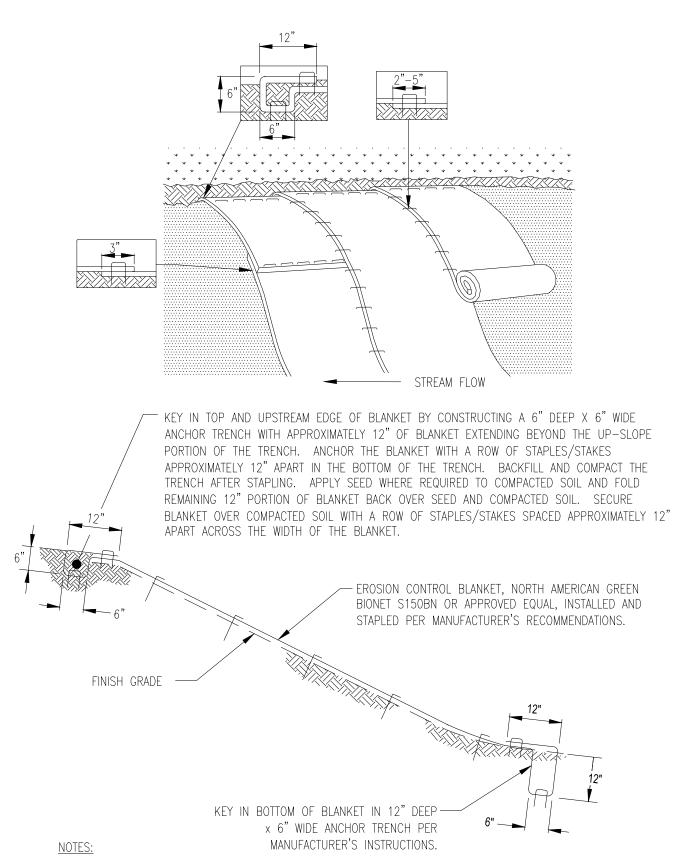
STAKED DOUBLE LAYERED SEDIMENTATION CONTROL BARRIER NOT TO SCALE



NOTE: AREAS DISTURBED BY SEDIMENTATION BARRIERS SHALL BE STABILIZED AFTER REMOVAL

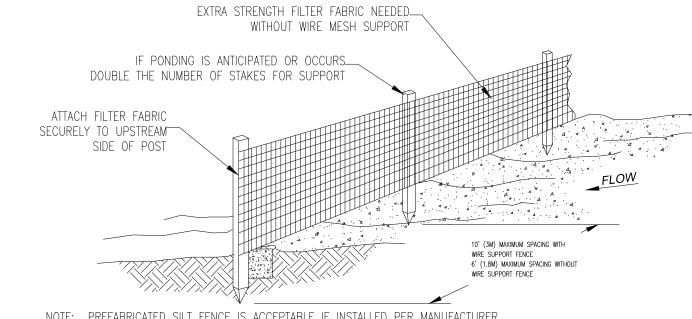
SEDIMENTATION CONTROL BARRIER FIBER ROLL DETAIL

NOT TO SCALE



- 1. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN BIONET S150BN OR APPROVED EQUAL.
- 2. EROSION CONTROL BLANKET SHALL NOT BE USED FOR SOIL WRAPS AND SHALL BE INSTALLED IN ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION AND HAVE SLOPES GREATER THAN 4:1 (H:V).
- 3. EXCAVATION FOR KEYING IN OF EROSION CONTROL BLANKET SHALL BE DONE IF NECESSARY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. EXCAVATION FOR KEYING IN OF EROSION CONTROL BLANKET SHALL NOT BE PERFORMED WITHIN THE FLOODPLAIN AND SHALL ONLY OCCUR IN UPLAND AREAS.

100% BIODEGRADABLE EROSION CONTROL BLANKET DETAIL NOT TO SCALE



NOTE: PREFABRICATED SILT FENCE IS ACCEPTABLE IF INSTALLED PER MANUFACTURER. STEEL OR WOOD POST 36" (1M) HIGH MAX. PONDING HEIGHT PONDING HEIGHT FLOW FLOW - 4"X6" (100X150MM) TRENCH WITH COMPACTED

TRENCH DETAIL

BACKFILL

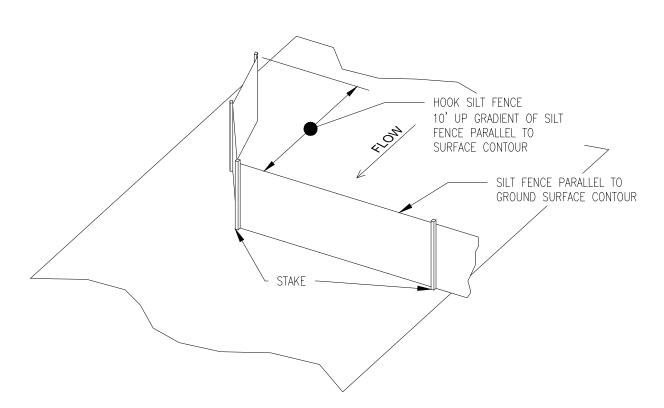
LEDGE, FROZEN GROUND, HEAVY ROOTS INSTALLATION WITHOUT TRENCHING

NOTES:

- 1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
- 2. INSPECT AND REPAIR FENCE AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225MM) MAXIMUM RECOMMENDED STORAGE HEIGHT.
- 3. WHEN TWO SECTIONS OF FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL.
- 4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
- 5. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. WIRE FENCE REINFORCEMENT REQUIRED WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.
- 6. DO NOT PLACE SILT FENCE IN STREAMS OR CONCENTRATED FLOW LOCATIONS.

TYPICAL SILT FENCE SEDIMENTATION CONTROL BARRIER INSTALLATION

NOT TO SCALE



SILT FENCE J-HOOK DETAL

NOT TO SCALE



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Notes



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Appd YYYY.MM.DD Revision FINAL PRELIMINARY DESIGN Appd YYYY.MM.DD Issued File Name: 02930C-104

Permit/Seal

Client/Project Logo

Division of Ecological Restoration Massachusetts Department of Fish & Game

Dudleyville Dam Removal Preliminary Design Dam ID# MA00512

Shutesbury, MA

EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

Project No. 195602930 Revision Sheet Scale AS SHOWN Drawing No.

ORIGINAL SHEET - ANSI D