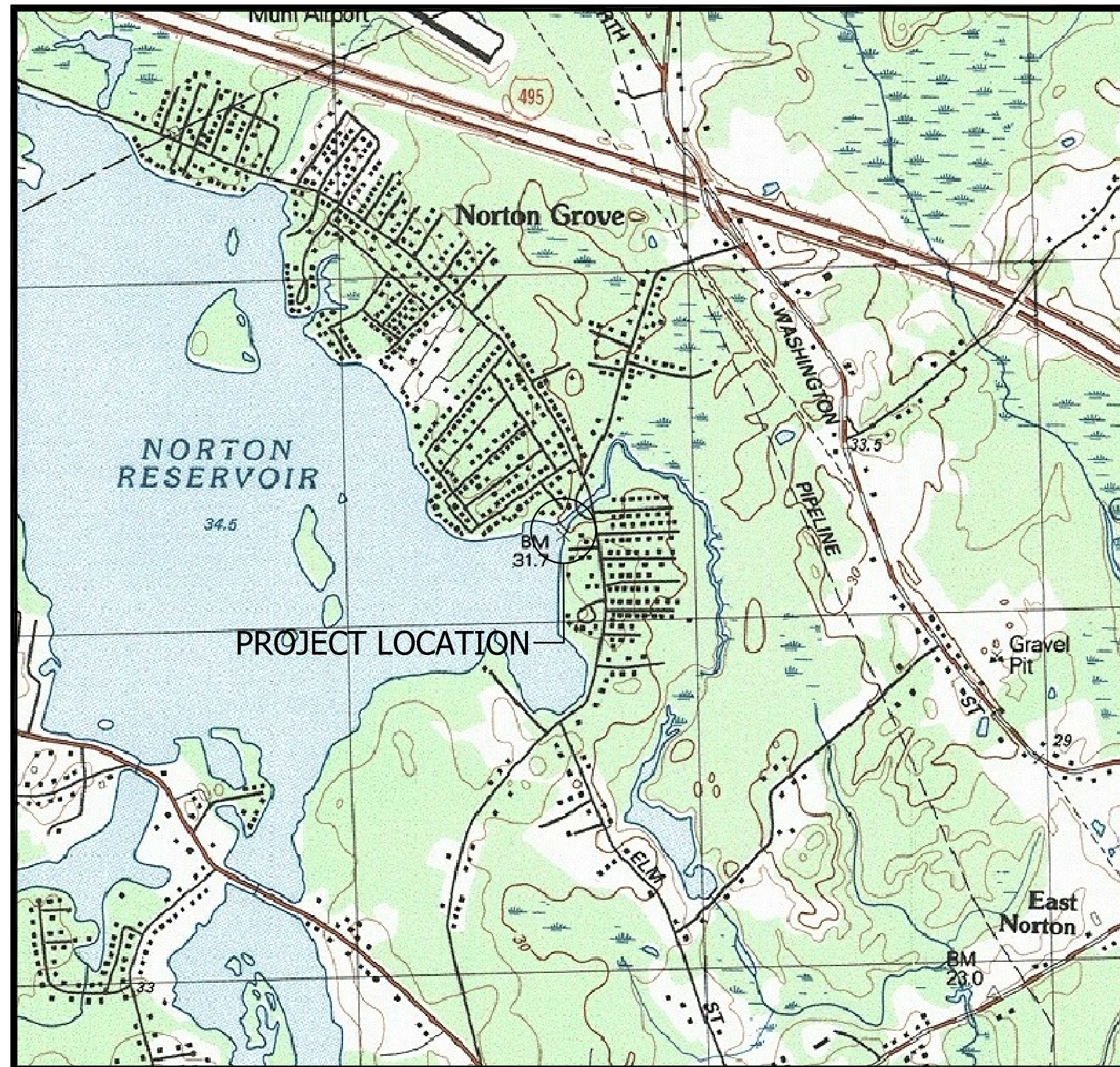


Prepared for The:

TOWN OF NORTON - CONSERVATION COMMISSION

NORTON RESERVOIR DAM IMPROVEMENTS

Norton, Massachusetts
MARCH 2010



LOCUS PLAN

Drawing Index

1. GENERAL NOTES, LEGEND, AND EROSION CONTROL DETAILS.
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6. CAST IN PLACE CONCRETE SCOUR APRON PLAN, SECTION, AND DETAILS

Prepared by:

PARE CORPORATION
Foxboro, Massachusetts



GENERAL NOTES:

1.

FOR THE PURPOSE OF THIS PROJECT:

OWNER - TOWN OF NORTON
70 EAST MAIN STREET
NORTON, MA 02766-2320
CONTACT: MS. JENNIFER CARLINO, CONSERVATION DIRECTOR

ENGINEER - PARE CORPORATION
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
CONTACT: J. MATTHEW BELLISLE, P.E.
2.

ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, THE SPECIFICATIONS INCLUDED IN THIS CONTRACT, AND 302 CMR 10.00 DAM SAFETY. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.
3.

THE DATUM FOR THE PROJECT IS NGVD 29 AND BASED UPON THE ELEVATION 103.85 FT AT THE USGS BENCHMARK DISK LOCATED ON THE CONCRETE CAPPED SECTION OF THE SPILLWAY. CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL AS REQUIRED TO ENABLE COMPLETION OF THE WORK AND THROUGHOUT THE DURATION OF THE PROJECT.
4.

WETLAND RESOURCE AREAS WERE DELINEATED BY PARE CORPORATION ON FEBRUARY 6, 2006.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.
6.

NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.
7.

INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES, UTILITIES, AND THE AS-BUILT CONFIGURATION AND CONDITION OF THE EXISTING DAM, SPILLWAY, AND DOWNSTREAM AREA IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE TOWN OF NORTON OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.
8.

DEPTHS AND THICKNESS OF THE SUBSURFACE STRATA INDICATED HEREIN ARE GENERALIZED FROM THE DATA PRESENTED ON THE BORING LOGS. INFORMATION SHOWN FOR AREAS THAT SURROUND THE ACTUAL TEST BORING LOCATION IS INTERPOLATED AND MAY DIFFER FROM THAT SHOWN DUE TO THE VARYING NATURE OF GLACIAL DEPOSITS.
9.

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REGULATING FLOWS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTICE PRIOR TO INCREASING FLOW IN THE DOWNSTREAM AREA DUE TO ADJUSTMENT OF THE OUTLETS.
10.

CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH MASSACHUSETTS, LOCAL, AND FEDERAL LAWS.
11.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ANY UTILITIES ON THE SITE.
12.

CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS FOR ALL PROJECT COMPONENTS AND ACTIVITIES.
13.

ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.
14.

WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN.
15.

CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 3 DAYS OF THE NOTICE OF AWARD.
16.

CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREA. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA.
17.

UPON COMPLETION OF THE PROJECT, CONTRACTOR IS TO PROVIDE TWO AS-BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.
18.

NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN WETLANDS WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING, AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.
19.

CONTRACTOR WILL BE REQUIRED TO ATTEND WEEKLY PROGRESS MEETINGS AS REQUESTED BY THE OWNER.
20.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RETURNING ALL PORTIONS OF DISTURBED PAVEMENT, ROADWAY, GRASSED AREAS, AND ANY OTHER PROPERTY TO PRE CONSTRUCTION CONDITIONS.
21.

CONTRACTOR SHALL SUPPORT AND PROTECT ALL UTILITIES WITHIN THE LIMITS OF WORK.

DIVERSION NOTES:

1.

CONTRACTOR SHALL REGULATE THE DISCHARGE OF WATER AS REQUIRED TO ENABLE CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN FLOWS THROUGHOUT CONSTRUCTION.
2.

CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY MATERIAL FROM ENTERING THE STREAM CHANNEL OR IMPOUNDMENT.
3.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.
4.

CONTRACTOR SHALL REGULATE DISCHARGES AND PHASE CONSTRUCTION SO THAT CONSTRUCTION EQUIPMENT DOES NOT PASS THROUGH FLOWING WATER.
5.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING UPSTREAM INTAKE CONFIGURATION PRIOR TO DESIGNING DIVERSIONS.
6.

CONTRACTOR SHALL MAINTAIN THE LEVEL OF NORTON RESERVOIR BETWEEN NORMAL POOL AND WINTER DRAW DOWN ELEVATIONS (EL. 99.8) IN ACCORDANCE WITH THE TOWN OF NORTON REQUIREMENTS.
7.

DISCHARGES THROUGH THE PRIMARY SPILLWAY CREATES TURBULENT FLOWS IN THE DOWNSTREAM AREA. DIVERSION AND/OR ENERGY DISSIPATION OF FLOW MAY BE NECESSARY WHILE WORKING NEAR THE DISCHARGE AREA. ANY DIVERSION AND/OR ENERGY DISSIPATION STRUCTURES SHALL BE REMOVED IN THEIR ENTIRETY.
8.

CONTRACTOR MAY OBSTRUCT FLOWS THROUGH THE PRIMARY SPILLWAY TO REDUCE VELOCITIES AND TURBULENCE WITHIN THE WORK AREA. FLOW OBSTRUCTION SHALL NOT INCREASE THE LEVEL OF THE IMPOUNDMENT TO HIGHER THAN EL. 102.37 (THE AUXILIARY SPILLWAY CREST). ANY OBSTRUCTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
9.

ANY NECESSARY DIVERSIONS SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.

TREE REMOVAL NOTES:

1.

CONTRACTOR SHALL REMOVE AND DISPOSE ACCUMULATED DEBRIS (BRANCHES) ON THE DOWNSTREAM SIDE OF THE AUXILIARY SPILLWAY AND PILED CUT TREES AND BRUSH FROM THE CREST AREA OF THE DAM.
2.

CONTRACTOR SHALL CUT, REMOVE, GRUB ROOTS, AND DISPOSE ALL TREES AND STUMPS IDENTIFIED FOR REMOVAL.
3.

TREES, STUMPS, AND ROOTS TO BE REMOVED FROM THE FRONT OF THE DOWNSTREAM TRAINING WALLS SHALL BE REMOVED IN SUCH A MANNER AS TO PREVENT DAMAGE TO THE EXISTING STONE MASONRY WALLS. TREES SHALL BE CUT EVEN WITH THE FACE OF THE WALL. ROOTS EXTENDING BELOW THE WALLS SHALL BE CUT FLUSH AND LEFT IN PLACE TO AVOID DAMAGING THE WALLS.
4.

ALL DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

ANTICIPATED CONSTRUCTION SEQUENCE:

THE FOLLOWING SEQUENCE IS INTENDED TO BE GENERAL IN NATURE AND SHALL NOT BE CONSIDERED DIRECTION BY THE ENGINEER OR THE TOWN OF NORTON. ALTHOUGH IT IS LIKELY THAT SOME OF THE WORK ITEMS WILL OVERLAP, CONSTRUCTION SEQUENCES FOR THE VARIOUS PROJECT COMPONENTS ARE DESCRIBED SEPARATELY AND MAY NOT NECESSARILY PROCEED IN CONSECUTIVE ORDER. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

- GENERAL

1.

CONTRACTOR MOBILIZATION

2.

INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS INCLUDING TURBIDITY BARRIERS.

3.

REMOVE AND DISPOSE OR STOCKPILE EXISTING SITE FEATURES AS NECESSARY TO FACILITATE SITE ACCESS.

4.

INSTALL/CONSTRUCT TEMPORARY SITE ACCESS WAYS.

5.

INSTALL TEMPORARY COFFERDAM AND SEDIMENT CONTROL TO ENCLOSE SPILLWAY IF NECESSARY.

6.

INSTALL WATER DIVERSION AND CONTROL OF WATER DEVICES AT PRIMARY SPILLWAY.
- TREE AND STUMP REMOVAL

1.

CUT AND REMOVE ALL TREES, SHRUBS, AND BRUSH FROM UPSTREAM AND DOWNSTREAM EMBANKMENT SLOPES WITHIN THE LIMITS OF WORK.

2.

REMOVE ALL STUMPS AND OTHER UNDESIRABLE MATERIAL FROM THE EMBANKMENTS. TRAP AND REMOVE BURROWING ANIMALS, (OBTAIN NECESSARY PERMITS FROM THE DIVISION OF FISHERIES AND WILDLIFE).

3.

FILL RESULTING HOLES AND ALL BURROWS WITH GRAVEL BORROW AND COMPACT.

4.

EXCAVATE EMBANKMENT SOILS TO THE LIMITS INDICATED.

5.

REMOVE AND BACKFILL ROOT SYSTEMS AND BACKFILL EMBANKMENT.

- SLOPE GRADING AND STABILIZATION

1.

PLACE, GRADE, AND COMPACT SUITABLE FILL MATERIAL TO THE LINES AND GRADES SHOWN ON THE PROJECT PLANS

2.

IN AREAS TO BE STABILIZED WITH VEGETATION, PLACE AND GRADE LOAM AND SEED IN AREAS TO BE STABILIZED WITH RIP RAP INSTALL TOE STONES, GEOTEXTILE FABRIC, BEDDING STONE, AND RIP RAP ARMOR STONE

3.

REGRADE AND CONSTRUCT FORMAL DOWNSTREAM CHANNEL FOR AUXILIARY SPILLWAY. PLACE RIP RAP SLOPE TO PLAN GRADES.
- BLANKET AND TOE DRAIN SYSTEM

1.

EXCAVATE EMBANKMENT SOILS TO THE LIMITS NECESSARY TO INSTALL THE BLANKET AND TOE DRAIN SYSTEM.

2.

CONSTRUCT BLANKET AND TOE DRAIN SYSTEM WITH CAST IN PLACE CONCRETE HEADWALL WITH WEIR.

3.

INSTALL RIPRAP SCOUR PROTECTION AS REQUIRED FOR THE CAST IN PLACE CONCRETE TOE DRAIN OUTLET.

- PROJECT COMPLETION

1.

NOTIFY ENGINEER/OWNER OF SUBSTANTIAL PROJECT COMPLETION.

2.

DEMobilize AND RETURN DISTURBED AREAS OF THE SITE TO PRECONSTRUCTION CONDITION.

EROSION AND SEDIMENT CONTROL NOTES:

1.

CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCE AS INDICATED IN THE CONTRACT DOCUMENTS FOR THE DURATION OF THE PROJECT.
2.

CONTRACTOR SHALL INSTALL AND MAINTAIN TURBIDITY BARRIERS AS INDICATED IN THE CONTRACT DOCUMENTS. TURBIDITY BARRIERS SHALL BE ANCHORED SECURELY AS NECESSARY TO INSURE COLLECTION OF SEDIMENT AND ENABLE THE WORK TO BE PERFORMED.
3.

CONTRACTOR MAY STOCKPILE FILL MATERIALS AT IDENTIFIED STAGING AREAS AND/OR IDENTIFIED STOCKPILE AREAS ALONG THE ACCESS ROAD IN A MANNER TO ALLOW FOR PASSAGE OF EMERGENCY VEHICLES. STOCKPILES SHALL BE A MINIMUM OF 1-FOOT FROM THE EDGE OF ANY SLOPE TO LIMIT RUNOFF DOWN THE EMBANKMENT SLOPES.
4.

EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED AS SHOWN ON THE PLAN AND DETAILS, AND SHALL BE INSPECTED AND APPROVED BY THE NORTON CONSERVATION AGENT PRIOR TO THE COMMENCEMENT OF ANY FURTHER CONSTRUCTION.
5.

THE EROSION CONTROL BARRIERS SHALL CONSIST OF SILT FENCE.
6.

EROSION CONTROL BARRIERS SHALL BE MODIFIED OR EXPANDED AS FIELD CONDITIONS WARRANT.
7.

ALL EROSION CONTROL BARRIERS SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER EACH STORM EVENT OF 0.5 INCH OR GREATER DURING CONSTRUCTION. ANY DAMAGED AREAS REPAIRED WITHIN 24-HOURS OF DISCOVERY.
8.

DEWATERING BASINS SHALL CONSIST OF HAY BALE ENCLOSURES, TANKS, PERMEABLE BLADDERS, OR OTHER APPROPRIATE METHOD. DEWATERING WASTEWATERS SHALL BE PUMPED TO THE DEWATERING BASINS AND TREATED PRIOR TO DISCHARGE.
9.

DISCHARGE OF TURBID WATER TO THE NORTON RESERVOIR, THE RUMFORD RIVER, OR ANY WETLAND SHALL BE PROHIBITED.
10.

THE TURBIDITY BOOM AND CURTAIN SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF EMBANKMENT EXCAVATION AND SHALL REMAIN IN PLACE UNTIL PERMANENT STABILIZATION OF THE EMBANKMENT IS ACHIEVED.
11.

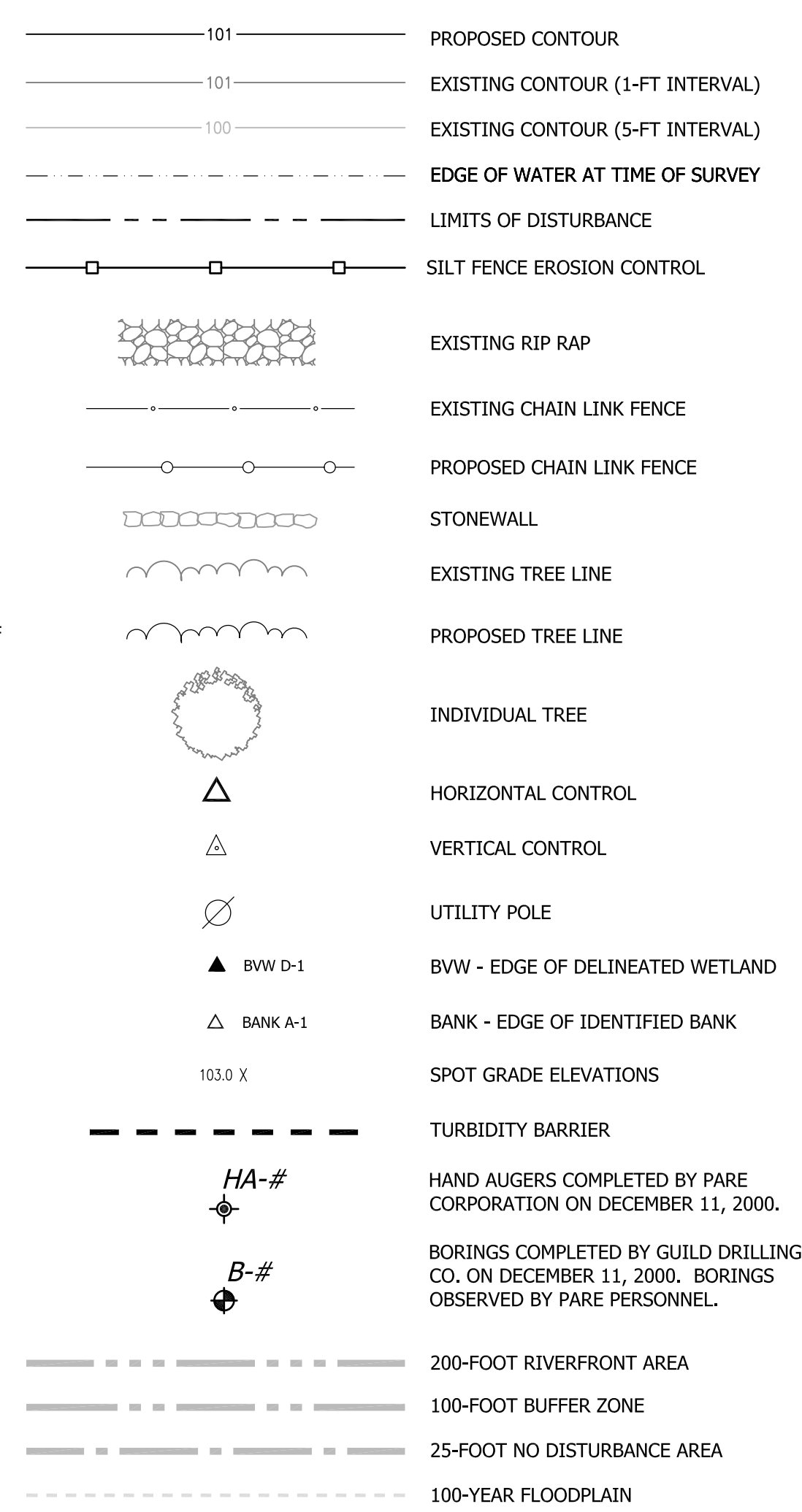
WITHIN 14 DAYS UPON THE COMPLETION OF GRADING, ALL EXPOSED SURFACES NOT OTHERWISE TO BE TREATED SHALL BE COVERED WITH A MINIMUM OF 6" OF LOAM AND SEEDED WITH SLOPE MIX IN ACCORDANCE WITH M.6.03.0 OF THE MHD STANDARD SPECIFICATIONS. MULCH SHALL BE APPLIED AS NECESSARY TOP PROVIDE TEMPORARY STABILIZATION UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.
12.

CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE IMPOUNDMENT VIA DISCHARGES THROUGH ANY NECESSARY COFFER DAMS UPSTREAM OF THE SPILLWAY.
13.

NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN WETLAND AREAS WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.
14.

UPON COMPLETION OF THE WORK ALL DISTURBED AREAS SHALL BE DRESSED AND SEEDED WITH SLOPE MIX IN ACCORDANCE WITH M.6.03.0 OF THE MHD STANDARD SPECIFICATIONS.

LEGEND:

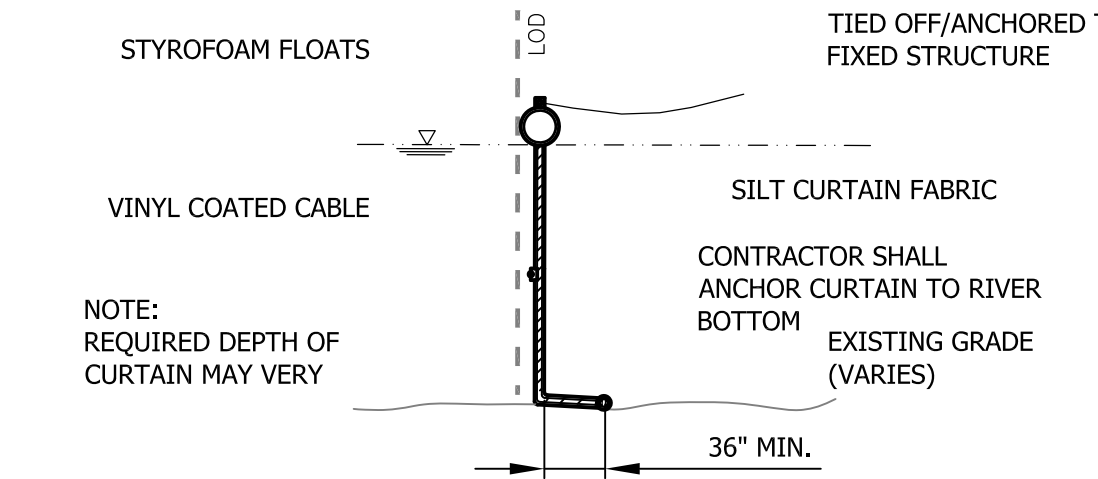


TURBIDITY BARRIER NOTES:

1.

TURBIDITY BARRIER SHALL BE SUFFICIENTLY ANCHORED TO FACILITATE CONSTRUCTION AND RESIST TURBULENCE AND FLOWS.
2.

TURBIDITY BARRIER SHALL BE REMOVED IN SUCH A MANNER SO AS TO MINIMIZE THE DISCHARGE OF SEDIMENT DOWNSTREAM.



TYPICAL TURBIDITY BARRIER
NOT TO SCALE

LOAM AND SEED NOTES:

1.

CONTRACTOR SHALL APPLY FERTILIZER AND LOAM TO PREPARE TOPSOIL SURFACE AT THE RATES INDICATED IN THE PROJECT SPECIFICATIONS.
2.

CONTRACTOR SHALL SEED ENTIRE SLOPE AND DISTURBED AREA AS INDICATED IN THE PROJECT SPECIFICATIONS.
3.

CONTRACTOR SHALL MULCH ENTIRE SEEDED AREA WITH STRAW MULCH.

REVISIONS

NO.	DATE	BY	DESCRIPTION

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT TITLE/CLIENT

NORTON RESERVOIR
DAM IMPROVEMENTS

TOWN OF NORTON

CONSERVATION COMMISSION

NORTON, MASSACHUSETTS

SCALE ADJUSTMENT
GUIDE

0" 1"

BAR IS ONE INCH ON
ORIGINAL DRAWING.

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

GENERAL NOTES, LEGEND,
AND EROSION CONTROL DETAILS

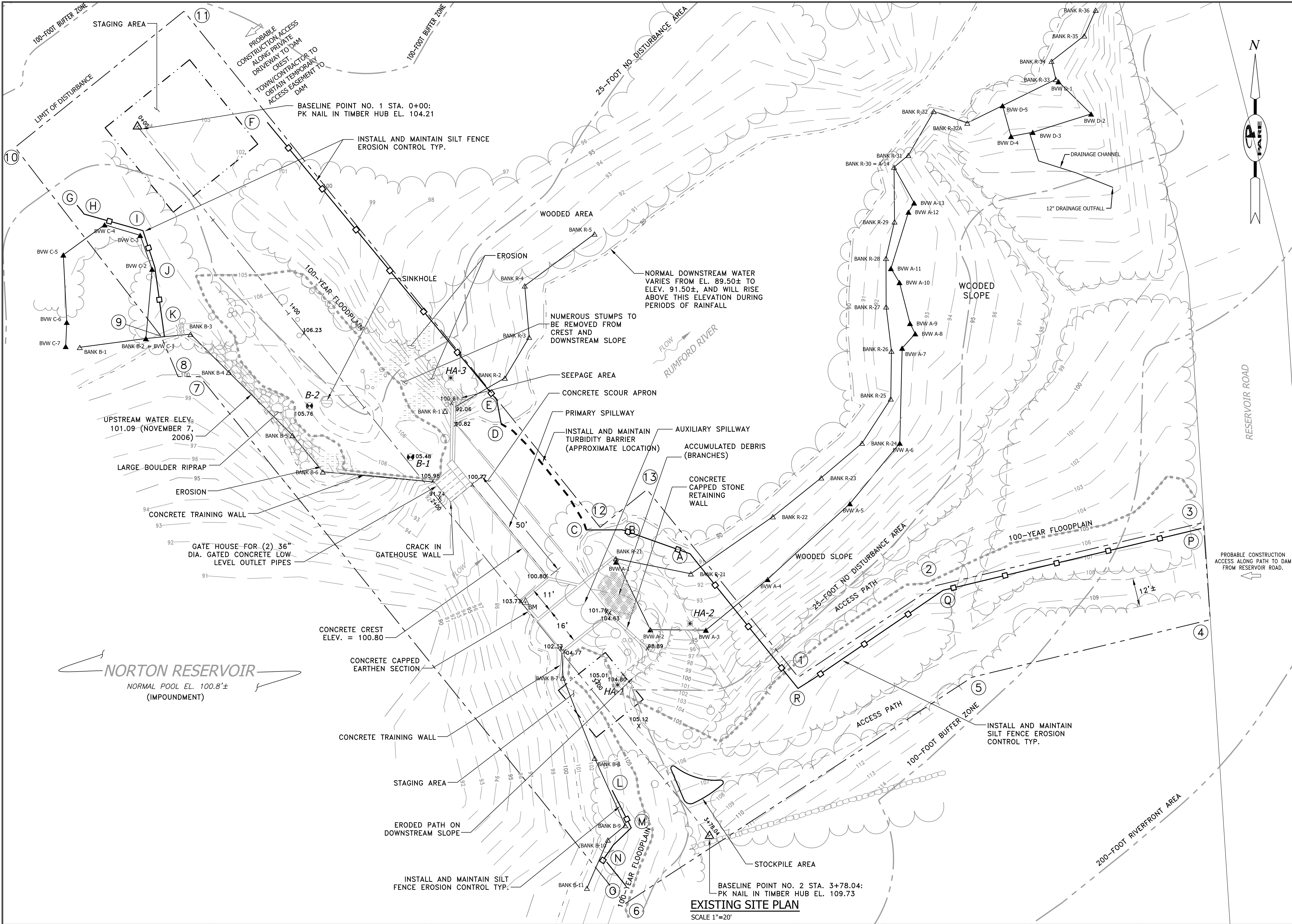
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DMM	NOVEMBER 2009	PM	NOVEMBER 2009	DMM	NOVEMBER 2009
CONST. REV.:	DATE:	APPROVED BY:	DATE:	CHECKED BY:	DATE:
ARO	NOVEMBER 2009	JMB	NOVEMBER 2009	JMB	NOVEMBER 2009

SCALE: AS NOTED

PROJ. NO. 05142.00

DWG. NO. 1

SHEET 2 OF 7



HORIZONTAL CONTROL		
DESCRIPTION		ELEVATION
PK NAIL SET IN TIMBER HUB @ STA. 0+00		104.21
PK NAIL SET IN TIMBER HUB @ STA. 3+78.04		109.73

VERTICAL CONTROL		
A SURVEY DISK BENCHMARK DISK LOCATED ON THE CONCRETE CAPPED ISLAND BETWEEN THE SPILLWAYS. ELEVATION = 103.85 FEET (NGVD).		

SITE CONTROLS

LOCATION	STATION	OFFSET
①	3+50.00	70' DS
②	3+56.11	138' DS
③	4+05.46	241' DS
④	4+38.64	218' DS
⑤	3+95.20	126' DS
⑥	3+78.04	45' US
⑦	0+97.00	45' US
⑧	0+91.50	52' US
⑨	0+74.00	47' US
⑩	-0+25.00	45' US
⑪	-0+25.00	45' DS
⑫	2+50.00	45' DS
⑬	2+50.00	70' DS

LIMIT OF DISTURBANCE TABLE

LOCATION	STATION	OFFSET
Ⓐ	2+82.00	67' DS
Ⓑ	2+56.50	52' DS
Ⓒ	2+47.00	40' DS
Ⓓ	1+91.00	40' DS
Ⓔ	1+83.00	44' DS
Ⓕ	0+32.50	43' DS
Ⓖ	0+10.00	40'US
Ⓕ	0+14.50	40'US
Ⓖ	0+35.00	26'US
Ⓖ	0+50.00	31'US
Ⓖ	0+75.00	46'US
Ⓖ	3+38.00	19'US
Ⓖ	3+55.00	23'US
Ⓖ	3+58.00	40'US
Ⓖ	3+72.00	40'US
Ⓖ	4+07.00	238'US
Ⓖ	3+56.00	138'US
Ⓖ	3+53.00	67'US

SILT FENCE TABLE

REVISIONS				REVISIONS			
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION

PROJECT TITLE/CLIENT

NORTON RESERVOIR
DAM IMPROVEMENTS

TOWN OF NORTON
CONSERVATION COMMISSION
NORTON, MASSACHUSETTS

SCALE 1"=20'

SCALE ADJUSTMENT
GUIDE

0" 1"

BAR IS ONE INCH ON
ORIGINAL DRAWING.

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

EXISTING SITE AND EROSION CONTROL PLAN					
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CONST. REV.: ARO	DATE: NOVEMBER 2009	APPROVED BY: JMB	DATE: NOVEMBER 2009	CHECKED BY: JMB	DATE: NOVEMBER 2009

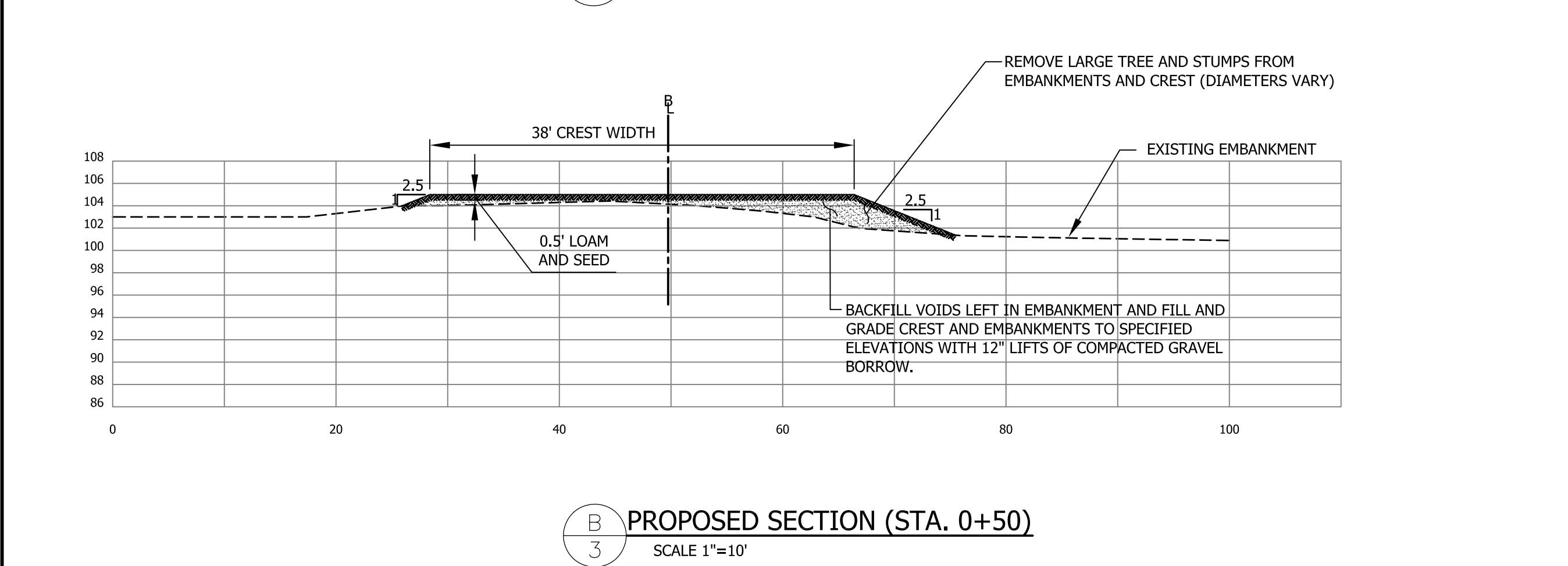
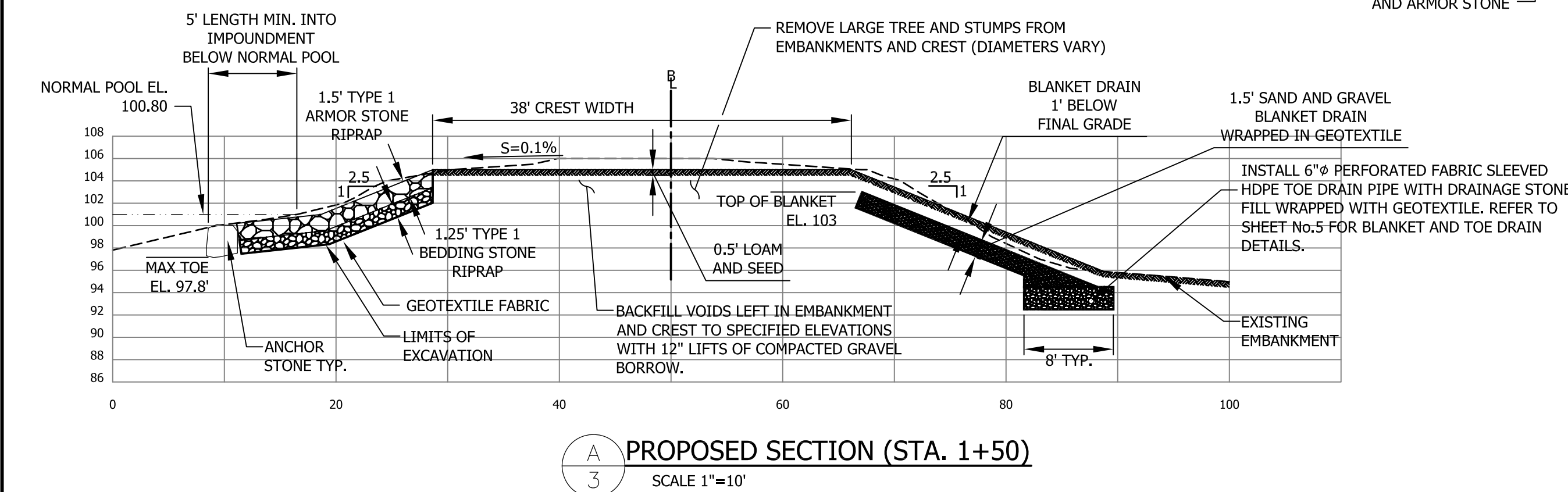
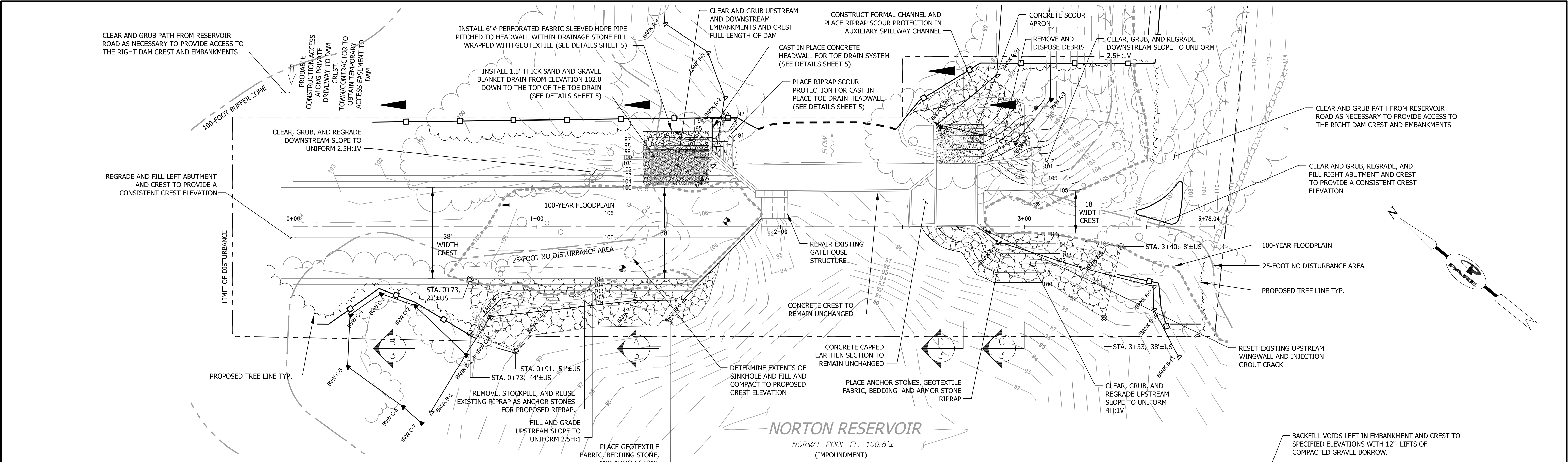
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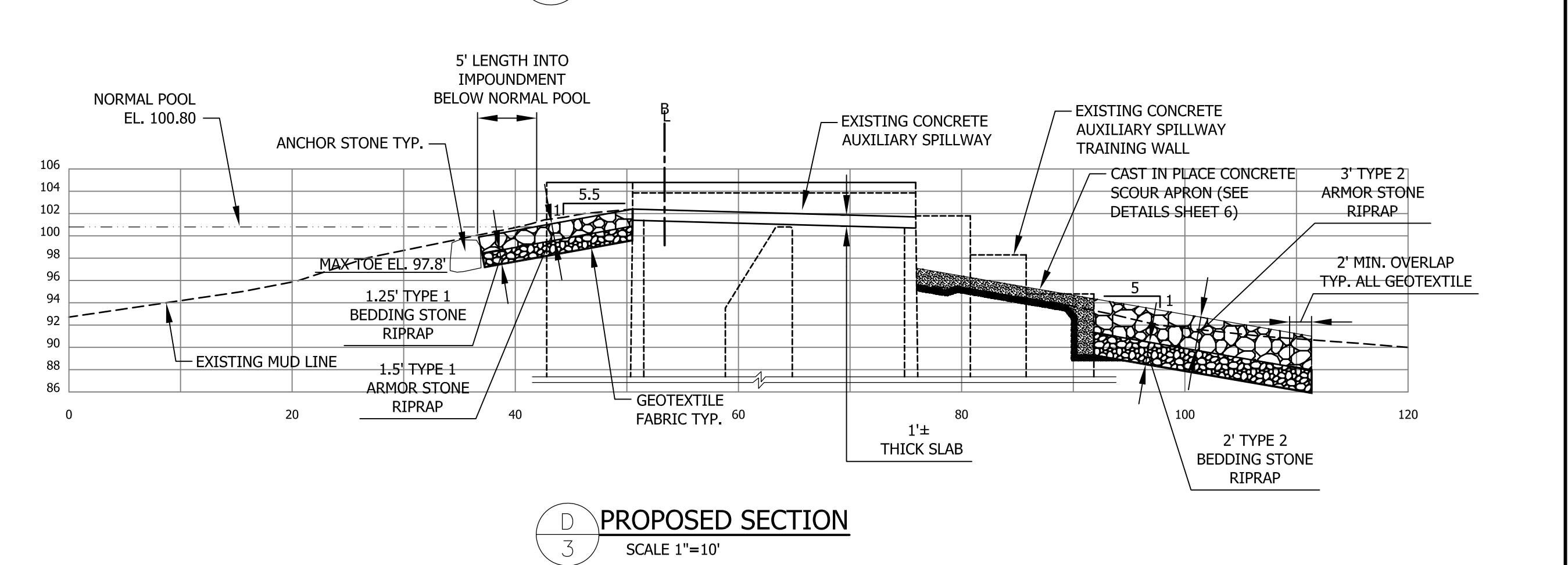
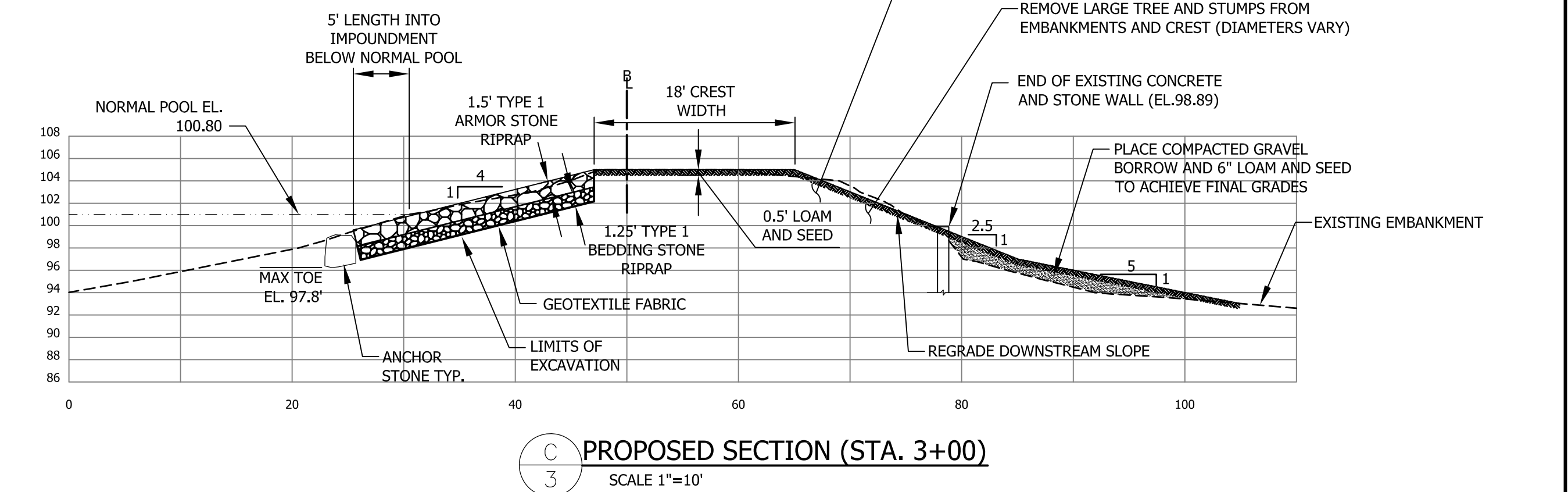
DWG. NO.

2

SHEET 3 OF 7



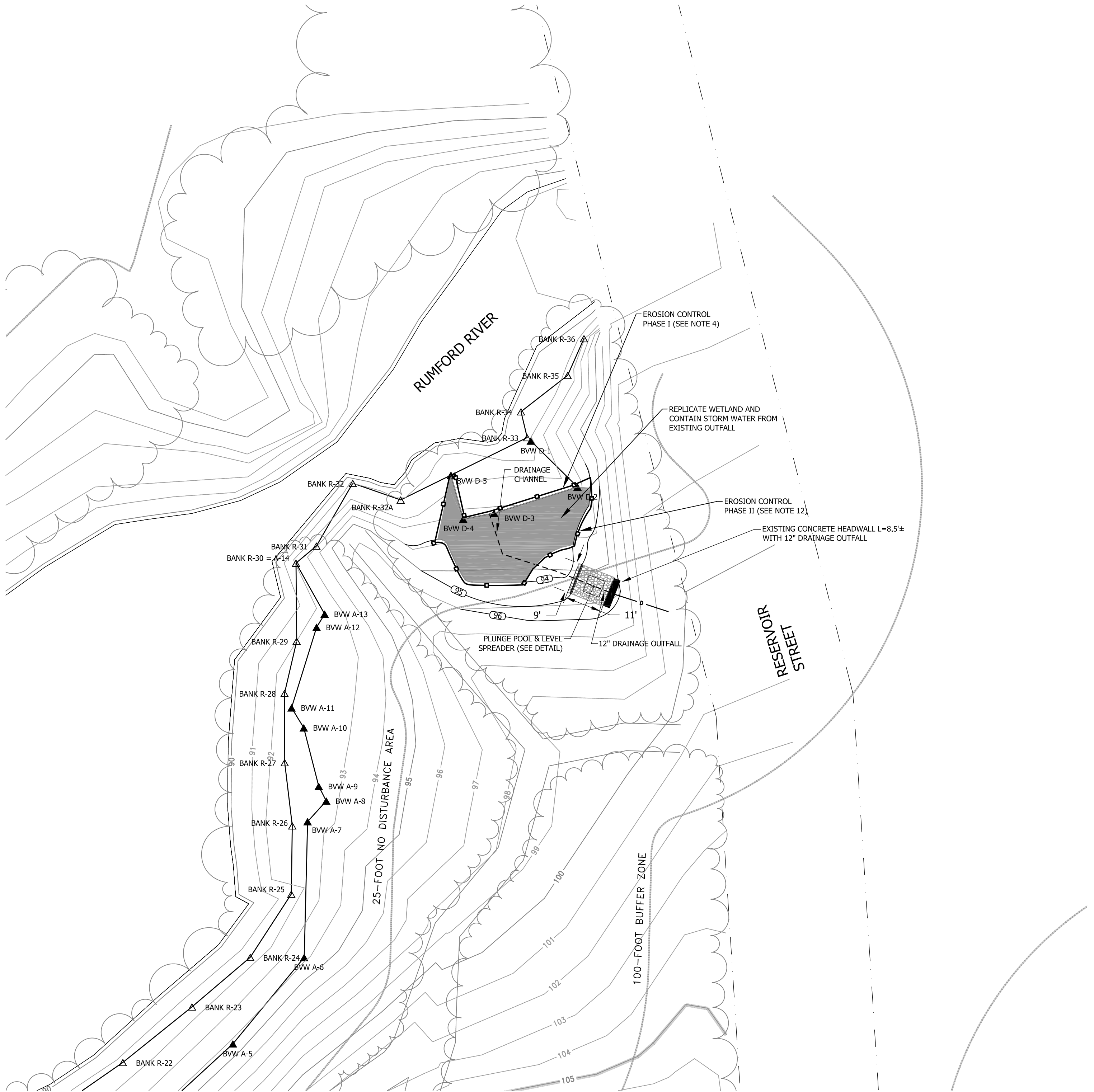
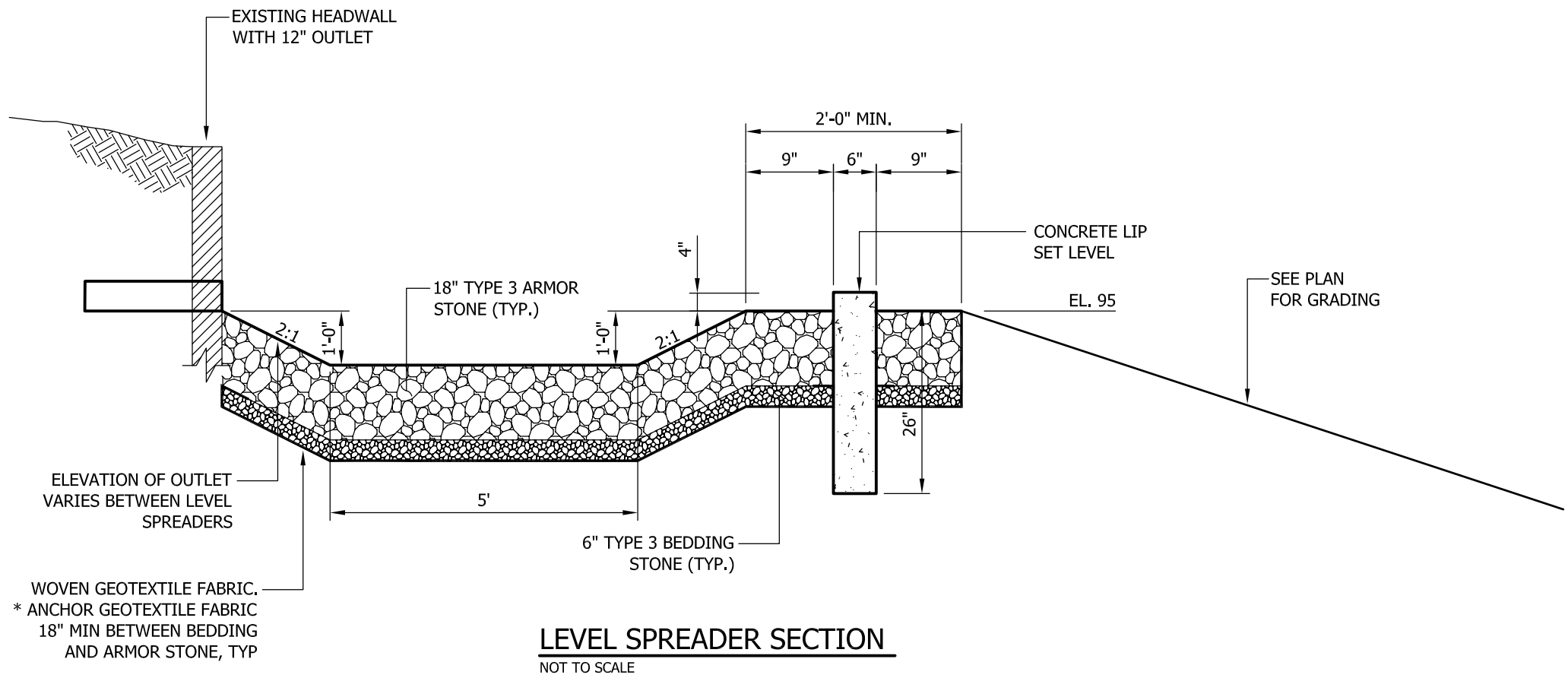
PROPOSED SITE PLAN
SCALE 1"=20'



REVISIONS				REVISIONS				PROJECT TITLE/CLIENT
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	
NORTON RESERVOIR DAM IMPROVEMENTS TOWN OF NORTON CONSERVATION COMMISSION NORTON, MASSACHUSETTS								SCALE: AS NOTED PROJ. NO. 05142.00 DWG. NO. 3 SHEET 4 OF 7
SCALE ADJUSTMENT GUIDE 0" 1" BAR IS ONE INCH ON ORIGINAL DRAWING.								
PARE CORPORATION ENGINEERS - SCIENTISTS - PLANNERS 10 LINCOLN ROAD, SUITE 103 FOXBORO, MA 02035 508-543-1755								
PROPOSED SITE PLAN, SECTIONS, AND DETAILS								
DESIGNED BY: DMM	DATE: NOVEMBER 2009	DRAWN BY: PM	DATE: NOVEMBER 2009	CHECKED BY: JMB	DATE: NOVEMBER 2009			
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WETLAND REPLICATION NOTES:

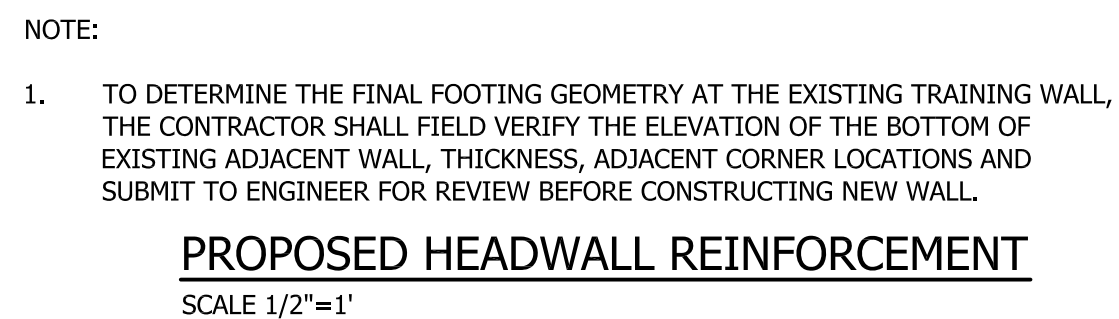
1. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CONTRACTOR AND CONSERVATION AGENT TO REVIEW THE REPLICATION PROCEDURES PRIOR TO COMMENCEMENT OF WORK.
2. APPROXIMATELY 750 SQUARE FEET OF BORDERING VEGETATED WETLAND AND BORDERING LAND SUBJECT TO FLOODING WILL BE ALTERED IN THIS PROJECT. APPROXIMATELY 750 SQUARE FEET SHALL BE REPLICATED ON-SITE, AS SHOWN ON THE WETLAND REPLICATION PLAN.
3. THE CONTRACTOR SHALL STAKE OUT THE FOLLOWING AREAS AS INDICATED ON THE WETLAND REPLICATION PLAN:
 - A. EROSION CONTROL/LIMIT OF WORK
 - B. REPLICATION AREA
4. EROSION CONTROL SHALL BE INSTALLED IN ACCORDANCE TO THE CONTRACT PLANS AND DOCUMENTS. HAYBALES SHALL NOT BE USED. SEE EROSION AND SEDIMENT CONTROL NOTES.
5. ALL VEGETATION WITHIN THE REPLICATION AREA SHALL BE REMOVED. EXISTING RED MAPLE TREES MAY BE SELECTED TO REMAIN ON HUMMOCKS IF APPROPRIATE. SELECT INORGANIC MATERIALS SUCH AS ROCKS AND BOULDERS AND SELECT TREES AND LOGS MAY BE STOCKPILED FOR USE IN THE REPLICATION AREA TO PROVIDE WILDLIFE HABITAT.
6. EXCAVATE TO APPROPRIATE SUBGRADES. MATERIALS WITHIN 12 INCHES OF THE BOTTOM OF THE REPLICATION AREA SHALL ALSO BE REMOVED. MATERIAL SHALL BE SPREAD TO CREATE A MOUND AND POOL TOPOGRAPHY FOR THE FINAL GRADE. ALL REMOVED FILL MATERIAL SHALL BE RELOCATED OFF SITE.
7. CREATE THE BERM WITH EARTH OR STONE TO A HEIGHT OF 6 INCHES ABOVE THE BOTTOM OF THE BASIN.
8. THE ENGINEER SHALL CONFIRM THE ELEVATIONS OF THE REPLICATION AREA PRIOR TO PLACEMENT OF SOILS.
9. ORGANIC SOILS SHALL BE IMPORTED IN A SUFFICIENT VOLUME TO COVER THE REPLICATION AREA TO A DEPTH OF 12 INCHES. COMPOST SHALL BE ADDED TO AMEND THE SOILS.
10. THE REPLICATION AREA SHALL BE PLANTED WITH INDIGENOUS PLANTS. TREES AND SHRUBS SHALL BE STAGGERED AND THE AMOUNT IS BASED UPON PLACING TREES AND SHRUBS 8 FEET ON CENTER. PLANTS SHALL BE PLANTED IN GROUPS TO MIMIC THE NATURAL SURROUNDINGS. A NEW ENGLAND WET SEED MIX SHALL ALSO BE ADDED TO PROVIDE HERBACEOUS MATERIALS. REPLICATION PLANTS INCLUDE:
 - A. 6 RED MAPLE (ACER REBRUM),
 - B. 9 SILKY DOGWOOD (CORNUS AMOMUM),
 - C. 5 Highbush blueberry (Vaccinium corymbosum) and
 - D. 4 WINTERBERRY (Ilex verticillata).
11. INORGANIC MATERIALS AND SAVED TREES/LOGS SHALL BE SCATTERED THROUGHOUT THE REPLICATION AREA TO COVER APPROXIMATELY 20% OF THE SURFACE AREA.
12. IMMEDIATELY FOLLOWING THE PLANTING OF THE REPLICATION AREA, A SECOND ROW OF SILT FENCE SHALL BE INSTALLED BETWEEN THE NEW REPLICATION AREA AND THE UPLAND AREA AS INDICATED ON THE WETLAND REPLICATION PLAN, THIS SHEET.
13. THE REPLICATION AREA SHALL BE VEGETATIVELY STABILIZED BY AT LEAST 75% WITHIN TWO GROWING SEASONS. ALL REPLICATION TASKS SHALL BE DONE IN ACCORDANCE WITH THE WETLAND PROTECTION ACT AND REGULATIONS UNDER 310CMR10.55 AND THE MASSACHUSETTS INLAND WETLAND REPLICATION GUIDE. EROSION CONTROL BETWEEN THE EXISTING WETLAND AND THE CREATED WETLAND SHALL BE REMOVED ONCE THE 75% STABILIZATION RATE HAS OCCURRED AND HAS BEEN VERIFIED BY THE CONSERVATION COMMISSION.
14. EROSION CONTROL BETWEEN THE CREATED WETLAND AND THE UPLAND SHALL BE REMOVED ONCE THE UPLAND HAS BEEN STABILIZED AND THE CONSERVATION COMMISSION HAS GIVEN APPROVAL TO DO SO.
15. THE REPLICATION AREA SHALL BE MONITORED FOR FIVE YEARS TO REMOVE ANY EXOTIC, INVASIVE SPECIES THAT MAY COLONIZE THE REPLICATION AREA.



WETLAND REPLICATION PLAN


SCALE 1"=20'

REVISIONS				REVISIONS				PROJECT TITLE/CLIENT NORTON RESERVOIR DAM IMPROVEMENTS TOWN OF NORTON CONSERVATION COMMISSION NORTON, MASSACHUSETTS	WETLAND REPLICATION PLAN AND NOTES						SCALE: AS NOTED		
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION		<div>SCALE ADJUSTMENT GUIDE</div> <div>0" 1"</div> <div>BAR IS ONE INCH ON ORIGINAL DRAWING.</div>		PARE CORPORATION ENGINEERS - SCIENTISTS - PLANNERS 10 LINCOLN ROAD, SUITE 103 FOXBORO, MA 02035 508-543-1755						PROJ. NO. 05142.00
											DESIGNED BY:	DATE:	DRAWN BY:	DATE:	CHECKED BY:	DATE:	DWG. NO.
											PM	NOVEMBER 2009	PM	NOVEMBER 2009	JMB	NOVEMBER 2009	4
											CONST. REV.:	DATE:	APPROVED BY:	DATE:	CHECKED BY:	DATE:	
											ARO	NOVEMBER 2009	JMB	NOVEMBER 2009	JMB	NOVEMBER 2009	
														SHEET 5 OF 7			



**NORTON RESERVOIR
DAM IMPROVEMENTS**
TOWN OF NORTON
CONSERVATION COMMISSION
NORTON, MASSACHUSETTS

SCALE ADJUSTMENT
GUIDE

0"  1"

BAR IS ONE INCH ON
ORIGINAL DRAWING.



PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

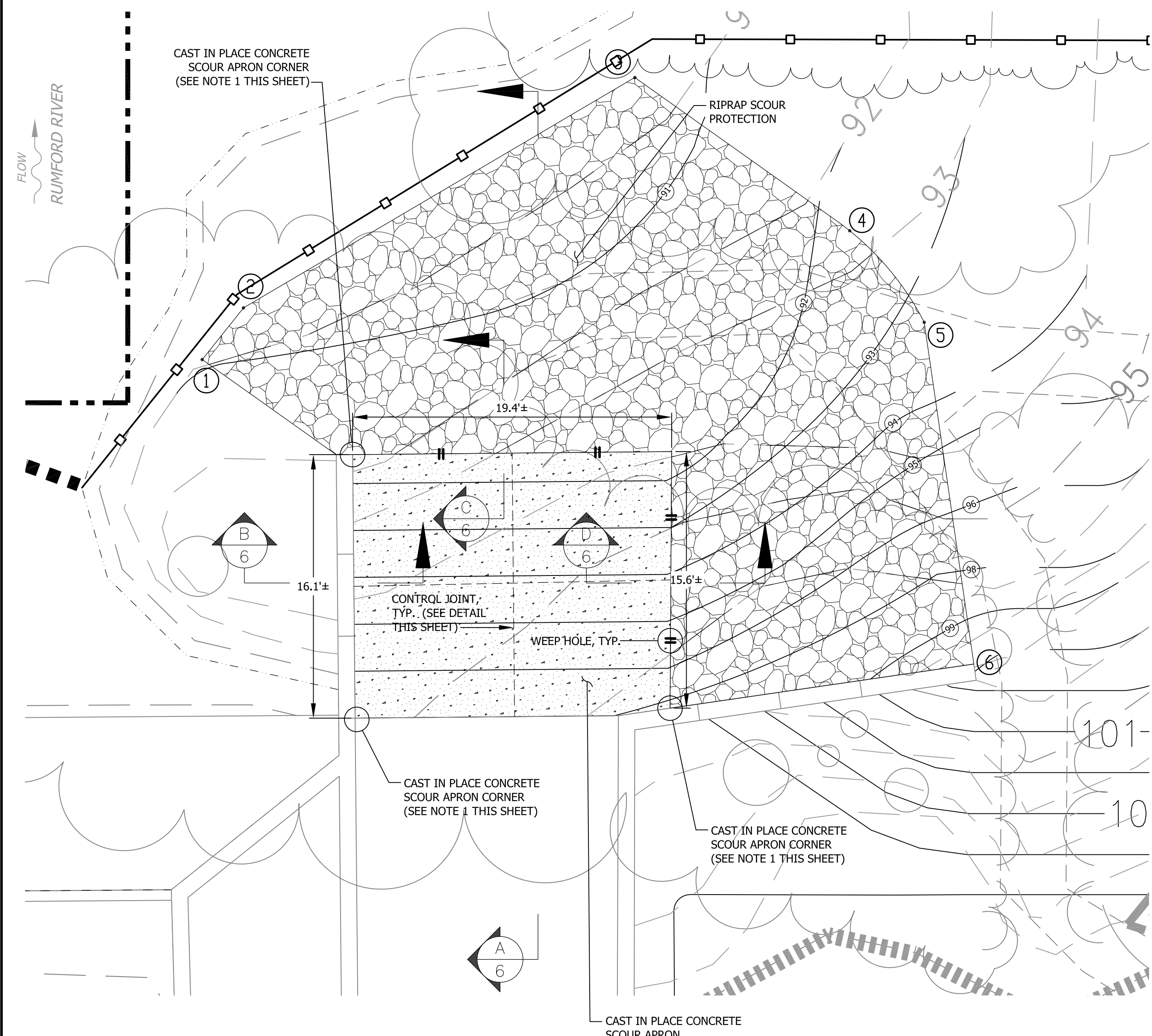
BLANKET AND TOE DRAIN AND HEADWALL PLAN, SECTIONS, AND DETAILS

DESIGNED BY: PM	DATE: NOVEMBER 2009	DRAWN BY: PM	DATE: NOVEMBER 2009	CHECKED BY: JMB	DATE: NOVEMBER 2009
CONST. REV.: ARO	DATE: NOVEMBER 2009	APPROVED BY: JMB	DATE: NOVEMBER 2009	CHECKED BY: JMB	DATE: NOVEMBER 2009

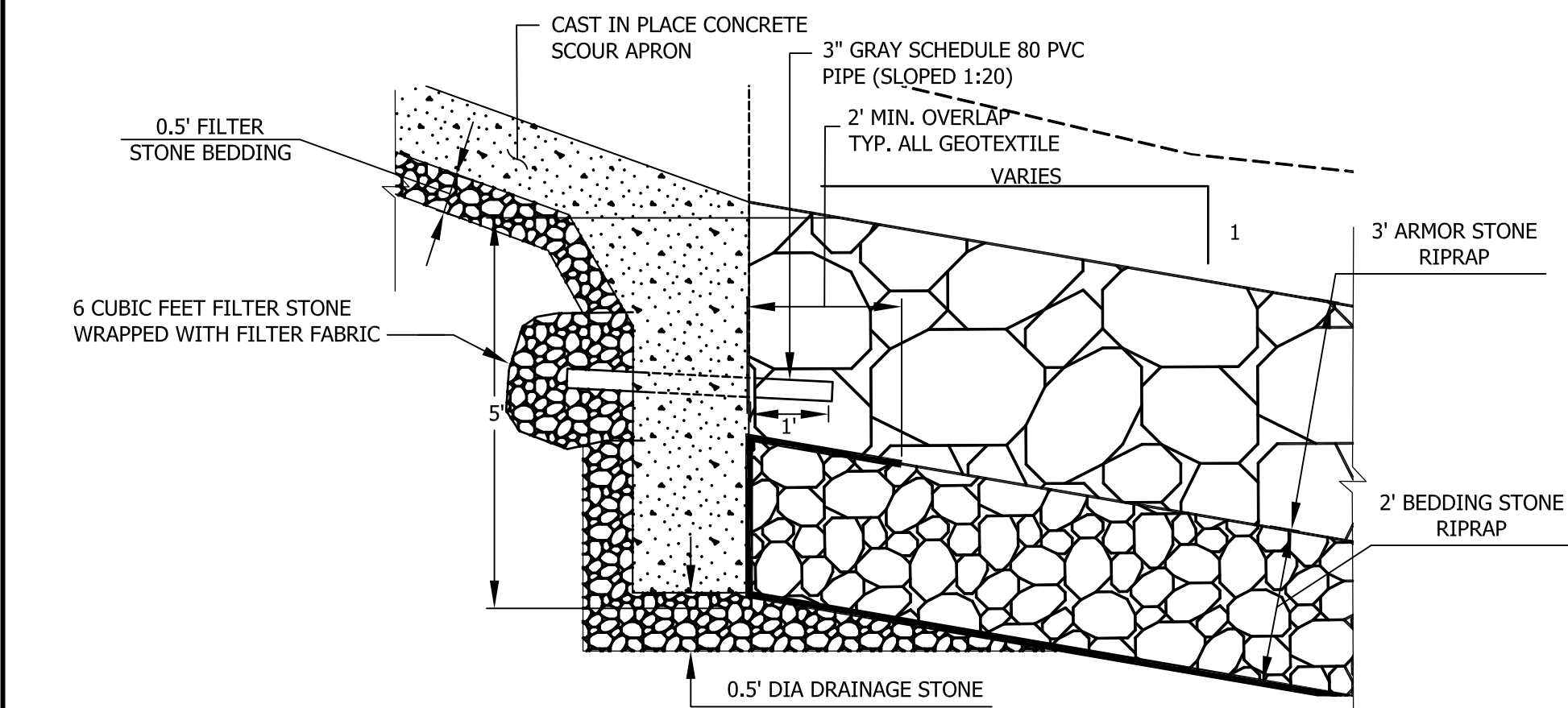
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DWG. NO

SHEET 6 OF 7



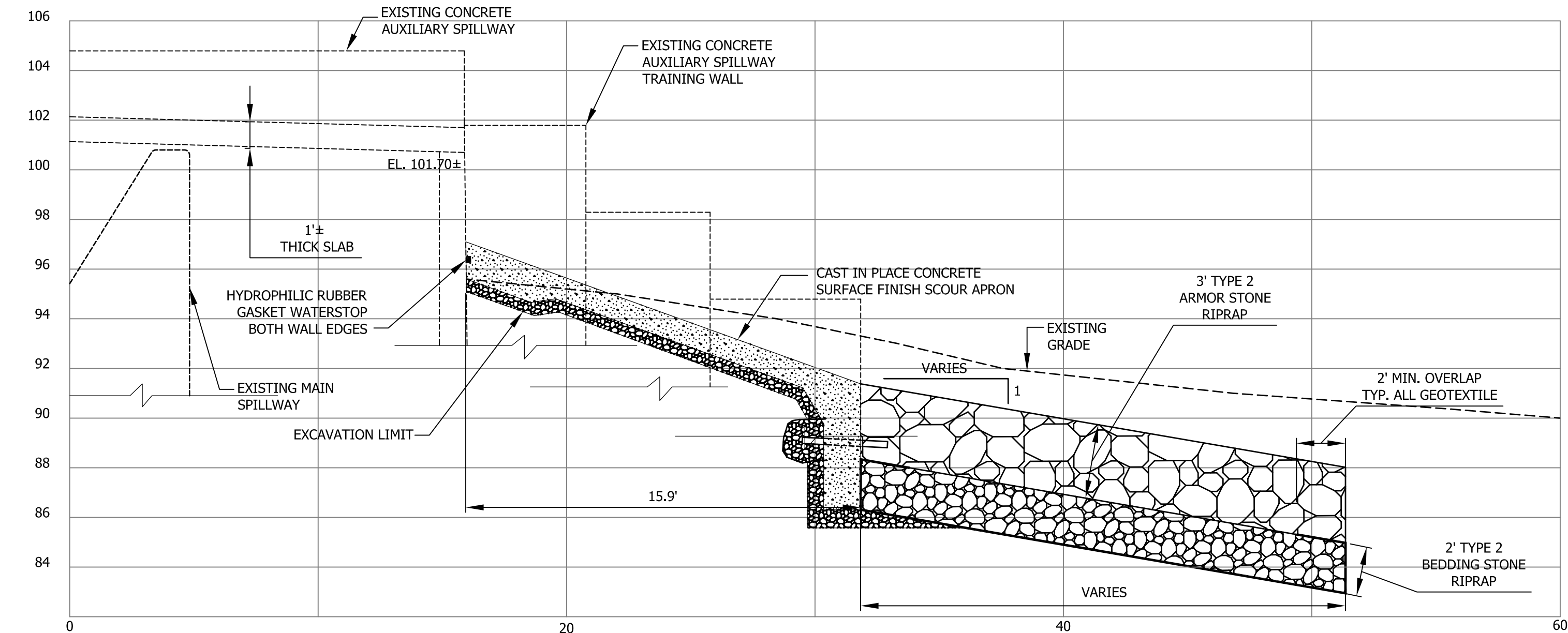
PROPOSED CONCRETE SCOUR APRON AND RIPRAP SCOUR PROTECTION PLAN
SCALE 1"=5'



PROPOSED CONCRETE SCOUR APRON ABUTMENT WITH RIPRAP
SCALE 1"=4'

REVISIONS				REVISIONS				PROJECT TITLE/CLIENT
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	DESCRIPTION	

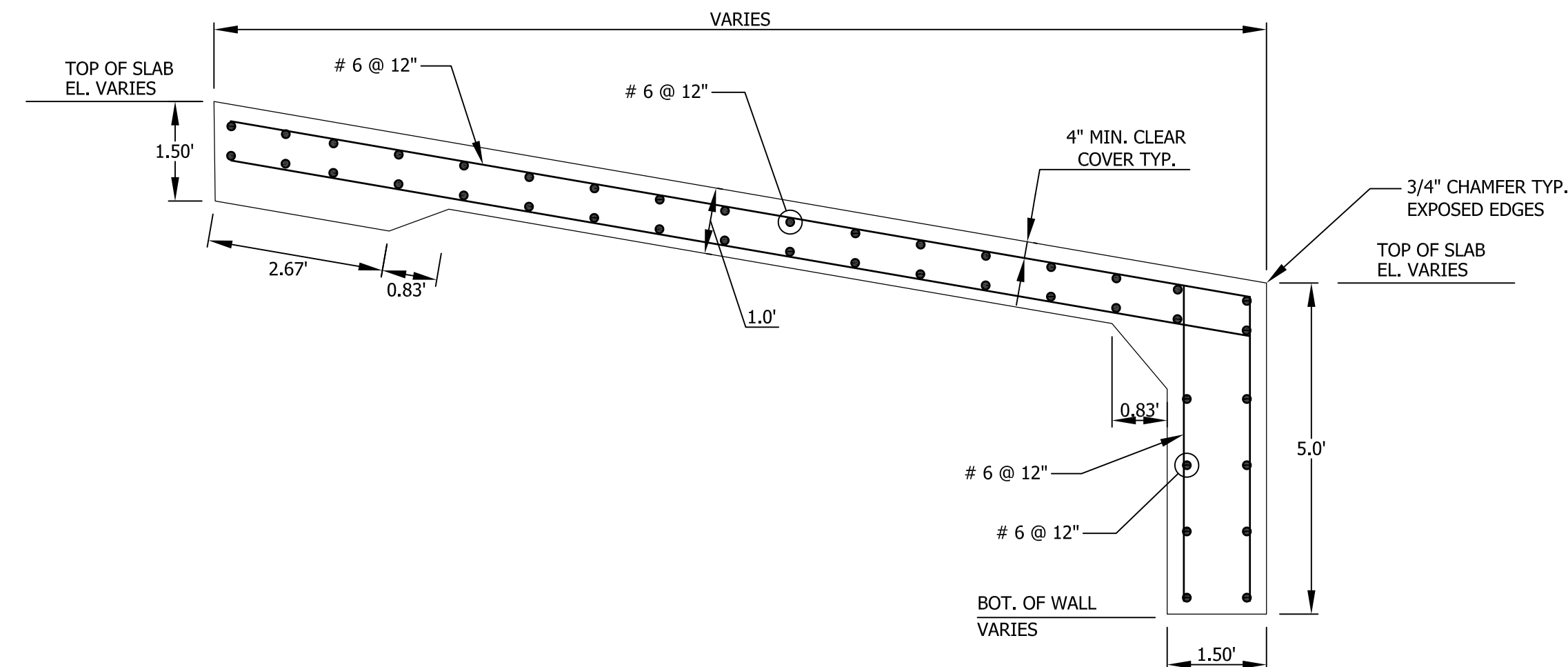
NORTON RESERVOIR
DAM IMPROVEMENTS
TOWN OF NORTON
CONSERVATION COMMISSION
NORTON, MASSACHUSETTS



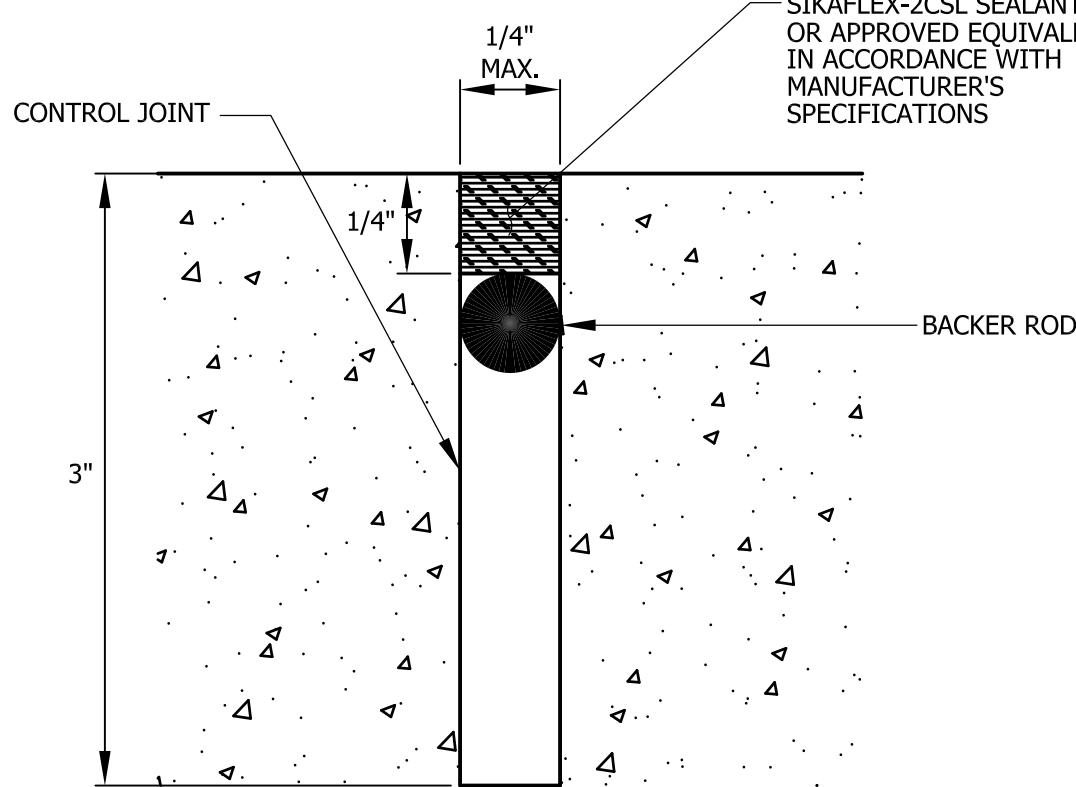
PROPOSED CONCRETE SCOUR APRON AND RIPRAP SCOUR PROTECTION ELEVATION
SCALE 1"=4'

LOCATION	STATION	OFFSET
①	2+54.5	47.6' DS
②	2+57.0	50.8' DS
③	2+80.9	64.8' DS
④	2+94.0	55.5' DS
⑤	2+98.5	49.9' DS

RIPRAP SCOUR PROTECTION LIMITS



PROPOSED CONCRETE SCOUR APRON REINFORCEMENT
SCALE 1/2"=1'



CONTROL JOINT DETAIL
NOT TO SCALE

NOTE
1. ADJUST BOTTOM OF STONE BEDDING AND RESPECTIVE SCOUR APRON AT ADJACENT WALLS AS NECESSARY SUCH THAT THE BOTTOM OF THE EXISTING WALL FOUNDATIONS ARE NOT UNDERMINED.

SCALE ADJUSTMENT
GUIDE
0" 1"
BAR IS ONE INCH ON
ORIGINAL DRAWING.



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10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

CAST IN PLACE CONCRETE SCOUR APRON PLAN, SECTION, AND DETAILS

DESIGNED BY:	DATE:	DRAWN BY:	DATE:	CHECKED BY:	DATE:
PM	NOVEMBER 2009	PM	NOVEMBER 2009	JMB	NOVEMBER 2009
CONST. REV.:	DATE:	APPROVED BY:	DATE:	CHECKED BY:	DATE:
ARO	NOVEMBER 2009	JMB	NOVEMBER 2009	JMB	NOVEMBER 2009

SCALE: AS NOTED
PROJ. NO. 05142.00
DWG. NO.

6

SHEET 7 OF 7