LEGEND

- GRANITE BND
- GRANITE BND W/DH
- MARBLE BND W/DH
- MARBLE BND
- CONC H BND
- CONC BND W/DH
- IP FOUND
- IP W/CAP
- GUN BARREL FND
- DRILL HOLE–SURVEY CONTROL PT.
- PTS STAKE
- MAG NAIL
- PK NAIL
- WIRE FENCE
- EDGE OF TREELINE
- WOOD FENCE
- CHAINLINK FENCE
- TREES
- SHRUBERY
- CARWASH VACUUM STATION
- GUY ANCHOR
- MONITORING WELL
- EXISTING CONTOURS
- LIMIT OF REMEDIATION
- EDGE OF RIVER

- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- LUMINAIRE
- PROPERTY LINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- SANITARY SEWER
- STORM SEWER
- WATER
- GAS
- OVERHEAD LINES
- TELEPHONE
- ELECTRIC
- GUARDRAIL
- RETAINING WALL
- ROCK/BOULDER
- POST
- WATER SHUTOFF VALVE
- GATE VALVE OR GAS VALVE
- HYDRANT
- SIGNPOST
- PARKING BUMPER
- UTILITY POLE

- DETAIL NUMBER (1 / 02|19)
- SHEET WHERE DETAIL IS SHOWN
- SHEET WHERE DETAIL IS REFERENCED
- SECTION IDENTIFIER (A / 02|12)
- SHEET WHERE SECTION IS SHOWN
- SHEET WHERE SECTION IS REFERENCED
- CELL BOUNDARY
- STAGING AREA
- 975 FINAL GRADE CONTOURS
- PRECAST CONCRETE WALL PANELS
- 2:1 MAX TOP OF SLOPE / TOE OF SLOPE
- ℄ RIVER
- FLOW DIRECTION
- 1 / 0 CONTROL POINT FOR SHEET PILE WALL
- SHEET PILE
- RIVER WALK
- + 967.0 FINAL GRADE SPOT ELEV.

GENERAL NOTES:

1. EXISTING SURVEYS PROVIDED BY: SK–DESIGN GROUP INC., 2 FEDERICO DRIVE, PITTSFIELD MA 01201, JAMES E. SEIDL P.L.S.; COL–EAST, INC., HARRIMAN & WEST AIRPORT, P.O. BOX 347, NORTH ADAMS MA 01247; HILL ENGINEERS, ARCHITECTS, PLANNERS, INC., 50 DEPOT ST., DALTON MA 01226.
2. TOPOGRAPHIC FIELD SURVEY AND PLANS WERE PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS BETWEEN SEPTEMBER 19, 2000 AND DECEMBER 1, 2000.
3. HORIZONTAL DATUM BASED ON MASSACHUSETTS STATE PLANE COORDINATES NAD 1983.
4. VERTICAL DATUM BASED ON NAVD 1988.
5. "EXCAVATION SUBCONTRACTOR" SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR GRADING.
6. "EXCAVATION SUBCONTRACTOR" SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK.
7. DISCREPANCIES IDENTIFIED BY THE "EXCAVATION SUBCONTRACTOR" BETWEEN THE SPECIFICATIONS, DRAWINGS, AND SITE CONDITIONS SHALL BE REPORTED TO THE GENERAL CONTRACTOR. WORK PERFORMED BY THE "EXCAVATION SUBCONTRACTOR" PRIOR TO RESOLUTION OF SUCH DISCREPANCY BY THE GENERAL CONTRACTOR SHALL BE DONE AT THE "EXCAVATION SUBCONTRACTOR'S" RISK.
8. THE "EXCAVATION SUBCONTRACTOR" IS RESPONSIBLE FOR INFORMATION CONTAINED IN THE FOLLOWING REFERENCES:

8.1 DRAFT BASIS OF DESIGN FOR PHASE 2 OF THE 1.5–MILE REMOVAL ACTION, DCN GE–121902–ABJE, DECEMBER–2002.

8.2 PRE–DESIGN SUMMARY, 1.5 MILE REMOVAL ACTION PHASE 2, DCN: GE–050202–AAZL, JULY, 2002.

8.3 PRE–DESIGN GEOTECHNICAL DATA SUMMARY FOR HOUSATONIC RIVER PROJECT FROM LYMAN STREET BRIDGE TO ELM STREET BRIDGE, PREPARED BY HART CROWSER, INC., DATED 9/25/2000.

8.4 SUMMARY OF STRUCTURAL CONDITIONS AND UTILITY SURVEY FROM LYMAN ST. BRIDGE TO ELM ST. BRIDGE ALONG HOUSATONIC RIVER, PITTSFIELD, MASSACHUSETTS, PREPARED BY HART CROWSER, INC., DATED 9/28/2000.

9. LIMITS OF REMEDIATION ARE BASED ON: AVERAGE ANNUAL WATER FLOW ELEVATION VARIES BETWEEN 971.01 AND 966.1 AS INDICATED IN HEC–RAS MODEL OUTPUT (SEE DRAFT BASIS OF DESIGN FOR PHASE 2) FOR STATION 521+68 TO STA. 527+60. AVERAGE ANNUAL WATER FLOW ELEVATION USED TO DISTINGUISH BETWEEN RIVER SEDIMENTS AND BANK SOILS.
10. EXCAVATION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROJECT RELATED SNOW REMOVAL, WITHIN THE AREAS SHOWN ON THESE DRAWINGS AND OUTSIDE OF THE AREAS SHOWN ON THESE DRAWINGS, SUCH AS ACCESS ROADS, STAGING AREAS, TRAILER AREAS, STOCKPILE AREAS, ETC. SNOW SHALL NOT BE PLOWED ONTO RESTORED RIVERBANKS, BEYOND SILT FENCES, OR IN AREAS NOT APPROVED BY THE ENGINEER.

DRAWING SCHEDULE

SHEET	SHEET REFERENCE NUMBER	TITLE	SHEET	SHEET REFERENCE NUMBER	TITLE
1	1000	GENERAL NOTES AND LEGEND	16	2101	RIVERBED AND RIVERBANK RESTORATION
2	1001	PLAN OF EXISTING CONDITIONS	17	2102	REVEGETATION RESTORATION
3	1002	REMOVAL AREAS AND EXCAVATION DEPTHS	18	2103	REVEGETATION RESTORATION DETAILS
4	1003	MISCELLANEOUS CIVIL DETAILS			
5	2000	RETAINING WALL LAYOUT			
6	2001	ENLARGED GRADING PLAN			
7	2002	GOLF SHOP EXCAVATION PLAN			
8	2003	GOLF SHOP FINAL GRADING PLAN			
9	2004	GOLF SHOP SEGMENTAL RETAINING WALL DETAILS			
10	2005	GOLF SHOP DETAILS			
11	2006	SHEETPILE DETAILS 1 OF 2			
12	2007	SHEETPILE DETAILS 2 OF 2			
13	2008	RIVERBED AND RIVERBANK ARMORING DETAILS			
14	2009	CROSS SECTIONS 1 OF 2			
15	2010	CROSS SECTIONS 2 OF 2			

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Ckd by: TD
Reviewed by:
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File name: 1000
Plot date: 11/21/03
Plot scale: AS SHOWN
Submitted by:
Chief, Arch. Section

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

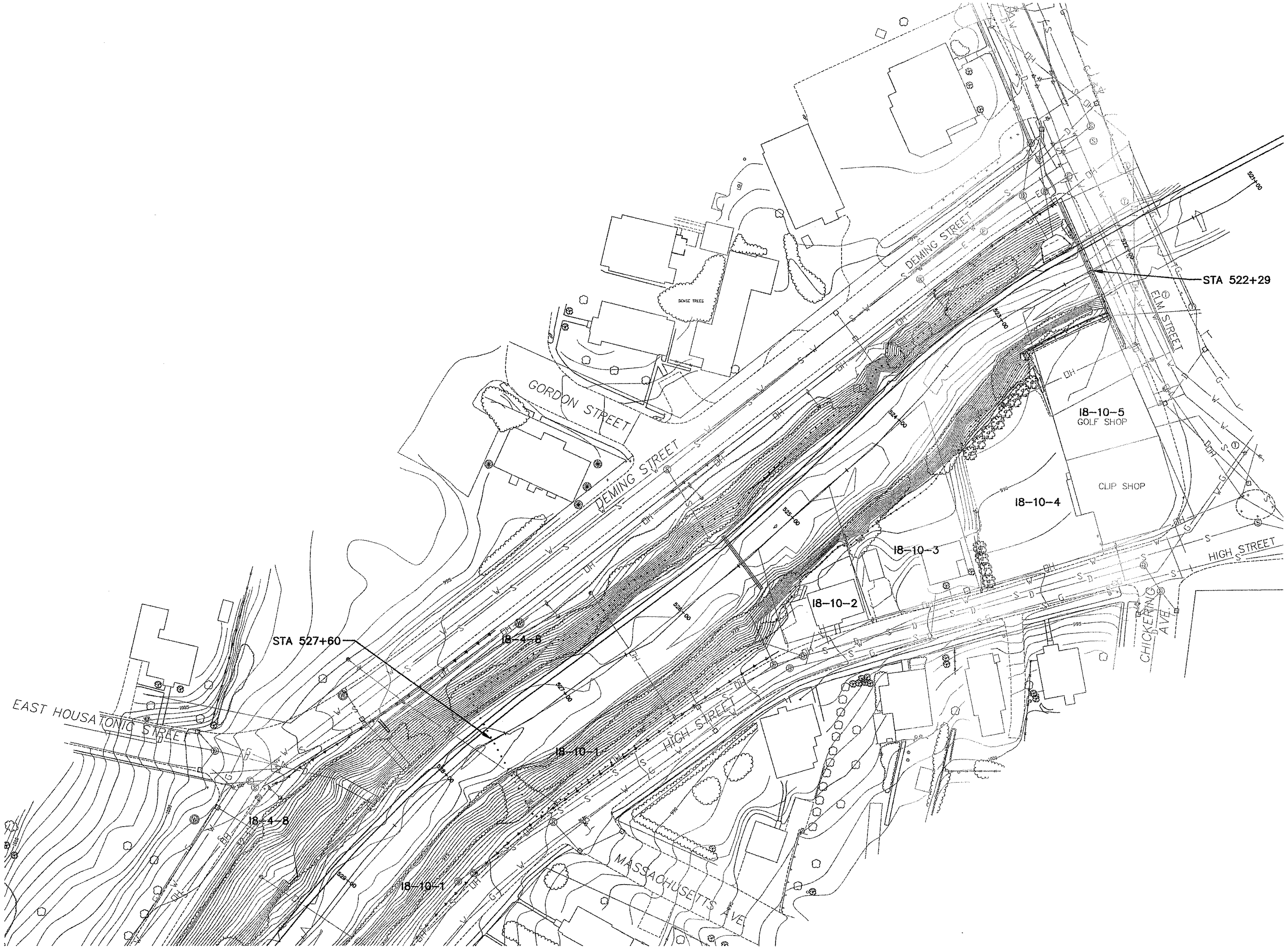
WESTON SOLUTIONS — WOODLOT ENVIRONMENTAL

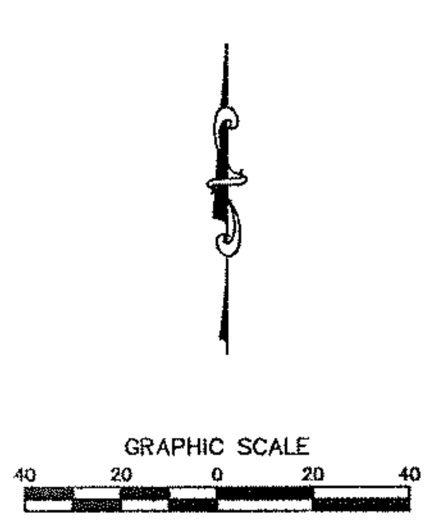
1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

GENERAL NOTES AND LEGEND

Sheet reference number:
1000
1 OF 18

GE-112103-ABYQ
SDMS 201092





STATE OF MAINE
Richard Anthony Delano 7663
REGISTERED PROFESSIONAL ENGINEER
11/24/03

COMMONWEALTH OF MASSACHUSETTS
JOEL S. LINDSAY
No. 37820
REGISTERED PROFESSIONAL ENGINEER
11/24/03

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WESTON SOLUTIONS
WOODLOT ALTERNATIVES, INC.

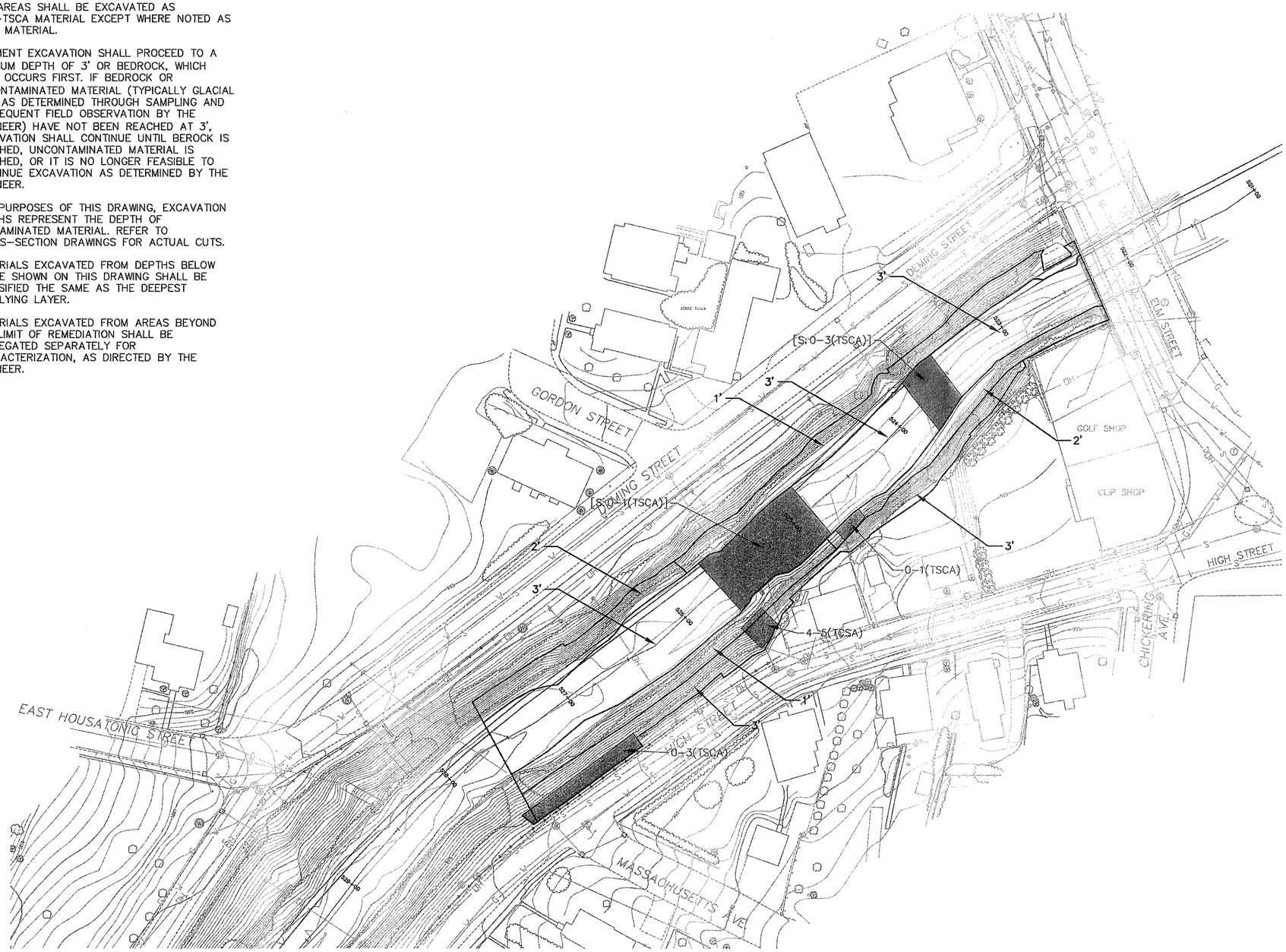
1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

PLAN OF EXISTING CONDITIONS

Sheet reference number:
1001

NOTES:

1. ALL AREAS SHALL BE EXCAVATED AS NON-TSCA MATERIAL EXCEPT WHERE NOTED AS TSCA MATERIAL.
2. SEDIMENT EXCAVATION SHALL PROCEED TO A MINIMUM DEPTH OF 3' OR BEDROCK, WHICH EVER OCCURS FIRST. IF BEDROCK OR UNCONTAMINATED MATERIAL (TYPICALLY GLACIAL TILL, AS DETERMINED THROUGH SAMPLING AND SUBSEQUENT FIELD OBSERVATION BY THE ENGINEER) HAVE NOT BEEN REACHED AT 3', EXCAVATION SHALL CONTINUE UNTIL BEROCK IS REACHED, UNCONTAMINATED MATERIAL IS REACHED, OR IT IS NO LONGER FEASIBLE TO CONTINUE EXCAVATION AS DETERMINED BY THE ENGINEER.
3. FOR PURPOSES OF THIS DRAWING, EXCAVATION DEPTHS REPRESENT THE DEPTH OF CONTAMINATED MATERIAL. REFER TO CROSS-SECTION DRAWINGS FOR ACTUAL CUTS.
4. MATERIALS EXCAVATED FROM DEPTHS BELOW THOSE SHOWN ON THIS DRAWING SHALL BE CLASSIFIED THE SAME AS THE DEEPEST OVERLYING LAYER.
5. MATERIALS EXCAVATED FROM AREAS BEYOND THE LIMIT OF REMEDIATION SHALL BE SEGREGATED SEPARATELY FOR CHARACTERIZATION, AS DIRECTED BY THE ENGINEER.



GRAPHIC SCALE
40 20 0 20 40
APPROXIMATE SCALE IN FEET

STATE OF MAINE — Richard Anthony Delano 7893 — REGISTERED PROFESSIONAL ENGINEER — 11/24/03

COMMONWEALTH OF MASSACHUSETTS — JOEL S. LINDSAY No. 37620 — REGISTERED PROFESSIONAL ENGINEER — 11/24/03

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WESTON SOLUTIONS — WOODLOT ALTERNATIVES, INC.

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

REMOVAL AREAS AND EXCAVATION DEPTHS

Sheet reference number:
1002
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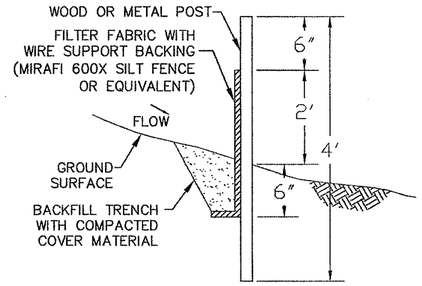
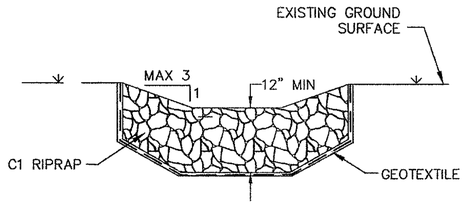


DETAIL – SILT FENCE (TYP.) (1)

NOT TO SCALE

NOTES:

1. WOOD OR METAL POSTS SHALL BE SPACED NO MORE THAN 10 FEET APART.
2. EXCAVATE TRENCH 6" DEEP TO BURY BASE OF FILTER FABRIC. BACKFILL TRENCH WITH COMPACTED NATIVE SOILS.

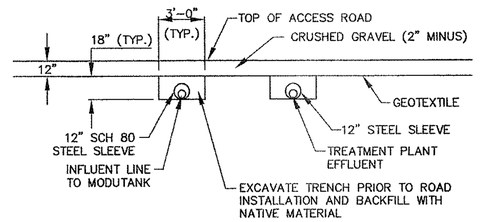


STORMWATER DIVERSION SWALE (TYP.) (3)

NOT TO SCALE

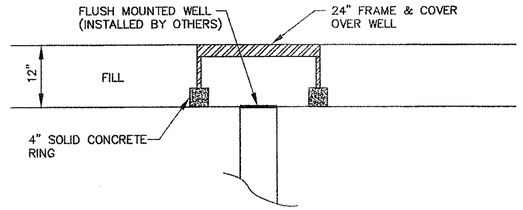
NOTES:

1. PROVIDE C1 RIPRAP AND GEOTEXTILE WHERE SWALE GRADE EXCEED 5%.
2. SWALES FLATTER THAN 5% GRADE SHALL BE LINED WITH APPROVED EROSION CONTROL MAT AND SEEDED WITH GRASS.



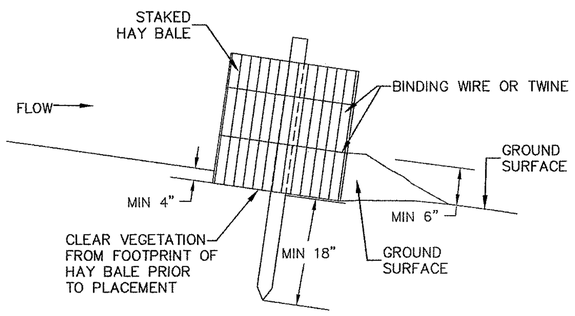
ACCESS ROAD PIPELINE CROSSING DETAIL

NOT TO SCALE

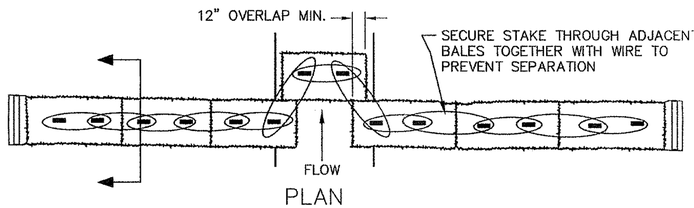


TYPICAL WELL-HEAD PROTECTION DETAIL IN ACCESS ROAD WHERE USED

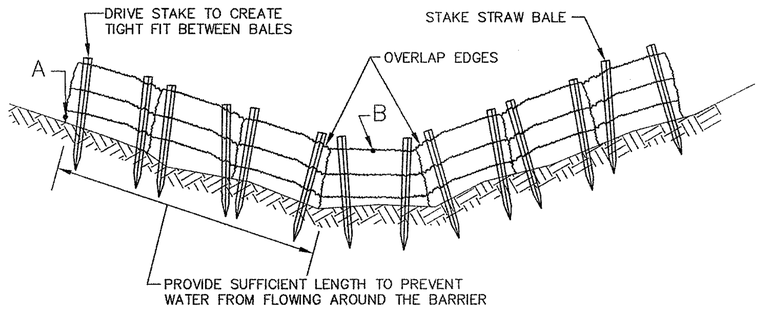
NOT TO SCALE



SECTION



PLAN



ELEVATION

(LOOKING DOWN STREAM)

NOTES:

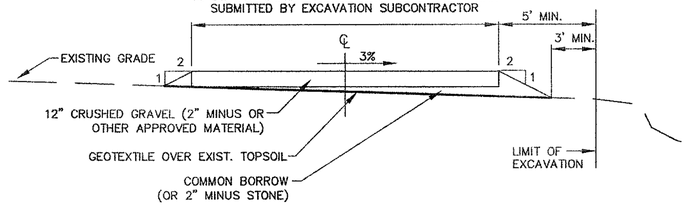
1. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT "A" AT LEAST 6" ABOVE OVERFLOW AT "B".
2. LOCATE BARRIER AS SHOWN ON PLANS AND AT THESE INTERVALS:

3.

DITCH SLOPE	MAX. PLACEMENT INTERVAL ALONG SWALE
< 3%	300'
> 3%	150'

TEMPORARY HAY BALE BARRIER (2)

NOT TO SCALE

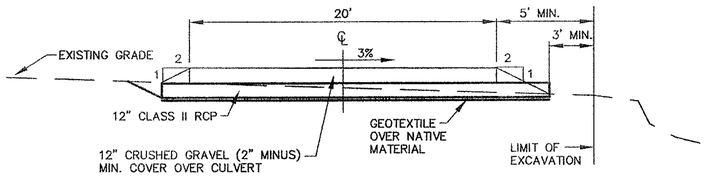


TYPICAL ACCESS ROAD SECTION

NOT TO SCALE

NOTE:

TOTAL DEPTH OF ACCESS ROAD WILL VARY ACCORDING TO SITE CONDITIONS.



CULVERT CROSSING DETAIL

NOT TO SCALE

NOTE:
CULVERT CROSSINGS SHALL BE LOCATED IN THE FIELD BY THE EXCAVATION CONTRACTOR.

STATE OF MAINE — Richard Anthony Delano 7683 — REGISTERED PROFESSIONAL ENGINEER — 11/24/03

COMMONWEALTH OF MASSACHUSETTS — JOEL S. LINDSAY No. 37620 — REGISTERED PROFESSIONAL ENGINEER — 11/24/03

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DEPARTMENT OF THE ARMY
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CONCORD, MASSACHUSETTS

WESTON SOLUTIONS — WOODLOT ALTERNATIVES, INC.

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

MISCELLANEOUS CIVIL DETAILS

Sheet reference number:
1003
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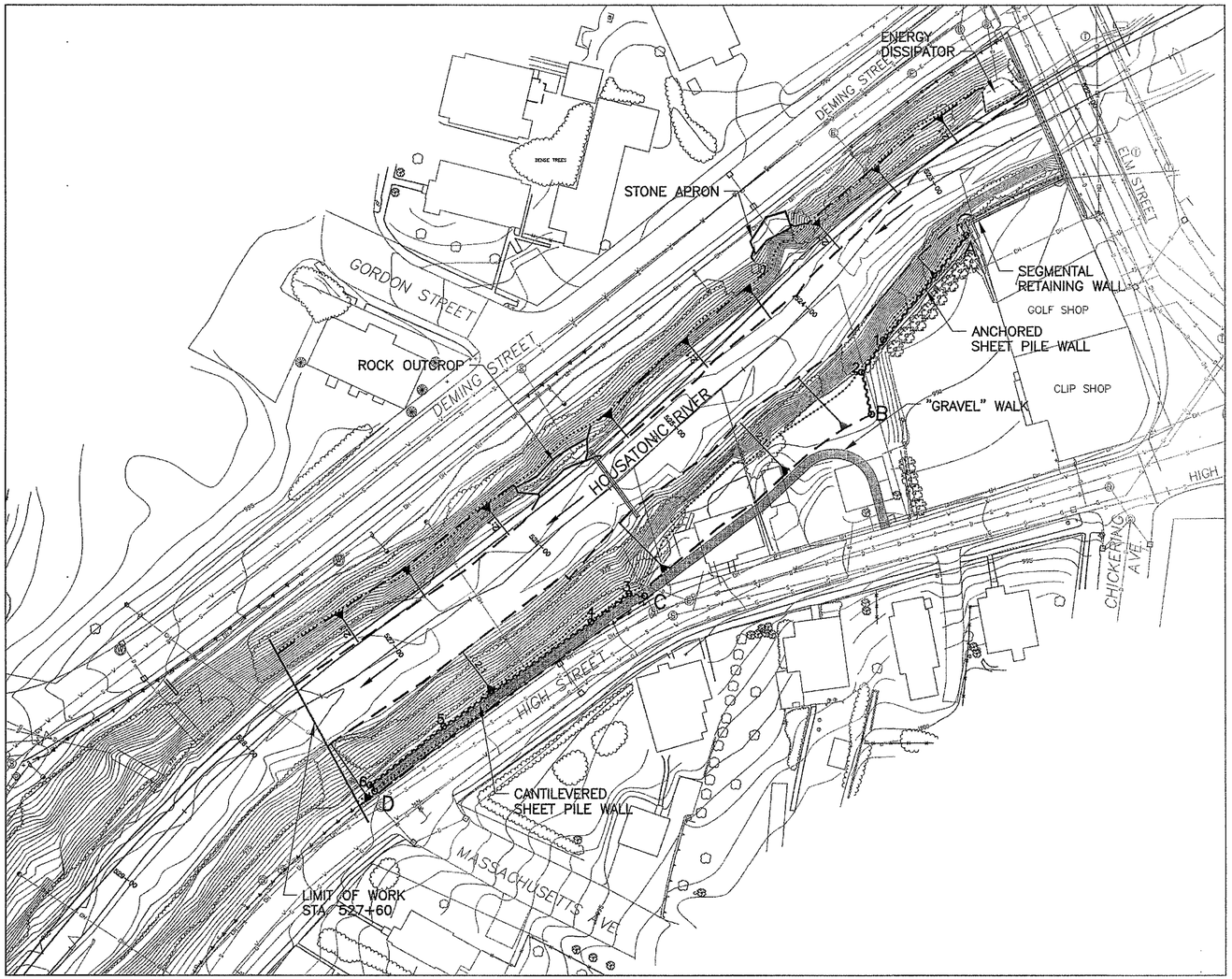

RETAINING WALL LAYOUT
1"=40'

TABLE 1 RETAINING WALL CONTROL POINTS

	COORDINATES		APPROXIMATE DISTANCE BETWEEN CONTROL PTS.	DESCRIPTION	ESTIMATED NO. OF SECTIONS
	NORTH	EAST			
A	2991969.47	185411.32			
			74.74'	STRAIGHT	34
1	2991911.03	185364.72			
			21.98'	STRAIGHT	10
2	2991892.77	185352.47			
			24.18'	STRAIGHT	11
B	2991869.21	185338.00			
C	2991769.02	185230.52			
			8.79'	STRAIGHT	4
3	2991770.38	185221.84			
			26.38'	STRAIGHT	12
4	2991754.81	185200.54			
			101.12'	STRAIGHT	46
5	2991696.58	185117.87			
			52.76'	STRAIGHT	24
6	2991663.98	185076.38			
			4.40'	STRAIGHT	2
D	2991660.52	185079.10			

ESTIMATED NO. OF SECTIONS BASED ON SKYLINE STEEL AZ-13 SINGLE PILE LENGTH

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM R. ZAHN ENGINEER 27113-E

11/21/03

40 0 40 80 FEET

SCALE 1"=40'

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New England District

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Drwn by: E.DIFATTA
Ckd by: B.ZAHN
Reviewed by:
Submitted by: Chief, Arch. Section
Date: 11/21/03
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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WOODLOT ENVIRONMENTAL, INC.
WESTON SOLUTIONS

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

RETAINING WALL LAYOUT

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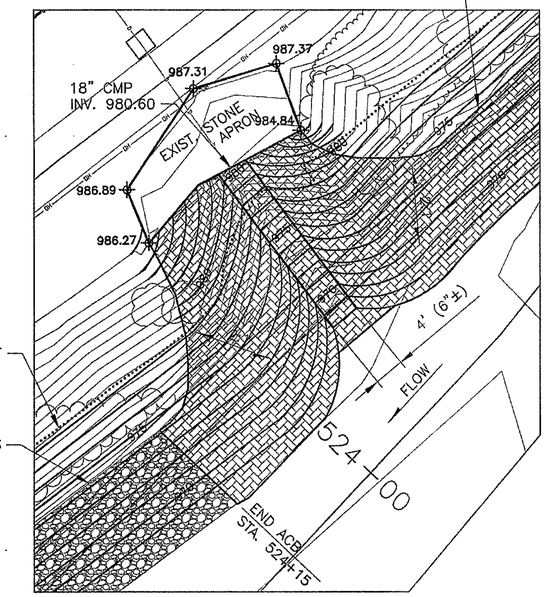
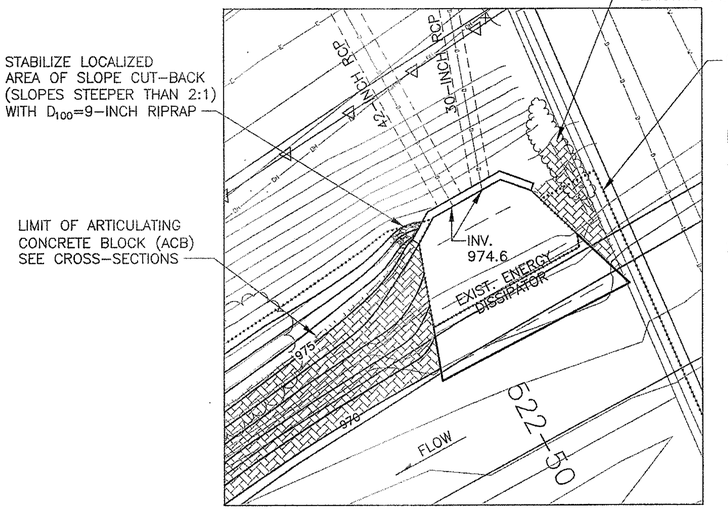
2000
5 OF 18



NOTES:

1. SEE ACB CHANNEL PROFILE DETAIL 1, DRAWING 2008 FOR CONSTRUCTION NOTES.
2. PLACE ACB TO FORM A CHANNEL APPROXIMATELY 4'–6" IN WIDTH AND 1'–0" (MIN) IN DEPTH.
3. SEE DRAWING 2008 FOR ACB DETAIL.

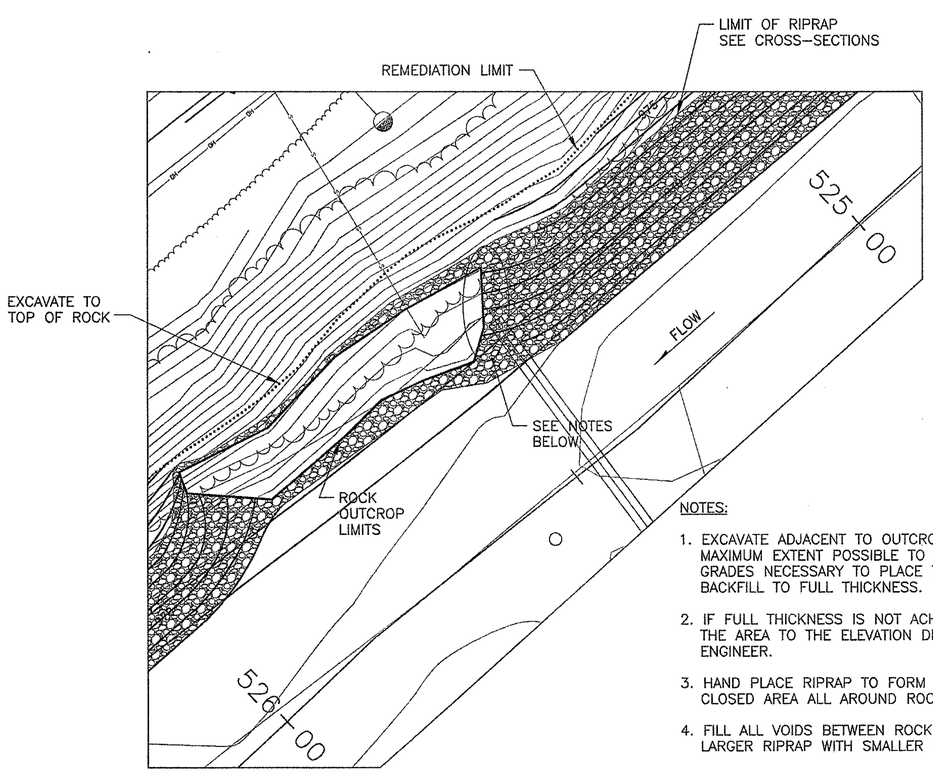
ARMORING PLAN AT STATION 524+00



NOTES:

1. WHEN EXCAVATING ALONG OUTLET STRUCTURE FILL ANY VOIDS DISCOVERED UNDER STRUCTURE WITH 1000 PSI LEAN CONCRETE.
2. MATCH TOP OF ACB TO THE EDGES OF OUTLET STRUCTURE.

ARMORING PLAN AT STATION 522+50

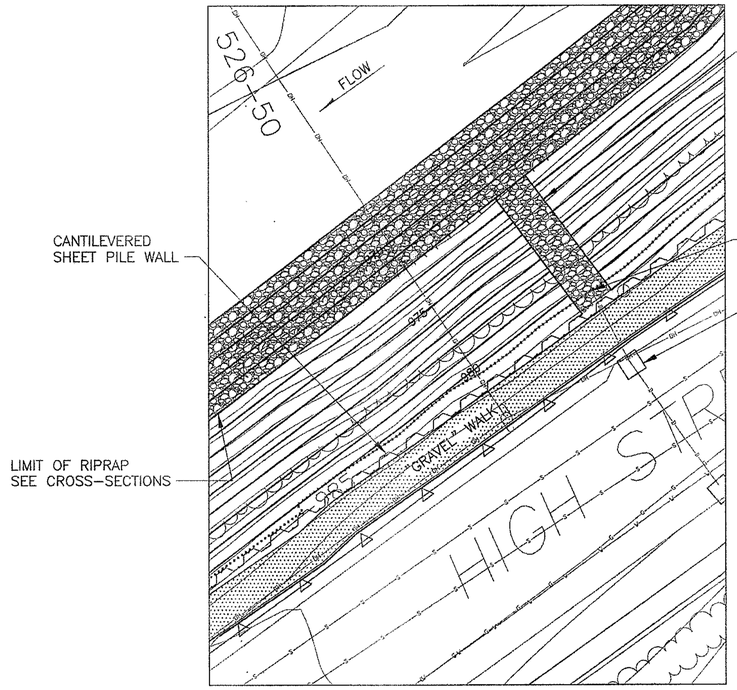


NOTES:

1. EXCAVATE ADJACENT TO OUTCROP TO MAXIMUM EXTENT POSSIBLE TO ACHIEVE THE GRADES NECESSARY TO PLACE THE PROPOSED BACKFILL TO FULL THICKNESS.
2. IF FULL THICKNESS IS NOT ACHIEVABLE, CLEAN THE AREA TO THE ELEVATION DIRECTED BY THE ENGINEER.
3. HAND PLACE RIPRAP TO FORM A TIGHT AND CLOSED AREA ALL AROUND ROCK OUTCROP.
4. FILL ALL VOIDS BETWEEN ROCK OUTCROP AND LARGER RIPRAP WITH SMALLER PIECES.

ARMORING PLAN AT STATION 525+50

ENLARGED PLANS
1"=10'



ARMORING PLAN AT STATION 526+50

10 0 10 20 FEET
SCALE 1"=10'

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Drawn by: EDIFATTA
Checked by: B.ZAHN
Reviewed by:
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Chief, Arch. Section
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File name:
Plot date:
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Rev. 0

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

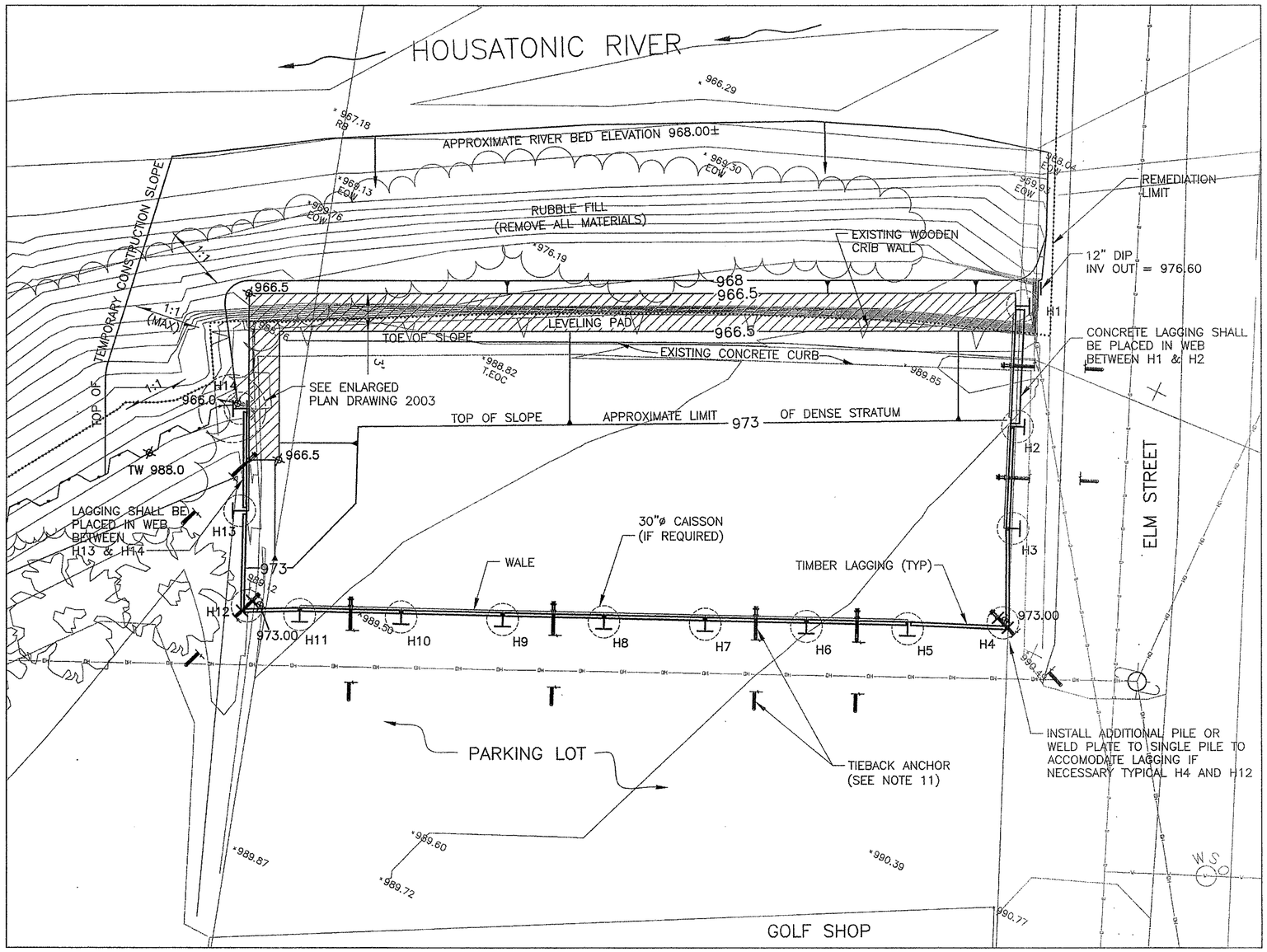
WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

ENLARGED GRADING PLANS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E
William A. Zahn
11/21/03

Sheet reference number:
2001
6 OF 18



EXCAVATION PLAN
1"=5'

NOTES:

1. TOPOGRAPHIC SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. IN MAY, 2003 BASED ON CONTROL PROVIDED BY WESTON SOLUTIONS, INC.
2. EXCAVATE TO PROPOSED CONTOURS AND SPOT ELEVATIONS
3. ADVANCE LAGGING AS EXCAVATION PROGRESSES TO ASSURE STABILITY OF FOUNDATIONS FOR BOTH THE BRIDGE AND BUILDING.
4. SEE DRAWING 2007 FOR LAGGING DETAILS.
5. ENSURE EXCAVATION IS NOT ACCESSIBLE TO THE PUBLIC.
6. H1 TO H4 TO BE INSTALLED AS CLOSE AS PRACTICABLE TO ELM STREET BRIDGE WINGWALL.
7. FINAL ALIGNMENT OF WALL BETWEEN H4 AND H12 TO BE BASED ON REINFORCEMENT LENGTHS REQUIRED TO SUPPORT SEGMENTAL RETAINING WALL. EXCAVATION AREA SHOULD BE MINIMIZED. EXCAVATION SUBCONTRACTOR SHALL COORDINATE LOCATION OF TEMPORARY WALL WITH SEGMENTAL RETAINING WALL DESIGN REQUIREMENTS.
8. SEE DRAWING 2009 FOR CROSS-SECTIONS.
9. ALL SOLDIER PILES EXCEPT H1, H2 AND H14 SHALL BE CUT-OFF 3 FEET BELOW FINAL GROUND SURFACE ELEVATIONS. THE TOP ELEVATION OF H1 AND H14 SHALL MATCH THE ELEVATION OF ADJACENT WALLS. TOP ELEVATION OF H2 AND PRECAST CONCRETE LAGGING SHALL BE SET 12 INCHES BELOW FINAL GROUND SURFACE ELEVATION.
10. EXCAVATION SUBCONTRACTOR SHALL COMPLETE EXCAVATION TO EL. 966.5 BETWEEN H1 & H2 TO ALLOW PLACEMENT OF PRECAST CONCRETE LAGGING.
11. EXCAVATION SUBCONTRACTOR SHALL DETERMINE FINAL LOCATION AND LENGTH OF TIEBACK ANCHORS.
12. THE EXCAVATION SUBCONTRACTOR MAY PROPOSE AN ALTERNATE RETAINING WALL OR CRIB WALL STABILIZATION METHOD.

TABLE 2
H PILE COORDINATE CONTROL POINTS
(SEE NOTE 7)

H PILE (HP 14x73)	COORDINATES	
	NORTH	EAST
H1	2992004.03	185465.00
H2	2991995.38	185468.71
H3	2991988.03	185471.87
H4	2991981.06	185474.33
H5	2991977.37	185467.75
H6	2991974.06	185460.46
H7	2991970.75	185453.18
H8	2991967.44	185445.90
H9	2991964.13	185438.62
H10	2991960.82	185431.33
H11	2991957.51	185424.05
H12	2991955.56	185420.03
H13	2991962.77	185416.28
H14	2991969.99	185412.83

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E
William A. Zahn
11/21/03

0 5 10 15
SCALE: 1" = 5'

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New England District

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0	ISSUED FOR CONSTRUCTION	11/21/03	

Rev. 0
Date: 11/21/03
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Designed by: HARPUR/MACKIE
Ckd by: B.ZAHN
Dwn by: E.DIFATTA
Reviewed by:
Submitted by:
File name:
Plot date:
Plot scale:
Chief, Arch. Section

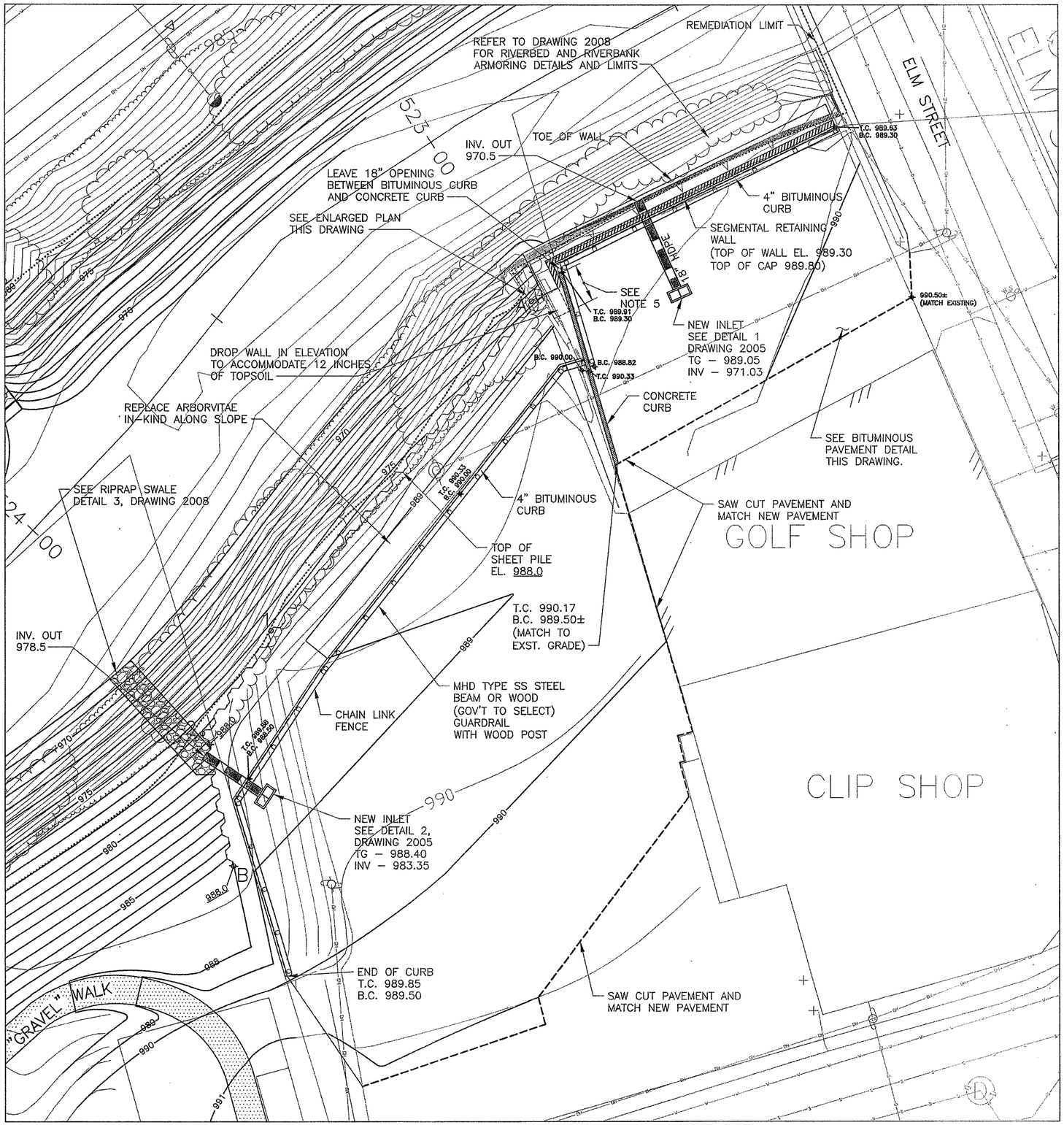
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

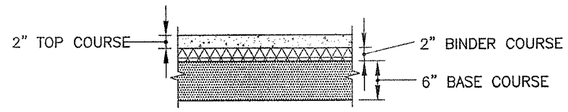
GOLF SHOP EXCAVATION PLAN

Sheet reference number:
2002
7 OF 18



FINAL GRADING PLAN

SCALE: 1"=10'



BITUMINOUS PAVEMENT DETAIL

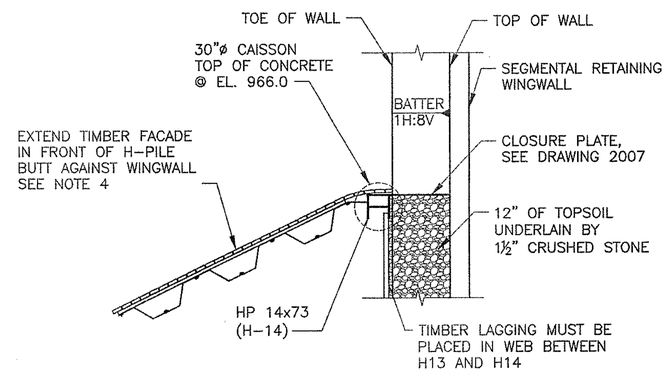
N.T.S.

BITUMINOUS PAVEMENT SPECIFICATION TABLE

MATERIAL	MA HIGHWAY DEPARTMENT SPECIFICATION
TOP COURSE	M3.11.00, CLASS I, AC–10
BINDER COURSE	M3.11.00, CLASS I, AC–10
AGGREGATE BASE COURSE	M2.01.4, 19MM

NOTES:

1. BITUMINOUS PAVEMENT SHALL BE INSTALLED PER MA HIGHWAY DEPARTMENT SPECIFICATIONS. SUFFICIENT MATERIAL SHALL BE REMOVED FROM BENEATH THE EXISTING PAVEMENT TO ALLOW PLACEMENT OF BASE, BINDER, AND TOP COURSES TO THE THICKNESSES AND GRADES SHOWN.
2. SEE DRAWING 2004 AND 2005 FOR SEGMENTAL WALL DETAILS AND TYPICAL CROSS–SECTION.
3. GRADING REQUIRED TO ALLOW FOR DRAINAGE AWAY FROM SEGMENTAL RETAINING WALL AND SHEET PILE WALL INTO THE INLET.
4. SEE DRAWING 2007, SECTION B FOR INTERFACE BETWEEN THE SHEET PILING AND THE SEGMENTAL RETAINING WALL.
5. CONCRETE CURB SHALL ONLY BE 18" IN TOTAL HEIGHT; THIS LENGTH ONLY. SEE DRAWING 2004, FOR DETAIL OF CONCRETE CURB.
6. THE EXCAVATION SUBCONTRACTOR MAY PROPOSE AN ALTERNATE RETAINING WALL OR CRIB WALL STABILIZATION METHOD.



ENLARGED PLAN

N.T.S.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM A. ZAHN ENGINEER 27113-E

William A. Zahn 11/21/03

10 0 10 20 FEET

SCALE 1"=10'

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers New England District

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Designed by: R.MACKIE
Drawn by: E.DIPIATTA
Ckd by: B.ZAHN
Reviewed by:
Submitted by:
Chief, Arch. Section
Date: 11/21/03
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Rev. 0
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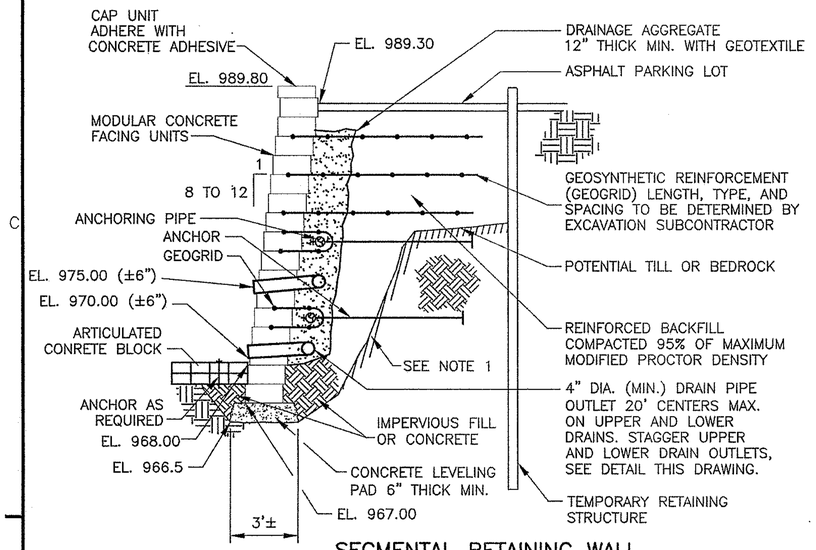
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. WOODWARD CLYDE INTERNATIONAL

1.5 MILE REMOVAL ACTION – PHASE 2 – STA. 522+29 TO STA. 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

GOLF SHOP FINAL GRADING PLAN

Sheet reference number:
2003
8 OF 18

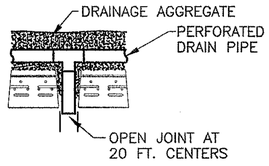


SEGMENTAL RETAINING WALL

N.T.S.

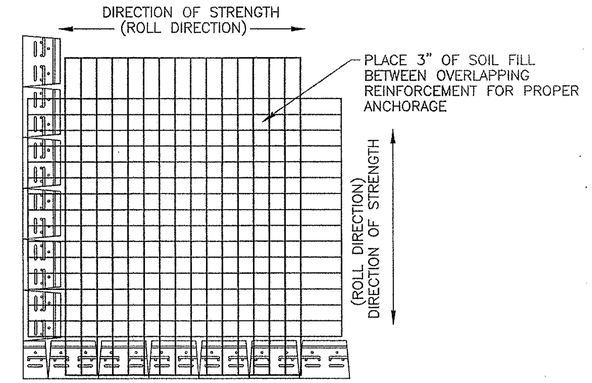
NOTES:

1. IF TILL OR BEDROCK ARE ENCOUNTERED INSTALL ANCHORS IN LIEU OF USING FULL LENGTHS OF REINFORCEMENT. ALL ANCHORAGE SYSTEM COMPONENTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.



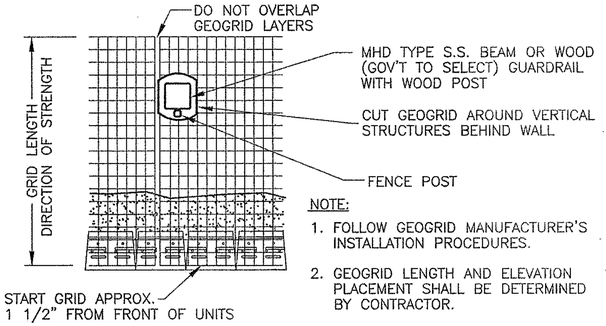
DRAIN PIPE DETAIL

N.T.S.



GEOSYNTHETIC PLACEMENT – OUTSIDE CORNER

N.T.S.

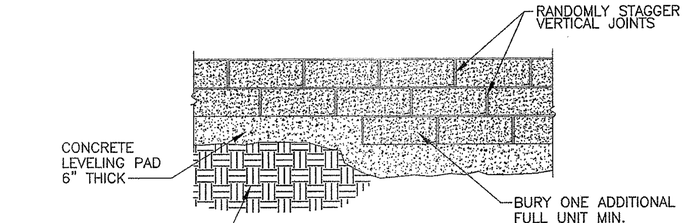


NOTE:

1. FOLLOW GEOGRID MANUFACTURER'S INSTALLATION PROCEDURES.
2. GEOGRID LENGTH AND ELEVATION PLACEMENT SHALL BE DETERMINED BY CONTRACTOR.

GEOSYNTHETIC AT STRUCTURES BEHIND WALL

N.T.S.

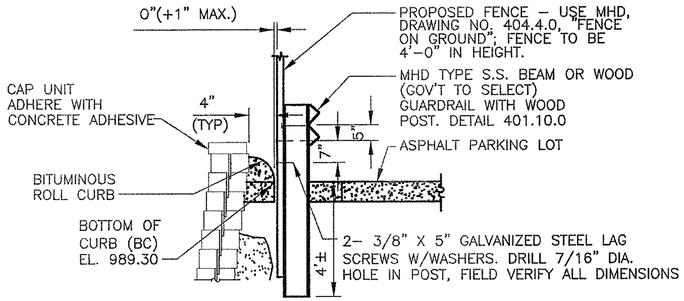


NOTE:

1. LIMIT CHANGES IN BASE ELEVATION TO 6" PER STEP TO AVOID DIFFERENTIAL SETTLEMENT.
2. STEP OFTEN ENOUGH TO MAINTAIN MINIMUM REQUIRED EMBEDMENT.

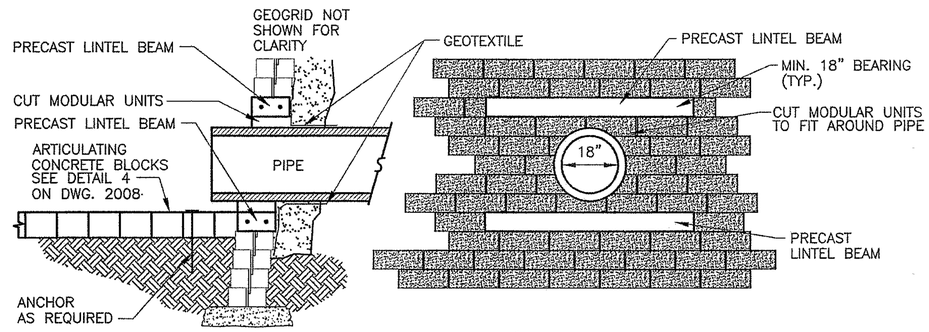
STEPPING BASE DETAIL

N.T.S.



FENCE AND GUIDERAIL TYPICAL SECTION

N.T.S.

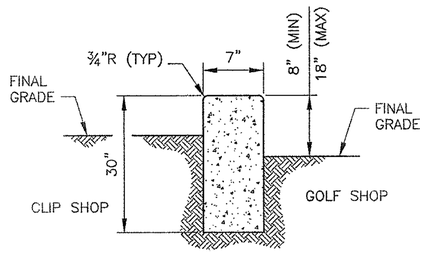


PIPE PENETRATION

N.T.S.

WALL W/ PIPE CULVERT PENETRATION

N.T.S.



CONCRETE CURB DETAIL

N.T.S.

NOTES:

1. FOR MATERIALS, SEE MHD, SECTION 501.63.
2. FOR INSTALLATION REQUIREMENTS, SEE MHD, SECTION 501.63.
3. SEE DRAWING 2003 FOR CURB LOCATION.

LINTEL NOTES:

1. FINAL BEAM SIZE, REINFORCEMENT, AND CONFIGURATION TO BE DESIGNED BY THE SEGMENTAL RETAINING WALL ENGINEER.
2. LINTEL BEAMS SHALL BE PRECAST WITH MIN. 7 DAYS CURE.
3. HEIGHT OF BEAM SHALL CORRESPOND TO HEIGHT OF MODULAR UNIT(S).
4. PLACE LINTEL ON COURSE ABOVE DRAINAGE PIPE. INSTALL DRAINAGE PIPE PRIOR TO CONSTRUCTION OF WALL ABOVE.
5. PIPE TO EXTEND BEYOND BASE COURSE OF WALL NO LESS THAN 6".
6. GEOTEXTILE FABRIC SHALL BE INSTALLED AROUND PIPE OPENING.
7. LINTEL TO EXTEND MINIMUM 18" EITHER SIDE OF OPENING.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E

William A. Zahn
11/21/03

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US Army Corps of Engineers
New England District

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Designed by: A.HARPUR
Drn by: E.DIFATTA
Chkd by: B.ZAHN
Reviewed by:
Submitted by:
Chief, Arch. Section

Date: 11/21/03
Design file no:
SPEC. No.:
File name:
Plot date:
Plot scale:
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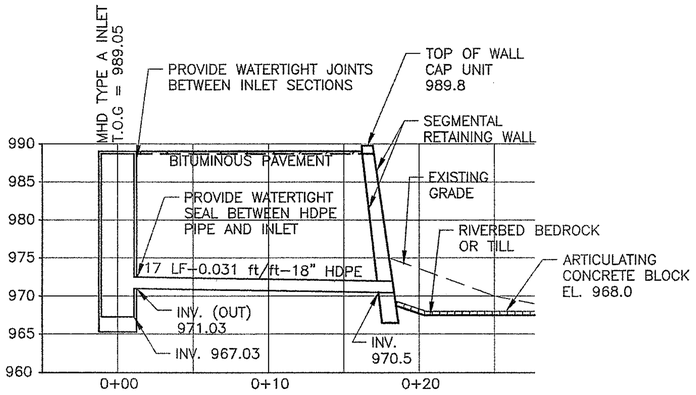
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

15 MILE REMOVAL ACTION - PHASE 2 - STA 552+29 TO STA 527+80
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

GOLF SHOP SEGMENTAL RETAINING WALL DETAILS

Sheet reference number:
2004
9 OF 18

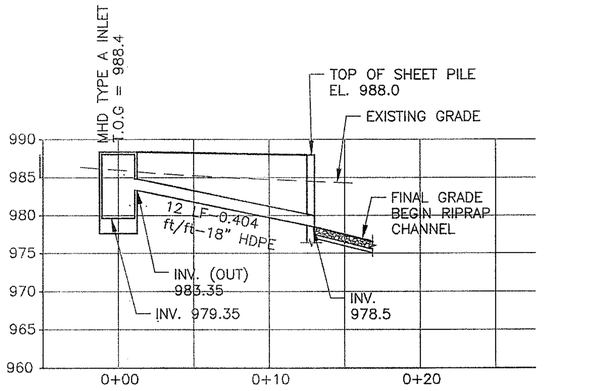


GOLF SHOP PARKING CULVERT PROFILE DETAIL (1) 2003|2005

H: 1"=10'–0"
V: 1"=10'–0"

NOTES:

1. GEOGRID NOT SHOWN FOR CLARITY.
2. INLET AND GRATE SHALL BE DESIGNED FOR HS–20 LOADING.
3. EXCAVATION SUBCONTRACTOR TO COORDINATE THE LENGTH OF 18" PIPE REQUIRED WITH SEGMENTAL RETAINING WALL DESIGNER.

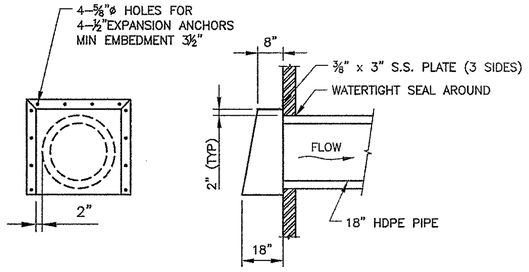


CLIP SHOP PARKING CULVERT PROFILE DETAIL (2) 2003|2005

H: 1"=10'–0"
V: 1"=10'–0"

NOTES:

1. INLET AND GRATE SHALL BE DESIGNED FOR HS–20 LOADING.
2. EXCAVATION SUBCONTRACTOR TO COORDINATE THE LENGTH OF 18" PIPE REQUIRED WITH SHEET PILE INSTALLER.

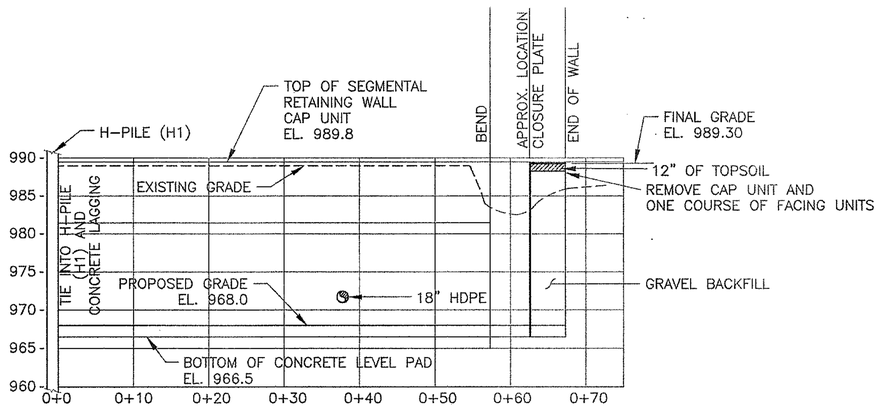


ELEVATION SECTION

TRAP
½"=1'–0"

NOTES:

1. ALL WELDS WILL COMPLY WITH A.I.S.C. AND AWS CODES
2. ALL WELDS WILL BE CONTINUOS WELDS.
3. TRAP SHALL MEET INTENT OF "INVERTED PIPE" AS DESCRIBED IN MADEP STORMWATER GUIDANCE FOR DEEP SUMP CATCH BASINS."



SEGMENTAL RETAINING WALL ELEVATION
STA. 522+34 TO 522+92

H: 1"=10'–0"
V: 1"=10'–0"

NOTE:

1. SPECIFIC HORIZONTAL LOCATIONS OF SEGMENTAL RETAINING WALL DRAIN PIPE OUTLETS AT EL. 970.0 (±6") AND EL 975 (±6") TO BE SELECTED BY CONTRACTOR IN ACCORDANCE WITH SEGMENTAL RETAINING WALL DETAIL ON DRAWING 2004.
2. INLETS SHALL HAVE SUMPS WITH DEPTHS OF AT LEAST 4' BELOW PIPE INVERT IN ACCORDANCE WITH MADEP STORMWATER MANAGEMENT GUIDANCE.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM A. ZAHN ENGINEER 27113-E
William A. Zahn 11/21/03

10 0 10 20 FEET
SCALE 1"=10'

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US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
0	ISSUED FOR CONSTRUCTION	11/21/03	

Designed by: R.MACKIE
Drwn by: E.DIFATTA
Ckd by: B.ZAHN
Reviewed by:
Submitted by:
Chief, Arch. Section
Date: 11/21/03
Design file no:
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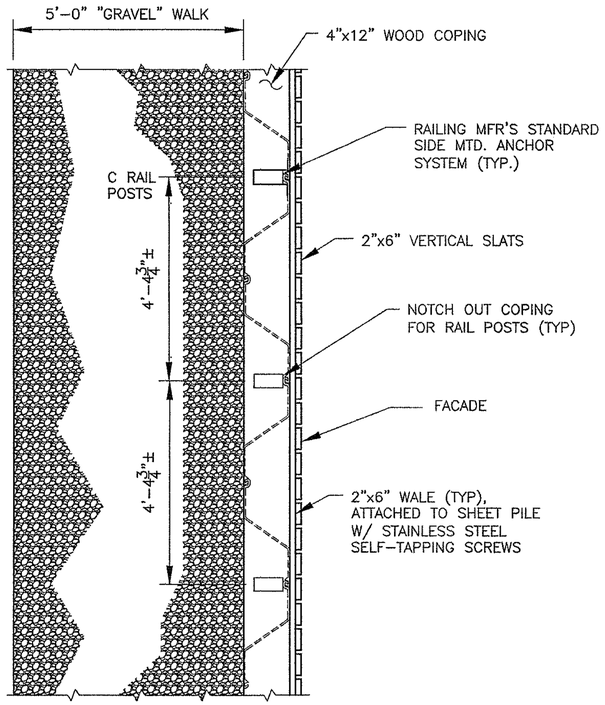
Rev. 0

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS
WESTON SOLUTIONS
WOODLOT ENGINEERING

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

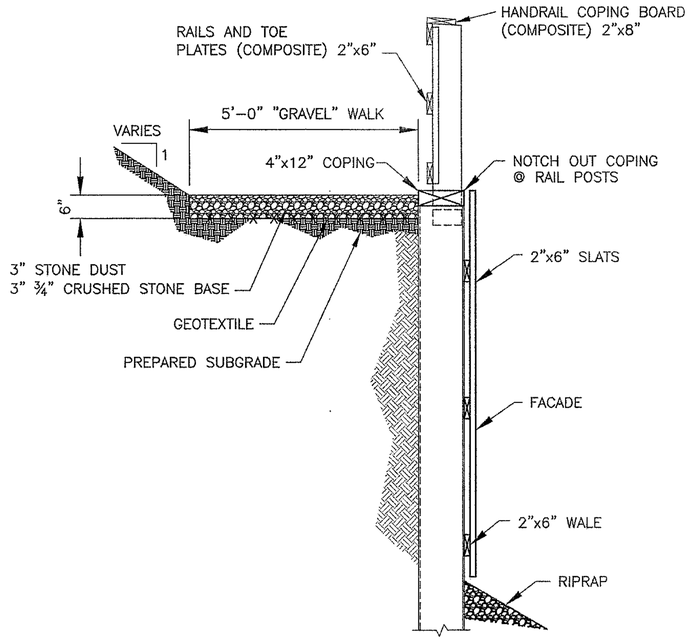
GOLF SHOP DETAILS

Sheet reference number:
2005
10 OF 18



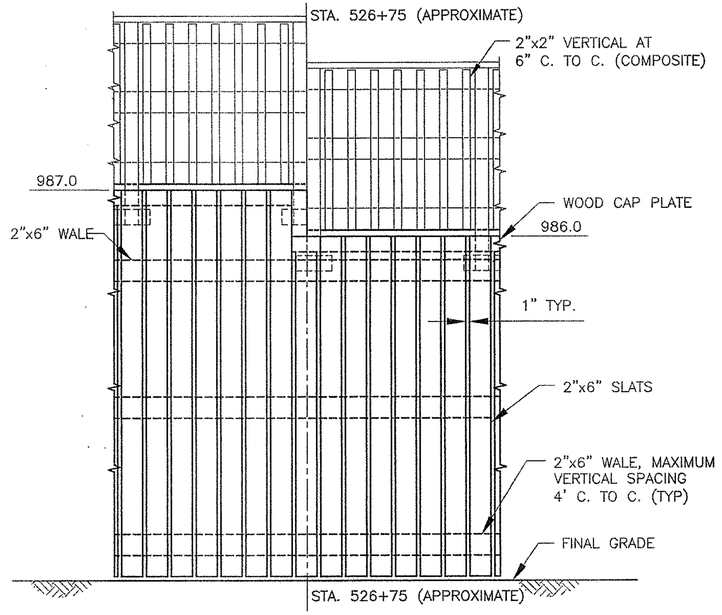
PLAN – CANTILEVERED RETAINING WALL

N.T.S.



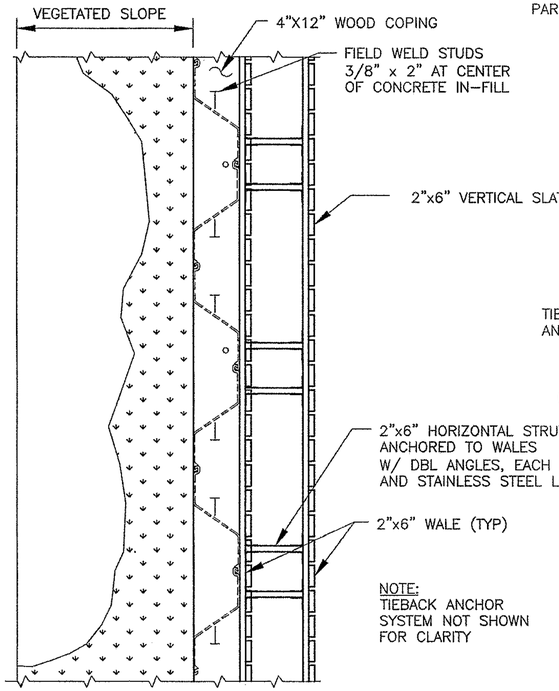
TYPICAL SECTION – CANTILEVERED RETAINING WALL STA. 525+75 TO 527+50 (EAST BANK)

N.T.S.



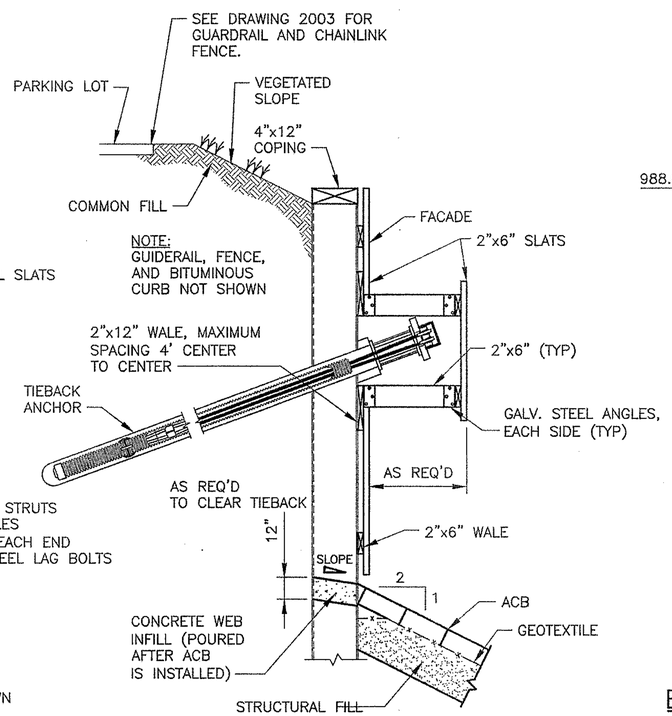
ELEVATION – CANTILEVERED RETAINING WALL AT STA. 526+75

N.T.S.



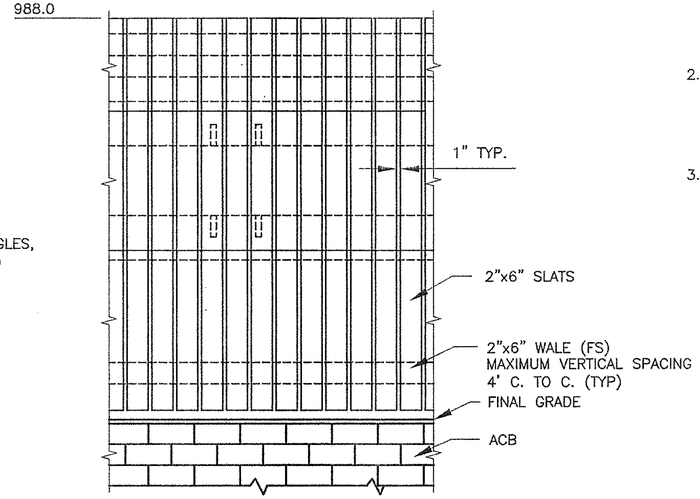
PLAN – ANCHORED RETAINING WALL

N.T.S.



TYPICAL SECTION – ANCHORED RETAINING WALL STA. 523+00 TO 524+24 (EAST BANK)

N.T.S.



ELEVATION – ANCHORED RETAINING WALL

N.T.S.

NOTES:

1. WALL LUMBER SHALL BE COMPOSED OF AN ACQ–TREATED, NO.2 GRADE SOUTHERN PINE OR BETTER, S4S, S–DRY IN ACCORDANCE WITH THE WESTERN WOOD PRODUCTS ASSSOCIATION (WWPA) GRADING STANDARDS.
2. ALL BOLTS, SCREWS, WASHERS, AND NAILS SHALL BE STAINLESS STEEL. MINIMUM BOLT/LAG SCREW DIAMETER FOR BOLTED CONNECTIONS SHALL BE 3/8" UNLESS OTHERWISE NOTED.
3. GALVANIZED STEEL ANCHOR BOLTS SHALL CONFORM TO A.S.T.M. A307 MATERIAL SPECIFICATION.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM A. ZAHN ENGINEER 27113-E

William A. Zahn 11/21/03

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US Army Corps of Engineers
New England District

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Drawn by: ELOFATTA
Checked by: B.ZAHN
Reviewed by:
Submitted by: Chief, Arch. Section
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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS, INC. WOODLOT ENGINEERING

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

SHEET PILE DETAILS
SHEET 1 OF 2

Sheet reference number:
2006
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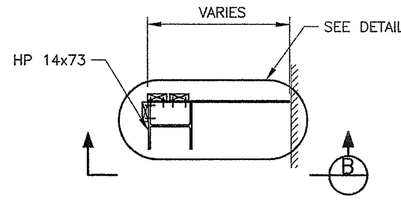
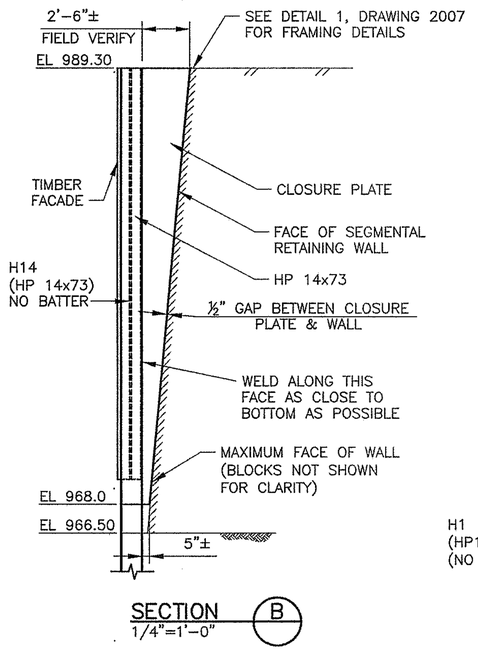


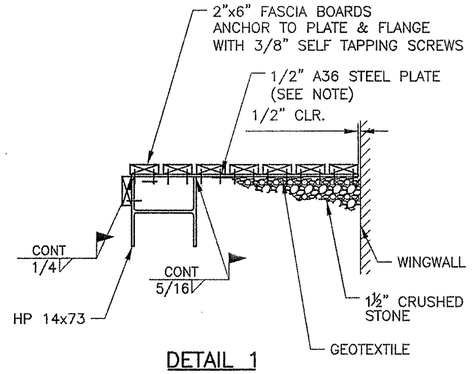
CLOSURE PLATE @ ELM STREET BRIDGE WINGWALL AND SEGMENTAL RETAINING WALL– PLAN

1/2" = 1'–0"



SECTION B

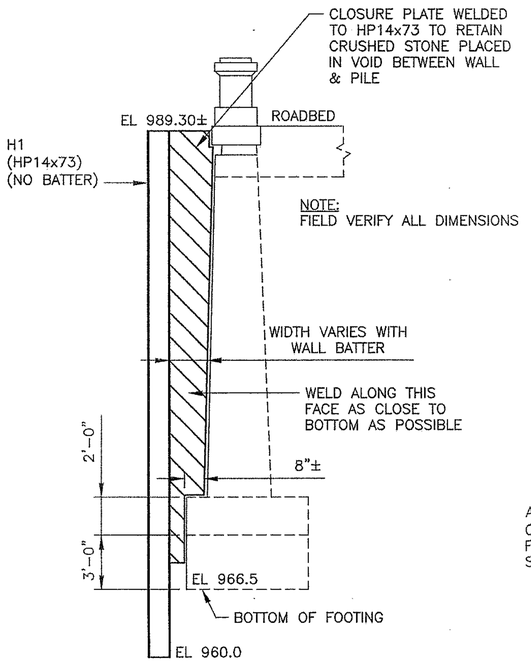
1/4"=1'–0"



DETAIL 1

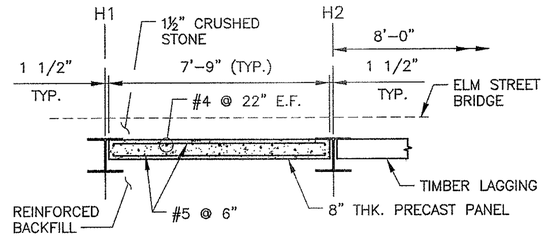
3/4"= 1'–0"

NOTE: EXCAVATION SUBCONTRACTOR TO FIELD MEASURE FOR PLATE DIMENSIONS AFTER HP 14x73 IS INSTALLED



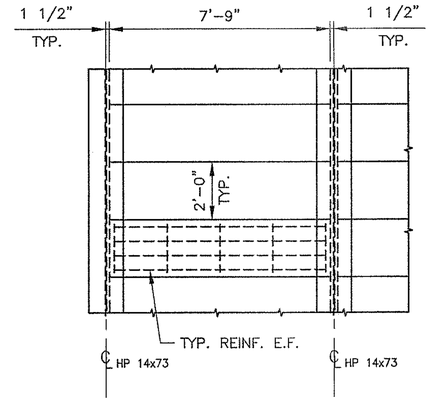
SECTION A

N.T.S.



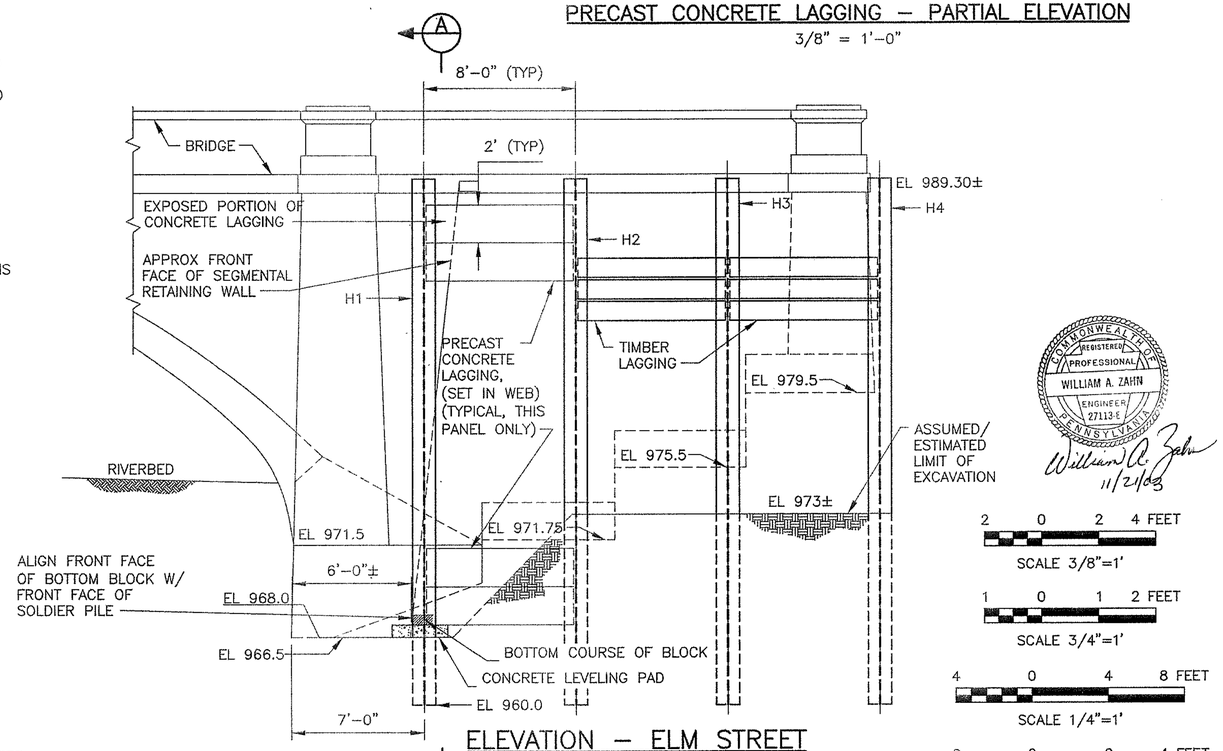
PRECAST CONCRETE LAGGING – PLAN

3/8" = 1'–0"



PRECAST CONCRETE LAGGING – PARTIAL ELEVATION

3/8" = 1'–0"



NOTE:
BRIDGE WINGWALL FOOTING ELEVATIONS BASED ON CITY OF PITTSFIELD, ELM STREET BRIDGE ELEVATION AND RAILING DETAIL, MARCH 20, 1911 SHEET 3.

ELEVATION – ELM STREET BRIDGE LAGGING

N.T.S.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E

11/21/03

2 0 2 4 FEET
SCALE 3/8"=1'

1 0 1 2 FEET
SCALE 3/4"=1'

4 0 4 8 FEET
SCALE 1/4"=1'

2 0 2 4 FEET
SCALE 1/2"=1'

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
0	ISSUED FOR CONSTRUCTION	11/20/03	

Designed by: HARPUR/HOFFMAN
Drwn by: E.DIFATTA
Ckd by: B.ZAHN
Reviewed by:
Submitted by: Chief, Arch. Section
Date: 11/21/03
Design file no:
SPEC. No.:
File name:
Plot date:
Plot scale:
Rev. 0

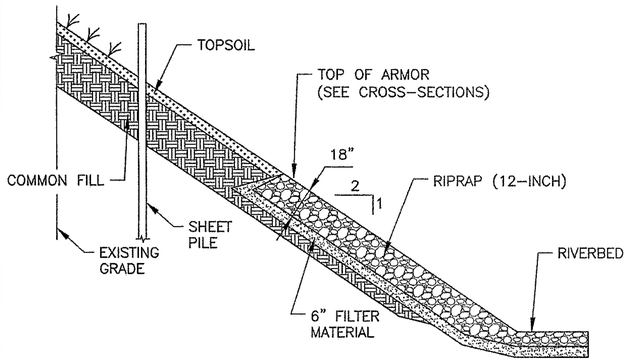
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

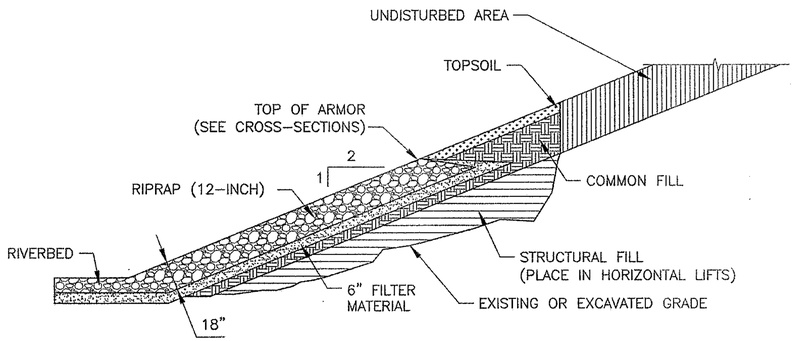
SHEET PILE DETAILS
SHEET 2 OF 2

Sheet reference number:
2007
12 OF 18



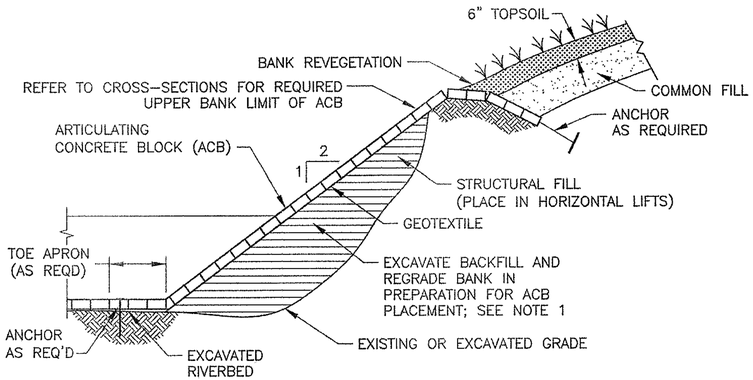
TYPICAL CROSS SECTION EAST BANK DETAIL STA. 524+00 TO 527+60

N.T.S



TYPICAL CROSS SECTION WEST BANK DETAIL STA. 524+00 TO 527+60

N.T.S.



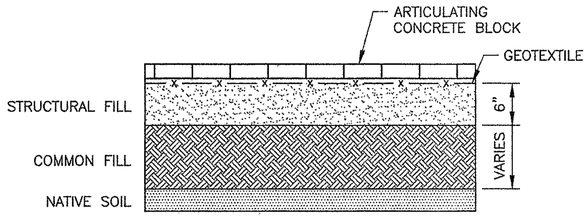
DETAIL 4
N.T.S. 2004|2008

ARTICULATING CONCRETE BLOCK (ACB) DETAIL STA. 522+29 TO 524+00

N.T.S.

NOTES:

1. REFER TO SPECIFICATION 02300, PART 3.1 FOR BACKFILL REQUIREMENTS.
2. MINIMUM THICKNESS OF STRUCTURAL FILL BELOW ACB SHALL BE 6 INCHES.
3. THE ARTICULATING CONCRETE BLOCK (ACB) SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE PARAMETERS/VALUES AND REQUIREMENTS OF SPECIFICATION 02382, ARTICULATING CONCRETE BLOCK REVETMENTS. THE DESIGN OF THE ACB SYSTEM SHALL ADDRESS BANK ANCHORAGE AND TOE APRON REQUIREMENTS AS REQ'D BY DESIGN PARAMETERS AND ITS LAYOUT CONFIGURATION.

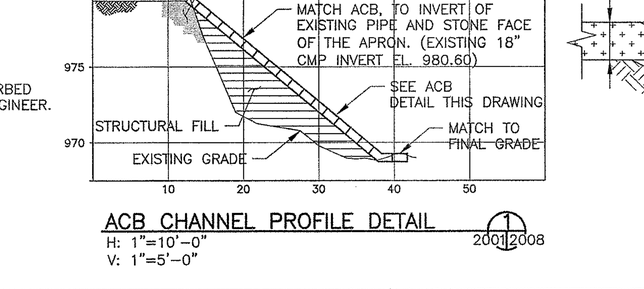


TYPICAL RIVERBED BACKFILL SEQUENCE STA. 522+29 TO 524+00

N.T.S.

NOTES:

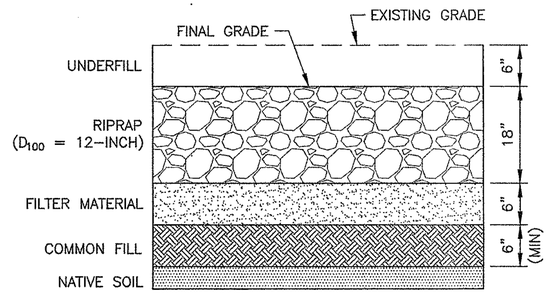
1. IF BEDROCK IS ENCOUNTERED WITHIN 3 FEET OF THE EXISTING RIVERBED SURFACE, BACKFILLING IS NOT REQUIRED, UNLESS DIRECTED BY THE ENGINEER.
2. AT THE DIRECTION OF THE ENGINEER, BACKFILL MAY CONSIST OF MINIMUM 24 INCHES OF 18-INCH RIPRAP OVERLYING FILTER MATERIAL AND COMMON FILL.



RIPRAP SWALE PROFILE DETAIL (STA. 526+50)

H: 1"=40'-0"
V: 1"=4'-0"

2 | 2001|2008



TYPICAL RIVERBED BACKFILL SEQUENCE STA. 524+00 TO 527+60

N.T.S.

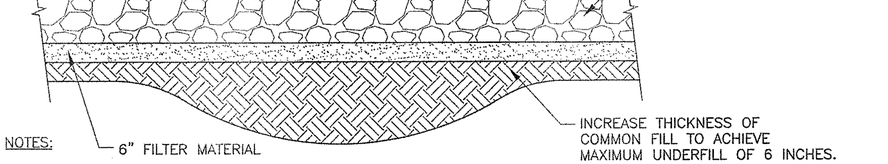
NOTES:

1. IF BEDROCK IS ENCOUNTERED WITHIN 2.5 FEET OF THE EXISTING RIVERBED SURFACE, BACKFILLING IS NOT REQUIRED, UNLESS DIRECTED BY THE ENGINEER.

ACB CHANNEL PROFILE DETAIL

H: 1"=10'-0"
V: 1"=5'-0"

1 | 2001|2008

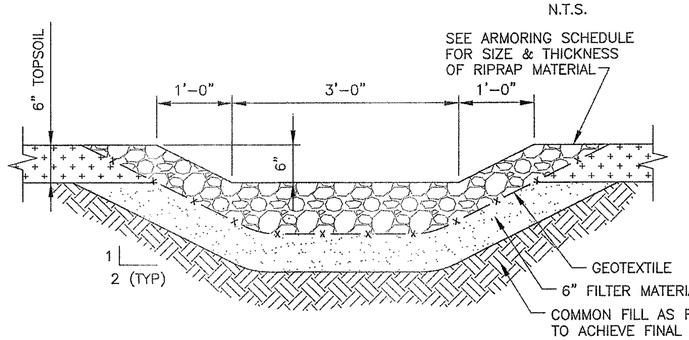


NOTES:

1. IF AND WHEN OVER-EXCAVATION IS REQUIRED, I.E. EXCAVATION GREATER THAN 3 FEET, THE EXCAVATION SHALL BE BACKFILLED AS INDICATED ABOVE.
2. FROM STA. 524+00 TO 527+60, IF AREA SURROUNDING OVER-EXCAVATION IS NOT BACKFILLED, I.E., BEDROCK IS ENCOUNTERED WITHIN 2.5 FEET OF THE RIVERBED SURFACE, BACKFILL OVER-EXCAVATED AREA WITH 12-INCH RIPRAP OR AS OTHERWISE DIRECTED BY THE ENGINEER.
3. FROM STA. 521+68 TO 524+00 IF AREA SURROUNDING OVER-EXCAVATION IS NOT BACKFILLED, I.E., BEDROCK IS ENCOUNTERED WITHIN 3 FEET OF THE RIVERBED SURFACE, BACKFILL OVER-EXCAVATED AREA WITH 18-INCH RIPRAP, ACB, OR AS OTHERWISE DIRECTED BY THE ENGINEER.

RESTORATION OF ISOLATED OVER-EXCAVATION DETAIL

N.T.S.



RIPRAP SWALE DETAIL

N.T.S.

3 | 2003|2008

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E
11/21/03

4 0 4 8 FEET
SCALE 1"=4'

5 0 5 10 FEET
SCALE 1"=5'

10 0 10 20 FEET
SCALE 1"=10'

40 0 40 80 FEET
SCALE 1"=40'

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr	Symbol	Description	Date	Appr
0	ISSUED FOR CONSTRUCTION	11/21/03					

Designed by: HARPUR/ZAHN | Date: 11/21/03 | Rev. 0
Dwn by: ELDFATTA | Ckd by: B.ZAHN | Design file no.: | SPEC. No.:
Reviewed by: | Submitted by: | File name: | File date: | Plot scale:
Chief, Arch. Section

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

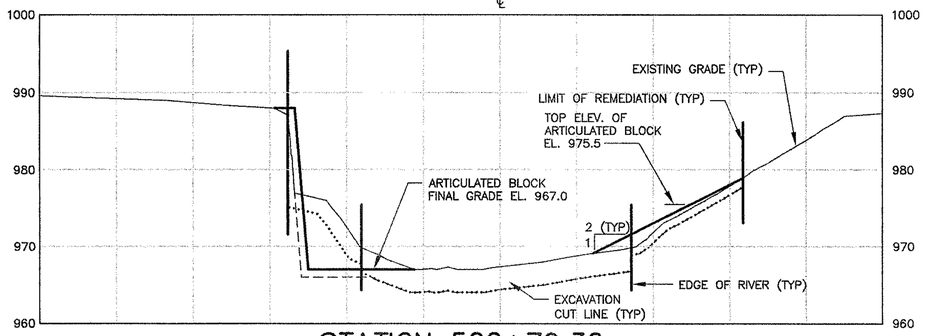
WESTON SOLUTIONS, INC. | WOODPLOT

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

RIVERBED AND RIVERBANK ARMORING DETAILS

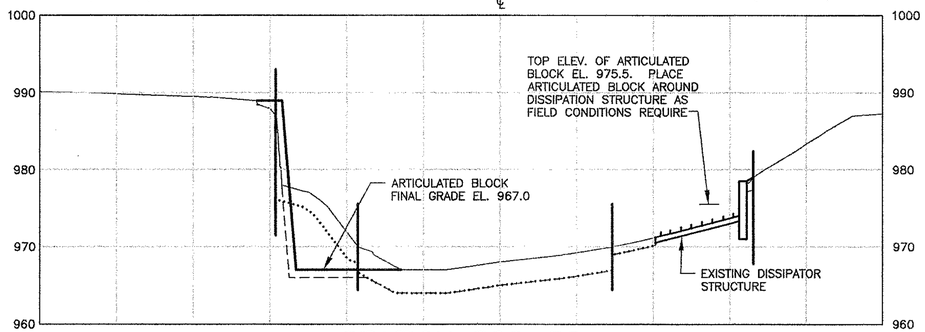
Sheet reference number:
2008
13 OF 21

EAST (LEFT) (RIGHT) WEST



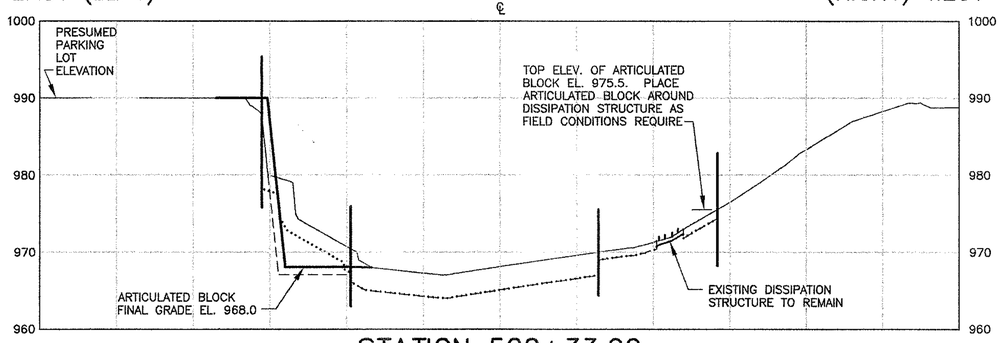
STATION 522+79.36

EAST (LEFT) (RIGHT) WEST



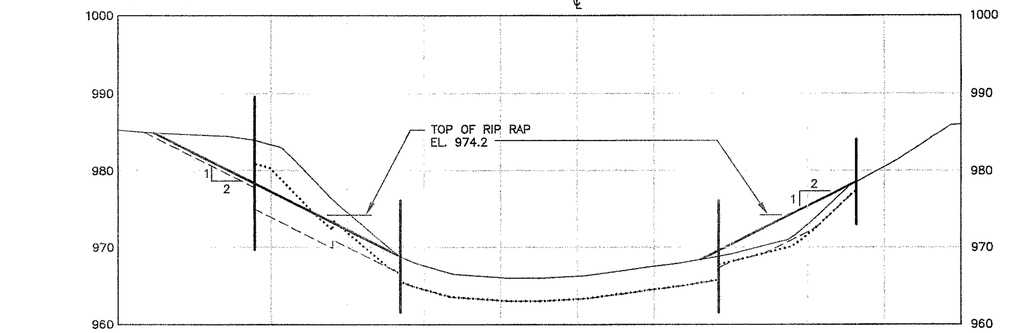
STATION 522+50

EAST (LEFT) (RIGHT) WEST



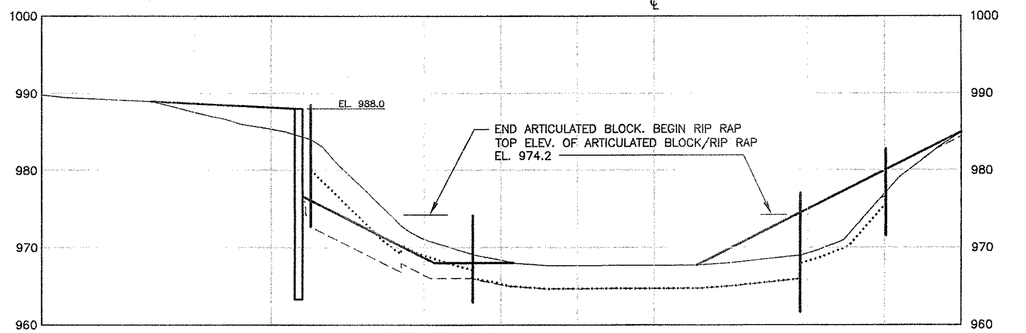
STATION 522+33.99

EAST (LEFT) (RIGHT) WEST



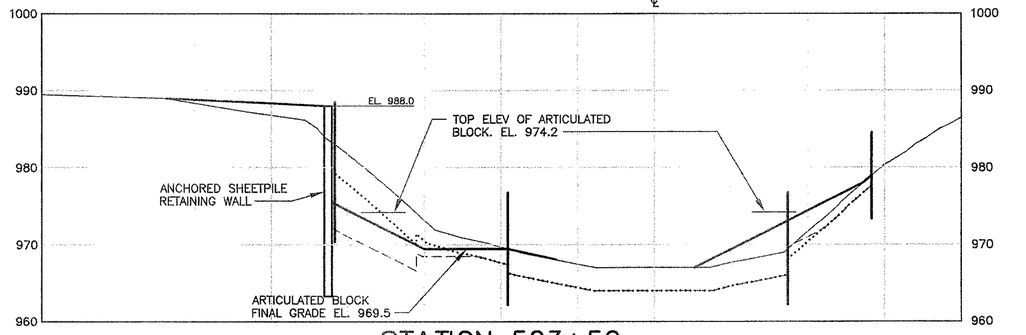
STATION 524+50

EAST (LEFT) (RIGHT) WEST



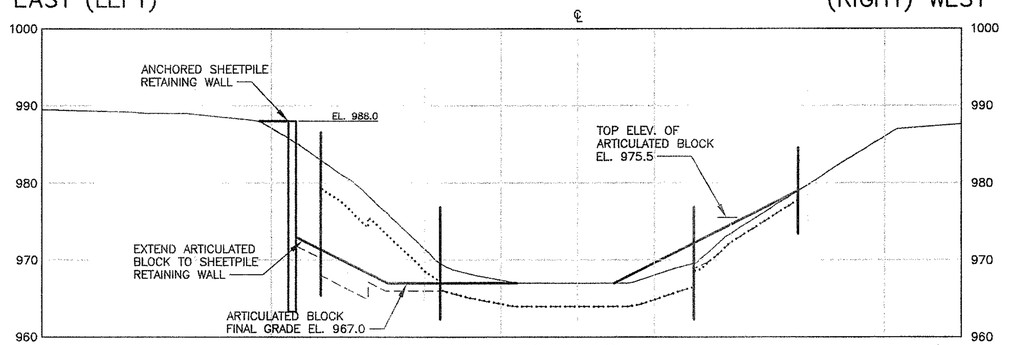
STATION 524+00

EAST (LEFT) (RIGHT) WEST



STATION 523+50

EAST (LEFT) (RIGHT) WEST



STATION 523+10

10 0 10 20 FEET

SCALE 1"=10'

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
WILLIAM A. ZAHN
ENGINEER
27113-E
William A. Zahn
11/21/03

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
0	ISSUED FOR CONSTRUCTION	11/21/03	

Designed by: MNH/WC
Drawn by: EJM/KTA
Checked by: T.DELANO
Reviewed by:
Submitted by:
Chief, Arch. Section
Date:
Design file no:
SPEC. No.:
Rev: 0
File name: 2009-2010
Plot date: 11/21/03
Plot scale: AS SHOWN

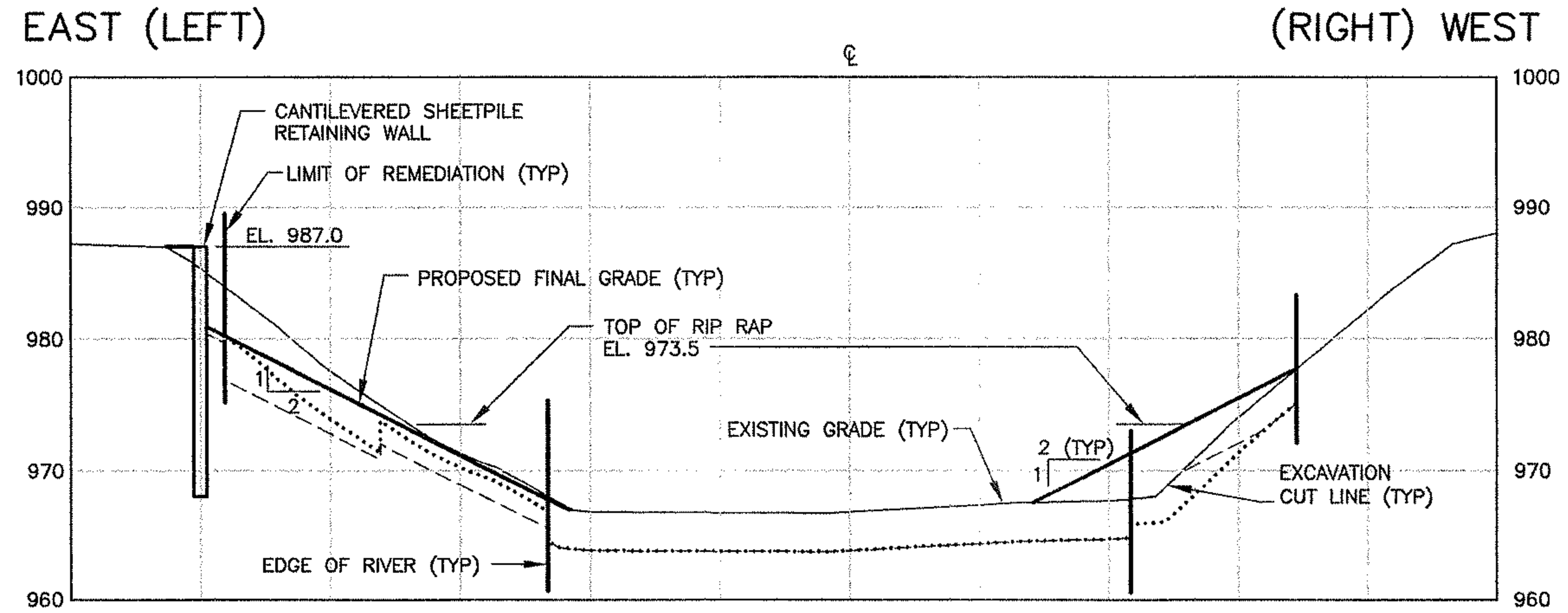
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

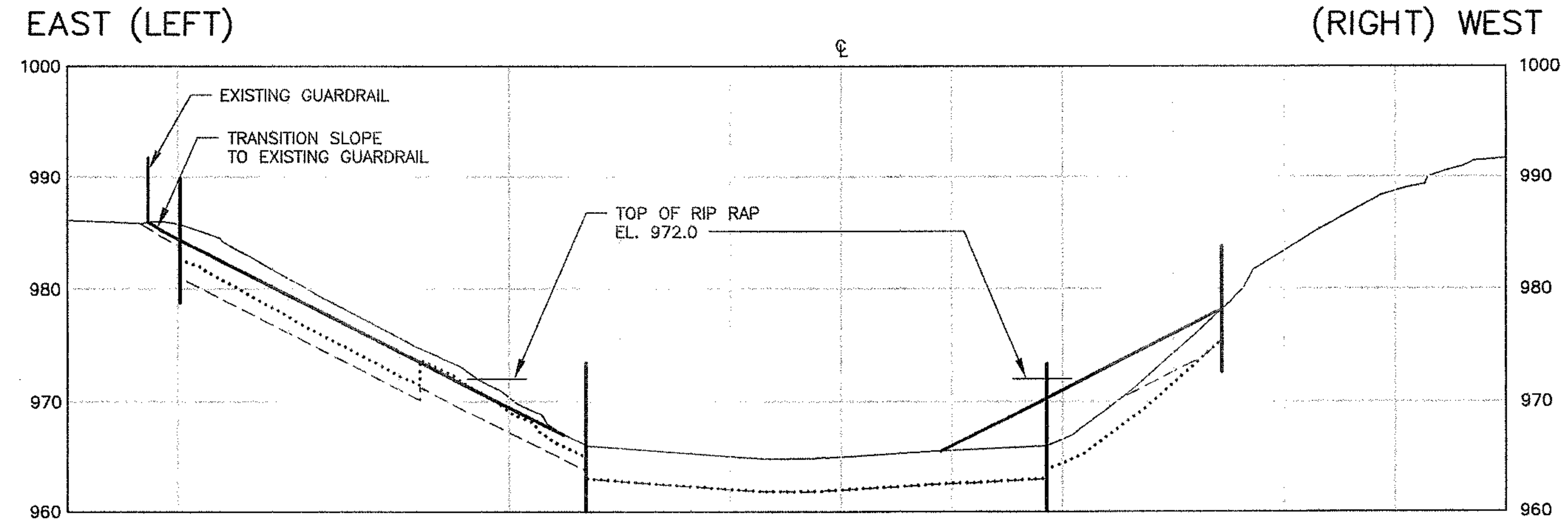
I-5 MILE REMOVAL ACTION - PHASE 2 - STA 522+33 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 1 OF 2

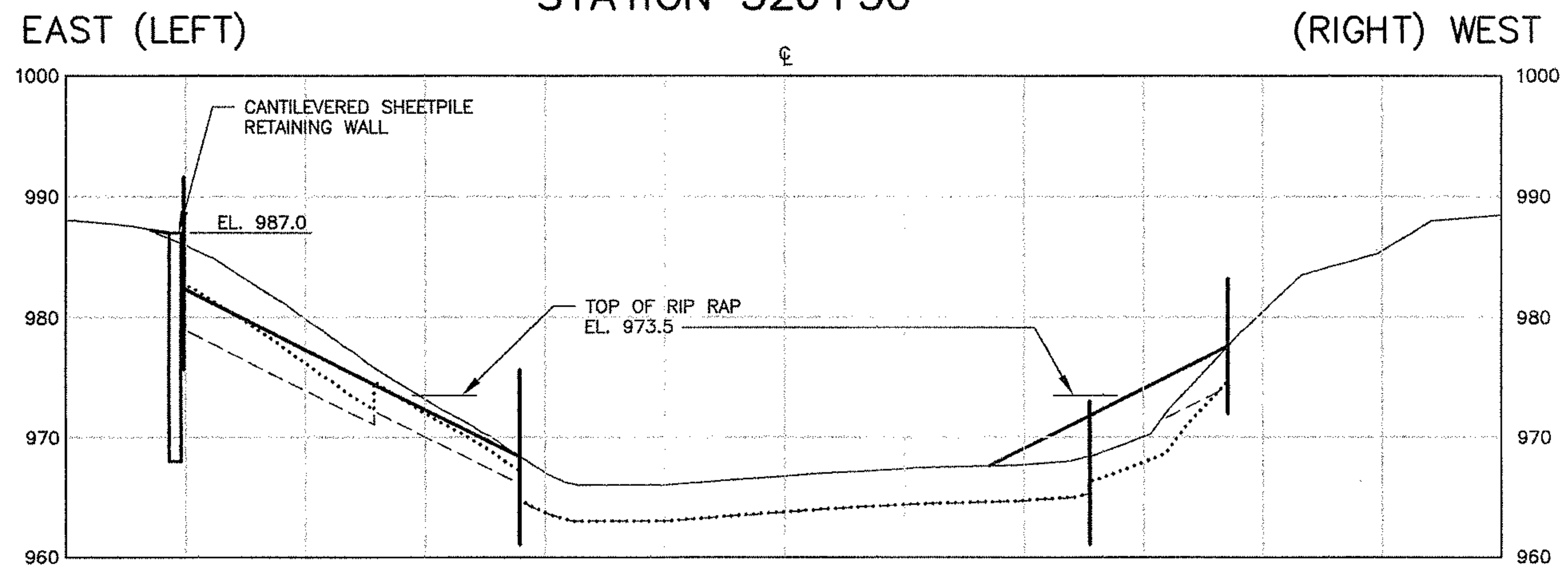
Sheet reference number:
2009
14 OF 18



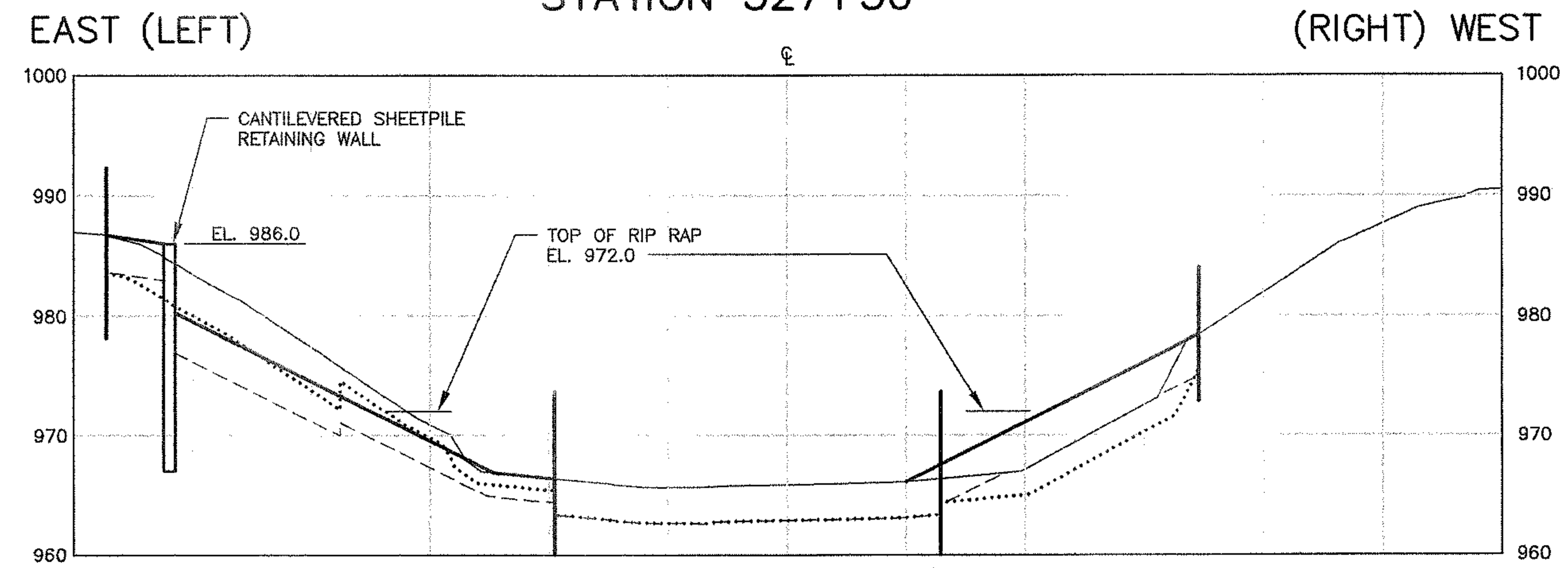
STATION 526+50



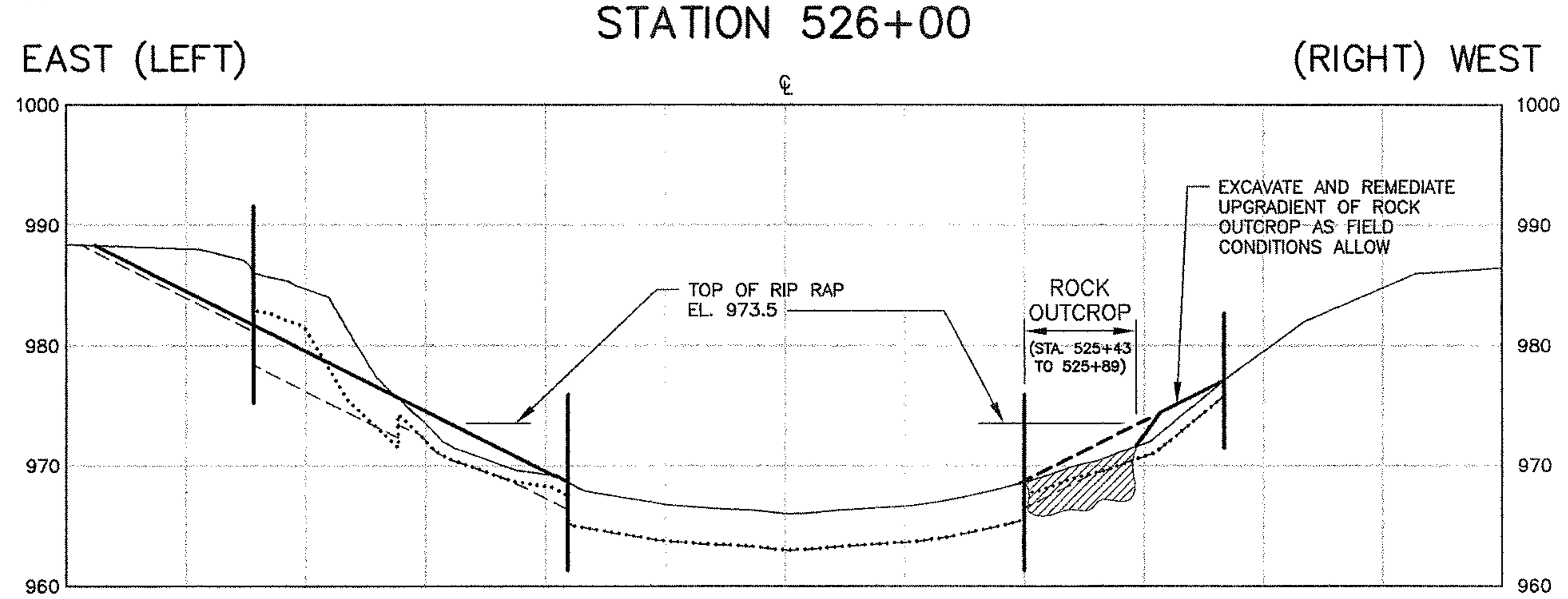
STATION 527+50



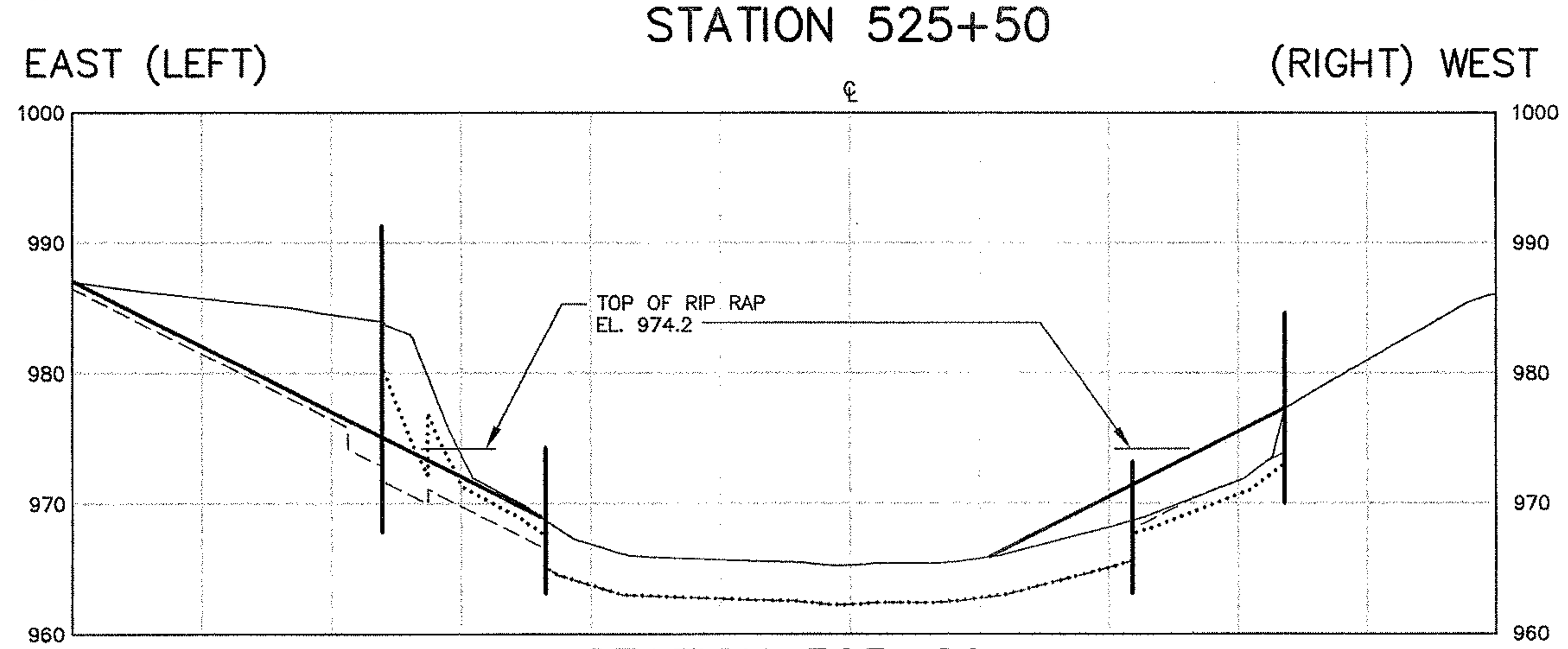
STATION 526+00



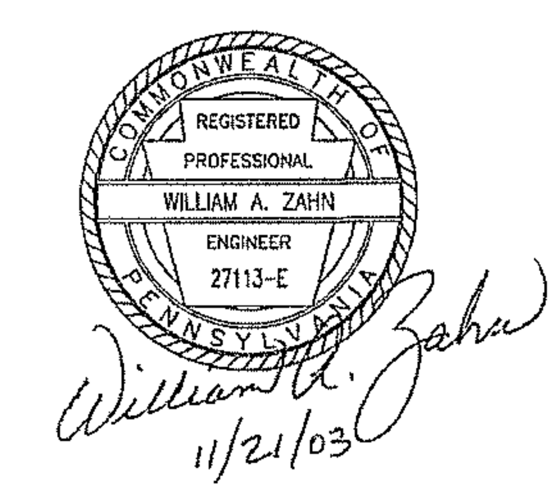
STATION 527+00



STATION 525+50



STATION 525+00



10 0 10 20 FEET

SCALE 1"=10'

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
0	ISSUED FOR CONSTRUCTION	11/21/03	

Designed by: MNH/WC
Dwn by: E.DIFATTA
Ckd by: T.DELANO
Reviewed by:
Submitted by:
Chief, Arch. Section
Date:
Design file no:
SPEC. No.:
File name: 2009-2010
Plot date: 11/21/03
Plot scale: AS SHOWN
Rev. 0

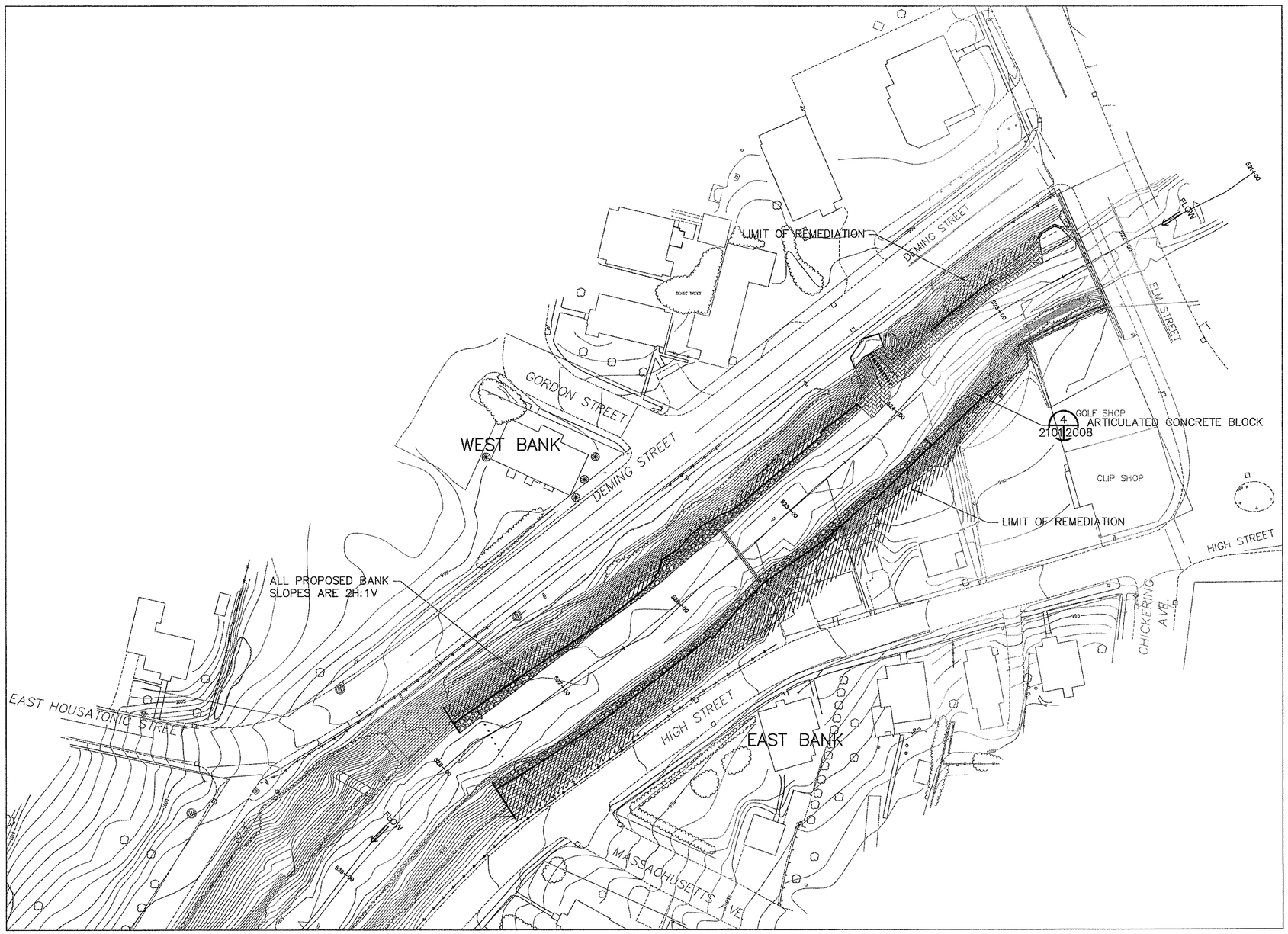
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 524+29 TO STA 527+80
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

CROSS SECTIONS
SHEET 2 OF 2

Sheet reference number:
2010
15 OF 18



LEGEND

EXISTING CONTOURS

LIMIT OF REMEDIATION

STABILIZATION KEY

REVEGETATION

ARTICULATED CONCRETE BLOCK (ACB)

ROCK ARMOR

PLAN NOTES:

1) FOR DETAILS ON RIVERBANK STABILIZATION METHODS SEE SHEET 2008 AND SHEETS 2102 & 2103.
2) ELEVATION OF ROCK ARMOR VARIES SEE SHEETS 2011 & 2012.
3) LIMITS OF PROPOSED SLOPES (2H:1V) ARE SHOWN ON SHEET 2000.

40 0 40 80 FEET

SCALE 1"=40'

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US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr.
0	ISSUED FOR CONSTRUCTION	11/21/03	

Designed by: MRS
Drawn by: KWH
Cad by: MRC
Reviewed by:
Submitted by:
Chief, Arch. Section
Date:
Design file no:
SPEC. No.:
Rev. 0
File name: 2101
Plot date: 11/21/03
Plot scale: AS SHOWN

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

RIVERBANK RESTORATION

Sheet reference number:
2101
16 OF 18

PLANTING SCHEDULE

PLANTING AREA	AREA (SQ. FT.)	TREES				Red Osier Band	SHRUBS			
		BW	SM	EC	BE		SD	AW	WB	CC
17	1,535	5 (2/3)	5 (2/3)	8 (7/1)	8 (7/1)	20	0	0	0	0
18	1,750	7 (2/5)	7 (2/5)	8 (6/2)	8 (6/2)	24	0	0	0	0
19	3,882	11 (7/4)	11 (7/4)	21 (20/1)	21 (20/1)	19	9	9	9	9
20	1,015	4 (1/3)	4 (1/3)	4 (3/1)	4 (3/1)	19	0	0	0	0
21	3,342	10 (5/5)	10 (5/5)	18 (16/2)	18 (16/2)	22	9	9	9	9
22	2,048	7 (3/4)	7 (3/4)	9 (8/1)	9 (8/1)	22	9	9	9	9
Totals	13,572	44	44	68	68	126	27	27	27	27

* PLANT NUMBERS=TOTAL (UPPER BANK/LOWER BANK PLANTING AREAS)
** ELEVATIONS OF UPPER AND LOWER BANK PLANTING AREAS VARY BY STATION AS SHOWN ON TABLE BELOW

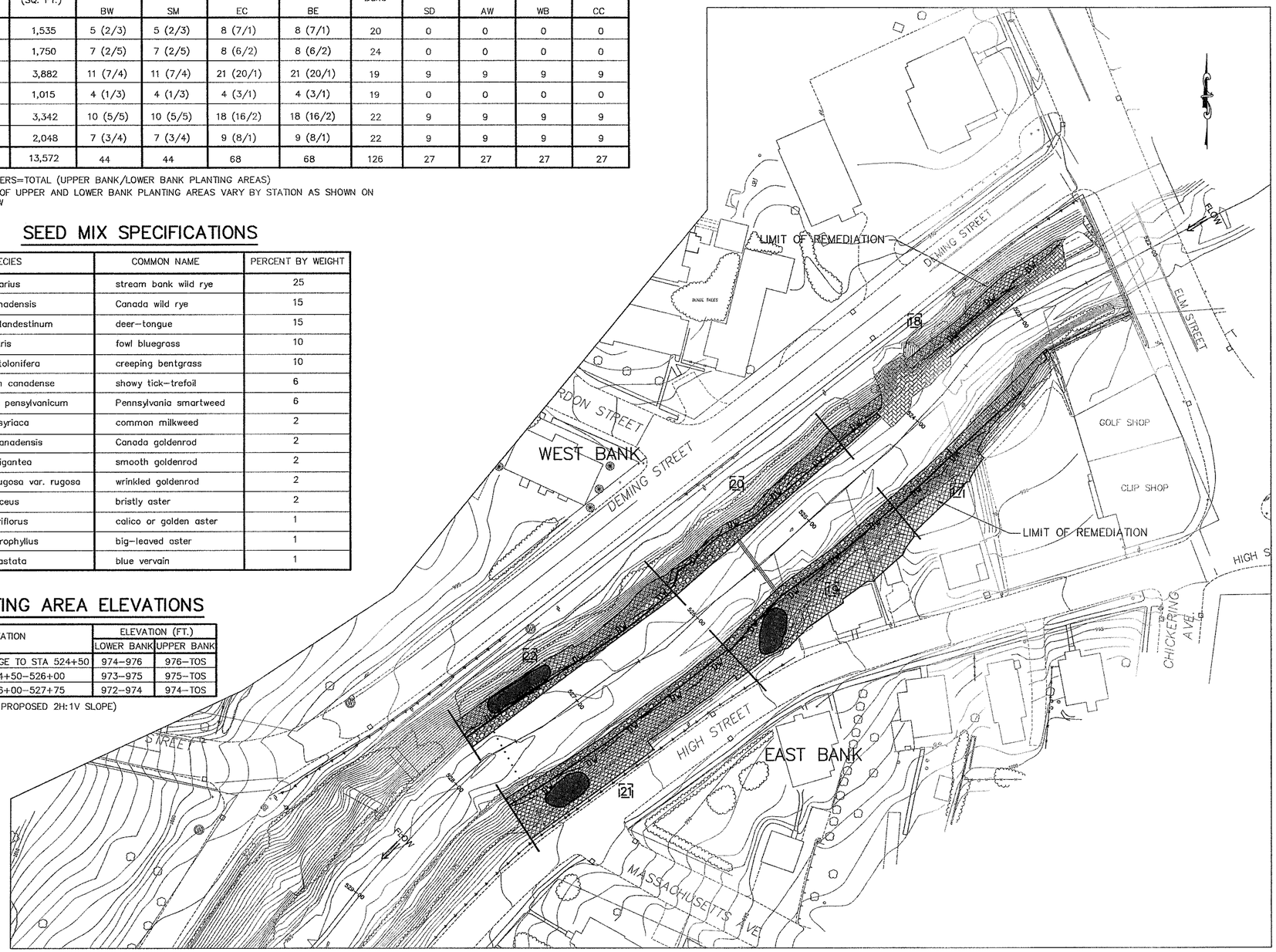
SEED MIX SPECIFICATIONS

SPECIES	COMMON NAME	PERCENT BY WEIGHT
Elymus riparius	stream bank wild rye	25
Elymus canadensis	Canada wild rye	15
Panicum clandestinum	deer-tongue	15
Poa palustris	fowl bluegrass	10
Agrostis stolonifera	creeping bentgrass	10
Desmodium canadense	showy tick-trefoil	6
Polygonum pensylvanicum	Pennsylvania smartweed	6
Asclepias syriaca	common milkweed	2
Solidago canadensis	Canada goldenrod	2
Solidago gigantea	smooth goldenrod	2
Solidago rugosa var. rugosa	wrinkled goldenrod	2
Aster puniceus	bristly aster	2
Aster lateriflorus	calico or golden aster	1
Aster macrophyllus	big-leaved aster	1
Verbena hastata	blue vervain	1

PLANTING AREA ELEVATIONS

STATION	ELEVATION (FT.)	
	LOWER BANK	UPPER BANK
ELM ST. BRIDGE TO STA 524+50	974-976	976-TOS
STA 524+50-526+00	973-975	975-TOS
STA 526+00-527+75	972-974	974-TOS

(TOS=TOP OF PROPOSED 2H:1V SLOPE)



PLANTING NOTES:

1) TREES SHALL BE CONTAINERIZED NURSERY STOCK 4' TO 6' HIGH. TREES SHALL BE PLANTED AT A DENSITY OF 700 PER ACRE, UNEVENLY SPACED (APPROXIMATELY 8' ON CENTER) IN SINUOUS ROWS ROUGHLY PARALLEL TO RIVER.
   TREE SPECIES TO BE PLANTED:
   BLACK WILLOW (Salix nigra)
   SILVER MAPLE (Acer saccharinum)
   EASTERN COTTONWOOD (Populus deltoides)
   BOX ELDER (Acer negundo)
   TREE SPECIES SHALL BE DISTRIBUTED THROUGHOUT UPPER AND LOWER BANKS AS FOLLOWS:
   LOWER BANK: 75% SILVER MAPLE AND BLACK WILLOW
   25% COTTONWOOD AND BOX ELDER
   UPPER BANK: 75% COTTONWOOD AND BOX ELDER
   25% SILVER MAPLE AND BLACK WILLOW
2) SHRUBS SHALL BE CONTAINERIZED NURSERY STOCK 2' TO 3' HIGH. SHRUBS SHALL BE PLANTED AT A DENSITY OF 730 PER ACRE. SHRUBS SHALL BE DISTRIBUTED IN CLUMPS OR IN SINGLE BANDS AS FOLLOWS:
   A) CLUMPS- SHRUBS SHALL BE SPACED 4' O.C. WITHIN 12'X50' OBLONG CLUMPS. THE CLUMPS SHALL BE SPACED MORE THAN 40' APART COMPRISED OF THE FOLLOWING SPECIES EVENLY DISTRIBUTED WITHIN THE CLUMP:
   SILKY DOGWOOD (Cornus amomum)
   NORTHERN ARROWWOOD (Viburnum dentatum)
   WINTERBERRY (Ilex verticillata)
   CHOKE CHERRY (Prunus virginiana)
   B) RED-OSIER DOGWOOD (Cornus sericea) BAND-THE BAND SHALL BE INSTALLED IN THE LOWER BANK WITHIN 2' OF THE TOP OF BANK ARMOR. PLANTS SHALL BE SPACED 8' O.C.
3) PLANT ABBREVIATIONS:
   BW = BLACK WILLOW
   SM = SILVER MAPLE
   EC = EASTERN COTTONWOOD
   BE = BOX ELDER
   SD = SILKY DOGWOOD
   AW = ARROWWOOD
   WB = WINTERBERRY
   CC = CHOKECHERRY
   RED-OSIER = RED-OSIER DOGWOOD

PLAN NOTES:

1) REFER TO SHEET 2101 FOR STABILIZATION METHODS AND SHEET 2103 FOR ADDITIONAL PLANTING DETAILS.
2) THE NATIVE HERBACEOUS SEED MIX SPECIFIED ABOVE WILL BE APPLIED ON ALL REVEGETATION AREAS AT A RATE OF 1 lb/100 S.F.
3) THE TRANSITION BETWEEN THE UPPER AND LOWER BANK PLANTING AREAS IS BASED ON THE WATER SURFACE ELEVATION OF THE 5-YEAR FLOOD.
4) PLANTING AREAS DELINEATED BASED UPON PROPOSED CONTOURS (NOT SHOWN).

LEGEND

EXISTING CONTOURS
ARTICULATED CONCRETE BLOCK (ACB)
LIMIT OF REMEDIATION

STABILIZATION KEY

17 PLANTING AREA
TREES AND SHRUBS TO BE ADDED
ROCK ARMOR
SHRUB CLUMP
DW DOGWOOD BAND

40 0 40 80 FEET
SCALE 1"=40'

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
0	ISSUED FOR CONSTRUCTION	11/21/03	

Date: 11/21/03
Rev.: 0
Designed by: WRS
Drawn by: KWH
Checked by: MRC
Reviewed by:
Submitted by:
Design file no:
SPEC. No.:
File name: 2102
Plot date: 11/21/03
Plot scale: AS SHOWN
Chief, Arch. Section

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS
WOODLOT ALTERNATIVES, INC.

1.5 MILE REMOVAL ACTION - PHASE 2 - STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

REVEGETATION RESTORATION

Sheet reference number:
2102
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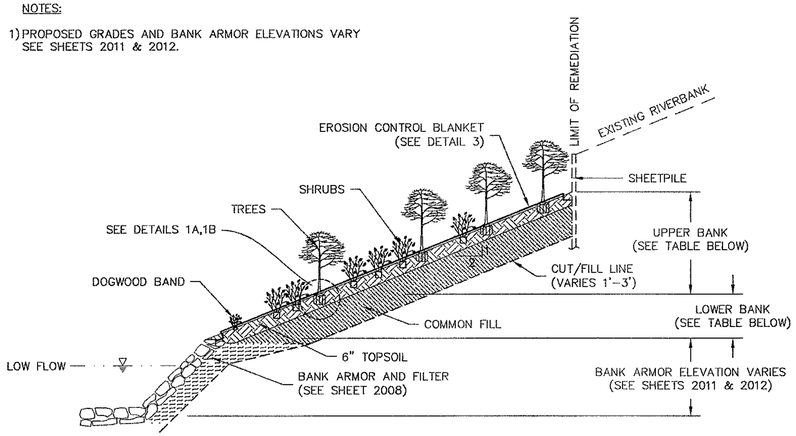
BANK REVEGETATION (TYP.)

NOT TO SCALE (SLOPE GRADE AND LENGTH VARY) 1 — 2102|2103

WALL REVEGETATION

NOTES:

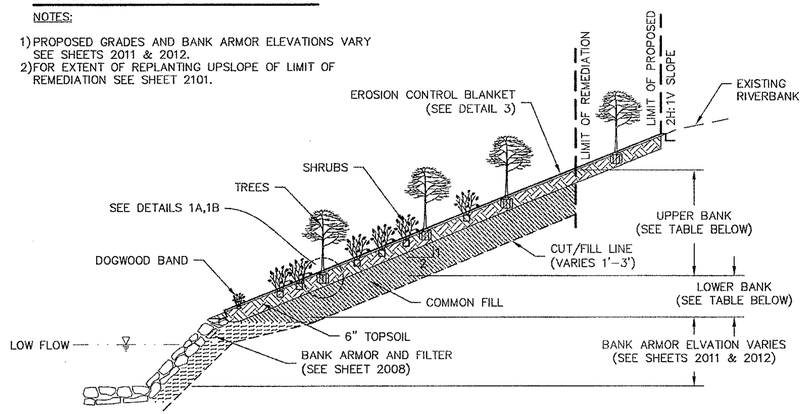
1) PROPOSED GRADES AND BANK ARMOR ELEVATIONS VARY SEE SHEETS 2011 & 2012.



STRAIGHT REVEGETATION

NOTES:

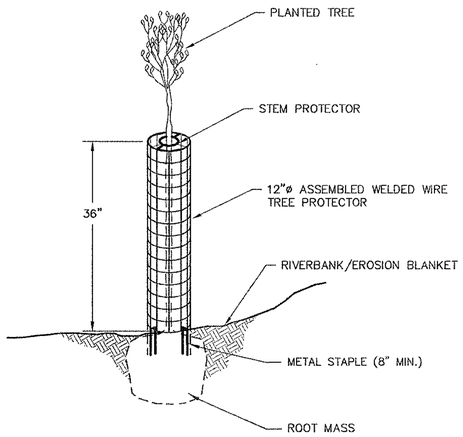
1) PROPOSED GRADES AND BANK ARMOR ELEVATIONS VARY SEE SHEETS 2011 & 2012.
2) FOR EXTENT OF REPLANTING UPSLOPE OF LIMIT OF REMEDIATION SEE SHEET 2101.



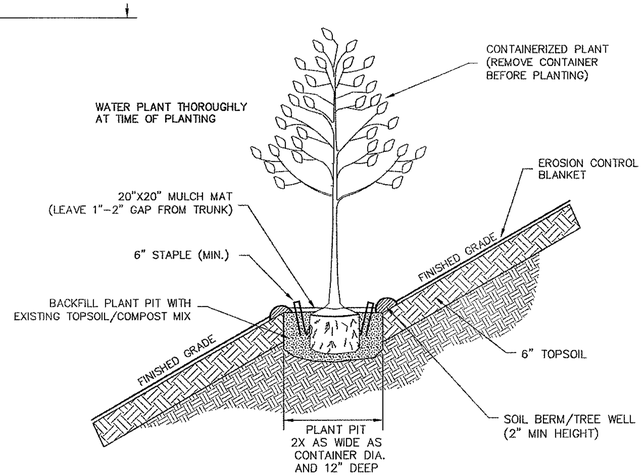
PLANTING AREA ELEVATIONS

STATION	ELEVATION (FT.)	
	LOWER BANK	UPPER BANK
ELM ST. BRIDGE TO STA 524+50	974–976	976–TOS
STA 524+50–526+00	973–975	975–TOS
STA 526+00–527+75	972–974	974–TOS

(TOS=TOP OF PROPOSED 2H:1V SLOPE)



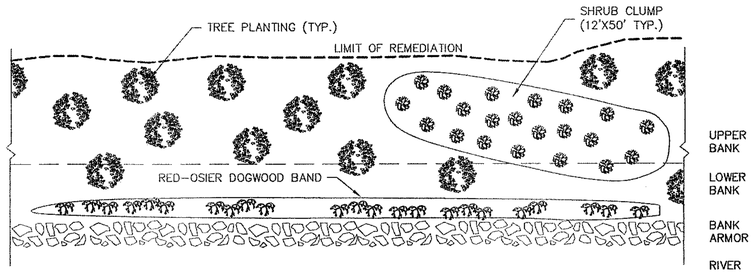
DETAIL 1B–TREE PROTECTOR



DETAIL 1A–TREE PLANTING

PLANTING LAYOUT FOR REVEGETATION AREAS (TYP.)

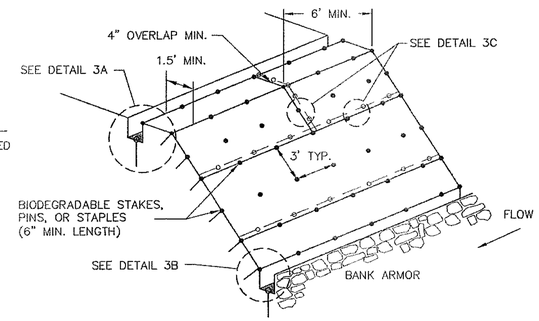
NOT TO SCALE 2 — 2102|2103

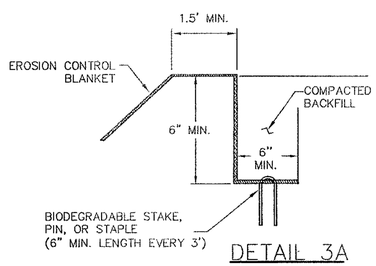


EROSION CONTROL BLANKET (TYP.)

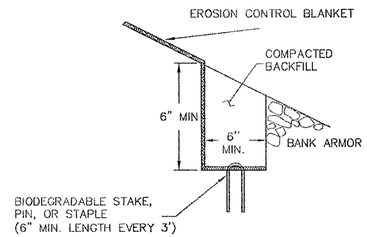
NOT TO SCALE 3 — 2102|2103

ISOMETRIC

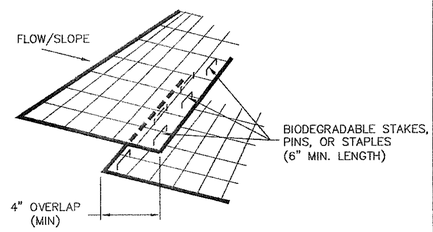




DETAIL 3A



DETAIL 3B



DETAIL 3C

ISSUED FOR CONSTRUCTION

US Army Corps of Engineers
New England District

Symbol	Description	Date	Appr
0	ISSUED FOR CONSTRUCTION	11/2/03	

Date: Rev. 0
Designed by: WRS
Drn. by: KMH/FJD
Ckd by: MRC
Reviewed by:
Submitted by: Chief, Arch. Section
Design. file no:
SPEC. No.:
File name: 2103
Plot date: 11/20/03
Plot scale: AS SHOWN

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

WESTON SOLUTIONS — WOODLOT ENVIRONMENTAL

1.5 MILE REMOVAL ACTION – PHASE 2 – STA 522+29 TO STA 527+60
ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

REVEGETATION RESTORATION DETAILS

Sheet reference number: 2103
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