 DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

**HISTORIC LAND USES**

Date: JULY 2006

Figure: 2-1

**LEGEND**

- MALDEN RIVER  
PRESENT CONFIGURATION
- MALDEN RIVER  
HISTORIC CONFIGURATION  
FST

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan- 10-5-99, revised 8-11-00.

0 200 400  
Approximate Scale in Feet



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CONCORD, MASSACHUSETTS

LEGEND

- DISCRETE RESPONSE ACTIONS
- BASE GRADING & CONSOLIDATION
- INSTALLATION OF A DIRECT CONTACT BARRIER
- IMPLEMENTATION OF LAND USE CONTROLS

--- RIVER'S EDGE PHASE 1 AREA

- ASPHALT PAVEMENT
- INHOSPITABLE VEGETATION
- LAWN SEED
- MEADOW SEED
- SLOPE SEED
- L LOW WETLAND SHRUBS
- M MEDIUM WETLAND SHRUBS
- T TALL WETLAND SHRUBS
- EXISTING TREE
- PROPOSED SHRUBS
- PROPOSED DECIDUOUS TREE
- PROPOSED UNDERSTORY DECIDUOUS TREE
- PROPOSED EVERGREEN TREE

NOTES

- REFERENCE: Existing Conditions Plan—River's Edge Project Preparation for Tufts University Boathouse—6-23-05 prepared by Rizzo Assoc.
- Proposed Phase 1 Development Area taken from Oct 2006 electronic file prepared by Rizzo Assoc.
- Proposed park conditions taken from 100% Construction Documents Sept 20, 2006 electronic file prepared by Shadley Assoc.

MALDEN RIVER  
RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS

PROPOSED  
RIVER'S EDGE  
PHASE I DEVELOPMENT

0 70 140  
Approximate Scale in Feet

Date: JAN 2007

Figure: 4.1





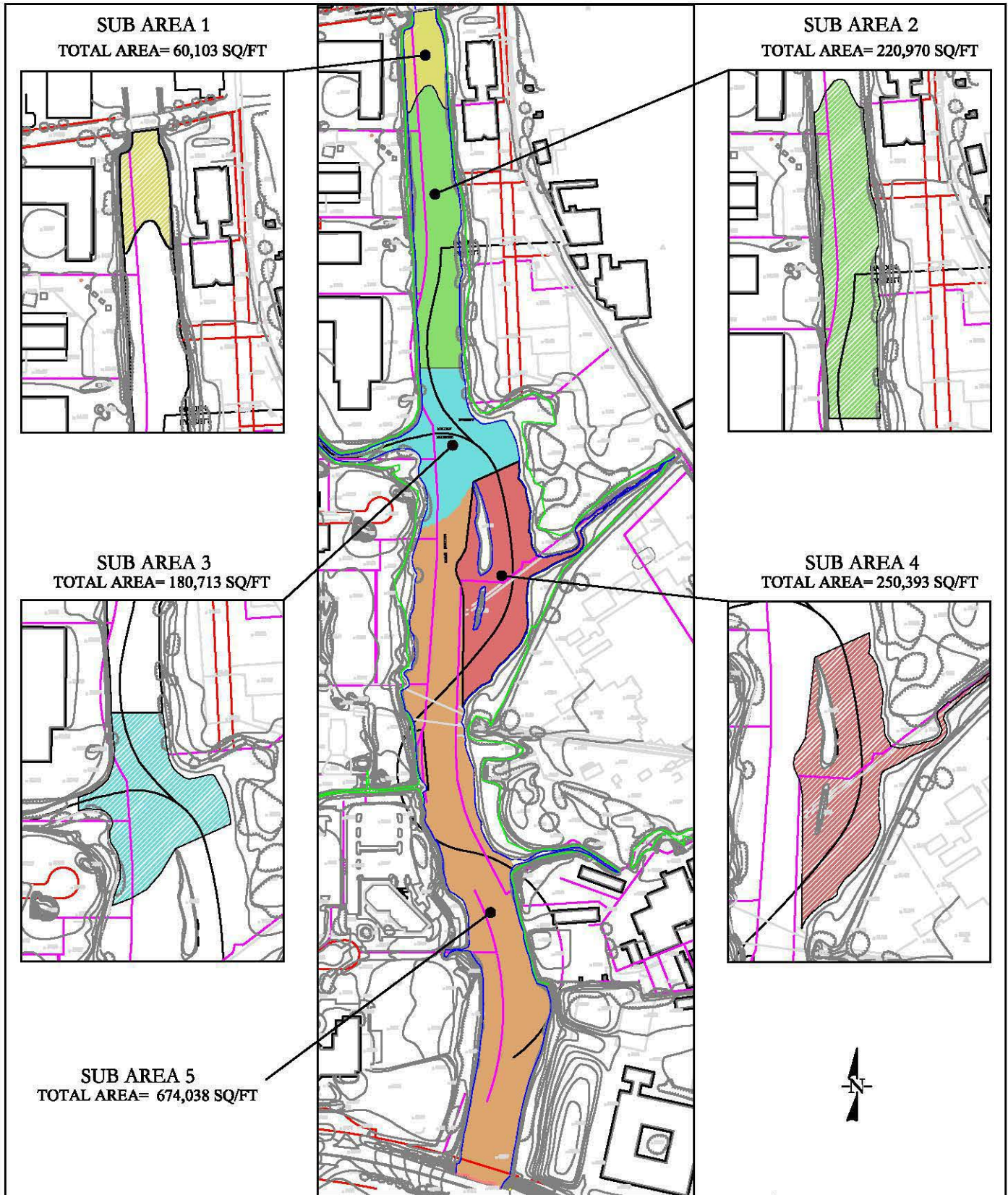
**Legend**


----- Town Boundary

**Malden River Restoration Project**

Figure 4 - 6  
Existing Ecological Impairments

Malden River  
Ecosystem Restoration  
Detailed Project Report



 DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS

**SUB-AREA DELINEATION**

0 300 600  
Approximate Scale In Feet

Date: JULY 2006

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00.

Figure: 4.1



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 CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS**

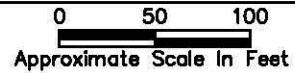
**SUB-AREA 1 DETAIL**

**LEGEND**

- SUB-AREA 1
- SUB-AREA 2
- WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.




Date: JULY 2006

Figure: 4-13



DEPARTMENT OF THE ARMY  
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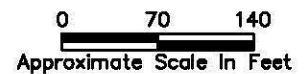
**LEGEND**

-  SUB-AREA 1
-  SUB-AREA 2
-  SUB-AREA 3
-  WETLAND

Reference: Figure prepared by  
 Toomey-Munson & Associates Inc.  
 from Wetland Resources Location  
 Plan-10-5-99, revised 8-11-00;  
 Haley & Aldrich Phase 2 Site  
 Assessment, Former Malden MGP  
 site-2001.

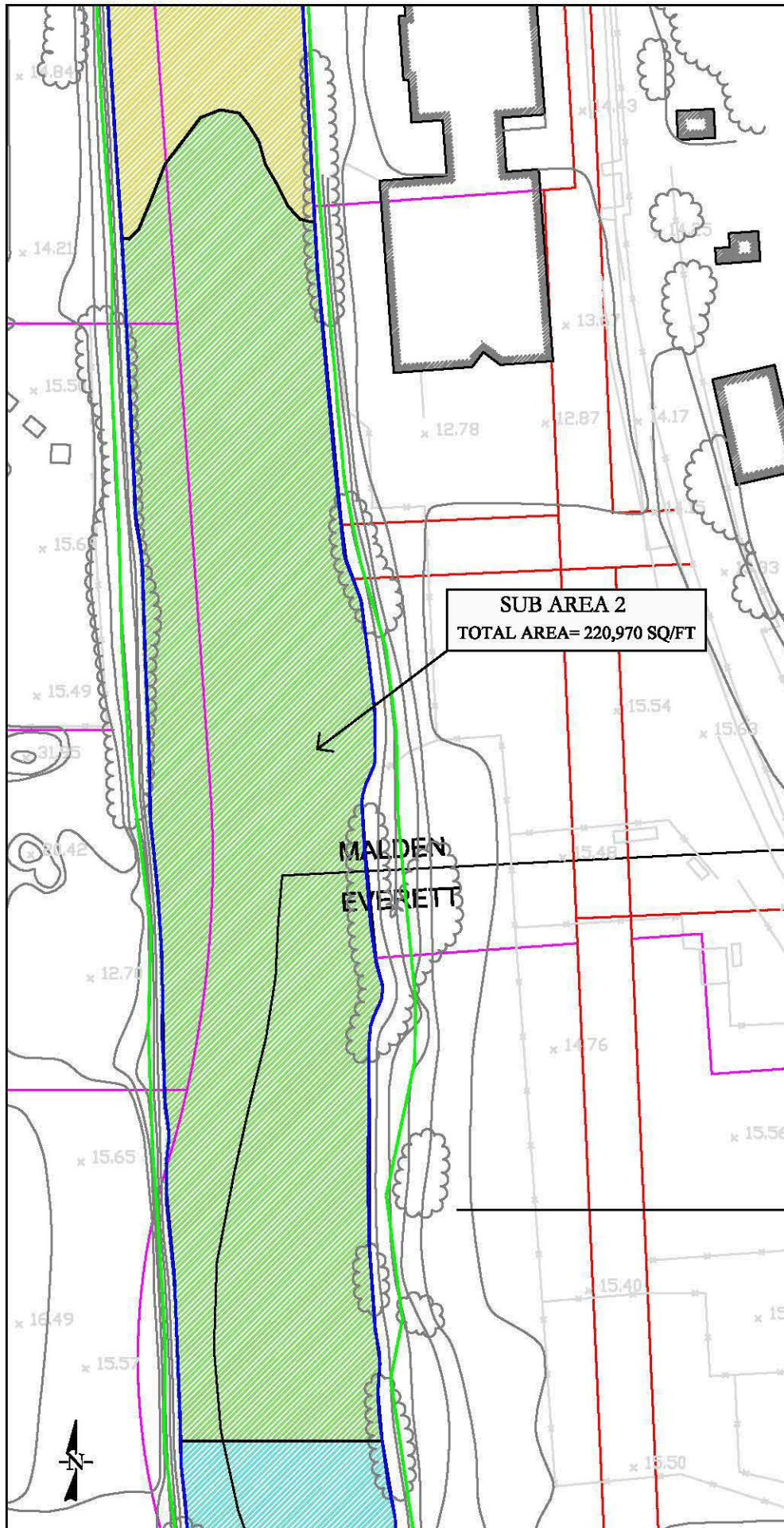
**MALDEN RIVER  
 RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS**

**SUB-AREA 2 DETAIL**




Date: JULY 2006

Figure: 4-14












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 CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
**EVERETT, MALDEN, MEDFORD MASSACHUSETTS**  
**SUB-AREA 3 DETAIL**

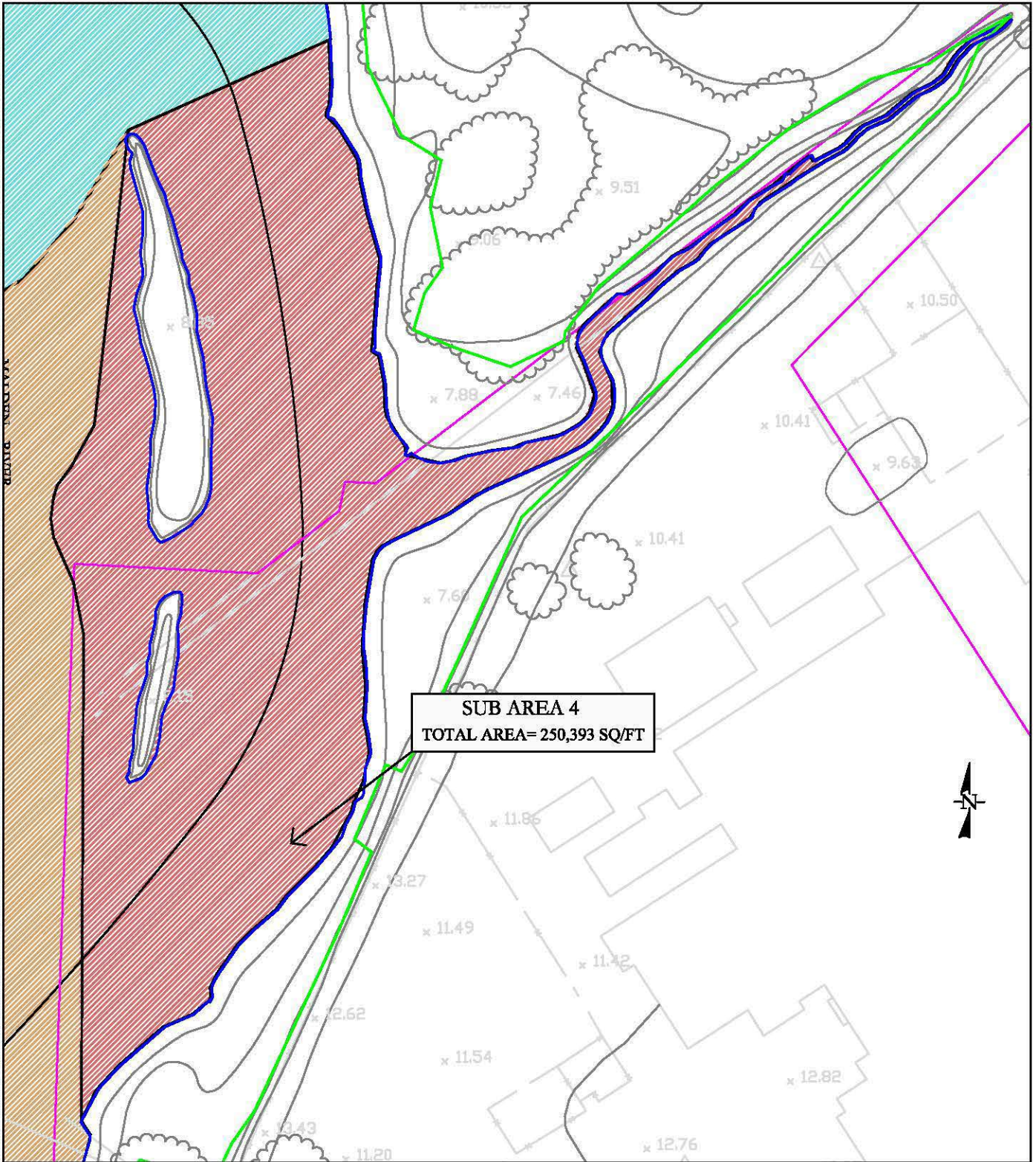
**LEGEND**

-  SUB-AREA 2
-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND


**Reference:** Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

0      70      140  
  
 Approximate Scale In Feet

Date: JULY 2006  
 Figure: 4-15







**SUB AREA 4**  
**TOTAL AREA= 250,393 SQ/FT**

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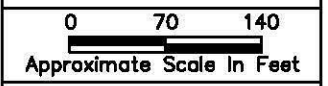
**MALDEN RIVER RESTORATION PROJECT**  
**EVERETT, MALDEN, MEDFORD**  
**MASSACHUSETTS**  
**SUB-AREA 4 DETAIL**

**LEGEND**

-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.



Date: JULY 2006

Figure: 4-16





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CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**LEGEND**

-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND

**SUB AREA 5**  
TOTAL AREA= 674,038 SQ/FT

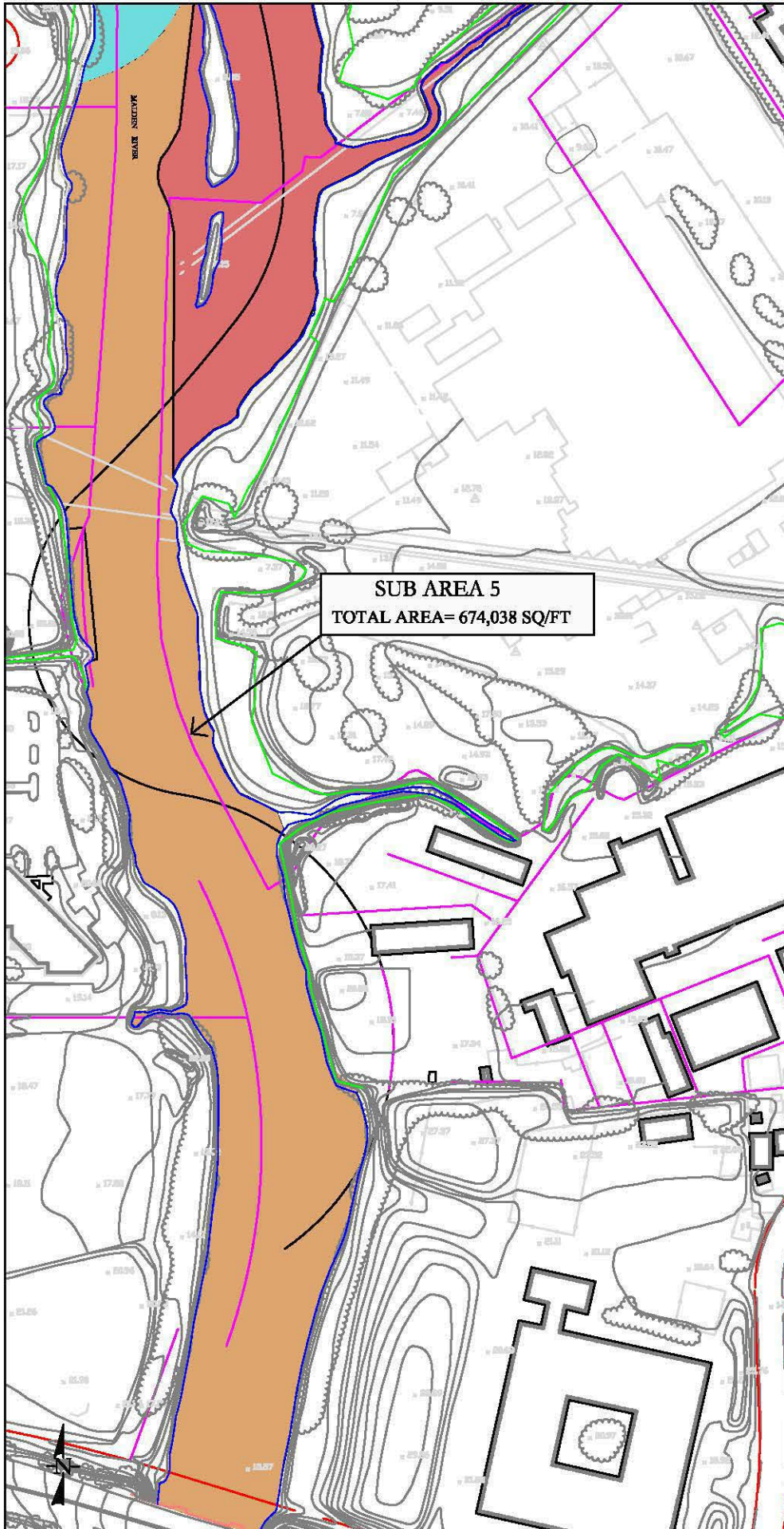
**MALDEN RIVER  
RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS**

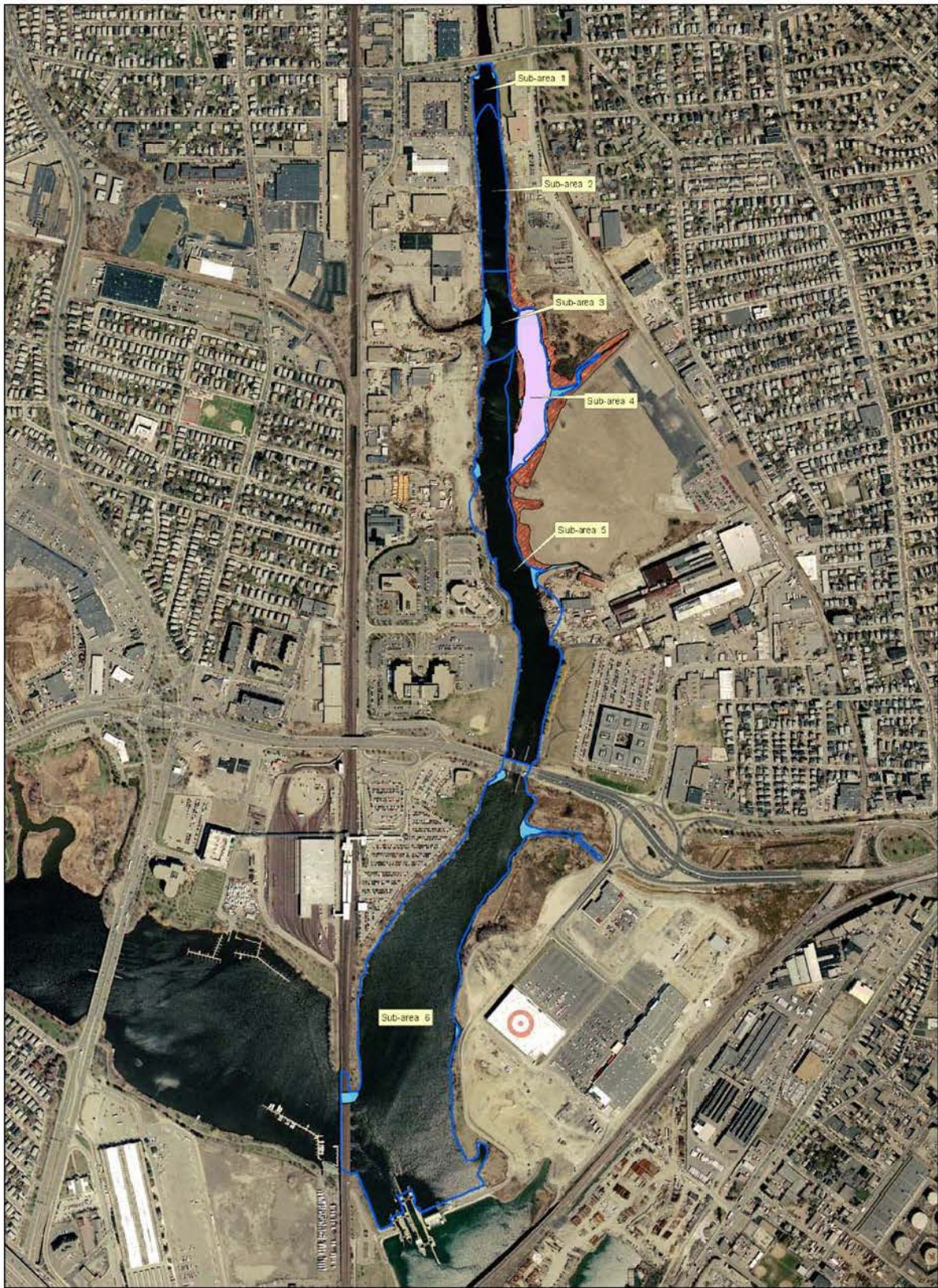
**SUB-AREA 5 DETAIL**

0 300  
Approximate Scale In Feet

Date: JULY 2006

Figure: 4-17



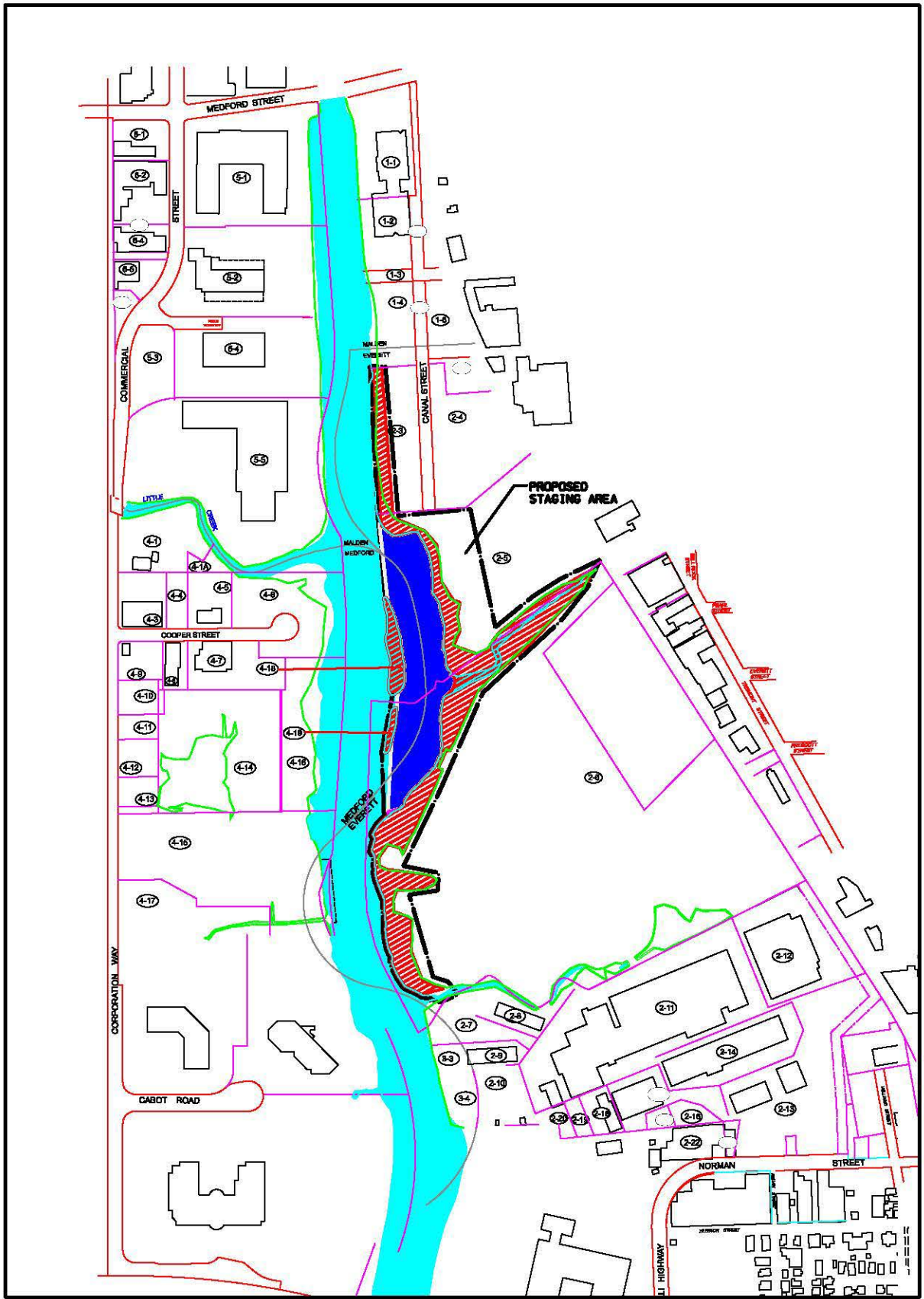


Legend	
	SubAreas
	Candidate Site for Invasive Species Removal/Replanting
	Candidate Site for Wetland Creation
	Gravel Placement for Fishery



Malden River Restoration Project  
 Figure 6-1  
 The NER Recommended Plan





LEGEND	
	PROPOSED CONTRACTOR WORK LIMITS
	PHRAGMITE REMOVAL AREA
	WETLAND CREATION AREA
	EXISTING BUILDING
	WETLAND
	RIVER

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

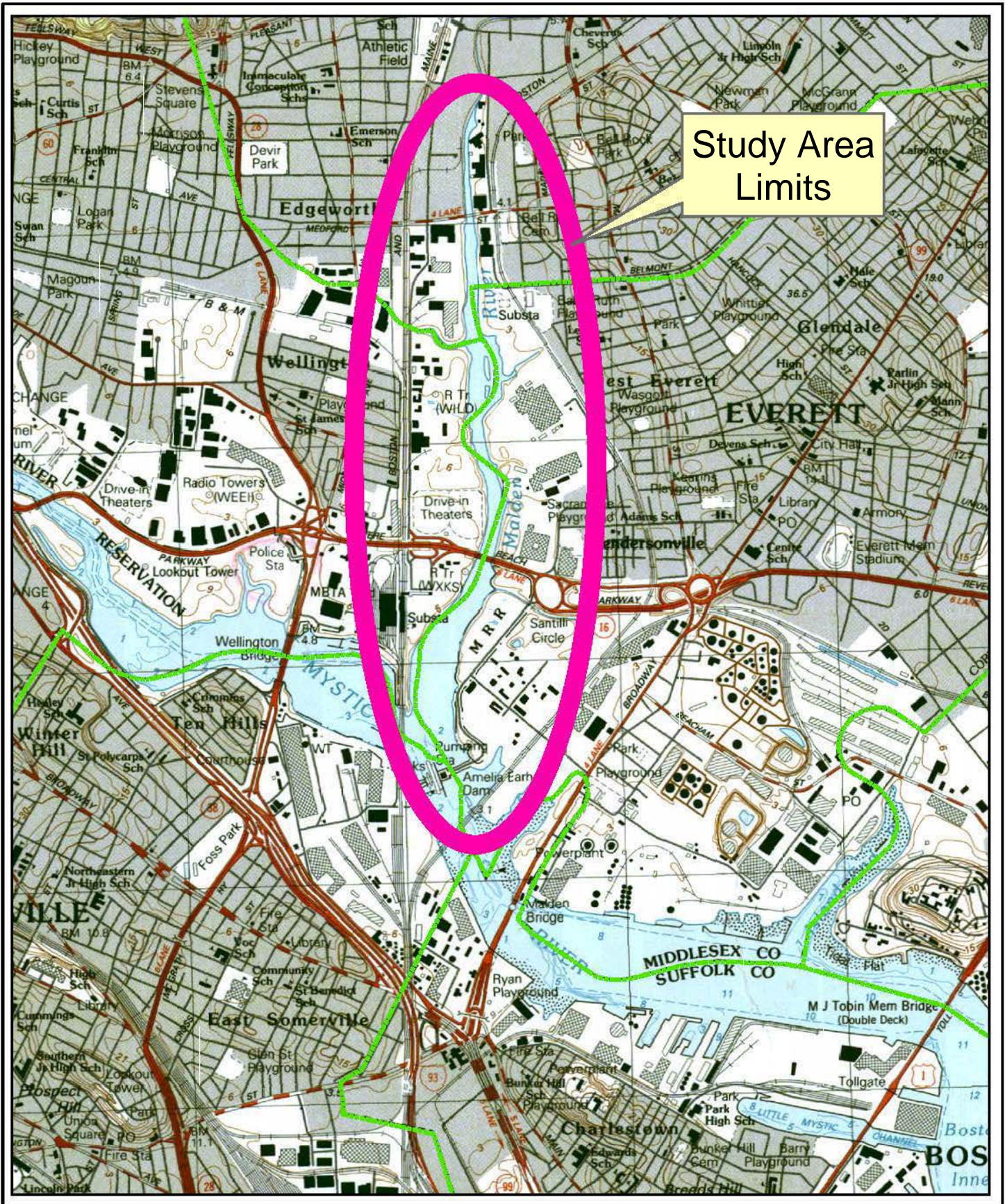
DEPARTMENT OF THE ARMY  
 NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
 CONCORD, MASSACHUSETTS

**MALDEN RIVER  
 REAL ESTATE PROPOSED WORK LIMITS**

0 200 400  
 Approximate Scale In Feet

Date: SEPT 2006  
 Job No: 500.01

Figure  
**6-2**

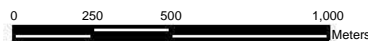


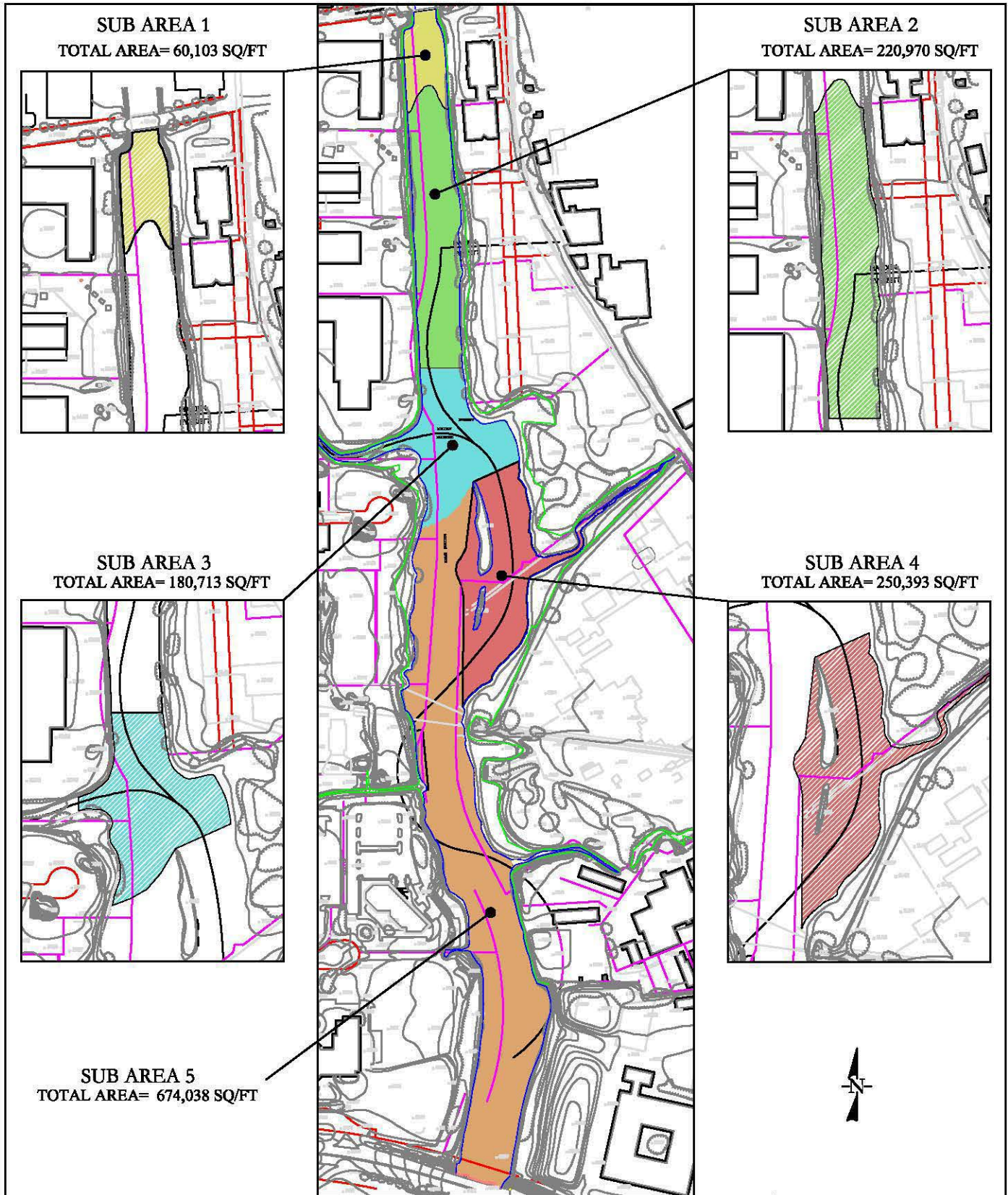
Study Area Limits




Malden River Restoration Project

Figure 1-1  
Site Locus





 DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS

**SUB-AREA DELINEATION**

0 300 600  
Approximate Scale In Feet

Date: JULY 2006

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00.

Figure: 4.1




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**MALDEN RIVER RESTORATION PROJECT**  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS


**SUB-AREA 1 DETAIL**

**LEGEND**

-  SUB-AREA 1
-  SUB-AREA 2
-  WETLAND

**NOTES**

Reference: Figure prepared by  
 Toomey-Munson & Associates  
 Inc. from Wetland Resources  
 Location Plan-10-5-99,  
 revised 8-11-00; Haley &  
 Aldrich Phase 2 Site  
 Assessment, Former Malden  
 MGP site-2001.

0      50      100  
  
 Approximate Scale In Feet

Date: JULY 2006  
 Figure: 4-13



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 CORPS OF ENGINEERS  
 CONCORD, MASSACHUSETTS

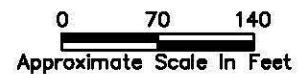
**LEGEND**

-  SUB-AREA 1
-  SUB-AREA 2
-  SUB-AREA 3
-  WETLAND

Reference: Figure prepared by  
 Toomey-Munson & Associates Inc.  
 from Wetland Resources Location  
 Plan-10-5-99, revised 8-11-00;  
 Haley & Aldrich Phase 2 Site  
 Assessment, Former Malden MGP  
 site-2001.

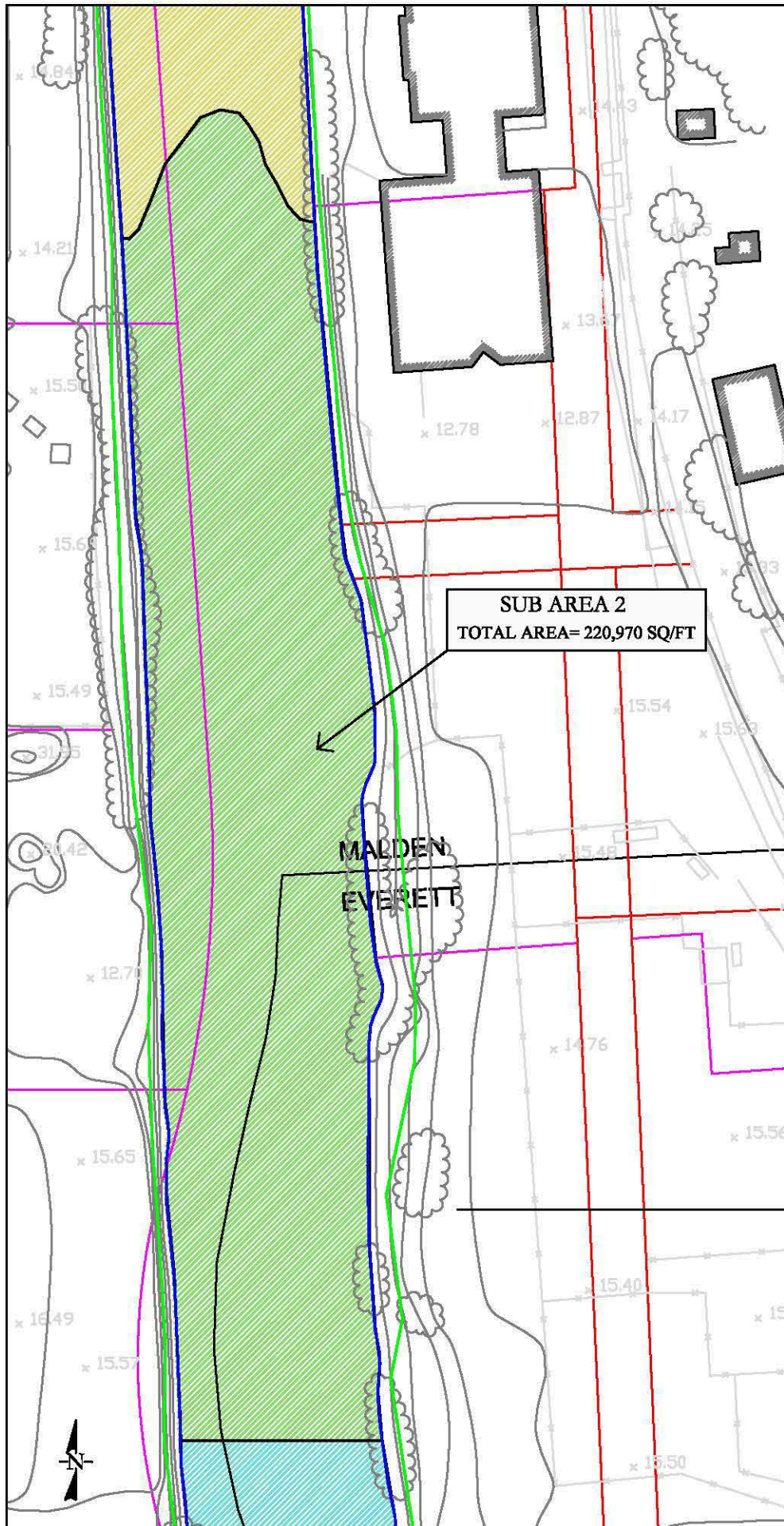
**MALDEN RIVER  
 RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS**

**SUB-AREA 2 DETAIL**



Date: JULY 2006

Figure: 4-14










DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS  
SUB-AREA 3 DETAIL

**LEGEND**

-  SUB-AREA 2
-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-89, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

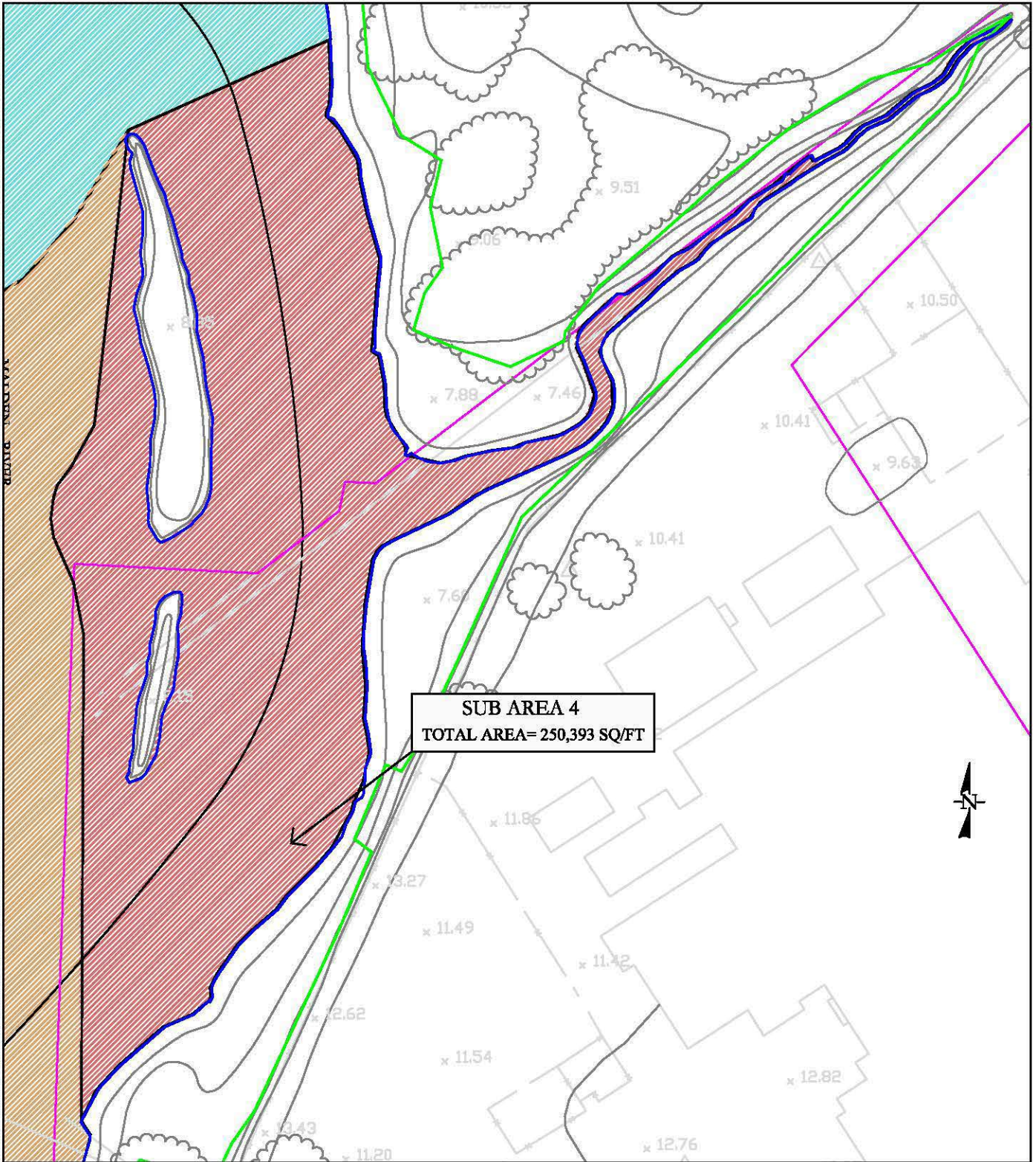
0 70 140

Approximate Scale In Feet

Date: JULY 2006

Figure: 4-15










 DEPARTMENT OF THE ARMY  
 NEW ENGLAND DISTRICT,  
 CORPS OF ENGINEERS  
 CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS

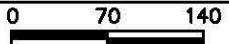
**SUB-AREA 4 DETAIL**

**LEGEND**

-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

  
 Approximate Scale In Feet

Date: JULY 2006

Figure: 4-16



DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT,  
CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**LEGEND**

-  SUB-AREA 3
-  SUB-AREA 4
-  SUB-AREA 5
-  WETLAND

**SUB AREA 5**  
TOTAL AREA= 674,038 SQ/FT

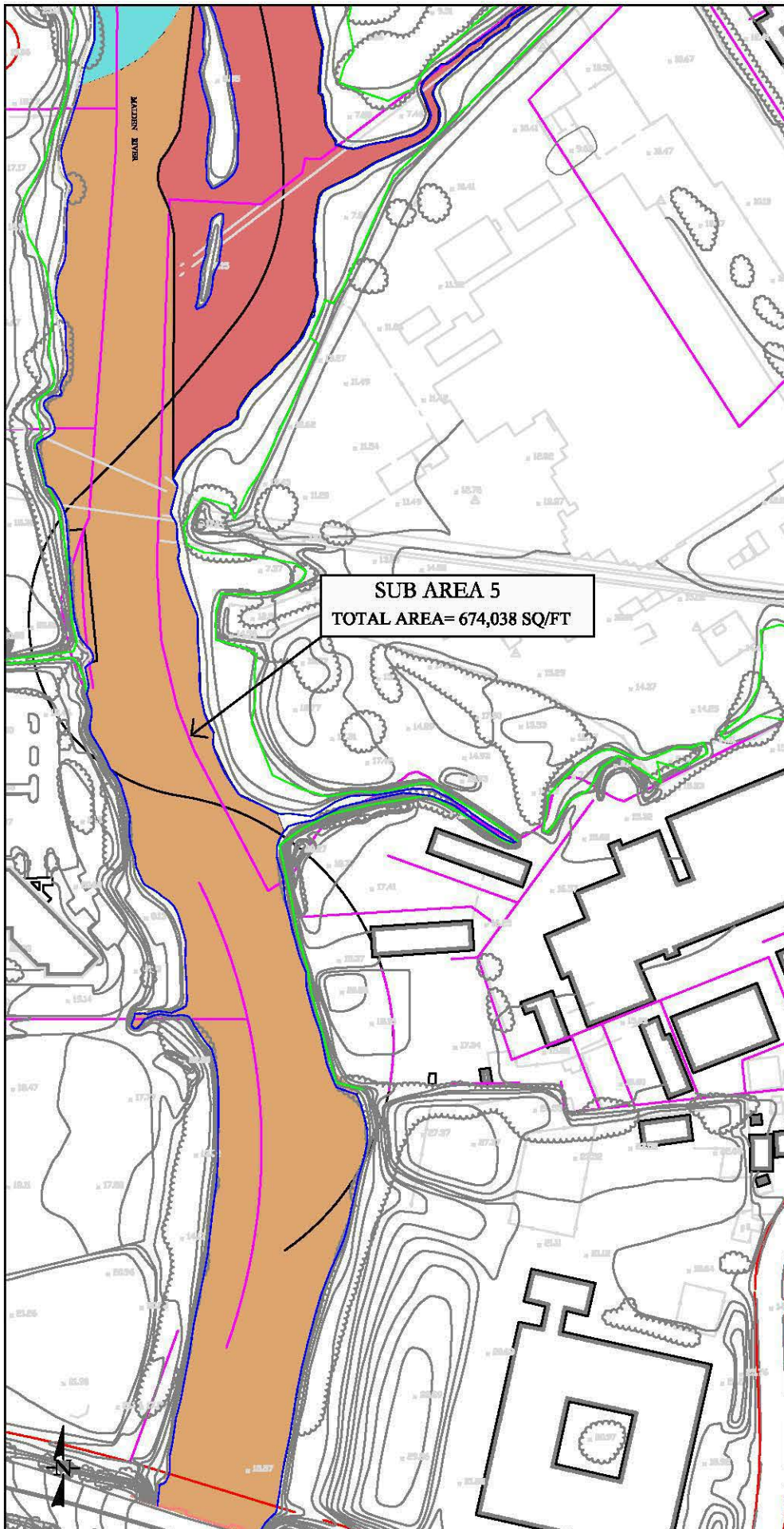
**MALDEN RIVER  
RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS**

**SUB-AREA 5 DETAIL**

0 300  
Approximate Scale In Feet

Date: JULY 2006

Figure: 4-17



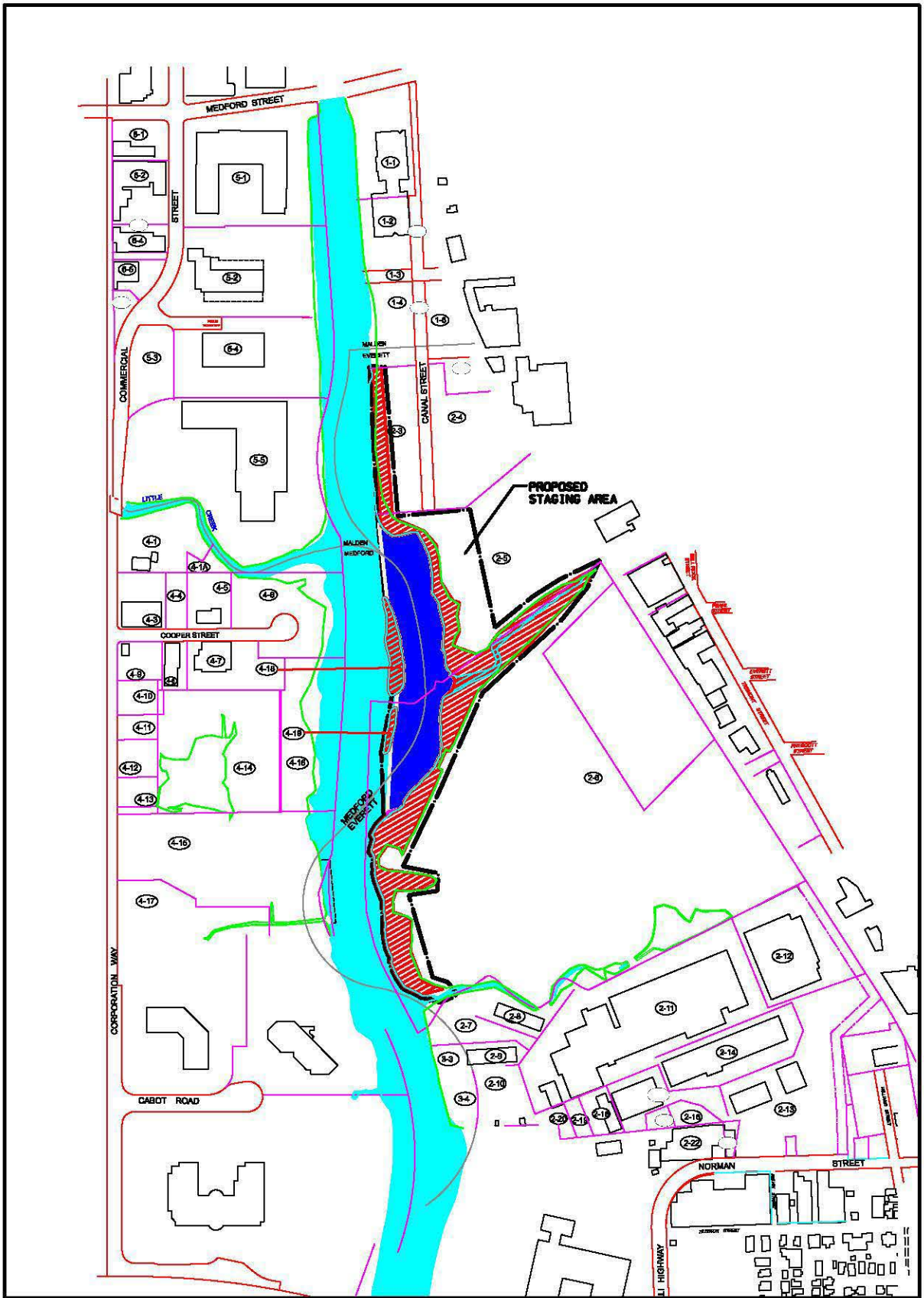








Legend	
	SubAreas
	Candidate Site for Invasive Species Removal/Replanting
	Candidate Site for Wetland Creation
	Gravel Placement for Fishery



Malden River Restoration Project  
 Figure 6-1  
 The NER Recommended Plan





LEGEND	
	PROPOSED CONTRACTOR WORK LIMITS
	PHRAGMITE REMOVAL AREA
	WETLAND CREATION AREA
	EXISTING BUILDING
	WETLAND
	RIVER

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

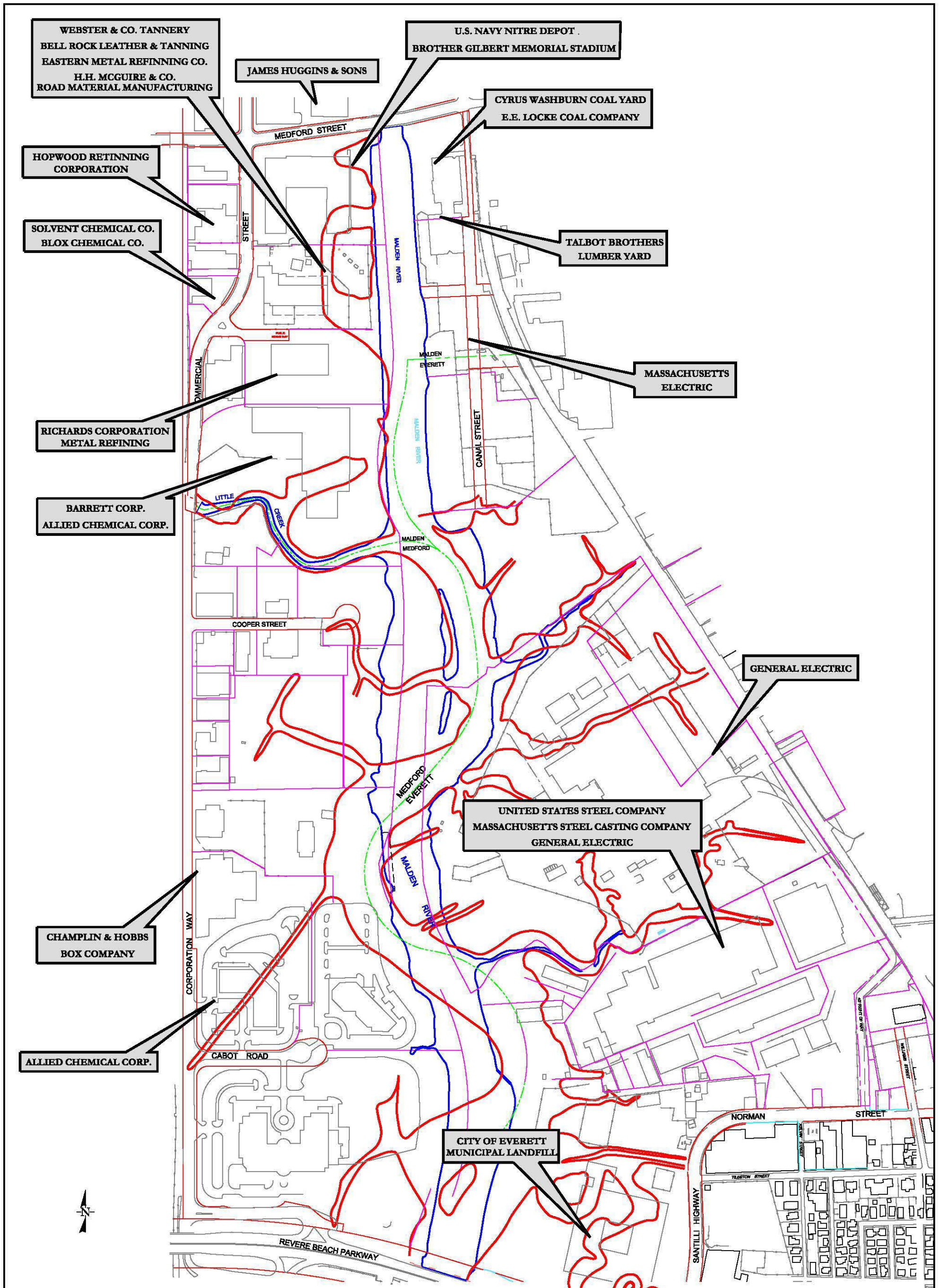
DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**MALDEN RIVER  
REAL ESTATE PROPOSED WORK LIMITS**

0 200 400  
Approximate Scale In Feet

Date: SEPT 2006  
Job No: 500.01

Figure  
**6-2**



 DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

**HISTORIC LAND USES**

Date: JULY 2006      Figure: 2-1

**LEGEND**

- MALDEN RIVER PRESENT CONFIGURATION
- MALDEN RIVER HISTORIC CONFIGURATION FST

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan- 10-5-99, revised 8-11-00.

0      200      400  
Approximate Scale in Feet



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CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

MAL DEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS  
**1936 AERIAL - NORTHEASTERLY VIEW**

Figure

2-2



DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS  
**1936 AERIAL - NORTHEASTERLY VIEW**

Figure

2-3



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MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS  
**1936 AERIAL - WESTERLY VIEW**

Figure

2-4

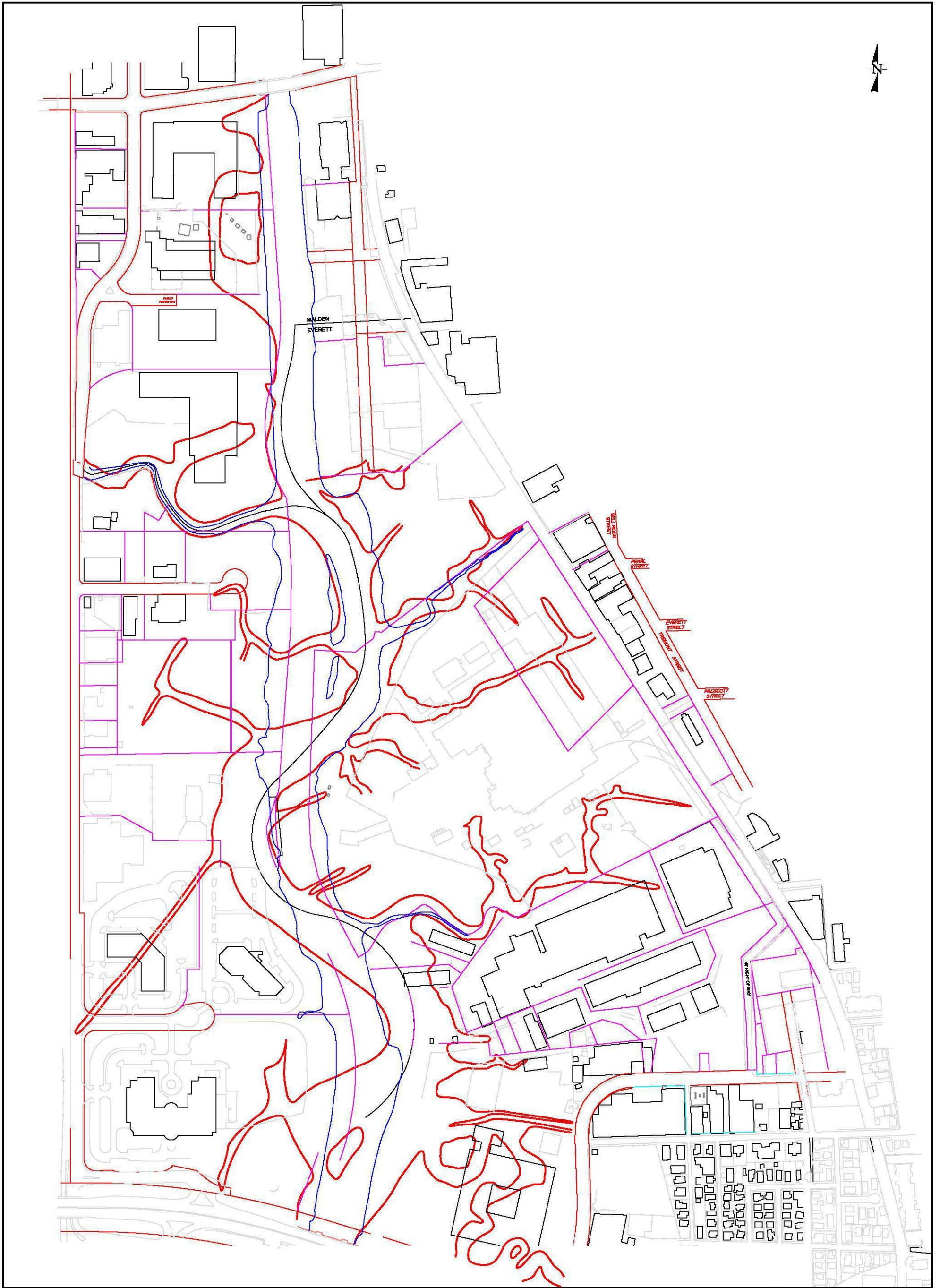




DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MED FORD MASSACHUSETTS  
**1936 AERIAL - EASTERLY VIEW**

Figure  
2-5



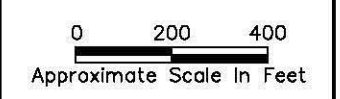
DEPARTMENT OF THE ARMY  
 NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
 CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

**PRESENT & HISTORIC  
 RIVER CONFIGURATIONS**

LEGEND	
	MALDEN RIVER PRESENT CONFIGURATION
	MALDEN RIVER HISTORIC CONFIGURATION FST
	EXISTING BUILDING
	FORMER BUILDING

**NOTES**  
 Reference: Figure prepared by  
 Toomey-Munson & Associates  
 Inc. from Wetland Resources  
 Location Plan-10-5-99, revised  
 8-11-00; Haley & Aldrich  
 Phase 2 Site Assessment,  
 Former Malden MGP site-2001.



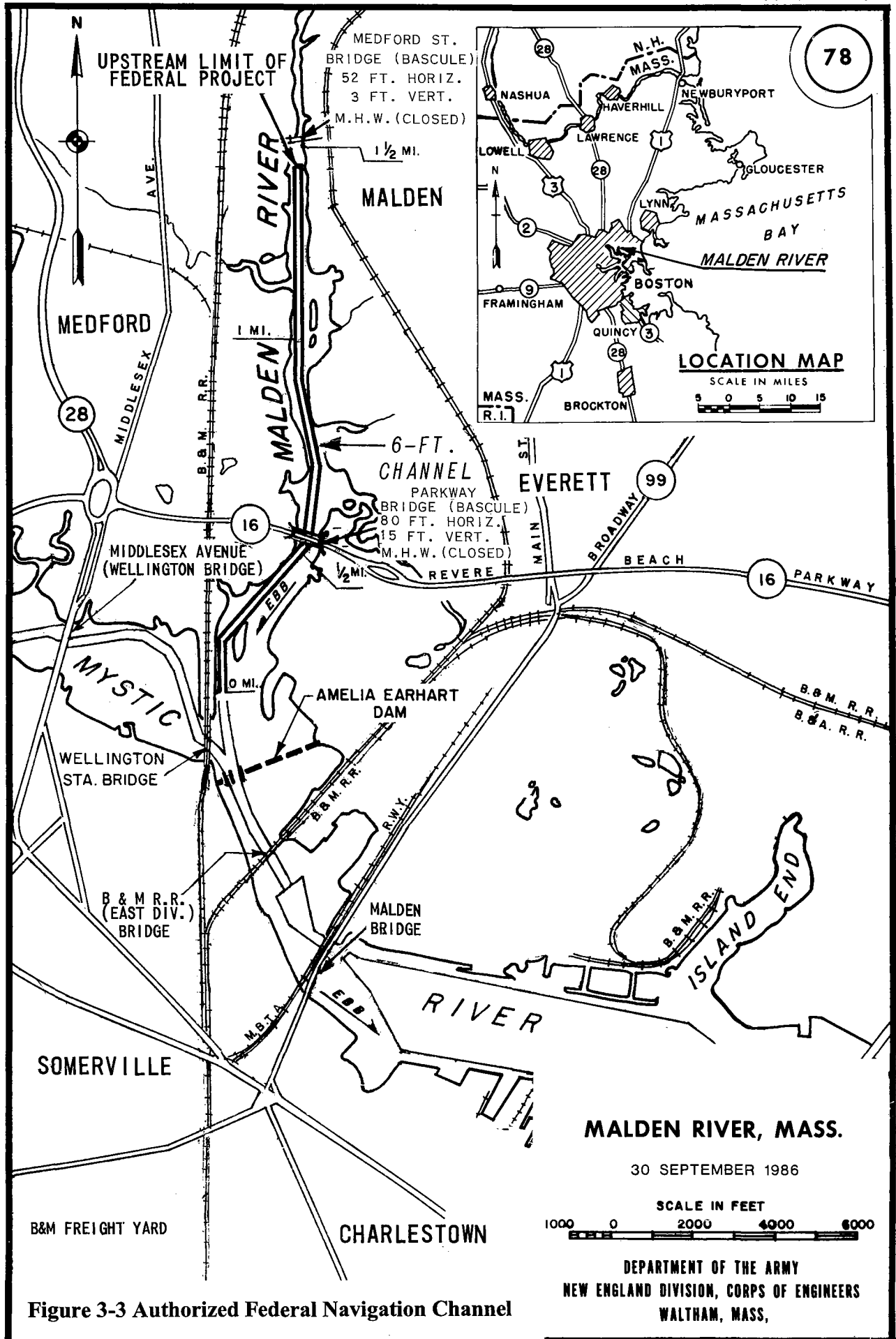
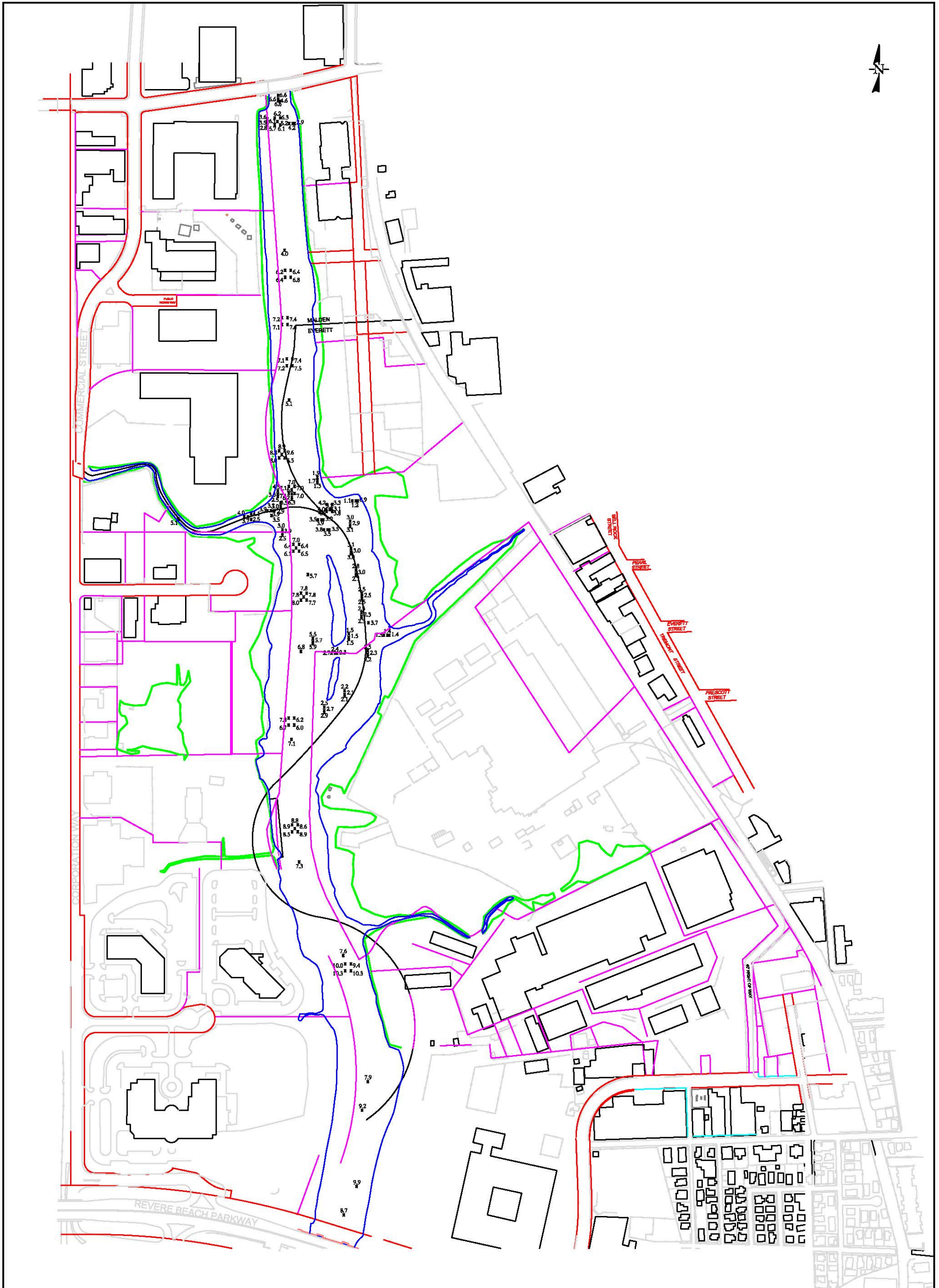



Figure 3-3 Authorized Federal Navigation Channel



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CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
**EVERETT, MALDEN, MEDFORD MASSACHUSETTS**  
**WATER DEPTHS (IN FEET)**

9.9  
x SPOT  
WATER DEPTH

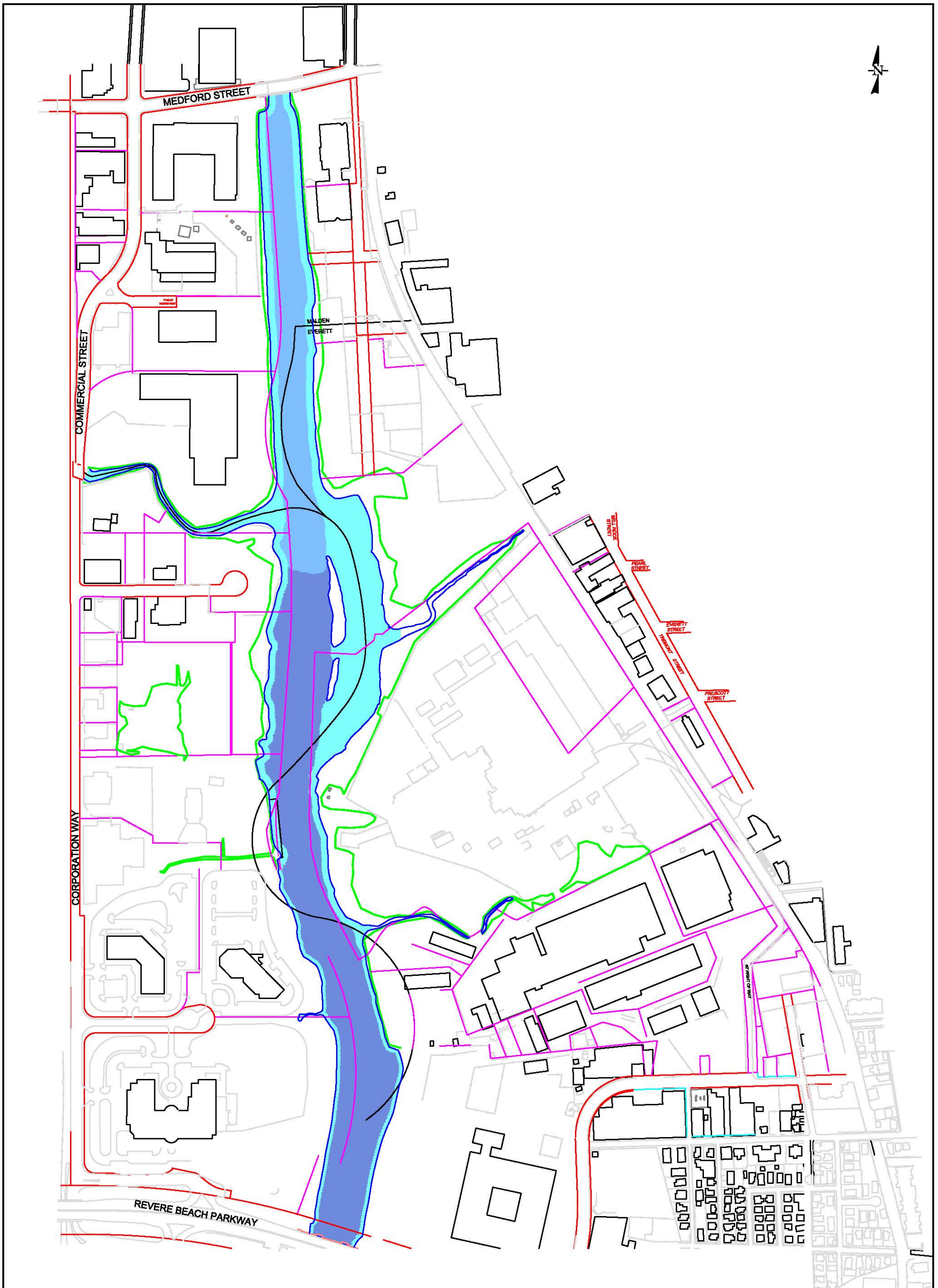
**LEGEND**

-  EXISTING BUILDING
-  FORMER BUILDING
-  WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

0 200 400  
Approximate Scale in Feet



DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

**WATER DEPTHS RANGES (IN FEET)**

- WATER DEPTH  
1-3 FEET
- WATER DEPTH  
5-7 FEET
- WATER DEPTH  
>7 FEET

**LEGEND**

- EXISTING BUILDING
- FORMER BUILDING
- WETLAND

**NOTES**

Reference: Figure prepared by  
Toomey-Munson & Associates  
Inc. from Wetland Resources  
Location Plan-10-5-99, revised  
8-11-00; Haley & Aldrich  
Phase 2 Site Assessment,  
Former Malden MGP site-2001.

0 200 400  
Approximate Scale in Feet



DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

**LEGEND**

- RIVER BORING PLACED BY H&A: 2000
- ◆ SEDIMENT SAMPLE TRC 1996

**NOTES**

• Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.  
Sample locations are approximate and were compiled from various sources.  
TRC sample locations from Rohm Tech site plan: 1-29-97.  
USGS locations taken from draft email dated 5-30-03.

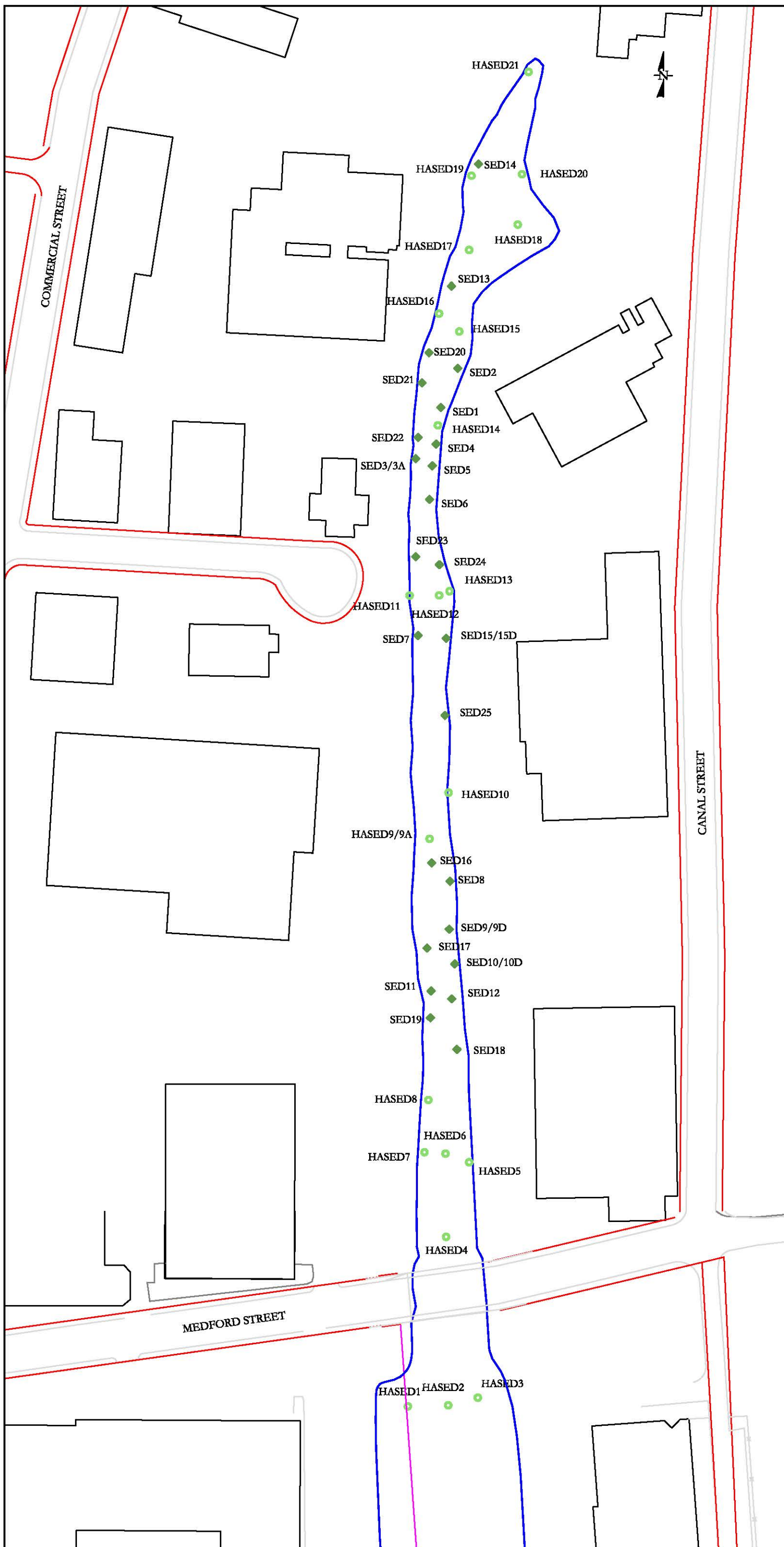
**MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

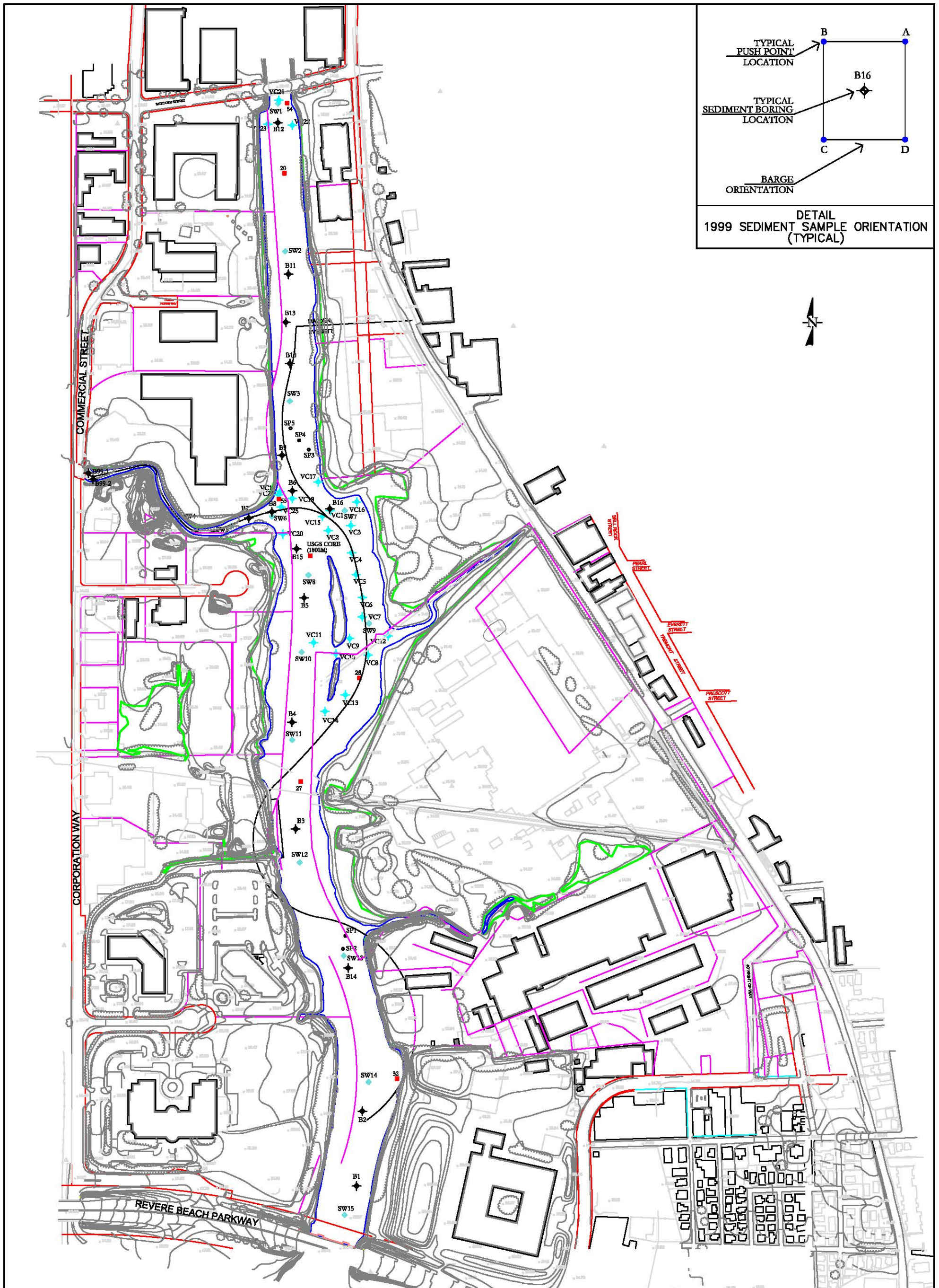
**HISTORIC SAMPLE LOCATIONS: 1996-2000**

0 200 400  
Approximate Scale in Feet

Date: JULY 2006

Figure: 4.1





DEPARTMENT OF THE ARMY  
 NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
 CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD MASSACHUSETTS**

**APPROXIMATE  
 SAMPLE LOCATIONS**

Date: JAN 2007

Figure: F-4

**LEGEND**

- ◆ RIVER BORING PLACED BY NCA: 1999
- HAND DRIVEN PROBE PLACED BY NCA: 1999
- USGS SEDIMENT SAMPLE LOCATION
- ◆ RIVER BORING PLACED BY NCA: 2003
- ◆ SURFACE WATER SAMPLE COLLECTED BY NCA: 1999

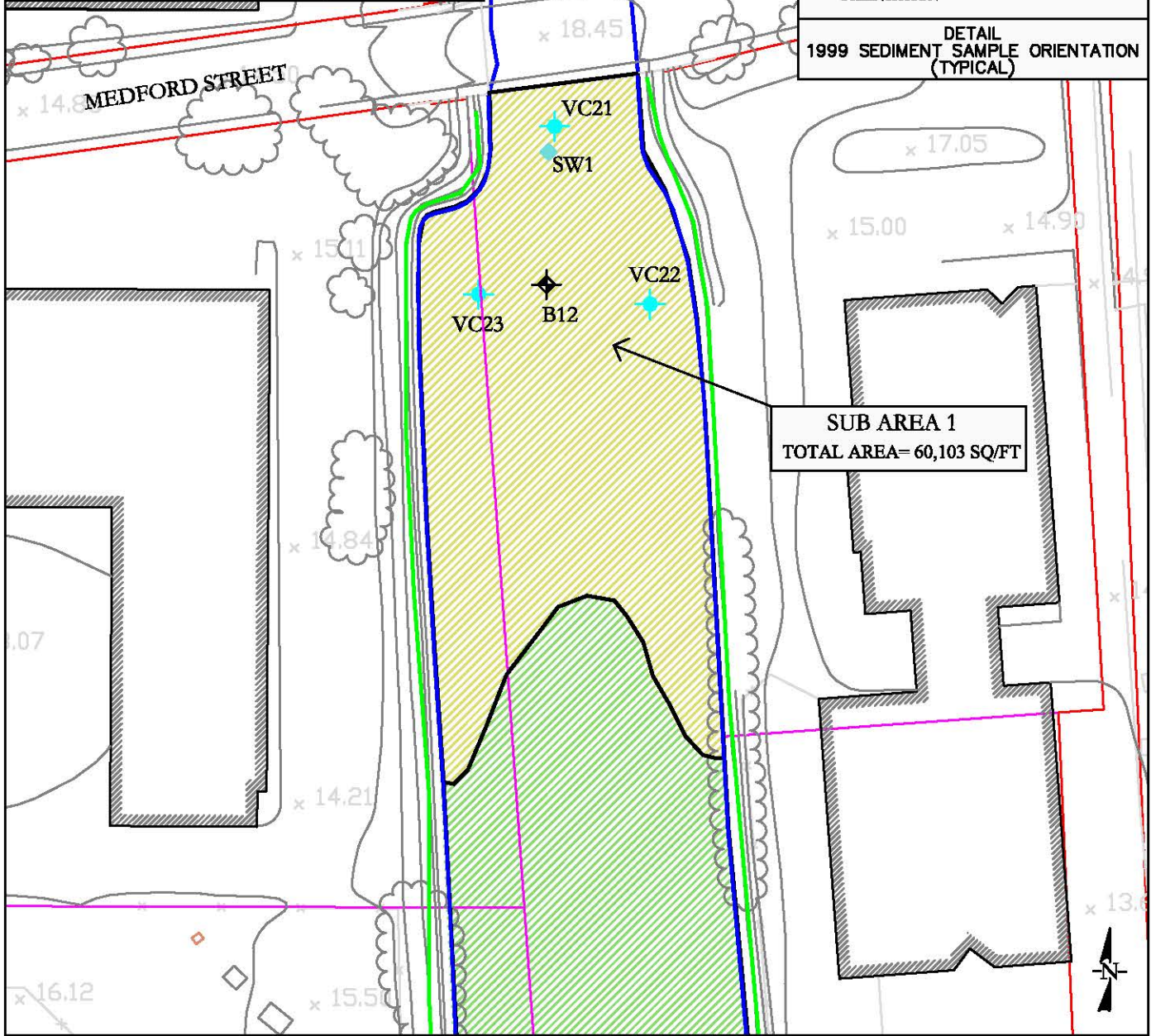
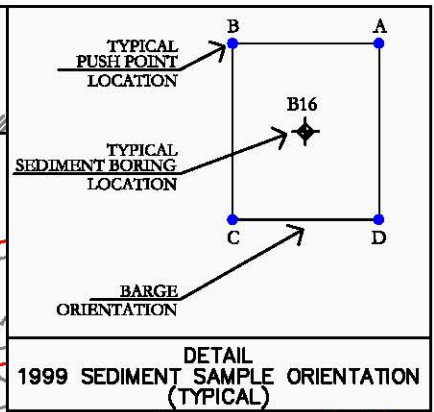
- EXISTING BUILDING
- FORMER BUILDING
- WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

0 200 400  
 Approximate Scale in Feet

PARAMETER	PEC	MINIMUM CONCENTRATION EXCEEDING PEC	MAXIMUM CONCENTRATION EXCEEDING PEC
ARSENIC	33	35 (VC21/S1)	120 (VC23/S4B)
CADMIUM	4.98	6 (B12/S3)	12 (VC21/S2)
CHROMIUM	111	150 (VC23/S4B)	150 (VC23/S4B)
COPPER	149	220 (VC22/S1)	320 (VC23/S4B)
LEAD	128	170 (VC21/S4)	1780 (B12/S3)
MERCURY	1.06	1.3 (VC22/S1)	3 (VC23/S4B)
ZINC	459	740 (VC22/S1)	1400 (VC23/S4B)









 DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT,  
CORPS OF ENGINEERS  
CONCORD, MASSACHUSETTS

**MALDEN RIVER RESTORATION PROJECT**  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS

**SUB-AREA 1 DETAIL**

**LEGEND**

-  RIVER BORING PLACED BY NCA: 1999
-  RIVER BORING PLACED BY NCA: 2003
-  SURFACE WATER SAMPLE COLLECTED BY NCA: 1999
-  SUB-AREA 1
-  SUB-AREA 2
-  WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

0 50 100  
Approximate Scale In Feet

Date: JULY 2006  
Figure: 4-13





DEPARTMENT OF THE ARMY  
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CONCORD, MASSACHUSETTS

PARAMETER	PEC	MINIMUM CONCENTRATION EXCEEDING PEC	MAXIMUM CONCENTRATION EXCEEDING PEC
ARSENIC	33	7 (B13/S2-3)	14 (B11/S3)
CADMIUM	4.98	116 (B13/C)	136 (B13/S3)
CHROMIUM	111	262 (B11/S3)	343 (B13/C)
COPPER	149	530 (B11/S3)	1970 (B13/C)
LEAD	128	1.5 (B11/S3)	6.8 (B13/S2)
MERCURY	1.06	55 (B11/S3)	56 (B13/C)
ZINC	459	1038 (B13/S2)	2838 (B13/C)

LEGEND

- ◆ RIVER BORING PLACED BY NCA: 1999
- HAND DRIVEN PROBE PLACED BY NCA: 1999
- ◆ RIVER BORING PLACED BY NCA: 2003
- ◆ SURFACE WATER SAMPLE COLLECTED BY NCA: 1999

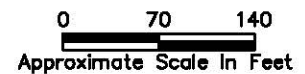
- SUB-AREA 1
- SUB-AREA 2
- SUB-AREA 3
- WETLAND

SUB AREA 2  
TOTAL AREA= 220,970 SQ/FT

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

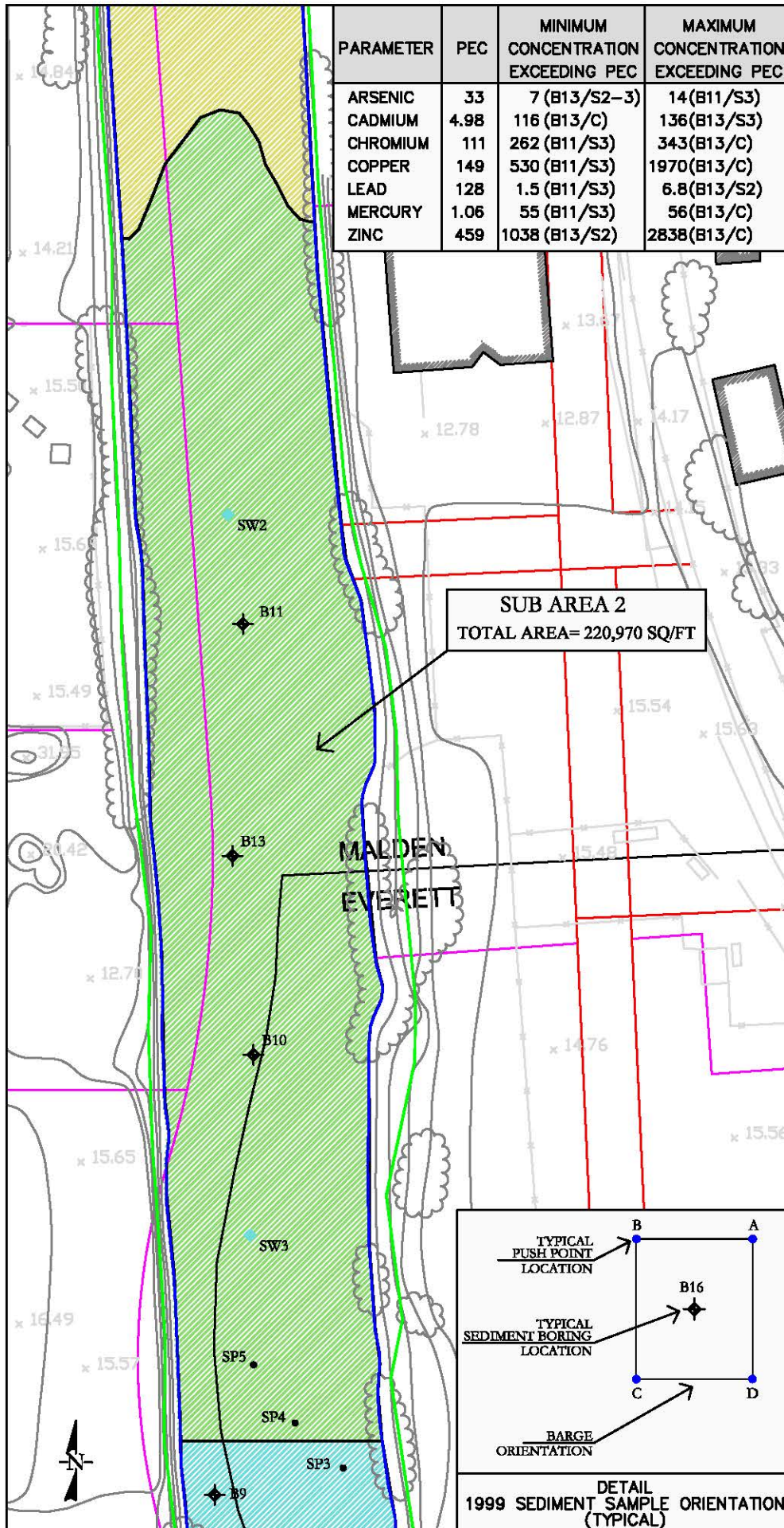
MALDEN RIVER RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD MASSACHUSETTS

SUB-AREA 2 DETAIL

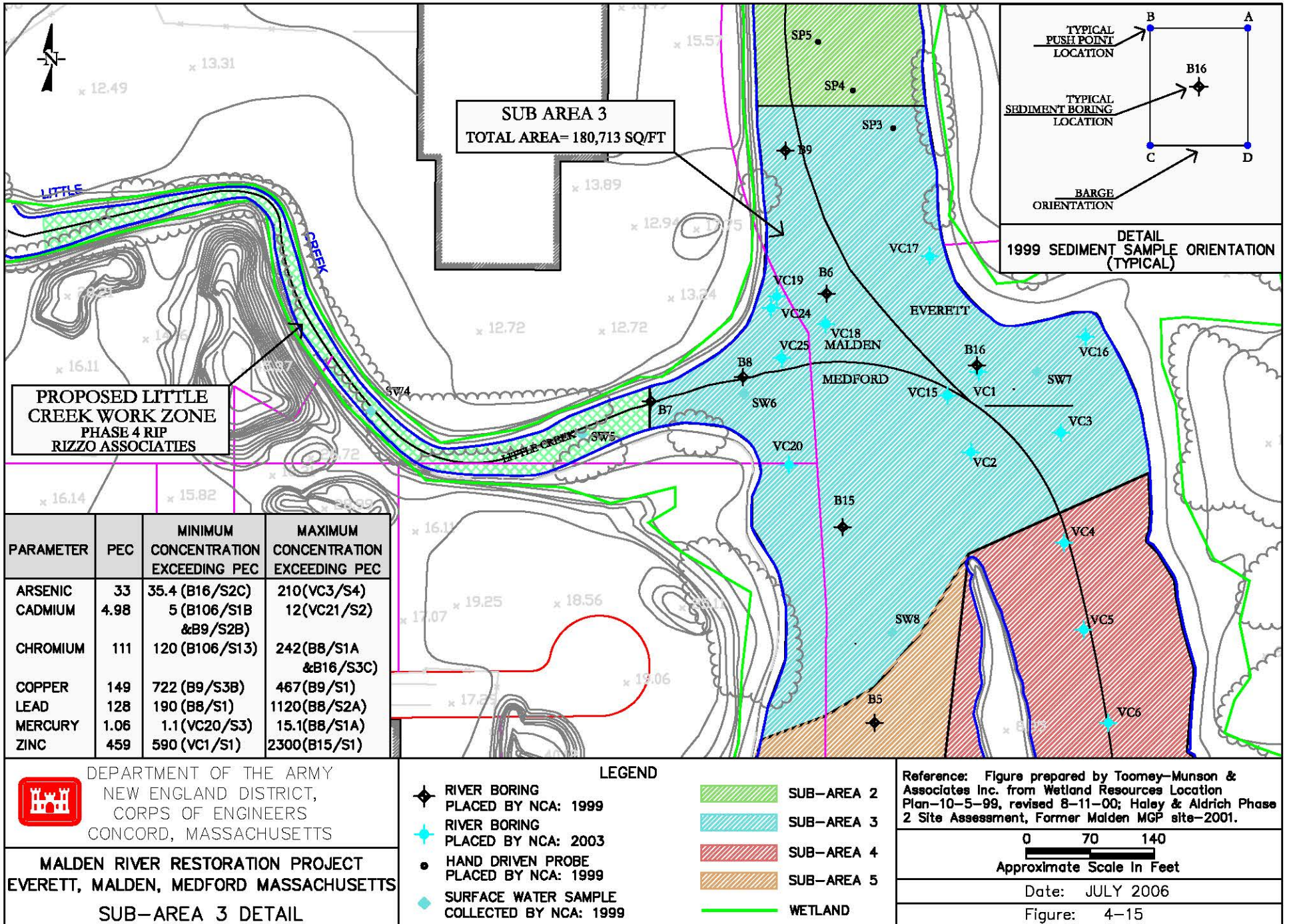


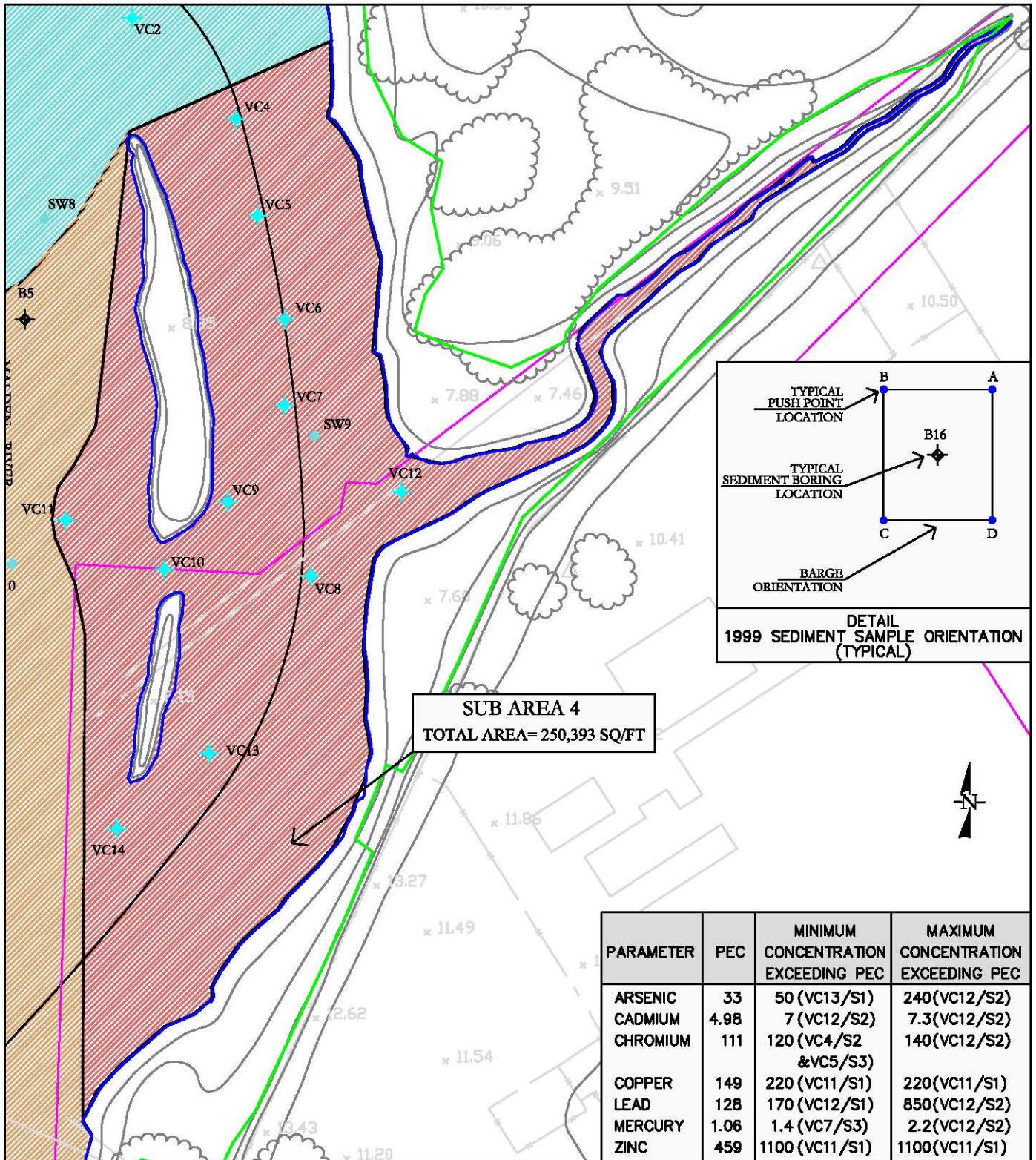
Date: JULY 2006

Figure: 4-14

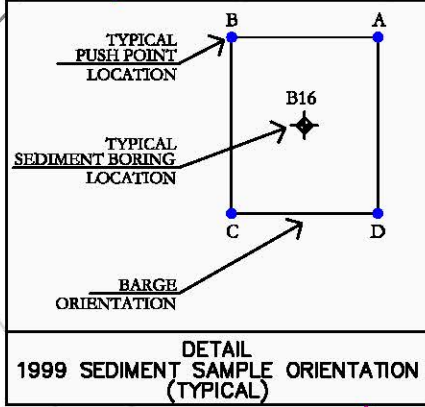


DETAIL  
1999 SEDIMENT SAMPLE ORIENTATION  
(TYPICAL)





**SUB AREA 4**  
TOTAL AREA= 250,393 SQ/FT











PARAMETER	PEC	MINIMUM CONCENTRATION EXCEEDING PEC	MAXIMUM CONCENTRATION EXCEEDING PEC
ARSENIC	33	50 (VC13/S1)	240(VC12/S2)
CADMIUM	4.98	7 (VC12/S2)	7.3(VC12/S2)
CHROMIUM	111	120 (VC4/S2 & VC5/S3)	140(VC12/S2)
COPPER	149	220 (VC11/S1)	220(VC11/S1)
LEAD	128	170 (VC12/S1)	850(VC12/S2)
MERCURY	1.06	1.4 (VC7/S3)	2.2(VC12/S2)
ZINC	459	1100 (VC11/S1)	1100(VC11/S1)

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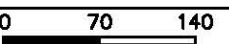
**MALDEN RIVER RESTORATION PROJECT**  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS

**SUB-AREA 4 DETAIL**

- LEGEND**
-  RIVER BORING PLACED BY NCA: 1999
  -  RIVER BORING PLACED BY NCA: 2003
  -  HAND DRIVEN PROBE PLACED BY NCA: 1999
  -  SURFACE WATER SAMPLE COLLECTED BY NCA: 1999
  -  SUB-AREA 3
  -  SUB-AREA 4
  -  SUB-AREA 5
  -  WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

  
Approximate Scale In Feet

Date: JULY 2006

Figure: 4-16

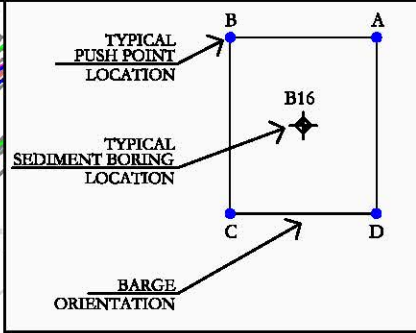


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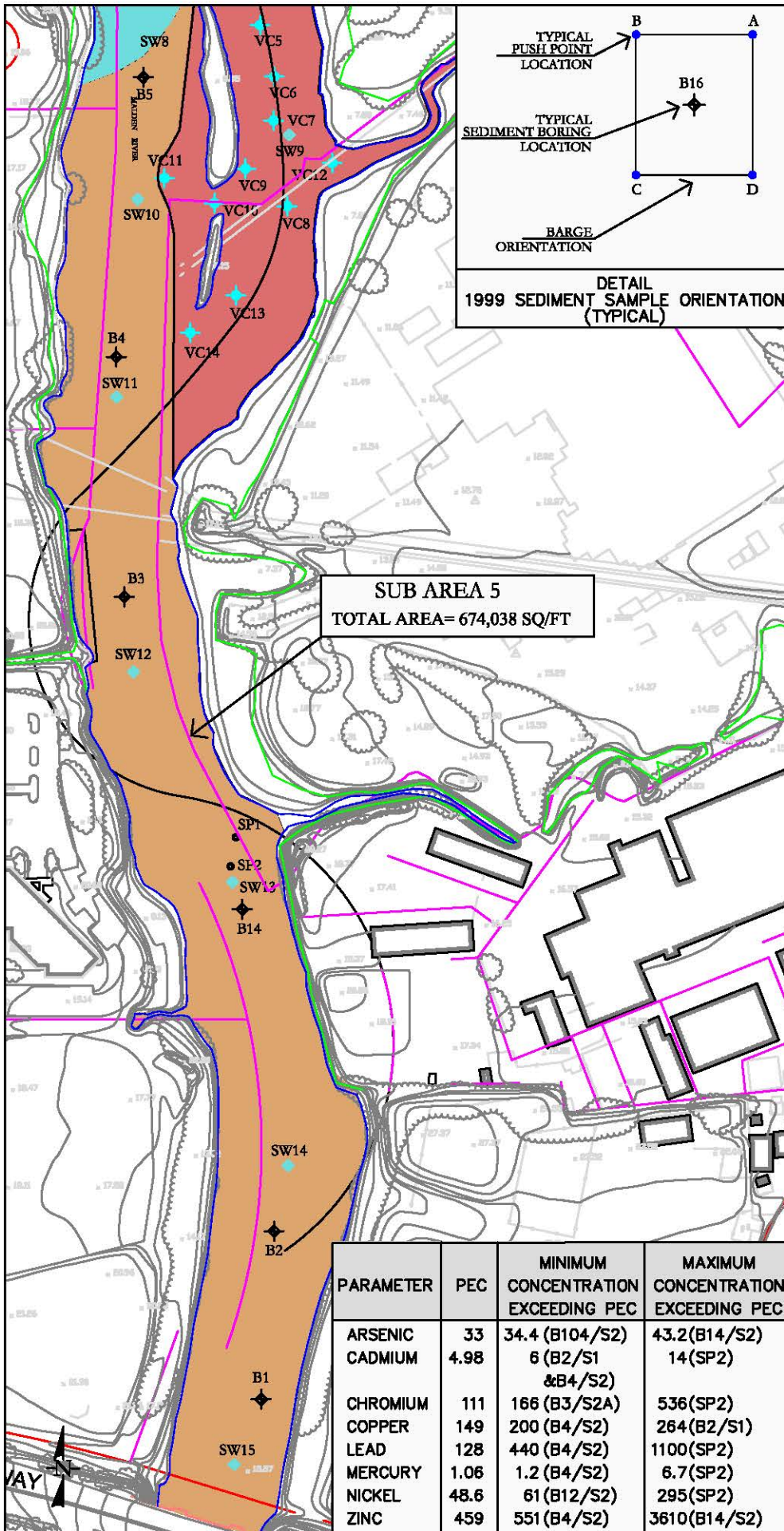
**LEGEND**

- ◆ RIVER BORING PLACED BY NCA: 1999
- HAND DRIVEN PROBE PLACED BY NCA: 1999
- ◆ RIVER BORING PLACED BY NCA: 2003
- ◆ SURFACE WATER SAMPLE COLLECTED BY NCA: 1999

- SUB-AREA 3
- SUB-AREA 4
- SUB-AREA 5
- WETLAND



DETAIL  
 1999 SEDIMENT SAMPLE ORIENTATION  
 (TYPICAL)



MALDEN RIVER  
 RESTORATION PROJECT  
 EVERETT, MALDEN, MEDFORD  
 MASSACHUSETTS

**SUB-AREA 5 DETAIL**



Date: JULY 2006

Figure: 4-17

PARAMETER	PEC	MINIMUM CONCENTRATION EXCEEDING PEC	MAXIMUM CONCENTRATION EXCEEDING PEC
ARSENIC	33	34.4 (B104/S2)	43.2(B14/S2)
CADMIUM	4.98	6 (B2/S1 & B4/S2)	14(SP2)
CHROMIUM	111	166 (B3/S2A)	536(SP2)
COPPER	149	200 (B4/S2)	264(B2/S1)
LEAD	128	440 (B4/S2)	1100(SP2)
MERCURY	1.06	1.2 (B4/S2)	6.7(SP2)
NICKEL	48.6	61 (B12/S2)	295(SP2)
ZINC	459	551 (B4/S2)	3610(B14/S2)



DEPARTMENT OF THE ARMY  
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**LEGEND**

- RIVER BORING  
PLACED BY NCA: 1999
- HAND DRIVEN PROBE  
PLACED BY NCA: 1999
- RIVER BORING  
PLACED BY NCA: 2003

PAH PEC VALUE  
0-3 FOOT INTERVAL  
FROM TOP OF  
SEDIMENT

CLAY DEPTH (FEET)  
FROM TOP OF  
SEDIMENT

EDGE OF BANK

EXISTING BUILDING

FORMER BUILDING

WETLAND

**NOTES**

Reference: Figure prepared by Toomey-Munson & Associates Inc. from Wetland Resources Location Plan-10-5-99, revised 8-11-00; Haley & Aldrich Phase 2 Site Assessment, Former Malden MGP site-2001.

B-5 sample was collected from 32-44" from top of sediment.

**MALDEN RIVER  
RESTORATION PROJECT  
EVERETT, MALDEN, MEDFORD  
MASSACHUSETTS**

**CONSENSUS BASED  
SEDIMENT TOXICITY  
EVALUATION**

**PROBABLE EFFECTS  
CONCENTRATION VALUES**

0 70 140  
Approximate Scale In Feet

Date: JAN 2007

Figure: E-1

