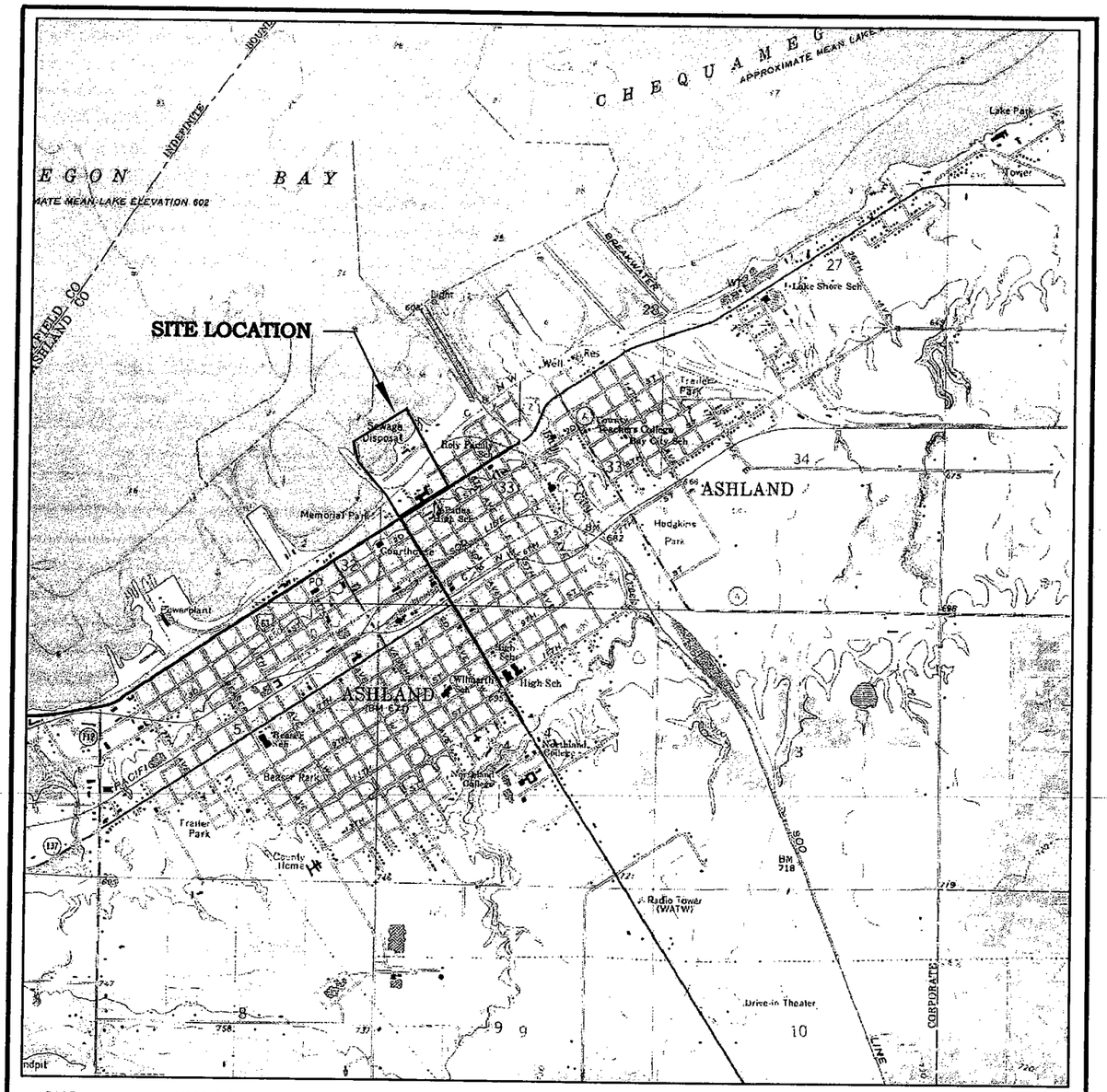
Figures



BASE MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, ASHLAND, WISCONSIN, DATED 1964, PHOTOREVISED 1975.

QUADRANGLE LOCATION

NORTH

0 1320 2640 5280

SCALE IN FEET

PROJECT: ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

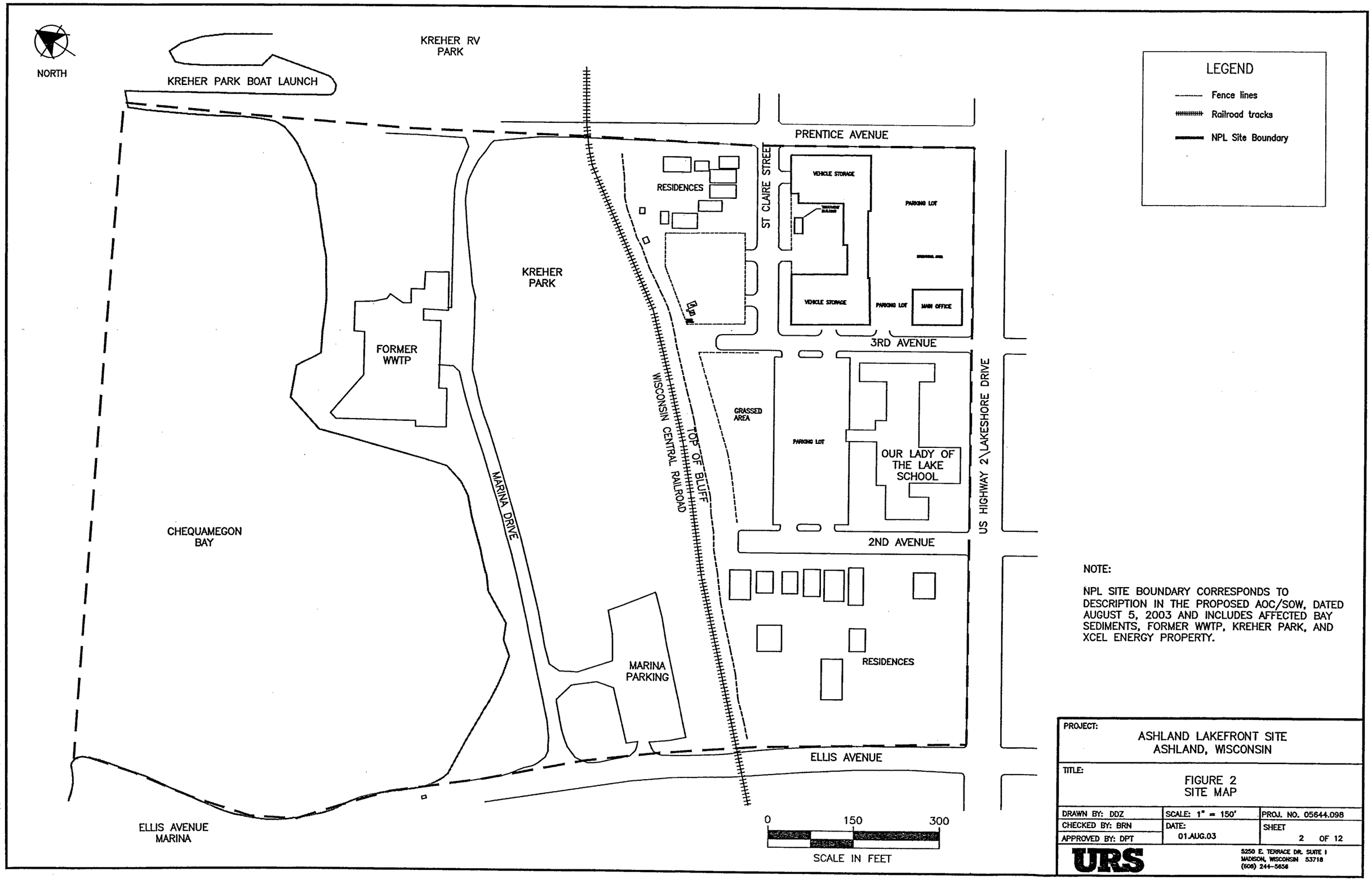
TITLE: FIGURE 1
SITE LOCATION MAP

DRAWN BY: BRN	SCALE: 1" = 2640'	PROJ. NO. 05644-098
CHECKED BY: DPT	DATE: 01.AUG.03	SHEET 1 OF 12
APPROVED BY: DPT		

URS

5250 E TERRACE DRIVE, SUITE J
MADISON, WISCONSIN 53718
(608) 244-5656

S:\CADDFILES\NSP\RIFSDRAWINGS\AUG2003\FIG1

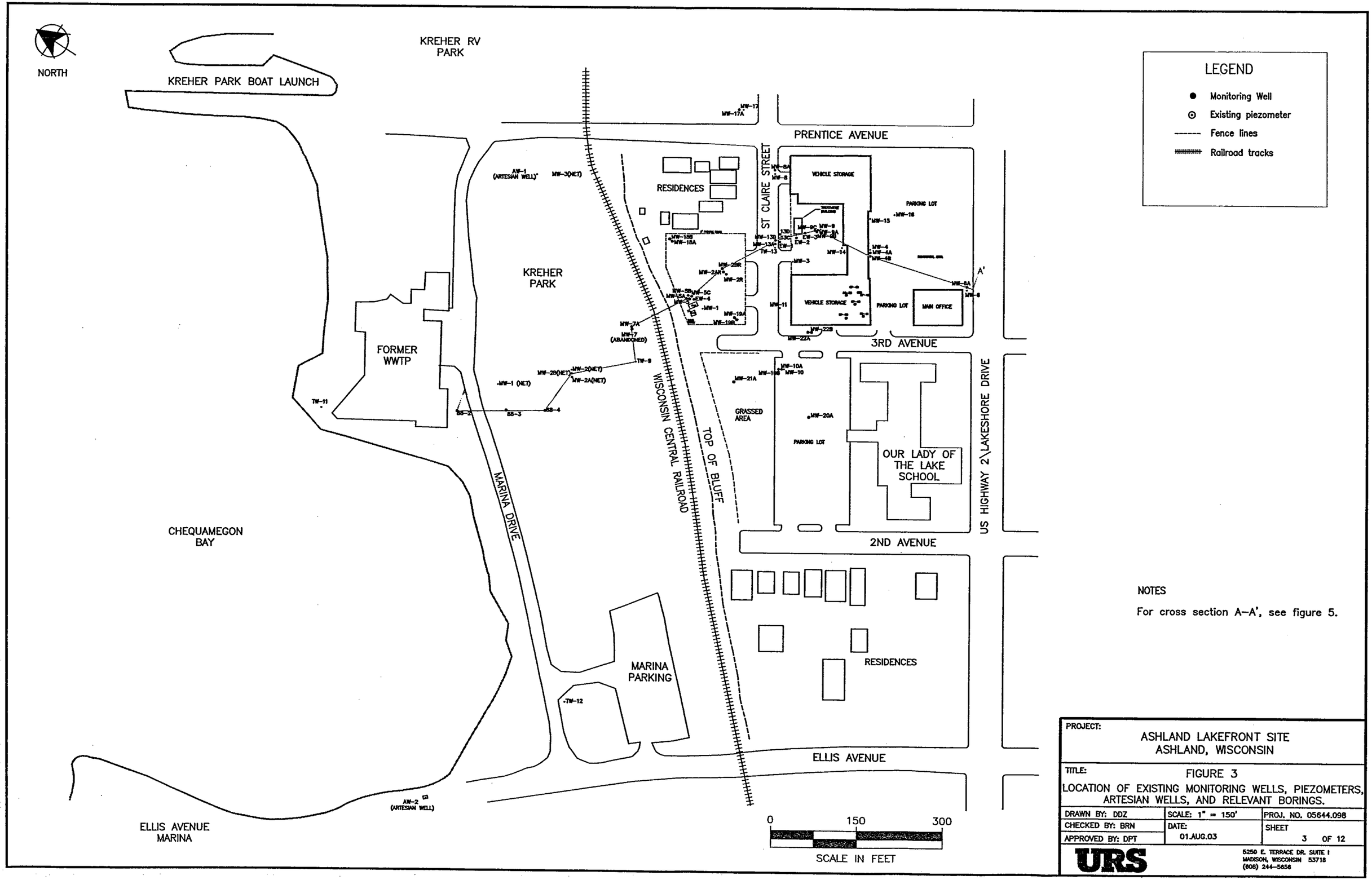


NOTE:

NPL SITE BOUNDARY CORRESPONDS TO DESCRIPTION IN THE PROPOSED AOC/SOW, DATED AUGUST 5, 2003 AND INCLUDES AFFECTED BAY SEDIMENTS, FORMER WWTP, KREHER PARK, AND XCEL ENERGY PROPERTY.

PROJECT: ASHLAND LAKEFRONT SITE ASHLAND, WISCONSIN		
TITLE: FIGURE 2 SITE MAP		
DRAWN BY: DDZ	SCALE: 1" = 150'	PROJ. NO. 05644.098
CHECKED BY: BRN	DATE: 01.AUG.03	SHEET 2 OF 12
APPROVED BY: DPT		
URS	5250 E. TERRACE DR. SUITE I MADISON, WISCONSIN 53718 (608) 244-5656	

S:\CADDFILES\NSP\RIFSDRAWINGS\AUG2003\FIG2



NOTES

For cross section A–A', see figure 5.

PROJECT: ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

TITLE: FIGURE 3
LOCATION OF EXISTING MONITORING WELLS, PIEZOMETERS, ARTESIAN WELLS, AND RELEVANT BORINGS.

DRAWN BY: DDZ	SCALE: 1" = 150'	PROJ. NO. 05644.098
CHECKED BY: BRN	DATE: 01.AUG.03	SHEET 3 OF 12
APPROVED BY: DPT		

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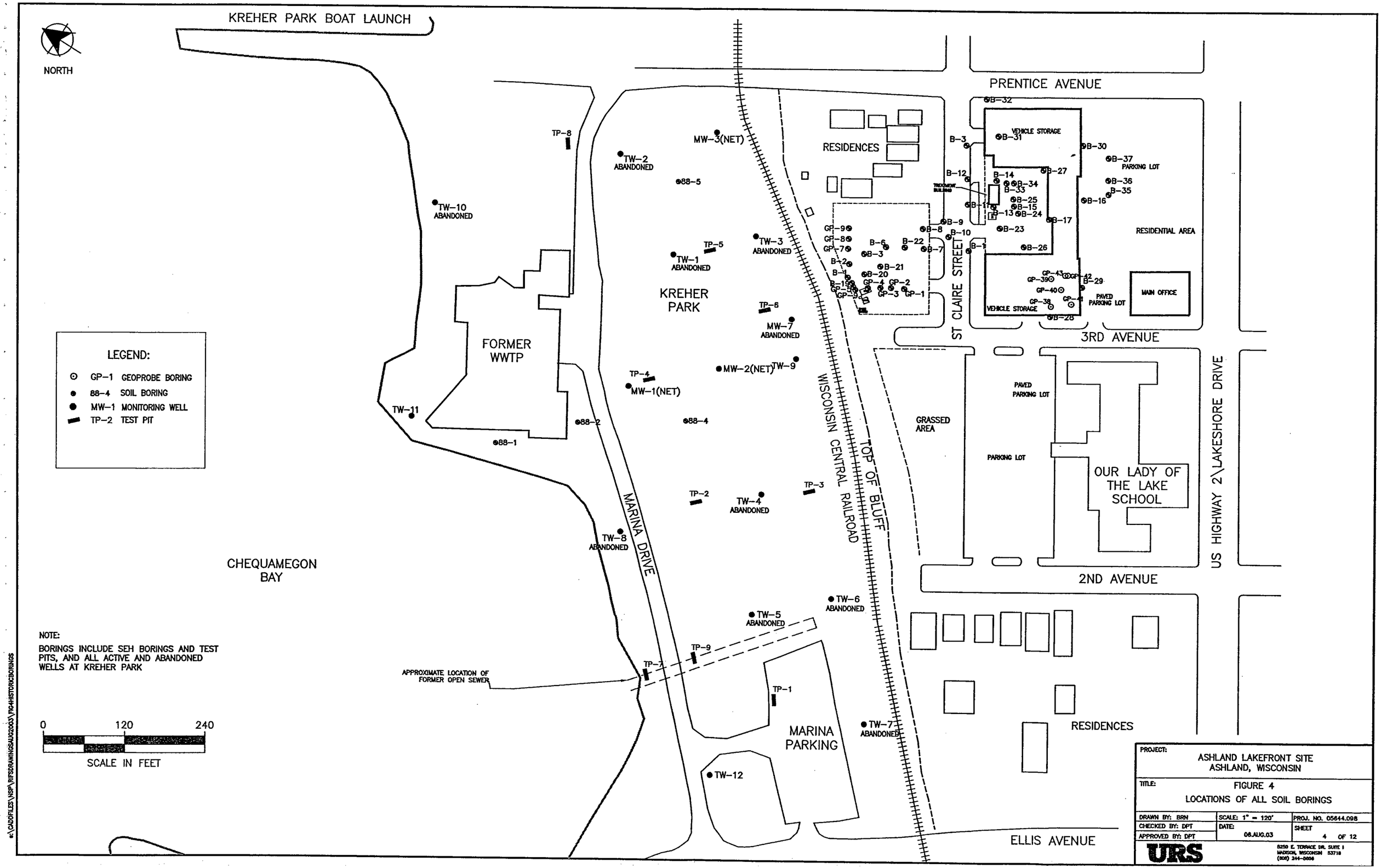
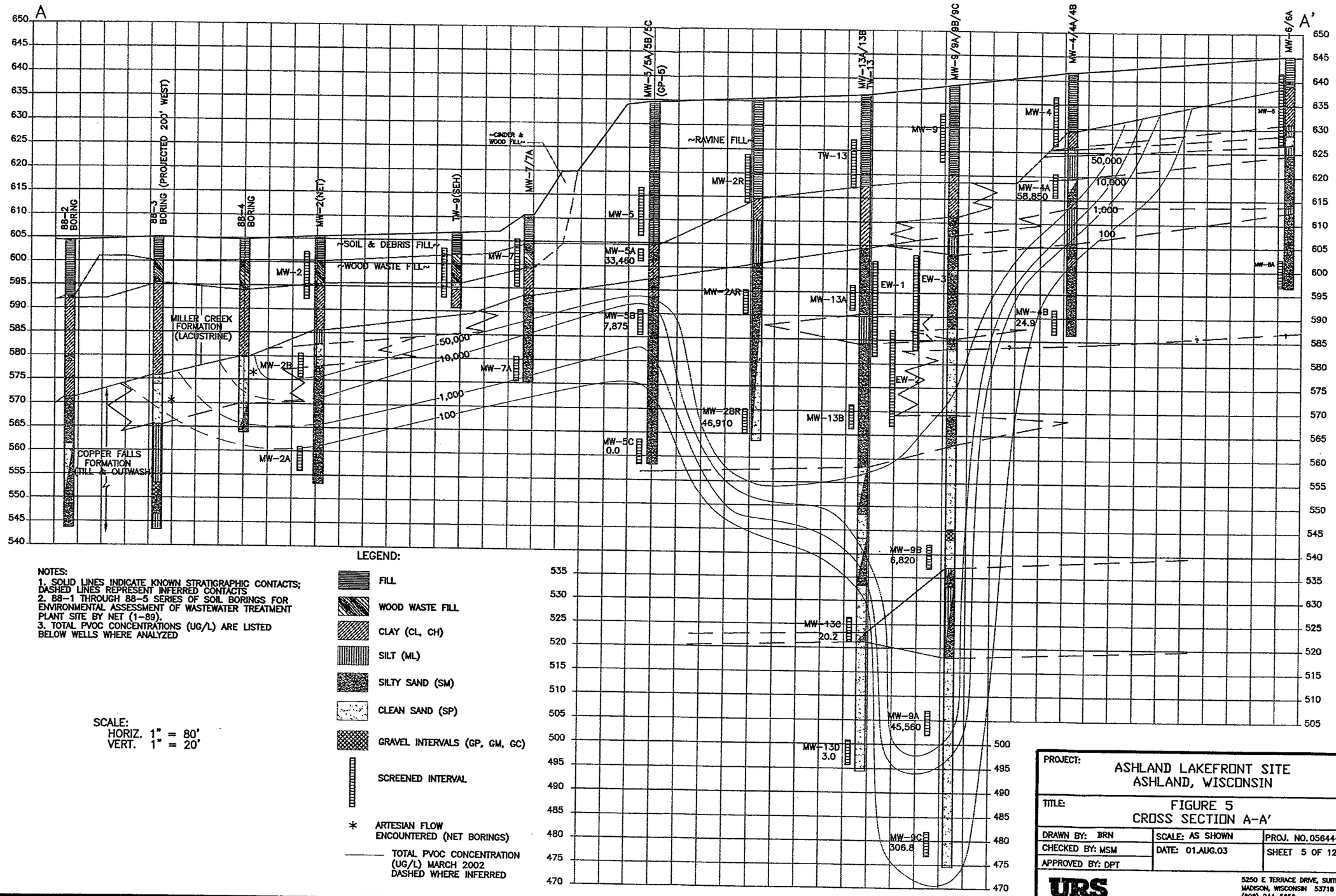
5250 E. TERRACE DR. SUITE 1
MADISON, WISCONSIN 53718
(608) 244-5858

S:\CADFILES\NSP\RIFSDRAWINGSAUG2003\FIG3



KREHER PARK BOAT LAUNCH
NORTH
PRENTICE AVENUE
RESIDENCES
VEHICLE STORAGE
PARKING LOT
RESIDENTIAL AREA
MAIN OFFICE
PAVED PARKING LOT
ST CLAIRE STREET
3RD AVENUE
KREHER PARK
FORMER WWTP
WISCONSIN CENTRAL RAILROAD
TOP OF BLUFF
GRASSED AREA
PAVED PARKING LOT
PARKING LOT
OUR LADY OF THE LAKE SCHOOL
US HIGHWAY 2\LAKESHORE DRIVE
2ND AVENUE
MARINA DRIVE
CHEQUAMEGON BAY
MARINA PARKING
RESIDENCES
ELLIS AVENUE
APPROXIMATE LOCATION OF FORMER OPEN SEWER
TW-1 ABANDONED
TW-2 ABANDONED
TW-3 ABANDONED
TW-4 ABANDONED
TW-5 ABANDONED
TW-6 ABANDONED
TW-7 ABANDONED
TW-8 ABANDONED
TW-9
TW-10 ABANDONED
TW-11
TW-12
MW-1(NET)
MW-2(NET)
MW-3(NET)
MW-7 ABANDONED
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
88-1
88-2
88-4
88-5
LEGEND:
GP-1 GEOPROBE BORING
88-4 SOIL BORING
MW-1 MONITORING WELL
TP-2 TEST PIT
NOTE:
BORINGS INCLUDE SEH BORINGS AND TEST PITS, AND ALL ACTIVE AND ABANDONED WELLS AT KREHER PARK
0
120
240
SCALE IN FEET
PROJECT:
ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN
TITLE:
FIGURE 4
LOCATIONS OF ALL SOIL BORINGS
DRAWN BY: BRN
CHECKED BY: DPT
APPROVED BY: DPT
SCALE: 1" = 120'
DATE: 06.AUG.03
PROJ. NO. 05644.098
SHEET 4 OF 12
URS



NOTES:
1. SOLID LINES INDICATE KNOWN STRATIGRAPHIC CONTACTS; DASHED LINES REPRESENT INFERRED CONTACTS
2. 88-1 THROUGH 88-5 SERIES OF SOIL BORINGS FOR ENVIRONMENTAL ASSESSMENT OF WASTEWATER TREATMENT PLANT SITE BY NET (1-89).
3. TOTAL PVOC CONCENTRATIONS (UG/L) ARE LISTED BELOW WELLS WHERE ANALYZED

LEGEND:

- FILL
- WOOD WASTE FILL
- CLAY (CL, CH)
- SILT (ML)
- SILTY SAND (SM)
- CLEAN SAND (SP)
- GRAVEL INTERVALS (GP, GM, GC)
- SCREENED INTERVAL
- * ARTESIAN FLOW ENCOUNTERED (NET BORINGS)
- TOTAL PVOC CONCENTRATION (UG/L) MARCH 2002 DASHED WHERE INFERRED

SCALE:
HORIZ. 1" = 80'
VERT. 1" = 20'

PROJECT: ASHLAND LAKEFRONT SITE ASHLAND, WISCONSIN		
TITLE: FIGURE 5 CROSS SECTION A-A'		
DRAWN BY: BRN	SCALE: AS SHOWN	PROJ. NO. 05644-098
CHECKED BY: MSM	DATE: 01.AUG.03	SHEET 5 OF 12
APPROVED BY: DPT		

URS

5250 E TERRACE DRIVE, SUITE J
MADISON, WISCONSIN 53718
(608) 244-5656

FILE: S:\CADDFILES\NSP\RIFSDRAWINGSAUG2003FIG5 X SEC

NOTE:

COPPER FALLS AQUIFER IS KNOWN TO BE MORE REGIONALLY EXTENSIVE; BOUNDARIES SHOWN REPRESENT THE PROBABLE AFFECTED AREAS.

NPL SITE BOUNDARY INCLUDES AFFECTED BAY SEDIMENTS, FORMER WWTP, KREHER PARK, AND XCEL ENERGY PROPERTY.

PROJECT:
ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

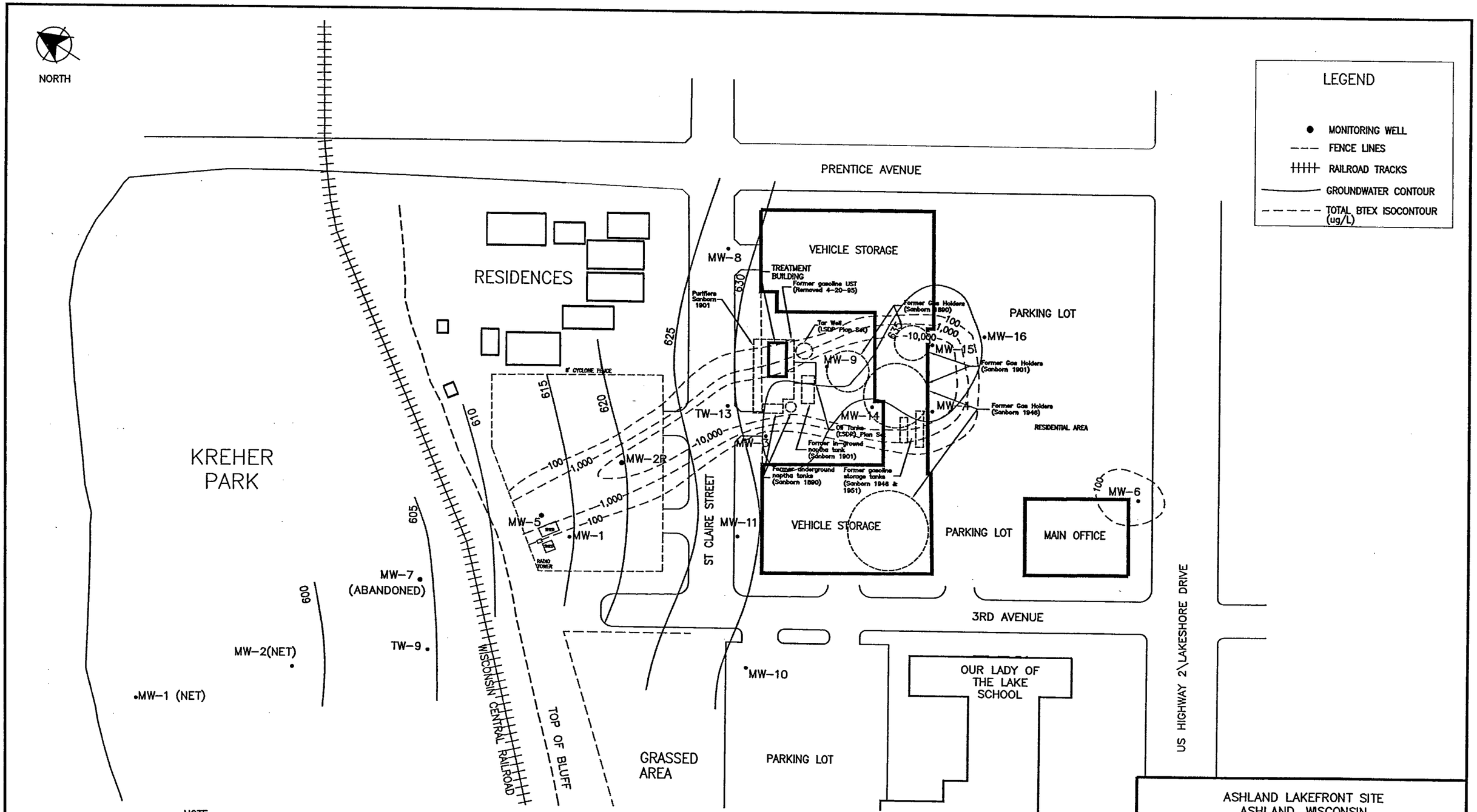
TITLE:
FIGURE 6
ASHLAND LAKEFRONT SITE OPERABLE UNITS

DRAWN BY: BRN	SCALE: 1" = 150'	PROJ. NO. 05644.098
CHECKED BY: DZ	DATE: 05.AUG.03	SHEET 6 OF 12
APPROVED BY: DPT		

URS

5250 E. TERRACE DR. SUITE 1
MADISON, WISCONSIN 53718
(608) 244-5656

S:\CADDFILES\NSP\RIFSDRAWINGSAUG2003\FIG6



NOTE:

BTEX ISOCONTOURS AND GROUNDWATER CONTOURS FROM URS/DAMES & MOORE REPORT, SUPPLEMENTAL FACILITY SITE INVESTIGATION AND REMEDIAL ACTION OPTIONS EVALUATION REPORT, DATED MARCH 1999.

HIGH CONCENTRATIONS IN MW-2R ARE ASSUMED BASED UPON RECENT TAR MEASUREMENTS AT THIS WELL

ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

FIGURE 7
GROUNDWATER CONTAMINATION IN RAVINE FILL UNIT (OU-1) AND FORMER MGP FEATURES

DRAWN BY: BRN	SCALE: 1" = 75'	PROJ. NO. 05644.098
CHECKED BY: DPT	DATE: 08.AUG.03	SHEET 7 OF 12
APPROVED BY: DPT		

URS

5250 E. TERRACE DR. SUITE I
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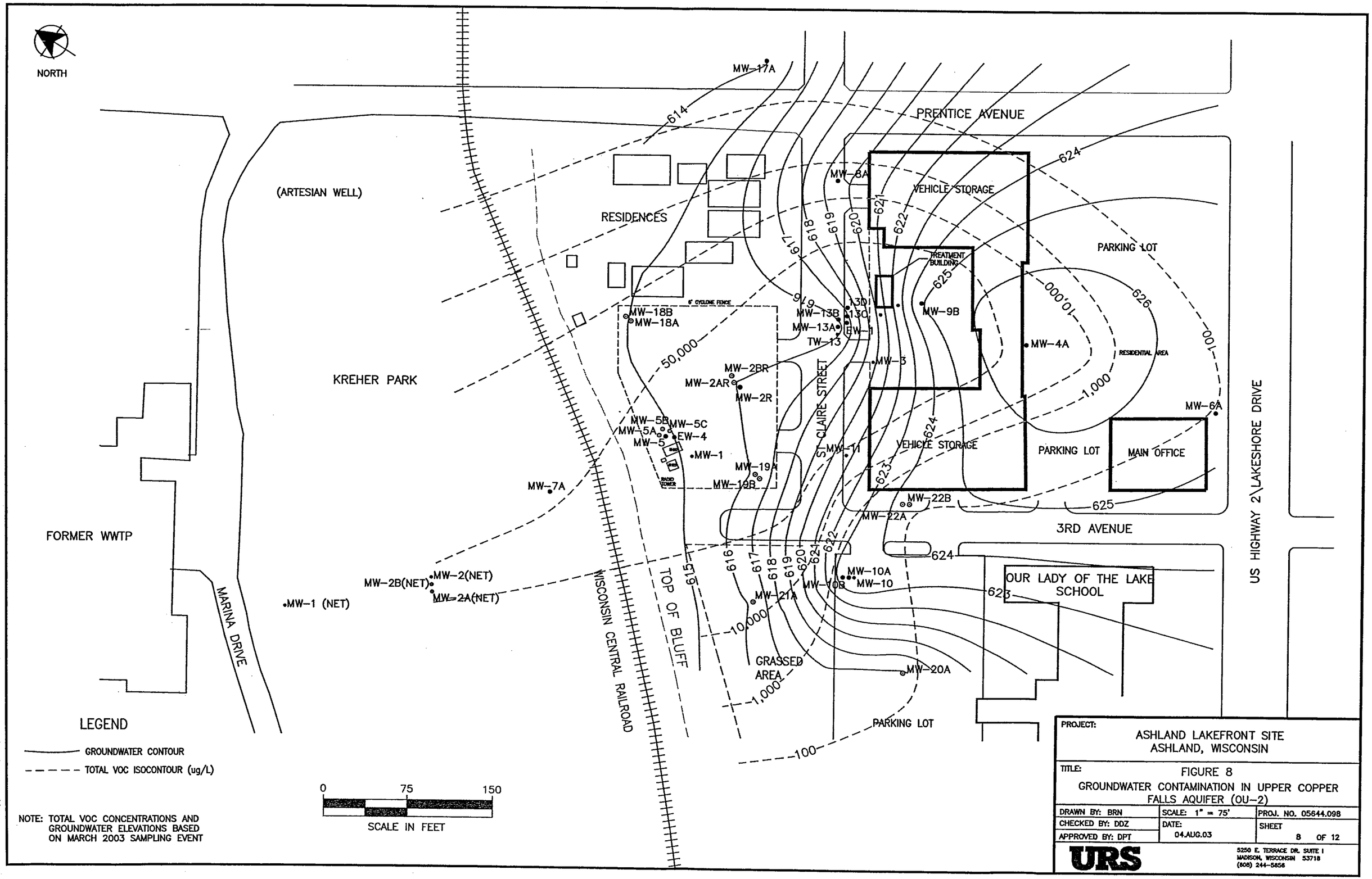
(608) 244-5656

S:\CADDFILES\WSP\RIFSDRAWINGS\AUG2003\FIG7

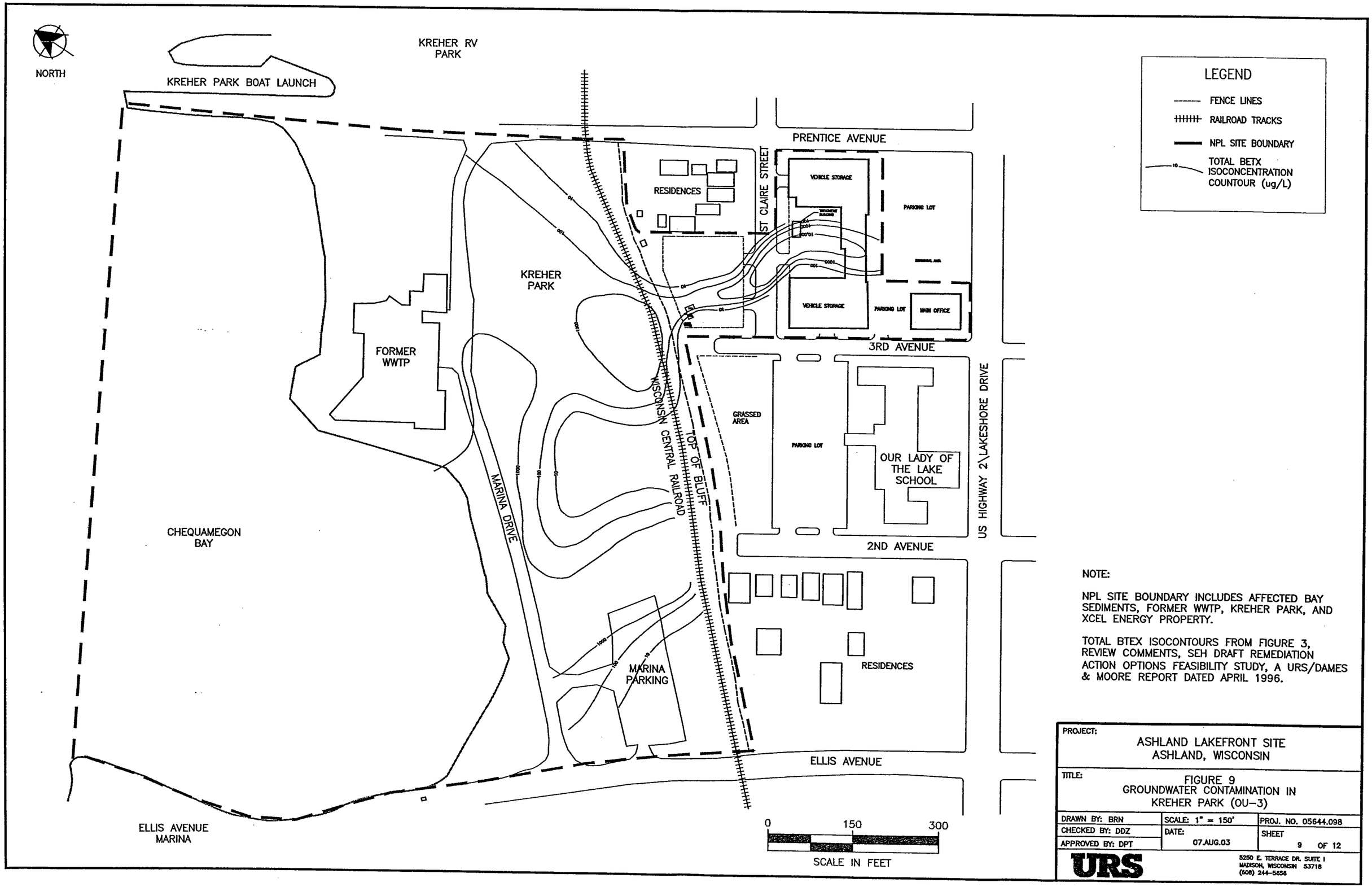


PROJECT: ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

TITLE: FIGURE 8
GROUNDWATER CONTAMINATION IN UPPER COPPER FALLS AQUIFER (OU-2)

DRAWN BY: BRN	SCALE: 1" = 75'	PROJ. NO. 05644.098
CHECKED BY: DDZ	DATE: 04.AUG.03	SHEET 8 OF 12
APPROVED BY: DPT		

URS
5250 E. TERRACE DR. SUITE I
MADISON, WISCONSIN 53718
(608) 244-5656



NOTE:

NPL SITE BOUNDARY INCLUDES AFFECTED BAY SEDIMENTS, FORMER WWTP, KREHER PARK, AND XCEL ENERGY PROPERTY.

TOTAL BTEX ISOCONTOURS FROM FIGURE 3, REVIEW COMMENTS, SEH DRAFT REMEDIATION ACTION OPTIONS FEASIBILITY STUDY, A URS/DAMES & MOORE REPORT DATED APRIL 1996.

PROJECT:
ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

TITLE:
FIGURE 9
GROUNDWATER CONTAMINATION IN KREHER PARK (OU-3)

DRAWN BY: BRN	SCALE: 1" = 150'	PROJ. NO. 05644.098
CHECKED BY: DDZ	DATE: 07.AUG.03	SHEET 9 OF 12
APPROVED BY: DPT		

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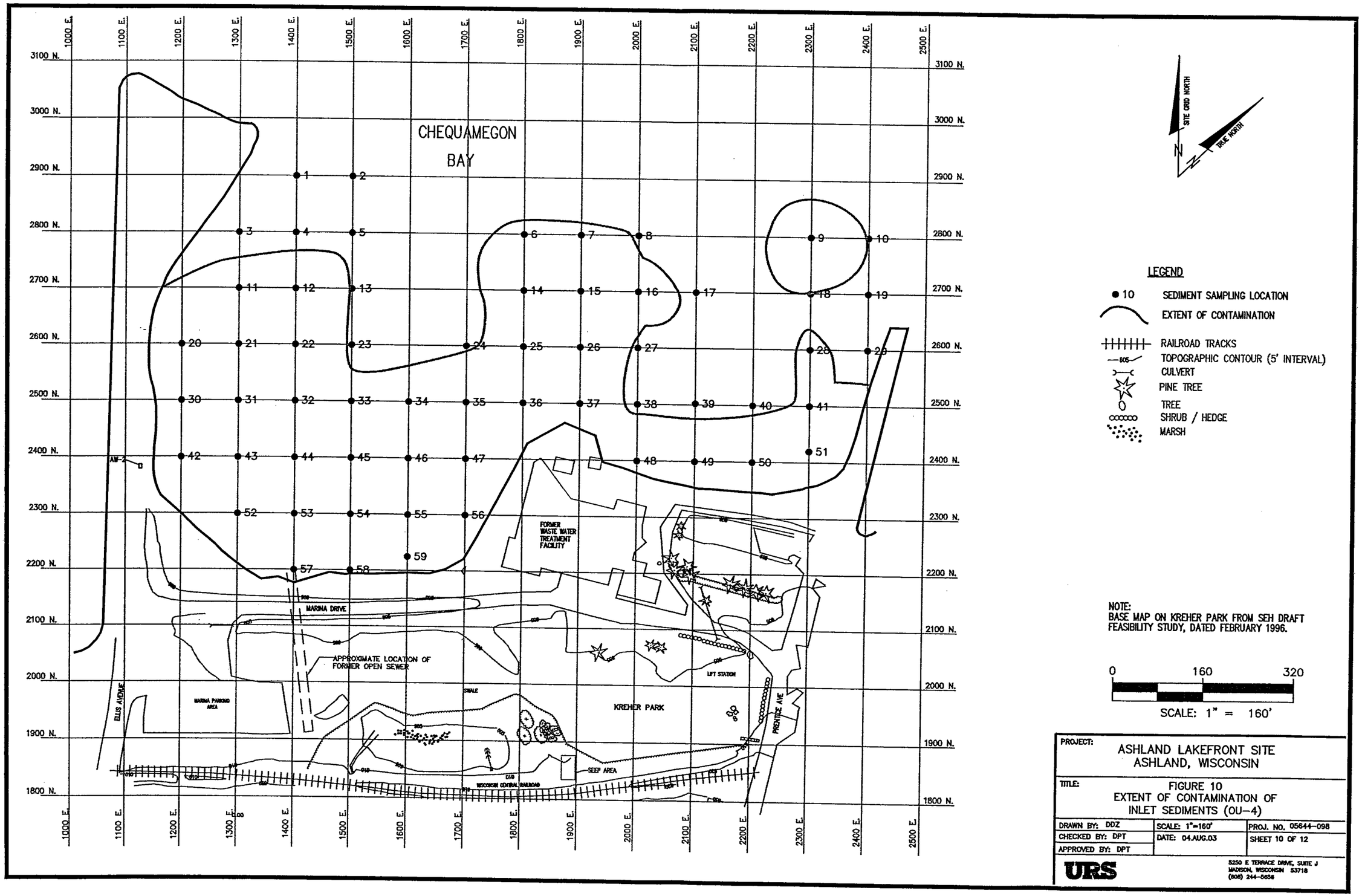
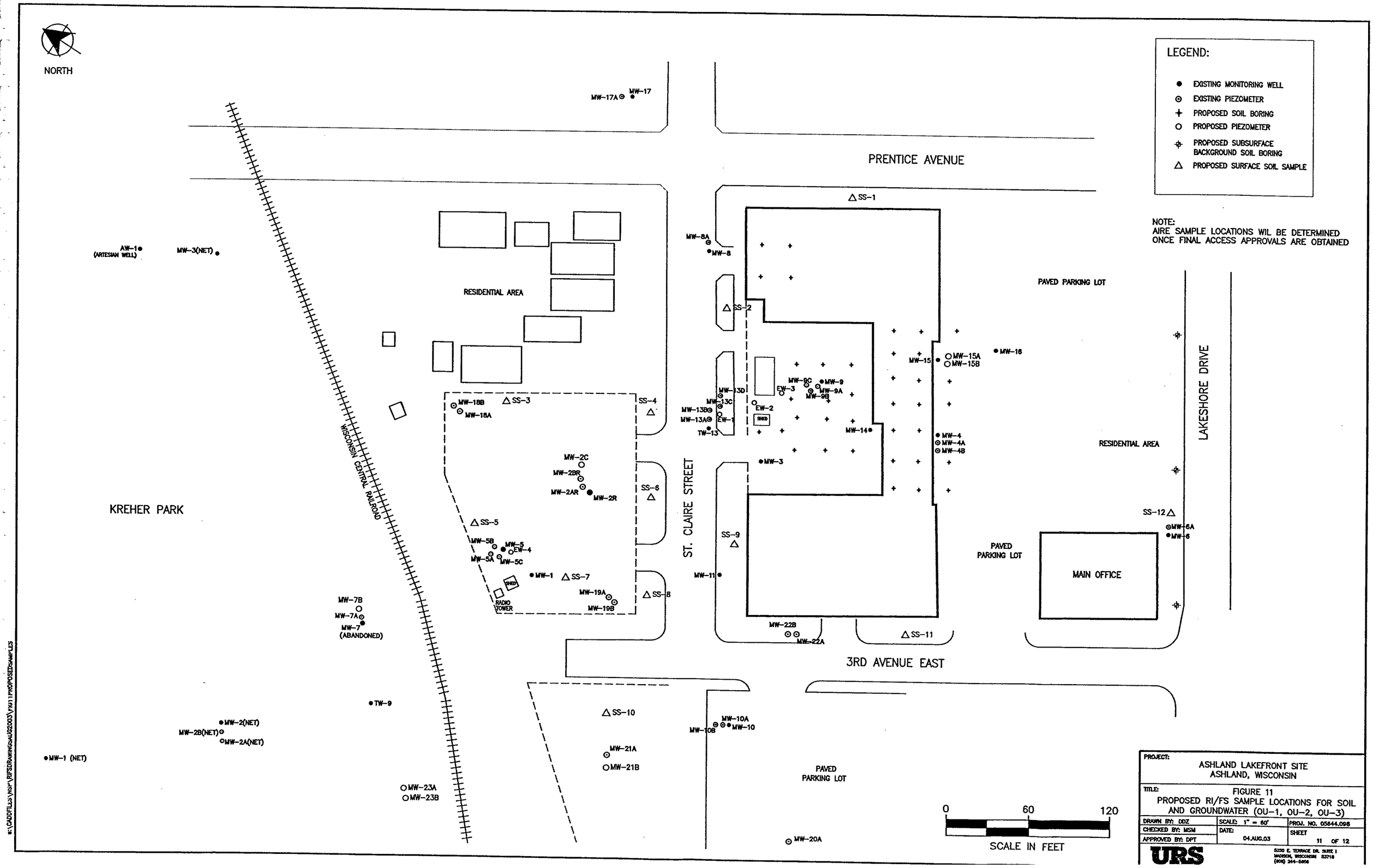
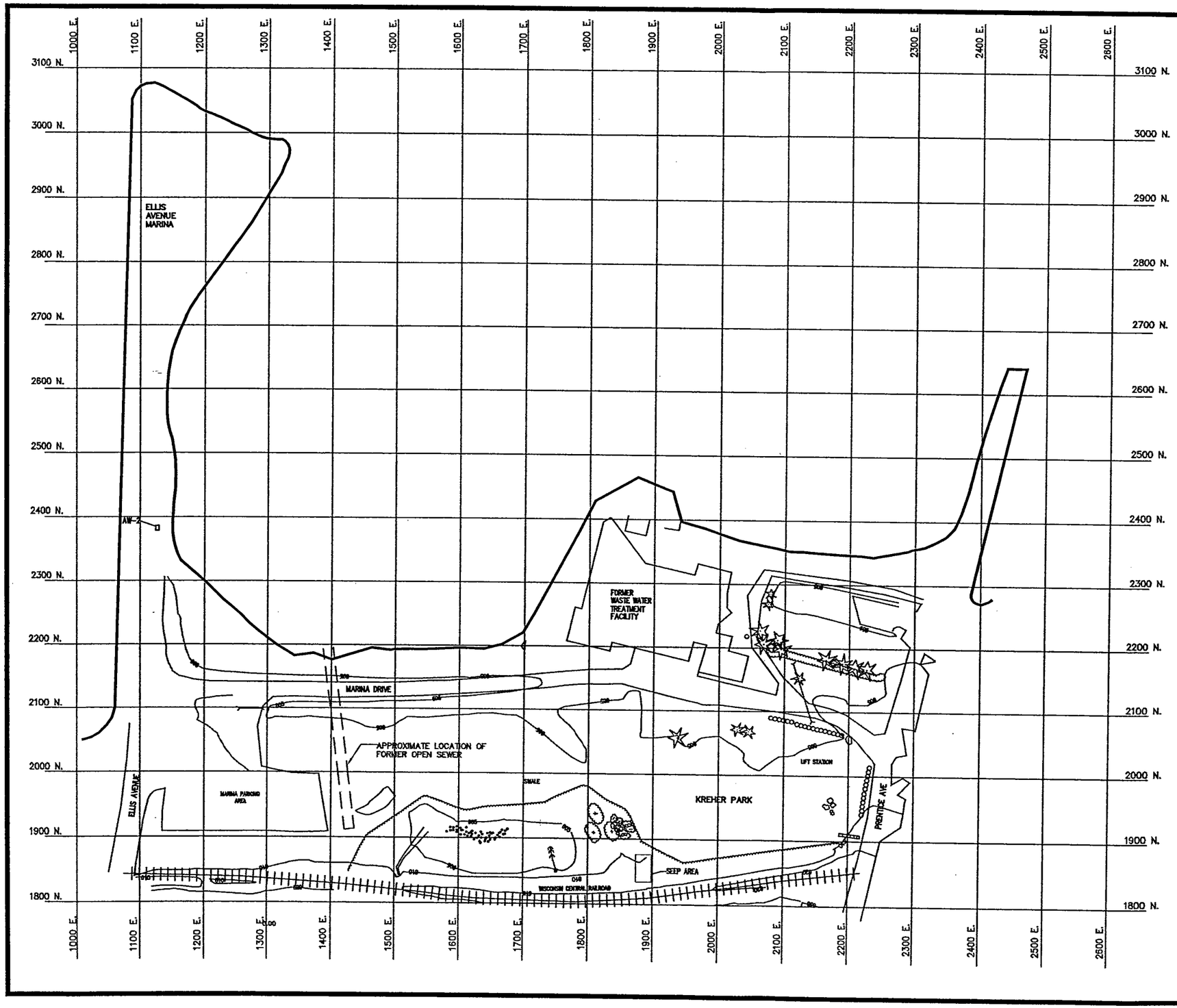
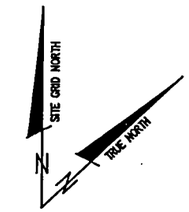
MADISON, WISCONSIN 53718
(608) 244-5658

S:\CADDFILES\NSP\RIFSDRAWINGSAUG2003\FIG_9


CHEQUAMEGON BAY
FORMER WASTE WATER TREATMENT FACILITY
MARINA DRIVE
APPROXIMATE LOCATION OF FORMER OPEN SEWER
MARINA PARKING AREA
ELLIS AVENUE
SWALE
KREHER PARK
LIFT STATION
PRENTICE AVE
SEEP AREA
WISCONSIN CENTRAL RAILROAD
AW-2
SITE GRID NORTH
TRUE NORTH
LEGEND
10 SEDIMENT SAMPLING LOCATION
EXTENT OF CONTAMINATION
RAILROAD TRACKS
TOPOGRAPHIC CONTOUR (5' INTERVAL)
CULVERT
PINE TREE
TREE
SHRUB / HEDGE
MARSH
NOTE:
BASE MAP ON KREHER PARK FROM SEH DRAFT FEASIBILITY STUDY, DATED FEBRUARY 1996.
0 160 320
SCALE: 1" = 160'
PROJECT: ASHLAND LAKEFRONT SITE ASHLAND, WISCONSIN
TITLE: FIGURE 10 EXTENT OF CONTAMINATION OF INLET SEDIMENTS (OU-4)
DRAWN BY: DDZ
CHECKED BY: DPT
APPROVED BY: DPT
SCALE: 1"=160'
DATE: 04.AUG.03
PROJ. NO. 05644-098
SHEET 10 OF 12
URS
5250 E TERRACE DRIVE, SUITE J
MADISON, WISCONSIN 53718
(608) 244-5656
FILE: S:\CADFILES\NSP\RIFSDRAWINGSAUG2003\FIG10SEDEXTENTS


NORTH
LEGEND:
EXISTING MONITORING WELL
EXISTING PIEZOMETER
PROPOSED SOIL BORING
PROPOSED PIEZOMETER
PROPOSED SUBSURFACE BACKGROUND SOIL BORING
PROPOSED SURFACE SOIL SAMPLE
NOTE:
AIRE SAMPLE LOCATIONS WIL BE DETERMINED ONCE FINAL ACCESS APPROVALS ARE OBTAINED
PRENTICE AVENUE
RESIDENTIAL AREA
KREHER PARK
WISCONSIN CENTRAL RAILROAD
ST. CLAIRE STREET
3RD AVENUE EAST
LAKESHORE DRIVE
PAVED PARKING LOT
MAIN OFFICE
RADIO TOWER
SHED
AW-1 (ARTESIAN WELL)
MW-3(NET)
MW-17A
MW-17
MW-8A
MW-8
SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
SS-7
SS-8
SS-9
SS-10
SS-11
SS-12
MW-18B
MW-18A
MW-2C
MW-2BR
MW-2AR
MW-2R
MW-5B
MW-5
EW-4
MW-5A
MW-5C
MW-1
MW-19A
MW-19B
MW-7B
MW-7A
MW-7 (ABANDONED)
TW-9
MW-2(NET)
MW-2B(NET)
MW-2A(NET)
MW-1 (NET)
MW-23A
MW-23B
MW-21A
MW-21B
MW-10A
MW-10B
MW-10
MW-20A
MW-13D
MW-13C
MW-13B
MW-13A
EW-1
TW-13
EW-2
EW-3
MW-9C
MW-9
MW-9A
MW-9B
MW-14
MW-3
MW-15
MW-15A
MW-15B
MW-16
MW-4
MW-4A
MW-4B
MW-11
MW-22B
MW-22A
MW-6A
MW-6
0
60
120
SCALE IN FEET
PROJECT:
ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN
TITLE:
FIGURE 11
PROPOSED RI/FS SAMPLE LOCATIONS FOR SOIL AND GROUNDWATER (OU-1, OU-2, OU-3)
DRAWN BY: DDZ
CHECKED BY: MSM
APPROVED BY: DPT
SCALE: 1" = 60'
DATE: 04.AUG.03
PROJ. NO. 05644.098
SHEET 11 OF 12
URS
5250 E. TERRACE DR. SUITE 1
MADISON, WISCONSIN 53718
(608) 244-5656





LEGEND

SEDIMENT SAMPLING LOCATION

EXTENT OF CONTAMINATION

RAILROAD TRACKS

TOPOGRAPHIC CONTOUR (5' INTERVAL)

CULVERT

PINE TREE

TREE

SHRUB / HEDGE

MARSH

NOTES:
BASE MAP OF KREHER PARK FROM SEH DRAFT FEASIBILITY STUDY, DATED FEBRUARY 1996.

FINAL SEDIMENT AND BIOTA SAMPLING LOCATIONS WILL BE DETERMINED PRIOR TO SUBMITTAL OF THE FINAL RI/FS DRAFT WORK PLAN.

0 160 320

SCALE: 1" = 160'

PROJECT: ASHLAND LAKEFRONT SITE
ASHLAND, WISCONSIN

TITLE: FIGURE 12
PROPOSED RI/FS SAMPLE
LOCATIONS FOR OU-4

DRAWN BY: DDZ	SCALE: 1"=160'	PROJ. NO. 05644-098
CHECKED BY: DPT	DATE: 04.AUG.03	SHEET 12 OF 12
APPROVED BY: DPT		

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5250 E TERRACE DRIVE, SUITE J
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FILE: S:\CADDFILES\NSP\RIFSDRAWINGSAUG2003\FIG12PROPOSEDSEDSAMPLES