

**City of West Allis
Community Development Authority**

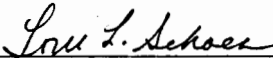
**Cap Maintenance Plan and
Material Handling Plan**

67th Place Industrial Park
1960 South 67th Place
West Allis, Wisconsin

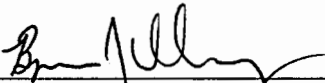
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April 2010

ARCADIS



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**Cap Maintenance Plan and
Material Handling Plan**

67th Place Industrial Park
1960 South 67th Place
West Allis, Wisconsin

Prepared for:
City of West Allis
Community Development Authority

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- A Annual Cap Inspection Form and Corrective Action Form

Introduction

This Cap Maintenance Plan and Material Handling Plan ("Plan") are applicable to the 67th Place Industrial Park located at 1960 South 67th Place in the city of West Allis, Milwaukee County, Wisconsin ("Site"). Figure 1 is a Site Location Map. Residual soil contamination remains onsite that exceed the direct contact residual contaminant levels (RCLs) for total lead, total arsenic, naphthalene, and other polycyclic aromatic hydrocarbons (PAHs) which resulted from historic spills and releases of petroleum products. Residual groundwater contamination also remains in the same area and consists of PAHs, a few select volatile organic compounds, and pH above the Natural Resources (NR) 140 Wis. adm. code preventive action limit and dissolved arsenic above the NR 140 enforcement standard. In addition, groundwater daylighting along the eastern slope of the Site, which has been addressed through the construction of an interceptor trench equipped with a French drain.

A copy of this Plan shall be kept on file in the offices of: (1) the Wisconsin Department of Natural Resources (WDNR), Southeast Region; (2) the owner of the Site, its successors and assigns (hereinafter identified collectively as the "Owner"); (3) the Site manager, if any; and (4) the City. The Plan shall be made available by the Owner to future developers, contractors, utilities and maintenance personnel, and any other public or private persons or entities authorized to perform underground excavation work at the Site.

Cap Maintenance Plan

The cap elements which are the subject of this Plan are approved engineered barriers which may consist of 2 feet of clean soil (e.g., backfill, topsoil, and seed for landscaping), buildings, and concrete or asphalt pavement over the soils that exceed the direct contact RCLs. In addition, the wet detention pond, interceptor trench, and French drain are considered a component of the long-term remedy for the Site. The Operations and Maintenance Plan for these three engineering controls are included in the Site Grading and Earthwork Summary Report, which is available from the city of West Allis Engineering Department. Figure 2 is a plan view (as-built drawing of the Site as of January 2010). Figure 3 presents the location and extent of the engineered barrier requirements.

The purpose of the Cap Maintenance Plan is to describe the procedures and controls that shall be followed to maintain the function of the engineered barriers. Maintaining the function of the engineered barriers will provide continued protection of human

health and the environment by minimizing potential exposure to the residual contamination.

Required Inspection and Repair Activities

The following activities will be conducted, at a minimum at the frequency specified. WDNR approval is not required to complete the activities.

Annual Cap Inspections

Not less than annually, the Site shall be inspected by the Owner to ensure that the integrity of the engineered barriers is maintained and that no significant fissures or cracks develop in the gravel or concrete caps, which could allow potential exposure to the residual contamination. Disturbances of the engineered barriers or significant fissures or cracks in the gravel or concrete cap shall be noted by the Owner on the "Annual Cap Inspection Form" (Appendix A). All inspection reports shall be maintained on file by the Owner, the Site manager, if any, and at the Site.

Repairs of Engineered Barriers

If, during the annual inspections or other routine inspections of the Site, the engineered barriers are observed to have been disturbed or significant fissures or cracks are observed in the gravel or concrete caps, the Owner shall arrange to have repairs made to such areas, in a manner consistent with this Plan. Such repairs shall be carried out within a reasonable period of time, not to exceed 120 days, subject to weather and seasonal considerations. The Owner shall document the repairs to capped areas on the "Corrective Action Form" (Appendix A). All Corrective Action Forms shall be maintained on file by the Owner, the Property manager, if any, and at the Property. A copy of the completed Corrective Action Form shall be filed with the WDNR.

Replacement of Engineered Barriers

WDNR approval is required prior to replacement of any portion of the engineered barrier. The replaced engineered barrier shall conform to the design requirements provided in this document. Earth work required to replace the engineered barrier shall conform to the requirements given in the Material Handling Plan.

Material Handling Plan

The Material Handling Plan specifies the requirements to be followed when performing earth work, groundwater, or surface water management. These activities are generally associated with construction.

Activities Requiring WDNR Approval

The WDNR must be notified and approval obtained prior to conducting the following activities:

1. **Construction or Installation of Buildings, Structures or Other Improvements.** Buildings, structures or other improvements may be constructed or installed on the Site using footings or other foundations that are placed into the area of residual contamination in the following manner:
 - A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
 - B) Soils that are excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
 - C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
 - D) A memorandum or report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion

of the work. A copy of the report shall be kept on file by the Owner and the Property manager, if any, and shall be submitted to the WDNR.

2. **Replacement of Engineered Barriers.** If it becomes necessary or desirable to replace the engineered barrier, WDNR approval will be required and the replacement shall be undertaken in the following manner:

- A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
- B) Contaminated soil that is excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. Any such excavation of contaminated soil shall be conducted in accordance with the health and safety plan. All excavated contaminated soils shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
- C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
- D) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file by the Owner, the Property manager, if any, and at the Property, and shall be submitted to the WDNR.

3. **Utility Installations or Repairs.** No utility repairs or installation of new or replacement utilities shall be conducted on the Site until after the utility and any

contractor(s) for the utility have acknowledged receipt of a copy of this Plan. The utility repairs or installation(s) shall be conducted in strict conformance with the standards set forth below with respect to excavations into and/or beneath the engineered barrier, and such excavations are to be undertaken in the following manner:

- A) The contractor performing the work shall be provided with a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
- B) Contaminated soil that is excavated for purposes of utility installation or repair shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
- C) Upon completion of such work, the excavated contaminated soil may be placed back into the excavation, provided, however, that any excavated soil placed back into the excavation shall maintain the compaction characteristics of the surrounding soil. The area of the excavation shall be restored in a manner consistent with the original cap condition.
- D) Any excavation of contaminated soil beneath the engineered barriers shall be conducted in accordance with the health and safety plan. Any other soils which have been commingled, mixed or otherwise have come into contact with soils excavated from beneath the engineered barrier shall be properly characterized and managed in accordance with state law with notice to the WDNR. Any groundwater affected by such activities shall be managed in accordance with state law after notice to the WDNR.
- E) If the utility installation or construction involves any disturbance of the seals used to seal the entrance of utility lines and the structures on the Site, such seals shall be replaced with new seals of like or superior quality.

- F) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file with the utility, the Owner, the Site manager, if any, and at the Site and shall be filed with the WDNR.

- 4. **Emergency Repairs to Underground Utilities.** In emergency instances, utility repairs may be made without prior approval from the WDNR. However, the employee/worker notifications, material management procedures, and reporting requirements shall follow those given in Section 3 of the Material Handling Plan.

- 5. **Offsite Disposal of Excavated Soils.** If it becomes necessary or desirable to dispose of excavated soils from the allowed construction, repair, and installation activities, the excavation and resulting soils shall be managed in accordance with NR 718.13.

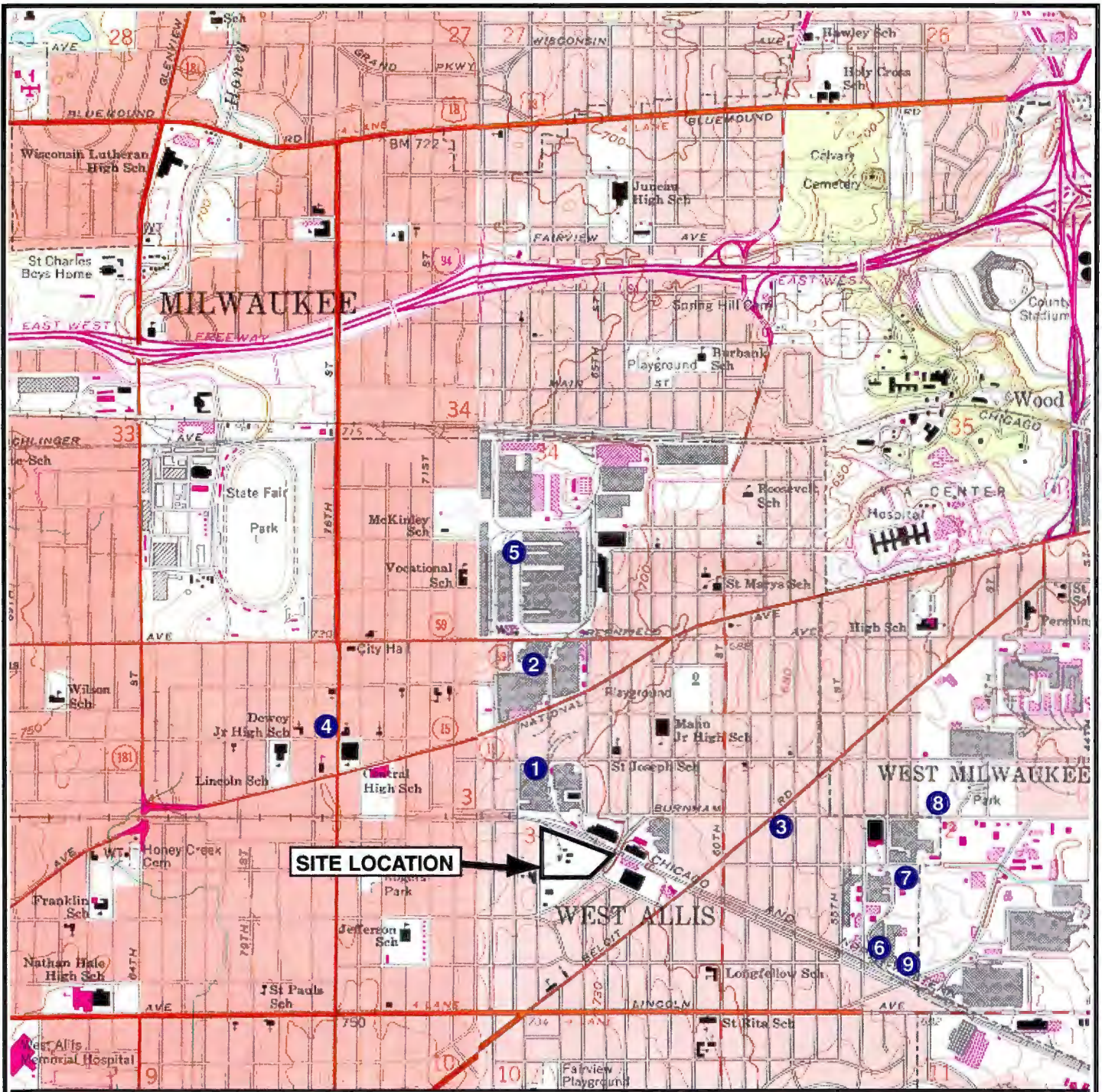
Request for WDNR Approval

The WDNR shall be notified at least five business days prior to completing work activities that require approval. The WDNR Project Manager (at the time of this submittal Mr. Andrew Boettcher) shall be notified by mail or email. Mr. Boettcher's contact information follows:

Mr. Andrew Boettcher
Wisconsin Department of Natural Resources
Southeast Region Office
2300 North Martin Luther King Drive
Milwaukee, Wisconsin 53212
(414) 2638541
Andrew.Boettcher@wisconsin.gov

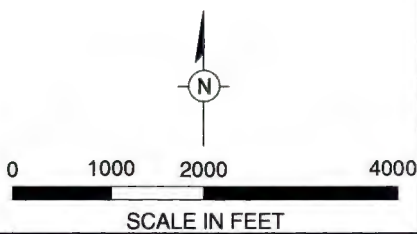
Request for Deviations

Owner shall not conduct any activities at the Site that are not in compliance with this Plan, unless written approval to do so is obtained from the WDNR.



SOURCE: Composite of USGS 7.5 Minute Topographic Maps, MILWAUKEE (1971) and WAUWATOSA (1994), WISCONSIN Quadrangles

WELL #	ID
1	ML-06/21E/03-0098
2	ML-06/21E/03-0111
3	ML-06/21E/02-0114
4	ML-06/21E/04-0297
5	ML-07/21E/34-0022
6	ML-06/21E/02-0064
7	ML-06/21E/02-0370
8	ML-06/21E/02-0099
9	ML-06/21E/02-0225



67TH PLACE INDUSTRIAL PARK
1960 SOUTH 67TH PLACE
WEST ALLIS, WISCONSIN

SITE LOCATION MAP

FIGURE
1

28JANENVIRONMENTALMB
PRESSTEELW1074LIMEPITGRAPHICSWELL LOC.A1

CITY: MILWAUKEE, WI, SYRACUSE, NY DIVISION: 141/ENV/CAD DB: R.ROBBENWOLT K.SARTORI LD: W.MAY PIC: PM: TM: LVR-ON*-OFF*-REF*
 G:\ENV\CAD\SURFACE\ACT\W00107400070001\DWG\01074002.dwg LAYOUT: 25/SAVED: 4/8/2010 10:12 AM ACADVER: 17.05 (LMS TECH)PAGESETUP:
 PROJECTNAME: ---
 XREFS: IMAGES: X:\Montgomery\060509
 01074X01
 01074X00

W. BURNHAM ST.
(R/W VARIES)

W. ROGERS STREET

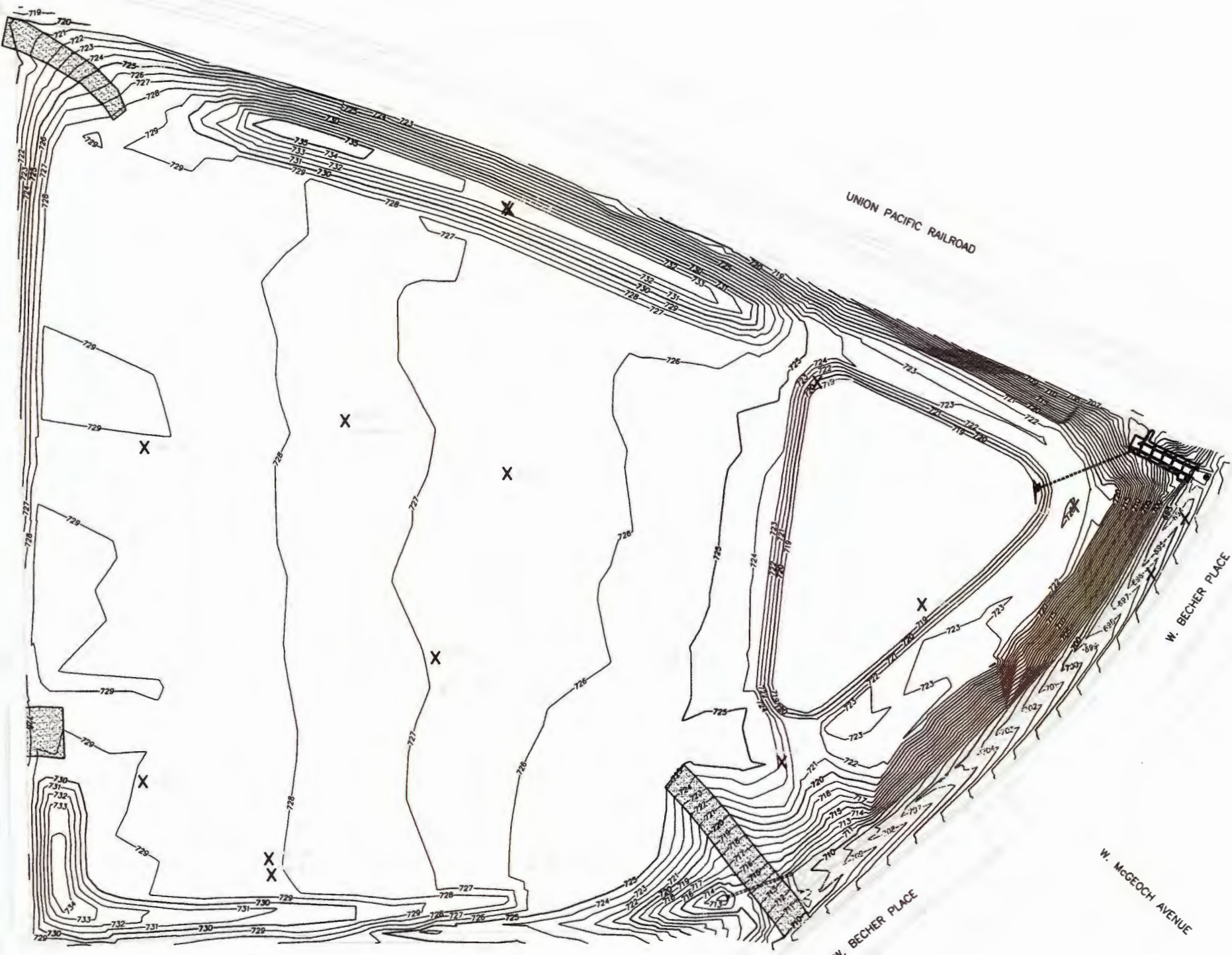
S. 67TH PLACE

UNION PACIFIC RAILROAD

W. BECHER PLACE

W. McGEEOCH AVENUE

W. BECHER PLACE



- LEGEND:**
- 724 — FINAL CONTOURS
 - 725 — APPROXIMATE LIMIT OF GRADING
 - - - GRADE BREAK
 - > CULVERT
 - ▨ GRAVEL ENTRANCE
 - ▭ RIPRAP
 - ▭ DRAINAGE STONE
 - MONITORING WELL
 - X MONITORING WELL (ABANDONED)

- NOTES:**
1. FINAL GRADES SHOWN REPRESENT FINISHED GROUND SURFACE.
 2. MAP BASED ON SURVEY COMPLETED 1/5/10 BY NORTH SHORE ENGINEERING, INC. ELEVATIONS SHOWN ARE BASED ON MEAN SEA LEVEL (NGVD-29).



CITY OF WEST ALLIS COMMUNITY DEVELOPMENT AUTHORITY WEST ALLIS, WISCONSIN 67TH PLACE INDUSTRIAL PARK	
SITE PLAN VIEW (JANUARY 2010 AS-BUILT)	
	FIGURE 2

CITY: MILWAUKEE; MI: SYRACUSE; NY: DIV/GROUP: 14/ENVCAD; DB: R.ROBBENWOLT; K.SARTORI; LD: W.MAY; PIC: PM; TM: LYNOM; OFF: REF; G:\ENVCAD\SYRACUSE\ACT\1074\0007\0001\10\10\1074\03.dwg; LAYOUT: 35; SAVED: 4/8/2010 10:37 AM; ACADVER: 17.05 (LMS TECH); PAGES: 1; PLOTSTYLETABLE: PLTCONT1.CTB; PLOTTED: 4/8/2010 10:38 AM; BY: DECLERCQ; BRIAN

W. BURNHAM ST.
(R/W VARIES)

W. ROGERS STREET

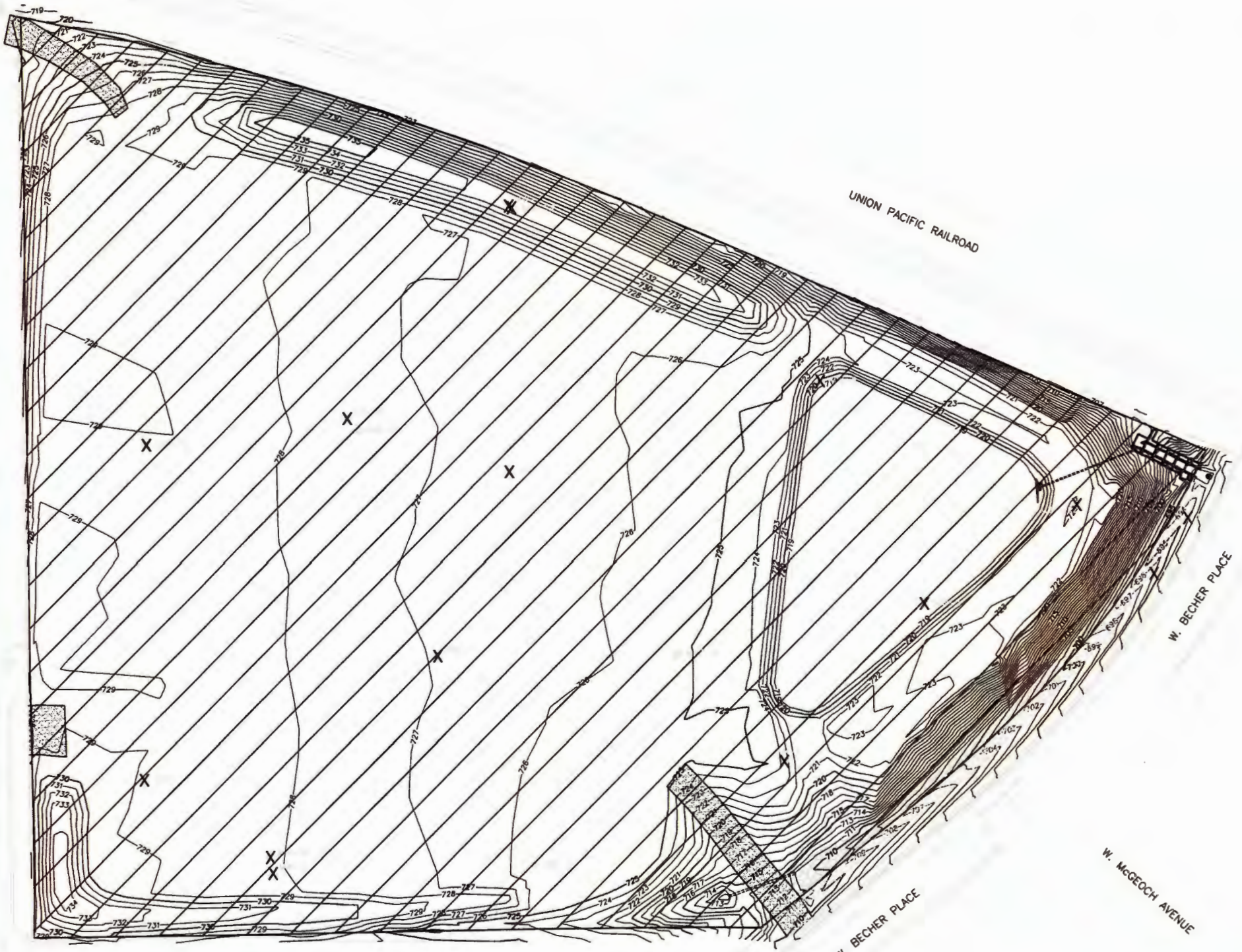
S. 67TH PLACE

UNION PACIFIC RAILROAD

W. BECHER PLACE

W. BECHER PLACE

W. MCGEOCH AVENUE



LEGEND:

- 724 — FINAL CONTOURS
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- - - GRADE BREAK
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- ▨ GRAVEL ENTRANCE
- ▭ RIPRAP
- ▭ DRAINAGE STONE
- MONITORING WELL
- X MONITORING WELL (ABANDONED)
- ▨ ENGINEERED AND VAPOR BARRIER

NOTES:

1. FINAL GRADES SHOWN REPRESENT FINISHED GROUND SURFACE.
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CITY OF WEST ALLIS
COMMUNITY DEVELOPMENT AUTHORITY
WEST ALLIS, WISCONSIN
67TH PLACE INDUSTRIAL PARK

**EXTENT OF ENGINEERED
AND VAPOR BARRIER**



FIGURE
3

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Appendix A

Annual Cap Inspection Form and
Corrective Action Form

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Annual Cap Inspection Form

Name of Inspector: _____

Company: _____

Date: _____

Time: _____

Weather:

Temperature _____ °F sunny cloudy windy rainy snowy

Ground Conditions: wet dry snow

Is this a scheduled inspection? yes no

If no, explain: _____

Inspection Results

Cap Condition

- Fissures or Cracking: _____
- Erosion/deterioration: _____
- Pooled water: _____
- Freeze/thaw damage: _____
- Surface disturbances from vehicles or other physical actions: _____
- Animal burrows: _____
- Other: _____

If any of the above conditions were observed, note area and explain. Sketch extent and location of observed damage below:

Vapor Intrusion Engineering Controls Condition

- Soil Gas Piping: _____
- Wind Turbine: _____

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Corrective Action Form

Report Number: _____

Date of Initial Inspection: _____

Name of Inspector: _____

Note: If Corrective Action cannot be completed within 120 days of the Initial Inspection Date, a Corrective Action Plan must be prepared and maintained in the operating record.

Corrective Action Work Order

Type of problem: _____

Required upgrade: _____

Corrective action assigned to: _____
Name Date

Corrective Action Completion Report

Received on: _____ By: _____

Completed on: _____

Comments: _____

By: _____
Name Date

Re-Inspection Report

Observations: _____

Comments: _____

Inspector: _____
Signature Date

Send completed form to the Wisconsin Department of Natural Resources. Maintain maintenance records with the Property Owner, Property manager (if any), and at the Property.