

**SECTION B**  
**FACILITY DESCRIPTION**



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Title Sheet

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## **B. FACILITY DESCRIPTION**

### **B-1 General**

This section provides a general description of operations and an overview of activities related to the post-closure care and monitoring of the closed Paint Shop Basin, the closed Locomotive Shop Basin and Waste Disposal Trench waste management units (WMUs) at the Wabtec Corporation – MotivePower facility (MP facility) in Boise, Ada County, Idaho.

#### *B-1a General Description*

The MP facility is located in the north half of the northwest quarter of Section 36, Township 3 North, Range 2 East, Boise Meridian, Ada County, Idaho as shown on Figure B-1 (Land Zoning Map). The property is approximately 36.4-acres in size. A general vicinity map is presented as Figure A-1 (Site Location Map). Legal descriptions for the MP facility and the WMUs (MK, 1988b), the Record of Survey, and the general record of the type, location, and quantity of hazardous wastes disposed of at the MP facility WMUs (MK, 1988b) are provided in Appendix B-1.

Based on information provided in Appendix B-1, the approximate size and waste/soil volumes associated with each of the closed WMUs are:

- Paint Shop Basin: 0.096 acres, 390 cubic yards (yd<sup>3</sup>).
- Locomotive Shop Basin: 0.295 acres, 650 yd<sup>3</sup>.
- Waste Disposal Trench: 0.086 acres, 400 yd<sup>3</sup>.

MP began rebuilding locomotives for U.S. railroads in 1969. During the period of peak operation (1970 through 1982) the Boise Industrial Complex operated under the ownership of the Morrison-Knudsen (MK) Company, Inc. – Railroad Division. In 1991, the company began expanding its capabilities by acquiring various companies that manufactured and distributed locomotive parts. The company went public in 1994 and transferred the property title to MK Rail Corporation (MK Rail). On January 1, 1997, the company name was changed from MK Rail to MotivePower Industries (MPI) – Boise Locomotive Company. MPI later merged with Westinghouse Air Brake Company on November 19, 1999, at which point MPI ceased being a separate entity. The combined company was renamed Westinghouse Air Brake Technologies Company (Wabtec) and subsequently Wabtec Corporation. As a result of the merger,

Wabtec is now responsible for all financial liabilities at the MP facility. The corporate headquarters for Wabtec is located at 1001 Air Brake Avenue in Wilmerding, Pennsylvania.

#### *B-1b Facility Operations*

MP rebuilds and manufactures locomotives for the railroad industry and provides overhaul and maintenance work on locomotives. The maintenance and remanufacturing process generally includes degreasing locomotive and component parts (blasting and steam cleaning); partial and total disassembly by mechanical means and arc and torch cutting methods; electrical/mechanical testing and qualification of component parts for reuse; rebuilding of the components that fail testing and qualification procedures; locomotive re-assembly by mechanical and welding methods; and final testing and qualifications for shipment.

MP is fully committed to the philosophy of environmental conservation. The Environmental and Safety Department reviews each chemical used at the facility to assure that its impact on the work force and the environment will be minimized both during use and upon disposal. New chemical products are incorporated only when it can be shown that their impact on the environment will be less than the currently used product, without degrading the operation of the facility. Further, MP periodically evaluates its waste disposal programs to assure that the wastes are handled in an environmentally conscious manner and that every effort is made to reduce the volume of disposed material through a recycling program.

Substantial process modifications have been made over the past several years to reduce the volume and direct handling of waste materials. Some of the waste minimization measures that have been implemented by MP include: the use of non-hazardous solvent in parts washers within several shop areas; the use of an on-site distillation unit to recycle paint thinners that are generated during the process of cleaning the paint equipment; the collection of batteries for off-site salvage or recycling; and the use of an enhanced biodegradation injections to help further reduce impacts to groundwater attributable to historical site operations.

MP is a large quantity generator of hazardous waste and manages its hazardous waste in accordance with Idaho Administrative Procedures Act (IDAPA) 58.01.05.006 (Standards Applicable to Generators of Hazardous Waste) (40 Code of Federal Regulations [CFR] §262). MP stores hazardous waste in designated areas for less than 90 days before shipment off-site for disposal. The Environmental and Safety Department provides training for all handlers of hazardous waste. In addition, the MP facility maintains a Facility Waste Management Plan (FWMP) that describes the management procedures for hazardous and non-hazardous waste. The FWMP is intended to act as a reference guide for management and other personnel who are responsible for plan implementation. MP has prepared and maintains a

Contingency and Emergency Response Plan that will be fully implemented in the event of a hazardous material/waste spill. A copy of the Contingency and Emergency Response Plan is included as Appendix B-2.

MP operates under a RCRA Post-Closure Permit administered by the Idaho Department of Environmental Quality (IDEQ) and does not actively treat or dispose of hazardous waste in WMUs at the facility. The Idaho Department of Health and Welfare (IDHW) issued the final Post Closure Permit on January 18, 1991. The Post Closure Permit was reviewed and reissued in September 1995 (IDHW, 1995). Please note that the IDEQ, formerly a Division under the IDHW, became a Department on July 1, 2000. The HWMA/RCRA Post closure permit was renewed for an additional 10 years with a date of August 7, 2002. The location of the closed, regulated WMUs (Regulated Units) and the non-regulated WMU are depicted on Figure B-2 (General Facility Map). The regulatory history of the WMUs is briefly described in Section B-1c.

#### *B-1c Regulatory History*

Heavy equipment repair and locomotive remanufacturing commenced at the MK – Boise Locomotive Complex in 1969. Solvents were used for cleaning parts and equipment during the repair and remanufacturing process. Wastewater that was generated from the equipment cleaning process containing solvents was discharged to in-ground wastewater separation basins that were connected to the paint shop and locomotive shop buried drain fields via an overflow-decant structure. This wastewater treatment system was in operation until 1984. Initial analytical results provided semi-quantitative screening indications that the materials contained in the mud basins may exhibit characteristics of hazardous waste. As a result, the paint shop and locomotive shop pipes were sealed on September 29, 1984, to prevent further discharge to the drain fields. Each shop's respective drain field has not received wastewater since that time (MK, 1988a).

In November 1984, MK applied for an U.S. EPA Hazardous Waste Generator Identification Number and later entered a Voluntary Compliance Agreement with the IDHW in August of 1985. Samples were collected from on-site groundwater monitoring wells and revealed that groundwater had been impacted by solvents. Based on these results, the United States Environmental Protection Agency (U.S. EPA) and the IDEQ determined that corrective action was required to mitigate the solvent impacts to groundwater.

The paint shop and locomotive shop buried drain fields were closed as RCRA-regulated WMUs in accordance with an approved closure plan (MK, 1986) on July 18, 1988. An asphalt cap was placed over the locomotive shop basin (LSB) and the non-regulated waste disposal trench (WDT) located in the southeastern portion of the facility. This asphalt cap and the pre-existing asphalt cap overlying the paint

shop basin (PSB) are located in the central portion of the facility and are designed to minimize infiltration of rain water and the migration of hazardous constituents to groundwater from the WMUs. In 1988, MK submitted a Part B Permit Application (MK, 1988b) for post closure care and corrective action of the on-site impacted groundwater.

Prior to 1983, a solid waste disposal trench was used for trash disposal, burial of scrap metal and other solid, non-hazardous waste materials (MK, 1986). The solid materials disposed in the trench were not expected to pose a threat of release to the environment. However, sludges removed from the PSB and LSB during cleaning in 1978 were also reportedly disposed of in this trench. In May 1986, MK submitted initial plans for closure of the WMUs. Sampling was performed on the trench disposal area in August 1986 to characterize buried wastes. Analyses of samples obtained indicated the presence of similar volatile organic compounds (VOCs), as was detected in sludges from the PSB and LSB (MK, 1988a). In November 1987, MK received approval of the closure plan, requiring the construction of an impermeable asphalt cap over the LSB and the non-regulated WDT and surface runoff control structures. Therefore, the asphalt cap covering the LSB was extended over the non-regulated WDT to minimize infiltration of rain water through this area. Cap construction was completed on June 13, 1988. The PSB was already covered with asphaltic cement, therefore, no additional closure construction was required at this location. The location of the non-regulated WDT is presented on Figure B-2 and is included in the legal descriptions provided in Appendix B-1.

The asphalt caps require limited post closure care. This care consists of routine inspection and maintenance of the asphalt caps. The general inspection and maintenance schedule for both the closed PSB and LSB/WDT and overflow-decant seals, surface water control structures, and the groundwater monitoring wells are presented in Section I of this permit application.

Since 1984 and concurrently with the above activities, MP conducted extensive site investigations and hydrogeologic characterization studies to define the extent of the site related impacts. Numerous borings were advanced and wells were installed. Chemical and physical testing was conducted to describe the subsurface conditions and to develop an effective groundwater monitoring program (GWMP) for the site. In July 1988, the IDHW accepted the site characterization efforts conducted to meet IDAPA 16.01.05.012 (40 [CFR] §270.14[c]) and the last revision of the site characterization report (MK, 1988a).

The GWMP revealed that dissolved VOC constituents had migrated to the uppermost groundwater zone (A-Zone) beneath the closed PSB WMU. As a result, an on-site groundwater recovery and treatment system of the shallow A-Zone was initiated in October 1990.

The IDHW issued the Post Closure Permit on January 18, 1991. The Post-Closure Plan for the WMUs consisted primarily of active groundwater remediation using a groundwater recovery and treatment remediation system and groundwater monitoring.

Since 1990, MP has voluntarily installed an extensive network of off-site groundwater monitoring wells to monitor the vertical and horizontal extent of dissolved constituents from the WMUs and from other potential off-site sources that may be located to the north and northwest of the MP facility. Additional remedial actions have also been taken to address the impacts. The groundwater monitoring program has revealed the migration of dissolved constituents across three distinct benches, namely the Sunrise Terrace (where the facility is located), the Whitney Terrace, and the Boise Terrace (MK, 1988a). MP submits a Semi-annual Report of Corrective Action that summarizes the effectiveness of the monitoring program in the closed PSB. Section E of this permit application provides additional details of the GWMP.

## B-2 Topographic Map

### B-2a *General Requirements*

Figure A-1 shows the facility on a United States Geological Survey (USGS) 7.5 minute topographic quadrangle at a scale of one-inch equals 24,000 feet, with a 20 foot contour interval. A topographic map (Figure B-3) that shows the MP facility and a distance of at least 1,000 feet around the facility was prepared in 2001 in accordance with IDAPA 58.01.05.012 (40 CFR §270.14 (b)(19)). As described in Section B-3b, the 100-year floodplain is not within 1,000 feet of the MP facility and is, therefore, not shown on the map. For clarity, surrounding land uses and the windrose are depicted on Figure B-1 and Figure B-4 (Boise Windrose) and described in Sections B-2a (2) and B-3a (3), respectively.

### B-2a(1) *Surface Waters*

Surface waters or intermittent streams do not flow across or originate within the MP facility property boundaries. The most prominent surface water structure near the MP facility is the New York Canal. The New York Canal is located approximately 2,000 feet north of the MP facility and diverts flow from the Boise River for irrigation purposes, generally between the months of April and October. An unnamed intermittent stream is located approximately 2,000 feet to the south of the MP facility. This stream apparently flows to Five Mile Creek at a location southwest of the Boise Air Terminal (Gowen Field).

A small surface depression is shown on Figure A-1 approximately 300 feet north of the MP facility boundary. At one time, this depression was used as a holding pond for a fire protection water supply for Bunting Building Corporation. This depression has been filled and is no longer present. Two

sedimentation basins are present approximately 250 feet south of the MP facility boundary. The basins are on the State of Idaho property, leased by Central Paving Corporation and are used to contain sediment from aggregate cleaning operations. One sedimentation basin is also present approximately 2,200 feet west of the MP facility boundary. This basin is on the Nelson Sand and Gravel Construction property and is also used to contain sediment from aggregate cleaning operations.

Due to the arid conditions of this area, the topographic relief, the on-site runoff control systems, and the distance to these surface water sources, it is not likely that runoff would migrate to any these surface waters from the MP facility. Surface water features are visible on the Aerial Photograph in Appendix B-3. Additional details regarding the storm water control features at the MP facility are included in Section B-2a (7) and depicted on Figure B-3.

#### *B-2a(2) Surrounding Land Uses*

Surrounding land use for an approximately one-mile radius beyond the MP facility was examined using a July 21, 2011 base map developed by the Ada County Development Services. A portion of the base map is depicted on Figure B-1 and was referenced for land use information. Land use in the immediate vicinity of the MP facility is primarily designated as industrial or commercial districts. The property to the south of the MP facility is designated as a Residential District, Rural-Urban Transition Zone. However, this property is owned by the State of Idaho and leased by Central Paving Corporation. The State of Idaho property is not used for residential purposes. The closest residential district, the Breckenridge Subdivision, is located approximately 1,000 feet north of the closed PSB WMU.

#### *B-2a(3) Windrose*

The windrose (i.e., prevailing wind speed and direction), was obtained from information compiled by the Iowa Environmental Mesonet, Iowa State University Department of Agronomy ([mesonet.agron.iastate.edu/sites/windrose.phtml](http://mesonet.agron.iastate.edu/sites/windrose.phtml)). The windrose is presented as Figure B-4. This figure was developed from 541,967 observations between January 1, 1948 and September 8, 2011. Meteorological conditions represented by the windrose should be generally representative of the overall wind distribution at the facility.

#### *B-2a(4) Legal Boundaries of the Hazardous Waste Facility Site and the Location of Operational Units*

The legal description of the facility/property boundaries is provided in Appendix B-1. Figure B-2 presents the facility boundaries, property boundaries, and the individual boundaries for the former

hazardous WMUs at the facility. Additionally, the legal boundaries of the MP facility and WMUs are depicted on Appendix B-4 (On-the-Ground Survey).

*B-2a(5) Access Control/Security Procedures*

Access to the MP facility is via Apple Street in the northwestern portion of the property. Vehicle access to the shop yard is controlled by a gate adjacent to the guard house where security personnel are on duty 24 hours per day, seven days a week. Vehicular traffic occurs primarily within the paved areas (see Figure B-3). A chain-link fence that is a minimum of six-feet in height surrounds the entire facility. Warning signs, meeting the requirements of 40 CFR 264.14(c), are posted at the entrance and along the perimeter fence. Under the current operating conditions, no on-site physical hazards exist with respect to the WMUs. Hazardous constituents are located under the ground surface, below an impermeable cap.

*B-2a(6) Injection and Extraction Wells*

On-site injection wells were used to inject food grade vegetable oil, along with various amendments, into the subsurface to promote biodegradation of the groundwater constituents. These activities are further described in other areas of this application.

Groundwater recovery and treatment was previously conducted as part of the corrective action program (CAP) at well locations (MW-9/RW-1, RW-3, RW-4, RW-6, and MW-1A1/RW-7). Section E of this document provides information regarding the use of groundwater recovery wells and monitoring wells at the MP facility. The locations of groundwater recovery wells and monitoring wells at the MP facility are shown on Figure B-3. With the exception of MP's on-site groundwater recovery wells, only one other producing well is present at the facility (45/WW-1 or MK Well). This water supply well is located along the southern property boundary as depicted on Figure B-3. The depth of this well is approximately 400 feet below ground surface (bgs) and has a capacity to produce approximately 1,000 gallons per minute (gpm). The static water level was reported at 192 feet bgs, after construction in 1968. A 500,000-gallon fire protection cistern is located adjacent to the pump and control house. Data from October 2000 indicate a water level of approximately 308 feet bgs with a pumping rate of approximately 140 gpm at the water supply well.

*B-2a(7) Improvements*

Figure B-2 depicts the locations of existing buildings, structures; extent of pavement on the property; and the location of the WMUs. Major support structures include the Locomotive Repair Shop, the General Repair Shop (Fabrication Shop), a Component Shop, a Small Paint Shop, a Large Paint Shop, Finish Building, and an office facility, which houses administrative personnel. The locations of "frost free

hydrants” and additional fire hydrants are noted on Figure B-3. Fire extinguishers and other emergency equipment are also strategically located throughout the facility. This equipment is tested and maintained as necessary.

The former sanitary sewer network consisted of three independent septic systems. The former septic systems are depicted on Exhibit 5 (Site Utilities and Support Structures) included with the 1986 *Part B Permit Application Drain Field Closure Plan, Boise Industrial Complex* (MK, 1986) and presented in Appendix B-5. The first and largest septic system connected to the Fabrication Shop, Office Facility, and Warehouse Number 1. The line ran northward between the Fabrication Building and the Office Facility. Once past the Office, the line turned west to pass near the Guard Shack before terminating in a septic tank, just north of the access road to the facility. This system was installed in 1969, at the time of initial construction for the entire plant.

The second septic system connected to the Component Shop. This line ran due east of the shop to a septic tank located across a roadway adjacent to the Component Shop. This system was also constructed in 1969.

The third septic system serviced the Locomotive Shop and ran underneath the floor of the shop from the north side restrooms to a septic tank located adjacent to the southern wall of the sandblast building. This system was installed in 1972 when the Locomotive Shop was erected.

The septic systems for the MP facility were abandoned in 1990. Sanitary wastewater and effluent from groundwater treatment are now discharged into the City of Boise Sanitary Sewer System. Sanitary sewers are primarily centrally located on the property and travel to the northwestern corner of the property. Treated groundwater from the groundwater treatment system was discharged to the City of Boise under an Industrial Wastewater Acceptance (IWA) Permit. The location of on-site sanitary sewer systems is noted on Figure B-3.

Storm water from the west side of the property is routed to two storm water catchment basins depicted on Figure B-3. The storm water basins are designed to retain storm water runoff, minimize localized flooding in the northwest corner of the property and provide residence time for evaporation and infiltration of the storm water. Storm water runoff from the east side of the property and the asphalt drain field covers is routed to a drainage ditch on the northeast property line and flows from the southeast to the northwest towards Amity Road. The asphalt covers for the closed PSB and the closed LSB/WDT WMUs were constructed to provide positive drainage away from the areas during precipitation events. The locations of on-site storm sewers and storm water catchment basins are noted on Figure B-3.

### B-2b *Additional Requirements for Land Disposal Facilities*

Historically, data indicated that the upper water-bearing zone (A-Zone) was not present beneath the southwestern portion of the site. Based upon a pre-design study (AGI, 2001), the A-Zone groundwater was encountered in the southeastern portion of the site, near the closed LSB. The direction of groundwater flow in the A-Zone is toward the north/northeast.

Because the A-Zone was previously not found beneath the southeastern portion of the site, the lower B-Zone was classified as the uppermost aquifer under the closed LSB. Section E of this document provides a detailed discussion of the hydrogeologic characteristics of the site and the current groundwater monitoring system.

### B-3 Location Information

#### B-3a *Seismic Standard*

No further information is required to demonstrate compliance within the seismic standard under IDAPA 58.01.05.008 (40 CFR 264.18 [a]) and IDAPA 58.01.05.012 (40 CFR 270.14[b][11]) because the political jurisdiction, (i.e., Ada County), is not listed in Appendix VI of 40 CFR Part 264.

#### B-3b *Floodplain Standard*

The WMUs are not located within the 100-year floodplain of the Boise River. Figure B-5 (100-Year Floodplain) presents the approximate location of the 100-year flood way relative to the MP facility, as delineated on the Flood Insurance Rate Map, Federal Emergency Management Agency, December 17, 1991. A larger scale map was used to display the 100-year floodplain, because the floodplain is not in the immediate vicinity of the WMUs.

### B-4 Traffic Information

The figures in this section show the roadways into and surrounding the MP facility. Visitor and employee parking are available near the office structure. Apple Street is the major public road used near the facility. Other public roadways located near the property include Federal Way.

Company vehicles, outside contractor's vehicles, and employee's private vehicles travel via asphalt paved areas within the site. Employee private vehicle traffic is generally limited to movement from the main

entrance to the parking lot associated with their respective work building. Because the WMUs are closed, travel associated with the WMUs is minimal (i.e., wastes are not transported to or disposed of at the WMUs).

#### B-5 References

---. 2001. *Pre-Design Investigation Report, MotivePower Apple Street Facility, Boise, Idaho*, August 9.

Idaho Department of Environmental Quality (IDEQ). 2002 and 2010. *Wabtec Corporation MotivePower Facility Post Closure Permit*, August 7, 2002 and January 25, 2010 revision.

Morrison-Knudsen (MK) Company, Inc. 1986. *Part B Permit Application Drain Field Closure Plan, Boise Industrial Complex*, May, revised September.

---. 1988a. *Site Characterization Report Boise Industrial Complex Volume 1 – Text and Volume 2 - Appendices*, submitted April 1986, revised July.

---. 1988b. *RCRA Part B Permit Application Post Closure Plan*, submitted July.

## FIGURES



**SECTION B**  
**APPENDICES**



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### Appendices

Appendix B-1 – Legal Descriptions and Record of Survey

Appendix B-2 – Contingency and Emergency Response Plan

Appendix B-3 – 2010 Aerial Photograph

Appendix B-4 – On-the-Ground Survey

Appendix B-5 – Site Utilities and Support Structures

**APPENDIX B-1**

**LEGAL DESCRIPTIONS AND RECORD OF SURVEY**



**APPENDIX B-2**  
**CONTINGENCY AND EMERGENCY RESPONSE PLAN**



**APPENDIX B-3**

**2010 AERIAL PHOTOGRAPH**



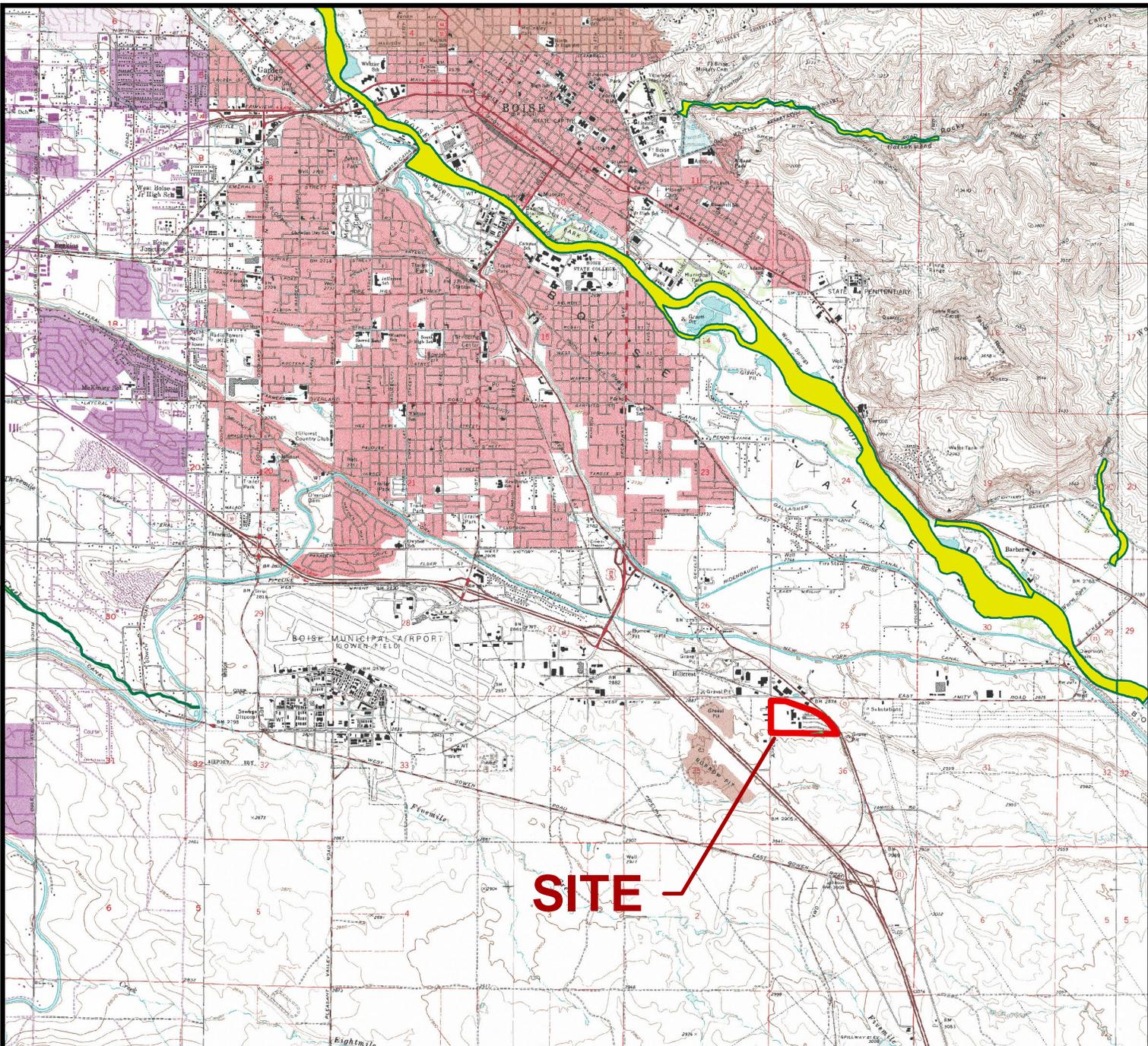
**APPENDIX B-4**  
**ON-THE-GROUND SURVEY**



**APPENDIX B-5**

**SITE UTILITIES AND SUPPORT STRUCTURES**



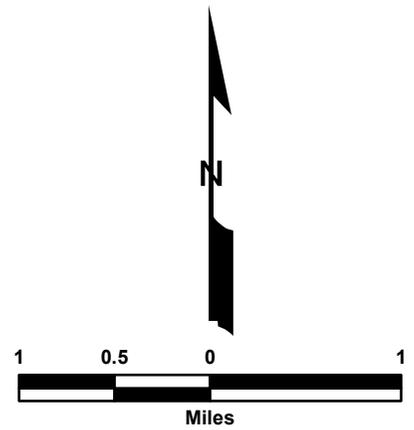


**SITE**

**LEGEND**

-  APPROXIMATE SUBJECT PROPERTY BOUNDARY
-  100-YEAR FLOODWAY<sup>(1)</sup>

**REFERENCE:**  
<sup>(1)</sup>FLOODWAY: "FLOOD HAZARD ZONE POLYGONS", FEDERAL EMERGENCY MANAGEMENT AGENCY, WASHINGTON, DC, FEBRUARY 19, 2003. VECTOR DIGITAL DATA DOWNLOADED FROM THE INTERNET SEPTEMBER 16, 2011, AT [HTTP://WWW.IDWR.IDAHO.GOV/GEOGRAPHICINFO/GISDATA/FLOOD\\_PLAIN.HTM](http://www.idwr.idaho.gov/geographicinfo/gisdata/flood_plain.htm)



WABTEC - MOTIVEPOWER  
 BOISE, IDAHO  
 EPA ID. EDD980976831

FIGURE B5  
 100-YEAR FLOODPLAIN MAP



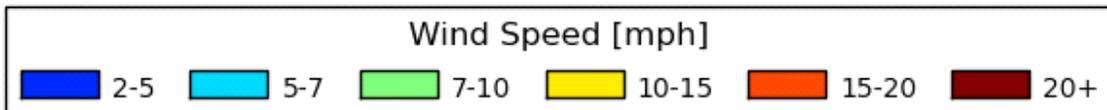
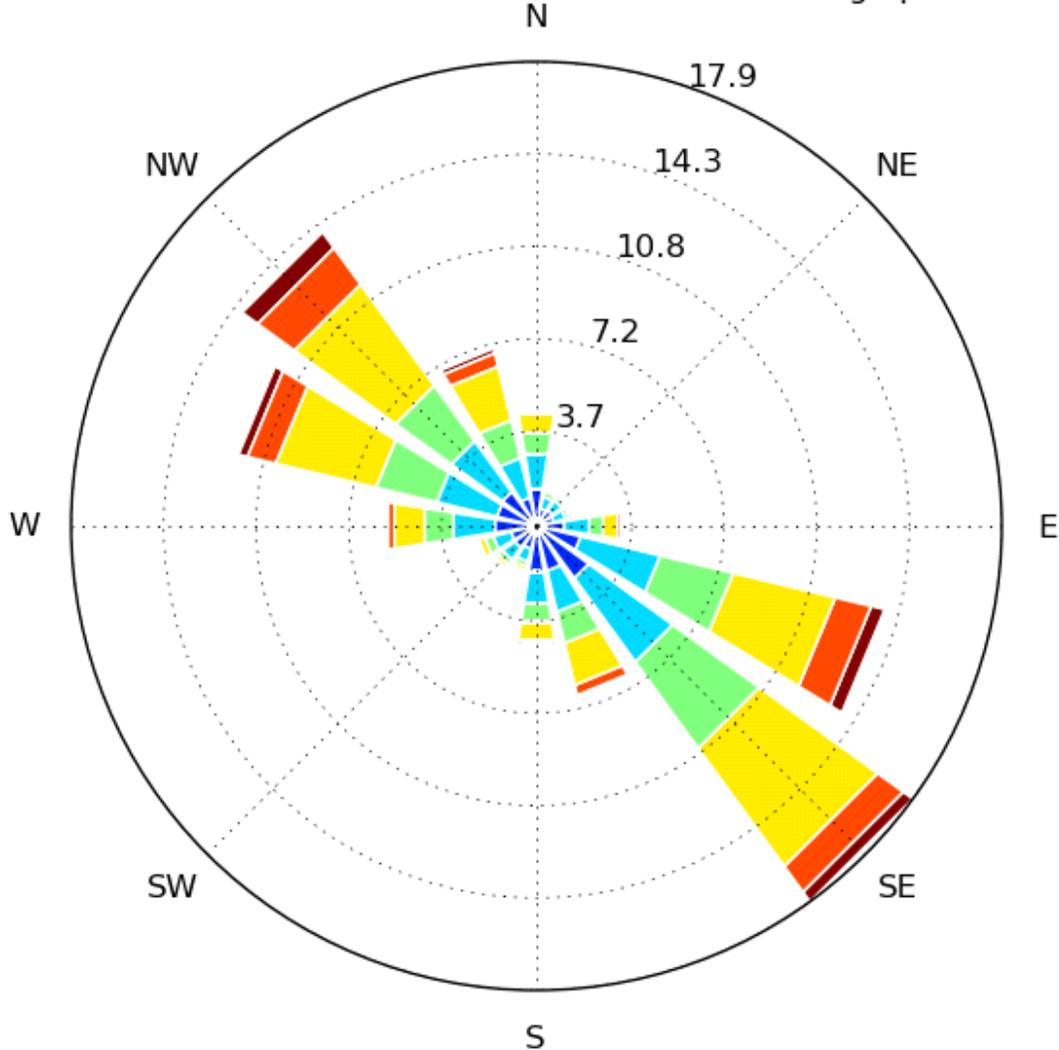
0	BAS	09/07/11	SETUP IN ARCMAP							CURRENT DATE	09/16/2011
										ARCMAP MXD	FIGURE B1 (100-YEAR FLOOD MAP)
										AGI PROJ NO	0008-018



**BOISE MUNICIPAL [BOI] Windrose Plot**  
 [All Year]

Period of Record: 01 Jan 1948 - 08 Sep 2011

Number of Obs: 541967 Calm: 10.0% Avg Speed: 8.2 mp



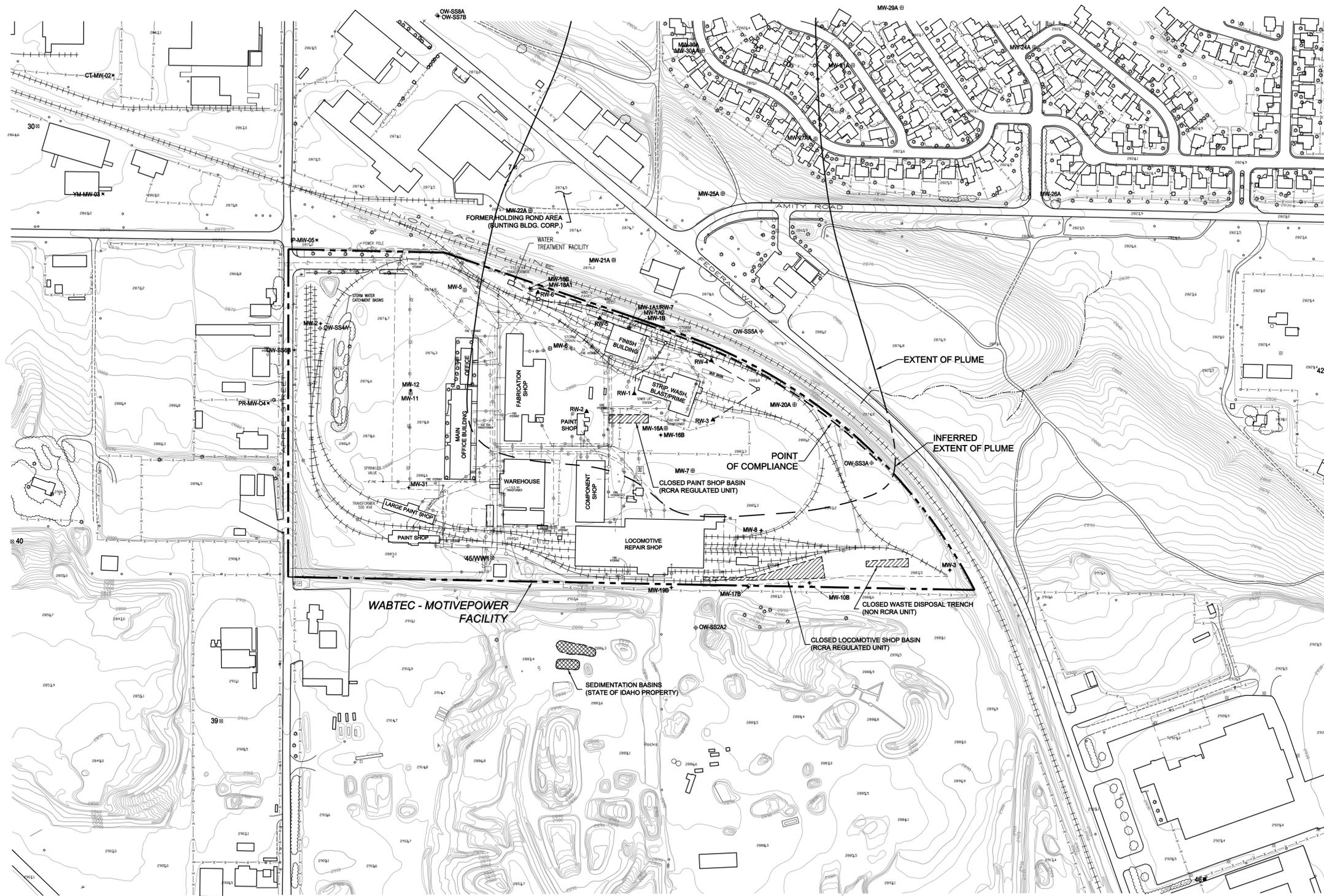
**REFERENCE:**  
 IOWA ENVIRONMENTAL MESONET, IOWA STATE UNIVERSITY DEPARTMENT OF AGRONOMY. DOWNLOADED FROM THE INTERNET AT  
[HTTP://MESONET.AGRON.IASTATE.EDU/SITES/WINDROSE.PHTML?](http://mesonet.agron.iastate.edu/sites/windrose.phtml?)

WABTEC - MOTIVEPOWER  
 BOISE, IDAHO  
 EPA ID. EDD980976831

FIGURE B4  
 BOISE WINDROSE



NO	DRN	DATE	REVISION	CHK	DATE	APP	DATE	CURRENT DATE	09/16/2011
0	BAS	09/07/11	SETUP IN ARCMAP					ARCMAP MXD	FIGURE B4 (BOISE WINDROSE)
								AGI PROJ NO	0008-018



**UTILITY LEGEND:**

- ⊕ WASTE WATER
- ⊕ COMPRESSED AIR/OXYGEN/CO
- ⊕ STORM SEWER
- ⊕ SANITARY SEWER
- ⊕ WATER
- ⊕ GAS
- ⊕ ELECTRICAL
- ⊕ TELEPHONE

**NOTE:**  
UTILITY LOCATIONS ARE APPROXIMATE.  
INFORMATION WAS OBTAINED FROM BOISE LOCOMOTIVE,  
GENERAL SITE PLAN DWG. 52-00-001 AND PE-1204.

**LEGEND:**

- ⊕ MW-11 A-ZONE MONITORING WELL
- + MW-12 B-ZONE MONITORING WELL
- ▲ RW-4 A-ZONE RECOVERY WELL
- ⊕ OW-SSA A-ZONE OBSERVATION WELL
- + OW-SS-6B B-ZONE OBSERVATION WELL
- \* PR-MW-04 U. S. EPA WELL
- ⊕ 38 VICINITY RECEPTOR/SUPPLY WELLS
- ⊕ 46 OUT-OF-SERVICE AND ABANDONED VICINITY RECEPTOR/SUPPLY WELLS
- PROPERTY BOUNDARY
- - - EDGE OF PAVEMENT
- - - EXISTING FENCING
- - - A-ZONE RECOVERY SYSTEM CONVEYANCE PIPING
- ▨ RCRA/NON RCRA UNIT BOUNDARY

**NOTES:**

- MAP TAKEN FROM AERIAL PHOTO DATED JULY 23, 2001.
- SURROUNDING LAND USES ARE DEPICTED ON FIGURE B-1 (LAND ZONING MAP)
- THE BOISE WINDROSE IS SHOWN ON FIGURE B-4 (BOISE WINDROSE).
- EXTENT OF THE PLUME IS BASED UPON AVERAGE CONSTITUENT CONCENTRATIONS DETECTED IN A-ZONE MONITORING WELL SAMPLES COLLECTED BETWEEN SEPTEMBER 1999 AND JUNE 2000 THAT EXCEEDED IDAPA 58.01.11.200 (MCL's).
- 100 YEAR FLOOD PLAIN IS NOT WITHIN THE LIMITS OF THIS MAP AND IS DEPICTED ON FIGURE B-5 (100 YEAR FLOODWAY FRINGE).
- CONTOUR INTERVAL = 2.0'



5							
4							
3							
2							
1							
0	ECM	9/5/01	INITIAL ISSUE				
NO.	DRWN.	DATE	REVISION	CHKD.	DATE	APPVD.	DATE

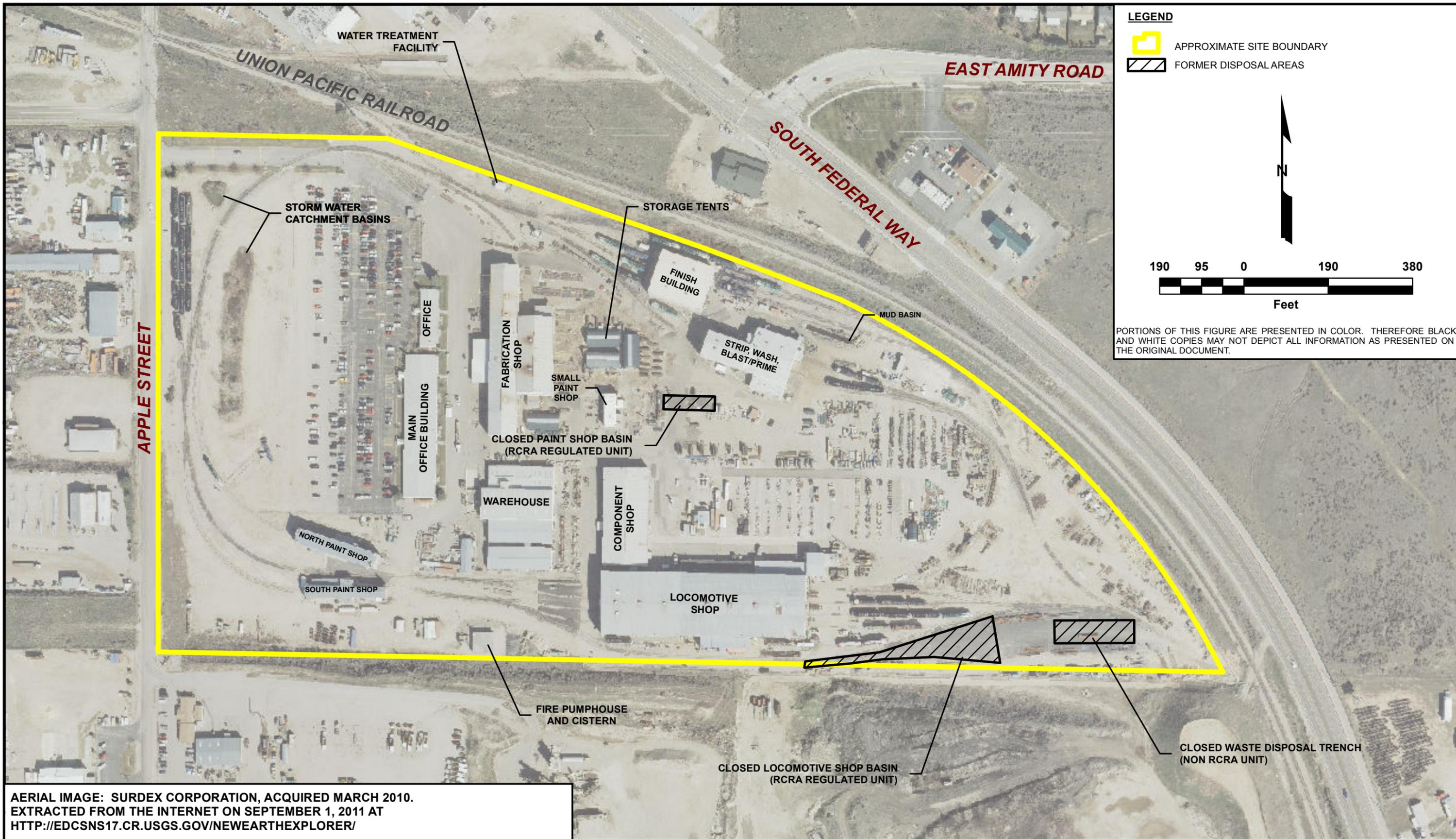
**WABTEC - MOTIVEPOWER  
BOISE, IDAHO  
EPA ID. IDD980976831**

CURRENT DATE 9-05-2001 CADD FILE 8311

**FIGURE B-3  
TOPOGRAPHIC MAP**

DRAWING NO. 00008K





**LEGEND**

APPROXIMATE SITE BOUNDARY

FORMER DISPOSAL AREAS

190 95 0 190 380

Feet

PORTIONS OF THIS FIGURE ARE PRESENTED IN COLOR. THEREFORE BLACK AND WHITE COPIES MAY NOT DEPICT ALL INFORMATION AS PRESENTED ON THE ORIGINAL DOCUMENT.

AERIAL IMAGE: SURDEX CORPORATION, ACQUIRED MARCH 2010.  
 EXTRACTED FROM THE INTERNET ON SEPTEMBER 1, 2011 AT  
[HTTP://EDCSNS17.CR.USGS.GOV/NEWEARTHEXPLORER/](http://EDCSNS17.CR.USGS.GOV/NEWEARTHEXPLORER/)

NO	DRN	DATE	REVISION	CHKD	DATE	APP	DATE
0	BAS	09/09/11	CREATED FIGURE IN ARCMAP	WTN	09/12/11	WTN	09/12/11

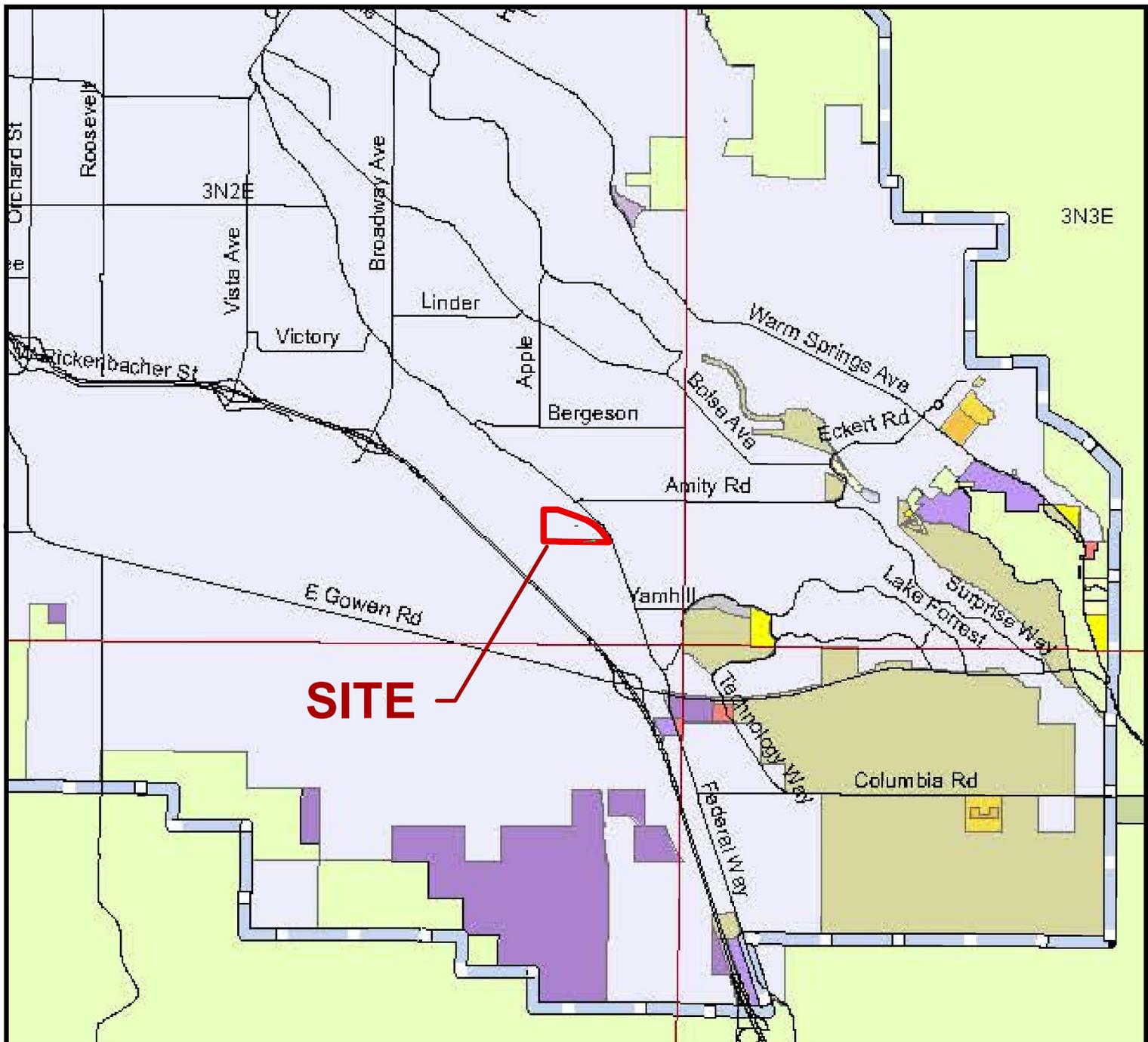
WABTEC - MOTIVEPOWER  
 BOISE, IDAHO  
 EPA ID. EDD980976831

CURRENT DATE 08/15/2011 ARCMAP MXD FIGURE B2 (GENERAL FACILITY MAP)



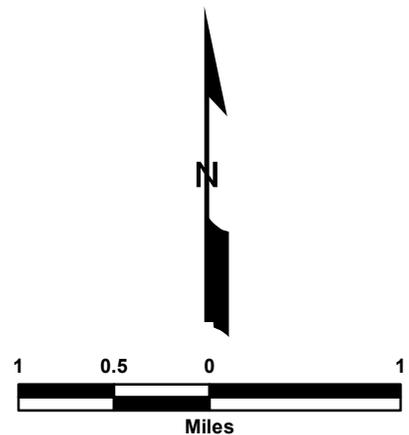
FIGURE B2  
 GENERAL FACILITY MAP

AGI PROJ NO. 0008-015 REVISION 0



- |  |   |
|--|---|
| IMPACT AREA                                  | R4 - MEDIUM LOW RESIDENTIAL                               |
| INCORPORATED AREAS                           | R6 - MEDIUM DENSITY RESIDENTIAL                           |
| C1 - NEIGHBORHOOD COMMERCIAL                 | R8 - MEDIUM HIGH DENSITY RESIDENTIAL                      |
| C2 - COMMUNITY COMMERCIAL                    | R8M - MEDIUM HIGH DENSITY RESIDENTIAL - MANUFACTURED HOME |
| LO - LIMITED OFFICE                          | R12 - HIGH DENSITY RESIDENTIAL                            |
| M1 - LIMITED INDUSTRIAL                      | R20 - VERY HIGH DENSITY RESIDENTIAL                       |
| M2 - GENERAL INDUSTRIAL                      | RP - RURAL PRESERVATION ZONE                              |
| M3 - AIRPORT INDUSTRIAL                      | RR - RURAL RESIDENTIAL ZONE                               |
| R1 - ESTATE RESIDENTIAL                      | RSW - SOUTHWEST COMMUNITY RESIDENTIAL ZONE                |
| R1M - ESTATE RESIDENTIAL - MANUFACTURED HOME | RUT - RURAL-URBAN TRANSITION ZONE                         |
| R2 - LOW DENSITY RESIDENTIAL                 | TI - TECHNOLOGICAL INDUSTRIAL                             |

REFERENCE:  
BASE MAP BY ADA COUNTY DEVELOPMENT SERVICES, BOISE, IDAHO, DATED JULY 21, 2011

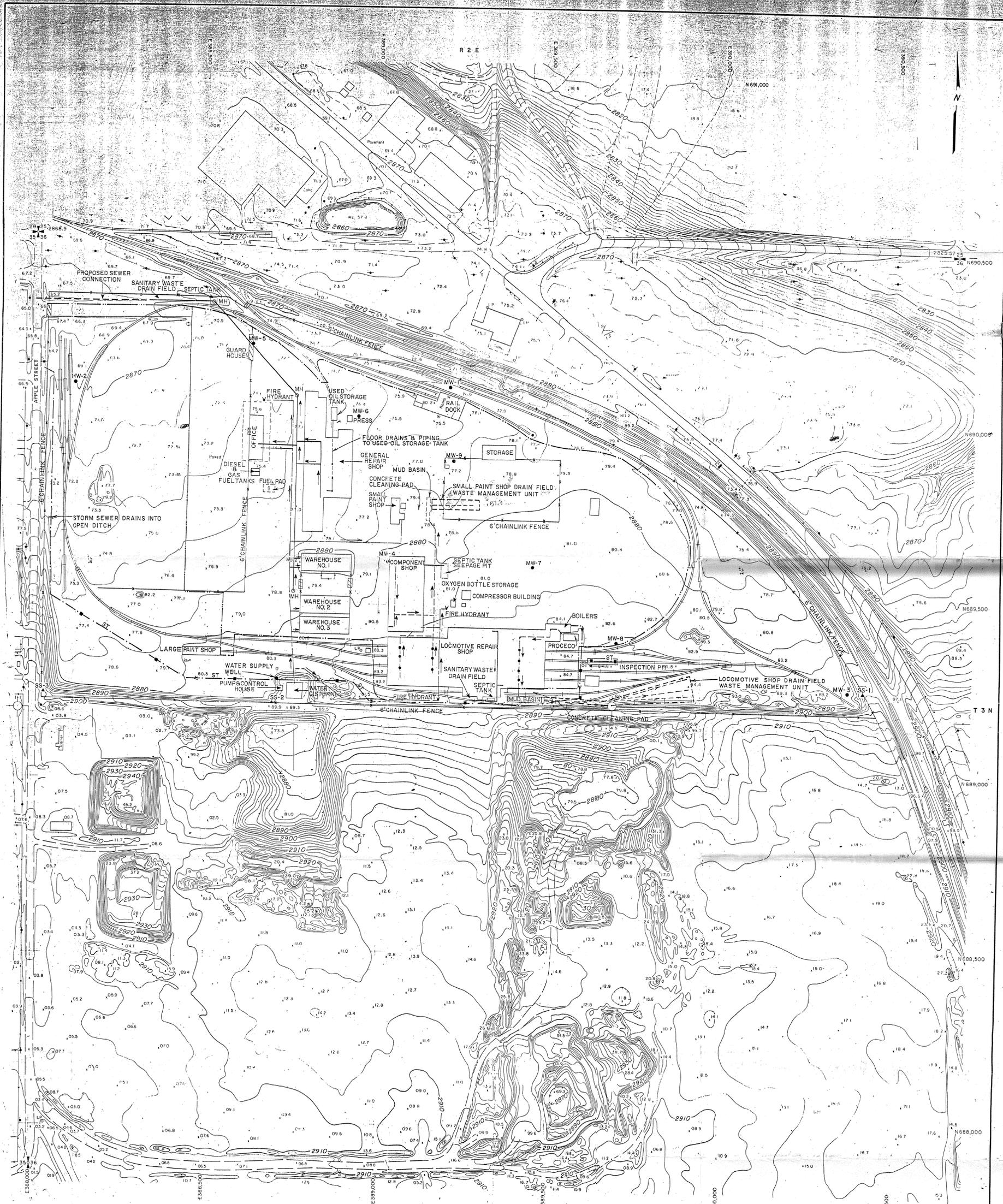


WABTEC - MOTIVEPOWER  
BOISE, IDAHO  
EPA ID. EDD980976831

FIGURE B1  
LAND ZONING MAP



0	BAS	09/07/11	SETUP IN ARCMAP						CURRENT DATE	09/16/2011
									ARCMAP MXD	FIGURE B1 (LAND ZONING MAP)
									AGI PROJ NO	0008-018

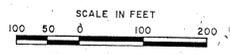


Vertical datum on this map is from N.G.S. datum.  
 The Plane Coordinates shown on this Map are based on the Idaho State Coordinate System, West Zone, originating from current N.G.S. control in vicinity. All coordinates shown are at Sea Level.  
 To convert measured Ground Distances to Sea Level Distances multiply by the combined factor 0.999981. To convert Sea Level Grid Distances to measured Ground Distances multiply by combined factor 1.000019. Factor varies with location.  
 In this area of the West Zone the True Azimuth is East of the Grid Azimuth as shown on the diagram. The Grid Azimuth may be converted to True Azimuth by use of the Delta Alpha ( $\Delta\alpha$ ) Angle shown for Center of each Map Sheet.

CONTOUR INTERVAL = 2'  
 PHOTOGRAPHY DATE 3-23-84

TOPOGRAPHY BY AERIAL MAPPING COMPANY, BOISE, IDAHO  
 FIELD CONTROL BY McCARTER AND TULLER, INC., CONSULTING ENGINEERS, BOISE, IDAHO

- LEGEND**
- +— SECTION CORNER
  - +— 1/4 CORNER
  - +— CORNER NOT SET
  - MEANDER CORNER
  - ▨ CONTROLLED ACCESS CORRIDOR
  - EXTENT OF PAVEMENT
  - SANITARY SEWER LINE
  - PROCESS SEWER LINE
  - ST. — STORM SEWER DROP STRUCTURE
  - DOMESTIC WATER / FIRE PROTECTION SYSTEM
  - FIRE HYDRANT

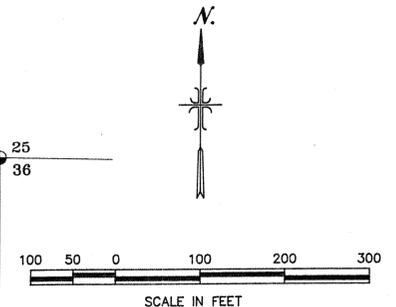
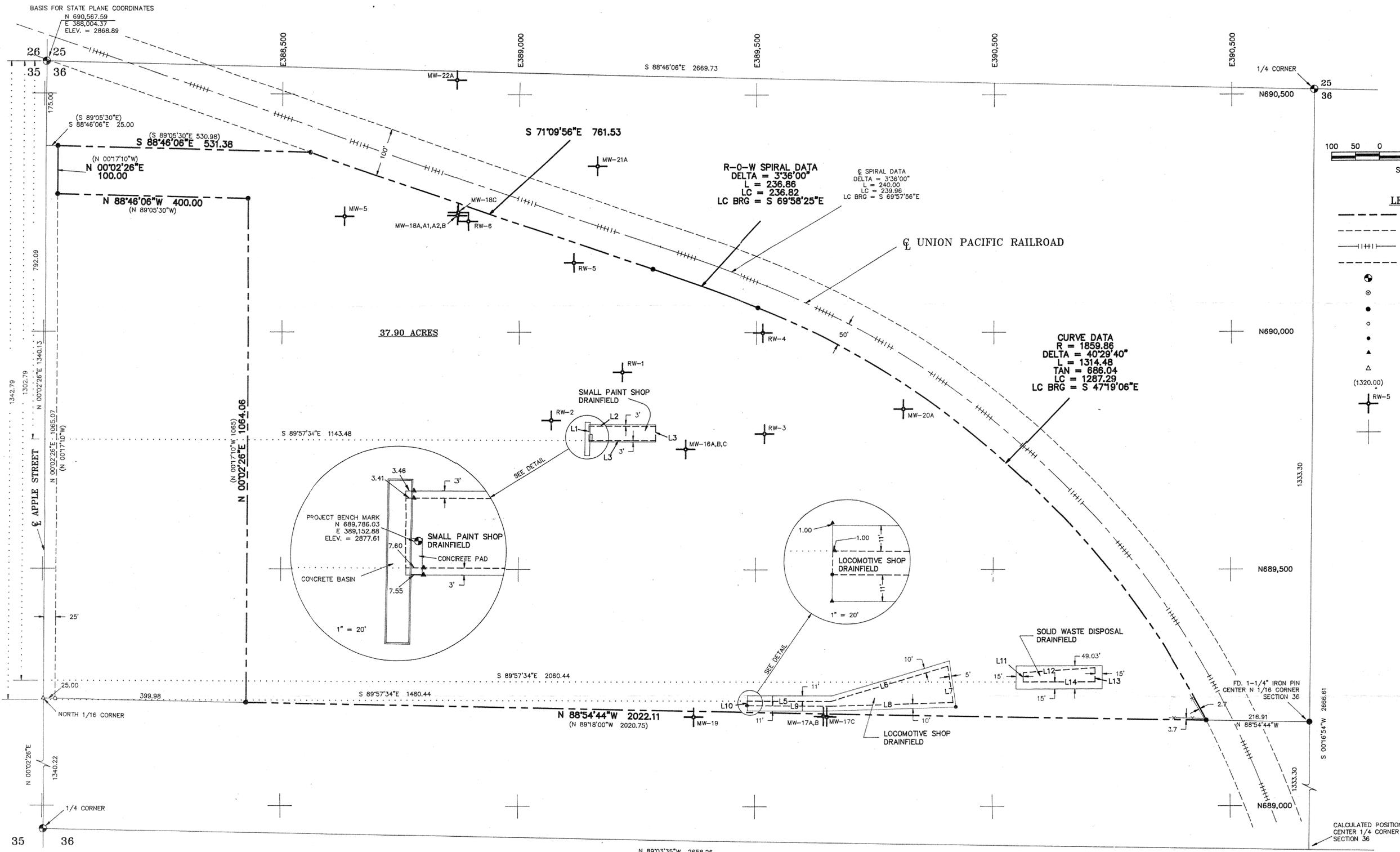


**BOISE INDUSTRIAL COMPLEX  
 BOISE, IDAHO**

**SITE UTILITIES AND  
 SUPPORT STRUCTURES**

DRAWN BY:	DATE:	SCALE: AS SHOWN	SHEET NO.:
DESIGNED BY:	DATE: APRIL, 1988		5
APPROVED BY:	DATE:		

**MORRISON-KNUDSEN ENGINEERS, INC.**  
 A MORRISON-KNUDSEN COMPANY



- LEGEND**
- BOUNDARY LINE
  - - - - EASEMENT BOUNDARY
  - |+|+|+ CENTER LINE RAILROAD
  - - - - DRAINFIELD BOUNDARY
  - FOUND BRASS CAP
  - FOUND 5/8" IRON PIN
  - SET 5/8" X 30" IRON PIN w/CAP
  - FOUND 1/2" IRON PIN
  - SET 1/2" X 24" IRON PIN w/CAP
  - ▲ SET PK NAIL
  - △ FOUND PK NAIL
  - (1320.00) DATA OF RECORD
  - ⊕ RW-5 WELL LOCATION AND IDENTIFICATION
  - ⊕ STATE PLANE GRID POINT

**SITE SURVEY**  
**M.K. LOCOMOTIVE CENTER**      1" = 100'

**LINE TABLE**

LINE	BEARING	DIST.
L1	N 00° 02' 26" E	30.00'
L2	S 89° 57' 34" E	140.00'
L3	S 00° 02' 26" W	30.00'
L4	N 89° 57' 34" W	140.00'
L5	S 89° 34' 17" E	175.55'
L6	N 73° 14' 06" E	256.62'
L7	S 08° 34' 49" E	77.13'
L8	S 88° 16' 02" W	256.55'
L9	N 89° 43' 17" W	176.39'
L10	N 00° 16' 43" E	10.00'
L11	N 00° 02' 26" E	20.00'
L12	N 88° 13' 35" E	150.33'
L13	S 00° 02' 26" W	30.00'
L14	N 89° 57' 34" W	150.00'

**WELL LOCATIONS AND ELEVATIONS**

WELL ID#	NORTHING	EASTING	8" CASING	4" PVC	2" PVC	3/4" PVC
RW-1	689,916.43	389,217.72	2877.45	2876.80		2877.70
RW-2	689,815.71	389,068.37	2880.29	2880.42		
RW-3	689,788.50	389,518.08	2880.98	2880.31		2881.25
RW-4	689,999.05	389,513.95	2878.77	2878.11		2879.04
RW-5	690,148.07	389,115.21	2876.81	2876.94		
RW-6	690,236.72	388,893.29	2875.81	2875.14		2876.08
MW-5	690,246.96	388,633.65	2872.77	2872.41		
MW-16A	689,755.88	389,350.97	2879.86		2879.86	
B					2879.89	
C					2879.90	
MW-17A	689,190.63	389,644.56	2884.30		2884.26	
B					2884.24	
MW-17C	689,189.43	389,651.75	2885.29	2884.50		
MW-18A1	690,248.80	388,870.66	2874.80		2874.87	
A2					2874.76	
B					2874.79	
MW-18C	690,255.44	388,871.75	2874.16	2874.27		
MW-19	689,188.98	389,370.45	2885.60	2885.16		
MW-20A	689,839.74	389,809.29	2878.38	2878.54		
MW-21A	690,353.59	389,164.57	2874.61	2874.76		
MW-22A	690,330.32	388,868.23	2871.55		2871.27	

- NOTES**
- BASIS OF BEARING AND LOCATION OF DRAINFIELDS BASED ON RECORD OF SURVEY 1293.
  - COORDINATES ARE STATE PLANE AT SITE ELEVATION BASED ON THE NORTHWEST CORNER OF SECTION 36. THE GRID FACTOR TO CONVERT TO SEA LEVEL DATUM (HOLDING THE COORDINATE FOR THE NORTHWEST CORNER OF SECTION 36) IS 0.9998100.
  - SET PK NAILS WITH SEALANT AT ALL DRAINFIELD AND OFFSET ANGLE POINTS EXCEPT AS NOTED.
  - PROPERTY BOUNDARY SHOWN IS AS DESCRIBED IN THE QUITCLAIM DEED RECORDED UNDER INSTRUMENT No. 8724485.

**CERTIFICATE OF SURVEYOR**

I, PATRICK A. TEALEY, PLS NO. 4347, STATE OF IDAHO, DO HEREBY CERTIFY THAT THE SURVEY REPRESENTED ON THIS PLAT WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION AND IS IN ACCORDANCE WITH THE LAWS OF IDAHO RELATING TO SURVEYS.



**TEALEY'S LAND SURVEYING**  
 479 MAIN ST. • BOISE, IDAHO 83720  
 208-386-0636

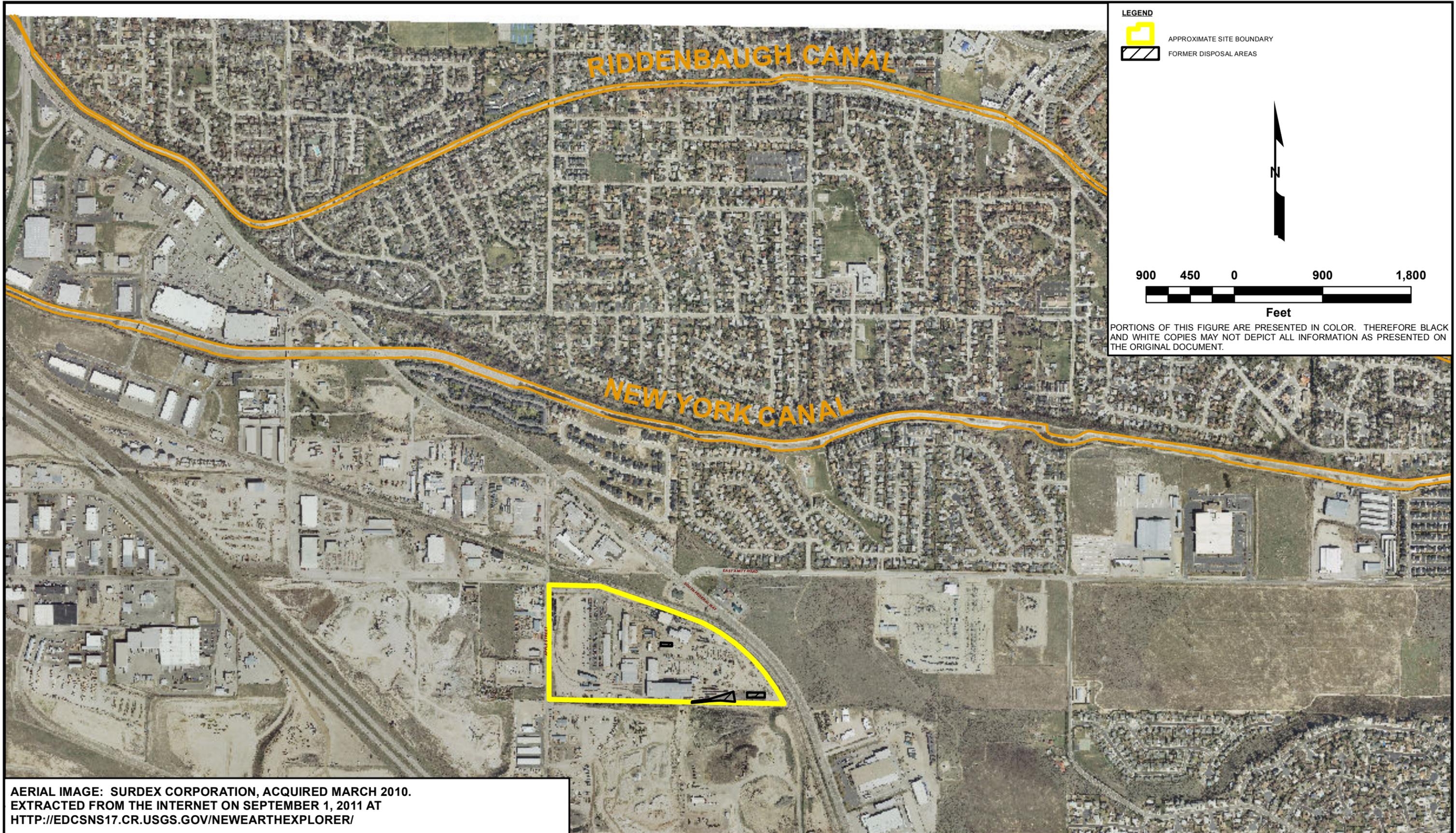
**SITE SURVEY FOR**  
**M.K. LOCOMOTIVE CENTER**

SITUATED IN THE NW 1/4 SECTION 36, T. 25 N., R. 25 E., B.M., BOISE, ADA COUNTY, IDAHO

DATE: JANUARY, 1991  
 DRAWING NO.: 740  
 CHECK: dnm  
 SCALE: 1" = 100'

REVISED: 1/28/91

DWG\740-SITE



AERIAL IMAGE: SURDEX CORPORATION, ACQUIRED MARCH 2010.  
 EXTRACTED FROM THE INTERNET ON SEPTEMBER 1, 2011 AT  
[HTTP://EDCSNS17.CR.USGS.GOV/NEWEARTHEXPLORER/](http://EDCSNS17.CR.USGS.GOV/NEWEARTHEXPLORER/)

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WABTEC - MOTIVEPOWER  
 BOISE, IDAHO  
 EPA ID. EDD980976831

CURRENT DATE 08/15/2011 ARCMAP MXD APPENDIX B-3 (2010 AERIAL IMAGE)



APPENDIX B-3  
 2010 AERIAL PHOTOGRAPH

AGI PROJ NO. 0008-015 REVISION 0

LEGAL DESCRIPTION  
BOISE INDUSTRIAL COMPLEX  
AND EASEMENT

A portion of the North 1/2 of the Northwest 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian, Ada County, Idaho, excepting there from the North 175 feet of said Section and that portion of said Section lying Northerly and Easterly of the Right-of-Way for the Oregon Short Line Railroad (also known as the Union Pacific Railroad) and more particularly described as follows:

Commencing at the Northwest Corner of Section 36, Township 3 North, Range 2 East, Boise Meridian; thence South 00° 02' 26" West along the section line, a distance of 175.00 feet; thence South 88° 46' 06" East, a distance of 25.00 feet to the East Right-of-Way of Apple Street, said point being the POINT OF BEGINNING;

thence South 88° 46' 06" East, a distance of 696.33 feet more or less to the apparent centerline of the railroad, said railroad having a right-of-way of 50 feet each side of the centerline;

thence continuing along the apparent centerline of the railroad generally on a curve to the right and defined by a series of chords as follows:

South 71° 12' 28" East, a distance of 602.34 feet;

South 70° 00' 28" East, a distance of 240.00 feet;

South 63° 47' 38" East, a distance of 229.22 feet;

South 56° 07' 49" East, a distance of 312.57 feet;

South 46° 41' 03" East, a distance of 310.16 feet;

South 37° 17' 06" East, a distance of 313.08 feet;

South 29° 42' 34" East, a distance of 211.55 feet to a point on the south line of the North 1/2 of the Northwest 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian;

thence North 88° 54' 44" West along the south line of the North 1/2 of the Northwest 1/4 of Section 36, a distance of 2,478.57 feet to a point on the easterly Right-of-Way of Apple Street;

thence North 00° 02' 26" East along said Right-of-Way for Apple Street, a distance of 1,165.04 feet to the POINT OF BEGINNING.

Also, attached to the southerly boundary is an easement granted by the State of Idaho, Easement No. 5346, filed as Instrument No. 8758591, Ada County, Idaho and whose description is as follows;

A parcel of land for roadway easement purposes located in the South 1/2 of the Northwest 1/4 of Section 36, Township 3 North, Range 2 East of the Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Commencing at the Brass Cap Monument representing the position of the corner common to Sections 25, 26, 35 and 36, T3N, R2E, B.M.; thence South 00° 02' 25" West along the line common to Sections 35 and 36, a distance of 1,340.13 feet to the North 1/16 Corner common to said Sections 35 and 36; thence South 88° 58' 05" East along the east-west centerline of the NW 1/4 of Section 36, a distance of 25.00 feet to a found rebar monument; thence continuing South 88° 58' 05" East

along said line, a distance of 959.38 feet to the REAL POINT OF BEGINNING;

thence continuing South  $88^{\circ} 58' 05''$  East along said line, a distance of 700.00 feet;

thence South  $01^{\circ} 01' 55''$  West, a distance of 20.00 feet;

thence North  $88^{\circ} 58' 05''$  West, along a line being 20.00 feet southerly of and parallel with said centerline, a distance of 700.00 feet;

thence North  $01^{\circ} 01' 55''$  East, a distance of 20.00 feet to the REAL POINT OF BEGINNING.

Prepared by: Loveless Engineering  
3330 Grace Street  
Boise, ID 83703  
February 29, 1988

Legal Description

Small Paint Shop Drain Field  
Waste Management Unit

A parcel of land in the N 1/2 of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Commencing at the Northwest corner of said Section 36; thence South 00°02'26" West along the West line of the NW 1/4 of said Section 36, a distance of 792.09 feet; thence leaving said West line South 89°57'34" East a distance of 1143.48 feet to the TRUE POINT OF BEGINNING of the following described parcel;

THENCE North 00°02'26" East a distance of 30.00 feet;  
THENCE South 89°57'34" East a distance of 140.00 feet;  
THENCE South 00°02'26" West a distance of 30.00 feet;  
THENCE North 89°57'34" West a distance of 140.00 feet to the TRUE POINT OF BEGINNING.

The above described parcel contains 0.096 acres of land more or less.

The Basis of Bearings is the West line of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian as it bears South 00°02'26" West.

Legal Description

Waste Disposal Trench Location  
Waste Management Unit

A parcel of land in the N 1/2 of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Commencing at the Northwest corner of said Section 36; thence South 00°02'26" West along the West line of the NW 1/4 of said Section 36, a distance of 1302.79 feet; thence leaving said West line South 89°57'34" East a distance of 2060.44 feet to the TRUE POINT OF BEGINNING of the following described parcel;

THENCE North 00° 02' 26" East a distance of 20.00 feet;  
THENCE North 86°13'35" East a distance of 150.33 feet;  
THENCE South 00°02'26" West a distance of 30.00 feet;  
THENCE North 89°57'34" West a distance of 150.00 feet to the TRUE POINT OF BEGINNING.

The above described parcel contains 0.086 acres of land more or less.

The Basis of Bearings is the West line of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian as it bears South 00°02'26" West.

Legal Description

Locomotive Shop Drain Field  
Waste Management Unit

A parcel of land in the N 1/2 of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian, Ada County, Idaho, being more particularly described as follows:

Commencing at the Northwest corner of said Section 36; thence South 00°02'26" West along the West line of the NW 1/4 of said Section 36, a distance of 1342.78 feet; thence leaving said West line, South 89°57'34" East a distance of 1480.44 feet to the TRUE POINT OF BEGINNING of the following described parcel;

THENCE South 89°43'17" East a distance of 175.55 feet;  
THENCE North 73°14'06" East a distance of 256.62 feet;  
THENCE South 08°34'49" East a distance of 77.13 feet;  
THENCE South 88°16'02" West a distance of 256.55 feet;  
THENCE North 89°43'17" West a distance of 176.39 feet;  
THENCE North 00°16'43" East a distance of 10.00 feet to the TRUE POINT OF BEGINNING.

The above described parcel contains 0.295 acres of land more or less.

The Basis of Bearings is the West line of the NW 1/4 of Section 36, Township 3 North, Range 2 East, Boise Meridian as it bears South 00°02'26" West.

8839523

Record of Survey  
No. 1293

Merriman-Kudson Co Inc  
Lease Industrial Survey

Book 9 of Surveys  
on Pages 1311-1312

Keith A. Lovelace  
Surveyor

At the request of  
Keith A. Lovelace

INST UCCG

AUG 11 2 22 PM '88

JOHN EASTIDA  
RECORDER ADA COUNTY  
Deputy DEPUT:

10.60

**RECORD OF SURVEY for MORRISON-KNUDSEN CO., INC.**  
**Boise Industrial Complex Waste Management Units**  
 Located in the N1/2 of the NW1/4, Sec. 36, T.3N., R.2E., B.M., Ada County, Idaho  
 Loveless Engineering - 1988

RECORD OF THE TYPE, LOCATION  
 AND QUANTITY OF HAZARDOUS WASTES DISPOSED  
 OF AT THE BOISE INDUSTRIAL COMPLEX

Pursuant to 40 CFR § 264.119(a), Morrison-Knudsen Company, Inc., a Delaware corporation whose principal place of business is Morrison-Knudsen Plaza, P.O. Box 7808, Boise, Idaho 83729, owner of the Boise Industrial Complex (the "Facility") which is located at 4600 Apple Street, Boise, Idaho 83705, as shown in the attached survey plat file (the "Survey Plat"), hereby describes, to the best of its knowledge, the type, location and quantity of wastes disposed of at the facility:

1. At the Small Paint Shop Drain Field, located as shown on the Survey Plat, an estimated 390 cubic yards of soils may have been affected by discharged wastewater containing low concentrations of F001 and low designated wastes per 40 CFR § 261 Subpart C. Analytical data from past site waste streams indicate that 1,1,1 trichloroethane was the primary constituent of spent solvents from facility degreasing operations. A source of cadmium (D006) has been identified in the review of material used at the facility before 1985.

2. At the Locomotive Shop Drain Field, located as shown in the Survey Plat, an estimated 650 cubic yards of soils may have been affected by discharged wastewaters containing low concentrations of F001 designated wastes per 40 CFR § 261 Subpart C. Analytical data from past facility waste streams indicate that 1,1,1 trichloroethane was the primary constituent of spent solvents from degreasing operations.

3. At the Solid Waste Disposal Trench, located as shown in the Survey Plat, an estimated 400 cubic yards of soils may have been affected by the disposal of sludges containing low concentrations of F001 designated wastes per 40 CFR § 261 Subpart C. Analytical data from past site waste streams indicate that 1,1,1 trichloroethane was the primary constituent of disposed wastes.

Date: Aug. 11, 1988 MORRISON-KNUDSEN COMPANY, INC.  
 BY: [Signature]  
 Senior Vice President

ACKNOWLEDGEMENT

STATE OF IDAHO )  
 COUNTY OF Ada ) SS.

On this 11th day of August, in the year 1988, before me, Keith A. Loveless, a notary/public, personally appeared Leon D. Stoddard, known or identified to me to be the Senior Vice President of Morrison-Knudsen Company, Inc., the corporation that executed the above instrument or the person who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



Keith A. Loveless  
 Notary Public, residing at  
Boise, Idaho  
 My commission expires  
April 10, 1994