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FINAL



Community Environmental Response
Facilitation Act (CERFA) Report

Fort Benjamin Harrison
Indiana

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Prepared for:

U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND 21010

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Final Report


**Community
Environmental
Response Facilitation
Act (CERFA) Report**

**Fort Benjamin
Harrison, Indiana**



Program Manager, Robert Lambe

12/4/94
Date



Task Manager, Nancy Naslas

12/4/94
Date

Submitted to

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Fort Benjamin Harrison (FBH) has been investigated by Arthur D. Little, Inc. under the Community Environmental Response Facilitation Act (CERFA). FBH is located 12 miles northeast of downtown Indianapolis, Indiana. The installation's mission includes administrative and training activities.

The objective of CERFA is to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. This investigation included interviews, visual inspections, and review of existing documents, regulatory records, data bases, and title documents. This information was used to divide the installation into four categories of parcels:

1. CERFA parcels: Approximately 1,825 acres of the facility have no history of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regulated hazardous substance or petroleum product release, disposal, or storage.
2. CERFA parcels with qualifiers: Approximately 78 acres had no evidence of such release, disposal, or storage, but contained non-CERCLA hazards, such as asbestos or radon.
3. CERFA disqualified parcels: For approximately 399 acres of the investigated area there is a history of release, disposal, or storage for one year or more of CERCLA-regulated hazardous substances or petroleum products.
4. CERFA excluded parcels: Approximately 201 acres have an existing mandate for retention by the federal government or have already been designated for transfer.

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List of Acronyms and Abbreviations

AAFES	Army and Air Force Exchange Service
ACBM	Asbestos-containing building material
ADL	Arthur D. Little, Inc.
ADMINCEN	U.S. Army Administrative Center
ARCOM	Army Reserve Command
AREE	Area requiring environmental evaluation
AST	Aboveground storage tank
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act
DIS	Directorate of Installation Support
DPCA	Directorate of Personnel and Community Activities
DRMO	Defense Reutilization and Marketing Office
EI	Environmental investigation
EOD	Explosive ordnance disposal
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
ESE	Environmental Science and Engineering, Inc.
FBH	Fort Benjamin Harrison
FINDS	Facility Index System
HLA	Harding Lawson Associates
IDEM	Indiana Department of Environmental management
IDNR	Indiana Department of Natural Resources
IRP	Installation Restoration Program
NEPA	National Environmental Policy Act
NET	National Environmental Testing, Inc.
NGVD	National Geodetic Vertical Datum
NPL	National Priorities List
NRMD	National Resources Management Division
PA	Preliminary assessment
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PCP	Pentachlorophenol
POL	Petroleum, oil, and lubricants
POTW	Publicly owned treatment works
PX	Post exchange
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SWMU	Solid waste management unit
TASO	Training Aids Service Office
TRADOC	U.S. Army Training and Doctrine Command

Executive Summary

This report presents the results of the Community Environmental Response Facilitation Act (CERFA) investigation conducted by Arthur D. Little, Inc. at Fort Benjamin Harrison (FBH), a U.S. Government property selected for closure by the Base Realignment and Closure (BRAC) Commission under Public Laws 100-526 and 101-510. The primary objective of this investigation as required under CERFA (Public Law 102-426), is for federal agencies to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Satisfying this objective requires the identification of real property where no Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-regulated hazardous substances or petroleum or their derivatives were stored for one year or more, known to have been released, or disposed of.

The property examined under this investigation is a 2,501-acre site located in Lawrence Township, Marion County, Indiana, approximately 12 miles northeast of downtown Indianapolis, Indiana. The installation's primary mission is to provide support to the U.S. Army Finance and Accounting Center, the U.S. Army Administration Center, the Defense Information School, the U.S. Army Enlisted Records and Evaluation Center, and other tenant activities. Operations at FBH consist of administrative, training, housing, and support functions. The environmentally significant operations associated with the property are printing and photographic processing, vehicle maintenance, furniture and office equipment repair, grounds, building, and road maintenance, and fuel storage.

Arthur D. Little reviewed existing investigation documents, U.S. Environmental Protection Agency (EPA), state, and county regulatory records, environmental data bases, and title documents pertaining to FBH during this investigation. In addition, Arthur D. Little conducted interviews and visual inspections of FBH as well as visual inspections and data base searches for the surrounding properties. This information was used to divide the installation into four categories of parcels: CERFA parcels, CERFA parcels with qualifiers, CERFA disqualified parcels, and CERFA excluded parcels.

Areas of the facility that have no history of CERCLA regulated hazardous substance or petroleum product release, disposal, or storage are categorized as CERFA parcels. Arthur D. Little's investigation and subsequent parcelization of the 2,501-acre installation property determined that approximately 1,825 acres of the facility fall within the CERFA parcel category. The CERFA parcels are located predominantly in the northern portion of the installation.

Areas of the facility that had no evidence of such release, disposal, or storage, but contained non-CERCLA hazards, such as asbestos, radon gas, lead-based paint, unexploded ordnance, radionuclides, or not in-use polychlorinated biphenyl (PCB)-containing equipment, were categorized as CERFA parcels with qualifiers. Approximately 78 acres of the facility were identified as CERFA parcels with qualifiers.

Executive Summary

Areas of the facility for which there is a history of release, disposal, or storage for one year or more of CERCLA-regulated hazardous substances or petroleum products were categorized as CERFA disqualified parcels. Approximately 399 acres of installation property are identified as CERFA disqualified parcels.

The remaining areas on the installation have an existing mandate for retention by the federal government, or have already been transferred by deed and are categorized as CERFA excluded parcels. Approximately 201 acres of the facility were identified as CERFA excluded parcels.

The accompanying map summarizes the categorization of FBH based on the above definitions. The CERFA Report for this installation provides the relevant environmental history to substantiate the parcel categorization.

This CERFA Report has been reviewed by the U.S. Army Environmental Center (USAEC), FBH, Natural Resources Management Division, U.S. Army Corps of Engineers, Louisville District, Region V of the U.S. Environmental Protection Agency, and the Indiana State Department of Environment Management. Comments from these organizations have been incorporated into this final report. Any unresolved issues from the regulatory agencies have been incorporated in Appendix C of this document.

The primary objective of CERFA is satisfied by the identification of CERFA parcels and CERFA parcels with qualifiers. As a result, concurrence has been sought from the regulatory agencies on these two categories of parcels.

This report does not address other property transfer requirements that may be applicable under the National Environmental Policy Act (NEPA), nor does it address natural resource considerations such as endangered, rare, or threatened plant or animal life.

This final CERFA report incorporates relevant environmental information available through February 15, 1994.

1.0 Introduction

1.1 Purpose and Scope

Public Laws 100-526 and 101-510 designated more than 100 Department of the Army facilities for closure and realignment. As a result, it became necessary to expedite the environmental investigation and cleanup process, as necessary, prior to the release and reuse of Army Base Realignment and Closure (BRAC) property. The BRAC environmental restoration program was established in 1989 with the first round (BRAC 88) of base closures and continued with subsequent rounds (BRAC 91 and BRAC 93). The BRAC program is patterned after the Army's Installation Restoration Program (IRP), except that it has been expanded to include such categories of contamination as asbestos, radon, polychlorinated biphenyls (PCBs), and others that are not normally addressed under the Army IRP.

The BRAC environmental restoration program began by conducting enhanced preliminary assessments (PAs). The term "enhanced" is used to distinguish these assessments from previous IRP preliminary assessments, since the BRAC PAs are conducted from a property transfer perspective and evaluate areas that are not included in the IRP (e.g., asbestos, radon, PCBs). The Enhanced PAs include reviews of existing installation documents, regulatory records, and aerial photographs; a site visit and visual inspection; and employee interviews. Enhanced PAs were conducted for BRAC 88 and BRAC 91 installations, and are currently under way at BRAC 93 installations. An Enhanced PA was prepared for Fort Benjamin Harrison (FBH) in 1992 by Roy F. Weston, Inc., under the direction of the U.S. Army Environmental Center (USAEC) (formerly the U.S. Army Toxic and Hazardous Materials Agency [USATHAMA]).

In October 1992, Public Law 102-426, the Community Environmental Response Facilitation Act (CERFA) amended Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and established new requirements with respect to contamination assessment, cleanup, and regulatory agency notification/concurrence for federal facility closures. CERFA requires the federal government, before termination of federal activities on real property owned, to identify property where no hazardous substances were stored, released, or disposed of. Also, the designation must be concurred with by the appropriate regulatory agency (U.S. Army Environmental Protection Agency for National Priorities List (NPL) bases and the state on non-NPL bases). These requirements retroactively affect the Army BRAC 88 and BRAC 91 environmental restoration activities, and are being implemented at BRAC 93 sites concurrently with their Enhanced PAs. The primary CERFA objective is for federal agencies to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed of.

1.0 Introduction

Arthur D. Little, Inc. was awarded the task to identify real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed at five BRAC 91 sites. Under this task, a Work Plan was developed to describe the process in satisfying the CERFA task objective. The purpose of this report is to present the findings for FBH, Indiana.

1.2 Definition of Terms

The following definitions are used in this report:

- CERFA parcel - A portion of the installation real property for which investigation revealed no evidence of storage for one year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. CERFA parcels include areas where PCB-containing equipment is in operation, but there is no evidence of release. CERFA parcels also include any portion of the installation that once contained related environmental, hazard, or safety issues including unexploded ordnance (UXO) located on firing ranges or impact areas, radon, stored (not in use) PCB-containing equipment, products that contained radionuclides being used for their intended purposes, asbestos contained within building materials, and lead-based paint applied to building material surfaces, but that has since been removed or fully remediated.
- CERFA parcel with qualifier(s) - A portion of the installation real property for which investigation reveals no evidence of storage for one year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. The parcel does however contain related environmental, hazard, or safety issues, including UXO located on firing ranges or impact areas, radon, radionuclides contained within products being used for their intended purposes, asbestos contained within building materials, lead-based paint applied to building material surfaces, or stored (not in use) PCB-containing equipment.
- CERFA disqualified parcel - A portion of the installation real property for which investigation reveals evidence of a release, disposal, or storage for more than one year of a CERCLA hazardous substance, petroleum, or petroleum derivative; or a portion of the installation threatened by such a release or disposal. CERFA disqualified parcels also include any portion of the installation where PCBs, asbestos-containing material, lead-based paint residue, or any ordnance has been disposed of, and any locations where chemical ordnance has been stored. Additionally, CERFA disqualified parcels include any areas in which CERCLA hazardous substances or petroleum products have been released or disposed of and subsequently fully remediated.

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- CERFA-excluded parcel - A portion of the installation real property retained by the Department of Defense, and therefore not explicitly investigated for CERFA. CERFA-excluded parcels also include any portions of the installation that have already been transferred by deed to a party outside the federal government, or by transfer assembly to another federal agency.

1.3 Geographical and Environmental Setting

FBH is located in Lawrence Township, Marion County, Indiana, approximately 12 miles northeast of downtown Indianapolis. FBH is bordered by residential areas and farmland, with the exception of industrial areas to the southeast.

FBH is situated on the Tipton Till Plain, which lies in the Till Plains Section of the Central Lowland physiographic province. The unit is of glacial origin and dates back to the Wisconsinian age. The topography rises (north to south) from nearly level bottomland along Fall Creek and its tributaries across moderately sloping terraces to nearly level uplands. Surface elevations across FBH range from 732 feet above National Geodetic Vertical Datum of 1929 (NGVD) along the northern boundary of the installation to 870 feet NGVD at the southern boundary (Roy F. Weston, 1992).

Surface drainage from the installation is primarily to the northwest, ultimately entering Fall Creek. Four major streams (Fall Creek, Lawrence Creek, Mud Creek, and Indian Creek) and three intermittent streams (Camp Creek, Fort Branch, and Schoen Creek) constitute the surface drainage system on FBH. Storm sewers in developed areas discharge surface runoff to these streams. In addition, three manmade lakes (Delaware Lake, New Lake, and Duck Pond) have been constructed on the installation. All three are stocked with fish and are designated as fishing and recreational areas. The Indiana Stream Pollution Control Board has classified the surface water at FBH as suitable for recreational use and aquatic life, and is therefore subject to the corresponding water quality criteria. In addition to these criteria, Fall Creek is also subject to more restrictive limitations on specific maximum chemical concentrations because it is used as a water supply source for the City of Indianapolis. (Roy F. Weston, 1992)

FBH personnel, in conjunction with the U.S. Fish and Wildlife Service, have identified wetlands at FBH using the Federal Manual for Identifying and Delineating Jurisdictional Wetlands; however, these wetlands have not been completely delineated. In addition, two areas at the installation are presently being considered for restoration to wetlands by FBH personnel and the State of Indiana. Wetlands are expected to be constructed upon delineation of the area(s) and approval of environmental restoration funds.

Several areas of FBH, both disturbed and undisturbed, provide excellent habitat for various aquatic, riparian, and terrestrial species. Significant landscape additions to the

1.0 Introduction

installation include several manmade lakes, an 18-hole golf course, fire trails, landfills, and the 27-acre black walnut plantation. In addition, 32 acres of land at FBH are available for an agricultural lease program; however, no land is currently leased for agricultural uses. Military personnel, post personnel, and their dependents are allowed to obtain permits for hunting and fishing on the installation.

Approximately 1,069 acres at FBH are covered by woodlands. The dominant species of trees include red oak, green ash, sugar maple, American beech, and cottonwood. Developed areas are covered with lawn grasses and various ornamental and shade trees, including tulip, sweet gum, honey locust, Ohio buckeye, and several varieties of hawthorn and crabapple (Roy F. Weston, 1992).

Four sensitive plant species have been identified at FBH. Wood's sedge is designated a state species of special concern or "rare" species. Pink turtlehead, goldenseal, and ginseng are considered state "watch list" species that may become threatened or endangered in the future. Sensitive animal species that have been observed at FBH include four state endangered birds (northern harrier, upland sandpiper, black tern, and golden-winged warbler), nine state special concern birds (great blue heron, brown creeper, broad-winged hawk, red-shouldered hawk, sharp-shinned hawk, Cooper's hawk, black-and-white warbler, worm-eating warbler, and hooded warbler), and the federally listed endangered Indiana bat (Harding Lawson Associates [HLA], 1993).

Several archaeological investigations have been performed at FBH as part of a cultural resources program started in 1985. Individual investigations are conducted before major land improvements. The latest archaeological investigation, conducted in late 1989 and early 1990, identified six new archaeological sites at FBH: four prehistoric and two historic. Historical investigations at FBH have identified more than 100 buildings with historical and military significance. Building 16, the post office, is on the National Register of Historic Places. FBH personnel are currently discussing with the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, the possibility of registering several other buildings (Roy F. Weston, 1992).

The climate of FBH is characterized generally by warm and humid summers and moderately cold winters. Temperatures average 28°F in January and 75°F in July. The summer climate is influenced by warm, moist air masses from the Gulf of Mexico that move up the Mississippi and Ohio valleys. The winter climate is influenced by cold, dry air masses from Canada that move across the plains. Precipitation in central Indiana is distributed fairly evenly throughout the year. The average annual rainfall is 40 inches and the average annual snowfall is 23 inches. Central Indiana is occasionally subject to tornadoes, windstorms, and periods of drought. Wind data for the period of 1972 through 1984 for Indianapolis indicate that the predominant wind direction is from the southwest in the summer and from the northwest in the winter. The average annual wind velocity at FBH is 9.7 miles per hour (Roy F. Weston, 1992).

2.0 Scope of Investigation

This CERFA Supplementary Preliminary Assessment of FBH included records reviews (see Section 2.1, Existing Investigation Documents, and Section 4.1 Previously Identified Areas Requiring Environmental Evaluation), a five-day site visit, and installation and agency staff interviews (see Section 2.3, Interviews).

2.1 Existing Investigation Documents

Existing environmental documents relating to FBH are listed below. A more extensive list of environmental documents for FBH is included in Appendix A.

- *Enhanced Preliminary Assessment*, Fort Benjamin Harrison, Contract Number DAAA15-90-D-0009, Delivery Order 9, Roy F. Weston, Inc., February 1992
- *Technical Sampling Plan for Fort Benjamin Harrison RCRA Facility Investigation*, Marion County, Indiana, Contract Number DAAA15-91-D-0013, Delivery Order 4, Harding Lawson Associates, December 1992, revised August 1993
- Numerous documents prepared by or for the Army regarding environmental compliance, landfill closure, and ground water investigations
- Maps dated 1926 (revised 1930), 1946, 1949 (revised 1950), and 1992
- Aerial photographs from 1985 (1" = 100') obtained from the State Land Office

A large amount of information regarding the buildings at FBH was developed from a review of the historical record books for FBH (building improvements prior to 1942) and the card files in the Real Property Office at the installation. This review focused on the type(s) of heating system used at the building (coal, oil, gas, steam) and the installation and removal of fuel storage tanks.

The base map used for locating and recording all sites of storage, release, and/or disposal of hazardous materials was obtained from Roy F. Weston. The original source of this map was the U.S. Army Corps of Engineers and the FBH Natural Resources Management Division.

Existing environmental information for FBH, primarily as it is described in the Enhanced PA (Roy F. Weston, 1992), is summarized below under the following headings: land use, surface water, ground water, hazardous materials/hazardous waste, and facility-wide studies.

2.0 Scope of Investigation

Land Use

In 1990 a land use plan was prepared for the U.S. Army Corps of Engineers to establish a complete definition of FBH land use, past and present, and to investigate how the installation interfaces with the surrounding community. In addition, the plan discusses current and long-range projects along with possible constraints to development (Roy F. Weston, 1992; Buchart-Horn, Inc., 1990).

Surface Water

Surface water samples from Fall Creek and nearby surface water bodies both on and adjacent to FBH have been collected since the early 1970s. Analytical results from these samples indicate that the water quality is good and suitable for its designated uses; a review of available sample results indicated that the operations at FBH appear to have had a negligible impact on the primary streams in the vicinity of the installation (Roy F. Weston, 1992). Although personnel shortages during the 1975 water quality monitoring program caused the sampling program to be operated sporadically, the general quality of surface water on or adjacent to the installation was assessed as good to excellent; no recommendations were made for continued sampling of studied locations (USAEHA, 1975). The objective of a 1987 survey was to determine the impact of FBH activities on the levels of pesticides and PCBs in Fall Creek; the results of the sampling and analysis indicated no evidence that FBH is contributing significant levels of pesticides or PCBs to Fall Creek (USAEHA, 1980a).

Ground Water

Samples from selected monitoring wells have been collected for analysis since the early 1980s. Analytical results indicate that aside from some localized impacts, the landfills have exhibited little to no influence on the ground water quality at FBH (Roy F. Weston, 1992; USAEHA, 1975, 1980a, 1981b; ERC, 1991; Viani, 1983; NET, 1990, 1991a, 1991b, 1991c; Raney, 1988).

In 1986, an installation-wide investigation with respect to potential sources of ground water contamination (such as landfills, dumps, impoundments, burial pits, underground tanks, and spill sites) identified high risk areas and evaluated the ground water monitoring program, including the monitoring network, well integrity, and collection and sampling procedures (USAEHA, 1986). A 1987 geohydrologic study summarizes the installation and sampling of monitoring wells at FBH (USAEHA, 1987a). As a result of the study, this report recommended the monitoring of the ground water around the current landfill and at two points along Lawrence Creek on a quarterly basis for one year for hazardous constituents and indicator parameters to determine the impact of the landfill on the ground water regime.

In 1990 a study was conducted to identify the presence of any release of hazardous constituents from the former coal storage yard adjacent to Building 2, the former landfill east of Lee Road and north of Hawley Army Hospital, and the former sewage treatment plant/fire training area at Building 810. The study concluded that these

2.0 Scope of Investigation

areas did not appear to have significantly affected the surrounding areas; however, one well (MW-20) near the former landfill contained vinyl chloride at a concentration greater than the drinking water standard (USAEHA, 1990). A 1991 follow-up memorandum concerning the investigation at the former landfill addressed additional sampling of MW-20, installation and sampling of a new monitoring well, and sampling of two surface water points; the presence of vinyl chloride in MW-20 was confirmed (USAEHA, 1991).

Additional data have been collected from surface and ground water monitoring points at FBH since 1991. Some of these data were reviewed during the CERFA investigation. For one sample collected on August 25, 1991, vinyl chloride was not detected in MW-20. However, the data packages available for review during the CERFA investigation contained unvalidated data and incomplete information regarding sampling methods, analyses, and quality assurance/quality control, therefore, new conclusions regarding ground water conditions have not been made.

Areas where known or potential ground water contamination may be present have been located based on ground water investigation reports (USAEHA, 1990, 1991). Ground water flow directions, contaminant concentration levels, and watershed boundaries were used to conservatively delineate disqualified parcel boundaries.

In June 1991, a Phase 2 Construction Clearance Study (and the Phase 1 that preceded it) was conducted to determine the effects of past use on site soils and ground water using soil borings and monitoring wells (ERC, 1991). The study indicated the presence of contaminant concentrations of several constituents above regulatory action limits and the presence of others (e.g., total petroleum hydrocarbons) for which there are no guidelines. Further investigation and monitoring well installation in this area (CERFA disqualified parcel 70D) were recommended.

The Enhanced PA (Roy F. Weston, 1992) review concluded that quarterly sampling results for select monitoring wells and surface water sampling locations from October 1990 to August 1991 indicate little influence of the two landfills on ground water quality at the FBH installation. Localized degradation was noted at certain well locations, as indicated by the periodic sampling events (Roy F. Weston, 1992).

Hazardous Materials/Hazardous Waste

An installation assessment was conducted in 1982 to address past and present use of any toxic or hazardous materials and to assess the potential for off-post migration. The study identified two wash racks as potential contaminant sources due to their direct tie into the storm sewer system (ESE, 1984). Hazardous substances in sewer and drainage systems do not represent a release or storage, any more than an oil/water separator that is pumped out routinely of oil represents storage. Such systems are noted in this CERFA report but do not cause parcel disqualification on this basis unless in areas where information/sampling has indicated contamination at some specific point. Also in this study (ESE, 1984), available information on

2.0 Scope of Investigation

geology, contaminant sources, and limited water quality data did not indicate any off-post migration of contaminants via surface or ground water. No follow-up survey was recommended.

In 1984, a study was conducted to determine if an Environmental Impact Statement for the ongoing mission activities of FBH was required and to identify measures to mitigate adverse environmental impacts (TRADOC, 1984). The conclusion was that no significant environmental impact should occur as a result of the ongoing mission activities and that an Environmental Impact Statement was not required.

In September 1987, FBH submitted an application for a RCRA permit to operate a storage facility at the Defense Reutilization and Marketing Office (DRMO). As a result of this application, a RCRA Facility Assessment was performed by the EPA, and the USAEHA compiled information on 15 solid waste managements units (SWMUs) (USAEHA, 1988); SWMUs are sources or potential sources of a release of hazardous waste or hazardous constituents to the environment.

Facility-Wide Studies

Facility-wide studies on asbestos, lead-based paint, radon, and UXO are discussed in Section 4.4 of this report. Studies regarding the use of pesticides and other related materials, and on coal storage areas are discussed below.

Pesticides, including insecticides, rodenticides, herbicides, and fungicides, are stored and mixed at FBH for the golf course and for use at all facilities. In 1975, USAEHA conducted a limited study of pesticide usage at FBH as part of the Department of the Army Pesticide Monitoring Program. Results showed elevated levels of total pesticides in 2 of 22 soil samples, 1 of 6 sediment samples, 3 of 4 fish samples, and none in 1 bird sample (USAEHA, 1975). In 1980, USAEHA conducted a survey of pesticide contamination of the streams located at FBH; it was concluded that pesticide operations at FBH do not contribute to contamination of the streams or waterways passing through FBH (USAEHA, 1980a).

Coal was used in the 1930s to heat buildings at FBH and, at that time, was stored in piles on the ground surface outside each building that had a coal burning unit. Generally, these coal piles were not covered and did not have any type of containment for runoff. In 1984 the top three feet of soil in two of the larger coal storage areas was removed and replaced. In 1990 a study was conducted to identify the presence of any release of hazardous constituents from various areas at FBH including the former coal storage yard adjacent to Building 2; the study concluded that these areas did not appear to have significantly affected the surrounding areas (USAEHA, 1990).

2.0 Scope of Investigation

2.2 Federal, State, and Local Government Regulatory Records

Federal and state regulatory records for the installation and surrounding properties were reviewed at the state offices in Indianapolis. The purpose of this review was to identify any hazardous waste manifests, permits, permit applications, inspection reports, spills, releases, underground tanks, and enforcement actions relevant to FBH and adjacent properties. A database search for FBH and Lawrence Township was also performed and included the following:

- Emergency Response Notification System (ERNS) Sites
- National Priorities List Superfund Sites
- EPA Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) Sites
- RCRA Corrective Action Sites and Subtitle D Landfills
- Facility Index System (FINDS) Sites
- Underground/Aboveground Storage Tanks

The findings of this regulatory file review and database search are summarized below. In general, the review of Lawrence Township files identified no significant regulatory concerns or underground storage tanks (USTs) at properties adjacent to the installation. Much of the information in the files and database search has been previously reported in the Enhanced PA (Roy F. Weston, 1992).

One ERNS report describes a gas pipeline explosion at 1035 Drumn Road in the Harrison Village Apartments on FBH (CERFA excluded Parcel 79E). Numerous spill/incident reports have been filed for FBH and are described in the Enhanced PA (Section 3.11, Roy F. Weston, 1992); significant incidents are noted in Table 5.1-1 with respect to parcel disqualification. Only one adjacent property incident report has been identified as potentially significant in relation to FBH; this incident is discussed in Section 4.3.

No NPL sites at or near FBH have been identified. Current environmental investigations at FBH include evaluations of RCRA facilities on the installation (described in Section 4.1.2); no RCRA facilities were identified adjacent to the installation.

In Lawrence Township, two CERCLIS sites are listed: FBH and American Industrial Corporation. The latter is not adjacent to FBH and does not offer a risk of contaminant migration onto the installation. Various businesses in Lawrence Township have received EPA identification numbers for handling hazardous wastes, but the majority of these businesses are located along Pendleton Pike and do not offer a risk of contaminant migration onto the installation.

2.0 Scope of Investigation

USTs at FBH were listed in the Enhanced PA (Roy F. Weston, 1992), based on various sources. Current information from the FBH National Resources Management Division (NRMD) identifies 11 USTs at FBH. Twenty-one USTs were listed on the federal Notification for Underground Storage Tanks form (January 1991); 10 of these USTs were removed in 1992. Locations where tanks leaked or may have leaked are currently *under investigation* (see Table 4.1-2). No registered USTs are located on properties adjacent to FBH. Numerous businesses in Lawrence Township have registered USTs, but the majority of these businesses are located along Pendleton Pike and do not offer a risk of contaminant migration onto the installation.

2.3 Interviews

Installation and agency personnel were interviewed to determine any changes to the installation condition since the Enhanced PA (Roy F. Weston, 1992) that would result in the identification of additional areas requiring environmental evaluation. Personnel interviewed and offices visited to obtain documents and review files during this investigation were as follows:

- U.S. Army Environmental Center
Andrew Maly, Project Manager for FBH (410-671-3461)
- FBH Natural Resources Management Division (NRMD)
Thomas Shafer, Chief, NRMD (317-549-5386)
Ronald Polk, Environmental Protection Specialist (317-549-5386)
Ronald Smith, Environmental Protection Specialist (317-549-5386)
Arbenz Berthoud, CAD Operator (317-549-5853)
- FBH Real Property Office
Al Pitts, Manager (317-549-5409)
- FBH U.S. Army Corps of Engineers Office (Louisville District)
- Indiana Department of Environmental Management (IDEM)
Solid and Hazardous Waste Management Section and
Office of Environmental Response (317-232-8603)
John Manley (317-233-6425)
Kevin Houppert
- Lawrence Township Assessor's Office (317-547-8625)
Jered Snyder, Kim Burns, and Marie Kimball
- State Land Offices: Zoning and Land Use Planning
Tom Bartlett, Manager, Land Use Planning

2.0 Scope of Investigation

2.4 Visual Inspections

Visual inspections of the installation and adjacent properties included an initial car tour with the USAEC Program Manager on August 9, 1993 and an aerial fly-over on August 11, 1993. Additional driving and walking tours were conducted during the site visit period (August 9 through 13, 1993) to verify or clarify reported or observed (such as during the fly-over) environmental conditions.

2.5 Title Documents

Arthur D. Little conducted a review of tract maps and transfer documents to identify the prior property owners of the BRAC portion of FBH at the time of its transfer to the Army. The purpose of this review was to collect additional information concerning the property's prior use and environmental condition at the time of its transfer to the Army. Based on this review, no additional information was collected. Previous ownership and the dates of transfer to the Army are indicated on Figure 5-2.

2.6 Newspaper Articles and Media Records

No newspaper articles or media records were utilized in this CERFA investigation.

3.0 Property Background Information

3.1 General Description of Real Property and Operations

3.1.1 History and Mission

FBH was created by an act of Congress on March 3, 1903. The initial land purchase for the present installation location, however, was not made until June 1904, when the Army purchased 1,994 acres. The Army also purchased an additional 423 acres in 1908 and 1909 south of the installation to allow military access to the "Big Four Railroad." Prior to its purchase for military purposes at FBH, the land was used primarily for farming.

From 1906 to 1908, FBH was used jointly by the regular Army and the National Guard as training grounds. Infantry regiments were stationed at FBH for garrison duty from the summer of 1908 to the winter of 1913. FBH was abandoned from the winter of 1913 until the spring of 1917, when the United States entered World War I (WWI).

From 1917 to 1919, an Officer Training Camp, a Medical Officer's Training Camp, and an Engineer Training Camp were held at FBH to support the effort of World War I. In 1917, the Eli Lilly Base Hospital 32, a volunteer hospital, was mobilized at FBH and in 1918 was converted to General Hospital No. 25; this hospital was dismantled following the end of WWI.

During the years between the two World Wars, FBH was generally used by the Army as a training center for military personnel as well as civilians. From 1922 to 1941, the 11th Infantry Regiment was stationed at FBH. A Citizen Military Training Camp was held at FBH from 1925 to 1941. The Civilian Conservation Corps Reforestation Act of 1933 established a Civilian Conservation Corps at FBH from 1933 to 1941.

From 1940 to 1945, during the United States's involvement in World War II (WWII), FBH became the site of an induction/reception center for military draftees, the Army Finance School, the Chaplain School, a school for bakers and cooks, the Finance Replacement Training Center, a prisoner of war camp, and an Army disciplinary barracks. An additional 50 acres of land was purchased in 1941 along the eastern side of the reservation, and a 1,000-bed hospital, Billings General Hospital, was built at FBH.

Following the end of hostilities in 1945 and on into early 1947, activities at FBH were slowly phased out. Billings General Hospital was closed in March 1946 and the Finance School was moved to St. Louis in July 1946. On July 1, 1947, FBH was officially declared "United States Army surplus," but in August 1947, it was returned to active status as a permanent military post. In October 1948, command of FBH was relinquished to the 10th Air Force for use as an Air Force Base. It was determined, however, that the facilities at FBH were inadequate to house an air force base, and in April 1950, command of FBH was returned to the Army.

3.0 Property Background Information

The 1950s at FBH were marked by reactivation and construction activities. In 1953 and 1954, the Benjamin Harrison Village Corporation built 300 apartment buildings on the southwest side of the post, which FBH purchased in April 1960 for use as military housing. Building 400, later to be named the Gates-Lord Hall for Major General Horatio Gates and Brigadier General Herbert M. Lord, was constructed from November 1954 to February 1957 to house the new Adjutant General and Finance Schools.

The Army Finance Center was constructed at the site of the former Army airfield from August 1951 to October 1953. The building is 966 feet long and 612 feet wide and cost approximately \$19 million to build. In February 1954, it was estimated that 6,000 civilian and military employees worked at the Center. The Army Finance Center is currently in operation at FBH.

The activities that followed the opening of the Army Finance Center at FBH can be characterized as administration and training. In 1966, FBH opened the Defense Information School. In 1971, FBH was designated the United States Army Administrative Schools Center, and in 1973, it was redesignated the United States Army Administrative Center (ADMINCEN) which was one of three mid-management centers for combat developments. In 1973, ADMINCEN was associated with schools such as the Chaplain School, the Woman's Army Corps School, the Defense Information School, the Defense Language Institute, the Judge Advocate General School, the Academy of Health Sciences, the Army Element of the Naval School of Music, and the Institute of Administration.

In 1980, FBH was reorganized and designated the United States Army Soldier Support Center. FBH provides support for the U.S. Army Finance and Accounting Center, the U.S. Army Administration Center, the Defense Information School, the U.S. Army Enlisted Records and Evaluation Center, and other tenant activities.

Currently, the Soldier Support Center at FBH includes the Adjutant General School, the Finance School, the Recruiting and Retention School, the Army Element of the Naval School of Music, the Chaplain Center and School, the Judge Advocate General's School and the Defense Information School. Five major tenant commands, including the Defense Finance and Accounting Service - Indianapolis Center, the Enlisted Records and Evaluation Center, Hawley Army Community Hospital, the Readiness Group Harrison, and the 123rd Army Reserve Command are also located at FBH. In April 1991, FBH was recommended for closure by the Secretary of Defense as part of Base Closure 91, with approval for closure in July 1991.

3.1.2 Real Property Description

The FBH property covers a total area of 2,501 acres. FBH consists mainly of administrative, training, housing, and support facilities, with over 400 buildings concentrated in the southeastern portion of the post. The three main administrative facilities at FBH are the U.S. Army Finance Center (Building 1), the U.S. Army

3.0 Property Background Information

Garrison headquarters (Building 600), and the U.S. Army Reserve Center (Buildings 126 and 127). Facility operations that support the administrative activities at the post consist of furniture and office equipment repair, printing, and photographic processing. Additional facility operations conducted at FBH to support the overall post activities include vehicle maintenance and repair, grounds maintenance, and building and road maintenance.

The Hawley Army Hospital (Building 300) provides medical care, including general surgery, for military personnel at FBH. Dental facilities (Building 300) and a veterinary clinic (Building 805) are also operated at FBH. Both the hospital and the dental clinic have laboratory facilities in Building 300. Former hospitals at FBH included the FBH Post Hospital (operated from 1908 until Hawley Army Hospital was completed), the Eli Lily Base Hospital/General Hospital 25 (operated from 1917 until the end of WWI), and Billings General Hospital (operated from 1941 through 1946). The FBH Post Hospital was located in Building 600, now the Post Headquarters Building. The Eli Lily Hospital occupied many of the WWI era buildings and was dismantled after WWI. Billings General Hospital occupied numerous smaller buildings in the area south of Hawley Army Hospital; both of these hospitals are/were within the Reserve Enclave CERFA excluded parcel (Parcel 23E. Information on former hospitals at FBH is from reports (Roy F. Weston, 1992; Levy et.al., 1986) and historic maps (dated August 27, 1946 and April 1926). Wastes from these former hospitals were likely disposed in historic dumps at FBH (pre-1946) or in the East Landfill (1946-1968); dump areas and adjacent areas potentially impacted by the dumps are within CERFA disqualified parcels.

The housing and community facilities at FBH include troop housing, family housing, a mobile home park, fire and police stations, chapels, a bank and credit union, child support center, library, community center, music center, a gas station, automobile maintenance shops, restaurants, and stores. Recreation facilities at FBH include a bowling center; gymnasium; 18-hole golf course; riding stable; skating rink; indoor and outdoor swimming pools; volleyball, basketball, handball, and tennis courts; baseball, softball, football, and soccer fields; and a running track. These facilities are located throughout the post. The housing facilities are located generally in the southwest portion of the post.

Troop training constitutes a major part of the activities at FBH. Training facilities include a confidence course, fire fighting training area, four firing ranges, as well as academic training facilities such as classrooms.

One inactive wastewater treatment plant (Building 810) exists at FBH, and two other former treatment plant locations are known. In the past, the Building 810 facility was equipped to treat wastewater (prior to disposal) from activities on post. FBH is currently tied into the Indianapolis metropolitan area storm water/sanitary sewer system. All wastewater is discharged to the publicly owned treatment works (POTW) in Belmont.

3.0 Property Background Information

Hazardous wastes generated at FBH are consolidated (from various satellite storage areas throughout the installation) at the DRMO Hazardous Waste Storage Building, located in the CERFA excluded Reserve Enclave in the southeastern corner of the installation. This facility has received a RCRA Part B permit for temporary storage of hazardous wastes prior to off-site recycling or disposal.

Two separate landfills, both permitted for municipal solid waste, have been used in the past for disposal of domestic waste, autoclaved medical waste, ash, and other non-toxic substances. The former landfill located along the eastern side of the post was closed in 1968; in 1974 it was excecised and deeded to the City of Lawrence (see also Section 4.3). The other former sanitary landfill, located in the southwestern portion of the post, was used from 1969 until October 1991. Additional landfill or historic dump areas were also located throughout FBH. These historic dumps are locations where hazardous materials may have been disposed of, including domestic wastes, medical wastes, and UXO (see Section 4.4.5).

Three separate portions of property that formerly were part of FBH were excecised to the City of Lawrence exclusively for public park or public recreation purposes in 1974. These tracts consist of approximately 102, 27, and 33 acres, including a former recreation area at the south end of the installation, a former landfill on the northeast side (now used as a park), and natural area to the north of the installation, respectively. The deed stipulates that the land rights and title will revert to and become property of the United States of America if needed for national defense or if there is a breach of the conditions and covenants contained within the lease.

3.2 Changes to Real Property Environmental Conditions Since Enhanced PA Investigation (1992)

There has been no expansion of the FBH mission since its identification for closure under BRAC 91. The installation has been preparing for site closure by removing hazardous materials that are no longer needed for ongoing FBH activities and properly disposing of hazardous wastes stored on site. The facility has also moved rapidly to identify and remediate contaminated sites, as described in the current Technical Sampling Plan (HLA, 1993) for RCRA and non-RCRA sites.

Since the February 1992 Enhanced PA, there have been no significant incidents (fires, spills, or explosions) at FBH. The following changes in environmental conditions have occurred:

- The Enhanced PA lists 37 USTs at FBH, of which 23 had been removed or were scheduled for removal in 1992, and one was permanently out-of-service. Twenty-one USTs were listed on the federal Notification for Underground Storage Tanks form (January 1991); 10 of these USTs were removed in 1992. The 11 USTs currently in service at FBH are registered and leak-tested regularly.

3.0 Property Background Information

- The West Landfill ceased operations in 1991 and has undergone closure. Additional cover application, regrading, and drainage channel stabilization has been required due to severe erosion, including gullying, that has occurred, particularly along the southern boundary. This work is currently being performed by the Army Corps of Engineers, Louisville District.
- Due to reported insufficient compaction during operation and closure of the East Landfill, differential settling has occurred and regrading activities have been required. The East Landfill is no longer FBH property, but belongs to the City of Lawrence; however, the landfill may have potential impacts on BRAC property. During the site visit it appeared that some regrading had recently been performed in the southwest corner of this former landfill site.
- Radon retesting has been completed since the Enhanced PA investigation. Results of the retesting indicate one building of potential concern, but the overall conclusion is that radon is not an environmental issue of concern at FBH (see additional discussion in Section 4.4.4).

4.0 Investigation Results

4.1 Previously Identified Areas Requiring Environmental Evaluation

4.1.1 Areas Identified in the Enhanced Preliminary Assessment

Areas requiring environmental evaluation (AREEs) at FBH were identified in the 1992 Enhanced PA, the 1990 USATHAMA Property Report, and the 1987 USAEHA report. Thirty-six AREEs, and their potential to contribute to contamination at FBH, were designated based upon evaluation of these and other existing documentation and on the site visit conducted during the investigation for the Enhanced PA. Past site conditions and management practices were evaluated on the basis of readily available records and the recollections of people interviewed. Possible sources of contamination were identified, and recommendations were made for a follow-up investigation. Table 4.1-1 lists all AREEs by number; the locations are shown in Figure 4-1. Facility-wide AREEs (such as asbestos and lead) are not shown due to their extensive nature.

4.1.2 Areas Currently Under Investigation

Areas currently under environmental investigation at FBH are the landfills, RCRA facility investigation (RFI) sites, and environmental investigation (EI) sites. Investigation of the landfills includes routine ground water monitoring. The RFI and EI sites investigations are described in the Technical Sampling Plan (HLA, 1993); selection of these sites was based in part on recommendations in the Enhanced PA, therefore investigations of AREEs are included in this current program. RFI and EI sites are listed in Table 4.1-2.

4.2 New Areas Requiring Environmental Investigation Identified by CERFA Investigation

Two parcels identified in this CERFA assessment have not been included in previous environmental reports, such as the Enhanced PA and the Technical Sampling Plan for current environmental investigations. One of these sites is a former grenade course and the other is the former base hospital.

The historic grenade course (Parcel 15Q) is identified on an August 27, 1946 map of FBH. It was not determined during this CERFA assessment if any other documentation exists regarding this grenade course, or if UXO were disposed or removed from this area. Due to the uncertain presence of UXO at this site, it has been designated as a CERFA parcel with qualifier, with a qualifier for potential UXO.

The FBH Post Hospital (established in 1908) is identified on the August 27, 1946 map of FBH, and is referred to in discussions on the history of FBH (Roy F. Weston, 1992; Levy et al., 1986). This hospital was located in Building 600 (currently Post Headquarters) until completion of Hawley Army Hospital/Building 300 in 1973. Based on the potential storage and release of hazardous substances such as medical wastes and hazardous materials typically found in medical facilities (described further

4.0 Investigation Results

in the Enhanced PA Section 3.9.1, Roy F. Weston, 1992), this building is included in a CERFA disqualified parcel (Parcel 39D).

4.3 Adjacent or Surrounding Properties

Two adjacent properties are potential sources of contamination to the installation. One of these is the former landfill on the east side of FBH (East Landfill), north of Hawley Army Hospital; the other is the Reserve Enclave, shown in Figure 5-1 as CERFA excluded Parcel 23E.

The East Landfill was in use from the early 1940s until 1968, then was deeded to the City of Lawrence in 1974, and is currently a city park with baseball fields and a playground (Roy F. Weston, 1992). This landfill received office and household wastes, demolition and construction debris, tree trimmings, and ash from incinerator operations. Used oils, solvents, pesticides, and paints could have been incorporated in the waste disposed in this landfill. Ground water impacts have been observed; however, the potential extent and significance of a contaminated ground water plume has not been fully evaluated, and the ground water in this area is being sampled and analyzed as part of a regular monitoring program (i.e., not part of the Technical Sampling Plan). Also, leachate seeps have been observed south of the former East Landfill (USAEHA, 1990). As discussed in Section 2.1, the delineation of parcels disqualified due to ground water contamination has been based on available data in ground water investigation reports (USAEHA, 1990, 1991), along with watershed boundaries. These parcel boundary delineations have been conservatively located to include areas where contamination has been observed, and to also include downgradient areas that may be potentially impacted by the ground water contamination. Therefore, CERFA disqualified Parcel 20D includes areas within the installation that are potentially impacted by migration of contaminants from this adjacent property.

The Reserve Enclave is located in the southeastern portion of FBH, bounded by Walter Reed Road on the west and the installation property lines to the north, east, and south. The Enclave area includes Hawley Army Hospital, the Reserve Center, the DRMO RCRA Part B-permitted Hazardous Waste Storage Area, a gas station (for government-owned vehicles), and the installation motor pool. The area west of Hawley Army Hospital, Parcel 20D, is disqualified due to potential impacts from the East Landfill. The DRMO Hazardous Waste Storage Building is on the east side of the Reserve Enclave and migration of contaminants from this area onto the BRAC portion of the installation is not considered likely due to the distance from the DRMO to BRAC property and based on inspection reports on this facility. Hazardous wastes were stored inside the building and inspection reports indicate the waste storage area was clean and containers were properly stored and labelled (USAEHA, 1988). The motor pool and gas station are adjacent to the BRAC portion of the installation (Parcels 24P and 26P) but no evidence of significant contamination was

4.0 Investigation Results

noted in the Enhanced PA, and the USTs at the gas station are leak-tested regularly (Roy F. Weston, 1992).

The remaining adjacent properties include residential areas and farmland, with the exception of an industrial area to the southeast that includes asphalt and paving companies, a steel processing plant, and several construction companies. Records reviewed and interviews conducted at the Lawrence Township Assessor's Office indicate that most of these properties have been developed in the past 10 years and were previously used for agriculture. One relevant incident report identified a fuel oil spill from an asphalt and paving company south of FBH. This spill occurred in April 1990, the quantity was unknown, and the material was reportedly discharged through ditches and pipes across the installation. Cleanup activities are not known. This spill was considered minor as noted on the IDEM investigation report; therefore, this incident has not caused any parcels to be categorized as CERFA disqualified. Overall, based upon site visit observations and a review of regulatory information for Lawrence Township, the potential for migration of contamination to the installation from these properties does not appear to warrant CERFA disqualification of adjacent installation property.

4.4 Related Environmental, Hazard, and Safety Issues

Military installations frequently contain issues that the USAEC believes fall outside of the provisions of CERFA. For example, while a release of lead-based paint onto the ground may be a CERCLA concern, the application of lead-based paint to a building surface is generally not. However, lead-based paint applied to building may represent a safety hazard to young children. Similarly, other substances or materials commonly applied to or found in buildings (for example, radon, and asbestos) may not be explicitly regulated under CERCLA, but may require a notice to potential transferees and lessees that they exist.

USAEC has sought to balance the statutory requirements of CERFA with the law's intent to identify uncontaminated property to the public that can be expeditiously reused. Notice has been provided for those parcels that appear to be uncontaminated under the definition provided in CERFA, but which may contain environmental, hazard, or safety issues. Buildings that contain asbestos-containing building materials (ACBM), lead-based paint, or naturally occurring radon fall into this category and are identified as "CERFA parcels with qualifiers" in this CERFA report. Parcels that contain stored (not in use) equipment that contain some level of PCB oil, stored low level radionuclide-containing equipment such as dials and weapon site posts, and UXO are also designated "CERFA parcels with qualifiers."

However, for cases where asbestos or PCBs have been disposed of in the environment, the parcel has been identified as "CERFA disqualified." In this example, the designation indicates that a CERCLA hazard may exist at this location.

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4.4.1 Asbestos-Containing Building Materials

Several asbestos surveys have been conducted in various areas at FBH. These surveys focused on different buildings and areas and the completeness with respect to the entire installation is not clear, as referenced in the Enhanced PA (Roy F. Weston, 1992). In general, the results of these surveys indicate that there are ACBM in several buildings at FBH; recommendations, depending on established hazard index values, included immediate removal, partial removal, encapsulation, enclosure, or no action.

During this CERFA assessment, a summary sheet (prepared by the environmental staff of the NRMD at FBH) listing buildings that contain ACBM was reviewed. The asbestos survey reports were reviewed to determine which buildings had been evaluated, and it was determined that ACBM data were not available for all buildings on the installation. Therefore, where no data were available, the year of construction was used to determine the potential for a building to contain ACBM (buildings constructed prior to 1985 were designated as having possible ACBM qualifiers).

4.4.2 Lead-Based Paint

One lead-based paint survey was conducted at FBH and concluded that lead-based paint is present in buildings constructed prior to 1978. Actual lead-based paint data were collected for some but not all of the buildings. However, due to the overall conclusion of the survey, the lead-based paint qualifier used for CERFA parcel designation has not been listed as possible or probable, and is applied to all pre-1978 buildings.

4.4.3 PCB-Containing Transformers

Transformers that contain PCBs have been used at FBH. According to USAEC guidance for CERFA assessments, parcels that have leaking PCB-containing transformers or areas used for storage/handling of PCB-containing transformers should be designated as CERFA disqualified. Normal use of PCBs in transformers that exhibited no evidence of leaking, however, is not sufficient to categorize a parcel as either CERFA disqualified or CERFA parcel with qualifier.

The locations of PCB-containing transformers at FBH were listed in the Enhanced PA. In 1989, FBH conducted a survey of all transformers on post that were in service, and developed a list of transformers with PCB concentrations greater than 50 parts per million (ppm). The FBH Fact Sheet (Maly, 1993) states that all PCB transformers were removed by January 1990, and there has been no evidence to indicate that any of the PCB-containing transformers were leaking while in service. Therefore, no FBH parcels have been designated as CERFA disqualified or CERFA parcel with qualifier due to the presence of leaking, in-service, PCB-containing transformers. Two parcels (Parcels 62D and 70D) designated as CERFA disqualified have areas used for storage/handling of PCB-containing transformers and have been identified as areas where spills of PCB-containing fluids have occurred (see Section 5.1.1).

4.0 Investigation Results

4.4.4 Naturally Occurring Radon

Phase 1 radon testing results indicated there may be several buildings on post in which radon levels exceed the EPA action level. Retesting of these buildings was being conducted at the time of the Enhanced PA, and results indicated that radon is a minor environmental factor at FBH (Smith, 1993). One building (Building 615 located in Parcel 45Q) had radon levels measured at 0.4 to 12.8 picocuries per liter (pCi/L); these values are below the Army mitigation standard (20 pCi/L) but above the EPA action level (4 pCi/L). Therefore, Parcel 45Q includes the qualifier for potential radon concern.

4.4.5 UXO

The Enhanced PA (Roy F. Weston, 1992) states that UXO is not considered to be of concern at FBH. The Enhanced PA further states that:

Site reports and personnel indicated that there are and have been no areas of FBH authorized for disposal of explosive ordnance or material and there are no Explosive Ordnance Disposal (EOD) exercises conducted at FBH. EOD activities have been conducted at Atterbury Reserve Force Training Area, which is not located on the FBH property. There are no historical records of EOD activities or demolition sites on FBH.

However, the Technical Sampling Plan (HLA, 1993), currently being implemented at FBH (see also Section 4.1.2), includes records review and environmental investigation and sampling at 11 historic (WWI and WWII) military dumps and trenches where hazardous materials and UXO may have been buried. Based on the records search, the sites will be evaluated for their potential for containing hazardous constituents/wastes or UXO, and will either be selected for further assessment or identified as not requiring further action.

In this CERFA assessment, parcels that contain eight of these eleven contain historic trenches and dumps (Parcels 3, 18, 20, 28, 35, and 58) are designated as CERFA disqualified due to the potential for disposal of hazardous materials; these parcel designations also include a qualifier for potential UXO. Three other historic dumps (Parcels 4, 6, and 9) have been designated as CERFA parcels based on site screenings performed by HLA in 1993 (Maly, 1994). Also, one parcel has been designated as a CERFA parcel with qualifier for potential UXO, since an historic map identifies the area as a former grenade course (see also Section 4.2).

4.4.6 Radiological Sources

Storage of radiological materials or wastes was not considered as an AREE for FBH (Roy F. Weston, 1992). The last radioactive materials (radio set) with Nuclear Regulatory Commission authorization were returned to Fort Monmouth, New Jersey in March 1982. Defective compasses are turned in to Building 425 for subsequent disposal through U.S. Army Troop Support and Aviation Material Readiness Command. The only areas where radiological materials were used or stored are the x-

4.0 Investigation Results

ray facilities in the medical and dental offices at FBH. X-ray facilities currently or formerly located at FBH were in the former hospitals, Hawley Army Hospital and Dental Clinic, and the Building 1 Dispensary. The current hospital and dental clinic are located within excluded Parcel 23E, therefore a qualifier is not required. The former hospitals have been removed or converted to other non-medical uses, therefore qualifiers are not required. The Finance Center Dispensary is still in use therefore a radiological qualifier (RD) has been attached to the Parcel 60D description.

4.5 Sites With Historical or Ongoing Remediation Efforts

Numerous USTs and leaking USTs have been removed at FBH. Also, numerous spills of home heating oil, diesel fuel, and gasoline have occurred. For most cases, spills were contained and contaminated soils were removed. These tank removal and spill remediation sites are identified in Table 5.1-1, and are located in CERFA disqualified parcels (see Section 5.1.1).

In 1984 the top three feet of soil in two of the larger coal storage areas was removed and replaced. Studies have been performed to evaluate the potential environmental impacts from coal storage areas at FBH and concluded that these areas did not appear to have significantly affected the surrounding areas (USAEHA, 1990). For the purposes of this CERFA assessment it was determined that coal storage would not be a sufficient basis for designating a parcel as disqualified or with qualifier.

4.6 CERFA Excluded Parcels

Three parcels in the southern portion of the installation have been excluded from this CERFA investigation. These parcels are listed below and therefore are not discussed in Section 5.0.

- **PARCEL 23E**

Parcel 23E includes 140 acres and has been designated as a Reserve Component Enclave and is located in the southeastern portion of FBH, bounded by Walter Reed Road on the west and the installation property lines to the north, east, and south. The Enclave area includes Hawley Army Hospital, the Reserve Center, the DRMO RCRA Part B-permitted Hazardous Waste Storage Area, a gas station (for government-owned vehicles), and the installation motor pool. Documentation regarding this excluded parcel is included in Appendix A. No further assessment of this parcel was conducted under this CERFA investigation.

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- **PARCEL 78E**
Parcel 78E is a 1.9-acre private cemetery that was not part of the original or any subsequent land acquisitions for FBH, and is not included in the installation's total area measured at 2,501 acres. It is located in approximately the center of the developed portion of the installation, south of the Post Headquarters Building. No further assessment of this parcel was conducted under this CERFA investigation.
- **PARCEL 79E**
Parcel 79E, which includes the Harrison Village Apartments, contains 59 acres in the southwest corner of the installation. Documentation regarding early transfer of this parcel is included in Appendix A. No further assessment of this parcel was conducted under this CERFA investigation.

1. DPCA Field Printing Shop
2. TASS Devices Shop
3. Graphics Shop
4. Photographic Processing Area
5. Weapons Cleaning Area
6. Carpentry Shop
7. Maintenance Shop
8. Former Maintenance Area
9. Wash Rack, Grease Rack, or Oil/Water Separator
10. Maintenance Area Drum Storage / PCL Waste Storage
11. Fueling Station
12. DIS Engineering Building
13. Water Treatment Operations
14. Firing Range/Training Area (not all shown on Flgs. 5-1, ES-1)
15. Former Drum/Waste Storage Area
16. DRMO Hazardous Waste Storage Area
17. PCB-Containing Waste Storage Area
18. Pesticide Mixing and Storage Area
19. Buried Drums (Lithium Bromide Solution)

20. Former Sewage Treatment Plant (not all shown)
21. Underground Storage Tank (not shown)
22. Aboveground Storage Tank (not shown)
23. Former Sanitary Landfill (East)
24. Former Sanitary Landfill (West)
25. Former Incinerator
26. Hospital and/or Clinic
27. Fire Training Area
28. Spill Area (not shown)
29. Ammunition Storage Area
30. Former Coal Storage Yard
31. Asbestos (not shown)
32. Pesticide Usage (not shown)
33. Former Coal Storage Area (not shown)
34. Radon (not shown)
35. Boiler Blowdown (not shown)
36. Transformer (not shown)

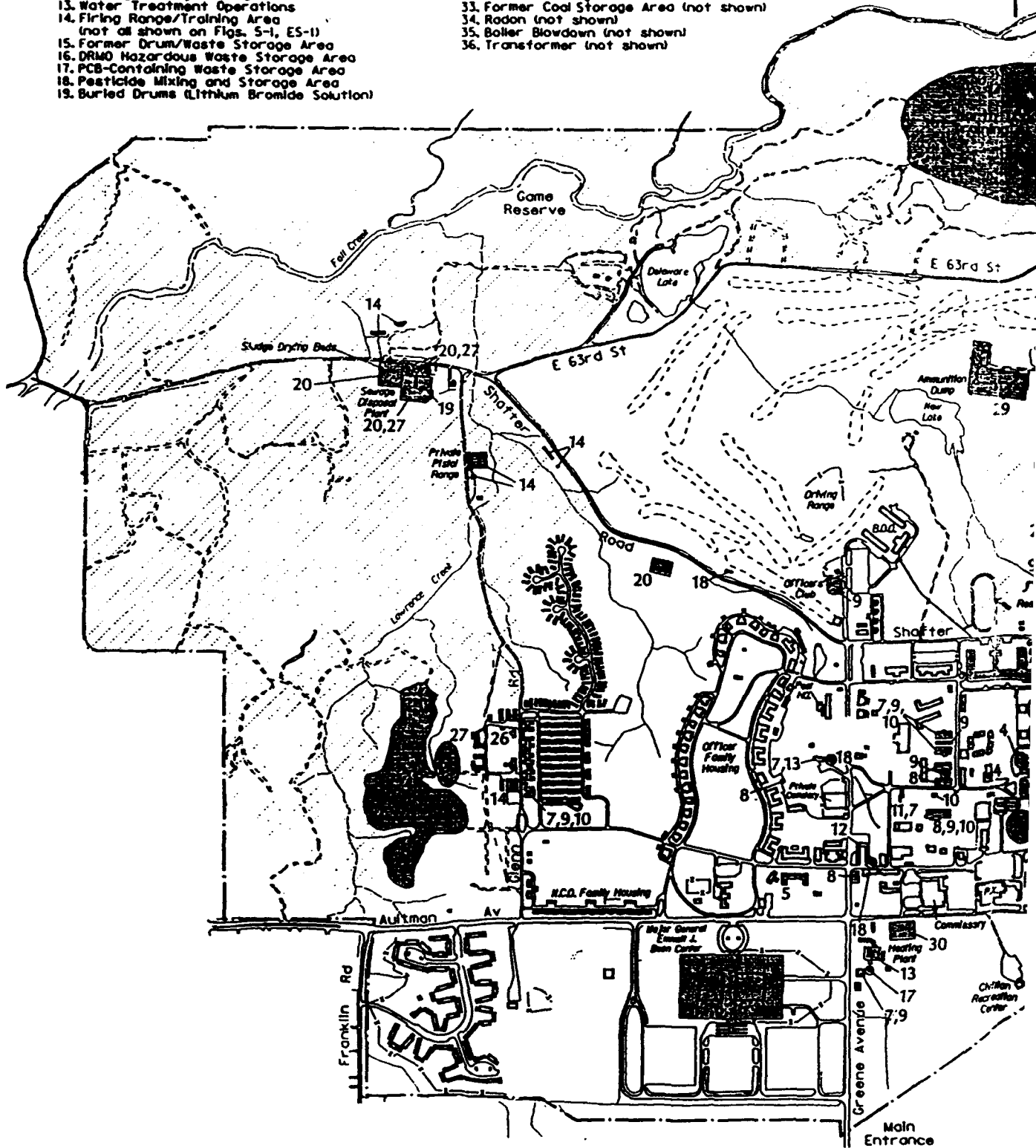
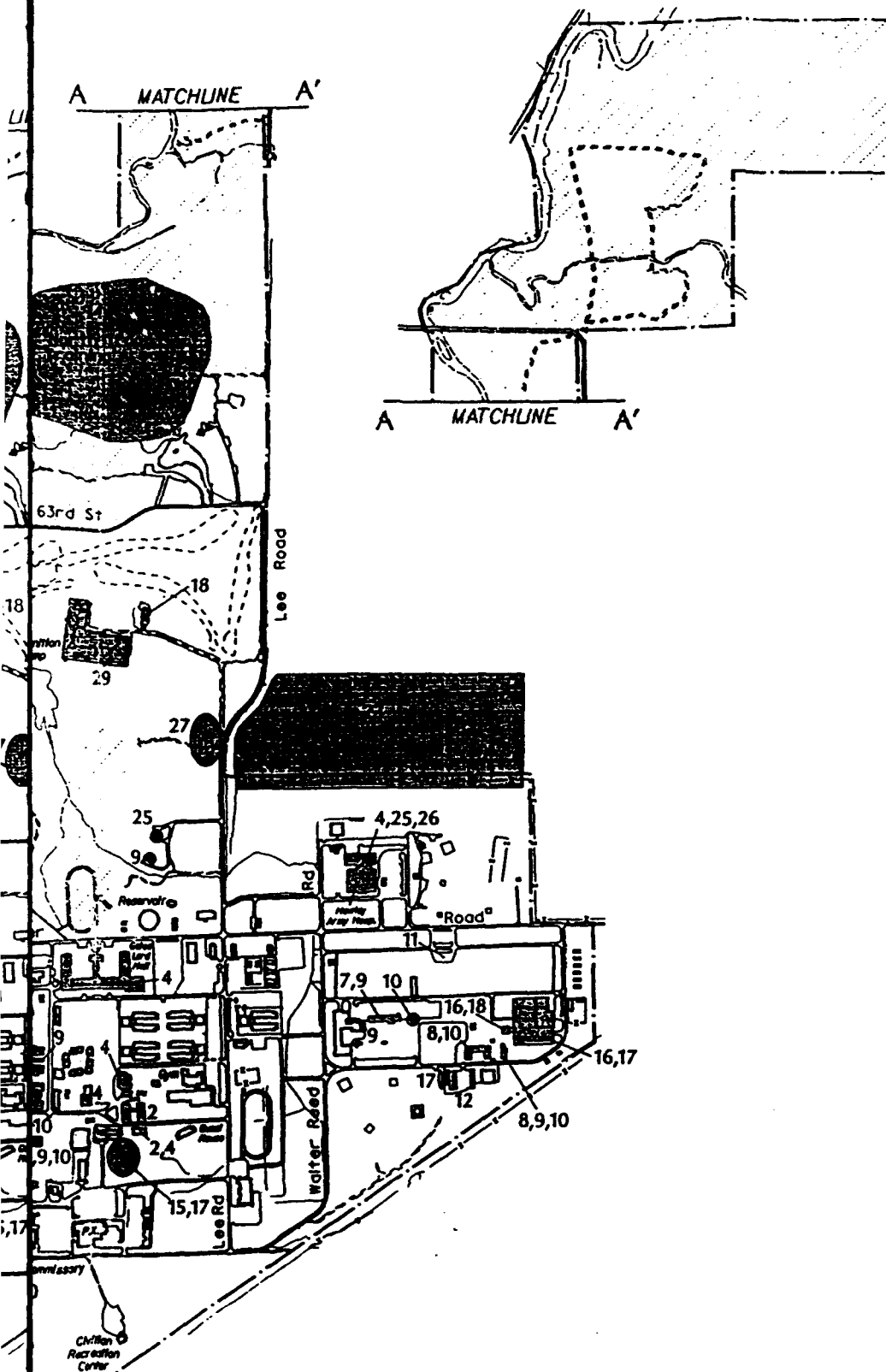
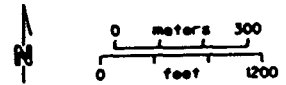


Figure 4.1
Areas Requiring
Environmental Evaluation

Compiled in 1991 from various sources
provided by the U.S. Army Toxic and
Hazardous Materials Agency



Explanation

- 24 AREE Number
- AREE
- Installation Boundary
- Hydrography
- Road/Pavement Edge
- - - Gravel Edge
- · - · Railroad
- · - · Powerline
- · - · Pipeline
- · - · Fence
- ▭ Structure

Source : Roy F. Weston, Inc. (ENPA, 1992)

4.0 Investigation Results

Table 4.1-1: List of Areas Requiring Environmental Evaluation

Building Number	Description	Building Number(s) Location
Facility Operations		
1	DPCA Field Printing Shop	Bldg. 1
2	TASO Devices Shop	Bldgs. 479 and 481
3	Graphics Shop	Bldg. 1
4	Photographic Processing Areas	Bldgs. 1, 300, 434, 470, 479
5	Weapons Cleaning Area	Bldg. 613
6	Carpentry Shop	Bldg. 1
Maintenance and Fueling Operations		
7	Maintenance Shops	
	- Electrical Shop	Bldg. 4
	- AAFES Gas Station	Bldg. 33
	- U.S. Army Reserve Center	Bldg. 127
	- Roads and Grounds	Bldg. 422
	- Office Equipment Repair	Bldg. 424
	- Plumbing Shop	Bldg. 604
	- Auto Craft Shop	Bldg. 705
8	Former Maintenance Shops	
	- Former Vehicle Maintenance	Bldgs. 13, 36, 109, 116, 424, 425, 426, 619
	- Former Paint Shop	Bldg. 38
9	Wash Racks, Grease Racks, and Oil/Water Separators	
	- Electric Shop	Bldg. 4
	- Former Wash Rack	Bldg. 36
	- Former 36th Engineer	Bldg. 116
	- U.S. Army Reserve Center (4)	Bldg. 127
	- Roads and Grounds	Bldg. 422
	- Car Wash	Bldg. 423
	- Indoor Wash Rack	Bldg. 424
	- Former Wash Rack to Storm Sewer	Between Bldgs. 425 and 426
	- Wash Rack (outdoor) Officers Club	Bldg. 500
	- Outdoor Wash Rack	Bldg. 515
	- Auto Craft Shop	Bldg. 705

4.0 Investigation Results

Table 4.1-1: List of Areas Requiring Environmental Evaluation (continued)

Area Number	Description	Building Number(s)/Location
10	POL Drum Accumulation Areas/POL Waste Staging - Former DIS trans. motor pool - Former 36th Engineer - U.S. Army Reserve Center - Roads and Grounds - Office Equipment Maintenance - Auto Craft Shop (former)	Bldgs. 34, 36 Bldgs. 109, 116 Outside of Bldg. 127 Bldg. 422 Bldg. 424 Bldg. 705
11	Fueling Stations - AAFES Station - POL Service Station	Bldg. 33 Bldg. 239
12	DIS Engineering/Maintenance Building - Current - Former	Bldg. 26 Bldg. 108
Water Treatment Operations		
13	Water Treatment Laboratory/Plant - Laboratory - Heating Plant	Bldg. 604 Bldg. 2
Training Areas/Ranges		
14	Firing Ranges - Indoor Pistol Range - Foreman Rifle Range - State Police Pistol Range - Skeet/Rifle Range - Troop Training	Bldg. 802 Bldg. 811, 812 Bldg. 815 Bldg. 819, 820, 821, 822 Basewide
Hazardous Materials Storage and Waste Handling Areas		
15	Former Drum/Waste Storage Area	South of Bldgs. 45 and 46
16	DRMO Hazardous Waste Storage Area	Bldg. 124, 125
17	PCB-Containing Waste Storage Areas - Storage/staging of transformers - Former storage of transformers - Former staging of transformers - DRMO storage of transformers and oil	Adjacent to Bldg. 4 Adjacent to Bldg. 46 Site of Bldg. 110 Bldgs. 124 and 125

4.0 Investigation Results

Table 4.1-1: List of Areas Requiring Environmental Evaluation (continued)

AREA Number	Description	Building Number(s)/ Location
18	Pesticide Mixing and Storage Areas <ul style="list-style-type: none"> - DIS Storage (former) - DRMO - Former Storage - DIS Storage and Mixing - Golf Course (former storage) 	Bldg. 27 Bldg. 125 Bldg. 514 Bldg. 605 Bldg. 674
19	Buried Lithium Bromide Drums	Adjacent to Bldg. 810
Sanitary Waste Water Treatment Plants		
20	Former Sewage Treatment Plants <ul style="list-style-type: none"> - Current Fire Training Area - Historic Maps/South of Shafter Road - Historic files/East Area of Installation 	Bldg. 810 East of Bldg. 674 To Be Located
Storage Tanks		
21	Underground Storage Tanks	See Listing in Subsection 3.7.1 of the 1992 Enhanced PA
22	Aboveground Storage Tanks	See Listing in Subsection 3.7.2 of the 1992 Enhanced PA
Sanitary Landfills and Former Incinerators		
23	Former Sanitary Landfill (East)	NW of Bldg. 304
24	Former Sanitary Landfill (West)	West of Bldgs. 800-809
25	Former Incinerators <ul style="list-style-type: none"> - Incinerator at Hospital - Sanitary Waste Incinerator 	Bldg. 300 Bldg. 518
Medical Facilities		
26	Hospital and Clinics <ul style="list-style-type: none"> - Occupational Health Clinic - Hawley Army Hospital - Dental Clinic - Veterinary Clinic 	Bldg. 1 Bldg. 300 Bldg. 300 Bldg. 805

4.0 Investigation Results

Table 4.1-1: List of Areas Requiring Environmental Evaluation (continued)

AREE Number	Description	Building Number(s)/ Location
Burn Pit Areas		
27	Fire Training Areas - Fire Training Pit - Former Fire Training Areas	Adjacent to Bldg. 810 North of Bldg. 518, East of the West Landfill
Spill Areas and Other Releases		
28	Spill Areas - PCB Spill Areas - Other Spills	Subsection 3.11, 1992 Enhanced PA Subsection 3.11, 1992 Enhanced PA
Ammunition Storage		
29	Ammunition Storage Areas	Bldgs. 519, 520, 521, and 522
Coal Storage		
30	Former Coal Storage Yard	NE of Bldg. 2
Facility-wide AREEs		
31	Asbestos	Basewide
32	Pesticide Usage	Basewide
33	Former Coal Storage Areas	Basewide
34	Radon	Basewide
35	Boiler Blowdown	Basewide
36	Transformers	Basewide

Note: From Table 3-1 of the Enhanced PA (Roy F. Weston, 1992).

4.0 Investigation Results

Table 4.1-2: Fort Benjamin Harrison Site Classification from the Technical Sampling Plan

<p>RCRA Facility Investigation Sites</p> <p>123rd ARCOM, Maintenance Shop, Building 127 Former Drum Storage Area, Building 45 Former Sewage Treatment Plant, Building 810 Former Sanitary Waste Incinerator, Building 518 DIS Maintenance Storage Shed, Building 27 Pesticide Mixing and Storage Area, Building 514 DIS Entomology, Building 605 Golf Course Mixing and Storage Area, Building 674 Foreman Firing Range, Buildings 811 and 812 State Police Pistol Range, Building 815 Skeet/Rifle Range, Buildings 819 through 822 Historic Military Sites, basewide Former Sewage Treatment Plant, west of Building 674 Former Sewage Treatment Plant, north of Building 519 Wash Racks/Grease Racks/Oil-Water Separators, basewide Patriotic Solid Waste management Unit (SWMU), west of Building 1</p> <p>Environmental Investigation Sites</p> <p>Auto Craft Shop, Building 705 Roads and Grounds Vehicle Maintenance Shop, Building 422 Former PX Gas Station, Building 619 DIS Engineering/Maintenance, Building 26 Electrical Shop, Building 4 Former Coal Storage Yard, Building 2</p> <p>RCRA Sites Being Handled Under Separate Actions</p> <p>USTs, basewide Former Sanitary Landfills</p>

Source: HLA, 1993.

5.0 Site Parcelization

After concluding the review of investigation documents, regulatory records, personnel interviews, and visual inspections, Arthur D. Little identified parcels on the installation as CERFA parcels, CERFA parcels with qualifiers, CERFA disqualified parcels, or CERFA excluded parcels in accordance with the definitions in Section 1.2. The parcels are delineated on a map of the BRAC portion of the installation using a 1-acre square grid for boundary definition.

The Army chose a 1-acre grid system to aid in the presentation of data gathered during CERFA investigations and to facilitate use of the document by reuse groups and others. The 1-acre grid provided a consistent method to report and locate environmental or other concerns. In the many cases where the concerns are much smaller than 1 acre, the grid system simplifies the depiction of the concern. Accordingly, the areal extent of many small areas of concern, such as UST sites, are liberally depicted in the CERFA report.

Additionally, the 1-acre grid size was chosen as a generally redevelopable parcel size for either industrial or residential uses. However, the grid does not drive reuse nor restrict it. Reuse decisions should be made irrespective of the grid.

The entire 1-acre grid square is colored or shaded to indicate the applicable parcel category based on the history of storage or release for any portion of that square. Parcels are labelled according to a system outlined in Section 1.2 of this report to indicate the applicable parcel category and the contaminating circumstances. Parcel labels are connected to the respective parcel boundaries by a line or are located within the parcel boundaries.

Where CERFA disqualified parcels and CERFA parcels with qualifiers have coincided, the overlapped area has been designated CERFA disqualified. Labels for any such overlapped parcels also indicate the presence of the qualifying hazards. CERFA excluded parcels have been excluded from this investigation of contaminant locations and therefore have no overlapping CERFA disqualified parcels or CERFA parcels with qualifiers. Structures within CERFA disqualified parcels that contain qualifying safety hazards are designated with the applicable qualifying label, where map scale permits this level of detail.

5.1 Parcel Designation Map

Arthur D. Little's investigation and subsequent parcelization of FBH determined that approximately 1,825 acres of the facility fall within the CERFA parcel category, approximately 78 acres of the facility are categorized as CERFA parcels with qualifiers, and approximately 399 acres constitute the CERFA disqualified portion of the installation. The remaining 201 acres are designated CERFA excluded because of retention by the Army or an existing mandate for transfer. One of the excluded parcels comprises approximately two acres; this parcel is not part of the installation's BRAC property totalling 2,501 acres. The CERFA parcels are located predominantly in the northern portion of the installation.

5.0 Site Parcelization

In determining the applicable parcel categories for the installation property, Arthur D. Little observed the following guidance provided by the USAEC for specific circumstances:

- Buildings constructed prior to 1978 are assumed to contain lead-based paint. A similar assumption is made for asbestos in buildings constructed prior to 1985.
- Storage of petroleum products, petroleum derivatives, and CERCLA-regulated hazardous substances will prevent an area from becoming a CERFA parcel as long as that storage is for one year or greater. The quantity of substances stored is not relevant to determining the applicable parcel category. However, if the operation requiring such substances is in the immediate area, and the storage is in limited quantities for immediate use, the area is not precluded from being a CERFA parcel.
- Non-leaking equipment containing less than 50 ppm PCBs does not preclude an area from becoming a CERFA parcel. Non-leaking, out-of-service equipment with greater than 50 ppm PCBs will place an area in the CERFA parcel with qualifier category. An area is designated CERFA disqualified if there is a known release containing greater than 50 ppm PCBs.
- Areas where there are transport systems or process equipment that handle hazardous material or petroleum products and upon which there have been no release, storage, or disposal are categorized as CERFA parcels.
- Hazardous substances in sewer and drainage systems do not represent a release or storage, any more than an oil/water separator that is pumped out routinely of oil represents storage. Such systems are noted in this CERFA report but do not cause parcel disqualification on this basis unless in areas where information/sampling has indicated contamination at some specific point.
- Ordnance disposal locations are designated CERFA disqualified. This does not include ordnance impact areas, which are designated CERFA parcels with qualifiers.
- Routine pesticide and herbicide application in accordance with manufacturer's directions and chlorofluorocarbons and halon in operational systems do not preclude an area from becoming a CERFA parcel.
- Coal storage piles and railroad tracks do not by themselves preclude an area from becoming a CERFA parcel.

Table 5.1-1 and Figure 5-1 identify the breakdown of the FBH property according to the criteria for parcel identification under CERFA.

5.0 Site Parcelization

5.1.1 CERFA Disqualified Parcels

Any parcel in which release, storage, or disposal of petroleum products or CERCLA hazardous substances has occurred currently or in the past is defined as a CERFA disqualified parcel. Areas of petroleum release included leaking UST sites, and petroleum or petroleum derivative spill sites; underground or aboveground storage tanks, and petroleum waste would disqualify a parcel due to petroleum storage. A spill of any known hazardous material or unknown material constitutes a hazardous release. Hazardous material storage was defined as storage of any amount of CERCLA hazardous material for a period of one year or more. Since the available storage records did not generally indicate the storage period, any area that was known to have been used for storage of hazardous materials was assumed to have the potential for long-term storage.

The parcels categorized as CERFA disqualified are indicated with light shading in the map provided as Figure 5-1 and a "D" following the parcel numbers; the supporting information for disqualifying the parcels is included in Table 5.1-1. Some parcels were disqualified from consideration as CERFA parcels for similar reasons, and are discussed together in this section.

Disqualified parcels were also evaluated for the presence of non-CERCLA concerns and, where appropriate, the parcel label in Figure 5-1 includes the qualifier code; supporting information is provided in Table 5.1-1. Qualifiers are not addressed in this section.

The following parcels were categorized as CERFA disqualified parcels:

PARCEL 3D-PR(P)/HR(P)/X(P)

PARCEL 18D-PR(P)/HR(P)/X(P)

PARCEL 35D-PR(P)/HR(P)/X(P)

PARCEL 58D-PR(P)/HR(P)/X(P)

Eleven historic (WW I and WW II) military dumps and trenches have been identified at FBH as sites where hazardous materials and UXO may have been buried. An initial site screening has determined that three of the 11 sites (CERFA Parcels 4, 6, and 9) do not contain hazardous constituents/wastes or UXO (HLA, 1993). Based on records searches, the remaining sites will be evaluated for their potential for containing hazardous constituents/wastes or UXO, and will either be selected for further assessment or identified as not requiring further action.

PARCEL 5D-PS

This parcel is located in the North Troop Training area and has been disqualified due to a heating fuel storage tank temporarily located in this area in support of training activities.

5.0 Site Parcelization

PARCEL 7D-HR/L

PARCEL 11D-HR/L

PARCEL 12D-HR/L

These parcels are firing ranges in which ammunition recovery has not occurred.

PARCEL 8D-HR/PR/L

This parcel contains an inactive wastewater treatment plant and current fire training area for the installation. Hazardous materials and petroleum products have likely been discharged in this area during wastewater treatment operations; also, drums containing potentially hazardous materials have been buried here.

PARCEL 16D-HS(P)/HR(P)

This parcel contains the ammunition storage buildings for FBH. The Enhanced PA states that the ammunition may have been stored in wooden boxes treated with pentachlorophenol (PCP) and that the PCP may have leached out of the boxes, constituting a release of a hazardous substance.

PARCEL 17D-HS/HR(P)

PARCEL 32-D/PS/PR/HS/HR/L

PARCEL 44D-PS/HS/HR/A/L

These parcels contain buildings where pesticides have been mixed and stored, and where releases have occurred or potentially occurred. Parcels 32D and 44D also have (contained) fuel storage tanks.

PARCEL 19D-PR(P)

PARCEL 54D-PR(P)

These parcels are identified in the Enhanced PA as former fire training areas. The fire training area in Parcel 19D may have been incorrectly located as a duplicate of the area in Parcel 54D (HLA, 1993).

PARCEL 20D-HS/HR/PS/PR/A/L/X(P)

This parcel contains areas potentially impacted by migration of contamination from the adjacent East Landfill. Also, the parcel includes a former incinerator building and adjacent ash disposal area, a former wastewater treatment plant location, an historic military trench/dump location, a building with a wash rack and former ASTs, and various other buildings that now have or once had fuel storage tanks.

PARCEL 25D-PS/L/A(P)

PARCEL 27D-PS/L/A(P)

PARCEL 33D-PS/PR/L/A

PARCEL 40D-PS/L/A

PARCEL 47D-PS/L/A

PARCEL 49D-PS/L/A

These areas mainly include buildings that have or formerly had home heating oil tanks.

PARCEL 28D-PS/PR(P)/HS(P)/HR(P)/A/L/X(P)

This parcel includes Gates Lord Hall (Building 400), which has a color photograph processing facility, a general purpose storage building (Building 490) that had a fuel storage tank, and an historic military trench/dump location.

5.0 Site Parcelization

PARCEL 30D-PS/RP/HS(P)/HR(P)/A/L PARCEL 42D-PS/PR/HS/A/L
PARCEL 46D-HS(P)/L PARCEL 50D-PS/PR/HS/HR/A/L
PARCEL 55D-PS(P)/HS(P) PARCEL 64D_PS/HS(P)/A/L
PARCEL 66D-PS/HS(P)/A(P)/L PARCEL 75D-PS/HS(P)/A/L

These parcels contain buildings that have or had fuel storage tanks (including one leaking UST at Building 501), flammable materials storehouses, hazardous chemicals storage, and/or a wash rack (Building 500).

PARCEL 34D-PR(P)/HR(P)

This parcel includes a former wastewater treatment plant location.

PARCEL 39D-HS(P)/A/L

This parcel includes Building 600, currently used as Base Headquarters. It was formerly used as the base hospital (discussed in Section 3.1.2) and may therefore have potentially stored hazardous materials.

PARCEL 51D-PS/PR/HS/HR/A/L PARCEL 74D-PS/HS/PR(P)/HR(P)/A/L

These parcels contain current and former vehicle maintenance buildings. Some of the buildings in these parcels have or had USTs, wash racks, oil/water separators, and hazardous materials/waste storage.

PARCEL 57D-PS/PR/HR

The West Landfill is located in this parcel. Hazardous constituents were likely included in the materials disposed of in this landfill, and a fuel storage tank was located in this area. Leachate seepage and ground water contamination have been detected; therefore the boundaries for this parcel have been delineated to cover the potential range of surface water and ground water impacts. As discussed in Section 2.1, the delineation of parcels disqualified due to ground water contamination has been based on available data in ground water investigation reports (USAEHA, 1990, 1991), along with watershed boundaries. These parcel boundary delineations have been conservatively located to include areas where contamination has been observed, and to also include downgradient areas that may be potentially impacted by the ground water contamination.

PARCEL 59D-PR(P)

This parcel was the site of patriotic flag disposal where an unknown quantity of fuel was potentially spilled. As described in the Technical Sampling Plan (HLA, 1993), the "Patriotic SWMU" is located west of Building 1 and consists of a former pit approximately 3 feet wide by 10 feet long. The former pit was used during the Summer of 1992 for a single episode of flag decommissioning by burning, and an unspecified amount of diesel fuel was poured over the flags to enhance combustion.

5.0 Site Parcelization

PARCEL 60D-PS/HS/HR/A/L

The Major General Emmett J. Bean Army Administrative Center Building occupies most of this parcel. Hazardous chemicals are present in various shop offices throughout this building, and a diesel UST is currently operated.

PARCEL 62D-PS/PR/HS/HR(P)/A/L

This parcel contains the installation heating plant, substation, electrical shop and maintenance building (Building 4), former large coal storage area, former gas station location, and various buildings/storehouses that have or had fuel storage tanks and/or hazardous materials storage/release. Fuel spills have been recorded for buildings in this parcel, and PCB-containing transformers have been stored and repaired at Building 4.

PARCEL 67D-HS(P)/HR(P)

This parcel includes the installation Main Exchange (Building 20), which stocks herbicides (and possibly other hazardous chemicals) and has a recorded spill of an herbicide (released to the sanitary sewer).

PARCEL 69D-PS/PR/HS/HR(P)/A/L

The current Exchange Service Station is located in this parcel; the station has five registered USTs and has been the site of numerous fuel spills. Vehicle maintenance activities have occurred at the gas station and at a former motor pool located in this parcel. Other buildings in this parcel have or had fuel storage tanks and/or hazardous materials storage.

PARCEL 70D-PS/PR/HS/HR/A/L

This parcel contains a former drum storage area and PCB storage area where contaminated soils and ground water have been identified in previous studies (Roy F. Weston, 1992; ERC, 1991). This parcel also contains various buildings that have or had fuel storage tanks and/or hazardous materials storage. The area currently under investigation, as identified in the Technical Sampling Plan (HLA, 1993), has been used for delineation of the boundaries of this disqualified parcel.

5.1.2 CERFA Parcels With Qualifier

Parcels in which there is no evidence of current or past storage, release, or disposal of petroleum products or hazardous materials, but for which there is evidence of the presence of non-CERCLA environmental concerns are categorized as CERFA parcels with qualifiers. These parcels are indicated on the map by a medium shading and a "Q" following the parcel number; the buildings and areas within these parcels and the supporting information are included in Table 5.1-1. Adjacent property and excluded/disqualified parcels were investigated to determine if these areas could potentially impact the CERFA parcels with qualifiers. Where potential impacts could occur, the relevant areas were included within the conservatively delineated boundaries of CERFA disqualified parcels.

5.0 Site Parcelization

The following parcels were categorized as CERFA parcel(s) with qualifier(s):

PARCEL 10Q-A(P)	PARCEL 22Q-L
PARCEL 29Q-A/L	PARCEL 31Q-L
PARCEL 37Q-A/L	PARCEL 41Q-A/L
PARCEL 43Q-A(P)/L	PARCEL 45Q-A/L/R
PARCEL 48Q-L	PARCEL 52Q-A/L
PARCEL 53Q-L	PARCEL 56Q-A/L
PARCEL 65Q-A/L	PARCEL 68Q-A(P)
PARCEL 71Q-A(P)	PARCEL 72Q-L
PARCEL 73Q-L	

The only concerns identified in these parcels were asbestos and/or lead-based paint and/or radon, discussed in Section 4.4. Potential asbestos concern has been denoted for buildings constructed prior to 1985 for which no asbestos data have been determined. All lead-based paint designations are based on building construction dates (pre-1978).

PARCEL 15Q-X(P)

This parcel has been designated as a CERFA parcel with qualifier for potential UXO, since an historic map identifies the area as a former grenade course.

5.1.3 CERFA Parcels

Parcels in which there is no evidence of current or past storage, release, or disposal of petroleum products or hazardous materials, and for which there is no evidence of the presence of non-CERCLA environmental concerns, are categorized as CERFA parcels. CERFA parcels are considered clean, uncontaminated areas. These parcels are shown on the map in Figure 5-1 with no shading and a "P" following the parcel number. The locations of these parcels are provided in Table 5.1-1. Adjacent property and excluded/disqualified parcels were investigated to determine if these areas could potentially impact the CERFA parcels. Where potential impacts could occur, the relevant areas were included within the conservatively delineated boundaries of CERFA disqualified parcels.

The following parcels were categorized as CERFA parcels:

- PARCEL 1P - Undeveloped areas in the northern and western portions of FBH
- PARCEL 2P - Well field in the northeast corner of the installation
- PARCEL 4P - Formerly designated as a historic military dump, but initial site screening indicated this is a CERFA parcel (Maly, 1994)
- PARCEL 6P - Formerly designated as a historic military dump, but initial site screening indicated this is a CERFA parcel (Maly, 1994)
- PARCEL 9P - Formerly designated as a historic military dump, but initial site screening indicated this is a CERFA parcel
- PARCEL 13P - Areas within and surrounding the West Cantonment
- PARCEL 14P - Golf course

5.0 Site Parcelization

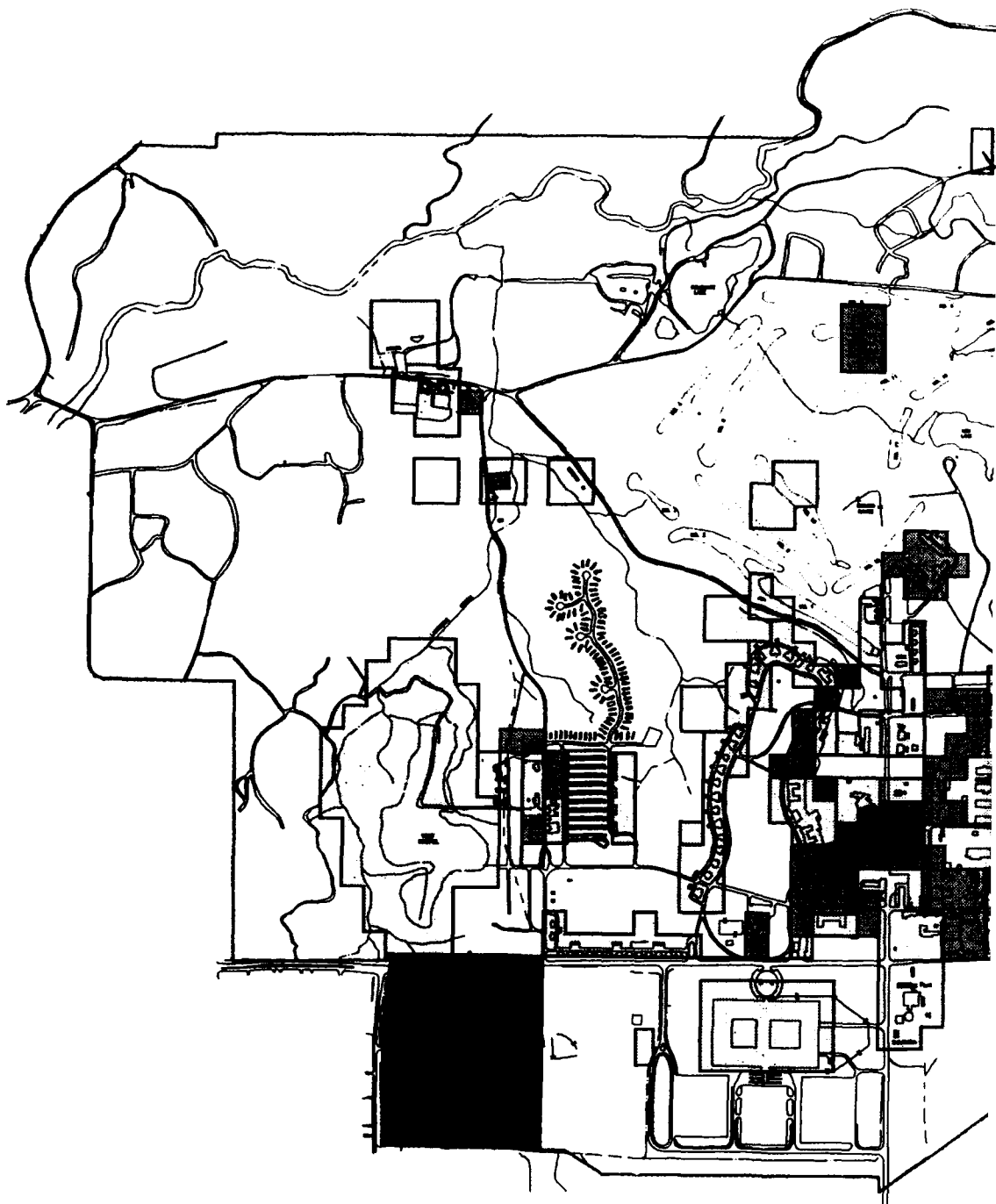
- PARCEL 21P - Undeveloped area east of the golf course, includes New Lake
- PARCEL 24P - Enlisted Barracks
- PARCEL 26P - NCO Club and recreation courts/fields
- PARCEL 36P - Grassed center of the officers housing loop road (Lawton Road)
- PARCEL 38P - Hawthorne Pond
- PARCEL 61P - Field to the east of and parking to the south of Building 1
- PARCEL 63P - Undeveloped area south and east of the heating plant
- PARCEL 76P - Undeveloped area south of Post Headquarters
- PARCEL 77P - Parking lot south of Building 402

5.2 Location Map and Property Boundaries

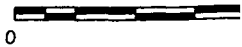
The property boundaries and all property transfers including prior ownership information are shown in the Tract Acquisition map, Figure 5-2. Title documents available from the U.S. Corps of Engineers, Louisville District, Real Estate Division, indicate that all of the property currently comprising the FBH installation was acquired in 1954. The legal description of the installation property is included in Appendix B.

5.3 Summary CERFA Map

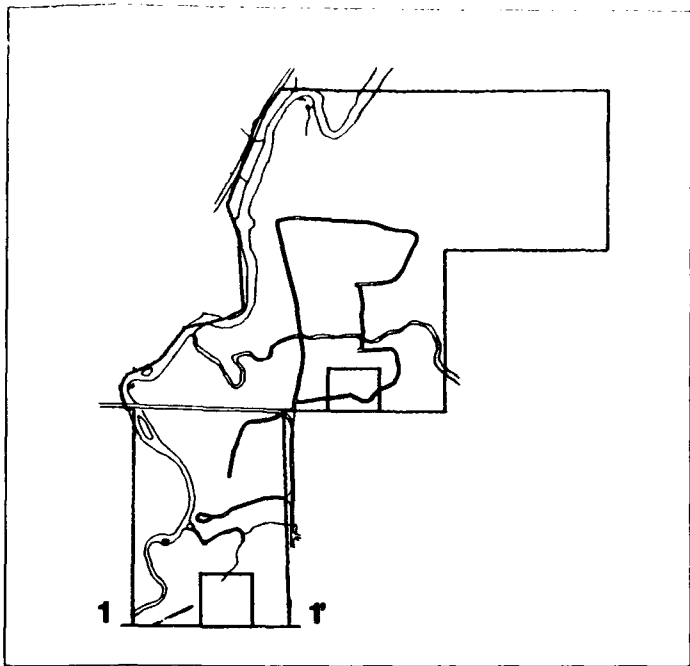
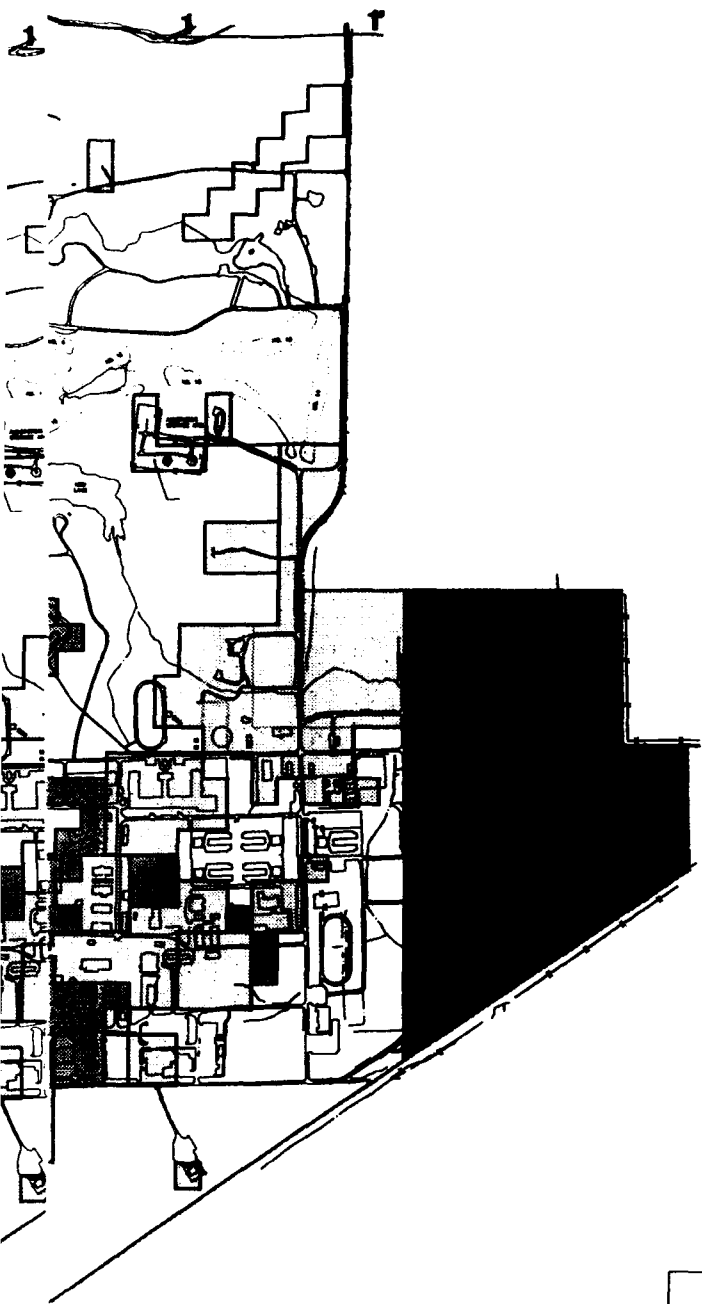
Figure 5-3 summarizes the breakdown of the FBH property according to the criteria for parcel identification under CERFA. This map is identical to Figure 5-1 but presents only the CERFA designations and shading for each parcel; none of the backup environmental data have been included.



SCALE



Compiled from various sources provided by the U.S. Army Environmental Center






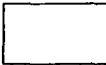
-  DISQUALIFIED AREA
-  QUALIFIED AREA
-  EXCLUDED AREA
-  CERFA PARCEL

FIGURE 5-3
 FORT BENJAMIN HARRISON
 MARION COUNTY, INDIANA
 CERFA PARCEL DESIGNATIONS

Prepared For: USAEC	Scale: AS SHOWN
Drawing No: 67070-020	Date: APR. 1994

Arthur D Little
 Cambridge, Massachusetts

500 2500 Ft.

Table 5.1-1: J-REA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
1	P	@823	--	--	Northern and western undeveloped areas and walnut plantation; EIS Areas 1, 2, 3, and 4.	--
2	P	@198	--	--	Well field, northeast section of installation.	--
3	D-PR(P)/HR(P) Q-X(P)	@3	57.5,63	--	Historic Military Site K - World War I/II Dump or Trench Potential disposal of POL and/or hazardous substances including UXO. SWMU#FBH25k currently under investigation.	TSP
4	P	4	53.5,54.5	--	Historic Military Site D - World War I/II Dump or Trench SWMU#FBH25d. Recent investigation (1993) indicated no evidence of this site at this location.	TSP,HLA USAEC
5	D-PS	2	46,48.5	Near 550	North Troop Training Area, POL Storage, AREE 14	ENPA, SV
6	P	@12	55.5,50.5 52,48	--	Historic Military Site E - World War I/II Dump or Trench Historic Military Site H - World War I/II Dump or Trench SWMU#FBH25e&h. Recent investigation (1993) indicated no evidence of this site at this location.	TSP,HLA USAEC
7	D-HR Q-L	9	20,40	819	Skeet Launcher, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH24 currently under investigation. Skeet Range, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH24 currently under investigation. Skeet Launcher, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH24 currently under investigation. Rifle Range, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH24 currently under investigation.	ENPA, TSP,RP ENPA, TSP,RP ENPA, TSP,RP ENPA, TSP,RP
8	D-HR/PR Q-L	8	21.5,37.5	810	Former sewage treatment plant, potential POL/hazardous release from installation waste streams from maintenance shops, photo processing, wash racks, etc...	ENPA, TSP,RP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
9	P	4	21.5,33.5	--	Drums containing lithium bromide, potentially contaminated with pesticides, were buried; lithium has been detected in ground water samples. Currently this is a fire training area therefore the potential for POL release exists. AREE 19/20/27, SWMU#FBH11 currently under investigation.	TSP,HLA USAEC
10	Q-A(P)	1	23,37	816	Lift Station, potential ACBM	RP
11	D-HR Q-L	4	24,33	815	Pistol Range, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH23 currently under investigation.	ENPA,TSP,RP
12	D-HR Q-L	4	28,34 28,33	811/812 811	Foreman Range, no ammunition recovery has occurred, soils may be contaminated with heavy metals. Lead paint. AREE 14, SWMU#FBH22 currently under investigation.	ENPA,TSP,RP
13	P	172	--	--	West Cantonment; EIS Area 5.	--
14	P	@230	--	--	Golf Course; EIS Area 6.	--
15	Q-X(P)	6	40.5,40	--	Former Grenade Range.	MAP
16	D-HS(P)/HR(P) Q-L	5	48,37 49,37 50,37 48,39 48.5,38	519 520 521 522 540	Small Arms Pyro. Magazine; lead paint. AREE 29 - possible pentachlorophenol in wooden boxes. Fixed Ammo Magazine; lead paint. AREE 29 - possible pentachlorophenol in wooden boxes. Small Arms Pyro. Magazine; lead paint. AREE 29 - possible pentachlorophenol in wooden boxes. Fixed Ammo Magazine; lead paint. AREE 29 - possible pentachlorophenol in wooden boxes. Sentry Station; lead paint.	RP,ENPA RP,ENPA RP,ENPA RP,ENPA RP

Table 5.1-1: RFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Standards (3)
17	D-HS/HR(P)	2	51,38.5	514	Golf Course Maintenance - Former Pesticide Storage AREE 18, SWMU#FBH19 currently under investigation.	RP,ENPA,TSP
18	D-HR(P)/PR(P) Q-X(P)	7	37.5,33.5 36.5,32.5	-- --	Historic Military Site B - World War I/II Dump or Trench Historic Military Site C - World War I/II Dump or Trench Potential disposal of POL/hazardous substances including UXO. SWMU#FBH25b&c currently under investigation.	TSP TSP
19	D-PR(P)	6	52,33.5	--	Potential Fire Training Area, fuel oil ignited in metal troughs. AREE 27	ENPA
20	D-HS/HR/PS/PR Q-A/L/X(P)	68	55,30 53,28 51,26 50,29 49,5,27 49,28	-- 513 510 -- 509 North of 509	Former Landfill on east side of FBH, currently a city park. Leachate seepage and ground water contamination detected. Monitoring program on-going, regrading/regrading in progress. Water well building; lead paint. Water reservoir with ACBM in siding (also in Parcel 25) Historic Military Site H - World War I/II Dump or Trench Potential disposal of POL/hazardous substances including UXO. SWMU#FBH25h currently under investigation. Gas chamber; original design was sewage tank house; lead paint. Former sewage treatment plant, potential POL/hazardous release from installation waste streams from maintenance shops, photo processing, wash racks, etc... AREE 20, EI SITE 4 currently under investigation. Wash pad and former AST location; AREE 9; lead paint. Incinerator building; ash was landfilled near the building. AREE 25, SWMU#FBH17 currently under investigation. CO HQ Bldg with 2x275-gal fuel oil tanks (removed), lead paint. AREE 21, 1x2,000-gal fuel oil UST (removed 1991) Bn Hq Bldg had oil-fired furnace; confirmed ACBM, lead paint. Det Day Room had oil-fired furnace; lead paint. Det Day Room had oil-fired furnace; lead paint. Enl Brks had oil-fired furnace; lead paint. Enl Brks had oil-fired furnace; lead paint. Mil Pers Bldg, lead paint. Enl Brks had oil-fired furnace; lead paint.	ENPA RP RP TSP RP ENPA,TSP,RP SV,ENPA RP,ENPA,TSP RP ENPA RP RP RP RP RP RP RP

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
21	P	93	48,34	--	Undeveloped area east of the golf course; EIS Area 7	--
22	Q-L	8	43,30 44,30 44,31	537 538 539	Officers' Quarters, lead paint. Officers' Quarters, lead paint. Officers' Quarters, lead paint.	RP
23	E	140	62,24	various	Reserve Enclave	--
24	P	31	52,21	various	Enlisted Barracks	RP
25	D-PS Q-L/A(P)	4	53,20 53,19	473 472	Gymnasium; poss ACBM; lead paint; 4/20/72 replace oil furnace. Phys Fit Center (also in Parcel 74); poss ACBM.	RP RP
26	P	@26	55,15	101	NCO Club, Rec Areas/fields	--
27	D-PS Q-L/A(P)	1	55,21	100	Chapel; poss. ACBM; lead paint; 1x1,000-gal fuel oil tank.	RP
28	D-PS/PR(P)/HS(P)/HR(P) Q-A/L/X(P)	17	48.5,22	--	Historic Military Site F - World War I/II Dump or Trench Potential disposal of POL/hazardous substances including	TSP

Table 5.1-1: RFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
29	Q-A/L	9	49,24 47,22	400 490	UXO. SWMU#FBH25f currently under investigation.	RP
					Gates-Lord Hall; color photo lab; confirmed ACBM; lead paint.	ENPA, HWI
					AREE 4, photo processing; Chemical Hazards List.	RP
					Storage GP Inst; 1x275 gal fuel tank removed; lead paint.	
					Mil Pers Bldg; confirmed ACBM; lead paint.	RP
30	D-PS/PR/HS(P)/HR(P) Q-A/L	13	43,24 42.5,23 42.5,22.5 42.5,22 42.5,22.5 42.5,22 43,22 41,28 41,26 42.5,25.5 42.5,26.5 43,25.5 43,26 43,26.5 43,27 41,28.5	403 404 405 406 407 408 409 500 501 502 504 505 506 507 508 526	Enl Barracks; confirmed ACBM; lead paint.	RP
					Enl Barracks; confirmed ACBM; lead paint.	RP
					Enl Barracks; confirmed ACBM; lead paint.	RP
					Enl Barracks; confirmed ACBM; lead paint.	RP
					Open Din Cons/Mess Hall (also Parcel 76); ACBM; lead paint.	RP
					ACES Facility; lead paint; oil heat (former?).	RP
					Family Housing; lead paint; 1/5/87 oil tank removed.	RP
					Family Housing; lead paint; 1/5/87 oil tank removed.	RP
					Family Housing; lead paint; 1/5/87 oil tank removed.	RP
					Flam Mat Storehouse; ACBM; lead paint.	RP
					Flam Mat Storehouse; lead paint.	RP
					Detached garage; lead paint.	RP
					Officers Club; confirmed ACBM; lead paint.	RP
					6/23/86 - Fuel oil tank removed	RP
					AREE 21, 1x2,000-gal fuel oil UST removed 1991	ENPA
AREE 9, wash rack, potential POL/hazardous (solvents) release	ENPA					
Clubhouse, ACBM, lead paint; 550-gal tank removed 2/1/81.	RP					
AREE 21, 1x550-gal fuel oil LUST removed 1991.	ENPA					
Off Qtrs Tran; confirmed ACBM; lead paint.	RP					
6/23/86 - Fuel oil tank removed	RP					
AREE 21, fuel oil UST removed 1991	ENPA					
Det Garage; wood frame with ACBM shingles.	RP					
Fam Hsg; 1x275-gal tank removed 1/31/84; ACBM; lead paint.	RP					
Fam Hsg; 1x275-gal heating oil tank removed; ACBM; lead paint.	RP					
Fam Hsg; 1x275-gal tank removed 1/31/84; ACBM; lead paint.	RP					
Fam Hsg; 1x275-gal tank removed 1/31/84; ACBM; lead paint.	RP					
Bath House; ACBM; lead paint.	RP					
31	Q-L	1	39.5,25	625	Det Garages (also in Parcel 33); lead paint.	RP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
32	D-PS/PR/HS/HR Q-L	3	36,28	674	Golf Course Maint; oil heat; lead paint. Pesticide storage and mixing, AREE 18, chemical hazards list. SWMU#FBH21 invest. to evaluate pesticide contamination. AREE 22; heating oil/gasoline/diesel ASTs, soil staining.	RP ENPA,HWI TSP ENPA
33	D-PS/PR Q-A/L	24	38,26	626	Det Garage; lead paint.	RP
			38,26	627	Det Garage; lead paint.	RP
			38,26	628	Det Garage; lead paint.	RP
			37,26.5	629	Det Garage; lead paint.	RP
			36,26	630	Det Garage; lead paint.	RP
			35,25	631	Det Garage; lead paint.	RP
			35,24	632	Det Garage; lead paint.	RP
			35,23	633	Det Garage; lead paint.	RP
			35,22	634	Det Garage; lead paint.	RP
			34,21.5	635	Det Garage; lead paint.	RP
			34,21	636	Det Garage; lead paint.	RP
			34,20	637	Det Garage; lead paint.	RP
			34,19.5	638	Det Garage; lead paint.	RP
			34,19	639	Det Garage; lead paint.	RP
			34,18.5	640	Det Garage; lead paint.	RP
			34,18	641	Det Garage; lead paint.	RP
			33,16	642	Det Garage; lead paint.	RP
			34,61	643	Fam Hsg; ACBM; lead paint; 10/20/91 rem oil ht (1x275-gal tank).	RP
			34,17	644	Fam Hsg; ACBM; lead paint; 10/28/91 rem oil ht (4x275-gal tank).	RP
			34,17	645	Fam Hsg; ACBM; lead paint; 4x275-gal fuel oil tanks.	RP
			34,18	646	Fam Hsg; ACBM; lead paint; 2/17/81 rem oil ht (2x275-gal tank).	RP
			34,18.5	647	Fam Hsg; ACBM; lead paint; 10/28/91 rem oil ht (4x275-gal tank).	RP
			34,19	648	Fam Hsg; ACBM; lead paint; 10/28/91 rem oil ht (4x275-gal tank).	RP
			39,19.5	649	Fam Hsg; ACBM; lead paint; 9/2/81 rem oil ht (4x275-gal tank).	RP
			34,20	650	Fam Hsg; ACBM; lead paint; 10/28/91 rem oil ht (4x275-gal tank). 4/24/83; 20-gal fuel oil spill, cleanup occurred.	RP IDEM
			34,21	651	Fam Hsg; ACBM; lead paint; 10/28/91 rem oil ht (4x275-gal tank).	RP
			34,21.5	652	Fam Hsg; ACBM; lead paint; 2x275-gal fuel oil tanks.	RP
			35,22	653	Fam Hsg; ACBM; lead paint; 4x275-gal fuel oil tanks.	RP
			35,22.5	654	Fam Hsg; ACBM; lead paint; 4x275-gal fuel oil tanks.	RP
			36,24.5	655	Fam Hsg; ACBM; lead paint; 2x275-gal fuel oil tanks.	RP

Table 5.1-1: ...RFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Status (2)
34	D-PR(P)/HR(P)	5	34.5,27.5	SW of 674	Former sewage treatment plant, potential POL/hazardous release from installation waste streams from maintenance shops, photo processing, wash racks, etc... AREE 20, EI SITE 3 currently under investigation.	ENPA, TSP
35	D-PR(P)/HR(P) Q-X(P)	4	33.5,23.5	--	Historic Military Site I - World War I/II Dump or Trench Potential disposal of POL/hazardous substances including UXO. SWMU#FBH25i currently under investigation.	TSP
36	P	30	36,17	--	EIS Area 8	--
37	Q-A/L	1	39,24	663	Admin Bldg; confirmed ACBM; lead paint.	RP
38	P	5	41,24	--	Hawthorne Pond	--
39	D-HS(P)/A/L Q-A/L	3	41,22	600	Post HQ; ACBM; lead paint. Formerly Post Hospital, potential hazardous storage.	RP,ENPA MAP
40	D-PS Q-A/L	2	39,23 39,22	623 624	Fire Hose House; 10/16/61 conv to oil heat; ACBM; lead paint. Fire Station; currently oil heated; ACBM; lead paint. AREE 22, 1x1,000-gal AST.	RP RP ENPA
			38.5,23.5 38.5,23	664 665	Admin Gen Purp (also Parcel 41); lead paint. Police Station (also Parcel 41); ACBM; lead paint.	RP RP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
41	Q-A/L	4	38.5,21	622	Admin Gen Purp; ACBM; lead paint.	RP
				666	Off Qtrs Trans; ACBM; lead paint.	RP
				667	Off Qtrs Trans; ACBM; lead paint.	RP
				664	Admin Gen Purp (also Parcel 40); lead paint.	RP
				665	Police Station (also Parcel 40); ACBM; lead paint.	RP
42	D-PS/PR/HS Q-A/L	7	38.5,18.5	619	Adm Gen Purp; lead paint; 1x275-gal fuel oil tank; former Gas Station; 1x1,000-gal, 1x2,000-gal, 1x8,000 gal USTs AREE 8; Former vehicle maint; POL/haz storage.	RP
				668	AREE 21, 2x10,000, 1x2,000, 1x1,000, 1x550-gal USTs rem 2/92. EI SITE 5 investigation of former LUSTs/USTs area.	ENPA
				669	Housekeeping on Chemical Hazards List; ACBM; lead paint.	ENPA, EPA
				670	Open Din NCO; ACBM; lead paint.	TSP
				670	Off Qtrs; ACBM; lead paint.	RP,HWI
				670	Off Qtrs; ACBM; lead paint.	RP
43	Q-A(P)/L	1	39,20	621	Storehouse; ACBM; lead paint.	RP
				604	Pump Sta Bldg; 1x1,000-gal tank; ACBM; lead paint.	RP, EPA
44	D-PS/HS/HR Q-A/L	3+	40.5,20	604	AREE 7 - Plumbing Shop; AREE 13 - Water Treatment Lab.	ENPA
				605	Maint Shop; former transformer substation; lead paint.	RP
				604/605	AREE 18 - Pesticide mixing and storage; confirmed release.	ENPA, TSP
				606	SWMU#FBH20 investigation of pesticides contamination. Storehouse, former well house; lead paint.	TSP,HWI
45	Q-A/L/R	13	40.5,15.5	610	Music Center, lead paint.	RP
				611	Rec Center, ACBM, lead paint.	RP
				614	Band Training Facility, ACBM, lead paint.	RP
				615	Enl Brk/Adm Gen Purp; ACBM; lead paint; potential radon.	RP
				617	Thrift Shop, lead paint.	RP
				671	Off Qtrs; ACBM; lead paint.	RP
				672	Off Qtrs; ACBM; lead paint.	RP
46	D-HS(P) Q-L/A(P)	2	39.5,14	613	Enl Barracks; possible ACBM; lead paint.	RP
				613	Weapons cleaning with solvents.	ENPA, HWI

Table 5.1-1: J.RFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
47	D-PS Q-A/L	1	38,13	616	Post Office; ACBM; lead paint; oil heat (1x275 gal tank).	RP
48	Q-L	2	36,13.5	618	Chapel; lead paint.	RP
49	D-PS Q-A/L	9	31,13.5	N of 916	Former NCO Club (Bldg T-W-9); oil heat.	RP
			31.5,13	902	Det Garages; lead paint.	RP
			30,13	903	Det Garages; lead paint.	RP
			28,13	904	Det Garages; lead paint.	RP
			27,14	905	Det Garages; lead paint.	RP
			27,14	906	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			27,13.5	907	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			27,12.5	908	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			27.5,12.5	909	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			28,12.5	910	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			28.5,12.5	911	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			29,12.5	912	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			29.5,12.5	913	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			30,12.5	914	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			30.5,12.5	915	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			31,12.5	916	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			31,12.5	917	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			31,12.5	918	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			32,12.5	919	Fam Hsg; ACBM; lead paint; 1/30/73 replace oil heat (2x275-gal).	RP
			32.5,12.5	920	Fam Hsg; ACBM; lead paint; 1/30/73 replaced oil heat.	RP
50	D-PS/HS Q-A/L	4	30,18	700	Scout Bldg; lead paint; 12/271 repl oil heat, rem 2 tanks.	RP
			30,19	701	Scout Bldg; probable ACBM; lead paint; 7/22/63 install oil heat. AREE 21, 1x550-gal UST removed summer 1991 (2/11/91 in RP).	RP ENPA
			30,20	702	Community Center; ACBM; lead paint.	RP
			30,20.5	703	Gen Storehouse; lead paint; 4/5/85 removed 2x275-gal tanks.	RP
			30,21	704	Gen Purp Warehouse; ACBM; lead paint; Chem Hazards List.	HW1,RP
51	D-PS/PR/HS/HR Q-A/L	5	27,18	705	Skill Ctr/Auto; 10/9/81 install 500-gal waste oil tank at NE corner; 6/23/86 removal of fuel oil tank; ACBM; lead paint. Vehicle Maint Shop; AREE 7 (waste oil); AREE 9 (wash rack).	RP RP ENPA

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (I)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
52	Q-A/L	2	27,20 27,21	710 711	oil/water separator); AREE 10 (waste oil UST); Chem Haz List; AREE 21 (2x550-gal USTs removed 1992). RCRA waste paint (F005) spill; waste oil spill. EI SITE 1 currently under investigation. Child Supp Center; ACBM; lead paint. Rod-Gun Club; lead paint; 12/7/83 removed 1x275-gal tank. Veterinary Facility; ACBM; lead paint. AREE 26, infectious waste and hazardous substances. CDC FIDOC BD/Admin (also in Parcel 56); ACBM; lead paint. Gen Purp Warehouse (also in Parcel 56); lead paint. Gen Purp Warehouse (also in Parcel 56); lead paint; AREE 14 - Indoor Pistol Range, haz release not a concern.	ENPA, HWI ENPA, EPA ECAS TSP RP RP RP ENPA RP RP RP ENPA
53	Q-L	2	26,22 26,22 26,22 25,22	806 807 808 809	Child Supp Center; ACBM; lead paint. Youth Center; ACBM; lead paint. Riding Stable; lead paint. Riding Stable; lead paint. Riding Stable; lead paint. Gen Storehouse; lead paint.	RP RP RP RP
54	D-PR(P)	2	24,20.5	--	Fire Training Area, fuel oil ignited in metal troughs; AREE 27.	ENPA
55	D-PS(P)/HS(P)	1	26,17	813	Flammable Materials Storehouse (former building # T-186).	RP
56	Q-A/L	1	26,18.5 26,18.5 26,18.5	800 801 802	CIDC FIDOC BD/Admin (also in Parcel 51); ACBM; lead paint. Gen Purp Warehouse (also in Parcel 51); lead paint. Gen Purp Warehouse (also in Parcel 51); lead paint; AREE 14 - Indoor Pistol Range, haz release not a concern.	RP RP RP ENPA
57	D-PS/PR/HR	79	22,19	--	Former Landfill, west side of FBH, AREE 23. Leachate seepage and ground water contamination detected. Monitoring program on-going; closure not complete. AREE 22 - 1x1,000-gal tank, out-of-service 2/92.	ENPA
58	D-PR(P)/HR(P)	1	33,18	--	Historic Military Site J - World War I/II Dump or Trench	TSP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
59	Q-X(P) D-PR(P)	2	31,8.5	--	Potential disposal of POL/hazardous substances including UXO. SWMU#FBH25j currently under investigation.	TSP
60	D-PS/HS/HR Q-A/L/RD	24	36,10	1	Mjr Gen Emmett J Bean Center; extensive ACBM; lead paint. Print Shop, AREE 1, Chemical Hazards List Graphics Shop, AREE 2, Chemical Hazards List Photo Processing, AREE 4 Carpentry Shop, AREE 6 AREE 21, 1x 7,000-gal diesel UST Occ Health Clinic, AREE 26, radiological source (X-Ray) DPPA and DIO Photo Shop, former (?), Chem Hazards List 2 releases of ammonia to air reported: 1/5/93 and 9/2/89	RP ENPA,HWI ENPA,HWI ENPA ENPA ENPA, EPA ENPA,USAEH HWI IDEM
61	P	@119	--	--	EIS Area 11	--
62	D-PS/PR/HS/HR(P) Q-A/L	22	44,12	--	Coal Storage Area at Bldg 2; AREE 30; potential acid/metals. EI SITE 8 currently under investigation; elevated levels of chromium and arsenic detected in previous studies. Comb AC and Heating Plant; lead paint. AREE 13, water treatment chemicals and waste POL storage. 12/15/92 2,000-gal diesel spill in bldg, 100-gal spill out of bldg Substation Bldg, shelter for switch gear. FE Maint Shop; lead paint; 3x10,000-gal diesel USTs. AREE 7/17; PCB-transformer main/store in uncontained area. EI SITE 7 at trans store/repair in Electric Shop AREE 9; oil/water separator. AREE 21; 1x10,000-gal LUST & 2x10,000-gal USTs removed 1982. AREE 21 1x1,000 gal AST, soil sampling in 2/92. 1985 leak test - one tank losing 7 gpd, no GW cont found in 1987. 3x10,000-gal diesel USTs removed in 1992. 2/23/78 O/W sep overflow discharged to ditch/sewer	ENPA TSP RP ENPA IDEM RP RP ENPA TSP ENPA ENPA ENPA ENPA EPA ENPA,TSP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Standards (2)
					6/7/89 supply line leak, 178-gal diesel release, 20 cu yds removed.	ENPA, TSP
			42,13	6	Former Gas Sta/Oil House; lead paint; 1x275-gal fuel oil tank;	RP
					3x10,000-gal gasoline tanks and 1x10,000-gal diesel tank.	RP
			42,13	--	AREE 21, 4x10,000-gal LUSTs (installed 1937) removed summer 1991	ENPA
					Former Bldg 86; gasoline tank and pit; 2x500-gal.	RP
					Former Bldg 119; 1x10,000-gal UST; completed in 1937.	RP
			44,14	13	Former Bldg 69; 1x10,000-gal steel UST.	RP
					Gen Purp/Cold Stor Whse; ACBM; lead paint; 2x275-gal tanks;	RP
					12/16/57 - replacement of ammonia refrig plant with Freon #12.	RP
					Former gas station (1937) and oil house (1919) - demolished;	ENPA
					AREE 8 - former vehicle maintenance, poss. POL/Haz storage.	ENPA
			43,14.5	18	Admin Gen Purp; ACBM; lead paint.	RP
			42.5,15.5	26	FE Maint Shop; ACBM; lead paint; 1x275 gal fuel oil tank.	RP
					DIS Eng/Maint; AREE 12; PCB transformer storage.	ENPA
					Carpentry, Electrical, PrevMaint, Htg-AC, Metal, & Paint Shops;	TSP
			43,15	27	EI SITE 6 currently under investigation.	TSP
					Flammable Materials Storehouse; lead paint.	RP
					AREE 18; pesticide storage, flooding in basement a concern.	ENPA
			44,14	66	SWMU#FBH18 under investigation re: pesticide mix & store.	TSP
			42.5,12	68	PE Storehouse; lead paint; 7/1/68 - change heating to oil.	RP
					Fuel Storage Tanks; 3/31/60 orig construction; 9/10/84 installed	RP
					underground fuel lines to bldgs 2 & 4; 3x30,000-gal LP gas tanks;	RP
					11/27/84 converted to fuel oil storage and dispensing.	RP
			41,16	609	AREE 22; 3 ASTs with 29,900-gal capacity.	ENPA
					Admin Gen Purp; ACBM; lead paint; oil heat; 1x1,000-gal tank.	RP
			43.5,15	28	AREE 22, 1x2,000-gal AST.	ENPA
			44,14.5	17	Eng Admin Bldg (also in Parcel 65); ACBM; lead paint.	RP
					Clothing sales store (also in Parcel 65); lead paint.	RP
63	P	70	--	--	EIS Area 12	--
64	D-PS/HS(P) Q-A/L	1	50,9 50,9	55 65	Civ Club Facility; ACBM; lead paint; oil heat; 2x275-gal tanks. Flam Mat Sthse adj to Civ Club; lead paint; POL/haz(?) storage.	RP RP
65	Q-A/L	12	45,15 44,15.5	30 31	Gen Purp Warehouse; lead paint. Admin Gen Purp; ACBM; lead paint.	RP RP

Table 5.1-1: CERCLA Parcel Designations

Parcel Number	CERCLA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Status (2)
66	D-PS/HS(P) Q-L/A(P)	1	43,5,15 44,5,17 45,16,5 44,14,5	28 32 35 17	Eng Admin Bldg (also in Parcel 62); ACBM; lead paint.	RP
					Admin Gen Purp (also in Parcel 69); ACBM; lead paint.	RP
					Credit Union (also in Parcel 69); ACBM; lead paint.	RP
					Clothing sales store (also in Parcel 62); lead paint.	RP
66	D-PS/HS(P) Q-L/A(P)	1	47,15	38	Class IV Store; poss ACBM; lead paint; 11/1/81 2x275-gal oil tanks removed (2 still remain?).	RP
					AREE 8 - Paint shop (1938), poss haz storage > 1 year.	ENPA
67	D-HS(P)/HR(P)	4	49,13	20	Main Exchange; ACBM; lead paint.	RP
					1/26/87 Baracide (herbicide) release to sewer.	IDEM
68	Q-A(P)	2	53,17.5	51	Guest House; poss ACBM.	RP
69	D-PS/PR/HS/HR(P) Q-A/L	19	48,18 44,18	W of 40 33	Former Bldg 303; 10,000-gal AST (gasoline)	RP
					Exchange Service Station; lead paint; 4x10,000-gal gasoline tanks;	RP
					1x550-gal fuel oil tank; 1x550-gal waste oil tank.	RP
					AREE 7, vehicle maint shop, poss soil contamination.	ENPA
					Vehicle Maint; Poss haz storage > 1 year, Chem Hazards List	HWI
					AREE 11, Fuel Station	ENPA
					AREE 21, 4x10,000-gal gasoline USTs and 1x550-gal waste oil UST.	ENPA, IDA
					9/88: 1,613-gal release from LUST to ditch, contained/cleaned-up.	ENPA, IDEM
					Spills: 15gal(8/79); 10gal(11/79); ukn vol(1/88); 30gal(12/88).	ENPA, IDEM
					Flam Mat Storehouse (former T-509 was an oil house).	RP
					AREE 10, POL drum storage and waste staging area.	ENPA
					Motor Rep Shop; ACBM; lead paint; 3/9/84 installed 30-gal tank in drain line as oil catch basin (at NE corner of bldg).	RP
					AREE 8; former maint shop; Chem Hazards List.	RP
Flam Storage area, solvent parts washer.	ENPA, HWI					
AREE 9, wash rack - poss POL/haz (solvents) release.	ECAS					
AREE 10, POL drum storage and waste staging area.	ENPA					
Theater; lead paint; 6/23/86 removal of fuel oil tanks.	RP					
AREE 21, 1x500-gal fuel oil UST removed summer 1991.	ENPA					
Bowling Center; lead paint; 6/23/86 removal of fuel oil tank.	RP					
AREE 21, 1x500-gal fuel oil UST removed summer 1991.	ENPA					
Appl Inst Bldg; lead paint; oil heat (550-gal UST).	RP					

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)					
70	D-PS/PR/HS/HR Q-A/L	9	50.5,16.5	45/46	AREE 21, 1x500-gal fuel oil UST to be removed summer 1992.	ENPA					
					Gen Purp Warehouse; ACBM; lead paint.	RP					
					Skill Dev Center; lead paint; 2/7/77 removed oil-fired boiler.	RP					
					AREE 4, photo processing (former?).	ENPA					
					Carpentry Shop; Chem Hazards List.	HWI					
					Appl Inst Bldg; ACBM: lead paint; photo lab.	RP					
					AREE 4, photo process, silver recovery.	ENPA,HWI					
					Admn Gn Purp; ACBM; lead paint; 10/18/66 1x275-gal oil tank.	RP					
					Admn Gn Purp; lead paint; 1x275-gal fuel oil tank.	RP					
					Admn Gn Purp (also in Parcel 65); ACBM; lead paint.	RP					
					Credit Union (also in Parcel 65); ACBM: lead paint.	RP					
					Training Aids Center/Warehouse (also Parcel 70); lead paint; photo lab; 1/6/67 oil heat; 1x1000-gal oil tank.	RP					
					AREE 2, Devices Shop: current graphics and former woodshop.	ENPA,HWI					
					AREE 4, photo processing	ENPA					
Gen Purp Warehouse (also Parcel 70); lead paint; 1x1,000-gal oil tank; 8/16/85 replaced oil furnace.	RP										
AREE 2, Devices Shop: current graphics and former woodshop.	ENPA,HWI										
71	Q-A(P)	1	52,19	472	Former DPDO Drum Storage in field south of Bldgs 45 and 46.	ENPA,TSP					
					AREE 15 and 17, SWMU#FBH18 under investigation.	ENPA,TSP					
					Uncontained drum storage; VOCs,TPH in soils & ground water.	ENPA,TSP					
					1-2 qts PCB oil spill at Bldg 46 (PCB Yard); 44cu yds removed.	ENPA,TSP					
					Gen Purp Warehouse; ACBM; lead paint.	RP					
					School/Church/Rec; ACBM; lead paint.	RP					
					Training Aids Center/Warehouse (also Parcel 69); lead paint; photo lab; 1/6/67 oil heat; 1x1,000-gal oil tank.	RP					
					AREE 2, Devices Shop: current graphics and former woodshop.	RP					
					AREE 4, photo processing	ENPA,HWI					
					Gen Purp Warehouse (also Parcel 69); lead paint; 1x1,000-gal oil tank; 8/16/85 replaced oil furnace.	ENPA					
					AREE 2, Devices Shop: current graphics and former woodshop.	RP					
					Phys Fit Center (also in Parcel 72); poss ACBM.	RP					
					72	Q-L	4	47,20.5	429	Entl Barracks Tr; lead paint.	RP

Table 5.1-1: RFA Parcel Designations

Parcel Number	CBRFA Category (I)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (P)
73	Q-L	@8	45.5,19	427	Enl Barracks (also in Parcel 76); lead paint.	RP
74	D-PS/HS/PR(P)/HR(P) Q-A/L	7	45,20 47,19.5 47,21 46.5,21	430	Enl Barracks Tr; lead paint.	RP
				431	Enl Barracks Tr; lead paint.	RP
				432	Enl Barracks Tr; lead paint.	RP
				E of 424	Former Bldg 300; 2x1,000-gal steel UST.	RP
				S of 428	Former Bldg 301; 1x10,000-gal steel UST.	RP
				S of 490	Former Bldg 302; 1x10,000-gal steel UST.	RP
				422	FE Maint Shop, wash pad (north side); ACBM; lead paint.	RP
					Former Bldg 79, QM Motor Repair, 9/4/41 removed gas pump.	RP
					AREE 7, vehicle maintenance shop, POL/haz storage.	ENPA,HWI
					AREE 9, wash rack, oil/wtr sep, poss POL/haz(solvents) release.	ENPA
	AREE 10, POL drum storage/waste staging area	ENPA				
	EI SITE 2, veh maint shop under investigation.	TSP				
	Waste oil spills around bldg, solvent parts degreaser.	ECAS				
	Storage GP Inst; ACBM; lead paint.	RP				
423	46.5,20.5	423	AREE 9, wash rack, oil/wtr sep, poss POL/haz(solvents) release.	ENPA		
424	46.5,20	424	QM Repair Shop; ACBM; lead paint.	RP		
			AREE 7, vehicle maintenance shop, POL/haz storage.	ENPA		
			AREE 8, former veh maint, hazwaste storage pre-1981.	ENPA,HWI		
			AREE 9, wash rack, oil/wtr sep, poss POL/haz(solvents) release.	ENPA		
			AREE 10, POL drum storage/waste staging area	ENPA		
			Storage GP Inst; ACBM; lead paint; 11/5/65 conv to oil heat.	RP		
			AREE 8, former vehicle maintenance.	ENPA		
			AREE 9, wash rack between bldgs 425 and 426.	ENPA		
			Gen Purp Warehouse; ACBM; lead paint.	K.		
			AREE 8, former vehicle maintenance.	ENPA		
			AREE 9, wash rack between bldgs 425 and 426.	ENPA		
			Bn Hq Bldg; lead paint.	RP		
			Storage GP Inst; lead paint.	RP		
			Open Din Cons/Mess Hall (also Parcel 29); ACBM; lead paint.	RP		
			Enl Barracks (also in Parcel 76); lead paint.	RP		
75	D-PS/HS(P) Q-A/L	2	42,20	411	Fam Hsg; ACBM; lead paint; 1/5/87 oil tanks removed.	RP
			43,20	412	Det Garages; lead paint.	RP

Table 5.1-1: CERFA Parcel Designations

Parcel Number	CERFA Category (1)	Parcel Size (Acres)	Map Coordinates	Building Number	Description	Source (2)
76	P	5	43,20	413	Det Str Bldg; lead paint; former flam mat storehouse.	RP
77	P	3	44,23	--	South of Post HQ	--
78	E	1.9	41,18	--	Parking Lot south of Bldg 402	--
79	E	59	23,8	--	Private Cemetery	--
					Harrison Village Apartments	--

Notes:

1. CERFA Categories:

- P CERFA Parcel
 - Q CERFA Parcel with Qualifier
 - D Disqualified Parcel
 - E Excluded Parcel
- Parcel Codes:
- HR Release or Disposal of Hazardous Materials
 - HS Storage of Hazardous Materials
 - PR Release or Disposal of Petroleum Products
 - PS Storage of Petroleum Products
 - A Asbestos-Containing Building Materials (ACBM)
 - L Lead-based Paint
 - R Radon
 - X Unexploded Ordnance
 - RD Radiological Source
 - (P) Potential

2. Sources/References:

- RP Real Property Files at FBH
- ENPA Enhanced Preliminary Assessment (Roy F. Weston, 1992)
- TSP Technical Sampling Plan (HLA, 1993)
- ECAS Environmental Compliance Assessment System report (Ogden, 1992)
- HWI Hazardous Waste Inventory (Law Environmental, 1990)
- MAP Historic Maps
- IDEM Incident Report at the Indiana Department of Environmental Management (Spill Files)
- EPA EPA Underground Storage Tank Notification Form
- SV Site Visit Observation
- USAEC Comments to the Draft CERFA Report on FBH (May, 1994)
- USAEHA Radiological Survey No. 4272R38-63 (USAEHA, 1962)

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DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS
WASHINGTON, DC



PERMITS
ATTENTION OF
DAMO-ZB

23 December 1991

MEMORANDUM THRU DIRECTOR OF THE ARMY STAFF

FOR ASSISTANT SECRETARY OF THE ARMY FOR INSTALLATIONS,
LOGISTICS AND ENVIRONMENT

SUBJECT: General Officer Steering Committee (GOSC)
Recommendations for Reserve Component (RC) Enclaves at Forts
Benjamin Harrison, Devens, and Ord

1. Reference. Headquarters, Department of the Army Memorandum,
Establishment of Reserve Component Enclave and Relocation of
Activities on Army Installations, 25 October 1991.

2. GOSC to evaluate proposals for the establishment of RC
Enclaves at Forts Benjamin Harrison, Devens, and Ord met on 16
December 1991. The meeting was chaired by the Assistant Deputy
Chief of Staff for Operations and Plans. The Office, Chief of
the U.S. Army Reserve, Director, Army National Guard, Assistant
Chief of Engineers, and Director of Management were voting
members of the GOSC. FORSCOM, TRADOC, AAA, and elements of the
Army Staff were represented.

3. The GOSC recommends the following actions.

a. Fort Benjamin Harrison. Retain 144 acres and 222.9KGSF
for the 123d ARCOM and 47.9KGSF for the Readiness Group Harrison
(RGH)/ Training Exercise Detachment (TED), which provides
sufficient land for future construction for the Indiana National
Guard. Move the USARF School onto the RC Enclave from the
Kessler Reserve Center in Indianapolis. House RGH/TED in excess
space in Bldg 300. Green space surrounding Bldg 300 (41 acres)
or area south of Bldg 126 (38 acres) deeded/licensed to Indiana
National Guard for construction of an armory. Do not retain 211
acre training area or ranges, and do not consolidate additional
USAR activities onto the RC Enclave from off-post facilities.
Enclosure 1 outlines boundaries and identifies bldgs to be
retained.

b. Fort Devens.


(1) RC Enclave Consolidation. Consolidate Reserve
Component activities, BASOPS, and Active Component activities
into the 600 area, and consolidate Regional Training Sites (RTS)
into 3400 area. Relocate 94th ARCOM from leased facilities into
the 600 area; however, this is not a BRAC cost and will be borne
by the USAR. The National Guard preference for consolidation

outside the RC Enclave into the Vicksburg Square historic area is noted. Enclosure 2 outlines boundaries for the recommended Enclave.

(2) Lease back required Army Family Housing under Section 802-type option; excess airfield with option to lease.

(3) Retain the ammunition storage point (ASP) in the RC Enclave. Negotiate the scope required to bring the waste water treatment facility into compliance. Do not retain MAFES facilities in the Enclave.

c. Fort Ord. Retain the U.S. Army Reserve Center and 12 acres as an RC Enclave. Enclosure 3 outlines boundaries and identifies the bldg to be retained.

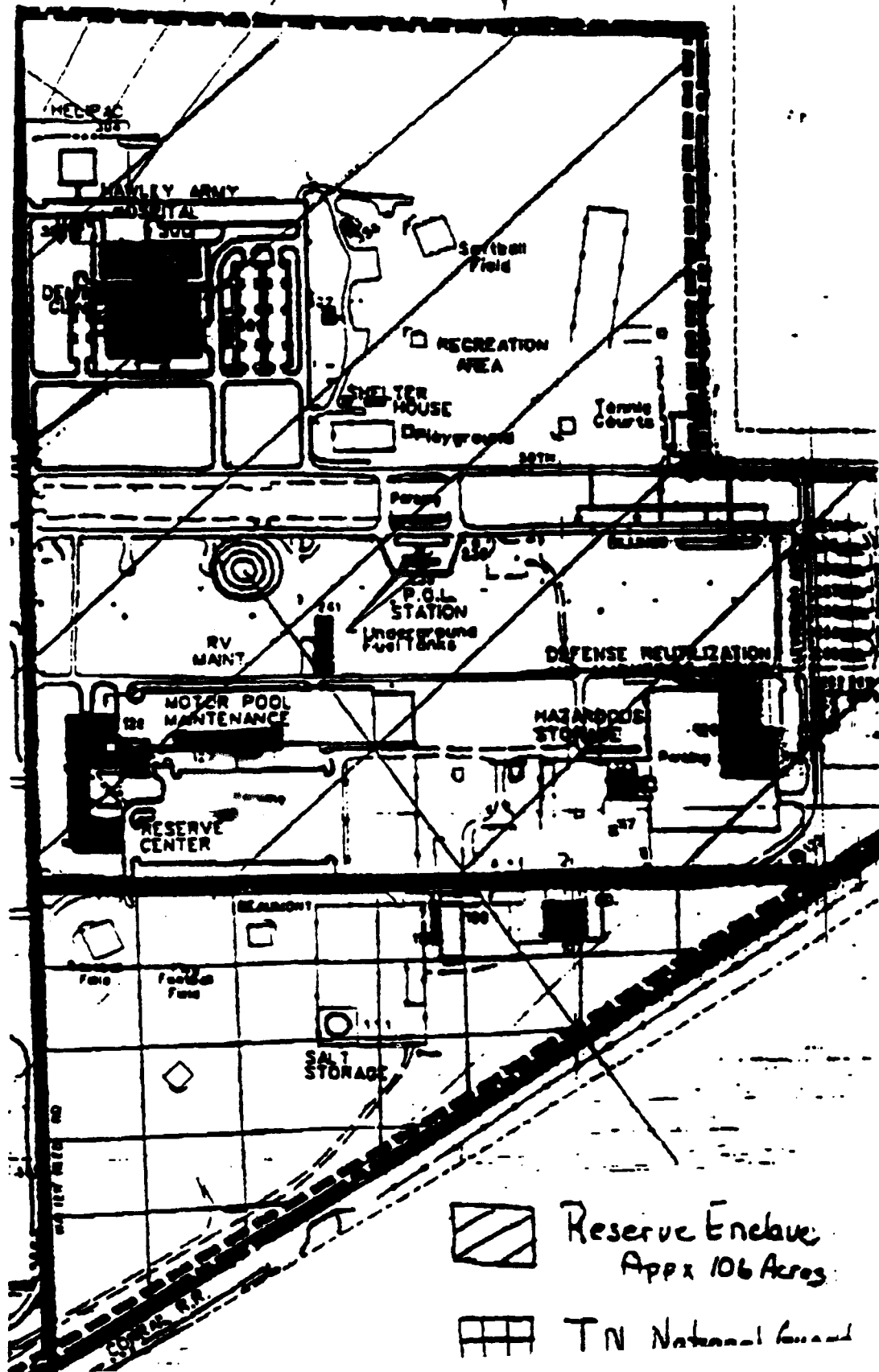

DANIEL R. SCHROEDER
Major General, GS
Assistant Deputy Chief of Staff
for Operations and Plans

Encl

Distribution

Director of Management
Deputy Chief of Staff, Operations
Assistant Chief of Engineers
Director, Army National Guard
Chief, Army Reserve
Chief of Staff, FORSCOM
Chief of Staff, TRADOC

MAPPING LIMITS



Reserve Enclave
Appx 106 Acres



TN National Guard

Date: 12-17-91 7:31am
 From: David Yentzer:Pentagon:OCE
 To: William Brown:Pentagon:OCE
 cc: dougm,sueh,susanh,lynnea
 Subj: ABSENSE
 In-Reply-To: Message from William Brown:Pentagon:OCE of 12-16-91

 FUNDAMENTALLY, OUR RECOMMENDATIONS WERE ACCEPTED.

FT ORD WAS A MINOR RESERVE CENTER WHICH WILL REMAIN IN PLACE.

FT BEN HARRISON INVOLVED A LTA W/ RANGE AND SOME BLDGS AND LAND FOR THE RC ENCLAVE. THE RESERVES DEMONSTRATED NO NEED FOR THE LTA AND IT WILL NOT BE RETAINED. WE CONFIGURED THE SMALLEST RC ENCLAVE THAT GAVE RESERVES SUFFICIENT BLDGS PLUS ROOM TO BUILD. THE ANG WAS GIVEN SUFFICIENT SPACE TO BUILD ALSO,

FT DEVENS WAS A COMPLEX STUDY. WE AGREED TO STAKE OUT OUR REQMTS IN THE MOST COST EFFECTIVE PLACE, IN THE MIDLWE OF POST AND THEN NEGOTIATE W/ THE REUSE GROUPS ON GENERATING REVENUE TO MOVE US TO A CORNER OF THE INSTALLATION. THE CORNER OPTION IS \$40 MILLION MORE EXPENSIVE THAN THE MIDDLE OPTION. THE GOSC DECIDED NOT TO STUDY RELOCATING THE REGIONAL TRAINING AS WE DESIRED AND TO NEGOTIATE THE AMMO POINT WHICH IS IN THE MIDDLE OF POST ALSO. WE WILL TRY TO DO LEASE BACK OF THE AIRFIELD AND SOME KIND OF LEASE BACK OF THE 100 AFH UNITS WE NEED. THE DEVENS "DECISION" IS ACTUALLY A PLAN FOR NEGOTIATING W/ THE LOCAL REUSE GROUP-- IT SERVES AS A REQM'TS ANALYSIS OF ARMY REQM'TS TO BE PRESENTED TO THE REUSE GROUP. THE REUSE GROUP CAN THAN RAISE DOLLARS TO MOVE US THRU BONDS OR SALE OF PROPERTY. NOTEABLY, THE MASS NG AGREED THAT THE SOLUTION SATISFIED THEIR REQM'TS BUT THEY WANT A SPECIFIC AREA ON POST SEPARATE FROM THE REST OF THE ARMY AND WILL PICK UP THE PROPERTY THRU THE STATE SCREENING PROCESS--THE GOSC NOTED THEIR POSITION.

LYNNE AND SUZANNE DID A GREAT JOB ON PREP AND PRESENTATION. SUSAN DID GREAT JOB TOO, BUT MISSED THE EASY PART OF PRESENTING DUE TO ILLNESS.

----- Replied Message Body -----

Date: 12-16-91 6:58pm
 From: William Brown:Pentagon:OCE
 To: David Yentzer:Pentagon:OCE
 Subj: ABSENSE
 In-Reply-To: Message from David Yentzer:Pentagon:OCE of 12-16-91

 Thanks, Dave.

You mentioned the Reserve Enclave GOSC went well--could you ask someone to give me a summary overview sometime on Tuesday?

----- Replied Message Body -----

Date: 12-16-91 6:03pm
 From: David Yentzer:Pentagon:OCE
 To: ZCI

AEC

CEORL-RE-H (DACS-DMB/28 May 93) (5-10c) 3d End Lambert/7373
SUBJECT: Fort Harrison Transition Task Force (FHTTF) Proposal
for Disposal of Harrison Village in 1994

Commander, U.S. Army Engineer District, Louisville, P.O. Box 59,
Louisville, KY 40201-0059 23 June 1993

FOR Director, Real Estate, USACE, ATTN: CERE-C (Mr. Patterson),
Pulaski Building, Room 4133, Washington, D.C. 20314-1000

1. In accordance with 2d Endorsement, following are recommenda-
tions for implementing the early transfer (1st Qtr FY 95) of
Harrison Village.

a. Procedures and Timelines.

- The actions required for early transfer of the subject property, the responsible agencies for the designated actions, and the timelines to complete the actions, are defined in Enclosure 2. Slippage of dates for critical actions, i.e. issuance of an Environmental Baseline Suitability for Transfer (EBST) and completion of the Environmental Impact Statement, will delay the closing of the real estate transaction, which is projected to be October 1994. Note: The date indicated for completion of the EBST, September 1993, allows a 30-day, no action, time period after the Record of Decision.

- In accordance with the attached schedule, State and local screening will commence subsequent to completion of the FHTTF's reuse plan for the Harrison Village Parcel. DOD and Federal screening have been completed. The entire property is presently being screened pursuant to the McKinney Act for homeless assistance use. Expressed requirements for homeless assistance use will have to be addressed by the FHTTF Reuse Committee.

b. Competition Issue.

- The property will be made available to the private sector on a competitive bid basis, as required under Section 203 of the Federal Property Administrative Act of 1949 (40 U.S.C. 484).

- The FHTTF's proposal to utilize the Department of Housing and Urban Development, as a possible mortgage insurer, has merit. The HUD 223-f program provides almost 100 percent financing for the developer. Little or no equity capital will be required from the developer, making the financial risk very low. The major market risk is filling up and/or keeping the units occupied to provide income to service the debt.

- If the appraised value is much in excess of \$5,200,000, the HUD 223-f program may not work. HUD does its own appraisals and guarantees a loan of 85 percent of value.

CEORL-RE-H

SUBJECT: Fort Harrison Transition Task Force (FHTTF) Proposal for Disposal of Harrison Village in 1994

c. Lease Option. The lease option has the following limits:

- No current authority to lease with option to buy.
- Execution of the lease under current guidelines would take as long as it would to sell the property.
- Inventory and condition report would need to be prepared at beginning of lease term and at termination of lease. This could lead to problems with what repairs/restoration would be required of the lessee to comply with lease conditions.
- Maintenance of the facility would require detail conditions in the lease that would be difficult to monitor/enforce.
- COE would be required to approve/monitor maintenance improvements, maintenance plans, insurance requirements, utilities, and rental rates as part of the lease agreement. However, we would not have the resources to monitor day to day activities. This would have to be accomplished by MACOM/ Installation personnel.
- Lease of the entire housing area would not be economically feasible, unless the Army committed to a certain number of military personnel occupying the housing units.

d. Value of Property with a Lease Option.

- Value of the lease would have little to no effect on the value of the property at sale since the Government has made no guarantees for occupancy.
- Rental rates range from \$450/month, plus \$50 for utilities, for a type 2A, 1-bedroom unit, to \$600/month, plus \$80 for utilities, for a type 4A, 4 bedroom unit.
- The Fair Market Value of Harrison Village will be determined by a contract appraisal, in accordance with the Federal Property Administrative Act of 1949. Value of the entire Harrison Village, based on an economic valuation methodology done by Mr. Spaid, was projected at \$5,200,000 (\$22,413/unit). If an additional \$2,798,222 is invested for improvements, the value (cost) is \$7,998,222 (\$34,475/unit). This compares with a true tax value of \$9,377,703 (\$40,421/unit and \$33.43/square foot). True tax value is used in determining assessed value and is based on 1993 replacement costs adjusted for age.

CEORL-RE-H

SUBJECT: Fort Harrison Transition Task Force (FHTTF) Proposal
for Disposal of Harrison Village in 1994

e. Disposal Alternatives.

Alternative No. 1.

- Sell the property "as is" with full or partial Army occupancy. One bedroom units would stay as one bedroom units, two bedroom units would stay as two bedroom units, etc. The new owner would collect rent from Army personnel at the Housing allowance, plus adjustment levels. The Army personnel could stay until they are moved or until some agreed upon outside date. As Army personnel leave, civilian renters could occupy the units. The location of Army occupied units and new construction/rehab is to be handled by the new owner. Hud 223-f financing could be a financial option.

Alternative No. 2.

- Sell the property "as is" with the developer converting the units to condominiums. The buyer could sell the units as condominiums while renters still occupied units. This is a conversion from "rental" to "for sale" units, which has been accomplished in the local area. Harrison Village units each have a ground floor entrance, with no one living upstairs, which enhances the value of the units for condominium use.

Alternatives 1 and 2 could be accomplished within the time frame on Enclosure 2.

Alternative No. 3.

- Offer the property for sale in an RFP in an "as is" condition. Negotiate the details and adjustments with the potential buyers at the time of sale rather than trying to anticipate every market and financing condition at this early date.

2. Point of contact for the Louisville Real Estate Division is Mike Lambert at commercial 502-625-7373.

FOR THE COMMANDER:

2 Encls
1. nc
Added 1 encl

Michael G. Barter
MICHAEL G. BARTER
Chief, Real Estate Division

HARRISON VILLAGE DISPOSAL

(Summary of Required Action Items)

	93					94					95													
	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB		
COORDINATE HOUSING NEEDS	:	:	***	***	***	(FBH)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
ESTABLISH VACANCY DATES	:	:	***	***	***	(FBH)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
DEVELOP SCHEDULE	:	:	***	***	***	(FBH)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
DETERMINE MILITARY LOCAL NEEDS	:	:	***	***	***	(FBH)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
UNIT RENTAL AGREEMENTS	:	:	:	:	:	(DABH-ZCI-B)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
RENTAL COST	:	:	:	:	:	(DABH-ZCI-B)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
CONTRACTUAL REQUIREMENTS	:	:	:	:	:	(DABH-ZCI-B)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
UTILITY CONTRACT - V&S	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(FBH)
BIS	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(TRADOC/CEORL-PD-R)
BBSF	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(ABC)
CULTURAL RESOURCES/MOA w/SNPD	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(TRADOC/CEORL-PD-R)
ASST SCHEDULES	***	***	(CG)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
MCKINNEY ACT SCREENING	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CERB-C)
REUSE PLAN	:	***	***	***	***	(FHITF)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
SURPLUS DECLARATION	:	:	:	:	***	***	(CERB-C)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
ST. & LOC. SCREENING (NO INTEREST)	:	:	:	:	:	***	***	***	(CBORL-RE-H)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
DISPOSITION PLAN	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	Marker Demand Fund. Target Sources Buyer
PREPARE CONTRACTOR SCOPE OF WORK	:	:	:	:	:	:	:	***	(CBORL-RE-H)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CONTRACTING (ADVERTISE & AWARD)	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-LT-C)
ZONING	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(FHITF)
APPRAISAL	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-RE-S)
ADVERTISE PROPERTY	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-RE-E)
BID OPENING & AWARD	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-RE-H)
PREPARE DEED	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-RE-H)
TRANSFER COMPLETED	:	:	:	:	:	:	:	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	(CBORL-RE-H)

Appendix B: Legal Description of the Installation Property

JURISDICTION BOUNDARY

FORT BENJAMIN HARRISON
MILITARY RESERVATION
MARION COUNTY, INDIANA

LEGAL DESCRIPTION

Situate in the State of Indiana, County of Marion, being all of Section 6, Township 16 North, Range 5 East, parts of Section 4, 5, 7, and 8, Township 16 North, Range 5 East, parts of Section 29, 30, and 31, Township 17 North, Range 5 East, parts of Section 35 and 36, Township 17 North, Range 4 East and part of Section 1, Township 16 North, Range 4 East of the Second Principal Meridian, more particularly described as follows:

Commencing at a brass plug marking the Southeast corner of the Southeast Quarter of said Section 1; thence N 89° 17' 35" W along the South line of the said Southeast Quarter 1312.11 feet; thence N 00° 36' 43" W 45.00 feet to the TRUE BEGINNING POINT; thence

N 00° 36' 43" W 2608.73 feet to a precast concrete monument marking the Southeast corner of the West Half of the Northeast Quarter of said Section 1; thence

N 89° 18' 45" W along the South line of the said Northeast Quarter 431.82 feet to the Easterly right-of-way line of Boy Scout Road (the next four (4) described courses being along the Easterly and Northerly right-of-way line of Boy Scout Road); thence

N 00° 22' 48" W parallel with the West line of the said Northeast Quarter 45.01 feet; thence

N 89° 18' 45" W, parallel with the said South line, 737.42 feet; thence

N 44° 50' 38" W 142.74 feet; thence

N 00° 22' 48" W, parallel with the West line of the said Northeast Quarter, 2309.28 feet to a United States Corps of Engineers monument on the South line of the Southeast Quarter of said Section 35 (said point also being on the Northerly right-of-way line of Shafter Road); thence

N 63° 01' 12" W along said Northerly right-of-way line 519.21 feet to the Easterly right-of-way line of Fall Creek Road (the next seven (7) described courses being along the said Easterly right-of-way line); thence

N 13° 31' 22" E 215.91 feet; thence

N 13° 22' 56" W 227.71 feet; thence

N 17° 44' 39" W 542.92 feet; thence

N 10° 40' 23" E 264.35 feet; thence

JURISDICTION BOUNDARY

FORT BENJAMIN HARRISON
MILITARY RESERVATION
MARION COUNTY, INDIANA

LEGAL DESCRIPTION (cont'd)

N 00° 10' 43" E along the said West line 1657.05 feet to a brass plug marking the North Quarter corner of said Section 31; thence

N 89° 50' 37" W along the North line of the Northwest Quarter of said Section 31 a distance of 63.93 feet to the top of the Westerly bank of said Fall Creek; thence with the top of the Westerly bank of said Fall Creek through the following sixteen (16) described courses

N 22° 38' 02" W 29.42 feet; thence

N 17° 49' 07" W 59.53 feet; thence

N 10° 04' 02" W 103.68 feet; thence

N 29° 40' 51" E 107.64 feet; thence

N 64° 40' 34" E 293.55 feet; thence

N 39° 18' 48" E 339.00 feet; thence

N 76° 03' 38" E 348.70 feet; thence

N 62° 26' 09" E 155.61 feet; thence

N 03° 51' 04" W 593.67 feet; thence

N 20° 01' 31" W 141.83 feet; thence

N 22° 15' 05" E 118.32 feet; thence

N 20° 41' 16" E 204.18 feet; thence

N 19° 21' 35" E 357.43 feet; thence

N 13° 50' 22" E 155.34 feet; thence

N 39° 21' 42" E 100.69 feet; thence

N 36° 31' 26" E 247.80 feet to a United States Corps of Engineers monument on the North line of the Southeast Quarter of said Section 30; thence

S 89° 41' 38" E along the said North line 1359.38 feet to a United States Stone Monument marking the Northwest corner of the Southwest Quarter of said Section 29; thence

JURISDICTION BOUNDARY

FORT BENJAMIN HARRISON
MILITARY RESERVATION
MARION COUNTY, INDIANA

LEGAL DESCRIPTION (cont'd)

N 89° 18' 18" E along the North line of the said Southwest Quarter 1339.13 feet to a United States Corps of Engineers Monument marking the Northeast corner of the Northwest Quarter of the said Southwest Quarter; thence

S 00° 07' 59" W 1304.20 feet to a precast concrete monument; thence

S 89° 44' 24" W 1337.91 feet to a United States Stone Monument; thence

S 00° 10' 24" E 1312.75 feet to a United States Stone Monument marking the Southeast corner of the Southeast Quarter of said Section 30; thence

S 89° 59' 19" W along the South line of the said Southeast Quarter 1327.56 feet to a United States Corps of Engineers Monument marking the Northeast corner of the West Half of the Northeast Quarter of said Section 31; thence

S 00° 12' 01" W along the East line of the West Half of the said Northeast Quarter 2648.88 feet to the Northeast corner of the West Half of the Southeast Quarter of said Section 31; thence

S 00° 03' 10" W along the East line of the West Half of the said Southeast Quarter 2638.95 feet to a precast concrete monument marking the Southeast corner of the West Half of the said Southeast Quarter Section; thence

N 89° 43' 43" E along the North line of the Northeast Quarter of said Section 5 a distance of 36.61 feet to a curve having a radius of 602.83 feet, the radius point of which bears South 89° 21' 18" W; thence

Southerly along the said curve 507.48 feet to a point which bears S 42° 24' 42" E from said radius point (said point also being on a curve having a radius of 501.91 feet, the radius point of which bears S 42° 24' 42" E); thence

Southerly along the said curve 423.38 feet to a point which bears S 89° 15' 27" W from said radius point; thence

S 00° 44' 33" E 237.79 feet; thence

N 89° 03' 33" E 2593.19 feet to the West line of the Northwest Quarter of said Section 4; thence

S 00° 21' 04" E along said West line 1217.29 feet to the West Quarter corner of said Section 4; thence

AEC

CEORL-RE-H (DACS-DMB/28 May 93) (5-10c) 3d End Lambert/7373
SUBJECT: Fort Harrison Transition Task Force (FHTTF) Proposal
for Disposal of Harrison Village in 1994

Commander, U.S. Army Engineer District, Louisville, P.O. Box 59,
Louisville, KY 40201-0059 23 June 1993

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Pulaski Building, Room 4133, Washington, D.C. 20314-1000

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Appendix C: Regulatory Comments to the Draft FBH CERFA Report



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Evan Bayh
Governor
Kathy Prosser
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

January 18, 1994

Commander
U.S. Army Environmental Center
ATTN: SFIM-AEC-BAC- (Mr. Andrew Maly)
Aberdeen Proving Ground
Edgewood Area, Maryland 21010-5401

Dear Mr. Maly:

Re: Review of the Draft Community
Environmental Response Facilitation
Act (CERFA) for Fort Benjamin
Harrison, Marion County, Indiana

Staff of the Indiana Department of Environmental Management (IDEM) have reviewed the above named document. Our review generated the following comments:

SPECIFIC COMMENTS

Section 2.1, Page 6, 1st full Paragraph:

"Analytical results from these samples indicate that the water quality is good and suitable for its designated uses." "The objective of a 1980 survey was to determine the impact of FBH activities on the levels of pesticide and PCB in Fall Creek; the results of the sampling and analysis indicated no evidence that FBH is contributing significant levels of pesticides or PCBs to Fall Creek."

These statements are too general. Specific results of the sampling and analysis need to be available for IDEM to draw their own conclusions. Specific concentrations and names of all constituents should be included or referenced in this report.

Mr. Maly
Page Two

Section 2.1, Page 6, Last Paragraph:

The text states, "the study concluded that these areas did not generally appear to have significantly affected the surrounding areas." This is a vague description lacking specific concentrations and names of all constituents. A concern for the environmental status of neighboring parcels is created with this description.

Section 2.1, Page 6, Last Paragraph:

The East Landfill was reported to have one monitoring well, MW-20, which had vinyl chloride exceeding the drinking water standard in 1990. The presence of this contaminant was confirmed in 1991, but the confirmational sources were not identified on a map nor were the levels of vinyl chloride stated. Could this plume or others be impacting the downgradient CERFA parcel currently or the future? Vinyl chloride is a terminal byproduct of microdecomposition of a number of chlorinated solvents such as tetrachloroethene, trichloroethene, etc. Vinyl chloride tends to be at the leading edge of a contaminated plume, therefore, the rest of the plume should be characterized. Isoconcentration maps of the groundwater contamination and any soil/subsoil contamination would help define the source(s), extent and chemical nature of the plume for the impacted areas.

Again, sample results and analysis in this section should be referenced or included as an appendix to this report.

Section 2.1, Page 7, 3rd Paragraph:

This paragraph identifies two wash racks as potential contaminant sources due to their direct tie into the storm sewer system. Has the possible issue of contamination migration through the storm sewer system from sources such as photographic labs, maintenance shops, paint shops, petroleum and oil accumulation areas been investigated?

Section 2.1, Page 7, 6th Paragraph:

"Results showed elevated levels of total pesticide in two of 22 soil samples, one of six sediment samples, three of four fish samples, and none in one bird sample." Specific sample results and locations should be stated or referenced.

Mr. Maly
Page Three

Section 2.1, Page 8, 1st Full Paragraph:

The text states, "the study concluded that these areas did not generally appear to have significantly affected the surrounding areas." This statement is too vague. The contamination is not quantified and the locations are not detailed. These generalizations are an insufficient basis upon which to draw conclusions.

Section 2.2, Page 9, 3rd Paragraph:

Are the USTs at FBH registered with IDEM? Were any of the USTs found to be leaking? If so, the LUSTs should be closed through IDEM's LUST remediation requirements. A brief summary should be presented to show contaminated levels before and after cleanup. This summary should include pictorial depiction of the contaminant levels. This information would be helpful when delineating the potential migration of contaminants from these sites.

A table should be included summarizing the status of each UST which include:

- Location
- Capacity
- Install year
- Fuel type
- Tank Material
- Regulated?
- Status

Section 3.2, Page 14, First Bullet:

Same concern as previous comment concerning USTs.

Section 4.3, Page 16, 2nd Paragraph:

"Ground water impacts have been observed and are not considered very significant." What data was used to make this conclusion?

Section 4.3, Page 16, 2nd Paragraph:

Have the leachate seeps observed south of the former East Landfill been sampled?

Mr. Maly
Page Four

Section 5.1.1, Page 28, 2nd Paragraph:

This section needs to discuss the possible migration of contaminants to CERFA Parcels via groundwater and surface water.

Section 5.1.1, Page 28, Last Paragraph:

Possible migration of contaminants to CERFA Parcels?

Section 5.1.1, Page 29, 4th Paragraph:

Clarify the logic used when delineating the potential range of potentially significant surface water and groundwater impacts.

Section 5.1.1, Page 30, 2nd Paragraph:

What are the contamination levels found in soils and groundwater on Parcel 70D?

GENERAL COMMENTS

In October 1992, Public Law 102-426, the Community Environmental Response Facilitation Act (CERFA) Amended Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and established new procedures with respect to contamination assessment, cleanup and regulatory agency notification/concurrence for federal facilities closures. The primary CERFA objective is to expeditiously identify property offering the greatest opportunity for immediate reuse and redevelopment. The report identifies real property where no CERCLA regulated hazardous substances or petroleum products were stored, released, or disposed.

This document presents a comprehensive investigation and contamination assessment for non-CERFA parcels that preclude immediate reuse and redevelopment. However, the document does not indicate that adequate characterization has been performed to determine that offsite migration has not occurred or will not occur from the CERFA Disqualified Parcels. Conclusions are drawn from general information where specific data is not stated or referenced. It is likely that most of the determinations of these parcels' classification is correct, but IDEM would like specific data in order to concur or not concur with the rationale used for potential contamination migration.

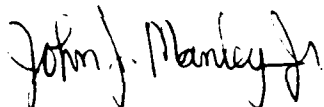
Mr. Maly
Page Five

It is impossible to concur that CERFA Parcels are free from contamination without specific knowledge of the groundwater environment related to CERFA Disqualified and CERFA Excluded Parcels. A map illustrating the potential source of groundwater contamination should be prepared as an addendum to this report. This addendum should include characterization of potential contaminants of concern to the fullest extent possible.

Based on the comments presented in this letter, IDEM cannot concur with the CERFA Report, as it is currently presented.

Thank you for the opportunity to review the draft CERFA Report. We look forward to further discussion of these comments. If you have any further questions please contact me at (317) 233-6425.

Sincerely,



John J. Manley, Project Manager
DOD Environmental Restoration Program
Office of Environmental Response

JJM:pm

cc: Billy Crawford, Chemistry
Kevin Houppert, Geologist
Karen Mason-Smith, U.S. EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

February 17, 1994

REPLY TO THE ATTENTION OF

Commander
U.S. Army Environmental Center
ATTN: SFIM-AEC-BAC-(Mr. Bill Nelson)
Aberdeen Proving Ground
Edgewood Area, Maryland 21010-5401

Dear Mr. Nelson:

Subject: Technical Review Comments on the Draft Community
Environmental Response Facilitation Act (CERFA) for
Fort Benjamin Harrison, Marion County, Indiana

The enclosed technical review comments are provided based on a general review of the subject document dated October 29, 1993, which was received by this office of the United States Environmental Protection Agency (U.S. EPA) on December 17, 1993.

As a partner and key member to the Base Realignment and Closure (BRAC) Cleanup Team or BCT for Fort Benjamin Harrison, in accordance with President Clinton's Five - Point Plan/Initiative to accelerate base closure cleanup, U.S. EPA would like to thank you for the opportunity to review this draft CERFA Report.

U.S. EPA would also like to thank you for the opportunity to provide our comments and concerns to the Indiana Department of Environmental Management (IDEM) in an effort of technical support and advice. If you should have any questions or comments, please feel free to contact me at (312) 886-6150.

Sincerely yours.

Karen L. Mason-Smith

Karen L. Mason-Smith, Project Manager
IL/IN Remedial Response Branch

Enclosures

cc: Richard Blume-Weaver, FBH BEC
Ken Tindall, EPA

John Manley, IDEM
Elmer Shannon, EPA

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 COMMENTS**

**US ARMY FORT BENJAMIN HARRISON
Draft Community Environmental Response Facilitation Act
(CERFA) Report for Fort Benjamin Harrison, Marion County, Indiana**

The following is a summary of the review comments on the Draft CERFA Report for U.S. Army Fort Benjamin Harrison (FBH). We have the following comments:

Technical Comments -- FBH Draft CERFA Report

1. **Page 4, Section 1.3, 1st paragraph, 4th sentence** -- Please clarify. This paragraph mentions "...eight state special concern birds...", unfortunately, only five birds are listed. Please correct the number to five or expand the list that was provided to eight.
2. **General Comment** -- Parcel 14P (Golf Course) is listed as a CERFA Parcel under Category 1. Photograph 21 in Section 7 of the Enhanced Preliminary Assessment (PA), dated February 1992, shows "Staining At Golf Course AST (Building 674)". The PA seems to indicate that a spill has taken place on this parcel, which should warrant a different category assignment for the parcel in question, unless sampling of the soils in this area have been collected and the soils have been determined to be clean. Has this been done?
3. **Page 13, Section 3.1.11** -- The Hospitals at FBH may require further consideration. Specifically, what happened to medical wastes generated from the FBH Post Hospital (circa 1908), the Eli Lilly Base Hospital 32/General Hospital 25 (circa 1917-1918), and from the Billings General Hospital (circa 1941-1946)? Page 3-42 of the Enhanced Preliminary Assessment mentions what was done with the Hawley Army Hospital wastes, but no mention of the wastes generated from the other hospitals is given. Also, these hospitals do not seem to have shared the same location. Where were the pre-1970's medical facilities located? I am not sure what techniques might detect the presence of bio-contaminated soils &/or groundwater, though geophysics or groundwater sampling may detect metals from needles, etc. if these objects are present. RCRA Land Use Restrictions may be required in order to transfer parcels that were potentially impacted by medical wastes from the older hospitals.

4. **Page 17 - 18, Section 4.4.3 PCB Transformers** -- Of great significance. Section 4.4.3 PCB Transformers (pp. 17-18) of the CERFA documents seems to be inconsistent with the Final Enhanced Preliminary Assessment. Specifically, page 18 of the CERFA document states that, "...there has been no evidence to indicate that any of the PCB-transformers were leaking." Section 5.14.6.1 Transformers (AREE 36) Conclusions (p.5-40) of the Final Enhanced Preliminary Assessment states, "There are records of several documented spills and releases of PCBs and PCB-containing fluids at FBH associated with transformers."

Given the above quotation, it seems that in order to be in compliance with USAEC guidance, none of the parcels where the documented spills occurred can be allowed to be CERFA qualified. A thorough examination of the records cited in the Enhanced Preliminary Assessment is in order to delineate all known areas where releases occurred.

5. **General Comment** -- Page 3-25 of the Enhanced Preliminary Assessment documents a PCB release at the Former Drum Storage Area (AREE 15) of 1 to 2 quarts of PCB transformer oil that occurred on 4 August, 1980. Page 3-27 documents a release of exactly the same amount on exactly the same day in the DRMO Hazardous Waste Storage Area AREE 16; this is apparently the same spill as mentioned on page 3-25.

Page 3-54 documents the above mentioned release, as well as an approximate 3-ounce release on November, 1981 at the an unmentioned location, and a 10 to 15 gallon spill of PCB-contaminated dielectric fluid near Building 1031B. It should be noted that all of the above mentioned spills received soil removal action; it is unclear if USAEC guidance would still require these parcels to be CERFA-disqualified. It is unlikely that these three areas would be disqualified by EPA's Land Disposal Regulations.

6. **General Comment** -- As a minor comment, Section 5.1.1 CERFA Disqualified Parcels (p.28). Parcels 40, 47, and 49 appear labeled with the qualifiers "PS/L/A" (i.e. without the "Disqualified" (D) qualifier). However, in Table 5.1-1, all three are labeled as "D-PS Q-A/L". Please be consistent with labels.
7. **General Comment** -- Many of the statements made in this document have been very generalized. Please provide either the actual data to support statements made, or exact references so that the reader can confirm.

8. **General Comment** -- The CERFA Report also needs figures or maps showing the delineation of the contaminant plume(s) in groundwater and potential source areas for that contamination. Parcels that may currently be clean have the potential to suffer future impacts from groundwater contamination that might migrate downgradient from source areas and go through these parcels. The Enhanced Preliminary Assessment does not seem to provide information on the extent of ground water plumes, so it is somewhat unclear if this has been considered. Potentially, deed restrictions may need to be written with this in mind.

9. **General Comment** -- The general lack of delineation of contaminant boundaries makes it difficult to determine if additional environmental sampling is necessary. Data may be present to fully define contaminant boundaries, but it is difficult to determine this from either the CERFA document and/or the Enhanced Preliminary Assessment. Therefore, I cannot comment on the need for additional sampling at this time.

In conclusion, based on the above comments in this letter, USEPA cannot concur with the CERFA Report as it is currently presented.

13 Apr 94

RESPONSE TO INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
COMMENTS ON THE DRAFT FORT BENJAMIN HARRISON CERFA REPORT

1) Comment: Section 2.1, Page 6, 1st full paragraph:

"Analytical results from these samples indicate that the water quality is good and suitable for its designated uses." The objective of the 1980 survey was to determine the impact of FBH activities on the levels of pesticide and PCB in Fall Creek; the results of the sampling and analysis indicated no evidence that FBH is contributing significant levels of pesticides or PCBs to Fall Creek."

These statements are too general. Specific results of the sampling and analysis need to be available for IDEM to draw their own conclusions. Specific concentrations and names of all constituents should be included or referenced in this report.

Response: Concur. The CERFA report needs to better reference documents containing specific analytical results which support statements made in the CERFA report. However, the Army does not concur with the need to include specific analytical results in the CERFA report. The Army does not believe that Congress intended a reevaluation of all environmental studies which came before the requirement to comply with CERFA. As such, the efforts to date, all of it reviewed by the regulatory agencies, has already occurred to characterize the nature and extent of contamination at FBH known to date. Further investigation to better define extent of contamination is currently underway and has included regulatory input. The **conclusions** of these reports and efforts to identify what areas of FBH are and are not "uncontaminated" are pertinent to fulfilling the requirements of CERFA. In the Army's opinion, the level of detail alluded to in this comment is beyond the scope of the information required to be re-presented in the CERFA report. However, all available information was reviewed in reaching determinations of "uncontaminated" parcels, in accordance with CERFA.

Reports which contain the detailed information regarding the level of contamination at a site will be specifically referenced in the CERFA report.

2) Comment: Section 2.1, page 6, Last Paragraph:

The text states, "the study concluded that these areas did not generally appear to have significantly affected the surrounding areas." This is a vague description lacking specific concentrations and names of all constituents. A concern for the environmental status of neighboring parcels is created with this description.

Response: Concur. Documents which contain data utilized to support descriptions lacking specific analytical results will be referenced in the CERFA report. Vague descriptions will be removed where appropriate. However, the Army believes that a certain amount of subjective language is appropriate. The CERFA report has as its primary user local reuse groups. The CERFA report results are communicated more effectively to less technically proficient users if a certain amount of subjective language is included.

All parcels with "CERFA Parcel" and "CERFA Parcel with Qualifier" designations will contain an expanded discussion on the methodology used to determine that adjacent property did not have the potential to impact on the "uncontaminated" status of that particular CERFA Parcel or CERFA Parcel with Qualifier.

3) Comment: Section 2.1, Page 6, Last Paragraph:

The East Landfill was reported to have one monitoring well, MW-20, which had vinyl chloride exceeding the drinking water standard in 1990. The presence of this contaminant was confirmed in 1991, but the confirmational sources were not identified on a map nor were the levels of vinyl chloride stated. Could this plume or others be impacting the downgradient CERFA parcel currently or in the future? Vinyl chloride is a terminal byproduct of microdecomposition of a number of chlorinated solvents such as tetrachloroethene, trichloroethene, etc. Vinyl chloride tends to be at the leading edge of a contaminated plume, therefore, the rest of the plume should be characterized. Isoconcentration maps of the groundwater contamination and any soil/subsoil contamination would help define the source(s), extent and chemical nature of the plume for the impacted areas.

Again, sample results and analysis in this section should be referenced or included as an appendix to this report.

Response: Concur. Sample results and analysis will be referenced. The CERFA assessment has considered potential impacts from the contaminated groundwater plume and has conservatively disqualified potentially impacted downgradient property. During the preparations of revisions to the draft CERFA report, additional monitoring data was obtained from the installation. Due to the raw nature of this data, and the lack of a formal summary report for data collected after the last

available groundwater investigation report (USAEHA 1990), new conclusions regarding groundwater were not made. The conservative parcel boundaries delineated in the draft CERFA report will not be altered. These parcel delineations were based on reported groundwater flow directions, the generally low contaminant concentrations observed, and watershed boundaries.

4) Comment: Section 2.1, Page 7, 3rd Paragraph:

This paragraph identifies two wash racks as potential contaminant sources due to their direct tie into the storm sewer system. Has the possible issue of contamination migration through the storm sewer system from sources such as photographic labs, maintenance shops, paint shops, petroleum and oil accumulation areas been investigated?

Response: Concur. CERFA required the Army undertake a 7 step process to determine whether or not there was any evidence of contamination which would preclude a parcel from being designated as "uncontaminated." The Army believes that it has conducted the designation of "uncontaminated" parcels in accordance with this process. Specific to storm sewer and drainage systems, the Army did not take the position that if the system was properly functioning, even if the system may have channeled hazardous substances at some point, the system would not be "disqualified" from being designated as "uncontaminated" (storage, release, or disposal has not occurred). If the system is known to have been functioning improperly or known to have cracks (releases), data would be evaluated and thus the proper evaluation for determining whether a parcel should be "disqualified" was considered. The Army does not believe it was Congress's intent to eliminate parcels which could be designated as "uncontaminated" based on supposition. In the absence of information to the contrary, the Army has not "disqualified" parcels from being designated as "uncontaminated."

5) Comment: Section 2.1, Page 7, 6th Paragraph:

"Results showed elevated levels of total pesticides in two of 22 soil samples, one of six sediment samples, three of four fish samples, and none in one bird sample." Specific sample results and location should be stated or referenced.

Response: Concur. The appropriate document containing a complete discussion of sampling and analysis results will be referenced (see also response to comment 1).

6) Comment: Section 2.1, Page 8, 1st Full Paragraph:

The text states, "the study concluded that these areas did not generally appear to have significantly affected the surrounding areas." This statement is too vague. The contamination is not quantified and the locations are not detailed. These generalizations are an insufficient basis upon which to draw conclusions.

Response: Concur. This paragraph will be rewritten to eliminate some of the vagueness although detailed data will only be referenced. Also, see response to comment 2.

7) Comment: Section 2.2, Page 9, 3rd Paragraph:

Are the USTs at FBH registered with IDEM? Were any of the USTs found to be leaking? If so, the LUSTs should be closed through IDEM's LUST remediation requirements. A brief summary should be presented to show contaminated levels before and after cleanup. This summary should include pictorial depiction of the contaminant levels. This information would be helpful when delineating the potential migration of contaminants from these sites.

A table should be included summarizing the status of each UST which include:

- Location
- Capacity
- Install year
- Fuel type
- Tank Material
- Regulated?
- Status

Response: Concur. Some but not all of the information requested in this comment is included in Table 3-5 of the Enhanced Preliminary Assessment (Weston 1992). Tanks were identified mainly from three sources: Table 3-5 (Weston 1992), the EPA UST Notification Form prepared by Fort Ben Harrison (FBH) NRMD staff, and historical records at the installation; above ground and underground fuel tanks are noted in Table 5.1-1 of the CERFA report. All parcels in which fuel tanks were formerly or are currently located have been disqualified (or excluded due to other reasons). Additional information necessary to create the requested table was not found during the CERFA assessment. Known sites that were contaminated by leaking tanks are currently under investigation (Harding Lawson 1993) and are located in disqualified parcels. An expanded discussion on potential migration from contaminated or formerly contaminated sites will be provided.

8) Comment: Section 3.2, Page 14, First Bullet:

Same concern as previous comment concerning USTs.

Response: Concur. See response to comment 7.

9) Comment: Section 4.3, Page 16, 2nd Paragraph:

"Ground water impacts have been observed and are not considered very significant." What data was used to make this conclusion?

Response: Concur. The sentence has been removed and additional information is provided in the referenced paragraph.

10) Comment: Section 4.3, Page 16, 2nd Paragraph:

Have the leachate seeps observed south of the former East Landfill been sampled?

Response: Concur. Additional monitoring information for 1992 was obtained from FBH during the preparation of revisions to the draft CERFA report. This information included incomplete, non-validated data for various surface water, groundwater, and potable water samples. Based on a cursory review of this data, the CERFA contractor concluded that leachate seeps from near the former East Landfill were not sampled; however, surface water samples in this area were collected and no significant impacts were noted. Due to the raw nature of this data, and the lack of a formal summary report for the surface water data, the conservative parcel boundaries delineated in the draft CERFA report will not be altered.

11) Comment: Section 5.1.1, Page 28, 2nd Paragraph:

This section needs to discuss the possible migration of contaminants to CERFA Parcels via groundwater and surface water.

Response: Concur. Parcels or properties adjacent to the CERFA Parcels or the CERFA Parcels with Qualifiers were identified and specifically evaluated. The focus was to determine whether releases have occurred on adjacent property both on and off FBH, and to provide assurance that any contaminants from adjacent properties or parcels do not impact the uncontaminated areas designated as CERFA Parcels and CERFA Parcels with Qualifiers. Any potential concerns will be discussed within the description of each CERFA Parcel and CERFA Parcel with Qualifier. Statements indicating that adjacent properties were considered with respect to potential impact on the CERFA Parcels or the CERFA Parcels with Qualifiers will be provided in Section 5.1.2 and 5.1.3, respectively; appropriate comments will also be included in Table 5.1-1.

12) Comment: Section 5.1.1, Page 28, Last Paragraph:

Possible migration of contaminants to CERFA parcels?

Response: Concur. See response to comment 11 above.

13) Comment: Section 5.1.1, Page 29, 4th Paragraph:

Clarify the logic used when delineating the potential range of potentially significant surface water and groundwater impacts.

Response: Concur. The discussion in this paragraph will be expanded to describe how the parcel boundary was established.

14) Comment: Section 5.1.1, Page 30, 2nd Paragraph:

What are the contamination levels found in soils and groundwater on Parcel 70D?

Response: Concur. The document containing specific levels of contamination will be referenced.

15) General Comments

In October 1992, Public Law 102-426, the Community Environmental Response Facilitation Act (CERFA) amended Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and established new procedures with respect to contamination assessment, cleanup and regulatory agency notification/concurrence for federal facilities closures. The primary CERFA objective is to expeditiously identify property offering the greatest opportunity for immediate reuse and redevelopment. The report identifies real property where no CERCLA regulated hazardous substances or petroleum products were stored, released, or disposed.

This document presents a comprehensive investigation and contamination assessment for non-CERCLA parcels that preclude immediate reuse and development. However, the document does not indicate that adequate characterization has been performed to determine that offsite migration has not occurred or will not occur from the CERFA Disqualified Parcels. Conclusions are drawn from general information where specific data is not stated or referenced. It is likely that most of the determinations of these parcels' classification is correct, but IDEM would like specific data in order to concur or not concur with the rationale used for potential contamination migration.

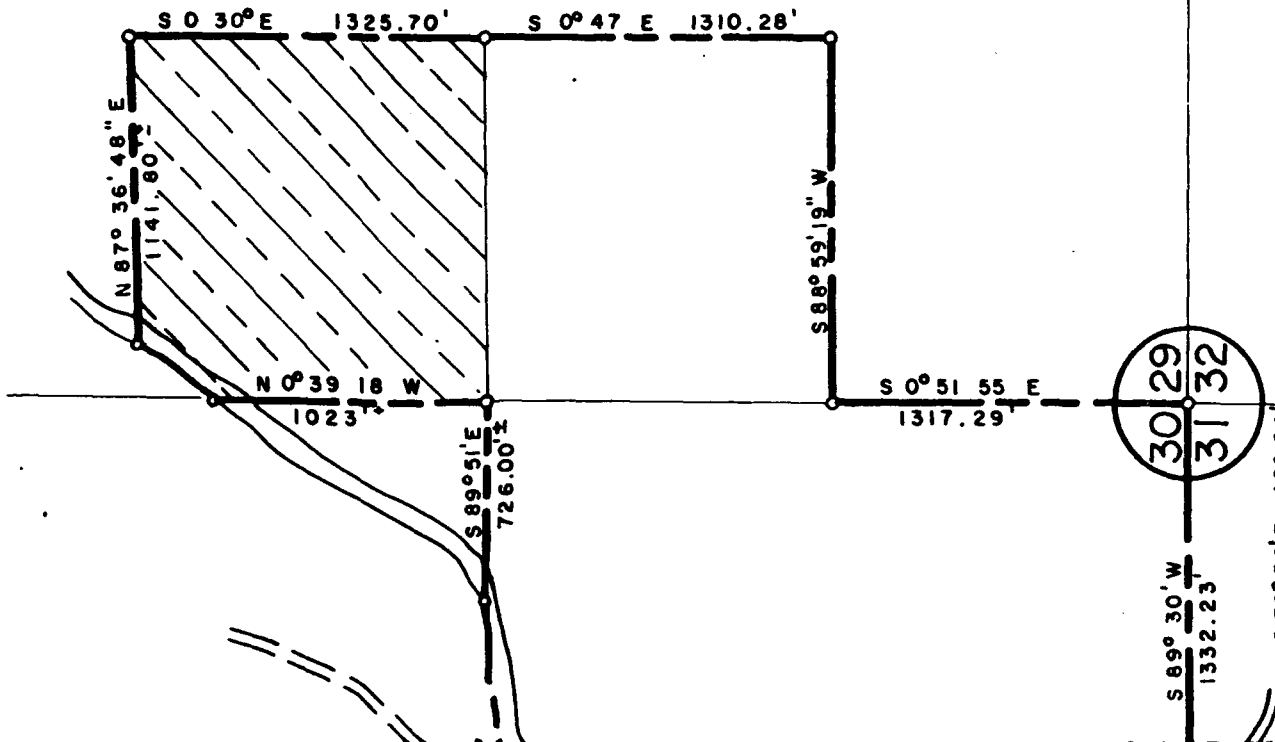
It is impossible to concur that CERFA Parcels are free from contamination without specific knowledge of the groundwater environment related to CERFA Disqualified and CERFA Excluded Parcels. A map illustrating the potential source of groundwater contamination should be prepared as an addendum to this report. This addendum should include characterization of potential contaminants of concern to the fullest extent possible.

Based on the comments presented in this letter, IDEM cannot concur with the CERFA Report, as it is currently presented.

Response: Concur. As noted in the response to comment 1, it is important to note that Public Law 102-426 only required the Army to delineate that portion of FBH which was "uncontaminated". As such, extensive information about contamination was purposefully excluded from the CERFA reports prepared by the Army as this information is, in general, superfluous to the requirements of the CERFA law. Where parcels were potentially impacted from adjacent sources of contamination, either on BRAC property or from elsewhere, the potentially impacted property was "disqualified" from designation as "uncontaminated". A more complete discussion will be provided in the CERFA report to clearly explain what was considered in determining whether a parcel was considered potentially impacted by adjacent threats.

Appropriate documents which detail the level of contamination will be referenced in the CERFA report.

CORPS OF ENGINEERS



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31 32

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N 39° 06' E 2.919.28'

N 68° 18' E 52.43'

S 76° 15' E 463.55'

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S 0° 22' E

1666.67'

S 89° 15' W
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S 0° 11' E

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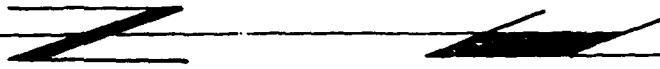
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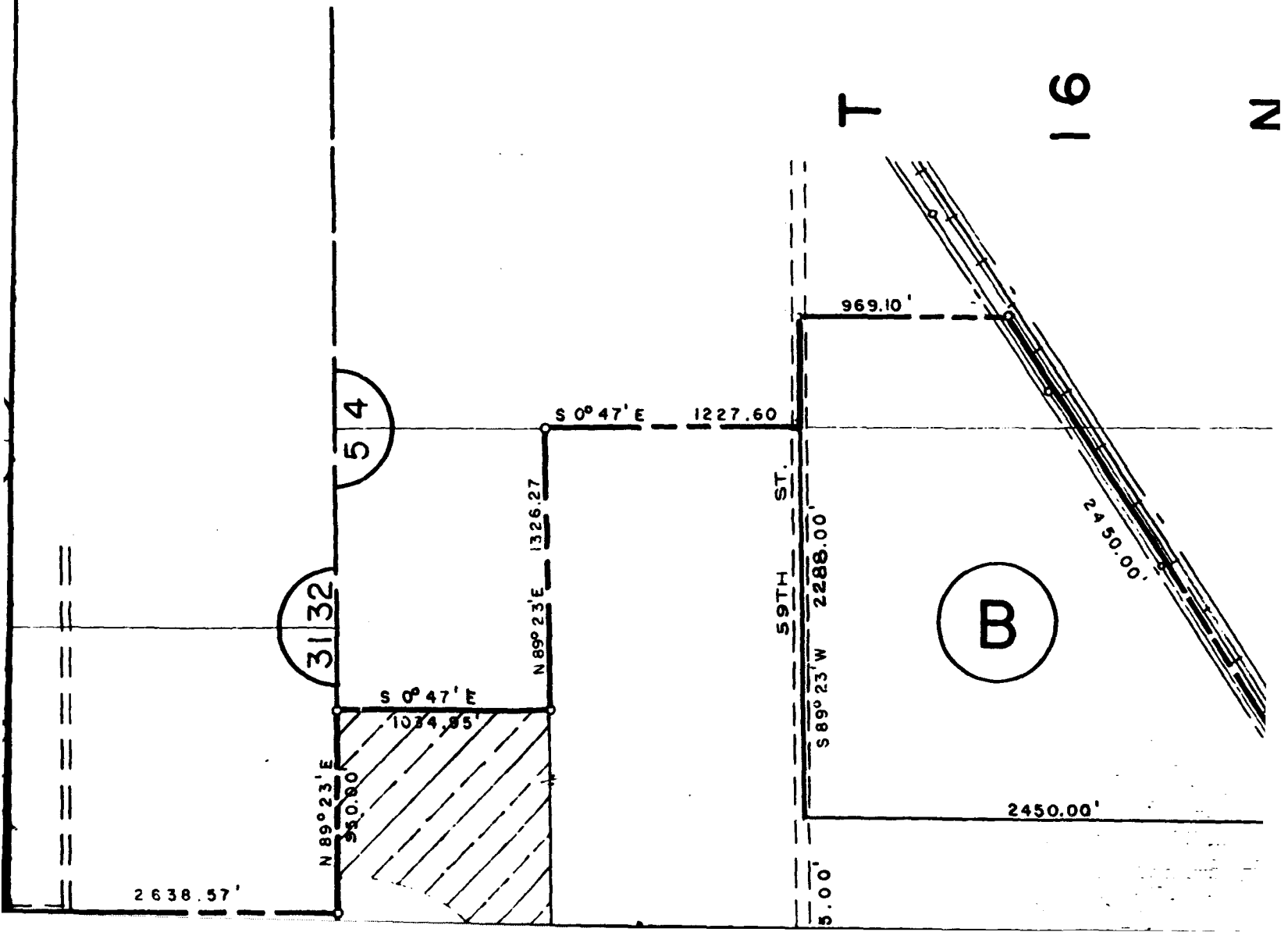
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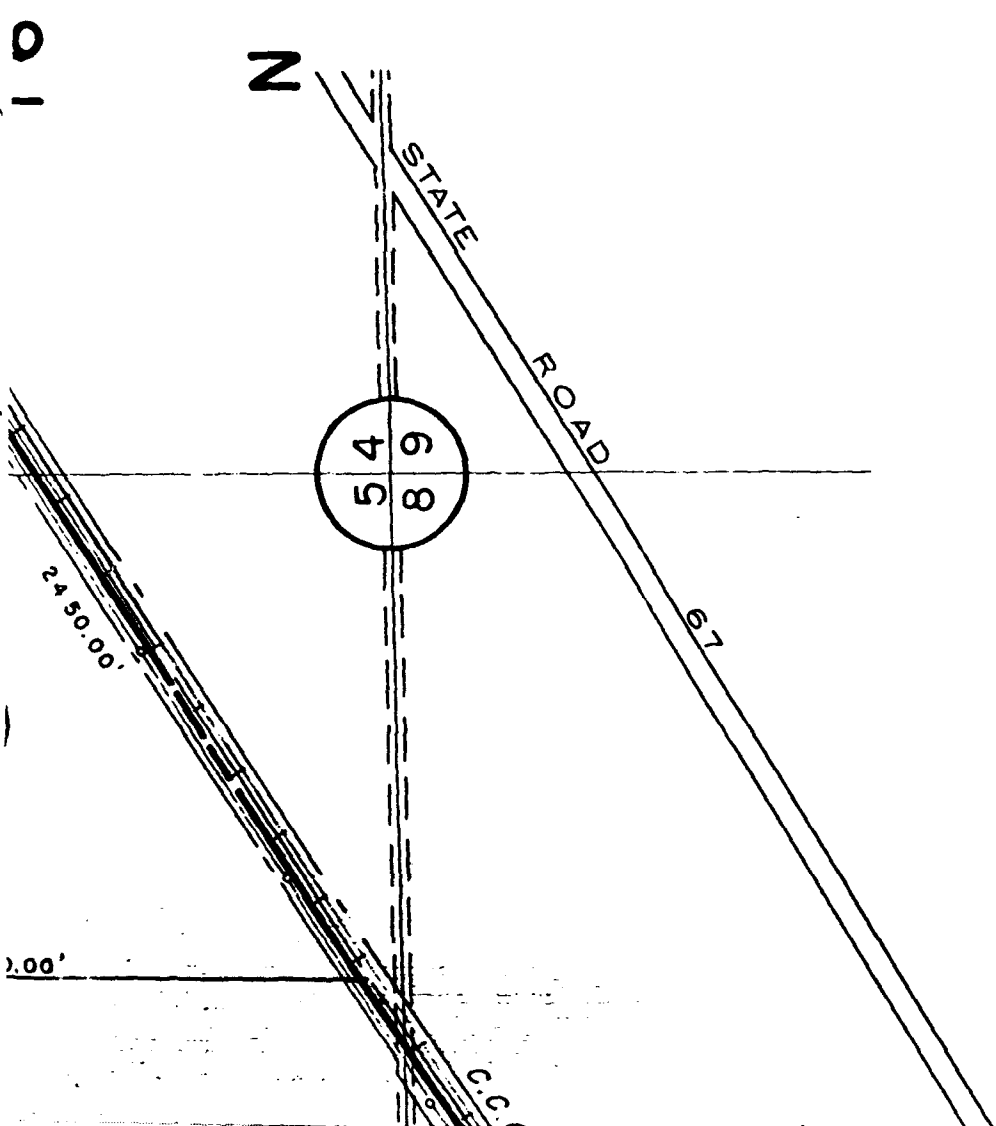
TRACT REGISTER OF ACQUIS

TRANSFER LETTER
DATED 21 JUNE 1950

RE - D 5874

TRACT NO.	LAND OWNER	ACRE TRAN
A	DEPARTMENT OF THE AIR FORCE	268
B	VETERANS ADMINISTRATION	** 8

** OF 89.66 ACRES, 38.46 ACRES WERE RETRANSFER



*NOTE: OF T
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REGISTER OF ACQUISITION AFTER 1 JULY 1940

OWNER	ACREAGE	REMARKS
	TRANSFER	
OF THE AIR FORCE	2680.35	LETTER TRANSFER FROM DEPT. OF AIR FORCE DATED 21 JUNE 1950, EFFECTIVE 1 MAY 1950.
ADMINISTRATION	** 89.66	LETTER TRANSFER FROM VETERANS ADMINISTRATION DATED 21 JUNE 1954, EFFECTIVE 2 JULY 1954.

38.46 ACRES WERE RETRANSFERRED FROM VETERANS ADMINISTRATION.



STATE INDEX

*NOTE: OF THIS AREA, 2680.35 ACRES WERE RETRANSFERRED TO DEPARTMENT OF ARMY (FORT BENJAMIN HARRISON) FROM DEPARTMENT OF AIR FORCE (BENJAMIN HARRISON AIR FORCE BASE); 38.46 ACRES WERE RETRANSFERRED FROM VETERANS ADMINISTRATION.

FIN
PROJECT

AGENCY: DEPART

STATE INDIANA

COUNTY MARION

DIVISION NORTH

DISTRICT CHICAGO
TO OMAHA DISTRICT

ARMY AREA FIFTH
 TO LOUISVILLE DISTRICT

LOCATION

AT VILLAGE OF

LO MILES NE OF

TRANSPORTATION

RAILROADS N.Y.C.

STATE ROADS 6

FEDERAL ROADS 3



U. S. ARMY

ON AFTER 1 JULY 1940

REMARKS

LETTER TRANSFER FROM DEPT. OF AIR FORCE DATED 21 JUNE 1950, EFFECTIVE 1 MAY 1950.

LETTER TRANSFER FROM VETERANS ADMINISTRATION DATED 21 JUNE 1954, EFFECTIVE 2 JULY 1954.

FROM VETERANS ADMINISTRATION.



STATE INDEX

AREA, 2680.35 ACRES WERE RETRANSFERRED TO THE DEPARTMENT OF ARMY (FORT BENJAMIN) FROM DEPARTMENT OF AIR FORCE (HARRISON AIR FORCE BASE); AREAS WERE RETRANSFERRED FROM VETERANS ADMINISTRATION.

FINAL PROJECT MAP

AGENCY: DEPARTMENT OF THE ARMY

STATE INDIANA

COUNTY MARION

DIVISION NORTH CENTRAL

DISTRICT ★ CHICAGO
TO OMAHA DISTRICT ON 1 JULY 1970

ARMY AREA FIFTH
★ TO LOUISVILLE DIST. 31 MAR. 82

LOCATION OF PROJECT

AT VILLAGE OF LAWRENCE

10 MILES NE OF INDIANAPOLIS

TRANSPORTATION FACILITIES

RAILROADS N.Y.C. & C.C.C. & ST. L.

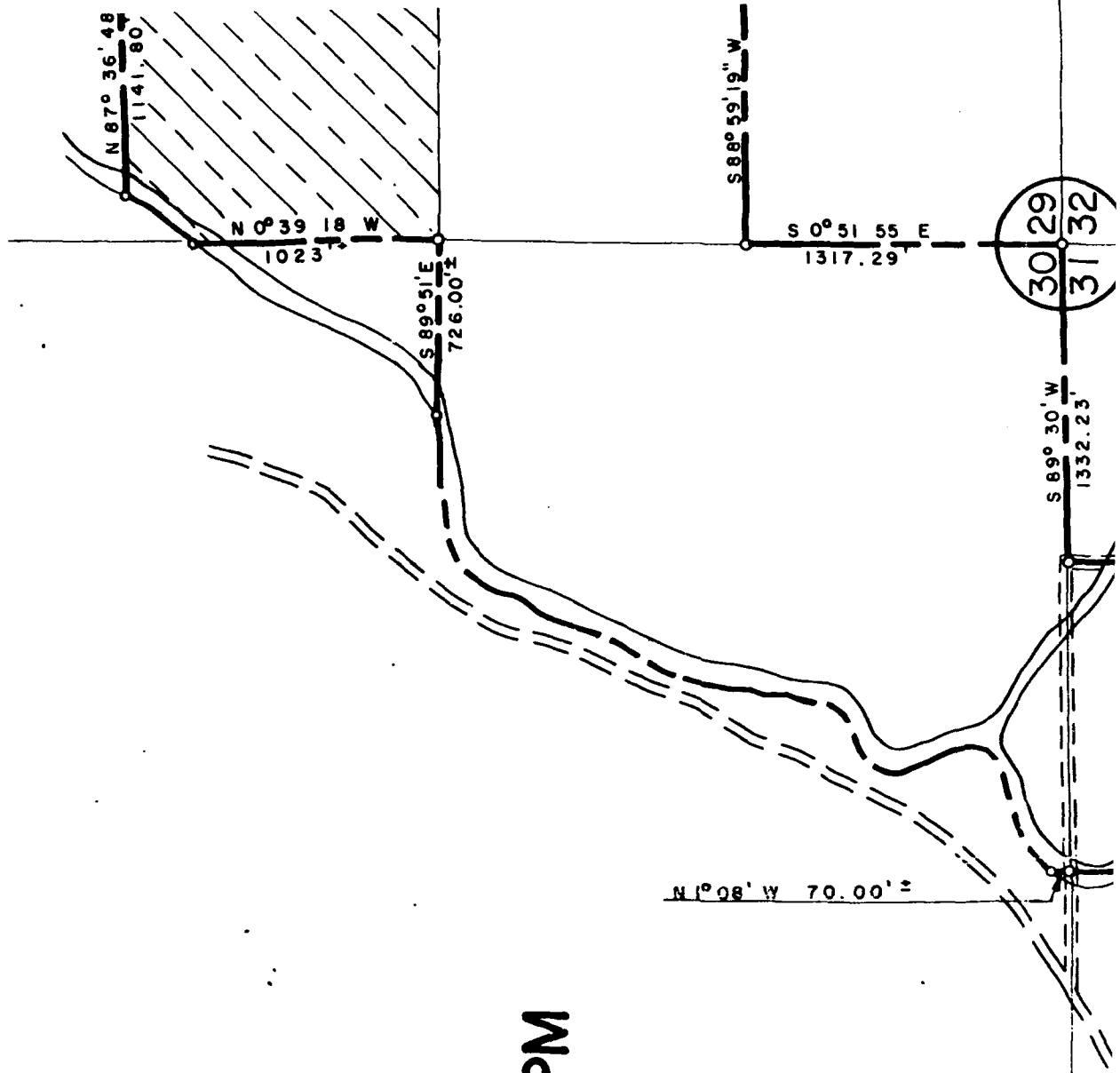
STATE ROADS 67

FEDERAL ROADS 36

AIR LINES



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31 32

S 89° 30' W
1332.23'

S 78° 36' E 400.04'
S 79° 15' E 252.31'
N 39° 06' E 299.28'
N 68° 18' E 52.43'

S 76° 15' E 463.55'

S 0° 22' E 1666.67'

S 89° 15' W
1329.55'

S 0° 24' E
987.44'

S 0° 11' E
2638.57'

LEE ROAD

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N 1° 00' W 1812.80'

2351.00' ±

2530
3631

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N 89° 22' E 673.49'

S 0° 29' E 1321.36'

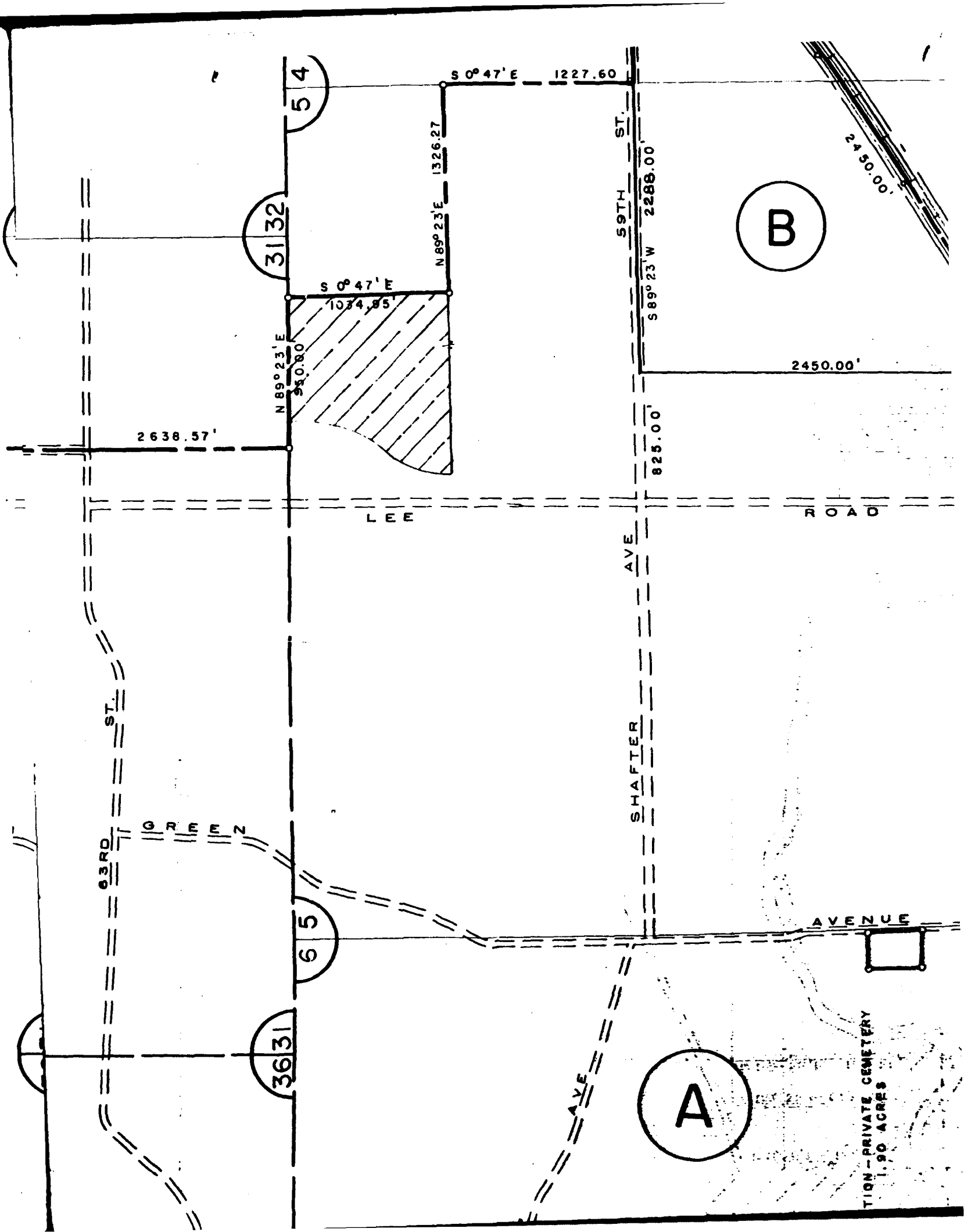
63RD ST.

GREEN ST.

FALLS

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(B)

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C.C.C. B ST.L RR
POWER LINE
EASEMENT (N.Y.C. RR)

DAD 67

U.S.

AVENUE

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AULTMAN

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1.90 ACRES

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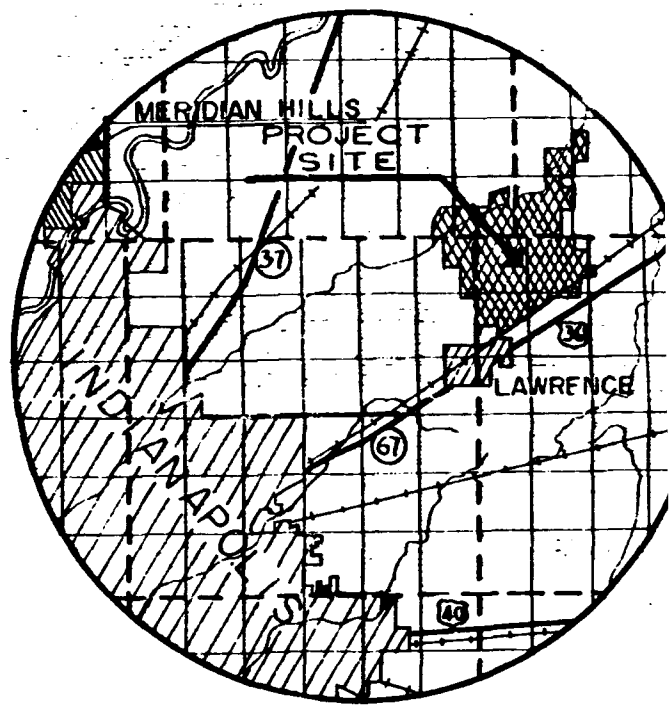
AVENUE

C.C.C.

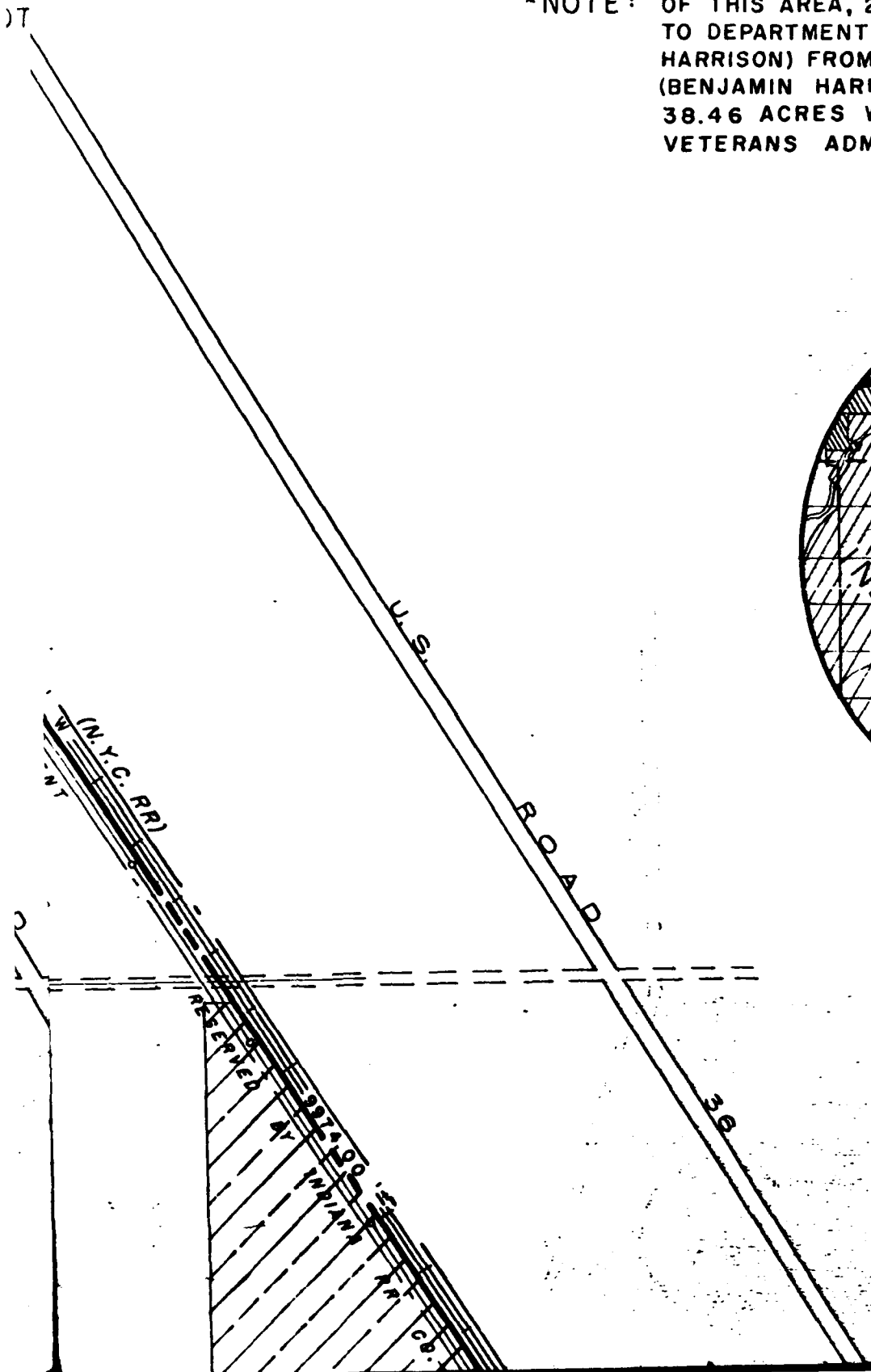
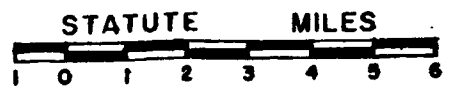


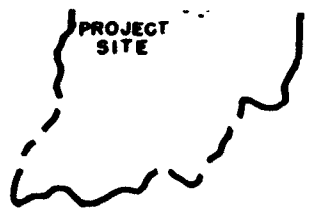
STATE INDEX

***NOTE:** OF THIS AREA, 2680.35 ACRES WERE RETRANSFERRED TO DEPARTMENT OF ARMY (FORT BENJAMIN HARRISON) FROM DEPARTMENT OF AIR FORCE (BENJAMIN HARRISON AIR FORCE BASE); 38.46 ACRES WERE RETRANSFERRED FROM VETERANS ADMINISTRATION.



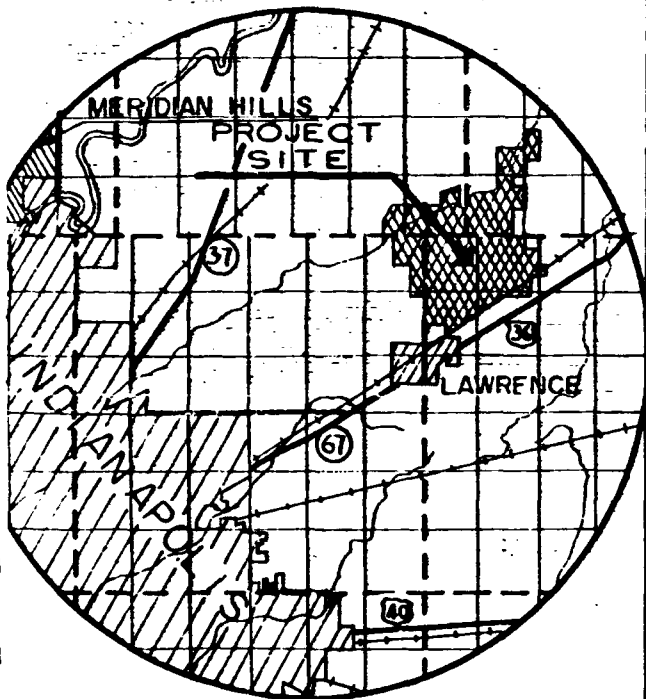
VICINITY MAP





STATE INDEX

A, 2680.35 ACRES WERE RETRANSFERRED
ENT OF ARMY (FORT BENJAMIN
FROM DEPARTMENT OF AIR FORCE
HARRISON AIR FORCE BASE);
S WERE RETRANSFERRED FROM
ADMINISTRATION.



☆ TO LOUISVILLE DIST. 31 MAR. 82

LOCATION OF PROJECT

AT VILLAGE OF LAWRENCE

10 MILES NE OF INDIANAPOLIS

TRANSPORTATION FACILITIES

RAILROADS N.Y.C. & C.C.C. & ST. L.

STATE ROADS 67

FEDERAL ROADS 36

AIR LINES

ACQUISITION

TOTAL ACRES ACQUIRED 2770.01

ACRES FEE

ACRES TRANSFERRED FEE * 2770.01

ACRES LEASED

ACRES LESSER INTERESTS

DISPOSAL

TOTAL ACRES DISPOSED OF 268.60

ACRES SOLD

ACRES TRANSFERRED

ACRES LEASES TERMINATED

ACRES LESS. INT'S. TERMINATED

N 1° 08' W 70.00'

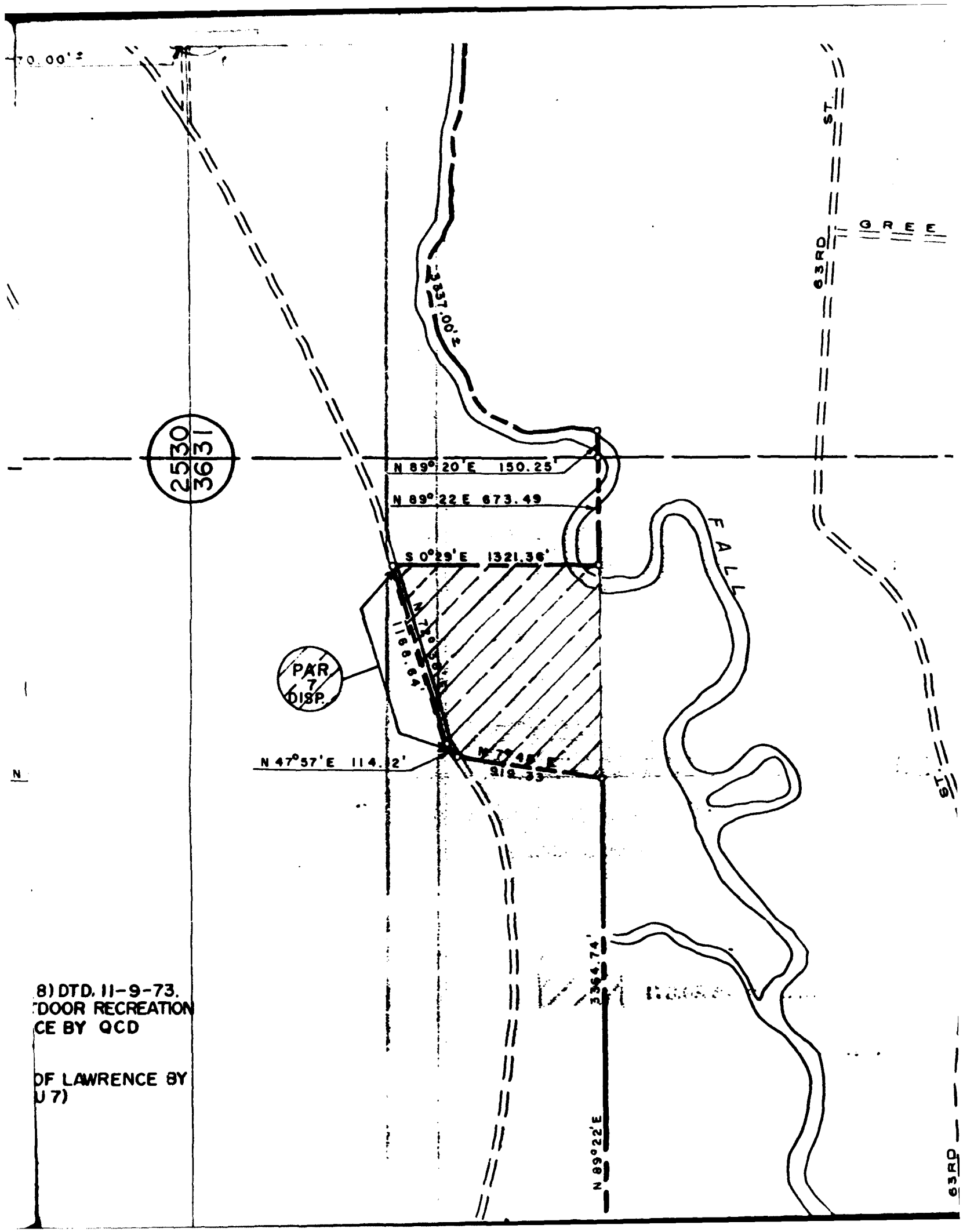
R 4 E 2ND PM | R 5 E 2ND PM

2530
3631



178.63 AC., FEE, REPORTED EXCESS TO GSA (SF-118) DTD. 11-9-73.
162.07 ACRES, ASSIGNED TO BUREAU OF OUTDOOR RECREATION
WHO CONVEYED TO CITY OF LAWRENCE BY QCD
DTD. 10-11-74.

16.56 ACRES CONVEYED BY GSA TO CITY OF LAWRENCE BY
QCD DTD. 12-6-74. (PARCELS 1 THRU 7)



2530
3631

PAR
7
DISP.

N 89° 20' E 150.25'

N 89° 22' E 673.49'

S 0° 29' E 1321.36'

N 70° 58' E
1166.64'

N 47° 57' E 114.2'

N 72° 45' E
912.33'

3364.74'

N 89° 22' E

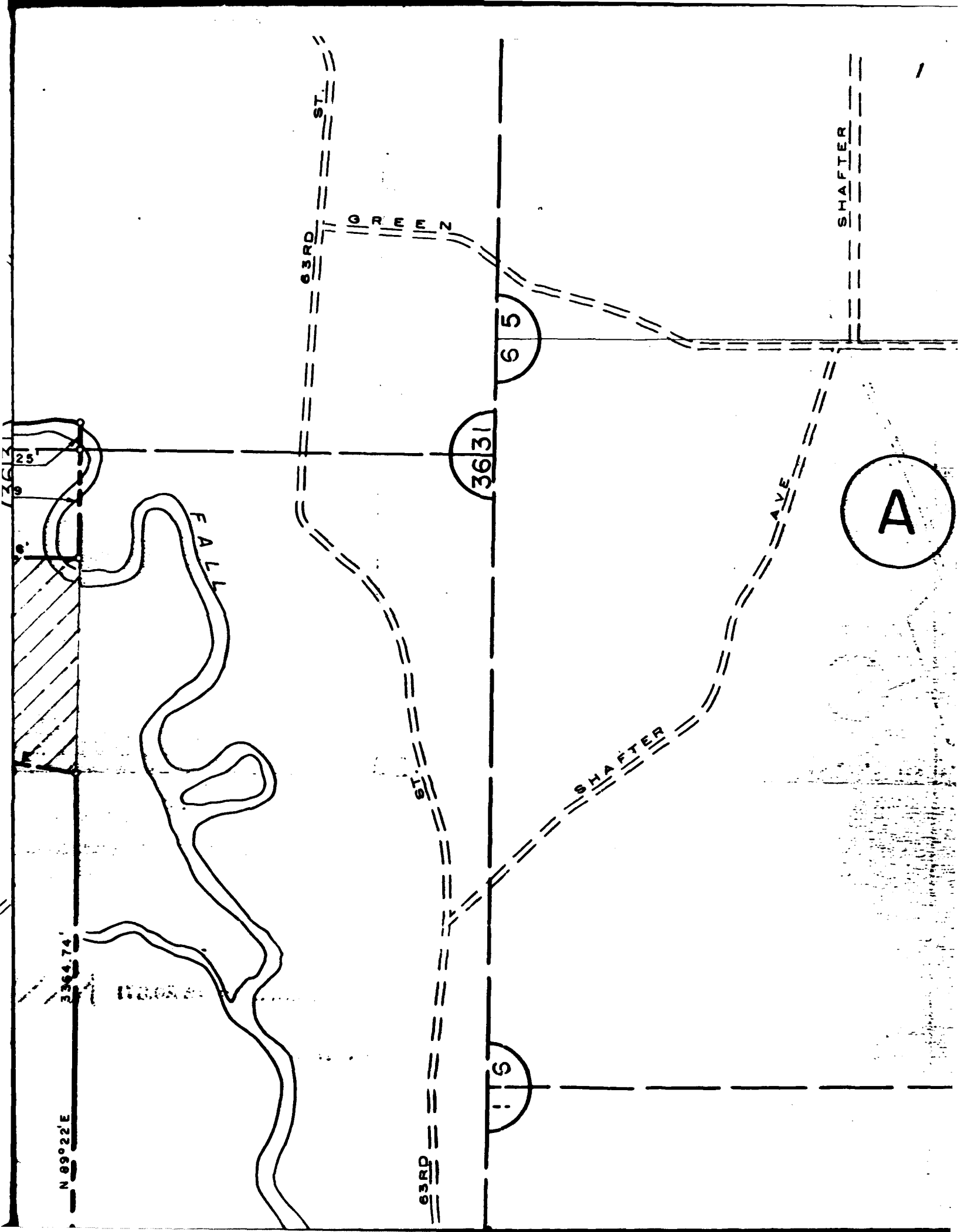
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EXCEPTION - PRIVATE CEMETERY
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6 5
7 8

AULTMAN

RESERVED

AVE

ST.

56 TH

6
127

N 12' 05" W

2570.50'

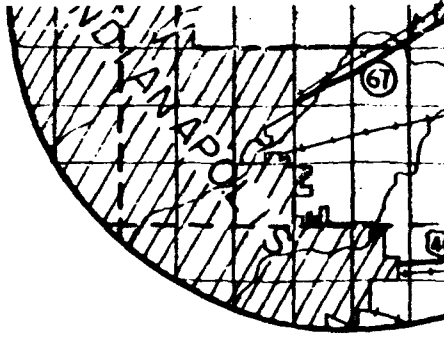
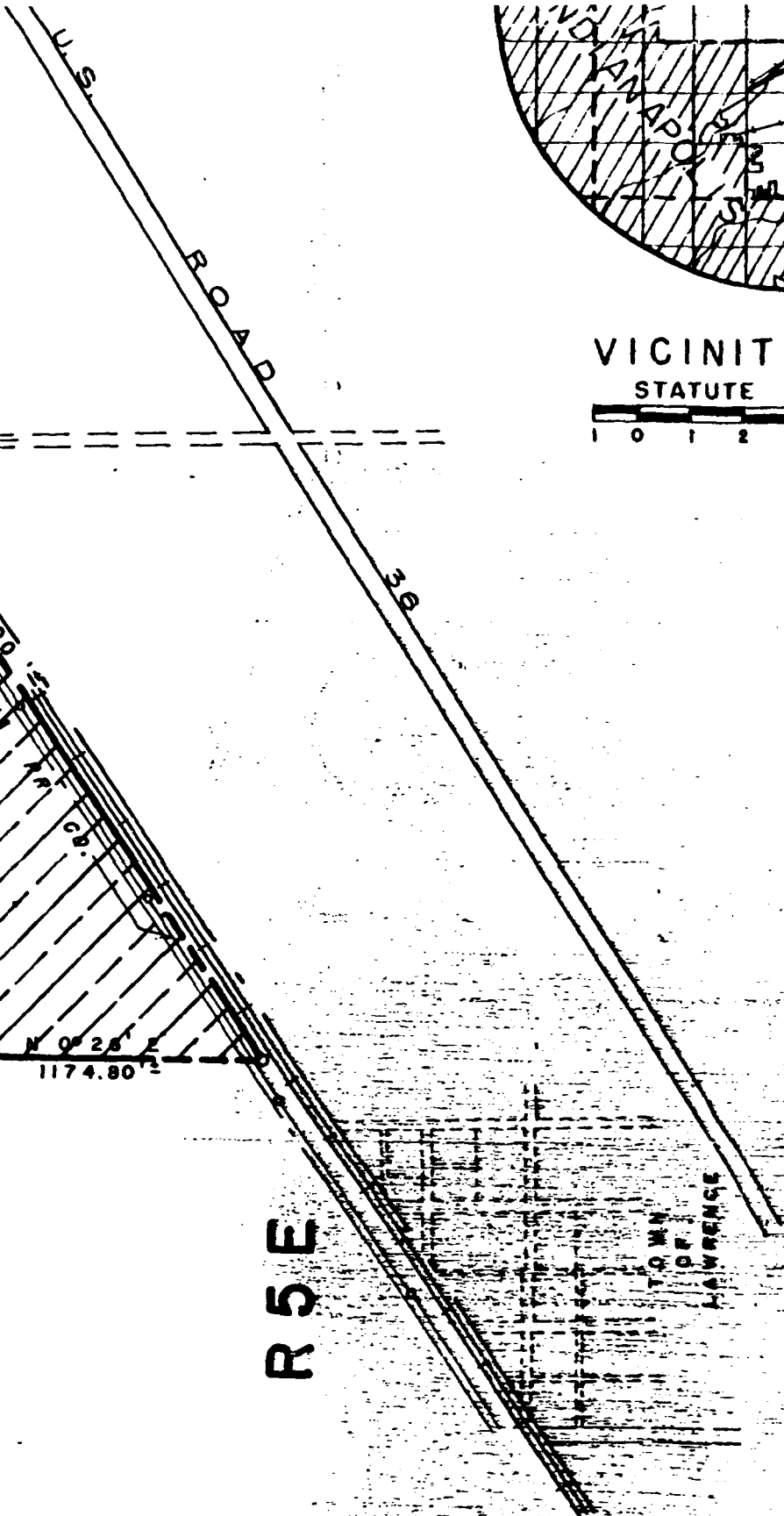
FRANKLIN

PAR
2
DISP.

35' W
2.36'

PAR
1
DISP.

LIVE
338 36' W (N.Y.C. RR)
EASEMENT



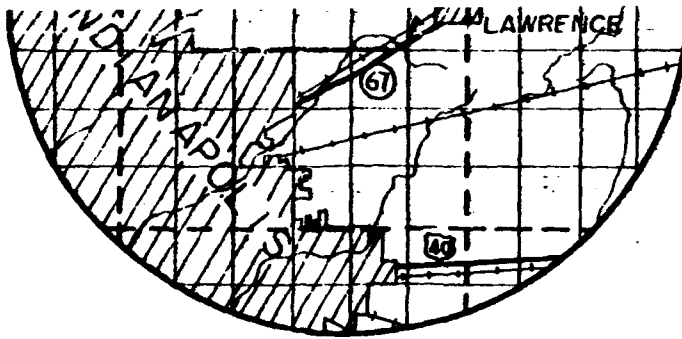
VICINITY
STATUTE MILE
1 0 1 2 3 4

R 5 E

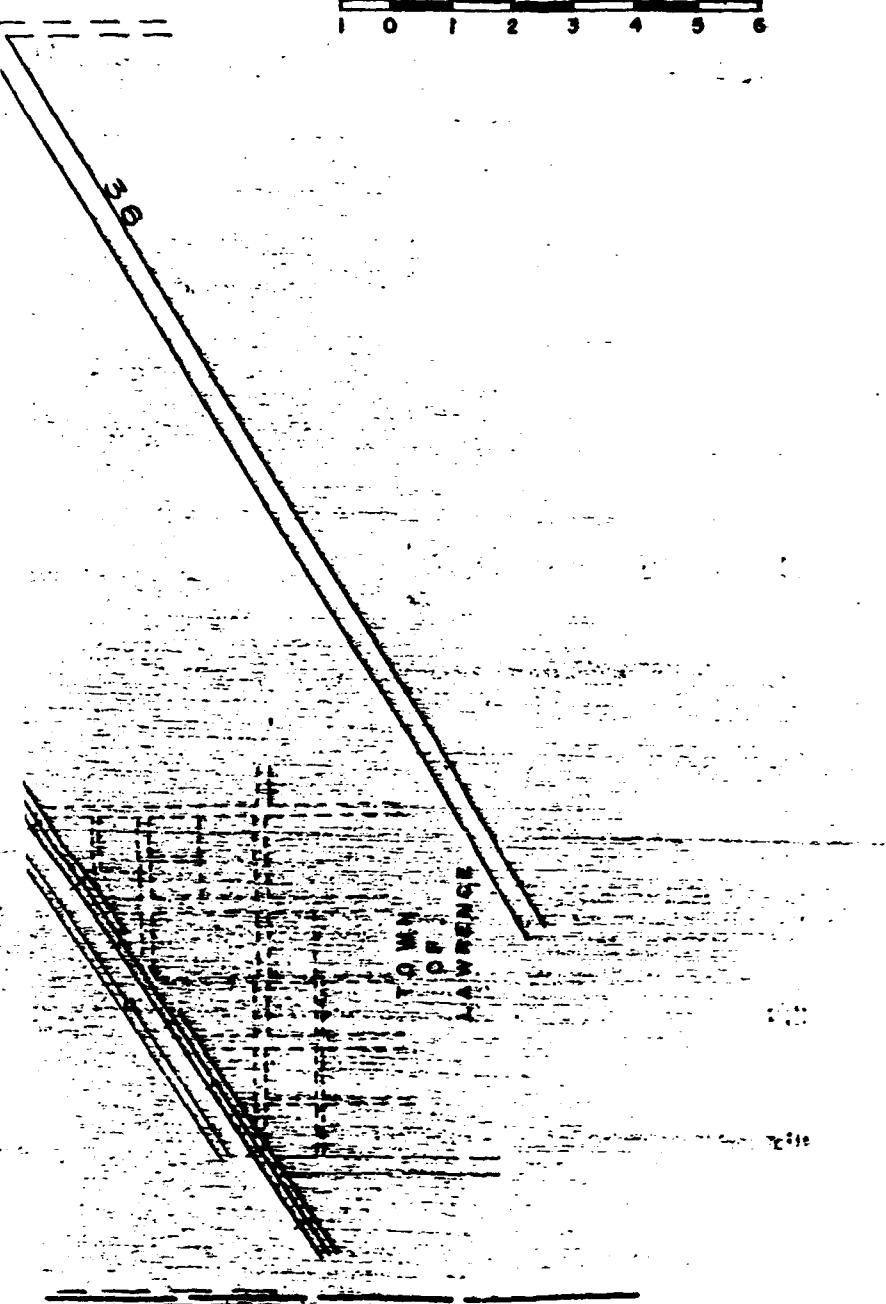
TOWN
OF
LAWRENCE

N 12' 05" W 2670.80'
FRANKLIN ROAD

ACQUISITION AU
TRANSFER LETTER
21 JUNE 1950 IN LIEU
DIRECTIVE.



VICINITY MAP
STATUTE MILES
0 1 2 3 4 5 6



TOTAL ACRES ACQUIRED 2770.00
 ACRES FEE
 ACRES TRANSFERRED FEE * 2770.00
 ACRES LEASED
 ACRES LESSER INTERESTS

DISPOSAL

TOTAL ACRES DISPOSED OF 268.60
 ACRES SOLD
 ACRES TRANSFERRED
 ACRES LEASES TERMINATED
 ACRES LESS. INT'S. TERMINATED
 ACRES REASSIGNED
 ACRES TO G.S.A. 268.60

LEGEND

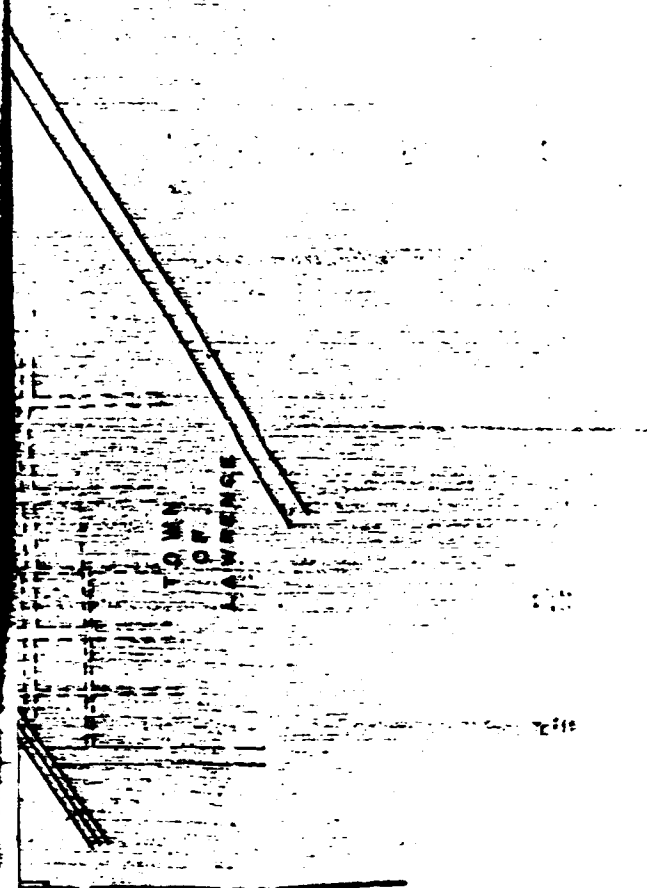
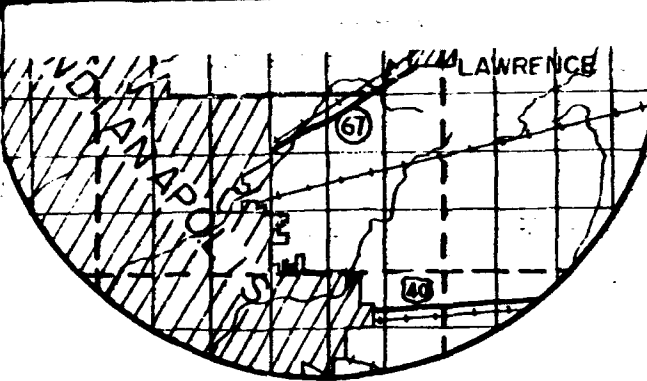
EXCEPT FOR THE SPECIAL SYMBOLS SHOWN BELOW, M
 SYMBOLS ARE STANDARD IN ARMY MAP SERVICE TE
 NICAL MANUAL NO. 23.

- RESERVATION LINE
- RESERVATION LINE (Actual Survey)
- TRACT BOUNDARY LINE
- TRACT NUMBER
- AVIGATION EASEMENT
- CONTOUR LINE

ACQUISITION AUTHORIZATION

TRANSFER LETTER DATED
 21 JUNE 1950 IN LIEU OF FORMAL
 DIRECTIVE.

OF
 TEL
 F



TOTAL ACRES ACQUIRED 2770.01

ACRES FEE

ACRES TRANSFERRED FEE * 2770.01

ACRES LEASED

ACRES LESSER INTERESTS

DISPOSAL

TOTAL ACRES DISPOSED OF 268.60

ACRES SOLD

ACRES TRANSFERRED

ACRES LEASES TERMINATED

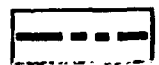
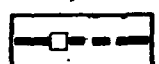
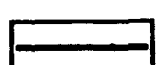


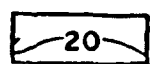
ACRES LESS. INT'S. TERMINATED

ACRES REASSIGNED

ACRES TO G.S.A. 268.60

LEGEND

EXCEPT FOR THE SPECIAL SYMBOLS SHOWN BELOW, MAP SYMBOLS ARE STANDARD IN ARMY MAP SERVICE TECHNICAL MANUAL NO. 23.

- RESERVATION LINE 
- RESERVATION LINE (Actual Survey) 
- TRACT BOUNDARY LINE 
- TRACT NUMBER 
- AVIGATION EASEMENT 
- CONTOUR LINE 

ACQUISITION AUTHORIZATION

TRANSFER LETTER DATED
21 JUNE 1950 IN LIEU OF FORMAL
DIRECTIVE.

R 4 E



178.63 AC., FEE, REPORTED EXCESS TO GSA (SF-118) DTD. 11-9-73.
162.07 ACRES, ASSIGNED TO BUREAU OF OUTDOOR RECREATION
WHO CONVEYED TO CITY OF LAWRENCE BY QCD
DTD. 10-11-74.

16.56 ACRES CONVEYED BY GSA TO CITY OF LAWRENCE BY
QCD DTD. 12-6-74. (PARCELS 1 THRU 7)

2625
3536

PAR
7
DISP.

N 47° 57' E 114.2'

N 77° 45' E
218.33'

(SF-118) DTD. 11-9-73.
OF OUTDOOR RECREATION
BY LAWRENCE BY QCD

CITY OF LAWRENCE BY
(THRU 7)

26 25
35 36

3364.74'

N 89° 22' E

N 0° 15' E 122.10'

N 89° 34' E
751.11'

N 43° 31' E 122.17'

PAR
6
DISP.

N 19° 45' E 161.51'

N 0° 23' W 142.85'

N 13° 25' W 212.

N 18° 15' W
547.50'

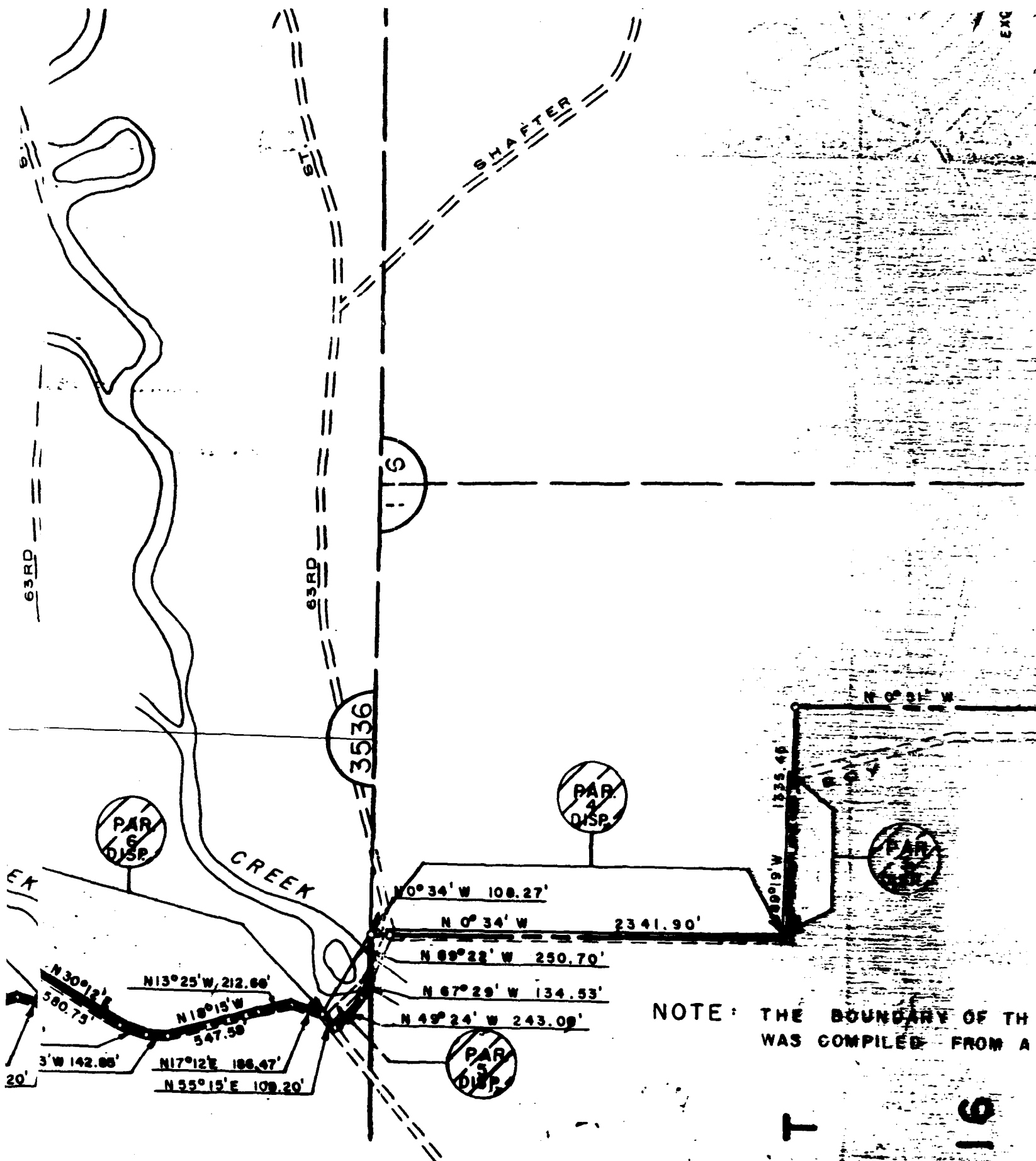
N 17° 12' E 10

N 55° 15' E

T

17

N



63RD

63RD

SHAFTER ST.

CREEK

3536

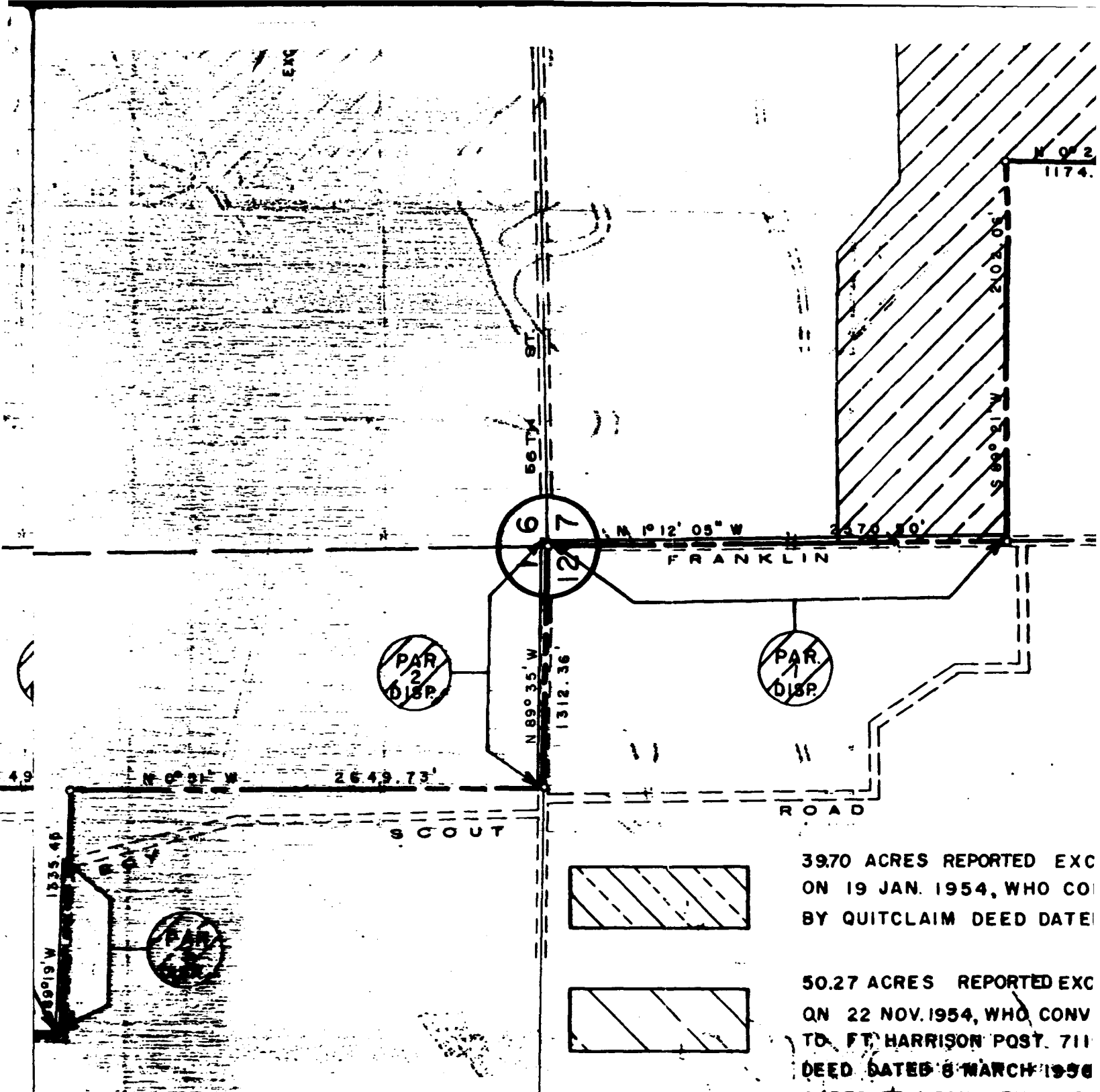
PAR. & DISP.

PAR. & DISP.

PAR. & DISP.

PAR. & DISP.

NOTE: THE BOUNDARY OF TH WAS COMPILED FROM A



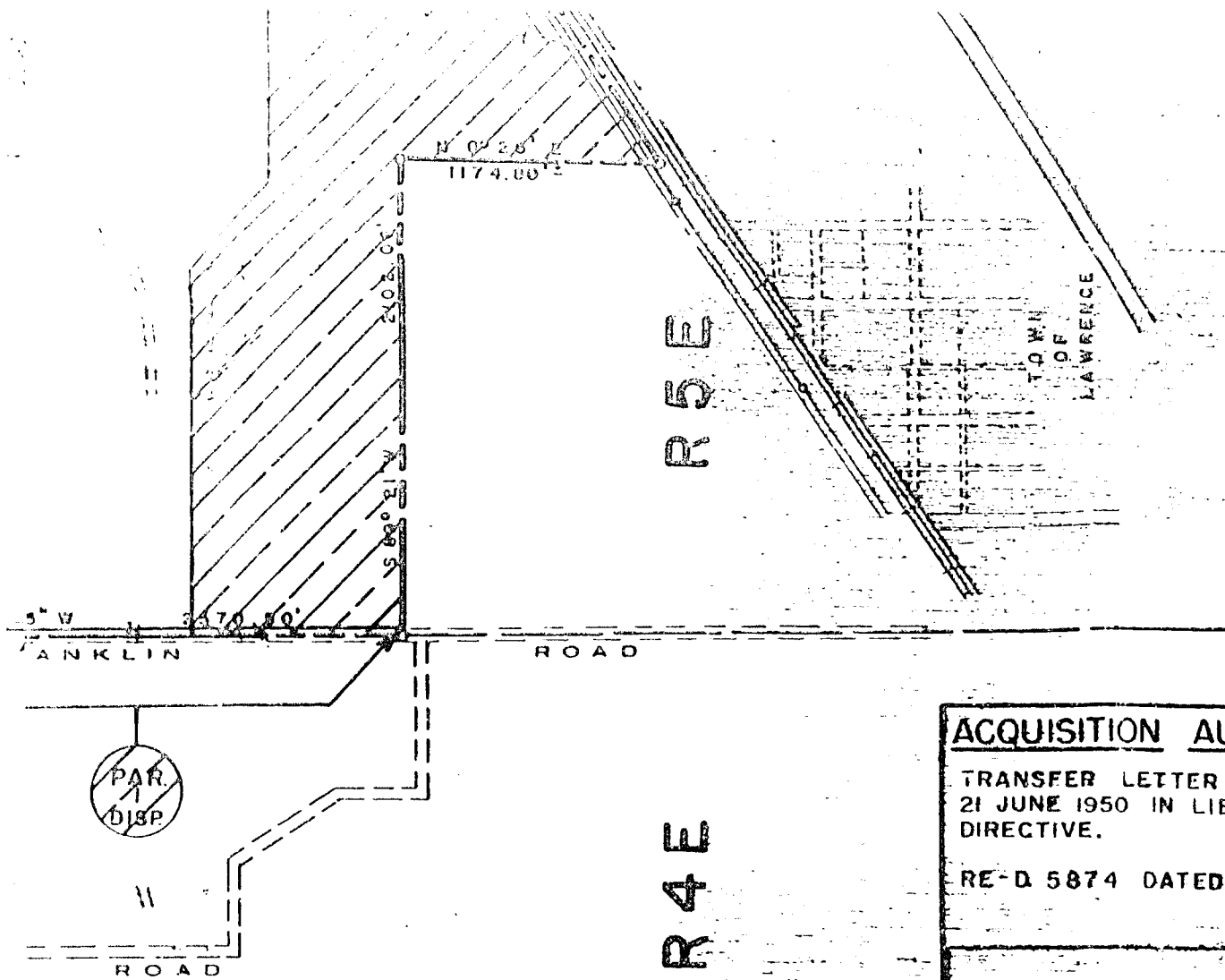
IN THE BOUNDARY OF THIS INSTALLATION
 WAS COMPILED FROM ACTUAL SURVEY.

39.70 ACRES REPORTED EXC
 ON 19 JAN. 1954, WHO CO
 BY QUITCLAIM DEED DATE

50.27 ACRES REPORTED EXC
 ON 22 NOV. 1954, WHO CONV
 TO FT. HARRISON POST. 711
 DEED DATED 8 MARCH 1956
 ACRES TO LEON LEVI AND
 DEED DATED 16 AUGUST

M 2-9-76	REVISED FINAL AUDIT.
NOTE:	THIS MAP PREPARED TO SHOW SEE MAP DATED 24 OCTOBER ORIGINAL ACQUISITION AND
DATE	REVISION

T 16 Z



39.70 ACRES REPORTED EXCESS TO GSA (FORM 30)
 ON 19 JAN. 1954, WHO CONVEYED TO JOHN A. COLLINS
 BY QUITCLAIM DEED DATED 14 MARCH 1956.

50.27 ACRES REPORTED EXCESS TO GSA (SF-118)
 ON 22 NOV. 1954, WHO CONVEYED THE SOUTH 20.16 ACRES
 TO FT. HARRISON POST, 7119, V.F.W., INC. BY QUITCLAIM
 DEED DATED 8 MARCH 1956, AND THE NORTH 30.11
 ACRES TO LEON LEVI AND PEARL LEVI BY QUITCLAIM
 DEED DATED 16 AUGUST 1956.

70	REVISED FINAL AUDIT	W.A.C.
80	THIS MAP PREPARED TO SHOW REACQUISITION. (TOTAL)	
90	SEE MAP DATED 24 OCTOBER 1944 FOR	
05	ORIGINAL ACQUISITION AND DISPOSALS.	
TE	REVISIONS	BY

ACQUISITION AUTHORIZATION

TRANSFER LETTER DATED
21 JUNE 1950 IN LIEU OF FORMAL
DIRECTIVE.

RE-D 5874 DATED 13 APRIL 1954

SH

DEPA
OFFICE OF THE
NORTH

DRAWN BY R.P. & R.C.
 TRACED BY R.P.
 CHECKED BY G.S.

SUBMITTED BY:
Robert L. ...
 SUPV. CARTOGRAPHIC DRAFTS

RECOMMENDED BY:
V.J. Milovich
 ASST. CHIEF PLANNING & CONTL. BR.

FORT

APPROVED BY:
 CHIEF, REAL
 OFFICE, CHIEF OF ENGINEERS, WASHINGTON
 OCE Appvd.

AUDITED
 INSTALLATION OR PROJECT NO. **100**

ACRES REASSIGNED

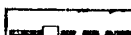
ACRES TO G.S.A.


268.60


LEGEND


EXCEPT FOR THE SPECIAL SYMBOLS SHOWN BELOW, MAP SYMBOLS ARE STANDARD IN ARMY MAP SERVICE TECHNICAL MANUAL NO. 23.

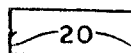
RESERVATION LINE 

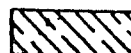
RESERVATION LINE (Actual Survey) 

TRACT BOUNDARY LINE 

TRACT NUMBER 

AVIGATION EASEMENT 

CONTOUR LINE 

DISPOSAL 

ACQUISITION AUTHORIZATION

TRANSFER LETTER DATED
21 JUNE 1950 IN LIEU OF FORMAL
DIRECTIVE.

RC-D 5074 DATED 13 APRIL 1954

SHEET 2

DEPARTMENT OF THE ARMY
OFFICE OF THE CHICAGO DISTRICT ENGINEER
NORTH CENTRAL DIVISION

DRAWN BY R.P.B. R.C.

TRACED BY R.P.

CHECKED BY G.S.

SUBMITTED BY

SUPV. CARTOGRAPHIC DRAFTS

RECOMMENDED BY

CHIEF PLANNING & CONTROL DIV.

REAL ESTATE

FORT BENJAMIN HARRISON

REACQUISITION

MILITARY RESERVATION

APPROVED BY: *Leopold H. Schmid*

DATE 26 DECEMBER 1956

CHIEF, REAL ESTATE DIVISION

OFFICE, CHIEF OF ENGINEERS, WASHINGTON 25, D. C.
OCE Appvd. dtd 6-3-76

AUDITED

INSTALLATION OR PROJECT NO. 100



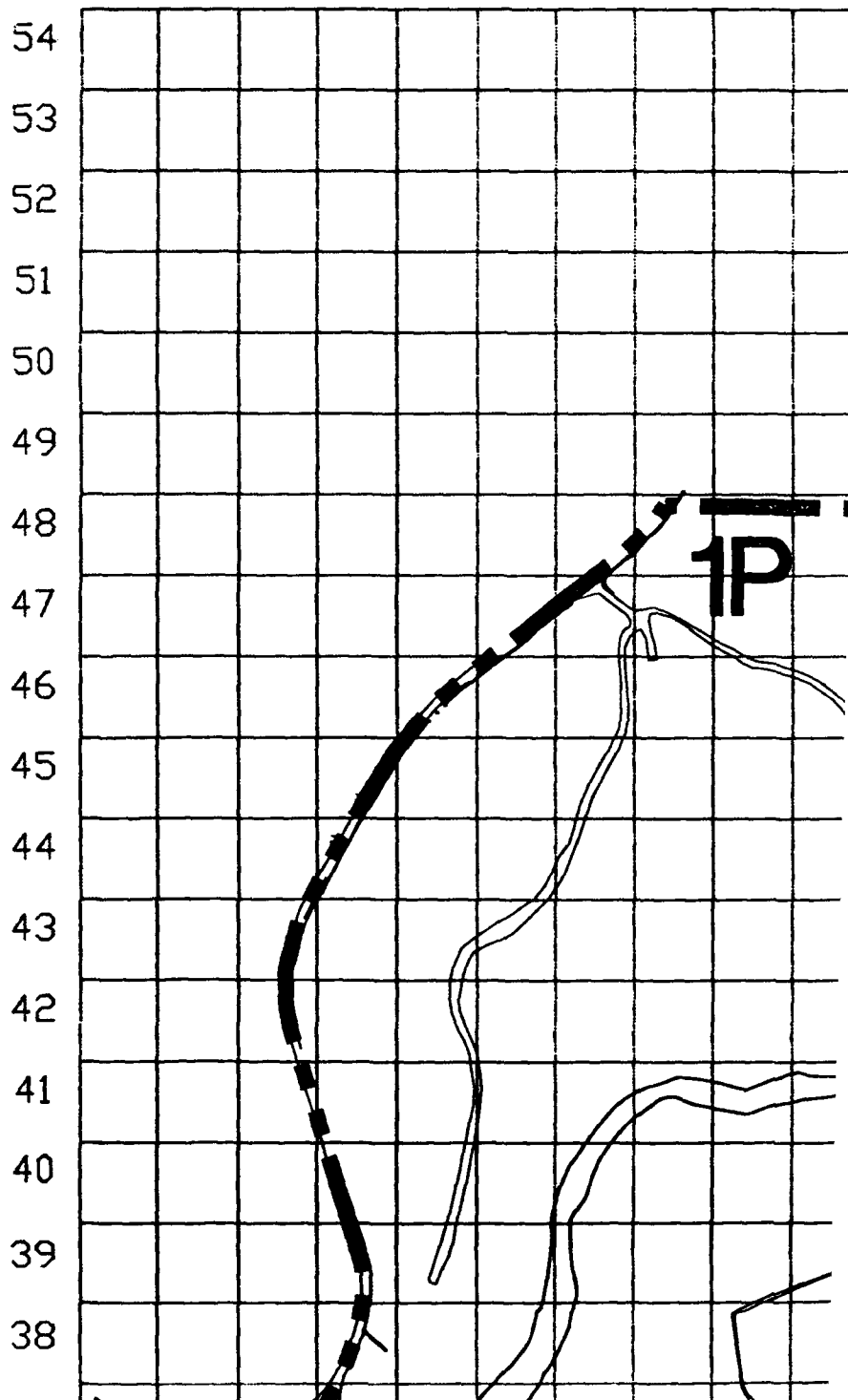
SHEET 2 OF 2

DRAWING NO. 1500

Eng. Form 1455
REV. 10-1-51

F-7 F-7-IND.-M

REV. #	REVISION DATE
0	10/26/93
1	4/11/94

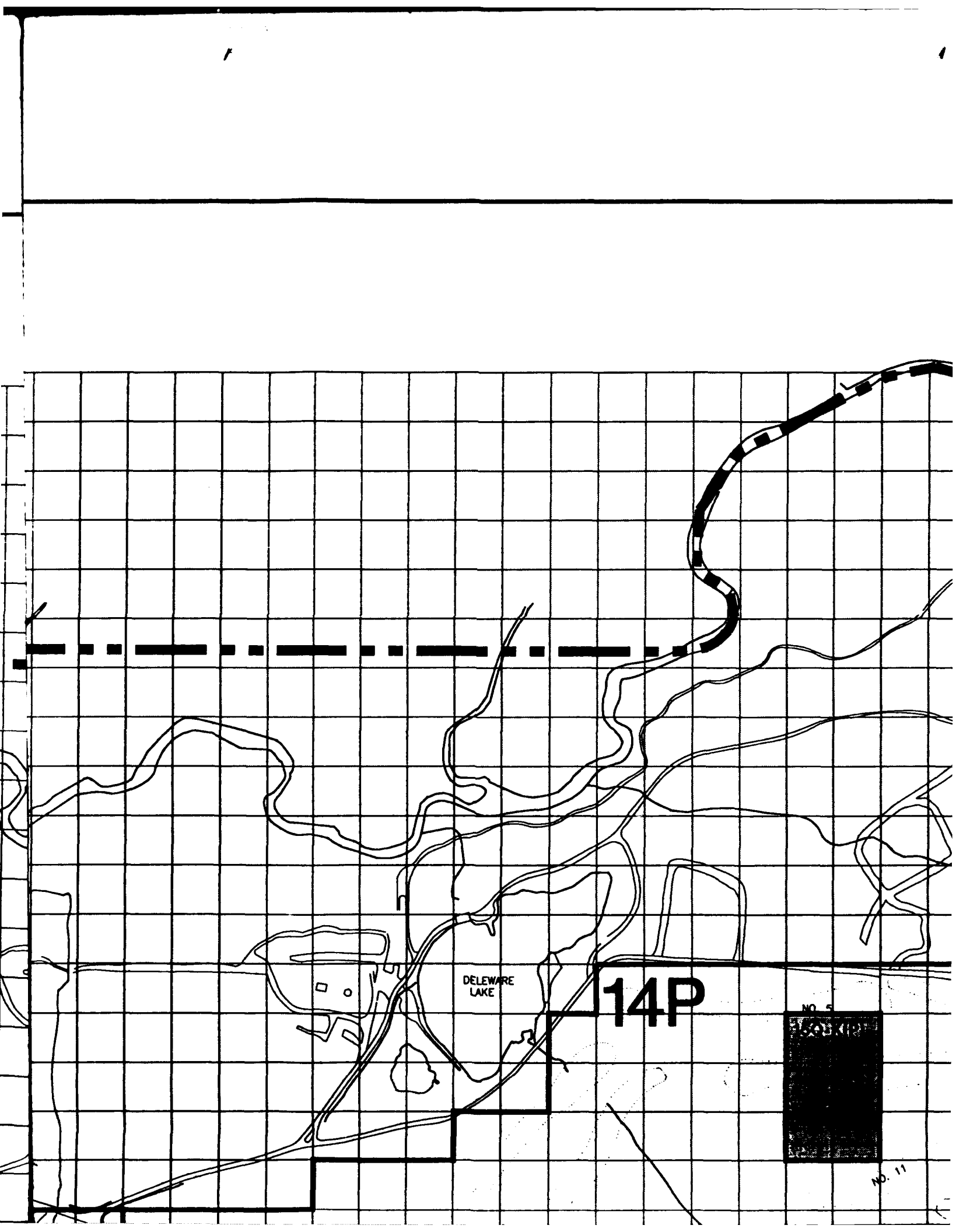


1P

7D-HR/L

SD-HR/PR/L

Q501

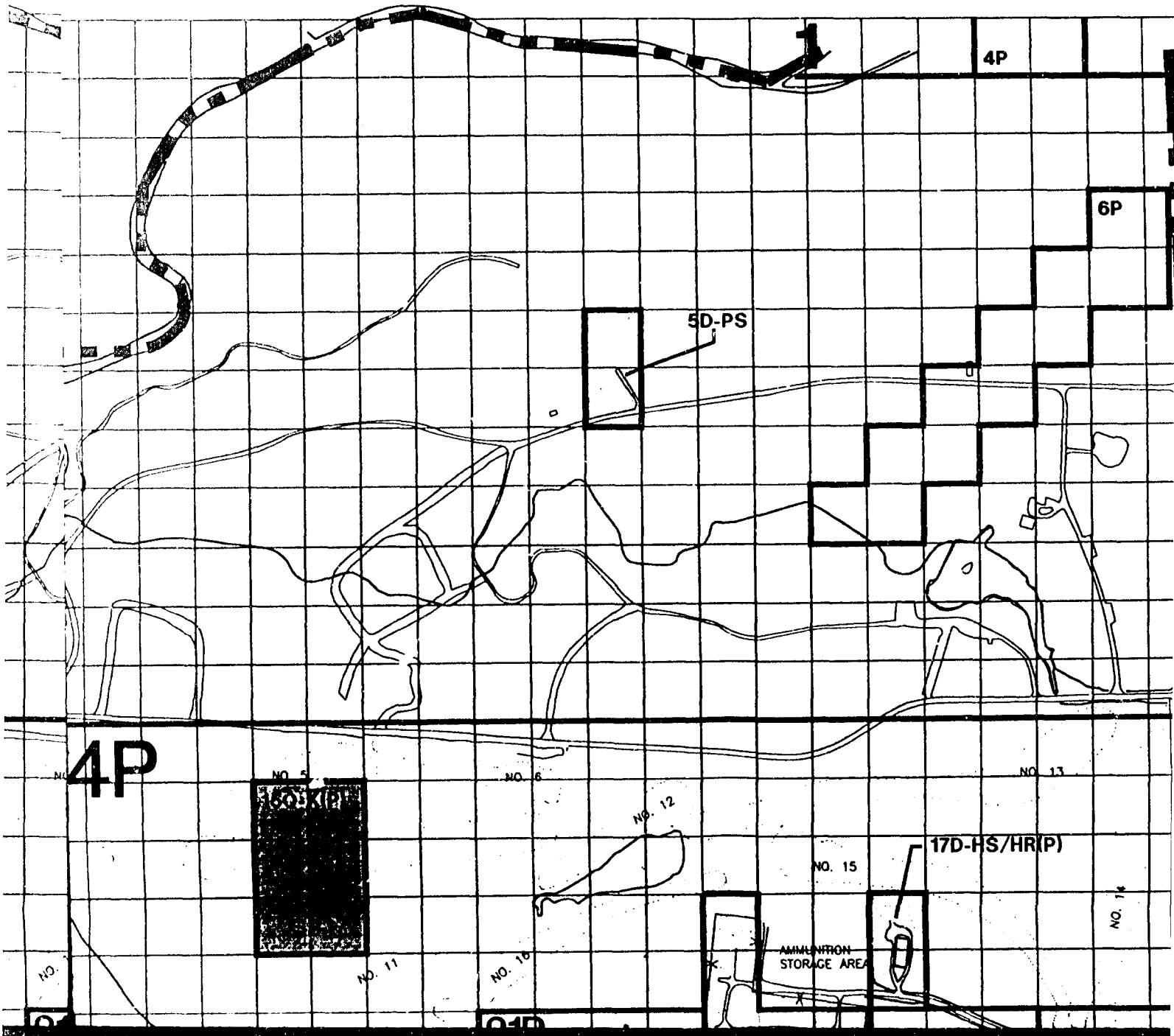


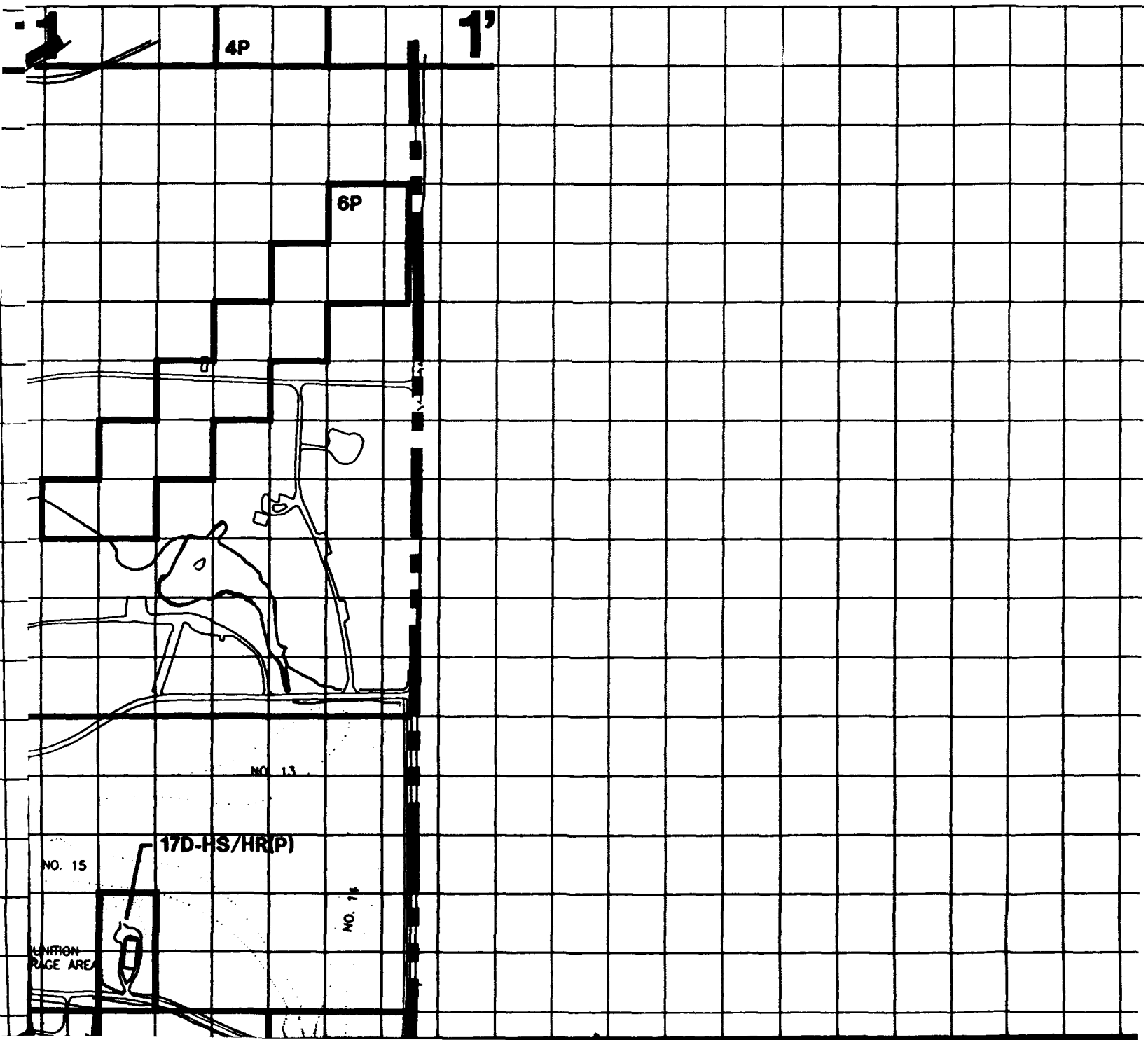
DELEWARE
LAKE

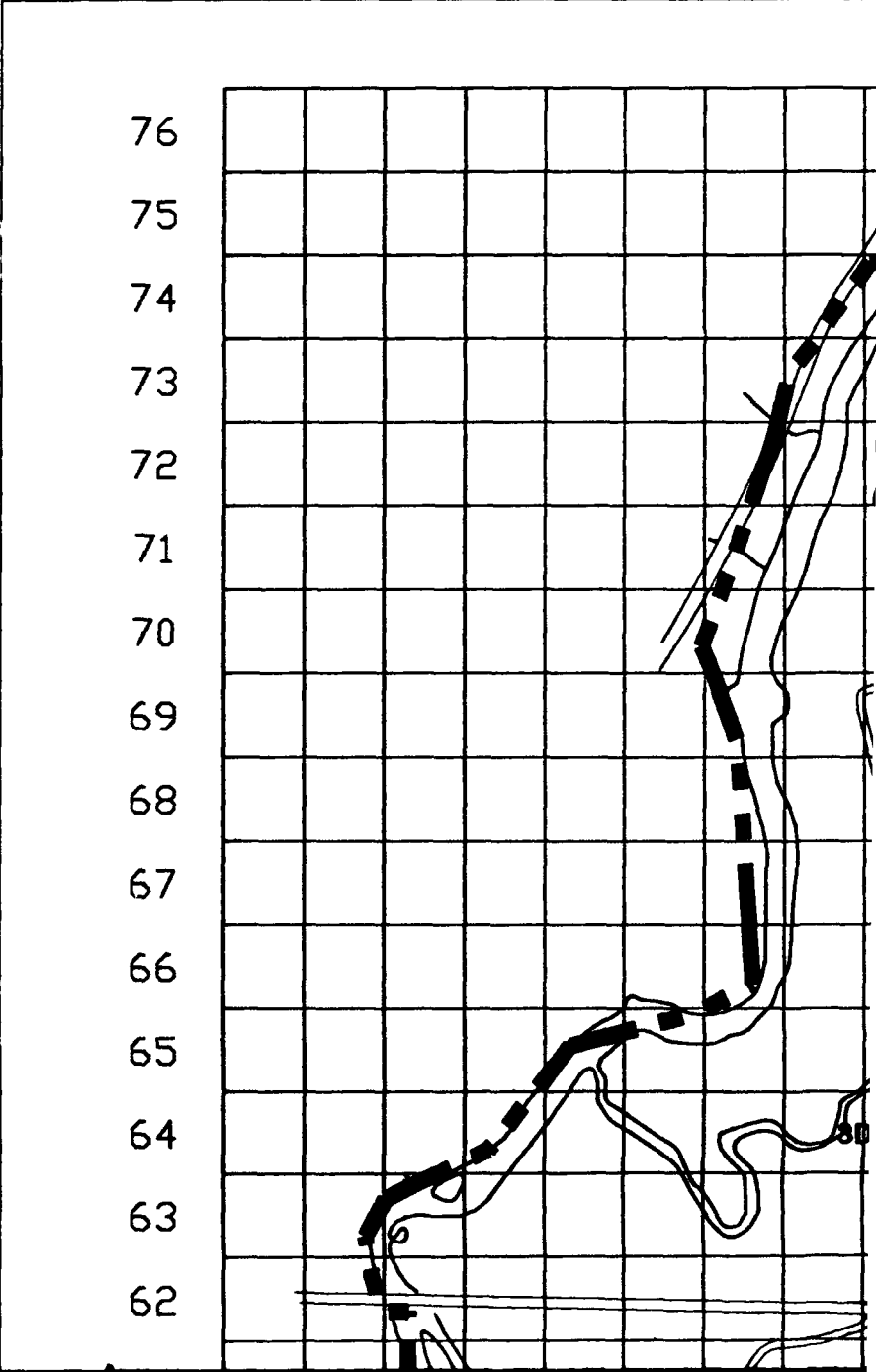
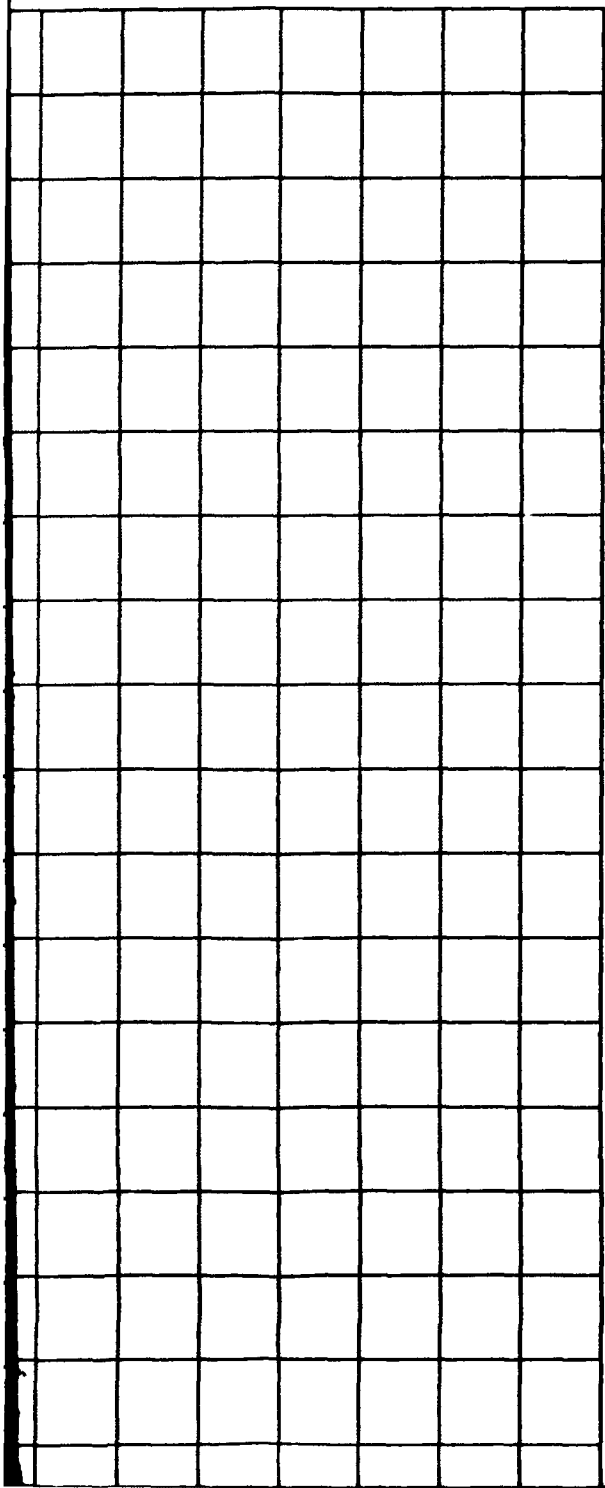
14P

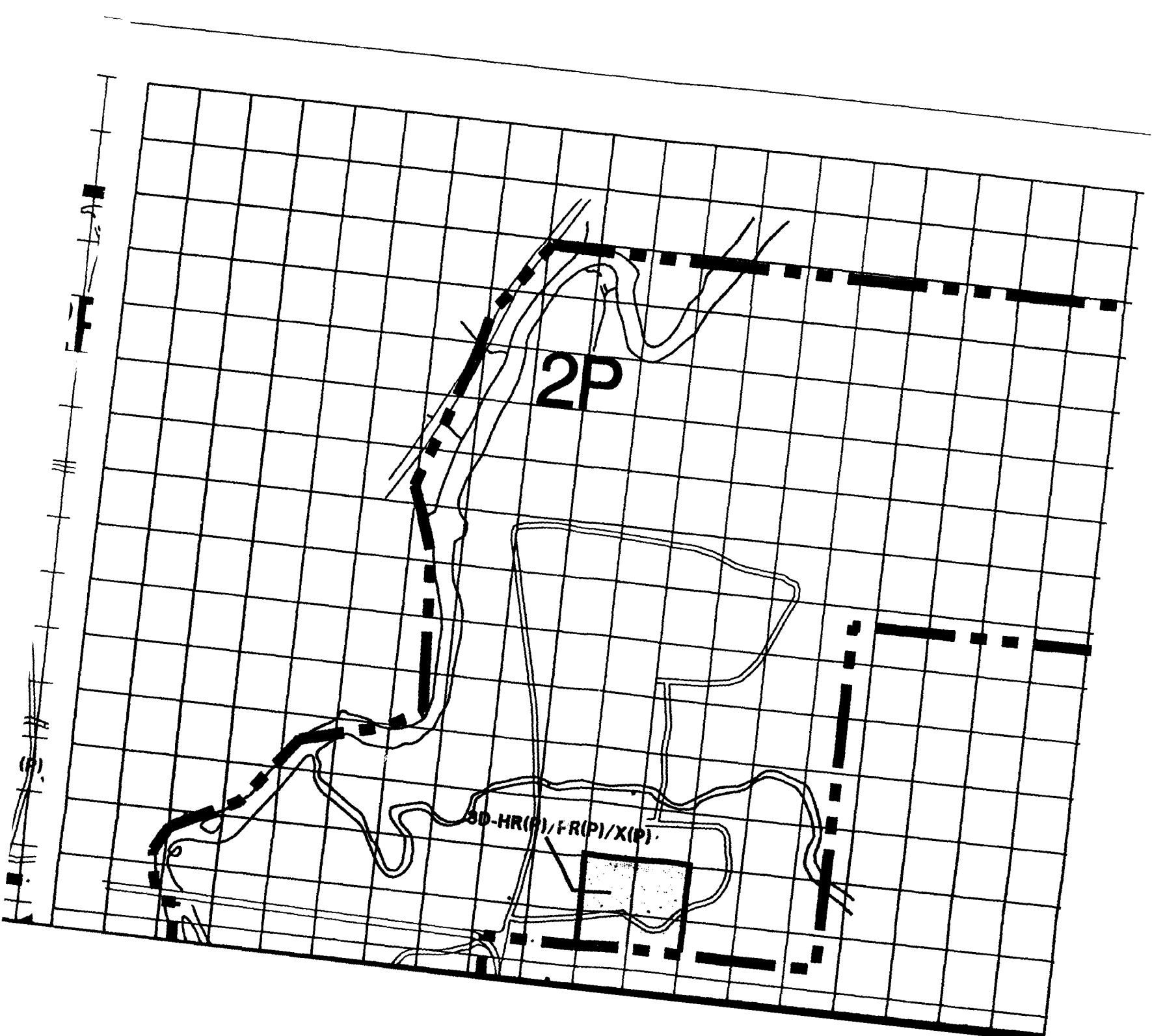
NO. 5
603 KID

NO. 11







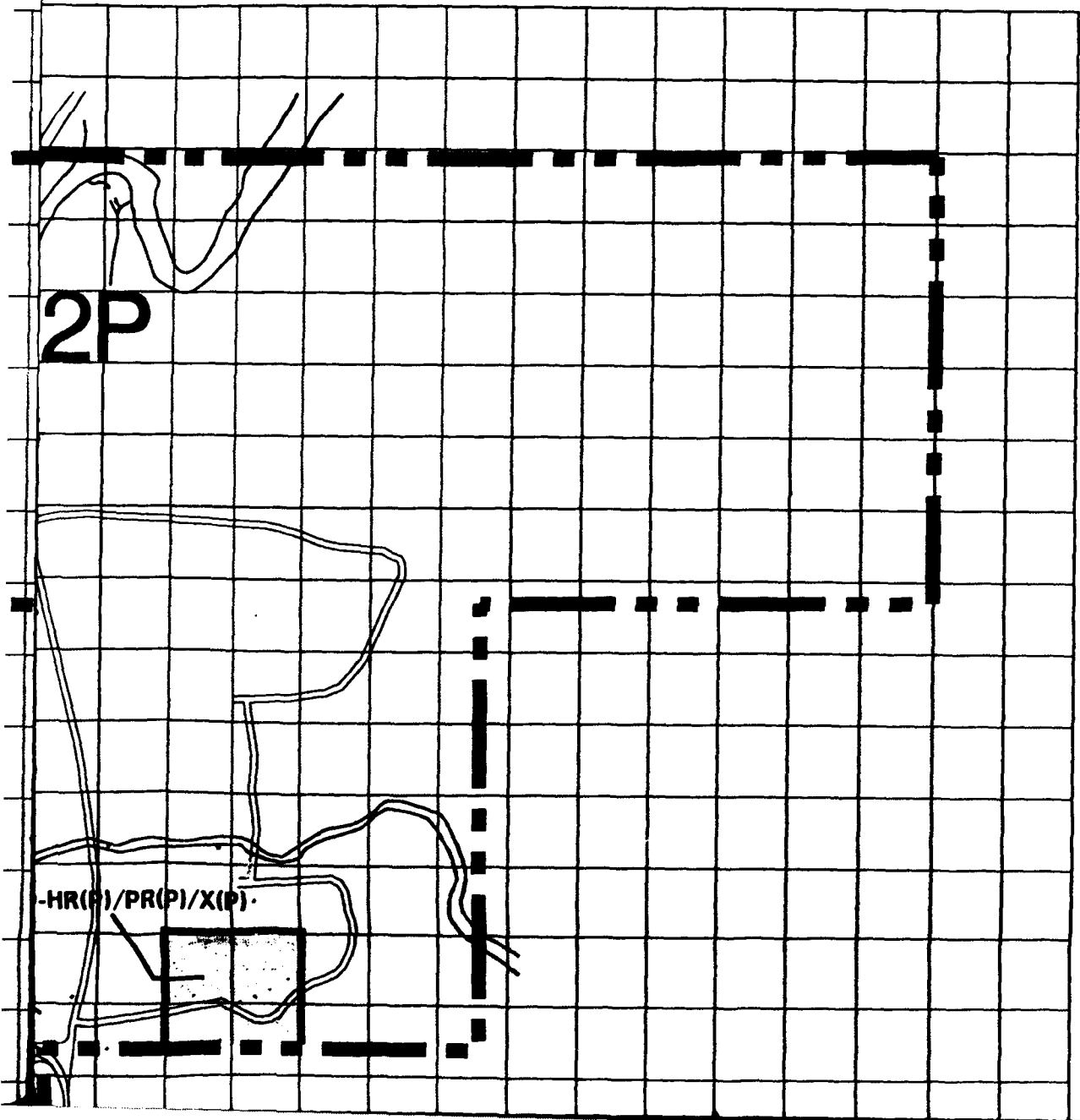


2P

30-HR(P)/FR(P)/X(P)

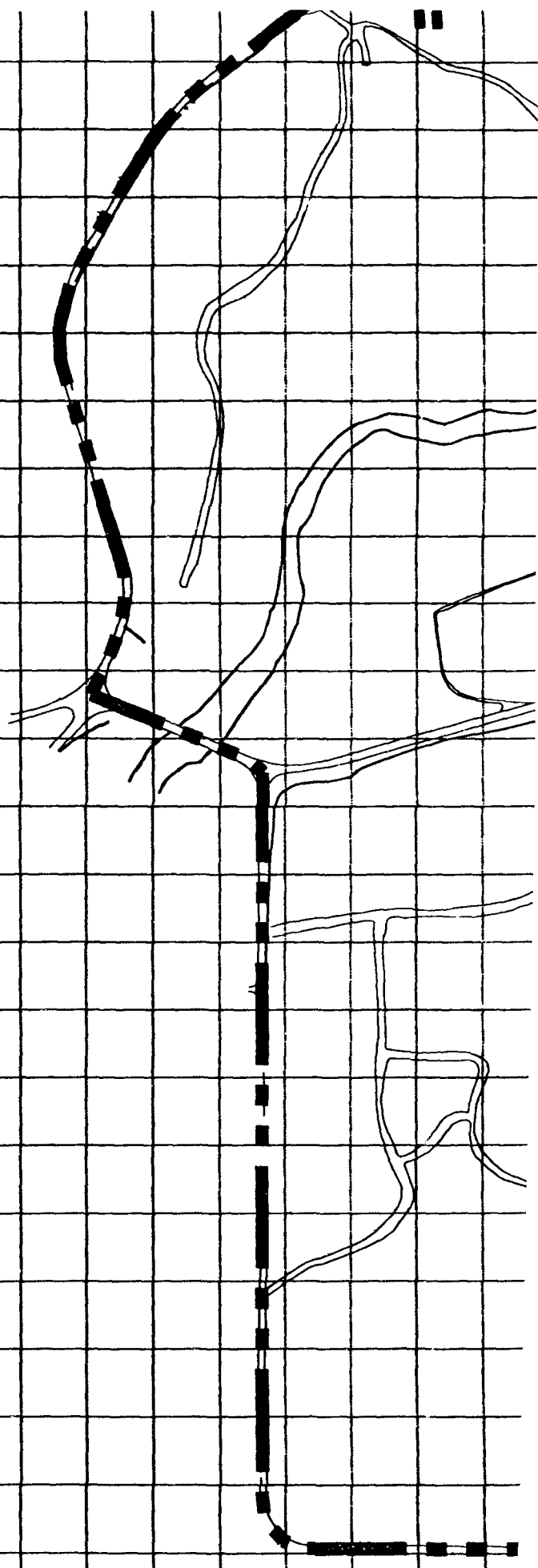
2P

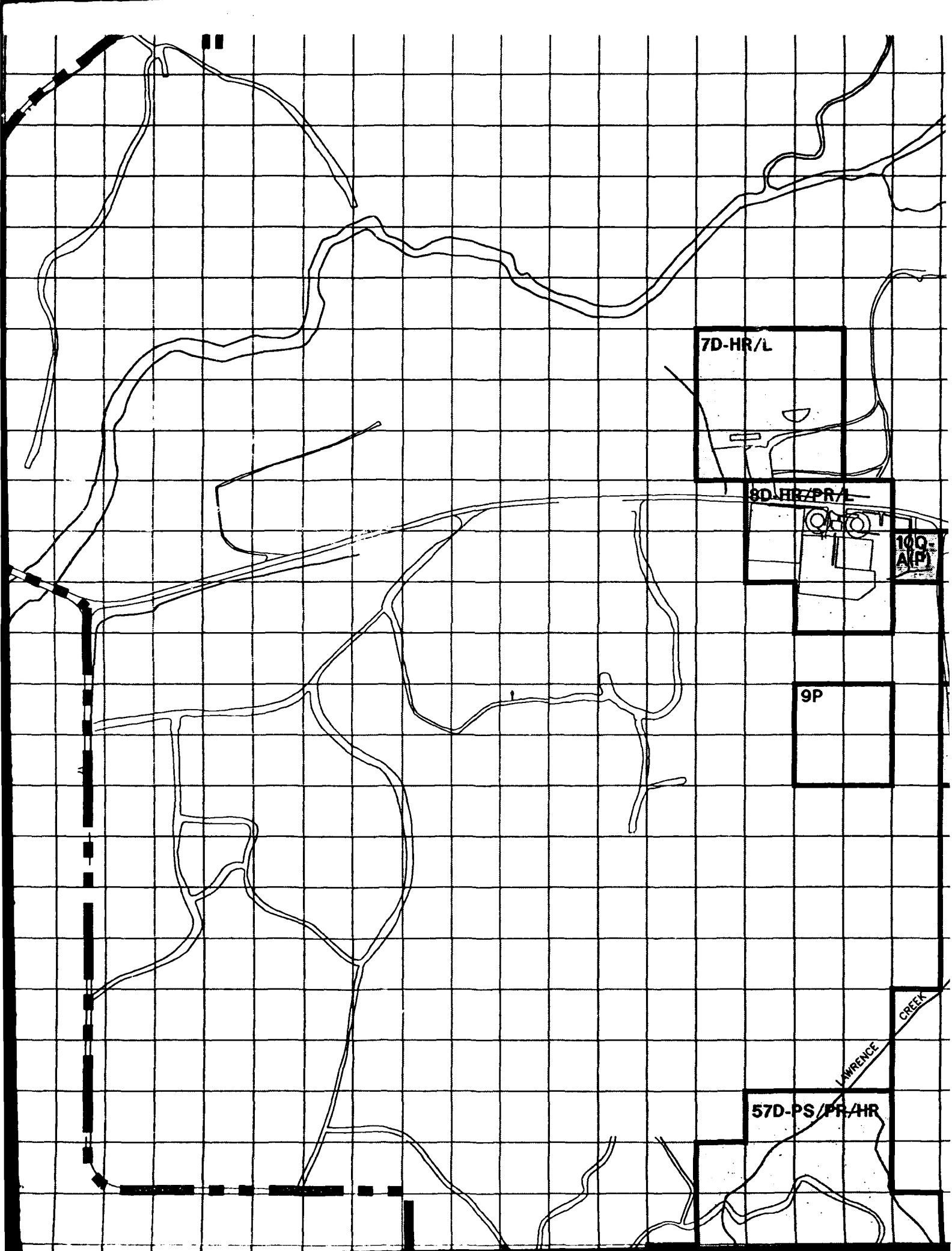
-HR(P)/PR(P)/X(P)-





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7D-HR/L

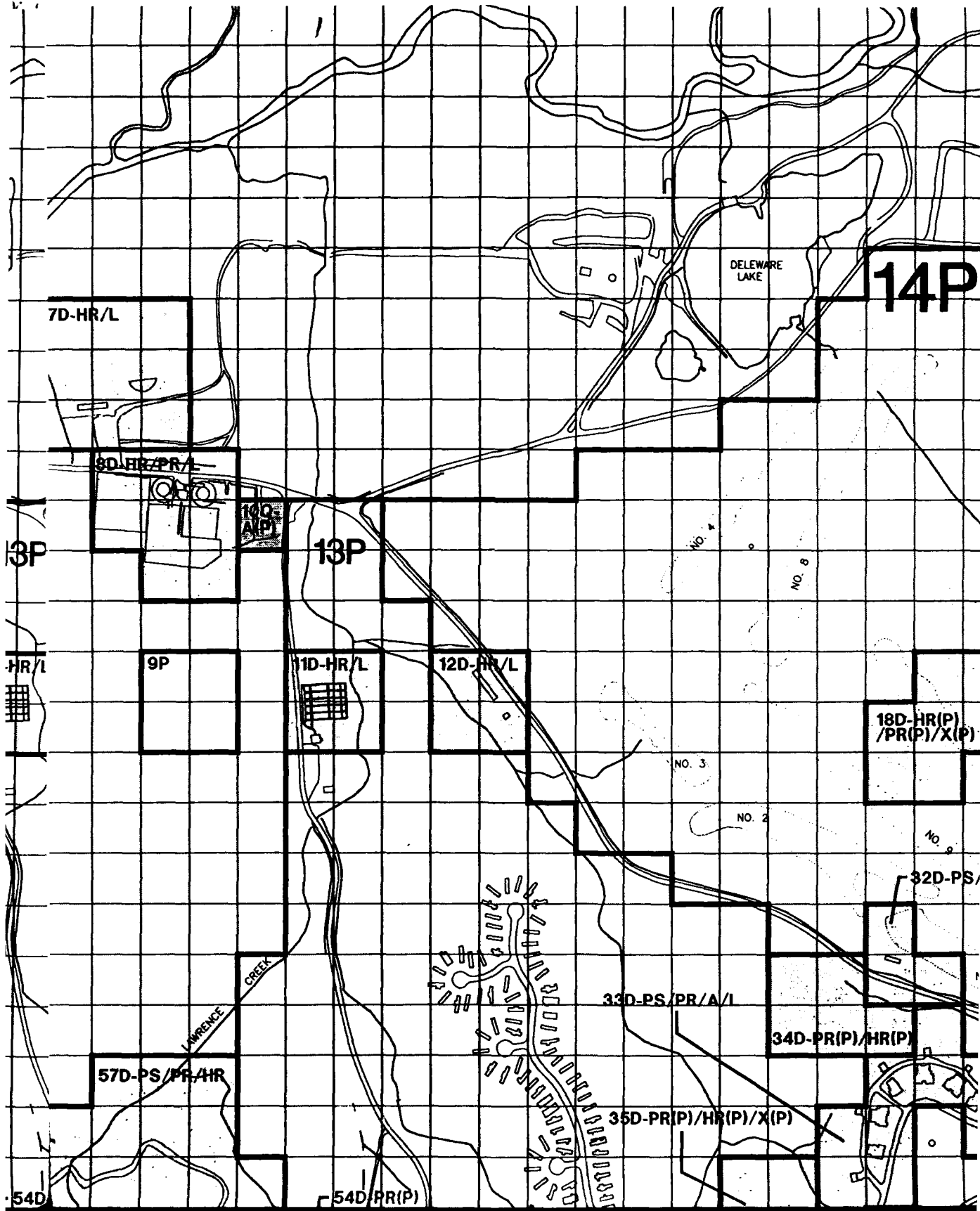
8D-HR/PR/L

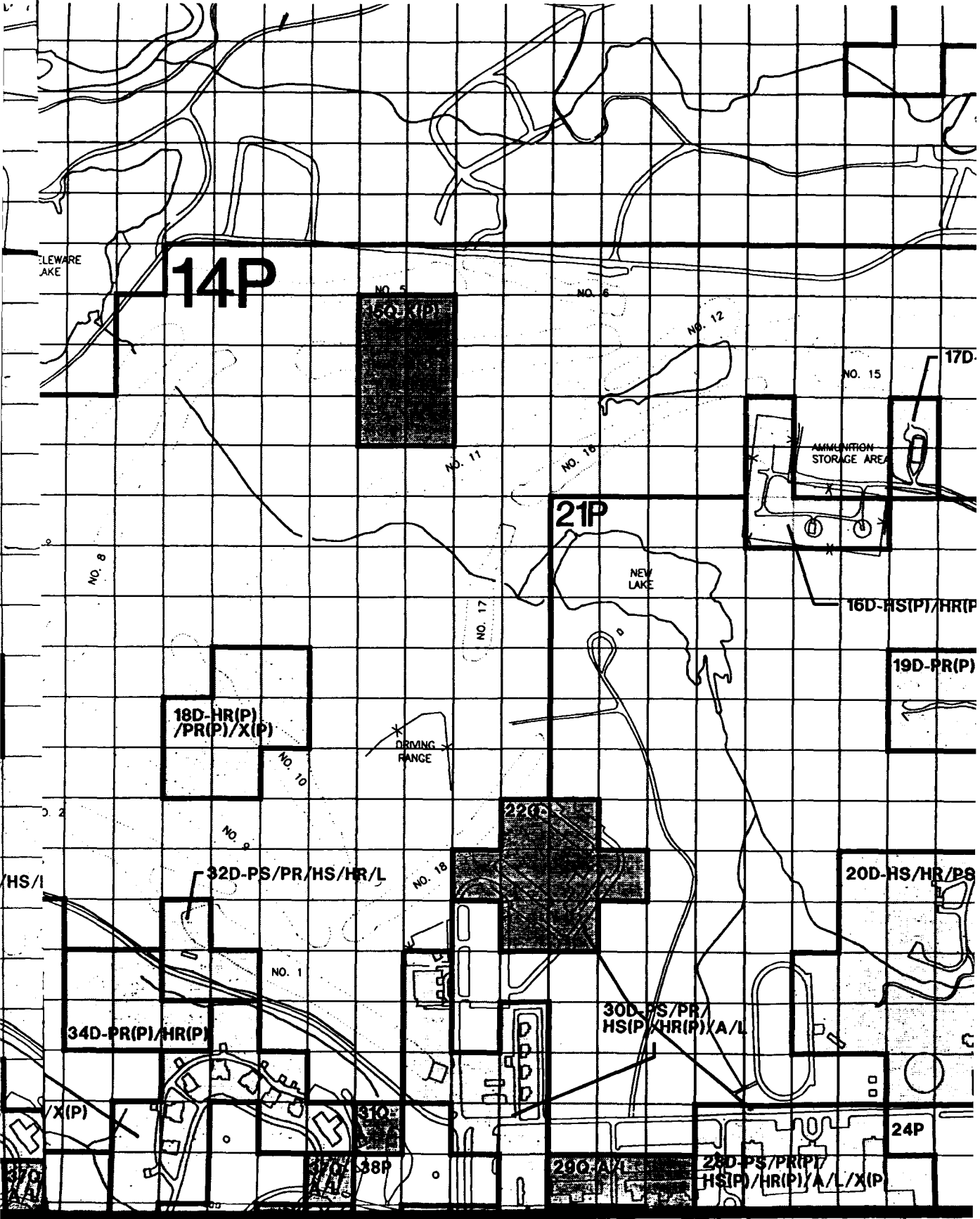
100-ALP

9P

57D-PS/PR/HR

LAWRENCE CREEK





LEWIS LAKE

14P

NO. 5
503RIP

NO. 6

NO. 12

NO. 15

17D

AMMUNITION STORAGE AREA

21P

NEW LAKE

16D-HS(P)/HR(P)

19D-PR(P)

18D-HR(P)
/PR(P)/X(P)

DRIVING RANGE

22G

32D-PS/PR/HS/HR/L

20D-HS/HR/PS

34D-PR(P)/HR(P)

30D-PS/PR/HS(P)/HR(P)/A/L

24P

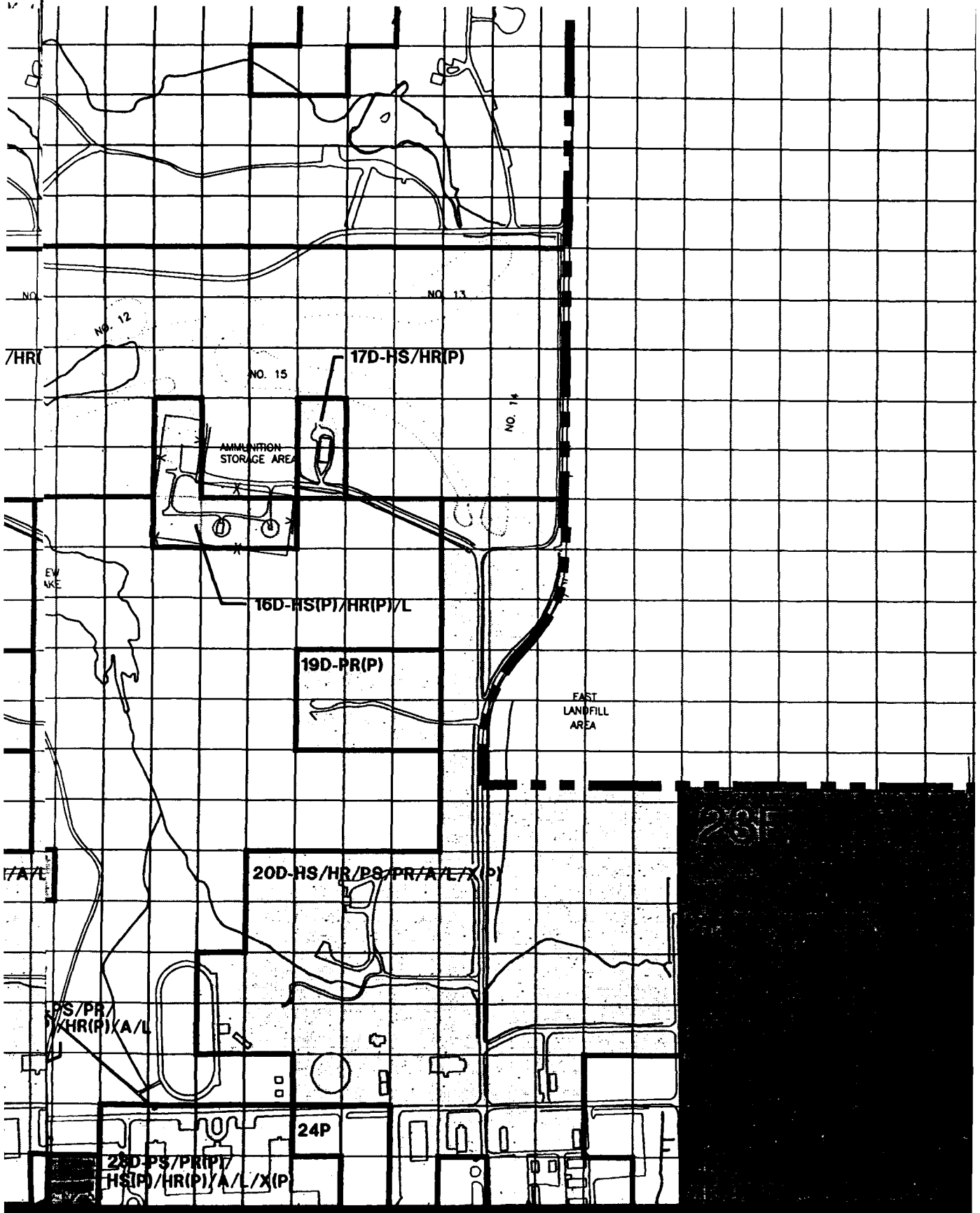
X(P)

310

38P

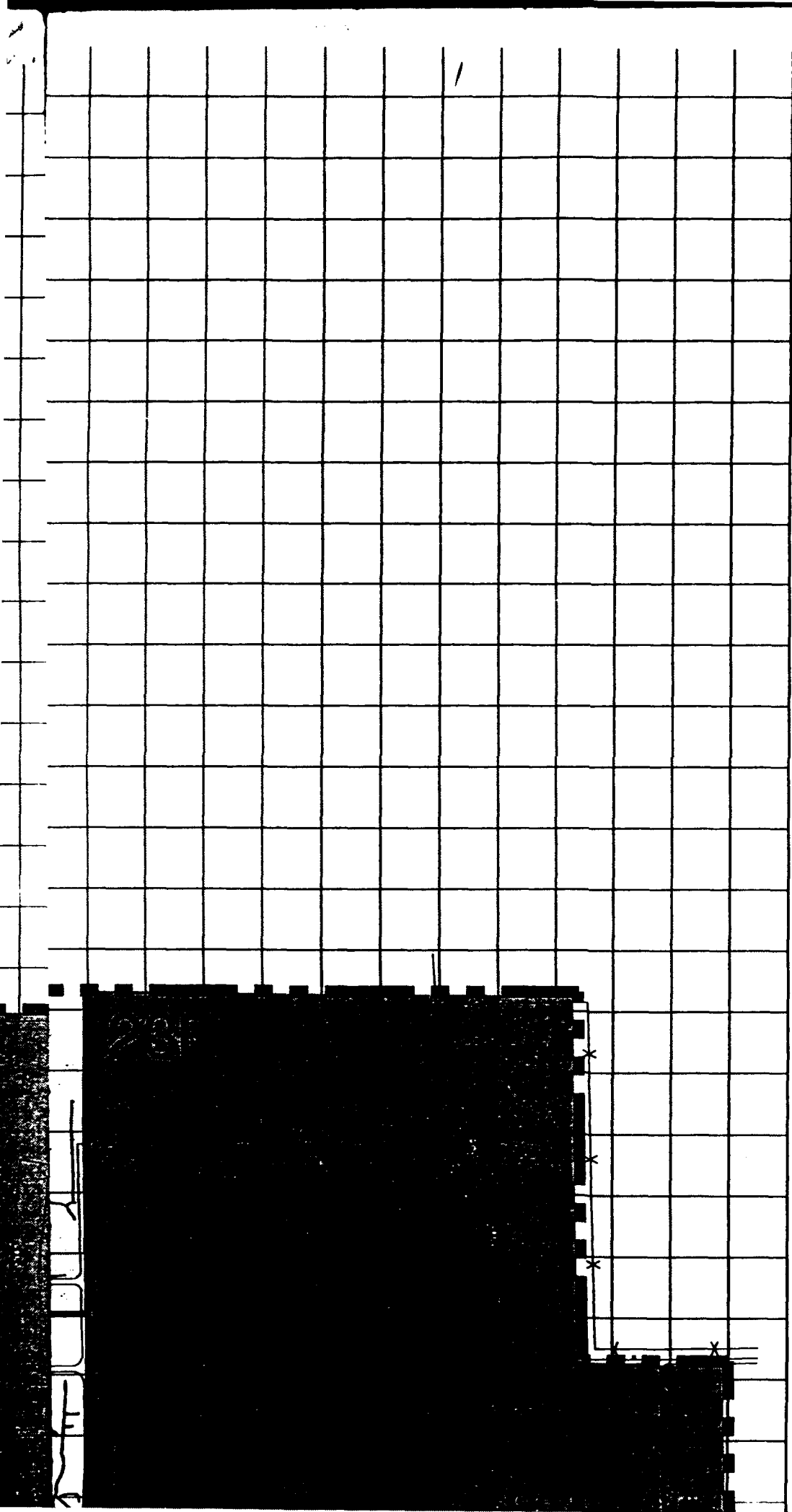
290 A/L

28D-PS/PR(P)/HS(P)/HR(P)/A/L/X(P)

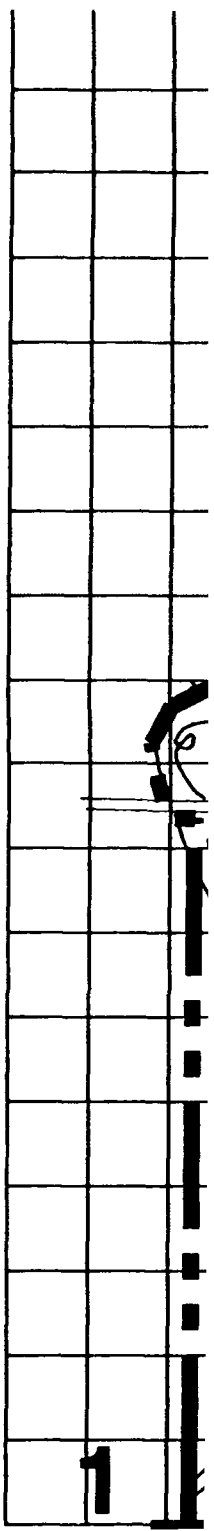


58D-PR(P)/HR(P)/X(P)

42D-PS/P/HS/A/L

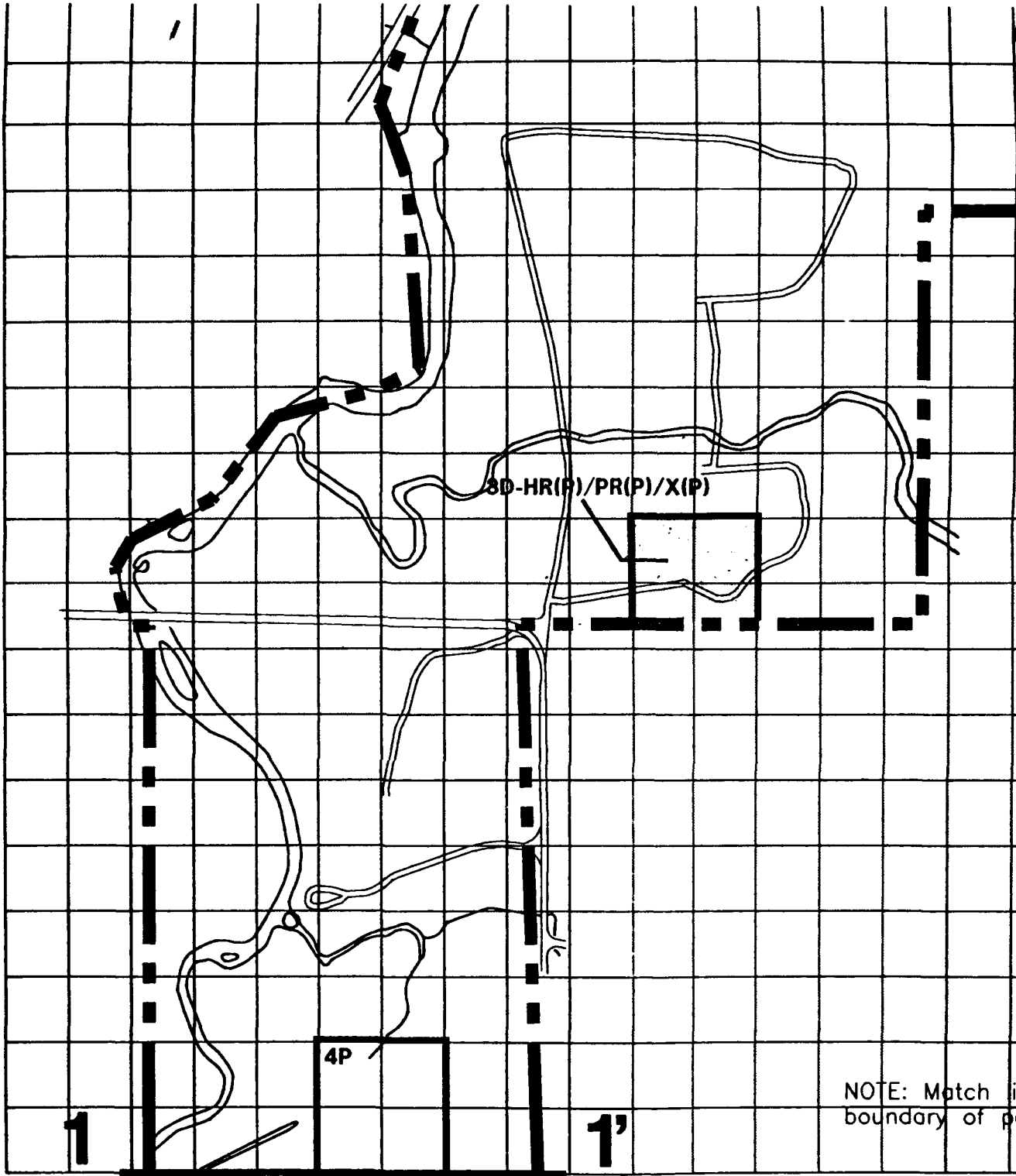


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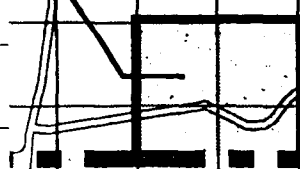


NOTE: Match
boundary of p

LEGEND

51

IR(P)/PR(P)/X(P)



NOTE: Match line 1-1' is the southern boundary of parcels 2P and 4D.

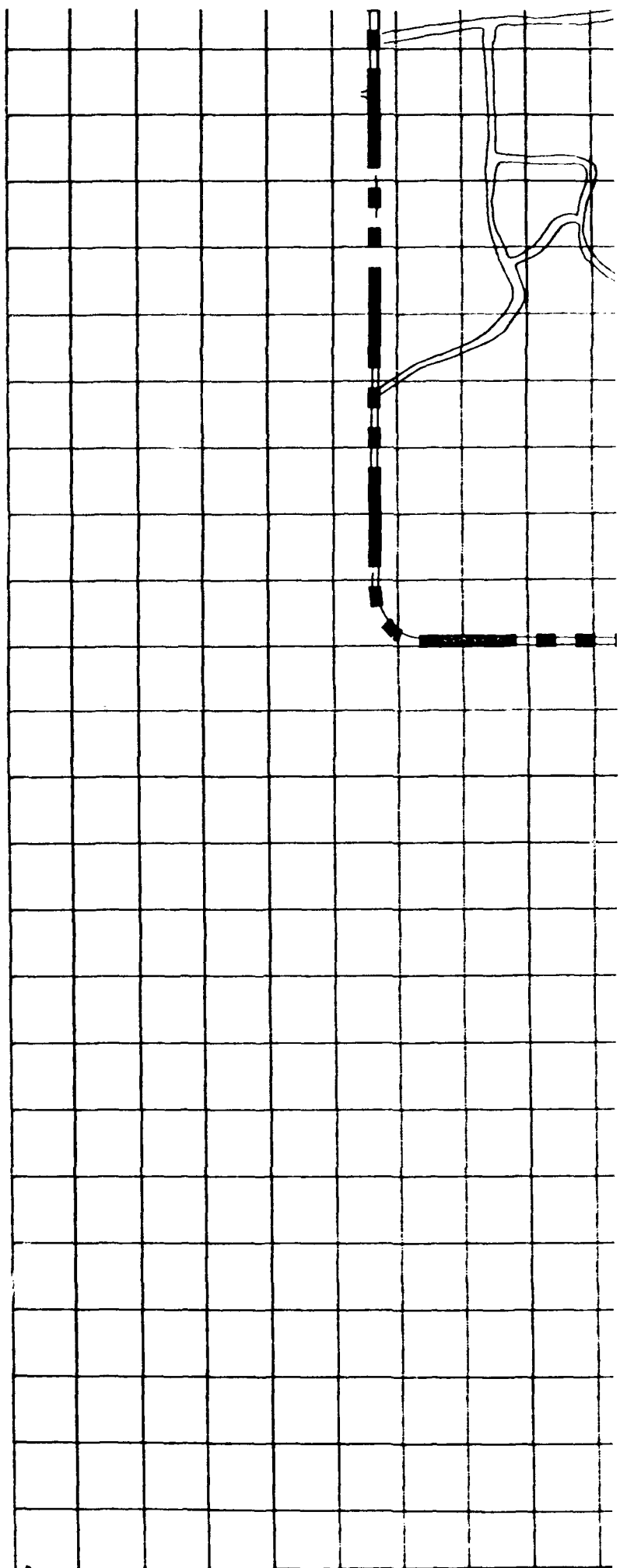
1'

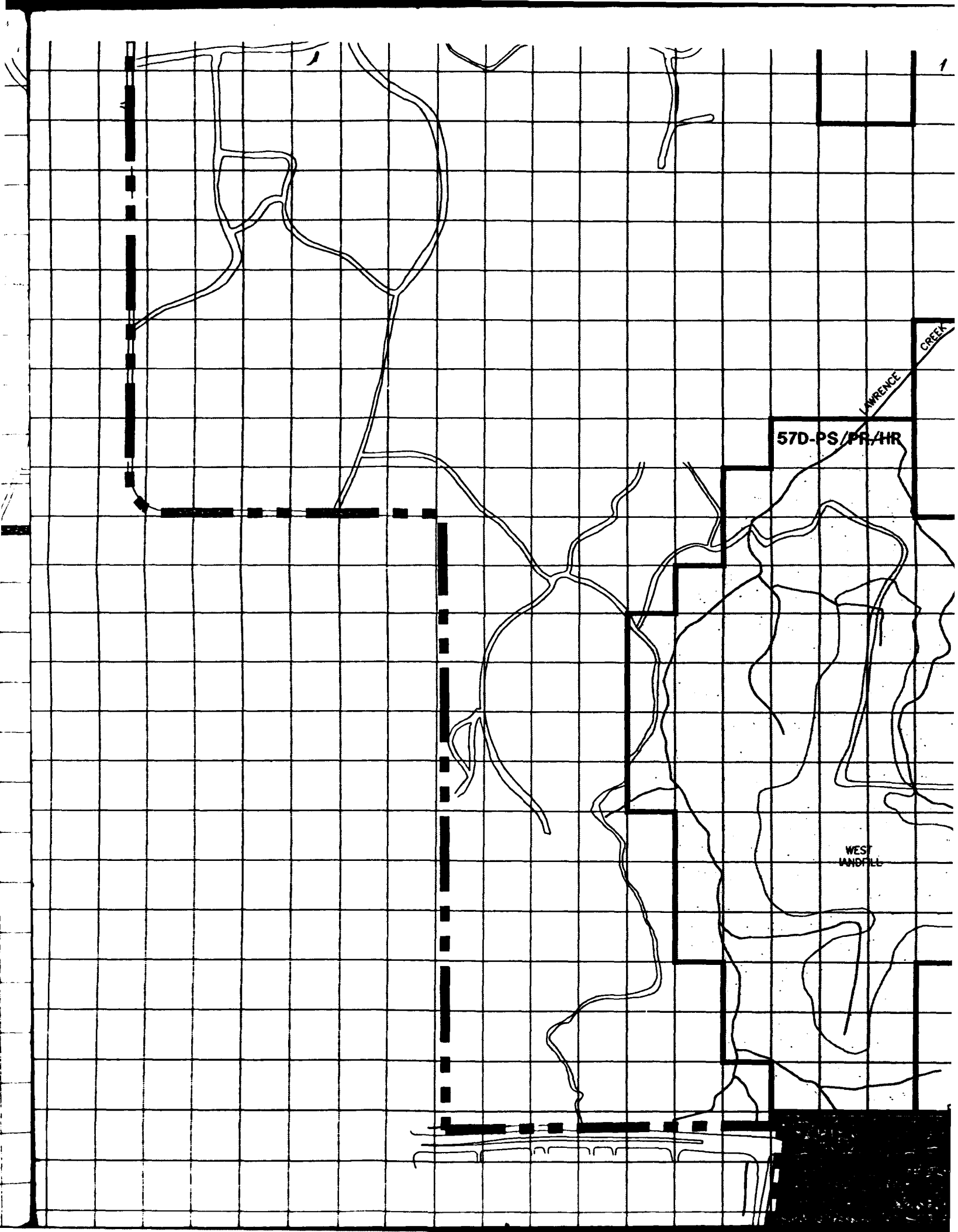
1-1
els 2

6 57 58 59 60 61 62 63 64 65 66 67 68 69 70

ND

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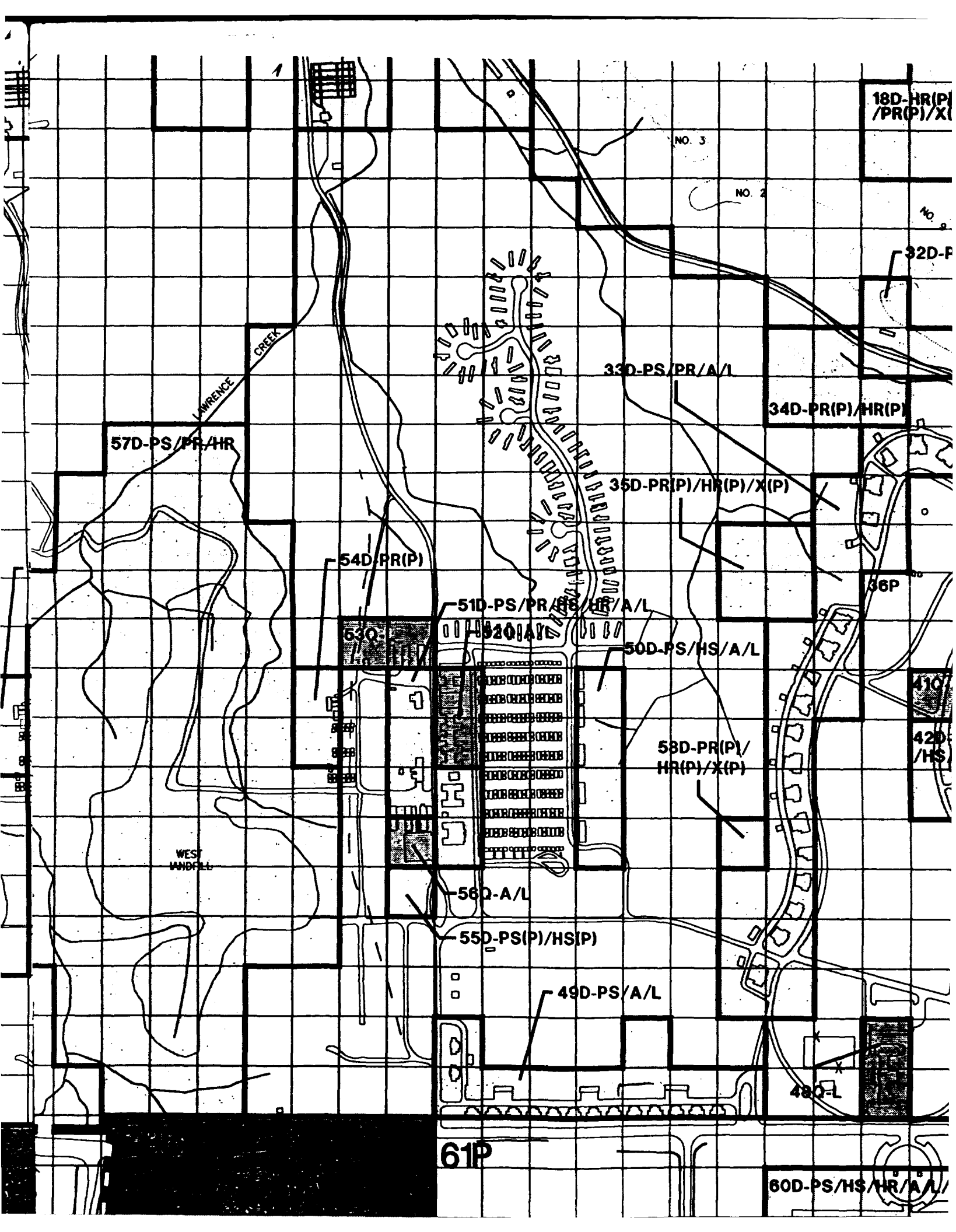




57D-PS/PR/HR

LAWRENCE
CREEK

WEST
LANDFILL



18D-HR(P)
/PR(P)/X(P)

NO. 3

NO. 2

NO. 1

32D-P

33D-PS/PR/A/L

34D-PR(P)/HR(P)

57D-PS/PR/HR

35D-PR(P)/HR(P)/X(P)

54D/PR(P)

36P

51D-PS/PR/HS/HR/A/L

530

50D-PS/HS/A/L

410

58D-PR(P)
HR(P)/X(P)

420
/HS

WEST
WADSWELL

56Q-A/L

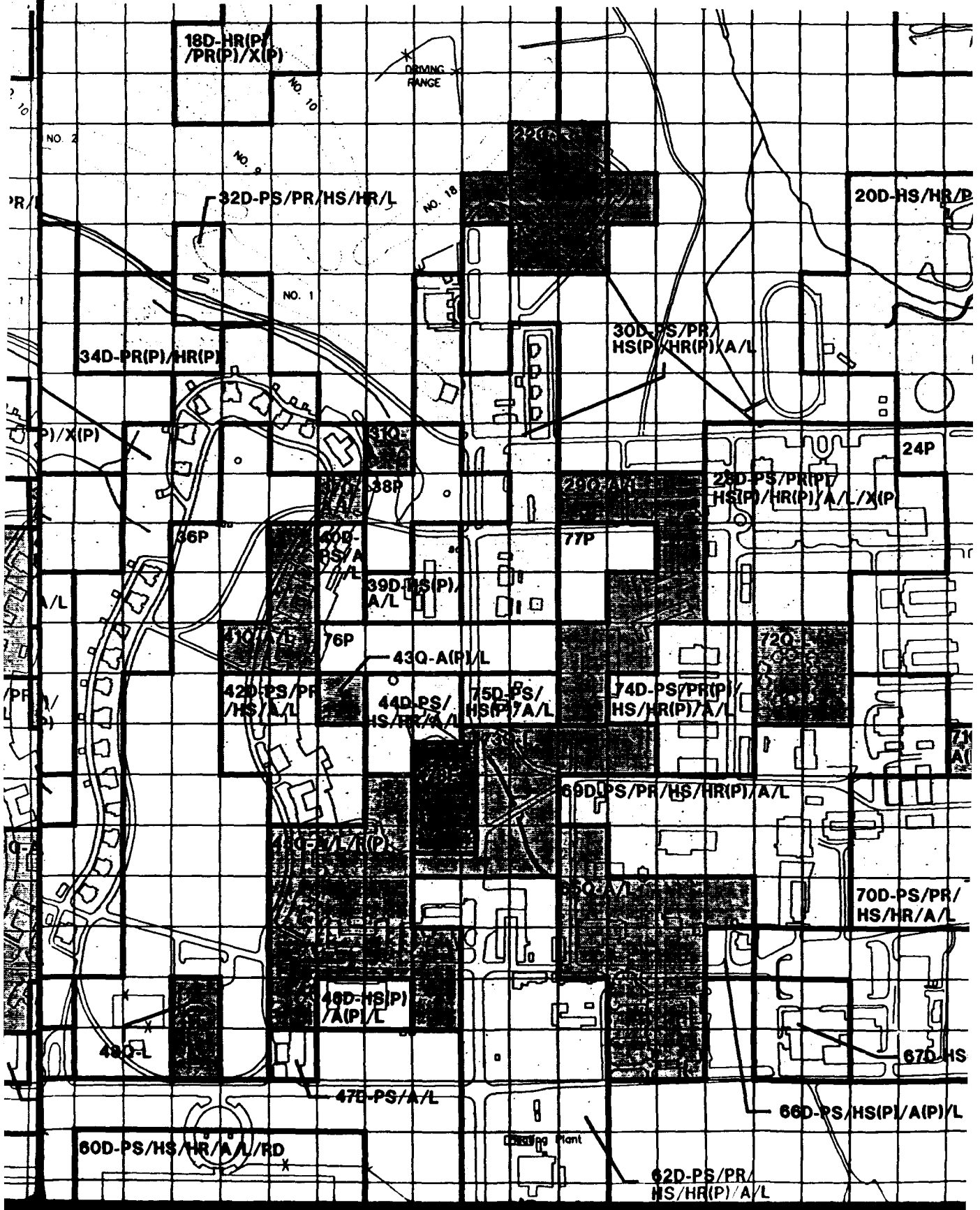
55D-PS(P)/HS(P)

49D-PS/A/L

480-L

61P

60D-PS/HS/HR/A/L



SO
CA

ONE-ACRE GRID SQUARE
COORDINATE LOCATION: 6,7

EAST
LANDFILL
AREA

200-HS/HR/PS/PR/A/L/X(P)

24P

PR(P)
(P)/A/L/X(P)

26P

250-PS/
A(P)/L

270-PS/A(P)/L

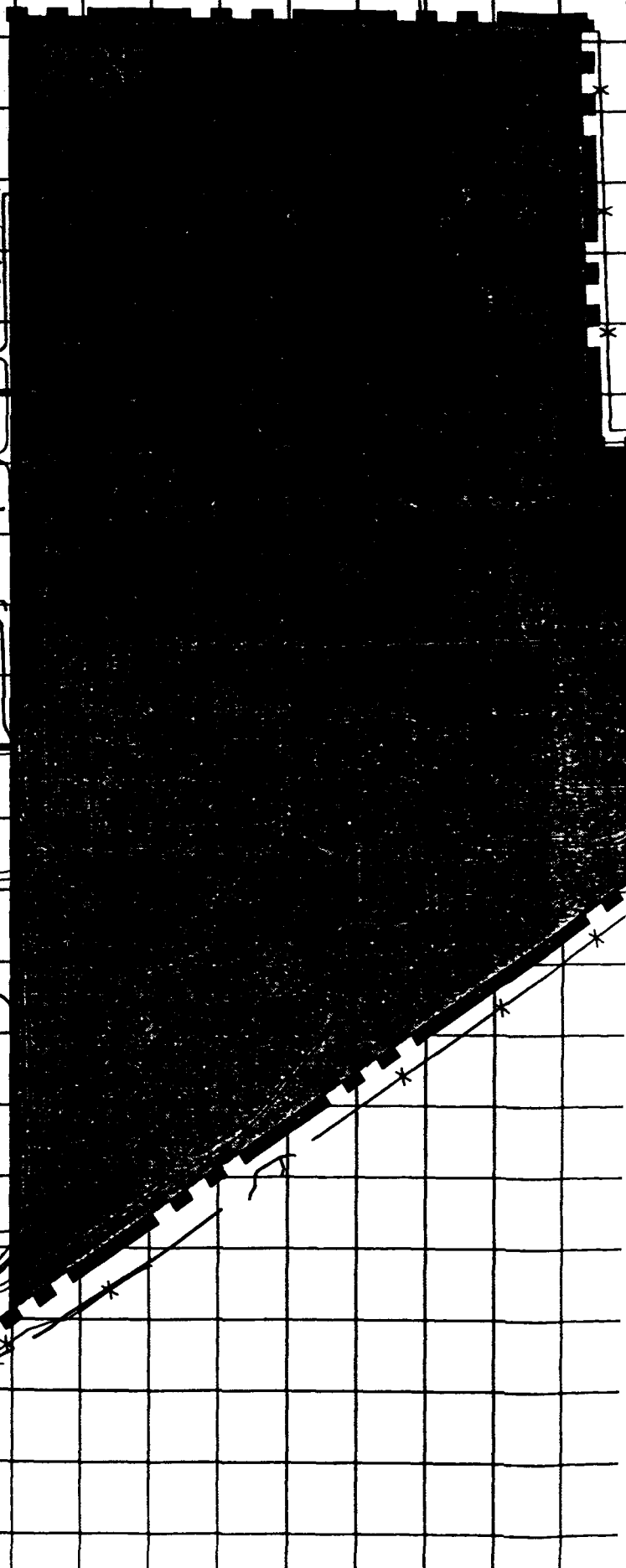
680-AP

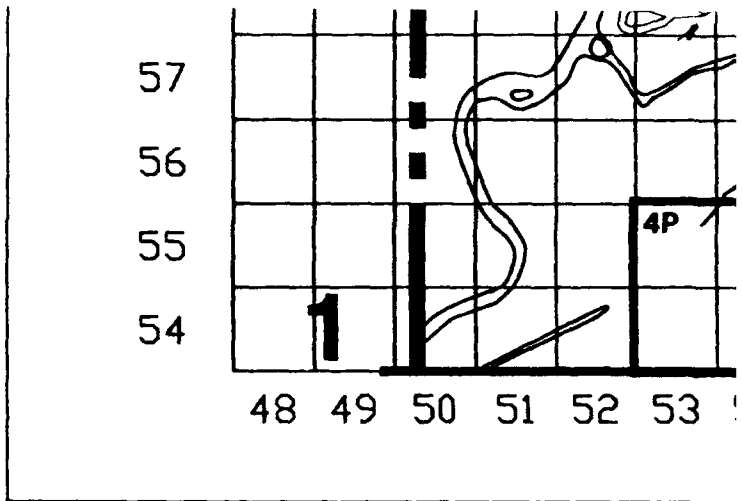
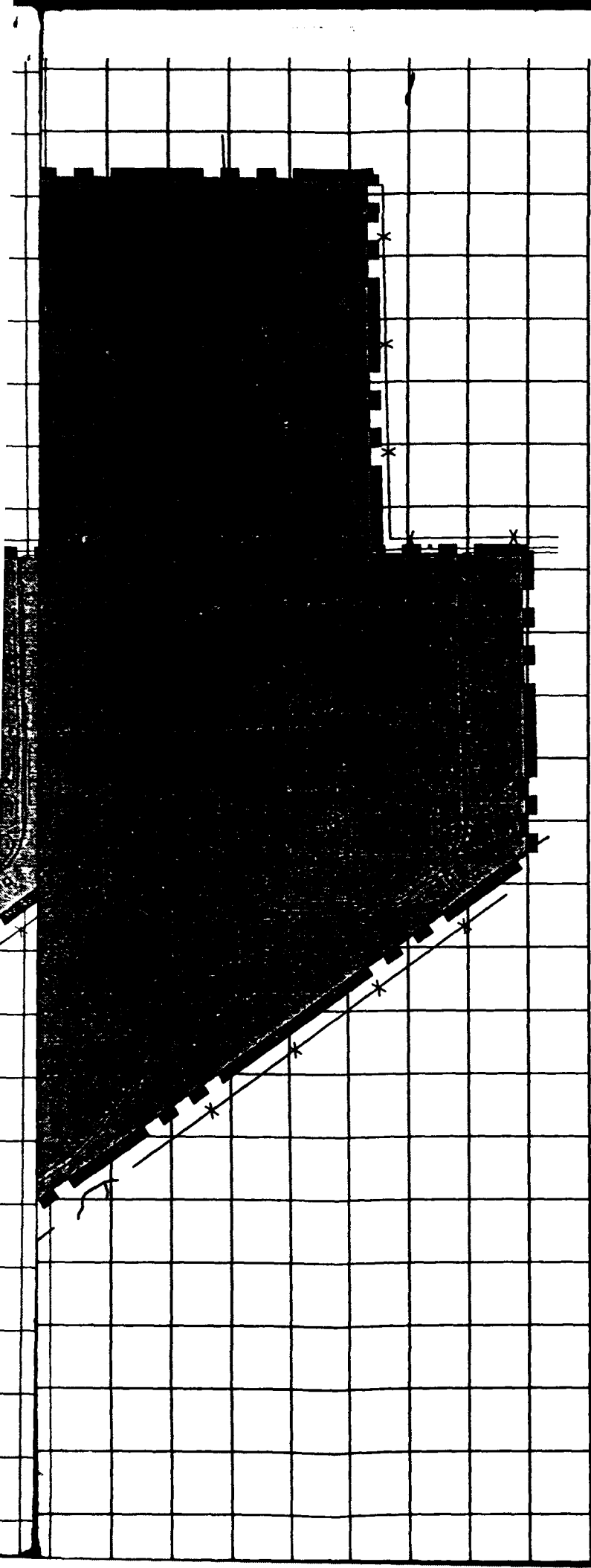
700-PS/PR/
HS/HR/A/L

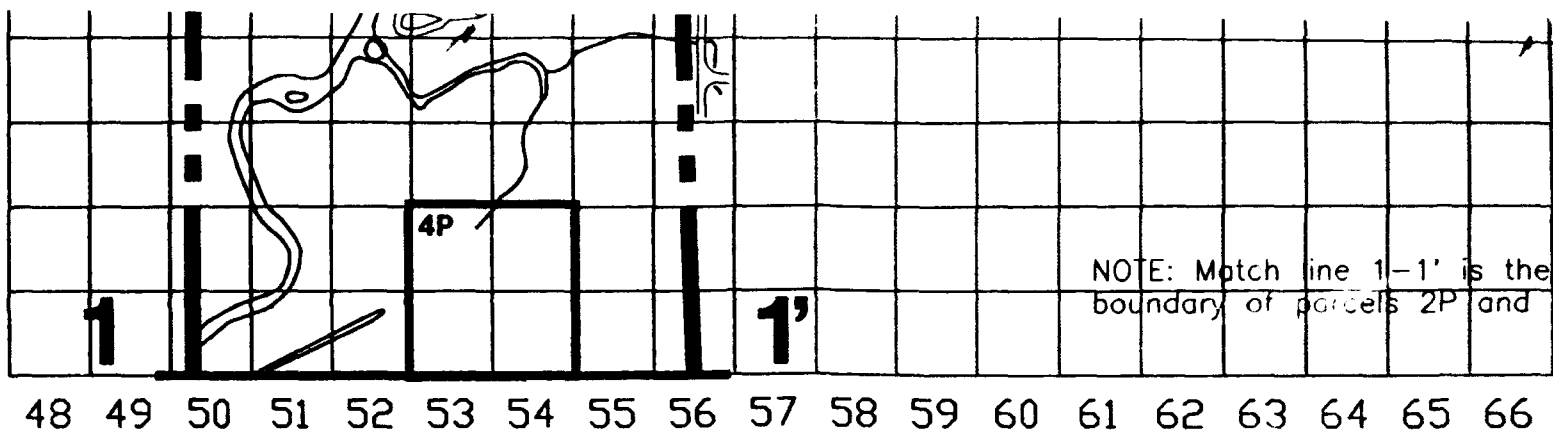
670 HS(P)/HR(P)/A/L

60-PS/HS(P)/A(P)/L

63P







LEGEND



DISQUALIFIED AREA



QUALIFIED AREA



EXCLUDED AREA



CERFA PARCEL



INSTALLATION BOUNDARY

NOTE: Match line 1-1' is the southern boundary of parcels 2P and 4D.

1'

56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

END

DISQUALIFIED AREA

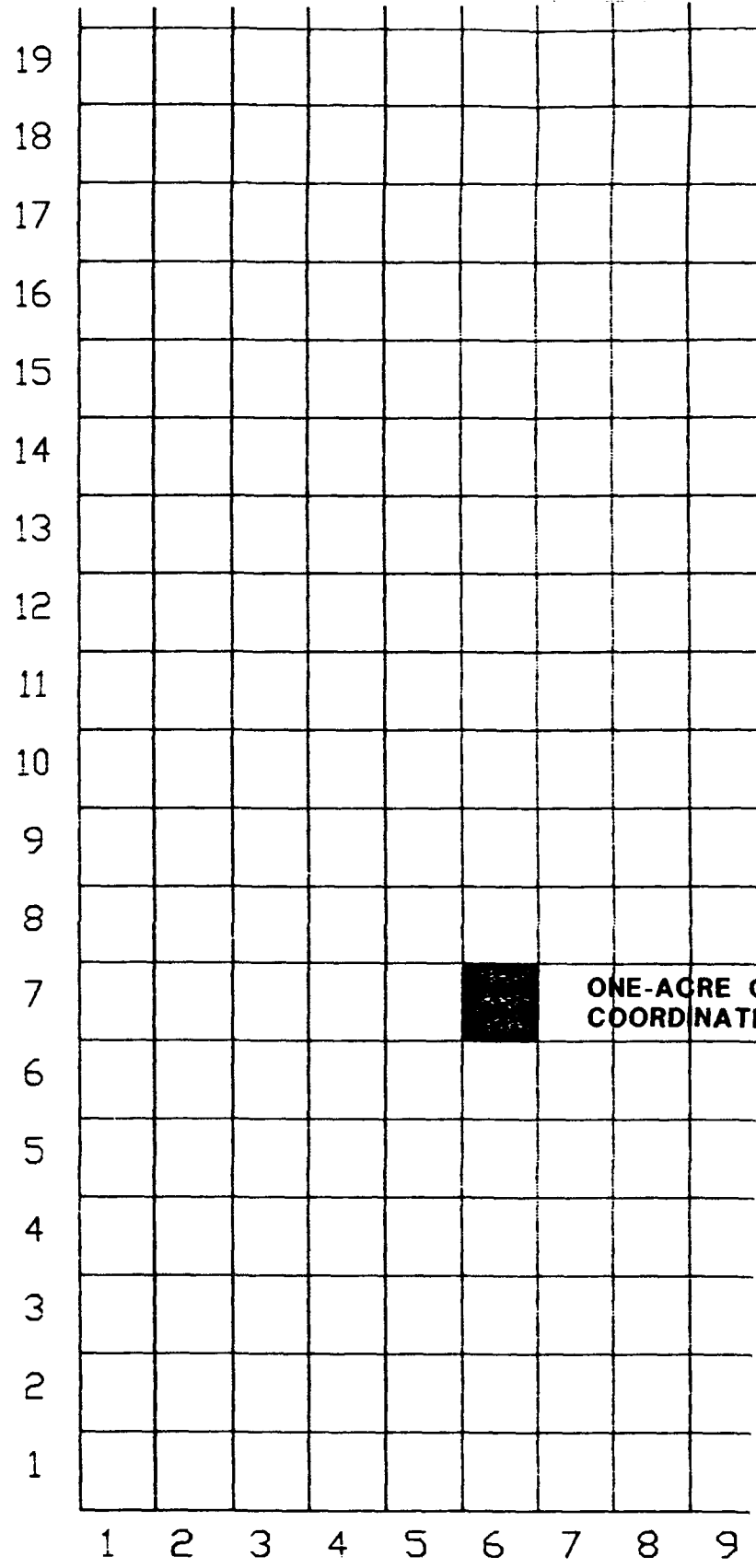
QUALIFIED AREA

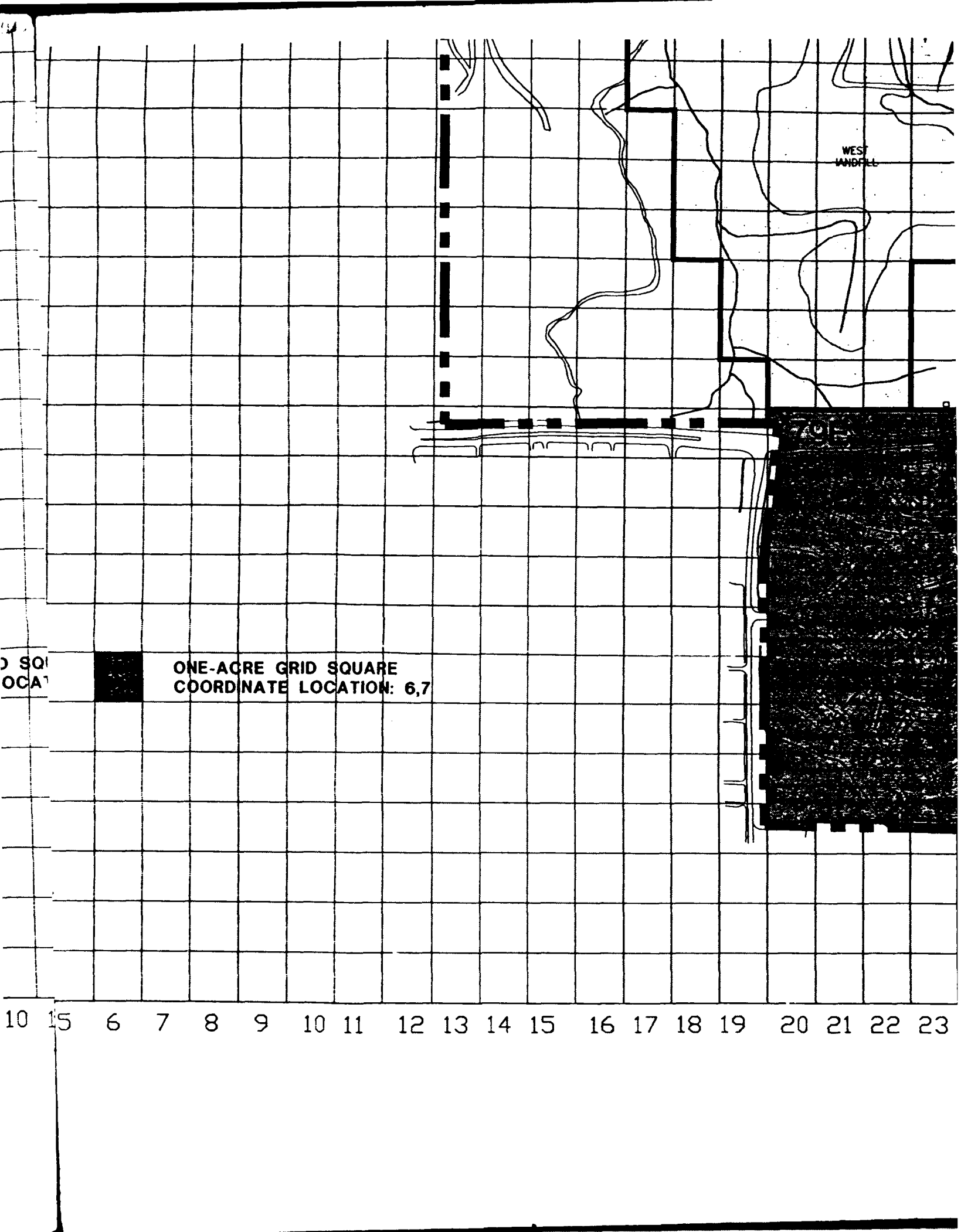
EXCLUDED AREA

CERFA PARCEL

INSTALLATION BOUNDARY

4





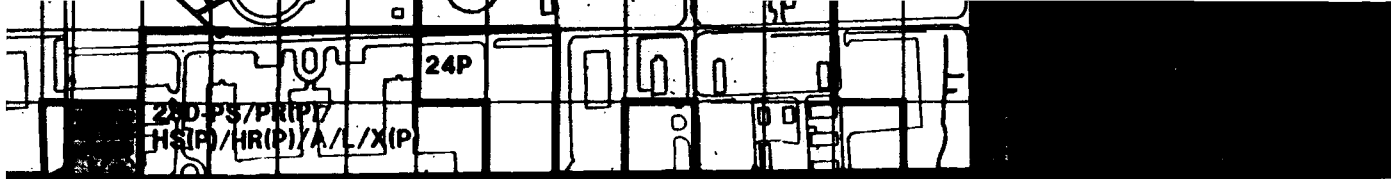
WEST
LANDFILL

SO
OCA



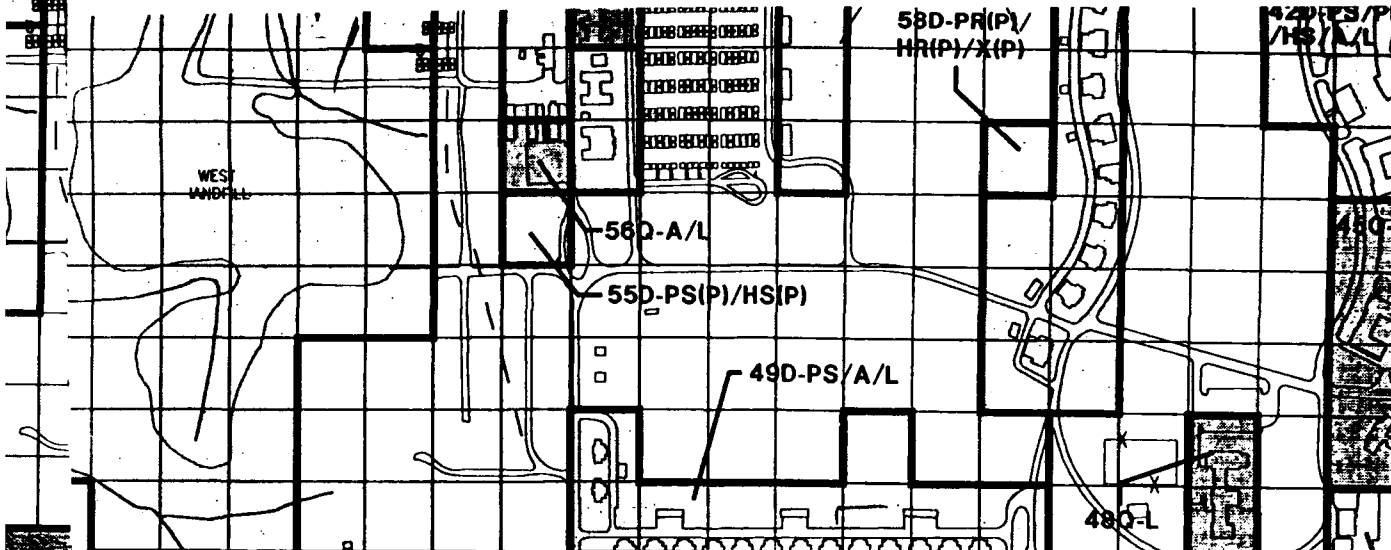
ONE-ACRE GRID SQUARE
COORDINATE LOCATION: 6,7

10 15 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23



20D-PS/PR(P)
HS(P)/HR(P)/A/L/X(P)

24P



WEST
WINDFILL

58D-PR(P)
HR(P)/X(P)

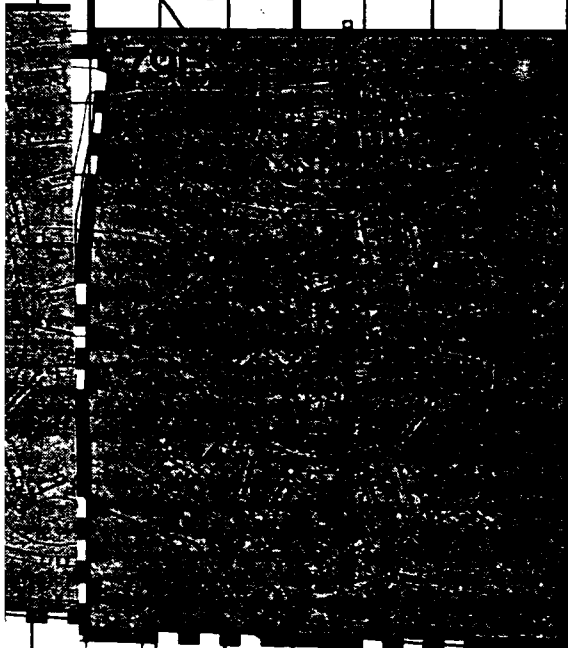
42D-PS/P
/HS/A/L

56D-A/L

55D-PS(P)/HS(P)

49D-PS/A/L

48D-L

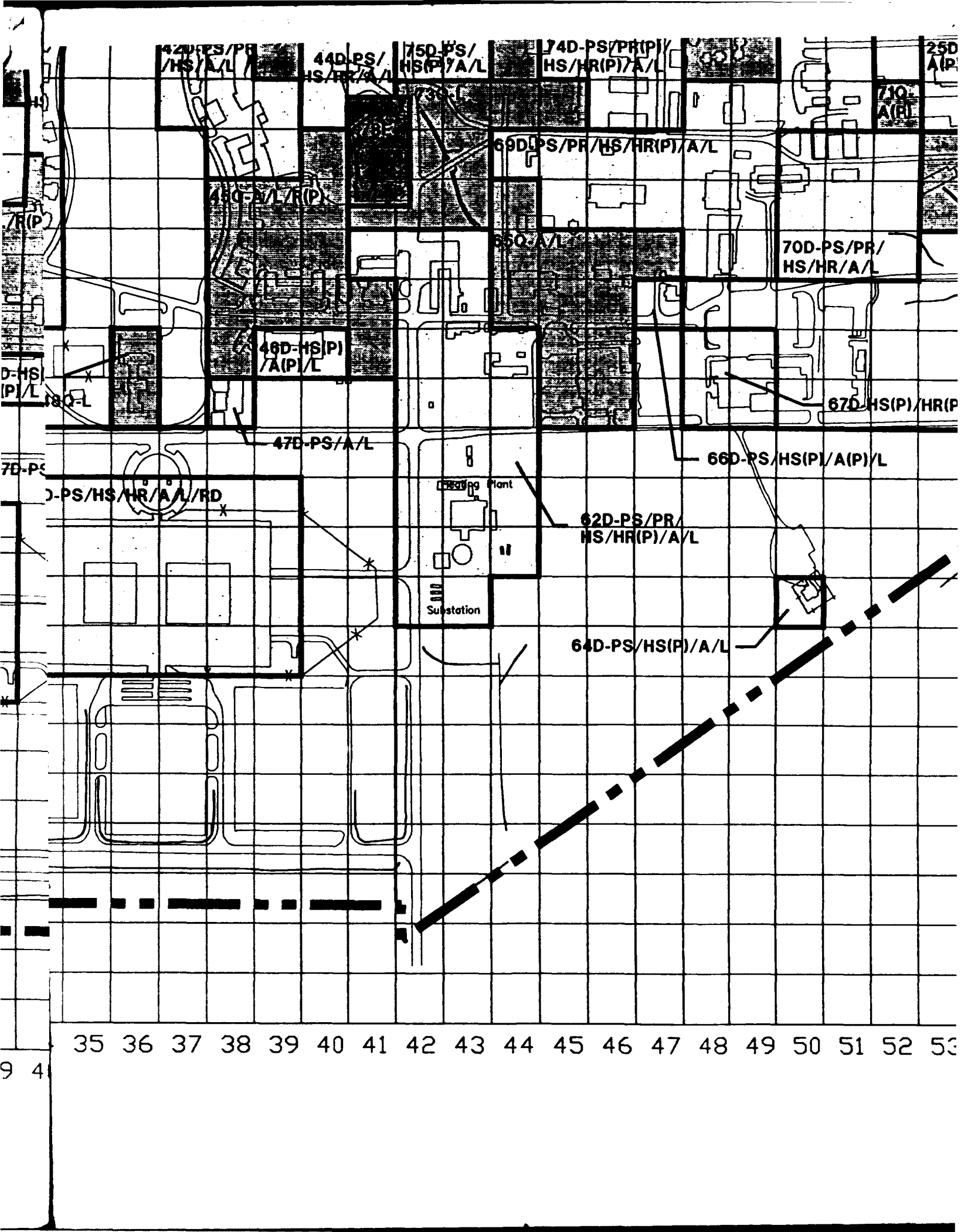


61P

60D-PS/HS/HR/A/L/RD

59D-PR(P)

4 25 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38



42D-PS/PR/HS/A/L

44D-PS/HS/PR/A/L

75D-PS/HS(P)/A/L

74D-PS/PR(P)/HS/HR(P)/A/L

25D A(P)

710 A(P)

69D-PS/PR/HS/HR(P)/A/L

45D-PS/A/L/PR(P)

65D A/L

70D-PS/PR/HS/HR/A/L

D-PS/PR(P)/L

46D-PS(P)/A(P)/L

67D-PS/HS(P)/HR(P)

47D-PS/A/L

66D-PS/HS(P)/A(P)/L

70D-PS

70D-PS/HS/HR/A/L/RD

Plant

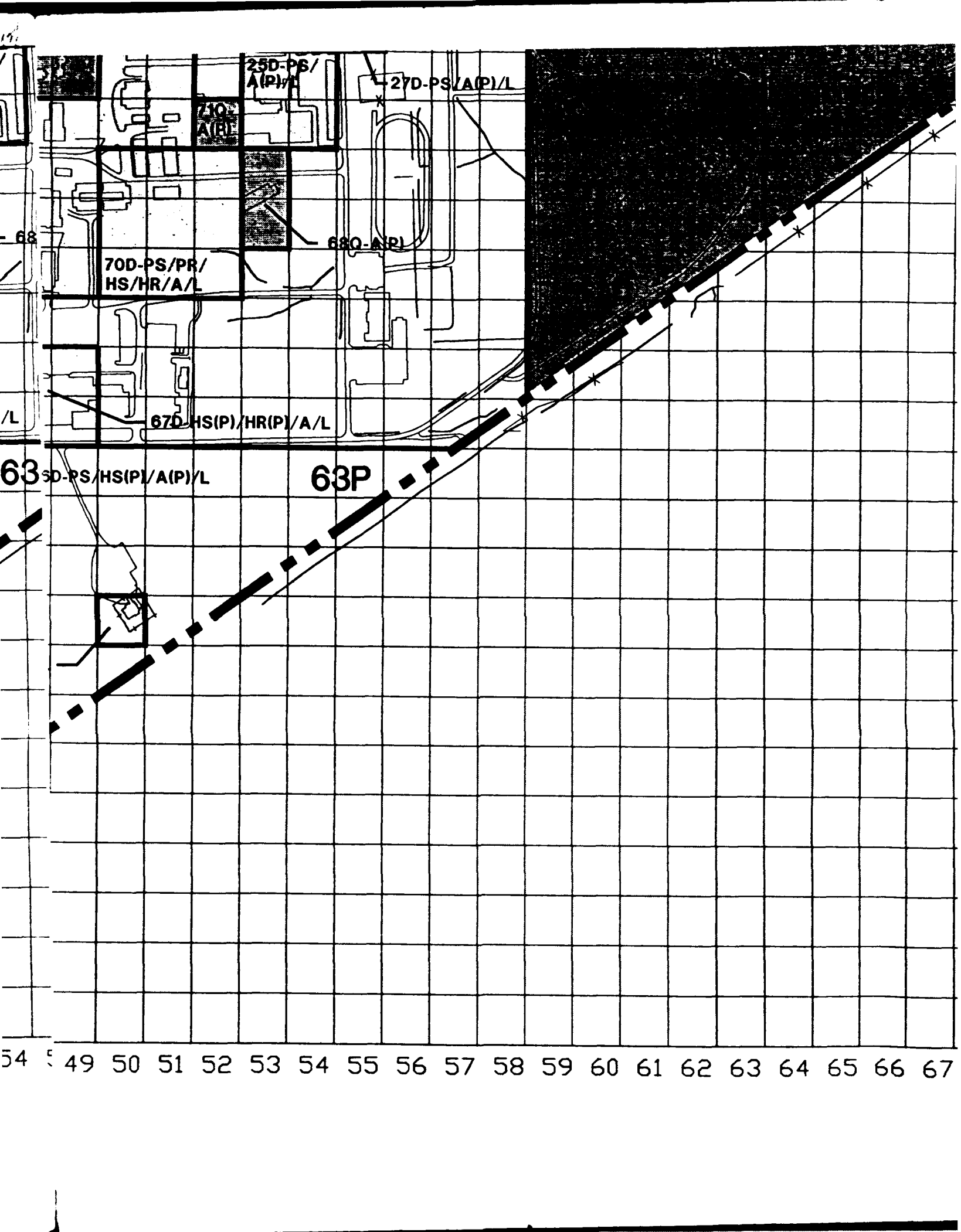
62D-PS/PR/HS/HR(P)/A/L

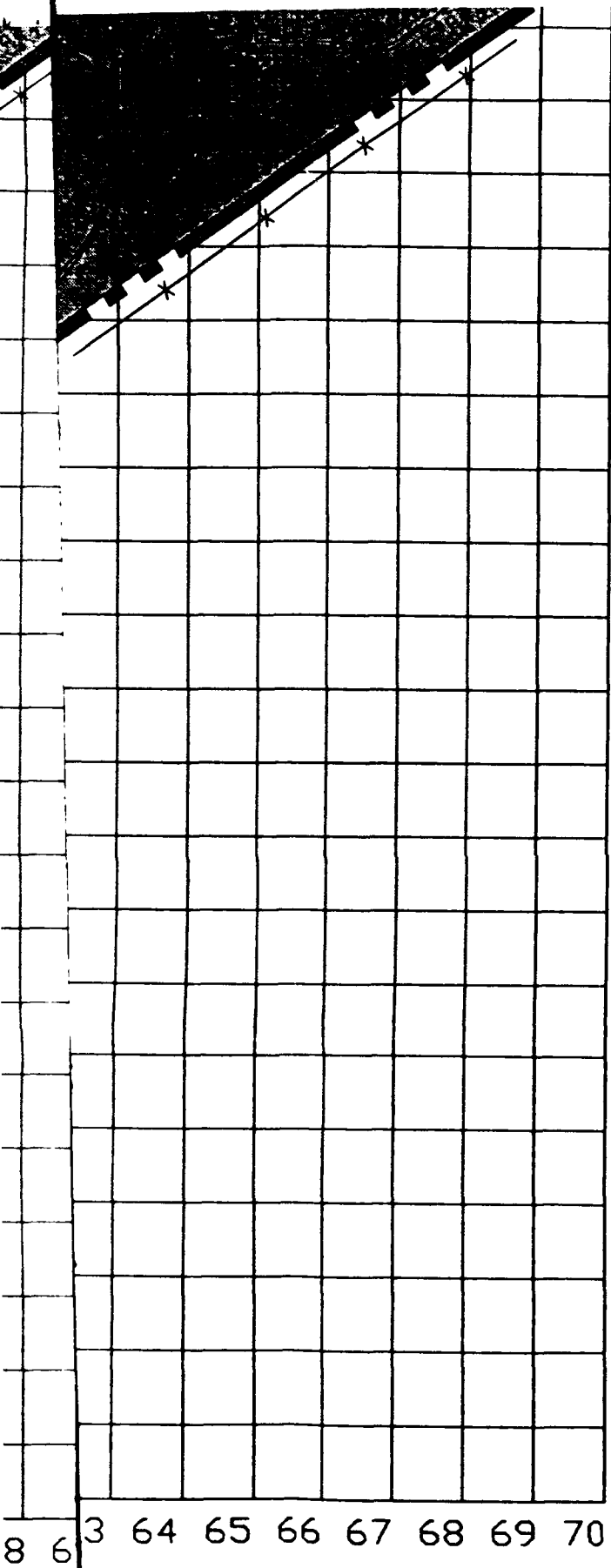
Substation

64D-PS/HS(P)/A/L

35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53

9 4





—

F
14D-





QUALIFIED AREA



EXCLUDED AREA



CERFA PARCEL



INSTALLATION BOUNDARY

PARCEL LABEL DEFINITIONS

14D-PS

- A = ASBESTOS
- L = LEAD PAINT
- R = RADON
- X = UXO
- PS = PETROLEUM STORAGE
- PR = PETROLEUM RELEASE/DISPOSA
- HS = HAZARDOUS MATERIAL STORAG
- HR = HAZARDOUS MATERIAL RELEAS
- (P) = POSSIBLE

- P = CERFA PARCEL
- Q = CERFA QUALIFIED PARCEL
- D = CERFA DISQUALIFIED PARCEL
- E = CERFA EXCLUDED PARCEL

PARCEL NUMBER



QUALIFIED AREA



EXCLUDED AREA



CERFA PARCEL



INSTALLATION BOUNDARY

PARCEL LABEL DEFINITIONS

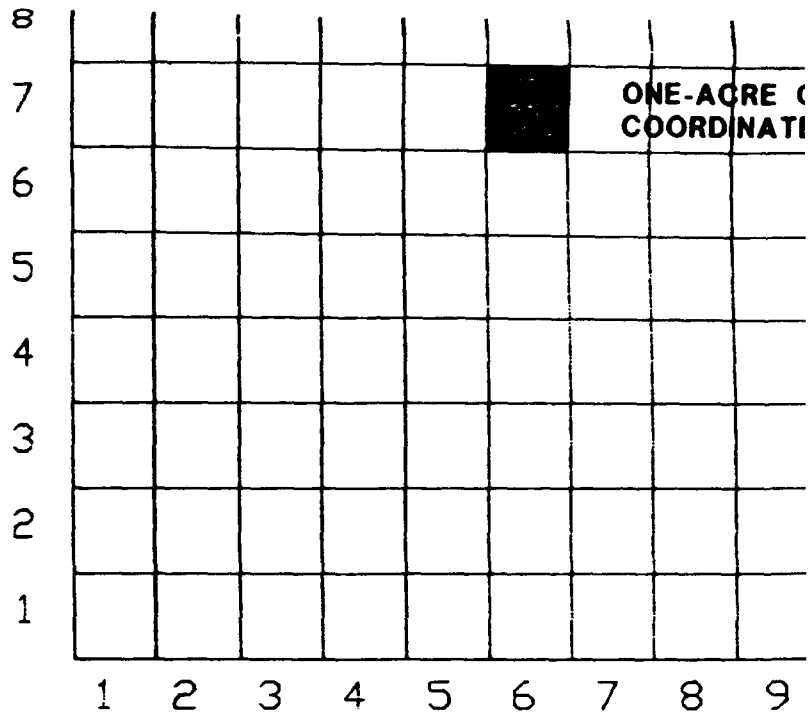
S

- _____ A = ASBESTOS
- _____ L = LEAD PAINT
- _____ R = RADON
- _____ X = UXO
- _____ PS = PETROLEUM STORAGE
- _____ PR = PETROLEUM RELEASE/DISPOSAL
- _____ HS = HAZARDOUS MATERIAL STORAGE
- _____ HR = HAZARDOUS MATERIAL RELEASE/DISPOSAL
- _____ (P) = POSSIBLE

- _____ P = CERFA PARCEL
- _____ Q = CERFA QUALIFIED PARCEL
- _____ D = CERFA DISQUALIFIED PARCEL
- _____ E = CERFA EXCLUDED PARCEL

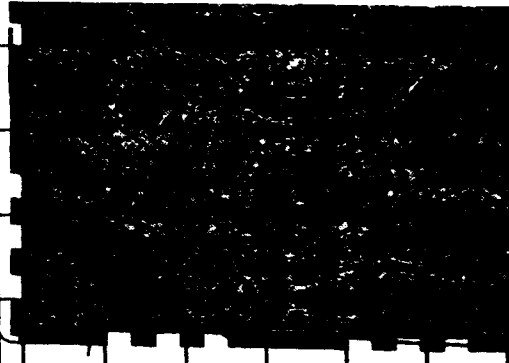
_____ PARCEL NUMBER

IP05

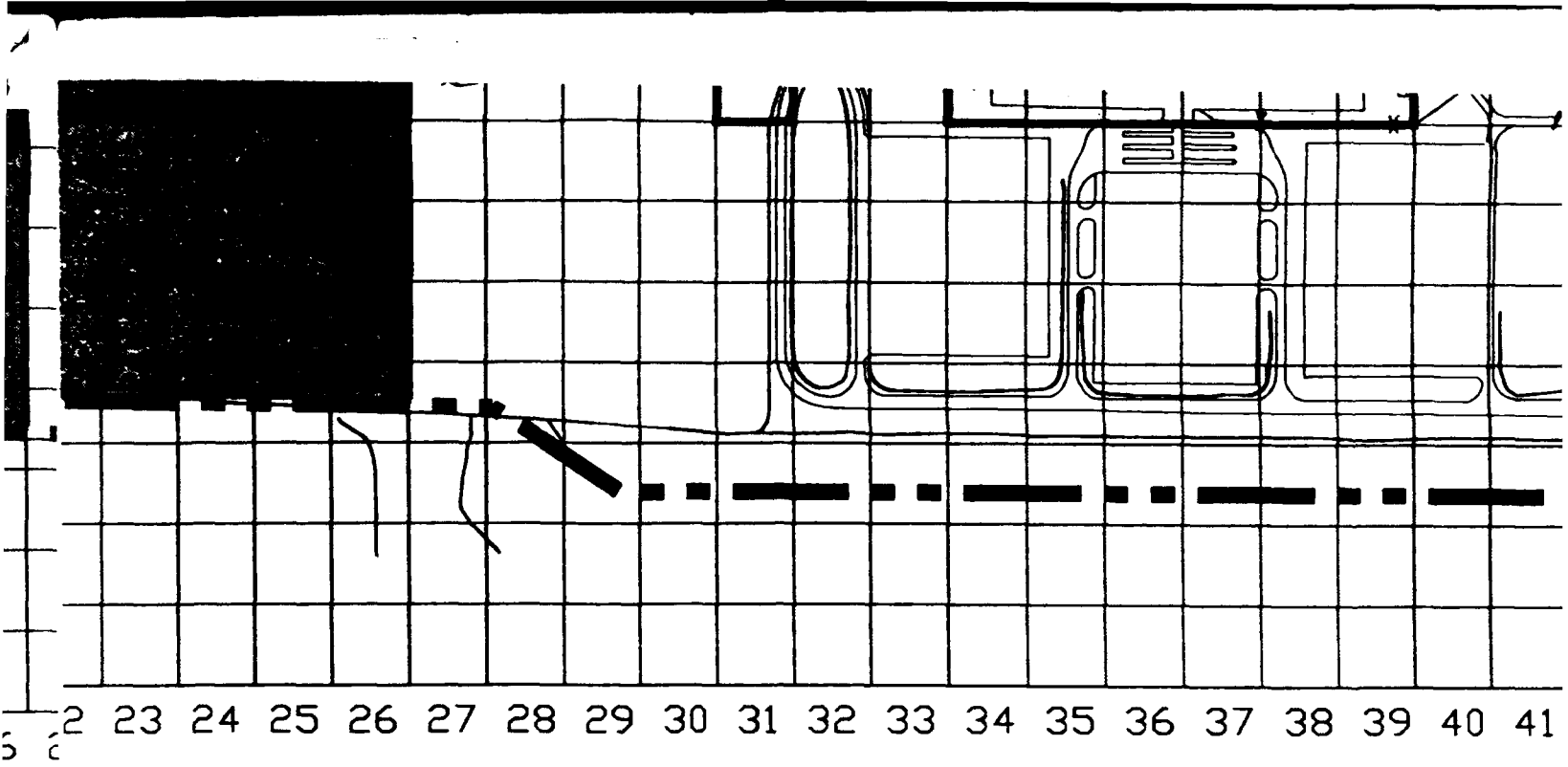


SO
CA

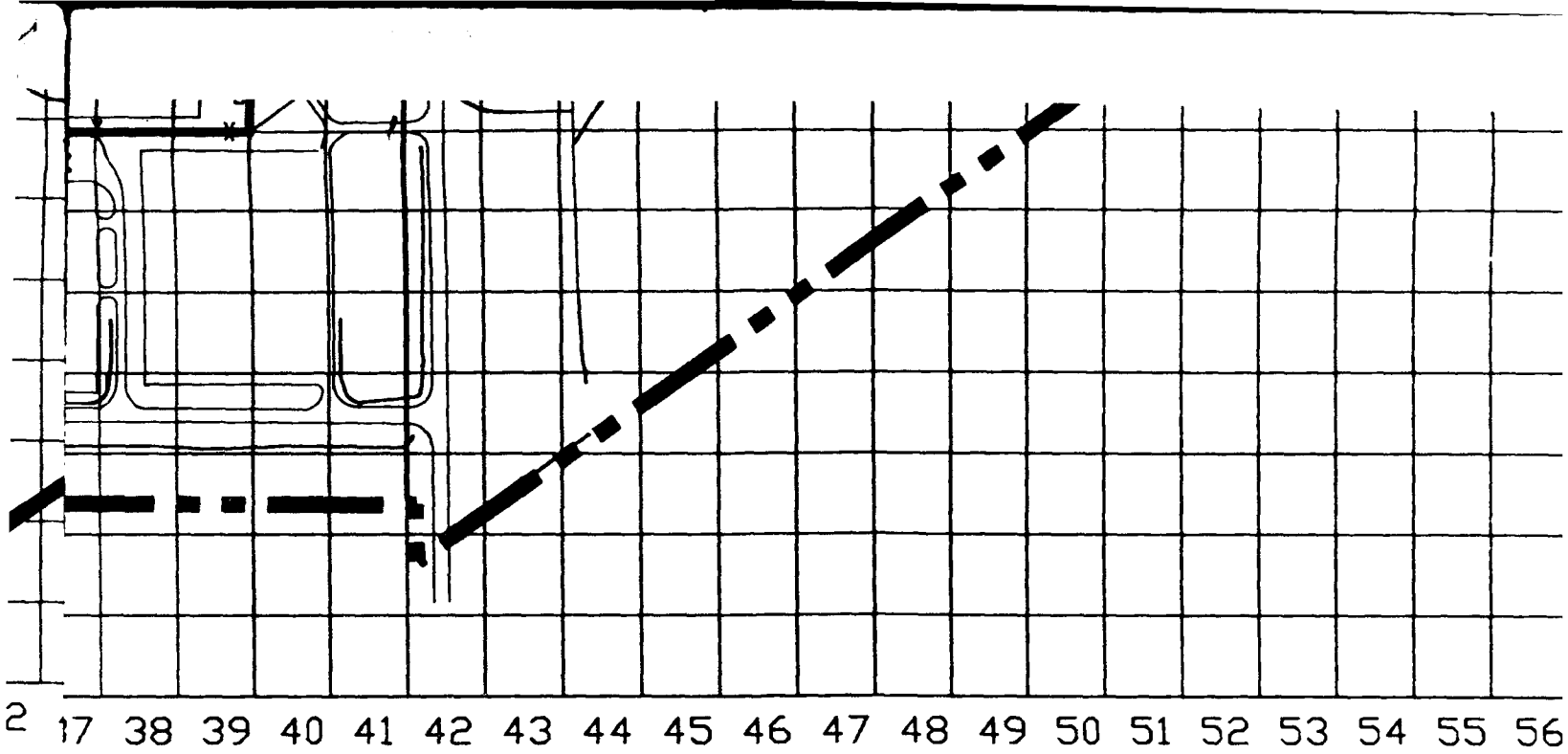
ONE-ACRE GRID SQUARE
COORDINATE LOCATION: 6,7



10 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25



0

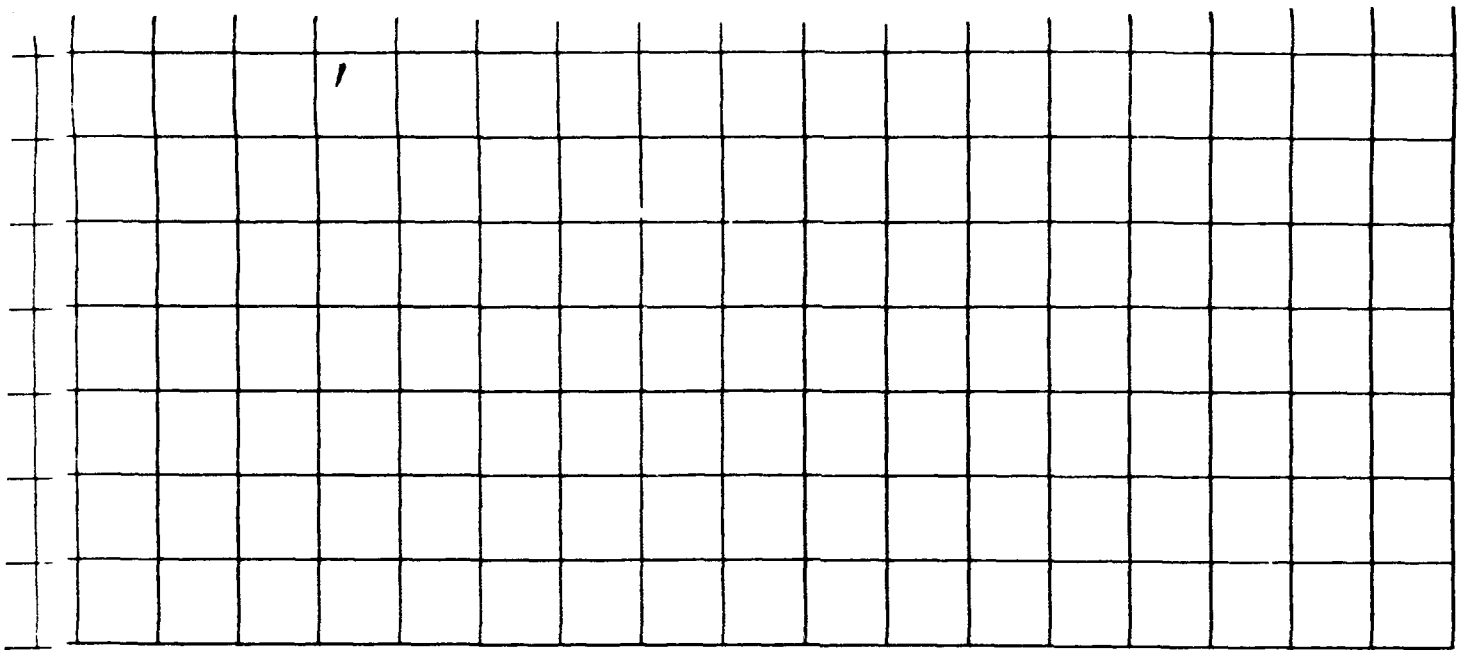


SCALE



0

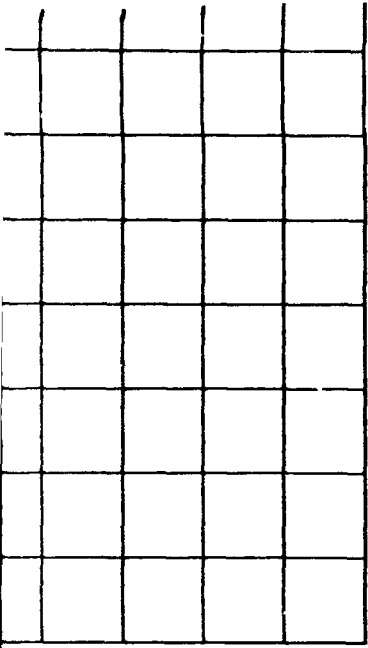
2500 Ft.



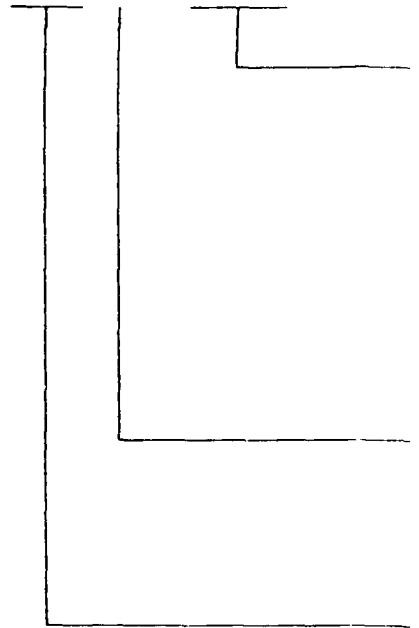
7 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

Compiled from various
the U.S. Army Environ

14D-PS

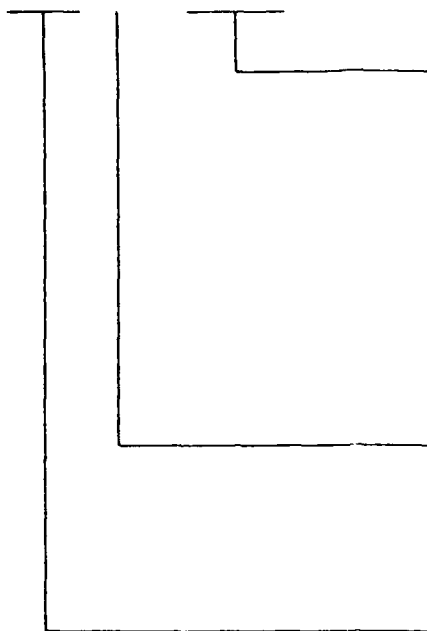


66 67 68 69 70



Compiled from various sources provided by
the U.S. Army Environmental Center

14D-PS



A =
L =
R =
X =
PS =
PR =
HS =
HR =
(P) =

A = ASBESTOS
L = LEAD PAINT
R = RADON
X = UXO
PS = PETROLEUM STORAGE
PR = PETROLEUM RELEASE/DISPOSAL
HS = HAZARDOUS MATERIAL STORAGE
HR = HAZARDOUS MATERIAL RELEASE/DISPOSAL
(P) = POSSIBLE

P = C
Q = C
D = C
E = C

P = CERFA PARCEL
Q = CERFA QUALIFIED PARCEL
D = CERFA DISQUALIFIED PARCEL
E = CERFA EXCLUDED PARCEL

PARCE

PARCEL NUMBER

Prepared F

Drawing N

ded by

FIGURE 5
FORT BENJAMIN
MARION COUNTY
CERFA PARCEL D

Prepared For: USAEC	Scale:
Drawing No: 67070-005	Date:

Arthur D
Cambridge, Mas

S

A = ASBESTOS
L = LEAD PAINT
R = RADON
X = UXO
PS = PETROLEUM STORAGE
PR = PETROLEUM RELEASE/DISPOSAL
HS = HAZARDOUS MATERIAL STORAGE
HR = HAZARDOUS MATERIAL RELEASE/DISPOSAL
(P) = POSSIBLE

P = CERFA PARCEL
Q = CERFA QUALIFIED PARCEL
D = CERFA DISQUALIFIED PARCEL
E = CERFA EXCLUDED PARCEL

PARCEL NUMBER

FIGURE 5-1
FORT BENJAMIN HARRISON
MARION COUNTY, INDIANA
CERFA PARCEL DESIGNATIONS

Prepared For:

USAEC

Scale:

AS SHOWN

Drawing No:

67070-005

Date:

APR. 1994

Arthur D Little
Cambridge, Massachusetts