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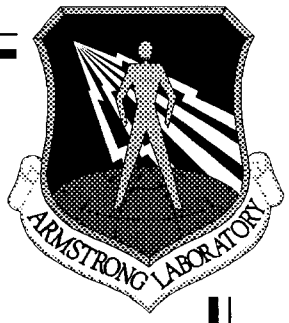

STORM WATER POLLUTION PREVENTION MANAGEMENT PLAN SCOTT AIR FORCE BASE, ILLINOIS

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Final Contractor Report for Period August - March 1994

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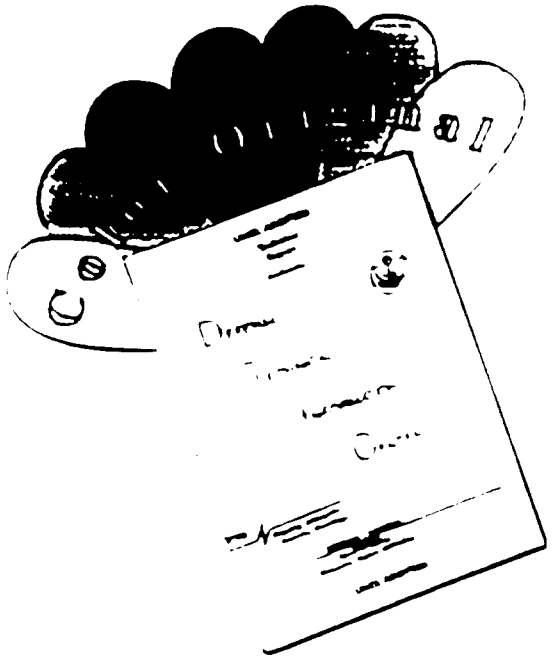

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This Storm Water Pollution Prevention Management Plan (SWPPMP) has been prepared as part of the United States Air Force (USAF) group permit application. This Plan includes all the components of a storm water pollution prevention plan as outlined in USEPA guidance for general permit holders. Pacific Environmental Services, Inc. (PES) prepared this SWPPMP for Scott AFB through PES' contract with the USAF Armstrong Laboratory.

Section 1 provides an introduction to the SWPPMP while Section 2 addresses organizational responsibilities; consisting of a description of the storm water management team at Scott AFB and implementation procedures to be followed. Section 3 presents the general characteristics of Scott AFB, including site history, topography, and general management of the SWPPMP. This section also includes a description of each drainage area and outfall with regard to industrial activities and potential sources of storm water pollution. Section 4 summarizes the storm water cross-connections identified under this work assignment. Section 5 describes the management practices for storm water pollution prevention, including process modifications and structural controls. Section 6 describes ongoing compliance and monitoring activities including inspection procedures and monitoring parameters such as analytes, locations, and sampling frequencies.

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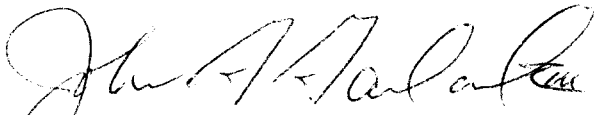

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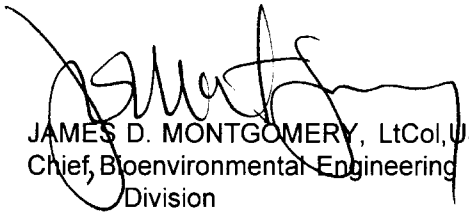

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SECTION 1

INTRODUCTION

Storm water discharges have been increasingly identified as a significant source of water pollution in numerous nationwide studies on water quality. To address this problem, the Clean Water Act Amendments of 1987 required the United States Environmental Protection Agency (USEPA) to publish regulations to control storm water discharges under the National Pollution Discharge Elimination System (NPDES). USEPA published storm water regulations on 16 November 1990 which require certain dischargers of storm water to "waters of the United States" to apply for NPDES permits. "Waters of the United States" is generally defined as surface waters, including lakes, rivers, streams, wetlands, and coastal waters. NPDES storm water discharge permits will allow the States and USEPA to track and monitor sources of storm water pollution.

According to the 16 November 1990 final rule, facilities with a "storm water discharge associated with industrial activity" are required to apply for a storm water permit. USEPA has defined this phrase in terms of 11 categories of industrial activity that include: 1) facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N; 2) "heavy" manufacturing facilities; 3) mining and oil and gas operations with "contaminated" storm water discharges; 4) hazardous waste treatment, storage, or disposal facilities; 5) landfills, land application sites, and open dumps; 6) recycling facilities; 7) steam electric generating facilities; 8) transportation facilities, including airports; 9) sewage treatment plants; 10) construction operations disturbing five or more acres; and 11) other industrial facilities where materials are exposed to storm water. Standard Industrial Classification (SIC) codes are used to identify those manufacturing facilities categorized as "heavy."

The storm water regulations address three permit application options for storm water discharges associated with industrial activity. The first option is to submit an individual application. The second option is to participate in a group application. The third option is to file a Notice of Intent (NOI) to be covered under a general permit in accordance with the requirements of an issued general permit. Regardless of the permit application option a facility selects, the resulting storm water discharge permit will contain a requirement to develop and implement a Storm Water Pollution

Prevention Management Plan (SWPPMP). The United States Air Force (USAF) has decided to submit a group application.

In anticipation of this permit requirement, the USAF has directed all of the Bases involved in their group application submittal to prepare a SWPPMP which includes all the components of a storm water pollution prevention plan as outlined in USEPA guidance for general permit holders. Pacific Environmental Services, Inc. (PES) is preparing this SWPPMP for Scott AFB through PES' contract with the USAF Armstrong Laboratory.

Section 2 of the plan addresses organizational responsibilities consisting of a description of the storm water management team at Scott AFB and implementation procedures to be followed. Section 3 presents the general characteristics of Scott AFB, including site history, topography, and general management of the Scott SWPPMP. This section also includes a description of each drainage area and outfall with regard to industrial activities and potential sources of storm water pollution. Section 4 identifies sources of non-storm discharges and summarizes the survey procedures employed to identify them. Section 5 describes the management practices for storm water pollution prevention, including process modifications and structural controls. Section 6 describes ongoing compliance and monitoring activities including inspection procedures and monitoring parameters such as analytes, locations, and sampling frequencies.

SECTION 2

PLAN ORGANIZATION

PURPOSE

This document is the SWPPMP for Scott AFB, prepared in support of the USAF group application for a NPDES Storm Water Discharge Permit. This SWPPMP provides guidance for the immediate implementation of a program of storm water quality control and contains all the components of a storm water pollution prevention plan as outlined in current USEPA guidance. Upon final publication by USEPA of guidance specific to the USAF group permit, this plan will be modified to comply with all applicable regulations.

IMPLEMENTATION/MANAGEMENT TEAM

The Environmental Management Office (EMO), 375 AW/EMO has overall responsibility for environmental compliance at Scott AFB, including storm water pollution prevention. The Wastewater Program Manager has the primary responsibility for development and implementation of the storm water pollution prevention plan.

The EMO will:

- Obtain and maintain all necessary permits for the discharge of industrial storm water;
- Maintain records pertaining to storm water pollution prevention;
- Coordinate inspection activities to maintain and improve storm water pollution prevention;
- Prepare a SWPPMP and update it as required by Federal, State, and local authorities;

- Support training efforts relative to storm water pollution prevention and ensure integration of these concepts into related environmental resource management training; and

- Serve as the authorized representative of the Wing Commander in achieving compliance with storm water regulations.

Implementation of the storm water pollution prevention initiative at Scott AFB will utilize a team approach. Designation of such a team will help achieve program goals by identifying existing programs and resources, identifying organizations on Base which are directly affected by storm water rules, minimize duplication of effort, and facilitate specification of individual responsibilities necessary to accomplishment of program goals. Proposed team members include representatives of:

- Environmental Compliance Assessments and Management Program (ECAMP). Inspection teams under this program employ environmental compliance assessments to ensure overall Base compliance with environmental regulations. Storm water related issues are already being incorporated in the annual inspection agendas.

- Spill Prevention and Response Plan. This plan is maintained by the Wastewater Working Group and is the principle Basewide mechanism for training, contingency planning, spill containment, and subsequent verification that spills have not resulted in contamination of storm sewers or other conveyances.

- Pollution Prevention Program. This program implements the Scott AFB initiative to identify and achieve waste reductions and hazardous waste substitutions wherever such opportunities are feasible.

- Installation Restoration Program Representative. This individual would provide primary point of contact for assuring that all sites under IRP authority are in compliance with applicable storm water rules.

Additionally, a number of organizations at Scott AFB will be directly responsible for implementing storm water initiatives within their specific roles or program activities. Identifying a point of contact with each organization will facilitate communication, training, and compliance initiatives to achieve compliance with storm water program goals. Specific organizations include:

- POL Representative (375th Logistics). A point of contact to insure that all POL activities are conducted in compliance with applicable storm water rules.

- Civil Engineering (CE) Contractor Inspection Representative. A point of contact to insure that all on Base contractors operate in compliance with storm water program objectives, including permit requirements for construction activities.

- Bioenvironmental Engineering Representative. Bioenvironmental Engineering (SGPB) assists in the execution of the environmental programs and may be able to provide sampling services for storm water monitoring or inspections.

- Recycling Representative. The 375th Services Squadron (375 SVS/SVRR) is responsible for the recycling program at Scott AFB.

- Hazardous Materials Tracking. Base Supply (375 SIPS/LGSDI) is responsible for tracking hazardous materials from receipt through disposition.

- Hazardous Waste Management. The Defense Reutilization and Marketing Office (DRMO) manager receives hazardous waste generated on Base and is responsible for final disposal.

- CE--Operations. A point of contact to facilities management and maintenance functions provided by CE.

- 375th Operations Group. A point of contact to airfield and flightline maintenance operations on Base.

- U.S. Army Aviation and Transportation Detachments. A point of contact to activities conducted on Base by these organizations.

REPORT DOCUMENTATION

The following documents and data resources were utilized in development of the SWPPMP for Scott AFB.

- Storm Water Management for Industrial Activities (EPA 832/R-92-006; September 1992).

- Guidance Manual for the Preparation of NPDES Permit Applications for Storm Water Discharges Associated with Industrial Activity (EPA 505/8-91-002; August 1991).

- Guidelines for NPDES General Permit; Discharges of Storm Water Associated with Industrial Activity (Illinois EPA; October 1992).

- Preliminary Environmental Findings Report for Scott AFB (Environmental Compliance Assessment and Management Program; November 1992).

- Draft Baseline Pollution Prevention and Analysis Reports for Scott AFB (March and July 1993).

- Oil and Hazardous Substance Spill Prevention and Response Plan for Scott AFB (375 AW/EMO; September 1992).

- Hazardous Waste Management Plan for Scott AFB, Draft (375 AW/EM; August 1993).

- Storm Water Report, Scott AFB (January 1993).

- Storm Water Sampling Data and Draft Application Materials (Form 2F) for Scott AFB (Bioenvironmental Engineering; May 1993).

- Specifications for Repair/Install Oil-Water Separators, SC93-0014/14A; Scott AFB (May 1993).

- Scott AFB Sewer System Evaluation Survey (HQ/AMC; February 1993).

- Inventories of Above Ground Storage Tanks, Underground Storage Tanks, Cooling Towers, Oil/Water Separators (375 AW/EMO).

SECTION 3

GENERAL CHARACTERISTICS OF THE STORM WATER SYSTEM AT SCOTT AFB

DESCRIPTION OF FACILITY

General Information

Scott AFB started in June 1917 when the Government leased 624 acres of land in the Shiloh Valley Township for an aviation site. The first years of operation at the Base were mainly as a pilot training center. The first major command hosted by Scott AFB was the Air Training Command in 1949.

Scott AFB is an Air Mobility Command (AMC) Base in the central United States. Scott AFB is located in St. Clair County, Illinois in the southwestern portion of the state, approximately 25 miles east of downtown St. Louis, Missouri. The Base is within the Illinois portion of the St. Louis metropolitan area known as Metro East. Although located in a semi-rural setting at the edge of the Metro East area, some distance from the major metropolitan centers, the Base is surrounded by smaller municipalities such as O'Fallon, Lebanon, and Mascoutah and is bordered on the east by Silver Creek. The facility occupies a total of 2,467 acres which reflects its three major missions--airfield operations, administration, and support activities. The Scott AFB Location Map is presented in Figure 3.1 and a Site Map is presented in Figure 3.2.

The mission of the Base shifted from training to aeromedical evacuation during the 1950s. In 1964, the 1405th Aeromedical Transport Wing was activated at Scott AFB and assumed responsibility for patient airlift in the United States; the first C-9A Nightingale aircraft arrived at the Base in 1968. By 1975 the Wing gained responsibility for aeromedical airlift worldwide. By 1978 the 375th Aeromedical Airlift assumed control of all CT-39 Operational Support Airlift assigned to the Military Airlift Command. In 1984 the CT-39 was replaced by the C-21A and C-12F aircraft. In 1987 the 1467th Facility Checking Squadron was assigned to Scott AFB to fly C-29 aircraft to check navigational aids and weather radar systems worldwide. The 1467th Facility Checking Squadron was inactivated in 1991.

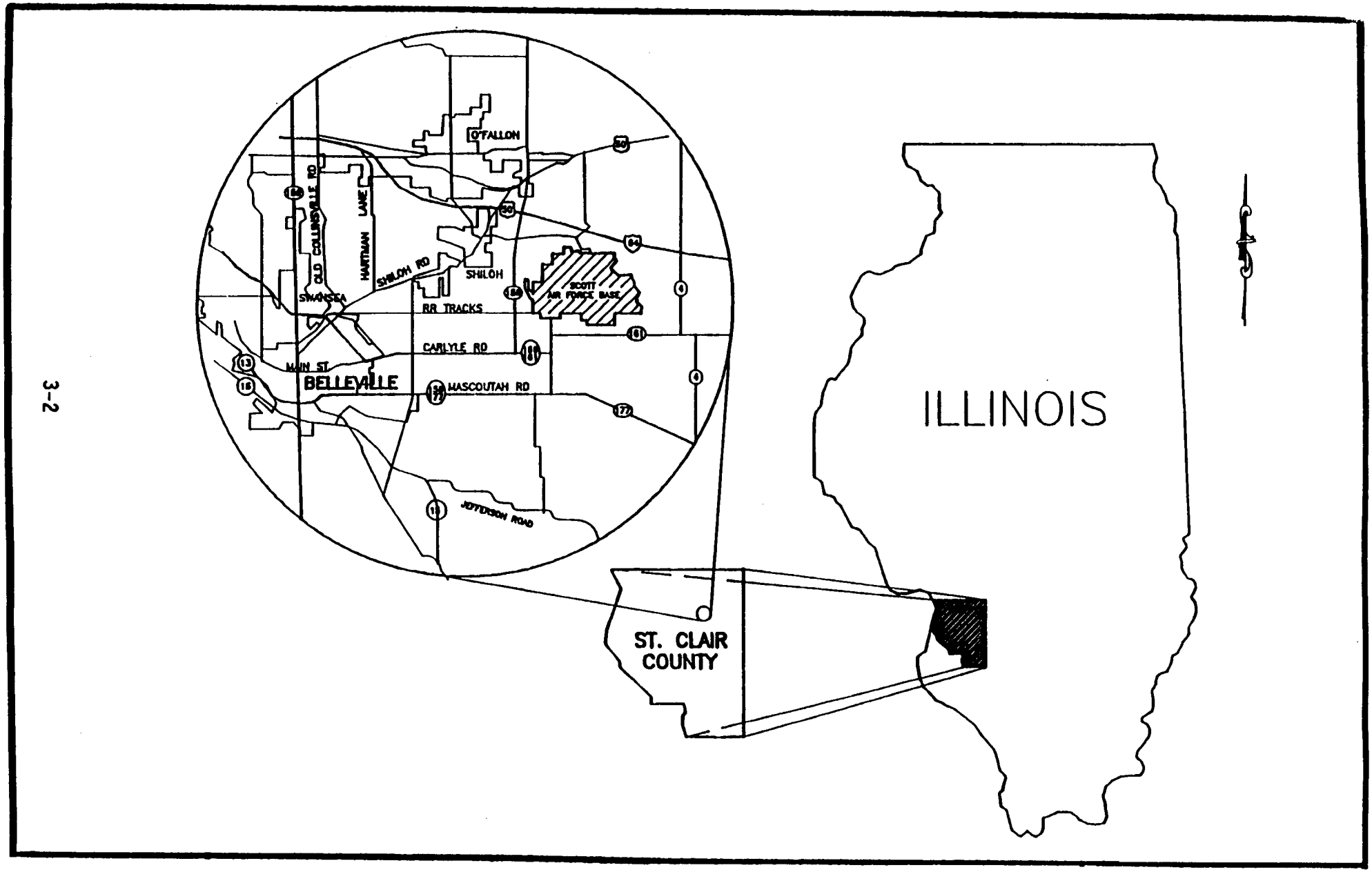


FIGURE 3.1 - SCOTT AIR FO. E BASE LOCATION MAP

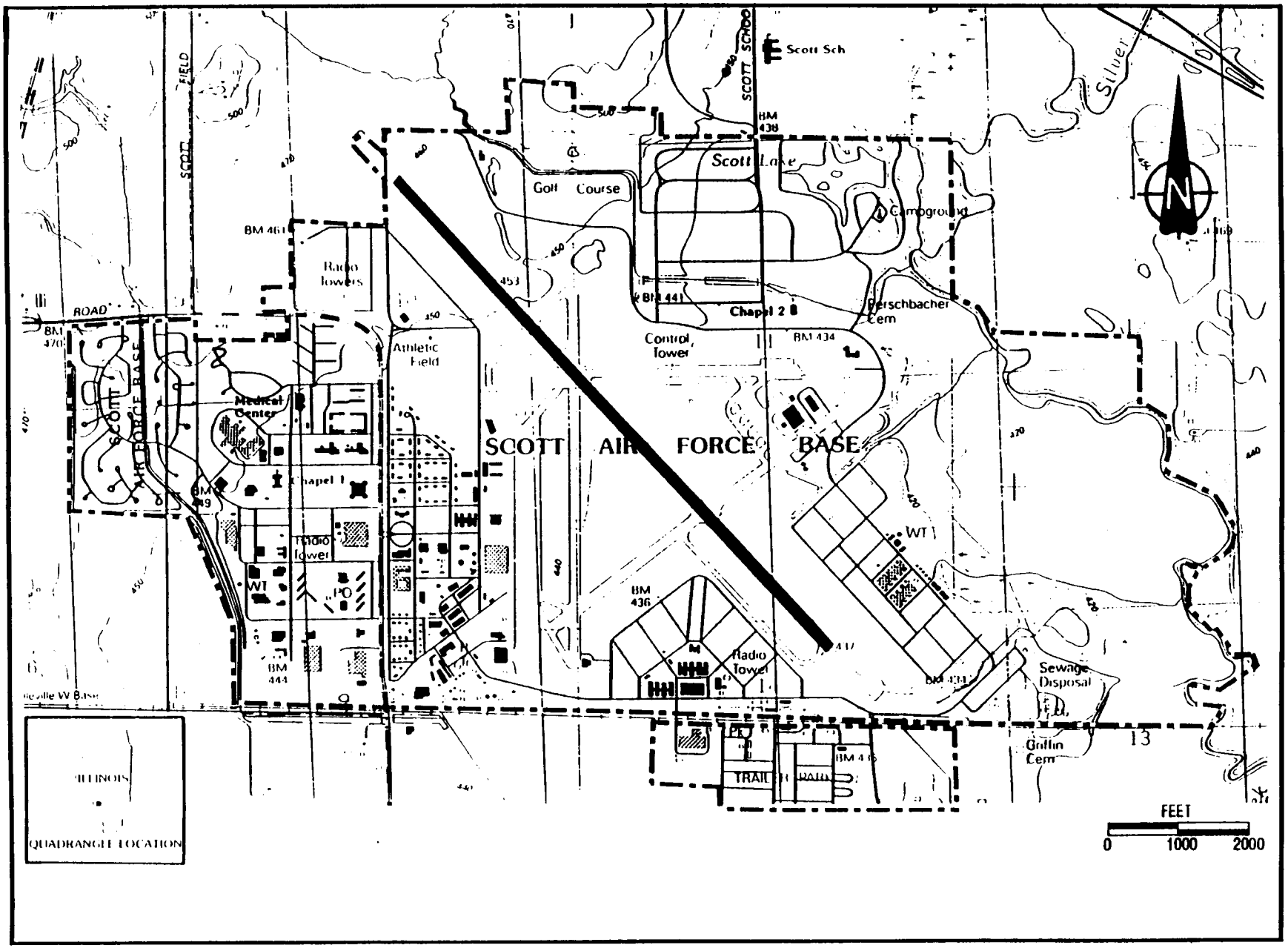


FIGURE 3.2 - SCOTT AIR FORCE BASE SITE MAP

Scott AFB is the home of the 375th Airlift Wing which has five missions. The Wing is responsible for the operation, management, and maintenance of Scott AFB; managing an aeromedical evacuation system for the continental United States; command and supervision of all USAF operational support aircraft (C-12 and C-21) within the United States; initial qualification training for all USAF pilots flying the C-9, C-12, and C-21 aircraft; and operational control of C-29 aircraft operated by the 1467th Facility Checking Squadron.

Topography

The Base rests in a closed basin of the Kaskaskia River with elevations ranging from 350 to 500 feet. The basin is approximately 22 miles wide and 63 miles long with Carlyle Lake as a major moisture source in the northernmost portion of the basin. Scott AFB is situated on the west bank of the basin in the Silver Creek Valley. The Base and surrounding areas are generally flat with some gently rolling hills.

Geology

Bedrock in the vicinity of the Base is sedimentary rock from the Paleozoic Era consisting of dolomite, sandstone, limestone, claystone, and shales. Covering the bedrock is a layer of glacial till which, in the eastern upland portions of St. Clair County, is overlain with a layer of loess. Together, these overburden layers are over 100 feet thick.

Precipitation

Scott AFB is located in the northern portion of EPA's Storm Water Precipitation Zone 4. Average annual precipitation is 33.9 inches per year, with most of the precipitation occurring during the months of March through July.

ENVIRONMENTAL MANAGEMENT STRUCTURE

The Commander of the 375th Airlift Wing (375 AW) is responsible for compliance with Federal, State, and local environmental laws and regulations. This responsibility was passed onto the Environmental Protection Committee (EPC) for the Base. The EPC, chaired by the 375 AW Vice Commander, serves as the decisionmaking body and provides oversight for environmental compliance. The EPC is comprised of members from both host and associate unit organizations.

The Environmental Management Office (EMO) under the 375th Airlift Wing administers the environmental programs on Base. The 375 AW/EM has the responsibility for implementing all necessary actions to comply with Federal, State, local, DOD, and USAF regulations. The current EMO staffing level consists of

fifteen full-time personnel; two officers, five enlisted and eight civilian personnel. Bioenvironmental Engineering (SGPB) assists in the execution of the environmental programs. The 375th Morale, Welfare, Recreation and Services Squadron (375 MWRSS) is responsible for the recycling program at Scott AFB. Base Supply (375 SUPS/LGSDI) is responsible for tracking hazardous materials from receipt through disposition. The Defense Reutilization and Marketing Office (DRMO) manager receives hazardous waste generated on-Base and is responsible for final disposal

Storm Water Collection System

The entire Base is located within the Silver Creek drainage basin. Storm drainage at Scott AFB is provided by a series of enclosed storm sewers and open channels. Drainage originating within the Base is conveyed to major drainage channels located to the south, east and west of the Base boundary. Silver Creek, which is located along the eastern boundary is the major drainageway for runoff from the Base. Drainage is also provided by Ash Creek, which flows through the western section of the Base and South Creek, which flows adjacent to the southern boundary of the Base.

The storm water collection system at Scott AFB serves a variety of developed and semi-developed areas on the Base; including aircraft hangars and maintenance facilities, office complexes, warehousing, fuels storage, residential and service facilities, runways, and recreational facilities. Four drainage areas with defined outfall points have been identified Basewide. All active facilities potentially subject to industrial classification under the storm water rules are located within three of these defined drainage areas. Areas without defined outfalls consist of the housing areas located on the western portion of the Base and the undeveloped region on the eastern portions of the Base. These areas are designated as Regions I-II and are shown on the Base map in Appendix A.

Current Permit Status

The storm water regulations provide three options for a permit application: 1) an individual application, 2) a group application, or 3) an application for coverage under a general permit. Scott AFB is included in a group application consisting of 71 USAF installations having flying operations.

A group application consists of two parts. Part 1 is a description of the group membership and identification of a sub-group for which quantitative data are to be submitted in Part 2 of the application. Scott AFB was designated to be a member of the sub-group requiring quantitative data. Part 2 of the group application contains quantitative information on the chemicals in the storm water, rainfall depth, rainfall duration, maximum rate of storm water runoff, and runoff volume (Federal Form 2F Part VII).

The USAF has submitted a complete group application for the 71 flying bases mentioned earlier. The USEPA is still in the process of evaluating all group applications and has not responded to the application at the time this planning was being prepared. Scott AFB collected storm water samples as part of the group application process, and the sample results are presented in Appendix B. These data generally show runoff concentrations well below average for the basic storm water parameters of total suspended solids, biological oxygen demand, chemical oxygen demand, total kjeldahl nitrogen, and total phosphorus. Nitrogen levels (nitrate plus nitrite) exceeded national averages on two out of three samples. National averages are based on values derived from the EPA's National Urban Runoff Program.

The Clean Water Act allows authorized states to administer the NPDES program instead of the USEPA. The state NPDES programs must be consistent with minimum Federal requirements, although they may be more stringent. The State of Illinois is authorized to issue NPDES permits, and the regulatory agency administering the NPDES program is the Illinois Environmental Protection Agency (IEPA). IEPA will acknowledge the group application and no major differences are anticipated between the Federal group permit requirements and those accepted by IEPA.

DISCUSSION OF INDIVIDUAL OUTFALLS

The following sections present characteristics of the storm water drainage system for each individual outfall area on the Base. Characteristics include: industrial activities, potential sources of storm water contamination, and non-storm discharges. Industrial facilities are discussed with respect to existing management practices and controls, remaining problems, and recommendations where appropriate. An overview of the storm water drainage areas and regions at Scott AFB is presented in Table 3.1. Maps of storm water drainage areas and photos of the drainage area outfalls are presented in Appendices A and C, respectively.

Outfall Area 1

This outfall area encompasses the northern third of the Base, and includes the Cardinal Creek residential area, the Base golf course, and a portion of the active runway. The only activity in this outfall area subject to storm water regulations is the active portion of the runway. Best management practices for the runway system are described in Section 5.

Several facilities in Outfall Area 1 are reviewed for potential impacts to storm water discharges from Scott AFB. Although these facilities are exempt from current storm water regulations, the Basewide management of storm water runoff should, at a minimum, monitor the status of discharges from such facilities as well as monitoring

TABLE 3.1

OVERVIEW OF STORM WATER DRAINAGE AREAS[1] AND REGIONS[2] AT SCOTT AFB

DRAINAGE AREA/ REGION	CONTAINS INDUSTRIAL ACTIVITY	TOTAL AREA (ACRES)	ESTIMATED IMPERVIOUS SURFACES (%)	OUTFALL LOCATION		RECEIVING SURFACE WATER BODY
				LATITUDE	LONGITUDE	
001	YES	496.7	4	33° 33′ 1″	89° 50′ 25″	SILVER CREEK
002	YES	215.8	25	38° 32′ 43″	89° 50′ 43″	SILVER CREEK
003	YES	916.1	17	38° 32′ 20″	89° 49′ 44″	ASH CREEK
004	NO	119.7	12	38° 32′ 18″	89° 49′ 50″	ASH CREEK
I	YES	N/A	0	N/A	N/A	SILVER CREEK
II	NO	N/A	N/A	N/A	N/A	ASH CREEK

[1]DRAINAGE AREAS, DENOTED WITH A NUMBER, CONVEY SURFACE RUNOFF TO A SINGLE LOCATION WHERE IT DISCHARGES TO A RECEIVING BODY OF WATER.
[2]DRAINAGE REGIONS, DENOTED WITH A ROMAN NUMERAL, CONVEY SURFACE RUNOFF ALONG DIFFUSE OVERLAND PATHS WHERE IT COMBINES WITH A RECEIVING BODY OF WATER.

any changes in Federal or State rules regarding the classification of such facilities. A more proactive policy for Scott AFB would identify and correct all sources of non-storm water discharges regardless of industrial classification and would implement pollution prevention strategies of this plan Basewide. Control measures, facility Best Management Practices (BMPs), and other action recommended in this plan are presented within the context of this proactive position. Sources in Outfall Area 1 are summarized in Tables 3.2-3.6.

The overall drainage area which encompasses Outfall Area 1 includes agricultural lands north of the Base boundary. Drainage from this area enters the Base through the North Ditch, which crosses the Scott AFB boundary just north of the golf course clubhouse (Building 1192). The outfall point for Area 1 is a bridge over North Ditch lying east of the Cardinal Creek residential area. Storm water runoff at this point includes discharges from Cardinal Creek housing and from agricultural lands north of the Base in addition to runoff from the runway area which is subject to industrial classification.

Monitoring of storm water runoff at the outfall point for Area 1 would be complicated by the presence of agricultural runoff from off Base areas. Such runoff could make it especially difficult to accurately evaluate total suspended solids (TSS) or biological oxygen demand (BOD). However, all of the runway area subject to de-icing within Outfall Area 1 is drained by a network of storm sewers which discharge from a single point into North Ditch. Monitoring of storm water runoff at this point would eliminate any interference from off Base activities. This storm sewer discharge point is recommended as the monitoring and sampling location for Outfall Area 1 and is illustrated on the map in Appendix A.

TABLE 3.2

INVENTORY OF FACILITIES WITH POTENTIAL STORM WATER IMPACTS

Outfall Area 1

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
1192	GOLF COURSE STORAGE	EXEMPT	N	C	N	
1197	GOLF COURSE INSECTICIDE STORAGE	EXEMPT	N	A,C,E	N	
1197	MAINTENANCE AREA	EXEMPT	N	B	POTENTIAL	NEW OIL/WATER SEPARATOR (1993/1994) WILL DISCHARGE TO STORM.
3600		EXEMPT	N	C,D	N	
3650		EXEMPT	N	C	N	
3690		EXEMPT	N	C	N	
5039		EXEMPT	N	C	N	
6748		EXEMPT	N	C	N	

[1]OTHER POTENTIAL IMPACTS AT THIS FACILITY INCLUDE:
A - REPORTED SPILLS
B - OIL/WATER SEPARATORS
C - STORAGE TANKS IN USE
D - COOLING TOWERS IN USE
E - HAZARDOUS WASTES GENERATED

TABLE 3.3

INVENTORY OF ABOVE GROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 1

BUILDING	TANK TYPE	CONTENTS	CAPACITY (GAL)
1197	AST	GASOLINE	275
1197	AST	GASOLINE	275
3690	AST	DIESEL	300
6748	AST	DIESEL	500

TABLE 3.4

UNDERGROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 1

TANK	BUILDING	CAPACITY	CONTENTS	DATE	ACTION
72	5039	10000	GASOLINE	1995	UPGRADE
73	5039	10000	GASOLINE	1995	UPGRADE
1192A	1192	1000	LP GAS	--	--
1192B	1192	1000	LP GAS	--	--

TABLE 3.5

COOLING TOWERS

Outfall Area 1

BUILDING	CAPACITY	DRAINAGE	COMMENTS
3600	500 GAL	SANITARY SEWER	
3600	500 GAL	SANITARY SEWER	

TABLE 3.6

HAZARDOUS WASTE GENERATORS

Outfall Area 1

BUILDING	ACTIVITY	CONTACT	PHONE NUMBER
1197	GOLF COURSE MAINT	MR. SEIGAL	63439

Outfall Area 2

Outfall Area 2, located in the east central portion of the Base, encompasses two tenant organizations at Scott AFB. The U.S. Army Reserve Aviation Support facility maintains and operates a helicopter hangar at Building 3680. Just east of this complex, the U.S. Army Reserve Transportation detachment operates a vehicle maintenance facility at Building 3675. Potential sources of storm water contamination are summarized in Tables 3.7 through 3.10.

A helicopter wash rack operated at Building 3680 discharges through floor drains to a settling pit and then to the storm sewer system. This is a non-storm water discharge which requires correction (see Section 4). No additional non-storm discharges were identified within the hangar or adjacent buildings.

An oil/water separator in the area immediately east of Building 3675 discharges to the storm sewer. This unit is being replaced with a new oil/water separator by a repair/install project which is currently being performed (see discussion in Section 4). The new separator will also discharge to the storm sewer. If any non-storm water effluents (i.e., vehicle wash water) are discharged to this separator, then the facility must either reroute discharges to a sanitary sewer line or obtain a NPDES permit for the discharging activity.

An oil/water separator (grease trap) located within Building 3675 has an unknown discharge connection. The Pollution Prevention reports indicate that this unit may not be in service. However, the status of this unit and the need for any additional action needs to be confirmed.

The point of discharge from Outfall Area 2 was previously identified as a 72" corrugated pipe located in the drainage ditch at a point northeast of the former HAZMAT training area (see map and photos). However, the culvert is almost completely filled with sediment at this point and the general area is a hardwood bottom land which appears to be subject to frequent flooding. A better monitoring location would be the drainage ditch containment structure located approximately 400 feet upstream of the culvert (north of Building 3173). The box shaped structure allows unobstructed flow during storm runoff, remains accessible during high water, and could be utilized as a gauging structure by painting a depth scale on one side of the opening. All storm flow subject to industrial classification within Outfall Area 2 passes through this point.

TABLE 3.7

INVENTORY OF FACILITIES WITH POTENTIAL STORM WATER IMPACTS
Outfall Area 2

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
3172	HAZMAT TRAINING (IRP)	(V)	N	C	N	
3184	FUEL TRUCK MAINTENANCE	(VIII)	N	B,E	N	REPLACE O/W SEPARATOR (1993/1994)
3665	NON-DESTRUCTIVE INSPECTION FACILITY	(VIII)	Y	C	N	500 GALLON LP GAS TANK
3670	ARMY RESERVE AVIATION CENTER	(VIII)	Y	C	N	
3675	ARMY RESERVE TRANSPORTATION CENTER	(VIII)	Y	A,B,C,E	Y	SUSPECTED CROSS-CONNECTION, REPLACE O/W SEPARATOR (1993/1994)
3676	ARMY RESERVE TRANSPORTATION CENTER	(VIII)	Y	N/A	N	
3680	ARMY RESERVE AVIATION CENTER	(VIII)	Y	B,E	Y	CONFIRMED CROSS-CONNECTION AT HELICOPTER WASH RACK
3681	ARMY RESERVE AVIATION CENTER	(VIII)	Y	C	N	3-275 GALLON DIESEL TANKS
3691		EXEMPT	N	C	N	500 GALLON DIESEL TANK
4001	SUPPLY	4225	N	C	N	
4180		EXEMPT	N	C	N	
6747		EXEMPT	N	C	N	

[1]OTHER POTENTIAL IMPACTS AT THIS FACILITY INCLUDE:
A - REPORTED SPILLS
B - OIL/WATER SEPARATORS
C - STORAGE TANKS IN USE
D - COOLING TOWERS IN USE
E - HAZARDOUS WASTES GENERATED

TABLE 3.8

INVENTORY OF ABOVE GROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 2

BUILDING	TANK TYPE	CONTENTS	CAPACITY (GAL)
3665	AST	LP GAS	500
3670	AST	LP GAS	500
3691	AST	DIESEL	500
3681	AST	DIESEL	275
3681	AST	DIESEL	275
3681	AST	DIESEL	275
6747	AST	DIESEL	500
4180	AST	LP GAS	500

TABLE 3.9

UNDERGROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 2

TANK	BUILDING	CAPACITY	CONTENTS	DATE	ACTION
42	3172	4000	JET FUEL	1994	REPL W/4000 UST
43	3172	550	WASTE OIL	1994	REPL W/500 UST

TABLE 3.10

HAZARDOUS WASTE GENERATORS

Outfall Area 2

BUILDING	ACTIVITY	CONTACT	PHONE NUMBER
3184	TRANSPORTATION	MR. SCHULTE	62953
3675 (2 SITES)	ARMY RESERVE TRANS	MR. CHOUINARD	66749
3680 (4 SITES)	ARMY RESERVE MAINT	MR. HELVIE	63578

Outfall Area 3

Outfall Area 3 encompasses the western and southern portions of the Base and is the largest outfall on the Base. There are several activities in Outfall Area 3 which are subject to storm water regulation for industrial activity. These include facilities which conduct activities associated with flightline operations, CE activities, maintenance of the Base transportation fleet, POL operations, the wastewater treatment plant, and a portion of the active runway.

Buildings associated with flightline operations include hangars at Buildings 433, 506, and 742 plus supporting operations in a number of nearby shops. A major new maintenance facility, currently under construction on a site 800 feet north of Building 433, will consolidate most ground support activities under one roof. A number of small shops and outdoor storage areas will probably be vacated following completion of the new facility. Among these are Buildings 350, 352, 441, 442, 443, 455, 456, 457, 458, and 603.

The CE activities that are subject to storm water regulations include those associated with de-icing operations (including salt and debris piles), and vehicle repair. Maintenance of the Base transportation fleet is conducted at Building 548. Just east of the CE yards are the POL bulk storage tanks, which are associated with Building 545. All of these facilities are classified as general airport support function (SIC Code 4581) for purposes of this SWPPMP. Supply facilities (Buildings 4001, 4005, 4006, and 512) appear to be most appropriately classified under storm water paragraph xi, SIC Code 4225.

The wastewater treatment plant located in the southeastern portion of the Base is also subject to storm water regulation as industrial activity because it has a design capacity of greater than one million gallons per day. The treatment plant utilizes a belt filtration system for sludge dewatering which replaces an outdoor drying bed system. The belt filtration system and sludge storage are covered facilities to prevent exposure of the sludge to precipitation.

The sanitary sewer system serving the WWTP at Scott AFB is subject to storm flow infiltration. During periods of heavy runoff, storm flow infiltration may cause flow to the WWTP to exceed its maximum capacity of 2.8 MGD. During 1993, infiltration studies of the sewer system were completed and repair/replacement projects are scheduled to commence in 1994. Restoring the integrity of the sanitary sewer system will eliminate WWTP overflows as a potential source of contamination.

Outfall Area 3 also contains an inactive waste disposal site and an abandoned fire training area. These sites are under the jurisdiction of the Scott AFB Installation Restoration Program (IRP) and are discussed in greater detail in Section 5. Both sites are fully covered and present no current potential for storm water contamination. A

breakdown of potential pollutant sources in Outfall Area 3 is presented in Tables 3.11-3.15.

The point of discharge for Outfall Area 3 is the containment structure in South Ditch, located approximately 300 feet downstream of Building 3200. This is the same type of structure described above for Outfall Area 2 and offers the same advantages of unobstructed flow, accessibility, and flow gauging. All storm flow subject to industrial classification within Outfall Area 3 passes through this point.

Outfall Area 4

Outfall Area 4 is located in the east central portion of the Base and is the smallest outfall. No facilities within the area are specifically regulated under the storm water regulations. A listing of potential pollutant sources in Outfall Area 4 is presented in Tables 3.16-3.19.

TABLE 3.11

INVENTORY OF FACILITIES WITH POTENTIAL STORM WATER IMPACTS

Outfall Area 3

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
6		EXEMPT	N	D	N	
10	PASS & I.D.	EXEMPT	N	D	N	
33		EXEMPT	N	C	N	
39		EXEMPT	N	C	N	
44		EXEMPT	?	D	N	
45	HEATING PLANT	VII	Y	B,C	Y	NATURAL GAS FIRED W/FUEL OIL BACKUP, REPLACE O/W SEPARATOR (1993/1994)
48		EXEMPT	N	C	N	3 UST'S
51		EXEMPT	N	C	N	
250		EXEMPT	N	C	N	
251		EXEMPT	N	C	N	
255		EXEMPT	N	C	N	
262		EXEMPT	N	C	N	
350	AVIONICS	(VIII)	N	C	N	
352	PRECISION MEASUREMENT & ELECTRONICS	EXEMPT	N	E	N	
382	BASE SUPPLY FUELS	(VIII)	N	A,C	N	NOT ON TANK LIST
411	C-9 FLIGHT LINE MAINTENANCE	(VIII)	Y	A	Y	POTENTIAL CROSS-CONNECTION

TABLE 3.11 (Continued)

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
433	PNEUMATIC AND HYDRAULIC REPAIR SHOP	(VIII)	Y	A,B,C,D	Y	DEFINITE CROSS-CONNECTION WITH AIRCRAFT WASH RACK; REPLACE OIL/WATER SEPARATOR (1993/1994)
441	MAINTENANCE - METAL FABRICATION	(VIII)	N	E	N	
455	375TH AEROSPACE GROUND EQUIPMENT MAINTENANCE	(VIII)	N	C,E	N	
460	VEHICLE MAINTENANCE (FIRE DEPARTMENT)	EXEMPT	N	C	N	
500		EXEMPT	N	C	N	
506	CONTRACT MAINTENANCE	(VIII)	N	C,E	N	
508	FUEL STORAGE	(VIII)	N	C	N	
512	SUPPLY	4225	N	E	N	
515	CEOHH	EXEMPT	N	C	N	
518		EXEMPT	N	C	N	
528	CE HEAVY REPAIR SHOP	(VIII)	N	C	N	
531	CEOFB	(VIII)	N	E	N	
533	CEOM	EXEMPT	N	C	N	
536	CEOI	EXEMPT	N	C	N	
538		EXEMPT	N	C	N	
540	CEOIP	EXEMPT	N	E	N	PCB ACCUMULATION POINT
544		EXEMPT	N	C	N	
546	VEHICLE WASHING (CE)	(VIII)	Y	B	N	REPLACE O/W SEPARATOR (1993/1994)
548	TRANSPORTATION SQUARE	(VIII)	N	B,C,E	N	REPLACE O/W SEPARATOR (1993/1994)

TABLE 3.11 (Continued)

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
549	C.E.S.	(VIII)	N	E	N	
556	375 OPERATIONS GROUP	(VIII)	N	E	N	
700	PRINTING SHOP AND PHOTO LAB	EXEMPT	Y	E	N	
702		EXEMPT	N	C	N	
742	FUEL SYSTEM	(VIII)	N	A,B,C	N	REPLACE O/W SEPARATOR (1993/1994)
750		EXEMPT	N	C	N	
859		EXEMPT	N	D	Y	COOLING TOWER DISCHARGE TO STORM
861		EXEMPT	N	D	Y	COOLING TOWER DISCHARGE TO STORM
869		EXEMPT	N	C	N	
1089		EXEMPT	N	C	N	
1523		EXEMPT	N	D	Y	COOLING TOWER DISCHARGE TO STORM
1530	HOSPITAL	EXEMPT	Y	C,D	Y	COOLING TOWER DISCHARGE TO STORM
1534	COMMUNICATIONS	EXEMPT	N	C	N	
1575	COMPUTER FACILITY	EXEMPT	N	C,D	Y	COOLING TOWER DISCHARGE TO STORM
1600	458 ASIQAR	EXEMPT	N	C,D	Y	COOLING TOWER DISCHARGE TO STORM
1601		EXEMPT	N	D	Y	COOLING TOWER DISCHARGE TO STORM
1650	AAFES	EXEMPT	N	D	Y	COOLING TOWER DISCHARGE TO STORM
1700		EXEMPT	N	C,D	Y	COOLING TOWER DISCHARGE TO STORM
1899		EXEMPT	N	C,D	Y	COOLING TOWER DISCHARGE UNKNOWN
1900		EXEMPT	N	C	N	
1948		EXEMPT	N	C	N	
1965	AAFES	EXEMPT	N	C	N	

TABLE 3.11 (Continued)

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
1971		EXEMPT	N	C	N	
1980	COMMISSARY	EXEMPT	N	C	N	
1989	ARTS & CRAFTS	EXEMPT	Y	B	N	REPLACE O/W SEPARATOR (1993/1994)
3271		EXEMPT	N	C	N	
3275	HOSPITAL SUPPLY	EXEMPT	N	E	N	
3287		EXEMPT	N	C	N	
3290	WASTEWATER TREATMENT	(IX)	N	C	N	
3291	WASTEWATER TREATMENT	(IX)	N	C	N	
3297	WASTEWATER TREATMENT	(IX)	N	C	N	
3298	C.E.S. (RCRA)	(VIII)	N	E	N	
3300	WASTEWATER TREATMENT PLANT	(IX)	Y	C	N	
8511	JP-4 FILL STAND	(VIII)	N	B	Potential	NEW O/W SEPARATOR (1993/1994)
N/A	AQUA YARD	(V)	N	C	N	UST REMEDIATION SITE

[1]OTHER POTENTIAL IMPACTS AT THIS FACILITY INCLUDE:
A - REPORTED SPILLS
B - OIL/WATER SEPARATORS
C - STORAGE TANKS IN USE
D - COOLING TOWERS IN USE
E - HAZARDOUS WASTES GENERATED

TABLE 3.12

INVENTORY OF ABOVE GROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 3

BUILDING	TANK TYPE	CONTENTS	CAPACITY (GAL)
33	AST	GASOLINE	300
39	AST	LP GAS	500
39	AST	DIESEL	2000
45	AST	DIESEL	500
45	AST	LP GAS	1000
45	AST	NO 2 FO	42000
51	AST	DIESEL	500
250	AST	DIESEL	1000
250	AST	NO 2 FO	500
250	AST	DIESEL	500
251	AST	LP GAS	500
255	AST	DIESEL	500
262	AST	DIESEL	50
433	AST	DIESEL	1000
433	AST	DIESEL	275
460	AST	GASOLINE	500
500	AST	DIESEL	275
508	AST	DIESEL	275
518	AST	DIESEL	50
528	AST	DIESEL	275
533	AST	LP GAS	500
536	AST	GASOLINE	500
538	AST	DIESEL	240
538	AST	DIESEL	107
544	AST	DIESEL	500
548	AST	ANTIFREEZE	500
702	AST	DIESEL	300
1089	AST	LP GAS	1000
1089	AST	DIESEL	500

TABLE 3.12 (Continued)

BUILDING	TANK TYPE	CONTENTS	CAPACITY (GAL)
1534	AST	DIESEL	100
1600	AST	DIESEL	5000
1948	AST	LP GAS	500
1971	AST	DIESEL	500
3200	AST	AVGAS	500
3200	AST	DIESEL	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3200	AST	LP GAS	500
3271	AST	LP GAS	500
3271	AST	LP GAS	500
3287	AST	LP GAS	500
3290	AST	LP GAS	1000
3290	AST	LP GAS	1000
3291	AST	LP GAS	1500
3297	AST	DIESEL	500

TABLE 3.13

UNDERGROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 3

TANK	BUILDING	CAPACITY	CONTENTS	DATE	ACTION
17	3200	5000	DIESEL	1995	REPL W/ 5000 UST
18	3200	5000	GASOLINE	1995	REPL W/ 5000 UST
20	508	50000	JET FUEL	1995	REPL W/200K BULK
21	508	50000	JET FUEL	1995	SAME AS 20
23	48	12000	DIESEL	1995	REPL W/ 12000 UST
24	48	12000	DIESEL	1995	REPL W/ 12000 UST
25	48	11000	DIESEL	1995	REPL W/ 11000 UST
27	508	550	WASTE OIL	1995	UPGRADE
28	455	1000	DIESEL	JUN 94	REPL W/ 1000 UST
29	455	500	GAS	JUN 94	REPL W/ 500 UST
33	742	8000	NO 2 FO	MAY 94	PULL ONLY
34	742	8000	NO 2 FO	MAY 94	PULL ONLY
35	506	5000	NO 2 FO	MAY 94	PULL ONLY
36	869	20000	NO 2 FO	MAY 94	PULL ONLY
37	869	20000	NO 2 FO	MAY 94	PULL ONLY
38	255	1000	NO 2 FO	1995	REPL W/1000 AST
45	1575	4000	DIESEL	1995	UPGRADE
46	1575	20000	DIESEL	1995	UPGRADE
48	1530	1000	DIESEL	1995	REPL W/ 1000 UST
67	1965	2000	DIESEL	1994	REPL W/ 2000 UST
68	1965	10000	GASOLINE	1994	REPL W/ 10000 UST
69	1965	10000	GASOLINE	1994	REPL W/ 10000 UST
70	1965	10000	GASOLINE	1994	REPL W/ 10000 UST
71	1965	550	WASTE OIL	1994	REPL W/ 550 UST
74	750	8000	DIESEL	1994	FIX LEAK DETECTION
75	750	8000	DIESEL	1994	FIX LEAK DETECTION
78	1700	8000	DIESEL	1995	UPGRADE
88	742	500	OWS	1995	UPGRADE
89	1900	2500	DIESEL		COMPLIES

TABLE 3.13 (Continued)

TANK	BUILDING	CAPACITY	CONTENTS	DATE	ACTION
96	1900	15000	DIESEL		COMPLIES
97	1520	560	DIESEL	1995	PULL ONLY
98	3200	2000	DIESEL	1995	PULL ONLY

TABLE 3.14

COOLING TOWERS

Outfall Area 3

BUILDING	CAPACITY	DRAINAGE	COMMENTS
3	75 GAL	SANITARY SEWER	
6	500 GAL	SANITARY SEWER	
10	400 GAL	SANITARY SEWER	
44	500 GAL	SANITARY SEWER	
44	200 GAL	SANITARY SEWER	
433	200 GAL	SANITARY SEWER	
859	350 GAL	STORM SEWER	
861	400 GAL	STORM SEWER	
1523	750 GAL	STORM SEWER	
1530	200 GAL	STORM SEWER	
1530	200 GAL	STORM SEWER	
1575	2500 GAL	STORM SEWER	
1575	2500 GAL	STORM SEWER	
1600	2500 GAL	STORM SEWER	
1600	2500 GAL	STORM SEWER	
1601	400 GAL	STORM SEWER	
1601	400 GAL	STORM SEWER	
1650	750 GAL	STORM SEWER	
1700	400 GAL	STORM SEWER	
1899	200 GAL	UNKNOWN	DRAINS TO MANHOLE IN REAR PARKING LOT OF BLDG 1900
1899	200 GAL	UNKNOWN	DRAINS TO MANHOLE IN REAR PARKING LOT OF BLDG 1900
1899	200 GAL	UNKNOWN	DRAINS TO MANHOLE IN REAR PARKING LOT OF BLDG 1900
1899	500 GAL	UNKNOWN	DRAINS TO MANHOLE IN REAR PARKING LOT OF BLDG 1900

TABLE 3.15

HAZARDOUS WASTE GENERATORS

Outfall Area 3

BUILDING	ACTIVITY	CONTACT	PHONE NUMBER
352	MAINTENANCE SQ	SGT DOSS	63721
441	MAINTENANCE SQ	TSGT WHITEHEAD	63757
455	MAINTENANCE SQ	SGT BAGLEY	65137
455	MAINTENANCE SQ	SSGT JOHANSEN	62180
506	BASE OPS	TSGT HURLDELBRINK	64533
515	C.E.S.	SGT GARLAND	63714
531	C.E.S.	MR. RICKETTS	68727
540	PCB ACCUMULATION POINT	SRA HOWELL	65572
548 (5 SITES)	TRANSPORTATION	SSGT RAMEY	62881
549	C.E.S.	SGT PURCELLI	62683
556	OPERATION GROUP	TSGT HURLDELBRINK	64588
700	PHOTOLAB	MR. MEURER	65507
700	FIELD PRINTING	MR. HAYHURST	64686
3200	AERO CLUB	MR. MCQUIRE	62170
3275	HOSP SUPPLY	SGT BROWN	65516

TABLE 3.16

INVENTORY OF FACILITIES WITH POTENTIAL STORM WATER IMPACTS

Outfall Area 4

BUILDING #	DESCRIPTION/FUNCTION	INDUSTRIAL CLASSIFICATION	WASTEWATER DISCHARGE	OTHER[1] POTENTIAL IMPACTS	NON-STORM DISCHARGE OR CROSS CONNECTIONS	COMMENTS
3167	SKEET RANGE	N/A	N	C	N	
3175		N/A	N	C	N	
3190	HQAFCC AFC4A	N/A	N	D,E	Y	COOLING TOWER DISCHARGE TO STORM

[1]OTHER POTENTIAL IMPACTS AT THIS FACILITY INCLUDE:
A - REPORTED SPILLS
B - OIL/WATER SEPARATORS
C - STORAGE TANKS IN USE
D - COOLING TOWERS IN USE
E - HAZARDOUS WASTES GENERATED

TABLE 3.17

INVENTORY OF ABOVE GROUND STORAGE TANKS
AS OF 31 JANUARY 1994

Outfall Area 4

BUILDING	TANK TYPE	CONTENTS	CAPACITY (GAL)
3167	AST	GASOLINE	100
3175	AST	DIESEL	300

TABLE 3.18

COOLING TOWERS

Outfall Area 4

BUILDING	CAPACITY	DRAINAGE	COMMENTS
3190	400 GAL	STORM SEWER	

TABLE 3.19

HAZARDOUS WASTE GENERATORS

Outfall Area 4

BUILDING	ACTIVITY	CONTACT	PHONE NUMBER
3190	HQ AFCC (TNACF)	TSGT SHOEBROOK	66644

HAZARDOUS MATERIAL AND FUEL SPILL INCIDENTS

The USEPA General Permit requires a three-year history of significant spills or leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance. The USEPA has defined "significant spills" to include releases within a 24-hour period of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act and Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Reportable quantities are set amounts of substances in pounds, gallons, or other units and are listed in 40 CFR Part 117 and 40 CFR Part 302. However, these references do not define a reportable quantity for spills of gasoline, diesel, or jet fuel. Spill incidents at Scott AFB almost exclusively involve fuels.

While a specific definition of "significant" fuel spills may have to wait on subsequent regulatory guidance, a cut-off point of 20 gallons may serve as a reasonable "interim" measure. During the past three years, nine spills of approximately 20 gallons or more have occurred in areas exposed to precipitation or that otherwise drain to a storm water conveyance. All of these spills (presented in Table 3.20) are associated with flightline operations or aircraft refueling.

The majority of minor (one to 20 gallons) spills Basewide also involve JP-4 spills associated with flightline operations. During the past three years, approximately 48 minor spills of JP-4 have been reported. These include 41 on the flight ramps, three at the Aero Club, three at POL facilities, and one inside a hangar. By contrast, 12 minor gasoline spills and eight minor diesel spills were reported during the same period. These are about evenly divided between industrial facilities, gas stations, and personal vehicles.

TABLE 3.20

HAZARDOUS MATERIAL AND FUEL SPILL INCIDENTS

NUMBER	DATE	TIME	LOCATION	MATERIAL SPILLED	AMOUNT OR SIZE OF SPILL	CAUSE AND ACTION TAKEN
H-27	930316	1448	SPOT 16	JET FUEL	CLASS II (600 SQ FT)	T-43 T/N 287 DUMPED APPROX 600 SQ FT OF FUEL. FUEL DUMP VALVE WAS ACCIDENTALLY HIT. FUEL WAS CLEANED UP BY SRT USING WIPES AND BIOSALT, THEN WASHED DOWN A DRAIN.
H-35	910517	0037	C-21 T/N 40069 SPOT 26	JP-4	20 GALLONS 600 SQ FT	JETTISON SWITCH LEFT IN ON POSITION. F/D RESPONDED AND CONTAINED SPILL, DIKED AROUND DRAIN WITH DIKING MATERIALS, LAID FOAM ON SPILL, SRT RESPONDED AND CLEANED UP SPILL.
H-25	910418	1730	F-14 ON SOUTH LIMA	JP-4	30 GALS	FD RESPONDED AND APPLIED PADS AND DRAIN COVER PAD TO CONTAIN SPILL/SRT RESPONDED AND USED A BOOM AND BIO-SOL AND PICKED UP SPILL/MAINTENANCE TOWED AIRCRAFT/CAUSE WAS A MALFUNCTION OF THE AIRCRAFT'S FUEL SHUT-OFF VALVE.
H-29	910424	1832	727 ACFT TN/N30KA SPOT #16	JP-4	20 GALS	FD RESPONDED AND CONTROLLED SPILL/SRT RESPONDED, NEUTRALIZED SPILL WITH BIO-SOL, AND CLEANED UP SPILL/CAUSE WAS A FLOAT VALVE STUCK OPEN.
H-12	910104	1630	S-3 T/N 705 (NAVY) SPOT 16	JP-4	50 GALS	FD RESPONDED AND FOAMED THE SPILL/MAINTENANCE TOWED THE AIRCRAFT/SRT CLEANED UP THE SPILL/SPILL WAS CAUSED BY FAILURE OF THE REFUEL VALVE TO SHUT OFF.
H-6	901130	0756	SPOT 11 C-9 T/N 875	JP-4	15-20 GALS	SPOT 11 VENTING FUEL/SRT RESPONDED AND USED FOAM.
H-62	900720	0045	C-9 T/N 961 SPOT #4	JP-4	15-20 GALS	FD RESPONDED AND CONTAINED SPILL USING ABSORBENT PADS AND HAD AIRCRAFT TOWED TO SPOT #1/SRT RESPONDED, RECOVERED THE ABSORBENT PADS, AND CLEANED UP SPILL/CAUSE WAS INACCURATE FUEL GAUGES WHICH CAUSED FUEL TANK TO OVERFILL.

TABLE 3.20 (Continued)

NUMBER	DATE	TIME	LOCATION	MATERIAL SPILLED	AMOUNT OR SIZE OF SPILL	CAUSE AND ACTION TAKEN
H-49	900607	1946	C-29 SPOT 26 T/N 40091	JP-4	50 GALS	FD RESPONDED AND FOAMED THE FUEL UNDER AND INSIDE THE AIRCRAFT/3M WIPES, OIL-A-WAY ABSORBENT, PIG, AND 3-INCH CHARGED LINE WERE USED TO BLOCK THE DRAIN/A SPECIAL ADAPTOR WAS USED TO DEFUEL THE TANK/SRT CLEANED UP SPILL/AIRCRAFT WAS REMOVED AND TURNED OVER TO BLASCO.
H-52	900267	1417	BLDG 545	JP-4	20 GALS	FD RESPONDED AND USED ABSORBENT PADS TO SECURE SPILL/SRT REMOVED ABSORBENT PADS AND REMAINDER OF SPILL.

OIL/WATER SEPARATORS

Oil/water separators serve in a variety of applications at Scott AFB. A project initiated in 1993 will replace most existing units as well as installing several new units. All known separators at Scott AFB (proposed, active, and out of service) are summarized in Table 3.21. Several of these units are subsequently reported as definite or potential cross-connections in Section 4.

An oil/water separator installation which is designed to receive only storm water runoff should discharge to the storm sewer system and is not considered to be a cross-connection. Such installations may include parking lots, tank containment areas, flight ramps, and vehicle storage/maintenance areas. Protection against spills or releases of non-storm discharges must be incorporated into the design and operation of these applications. For example, an oil/water separator serving one or more tank containment areas would be equipped with a valve. This valve would normally be kept closed and would be opened only to drain storm water after a precipitation event. Such a system permits inspection of storm water accumulation within the containment area before it is discharged.

Activities which generate non-storm discharges, such as vehicle washing, must be specifically prohibited within the area served by any separator which discharges to a storm sewer. Additionally, maintenance and repair activities should actively employ spill plans and spill containment equipment to minimize any potential discharges or spills to the separator. Finally, diking and curbing should be employed to prevent storm water run-on from areas outside the facility being served by the separator.

Any activity which generates a non-storm water discharge must be connected to a sanitary (or industrial) sewer line or must obtain a NPDES discharge permit. If such activities are conducted outdoors, efforts should be employed to minimize the quantity of storm water discharging to such a system. For example, overhead canopies and surface grading/curbing measures can be employed to minimize storm water runoff to vehicle or an equipment washing facility.

TABLE 3.21

OIL/WATER SEPARATORS
AS OF OCTOBER 1993

LOCATION		DESCRIPTION	DISCHARGE	
OUTFALL AREA	BUILDING		OLD UNIT	NEW UNIT
1	1197	GOLF COURSE MAINTENANCE; RECEIVES STORM WATER RUNOFF FROM PAVED MAINTENANCE, REFUELING, AND EQUIPMENT WASHING AREAS	STORM	STORM
2	3675	ARMY RESERVE VEHICLE MAINTENANCE; RECEIVES STORM WATER RUNOFF FROM OUTDOOR VEHICLE PARKING/MAINTENANCE AREA.	STORM	STORM
2	3675	ARMY RESERVE VEHICLE MAINTENANCE; GREASE TRAP UNIT RECEIVES DISCHARGES FROM FLOOR OF MAINTENANCE BUILDING. REPORTED AS OUT OF SERVICE.	UNKNOWN	NONE
2	3680	ARMY RESERVE AVIATION CENTER; SEPARATOR PIT RECEIVES WASH WATER DISCHARGES FROM HANGAR FLOOR.	STORM	NONE
2	3184	VEHICLE REFUELING SHOP; RECEIVES DISCHARGES FROM FLOOR OF BUILDING.	SANITARY	SANITARY
3	45	HEATING PLANT; RECEIVES STORM WATER RUNOFF FROM TANK (8786) CONTAINMENT AREA.	STORM	STORM
3	433	HANGAR-PNEUMATIC AND HYDRAULIC SHOP; RECEIVES DISCHARGES FROM FLOOR DRAINS SERVING AIRCRAFT WASH RACK.	STORM	SANITARY
3	546	VEHICLE WASHING (CE); NEW INSTALLATION WILL COLLECT DISCHARGE FROM VEHICLE WASHING OPERATIONS	NONE	SANITARY
3	548	TRANSPORTATION SQUARE; RECEIVES DISCHARGE FROM FLOOR OF VEHICLE MAINTENANCE BUILDING.	SANITARY	SANITARY
3	742	FUEL SYSTEM MAINTENANCE DOCK; RECEIVES DISCHARGE FROM FLOOR OF MAINTENANCE BUILDING.	SANITARY	SANITARY
3	8511	JP-4 FILL STAND; RECEIVES STORM WATER RUNOFF FROM OPEN AREA TRUCK FUELING STAND.	NONE	STORM
II	1989	ARTS AND CRAFTS BUILDING; RECEIVES DISCHARGE FROM VEHICLE WASHING FACILITY.	SANITARY	SANITARY

SECTION 4

NON-STORM DISCHARGES

INTRODUCTION

The pollutant source assessment phase of a SWPPMP requires the identification of non-storm water discharges and unpermitted connections to the storm water system. The plan must also include a certification that all storm water outfalls have been tested or evaluated for the presence of non-storm water discharges.

DEFINITION OF NON-STORM WATER DISCHARGES

Examples of non-storm water discharges include any water used directly in a manufacturing process (process water), air conditioner condensate, non-contact cooling water, vehicle wash water, or sanitary wastes. Generally, unless covered by a NPDES permit, such discharges are illegal. However, the USEPA General Permit authorizes the following types of non-storm water discharges:

- Discharges from fire fighting activities.
- Fire hydrant flushings.
- Potable water sources including waterline flushings.
- Irrigation drainage.
- Lawn watering.
- Uncontaminated groundwater.
- Foundation or footing drains where flows are not contaminated with process materials.
- Discharges from springs.

- Routine exterior building washdown which does not use detergents or other compounds.

- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used.

- Air conditioning condensate.

While the USAF group storm water permit has not been issued, it is likely to contain similar provisions. All non-storm water discharges must be identified in the SWPPMP and steps taken to minimize pollutant contact with those streams. All other discharges of non-storm water must either be disconnected from the storm drainage system or covered by a NPDES permit.

INSPECTION PROCEDURES

The SWPPMP guidance manual published by USEPA in support of the storm water regulations describes three test methods for identifying non-storm water discharges and cross-connections. These methods include visual inspections, review of sewer maps, and dye testing. To date, PES has employed a combination of visual inspection and sewer map review. Additional information was obtained by PES through review of pollution prevention reports; ECAMP inspections; construction specifications for new oil/water separators; and an evaluation survey addressing portions of the sanitary sewer system. Where appropriate, on-site inspection of facilities and/or interviews with facility representatives were conducted.

During 1993, a renovation project addressed all oil/water separators known to be in service at Scott AFB. With one exception, all existing separators were recommended for replacement under a construction project which was initiated in August 1993. The configuration of the oil/water separators reported in this plan is based on specifications of this project, including modifications as of October 1993. Cross-connections are reported for those units discharging to storm sewers which could potentially receive non-storm water discharges. Units which receive storm water runoff only (i.e., from parking lots) are not reported as a cross-connection.

PES personnel obtained the Base storm drainage system maps which show the location of each storm water outfall and its boundary. Using the storm sewer maps, the final discharge point for each outfall was located and inspected during dry weather conditions. (Dry weather conditions mean no precipitation in the previous 72 hours.) During this inspection, an initial determination of potential non-storm water discharges and cross-connections were made based on whether or not flow was present at each outfall.

After each outfall was located and initially inspected, all the outfalls were subjected to a visual storm drainage system inspection. This consisted of starting at the final discharge of the outfall and proceeding back upstream, checking each succeeding manhole under dry weather conditions to visually determine if flow was present. As each point was investigated, its condition was marked on a copy of the storm system map. Each flow was traced back until it could be attributed to a specific building or location. If a branch of the main storm sewer line in an outfall was found to be dry and 15 inches or less in diameter, it was excluded from further inspection.

NON-STORM DISCHARGES IDENTIFIED

In addition to the location-specific discharges or potential discharges identified below, this SWPPMP stipulates that any of the authorized discharges described in the introduction to this chapter may be present from time to time at Scott AFB. Certain types of authorized discharges (i.e., foundation or footing drains, air conditioning condensate) cannot be identified with certainty through visual inspections or other test methods discussed above. Methods (in place or proposed) to minimize the quantity of non-storm discharges and to minimize pollutant contact with those streams are discussed elsewhere in this SWPPMP.

All non-storm discharges (other than authorized discharges as previously described) are presented below by outfall area. These include discharges and potential discharges identified by visual survey and all other assessment methods described previously. Certification forms are included in Appendix A.

Outfall Area 1

Building 1197

Oil/water separator receives storm water runoff from paved maintenance area. Potential cross-connection if non-storm sources (i.e., equipment wash water) are discharged to this separator.

Outfall Area 2

Building 3675

An existing oil/water separator serving Army Reserve Vehicle Maintenance drains to the storm sewer. Replacement unit, to be installed in 1994, will also discharge to the storm sewer.

Building 3675

An old separator (grease trap) located in the floor of 3675 is reported to be out of service, has an unknown discharge.

Building 3680

The helicopter wash rack area in the Army Reserve Hangar discharges through floor drains to the storm sewer.

Outfall Area 3

Building 45

An existing oil/water separator at diesel fuel tank 8786 drains to the storm sewer. Replacement unit, to be installed in 1994, will also discharge to the storm sewer.

Building 433

Aircraft wash rack in southeast corner of building is connected to storm sewer. Project in 1994 will connect wash rack to oil/water separator, which will discharge to sanitary.

Building 859

Cooling tower (350 gal) discharge to storm sewer.

Building 861

Cooling tower (400 gal) discharge to storm sewer.

Building 1523

Cooling tower (750 gal) discharge to storm sewer.

Building 1530

Two (2) cooling towers (200 gal ea) discharge to storm sewer.

Building 1575

Two (2) cooling towers (2500 gal ea) discharge to storm sewer.

Building 1600

Two (2) cooling towers (2500 gal ea) discharge to storm sewer.

Building 1601

Two (2) cooling towers (400 gal ea) discharge to storm sewer.

Building 1650

Cooling tower (750 gal) discharge to storm sewer.

Building 1700

Cooling tower (400 gal) discharge to storm sewer.

Building 1899

Three (3) cooling towers (200 gal ea) discharge to unknown.

Building 1899

Cooling tower (500 gal) discharge to unknown.

Outfall Area 4

Building 3190

Cooling tower (400 gal) discharge to storm sewer.

OTHER POTENTIAL NON-STORM DISCHARGES

Outfall Area 3

Building 433

Trench drains at north and south entranceways are debris filled, discharges to unknown.

Building 548

A floor drain with unknown discharge within 15 feet of a hazardous waste satellite accumulation point. Identified from 1993 ECAMP inspections.

Building 552

A floor drain with unknown discharge within corrosion materials storage area. No secondary containment (ECAMP 1993).

CONCLUSIONS

Unpermitted connections to the storm sewer system must either be removed or an application made for a specific NPDES permit for the discharge. This applied to the helicopter wash rack and the 18 cooling towers referenced above. Floor drains with storm sewer connections should be disconnected or sealed.

SECTION 5

MANAGEMENT PRACTICES AND GUIDELINES

INTRODUCTION

Three activities at Scott AFB account for the majority of releases with the potential to contaminate storm water runoff. These are: runway de-icing, aircraft de-icing, and aircraft maintenance refueling operations conducted outdoors. Efforts to minimize releases from these sources will result in the most immediate and demonstrable improvements to storm water runoff quality.

With respect to runway de-icing, conversion to the use of potassium acetate (scheduled for the 1994/1995 season) appears to be the best available approach to minimizing the release of potential contaminants. Potassium acetate appears to be the best choice among materials currently approved for application on USAF runways. Other practices currently in place include utilization of an electronic runway monitoring network, runway plowing and sweeping practices, and restriction of chemical de-icing to the main runway. These practices would be compatible with the use of potassium acetate and constitute Best Management Practices for minimization of chemical de-icing.

Propylene glycol is used for aircraft de-icing Basewide and no feasible alternatives appear to be currently available. A strategy to contain aircraft de-icing runoff and divert such effluent to the sanitary sewer system is proposed as the most immediate and cost effective means of eliminating such discharges to the environment. Further investigations should address: 1) the content of propylene glycol formulations for the presence of potentially harmful or toxic additions, and 2) modification of equipment or technique to minimize quantities of propylene glycol used.

Aircraft maintenance and refueling operations which are conducted outdoors create a variety of opportunities for contamination of storm water runoff. While many of these activities are concentrated within the Main Ramp area, the term also refers to use, maintenance, and storage of vehicles and ground support equipment wherever such functions occur outdoors. Implementation of management, procedures, and training efforts are required to effectively minimize and contain the relatively large numbers of leaks and spills associated with these activities. Effective utilization of other programs (Spill Prevention and Response, Pollution Prevention, etc.) can

contribute to achieving progress in this area. More detailed investigation of past and present practices at Scott AFB is required to develop specific recommendations, which are compatible with contemporary airfield practices.

Additional specific areas of concern include:

- Identification of cooling tower discharges.
- Outdoor storage of recyclables, scrap materials, and other equipment.

Water used in cooling towers may be treated with biocides, rust inhibitors, and other additives. Discharge of these treated waters is no longer acceptable under storm water regulations. A complete inventory of cooling towers at Scott AFB and their route of discharge is currently being completed. Those units which discharge to the storm drainage system should be re-routed to the sanitary sewer system. Options to reuse cooling tower blowdown may be explored and implemented if cost effective.

Large scale outdoor storage practices can create dramatic visual impacts as well as opportunities for storm water contamination, wind blown debris, and related problems. It is important that currently proposed projects to address previously identified problems be fully implemented, as well as installing basic structural controls to minimize future storm water exposure. More detailed assessment of feasible options is needed before committing to potentially capital intensive options such as full enclosure or relocation.

Discussion of management practices in the following section is organized around broad functional categories. These include: 1) flight support/maintenance operations, which are subject to industrial classification under paragraph viii, airport operations; 2) shipping/receiving and materials handling (SIC 4225, paragraph xi); 3) waste management and recycling (paragraph vi and vii); 4) de-icing practices (SIC 4581, paragraph viii); 5) POL and UST practices (SIC 4581); and 6) the Base IR Program (paragraph v).

FLIGHT SUPPORT AND MAINTENANCE OPERATIONS

Flightline operations at Scott AFB include the industrial shops that perform repair, testing, and calibration activities; utilities such as wash racks; hangars for aircraft storage and maintenance, and runway fueling. With the exception of the U.S. Army Aviation Operations within Outfall Area 2, these facilities are distributed along the Main Ramp area, east of Hangar Road (Outfall Area 3). The primary function of these facilities is keeping the aircraft ready to fly in a safe condition.

All industrial shops along the flightline are located in fully enclosed structures. This feature reduces the exposure of industrial materials to rainfall contact and provides the opportunity for constructing curbs or other types of containments for spills. Floor drains which may have been connected to the storm sewer system present the greatest potential for pollution from non-storm discharges. These drains should be re-routed to the sanitary sewer system or plugged.

Most wash racks at Scott AFB are fully enclosed and connected to the sanitary sewer system. Those that have been identified as non-storm discharges should be relocated or the flow diverted to sanitary sewers. Installation of an oil/water separator in conjunction with diversion (to sanitary) would help minimize the quantity of wastes released from the wash rack.

Hangars generally provide a fully enclosed structure. Exposure to rainfall can occur if the doors are left open to allow entrance of wind blown rain. Permanent spill containment structures would interfere with operations inside the hangar; however, drip pans could be used to contain minor leaks of hydraulic fluids and other lubricants from the aircraft. Floor drains should be disconnected from the storm sewer system by re-routing to sanitary sewers or plugging.

Spill records at Scott AFB indicate a fairly high proportion of such incidents occur in the flightline area. Runway fueling operations create potential non-storm discharges and runoff of leaks during storm events. Spill prevention and response plans are in effect to minimize the risk of storm water contamination and to provide immediate containment as well as clean up of these leaks. Condensation of evaporated fuels may need to be addressed as it affects "topping off" fuel tanks of aircraft. Drip pans are suggested for aircraft parked along the runways for extended periods of time.

The recent ECAMP inspection at Scott AFB indicated a few outdoor storage and containment issues related to flightline operations. Wherever possible, such outdoor storage practices should be minimized. Where such storage is necessary, ECAMP recommendations for containment, coverage, warning signs, and related practices should be followed.

SHIPPING/RECEIVING AND MATERIALS HANDLING

The potential for storm water contamination from shipping/receiving activities at Scott AFB is minimal. Base Supply (375 SIPS/LGSDI) is responsible for general warehouse/distribution of goods and is also responsible for tracking hazardous materials from receipt through disposition. Hazardous materials are used throughout the Base, including the Logistic Group, CE, Operations Group Maintenance, Medical Group, MWRS, AAFES (Army-USAF Exchange Service), and the Air National

Guard. A "pharmacy" system is planned for the future dispensing of hazardous materials, which will further reduce the amount of hazardous materials stored at various locations on the Base.

Facility personnel have annual training in Hazard Communication (HAZCOM) which enables them to identify the hazards of materials that they handle. Material Safety Data Sheets are provided with materials or can be obtained from the Bioenvironmental Engineering office. Spill response is provided by the Fire Department, and inspections of facilities are conducted by the Fire Department, Safety, and Disaster Preparedness offices.

These training and support measures are reinforced by the annual ECAMP inspections. The most recent inspections identified only a few situations which could potentially impact storm water runoff. These were outdoor storage/containment issues similar to those discussed previously. However, there were also some citations addressing the adequacy of the compressed gas, flammables, and corrosives storage facilities themselves. Pending work orders to upgrade these facilities should be implemented.

WASTE MANAGEMENT AND RECYCLING

Hazardous Waste Management

Hazardous wastes generated at Scott AFB include flammable solvents, contaminated fuels, lubricants and spill residues, stripping chemicals, electroplating chemical, waste oils, waste paint-related materials, and many other miscellaneous wastes. The 375 AW organizations that generate significant amounts of hazardous wastes include the CE Squadron (CES), Maintenance Squadron (MS), and Transportation Squadron (TRNSPS). Tenants at Scott AFB like the U.S. Army Reserve Aviation Support Facility, and USAF C4A (HQ AFC4A/TNACF) also generate significant amounts of hazardous wastes.

The responsibility for managing hazardous waste lies with the generating organizations and EMO. Numerous locations throughout the Base have been designated as accumulation points or satellite accumulation points. Each organization appoints accumulation point managers and alternates to provide for the proper identification, handling, storage, and recordkeeping of the hazardous waste. The generating organizations are also responsible for transporting the waste to various staging areas. There is no permitted storage at Scott AFB; all hazardous waste must be removed from the Base within the 90 days of the noted accumulation date. Personnel from the Environmental Management Office (EMO) are responsible for ensuring that the wastes are removed on time, and that all manifests are properly filled out and returned from the disposal facility.

The servicing DRMO is located at Scott AFB and maintains contracts for the recycling or disposal of hazardous wastes. No hazardous wastes are stored at the DRMO. The Scott AFB EMO also maintains a contract with Safety Kleen® for various flammable liquids disposal. The EMO is responsible for coordinating the disposal of wastes with DRMO and Safety Kleen®.

An important benefit of designated satellite and accumulation points is that proper storage and spill containment provide the best management plan for preventing pollution from entering the storm sewer system. Each accumulation point requires provision of adequate training, a site specific spill plan, and acquisition of appropriate storage and containment equipment. Ongoing inspections enforce continual improvement of standards. The recent ECAMP inspections indicated only minimal risks to storm water from this activity area at Scott AFB.

Solid Waste Management

The management of solid waste at Scott AFB includes recycling efforts through the MWRSS and DRMO, the collection and disposal of solid wastes by contract, and the incineration of infectious wastes. There are no active landfills on the Base.

Receptacles are placed throughout the Base for solid waste disposal. Under contract with Browning Ferris Industries, a private hauler removes the waste from the Base to a landfill south of Belleville, Illinois. Yard wastes are no longer accepted at the local landfill, and must be deposited in a designated dumpster on-Base, or in designated containers in the housing areas. The yard wastes are collected by a separate contractor and disposed of at a composting facility near the Base.

Regulated medical wastes generated at the Base hospital (375 MG/SGG, Bldg 1530) are disposed in red plastic bags and in sharp instrument containers. The bags and sharp containers are packed in heavy plastic red bags marked with the biohazardous waste symbol for incineration.

Inappropriate disposal practices in or around waste collection receptacles are the primary source of potential storm water impacts. Open receptacles, overfilled receptacles, and trash placed outside of designated receptacles create opportunities for exposure to rain water. The collection contract insures an adequate number of receptacles (with appropriate covers) and consistent collection schedules while Scott AFB enforces disposal standards Basewide.

Recycling

Scott AFB began a recycling center in November 1992 and exceeded a goal to ship one million pounds of recycled material by September 1993; the one millionth pound of recyclables was shipped on July 28, 1993. The Base recycles newspaper, office paper, #1 and #2 plastics, aluminum cans, glass, steel cans, corrugated cardboard, and magazines. The revenue generated from recycling offsets funding costs and keeps recreation fees affordable for Scott AFB personnel and families. In addition to the main collection point at the recycling center, collection trailers are set up in the Cardinal Creek and Shiloh housing areas. Scrap metal is recycled by MWRSS through the DRMO. If the material is not exposed to storm water runoff, recycling and recovery activities pose no pollution potential and help to decrease the volume of solid waste disposal.

DE-ICING OPERATIONS AT SCOTT AFB

Aircraft De-icing

Aircraft de-icing operations at Scott AFB converted from ethylene glycol to propylene glycol during the 1992/1993 season and will use propylene glycol exclusively during the 1993/1994 season. Approximately 5000 to 7000 gallons of aircraft de-icing chemicals were used during the "relatively mild" winter of 1992/1993. Aircraft de-icing is performed on an as-needed basis, wherever aircraft are parked on taxi aprons. On occasion, aircraft may be de-iced at the end of the runway apron if they have iced up again while waiting for takeoff. Effluent from these operations runs directly from the taxiway into the storm water collection system.

Dual tank trucks containing separate water and chemical storage tanks are utilized for aircraft de-icing at Scott AFB. These trucks apply a heated mixture of water and chemicals. This mixture can be adjusted so as to minimize the quantity of chemicals utilized. In addition, aircraft are swept to remove snow and other loose materials prior to application of de-icing chemicals. These practices help to minimize the quantity of de-icing chemicals utilized.

The overall scale of de-icing operations at Scott AFB is relatively small. The Base supports 12 C-9 Nightingale medical evacuation aircraft and 13 small craft (10 C-21 Lear jets and three C-12 Beechcraft). Some hangar space is available for the small aircraft and it is used as much as possible for flight preparation so as to minimize de-icing needs. No hangar space is available for the C-9 aircraft, which must be de-iced outside. These aircraft account for the majority of de-icing operations. Additional de-icing services are provided to transient aircraft, but there are seldom more than one or two transients on Base at any time.

Current procedures restrict de-icing operations to aircraft with engines not running. Base Operations has submitted a proposal to permit de-icing operations while engines are running. This would permit de-icing operations to be performed at a single location and should shorten the average length of time between de-icing and takeoff. A designated de-icing station may also permit implementation of other measures to minimize the impact from de-icing chemicals.

Taxiway H has been suggested as a designated location for aircraft de-icing. This area is relatively remote from storm drain inlets and it was believed that grass and surface soils might provide some interim retention of de-icing effluents. However, the ultimate impact of such retention is unpredictable. The rate of glycol degradation and ultimate BOD is slowed by cold weather. Fairly quick conveyance of de-icing effluents to receiving surface waters could contribute to long-term transport and dilution of winter time releases. By contrast, discharges to poorly drained surfaces or to snow piles could contribute to an accumulation of glycols which might then be released in greater concentrations during periods of warm weather. Additionally, the potential biodegradation of glycols on-site may result in objectionable odors due to the release of aldehydes.

Available Options to Aircraft De-Icing

Scott AFB has already implemented a number of practices which help to minimize the quantities of aircraft de-icing chemicals escaping to the environment. Conversion to propylene glycol has eliminated potential toxicities associated with former use of ethylene glycol. Maximum use of hangar space reduces the number of aircraft requiring de-icing. Preliminary blowing/brushing of aircraft reduces the amount of chemical applications required. Finally, use of a single service group can ensure consistent application of de-icing procedures designed to minimize the quantities of chemicals applied. Other short-term opportunities for changing current aircraft de-icing practices are somewhat limited. All such alternatives require careful consideration from the perspective of flight safety as well as environmental impact and cost effectiveness.

With regard to environmental impacts; the formulation of the de-icing compound currently in use should be reviewed and compared to alternatively available formulas. Glycol based de-icing formulations exert high BOD on receiving waters and present a potentially high toxicity impact as well. The high BOD rates result from the extremely oxygen demanding, rapid biodegradation of glycols within soil or aquatic systems. Glycols, per se, present relatively low toxicity impacts, but other compounds or additives to glycol de-icing formulations may be acutely toxic to aquatic habitats. Such formulation components may include rust inhibitors, acetaldehyde, dioxane, corrosion inhibitors, polymer thickening agents, and surfactants.

A more immediate approach to aircraft de-icing is to prevent the release of such effluents to the environment. Such an approach could entail diversion of de-icing effluents to the sanitary collection systems, diversion to a containment/treatment system, or recovery/recycle of the effluents. Although numerous airports are currently evaluating and/or implementing such options, very little information based on established experience is as yet available.

A glycol recovery system is probably the most capital intensive option, especially with respect to the cost of converting existing ramps. Such a system requires recovery of large quantities of concentrated fluids (i.e., 15 percent glycol), restricts de-icing operations to specific locations, and could create a bottleneck if large numbers of aircraft need to be mobilized quickly. Given the relatively small quantities of waste glycols generated at Scott AFB, such recovery/recycle would probably not be feasible. A recovery/recycle system described in the Scott Pollution Prevention General Opportunity Assessments (29 July 1993) is quoted at $500,000 to $1,500,000 installed. Scott AFB uses less than $30,000 worth of propylene glycol (at $3.86/gal) during a mild winter. With a projected 10-year life span for a recovery system, recycle benefits would be minimal.

Diversion of aircraft de-icing effluents to a wastewater treatment system is technically feasible (with respect to treatment) and has been implemented at some airports. Where very large quantities of effluents are expected (i.e., the new Denver airport), containment ponds can be installed to control and monitor release of the effluent to the sanitary collection system. However, in situations where only a few aircraft per day might be de-iced, direct discharge to the sanitary system may be acceptable, if such discharge could be isolated from general storm water flows.

Such an option could be implemented at the Scott AFB Main Ramp area and would entail the following steps:

1. Isolate the ramp storm drains from the surrounding storm drain system;

2. Connect the ramp storm drains to a single point of outlet to the storm drain system;

3. Connect a sanitary line to the outlet point, and;

4. Install a gate device at the outlet point which allows discharge to either the storm or sanitary systems or closure of the ramp drains.

With these modifications installed, precipitation to the ramp areas would be routinely discharged to the storm drainage system. However, effluents from aircraft

de-icing operations would be diverted to the sanitary system and conveyed to the WWTP at Scott AFB. In addition, the ability to close the gate would provide an additional means of containment in the event of fuel spills on the flightline.

Runway De-Icing

Scott AFB currently utilizes a liquid urea (Ucar) system for runway de-icing. This system will continue to be used during the 1993/1994 season, but will be replaced with a liquid potassium acetate (Cryotec PA) beginning with the 1994/1995 season.

Only the main runway, plus small sections of Hangar and Heritage Roads, receive chemical de-icing. The road sections receive this treatment to prevent road salt from being tracked onto the flightline areas. Snow blade and brooming operations are employed on the main runway as needed prior to chemical applications. The taxiways and ramp area receive only mechanical cleaning.

Scott AFB monitors conditions on the main runway with a Surface Condition Analyzer (SCAN) system manufactured by Surface Systems, Inc. (SSI). The system was installed and operational prior to the 1991/1992 season; two years of experience with the system have been accumulated. The SCAN system is operated at numerous airport and highway applications throughout the upper midwest and has been designated as the USAF Standard System. All USAF flying bases in the northern tier of North America will eventually have the SCAN system installed.

At Scott AFB, the SCAN system includes seven surface monitors and one subsurface monitor (18" below grade) installed on the main runway. The monitors report data (air and surface temperature, relative humidity, precipitation) to a control processing unit which also receives atmospheric data from the local weather service. This information is used to forecast the advent of freezing conditions up to 12 hours in advance.

The SCAN system is considered to be highly accurate and reliable. The system can distinguish wet from dry, can distinguish ice from slush, and provides an indication of the concentration of de-icing chemicals in surface water. On a scale of 0 to 100, a fresh application of urea will register between 50 and 80. Under continued dilution from fresh rainfall, this reading will gradually return to the background level of five to 10. There is a general consensus that operation of the SCAN system has permitted a significant reduction in the quantities of urea applied, but no data to support this conclusion was available. The annual variability of urea application rates due to fluctuating weather conditions makes it difficult to interpret application rates directly.

Available Options for Runway De-Icing

The planned conversion to a liquid potassium acetate system appears to be the best currently available option for minimizing the environmental impacts of runway de-icing operations. The compound decomposes to potassium, a common mineral in the environment; while acetate exerts a BOD as it metabolizes to carbon dioxide and water. However, the BOD is significantly less than that resulting from equivalent applications of urea, and the secondary risks associated with ammonia and nitrate degradation are eliminated.

The cost of potassium acetate appears to have fallen somewhat during the past two years, but remains almost twice as expensive as urea ($4.75/gal versus $2.60/gal as of September 1993). However, application rates under equivalent conditions have been reported as about one-third the rate for urea. If such advantages were to prove true at Scott AFB, use of potassium acetate would be cost effective in addition to dramatically reducing the net BOD discharge to the aquatic environment.

Implementation of potassium acetate runway de-icing at Scott AFB may require some modification of the present application system. An important component would be a sophisticated spray boom capable of precisely controlled, pressurized spraying. Such capability is important to maximizing the range of conditions under which the potassium acetate may be applied (i.e., snow packs or ice layers) as well as minimizing the quantity as appropriate to different situations.

Potassium acetate is reported to be most effective when applied to clean runways as a deterrent to ice or frost formation. The material does not evaporate, remaining effective for up to 24 hours. Use of potassium acetate in this manner is also reported to contribute to improved runway surface friction and skid resistance.

Runway de-icing procedures currently in place at Scott AFB are designed to minimize the quantity of chemical agents employed. Current practices would be immediately applicable to the use of potassium acetate. These practices include: 1) restriction of de-icing chemicals to use on main runway and access taxi usage only (ramps and other areas are mechanically cleared), 2) plowing and brooming of the main flightline to remove snow; chemicals are applied to clear the flightline to prevent accumulation of ice or frost, and 3) use of the SCAN system to monitor flightline conditions and predict the onset of freezing conditions.

PETROLEUM, OIL, AND LUBRICANT MANAGEMENT

Introduction

Fuels stored and handled at Scott AFB include aviation fuels (JP-4 and aviation gasoline), motor vehicle fuels (gasoline and diesel), and fuels for stationary and external combustion engines (diesel). Storage consists of above ground (AST) and/or underground tanks (UST) of various sizes located in all outfall areas. Bulk storage of JP-4 fuel currently consists of two tanks with a capacity of 210,000 gallons each. Pending or proposed upgrades to POL management at Scott AFB include installation of vapor recovery systems, cathodic protection, AST containment, containment at fill stands, and upgrades to existing facilities. A management program for USTs has been in place for several years and has already removed or replaced more than 57 USTs.

Bulk Fuel Storage

Bulk fuel storage (Building 545) maintains two ASTs (Tank No. 8733 and Tank No. 8734) with a capacity of 210,000 gallons each for JP-4 storage. Dating from the 1950s, these tanks were recently (1991/1992) re-routed and equipped with floating roofs and new covers. Fuel deliveries to Scott AFB are by truck, which off-load at a fuel stand just north of the bulk tanks. Spill containment at this fuel stand is currently scheduled for upgrading under Project No. SC94-0010.

Additional proposals for upgrading bulk fuel storage were presented during 1993 by the ECAMP inspection reports and/or the pollution prevention assessments. These include: repairing the containment structures surrounding the two tanks, installing an oil/water separator at the containment area discharges; installing vapor recovery systems on distribution and loading operations for all aviation fuels; and implementing pressure testing and tightness testing for fuel piping and connection equipment Basewide. All of these proposed actions would help reduce the potential for storm water contamination from POL activities.

Other POL Issues

Spills and leaks from fuel transfer operations pose the greatest risk for storm water contamination associated with fuel delivery systems. A number of specific recommendations for improvements were generated by the recent ECAMP inspections. These included: repair of containment structures for Tank No. 8786 (Building 45); installation of an oil/water separator for Tank No. 8786; installation of spill containments for filling stands at Buildings 45, 48, and 3200; containment for fuel truck parking at Buildings 3184 and 7702; upgrades to the main jet fueling stand at Building 508; and cathodic protection for an underground fuel system piping at Building 3290.

Installation of new containments for ASTs Basewide has also been recommended. Implementation of such an effort should utilize a management program to inventory tanks requiring containment, establish standards appropriate to tank size and type, and prioritize tanks for installation of containment structures or systems.

UST Program

An active program is in place to remove, replace, and monitor USTs Basewide. Over 57 tanks have been removed or replaced to date. All but nine USTs are scheduled to be removed or replaced.

Contaminated soil removed in this process is being stockpiled in Outfall Area 4. Contaminated soil is protected against exposure to storm water at both the excavation and stock pile locations. Soils are piled on visqueen and covered with visqueen as well. At the stockpile, covers are stabilized and a top layer of clean fill is utilized to protect the visqueen from ultraviolet radiation.

Scott AFB is using a thermal treatment unit for final cleanup of contaminated soil. The unit began operations in October 1993 and is scheduled to operate indefinitely until all available soil has been treated.

INSTALLATION RESTORATION PROGRAM

The Installation Restoration Program (IRP) at Scott AFB is administered through the Base Environmental Management Office (375 AW/EMO). The program seeks to identify and evaluate past material disposal sites and is conducted in accordance with the National Contingency Plan; requirements outlined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA) of 1986.

To date, four disposal sites have been identified at Scott AFB which may contain materials derived from activities subject to industrial storm water classification. These sites are identified as; Landfill (Site 1), Fire Protection Training Areas 2 and 3, and Fueling Facility 8550 (renumbered to 8733). These sites are currently undergoing Remedial Investigation/Feasibility studies to determine final disposition of the sites.

Current management practices implemented by the IRP are adequate to protect the sites against potential contamination of storm water. All IRP sites at Scott AFB have a vegetation cover or other surface protection which minimizes the risk of storm

water runoff contamination. To further mitigate runoff from these areas, the following management practices should be implemented:

- Maintain the integrity of IRP site protective covers and inspect regularly to assure compliance.

- Prohibit construction in the immediate vicinity of IRP sites until contamination sources are removed and the soils are properly remediated.

- Take special care during remediation activities to prevent the exposure of contaminated soils to rainfall by temporary covers or other protective measures and divert all off-site runoff by constructing berms around the affected area.

- Storm water runoff which comes in contact with any contaminated soils should be contained and discharged to the sanitary sewer system or conveyed to other appropriate treatment.

IMPACT OF ESTABLISHED ENVIRONMENTAL PROGRAMS

Ongoing environmental programs and plans implemented at Scott AFB have a positive effect on minimizing storm water pollution problems. These programs include:

- Oil and Hazardous Substance Spill Prevention and Response Plan - September 1992.

- Environmental Compliance Assessment and Management Program (ECAMP) - November 1993.

- Baseline Pollution Prevention and Analysis - July 1993.

Spill Prevention and Response Plan

This plan describes measures to be taken to prevent spills and containment of spills, if they occur. The plan covers all activities on the Base and addresses both oil and hazardous substances (including hazardous wastes and materials). The plan was intended to fulfill the requirements for: 1) a Spill Prevention Control and Countermeasure (SPCC) plan per 40 CFR 112, 2) an Oil and Hazardous Substance Pollution Contingency (OHSPC) plan per 40 CFR 300, 3) the Resource Conservation and Recovery Act per 40 CFR 260-271, and 4) the hazardous waste spill prevention and response requirements of AFR 19-8, and AFR 355-1.

Section 2 of this plan is a Spill Prevention Control and Countermeasures (SPCC) Plan that describes the facilities and procedures to ensure that:

- All storage and transfer sites for both oils and hazardous materials are adequately designed to prevent spills.
- The operators of the storage and handling sites are trained in spill prevention, control, and reporting procedures.
- The operators have adequate spill containment and clean-up materials.
- All storage is routinely monitored to prevent or limit undetected spills.
- The route and effect of a potential spill is known.

Site specific contingency plans have been prepared for each site that contains petroleum products or hazardous materials. A key component in all these plans is containment of any spill to prevent it from entering a storm or sanitary sewer. After a spill is cleaned up, procedures are in place to inspect the sewers and insure that they have not been contaminated.

The 1993 ECAMP inspections cite the SPCC Plan for containing outdated information. Major changes in the location of fuel tanks, conversion to natural gas, and the UST removal program are not reflected in the current plan. Updating the SPCC Plan at this time could incorporate modifications and additions aimed at further minimizing potential impacts to storm water runoff.

Environmental Compliance Assessment and Management Program (ECAMP)

An external environmental compliance evaluation of this Base was conducted during the period of 24-29 October 1993, under the direction of Headquarters, Air Mobility Command. This evaluation included the following compliance categories:

Air Emissions
Hazardous Materials Management
Hazardous Waste Management
Natural and Cultural Resources Management
Noise Management (Environmental)
Pesticide Management
POL Management
Solid Waste Management
Special Programs
Water Quality Management
Pollution Prevention

A number of these categories, including hazardous material and waste; pesticides; POL management; and water quality have potential impacts on storm water discharges. Several of the citations from the 1993 ECAMP have been referenced in earlier portions of this report. The complete report presented a total of 38 citations which were directly or indirectly related to storm water issues. Actions recommended by these citations could have both immediate and long term effects on the quality of storm water discharges from the Base.

The USAF Environmental Compliance Assessment and Management Program (ECAMP) established the use of environmental evaluations and management action plans to achieve, maintain, and monitor compliance with applicable Federal, State, local, Department of Defense (DOD), and USAF environmental laws and regulations. There are two types of ECAMP evaluations--external and internal. An external evaluation is conducted every three years by the major command, with a team of USAF personnel or with contractor personnel not directly associated with the installation. Internal evaluations are conducted annually by Base personnel, except during the year an external evaluation is performed.

Annual ECAMP inspections appear to meet all the criteria for the comprehensive site compliance evaluation program required by the SWPPMP. These criteria include annual site inspections to: 1) confirm the accuracy of potential pollution sources described in the plan, 2) determine effectiveness of the plan, and 3) assess compliance with the terms and conditions of the permit. Storm water inspections could be specifically incorporated in future ECAMP inspections as a subcategory of Water Quality Management.

Pollution Prevention Program

As part of the USAF Pollution Prevention Program, Scott AFB has developed a Baseline Pollution Prevention Report. This report describes the following:

- organizations and their missions.
- work performed.
- materials used in the waste generating processes.
- waste assessment.
- waste characteristics, types, and quantities.
- fate and disposal of the generated wastes.

For each facility inspected, the report addresses the materials used in each process along with a flow diagram of the materials and the waste generated. New technologies, equipment, and materials which could reduce and/or eliminate the hazardous waste steam are described.

As these technologies are further evaluated and, where feasible, implemented, a decrease in hazardous waste will be achieved. This waste reduction and elimination has an indirect benefit on storm water discharge since the potential for release into the storm water is greatly decreased.

COMPLIANCE ACTIONS

The following actions are recommended to facilitate implementation of the Storm Water Management Program at Scott AFB. Recommended actions include summary enumerations of activities discussed elsewhere in the plan. These steps are proposed in addition to baseline management practices currently in place at Scott AFB.

General Issues

Planning/Review

Expand environmental compliance responsibility of the EMO to insure that all proposed activities are in compliance with storm water regulations. Include mechanisms for early design review of new construction and of facility modification projects so as to incorporate storm water management opportunities in the most cost-effective manner. This approach can also be applied to ongoing maintenance and rehabilitation work to identify and correct deficiencies in existing facilities.

Examples of opportunities for participation in the early design phase of projects include the new fuel operation facilities proposed for construction east of Building 547 and proposed sediment prevention work at Scott Lake.

Erosion Control

Establish a formal requirement that all construction contractors on-Base comply with applicable rules for management of storm water at construction sites. The rule could be written into established General Requirements for Contractors as administered by Base CE. The rule should require submission of an erosion control plan by the contractor, and review of the plan by EMO.

Spill Plan Update

Incorporate storm water management requirements in the pending update to the Spill Prevention and Response Plan for Scott AFB. Incorporate storm water management requirements in other environmental management plans during subsequent periodic updates.

Baseline Sampling

Schedule storm flow sampling program for 1994/1995 (See Section 6).

Storm Water Plan Implementation

Identify individual members of the Storm Water Implementation/Management Team and convene initial meetings. Primary focus of first meetings should be to identify and establish firm point of contact with operating organizations and communicate storm water management needs to the respective organizations.

Site-Specific Best Management Plans

Building 1197

Establish operating specifications to avoid non-storm discharges to the oil/water separator serving the outdoor maintenance area for the golf course. Incorporate operating specifications in the spill plan for the site.

Building 3675

Seal off drains to old grease trap under floor of building and confirm that this unit is out of service. Establish operating specifications for transportation maintenance area draining to outdoor oil/water separator.

Building 3680

Install an appropriate control device to discharge from helicopter washing area and route final discharge to sanitary sewer.

Building 45

Establish operating specifications for oil/water separator serving tank containment area, including gate valve for separator to prevent accidental discharge from containment area.

Building 433

Monitor installation of new oil/water separator to insure proper connection to sanitary sewer.

Buildings 859, 861, 1523, 1530, 1575, 1600, 1601, 1650, 1700, 1899, 3190

Implement program to reuse water from cooling tower blowdown or reroute drains to sanitary sewer connections.

Base De-icing Operations

Evaluate need for specialized spray boom for application of potassium acetate to runways. Evaluate feasibility for establishing aircraft de-icing station with discharge to sanitary sewers. Review contents of de-icing formulas and application procedures to determine opportunities for minimization of chemical releases.

Storm Water Buffer Zones, Other Strategies

Develop opportunities for enhancement of storm flow quality through sediment prevention project at Scott Lake. Evaluate additional strategies such as minimized runway mowing; use of natural vegetation to retard runoff; programs to minimize quantities of pesticides, herbicides, fertilizers, and irrigation waters applied Basewide.

Previously Recommended Actions

Implement recommendations from ECAMP and other sources for general improvements to POL system Basewide (See earlier discussion in this Section.). Recommendations include fuel stand containment, repair/upgrade storage tank containment, install vapor recovery systems, install cathodic protection, and new containment for ASTs Basewide.

SECTION 6

COMPLIANCE EVALUATION AND MONITORING PLANS

COMPLIANCE PLAN

Annual site compliance inspections are comprehensive inspections performed by personnel designated in the SWPPMP as having responsibility for conducting storm water inspections. The inspectors should be familiar with USEPA storm water regulations and the SWPPMP. The inspectors should also have direct access to management decisionmakers with regard to environmental compliance issues.

This annual inspection will then be used to evaluate the overall effectiveness of the SWPPMP. In particular, the inspections should be geared toward verifying the location of potential pollutant sources, that drainage maps are accurate and reflect current conditions, that controls identified to reduce storm water pollution are in place and working, and identify any needs for additional controls.

The process for conducting the evaluation should include these items:

- Review the SWPPMP and draw up a list of those items which are part of material handling, storage, and transfer areas covered by the plan.
- List all equipment and containment in these areas covered in the plan.
- Review Base operations for the past year to determine if any more areas should be included in the original plan, or if any existing areas were modified so as to require plan modification; change plan as appropriate.
- Conduct inspection to determine: 1) if all storm water pollution prevention measures are accurately identified in the plan, and 2) are in place and working properly.
- Document findings.
- Modify SWPPMP as appropriate.

All documentation regarding conditions necessitating modification to the SWPPMP should be kept on file as part of the plan for at least three years and submitted annually to Illinois EPA as outlined in the general permit to discharge storm water associated with industrial activity in Appendix D.

Compliance

Scott AFB has already established an Environmental Compliance Assessment and Management Program (ECAMP) to ensure overall Base compliance with environmental regulations. The ECAMP inspection team will include a representative who is familiar with the storm water regulations and the SWPPMP.

The objectives of ECAMP are to:

1. Establish the use of environmental compliance assessments as a means of ensuring the USAF compliance with all applicable local, DOD, and USAF environmental laws and regulations.

2. Assure major commands, installation commanders, environmental protection committees, environmental coordinators, bioenvironmental engineers, and natural resource managers that their environmental programs are effectively addressing environmental problems that could:

   a. Affect mission effectiveness;

   b. Jeopardize the health of USAF personnel or the general public;

   c. Significantly degrade the environment;

   d. Expose the USAF and its people to avoidable financial liabilities as a result of non-compliance with environmental requirements;

   e. Erode public confidence in the USAF and the defense establishment; and

   f. Expose individuals to civil and criminal liability.

3. Secure information that will permit installation commanders to anticipate and prevent future environmental problems;

4. Enhance management by establishing a system for environmental compliance management;

5. Provide data for use in identifying, programming, and budgeting environmental requirements;

6. Provide accurate and complete information to the public on the status of installation environmental compliance programs; and

7. Provide training and experience to Command personnel.

In addition to the ECAMP inspections, several individual subcommittee already exist within the Environmental Protection Committee (EPC) that will play a role in maintaining compliance with storm water regulations. The spill response coordinator is responsible for implementing the Basewide spill plan. The Pollution Prevention Subcommittee is responsible for assessing and implementing waste reduction and hazardous material substitution programs as mandated by USAF command. A pollution prevention directive has been issued and implemented at all USAF bases worldwide.

The Base CE Squadron will be responsible for monitoring on Base contractors, including construction activities. The CE squadron currently has an inspection program to verify that all contractor activities are conducted in accordance with all applicable regulations. It will be the responsibility of each contractor to determine if a Notice of Intent (NOI) for construction activity should be filed for new construction projects on a case-by-case basis.

The EPC maintains a communications capability to distribute vital environmental information through several mechanisms. These mechanisms include: access to the Base newspaper, news releases to the general public when necessary, and direct mailings or distribution of fact sheets to building managers or affected individuals.

OUTFALL MONITORING PROGRAM

Based on USEPA guidance, Scott AFB will conduct a monitoring program to determine the storm water discharge characteristics at selected outfalls.

OUTFALL SAMPLING AND ANALYSIS PLAN

Grab samples will be collected twice annually from all of the outfalls at Scott AFB (sampling to be performed at least once during a rainy period when de-icer compounds are in use). The parameters to be analyzed are oil and grease, BOD5, COD, TSS, pH, and de-icer compounds. These analytes were selected using guidance from the USEPA General Storm Water Permit for Industrial Activity. The

duration of the storm event, the measured precipitation, and a flow estimate for each outfall will also be recorded when the samples are collected. The results of the analyses will be kept for three years after they are collected as an appendix to this plan.

APPENDIX A

STORM WATER POLLUTION PREVENTION PLAN MAP

(located in Map pocket, back cover)

APPENDIX B

SUMMARY OF STORM WATER SAMPLING RESULTS

CHEMICALS EXPECTED TO BE PRESENT IN STORM WATER FROM SCOTT AFB

Chemical	
Oil and Grease	
pH	
BOD5	
COD	Eight basic chemicals to be sampled by applicants [40 CFR 122.26(c)(i)(E)(3)]
TSS	
Phosphorus, Total	
Kjeldahl Nitrogen, Total	
Nitrate plus Nitrite Nitrogen	
Ammonia-Nitrogen	
Bromide	
Chlorine, Total Residual	
Fecal Coliform	
Fluoride	
Sulfate	
Sulfite	
Surfactants	Table 2F-2 (Federal Form 2F) (Conventional and Nonconventional Pollutants).
Aluminum, Total	
Barium, Total	
Boron, Total	
Iron, Total	
Magnesium, Total	
Manganese, Total	
Molybdenum, Total	
Organic Carbon, Total	
Tin, Total	
Titanium, Total	
Antimony, Total	
Arsenic, Total	
Beryllium, Total	
Chromium, Total	
Copper, Total	Table 2F-3 (Federal Form 2F) (Toxic Pollutants)
Lead, Total	
Selenium, Total	
Silver, Total	
Thallium, Total	
Zinc, Total	
Benzene	
Carbon Tetrachloride	
Chlorobenzene	
Ethylbenzene	Table 2F-3 (Federal Form 2F) (GC/MS Fraction Volatile Compounds)
Methylene Chloride	
Toluene	
1,1,1-Trichloroethane	
Vinyl Chloride	

CHEMICALS EXPECTED TO BE PRESENT IN STORM WATER FROM SCOTT AFB

Chemical	
Acenaphthene	Table 2F-3 (Federal Form 2F) (GC/MS Base/Neutral Compounds)
Acenaphtylene	
Anthracene	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(ghi)perylene	
Benzo(k)fluoranthene	
Chrysene	
Di-N-Butyl Phthalate	
Fluroranthene	
Fluorene	
Isophorone	
Napthalene	
Phenanthrene	
Pyrene	
Aniline	Table 2F-4 (Federal Form 2F) (Hazardous Substances)
Butyl Acetate	
Cyclohexane	
Strontium	
Trimethylamine	
Xylene	

CHEMICALS SAMPLED IN STORM WATER
SCOTT AFB, 15 MARCH 1993

Chemical	CAS No.	Analytical Method	Outfall Number 001	002	003
Oil and Grease[1] [2]	NA	EPA 413.1	x	x	x
pH[1]	NA	EPA 150.1	x	x	x
BOD5	NA	EPA 405.1	x	x	x
COD	NA	EPA 410.4	x	x	x
TSS	NA	EPA 160.2	x	x	x
Total Phosphorus	NA	EPA 365.1	x	x	x
Total Kjeldahl Nitrogen	NA	EPA 351.2	x	x	x
Nitrate plus Nitrite Nitrogen	NA	EPA 353.2	x	x	x
Total Residual Chlorine[1]	NA	EPA 330.1	x	x	x
Fecal Coliform[1]	NA	Standard Methods 903	x	x	x
Ammonia-Nitrogen	7664-41-7	EPA 350.1	x	x	x
Total Antimony	7440-36-0	EPA 200.7 CLP-M		x	x
Total Arsenic	7440-38-2	EPA 206.2 CLP-M			x
Total Beryllium	7440-41-7	EPA 200.7 CLP-M		x	x
Total Chromium	7440-47-3	EPA 200.7 CLP-M		x	x
Total Copper	7440-50-8	EPA 200.7 CLP-M		x	x
Total Lead	7439-92-1	EPA 200.7 CLP-M		x	x
Total Selenium	7782-49-2	EPA 270.2 CLP-M			x
Total Silver	7440-22-4	EPA 200.7 CLP-M		x	x
Total Thallium	7440-28-0	EPA 200.7 CLP-M			x
Total Zinc	7440-66-6	EPA 200.7 CLP-M		x	x
GC/MS Fraction Volatile Compounds[2]	NA	EPA 624		x	x
GC/MS Base/Neutral Compounds	NA	EPA 625		x	x

NA - no CAS number is available.

[1] Collect and analyze for grab sample only.

[2] Approved sampling method does not include automatic samplers.

SAMPLE ANALYSIS - OUTFALL AREA 1
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	.3		AVERAGE VALUES		1	
Biological Oxygen Demand (BOD5)	2	4	EQUAL MAXIMUM		1	
Chemical Oxygen Demand (COD)	17	13			1	
Total Suspended Solids (TSS)	< 0.2 mL/L	< 0.2 mL/L			1	
Total Kjeldahl Nitrogen	0.6	0.8			1	
Nitrate plus Nitrite Nitrogen	448	352			1	
Total Phosphorus	0.12	.13			1	
pH	Minimum 7.2	Maximum 7.2	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
pH	7.2	7.2	AVERAGE	VALUES		
			EQUAL MAXIMUM		1	
BOD5	2	4			1	
Fecal	162 col/100mL				1	
Coliform						
Ammonia	< .2	< .2			1	
TRC	0	0			1	
TSS	< .2 mL/L	< .2 mL/L			1	
		ALL UNITS IN MILLIGRAMS PER LITER UNLESS OTHERWISE SPECIFIED.				

SAMPLE ANALYSIS - OUTFALL AREA 1
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

Chemical	Grab Sample	Composite Sample
Antimony	0.009 mg/L	0.009 mg/L
Selenium	0.029 mg/L	0.027 mg/L
Thallium	0.004 mg/L	0.003 mg/L
Zinc	0.053 mg/L	nondetect

SAMPLE ANALYSIS - OUTFALL AREA 2
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	1.2		AVERAGE VALUES		1	
Biological Oxygen Demand (BOD5)	2	1	EQUAL MAXIMUM		1	
Chemical Oxygen Demand (COD)	17	13			1	
Total Suspended Solids (TSS)	< 0.2	< .2			1	
Total Kjeldahl Nitrogen	.3	.4			1	
Nitrate plus Nitrite Nitrogen	1.12	.62			1	
Total Phosphorus	.17	.10			1	
pH	Minimum 6.8	Maximum 6.8	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Ph	6.8	6.8	AVERAGE VALUES		1	
			EQUAL MAXIMUM			
BoD5	2	1			1	
Fecal Coliform	40 col./100 mL				1	
TRC	0	0			1	
TSS	0.2 mL L	0.2 mL L			1	
Ammonia	< .2	< .2			1	
		ALL UNITS IN MILLIGRAMS PER LITER UNLESS OTHERWISE SPECIFIED				

SAMPLE ANALYSIS - OUTFALL AREA 2
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

Chemical	Grab Sample	Composite Sample
Antimony	0.006 mg/L	0.049 mg/L
Arsenic	nondetect	0.022 mg/L
Selenium	0.017 mg/L	0.243 mg/L
Thallium	0.002 mg/L	0.044 mg/L
bis (2-ethylhexyl) phthalate	nondetect	2.8 ug/L

SAMPLE ANALYSIS - OUTFALL AREA 3
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	1.7		AVERAGE VALUES		1	
Biological Oxygen Demand (BOD5)	6	5	EQUAL MAXIMUM		1	
Chemical Oxygen Demand (COD)	27	28			1	
Total Suspended Solids (TSS)	.4 mL/L	.4 mL/L			1	
Total Kjeldahl Nitrogen	3.9	2.2			1	
Nitrate plus Nitrite Nitrogen	5.6	5.6			1	
Total Phosphorus	1.6	1.5			1	
pH	Minimum 7.0	Maximum 7.0	Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
pH	7.0	7.0	AVERAGE VALUES EQUAL MAXIMUM		1	
BOD5	6	5			1	
Fecal Coliform	334 col/100 mL				1	
Ammonia	1.7	1.98			1	
TRC	0	0			1	
T55	.4 mL/L	.4 mL/L			1	

ALL UNITS IN MILLIGRAMS PER LITER UNLESS OTHERWISE SPECIFIED

SAMPLE ANALYSIS - OUTFALL AREA 3
SUMMARY OF ALL CHEMICALS PRESENT ABOVE DETECTION LEVELS

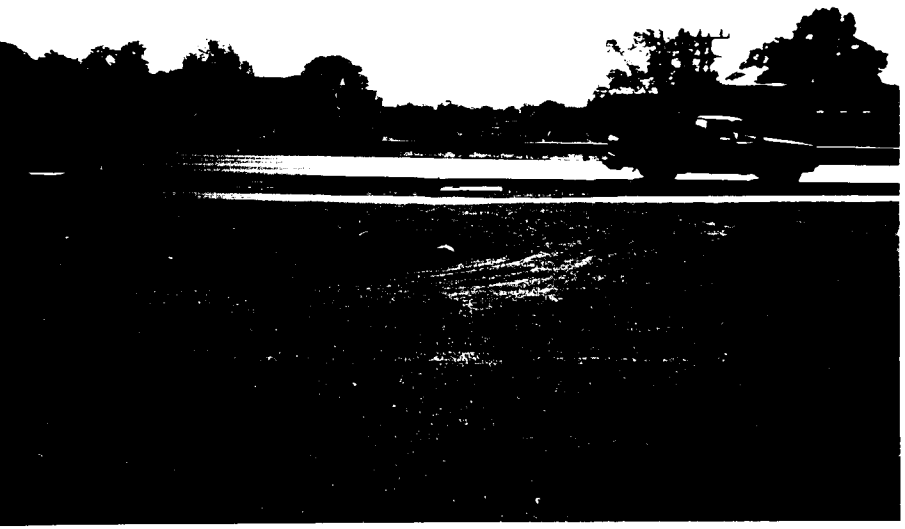
Chemical	Grab Sample	Composite Sample
Antimony	0.025 mg/L	0.019 mg/L
Selenium	0.043 mg/L	0.046 mg/L
Thallium	0.010 mg/L	0.007 mg/L
Zinc	0.052 mg/L	nondetect
bis (2-ethylhexyl) phthalate	2.500 ug/L	11 ug/L

APPENDIX C

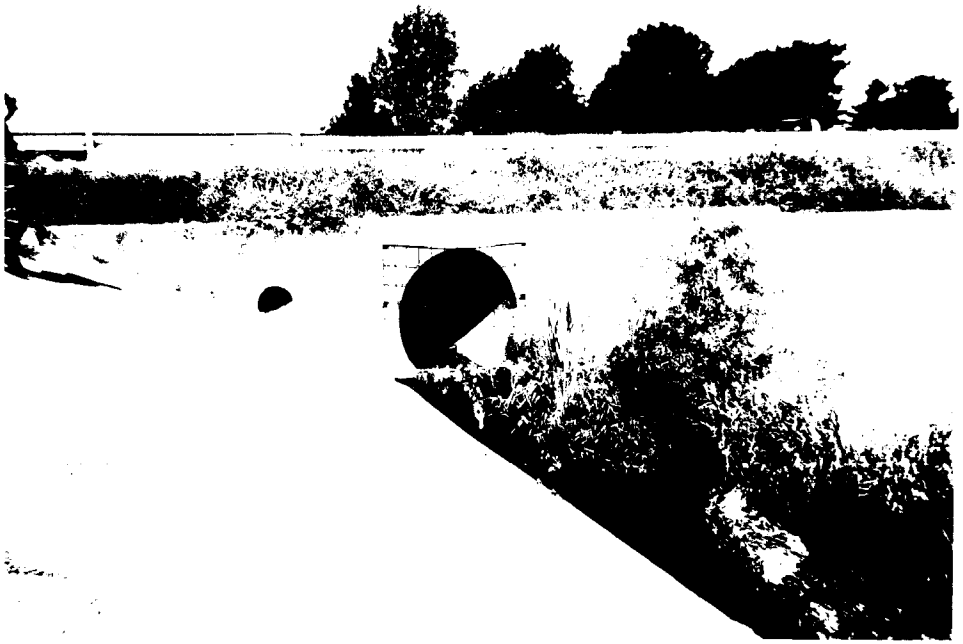
PHOTOS OF DRAINAGE OUTFALLS AND OTHER FEATURES

26 AUGUST 93
DRY CREEK/NORTH DITCH
UPSTREAM FROM BRIDGE
POINT OF ENTRANCE TO BASE
200 FEET NORTH BLDG 1192
OUTFALL 1

26 AUGUST 93
BRIDGE AT DRYCREEK/NORTH DITCH
UPSTREAM, 200 FEET NORTH OF BLDG 1192
OUTFALL 1
POINT OF ENTRANCE TO BASE



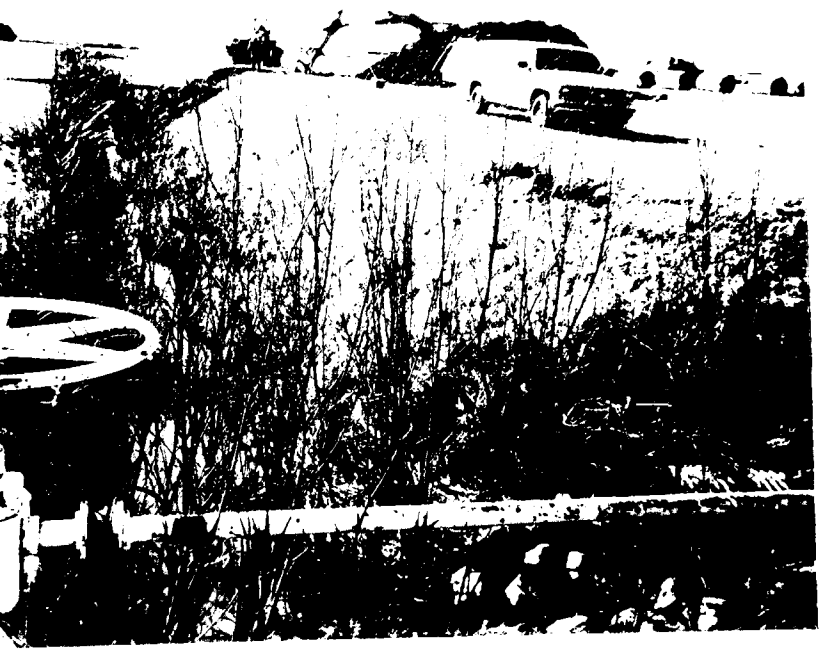
26 AUGUST 93
INLET TO STORM DITCH
200 FEET NORTH OF BLDG 1197
OUTFALL 1



26 AUGUST 93
OUTLET TO STORM DITCH
200 FEET NORTH OF BLDG 1197
OUTFALL 1
Note: The large diameter outlet is the proposed monitoring point in outfall area 001.

26 AUGUST 93
OUTLET OF OUTFALL 1
DRYCREEK/NORTH DITCH
Note: This is the discharge point
for all of outfall area 001.

26 AUGUST 93
OUTFALL 1
DOWNSTREAM VIEW



4 FEBRUARY 94
STORM DITCH
OUTFALL 2
UPSTREAM VIEW
100 FEET NORTH OF BLDG 3173

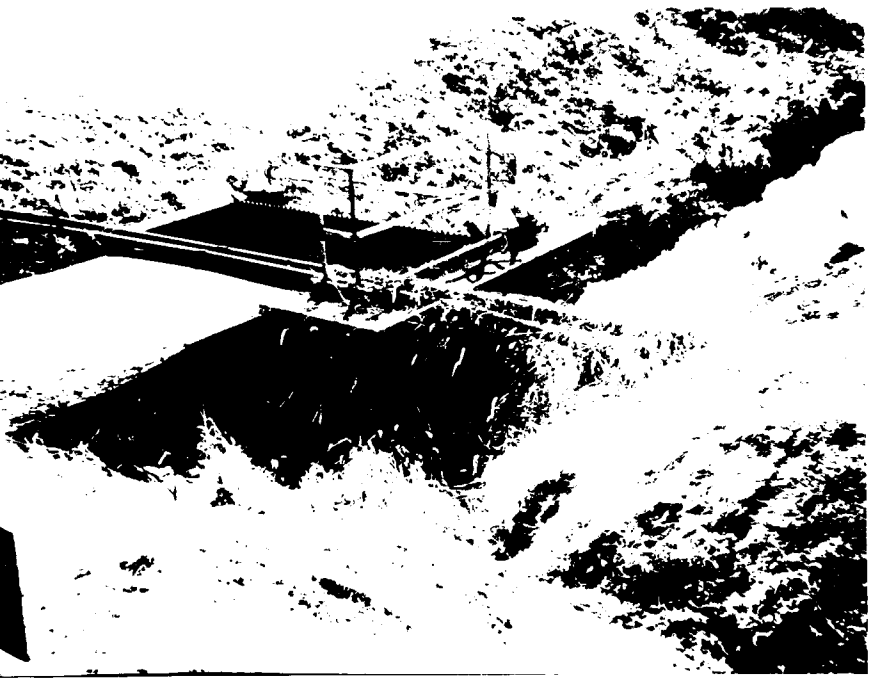
4 FEBRUARY 94
OUTLET OF OUTFALL 2
CONTAINMENT STRUCTURE AND
PROPOSED MONITORING POINT

26 AUGUST 93
JP-4 TANKS, 8733, 8734
OUTFALL 3

26 AUGUST 93
STORM DITCH, UPSTREAM
200 FEET SOUTH WEST OF BLDG 3200
UPSTREAM VIEW, OUTFALL 3

26 AUGUST 93
BLDG 3200
OUTFALL 3

8/26/93
STORM DITCH, DOWNSTREAM VIEW
SOUTHWEST OF 3200
OUTFALL 3



4 FEBRUARY 94
OUTFALL 3
UPSTREAM VIEW
800 FEET NORTHEAST OF
BLDG 3200

4 FEBRUARY 94
OUTLET OF OUTFALL 3
CONTAINMENT STRUCTURE AND
SAMPLING POINT

4 FEBRUARY 94
OUTFALL 4
UPSTREAM VIEW
700 FEET NORTHEAST OF
BLDG 3287

APPENDIX D

ILLINOIS GENERAL PERMIT FOR STORM WATER DISCHARGES

General NPDES Permit No. ILR00
Illinois Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NPDES Permit

Expiration Date: October 1, 1997 Issue Date: October 16, 1992

Discharges authorized by this General Permit: In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act, the following discharges may be authorized by this permit in accordance with the conditions herein:

Discharges of storm water associated with industrial activity, as defined and limited herein. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

This general permit regulates only storm water discharges from a facility. Other discharges such as process wastewater or cooling water shall be regulated by other NPDES permits.

Receiving waters: Discharges may be authorized to any surface water of the State.

To receive authorization to discharge under this general permit, a facility operator must submit an application as described in the permit conditions to the Illinois Environmental Protection Agency. Authorization, if granted, will be by letter and include a copy of this permit.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

CONTENTS OF THIS GENERAL PERMIT

A. APPLICABILITY OF THIS GENERAL PERMIT

This permit is applicable to new and existing storm water discharges associated with industrial activity in the State of Illinois from the facilities listed below.

1. Discharges of storm water from facilities whose process wastewater discharges are subject to new source performance standards or toxic pollutant effluent standards under 40 CFR Subchapter N, except:

   a. discharges subject to new source performance standards or toxic pollutant effluent standards and described in paragraph A.8. below which do not have materials or activities exposed to storm water;

   b. discharges subject to storm water effluent limitations guidelines listed in B.1. of this permit.

2. Discharges from manufacturing facilities in the following categories:

   SIC 24 (Lumber and wood products except furniture) except SIC 2434 (Wood kitchen cabinets)
   SIC 26 (Paper and allied products) except SIC 265 (Paperboard containers and boxes from purchased paperboard) and SIC 267 (Converted paper and paperboard products, except containers and boxes)
   SIC 28 (Chemicals and allied products) except SIC 283 (Drugs)
   SIC 29 (Petroleum refining and related industries), except discharges subject to 40 CFR 419
   SIC 311 (Leather tanning and finishing)
   SIC 32 (Stone, clay, glass, and concrete products) except SIC 323 (Glass products made of purchased glass)
   SIC 33 (Primary metal industries)
   SIC 3441 (Fabricated structural metal)
   SIC 373 (Ship and boat building and repairing)

3. Facilities classified as SIC Codes 10-14 (Mineral Industry) including active or inactive mining operations and oil and gas exploration, production, processing, treatment operations, or transmission facilities, except discharges subject to 40 CFR 434, 436, or 440.

4. Landfills, land application sites (excluding land application sites which utilize agricultural land), and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described in 40 CFR 122.26(b)(14).

5. Facilities involved in the recycling of materials including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards including but not limited to SIC 5015 (Used motor vehicle parts) and SIC 5093 (Scrap and waste materials)

6. Transportation facilities-portions of the following facilities involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations:

   SIC 40 (Railroad transportation)
   SIC 41 (Local and suburban transit and inter-urban highway passenger transportation)
   SIC 42 (Motor freight transportation and warehousing) except SIC 4221-4225 (Farm product warehousing and storage, refrigerated warehousing and storage, general warehousing and storage)
   SIC 43 (United States Postal Service)
   SIC 44 (Water transportation)
   SIC 45 (Transportation by air)
   SIC 5171 (Petroleum bulk stations and terminals-wholesale)

7. Treatment Works treating domestic sewage with a design flow of 1 MGD or more, or required to have an approved pretreatment program; includes sludge or wastewater treatment devices or systems used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, and land dedicated to sludge disposal located within the confines of the facility; excludes off-site sludge management lands, farm lands, and gardens.

8. Facilities in the following SIC Codes with storm water discharges from areas (except access roads and rail lines) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water.

SIC 20 (Food and kindred products manufacturing or processing)
SIC 21 (Tobacco products)
SIC 22 (Textile mill products)
SIC 23 (Apparel and other finished products made from fabrics and similar materials)
SIC 2434 (Wood kitchen cabinets)
SIC 25 (Furniture and fixtures)
SIC 265 (Paperboard containers and boxes)
SIC 267 (Converted paper and paperboard products, except containers and boxes)
SIC 27 (Printing, publishing, and allied industries)
SIC 283 (Drugs)
SIC 285 (Paints, varnishes, lacquers, enamels, and allied products)
SIC 30 (Rubber and miscellaneous plastics products)
SIC 31 (Leather and leather products) except SIC 311 (Leather tanning and finishing)
SIC 323 (Glass products, made of purchased glass)
SIC 34 (Fabricated metal products, except machinery and transportation equipment) except SIC 3441 (Fabricated structural metal)
SIC 35 (Industrial and commercial machinery and computer equipment)
SIC 36 (Electronic and other electrical equipment and components, except computer equipment)
SIC 37 (Transportation equipment) except SIC 373 (Ship and boat building and repairing)
SIC 38 (Measuring, analyzing, and controlling instruments; photographic, medical, and optical goods; watches and clocks)
SIC 39 (Miscellaneous manufacturing industries)
SIC 4221-25 (Farm products warehousing and storage, refrigerated warehousing and storage, general warehousing and storage)

B. TYPES OF DISCHARGES NOT COVERED BY THIS PERMIT

This permit is not applicable to storm water discharges from the following facilities:

1. Discharges subject to storm water effluent limitations guidelines in the following categories;

Cement Manufacturing (40 CFR 411)
Feedlots (40 CFR 412)
Fertilizer Manufacturing (40 CFR 418)
Petroleum Refining (40 CFR 419)
Phosphate Manufacturing (40 CFR 422)
Steam Electric (40 CFR 423)
Coal Mining (40 CFR 434)
Mineral Mining and Processing (40 CFR 436)
Ore Mining and Dressing (40 CFR 440)
Asphalt Emulsion (40 CFR 443)

2. Hazardous waste treatment, storage or disposal facilities.

3. Steam electric power generating facilities, including coal handling sites.

4. Construction activity including clearing, grading and excavation activities.

5. Storm water discharges associated with industrial activity from facilities with an existing NPDES individual or general permit for the storm water discharges.

6. Storm water discharges associated with industrial activity which are identified by the Agency as possibly causing or contributing to a violation of water quality standards.

7. Storm water discharges associated with inactive mining or inactive oil and gas operations occurring on Federal lands where an operator cannot be identified.

8. Storm water discharges that the Agency determines are not appropriately covered by this general permit.

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill, and does not supercede any reporting requirements for spills or releases of hazardous substances or oil.

C. APPLICATION REQUIREMENTS

1. Dischargers seeking coverage under this general permit shall provide the Illinois Environmental Protection Agency (IEPA) with the following information:

   a. A completed IEPA Notice of Intent form, accompanied by quantitative sampling data for the storm water discharge(s) if available; or

   b. A completed U.S. EPA Form 1, including Form 2F and quantitative sampling data if available; or

   c. A completed U.S. EPA Notice of Intent form, accompanied by quantitative sampling data for the storm water discharge (s) if available.

   d. Participation in a group application accepted by U.S. EPA shall also be considered as an application for coverage under this general permit, subject to the applicability provisions of this permit.

2. Quantitative sampling data as required by U.S. EPA Form 2F for storm water discharges from the following facilities is required to be submitted, unless the facility is a participant in a group application accepted by U.S. EPA. Applications submitted without sample results will be considered complete if sample results are submitted before April 1, 1993.

   a. Facilities subject to reporting requirements under Section 313 of EPCRA for chemicals classified as "Section 313 water priority chemicals": Storm water discharges that come into contact with any equipment, tank, container, or other vessel or area used for storage of a Section 313 water priority chemical, or located at a truck or rail car unloading area where a Section 313 water priority chemical is handled.

   b. Facilities classified as SIC 33 (Primary Metal Industries).

   c. Active or inactive landfills, land application sites, or open dumps without a stabilized final cover which have received any industrial wastes.

   d. Wood treatment facilities: Storm water discharges from areas that are used for wood treatment, wood surface application, or storage of treated or surface protected wood.

   e. Coal pile runoff at industrial facilities other than coal mines.

   f. Battery reclaiming facilities: storm water discharges from areas used for storage of lead acid batteries, reclamation products, or waste products, and areas used for lead acid battery reclamation.

   g. Airports with over 50,000 flight operations per year: storm water discharges from aircraft or airport deicing areas.

   h. Meat packing plants, poultry packing plants, and facilities that manufacture animal and marine fats and oils.

   i. Facilities classified as SIC 28 (Chemicals and Allied Products) and SIC 30 (Rubber and Miscellaneous Plastics Products): Storm water discharges that come into contact with solid chemical storage piles.

   j. Automobile junkyards: Storm water discharges exposed to over 250 auto/truck bodies with drivelines, over 250 drivelines, or any combination thereof (in whole or in parts); over 500 auto/truck units (bodies with or without drivelines in whole or in parts); or over 100 units per year are dismantled and drainage or storage of automotive fluids occurs in areas exposed to storm water.

   k. Lime manufacturing facilities: storm water discharges that have come into contact with lime storage piles.

   l. Cement manufacturing facilities and cement kilns: Storm water discharges other than those subject to 40 CFR 411.

   m. Ready-mixed concrete facilities.

   n. Ship building and repairing facilities.

3. When a facility has two or more outfalls that, based on consideration of features and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may sample the effluent of one such outfall and report that quantitative data also applies to the substantially identical outfalls. If the applicant is requesting approval to sample a representative outfall, identification of all

storm water outfalls considered to be substantially identical along with the outfall being used to represent such outfalls and appropriate justification must be provided with the application.

4. For existing facilities with an individual NPDES permit covering storm water associated with industrial activity, or those facilities who have previously submitted an application for an individual permit and not yet received a permit, the permittee/applicant may elect to seek coverage under this general permit in place of obtaining an individual permit. To be considered for coverage the permittee/applicant is required to submit the above information following the general permit issue date.

5. For new facilities, the NOI and required information shall be submitted 180 days prior to the date on which the discharge is to commence unless permission for a later date has been granted by the IEPA. Mobile facilities (such as concrete or asphalt batch plants) shall apply at least 30 days prior to discharge.

6. For purposes of the permit an existing facility shall be considered a facility which discharged storm water associated with industrial activity prior to the application deadline set by the U.S. EPA storm water regulations. A new facility is a facility which generates storm water after, but not before the deadline.

7. The required information shall be submitted to the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control
   Permit Section
   Post Office Box 19276
   Springfield, Illinois 62794-9276

8. In any case where an NPDES Permit has been timely applied for but final administrative disposition of such application has not been made, it shall not be a violation of Section 12(F) of the Environmental Protection Act to discharge without such permit unless the complainant proves that final administrative disposition has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For purposes of this provision, participation in a group application filed with U.S. EPA shall be deemed an application filed with the Agency. This provision does not relieve the applicant from the responsibility for compliance with any other requirement of the Act or regulations promulgated under the Act.

9. Facilities which discharge storm water associated with industrial activity to a municipal separate storm sewer system shall notify the municipality, and shall provide the municipality with a copy of their application if requested.

D. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

1. A storm water pollution prevention plan shall be developed by the permittee for each facility covered by this permit. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

2. The plan shall be completed within 180 days of notification by the Agency of coverage by this permit or in the case of new facilities, prior to submitting an NOI to be covered under this permit. Plans shall provide for compliance with the terms of the plan within 365 days of notification by the Agency of coverage by this permit, or in the case of new facilities, prior to submitting an NOI to be covered under this permit. The owner or operator of a facility with storm water discharges covered by this permit shall make a copy of the plan available to the Agency at any reasonable time upon request.

   Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.

3. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this permit. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

4. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph D.8. of this permit indicates that an amendment is needed. The plan should also be amended if the discharger is

in violation of any conditions of this permit, or has not achieved the general objectives of controlling pollutants in storm water discharges. Amendments to the plan shall be made within the shortest reasonable period of time, and shall be provided to the Agency for review upon request.

5. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from the facility. The plan shall include, at a minimum, the following items:

   a. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate.

   b. A site map showing:

      i. The storm water conveyance and discharge structures;

      ii. An outline of the storm water drainage areas for each storm water discharge point;

      iii. Paved areas and buildings;

      iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

      v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

      vi. Surface water locations and/or municipal storm drain locations

      vii. Areas of existing and potential soil erosion;

      viii. Vehicle service areas;

      ix. Material loading, unloading, and access areas.

   c. A narrative description of the following:

      i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

      ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

      iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

      iv. Industrial storm water discharge treatment facilities;

      v. Methods of onsite storage and disposal of significant materials;

   d. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

   e. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.

   f. A summary of existing sampling data describing pollutants in storm water discharges.

6. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:

   a. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.

   b. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

c. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.

d. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill clean up equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.

e. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff;

ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges;

iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges;

iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.

v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination;

vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

f. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion and describe measures to limit erosion.

g. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

h. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.

7. Non-Storm water Discharges - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include a description of any tests for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible. Discharges not comprised entirely of storm water are not authorized by this permit.

8. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

9. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated thereunder, and Best Management Programs under 40 CFR 125.100.

10. The plan is considered a report that shall be available to the public under Section 308(b) of the CWA. The permittee may claim portions of the plan as confidential business information, including any portion describing facility security measures.

11. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.

12. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirements imposed by the operator of the municipal system.

E. CONSTRUCTION AUTHORIZATION

Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention Plan developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

1. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee thereupon waives all rights thereunder.

2. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.

3. Plans and specifications of all treatment equipment being included as a part of the stormwater management practice shall be included in the SWPPP.

4. Any modification of or deviation from the plans and specifications originally submitted with the initial SWPPP requires amendment of the SWPPP.

5. Construction activities which result from treatment equipment installation, including cleaning, grading and excavation activities which result in the disturbance of five acres or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding required permit(s).

F. REPORTING

1. The facility shall submit an annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part 8 of the Storm Water Pollution Prevention Plan of this permit. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s).

2. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.

3. Annual inspection reports shall be mailed to the following address:

    Illinois Environmental Protection Agency
    Division of Water Pollution Control
    Compliance Assurance Section
    Annual Inspection Report
    2200 Churchill Road
    P.O. Box 19276
    Springfield, Illinois 62794-9276

4. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.

G. TERMINATION OF COVERAGE UNDER THIS PERMIT

1. Where all storm water discharges associated with industrial activity that have been authorized by this permit are eliminated, the operator of the facility may submit a termination request to the Agency at the address shown on Page 5 of this permit. The termination request shall include the name, address, telephone number, and location of the facility, and a description of actions taken to eliminate the storm water discharge or other justification for the request. Coverage under this permit is not terminated until the Agency acts on the termination request, and reports as described above are required until coverage is terminated.

2. The Agency may require any person authorized by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Agency to take action under this paragraph. The Agency may require any owner or operator authorized to discharge under this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. The Agency may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit in a timely manner an individual NPDES permit application required by the Agency under this paragraph then the applicability of this permit to the individual NPDES permitted is automatically terminated at the end of the day specified for application submittal.

3. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request, in accordance with the requirements of 40 CFR 122.28, to the Agency. The request shall be granted by issuing of an individual permit or an alternative general permit if the reasons cited by the owner or operator are adequate to support the request.

4. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the issue date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied coverage under an alternative NPDES general permit the applicability of this permit to the individual NPDES permitted is automatically terminated on the date of such denial, unless otherwise specified by the Agency.

H. RENEWAL

1. Application forms for renewal procedures, including coverage under this general permit, will be available approximately one year prior to the expiration date.

2. Any Permittee who wishes to continue to discharge after the expiration date of this general permit shall apply for reissuance of the permit not less than 180 days prior to the expiration date of this permit.

I. DEFINITIIONS

1. Coal pile runoff means the rainfall runoff from or through any coal storage pile.

2. Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

3. Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well or waste pile.

4. Section 313 water priority chemical means a chemical or chemical categories which: 1) Are listed at 40 CFR 372.65 pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986); 2) are present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and 3) that meet at least one of the following criteria: (i) Are listed in Appendix D of 40 CFR 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances); (ii) are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the CWA at 40 CFR 116.4; or (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

5. Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to EPCRA Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

6. Significant spills includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under section 311 of the Clean Water Act (see 40 CFR 110.10 and CFR 117.21) or section 102 of CERCLA (see 40 CFR 302.4).

Note that additional definitions are included in the permit Standard Conditions, Attachment H.

ATTACHMENT H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, Ch. 111 1/2 Ill. Rev. Stat. Sec. 1001 1052, as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L. 92-500, as amended, 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) Duty to provide information. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency, upon request, copies of records required to be kept by this permit.

(9) Inspection and entry. The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. This period may be extended by request of the Agency at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) Signatory requirement. All applications, reports or information submitted to the Agency shall be signed and certified.

(a) Application. All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a); and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(12) **Reporting requirements.**

(a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.

(b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(d) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(e) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours.

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(f) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(e).

(g) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Transfer of permits.** A permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees; and

(c) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(14) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(15) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:

(a) Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (a) the quality and quantity of effluent introduced into the POTW, and (b) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(16) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(1) User charges pursuant to Section 204(b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;

(2) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(3) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(17) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(18) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(19) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(20) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500, nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

(21) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

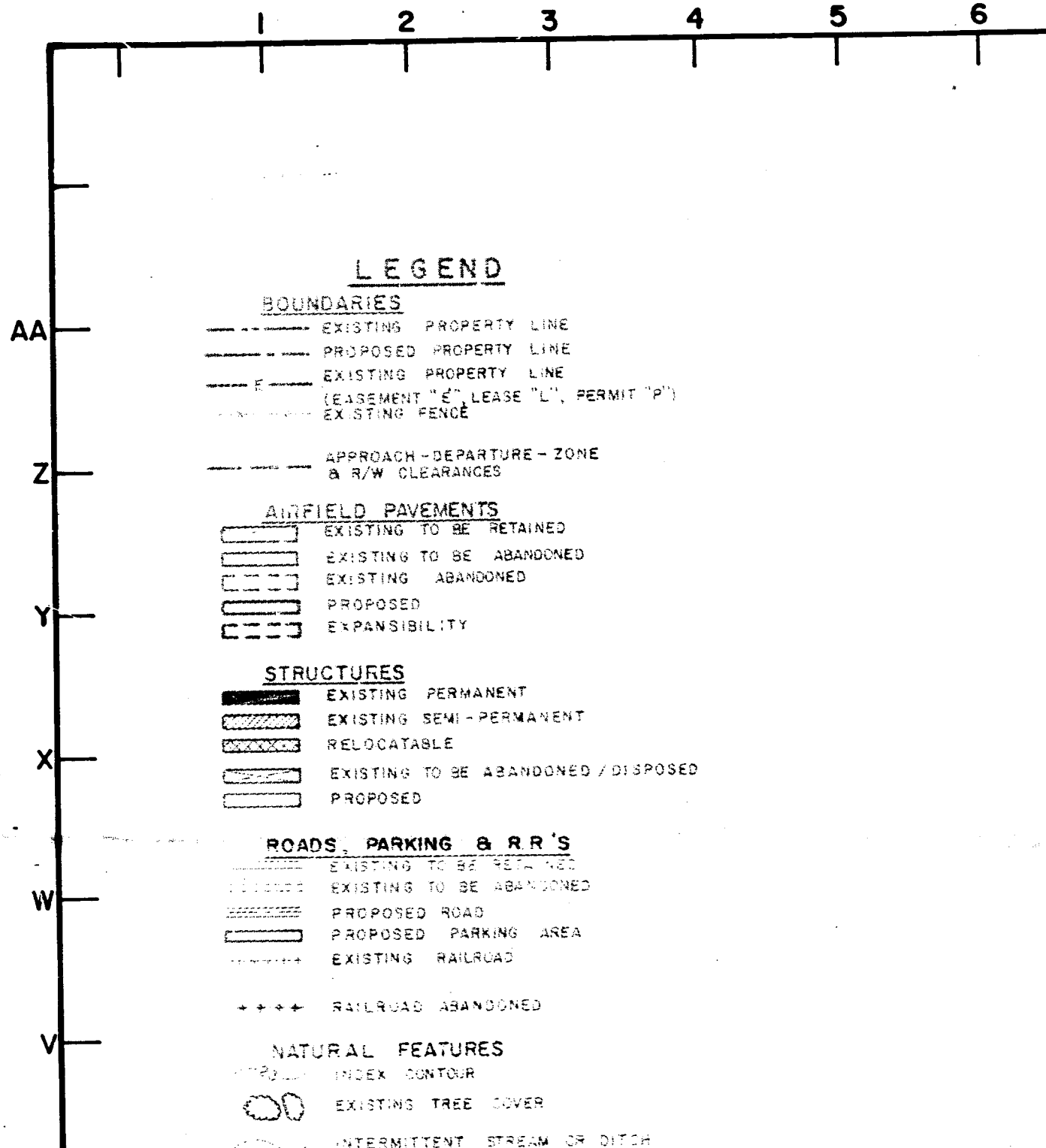
(22) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit shall, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(23) Collected screenings, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(24) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(25) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board.

(26) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.



LEGEND

BOUNDARIES

EXISTING PROPERTY LINE

PROPOSED PROPERTY LINE

EXISTING PROPERTY LINE
(EASEMENT "E", LEASE "L", PERMIT "P")

EXISTING FENCE

APPROACH - DEPARTURE - ZONE
& R/W CLEARANCES

AIRFIELD PAVEMENTS

EXISTING TO BE RETAINED

EXISTING TO BE ABANDONED

EXISTING ABANDONED

PROPOSED

EXPANSIBILITY

STRUCTURES

EXISTING PERMANENT

EXISTING SEMI-PERMANENT

RELOCATABLE

EXISTING TO BE ABANDONED / DISPOSED

PROPOSED

ROADS, PARKING & R.R.'S

EXISTING TO BE RETAINED

EXISTING TO BE ABANDONED

PROPOSED ROAD

PROPOSED PARKING AREA

EXISTING RAILROAD

RAILROAD ABANDONED

NATURAL FEATURES

INDEX CONTOUR

EXISTING TREE COVER

INTERMITTENT STREAM OR DITCH


NATURAL FEATURES
INDEX CONTOUR
EXISTING TREE COVER
INTERMITTENT STREAM OR DITCH
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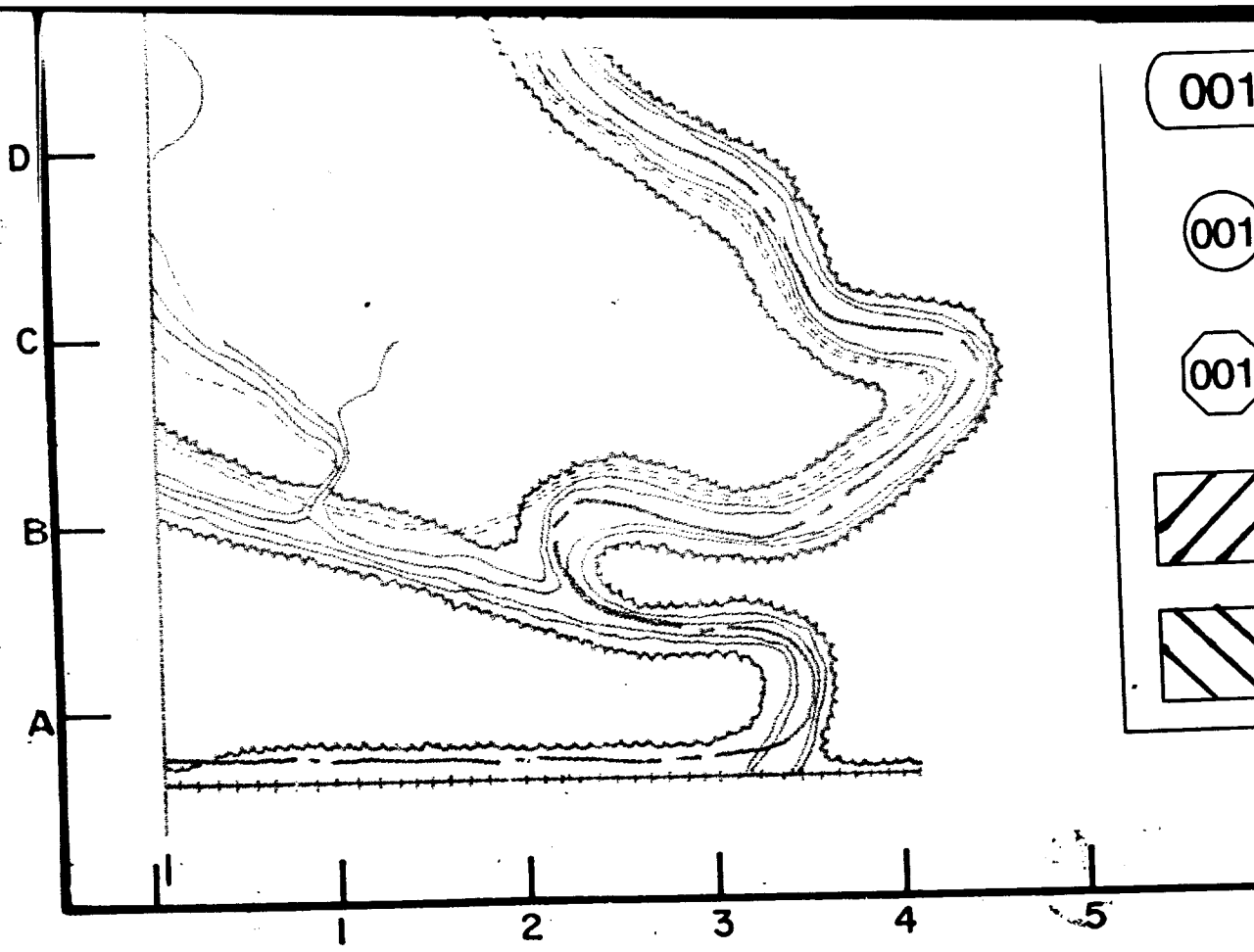
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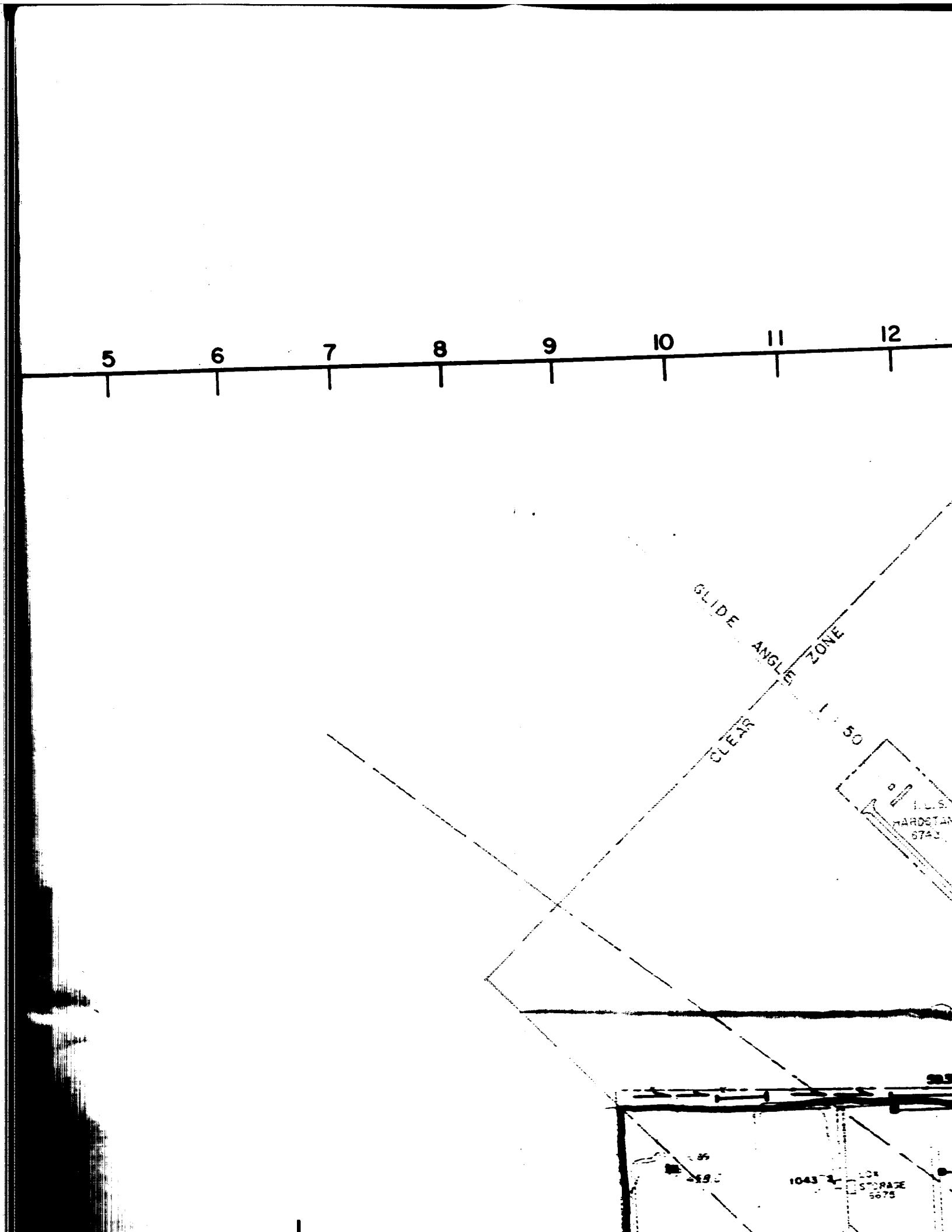
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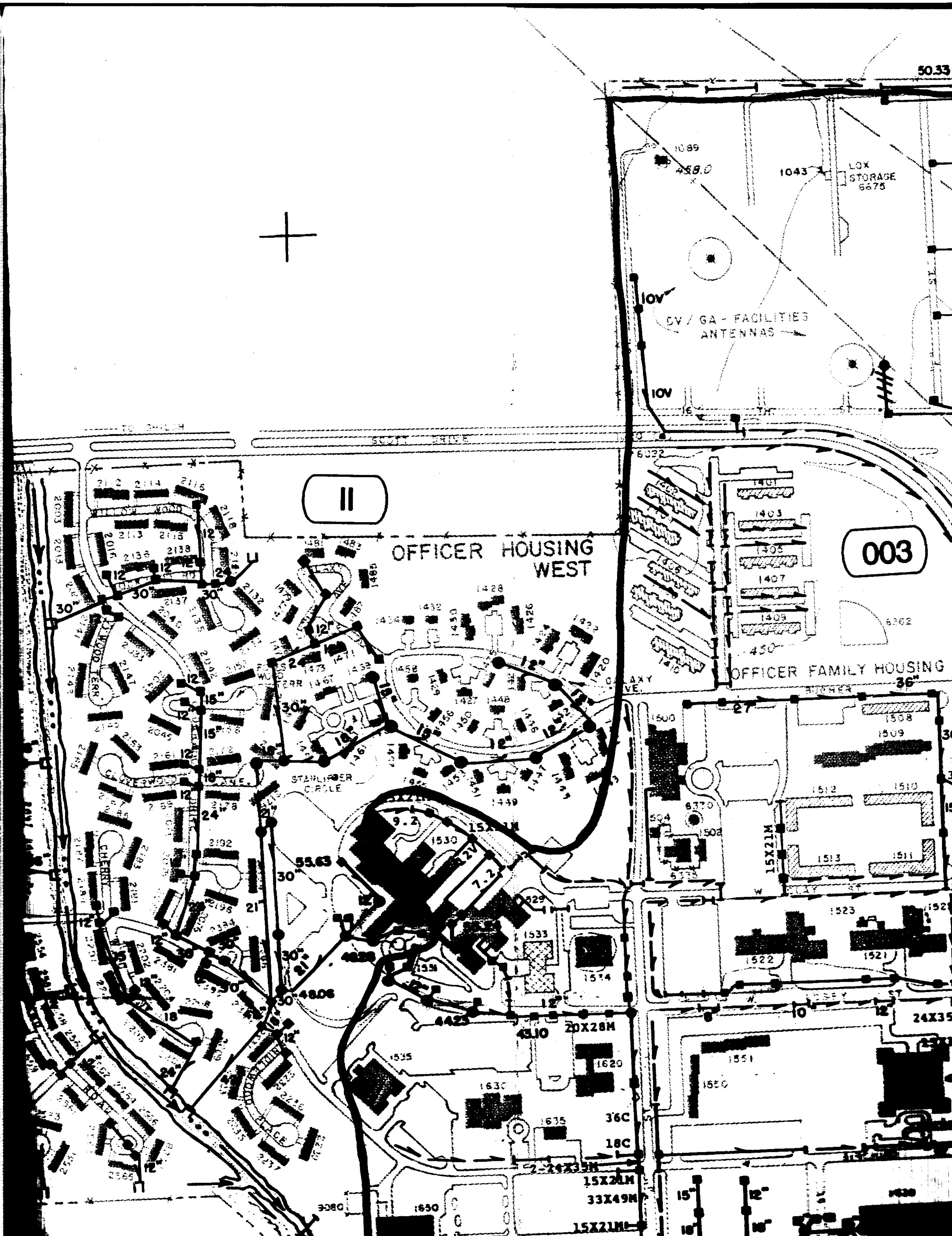

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LOX STORAGE 6675
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OFFICER FAMILY HOUSING
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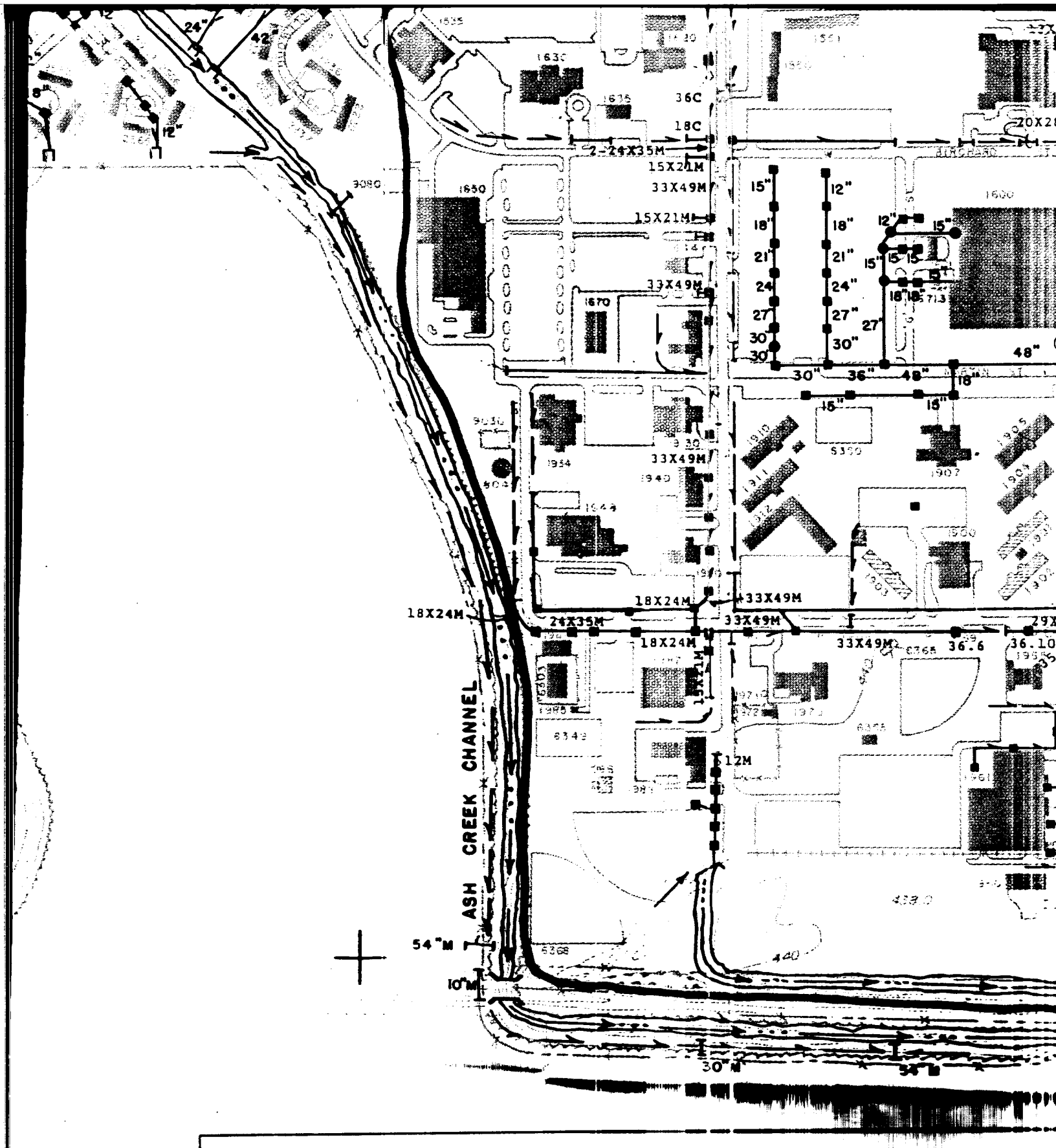
15X21M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OUTFALL AREA
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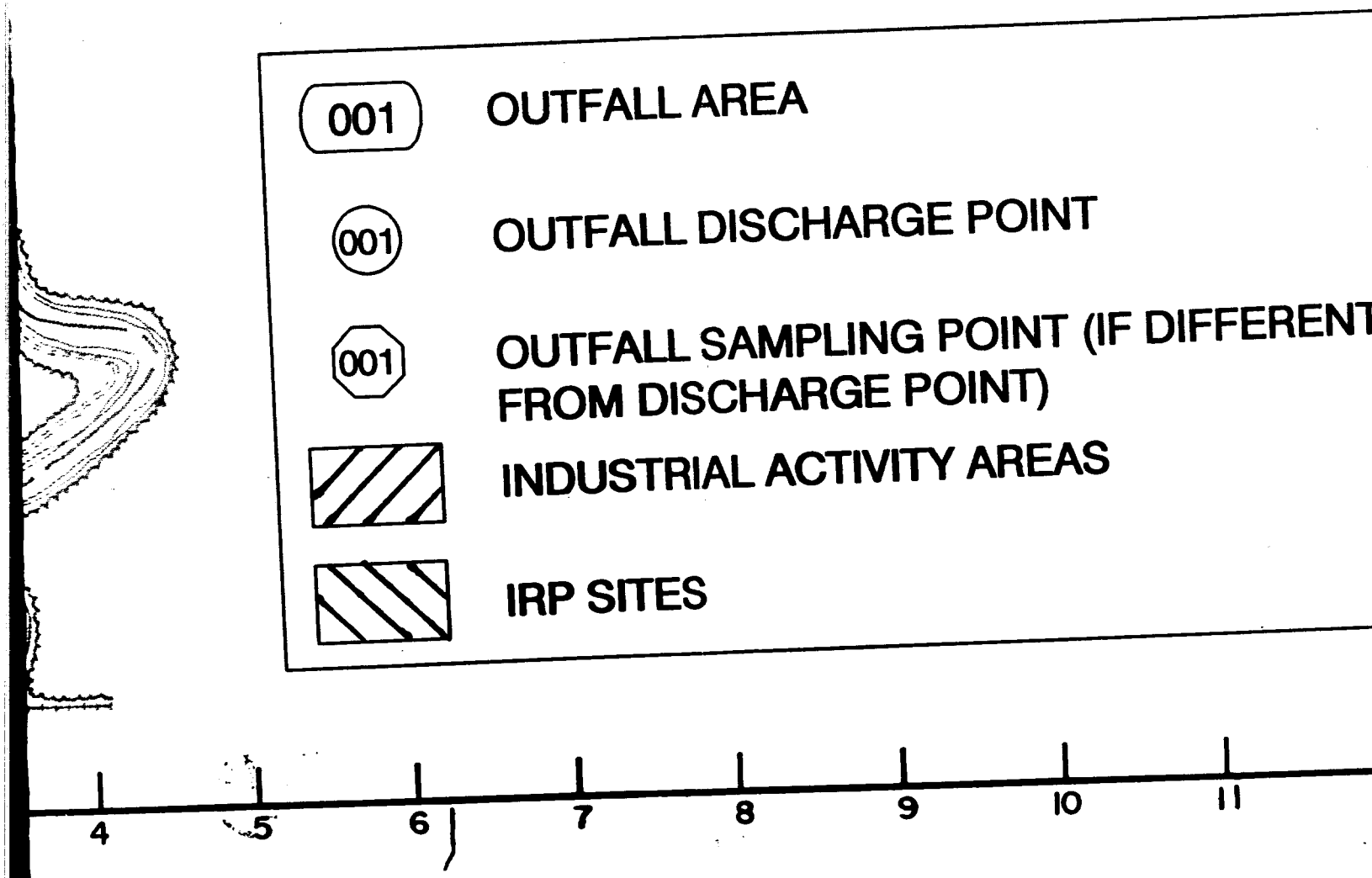
OUTFALL DISCHARGE POINT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OUTFALL DISCHARGE POINT
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OUTFALL SAMPLING POINT (IF DIFFERENT
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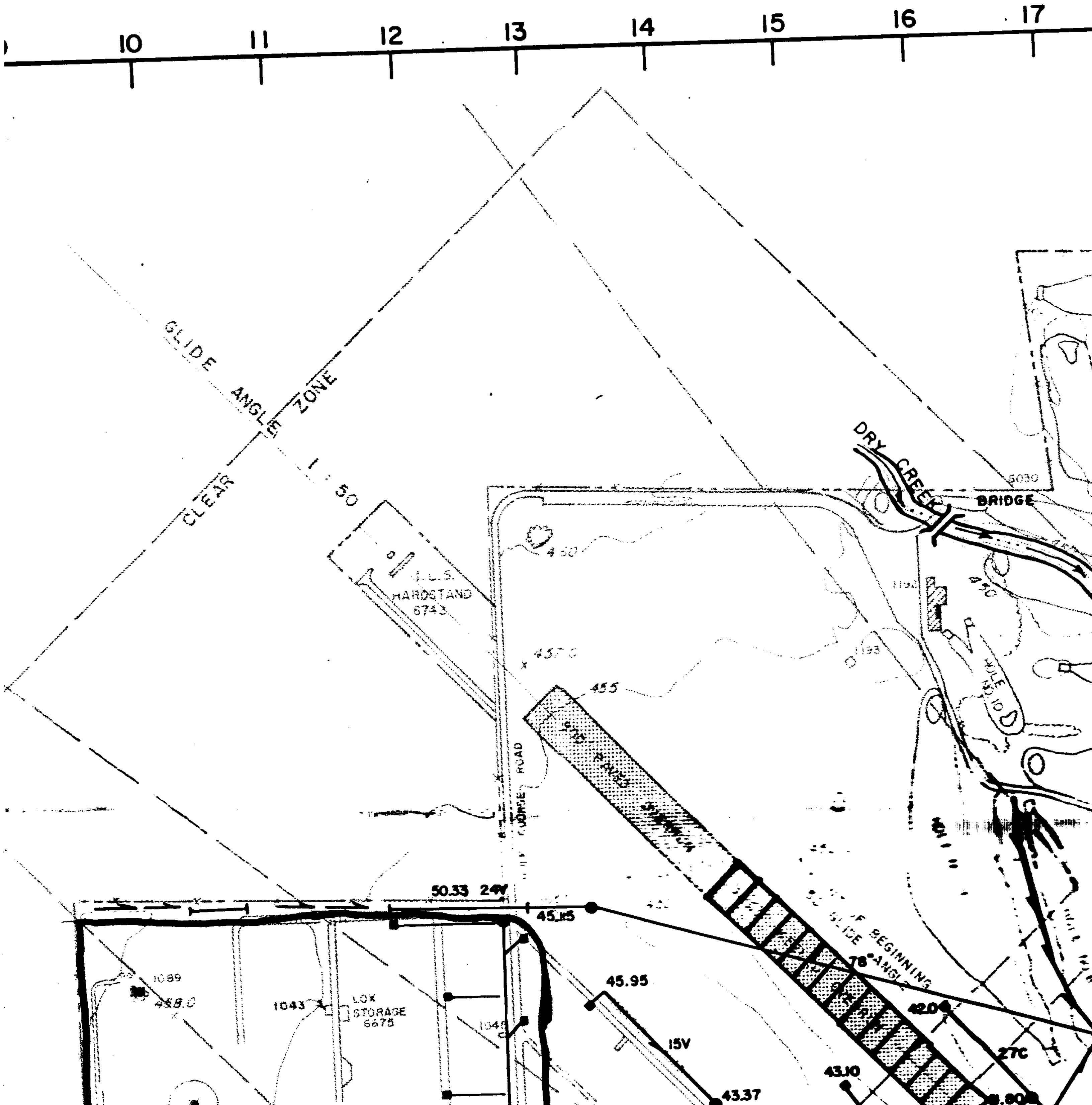
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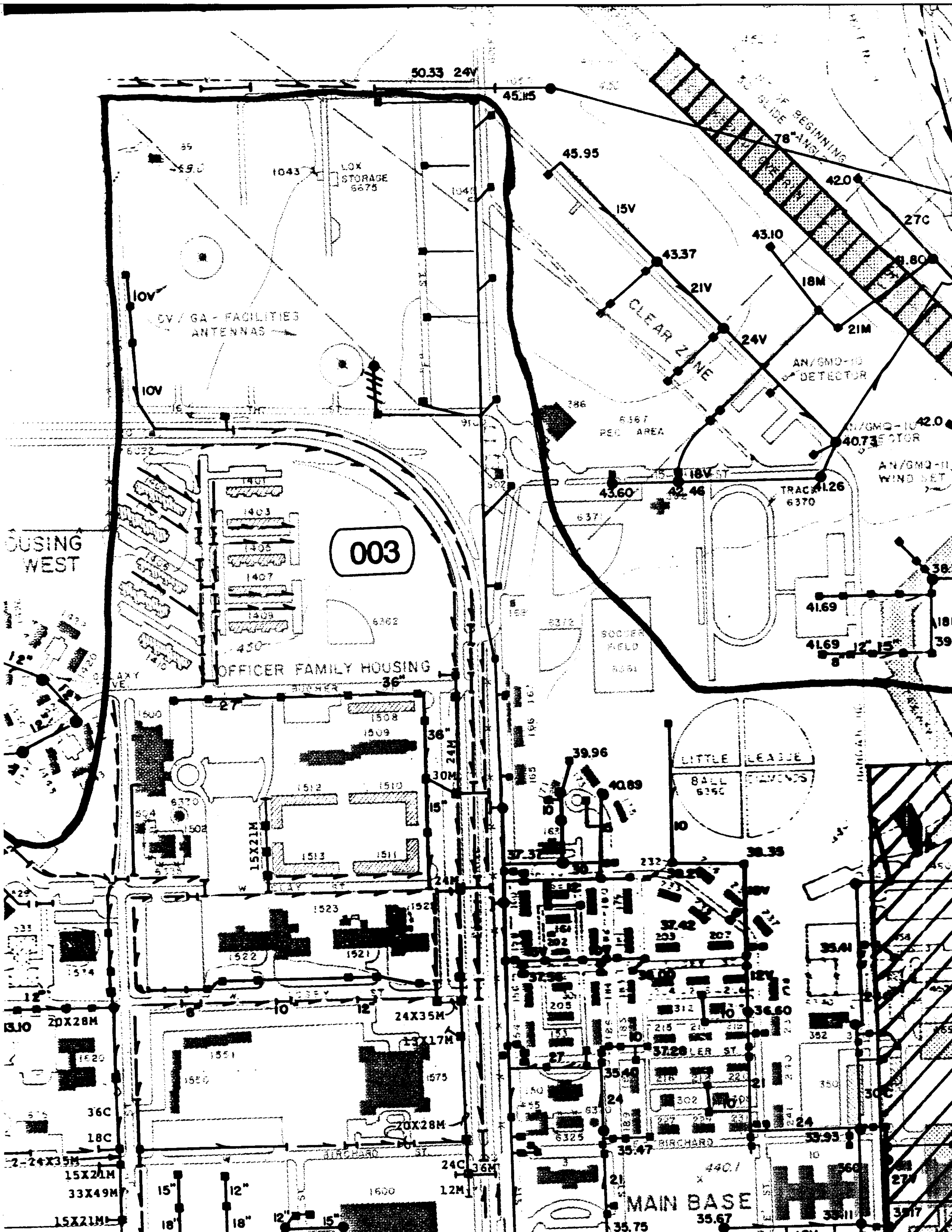
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AN/GMQ-10 DETECTOR
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SOCCER FIELD 6361
LITTLE LEAGUE
BALL DIAMONDS
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37.42
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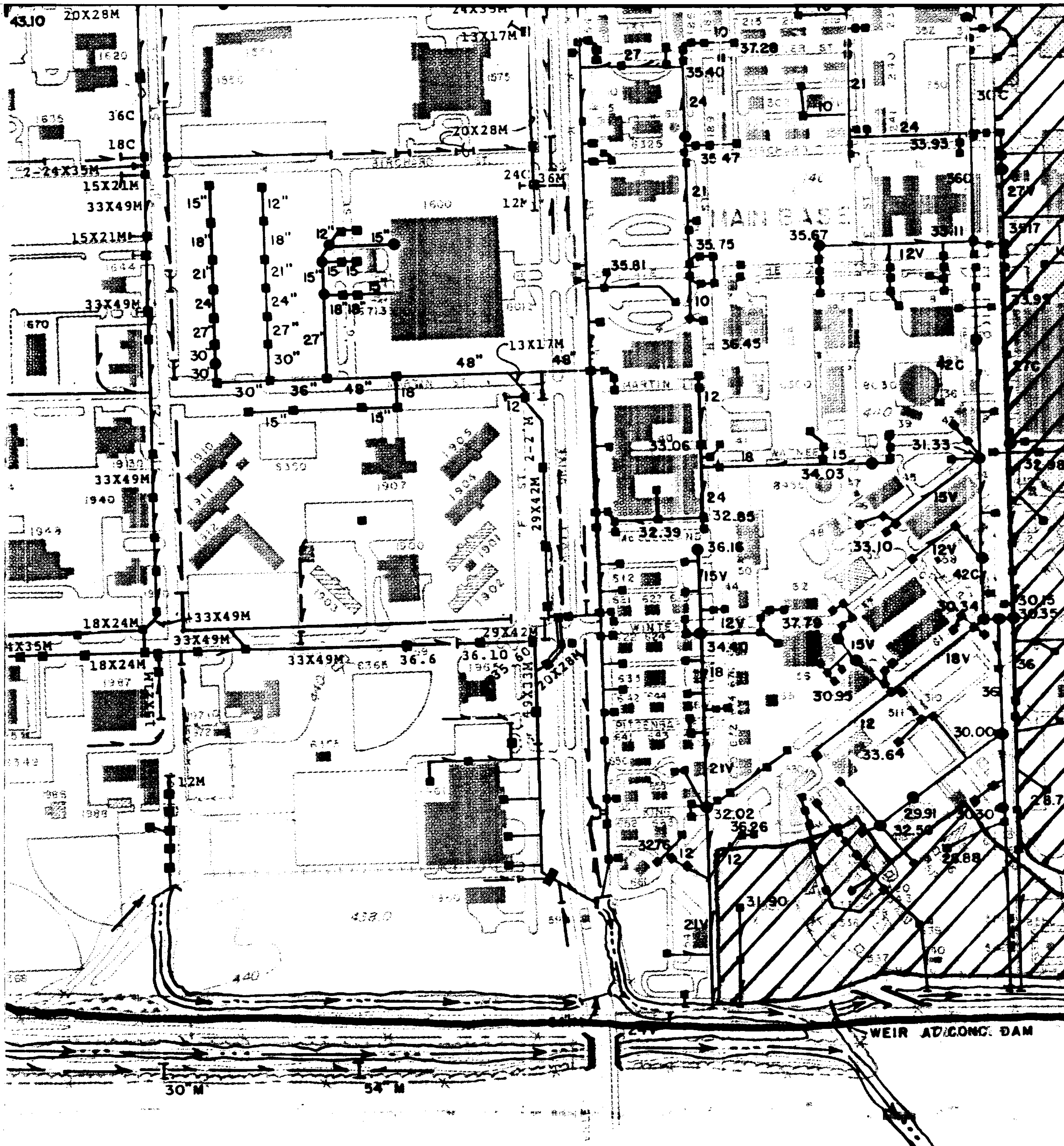

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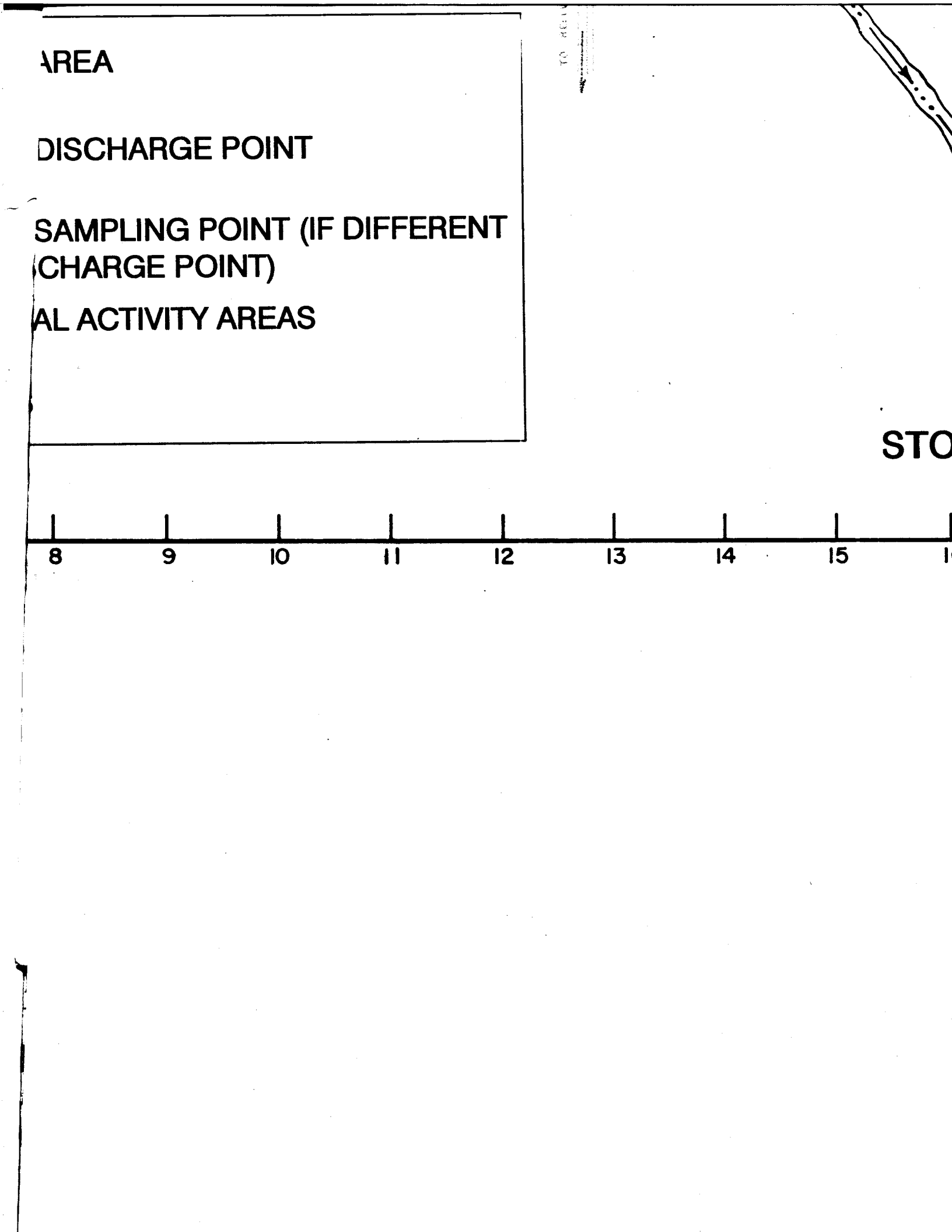
DISCHARGE POINT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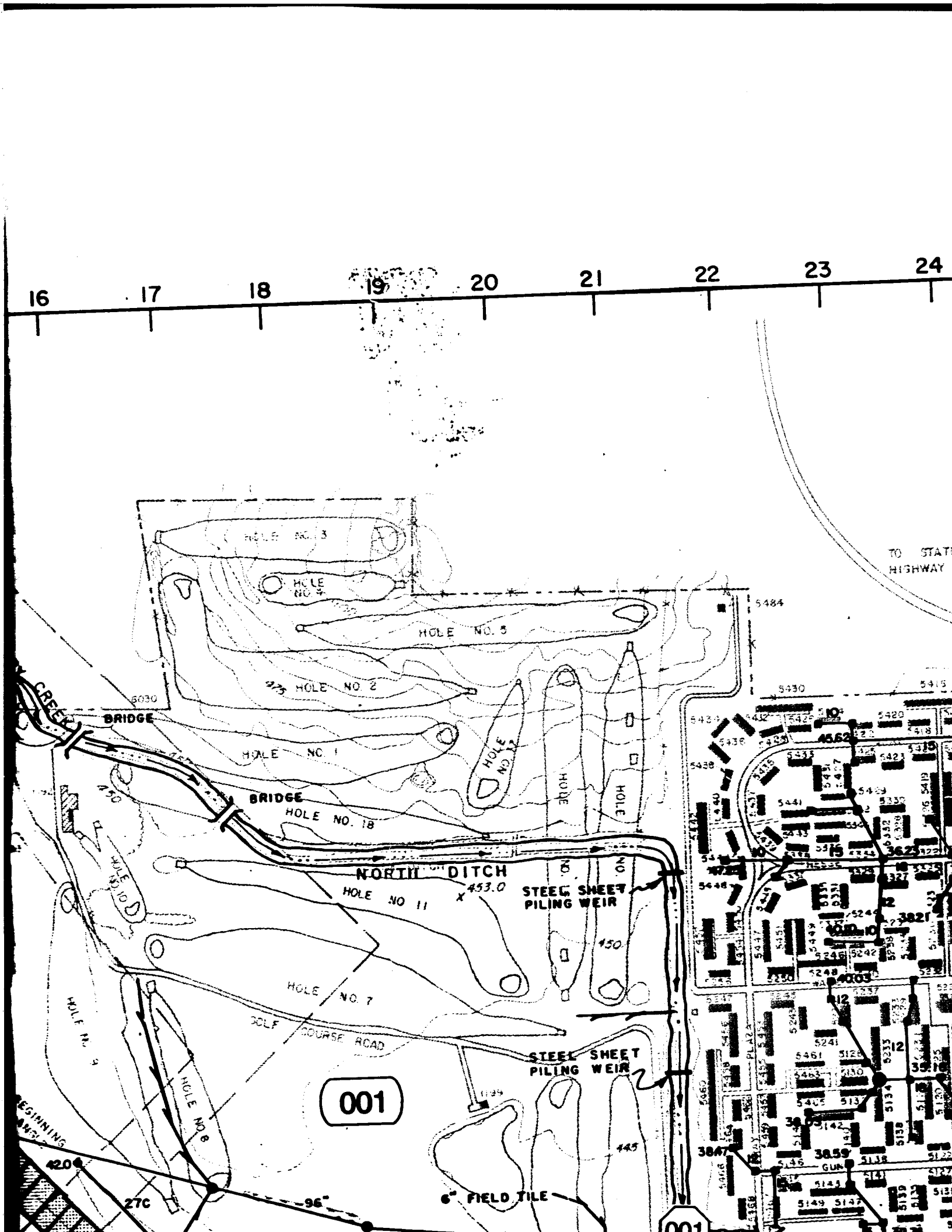
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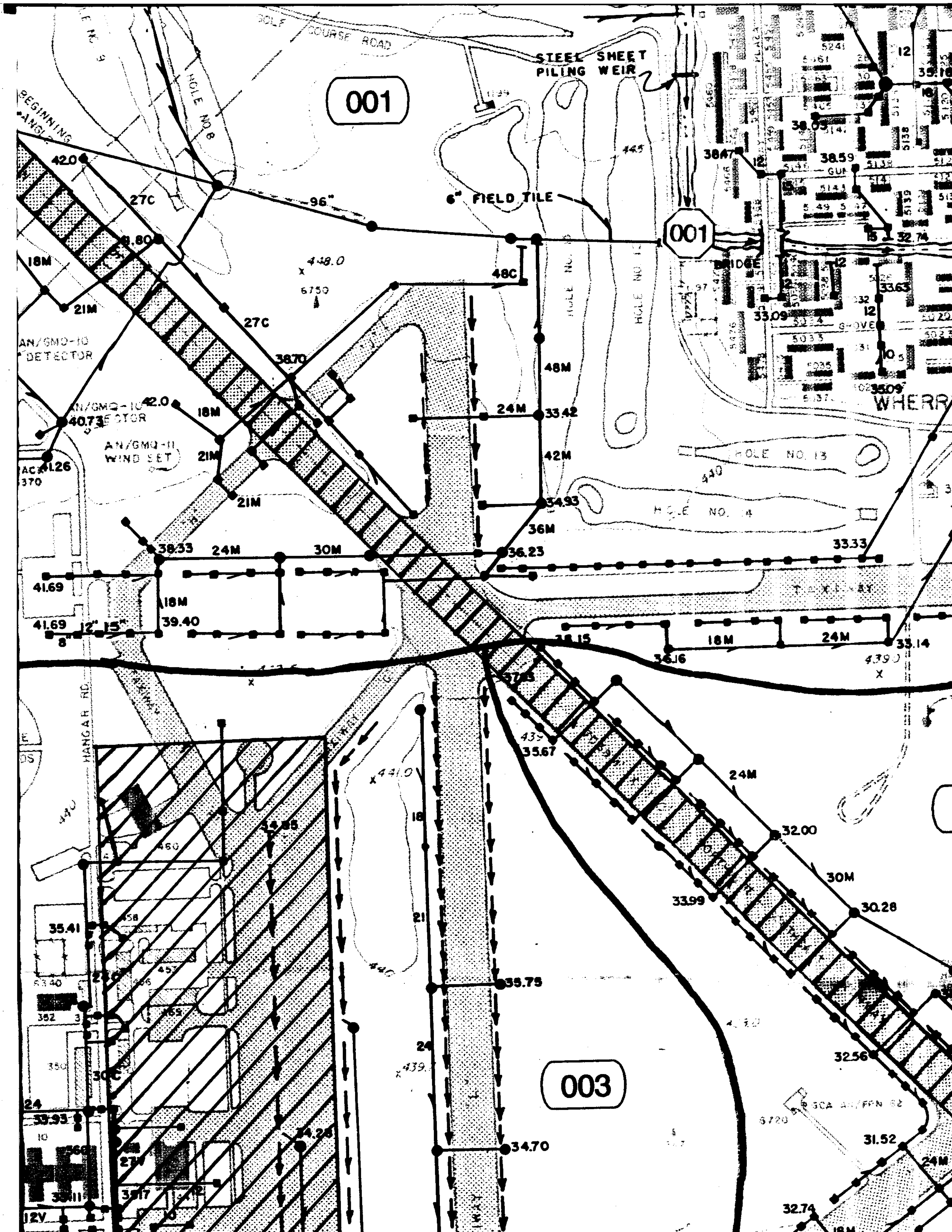
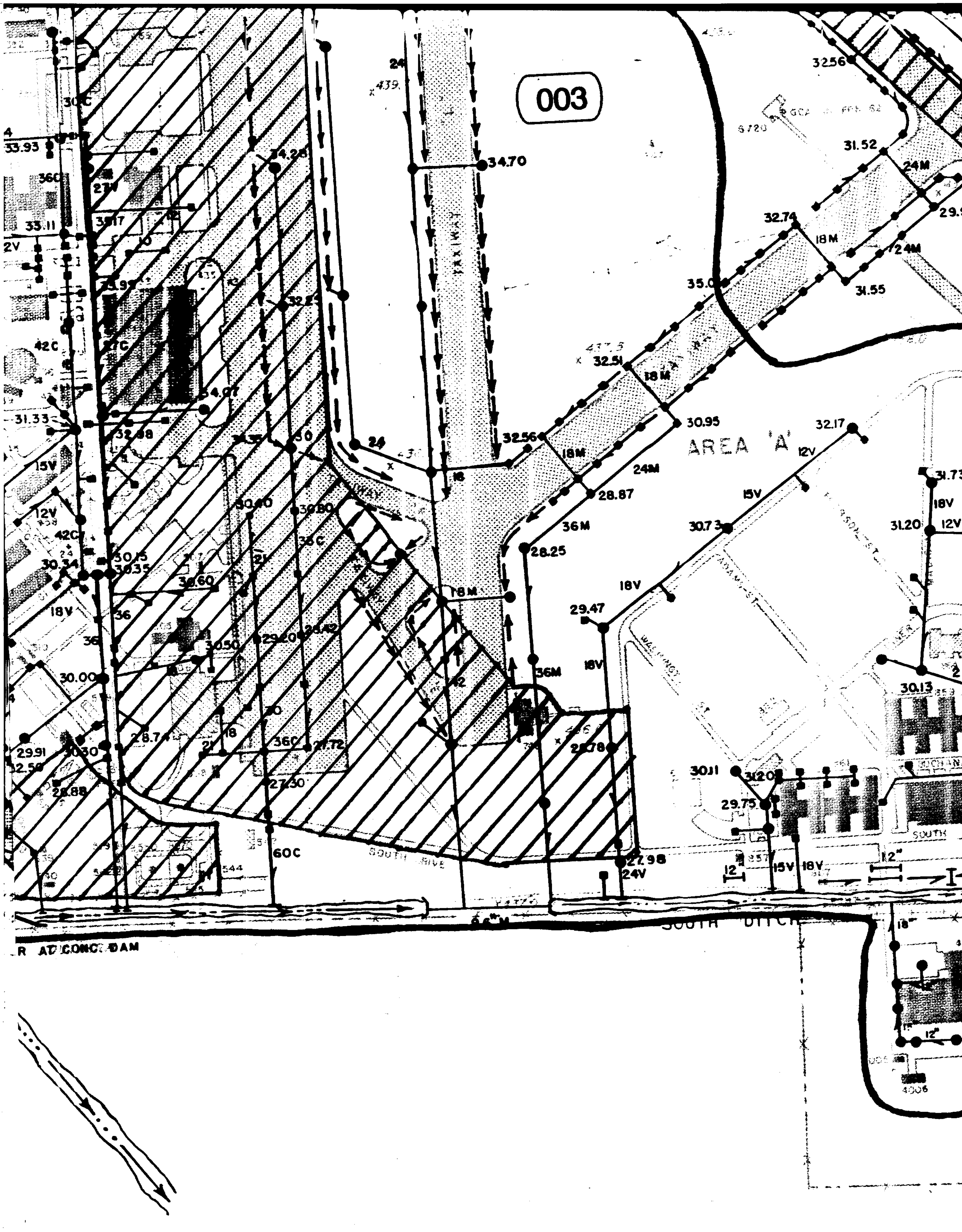
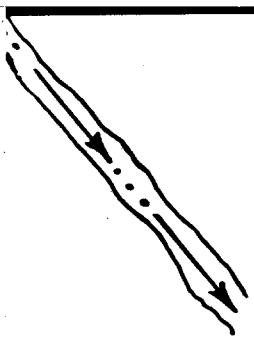
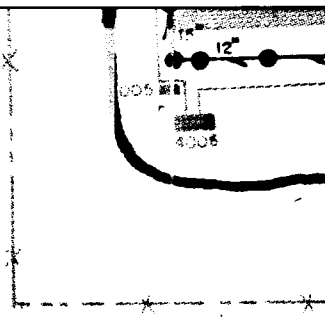

GOLF COURSE ROAD
STEEL SHEET PILING WEIR
001
6" FIELD TILE
96"
001
BRIDGE
HOLE NO. 8
HOLE NO. 13
HOLE NO. 14
GROVE
WHERR
AN/GMQ-10 DETECTOR
AN/GMQ-11 WIND SET
HANGAR RD
TAXIWAY
27C
48C
48M
24M
42M
36M
30M
18M
21M
42.0
38.70
40.73
41.26
38.33
41.69
39.40
33.42
34.93
36.23
33.33
38.15
36.16
33.14
35.67
32.00
30.28
33.99
35.75
34.70
32.56
31.52
32.74
35.41
33.93
38.47
38.59
32.74
33.09
33.63
35.09
003

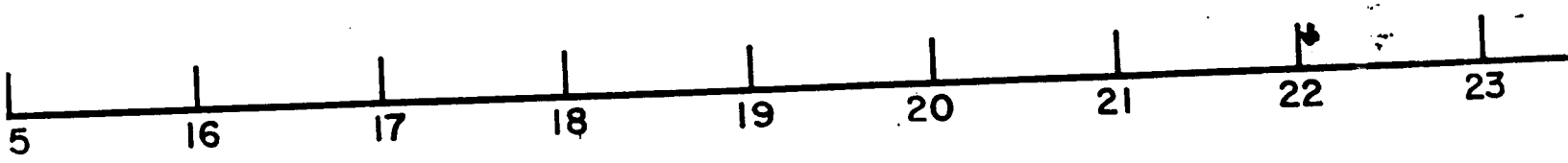


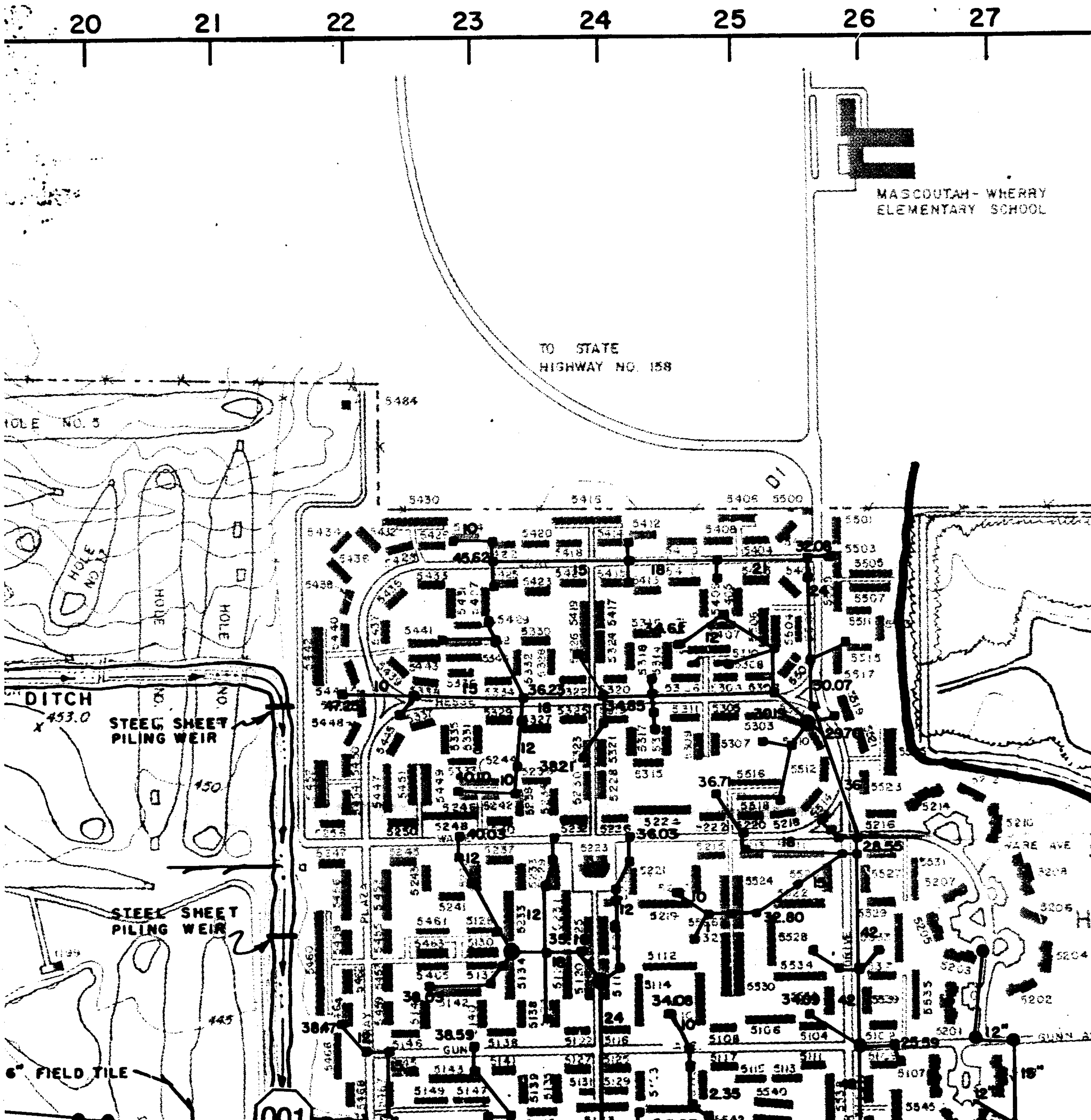
003
AREA 'A'
TAXIWAY
SOUTH DITCH
R AT CONC. DAM
SOUTH DRIVE
34.70
34.28
32.56
31.52
24M
32.74
18M
24M
31.55
35.0
32.51
18M
30.95
32.17
12V
31.73
18V
31.20
12V
28.87
36M
30.73
15V
28.25
18V
29.47
18V
36M
30.13
28.78
30.11
31.20
29.75
27.98
24V
15V
18V
12"
18"
4006
33.93
36C
27V
33.11
2V
42C
31.33
32.98
15V
12V
42C
30.34
30.15
30.35
30.60
18V
36
36
30.00
29.91
30.30
28.74
28.88
30.40
30.80
36C
29.20
29.42
30.50
27.72
27.30
36C
60C
32.83
34.07
30
18
21
24





STORM WATER POLLUTION PREVENTION PLAN MAP

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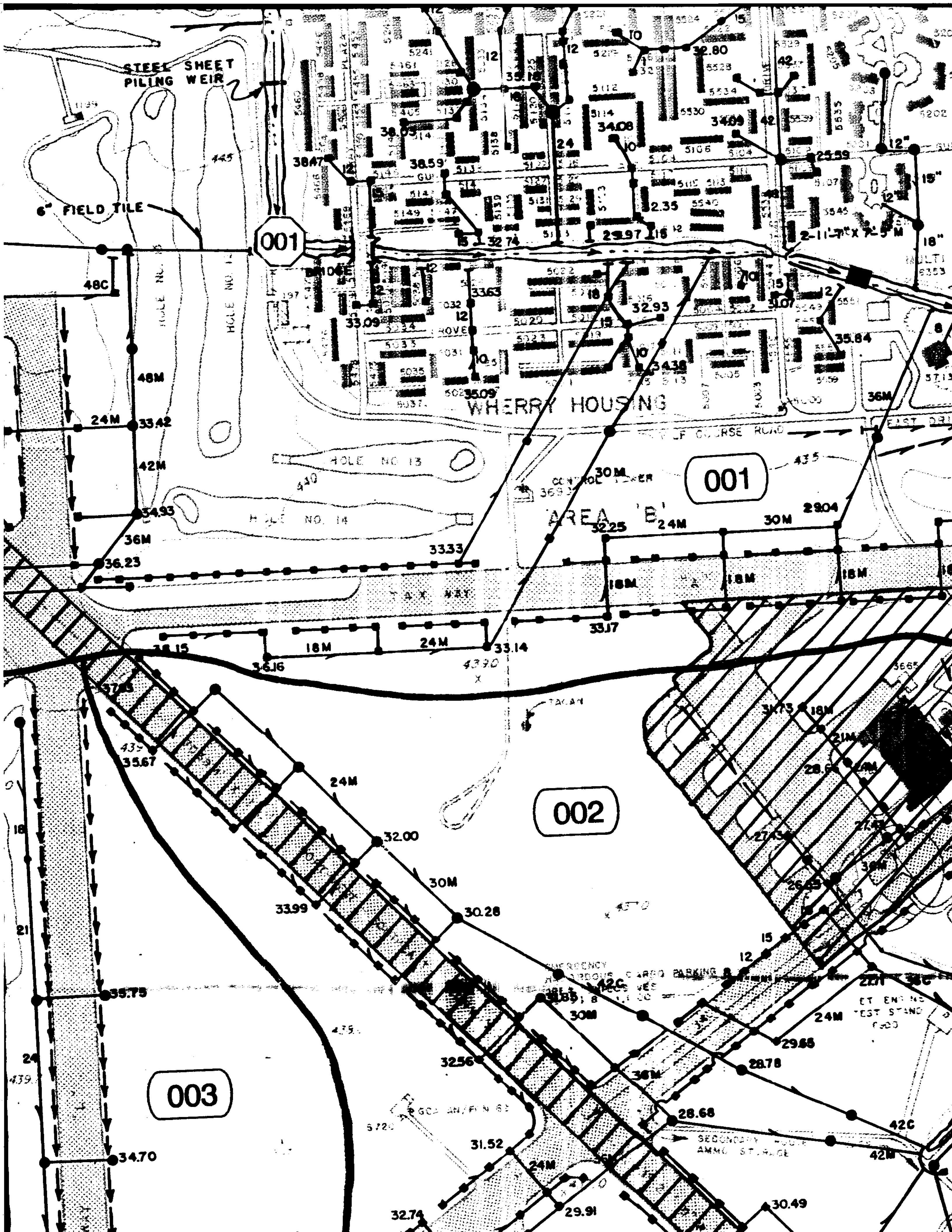
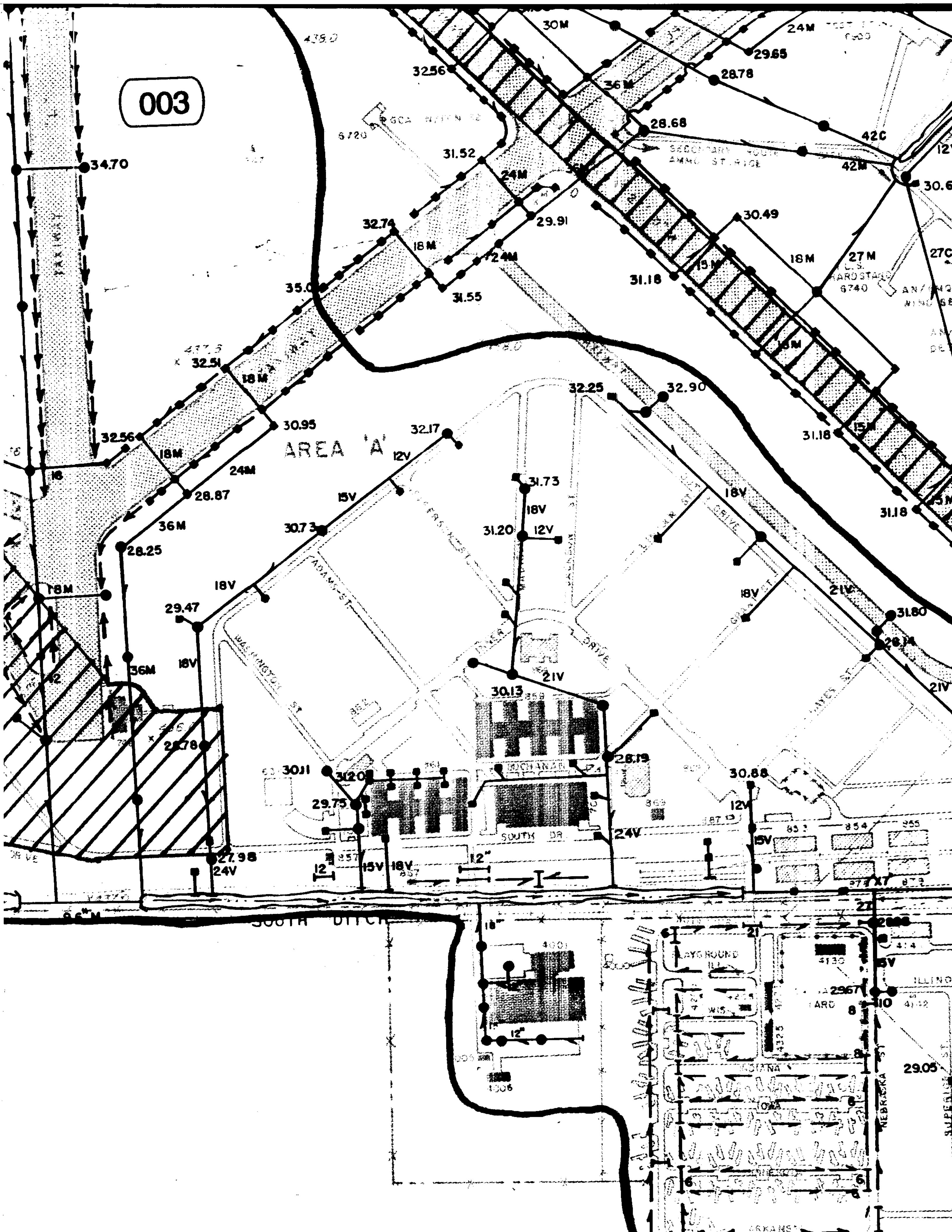
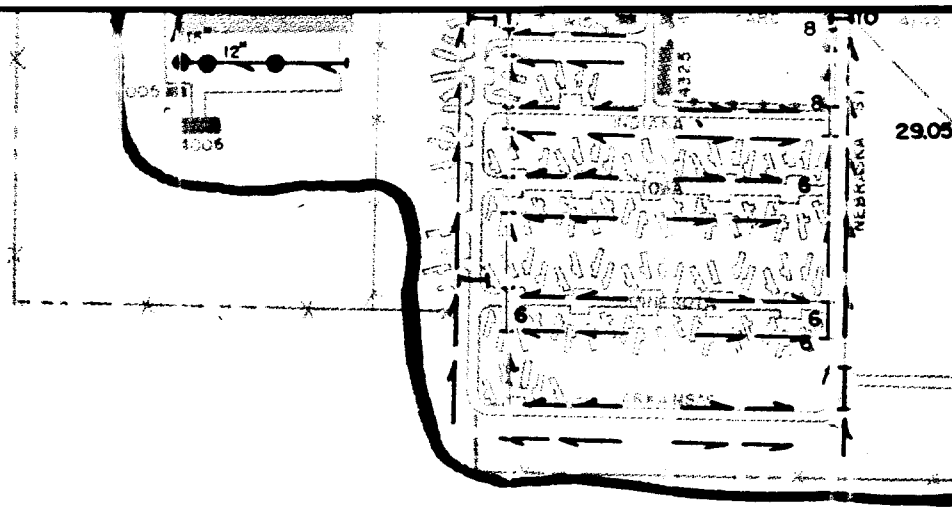
MASCOUTAH- WHERRY
ELEMENTARY SCHOOL
TO STATE
HIGHWAY NO. 158
HOLE NO. 5
HOLE NO. 12
DITCH
453.0
STEEL SHEET
PILING WEIR
STEEL SHEET
PILING WEIR
450
445
6" FIELD TILE
HESSE
WARE AVE
GUNN
PLAZA
DRIVE
001

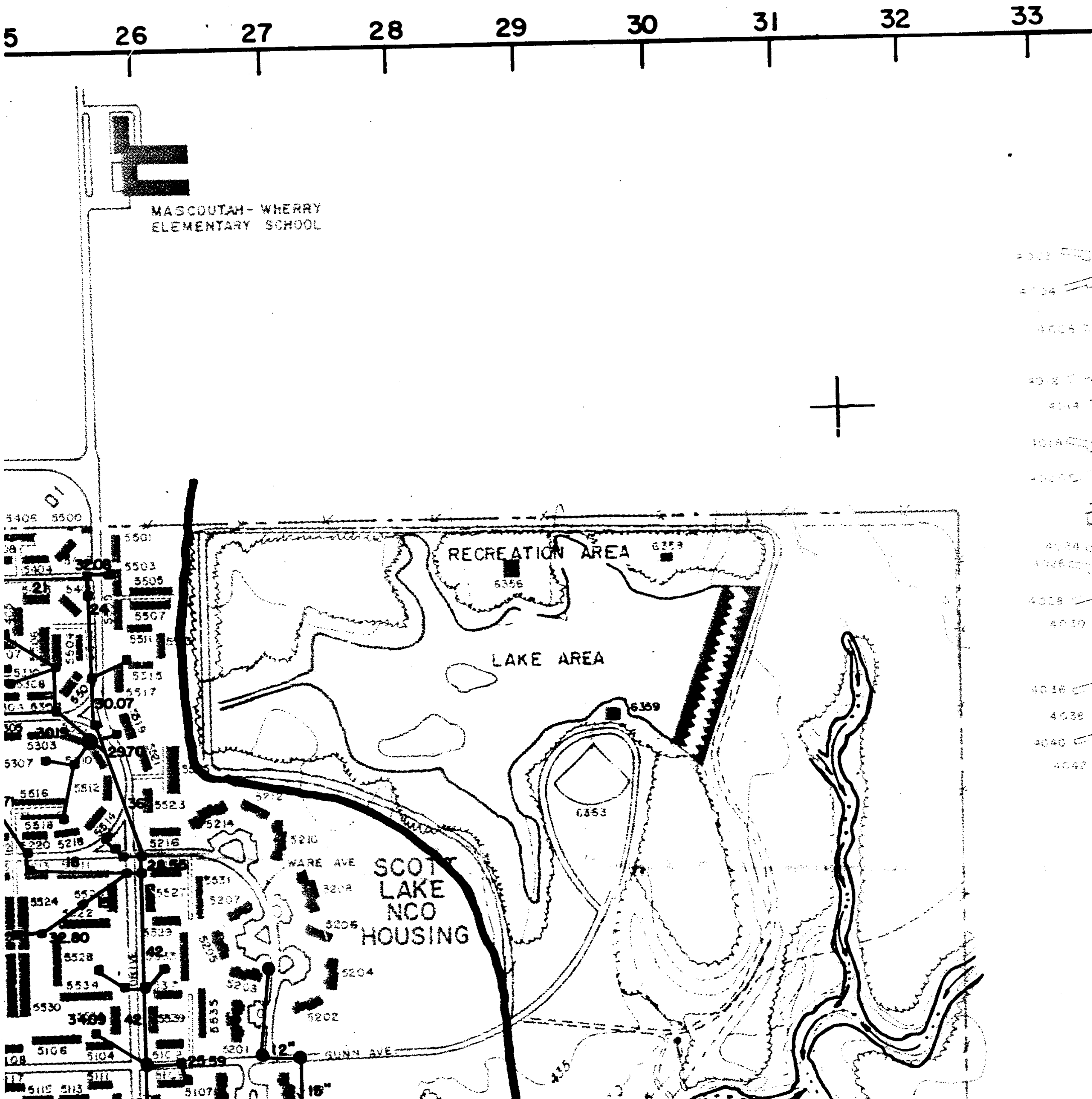

STEEL SHEET
PILING WEIR
6" FIELD TILE
001
BRIDGE
WHERRY HOUSING
HOLE NO. 13
HOLE NO. 14
CONTROL TOWER
001
AREA 'B'
TAXIWAY
002
003
24M
48M
42M
36M
18M
30M
48C
42C
36M
24M
30M
33.42
34.93
36.23
33.33
33.14
33.17
32.25
29.04
36.16
38.15
37.63
35.67
32.00
30.28
33.99
35.75
34.70
32.56
31.52
28.68
28.78
29.65
29.91
30.49
32.74
38.47
38.59
38.03
33.09
33.63
35.09
32.93
34.38
35.84
31.07
29.97
32.74
32.80
34.08
34.09
25.59
2.35
31.73
28.64
27.43
26.45
22.11
2-11-7" X 7-5" M
EMERGENCY
SECONDARY
JET ENGINE
TEST STAND


003
AREA 'A'
34.70
32.56
31.52
32.74
35.0
32.51
32.56
30.95
28.87
28.25
29.47
28.78
27.98
30.11
31.20
29.75
30.13
28.19
30.88
32.17
30.73
31.73
31.20
32.25
32.90
29.91
31.55
28.68
28.78
29.65
30.49
31.18
31.18
31.18
31.80
28.14
29.67
29.05
30M
24M
36M
42C
42M
27M
27C
18M
15M
12V
15V
18V
21V
24V
36M
SOUTH DR.
SOUTH DITCH
SECONDARY ROUTE AMMO STORAGE
WASHINGTON ST.
ADAMS ST.
GRANT ST.
DRIVE
PLAYGROUND
INDIANA
IOWA
NEBRASKA
ILLINOIS
4001
4130
1006
853
854
855
857
12"
18"



LLUTION PREVENTION PLAN MAP

19 20 21 22 23 24 25 26


25
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MASCOUTAH - WHERRY
ELEMENTARY SCHOOL
RECREATION AREA
LAKE AREA
SCOTT
LAKE
NCO
HOUSING
WARE AVE
GUNN AVE
5501
5503
5505
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5515
5517
5523
5216
5214
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5113
5115
5107
5303
5307
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30.07
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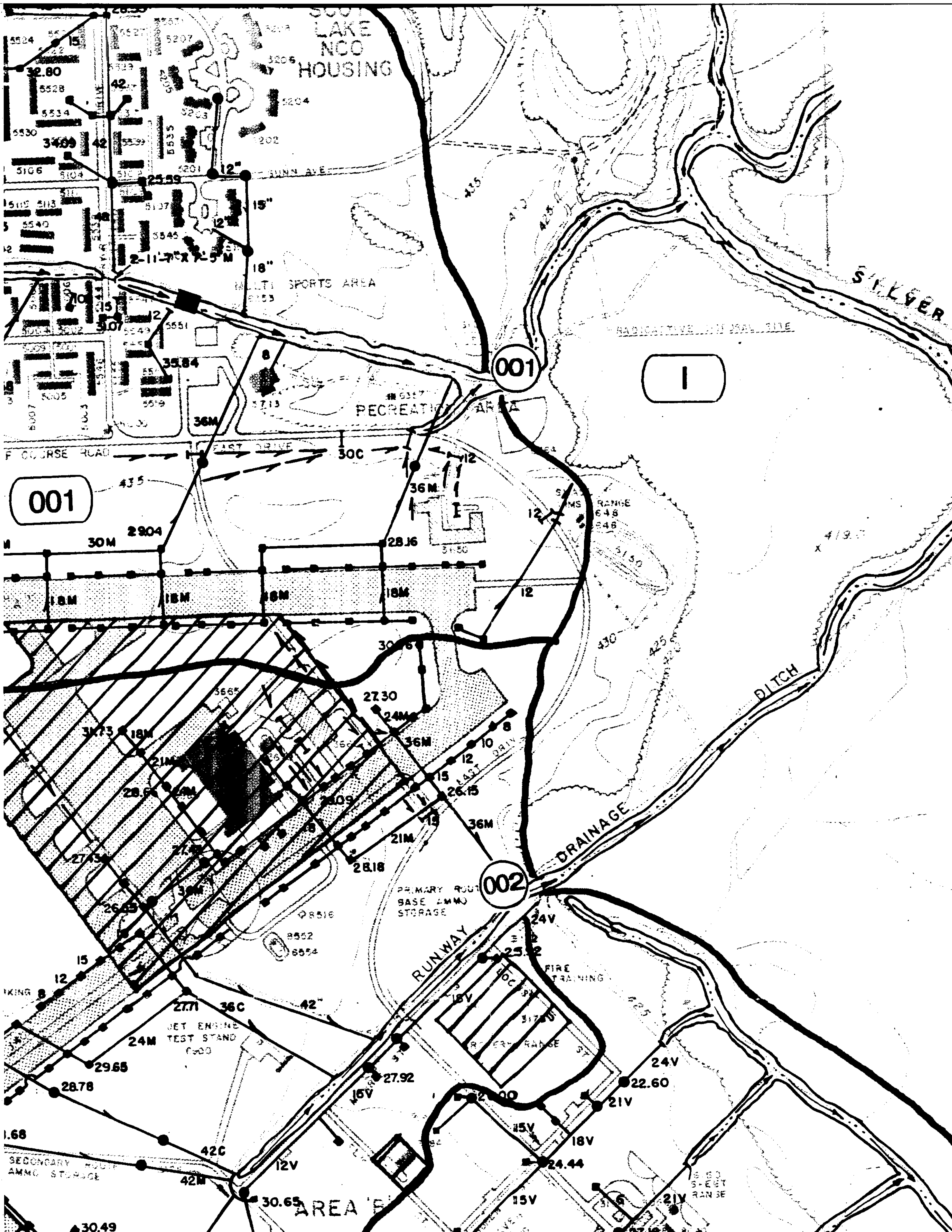
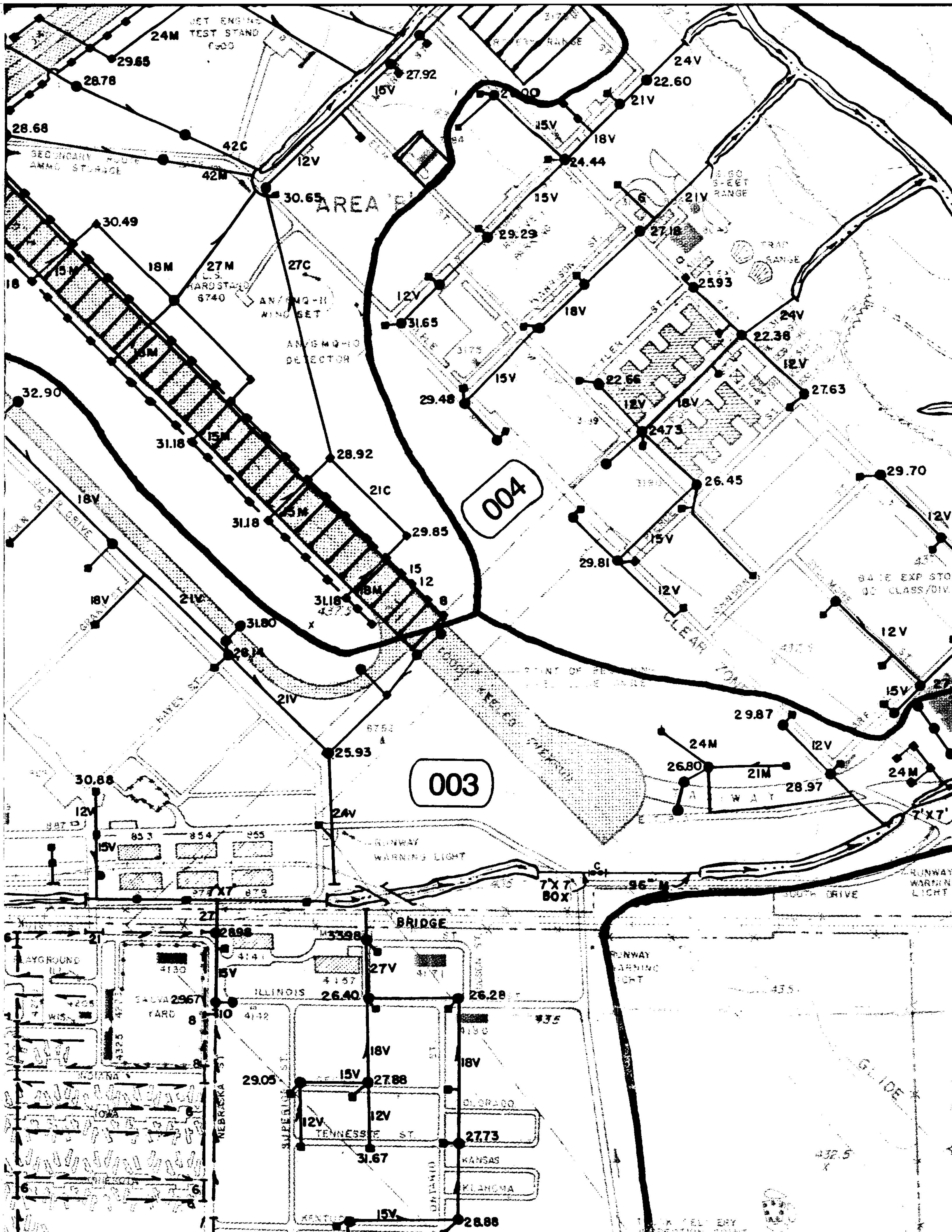
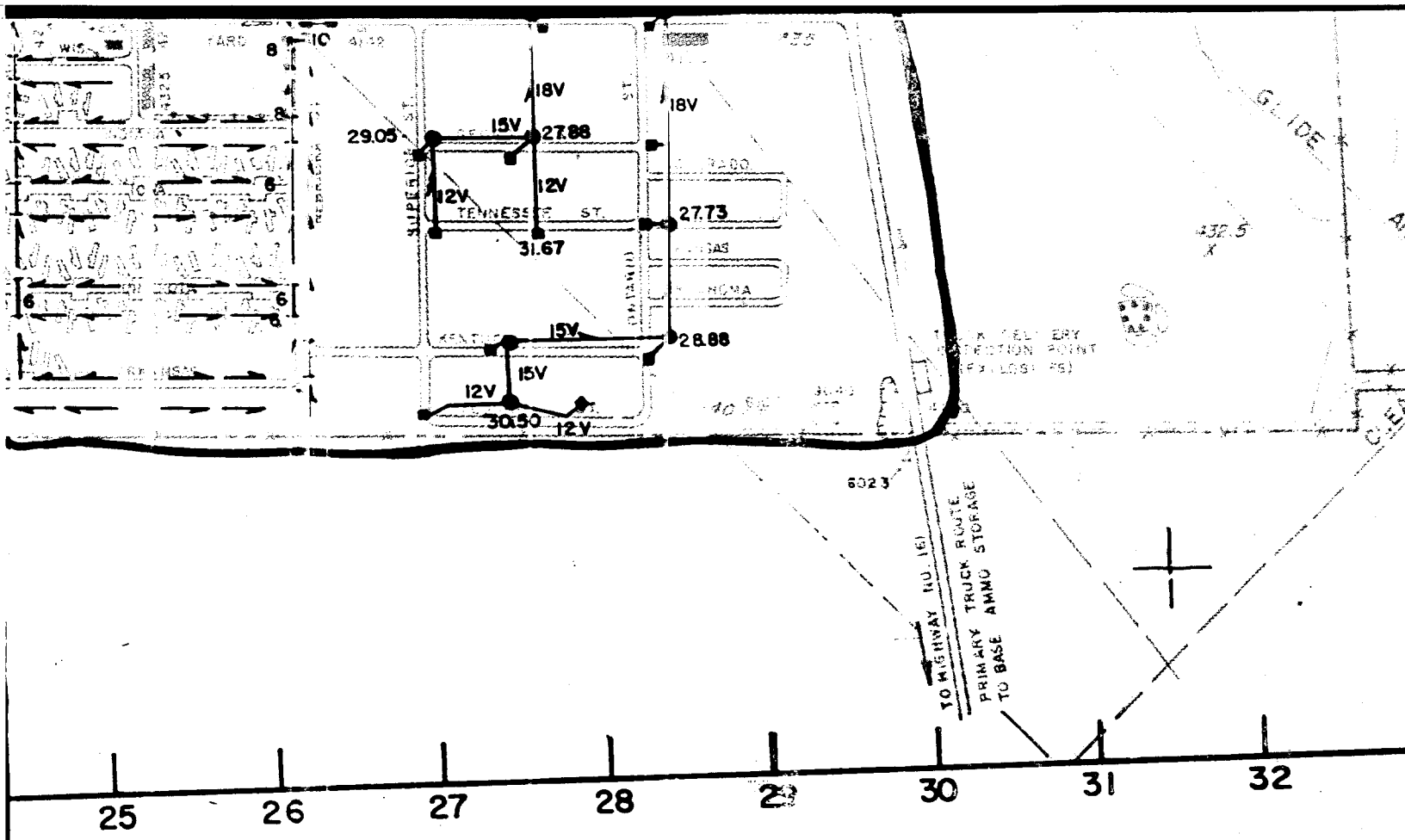
28.55
32.80
34.09
25.59
12"
18"



SCOTT LAKE NCO HOUSING
MULTI SPORTS AREA
RECREATION AREA
RADIOACTIVE DISPOSAL SITE
SILVER
DITCH
DRAINAGE
001
001
002
I
RUNWAY
PRIMARY ROUTE BASE AMMO STORAGE
JET ENGINE TEST STAND
SECONDARY ROUTE AMMO STORAGE
FIRE TRAINING
AREA 'B'
GOLF COURSE ROAD
EAST DRIVE
SUNN AVE
32.80
34.09
25.59
31.07
35.84
29.04
28.16
30.61
27.30
31.73
28.64
28.09
26.15
27.43
26.63
28.18
27.71
29.65
28.78
27.92
25.52
22.60
24.44
30.65
30.49



JET ENGINE TEST STAND
24M
29.65
28.78
27.92
15V
28.68
42C
SECONDARY ROUTE AMMO STORAGE
42M
12V
30.65
AREA 'B'
30.49
18M
27M
27C
15M
AN/GMQ-10 DETECTOR
32.90
31.18
28.92
21C
29.85
18V
31.80
21V
25.93
003
004
30.88
24V
RUNWAY WARNING LIGHT
7'X7' BOX
96" M
BRIDGE
SOUTH DRIVE
RUNWAY WARNING LIGHT
27
28.98
33.98
27V
ILLINOIS
26.40
26.28
29.67
SALVAGE YARD
INDIANA
IOWA
NEBRASKA ST.
29.05
27.88
15V
12V
18V
TENNESSEE ST.
SUPERIOR ST.
31.67
27.73
KANSAS
OKLAHOMA
28.88
COLORADO
GLIDE
22.60
21V
18V
24.44
15V
29.29
27.18
TRAP RANGE
25.93
22.38
24V
12V
27.63
31.65
29.48
22.66
24.73
26.45
29.81
29.70
29.87
24M
26.80
21M
28.97
7'X7'


18V
15V
27.88
29.05
12V
12V
TENNESSEE ST.
31.67
18V
27.73
15V
28.88
15V
12V
30.50
12V
6023
TO HIGHWAY NO 161
PRIMARY TRUCK ROUTE
TO BASE AMMO STORAGE
25
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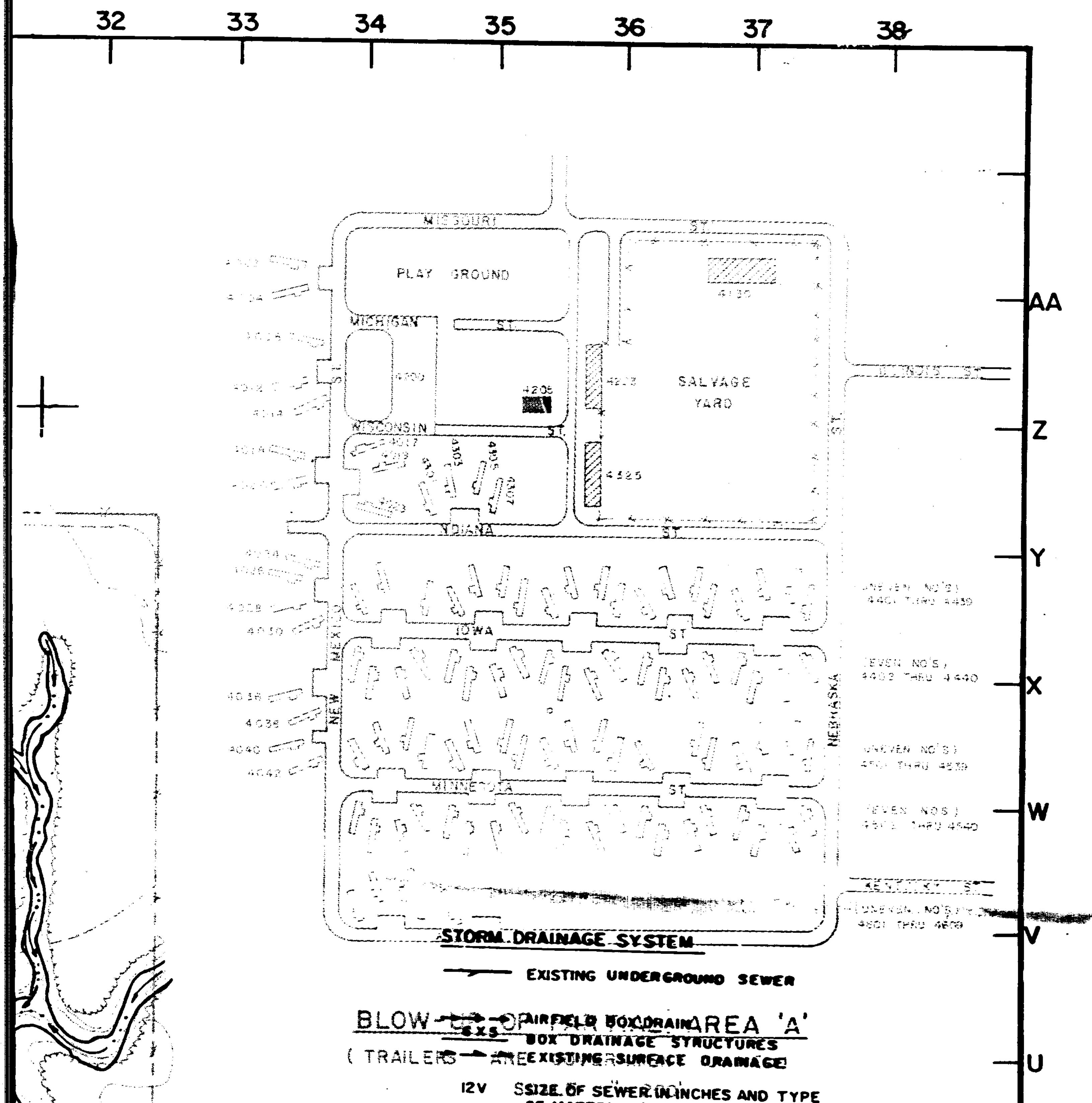
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AA
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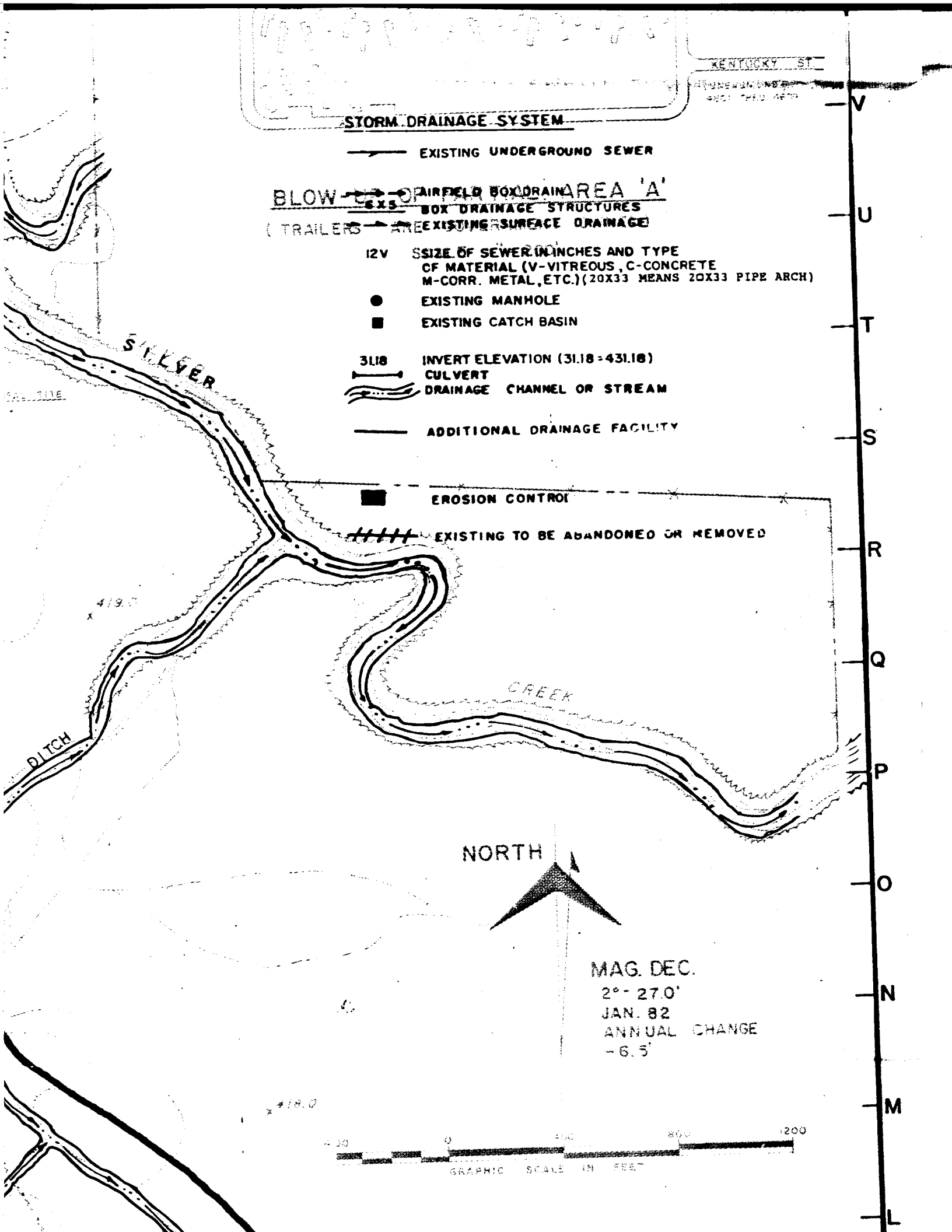
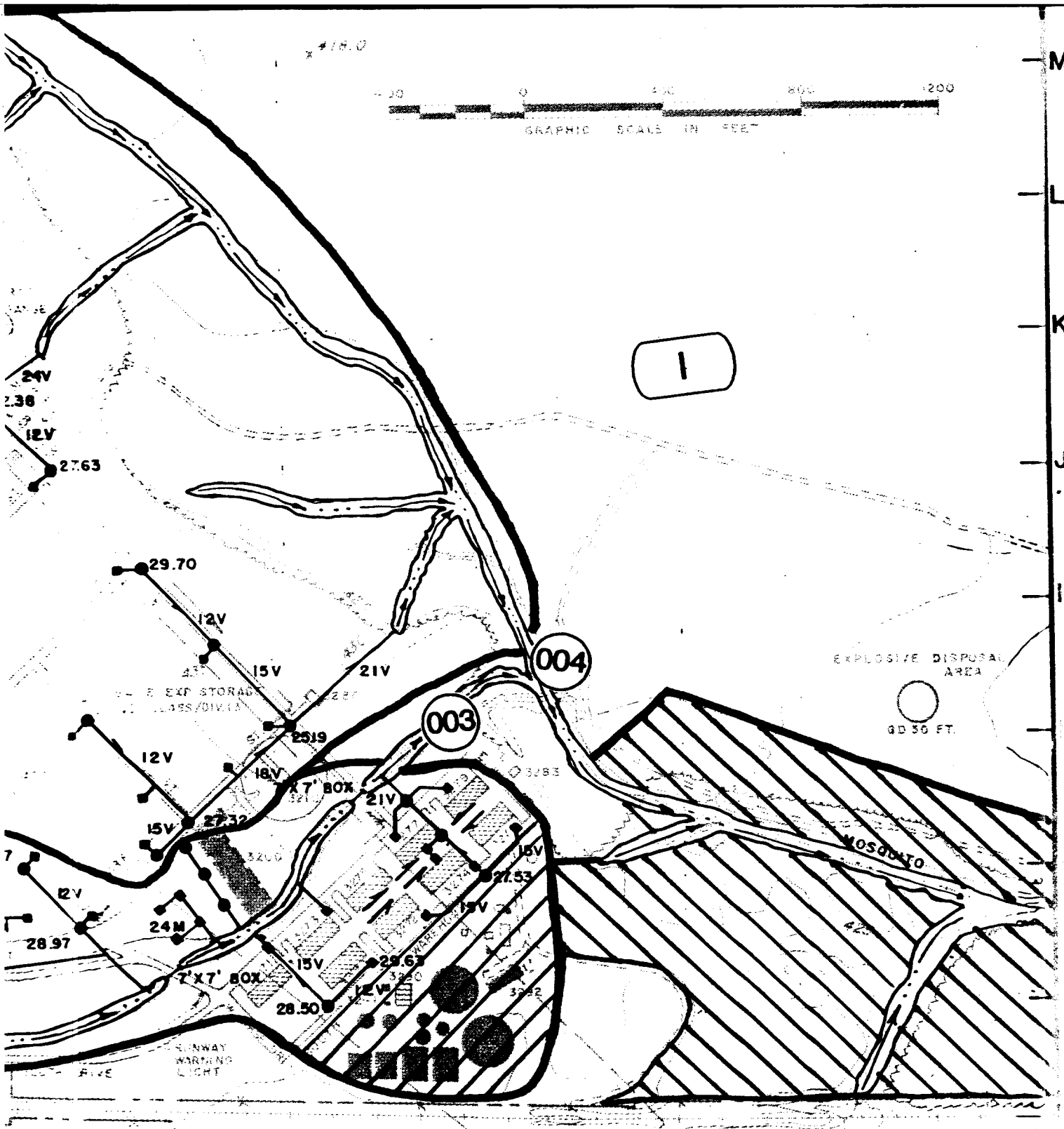
Y
X
W
V
U
MISSOURI ST.
PLAY GROUND
MICHIGAN ST.
4205
SALVAGE YARD
4135
4323
4325
WISCONSIN ST.
INDIANA ST.
IOWA ST.
MINNESOTA ST.
NEW MEXICO
NEBRASKA
UNEVEN NO'S) 4401 THRU 4439
(EVEN NO'S) 4402 THRU 4440
UNEVEN NO'S) 4501 THRU 4539
(EVEN NO'S) 4502 THRU 4540
UNEVEN NO'S) 4601 THRU 4639
4036
4038
4040
4042
STORM DRAINAGE SYSTEM
EXISTING UNDERGROUND SEWER
AIRFIELD BOX DRAIN
BOX DRAINAGE STRUCTURES
EXISTING SURFACE DRAINAGE
12V SIZE OF SEWER IN INCHES AND TYPE
BLOW-UP OF AREA 'A'
(TRAILERS AREA


KENTUCKY ST
STORM DRAINAGE SYSTEM
EXISTING UNDERGROUND SEWER
BLOW
AIRFIELD BOX DRAIN
AREA 'A'
6X5
BOX DRAINAGE STRUCTURES
(TRAILERS
EXISTING SURFACE DRAINAGE
12V
SIZE OF SEWER IN INCHES AND TYPE OF MATERIAL (V-VITREOUS, C-CONCRETE M-CORR. METAL, ETC.) (20X33 MEANS 20X33 PIPE ARCH)
EXISTING MANHOLE
EXISTING CATCH BASIN
31.18
INVERT ELEVATION (31.18 = 431.18)
CULVERT
DRAINAGE CHANNEL OR STREAM
ADDITIONAL DRAINAGE FACILITY
EROSION CONTROL
EXISTING TO BE ABANDONED OR REMOVED
SILVER
CREEK
DITCH
NORTH
MAG. DEC.
2° - 27.0'
JAN. 82
ANNUAL CHANGE
- 6.5'
GRAPHIC SCALE IN FEET
0
800
1200
V
U
T
S
R
Q
P
O
N
M
L

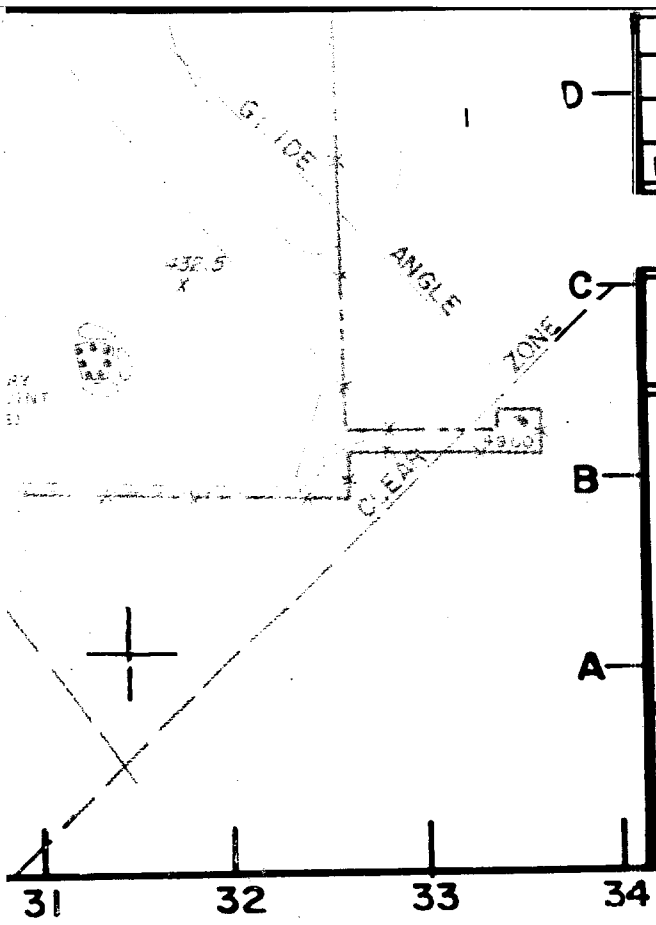


REV.	DATE	DESCRIPTION	INITIAL
4	JUNE 91	GENERAL REVISION AS PER JANDA	MMB
3	SEP 87	GENERAL	
2	JUN 87	GENERAL REVISION	DEP
1	MAY 79	GENERAL REVISION (STREET NAMES CHANGED)	K J G

PLAN REVISIONS

DEPARTMENT OF THE AIR FORCE

DIRECTORATE OF CIVIL ENGINEERING DCS/P&R - WASHINGTON, D.C.



REV.	DATE	DESCRIPTION	INITIAL
3	SEP 87	GENERAL REVISION	RSH
2	JUN 87	GENERAL REVISION	DEP
1	MAY 79	GENERAL REVISION (STREET NAMES CHANGED)	K J G

PLAN REVISIONS

DEPARTMENT OF THE AIR FORCE

DIRECTORATE OF CIVIL ENGINEERING DCS/P&R - WASHINGTON, D.C.

MILITARY AIRLIFT COMMAND

COMPREHENSIVE PLAN

STORM DRAINAGE SYSTEM

SCOTT AIR FORCE BASE

BELLEVILLE, ILLINOIS

SCALE: = 1"= 400' | DATE: AUG 76

MASTER PLANNING DIRECTIVE SCOTT AFB 71-8

TAB NO. G-3

SHEET 1 OF 1

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