THE GINN CORPORATION

Consulting Engineers

June 20, 1995

John B
Let's talk
R -
6-30-95

Pete Davis, P.E.
Texas Turnpike Authority
P.O. Box 190369
Dallas, Texas 75219

RE: Addison Toll Tunnel
Environmental Site Assessment

Dear Mr. Davis:

Transmitted herewith are two (2) copies of the Phase One Environmental Site Assessment for the Addison Toll Tunnel.

We are also forwarding copies to the parties listed below.

Sincerely,

H. Wayne Ginn, P.E.

HWG/lw
Enclosures

cc: Glenn Houser, HNTB (w/o enclosures)
Ron Whitehead, Town of Addison
Jim Jackson, Dallas County Commissioner
Sam Stuart, AATI

17103 Preston Road • Suite 205 • Dallas, Texas 75248 • Phone 214/248-4900
P.O. Box 796577 • Dallas, Texas 75379-6577 • FAX 214/931-1452

HDR

PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT

of

the proposed Keller Springs Toll Tunnel
Addison, Texas

Prepared for the

TEXAS TURNPIKE AUTHORITY

by

HDR ENGINEERING, INC.

June 12, 1995

PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT
the proposed Keller Springs Toll Tunnel
Addison, Texas

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PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT

I. Summary

HDR Engineering, Inc.'s (HDR) Phase 1 - Environmental Site Assessment (ESA) of the proposed right of way (ROW or site) for the Texas Turnpike Authority tunnel resulted in several findings and recommendations which should be addressed before a transfer of property ownership is executed. The ESA commenced on April 7, 1995, at the request of the Texas Turnpike Authority. Activities included a "snapshot" review of pertinent and available documents, interviews with site personnel, and a site inspection of the property grounds for visual signs of underground storage tanks, and general environmental conditions.

The draft ESA report (May 31, 1995) has been revised to include recently obtained geologic information. Lachel & Associates, Inc. (LAI) initiated a geotechnical investigation program in April which focused on geologic issues relating to the tunnel construction only. The results of their sampling program is summarized and shown on Figure 1 " Draft - Geologic Profile - West Portal" and Figure 2 "Draft - Geologic Profile - East Portal" (Appendix C).

General findings were made during the ESA. Foremost is the fact that both the ROW and areas in the vicinity of the site are, or have been, heavily industrialized. Both sources and routes of potential contamination are thought to exist on or near the site. The site exhibits no outward indications of serious environmental impairment and this investigation has not identified any environmental impairment that would cause us to recommend the Authority not purchase these properties. Many of the documents reviewed concerning operations of facilities near to the subject property were not available and many of those that could be reviewed were incomplete. Several reports were in conflict with each other, as was some of the information supplied by those people interviewed.

Based upon findings of the ESA, we propose the following recommendations.

- Sample existing piezometers along the proposed ROW east and west of the airport.
- Phase II Environmental Site Assessment (intrusive sampling).
- Recommend the completion of a title survey.
- General clean up of drum storage areas.
- Asbestos investigation of buildings

Samples (physical equipment, liquid or soil) were not obtained as part of this audit. Consequently, we do not have any laboratory data, either physical or chemical, which supports, nor refutes, the potential liabilities associated with the ROW. The basis for our recommendations and suggestions are visual observations of the site, supported by the photographs which accompany this report, as well as other documentation which appears in the appendices to this report. Furthermore, there is the possibility that less obvious environmental concerns and liabilities, not readily noticeable from simple visual inspection, may exist, and this should not be excluded from consideration.

II. Introduction

The Texas Turnpike Authority is planning to purchase the ROW, for the construction of a tunnel under a portion of the Addison Airport, with the intent of connecting the eastern and western portions of Keller Springs Road, currently separated by the Addison Airport. The proposed ROW affects an area approximately 3700 feet long by 100 feet wide. HDR Engineering, Inc. (HDR) has been contracted to provide a Phase 1, Environmental Site Assessment (ESA) for the proposed ROW.

II.1 Purpose

HDR, at the request of the Texas Turnpike Authority, has completed a Phase One - Environmental Site Assessment. This ESA was conducted in accordance with the attached Scope of Services (See Appendix E) to evaluate the potential for the presence of hazardous substances and/or petroleum products at the above-referenced site as the result of any past or present land use on or near the subject property. This ESA is based upon the review of readily available documents and site visits for the purpose of evaluating the history of past use and identifying sources of potential contaminants.

Three areas of review include:

1. Local - Review of readily available information held by the Town of Addison and City of Carrollton, Texas. Interviews with local environmental quality officials and business managers familiar with the subject property and local history in general were conducted.

2. State & Federal - Acquisition and review of government and private agency databases containing environmental information pertinent to the subject property and vicinity. These include databases and files maintained by the U.S. Environmental Protection Agency (EPA), Texas Natural Resource Conservation Commission (TNRCC), Texas Department of Health (TDH) and the Texas Water Development Board (TWDB).

3. Site visit - Several site visits were made to identify visible evidence of the presence of, or the potential for the presence of, hazardous substances and/or petroleum products and non-compliance areas. In addition, a review of land use on and adjacent to the subject property was conducted.

II.2 Special Terms and Conditions

This investigation addresses the likelihood of the presence of hazardous substances and/or petroleum products resulting from past and current known uses of the site and nearby properties. As a result, certain conditions, such as those listed below, may not be revealed:

1. naturally occurring toxics in the subsurface soils, rocks, water, or toxicity of the on-site flora;

2. toxicity of substances common in current habitable environments, such as, stored household products, building materials, and consumables;

3. biological pathogens;

4. contaminant plume below the surface from a remote source;

5. contaminants or contaminant concentrations that do not violate present regulatory standards but may violate such future standards; and,

6. unknown site contamination, such as, "midnight dumping" and/or accidental spillage which could have occurred after the site visit by HDR.

Services for this project were conducted in accordance with the Agreement between the Texas Turnpike Authority and HDR. No warranty or guarantee of site conditions is intended. This report is solely for the use of the Texas Turnpike Authority and any reliance on this report by third parties shall be at such party's sole risk.

II.3 Limitations and Exceptions of Assessment

The scope of this investigation is limited to visual observation of surface conditions at the site, interviews with public and private personnel, and a review of readily available reports and literature. Facts that have been concealed, withheld or not fully disclosed at the time this report was prepared may have significant impact on the findings and recommendations of this study. No sampling, laboratory analysis, or determination of asbestos containing materials activities were conducted as part of this investigation. This approach reflects current professional practice unless the information obtained as part of this work suggests the need for further investigation.

II.4 Audit Dates and Participants

The audit team for this investigation was composed of Mr. Victor M. Zepeda, P.E., R.E.P., and Mr. Troy Hotchkiss, E.I.T. The site was visited on five occasions (Refer to Table 2, in Section V.1 of this report for specific dates). The Report was subjected to a Quality Review by Mr. Mike Harris, a Senior Environmental Professional, on June 12, 1995.

III. Site Description

III.1 Location and Description

The subject property is located within the Town of Addison, Texas, (Figure 1) generally bisecting the Addison Municipal Airport from east to west. The site has been a part of the airport since 1956, when the airport was first constructed. A complete legal description and a property survey with easements of the tunnel project site were not available. An alignment plan produced by Howard Needles Tammen & Bergendoff, titled *Figure 3, HNTB (Appendix D),* was used as a guide to identify the limits of the proposed tunnel ROW. The administrative offices of Addison Airport are located at:

Addison Airport
4505 Claire Chennault Dr.
Addison, Texas 75248

III.2 Site and Vicinity Characteristics

The subject property is located on a generally flat topographic high point, approximately 640 feet above the National Geodetic Vertical Datum plane (NGVD), as determined from USGS topographic quadrangle maps. At the subject site location, surface drainage is either toward the east to White Rock creek or the west toward an unnamed tributary of Hutton Branch which feeds into the Trinity River.

Surface Water Characteristics

No surface water impoundments are known to exist on the site. The existing portion of Keller Springs Road on the eastern side of the airport is drained by roadside ditches toward the east. From review of aerial photos, United States Geologic Survey (USGS) maps and site visits, no other delineable watercourses were identified on the eastern portion of the subject property.

Where the proposed tunnel crosses the runway proper, the surface grade appears to be toward the south. However, the tunnel location where it crosses the flight operations area is generally a local topographic high point.

The runway and western portions of the airport near the proposed tunnel are drained by a surface swale toward the north and west, away from the proposed "west portal" of the toll tunnel. Between the west portal and Midway Road, the existing Keller Springs Road is drained by roadway curbs and storm sewers toward the north, eventually to a tributary of Hutton Branch.

Soils and Geology

The subject property is located in northern Dallas County in the Blackland Prairie physiographic province. This region is characterized by little relief and dark, plastic clay soils. The subject property is generally conforming to this description, although significant disturbance to the surface clays is evident as a result of urbanization and industrialization of the area, (Appendix B, Photo 15).

The geologic setting, as mapped by the Geologic Atlas of Texas, Dallas Sheet (1972, revised 1988, University of Texas, Bureau of Economic Geology), is within the Austin Chalk Formation. This formation is cited as being generally "Chalk, mostly microgranular calcite, some calcareous clay, weathers white." This formation is known to have very low porosity and permeability, thus forming an aquitard, or barrier to vertical groundwater flow. The reported thickness of the formation is approximately 300-500 feet.

The surface soils of the subject property are in the Stephen-Upland land complex type. This complex is typified by one to four percent slopes and is well drained. Due to commercial/industrial development, the surface layers of the soils have been extensively disturbed by building, street, and especially airport construction. Where the soil is relatively undisturbed, the surface layer is moderately alkaline, very dark brown silty clay with a typical thickness of one and a half to two feet. Permeability and available water capacity are moderately low. Photo 15 depicts the surficial clays overlying the Austin chalk approximately 1/4 mile north of the West Portal.

The Texas Water Commission (TNRCC) maps, Major Aquifers of Texas and Minor Aquifers of Texas locate the subject property above the Trinity (downdip) and Woodbine (downdip) Aquifers, the former being the more significant and deeper of the two. Due to poor hydraulic communication between potential shallow, perched groundwater and deeper usable aquifers, the local surface recharge rate of these groundwater features is minimal. Some water is occasionally encountered in the cracks and fissures of the limestone formation, especially the upper, weathered section. Local shallow subsurface flow is undetermined but is assumed to generally follow topography. Assuming uniform weathering and surface top soil/clay coverage over the unweathered chalk, subsurface flow would be expected to drain generally east and northwesterly from the center of the subject property, generally conforming to pre-development surface contours. However, without a thorough hydrogeologic investigation, it would be imprudent to estimate the likelihood for the presence of on-site subsurface contamination the origins of which are from offsite areas.

A review of readily available subsurface investigations in the area revealed the following geologic observations:

A) Aviall Fuel Farm on the Addison Airport
(Approximately 1/2 mile south of the site)

"The surface material consists of a black alluvial clay layer approximately three feet thick. This is a plastic clay of very low permeability. . A soft limestone of at least ten feet in thickness underlies the clay layer. A blue rock was mentioned as being present at about 13 feet below ground surface in one excavation."

Preliminary Investigation of Suspected Leaking Underground Motor-Fuel Storage System
North American Consultants, Inc.
September 1987

B) AER Manufacturing, 3420 Wiley Post Rd.
(Approximately 1/2 mile southwest of the site)

"Groundwater was observed to be seeping into the tank hole in several locations from a shaly, fissile, calcareous clay located at a depth of approximately nine feet.

A dark gray, plastic, silty clay (CL) was observed to a depth of approximately five feet. The dark gray silty clay graded into a tan silty clay (CL) that extended to the bottom of the excavation. At a depth of approximately nine feet, the clay is shaly. At this depth several seeps were observed in the walls of the tank hole."

UST Closure/Removal Report
AER Manufacturing, Inc
RERC Environmental, Inc.
June 1994

C) Homelite/Textron, 1900 Surveyor
(Approximately 1/2 mile southwest of the site)

"Naturally occurring rock in the area is located at a depth of approximately three feet below grade. Water was originally detected at 3.5' below grade...it is believed that this water is...perched water." This report associates the perched water with a city of Addison water line break.

Site Closure Report
JMA, May 1993

D) Raleigh Blakely Hangar (55), 16445 Addison Road
(Approximately 1/2 mile north of the site)

"...a dark brown/black/gray clay to a depth of approximately 3 to 8 feet. Below the clay, a weathered tan/gray chalky limestone was encountered which graded to a competent dark gray chalk...each of the three wells were

dry. The soil cores did not exhibit hydrocarbon odors or staining. Several volatile organic compounds were detected in [a boring near the south property line]...The analytical testing data for inorganic analysis identified several trace metals...in all three borings."

Phase I and Phase II Environmental Site Assessment
for the Property Located at 16445 Addison Road
ENSR Consulting, March, 1994

III.3 Description of Structures, Other improvements, Roads

The subject property has been in heavy commercial or industrial use for some time, particularly the eastern portions that have been used by airport support facilities including hangars, maintenance shops, runways and aprons, etc. The surrounding land has been extensively urbanized and is presently in commercial/industrial use. No surface water drains onto the subject property from outside the airport, except on the very westerly portion where a small business (office) development drains northerly across the existing Keller Springs Road. The subsurface is generally a dense clay overlying a competent, relatively impervious bedrock material. Subsurface drainage is assumed to follow pre-development topography. The impact of historic airport/industrial site uses, as well as those of adjoining properties cannot be determined within the scope of this assessment.

Generally all types of utilities were found on the site. Water, wastewater, overhead power, airport tower subsurface control lines, subsurface natural gas lines, storm sewer systems, overhead and subsurface telephone lines exist to the east of the airport. Transformers were observed to be present on two poles in close proximity to the site, east of the airport. West of the airport, similar utilities were observed including a pipeline, subsurface power and transformers on power poles. For the purposes of this report, it was assumed that all utilities, including water service lines, sanitary sewer lines, storm sewers, gas and electric lines, or other communications and utility lines and trenches would be identified and located during the course of the overall project execution.

III.4 Information Based on Experience and Knowledge

Mr. Morales, airport engineer, has been at the airport since approximately 1970 and stated that there have never been any petroleum storage tanks (PSTs) of any type on the airport other than the fuel farm located at the southeast corner as described by Mr. Ginn (V.2). Several conversations were held with Mr. Morales to confirm that, to his knowledge, there were no past storage tank leaks or other impairment that might affect the proposed work. The Addison Airport is in the process of completing a group National Pollutant Discharge Elimination System permit which addresses typical surface pollutants. However, it was not available for review at the time this report was prepared.

III.5 Current Uses

The site of the proposed Keller Springs Toll Tunnel is located almost entirely on Addison Airport property, except for the most westerly expansion over the present portions of Keller Springs. As described in Section III.3, the site is predominantly used for airport and allied industry uses. The eastern portion of the tunnel is located very near areas of profuse industrial chemical users, predominantly aviation related maintenance facilities. The presence of underground utilities, including sewer, potable and fire suppression water, gas, electric, telecommunications, etc. should be located and planned for accordingly during the planning and design stages of any type of land development project located on or near this site.

III.6 Current and Past Uses of Adjoining Properties

A review of public records, review of aerial photography, interviews and field observations were made to confirm the present land use surrounding and impacting the subject facility. The land uses immediately adjacent to the property are, for the most part, either airport, airport-related support industries or other commercial/industrial/retail facilities.

IV. Record Reviews

IV.1 Sources of Information

State and Federal level environmental databases were researched for records that might indicate potential for site contamination on or near the subject sites. The EPA databases reviewed include the following:

- EPA Resource Conservation and Recovery Act (RCRA) Hazardous Waste Registration Listing Report - data extracted November 29, 1994;
- EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) - data extracted April 18, 1994;
- EPA Toxic Release Inventory (TRI) Database for the reporting years 1987 through 1992;
- EPA Facility Index System (FINDS) Database - data extracted November 29, 1994.
- EPA Civil Enforcement Docket - data extracted January 25, 1995;
- EPA Emergency Response Notification System (ERNS) - data extracted January 2, 1995;

State environmental databases, administered by the TNRCC reviewed include;

- TNRCC Petroleum Storage Tank Database - data extracted January 12, 1995;
- TNRCC Leaking Tank Sites (LPST) Database - data extracted January 12, 1995;
- TNRCC Spill Response Database - data extracted January 11, 1994;
- TNRCC Municipal Solid Waste Facilities Database - data extracted January 13, 1995;

- TNRCC (and TDH) Hazardous Materials Storage (HMS) Database for the reporting years 1987, 1988, 1989, 1990, and 1991;

- TNRCC State Superfund - data extracted January 12, 1995.

Other reference materials utilized in the preparation of this report include:

- Soil Survey, Dallas County, Texas, February, 1980, United States Department of Agriculture, Soil Conservation Service and the Texas Agricultural Experiment Station;

- Geologic Atlas of Texas, Sherman Sheet, 1967, University of Texas, Bureau of Economic Geology;

- Historic aerial photographs from 1957, 1963, 1965, 1971, 1975, 1979, 1980, 1982, 1984, 1986, 1988, 1990, 1991, 1993, and 1994;

- National Flood Insurance Program, Flood Insurance Rate Map (FIRM), City of Addison, Texas, Dallas, County, Community Panel Number 481089-0005-A, July 16, 1980, U.S. Department of Housing and Urban Development

- United States Geological Survey (USGS) Quadrangle maps;

- Texas Department of Transportation (TxDOT) Highway maps;

- Dallas *MAPSCO*© (1995);

- Addison Airport of Texas, Inc., Facility Layout Plans (prepared by Greiner, Inc, 1993).

IV.2 Reference Material Discussion

The information found in the various local, state and federal databases, has been summarized and incorporated into the Site Reconnaissance and Interview discussion included as Section V.1.(a & b).

Soil Survey Map (See Figure 2) - The majority of the airport falls within the Stephen-Urban land complex (SCS identifying code 69), with typical slopes of 1% to 4%, consisting of a moderately slow permeability, low water capacity, very dark brown silty clay approximately 14 inches thick, overlying the Austin Chalk geologic formation. On the eastern side of the airport west of the Keller Springs/Addison Rd. intersection are two other soil classifications of equal distribution (in relation to the proposed ROW). The Dalco-Urban land complex (SCS identifying code 24), with typical slopes of 0% to 3%, consists of moderately deep, moderately well drained soils, slow permeability, low water capacity black clay between 26 inches to 36 inches deep. The Houston Black-Urban land complex (identifying code of 45), with typical slopes of 0% to 4%, consists of moderately well drained, slow permeability, high water capacity, dark gray to dark grayish brown clay between 6 inches to 70 inches deep.

Geologic Atlas of Texas - Refer to Figure 3, and Section III.2 of this report for a complete description of the geology found at this site.

Historical Aerial Photographs - Several aerial photographs dated 1957 to 1993 were available at the administrative office of the Addison Airport. Additional aerial photos dated 1963 to 1994 were also obtained from other sources, some of which are attached (Appendix A). The photographs generally indicate a commercial and industrial development around the airport.

National Flood Insurance Program, FIRM (See Figure 4) - The FIRM maps provide an explanation for each of the designations shown on the map. The Addison airport lies completely within the zone designation "C". The FIRM provides the following definition for Zone C: "Areas of minimal flooding.(No Shading)". A FIRM zoning classification of "B" is shown on the far east side of the drawing. It also provides the following definition: "Areas between limits of the 100-year flood and 500-year flood: or certain areas subject to 100-year flooding with average depths less that one(1) foot or where the contributing

drainage area is less than one square mile: or areas protected by levees from the base flood. (Medium shading)". The zone "B" fingers are located 2,000 feet to 3,000 feet downstream of the subject property.

U.S.G.S. Maps (See Figure 5) - The site area under review appears to be at the geographical high point with drainage being directed either west or east, away from the runway. Further discussion is provided under Section III.2 Site and Vicinity Characteristics.

Texas Highway Dept. Map, Mapsco, and Facility Layout Plan information has been incorporated within this report.

IV.3 Historical Use (Aerial Photographs)

Historical photographs generally spanning the history of the Addison Airport and its surroundings were reviewed. These include large scale color, as well as black and white, photographs which were reviewed at the airport as well as photographs which were commercially available. The airport photos included the years 1957, 1965, 1979, 1982, 1986, 1988 and 1993. Commercial photographs (a portion of which are poor quality pictures) include the years 1963, 1971, 1975, 1980, 1984, 1990, and 1994.

The photographs indicate that substantial commercial and industrial growth occurred after 1971 with a major increase between 1975 and 1980. By 1979 the auxiliary runway (NE to SW) had been removed and an extension north to the main (SSE to NNW) runway and an expansion to the west constructed causing the relocation of Midway Road. From these photos, several "Areas of Concern" were identified, which include:

1. A property to the west of the airport, north of the proposed ROW, on Kellway Circle, appears to contain construction debris. Construction debris appears to have collected since 1982, with what appeared to be a major drum storage area in the 1986 photograph. The following photograph of 1988 indicates only construction debris.

2. A property to the west of the airport, south of the proposed ROW, at the corner of Midcourt and Chennault, appeared to have a large warehouse in

the early '80's, which does not appear in the 1988 photograph. This facility appeared to have stored drums in the earlier photographs. The area is now a vacant lot and raised grassy knoll.

3. A property to the west of the airport, south of the proposed ROW, located between Midway Dr. and Wright Brothers Dr. is presently a fence company and may have been since it first appeared in a 1965 photograph. In both the 1982 and 1988 photographs this area appeared to have been utilized to store drums and debris. In the 1988 photograph the property appears to undergone a major cosmetic improvement. This property continues to store material, but does not appear to be as cluttered as before.

4. A property to the west of the airport, south of the proposed ROW, located on Lindberg Dr. and adjacent to the ST-L & SW R.R. is presently Mayflower Storage Co. property. In photographs dating from 1965, 1979 and 1982, it appears to have been utilized to store a large quantity of drums. The appearance of the facility has not improved dramatically. Large containers are now stored on site.

5. A property just south of the airport runway, in the triangular area formed by the East/West railroad and North/South railroad intersection, appears to have been utilized to store large amounts of debris based on the photographs dated 1979, 1982 and 1986. By 1988 the photographs indicate the area had been cleaned.

6. A property to the west of the airport, south of the proposed ROW, and located on Surveyor Lane adjacent to a R.R. Spur appears to have stored heavy construction materials in an unorderly fashion through 1982. The 1988 photograph indicates a more organized facility.

7. An area, now located between Ratliff and Glenn Curtiss Roads, west of Addison Road, appeared on photographs prior to 1986 as containing some type of above ground storage tanks or small utility buildings. These were later identified to be quonset huts owned by a construction company, perhaps United Contracting.

V. Information from Site Reconnaissance and Interviews

V.1 Site Reconnaissance

Mr. Victor Zepeda, P.E., R.E.P., and Mr. Troy Hotchkiss, E.I.T. visited the subject site and surrounding area several times during April, 1995, as described in the site visit table below.

TABLE 2
SITE VISITS - ADDISON AIRPORT TUNNEL

PERSONNEL	DATE	PURPOSE
V. Zepeda	April 12, 1995	Drive airport vicinity
V. Zepeda, T. Hotchkiss	April 13, 1995	Meet w/ Mr. Morales, review aerials
T. Hotchkiss	April 19, 1995	Meet w/ Morales (postponed)
V. Zepeda, T. Hotchkiss	April 20, 1995	Meet w/ Mr. Morales, 30 minute FAA AOA Safety course, drive airport
T. Hotchkiss	April 26, 1995	Site Reconnaissance, photos

V.1.a Immediate Vicinity

Photographs were taken during the April 26, 1995 site reconnaissance by Mr. Hotchkiss. The site was observed to be generally as described in previous sections, although access was not gained to the majority of the site proper due to on-going air operations. Four fuel tanker trucks (approximately 3000 gallon) painted with Phillips 66 markings were observed on the apron adjacent to the Beechcraft hangar, approximately 500 feet west of the proposed East Portal (Titled "*Figure 3, HNTB*" Appendix D). Please refer to Photo 1. At the eastern end of the Beechcraft apron, against the chain-link fencing, were several drums with undetermined contents. These may provide intermediate storage for spent solvents and other unknown liquid waste generated by the facility as part of their operations.

A tanker truck, similar to those described above, bearing Stern Air markings, was located in the farthest northeast corner of the Jetway (formerly Stern Air) parking lot, very near station 25+00 on the above referenced Figure. At the north end of Hangar Six, immediately south of Jetway, an above ground storage tank (approximately 250-gallon) was located, see Photo 2. Most of the hangers presently in the proposed ROW are occupied by either aircraft or miscellaneous private storage facilities of an unknown nature. These hangers were observed to be occupied by numerous boxes, files, miscellaneous shelved materials of undetermined nature, etc. Outside these buildings, numerous steel drums were observed, their contents and purpose undetermined, but one of them was stenciled "JET - A", see Photo 3. Although probably used for general refuse containment, they may be temporary storage for solvents, degreasers, spent or excess fuels, etc. and could be considered as potential sources of environmental contamination.

Several facilities located adjacent, or very near, to the southwestern corner of the Addison Airport property are, or have been, in light to heavy industrial use. These include:

Plastech Corp.	15606 Wright Bros.	Toxic Release Inventory, SSTS
Prestolite	4103 Lindberg	Toxic Release Inventory
Details, Ltd	15508 Midway	RCRA small quantity gen., transporter
Image Ind	4213 Wiley Post	RCRA small quantity gen.
International Auto	15605 Wright Bros.	RCRA large quantity gen., transporter
Midway Press	4319 Lindberg	RCRA large quantity gen.
WO Bankston	4300 Lindberg	RCRA small quantity gen.
Circuit Automation	3970 Lindberg	RCRA large quantity gen., violator

The Addison Airport fuel farm is located at the southeast corner of Addison Airport proper, fronting on the west side of Addison Road, south of Roscoe Turner. A review of current TNRCC Underground Storage Tank Listing records revealed 31 registered USTs at the facility. It should be noted that the address for these tanks was reported as that of the owner, not the physical location of the tanks. The site visit revealed 31 snorkels, apparently confirming the presence of that number of tanks. Photos 12 through 14 depict the various tank groups, each owned and operated by separate entities, within the general area of the fuel farm.

Several documented leaking tank removals, piping upgrades, and tank overfilling accidental releases have been associated with this tank farm. These accidental releases have reportedly been remediated with the knowledge of the TNRCC, but absent from the many corrective action, site remediation, and enforcement action plans reviewed were any type of groundwater contamination or hydrogeologic characterization study.

The exception to this was a *Phase I Hydrogeologic Investigation* prepared by ATEC on behalf of Aviall and the Addison Airport in January, 1988. This investigation apparently focused on the northernmost group of tanks, now evidently owned by Cornerstone Fuels. The investigation included twelve soil borings (five of which were converted to monitor wells) and none encountered water during the boring activities. After some time, the wells were observed to have one to two feet of water in the wells, which the author explained as the result of recent heavy rains. No hydrogeologic conclusions were drawn from this observation, or any others during in the entire study. It was noted that highly elevated levels of petroleum hydrocarbons were observed in the soils from almost all borings, most notably a concentration of 1340 ppm in a boring approximately 50 feet northwest of the tank hole. This indicates that contamination was clearly not confined to the tank hole as originally thought. Neither the source nor the extent of the contamination was characterized.

It was also noted during the site visit that two capped surface completions, apparently tank access pipes, were observed within the Jetway (Stern Air) compound at the fuel farm. These may be the two 12,000 gallon tanks reported to be in violation of the tank closure rules noted from the records review. Monarch Air, at 4580 Claire Chennault, reported the removal of a 250 gallon used oil and solvent underground storage tank in July of 1994. This address is listed in the TNRCC Underground Storage Tank Listing

database as Campbell Aviation Services, although Monarch Air is listed in the local telephone directory at the address given above. Addison Aircraft Storage is reported to have two underground storage tanks at 4584 Claire Chennualt. Addison Aircraft Storage and Monarch Air correspond to hangars No. 63 and 64 respectively on the *Airport Layout Plan* (Greiner, February, 1993).

Several printers and what appeared to be a large janitorial supply company are located on Keller Springs immediately east of the subject property. No RCRA or State listings for these facilities were noted during the database research.

V.1.b Surrounding Area

Several hundred feet north of the eastern end of the proposed toll tunnel are located several light industrial facilities in the vicinity of Glenn Curtis and Ratliff Roads. The facility, identified from aerial photography, located at the northwest corner of Glenn Curtis and Addison Road was observed to be a vacant lot with distressed vegetation. Mr. Neal Gayden (City of Addison) identified the facility as United Contracting. No other heavy industrial activities were observed at the eastern end of the proposed tunnel location.

The western portion of the proposed tunnel location is also in a heavily industrialized area, especially to the south and west. All development in the project area adjacent to Keller Springs west of the West Portal ("*Figure 3, HNTB, Appendix D*") appears to be light commercial and retail in nature, with the majority being offices. However, the nature of the empty lot immediately northwest of the West Portal (at the northwest corner of the Dooley Road/Keller Springs intersection) is unclear. It was observed to have several large, concrete structures that appeared to be sidewalks or some other parking-related use. Photo 4 depicts an east-southeasterly view of this property. Mr. Don Lookadoo, a real estate broker representing EKL Realty Partners, the site owner, was queried about the site history, but could only offer that a previous owner had attempted to develop the lot/site for commercial use. He could not comment on the presence or absence, at any time, of USTs or other chemical storage facilities on the site.

Immediately north of the vacant lot is METCO, an undetermined, apparently retail venture and several automotive repair facilities, including Fast Eddy's Auto Shop, Allen's Towing Service and Auto Storage Lot, an un-named Auto Body Shop, and Royale Auto Service.

North of these, also on Dooley Road, is what appears to be a construction equipment storage yard. More than two dozen unmarked drums were observed in this fenced-in yard, see Photos 5 and 6. Surface water drainage from all these areas is to the north, away from the project site.

Farther north-northwest, at the northeast corner of Kellway Circle, a debris pile containing what appeared to be varying amounts of soil, concrete, tires, and other demolition debris was observed between the airport boundary fence and an unnamed warehouse parking lot, see Photo 7. Immediately east and south of the debris pile is a construction equipment storage yard, including an apparent aboveground storage tank, enclosed by an approximately eight foot high wooden fence, see Photo 8. This yard may belong to Housley Communications, who occupies part of the building fronting on Kellway Circle, near the entrance to the yard.

Approximately 400 feet south-southeast of the West Portal is the Addison Airport Air Traffic Control Tower (ATCT). In 1989, the FAA removed a 500 gallon UST from the ATCT, probably the fuel supply for an emergency generator. According to the TNRCC regional inspector, there had been no apparent release of fuel from the tank.

Approximately 600 feet south of the proposed Toll Plaza, generally between Midway and Dooley Roads is an industrial-appearing facility, N. J. Nalin. This facility was not listed on the database search and had no outward appearance of environmental threat. A listing for American Coldset at 15879 Midway may refer to this facility. American Coldset is listed as a small quantity generator of hazardous waste.

Approximately 300 feet northwest of the Keller Springs/Midway Road intersection is Service King Collision, an automotive repair shop listed as a small quantity generator of hazardous waste on the RCRIS database. No enforcement actions or violations were reported against this facility. About 500 feet north of Service King on Midway is located Midway Auto Painters. This facility did not appear on any of the regulatory files reviewed. Both facilities are topographically downgradient from the project site.

To the west of Midway Road on Keller Springs, there are several retail and light commercial businesses, including two printers. One, Spinner Printing, is listed as a small quantity generator of hazardous waste. The other, Prestige Printing, is listed as a

Conditionally Exempt Waste generator. Both facilities are topographically downgradient from the project location. Also near these facilities is the Gammon Group, a circuit board manufacturer with no regulatory history of violations, although this type of facility regularly generates small quantities of hazardous wastes.

Arctic Insulation, several hundred feet south of the Midway/Keller Springs intersection at 2105 Midway, is listed as RCRA transporter of waste from its own facilities. It has no record of violations on the databases reviewed. Near this location are two cosmetics manufacturers, Beauticontrol Cosmetics (3311 Boyington) and Jeri Jacobus Laboratories (2101 Midway). The former facility is listed as a small quantity generator of hazardous waste while the latter appears on the FINDS database as being listed on the EPA civil judicial enforcement docket. Several attempts were made to contact this facility for further information, but they could not be reached.

Approximately 800 feet south of the proposed project on Dooley Road, an un-named building/hangar corresponding to building No. 92 on the *Airport Layout Plan* (Greiner, February, 1993) was observed with an aboveground storage tank and three snorkels indicative of three USTs, see Photo 9. On the *Airport Layout Plan*, building No. 92 belongs to Beltway Construction and this facility is crosslisted with Beltway Construction on the Petroleum Storage Tank Database as Beltway Development Co. at 4055 Dooley. This record also indicates that three USTs are associated with this facility. This facility is referred to as the Beltway Development Service Center in the local phone directory.

Farther south and west of the proposed project site are many large industrial manufacturing operations, several of which have been under State enforcement for RCRA violations. The known RCRA violators are all more than a half mile from the project site and are downgradient topographically. Those facilities with an enforcement record are:

TXD007507775 AER MFG INC	3420 WILEY POST RD	CARROLLTON
TXD981052277 AER MFG INC	1605 SURVEYOR BLVD	CARROLLTON
TX0000817924 AER MFG INC	3325 WILEY POST RD	CARROLLTON
TXD030156871 TEXAS FINISHING CO	1801 SURVEYOR BLVD	CARROLLTON
TXD021675673 CIRCUIT AUTOMATION, INC	3970 LINDBERG DR	DALLAS (ADDISON)

The violations are described in the database search as "Generator-All Requirements", usually referring to permitting of non-permitted operations. A review of the State files confirms that these facilities were operating at one time outside of RCRA permitted standards. No enforcement actions were noted for unauthorized discharges of hazardous wastes.

A facility that appeared as an equipment yard in historical aerial photos at the southeast corner of Midcourt and Chennault in Carrollton is now a grassy mound. No historical information could be ascertained to evaluate the site. Forney Corporation, at 3405 Wiley Post, was observed to have many drums of un-identified waste behind its manufacturing facility, near its igniter testing facility, see Photos 10 & 11.

At Plastech, 15606 Wright Bros., a 1,000 gallon tank was removed and reported to not be leaking by Mr. Buck Stout, Vice President of Petko Construction of Addison. There are many RCRA facilities located in an industrialized section between Midway Road on the east and Surveyor on the west in Carrollton. For brevity, these are not listed here and according to Mr. Hudson (see following sections) these are generally considered to be environmentally benign.

Several other leaking tanks were located within one mile of the subject property, see Figure 6. Other than the Addison Airport tank farm, the C-Store, at 16601 Addison Rd., is the nearest reported LPST to the subject property. This facility was identified by Martha Britton of the TNRCC Region 4 office as well as a Phase I/II report provided to HDR by Mr. Edward Morales, Operations Manager of the Addison Airport. From review of these sources, the C-Store appears to have discovered leaking UST piping which was replaced in April, 1993. The facility is still under a TNRCC order to perform a site characterization, although no report was located in the facility files nor did Ms. Britton have any knowledge of ongoing enforcement at the site.

V.2 Interviews

Mr. H. Wayne Ginn, P.E., consulting engineer

Mr. Ginn, former Town Engineer for Addison and prime consultant to the Addison Airport, was contacted to ascertain his knowledge of underground storage tanks,

surface spills, or other significant impairments to the project site. He had no knowledge of leaks or U.S.T's within the study area. The closest spill which he remembered was at the corner of Roscoe Turner Dr. and Addison Rd., he indicated that the airport's tank farm was at the southeast corner of the facility, immediately north of the Addison Post Office. He indicated that Mr. Stuart or Mr. Morales of Addison Airport would be the persons responsible for environmental compliance issues at the airport proper.

Mr. Edward Morales, Assistant Operations Manager, Addison Airport

Spoke to Mr. Morales concerning the same issues outlined above. He has been at the airport since approximately 1970 and stated that there have never been any PST's of any type on the airport other than the fuel farm located at the southeast corner as described by Mr. Ginn. Several conversations were held with Mr. Morales to confirm that, to his knowledge, there were no past storage tank leaks or other impairments that might affect the proposed work.

Mr. Sam Stuart, Operations Manager, Addison Airport

Mr. Stuart is the son of the airports founder and was contacted to gain his knowledge concerning historical issues. He deferred to Mr. Morales for all issues concerning environmental compliance.

Mr. Neal Gayden, Town of Addison Environmental Health Inspector

Mr. Gayden was contacted to ascertain his knowledge of underground storage tanks, surface spills, or other significant impairment for the proposed work area. He stated that there have been many surface spills at the Addison Airport Tank Farm. He also indicated that there have been multiple tank replacement operations at the facility. Mr. Gayden informed HDR that tanks installed into the competent bedrock in the area were not a threat to the environment because the rock was essentially impermeable.

The leaking lines at the "Mr. C" store at 16801 Addison Road were also characterized by Mr. Gayden as not being an imminent threat due to the relatively small and confined nature of the release. He confirmed the presence and ongoing replacement of tanks at the "7-11" store at the corner of Addison and Arapaho Roads, and brought to our attention the former Ashland Chemical site near the corner of Arapaho and Quorum, where that company reportedly operated several storage tanks. However, Mr. Gayden did not know the type or contents of the alleged tanks. He did indicate that several Phase II investigations of the site had been conducted apparently for the purpose of developing the land for a hotel, but that no construction was planned in the near future.

Mr. Gayden indicated that the Elfab site southwest of the airport, near the Carrollton industrial district, had undergone groundwater remediation in the late 1980's. Apparently, the facility produced printed circuit boards and had contaminated the groundwater with copper sulfate. Mr. Gayden stated that the remedial effort was completed in 1989.

The current location of the Mayflower trucking depot had, for as long as Mr. Garden could remember, always been some type of trucking operation and had never been used for heavy industrial uses. He also stated that the structures revealed in aerial photography between Ratliff and Glenn Curtiss, west of Addison Road, were quonset huts owned by a construction company, perhaps United Contracting.

Mr. Scott Hudson, City of Carrollton Environmental Health, Industrial Inspector

Like Mr. Gayden, Mr. Hudson was interviewed to gain his knowledge of historical potential sources of environmental contamination in the Carrollton industrial sector west and southwest of the Addison Airport.

He stated that Texas Finishing had several enforcement problems, mostly concerning poor management practices and records keeping. That facility apparently discharges wastewaters to the City septic sewer, with a record of permit violations for exceeding pollutant limits. They also are operating under an air permit and utilize an afterburner.

Mr. Hudson also commented on several other Carrollton facilities, including Forney Engineering, which produces diesel fueled igniters for coal fired power plants. He indicated that they had storage violations for fuel tanks in 1992 and operate under an Air Standard Exemption for igniter testing purposes. Apparently, there have been many complaints when the igniters fail and diesel fuel is released to the air.

Concerning AER manufacturing, Mr. Hudson said that despite minor sanitary sewer industrial discharge violations he was not aware of any major environmental violations. He did mention that they have historically had State violations for various record-keeping and other requirements concerning solvents and metals.

Homelite Services was reported to have a minor LPST cleanup that was confined to surface soils. The Steve King Auto shop, north of the airport, was reported to have minor PST and surface discharge violations.

Ms. Jackie O'Neil, Jetway Incorporated (formerly Stern Air)

Ms. O'Neil was interviewed in person regarding the presence of USTs at Jetway (Stern Air). She informed us that, to her knowledge, no USTs were allowed on the airport proper and that Jetways tanks were in the Addison Airport fuel farm. She indicated that all USTs associated with the airport were in the fuel tank farm at the southeast corner of the airport. She also went informed us that Jetway did use small amounts of industrial solvents and other chemicals, but that these were temporarily accumulated onsite until their removal by an EPA-registered hazardous waste hauler.

Mr. Doug Thompson, Operations Manager, Texas Utilities

Mr. Thompson indicated that, to his knowledge, there were no spills of PCB containing material, or other controlled substance, by Texas Utilities near the Addison Airport.

Ms. Carolyn Beard, Texas Finishing (Baker Metal Products)

Ms. Beard could not be reached by phone for comments regarding reported RCRA violations. Several massages were left with her assistant.

Mr. Rex Rayfield, Plastech

Like Ms. Beard, Mr. Rayfield also could not be reached despite several attempts to contact him.

Mr. Jerry Wisenhower, Prestolite

Mr. Wisenhower indicated that Prestolite no longer operated that facility, but that it had some time ago. The predominate activity was the assembly of various types of machinery. He could not address any potential environmental concerns regarding the facility other than to say that it had not been under regulatory enforcement.

Shafi Parekh, Yoplait

Mr. Parekh also could not be reached as Yoplait no longer uses the facility.

Mr. Rich Linamen and Mr. George Sarek, Lachel & Assoc.s, Inc., Consulting Engineers

Mr. Linamen and Mr. Sarek described the results of the geotechnical investigation program. Eighteen exploratory borings were drilled to determine the geologic conditions along the proposed tunnel alignment. The geologic profiles for the west and east portal areas developed by LAI are attached (Appen. C). The geologic interpretation which they provided is specifically focused on the proposed ROW. They also provided a subsurface interpretation, which was very helpful in estimating the possible impacts of spills and leaks affecting the ROW. Prior to this meeting and discussion, several facilities located east and west of the portals were identified as possible areas of concern, which could affect the ROW purchase.

We discussed the impacts of possible subgrade contamination flowing from the various facilities described as Areas of Concern in Sections IV and V and compared these to the geologic conditions. Between the portals the alluvial is approximately 1 foot in depth lying atop the Austin chalk formation, with the crown being approximately center. This would provide good drainage away from the crown, toward both the east and the west. Possible impacts to the west portal appear to be minimized. The west portal was described as having a deeper alluvium and a subgrade providing drainage away from the portal and the proposed ROW, in southwesterly direction. The soils west of the west portal have been described as consisting of a top layer of 5 feet of alluvial grading to residual and underlain by 8 feet of moist soft medium plasticity clays. The soils east of the east portal have been found to consists of 1 foot of soft clays (top layer), 9 feet of stiff clay (underlying the top layer), underlain by 3 feet of weathered limestone, all considered as residuals on top of unweathered limestone. Further east toward Addison Road, it appears as though the layering of soils consists of 5 feet of upper clays with 3 feet of weathered chalk, possibly causing a tub effect for any subgrade liquids east of Addison Road.

VI. Findings and Conclusions

Based upon a cursory review of environmental regulatory databases, site visits, and other readily available materials the project site appears to have been in industrial use (airport operations) for over 35 years. Also, the areas in the vicinity of both ends of the project site are heavily industrialized. Due to limited knowledge of subsurface conditions, the potential for impact to the project site by subsurface contamination from offsite facilities cannot be fully estimated, but the route for potential migration appears to exist. Because the area has been industrialized for at least 30 years prior to the development and implementation of safe hazardous materials and petroleum product handling practices, it cannot be concluded that there have been adverse environmental impacts without further investigation for the presence of subsurface contamination.

The ROW exhibits no outward indications of serious environmental impairment and this investigation has not identified any environmental impairment that would cause us to recommend the Authority not purchase these properties. However, only through more

exhaustive research, sampling and site history review can an opinion with respect to adverse environmental impacts be prudently rendered. Many of the documents reviewed concerning operations of facilities in the vicinity of the ROW were not available and many of those that could be reviewed were incomplete. Several reports were in conflict with each other, as was some of the information supplied by those people interviewed. Therefore, we recommend that prior to development of these properties the following activities be undertaken:

- Obtain water quality samples from existing piezometers (installed by LAI).

- Develop a phase II sampling (intrusive) program, testing for hazardous substances and petroleum products on the subject property

    - east of the runway to Keller Springs Rd., in and around the various buildings which will be displaced,

    - directly south of the construction storage area identified in Section IV.3.1, west of the runway,

    - south boundary of the ROW, west of the west portal directly north of the property identified as Building No. 92 (Greiner Report), shown in Photo 9 and described in Section V.1.b of this report, and

    - construction materials storage area immediately west of the airport, north of the proposed ROW.

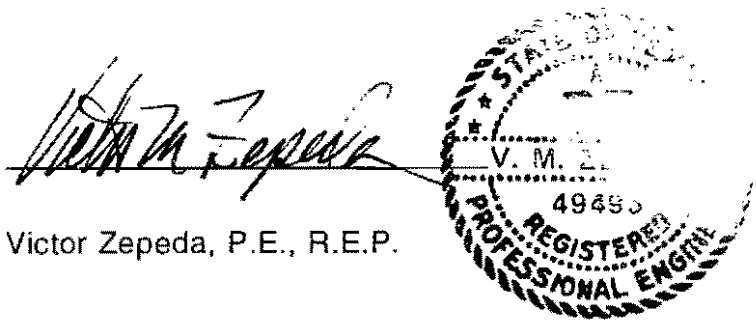
- A Title survey reflecting the subject property(s) for at least fifty years.

- General cleanup by current owners to include removing all containers, tanks, drums, scrap and debris from the property which are not currently necessary to the operation. Further inspection of surface debris may identify additional hazardous materials which may lead to additional information regarding past disposal operations and management methods conducted on site.

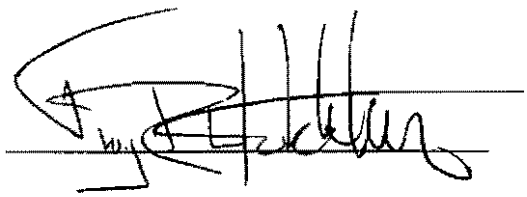
- Asbestos Investigations to examine the interior of the hangars and buildings for asbestos containing materials.

The presence or absence of subsurface contamination cannot be determined from this study, but the present facility and surrounding land uses warrant caution prior to ROW acquisition.

VII. Signatures of Environmental Professionals



Victor Zepeda, P.E., R.E.P.



Troy Hotchkiss, E.I.T.

TABLES

Table 1
Database Survey

R-code	T-code	F-code	P-code	L-code	S-code	W-code	H-code	EPA	ID #	Facility	Street Address	City	Zip
R1		F1	P10					TXD	7507775	AER MFG INC (RCRA violator)	3420 Wiley Post Rd	Carrollton	75006
R2			P9					TXD	981052277	AER MFG INC	1605 Surveyor Blvd	Carrollton	75006
R3		F2					H4	TXD	817924	AER MFG INC	3225 Wiley Post Rd	Carrollton	75006
R54		F3						TXD	92943612	Arctic Insulation	2105 Midway Rd	Carrollton	75006
R4		F5					H5	TXD	988074118	Beauticontrol Cosmetics Inc	3311-400 Boyington	Carrollton	75006
R5		F7						TXD	981913700	Eurocare Autoworks Inc	3333 Earhart Dr Ste 380	Carrollton	75006
R6		F8						TXD	981058233	Eurowerks Inc	3151 Skylane Dr Ste 104	Carrollton	75006
R7		F9					H8	TXD	49397383	Forney Corp	3405 Winey Post Rd	Carrollton	75006
R8		F10						TXD	981592959	Frito-Lay Inc Carrolton QA	3237 Commander Dr	Carrollton	75006
R9		F12						TXD	982563603	Genesis Circuit Inc	2530 Tarpley Rd Ste 500	Carrollton	75006
R10		F13						TXD	981151954	International Auto Repair	2017 Surveyor Blvd	Carrollton	75006
R11		F15						TXD	56378615	Mix Printing Company	2000 Surveyor Blvd	Carrollton	75006
R12		F16						TXD	981901721	Mix Printing Company Inc.	2441 Midway Rd	Carrollton	75006
R13		F17						TXD	57356	Prestige Printing Inc.	3330 Keller Springs Rd Ste 220	Carrollton	75006
R14		F19					H2	TXD	102606746	Savin Corp	2389 Midway Rd	Carrollton	75006
R15		F20						TXD	988039699	Service King Collision	2309 Midway Rd	Carrollton	75006
R16		F21						TXD	778670	Sherwin Williams Co.	3330 Wiley Post Rd	Carrollton	75006
R17		F22						TXD	981156532	Spinner Printing Company	3335 Keller Springs Rd Ste 130	Carrollton	75006
R18		F23	P6	L1				TXD	982290082	Steve Kings Automotives	3151 Skylane Dr Ste 108	Carrollton	75006
R19		F25						TXD	988019832	Team Mad Dog Racing	3152 Skylane Dr Ste 101	Carrollton	75006
R20		F26						TXD	77617769	Technicon Instruments Corporation	3400 Wiley Post Rd	Carrollton	75006
R21		F27						TXD	981155583	Texas Body Works	2415 Midway Rd Ste 111	Carrollton	75006
R22	T1	F28					H7	TXD	30156871	Texas Finishing Co. (RCRA violator)	1801 Surveyor Blvd	Carrollton	75006
R23								TXD	982291403	Tom Pierce Body Works Inc.	3325 Wiley Post Rd	Carrollton	75006
R24		F30						TXD	981058423	Tru-Colors Concepts	3151 Skylane Dr Ste 107	Carrollton	75006
R25		F31						TXD	72610736	Watkins Ornamental Iron Inc.	3212 Skylane Dr	Carrollton	75006
R26		F32						TXD	75113043	Xerox Corp	1605 Surveyor Blvd	Carrollton	75006
R27								TXD	1649128	American Coldset Corp	15879 Midway Rd	Dallas	75244
R28								TXD	46981866	Carterphone Electronics	3970 Lindberg Dr	Dallas	75244
R29		F33						TXD	21675673	Circuit Automation Inc (RCRA violator)	4132 Lindberg Dr	Dallas	75244
R30		F35						TXD	59761544	Dallas North Office Supply Inc	15101 Midway Rd	Dallas	75244
R31								TXD	51108330	Details Ltd	15508 Midway Rd	Dallas	75244
R32								TXD	508540041	Displaytek Corp	4124 Billy Mitchell Dr	Dallas	75244
R33			P18					TXD	41089491	Elfab Corp	4200 Wiley Post Rd	Dallas	75244
R34								TXD	11965	Fibergate Corp	4112 Billy Mitchell Dr	Dallas	75244

note : Database information reflects data as reported to HDR by DATASITE ONLINE SERVICES.
R-code for RCRA ; T-code for TRI; F-code for FINDS; P-code for Petroleum Storage Tanks; L-code for Leaking Tank Sites, S-code for Spill Incident Sites; W-code for Municipal Solid Waste Records; H-code for Hazardous Material Storage.

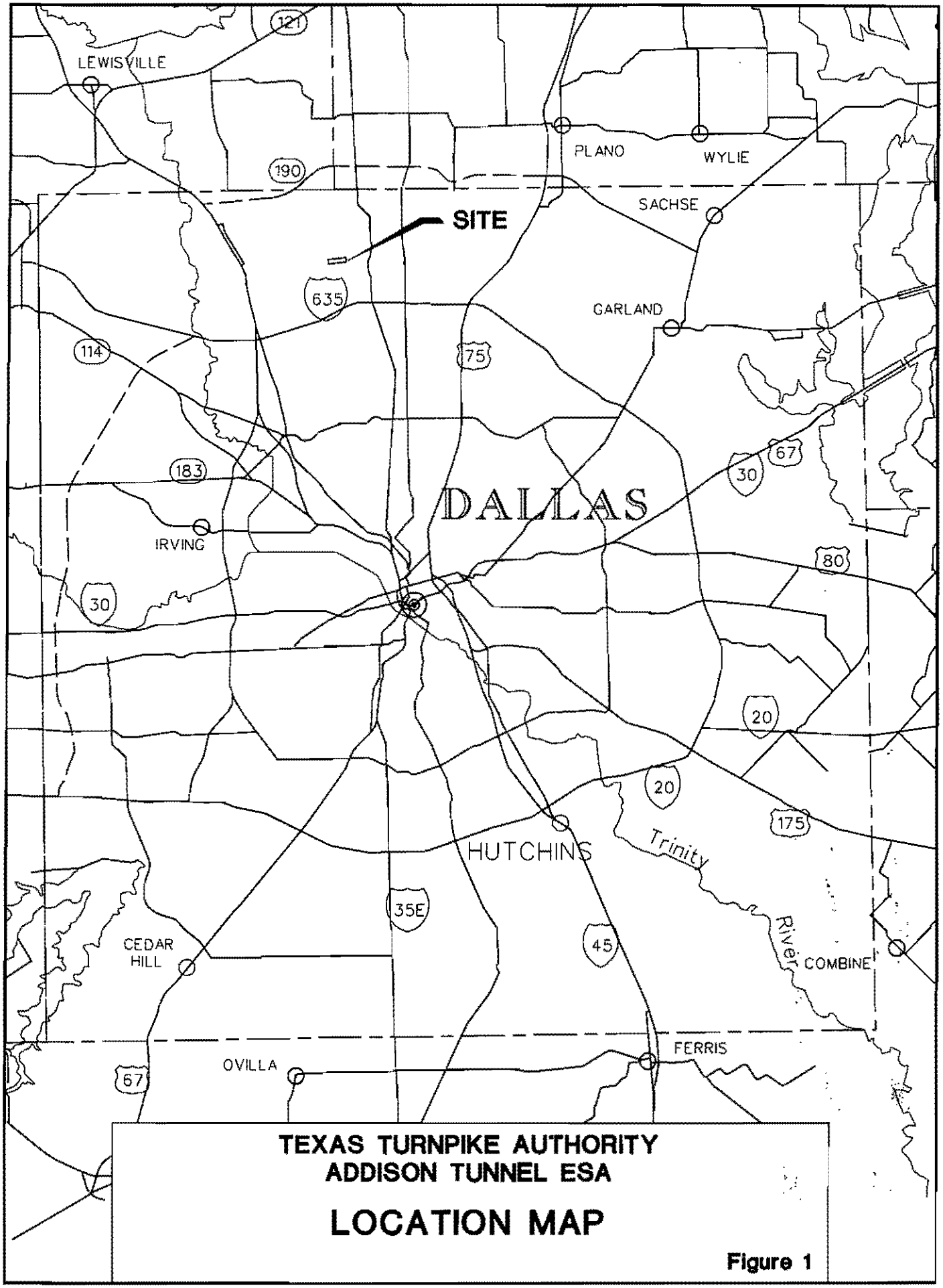
Table 1
Database Survey

R-code	T-code	F-code	P-code	L-code	S-code	W-code	H-code	EPA	ID #	Facility	Street Address	City	Zip
R35								TXD	50133669	Graco Inc	4159 Billy Mitchell Dr	Dallas	75244
R36								TXD	64144538	Image Ind	4213 Wiley Post Rd	Dallas	75244
R37								TXD	981053531	International Auto Repair	15605 Wrights Brothers	Dallas	75244
R38								TXD	981514482	J&J Mfg	3907 Lindberg Dr	Dallas	75244
R39								TXD	981058332	Leff Bros Auto Complex	4201 Kellway Circle Dr	Dallas	75244
R40		F36						TXD	988040242	Midway Press	4319 Lindberg Dr	Dallas	75244
R41		F39						TXD	988038253	Quest Medical Inc	4103 Billy Mitchell Dr	Dallas	75244
R42								TXD	988031621	Taylor Exxon	14330 Marsh Spgs Valley	Dallas	75244
R43		F40						TXD	981058415	Tru-Colors Concepts Inc	16304 Midway Rd	Dallas	75244
R44								TXD	982283848	WO Bankston Body Shop	4300 Linberg Dr	Dallas	75244
R45		F42						TXD	988019378	Air Systems Inc	16528 Westgrove Dr	Dallas	75248
R46								TXD	987981792	Airborn Inc	4321 Airborn Dr	Dallas	75248
R47								TXD	829366	Ashland Chemical Co	4904 Arapaho Rd	Dallas	75248
R48								TXD	988058889	Autohaus Hans Inc	15840 Addison Rd	Dallas	75248
R49								TXD	988034427	Dojdea Addison Facility	16423 Addison Rd	Dallas	75248
R50		F43	P33					TXD	766337	Million Air	4300 Westgrove Dr	Dallas	75248
R51								TXD	187354147	Rockwell International	4575 Claire Chennault St	Dallas	75248
R52		F44	P29	L5			H14	TXD	980748784	Shell Service Station	5304 Arapaho Rd	Dallas	75248
R53		F45						TXD	988061206	Stern Air	4553 Keller Springs Rd	Dallas	75248
	T2	F38						TXD	988078507	Plastech Corp	15606 Wright Brothers Dr	Dallas	75244
	T3							TXD		Prestolite Electric Inc	4103 Lindberg Dr	Dallas	75244
	T4	F41					H10	TXD	988058574	Yoplait USA	15100 Midway Rd	Dallas	75244
		F4						TXD	987970142	Barrier Chemical Corp	2017 Surveyor Blvd	Carrollton	75006
		F6						TXD	117452987	Country Express Cleaners	2155 Marsh Ln 108	Carrollton	75006
		F11						TXD	988065348	Gammon Group	3330 Keller Springs Rd Ste 200	Carrollton	75006
		F14						TXD	168595189	Jeri Jacobus Lab Inc	2101 Midway Rd	Carrollton	75006
		F18						TXD	21675699	Quest Medical Inc	3312 Wiley Post Rd	Carrollton	75006
		F24						TXD	51202836	Stylecraft Cleaners	2217 Marsh Ln	Carrollton	75006
		F29						TXD	981052277	Texas Instruments	1605 Surveyor Blvd	Carrollton	75006
		F34						TXD	13159074	Con Trac Packaging Inc	4130 Billy Mitchell Dr	Dallas	75244
		F37						TXD	980489397	Pak It Custom Packaging Co	15404 Midway Rd	Farmers Branch	75244
			P1					TXD		Budget Rent a Car Co	3350 Boyington Dr	Carrollton	75006
			P2					TXD		Jiffy Lube #642	1610 Marsh Ln	Carrollton	75006
			P3				H3	TXD		7 - Eleven #25436	2210 Marsh Lane	Carrollton	75006
			P4					TXD		Jiffy Lube #823	2625 Midway Rd	Carrollton	75006
			P5					TXD		Compass Computer Services Inc	2085 Midway Rd	Carrollton	75006
			P7	L3				TXD		Homelite Division of Textron	1900 Surveyor Blvd	Carrollton	75006
			P8	L2				TXD		Ctx Builders Supply	2800 Surveyor Blvd	Carrollton	75006

Table 1
Database Survey

R-code	T-code	F-code	P-code	L-code	S-code	W-code	H-code	EPA	ID #	Facility	Street Address	City	Zip
			P11					TXD		RAS #6-0275 (Exxon)	4191 Belt Line Rd	Dallas	75244
			P12							SSBA	4055 Belt Line Rd	Dallas	75244
			P13							Beltway Service Center	15800 Dooley Rd	Dallas	75244
			P14							American Transfer & Storage	4204 Lindberg Dr	Dallas	75244
			P15				H12			Coca-Cola Bottling Co. of N. T.	15200 Midway Rd	Dallas	75244
			P16							Educational Tours Inc	15510 Midway Rd	Dallas	75244
			P17							Peer Services	15465 Midway Rd	Farmers Branch	75244
			P19							Rod-Mar Inc	15605 Wright Brothers Dr	Dallas	75244
			P20							Waterworks Car Wash	15209 Addison Rd	Dallas	75248
			P21							Texas Pro Air	Addison Rd	Dallas	75248
			P22							Avis Rent a Car	15804 Addison Rd	Dallas	75248
			P23							Beltway Development Co	15280 Addison Rd Ste 300	Dallas	75248
			P24							Sternair Inc	Addison Airport	Dallas	75248
			P25							Addison Airport	15409 Addison Rd	Dallas	75248
			P26							Central Fire Station	4798 Airport Pky	Dallas	75248
			P27				H15			7-Eleven #22948	5403 Arapaho Rd	Dallas	75248
			P28	L6						Montgomery Ward	5402 Arapaho Rd	Dallas	75248
			P30							Campbell Aviation Services Inc	4580 Claire Chennault St	Dallas	75248
			P31							Addison Aircraft Storage	4584 Claire Chennault St	Dallas	75248
			P32							Addison Airport	4788 Roscoe Turner St	Dallas	75248
			P34							Bent Tree Country Club Golf	5201 Westgrove Dr	Dallas	75248
				L4						C-Store / Tom Welch	16601 Addison Rd	Dallas	75248
					S1					Computer Language Research	2395 Midway Rd	Carrolton	75006
					S2					Texas Power & Light	1601 Marsh Rd	Carrolton	75006
					S3					Aviall	4505 Claire Chennault St	Addison	75248
					S4					Aviall	4585 Claire Chennault St	Addison	75248
					S5					Groendyke Transport Inc	15500 Addison Rd	Addison	75248
						W1				Keller Springs Landfill	Keller Springs Rd	Carrolton	75006
						W2				Enviro-Waste Mgt	4345 Lindberg	Addison	75244
							H1			Forney Eng Co	3405 Wiley Post Rd	Carrolton	75006
							H6			Carlisle Syntec Systems	2399 Midway Rd	Carrolton	75006
							H9			American Medical Electronics	4125 Keller Springs Rd Ste 144	Dallas	75244
							H11			All-Plastics Moldings Company	15700 Midway Rd	Dallas	75244
							H13			Megatron Ind (formerly Prestolite)	4103 Lindberg Dr	Addison	75244
							H16			DSC Communications Corp	4570 Westgrove #210	Addison	75248
							H17			Logic Design Metals, Inc	4805 Arapaho Rd	Addison	75248
							H18			Town of Addison Service Center	16801 Westgrove	Addison	75248
							H19			Hedrick Beechcraft Inc	4400 Glenn Curtiss Dr	Dallas	75248

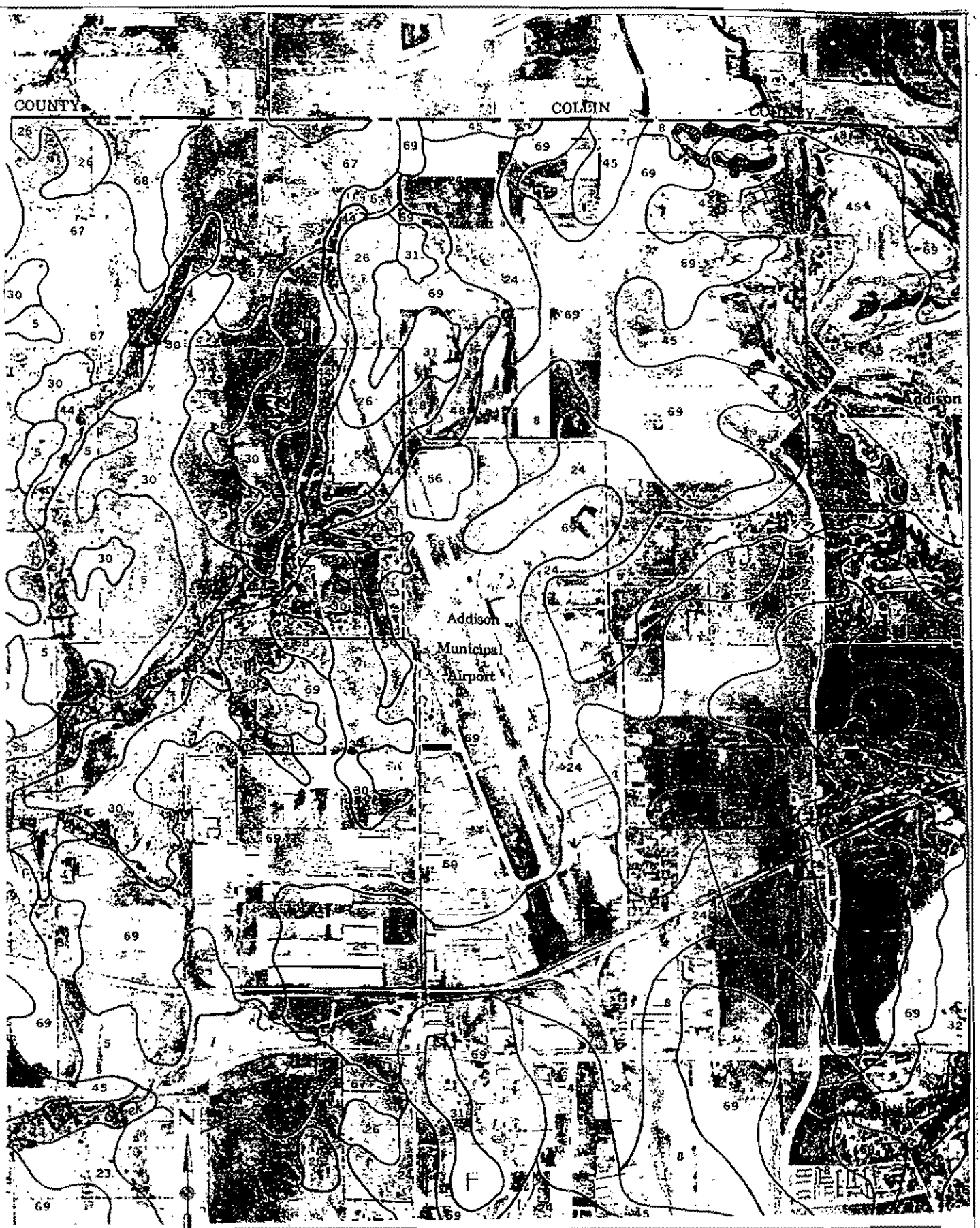
FIGURES



TEXAS TURNPIKE AUTHORITY
ADDISON TUNNEL ESA

LOCATION MAP

Figure 1



HDR

HDR Engineering, Inc.

TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

" S.C.S. - SOIL SURVEY MAP"

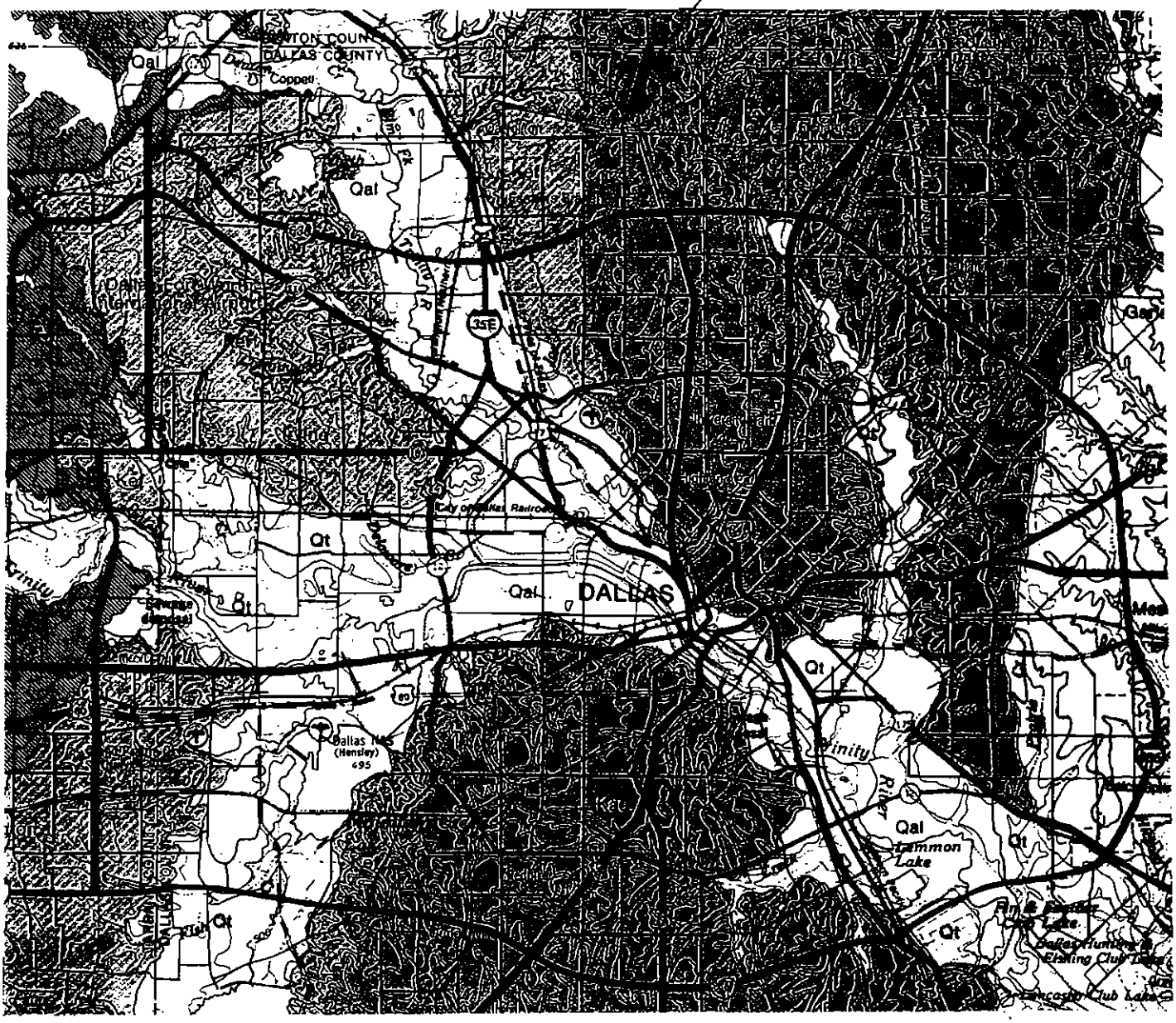
Ref. U.S. Soil Conservation Service, Feb. 1980.

Date

May 1995

Figure 2

ADDISON AIRPORT
APPROXIMATE LOCATION



Scale 1 250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

5 0 5 10 Nautical Miles

CONTOUR INTERVAL 50 FEET

HDR

HDR Engineering, Inc.

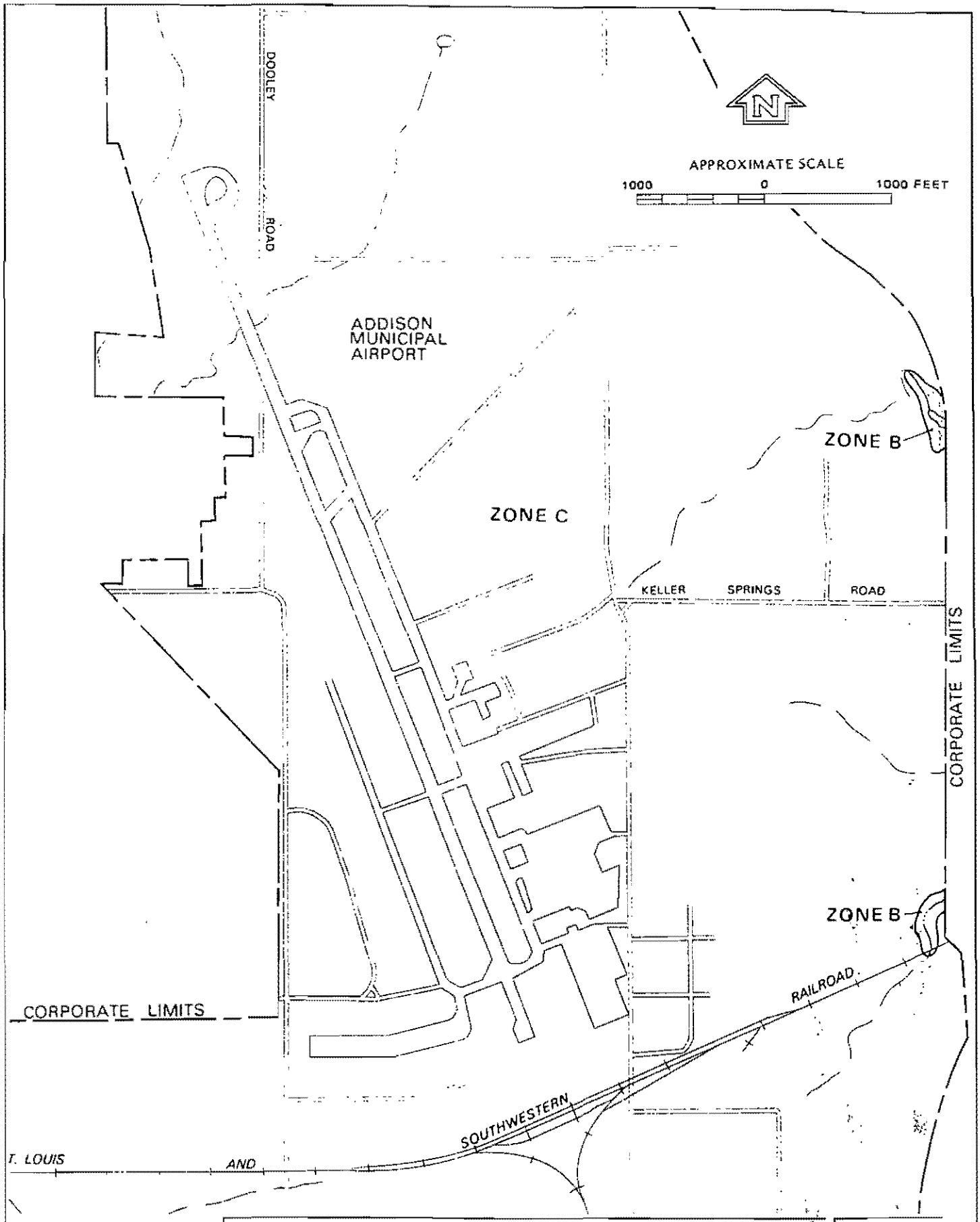
TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

"GEOLOGIC ATLAS OF TEXAS - DALLAS SHEET"

Ref. University of Texas. Bureau of Economic Geology, Rev. 1987.

Date
May 1995

Figure 3



HDR

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TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

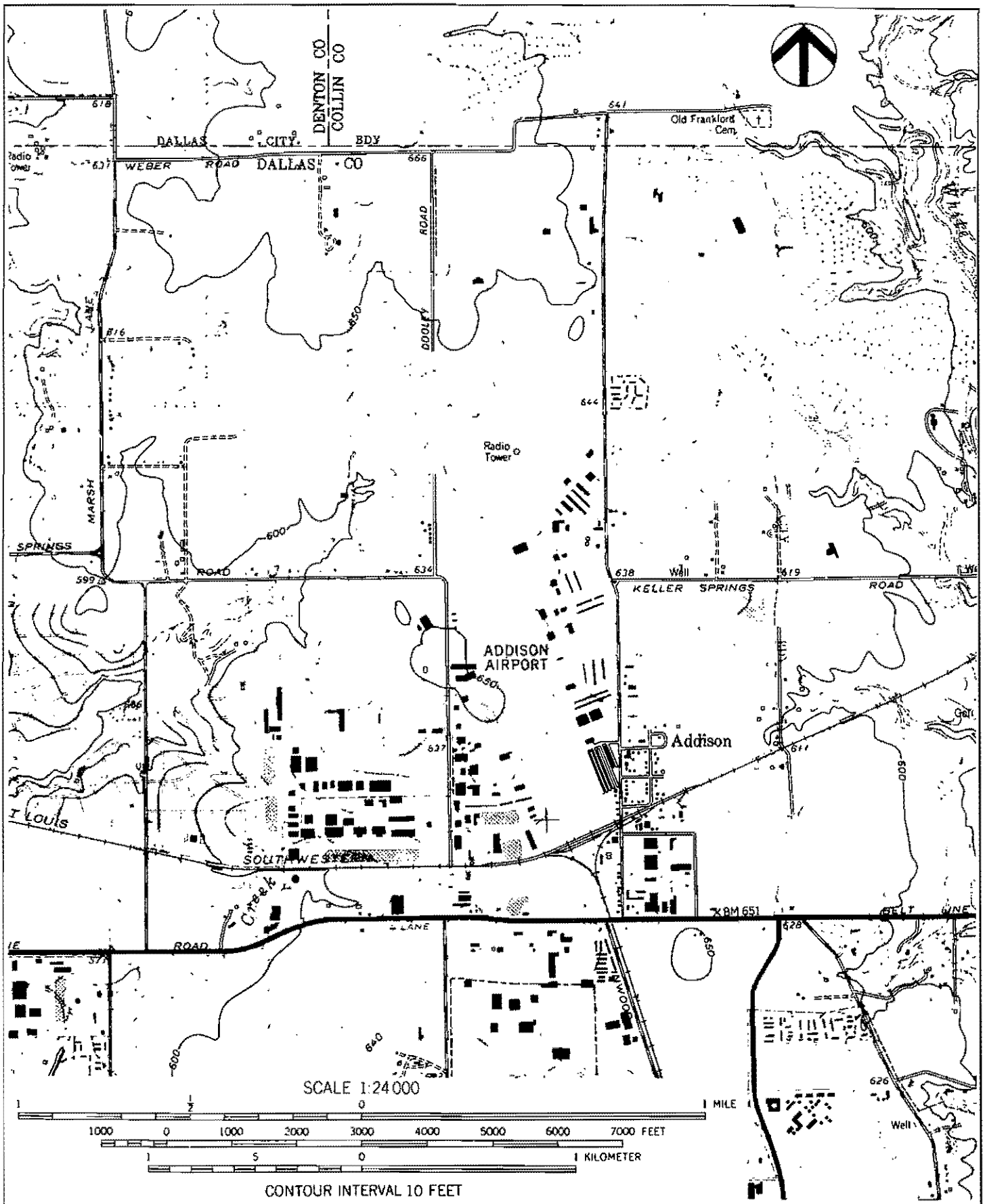
"FLOOD INSURANCE RATE MAP"

Ref. H.U.D. Community - Parcel # 4810890005 A, July 16 1980.

Date

May 1995

Figure 4



HDR Engineering, Inc.

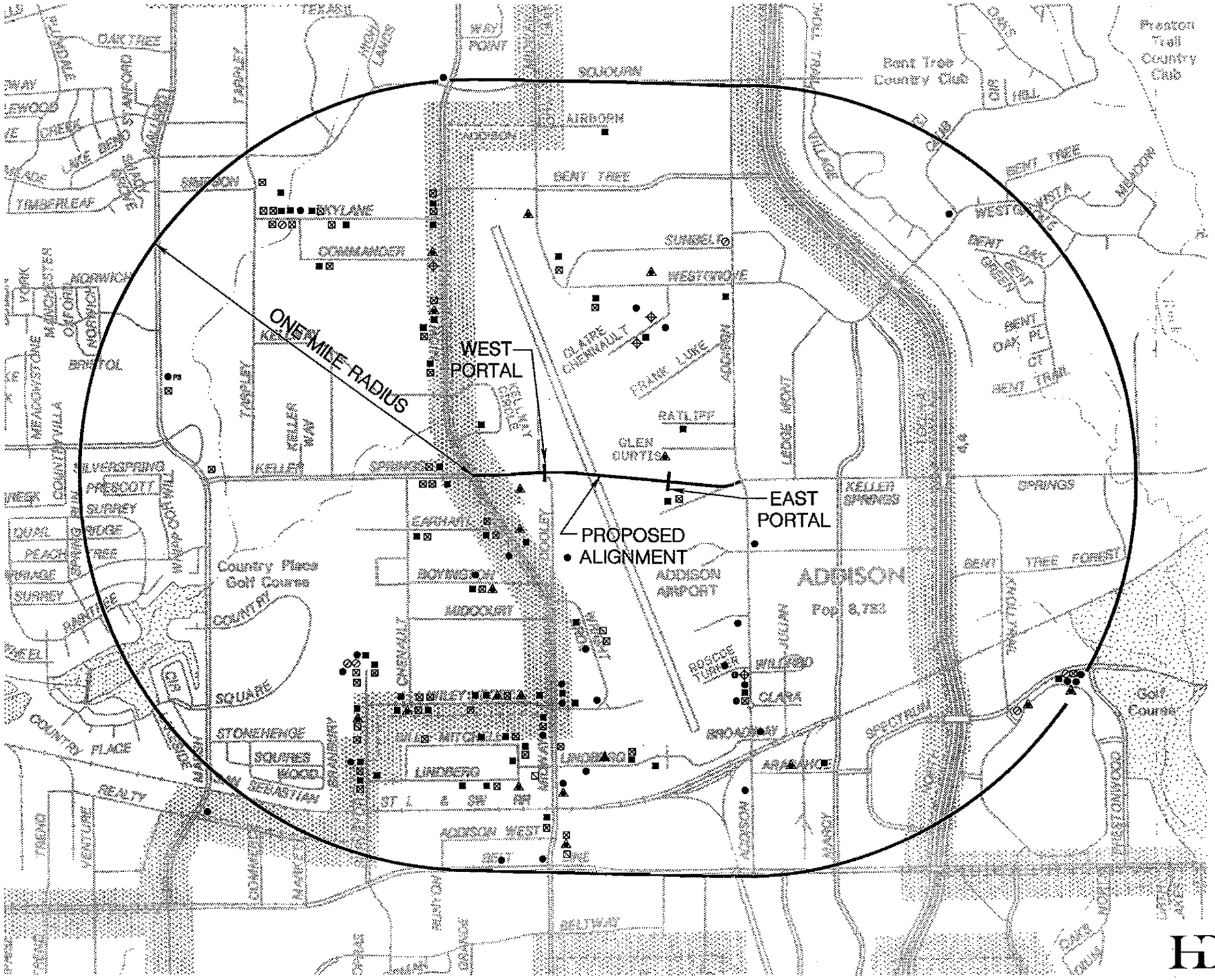
TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

"U.S.G.S. MAP"

U.S. Geological Survey, 1959 photorevised 1981.

Date
May 1995

Figure 5



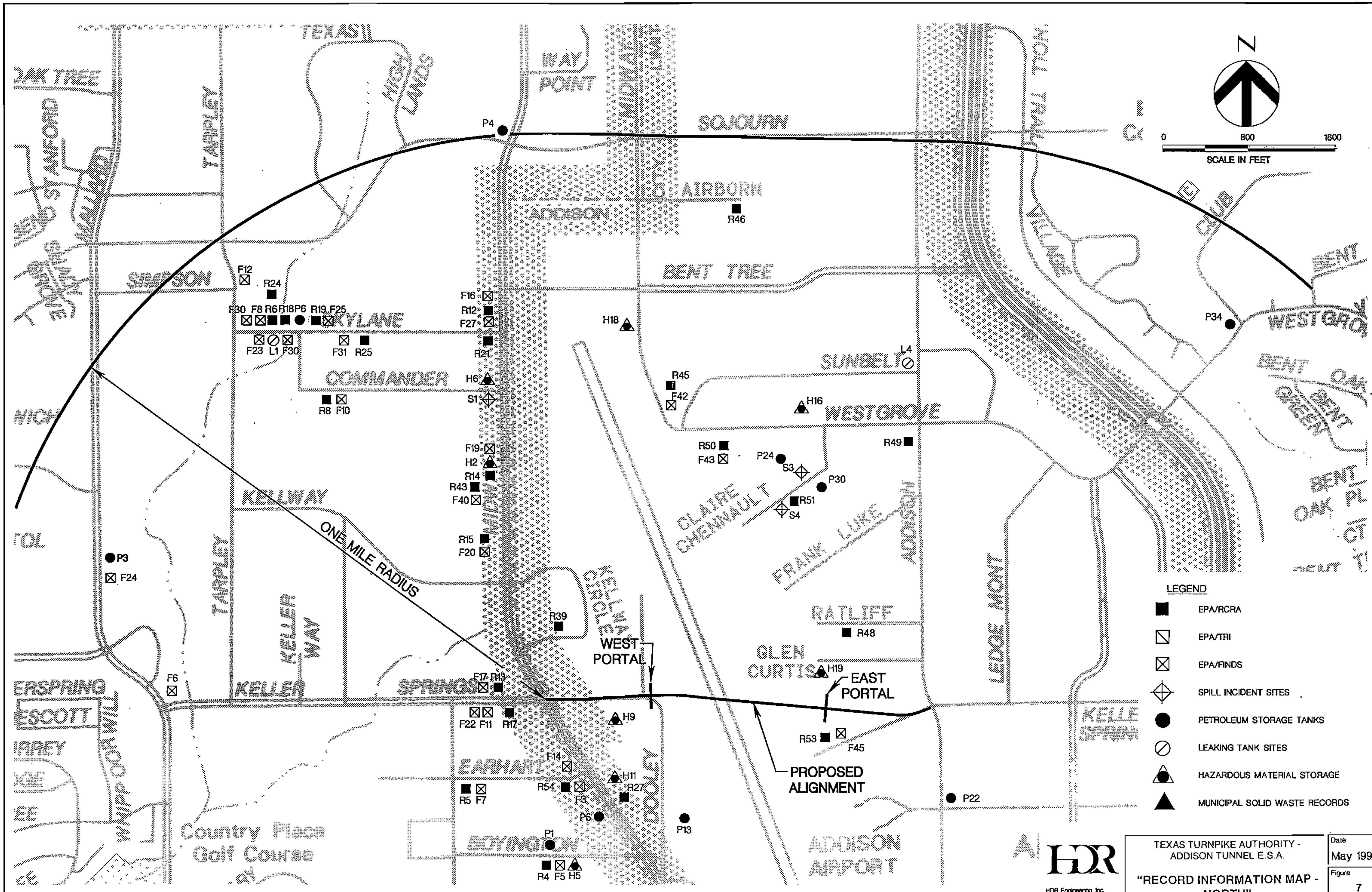
HDR Engineering, Inc.

TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

"RECORD INFORMATION KEYMAP"

Date: May 1995

Figure: 6



LEGEND
EPA/RCRA
EPA/TRI
EPA/FINDS
SPILL INCIDENT SITES
PETROLEUM STORAGE TANKS
LEAKING TANK SITES
HAZARDOUS MATERIAL STORAGE
MUNICIPAL SOLID WASTE RECORDS
SCALE IN FEET
0
800
1600
ONE MILE RADIUS
WEST PORTAL
EAST PORTAL
PROPOSED ALIGNMENT
SOJOURN
AIRBORN
ADDISON
BENT TREE
SIMPSON
SKYLANE
COMMANDER
KELLWAY
KELLER SPRINGS
EARHART
BOYINGTON
WESTGROVE
SUNBELT
CLAIRE CHENNAULT
FRANK LUKE
RATLIFF
GLEN CURTISS
LEDGE MONT
DOOLEY
TARPLEY
KELLER WAY
Country Place Golf Course
ADDISON AIRPORT

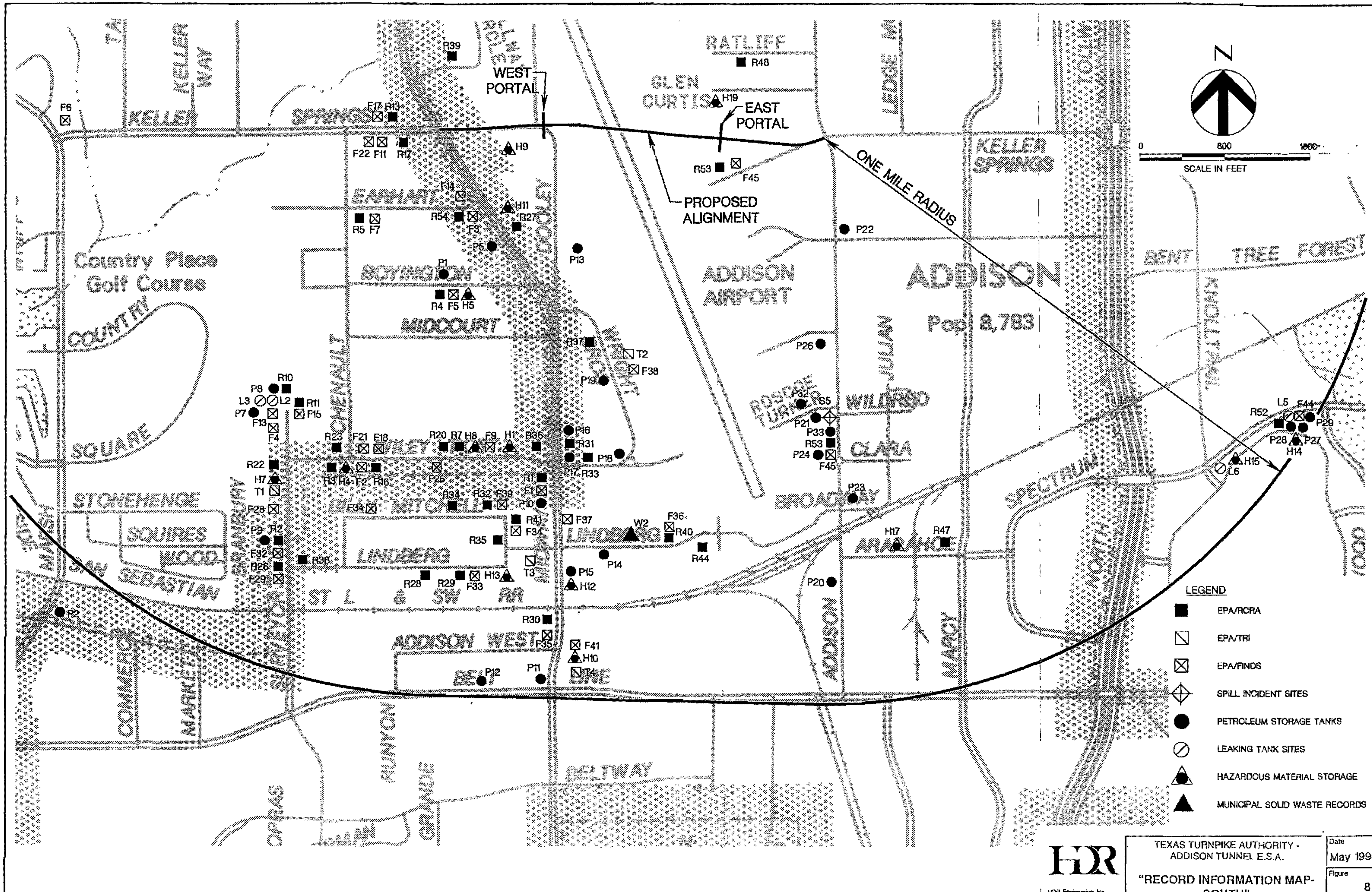
HDR Engineering, Inc.

TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

"RECORD INFORMATION MAP - NORTH"

Date May 1995

Figure 7



WEST PORTAL
EAST PORTAL
PROPOSED ALIGNMENT
ONE MILE RADIUS
ADDISON
Pop. 8,783
ADDISON AIRPORT
Country Place Golf Course
KELLER SPRINGS
RATLIFF
GLEN CURTIS
EARHART
BOYINGTON
MIDCOURT
WILEY
MITCHELL
LINDBERG
STONEHENGE
SQUIRES WOOD
SAN SEBASTIAN
ST L & SW RR
ADDISON WEST
BELT LINE
BELTWAY
BROADWAY
ARAPAHOE
SPECTRUM
BENT TREE FOREST
ROSCOE TURNER
CLARA
WILDRED
JULIAN
MARCY
ADDISON
MIDWAY
CHENAULT
COMMERCE
MARKET
SURVEYOR
RUNYON
GRANDE
LEGEND
EPA/RCRA
EPA/TRI
EPA/FINDS
SPILL INCIDENT SITES
PETROLEUM STORAGE TANKS
LEAKING TANK SITES
HAZARDOUS MATERIAL STORAGE
MUNICIPAL SOLID WASTE RECORDS
N
0
800
1600
SCALE IN FEET
HDR
HDR Engineering, Inc.

TEXAS TURNPIKE AUTHORITY - ADDISON TUNNEL E.S.A.

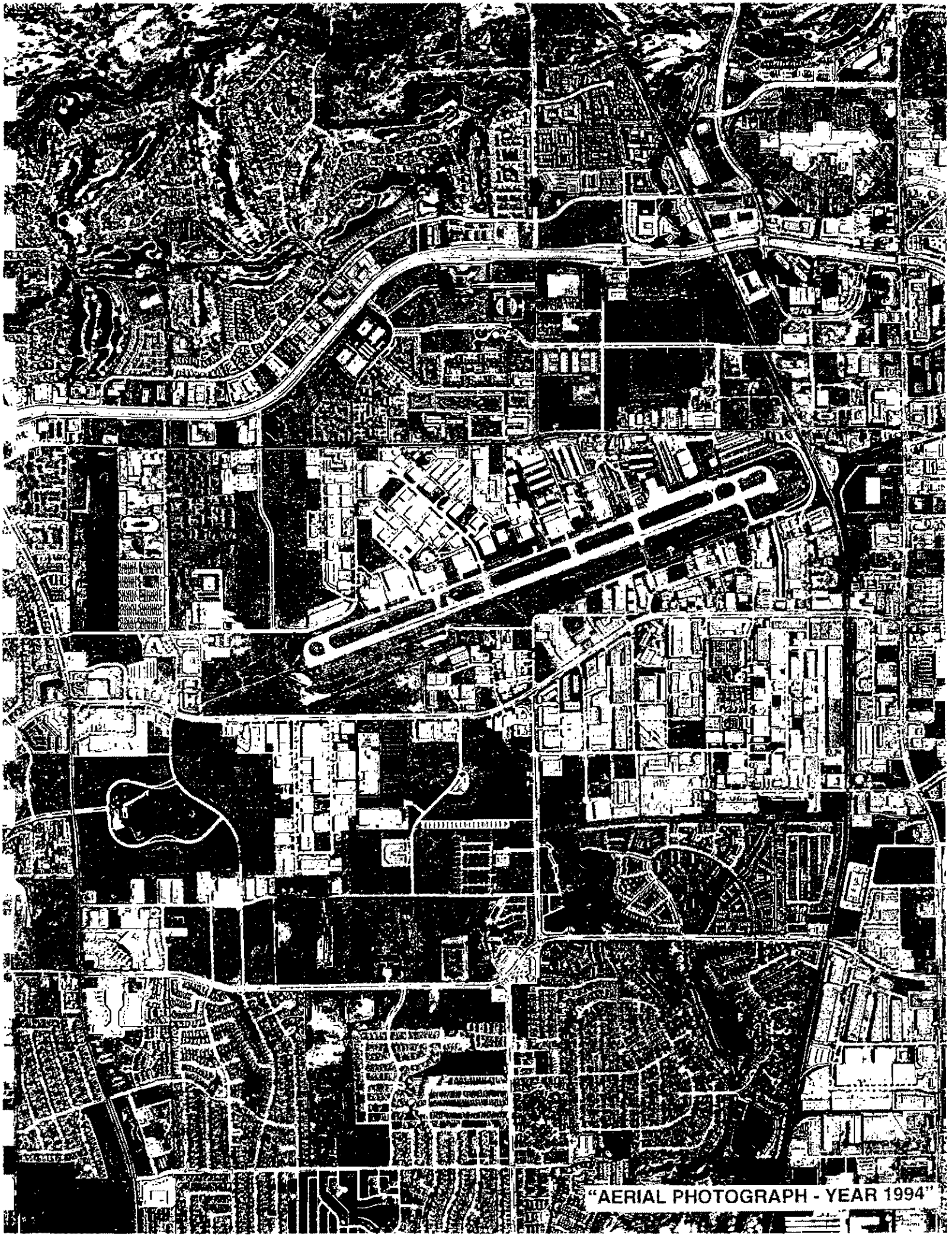
"RECORD INFORMATION MAP-SOUTH"

Date: May 1995

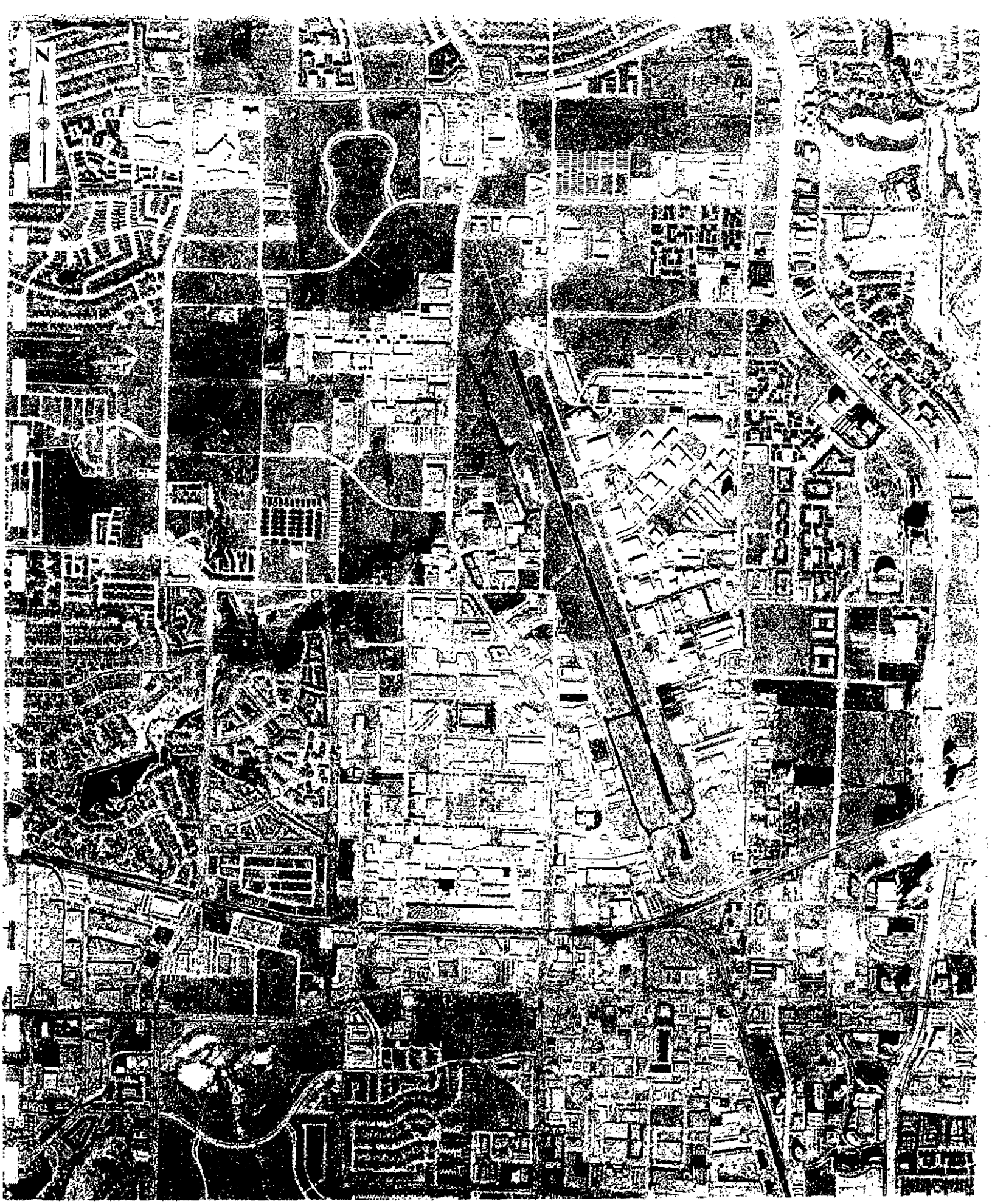
Figure 8

APPENDICES

APPENDIX A

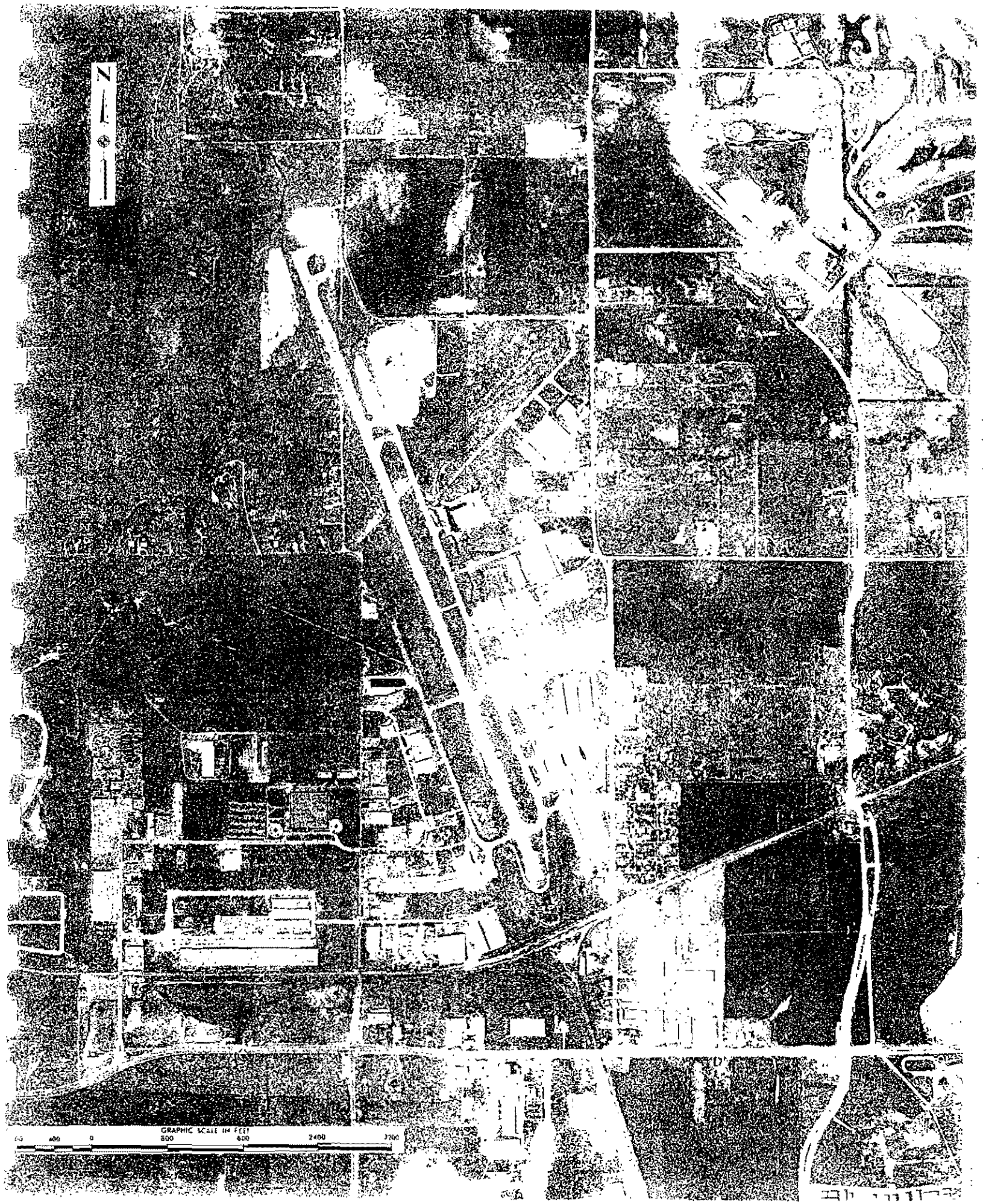


"AERIAL PHOTOGRAPH - YEAR 1994"



"AERIAL PHOTOGRAPH - YEAR 1990"

"AERIAL PHOTOGRAPH - YEAR 1984"



"AERIAL PHOTOGRAPH - YEAR 1975"

"AERIAL PHOTOGRAPH - YEAR 1971"

"AERIAL PHOTOGRAPH - YEAR 1957

APPENDIX B

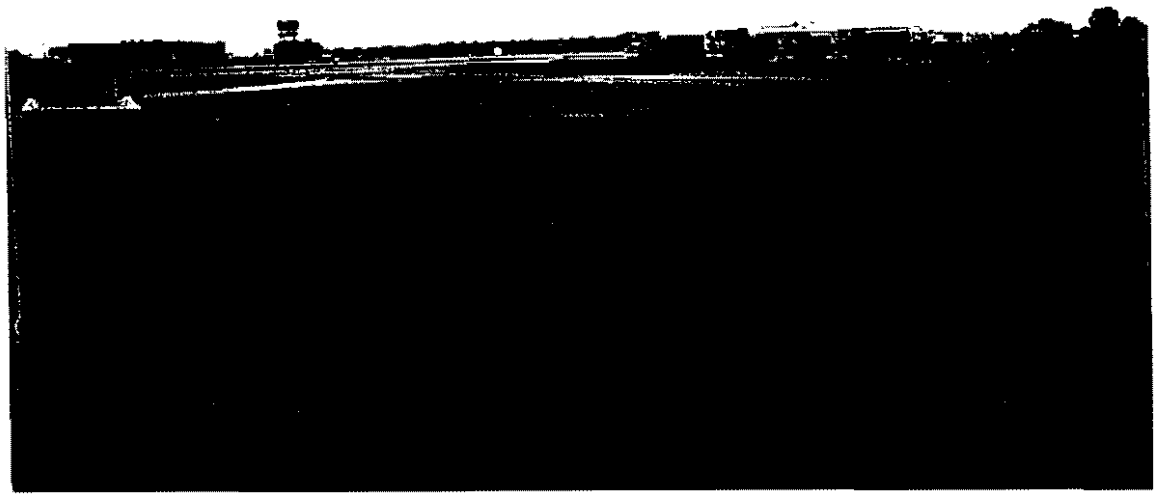


Photo 1 -View west from northeast corner of Jetway parking lot. Beechcraft tanker trucks are parked on apron in middle distance and Addison Air Traffic Control Tower is in far distance.

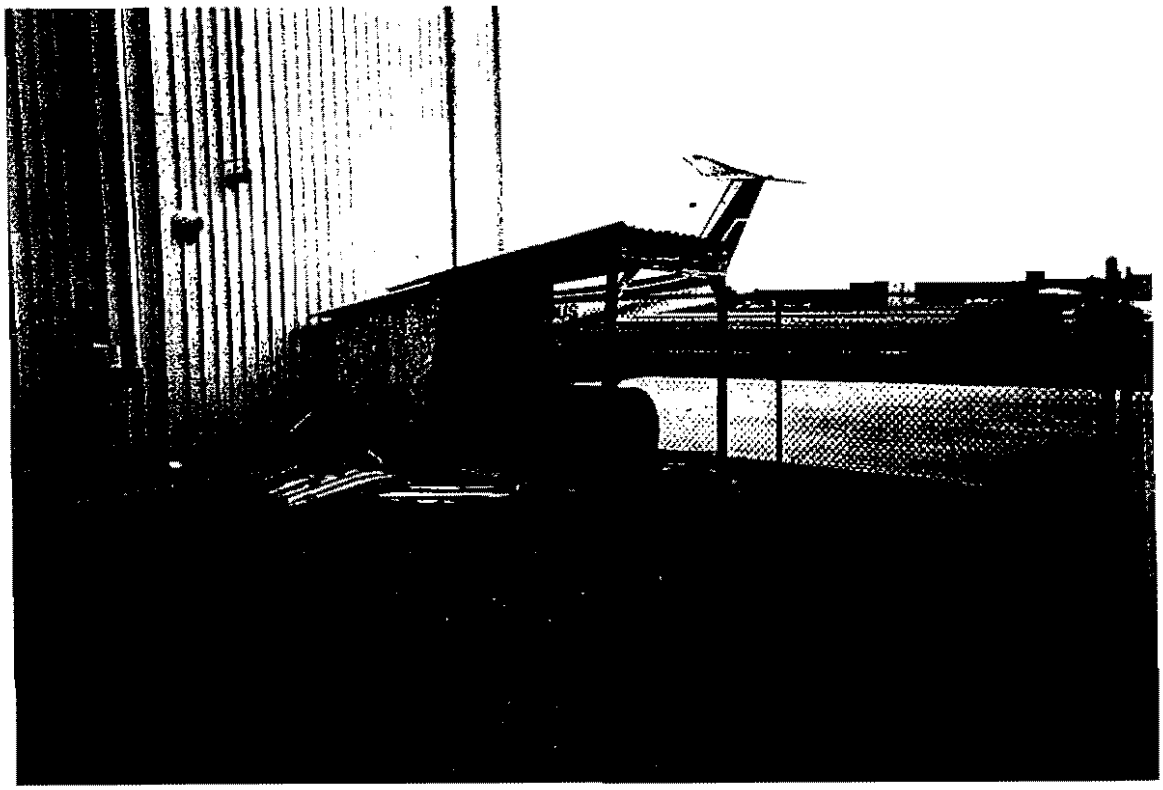


Photo 2 - View west of approximately 250 gallon above ground storage tank between Hangar Six and Jetway. Notice thick, oily spillage on ground immediately right of the tank.

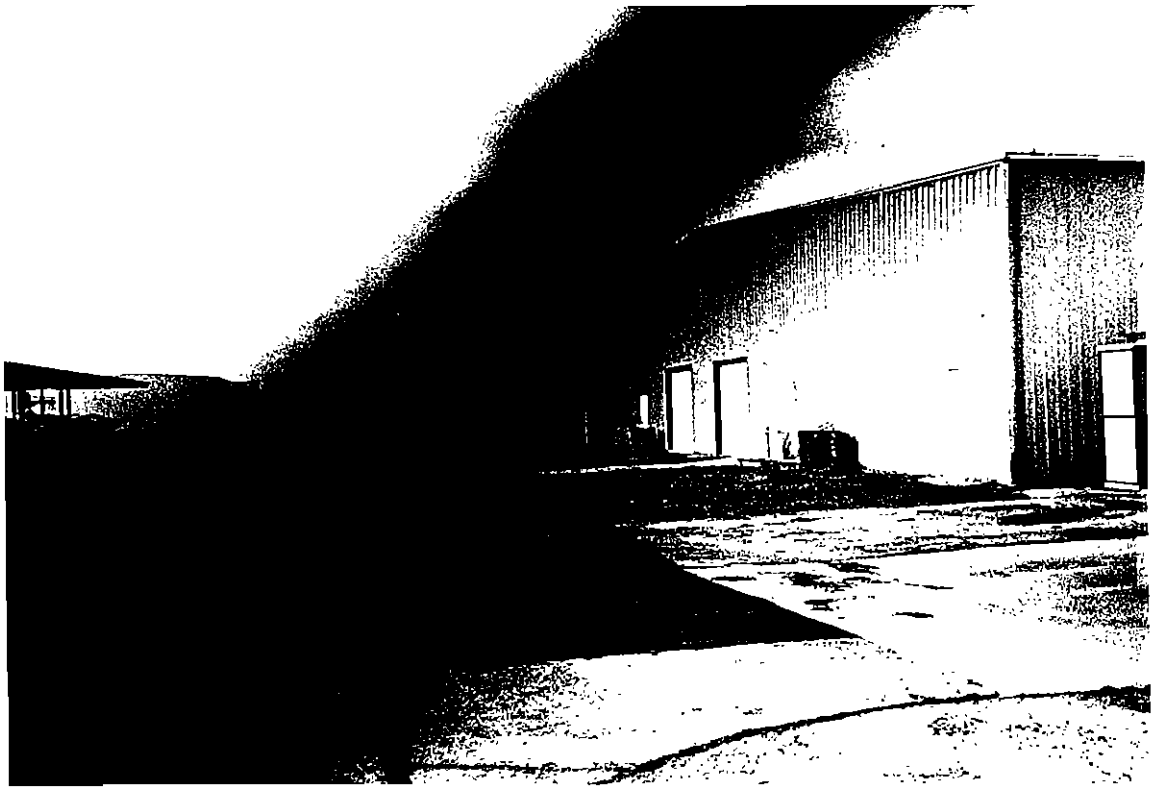


Photo 3 - View north of "Jet Hangers". Notice drums near facility doors.

Photo 4 - View east from empty lot at corner of Dooley Road and Keller Springs. Formed concrete slabs are in foreground, drill crew is in middle distance between trees.

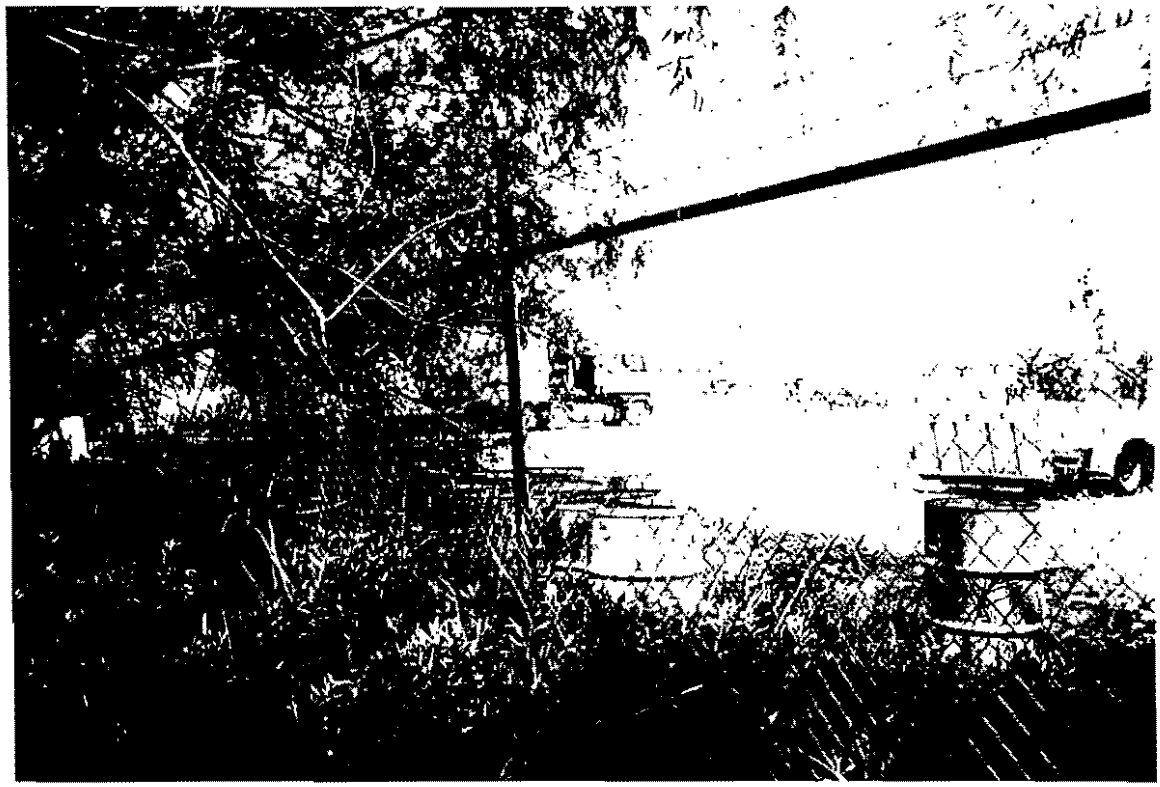


Photo 5 - View northeast from behind "construction yard" on Dooley Road. To the immediate left is a drainage ditch flowing north.

Photo 6 - View west from Dooley Road of "construction yard" with drums along the treeline in the distance and a trailer mounted tank between the tanks and semi-trailer.

Photo 7 - View northeast of debris piles from parking lot behind unidentified warehouse, northeast quadrant of Kellway Circle. Housely Communications (?) construction yard is in middle, right distance and Million Air is in far distance.

Photo 8 - View southeast of Housely Communications (?) equipment yard with storage tank in middle right distance.

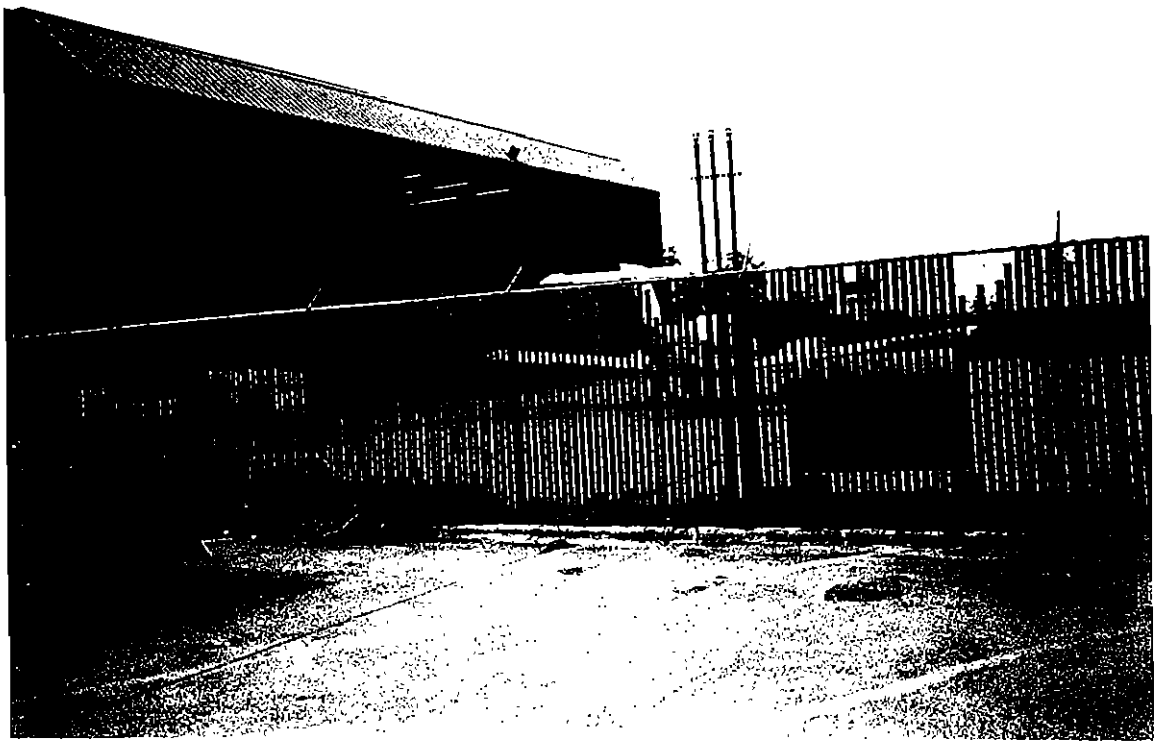


Photo 9 - View north of Beltway Construction (Hanger 92). Notice three snorkels and surface tank behind fence.

Photo 10 - View east from northwest corner of Forney Engineering property depicting drum loading area.

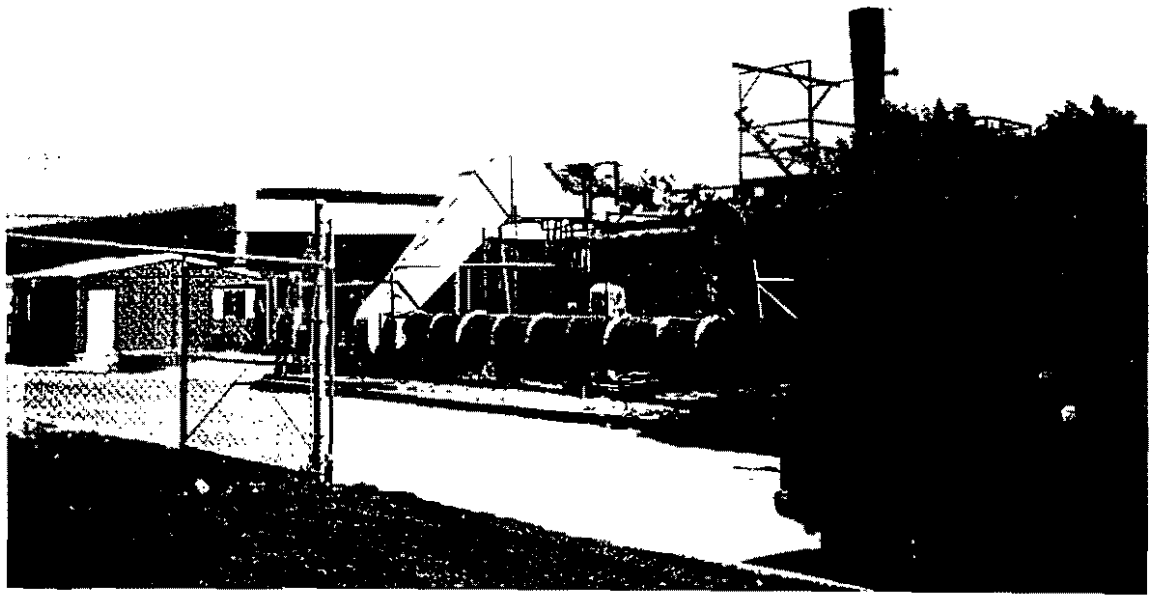


Photo 11 - View southeast of Forney Engineering diesel igniter testing facility for coal fired power plants.

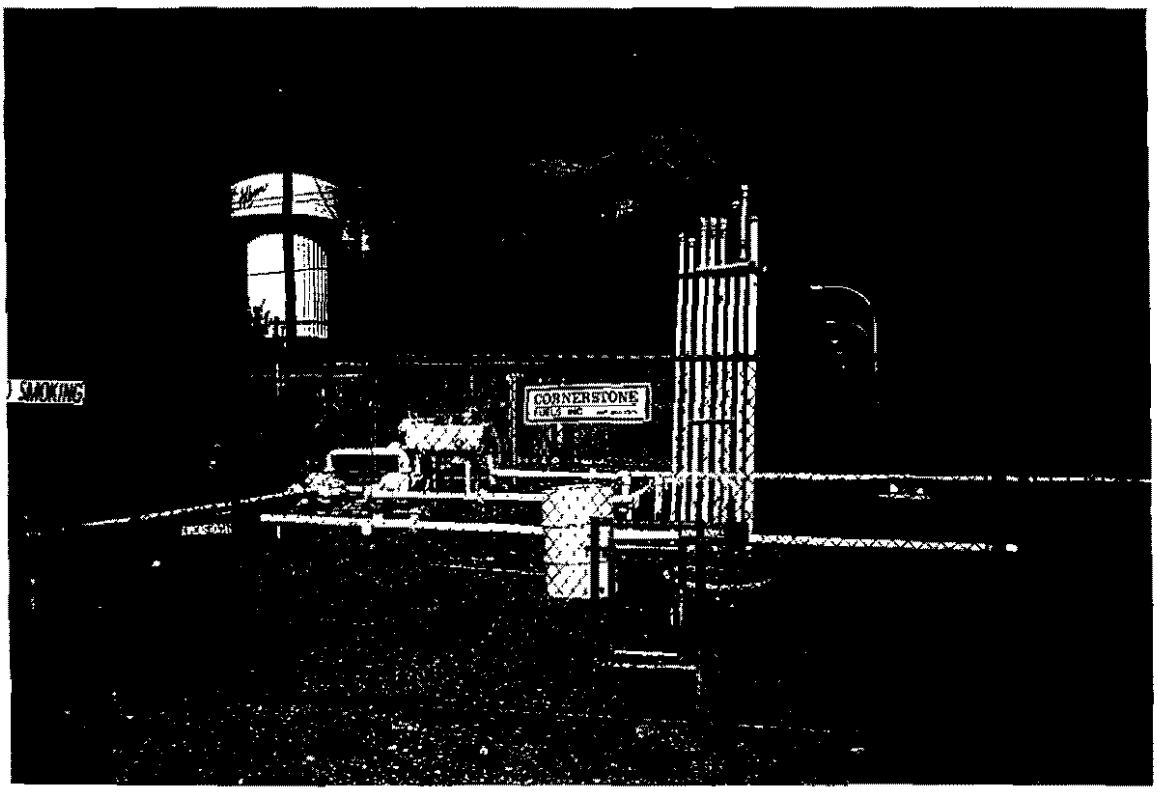


Photo 12 - View east of the Cornerstone Fuels fuel tank group at the northern end of the Addison Airport fuel farm.

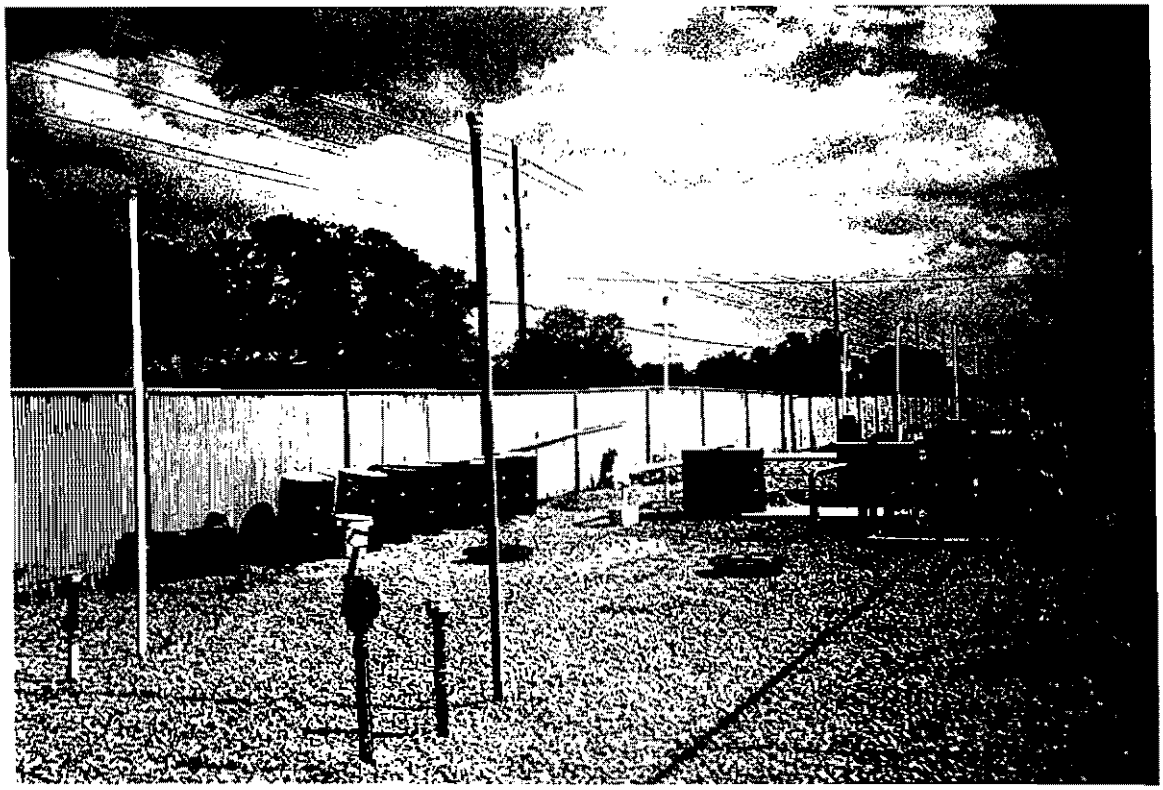


Photo 13 - View southeast of the Million Air tank group at the Addison Airport fuel farm. Notice unlabelled drums along the fence and on the pump-pad.

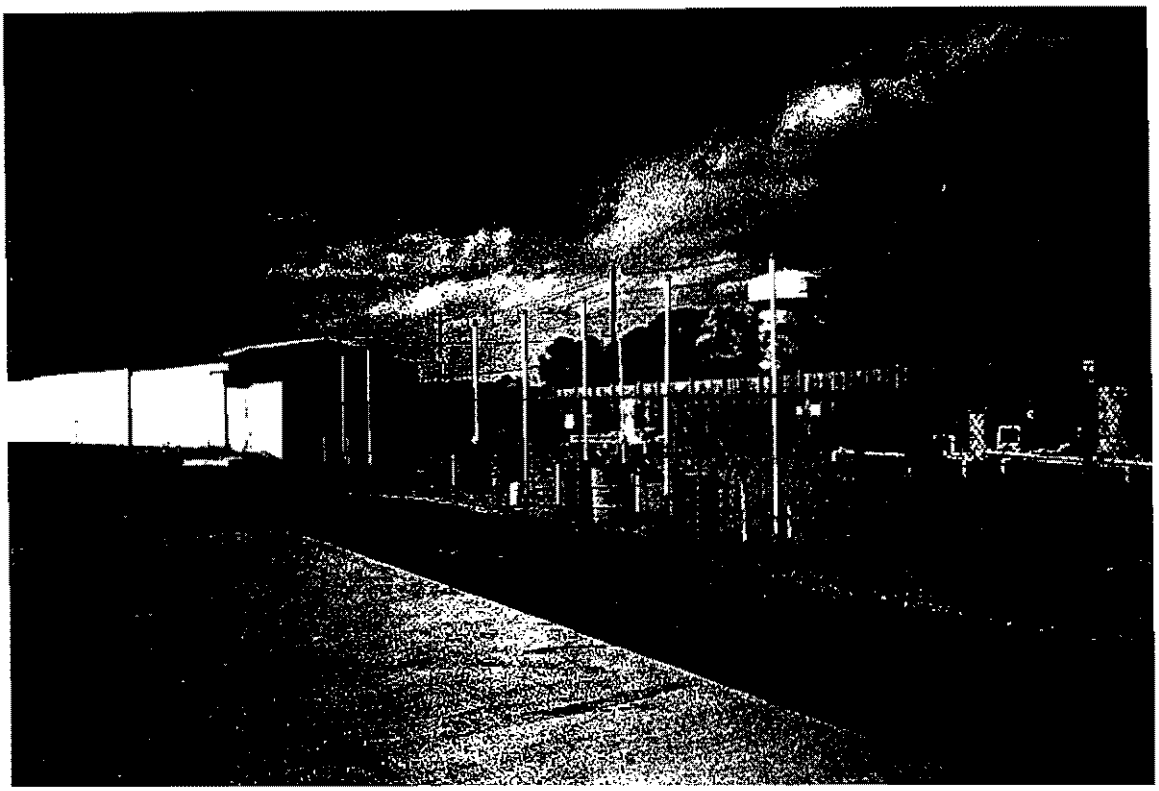
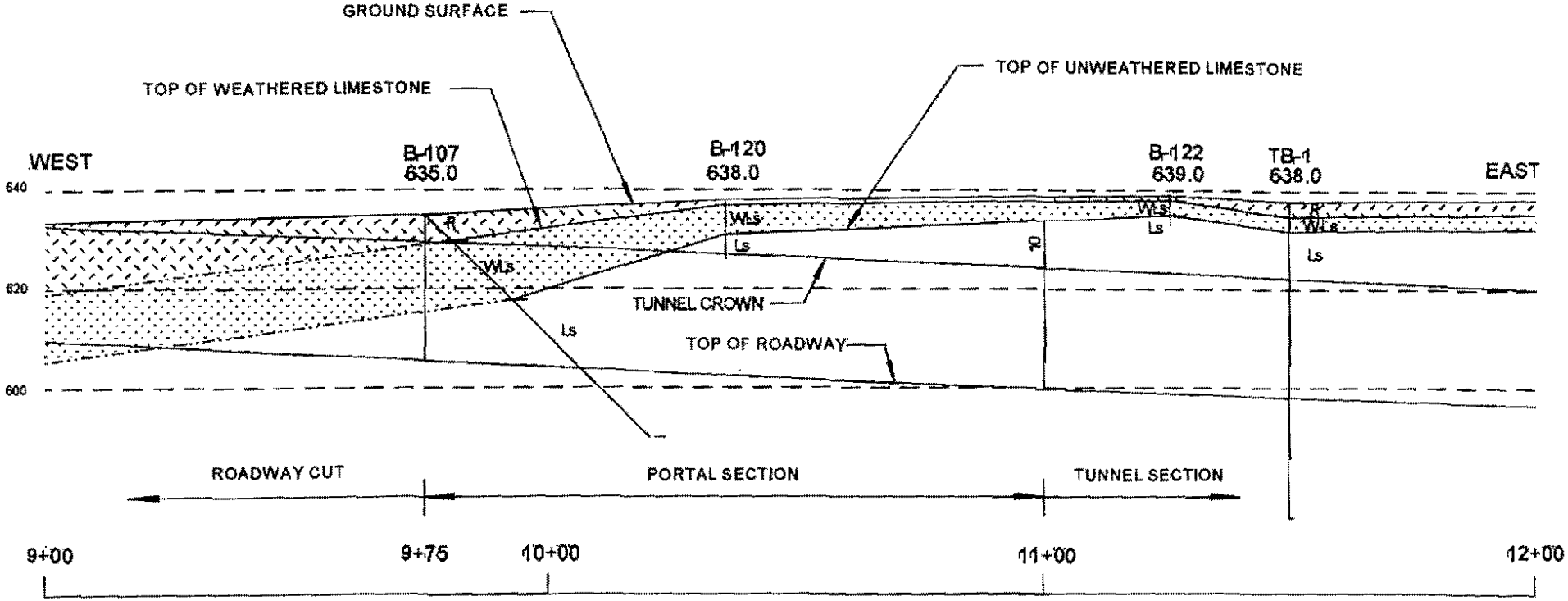


Photo 14 - View northeast of the Jetway tank group at the airport fuel farm. Two snorkels to the right are not in the picture.

Photo 15 - View north of typical geologic shallow cross-section taken immediately west of airfield stormwater outfall culvert, north of Kellway Circle.

APPENDIX C

DRAFT



GEOLOGIC PROFILE - WEST PORTAL

NORTH R/W LINE

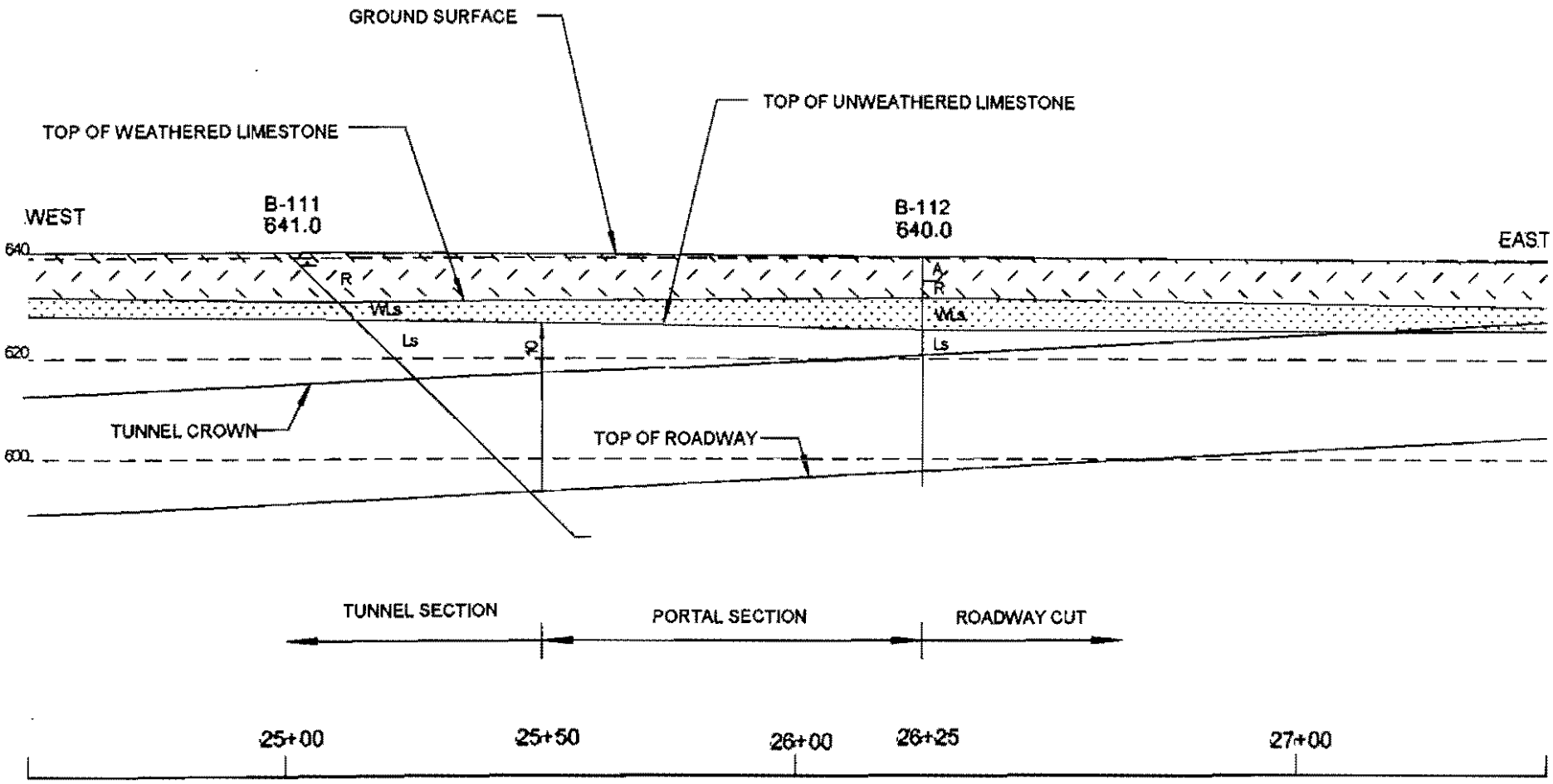
LEGEND:

R RESIDUAL CLAY
WLs WEATHERED LIMESTONE
Ls UNWEATHERED LIMESTONE

DRAFT

FIGURE 1

DRAFT



GEOLOGIC PROFILE - EAST PORTAL

NORTH R/W LINE

LEGEND:

A ALLUVIAL CLAY
R RESIDUAL CLAY
WLs WEATHERED LIMESTONE
Ls UNWEATHERED LIMESTONE

FIGURE 2

DRAFT

APPENDIX D

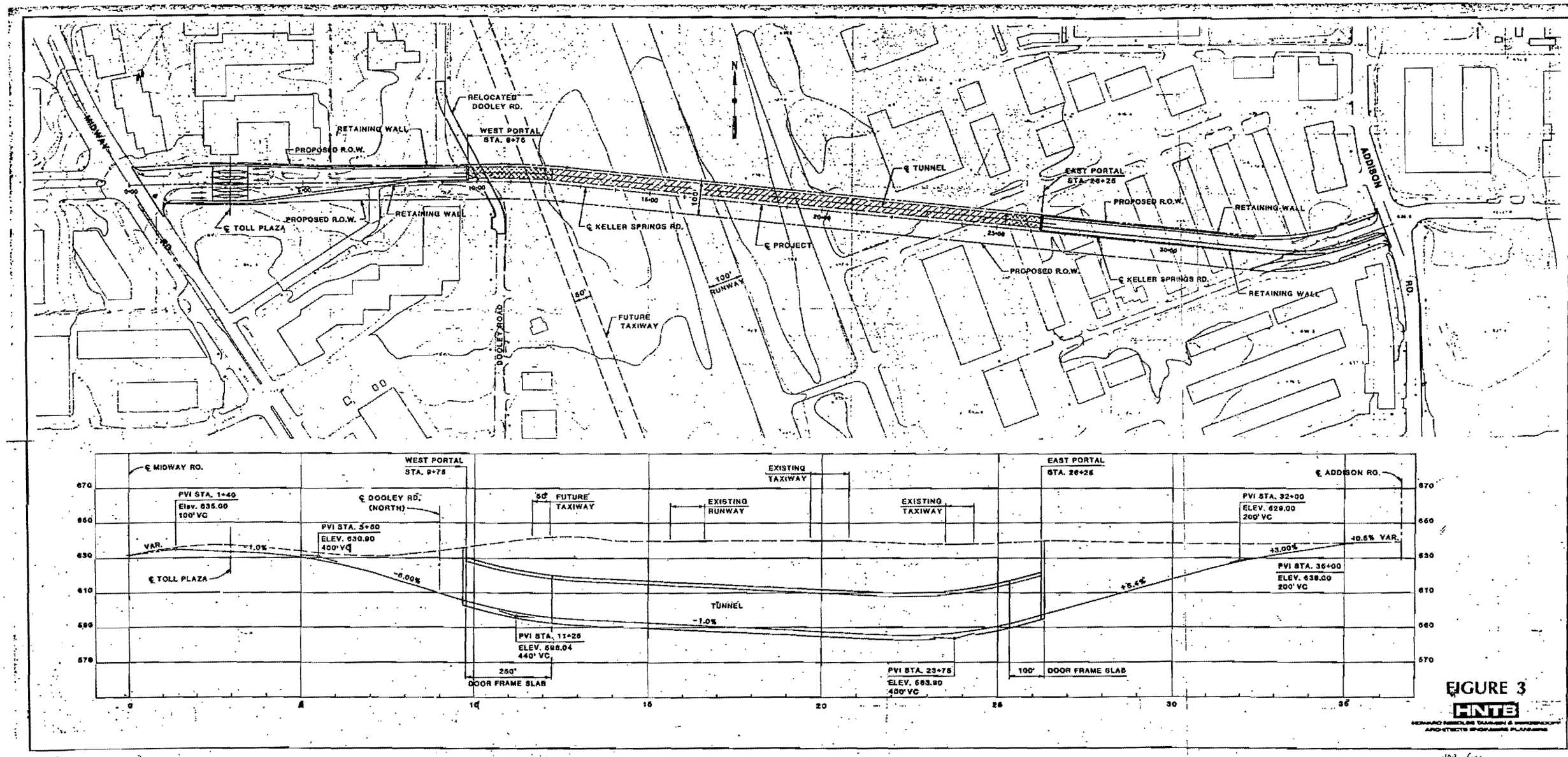


FIGURE 3

HNTB

HDR Corp.

APPENDIX E

SCOPE OF SERVICES

(8/19/94)

ADDISON TUNNEL PROJECT

Phase 1 - Site Assessment

BASIC SERVICES

The intent of the Phase 1 environmental site assessment is to review readily available documents and provide an on-site visit for the purpose of evaluating the history of past use identifying sources of potential contaminants.

Task 1 - Literature and Records Research

HDR will compile and review available literature, photographs and available regulatory agency files to:

- Review a history of operations and land usage at the site
- Review information on any spills, discharges or other incidence reported to the federal regulatory agencies
- Review information concerning the usage, storage, treatment, and disposal of hazardous substances at the site.
- Identify areas with potential environmental problems and evaluate the potential impact of these areas on the subject property

Task II - On-site visit

An on-site visit of the subject property will be conducted to identify visible evidence of hazardous or potentially hazardous substance and noncompliance areas. The inspection will include a visual assessment of on-site hazardous material contamination, as well as an examination of land use on and adjacent to the subject property. The survey will attempt to identify apparent potential or dormant environmental impacts.

During the on-site visit, no borings will be conducted and no samples will be collected from any structures or land either on or off the property. As a result certain conditions, such as those listed below, may not be revealed.

- naturally occurring toxics in the subsurface soils, rocks, water, or the toxicity of the on-site flora;

- toxicity of substances common in current habitable environments, such as, stored household products, building materials, and consumable;
- biological pathogens;
- contaminant plume below surface from remote source;
- contaminants or contaminant concentrations that do not violate present regulatory standards but may violate future such standards; and,

Task 3 - Report Preparation

HDR will prepare a report documenting activities and summarizing findings. The report will include a description of the subject property, development history, and land use; a summary of the site literature and records search; the results of the on-site investigation; and any recommendations for further action.

In connection with environmental assessments of a site, only a limited amount of services can be performed within the schedules and budgets available to HDR under agreement with the client. As a result, HDR, despite the use of reasonable care, may fail to detect hazardous substances or underground tanks or may incorrectly determine the concentration of hazardous substance which are present.

ADDITIONAL SERVICES

Information gathered from the records search and site reconnaissance may not be sufficient to assess the likelihood of site contamination due to the presence or proximity of hazardous substances as well as the health risk associated with the contaminants. Under certain circumstances, it may be necessary to conduct an intrusive site investigation of a scope sufficient to support a more detailed assessment. The extended (phase 2) investigation would likely include soil and/or water sampling, sample testing and chemical analyses and may include assessments of contaminant transport, health risk and remedial alternatives. A Phase 2 scope of services would have to be developed jointly with the client.

COST ESTIMATE

A cost estimate has been prepared and is submitted for your review. The cost is based on a per diem basis with reimbursable expenses. It is provided as a budget only. Should you decide try to use this budget as a lump sum cost, I would strongly suggest a contingency add on of 10% to 20%.