Chapter Fourteen:
Timpie Valley Industrial Plan

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Ever diminishing parcels of land for industrial development along the Wasatch Front have made an occasional demand for suitable sites for development in peripheral areas. Development of the Timpie Valley shown in Maps A and B as an industrial area is consistent with this and other emerging patterns of economic location in Northern Utah. The location and physical characteristics of Timpie Valley render the site attractive to development for a wide range of industrial and commercial uses that will stimulate and promote job creation, expand the local tax base and foster growth and diversification of the local economy. There are many diverse categories of industry for which the site is ideal because of its proximity to a diversified regional work force in excess of 900,000 people and to major interstate and state highways, rail corridors, and an international airport.

Comprising over 4,000 acres of developable land, Timpie Valley offers companies seeking expansion of their operations an increasingly rare siting option in Northern Utah, that is contiguous acreage of 25 acres or larger. The site is the logical choice for companies with expansion or relocation plans necessitating the location, construction and operation of large physical plants. With many acres of flat or slightly sloped land and utility infrastructure on-site or proximate, Timpie Valley can be developed for commercial and industrial uses in phases with a modicum of site preparation. Such development will clearly allow Tooele County to compete more effectively with other counties for new jobs and private investment.

MASTER PLANNED INDUSTRIAL SITES

Timpie Valley is located in the northwest side of Tooele Valley. Located in an area that has historically had industrial uses, the site provides:

- an interchange to I-80, the major east-west corridor through the United States;
- three phase, 47,000 volt electrical power with two substations in the area;
- fiber optic phone line with broadband capability for T-1 line connections;
- 25-minute access to the Salt Lake International Airport, and the Erda Airport;
- security from encroachment;
- 59 square miles of industrial zoning;
- large areas of flat or slightly sloped development areas;
- high visibility from Interstate 80;
- rail access;
- high pressure natural gas service;
- area to build large structures; and
- area for ancillary support businesses.

Timpie Valley offers over 4,000 acres of land that is developable. The site is zoned for manufacturing, distribution and industrial uses. Ancillary uses which do not fit into the uses for manufacturing, distribution and industrial should considered and be located at points in the development where they can support those uses located in the area. Rezoning to accommodate those commercial uses should be done where a master development plan is presented.

Development of the site must serve the specific needs

of the applicant and may vary from that of one acre to 80 acres or more. It is preferable that such development be made on a case-by-case basis and not limit the size of the parcels by creating pre-designed lot sizes throughout. This will allow many industrial activities to have a design that is particularly efficient for their needs. Residential uses should be prohibited to protect the magnitude of industrial uses and the impacts they present.

Such design will appear to be haphazard, but it will insure that the various industrial uses can locate and expand their operations. Connections to transportation systems must be taken throughout the development so parcels or potential development of land behind another is not landlocked or deprived of access to transportation routes or utilities. Plans on the west side of SR138 should expand the utilization of rail access to those industries that are dependent on sidings for their transportation needs.

To meet the demands of industrial traffic, collector roads throughout the area should be 80-foot wide rights-of-way with a pavement width of 48 feet. Local access roads need to be designed to a 66-foot wide right-of-way, with 36 feet of pavement width.

GEOLOGIC CONSIDERATIONS

Potential liquefaction.

Liquefaction is a process in which, during ground shaking, some sandy, water-saturated soils behave like liquids rather than solids. Areas of potential liquefaction

have been identified by the Utah Geological Survey. Those areas will require liquefaction be explored site specifically and the findings be accounted for in building design. No tall, slender building should be approved in that area because in an earthquake, the stories of a building shift.

Two conditions must exist for liquefaction to occur: (1) the soil must be susceptible to liquefaction (loose, water-saturated, sandy soil, typically between zero and 30 feet below the ground surface) and (2) ground shaking must be strong enough to cause susceptible soils to liquefy.

To determine the liquefaction potential and likelihood of property damage at a site, a site-specific geotechnical investigation by a qualified professional is needed. If a hazard exists, various hazard-reduction techniques are available, such as soil improvement or special foundation design. The cost of site investigations and/or mitigation measures should be balanced with an acceptable risk.

Map C shows areas of potential liquefaction. The liquefaction potential categories shown on this map depend on the probability of having an earthquake within a 100-year period that will be strong enough to cause liquefaction in those zones. High liquefaction potential means that there is a 50% probability of having an earthquake within a 100-year period that will be strong enough to cause liquefaction. Moderate

means that the probability is between 10% and 50%, low between 5 and 10%, and very low less than 5%.

Potential seasonal water innundation.

Timpie Valley sits on the southwestern edge of the Great Salt Lake. Land to the north is subject to seasonal water innundation. Most of the land to the north is not developable, which protects the industrial area from intrusion by any other land use. Map D shows in the shaded areas, where innundation is probable.

Potential rockfall hazard.

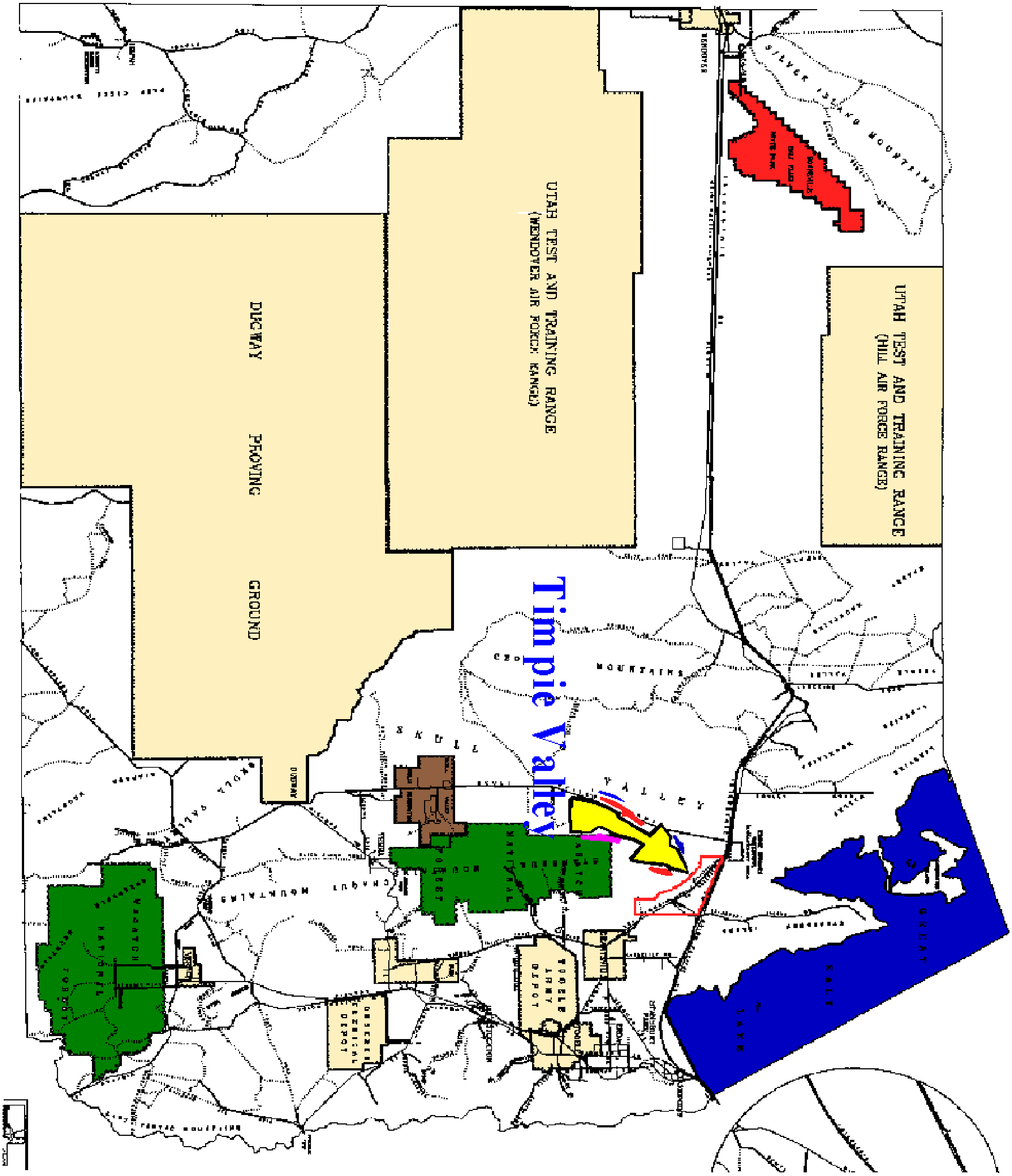
Rockfalls are a natural process of cliff and hillside erosion. They consist of large rock fragments from a cliff, or boulders from a slope that bounce, roll, and slide down a hillside and come to rest in a "runout" zone at or near its base. Map E shows areas subject to potential rock fall hazards.

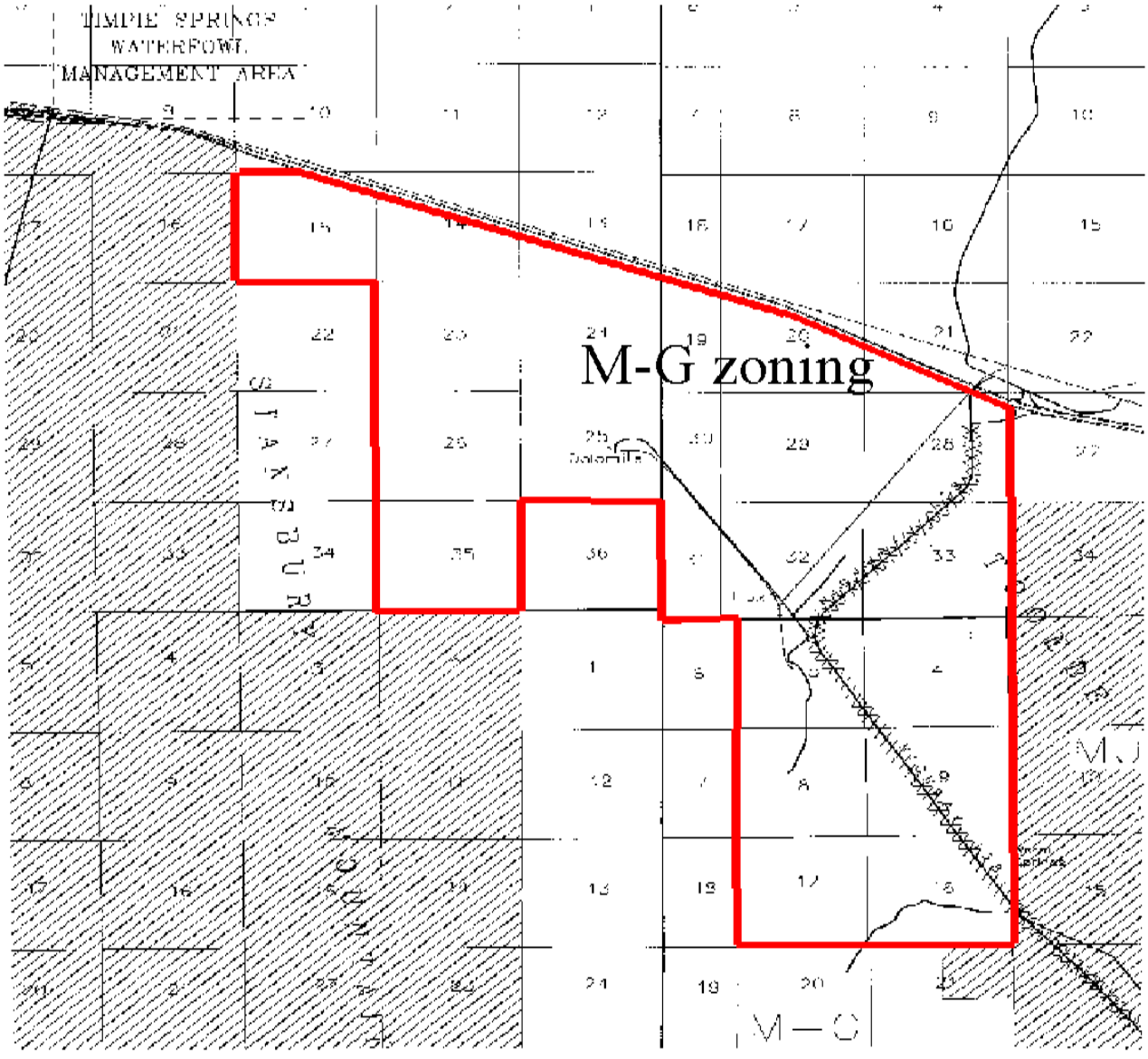
Excavation for a road cut or building may weaken bedrock support. Rock falls are commonly triggered by earthquake ground shaking, rapid snowmelt, wide diurnal temperature changes, and intense storms.

Rockfalls and slides are a threat to property and life within the runout zone. The runout zone extends from the slope below the source downward to at least the maximum distance from the cliff that rocks have fallen and rolled. Utility and transportation corridors such as power lines, pipelines, tracks, and highways are damaged by rockfalls more often than buildings because they commonly extend along the base of slopes.

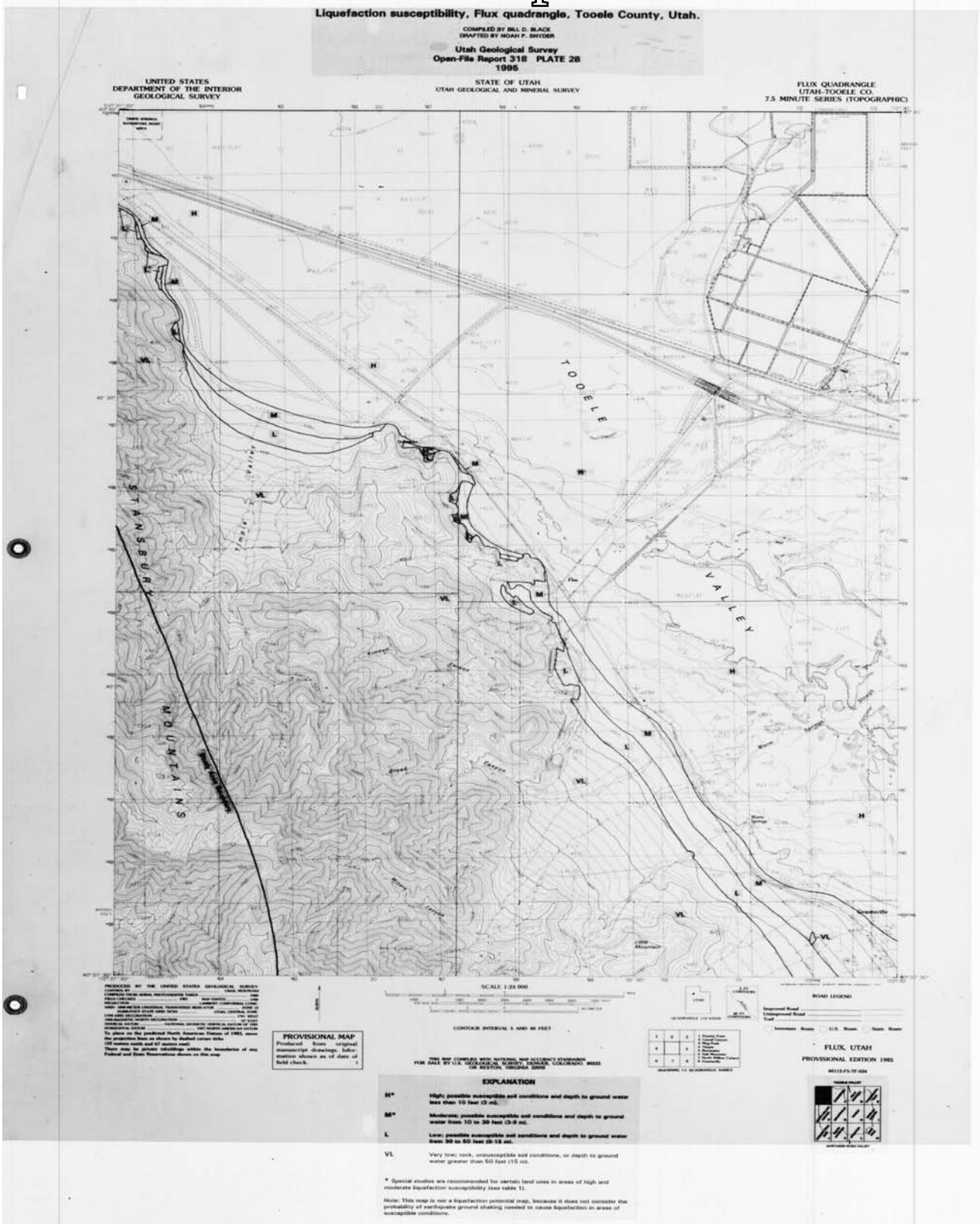
In addition to avoiding the runout zone, rockfall risk is reduced by (1) preventing rocks from falling, (2) removing them, or (3) providing protection when they fall. Rock bolts, buttresses, wire mesh, or shotcrete (concrete sprayed on a road cut) will help prevent rocks from falling. Good drainage will relieve pressure on rocks perched on a slope and reduce weathering and erosion. Chain-link fences offer protection from local, small rocks. Gabions or Jersey barriers also provide protection from rolling rocks. Rolling boulders can be trapped in a ditch with a berm to prevent them from bouncing out. Railroad tracks can be monitored for landslides, including rockfall damage with wire sensors that sound an alarm when they are hit. Pipelines are often buried for protection from falling rock. Roofs over highways and railroad tracks shield them from falling rock.

Those areas identified on Map E as A have the potential for ground water at less than ten feet. Area B may have the potential of ground water at a depth of ten to 30 feet deep; area C 30 to 50 feet deep and area D at a depth of greater than 50 feet.

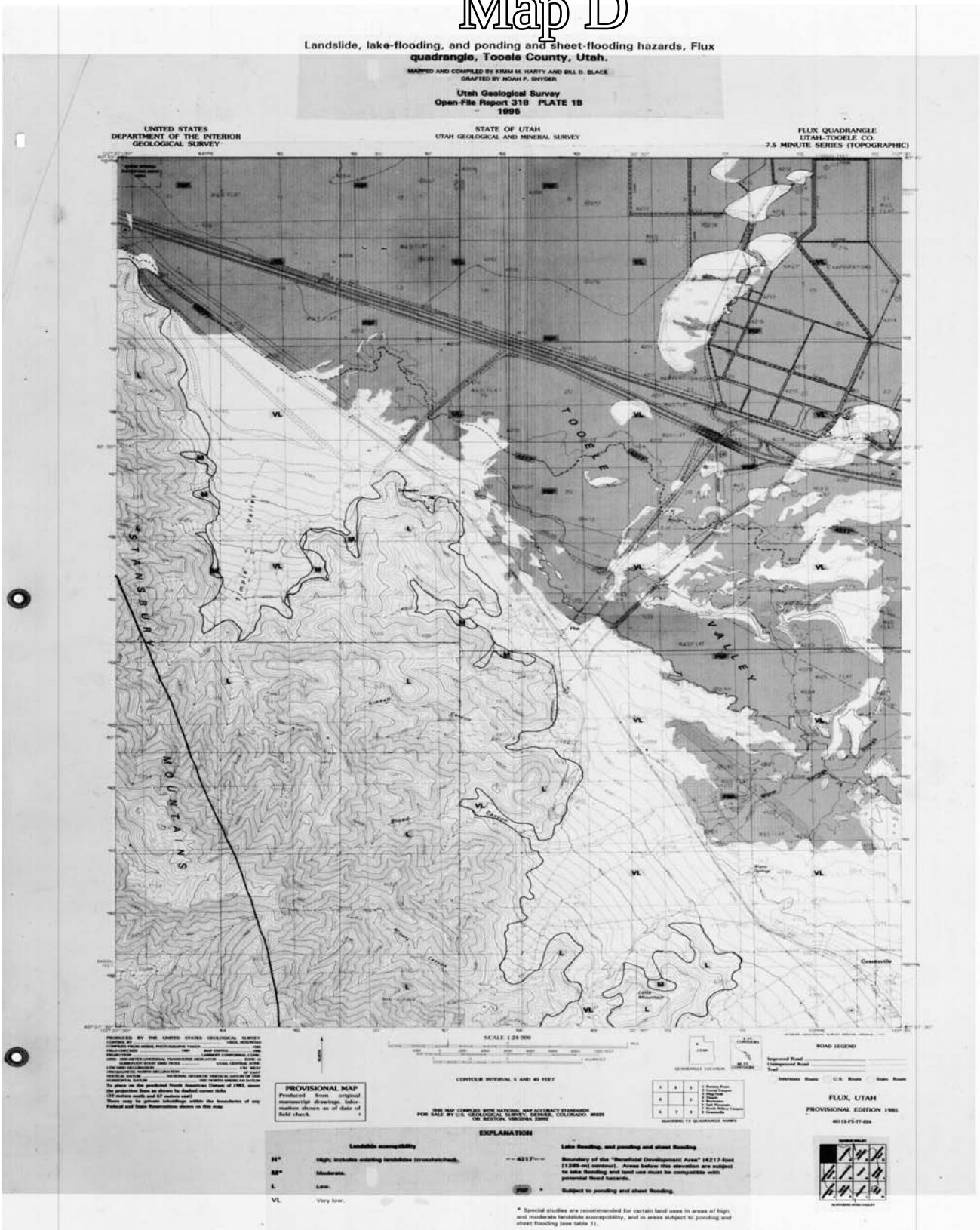

UTAH TEST AND TRAINING RANGE
(WENDOVER AIR FORCE RANGE)
DUGWAY PROVING GROUND
UTAH TEST AND TRAINING RANGE
(HILL AIR FORCE RANGE)
Timpie Valley
SILVER ISLAND MOUNTAINS
GREAT SALT LAKE
TOOELE ARMY DEPOT


TIMPIE SPRINGS
WATERFOWL
MANAGEMENT AREA
M-G zoning

Map C


Liquefaction susceptibility, Flux quadrangle, Tooele County, Utah.
COMPILED BY BILL D. BLACK
DRAFTED BY NOAH F. SNYDER
Utah Geological Survey
Open-File Report 318 PLATE 28
1996
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF UTAH
UTAH GEOLOGICAL AND MINERAL SURVEY
FLUX QUADRANGLE
UTAH-TOOELE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
TOOELE
VALLEY
STANSBURY
MOUNTAINS
PROVISIONAL MAP
SCALE 1:24 000
CONTOUR INTERVAL 5 AND 40 FEET
ROAD LEGEND
FLUX, UTAH
PROVISIONAL EDITION 1995
EXPLANATION
H* High; possible susceptible soil conditions and depth to ground water less than 10 feet (3 m).
M* Moderate; possible susceptible soil conditions and depth to ground water from 10 to 30 feet (3-9 m).
L Low; possible susceptible soil conditions and depth to ground water from 30 to 50 feet (9-15 m).
VL Very low; rock, unsusceptible soil conditions, or depth to ground water greater than 50 feet (15 m).
* Special studies are recommended for certain land uses in areas of high and moderate liquefaction susceptibility (see table 1).
Note: This map is not a liquefaction potential map, because it does not consider the probability of earthquake ground shaking needed to cause liquefaction in areas of susceptible conditions.

Map D


Landslide, lake-flooding, and ponding and sheet-flooding hazards, Flux quadrangle, Tooele County, Utah.
MAPPED AND COMPILED BY KIMM M. HARTY AND BILL D. BLACK
DRAFTED BY NOAH P. SNYDER
Utah Geological Survey
Open-File Report 318 PLATE 1B
1996
UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY
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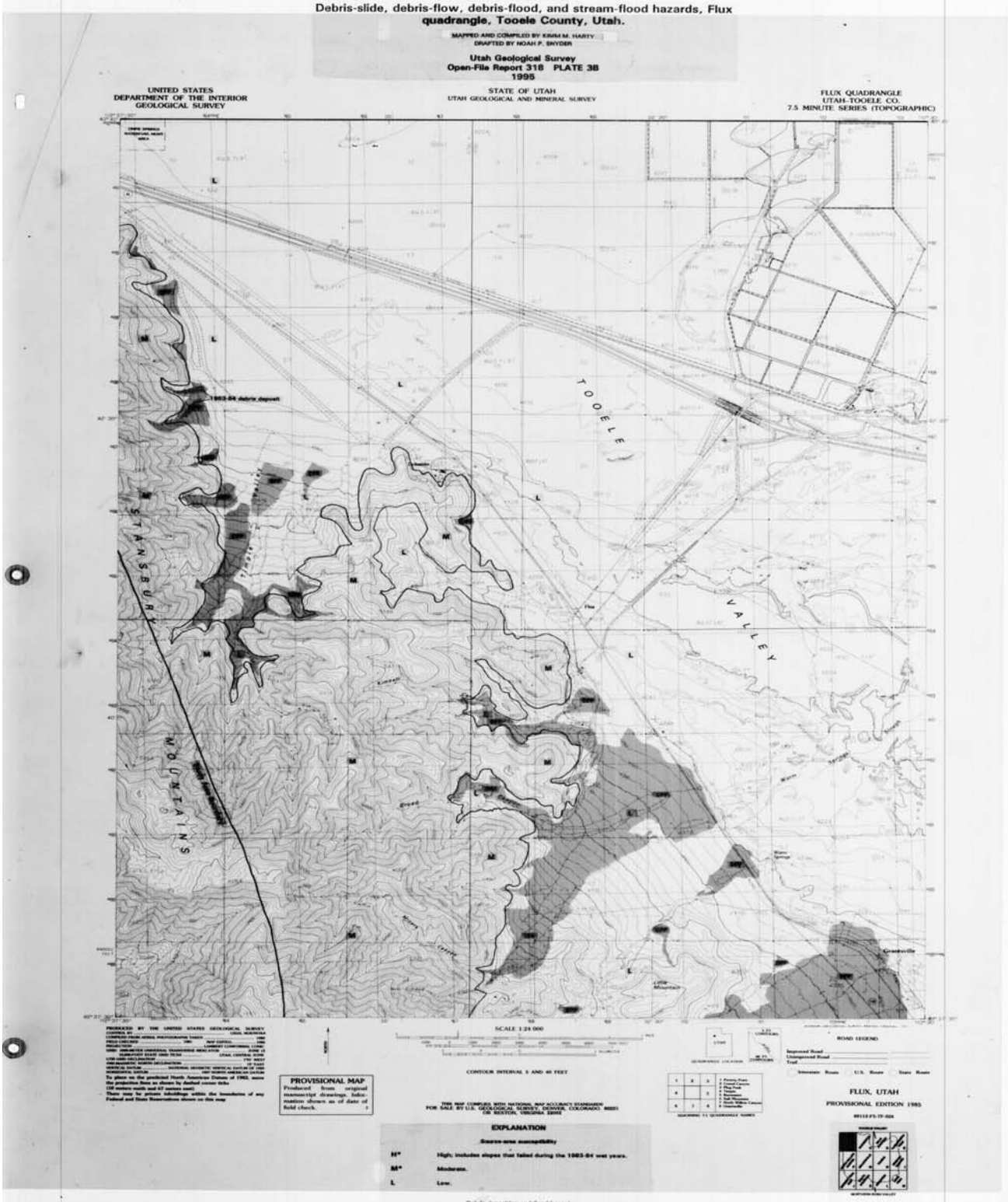
ROAD LEGEND
FLUX, UTAH
PROVISIONAL EDITION 1995
EXPLANATION
Landslide susceptibility
H* High; includes existing landslides (crosshatched).
M* Moderate.
L Low.
VL Very low.
Lake flooding, and ponding and sheet flooding
Boundary of the "Beneficial Development Area" (4217-foot (1286-m) contour). Areas below this elevation are subject to lake flooding and land use must be compatible with potential flood hazards.
Subject to ponding and sheet flooding.
* Special studies are recommended for certain land uses in areas of high and moderate landslide susceptibility, and in areas subject to ponding and sheet flooding (see table 1).

Map E

Debris-slide, debris-flow, debris-flood, and stream-flood hazards, Flux quadrangle, Tooele County, Utah.



Problem soils, Flux quadrangle, Tooele County, Utah.

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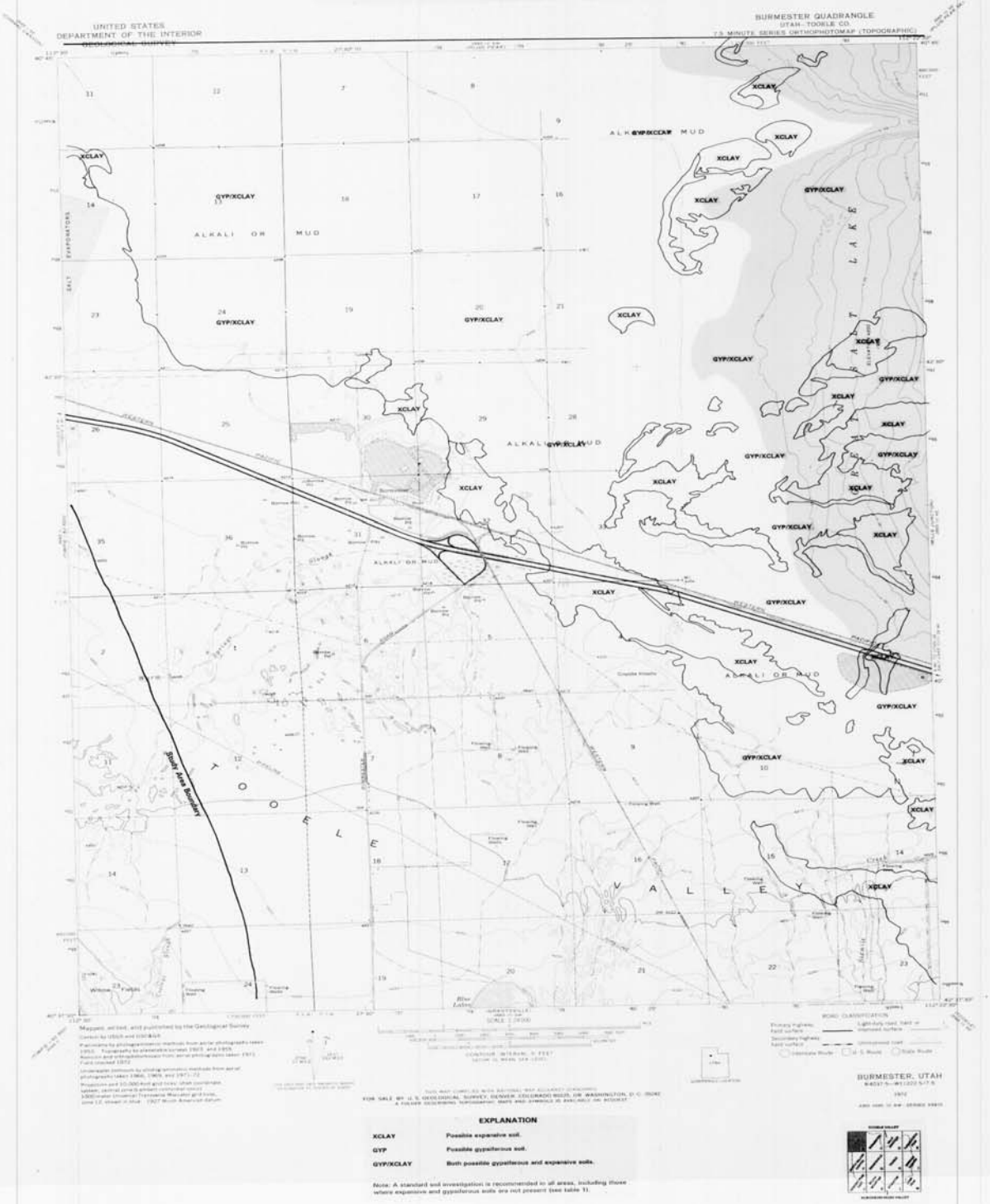


WARNING
GAS PIPELINE