



SUSITNA HYDROELECTRIC PROJECT

TRANSMISSION LINE SELECTED ROUTE

FINAL DRAFT
MARCH 1982
FIGURES

Prepared by:



ALASKA POWER AUTHORITY

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1 - TRANSMISSION LINE SELECTED ROUTE

Development of the proposed Susitna project will require a transmission mechanism to deliver electric power to the Railbelt area. The pre-building of the Intertie system will result in a corridor and route for the Susitna transmission lines between Willow and Healy. Therefore, three areas require study for corridor selection: the northern area to connect Healy with Fairbanks, the central area to connect the Watana and Devil Canyon damsites with the Intertie, and the southern area to connect Willow with Anchorage.

The corridor selection methodology followed the Susitna study plan formulation and selection methodology. Previous studies, existing data, aerial reconnaissance, and limited field studies formed the data base. Using certain selection criteria, corridors 3 to 5 miles wide which met these criteria were selected in each of the three study areas. These corridors were then evaluated to determine which ones met the more specific screening criteria. This screening process resulted in one corridor in each area being designated as the recommended corridor for the transmission line. For a more detailed discussion of study methodology and the selection and screening criteria, refer to the Transmission Line Corridor Screening Closeout Report, prepared by Acres American Incorporated, September, 1981.

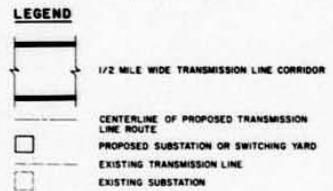
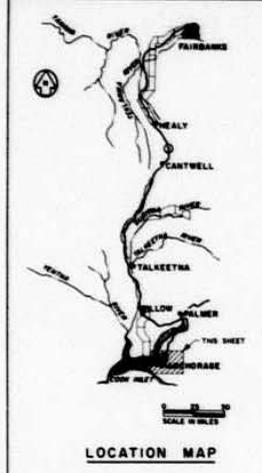
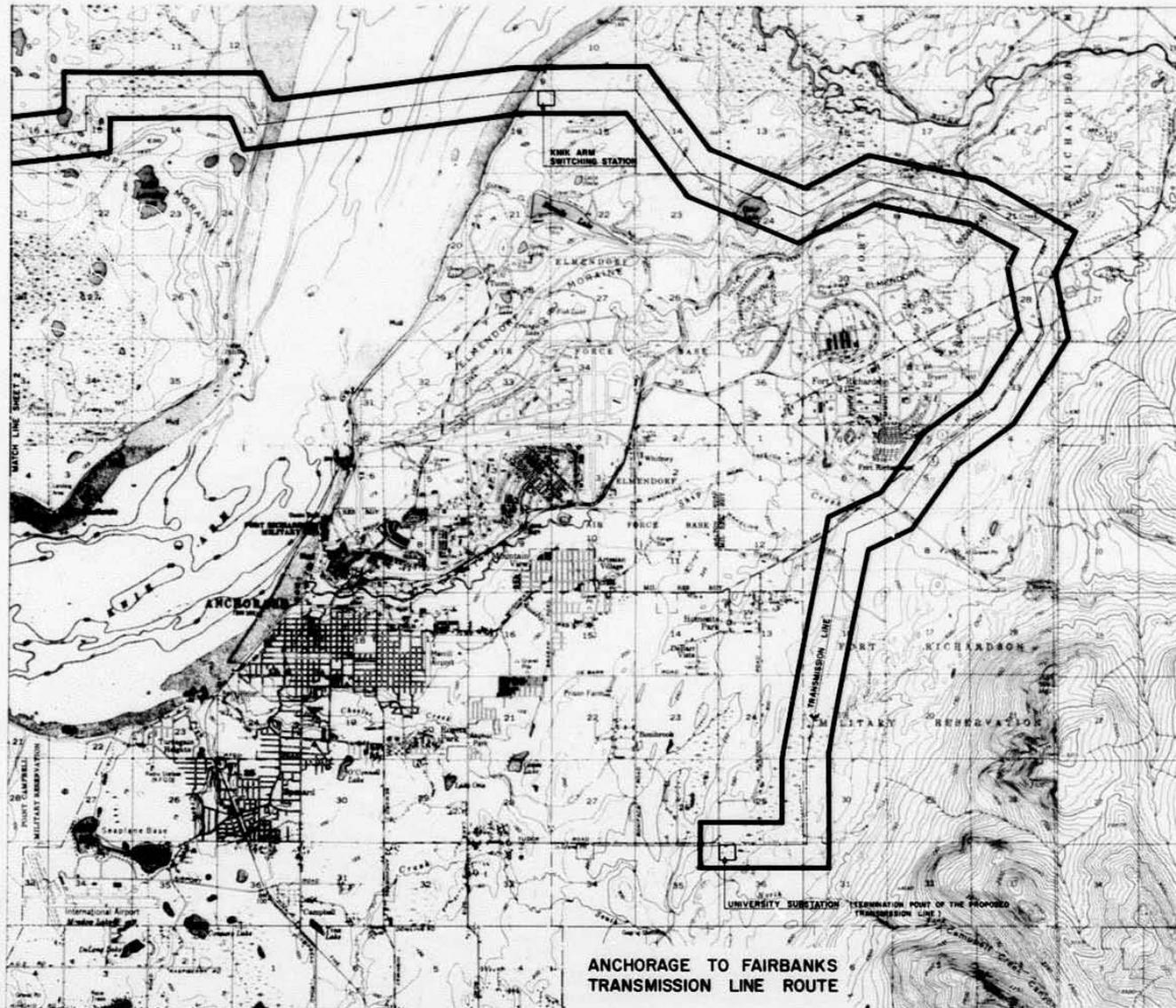
A study of existing information and aerial overflights, together with additional aerial coverage, was used to locate the recommended route in each of the southern, central, and northern study areas.

Additional environmental information and land status studies made it possible to align the routes to avoid any restraints.

Terrain unit maps describing the general material expected in the area were prepared specifically for transmission line studies and were used to locate the routes away from unfavorable soil conditions whenever possible.

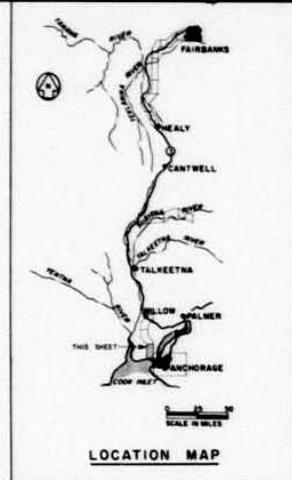
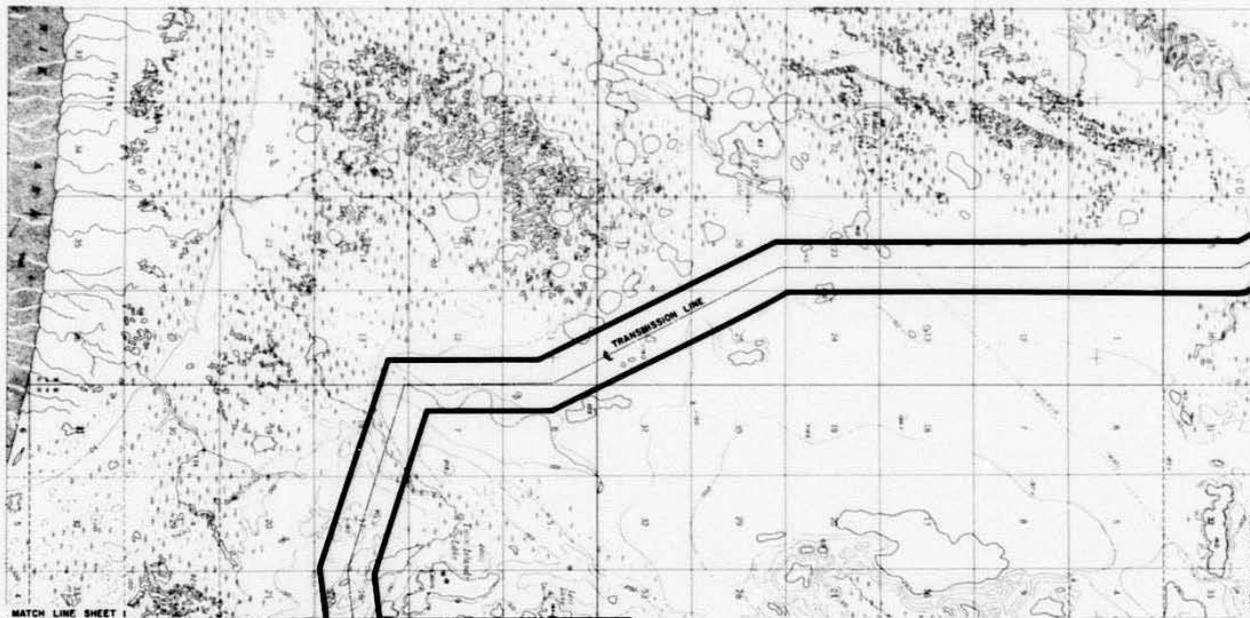
Figures 1 through 14 (as discussed in Section 14.3 of the Feasibility Report) are believed to best meet the technical, economical, and environmental criteria as discussed in the Transmission Line Corridor Screening Closeout Report. A half-mile-wide corridor is located in these figures; within this width, the centerline of the proposed route is located. The centerline represents a 400-foot-width right-of-way for the entire length of the transmission line, except in the segment of the line between Devil Canyon and the Intertie where the right-of-way is 700 feet. This segment has five single-circuit lines parallel to each other.

Appendix A contains the environmental constraint maps.



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA QUADRANGLES:
ANCHORAGE (A-7), ANCHORAGE (A-8), ANCHORAGE (B-7)
AND ANCHORAGE (B-8).

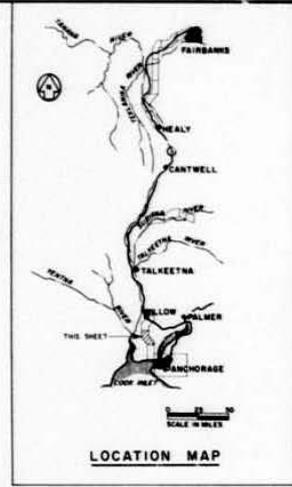
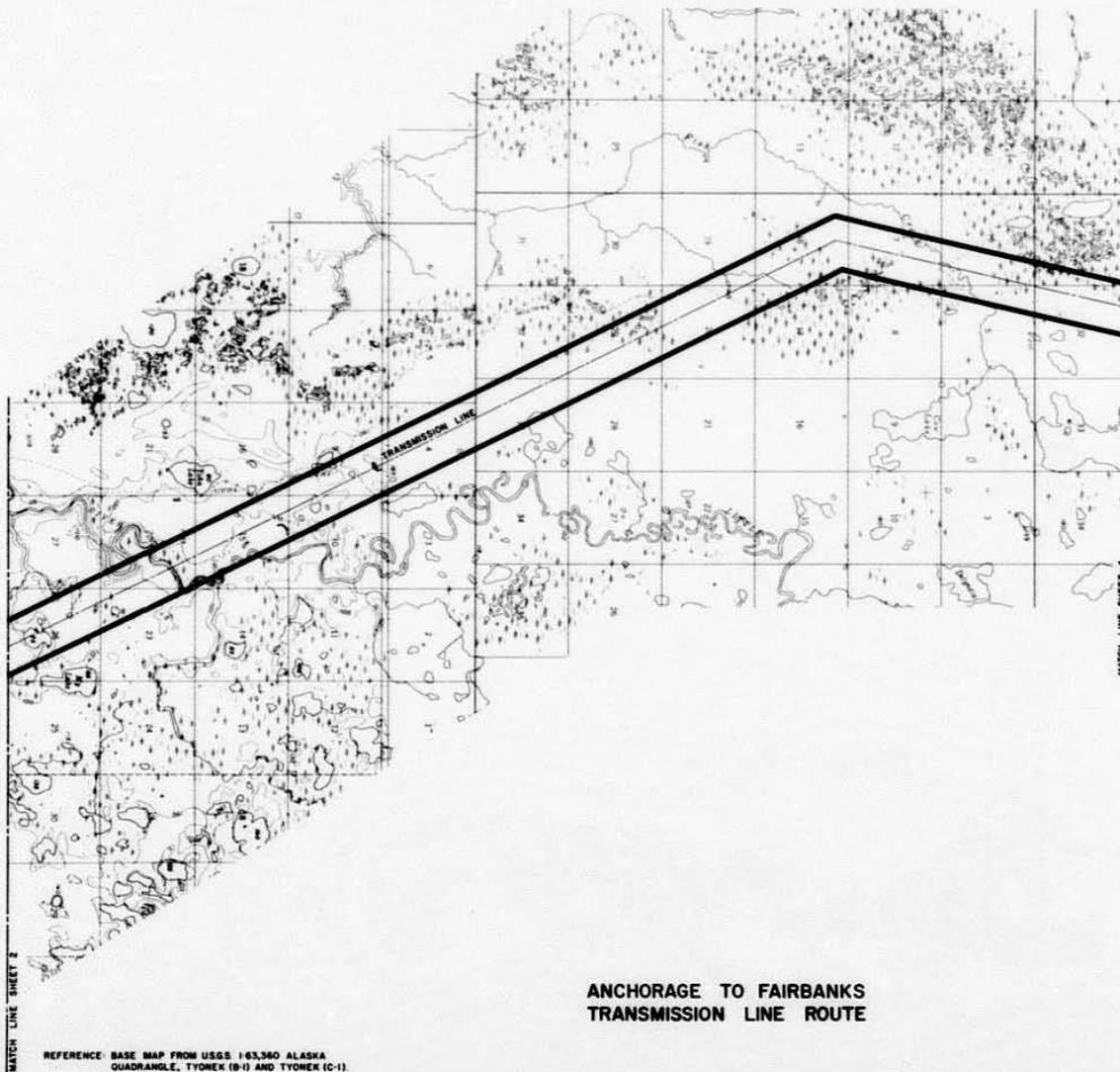


- LEGEND**
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
 -  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
 -  PROPOSED SUBSTATION OR SWITCHING YARD
 -  EXISTING TRANSMISSION LINE
 -  EXISTING SUBSTATION



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA
QUADRANGLE, TYONEK (8-1)

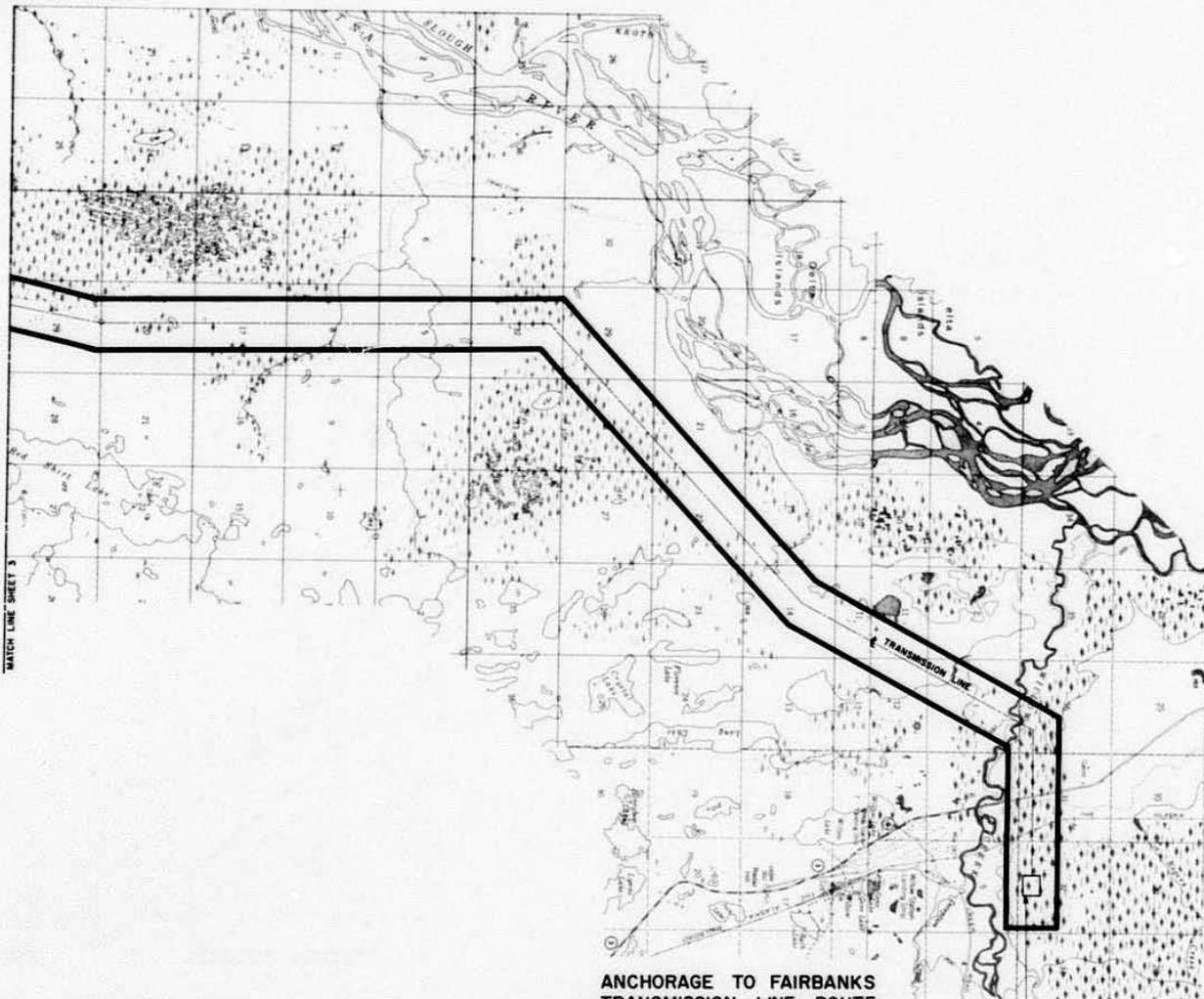


- LEGEND**
- 1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
 - CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
 - PROPOSED SUBSTATION OR SWITCHING YARD
 - EXISTING TRANSMISSION LINE
 - EXISTING SUBSTATION



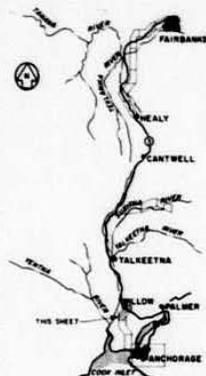
**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE BASE MAP FROM USGS 1:63,360 ALASKA
QUADRANGLE, TYONEK (B-1) AND TYONEK (C-1).



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

WILLOW SWITCHING STATION (TERMINATION POINT OF THE PROPOSED TRANSMISSION LINE)



LOCATION MAP

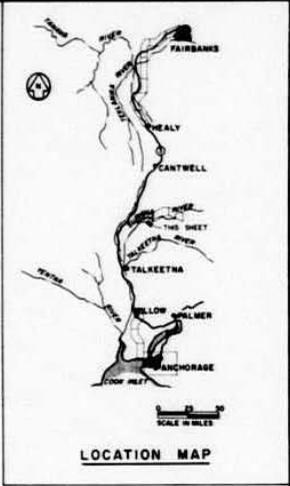
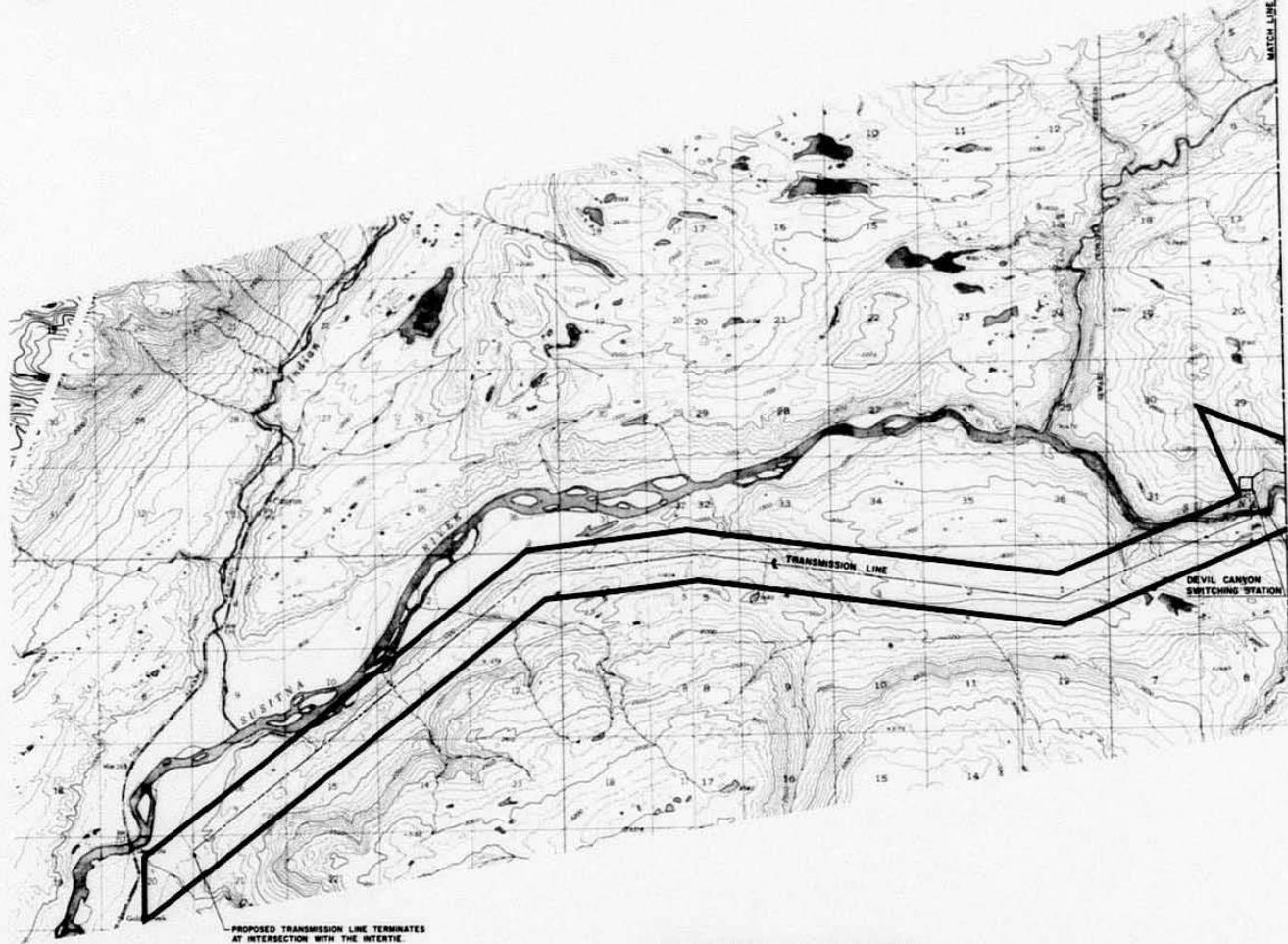
LEGEND

-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
-  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION

SCALE 0 1 MILE

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA
QUADRANGE TYONEK (C-1) AND TYONEK (D-1)



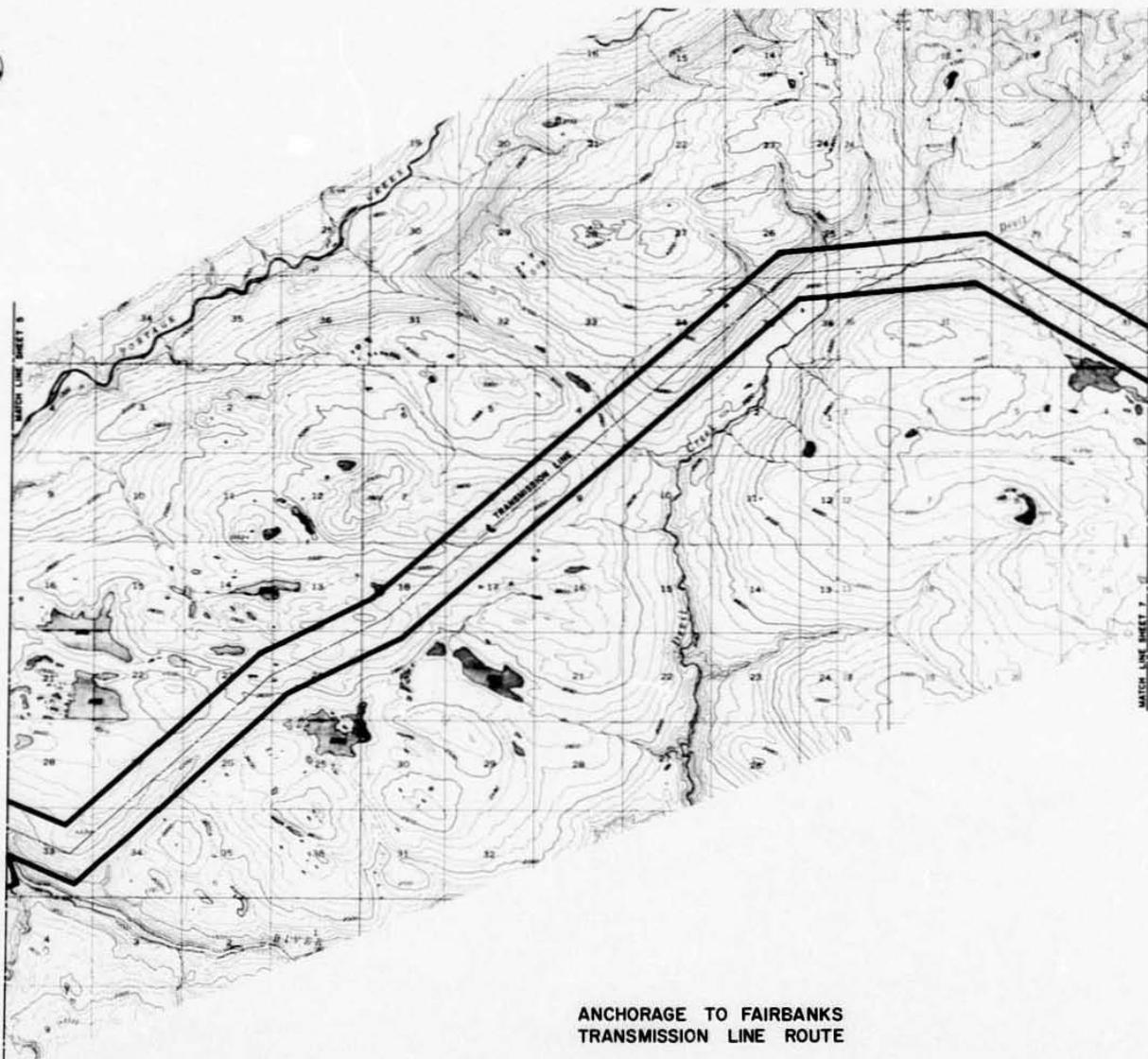


- 1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
- CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
- PROPOSED SUBSTATION OR SWITCHING YARD
- EXISTING TRANSMISSION LINE
- EXISTING SUBSTATION



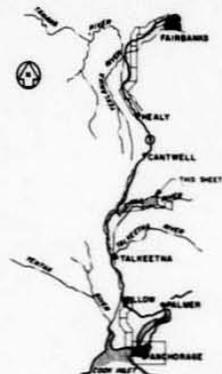
**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA QUADRANGLES,
TALKEETNA MOUNTAINS (D-6) AND TALKEETNA
MOUNTAINS (D-5).

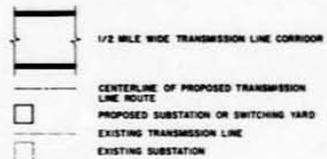


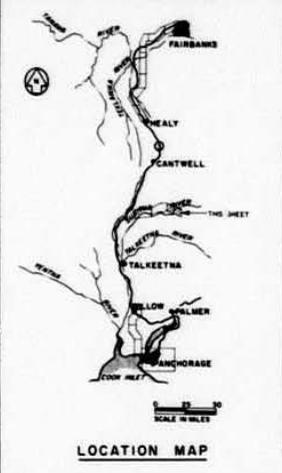
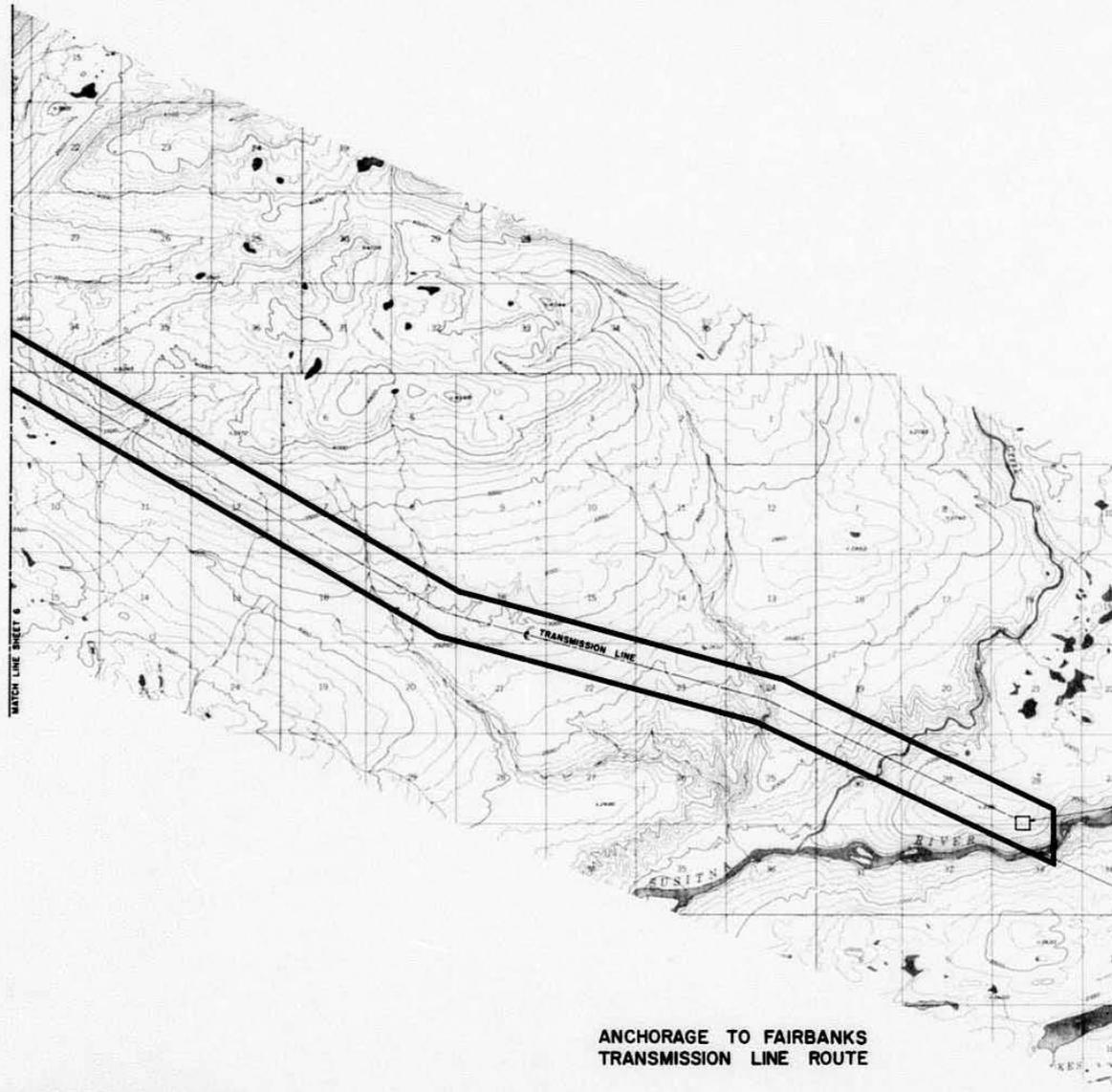
ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE

REFERENCE MAP FROM USGS 1:63,360 ALASKA QUADRANGLES,
TALKEETNA MOUNTAINS (D-5) AND TALKEETNA
MOUNTAINS (D-4)



LOCATION MAP





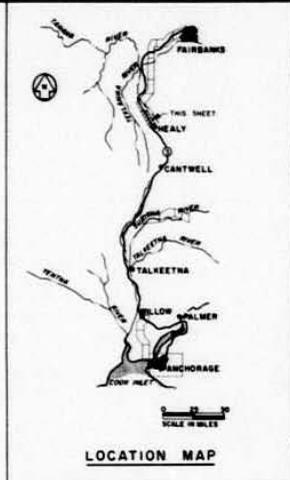
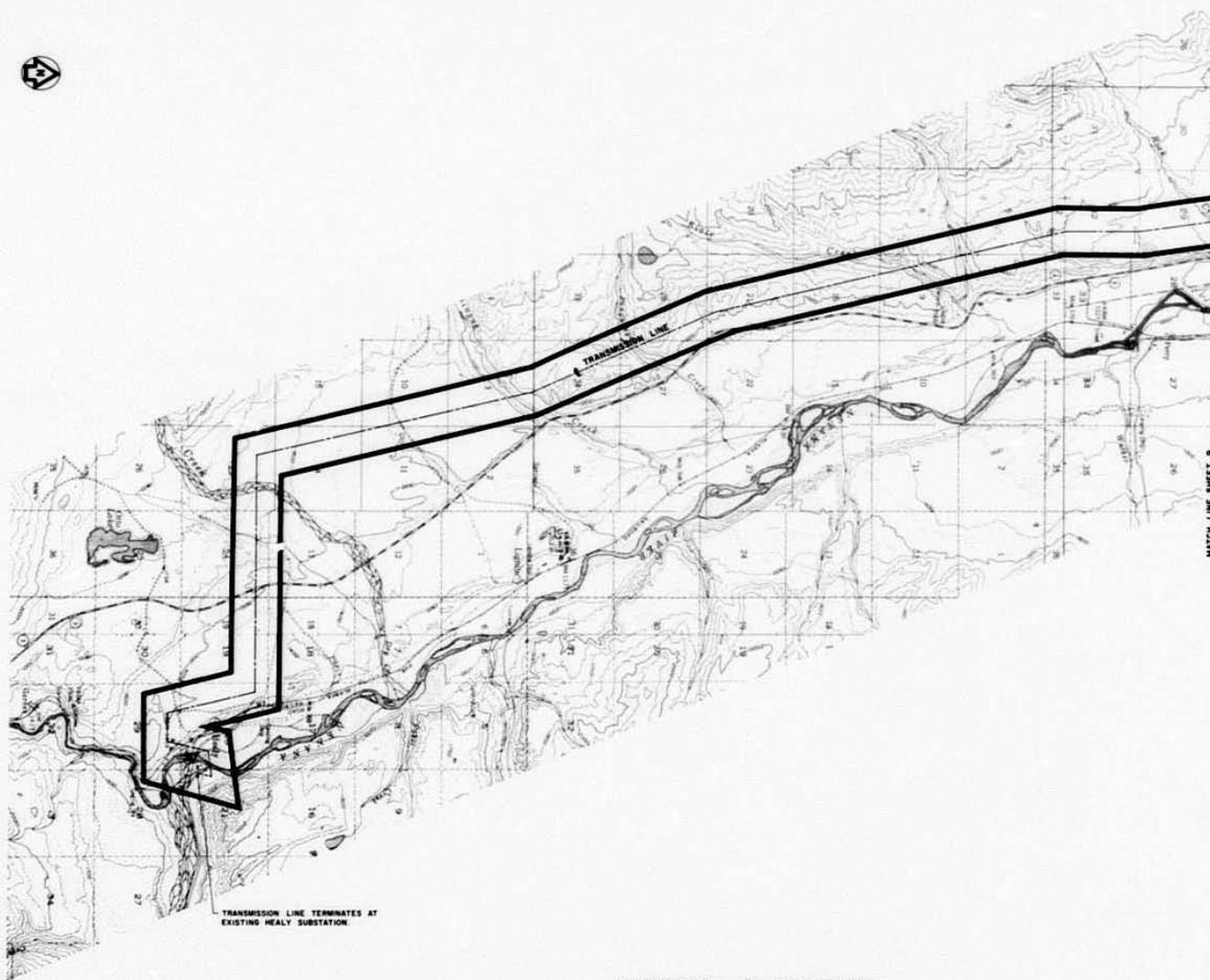
- LEGEND**
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
 -  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
 -  PROPOSED SUBSTATION OR SWITCHING YARD
 -  EXISTING TRANSMISSION LINE
 -  EXISTING SUBSTATION

WATANA SWITCHING STATION
(TERMINATION POINT OF THE
PROPOSED TRANSMISSION LINE)

WATANA DAM SCALE 0 1 MILE

**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM USGS 1:63,360 ALASKA
QUADRANGLE, TALKEETNA MOUNTAINS (D-4)



LEGEND

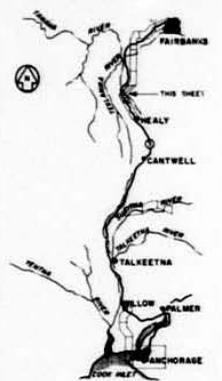
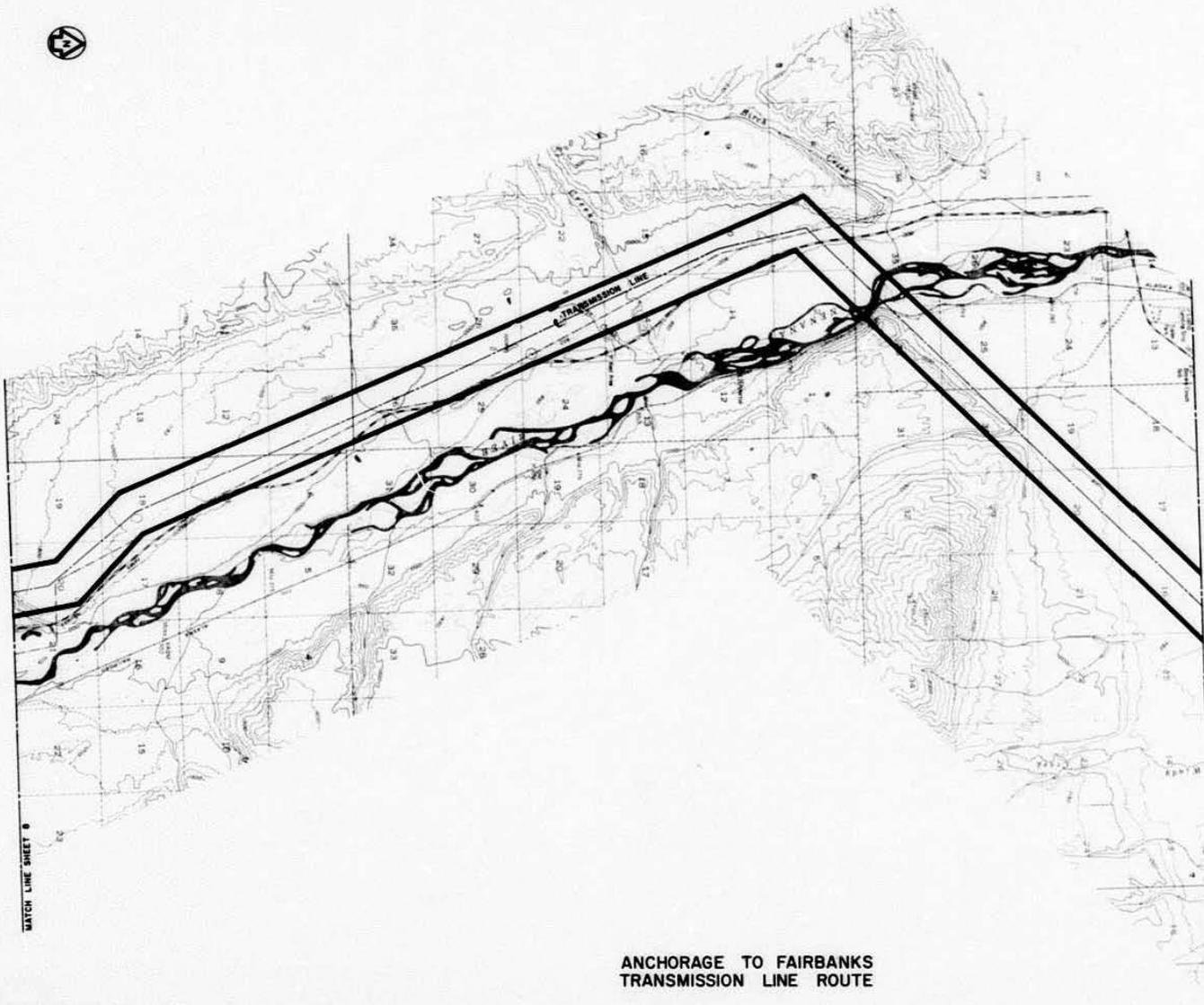
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
-  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA QUADRANGLES,
FAIRBANKS (A-5), HEALY (D-4) AND HEALY (D-5)





LOCATION MAP

LEGEND

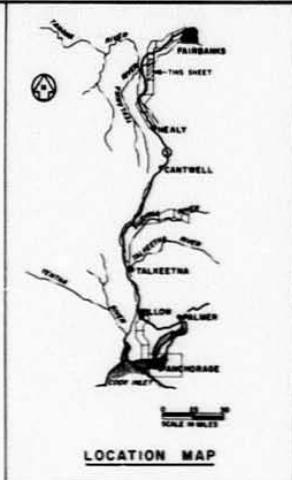
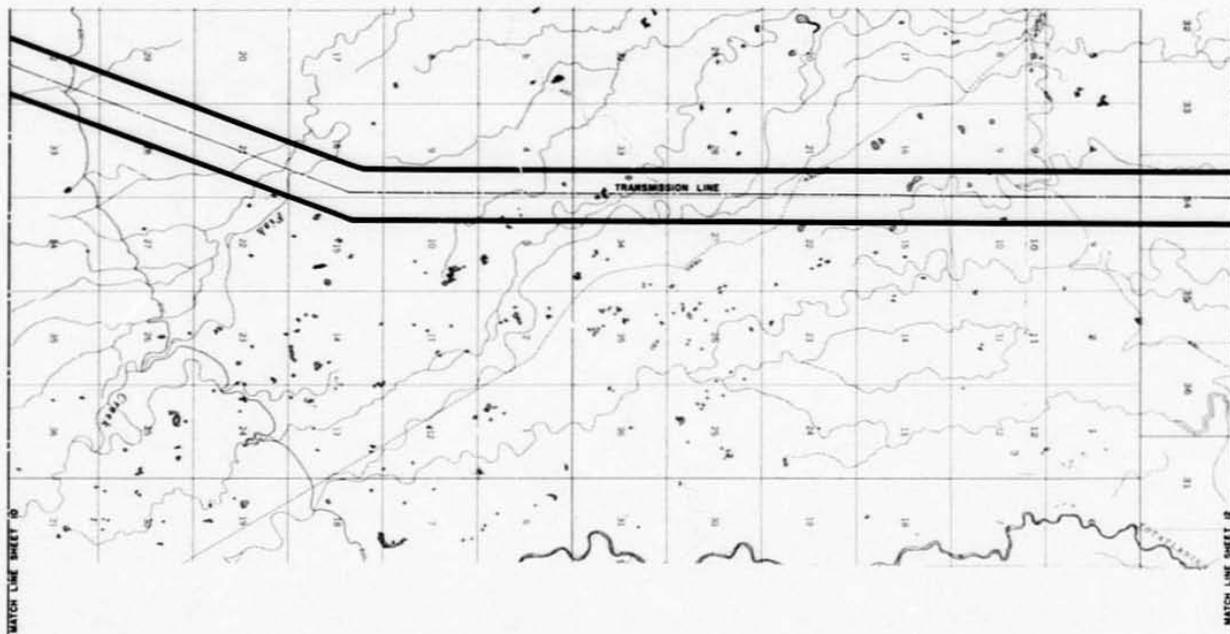
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
-  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED TRANSMISSION LINE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION

SCALE 0 1 MILE

**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM USGS 1:63,360 ALASKA QUADRANGLES,
FAIRBANKS (A-5).





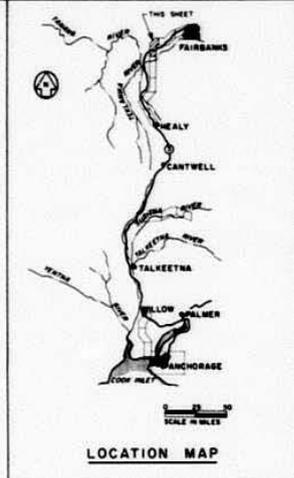
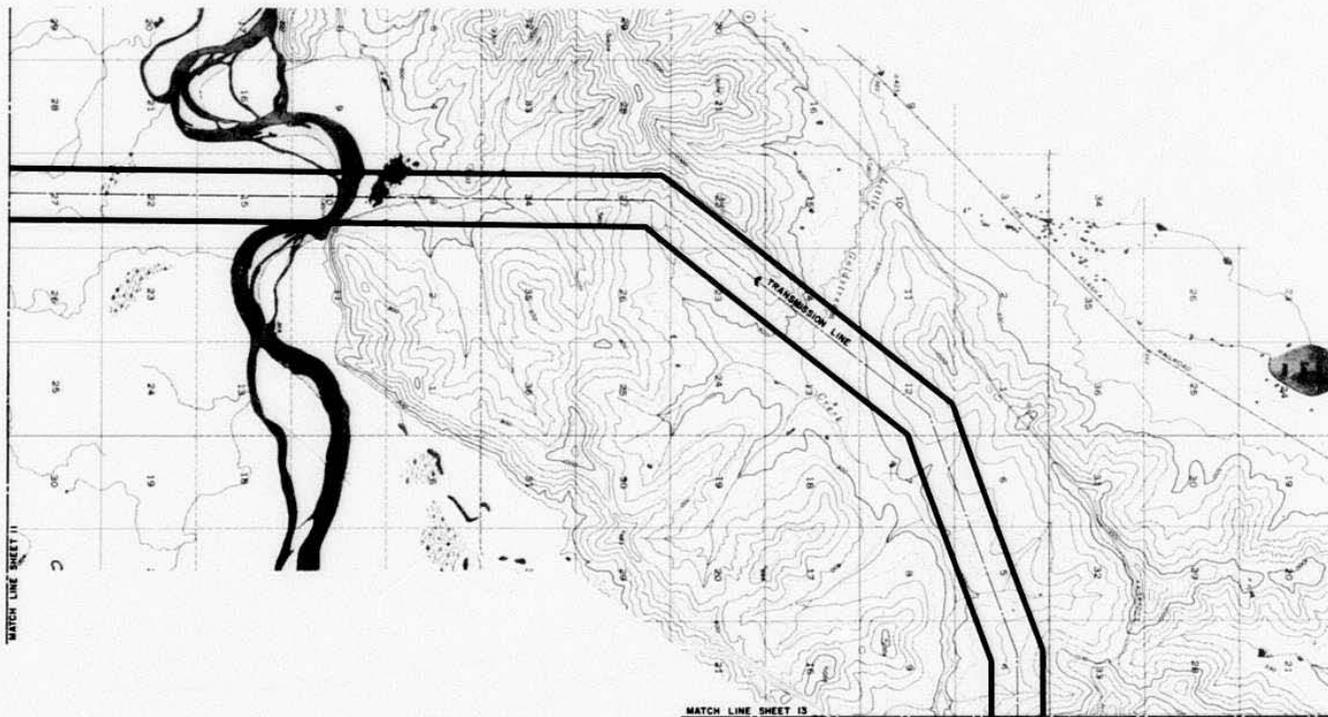
LEGEND

-  1/2 MILE WIDE TRANSMISSION LINE CONDUIT
-  CENTER LINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA QUADRANGLES,
FAIRBANKS (B-4) AND FAIRBANKS (C-4)



LEGEND

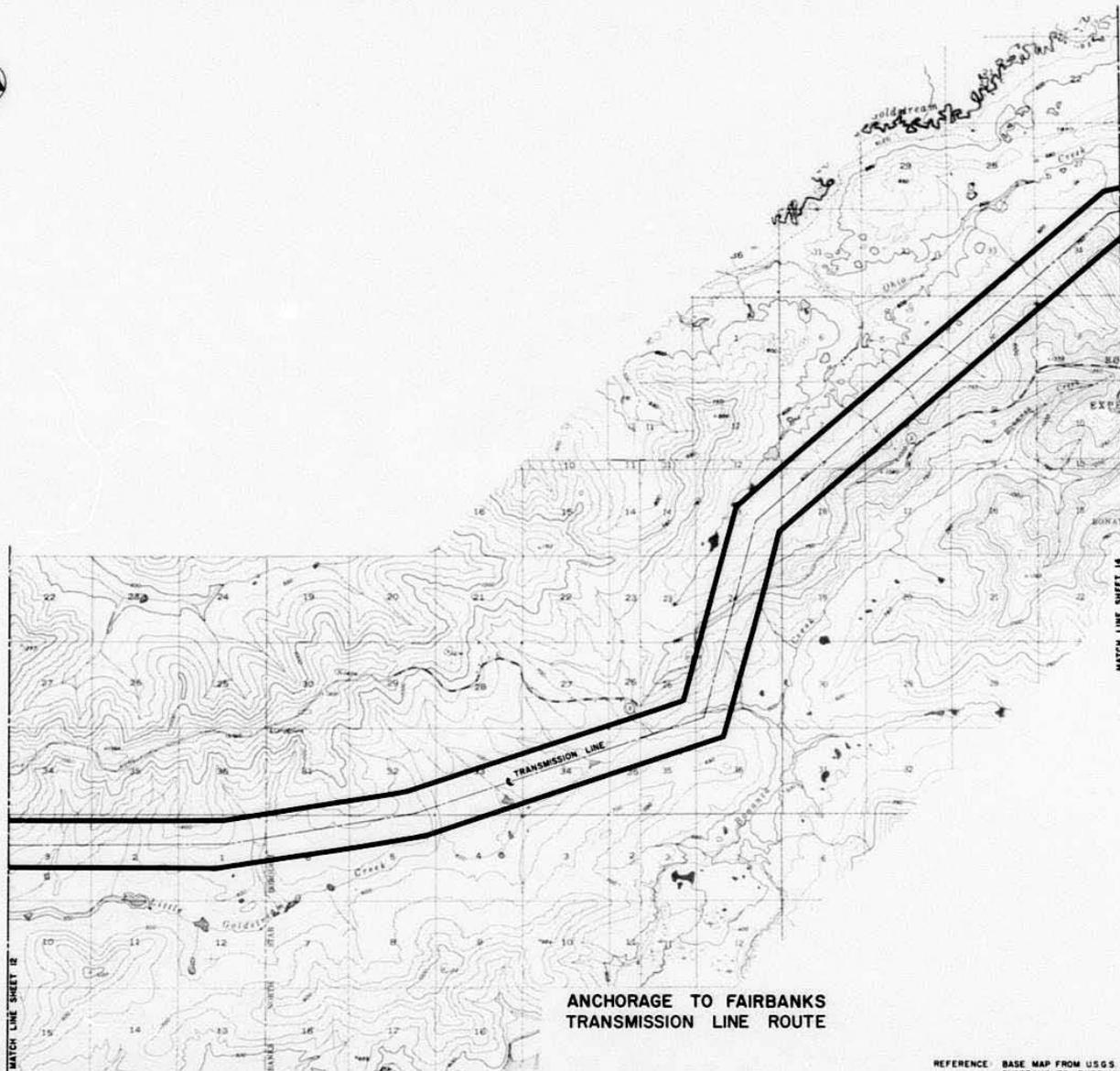
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
-  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION

SCALE 0 1 MILE

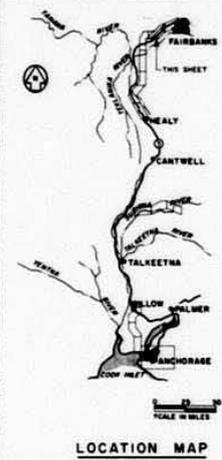
**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM U.S.G.S. 1:63,360 ALASKA
QUADRANGLE, FAIRBANKS (C-4)





**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**



- LEGEND**
-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
 -  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
 -  PROPOSED SUBSTATION OR SWITCHING YARD
 -  EXISTING TRANSMISSION LINE
 -  EXISTING SUBSTATION

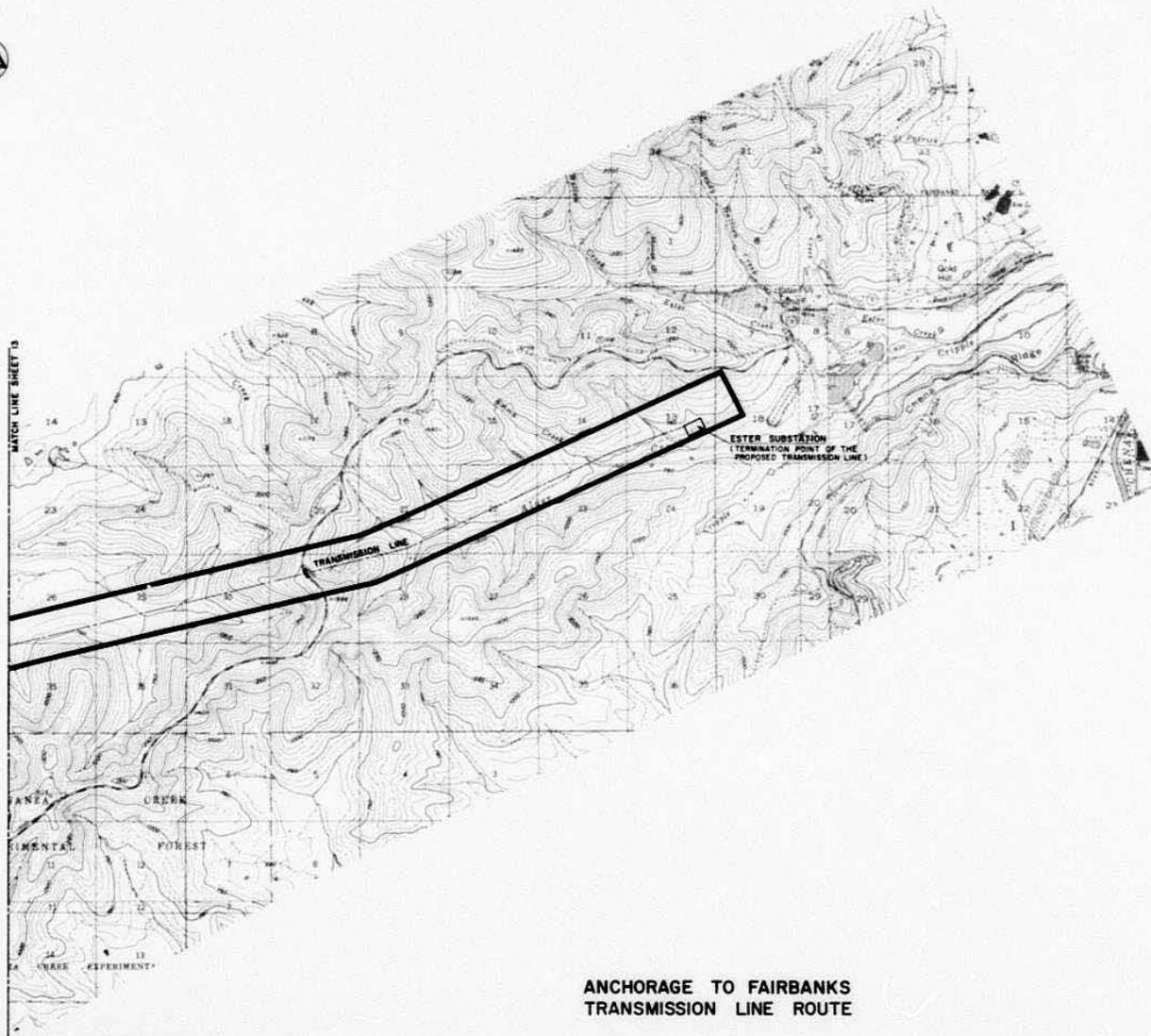


REFERENCE: BASE MAP FROM USGS 1:63,360 ALASKA
QUADRANGLES, FAIRBANKS (C-3),
FAIRBANKS (C-4), FAIRBANKS (D-3) & FAIRBANKS (D-4)



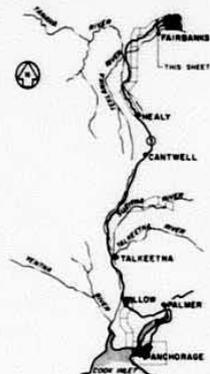


MATCH LINE SHEET 13



**ANCHORAGE TO FAIRBANKS
TRANSMISSION LINE ROUTE**

REFERENCE: BASE MAP FROM USGS 1:63,360 ALASKA QUADRANGLES,
FAIRBANKS (D-2) & FAIRBANKS (D-3).



LOCATION MAP

LEGEND

-  1/2 MILE WIDE TRANSMISSION LINE CORRIDOR
-  CENTERLINE OF PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED SUBSTATION OR SWITCHING YARD
-  EXISTING TRANSMISSION LINE
-  EXISTING SUBSTATION

SCALE 0 1 MILE

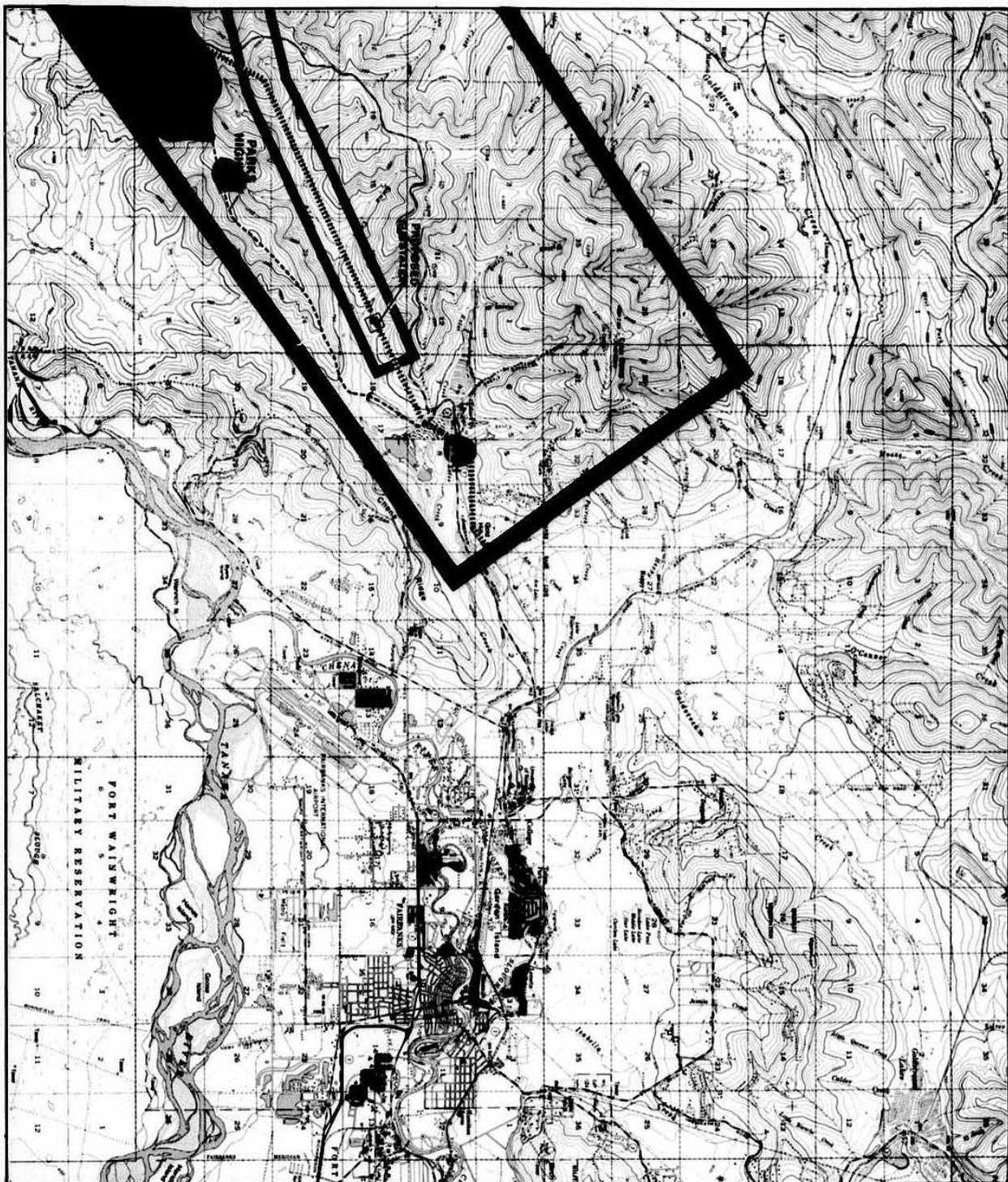


APPENDIX A

1 - CONSTRAINT MAPS

Constraint analysis information was placed on the base maps, (Figures 1 through 48). Constraints were identified and presented on overlays to the base map. This mapping process involved using both existing information and that acquired through related Susitna project studies. This information was first categorized as to its potential for constraining the development of a transmission line route within the preferred corridors. Environmental constraints were identified and recorded directly onto the base maps in rough form. Overlays to the base map were prepared indicating the type and extent of the encountered constraints. Three overlays were prepared for each map; one for man-made constraints, one for visual constraints, and one for biological constraints.

Base maps include such information as topographic features, roads, rivers, streams, communities, etc. Environmental constraints were mapped on separate overlays to the base map, with the final overlay consisting of a composite of all environmental constraints. Using the composite overlay, alternative routes were evaluated, with establishment of a primary route as the objective of the evaluation process.



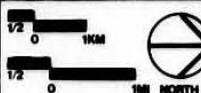
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

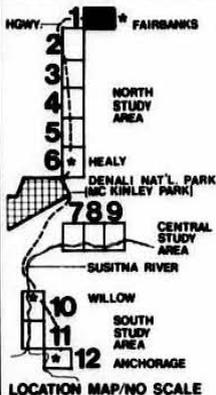
- SENSITIVE VIEWSHEDS**
- HW HIGHWAY
 - RR RAILROAD
 - PL PRIVATE LANDS
 - WC WATER COURSE
 - RA RECREATION AREA

LEGEND

- ==== EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



LOCATION MAP/NO SCALE

**VISUAL CONSTRAINTS
MAP M1**

PREPARED BY TES FIGURE 1 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

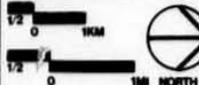
BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 QF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

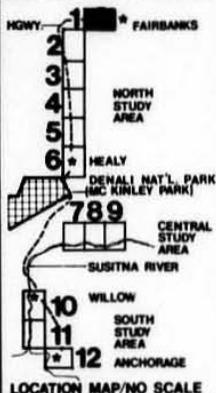
LEGEND

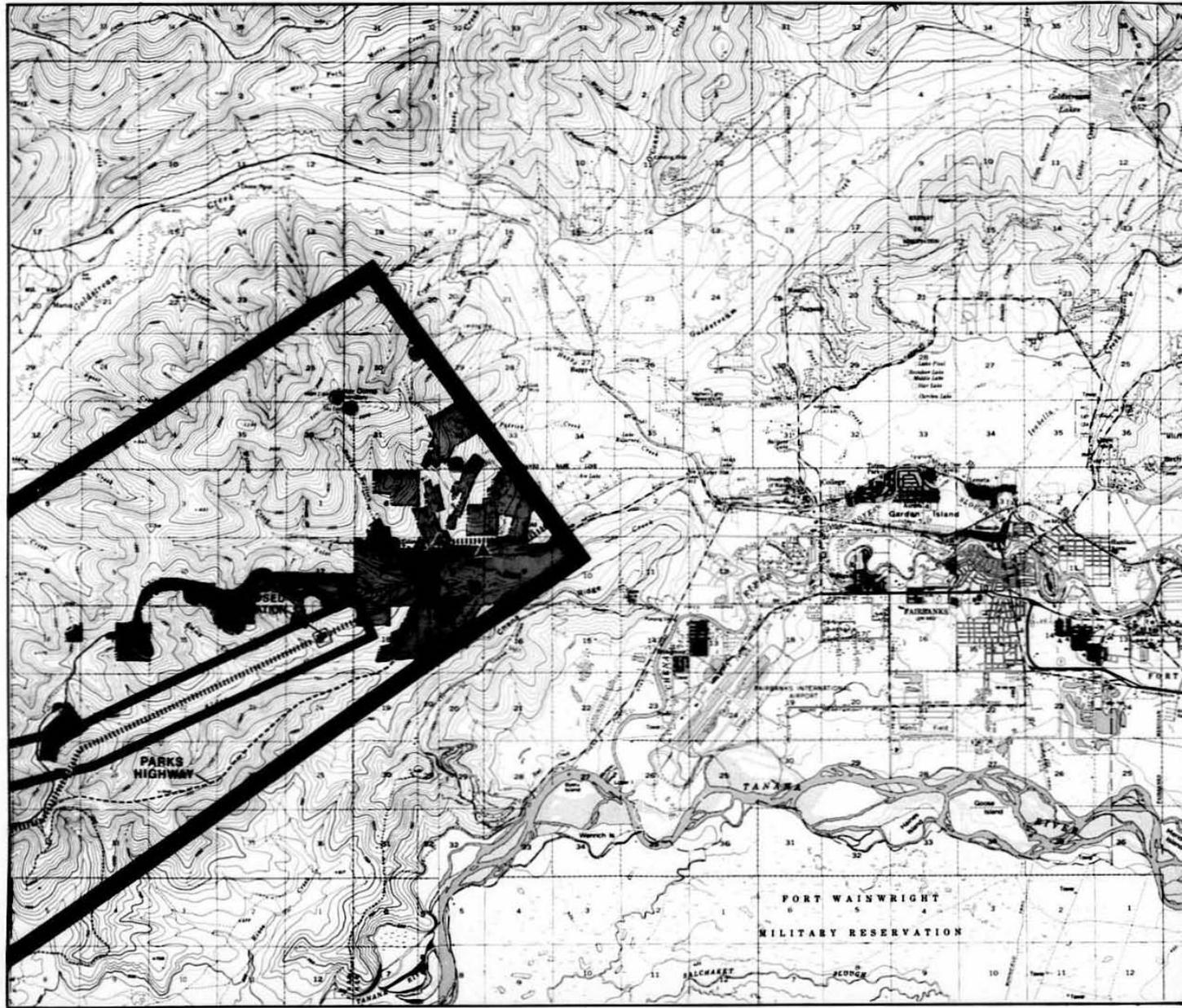
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

BIOLOGICAL CONSTRAINTS
MAP M1
 PREPARED BY TES FIGURE 2 OF 48



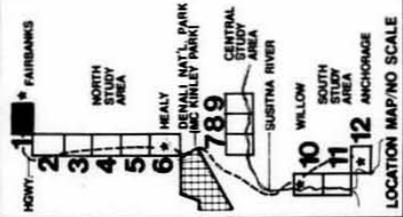
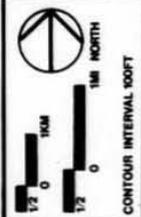


SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

- RECREATION BOUNDARIES**
- CAMPSITE
 - RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DAM IMPROVEMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL

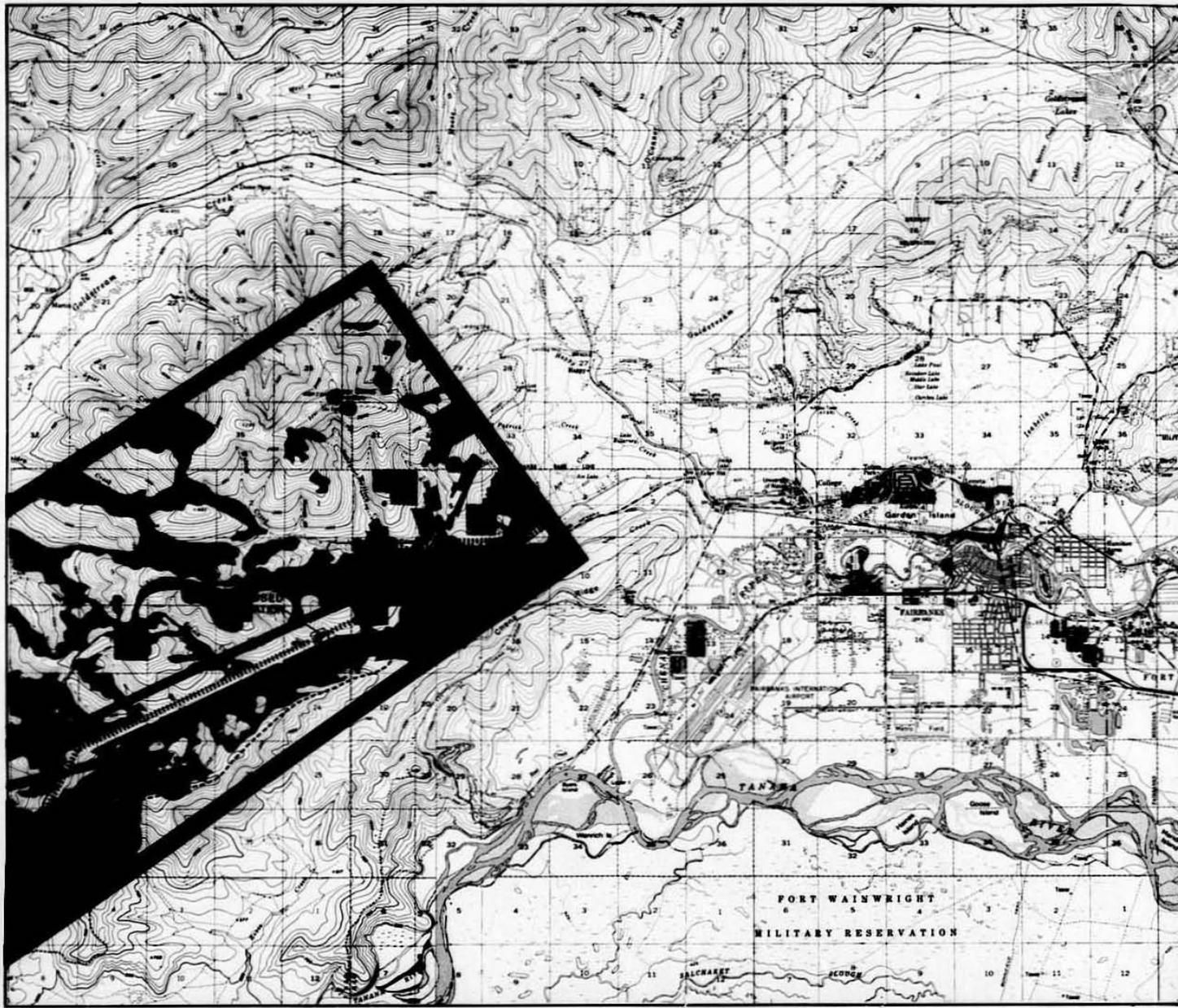
- LEGEND**
- EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERTIE
 - RECOMMENDED ROUTE BOUNDARY
 - CORRIDOR BOUNDARY



MANMADE CONSTRAINTS MAP M 1

PREPARED BY TES FIGURE 3 of 48



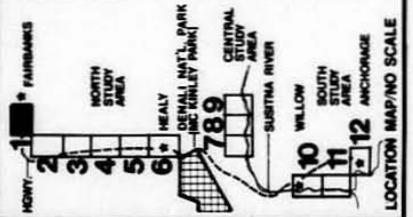


SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

- LEGEND**
- EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERIE RECOMMENDED ROUTE BOUNDARY
 - ▭ CORRIDOR BOUNDARY



- VISUAL CONSTRAINTS**
- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY
- BIOLOGICAL CONSTRAINTS**
- X VEGETATION
 - WILDLIFE HABITAT
- MANMADE CONSTRAINTS**
- X RECREATION
 - X LAND USE AND LAND OWNERSHIP
 - X TRANSPORTATION
 - X DENOTES CONSTRAINT PRESENT

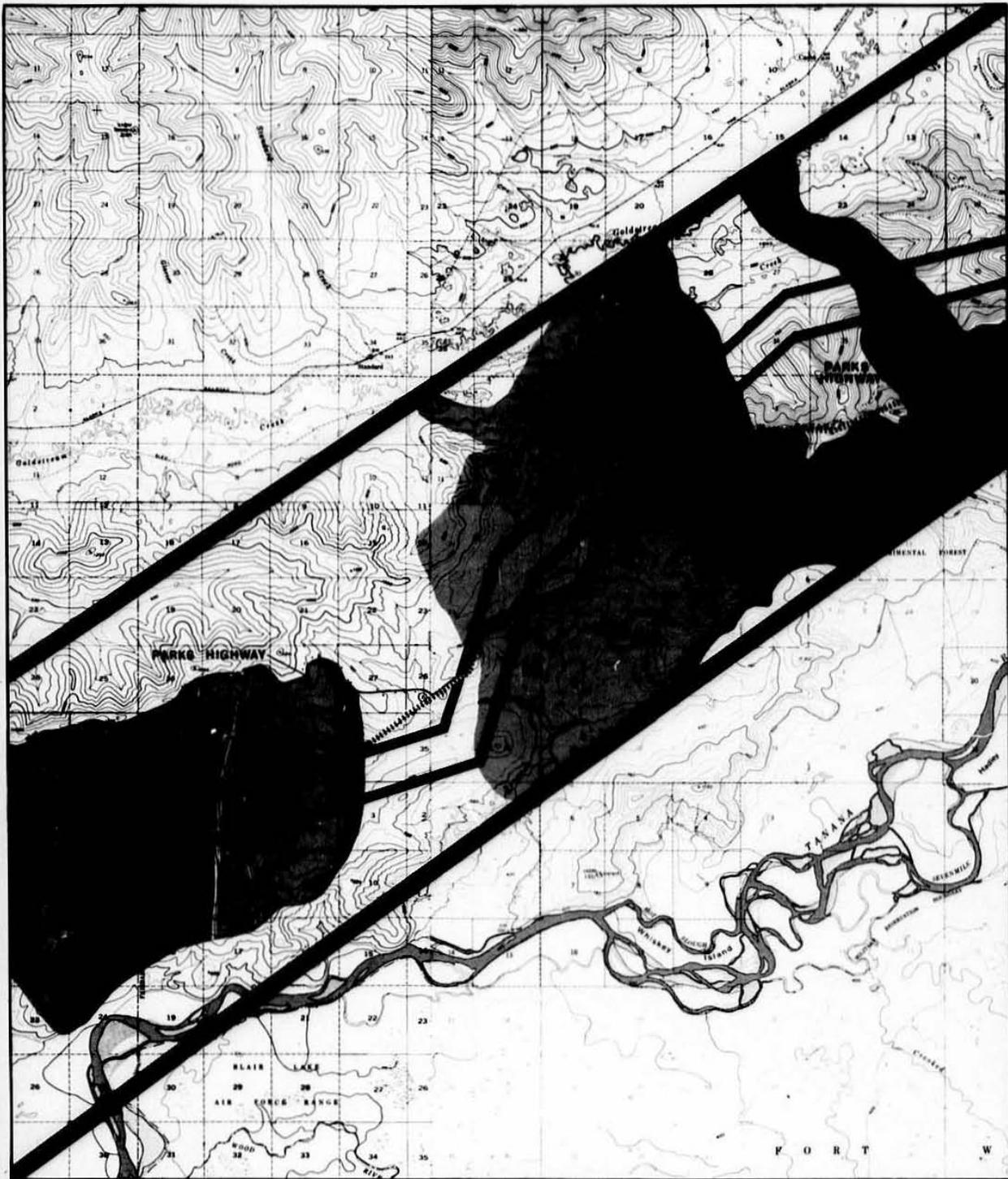


THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

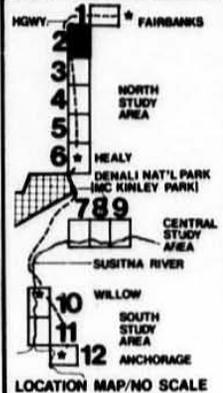
COMPOSITE CONSTRAINTS

MAP M1

PREPARED BY TES FIGURE 4 of 48



VISUAL CONSTRAINTS
MAP M2
 PREPARED BY TES FIGURE 5 OF 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS
 SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

PSH PROPOSED SCENIC HIGHWAY AREA

SENSITIVE VIEWSHEDS

- HW HIGHWAY
- RR RAILROAD
- PL PRIVATE LANDS
- WC WATER COURSE
- RA RECREATION AREA

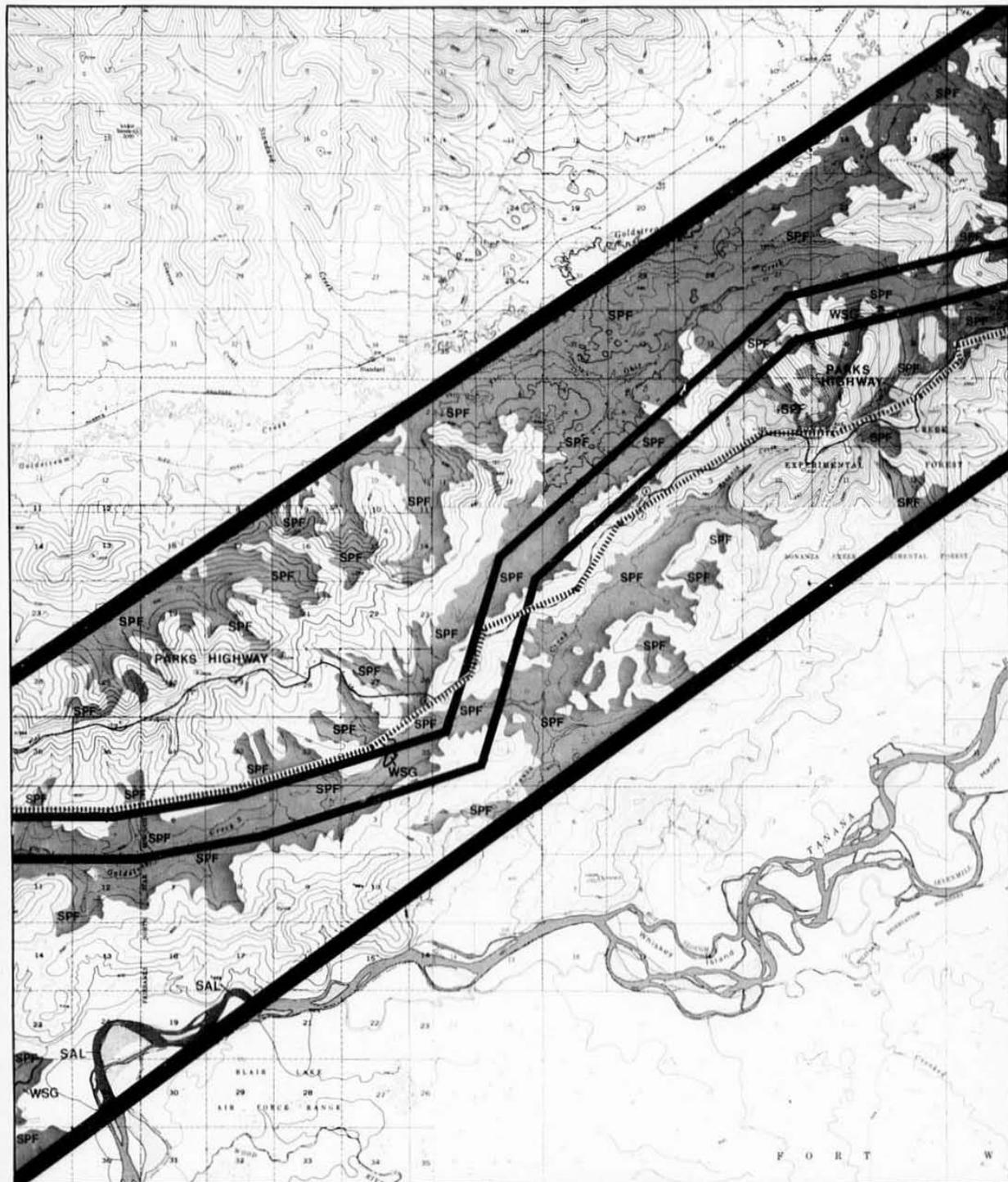
LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

0 100 KM
 0 100 MI NORTH

CONTOUR INTERVAL 100FT





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 * PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

LEGEND

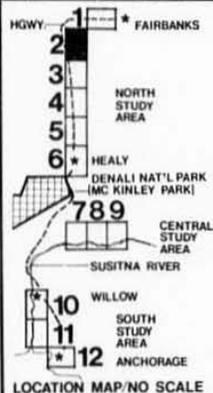
- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

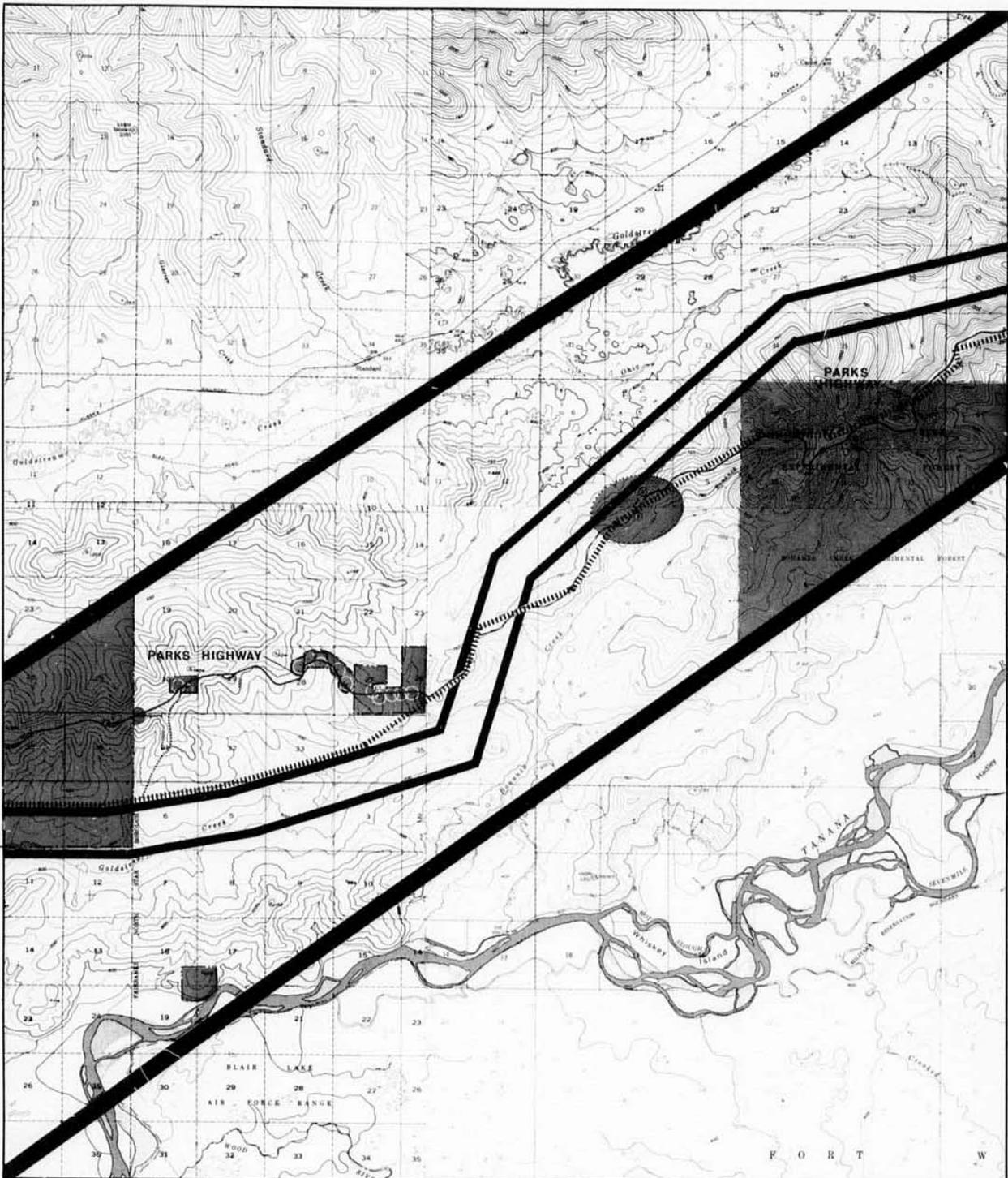
**BIOLOGICAL
CONSTRAINTS
MAP M2**

PREPARED BY TES FIGURE 6 of 48



LOCATION MAP/NO SCALE





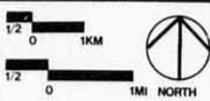
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

- RECREATION BOUNDARIES**
- CAMPSITE
 - RT -- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

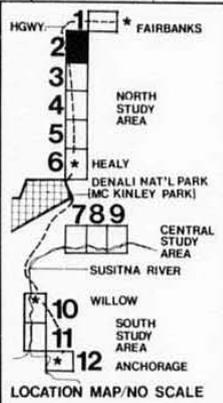
LEGEND

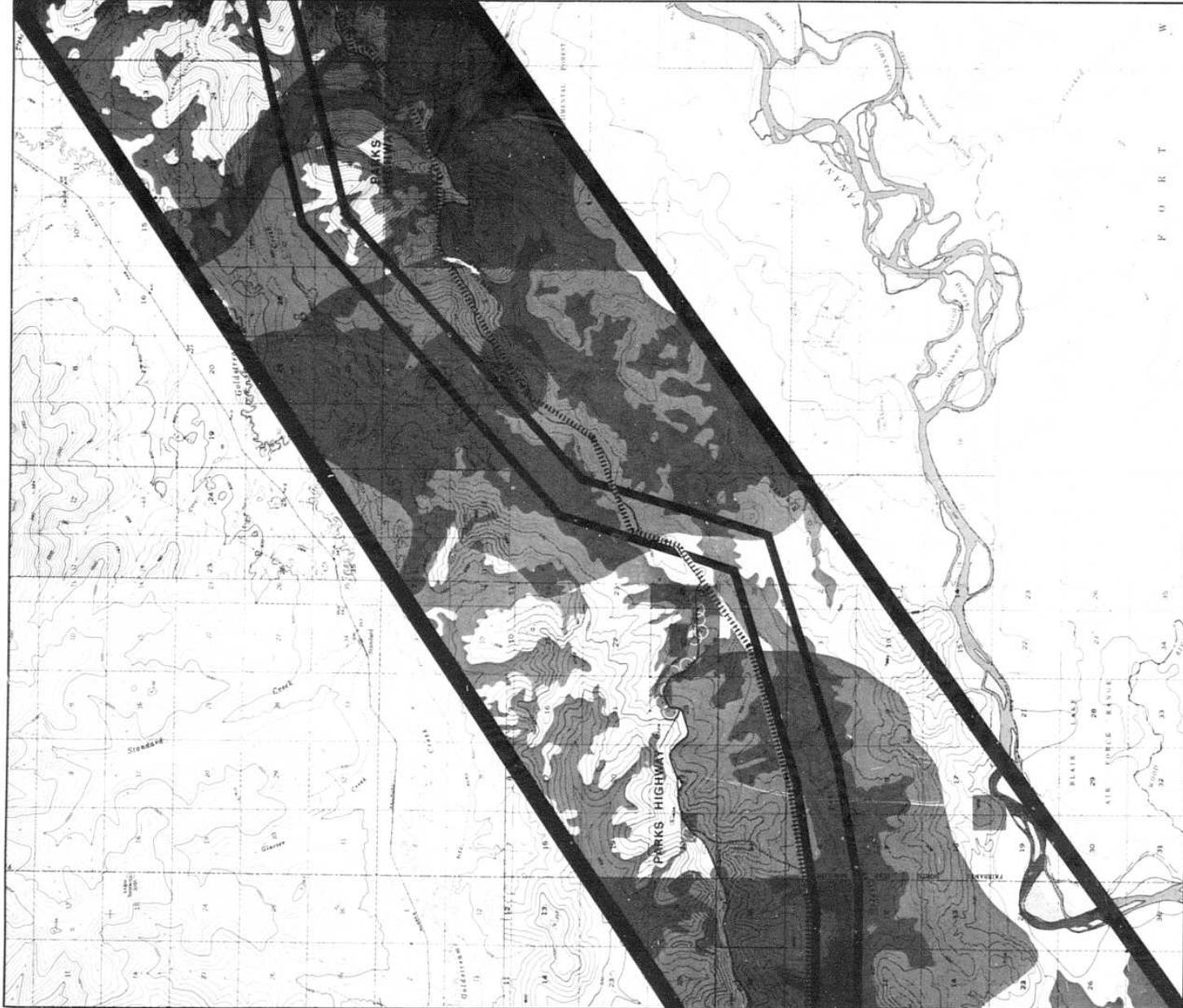
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

MANMADE CONSTRAINTS
MAP M2
 PREPARED BY TES FIGURE 7 OF 48

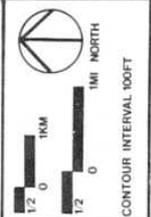




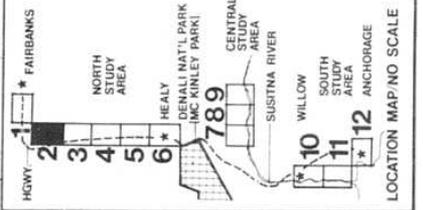
F O R T W

SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

- LEGEND**
- EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERTIE
 - RECOMMENDED ROUTE BOUNDARY
 - CORRIDOR BOUNDARY



- VISUAL CONSTRAINTS**
- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY
- BIOLOGICAL CONSTRAINTS**
- X VEGETATION
 - X WILDLIFE HABITAT
- MANMADE CONSTRAINTS**
- X RECREATION
 - X LAND USE AND LAND OWNERSHIP
 - X TRANSPORTATION
 - X DENOTES CONSTRAINT PRESENT

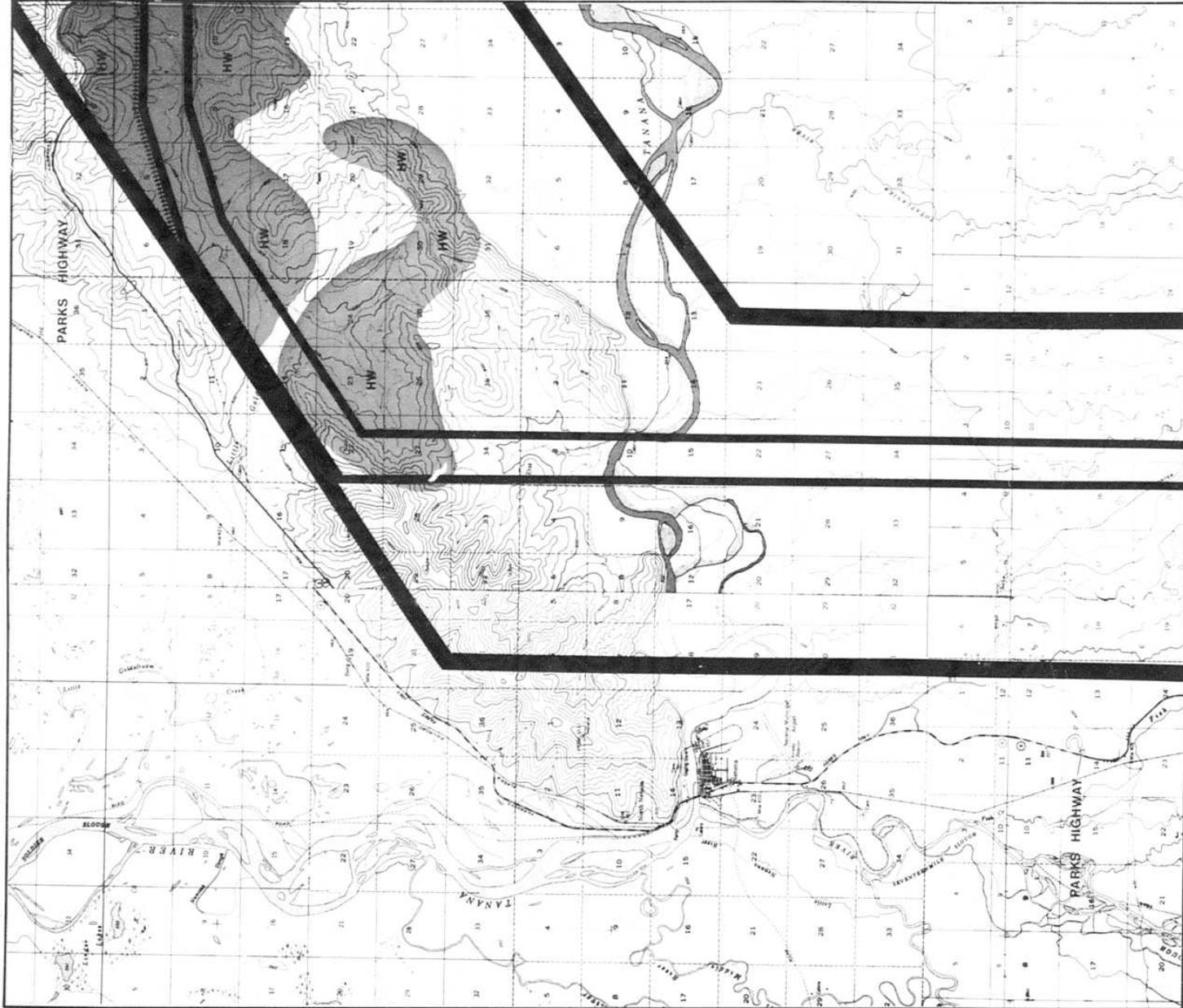


THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

COMPOSITE CONSTRAINTS

MAP M2

PREPARED BY TES FIGURE 8 of 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

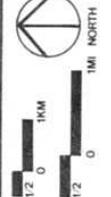
VISUAL CONSTRAINTS

SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA
 PSH PROPOSED SCENIC HIGHWAY AREA

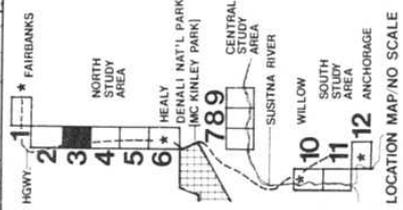
- SENSITIVE VIEWSHEDS**
 HW HIGHWAY
 RR RAILROAD
 PL PRIVATE LANDS
 WC WATER COURSE
 RA RECREATION AREA

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTE
- RECOMMENDED CORRIDOR BOUNDARY



CONTOUR INTERVAL: 50 FT

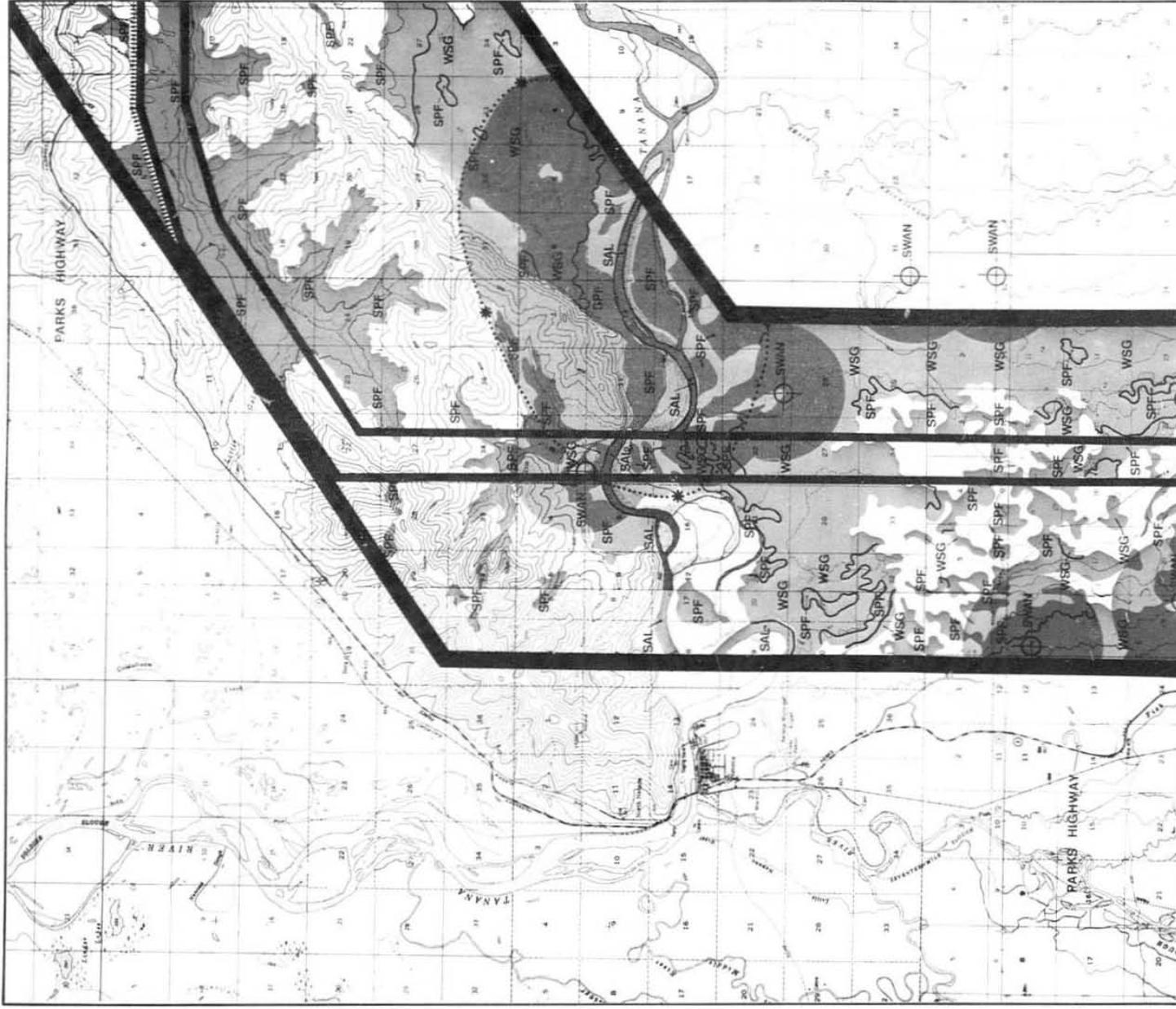


LOCATION MAP/NO SCALE

VISUAL CONSTRAINTS MAP M3

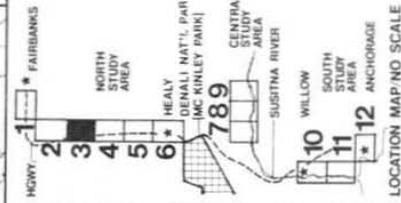
PREPARED BY TES FIGURE 9 of 48





BIOLOGICAL CONSTRAINTS MAP M3

PREPARED BY TES FIGURE 10 of 48



LOCATION MAP/NO SCALE

SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

- VEGETATION BOUNDARIES**
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA
- WILDLIFE BOUNDARIES**
 SAL SALMON PRESENT
 PEROGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 * * * ACTIVE NEST SITES 1980 - 81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

- LEGEND**
 - - - - - EXISTING MAJOR TRANSMISSION LINE
 - - - - - PROPOSED INTERTIE
 - - - - - RECOMMENDED ROUTE BOUNDARY
 - - - - - CORRIDOR BOUNDARY



CONTOUR INTERVAL 50FEET

ACRES



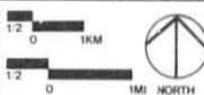
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

- RECREATION BOUNDARIES**
- CAMPSITE
 - RT --- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

LEGEND

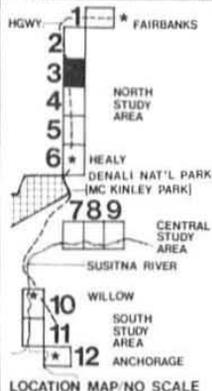
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

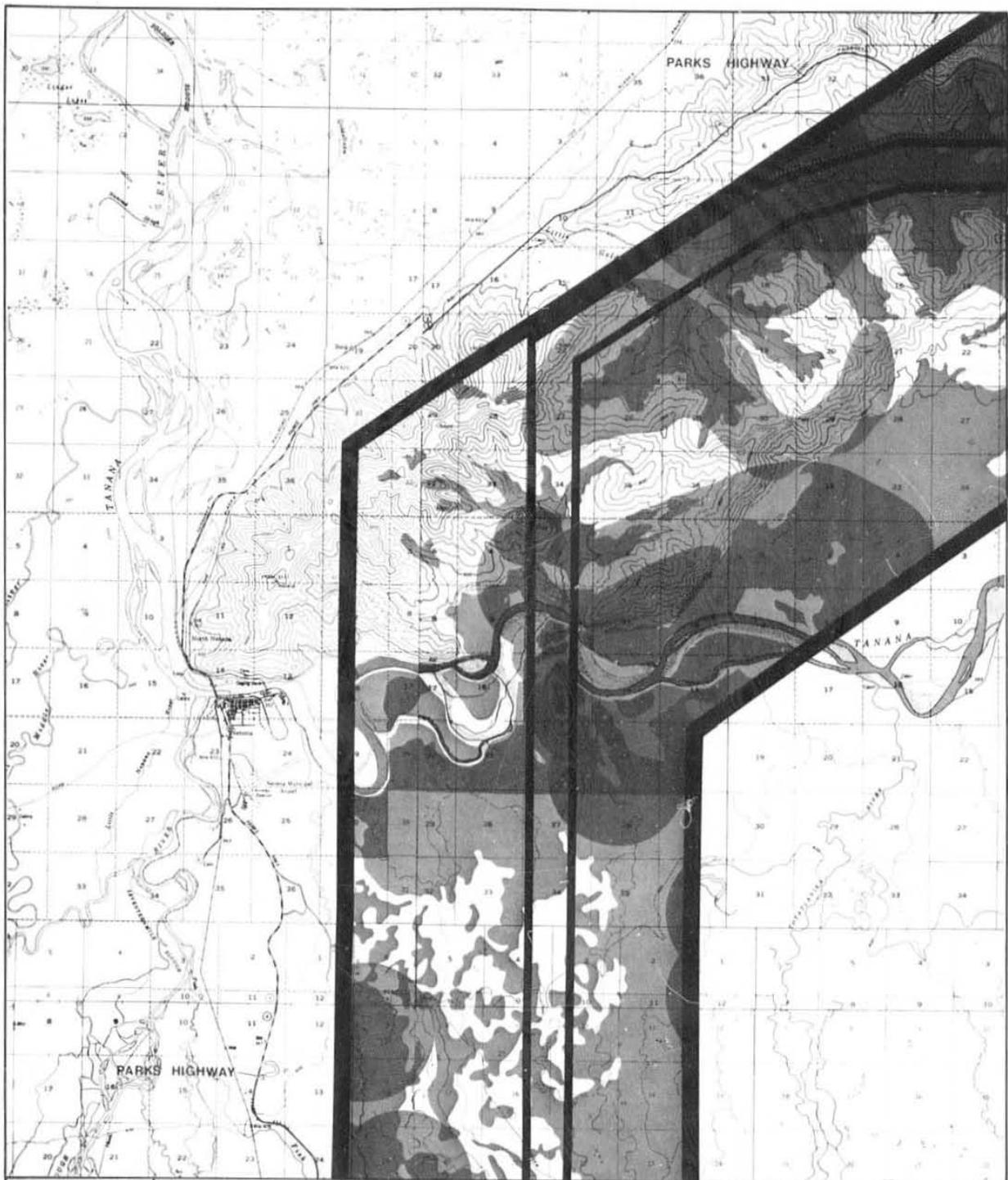


CONTOUR INTERVAL 100FT

MANMADE
CONSTRAINTS
MAP M3

PREPARED BY TES FIGURE 11 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- X WILDLIFE HABITAT

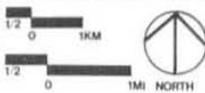
MANMADE CONSTRAINTS

- RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

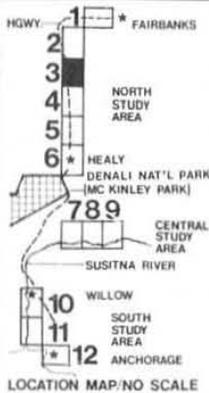


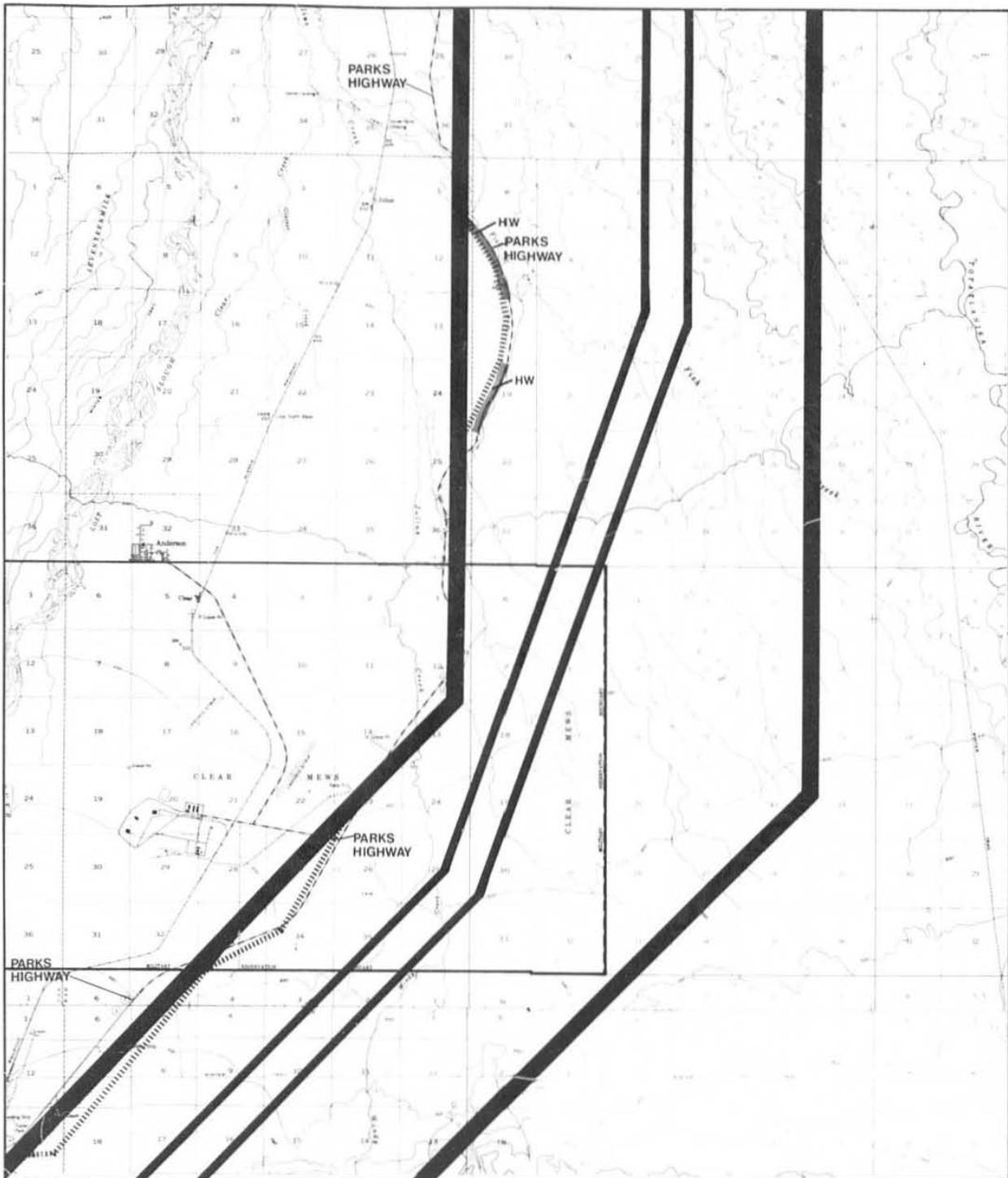
CONTOUR INTERVAL 100FT

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS
IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY

MAP M3

PREPARED BY TES FIGURE 12 OF 48





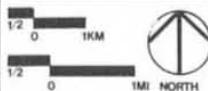
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

- PSH PROPOSED SCENIC HIGHWAY AREA
- SENSITIVE VIEWSHEDS
- HW HIGHWAY
 - RR RAILROAD
 - PL PRIVATE LANDS
 - WC WATER COURSE
 - RA RECREATION AREA

LEGEND

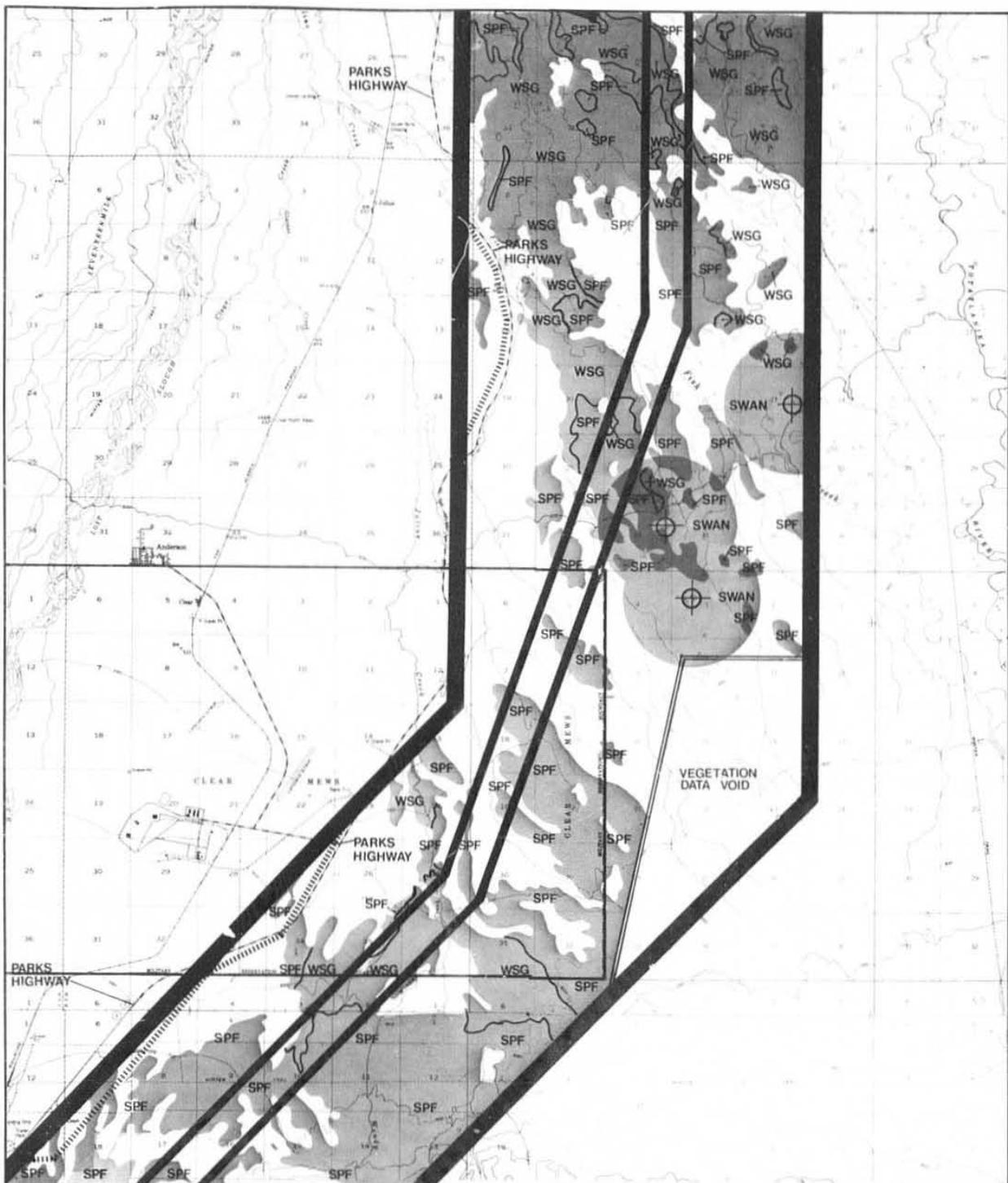
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

VISUAL CONSTRAINTS
MAP M4
 PREPARED BY TES FIGURE 13 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

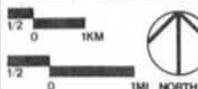
BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 PF PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

LEGEND

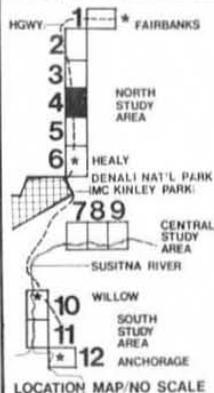
- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

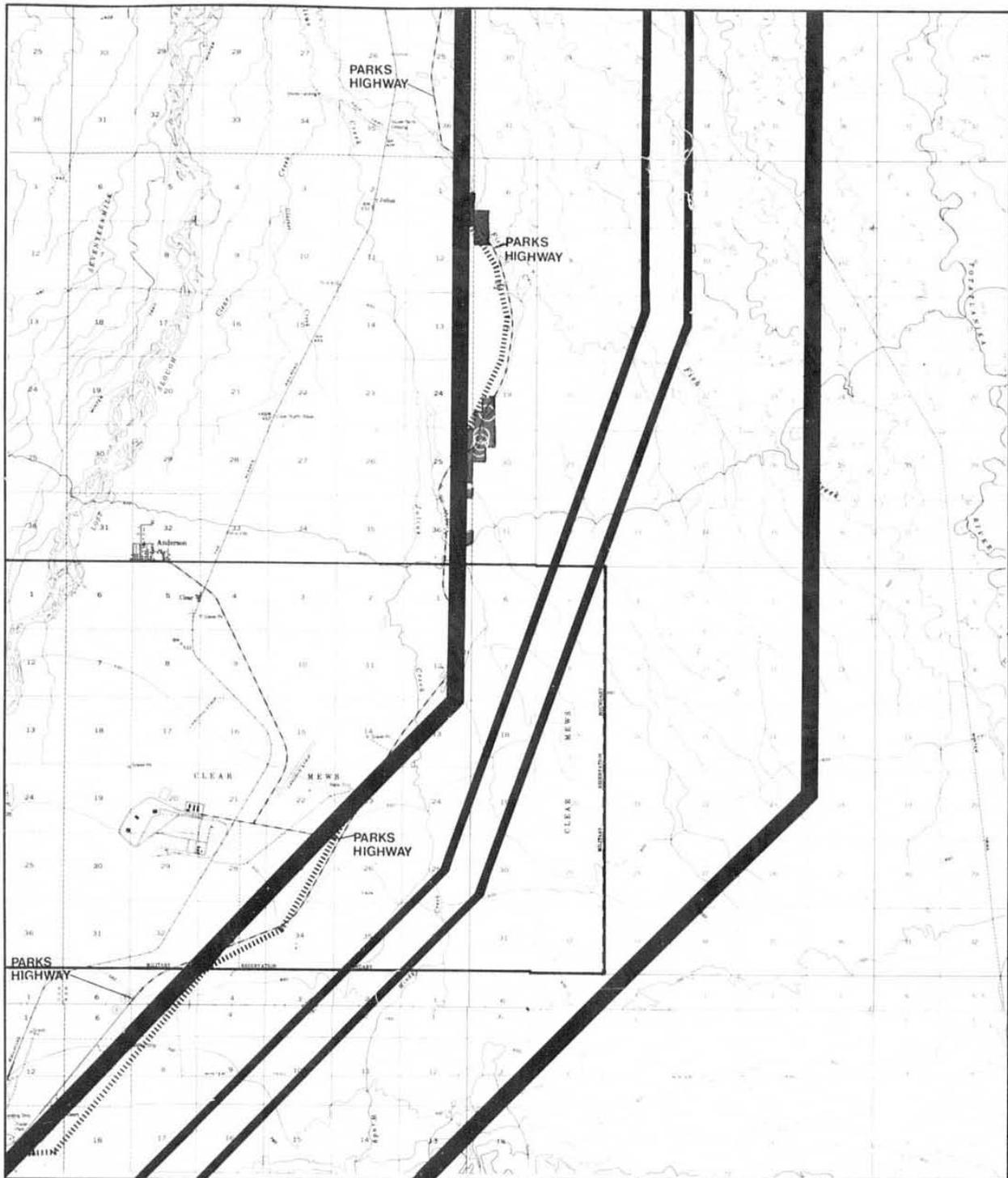


CONTOUR INTERVAL 100FT

BIOLOGICAL CONSTRAINTS
MAP M4

PREPARED BY TES FIGURE 14 OF 48





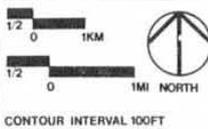
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

- RECREATION BOUNDARIES**
- CAMPSITE
 - RT--- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

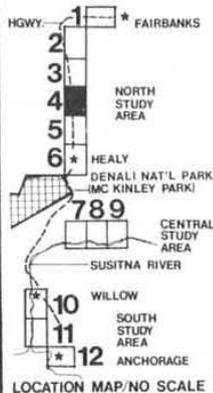
LEGEND

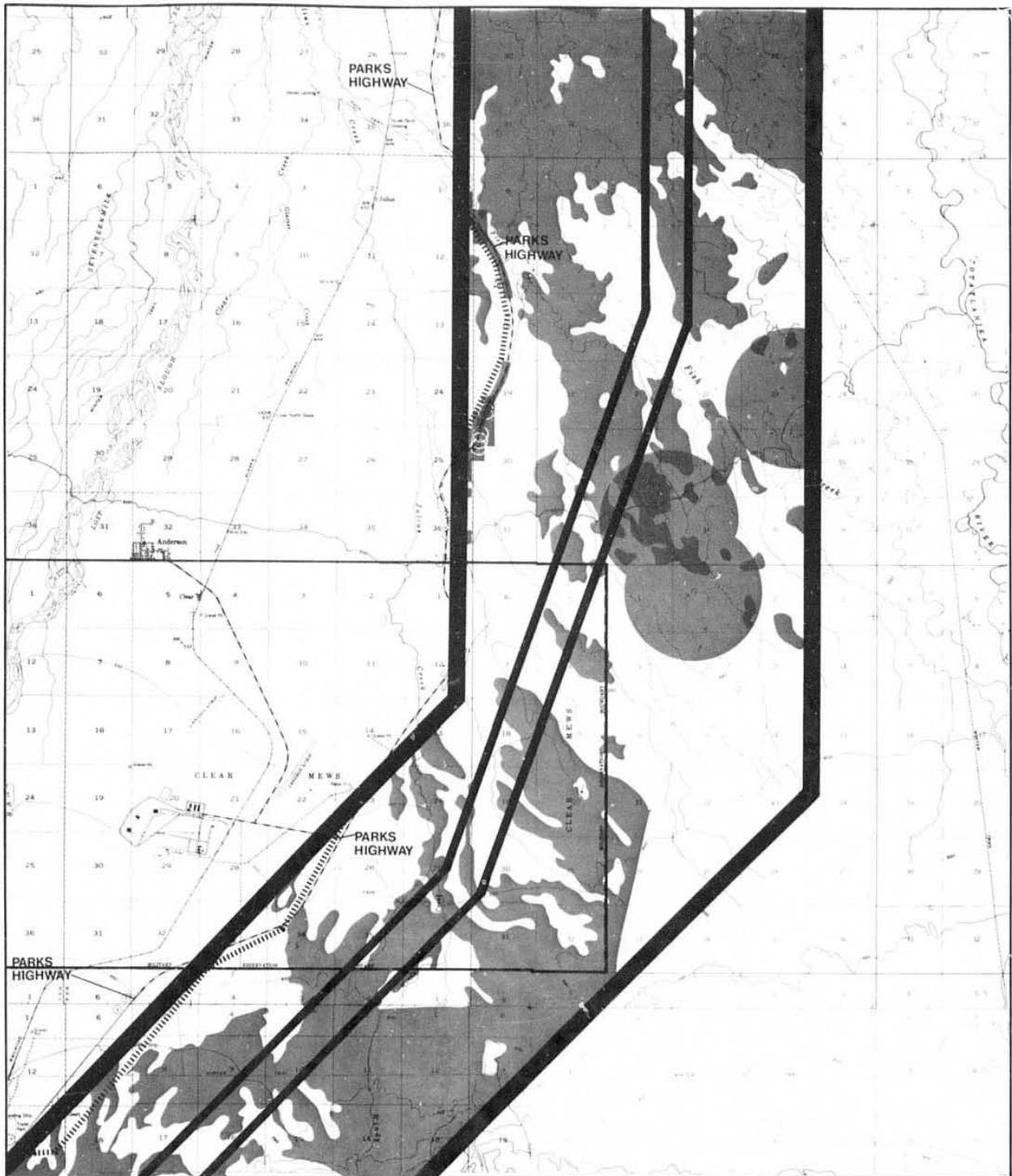
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- █ CORRIDOR BOUNDARY



MANMADE
CONSTRAINTS
MAP M4

PREPARED BY TES FIGURE 15 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- X WILDLIFE HABITAT

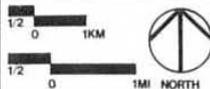
MANMADE CONSTRAINTS

- RECREATION
- X LAND USE AND LAND OWNERSHIP
- TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

PREPARED BY IES FIGURE 16 OF 48

MAP M4

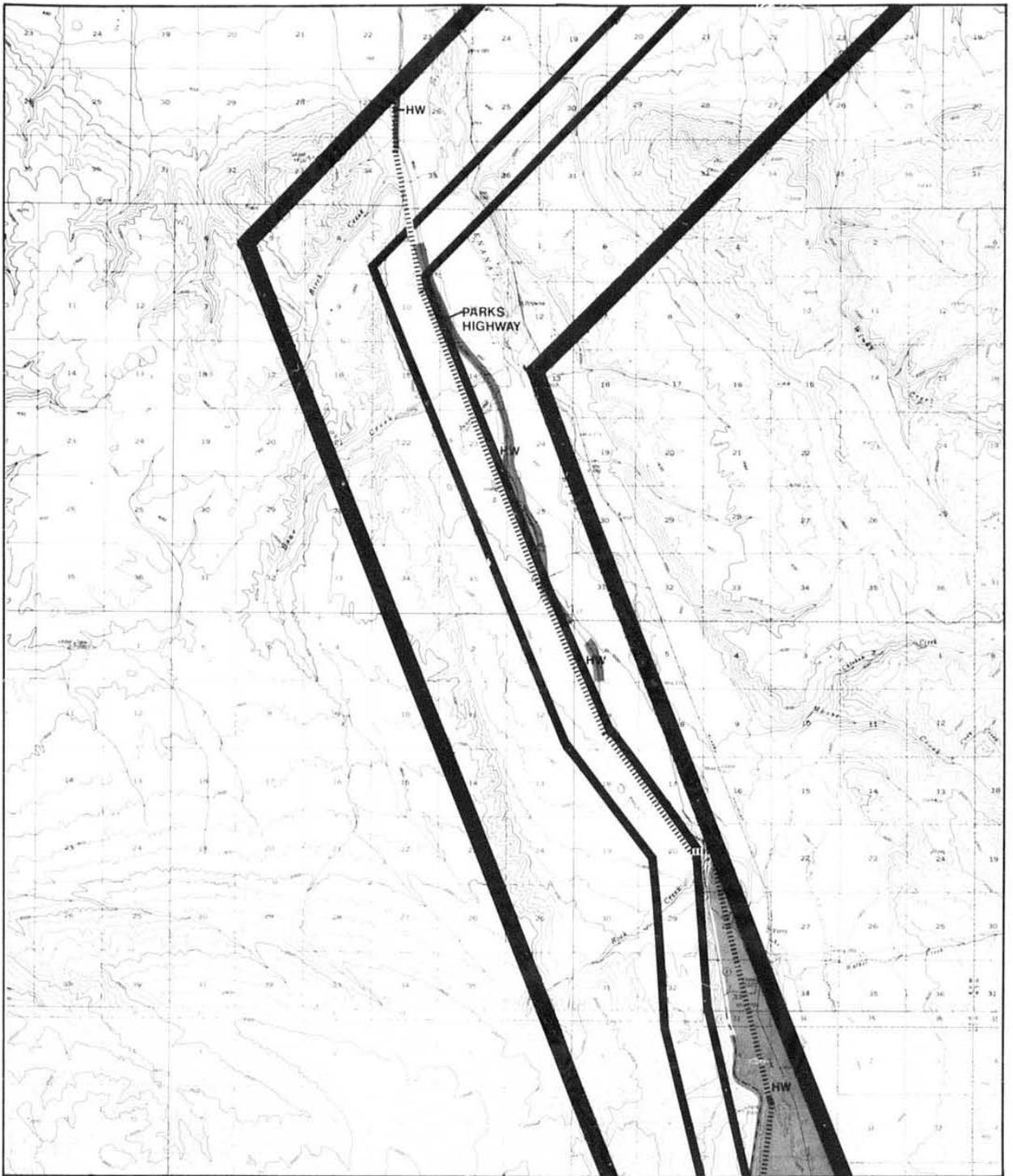
COMPOSITE CONSTRAINTS

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

1 * FAIRBANKS
2
3
4 NORTH STUDY AREA
5
6 * HEALY DENALI NAT'L PARK (MC KINLEY PARK)
789
CENTRAL STUDY AREA
SUSITNA RIVER
10 WILLOW
11 SOUTH STUDY AREA
12 * ANCHORAGE

LOCATION MAP/NO SCALE

APRS



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

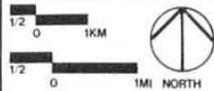
PSH PROPOSED SCENIC HIGHWAY AREA

SENSITIVE VIEWSHEDS

- HW HIGHWAY
- RR RAILROAD
- PL PRIVATE LANDS
- WC WATER COURSE
- RA RECREATION AREA

LEGEND

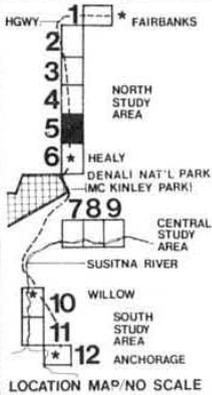
- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬▬▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

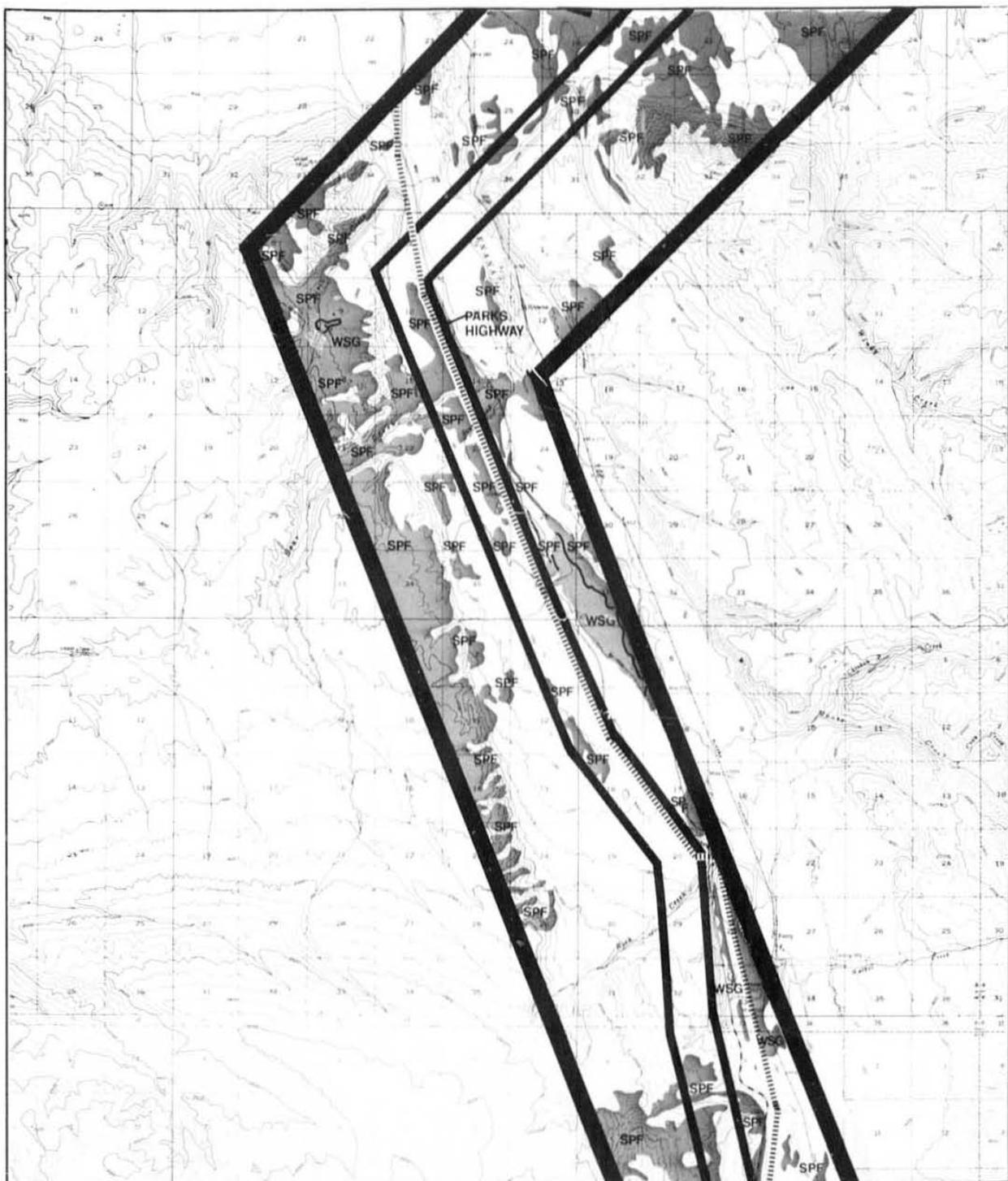


CONTOUR INTERVAL 100FT

VISUAL CONSTRAINTS MAP M5

PREPARED BY TES FIGURE 17 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

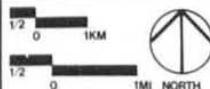
BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 * PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ⊕ ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

LEGEND

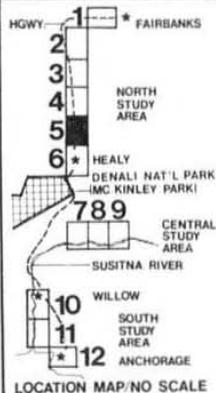
- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- █ RECOMMENDED ROUTE BOUNDARY
- █ CORRIDOR BOUNDARY

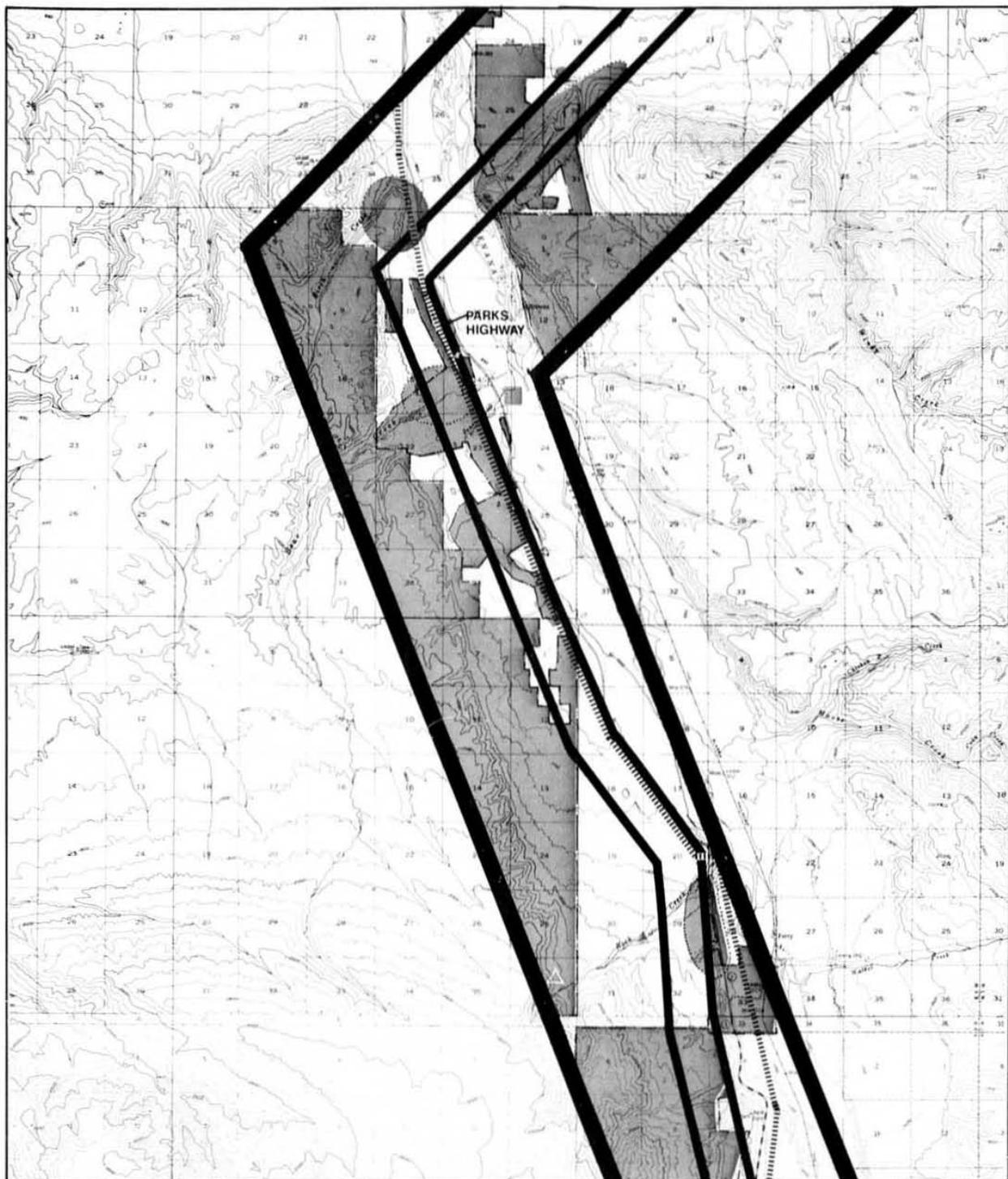


CONTOUR INTERVAL 100FT

BIOLOGICAL CONSTRAINTS
MAP M5

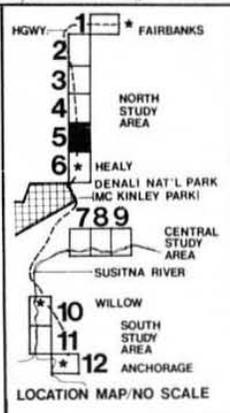
PREPARED BY TES FIGURE 18 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS
MAP M5
 PREPARED BY TES FIGURE 19 OF 48



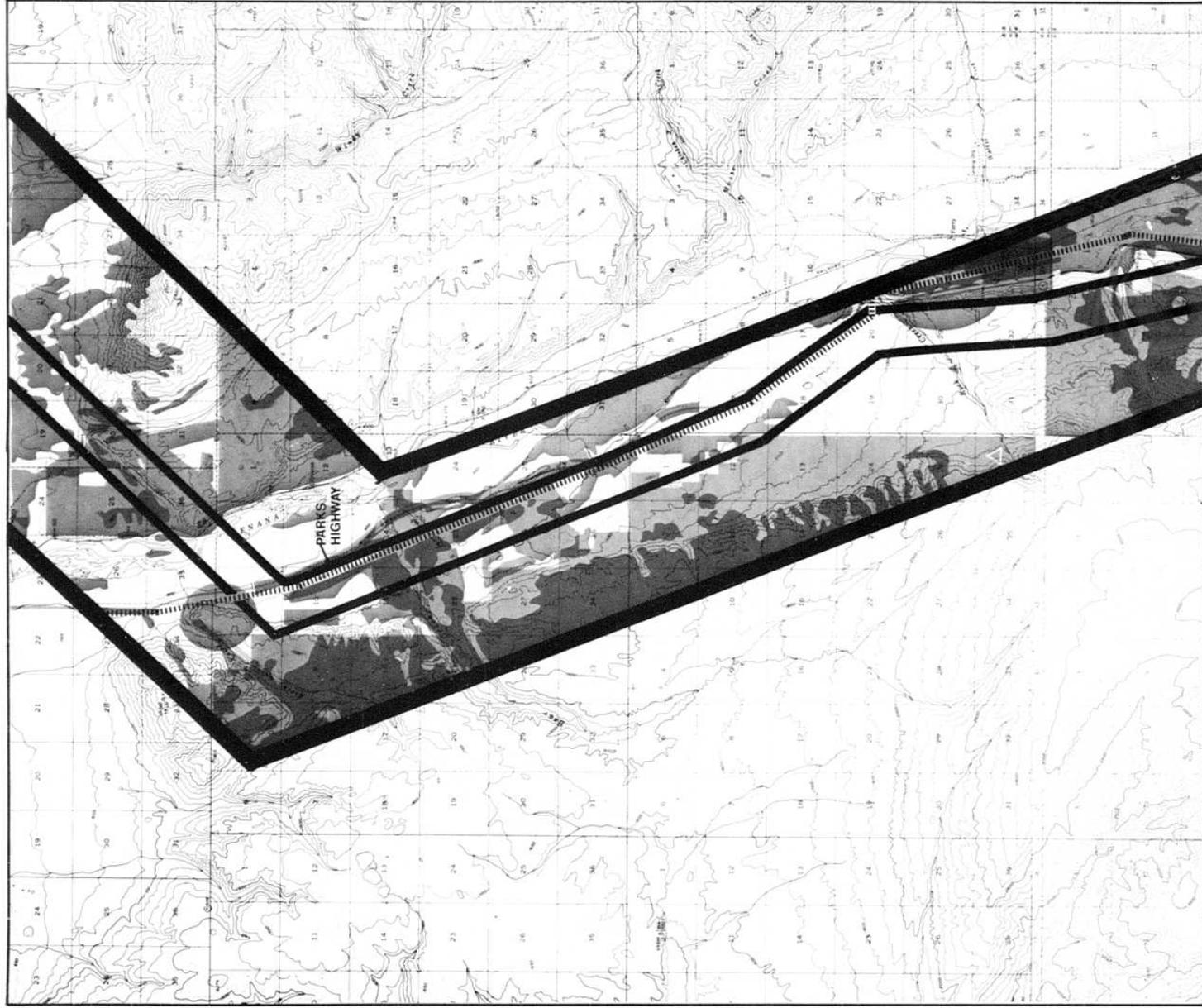
MANMADE CONSTRAINTS

- RECREATION BOUNDARIES**
- CAMPSITE
 - RT -- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERTIE
 - RECOMMENDED ROUTE BOUNDARY
 - █ CORRIDOR BOUNDARY
- 1/2 0 1KM
 1/2 0 1MI NORTH
- CONTOUR INTERVAL 100FT





HOWY-1 * FAIRBANKS

NORTH STUDY AREA

HEALY DENALI NAT'L PARK
MC KINLEY PARK

789 CENTRAL STUDY AREA

SUSITNA RIVER

WILLOW

SOUTH STUDY AREA

* 12 ANCHORAGE

LOCATION MAP/NO SCALE

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

COMPOSITE CONSTRAINTS

MAP M5

PREPARED BY TES FIGURE 20 of 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

X VEGETATION

WILDLIFE HABITAT

MANMADE CONSTRAINTS

X RECREATION

X LAND USE AND LAND OWNERSHIP

TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

EXISTING MAJOR TRANSMISSION LINE

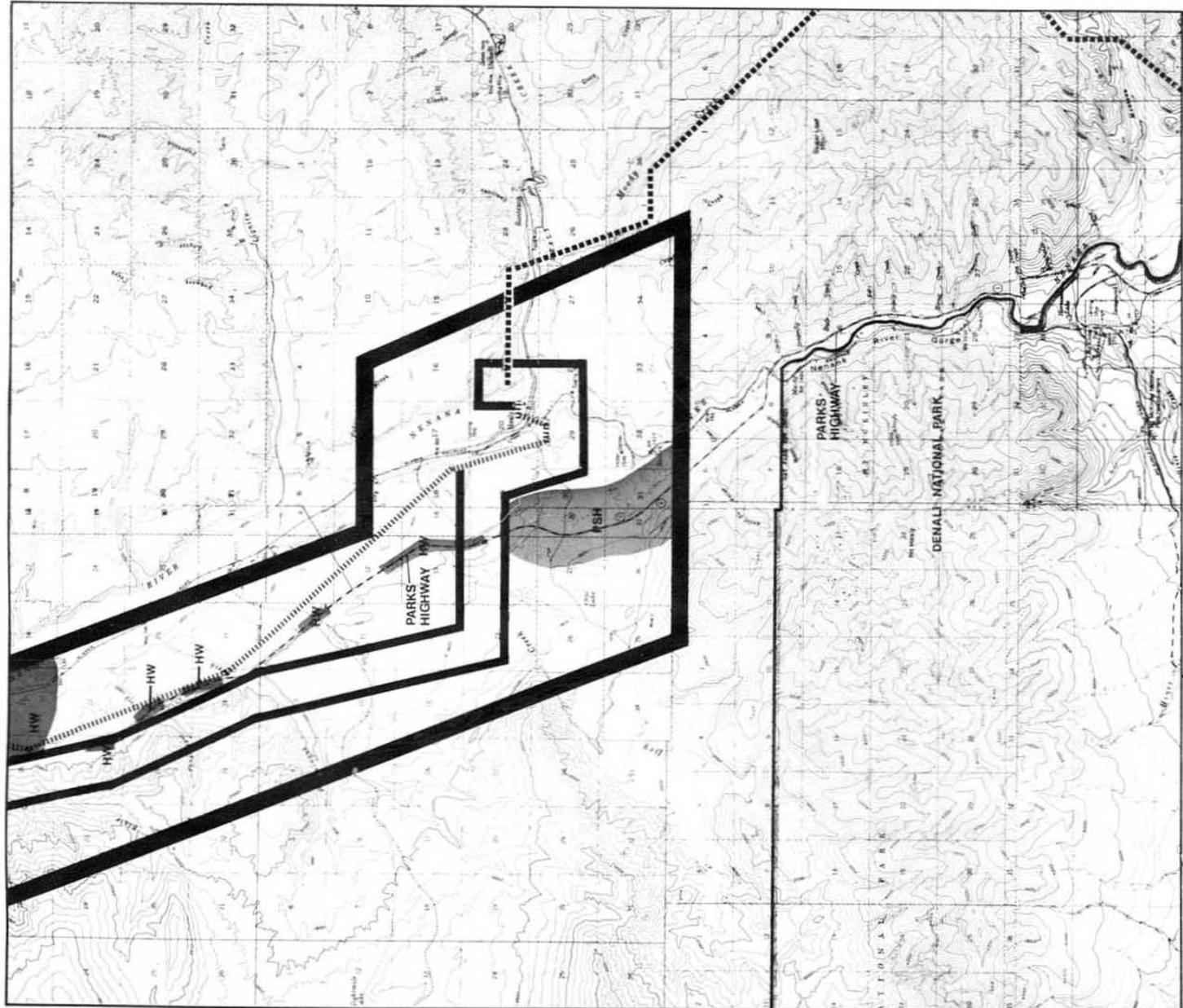
PROPOSED INTERTIE

RECOMMENDED ROUTE BOUNDARY

CORRIDOR BOUNDARY

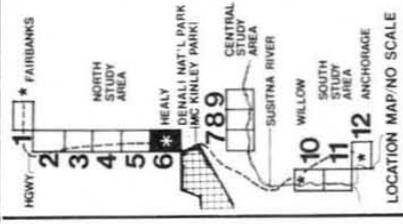


CONTOUR INTERVAL: 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

PREPARED BY TES FIGURE 21 of 48



VISUAL CONSTRAINTS

SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

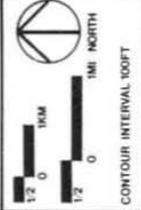
P SH PROPOSED SCENIC HIGHWAY AREA

SENSITIVE VIEWSHEDS

- HW HIGHWAY
- RR RAILROAD
- PL PRIVATE LANDS
- WC WATER COURSE
- RA RECREATION AREA

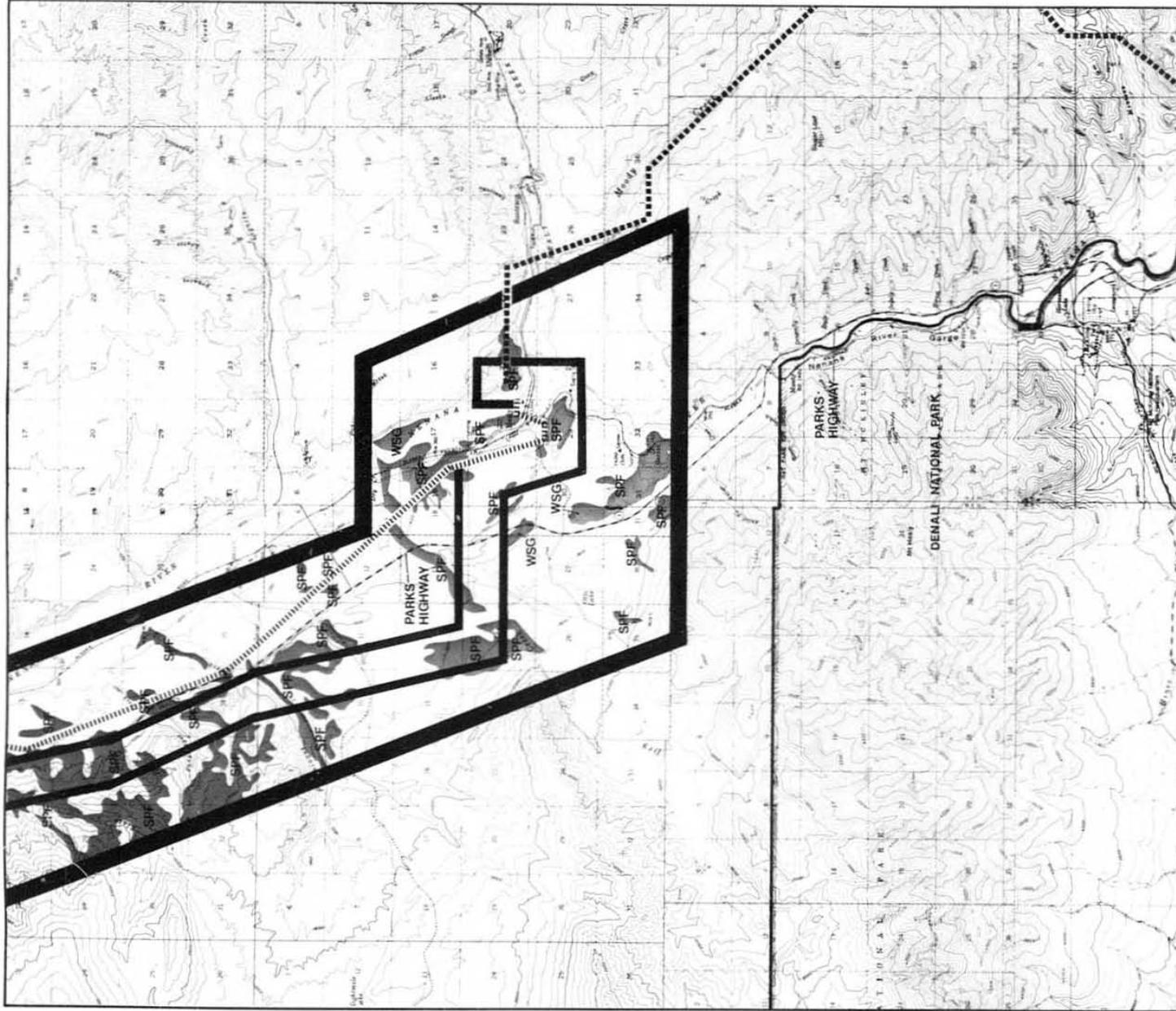
LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY



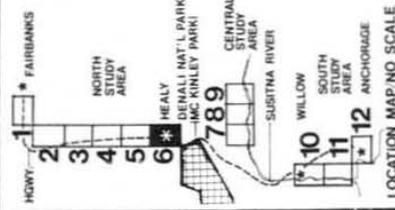
LOCATION MAP/NO SCALE





BIOLOGICAL CONSTRAINTS MAP M6

PREPARED BY TES FIGURE 22 OF 48

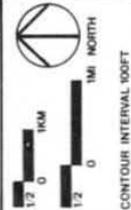


SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

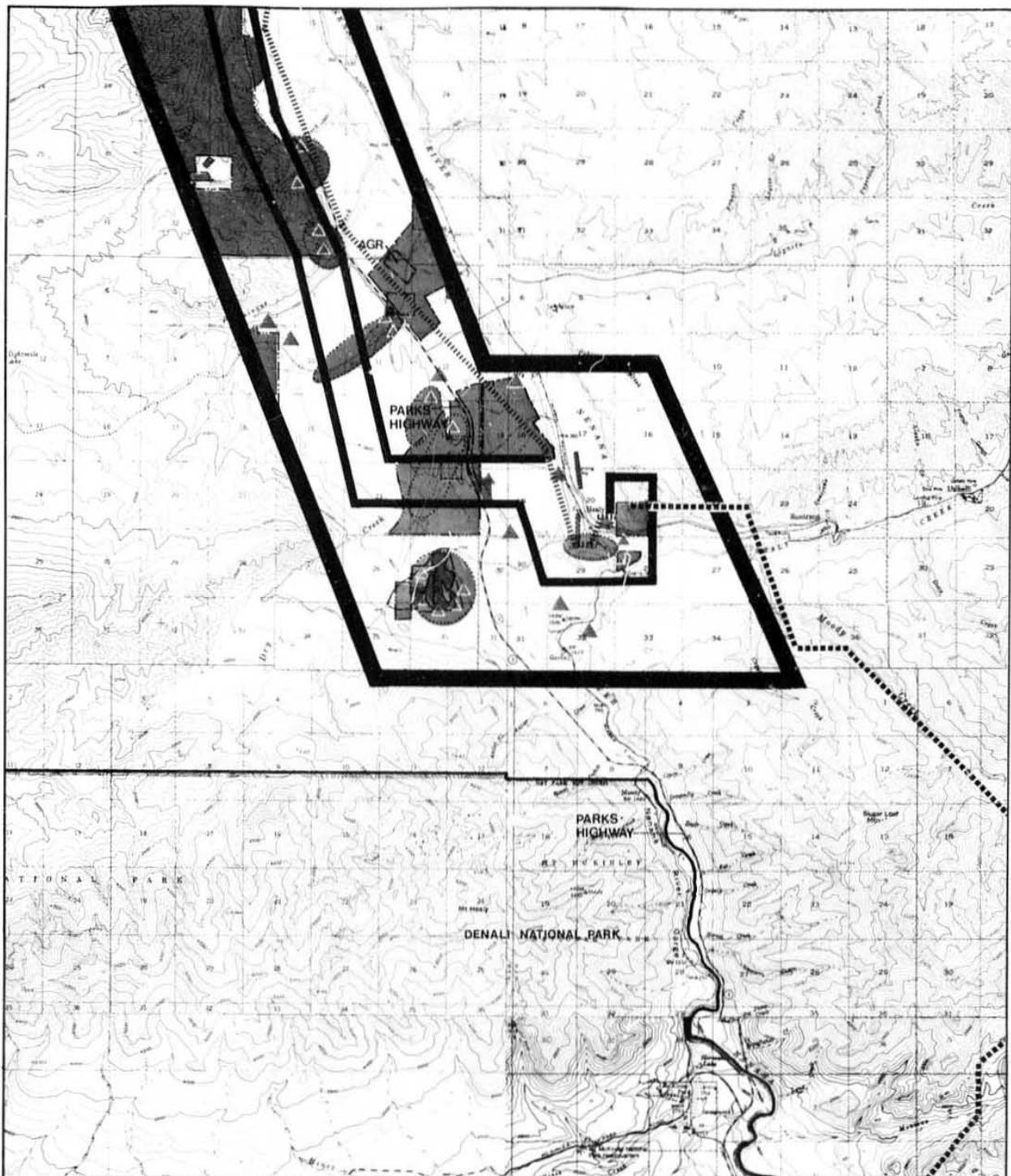
BIOLOGICAL CONSTRAINTS

- VEGETATION BOUNDARIES**
 WSG WET SEDGE GRASS
 SPP WET SPRUCE/POTENTIAL PERMAFROST AREA
- WILDLIFE BOUNDARIES**
 SAL SALMON PRESENT
 SWN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ANS ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

- LEGEND**
 - - - - - EXISTING MAJOR TRANSMISSION LINE
 - - - - - PROPOSED INTERTIE
 - - - - - RECOMMENDED ROUTE BOUNDARY
 - - - - - CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

RECREATION BOUNDARIES

- CAMP-SITE
- RT--- RECREATION TRAIL
- NAME GAME REFUGE AREA

LAND USE AND LAND OWNERSHIP BOUNDARIES

- EXISTING PRIVATE LAND
- DEVELOPMENT AREA
- DISPOSAL AREA
- AGRICULTURAL LAND
- △ KNOWN ARCHEOLOGICAL SITE
- △ AREA OF HIGH ARCHEOLOGICAL POTENTIAL
- DIA DAM IMPOUNDMENT AREA
- CABINS, STRUCTURE

TRANSPORTATION BOUNDARIES

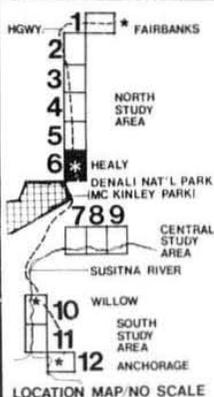
- AIRPORT AND LANDING STRIP
- FPL FLOAT PLANE LANDING SITE

LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



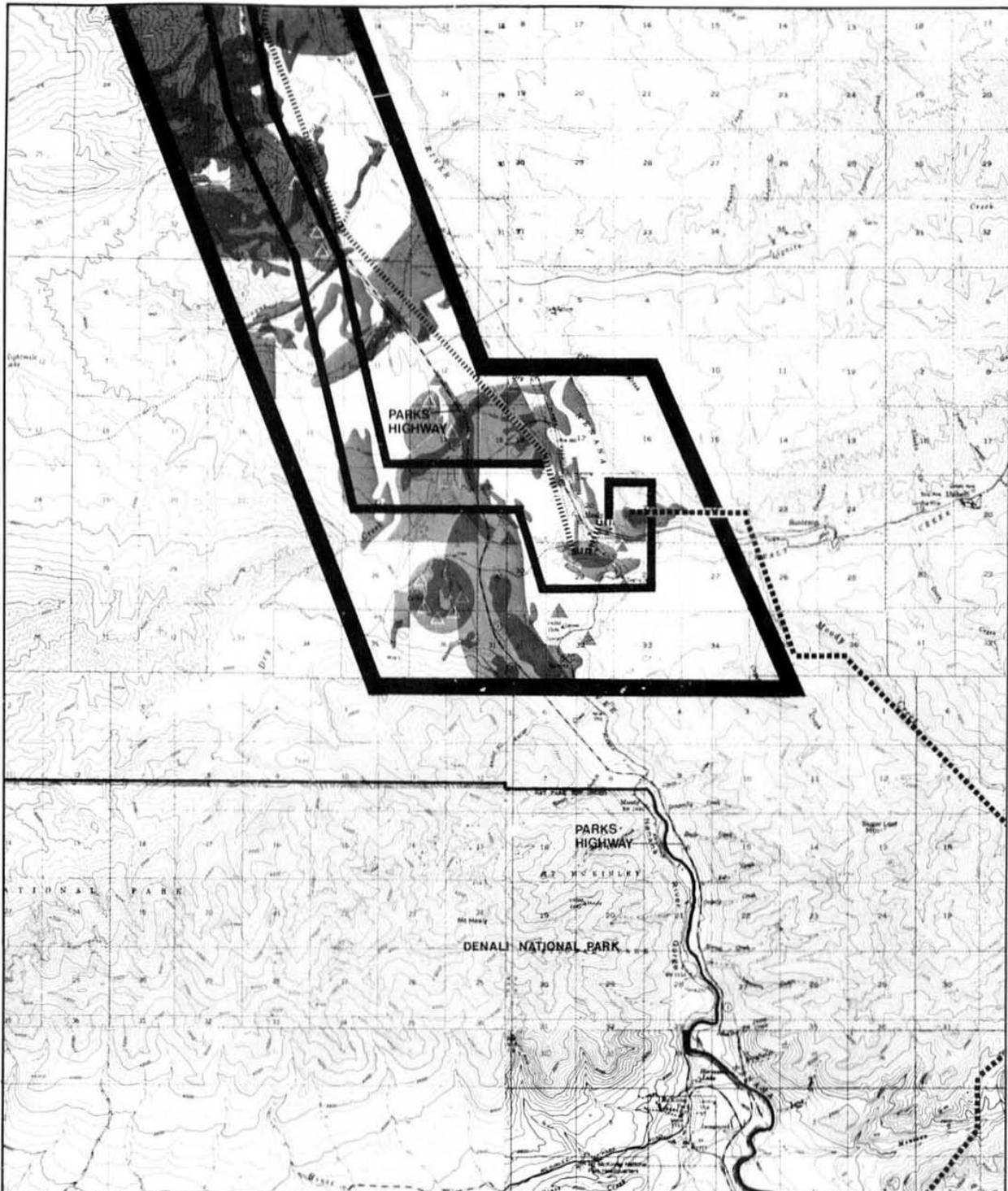
CONTOUR INTERVAL 100FT



MANMADE
CONSTRAINTS
MAP M6

PREPARED BY TES FIGURE 23 OF 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- WILDLIFE HABITAT

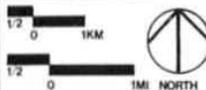
MANMADE CONSTRAINTS

- X RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

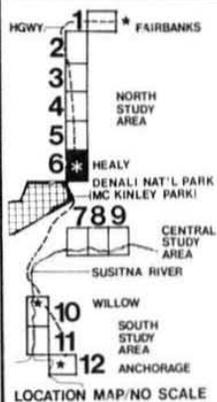
X DENOTES CONSTRAINT PRESENT

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



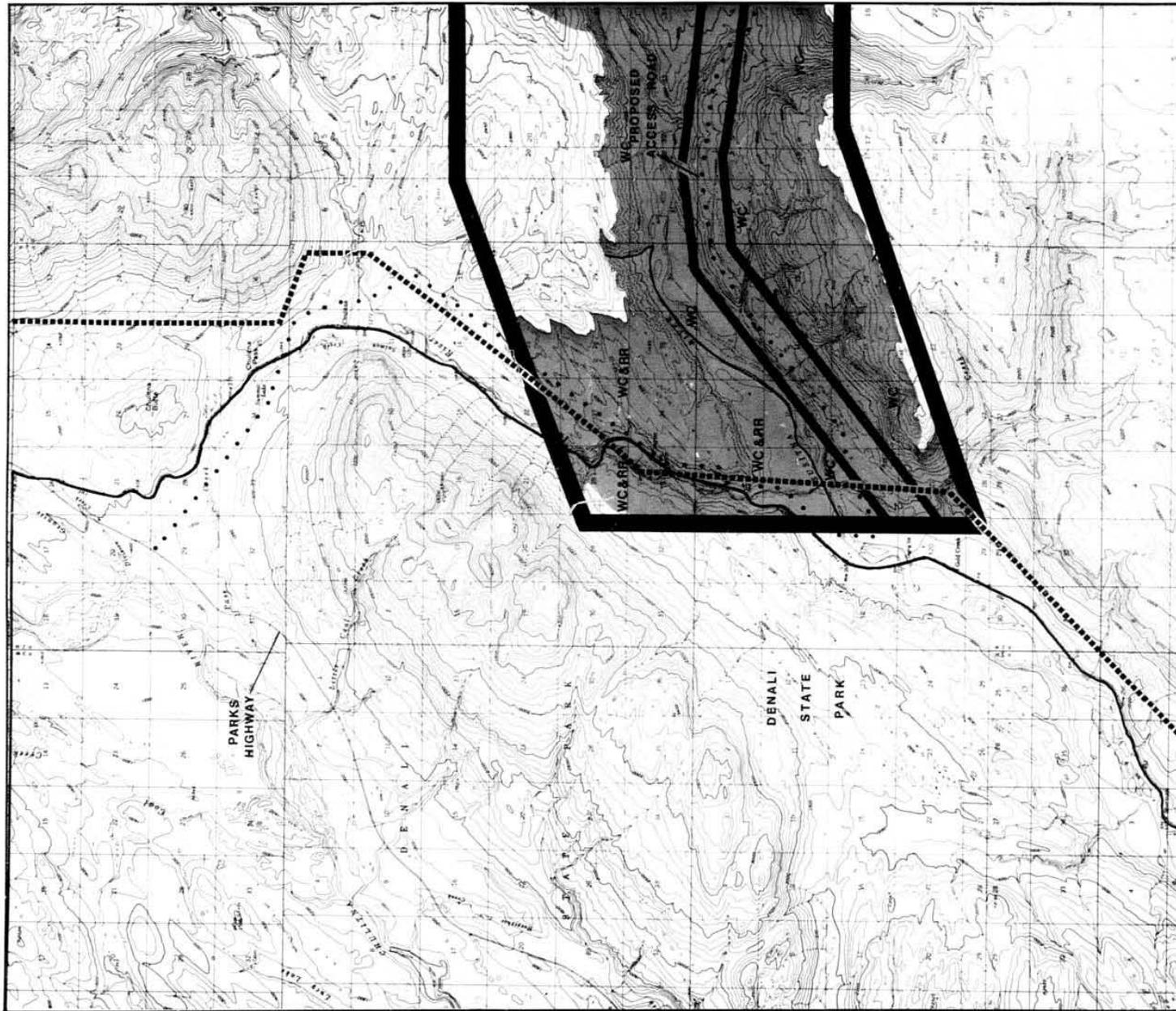
LOCATION MAP: NO SCALE

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

COMPOSITE CONSTRAINTS MAP M6

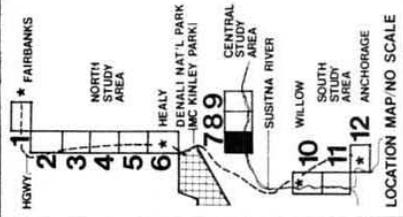
PREPARED BY TES FIGURE 24 OF 48





VISUAL CONSTRAINTS MAP M7

PREPARED BY TES FIGURE 25 of 48



HWY. 789

SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

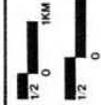
VISUAL CONSTRAINTS

SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA
PSH PROPOSED SCENIC HIGHWAY AREA

- SENSITIVE VIEWSHEDS
- HW HIGHWAY
 - RR RAILROAD
 - PL PRIVATE LANDS
 - WC WATER COURSE
 - RA RECREATION AREA

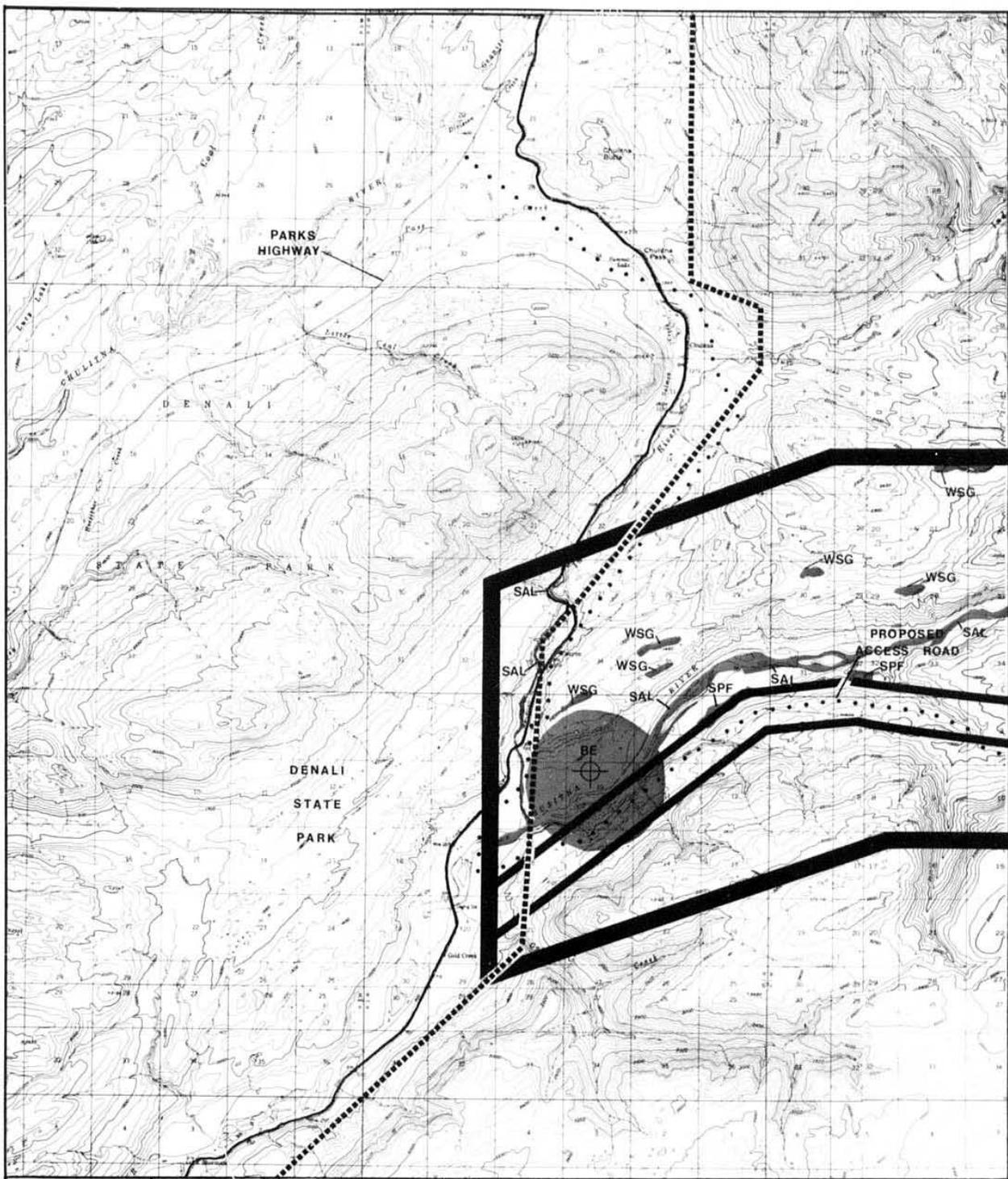
LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- - - - PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY

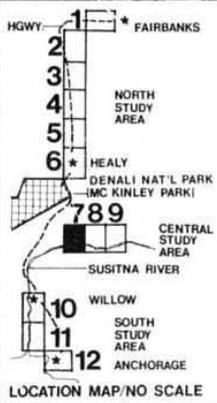


CONTOUR INTERVAL 80 FT

LOCATION MAP/NO SCALE



BIOLOGICAL CONSTRAINTS
 MAP M7
 PREPARED BY TES FIGURE 26 OF 48

SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 * PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ⊕ ACTIVE NEST SITES 1580-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

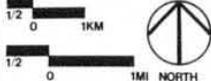
LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY

1/2 0 1KM



1/2 0 1MI NORTH



CONTOUR INTERVAL 100FT



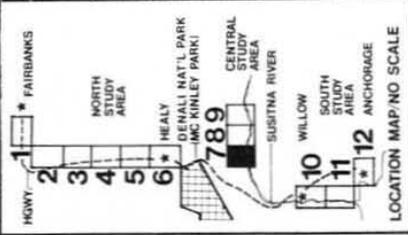
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- - - - - RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY

CONTOUR INTERVAL 100FT

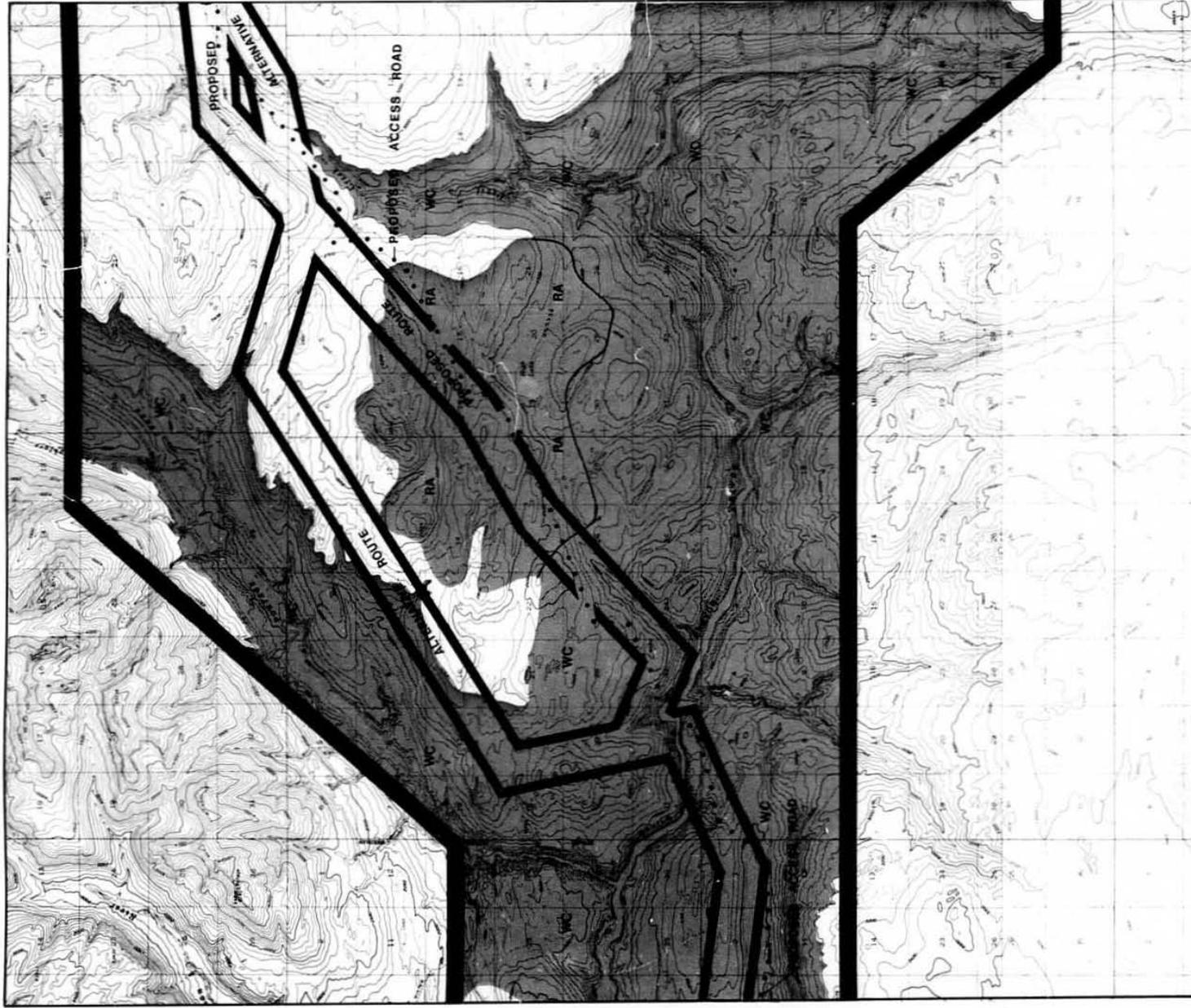
- ### VISUAL CONSTRAINTS
- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY
- ### BIOLOGICAL CONSTRAINTS
- X VEGETATION
 - X WILDLIFE HABITAT
- ### MANMADE CONSTRAINTS
- X RECREATION
 - X LAND USE AND LAND OWNERSHIP
 - X TRANSPORTATION
- X DENOTES CONSTRAINT PRESENT



THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

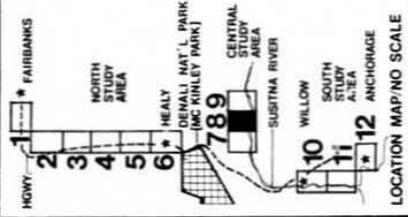
COMPOSITE CONSTRAINTS MAP M7

PREPARED BY TES FIGURE 28 of 48



VISUAL CONSTRAINTS MAP M8

PREPARED BY TES FIGURE 29 of 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

- VISUAL CONSTRAINTS**
- SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA
 - PSH PROPOSED SCENIC HIGHWAY AREA
 - SENSITIVE VIEWSHEDS
 - HW HIGHWAY
 - RR RAILROAD
 - PL PRIVATE LANDS
 - WC WATER COURSE
 - RA RECREATION AREA

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE ROUTE BOUNDARY
- CORRIDOR BOUNDARY

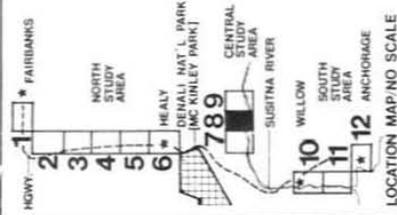
1/2 0 1KM 1/2 0 1MI NORTH

CONTOUR INTERVAL 100FT



BIOLOGICAL CONSTRAINTS MAP M8

PREPARED BY TES FIGURE 30 of 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
WSG WET SEDGE GRASS
SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES

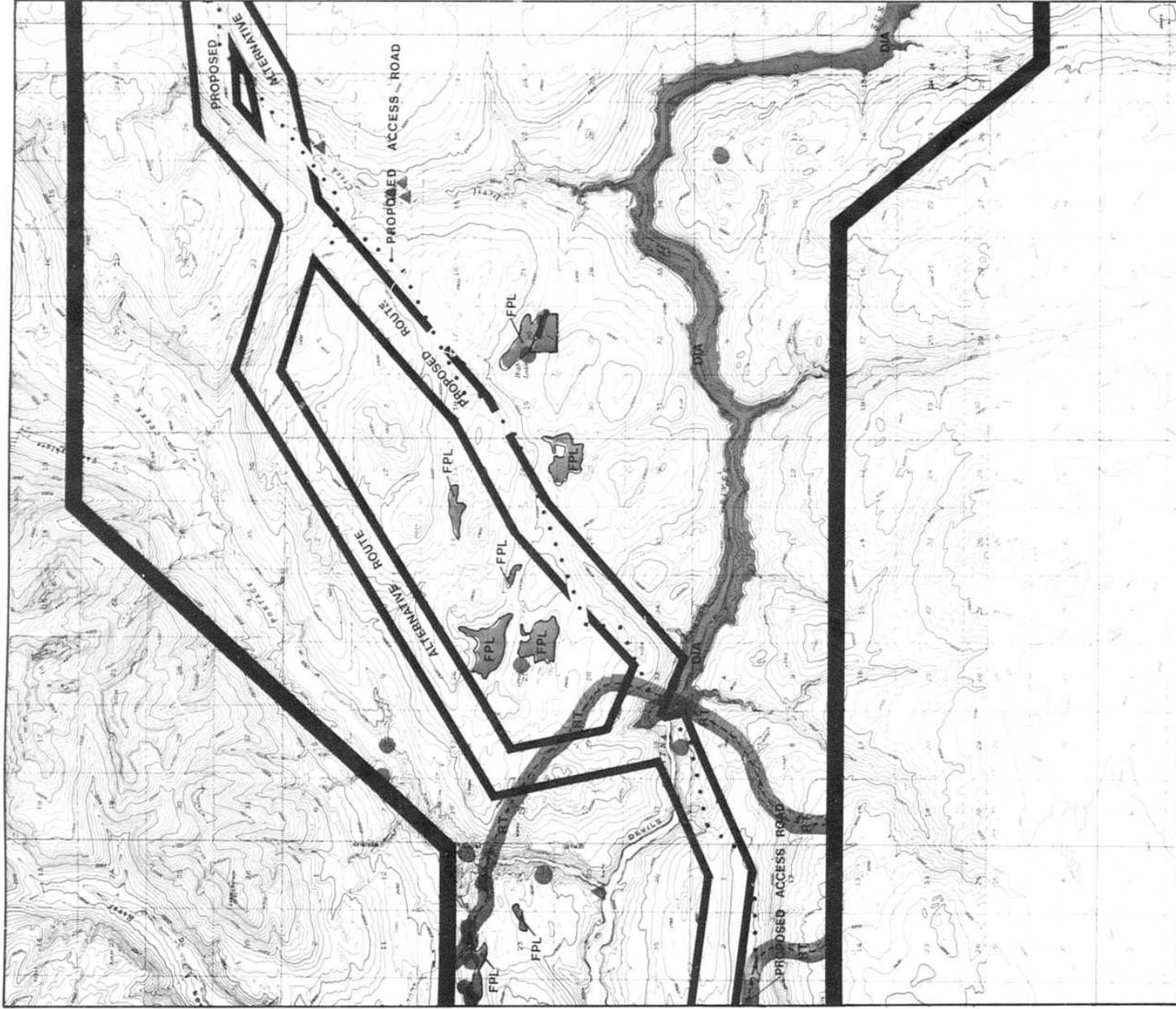
SAL SALMON PRESENT
SALM SALMON PRIME HABITAT
SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
GE ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
BE BALD EAGLE
GF GYRFALCON
GH GOSHAWK
UN UNKNOWN

LEGEND

EXISTING MAJOR TRANSMISSION LINE
PROPOSED INTERTIE ROUTE BOUNDARY
CORRIDOR BOUNDARY

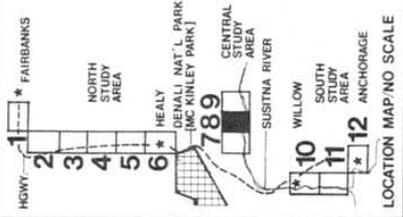


CONTOUR INTERVAL: 100 FT



MANMADE CONSTRAINTS MAP M8

PREPARED BY TES FIGURE 31 of 48



MANMADE CONSTRAINTS

- RECREATION BOUNDARIES
 - CAMPSITE
 - RECREATION TRAIL
- NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES
 - EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES
 - AIRPORT AND LANDING STRIP
 - FPL

SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

1/2 0 1/2 1KM 1MI NORTH

CONTOUR INTERVAL 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- X WILDLIFE HABITAT

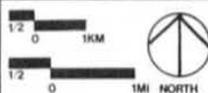
MANMADE CONSTRAINTS

- X RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

- ==== EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



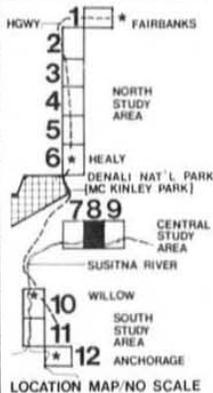
CONTOUR INTERVAL 100FT

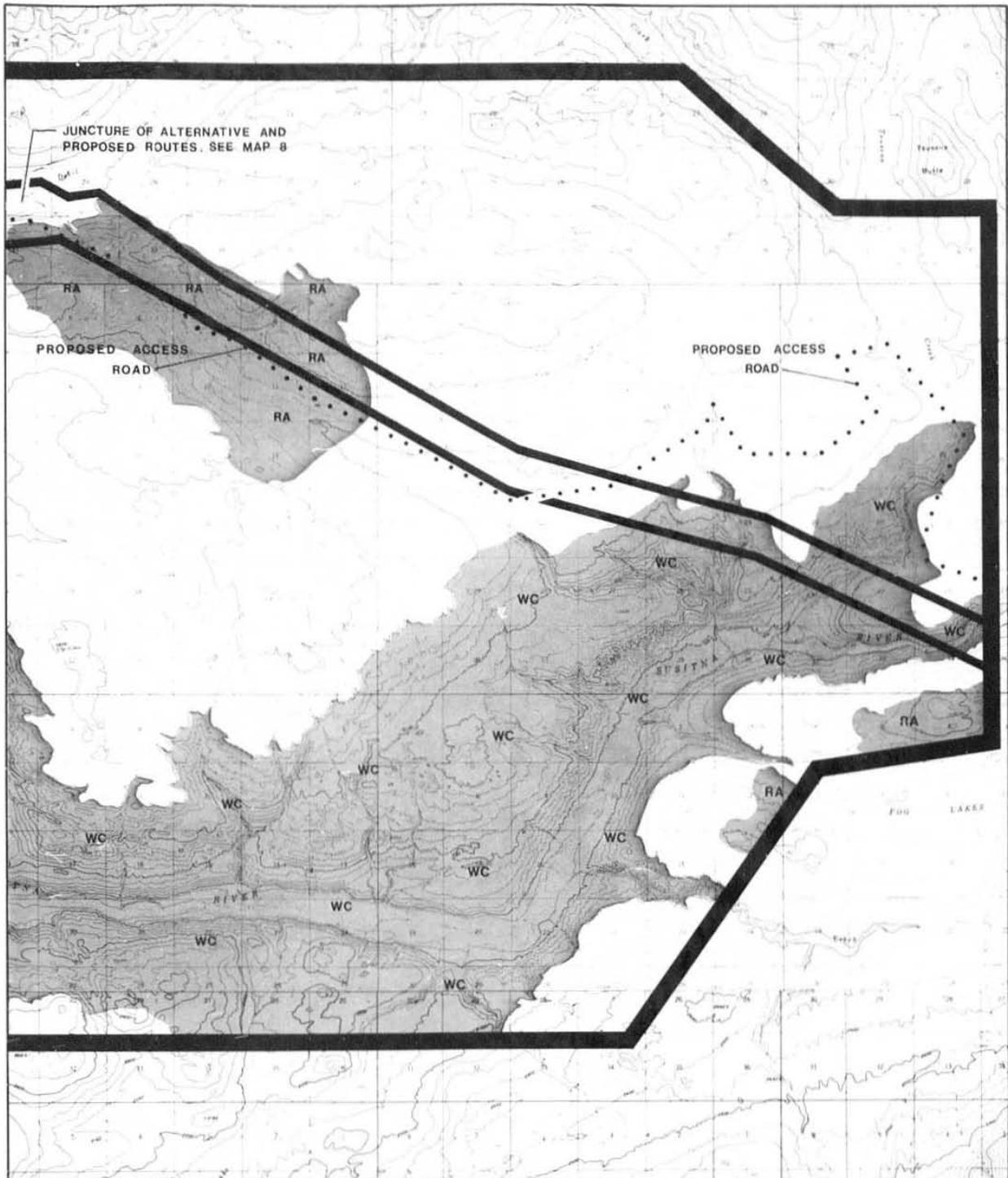
PREPARED BY TES FIGURE 32 OF 48

MAP M8

COMPOSITE CONSTRAINTS

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

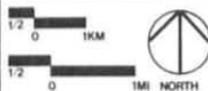
PSH PROPOSED SCENIC HIGHWAY AREA

SENSITIVE VIEWSHEDS

- HW HIGHWAY
- RR RAILROAD
- PL PRIVATE LANDS
- WC WATER COURSE
- RA RECREATION AREA

LEGEND

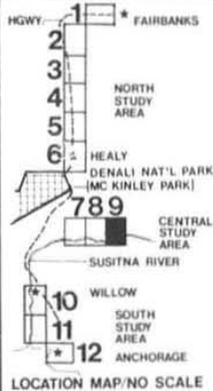
- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

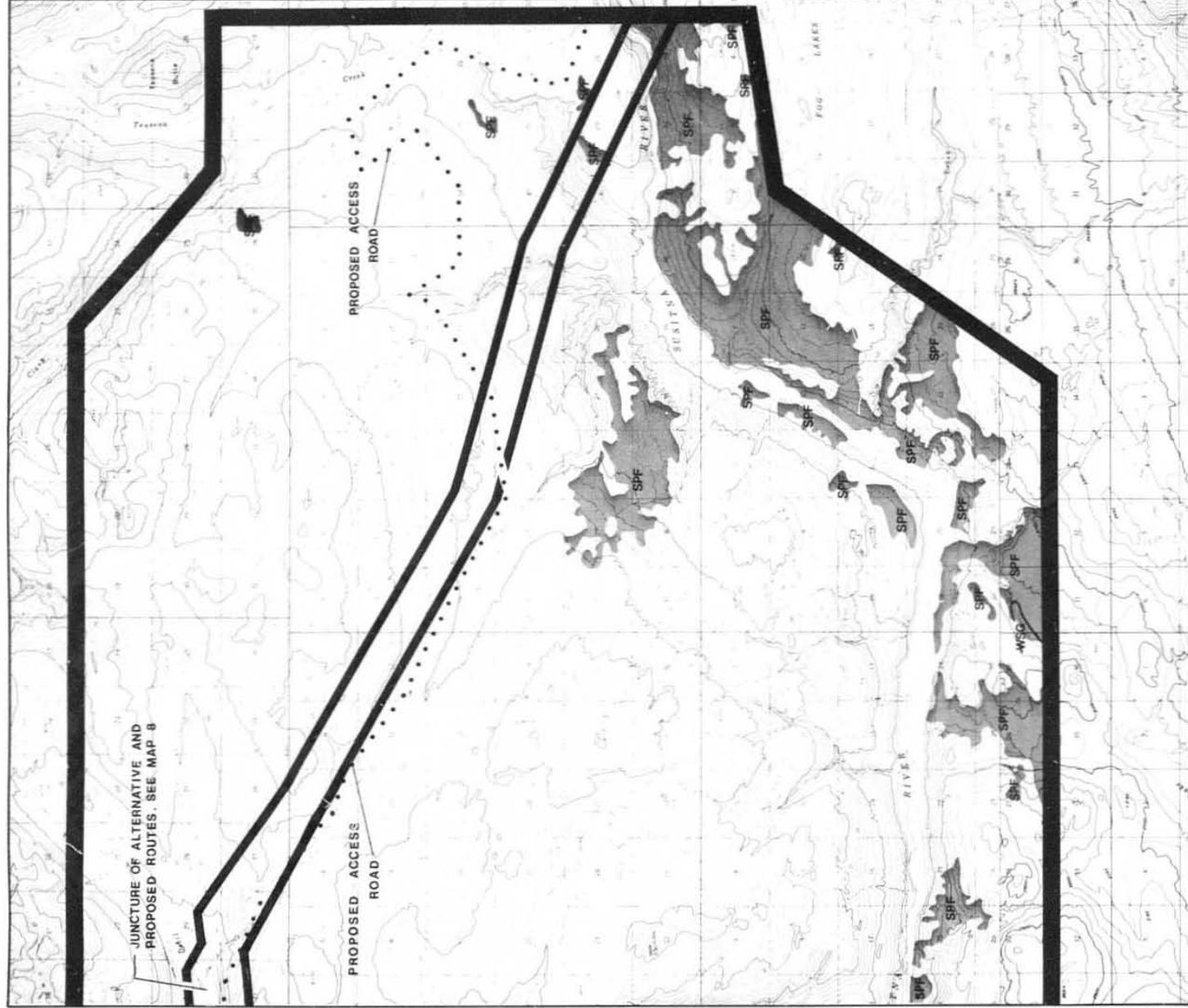
VISUAL CONSTRAINTS
MAP M9

PREPARED BY TES FIGURE 33 OF 48



LOCATION MAP/NO SCALE





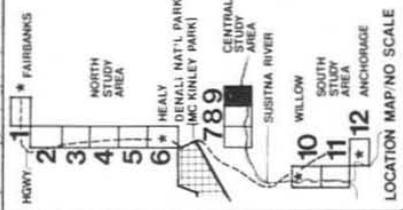
JUNCTURE OF ALTERNATIVE AND PROPOSED ROUTES, SEE MAP 8

PROPOSED ACCESS ROAD

PROPOSED ACCESS ROAD

BIOLOGICAL CONSTRAINTS MAP M9

PREPARED BY TES FIGURE 34 of 48

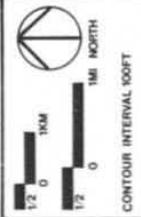


SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

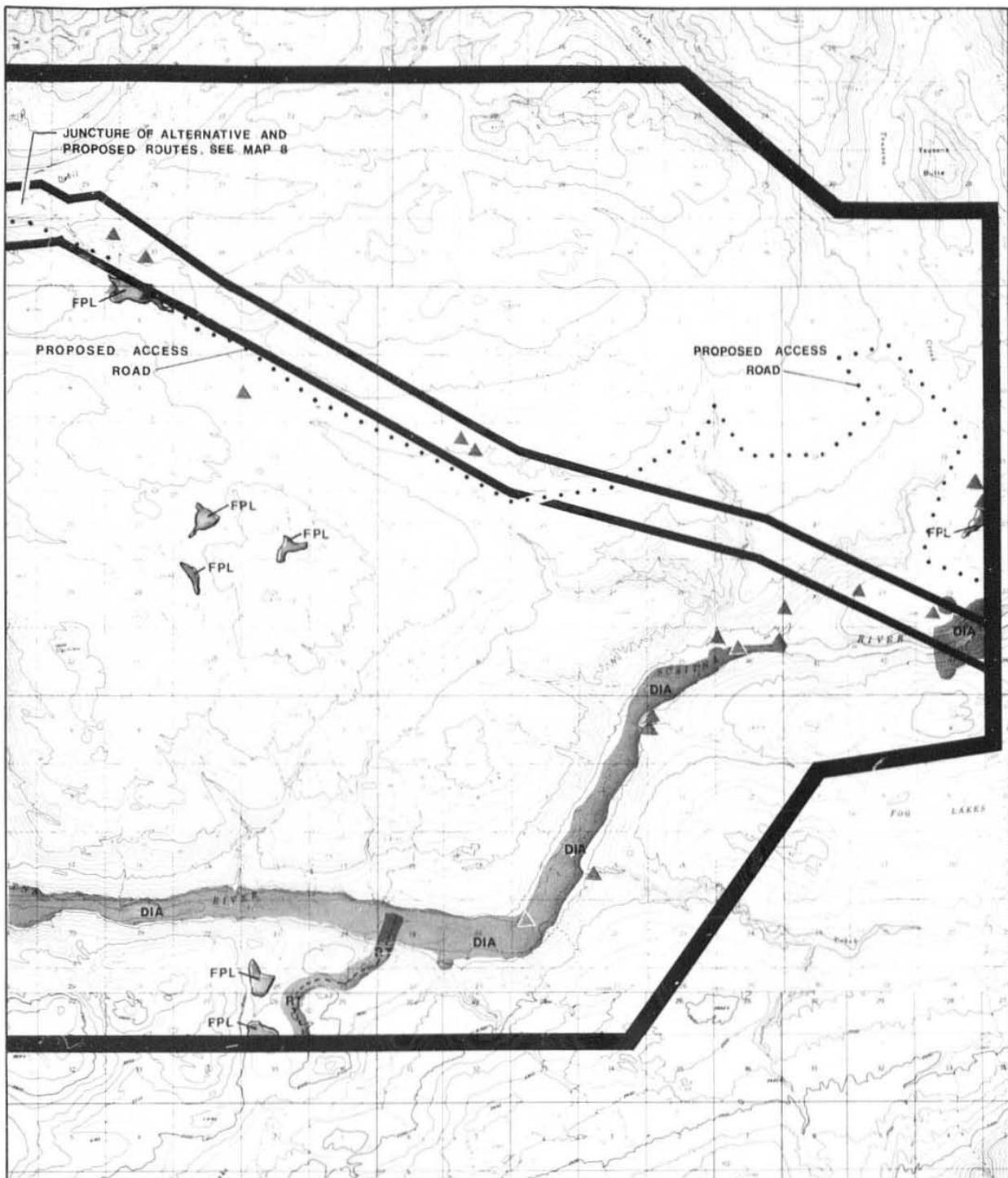
- VEGETATION BOUNDARIES**
 WISG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA
- WILDLIFE BOUNDARIES**
 SAL SALMON PRESENT
 WISG WET SEDGE GRASS
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

- LEGEND**
 - - - - - EXISTING MAJOR TRANSMISSION LINE
 - - - - - PROPOSED INTERTIE
 - - - - - RECOMMENDED ROUTE BOUNDARY
 - - - - - CORRIDOR BOUNDARY



LOCATION MAP/NO SCALE

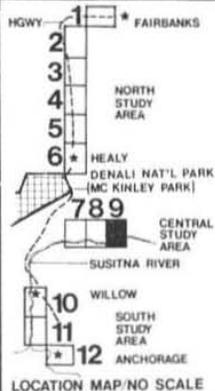
CONTOUR INTERVAL 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS MAP M9

PREPARED BY TES FIGURE 35 OF 48

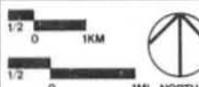


MANMADE CONSTRAINTS

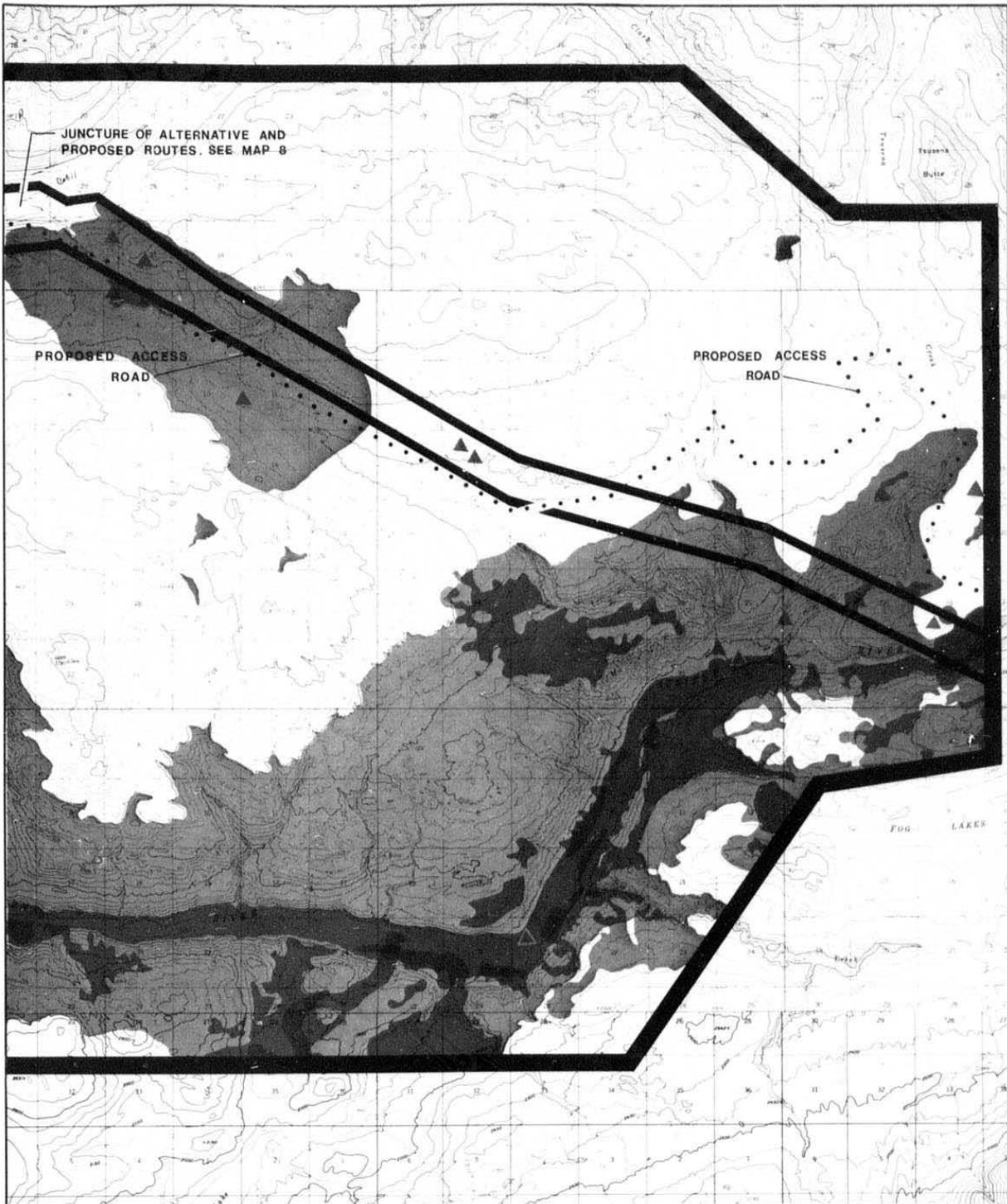
- RECREATION BOUNDARIES**
- CAMPSITE
 - RT --- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- WILDLIFE HABITAT

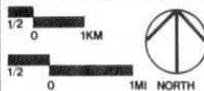
MANMADE CONSTRAINTS

- X RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

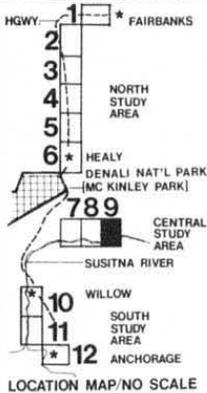


CONTOUR INTERVAL 100FT

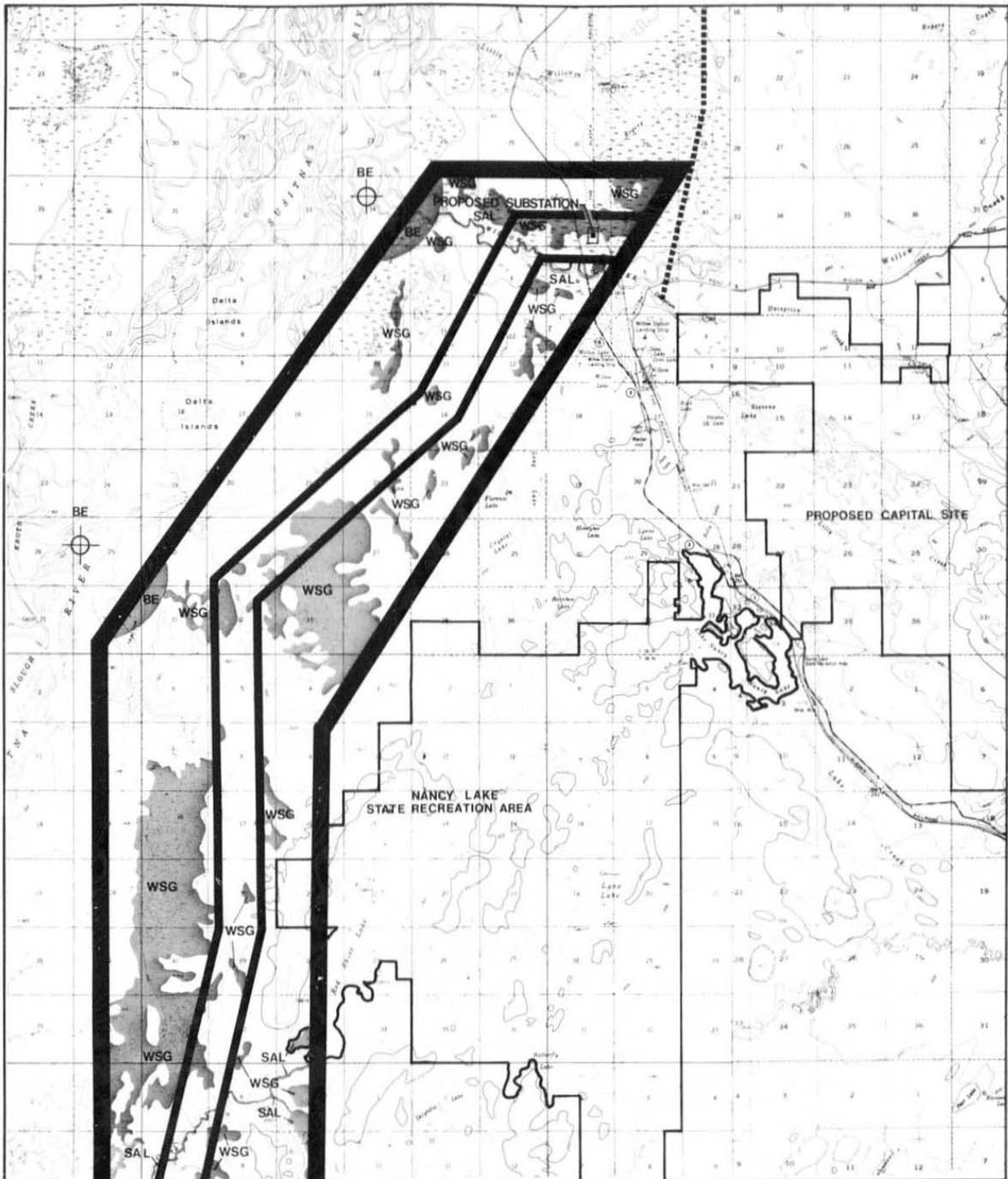
THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

MAP M9

PREPARED BY TES FIGURE 36 OF 48



LOCATION MAP/NO SCALE



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 PF PEREGRINE FALCON PRIME HABITAT
 SWAN SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 QF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

LEGEND

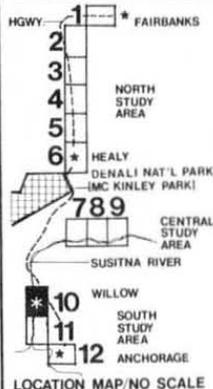
EXISTING MAJOR TRANSMISSION LINE
 PROPOSED INTERTIE
 RECOMMENDED ROUTE BOUNDARY
 CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT

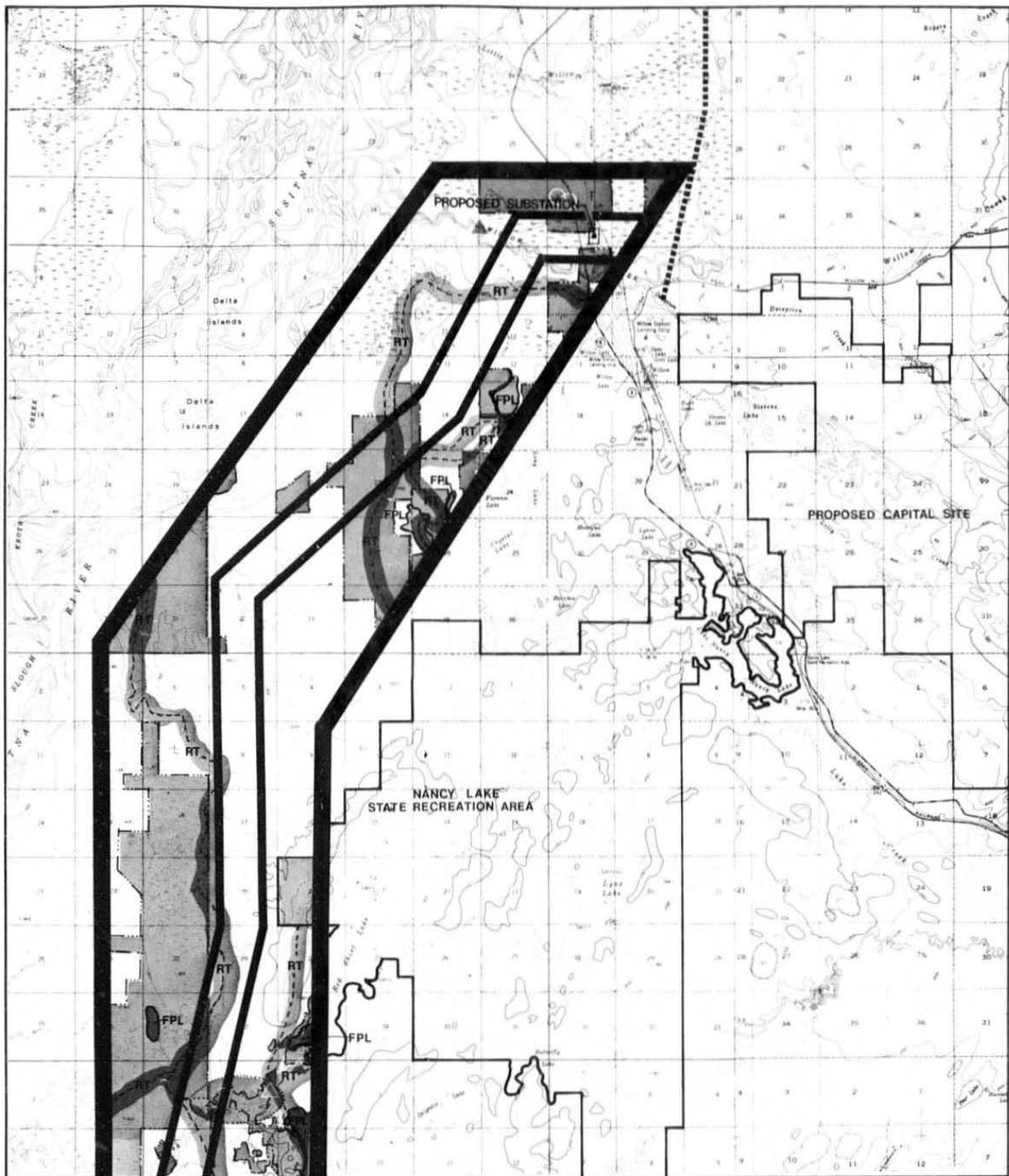
BIOLOGICAL CONSTRAINTS MAP M10

PREPARED BY TES FIGURE 28 OF 48



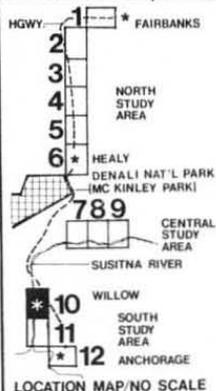
LOCATION MAP/NO SCALE





MANMADE CONSTRAINTS
MAP M10

PREPARED BY TES FIGURE 39 OF 48



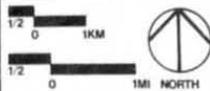
SUSITNA HYDROELECTRIC PROJECT
ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

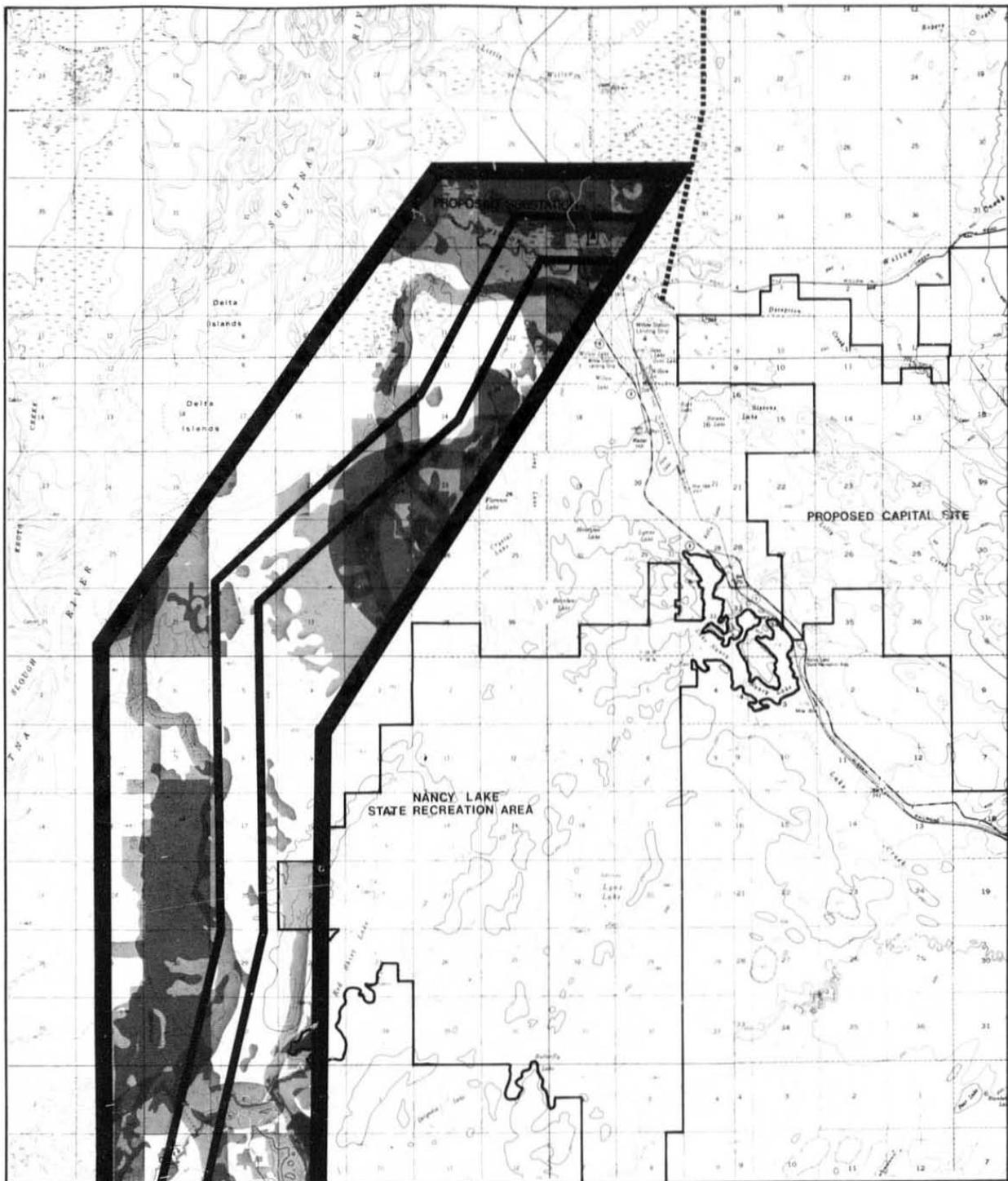
- RECREATION BOUNDARIES**
- CAMPSITE
 - RT --- RECREATION TRAIL
 - NAME GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - DISPOSAL AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - △ AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DIA DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL FLOAT PLANE LANDING SITE

LEGEND

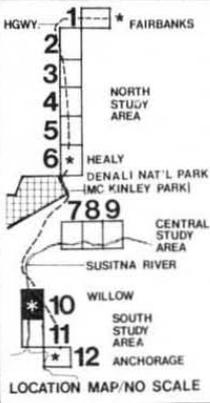
- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS.
 IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.
COMPOSITE
CONSTRAINTS
MAP M10
 PREPARED BY TES FIGURE 40 OF 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- X WILDLIFE HABITAT

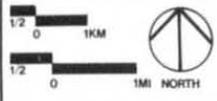
MANMADE CONSTRAINTS

- X RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

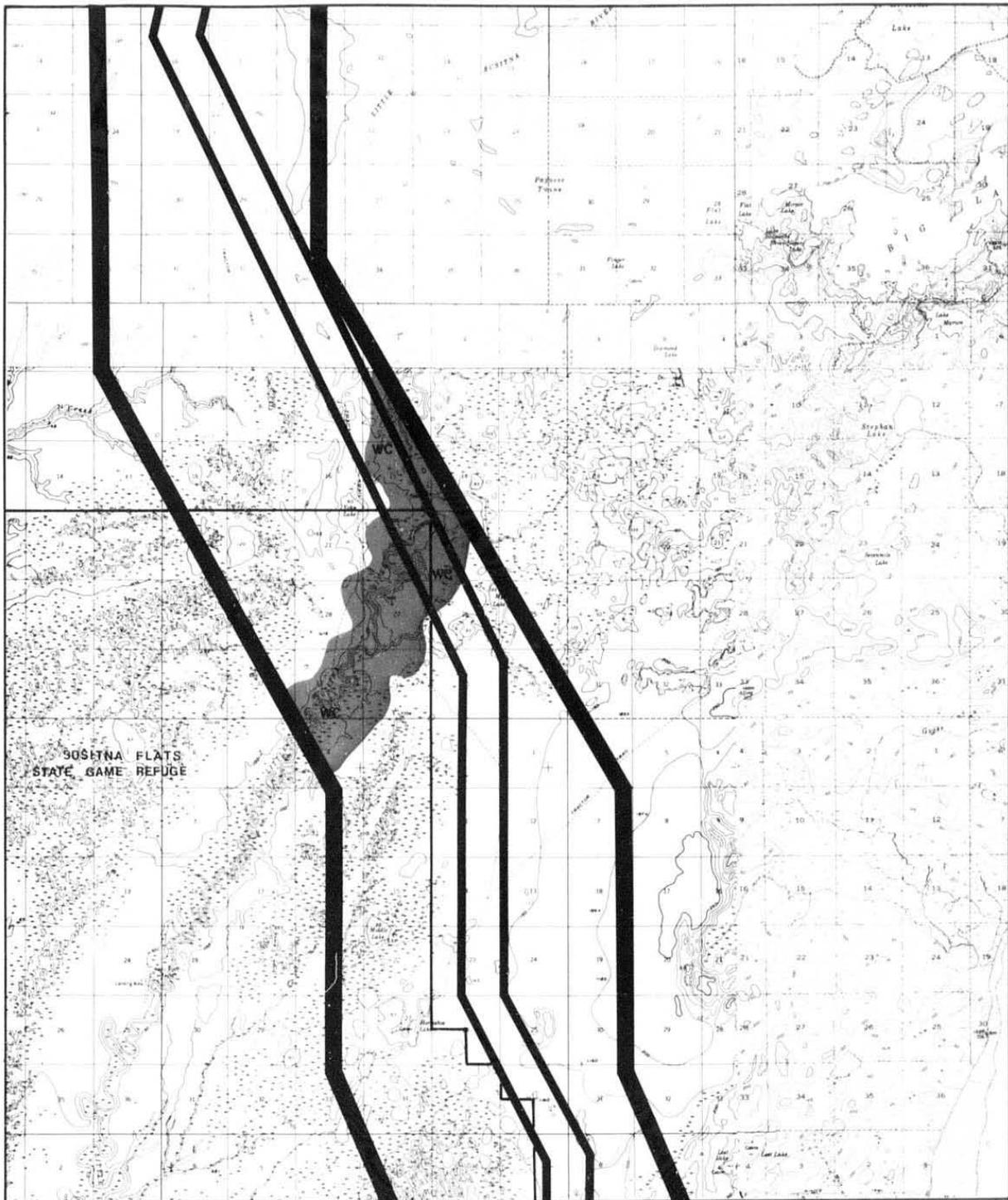
LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



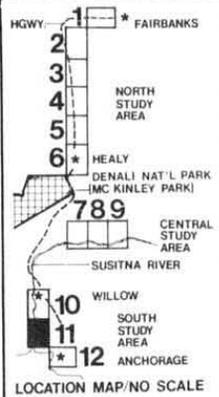
CONTOUR INTERVAL 100FT





PREPARED BY TES FIGURE 41 OF 48

VISUAL CONSTRAINTS
MAP M-11

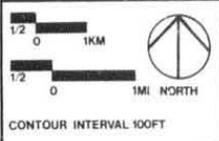


SUSITNA HYDROELECTRIC PROJECT
ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS
SENSITIVE VIEWSHEDS AND PROPOSED SCENIC HIGHWAY AREA

- PSH PROPOSED SCENIC HIGHWAY AREA
- SENSITIVE VIEWSHEDS**
- HW HIGHWAY
 - RR RAILROAD
 - PL PRIVATE LANDS
 - WC WATER COURSE
 - RA RECREATION AREA

- LEGEND**
- ||||| EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERTIE
 - ▬▬▬ RECOMMENDED ROUTE BOUNDARY
 - ▬▬▬ CORRIDOR BOUNDARY





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

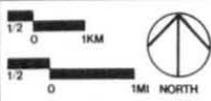
BIOLOGICAL CONSTRAINTS

VEGETATION BOUNDARIES
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA

WILDLIFE BOUNDARIES
 SAL SALMON PRESENT
 * PEREGRINE FALCON PRIME HABITAT
 * SWAN NEST AREA (WITH 1 MI. RAD. BUFFER ZONE)
 ⊕ ACTIVE NEST SITES 1980-81 (WITH 1 MI. RAD. BUFFER ZONE)
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

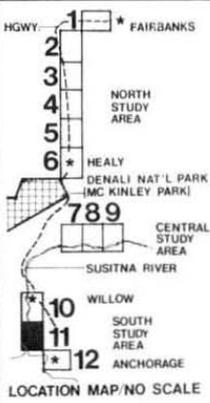
LEGEND

- ||||| EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- ▬ CORRIDOR BOUNDARY



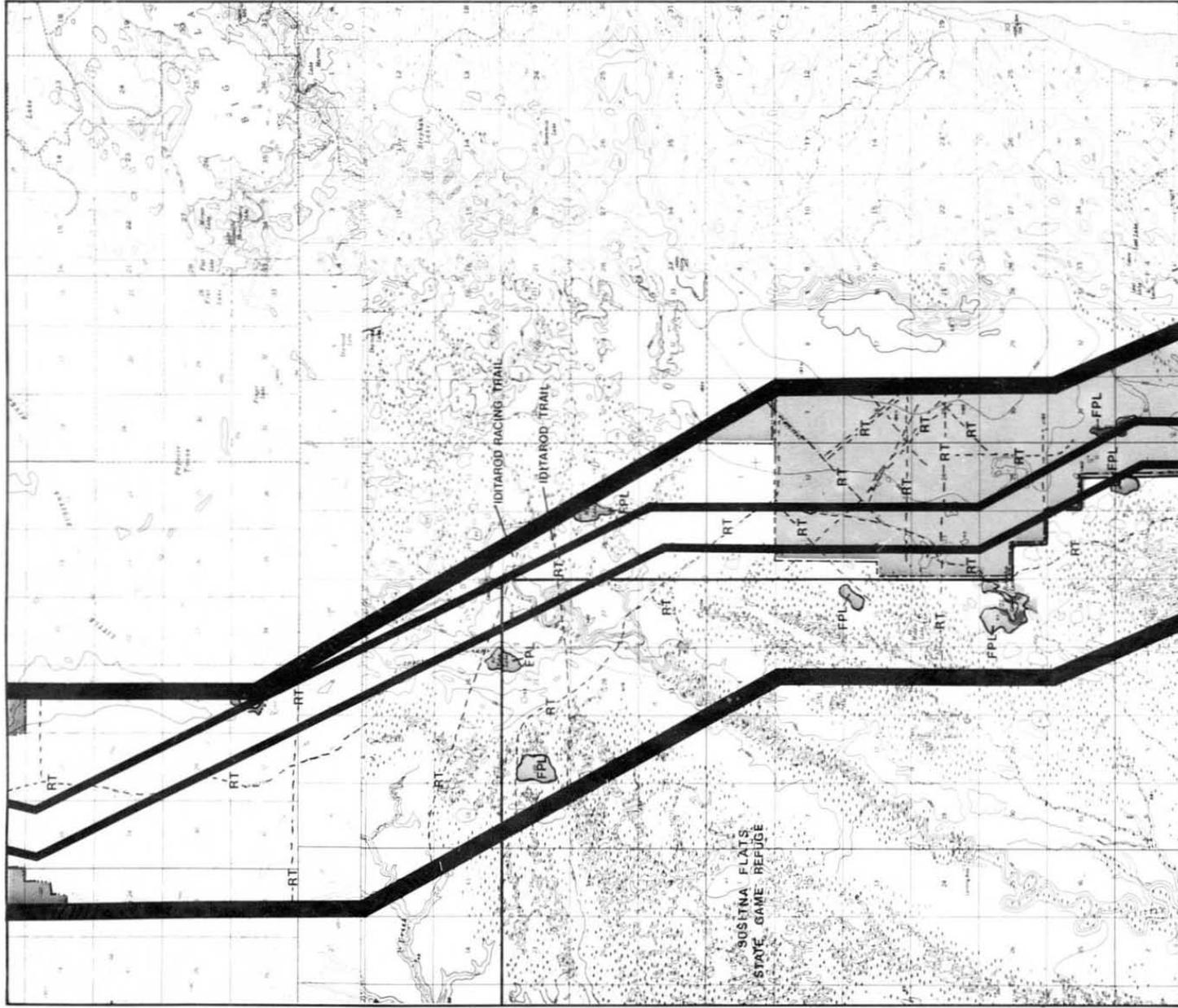
CONTOUR INTERVAL 100FT

BIOLOGICAL CONSTRAINTS
MAP M11
 PREPARED BY TES FIGURE 42 OF 48



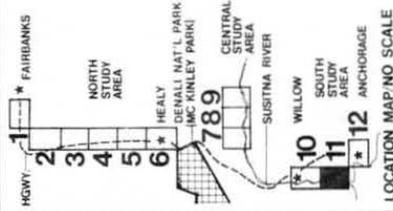
LOCATION MAP/NO SCALE





MANMADE CONSTRAINTS MAP M11

PREPARED BY TES FIGURE 43 of 48



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

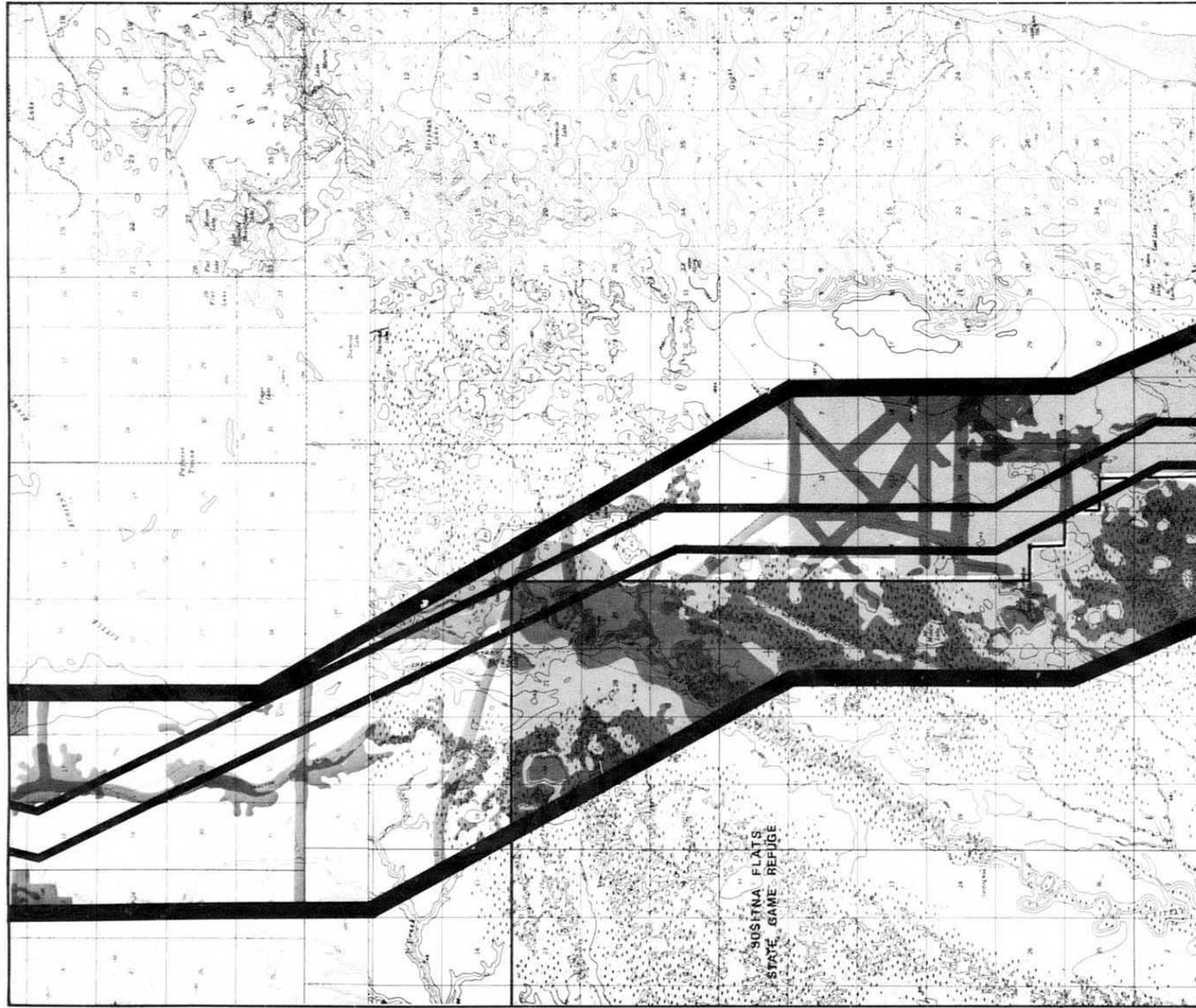
- RECREATION BOUNDARIES**
- CAMPSITE
 - RECREATION TRAIL
 - RT --- GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES**
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - AGRICULTURAL LAND
 - △ KNOWN ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES**
- AIRPORT AND LANDING STRIP
 - FPL --- FLOAT PLANE LANDING SITE

LEGEND

- ==== EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

- X VEGETATION
- X WILDLIFE HABITAT

MANMADE CONSTRAINTS

- X RECREATION
- X LAND USE AND LAND OWNERSHIP
- X TRANSPORTATION

X DENOTES CONSTRAINT PRESENT

LEGEND

- EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY

1 KM

1 MI NORTH

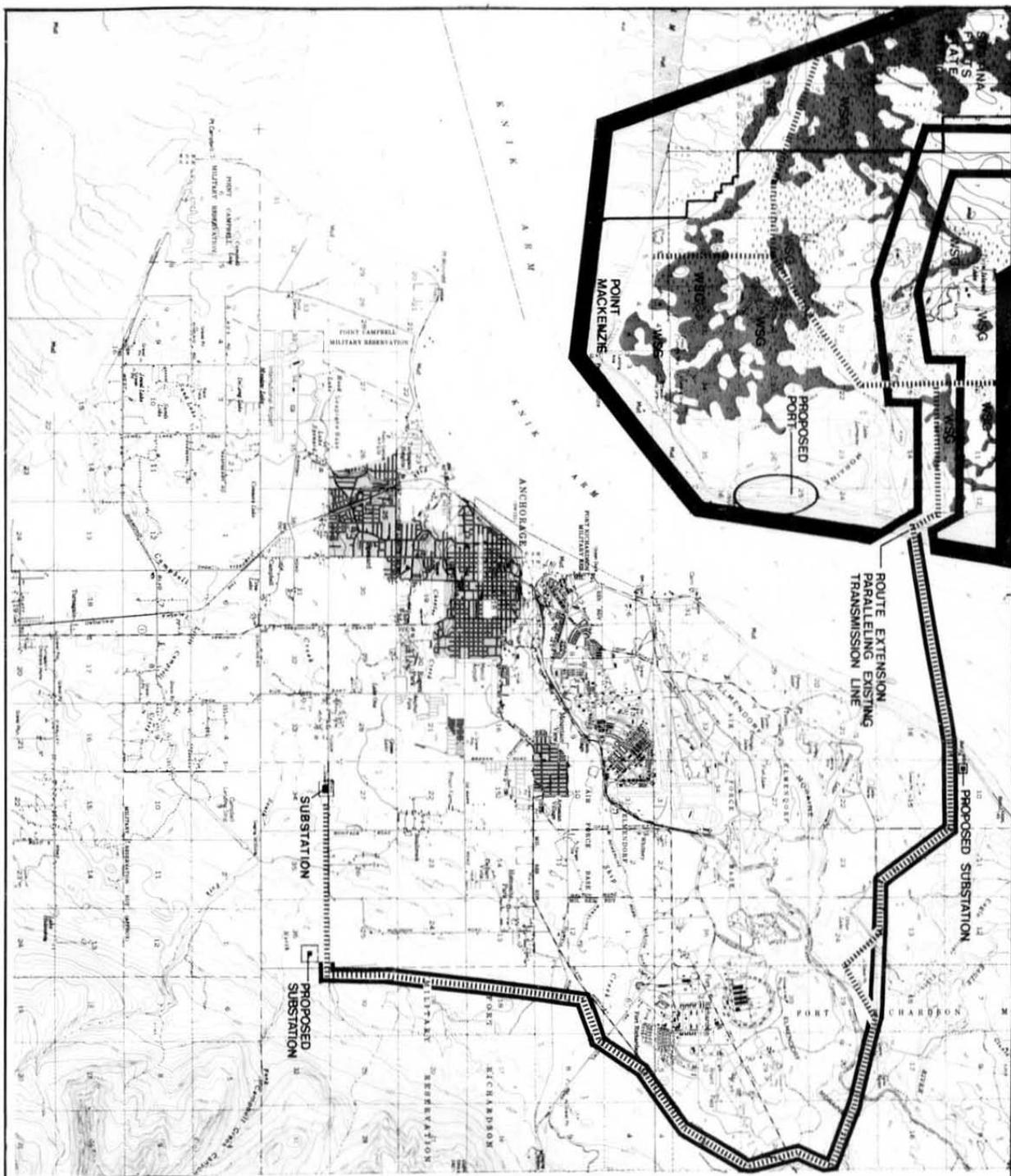
CONTOUR INTERVAL 100FT

LOCATION MAP: NO SCALE

THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS. IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY.

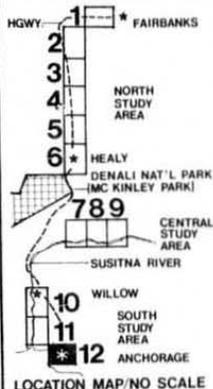
COMPOSITE CONSTRAINTS MAP M11

PREPARED BY TES FIGURE 44 of 48



PREPARED BY TES FIGURE 46 of 48

BIOLOGICAL CONSTRAINTS MAP M12



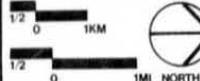
SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

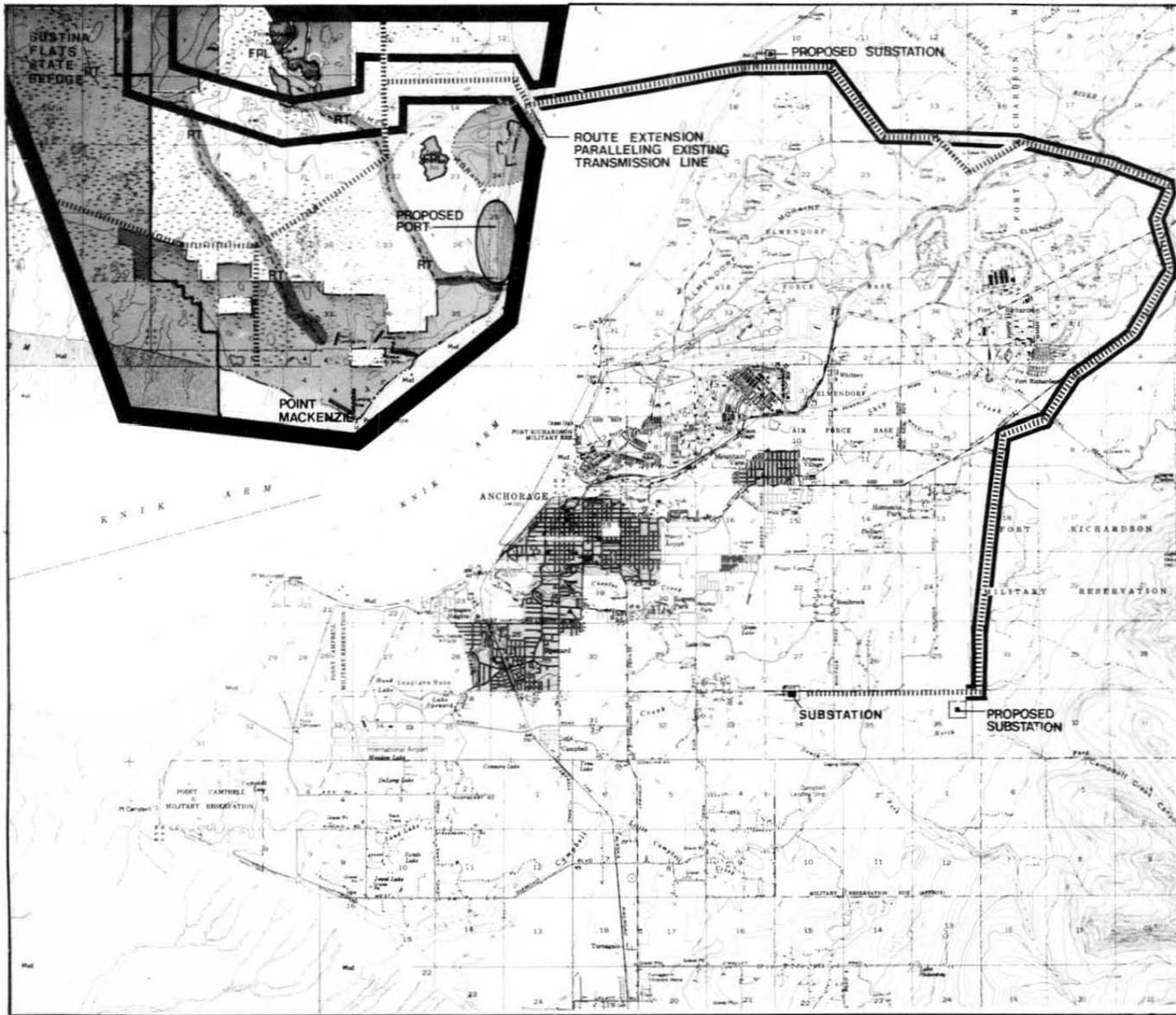
BIOLOGICAL CONSTRAINTS

- VEGETATION BOUNDARIES**
 WSG WET SEDGE GRASS
 SPF WET SPRUCE/POTENTIAL PERMAFROST AREA
- WILDLIFE BOUNDARIES**
 SAL SALMON PRESENT
 SWAN SWAN NEST AREA [WITH 1 MI. RAD. BUFFER ZONE]
 GN ACTIVE NEST SITES 1980 - 81 [WITH 1 MI. RAD. BUFFER ZONE]
 GE GOLDEN EAGLE
 BE BALD EAGLE
 GF GYRFALCON
 GH GOSHAWK
 UN UNKNOWN

LEGEND

- ==== EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



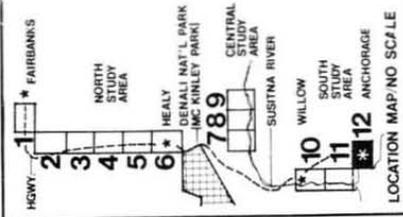


SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

MANMADE CONSTRAINTS

- LEGEND**
- EXISTING MAJOR TRANSMISSION LINE
 - PROPOSED INTERTIE
 - RECOMMENDED ROUTE BOUNDARY
 - CORRIDOR BOUNDARY
- 12 0 12 1 MI NORTH
CONTOUR INTERVAL 100FT

- MANMADE CONSTRAINTS**
- RECREATION BOUNDARIES
- RECREATION TRAIL
 - CAMP/SITE
 - NAME
 - GAME REFUGE AREA
- LAND USE AND LAND OWNERSHIP BOUNDARIES
- EXISTING PRIVATE LAND
 - DEVELOPMENT AREA
 - AGRICULTURAL LAND
 - KNOW ARCHEOLOGICAL SITE
 - AREA OF HIGH ARCHEOLOGICAL POTENTIAL
 - DAM IMPOUNDMENT AREA
 - CABINS, STRUCTURE
- TRANSPORTATION BOUNDARIES
- AIRPORT AND LANDING STRIP
 - FLOAT PLANE LANDING SITE
- PFL



MANMADE CONSTRAINTS MAP M12

PREPARED BY TES FIGURE 47 of 48





SUSITNA HYDROELECTRIC PROJECT ALASKA POWER AUTHORITY

VISUAL CONSTRAINTS

- X SENSITIVE VIEWSHEDS & PROPOSED SCENIC HIGHWAY

BIOLOGICAL CONSTRAINTS

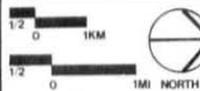
- X VEGETATION
- WILDLIFE HABITAT

MANMADE CONSTRAINTS

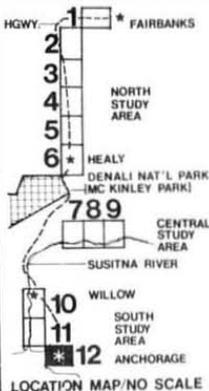
- X RECREATION
 - X LAND USE AND LAND OWNERSHIP
 - X TRANSPORTATION
- X DENOTES CONSTRAINT PRESENT

LEGEND

- ==== EXISTING MAJOR TRANSMISSION LINE
- PROPOSED INTERTIE
- ▬ RECOMMENDED ROUTE BOUNDARY
- CORRIDOR BOUNDARY



CONTOUR INTERVAL 100FT



THIS MAP SUPERIMPOSES THE THREE PREVIOUS MAPS
IT ILLUSTRATES ALL CONSTRAINTS SIMULTANEOUSLY

CONSTRAINTS

MAP M12

PREPARED BY TES FIGURE 48 OF 48

