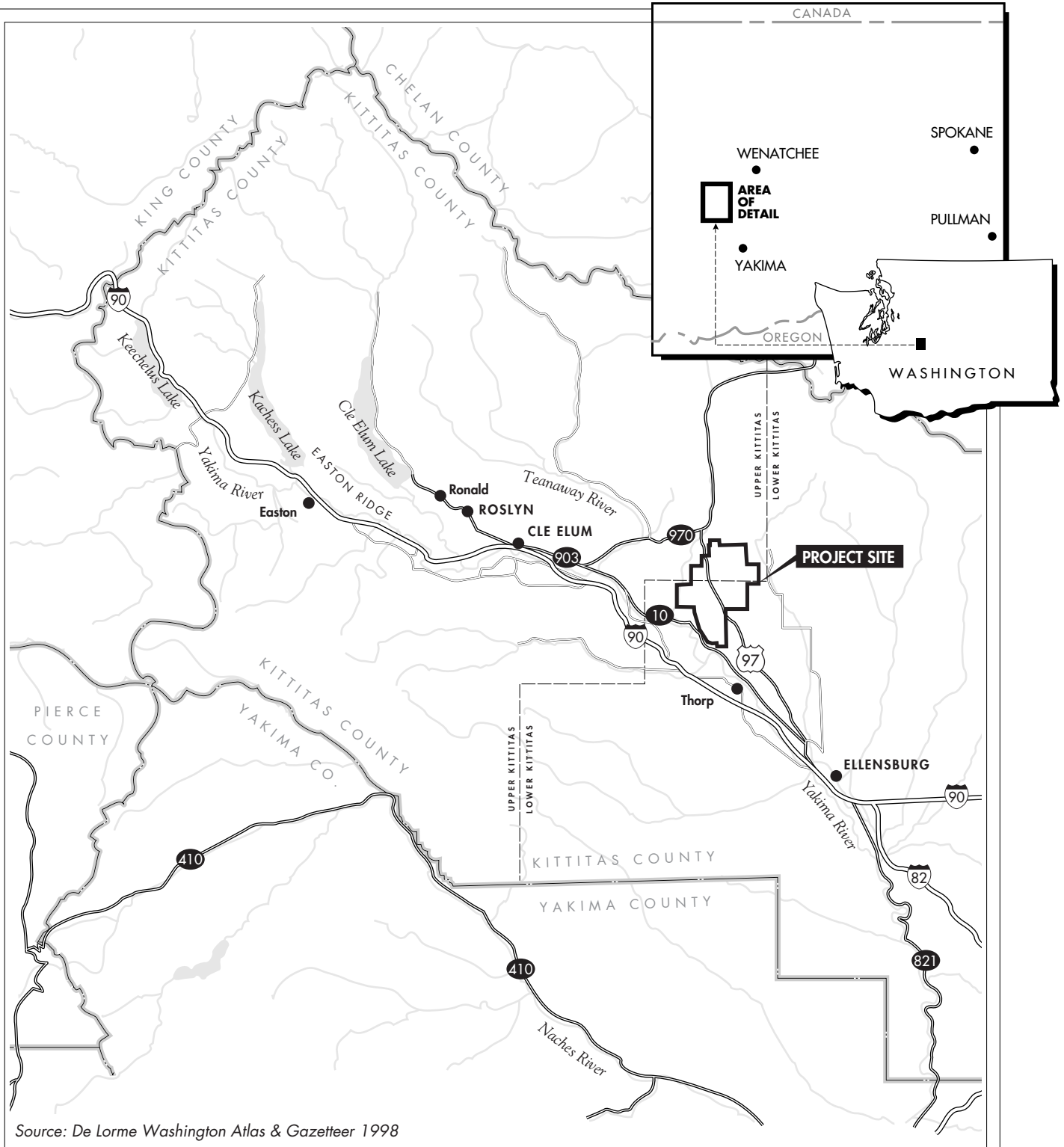


FIGURE 1-1

VICINITY MAP



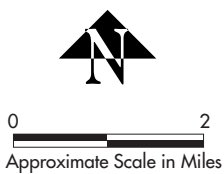
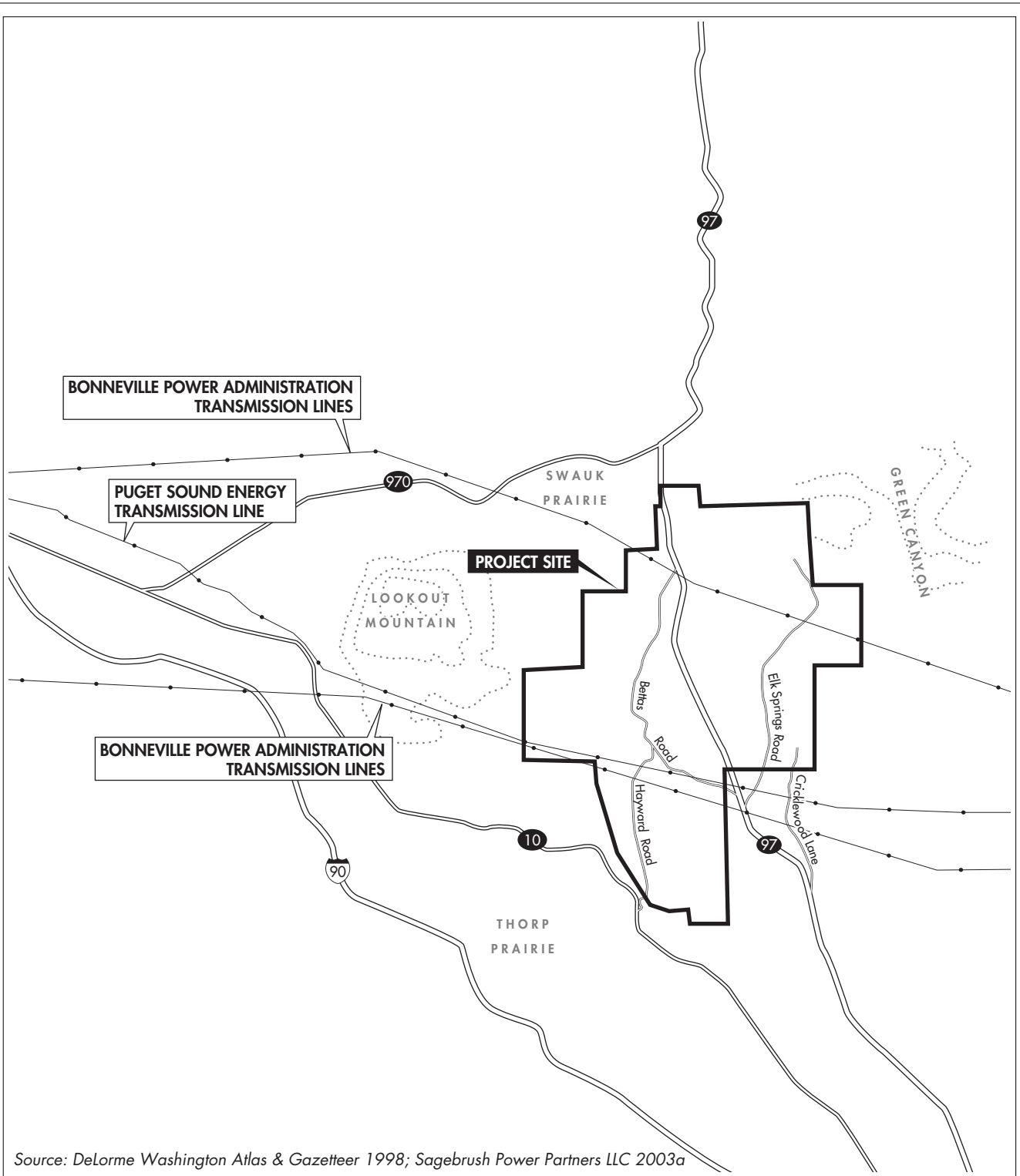
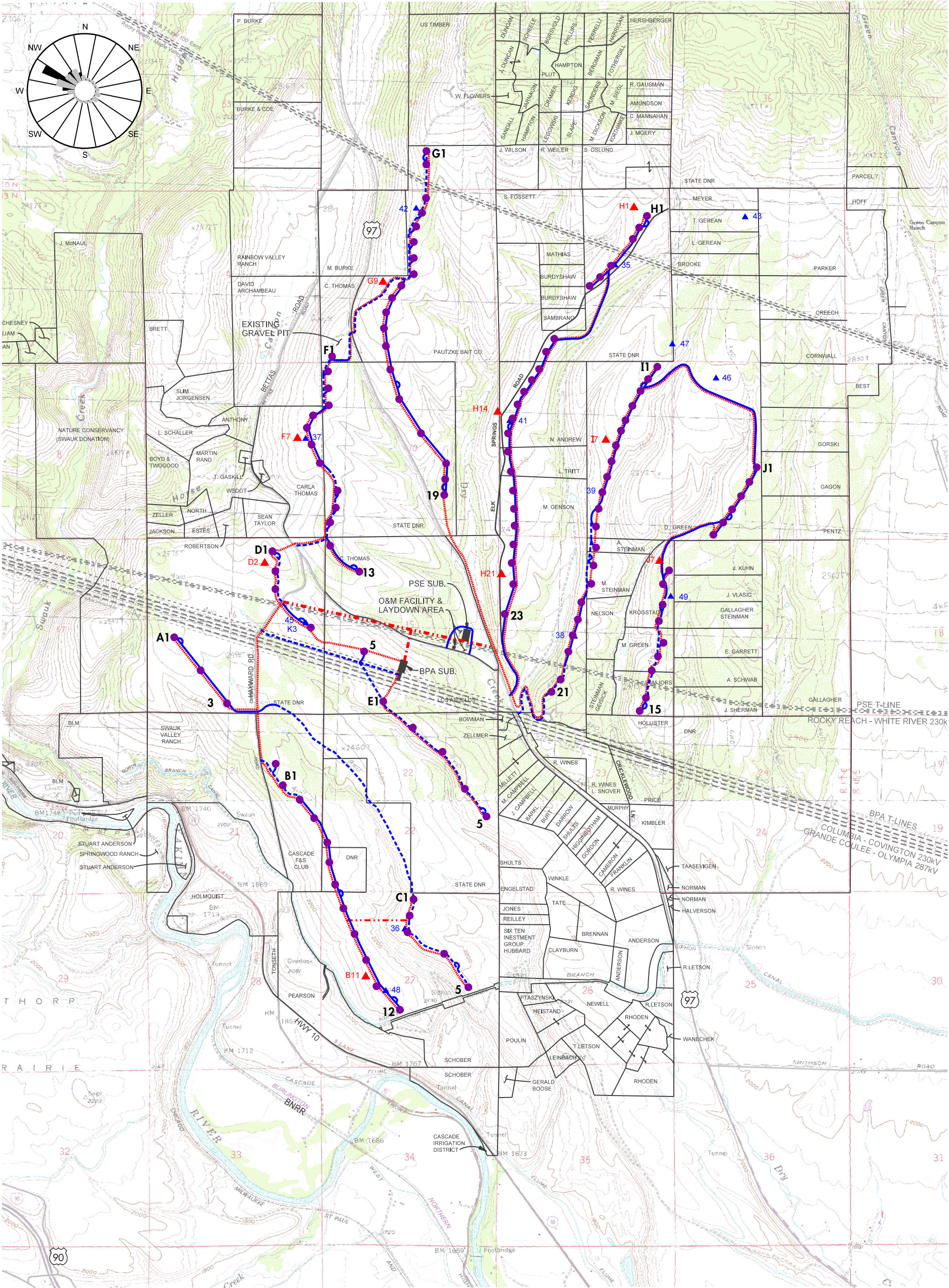


FIGURE 1-2

PROJECT SITE MAP





Source: Sagebrush Power Partners LLC 2003a

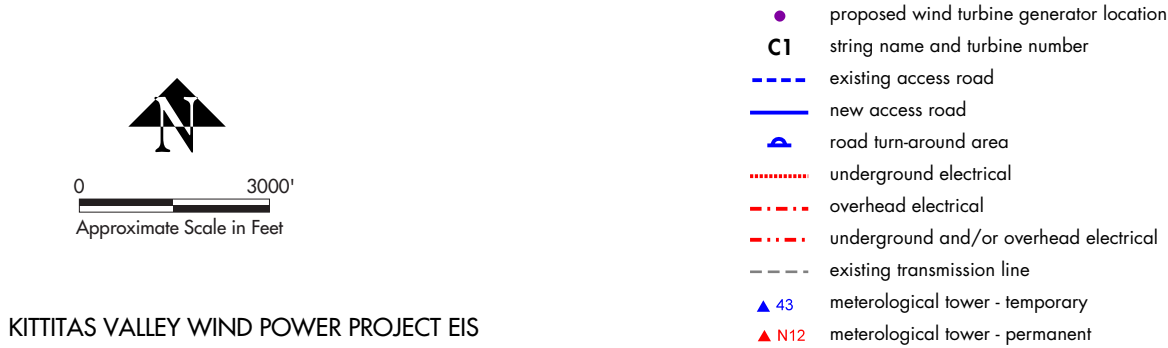
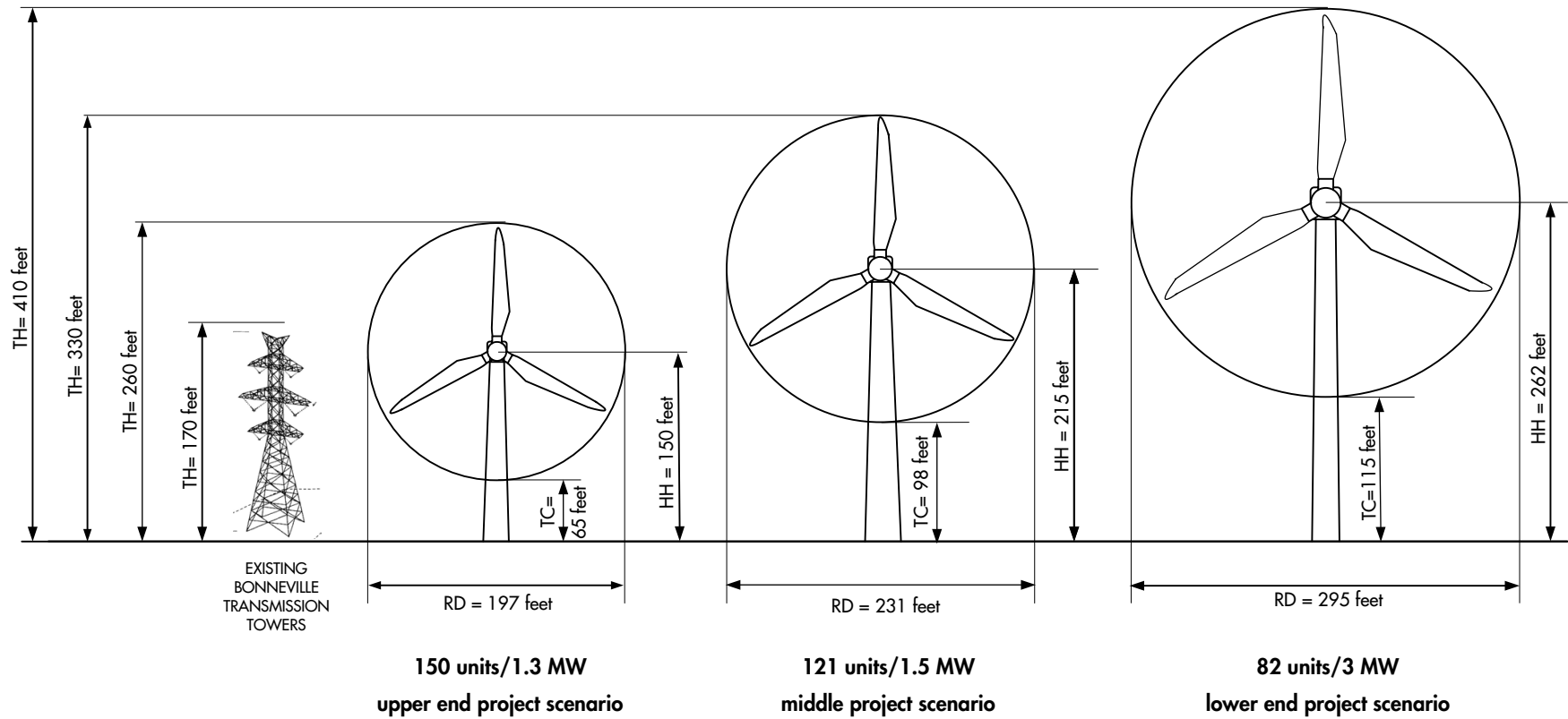


FIGURE 2-1

PROJECT SITE LAYOUT,
MIDDLE SCENARIO





Source: Sagebrush Power Partners LLC 2003a

HH hub height
RD rotor diameter
TC tip clearance
TH tip height

FIGURE 2-2

TYPICAL WIND TURBINE DIMENSIONS

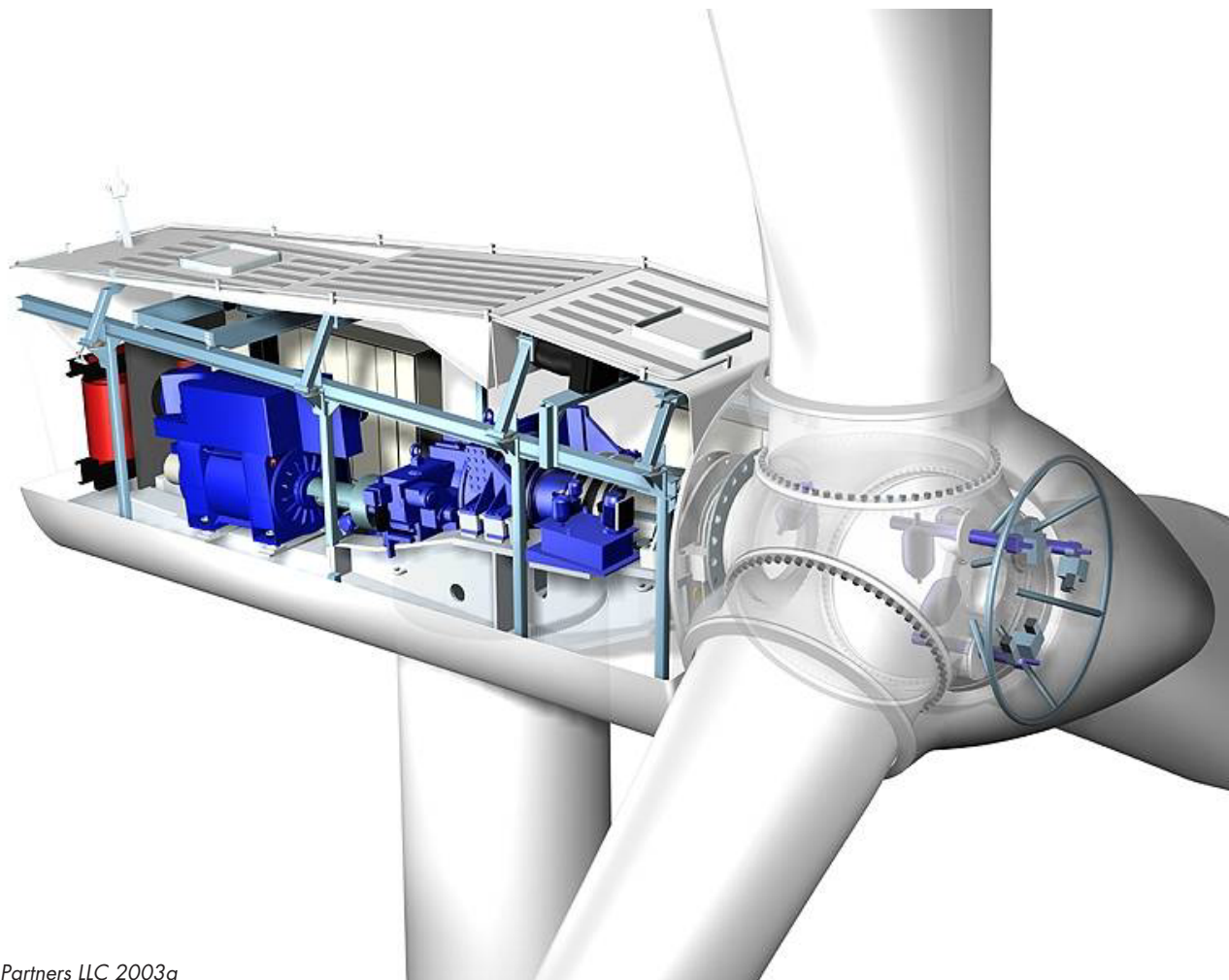


Source: Sagebrush Power Partners LLC 2003a

FIGURE 2-3

**TYPICAL MODERN THREE-BLADED
UPWIND TURBINE GENERATOR**

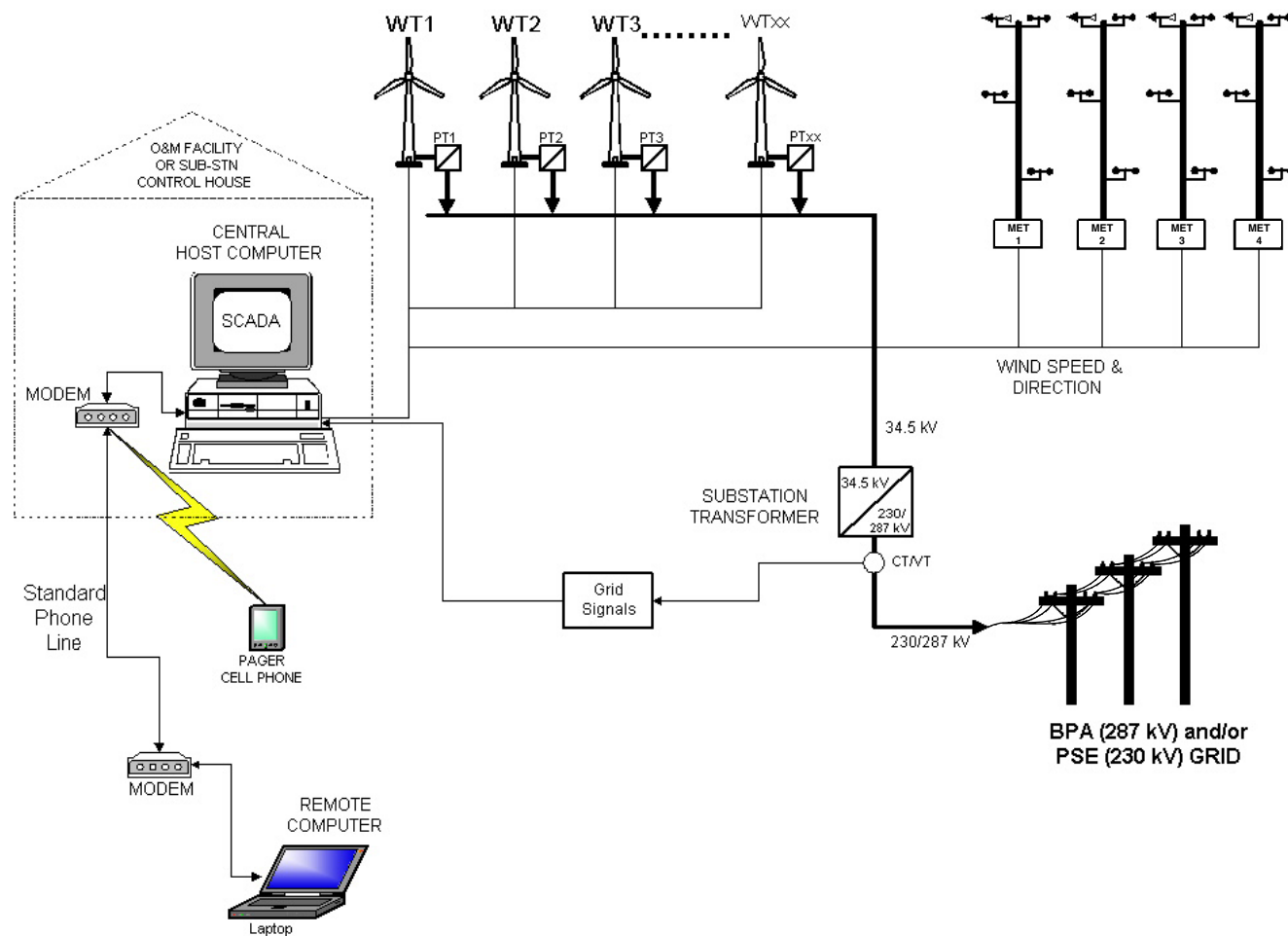




Source: Sagebrush Power Partners LLC 2003a

FIGURE 2-4

TYPICAL NACELLE

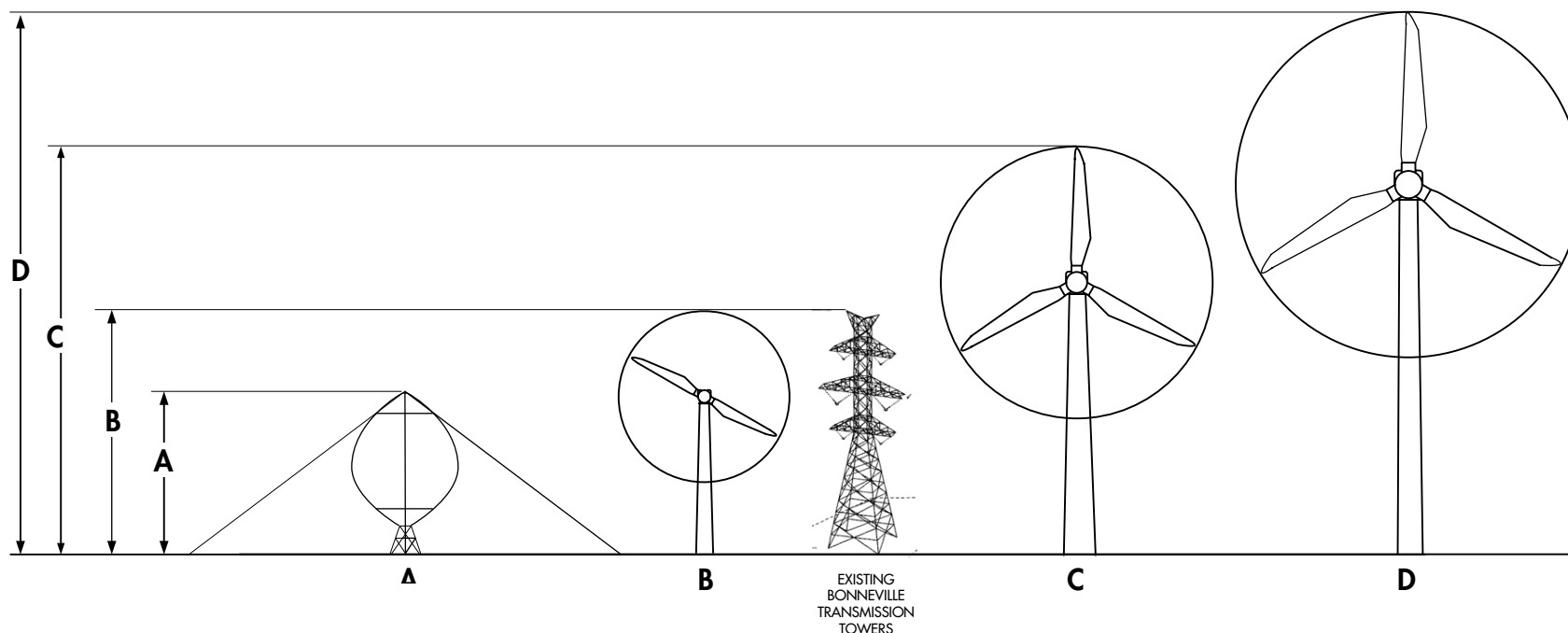


Source: Sagebrush Power Partners LLC 2003a

	communication lines
	electrical power lines
WT	wind turbine
PT	pad-mounted transformer
MET	meteorological data system
SCADA	supervisory control & data acquisition
CT	current transducers
VT	voltage transducers

FIGURE 2-5

ELECTRICAL AND COMMUNICATIONS SYSTEM



Source: Sagebrush Power Partners LLC 2003c

		typical generator size	typical size	approx. units required for 182 MW	typical rotational speed
A	Darrieus rotor	50-100 kW	100-150 ft	2,400	50-70 RPM
B	two-bladed (downwind)	50-200 kW	150-200 ft	2,400	60-90 RPM
C	three-bladed (upwind)	500-750 kW	240-300 ft	290	28-30 RPM
D	three-bladed (upwind)	1,300-2,500 kW	300-400 ft	121	20-25 RPM

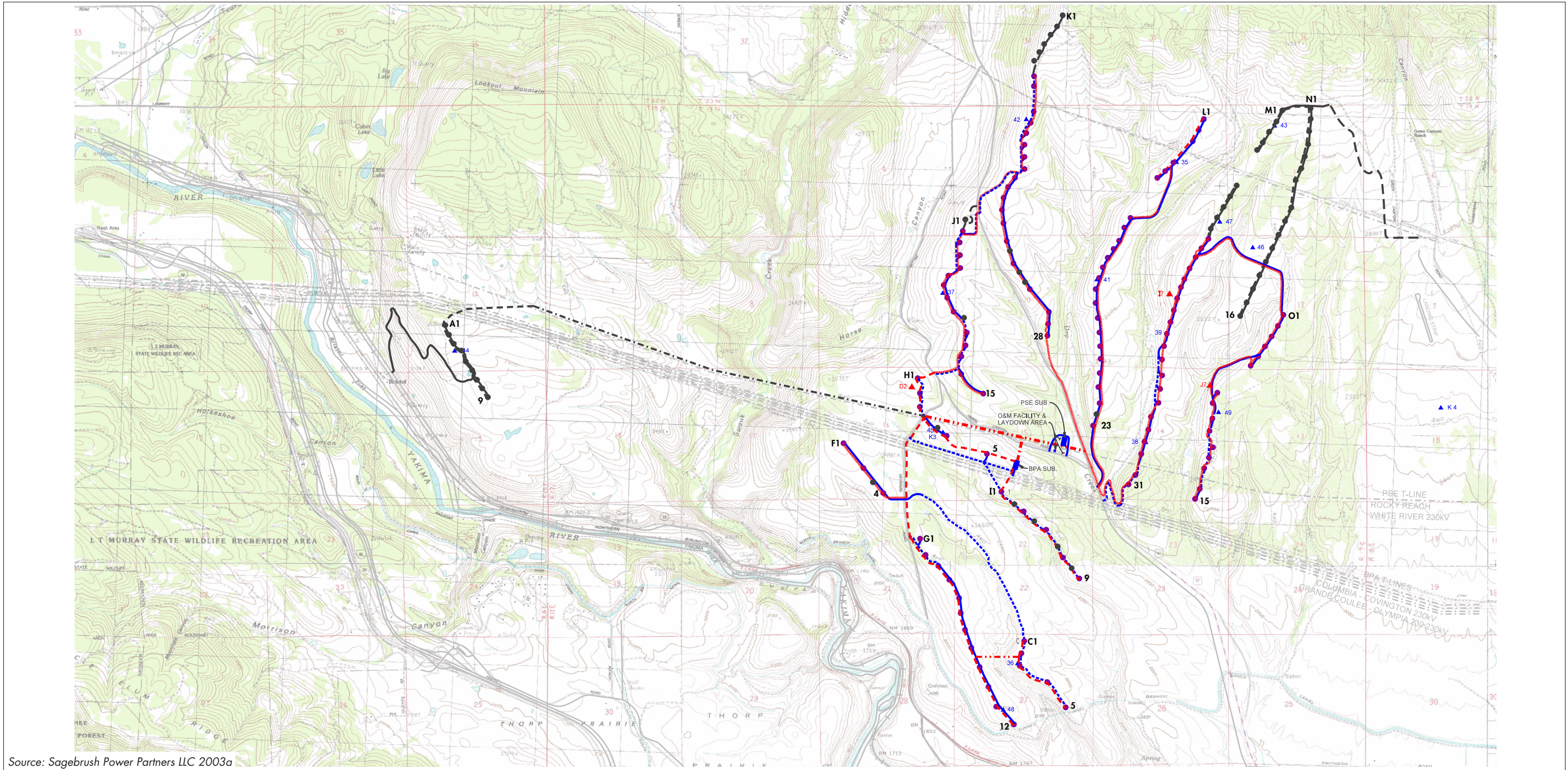
FIGURE 2-6

COMPARISON OF VARIOUS WIND TURBINE TECHNOLOGIES

KITTITAS VALLEY WIND POWER PROJECT EIS



SHAPIRO
& ASSOCIATES, INC.



- proposed wind turbine generator location
- facilities studied and removed from the project
- C1 string name and turbine number
- ▲ 43 meteorological tower - temporary
- ▲ N12 meteorological tower - permanent
- existing access road
- new access road
- - - underground electrical
- · - · - overhead electrical



0 4000'
Approximate Scale in Feet

FIGURE 2-7

ALTERNATIVE A SITE LAYOUT

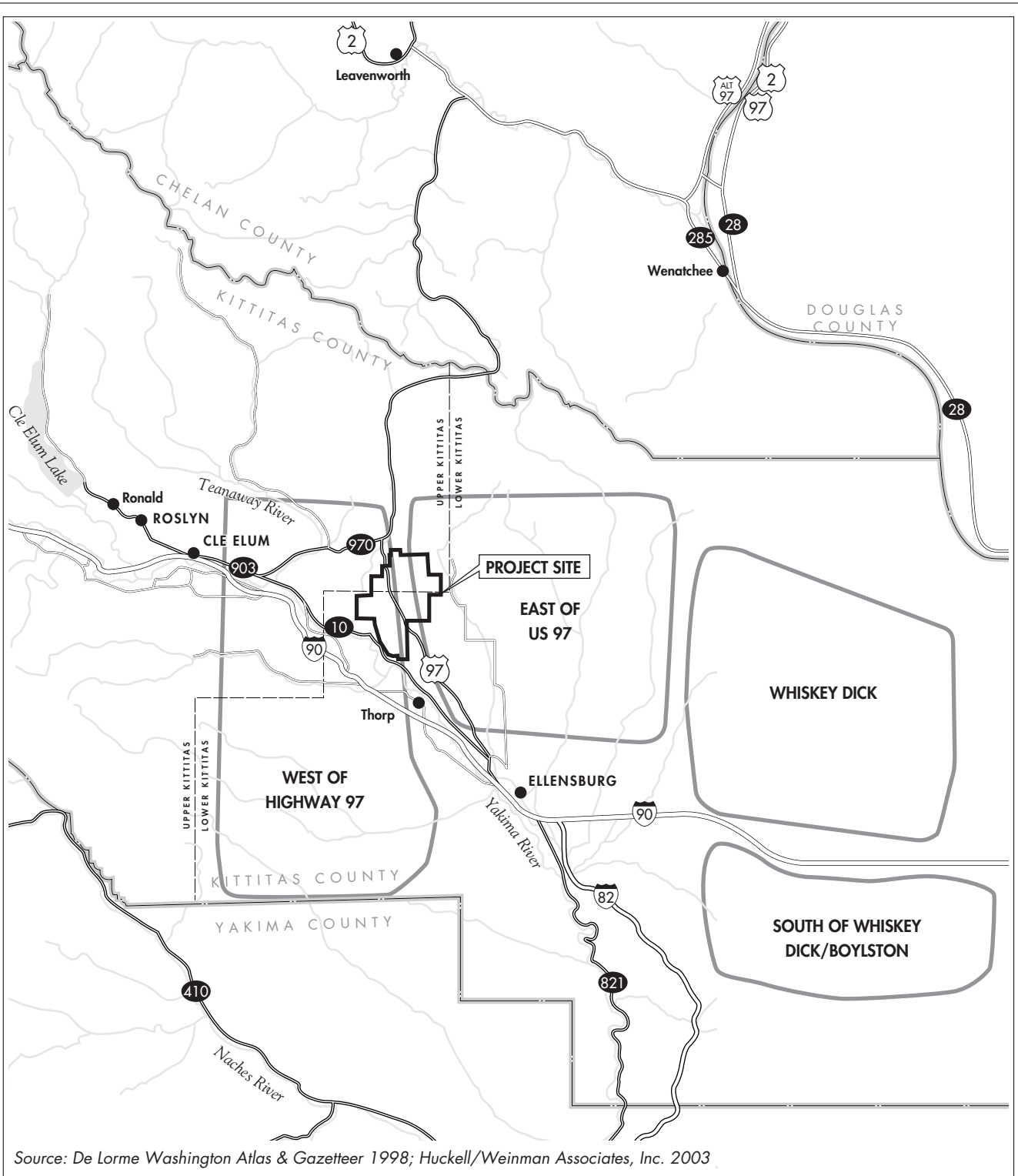
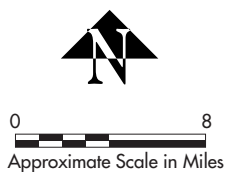
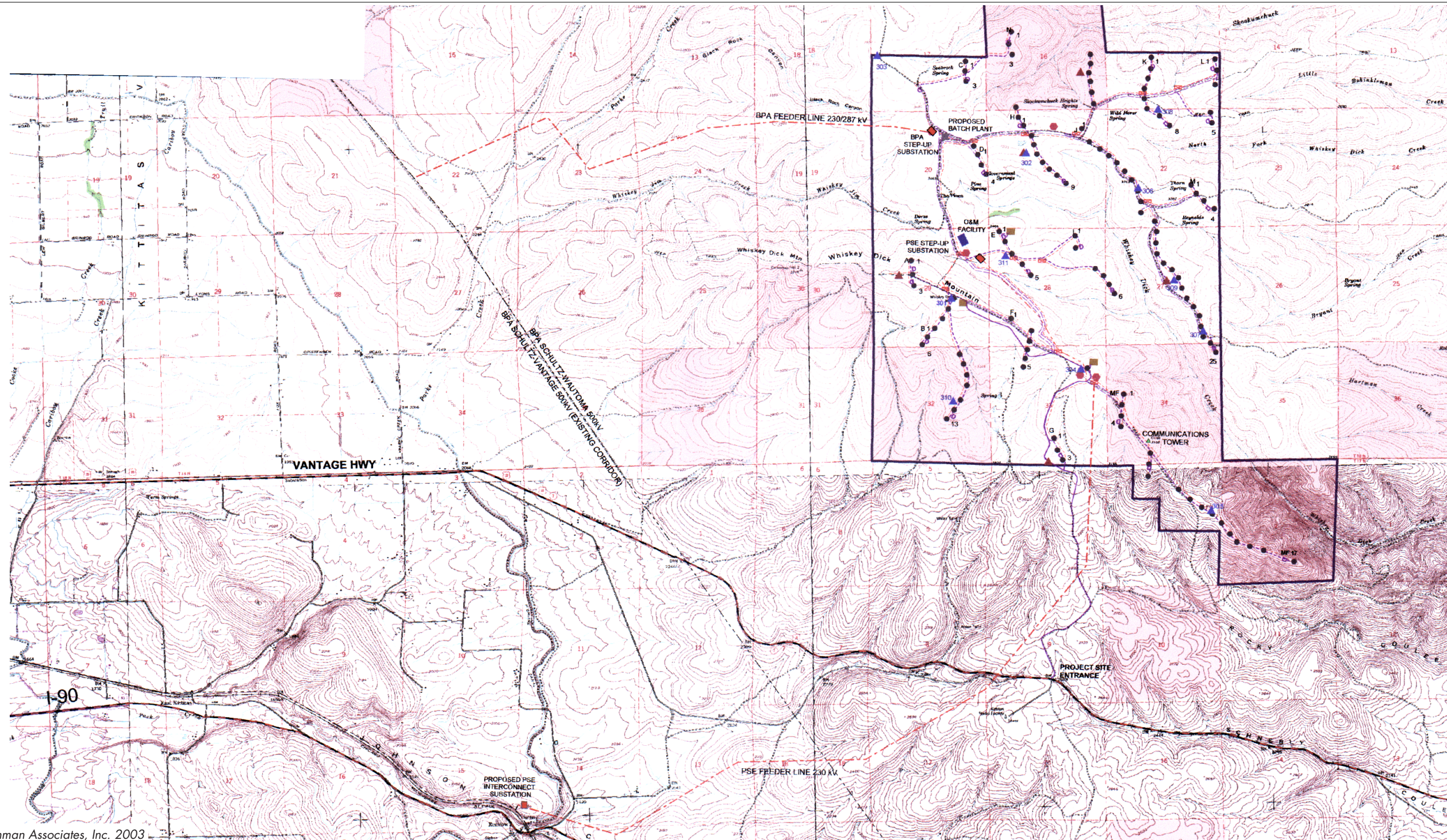


FIGURE 2-8

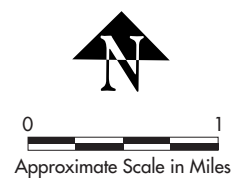


AREAS INVESTIGATED FOR WIND ENERGY DEVELOPMENT





Source: Huckell/Weinman Associates, Inc. 2003

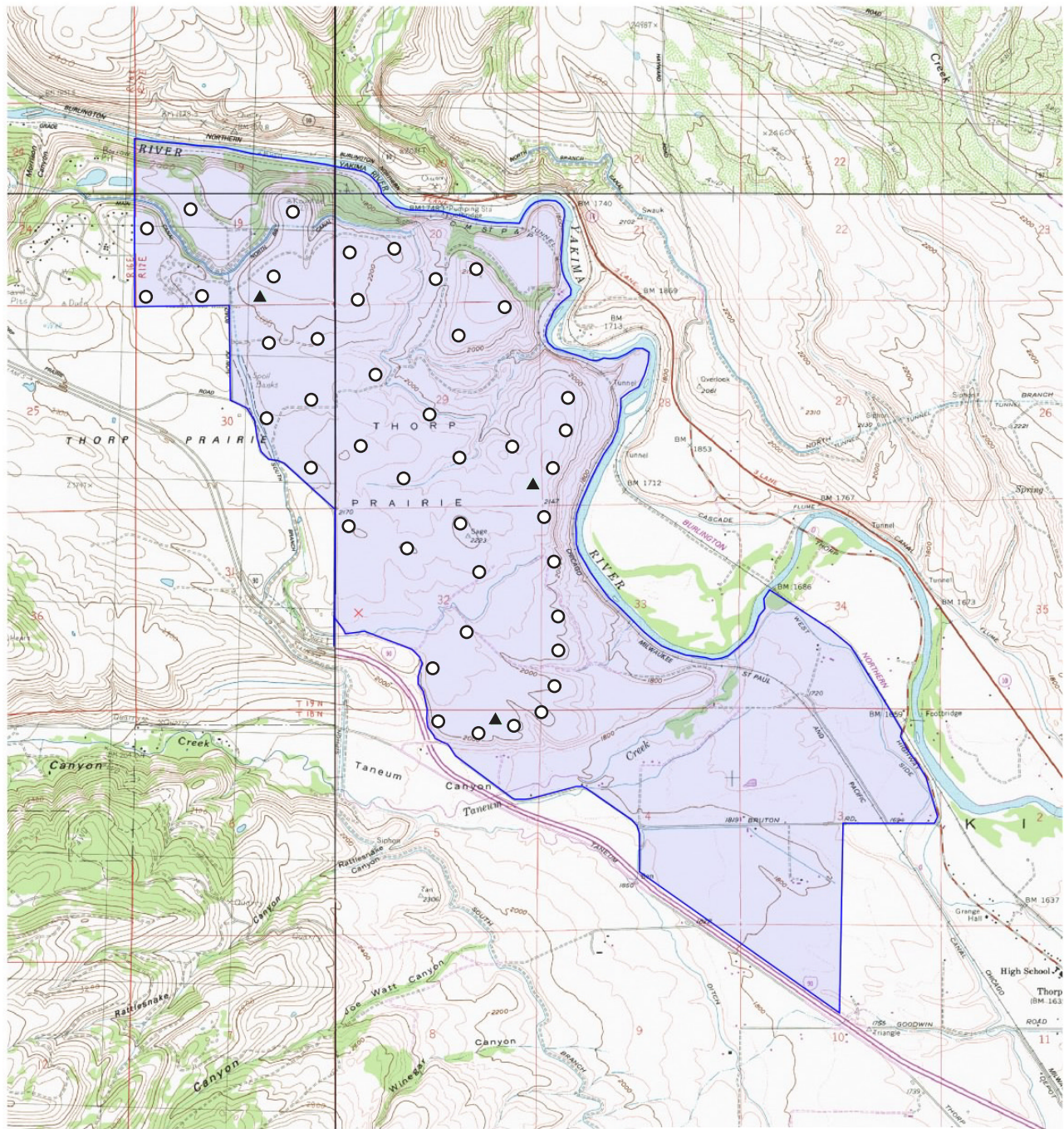


turnaround
 proposed wind turbine generator location
 meteorological tower - temporary
 meteorological tower - permanent
 O&M facility
 substation
 underground electrical
 overhead electrical
 overhead electrical - 230kV with 34.5kV underbuild

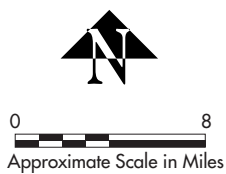
pad switch/junction panel
 quarry site
 laydown area
 existing road - minor improvement required
 existing road - major improvement required
 new road
 overhead electrical feeder line
 DNR parcels included in project layout

FIGURE 2-9

**ALTERNATIVE 1
 WILD HORSE**



Source: Huckell/Weinman Associates, Inc. 2003

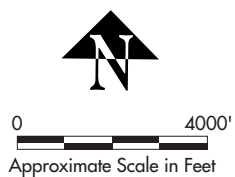
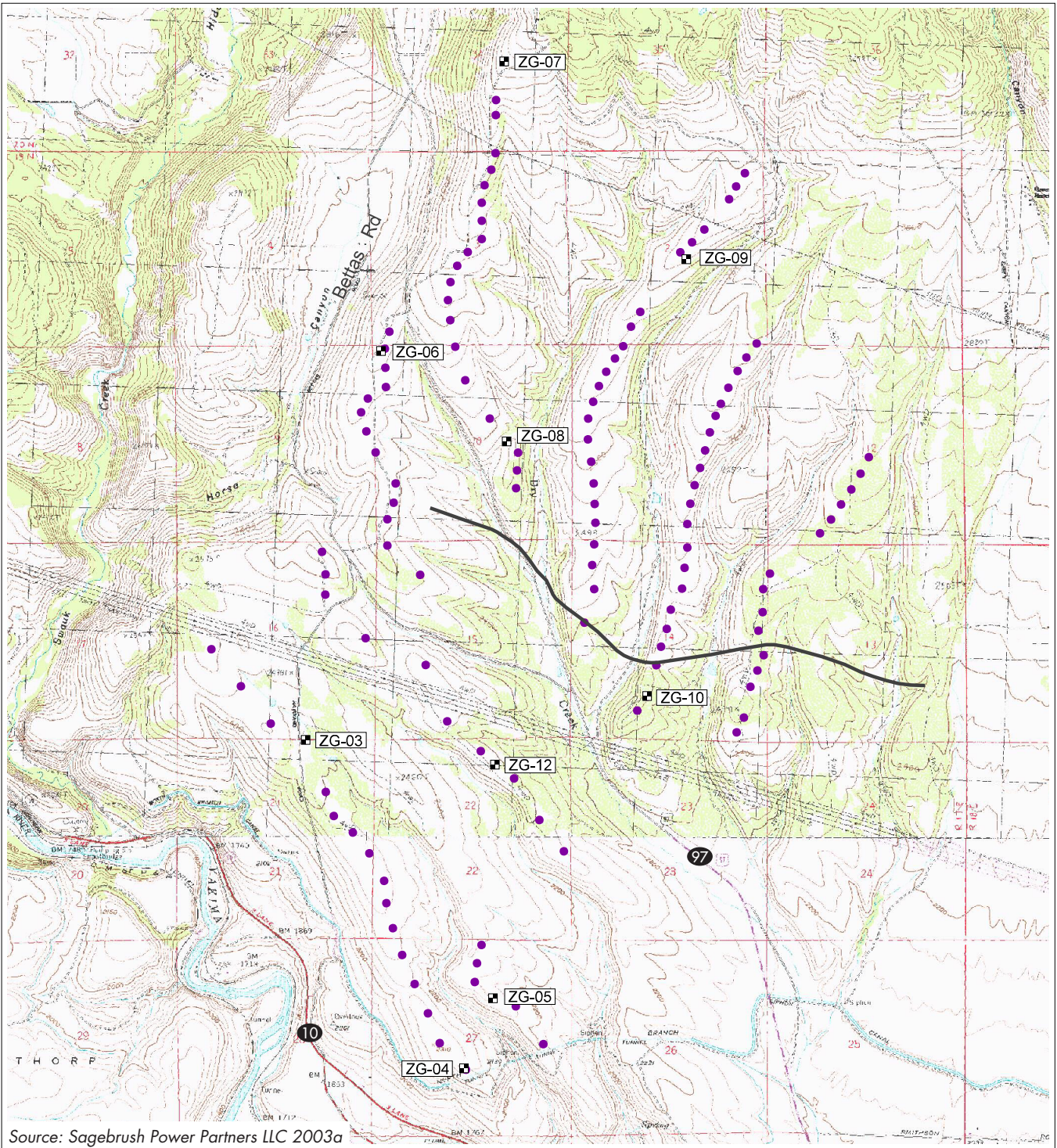


- ▲ proposed meteorological tower
- proposed wind turbine

FIGURE 2-10

ALTERNATIVE 2 SPRINGWOOD RANCH





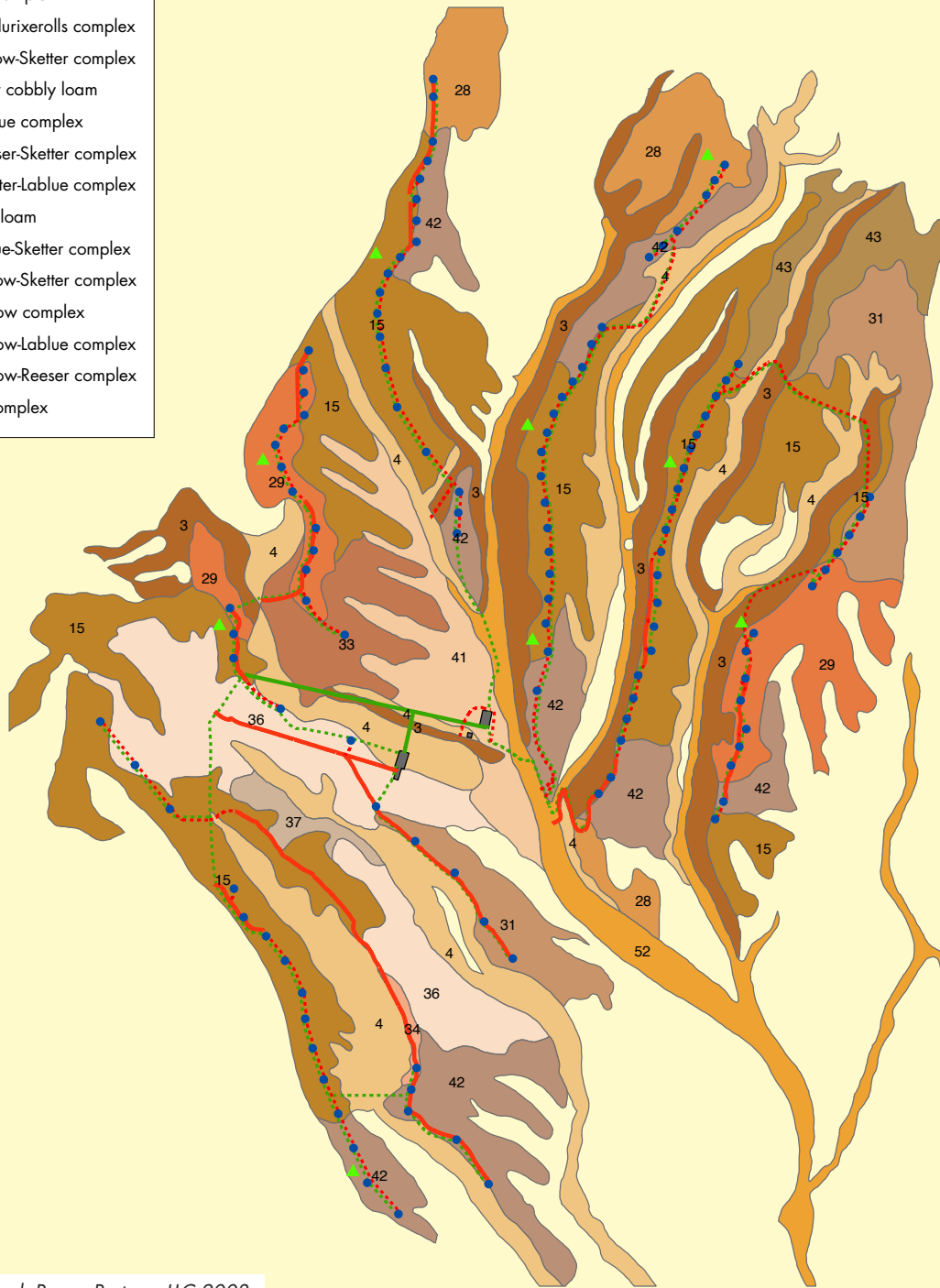
- ZG-10 test pit location
- proposed wind turbine generator location (middle scenario)
- local high-angle fault

FIGURE 3.1-1

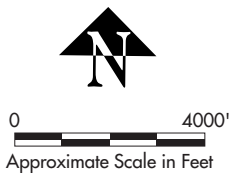
GEOTECHNICAL TEST PIT AND FAULT LOCATIONS



- 3 argixerolls complex
- 4 argixerolls-durixerolls complex
- 15 LaBlue-Reelow-Sketter complex
- 28 Reelow very cobbly loam
- 29 Reelow-Lablue complex
- 31 Reelow-Reeser-Sketter complex
- 33 Reelow-Sketter-Lablue complex
- 34 Reeser clay loam
- 36 Reeser-Lablue-Sketter complex
- 37 Reeser-Reelow-Sketter complex
- 41 Sketter-Reelow complex
- 42 Sketter-Reelow-Lablue complex
- 43 Sketter-Reelow-Reeser complex
- 52 Weirman complex



Source: Sagebrush Power Partners LLC 2003c



- proposed wind turbine generator location (middle scenario)
- ▲ meteorological tower
- existing access road
- - - new access road
- - - underground electrical
- overhead electrical
- ▭ substation
- no soil type

FIGURE 3.1-2

SOILS

KITTITAS VALLEY
WIND POWER PROJECT EIS

1017002.2T



SHAPIRO
& ASSOCIATES, INC.



Source: Sagebrush Power Partners LLC 2003a



0 2500'
Approximate Scale in Feet

KITTITAS VALLEY WIND POWER PROJECT EIS

wetland
riparian
riparian trees
dense conifers
sparse conifers
deciduous shrub thicket
dense shrub-steppe
moderate shrub-steppe
sparse shrub-steppe
low sagebrush

grassland
lithosolic plant community
surface water
talus
developed

50-meter lithosol survey corridor

300-meter buffer corridor

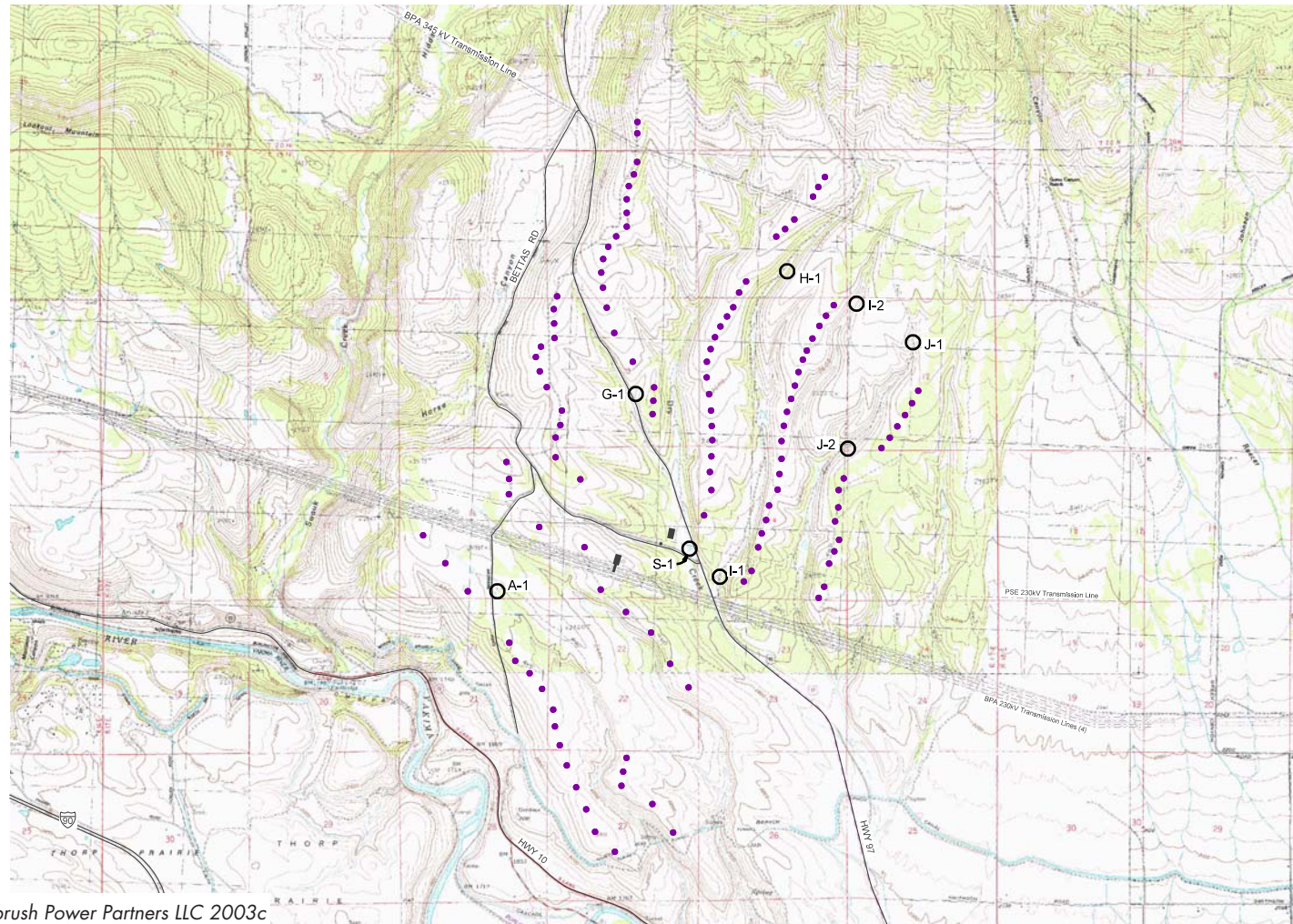
turbine locations and string
name (middle scenario)

FIGURE 3.2-1

VEGETATION TYPES



SHAPIRO
& ASSOCIATES, INC.



Source: Sagebrush Power Partners LLC 2003c

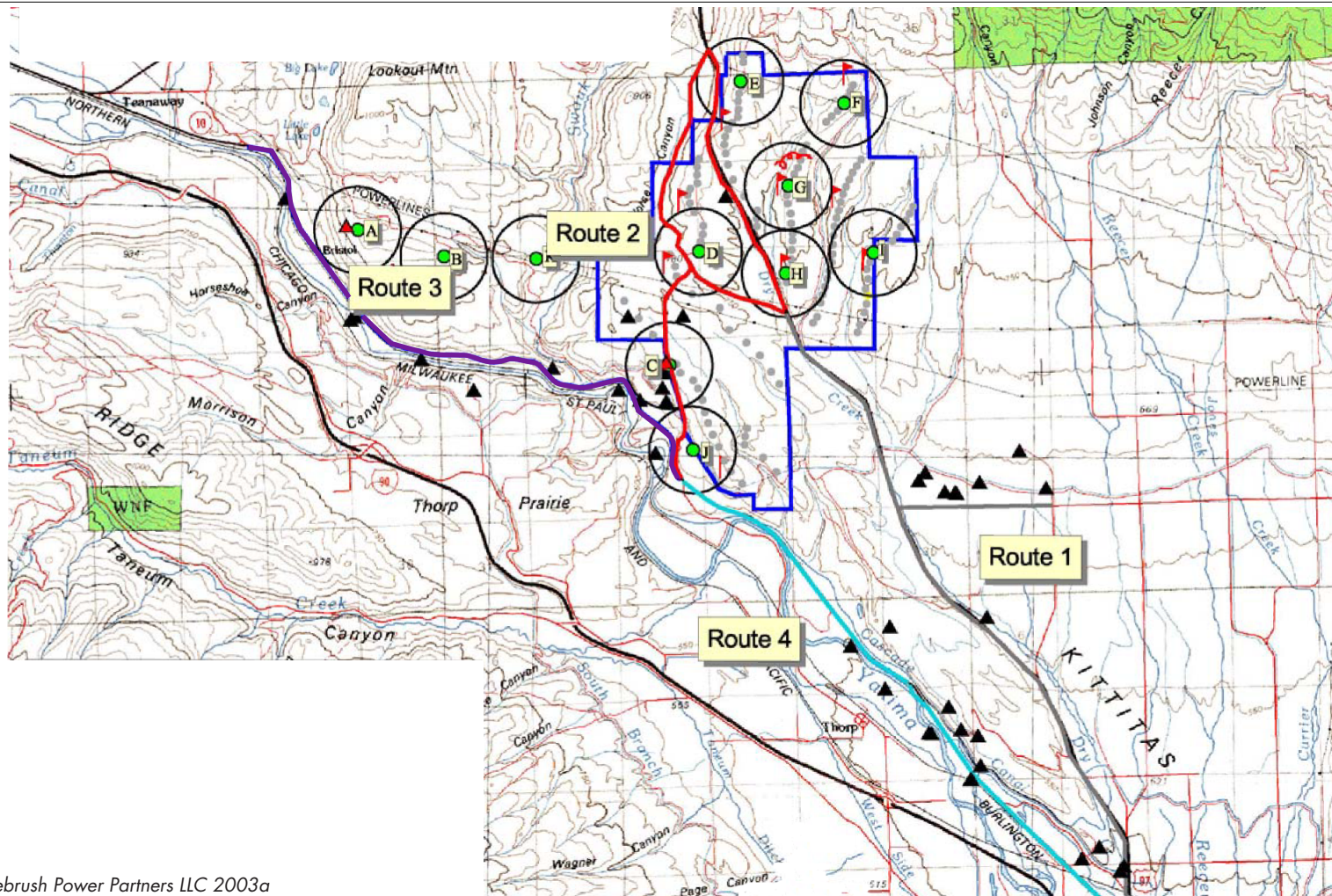


0 6000'
Approximate Scale in Feet

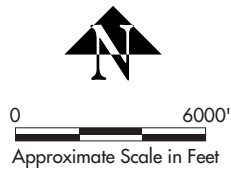
- J-1 stream survey location
- proposed wind turbine generator location (middle scenario)

FIGURE 3.2-2

STREAM SURVEY LOCATIONS



Source: Sagebrush Power Partners LLC 2003a



- bald eagle flight path
- ▲ bald eagle perch
- ▲ bald eagles observed during winter surveys
- survey route 1
- survey route 2
- survey route 3
- survey route 4
- permanent meteorological tower
- turbine(middle scenario)
- approximate project boundary
- avian use survey points

FIGURE 3.2-3

APPROXIMATE PERCHES AND FLIGHT PATHS OF BALD EAGLES

KITTITAS VALLEY WIND POWER PROJECT EIS

SHAPIRO
& ASSOCIATES, INC.

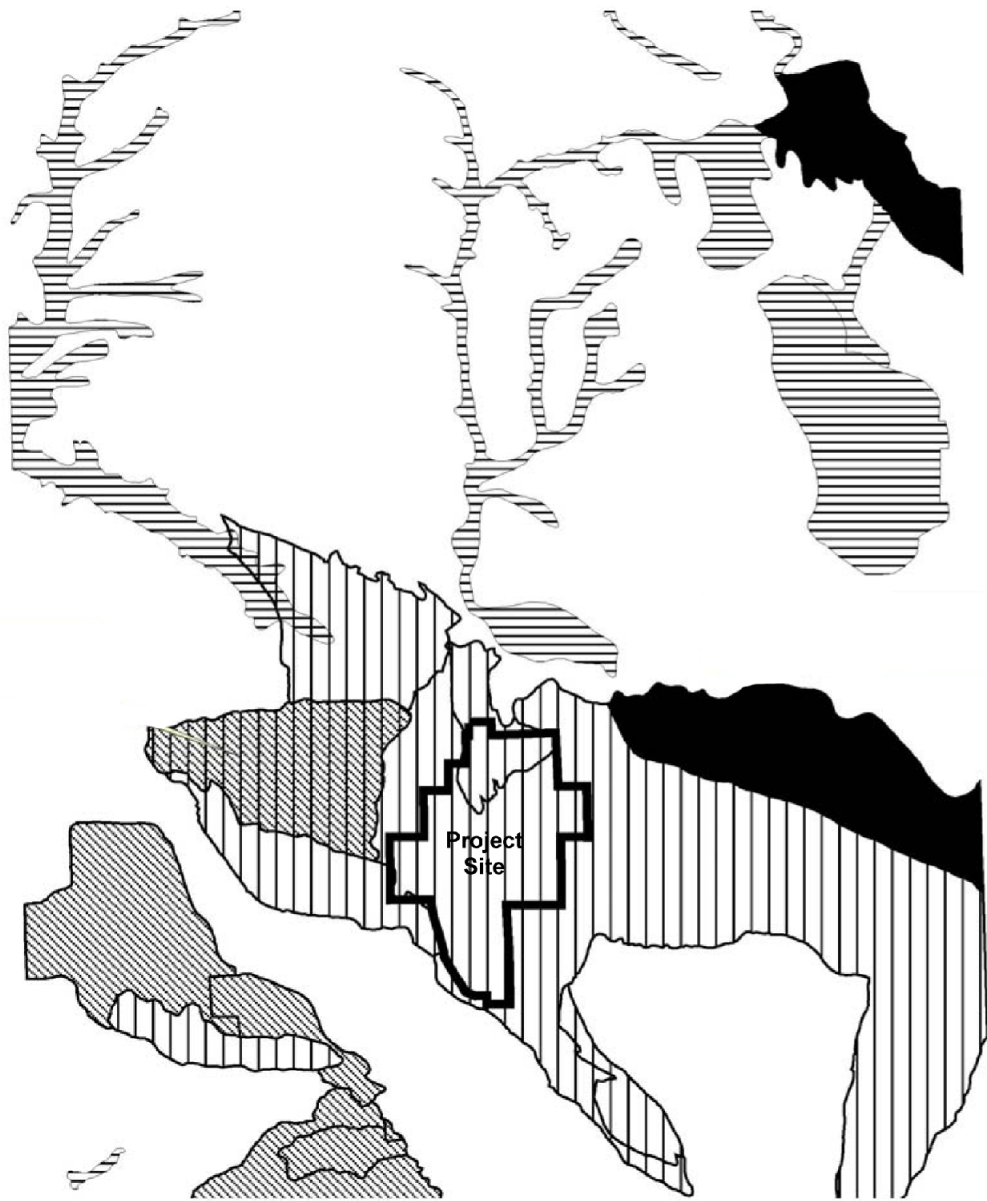
0 1.5
Approximate Scale in Miles

-  search area
-  active red-tailed hawk nest
-  inactive nest
-  search paths
-  permanent meteorological tower
-  turbine (middle scenario)
-  approximate project boundary

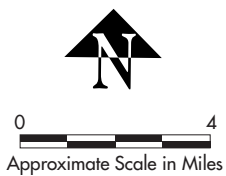
APPROXIMATE RAPTOR NEST LOCATIONS

KITTITAS VALLEY WIND POWER PROJECT EIS





Source: Sagebrush Power Partners LLC 2003c



KITTITAS VALLEY
WIND POWER PROJECT EIS

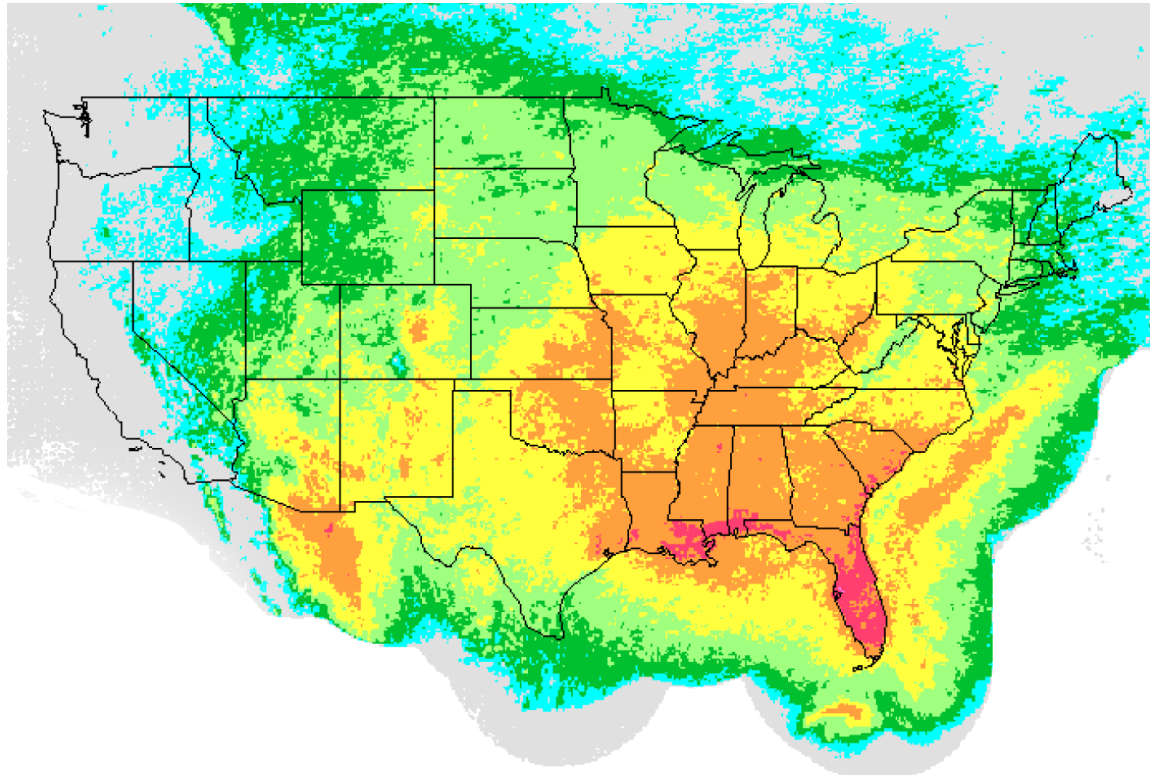
-  project boundary
-  mule deer winter range
-  elk calving areas
-  elk migration corridors
-  elk winter range

FIGURE 3.2-5

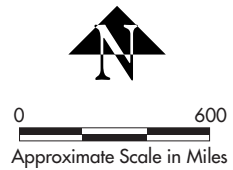
**MULE DEER AND ELK
WINTER RANGES**



SHAPIRO
& ASSOCIATES, INC.



Source: Sagebrush Power Partners LLC 2003c



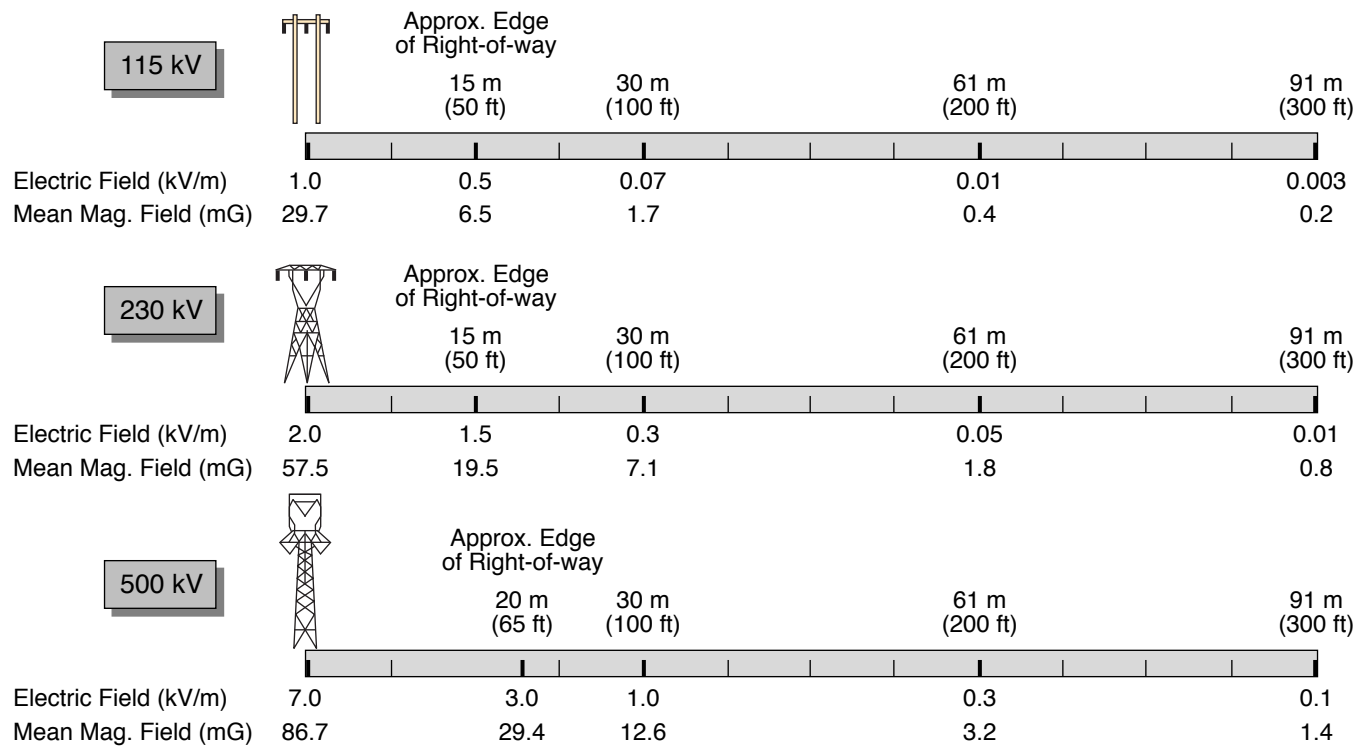
Flash Density
flashes per square km per year

16+
9 - 16
4 - 9
2 - 4
1 - 2
0.5 - 1
0.25 - 0.5
0 - 0.25

FIGURE 3.4-1

**1996-2000
LIGHTNING FLASH DENSITY**

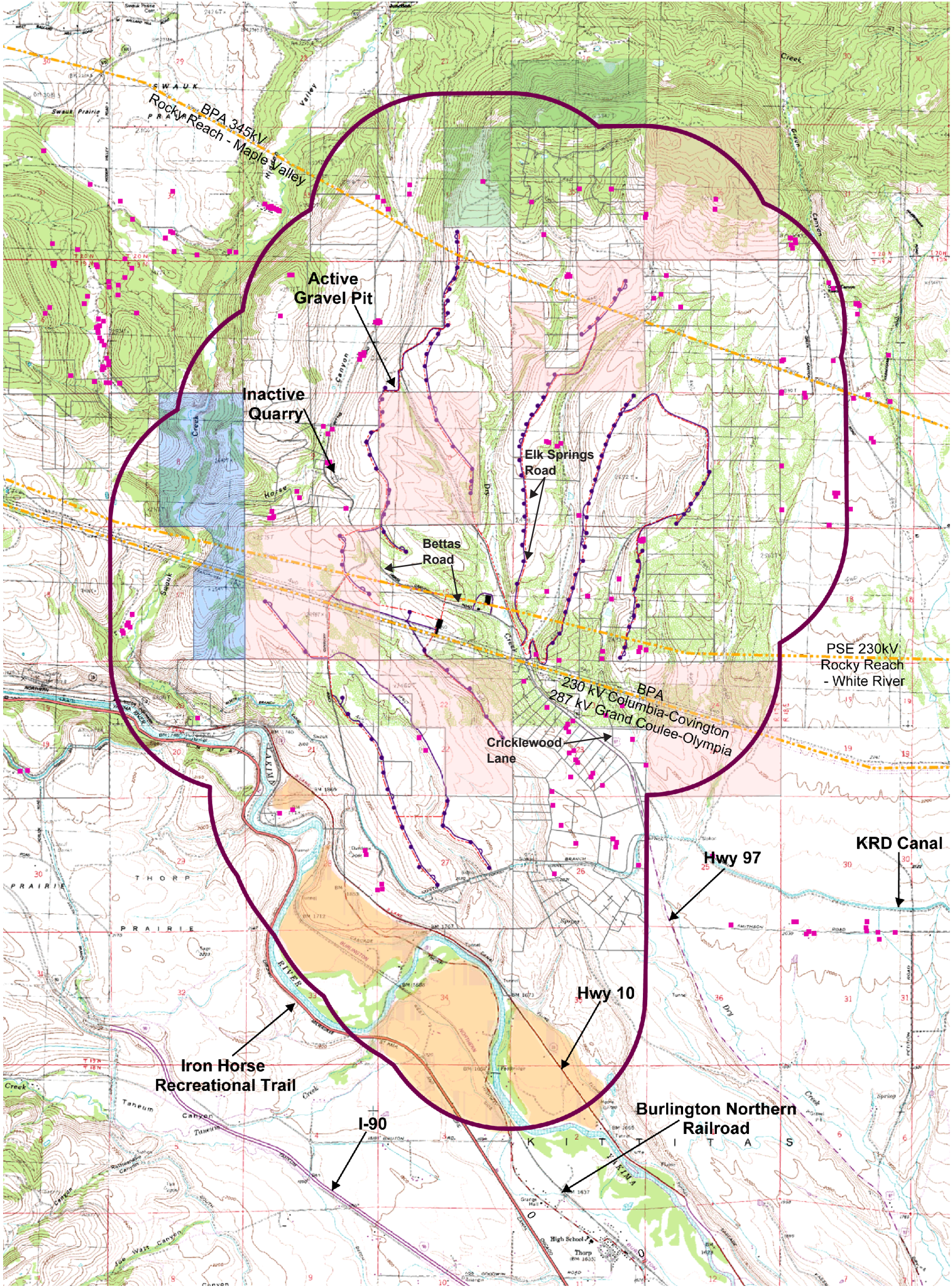
KITTITAS VALLEY WIND POWER PROJECT EIS



Source: Bonneville 1995

FIGURE 3.4-2

TYPICAL ELECTROMAGNETIC LEVELS FOR TRANSMISSION LINES

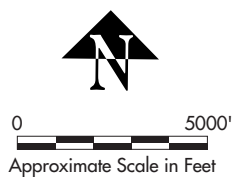
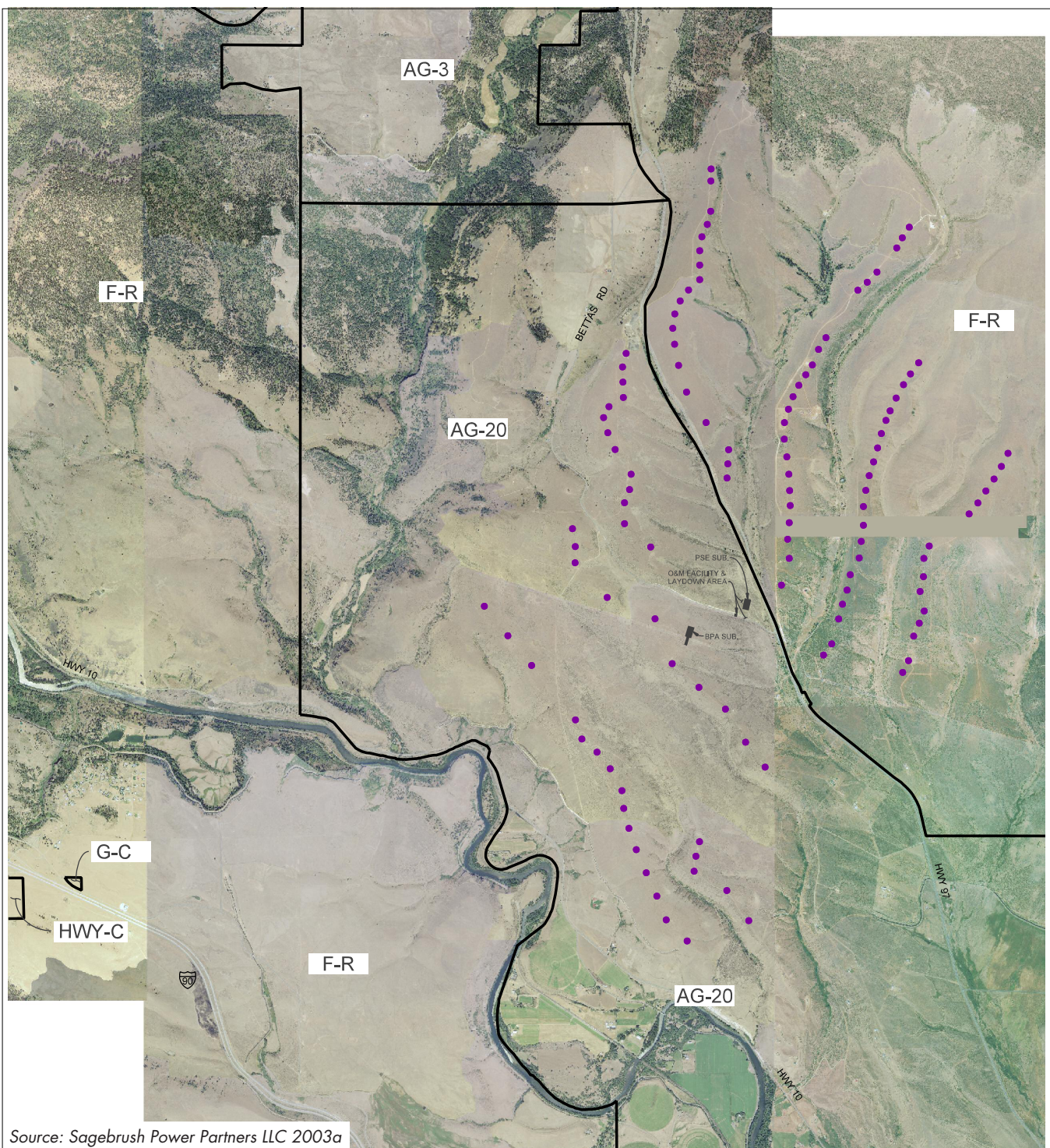


Source: CH2M Hill 2003

FIGURE 3.6-1

EXISTING LAND USE

- 1-mile buffer from project site
- existing structures
- nature conservancy easement
- irrigated agriculture
- Washington DNR lands
- commercial timber lands
- high voltage transmission lines
- proposed turbine locations (middle scenario)
- proposed electric cables
- roads
- proposed substation location
- Ironhorse Recreational Trail



- zoning boundary
- proposed wind turbine generator location (middle scenario)
- AG-20 agricultural - 20 acre
- AG-3 agricultural - 3 acre
- C-F commercial forest
- F-R forest and range
- G-C general commercial
- HWY-C highway - commercial

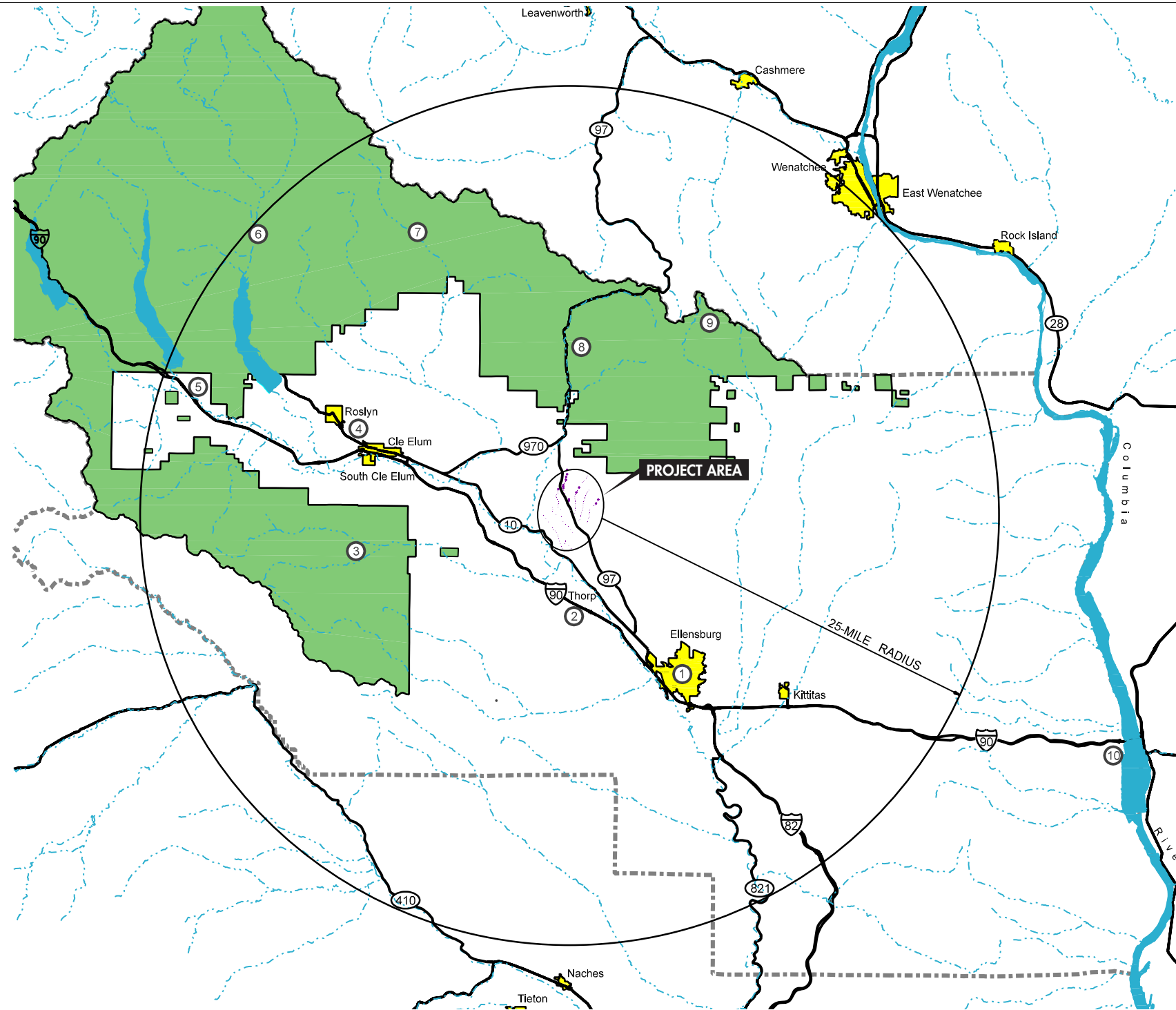
FIGURE 3.6-2

EXISTING ZONING

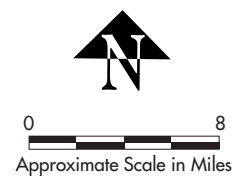
KITTITAS VALLEY
WIND POWER PROJECT EIS



SHAPIRO
& ASSOCIATES, INC.



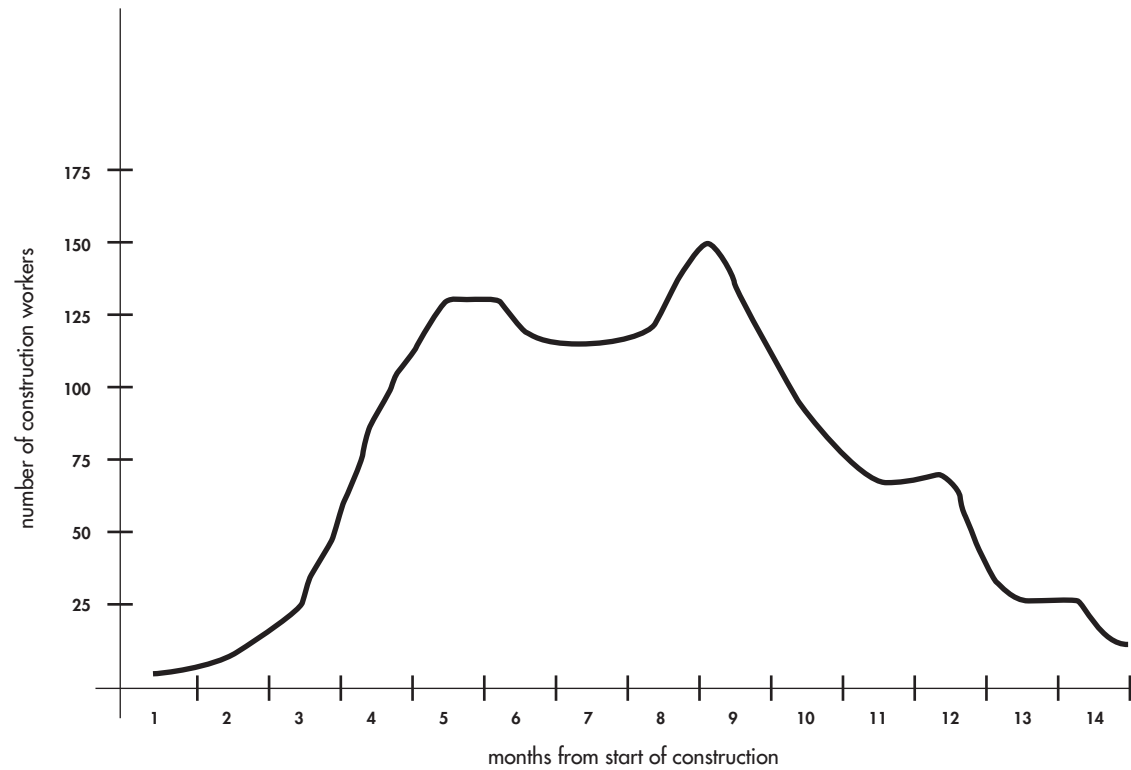
Source: Sagebrush Power Partners LLC 2003a



- recreational areas**
- | | |
|--------------------|-------------------------|
| 1 Ellensburg | 6 Upper Cle Elum Valley |
| 2 Thorp | 7 Teanaway |
| 3 Taneum Manastash | 8 Swauk-Table Mountain |
| 4 Cle Elum/Roslyn | 9 Squilchuck |
| 5 Easton | 10 Wanapum/Ginkgo Park |
- U.S. Forest Service land
 urbanized areas
 Kittitas County boundary

FIGURE 3.6-3

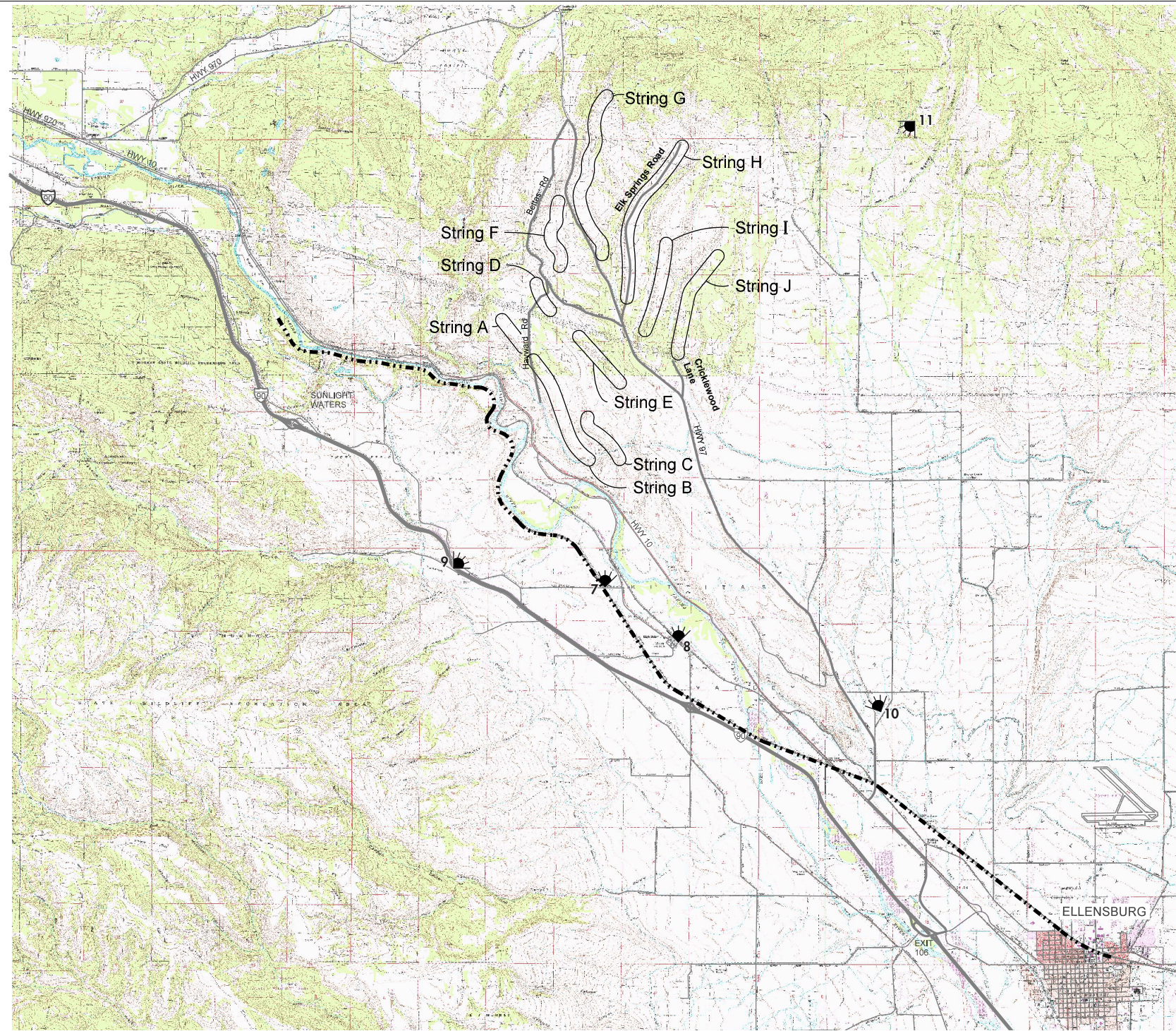
RECREATIONAL AREAS



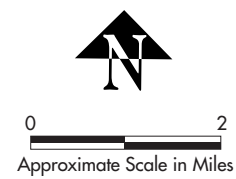
Source: Sagebrush Power Partners LLC 2003a

FIGURE 3.7-1

CONSTRUCTION EMPLOYMENT SCHEDULE



Source: Sagebrush Power Partners LLC 2003a



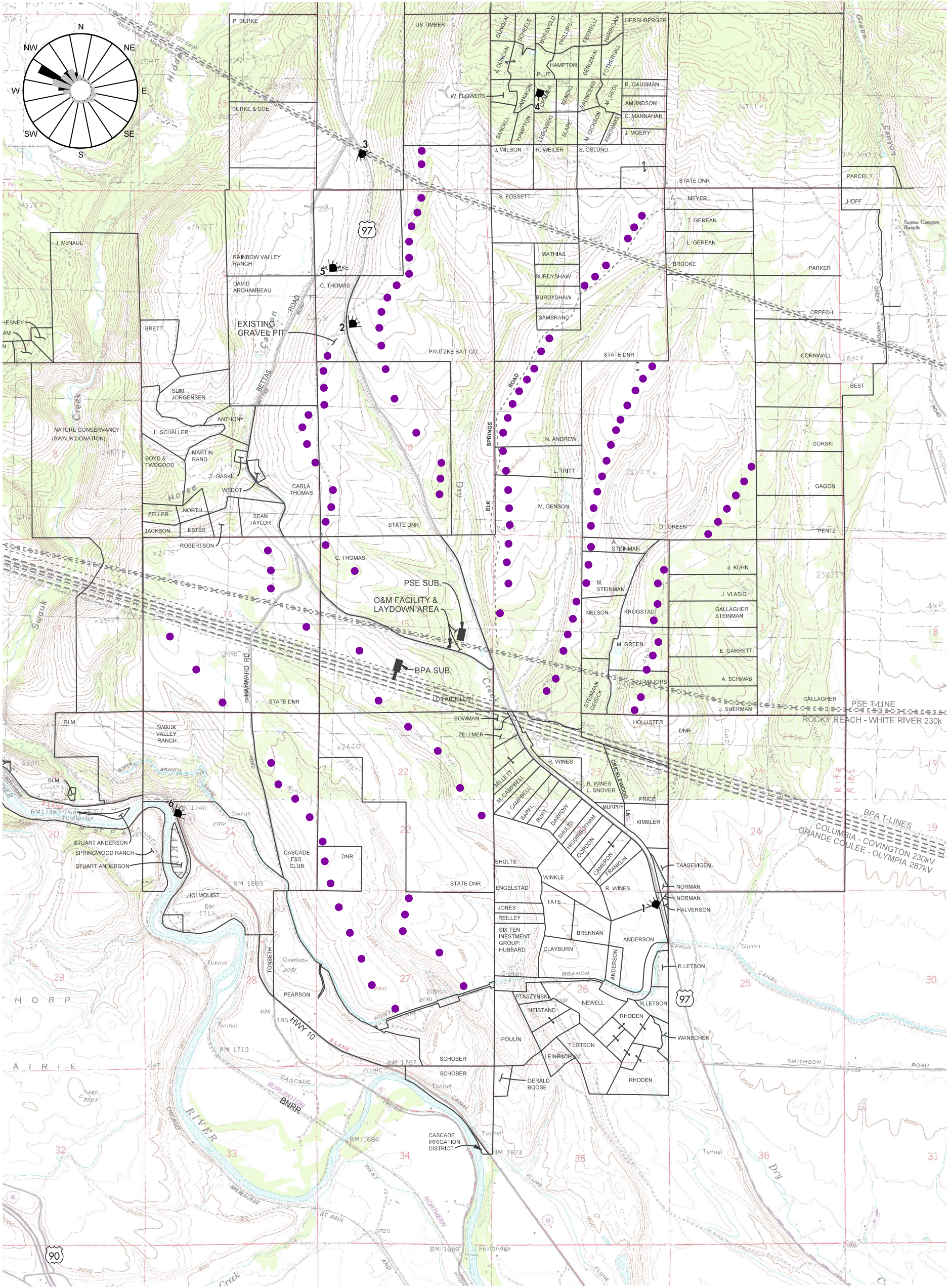
- major roadways in the project area
- proposed wind turbine generator string location
- viewpoint
- John Wayne Trail

KITTITAS VALLEY WIND POWER
PROJECT DRAFT EIS

1017002.2T

FIGURE 3.9-1

**PHOTOGRAPH LOCATIONS
OUTSIDE PROJECT AREA**



Source: Sagebrush Power Partners LLC 2003a



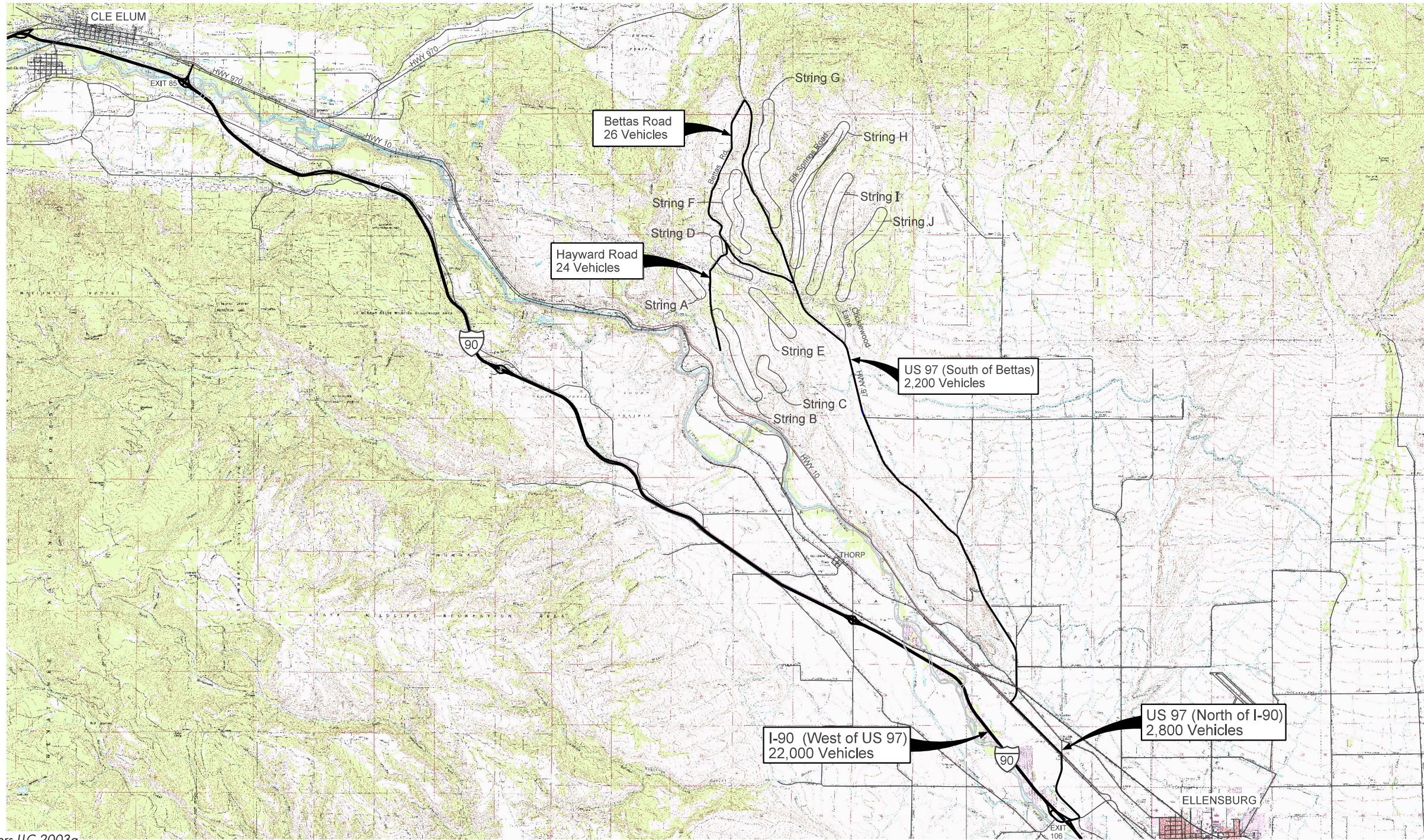
0 3000'
Approximate Scale in Feet

- proposed wind turbine generator location (middle scenario)
- 1 [viewpoint icon] viewpoint

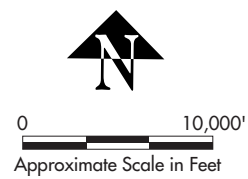
FIGURE 3.9-2

PHOTOGRAPH LOCATIONS
WITHIN PROJECT AREA





Source: Sagebrush Power Partners LLC 2003a



- transportation route
- existing roads
- proposed wind turbine generator string location

FIGURE 3.10-1

EXISTING AVERAGE DAILY TRAFFIC VOLUMES FOR 2001

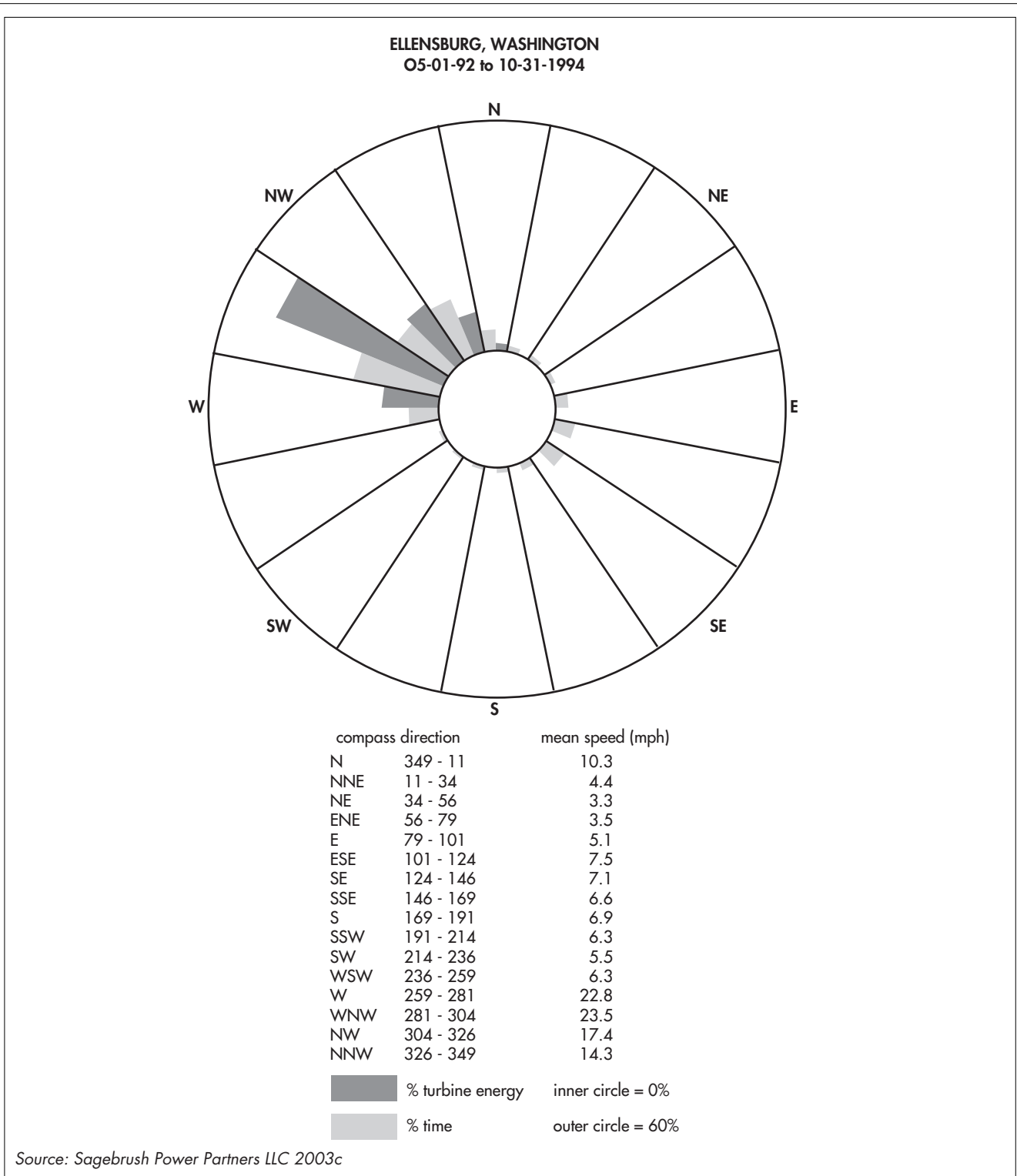


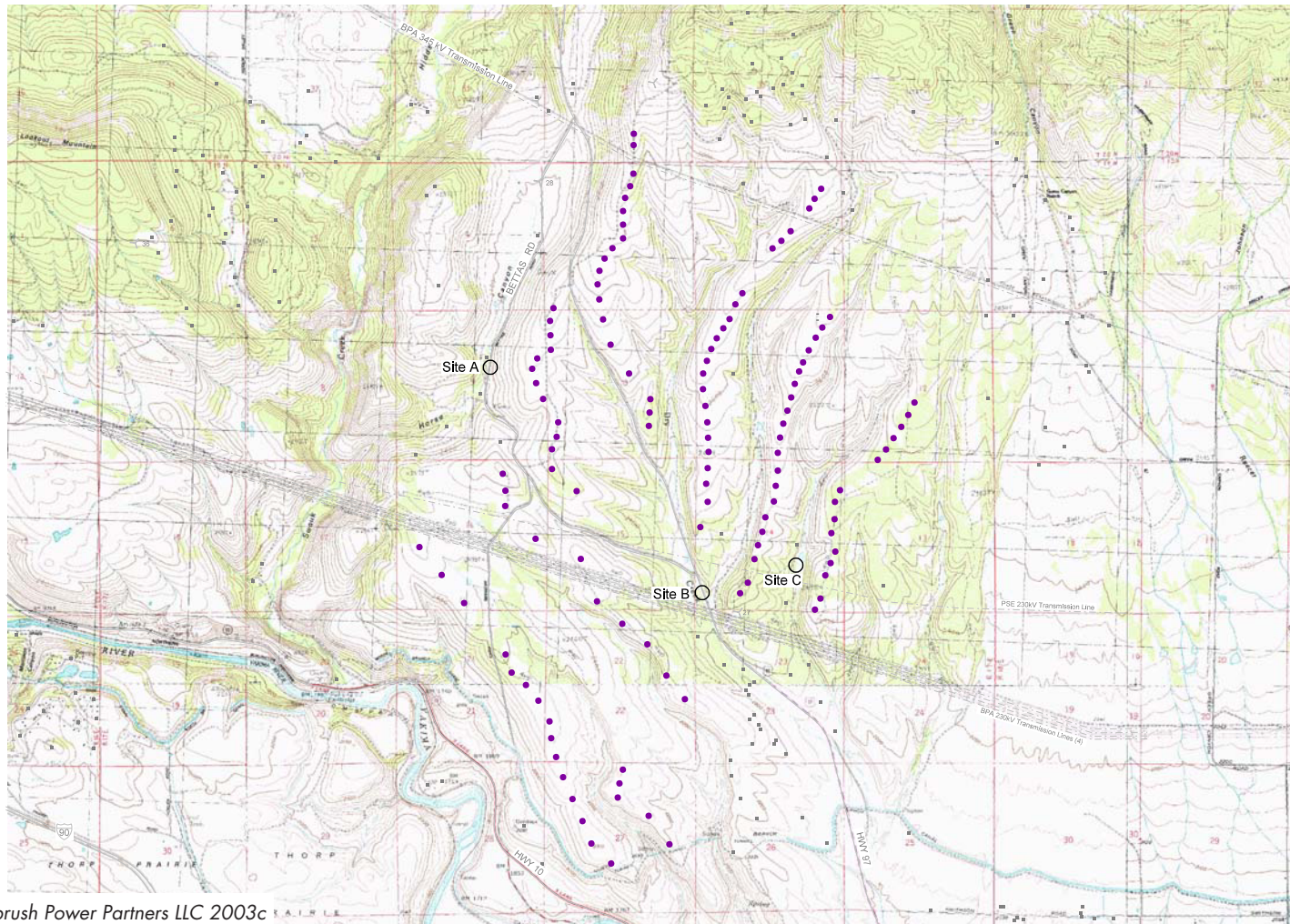
FIGURE 3.11-1

KITTITAS VALLEY AREA WIND ROSE

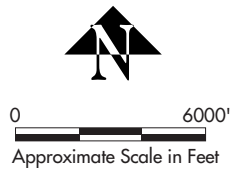
KITTITAS VALLEY
WIND POWER PROJECT EIS



SHAPIRO
& ASSOCIATES, INC.



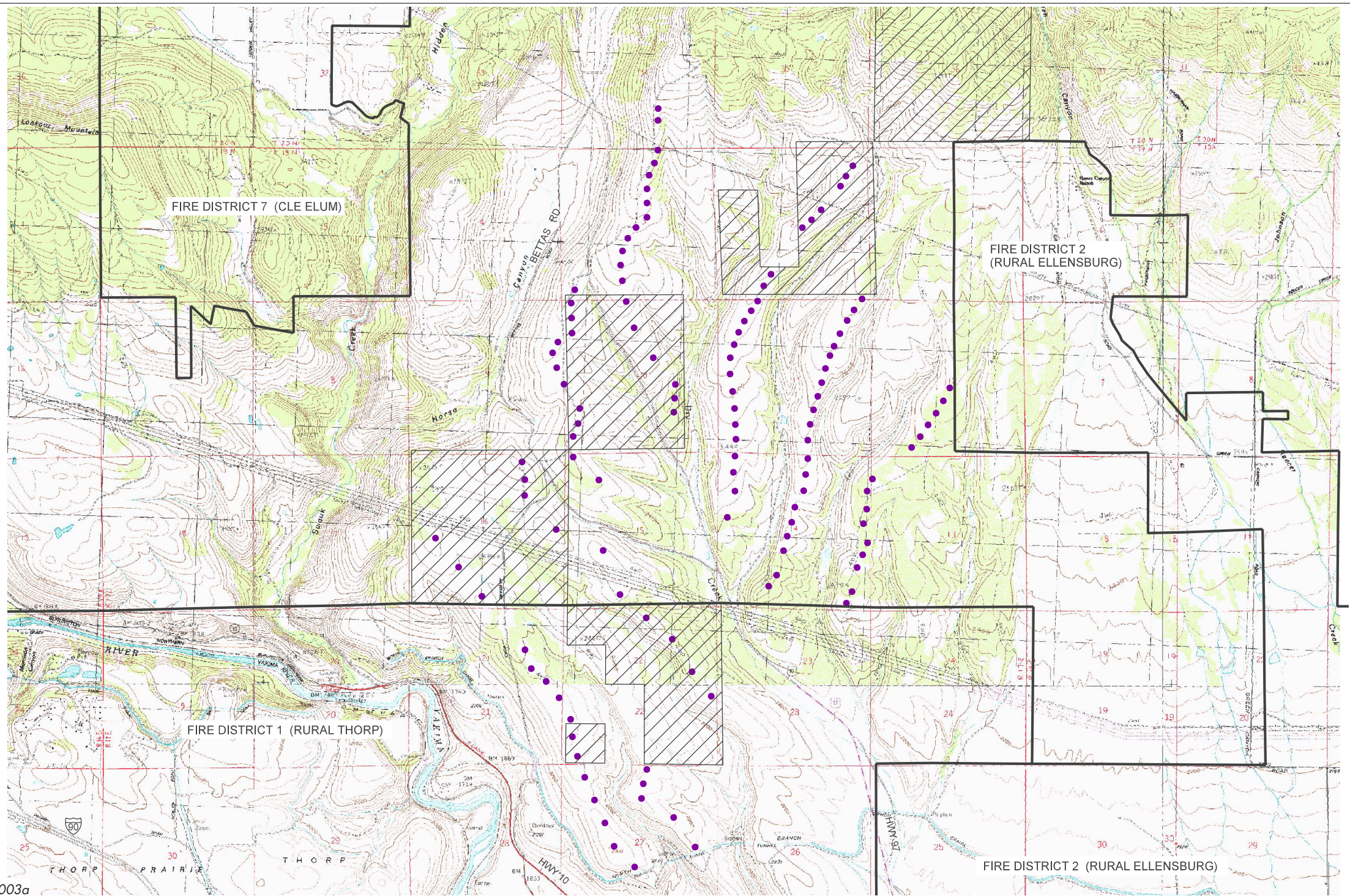
Source: Sagebrush Power Partners LLC 2003c



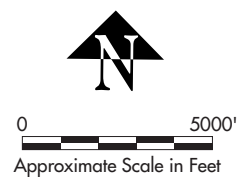
- Site A ○ noise monitoring location
- proposed wind turbine generator location (middle scenario)

FIGURE 3.12-1

NOISE MONITORING LOCATIONS



Source: Sagebrush Power Partners LLC 2003a



- district boundary
- proposed wind turbine generator location (middle scenario)
- ▨ DNR property

FIGURE 3.13-1

FIRE DISTRICTS

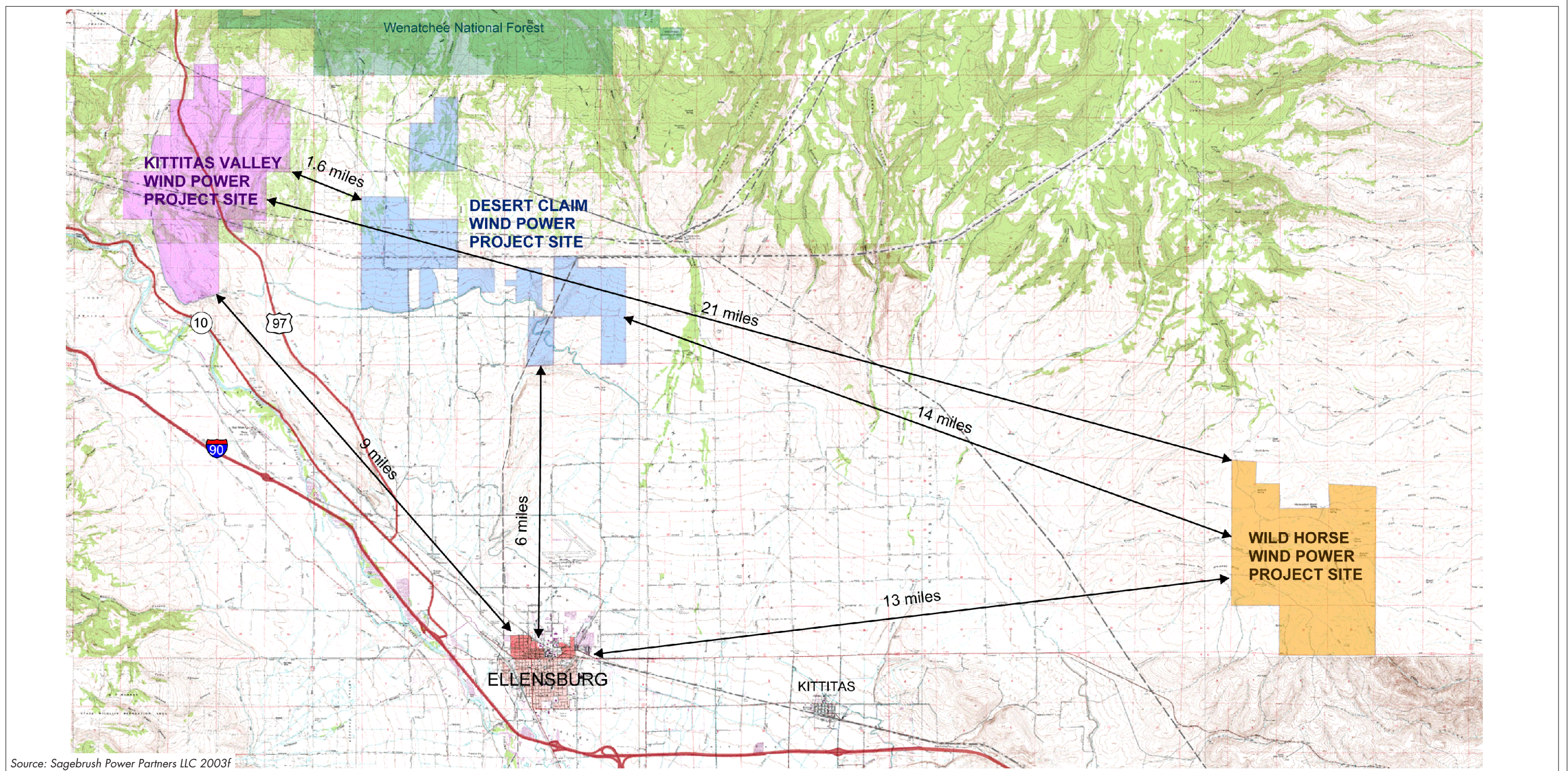
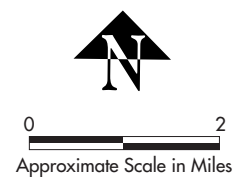
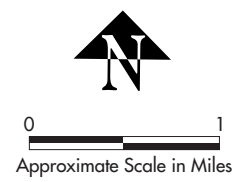
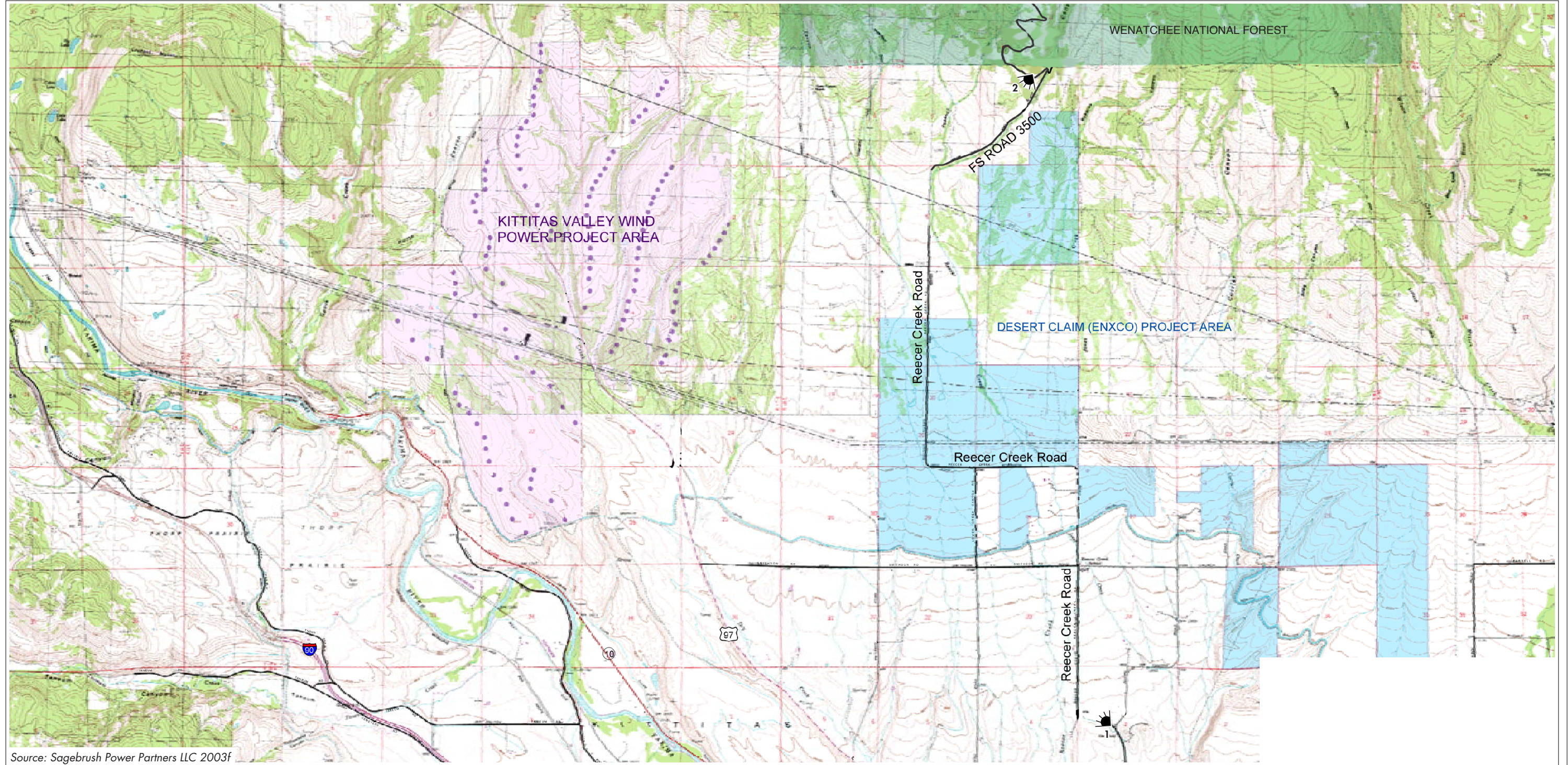


FIGURE 3.14-1

**CUMULATIVE STUDY AREA FOR KITTITAS VALLEY,
DESERT CLAIM, AND WILD HORSE WIND POWER PROJECTS**





1 viewpoint

FIGURE 3.14-2

**PHOTOGRAPH LOCATIONS
FOR CUMULATIVE ANALYSIS**