

11. Transmission Lines. The Introduction (Chapter 1) for these design data collection guidelines contains additional information concerning: preparing a design data collection request, design data collection requirements, and coordinating the design data collection and submittal.

A. General Map Showing:

- (1) A key map locating the general map within the State.
- (2) The proposed route, including terminal and intermediate substation locations.
- (3) The type of terrain, and natural or manmade features such as rivers, roads, highways, etc., which may have a significant effect on tower location, or may require long spans.
- (4) Range, township, and section lines.

Generally, a map made from, or prepared on, current USGS topographic maps (15-minute quad sheets) will be adequate.

B. Aerial Photographs. Aerial photographs are desirable of major river and highway crossings, in color if available.

C. Foundation Data.

A general description of foundation conditions along the route adequate to determine the type and approximate number of auger, pad-stem, rock, or pile footings.

D. Electrical Data:

- (1) Estimated average and peak loads.
- (2) Operating voltage of the line.
- (3) Value of energy for sizing purposes.
- (4) A description of terminal and intermediate substations.

E. Environmental Considerations. Comments should be included on ecological, aesthetic, or other environmental aspects that affect the selection of the route. Emphasis should be on areas of raptor protection, threatened/endangered species habitat, high scenic or historical value, heavy public use, bird migration corridors, or fragile ecological areas.

F. Site Security. Many Reclamation projects may require a security risk assessment. The need for a site-specific security risk assessment should be considered for feasibility designs where an assessment may impact the field cost

estimate and for specifications designs. Specific issues to consider are contained in Section 14 of Chapter 7 – Site Security and Public and Worker Safety. If assistance is required to determine specific design data needs, contact the Office of Security, Safety and Law Enforcement. Where design data and designs include site-specific security assessment, compliance with Reclamation Manual DM Part 444 – Physical Protection and Facility Security, Chapters 1 and 2 is required.