

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Utilities Service

BULLETIN 1724D-103

SUBJECT: System Planning Guide, System Mapping Guide

TO: RUS Electric Borrowers and RUS Electric Staff

EFFECTIVE DATE: Date of Approval

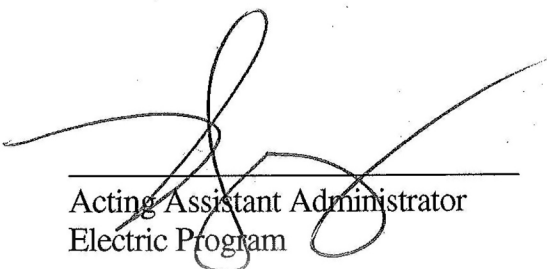
OFFICE OF PRIMARY INTEREST: Distribution Branch, Electric Staff Division

FILING INSTRUCTIONS: This Bulletin replaces Bulletin 1724D-103, "System Planning Guide, System Mapping Guide," dated July 19, 1993.

AVAILABILITY: This bulletin can be accessed on the Internet at:

<http://www.usda.gov/rus/electric/bulletins.htm>

PURPOSE: The purpose of this bulletin is to provide guidance to borrowers and engineers for the preparation of various maps and system diagrams required for facilities identification and location, planning and the operations of the electric distribution systems.



Acting Assistant Administrator
Electric Program



Date

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System Planning Guide

1 INTRODUCTION

A series of symbols, and their definitions, pertaining to electrical lines, equipment, facilities and appurtenances used on electric utility power systems, and geographic and political mapping symbols and their definitions has been developed. They are attached to this bulletin as "Mapping Symbols."

- a It is suggested that RUS electric borrowers adopt these symbols as a standard and use them on maps and system diagrams which are furnished, to RUS for various reasons.
- b It is anticipated that the adoption and use of these standard symbols will improve clarity and expedite reviews of maps and system diagrams furnished to RUS.

2 PURPOSE

The purpose of this bulletin is to provide guidance to borrowers and engineers for the preparation of various maps and system diagrams required for facilities identification and location, planning and the operations of the electric distribution systems.

POLE



MEMBER



IDLE SERVICE



LIGHT



FUSE

25



SWITCH add (no)



ABS

ADD

ABS OR GOAB

MOTOR OP.

ADD

MO

LOAD BREAK

ADD

LB

SUB/METERING POINT

SUB NUMBER

MP

14

NAME
MVA

VOLTAGE

GENERATOR

UNIT NUMBER

4

NAME
MW
TYPE

TRANSMISSION LINE

OWNER
VOLTAGE

SECONDARY JUNCTION PEDESTAL



SECONDARY JUNCTION PEDESTAL UG



VOLTAGE DROP BLOCK

UNREG	12.7
REGULATED	4.2
MILES FROM SOURCE	27.2

PRIMARY/AUTO TRANSFORMER



ALL WIRE ACSR UNLESS OTHERWISE LABELED

SINGLE PHASE



V PHASE



THREE PHASE



SECONDARY



PRIMARY UNDERGROUND

SINGLE PHASE



V PHASE



THREE PHASE



SECONDARY UNDERGROUND



JUNCTION BOXES

SWITCH BOX

PROPOSED
CIRCLE/BOX/CLOUD AROUND PROJECT

OPEN

CAPACITOR SHUNT

CAPACITOR SERIES

REGULATORS

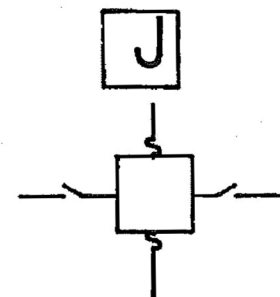
STATION BREAKER

RECLOSERS

SECTIONALIZER

TRANSFORMER

PAD MOUNTED TRANSFORMER



(3-477)

NO



OR



1 - 35



BOUNDARIES

STATE LINE & INTERNATIONAL BOUNDARY



COUNTY LINE



TOWNSHIP LINE



SECTION LINE



LATITUDE & LONGITUDE LINES



RESERVATIONS, NATIONAL & STATE FORESTS & PARKS



PROJECT BOUNDARY



TERRITORY BOUNDARIES



CITY LIMITS



CULTURAL FEATURES

INTERSTATE HIGHWAY



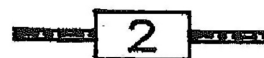
U.S. ROUTE



STATE ROAD



FARM TO MARKET ROAD



COUNTY ROAD



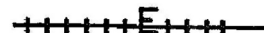
UNIMPROVED ROAD



RAILROAD



ELECTRIC RAILWAY



TELEPHONE



FIBER OPTIC TRUNK LINES



BRIDGE



CITIES AND TOWNS (within corporate limits)



TOWNS AND VILLAGES



STATE CAPITAL



COUNTY SEAT



HOUSES AND OTHER BUILDINGS



SCHOOL



CHURCH



HOSPITAL



FACTORY



CAMP



DOCK



CEMETERY



WINDMILL



OIL OR GAS WELLS



MINE OR QUARRY



PIPE LINE

P P P P P P

AIRPORT



LOCATED OR LANDMARK OBJECT



TRIANGULATION STATION
USGS BENCH MARK

ADD B.M.



