

## EXCHANGE WIRE RECORD LEAD AND POLE NUMBERING

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### 1. GENERAL

1.01 The purpose of this section is to outline the use of lead and pole numbers in the preparation and maintenance of the exchange wire record. (See Bell System Practices, Section 680-220-010, Paragraph 6.01 (a).) The numbering of poles and pole leads serves three basic purposes:

- (a) To aid the field forces in locating and identifying a particular pole at or near which work is to be performed.
- (b) To aid in the keeping of plant records, i.e., pole records, assignment records, line card records, maps, etc.
- (c) To serve as the basis for identifying the location of exchange wire for reconciliation purposes.

1.02 A good numbering plan must have simplicity, yet be complete enough to fulfill the requirements outlined in Paragraph 1.01. In rural areas it is desirable to have an association between the main pole lead and the spur pole lead identification. This will enable the field forces to more readily find specific locations.

1.03 In determining the adequacy of a lead and pole numbering plan, the plant engineer will consider the type of area to be served. There are three types of areas, as follows:

- (a) The portion of an exchange or central office area that is currently using street names and house or building numbers.
- (b) The portion of an exchange or central office area that has adequate street and road names, but does not have an effective house numbering scheme.
- (c) The portion of an exchange or central office area that has neither street and road names, nor house numbering.

1.04 The figures associated with this practice, illustrate a lead and pole numbering plan for each type of area.

1.05 All poles on which the Telephone Company has cable and wire attachments should be assigned number, or otherwise identified for record purposes.

1.06 The lead and pole numbering plan as described in the engineering series of the Bell System Practices, applies to all exchange and toll poles and pole leads. However, this section has particular reference to poles carrying exchange wire plant.

1.07 The marking of poles is covered in the Bell System Practices "G" Series.

### 2. EXCHANGE POLES - URBAN AREAS

2.01 The term "Urban Area" as used in this section, applies to that portion of a city or community that has named or numbered streets and a property numbering plan for buildings and houses. Generally, these are the areas where the U. S. Post Office is providing house-to-house mail delivery service. Detail maps indicating street names and property addresses are usually available from municipal authorities or other sources.

2.02 Street names when available, furnish the best geographical indication for pole lead identification. Each pole within the lead is designated in terms of the property address corresponding to the pole location. A pole located near a vacant lot will be assigned the property address number of that lot. Under this plan the pole numbers need not be marked on the poles, except if advantageous to local operation. A method which has proven satisfactory is illustrated in Fig. 1.

2.03 For record purposes it is desirable to assign a serial number designation to each main wire lead and spur wire lead. This will be used as a cross-reference between the terminal assignment record, exchange subscriber cable record and the exchange wire record.

### 3. EXCHANGE POLES - RURAL AREAS

3.01 The term "Rural Area" as used in this section applies to that portion of a city or community that does not have a suitable street

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name or property address plan in effect. (See Paragraph 2.01.)

3.02 In rural areas, roads are often unnamed and houses are seldom numbered, which makes it difficult to locate a particular pole without a lead and pole numbering plan. The plans illustrated in the associated figures use a combination of letters and numbers for pole lead identification. This identification serves the same function as the street name in an urban area.

3.03 The letters "I" and "O" are omitted because of their similarity to numerals.

3.04 Poles will be numbered consecutively in each pole lead (main, spur, or subspur). Pole number "1" will be the first pole in a main lead or the first pole beyond the junction pole in a spur or subspur pole lead.

3.05 Fig. 2 is a comprehensive plan with a capacity of nearly 600 main pole leads. The spur pole lead number is identical with the junction lead and pole number from which it serves, e.g., if the main lead identification is "KA" and the junction pole number is "27," the spur pole lead identification would be "KA27." In this plan the identification of newly constructed spur pole leads will always appear in their respective position. The further expansion of this plan to include successive junction pole numbers for identifying subspur pole leads is illustrated in the figure.

3.06 Fig. 3 illustrates a method of designating pole leads in exchanges or central office areas where the total number of main pole leads will not exceed 24. This plan is suggested where the number of spur pole leads averages six or less per main pole lead. The larger the number of spur leads, the greater the difficulty experienced by the field forces in locating a certain pole, e.g., when a new spur pole lead is constructed, it will be assigned the next available number in numerical sequence, but will not necessarily be in geographical order.

3.07 Only one series of lead letter designations should be used in a single office exchange. However, in multi-office exchanges the same series of lead designations may be used in each central office area.

### 4. USE OF TOLL POLES FOR EXCHANGE PURPOSES

4.01 Present practice commonly uses the name of the toll pole line for record purposes, e.g., Brownston-Jonesboro toll line. However, a designation

consisting of numbers, letters, or a combination of numbers and letters is sometimes used. It is desirable that the designation for a particular toll pole line apply for its entire length. Also the pole numbering usually starts with "1" and runs consecutively for the entire length of the lead.

4.02 When a toll lead provides exchange service, the toll pole numbering will be used.

4.03 If the toll lead is identified by letters or numbers or a combination of letters and numbers the toll pole lead identification will be used for all exchange purposes.

4.04 If the toll lead is identified by name (Brownston-Jonesboro toll lead) an exchange lead identification will be used. (See Fig. 2, Note 3.)

### 5. TABULATION OF POLE LEAD NUMBERS

5.01 Tabulations of pole lead designations form a part of the Outside Plant Engineering Records, and are available to the field forces as an aid to the objectives outlined in Paragraph 1.01.

### 6. POLE LINE REARRANGEMENTS

6.01 Pole line rearrangements often result in an increase or decrease in the number of poles in the lead. When this occurs it is desirable to renumber the poles involved in the rearrangement and the remaining poles in the lead, consistent with the numbering plan in effect.

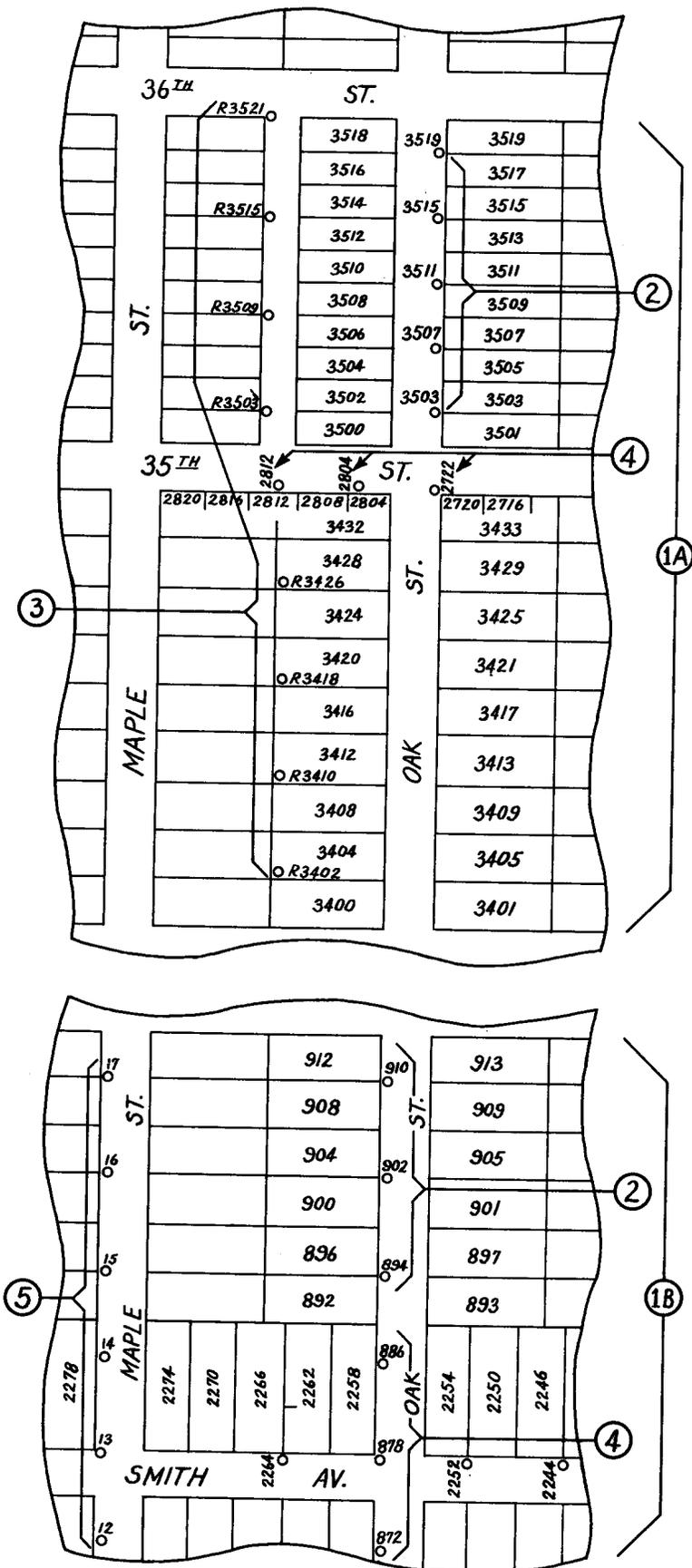
6.02 In case of a minor rearrangement on a long lead, it may not be economical to renumber the complete lead. Therefore, the plant engineer may choose one of the following methods, in lieu of the method outlined in Paragraph 6.01.

(a) In pole lines where the poles are numbered consecutively and the new route requires fewer poles than the old route, the new poles may be numbered consecutively from the lowest numbered pole in the old route. This will leave a gap in numbers between the last pole of the new route and the next pole of the unchanged section beyond.

(b) In pole lines where the poles are numbered consecutively and the new route requires more poles than the old, the poles in the new route may be numbered consecutively, except that sufficient 1/2 numbers may be used beginning with the first pole of the new route to take care of the increase in the number of poles.

Attached:

Figs. 1, 2, 3, and 4.



**NOTE NO.**

**EXPLANATION**

- ① THERE ARE TWO DIFFERENT PROPERTY ADDRESS NUMBERING PLANS IN GENERAL USE, AS FOLLOWS:
  - (1) WHERE 100 NUMBERS ARE ASSIGNED TO EACH BLOCK.
  - (2) WHERE THE NUMBERS START AND RUN CONTINUOUSLY, REGARDLESS OF CROSS STREETS.
- ② POLES ARE GENERALLY PLACED ON THE PROPERTY LINE, THEREFORE THE POLE NUMBER SHOULD CORRESPOND TO ITS LOCATION, AS NEARLY AS POSSIBLE, E.G., THE POLE IDENTIFIED AS 902 OAK STREET IS LOCATED ON THE PROPERTY LINE BETWEEN 900 AND 904. ANOTHER EXAMPLE IS THE POLE LOCATED ON THE PROPERTY LINE BETWEEN 3509 AND 3511 OAK STREET. IN THIS CASE THE HIGHER NUMBER WAS SELECTED.
- ③ POLES LOCATED IN ALLEYS AND ON REAR PROPERTY LINES SHALL BE IDENTIFIED BY PREFIXING THE POLE NUMBER WITH THE LETTER "R" (REAR), E.G., THE POLE MARKED R3509 MAPLE STREET.
- ④ CORNER PROPERTY MAY BE ADDRESSED ON EITHER STREET. ALTHOUGH THE PROPERTY ABUTTING 35TH STREET IS ADDRESSED ON OAK STREET, THE THEORETICAL 35TH STREET ADDRESSES ARE USED.
- ⑤ AREAS WHERE THE STREETS ARE ADEQUATELY NAMED, BUT BUILDING NUMBERS ARE NOT IN EFFECT, THE POLES MAY BE NUMBERED SERIALLY STARTING WITH ONE. THESE NUMBERS TO BE MARKED ON EACH POLE.

FIG. 1 - A TYPICAL ILLUSTRATION OF A PLAT MAP, WITH NOTES DESCRIBING THE USE OF STREET NAMES AND PROPERTY ADDRESSES FOR LEAD AND POLE NUMBERING.

**IDENTIFYING MAIN POLE LEADS**

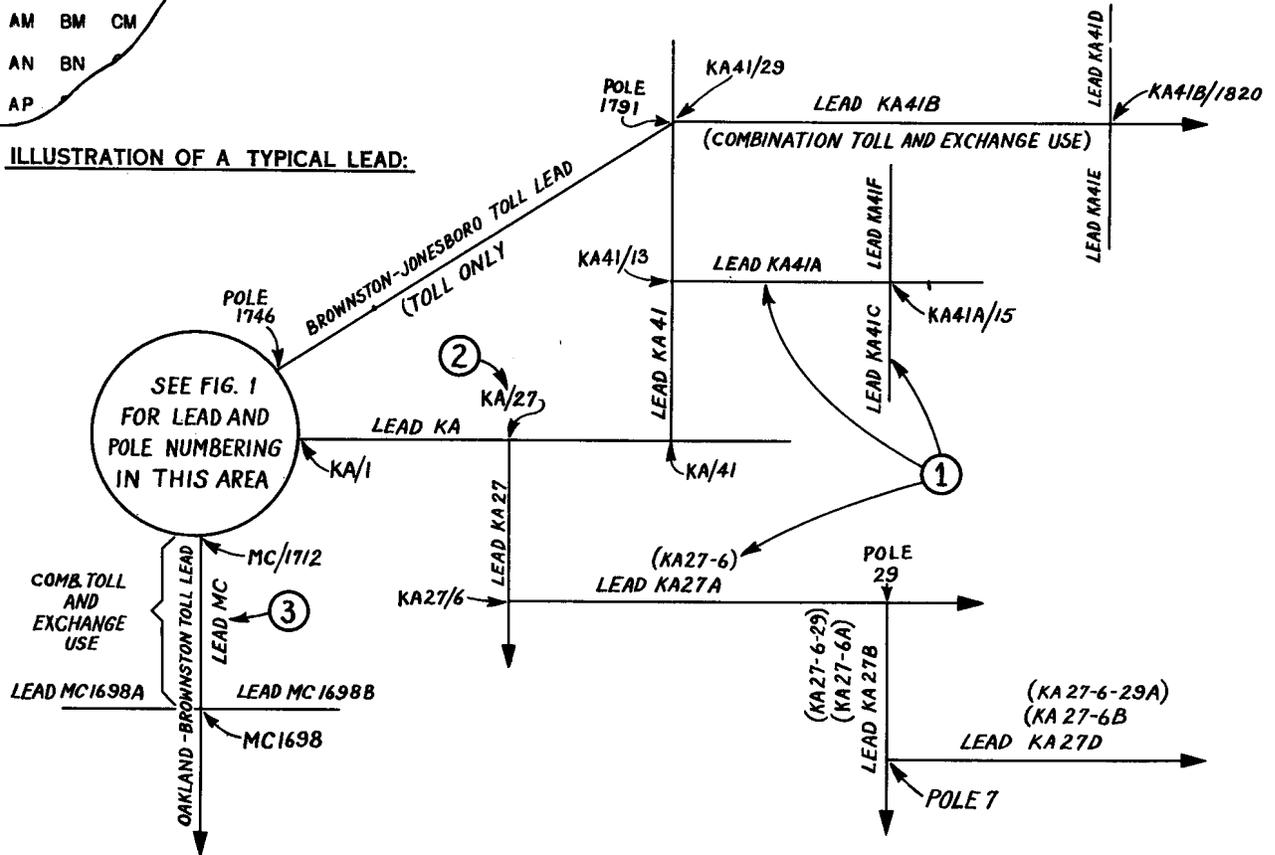
AA	BA	CA	DA	EA	FA	GA	HA	JA	KA	LA	MA	NA	PA
AB	BB	CB	DB	EB	FB	GB	HB	JB	KB	LB	MB	NB	
AC	BC	CC	DC	EC	FC	GC	HC	JC	KC	LC	MC		
AD	BD	CD	DD	ED	FD	GD	HD	JD	KD	LD			
AE	BE	CE	DE	EE	FE	GE	HE	JE	KE				
AF	BF	CF	DF	EF	FF	GF	HF	JF					
AG	BG	CG	DG	EG	FG	GG	HG						
AH	BH	CH	DH	EH	FH	GH							
AJ	BJ	CJ	DJ	EJ	FJ								
AK	BK	CK	DK	EK									
AL	BL	CL	DL										
AM	BM	CM											
AN	BN												
AP													

**IDENTIFYING SPUR AND SUB-SPUR POLE LEADS**

MAIN LEAD	SPUR LEAD	SUB-SPUR LEADS		
KA	KA27 KA41	KA27A KA41A	KA27B KA41B	KA27C KA41C

THIS METHOD COMBINES THE MAIN LEAD LETTERS WITH THE JUNCTION POLE NUMBER FOR IDENTIFYING SPUR LEADS. SUFFIX LETTERS IDENTIFY SUB-SPUR LEADS.

**ILLUSTRATION OF A TYPICAL LEAD:**



**NOTE NO. 1**  
**EXPLANATION**  
 SUB-SPUR POLE LEADS CONSTRUCTED AFTER THE NUMBERING PLAN IS ESTABLISHED WILL NOT BE IDENTIFIED IN ALPHABETICAL ORDER. IF MORE THAN 6 SUB-SPURS ARE IDENTIFIED BY SUFFIX LETTERS, CONSIDER USING ADDITIONAL JUNCTION POLE NUMBERS, E.G. LEAD KA27A WOULD BE CHANGED TO LEAD KA27-6, ETC. THE FOLLOWING TABLE FURTHER ILLUSTRATES THIS PRINCIPLE.

**NOTE NO. 2**  
**EXPLANATION**  
 POLE LEAD JUNCTION POINTS ARE DESIGNATED BY THE POLE LINE DESIGNATION AND POLE NUMBERS; E.G., KA/27 IS A JUNCTION POLE ON LEAD KA AT POLE 27.

**NOTE NO. 3**  
**EXPLANATION**  
 IN GENERAL, TOLL LEADS ARE IDENTIFIED BY NAME, E.G. OAKLAND-BROWNSTON TOLL LEAD. A NAMED TOLL LEAD CARRYING EXCHANGE PLANT WILL BE ASSIGNED AN EXCHANGE LEAD IDENTIFICATION. HOWEVER, THE TOLL POLE NUMBERS WILL BE USED, REGARDLESS OF THE DIRECTION OF NUMBERING.

MAIN LEAD	SPUR LEAD	SUB-SPUR LEAD		
KA	KA27	KA27A (KA27-6)	KA27B (KA27-6A) (KA27-6-29)	KA27C (KA27-6B) (KA27-6-29A)

FIG. 2 - ILLUSTRATES A METHOD OF LEAD AND POLE NUMBERING FOR AREAS WHERE STREET NAMES AND PROPERTY ADDRESSES ARE NOT IN EFFECT.

**IDENTIFYING MAIN POLE LEADS**

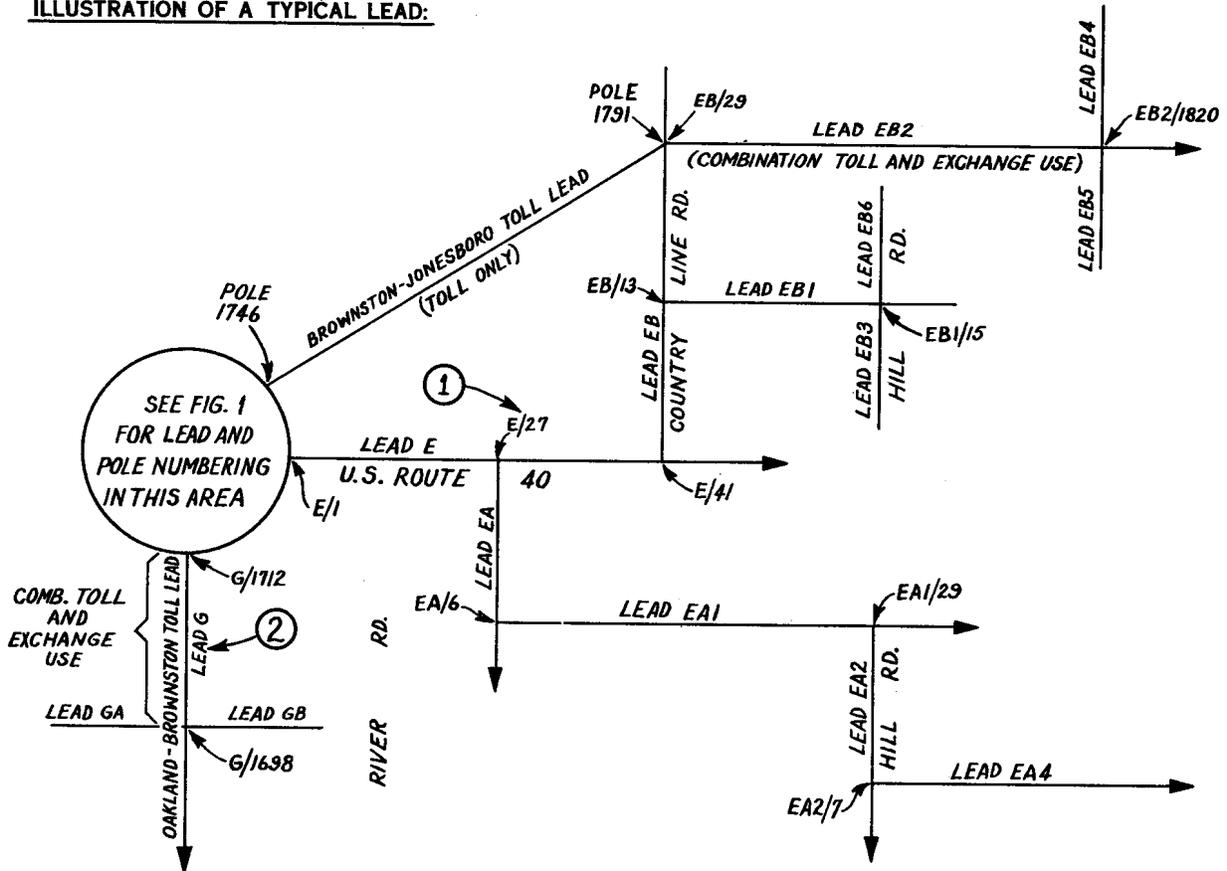
A B C D E F G H J K L M N P

**IDENTIFYING SPUR AND SUB-SPUR POLE LEADS**

MAIN LEAD	SPUR LEAD	SUB-SPUR LEAD			
E	EA	EA1	EA2	EA3	EA4

THIS METHOD COMBINES THE MAIN LEAD LETTER WITH AN ADDITIONAL LETTER FOR IDENTIFYING SPUR LEADS. SUFFIX NUMBERS IDENTIFY SUB-SPUR LEADS.

**ILLUSTRATION OF A TYPICAL LEAD:**



**NOTE NO. 1**  
**EXPLANATION**  
 ① POLE LEAD JUNCTION POINTS ARE DESIGNATED BY THE POLE LINE DESIGNATION AND POLE NUMBER; E.G., E/27 IS A JUNCTION POLE ON LEAD E AT POLE 27.

**NOTE NO. 2**  
**EXPLANATION**  
 ② IN GENERAL, TOLL LEADS ARE IDENTIFIED BY NAME, E.G., OAKLAND-BROWNSTON TOLL LEAD. A NAMED TOLL LEAD CARRYING EXCHANGE PLANT, WILL BE ASSIGNED AN EXCHANGE LEAD IDENTIFICATION. HOWEVER, THE TOLL POLE NUMBERS WILL BE USED, REGARDLESS OF THE DIRECTION OF NUMBERING.

FIG. 3 - ILLUSTRATES A METHOD OF LEAD AND POLE NUMBERING FOR AREAS HAVING LESS THAN 24 MAIN LEADS.

<u>LEAD DESIGNATION</u>	<u>INITIAL POLE OR JUNCTION POLE LEAD/POLE NO.</u>	<u>LOCATION OF INITIAL POLE OR JUNCTION POLE</u>	<u>DIRECTION OF LINE</u>
E	E/1	U.S. ROUTE 40 AT HILTON ST.	EAST
EA	E/27	U.S. ROUTE 40, E. OF RIVER RD.	SOUTH
EA1	EA/6	S. OF U.S. 40, E. OF RIVER RD.	EAST
EA2	EA1/29	HILL RD., S. OF U.S. 40	SOUTH
EA3	EA/10	S. OF U.S. 40, E. OF RIVER RD.	WEST
EA4	EA2/7	HILL RD., S. OF U.S. 40	EAST
EB	E/41	U.S. 40 AT COUNTY LINE RD.	NORTH
EB1	EB/13	COUNTY LINE RD., N. OF U.S. 40	EAST
EB2	EB/29	BROWNSTON-JONESBORO TOLL POLE 1791	EAST
EB3	EB1/15	HILL RD., N. OF U.S. 40	SOUTH
EB4	EB2/1820	BROWNSTON-JONESBORO TOLL, E. OF HILL RD.	NORTH
EB5	EB2/1820	BROWNSTON-JONESBORO TOLL, E. OF HILL RD.	SOUTH
EB6	EB1/15	HILL RD., N. OF U.S. 40	NORTH

FIG. 4 - ILLUSTRATES A TYPICAL TABULATION OF LEAD DESIGNATIONS.