

STATION: BEATTYVILLE TERMINAL
CUSTOMER: SOUTH CENTRAL BELL
TOWER TYPE: 40 SELF SUPPORTER
DATE OF INSPECTION: 6-23-94
INSPECTOR: LANE JOHNSON
CREW: PHIL HOUGHENS

Minerich, Inc.

MAINTENANCE AND INSPECTION REPORT

1905 Barnes Mill Road
P.O. Box 98
Richmond, Kentucky 40475
Phone: (606) 623-0024



**MINERICH, INC.
MAINTENANCE/INSPECTION REPORT**

STATION: BEATTYVILLE TERMINAL
CUSTOMER: SOUTH CENTRAL BELL
TOWER TYPE: 40 SELF SUPPORTER
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CERTIFICATION

It is the supervisor's responsibility to ensure that all the procedures used (plumb/tensioning) comply with the requirements for this project and to ensure that safe and correct practices are maintained during maintenance and inspection work.

1). This certifies that all the information entered herein is correct to the best of my knowledge and that all items noted by [X] have been **corrected** or explained on page 11 notes for reasons for **not correcting**, and that the customer's representative has been informed of major problems that require authorization to correct.

CUSTOMER'S REPRESENTATIVE: _____

Lane Johnson SIGNED
MINERICH, INC. SUPERVISOR/INSPECTOR
PRINT NAME: LANE JOHNSON

2) Report reviewed and recorded. _____

Rob E. Minerich
MINERICH INC. PROJECT MANAGER
PRINT NAME: Rob E. Minerich

3) Date of last inspection. _____

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STATION: BEATTYVILLE TERM

SUMMARY

[1] TOWER STRUCTURE

1. G Sections
2. G Angles/Members
3. G Splices
4. G Bolts/Nuts/Filler plates
5. N/A Guy Pulloffs
6. N/A Torque Stabilizers
7. G Ladder
8. N/A Safety Climb Device
9. N/A Step Bolts
10. X Lightning Rod
11. G Foundations
12. G Galvanizing/Rust/Flaking
13. G Tower Grounding

[2] TOWER SUPPORT SYSTEM - N/A

1. _____ Tower Plumbness
2. _____ Guy Tensions
3. _____ Guy Attachments
4. _____ Guy Anchors
5. _____ Anchor Grounding
6. _____ Anchor Fence/Guard Posts

[3] PAINTING - N/A

1. _____ Number of Bands
2. _____ Condition of Paint
3. _____ Surface Coverage

[4] SITE

1. N/A Access Road
2. N/A Access Gate/s
3. G Shelter Fence
4. G Shelter
5. G General Site Conditions

[5] ELECTRICAL - N/A

1. _____ Relamped
2. _____ Operation
3. _____ Beacon
4. _____ Sidelights
5. _____ Conduit
6. _____ Junction Boxes
7. _____ Supports

[6] WAVEGUIDE

1. N/A Elliptical
2. G Rigid
3. N/A Co-Axial
4. G Spacing
5. G Supports
6. G Waveguide Bridge
7. G Building Entry
8. G Pressure
9. N/A Ice Protection
10. N/A Bullet Protection
11. G Grounding

[7] ANTENNAS

1. G Parabolic []
2. N/A Horns []
3. N/A Reflectors []
4. N/A Two Way []
5. X Mounts
6. G Stiffarms
7. N/A Antenna Ice Protection
8. N/A Feedhorn Ice Protection
9. G Grounding

Legend:

[G]--Good

[X]--See Notes

[N]--Not Applicable

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[1] TOWER STRUCTURE

GUYED

SELF SUPPORTING

OTHER

40'

1. Check sections for damage or distortion

G

2. Check angles and members for damage, distortion and missing steel

G

3. Check splices

G

4. Check bolts for tightness (Torque Wrench)

G

5. Check guy pulloffs

N/A

6. Check torque stabilizers

N/A

7. Check ladder/step bolts

G

8. Check safety climb

N/A

9. Check lightning rod

X

10. Check foundations (grout, settling, cracks)

G

11. Check galvanized surfaces

G

12. Check tower grounding system

G

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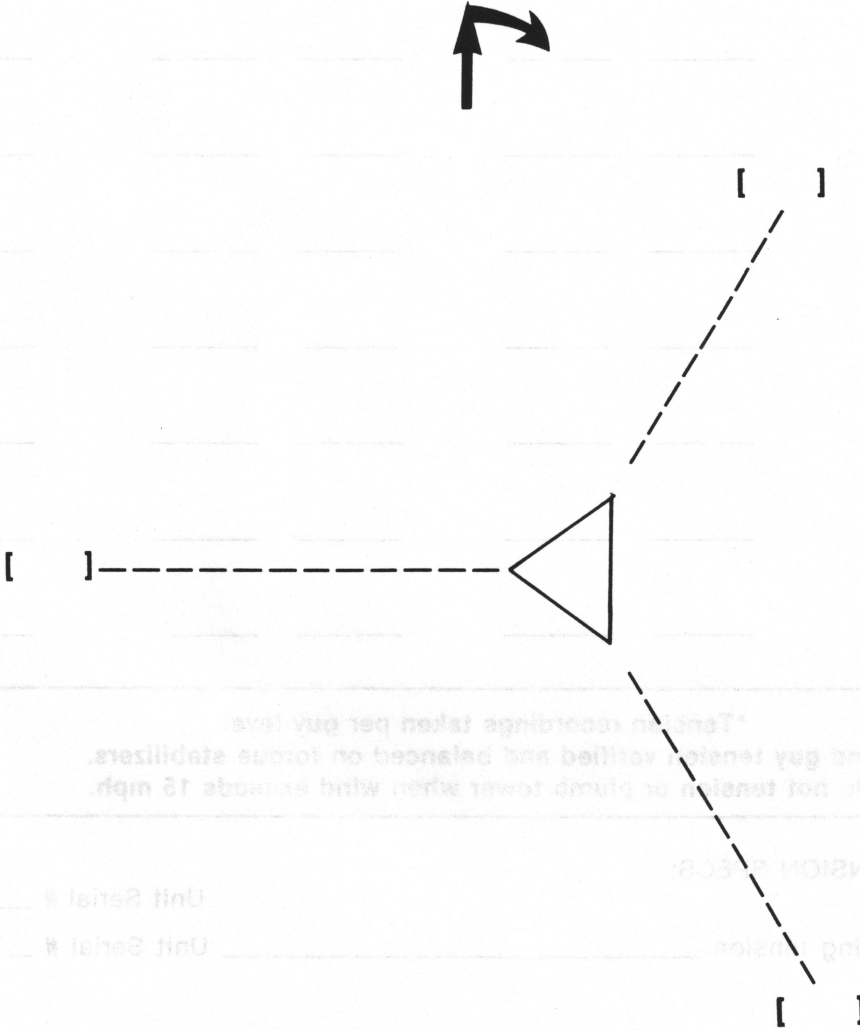
(4A)

[2] TOWER SUPPORT SYSTEMS - *Mr A*

1. TOWER PLUMBNESS

- A). Record the amount and direction of **twist**.
- B). Draw a sketch locating

- 1. **Transit** set up positions and note (Pos. I) and (Pos. II)
- 2. **Magnetic North**
- 3. **Building** to Tower relation
- 4. **Anchors** noted clockwise from "N"



Do not tension or chum tower when wind exceeds 15 mph.
The guy remains verified and balanced on tower stabilizers.
*Tension recordings taken per guy legs.

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[2] TOWER SUPPORT SYSTEMS ~~N/A~~

[2] GUY TENSIONS

TENSIONS:	Guy Level	Guy Size	Guy "A" Actual/Final		Guy "B" Actual/Final		Guy "C" Actual/Final	
_____	1.	_____	_____	_____	_____	_____	_____	_____
_____	2.	_____	_____	_____	_____	_____	_____	_____
_____	3.	_____	_____	_____	_____	_____	_____	_____
_____	4.	_____	_____	_____	_____	_____	_____	_____
_____	5.	_____	_____	_____	_____	_____	_____	_____
_____	6.	_____	_____	_____	_____	_____	_____	_____
_____	7.	_____	_____	_____	_____	_____	_____	_____
_____	8.	_____	_____	_____	_____	_____	_____	_____
_____	9.	_____	_____	_____	_____	_____	_____	_____

***Tension recordings taken per guy level.
2nd guy tension verified and balanced on torque stabilizers.
Do not tension or plumb tower when wind exceeds 15 mph.**

↑
_____ [] TENSION SPECS:

Unit Serial # _____

Method used for determining tension _____ Unit Serial # _____

Ground wind velocity _____ MPH Direction _____

Outside air Temperature _____ degrees Fahrenheit

Weather Conditions _____

Reason tension/plumb not completed _____

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[2] TOWER SUPPORT SYSTEMS - N/A

[3/4] GUY ATTACHMENTS/ANCHORS

1. Describe condition and type of connection hardware

- 1. _____ Preform _____
- 2. _____ Fist Grip _____
- 3. _____ Crosby Clamp _____
- 4. _____ Other _____
- 5. _____ Thimbles _____
- 6. _____ Shackles _____
- 7. _____ Sockets _____
- 8. _____ Other _____
- 9. _____ Turnbuckles _____

2. Check cotter pins/locking nuts are secured

3. Check for adequate reserve thread on turnbuckles

4. Check safety wire passes through turnbuckle centers and eyes/jaws

5. Check guy hardware and guy strands for corrosion

6. Check guy tails for unravelling

7. Check guy anchors

Inner:

Outer:

"A"

"B"

"C"

"A"

"B"

"C"

- | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|
| 1. _____ Flat bar | _____ | _____ | _____ | _____ | _____ | _____ |
| 2. _____ Rod | _____ | _____ | _____ | _____ | _____ | _____ |
| 3. _____ "[Channel | _____ | _____ | _____ | _____ | _____ | _____ |
| 4. _____ "]] Channel | _____ | _____ | _____ | _____ | _____ | _____ |
| 5. _____ Weldment (Caisson) | _____ | _____ | _____ | _____ | _____ | _____ |

8. Check backfill condition

9. Anchor heads for clearance above grade

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[2] TOWER SUPPORT SYSTEMS - N/A

[5/6] ANCHOR GROUNDING/PAINTING

1. Check anchor ground connections

2. Check guy wire ground connections

3. Record type of connections

"A" Inner/Outer

"B" Inner/Outer

"C" Inner/Outer

4. Check anchor fences/guard posts

5. Record Type of fences/guard posts

"A" Inner/Outer

"B" Inner/Outer

"C" Inner/Outer

[3] PAINTING - N/A

1. Check number of color bands

2. Check paint condition

3. Record color

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[4] SITE:

1. Check access road condition

N/A SITE IN TOWN

2. Check access gate/s condition

N/A

3. Check shelter/building fence condition and Record size

G - 75'x60'

4. Check general shelter/building condition and Record size

G - 44'4" x 39'8"

5. Check general site condition

G

[5] ELECTRICAL - N/A

Beacon

Sidelight/s

1. Relamped Yes _____

Yes _____

No _____

No _____

2. Record Bulb Manufacturer/Type

3. Check Operation of lights and control

4. Record unit type/manufacturer

5. Check beacon physically for damage and condition

6. Check sidelights physically for damage and condition

7. Check conduit/junction boxes for damage

8. Check support system for damage

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[6] WAVEGUIDE

Check and record Waveguide types

	Type:	Type Number:	Number Runs:	Condition:
1.	Elliptical	_____	_____	_____
2.	Rigid	1 1/2" x 1"	2	G
3.	Co-axial	_____	_____	_____
4.	Flex Sections at antennas/record quantity			
	Antenna: _____			
	Quantity/Type: 1-3' & 1-4' FLEX TO RIGID			
5.	Check for correct spacing			
	G			
6.	Check waveguide support system			
	G			
7.	Check waveguide bridge			
	G			
8.	Check building entry/ports			
	G			
9.	Check pressurization/leaks			
	G			
10.	Check ice protection on waveguide			
	N/A			
11.	Check bullet protection on waveguide			
	N/A			
12.	Check waveguide grounding system			
	N/A			

Waveguide

Top: Bottom:

Other:

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[7] ANTENNAS

Check and record antenna types.

	Size/Type:		Parabolic		Horn:	R/flrs:	2/Ways:	Stiffarms:
			Azimuth	Height:				
1.	8'	w/E K5-15970	160.8°	37'				2
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

5. Check mounts/hardware

x - U-BOLTS TO MOUNT WERE LOOSE - (REPAIRED)

6. Check stiffarms

G

7. Check ice protection -N/A

Antenna:	Ft:	Az:	Feedhorn:	Ft:	Az:

8. Check Antenna grounding at antenna

G

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[8] GENERAL NOTES (NOTE ALL ITEMS CORRECTED OR REQUIRING FURTHER ACTION)

1) All rusted areas zinc rich spray coated [] cans used.

[1] TOWER STRUCTURE

1a.) NO LIGHTNING ROD.

[7] ANTENNAS

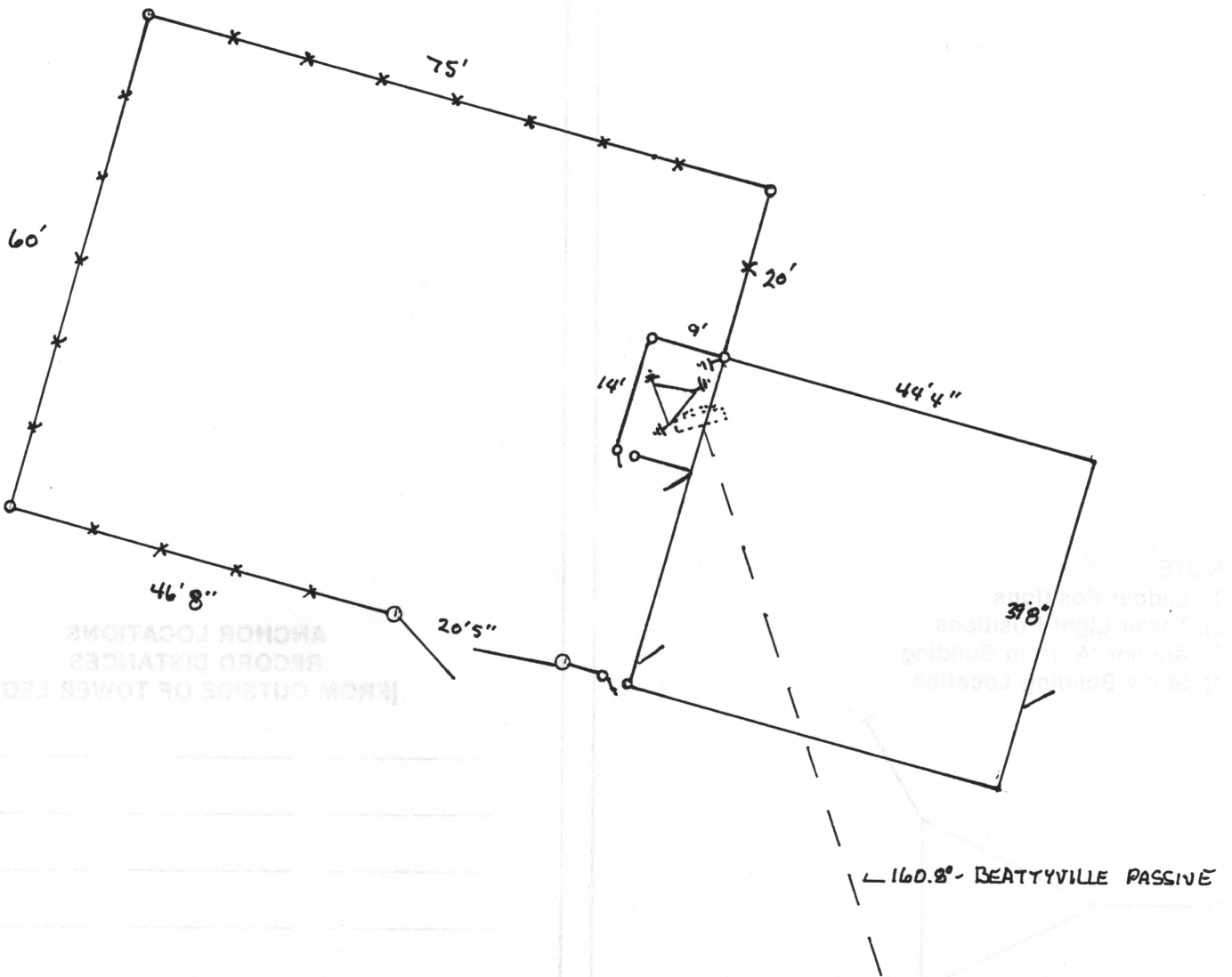
5.) U-BOLTS ON MOUNT WERE LOOSE (REPAIRED)

[9] SITE INFORMATION

Sketch fence area and record measurements.
Sketch building shape and record measurements.

NOTE:

- 1) Ground Connection locations on Fence.
- 2) Ground Connection locations on Tower.
- 3) Ground Connection/Entry on Building.
- 4) General Information.



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[10] GUYED TOWER
GUY AND ANTENNA LOCATIONS

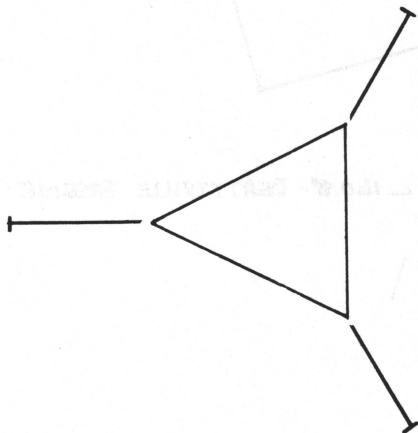
PATH DIRECTION

PATH DIRECTION

NOTE:

- 1]. Ladder Positions
- 2]. Tower Light Positions
- 3]. Anchor 'A' from Building
- 4]. Show Building Location

ANCHOR LOCATIONS
RECORD DISTANCES
[FROM OUTSIDE OF TOWER LEG]



_____	_____	_____	"A"
_____	_____	_____	"B"
_____	_____	_____	"C"
_____	_____	_____	"D"



▲ INNER ▲ MID ▲ OUTER

DISTANCE

[] INCHES

[11] SITE PHOTOGRAPHS



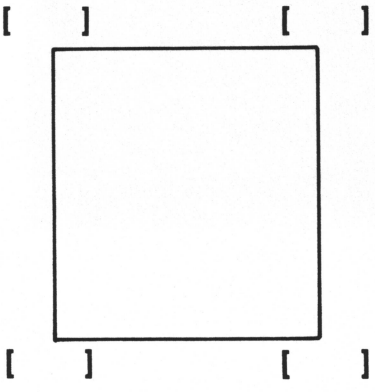
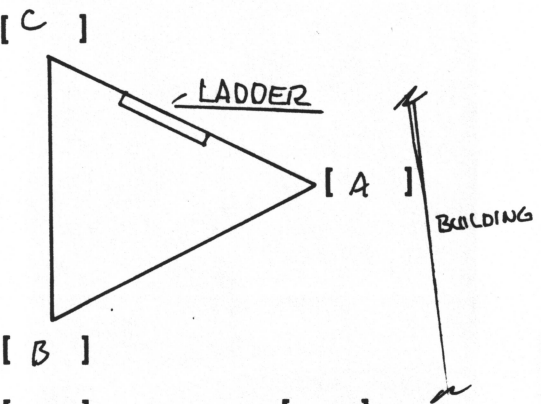
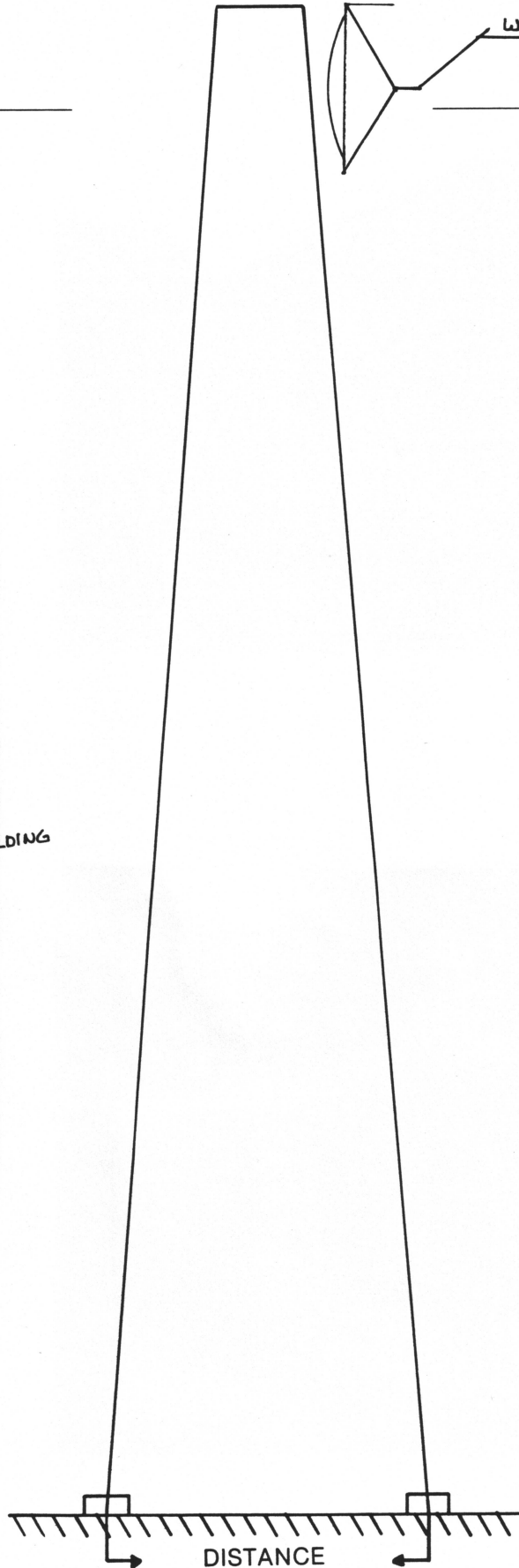
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[12] SELF SUPPORTING TOWER
ANTENNA LOCATIONS

← PATH DIRECTION

(15)
DISTANCE

WESTERN ELECTRIC KS-15970 @ 37'
160.8° - BEATTYVILLE PASSIVE
PATH DIRECTION →



- NOTE:
 1). Ladder Positions
 2). Tower Light Positions
 3). Show Building Location
 4). Base Levels

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[13] SITE PHOTOGRAPHS

EQUIPMENT

EQUIPMENT

AIRC CLAMP ON GROUND RESISTANCE TESTER MODEL 3700

IF MORE THAN 2AMP CURRENT FLOW IN GROUND DO NOT PROCEED WITH GROUND RESISTANCE TEST

DATE: 6-22-04
 WEATHER: CLOUDY-RAIN
 SITE TERRAIN: URBAN
 TESTER: JANE JOHNSON
 STATE: KY

PROBE LOCATION	CURRENT READINGS	OHMS READINGS
1. MAIN GROUND TO BUILDING	_____ AMPS	_____ OHMS
2. TOWER BASE - (A)	_____ AMPS	_____ OHMS
3. TOWER BASE - (D)	_____ AMPS	_____ OHMS
4. TOWER BASE - (C)	_____ AMPS	_____ OHMS
5. FENCE - (CORNER)	_____ AMPS	_____ OHMS
6. FENCE - (CORNER)	_____ AMPS	_____ OHMS
7. ANCHORS - ("A" INNER)	_____ AMPS	_____ OHMS
8. ("A" OUTER)	_____ AMPS	_____ OHMS
9. ("B" INNER)	_____ AMPS	_____ OHMS
10. ("B" OUTER)	_____ AMPS	_____ OHMS
11. ("C" INNER)	_____ AMPS	_____ OHMS
12. ("C" OUTER)	_____ AMPS	_____ OHMS

TESTER: JANE JOHNSON

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[14] GROUND MEG TESTING

EQUIPMENT:

AEMC CLAMP-ON GROUND RESISTANCE TESTER MODEL 3700

IF MORE THAN 2AMP CURRENT FLOW IN GROUND DO NOT PROCEED WITH GROUND RESISTANCE TEST

SITE: BEATTYVILLE TERMINAL

STATE: KY

DATE: 6-23-94

TESTER: LANE JOHNSON

WEATHER: CLOUDY-WARM

SITE TERRAIN: Rolling Hills

PROBE LOCATION:

1. MAIN GROUND TO BUILDING

CURRENT
READINGS:

OHMS
READINGS:

2. TOWER BASE --- (A)

_____ AMPS

~~3.40~~

3. TOWER BASE --- (B)

_____ AMPS

3.40

4. TOWER BASE --- (C)

_____ AMPS

3.40

5. FENCE -- (CORNER)

_____ AMPS

3.39

6. FENCE -- (CORNER)

_____ AMPS

3.40

7. ANCHORS -- ("A" INNER)

_____ AMPS

("A" OUTER)

_____ AMPS

("B" INNER)

_____ AMPS

("B" OUTER)

_____ AMPS

("C" INNER)

_____ AMPS

("C" OUTER)

_____ AMPS

_____ AMPS

NOTES

BUILDING GROUND INACCESSIBLE

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[15] RECOMMENDATIONS/ACTION REQUIRED

PHOTOGRAPH SITE (10)

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[16] SITE PHOTOGRAPHS

(18) RECOMMENDATION/ACTION REQUIRED

