A

TORNADO PROJECT SUMMARY SHEET

F=0 ONT

1. DATE AND TIME SUN JUNE 18, 1978 0230 EST

2. LOCATION OR PATH (attach map) VCNTY HILLSBURGH 0697813

3. PATH LENGTH ☐ NOT KNOWN ☐ <1mi; ☐ 1-4mi; ☐ 5-10mi; ☐ 11-50mi; ☐ LENGTH IF>50mi

4. PATH WIDTH 40 FT 5. TORNADO PART OF SQUALL LINE? ☐ YES; ☐ NO; ☐ UNKNOWN:

6. ANY UNUSUAL COLORATION? ☐ YES; ☐ NO; ☐ UNKNOWN

7. ANY UNUSUAL SOUND? ☐ YES; ☐ NO; ☐ UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE; Sounded like "10 freight trains"

9. LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.)

10. TOTAL DAMAGE ESTIMATE $ Thousands 11. TOTAL DEATHS NONE

12. TOTAL INJURED NONE 13. TOTAL HOMELESS NONE

14. LIST ALL REFERENCES

Newark, M.S. and P.S.E.M.S.; 1978: Report on the Tornado near Hillsburgh, Ont. June 21, 1978.

Erin Advocate, June 21, 1978 p1,5

The midweek Banner, Orangeville. June 21, 1978

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

(a) no remarks

(b) House wall buckled outwards and loose items from within were carried into front yard. Some furniture, farm wagon tossed through the air. Barns damaged, trees broken and uprooted.

WORKSHEET

IDTO 0697813

(1) ORIGIN x 1756500
y 4852950

(2) LIFT-OFF x_1 1757175
y_1 4853900

(3) $(x_1 - x)$ = 5250

(4) $(y - y_1)$ = 950

(5) Standard Error S_x 50 c

(6) Standard Error S_y 50 c

(7) DAMAGE LENGTH

$$L = [(x_1 - x)^2 + (y - y_1)^2]^{1/2}$$

(3)+(4) $\boxed{\rightarrow r,\theta}$ = 5335

(8) $\alpha = \tan^{-1} \dfrac{|y - y_1|}{|x - x_1|}$

$\boxed{X \leftrightarrow Y}$ = 10°

(9) Standard Error $S_L = (S_x^2 + S_y^2)^{1/2}$

(5)+(6) $\boxed{\rightarrow r,\theta}$ = 71 c

(10) $\beta = \dfrac{\tan^{-1} S_L}{L}$

(7)+(9) $\boxed{\rightarrow r,\theta}$

$\boxed{X \leftrightarrow Y}$ = 1°

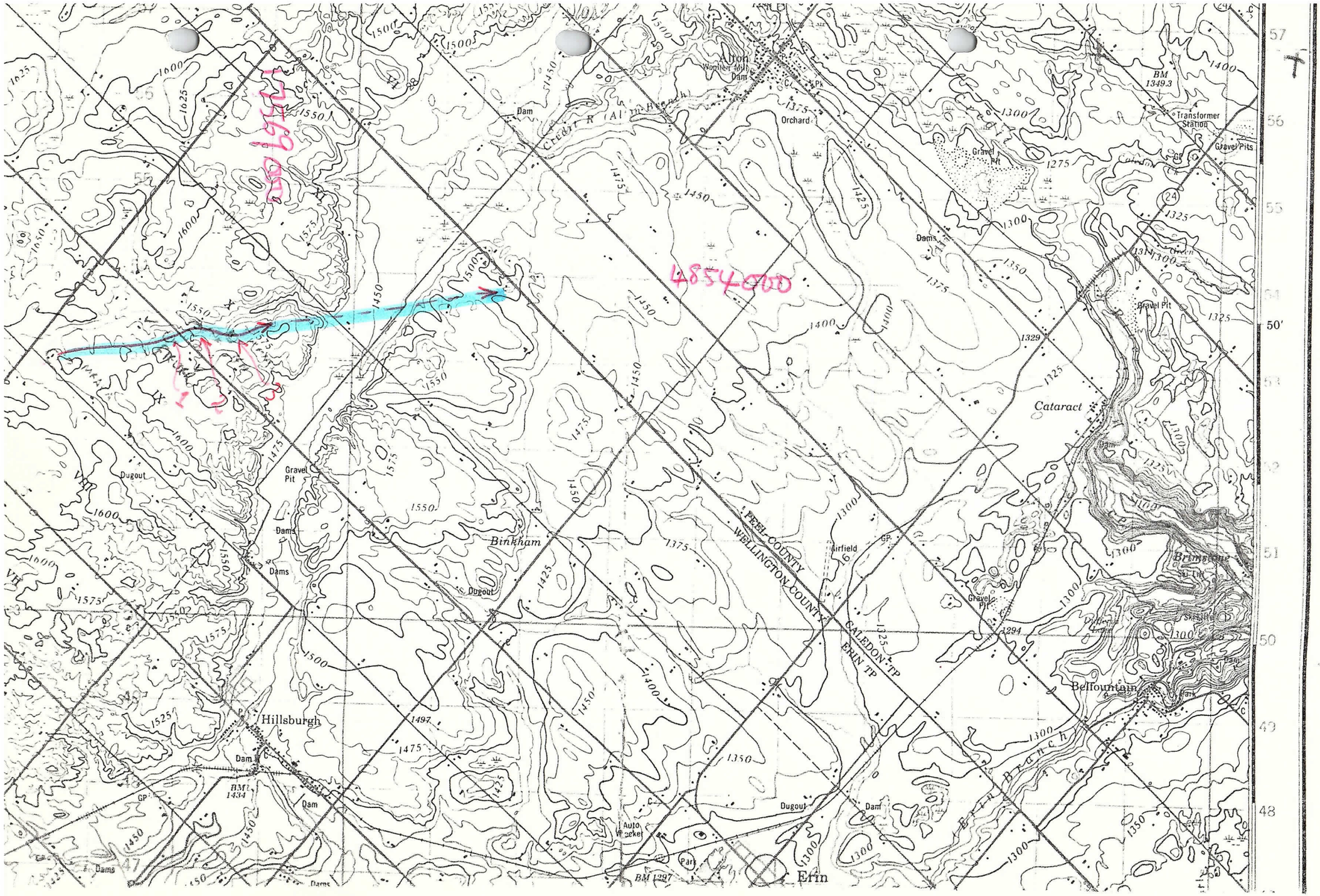
NE Quad $\phi = 90 - \alpha$

NW Quad $\phi = 270 + \alpha$

SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

(11) ϕ = 260°



Magnetic North

Grid North

Use diagram only to obtain numerical va
APPROXIMATE MEAN DECLINATION
FOR CENTRE OF MAP
Annual change increasing 1.1'

ONE THOUSAND ME
UNIVERSAL TRANSVERSE MERCAT
ZONE 17

GRID ZONE DESIGNATION	100,000 M SQUARE IDEN
17 T	NU

EXAMPLE OF METHOD USED
TO GIVE A REFERENCE TO NEAREST 100 M
THE FOLLOWING GRID REFERENCE IS A SAMPLE ON
AND DOES NOT REFER TO A POINT ON THIS MAP

99
98
97
95 96 97 98

REFERENCE POINT	CHURCH
EASTING: Read number on grid line immediately to left of point Estimate tenths of a square from this line eastward to point	7 9
NORTHING: Read number on grid line immediately below point Estimate tenths of a square from this line northward to point	98 9
EXAMPLE MILITARY GRID REFERENCE	9759
Nearest similar grid reference 100,000 metres about 63	

Report on the tornado near Hillsburg, Ont., which occurred at 3.30 am EDT., Sunday June 18, 1978.(Visited wednesday June 21,1978).

M.J.Newark and P.Elms.

STORM DATE:)##) 0330 EDT., Sunday June 18, 1978
LENGTH OF TRACK: 1.5 miles (2.5km) . TRACK ORIENTATION: WSW -ENE.
DAMAGE WIDTH: 40 ft (12m).
DAMAGE ESTIMATE: $5,000
No deaths or injuries.
LOCATION: 2.5 miles (4 km) north of Hillsburgh, Ont, from conc 8 to conc 9 of Wellington County.

(1) Mr and Mrs John Fielder, west side of Conc 9 (on the site of Erin S.S. no.11).

Both were asleep when the storm struck. It awakened them with a noise that sounded like "10 freight trains". The northwest wall of their house (frame construction, covered with aluminum siding) was bowed outwards 18 inches where it met the concrete foundation. The apex of the bow was at a weak spot where two of the 2 x 4 framing base plates met. They were not re-inforced at this point, nor were the base plates pinned to the foundation. Loose material from the interior (a garage space),including a 20lb metal box , was withdrawn and scattered over the front lawn. The wall contained an aluminum sliding window which was not broken in spite of the pronounced bend in the wall itself. On the opposite side of the house a flush mounted storm window at basement level was sucked out frame and all. Lawn furniture was thrown in the direction of the storm path from one side of the house over it to the other side, while a wheel-barrow was carried perpendicularly to the left of the storm track. A metal chair was plucked from its resting place against the wall of the schoolhouse,where it was located behind a ladder, and thrown in the direction of the storm, while the ladder was left undisturbed.

On the school house (brick construction) many shingles were blown off the lee side of the roof but only a few were missing from the windward side. Also one half of the double brick chimney was wrecked, but otherwise the schoolhouse survived intact.

CONCLUSION from this visit; The only credible explanation for these events is that a relatively weak tornado funnel passed over the house.

(2) Farm of Chas Abel, east side of Conc 9 and 3/4 of a mile (1.3 km) from the East Garafraxa township line, rented by Mr & Mrs Lumsden.

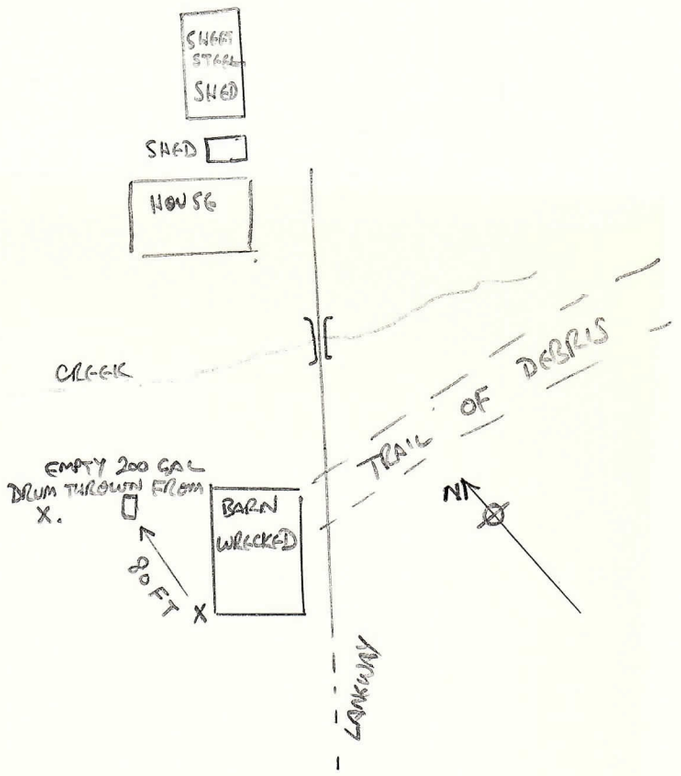
The Lumsdens were up at the time the storm struck. The barn about 120 yards from the house was demolished and in the process the hydro line was broken, fixing the time on an electric clock at 3.30 am. The barn was an old structure, not well maintained. Debris was strewn in a path eastwards from the barn but nearby rail fences were not disturbed. A 200 gal storage tank was an exception to the other debris sinceit was carried about 80 feet perpendicularly to the main storm track and to its left. Mrs Lumsden reported thunder and lightning but no hail. She said that the storm duration was very short - just a matter of seconds before it was all over. Other flimsy outbuildings around the property were unscathed. Crops in the surrounding fields were of insufficient height to indicate a swath.

(3) Farm of M Timmins, immediate neighbor(to the east) of the Chas Abel farm, east side of Conc 9.

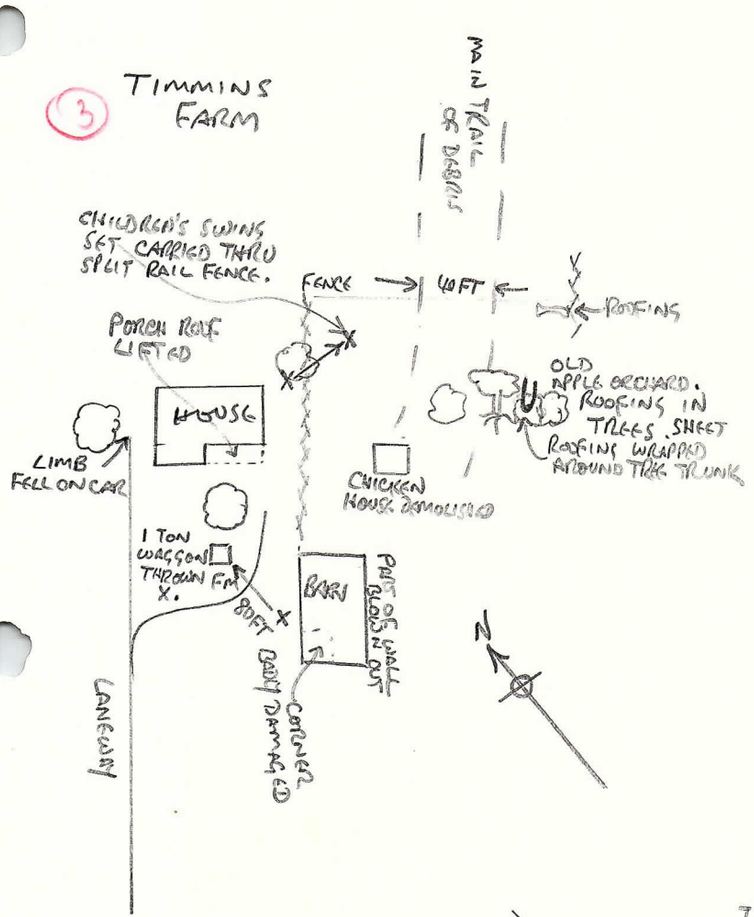
The Timmins were returning from a party at the time of the storm. An examination of their property revealed that the windward corner of their barn was badly damaged while the wall and part of the roof on the lee side was largely removed. Debris was strewn several hundred yards northeastwards from it and a chicken house which suffered a similar fate. Sheet metal was wrapped around trees or else lodged in tree tops. Several large trees suffered limb damage on their windward side. For about 40 feet a wire fence was filled with debris and two of the steel I-beam supporting posts were bent .

A one ton farm wagon was thrown about 80 feet more or less perpendicularly to the left of the main debris track. A few shingles were taken off the nearby house while the front porch roof was lifted, allowing the supporting poststo swing back out of place. A tree limb (broken at a weak section) fell on a car parked near the house doing some minor damage and a childrens swing set was carried through a split rail fence for about 100 feet.

(2) CHAS ABEL FARM
(OLD TURNBULL FARM)



(3) TIMMINS FARM



(1) FIELDER HOUSE

