A

TORNADO PROJECT SUMMARY SHEET

F=0 ONT

1. DATE AND TIME ~~JUNE~~ 11. 6. 1970 1410 EDT

2. LOCATION OF PATH (attach map) TOUCHDOWN IN ST CATHERINES 06970-3

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

4. PATH WIDTH NOT KNOWN 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; SKY WAS PITCH BLACK

9. LIST ANY ASSOCIATED PHENOMENA (such as hail, vivid lightning heavy rain, no rain, etc.) VERY HEAVY RAIN, MOTHBALL SIZE HAIL

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

12. TOTAL INJURED NONE 13. TOTAL HOMELESS NONE

14. LIST ALL REFERENCES

ST CATHERINES STANDARD 12.6.1970

Telephone Interview Dec 2, 1980 by M.J. Newark.

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

(a) The tornado was reported by Mr and Mrs George A Jeffrey of Tinton who were driving their truck along the QE way.... Mrs Jeffrey saw the long black funnel "whirling things around in mid-air".

(b) 600 greenhouse windows exploded out of the Schenck Farms and Greenhouses. Trees uprooted.

WORKSHEET

IDTO 0697003

(1) ORIGIN x 1763850 (5) Standard Error S_x 500 C.

y 4782400

(2) LIFT-OFF x_1 1764020 (6) Standard Error S_y 500 C

y_1 4778250

(3) $(x_1 - x)$ = 1700

(4) $(y - y_1)$ = 4150

(7) DAMAGE LENGTH

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

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

(3)+(4) $\boxed{\rightarrow r,\theta}$ = 4485 m

$\boxed{x \leftrightarrow y}$ = 68°

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

(5)+(6) $\boxed{\rightarrow r,\theta}$ = 707 m C

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

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

$\boxed{x \leftrightarrow y}$ = 9°

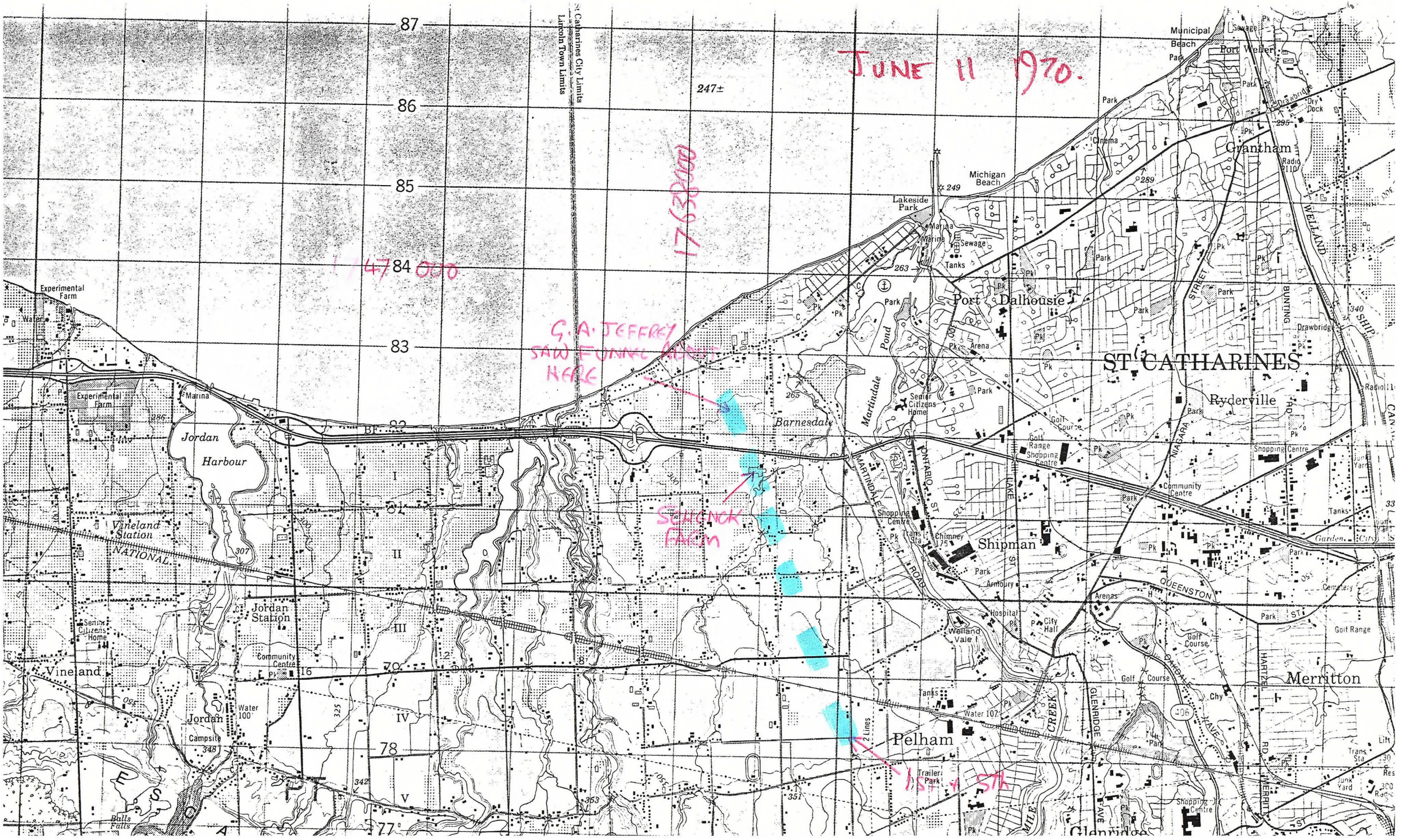
NE Quad $\phi = 90 - \alpha$

NW Quad $\phi = 270 + \alpha$

SW quad $\phi = 270 - \alpha$

SE quad $\phi = 90 + \alpha$

(11) ϕ = 338°


JUNE 11 1970.
1:47 84 000
G.A. JEFFREY SAW FUNNEL HERE
SCHENCK FARM
1ST + 5TH
ST CATHARINES
Grantham
Port Dalhousie
Ryderville
Shipman
Merritton
Pelham
Glenridge
Vineland
Jordan
Jordan Station
Jordan Harbour
Vineland Station
Barnesdale
Martindale
Lakeside Park
Michigan Beach
Municipal Beach
Port Weller
Experimental Farm
Welland Vale
Bulls Falls
Lincoln Town Limits
St Catharines City Limits
87
86
85
84
83
82
81
80
79
78
77
I
II
III
IV
V
247±
WELLAND
MARTINDALE
ONTARIO ST
LAKE
NIAGARA
QUEENSTON
HARTZEL
GLENRIDGE
CREEK
MILE
BUNTING
STREET
SHIP
CANAL
NATIONAL
Golf Course
Golf Range
Shopping Centre
Community Centre
Senior Citizens Home
Trailer Park
Junk Yard
Dry Dock
Drawbridge
Cinema
Arena
Armoury
Arenas
Hospital
City Hall
Cemetery
Tanks
Water 107
Water 100
Campsite
Trans Sta
Chimney
Marina
Pond
Radio
Lift
406

12209

Ontario Hydro Press Clipping Service

Paper St. Catharines Standard

Date JUN 12 1970

Source Niagara Region

715-6

JUN 19 1970

Sudden Storm Slashes City

By STEVE ARCHER
Standard Reporter

Its advent was signalled by a sudden, and to some people startling, thunder clap from what moments before had been a hazy blue sky.

It tore in off Lake Ontario, bringing high winds, torrential rains, hailstones the size of mothballs, even what some witnesses described as a tornado.

And finally, after three rounds of fury covering a period from about 2 p.m. to 7 p.m., the biggest summer storm of the year moved off, leaving the stars of a clear and muggy June night looking down on scenes of scattered destruction.

No accurate reading of the top wind velocity from the storm was available last night. It seemed at times a lot higher than the 25-mile-an-hour gusts recorded at weather offices of the St. Lawrence Seaway, Buffalo International Airport and Toronto International Airport.

Toronto reported picking up the storm on their radar. And similar thunderstorms were reported in the Simcoe and London regions of Southweatern Ontario.

How much rain fell? According to readings at the Linwell Rd. fire hall, 2.35 inches gushed down on us between, 2 p.m. and 6 p.m.

The storm wasn't the worst in the city's history. But it left its mark:

- At least a dozen stores in the Grantham Plaza were hit by flooding, with damage likely running over the $100,000 mark. Some reports put it at $500,000;
- A Ghent St. woman was killed during heavy rain early in the life of the storm when her car collided with another on the Queen Elizabeth Way at the Beamsville traffic lights;
- A tornado-like funnel roared across a section of old Louth Township in the 3rd St. area, ripping up trees, slamming through a section of greenhouse and terrorizing motorists along the QE Way;
- Pumps in the Thorold Tunnel beneath the Welland Canal couldn't carry the heavy load and water built up in the roadbed to a depth of about six inches. At least one car stalled with a drowned ignition system;
- Electric power was knocked out in several sections of the city as power lines came down and basements flooded, shorting out house panels;
- The automatic barriers on the Canadian National Railways level crossing at Glendale Ave. in Merritton Ward shorted out, jamming in the down position. Cars were forced to zig-zag around them while railway crews restored them to working order;
- Police switchboards lit up and fire department dispatchers were deluged with calls — most of them minor — between 2 p.m. and 7 p.m.

The tornado was reported by Mr. and Mrs. George A. Jeffrey, of Tintern, who were driving their truck along the QE Way toward St. Catharines at 2:10 p.m.

"The wind was very high, the rain was heavy and the sky was pitch black," Mr. Jeffrey recalled.

His vehicle was among 20 or 30 forced to stop when visibility became extremely poor. Mrs. Jeffrey saw the long, black funnel "whirling things around in mid-air."

Mr. Jeffrey watched the funnel just off the highway, moving towards the lake.

"It started moving toward us," he said, "and we didn't stay around any longer than that. We didn't see if it did any damage. When we saw it moving toward us, we just took off."

The twister did do some damage at the Schenck Farms and greenhouses on 3rd St. (Louth). It cut across one corner of the business buildings, blowing out — rather than smashing — 600 greenhouse windows, breaking off a pair of cast iron ventilator cranks and taking out several rafters.

It then crossed a ravine, uprooted about half a dozen trees, tore the tops off six others, then headed for the 1st St., 5th Ave., area where it apparently petered out.

The fatal accident on the QE Way took the life of 57 year-old Mabel Cannon, of 37 Ghent St. She was pronounced dead on arrival at West Lincoln Memorial Hospital, Grimsby, shortly after the 2:25 p.m. accident.

Mrs. Cannon was the driver of one of the cars involved. The other driver, Harry Britton, 48, of Lakeshore Rd., Beamsville, escaped injury. Damage to both vehicles was estimated at $1,500.

Mrs Cannon's car is said to have veered across the centre median, hitting Mr. Brisson's, coming from the opposite direction.

Flooding was widespread in St. Catharines with whole sections of streets and fields under water, particularly in the north end.

GEORGE JEFFREY. 934-1216.
SCHENCK FARMS (416) 684-5478
Greenhouses 945-0514

(416) 562-7456
BOX 116
JORDAN STN
ONT, LOR 1S0

P2

775-6

Ontario Hydro Press Clipping Service

Paper St. Catharines Standard

Date JUN 12 1970

Source Niagara Region

JUNE 1970

JUN 19 1970

N

ST CATHERINES

To one ement of the popu-
tion, the prospect wasn't all
ad. Child en donned bathing
uits and ed the streets and
itches as wimming holes.

The bl k contained by
cott, Vin Carlton and Nigg-
ra Sts. b came a huge lake.
People paddled a canoe.
Someone ad a rowboat out.
Standard photographer John
McTaggar even spotted one
athleti type swimming
across th unnatural lake.

Outside the city, the most
serious fl oding incident was
reported the Thorold Tun-
nel where pumps went out of
action un er the heavy load.
About six inches built up at
the botto of the underpass.

causing e car to stall. But
depart nent of highways
crews hac the pumps back in
operation quickly.

Elsewhere in Thorold, problems resulting from the storm were at a minimum. Thorold police reported no storm trouble calls, other than one to Thorold District Secondary School, where lightning set off the remote fire alarm.

Thorold's public utilities escaped serious consequences. A power blackout lasting one hour was limited to four homes, the result of a transformer on Townline Rd. burning out..

In St. Catharines, damage to power lines was more extensive but still not too severe. Several areas, including a large one in the north end, were without power for several hours.

Most of the calls Public Utilities Commission crews answered were from individual homes. Downed service lines, flooded basements and blown fuses due to lightning were the causes of most.

PUC workers said the storm was unusual in that it hit not once but three times, one blast after another.

"We'd just get things put together and it would come in again," a spokesman said.

Ontario Hydro crews were on the job from 4 p.m., with the main trouble caused in individual houses, as in St. Catharines.

Four defective transformers handling rural power requirements in virtually all of old Lincoln County had to be replaced. Lightning strikes shut off power in some areas for two or three minutes until automatic equipment switched over to other power sources.

Individual subscribers in scattered areas were without power for two or three hours, but Ontario Hydro foreman Earl MacMillan, of Lincoln, said things were pretty well cleaned up by 8:30 p.m.

The storm cut a clearly-defined path across the northeast corner of the Niagara Peninsula. It came in off Lake Ontario west of St. Catharines, dumped most of its rain on the cty, then passed over Thorold and Niagara Falls.

In Beamsville, Vineland, Virgil and Niagara-on-the-Lake, Fonthill, Welland, Fort Erie and Port Colborne, only light to moderate rain was recorded and temperatures stayed high.

Bell Canada's complaint calls confirmed this. They had no reports of trouble from any of these locations.

Even in St. Catharines, Bell got off lightly with only a few isolated cases of telephone failure. No more than three or four customers on the same line were without service. A spokesman said all service would be likely to be restored fully by 5 p.m. today.

There were many cases of flooding and lightning damage, among them the Hatashita Judo Club as well as area greenhouses.

The judo club, at 40 Page St., was "wiped out" by yesterday's storm, according to one club official.

"It looks like lightning struck the roof," said club official Frank Frazer. "It's a flat roof, and there's nothing up there that would fall. The only thing we can think of is lightning to make a hole like that."

He said water came in through a hole in the roof sometime between 5 and 7 p.m. yesterday. The club's tile ceiling collapsed with the weight of the water.

A total of 56 compressed-straw mats, valued at $40 each, were destroyed.

"They just soaked up water like a sponge," said Mr. Frazer. "They're only three feet by six, and it takes four of us to lift one of them now."

Greenhouse owners in St. Catharines and Louth Twp. reported a variety of damage.

While Schenck Farms, near the site of the twister, sustained heavy damage, the greenhouse of Colonial Florists on Ontario St. got through without a scratch. Dufferin Gardens on Dufferin St., also reported no damage and the proprietor explained that their buildings were plastic and not susceptible to hail.

Vine Street Floral Gardens escaped damage also, but two women employees admitted to huddling inside while lightning flashed around them.

A tree on Salina St., near Yates St., was blown over and blocked the road for some time.

Workmen has just installed a new strip of sidewalk in the morning, and some of the roots of the tree had apparently been cut, weakening it so it could not withstand the blast. It fell into another tree, but little property damage was reported.

St. Lawrence Seaway Authority officials were today looking for the cause of power and communications blackout which hit sections of the Welland Canal during the storm.

From Lock 1 to Lock 5, emergency generators were switched on and bridges switched to diesel power to prevent any disruption to shipping.

The power blackout lasted from 4 p.m. to 5 p.m., and communications were disrupted from 4 to 6:15 p.m., Frank Jackson, assistant regional director, reported.