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NON-DESTRUCTIVE TESTING

August 14, 2001

Our Project: UST 8888-888

Mr. John Jones, Property Manager TopCorp Management Services Limited 300 1st Road Yourcity, Ontario X1A 2M3

Subject: <u>Structural Condition Analysis Report of Parking Lot Light Standards at The Best Plaza,</u>
1550-1556 Big Top Road, Mytown, Ontario, June 14, 2001

Dear Mr. Jonesl:

As per your request, The King North Group has completed a condition assessment of eight (8) light standards at the above noted facility.

This report has been prepared for TopCorp Management Services Limited and third party use of this report without the consent of The King North Group is prohibited.

The enclosed report outlines in detail, the condition of and repairs required on the steel posts for the light standards and concrete support bases.

We trust that this information is clear, however if you should have any questions on the contents of this report, please do not hesitate to call.

Yours truly,

The King North Group (1118219 Ontario Limited)

Edward Litow, B. Tech. (Arch Sc.)



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STRUCTURAL CONDITION ANALYSIS REPORT

OF

PARKING LOT LIGHT STANDARDS

AT

THE BEST PLAZA

MYTOWN, ONTARIO

PREPARED FOR

TOPCORP MANAGEMENT SERVICES LIMITED

Prepared By:

THE KING NORTH GROUP 380 Kettleby Road Kettleby, Ontario L0G 1J0

Project No. UST 8888-888

JUNE 2001





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SCHEMATIC DRAWING OF POLE LOCATIONS





1.0 EXECUTIVE SUMMARY SPREADSHEET

At the request of Mr John Jones, Property Manager for TopCorp Management Services Limited, The King North Group, performed a condition assessment/inspection of eight (8) parking lot light standards at The Best Plaza in Mytown, Ontario. Our report reflects the conditions in effect June 14, 2001 during our ultrasonic inspections and visual observations.

Concrete Bases:

Our findings revealed that all the concrete bases for the eight (8) poles covered in the scope of work are in good condition. There are currently no areas of concern respecting these structural elements of the light standard.

Light Standards:

According to the identification labels on the poles, the oldest poles are eight years old (1993). The newest poles are 3 years old (1988). Seven of the eight poles require maintenance to address exterior corrosion. The corrosion is currently limited to exterior surface conditions and to a minor degree the interior surfaces. The degree of corrosion is still limited to surface and has not significantly affected the wall thickness of the tube poles. All inspected poles have wall thickness within the stated specifications of the standard for the industry.

With diligent maintenance procedures i.e. recoat (with corrosion protective paint) all exterior surfaces, the poles should continue to perform trouble free in terms of their structural integrity.





Following is a Summary Spreadsheet of our findings and maintenance recommendations:

POLE	CONDITION OF POLE (Shape, height, colour, # fixtures)	MAINTENANCE	REQ'D (BY PRIO	YEAR MAINTENANCE REQUIRED			
		P1	P2	P3	2001	2002	2003
1.	STEEL POLE: GOOD POWCO: 9"X9" tube, tapered, 40 ft., painted white. Surface corrosion S. side of pole base to half height of pole. Minor corrosion interior. CONCRETE BASE: GOOD Unpainted	N/A	Remove surface corrosion, prime and repaint.		Yes	N/A	N/A
2.	STEEL POLE: GOOD POWCO: 9"X9" tube, tapered, 40 ft., painted white. Minor surface corrosion S. side. CONCRETE BASE: GOOD Unpainted	N/A	Remove surface corrosion, prime and repaint.	N/A	Yes	N/A	N/A
3.	STEEL POLE: FAIR DYNAPOLE: 8" x8" square tube, tapered, 40ft, painted white. Significant corrosion on S. side of pole. CONCRETE BASE: GOOD Unpainted.	Remove surface corrosion and repaint.	N/A	N/A	Yes	N/A	N/A
4.	STEEL POLE: FAIR DYNAPOLE: 8" x8" square tube, tapered, 40ft, painted white. Minor surface corrosion W. side exterior at base. Minor corrosion interior CONCRETE BASE: GOOD Unpainted.	N/A	Remove surface corrosion, prime and repaint.	N/A	Yes	N/A	N/A
5.	STEEL POLE: GOOD DYNAPOLE: 8" x8" square tube, tapered, 40ft, painted white. Surface corrosion at base of pole. Minimal interior corrosion. CONCRETE BASE: GOOD Unpainted.	N/A	Remove surface corrosion, prime and repaint.	N/A	Yes	N/A	N/A



E BEST PLAZA, MYTOWN

POLE I.D. #	CONDITION OF POLE (Shape, height, colour, # fixtures)	MAINTENANCE	YEAR MAINTENANCE REQUIRED				
		P1	P2	P3	2000	2001	2002
6.	STEEL POLE: GOOD DYNAPOLE: 8" x8" square tube, tapered, 40ft, painted white. Surface corrosion at base of pole. Minimal interior corrosion. CONCRETE BASE: GOOD Unpainted.	N/A	Remove surface corrosion, prime and repaint.	N/A	Yes	N/A	N/A
7.	STEEL POLE: FAIR SPINA STEEL WORKERS: 9"X9" tube, tapered, 40ft., white. No surface corrosion. No interior corrosion. CONCRETE BASE: GOOD Unpainted.	N/A	N/A	N/A	N/A	N/A	N/A
8.	STEEL POLE: GOOD STEEL POLE: GOOD DYNAPOLE: 8" x8" square tube, tapered, 40ft, painted white. Minor surface corrosion at base of pole and S. surface. Minor surface corrosion S. side of pole. Minimal interior corrosion. CONCRETE BASE: GOOD Unpainted.	N/A	Remove surface corrosion, prime and repaint.	N/A	Yes	N/A	N/A





2.0

OBSERVATIONS

Following is our detailed information of our field observations of the steel light pole standards at the building.

Our Scope of Work was based on the following:

1. Visual Inspection:

Components inspected included:

Light Standard/Pole

- Threaded rod
- Levelling nuts
- Washers
- Hex nuts
- Nut covers
- Base plates
- Handholes
- Tube
- Plumb in elevation

Concrete Base

- Exterior finish
- Plumb in elevation

2. Test Reading

Light Standard/Pole

Ultrasonic thickness readings

Concrete Base

Hammer testing

The steel thickness readings were captured with a Gilardoni DG41 EZ Portable Ultrasonic non-destructive Digital Indicating Thickness Testing Gauge. This is an ultrasonic testing device that utilizes a double transducer probe emitting a 4 MHz ultrasonic pulse into the steel to be measured. The probe is especially designed to gauge thickness of rough or corroded metals.





Based on our observations, the conditions were assigned a condition and maintenance priority rating indicative of the degree of severity of the conditions

Our condition ratings are described as follows:

GOOD CONDITION

Components of light pole (concrete base (if applicable), metal base plates, anchor bolts, cover plates, pole tube) are not physically damaged and are not an immediate structural concern. Probability of failure of the pole i.e. collapse is minimal to none.

FAIR CONDITION

Components are physically damaged i.e. corroded, cracked and/or broken, loose, misshapen, however are not an immediate structural concern.

Possibility of failure of the pole i.e. collapse, is low.

POOR CONDITION

Components are physically damaged i.e. corroded, cracked and/or broken, loose, misshapen, resulting in structural integrity concerns.

Possibility of failure of the pole i.e. collapse, is high.

Our Priority ratings are determined as follows:

Priority 1: HIGH MAINTENANCE PRIORITY:

Immediate maintenance attention is required.

Priority 2: MEDIUM MAINTENANCE PRIORITY:

Maintenance attention required as soon as possible.

Priority 3: LOW MAINTENANCE PRIORITY:

Components require only routine maintenance attention.





SUMMARY CHART OF OBSERVATIONS

The following chart summarizes our field observations.

	METAL TESTING RESULTS																		
LIGHT	Th	THICKNESS (In.)				REMARKS								T REMARKS					
POLE			.125/3	-															
#		-22000 0000	.149/40	-															
	N	S	E	W	Cond	Prio	Comments	Sample Photographs											
					ition	rity													
1	.131	.203	.131	.138	Good	2	Surface corrosion S.												
9"x9"	.126	.135	.131	.135			side of pole base to												
Square	.127	.138	.133	.133			half height of pole. Minor corrosion												
tube	.131	.134	.134	.132			interior.												
tapered	.139	.178	.147	.140															
40 ft.,																			
2 head																			
2	.143	.144	.135	.130	Good	2	1. Minor surface												
9"x9"	.134	.128	.138	.132			corrosion S. side. No corrosion interior.												
Square	.138	.125	.137	.133			No corrosion interior.												
tube	.129	.125	.135	.136															
tapered	.125	.135	.136	.144															
40 ft.,																			
2 head								500											
3	.094	.120	.095	.071	Fair	1	Significant corrosion												
8"x8"	.073	.121	.210	.070			on S. side of pole.												
Square	.078	.105	.115	.074															
tube	.100	.197	.118	.081															
tapered	.201	.197	.074	.081															
40 ft.,																			
2 head								4											
4	.205	.077	.092	.117	Good	2	1. Minor surface corrosion												
8"x8"	.121	.090	.070	.074	2004		W. side exterior at base.												
Square	.208	.081	.075	.205			Minor corrosion interior												
tube	.210	.080	.094	.208															
tapered	.079		.101	.259															
40 ft.,																			
2 head																			





	METAL TESTING RESULTS										
LIGHT POLE #	l	pec'd: .1	ESS (In . 25/35'po 49/40'po	le	REMARKS						
	N	S	E	W	Cond ition	Prio rity	Comments	Sample Photographs			
5 8"x8" Square tube tapered 40 ft., 2 head	.233 .237 .223 .235 .203	.091 .078 .120 .094	.239 .086 .074 .074 .205	.139 .225 .218 .212 .218	Good	2	Surface corrosion at base of pole. Minimal interior corrosion.				
6 8"x8" Square tube tapered 40 ft., 2 head	.232 .230 .230 .217 .217	.238 .248 .249 .223 .111	.242 .240 .238 .234 .252	.230 .233 .119 .096 .234	Good	2	Surface corrosion at base of pole. Minimal interior corrosion.				
7 9"x9" Square tapered 2 head	.219 .219 .203 .200 .203	.200 .200 .205 .205 .207	.217 .217 .207 .203 .202	.270 .223 .203 .200 .201	Good	2	No surface corrosion. No interior corrosion.				
8 8"x8" Square tube tapered 40 ft., 2 head	.229 .240 .242 .235 .231	.211 .208 .208 .209 .226	.211 .214 .216 .214 .216	.216 .222 .223 .220 .229	Good	2	Minor surface corrosion at base of pole and S. surface. Minor surface corrosion S. side of pole. Minimal interior corrosion. No bolt covers.				



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NOTE: 1. Our minimum required thickness values for the metal thickness were based on manufacturer's information (Powco in Barrie, Ontario). The poles installed at this site have been designed for a maximum EPA of 7ft² @ 70mph (including a 1.3 gust factor) with a minimum wall thickness estimated to be 9 gauge metal (0.1495 in.) for round and square poles as well as tapered square and octagonal poles up to 40 ft..

2. Standard of the industry states that minimum wall thickness for round and square poles as well as tapered square and octagonal poles up to 40 ft in height is 11 gauge metal (0.1233 in.). This is for a pole loading maximum EPA of 10ft² @ 100mph (including a 1.3 gust factor).

Based on these results the structural condition of the poles with respect to wall thickness integrity is good.

CONCRETE BASES

The concrete bases for all light poles were tested by hammer test soundings and were found to be in good condition. They will not be considered further in this report.





3.0 CONCLUSIONS AND RECOMMENDATIONS

All existing light standards are in acceptable structural condition (based on the stated criteria) and require only routine maintenance at this time. Seven of the eight are exhibiting signs of surface corrosion and will require remedial maintenance work i.e. sandblasting and recoating, in specific locations.

While corrosion is present, it has not at this time affected the wall thickness of the light standards to any significant degree. They should however be monitored/tested on a regular basis (3 to 5 years minimum) to ensure the remedial work has addressed and halted further corrosion of the metal tubing which comprises the poles. They should also be visually inspected (by staff) for signs of premature corrosion after every winter season. This would allow for maintenance to be performed to prevent premature damage to the poles.



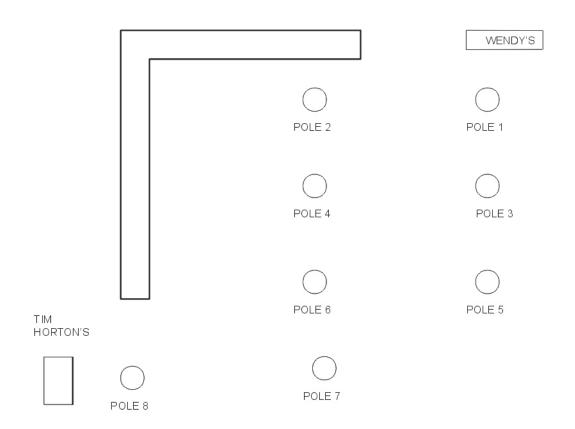
SCHEMATIC DRAWING (NTS)OF POLE LOCATIONS

The Best Plaza

MYTOWN, ONTARIO



SCHEMATIC DRAWING OF POLE LOCATIONS



POLE LOCATIONS

THE BEST Plaza 1550-1556 Big Top Road Mytown, Ontario (NOT TO SCALE)