Section:	Tab 6, Appendix 6.3	**Page No.:**	21 of 25
Topic:	Area and Roadway Lighting		
Subtopic:	Outdoor Lighting Rate – Tariff No. 2015-80		
Issue:	Basis for the Billing Determinant		

PREAMBLE TO IR (IF ANY):

In light of Manitoba Hydro's LED conversion plans, additional detail related to the information provided in the response to COW/MH-I-1a is required to determine the impact of the proposed rate increase, combined with LED conversions, on the monthly Area and Roadway Lighting bills of the City of Winnipeg.

QUESTION:

a) Please extend each of the tables provided in the response to COW/MH-I-1a by adding two columns containing (i) the description of the LED unit that will replace each existing unit and (ii) the number of units required to replace of the existing unit types in each service location.
b) Please clearly show in the tables any units that will not be replaced with LEDs (e.g. HPS greater than 400 W).
c) If Manitoba Hydro has a schedule for the showing location and expected timing for the installation of LEDs, please provide the schedule.
d) Please provide the geographical location for the lights identified in (b) that are not being converted.

RATIONALE FOR QUESTION:

The Manitoba Hydro's records for both existing luminaires and the number of LED conversions are the Area and Roadway Lighting equivalent of the metered volume used to bill customers. There is no process analogous to certification of meters to provide confidence that the "meter reading" is correct. The City wishes to obtain the information necessary to determine whether it should have confidence in the luminaire count used by Manitoba Hydro for billing purposes.

RESPONSE:

As outlined in Manitoba Hydro's response to COW/MH-I-1, units are to be replaced on a one-for-one basis. For example, a 70W HPS (exclusive or shared) light will be replaced with a 40W LED. Manitoba Hydro has confirmed the light distribution patterns with the Lighting Systems Branch of the City of Winnipeg as being acceptable.

Manitoba Hydro uses several types of lighting to illuminate streets based on standards created by the Illuminating Engineering Society North America (IESNA) in Recommended Practice number 8 (RP-8)[1]. RP-8 outlines the minimum light levels required for specific road types. How these levels are achieved depends upon the luminaire wattage, spacing and height. Manitoba Hydro has specific guidelines for pole spacing and luminiaire height to ensure projects meet the required RP-8 levels.

Manitoba Hydro intends to replace all Roadway & Area Lighting with an energy efficient LED equivalent by the end of the program provided an LED equivalent unit is available that meets the required IESNA RP-8 lighting levels. Existing street lighting in Manitoba is predominantly 70W and 100W HPS fixtures. These lights are commonly found on residential streets in areas where traffic density is low. The 150W HPS fixtures are used on collector streets which allow for transition from residential to major streets (e.g. Moray Street between Portage Avenue and Ness Avenue, Stradbrook Avenue, Cambridge Street). The 250W and 400W HPS fixtures are used on major streets with the 400W specifically being used for multi-lane roadways with high traffic volumes (e.g. Portage Avenue, Kenaston Boulevard). The 750W HPS and 1000W HPS are used at very specific locations such as highway clover leaf intersections or other major intersections where there is a requirement for significant illumination and the pole height can be greater than 60' (e.g. intersection of Fermor Avenue and Lagimodiere Boulevard). As stated in Manitoba Hydro's response to COW/MH I-3, high-mast lighting (HPS greater than 400W) will not be converted during the initial stages of the program until the replacement LED technology is thoroughly tested and the high-mast LED's adherence to RP-8 can be confirmed. Overall, the number of fixtures within each classification decreases as the wattage of the fixtures increases as residential streets are more common than major streets.

[1] Illuminating Engineering Society of North America (IESNA) Recommended Practice 8, 2014 Edition (RP-8-14), pg. 3

The following table summarizes the lighting presented in Manitoba Hydro's response to COW/MH-I-1 and the planned LED replacement:

Rate Description	**LED Replacement Description**
70W HPS Exclusive & Shared	40W LED cobra head type II or III for roadway,
	50W LED cobra head type I for lane
70W HPS 24HR Exclusive	40W LED 24HR area light type V
100W HPS Exclusive & Shared	60W LED cobra head type II or III for roadway,
	60W LED type II, III or V for decorative post-top luminaires – styles: acorn, colonial, contemporary and octagonal
150W HPS Exclusive & Shared	90W LED cobra head type II or III for roadway
250W HPS Exclusive & Shared	150W LED cobra head type II or III for roadway
400W HPS Exclusive & Shared	240W LED cobra head type II or III for roadway
400W HPS 4-100 Exclusive	240W LED cobra head type II or III for roadway
750W HPS Exclusive & Shared	High mast type I, II, III or IV
1000W HPS Exclusive	To be determined - High mast
1000W HPS 1-60 Exclusive	To be determined - High mast
1000W HPS 2-100 Exclusive	To be determined - High mast
1000W HPS 4-100 Exclusive	To be determined - High mast
175W MV Exclusive & Shared	90W LED cobra head type II or III for roadway
250W MV Exclusive & Shared	150W LED cobra head type II or III for roadway
400W MV Flood Exclusive	To be determined - Flood
400W MV Exclusive & Shared	240W LED cobra head type II or III for roadway
400W Metal Halide Exclusive	240W LED cobra head type II or III for roadway
100W Incandescent Exclusive & Shared	LED equivalent replacement to be assessed
300W Incandescent Exclusive	LED equivalent replacement to be assessed
500W Incan Flood Shared	To be determined - Flood
500W Incandescent Shared	LED equivalent replacement to be assessed
10W LED Exclusive	Not Applicable

Lighting types are specified by the IESNA and are based on the pattern of light on the roadway[2]:

- Type I lights are designed to illuminate the roadway only and are used in lane applications.
- Type II and III are designed to provide the majority of illumination to the road and some light in front and behind the fixture.
- Type IV and V lights are used to illuminate areas and are used specifically in dusk to dawn applications and around clover leafs in high mast applications. Type V decorative lighting is also used as the centre light in a cul-de-sac in residential developments.

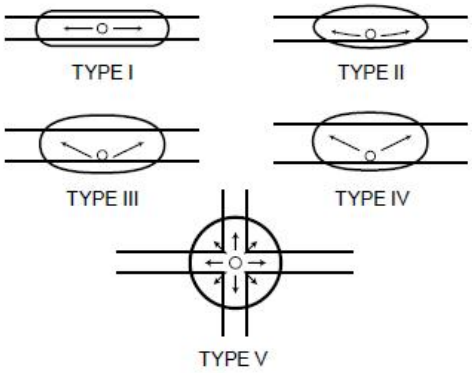

Figure 3. IESNA Outdoor lighting distribution types I - V.

The table above presents two types of multiple head high-mast lights, the 1000W HPS 2-100 and 1000W HPS 4-100. The former is a two light 100 foot application and the latter is a four light 100 foot application. Once an acceptable LED solution has been found for high-mast lighting, a direct one-for-one replacement can be confirmed.

The detailed schedule for replacements within the City of Winnipeg has not been finalized. As stated in Manitoba Hydro's response to COW/MH-I-3, LED replacements are scheduled to follow the group re-lamping process. Based upon this, the project is expected to begin in the north-west quadrant of the city and move clockwise through the city over the next four to five years except for high-mast and other less common decorative lighting types, such as those located along Waterfront Drive and Graham Avenue, which will require further evaluation to determine a suitable LED replacement product. As mentioned, these units are expected to be converted in the later years of the program. Once a detailed plan is developed, it will be finalized with the City of Winnipeg's Lighting Systems Branch to ensure the plan meets their scheduling needs, minimizes public disturbances, and does not conflict with planned roadwork, etc.

[2] Illuminating Engineering Society of North America (IESNA) Recommended Practice 8, 2014 Edition (RP-8-14), Annex E, pg 49.

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Topic:	Area and Roadway Lighting		
Subtopic:	Outdoor Lighting Rate – Tariff No. 2015-80		
Issue:	Basis for the Billing Determinant		

PREAMBLE TO IR (IF ANY):

In light of Manitoba Hydro's LED conversion plans, additional detail related to the information provided in the response to COW/MH-I-1a is required to determine the impact of the proposed rate increase, combined with LED conversions, on the monthly Area and Roadway Lighting bills of the City of Winnipeg.

QUESTION:

e) Please provide the definition used by Manitoba Hydro for shared and exclusive units. The definitions should explicitly identify how the attachment of non-Manitoba Hydro facilities such as cable and/or telephone wires, wireless antennae, etc., is reflected in the classification of poles as shared or exclusive.

RATIONALE FOR QUESTION:

The Manitoba Hydro's records for both existing luminaires and the number of LED conversions are the Area and Roadway Lighting equivalent of the metered volume used to bill customers. There is no process analogous to certification of meters to provide confidence that the "meter reading" is correct. The City wishes to obtain the information necessary to determine whether it should have confidence in the luminaire count used by Manitoba Hydro for billing purposes.

RESPONSE:

A shared unit (shared pole) is defined as a wood or ornamental pole provided for the primary purpose of supporting electrical circuits other than those required for street lighting. This includes joint use agreement poles and poles installed by traffic departments for the primary

purpose of supporting traffic control devices and their related circuitry. This would include cable and/or telephone wires, wireless antennae, etc.

An exclusive unit (exclusive pole) is defined as a Manitoba Hydro-owned wood or ornamental pole provided for the primary purpose of supporting one of more street light luminaries and related circuitry. This includes poles to which are attached traffic control devices and related circuitry, festoon and decorative lighting.

Section:	Tab 6, Appendix 6.3	**Page No.:**	21 of 25
Topic:	Area and Roadway Lighting		
Subtopic:	Outdoor Lighting Rate – Tariff No. 2015-80		
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PREAMBLE TO IR (IF ANY):

In light of Manitoba Hydro's LED conversion plans, additional detail related to the information provided in the response to COW/MH-I-1a is required to determine the impact of the proposed rate increase, combined with LED conversions, on the monthly Area and Roadway Lighting bills of the City of Winnipeg.

QUESTION:

f) Please provide the details of the process used to periodically verify Manitoba Hydro's records that identify the classification (type and exclusive or shared) for Area and Roadway Lighting units.

g) Please provide a map identifying the boundaries of the 17 service locations.

RATIONALE FOR QUESTION:

The Manitoba Hydro's records for both existing luminaires and the number of LED conversions are the Area and Roadway Lighting equivalent of the metered volume used to bill customers. There is no process analogous to certification of meters to provide confidence that the "meter reading" is correct. The City wishes to obtain the information necessary to determine whether it should have confidence in the luminaire count used by Manitoba Hydro for billing purposes.

RESPONSE:

f) Manitoba Hydro does not have a process to periodically verify the classification for Area and Roadway Lighting units.

g) Addition of new services to one of the 17 City of Winnipeg lighting accounts within the customer billing system is not determined by map. Instead, the new lights are added to one of the 17 accounts based on the address of the light location. The details of the customer billing system accounts are not maintained in the GIS system. Reconciliation to the GIS mapping software will take place in the future as noted in the response to COW/MH-I-1c.

Section:	Tab 6, Appendix 6.3	**Page No.:**	21 of 25
Topic:	Area and Roadway Lighting		
Subtopic:	Outdoor Lighting Rate – Tariff No. 2015-80		
Issue:	Basis for the Billing Determinant		

PREAMBLE TO IR (IF ANY):

Manitoba Hydro's response to COW/MH-I-1c requires further clarification.

QUESTION:

a) Please explain the process used to "survey" all the poles and streetlight standards across the province, as noted in the response to COW/MH-I-1c.

b) Please confirm that the tables contained in Manitoba Hydro's response to COW/MH-I-1a are based on information obtained from the GIS mapping software.

c) If so, please confirm that the information provided corresponds exactly to the information contained in the GIS mapping software.

d) If not, please provide a version of the tables in the response to COW/MH-I-1a that is based on Manitoba Hydro's GIS mapping software.

RATIONALE FOR QUESTION:

The accuracy of the information provided is being confirmed.

RESPONSE:

a) The "intensive asset data capture program" referred to in COW/MH-I-1c was designed to collect data for asset management purposes. The program used third-party contractors to inventory Manitoba Hydro's wood pole and street light assets. Information collected through this program that has relevance to Area and Roadway lighting included GPS information and the wattage of lights. The contractor also affixed a barcode to each pole and street light standard. This information was entered into Manitoba Hydro's GIS System.

b) Not confirmed. The tables are based on information maintained in the customer billing system.

c) Please see the response to part b) above.

d) Detailed reconciliation to the GIS mapping software has not yet taken place. Future efforts will be directed toward the verification which will take place during the LED conversion and reconciliation of the classification of lights between the GIS and customer billing records.

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Topic:	Area and Roadway Lighting		
Subtopic:	Outdoor Lighting Rate – Tariff No. 2015-80		
Issue:	Basis for the Billing Determinant		

PREAMBLE TO IR (IF ANY):

Manitoba Hydro's response to COW/MH-I-1c states that it will be verifying "the number of fixtures replaced, the nominal wattage of the new light, and the exact location of each light" during the upcoming LED conversion. The City wishes to understand the actions that will be taken in the event that errors are found in the existing Manitoba Hydro records.

QUESTION:

a) Please confirm that the classification (shared and exclusive) will also be verified during the upcoming LED conversion.

b) Please confirm that the process of verification will also identify any errors in the existing information contained in the GIS mapping software.

c) In the event that errors in the information recorded in the GIS mapping software are found, please provide details of the steps that Manitoba Hydro will take to correct the bills rendered to customers in the past based on incorrect counts of the lights in its service territory.

d) Please confirm that the bills for Area and Roadway Lighting will be adjusted monthly to reflect the actual count and actual days of usage of the LED luminaires and corresponding luminaires replaced during the conversion program.

e) Please confirm that the LEDs added to the monthly billing will be identified as "conversion of existing" or "new".

RATIONALE FOR QUESTION:

35T

RESPONSE:

a) Confirmed.

b) Confirmed.

c) The steps taken to correct past bills will be determined based on the aggregate or overall impact of any errors that might be determined, and whether any discrepancies resulted in underbilling or overbilling to the customer.

In the event of aggregate underbilling, the adjustment will be retroactive for a maximum period of six months plus current bill. If the aggregate result is an overbilling, more detailed analysis will be undertaken to determine the period of the overcharge. The adjustment would then be retroactive for the full period of the overbilling.

d) Confirmed. Bills are updated monthly based on information provided by field personnel. Lights installed or removed during the period are billed based on the number of days in service.

e) This will not be done within the billing system. However, supplementary information can be provided to assist in reconciliation of changes to monthly billings.

Section:	Tab 6, Appendix 6.3	**Page No.:**	21 of 25
Topic:	Bill Impacts		
Subtopic:	Area and Roadway Lighting Rates		
Issue:	Outdoor Lighting Rate – Tariff No. 2015-80		

PREAMBLE TO IR (IF ANY):

Supplementary explanation of the table provided in Manitoba Hydro's response to PUB/MH-I-49a is required. Manitoba Hydro's response to PUB/MH-I-49b indicates that the rates reflect compliance other than the cost of energy usage.

QUESTION:

a) For each HPS category identified in the table, please provide a breakdown of the other cost components showing the dollar amount of the rate that is attributable to each cost component (e.g., allocated distribution system costs, dedicated capital such as the shared or exclusive pole, replacement reserve, etc.). Please provide two tables, one each for exclusive and shared, to facilitate easy comparison across wattages within each classification.

b) For each cost component, please identify the cost allocator used to allocate that cost component to rate classes (i.e., the applicable customer, demand or energy allocator).

c) For each cost component other than the energy consumed that is allocated on the basis of either demand or energy, please explain why that cost component is not taken into account in deriving the proposed monthly LED rate based on the HPS rate.

d) In the tables requested above, please also provide the cost differentials for each increment in wattage.

e) For each cost differential for the incremental wattages, please provide an explanation of the factors that cause the cost component to increase with wattage by more than the difference in the energy consumed.

f) Please explain why the adjustments used to derive the proposed LED rates do not take into account the lower replacement reserve and maintenance costs of LED lights due to their longer life.

g) Has Manitoba Hydro ever conducted a detailed cost of service study as the basis for establishing its HPS rates? If such a study exists, please provide a copy.

h) Given that the LED conversion program will result in significantly different usage of Manitoba Hydro's system for Area and Roadway Lighting, please provide Manitoba Hydro's plans for undertaking a comprehensive review of the cost of service for each category of lights. In particular, will this study be included as part of Manitoba Hydro's imminent cost of service filing?

i) Please explain how the proposed HPS and LED rates take into account the fact that in most cases, the shaft, top section and light fixtures for roughly 1000 decorative lighting poles are provided by the City of Winnipeg at no expense to Manitoba Hydro. This decorative lighting accounts for over 2500 of the 74,701 units identified in the response to COW/MH-I-1a.

RATIONALE FOR QUESTION:

36T

RESPONSE:

Response to parts a) through i):

The Area and Roadway Lighting ("ARL") class receives an allocation of common costs (Generation, Transmission, Sub Transmission and Distribution) in the Cost of Service Study. This class is also directly assigned dedicated costs related to street lighting, which includes the capital and maintenance costs of the fixtures.

Allocated common costs are approximately $6.3 million and directly assigned dedicated costs, less the classes allocation of Net Export Revenue, are approximately $13.9 million, on a total corporate revenue requirement of approximately $1.3 billion (as per PCOSS13).

Area & Roadway Lighting Revenue Requirement	**PCOSS13 ($ 000)**
Generation	2,738
Transmission	468
Subtransmission	520
Distribution Plant - Demand Related	1,362
Distribution Plant - Customer Related	754
Customer Service - General	218
Customer Service - Billing	285
Total Allocated Common Costs	6,344
Net Export Revenue	(306)
DSM	7
Dedicated - Operating	7,041
Dedicated - Depreciation	4,096
Dedicated - Interest	3,075
Total Area & Roadway Lighting Revenue Requirement	20,257

The following table provides a breakdown of cost components included in HPS rates based on allocated costs from PCOSS13. Included in this table is the basis of allocation for each function. Dedicated lighting costs (column 9) have been derived by fixture type as the difference between the proposed rate and the total allocated common costs.

Cost Component	Generation ($/mth)	Transmission ($/mth)	Subtransmission ($/mth)	Distribution Plant – Demand ($/mth)	Distribution Plant – Customer ($/mth)	Customer Service – Billing ($/mth)	Customer Service – General ($/mth)	Estimated Direct O&M and Dedicated Capital Costs ($/mth)	Proposed Monthly HPS Rate
1	2	3	4	5	6	7	8	9	10
Allocation Table Number	E12 & E13	D13 & D14	D21, D22, D23	D32, D36, D40	C23	C11	C10		
Basis of Allocation	12 Period Weighted Energy	2 CP Demand	Class NCP Demand	Class NCP Demand	Number of Connections	Weighted Customer	Weighted Ratio of Relative Customer Service	Direct Assignment	
Exclusive									
70w HPS	1.01	0.17	0.19	0.50	0.51	0.15	0.20	10.22	$12.97
70w 24hr HPS	1.01	0.17	0.19	0.50	0.51	0.15	0.20	11.83	$14.58
100w HPS	1.41	0.24	0.27	0.70	0.51	0.15	0.20	10.19	$13.68
150w HPS	1.99	0.34	0.38	0.99	0.51	0.15	0.20	10.89	$15.45
250w HPS	3.14	0.54	0.60	1.56	0.51	0.15	0.20	11.12	$17.81
400w HPS	4.91	0.84	0.93	2.44	0.85	0.15	0.20	14.37	$24.71
400w 2/100'	4.91	0.84	0.93	2.44	0.85	0.15	0.20	27.86	$38.20
400w 4/100'	4.91	0.84	0.93	2.44	0.85	0.15	0.20	17.72	$28.06
Shared									
70w HPS	1.01	0.17	0.19	0.50	0.51	0.15	0.20	5.15	$7.90
100w HPS	1.41	0.24	0.27	0.70	0.51	0.15	0.20	4.71	$8.20
150w HPS	1.99	0.34	0.38	0.99	0.51	0.15	0.20	5.49	$10.05
250w HPS	3.14	0.54	0.60	1.56	0.51	0.15	0.20	6.12	$12.81
400w HPS	4.91	0.84	0.93	2.44	0.85	0.15	0.20	4.36	$14.70

The difference in costs components between incremental HPS wattages is indicated in the following table:

Cost Component	Generation ($/mth)	Transmission ($/mth)	Subtransmission ($/mth)	Distribution Plant – Demand ($/mth)	Distribution Plant – Customer ($/mth)	Customer Service – Billing ($/mth)	Customer Service – General ($/mth)	Estimated Direct O&M and Dedicated Capital Costs ($/mth)	Total Change
Exclusive HPS									
100w vs 70w	0.40	0.07	0.08	0.20	-	-	-	(0.03)	$0.71
150w vs 100w	0.58	0.10	0.11	0.29	-	-	-	0.70	$1.77
250w vs 150w	1.15	0.20	0.22	0.57	-	-	-	0.22	$2.36
400w vs 250w	1.78	0.30	0.34	0.88	0.35	-	-	3.25	$6.90
Shared HPS									
100w vs 70w	0.40	0.07	0.08	0.20	-	-	-	(0.44)	$0.30
150w vs 100w	0.58	0.10	0.11	0.29	-	-	-	0.78	$1.85
250w vs 150w	1.15	0.20	0.22	0.57	-	-	-	0.62	$2.76
400w vs 250 w	1.78	0.30	0.34	0.88	0.35	-	-	(1.76)	$1.89

For the proposed HPS rates, the differential in cost components between incremental wattages related to Generation costs, as well as demand related Transmission, Subtransmission and Distribution cost are proportional to the difference in actual wattage and the energy consumed. Customer service costs, as well as capital and maintenance costs of dedicated lighting facilities are not directly related to lamp wattage or energy consumption.

Manitoba Hydro's conversion of street lighting to LED technology will be undertaken over a period of several years. LED technology has a higher capital cost but each unit is projected to have a much longer service life than the HPS fixture it replaces. In addition, LED technology consumes less energy, and therefore once fully implemented, will reduce the amount of common cost allocated to the ARL class on that basis.

At the outset of the program, relatively few LED installations will be in service, and the impact of the investment in LED technology will be modest. As the program to replace street lights progresses over time, the impact of the increased investment in LED will be taken into account in the preparation of each subsequent PCOSS. Future Cost of Service Studies will incorporate the reductions in the forecast load for the ARL Class, as well as reductions in annual maintenance costs associated with the new LED technology.

Notwithstanding the conversion is in its infancy, Manitoba Hydro elected to provide immediate recognition to the ARL Class of anticipated load (demand and energy) reductions. As a result, proposed monthly LED rates reflect load reductions and anticipated lower allocated generation, transmission, sub transmission and distribution plant costs. The customer-related portion of distribution plant is not affected by reductions in lamp wattage and energy consumption and no adjustment has therefore been made in the proposed LED rates.

Manitoba Hydro conducted a street lighting cost of service study in 1989/90 (a copy has been made available electronically only). While Manitoba Hydro expects to review the allocation of common costs to all customer classes by way of an upcoming Cost of Service Review, it has no plans to review the determination of costs by fixture type and size. It may be more appropriate to consider the merit of such an examination once the LED installation project has been completed.

The Terms and Conditions that govern decorative streetlight matters between the City of Winnipeg and Manitoba Hydro specify that there will not be a specialty rate for decorative lights. Given the capital related costs associated with decorative lighting are assumed by the City of Winnipeg, these costs do not form part of the revenue requirement for the ARL Class. Costs incurred by Manitoba Hydro for operation and maintenance associated with decorative lights are reflected in the revenue requirement for the ARL Class and are absorbed through the standard lighting rates. While the application of the unreduced rate for a decorative lamp may result in over collection of revenue requirement for the particular lamp, due to the small customer base and variety of lighting configurations used, on average the rates will collect the correct amount of revenue from lighting customers.

STREET LIGHTING COST OF SERVICE STUDY

RATE ZONE 1

MARCH 31, 1989

manitoba hydro

RATES DEPARTMENT

FOR INTERNAL USE ONLY
SEPTEMBER 1990

STREET LIGHT COST OF SERVICE STUDY
MARCH 31, 1989
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STREET LIGHT COST OF SERVICE STUDY

MARCH 31, 1989

1.0 Introduction

A Cost of Service Study is a method of allocating the utility's cost to the various customer rate classes. Its purpose is to determine a fair sharing of costs/revenue requirements among the customer classes. While there are many allocation methods, the central aim is always to allocate costs to the customer classes on the basis of known customer characteristics and cost causative relationships. The cost study conducted at Manitoba Hydro is an Average (Embedded) Cost Study in that the unit costs represent the average for all customers in a rate class/subclass based upon funds historically invested in plant in service.

The Street Light - Rate Zone 1 (Winnipeg) Cost of Service Study is an extension of the 1989 Historic Cost Study in that costs assigned to the Lighting Class from the study are allocated to lamp size (wattage) within the type of lighting system (Incandescent, Mercury Vapour, and High Pressure Sodium - HPS) within Rate Zone 1. In order to complete a study on the other two rate zones, Zone 2 - Medium Density and Zone 3 - Low Density, further analysis of operating costs is required.

The results of the study provide an approximation of the costs to operate and maintain the street lighting system within Rate Zone 1 as well as the relative performance of the major types of lighting systems and the lamp size within each system.

The costing methodology used in this study is similar to the 1988 Street Light Study, except unlike the previous study

where all dedicated street light facilities associated with a type of lighting system were aged, this study only makes consideration for the age of the lamp and luminaire, the components specifically tied to a lighting technology. The development of the costs assigned to various types and sizes of lights as well as the revenue is discussed in Sections 4-6 of this report.

Section 9 of this report provides results where the age of the lamp and luminaire system has not been considered in the costing methodology. These results may provide guidance in the amount of flexibility in rate design that is available in considering a demand side management program to convert the Incandescent and Mercury Vapour lighting systems to H.P.S.

2.0 Results

The results of the study indicate the degree to which the light systems and lamp sizes contribute to or draw from the Corporate reserves. The results of the study are in the form of revenue cost coverage (RCC) percentage where a RCC of 100% means the revenue received equals the cost to supply service. The results (Table 7.1) have been separated into distribution pole (shared with distribution plant) vs. exclusive pole and by size within each type of lighting system. The results by type of system after net export revenue (NER) and reserve transfer are summarized below:

Type of System	RCC Before NER & Reserve Transfer	RCC After NER & Reserve Transfer
Distribution Pole		
Incandescent	86%	88%
Mercury Vapour	119	122
High Pressure Sodium	110	118
Total Distribution Pole	115%	119%
Exclusive Pole		
Incandescent	110%	111%
Mercury Vapour	130	133
High Pressure Sodium	123	129
Total Exclusive Pole	125%	128%
System Totals		
Incandescent	108%	109%
Mercury Vapour	127	130
High Pressure Sodium	122	128
Total System	123%	126%

Costs assigned to the lighting systems have been separated into expenses on dedicated plant and into expenses on shared/common plant. Table 7.2 summarizes these costs into monthly costs for capital, operating and energy and compares these costs to the monthly rate. The capital component includes interest and depreciation on dedicated plant; the operating component includes the cost of maintaining dedicated street light plant; while the energy component includes all costs associated with generation through to distribution of electricity.

A summary of the monthly costs by capital, operating and energy component and by type of system for comparable lighting units follows:

STREET LIGHT COST OF SERVICE
MARCH 31, 1989
MONTHLY COMPONENT COST & MONTHLY REVENUE

TYPE OF SYSTEM	LUMEN OUTPUT	MONTHLY COMPONENT COSTS				COMPONENT COSTS %				MONTHLY RATE	RCC BEFORE NER & RESERVE TRANSFER	NER & RESERVE TRANSFER	RCC AFTER NER & RESERVE TRANSFER
		CAPITAL	OPERATING	ENERGY	TOTAL	CAPITAL	OPERATING	ENERGY	TOTAL				
DISTRIBUTION POLE													
300 W INCANDESCENT	5 800	$0.36	$3.27	$5.29	$8.92	4.0%	36.7%	59.3%	100.0%	$8.24	92.4%	$0.14	93.9%
500 W INCANDESCENT	9 500	$0.58	$3.45	$9.56	$13.59	4.3%	25.4%	70.3%	100.0%	$11.18	82.3%	$0.31	84.5%
175 W MERCURY VAPOUR	7 950	$0.79	$2.39	$3.54	$6.72	11.8%	35.6%	52.7%	100.0%	$8.24	122.6%	$0.20	125.6%
70 W HIGH PRESSURE SODIUM	5 800	$2.43	$2.95	$1.97	$7.35	33.1%	40.1%	26.8%	100.0%	$8.24	112.1%	$0.59	120.1%
100 W HIGH PRESSURE SODIUM	9 500	$2.49	$2.91	$2.33	$7.73	32.2%	37.6%	30.1%	100.0%	$9.00	116.4%	$0.62	124.5%
EXCLUSIVE POLE													
300 W INCANDESCENT	5 800	$1.27	$5.44	$5.29	$12.00	10.6%	45.3%	44.1%	100.0%	$13.21	110.1%	$0.16	111.4%
500 W INCANDESCENT	9 500	$1.66	$5.61	$9.56	$16.83	9.9%	33.3%	56.8%	100.0%	$18.20	108.1%	$0.38	110.4%
175 W MERCURY VAPOUR	7 950	$1.71	$4.55	$3.54	$9.80	17.4%	46.4%	36.1%	100.0%	$13.21	134.8%	$0.23	137.1%
70 W HIGH PRESSURE SODIUM	5 800	$3.34	$5.12	$1.97	$10.43	32.0%	49.1%	18.9%	100.0%	$13.21	126.7%	$0.62	132.6%
100 W HIGH PRESSURE SODIUM	9 500	$3.44	$5.08	$2.33	$10.85	31.7%	46.8%	21.5%	100.0%	$14.36	132.4%	$0.65	138.3%

NER is Net Export Revenue

3.0 Conclusions and Recommendations

The results of this study provide an approximation of the costs to operate and maintain the Street Lighting System within Rate Zone 1 as well as the relative performance the various size (wattage) of lights within the major types of lighting systems.

As with all such studies, many judgements are required in the classification and allocation of common/shared costs amongst the rate classifications. Judgements were also required because information needed to determine costs directly associated with street light plant are either not established or the data is not readily available. The results of this study provides our best approximation of the Street Lighting Rate Class's performance given the availability of information at the present time.

The Street Lighting Rate Class RCC of 126% is significantly above what is considered to be an acceptable RCC range. The Mercury Vapour and HPS Systems' RCC at close to 130% is significantly higher than the Incandescent System at 109%.

The RCC within each system is lower for distribution pole than for exclusive pole. The RCC on average decreases as the size (wattage) of the lights increase to the point where the RCC for high mast lighting is below what is considered to be an accepted range.

The results of this study provide a starting point to address the apparent inequities in the Street Lighting Rate Class's RCC. Future rate increases should be designed to address not only the overall inequity of the class's RCC but also the inequities within the class.

Information requirements to improve the accuracy of this study should be addressed in a cost effective manner and this type of study should be conducted on a periodic basis to monitor the RCC of both the various types and sizes of lights as well as to provide guidance for future rate design.

4.0 Revenue

Annual revenue by type and size of light is developed in Table 7.3 and is based upon the regional street light inventories as of March 31, 1989 and monthly street lighting rates effective April 1, 1988 to March 31, 1989.

The total revenue (all rate zones) calculated in this table is $12 940 560 compared to that recorded in the billing system of $12 618 141, a 2.6% error factor. This error factor reflects that changes to the street light inventory occurred over the course of the year and these are incorporated into the billing records but are not reflected in the study. However, the impact on the study results is mitigated as costs are also based upon year end inventories.

5.0 Allocation of Direct Costs

The costs assigned to the street light rate class are separated into two groupings: (1) direct costs, and (2) common/shared costs (see section 6).

Direct costs represent capital recovery of interest and depreciation associated with the installation of the street light standard, luminaire, street light cable etc., as well as operating costs associated with the maintenance of this investment.

5.1.0 Capital Recovery

Table 7.4 summarizes the capital recovery costs associated with each type and size of street light. These costs are net of capital contributions collected from the local authorities in connection with the installation of new street light investment.

Interest expense is based upon a rate of 9.714% applied against the net investment in street light plant (i.e. gross investment less accumulated depreciation and the unamortized portion of capital contribution). The interest rate is that used in the Historic Cost of Service Study for year end March 31, 1989 (based on year end net investment).

Depreciation expense is net of the current amortization of the capital contribution.

Thus, in order to calculate the capital recovery costs associated with each type and size of street light, the following components must first be determined:

(a) Gross Capital Investment
(b) Accumulated Depreciation
(c) Depreciation Expense
(d) Gross Capital Contribution
(e) Unamortized Capital Contribution
(f) Annual Amortization of Capital Contribution

5.1.1 Capital Investment

Manitoba Hydro's plant and work-in-progress records contain the details to determine total investment in street lighting by distribution system and thus their assignment to the rate zones. Investment by type and

size of light is not maintained and would require extensive effort to construct from the numerous capital work orders which record street light investment.

Investment by type and size of light in the study is developed in Table 7.5 and 7.6. It is based upon current construction costs and the street light inventory which identifies type and size of light within each rate zone. The current installation prices were developed using the quotation schedule back-up models used in Procedure Directive 205, "Quoting For Electric Service Facilities" or obtained from Central Region Distribution Engineering.

A mix of steel and wood pole installations for the exclusive pole grouping used in the study is 95/05 - Zone 1, 80/20 - Zone 2, 50/50 - Zone 3 for those lights where both steel and wood construction costs are shown. For Zone 1 this mix was provided by Central Region but for Zones 2 and 3 the mix used is estimated based upon data provided by Regional staff.

The current dollar investment calculated from this information is adjusted to reflect what has been historically booked in the street light accounts. In this adjustment process, the objective is to maintain cost distinction between the types and sizes of lights as well as the age of the plant. Unlike the previous study where all component costs associated with a type of lighting system were aged, this study only makes consideration for the age of the lamps and luminaires - the components specifically tied to a lighting technology.

Historically the incandescent lighting system was installed up to the late 1960's. The mercury vapour

system has been installed from around 1955 to present day but not to any significant amount since the introduction of high pressure sodium in the late 1970's. To approximate the historic investment in lamps and luminaires the current dollar investment was indexed using Statistics Canada's Electric Utility Construction Price Index for Distribution Systems (D482101) assuming an average age of 5 years for H.P.S., 15 years for mercury vapour and 20 years for incandescent systems. This is the same assumption as used in the previous study.

The calculation to adjust the current dollar investment to historic investment is shown on page 3 of Table 7.6. Here, a historic adjustment factor is determined for street light distribution costs (excluding lamp and luminaire) and applied against the current dollar investment in street light distribution (excluding lamp and luminaire) for each type and size of light. To this adjusted street light distribution cost, the indexed cost of the lamp and luminaire is added to come back to historic investment.

5.1.2 Depreciation Expense

Allocation of depreciation expense is shown in Table 7.7. Total depreciation expense booked for fiscal year end March 31, 1989 less that attributed to sentinel lights, has been prorated to the various types and sizes of lights based upon the assigned historic investment.

5.1.3 Accumulated Depreciation

Table 7.8 shows the assignment of accumulated depreciation which is based upon a weighted investment

in lamps and luminaires and the assigned historic investment in street light distribution. The first step in this process is to weight the investment in lamps and luminaires to reflect their relative age in comparison to the average service life of street lighting plant which for distribution systems is estimated to be 25 years. Thus the relative weights of 1.2 - .6 - .2 for incandescent, mercury vapour and H.P.S. respectively have been used to assign accumulated depreciation to lamps and luminaires. The balance of the accumulated depreciation is associated with dedicated street light distribution and this has been assigned proportional to distribution investment. Total accumulated depreciation is the sum of these two values.

5.1.4 Capital Contributions

Manitoba Hydro's service extension policy allows a construction allowance equal to three times annual revenue. Thus capital contributions are collected for the difference between the construction allowance and the cost to install street lighting plant.

Table 7.9 contains the assignment of the gross contribution to the lighting systems based upon current rates and current construction costs. The resulting capital contributions are in current dollars and these have been adjusted on a prorata basis to align the contributions to the historical contributions pertaining to street lighting.

5.1.5 Annual Amortization of Capital Contributions

Table 7.10 shows the annual amortization of the capital contribution which has been allocated proportional to

the assigned historical capital contribution developed in Table 7.9.

5.1.6 Unamortized Capital Contribution

The development of the unamortized capital contribution in Table 7.11 has also been allocated on a prorata basis.

5.2.0 Maintenance Costs

Central Region's street light maintenance costs are recorded either in functional accounts or in maintenance work orders. Costs can be separated into labour, material and expense. Separate Maintenance Work Orders have been established to record costs for street light standard painting, standard replacement and high mast lighting. Costs can be associated to/with the districts but not to the rate zones.

Costs recorded in these various operating accounts do not reflect employee benefits and corporate overheads, only direct costs. For this study overheads are based on those determined in the 1989 Annual Cost of Service Study adjusted to include interest and depreciation on buildings and general equipment assigned to street lighting in that study. The overhead costs are calculated at 188% of direct costs.

5.2.1 Methodology

Table 7.12 identifies the major types of maintenance activities associated with the street light system along with a frequency of service and a cost per unit of service.

To approximate the frequency of service on an annual basis Stores issues to the functional accounts were analyzed. Where possible, the frequency is reflective of the type of system. For lamp replacement the frequency split between group and spot was based upon information received from District staff. For the control relay and photocell, the frequencies were based upon a judgement of the number of lights controlled by each, reflective of the type of lighting system.

Cost per unit of service values are developed in Tables 8.2. Labour and expense values were obtained from Central Region staff based upon expected time and associated expense to perform an activity. Material costs have been taken from the Stores Catalogue. Cost per light for high mast lighting, underground breaks and standard repairs are shown in Table 8.2.3.

Table 7.13 provides a breakdown of the calculated maintenance costs developed in Table 7.12 into labour, material, expense and overhead components. The calculated maintenance costs have been compared to the total to be recovered by component and a correction factor calculated for each based on costs used in the 1989 Annual Cost of Service Study. These correction factors are used to adjust maintenance component costs for all types and sizes of lights.

The correction factors calculated in this table are: labour costs - increased by 19.1%; material costs decreased by .5%; expenses increased by 25.3%; overheads increased by 9.5%; an overall increase of 11.0%.

The maintenance costs incurred in the suburban districts include the cost to maintain street lights in Rate Zones 2 and 3. In 1988, Zone 1 street lights

represented 92% of the total street lights in the suburban districts. To approximate Zone 1 costs, the suburban districts maintenance costs have been reduced by 10%.

6.0 Allocation of Common/Shared Costs

The common/shared costs are those which the street light rate class shares with the other rate classes. These are costs associated with generation, transmission and distribution of electricity as well as for customer service and billing. Common costs are separated into customer, energy and demand related components and are allocated to the various rate classes based upon their share of the load (kW.h and kW) on the electric system or in proportion to the number of customers being served.

These costs are developed/determined in the Historic Cost of Service study. Table 7.14 identifies the component costs allocated to the Street Light Rate Class in the 1989 study as well as the determination of customer, energy and demand unit costs.

A description of the costs and allocation methods is included in Table 8.3.

6.1.1 Energy Costs

Annual energy costs by type and size of light is developed in Table 7.15. The costs are based upon a lamp wattage including ballast losses and 4 075.6 hours of burn per year for non seasonal and 1670.2 for seasonal lights.

A comparison of total energy requirements (all rate zones) calculated in Table 7.15 of 86 302 789 kW.h compared to that contained in the billing records of 85 373 857 kW.h indicated an error factor of 1.1%. This error factor again relates to the use of year end inventories as opposed to changes that occurred during the course of the year.

6.1.2 Demand Costs

Annual demand costs by type and size of light is developed in Table 7.16. The costs are based upon lamp wattage including ballast losses and the price per kW calculated in Table 7.14.

6.1.3 Customer Costs

Annual customer costs by type and size of light is developed in Table 7.17 and is based upon cost per light calculated in Table 7.14 and the street light inventory.

REPORT TABLES

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Table 7.1
Page 1

STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

DISTRIBUTION POLE		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL COSTS	CLASS REVENUE	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE
		INTEREST $	DEPRECIATION $	OPERATING $	ENERGY $	DEMAND $	CUSTOMER $	$	$	$	%	$	$	%
INCANDESCENT	60 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	300	75	673	6 822	4 244	5 528	1 275	18 618	17 205	(1 413)	92%	289	(1 124)	94%
SEAS	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	300	(3)	19	197	122	159	37	530	501	(29)	94%	6	(23)	96%
	500	644	1 295	11 536	13 005	16 942	2 045	45 469	37 431	(8 038)	82%	1 038	(7 000)	85%
SEAS	500	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	500	113	321	2 827	3 170	4 129	498	11 059	9 686	(1 373)	88%	237	(1 136)	90%
SEAS - FLOOD	500	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL INC.		829	2 309	21 383	20 541	26 759	3 856	75 676	64 823	(10 853)	86%	1 570	(9 283)	88%
MERCURY VAPOUR	175 W	10 398	13 975	73 332	39 157	51 009	18 772	206 644	253 232	46 588	123%	6 263	52 851	126%
SEAS	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
LANE	175	16 419	16 909	118 319	57 474	74 871	27 553	311 545	371 690	60 145	119%	9 622	69 767	122%
SEAS - LANE	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	3 274	3 986	20 933	14 665	19 104	4 970	66 931	76 885	9 954	115%	2 116	12 070	118%
FLOOD	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	400	10 315	10 846	50 290	51 222	66 728	10 944	200 344	232 371	32 026	116%	6 974	39 000	119%
LANE	400	208	216	1 305	1 304	1 698	279	5 009	5 914	905	118%	157	1 062	121%
FLOOD	400	156	164	696	755	983	161	2 915	3 524	609	121%	104	714	124%
SEAS	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL M. V.		40 769	46 096	264 875	164 576	214 393	62 679	793 388	943 616	150 228	119%	25 236	175 464	122%
H. P. SODIUM	70	17 166	10 550	33 640	6 738	8 778	6 971	83 843	94 035	10 192	112%	6 780	16 972	120%
	100	1 153	701	2 169	555	723	454	5 755	6 696	941	116%	462	1 403	124%
	150	7 730	4 620	14 805	5 129	6 682	2 881	41 847	46 358	4 511	111%	3 182	7 693	118%
	250	11 995	6 925	20 006	11 624	15 143	3 746	69 439	76 773	7 334	111%	5 163	12 496	118%
	400	2 148	1 212	2 901	2 728	3 554	564	13 107	12 354	(753)	94%	964	211	102%
TOTAL H.P.S.		40 192	24 007	73 521	26 775	34 879	14 616	213 990	236 216	22 225	110%	16 550	38 776	118%
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL DIST. POLE		81 790	72 411	359 779	211 892	276 031	81 150	1 083 054	1 244 654	161 600	115%	43 356	204 956	119%

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Table 7.1
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL COSTS	CLASS REVENUE	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE
		INTEREST $	DEPRECIATION $	OPERATING $	ENERGY $	DEMAND $	CUSTOMER $	$	$	$	%	$	$	%
EXCLUSIVE POLE														
INCANDESCENT	60 W	(2)	13	60	4	6	7	89	111	22	125%	(0)	22	124%
SEAS	60	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	150	(10)	78	368	67	87	44	635	667	32	105%	0	32	105%
FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	300	4 883	62 385	286 938	107 286	139 762	32 245	633 499	697 329	63 831	110%	8 406	72 237	111%
FLOOD	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	500	773	2 703	11 722	8 111	10 566	1 275	35 151	38 002	2 850	108%	785	3 636	110%
FLOOD	500	232	939	4 056	2 797	3 644	440	12 106	13 666	1 559	113%	258	1 817	115%
TOTAL INC.		5 876	66 117	303 144	118 266	154 065	34 011	681 480	749 775	68 295	110%	9 450	77 744	111%
MERCURY VAPOUR	175 W	53 848	177 774	618 576	173 048	225 430	82 961	1 331 636	1 794 129	462 493	135%	30 607	493 100	137%
LANE	175	142	169	1 081	306	398	147	2 243	3 170	928	141%	71	999	145%
SEAS	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	11 046	37 964	118 682	45 119	58 776	15 290	286 877	374 479	87 602	131%	6 870	94 472	133%
FLOOD	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	400	22 312	62 292	193 048	110 061	143 377	23 515	554 605	688 693	134 088	124%	15 040	149 128	127%
LANE	400	336	351	2 052	1 166	1 520	249	5 674	7 299	1 625	129%	196	1 821	132%
FLOOD	400	338	956	2 848	1 681	2 190	359	8 372	10 549	2 176	126%	229	2 405	129%
SEAS	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	700	21	194	497	291	379	37	1 418	1 425	7	100%	26	32	102%
	1000	492	2 817	6 166	5 825	7 588	520	23 408	23 353	(55)	100%	540	486	102%
60 ft	1000	132	2 064	4 585	2 871	3 741	257	13 649	13 100	(550)	96%	225	(324)	98%
4/ 100 ft	1000	(219)	5 678	14 755	5 579	7 268	498	33 558	26 349	(7 210)	79%	262	(6 948)	79%
TOTAL M. V.		88 446	290 258	962 290	345 947	450 666	123 833	2 261 441	2 942 547	681 105	130%	54 066	735 171	133%
H. P. SODIUM	70 W	94 416	107 485	309 176	35 682	46 483	36 914	630 157	798 307	168 150	127%	37 205	205 355	133%
24 hr.	70	391	295	648	152	92	73	1 651	1 772	121	107%	154	275	117%
SEAS	70	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	7 650	8 473	23 850	3 499	4 559	2 866	50 898	67 377	16 479	132%	3 052	19 532	138%
	150	32 347	38 877	102 691	21 131	27 528	11 867	234 441	293 751	59 310	125%	13 294	72 604	131%
SEAS	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	38 337	41 850	105 605	37 011	48 214	11 926	282 943	341 670	58 727	121%	16 492	75 219	127%
	400	36 867	61 810	84 456	49 881	64 981	10 321	308 316	380 160	71 844	123%	16 738	88 582	129%
4/ 100 ft	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
2/ 100 ft	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%

Table 7.1
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL COSTS	CLASS REVENUE	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE
		INTEREST	DEPRECIATION	OPERATING	ENERGY	DEMAND	CUSTOMER							
		$	$	$	$	$	$	$	$	$	%	$	$	%
60 ft	1000	10 973	14 726	24 313	14 749	19 213	1 283	85 256	82 131	(3 125)	96%	4 976	1 850	102%
4/ 100 ft	1000	669	1 304	3 001	1 011	1 317	88	7 390	5 790	(1 600)	78%	310	(1 290)	83%
2/ 100 ft	1000	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL H.P.S.		221 650	274 819	653 740	163 118	212 388	75 338	1 601 052	1 970 959	369 907	123%	92 221	462 128	129%
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
L.P.S. - FLOOD	200 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL EXCL. POLE		315 973	631 195	1 919 174	627 331	817 119	233 182	4 543 973	5 663 280	1 119 307	125%	155 737	1 275 044	128%
TOTAL SYSTEM		397 763	703 606	2 278 953	839 222	1 093 150	314 332	5 627 027	6 907 934	1 280 907	123%	199 093	1 480 000	126%
Reference Table		7.4	7.4	7.13	7.15	7.16	7.17		7.3					

EXPORT REVENUE 51 593
RESERVE DRAW DOWN 147 500
199 093

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Table 7.2
Page 1

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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO	REVENUE / COST	N.E.R. & RESERVE	RCC AFTER N.E.R. &
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $	RESERVES $	COVERAGE %	TRANSFER $	RESERVE TRSF. %
DISTRIBUTION POLE										
INCANDESCENT	60 W	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	300	0.36	3.27	5.29	8.92	$8.24	(0.68)	92%	0.14	94%
SEAS	300	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	300	0.26	3.29	5.29	8.84	$8.35	(0.49)	94%	0.11	96%
	500	0.58	3.45	9.56	13.58	$11.18	(2.40)	82%	0.31	85%
SEAS	500	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	500	0.53	3.46	9.56	13.55	$11.87	(1.68)	88%	0.29	90%
SEAS - FLOOD	500	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL INC.		0.50	3.39	8.10	11.99	10.27	(1.72)	86%	0.25	88%
MERCURY VAPOUR	175 W	0.79	2.39	3.54	6.72	$8.24	1.52	123%	0.20	126%
SEAS	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
LANE	175	0.74 *	2.62	3.54	6.91	$8.24	1.33	119%	0.21	122%
SEAS - LANE	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	0.89	2.57	4.76	8.23	$9.45	1.22	115%	0.26	118%
FLOOD	250	0.00	0.00	0.00	0.00	$9.83	0.00	0%	0.00	0%
SEAS	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	400	1.18	2.81	7.19	11.18	$12.97	1.79	116%	0.39	119%
LANE	400	0.93 *	2.86	7.19	10.99	$12.97	1.98	118%	0.35	121%
FLOOD	400	1.21	2.64	7.19	11.04	$13.35	2.31	121%	0.39	124%
SEAS	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL M. V.		0.85	2.58	4.30	7.73	9.20	1.46	119%	0.25	122%
H. P. SODIUM	70	2.43	2.95	1.97	7.35	$8.24	0.89	112%	0.59	120%
	100	2.49	2.91	2.33	7.73	$9.00	1.27	116%	0.62	124%
	150	2.62	3.14	3.12	8.87	$9.83	0.96	111%	0.67	118%
	250	3.09	3.26	4.98	11.32	$12.52	1.20	111%	0.84	118%
	400	3.64	3.14	7.41	14.18	$13.37	(0.81)	94%	1.04	102%
TOTAL H.P.S.		2.68	3.07	3.19	8.94	9.87	0.93	110%	0.69	118%
QUARTZ - FLOOD	500 W	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL DIST. POLE		1.16	2.71	4.28	8.15	9.37	1.22	115%	0.33	119%

*Capital cost is based on roadway luminaire. If sentinel luminaire is used capital cost per light/month is approximately 16¢ less for the 175W MV and 32¢ less for the 400W MV.

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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	RCC AFTER N.E.R. & RESERVE TRSF.
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $	$	%	$	%
EXCLUSIVE POLE										
INCANDESCENT	60 W	0.94	5.01	1.47	7.43	$9.26	1.83	125%	(0.03)	124%
SEAS	60	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	0.00	0.00	0.00	0.00	$9.26	0.00	0%	0.00	0%
FLOOD	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	150	0.94	5.12	2.76	8.82	$9.26	0.44	105%	0.01	105%
FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	200	0.00	0.00	0.00	0.00	$9.26	0.00	0%	0.00	0%
SEAS	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	300	1.27	5.44	5.29	12.00	$13.21	1.21	110%	0.16	111%
FLOOD	300	0.00	0.00	0.00	0.00	$12.85	0.00	0%	0.00	0%
SEAS	300	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	500	1.66	5.61	9.56	16.83	$18.20	1.37	108%	0.38	110%
FLOOD	500	1.63	5.63	9.56	16.81	$18.98	2.17	113%	0.36	115%
TOTAL INC.		1.29	5.44	5.50	12.24	13.47	1.23	110%	0.17	111%
MERCURY VAPOUR	175 W	1.71	4.55	3.54	9.80	$13.21	3.41	135%	0.23	137%
LANE	175	1.30	4.50	3.54	9.34	$13.21	3.87	141%	0.30	145%
SEAS	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	1.96	4.74	4.76	11.46	$14.96	3.50	131%	0.27	133%
FLOOD	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	400	2.20	5.01	7.19	14.41	$17.89	3.48	124%	0.39	127%
LANE	400	1.68	5.03	7.19	13.91	$17.89	3.98	129%	0.48	132%
FLOOD	400	2.20	4.84	7.19	14.24	$17.94	3.70	126%	0.39	129%
SEAS	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	700	3.58	8.28	11.77	23.64	$23.75	0.11	100%	0.43	102%
	1000	3.88	7.24	16.35	27.47	$27.41	(0.06)	100%	0.63	102%
60 ft	1000	5.23	10.92	16.35	32.50	$31.19	(1.31)	96%	0.54	98%
4/ 100 ft	1000	6.69	18.08	16.35	41.13	$32.29	(8.84)	79%	0.32	79%
TOTAL M. V.		1.87	4.75	4.54	11.16	14.51	3.36	130%	0.27	133%
H. P. SODIUM	70 W	3.34	5.12	1.97	10.43	$13.21	2.78	127%	0.62	133%
24 hr.	70	5.71	5.40	2.65	13.76	$14.77	1.01	107%	1.28	117%
SEAS	70	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	3.44	5.08	2.33	10.85	$14.36	3.51	132%	0.65	138%
	150	3.67	5.29	3.12	12.07	$15.12	3.05	125%	0.68	131%
SEAS	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	4.11	5.41	4.98	14.49	$17.50	3.01	121%	0.84	127%
	400	5.84	5.00	7.41	18.25	$22.50	4.25	123%	0.99	129%
4/ 100 ft	400	0.00	0.00	0.00	0.00	$25.58	0.00	0%	0.00	0%
2/ 100 ft	400	0.00	0.00	0.00	0.00	$34.84	0.00	0%	0.00	0%
60 ft	1000	12.24	11.58	16.78	40.60	$39.11	(1.49)	96%	2.37	102%

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Table 7.2
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	RCC AFTER N.E.R. & RESERVE TRSF.
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $	$	%	$	%
4/ 100 ft	1000	13.70	20.84	16.78	51.32	$40.21	(11.11)	78%	2.15	83%
2/ 100 ft	1000	0.00	0.00	0.00	0.00	$46.89	0.00	0%	0.00	0%
TOTAL H.P.S.		4.03	5.30	3.66	12.98	15.98	3.00	123%	0.75	129%
QUARTZ - FLOOD	500 W	0.00	0.00	0.00	0.00	20.17	0.00	0%	0.00	0%
L.P.S. - FLOOD	200 W	0.00	0.00	0.00	0.00	19.07	0.00	0%	0.00	0%
TOTAL EXCL. POLE		2.48	5.03	4.39	11.90	14.84	2.93	125%	0.41	128%
TOTAL SYSTEM		2.14	4.43	4.37	10.93	13.42	2.49	123%	0.39	126%

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STREET LIGHT COST OF SERVICE STUDY
MARCH 31, 1989
REVENUE

			INVENTORY TOTAL SYSTEM			RATES 88/89			REVENUE 88/89			TOTAL
			ZONE 1	ZONE 2	ZONE 3	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	SYSTEM $
DISTRIBUTION POLE												
INCANDESCENT	60	W	0	8	4	$0.00	$4.27	$4.53	0	410	217	627
	100		0	116	144	$0.00	$4.27	$4.53	0	5 944	7 828	13 772
SEAS	100		0	0	14	$0.00	$8.24	$8.24	0	0	692	0
FLOOD	100		0	0	6	$0.00	$0.00	$4.84	0	0	348	348
	150		0	19	38	$0.00	$4.27	$4.53	0	974	2 066	3 039
FLOOD	150		0	2	4	$0.00	$0.00	$4.84	0	0	232	232
	200		0	6	3	$0.00	$4.27	$4.53	0	307	163	471
SEAS	200		0	0	19	$0.00	$8.24	$8.24	0	0	939	939
SEAS - LANE	200		0	0	1	$0.00	$8.24	$8.24	0	0	49	49
	300		174	451	17	$8.24	$8.55	$8.75	17 205	46 273	1 785	65 263
SEAS	300		0	0	42	$0.00	$14.05	$14.05	0	0	3 541	3 541
FLOOD	300		5	6	0	$8.35	$8.81	$9.26	501	634	0	1 135
	500		279	1	1	$11.18	$11.70	$12.01	37 431	140	144	37 715
SEAS	500		0	0	1	$0.00	$18.52	$18.52	0	0	111	111
FLOOD	500		68	4	0	$11.87	$12.38	$13.03	9 686	594	0	10 280
SEAS - FLOOD	500		0	0	1	$0.00	$18.52	$18.52	0	0	111	111
TOTAL INC.			526	613	295				64 823	55 276	18 228	137 635
MERCURY VAPOUR	175	W	2 561	9 677	3 485	$8.24	$8.55	$8.75	253 232	992 860	365 925	1 612 017
SEAS	175		0	0	91	$0.00	$15.72	$15.72	0	0	8 583	8 583
LANE	175		3 759	331	70	$8.24	$8.55	$8.75	371 690	33 961	7 350	413 001
SEAS - LANE	175		0	0	16	$0.00	$15.72	$15.72	0	0	1 509	1 509
	250		678	406	71	$9.45	$9.57	$10.22	76 885	46 625	8 707	132 218
FLOOD	250		0	1	135	$9.83	$10.37	$10.93	0	124	17 707	17 831
SEAS	250		0	0	7	$0.00	$17.20	$17.20	0	0	722	722
	400		1 493	1 055	218	$12.97	$13.48	$14.12	232 371	170 657	36 938	439 965
LANE	400		38	43	10	$12.97	$13.48	$14.12	5 914	6 956	1 694	14 564
FLOOD	400		22	8	47	$13.35	$14.02	$14.69	3 524	1 346	8 285	13 155
SEAS	400		0	0	18	$0.00	$22.83	$22.83	0	0	2 466	2 466
SEAS - LANE	400		0	0	2	$0.00	$22.83	$22.83	0	0	274	274
TOTAL M. V.			8 551	11 521	4 170				943 616	1 252 529	460 161	2 656 305
H. P. SODIUM	70		951	634	176	$8.24	$8.55	$8.75	94 035	65 048	18 480	177 563
	100		62	301	48	$9.00	$9.32	$9.45	6 696	33 664	5 443	45 803
	150		393	368	130	$9.83	$10.14	$10.29	46 358	44 778	16 052	107 189
	250		511	113	57	$12.52	$13.08	$13.73	76 773	17 736	9 391	103 900
	400		77	0	9	$13.37	$14.90	$15.12	12 354	0	1 633	13 987
TOTAL H.P.S.			1 994	1 416	420				236 216	161 227	51 000	448 443
QUARTZ - FLOOD	500	W	0	1	3	$0.00	$18.33	$18.33	0	220	660	880
TOTAL DIST. POLE			11 071	13 551	4 888				1 244 654	1 469 252	530 048	3 243 262

STREET LIGHT COST OF SERVICE STUDY
MARCH 31, 1989
REVENUE

Table 7.3
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		INVENTORY TOTAL SYSTEM ZONE 1	ZONE 2	ZONE 3	RATES 88/89 ZONE 1 $	ZONE 2 $	ZONE 3 $	REVENUE 88/89 ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL SYSTEM $
EXCLUSIVE POLE											
INCANDESCENT	60 W	1	13	0	$9.26	$9.31	$9.51	111	1 452	0	1 563
SEAS	60	0	0	2	$0.00	$18.84	$18.84	0	0	226	226
	100	0	22	23	$9.26	$9.31	$9.51	0	2 458	2 625	5 083
FLOOD	100	0	0	2	$0.00	$0.00	$10.03	0	0	241	241
SEAS	100	0	0	7	$0.00	$18.84	$18.84	0	0	791	791
	150	6	13	11	$9.26	$9.31	$9.51	667	1 452	1 255	3 374
FLOOD	150	0	2	3	$0.00	$0.00	$10.03	0	0	361	361
SEAS	150	0	0	1	$0.00	$18.84	$18.84	0	0	113	113
SEAS - FLOOD	150	0	0	1	$0.00	$18.84	$18.84	0	0	113	113
	200	0	12	0	$9.26	$9.31	$9.51	0	1 341	0	1 341
SEAS	200	0	0	22	$0.00	$18.84	$18.84	0	0	2 487	2 487
	300	4 399	1 115	9	$13.21	$13.54	$13.59	697 329	181 165	1 468	879 962
FLOOD	300	0	3	1	$12.85	$13.36	$13.86	0	481	166	647
SEAS	300	0	0	48	$0.00	$22.38	$22.38	0	0	6 445	6 445
	500	174	0	0	$18.20	$18.58	$18.88	38 002	0	0	38 002
FLOOD	500	60	1	0	$18.98	$19.42	$19.68	13 666	233	0	13 899
TOTAL INC.		4 640	1 181	130				749 775	188 582	16 292	954 649
MERCURY VAPOUR	175 W	11 318	8 762	995	$13.21	$13.54	$13.59	1 794 129	1 423 650	162 265	3 380 044
LANE	175	20	33	2	$13.21	$13.54	$13.59	3 170	5 362	326	8 858
SEAS	175	0	0	120	$0.00	$26.33	$26.33	0	0	18 958	18 958
SEAS - LANE	175	0	0	3	$0.00	$26.33	$26.33	0	0	474	474
	250	2 086	915	200	$14.96	$15.58	$15.65	374 479	171 068	37 560	583 107
FLOOD	250	0	2	0	$0.00	$15.96	$16.61	0	383	0	383
SEAS	250	0	0	2	$0.00	$28.31	$28.31	0	0	340	340
	400	3 208	2 278	748	$17.89	$18.84	$19.24	688 693	515 010	172 698	1 376 402
LANE	400	34	19	4	$17.89	$18.84	$19.24	7 299	4 296	924	12 518
FLOOD	400	49	13	0	$17.94	$18.91	$19.81	10 549	2 950	0	13 499
SEAS	400	0	0	9	$0.00	$33.06	$33.06	0	0	1 785	1 785
SEAS - LANE	400	0	0	4	$0.00	$33.06	$33.06	0	0	793	793
	700	5	0	61	$23.75	$24.73	$25.31	1 425	0	18 527	19 952
	1000	71	12	13	$27.41	$29.34	$31.13	23 353	4 225	4 856	32 435
60 ft	1000	35	3	76	$31.19	$32.60	$35.34	13 100	1 174	32 230	46 503
4/ 100 ft	1000	68	0	417	$32.29	$33.61	$36.31	26 349	0	181 695	208 044
TOTAL M. V.		16 894	12 037	2 654				2 942 547	2 128 117	633 431	5 704 095
H. P. SODIUM	70 W	5 036	1 414	175	$13.21	$13.54	$13.59	798 307	229 747	28 539	1 056 592
24 hr.	70	10	0	0	$14.77	$15.10	$15.15	1 772	0	0	1 772
SEAS	70	0	0	2	$0.00	$26.33	$26.33	0	0	316	316
	100	391	813	90	$14.36	$14.69	$14.74	67 377	143 316	15 919	226 612
	150	1 619	1 139	251	$15.12	$15.47	$15.52	293 751	211 444	46 746	551 942
SEAS	150	0	0	41	$0.00	$29.53	$29.53	0	0	7 264	7 264
	250	1 627	598	275	$17.50	$18.40	$18.84	341 670	132 038	62 172	535 880
	400	1 408	34	262	$22.50	$23.39	$24.48	380 160	9 543	76 965	466 668
4/ 100 ft	400	0	0	138	$25.58	$26.59	$27.73	0	0	45 921	45 921
2/ 100 ft	400	0	0	20	$34.84	$37.48	$42.88	0	0	10 291	10 291

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STREET LIGHT COST OF SERVICE STUDY
MARCH 31, 1989
REVENUE

Table 7.3
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		INVENTORY TOTAL SYSTEM ZONE 1	ZONE 2	ZONE 3	RATES 88/89 ZONE 1 $	ZONE 2 $	ZONE 3 $	REVENUE 88/89 ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL SYSTEM $
60 ft	1000	175	0	0	$39.11	$40.53	$43.28	82 131	0	0	82 131
4/ 100 ft	1000	12	0	70	$40.21	$41.49	$44.24	5 790	0	37 162	42 952
2/ 100 ft	1000	0	0	12	$46.89	$49.53	$54.93	0	0	7 910	7 910
TOTAL H.P.S.		10 278	3 998	1 336				1 970 959	726 088	339 206	3 036 252
QUARTZ - FLOOD	500 W	0	4	0	$21.01	$23.25	$23.25	0	1 116	0	1 116
L.P.S. - FLOOD	200 W	0	2	0	$19.87	$20.58	$21.34	0	494	0	494
TOTAL EXCL. POLE		31 812	17 222	4 120				5 663 280	3 044 397	988 928	9 696 606
TOTAL SYSTEM		42 883	30 773	9 008				6 907 934	4 513 649	1 518 976	12 940 560

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Table 7.4
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

DISTRIBUTION POLE		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
INCANDESCENT	60 W	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0
FLOOD	150	0	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0	0
SEAS - LANE	200	0	0	0	0	0	0	0	0
	300	21 064	(15 215)	(5 075)	774	75	870	(196)	673
SEAS	300	0	0	0	0	0	0	0	0
FLOOD	300	620	(480)	(172)	(32)	(3)	26	(7)	19
	500	33 364	(24 605)	(2 130)	6 629	644	1 378	(82)	1 295
SEAS	500	0	0	0	0	0	0	0	0
FLOOD	500	8 336	(6 584)	(590)	1 162	113	344	(23)	321
SEAS - FLOOD	500	0	0	0	0	0	0	0	0
TOTAL INC.		63 384	(46 884)	(7 968)	8 532	829	2 618	(308)	2 309
MERCURY VAPOUR	175 W	418 166	(226 009)	(85 118)	107 039	10 398	17 269	(3 294)	13 975
SEAS	175	0	0	0	0	0	0	0	0
LANE	175	419 031	(239 794)	(10 217)	169 019	16 419	17 304	(395)	16 909
SEAS - LANE	175	0	0	0	0	0	0	0	0
	250	113 296	(61 688)	(17 905)	33 704	3 274	4 679	(693)	3 986
FLOOD	250	0	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0	0
	400	277 734	(155 428)	(16 123)	106 183	10 315	11 469	(624)	10 846
LANE	400	5 231	(3 089)	0	2 143	208	216	0	216
FLOOD	400	4 177	(2 350)	(221)	1 605	156	172	(9)	164
SEAS	400	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0	0
TOTAL M. V.		1 237 635	(688 357)	(129 584)	419 693	40 769	51 110	(5 014)	46 096
H. P. SODIUM	70	288 701	(76 509)	(35 477)	176 715	17 166	11 922	(1 373)	10 550
	100	18 822	(4 988)	(1 968)	11 866	1 153	777	(76)	701
	150	121 311	(31 649)	(10 084)	79 578	7 730	5 010	(390)	4 620
	250	173 461	(43 817)	(6 163)	123 482	11 995	7 163	(238)	6 925
	400	30 345	(7 155)	(1 076)	22 115	2 148	1 253	(42)	1 212
TOTAL H.P.S.		632 641	(164 116)	(54 768)	413 756	40 192	26 126	(2 119)	24 007
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0
TOTAL DIST. POLE		1 933 659	(899 358)	(192 320)	841 981	81 790	79 853	(7 442)	72 411

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Table 7.4
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
EXCLUSIVE POLE									
INCANDESCENT	60 W	599	(313)	(303)	(17)	(2)	25	(12)	13
SEAS	60	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0	0
	150	3 593	(1 878)	(1 819)	(104)	(10)	148	(70)	78
FLOOD	150	0	0	0	0	0	0	0	0
SEAS	150	0	0	0	0	0	0	0	0
SEAS - FLOOD	150	0	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0	0
	300	2 649 001	(1 383 835)	(1 214 896)	50 270	4 883	109 394	(47 009)	62 385
FLOOD	300	0	0	0	0	0	0	0	0
SEAS	300	0	0	0	0	0	0	0	0
	500	104 524	(54 867)	(41 695)	7 962	773	4 316	(1 613)	2 703
FLOOD	500	36 223	(19 437)	(14 401)	2 384	232	1 496	(557)	939
TOTAL INC.		2 793 939	(1 460 331)	(1 273 114)	60 494	5 876	115 380	(49 262)	66 117
MERCURY VAPOUR	175 W	7 256 279	(3 552 016)	(3 149 932)	554 332	53 848	299 658	(121 884)	177 774
LANE	175	4 993	(2 580)	(954)	1 458	142	206	(37)	169
SEAS	175	0	0	0	0	0	0	0	0
SEAS - LANE	175	0	0	0	0	0	0	0	0
	250	1 561 506	(762 409)	(685 386)	113 711	11 046	64 485	(26 520)	37 964
FLOOD	250	0	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0	0
	400	2 462 094	(1 214 575)	(1 017 825)	229 693	22 312	101 676	(39 384)	62 292
LANE	400	9 378	(4 981)	(940)	3 457	336	387	(36)	351
FLOOD	400	37 794	(18 686)	(15 628)	3 480	338	1 561	(605)	956
SEAS	400	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0	0
	700	8 581	(4 221)	(4 145)	215	21	354	(160)	194
	1000	121 318	(59 586)	(56 672)	5 060	492	5 010	(2 193)	2 817
60 ft	1000	94 257	(45 638)	(47 262)	1 357	132	3 892	(1 829)	2 064
4/ 100 ft	1000	272 142	(130 691)	(143 710)	(2 259)	(219)	11 238	(5 561)	5 678
TOTAL M. V.		11 828 341	(5 795 383)	(5 122 455)	910 503	88 446	488 467	(198 209)	290 258
H. P. SODIUM	70 W	3 935 238	(1 541 208)	(1 422 070)	971 961	94 416	162 511	(55 026)	107 485
24 hr.	70	9 516	(2 956)	(2 540)	4 021	391	393	(98)	295
SEAS	70	0	0	0	0	0	0	0	0
	100	305 536	(119 661)	(107 118)	78 757	7 650	12 618	(4 145)	8 473
	150	1 441 139	(574 803)	(533 343)	332 993	32 347	59 514	(20 637)	38 877
SEAS	150	0	0	0	0	0	0	0	0
	250	1 498 331	(586 128)	(517 547)	394 656	38 337	61 876	(20 026)	41 850
	400	2 501 186	(1 049 660)	(1 071 998)	379 528	36 867	103 290	(41 480)	61 810
4/ 100 ft	400	0	0	0	0	0	0	0	0
2/ 100 ft	400	0	0	0	0	0	0	0	0

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Table 7.4
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
60 ft	1000	575 504	(228 908)	(233 637)	112 959	10 973	23 766	(9 040)	14 726
4/ 100 ft	1000	55 171	(23 112)	(25 177)	6 882	669	2 278	(974)	1 304
2/ 100 ft	1000	0	0	0	0	0	0	0	0
TOTAL H.P.S.		10 321 622	(4 126 435)	(3 913 429)	2 281 757	221 650	426 245	(151 427)	274 819
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0
L.P.S. - FLOOD	200 W	0	0	0	0	0	0	0	0
TOTAL EXCL. POLE		24 943 902	(11 382 149)	(10 308 998)	3 252 755	315 973	1 030 092	(398 898)	631 195
TOTAL SYSTEM		26 877 561	(12 281 507)	(10 501 318)	4 094 736	397 763	1 109 945	(406 340)	703 606
Reference Table		7.6	7.8	7.11			7.7	7.10	

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Table 7.5
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STREET LIGHT INVESTMENT
MARCH 31, 1989

DISTRIBUTION POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	CURRENT INSTALLED PRICE STEEL	WOOD	CURRENT DOLLAR INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT * ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	0	8	4	12		$440	0	3 520	1 760	5 280	0	918	411	1 330
	100	0	116	144	260		440	0	51 040	63 360	114 400	0	13 314	14 811	28 126
SEAS	100	0	0	14	14		440	0	0	6 160	6 160	0	0	1 440	1 440
FLOOD	100	0	0	6	6		470	0	0	2 820	2 820	0	0	645	645
	150	0	19	38	57		440	0	8 360	16 720	25 080	0	2 181	3 909	6 089
FLOOD	150	0	2	4	6		470	0	940	1 880	2 820	0	237	430	666
	200	0	6	3	9		440	0	2 640	1 320	3 960	0	689	309	997
SEAS	200	0	0	19	19		440	0	0	8 360	8 360	0	0	1 954	1 954
SEAS - LANE	200	0	0	1	1		290	0	0	290	290	0	0	63	63
	300	174	451	17	642		440	76 560	198 440	7 480	282 480	21 064	51 765	1 749	74 577
SEAS	300	0	0	42	42		440	0	0	18 480	18 480	0	0	4 291	4 291
FLOOD	300	5	6	0	11		470	2 350	2 820	0	5 170	620	710	0	1 330
	500	279	1	1	281		440	122 760	440	440	123 640	33 364	114	102	33 580
SEAS	500	0	0	1	1		440	0	0	440	440	0	0	102	102
FLOOD	500	68	4	0	72		470	31 960	1 880	0	33 840	8 336	469	0	8 804
SEAS - FLOOD	500	0	0	1	1		470	0	0	470	470	0	0	107	107
TOTAL INC.		526	613	295	1 434			233 630	270 080	129 980	633 690	63 384	70 396	30 323	164 102
MERCURY VAPOUR	175 W	2 561	9 677	3 485	15 723		$460	1 178 060	4 451 420	1 603 100	7 232 580	418 166	1 521 975	508 371	2 448 512
SEAS	175	0	0	91	91		460	0	0	41 860	41 860	0	0	13 275	13 275
LANE	175	3 759	331	70	4 160		310	1 165 290	102 610	21 700	1 289 600	419 031	36 265	7 415	462 712
SEAS - LANE	175	0	0	16	16		310	0	0	4 960	4 960	0	0	1 695	1 695
	250	678	406	71	1 155		470	318 660	190 820	33 370	542 850	113 296	65 517	10 685	189 497
FLOOD	250	0	1	135	136		530	0	530	71 550	72 080	0	185	23 788	23 973
SEAS	250	0	0	7	7		470	0	0	3 290	3 290	0	0	1 053	1 053
	400	1 493	1 055	218	2 766		520	776 360	548 600	113 360	1 438 320	277 734	191 360	37 621	506 714
LANE	400	38	43	10	91		380	14 440	16 340	3 800	34 580	5 231	5 885	1 353	12 469
FLOOD	400	22	8	47	77		530	11 660	4 240	24 910	40 810	4 177	1 484	8 328	13 988
SEAS	400	0	0	18	18		520	0	0	9 360	9 360	0	0	3 106	3 106
SEAS - LANE	400	0	0	2	2		380	0	0	760	760	0	0	271	271
TOTAL M. V.		8 551	11 521	4 170	24 242			3 464 470	5 314 560	1 932 020	10 711 050	1 237 635	1 822 670	616 961	3 677 266
H. P. SODIUM	70 W	951	634	176	1 761		$480	456 480	304 320	84 480	845 280	288 701	188 833	50 505	528 039
	100	62	301	48	411		480	29 760	144 480	23 040	197 280	18 822	89 651	13 774	122 247
	150	393	368	130	891		480	188 640	176 640	62 400	427 680	121 311	111 585	38 071	270 967
	250	511	113	57	681		510	260 610	57 630	29 070	347 310	173 461	37 772	18 492	229 726
	400	77	0	9	86		550	42 350	0	4 950	47 300	30 345	0	3 440	33 786
TOTAL H.P.S.		1 994	1 416	420	3 830			977 840	683 070	203 940	1 864 850	632 641	427 842	124 282	1 184 765
QUARTZ - FLOOD	500 W	0	1	3	4		$530	0	530	1 590	2 120	0	125	350	475
TOTAL DIST. POLE		11 071	13 551	4 888	29 510			4 675 940	6 268 240	2 267 530	13 211 710	1 933 659	2 321 034	771 915	5 026 608

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STREET LIGHT INVESTMENT
MARCH 31, 1989

EXCLUSIVE POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	CURRENT INSTALLED PRICE STEEL	WOOD	CURRENT DOLLAR INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT * ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	1	13	0	14	$1 870	$940	1 824	21 892	0	23 716	599	6 636	0	7 235
SEAS	60	0	0	2	2	1 870	940	0	0	2 810	2 810	0	0	720	720
	100	0	22	23	45	1 870	940	0	37 048	32 315	69 363	0	11 231	8 275	19 506
FLOOD	100	0	0	2	2	1 900	970	0	0	2 870	2 870	0	0	729	729
SEAS	100	0	0	7	7	1 870	940	0	0	9 835	9 835	0	0	2 519	2 519
	150	6	13	11	30	1 870	940	10 941	21 892	15 455	48 288	3 593	6 636	3 958	14 188
FLOOD	150	0	2	3	5	1 900	970	0	3 428	4 305	7 733	0	1 028	1 093	2 121
SEAS	150	0	0	1	1	1 870	940	0	0	1 405	1 405	0	0	360	360
SEAS - FLOOD	150	0	0	1	1	1 900	970	0	0	1 435	1 435	0	0	364	364
	200	0	12	0	12	1 870	940	0	20 208	0	20 208	0	6 126	0	6 126
SEAS	200	0	0	22	22	1 870	940	0	0	30 910	30 910	0	0	7 916	7 916
	300	4 399	1 115	9	5 523	1 880	940	8 063 367	1 886 580	12 690	9 962 637	2 649 001	572 031	3 250	3 224 282
FLOOD	300	0	3	1	4	1 910	970	0	5 166	1 440	6 606	0	1 550	366	1 915
SEAS	300	0	0	48	48	1 880	940	0	0	67 680	67 680	0	0	17 334	17 334
	500	174	0	0	174	1 880	940	318 942	0	0	318 942	104 524	0	0	104 524
FLOOD	500	60	1	0	61	1 910	970	111 780	1 722	0	113 502	36 223	515	0	36 738
TOTAL INC.		4 640	1 181	130	5 951			8 506 854	1 997 936	183 150	10 687 940	2 793 939	605 753	46 883	3 446 576
MERCURY VAPOUR	175 W	11 318	8 762	995	21 075	$1 890	$960	20 864 733	14 930 448	1 417 875	37 213 056	7 256 279	4 845 268	400 801	12 502 348
LANE	175	20	33	2	55	710		14 200	23 430	1 420	39 050	4 993	7 814	425	13 232
SEAS	175	0	0	120	120	1 890	960	0	0	171 000	171 000	0	0	48 338	48 338
SEAS - LANE	175	0	0	3	3	710		0	0	2 130	2 130	0	0	637	637
	250	2 086	915	200	3 201	2 210	1 080	4 492 201	1 815 360	329 000	6 636 561	1 561 506	588 314	92 668	2 242 488
FLOOD	250	0	2	0	2	2 270	1 140	0	4 088	0	4 088	0	1 333	0	1 333
SEAS	250	0	0	2	2	2 210	1 080	0	0	3 290	3 290	0	0	927	927
	400	3 208	2 278	748	6 234	2 260	1 130	7 068 828	4 633 452	1 267 860	12 970 140	2 462 094	1 510 264	363 100	4 335 458
LANE	400	34	19	4	57	780		26 520	14 820	3 120	44 460	9 378	5 018	967	15 363
FLOOD	400	49	13	0	62	2 270	1 140	108 462	26 572	0	135 034	37 794	8 672	0	46 466
SEAS	400	0	0	9	9	2 260	1 130	0	0	15 255	15 255	0	0	4 369	4 369
SEAS - LANE	400	0	0	4	4	780		0	0	3 120	3 120	0	0	967	967
	700	5	0	61	66	4 930		24 650	0	300 730	325 380	8 581	0	84 413	92 994
	1000	71	12	13	96	4 910		348 610	58 920	63 830	471 360	121 318	19 126	17 882	158 326
60 ft	1000	35	3	76	114	7 760		271 600	23 280	589 760	884 640	94 257	7 501	162 215	263 973
4/ 100 ft	1000	68	0	417	485	11 550		785 400	0	4 816 350	5 601 750	272 142	0	1 310 855	1 582 997
TOTAL M. V.		16 894	12 037	2 654	31 585			34 005 204	21 530 370	8 984 740	64 520 314	11 828 341	6 993 310	2 488 566	21 310 216
H. P. SODIUM	70 W	5 036	1 414	175	6 625	$1 910	$980	9 384 586	2 437 736	252 875	12 075 197	3 935 238	980 685	95 183	5 011 105
24 hr.	70	10	0	0	10	1 780		17 800	0	0	17 800	9 516	0	0	9 516
SEAS	70	0	0	2	2	1 910	980	0	0	2 890	2 890	0	0	1 088	1 088
	100	391	813	90	1 294	1 910	980	728 629	1 401 612	130 050	2 260 291	305 536	563 859	48 951	918 346
	150	1 619	1 139	251	3 009	2 220	1 090	3 502 707	2 271 166	415 405	6 189 278	1 441 139	893 904	152 033	2 487 076
SEAS	150	0	0	41	41	2 220	1 090	0	0	67 855	67 855	0	0	24 834	24 834
	250	1 627	598	275	2 500	2 250	1 120	3 568 825	1 210 352	463 375	5 242 552	1 498 331	487 886	175 251	2 161 468
	400	1 408	34	262	1 704	4 726	1 250	6 409 498	137 047	782 856	7 329 401	2 501 186	50 906	270 219	2 822 311
4/ 100 ft	400	0	0	138	138	11 370		0	0	1 569 060	1 569 060	0	0	450 316	450 316
2/ 100 ft	400	0	0	20	20	22 490		0	0	449 800	449 800	0	0	124 479	124 479
60 ft	1000	175	0	0	175	7 970		1 394 750	0	0	1 394 750	575 504	0	0	575 504

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STREET LIGHT INVESTMENT
MARCH 31, 1989

		SUMMARY OF INVENTORY				CURRENT INSTALLED PRICE		CURRENT DOLLAR INVESTMENT				HISTORIC INVESTMENT *			
		ZONE 1	ZONE 2	ZONE 3	TOTAL	STEEL	WOOD	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
4/ 100 ft	1000	12	0	70	82	11 760		141 120	0	823 200	964 320	55 171	0	262 511	317 682
2/ 100 ft	1000	0	0	12	12	22 890		0	0	274 680	274 680	0	0	80 564	80 564
TOTAL H.P.S.		10 278	3 998	1 336	15 612			25 147 913	7 457 913	5 232 046	37 837 872	10 321 622	2 977 240	1 685 429	14 984 290
QUARTZ - FLOOD	500 W	0	4	0	4	$2 270	$1 140	0	8 176	0	8 176	0	2 428	0	2 428
L.P.S. - FLOOD	200 W	0	2	0	2	$2 270	$1 140	0	4 088	0	4 088	0	1 214	0	1 214
TOTAL EXCL. POLE		31 812	17 222	4 120	53 154			67 659 970	30 998 483	14 399 936	113 058 389	24 943 902	10 579 945	4 220 877	39 744 724
TOTAL SYSTEM		42 883	30 773	9 008	82 664			72 335 910	37 266 723	16 667 466	126 270 099	26 877 561	12 900 979	4 992 792	44 771 332

Reference Table 8.1 7.6

	ZONE 1	ZONE 2	ZONE 3
STEEL	95%	80%	50%
WOOD	5%	20%	50%

* See page 3 of Table 7.6 for calculation of historic investment.

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STREET LIGHT COST OF SERVICE
CALCULATION OF HISTORIC INVESTMENT

DISTRIBUTION POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	INSTALLED PRICE OF LAMP & LUMINAIRE	CURRENT DOLLAR INVESTMENT LAMP & LUMINAIRE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	PRICE INDEX	INDEXED INVESTMENT LAMP & LUMINAIRE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT * ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	0	8	4	12	$210	0	1 680	840	2 520	0.1981757	0	333	166	499	0	918	411	1 330
	100	0	116	144	260	210	0	24 360	30 240	54 600	0.1981757	0	4 828	5 993	10 820	0	13 314	14 811	28 126
SEAS	100	0	0	14	14	210	0	0	2 940	2 940	0.1981757	0	0	583	583	0	0	1 440	1 440
FLOOD	100	0	0	6	6	260	0	0	1 560	1 560	0.1981757	0	0	309	309	0	0	645	645
	150	0	19	38	57	210	0	3 990	7 980	11 970	0.1981757	0	791	1 581	2 372	0	2 181	3 909	6 089
FLOOD	150	0	2	4	6	260	0	520	1 040	1 560	0.1981757	0	103	206	309	0	237	430	666
	200	0	6	3	9	210	0	1 260	630	1 890	0.1981757	0	250	125	375	0	689	309	997
SEAS	200	0	0	19	19	210	0	0	3 990	3 990	0.1981757	0	0	791	791	0	0	1 954	1 954
SEAS - LANE	200	0	0	1	1	210	0	0	210	210	0.1981757	0	0	42	42	0	0	63	63
	300	174	451	17	642	210	36 540	94 710	3 570	134 820	0.1981757	7 241	18 769	707	26 718	21 064	51 765	1 749	74 577
SEAS	300	0	0	42	42	220	0	0	9 240	9 240	0.1981757	0	0	1 831	1 831	0	0	4 291	4 291
FLOOD	300	5	6	0	11	260	1 300	1 560	0	2 860	0.1981757	258	309	0	567	620	710	0	1 330
	500	279	1	1	281	220	61 380	220	220	61 820	0.1981757	12 164	44	44	12 251	33 364	114	102	33 580
SEAS	500	0	0	1	1	220	0	0	220	220	0.1981757	0	0	44	44	0	0	102	102
FLOOD	500	68	4	0	72	270	18 360	1 080	0	19 440	0.1981757	3 639	214	0	3 853	8 336	469	0	8 804
SEAS - FLOOD	500	0	0	1	1	270	0	0	270	270	0.1981757	0	0	54	54	0	0	107	107
TOTAL INC.		526	613	295	1 434		117 580	129 380	62 950	309 910		23 302	25 640	12 475	61 417	63 384	70 396	30 323	164 102
MERCURY VAPOUR	175 W	2 561	9 677	3 485	15 723	$240	614 640	2 322 480	836 400	3 773 520	0.3637368	223 567	844 772	304 230	1 372 568	418 166	1 521 975	508 371	2 448 512
SEAS	175	0	0	91	91	240	0	0	21 840	21 840	0.3637368	0	0	7 944	7 944	0	0	13 275	13 275
LANE	175	3 759	331	70	4 160	240	902 160	79 440	16 800	998 400	0.3637368	328 149	28 895	6 111	363 155	419 031	36 265	7 415	462 712
SEAS - LANE	175	0	0	16	16	240	0	0	3 840	3 840	0.3637368	0	0	1 397	1 397	0	0	1 695	1 695
	250	678	406	71	1 155	260	176 280	105 560	18 460	300 300	0.3637368	64 120	38 396	6 715	109 230	113 296	65 517	10 685	189 497
FLOOD	250	0	1	135	136	360	0	360	48 600	48 960	0.3637368	0	131	17 678	17 809	0	185	23 788	23 973
SEAS	250	0	0	7	7	260	0	0	1 820	1 820	0.3637368	0	0	662	662	0	0	1 053	1 053
	400	1 493	1 055	218	2 766	350	522 550	369 250	76 300	968 100	0.3637368	190 071	134 310	27 753	352 134	277 734	191 360	37 621	506 714
LANE	400	38	43	10	91	350	13 300	15 050	3 500	31 850	0.3637368	4 838	5 474	1 273	11 585	5 231	5 885	1 353	12 469
FLOOD	400	22	8	47	77	370	8 140	2 960	17 390	28 490	0.3637368	2 961	1 077	6 325	10 363	4 177	1 484	8 328	13 988
SEAS	400	0	0	18	18	350	0	0	6 300	6 300	0.3637368	0	0	2 292	2 292	0	0	3 106	3 106
SEAS - LANE	400	0	0	2	2	350	0	0	700	700	0.3637368	0	0	255	255	0	0	271	271
TOTAL M. V.		8 551	11 521	4 170	24 242		2 237 070	2 895 100	1 051 950	6 184 120		813 705	1 053 055	382 633	2 249 392	1 237 635	1 822 670	616 961	3 677 266
H. P. SODIUM	70 W	951	634	176	1 761	$270	256 770	171 180	47 520	475 470	0.8557213	219 724	146 482	40 664	406 870	288 701	188 833	50 505	528 039
	100	62	301	48	411	270	16 740	81 270	12 960	110 970	0.8557213	14 325	69 544	11 090	94 959	18 822	89 651	13 774	122 247
	150	393	368	130	891	280	110 040	103 040	36 400	249 480	0.8557213	94 164	88 174	31 148	213 485	121 311	111 585	38 071	270 967
	250	511	113	57	681	320	163 520	36 160	18 240	217 920	0.8557213	139 928	30 943	15 608	186 479	173 461	37 772	18 492	229 726
	400	77	0	9	86	400	30 800	0	3 600	34 400	0.8557213	26 356	0	3 081	29 437	30 345	0	3 440	33 786
TOTAL H.P.S.		1 994	1 416	420	3 830		577 870	391 650	118 720	1 088 240		494 496	335 143	101 591	931 230	632 641	427 842	124 282	1 184 765
QUARTZ - FLOOD	500 W	0	1	3	4	$360	0	360	1 080	1 440	0.1981757	0	71	214	285	0	125	350	475
TOTAL DIST. POLE		11 071	13 551	4 888	29 510		2 932 520	3 416 490	1 234 700	7 583 710		1 331 502	1 413 909	496 913	3 242 325	1 933 659	2 321 034	771 915	5 026 608

Table 7.6
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STREET LIGHT COST OF SERVICE
CALCULATION OF HISTORIC INVESTMENT

EXCLUSIVE POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	INSTALLED PRICE OF LAMP & LUMINAIRE	CURRENT DOLLAR INVESTMENT LAMP & LUMINAIRE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	PRICE INDEX	INDEXED INVESTMENT LAMP & LUMINAIRE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT * ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	1	13	0	14	$210	210	2 730	0	2 940	0.1981757	42	541	0	583	599	6 636	0	7 235
SEAS	60	0	0	2	2	210	0	0	420	420	0.1981757	0	0	83	83	0	0	720	720
	100	0	22	23	45	210	0	4 620	4 830	9 450	0.1981757	0	916	957	1 873	0	11 231	8 275	19 506
FLOOD	100	0	0	2	2	260	0	0	520	520	0.1981757	0	0	103	103	0	0	729	729
SEAS	100	0	0	7	7	210	0	0	1 470	1 470	0.1981757	0	0	291	291	0	0	2 519	2 519
	150	6	13	11	30	210	1 260	2 730	2 310	6 300	0.1981757	250	541	458	1 249	3 593	6 636	3 958	14 188
FLOOD	150	0	2	3	5	260	0	520	780	1 300	0.1981757	0	103	155	258	0	1 028	1 093	2 121
SEAS	150	0	0	1	1	210	0	0	210	210	0.1981757	0	0	42	42	0	0	360	360
SEAS - FLOOD	150	0	0	1	1	260	0	0	260	260	0.1981757	0	0	52	52	0	0	364	364
	200	0	12	0	12	210	0	2 520	0	2 520	0.1981757	0	499	0	499	0	6 126	0	6 126
SEAS	200	0	0	22	22	210	0	0	4 620	4 620	0.1981757	0	0	916	916	0	0	7 916	7 916
	300	4 399	1 115	9	5 523	210	923 790	234 150	1 890	1 159 830	0.1981757	183 073	46 403	375	229 850	2 649 001	572 031	3 250	3 224 282
FLOOD	300	0	3	1	4	260	0	780	260	1 040	0.1981757	0	155	52	206	0	1 550	366	1 915
SEAS	300	0	0	48	48	210	0	0	10 080	10 080	0.1981757	0	0	1 998	1 998	0	0	17 334	17 334
	500	174	0	0	174	220	38 280	0	0	38 280	0.1981757	7 586	0	0	7 586	104 524	0	0	104 524
FLOOD	500	60	1	0	61	270	16 200	270	0	16 470	0.1981757	3 210	54	0	3 264	36 223	515	0	36 738
TOTAL INC.		4 640	1 181	130	5 951		979 740	248 320	27 650	1 255 710		194 161	49 211	5 480	248 851	2 793 939	605 753	46 883	3 446 576
MERCURY VAPOUR	175 W	11 318	8 762	995	21 075	$240	2 716 320	2 102 880	238 800	5 058 000	0.3637368	988 026	764 895	86 860	1 839 781	7 256 279	4 845 268	400 801	12 502 348
LANE	175	20	33	2	55	240	4 800	7 920	480	13 200	0.3637368	1 746	2 881	175	4 801	4 993	7 814	425	13 232
SEAS	175	0	0	120	120	240	0	0	28 800	28 800	0.3637368	0	0	10 476	10 476	0	0	48 338	48 338
SEAS - LANE	175	0	0	3	3	240	0	0	720	720	0.3637368	0	0	262	262	0	0	637	637
	250	2 086	915	200	3 201	260	542 360	237 900	52 000	832 260	0.3637368	197 276	86 533	18 914	302 724	1 561 506	588 314	92 668	2 242 488
FLOOD	250	0	2	0	2	360	0	720	0	720	0.3637368	0	262	0	262	0	1 333	0	1 333
SEAS	250	0	0	2	2	260	0	0	520	520	0.3637368	0	0	189	189	0	0	927	927
	400	3 208	2 278	748	6 234	350	1 122 800	797 300	261 800	2 181 900	0.3637368	408 404	290 007	95 226	793 637	2 462 094	1 510 264	363 100	4 335 458
LANE	400	34	19	4	57	350	11 900	6 650	1 400	19 950	0.3637368	4 328	2 419	509	7 257	9 378	5 018	967	15 363
FLOOD	400	49	13	0	62	370	18 130	4 810	0	22 940	0.3637368	6 595	1 750	0	8 344	37 794	8 672	0	46 466
SEAS	400	0	0	9	9	350	0	0	3 150	3 150	0.3637368	0	0	1 146	1 146	0	0	4 369	4 369
SEAS - LANE	400	0	0	4	4	350	0	0	1 400	1 400	0.3637368	0	0	509	509	0	0	967	967
	700	5	0	61	66	730	3 650	0	44 530	48 180	0.3637368	1 328	0	16 197	17 525	8 581	0	84 413	92 994
	1000	71	12	13	96	700	49 700	8 400	9 100	67 200	0.3637368	18 078	3 055	3 310	24 443	121 318	19 126	17 882	158 326
60 ft	1000	35	3	76	114	700	24 500	2 100	53 200	79 800	0.3637368	8 912	764	19 351	29 026	94 257	7 501	162 215	263 973
4/ 100 ft	1000	68	0	417	485	700	47 600	0	291 900	339 500	0.3637368	17 314	0	106 175	123 489	272 142	0	1 310 855	1 582 997
TOTAL M. V.		16 894	12 037	2 654	31 585		4 541 760	3 168 680	987 800	8 698 240		1 652 006	1 152 566	359 299	3 163 871	11 828 341	6 993 310	2 488 566	21 310 216
H. P. SODIUM	70 W	5 036	1 414	175	6 625	$270	1 359 720	381 780	47 250	1 788 750	0.8557213	1 163 541	326 697	40 433	1 530 672	3 935 238	980 685	95 183	5 011 105
24 hr.	70	10	0	0	10	660	6 600	0	0	6 600	0.8557213	5 648	0	0	5 648	9 516	0	0	9 516
SEAS	70	0	0	2	2	270	0	0	540	540	0.8557213	0	0	462	462	0	0	1 088	1 088
	100	391	813	90	1 294	270	105 570	219 510	24 300	349 380	0.8557213	90 339	187 839	20 794	298 972	305 536	563 859	48 951	918 346
	150	1 619	1 139	251	3 009	280	453 320	318 920	70 280	842 520	0.8557213	387 916	272 907	60 140	720 962	1 441 139	893 904	152 033	2 487 076
SEAS	150	0	0	41	41	280	0	0	11 480	11 480	0.8557213	0	0	9 824	9 824	0	0	24 834	24 834
	250	1 627	598	275	2 500	320	520 640	191 360	88 000	800 000	0.8557213	445 523	163 751	75 303	684 577	1 498 331	487 886	175 251	2 161 468
	400	1 408	34	262	1 704	400	563 200	13 600	104 800	681 600	0.8557213	481 942	11 638	89 680	583 260	2 501 186	50 906	270 219	2 822 311
4/ 100 ft	400	0	0	138	138	400	0	0	55 200	55 200	0.8557213	0	0	47 236	47 236	0	0	450 316	450 316
2/ 100 ft	400	0	0	20	20	400	0	0	8 000	8 000	0.8557213	0	0	6 846	6 846	0	0	124 479	124 479
60 ft	1000	175	0	0	175	1 050	183 750	0	0	183 750	0.8557213	157 239	0	0	157 239	575 504	0	0	575 504

Table 7.6
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STREET LIGHT COST OF SERVICE
CALCULATION OF HISTORIC INVESTMENT

		SUMMARY OF INVENTORY				INSTALLED PRICE OF LAMP & LUMINAIRE	CURRENT DOLLAR INVESTMENT LAMP & LUMINAIRE				PRICE INDEX	INDEXED INVESTMENT LAMP & LUMINAIRE				HISTORIC INVESTMENT *			
		ZONE 1	ZONE 2	ZONE 3	TOTAL		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
4/ 100 ft	1000	12	0	70	82	1 050	12 600	0	73 500	86 100	0.8557213	10 782	0	62 896	73 678	55 171	0	262 511	317 682
2/ 100 ft	1000	0	0	12	12	1 050	0	0	12 600	12 600	0.8557213	0	0	10 782	10 782	0	0	80 564	80 564
TOTAL H.P.S.		10 278	3 998	1 336	15 612		3 205 400	1 125 170	495 950	4 826 520		2 742 929	962 832	424 395	4 130 156	10 321 622	2 977 240	1 685 429	14 984 290
QUARTZ - FLOOD	500 W	0	4	0	4	$360	0	1 440	0	1 440	0.1981757	0	285	0	285	0	2 428	0	2 428
L.P.S. - FLOOD	200 W	0	2	0	2	$360	0	720	0	720	0.1981757	0	143	0	143	0	1 214	0	1 214
TOTAL EXCL. POLE		31 812	17 222	4 120	53 154		8 726 900	4 544 330	1 511 400	14 782 630		4 589 096	2 165 037	789 174	7 543 306	24 943 902	10 579 945	4 220 877	39 744 724
TOTAL SYSTEM		42 883	30 773	9 008	82 664		11 659 420	7 960 820	2 746 100	22 366 340		5 920 598	3 578 946	1 286 087	10 785 631	26 877 561	12 900 979	4 992 792	44 771 332

Reference Table 8.1

* CALCULATION OF HISTORIC INVESTMENT FOR EACH TYPE & SIZE OF LIGHT BY RATE ZONE IS BASED ON THE FOLLOWING FORMULA:
((4-5)*7)+2

	ZONE 1	ZONE 2	ZONE 3
1) HISTORIC PLANT INVESTMENT	26 877 561	12 900 979	4 992 792
2) LESS INDEXED COST LAMP & LUMINAIRE	(5 920 598)	(3 578 946)	(1 286 087)
3) HISTORIC INVESTMENT ST. LIGHT DISTRIBUTION	20 956 963	9 322 033	3 706 705
4) CURRENT DOLLAR INVESTMENT	72 335 910	37 266 723	16 667 466
5) LESS CURRENT DOLLAR INVESTMENT LAMP & LUMINAIRE	(11 659 420)	(7 960 820)	(2 746 100)
6) CURRENT DOLLAR INVESTMENT ST. LIGHT DISTRIBUTION	60 676 490	29 305 903	13 921 366
7) HISTORIC COST ADJUSTMENT FACTOR ST. LIGHT DISTRIBUTION	0.345388522	0.318094032	0.266260127

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Table 7.7
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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31,1988

		HISTORIC INVESTMENT				DEPRECIATION EXPENSE			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
DISTRIBUTION POLE									
INCANDESCENT	60 W	0	918	411	1 330	0	38	17	55
	100	0	13 314	14 811	28 126	0	550	612	1 161
SEAS	100	0	0	1 440	1 440	0	0	59	59
FLOOD	100	0	0	645	645	0	0	27	27
	150	0	2 181	3 909	6 089	0	90	161	251
FLOOD	150	0	237	430	666	0	10	18	28
	200	0	689	309	997	0	28	13	41
SEAS	200	0	0	1 954	1 954	0	0	81	81
SEAS - LANE	200	0	0	63	63	0	0	3	3
	300	21 064	51 765	1 749	74 577	870	2 138	72	3 080
SEAS	300	0	0	4 291	4 291	0	0	177	177
FLOOD	300	620	710	0	1 330	26	29	0	55
	500	33 364	114	102	33 580	1 378	5	4	1 387
SEAS	500	0	0	102	102	0	0	4	4
FLOOD	500	8 336	469	0	8 804	344	19	0	364
SEAS - FLOOD	500	0	0	107	107	0	0	4	4
TOTAL INC.		63 384	70 396	30 323	164 102	2 618	2 907	1 252	6 777
MERCURY VAPOUR	175 W	418 166	1 521 975	508 371	2 448 512	17 269	62 852	20 994	101 115
SEAS	175	0	0	13 275	13 275	0	0	548	548
LANE	175	419 031	36 265	7 415	462 712	17 304	1 498	306	19 108
SEAS - LANE	175	0	0	1 695	1 695	0	0	70	70
	250	113 296	65 517	10 685	189 497	4 679	2 706	441	7 826
FLOOD	250	0	185	23 788	23 973	0	8	982	990
SEAS	250	0	0	1 053	1 053	0	0	44	44
	400	277 734	191 360	37 621	506 714	11 469	7 902	1 554	20 925
LANE	400	5 231	5 885	1 353	12 469	216	243	56	515
FLOOD	400	4 177	1 484	8 328	13 988	172	61	344	578
SEAS	400	0	0	3 106	3 106	0	0	128	128
SEAS - LANE	400	0	0	271	271	0	0	11	11
TOTAL M. V.		1 237 635	1 822 670	616 961	3 677 266	51 110	75 270	25 478	151 858
H. P. SODIUM	70 W	288 701	188 833	50 505	528 039	11 922	7 798	2 086	21 806
	100	18 822	89 651	13 774	122 247	777	3 702	569	5 048
	150	121 311	111 585	38 071	270 967	5 010	4 608	1 572	11 190
	250	173 461	37 772	18 492	229 726	7 163	1 560	764	9 487
	400	30 345	0	3 440	33 786	1 253	0	142	1 395
TOTAL H.P.S.		632 641	427 842	124 282	1 184 765	26 126	17 668	5 132	48 926
QUARTZ - FLOOD	500 W	0	125	350	475	0	5	14	20
TOTAL DIST. POLE		1 933 659	2 321 034	771 915	5 026 608	79 853	95 850	31 877	207 581

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Table 7.7
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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31, 1989

EXCLUSIVE POLE		HISTORIC INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	DEPRECIATION EXPENSE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	599	6 636	0	7 235	25	274	0	299
SEAS	60	0	0	720	720	0	0	30	30
	100	0	11 231	8 275	19 506	0	464	342	806
FLOOD	100	0	0	729	729	0	0	30	30
SEAS	100	0	0	2 519	2 519	0	0	104	104
	150	3 593	6 636	3 958	14 188	148	274	163	586
FLOOD	150	0	1 028	1 093	2 121	0	42	45	88
SEAS	150	0	0	360	360	0	0	15	15
SEAS - FLOOD	150	0	0	364	364	0	0	15	15
	200	0	6 126	0	6 126	0	253	0	253
SEAS	200	0	0	7 916	7 916	0	0	327	327
	300	2 649 001	572 031	3 250	3 224 282	109 394	23 623	134	133 151
FLOOD	300	0	1 550	366	1 915	0	64	15	79
SEAS	300	0	0	17 334	17 334	0	0	716	716
	500	104 524	0	0	104 524	4 316	0	0	4 316
FLOOD	500	36 223	515	0	36 738	1 496	21	0	1 517
TOTAL INC.		2 793 939	605 753	46 883	3 446 576	115 380	25 015	1 936	142 331
MERCURY VAPOUR	175 W	7 256 279	4 845 268	400 801	12 502 348	299 658	200 092	16 552	516 301
LANE	175	4 993	7 814	425	13 232	206	323	18	546
SEAS	175	0	0	48 338	48 338	0	0	1 996	1 996
SEAS - LANE	175	0	0	637	637	0	0	26	26
	250	1 561 506	588 314	92 668	2 242 488	64 485	24 295	3 827	92 607
FLOOD	250	0	1 333	0	1 333	0	55	0	55
SEAS	250	0	0	927	927	0	0	38	38
	400	2 462 094	1 510 264	363 100	4 335 458	101 676	62 368	14 995	179 039
LANE	400	9 378	5 018	967	15 363	387	207	40	634
FLOOD	400	37 794	8 672	0	46 466	1 561	358	0	1 919
SEAS	400	0	0	4 369	4 369	0	0	180	180
SEAS - LANE	400	0	0	967	967	0	0	40	40
	700	8 581	0	84 413	92 994	354	0	3 486	3 840
	1000	121 318	19 126	17 882	158 326	5 010	790	738	6 538
60 ft	1000	94 257	7 501	162 215	263 973	3 892	310	6 699	10 901
4/ 100 ft	1000	272 142	0	1 310 855	1 582 997	11 238	0	54 134	65 372
TOTAL M. V.		11 828 341	6 993 310	2 488 566	21 310 216	488 467	288 798	102 769	880 034
H. P. SODIUM	70 W	3 935 238	980 685	95 183	5 011 105	162 511	40 499	3 931	206 940
24 hr.	70	9 516	0	0	9 516	393	0	0	393
SEAS	70	0	0	1 088	1 088	0	0	45	45
	100	305 536	563 859	48 951	918 346	12 618	23 285	2 021	37 924
	150	1 441 139	893 904	152 033	2 487 076	59 514	36 915	6 278	102 707
SEAS	150	0	0	24 834	24 834	0	0	1 026	1 026
	250	1 498 331	487 886	175 251	2 161 468	61 876	20 148	7 237	89 261
	400	2 501 186	50 906	270 219	2 822 311	103 290	2 102	11 159	116 551
4/ 100 ft	400	0	0	450 316	450 316	0	0	18 596	18 596
2/ 100 ft	400	0	0	124 479	124 479	0	0	5 141	5 141
60 ft	1000	575 504	0	0	575 504	23 766	0	0	23 766

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Table 7.7
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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31, 1989

		HISTORIC INVESTMENT				DEPRECIATION EXPENSE			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
4/ 100 ft	1000	55 171	0	262 511	317 682	2 278	0	10 841	13 119
2/ 100 ft	1000	0	0	80 564	80 564	0	0	3 327	3 327
TOTAL H.P.S.		10 321 622	2 977 240	1 685 429	14 984 290	426 245	122 949	69 602	618 797
QUARTZ - FLOOD	500 W	0	2 428	0	2 428	0	100	0	100
L.P.S. - FLOOD	200 W	0	1 214	0	1 214	0	50	0	50
TOTAL EXCL. POLE		24 943 902	10 579 945	4 220 877	39 744 724	1 030 092	436 913	174 307	1 641 312
TOTAL SYSTEM		26 877 561	12 900 979	4 992 792	44 771 332	1 109 945	532 763	206 184	1 848 893

Reference Table 7.6

DEPRECIATION EXPENSE:

DISTRIBUTION	1 941 898.29
FARM LINES	20 239.32
* SENTINEL LIGHTS	(113 244.49)
	1 848 893.12

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

		HISTORIC INVESTMENT LAMPS & LUMINAIRE				WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES			HISJ. INVESTMENT ST.LIGHT DIST.			ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION			TOTAL ACCUMULATED DEPRECIATION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	WEIGHT	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
DISTRIBUTION POLE																		
INCANDESCENT	60 W	0	333	166	1.2	0	(400)	(200)	0	585	245	0	(276)	(116)	0	(676)	(315)	(991)
	100	0	4 828	5 993	1.2	0	(5 793)	(7 191)	0	8 487	8 819	0	(4 007)	(4 163)	0	(9 800)	(11 355)	(21 154)
SEAS	100	0	0	583	1.2	0	0	(699)	0	0	857	0	0	(405)	0	0	(1 104)	(1 104)
FLOOD	100	0	0	309	1.2	0	0	(371)	0	0	335	0	0	(158)	0	0	(529)	(529)
	150	0	791	1 581	1.2	0	(949)	(1 898)	0	1 390	2 327	0	(656)	(1 099)	0	(1 605)	(2 996)	(4 601)
FLOOD	150	0	103	206	1.2	0	(124)	(247)	0	134	224	0	(63)	(106)	0	(187)	(353)	(540)
	200	0	250	125	1.2	0	(300)	(150)	0	439	184	0	(207)	(87)	0	(507)	(237)	(743)
SEAS	200	0	0	791	1.2	0	0	(949)	0	0	1 164	0	0	(549)	0	0	(1 498)	(1 498)
SEAS - LANE	200	0	0	42	1.2	0	0	(50)	0	0	21	0	0	(10)	0	0	(60)	(60)
	300	7 241	18 769	707	1.2	(8 690)	(22 523)	(849)	13 822	32 996	1 041	(6 525)	(15 577)	(491)	(15 215)	(38 100)	(1 340)	(54 656)
SEAS	300	0	0	1 831	1.2	0	0	(2 197)	0	0	2 460	0	0	(1 161)	0	0	(3 359)	(3 359)
FLOOD	300	258	309	0	1.2	(309)	(371)	0	363	401	0	(171)	(189)	0	(480)	(560)	0	(1 041)
	500	12 164	44	44	1.2	(14 597)	(52)	(52)	21 200	70	59	(10 008)	(33)	(28)	(24 605)	(85)	(80)	(24 771)
SEAS	500	0	0	44	1.2	0	0	(52)	0	0	59	0	0	(28)	0	0	(80)	(80)
SEAS - FLOOD	500	3 639	214	0	1.2	(4 366)	(257)	0	4 697	254	0	(2 218)	(120)	0	(6 584)	(377)	0	(6 961)
FLOOD	500	0	0	54	1.2	0	0	(64)	0	0	53	0	0	(25)	0	0	(89)	(89)
TOTAL INC.		23 302	25 640	12 475		(27 962)	(30 768)	(14 970)	40 082	44 756	17 847	(18 923)	(21 129)	(8 426)	(46 884)	(51 897)	(23 396)	(122 177)
MERCURY VAPOUR	175 W	223 567	844 772	304 230	0.6	(134 140)	(506 863)	(182 538)	194 599	677 203	204 142	(91 869)	(319 703)	(96 374)	(226 009)	(826 566)	(278 912)	(1 331 487)
SEAS	175	0	0	7 944	0.6	0	0	(4 766)	0	0	5 331	0	0	(2 517)	0	0	(7 283)	(7 283)
LANE	175	328 149	28 895	6 111	0.6	(196 889)	(17 337)	(3 666)	90 882	7 370	1 305	(42 905)	(3 479)	(616)	(239 794)	(20 817)	(4 282)	(264 893)
SEAS - LANE	175	0	0	1 397	0.6	0	0	(838)	0	0	298	0	0	(141)	0	0	(979)	(979)
	250	64 120	38 396	6 715	0.6	(38 472)	(23 038)	(4 029)	49 176	27 121	3 970	(23 216)	(12 803)	(1 874)	(61 688)	(35 841)	(5 903)	(103 432)
FLOOD	250	0	131	17 678	0.6	0	(79)	(10 607)	0	54	6 111	0	(26)	(2 885)	0	(104)	(13 491)	(13 595)
SEAS	250	0	0	662	0.6	0	0	(397)	0	0	391	0	0	(185)	0	0	(582)	(582)
	400	190 071	134 310	27 753	0.6	(114 042)	(80 586)	(16 652)	87 663	57 050	9 868	(41 385)	(26 933)	(4 658)	(155 428)	(107 519)	(21 310)	(284 257)
LANE	400	4 838	5 474	1 273	0.6	(2 903)	(3 285)	(764)	394	410	80	(186)	(194)	(38)	(3 089)	(3 478)	(802)	(7 368)
FLOOD	400	2 961	1 077	6 325	0.6	(1 776)	(646)	(3 795)	1 216	407	2 002	(574)	(192)	(945)	(2 350)	(838)	(4 740)	(7 929)
SEAS	400	0	0	2 292	0.6	0	0	(1 375)	0	0	815	0	0	(385)	0	0	(1 760)	(1 760)
SEAS - LANE	400	0	0	255	0.6	0	0	(153)	0	0	16	0	0	(8)	0	0	(160)	(160)
TOTAL M. V.		813 705	1 053 055	382 633		(488 223)	(631 833)	(229 580)	423 930	769 616	234 328	(200 134)	(363 330)	(110 624)	(688 357)	(995 163)	(340 204)	(2 023 725)
H. P. SODIUM	70	219 724	146 482	40 664	0.2	(43 945)	(29 296)	(8 133)	68 978	42 351	9 841	(32 564)	(19 994)	(4 646)	(76 509)	(49 290)	(12 779)	(138 577)
	100	14 325	69 544	11 090	0.2	(2 865)	(13 909)	(2 218)	4 497	20 107	2 684	(2 123)	(9 492)	(1 267)	(4 988)	(23 401)	(3 485)	(31 874)
	150	94 164	88 174	31 148	0.2	(18 833)	(17 635)	(6 230)	27 148	23 412	6 923	(12 816)	(11 053)	(3 268)	(31 649)	(28 687)	(9 498)	(69 834)
	250	139 928	30 943	15 608	0.2	(27 986)	(6 189)	(3 122)	33 534	6 829	2 884	(15 831)	(3 224)	(1 361)	(43 817)	(9 413)	(4 483)	(57 712)
	400	26 356	0	3 081	0.2	(5 271)	0	(616)	3 989	0	359	(1 883)	0	(170)	(7 155)	0	(786)	(7 940)
TOTAL H.P.S.		494 496	335 143	101 591		(98 899)	(67 029)	(20 318)	138 145	92 699	22 691	(65 217)	(43 763)	(10 712)	(164 116)	(110 791)	(31 030)	(305 938)
QUARTZ - FLOOD	500 W	0	71	214	1.2	0	(86)	(257)	0	54	136	0	(26)	(64)	0	(111)	(321)	(432)
TOTAL DIST. POLE		1 331 502	1 413 909	496 913		(615 084)	(729 715)	(265 125)	602 157	907 125	275 001	(284 274)	(428 247)	(129 826)	(899 358)	(1 157 962)	(394 951)	(2 452 272)

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

EXCLUSIVE POLE		HISTORIC INVESTMENT LAMPS & LUMINAIRE ZONE 1 $	ZONE 2 $	ZONE 3 $	WEIGHT	WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES ZONE 1 $	ZONE 2 $	ZONE 3 $	HIST. INVESTMENT ST.LIGHT DIST. ZONE 1 $	ZONE 2 $	ZONE 3 $	ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL ACCUMULATED DEPRECIATION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	42	541	0	1.2	(50)	(649)	0	557	6 095	0	(263)	(2 878)	0	(313)	(3 527)	0	(3 840)
SEAS	60	0	0	83	1.2	0	0	(100)	0	0	636	0	0	(300)	0	0	(400)	(400)
	100	0	916	957	1.2	0	(1 099)	(1 149)	0	10 315	7 318	0	(4 870)	(3 455)	0	(5 968)	(4 603)	(10 572)
FLOOD	100	0	0	103	1.2	0	0	(124)	0	0	626	0	0	(295)	0	0	(419)	(419)
SEAS	100	0	0	291	1.2	0	0	(350)	0	0	2 227	0	0	(1 051)	0	0	(1 401)	(1 401)
	150	250	541	458	1.2	(300)	(649)	(549)	3 344	6 095	3 500	(1 579)	(2 878)	(1 652)	(1 878)	(3 527)	(2 202)	(7 607)
FLOOD	150	0	103	155	1.2	0	(124)	(185)	0	925	939	0	(437)	(443)	0	(560)	(629)	(1 189)
SEAS	150	0	0	42	1.2	0	0	(50)	0	0	318	0	0	(150)	0	0	(200)	(200)
SEAS - FLOOD	150	0	0	52	1.2	0	0	(62)	0	0	313	0	0	(148)	0	0	(210)	(210)
	200	0	499	0	1.2	0	(599)	0	0	5 626	0	0	(2 656)	0	0	(3 255)	0	(3 255)
SEAS	200	0	0	916	1.2	0	0	(1 099)	0	0	7 000	0	0	(3 305)	0	0	(4 403)	(4 403)
	300	183 073	46 403	375	1.2	(219 687)	(55 683)	(449)	2 465 928	525 628	2 876	(1 164 148)	(248 146)	(1 358)	(1 383 835)	(303 829)	(1 807)	(1 689 471)
FLOOD	300	0	155	52	1.2	0	(185)	(62)	0	1 395	314	0	(659)	(148)	0	(844)	(210)	(1 054)
SEAS	300	0	0	1 998	1.2	0	0	(2 397)	0	0	15 337	0	0	(7 240)	0	0	(9 637)	(9 637)
	500	7 586	0	0	1.2	(9 103)	0	0	96 937	0	0	(45 764)	0	0	(54 867)	0	0	(54 867)
FLOOD	500	3 210	54	0	1.2	(3 853)	(64)	0	33 012	462	0	(15 585)	(218)	0	(19 437)	(282)	0	(19 720)
TOTAL INC.		194 161	49 211	5 480		(232 993)	(59 053)	(6 575)	2 599 779	556 542	41 403	(1 227 338)	(262 740)	(19 546)	(1 460 331)	(321 793)	(26 122)	(1 808 246)
MERCURY VAPOUR	175 W	988 026	764 895	86 860	0.6	(592 815)	(458 937)	(52 116)	6 268 254	4 080 373	313 941	(2 959 200)	(1 926 317)	(148 209)	(3 552 016)	(2 385 254)	(200 325)	(6 137 595)
LANE	175	1 746	2 881	175	0.6	(1 048)	(1 728)	(105)	3 247	4 934	250	(1 533)	(2 329)	(118)	(2 580)	(4 058)	(223)	(6 861)
SEAS	175	0	0	10 476	0.6	0	0	(6 285)	0	0	37 862	0	0	(17 874)	0	0	(24 160)	(24 160)
SEAS - LANE	175	0	0	262	0.6	0	0	(157)	0	0	375	0	0	(177)	0	0	(334)	(334)
	250	197 276	86 533	18 914	0.6	(118 366)	(51 920)	(11 349)	1 364 230	501 781	73 754	(644 044)	(236 887)	(34 819)	(762 409)	(288 807)	(46 167)	(1 097 384)
FLOOD	250	0	262	0	0.6	0	(157)	0	0	1 071	0	0	(506)	0	0	(663)	0	(663)
SEAS	250	0	0	189	0.6	0	0	(113)	0	0	738	0	0	(348)	0	0	(462)	(462)
	400	408 404	290 007	95 226	0.6	(245 042)	(174 004)	(57 136)	2 053 690	1 220 257	267 874	(969 533)	(576 075)	(126 461)	(1 214 575)	(750 080)	(183 597)	(2 148 252)
LANE	400	4 328	2 419	509	0.6	(2 597)	(1 451)	(306)	5 050	2 599	458	(2 384)	(1 227)	(216)	(4 981)	(2 678)	(522)	(8 181)
FLOOD	400	6 595	1 750	0	0.6	(3 957)	(1 050)	0	31 199	6 922	0	(14 729)	(3 268)	0	(18 686)	(4 318)	0	(23 004)
SEAS	400	0	0	1 146	0.6	0	0	(687)	0	0	3 223	0	0	(1 522)	0	0	(2 209)	(2 209)
SEAS - LANE	400	0	0	509	0.6	0	0	(306)	0	0	458	0	0	(216)	0	0	(522)	(522)
	700	1 328	0	16 197	0.6	(797)	0	(9 718)	7 253	0	68 216	(3 424)	0	(32 204)	(4 221)	0	(41 923)	(46 143)
	1000	18 078	3 055	3 310	0.6	(10 847)	(1 833)	(1 986)	103 240	16 070	14 572	(48 739)	(7 587)	(6 880)	(59 586)	(9 420)	(8 866)	(77 871)
60 ft	1000	8 912	764	19 351	0.6	(5 347)	(458)	(11 610)	85 346	6 737	142 865	(40 291)	(3 181)	(67 445)	(45 638)	(3 639)	(79 056)	(128 333)
4/100 ft	1000	17 314	0	106 175	0.6	(10 388)	0	(63 705)	254 828	0	1 204 681	(120 302)	0	(568 722)	(130 691)	0	(632 427)	(763 117)
TOTAL M. V.		1 652 006	1 152 566	359 299		(991 203)	(691 539)	(215 580)	10 176 335	5 840 744	2 129 266	(4 804 179)	(2 757 376)	(1 005 212)	(5 795 383)	(3 448 915)	(1 220 792)	(10 465 090)
H. P. SODIUM	70 W	1 163 541	326 697	40 433	0.2	(232 708)	(65 339)	(8 087)	2 771 697	653 987	54 750	(1 308 499)	(308 743)	(25 847)	(1 541 208)	(374 082)	(33 934)	(1 949 224)
24 hr.	70	5 648	0	0	0.2	(1 130)	0	0	3 868	0	0	(1 826)	0	0	(2 956)	0	0	(2 956)
SEAS	70	0	0	462	0.2	0	0	(92)	0	0	626	0	0	(295)	0	0	(388)	(388)
	100	90 339	187 839	20 794	0.2	(18 068)	(37 568)	(4 159)	215 197	376 020	28 157	(101 593)	(177 516)	(13 293)	(119 661)	(215 084)	(17 452)	(352 197)
	150	387 916	272 907	60 140	0.2	(77 583)	(54 581)	(12 028)	1 053 223	620 998	91 893	(497 220)	(293 169)	(43 382)	(574 803)	(347 750)	(55 410)	(977 963)
SEAS	150	0	0	9 824	0.2	0	0	(1 965)	0	0	15 010	0	0	(7 086)	0	0	(9 051)	(9 051)
	250	445 523	163 751	75 303	0.2	(89 105)	(32 750)	(15 061)	1 052 808	324 135	99 947	(497 024)	(153 022)	(47 184)	(586 128)	(185 772)	(62 245)	(834 146)
	400	481 942	11 638	89 680	0.2	(96 388)	(2 328)	(17 936)	2 019 244	39 268	180 539	(953 272)	(18 538)	(85 231)	(1 049 660)	(20 866)	(103 167)	(1 173 693)
4/ 100 ft	400	0	0	47 236	0.2	0	0	(9 447)	0	0	403 081	0	0	(190 292)	0	0	(199 739)	(199 739)
2/ 100 ft	400	0	0	6 846	0.2	0	0	(1 369)	0	0	117 634	0	0	(55 534)	0	0	(56 903)	(56 903)

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

		HISTORIC INVESTMENT LAMPS & LUMINAIRE				WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES			HIST. INVESTMENT ST.LIGHT DIST.			ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION			TOTAL ACCUMULATED DEPRECIATION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	WEIGHT	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
60 ft	1000	157 239	0	0	0.2	(31 448)	0	0	418 266	0	0	(197 460)	0	0	(228 908)	0	0	(228 908)
4/ 100 ft	1000	10 782	0	62 896	0.2	(2 156)	0	(12 579)	44 389	0	199 615	(20 956)	0	(94 237)	(23 112)	0	(106 816)	(129 928)
2/ 100 ft	1000	0	0	10 782	0.2	0	0	(2 156)	0	0	69 781	0	0	(32 943)	0	0	(35 100)	(35 100)
TOTAL H.P.S.		2 742 929	962 832	424 395		(548 586)	(192 566)	(84 879)	7 578 692	2 014 408	1 261 034	(3 577 850)	(950 988)	(595 325)	(4 126 435)	(1 143 555)	(680 204)	(5 950 195)
QUARTZ - FLOOD	500 W	0	285	0	1.2	0	(342)	0	0	2 143	0	0	(1 012)	0	0	(1 354)	0	(1 354)
L.P.S. FLOOD	200 W	0	143	0	1.2	0	(171)	0	0	1 071	0	0	(506)	0	0	(677)	0	(677)
TOTAL EXCL. POLE		4 589 096	2 165 037	789 174		(1 772 782)	(943 673)	(307 034)	20 354 806	8 414 908	3 431 703	(9 609 367)	(3 972 622)	(1 620 084)	(11 382 149)	(4 916 294)	(1 927 118)	(18 225 562)
TOTAL SYSTEM		5 920 598	3 578 946	1 286 087		(2 387 866)	(1 673 388)	(572 159)	20 956 963	9 322 033	3 706 705	(9 893 641)	(4 400 869)	(1 749 910)	(12 281 507)	(6 074 257)	(2 322 069)	(20 677 834)
			10 785 631				(4 633 413)			33 985 701			(16 044 421)					

Reference Table 7.6

ACCUMULATED DEP'N ST. LIGHTING MARCH 31, 1989	(21 912 313)	ACCUM. DEP'N
INVESTMENT ST. LIGHT MARCH 31, 1989	44 771 332	(20 677 834)
INVESTMENT SENTINEL LIGHT MARCH 31, 1989	2 672 877	(1 234 480)
	47 444 209	(21 912 313)

ASSIGNMENT OF ACCUM. DEP'N	INVESTMENT	
INVESTMENT LAMPS & LUMINAIRES	10 785 631	(4 633 413) *
INVESTMENT ST. LIGHT DISTRIBUTION	33 985 701	(16 044 421)
TOTAL	44 771 332	(20 677 834)
		(20 677 834)

* ACCUM DEP'N HAS BEEN ASSIGNED BASED ON ESTIMATED AGE OF FACILITIES AS COMPARED TO ESTIMATED LIFE

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Table 7.9
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STREET LIGHT COST OF SERVICE STUDY
CAPITAL CONTRIBUTIONS
MARCH 31, 1989

		X's REVENUE TEST	CAPITAL CONSTRUCTION ALLOWANCE			CURRENT CONSTRUCTION COSTS			CURRENT CAPITAL CONTRIBUTION			HISTORIC CAPITAL CONTRIBUTION			
			ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
DISTRIBUTION POLE															
INCANDESCENT	60 W	3	0	1 230	652	0	3 520	1 760	0	(2 290)	(1 108)	0	(634)	(306)	(940)
	100	3	0	17 832	23 484	0	51 040	63 360	0	(33 208)	(39 876)	0	(9 186)	(11 030)	(20 216)
SEAS	100	3	0	0	2 076	0	0	6 160	0	0	(4 084)	0	0	(1 130)	(1 130)
FLOOD	100	3	0	0	1 045	0	0	2 820	0	0	(1 775)	0	0	(491)	(491)
	150	3	0	2 921	6 197	0	8 360	16 720	0	(5 439)	(10 523)	0	(1 505)	(2 911)	(4 415)
FLOOD	150	3	0	0	697	0	940	1 880	0	(940)	(1 183)	0	(260)	(327)	(587)
	200	3	0	922	489	0	2 640	1 320	0	(1 718)	(831)	0	(475)	(230)	(705)
SEAS	200	3	0	0	2 818	0	0	8 360	0	0	(5 542)	0	0	(1 533)	(1 533)
SEAS - LANE	200	3	0	0	148	0	0	290	0	0	(142)	0	0	(39)	(39)
	300	3	51 615	138 818	5 355	76 560	198 440	7 480	(24 945)	(59 622)	(2 125)	(6 900)	(16 492)	(588)	(23 980)
SEAS	300	3	0	0	10 622	0	0	18 480	0	0	(7 858)	0	0	(2 174)	(2 174)
FLOOD	300	3	1 503	1 903	0	2 350	2 820	0	(847)	(917)	0	(234)	(254)	0	(488)
	500	3	112 292	421	432	122 760	440	440	(10 468)	(19)	(8)	(2 896)	(5)	(2)	(2 903)
SEAS	500	3	0	0	333	0	0	440	0	0	(107)	0	0	(29)	(29)
FLOOD	500	3	29 058	1 783	0	31 960	1 880	0	(2 902)	(97)	0	(803)	(27)	0	(830)
SEAS - FLOOD	500	3	0	0	333	0	0	470	0	0	(137)	0	0	(38)	(38)
TOTAL INC.			194 468	165 829	54 683	233 630	270 080	129 980	(39 162)	(104 251)	(75 297)	(10 833)	(28 837)	(20 828)	(60 498)
MERCURY VAPOUR	175 W	3	759 695	2 978 581	1 097 775	1 178 060	4 451 420	1 603 100	(418 365)	(1 472 839)	(505 325)	(115 725)	(407 405)	(139 779)	(662 909)
SEAS	175	3	0	0	25 749	0	0	41 860	0	0	(16 111)	0	0	(4 456)	(4 456)
LANE	175	3	1 115 070	101 882	22 050	1 165 290	102 610	21 700	(50 220)	(728)	0	(13 892)	(201)	0	(14 093)
SEAS - LANE	175	3	0	0	4 527	0	0	4 960	0	0	(433)	0	0	(120)	(120)
	250	3	230 656	139 875	26 122	318 660	190 820	33 370	(88 004)	(50 945)	(7 248)	(24 343)	(14 092)	(2 005)	(40 440)
FLOOD	250	3	0	373	53 120	0	530	71 550	0	(157)	(18 430)	0	(43)	(5 098)	(5 141)
SEAS	250	3	0	0	2 167	0	0	3 290	0	0	(1 123)	0	0	(311)	(311)
	400	3	697 112	511 970	110 814	776 360	548 600	113 360	(79 248)	(36 630)	(2 546)	(21 921)	(10 132)	(704)	(32 758)
LANE	400	3	17 743	20 867	5 083	14 440	16 340	3 800	0	0	0	0	0	0	0
FLOOD	400	3	10 573	4 038	24 855	11 660	4 240	24 910	(1 087)	(202)	(55)	(301)	(56)	(15)	(372)
SEAS	400	3	0	0	7 397	0	0	9 360	0	0	(1 963)	0	0	(543)	(543)
SEAS - LANE	400	3	0	0	822	0	0	760	0	0	0	0	0	0	0
TOTAL M. V.			2 830 848	3 757 586	1 380 482	3 464 470	5 314 560	1 932 020	(636 925)	(1 561 501)	(553 233)	(176 181)	(431 930)	(153 031)	(761 142)
H. P. SODIUM	70	3	282 105	195 145	55 440	456 480	304 320	84 480	(174 375)	(109 175)	(29 040)	(48 234)	(30 199)	(8 033)	(86 466)
	100	3	20 088	100 992	16 330	29 760	144 480	23 040	(9 672)	(43 488)	(6 710)	(2 675)	(12 029)	(1 856)	(16 561)
	150	3	139 075	134 335	48 157	188 640	176 640	62 400	(49 565)	(42 305)	(14 243)	(13 710)	(11 702)	(3 940)	(29 352)
	250	3	230 318	53 209	28 174	260 610	57 630	29 070	(30 292)	(4 421)	(896)	(8 379)	(1 223)	(248)	(9 850)
	400	3	37 062	0	4 899	42 350	0	4 950	(5 288)	0	(51)	(1 463)	0	(14)	(1 477)
TOTAL H.P.S.			708 647	483 681	153 000	977 840	683 070	203 940	(269 193)	(199 389)	(50 940)	(74 462)	(55 153)	(14 091)	(143 706)
QUARTZ - FLOOD	500 W	3	0	660	1 980	0	530	1 590	0	0	0	0	0	0	0
TOTAL DIST. POLE			3 733 963	4 407 756	1 590 145	4 675 940	6 268 240	2 267 530	(945 280)	(1 865 141)	(679 470)	(261 476)	(515 921)	(187 950)	(965 346)

Table 7.9
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STREET LIGHT COST OF SERVICE STUDY
CAPITAL CONTRIBUTIONS
MARCH 31, 1989

		X's REVENUE TEST	CAPITAL CONSTRUCTION ALLOWANCE			CURRENT CONSTRUCTION COSTS			CURRENT CAPITAL CONTRIBUTION			HISTORIC CAPITAL CONTRIBUTION			
			ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
EXCLUSIVE POLE															
INCANDESCENT	60 W	3	333	4 357	0	1 824	21 892	0	(1 490)	(17 535)	0	(412)	(4 850)	0	(5 263)
SEAS	60	3	0	0	678	0	0	2 810	0	0	(2 132)	0	0	(590)	(590)
	100	3	0	7 374	7 874	0	37 048	32 315	0	(29 674)	(24 441)	0	(8 208)	(6 761)	(14 969)
FLOOD	100	3	0	0	722	0	0	2 870	0	0	(2 148)	0	0	(594)	(594)
SEAS	100	3	0	0	2 374	0	0	9 835	0	0	(7 461)	0	0	(2 064)	(2 064)
	150	3	2 000	4 357	3 766	10 941	21 892	15 455	(8 941)	(17 535)	(11 689)	(2 473)	(4 850)	(3 233)	(10 557)
FLOOD	150	3	0	0	1 083	0	3 428	4 305	0	(3 428)	(3 222)	0	(948)	(891)	(1 839)
SEAS	150	3	0	0	339	0	0	1 405	0	0	(1 066)	0	0	(295)	(295)
SEAS - FLOOD	150	3	0	0	339	0	0	1 435	0	0	(1 096)	0	0	(303)	(303)
	200	3	0	4 022	0	0	20 208	0	0	(16 186)	0	0	(4 477)	0	(4 477)
SEAS	200	3	0	0	7 461	0	0	30 910	0	0	(23 449)	0	0	(6 486)	(6 486)
	300	3	2 091 988	543 496	4 403	8 063 367	1 886 580	12 690	(5 971 379)	(1 343 084)	(8 287)	(1 651 756)	(371 514)	(2 292)	(2 025 562)
FLOOD	300	3	0	1 443	499	0	5 166	1 440	0	(3 723)	(941)	0	(1 030)	(260)	(1 290)
SEAS	300	3	0	0	19 336	0	0	67 680	0	0	(48 344)	0	0	(13 372)	(13 372)
	500	3	114 005	0	0	318 942	0	0	(204 937)	0	0	(56 688)	0	0	(56 688)
FLOOD	500	3	40 997	699	0	111 780	1 722	0	(70 783)	(1 023)	0	(19 579)	(283)	0	(19 862)
TOTAL INC.			2 249 324	565 747	48 875	8 506 854	1 997 936	183 150	(6 257 530)	(1 432 189)	(134 275)	(1 730 909)	(396 161)	(37 142)	(2 164 212)
MERCURY VAPOUR	175 W	3	5 382 388	4 270 949	486 794	20 864 733	14 930 448	1 417 875	(15 482 345)	(10 659 499)	(931 081)	(4 282 605)	(2 948 547)	(257 548)	(7 488 701)
LANE	175	3	9 511	16 086	978	14 200	23 430	1 420	(4 689)	(7 344)	(442)	(1 297)	(2 032)	(122)	(3 451)
SEAS	175	3	0	0	56 873	0	0	171 000	0	0	(114 127)	0	0	(31 569)	(31 569)
SEAS - LANE	175	3	0	0	1 422	0	0	2 130	0	0	(708)	0	0	(196)	(196)
	250	3	1 123 436	513 205	112 680	4 492 201	1 815 360	329 000	(3 368 765)	(1 302 155)	(216 320)	(931 841)	(360 192)	(59 837)	(1 351 870)
FLOOD	250	3	0	1 149	0	0	4 088	0	0	(2 939)	0	0	(813)	0	(813)
SEAS	250	3	0	0	1 019	0	0	3 290	0	0	(2 271)	0	0	(628)	(628)
	400	3	2 066 080	1 545 031	518 095	7 068 828	4 633 452	1 267 860	(5 002 748)	(3 088 421)	(749 765)	(1 383 821)	(854 295)	(207 394)	(2 445 510)
LANE	400	3	21 897	12 887	2 771	26 520	14 820	3 120	(4 623)	(1 933)	(349)	(1 279)	(535)	(97)	(1 910)
FLOOD	400	3	31 646	8 850	0	108 462	26 572	0	(76 815)	(17 722)	0	(21 248)	(4 902)	0	(26 150)
SEAS	400	3	0	0	5 356	0	0	15 255	0	0	(9 899)	0	0	(2 738)	(2 738)
SEAS - LANE	400	3	0	0	2 380	0	0	3 120	0	0	(740)	0	0	(205)	(205)
	700	3	4 275	0	55 581	24 650	0	300 730	(20 375)	0	(245 149)	(5 636)	0	(67 811)	(73 447)
	1000	3	70 060	12 675	14 569	348 610	58 920	63 830	(278 550)	(46 245)	(49 261)	(77 050)	(12 792)	(13 626)	(103 469)
60 ft	1000	3	39 299	3 521	96 690	271 600	23 280	589 760	(232 301)	(19 759)	(493 070)	(64 257)	(5 466)	(136 389)	(206 112)
4/ 100 ft	1000	3	79 046	0	545 086	785 400	0	4 816 350	(706 354)	0	(4 271 264)	(195 386)	0	(1 181 484)	(1 376 870)
TOTAL M. V.			8 827 640	6 384 352	1 900 293	34 005 204	21 530 370	8 984 740	(25 177 564)	(15 146 018)	(7 084 447)	(6 964 421)	(4 189 573)	(1 959 644)	(13 113 639)
H. P. SODIUM	70 W	3	2 394 920	689 240	85 617	9 384 586	2 437 736	252 875	(6 989 666)	(1 748 496)	(167 258)	(1 933 427)	(483 655)	(46 266)	(2 463 348)
24 hr.	70	3	5 317	0	0	17 800	0	0	(12 483)	0	0	(3 453)	0	0	(3 453)
SEAS	70	3	0	0	948	0	0	2 890	0	0	(1 942)	0	0	(537)	(537)
	100	3	202 131	429 947	47 758	728 629	1 401 612	130 050	(526 497)	(971 665)	(82 292)	(145 636)	(268 774)	(22 763)	(437 173)
	150	3	881 254	634 332	140 239	3 502 707	2 271 166	415 405	(2 621 452)	(1 636 834)	(275 166)	(725 126)	(452 768)	(76 114)	(1 254 008)
SEAS	150	3	0	0	21 793	0	0	67 855	0	0	(46 062)	0	0	(12 741)	(12 741)
	250	3	1 025 010	396 115	186 516	3 568 825	1 210 352	463 375	(2 543 815)	(814 237)	(276 859)	(703 650)	(225 228)	(76 583)	(1 005 461)
	400	3	1 140 480	28 629	230 895	6 409 498	137 047	782 856	(5 269 018)	(108 418)	(551 961)	(1 457 475)	(29 990)	(152 679)	(1 640 143)
4/ 100 ft	400	3	0	0	137 763	0	0	1 569 060	0	0	(1 431 297)	0	0	(395 914)	(395 914)
2/ 100 ft	400	3	0	0	30 874	0	0	449 800	0	0	(418 926)	0	0	(115 880)	(115 880)

MARCH 31, 1989

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Table 7.9
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STREET LIGHT COST OF SERVICE STUDY
CAPITAL CONTRIBUTIONS
MARCH 31, 1989

		X's REVENUE TEST	CAPITAL CONSTRUCTION ALLOWANCE			CURRENT CONSTRUCTION COSTS			CURRENT CAPITAL CONTRIBUTION			HISTORIC CAPITAL CONTRIBUTION			
			ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
60 ft	1000	3	246 393	0	0	1 394 750	0	0	(1 148 357)	0	0	(317 650)	0	0	(317 650)
4/ 100 ft	1000	3	17 371	0	111 485	141 120	0	823 200	(123 749)	0	(711 715)	(34 231)	0	(196 869)	(231 100)
2/ 100 ft	1000	3	0	0	23 730	0	0	274 680	0	0	(250 950)	0	0	(69 416)	(69 416)
TOTAL H.P.S.			5 912 877	2 178 264	1 017 617	25 147 913	7 457 913	5 232 046	(19 235 037)	(5 279 650)	(4 214 430)	(5 320 646)	(1 460 416)	(1 165 763)	(7 946 824)
QUARTZ - FLOOD	500 W	3	0	3 348	0	0	8 176	0	0	(4 828)	0	0	(1 335)	0	(1 335)
L.P.S. - FLOOD	200 W	3	0	1 482	0	0	4 088	0	0	(2 606)	0	0	(721)	0	(721)
TOTAL EXCL. POLE			16 989 840	9 133 192	2 966 784	67 659 970	30 998 483	14 399 936	(50 670 130)	(21 865 291)	(11 433 152)	(14 015 976)	(6 048 206)	(3 162 549)	(23 226 732)
TOTAL SYSTEM			20 723 803	13 540 948	4 556 929	72 335 910	37 266 723	16 667 466	(51 615 410)	(23 730 432)	(12 112 621)	(14 277 452)	(6 564 127)	(3 350 499)	(24 192 078)
				38 821 680			126 270 099			(87 458 464)					

CAPITAL CONTRIBUTIONS BOOKED (24 192 078)

HISTORICAL ADJUSTMENT FACTOR 0.276612199

Reference Table 7.5

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STREET LIGHT COST OF SERVICE STUDY
AMORITIZED CONTRIBUTION
MARCH 31, 1989

Table 7.10
Page 1

		HISTORIC CAPITAL CONTRIBUTION				ANNUAL AMORITIZATION OF CONTRIBUTION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
DISTRIBUTION POLE									
INCANDESCENT	60 W	0	(634)	(306)	(940)	0	(18)	(9)	(27)
	100	0	(9 186)	(11 030)	(20 216)	0	(261)	(314)	(575)
SEAS	100	0	0	(1 130)	(1 130)	0	0	(32)	(32)
FLOOD	100	0	0	(491)	(491)	0	0	(14)	(14)
	150	0	(1 505)	(2 911)	(4 415)	0	(43)	(83)	(126)
FLOOD	150	0	(260)	(327)	(587)	0	(7)	(9)	(17)
	200	0	(475)	(230)	(705)	0	(14)	(7)	(20)
SEAS	200	0	0	(1 533)	(1 533)	0	0	(44)	(44)
SEAS - LANE	200	0	0	(39)	(39)	0	0	(1)	(1)
	300	(6 900)	(16 492)	(588)	(23 980)	(196)	(469)	(17)	(682)
SEAS	300	0	0	(2 174)	(2 174)	0	0	(62)	(62)
FLOOD	300	(234)	(254)	0	(488)	(7)	(7)	0	(14)
	500	(2 896)	(5)	(2)	(2 903)	(82)	(0)	(0)	(83)
SEAS	500	0	0	(29)	(29)	0	0	(1)	(1)
FLOOD	500	(803)	(27)	0	(830)	(23)	(1)	0	(24)
SEAS - FLOOD	500	0	0	(38)	(38)	0	0	(1)	(1)
TOTAL INC.		(10 833)	(28 837)	(20 828)	(60 498)	(308)	(821)	(593)	(1 722)
MERCURY VAPOUR	175 W	(115 725)	(407 405)	(139 779)	(662 909)	(3 294)	(11 595)	(3 978)	(18 867)
SEAS	175	0	0	(4 456)	(4 456)	0	0	(127)	(127)
LANE	175	(13 892)	(201)	0	(14 093)	(395)	(6)	0	(401)
SEAS - LANE	175	0	0	(120)	(120)	0	0	(3)	(3)
	250	(24 343)	(14 092)	(2 005)	(40 440)	(693)	(401)	(57)	(1 151)
FLOOD	250	0	(43)	(5 098)	(5 141)	0	(1)	(145)	(146)
SEAS	250	0	0	(311)	(311)	0	0	(9)	(9)
	400	(21 921)	(10 132)	(704)	(32 758)	(624)	(288)	(20)	(932)
LANE	400	0	0	0	0	0	0	0	0
FLOOD	400	(301)	(56)	(15)	(372)	(9)	(2)	(0)	(11)
SEAS	400	0	0	(543)	(543)	0	0	(15)	(15)
SEAS - LANE	400	0	0	0	0	0	0	0	0
TOTAL M. V.		(176 181)	(431 930)	(153 031)	(761 142)	(5 014)	(12 293)	(4 355)	(21 662)
H. P. SODIUM	70	(48 234)	(30 199)	(8 033)	(86 466)	(1 373)	(859)	(229)	(2 461)
	100	(2 675)	(12 029)	(1 856)	(16 561)	(76)	(342)	(53)	(471)
	150	(13 710)	(11 702)	(3 940)	(29 352)	(390)	(333)	(112)	(835)
	250	(8 379)	(1 223)	(248)	(9 850)	(238)	(35)	(7)	(280)
	400	(1 463)	0	(14)	(1 477)	(42)	0	(0)	(42)
TOTAL H.P.S.		(74 462)	(55 153)	(14 091)	(143 706)	(2 119)	(1 570)	(401)	(4 090)
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0
TOTAL DIST. POLE		(261 476)	(515 921)	(187 950)	(965 346)	(7 442)	(14 683)	(5 349)	(27 474)

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Table 7.10
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STREET LIGHT COST OF SERVICE STUDY
AMORITIZED CONTRIBUTION
MARCH 31, 1989

		HISTORIC CAPITAL CONTRIBUTION				ANNUAL AMORITIZATION OF CONTRIBUTION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
EXCLUSIVE POLE									
INCANDESCENT	60 W	(412)	(4 850)	0	(5 263)	(12)	(138)	0	(150)
SEAS	60	0	0	(590)	(590)	0	0	(17)	(17)
	100	0	(8 208)	(6 761)	(14 969)	0	(234)	(192)	(426)
FLOOD	100	0	0	(594)	(594)	0	0	(17)	(17)
SEAS	100	0	0	(2 064)	(2 064)	0	0	(59)	(59)
	150	(2 473)	(4 850)	(3 233)	(10 557)	(70)	(138)	(92)	(300)
FLOOD	150	0	(948)	(891)	(1 839)	0	(27)	(25)	(52)
SEAS	150	0	0	(295)	(295)	0	0	(8)	(8)
SEAS - FLOOD	150	0	0	(303)	(303)	0	0	(9)	(9)
	200	0	(4 477)	0	(4 477)	0	(127)	0	(127)
SEAS	200	0	0	(6 486)	(6 486)	0	0	(185)	(185)
	300	(1 651 756)	(371 514)	(2 292)	(2 025 562)	(47 009)	(10 573)	(65)	(57 648)
FLOOD	300	0	(1 030)	(260)	(1 290)	0	(29)	(7)	(37)
SEAS	300	0	0	(13 372)	(13 372)	0	0	(381)	(381)
	500	(56 688)	0	0	(56 688)	(1 613)	0	0	(1 613)
FLOOD	500	(19 579)	(283)	0	(19 862)	(557)	(8)	0	(565)
TOTAL INC.		(1 730 909)	(396 161)	(37 142)	(2 164 212)	(49 262)	(11 275)	(1 057)	(61 594)
MERCURY VAPOUR	175 W	(4 282 605)	(2 948 547)	(257 548)	(7 488 701)	(121 884)	(83 916)	(7 330)	(213 130)
LANE	175	(1 297)	(2 032)	(122)	(3 451)	(37)	(58)	(3)	(98)
SEAS	175	0	0	(31 569)	(31 569)	0	0	(898)	(898)
SEAS - LANE	175	0	0	(196)	(196)	0	0	(6)	(6)
	250	(931 841)	(360 192)	(59 837)	(1 351 870)	(26 520)	(10 251)	(1 703)	(38 475)
FLOOD	250	0	(813)	0	(813)	0	(23)	0	(23)
SEAS	250	0	0	(628)	(628)	0	0	(18)	(18)
	400	(1 383 821)	(854 295)	(207 394)	(2 445 510)	(39 384)	(24 313)	(5 902)	(69 600)
LANE	400	(1 279)	(535)	(97)	(1 910)	(36)	(15)	(3)	(54)
FLOOD	400	(21 248)	(4 902)	0	(26 150)	(605)	(140)	0	(744)
SEAS	400	0	0	(2 738)	(2 738)	0	0	(78)	(78)
SEAS - LANE	400	0	0	(205)	(205)	0	0	(6)	(6)
	700	(5 636)	0	(67 811)	(73 447)	(160)	0	(1 930)	(2 090)
	1000	(77 050)	(12 792)	(13 626)	(103 469)	(2 193)	(364)	(388)	(2 945)
60 ft	1000	(64 257)	(5 466)	(136 389)	(206 112)	(1 829)	(156)	(3 882)	(5 866)
4/ 100 ft	1000	(195 386)	0	(1 181 484)	(1 376 870)	(5 561)	0	(33 625)	(39 186)
TOTAL M. V.		(6 964 421)	(4 189 573)	(1 959 644)	(13 113 639)	(198 209)	(119 236)	(55 772)	(373 217)
H. P. SODIUM	70 W	(1 933 427)	(483 655)	(46 266)	(2 463 348)	(55 026)	(13 765)	(1 317)	(70 107)
24 hr.	70	(3 453)	0	0	(3 453)	(98)	0	0	(98)
SEAS	70	0	0	(537)	(537)	0	0	(15)	(15)
	100	(145 636)	(268 774)	(22 763)	(437 173)	(4 145)	(7 649)	(648)	(12 442)
	150	(725 126)	(452 768)	(76 114)	(1 254 008)	(20 637)	(12 886)	(2 166)	(35 689)
SEAS	150	0	0	(12 741)	(12 741)	0	0	(363)	(363)
	250	(703 650)	(225 228)	(76 583)	(1 005 461)	(20 026)	(6 410)	(2 180)	(28 616)
	400	(1 457 475)	(29 990)	(152 679)	(1 640 143)	(41 480)	(854)	(4 345)	(46 679)
4/ 100 ft	400	0	0	(395 914)	(395 914)	0	0	(11 268)	(11 268)
2/ 100 ft	400	0	0	(115 880)	(115 880)	0	0	(3 298)	(3 298)

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STREET LIGHT COST OF SERVICE STUDY
AMORITIZED CONTRIBUTION
MARCH 31, 1989

Table 7.10
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		HISTORIC CAPITAL CONTRIBUTION				ANNUAL AMORITIZATION OF CONTRIBUTION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
60 ft	1000	(317 650)	0	0	(317 650)	(9 040)	0	0	(9 040)
4/ 100 ft	1000	(34 231)	0	(196 869)	(231 100)	(974)	0	(5 603)	(6 577)
2/ 100 ft	1000	0	0	(69 416)	(69 416)	0	0	(1 976)	(1 976)
TOTAL H.P.S.		(5 320 646)	(1 460 416)	(1 165 763)	(7 946 824)	(151 427)	(41 564)	(33 178)	(226 168)
QUARTZ - FLOOD	500 W	0	(1 335)	0	(1 335)	0	(38)	0	(38)
L.P.S. - FLOOD	200 W	0	(721)	0	(721)	0	(21)	0	(21)
TOTAL EXCL. POLE		(14 015 976)	(6 048 206)	(3 162 549)	(23 226 732)	(398 898)	(172 133)	(90 007)	(661 038)
TOTAL SYSTEM		(14 277 452)	(6 564 127)	(3 350 499)	(24 192 078)	(406 340)	(186 817)	(95 356)	(688 512)

Reference Table 7.9

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Table 7.11
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STREET LIGHT COST OF SERVICE STUDY
UNAMORITIZED CONTRIBUTION
MARCH 31, 1989

DISTRIBUTION POLE		HISTORIC CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	AMORITIZED CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	UNAMORITIZED CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	0	(634)	(306)	(940)	0	(168)	(81)	(249)	0	(466)	(225)	(691)
	100	0	(9 186)	(11 030)	(20 216)	0	(2 430)	(2 917)	(5 347)	0	(6 756)	(8 113)	(14 869)
SEAS	100	0	0	(1 130)	(1 130)	0	0	(299)	(299)	0	0	(831)	(831)
FLOOD	100	0	0	(491)	(491)	0	0	(130)	(130)	0	0	(361)	(361)
	150	0	(1 505)	(2 911)	(4 415)	0	(398)	(770)	(1 168)	0	(1 107)	(2 141)	(3 248)
FLOOD	150	0	(260)	(327)	(587)	0	(69)	(87)	(155)	0	(191)	(241)	(432)
	200	0	(475)	(230)	(705)	0	(126)	(61)	(186)	0	(349)	(169)	(518)
SEAS	200	0	0	(1 533)	(1 533)	0	0	(405)	(405)	0	0	(1 128)	(1 128)
SEAS - LANE	200	0	0	(39)	(39)	0	0	(10)	(10)	0	0	(29)	(29)
	300	(6 900)	(16 492)	(588)	(23 980)	(1 825)	(4 362)	(155)	(6 342)	(5 075)	(12 130)	(432)	(17 638)
SEAS	300	0	0	(2 174)	(2 174)	0	0	(575)	(575)	0	0	(1 599)	(1 599)
FLOOD	300	(234)	(254)	0	(488)	(62)	(67)	0	(129)	(172)	(187)	0	(359)
	500	(2 896)	(5)	(2)	(2 903)	(766)	(1)	(1)	(768)	(2 130)	(4)	(2)	(2 135)
SEAS	500	0	0	(29)	(29)	0	0	(8)	(8)	0	0	(22)	(22)
FLOOD	500	(803)	(27)	0	(830)	(212)	(7)	0	(219)	(590)	(20)	0	(610)
SEAS - FLOOD	500	0	0	(38)	(38)	0	0	(10)	(10)	0	0	(28)	(28)
TOTAL INC.		(10 833)	(28 837)	(20 828)	(60 498)	(2 865)	(7 627)	(5 509)	(16 001)	(7 968)	(21 210)	(15 319)	(44 497)
MERCURY VAPOUR	175 W	(115 725)	(407 405)	(139 779)	(662 909)	(30 607)	(107 752)	(36 969)	(175 328)	(85 118)	(299 654)	(102 810)	(487 581)
SEAS	175	0	0	(4 456)	(4 456)	0	0	(1 179)	(1 179)	0	0	(3 278)	(3 278)
LANE	175	(13 892)	(201)	0	(14 093)	(3 674)	(53)	0	(3 727)	(10 217)	(148)	0	(10 366)
SEAS - LANE	175	0	0	(120)	(120)	0	0	(32)	(32)	0	0	(88)	(88)
	250	(24 343)	(14 092)	(2 005)	(40 440)	(6 438)	(3 727)	(530)	(10 696)	(17 905)	(10 365)	(1 475)	(29 744)
FLOOD	250	0	(43)	(5 098)	(5 141)	0	(11)	(1 348)	(1 360)	0	(32)	(3 750)	(3 782)
SEAS	250	0	0	(311)	(311)	0	0	(82)	(82)	0	0	(228)	(228)
	400	(21 921)	(10 132)	(704)	(32 758)	(5 798)	(2 680)	(186)	(8 664)	(16 123)	(7 452)	(518)	(24 094)
LANE	400	0	0	0	0	0	0	0	0	0	0	0	0
FLOOD	400	(301)	(56)	(15)	(372)	(80)	(15)	(4)	(98)	(221)	(41)	(11)	(273)
SEAS	400	0	0	(543)	(543)	0	0	(144)	(144)	0	0	(399)	(399)
SEAS - LANE	400	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL M. V.		(176 181)	(431 930)	(153 031)	(761 142)	(46 597)	(114 238)	(40 474)	(201 309)	(129 584)	(317 692)	(112 557)	(559 834)
H. P. SODIUM	70	(48 234)	(30 199)	(8 033)	(86 466)	(12 757)	(7 987)	(2 125)	(22 869)	(35 477)	(22 212)	(5 908)	(63 597)
	100	(2 675)	(12 029)	(1 856)	(16 561)	(708)	(3 182)	(491)	(4 380)	(1 968)	(8 848)	(1 365)	(12 181)
	150	(13 710)	(11 702)	(3 940)	(29 352)	(3 626)	(3 095)	(1 042)	(7 763)	(10 084)	(8 607)	(2 898)	(21 589)
	250	(8 379)	(1 223)	(248)	(9 850)	(2 216)	(323)	(66)	(2 605)	(6 163)	(899)	(182)	(7 245)
	400	(1 463)	0	(14)	(1 477)	(387)	0	(4)	(391)	(1 076)	0	(10)	(1 086)
TOTAL H.P.S.		(74 462)	(55 153)	(14 091)	(143 706)	(19 694)	(14 587)	(3 727)	(38 008)	(54 768)	(40 566)	(10 364)	(105 698)
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DIST. POLE		(261 476)	(515 921)	(187 950)	(965 346)	(69 156)	(136 452)	(49 709)	(255 317)	(192 320)	(379 469)	(138 240)	(710 029)

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Table 7.11
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STREET LIGHT COST OF SERVICE STUDY
UNAMORITIZED CONTRIBUTION
MARCH 31, 1989

EXCLUSIVE POLE		HISTORIC CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	AMORITIZED CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	UNAMORITIZED CAPITAL CONTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	(412)	(4 850)	0	(5 263)	(109)	(1 283)	0	(1 392)	(303)	(3 568)	0	(3 871)
SEAS	60	0	0	(590)	(590)	0	0	(156)	(156)	0	0	(434)	(434)
	100	0	(8 208)	(6 761)	(14 969)	0	(2 171)	(1 788)	(3 959)	0	(6 037)	(4 973)	(11 010)
FLOOD	100	0	0	(594)	(594)	0	0	(157)	(157)	0	0	(437)	(437)
SEAS	100	0	0	(2 064)	(2 064)	0	0	(546)	(546)	0	0	(1 518)	(1 518)
	150	(2 473)	(4 850)	(3 233)	(10 557)	(654)	(1 283)	(855)	(2 792)	(1 819)	(3 568)	(2 378)	(7 765)
FLOOD	150	0	(948)	(891)	(1 839)	0	(251)	(236)	(486)	0	(697)	(655)	(1 353)
SEAS	150	0	0	(295)	(295)	0	0	(78)	(78)	0	0	(217)	(217)
SEAS - FLOOD	150	0	0	(303)	(303)	0	0	(80)	(80)	0	0	(223)	(223)
	200	0	(4 477)	0	(4 477)	0	(1 184)	0	(1 184)	0	(3 293)	0	(3 293)
SEAS	200	0	0	(6 486)	(6 486)	0	0	(1 716)	(1 716)	0	0	(4 771)	(4 771)
	300	(1 651 756)	(371 514)	(2 292)	(2 025 562)	(436 860)	(98 259)	(606)	(535 725)	(1 214 896)	(273 255)	(1 686)	(1 489 837)
FLOOD	300	0	(1 030)	(260)	(1 290)	0	(272)	(69)	(341)	0	(757)	(191)	(949)
SEAS	300	0	0	(13 372)	(13 372)	0	0	(3 537)	(3 537)	0	0	(9 836)	(9 836)
	500	(56 688)	0	0	(56 688)	(14 993)	0	0	(14 993)	(41 695)	0	0	(41 695)
FLOOD	500	(19 579)	(283)	0	(19 862)	(5 178)	(75)	0	(5 253)	(14 401)	(208)	0	(14 609)
TOTAL INC.		(1 730 909)	(396 161)	(37 142)	(2 164 212)	(457 795)	(104 778)	(9 823)	(572 396)	(1 273 114)	(291 383)	(27 319)	(1 591 816)
MERCURY VAPOUR	175 W	(4 282 605)	(2 948 547)	(257 548)	(7 488 701)	(1 132 674)	(779 839)	(68 117)	(1 980 629)	(3 149 932)	(2 168 709)	(189 431)	(5 508 072)
LANE	175	(1 297)	(2 032)	(122)	(3 451)	(343)	(537)	(32)	(913)	(954)	(1 494)	(90)	(2 538)
SEAS	175	0	0	(31 569)	(31 569)	0	0	(8 349)	(8 349)	0	0	(23 220)	(23 220)
SEAS - LANE	175	0	0	(196)	(196)	0	0	(52)	(52)	0	0	(144)	(144)
	250	(931 841)	(360 192)	(59 837)	(1 351 870)	(246 456)	(95 264)	(15 826)	(357 546)	(685 386)	(264 927)	(44 011)	(994 324)
FLOOD	250	0	(813)	0	(813)	0	(215)	0	(215)	0	(598)	0	(598)
SEAS	250	0	0	(628)	(628)	0	0	(166)	(166)	0	0	(462)	(462)
	400	(1 383 821)	(854 295)	(207 394)	(2 445 510)	(365 996)	(225 946)	(54 852)	(646 794)	(1 017 825)	(628 349)	(152 542)	(1 798 716)
LANE	400	(1 279)	(535)	(97)	(1 910)	(338)	(141)	(26)	(505)	(940)	(393)	(71)	(1 405)
FLOOD	400	(21 248)	(4 902)	0	(26 150)	(5 620)	(1 297)	0	(6 916)	(15 628)	(3 606)	0	(19 234)
SEAS	400	0	0	(2 738)	(2 738)	0	0	(724)	(724)	0	0	(2 014)	(2 014)
SEAS - LANE	400	0	0	(205)	(205)	0	0	(54)	(54)	0	0	(150)	(150)
	700	(5 636)	0	(67 811)	(73 447)	(1 491)	0	(17 935)	(19 426)	(4 145)	0	(49 876)	(54 022)
	1000	(77 050)	(12 792)	(13 626)	(103 469)	(20 378)	(3 383)	(3 604)	(27 366)	(56 672)	(9 409)	(10 022)	(76 103)
60 ft	1000	(64 257)	(5 466)	(136 389)	(206 112)	(16 995)	(1 446)	(36 073)	(54 513)	(47 262)	(4 020)	(100 317)	(151 599)
4/ 100 ft	1000	(195 386)	0	(1 181 484)	(1 376 870)	(51 676)	0	(312 482)	(364 158)	(143 710)	0	(869 002)	(1 012 712)
TOTAL M. V.		(6 964 421)	(4 189 573)	(1 959 644)	(13 113 639)	(1 841 967)	(1 108 068)	(518 291)	(3 468 326)	(5 122 455)	(3 081 505)	(1 441 353)	(9 645 313)
H. P. SODIUM	70 W	(1 933 427)	(483 655)	(46 266)	(2 463 348)	(511 357)	(127 918)	(12 236)	(651 512)	(1 422 070)	(355 737)	(34 029)	(1 811 836)
24 hr.	70	(3 453)	0	0	(3 453)	(913)	0	0	(913)	(2 540)	0	0	(2 540)
SEAS	70	0	0	(537)	(537)	0	0	(142)	(142)	0	0	(395)	(395)
	100	(145 636)	(268 774)	(22 763)	(437 173)	(38 518)	(71 086)	(6 020)	(115 625)	(107 118)	(197 688)	(16 743)	(321 548)
	150	(725 126)	(452 768)	(76 114)	(1 254 008)	(191 783)	(119 749)	(20 131)	(331 663)	(533 343)	(333 019)	(55 983)	(922 345)
SEAS	150	0	0	(12 741)	(12 741)	0	0	(3 370)	(3 370)	0	0	(9 371)	(9 371)
	250	(703 650)	(225 228)	(76 583)	(1 005 461)	(186 103)	(59 569)	(20 255)	(265 927)	(517 547)	(165 659)	(56 328)	(739 534)
	400	(1 457 475)	(29 990)	(152 679)	(1 640 143)	(385 476)	(7 932)	(40 381)	(433 789)	(1 071 998)	(22 058)	(112 298)	(1 206 354)
4/ 100 ft	400	0	0	(395 914)	(395 914)	0	0	(104 712)	(104 712)	0	0	(291 202)	(291 202)
2/ 100 ft	400	0	0	(115 880)	(115 880)	0	0	(30 648)	(30 648)	0	0	(85 232)	(85 232)

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Table 7.11
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STREET LIGHT COST OF SERVICE STUDY
UNAMORITIZED CONTRIBUTION
MARCH 31, 1989

		HISTORIC CAPITAL CONTRIBUTION				AMORITIZED CAPITAL CONTRIBUTION				UNAMORITIZED CAPITAL CONTRIBUTION			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
60 ft	1000	(317 650)	0	0	(317 650)	(84 013)	0	0	(84 013)	(233 637)	0	0	(233 637)
4/ 100 ft	1000	(34 231)	0	(196 869)	(231 100)	(9 053)	0	(52 068)	(61 122)	(25 177)	0	(144 801)	(169 978)
2/ 100 ft	1000	0	0	(69 416)	(69 416)	0	0	(18 359)	(18 359)	0	0	(51 057)	(51 057)
TOTAL H.P.S.		(5 320 646)	(1 460 416)	(1 165 763)	(7 946 824)	(1 407 217)	(386 254)	(308 324)	(2 101 795)	(3 913 429)	(1 074 161)	(857 439)	(5 845 029)
QUARTZ - FLOOD	500 W	0	(1 335)	0	(1 335)	0	(353)	0	(353)	0	(982)	0	(982)
L.P.S. - FLOOD	200 W	0	(721)	0	(721)	0	(191)	0	(191)	0	(530)	0	(530)
TOTAL EXCL. POLE		(14 015 976)	(6 048 206)	(3 162 549)	(23 226 732)	(3 706 979)	(1 599 644)	(836 438)	(6 143 061)	(10 308 998)	(4 448 562)	(2 326 111)	(17 083 671)
TOTAL SYSTEM		(14 277 452)	(6 564 127)	(3 350 499)	(24 192 078)	(3 776 134)	(1 736 096)	(886 148)	(6 398 378)	(10 501 318)	(4 828 031)	(2 464 351)	(17 793 700)

Reference Table 7.9

CAPITAL CONTRIBUTIONS BOOKED	(24 192 078)	GROSS CONTRIBUTION	(24 192 078)
		AMORITIZATION TO DATE	(6 398 378)
HISTORICAL ADJUSTMENT FACTOR	0.2766121999	NET CONTRIBUTION	(17 793 700)

Table 7.12
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST
MARCH 31, 1989

DISTRIBUTION POLE		FREQUENCY OF SERVICE /REPLACEMENT (Annual)							COST PER UNIT OF SERVICE ($)							ANNUAL HIGH-MAST LIGTHING COSTS	ANNUAL UNDERGROUND BREAKS & STANDARD REPAIR	COST PER UNIT	CALCULATED MAINTENANCE COSTS
		LAMP REPLACEMENT GROUP	LAMP REPLACEMENT SPOT	POLE CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR	LAMP REPLACEMENT GROUP	LAMP REPLACEMENT SPOT	STANDARD CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR				
INCANDESCENT	60		0.38		0.007	0.045	0.055		0.005	0.00	76.15		209.61	47.29	10.11		97.63			33.58	0
	100		0.38		0.007	0.045	0.055		0.005	0.00	76.18		209.61	47.29	10.11		97.63			33.59	0
SEAS	100		0.38		0.007	0.045	0.055		0.005	0.00	76.18		209.61	47.29	10.11		97.63			33.59	0
FLOOD	100		0.38		0.007	0.045	0.055		0.005	0.00	76.18		209.61	47.29	10.11		145.01			33.82	0
	150		0.38		0.007	0.045	0.055		0.005	0.00	79.52		209.61	47.29	10.11		97.63			34.86	0
FLOOD	150		0.38		0.007	0.045	0.055		0.005	0.00	79.52		209.61	47.29	10.11		145.01			35.09	0
	200		0.38		0.007	0.045	0.055		0.005	0.00	87.26		209.61	47.29	10.11		97.63			37.80	0
SEAS	200		0.38		0.007	0.045	0.055		0.005	0.00	87.26		209.61	47.29	10.11		97.63			37.80	0
SEAS - LANE	200		0.38		0.007		0.055		0.005	0.00	87.26		209.61	0.00	101.12		97.63			40.68	0
	300		0.38		0.007	0.045	0.055		0.005	0.00	90.09		209.61	47.29	10.11		97.63			38.87	6 764
SEAS	300		0.38		0.007	0.045	0.055		0.005	0.00	90.09		209.61	47.29	10.11		97.63			38.87	0
FLOOD	300		0.38		0.007	0.045	0.055		0.005	0.00	90.09		209.61	47.29	10.11		145.01			39.11	196
	500		0.38		0.007	0.045	0.055		0.005	0.00	95.99		209.61	47.29	10.11		97.63			41.12	11 471
SEAS	500		0.38		0.007	0.045	0.055		0.005	0.00	95.99		209.61	47.29	10.11		97.63			41.12	0
FLOOD	500		0.38		0.007	0.045	0.055		0.005	0.00	95.99		209.61	47.29	10.11		145.01			41.35	2 812
SEAS - FLOOD	500		0.38		0.007	0.045	0.055		0.005	0.00	95.99		209.61	47.29	10.11		145.01			41.35	0
TOTAL INC.																					21 243
MERCURY VAPOUR	175	0.20	0.08		0.010	0.045	0.055		0.005	56.59	104.11		562.06	47.29	10.11		196.76			28.94	74 105
SEAS	175	0.20	0.08		0.010	0.045	0.055		0.005	56.59	104.11		562.06	47.29	10.11		196.76			28.94	0
LANE	175	0.20	0.08		0.010		0.055		0.005	56.59	104.11		562.06	0.00	101.12		177.47			31.72	119 223
SEAS - LANE	175	0.20	0.08		0.010		0.055		0.005	56.59	104.11		562.06	0.00	101.12		182.65			31.74	0
	250	0.20	0.08		0.010	0.045	0.055		0.005	63.82	111.34		594.40	47.29	10.11		196.76			31.28	21 210
FLOOD	250	0.20	0.08		0.010	0.045	0.055		0.005	63.82	111.34		800.06	47.29	10.11		145.01			33.08	0
SEAS	250	0.20	0.08		0.010	0.045	0.055		0.005	63.82	111.34		594.40	47.29	10.11		196.76			31.28	0
	400	0.20	0.08		0.010	0.045	0.055		0.005	65.40	114.94		784.20	47.29	10.83		246.59			34.07	50 874
LANE	400	0.20	0.08		0.010		0.055		0.005	60.22	107.74		745.03	0.00	101.12		206.99			34.71	1 319
FLOOD	400	0.20	0.08		0.010	0.045	0.055		0.005	60.22	107.74		800.06	47.29	10.11		145.01			32.07	706
SEAS	400	0.20	0.08		0.010	0.045	0.055		0.005	65.40	114.94		784.20	47.29	10.83		246.59			34.07	0
SEAS - LANE	400	0.20	0.08		0.010		0.055		0.005	60.22	107.74		745.03	0.00	101.12		206.99			34.71	0
TOTAL M. V.																					267 436
H. P. SODIUM	70	0.040	0.135		0.005		0.055	0.009	0.005	103.51	151.03		596.91	0.00	101.12	196.56	196.76			35.83	34 072
	100	0.040	0.135		0.005		0.055	0.009	0.005	100.83	148.35		607.85	0.00	101.12	196.56	196.76			35.41	2 196
	150	0.040	0.135		0.005		0.055	0.009	0.005	106.85	156.38		689.21	0.00	108.32	244.94	216.35			38.08	14 964
	250	0.040	0.135		0.005		0.055	0.009	0.005	114.48	164.02		732.07	0.00	108.32	244.94	216.35			39.63	20 249
	400	0.040	0.135		0.005	0.045	0.055	0.009	0.005	119.69	169.23		901.58	47.29	10.83	244.94	246.59			38.30	2 949
TOTAL H.P.S.																					74 429
QUARTZ - FLOOD	500		0.25		0.010		0.055		0.005	0.00	95.90		800.06	472.87	101.12		145.01			38.26	0
TOTAL DIST. POLE																					363 108

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STREET LIGHT COST OF SERVICE
MAINTENANCE COST
MARCH 31, 1989

EXCLUSIVE POLE		FREQUENCY OF SERVICE /REPLACEMENT (Annual)								COST PER UNIT OF SERVICE ($)								ANNUAL HIGH-MAST LIGTHING COSTS	ANNUAL UNDERGROUND BREAKS & STANDARD REPAIR	COST PER UNIT	CALCULATED MAINTENANCE COSTS
		LAMP REPLACEMENT		POLE CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR	LAMP REPLACEMENT		STANDARD CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR				
		GROUP	SPOT							GROUP	SPOT										
INCANDESCENT	60		0.38	0.07	0.007	0.045	0.055		0.005	0.00	76.15	48.07	209.61	47.29	10.11		97.63		20.49	57.43	57
SEAS	60		0.38	0.07	0.007	0.045	0.055		0.005	0.00	76.15	48.07	209.61	47.29	10.11		97.63		20.49	57.43	0
	100		0.38	0.07	0.007	0.045	0.055		0.005	0.00	76.18	48.07	209.61	47.29	10.11		97.63		20.49	57.44	0
FLOOD	100		0.38	0.07	0.007	0.045	0.055		0.005	0.00	76.18	48.07	209.61	47.29	10.11		97.63		20.49	57.44	0
SEAS	100		0.38	0.07	0.007	0.045	0.055		0.005	0.00	76.18	48.07	209.61	47.29	10.11		145.01		20.49	57.68	0
	150		0.38	0.07	0.007	0.045	0.055		0.005	0.00	79.52	48.07	209.61	47.29	10.11		97.63		20.49	58.71	352
FLOOD	150		0.38	0.07	0.007	0.045	0.055		0.005	0.00	79.52	48.07	209.61	47.29	10.11		145.01		20.49	58.95	0
SEAS	150		0.38	0.07	0.007	0.045	0.055		0.005	0.00	79.52	48.07	209.61	47.29	10.11		97.63		20.49	58.71	0
SEAS - FLOOD	150		0.38	0.07	0.007	0.045	0.055		0.005	0.00	79.52	48.07	209.61	47.29	10.11		97.63		20.49	58.71	0
	200		0.38	0.07	0.007	0.045	0.055		0.005	0.00	87.26	48.07	209.61	47.29	10.11		97.63		20.49	61.66	0
SEAS	200		0.38	0.07	0.007	0.045	0.055		0.005	0.00	87.26	48.07	209.61	47.29	10.11		97.63		20.49	61.66	0
	300		0.38	0.07	0.007	0.045	0.055		0.005	0.00	90.09	48.07	209.61	47.29	10.11		97.63		20.49	62.73	275 947
FLOOD	300		0.38	0.07	0.007	0.045	0.055		0.005	0.00	90.09	48.07	209.61	47.29	10.11		97.63		20.49	62.73	0
SEAS	300		0.38	0.07	0.007	0.045	0.055		0.005	0.00	90.09	48.07	209.61	47.29	10.11		145.01		20.49	62.97	0
	500		0.38	0.07	0.007	0.045	0.055		0.005	0.00	95.99	48.07	209.61	47.29	10.11		97.63		20.49	64.97	11 305
FLOOD	500		0.38	0.07	0.007	0.045	0.055		0.005	0.00	95.99	48.07	209.61	47.29	10.11		145.01		20.49	65.21	3 913
TOTAL INC.																					291 574
MERCURY VAPOUR	175	0.20	0.08	0.07	0.010	0.045	0.055		0.005	56.59	104.11	48.07	562.06	47.29	10.11		196.76		20.49	52.79	597 511
LANE	175	0.20	0.08		0.010		0.055		0.005	56.59	104.11	48.07	562.06	0.00	101.12		177.47		20.49	52.21	1 044
SEAS	175	0.20	0.08	0.07	0.010	0.045	0.055		0.005	56.59	104.11	48.07	800.06	47.29	10.11		196.76		20.49	55.17	0
SEAS - LANE	175	0.20	0.08	0.07	0.010		0.055		0.005	56.59	104.11	48.07	562.06	0.00	101.12		176.17		20.49	55.57	0
	250	0.20	0.08	0.07	0.010	0.045	0.055		0.005	63.82	111.34	48.07	594.40	47.29	10.11		196.76		20.49	55.14	115 023
FLOOD	250	0.20	0.08	0.07	0.010	0.045	0.055		0.005	63.82	111.34	48.07	800.06	47.29	10.11		145.01		20.49	56.94	0
SEAS	250	0.20	0.08	0.07	0.010	0.045	0.055		0.005	63.82	111.34	48.07	594.40	47.29	10.11		196.76		20.49	55.14	0
	400	0.20	0.08	0.07	0.010	0.045	0.055		0.005	65.40	114.94	48.07	784.20	58.30	10.83		246.59		20.49	58.43	187 436
LANE	400	0.20	0.08	0.07	0.010		0.055		0.005	60.22	107.74	48.07	745.03	0.00	101.12		206.99		20.49	58.57	1 991
FLOOD	400	0.20	0.08	0.07	0.010	0.045	0.055		0.005	60.22	107.74	48.07	800.06	58.30	10.11		145.01		20.49	56.43	2 765
SEAS	400	0.20	0.08	0.07	0.010	0.045	0.055		0.005	65.40	114.94	48.07	784.20	58.30	10.83		246.59		20.49	58.43	0
SEAS - LANE	400	0.20	0.08	0.07	0.010		0.055		0.005	60.22	107.74	48.07	745.03	0.00	101.12		206.99		20.49	58.57	0
	700	0.20	0.08		0.010	0.045	0.055		0.005	215.11	223.08		1 386.43	58.30	10.83		264.84		20.49	99.77	499
	1000	0.20	0.08		0.010	0.045	0.055		0.005	159.24	181.41		1 473.90	58.30	10.83		264.84		20.49	86.14	6 116
60 ft	1000	0.20	0.08		0.010	0.045	0.055		0.005	252.55	314.47		1 677.80	0.00	241.37		535.28		20.49	128.89	4 511
4/ 100 ft	1000	0.20	0.08		0.010		0.055		0.005	99.91	314.47		1 677.80	0.00	60.34		535.28	126.76	20.49	215.16	14 631
TOTAL M. V.																					931 527
H. P. SODIUM	70	0.040	0.135	0.07	0.005		0.055	0.009	0.005	103.51	151.03	48.07	596.91	0.00	101.12	196.56	196.76		20.49	59.68	300 573
24 hr.	70	0.040	0.135	0.07	0.005		0.055	0.009	0.005	103.51	151.03	48.07	1 312.33	0.00	101.12	196.56	196.76		20.49	63.26	633
SEAS	70	0.040	0.135	0.07	0.005		0.055	0.009	0.005	103.51	151.03	48.07	596.91	0.00	101.12	196.56	196.76		20.49	59.68	0
	100	0.040	0.135	0.07	0.005		0.055	0.009	0.005	100.83	148.35	48.07	607.85	0.00	101.12	196.56	196.76		20.49	59.27	23 175
	150	0.040	0.135	0.07	0.005		0.055	0.009	0.005	106.85	156.38	48.07	689.21	0.00	108.32	216.14	216.35		20.49	61.67	99 849
SEAS	150	0.040	0.135	0.07	0.005		0.055	0.009	0.005	106.85	156.38	48.07	689.21	0.00	108.32	216.14	216.35		20.49	61.67	0
	250	0.040	0.135	0.07	0.005		0.055	0.009	0.005	114.48	164.02	48.07	732.07	0.00	108.32	216.14	216.35		20.49	63.22	102 864
	400	0.040	0.135		0.005	0.045	0.055	0.009	0.005	119.69	169.23		901.58	47.29	10.83	216.14	246.59		20.49	58.54	82 419
4/ 100 ft	400	0.040	0.135		0.005		0.055	0.009	0.005	87.72	302.28		1 191.89	0.00	60.34	486.58	517.02	126.76	20.49	207.81	0

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STREET LIGHT COST OF SERVICE
MAINTENANCE COST
MARCH 31, 1989

		FREQUENCY OF SERVICE /REPLACEMENT (Annual)							COST PER UNIT OF SERVICE ($)										
		LAMP REPLACEMENT		POLE CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR	LAMP REPLACEMENT		STANDARD CLEANING & PAINTING	LUMINAIRE	CONTROL RELAY	PHOTO CELL	STARTER	REFRACTOR	ANNUAL HIGH-MAST LIGTHING COSTS	ANNUAL UNDERGROUND BREAKS & STANDARD REPAIR	COST PER UNIT	CALCULATED MAINTENANCE COSTS
		GROUP	SPOT							GROUP	SPOT										
2/ 100 ft	400	0.040	0.135		0.005		0.055	0.009	0.005	87.72	302.28		1 191.89	0.00	120.69	486.58	517.02	126.76	20.49	211.13	0
60 ft	1000	0.040	0.135		0.005		0.055	0.009	0.005	446.11	508.03		2 181.08	0.00	241.37	486.58	535.28		20.49	138.16	24 178
4/ 100 ft	1000	0.040	0.135		0.005		0.055	0.009	0.005	293.47	508.03		2 181.08	0.00	60.34	486.58	535.28	126.76	20.49	248.85	2 986
2/ 100 ft	1000	0.040	0.135		0.005		0.055	0.009	0.005	293.47	508.03		2 181.08	0.00	120.69	486.58	535.28	126.76	20.49	252.17	0
TOTAL H.P.S.																					636 677
QUARTZ - FLOOD	500		0.25	0.09	0.010		0.055		0.005	0.00	95.90	48.07	800.06	0.00	101.12		145.01		20.49	63.08	0
L.P.S. - FLOOD	200		0.25	0.09	0.010		0.055		0.005	0.00	95.90	48.07	800.06	0.00	101.12		145.01		20.49	63.08	0
TOTAL EXCL. POLE																					1 859 778
TOTAL SYSTEM																					2 222 886

Reference Table 8.2.1 8.2.2 8.2.3

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STREET LIGHT COST OF SERVICE
MAINTENANCE COSTS
MARCH 31,1989

DISTRIBUTION POLE		INVENTORY ZONE 1	COST PER UNIT	CALCULATED MAINTENANCE COSTS	MAINTENANCE COSTS SUBURBAN DISTRICTS						ANNUAL MAINTENANCE COSTS ZONE 1 90.00%
					LABOUR	MATERIAL	EXPENSE	OVERHEADS	UNADJUSTED TOTAL EXPENSE	ADJUSTED TOTAL EXPENSE	
INCANDESCENT	60 W	0	33.58	0	0	0	0	0	0	0	0
	100	0	33.59	0	0	0	0	0	0	0	0
SEAS	100	0	33.59	0	0	0	0	0	0	0	0
FLOOD	100	0	33.82	0	0	0	0	0	0	0	0
	150	0	34.86	0	0	0	0	0	0	0	0
FLOOD	150	0	35.09	0	0	0	0	0	0	0	0
	200	0	37.80	0	0	0	0	0	0	0	0
SEAS	200	0	37.80	0	0	0	0	0	0	0	0
SEAS - LANE	200	0	40.68	0	0	0	0	0	0	0	0
	300	174	38.87	6 764	1 283	453	613	4 415	6 764	7 580	6 822
SEAS	300	0	38.87	0	0	0	0	0	0	0	0
FLOOD	300	5	39.11	196	37	13	18	128	196	219	197
	500	279	41.12	11 471	2 057	943	983	7 488	11 471	12 818	11 536
SEAS	500	0	41.12	0	0	0	0	0	0	0	0
FLOOD	500	68	41.35	2 812	501	236	239	1 836	2 812	3 141	2 827
SEAS - FLOOD	500	0	41.35	0	0	0	0	0	0	0	0
TOTAL INC.		526		21 243	3 878	1 645	1 852	13 867	21 243	23 759	21 383
MERCURY VAPOUR	175 W	2 561	28.94	74 105	8 651	12 366	4 714	48 374	74 105	81 481	73 332
SEAS	175	0	28.94	0	0	0	0	0	0	0	0
LANE	175	3 759	31.72	119 223	15 196	18 127	8 074	77 826	119 223	131 465	118 319
SEAS - LANE	175	0	31.74	0	0	0	0	0	0	0	0
	250	678	31.28	21 210	2 290	3 826	1 248	13 845	21 210	23 259	20 933
FLOOD	250	0	33.08	0	0	0	0	0	0	0	0
SEAS	250	0	31.28	0	0	0	0	0	0	0	0
	400	1 493	34.07	50 874	5 757	8 763	3 145	33 209	50 874	55 878	50 290
LANE	400	38	34.71	1 319	154	223	82	861	1 319	1 450	1 305
FLOOD	400	22	32.07	706	74	130	40	461	706	773	696
SEAS	400	0	34.07	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	34.71	0	0	0	0	0	0	0	0
TOTAL M. V.		8 551		267 436	32 121	43 435	17 303	174 576	267 436	294 306	264 875
H. P. SODIUM	70 W	951	35.83	34 072	3 886	6 041	1 903	22 242	34 072	37 378	33 640
	100	62	35.41	2 196	253	385	124	1 433	2 196	2 410	2 169
	150	393	38.08	14 964	1 828	2 489	879	9 768	14 964	16 450	14 805
	250	511	39.63	20 249	2 377	3 511	1 143	13 218	20 249	22 229	20 006
	400	77	38.30	2 949	301	578	145	1 925	2 949	3 223	2 901
TOTAL H.P.S.		1 994		74 429	8 645	13 004	4 194	48 586	74 429	81 690	73 521
QUARTZ - FLOOD	500 W	0	38.26	0	0	0	0	0	0	0	0
TOTAL DIST. POLE		11 071		363 108	44 645	58 085	23 350	237 029	363 108	399 755	359 779

Table 7.13
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STREET LIGHT COST OF SERVICE
MAINTENANCE COSTS
MARCH 31,1989

EXCLUSIVE POLE		INVENTORY ZONE 1	COST PER UNIT	CALCULATED MAINTENANCE COSTS	MAINTENANCE COSTS SUBURBAN DISTRICTS LABOUR	MATERIAL	EXPENSE	OVERHEADS	UNADJUSTED TOTAL EXPENSE	ADJUSTED TOTAL EXPENSE	ANNUAL MAINTENANCE COSTS ZONE 1 90.00%
INCANDESCENT	60 W	1	57.43	57	11	2	7	39	59	67	60
SEAS	60	0	57.43	0	0	0	0	0	0	0	0
	100	0	57.44	0	0	0	0	0	0	0	0
FLOOD	100	0	57.44	0	0	0	0	0	0	0	0
SEAS	100	0	57.68	0	0	0	0	0	0	0	0
	150	6	58.71	352	64	15	44	241	363	409	368
FLOOD	150	0	58.95	0	0	0	0	0	0	0	0
SEAS	150	0	58.71	0	0	0	0	0	0	0	0
SEAS - FLOOD	150	0	58.71	0	0	0	0	0	0	0	0
	200	0	61.66	0	0	0	0	0	0	0	0
SEAS	200	0	61.66	0	0	0	0	0	0	0	0
	300	4 399	62.73	275 947	46 665	17 134	32 016	188 231	284 046	318 820	286 938
FLOOD	300	0	62.73	0	0	0	0	0	0	0	0
SEAS	300	0	62.97	0	0	0	0	0	0	0	0
	500	174	64.97	11 305	1 846	813	1 266	7 700	11 626	13 025	11 722
FLOOD	500	60	65.21	3 913	636	285	437	2 665	4 023	4 506	4 056
TOTAL INC.		4 640		291 574	49 221	18 249	33 770	198 876	300 117	336 827	303 144
MERCURY VAPOUR	175 W	11 318	52.79	597 511	74 840	69 281	63 348	410 880	618 349	687 307	618 576
LANE	175	20	52.21	1 044	145	120	97	718	1 081	1 201	1 081
SEAS	175	0	55.17	0	0	0	0	0	0	0	0
SEAS - LANE	175	0	55.57	0	0	0	0	0	0	0	0
	250	2 086	55.14	115 023	13 794	14 469	11 676	78 925	118 864	131 869	118 682
FLOOD	250	0	56.94	0	0	0	0	0	0	0	0
SEAS	250	0	55.14	0	0	0	0	0	0	0	0
	400	3 208	58.43	187 436	22 746	23 528	18 809	128 260	193 342	214 498	193 048
LANE	400	34	58.57	1 991	247	243	201	1 362	2 054	2 280	2 052
FLOOD	400	49	56.43	2 765	324	362	274	1 895	2 855	3 164	2 848
SEAS	400	0	58.43	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	58.57	0	0	0	0	0	0	0	0
	700	5	99.77	499	35	114	24	335	508	552	497
	1000	71	86.14	6 116	567	1 121	435	4 123	6 246	6 851	6 166
60 ft	1000	35	128.89	4 511	345	548	674	3 009	4 576	5 095	4 585
4/ 100 ft	1000	68	215.16	14 631	2 093	1 686	1 301	9 676	14 756	16 395	14 755
TOTAL M. V.		16 894		931 527	115 136	111 471	96 839	639 184	962 631	1 069 211	962 290
H. P. SODIUM	70 W	5 036	59.68	300 573	36 870	38 502	28 995	205 479	309 845	343 529	309 176
24 hr.	70	10	63.26	633	73	89	58	431	651	720	648
SEAS	70	0	59.68	0	0	0	0	0	0	0	0
	100	391	59.27	23 175	2 863	2 933	2 251	15 848	23 895	26 500	23 850
	150	1 619	61.67	99 849	12 622	12 346	9 702	68 160	102 830	114 101	102 691
SEAS	150	0	61.67	0	0	0	0	0	0	0	0
	250	1 627	63.22	102 864	12 684	13 282	9 750	70 143	105 860	117 339	105 605
	400	1 408	58.54	82 419	9 916	12 207	6 495	56 393	85 011	93 840	84 456
4/ 100 ft	400	0	207.81	0	0	0	0	0	0	0	0

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STREET LIGHT COST OF SERVICE
MAINTENANCE COSTS
MARCH 31,1989

		INVENTORY ZONE 1	COST PER UNIT	CALCULATED MAINTENANCE COSTS	MAINTENANCE COSTS SUBURBAN DISTRICTS LABOUR	MATERIAL	EXPENSE	OVERHEADS	UNADJUSTED TOTAL EXPENSE	ADJUSTED TOTAL EXPENSE	ANNUAL MAINTENANCE COSTS ZONE 1 90.00%
2/ 100 ft	400	0	211.13	0	0	0	0	0	0	0	0
60 ft	1000	175	138.16	24 178	1 656	4 016	2 723	16 105	24 500	27 014	24 313
4/ 100 ft	1000	12	248.85	2 986	386	385	265	1 971	3 008	3 334	3 001
2/ 100 ft	1000	0	252.17	0	0	0	0	0	0	0	0
TOTAL H.P.S.		10 278		636 677	77 070	83 759	60 239	434 532	655 600	726 378	653 740
QUARTZ - FLOOD	500 W	0	63.08	0	0	0	0	0	0	0	0
L.P.S. - FLOOD	200 W	0	63.08	0	0	0	0	0	0	0	0
TOTAL EXCL. POLE		31 812		1 859 778	241 428	213 480	190 848	1 272 592	1 918 348	2 132 416	1 919 174
TOTAL SYSTEM		42 883		2 222 886	286 073	271 564	214 198	1 509 621	2 281 456	2 532 171	2 278 953
Reference Table		8.1	7.12	ACTUAL EXPENSE	340 611	270 329	268 286	1 652 945	2 532 171		
				CORRECTION	1.19064	0.99545	1.25251	1.09494	1.10989		

Table 7.14
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STREET LIGHT COST OF SERVICE
UNIT COST CALCULATION - COMMON COSTS
MARCH 31,1989

COMMON COSTS ALLOCATED TO STREET LIGHTING

FUNCTION	ALLOCATE TABLE	ZONE ID.	INTEREST	DEPRECIATION	OPERATING	MISC. REVENUE	TOTAL
GENERATION	E-10	ZONE 1	267.1	64.4	254.8	(1.2)	585.1
		ZONE 2	174.6	42.1	166.5	(0.8)	382.4
		ZONE 3	121.0	29.2	115.4	(0.6)	265.0
	D-10	ZONE 1	247.9	59.8	236.4	(1.2)	542.9
		ZONE 2	162.1	39.1	154.6	(0.8)	355.0
		ZONE 3	111.8	27.0	106.6	(0.5)	244.9
			1 084.5	261.6	1 034.3	(5.1)	2 375.3
TRANSMISSION	E-10	ZONE 1	105.6	41.4	135.6	(3.3)	279.3
		ZONE 2	69.0	27.1	88.6	(2.1)	182.6
		ZONE 3	47.8	18.8	61.4	(1.5)	126.5
	D-10	ZONE 1	97.9	38.4	125.8	(3.0)	259.1
		ZONE 2	64.1	25.1	82.3	(2.0)	169.5
		ZONE 3	44.2	17.3	56.7	(1.4)	116.8
			428.6	168.1	550.4	(13.3)	1 133.8
SUB-TRANS.	D-21	ZONE 1	1.5	1.1	1.9		4.5
		ZONE 2	1.0	0.7	1.2		2.9
		ZONE 3	0.7	0.5	0.9		2.1
	D-22	ZONE 1	17.9	9.0	20.9		47.8
		ZONE 2	11.7	5.9	13.7		31.3
		ZONE 3	8.1	4.0	9.4		21.5
	D-23	ZONE 1	15.2	5.4	13.3		33.9
		ZONE 2	10.0	3.5	8.7		22.2
		ZONE 3	6.9	2.4	6.0		15.3
			73.0	32.5	76.0	0.0	181.5
DIST. PLANT	D-31	ZONE 1	0.5	0.1	1.6		2.2
		ZONE 2	0.3	0.1	1.1		1.5
		ZONE 3	0.2	0.0	0.7		0.9
	D-32	ZONE 1	27.5	13.6	33.2		74.3
		ZONE 2	18.0	8.9	21.7		48.6
		ZONE 3	12.4	6.1	15.0		33.5
	D-34	ZONE 1	38.0	28.0	27.7	(2.7)	91.0
	D-35	ZONE 2	14.1	10.1	16.5	(1.0)	39.7
	D-36	ZONE 3	45.3	27.9	37.1	(2.3)	108.0
	D-38	ZONE 1	26.2	18.5	16.9		61.6
	D-39	ZONE 2	8.4	5.9	8.7		23.0
	D-40	ZONE 3	27.2	16.4	20.3		63.9
	C-20	ZONE 1	0.3	0.1	0.0		0.4
		ZONE 2	0.2	0.0	0.0		0.2
		ZONE 3	0.2	0.0	0.0		0.2
	C-21	ZONE 1	34.7	25.6	26.2	(2.6)	83.9
	C-22	ZONE 2	18.7	13.4	22.6	(1.4)	53.3
	C-23	ZONE 3	65.7	40.3	55.2	(3.4)	157.8
			337.9	215.0	304.5	(13.4)	844.0
DIST. SERVICES	C-11	ZONE 1	5.6	3.2	206.0	(12.7)	202.1
	C-12	ZONE 2	6.9	3.9	251.2	(15.5)	246.5
		ZONE 3	4.9	2.8	177.6	(11.0)	174.3
	C-13	ZONE 1	0.5	0.4	35.0	0.0	35.9
		ZONE 2	0.3	0.3	25.1	0.0	25.7
		ZONE 3	0.2	0.2	17.7	0.0	18.1
	C-30	ZONE 1	0.0	0.0	2.6	0.0	2.6
		ZONE 2	0.4	0.3	26.4	0.0	27.1
		ZONE 3	1.3	1.2	92.5	0.0	95.0
			20.1	12.3	834.1	(39.2)	827.3
TOTAL ALLOCATED COSTS			1 944.1	689.5	2 799.3	(71.0)	5 361.9
TOTAL DIRECT COSTS			874.1	1 340.6	4 403.0		6 617.7
TOTAL STREET LIGHT COSTS			2 818.2	2 030.1	7 202.3	(71.0)	11 979.6

CALCULATION OF UNIT COSTS
FOR COMMON COSTS ALLOCATED TO STREET LIGHTING

COST ($000's)	CUSTOMER	ENERGY	DEMAND	TOTAL
ZONE 1	324.9	864.4	1 117.3	2 306.6
ZONE 2	352.8	565.0	693.7	1 611.5
ZONE 3	445.4	391.5	606.9	1 443.8
TOTAL ALLOCATED COSTS	1 123.1	1 820.9	2 417.9	5 361.9
NO. OF UNITS				
ZONE 1	44 310.0	47 133.3	11.5	
ZONE 2	32 359.0	30 372.0	7.5	
ZONE 3	24 418.0	20 668.8	5.1	
UNITS - TOTAL	101 087.0	98 174.1	24.1	
UNIT COSTS PER	CUSTOMER	KWh	KW	
ZONE 1	$7.33	$0.0183	$97.16	
ZONE 2	$10.90	$0.0186	$92.49	
ZONE 3	$18.24	$0.0189	$119.00	
UNIT COSTS	$11.11	$0.0185	$100.33	

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STREET LIGHT COST OF SERVICE
ENERGY REQUIREMENTS / COSTS
MARCH 31, 1989

DISTRIBUTION POLE		WATTAGE INCLUDING BALLAST LOSSES	STREET LIGHT INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	ANNUAL ENERGY REQUIREMENTS ZONE 1	ZONE 2	ZONE 3	TOTAL	ANNUAL ENERGY COSTS $0.0183 ZONE 1	$0.0186 ZONE 2	$0.0189 / KW.h ZONE 3	TOTAL
INCANDESCENT	60 W	60 W	0	8	4	12	0	1 956	978	2 934	0	36	18	55
	100	100	0	116	144	260	0	47 277	58 689	105 966	0	879	1 109	1 989
SEAS	100	100	0	0	14	14	0	0	2 338	2 338	0	0	44	44
FLOOD	100	100	0	0	6	6	0	0	2 445	2 445	0	0	46	46
	150	150	0	19	38	57	0	11 615	23 231	34 846	0	216	439	655
FLOOD	150	150	0	2	4	6	0	1 223	2 445	3 668	0	23	46	69
	200	200	0	6	3	9	0	4 891	2 445	7 336	0	91	46	137
SEAS	200	200	0	0	19	19	0	0	6 347	6 347	0	0	120	120
SEAS - LANE	200	200	0	0	1	1	0	0	334	334	0	0	6	6
	300	327	174	451	17	642	231 893	601 057	22 656	855 607	4 244	11 180	428	15 852
SEAS	300	327	0	0	42	42	0	0	22 939	22 939	0	0	434	434
FLOOD	300	327	5	6	0	11	6 664	7 996	0	14 660	122	149	0	271
	500	625	279	1	1	281	710 683	2 547	2 547	715 777	13 005	47	48	13 101
SEAS	500	625	0	0	1	1	0	0	1 044	1 044	0	0	20	20
FLOOD	500	625	68	4	0	72	173 213	10 189	0	183 402	3 170	190	0	3 359
SEAS - FLOOD	500	625	0	0	1	1	0	0	1 044	1 044	0	0	20	20
TOTAL INC.			526	613	295	1 434	1 122 453	688 752	149 483	1 960 687	20 541	12 811	2 825	36 177
MERCURY VAPOUR	175 W	205 W	2 561	9 677	3 485	15 723	2 139 710	8 085 114	2 911 711	13 136 535	39 157	150 383	55 031	244 571
SEAS	175	205	0	0	91	91	0	0	31 158	31 158	0	0	589	589
LANE	175	205	3 759	331	70	4 160	3 140 637	276 550	58 485	3 475 672	57 474	5 144	1 105	63 723
SEAS - LANE	175	205	0	0	16	16	0	0	5 478	5 478	0	0	104	104
	250	290	678	406	71	1 155	801 344	479 861	83 917	1 365 122	14 665	8 925	1 586	25 176
FLOOD	250	290	0	1	135	136	0	1 182	159 560	160 742	0	22	3 016	3 038
SEAS	250	290	0	0	7	7	0	0	3 391	3 391	0	0	64	64
	400	460	1 493	1 055	218	2 766	2 799 041	1 977 889	408 701	5 185 630	51 222	36 789	7 724	95 736
LANE	400	460	38	43	10	91	71 241	80 615	18 748	170 605	1 304	1 499	354	3 157
FLOOD	400	460	22	8	47	77	41 245	14 998	88 114	144 358	755	279	1 665	2 699
SEAS	400	460	0	0	18	18	0	0	13 829	13 829	0	0	261	261
SEAS - LANE	400	460	0	0	2	2	0	0	1 537	1 537	0	0	29	29
TOTAL M. V.			8 551	11 521	4 170	24 242	8 993 219	10 916 209	3 784 627	23 694 056	164 576	203 041	71 529	439 147
H. P. SODIUM	70 W	95 W	951	634	176	1 761	368 210	245 473	68 144	681 828	6 738	4 566	1 288	12 592
	100	120	62	301	48	411	30 322	147 211	23 475	201 009	555	2 738	444	3 737
	150	175	393	368	130	891	280 299	262 469	92 720	635 488	5 129	4 882	1 752	11 764
	250	305	511	113	57	681	635 203	140 466	70 854	846 522	11 624	2 613	1 339	15 576
	400	475	77	0	9	86	149 065	0	17 423	166 488	2 728	0	329	3 057
TOTAL H.P.S.			1 994	1 416	420	3 830	1 463 099.6	795 618.3	272 616.9	2 531 334.8	26 775	14 798	5 152	46 726
QUARTZ - FLOOD	500 W	500 W	0	1	3	4	0	2 038	6 113	8 151	0	38	116	153
TOTAL DIST. POLE			11 071	13 551	4 888	29 510	11 578 771	12 402 617	4 212 840	28 194 229	211 892	230 689	79 623	522 203

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STREET LIGHT COST OF SERVICE
ENERGY REQUIREMENTS / COSTS
MARCH 31, 1989

		WATTAGE INCLUDING BALLAST LOSSES	STREET LIGHT INVENTORY				ANNUAL ENERGY REQUIREMENTS				ANNUAL ENERGY COSTS $0.0183 / $0.0186 / $0.0189 / KW.h			
			ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
EXCLUSIVE POLE														
INCANDESCENT	60 W	60 W	1	13	0	14	245	3 179	0	3 424	4	59	0	64
SEAS	60	60	0	0	2	2	0	0	200	200	0	0	4	4
	100	100	0	22	23	45	0	8 966	9 374	18 340	0	167	177	344
FLOOD	100	100	0	0	2	2	0	0	815	815	0	0	15	15
SEAS	100	100	0	0	7	7	0	0	1 169	1 169	0	0	22	22
	150	150	6	13	11	30	3 668	7 947	6 725	18 340	67	148	127	342
FLOOD	150	150	0	2	3	5	0	1 223	1 834	3 057	0	23	35	57
SEAS	150	150	0	0	1	1	0	0	251	251	0	0	5	5
SEAS - FLOOD	150	150	0	0	1	1	0	0	251	251	0	0	5	5
	200	200	0	12	0	12	0	9 781	0	9 781	0	182	0	182
SEAS	200	200	0	0	22	22	0	0	7 349	7 349	0	0	139	139
	300	327	4 399	1 115	9	5 523	5 862 641	1 485 984	11 994	7 360 619	107 286	27 639	227	135 152
FLOOD	300	327	0	3	1	4	0	3 998	1 333	5 331	0	74	25	100
SEAS	300	327	0	0	48	48	0	0	26 215	26 215	0	0	495	495
	500	625	174	0	0	174	443 222	0	0	443 222	8 111	0	0	8 111
FLOOD	500	625	60	1	0	61	152 835	2 547	0	155 382	2 797	47	0	2 844
TOTAL INC.			4 640	1 181	130	5 951	6 462 610	1 523 626	67 510	8 053 746	118 266	28 339	1 276	147 881
MERCURY VAPOUR	175 W	205 W	11 318	8 762	995	21 075	9 456 166	7 320 633	831 321	17 608 120	173 048	136 164	15 712	324 924
LANE	175	205	20	33	2	55	16 710	27 571	1 671	45 952	306	513	32	850
SEAS	175	205	0	0	120	120	0	0	41 087	41 087	0	0	777	777
SEAS - LANE	175	205	0	0	3	3	0	0	1 027	1 027	0	0	19	19
	250	290	2 086	915	200	3 201	2 465 493	1 081 460	236 385	3 783 339	45 119	20 115	4 468	69 701
FLOOD	250	290	0	2	0	2	0	2 364	0	2 364	0	44	0	44
SEAS	250	290	0	0	2	2	0	0	969	969	0	0	18	18
	400	460	3 208	2 278	748	6 234	6 014 281	4 270 740	1 402 332	11 687 354	110 061	79 436	26 504	216 001
LANE	400	460	34	19	4	57	63 742	35 621	7 499	106 862	1 166	663	142	1 971
FLOOD	400	460	49	13	0	62	91 864	24 372	0	116 236	1 681	453	0	2 134
SEAS	400	460	0	0	9	9	0	0	6 915	6 915	0	0	131	131
SEAS - LANE	400	460	0	0	4	4	0	0	3 073	3 073	0	0	58	58
	700	780	5	0	61	66	15 895	0	193 917	209 812	291	0	3 665	3 956
	1000	1100	71	12	13	96	318 304	53 798	58 281	430 383	5 825	1 001	1 102	7 927
60 ft	1000	1100	35	3	76	114	156 911	13 449	340 720	511 080	2 871	250	6 440	9 561
4/ 100 ft	1000	1100	68	0	417	485	304 855	0	1 869 478	2 174 333	5 579	0	35 333	40 912
TOTAL M. V.			16 894	12 037	2 654	31 585	18 904 222	12 830 009	4 994 674	36 728 906	345 947	238 638	94 399	678 985
H. P. SODIUM	70 W	95 W	5 036	1 414	175	6 625	1 949 849	547 475	67 757	2 565 081	35 682	10 183	1 281	47 146
24 hr.	70	95	10	0	0	10	8 322	0	0	8 322	152	0	0	152
SEAS	70	95	0	0	2	2	0	0	317	317	0	0	6	6
	100	120	391	813	90	1 294	191 227	397 616	44 016	632 859	3 499	7 396	832	11 727
	150	175	1 619	1 139	251	3 009	1 154 719	812 369	179 021	2 146 109	21 131	15 110	3 383	39 625
SEAS	150	175	0	0	41	41	0	0	11 984	11 984	0	0	226	226
	250	305	1 627	598	275	2 500	2 022 455	743 349	341 841	3 107 645	37 011	13 826	6 461	57 298
	400	475	1 408	34	262	1 704	2 725 761	65 821	507 208	3 298 791	49 881	1 224	9 586	60 692
4/ 100 ft	400	475	0	0	138	138	0	0	267 156	267 156	0	0	5 049	5 049

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STREET LIGHT COST OF SERVICE
ENERGY REQUIREMENTS / COSTS
MARCH 31, 1989

		WATTAGE INCLUDING BALLAST LOSSES	STREET LIGHT INVENTORY				ANNUAL ENERGY REQUIREMENTS				ANNUAL ENERGY COSTS $0.0183	$0.0186	$0.0189 / KW.h	
			ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
2/ 100 ft	400	475	0	0	20	20	0	0	38 718	38 718	0	0	732	732
60 ft	1000	1130	175	0	0	175	805 950	0	0	805 950	14 749	0	0	14 749
4/ 100 ft	1000	1130	12	0	70	82	55 265	0	322 380	377 645	1 011	0	6 093	7 104
2/ 100 ft	1000	1130	0	0	12	12	0	0	55 265	55 265	0	0	1 045	1 045
TOTAL H.P.S.			10 278	3 998	1 336	15 612	8 913 549	2 566 629	1 835 663	13 315 842	163 118	47 739	34 694	245 551
QUARTZ - FLOOD	500 W	500 W	0	4	0	4	0	8 151	0	8 151	0	152	0	152
L.P.S. - FLOOD	200 W	235 W	0	2	0	2	0	1 916	0	1 916	0	36	0	36
TOTAL EXCL. POLE			31 812	17 222	4 120	53 154	34 280 381	16 930 332	6 897 848	58 108 560	627 331	314 904	130 369	1 072 604
TOTAL SYSTEM			42 883	30 773	9 008	82 664	45 859 152	29 332 949	11 110 688	86 302 789	839 222	545 593	209 992	1 594 807

Reference Table 7.14

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Table 7.16
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STREET LIGHT COST OF SERVICE
DEMAND REQUIREMENTS / COSTS
MARCH 31, 1989

		WATTAGE INCLUDING BALLAST LOSSES	STREET LIGHT INVENTORY				CONNECTED LOAD				ANNUAL DEMAND COSTS $97.16	$92.49	$119.00 / KW	
			ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
EXCLUSIVE POLE														
INCANDESCENT	60 W	60 W	1	13	0	14	0.1	0.8	0.0	0.8	6	72	0	78
SEAS	60	60	0	0	2	2	0.0	0.0	0.1	0.1	0	0	14	14
	100	100	0	22	23	45	0.0	2.2	2.3	4.5	0	203	274	477
FLOOD	100	100	0	0	2	2	0.0	0.0	0.2	0.2	0	0	24	24
SEAS	100	100	0	0	7	7	0.0	0.0	0.7	0.7	0	0	83	83
	150	150	6	13	11	30	0.9	2.0	1.7	4.5	87	180	196	464
FLOOD	150	150	0	2	3	5	0.0	0.3	0.5	0.8	0	28	54	81
SEAS	150	150	0	0	1	1	0.0	0.0	0.2	0.2	0	0	18	18
SEAS - FLOOD	150	150	0	0	1	1	0.0	0.0	0.2	0.2	0	0	18	18
	200	200	0	12	0	12	0.0	2.4	0.0	2.4	0	222	0	222
SEAS	200	200	0	0	22	22	0.0	0.0	4.4	4.4	0	0	524	524
	300	327	4 399	1 115	9	5 523	1 438.5	364.6	2.9	1 806.0	139 762	33 722	350	173 835
FLOOD	300	327	0	3	1	4	0.0	1.0	0.3	1.3	0	91	39	130
SEAS	300	327	0	0	48	48	0.0	0.0	15.7	15.7	0	0	1 868	1 868
	500	625	174	0	0	174	108.8	0.0	0.0	108.8	10 566	0	0	10 566
FLOOD	500	625	60	1	0	61	37.5	0.6	0.0	38.1	3 644	58	0	3 701
TOTAL INC.			4 640	1 181	130	5 951	1 585.7	373.8	29.1	1 988.6	154 065	34 577	3 461	192 103
MERCURY VAPOUR	175 W	205 W	11 318	8 762	995	21 075	2 320.2	1 796.2	204.0	4 320.4	225 430	166 131	24 273	415 834
LANE	175	205	20	33	2	55	4.1	6.8	0.4	11.3	398	626	49	1 073
SEAS	175	205	0	0	120	120	0.0	0.0	24.6	24.6	0	0	2 927	2 927
SEAS - LANE	175	205	0	0	3	3	0.0	0.0	0.6	0.6	0	0	73	73
	250	290	2 086	915	200	3 201	604.9	265.4	58.0	928.3	58 776	24 542	6 902	90 220
FLOOD	250	290	0	2	0	2	0.0	0.6	0.0	0.6	0	54	0	54
SEAS	250	290	0	0	2	2	0.0	0.0	0.6	0.6	0	0	69	69
	400	460	3 208	2 278	748	6 234	1 475.7	1 047.9	344.1	2 867.6	143 377	96 918	40 946	281 241
LANE	400	460	34	19	4	57	15.6	8.7	1.8	26.2	1 520	808	219	2 547
FLOOD	400	460	49	13	0	62	22.5	6.0	0.0	28.5	2 190	553	0	2 743
SEAS	400	460	0	0	9	9	0.0	0.0	4.1	4.1	0	0	493	493
SEAS - LANE	400	460	0	0	4	4	0.0	0.0	1.8	1.8	0	0	219	219
	700	780	5	0	61	66	3.9	0.0	47.6	51.5	379	0	5 662	6 041
	1000	1100	71	12	13	96	78.1	13.2	14.3	105.6	7 588	1 221	1 702	10 511
60 ft	1000	1100	35	3	76	114	38.5	3.3	83.6	125.4	3 741	305	9 948	13 994
4/ 100 ft	1000	1100	68	0	417	485	74.8	0.0	458.7	533.5	7 268	0	54 585	61 853
TOTAL M. V.			16 894	12 037	2 654	31 585	4 638.4	3 148.0	1 244.3	9 030.7	450 666	291 159	148 067	889 892
H. P. SODIUM	70 W	95 W	5 036	1 414	175	6 625	478.4	134.3	16.6	629.4	46 483	12 424	1 978	60 886
24 hr.	70	95	10	0	0	10	1.0	0.0	0.0	1.0	92	0	0	92
SEAS	70	95	0	0	2	2	0.0	0.0	0.2	0.2	0	0	23	23
	100	120	391	813	90	1 294	46.9	97.6	10.8	155.3	4 559	9 023	1 285	14 867
	150	175	1 619	1 139	251	3 009	283.3	199.3	43.9	526.6	27 528	18 436	5 227	51 191
SEAS	150	175	0	0	41	41	0.0	0.0	7.2	7.2	0	0	854	854
	250	305	1 627	598	275	2 500	496.2	182.4	83.9	762.5	48 214	16 869	9 981	75 065
	400	475	1 408	34	262	1 704	668.8	16.2	124.5	809.4	64 981	1 494	14 810	81 284
4/ 100 ft	400	475	0	0	138	138	0.0	0.0	65.6	65.6	0	0	7 800	7 800

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STREET LIGHT COST OF SERVICE
DEMAND REQUIREMENTS / COSTS
MARCH 31, 1989

		WATTAGE INCLUDING BALLAST LOSSES	STREET LIGHT INVENTORY				CONNECTED LOAD				ANNUAL DEMAND COSTS $97.16 / $92.49 / $119.00 / KW			
			ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
2/ 100 ft	400	475	0	0	20	20	0.0	0.0	9.5	9.5	0	0	1 131	1 131
60 ft	1000	1130	175	0	0	175	197.8	0.0	0.0	197.8	19 213	0	0	19 213
4/ 100 ft	1000	1130	12	0	70	82	13.6	0.0	79.1	92.7	1 317	0	9 413	10 730
2/ 100 ft	1000	1130	0	0	12	12	0.0	0.0	13.6	13.6	0	0	1 614	1 614
TOTAL H.P.S.			10 278	3 998	1 336	15 612	2 186.0	629.8	454.8	3 270.5	212 388	58 246	54 115	324 749
QUARTZ - FLOOD	500 W	500 W	0	4	0	4	0.0	2.0	0.0	2.0	0	185	0	185
L.P.S. - FLOOD	200 W	235 W	0	2	0	2	0.0	0.5	0.0	0.5	0	43	0	43
TOTAL EXCL. POLE			31 812	17 222	4 120	53 154	8 410.0	4 154.1	1 728.1	14 292.2	817 119	384 210	205 643	1 406 972
TOTAL SYSTEM			42 883	30 773	9 008	82 664	11 251.0	7 197.2	2 793.4	21 241.6	1 093 150	665 670	332 412	2 091 232

Reference Table 7.14

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Table 7.17
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STREET LIGHT COST OF SERVICE
CUSTOMER COSTS
MARCH 31, 1989

DISTRIBUTION POLE		STREET LIGHT INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	ANNUAL CUSTOMER COSTS $7.33 / $10.90 / $18.24 / LIGHT ZONE 1	ZONE 2	ZONE 3	TOTAL
INCANDESCENT	60	0	8	4	12	0	87	73	160
	100	0	116	144	260	0	1 264	2 627	3 891
SEAS	100	0	0	14	14	0	0	255	255
FLOOD	100	0	0	6	6	0	0	109	109
	150	0	19	38	57	0	207	693	900
FLOOD	150	0	2	4	6	0	22	73	95
	200	0	6	3	9	0	65	55	120
SEAS	200	0	0	19	19	0	0	347	347
SEAS - LANE	200	0	0	1	1	0	0	18	18
	300	174	451	17	642	1 275	4 916	310	6 501
SEAS	300	0	0	42	42	0	0	766	766
FLOOD	300	5	6	0	11	37	65	0	102
	500	279	1	1	281	2 045	11	18	2 074
SEAS	500	0	0	1	1	0	0	18	18
FLOOD	500	68	4	0	72	498	44	0	542
SEAS - FLOOD	500	0	0	1	1	0	0	18	18
TOTAL INC.		526	613	295	1 434	3 856	6 682	5 381	15 918
MERCURY VAPOUR	175	2 561	9 677	3 485	15 723	18 772	105 479	63 566	187 818
SEAS	175	0	0	91	91	0	0	1 660	1 660
LANE	175	3 759	331	70	4 160	27 553	3 608	1 277	32 438
SEAS - LANE	175	0	0	16	16	0	0	292	292
	250	678	406	71	1 155	4 970	4 425	1 295	10 690
FLOOD	250	0	1	135	136	0	11	2 462	2 473
SEAS	250	0	0	7	7	0	0	128	128
	400	1 493	1 055	218	2 766	10 944	11 500	3 976	26 420
LANE	400	38	43	10	91	279	469	182	930
FLOOD	400	22	8	47	77	161	87	857	1 106
SEAS	400	0	0	18	18	0	0	328	328
SEAS - LANE	400	0	0	2	2	0	0	36	36
TOTAL M. V.		8 551	11 521	4 170	24 242	62 679	125 579	76 061	264 319
H. P. SODIUM	70	951	634	176	1 761	6 971	6 911	3 210	17 092
	100	62	301	48	411	454	3 281	876	4 611
	150	393	368	130	891	2 881	4 011	2 371	9 263
	250	511	113	57	681	3 746	1 232	1 040	6 017
	400	77	0	9	86	564	0	164	729
TOTAL H.P.S.		1 994	1 416	420	3 830	14 616	15 434	7 661	37 711
QUARTZ - FLOOD	500	0	1	3	4	0	11	55	66
TOTAL DIST. POLE		11 071	13 551	4 888	29 510	81 150	147 706	89 157	318 013

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STREET LIGHT COST OF SERVICE
CUSTOMER COSTS
MARCH 31, 1989

		STREET LIGHT INVENTORY				ANNUAL CUSTOMER COSTS $7.33 $10.90 $18.24 / LIGHT			
		ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
EXCLUSIVE POLE									
INCANDESCENT	60	1	13	0	14	7	142	0	149
SEAS	60	0	0	2	2	0	0	36	36
	100	0	22	23	45	0	240	420	659
FLOOD	100	0	0	2	2	0	0	36	36
SEAS	100	0	0	7	7	0	0	128	128
	150	6	13	11	30	44	142	201	386
FLOOD	150	0	2	3	5	0	22	55	77
SEAS	150	0	0	1	1	0	0	18	18
SEAS - FLOOD	150	0	0	1	1	0	0	18	18
	200	0	12	0	12	0	131	0	131
SEAS	200	0	0	22	22	0	0	401	401
	300	4 399	1 115	9	5 523	32 245	12 154	164	44 562
FLOOD	300	0	3	1	4	0	33	18	51
SEAS	300	0	0	48	48	0	0	876	876
	500	174	0	0	174	1 275	0	0	1 275
FLOOD	500	60	1	0	61	440	11	0	451
TOTAL INC.		4 640	1 181	130	5 951	34 011	12 873	2 371	49 255
MERCURY VAPOUR	175	11 318	8 762	995	21 075	82 961	95 506	18 149	196 616
LANE	175	20	33	2	55	147	360	36	543
SEAS	175	0	0	120	120	0	0	2 189	2 189
SEAS - LANE	175	0	0	3	3	0	0	55	55
	250	2 086	915	200	3 201	15 290	9 974	3 648	28 912
FLOOD	250	0	2	0	2	0	22	0	22
SEAS	250	0	0	2	2	0	0	36	36
	400	3 208	2 278	748	6 234	23 515	24 830	13 644	61 988
LANE	400	34	19	4	57	249	207	73	529
FLOOD	400	49	13	0	62	359	142	0	501
SEAS	400	0	0	9	9	0	0	164	164
SEAS - LANE	400	0	0	4	4	0	0	73	73
	700	5	0	61	66	37	0	1 113	1 149
	1000	71	12	13	96	520	131	237	888
60 ft	1000	35	3	76	114	257	33	1 386	1 675
4/ 100 ft	1000	68	0	417	485	498	0	7 606	8 105
TOTAL M. V.		16 894	12 037	2 654	31 585	123 833	131 203	48 409	303 445
H. P. SODIUM	70	5 036	1 414	175	6 625	36 914	15 413	3 192	55 518
24 hr.	70	10	0	0	10	73	0	0	73
SEAS	70	0	0	2	2	0	0	36	36
	100	391	813	90	1 294	2 866	8 862	1 642	13 369
	150	1 619	1 139	251	3 009	11 867	12 415	4 578	28 861
SEAS	150	0	0	41	41	0	0	748	748
	250	1 627	598	275	2 500	11 926	6 518	5 016	23 460
	400	1 408	34	262	1 704	10 321	371	4 779	15 470
4/ 100 ft	400	0	0	138	138	0	0	2 517	2 517

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STREET LIGHT COST OF SERVICE
CUSTOMER COSTS
MARCH 31, 1989

		STREET LIGHT INVENTORY				ANNUAL CUSTOMER COSTS $7.33 $10.90 $18.24 / LIGHT			
		ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
2/ 100 ft	400	0	0	20	20	0	0	365	365
60 ft	1000	175	0	0	175	1 283	0	0	1 283
4/ 100 ft	1000	12	0	70	82	88	0	1 277	1 365
2/ 100 ft	1000	0	0	12	12	0	0	219	219
TOTAL H.P.S.		10 278	3 998	1 336	15 612	75 338	43 578	24 369	143 285
QUARTZ - FLOOD	500	0	4	0	4	0	44	0	44
L.P.S. - FLOOD	200	0	2	0	2	0	22	0	22
TOTAL EXCL. POLE		31 812	17 222	4 120	53 154	233 182	187 720	75 149	496 051
TOTAL SYSTEM		42 883	30 773	9 008	82 664	314 332	335 426	164 306	814 064

Reference Table 7.14

APPENDIX TABLES

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STREET LIGHT INVENTORY
MARCH 31, 1989

DISTRIBUTION POLE		CENTRAL REGION ZONE 1	CENTRAL REGION ZONE 2	CENTRAL REGION ZONE 3	CENTRAL REGION TOTAL	EASTERN REGION ZONE 2	EASTERN REGION ZONE 3	EASTERN REGION TOTAL	WESTERN REGION ZONE 2	WESTERN REGION ZONE 3	WESTERN REGION TOTAL	SUMMARY OF INVENTORY ZONE 1	SUMMARY OF INVENTORY ZONE 2	SUMMARY OF INVENTORY ZONE 3	SUMMARY OF INVENTORY TOTAL
INCANDESCENT	60 W				0	6	4	10	2		2	0	8	4	12
	100		8	18	26	17	13	30	91	113	204	0	116	144	260
SEAS	100				0			0		14	14	0	0	14	14
FLOOD	100				0			0		6	6	0	0	6	6
	150		3	7	10	12	9	21	4	22	26	0	19	38	57
FLOOD	150		1		1	1		1		4	4	0	2	4	6
	200		1		1	2		2	3	3	6	0	6	3	9
SEAS	200				0			0		19	19	0	0	19	19
SEAS - LANE	200				0			0		1	1	0	0	1	1
	300	174	10	1	185	277		277	164	16	180	174	451	17	642
SEAS	300				0			0		42	42	0	0	42	42
FLOOD	300	5	2		7	3		3	1		1	5	6	0	11
	500	279		1	280			0	1		1	279	1	1	281
SEAS	500				0			0		1	1	0	0	1	1
FLOOD	500	68	2		70			0	2		2	68	4	0	72
SEAS - FLOOD	500				0			0		1	1	0	0	1	1
TOTAL INC.		526	27	27	580	318	26	344	268	242	510	526	613	295	1 434
MERCURY VAPOUR	175 W	2 561	2 259	1 047	5 867	3 931	1 489	5 420	3 487	949	4 436	2 561	9 677	3 485	15 723
SEAS	175			19	19		1	1		71	71	0	0	91	91
LANE	175	3 759	51	8	3 818	243	26	269	37	36	73	3 759	331	70	4 160
SEAS - LANE	175				0		5	5		11	11	0	0	16	16
	250	678	53	22	753	200	22	222	153	27	180	678	406	71	1 155
FLOOD	250			107	107	1	28	29			0	0	1	135	136
SEAS	250				0		4	4		3	3	0	0	7	7
	400	1 493	355	129	1 977	405	47	452	295	42	337	1 493	1 055	218	2 766
LANE	400	38	10		48	30	7	37	3	3	6	38	43	10	91
FLOOD	400	22	4	45	71	4	2	6			0	22	8	47	77
SEAS	400				0			0		18	18	0	0	18	18
SEAS - LANE	400				0		1	1		1	1	0	0	2	2
TOTAL M. V.		8 551	2 732	1 377	12 660	4 814	1 632	6 446	3 975	1 161	5 136	8 551	11 521	4 170	24 242
H. P. SODIUM	70 W	951	61	53	1 065	115	110	225	458	13	471	951	634	176	1 761
	100	62	26	16	104	14	19	33	261	13	274	62	301	48	411
	150	393	42	10	445	99	91	190	227	29	256	393	368	130	891
	250	511	12	55	578	16	2	18	85		85	511	113	57	681
	400	77		3	80			0		6	6	77	0	9	86
TOTAL H.P.S.		1 994	141	137	2 272	244	222	466	1 031	61	1 092	1 994	1 416	420	3 830
QUARTZ - FLOOD	500 W			3	3	1		1			0	0	1	3	4
TOTAL DIST. POLE		11 071	2 900	1 544	15 515	5 377	1 880	7 257	5 274	1 464	6 738	11 071	13 551	4 888	29 510

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STREET LIGHT INVENTORY
MARCH 31, 1989

EXCLUSIVE POLE		CENTRAL REGION ZONE 1	CENTRAL REGION ZONE 2	CENTRAL REGION ZONE 3	CENTRAL REGION TOTAL	EASTERN REGION ZONE 2	EASTERN REGION ZONE 3	EASTERN REGION TOTAL	WESTERN REGION ZONE 2	WESTERN REGION ZONE 3	WESTERN REGION TOTAL	SUMMARY OF INVENTORY ZONE 1	SUMMARY OF INVENTORY ZONE 2	SUMMARY OF INVENTORY ZONE 3	SUMMARY OF INVENTORY TOTAL
INCANDESCENT	60 W	1			1			0	13		13	1	13	0	14
SEAS	60				0			0		2	2	0	0	2	2
	100			9	9			0	22	14	36	0	22	23	45
FLOOD	100				0			0		2	2	0	0	2	2
SEAS	100				0		2	2		5	5	0	0	7	7
	150	6		1	7	1		1	12	10	22	6	13	11	30
FLOOD	150		2		2			0		3	3	0	2	3	5
SEAS	150				0			0		1	1	0	0	1	1
SEAS - FLOOD	150				0			0		1	1	0	0	1	1
	200				0	1		1	11		11	0	12	0	12
SEAS	200				0			0		22	22	0	0	22	22
	300	4 399	11		4 410	490	2	492	614	7	621	4 399	1 115	9	5 523
FLOOD	300		2		2			0	1	1	2	0	3	1	4
SEAS	300				0		10	10		38	38	0	0	48	48
	500	174			174			0			0	174	0	0	174
FLOOD	500	60	1		61			0			0	60	1	0	61
TOTAL INC.		4 640	16	10	4 666	492	14	506	673	106	779	4 640	1 181	130	5 951
MERCURY VAPOUR	175 W	11 318	2 234	341	13 893	3 244	308	3 552	3 284	346	3 630	11 318	8 762	995	21 075
LANE	175	20	5		25	25		25	3	2	5	20	33	2	55
SEAS	175				0		63	63		57	57	0	0	120	120
SEAS - LANE	175				0			0		3	3	0	0	3	3
	250	2 086	58	138	2 282	359	48	407	498	14	512	2 086	915	200	3 201
FLOOD	250				0	2		2			0	0	2	0	2
SEAS	250				0			0		2	2	0	0	2	2
	400	3 208	369	560	4 137	1 113	80	1 193	796	108	904	3 208	2 278	748	6 234
LANE	400	34			34	10	3	13	9	1	10	34	19	4	57
FLOOD	400	49	1		50	5		5	7		7	49	13	0	62
SEAS	400				0		2	2		7	7	0	0	9	9
SEAS - LANE	400				0		2	2		2	2	0	0	4	4
	700	5		54	59		7	7			0	5	0	61	66
	1000	71	12	13	96			0			0	71	12	13	96
60 ft	1000	35		66	101	3		3		10	10	35	3	76	114
4/ 100 ft	1000	68		405	473		12	12			0	68	0	417	485
TOTAL M. V.		16 894	2 679	1 577	21 150	4 761	525	5 286	4 597	552	5 149	16 894	12 037	2 654	31 585
H. P. SODIUM	70 W	5 036	302	113	5 451	316	45	361	796	17	813	5 036	1 414	175	6 625
24 hr.	70	10			10			0			0	10	0	0	10
SEAS	70				0			0		2	2	0	0	2	2
	100	391	150	68	609	56	21	77	607	1	608	391	813	90	1 294
	150	1 619	146	93	1 858	286	128	414	707	30	737	1 619	1 139	251	3 009
SEAS	150				0		5	5		36	36	0	0	41	41
	250	1 627	113	65	1 805	51	87	138	434	123	557	1 627	598	275	2 500
	400	1 408	1	191	1 600	18	25	43	15	46	61	1 408	34	262	1 704
4/ 100 ft	400			4	4		130	130		4	4	0	0	138	138
2/ 100 ft	400			20	20			0			0	0	0	20	20
60 ft	1000	175			175			0			0	175	0	0	175

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STREET LIGHT INVENTORY
MARCH 31, 1989

		CENTRAL REGION				EASTERN REGION			WESTERN REGION			SUMMARY OF INVENTORY			
		ZONE 1	ZONE 2	ZONE 3	TOTAL	ZONE 2	ZONE 3	TOTAL	ZONE 2	ZONE 3	TOTAL	ZONE 1	ZONE 2	ZONE 3	TOTAL
4/ 100 ft	1000	12		54	66		16	16			0	12	0	70	82
2/ 100 ft	1000			12	12			0			0	0	0	12	12
TOTAL H.P.S.		10 278	712	620	11 610	727	457	1 184	2 559	259	2 818	10 278	3 998	1 336	15 612
QUARTZ - FLOOD	500 W				0			0	4		4	0	4	0	4
L.P.S. - FLOOD	200 W				0	2		2			0	0	2	0	2
TOTAL EXCL. POLE		31 812	3 407	2 207	37 426	5 982	996	6 978	7 833	917	8 750	31 812	17 222	4 120	53 154
TOTAL SYSTEM		42 883	6 307	3 751	52 941	11 359	2 876	14 235	13 107	2 381	15 488	42 883	30 773	9 008	82 664

Table 8.2.1
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

		GROUP LAMP REPLACEMENT & CLEANING						SPOT LAMP REPLACEMENT & CLEANING						LUMINAIRE REPLACEMENT					
		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.	
DISTRIBUTION POLE		LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL
INCANDESCENT	60 W							17.50	8.30	0.64	26.44	49.71	76.15	44.80	23.00	4.98	72.78	136.83	209.61
	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
	200							17.50	8.30	4.50	30.30	56.96	87.26	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	200							17.50	8.30	4.50	30.30	56.96	87.26	44.80	23.00	4.98	72.78	136.83	209.61
SEAS - LANE	200							17.50	8.30	4.50	30.30	56.96	87.26	44.80	23.00	4.98	72.78	136.83	209.61
	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
SEAS - FLOOD	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
TOTAL INC.																			
MERCURY VAPOUR	175 W	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
SEAS	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
LANE	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
SEAS - LANE	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	138.59	206.39	388.01	594.40
FLOOD	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	210.00	277.80	522.26	800.06
SEAS	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	138.59	206.39	388.01	594.40
	400	6.70	4.40	11.61	22.71	42.69	65.40	19.20	9.10	11.61	39.91	75.03	114.94	53.80	27.60	190.89	272.29	511.91	784.20
LANE	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	190.89	258.69	486.34	745.03
FLOOD	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	210.00	277.80	522.26	800.06
SEAS	400	6.70	4.40	11.61	22.71	42.69	65.40	19.20	9.10	11.61	39.91	75.03	114.94	53.80	27.60	190.89	272.29	511.91	784.20
SEAS - LANE	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	190.89	258.69	486.34	745.03
TOTAL M. V.																			
H. P. SODIUM	70 W	5.60	3.70	26.64	35.94	67.57	103.51	17.50	8.30	26.64	52.44	98.59	151.03	44.80	23.00	139.46	207.26	389.65	596.91
	100	5.60	3.70	25.71	35.01	65.82	100.83	17.50	8.30	25.71	51.51	96.84	148.35	44.80	23.00	143.26	211.06	396.79	607.85
	150	6.70	4.40	26.00	37.10	69.75	106.85	19.20	9.10	26.00	54.30	102.08	156.38	53.80	27.60	157.91	239.31	449.90	689.21
	250	6.70	4.40	28.65	39.75	74.73	114.48	19.20	9.10	28.65	56.95	107.07	164.02	53.80	27.60	172.79	254.19	477.88	732.07
	400	6.70	4.40	30.46	41.56	78.13	119.69	19.20	9.10	30.46	58.76	110.47	169.23	53.80	27.60	231.65	313.05	588.53	901.58
TOTAL H.P.S.																			
QUARTZ - FLOOD	500 W							17.50	8.30	7.50	33.30	62.60	95.90	44.80	23.00	210.00	277.80	522.26	800.06
TOTAL DIST. POLE																			

Table 8.2.1
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

		GROUP LAMP REPLACEMENT & CLEANING						SPOT LAMP REPLACEMENT & CLEANING						LUMINAIRE REPLACEMENT					
		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.	
		LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL
EXCLUSIVE POLE																			
INCANDESCENT	60 W							17.50	8.30	0.64	26.44	49.71	76.15	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	60							17.50	8.30	0.64	26.44	49.71	76.15	44.80	23.00	4.98	72.78	136.83	209.61
	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	100							17.50	8.30	0.65	26.45	49.73	76.18	44.80	23.00	4.98	72.78	136.83	209.61
	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
SEAS - FLOOD	150							17.50	8.30	1.81	27.61	51.91	79.52	44.80	23.00	4.98	72.78	136.83	209.61
	200							17.50	8.30	4.50	30.30	56.96	87.26	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	200							17.50	8.30	4.50	30.30	56.96	87.26	44.80	23.00	4.98	72.78	136.83	209.61
	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
SEAS	300							17.50	8.30	5.48	31.28	58.81	90.09	44.80	23.00	4.98	72.78	136.83	209.61
	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
FLOOD	500							17.50	8.30	7.53	33.33	62.66	95.99	44.80	23.00	4.98	72.78	136.83	209.61
TOTAL INC.																			
MERCURY VAPOUR	175 W	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
LANE	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
SEAS	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	210.00	277.80	522.26	800.06
SEAS - LANE	175	5.60	3.70	10.35	19.65	36.94	56.59	17.50	8.30	10.35	36.15	67.96	104.11	44.80	23.00	127.36	195.16	366.90	562.06
	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	138.59	206.39	388.01	594.40
FLOOD	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	210.00	277.80	522.26	800.06
SEAS	250	5.60	3.70	12.86	22.16	41.66	63.82	17.50	8.30	12.86	38.66	72.68	111.34	44.80	23.00	138.59	206.39	388.01	594.40
	400	6.70	4.40	11.61	22.71	42.69	65.40	19.20	9.10	11.61	39.91	75.03	114.94	53.80	27.60	190.89	272.29	511.91	784.20
LANE	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	190.89	258.69	486.34	745.03
FLOOD	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	210.00	277.80	522.26	800.06
SEAS	400	6.70	4.40	11.61	22.71	42.69	65.40	19.20	9.10	11.61	39.91	75.03	114.94	53.80	27.60	190.89	272.29	511.91	784.20
SEAS - LANE	400	5.60	3.70	11.61	20.91	39.31	60.22	17.50	8.30	11.61	37.41	70.33	107.74	44.80	23.00	190.89	258.69	486.34	745.03
	700	6.70	4.40	63.59	74.69	140.42	215.11	19.20	9.10	49.16	77.46	145.62	223.08	53.80	27.60	400.00	481.40	905.03	1 386.43
	1000	11.20	9.40	34.69	55.29	103.95	159.24	19.20	9.10	34.69	62.99	118.42	181.41	53.80	57.60	400.37	511.77	962.13	1 473.90
60 ft	1000	11.20	41.80	34.69	87.69	164.86	252.55	26.20	48.30	34.69	109.19	205.28	314.47	67.20	115.00	400.37	582.57	1 095.23	1 677.80
4/ 100 ft	1000			34.69	34.69	65.22	99.91	26.20	48.30	34.69	109.19	205.28	314.47	67.20	115.00	400.37	582.57	1 095.23	1 677.80
TOTAL M. V.																			
H. P. SODIUM	70 W	5.60	3.70	26.64	35.94	67.57	103.51	17.50	8.30	26.64	52.44	98.59	151.03	44.80	23.00	139.46	207.26	389.65	596.91
24 hr.	70	5.60	3.70	26.64	35.94	67.57	103.51	17.50	8.30	26.64	52.44	98.59	151.03	44.80	23.00	387.87	455.67	856.66	1 312.33
SEAS	70	5.60	3.70	26.64	35.94	67.57	103.51	17.50	8.30	26.64	52.44	98.59	151.03	44.80	23.00	139.46	207.26	389.65	596.91
	100	5.60	3.70	25.71	35.01	65.82	100.83	17.50	8.30	25.71	51.51	96.84	148.35	44.80	23.00	143.26	211.06	396.79	607.85
	150	6.70	4.40	26.00	37.10	69.75	106.85	19.20	9.10	26.00	54.30	102.08	156.38	53.80	27.60	157.91	239.31	449.90	689.21
SEAS	150	6.70	4.40	26.00	37.10	69.75	106.85	19.20	9.10	26.00	54.30	102.08	156.38	53.80	27.60	157.91	239.31	449.90	689.21
	250	6.70	4.40	28.65	39.75	74.73	114.48	19.20	9.10	28.65	56.95	107.07	164.02	53.80	27.60	172.79	254.19	477.88	732.07
	400	6.70	4.40	30.46	41.56	78.13	119.69	19.20	9.10	30.46	58.76	110.47	169.23	53.80	27.60	231.65	313.05	588.53	901.58
4/ 100 ft	400			30.46	30.46	57.26	87.72	26.20	48.30	30.46	104.96	197.32	302.28	67.20	115.00	231.65	413.85	778.04	1 191.89

Table 8.2.1
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

		GROUP LAMP REPLACEMENT & CLEANING						SPOT LAMP REPLACEMENT & CLEANING						LUMINAIRE REPLACEMENT					
		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.		DIRECT COST				EMP. BEN.	
		LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	TOTAL	O/HEAD	TOTAL
2/ 100 ft	400			30.46	30.46	57.26	87.72	26.20	48.30	30.46	104.96	197.32	302.28	67.20	115.00	231.65	413.85	778.04	1 191.89
60 ft	1000	11.20	41.80	101.90	154.90	291.21	446.11	26.20	48.30	101.90	176.40	331.63	508.03	67.20	115.00	575.12	757.32	1 423.76	2 181.08
4/ 100 ft	1000			101.90	101.90	191.57	293.47	26.20	48.30	101.90	176.40	331.63	508.03	67.20	115.00	575.12	757.32	1 423.76	2 181.08
2/ 100 ft	1000			101.90	101.90	191.57	293.47	26.20	48.30	101.90	176.40	331.63	508.03	67.20	115.00	575.12	757.32	1 423.76	2 181.08
TOTAL H.P.S.																			
QUARTZ - FLOOD	500 W							17.50	8.30	7.50	33.30	62.60	95.90	44.80	23.00	210.00	277.80	522.26	800.06
L.P.S. - FLOOD	200 W							17.50	8.30	7.50	33.30	62.60	95.90	44.80	23.00	210.00	277.80	522.26	800.06
TOTAL EXCL. POLE																			
TOTAL SYSTEM																			

Table 8.2.2
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

DISTRIBUTION POLE		CONTROL RELAY REPLACEMENT: DIRECT COSTS LABOUR	EXPENSE	MATERIAL	EMP. BEN. O/HEAD	TOTAL	NUMBER OF LIGHTS	COST PER LIGHTS	PHOTO CELL REPLACEMENT: DIRECT COSTS LABOUR	EXPENSE	MATERIAL	EMP. BEN. O/HEAD	TOTAL	NUMBER OF LIGHTS	COST PER LIGHTS	STARTER REPLACEMENT: DIRECT COSTS LABOUR	EXPENSE	MATERIAL	EMP. BEN. O/HEAD	TOTAL	REFRACTOR REPLACEMENT: DIRECT COSTS LABOUR	EXPENSE	MATERIAL	EMP. BEN. O/HEAD	TOTAL
INCANDESCENT	60 W	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
	200	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	200	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS - LANE	200								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50		63.73	97.63
	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS - FLOOD	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
TOTAL INC.																									
MERCURY VAPOUR	175 W	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
SEAS	175	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
LANE	175								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	27.72	115.85	177.47
SEAS - LANE	175								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	29.52	119.23	182.65
	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
FLOOD	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
	400	44.80	23.00	96.39	308.68	472.87	10	47.29	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	44.92	160.97	246.59
LANE	400								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	37.97	135.12	206.99
FLOOD	400	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS	400	44.80	23.00	96.39	308.68	472.87	10	47.29	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	44.92	160.97	246.59
SEAS - LANE	400								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	37.97	135.12	206.99
TOTAL M. V.																									
H. P. SODIUM	70 W								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
	100								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
	150								19.20	9.10	9.31	70.71	108.32	1	108.32	36.90	13.80	34.35	159.89	244.94	26.90	13.80	34.42	141.23	216.35
	250								19.20	9.10	9.31	70.71	108.32	1	108.32	36.90	13.80	34.35	159.89	244.94	26.90	13.80	34.42	141.23	216.35
	400	44.80	23.00	96.39	308.68	472.87	10	47.29	19.20	9.10	9.31	70.71	108.32	10	10.83	36.90	13.80	34.35	159.89	244.94	26.90	13.80	44.92	160.97	246.59
TOTAL H.P.S.																									
QUARTZ - FLOOD	500 W	44.80	23.00	96.39	308.68	472.87	1	472.87	17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	16.45	94.66	145.01
TOTAL DIST. POLE																									

Table 8.2.2
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

		CONTROL RELAY REPLACEMENT							PHOTO CELL REPLACEMENT							STARTER REPLACEMENT					REFRACTOR REPLACEMENT				
		------DIRECT COSTS------EMP. BEN.					NUMBER OF	COST PER	------DIRECT COSTS------EMP. BEN.					NUMBER OF	COST PER	------DIRECT COSTS------EMP. BEN.					------DIRECT COSTS------- EMP. BEN.			
EXCLUSIVE POLE		LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL	LIGHTS	LIGHTS	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL	LIGHTS	LIGHTS	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
INCANDESCENT	60 W	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	60	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	100	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS - FLOOD	150	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
	200	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	200	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
SEAS	300	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50		63.73	97.63
FLOOD	500	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
TOTAL INC.																									
MERCURY VAPOUR	175 W	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
LANE	175								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	27.72	115.85	177.47
SEAS	175	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
SEAS - LANE	175								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	27.27	115.00	176.17
	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
FLOOD	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS	250	44.80	23.00	96.39	308.68	472.87	10	47.29	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	34.42	128.44	196.76
	400	44.80	23.00	134.64	380.59	583.03	10	58.30	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	44.92	160.97	246.59
LANE	400								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	37.97	135.12	206.99
FLOOD	400	44.80	23.00	134.64	380.59	583.03	10	58.30	17.50	8.30	9.31	66.01	101.12	10	10.11						22.40	11.50	16.45	94.66	145.01
SEAS	400	44.80	23.00	134.64	380.59	583.03	10	58.30	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	44.92	160.97	246.59
SEAS - LANE	400								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	37.97	135.12	206.99
	700	44.80	23.00	134.64	380.59	583.03	10	58.30	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	51.26	172.88	264.84
	1000	44.80	23.00	134.64	380.59	583.03	10	58.30	19.20	9.10	9.31	70.71	108.32	10	10.83						26.90	13.80	51.26	172.88	264.84
60 ft	1000								26.20	48.30	9.31	157.56	241.37	1	241.37						33.60	101.00	51.26	349.42	535.28
4/ 100 ft	1000								26.20	48.30	9.31	157.56	241.37	4	60.34						33.60	101.00	51.26	349.42	535.28
TOTAL M. V.																									
H. P. SODIUM	70 W								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
24 hr.	70								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
SEAS	70								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
	100								17.50	8.30	9.31	66.01	101.12	1	101.12	22.40	11.50	34.35	128.31	196.56	22.40	11.50	34.42	128.44	196.76
	150								19.20	9.10	9.31	70.71	108.32	1	108.32	26.90	13.80	34.35	141.09	216.14	26.90	13.80	34.42	141.23	216.35
SEAS	150								19.20	9.10	9.31	70.71	108.32	1	108.32	26.90	13.80	34.35	141.09	216.14	26.90	13.80	34.42	141.23	216.35
	250								19.20	9.10	9.31	70.71	108.32	1	108.32	26.90	13.80	34.35	141.09	216.14	26.90	13.80	34.42	141.23	216.35
	400	44.80	23.00	96.39	308.68	472.87	10	47.29	19.20	9.10	9.31	70.71	108.32	10	10.83	26.90	13.80	34.35	141.09	216.14	26.90	13.80	44.92	160.97	246.59
4/ 100 ft	400								26.20	48.30	9.31	157.56	241.37	4	60.34	33.60	101.00	34.35	317.63	486.58	33.60	101.00	44.92	337.50	517.02

Table 8.2.2
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STREET LIGHT COST OF SERVICE
MAINTENANCE COST DETAIL
MARCH 31, 1989

		CONTROL RELAY REPLACEMENT						PHOTO CELL REPLACEMENT						STARTER REPLACEMENT						REFRACTOR REPLACEMENT				
		------DIRECT COSTS------EMP. BEN.					NUMBER OF LIGHTS	COST PER LIGHTS	------DIRECT COSTS------EMP. BEN.					NUMBER OF LIGHTS	COST PER LIGHTS	------DIRECT COSTS------EMP. BEN.					------DIRECT COSTS------- EMP. BEN.				
		LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL			LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL			LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
2/ 100 ft	400								26.20	48.30	9.31	157.56	241.37	2	120.69	33.60	101.00	34.35	317.63	486.58	33.60	101.00	44.92	337.50	517.02
60 ft	1000								26.20	48.30	9.31	157.56	241.37	1	241.37	33.60	101.00	34.35	317.63	486.58	33.60	101.00	51.26	349.42	535.28
4/ 100 ft	1000								26.20	48.30	9.31	157.56	241.37	4	60.34	33.60	101.00	34.35	317.63	486.58	33.60	101.00	51.26	349.42	535.28
2/ 100 ft	1000								26.20	48.30	9.31	157.56	241.37	2	120.69	33.60	101.00	34.35	317.63	486.58	33.60	101.00	51.26	349.42	535.28
TOTAL H.P.S.																									
QUARTZ - FLOOD	500 W								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	16.45	94.66	145.01
L.P.S. - FLOOD	200 W								17.50	8.30	9.31	66.01	101.12	1	101.12						22.40	11.50	16.45	94.66	145.01
TOTAL EXCL. POLE																									
TOTAL SYSTEM																									

Table 8.2.3
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STREET LIGHT COST OF SERVICE
MARCH 31, 1989

EXCLUSIVE POLE EXPENSES

UNDERGROUND FAULTS - SUB EAST & WEST

NUMBER OF FAULTS WPG 1988/89		594				
		LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
COST / FAULT		$82.40	$110.70	$20.72	$401.98	$615.80
ANNUAL COSTS DISTRICT STAFF		48 946	65 756	12 308	238 777	365 786
UNDERGROUND TEST VAN		43 432	12 554		105 254	161 240
UNDERGROUND TEST VAN FAULT DETECTION EQUIP					58 570	
		92 378	78 310	12 308	402 601	527 026
Z-1 EXCL. LIGHTS	31 812					
COST / LIGHT		2.90	2.46	0.39	12.66	16.57

STREET LIGHT STANDARD REPAIR

	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
C.REGION MTCE W/O 52126	3 062	2 418	9 188	27 574	42 241
C.REGION MTCE W/O 58537	2 255	1 720	2 377	11 942	18 294
C.REGION MTCE W/O 52084	1 427	1 330	5 389	15 314	23 459
C.REGION MTCE W/O 58628	1 892	1 673	4 688	15 515	23 767
C.REGION MTCE W/O 58677	1 736	1 190	3 019	11 177	17 122
	10 372	8 330	24 661	81 521	124 884
Z-1 EXCL. LIGHTS 31 812					
COST / LIGHT	0.32604	0.26184	0.77520	2.56260	3.92568
TOTAL COST - U/G FAULTS & STANDARD REPAIR	3.22990	2.72349	1.16209	15.21823	20.49257

HIGH-MAST LIGHTING COSTS	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
ST. JAMES W/O 58511	1 255.28	978.80		4 200.07	6 434.15
FORT GARRY W/O 58495	3 783.10	1 063.19	1 046.92	11 079.23	16 972.44
W. KILDONAN W/O 58552	2 619.32	453.60	1 095.38	7 836.40	12 004.70
R. EAST W/O 58685	2 141.99	1 636.07	1 707.63	10 313.10	15 798.79
TOTAL MTCE W/O (1988/89)	9 799.69	4 131.66	3 849.93	33 428.81	51 210.09
NO.HIGH MAST LIGHTS IN SUBURBAN DISTRICTS 404					
COST / LIGHT	24.26	10.23	9.53	82.74	126.76

CLEAN, PRIME & PAINT STANDARDS	UNITS	LABOUR	EXPENSE	MATERIAL	O/HEAD	TOTAL
ST. JAMES W/O 52134	419	0.00	6 231.60	1 176.37	13 926.98	21 334.95
FORT GARRY W/O 52191	414	0.00	7 676.60	0.00	14 432.01	22 108.61
W. KILDONAN W/O 52092	380	141.12	4 935.04	1 414.34	12 202.14	18 692.64
ST. BONIFACE W/O 52480	405	0.00	5 256.34	0.00	9 881.92	15 138.26
R. EAST W/O 52217	268	0.00	4 088.10	836.03	9 257.36	14 181.49
TRANSCONA W/O 52241	208	0.00	2 712.93	479.10	6 001.02	9 193.05
	2 094	141.12	30 900.61	3 905.84	65 701.43	100 649.00
UNIT COST		0.07	14.76	1.87	31.38	48.07

Table 8.2.4
Page 1

STREET LIGHT COST OF SERVICE
MARCH 31, 1989

DISTRIBUTION POLE		NUMBER OF UNIT REPLACED						
		LAMP REPLACEMENT	LUMINAIRE REPLACEMENT	CONTROL SWITCH REPLACEMENT	PHOTO CELL REPLACEMENT	STARTER REPLACEMENT	REFRACTOR REPLACEMENT	STANDARDS PRIMED & PAINTED
INCANDESCENT	60 W	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0
FLOOD	150	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0
SEAS - LANE	200	0	0	0	0	0	0	0
	300	66	1	1	1	0	1	0
SEAS	300	0	0	0	0	0	0	0
FLOOD	300	2	0	0	0	0	0	0
	500	106	2	1	2	0	1	0
SEAS	500	0	0	0	0	0	0	0
FLOOD	500	26	0	0	0	0	0	0
SEAS - FLOOD	500	0	0	0	0	0	0	0
TOTAL INC.		200	4	2	3	0	3	0
MERCURY VAPOUR	175 W	717	26	12	14	0	13	0
SEAS	175	0	0	0	0	0	0	0
LANE	175	1 053	38	0	207	0	19	0
SEAS - LANE	175	0	0	0	0	0	0	0
	250	190	7	3	4	0	3	0
FLOOD	250	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0
	400	418	15	7	8	0	7	0
LANE	400	11	0	0	2	0	0	0
FLOOD	400	6	0	0	0	0	0	0
SEAS	400	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0
TOTAL M. V.		2 394	86	21	235	0	43	0
H. P. SODIUM	70 W	166	5	0	52	9	5	0
	100	11	0	0	3	1	0	0
	150	69	2	0	22	4	2	0
	250	89	3	0	28	5	3	0
	400	13	0	0	0	1	0	0
TOTAL H.P.S.		349	10	0	106	18	10	0
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0
TOTAL DIST. POLE		2 943	99	24	344	18	55	0

Table 8.2.4
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STREET LIGHT COST OF SERVICE
MARCH 31, 1989

EXCLUSIVE POLE		NUMBER OF UNIT REPLACED						
		LAMP REPLACEMENT	LUMINAIRE REPLACEMENT	CONTROL SWITCH REPLACEMENT	PHOTO CELL REPLACEMENT	STARTER REPLACEMENT	REFRACTOR REPLACEMENT	STANDARDS PRIMED & PAINTED
INCANDESCENT	60 W	0	0	0	0	0	0	0
SEAS	60	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0
	150	2	0	0	0	0	0	0
FLOOD	150	0	0	0	0	0	0	0
SEAS	150	0	0	0	0	0	0	0
SEAS - FLOOD	150	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0
	300	1 672	31	20	24	0	22	308
FLOOD	300	0	0	0	0	0	0	0
SEAS	300	0	0	0	0	0	0	0
	500	66	1	1	1	0	1	12
FLOOD	500	23	0	0	0	0	0	4
TOTAL INC.		1 763	32	21	26	0	23	325
MERCURY VAPOUR	175 W	3 169	113	51	62	0	57	792
LANE	175	6	0	0	1	0	0	0
SEAS	175	0	0	0	0	0	0	0
SEAS - LANE	175	0	0	0	0	0	0	0
	250	584	21	9	11	0	10	146
FLOOD	250	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0
	400	898	32	14	18	0	16	225
LANE	400	10	0	0	2	0	0	2
FLOOD	400	14	0	0	0	0	0	3
SEAS	400	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0
	700	1	0	0	0	0	0	0
	1000	20	1	0	0	0	0	0
60 ft	1000	10	0	0	2	0	0	0
4/ 100 ft	1000	19	1	0	1	0	0	0
TOTAL M. V.		4 730	169	75	98	0	84	1 169
H. P. SODIUM	70 W	881	25	0	277	45	25	353
24 hr.	70	2	0	0	1	0	0	1
SEAS	70	0	0	0	0	0	0	0
	100	68	2	0	22	4	2	27
	150	283	8	0	89	15	8	113
SEAS	150	0	0	0	0	0	0	0
	250	285	8	0	89	15	8	114
	400	246	7	6	8	13	7	0
4/ 100 ft	400	0	0	0	0	0	0	0

Table 8.2.4
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STREET LIGHT COST OF SERVICE
MARCH 31, 1989

		NUMBER OF UNIT REPLACED						
		LAMP REPLACEMENT	LUMINAIRE REPLACEMENT	CONTROL SWITCH REPLACEMENT	PHOTO CELL REPLACEMENT	STARTER REPLACEMENT	REFRACTOR REPLACEMENT	STANDARDS PRIMED & PAINTED
2/ 100 ft	400	0	0	0	0	0	0	0
60 ft	1000	31	1	0	10	2	1	0
4/ 100 ft	1000	2	0	0	0	0	0	0
2/ 100 ft	1000	0	0	0	0	0	0	0
TOTAL H.P.S.		1 799	51	6	495	93	51	608
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0
L.P.S. - FLOOD	200 W	0	0	0	0	0	0	0
TOTAL EXCL. POLE		8 292	253	103	619	93	159	2 101
TOTAL SYSTEM		11 235	352	127	962	110	214	2 101

Table 8.3
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COST OF SERVICE STUDY
MARCH 31, 1989
ALLOCATION TABLES

Function/ Table No.	Table Description	Purpose	Justification
Power Supply			
E10	kW.h generated	used to allocate energy costs associated with generation and transmission.	Costs that are identified as being energy related are allocated to each customer class proportionate to each customer's kW.h consumption, adjusted for line losses.
D10	Coincident Peak adjusted for losses	used to allocate demand costs associated with generation and transmission.	Generation and high voltage transmission costs are incurred so that the necessary facilities are in place in order to meet the system requirements at the time of peak usage. These costs are allocated to each customer class proportionate to each customer's demand at the time of the system peak, adjusted for line losses.
Subtransmission			
D20	Class Non-Coincident Peak adjusted for losses (NCP1)	used as a base for the class non-coincident peak demand tables, D21 - D23.	Costs are incurred in order that the necessary facilities are available to meet the non-coincident peak demand at the secondary level. These costs are allocated to each customer class proportionate to each customers' non-coincident peak demand, adjusted for line losses.
D21	Class Non-Coincident Peak adjusted for losses Excluding: - Power > 100 kV and Wpg. Hydro	used to allocate the demand portion for: a) Operating Costs - T&S Departments b) Interest and Depreciation - associated with buildings, communication and general equipment.	
D22	Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 100 kV and Wpg. Hydro - dedicated substations 30-100 kV and Bulk	used to allocate the demand portion for: a) Operating Costs - Regional Station maintenance. b) Interest and Depreciation - associated with substations and transformers.	

Function/ Table No.	Table Description	Purpose	Justification
D36	Zone 3 - Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV	used to allocate the demand portion for Zone 3: a) Operating Costs - Regional Distribution Maintenance. b) Interest and Depreciation - associated with distribution lines, farm lines, Regional Buildings and General Equipment.	
D38	Zone 1 - Class Non-Coincident Peak adjusted for losses Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Customer owned transformation	Used to allocate the demand portion for Zone 1: a) Regional Distribution Maintenance associated with Distribution transformation. b) Interest and Depreciation - associated with distribution transformation.	
D39	Zone 2 - Class Non-Coincident Peak adjusted for losses Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Customer owned transformation	Used to allocate the demand portion for Zone 2: a) Regional Distribution Maintenance associated with Distribution transformation. b) Interest and Depreciation - associated with distribution transformation.	
D40	Zone 3 - Class Non-Coincident Peak adjusted for losses Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Customer owned transformation	Used to allocate the demand portion for Zone 3: a) Regional Distribution Maintenance associated with Distribution transformation. b) Interest and Depreciation - associated with distribution transformation.	
C20	Number of customers Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Water heating	used to allocate the customer portion for: Interest and Depreciation - associated with Head Office Building.	Customer component costs are incurred in distribution plant dependent upon the number of customers and the type of customer being serviced (i.e. plant installed to serve a General Service customer is more expensive than plant installed to serve a Residential customer). Weighted number of customers has been used to allocate costs where there is a cost differential to serve the customer rate classes.
C21	Zone 1 - Number of customers Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV - Water Heating	used to allocate customer portion for Zone 1: a) Operating Costs - relating to distribution lines b) Interest and Depreciation - associated with distribution lines, regional buildings and general equipment.	

Table 8.3
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Function/ Table No.	Table Description	Purpose	Justification
C22	Zone 2 - Number of customers Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV - Water Heating	used to allocate customer portion for: a) Operating Costs - relating to distribution lines b) Interest and Depreciation - associated with distribution lines, farm lines, distribution transformers and regional buildings.	
C23	Zone 3 - Number of Customers Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV - Water Heating	used to allocate the customer portion for Zone 3: a) Operating Costs - relating to distribution lines b) Interest and Depreciation - associated with distribution lines, farm lines, regional buildings and general equipment.	
C25	Zone 1 - Number of Customers - Weighted Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Water Heating and street/ Sentinel Lights.	used to allocate the customer portion for Zone 1: a) Regional Distribution Maintenance associated with service drops. b) Interest and depreciation associated with service drops.	Number of customers are weighted 5 x for General Service 3 Phase and 5 x for power customers. Weighted customer recognizes cost differential to serve different customer classes.
C26	Zone 2 - Number of Customers - Weighted Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Water Heating and street/ Sentinel Lights.	used to allocate the customer portion for Zone 2: a) Regional Distribution Maintenance associated with service drops. b) Interest and depreciation associated with service drops.	
C27	Zone 3 - Number of Customers - Weighted Excluding: - Power > 30 kV, Bulk and Wpg. Hydro - Water Heating and street/ Sentinel Lights.	used to allocate the customer portion for Zone 3: a) Regional Distribution Maintenance associated with service drops. b) Interest and depreciation associated with service drops.	
C40	Weighted Customers	used to allocate the customer portion for: Interest and Depreciation - associated with meters and metering transformers.	An analysis of meter costs was undertaken to determine the relative costs for metering equipment by customer class and voltage level. The results of this analysis were used to weigh the forecasted number of customers.

Function/ Table No.	Table Description	Purpose	Justification
D23	Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 100 kV and Wpg. Hydro - dedicated lines 30-100 kV and Bulk	used to allocate the demand portion for: a) Operating Costs - Regional Distribution Maintenance b) Interest and Depreciation - associated with transmission and subtransmission lines.	
Distribution Plant			
D31	Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro	used to allocate the demand portion for: a) Operating Costs - T&S departments b) Interest and Depreciation - associated with and Head Office Building.	Demand component costs are incurred in distribution plant in order that the necessary facilities are available to meet the non-coincidental peak demand. These costs are allocated to each customer class, proportionate to each class non-coincidental peak demand, adjusted for line losses. Class non-coincident peak has been used to allocate all demand distribution related costs as cost data associated with primary and secondary voltages is not available.
D32	Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated substations 0-30 kV	used to allocate the demand portion for: a) Operating Costs - Regional Station maintenance b) Interest and Depreciation - associated with substations and station transformers.	
D33	Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV	used as a base for tables D34 - D36.	
D34	Zone 1 - Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV	used to allocate the demand portion for Zone 1: a) Operating Costs - Regional Distribution Maintenance b) Interest and Depreciation - associated with distribution lines, Regional buildings and general equipment.	
D35	Zone 2 - Class Non-Coincident Peak adjusted for losses Excluding NCP1 for: - Power > 30 kV, Bulk and Wpg. Hydro - dedicated lines 0 - 30 kV	used to allocate the demand portion for Zone 2: a) Operating Costs - Regional Distribution Maintenance. b) Interest and Depreciation - associated with distribution lines, Regional buildings and General Equipment.	

Table 8.3
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Function/ Table No.	Table Description	Purpose	Justification
Distribution Services			
C10	Number of customers adjusted for water heating and street/ sentinel lighting	used as a base for customer tables C11 - C12	Costs are incurred relative to the number of customers that are being served. These costs are allocated to each customer class proportionate to the number of customers in each class.
C11	Zone 1 - Number of customers adjusted for water heating and street lighting	used to allocate the customer portion for Zone 1: a) Operating Costs - relating to the regional Customer Service. b) Interest and Depreciation - associated with regional buildings and regional general equipment.	
C12	Zones 2 & 3 - Number of customers adjusted for water heating and street lighting	used to allocate the customer portion for Zone 2 & 3: a) Operating Costs - relating to the regional Customer Service. b) Interest and Depreciation - associated with regional buildings and regional general equipment.	
C13	Percentage of Customer Advisory Services - Customer costs assignable to the rate classes.	used to allocate the customer portion for: Operating Costs - relating to the Customer Advisory Service	An analysis was undertaken by Customer Advisory Services to determine the percentage of customer related costs assignable to each rate classes by area of responsibility. This table represents the weighted percentage of costs assignable to each rate class.
C30	Weighted Customers	used to allocate the customer portion for: a) Operating Costs - relating to customer accounting and rates. b) Interest and Depreciation - Buildings and general equipment costs assigned to customer accounting and rates departments.	An analysis was undertaken by Customer Accounting Department to determine the cost distribution between rate class and subclass for customer accounting costs. The results of ths analysis were used to weight the forecasted number of customers.
Tables used to Calculate Unit Costs			
E20	kW.h sales	used to calculate energy unit cost in ¢/kW.h	
D50	Class Non-Coincident Peak	used to calculate demand unit cost in $/kW/month.	
C90	No. of Customers Unadjusted	used to calculate customer unit cost in $/month.	

ALT. COSTING METHOD

9.0 Revenue Cost Coverage Results - Age of Lighting System not considered in Costing Methodology.

This section of the report provides results where the age of the lighting system has not been considered in the costing methodology, an approach which moves away from an embedded study where the comparative capital costs are based upon funds historically invested. The purpose of this section is to provide guidance in the amount of flexibility in rate design that may be available in a demand side management program to convert the Incandescent and Mercury Vapour lighting systems to H.P.S. In using these results, consideration must be given for any premature capital retirement and how the unrecovered capital is to be funded.

9.1 Results

Comparative RCC results are summarized below which show the impact of moving from an embedded approach (scenario 1) to the results where no distinction in the age of investment has been made (scenario 2). Results are after net export revenue and reserve transfer.

Type of System	Scenario 1	Scenario 2
Distribution Pole		
Incandescent	88%	85%
Mercury Vapour	122	120
High Pressure Sodium	118	138
Total Distribution Pole	119%	121%
Exclusive Pole		
Incandescent	111%	106%
Mercury Vapour	133	128
High Pressure Sodium	129	140
Total Exclusive Pole	128%	128%
System Totals		
Incandescent	109%	104%
Mercury Vapour	130	126
High Pressure Sodium	128	140
Total System	126%	127%

A comparative summary of monthly costs by capital, operating and energy component for selected light units follows:

STREET LIGHT COST OF SERVICE
MARCH 31, 1989
COMPARATIVE MONTHLY COMPONENT COST & MONTHLY REVENUE

TYPE OF SYSTEM	LUMEN OUTPUT	MONTHLY COMPONENT COSTS						MONTHLY RATE	NER & RESERVE TRANSFER (SCENARIO 1)	NER & RESERVE TRANSFER (SCENARIO 2)	RCC (SCENARIO 1)	RCC (SCENARIO 2)
		CAPITAL (SCENARIO 1)	CAPITAL (SCENARIO 2)	OPERATING	ENERGY	TOTAL (SCENARIO 1)	TOTAL (SCENARIO 2)					
DISTRIBUTION POLE												
300 W INCANDESCENT	5 800	$0.36	$0.94	$3.27	$5.29	$8.92	$9.50	$8.24	$0.14	$0.31	93.9%	90.0%
500 W INCANDESCENT	9 500	$0.58	$1.19	$3.45	$9.56	$13.59	$14.20	$11.18	$0.31	$0.49	84.5%	82.2%
175 W MERCURY VAPOUR	7 950	$0.79	$0.96	$2.39	$3.54	$6.72	$6.89	$8.24	$0.20	$0.26	125.6%	123.4%
70 W HIGH PRESSURE SODIUM	5 800	$2.43	$0.97	$2.95	$1.97	$7.35	$5.89	$8.24	$0.59	$0.22	120.1%	143.6%
100 W HIGH PRESSURE SODIUM	9 500	$2.49	$1.03	$2.91	$2.33	$7.73	$6.27	$9.00	$0.62	$0.25	124.5%	147.5%
EXCLUSIVE POLE												
300 W INCANDESCENT	5 800	$1.27	$2.18	$5.44	$5.29	$12.00	$12.91	$13.21	$0.16	$0.41	111.4%	105.5%
500 W INCANDESCENT	9 500	$1.66	$2.60	$5.61	$9.56	$16.83	$17.77	$18.20	$0.38	$0.63	110.4%	106.0%
175 W MERCURY VAPOUR	7 950	$1.71	$2.19	$4.55	$3.54	$9.80	$10.28	$13.21	$0.23	$0.36	137.1%	132.0%
70 W HIGH PRESSURE SODIUM	5 800	$3.34	$2.20	$5.12	$1.97	$10.43	$9.29	$13.21	$0.62	$0.32	132.6%	145.6%
100 W HIGH PRESSURE SODIUM	9 500	$3.44	$2.30	$5.08	$2.33	$10.85	$9.71	$14.36	$0.65	$0.35	138.3%	151.5%

SCENARIO 1 - CAPITAL COST REFLECTS AGED INVESTMENT IN LAMP & LUMINAIRE.

SCENARIO 2 - CAPITAL COST DOES NOT REFLECT AGED INVESTMENT IN LAMP & LUMINAIRE.

9.2 Revised Report Tables

A number of the report tables as shown in Section 7 have been revised in order to determine RCC results where the age of the lighting systems is not considered in the costing methodology. The revised report tables are:

Table 9.2.1 - Revenue Cost Coverage Summary - Total Cost/Revenue

Table 9.2.2 - Revenue Cost Coverage Summary - Monthly Unit Cost/Rates

Table 9.2.3 - Calculation of Net Interest and Depreciation

Table 9.2.4 - Gross Investment Calculation

Table 9.2.5 - Depreciation Expense

Table 9.2.6 - Accumulated Depreciation

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Table 9.2.1
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL	CLASS	CONTRIBUTION	REVENUE /	N.E.R. &	CONTRIBUTION	REVENUE /
		INTEREST	DEPRECIATION	OPERATING	ENERGY	DEMAND	CUSTOMER	COSTS	REVENUE	TO RESERVES	COST COVERAGE	RESERVE TRANSFER	TO RESERVES	COST COVERAGE
		$	$	$	$	$	$	$	$	$	%	$	$	%
DISTRIBUTION POLE														
INCANDESCENT	60 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	300	994	978	6 822	4 244	5 528	1 275	19 842	17 205	(2 637)	87%	642	(1 995)	90%
SEAS	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	300	29	29	197	122	159	37	573	501	(72)	87%	19	(53)	91%
	500	2 178	1 801	11 536	13 005	16 942	2 045	47 508	37 431	(10 077)	79%	1 634	(8 444)	82%
SEAS	500	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	500	563	468	2 827	3 170	4 129	498	11 656	9 686	(1 970)	83%	411	(1 559)	87%
SEAS - FLOOD	500	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL INC.		3 764	3 277	21 383	20 541	26 759	3 856	79 579	64 823	(14 756)	81%	2 705	(12 051)	85%
MERCURY VAPOUR	175 W	14 614	14 783	73 332	39 157	51 009	18 772	211 668	253 232	41 564	120%	8 007	49 571	123%
SEAS	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
LANE	175	21 642	17 485	118 319	57 474	74 871	27 553	317 344	371 690	54 346	117%	11 826	66 172	121%
SEAS - LANE	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	4 450	4 197	20 933	14 665	19 104	4 970	68 318	76 885	8 567	113%	2 607	11 174	116%
FLOOD	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	400	13 514	11 289	50 290	51 222	66 728	10 944	203 987	232 371	28 384	114%	8 327	36 711	118%
LANE	400	280	222	1 305	1 304	1 698	279	5 087	5 914	827	116%	188	1 015	120%
FLOOD	400	205	170	696	755	983	161	2 970	3 524	554	119%	125	679	123%
SEAS	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL M. V.		54 705	48 146	264 875	164 576	214 393	62 679	809 374	943 616	134 242	117%	31 079	165 321	120%
H. P. SODIUM	70	5 420	5 632	33 640	6 738	8 778	6 971	67 179	94 035	26 856	140%	2 491	29 347	144%
	100	387	381	2 169	555	723	454	4 668	6 696	2 028	143%	182	2 210	147%
	150	2 685	2 504	14 805	5 129	6 682	2 881	34 686	46 358	11 672	134%	1 344	13 016	138%
	250	4 463	3 760	20 006	11 624	15 143	3 746	58 743	76 773	18 030	131%	2 425	20 455	135%
	400	718	608	2 901	2 728	3 554	564	11 073	12 354	1 281	112%	443	1 723	116%
TOTAL H.P.S.		13 673	12 885	73 521	26 775	34 879	14 616	176 350	236 216	59 866	134%	6 885	66 751	138%
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL DIST. POLE		72 142	64 307	359 779	211 892	276 031	81 150	1 065 303	1 244 654	179 352	117%	40 670	220 022	121%

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Table 9.2.1
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL COSTS	CLASS REVENUE	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE
		INTEREST $	DEPRECIATION $	OPERATING $	ENERGY $	DEMAND $	CUSTOMER $	$	$	$	%	$	$	%
EXCLUSIVE POLE														
INCANDESCENT	60 W	6	16	60	4	6	7	100	111	11	111%	3	14	114%
SEAS	60	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
FLOOD	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	100	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	150	36	97	368	67	87	44	700	667	(34)	95%	18	(16)	98%
FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - FLOOD	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	200	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	300	38 606	76 718	286 938	107 286	139 762	32 245	681 554	697 329	15 775	102%	21 389	37 164	105%
FLOOD	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	300	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	500	2 145	3 281	11 722	8 111	10 566	1 275	37 100	38 002	901	102%	1 320	2 222	106%
FLOOD	500	772	1 158	4 056	2 797	3 644	440	12 866	13 666	799	106%	468	1 267	110%
TOTAL INC.		41 565	81 270	303 144	118 266	154 065	34 011	732 321	749 775	17 454	102%	23 197	40 651	106%
MERCURY VAPOUR	175 W	99 288	198 271	618 576	173 048	225 430	82 961	1 397 573	1 794 129	396 556	128%	48 683	445 239	132%
LANE	175	183	181	1 081	306	398	147	2 296	3 170	875	138%	89	964	142%
SEAS	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	175	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	20 677	42 409	118 682	45 119	58 776	15 290	300 953	374 479	73 525	124%	10 697	84 222	128%
FLOOD	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS	250	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	400	38 432	69 083	193 048	110 061	143 377	23 515	577 516	688 693	111 178	119%	21 492	132 670	123%
LANE	400	424	371	2 052	1 166	1 520	249	5 782	7 299	1 518	126%	234	1 752	130%
FLOOD	400	589	1 060	2 848	1 681	2 190	359	8 726	10 549	1 822	121%	329	2 151	125%
SEAS	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
SEAS - LANE	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	700	76	218	497	291	379	37	1 497	1 425	(72)	95%	47	(25)	98%
	1000	1 266	3 156	6 166	5 825	7 588	520	24 522	23 353	(1 168)	95%	843	(325)	99%
60 ft	1000	684	2 339	4 585	2 871	3 741	257	14 477	13 100	(1 377)	90%	439	(938)	94%
4/ 100 ft	1000	1 295	6 491	14 755	5 579	7 268	498	35 886	26 349	(9 538)	73%	839	(8 698)	76%
TOTAL M. V.		162 914	323 578	962 290	345 947	450 666	123 833	2 369 229	2 942 547	573 318	124%	83 693	657 011	128%
H. P. SODIUM	70 W	44 144	88 974	309 176	35 682	46 483	36 914	561 374	798 307	236 933	142%	19 109	256 041	146%
24 hr.	70	99	175	648	152	92	73	1 240	1 772	533	143%	47	580	147%
SEAS	70	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	100	3 747	7 035	23 850	3 499	4 559	2 866	45 557	67 377	21 820	148%	1 651	23 471	152%
	150	16 227	33 109	102 691	21 131	27 528	11 867	212 554	293 751	81 197	138%	7 517	88 714	142%
SEAS	150	0	0	0	0	0	0	0	0	0	0%	0	0	0%
	250	19 046	34 735	105 605	37 011	48 214	11 926	256 537	341 670	85 133	133%	9 573	94 706	137%
	400	20 363	56 869	84 456	49 881	64 981	10 321	286 871	380 160	93 289	133%	10 869	104 158	136%
4/ 100 ft	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%
2/ 100 ft	400	0	0	0	0	0	0	0	0	0	0%	0	0	0%

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Table 9.2.1
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		EXPENSES ON DEDICATED PLANT			EXPENSES ON SHARED PLANT			TOTAL COSTS	CLASS REVENUE	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE
		INTEREST	DEPRECIATION	OPERATING	ENERGY	DEMAND	CUSTOMER							
		$	$	$	$	$	$	$	$	$	%	$	$	%
60 ft	1000	4 396	12 361	24 313	14 749	19 213	1 283	76 314	82 131	5 817	108%	2 591	8 408	111%
4/ 100 ft	1000	295	1 191	3 001	1 011	1 317	88	6 904	5 790	(1 114)	84%	175	(939)	86%
2/ 100 ft	1000	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL H.P.S.		108 317	234 451	653 740	163 118	212 388	75 338	1 447 352	1 970 959	523 607	136%	51 533	575 140	140%
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
L.P.S. - FLOOD	200 W	0	0	0	0	0	0	0	0	0	0%	0	0	0%
TOTAL EXCL. POLE		312 797	639 299	1 919 174	627 331	817 119	233 182	4 548 901	5 663 280	1 114 379	124%	158 423	1 272 802	128%
TOTAL SYSTEM		384 939	703 606	2 278 953	839 222	1 093 150	314 332	5 614 204	6 907 934	1 293 731	123%	199 093	1 492 824	127%
Reference Table		9.2.3	9.2.3	7.13	7.15	7.16	7.17		7.3					

EXPORT REVENUE 51 593
RESERVE DRAW DOWN 147 500
199 093

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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	RCC AFTER N.E.R. & RESERVE TRSF.
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $		%	$	%
DISTRIBUTION POLE										
INCANDESCENT	60 W	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	300	0.94	3.27	5.29	9.50	$8.24	(1.26)	87%	0.31	90%
SEAS	300	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	300	0.97	3.29	5.29	9.55	$8.35	(1.20)	87%	0.31	91%
	500	1.19	3.45	9.56	14.19	$11.18	(3.01)	79%	0.49	82%
SEAS	500	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
FLOOD	500	1.26	3.46	9.56	14.28	$11.87	(2.41)	83%	0.50	87%
SEAS - FLOOD	500	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL INC.		1.12	3.39	8.10	12.61	10.27	(2.34)	81%	0.43	85%
MERCURY VAPOUR	175 W	0.96	2.39	3.54	6.89	$8.24	1.35	120%	0.26	123%
SEAS	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
LANE	175	0.87	2.62	3.54	7.04	$8.24	1.20	117%	0.26	121%
SEAS - LANE	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	1.06	2.57	4.76	8.40	$9.45	1.05	113%	0.32	116%
FLOOD	250	0.00	0.00	0.00	0.00	$9.83	0.00	0%	0.00	0%
SEAS	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	400	1.38	2.81	7.19	11.39	$12.97	1.58	114%	0.46	118%
LANE	400	1.10	2.86	7.19	11.16	$12.97	1.81	116%	0.41	120%
FLOOD	400	1.42	2.64	7.19	11.25	$13.35	2.10	119%	0.47	123%
SEAS	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL M. V.		1.00	2.58	4.30	7.89	9.20	1.31	117%	0.30	120%
H. P. SODIUM	70	0.97	2.95	1.97	5.89	$8.24	2.35	140%	0.22	144%
	100	1.03	2.91	2.33	6.27	$9.00	2.73	143%	0.25	147%
	150	1.10	3.14	3.12	7.36	$9.83	2.47	134%	0.28	138%
	250	1.34	3.26	4.98	9.58	$12.52	2.94	131%	0.40	135%
	400	1.44	3.14	7.41	11.98	$13.37	1.39	112%	0.48	116%
TOTAL H.P.S.		1.11	3.07	3.19	7.37	9.87	2.50	134%	0.29	138%
QUARTZ - FLOOD	500 W	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
TOTAL DIST. POLE		1.03	2.71	4.28	8.02	9.37	1.35	117%	0.31	121%

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Table 9.2.2
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO	REVENUE / COST	N.E.R. & RESERVE	RCC AFTER N.E.R. &
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $	RESERVES $	COVERAGE %	TRANSFER $	RESERVE TRSF. %
EXCLUSIVE POLE										
INCANDESCENT	60 W	1.85	5.01	1.47	8.34	$9.26	0.92	111%	0.21	114%
SEAS	60	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	0.00	0.00	0.00	0.00	$9.26	0.00	0%	0.00	0%
FLOOD	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	100	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	150	1.85	5.12	2.76	9.73	$9.26	(0.47)	95%	0.25	98%
FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - FLOOD	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	200	0.00	0.00	0.00	0.00	$9.26	0.00	0%	0.00	0%
SEAS	200	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	300	2.18	5.44	5.29	12.91	$13.21	0.30	102%	0.41	105%
FLOOD	300	0.00	0.00	0.00	0.00	$12.85	0.00	0%	0.00	0%
SEAS	300	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	500	2.60	5.61	9.56	17.77	$18.20	0.43	102%	0.63	106%
FLOOD	500	2.68	5.63	9.56	17.87	$18.98	1.11	106%	0.65	110%
TOTAL INC.		2.21	5.44	5.50	13.15	13.47	0.31	102%	0.42	106%
MERCURY VAPOUR	175 W	2.19	4.55	3.54	10.29	$13.21	2.92	128%	0.36	132%
LANE	175	1.52	4.50	3.54	9.57	$13.21	3.64	138%	0.37	142%
SEAS	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	175	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	2.52	4.74	4.76	12.02	$14.96	2.94	124%	0.43	128%
FLOOD	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS	250	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	400	2.79	5.01	7.19	15.00	$17.89	2.89	119%	0.56	123%
LANE	400	1.95	5.03	7.19	14.17	$17.89	3.72	126%	0.57	130%
FLOOD	400	2.80	4.84	7.19	14.84	$17.94	3.10	121%	0.56	125%
SEAS	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
SEAS - LANE	400	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	700	4.90	8.28	11.77	24.96	$23.75	(1.21)	95%	0.78	98%
	1000	5.19	7.24	16.35	28.78	$27.41	(1.37)	95%	0.99	99%
60 ft	1000	7.20	10.92	16.35	34.47	$31.19	(3.28)	90%	1.04	94%
4/ 100 ft	1000	9.54	18.08	16.35	43.98	$32.29	(11.69)	73%	1.03	76%
TOTAL M. V.		2.40	4.75	4.54	11.69	14.51	2.83	124%	0.41	128%
H. P. SODIUM	70 W	2.20	5.12	1.97	9.29	$13.21	3.92	142%	0.32	146%
24 hr.	70	2.28	5.40	2.65	10.33	$14.77	4.44	143%	0.39	147%
SEAS	70	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	100	2.30	5.08	2.33	9.71	$14.36	4.65	148%	0.35	152%
	150	2.54	5.29	3.12	10.94	$15.12	4.18	138%	0.39	142%
SEAS	150	0.00	0.00	0.00	0.00	$0.00	0.00	0%	0.00	0%
	250	2.75	5.41	4.98	13.14	$17.50	4.36	133%	0.49	137%
	400	4.57	5.00	7.41	16.98	$22.50	5.52	133%	0.64	136%
4/ 100 ft	400	0.00	0.00	0.00	0.00	$25.58	0.00	0%	0.00	0%
2/ 100 ft	400	0.00	0.00	0.00	0.00	$34.84	0.00	0%	0.00	0%
60 ft	1000	7.98	11.58	16.78	36.34	$39.11	2.77	108%	1.23	111%

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Table 9.2.2
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STREET LIGHT COST OF SERVICE STUDY
REVENUE COST COVERAGE SUMMARY - ZONE 1
MARCH 31, 1989

		COST PER LIGHT / MONTH					CONTRIBUTION TO RESERVES	REVENUE / COST COVERAGE	N.E.R. & RESERVE TRANSFER	RCC AFTER N.E.R. & RESERVE TRSF.
		CAPITAL $	OPERATING $	ENERGY $	TOTAL	RATES $	$	%	$	%
4/ 100 ft	1000	10.32	20.84	16.78	47.95	$40.21	(7.74)	84%	1.22	86%
2/ 100 ft	1000	0.00	0.00	0.00	0.00	$46.89	0.00	0%	0.00	0%
TOTAL H.P.S.		2.78	5.30	3.66	11.74	15.98	4.25	136%	0.42	140%
QUARTZ - FLOOD	500 W	0.00	0.00	0.00	0.00	20.17	0.00	0%	0.00	0%
L.P.S. - FLOOD	200 W	0.00	0.00	0.00	0.00	19.07	0.00	0%	0.00	0%
TOTAL EXCL. POLE		2.49	5.03	4.39	11.92	14.84	2.92	124%	0.41	128%
TOTAL SYSTEM		2.12	4.43	4.37	10.91	13.42	2.51	123%	0.39	127%

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Table 9.2.3
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

DISTRIBUTION POLE		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
INCANDESCENT	60 W	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0
FLOOD	150	0	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0	0
SEAS - LANE	200	0	0	0	0	0	0	0	0
	300	28 447	(13 138)	(5 075)	10 234	994	1 175	(196)	978
SEAS	300	0	0	0	0	0	0	0	0
FLOOD	300	873	(403)	(172)	298	29	36	(7)	29
	500	45 613	(21 067)	(2 130)	22 417	2 178	1 884	(82)	1 801
SEAS	500	0	0	0	0	0	0	0	0
FLOOD	500	11 875	(5 485)	(590)	5 800	563	490	(23)	468
SEAS - FLOOD	500	0	0	0	0	0	0	0	0
TOTAL INC.		86 809	(40 093)	(7 968)	38 748	3 764	3 585	(308)	3 277
MERCURY VAPOUR	175 W	437 727	(202 166)	(85 118)	150 443	14 614	18 077	(3 294)	14 783
SEAS	175	0	0	0	0	0	0	0	0
LANE	175	432 982	(199 975)	(10 217)	222 790	21 642	17 881	(395)	17 485
SEAS - LANE	175	0	0	0	0	0	0	0	0
	250	118 403	(54 685)	(17 905)	45 813	4 450	4 890	(693)	4 197
FLOOD	250	0	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0	0
	400	288 469	(133 231)	(16 123)	139 115	13 514	11 913	(624)	11 289
LANE	400	5 365	(2 478)	0	2 887	280	222	0	222
FLOOD	400	4 332	(2 001)	(221)	2 110	205	179	(9)	170
SEAS	400	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0	0
TOTAL M. V.		1 287 279	(594 535)	(129 584)	563 159	54 705	53 160	(5 014)	48 146
H. P. SODIUM	70	169 612	(78 336)	(35 477)	55 799	5 420	7 004	(1 373)	5 632
	100	11 058	(5 107)	(1 968)	3 983	387	457	(76)	381
	150	70 092	(32 372)	(10 084)	27 636	2 685	2 895	(390)	2 504
	250	96 834	(44 723)	(6 163)	45 948	4 463	3 999	(238)	3 760
	400	15 736	(7 268)	(1 076)	7 392	718	650	(42)	608
TOTAL H.P.S.		363 332	(167 806)	(54 768)	140 757	13 673	15 004	(2 119)	12 885
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0
TOTAL DIST. POLE		1 737 420	(802 435)	(192 320)	742 665	72 142	71 749	(7 442)	64 307

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Table 9.2.3
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
EXCLUSIVE POLE									
INCANDESCENT	60 W	678	(313)	(303)	61	6	28	(12)	16
SEAS	60	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0
FLOOD	100	0	0	0	0	0	0	0	0
SEAS	100	0	0	0	0	0	0	0	0
	150	4 065	(1 878)	(1 819)	369	36	168	(70)	97
FLOOD	150	0	0	0	0	0	0	0	0
SEAS	150	0	0	0	0	0	0	0	0
SEAS - FLOOD	150	0	0	0	0	0	0	0	0
	200	0	0	0	0	0	0	0	0
SEAS	200	0	0	0	0	0	0	0	0
	300	2 996 073	(1 383 749)	(1 214 896)	397 428	38 606	123 727	(47 009)	76 718
FLOOD	300	0	0	0	0	0	0	0	0
SEAS	300	0	0	0	0	0	0	0	0
	500	118 508	(54 733)	(41 695)	22 079	2 145	4 894	(1 613)	3 281
FLOOD	500	41 534	(19 182)	(14 401)	7 950	772	1 715	(557)	1 158
TOTAL INC.		3 160 857	(1 459 856)	(1 273 114)	427 887	41 565	130 532	(49 262)	81 270
MERCURY VAPOUR	175 W	7 752 624	(3 580 583)	(3 149 932)	1 022 109	99 288	320 155	(121 884)	198 271
LANE	175	5 276	(2 437)	(954)	1 885	183	218	(37)	181
SEAS	175	0	0	0	0	0	0	0	0
SEAS - LANE	175	0	0	0	0	0	0	0	0
	250	1 669 149	(770 904)	(685 386)	212 859	20 677	68 930	(26 520)	42 409
FLOOD	250	0	0	0	0	0	0	0	0
SEAS	250	0	0	0	0	0	0	0	0
	400	2 626 536	(1 213 077)	(1 017 825)	395 634	38 432	108 466	(39 384)	69 083
LANE	400	9 854	(4 551)	(940)	4 362	424	407	(36)	371
FLOOD	400	40 301	(18 613)	(15 628)	6 059	589	1 664	(605)	1 060
SEAS	400	0	0	0	0	0	0	0	0
SEAS - LANE	400	0	0	0	0	0	0	0	0
	700	9 159	(4 230)	(4 145)	784	76	378	(160)	218
	1000	129 532	(59 825)	(56 672)	13 035	1 266	5 349	(2 193)	3 156
60 ft	1000	100 917	(46 609)	(47 262)	7 046	684	4 168	(1 829)	2 339
4/ 100 ft	1000	291 828	(134 782)	(143 710)	13 336	1 295	12 051	(5 561)	6 491
TOTAL M. V.		12 635 176	(5 835 611)	(5 122 455)	1 677 110	162 914	521 787	(198 209)	323 578
H. P. SODIUM	70 W	3 486 993	(1 610 483)	(1 422 070)	454 440	44 144	144 000	(55 026)	88 974
24 hr.	70	6 614	(3 055)	(2 540)	1 020	99	273	(98)	175
SEAS	70	0	0	0	0	0	0	0	0
	100	270 734	(125 039)	(107 118)	38 577	3 747	11 180	(4 145)	7 035
	150	1 301 486	(601 097)	(533 343)	167 047	16 227	53 747	(20 637)	33 109
SEAS	150	0	0	0	0	0	0	0	0
	250	1 326 054	(612 444)	(517 547)	196 063	19 046	54 761	(20 026)	34 735
	400	2 381 551	(1 099 930)	(1 071 998)	209 623	20 363	98 349	(41 480)	56 869
4/ 100 ft	400	0	0	0	0	0	0	0	0
2/ 100 ft	400	0	0	0	0	0	0	0	0

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Table 9.2.3
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STREET LIGHT COST OF SERVICE - ZONE 1
CALCULATION OF NET INTEREST & DEPRECIATION EXPENSE
ON DEDICATED PLANT

		STREET LIGHT INVESTMENT $	ACCUM. DEPN STREET LIGHT $	UNAMORITIZED CONTRIBUTION $	NET INVESTMENT $	NET INTEREST EXPENSE 9.714% $	DEPRECIATION STREET LIGHT PLANT $	ANNUAL AMORITIZATION CONTRIBUTION $	NET DEPRECIATION EXPENSE $
60 ft	1000	518 242	(239 352)	(233 637)	45 253	4 396	21 401	(9 040)	12 361
4/ 100 ft	1000	52 435	(24 218)	(25 177)	3 041	295	2 165	(974)	1 191
2/ 100 ft	1000	0	0	0	0	0	0	0	0
TOTAL H.P.S.		9 344 108	(4 315 617)	(3 913 429)	1 115 063	108 317	385 878	(151 427)	234 451
QUARTZ - FLOOD	500 W	0	0	0	0	0	0	0	0
L.P.S. - FLOOD	200 W	0	0	0	0	0	0	0	0
TOTAL EXCL. POLE		25 140 141	(11 611 083)	(10 308 998)	3 220 060	312 797	1 038 196	(398 898)	639 299
TOTAL SYSTEM		26 877 561	(12 413 518)	(10 501 318)	3 962 725	384 939	1 109 945	(406 340)	703 606
Reference Table		9.2.4	9.2.6	7.11			9.2.5	7.10	

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Table 9.2.4
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STREET LIGHT INVESTMENT
MARCH 31, 1989

DISTRIBUTION POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	CURRENT INSTALLED PRICE STEEL	WOOD	CURRENT DOLLAR INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	0	8	4	12		$440	0	3 520	1 760	5 280	0	1 219	527	1 746
	100	0	116	144	260		440	0	51 040	63 360	114 400	0	17 669	18 980	36 649
SEAS	100	0	0	14	14		440	0	0	6 160	6 160	0	0	1 845	1 845
FLOOD	100	0	0	6	6		470	0	0	2 820	2 820	0	0	845	845
	150	0	19	38	57		440	0	8 360	16 720	25 080	0	2 894	5 009	7 903
FLOOD	150	0	2	4	6		470	0	940	1 880	2 820	0	325	563	889
	200	0	6	3	9		440	0	2 640	1 320	3 960	0	914	395	1 309
SEAS	200	0	0	19	19		440	0	0	8 360	8 360	0	0	2 504	2 504
SEAS - LANE	200	0	0	1	1		290	0	0	290	290	0	0	87	87
	300	174	451	17	642		440	76 560	198 440	7 480	282 480	28 447	68 696	2 241	99 384
SEAS	300	0	0	42	42		440	0	0	18 480	18 480	0	0	5 536	5 536
FLOOD	300	5	6	0	11		470	2 350	2 820	0	5 170	873	976	0	1 849
	500	279	1	1	281		440	122 760	440	440	123 640	45 613	152	132	45 898
SEAS	500	0	0	1	1		440	0	0	440	440	0	0	132	132
FLOOD	500	68	4	0	72		470	31 960	1 880	0	33 840	11 875	651	0	12 526
SEAS - FLOOD	500	0	0	1	1		470	0	0	470	470	0	0	141	141
TOTAL INC.		526	613	295	1 434			233 630	270 080	129 980	633 690	86 809	93 496	38 936	219 241
MERCURY VAPOUR	175 W	2 561	9 677	3 485	15 723		$460	1 178 060	4 451 420	1 603 100	7 232 580	437 727	1 540 991	480 214	2 458 931
SEAS	175	0	0	91	91		460	0	0	41 860	41 860	0	0	12 539	12 539
LANE	175	3 759	331	70	4 160		310	1 165 290	102 610	21 700	1 289 600	432 982	35 521	6 500	475 004
SEAS - LANE	175	0	0	16	16		310	0	0	4 960	4 960	0	0	1 486	1 486
	250	678	406	71	1 155		470	318 660	190 820	33 370	542 850	118 403	66 058	9 996	194 457
FLOOD	250	0	1	135	136		530	0	530	71 550	72 080	0	183	21 433	21 617
SEAS	250	0	0	7	7		470	0	0	3 290	3 290	0	0	986	986
	400	1 493	1 055	218	2 766		520	776 360	548 600	113 360	1 438 320	288 469	189 914	33 957	512 340
LANE	400	38	43	10	91		380	14 440	16 340	3 800	34 580	5 365	5 657	1 138	12 160
FLOOD	400	22	8	47	77		530	11 660	4 240	24 910	40 810	4 332	1 468	7 462	13 262
SEAS	400	0	0	18	18		520	0	0	9 360	9 360	0	0	2 804	2 804
SEAS - LANE	400	0	0	2	2		380	0	0	760	760	0	0	228	228
TOTAL M. V.		8 551	11 521	4 170	24 242			3 464 470	5 314 560	1 932 020	10 711 050	1 287 279	1 839 792	578 743	3 705 814
H. P. SODIUM	70 W	951	634	176	1 761		$480	456 480	304 320	84 480	845 280	169 612	105 349	25 306	300 268
	100	62	301	48	411		480	29 760	144 480	23 040	197 280	11 058	50 016	6 902	67 976
	150	393	368	130	891		480	188 640	176 640	62 400	427 680	70 092	61 149	18 692	149 933
	250	511	113	57	681		510	260 610	57 630	29 070	347 310	96 834	19 950	8 708	125 492
	400	77	0	9	86		550	42 350	0	4 950	47 300	15 736	0	1 483	17 219
TOTAL H.P.S.		1 994	1 416	420	3 830			977 840	683 070	203 940	1 864 850	363 332	236 465	61 091	660 888
QUARTZ - FLOOD	500 W	0	1	3	4		$530	0	530	1 590	2 120	0	183	476	660
TOTAL DIST. POLE		11 071	13 551	4 888	29 510			4 675 940	6 268 240	2 267 530	13 211 710	1 737 420	2 169 937	679 246	4 586 603

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Table 9.2.4
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STREET LIGHT INVESTMENT
MARCH 31, 1989

EXCLUSIVE POLE		SUMMARY OF INVENTORY ZONE 1	ZONE 2	ZONE 3	TOTAL	CURRENT INSTALLED PRICE STEEL	WOOD	CURRENT DOLLAR INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	HISTORIC INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	1	13	0	14	$1 870	$940	1 824	21 892	0	23 716	678	7 579	0	8 256
SEAS	60	0	0	2	2	1 870	940	0	0	2 810	2 810	0	0	842	842
	100	0	22	23	45	1 870	940	0	37 048	32 315	69 363	0	12 825	9 680	22 505
FLOOD	100	0	0	2	2	1 900	970	0	0	2 870	2 870	0	0	860	860
SEAS	100	0	0	7	7	1 870	940	0	0	9 835	9 835	0	0	2 946	2 946
	150	6	13	11	30	1 870	940	10 941	21 892	15 455	48 288	4 065	7 579	4 630	16 273
FLOOD	150	0	2	3	5	1 900	970	0	3 428	4 305	7 733	0	1 187	1 290	2 476
SEAS	150	0	0	1	1	1 870	940	0	0	1 405	1 405	0	0	421	421
SEAS - FLOOD	150	0	0	1	1	1 900	970	0	0	1 435	1 435	0	0	430	430
	200	0	12	0	12	1 870	940	0	20 208	0	20 208	0	6 996	0	6 996
SEAS	200	0	0	22	22	1 870	940	0	0	30 910	30 910	0	0	9 259	9 259
	300	4 399	1 115	9	5 523	1 880	940	8 063 367	1 886 580	12 690	9 962 637	2 996 073	653 095	3 801	3 652 969
FLOOD	300	0	3	1	4	1 910	970	0	5 166	1 440	6 606	0	1 788	431	2 220
SEAS	300	0	0	48	48	1 880	940	0	0	67 680	67 680	0	0	20 274	20 274
	500	174	0	0	174	1 880	940	318 942	0	0	318 942	118 508	0	0	118 508
FLOOD	500	60	1	0	61	1 910	970	111 780	1 722	0	113 502	41 534	596	0	42 130
TOTAL INC.		4 640	1 181	130	5 951			8 506 854	1 997 936	183 150	10 687 940	3 160 857	691 645	54 863	3 907 365
MERCURY VAPOUR	175 W	11 318	8 762	995	21 075	$1 890	$960	20 864 733	14 930 448	1 417 875	37 213 056	7 752 624	5 168 616	424 729	13 345 970
LANE	175	20	33	2	55	710		14 200	23 430	1 420	39 050	5 276	8 111	425	13 813
SEAS	175	0	0	120	120	1 890	960	0	0	171 000	171 000	0	0	51 224	51 224
SEAS - LANE	175	0	0	3	3	710	810	0	0	2 130	2 130	0	0	638	638
	250	2 086	915	200	3 201	2 210	1 080	4 492 201	1 815 360	329 000	6 636 561	1 669 149	628 441	98 553	2 396 142
FLOOD	250	0	2	0	2	2 270	1 140	0	4 088	0	4 088	0	1 415	0	1 415
SEAS	250	0	0	2	2	2 210	1 080	0	0	3 290	3 290	0	0	986	986
	400	3 208	2 278	748	6 234	2 260	1 130	7 068 828	4 633 452	1 267 860	12 970 140	2 626 536	1 604 007	379 791	4 610 334
LANE	400	34	19	4	57	780		26 520	14 820	3 120	44 460	9 854	5 130	935	15 919
FLOOD	400	49	13	0	62	2 270	1 140	108 462	26 572	0	135 034	40 301	9 199	0	49 499
SEAS	400	0	0	9	9	2 260	1 130	0	0	15 255	15 255	0	0	4 570	4 570
SEAS - LANE	400	0	0	4	4	780		0	0	3 120	3 120	0	0	935	935
	700	5	0	61	66	4 930		24 650	0	300 730	325 380	9 159	0	90 085	99 244
	1000	71	12	13	96	4 910		348 610	58 920	63 830	471 360	129 532	20 397	19 120	169 049
60 ft	1000	35	3	76	114	7 760		271 600	23 280	589 760	884 640	100 917	8 059	176 664	285 641
4/ 100 ft	1000	68	0	417	485	11 550		785 400	0	4 816 350	5 601 750	291 828	0	1 442 753	1 734 581
TOTAL M. V.		16 894	12 037	2 654	31 585			34 005 204	21 530 370	8 984 740	64 520 314	12 635 176	7 453 375	2 691 407	22 779 958
H. P. SODIUM	70 W	5 036	1 414	175	6 625	$1 910	$980	9 384 586	2 437 736	252 875	12 075 197	3 486 993	843 894	75 750	4 406 637
24 hr.	70	10	0	0	10	1 780		17 800	0	0	17 800	6 614	0	0	6 614
SEAS	70	0	0	2	2	1 910	980	0	0	2 890	2 890	0	0	866	866
	100	391	813	90	1 294	1 910	980	728 629	1 401 612	130 050	2 260 291	270 734	485 209	38 957	794 900
	150	1 619	1 139	251	3 009	2 220	1 090	3 502 707	2 271 166	415 405	6 189 278	1 301 486	786 231	124 436	2 212 154
SEAS	150	0	0	41	41	2 220	1 090	0	0	67 855	67 855	0	0	20 326	20 326
	250	1 627	598	275	2 500	2 250	1 120	3 568 825	1 210 352	463 375	5 242 552	1 326 054	418 999	138 805	1 883 858
	400	1 408	34	262	1 704	4 726	1 250	6 409 498	137 047	782 856	7 329 401	2 381 551	47 443	234 507	2 663 501
4/ 100 ft	400	0	0	138	138	11 370		0	0	1 569 060	1 569 060	0	0	470 017	470 017
2/ 100 ft	400	0	0	20	20	22 490		0	0	449 800	449 800	0	0	134 739	134 739
60 ft	1000	175	0	0	175	7 970		1 394 750	0	0	1 394 750	518 242	0	0	518 242

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STREET LIGHT INVESTMENT
MARCH 31, 1989

		SUMMARY OF INVENTORY				CURRENT INSTALLED PRICE		CURRENT DOLLAR INVESTMENT				HISTORIC INVESTMENT			
		ZONE 1	ZONE 2	ZONE 3	TOTAL	STEEL	WOOD	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
4/ 100 ft	1000	12	0	70	82	11 760		141 120	0	823 200	964 320	52 435	0	246 592	299 028
2/ 100 ft	1000	0	0	12	12	22 890		0	0	274 680	274 680	0	0	82 281	82 281
TOTAL H.P.S.		10 278	3 998	1 336	15 612			25 147 913	7 457 913	5 232 046	37 837 872	9 344 108	2 581 777	1 567 276	13 493 161
QUARTZ - FLOOD	500 W	0	4	0	4	$2 270	$1 140	0	8 176	0	8 176	0	2 830	0	2 830
L.P.S. - FLOOD	200 W	0	2	0	2	$2 270	$1 140	0	4 088	0	4 088	0	1 415	0	1 415
TOTAL EXCL. POLE		31 812	17 222	4 120	53 154			67 659 970	30 998 483	14 399 936	113 058 389	25 140 141	10 731 042	4 313 546	40 184 729
TOTAL SYSTEM		42 883	30 773	9 008	82 664			72 335 910	37 266 723	16 667 466	126 270 099	26 877 561	12 900 979	4 992 792	44 771 332

	ZONE 1	ZONE 2	ZONE 3
STEEL	95%	80%	50%
WOOD	5%	20%	50%

Table 9.2.5
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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31,1988

DISTRIBUTION POLE		HISTORIC INVESTMENT ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	DEPRECIATION EXPENSE ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	0	1 219	527	1 746	0	50	22	72
	100	0	17 669	18 980	36 649	0	730	784	1 513
SEAS	100	0	0	1 845	1 845	0	0	76	76
FLOOD	100	0	0	845	845	0	0	35	35
	150	0	2 894	5 009	7 903	0	120	207	326
FLOOD	150	0	325	563	889	0	13	23	37
	200	0	914	395	1 309	0	38	16	54
SEAS	200	0	0	2 504	2 504	0	0	103	103
SEAS - LANE	200	0	0	87	87	0	0	4	4
	300	28 447	68 696	2 241	99 384	1 175	2 837	93	4 104
SEAS	300	0	0	5 536	5 536	0	0	229	229
FLOOD	300	873	976	0	1 849	36	40	0	76
	500	45 613	152	132	45 898	1 884	6	5	1 895
SEAS	500	0	0	132	132	0	0	5	5
FLOOD	500	11 875	651	0	12 526	490	27	0	517
SEAS - FLOOD	500	0	0	141	141	0	0	6	6
TOTAL INC.		86 809	93 496	38 936	219 241	3 585	3 861	1 608	9 054
MERCURY VAPOUR	175 W	437 727	1 540 991	480 214	2 458 931	18 077	63 637	19 831	101 545
SEAS	175	0	0	12 539	12 539	0	0	518	518
LANE	175	432 982	35 521	6 500	475 004	17 881	1 467	268	19 616
SEAS - LANE	175	0	0	1 486	1 486	0	0	61	61
	250	118 403	66 058	9 996	194 457	4 890	2 728	413	8 030
FLOOD	250	0	183	21 433	21 617	0	8	885	893
SEAS	250	0	0	986	986	0	0	41	41
	400	288 469	189 914	33 957	512 340	11 913	7 843	1 402	21 158
LANE	400	5 365	5 657	1 138	12 160	222	234	47	502
FLOOD	400	4 332	1 468	7 462	13 262	179	61	308	548
SEAS	400	0	0	2 804	2 804	0	0	116	116
SEAS - LANE	400	0	0	228	228	0	0	9	9
TOTAL M. V.		1 287 279	1 839 792	578 743	3 705 814	53 160	75 977	23 900	153 037
H. P. SODIUM	70 W	169 612	105 349	25 306	300 268	7 004	4 351	1 045	12 400
	100	11 058	50 016	6 902	67 976	457	2 065	285	2 807
	150	70 092	61 149	18 692	149 933	2 895	2 525	772	6 192
	250	96 834	19 950	8 708	125 492	3 999	824	360	5 182
	400	15 736	0	1 483	17 219	650	0	61	711
TOTAL H.P.S.		363 332	236 465	61 091	660 888	15 004	9 765	2 523	27 292
QUARTZ - FLOOD	500 W	0	183	476	660	0	8	20	27
TOTAL DIST. POLE		1 737 420	2 169 937	679 246	4 586 603	71 749	89 610	28 050	189 410

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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31, 1989

		HISTORIC INVESTMENT				DEPRECIATION EXPENSE			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
EXCLUSIVE POLE									
INCANDESCENT	60 W	678	7 579	0	8 256	28	313	0	341
SEAS	60	0	0	842	842	0	0	35	35
	100	0	12 825	9 680	22 505	0	530	400	929
FLOOD	100	0	0	860	860	0	0	36	36
SEAS	100	0	0	2 946	2 946	0	0	122	122
	150	4 065	7 579	4 630	16 273	168	313	191	672
FLOOD	150	0	1 187	1 290	2 476	0	49	53	102
SEAS	150	0	0	421	421	0	0	17	17
SEAS - FLOOD	150	0	0	430	430	0	0	18	18
	200	0	6 996	0	6 996	0	289	0	289
SEAS	200	0	0	9 259	9 259	0	0	382	382
	300	2 996 073	653 095	3 801	3 652 969	123 727	26 970	157	150 854
FLOOD	300	0	1 788	431	2 220	0	74	18	92
SEAS	300	0	0	20 274	20 274	0	0	837	837
	500	118 508	0	0	118 508	4 894	0	0	4 894
FLOOD	500	41 534	596	0	42 130	1 715	25	0	1 740
TOTAL INC.		3 160 857	691 645	54 863	3 907 365	130 532	28 562	2 266	161 360
MERCURY VAPOUR	175 W	7 752 624	5 168 616	424 729	13 345 970	320 155	213 445	17 540	551 140
LANE	175	5 276	8 111	425	13 813	218	335	18	570
SEAS	175	0	0	51 224	51 224	0	0	2 115	2 115
SEAS - LANE	175	0	0	638	638	0	0	26	26
	250	1 669 149	628 441	98 553	2 396 142	68 930	25 952	4 070	98 952
FLOOD	250	0	1 415	0	1 415	0	58	0	58
SEAS	250	0	0	986	986	0	0	41	41
	400	2 626 536	1 604 007	379 791	4 610 334	108 466	66 240	15 684	190 390
LANE	400	9 854	5 130	935	15 919	407	212	39	657
FLOOD	400	40 301	9 199	0	49 499	1 664	380	0	2 044
SEAS	400	0	0	4 570	4 570	0	0	189	189
SEAS - LANE	400	0	0	935	935	0	0	39	39
	700	9 159	0	90 085	99 244	378	0	3 720	4 098
	1000	129 532	20 397	19 120	169 049	5 349	842	790	6 981
60 ft	1000	100 917	8 059	176 664	285 641	4 168	333	7 296	11 796
4/ 100 ft	1000	291 828	0	1 442 753	1 734 581	12 051	0	59 580	71 632
TOTAL M. V.		12 635 176	7 453 375	2 691 407	22 779 958	521 787	307 797	111 145	940 729
H. P. SODIUM	70 W	3 486 993	843 894	75 750	4 406 637	144 000	34 850	3 128	181 978
24 hr.	70	6 614	0	0	6 614	273	0	0	273
SEAS	70	0	0	866	866	0	0	36	36
	100	270 734	485 209	38 957	794 900	11 180	20 037	1 609	32 826
	150	1 301 486	786 231	124 436	2 212 154	53 747	32 468	5 139	91 354
SEAS	150	0	0	20 326	20 326	0	0	839	839
	250	1 326 054	418 999	138 805	1 883 858	54 761	17 303	5 732	77 796
	400	2 381 551	47 443	234 507	2 663 501	98 349	1 959	9 684	109 993
4/ 100 ft	400	0	0	470 017	470 017	0	0	19 410	19 410
2/ 100 ft	400	0	0	134 739	134 739	0	0	5 564	5 564
60 ft	1000	518 242	0	0	518 242	21 401	0	0	21 401

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STREET LIGHT COST OF SERVICE STUDY
DEPRECIATION EXPENSE
MARCH 31, 1989

		HISTORIC INVESTMENT				DEPRECIATION EXPENSE			
		ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
4/ 100 ft	1000	52 435	0	246 592	299 028	2 165	0	10 183	12 349
2/ 100 ft	1000	0	0	82 281	82 281	0	0	3 398	3 398
TOTAL H.P.S.		9 344 108	2 581 777	1 567 276	13 493 161	385 878	106 618	64 723	557 218
QUARTZ - FLOOD	500 W	0	2 830	0	2 830	0	117	0	117
L.P.S. - FLOOD	200 W	0	1 415	0	1 415	0	58	0	58
TOTAL EXCL. POLE		25 140 141	10 731 042	4 313 546	40 184 729	1 038 196	443 153	178 134	1 659 483
TOTAL SYSTEM		26 877 561	12 900 979	4 992 792	44 771 332	1 109 945	532 763	206 184	1 848 893

DEPRECIATION EXPENSE:	
DISTRIBUTION	1 941 898.29
FARM LINES	20 239.32
* SENTINEL LIGHTS	(113 244.49)
	1 848 893.12

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

DISTRIBUTION POLE		WEIGHT	WEIGHTED INVEST. LAMPS & LUMINAIRES ZONE 1 $	ZONE 2 $	ZONE 3 $	WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES ZONE 1 $	ZONE 2 $	ZONE 3 $	HIST. INVESTMENT ST.LIGHT DIST. ZONE 1 $	ZONE 2 $	ZONE 3 $	ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL ACCUMULATED DEPRECIATION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	6	0	0	0	0	0	0	0	1 219	527	0	(563)	(243)	0	(563)	(243)	(806)
	100	6	0	0	0	0	0	0	0	17 669	18 980	0	(8 161)	(8 766)	0	(8 161)	(8 766)	(16 926)
SEAS	100	6	0	0	0	0	0	0	0	0	1 845	0	0	(852)	0	0	(852)	(852)
FLOOD	100	6	0	0	0	0	0	0	0	0	845	0	0	(390)	0	0	(390)	(390)
	150	6	0	0	0	0	0	0	0	2 894	5 009	0	(1 337)	(2 313)	0	(1 337)	(2 313)	(3 650)
FLOOD	150	6	0	0	0	0	0	0	0	325	563	0	(150)	(260)	0	(150)	(260)	(410)
	200	6	0	0	0	0	0	0	0	914	395	0	(422)	(183)	0	(422)	(183)	(605)
SEAS	200	6	0	0	0	0	0	0	0	0	2 504	0	0	(1 157)	0	0	(1 157)	(1 157)
SEAS - LANE	200	6	0	0	0	0	0	0	0	0	87	0	0	(40)	0	0	(40)	(40)
	300	6	0	0	0	0	0	0	28 447	68 696	2 241	(13 138)	(31 727)	(1 035)	(13 138)	(31 727)	(1 035)	(45 901)
SEAS	300	6	0	0	0	0	0	0	0	0	5 536	0	0	(2 557)	0	0	(2 557)	(2 557)
FLOOD	300	6	0	0	0	0	0	0	873	976	0	(403)	(451)	0	(403)	(451)	0	(854)
	500	6	0	0	0	0	0	0	45 613	152	132	(21 067)	(70)	(61)	(21 067)	(70)	(61)	(21 198)
SEAS	500	6	0	0	0	0	0	0	0	0	132	0	0	(61)	0	0	(61)	(61)
SEAS - FLOOD	500	6	0	0	0	0	0	0	11 875	651	0	(5 485)	(301)	0	(5 485)	(301)	0	(5 785)
FLOOD	500	6	0	0	0	0	0	0	0	0	141	0	0	(65)	0	0	(65)	(65)
TOTAL INC.			0	0	0	0	0	0	86 809	93 496	38 936	(40 093)	(43 182)	(17 983)	(40 093)	(43 182)	(17 983)	(101 257)
MERCURY VAPOUR	175 W	3	0	0	0	0	0	0	437 727	1 540 991	480 214	(202 166)	(711 713)	(221 789)	(202 166)	(711 713)	(221 789)	(1 135 668)
SEAS	175	3	0	0	0	0	0	0	0	0	12 539	0	0	(5 791)	0	0	(5 791)	(5 791)
LANE	175	3	0	0	0	0	0	0	432 982	35 521	6 500	(199 975)	(16 406)	(3 002)	(199 975)	(16 406)	(3 002)	(219 383)
SEAS - LANE	175	3	0	0	0	0	0	0	0	0	1 486	0	0	(686)	0	0	(686)	(686)
	250	3	0	0	0	0	0	0	118 403	66 058	9 996	(54 685)	(30 509)	(4 617)	(54 685)	(30 509)	(4 617)	(89 811)
FLOOD	250	3	0	0	0	0	0	0	0	183	21 433	0	(85)	(9 899)	0	(85)	(9 899)	(9 984)
SEAS	250	3	0	0	0	0	0	0	0	0	986	0	0	(455)	0	0	(455)	(455)
	400	3	0	0	0	0	0	0	288 469	189 914	33 957	(133 231)	(87 713)	(15 683)	(133 231)	(87 713)	(15 683)	(236 627)
LANE	400	3	0	0	0	0	0	0	5 365	5 657	1 138	(2 478)	(2 613)	(526)	(2 478)	(2 613)	(526)	(5 616)
FLOOD	400	3	0	0	0	0	0	0	4 332	1 468	7 462	(2 001)	(678)	(3 446)	(2 001)	(678)	(3 446)	(6 125)
SEAS	400	3	0	0	0	0	0	0	0	0	2 804	0	0	(1 295)	0	0	(1 295)	(1 295)
SEAS - LANE	400	3	0	0	0	0	0	0	0	0	228	0	0	(105)	0	0	(105)	(105)
TOTAL M. V.			0	0	0	0	0	0	1 287 279	1 839 792	578 743	(594 535)	(849 716)	(267 295)	(594 535)	(849 716)	(267 295)	(1 711 546)
H. P. SODIUM	70	1	0	0	0	0	0	0	169 612	105 349	25 306	(78 336)	(48 656)	(11 688)	(78 336)	(48 656)	(11 688)	(138 680)
	100	1	0	0	0	0	0	0	11 058	50 016	6 902	(5 107)	(23 100)	(3 188)	(5 107)	(23 100)	(3 188)	(31 395)
	150	1	0	0	0	0	0	0	70 092	61 149	18 692	(32 372)	(28 242)	(8 633)	(32 372)	(28 242)	(8 633)	(69 247)
	250	1	0	0	0	0	0	0	96 834	19 950	8 708	(44 723)	(9 214)	(4 022)	(44 723)	(9 214)	(4 022)	(57 959)
	400	1	0	0	0	0	0	0	15 736	0	1 483	(7 268)	0	(685)	(7 268)	0	(685)	(7 952)
TOTAL H.P.S.			0	0	0	0	0	0	363 332	236 465	61 091	(167 806)	(109 212)	(28 215)	(167 806)	(109 212)	(28 215)	(305 234)
QUARTZ - FLOOD	500 W	6	0	0	0	0	0	0	0	183	476	0	(85)	(220)	0	(85)	(220)	(305)
TOTAL DIST. POLE			0	0	0	0	0	0	1 737 420	2 169 937	679 246	(802 435)	(1 002 195)	(313 713)	(802 435)	(1 002 195)	(313 713)	(2 118 342)

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

EXCLUSIVE POLE		WEIGHT	WEIGHTED INVEST. LAMPS & LUMINAIRES ZONE 1 $	ZONE 2 $	ZONE 3 $	WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES ZONE 1 $	ZONE 2 $	ZONE 3 $	HIST. INVESTMENT ST.LIGHT DIST. ZONE 1 $	ZONE 2 $	ZONE 3 $	ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL ACCUMULATED DEPRECIATION ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
INCANDESCENT	60 W	6	0	0	0	0	0	0	678	7 579	0	(313)	(3 500)	0	(313)	(3 500)	0	(3 813)
SEAS	60	6	0	0	0	0	0	0	0	0	842	0	0	(389)	0	0	(389)	(389)
	100	6	0	0	0	0	0	0	0	12 825	9 680	0	(5 923)	(4 471)	0	(5 923)	(4 471)	(10 394)
FLOOD	100	6	0	0	0	0	0	0	0	0	860	0	0	(397)	0	0	(397)	(397)
SEAS	100	6	0	0	0	0	0	0	0	0	2 946	0	0	(1 361)	0	0	(1 361)	(1 361)
	150	6	0	0	0	0	0	0	4 065	7 579	4 630	(1 878)	(3 500)	(2 138)	(1 878)	(3 500)	(2 138)	(7 516)
FLOOD	150	6	0	0	0	0	0	0	0	1 187	1 290	0	(548)	(596)	0	(548)	(596)	(1 144)
SEAS	150	6	0	0	0	0	0	0	0	0	421	0	0	(194)	0	0	(194)	(194)
SEAS - FLOOD	150	6	0	0	0	0	0	0	0	0	430	0	0	(199)	0	0	(199)	(199)
	200	6	0	0	0	0	0	0	0	6 996	0	0	(3 231)	0	0	(3 231)	0	(3 231)
SEAS	200	6	0	0	0	0	0	0	0	0	9 259	0	0	(4 276)	0	0	(4 276)	(4 276)
	300	6	0	0	0	0	0	0	2 996 073	653 095	3 801	(1 383 749)	(301 635)	(1 756)	(1 383 749)	(301 635)	(1 756)	(1 687 140)
FLOOD	300	6	0	0	0	0	0	0	0	1 788	431	0	(826)	(199)	0	(826)	(199)	(1 025)
SEAS	300	6	0	0	0	0	0	0	0	0	20 274	0	0	(9 364)	0	0	(9 364)	(9 364)
	500	6	0	0	0	0	0	0	118 508	0	0	(54 733)	0	0	(54 733)	0	0	(54 733)
FLOOD	500	6	0	0	0	0	0	0	41 534	596	0	(19 182)	(275)	0	(19 182)	(275)	0	(19 458)
TOTAL INC.			0	0	0	0	0	0	3 160 857	691 645	54 863	(1 459 856)	(319 439)	(25 339)	(1 459 856)	(319 439)	(25 339)	(1 804 633)
MERCURY VAPOUR	175 W	3	0	0	0	0	0	0	7 752 624	5 168 616	424 729	(3 580 583)	(2 387 148)	(196 163)	(3 580 583)	(2 387 148)	(196 163)	(6 163 894)
LANE	175	3	0	0	0	0	0	0	5 276	8 111	425	(2 437)	(3 746)	(196)	(2 437)	(3 746)	(196)	(6 379)
SEAS	175	3	0	0	0	0	0	0	0	0	51 224	0	0	(23 658)	0	0	(23 658)	(23 658)
SEAS - LANE	175	3	0	0	0	0	0	0	0	0	638	0	0	(295)	0	0	(295)	(295)
	250	3	0	0	0	0	0	0	1 669 149	628 441	98 553	(770 904)	(290 248)	(45 517)	(770 904)	(290 248)	(45 517)	(1 106 669)
FLOOD	250	3	0	0	0	0	0	0	0	1 415	0	0	(654)	0	0	(654)	0	(654)
SEAS	250	3	0	0	0	0	0	0	0	0	986	0	0	(455)	0	0	(455)	(455)
	400	3	0	0	0	0	0	0	2 626 536	1 604 007	379 791	(1 213 077)	(740 817)	(175 408)	(1 213 077)	(740 817)	(175 408)	(2 129 303)
LANE	400	3	0	0	0	0	0	0	9 854	5 130	935	(4 551)	(2 369)	(432)	(4 551)	(2 369)	(432)	(7 352)
FLOOD	400	3	0	0	0	0	0	0	40 301	9 199	0	(18 613)	(4 248)	0	(18 613)	(4 248)	0	(22 861)
SEAS	400	3	0	0	0	0	0	0	0	0	4 570	0	0	(2 111)	0	0	(2 111)	(2 111)
SEAS - LANE	400	3	0	0	0	0	0	0	0	0	935	0	0	(432)	0	0	(432)	(432)
	700	3	0	0	0	0	0	0	9 159	0	90 085	(4 230)	0	(41 606)	(4 230)	0	(41 606)	(45 836)
	1000	3	0	0	0	0	0	0	129 532	20 397	19 120	(59 825)	(9 420)	(8 831)	(59 825)	(9 420)	(8 831)	(78 076)
60 ft	1000	3	0	0	0	0	0	0	100 917	8 059	176 664	(46 609)	(3 722)	(81 593)	(46 609)	(3 722)	(81 593)	(131 924)
4/100 ft	1000	3	0	0	0	0	0	0	291 828	0	1 442 753	(134 782)	0	(666 342)	(134 782)	0	(666 342)	(801 124)
TOTAL M. V.			0	0	0	0	0	0	12 635 176	7 453 375	2 691 407	(5 835 611)	(3 442 373)	(1 243 038)	(5 835 611)	(3 442 373)	(1 243 038)	(10 521 022)
H. P. SODIUM	70 W	1	0	0	0	0	0	0	3 486 993	843 894	75 750	(1 610 483)	(389 756)	(34 985)	(1 610 483)	(389 756)	(34 985)	(2 035 224)
24 hr.	70	1	0	0	0	0	0	0	6 614	0	0	(3 055)	0	0	(3 055)	0	0	(3 055)
SEAS	70	1	0	0	0	0	0	0	0	0	866	0	0	(400)	0	0	(400)	(400)
	100	1	0	0	0	0	0	0	270 734	485 209	38 957	(125 039)	(224 096)	(17 992)	(125 039)	(224 096)	(17 992)	(367 128)
	150	1	0	0	0	0	0	0	1 301 486	786 231	124 436	(601 097)	(363 124)	(57 471)	(601 097)	(363 124)	(57 471)	(1 021 693)
SEAS	150	1	0	0	0	0	0	0	0	0	20 326	0	0	(9 388)	0	0	(9 388)	(9 388)
	250	1	0	0	0	0	0	0	1 326 054	418 999	138 805	(612 444)	(193 517)	(64 108)	(612 444)	(193 517)	(64 108)	(870 068)
	400	1	0	0	0	0	0	0	2 381 551	47 443	234 507	(1 099 930)	(21 912)	(108 308)	(1 099 930)	(21 912)	(108 308)	(1 230 149)
4/ 100 ft	400	1	0	0	0	0	0	0	0	0	470 017	0	0	(217 079)	0	0	(217 079)	(217 079)
2/ 100 ft	400	1	0	0	0	0	0	0	0	0	134 739	0	0	(62 230)	0	0	(62 230)	(62 230)

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STREET LIGHT COST OF SERVICE STUDY
ACCUMULATED DEPRECIATION
MARCH 31, 1989

			WEIGHTED INVEST. LAMPS & LUMINAIRES			WEIGHTED ACCUM. DEPRECIATION LAMPS & LUMINAIRES			HIST. INVESTMENT ST.LIGHT DIST.			ACCUM. DEPRECIATION ST.LIGHT DISTRIBUTION			TOTAL ACCUMULATED DEPRECIATION			
		WEIGHT	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	ZONE 1 $	ZONE 2 $	ZONE 3 $	TOTAL $
60 ft	1000	1	0	0	0	0	0	0	518 242	0	0	(239 352)	0	0	(239 352)	0	0	(239 352)
4/ 100 ft	1000	1	0	0	0	0	0	0	52 435	0	246 592	(24 218)	0	(113 890)	(24 218)	0	(113 890)	(138 107)
2/ 100 ft	1000	1	0	0	0	0	0	0	0	0	82 281	0	0	(38 002)	0	0	(38 002)	(38 002)
TOTAL H.P.S.			0	0	0	0	0	0	9 344 108	2 581 777	1 567 276	(4 315 617)	(1 192 405)	(723 853)	(4 315 617)	(1 192 405)	(723 853)	(6 231 875)
QUARTZ - FLOOD	500 W	6	0	0	0	0	0	0	0	2 830	0	0	(1 307)	0	0	(1 307)	0	(1 307)
L.P.S. FLOOD	200 W	6	0	0	0	0	0	0	0	1 415	0	0	(654)	0	0	(654)	0	(654)
TOTAL EXCL. POLE			0	0	0	0	0	0	25 140 141	10 731 042	4 313 546	(11 611 083)	(4 956 178)	(1 992 230)	(11 611 083)	(4 956 178)	(1 992 230)	(18 559 491)
TOTAL SYSTEM			0	0	0	0	0	0	26 877 561	12 900 979	4 992 792	(12 413 518)	(5 958 373)	(2 305 943)	(12 413 518)	(5 958 373)	(2 305 943)	(20 677 834)
				0			0			44 771 332			(20 677 834)					

ACCUMULATED DEP'N ST. LIGHTING MARCH 31, 1989	(21 912 313)
INVESTMENT ST. LIGHT MARCH 31, 1989	44 771 332
INVESTMENT SENTINAL LIGHT MARCH 31, 1989	2 672 877

ASSIGNMENT OF ACCUM. DEP'N	INVESTMENT	ACCUM. DEP'N
WEIGHTED INVESTMENT LAMPS & LUMINAIRES	0	0
INVESTMENT ST. LIGHT DISTRIBUTION	44 771 332	(20 677 834)
TOTAL	44 771 332	(20 677 834)