

CUT AT YEAR 16				
YEAR	TYPE OF MAINTENANCE	COST/SY	FACTOR	NPV PER SY
0	Reconstruct / New	\$20.00	1	\$20.00
5	Cape Seal	1.75	0.909564315	1.59
12	Cape Seal	1.7	0.796526432	1.39
16	CUT			
19	2" Overlay	5.00	0.697536553	3.48
	TOTAL NPV			26.46
	EQUIVALENT ANNUAL COST			1.75

FEE FOR CUT AT YEAR 2.5

Difference in EAC \$0.50
 Fee for this difference 4.67

FEE FOR CUT AT YEAR 10

Difference in EAC \$0.26
 Fee for this difference 2.66

FEE FOR CUT AT YEAR 16

Difference in EAC \$0.08
 Fee for this difference 0.86

NEW PAVEMENT REPAIR POLICY, VER. 1.1

1. **PURPOSE**

- 1.1 To establish policy and procedures for the repair and restoration of cuts into City streets, roads, alleys or other surfaces meant for the convenience of the general public.

2. **SCOPE**

- 2.1 The policies and procedures detailed herein apply to all City departments as well as to all companies doing work within the City right-of-way.

3. **DEFINITION**

- 3.1 **NEW** - any street that has been constructed, overlaid or reconstructed within five (5) years previous to the date of application for an excavation permit, the date of advertisement for bid or date of initial cut, whichever occurs first. The five (5) year time period shall commence with the date of council acceptance of the project or development constructing, reconstructing, resurfacing or overlaying the street. In the case of streets resurfaced by the Street Division, the five (5) year period will begin with the date established by the Street Division Manager.
- 3.2 **STREET** - any paved surface meant to convey the general public including but not limited to streets, roads or alleys.

4. **POLICY**

- 4.1 All pavement shall be saw cut to neat straight parallel lines.
- 4.2 Pavement shall be removed a minimum of 6" beyond all trench excavation.
- 4.3 Final pavement section shall exceed existing section by 1" in both AC & AB.
- 4.4 From the point of asphalt removal to a point 30" beyond said point existing AC shall be milled to a depth of 1.5"
- 4.5 Should AC milling or removal come within 12" of any concrete or pavement edge, AC shall be removed or milled to said concrete or pavement edge.

- 4.6 Trench backfill material may be job excavated provided it may be mechanically compacted to a relative compaction of 90%. Maximum uncompacted lift shall not exceed 8". No jetting or flooding will be allowed. Class 2 AB or 2 sack sand cement slurry may be used in place of job excavated material. Final 6" below subgrade shall be compacted to 95%.
- 4.7 Asphalt shall be placed and compacted in lifts not to exceed 3" in uncompacted depth until flush with milled surface.
- 4.8 Final 1.5" compacted depth lift shall be of 1/2" mix, finished smooth and flush with existing pavement.
- 4.9 Any pavement markings distributing by this work shall be replaced in kind with paint or reflective tape in accordance with the requirements of the City of Sacramento.
- Crosswalks shall be replaced the entire width of the street, legends shall be replaced in total and stripes shall be replaced from intersection to intersection.
- 4.10 Persons cutting and repairing streets shall repair/resurface any settlement in repaired street within ten (10) days notification for a period of five (5) years beyond final placement of pavement surface.
- 4.11 Trenches less than 15" in width shall be backfilled with a 2 sack sand-cement slurry.

5. PROCEDURES

- 5.1 Excavation mitigation fee shall be collected at the same time and at the same location as the current excavation fee.
- 5.2 Fee for City CIP Projects shall be collected at time of award.
- 5.3 All fees shall be accumulated in a fund established for the maintenance of City streets. Use of this fund shall be for street repair only.

DRAFT

ORDINANCE NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

AN ORDINANCE AMENDING SACRAMENTO CITY CODE SECTIONS 38.03.026, 38.03.027, 38.03.031 AND 38.03.032, RELATING TO PAYMENT OF EXCAVATION MITIGATION FEES.

BE IT ENACTED BY THE COUNCIL OF THE CITY OF SACRAMENTO:

SECTION 1

The City Council hereby finds and declares as follows:

- (1) Excavations in the City's streets, alleys, sidewalks and other public places, for the purpose of installing, repairing or removing public and private utility facilities, including but not limited to facilities providing water, sewer, gas, electric, communication and television services, are becoming more frequent.
- (2) Excavations in the City's streets, alleys, sidewalks and other public places, for the purpose of installing, repairing or removing such public and private utility facilities, disrupt and interfere with the public use of such streets, alleys, sidewalks and other public places.
- (3) Excavations in the City's streets, alleys, sidewalks and other public places for the purpose of installing, repairing or removing such public and private utility facilities, degrades and shortens the life of the surface of such streets, alleys, sidewalks and other public places, and thereby increases the frequency and cost to the public of necessary resurfacing, maintenance and repair by City.
- (4) The disruption and interference with the public use of City streets, alleys, sidewalks and other public places where excavations occur, and the additional cost to the public which the City incurs for resurfacing, maintenance and repair necessitated by the resulting from such excavations, are increased and magnified when a street, alley, sidewalk or other public place is subject to multiple excavations

FOR CITY CLERK USE ONLY

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DATE ADOPTED _____

- (5) To the maximum extent possible, excavations in the City's streets, alleys, sidewalks and other public places for the purpose of installing, repairing or removing public and private utility facilities should be performed in conjunction with the surfacing or resurfacing of such streets, alleys, sidewalks and other public places by the City, in order to avoid frequent recurrent disruption and interference with the public use, and to avoid degrading and shortening the life of the surface of such streets, alleys, sidewalks and other public places. In order to minimize such adverse impacts, and to provide an incentive to perform excavations for the purpose of installing, repairing or removing public and private utility facilities in conjunction with the surfacing or resurfacing of streets, alleys, sidewalks and other public places by the City, excavations in streets, alleys, sidewalks or other public places which have been surfaced or resurfaced should be discouraged for a period of five (5) years after such surfacing or resurfacing is completed.
- (6) When excavation for the purpose of installing, repairing or removing public or private utility facilities in a paved street, alley, sidewalk or other public place is not performed in conjunction with surfacing or resurfacing by the City, the additional or incremental cost to the public which the City will incur in the future to resurface, maintain and repair such street, alley, sidewalk or other paved surface, which cost is due to degradation caused by such excavation, should be borne by the entity making and benefitting from the excavation, through payment of an excavation mitigation fee.
- (7) Under existing law, public and private utilities with facilities installed in any street, alley, sidewalk, or other public place generally are required to relocate their facilities at their own cost, in the event that such relocation is required or made necessary by a City project or any other proper governmental use of the street, alley, sidewalk or other public place. The imposition of fees or other requirements upon such utilities in order to mitigate and reduce the adverse impacts of excavations, as authorized in this ordinance, should not in any way affect or alter this obligation.

SECTION 2

Sections 38.03.026, 38.03.027, 38.03.31, 38.03.032 and 38.03.038, of the Sacramento City Code are hereby amended to read as follows:

FOR CITY CLERK USE ONLY

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38.03.026 Permit-Required

It shall be unlawful for any person to make or cause to be made any excavation in or under the surface of any public street, alley, sidewalk, or any other public place for the installation, repair or removal of any pipe, conduit, duct, tunnel, power pole, or for any other purpose without first obtaining from the city engineer an excavation permit in compliance with this chapter. As used in this chapter, the term "city engineer" shall mean the Director of the Department of Public Works for the City of Sacramento or his or her authorized designee

38.03.027 Same-Requirements

(a) Before issuing an excavation permit, the city engineer shall require:

a written application for such permit, upon a form to be furnished by the city engineer, to be made and filed with the city engineer, wherein the applicant shall set forth the following:

1. The name and residence or business address of the person making such application;
2. The location and approximate area of the excavation; and,
3. The purpose of the excavation

The applicant shall attach to the application form a plan showing the location of the proposed excavation, the dimensions thereof, and such other details as the city engineer may require to be shown upon such plan.

(b) At the time the permit is issued, a non-refundable fee in an amount established by resolution of the city council shall be paid to defray the city's costs for inspection and processing the application, provided, however, that in any case where the city engineer determines the fee to be inappropriate based on the amount of work to be done for inspection and to process the application, or for other good cause shown, the city engineer may waive the fee, in whole or in part.

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- (c) At the time any permit is issued for excavation of a paved street, alley, or other paved public place, a non-refundable excavation mitigation fee shall be paid to defray the incremental costs for maintenance, repair or resurfacing of the pavement which the City will incur in the future as a result of the excavation for which the permit is issued. Procedures for determining the amount of the excavation mitigation fee, including procedures for determining circumstances, if any, when such fee may be waived in whole or in part, shall be adopted by resolution of the City Council. No excavation mitigation fee shall be charged for excavations to install power poles.
- (d) The location, depth and other physical characteristics of any facilities for which an excavation permit is issued shall be subject to approval of the city engineer.
- (e) Should a permit be issued for excavation of a paved street, alley, sidewalk or other paved public place, which has been surfaced or resurfaced within the previous five (5) years, the city engineer shall require additional restoration and backfill requirements as contained in the new Pavement Repair Policy maintained by the Street Division Manager.
- (f) No fee or requirement authorized or imposed pursuant to this section, section 38.03.041, or any other provision of this chapter, shall be construed to affect or alter in any way the obligation of any public or private utility provider to relocate its facilities at no cost to the City, in the event that such relocation is required or made necessary by a City project or any other proper governmental use of any street, alley, sidewalk or other public place.

38.03.032 Opening and Backfilling Trenches

- (a) No trench shall be opened in any street for the purpose of laying pipes, conduits or ducts more than four hundred (400) feet in advance of the pipe, conduit or ducts being placed in the trench, except in the case of emergency, and only after the consent of the city engineer has been obtained.

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- (b) All trenches shall be backfilled to meet city standards for compaction backfill and pavement restoration. The old torn up pavements and other rubble shall be removed, together with any surplus excavated material, within one (1) working day from the time such material is placed upon the street. After backfilling is completed, and prior to repaving the cut, the contractor or permittee shall remove all loose paving material and trim the edges of the excavation at the street surface to the satisfaction of the engineer. In addition to the requirement contained herein, any pavement less than five (5) years old shall be repaired in compliance with section 38.03.027, paragraph E.
- (c) Whenever any caving occurs in the sidewalls of any excavation, the pavements above such caving shall be cut away. In no case shall any void under a pavement be filled by any side or lateral tamping (Ord. No 300, 3rd Series, 2; Ord. No 4250, 1).

38.03.038 Blanket Permits

The city engineer may issue blanket permits for any utility to make excavations for service connections, for the location of trouble in conduits or pipes, for making repairs thereto, or for emergency purposes. Blanket permits shall be issued on a yearly basis only and will authorize excavation only as stated above. Blanket permits shall not be issued for new installations or facilities. Work authorized in accordance with this section shall be subject to the fees and restoration requirements contained in section 38.03.027.

SECTION 3

Should any part of this ordinance be declared invalid by a court of competent jurisdiction, the remaining provisions of this ordinance shall remain in full force and effect.

FOR CITY CLERK USE ONLY

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1 PURPOSE

- PRESENT INFORMATION ON THE EFFECTS OF CUTTING STREETS
- DISCUSS STREET DIVISIONS PROPOSAL + *collect any comments*
- ASK PERMISSION TO PROCEED
 - meet with the community and business sectors
 - develop a final proposal
 - return with proposal in the spring of 1996

2 WHY MANAGE CUTS?

- CITY STREETS REPRESENT A LARGE INVESTMENT
 - @ 1160 centerline miles
 - \$385,000,000 replacement value
- CUTS DECREASE PAVEMENT LIFE
 - uncut streets last about 1.3 times longer than cut streets
 - decrease in life increases life cycle costs

3 STUDIES USED

- BASED ON STUDIES PERFORMED AT THE REQUEST OF:
 - APWA *Lincoln etc*
 - BURLINGTON, VT
 - PHOENIX, AZ.
 - SAN FRANCISCO, CA

4 RESULTS OF STUDIES

- ALL CUTS REDUCE STREET LIFE
- POORLY REPAIRED CUTS EFFECT STREETS MORE
- MULTIPLE CUTS HAVE A GREATER EFFECT THAN SINGLE CUTS

5 PHOTO 1

- MULTIPLE CUTS
- TRENCHES LOOK OK

6 PHOTO 2

- MULTIPLE CUTS
- COMPACTION FAILURE

7 PHOTO 3

- SPOT REPAIR
- COMPACTION FAILURE

8 PHOTO 4

- TRENCH OK

- AREA ADJACENT TO CUT FAILED
 - FABRIC ANALOGY

9 **PAVEMENT LIFE CYCLES**

- RED CURVE IS UNCUT STREET
- GREEN CURVE IS A CUT STREET
- ALL CUTS REDUCE STREET LIFE

10 **PROPOSAL**

- SUGGEST A FEE TO OFFSET THE EXTRA COSTS REQUIRED OF CUT PAVEMENTS
- REQUIRE MORE STRINGENT REPAIR OF CUTS IN PAVEMENT LESS THAN 5 YEARS OLD
- CHANGE THE CITY CODE AS REQUIRED TO ACCOMPLISH ITEMS 1 & 2

11 **EXCAVATION MITIGATION FEE**

- THE AREA BETWEEN THE CURVES REPRESENTS A TANGIBLE LOSS TO THE CITY

12 **SUGGESTED FEES**

13 **NEW PAVEMENT REPAIR REQUIREMENTS**

- REMOVAL OF ALL PAVEMENT 6" BEYOND TRENCH LINE
- MILLING OF PAVEMENT 30" BEYOND PAVEMENT REMOVAL
- REQUIRE AN ADDITIONAL 1" OF BOTH A.C. & A.B.

14 trench repair detail

15 **FEE FOR TYPICAL INSTALLATIONS**

16 **CONCLUSION**

- STREETS NEED PROTECTION
 - pavement mitigation fee
 - new pavement repair policy
- SHOULD YOU AGREE IN PRINCIPAL
 - meet with the community and business sectors
 - develop a final proposal
 - return with proposal in the spring of '996

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PHOTO 1

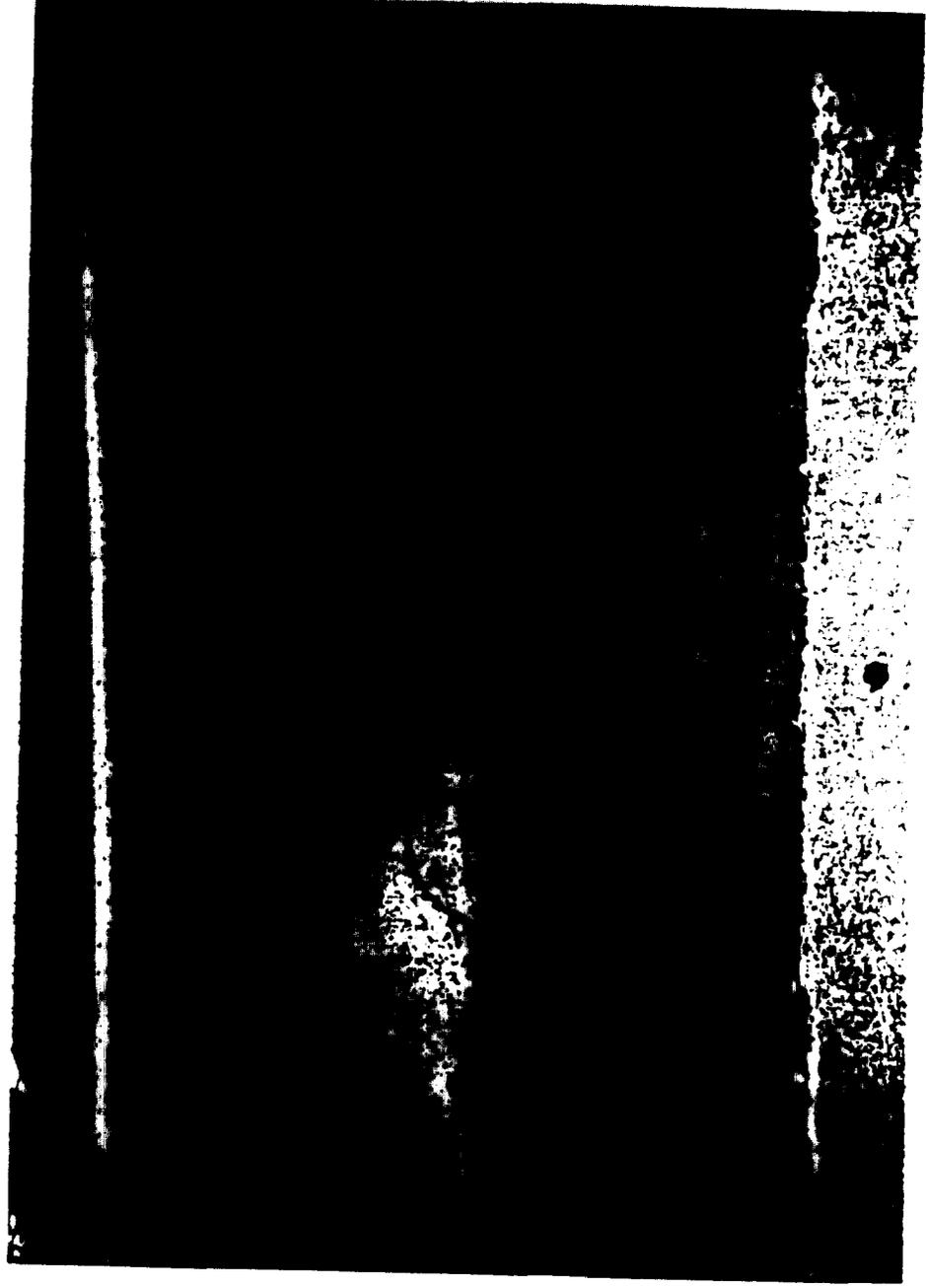


PHOTO 2



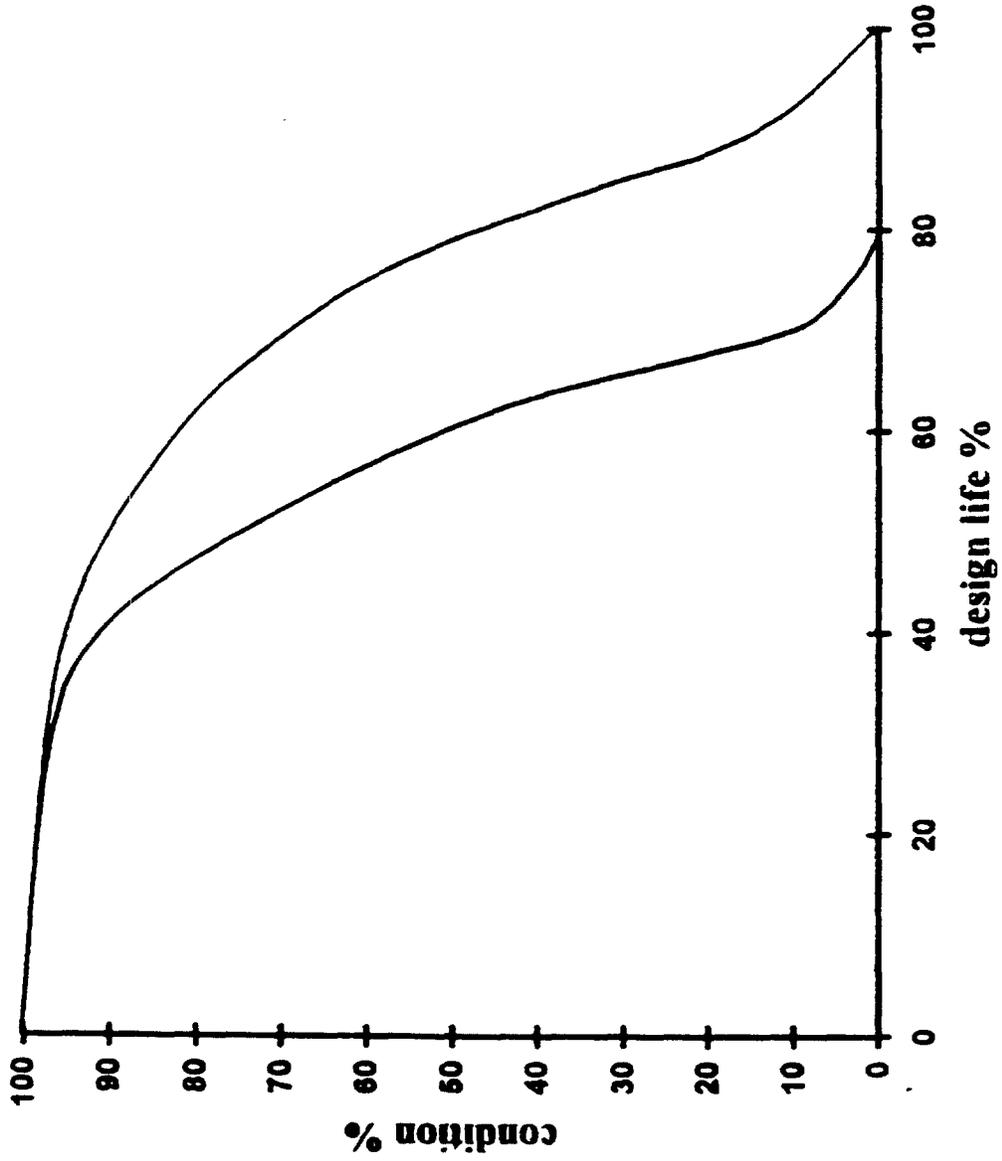
PHOTO 3



PHOTO 4



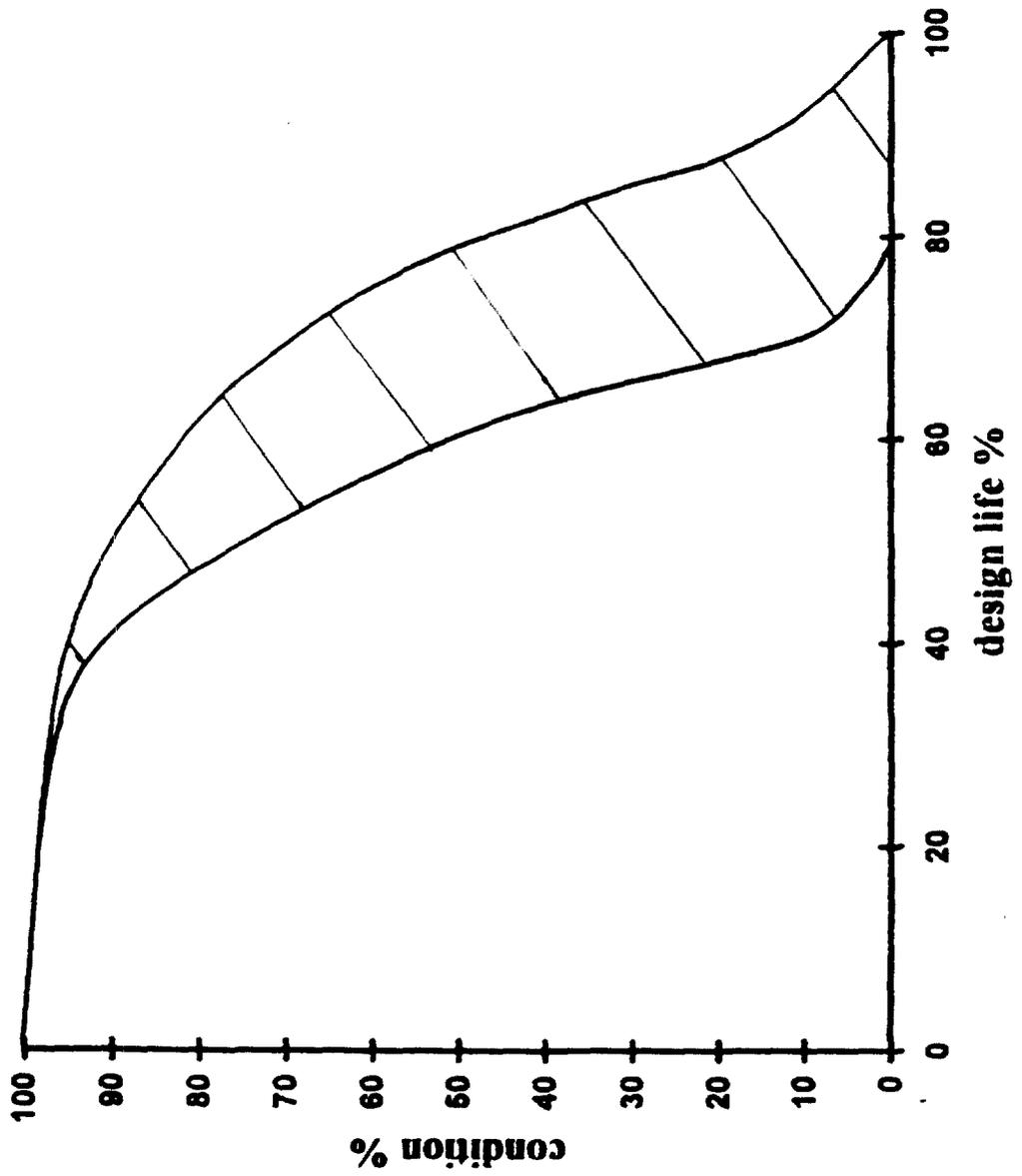
Life Cycle Curves



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Life Cycle Curves



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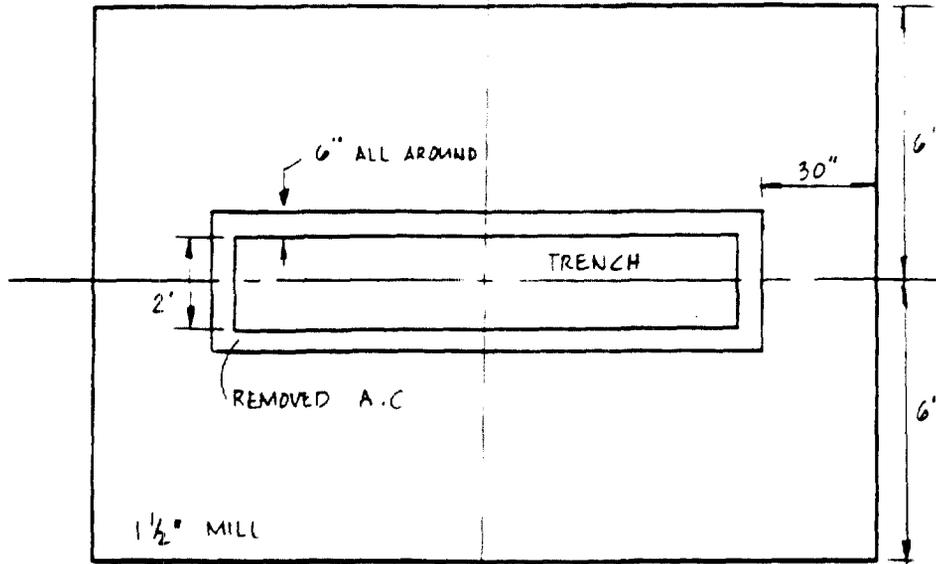
	RESIDENTIAL	NON-RESIDENTIAL
Less than 5 yrs.	\$ 3.78 / sq. yd.	\$ 4.67 / sq. yd.
More than 5 yrs.	\$ 2.52 / sq. yd.	\$ 2.66 / sq. yd.
Over 15 yrs.	\$ 1.36 / sq. yd.	\$ 0.86 / sq. yd.

No fee would be assessed in the two (2) years prior to a planned overlay or reconstruction project.

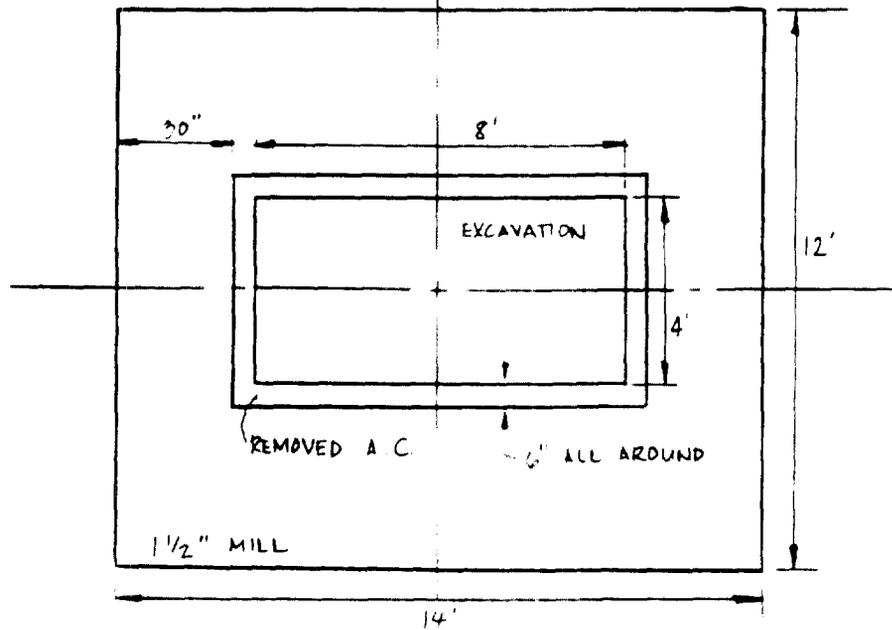
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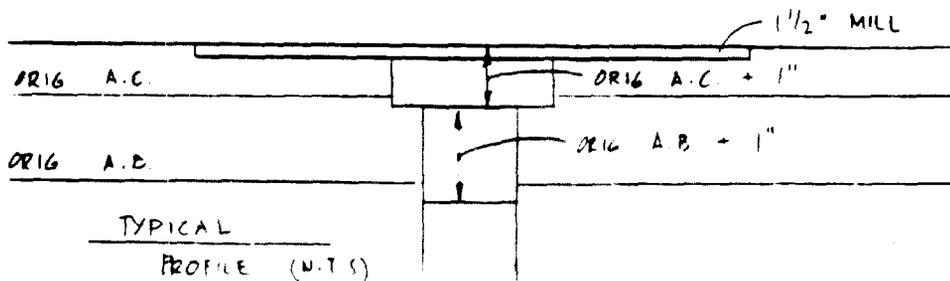
TYPICAL EXCAVATION REPAIR FOR TRENCH IN A.C. STREETS



TYPICAL EXCAVATION REPAIR
PLAN (N.T.S.)



TYPICAL 4' X 8' EXCAVATION REPAIR
PLAN (N.T.S.)



TYPICAL
PROFILE (N.T.S.)

FEE FOR TYPICAL INSTALLATIONS

TYPICAL FEE			
Street Age	Type of installation	Fee	
		Residential	Non-Residential
Less 5 years	1 block - 12" pipe	\$ 1,175.99	\$ 1,452.88
	1 block - rocksawed conduit	808.50	998.87
	4' x 8' repair	58.82	72.67
Over 5 yrs / less 15 yrs	1 block - 12" pipe	294.00	310.34
	1 block - rocksawed conduit	146.99	155.16
	4' x 8' repair	12.60	13.30
Over 15 yrs	1 block - 12" pipe	158.69	100.34
	1 block - rocksawed conduit	79.33	50.16
	4' x 8' repair	6.80	4.30
	2 years prior to planned overlay or reconstruction	0.00	0.00