

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF TREASURY

ROBERT A. BOWMAN, State Treasurer

STATE TAX COMMISSION

4th Floor Treasury Building
Lansing, Michigan 48922 Telephone 517 373-0500

COMMISSION MEMBERS

THEODORE P. MANSOUR
LEROY J. NELSON
ROBERT O. VANDERMARK

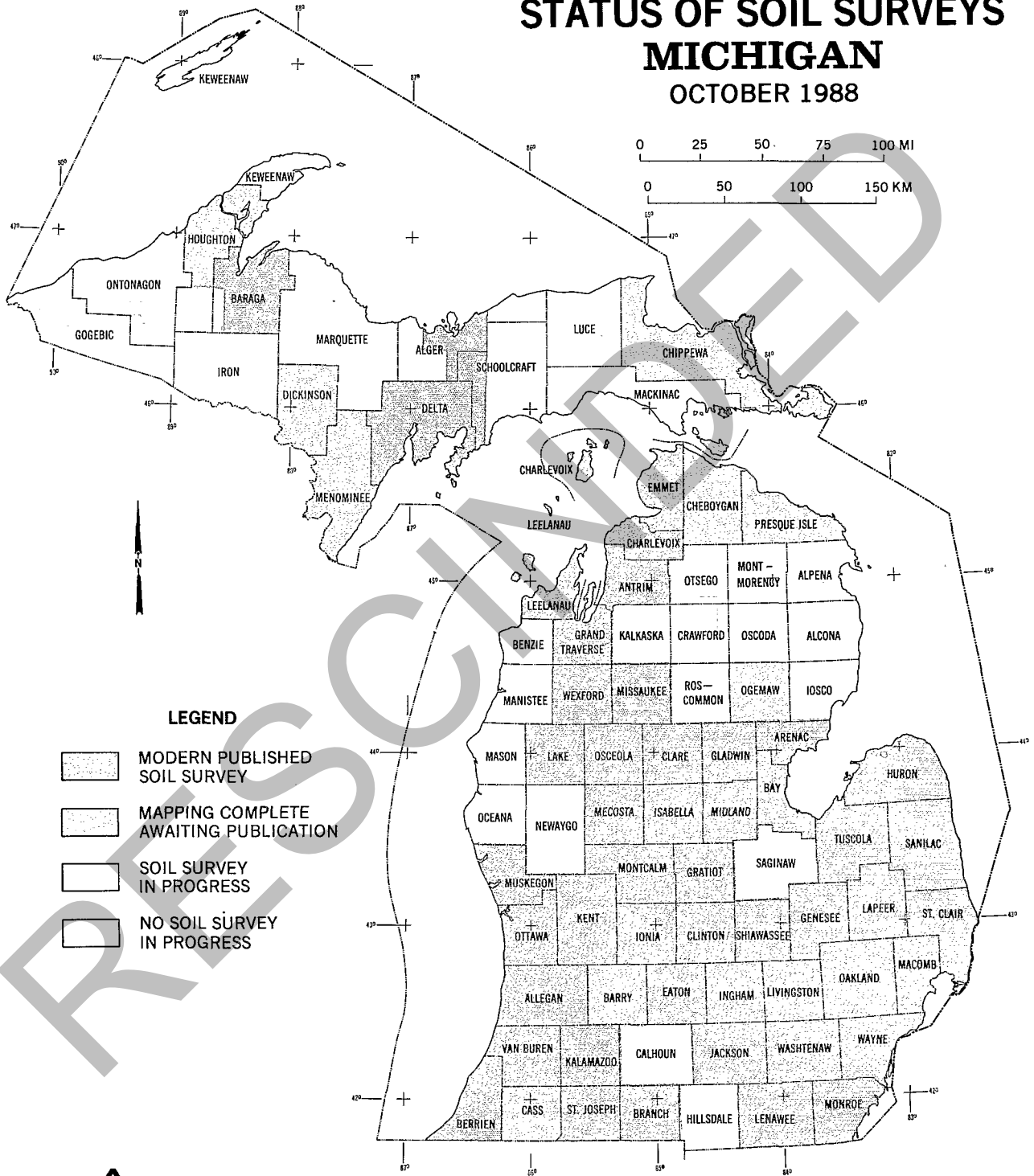
TO: Assessing Officers
FROM: Property Tax Division
Department of Treasury
RE: Status of Soil Surveys

The enclosed map indicates the status of soil surveys conducted by the Soil Conservation Service, U.S. Department of Agriculture.





The surveys are available from the Soil Conservation Service office which serves your county.

We have been advised that the surveys are available free of charge.

STATUS OF SOIL SURVEYS MICHIGAN OCTOBER 1988



LEGEND

-  MODERN PUBLISHED SOIL SURVEY
-  MAPPING COMPLETE AWAITING PUBLICATION
-  SOIL SURVEY IN PROGRESS
-  NO SOIL SURVEY IN PROGRESS

SOURCE: Data compiled by SCS
Field Personnel.

REVISED AUGUST 1988 1000098

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Theodore P. Mansour

DATE: February 17, 1988
TO: Assessing Officers and
Users of Assessor's Manual
FROM: State Tax Commission

Attached are the 1988 updates for the new (1986) Michigan Assessor's Manual. Page number 233 labeled "1988 County Multipliers" is to be inserted behind the "County Multipliers" tab of Volume I. The remaining sheets are to be inserted in Volume II behind the tabs labeled "Equipment Index, Comparative Cost Multipliers", and "Architect's Fee, County Multipliers."

Also enclosed is a page of errors and omissions in the 1986 Assessor's Manual. Please note these changes in your manual.

The final sheet is a copy of the September 2, 1986 letter by the State Tax Commission which includes an order blank for the new Assessor's Manual. Those assessing officers who have not yet ordered the new manual can use this blank for their order.

Attachments

1988

COUNTY MULTIPLIERS

State of Michigan

Counties	RESIDENTIAL		FARM	Counties	RESIDENTIAL		FARM
	Masonry	Frame			Masonry	Frame	
ALCONA	0.93	0.92	0.93	KENT	0.97	0.97	0.97
ALGER	0.94	0.93	0.94	KEWEENAW	0.92	0.91	0.92
ALLEGAN	0.97	0.96	0.97	LAKE	0.93	0.92	0.93
ALPENA	0.93	0.92	0.93	LAPEER	1.00	1.00	1.01
ANTRIM	0.93	0.92	0.93	LEELANAU	0.93	0.92	0.93
ARENAC	0.96	0.95	0.96	LENAWEE	1.02	1.03	1.03
BARAGA	0.93	0.92	0.93	LIVINGSTON	1.03	1.04	1.04
BARRY	0.97	0.97	0.98	LUCE	0.93	0.92	0.93
BAY	0.98	0.98	0.99	MACKINAC	0.92	0.91	0.92
BENZIE	0.93	0.92	0.93	MACOMB	1.06	1.06	1.06
BERRIEN	0.97	0.97	0.98	MANISTEE	0.94	0.92	0.93
BRANCH	0.99	0.98	0.99	MARQUETTE	0.96	0.96	0.97
CALHOUN	1.01	1.01	1.01	MASON	0.94	0.94	0.94
CASS	0.97	0.97	0.98	MECOSTA	0.95	0.94	0.95
CHARLEVOIX	0.93	0.92	0.93	MENOMINEE	0.93	0.93	0.94
CHEBOYGAN	0.93	0.91	0.92	MIDLAND	0.97	0.97	0.98
CHIPPEWA	0.92	0.91	0.92	MISSAUKEE	0.94	0.92	0.93
CLARE	0.95	0.94	0.95	MONROE	1.05	1.06	1.06
CLINTON	1.00	1.00	1.00	MONTCALM	0.96	0.95	0.96
CRAWFORD	0.93	0.92	0.93	MONTMORENCY	0.92	0.91	0.92
DELTA	0.93	0.93	0.94	MUSKEGON	0.97	0.98	0.98
DICKINSON	0.96	0.95	0.96	NEWAYGO	0.96	0.95	0.96
EATON	1.00	1.00	1.01	OAKLAND	1.06	1.07	1.07
EMMET	0.93	0.92	0.93	OCEANA	0.96	0.95	0.96
GENESEE	1.03	1.03	1.03	OGEMAW	0.93	0.92	0.93
GLADWIN	0.95	0.94	0.95	ONTONAGON	0.93	0.91	0.92
GOGEBIC	0.93	0.92	0.93	OSCEOLA	0.94	0.94	0.94
GRAND TRAVERSE	0.94	0.93	0.94	OSCODA	0.92	0.91	0.92
GRATIOT	0.97	0.97	0.97	OTSEGO	0.93	0.91	0.92
HILLSDALE	1.00	1.01	1.01	OTTAWA	0.97	0.96	0.97
HOUGHTON	0.93	0.92	0.93	PRESQUE ISLE	0.93	0.92	0.93
HURON	0.98	0.97	0.98	ROSCOMMON	0.93	0.92	0.94
INGHAM	1.03	1.03	1.03	SAGINAW	0.99	0.99	1.00
IONIA	0.98	0.98	0.98	ST. CLAIR	1.02	1.02	1.03
IOSCO	0.95	0.95	0.95	ST. JOSEPH	0.97	0.97	0.97
IRON	0.94	0.93	0.94	SANILAC	0.99	0.99	1.00
ISABELLA	0.97	0.97	0.97	SCHOOLCRAFT	0.93	0.92	0.93
JACKSON	1.01	1.02	1.02	SHIAWASSEE	1.01	1.01	1.01
KALAMAZOO	0.99	0.99	0.99	TUSCOLA	0.98	0.97	0.98
KALKASKA	0.94	0.92	0.93	VAN BUREN	0.97	0.97	0.97
				WASHTENAW	1.05	1.05	1.05
				WAYNE	1.06	1.07	1.07
				WEXFORD	0.94	0.92	0.93

COST INDEXES (1926 = 100)

EQUIPMENT — NATIONAL AVERAGE

FOR USE FOR 1988 ASSESSMENTS

These indexes can be used for analysis purposes. However, the valuation of machinery, equipment, furniture, fixtures, etc. for assessment purposes will usually be determined by applying the appropriate State Tax Commission personal property multipliers to the original cost, by year installed, of equipment as discussed in chapter 15 of the Assessor's Manual.

	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977
Average of all	806.9	795.4	787.9	776.4	755.8	742.4	709.2	642.8	584.4	534.7	497.1
Airplane mfg.	982.4	971.5	967.0	954.6	929.3	912.0	873.8	792.9	716.0	652.6	608.1
Apartment	594.1	584.2	578.6	569.6	552.5	541.4	521.2	477.5	441.2	406.5	378.9
Bakery	755.2	742.7	730.0	716.2	699.7	689.8	658.3	595.3	538.5	491.5	457.3
Bank	636.5	625.6	619.8	612.6	593.6	579.0	558.7	513.8	476.5	437.3	406.9
Bottling	814.1	803.6	798.3	788.3	768.3	757.1	725.5	658.5	595.8	545.7	506.9
Brewery and distillery	988.8	976.4	967.9	954.0	930.9	917.8	876.8	792.9	715.9	658.2	612.1
Candy and confectionery	962.7	946.3	929.1	910.5	890.2	878.9	837.8	756.1	682.3	623.4	580.0
Cannery (fish)	942.5	926.8	911.9	894.8	873.2	860.2	820.9	743.1	672.9	613.5	569.4
Cannery (fruit)	942.8	926.4	911.2	895.5	873.9	859.3	822.6	746.4	677.7	617.5	571.4
Cement mfg.	828.4	820.4	814.8	803.2	784.2	771.6	731.8	658.7	598.7	548.2	509.7
Chemical	812.8	804.0	800.4	789.2	768.8	757.8	720.0	647.4	583.7	536.9	498.3
Church	670.4	656.9	647.0	638.5	617.0	598.5	576.1	530.2	495.5	450.4	412.5
Clay products	814.2	804.3	797.8	785.0	762.3	748.4	708.5	638.7	580.5	532.6	496.0
Contractor's equip.	939.9	927.2	919.5	908.4	890.1	871.6	824.2	739.3	669.4	610.9	567.0
Creamery and dairy	828.3	815.1	802.6	788.5	770.5	760.5	725.8	656.0	590.3	541.3	504.8
Dwelling	580.0	570.4	564.9	555.7	539.6	529.5	509.5	466.3	430.7	397.1	371.2
Elec. equip. mfg.	810.5	802.2	798.7	788.8	767.3	755.5	730.2	666.1	596.2	542.3	508.7
Elec. power equip.	765.6	759.9	755.8	748.5	729.8	721.3	698.1	638.3	568.8	517.0	487.8
Flour, cereal and feed	794.3	784.1	775.4	763.3	746.5	738.1	705.4	637.8	575.8	526.6	490.9
Garage	906.5	894.0	888.4	874.6	851.4	834.0	794.7	716.8	648.6	592.9	551.0
Glass mfg.	762.0	753.4	749.6	740.2	720.9	710.9	680.0	617.0	557.3	510.6	475.7
Hospital	737.1	723.7	713.2	700.5	680.0	665.7	635.0	578.1	526.3	481.2	448.5
Hotel	697.5	683.9	671.6	658.6	640.0	626.0	597.7	543.5	498.9	456.3	423.7
Laundry and cleaning	693.2	682.9	677.0	667.1	648.3	637.4	609.0	553.0	503.8	462.6	431.6
Library	764.4	751.9	744.5	734.4	711.3	696.0	667.7	609.8	561.7	513.0	475.7
Logging equip.	853.5	842.7	836.5	825.8	806.0	789.7	748.6	673.6	612.7	558.7	518.0
Metal working	923.6	912.1	906.0	889.9	866.4	847.0	810.2	730.9	657.7	599.8	557.3
Mining and milling	833.1	826.0	821.9	812.2	796.1	778.0	737.3	664.1	605.2	553.1	511.4
Motion picture	890.6	878.0	871.6	861.9	838.0	821.7	790.5	720.8	654.8	598.2	556.5
Office equip.	703.8	691.8	683.4	674.3	655.1	641.4	617.0	565.8	523.4	482.6	453.5
Packing (fruit)	889.2	874.9	864.3	852.0	829.8	813.3	780.2	708.8	648.0	591.2	545.4
Packing (meat)	830.8	817.3	804.2	788.4	768.7	757.0	720.1	649.6	589.3	540.4	503.6
Paint mfg.	821.3	810.9	806.1	794.9	773.0	760.6	725.3	656.5	594.3	544.8	506.8
Paper mfg.	776.9	766.6	761.7	753.0	732.5	719.8	687.5	623.2	567.2	520.7	482.4
Petroleum	860.3	857.6	857.0	847.7	832.4	824.6	773.4	690.1	621.0	568.3	526.7
Printing	755.9	743.9	736.4	726.5	703.3	690.3	665.0	605.9	547.8	498.9	464.0
Refrigeration	955.1	941.8	934.4	920.5	894.0	877.6	835.0	754.6	684.5	628.8	586.4
Restaurant	650.5	638.0	625.7	613.4	595.9	582.6	554.9	503.3	460.6	420.8	390.1
Rubber	878.3	864.3	857.5	842.3	817.0	800.6	758.2	681.1	618.6	565.2	523.2
School	751.2	737.3	725.0	712.0	691.1	676.7	646.4	588.2	539.8	494.3	459.7
Shipbuilding	934.4	925.0	922.0	911.6	892.3	879.9	836.8	754.6	681.7	622.8	577.7
Steam power	803.0	794.1	790.6	778.4	753.9	743.6	712.0	643.8	580.3	534.6	500.0
Store	786.0	771.9	762.9	753.3	728.9	711.3	683.5	626.3	579.6	530.0	490.4
Textile	863.9	849.8	840.4	828.4	805.0	791.4	756.2	685.3	625.9	575.4	535.5
Theater	671.5	659.8	651.9	642.3	621.3	607.0	581.6	530.9	489.3	447.7	416.0
Warehousing	686.6	677.3	672.4	664.8	650.0	642.4	615.0	555.7	510.4	468.2	434.8
Woodworking	780.2	769.4	764.8	754.7	734.4	717.9	688.4	627.7	572.1	523.3	482.4

COST INDEXES (1926 = 100)

EQUIPMENT — NATIONAL AVERAGE

FOR USE FOR 1988 ASSESSMENTS

	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966
Average of all	472.1	444.3	398.4	344.1	332.1	321.3	303.3	285.1	273.2	262.9	252.5
Airplane mfg.	577.5	543.7	487.0	415.9	400.0	385.9	364.2	340.8	326.1	315.5	303.3
Apartment	361.9	340.0	316.3	286.8	277.0	270.7	259.7	248.0	237.9	229.0	220.5
Bakery	433.9	407.6	364.2	316.0	306.0	296.1	279.0	262.3	251.9	243.0	233.3
Bank	389.4	367.3	332.6	289.9	278.5	270.9	256.9	240.3	230.5	221.4	211.3
Bottling	482.2	455.5	403.5	347.8	336.3	325.4	306.7	288.3	276.9	267.0	256.4
Brewery and distillery	581.9	550.4	487.8	417.4	402.2	386.9	362.1	338.2	322.7	309.0	296.5
Candy and confectionery	549.9	517.7	463.8	400.3	386.2	371.5	347.6	324.7	309.8	296.6	284.6
Cannery (fish)	539.3	507.7	456.2	391.5	378.7	366.4	345.3	324.6	311.8	300.6	288.7
Cannery (fruit)	540.9	509.7	457.9	392.0	379.2	366.9	345.8	325.1	312.2	301.1	289.1
Cement mfg.	482.2	454.3	398.1	340.1	328.5	317.3	298.3	280.1	268.3	258.1	248.0
Chemical	473.2	447.6	400.5	341.1	329.7	319.1	300.7	282.8	271.6	261.9	251.5
Church	390.3	364.3	339.0	301.2	288.5	281.3	269.0	254.5	243.0	233.1	222.5
Clay products	466.9	437.2	384.5	330.3	319.3	308.4	289.9	272.2	260.7	250.8	240.9
Contractor's equip.	537.4	504.2	435.4	375.6	363.0	350.6	330.7	312.2	297.2	283.5	273.8
Creamery and dairy	479.5	452.1	405.1	346.7	334.8	322.1	302.3	283.4	271.1	260.9	249.8
Dwelling	355.3	334.3	310.7	281.7	272.3	265.5	255.1	245.3	234.9	226.2	218.5
Elec. equip. mfg.	484.3	457.9	409.5	351.8	340.4	330.8	313.9	296.5	285.8	277.6	267.0
Elec. power equip.	465.1	438.5	391.7	327.2	316.4	307.5	290.3	274.8	264.9	257.3	246.6
Flour, cereal and feed	466.4	440.1	390.7	333.2	321.9	311.6	293.6	276.0	265.1	255.6	245.4
Garage	524.6	496.2	443.6	385.2	373.2	358.9	338.6	319.8	307.3	297.6	289.0
Glass mfg.	451.3	425.3	375.4	321.9	311.3	301.3	283.9	266.9	256.3	247.2	237.4
Hospital	427.1	404.8	366.2	319.0	306.3	294.6	275.7	257.5	245.7	235.0	225.7
Hotel	403.4	381.2	346.6	307.6	295.0	287.6	275.1	260.2	248.4	238.4	227.6
Laundry and cleaning	411.0	388.6	346.7	296.9	287.6	278.5	262.7	247.9	238.8	229.7	222.1
Library	452.4	427.7	388.3	334.6	320.4	312.7	298.1	279.5	267.6	256.4	244.2
Logging equip.	490.7	459.2	397.7	346.9	335.6	324.2	304.8	286.1	274.0	263.6	253.2
Metal working	529.0	497.7	438.9	375.1	360.5	347.8	330.4	308.8	295.2	286.8	276.2
Mining and milling	482.9	451.2	394.3	342.9	331.8	321.1	302.6	284.5	273.2	263.5	253.0
Motion picture	528.5	495.8	446.4	390.1	377.7	365.5	344.5	323.8	311.0	299.9	288.0
Office equip.	436.2	412.7	373.9	327.5	314.6	306.5	291.7	274.5	263.0	251.9	241.2
Packing (fruit)	516.0	477.6	439.8	389.5	378.1	365.9	344.8	324.1	311.3	300.2	288.3
Packing (meat)	478.1	449.8	404.8	347.9	336.0	323.5	303.4	284.4	272.0	261.7	250.7
Paint mfg.	481.2	455.0	406.1	345.9	333.3	320.7	300.1	280.3	267.4	256.0	245.7
Paper mfg.	457.6	430.1	381.7	328.4	317.7	307.5	289.7	272.4	261.6	252.2	242.2
Petroleum	497.7	470.9	419.3	356.0	343.0	330.0	308.8	288.4	275.2	263.4	252.8
Printing	440.1	414.5	375.8	320.1	309.2	299.3	282.0	265.1	254.7	245.6	235.8
Refrigeration	558.4	528.1	472.4	404.6	389.5	374.7	350.6	327.5	312.5	299.2	287.1
Restaurant	370.4	348.3	314.9	273.4	263.5	257.4	246.9	235.7	226.2	217.7	209.6
Rubber	497.3	468.5	415.3	357.8	344.7	331.6	310.3	289.9	276.5	264.7	254.1
School	437.2	411.6	376.5	326.1	313.0	304.4	288.7	270.0	259.0	248.8	237.6
Shipbuilding	547.0	513.1	451.7	383.9	370.0	356.5	336.5	314.9	301.3	291.5	280.2
Steam power	475.7	448.2	400.8	338.9	326.3	313.9	293.8	274.4	261.8	250.6	240.5
Store	465.8	436.1	402.1	348.9	335.3	326.6	310.8	292.5	280.2	268.4	257.0
Textile	509.5	478.3	431.4	372.7	360.7	349.0	328.9	309.2	297.0	286.4	275.1
Theater	396.2	373.8	339.8	293.7	282.0	274.7	261.4	246.0	235.6	225.7	216.1
Warehousing	412.0	381.1	349.8	309.6	302.3	291.3	273.5	259.0	250.3	241.6	234.4
Woodworking	456.0	424.6	387.8	341.6	330.8	320.4	302.8	284.4	273.3	264.4	254.2

COMPARATIVE COST MULTIPLIERS

FOR USE FOR 1988 ASSESSMENTS

These multipliers can be used to trend historical costs to the current level for rough estimating or checking. Example: a Class C structure which cost \$1,000,000 to build in July 1980 would cost approximately \$1,218,000 (i.e., \$1,000,000 x 1.218) for 1988 assessment purposes. The factors on this sheet do not allow for depreciation.

YEAR OF FORMER COST	CLASS A Fireproofed Steel Frame	CLASS B Reinforced Concrete Frame	CLASS C Masonry Bearing Walls	CLASS D Wood Frame	CLASS S Metal Frame and Walls	YEAR OF FORMER COST	CLASS A Fireproofed Steel Frame	CLASS B Reinforced Concrete Frame	CLASS C Masonry Bearing Walls	CLASS D Wood Frame	CLASS S Metal Frame and Walls
1987	1.000	1.000	1.000	1.000	1.000	JUL 1975	1.768	1.765	1.786	1.777	1.725
						JAN 1975	1.820	1.823	1.848	1.829	1.770
OCT 1986	1.005	1.004	1.004	1.004	1.003	JUL 1974	1.969	1.976	1.962	1.892	1.948
JUL 1986	1.006	1.006	1.005	1.005	1.005	JAN 1974	2.083	2.099	2.070	1.966	2.093
APR 1986	1.013	1.013	1.013	1.015	1.012	JUL 1973	2.151	2.169	2.134	2.020	2.158
JAN 1986	1.013	1.013	1.016	1.019	1.012	JAN 1973	2.249	2.274	2.240	2.137	2.258
OCT 1985	1.012	1.012	1.015	1.019	1.009	JUL 1972	2.324	2.349	2.325	2.230	2.323
JUL 1985	1.013	1.014	1.017	1.021	1.009	JAN 1972	2.413	2.441	2.422	2.322	2.416
APR 1985	1.014	1.015	1.018	1.022	1.011	JUL 1971	2.508	2.530	2.506	2.418	2.482
JAN 1985	1.017	1.018	1.021	1.022	1.014	JAN 1971	2.615	2.643	2.618	2.538	2.644
OCT 1984	1.022	1.025	1.026	1.025	1.017	JUL 1970	2.733	2.771	2.746	2.655	2.783
JUL 1984	1.026	1.029	1.030	1.026	1.020	JAN 1970	2.825	2.846	2.795	2.685	2.897
APR 1984	1.029	1.033	1.035	1.031	1.021	JUL 1969	2.918	2.939	2.877	2.718	3.028
JAN 1984	1.033	1.035	1.045	1.044	1.027	JAN 1969	3.016	3.045	2.997	2.854	3.106
OCT 1983	1.046	1.050	1.060	1.061	1.037	JUL 1968	3.159	3.181	3.130	3.018	3.272
JUL 1983	1.055	1.060	1.073	1.078	1.044	JAN 1968	3.228	3.250	3.213	3.109	3.342
APR 1983	1.075	1.081	1.097	1.108	1.061	JUL 1967	3.317	3.345	3.318	3.220	3.474
JAN 1983	1.081	1.088	1.105	1.117	1.067	JAN 1967	3.397	3.414	3.394	3.292	3.498
OCT 1982	1.081	1.090	1.106	1.118	1.066	JUL 1966	3.432	3.439	3.432	3.304	3.570
JUL 1982	1.085	1.094	1.111	1.125	1.068	JAN 1966	3.528	3.522	3.532	3.411	3.626
APR 1982	1.096	1.104	1.120	1.136	1.079	JUL 1965	3.607	3.597	3.597	3.492	3.723
JAN 1982	1.107	1.115	1.131	1.146	1.093	JAN 1965	3.650	3.639	3.648	3.557	3.746
OCT 1981	1.103	1.108	1.119	1.128	1.088	JUL 1964	3.692	3.697	3.704	3.601	3.779
JUL 1981	1.133	1.136	1.146	1.155	1.118	JAN 1964	3.746	3.748	3.765	3.683	3.822
APR 1981	1.149	1.151	1.160	1.170	1.136	JUL 1963	3.761	3.763	3.781	3.696	3.896
JAN 1981	1.161	1.163	1.173	1.180	1.149	JAN 1963	3.819	3.812	3.831	3.755	3.880
OCT 1980	1.193	1.193	1.202	1.208	1.181	JUL 1962	3.837	3.841	3.848	3.802	3.961
JUL 1980	1.207	1.206	1.218	1.228	1.191	JAN 1962	3.888	3.882	3.913	3.842	3.907
APR 1980	1.217	1.217	1.232	1.238	1.199	JUL 1961	3.906	3.900	3.937	3.866	3.920
JAN 1980	1.239	1.240	1.250	1.248	1.219	JAN 1961	3.946	3.935	3.966	3.870	---
OCT 1979	1.264	1.265	1.272	1.268	1.244	JUL 1960	3.938	3.932	3.963	3.866	3.924
JUL 1979	1.296	1.295	1.301	1.294	1.278	JAN 1960	3.935	3.971	4.001	3.912	---
APR 1979	1.339	1.339	1.341	1.330	1.323	JUL 1959	3.944	3.990	4.010	3.907	3.928
JAN 1979	1.374	1.374	1.375	1.358	1.362	JAN 1959	4.012	4.044	4.078	3.990	---
OCT 1978	1.416	1.415	1.416	1.394	1.404	JUL 1958	4.098	4.123	4.152	4.073	4.088
JUL 1978	1.455	1.454	1.455	1.429	1.442	JAN 1958	4.106	4.134	4.160	4.072	---
APR 1978	1.494	1.492	1.493	1.463	1.482	JUL 1957	4.164	4.187	4.210	4.120	4.176
JAN 1978	1.520	1.515	1.515	1.482	1.511	JAN 1957	4.223	4.241	4.255	4.158	---
OCT 1977	1.552	1.549	1.559	1.529	1.535	JUL 1956	4.345	4.357	4.374	4.235	4.331
JUL 1977	1.586	1.585	1.601	1.578	1.554	JAN 1956	4.407	4.424	4.473	4.330	---
APR 1977	1.615	1.612	1.629	1.605	1.571						
JAN 1977	1.628	1.628	1.645	1.621	1.585						
JUL 1976	1.695	1.695	1.706	1.690	1.658						
JAN 1976	1.726	1.728	1.748	1.748	1.679						

The architect's fees listed on the next page are based on averages of fees actually charged or recommended. Actual fees, since they are based on the size of the project, the technical difficulty, the artistic requirements, the reputation of the architect, and his willingness to accept the assignment, vary greatly, and the estimate of the fee is a matter for the valuator's judgment.

Architect's fees normally will include part or all of the following:

1. Plans and specifications including consultations, estimates, and engineering studies.
2. General administration and over-all supervision of construction, not including superintending construction.
3. Approving payment vouchers to the contractor.
4. Approval and acceptance of completed construction.

Regardless of the size and type of construction, all of these services must be performed by someone. On some projects the owner or the general contractor may do the supervision. On governmental projects, many services are performed by government employees; however, in replacing the building, the cost of these services, whether performed by the architect or others, must be included.

The architect's fee multipliers given here are only a guide. On a simple residence, stock plans and specifications may be purchased for under \$200, and on a large housing development, the architect may get full fees for each individual design and payments as low as \$150 per unit for additional uses of the plans, or he may work as a corporate employee.

In actual practice, the architect's fee normally is based, by contract, either at a percentage of the entire cost, on a multiplier of the technical payroll plus incidental expenses, or on a fixed sum plus listed expenses.

In the final analysis, the architect's function when fully performed is a proper cost of construction. A well considered matching of structure to land may enhance the end value by more than the fees involved. However, when poorly performed, the cost of design and drafting work may be wasted and result in functional obsolescence in a brand new structure. This determination is a matter of judgment.

The average fees listed for buildings do not include fees for design of furniture, built-in equipment, plant layout, or other detailed special items designed for a specific trade or personal use.

AVERAGE ARCHITECT'S FEES

The table below can be used as a general guide or for greater detail see Page 2. The numbers listed below are percentages.

SECTION	QUALITY AVERAGE
SEG 1	7.0
SEG 2	7.0
SEG 3	7.0
SEG 4	6.0
SEG 5	7.0
SEG 6	7.0

Architectural Fees for most UIP components are commensurate with the general SEG building types.

The following special supplemental cost section items already include architect fees:

- Manufactured Housing Parks
- Service Stations
- Golf Courses
- Drive-In Theaters
- Ski-Lifts
- Recreational Enclosures

ARCHITECT'S FEES

EXPLANATION

The tables of architect's fees are based on composite curves derived from many actual fees charged, recommendations of several architectural committees in various states, and architectural time studies. In cases where superior quality and detail are required, the fee may be higher than the average, while very low quality and standardized buildings may call for a fee which is lower. The fee schedules contain approximately 30% (20% to 40%) for contract administration and supervision. In many cases, this function may be performed by the contractor, an employee of the owner or an outside consultant. In any case, this is a proper charge against the building and the total fee should be added to building costs computed from the Unit-in-Place or the Segregated Costs.

TABLE I

Furnishings and Interiors	Mausoleums and Memorials
Special Lighting	

TABLE II

Airport Terminals	Laboratories
Computer Centers	Libraries
Convention Centers	Museums and Galleries
Hospitals and Mental Institutions	Store Fronts

TABLE III

Auditoriums	Medical Office Buildings
Banks and Financial Institutions	Major Post Office Buildings
Communications and Broadcasting	Public Health Centers
Convalescent Hospitals	Resort Lodges
Country Clubs and Marinas	Specialty Shops
Fire and Police Stations	Stadiums and Sports Facilities
Fraternal Buildings	Theaters
Hotels and City Clubs	Veterinary Hospitals

TABLE IV

Apartments and Dormitories	Health Clubs
Bars and Lounges	Homes for the Elderly
Branch Post Offices	Laundries and Cleaners
Bus Stations	Maintenance Hangars
Clubhouses and Gymnasiums	Mortuaries
Cold Storage Buildings	Motels
Day Care Centers	Office Buildings
Department Stores	Public Recreation Facilities
Eng. & Research Industrial Buildings	Racquetball and Tennis Clubs
Equestrian Centers	Regional Shopping Centers
Fraternity and Sorority Houses	Restaurants and Clubs

PROJECT COST Up To	TABLE					
	I	II	III	IV	V	VI
\$ 50,000	10.7	9.7	8.7	7.9	7.1	6.4
100,000	10.3	9.4	8.4	7.6	6.9	6.2
200,000	10.0	9.1	8.2	7.4	6.7	6.0
500,000	9.5	8.7	7.8	7.1	6.4	5.8
1,000,000	9.2	8.4	7.6	6.9	6.2	5.6
2,000,000	8.9	8.1	7.3	6.6	6.0	5.5
3,000,000	8.7	7.9	7.2	6.5	5.9	5.4
5,000,000	8.4	7.7	7.0	6.4	5.8	5.3
10,000,000	8.1	7.5	6.8	6.2	5.6	5.1
20,000,000	7.9	7.2	6.6	6.0	5.4	5.0
50,000,000	7.5	6.9	6.3	5.7	5.2	4.8
and up	7.3	6.8	6.2	5.6	5.1	4.7

TABLE V

Automotive Centers	Loft Buildings
Barber and Beauty Shops	Manufacturing Industrial Buildings
Bowling Alleys	Markets and Convenience Stores
Car Washes	Multiples, Individual Design
Community Shopping Centers	Neighborhood Shopping Centers
Creameries	Retail Stores
Dairies	Row Houses, Individual Design
Discount Stores	Senior Citizen Multiple Residences
Dispensaries	Showrooms
Distribution Warehouses	Skating Rinks
Docks and Wharfs	Stables and Horse Arenas
Fast Food Restaurants	Storage Hangars

The following are the approximate percentages included in the manual costs for single and multi-family residences and miscellaneous farm structures not listed in the above table.

TABLE VI

Garages and Parking Structures	Service Stations
Greenhouses	Shipping Docks & Transfer Points
	Storage Warehouses

	LOW COST	FAIR	AVERAGE	GOOD
Multiple-Residential	1.5%	1.9%	2.4%	3.9%
Miscellaneous Farm Structures	1.6%	2.1%	2.8%	3.8%

1988

COUNTY MULTIPLIERS

State of Michigan

Counties Class	Commerical and Industrial				
	A	B	C	D	S
ALCONA	0.94	0.94	0.93	0.92	0.94
ALGER	0.95	0.95	0.94	0.93	0.94
ALLEGAN	0.98	0.97	0.97	0.96	0.97
ALPENA	0.94	0.94	0.93	0.92	0.94
ANTRIM	0.94	0.94	0.93	0.92	0.93
ARENAC	0.96	0.96	0.96	0.95	0.96
BARAGA	0.94	0.94	0.93	0.92	0.94
BARRY	0.98	0.98	0.97	0.97	0.98
BAY	1.00	0.99	0.98	0.98	0.99
BENZIE	0.94	0.94	0.93	0.92	0.93
BERRIEN	0.98	0.98	0.97	0.97	0.98
BRANCH	1.00	1.00	0.99	0.98	1.00
CALHOUN	1.01	1.01	1.01	1.01	1.01
CASS	0.98	0.98	0.97	0.97	0.98
CHARLEVOIX	0.94	0.94	0.93	0.92	0.93
CHEBOYGAN	0.94	0.93	0.93	0.91	0.93
CHIPPEWA	0.93	0.93	0.92	0.91	0.93
CLARE	0.96	0.96	0.95	0.94	0.96
CLINTON	1.00	1.00	1.00	1.00	1.00
CRAWFORD	0.95	0.94	0.93	0.92	0.94
DELTA	0.94	0.94	0.93	0.93	0.94
DICKINSON	0.96	0.96	0.96	0.95	0.96
EATON	1.01	1.01	1.00	1.00	1.01
EMMET	0.94	0.94	0.93	0.92	0.93
GENESEE	1.04	1.04	1.03	1.03	1.03
GLADWIN	0.96	0.96	0.95	0.94	0.96
GOGEBIC	0.94	0.94	0.93	0.92	0.94
GRAND TRAVERSE	0.95	0.95	0.94	0.93	0.94
GRATIOT	0.98	0.98	0.97	0.97	0.97
HILLSDALE	1.00	1.00	1.00	1.01	1.00
HOUGHTON	0.94	0.94	0.93	0.92	0.94
HURON	0.99	0.99	0.98	0.97	0.98
INGHAM	1.03	1.03	1.03	1.03	1.03
IONIA	0.98	0.98	0.98	0.98	0.98
IOSCO	0.96	0.96	0.95	0.95	0.95
IRON	0.95	0.94	0.94	0.93	0.95
ISABELLA	0.98	0.98	0.97	0.97	0.97
JACKSON	1.02	1.02	1.01	1.02	1.01
KALAMAZOO	0.99	0.99	0.99	0.99	0.99
KALKASKA	0.95	0.95	0.94	0.92	0.94

Counties	Commerical and Industrial				
	Class	A	B	C	D
KENT	0.98	0.98	0.97	0.97	0.97
KEWEENAW	0.94	0.93	0.92	0.91	0.93
LAKE	0.93	0.93	0.93	0.92	0.93
LAPEER	1.02	1.02	1.00	1.00	1.01
LEELANAU	0.94	0.94	0.93	0.92	0.93
LENAWEE	1.02	1.02	1.02	1.03	1.02
LIVINGSTON	1.03	1.04	1.03	1.04	1.04
LUCE	0.94	0.94	0.93	0.92	0.94
MACKINAC	0.93	0.93	0.92	0.91	0.93
MACOMB	1.06	1.06	1.06	1.06	1.05
MANISTEE	0.94	0.94	0.94	0.92	0.93
MARQUETTE	0.97	0.97	0.96	0.96	0.97
MASON	0.95	0.95	0.94	0.94	0.94
MECOSTA	0.95	0.96	0.95	0.94	0.95
MENOMINEE	0.94	0.94	0.93	0.93	0.94
MIDLAND	0.99	0.98	0.97	0.97	0.98
MISSAUKEE	0.94	0.94	0.94	0.92	0.93
MONROE	1.05	1.05	1.05	1.06	1.05
MONTCALM	0.96	0.96	0.96	0.95	0.96
MONTMORENCY	0.93	0.93	0.92	0.91	0.93
MUSKEGON	0.98	0.98	0.97	0.98	0.97
NEWAYGO	0.96	0.96	0.96	0.95	0.96
OAKLAND	1.06	1.06	1.06	1.07	1.06
OCEANA	0.96	0.96	0.96	0.95	0.96
OGEMAW	0.95	0.94	0.93	0.92	0.94
ONTONAGON	0.94	0.94	0.93	0.91	0.93
OSCEOLA	0.95	0.95	0.94	0.94	0.94
OSCODA	0.93	0.93	0.92	0.91	0.93
OTSEGO	0.94	0.93	0.93	0.91	0.93
OTTAWA	0.97	0.97	0.97	0.96	0.97
PRESQUE ISLE	0.94	0.94	0.93	0.92	0.93
ROSCOMMON	0.95	0.94	0.93	0.92	0.95
SAGINAW	1.01	1.00	0.99	0.99	1.00
ST. CLAIR	1.03	1.03	1.02	1.02	1.03
ST. JOSEPH	0.98	0.98	0.97	0.97	0.97
SANILAC	1.00	1.00	0.99	0.99	1.00
SCHOOLCRAFT	0.94	0.94	0.93	0.92	0.94
SHIAWASSEE	1.02	1.02	1.01	1.01	1.01
TUSCOLA	0.99	0.99	0.98	0.97	0.98
VAN BUREN	0.98	0.98	0.97	0.97	0.97
WASHTENAW	1.05	1.05	1.05	1.05	1.05
WAYNE	1.06	1.06	1.06	1.07	1.06
WEXFORD	0.95	0.95	0.94	0.92	0.94

**ERRORS AND OMISSIONS
IN THE 1986 ASSESSOR'S MANUAL**

VOLUME I:

- 1) Page 115, wood basement rate for 1400 sq. ft. size should be .77, not .07.
- 2) Page 115, siding rate for 3300 sq. ft. size should be \$84.44, not \$84.86.
- 3) Page 192, the additional costs for chain link fences for rails and 3-strand barbed wire should be costs per lineal foot, not costs per square foot.
- 4) Page 201, the instructions for calculating effective wall height apply only to high-pitched roofs such as gambrel or gothic roofs on barns. They do not apply to pole buildings.
- 5) Page 230, the note concerning utility bins with less capacity should read "page 229", not "page 219".

VOLUME II:

- 1) Page CAL 69, the floor areas on the right hand side of the Floor Area/Perimeter Table are the correct ones.

4

Average Floor Area SF per Story	AVERAGE PERIMETER													Average Floor Area SF per Story	
	75	100	125	150	175	200	225	250	275	300	350	400	450		500
500	1.43	1.66	1.89												500
1,000		1.20	1.31	1.43	1.55	1.66	1.78								1,000
1,200			1.22	1.31	1.41	1.51	1.60								1,200
1,500				1.15	1.23	1.31	1.40	1.48	1.56	1.64					1,400
2,000					1.17	1.24	1.31	1.39	1.46	1.53					1,600
2,200						1.19	1.25	1.31	1.38	1.44	1.51				1,800
3,000							1.14	1.20	1.26	1.31	1.37	1.43	1.55		2,000
3,500								1.04	1.08	1.12	1.16	1.20	1.28	1.35	3,000
4,000									1.00	1.02	1.05	1.08	1.14	1.20	4,000
5,000										.97	.99	1.01	1.06	1.11	5,000
6,000											.95	.97	1.01	1.04	6,000
8,000												.91	.94	.97	8,000

- 2) Page CAL 101, the height refinements for the heights of 22 and 24 feet should be 1.24 and 1.28 respectively, not 1.14 and 1.18.
- 3) Seg 1, page 3, \$2.32 should be \$3.02. See below:

ELECTRICAL AND LIGHTING - Apply to total floor area.				
Few outlets				
Non-metallic	\$1.68	\$1.83	\$1.98	\$2.16
Armored cable (BX)	1.96	2.13	2.33	2.54
Flexible conduit	2.40	2.59	2.78	3.00
Rigid conduit	2.77	2.82	3.27	3.56

3.02

- 4) UIP 8, page 1, the table for "Walk In Boxes" should be corrected as shown below.

COST RANGE

Temperature	50 Sq. Ft.	100	150	200
32 to 60° F	\$5,100	\$7,200	\$8,800	\$10,200
5 to 31° F	6,100	8,600	10,500	12,200
-15 to 5° F	7,100	10,200	12,300	14,200
Temperature	300	400	500	
32 to 60° F	\$12,400	\$14,400	\$16,200	
5 to 31° F	15,000	17,300	19,400	
-15 to 5° F	15,000	17,300	19,400	

- 5) UIP 15, page 2, throughout the table on bowling alleys, the terms "alley" and "lane" mean the same thing.
- 6) Concerning the index in Volume II:
 - A) Page Index 9, Loading Docks are found on page CAL 132 not CAL 21.
 - B) Add: Scales, truck.....CAL 134
Elevator, grain...CAL 133, 134.

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF TREASURY

ROBERT A. BOWMAN, State Treasurer

STATE TAX COMMISSION

4th Floor Treasury Building
Lansing, Michigan 48922 Telephone 517 373-0500
September 2, 1986

COMMISSION MEMBERS

~~WALTER G. BOWEN~~
LEROY J. NELSON
ROBERT O. VANDERMARK

Theodore P. Mansour

TO: Assessing Officers
Equalization Directors

FROM: State Tax Commission

RE: Ordering Volumes I and II of the Assessor's Manual

At the end of this letter is the form to be used for ordering Volumes I and/or II of the 1986 Assessor's Manual. Volume I contains cost schedules for pricing residential and agricultural structures. Volume II contains cost schedules for pricing commercial and industrial structures. These cost schedules were developed by the Marshall and Swift Company under contract with Michigan State Tax Commission. Each volume will be mailed separately. Please indicate the quantity needed for each volume separately.

The State Tax Commission's contract with Marshall and Swift includes a five year maintenance agreement which calls for annual current cost multipliers as well as new base costs in the fourth year. Any charge that may be necessary for these updates will be based on the costs of materials, printing, and mailing only.

Besides Volume I & II, additional volumes will also be available in the near future, and a separate letter will be sent to you at that time. These volumes will contain the instructive chapters dealing with various topics of concern to assessing and equalization personnel.

Section 211.721 of the Michigan Compiled Laws provides that assessing officials shall use the official manuals as prepared or approved by the State Tax Commission as a guide in preparing assessments. It is important, therefore, that all assessing officers and equalization department personnel have up-to-date Assessor's Manuals.

Please complete the order information below and mail it with your check to the address shown, in order to receive proper credit for your payments.

Name: _____

Address: _____

Telephone: () _____

Mailing Address: _____

Unit of Government or Employer's Name: _____

	Qty.	Cost Each	Total
Volume I (Residential/Agriculture Schedules)		\$25.00	\$ _____
Volume II(Commercial/Industrial Schedules)		\$25.00	\$ _____
Grand Total			\$ _____

Make check payable to: STATE OF MICHIGAN

Return completed form with payment to: Michigan Department of Treasury
Local Property Services Division
2nd Floor, Treasury Building
Lansing, MI 48922

If you have any questions regarding the content of the manual, call Dennis Platte at (517)373-3554.

Allow 4 to 8 weeks for delivery.

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF TREASURY

ROBERT A. BOWMAN, State Treasurer

STATE TAX COMMISSION

4th Floor Treasury Building

Lansing, Michigan 48922 Telephone 517 373-0500

COMMISSION MEMBERS

~~WARD S. BAKER~~

LEROY J. NELSON

ROBERT O. VANDERMARK

Theodore P. Mansour

DATE: February 17, 1988

TO: Assessing Officers and
Users of Assessor's Manual

FROM: State Tax Commission

Attached are the 1988 updates for the new (1986) Michigan Assessor's Manual. Page number 233 labeled "1988 County Multipliers" is to be inserted behind the "County Multipliers" tab of Volume I. The remaining sheets are to be inserted in Volume II behind the tabs labeled "Equipment Index, Comparative Cost Multipliers", and "Architect's Fee, County Multipliers."

Also enclosed is a page of errors and omissions in the 1986 Assessor's Manual. Please note these changes in your manual.

The final sheet is a copy of the September 2, 1986 letter by the State Tax Commission which includes an order blank for the new Assessor's Manual. Those assessing officers who have not yet ordered the new manual can use this blank for their order.

Attachments

1988

COUNTY MULTIPLIERS

State of Michigan

Counties	RESIDENTIAL		FARM	Counties	RESIDENTIAL		FARM
	Masonry	Frame			Masonry	Frame	
ALCONA	0.93	0.92	0.93	KENT	0.97	0.97	0.97
ALGER	0.94	0.93	0.94	KEWEENAW	0.92	0.91	0.92
ALLEGAN	0.97	0.96	0.97	LAKE	0.93	0.92	0.93
ALPENA	0.93	0.92	0.93	LAPEER	1.00	1.00	1.01
ANTRIM	0.93	0.92	0.93	LEELANAU	0.93	0.92	0.93
ARENAC	0.96	0.95	0.96	LENAWEE	1.02	1.03	1.03
BARAGA	0.93	0.92	0.93	LIVINGSTON	1.03	1.04	1.04
BARRY	0.97	0.97	0.98	LUCE	0.93	0.92	0.93
BAY	0.98	0.98	0.99	MACKINAC	0.92	0.91	0.92
BENZIE	0.93	0.92	0.93	MACOMB	1.06	1.06	1.06
BERRIEN	0.97	0.97	0.98	MANISTEE	0.94	0.92	0.93
BRANCH	0.99	0.98	0.99	MARQUETTE	0.96	0.96	0.97
CALHOUN	1.01	1.01	1.01	MASON	0.94	0.94	0.94
CASS	0.97	0.97	0.98	MECOSTA	0.95	0.94	0.95
CHARLEVOIX	0.93	0.92	0.93	MENOMINEE	0.93	0.93	0.94
CHEBOYGAN	0.93	0.91	0.92	MIDLAND	0.97	0.97	0.98
CHIPPEWA	0.92	0.91	0.92	MISSAUKEE	0.94	0.92	0.93
CLARE	0.95	0.94	0.95	MONROE	1.05	1.06	1.06
CLINTON	1.00	1.00	1.00	MONTCALM	0.96	0.95	0.96
CRAWFORD	0.93	0.92	0.93	MONTMORENCY	0.92	0.91	0.92
DELTA	0.93	0.93	0.94	MUSKEGON	0.97	0.98	0.98
DICKINSON	0.96	0.95	0.96	NEWAYGO	0.96	0.95	0.96
EATON	1.00	1.00	1.01	OAKLAND	1.06	1.07	1.07
EMMET	0.93	0.92	0.93	OCEANA	0.96	0.95	0.96
GENESEE	1.03	1.03	1.03	OGEMAW	0.93	0.92	0.93
GLADWIN	0.95	0.94	0.95	ONTONAGON	0.93	0.91	0.92
GOGEBIC	0.93	0.92	0.93	OSCEOLA	0.94	0.94	0.94
GRAND TRAVERSE	0.94	0.93	0.94	OSCODA	0.92	0.91	0.92
GRATIOT	0.97	0.97	0.97	OTSEGO	0.93	0.91	0.92
HILLSDALE	1.00	1.01	1.01	OTTAWA	0.97	0.96	0.97
HOUGHTON	0.93	0.92	0.93	PRESQUE ISLE	0.93	0.92	0.93
HURON	0.98	0.97	0.98	ROSCOMMON	0.93	0.92	0.94
INGHAM	1.03	1.03	1.03	SAGINAW	0.99	0.99	1.00
IONIA	0.98	0.98	0.98	ST. CLAIR	1.02	1.02	1.03
IOSCO	0.95	0.95	0.95	ST. JOSEPH	0.97	0.97	0.97
IRON	0.94	0.93	0.94	SANILAC	0.99	0.99	1.00
ISABELLA	0.97	0.97	0.97	SCHOOLCRAFT	0.93	0.92	0.93
JACKSON	1.01	1.02	1.02	SHIAWASSEE	1.01	1.01	1.01
KALAMAZOO	0.99	0.99	0.99	TUSCOLA	0.98	0.97	0.98
KALKASKA	0.94	0.92	0.93	VAN BUREN	0.97	0.97	0.97
				WASHTENAW	1.05	1.05	1.05
				WAYNE	1.06	1.07	1.07
				WEXFORD	0.94	0.92	0.93

COST INDEXES (1926 = 100)

EQUIPMENT — NATIONAL AVERAGE

FOR USE FOR 1988 ASSESSMENTS

These indexes can be used for analysis purposes. However, the valuation of machinery, equipment, furniture, fixtures, etc. for assessment purposes will usually be determined by applying the appropriate State Tax Commission personal property multipliers to the original cost, by year installed, of equipment as discussed in chapter 15 of the Assessor's Manual.

	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977
Average of all	806.9	795.4	787.9	776.4	755.8	742.4	709.2	642.8	584.4	534.7	497.1
Airplane mfg.	982.4	971.5	967.0	954.6	929.3	912.0	873.8	792.9	716.0	652.6	608.1
Apartment	594.1	584.2	578.6	569.6	552.5	541.4	521.2	477.5	441.2	406.5	378.9
Bakery	755.2	742.7	730.0	716.2	699.7	689.8	658.3	595.3	538.5	491.5	457.3
Bank	636.5	625.6	619.8	612.6	593.6	579.0	558.7	513.8	476.5	437.3	406.9
Bottling	814.1	803.6	798.3	788.3	768.3	757.1	725.5	658.5	595.8	545.7	506.9
Brewery and distillery	988.8	976.4	967.9	954.0	930.9	917.8	876.8	792.9	715.9	658.2	612.1
Candy and confectionery	962.7	946.3	929.1	910.5	890.2	878.9	837.8	756.1	682.3	623.4	580.0
Cannery (fish)	942.5	926.8	911.9	894.8	873.2	860.2	820.9	743.1	672.9	613.5	569.4
Cannery (fruit)	942.8	926.4	911.2	895.5	873.9	859.3	822.6	746.4	677.7	617.5	571.4
Cement mfg.	828.4	820.4	814.8	803.2	784.2	771.6	731.8	658.7	598.7	548.2	509.7
Chemical	812.8	804.0	800.4	789.2	768.8	757.8	720.0	647.4	583.7	536.9	498.3
Church	670.4	656.9	647.0	638.5	617.0	598.5	576.1	530.2	495.5	450.4	412.5
Clay products	814.2	804.3	797.8	785.0	762.3	748.4	708.5	638.7	580.5	532.6	496.0
Contractor's equip.	939.9	927.2	919.5	908.4	890.1	871.6	824.2	739.3	669.4	610.9	567.0
Creamery and dairy	828.3	815.1	802.6	788.5	770.5	760.5	725.8	656.0	590.3	541.3	504.8
Dwelling	580.0	570.4	564.9	555.7	539.6	529.5	509.5	466.3	430.7	397.1	371.2
Elec. equip. mfg.	810.5	802.2	798.7	788.8	767.3	755.5	730.2	666.1	596.2	542.3	508.7
Elec. power equip.	765.6	759.9	755.8	748.5	729.8	721.3	698.1	638.3	568.8	517.0	487.8
Flour, cereal and feed	794.3	784.1	775.4	763.3	746.5	738.1	705.4	637.8	575.8	526.6	490.9
Garage	906.5	894.0	888.4	874.6	851.4	834.0	794.7	716.8	648.6	592.9	551.0
Glass mfg.	762.0	753.4	749.6	740.2	720.9	710.9	680.0	617.0	557.3	510.6	475.7
Hospital	737.1	723.7	713.2	700.5	680.0	665.7	635.0	578.1	526.3	481.2	448.5
Hotel	697.5	683.9	671.6	658.6	640.0	626.0	597.7	543.5	498.9	456.3	423.7
Laundry and cleaning	693.2	682.9	677.0	667.1	648.3	637.4	609.0	553.0	503.8	462.6	431.6
Library	764.4	751.9	744.5	734.4	711.3	696.0	667.7	609.8	561.7	513.0	475.7
Logging equip.	853.5	842.7	836.5	825.8	806.0	789.7	748.6	673.6	612.7	558.7	518.0
Metal working	923.6	912.1	906.0	889.9	866.4	847.0	810.2	730.9	657.7	599.8	557.3
Mining and milling	833.1	826.0	821.9	812.2	796.1	778.0	737.3	664.1	605.2	553.1	511.4
Motion picture	890.6	878.0	871.6	861.9	838.0	821.7	790.5	720.8	654.8	598.2	556.5
Office equip.	703.8	691.8	683.4	674.3	655.1	641.4	617.0	565.8	523.4	482.6	453.5
Packing (fruit)	889.2	874.9	864.3	852.0	829.8	813.3	780.2	708.8	648.0	591.2	545.4
Packing (meat)	830.8	817.3	804.2	788.4	768.7	757.0	720.1	649.6	589.3	540.4	503.6
Paint mfg.	821.3	810.9	806.1	794.9	773.0	760.6	725.3	656.5	594.3	544.8	506.8
Paper mfg.	776.9	766.6	761.7	753.0	732.5	719.8	687.5	623.2	567.2	520.7	482.4
Petroleum	860.3	857.6	857.0	847.7	832.4	824.6	773.4	690.1	621.0	568.3	526.7
Printing	755.9	743.9	736.4	726.5	703.3	690.3	665.0	605.9	547.8	498.9	464.0
Refrigeration	955.1	941.8	934.4	920.5	894.0	877.6	835.0	754.6	684.5	628.8	586.4
Restaurant	650.5	638.0	625.7	613.4	595.9	582.6	554.9	503.3	460.6	420.8	390.1
Rubber	878.3	864.3	857.5	842.3	817.0	800.6	758.2	681.1	618.6	565.2	523.2
School	751.2	737.3	725.0	712.0	691.1	676.7	646.4	588.2	539.8	494.3	459.7
Shipbuilding	934.4	925.0	922.0	911.6	892.3	879.9	836.8	754.6	681.7	622.8	577.7
Steam power	803.0	794.1	790.6	778.4	753.9	743.6	712.0	643.8	580.3	534.6	500.0
Store	786.0	771.9	762.9	753.3	728.9	711.3	683.5	626.3	579.6	530.0	490.4
Textile	863.9	849.8	840.4	828.4	805.0	791.4	756.2	685.3	625.9	575.4	535.5
Theater	671.5	659.8	651.9	642.3	621.3	607.0	581.6	530.9	489.3	447.7	416.0
Warehousing	686.6	677.3	672.4	664.8	650.0	642.4	615.0	555.7	510.4	468.2	434.8
Woodworking	780.2	769.4	764.8	754.7	734.4	717.9	688.4	627.7	572.1	523.3	482.4

COST INDEXES (1926 = 100)

EQUIPMENT — NATIONAL AVERAGE

FOR USE FOR 1988 ASSESSMENTS

	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966
Average of all	472.1	444.3	398.4	344.1	332.1	321.3	303.3	285.1	273.2	262.9	252.5
Airplane mfg.	577.5	543.7	487.0	415.9	400.0	385.9	364.2	340.8	326.1	315.5	303.3
Apartment	361.9	340.0	316.3	286.8	277.0	270.7	259.7	248.0	237.9	229.0	220.5
Bakery	433.9	407.6	364.2	316.0	306.0	296.1	279.0	262.3	251.9	243.0	233.3
Bank	389.4	367.3	332.6	289.9	278.5	270.9	256.9	240.3	230.5	221.4	211.3
Bottling	482.2	455.5	403.5	347.8	336.3	325.4	306.7	288.3	276.9	267.0	256.4
Brewery and distillery	581.9	550.4	487.8	417.4	402.2	386.9	362.1	338.2	322.7	309.0	296.5
Candy and confectionery	549.9	517.7	463.8	400.3	386.2	371.5	347.6	324.7	309.8	296.6	284.6
Cannery (fish)	539.3	507.7	456.2	391.5	378.7	366.4	345.3	324.6	311.8	300.6	288.7
Cannery (fruit)	540.9	509.7	457.9	392.0	379.2	366.9	345.8	325.1	312.2	301.1	289.1
Cement mfg.	482.2	454.3	398.1	340.1	328.5	317.3	298.3	280.1	268.3	258.1	248.0
Chemical	473.2	447.6	400.5	341.1	329.7	319.1	300.7	282.8	271.6	261.9	251.5
Church	390.3	364.3	339.0	301.2	288.5	281.3	269.0	254.5	243.0	233.1	222.5
Clay products	466.9	437.2	384.5	330.3	319.3	308.4	289.9	272.2	260.7	250.8	240.9
Contractor's equip.	537.4	504.2	435.4	375.6	363.0	350.6	330.7	312.2	297.2	283.5	273.8
Creamery and dairy	479.5	452.1	405.1	346.7	334.8	322.1	302.3	283.4	271.1	260.9	249.8
Dwelling	355.3	334.3	310.7	281.7	272.3	265.5	255.1	245.3	234.9	226.2	218.5
Elec. equip. mfg.	484.3	457.9	409.5	351.8	340.4	330.8	313.9	296.5	285.8	277.6	267.0
Elec. power equip.	465.1	438.5	391.7	327.2	316.4	307.5	290.3	274.8	264.9	257.3	246.6
Flour, cereal and feed	466.4	440.1	390.7	333.2	321.9	311.6	293.6	276.0	265.1	255.6	245.4
Garage	524.6	496.2	443.6	385.2	373.2	358.9	338.6	319.8	307.3	297.6	289.0
Glass mfg.	451.3	425.3	375.4	321.9	311.3	301.3	283.9	266.9	256.3	247.2	237.4
Hospital	427.1	404.8	366.2	319.0	306.3	294.6	275.7	257.5	245.7	235.0	225.7
Hotel	403.4	381.2	346.6	307.6	295.0	287.6	275.1	260.2	248.4	238.4	227.6
Laundry and cleaning	411.0	388.6	346.7	296.9	287.6	278.5	262.7	247.9	238.8	229.7	222.1
Library	452.4	427.7	388.3	334.6	320.4	312.7	298.1	279.5	267.6	256.4	244.2
Logging equip.	490.7	459.2	397.7	346.9	335.6	324.2	304.8	286.1	274.0	263.6	253.2
Metal working	529.0	497.7	438.9	375.1	360.5	347.8	330.4	308.8	295.2	286.8	276.2
Mining and milling	482.9	451.2	394.3	342.9	331.8	321.1	302.6	284.5	273.2	263.5	253.0
Motion picture	528.5	495.8	446.4	390.1	377.7	365.5	344.5	323.8	311.0	299.9	288.0
Office equip.	436.2	412.7	373.9	327.5	314.6	306.5	291.7	274.5	263.0	251.9	241.2
Packing (fruit)	516.0	477.6	439.8	389.5	378.1	365.9	344.8	324.1	311.3	300.2	288.3
Packing (meat)	478.1	449.8	404.8	347.9	336.0	323.5	303.4	284.4	272.0	261.7	250.7
Paint mfg.	481.2	455.0	406.1	345.9	333.3	320.7	300.1	280.3	267.4	256.0	245.7
Paper mfg.	457.6	430.1	381.7	328.4	317.7	307.5	289.7	272.4	261.6	252.2	242.2
Petroleum	497.7	470.9	419.3	356.0	343.0	330.0	308.8	288.4	275.2	263.4	252.8
Printing	440.1	414.5	375.8	320.1	309.2	299.3	282.0	265.1	254.7	245.6	235.8
Refrigeration	558.4	528.1	472.4	404.6	389.5	374.7	350.6	327.5	312.5	299.2	287.1
Restaurant	370.4	348.3	314.9	273.4	263.5	257.4	246.9	235.7	226.2	217.7	209.6
Rubber	497.3	468.5	415.3	357.8	344.7	331.6	310.3	289.9	276.5	264.7	254.1
School	437.2	411.6	376.5	326.1	313.0	304.4	288.7	270.0	259.0	248.8	237.6
Shipbuilding	547.0	513.1	451.7	383.9	370.0	356.5	336.5	314.9	301.3	291.5	280.2
Steam power	475.7	448.2	400.8	338.9	326.3	313.9	293.8	274.4	261.8	250.6	240.5
Store	465.8	436.1	402.1	348.9	335.3	326.6	310.8	292.5	280.2	268.4	257.0
Textile	509.5	478.3	431.4	372.7	360.7	349.0	328.9	309.2	297.0	286.4	275.1
Theater	396.2	373.8	339.8	293.7	282.0	274.7	261.4	246.0	235.6	225.7	216.1
Warehousing	412.0	381.1	349.8	309.6	302.3	291.3	273.5	259.0	250.3	241.6	234.4
Woodworking	456.0	424.6	387.8	341.6	330.8	320.4	302.8	284.4	273.3	264.4	254.2

COMPARATIVE COST MULTIPLIERS

FOR USE FOR 1988 ASSESSMENTS

These multipliers can be used to trend historical costs to the current level for rough estimating or checking. Example: a Class C structure which cost \$1,000,000 to build in July 1980 would cost approximately \$1,218,000 (i.e., \$1,000,000 x 1.218) for 1988 assessment purposes. The factors on this sheet do not allow for depreciation.

YEAR OF FORMER COST	CLASS A Fireproofed Steel Frame	CLASS B Reinforced Concrete Frame	CLASS C Masonry Bearing Walls	CLASS D Wood Frame	CLASS S Metal Frame and Walls	YEAR OF FORMER COST	CLASS A Fireproofed Steel Frame	CLASS B Reinforced Concrete Frame	CLASS C Masonry Bearing Walls	CLASS D Wood Frame	CLASS S Metal Frame and Walls
1987	1.000	1.000	1.000	1.000	1.000	JUL 1975	1.768	1.765	1.786	1.777	1.725
						JAN 1975	1.820	1.823	1.848	1.829	1.770
OCT 1986	1.005	1.004	1.004	1.004	1.003	JUL 1974	1.969	1.976	1.962	1.892	1.948
JUL 1986	1.006	1.006	1.005	1.005	1.005	JAN 1974	2.083	2.099	2.070	1.966	2.093
APR 1986	1.013	1.013	1.013	1.015	1.012	JUL 1973	2.151	2.169	2.134	2.020	2.158
JAN 1986	1.013	1.013	1.016	1.019	1.012	JAN 1973	2.249	2.274	2.240	2.137	2.258
OCT 1985	1.012	1.012	1.015	1.019	1.009	JUL 1972	2.324	2.349	2.325	2.230	2.323
JUL 1985	1.013	1.014	1.017	1.021	1.009	JAN 1972	2.413	2.441	2.422	2.322	2.416
APR 1985	1.014	1.015	1.018	1.022	1.011	JUL 1971	2.508	2.530	2.506	2.418	2.482
JAN 1985	1.017	1.018	1.021	1.022	1.014	JAN 1971	2.615	2.643	2.618	2.538	2.644
OCT 1984	1.022	1.025	1.026	1.025	1.017	JUL 1970	2.733	2.771	2.746	2.655	2.783
JUL 1984	1.026	1.029	1.030	1.026	1.020	JAN 1970	2.825	2.846	2.795	2.685	2.897
APR 1984	1.029	1.033	1.035	1.031	1.021	JUL 1969	2.918	2.939	2.877	2.718	3.028
JAN 1984	1.033	1.035	1.045	1.044	1.027	JAN 1969	3.016	3.045	2.997	2.854	3.106
OCT 1983	1.046	1.050	1.060	1.061	1.037	JUL 1968	3.159	3.181	3.130	3.018	3.272
JUL 1983	1.055	1.060	1.073	1.078	1.044	JAN 1968	3.228	3.250	3.213	3.109	3.342
APR 1983	1.075	1.081	1.097	1.108	1.061	JUL 1967	3.317	3.345	3.318	3.220	3.474
JAN 1983	1.081	1.088	1.105	1.117	1.067	JAN 1967	3.397	3.414	3.394	3.292	3.498
OCT 1982	1.081	1.090	1.106	1.118	1.066	JUL 1966	3.432	3.439	3.432	3.304	3.570
JUL 1982	1.085	1.094	1.111	1.125	1.068	JAN 1966	3.528	3.522	3.532	3.411	3.626
APR 1982	1.096	1.104	1.120	1.136	1.079	JUL 1965	3.607	3.597	3.597	3.492	3.723
JAN 1982	1.107	1.115	1.131	1.146	1.093	JAN 1965	3.650	3.639	3.648	3.557	3.746
OCT 1981	1.103	1.108	1.119	1.128	1.088	JUL 1964	3.692	3.697	3.704	3.601	3.779
JUL 1981	1.133	1.136	1.146	1.155	1.118	JAN 1964	3.746	3.748	3.765	3.683	3.822
APR 1981	1.149	1.151	1.160	1.170	1.136	JUL 1963	3.761	3.763	3.781	3.696	3.896
JAN 1981	1.161	1.163	1.173	1.180	1.149	JAN 1963	3.819	3.812	3.831	3.755	3.880
OCT 1980	1.193	1.193	1.202	1.208	1.181	JUL 1962	3.837	3.841	3.848	3.802	3.961
JUL 1980	1.207	1.206	1.218	1.228	1.191	JAN 1962	3.888	3.882	3.913	3.842	3.907
APR 1980	1.217	1.217	1.232	1.238	1.199	JUL 1961	3.906	3.900	3.937	3.866	3.920
JAN 1980	1.239	1.240	1.250	1.248	1.219	JAN 1961	3.946	3.935	3.966	3.870	----
OCT 1979	1.264	1.265	1.272	1.268	1.244	JUL 1960	3.938	3.932	3.963	3.866	3.924
JUL 1979	1.296	1.295	1.301	1.294	1.278	JAN 1960	3.935	3.971	4.001	3.912	----
APR 1979	1.339	1.339	1.341	1.330	1.323	JUL 1959	3.944	3.990	4.010	3.907	3.928
JAN 1979	1.374	1.374	1.375	1.358	1.362	JAN 1959	4.012	4.044	4.078	3.990	----
OCT 1978	1.416	1.415	1.416	1.394	1.404	JUL 1958	4.098	4.123	4.152	4.073	4.088
JUL 1978	1.455	1.454	1.455	1.429	1.442	JAN 1958	4.106	4.134	4.160	4.072	----
APR 1978	1.494	1.492	1.493	1.463	1.482	JUL 1957	4.164	4.187	4.210	4.120	4.176
JAN 1978	1.520	1.515	1.515	1.482	1.511	JAN 1957	4.223	4.241	4.255	4.158	----
OCT 1977	1.552	1.549	1.559	1.529	1.535	JUL 1956	4.345	4.357	4.374	4.235	4.331
JUL 1977	1.586	1.585	1.601	1.578	1.554	JAN 1956	4.407	4.424	4.473	4.330	----
APR 1977	1.615	1.612	1.629	1.605	1.571						
JAN 1977	1.628	1.628	1.645	1.621	1.585						
JUL 1976	1.695	1.695	1.706	1.690	1.658						
JAN 1976	1.726	1.728	1.748	1.748	1.679						

The architect's fees listed on the next page are based on averages of fees actually charged or recommended. Actual fees, since they are based on the size of the project, the technical difficulty, the artistic requirements, the reputation of the architect, and his willingness to accept the assignment, vary greatly, and the estimate of the fee is a matter for the valuator's judgment.

Architect's fees normally will include part or all of the following:

1. Plans and specifications including consultations, estimates, and engineering studies.
2. General administration and over-all supervision of construction, not including superintending construction.
3. Approving payment vouchers to the contractor.
4. Approval and acceptance of completed construction.

Regardless of the size and type of construction, all of these services must be performed by someone. On some projects the owner or the general contractor may do the supervision. On governmental projects, many services are performed by government employees; however, in replacing the building, the cost of these services, whether performed by the architect or others, must be included.

The architect's fee multipliers given here are only a guide. On a simple residence, stock plans and specifications may be purchased for under \$200, and on a large housing development, the architect may get full fees for each individual design and payments as low as \$150 per unit for additional uses of the plans, or he may work as a corporate employee.

In actual practice, the architect's fee normally is based, by contract, either at a percentage of the entire cost, on a multiplier of the technical payroll plus incidental expenses, or on a fixed sum plus listed expenses.

In the final analysis, the architect's function when fully performed is a proper cost of construction. A well considered matching of structure to land may enhance the end value by more than the fees involved. However, when poorly performed, the cost of design and drafting work may be wasted and result in functional obsolescence in a brand new structure. This determination is a matter of judgment.

The average fees listed for buildings do not include fees for design of furniture, built-in equipment, plant layout, or other detailed special items designed for a specific trade or personal use.

AVERAGE ARCHITECT'S FEES

The table below can be used as a general guide or for greater detail see Page 2. The numbers listed below are percentages.

SECTION	QUALITY AVERAGE
SEG 1	7.0
SEG 2	7.0
SEG 3	7.0
SEG 4	6.0
SEG 5	7.0
SEG 6	7.0

Architectural Fees for most UIP components are commensurate with the general SEG building types.

The following special supplemental cost section items already include architect fees:

- Manufactured Housing Parks
- Service Stations
- Golf Courses
- Drive-In Theaters
- Ski-Lifts
- Recreational Enclosures

ARCHITECT'S FEES

EXPLANATION

The tables of architect's fees are based on composite curves derived from many actual fees charged, recommendations of several architectural committees in various states, and architectural time studies. In cases where superior quality and detail are required, the fee may be higher than the average, while very low quality and standardized buildings may call for a fee which is lower. The fee schedules contain approximately 30% (20% to 40%) for contract administration and supervision. In many cases, this function may be performed by the contractor, an employee of the owner or an outside consultant. In any case, this is a proper charge against the building and the total fee should be added to building costs computed from the Unit-in-Place or the Segregated Costs.

TABLE I

Furnishings and Interiors	Mausoleums and Memorials
Special Lighting	

TABLE II

Airport Terminals	Laboratories
Computer Centers	Libraries
Convention Centers	Museums and Galleries
Hospitals and Mental Institutions	Store Fronts

TABLE III

Auditoriums	Medical Office Buildings
Banks and Financial Institutions	Major Post Office Buildings
Communications and Broadcasting	Public Health Centers
Convalescent Hospitals	Resort Lodges
Country Clubs and Marinas	Specialty Shops
Fire and Police Stations	Stadiums and Sports Facilities
Fraternal Buildings	Theaters
Hotels and City Clubs	Veterinary Hospitals

TABLE IV

Apartments and Dormitories	Health Clubs
Bars and Lounges	Homes for the Elderly
Branch Post Offices	Laundries and Cleaners
Bus Stations	Maintenance Hangars
Clubhouses and Gymnasiums	Mortuaries
Cold Storage Buildings	Motels
Day Care Centers	Office Buildings
Department Stores	Public Recreation Facilities
Eng. & Research Industrial Buildings	Racquetball and Tennis Clubs
Equestrian Centers	Regional Shopping Centers
Fraternity and Sorority Houses	Restaurants and Clubs

TABLE V

Automotive Centers	Loft Buildings
Barber and Beauty Shops	Manufacturing Industrial Buildings
Bowling Alleys	Markets and Convenience Stores
Car Washes	Multiples, Individual Design
Community Shopping Centers	Neighborhood Shopping Centers
Creameries	Retail Stores
Dairies	Row Houses, Individual Design
Discount Stores	Senior Citizen Multiple Residences
Dispensaries	Showrooms
Distribution Warehouses	Skating Rinks
Docks and Wharfs	Stables and Horse Arenas
Fast Food Restaurants	Storage Hangars

TABLE VI

Garages and Parking Structures	Service Stations
Greenhouses	Shipping Docks & Transfer Points
	Storage Warehouses

PROJECT COST Up To	TABLE					
	I	II	III	IV	V	VI
\$ 50,000	10.7	9.7	8.7	7.9	7.1	6.4
100,000	10.3	9.4	8.4	7.6	6.9	6.2
200,000	10.0	9.1	8.2	7.4	6.7	6.0
500,000	9.5	8.7	7.8	7.1	6.4	5.8
1,000,000	9.2	8.4	7.6	6.9	6.2	5.6
2,000,000	8.9	8.1	7.3	6.6	6.0	5.5
3,000,000	8.7	7.9	7.2	6.5	5.9	5.4
5,000,000	8.4	7.7	7.0	6.4	5.8	5.3
10,000,000	8.1	7.5	6.8	6.2	5.6	5.1
20,000,000	7.9	7.2	6.6	6.0	5.4	5.0
50,000,000	7.5	6.9	6.3	5.7	5.2	4.8
and up	7.3	6.8	6.2	5.6	5.1	4.7

The following are the approximate percentages included in the manual costs for single and multi-family residences and miscellaneous farm structures not listed in the above table.

	LOW COST	FAIR	AVERAGE	GOOD
Multiple-Residential	1.5%	1.9%	2.4%	3.9%
Miscellaneous Farm Structures	1.6%	2.1%	2.8%	3.8%

1988

COUNTY MULTIPLIERS
State of Michigan

Counties Class	Commerical and Industrial				
	A	B	C	D	S
ALCONA	0.94	0.94	0.93	0.92	0.94
ALGER	0.95	0.95	0.94	0.93	0.94
ALLEGAN	0.98	0.97	0.97	0.96	0.97
ALPENA	0.94	0.94	0.93	0.92	0.94
ANTRIM	0.94	0.94	0.93	0.92	0.93
ARENAC	0.96	0.96	0.96	0.95	0.96
BARAGA	0.94	0.94	0.93	0.92	0.94
BARRY	0.98	0.98	0.97	0.97	0.98
BAY	1.00	0.99	0.98	0.98	0.99
BENZIE	0.94	0.94	0.93	0.92	0.93
BERRIEN	0.98	0.98	0.97	0.97	0.98
BRANCH	1.00	1.00	0.99	0.98	1.00
CALHOUN	1.01	1.01	1.01	1.01	1.01
CASS	0.98	0.98	0.97	0.97	0.98
CHARLEVOIX	0.94	0.94	0.93	0.92	0.93
CHEBOYGAN	0.94	0.93	0.93	0.91	0.93
CHIPPEWA	0.93	0.93	0.92	0.91	0.93
CLARE	0.96	0.96	0.95	0.94	0.96
CLINTON	1.00	1.00	1.00	1.00	1.00
CRAWFORD	0.95	0.94	0.93	0.92	0.94
DELTA	0.94	0.94	0.93	0.93	0.94
DICKINSON	0.96	0.96	0.96	0.95	0.96
EATON	1.01	1.01	1.00	1.00	1.01
EMMET	0.94	0.94	0.93	0.92	0.93
GENESEE	1.04	1.04	1.03	1.03	1.03
GLADWIN	0.96	0.96	0.95	0.94	0.96
GOGEBIC	0.94	0.94	0.93	0.92	0.94
GRAND TRAVERSE	0.95	0.95	0.94	0.93	0.94
GRATIOT	0.98	0.98	0.97	0.97	0.97
HILLSDALE	1.00	1.00	1.00	1.01	1.00
HOUGHTON	0.94	0.94	0.93	0.92	0.94
HURON	0.99	0.99	0.98	0.97	0.98
INGHAM	1.03	1.03	1.03	1.03	1.03
IONIA	0.98	0.98	0.98	0.98	0.98
IOSCO	0.96	0.96	0.95	0.95	0.95
IRON	0.95	0.94	0.94	0.93	0.95
ISABELLA	0.98	0.98	0.97	0.97	0.97
JACKSON	1.02	1.02	1.01	1.02	1.01
KALAMAZOO	0.99	0.99	0.99	0.99	0.99
KALKASKA	0.95	0.95	0.94	0.92	0.94

Counties	Commerical and Industrial				
	Class	A	B	C	D
KENT	0.98	0.98	0.97	0.97	0.97
KEWEENAW	0.94	0.93	0.92	0.91	0.93
LAKE	0.93	0.93	0.93	0.92	0.93
LAPEER	1.02	1.02	1.00	1.00	1.01
LEELANAU	0.94	0.94	0.93	0.92	0.93
LENAWEE	1.02	1.02	1.02	1.03	1.02
LIVINGSTON	1.03	1.04	1.03	1.04	1.04
LUCE	0.94	0.94	0.93	0.92	0.94
MACKINAC	0.93	0.93	0.92	0.91	0.93
MACOMB	1.06	1.06	1.06	1.06	1.05
MANISTEE	0.94	0.94	0.94	0.92	0.93
MARQUETTE	0.97	0.97	0.96	0.96	0.97
MASON	0.95	0.95	0.94	0.94	0.94
MECOSTA	0.95	0.96	0.95	0.94	0.95
MENOMINEE	0.94	0.94	0.93	0.93	0.94
MIDLAND	0.99	0.98	0.97	0.97	0.98
MISSAUKEE	0.94	0.94	0.94	0.92	0.93
MONROE	1.05	1.05	1.05	1.06	1.05
MONTCALM	0.96	0.96	0.96	0.95	0.96
MONTMORENCY	0.93	0.93	0.92	0.91	0.93
MUSKEGON	0.98	0.98	0.97	0.98	0.97
NEWAYGO	0.96	0.96	0.96	0.95	0.96
OAKLAND	1.06	1.06	1.06	1.07	1.06
OCEANA	0.96	0.96	0.96	0.95	0.96
OGEMAW	0.95	0.94	0.93	0.92	0.94
ONTONAGON	0.94	0.94	0.93	0.91	0.93
OSCEOLA	0.95	0.95	0.94	0.94	0.94
OSCODA	0.93	0.93	0.92	0.91	0.93
OTSEGO	0.94	0.93	0.93	0.91	0.93
OTTAWA	0.97	0.97	0.97	0.96	0.97
PRESQUE ISLE	0.94	0.94	0.93	0.92	0.93
ROSCOMMON	0.95	0.94	0.93	0.92	0.95
SAGINAW	1.01	1.00	0.99	0.99	1.00
ST. CLAIR	1.03	1.03	1.02	1.02	1.03
ST. JOSEPH	0.98	0.98	0.97	0.97	0.97
SANILAC	1.00	1.00	0.99	0.99	1.00
SCHOOLCRAFT	0.94	0.94	0.93	0.92	0.94
SHIAWASSEE	1.02	1.02	1.01	1.01	1.01
TUSCOLA	0.99	0.99	0.98	0.97	0.98
VAN BUREN	0.98	0.98	0.97	0.97	0.97
WASHTENAW	1.05	1.05	1.05	1.05	1.05
WAYNE	1.06	1.06	1.06	1.07	1.06
WEXFORD	0.95	0.95	0.94	0.92	0.94

**ERRORS AND OMISSIONS
IN THE 1986 ASSESSOR'S MANUAL**

VOLUME I:

- 1) Page 115, wood basement rate for 1400 sq. ft. size should be .77, not .07.
- 2) Page 115, siding rate for 3300 sq. ft. size should be \$84.44, not \$84.86.
- 3) Page 192, the additional costs for chain link fences for rails and 3-strand barbed wire should be costs per lineal foot, not costs per square foot.
- 4) Page 201, the instructions for calculating effective wall height apply only to high-pitched roofs such as gambrel or gothic roofs on barns. They do not apply to pole buildings.
- 5) Page 230, the note concerning utility bins with less capacity should read "page 229", not "page 219".

VOLUME II:

- 1) Page CAL 69, the floor areas on the right hand side of the Floor Area/Perimeter Table are the correct ones.

4

Average Floor Area SF per Story	AVERAGE PERIMETER														Average Floor Area SF per Story
	75	100	125	150	175	200	225	250	275	300	350	400	450	500	
500	1.43	1.66	1.89												500
1,000		1.20	1.31	1.43	1.55	1.66	1.78								1,000
1,200			1.22	1.31	1.41	1.51	1.60								1,200
1,500				1.15	1.23	1.31	1.40	1.48	1.56	1.64					1,400
2,000					1.17	1.24	1.31	1.39	1.46	1.53					1,600
2,500						1.19	1.25	1.31	1.38	1.44	1.51				1,800
3,000							1.14	1.20	1.26	1.31	1.37	1.43	1.55		2,000
3,500								1.04	1.08	1.12	1.16	1.20	1.28	1.35	3,000
4,000									1.00	1.02	1.05	1.08	1.14	1.20	4,000
5,000										.97	.99	1.01	1.06	1.11	5,000
6,000											.95	.97	1.01	1.04	6,000
8,000												.91	.94	.97	8,000

- 2) Page CAL 101, the height refinements for the heights of 22 and 24 feet should be 1.24 and 1.28 respectively, not 1.14 and 1.18.
- 3) Seg 1, page 3, \$2.32 should be \$3.02. See below:

ELECTRICAL AND LIGHTING - Apply to total floor area.				
Few outlets				
Non-metallic	\$1.68	\$1.83	\$1.98	\$2.16
Armored cable (BX)	1.96	2.13	2.33	2.54
Flexible conduit	2.40	2.59	2.78	3.00
Rigid conduit	2.77	2.92	3.27	3.56

3.02

- 4) UIP 8, page 1, the table for "Walk In Boxes" should be corrected as shown below.

COST RANGE				
Temperature	50 Sq. Ft.	100	150	200
32 to 60° F	\$5,100	\$7,200	\$8,800	\$10,200
5 to 31° F	6,100	8,600	10,500	12,200
-15 to 5° F	7,100	10,200	12,300	14,200
Temperature	300	400	500	
32 to 60° F	\$12,400	\$14,400	\$16,200	
5 to 31° F	15,000	17,300	19,400	
-15 to 5° F	15,000	17,300	19,400	

- 5) UIP 15, page 2, throughout the table on bowling alleys, the terms "alley" and "lane" mean the same thing.
- 6) Concerning the index in Volume II:
 - A) Page Index 9, Loading Docks are found on page CAL 132 not CAL 21.
 - B) Add: Scales, truck....CAL 134
Elevator, grain...CAL 133, 134.

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF TREASURY

ROBERT A. BOWMAN, State Treasurer

STATE TAX COMMISSION

4th Floor Treasury Building
Lansing, Michigan 48922 Telephone 517 373-0500
September 2, 1986

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TO: Assessing Officers
Equalization Directors

FROM: State Tax Commission

RE: Ordering Volumes I and II of the Assessor's Manual

At the end of this letter is the form to be used for ordering Volumes I and/or II of the 1986 Assessor's Manual. Volume I contains cost schedules for pricing residential and agricultural structures. Volume II contains cost schedules for pricing commercial and industrial structures. These cost schedules were developed by the Marshall and Swift Company under contract with Michigan State Tax Commission. Each volume will be mailed separately. Please indicate the quantity needed for each volume separately.

The State Tax Commission's contract with Marshall and Swift includes a five year maintenance agreement which calls for annual current cost multipliers as well as new base costs in the fourth year. Any charge that may be necessary for these updates will be based on the costs of materials, printing, and mailing only.

Besides Volume I & II, additional volumes will also be available in the near future, and a separate letter will be sent to you at that time. These volumes will contain the instructive chapters dealing with various topics of concern to assessing and equalization personnel.

Section 211.721 of the Michigan Compiled Laws provides that assessing officials shall use the official manuals as prepared or approved by the State Tax Commission as a guide in preparing assessments. It is important, therefore, that all assessing officers and equalization department personnel have up-to-date Assessor's Manuals.

Please complete the order information below and mail it with your check to the address shown, in order to receive proper credit for your payments.

Name: _____

Address: _____

Telephone: () _____

Mailing Address: _____

Unit of Government or Employer's Name: _____

	Qty.	Cost Each	Total
Volume I (Residential/Agriculture Schedules)		\$25.00	\$ _____
Volume II (Commercial/Industrial Schedules)		\$25.00	\$ _____
Grand Total			\$ _____

Make check payable to: STATE OF MICHIGAN

Return completed form with payment to: Michigan Department of Treasury
Local Property Services Division
2nd Floor, Treasury Building
Lansing, MI 48922

If you have any questions regarding the content of the manual, call Dennis Platte at (517)373-3554.

Allow 4 to 8 weeks for delivery.