VOLUME II – Cost Section

BUILDING CLASSIFICATION AND SPECIFICATIONS

BASE REPLACEMENT COST SCHEDULES

ADJUSTMENTS TO BASE SPECIFICATIONS

TABLE OF CONTENTS

VOLUME II

VOLUME II – COST AND MISCELLANEOUS SECTION

INTRODUCTION

Volume II of the Real Property Appraisal Manual for New Jersey Assessors provides the building specifications and cost tables used in appraising real property by the Cost Approach to Value. Also included in this volume are cost conversation tables, depreciation tables, depth factor tables, plus various illustrations and definitions to assist the appraiser in classifying and calculating replacement costs.

Specifications are written to provide for the use of this manual in the appraisal of most buildings found throughout the State.

The R-12 through R-54 residential replacement cost tables and adjustment sections are based upon actual material and labor costs prevailing in New Jersey as of October 2001.

The appraisal procedures and techniques utilized herein reflect standard appraisal practices in valuing properties using replacement cost methods.

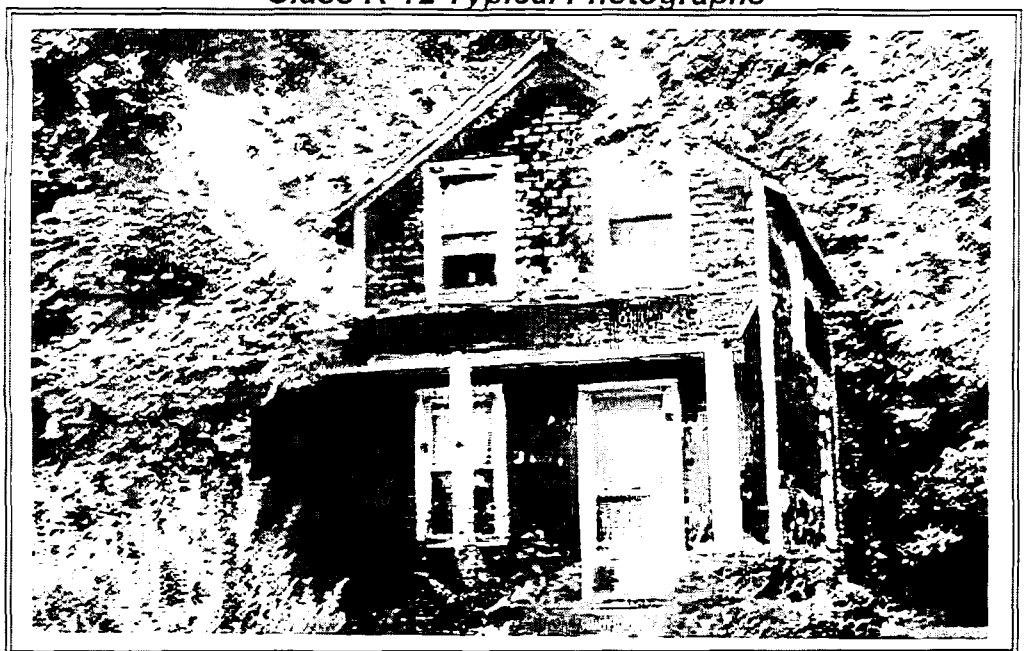
Efficient use of Volume II and the schedules herein require the assessor to be thoroughly familiar with the procedures outlined in Volume I. Since this manual is in a format suitable for computerization, accuracy and uniformity in the use of all costs in this Volume are absolutely essential.

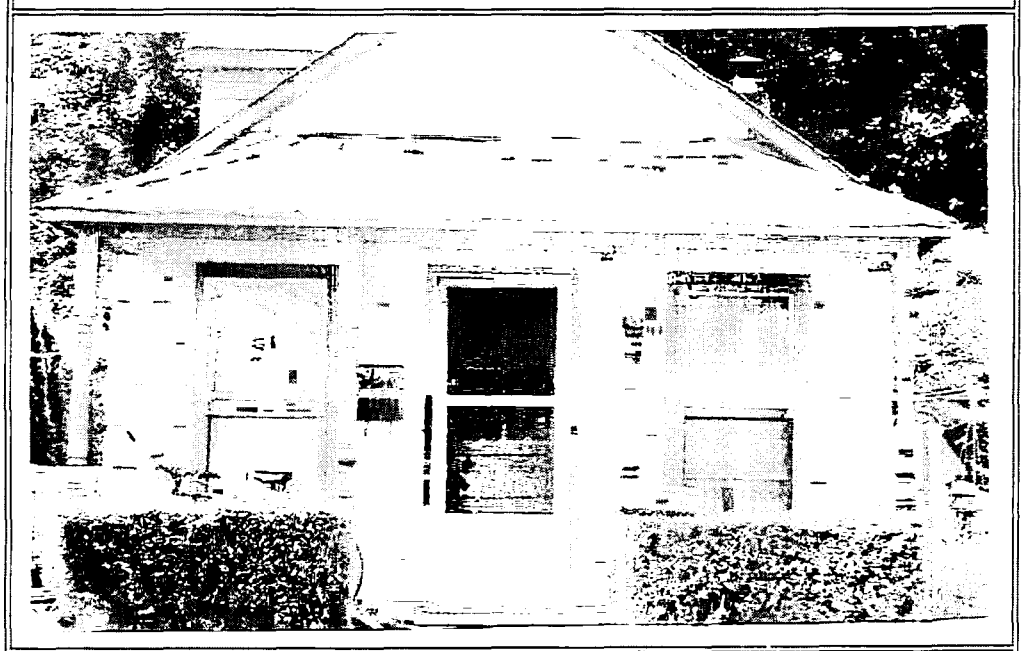
Reserved for future use

Class R-12 TO R-49

All Residential Base Costs in this Section for the "R" Series are as of October 2001.
Conversion Factors must be used to convert to any other Base Year.
For adjustments See Pages II-49 through II-53.2.

R-12 Single Family Residence





CLASS R-12: SINGLE FAMILY RESIDENCE & CABINS

LOW QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, sheathing with low quality composition or wood shingles.
2. FOUNDATION – Masonry or stone, perimeter wall or wood piers.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, low quality wood or composition sheathing, poor quality shingles, siding or equivalent.
   Interior Finish – Low quality drywall or wallboard on walls, partitions and ceilings. Minimum number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, subfloor with low quality wood finish or equivalent (i.e. – concrete slab on grade with low quality finish).
6. HEATING – None
7. PLUMBING – One three – fixture bath.
8. LIGHTING – Low quality fixtures and minimum number of outlets.
9. BUILT-INS / APPLIANCES – Low quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	42.15	22.75	700	49.88	27.35	15.40
250	-	38.01	20.68	750	48.57	26.97	15.21
300	-	35.24	19.32	800	47.43	26.61	15.05
350	-	33.25	18.34	850	46.42	26.31	14.88
400	64.68	31.78	17.60	900	45.50	26.04	14.78
450	60.84	30.64	17.03	950	44.71	25.80	14.64
500	57.77	29.71	16.57	1000	43.97	25.58	14.53
550	55.26	28.95	16.22	1100	42.72	25.20	14.34
600	53.17	28.33	15.92	1200	41.69	24.87	14.20
650	51.40	27.81	15.65	1300	40.79	24.60	14.07

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-13 Single Family Residence

CLASS R-13: SINGLE FAMILY RESIDENCE

FAIR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

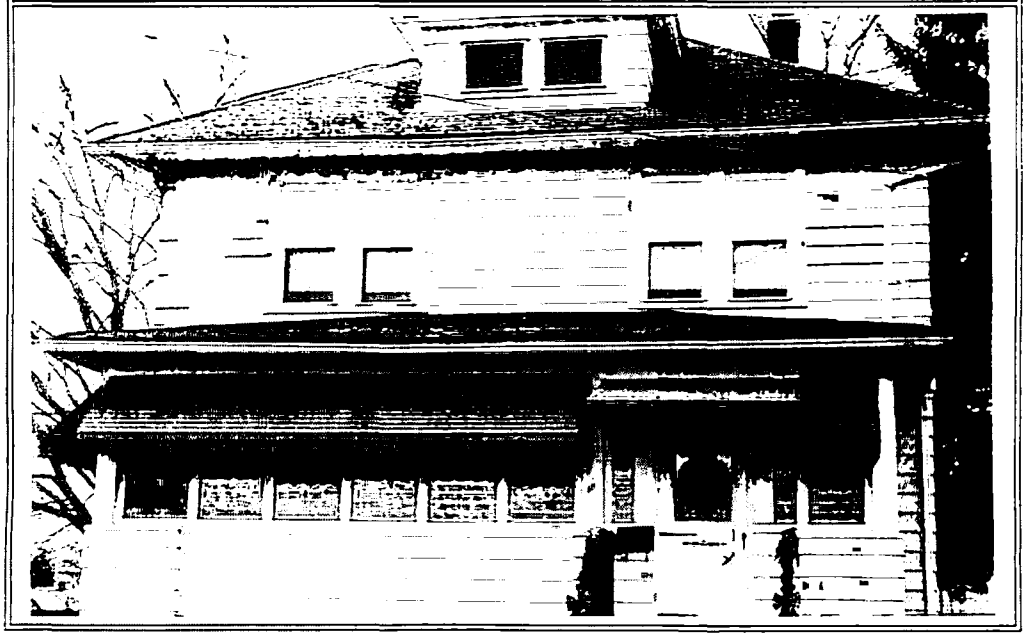
1. ROOF – Wood frame, medium pitch, sheathing with fair quality composition or wood shingles.
2. FOUNDATION – Masonry or stone, perimeter wall or wood piers.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, fair quality wood or composition sheathing, fair quality shingles, siding or equivalent.
   Interior Finish – Fair quality drywall or plaster on walls, partitions and ceilings. Softwood doors and trim. Minimum number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with fair quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three – fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Fair quality fixtures and moderate number of outlets.
9. BUILT-INS / APPLIANCES – One fair quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	50.58	27.29	750	58.28	32.35	18.26
250	-	45.60	24.82	800	56.90	31.92	18.04
300	-	42.28	23.18	850	55.67	31.56	17.88
350	-	39.92	22.01	900	54.61	31.24	17.71
400	77.60	38.15	21.11	950	53.63	30.94	17.55
450	73.00	36.76	20.43	1000	52.76	30.69	17.44
500	69.33	35.65	19.89	1100	51.26	30.23	17.20
550	66.31	34.75	19.46	1200	50.01	29.85	17.03
600	63.81	34.01	19.07	1300	48.95	29.55	16.87
650	61.69	33.36	18.75	1400	48.03	29.28	16.73
700	59.86	32.82	18.48				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-14 Single Family Residence



CLASS R-14: SINGLE FAMILY RESIDENCE

BELOW AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing with below average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, below average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Moderate number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with below average finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three – fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Adequate number of below average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One below average quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	54.77	29.55	800	61.63	34.58	19.56
250	-	49.39	26.88	850	60.32	34.20	19.35
300	-	45.82	25.11	900	59.15	33.85	19.18
350		43.24	23.84	950	58.09	33.52	19.02
400	-	41.33	22.88	1000	57.17	33.25	18.88
450	-	39.84	22.15	1100	55.54	32.76	18.64
500	75.10	38.64	21.55	1200	54.18	32.35	18.45
550	71.83	37.66	21.06	1300	53.03	32.00	18.26
600	69.11	36.84	20.65	1400	52.03	31.70	18.12
650	66.83	36.13	20.33	1600	50.42	31.21	17.88
700	64.84	35.56	20.03	1800	49.20	30.86	17.69
750	63.13	35.05	19.78				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-15 Single Family Residence

CLASS R-15; SINGLE FAMILY RESIDENCE

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with average quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One and one half bath, one three fixture bath, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Adequate number of average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One average quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	60.22	32.49	850	66.28	37.58	21.28
250	-	54.28	29.55	900	65.00	37.20	21.09
300	-	50.34	27.59	950	63.86	36.84	20.90
350	-	47.51	26.20	1000	62.80	36.54	20.76
400	-	45.41	25.14	1100	61.03	36.00	20.49
450	-	43.75	24.33	1200	59.54	35.54	20.27
500	82.53	42.45	23.67	1300	58.26	35.16	20.08
550	78.94	41.36	23.16	1400	57.17	34.83	19.92
600	75.94	40.49	22.72	1600	55.43	34.31	19.65
650	73.41	39.73	22.34	1800	54.04	33.90	19.46
700	71.26	39.07	22.01	2000	52.95	33.58	19.29
750	69.39	38.50	21.74	2200	52.05	33.31	19.16
800	67.75	38.01	21.50	2400	51.32	33.09	19.05

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
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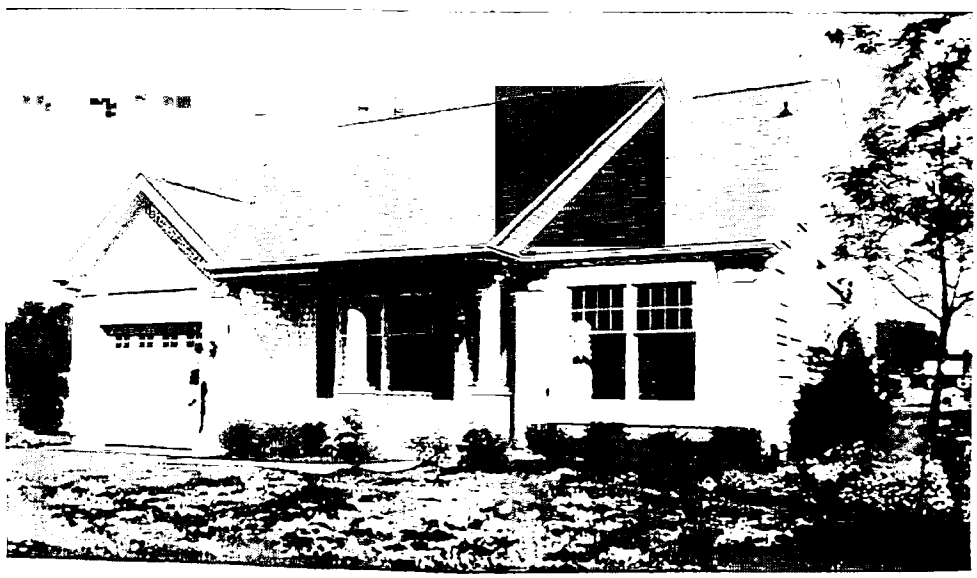
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-16 Single Family Residence



CLASS R-16: SINGLE FAMILY RESIDENCE

STANDARD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, standard quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, standard quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, standard quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with standard quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – Two three - fixture, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Adequate number and standard quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One standard quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Half Story $	Sq. Ft. Area	First Story $	Upper Story $	Half Story $
200	-	68.62	37.03	950	72.79	42.01	23.84
250	-	61.88	33.69	1000	71.62	41.63	23.65
300	-	57.39	31.45	1100	69.58	41.03	23.35
350	-	54.18	29.85	1200	67.86	40.52	23.10
400	-	51.75	29.22	1300	66.42	40.08	22.88
450	-	49.90	27.75	1400	65.20	39.73	22.69
500	-	48.38	26.99	1600	63.18	39.10	22.39
550	-	47.15	26.39	1800	61.63	38.64	22.18
600	86.58	46.15	25.88	2000	60.38	38.26	21.99
650	83.70	45.28	25.47	2200	59.35	37.96	21.85
700	81.22	44.54	25.09	2400	58.50	37.71	21.71
750	79.10	43.89	24.76	2600	57.77	37.50	21.60
800	77.22	43.32	24.49	2800	57.17	37.30	21.52
850	75.56	42.83	24.24	3000	56.62	37.14	21.44
900	74.09	42.39	24.03	3500	56.08	36.98	21.36

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
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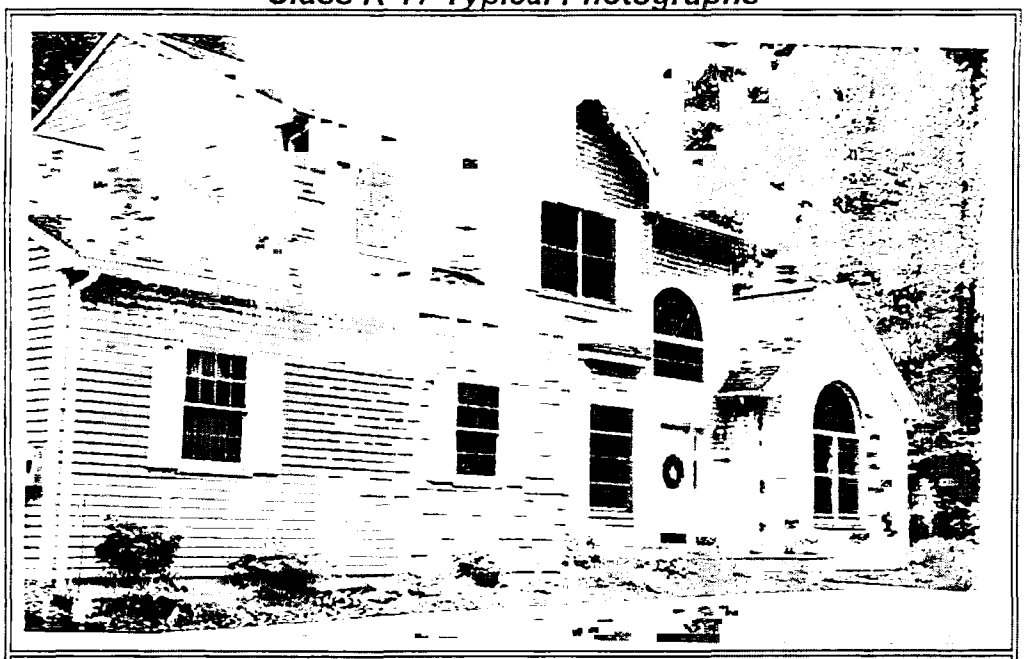
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-17 Typical Photographs

R-17 Single Family Residence



CLASS R-17: SINGLE FAMILY RESIDENCE

ABOVE STANDARD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1 ROOF – Wood frame, medium pitch, wood sheathing, above standard quality composition shingles or equivalent.

2 FOUNDATION – Masonry perimeter walls or equivalent.

3 BASEMENT – None

4 STRUCTURE –
Exterior Walls – Wood frame, wood or composition sheathing, above standard quality shingles, aluminum siding or equivalent with gutters and downspouts.
Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, above standard quality ceramic tile or equivalent wainscoting in bath.

5 FLOORS – Frame, wood joists, adequate for span and load. Subfloor with above standard quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.

6 HEATING – None

7 PLUMBING – Two three - fixture, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.

8 LIGHTING – Above average number and quality fixtures and outlets.

9 BUILT-INS / APPLIANCES – One above standard quality range and oven.

10 FIREPLACE – None

11 ATTIC - Unfinished

12 PORCHES AND DECKS – None

13 GARAGES – None

14 OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	82.47	44.48	1000	86.03	50.03	28.44
250	-	74.35	40.48	1100	83.58	49.31	28.05
300	-	68.97	37.80	1200	81.53	48.68	27.75
350	-	65.10	35.89	1300	79.82	48.18	27.50
400	-	62.21	34.46	1400	78.33	47.71	27.28
450	-	59.94	33.33	1600	75.93	46.99	26.92
500	-	58.15	32.44	1800	74.05	46.44	26.64
550	-	56.68	31.72	2000	72.53	46.00	26.42
600	-	55.44	31.12	2200	71.32	45.61	26.23
650	-	54.39	30.59	2400	70.13	45.31	26.09
700	-	53.51	30.15	2600	69.44	45.06	25.95
750	-	52.74	29.76	2800	68.69	44.84	25.84
800	92.80	52.07	29.43	3000	68.03	44.65	25.76
850	90.81	51.47	29.13	3500	66.76	44.26	25.57
900	89.04	50.94	28.88	4000	66.13	44.06	25.47
950	87.47	50.47	28.63				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
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Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-18 Typical Photographs

R-18 Single Family Residence

CLASS R-18: SINGLE FAMILY RESIDENCE

GOOD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1 ROOF – Wood frame, medium pitch, wood sheathing, good quality composition shingles or equivalent.

2 FOUNDATION – Masonry perimeter walls or equivalent.

3 BASEMENT – None

4 STRUCTURE –
Exterior Walls – Wood frame, wood or composition sheathing, good quality shingles, aluminum siding or equivalent with gutters and downspouts.
Interior Finish – Good quality drywall or plaster on walls, partitions and ceilings. Hardwood doors and trims. Ample number of closets and kitchen cabinets, good quality ceramic tile or equivalent wainscoting in bath.

5 FLOORS – Frame, wood joists, more than span and load. Subfloor with good quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.

6 HEATING – None

7 PLUMBING – Two three - fixture, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.

8 LIGHTING – Ample quantity of good quality fixtures and outlets.

9 BUILT-INS / APPLIANCES – One good quality range and oven.

10 FIREPLACE – None

11 ATTIC - Unfinished

12 PORCHES AND DECKS – None

13 GARAGES – None

14 OTHER ITEMS – None

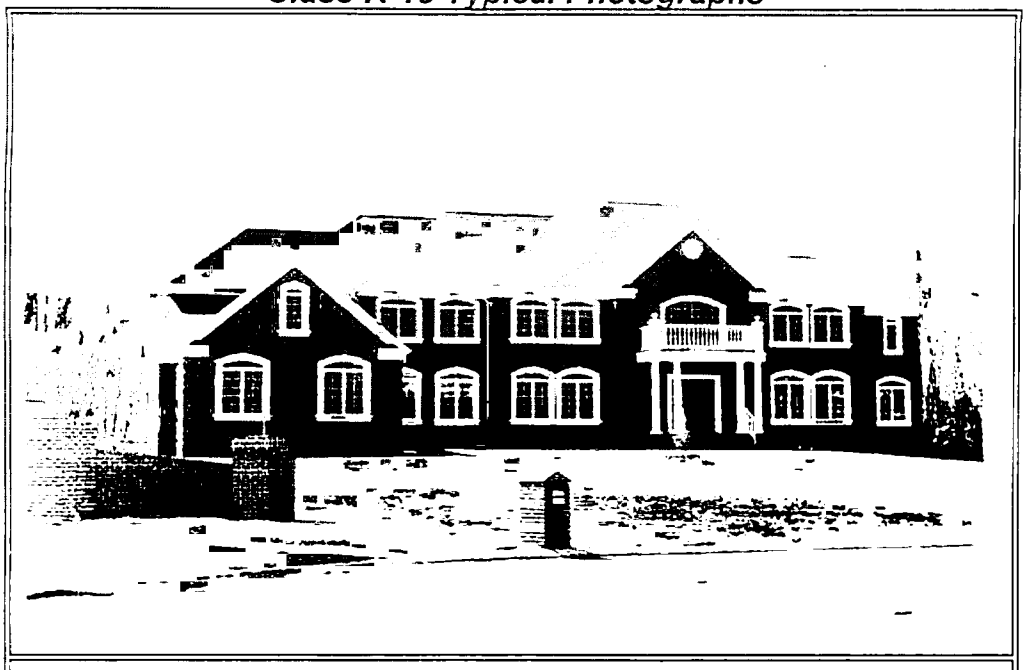
BASE COST PER SQUARE FOOT FLOOR AREA

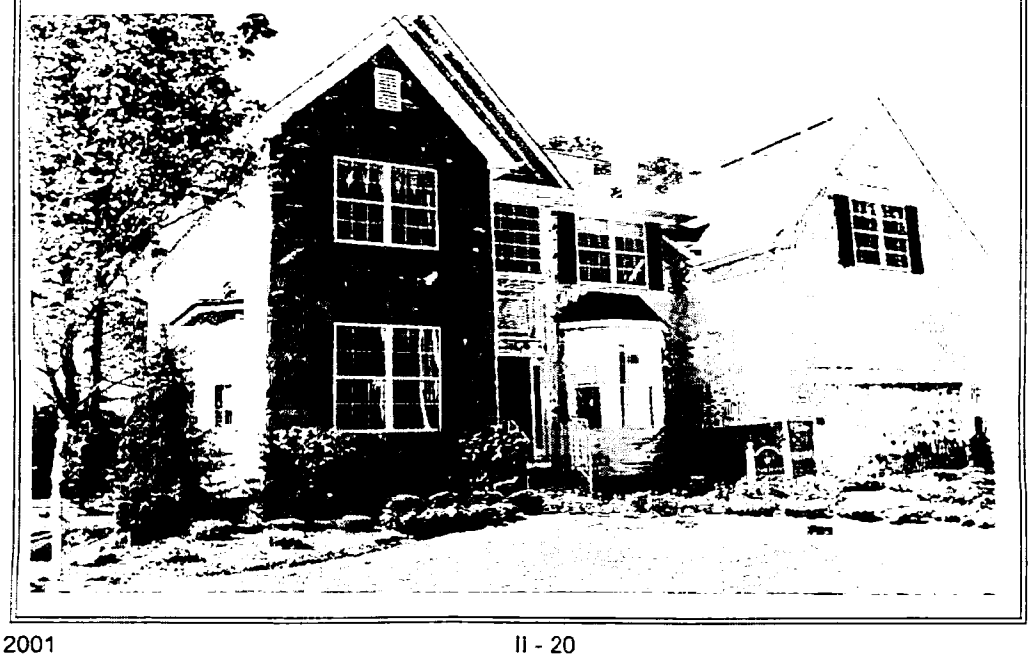
Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	101.82	54.92	1000	106.25	61.79	35.11
250	-	91.82	49.97	1100	103.21	60.88	34.66
300	-	85.14	46.68	1200	100.69	60.12	34.26
350	-	80.37	44.32	1300	98.55	59.49	33.95
400	-	76.79	42.53	1400	96.71	58.92	33.69
450	-	74.04	41.17	1600	93.75	58.04	33.24
500	-	71.79	40.06	1800	91.42	57.33	32.90
550	-	69.97	39.15	2000	89.58	56.79	32.61
600	-	68.47	38.41	2200	88.07	56.34	32.39
650	-	67.19	37.79	2400	86.79	55.94	32.22
700	-	66.08	37.22	2600	85.71	55.63	32.05
750	-	65.12	36.76	2800	84.80	55.34	31.90
800	-	64.29	36.34	3000	84.01	55.12	31.79
850	-	63.55	35.97	3500	82.42	54.63	31.56
900	-	62.90	35.65	4000	81.22	54.29	31.39
950	-	62.30	35.37				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-19 Typical Photographs

R-19 Single Family Residence





CLASS R-19: SINGLE FAMILY RESIDENCE

HIGH QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1 ROOF – Wood frame, medium pitch, wood sheathing, high quality composition shingles or equivalent.

2 FOUNDATION – Masonry perimeter walls or equivalent.

3 BASEMENT – None

4 STRUCTURE –
Exterior Walls – Wood frame, wood or composition sheathing, high quality shingles, aluminum siding or equivalent with gutters and downspouts.
Interior Finish – High quality drywall or plaster on walls, partitions and ceilings. Hardwood doors and trims. Ample number of closets and kitchen cabinets. High quality ceramic tile or equivalent wainscoting in bath.

5 FLOORS – Frame, wood joists, adequate for span and load. Subfloor with high quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.

6 HEATING – None

7 PLUMBING – Two three - fixture, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.

8 LIGHTING – Substantial quantity of high quality fixtures and outlets.

9 BUILT-INS / APPLIANCES – One high quality range and oven.

10 FIREPLACE – None

11 ATTIC - Unfinished

12 PORCHES AND DECKS – None

13 GARAGES – None

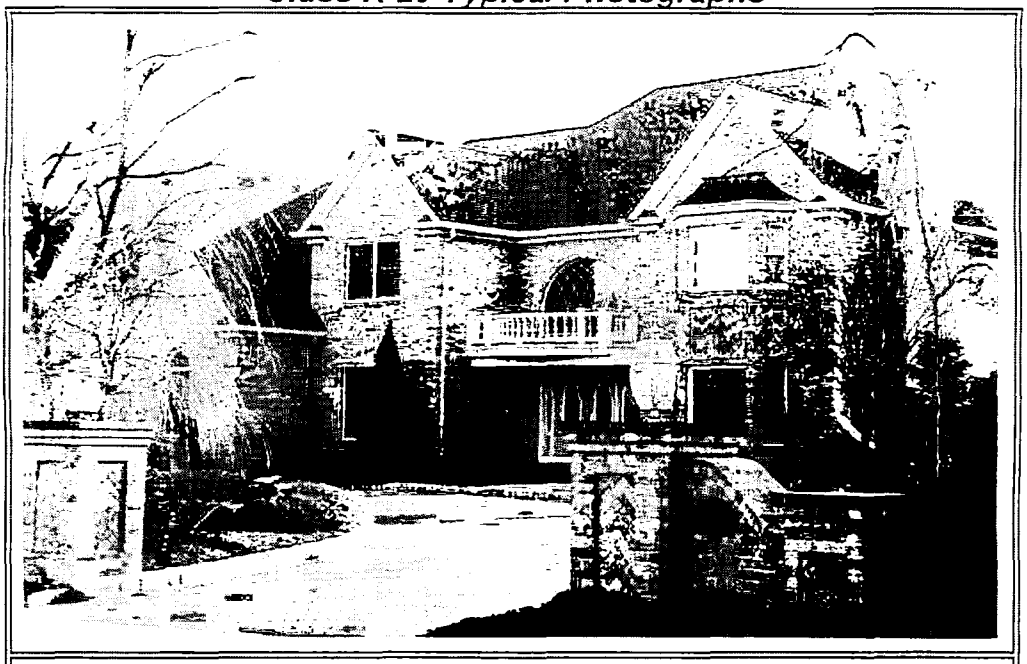
14 OTHER ITEMS – None

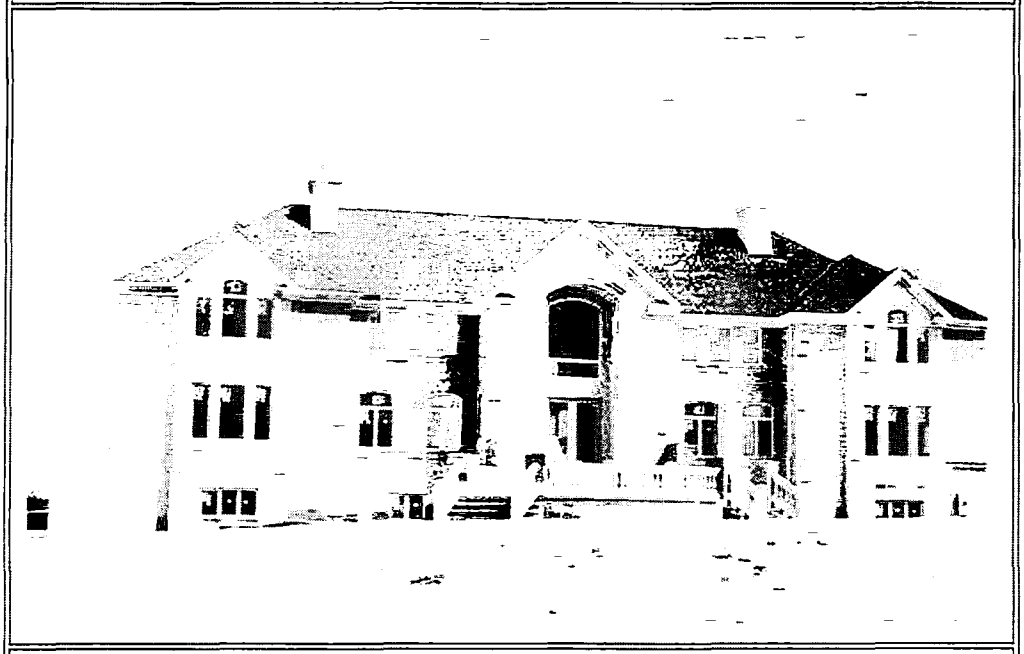
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	124.48	67.16	1100	-	74.41	42.37
250	-	112.25	61.09	1200	-	73.49	41.90
300	-	104.08	57.06	1300	-	72.69	41.51
350	-	98.25	54.16	1400	118.23	72.04	41.19
400	-	93.89	52.00	1600	114.59	70.95	40.62
450	-	90.49	50.31	1800	111.75	70.09	40.21
500	-	87.76	48.97	2000	109.50	69.41	39.88
550	-	85.54	47.88	2200	107.63	68.84	39.65
600	-	83.68	46.96	2400	106.09	68.40	39.38
650	-	82.11	46.16	2600	104.79	67.98	39.17
700	-	80.78	45.51	2800	103.72	67.66	39.03
750	-	79.50	44.92	3000	102.69	67.36	38.88
800	-	78.58	44.42	3500	100.76	66.80	38.58
850	-	77.70	43.97	4000	99.31	66.36	38.37
900	-	76.90	43.59	4500	98.16	66.00	38.20
950	-	76.19	43.23	5000	97.22	65.71	38.05
1000	-	75.54	42.90				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-20 Typical Photographs





R-20 Single Family Residence

CLASS R-20: SINGLE FAMILY RESIDENCE

SUPERIOR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1 ROOF – Wood frame, medium pitch, wood sheathing, superior quality composition shingles or equivalent.

2 FOUNDATION – Masonry perimeter walls or equivalent.

3 BASEMENT – None

4 STRUCTURE –
Exterior Walls – Wood frame, wood or composition sheathing, superior quality shingles, aluminum siding or equivalent with gutters and downspouts.
Interior Finish – Superior quality drywall or plaster on walls, partitions and ceilings. Hardwood doors and trims. Ample number of superior closets and kitchen cabinets, superior quality ceramic tile or equivalent wainscoting.

5 FLOORS – Frame, wood joists more than adequate span and load. Subfloor with superior quality finish of hardwood, carpet, tile or equivalent.

6 HEATING – None

7 PLUMBING – Two three - fixture, and one half fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.

8 LIGHTING – Substantial quantity of superior quality fixtures and outlets.

9 BUILT-INS / APPLIANCES – One superior quality range and oven.

10 FIREPLACE – None

11 ATTIC - Unfinished

12 PORCHES AND DECKS – None

13 GARAGES – None

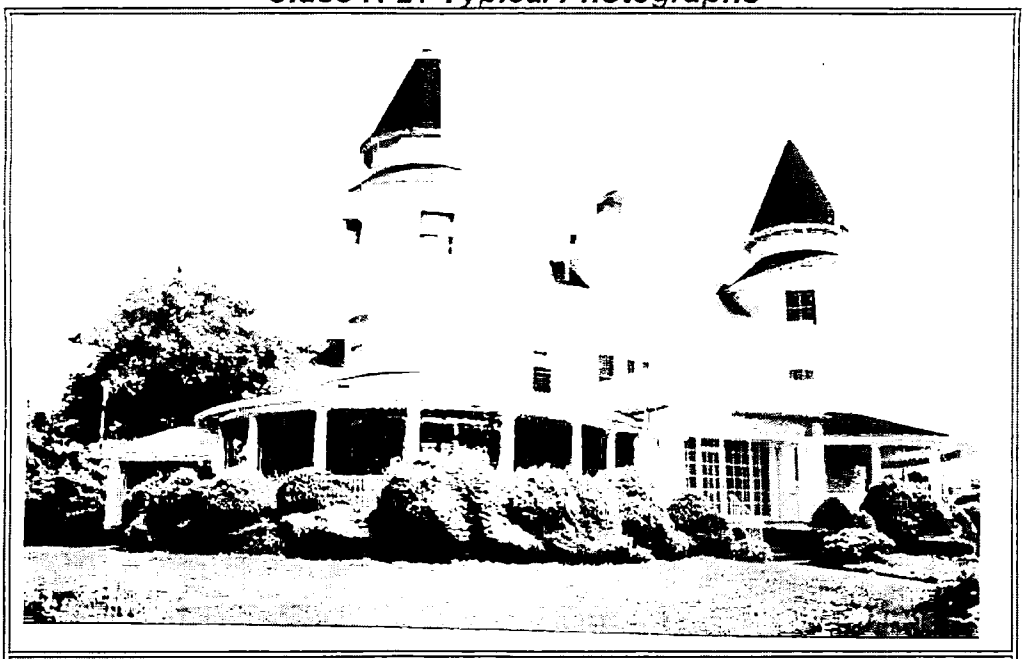
14 OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Half Story $	Sq. Ft. Area	First Story $	Upper Story $	Half Story $
200	-	165.73	89.41	1200	-	97.84	55.78
250	-	149.45	81.33	1300	-	96.78	55.27
300	-	138.57	75.96	1400	149.91	95.91	54.83
350	-	130.80	72.10	1600	145.30	94.45	54.09
400	-	125.00	69.22	1800	141.69	93.31	53.53
450	-	120.47	66.98	2000	138.84	92.40	53.10
500	-	116.84	65.20	2200	136.47	91.65	52.78
550	-	113.89	63.74	2400	134.52	91.06	52.43
600	-	111.40	62.52	2600	132.87	90.51	52.15
650	-	109.31	61.46	2800	131.52	90.08	51.96
700	-	107.54	60.59	3000	130.20	89.68	51.76
750	-	105.85	59.80	3500	127.76	88.93	51.37
800	-	104.62	59.13	4000	125.92	88.34	51.09
850	-	103.44	58.54	4500	124.46	87.87	50.85
900	-	102.38	58.03	5000	123.27	87.49	50.65
950	-	101.40	57.55				
1000	-	100.56	57.12				
1100	-	99.07	56.41				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-21 Single Family Residence



CLASS R-21: SINGLE FAMILY RESIDENCE

MANSION QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

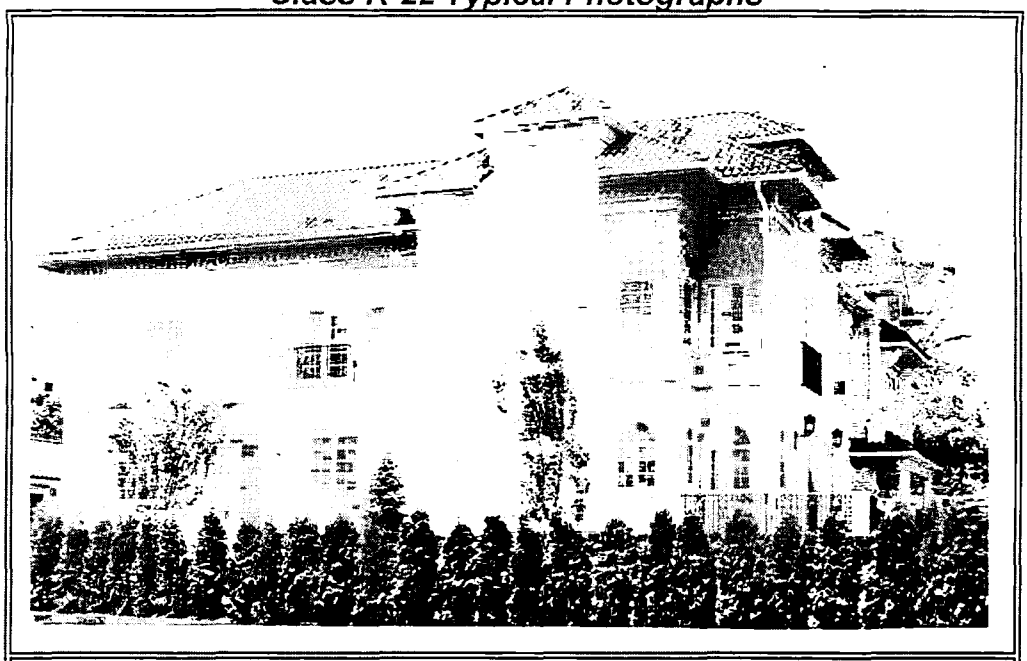
1. ROOF – Wood frame, medium pitch, sheathing, excellent quality composition shingles, shakes or equivalent (i.e. –slate, copper, etc.)
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Masonry or wood frame and sheathing, excellent quality shingles, aluminum siding, brick, stone or equivalent with copper or equivalent gutters and downspouts.
   Interior Finish – Excellent quality hardwood or plaster on walls, partitions and ceilings. Custom Hardwood doors and trims. Ample number of closets and kitchen cabinets with superior hardware. Excellent quality marble, ceramic tile, or equivalent wainscoting.
5. FLOORS – Frame, wood or steel joists, more than adequate for span and load. Subfloor with excellent quality finish of hardwood, carpet, terrazzo, slate, marble, tile, or equivalent.
6. HEATING – None
7. PLUMBING – Two three – fixture baths and one half bath, kitchen sink, water heater, laundry- tub and one rough-in.
8. LIGHTING – Substantial quantity of excellent quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – Excellent quality kitchen appliances.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES/CARRIAGE HOUSES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
500	-	165.10	92.13	1800	191.11	131.85	75.64
550	-	160.92	90.07	2000	187.26	130.56	75.03
600	-	157.41	88.34	2200	184.07	129.51	74.58
650	-	154.46	86.84	2400	181.44	128.67	74.08
700	-	151.95	85.61	2600	179.21	127.89	73.69
750	-	149.56	84.50	2800	177.38	127.28	73.41
800	-	147.83	83.55	3000	175.61	126.72	73.14
850	-	146.16	82.72	3500	172.32	125.66	72.58
900	-	144.66	81.99	4000	169.84	124.83	72.19
950	-	143.38	81.32	4500	167.86	124.16	71.86
1000	-	142.09	80.71	5000	166.27	123.62	71.58
1100	-	139.98	79.71	5500	164.68	123.07	71.31
1200	-	138.25	78.82	6000	163.12	122.53	71.04
1300	-	136.75	78.09	6500	161.56	122.00	70.77
1400	202.20	135.52	77.48	7000	160.02	121.46	70.50
1600	195.97	133.46	76.42	7500	158.50	120.93	70.23

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-22 Single Family Residence



CLASS R-22: SINGLE FAMILY RESIDENCE

ESTATE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium to steep pitch sheathing, extraordinary quality composition shingles, shakes or equivalent (i.e. –slate, copper, etc.)
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Masonry or wood frame and sheathing, extraordinary quality shingles, aluminum siding, brick, stone or equivalent with copper or equivalent gutters and down-spouts.
   Interior Finish – Extraordinary quality hardwood or plaster on walls, partitions and ceilings. Custom Hardwood doors and trims. Ample number of closets and kitchen cabinets with superior hardware. Extraordinary quality marble, ceramic tile, or equivalent wainscoting.
5. FLOORS – Frame, wood or steel joists, more than adequate for span and load. Subfloor with extraordinary quality finished flooring of hardwood, carpet, terrazzo, slate, marble, tile, or equivalent.
6. HEATING – None
7. PLUMBING – Two three – fixture baths and one half bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Substantial quantity of extraordinary quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – Extraordinary quality kitchen appliances.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES/CARRIAGE HOUSES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
500	-	217.62	121.44	1800	240.95	173.79	99.71
550	-	212.11	118.72	2000	236.10	172.10	98.90
600	-	207.49	116.45	2200	232.07	170.70	98.31
650	-	203.60	114.46	2400	228.75	169.60	97.65
700	-	200.29	112.85	2600	225.94	168.57	97.14
750	-	197.13	111.38	2800	223.65	167.77	96.77
800	-	194.86	110.13	3000	221.41	167.03	96.40
850	-	192.66	109.03	3500	217.26	165.64	95.67
900	-	190.67	108.08	4000	214.13	164.54	95.15
950	-	188.99	107.19	4500	211.64	163.65	94.71
1000	-	187.30	106.39	5000	209.63	162.94	94.35
1100	-	184.51	105.07	5500	207.63	162.22	93.99
1200	-	182.23	103.89	6000	205.66	161.51	93.64
1300	-	180.25	102.94	6500	203.70	160.81	93.28
1400	254.93	178.63	102.13	7000	201.76	160.10	92.93
1600	247.08	175.92	100.73	7500	199.84	159.40	92.57

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-23 Single Family Residence

CLASS R-23: SINGLE FAMILY RESIDENCE

HIGHEST ESTATE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium to steep pitch, sheathing, extraordinary quality composition shingles, shakes or equivalent (i.e. - slate, copper)
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Masonry or wood frame and sheathing, highest quality shingles, aluminum siding, brick, stone or equivalent with copper or equivalent gutters and down-spouts.
   Interior Finish – Highest quality hardwood or plaster on walls, partitions and ceilings. Custom Hardwood doors and trims. Ample number of closets and kitchen cabinets with superior hardware. Highest quality marble, ceramic tile, or equivalent wainscoting.
5. FLOORS – Frame, wood or steel joists, more than adequate for span and load. Subfloor with highest quality finished flooring of hardwood, carpet, terrazzo, slate, marble, tile, or equivalent.
6. HEATING – None
7. PLUMBING – Two three – fixture baths and one half bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Substantial quantity of highest quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – Highest quality kitchen appliances.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES/CARRIAGE HOUSES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
500	-	357.02	199.23	1800	334.25	285.11	163.57
550	-	347.99	194.77	2000	327.52	282.34	162.25
600	-	340.40	191.04	2200	321.94	280.05	161.29
650	-	334.01	187.78	2400	317.34	278.24	160.20
700	-	328.59	185.13	2600	313.44	276.56	159.36
750	-	323.41	182.73	2800	310.25	275.23	158.76
800	-	319.68	180.68	3000	307.15	274.03	158.15
850	-	316.07	178.87	3500	301.40	271.74	156.95
900	-	312.81	177.31	4000	297.06	269.93	156.11
950	-	310.05	175.86	4500	293.60	268.49	155.38
1000	-	307.27	174.53	5000	290.81	267.31	154.79
1100	-	302.70	172.37	5500	288.04	266.14	154.20
1200	-	298.96	170.44	6000	285.30	264.97	153.62
1300	-	295.71	168.87	6500	282.58	263.81	153.03
1400	353.65	293.06	167.55	7000	279.89	262.66	152.45
1600	342.76	288.60	165.26	7500	277.23	261.51	151.87

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-27 Semi-Detached Residence

CLASS R-27: SEMI- DETACHED RESIDENCE

FAIR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, sheathing with fair quality composition shingles or equivalent.
2. FOUNDATION – Masonry or stone, perimeter wall or wood piers.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, fair quality wood or composition sheathing, fair quality shingles, siding or equivalent.
   Interior Finish – Fair quality drywall or wallboard on walls, partitions and ceilings. Minimum number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, subfloor with fair quality wood finish or equivalent (i.e. – concrete slab on grade with fair quality finish).
6. HEATING – None
7. PLUMBING – One three – fixture bath.
8. LIGHTING – Fair quality fixtures and minimum number of outlets.
9. BUILT-INS / APPLIANCES – Fair quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

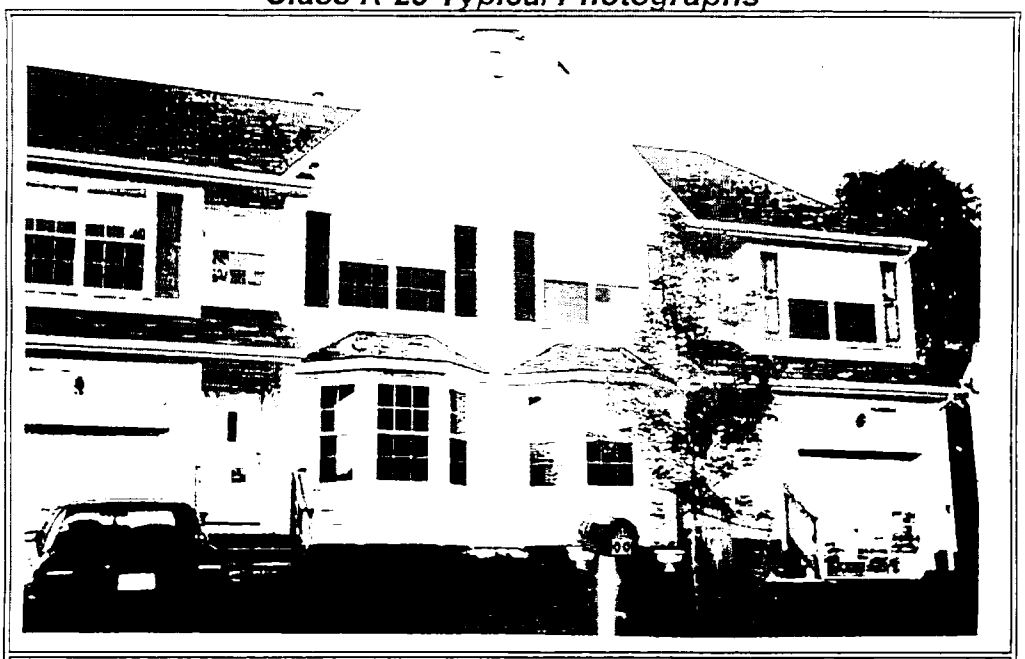
BASE COST PER SQUARE FOOT FLOOR AREA

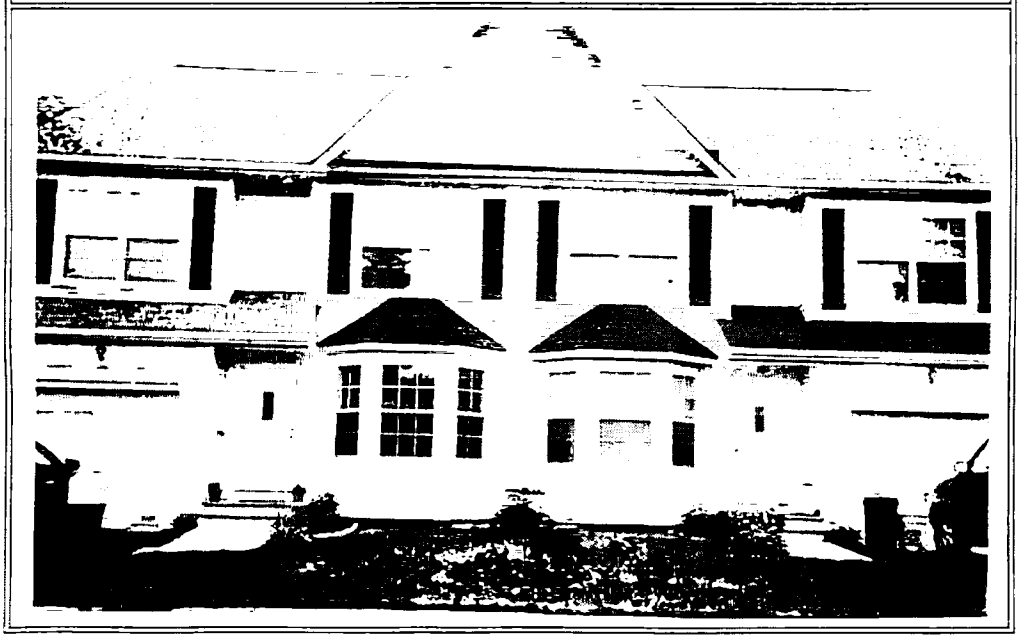
Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	75.36	39.74	22.26	800	45.54	28.78	16.12
300	62.10	34.86	19.53	900	44.41	28.38	15.88
400	55.46	32.43	18.18	1000	43.55	28.07	15.69
500	51.50	30.99	17.35	1200	42.20	27.58	15.45
600	48.83	30.00	16.80	1500	40.88	27.09	15.17
700	46.96	29.33	16.40				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-28 Typical Photographs

R-28 Semi-Detached Residence





CLASS R-28: SEMI - DETACHED RESIDENCE

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with average quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One and one half bath, one three fixture bath, and one two fixture bath, kitchen sink, water heater, laundry-tub and one rough-in.
8. LIGHTING – Adequate number of average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One average quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	56.75	31.78	900	63.45	40.54	22.69
300	88.69	49.81	27.88	1000	62.19	40.08	22.42
400	79.23	46.34	25.95	1200	60.28	39.40	22.05
500	73.55	44.25	24.78	1500	58.38	38.69	21.68
600	69.77	42.87	23.98	2000	56.51	38.02	21.28
700	67.07	41.89	23.43	2500	55.37	37.59	21.04
800	65.04	41.12	23.03				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, beginning on Page II-181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-29 Semi-Detached Residence

CLASS R-29: SEMI - DETACHED RESIDENCE

ABOVE AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, above average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, above average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with above average quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One and one half bath, one three fixture bath, and one two fixture bath, kitchen sink, water heater, laundry tub and one rough-in.
8. LIGHTING – Adequate number of above average quality fixtures and minimum number of outlets.
9. BUILT-INS / APPLIANCES – Above average quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

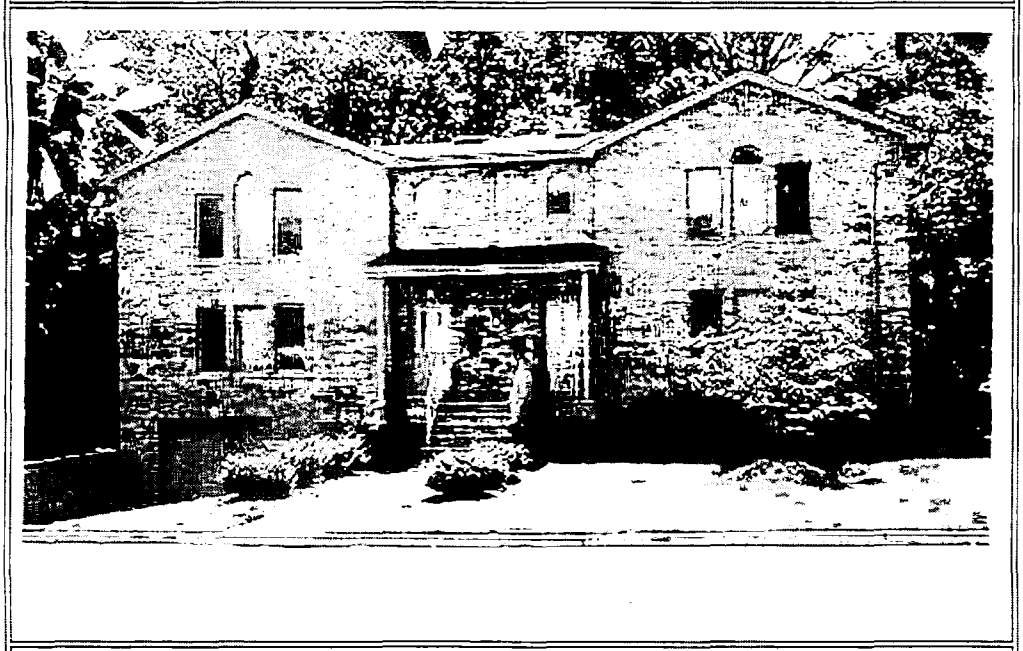
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	76.62	42.90	900	85.65	54.73	30.65
300	-	67.25	37.65	1000	83.96	54.11	30.28
400	-	62.56	35.04	1200	81.38	53.19	29.76
500	99.29	59.73	33.44	1500	78.80	52.24	29.27
600	94.19	57.89	32.37	2000	76.28	51.32	28.74
700	90.53	56.54	31.63	2500	74.75	50.73	28.41
800	87.80	55.52	31.11				

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-30 Typical Photographs

R-30 Semi-Detached Residence



CLASS R-30: SEMI - DETACHED RESIDENCE

GOOD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, good quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls. or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, good quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Soft wood doors and trims. Adequate number of closets and kitchen cabinets.
5. FLOORS – Frame, wood joists, more than adequate for span and load. Subfloor with good quality finished flooring of hardwood, softwood, carpet, vinyl or tile.
6. HEATING – None
7. PLUMBING – One three fixture bath, and one two fixture bath, kitchen sink, water heater, laundry tub and one rough- in.
8. LIGHTING – Adequate number of good quality fixtures and minimum number of outlets.
9. BUILT-INS / APPLIANCES – Good quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

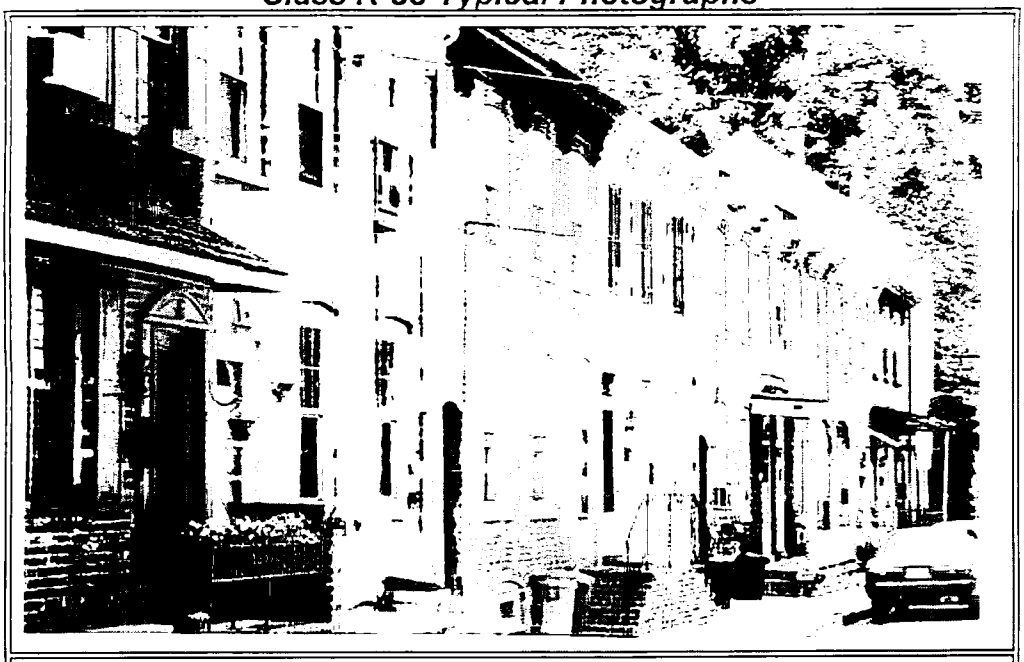
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story	Upper Story	Half Story	Sq. Ft. Area	First Story	Upper Story	Half Story
200	-	103.44	57.92	900	115.63	73.88	41.38
300	-	90.79	50.83	1000	113.35	73.05	40.88
400	-	84.45	47.30	1200	109.87	71.81	40.17
500	134.04	80.64	45.15	1500	106.38	70.52	39.51
600	127.15	78.15	43.70	2000	102.98	69.28	38.81
700	122.22	76.33	42.70	2500	100.91	68.49	38.35
800	118.53	74.96	42.00	3000	99.50	67.99	38.06

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-33 Typical Photographs

R-33 Row / Townhouse Residence



CLASS R-33: ROW / TOWNHOUSE RESIDENCE

FAIR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

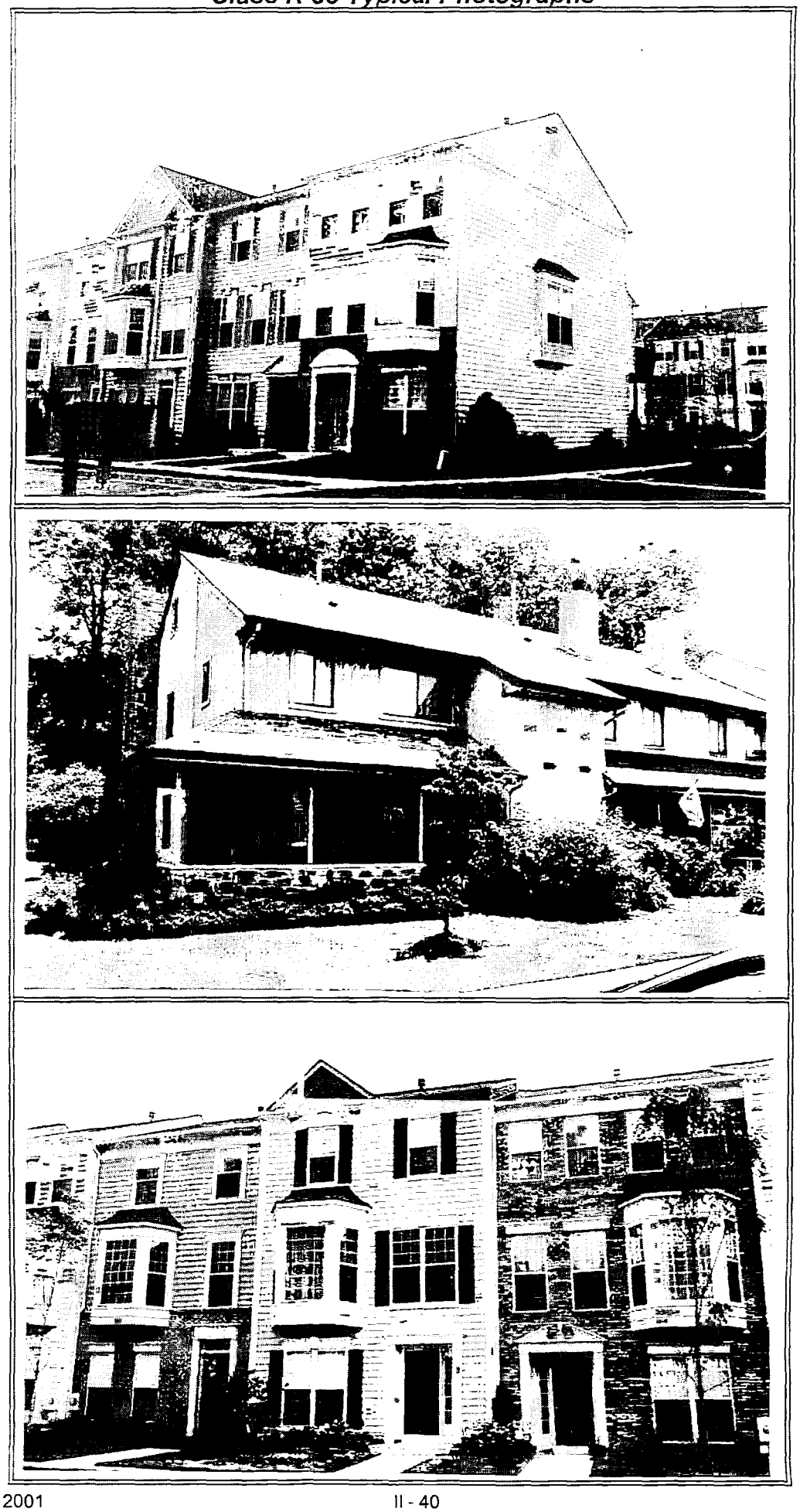
1. ROOF – Wood frame, medium pitch, wood sheathing, fair quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, fair quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, fair quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with fair quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three - fixture bath, per dwelling unit.
8. LIGHTING – Fair quality fixtures and a minimum number of outlets.
9. BUILT-INS / APPLIANCES – Fair quality range and oven.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Sq. Ft. Area	First Story $	Upper Story $
300	56.66	27.24	1000	40.48	22.91
400	50.89	25.70	1100	39.86	22.76
500	47.42	24.75	1200	39.34	22.60
600	45.11	24.14	1400	38.51	22.39
700	43.45	23.68	1600	37.87	22.20
800	42.23	23.37	1800	37.40	22.08
900	41.24	23.12	2000	37.01	21.96

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-35 Row / Townhouse Residence



CLASS R-35: ROW / TOWNHOUSE RESIDENCE

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, average quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with average quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three - fixture bath, per dwelling unit
8. LIGHTING – Adequate number of average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One average quality range and oven per dwelling unit.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Sq. Ft. Area	First Story $	Upper Story $
300	80.95	38.91	1200	56.20	32.28
400	72.69	36.70	1400	55.00	31.97
500	67.75	35.38	1600	54.11	31.72
600	64.43	34.49	1800	53.44	31.54
700	62.10	33.84	2000	52.88	31.39
800	60.31	33.38	2200	52.45	31.26
900	58.93	33.01	2400	52.05	31.17
1000	57.83	32.74	2600	51.75	31.08
1100	56.94	32.49			

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-37 Row / Townhouse Residence

CLASS R-37: ROW / TOWNHOUSE RESIDENCE

ABOVE AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, wood sheathing, above average quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, above average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, above average quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with above average quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three - fixture bath, kitchen sink, water heater, and laundry per dwelling unit.
8. LIGHTING – More than adequate number of above average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One above average quality range and oven per dwelling unit. unit.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

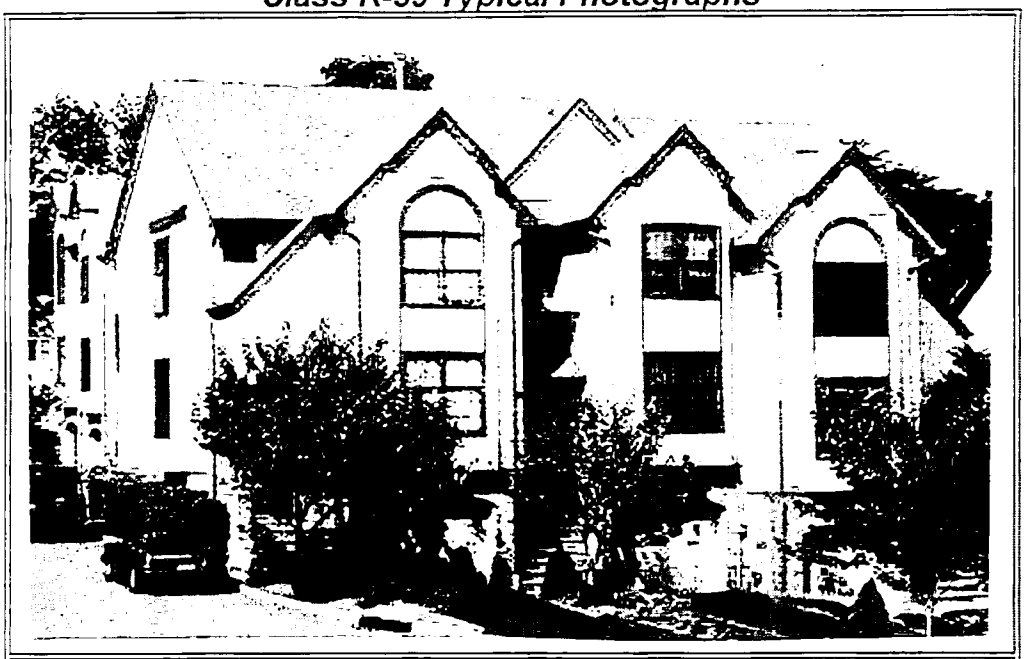
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Sq. Ft. Area	First Story $	Upper Story $
300	109.30	52.51	1400	74.26	43.15
400	98.12	49.54	1600	73.06	42.84
500	91.45	47.75	1800	72.14	42.56
600	86.97	46.56	2000	71.40	42.38
700	83.84	45.70	2200	70.82	42.20
800	81.41	45.67	2400	70.26	42.07
900	79.57	44.56	2600	69.87	41.95
1000	78.06	44.19	3000	69.19	41.77
1100	76.87	43.85	3400	68.64	41.64
1200	75.88	43.58			

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-39 Typical Photographs

R-39 Row / Townhouse Residence



CLASS R-39: ROW / TOWNHOUSE RESIDENCE

GOOD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium to steep pitch, wood sheathing, good quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter walls or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, good quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trims. Adequate number of closets and kitchen cabinets, good quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists, adequate for span and load. Subfloor with good quality finished flooring of hardwood, softwood, carpet, vinyl or tile, etc.
6. HEATING – None
7. PLUMBING – One three - fixture bath, kitchen sink, water heater, and laundry-tub per dwelling unit.
8. LIGHTING – More than adequate number of good quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One good quality range and oven per dwelling unit.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	First Story $	Upper Story $	Sq. Ft. Area	First Story $	Upper Story $
300	147.55	70.89	1400	100.25	58.25
400	132.46	66.87	1600	98.63	57.83
500	123.46	64.47	1800	97.39	57.46
600	117.41	62.85	2000	96.39	57.21
700	113.18	61.69	2200	95.60	56.96
800	109.91	61.65	2400	94.86	56.80
900	107.42	60.16	2600	94.32	56.63
1000	105.39	59.66	3000	93.41	56.38
1100	103.77	59.20	3400	92.66	56.22
1200	102.44	58.83			

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

R-43 Two to Four Family Apartments

Class R-43 Typical Photographs

CLASS R-43: TWO TO FOUR FAMILY APARTMENTS

FAIR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, sheathing with fair quality composition shingles.
2. FOUNDATION – Masonry or stone, perimeter wall or wood piers.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, fair quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trim. Adequate number of closets and kitchen cabinets in each apartment.
5. FLOORS – Frame, wood joists adequate for span and load. Subfloor with fair quality finished flooring or hardwood, softwood, carpet, linoleum, tile, etc.
6. HEATING – None
7. PLUMBING – One three – fixture bath. per apartment.
8. LIGHTING – Fair quality fixtures and minimum number of outlets.
9. BUILT-INS / APPLIANCES – Fair quality range and oven per apartment.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

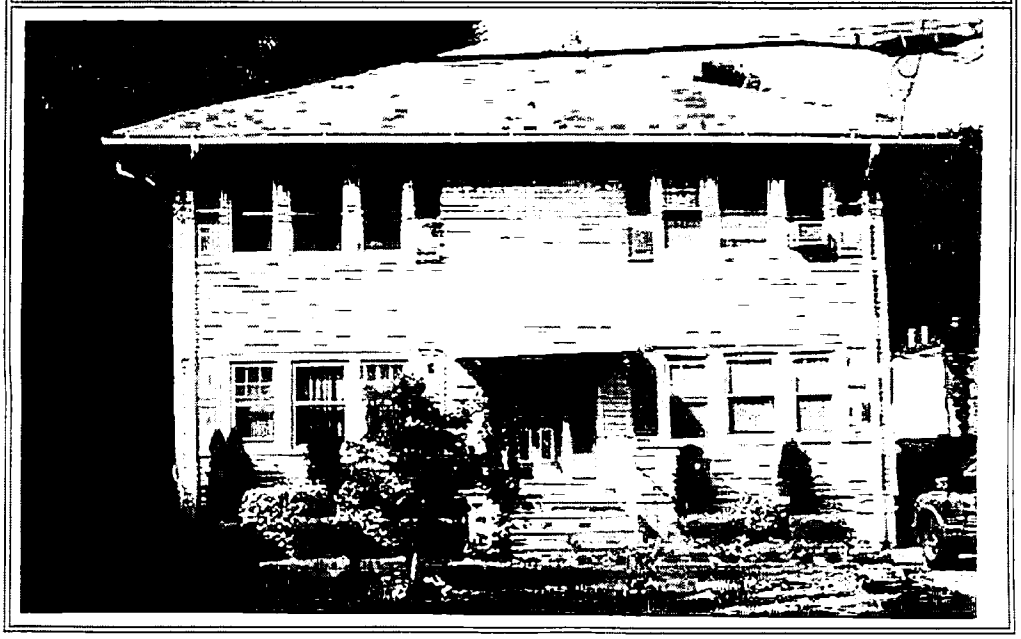
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	Number of Units	First Story	Upper Story	Sq. Ft. Area	Number of Units	First Story	Upper Story
800	2	59.98	33.72	2000	2	46.86	29.67
800	3	66.98	37.53	2000	3	52.33	33.14
800	4	72.26	40.54	2000	4	56.57	35.81
1000	2	55.59	32.37	2500	2	45.11	29.14
1000	3	62.10	36.05	2500	3	50.36	32.58
1000	4	67.04	38.94	2500	4	54.45	35.16
1200	2	52.70	31.48	3000	2	43.98	28.78
1200	3	58.84	34.52	3000	3	49.04	32.18
1200	4	63.54	37.90	3000	4	53.07	34.73
1400	2	50.61	30.83	3500	2	43.12	28.50
1400	3	56.51	34.40	3500	3	48.12	31.91
1400	4	61.05	37.16	3500	4	52.05	34.43
1600	2	49.04	30.34	4000	2	42.50	28.31
1600	3	54.79	33.87	4000	3	47.45	31.69
1600	4	59.18	36.58	4000	4	51.22	34.21
1800	2	47.85	29.97	4500	2	42.01	28.19
1800	3	53.40	33.44	4500	3	46.89	31.54
1800	4	57.73	36.15	4500	4	50.64	34.06

NOTE: Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-45 Typical Photographs

R-45 Two to Four Family Apartments



CLASS R-45: TWO TO FOUR FAMILY APARTMENTS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, sheathing with average quality shingles or equivalent.
2. FOUNDATION – Masonry perimeter wall or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Drywall or plaster on walls, partitions and ceilings. Softwood doors and trim. Adequate number of closets and kitchen cabinets in each apartment.
5. FLOORS – Frame, wood joists adequate for span and load. Subfloor with average quality finished flooring or hardwood, softwood, carpet, linoleum, tile, etc.
6. HEATING – None
7. PLUMBING – One three – fixture bath. kitchen sink, water heater and laundry facilities per apartment.
8. LIGHTING – Adequate number of average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One average quality range and oven per apartment.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

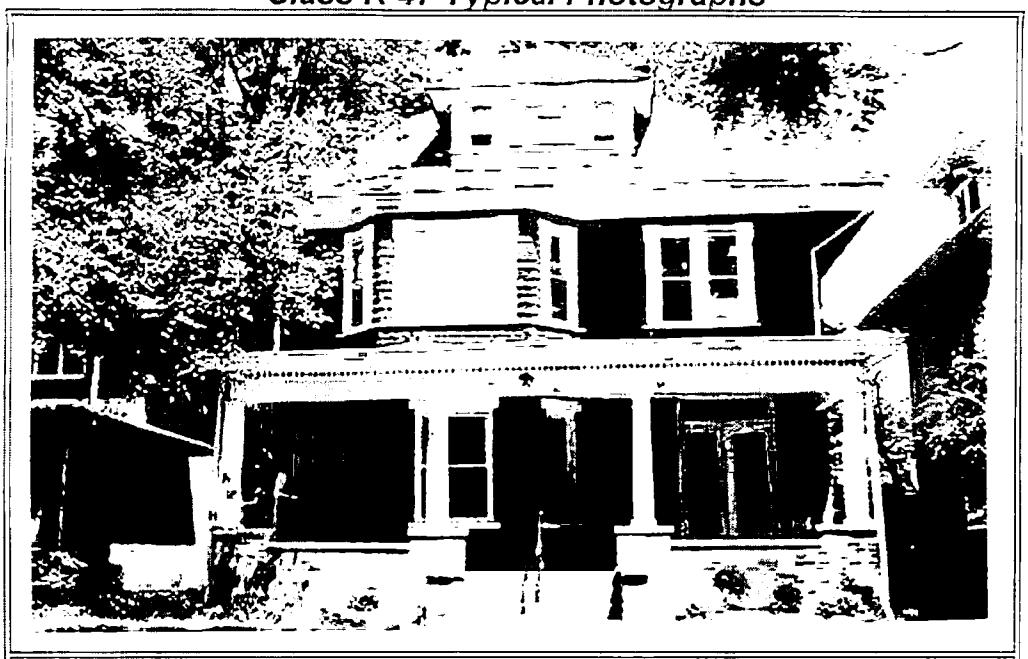
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	Number of Units	First Story	Upper Story	Sq. Ft. Area	Number of Units	First Story	Upper Story
800	2	85.65	48.18	2500	2	64.46	41.61
800	3	95.69	53.59	2500	3	71.95	46.53
800	4	103.25	57.89	2500	4	77.79	50.24
1000	2	79.42	46.25	3000	2	62.80	41.12
1000	3	88.72	51.50	3000	3	70.08	45.97
1000	4	95.75	55.65	3000	4	75.79	49.63
1200	2	75.27	44.96	3500	2	61.60	40.72
1200	3	84.05	50.12	3500	3	68.76	45.57
1200	4	90.78	54.14	3500	4	74.38	49.20
1400	2	72.29	44.04	4000	2	60.71	40.45
1400	3	80.74	49.14	4000	3	67.78	45.27
1400	4	87.22	53.07	4000	4	73.18	48.89
1600	2	70.05	43.36	4500	2	60.01	40.26
1600	3	78.25	48.40	4500	3	66.98	45.05
1600	4	84.54	52.27	4500	4	72.35	48.64
1800	2	68.33	42.81	5000	2	59.49	40.08
1800	3	76.28	47.78	5000	3	66.36	44.87
1800	4	82.46	51.65	5000	4	71.68	48.43
2000	2	66.95	42.38	6000	2	58.66	39.83
2000	3	74.75	47.35	6000	3	65.44	44.59
2000	4	80.80	51.13	6000	4	70.69	48.12

NOTE:
Depreciation Schedules for Frame Wall Types – Table D-III, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-IV, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-47 Typical Photographs

R-47 Two to Four Family Apartments



CLASS R-47: TWO TO FOUR FAMILY APARTMENTS

ABOVE AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium pitch, sheathing with above average quality shingles or equivalent (I.e. -low grade slate, etc.)
2. FOUNDATION – Masonry perimeter wall or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, above average quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish –Above average quality drywall or plaster on walls, partitions and ceilings. Hardwood doors and trim. More than adequate number of closets and kitchen cabinets. Above average quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists more adequate for span and load. Subfloor with above average quality finished flooring or hardwood, softwood, carpet, tile or equivalent.
6. HEATING – None
7. PLUMBING – One three – fixture bath, kitchen sink, water heater and laundry facilities per apartment.
8. LIGHTING – More than adequate number of above average quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One above average quality range and oven per apartment.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

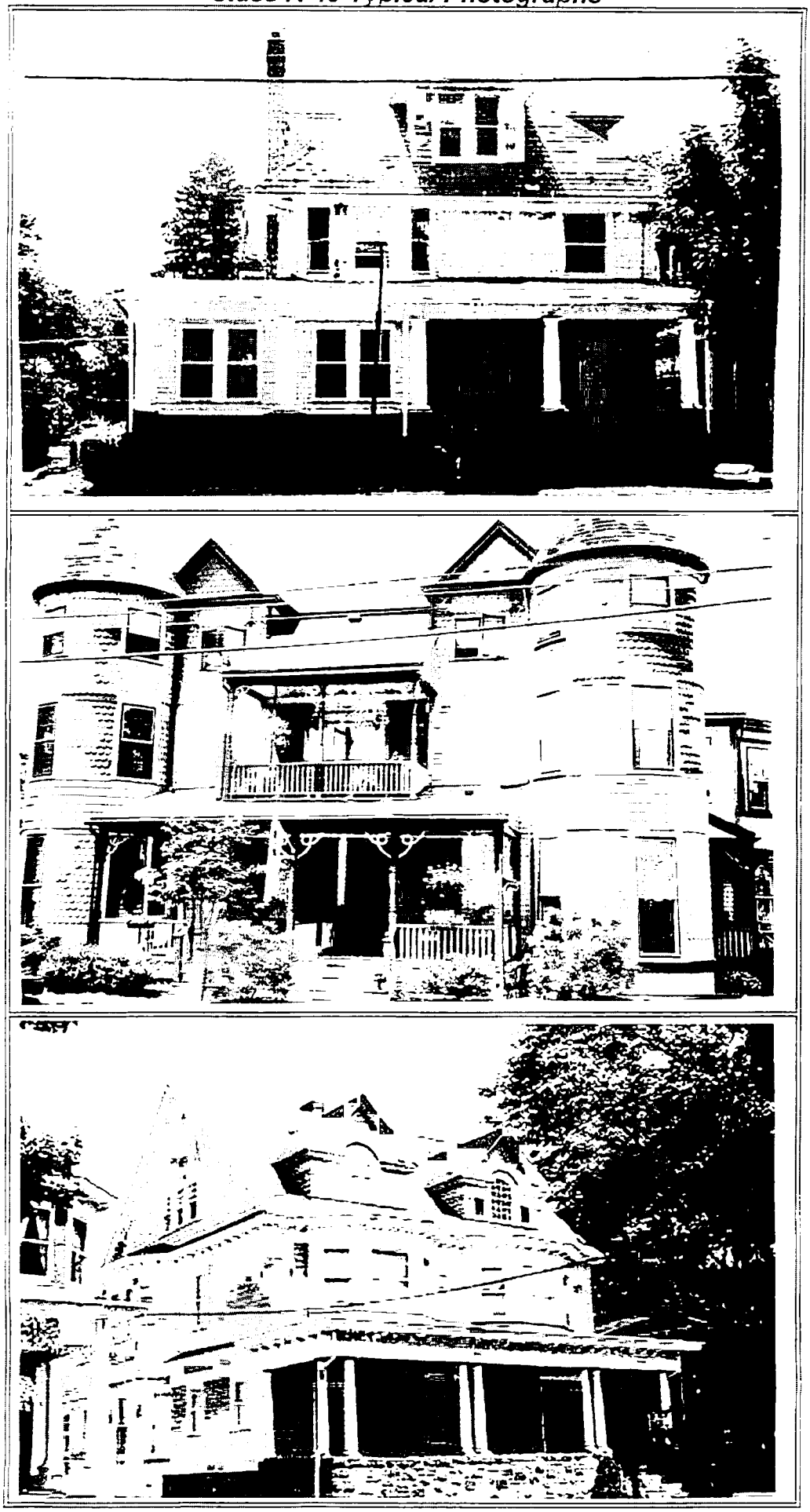
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	Number of Units	First Story	Upper Story	Sq. Ft. Area	Number of Units	First Story	Upper Story
800	2	115.62	65.04	3000	2	84.79	55.52
800	3	129.20	72.35	3000	3	94.62	62.06
800	4	139.39	78.16	3000	4	102.33	67.01
1000	2	107.21	62.43	3500	2	83.16	54.97
1000	3	119.77	69.53	3500	3	92.84	61.51
1000	4	129.26	75.12	3500	4	100.42	66.43
1200	2	101.62	60.68	4000	2	81.96	54.60
1200	3	113.47	67.65	4000	3	91.49	61.11
1200	4	122.56	73.09	4000	4	98.79	66.00
1400	2	97.60	59.45	4500	2	81.01	54.36
1400	3	108.99	66.33	4500	3	90.41	60.81
1400	4	117.74	71.65	4500	4	97.69	65.66
1600	2	94.56	58.53	5000	2	80.31	54.11
1600	3	105.64	65.35	5000	3	89.58	60.56
1600	4	114.15	70.57	5000	4	96.77	65.38
1800	2	92.25	57.80	6000	2	79.20	53.77
1800	3	102.97	64.49	6000	3	88.35	60.19
1800	4	111.32	69.74	6000	4	95.45	64.95
2000	2	90.38	57.21	7000	2	78.37	53.50
2000	3	100.91	63.94	7000	3	87.46	59.85
2000	4	109.08	69.04	7000	4	94.49	64.58
2500	2	87.03	56.17	8000	2	77.79	53.28
2500	3	97.14	62.80	8000	3	86.76	59.67
2500	4	105.03	67.84	8000	4	93.76	64.52

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109 Cost Adjustment Factors: Brick 1.15, Stone 1.30
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Class R-49 Typical Photographs

R-49 Two to Four Family Apartments



CLASS R-49: TWO TO FOUR FAMILY APARTMENTS

GOOD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Wood frame, medium to steep pitch, wood sheathing, good quality composition shingles or equivalent.
2. FOUNDATION – Masonry perimeter wall or equivalent.
3. BASEMENT – None
4. STRUCTURE –
   Exterior Walls – Wood frame, wood or composition sheathing, good quality shingles, aluminum siding or equivalent with gutters and downspouts.
   Interior Finish – Good quality drywall or plaster on walls, partitions and ceilings. Hardwood doors and trim. More than adequate number of closets and kitchen cabinets. Good quality ceramic tile or equivalent wainscoting in bath.
5. FLOORS – Frame, wood joists more adequate for span and load. Subfloor with good quality finished flooring or hardwood, softwood, carpet, tile or equivalent.
6. HEATING - None
7. PLUMBING – One three – fixture bath, kitchen sink, water heater and laundry facilities per apartment.
8. LIGHTING – More than adequate number of good quality fixtures and outlets.
9. BUILT-INS / APPLIANCES – One good quality range and oven per apartment.
10. FIREPLACE – None
11. ATTIC - Unfinished
12. PORCHES AND DECKS – None
13. GARAGES – None
14. OTHER ITEMS – None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	Number of Units	First Story	Upper Story	Sq. Ft. Area	Number of Units	First Story	Upper Story
800	2	141.06	79.35	3000	2	103.44	67.74
800	3	157.62	88.27	3000	3	115.43	75.72
800	4	170.06	95.35	3000	4	124.84	81.75
1000	2	130.79	76.17	3500	2	101.46	67.06
1000	3	146.12	84.82	3500	3	113.26	75.04
1000	4	157.70	91.64	3500	4	122.51	81.04
1200	2	123.98	74.03	4000	2	100.00	66.61
1200	3	138.44	82.54	4000	3	111.61	74.56
1200	4	149.53	89.17	4000	4	120.53	80.51
1400	2	119.07	72.53	4500	2	98.84	66.32
1400	3	132.97	80.93	4500	3	110.30	74.18
1400	4	143.65	87.41	4500	4	119.18	80.10
1600	2	115.36	71.41	5000	2	97.97	66.02
1600	3	128.88	79.73	5000	3	109.29	73.88
1600	4	139.26	86.10	5000	4	118.06	79.77
1800	2	112.55	70.51	6000	2	96.63	65.60
1800	3	125.62	78.68	6000	3	107.79	73.43
1800	4	135.81	85.09	6000	4	116.44	79.24
2000	2	110.26	69.80	7000	2	95.61	65.27
2000	3	123.11	78.00	7000	3	106.70	73.02
2000	4	133.08	84.22	7000	4	115.28	78.79
2500	2	106.18	68.53	8000	2	94.90	65.00
2500	3	118.51	76.62	8000	3	105.84	72.80
2500	4	128.13	82.76	8000	4	114.38	78.72

NOTE: Depreciation Schedules for Frame Wall Types – Table D-IV, Page II-137
Depreciation Schedules for Masonry Wall Types – Table D-V, Page II-137
For Cost Conversion Factors – See "R" Series, Beginning on Page II – 181
Adjustments to base specifications – Pages II- 49 through II – 53.2
Obsolescence Guides – Page I – 109
Cost Adjustment Factors: Brick 1.15, Stone 1.30

Reserved for future use

MOBILE HOMES

Classes R-50 to R-54

All Base Costs in this Section are as of October, 2001

Conversion Factors must be used to convert to any other Base Year

For Adjustments, See Page II – 54

For Depreciation, See Page II – 136.1

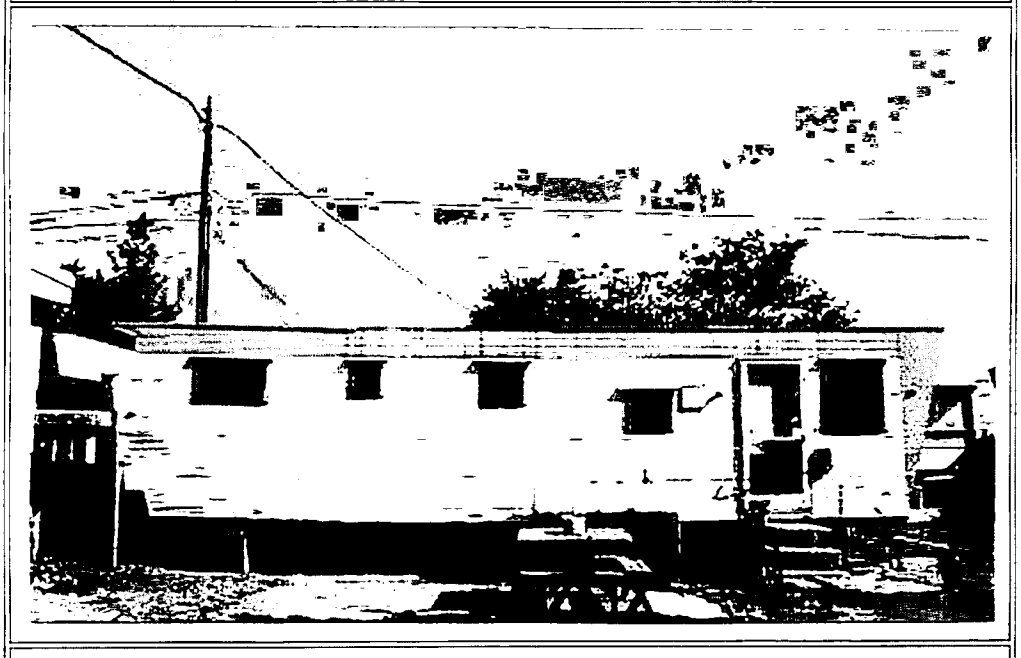
For Procedures, See Page I – 82.1

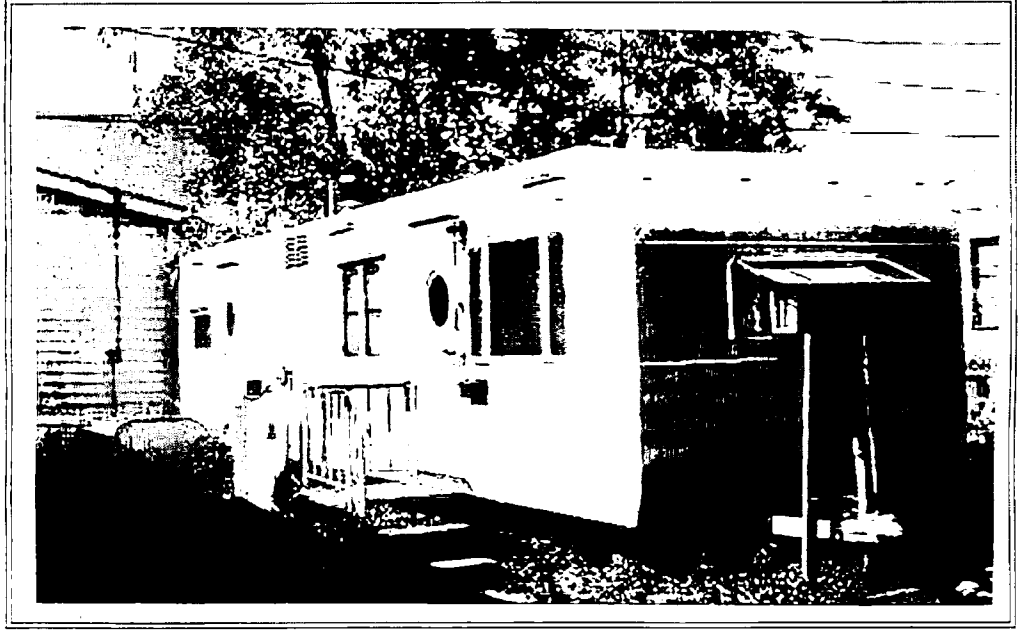
Reserved for future use

Reserved for future use

Class R-50 Typical Photographs

R-50 Mobile Home





CLASS R-50: MOBILE HOME

LOW QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Flat or low pitch with metal or composition roofing material of low quality.
2. STRUCTURE – 6 1/2' to 7' high ceiling.

   Exterior Walls – Aluminum siding of light gauge and low quality on walls 2" to 3" thick.

   Interior Finish – Painted plywood, composition board or plywood panels of low quality. Softwood door and trim. Minimum number of closets and kitchen cabinets.
3. DOOR AND WINDOWS - Low quality wood doors and minimum number of windows with small openings.
4. FLOORS - Floor joists with a plywood or particle board subfloor. Floor covering of low grade linoleum and/or carpeting.
5. HEATING - Minimal forced hot air heating unit with straight-line ducts.
6. PLUMBING - One low quality three fixture bathroom, small hot water heater and kitchen sink.
7. LIGHTING - Minimal number of low quality fixtures and outlets.
8. BUILT-INS/APPLIANCES - Low quality range and oven.
9. OTHER ITEMS - None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	8'	10'	12'
150	53.11	-	-
200	47.65	-	-
250	44.39	-	-
300	42.18	43.69	-
350	40.65	42.12	-
400	39.48	40.95	34.41
450	-	40.06	32.94
500	-	39.33	31.77
550	-	38.71	30.82
600	-	38.25	29.99
650	-	37.79	29.35
700	-	37.48	28.80
750	-	37.15	28.27
800	-	-	27.81
850	-	-	27.45
900	-	-	27.11

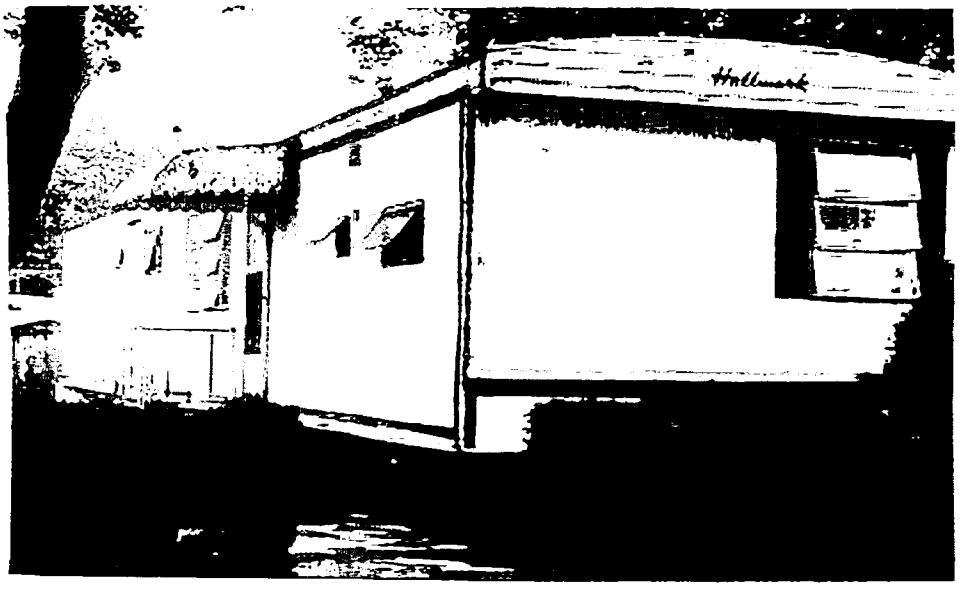
NOTE: Depreciation Schedules, see page II - 136.1

For Cost Conversion Factors, Table RR-1, See "R" Series, Beginning on Page II - 181

Adjustments to base specifications – Pages II- 54

Class R-51 Typical Photographs

R-51 Mobile Home



CLASS R-51: MOBILE HOME

FAIR QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Flat or low pitch with metal or composition roofing material of fair quality.

2. STRUCTURE – 7' to 7 1/2' high ceilings.

   Exterior Walls – Aluminum siding of light gauge and fair quality on walls 2" to 3" thick.

   Interior Finish – Painted plywood, composition board or plywood panels of fair quality. Softwood door and trim. Minimum number of closets and kitchen cabinets.

3. DOOR AND WINDOWS - Fair quality wood or metal clad doors and adequate number of windows with small openings.

4. FLOORS - Floor joists with a plywood or particle board subfloor. Floor covering of fair grade linoleum and/or carpeting.

5. HEATING - Standard forced hot air heating unit with straight-line ducts.

6. PLUMBING - One fair grade three fixture bathroom, hot water heater and kitchen sink.

7. LIGHTING - Minimal number of fair quality fixtures and outlets.

8. BUILT-INS/APPLIANCES - Fair quality range and oven.

9. OTHER ITEMS - None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	10 Feet	12 Feet	14 Feet
300	52.40	-	-
350	50.53	-	-
400	49.15	41.32	-
450	48.08	39.54	-
500	47.19	38.13	44.79
550	46.30	36.96	44.18
600	45.90	36.04	43.62
650	45.37	35.21	43.13
700	44.94	34.51	42.73
750	44.58	33.92	42.40
800	-	33.40	42.12
850	-	32.91	41.84
900	-	32.51	41.60
950	-	-	41.41
1000	-	-	41.20
1050	-	-	41.05
1100	-	-	40.89
1150	-	-	-
1200	-	-	-
1250	-	-	-
1300	-	-	-
1400	-	-	-
1500	-	-	-

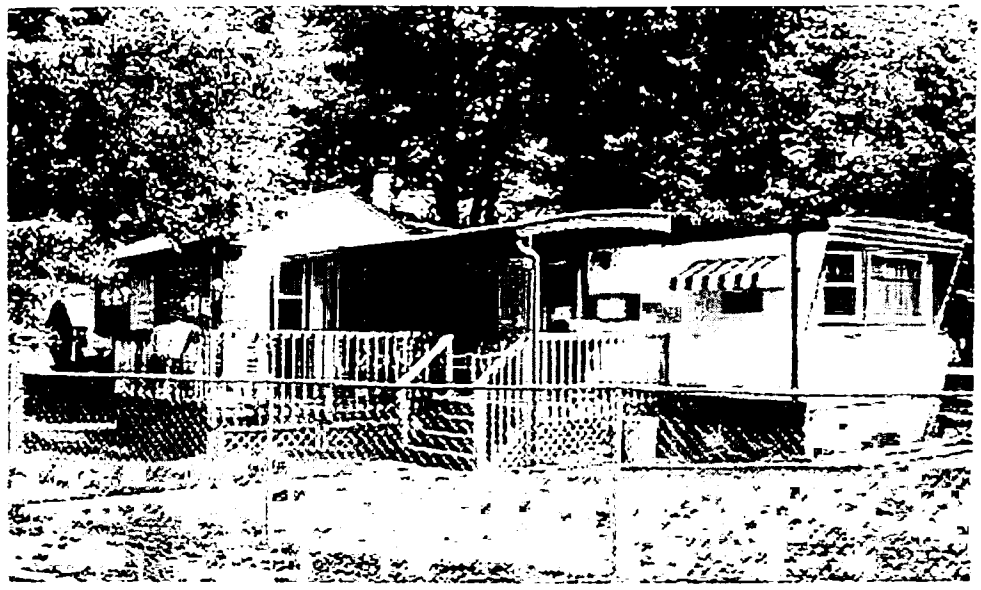
NOTE: Depreciation Schedules, see page II - 136.1

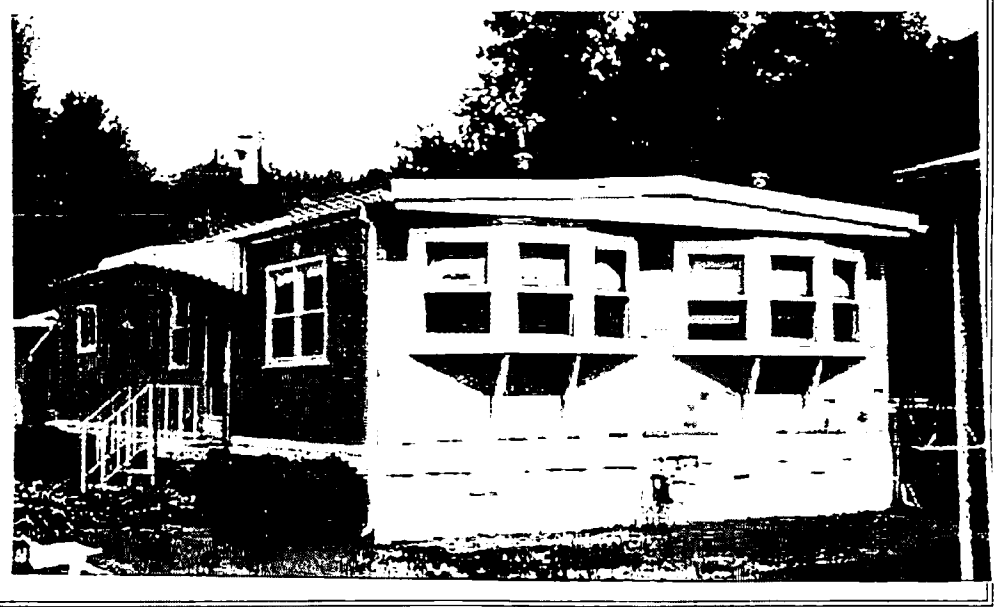
For Cost Conversion Factors, Table RR-1, See "R" Series, Beginning on Page II - 181

Adjustments to base specifications – Pages II- 54

Class R-52 Typical Photographs

R-52 Mobile Home





CLASS R-52: MOBILE HOME

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Flat or gable with metal roof or shingles of average quality.

2. STRUCTURE – 7' to 7 1/2' high ceilings.

   Exterior Walls – Enameled aluminum siding of medium gauge on insulated walls 3" to 4" thick. Double studding and headers over doors and large window openings.

   Interior Finish – Wood paneling of average quality on most interior walls. Softwood doors and trim. Adequate number of closets and kitchen cabinets.

3. DOOR AND WINDOWS - Average grade metal clad doors and adequate fenestration.

4. FLOORS - Floor joists with a plywood or particle board subfloor. Floor covering of average grade seamless vinyl and carpeting.

5. HEATING - Standard forced hot air heating unit with straightline or minimum branched ducting with adequate number of registers.

6. PLUMBING - One average grade three fixture bathroom, hot water heater and kitchen sink.

7. LIGHTING - Adequate number of average quality lighting fixtures and outlets.

8. BUILT-INS/APPLIANCES - Average quality range and oven.

9. OTHER ITEMS - None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	10 Feet	12 Feet	14 Feet	16 Feet	20 Feet	24 Feet	28 Feet
500	52.44	42.37	49.76	-	-	-	-
550	51.64	41.08	49.09	-	-	-	-
600	50.99	40.03	48.48	51.21	-	-	-
650	50.41	39.11	47.92	50.67	-	-	-
700	49.95	38.34	47.49	50.19	-	-	-
750	49.55	37.70	47.09	49.73	-	-	-
800	-	37.12	46.79	49.31	54.89	53.76	-
850	-	36.56	46.48	48.76	54.06	52.59	-
900	-	36.10	46.23	48.30	53.36	51.55	-
950	-	-	46.02	47.87	52.68	50.59	-
1000	-	-	45.77	47.54	52.25	49.76	-
1050	-	-	45.62	47.14	51.58	49.00	50.44
1100	-	-	45.44	46.81	51.08	48.32	49.43
1150	-	-	-	46.15	50.62	47.71	48.48
1200	-	-	-	45.52	50.23	47.09	47.65
1250	-	-	-	-	49.86	46.60	46.85
1300	-	-	-	-	49.55	46.08	46.17
1400	-	-	-	-	48.94	45.22	45.47
1500	-	-	-	-	48.35	44.48	44.33
1600	-	-	-	-	-	43.81	43.32
1700	-	-	-	-	-	43.23	42.43
1800	-	-	-	-	-	42.70	41.63
2000	-	-	-	-	-	-	39.73

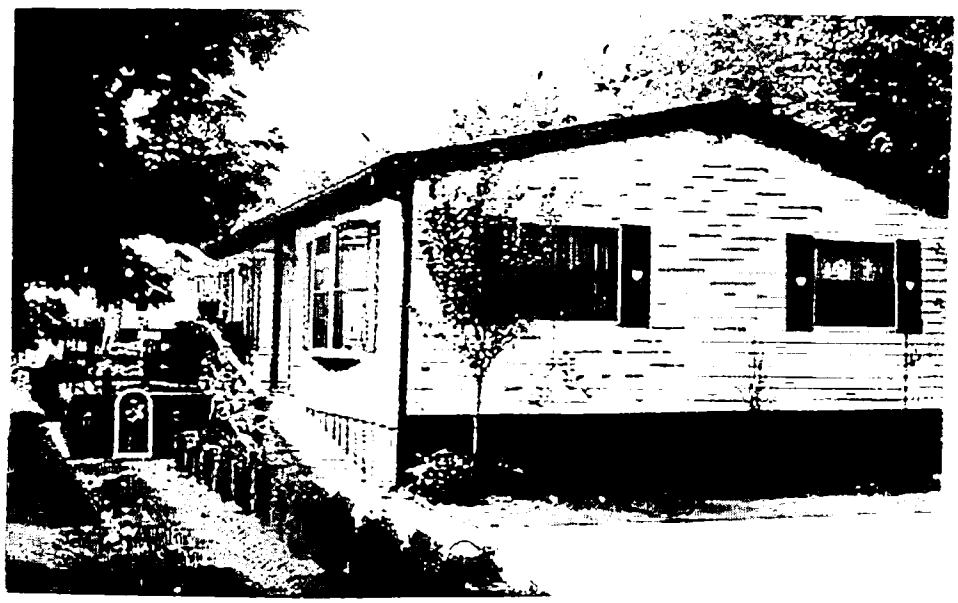
NOTE: Depreciation Schedules, see page II - 136.1

For Cost Conversion Factors, Table RR-1, See "R" Series, Beginning on Page II - 181

Adjustments to base specifications – Pages II- 54

Class R-53 Typical Photographs

R-53 Mobile Home



CLASS R-53: MOBILE HOME

GOOD QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Flat or gable roof with composition shingles of good quality.

2. STRUCTURE – 7 1/2' to 8' high ceilings. Living room may include cathedral type ceilings.

   Exterior Walls – Enameled aluminum siding of medium gauge on insulated walls 4" thick. Double studding and headers over doors and large window openings.

   Interior Finish – Wood paneling of good quality on most interior walls. Softwood doors and trim. More than adequate number of good quality closets and kitchen cabinets.

3. DOOR AND WINDOWS - Good grade metal clad doors and adequate fenestration. Some bay, picture or louvered windows.

4. FLOORS - Floor joists with a plywood or particle board subfloor. Floor covering of good grade seamless vinyl and carpeting.

5. HEATING - Standard forced hot air heating unit with large capacity ducts, cold air returns and branched ducting.

6. PLUMBING - One good grade three fixture bathroom, hot water heater and kitchen sink.

7. LIGHTING - Adequate number of good quality lighting fixtures and outlets.

8. BUILT-INS/APPLIANCES - Good quality range and oven.

9. OTHER ITEMS - None

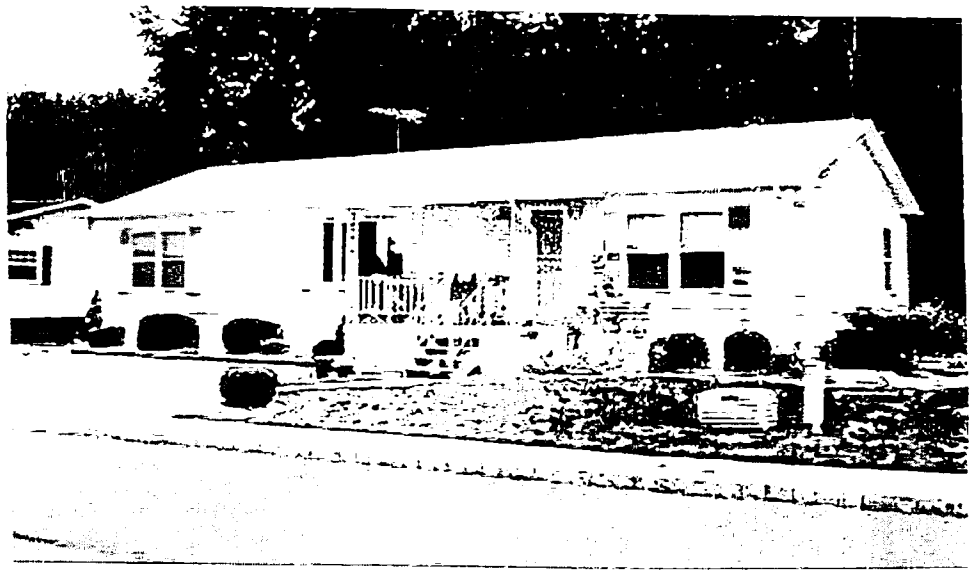
BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	12 Feet	14 Feet	16 Feet	20 Feet	24 Feet	28 Feet
400	50.47	-	-	-	-	-
450	48.32	-	-	-	-	-
500	46.60	54.77	57.64	-	-	-
550	45.16	54.00	56.96	-	-	-
600	44.02	53.30	56.31	-	-	-
650	43.01	52.74	55.74	-	-	-
700	42.18	52.25	55.20	-	-	-
750	41.48	51.82	54.70	-	-	-
800	40.80	51.45	54.23	60.36	59.13	-
850	40.25	51.15	53.65	59.47	57.84	-
900	39.73	50.84	53.11	58.67	56.70	-
950	-	50.62	52.65	57.93	55.66	-
1000	-	50.38	52.31	57.47	54.77	55.47
1050	-	50.16	51.85	56.73	53.91	54.37
1100	-	49.98	51.50	56.21	53.14	53.33
1150	-	-	50.76	55.69	52.47	52.40
1200	-	-	50.08	55.26	51.82	52.10
1250	-	-	-	54.86	51.27	50.78
1300	-	-	-	54.49	50.69	50.01
1400	-	-	-	53.82	49.73	48.75
1500	-	-	-	53.20	48.94	47.65

NOTE: Depreciation Schedules, see page II - 136.1
For Cost Conversion Factors, Table RR-1, See "R" Series, Beginning on Page II - 181
Adjustments to base specifications – Pages II- 54

Class R-54 Typical Photographs

R-54 Mobile Home



CLASS R-54: MOBILE HOME

HIGHEST QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS FOR CLASS

1. ROOF – Flat or gable roof with composition shingles of highest quality.

2. STRUCTURE – 7 1/2' to 8' high ceilings. Living room, dining room and kitchen may include cathedral type ceilings.

   Exterior Walls – Enameled aluminum siding of heavy gauge on insulated walls 4" thick. Double studding and headers over doors and large window openings.

   Interior Finish – Wood paneling of simulated brick or stone paneling of high quality. Hardwood doors and trim. Substantial number of highest quality closets and kitchen cabinets.

3. DOOR AND WINDOWS - Conventional home doors throughout. Selective use of bay, picture or louvered windows in living room, dining room and kitchen area.

4. FLOORS - Floor joists with plywood or particle board subfloor. Floor covering of heavy duty vinyl and highest quality carpeting.

5. HEATING - Standard forced hot air heating unit with large capacity ducts, cold air returns and branched ducting.

6. PLUMBING - One highest quality three fixture bathroom, hot water heater and kitchen sink.

7. LIGHTING - Substantial number of highest quality lighting fixtures and outlets.

8. BUILT-INS/APPLIANCES - Highest quality range and oven.

9. OTHER ITEMS - None

BASE COST PER SQUARE FOOT FLOOR AREA

Sq. Ft. Area	14 Feet	16 Feet	20 Feet	24 Feet	28 Feet
600	58.15	-	-	-	-
650	57.53	62.59	-	-	-
700	57.01	61.97	68.25	-	-
750	56.52	61.33	66.99	-	-
800	56.15	60.75	65.85	-	-
850	55.78	59.90	64.84	-	-
900	55.44	59.17	64.04	61.86	-
950	55.23	58.50	63.21	60.72	-
1000	54.92	57.95	62.51	59.71	60.54
1050	54.74	57.44	61.89	58.79	59.31
1100	54.52	56.95	61.31	57.99	58.18
1150	-	56.57	60.76	57.22	57.41
1200	-	56.18	60.26	56.52	56.21
1250	-	-	59.83	55.90	55.38
1300	-	-	59.44	55.29	54.58
1400	-	-	58.70	54.28	53.20
1500	-	-	58.02	53.39	51.98
1600	-	-	-	52.56	50.90
1700	-	-	-	51.88	49.95
1800	-	-	-	51.27	49.12
2000	-	-	-	-	47.71

NOTE: Depreciation Schedules, see page II - 136.1

For Cost Conversion Factors, Table RR-1, See "R" Series, Beginning on Page II - 181

Adjustments to base specifications – Pages II- 54

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RESIDENTIAL BUILDINGS

Adjustments to Base Cost

Reserved for future use

Residential class factors may be applied to all classes of structures in the residential section and to the average grade costs in the residential adjustments section. The factors which apply are clearly indicated under each heading of the Adjustments Section and are repeated in tabular form here for comparison purposes and identification.

PROPERTY CLASS	Class R-12	Class R-13	Class R-14	Class R-15	Class R-16	Class R-17	Class R-18	Class R-19	Class R-20	Class R-21	Class R-22	Class R-23
				Class 27	Class 28	Class 29	Class 30					
				Class 33	Class 35	Class 37	Class 39					
				Class 43	Class 45	Class 47	Class 49					
PRINCIPAL BUILDING	0.51	0.70	0.84	0.91	1.00	1.14	1.35	1.62	1.90	2.08	2.28	2.51
ROOF	0.51	0.70	0.84	0.91	1.00	1.14	1.35	1.62	1.90	2.08	2.28	2.51
FOUNDATION	0.51	0.70	0.84	0.91	1.00	1.14	1.35	1.62	1.90	2.08	2.28	2.51
BASEMENT	0.76	0.85	0.93	0.97	1.00	1.15	1.32	1.44	1.54	1.68	1.85	2.04
BASEMENT FINISH	0.55	0.70	0.85	0.92	1.00	1.15	1.30	1.30	1.30	1.42	1.56	1.72
UNFINISHED AREAS	0.48	0.67	0.82	0.91	1.00	1.14	1.35	1.62	1.90	2.08	2.28	2.51
FULL BRICK	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.21	1.27	1.33
FULL STONE	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.37	1.43	1.50
FLOORS SLAB	0.82	0.82	0.82	0.91	1.00	1.14	1.35	1.62	1.95	2.13	2.34	2.58
HEATING/COOLING	0.69	0.82	0.95	1.00	1.00	1.12	1.15	1.30	1.49	1.63	1.79	1.97
PLUMBING	0.69	0.82	0.95	1.00	1.00	1.12	1.15	1.30	1.49	1.63	1.79	1.97
B.I. APPLIANCES	0.67	0.67	0.67	1.00	1.00	1.00	1.25	1.31	1.37	1.50	1.65	1.81
FIREPLACES	0.90	0.90	0.95	0.95	1.00	1.15	1.30	1.45	1.60	1.75	1.92	2.12
ATTIC FINISH	0.70	0.88	0.93	0.97	1.00	1.15	1.30	1.30	1.34	1.46	1.61	1.77
PORCHES / DECKS	0.55	0.70	0.85	0.92	1.00	1.15	1.30	1.30	1.30	1.42	1.56	1.72
SOLARIUMS	-	-	-	-	1.00	1.15	1.22	1.30	1.36	1.49	1.63	1.80
ADDITIONAL KITCHEN	-	-	-	-	1.00	1.12	1.25	1.31	1.37	1.50	1.65	1.81
GARAGES	0.52	0.66	0.85	0.93	1.00	1.13	1.24	1.39	1.58	1.73	1.90	2.09
CARPORTS/CANOPIES	0.59	0.78	0.92	0.96	1.00	1.06	1.10	1.13	1.19	1.30	1.43	1.57
SHEDS	0.56	0.78	0.78	0.89	1.00	1.20	1.20	1.45	1.45	1.58	1.74	1.92
SHED FINISH	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.45	1.45	1.58	1.74	1.92
SWIMMING POOLS	0.56	0.78	0.78	0.89	1.00	1.20	1.20	1.45	1.30	1.42	1.56	1.72
BULKHEADS / DOCKS	0.51	0.70	0.84	0.91	1.00	1.14	1.35	1.62	1.90	2.08	2.28	2.51
PAVING	0.70	0.70	0.85	1.00	1.00	1.00	1.15	1.30	1.00	1.09	1.20	1.32
SPECIAL EQUIPMENT	-	-	-	-	-	1.00	1.00	1.00	1.12	1.15	1.27	1.39

Since the unit cost of all residential classes are based on frame construction, to adjust for full brick or full stone, the factors for brick or stone must be applied to the base cost of the class structure.

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RESIDENTIAL BUILDINGS
ADJUSTMENTS TO BASE COSTS

1. ROOF - Included in base specifications - no adjustments necessary.

2. FOUNDATION - Included in base specifications - no adjustments necessary.

3. BASEMENT - Base cost per square foot floor area.

Square Foot Area	3.01 Basement	3.02 Basement Finish
200	$20.17	$19.53
300	$16.62	$17.50
400	$14.86	$16.50
500	$13.80	$15.89
600	$13.10	$15.50
700	$12.59	$15.19
800	$12.22	$14.98
900	$11.92	$14.80
1000	$11.68	$14.68
1200	$11.31	$14.47
1400	$11.07	$14.35
1600	$10.89	$14.22
1800	$10.74	$14.13
2000	$10.61	$14.07
2500 & over	$10.40	$13.95

NOTE: Basement base cost average grade - multiply by class factor for adjustment.
NOTE: Basement finish base cost average grade - multiply by class factor for adjustment.

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Unfin	0.76	0.85	0.93	0.97	1.00	1.15	1.32	1.44	1.54	1.68	1.85	2.04
Fin	0.55	0.70	0.85	0.92	1.00	1.15	1.30	1.30	1.30	1.42	1.56	1.72

* For building classes R-27 thru R-49, See Residential Specification pages

4. STRUCTURE

Unfinished Area - Base cost (deduct) per square foot floor area unfinished.
4.01 Unfinished Area
4.02 Unfinished Area (Based on square foot floor area below unfinished section)

Square Foot Area	4.01 Full Story	4.02 Half Story
200	11.10	7.40
300	9.10	6.07
400	8.10	5.40
500	7.50	5.00
600	7.10	4.73
700	6.81	4.54
800	6.60	4.40
900	6.43	4.29
1000	6.30	4.20
1200	6.10	4.07
1400	5.95	3.97
1600	5.85	3.90
2000	5.70	3.80
2500	5.58	3.72
3500 & over	5.44	3.63

Unfinished Areas - Base cost average grade - multiply by class factor for adjustment.

CLASS FACTOR*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.48	0.67	0.82	0.91	1	1.14	1.35	1.62	1.9	2.08	2.28	2.51

4.03 Partial Brick & 4.04 Partial Stone Base cost per square foot wall area.

quare Foot Area		Class R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
100	Brick	7.43	8.29	9.15	10.01	10.87	11.73	12.59	13.45	14.31	15.17	16.03	17.15
	Stone	13.34	14.86	16.38	17.90	19.42	20.94	22.46	23.98	25.50	27.02	28.54	30.06
200	Brick	7.28	8.14	9.00	9.86	10.72	11.58	12.44	13.30	14.16	15.02	15.88	16.81
	Stone	13.19	14.71	16.23	17.75	19.27	20.79	22.31	23.83	25.35	26.87	28.39	29.91
400	Brick	7.13	7.98	8.83	9.68	10.53	11.38	12.23	13.08	13.93	14.78	15.63	16.48
	Stone	13.04	14.56	16.08	17.60	19.12	20.64	22.16	23.68	25.20	26.72	28.24	29.76
600	Brick	7.06	7.91	8.76	9.61	10.46	11.31	12.16	13.01	13.86	14.71	15.56	16.41
	Stone	12.96	14.48	16.00	17.52	19.04	20.56	22.08	23.60	25.12	26.64	28.16	29.68
800 & over	Brick	6.99	7.84	8.69	9.54	10.39	11.24	12.09	12.94	13.79	14.64	15.49	16.34
	Stone	12.89	14.41	15.93	17.45	18.97	20.49	22.01	23.53	25.05	26.57	28.09	29.61

* Factors for building classes R-27 thru R-49, See Residential Specification Pages.

5. FLOOR

5.01 Concrete Slab Floor -

Base cost per square foot area - deduct following costs.

	Square Foot Area						
	400	500	600	700	800	1200	1800 & over
Cost per square foot	$3.82	$3.28	$2.91	$2.67	$2.49	$2.03	$1.73

Concrete Slab Floors Factors - Multiply by class factor for adjustment.

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.82	0.82	0.82	0.91	1	1.14	1.35	1.62	1.95	2.13	2.34	2.58

* Factors for building classes R-27 thru R-49, see Residential Specification pages

6. HEATING AND COOLING - Base cost per square foot floor area.

Type	Square Foot Heated/Cooled							
	400	600	800	1000	1200	1600	2000	2400
6.01 Floor or wall furnace	3.43	2.85	2.58	2.40	2.27	2.15	2.06	2.00
6.02 Gravity hot air	3.43	2.86	2.58	2.40	2.27	2.15	2.06	2.00
6.03 Forced hot air	4.70	3.94	3.58	3.34	3.18	3.00	2.88	2.82
6.04 Hot water baseboard	6.25	5.28	4.76	4.55	4.25	4.00	3.85	3.76
6.05 Hot water or steam	7.58	6.31	5.70	5.31	5.06	4.73	4.55	4.43
6.06 Electric baseboard	3.43	2.85	2.58	2.40	2.27	2.15	2.06	2.00
6.07 Radiant electric	3.43	2.85	2.58	2.40	2.27	2.15	2.06	2.00
6.08 Heat pump	10.83	8.31	7.04	6.28	5.76	5.16	4.76	4.52
6.09 Central cooling system (Added to heating duct work)	6.22	4.46	3.58	3.03	2.67	2.24	1.97	1.79
6.10 Central cooling system (with own duct work)	7.28	5.55	4.55	3.94	3.55	3.03	2.73	2.52

Heating/Cooling - Base cost - Average grade - Multiply by class factor for adjustment

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.69	0.82	0.95	1.00	1.00	1.12	1.15	1.30	1.49	1.63	1.79	1.97

* Factors for building classes R-27 thru R-49, see Residential Specification pages

7. PLUMBING - Base cost per fixture - and to or deduct from base specifications.

Type		Cost
7.01	4 Fixture bath	$3,185
7.02	3 Fixture bath	$2,595
7.03	2 Fixture bath	$1,895
7.04	Bathtub	$1,110
7.05	Shower over tub	$235
7.06	One piece fiberglass tub	$1,315
7.07	Whirlpool bath	$3,295
7.08	Stall shower with glass doors, tile base	$1,245
7.09	Bidet	$1,180
7.10	Single fixture	$910

Type		Cost
7.11	Kitchen sink	$805
7.12	Laundry tub	$635
7.13	Water heater	$750
7.14	Rough-in	$380
7.15	Floor drain	$370
7.16	Sump pump	$420
7.17	Hot tubs	
	Wood 6' diameter	$4,890
	Fiberglass 8' diameter	$6,600
7.18	Sauna - small	$7,035
7.19	Sauna - medium	$10,560
7.20	Sauna - large	$19,070

Plumbing base cost - average grade - multiply by class factor for adjustment.

CLASS FACTORS*											
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.69	0.82	0.95	1.00	1.00	1.12	1.15	1.30	1.49	1.63	1.79	1.97

*Factors for building classes R-27 thru R-49, see Residential Specification pages

8. ELECTRICAL - Included in base specifications - no adjustments necessary.

9. BUILT-INS/ APPLIANCES - Base cost per each.

Type		Cost
9.01	Range top oven	$1,700
9.02	Drop-in range	$1,455
9.03	Dishwasher	$1,335
9.04	Garbage disposal	$365
9.05	Exhaust hood and fan	$365
9.06	Intercom system	$970
9.07	Central vacuum system	$1,700

Type		Cost
9.08	Electronic oven	$4,790
9.09	Food center power unit	$365
9.10	Free standing range and oven	$1,275
9.11	Extra kitchen unit	$3,485
9.12	Electronic garage door opener	$460
9.13	Security system	$1,350

Built-ins/Appliances - Base cost is average grade - multiply factor for adjustment to specific grade.

CLASS FACTORS*											
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.67	0.67	0.67	1.00	1.00	1.00	1.25	1.31	1.37	1.50	1.65	1.81

10. FIREPLACES - Base cost per unit

Type		Cost
10.01	One-story stack	$4,245
10.02	One and one-half story stack	$4,550
10.03	Two story stack	$4,850
10.04	Second fireplace on same stack	$1,605
10.05	Free standing fireplace	$3,505
10.06	Heatilator and fan	$605

Fireplace - Base cost - average grade - multiply by class factor for adjustment.

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.90	0.90	0.95	0.95	1.00	1.15	1.30	1.45	1.60	1.75	1.92	2.12

* Factors for building classes R-27 thru R-49, See Residential Specification pages.

11. EXPANDED ATTIC & DORMERS (See Note)

11.01 Expanded Attic - Base cost per square foot floor area directly below.

Area	200	300	400	500	600	700
Cost per Sq. Ft.	14.71	12.74	11.68	11.07	10.61	10.31

Area	800	900	1000	1200	1600	2000 & over
Cost per Sq. Ft.	10.16	10.01	9.86	9.55	9.40	9.25

Dormers and Expanded Attic - Base cost - average grade, multiply by class factor for adjustment.

11.02 Dormers - Base cost per lineal foot.

Size	Up to 8'	9' to 19'	20' to 30'	Over 30'
Cost per Lineal Ft.	$136	$129	$123	$118

NOTE: If Attic or Dormer area is unfinished multiply above cost by 0.50.

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.7	0.88	0.93	0.97	1	1.15	1.3	1.3	1.34	1.46	1.61	1.77

* Factors for building classes R-27 thru R-49, See Residential Specification pages.

12. PORCHES AND DECKS - Base cost per square foot floor area.

Type		Square Foot Area						
		20	40	60	80	100	200	500 & over
12.01	Deck or patio	15.01	10.01	8.49	7.58	7.13	6.22	5.61
12.02	Open porch	32.91	21.84	18.20	16.38	15.32	13.04	11.68
12.03	Enclosed porch	81.13	54.14	45.04	40.49	37.91	32.45	29.27

Porches and Deck/Patios - Base cost - average grade multiply by class factor for adjustments.

12.04 Solariums $140 per Sq. Ft., includes foundation and floor

CLASS FACTORS*											
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.55	0.70	0.85	0.92	1.00	1.15	1.30	1.30	1.30	1.42	1.56	1.72

13. GARAGE

Attached Garages and Carports/Canopies - Base cost per square foot floor area.

	Type	Square Foot Area						
		200	300	400	500	600	700	800 and over
13.01	Basement garage	12.28	9.86	8.64	7.89	7.43	6.98	6.82
13.02	Attached garage	26.99	23.05	20.93	19.71	18.96	18.35	17.89
13.03	Attached carport-canopy	7.89	6.98	6.52	6.22	6.07	5.91	5.76

CLASS FACTORS--GARAGES*											
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.52	0.66	0.85	0.93	1.00	1.13	1.24	1.39	1.58	1.73	1.90	2.09

Garages - Base cost are average grade - multiply by class factor for adjustment.

CLASS FACTORS--CARPORTS & CANOPIES*											
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.59	0.78	0.92	0.96	1.00	1.06	1.10	1.13	1.19	1.30	1.43	1.57

Carports/Canopies - Base cost are average grade - multiply by class factor for adjustment.

* Class factors for building classes R-27 thru R-49, see Building Class Spec sheet.

14. OTHER ITEMS

Detached Garages and Carports - Base cost per square foot floor area.

Type		Sq. Ft Area						
		200	300	400	500	600	700	800 & Over
14.01	Detached garage	31.39	26.23	23.66	22.14	21.08	20.47	19.86
14.02	Detached Carport/ canopy	9.25	8.19	7.73	7.43	7.13	6.98	6.82

Detached Garage - Base cost average grade - multiply by class factor for adjustments

CLASS FACTOR--DETACHED GARAGE*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.52	0.66	0.85	0.93	1	1.13	1.24	1.39	1.58	1.73	1.9	2.09

Brick Factor - 1.15 Stone Factor - 1.30

Detached Carport/ Canopy - base cost average grade - multiply by class factor for adjustment

CLASS FACTOR--DETACHED CARPORT/CANOPY*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.59	0.78	0.92	0.96	1	1.06	1.1	1.13	1.19	1.3	1.43	1.57

14.03 Shed Construction

Sq. Ft. Area	First Story	Second Story	Half Story
80	26.99	13.04	8.95
100	24.57	11.83	8.04
120	22.90	11.07	7.58
140	21.84	10.46	7.13
160	20.93	10.01	6.82
180	20.17	9.70	6.67
200	19.71	9.40	6.52
300	18.05	8.64	5.91
400	17.14	8.19	5.61
600	16.38	7.89	5.46
800 & Over	15.92	7.73	5.31

14.04 Shed Finish

Full Story Area	Half Story Area
27.60	18.50
24.57	16.53
22.59	15.16
21.08	14.10
20.02	13.34
19.11	12.74
18.50	12.28
16.38	10.92
15.32	10.31
14.41	9.55
13.80	9.33

Sheds and Shed Finish - Base cost per square foot floor area.
Sheds and Shed Finish - Base cost average grade - multiply by class factor for adjustment.

CLASS FACTORS*												
Class	R-12	R-13	R-14	R-15	R-16	R-17	R-18	R-19	R-20	R-21	R-22	R-23
Factor	0.56	0.78	0.78	0.89	1.00	1.20	1.20	1.45	1.45	1.58	1.74	1.92

NOTE - Shed finish can also be applied to detached garage when interior is finished.
* For building classes R-27 thru R-49, see building class spec sheet.

14. OTHER ITEMS (continued)

14.05 Swimming Pools - Base cost per square foot of surface area. Cost includes excavation, filter system, piping, coping and ladder.

Sq. Ft. Area	300	400	500	600	700	800 & over
Cost/Sq. Ft.	51.86	43.67	38.82	35.64	33.36	31.54

Swimming Pools - Base cost average quality - for differences in quality, multiply square foot cost by Quality Factor. Factors that affect Quality are type of construction, workmanship and/or shape of pool.

Quality	Low	Fair	Average	Good	High
Factor	0.6	0.75	1.00	1.30	1.90

14.06 & 14.07 Paving - Base cost per square foot pavement area.

	Type	Cost per Sq. Ft.
14.06	Concrete	$3.18
14.07	Asphalt	$2.12

15. SPECIAL EQUIPMENT

PASSENGER ELEVATOR--Two Levels

Capacity	750 Lbs.	1,000 Lbs.	1,500 Lbs.	Ea. Additional Level
15.01 Hydraulic	30,000	35,000	40,000	5,000
15.02 Electric	22,000	28,000	34,500	3,500

DUMBWAITER

	2-Levels	3-Levels
15.03 Hydraulic or electric, 75 to 100 lbs. Capacity	5,800	7,250

16. SPECIAL STRUCTURAL ELEMENTS

PILINGS

Add to items 16.01 & 16.02 a crane site set up fee of $1150.

16.01 12" Concrete filled steel tube----------$21.00 per lineal foot
NOTE: A typical piling is 30 ft. long.

16.02 10" to 12" (butt) treated wood piling----------$12.50 per lineal foot
NOTE: A typical wood piling is 35 ft. long with a 8" tip and 10" to 12" butt.

MARINE BULKHEAD

		Depth 16 Ft.	Depth 20 Ft.
16.03	Vinyl	$375 per LF.	$500 per LF.
16.04	Wood	$331 per LF.	$441 per LF.

Typical width is 12 inches.

MARINE DOCKS / PIER*

16.05 Wood pilings with wood decking $22 per Sq. Ft.

*Multiply by Class Factor for adjustment, See Residential Specification Pages.

Reserved for future use

MOBILE HOME ADJUSTMENTS

20. PLUMBING - Base cost per fixture - add to, or deduct from specifications.

		LOW QUALITY	FAIR QUALITY	AVERAGE QUALITY	GOOD QUALITY	HIGH QUALITY
20.1	4 Fixture	$1003	$1203	$1338	$1473	$1605
20.2	3 Fixture	779	936	1040	1145	1249
20.3	2 Fixture	528	632	703	773	844
20.4	Single Fixture	338	402	448	494	537

21. BUILT-INS / APPLIANCES

		LOW QUALITY	AVERAGE QUALITY	HIGH QUALITY
21.1	Free standing range & oven	$706	$1010	$1350
21.2	Drop-in range	635	908	1228
21.3	Oven	429	614	828
21.4	Counter top range	276	396	534
21.5	Microwave oven, built-in	669	954	1289
21.6	Exhaust hood, fan & light	224	319	429
21.7	Dishwasher	669	954	1289
21.8	Garbage disposal	168	242	328
21.9	Am-Fm Intercom	343	491	663
21.10	Trash Compactor	537	767	1037
21.11	Fireplace	1381	1974	2664

22. OPTIONAL ITEMS (ALL COSTS PER SQUARE FOOT, EXCEPT AS NOTED)

		LOW QUALITY	AVERAGE QUALITY	HIGH QUALITY
22.1	Patio covers	$ 3.68	$ 5.24	$ 6.29
22.2	Carports	6.04	8.65	10.37
22.3	Storage sheds - wood	10.34	14.79	17.74
22.4	Storage sheds - metal	7.21	10.31	12.37
22.5	Screened porches	8.07	11.54	13.84
22.6	Enclosed porches	10.77	15.38	18.45
22.7	Redwood deck	4.85	6.90	8.28
22.8	Skirting - aluminum per lineal ft.	3.37	4.81	5.77
22.9	Skirting - vinyl per lineal ft.	3.13	4.48	5.37
22.10	Skirting - simulated stone per lineal ft.	4.60	6.56	7.88
22.11	Masonry foundation wall	7.06	7.98	9.36
22.12	Central Air Conditioning per square foot	1.65	2.40	2.76

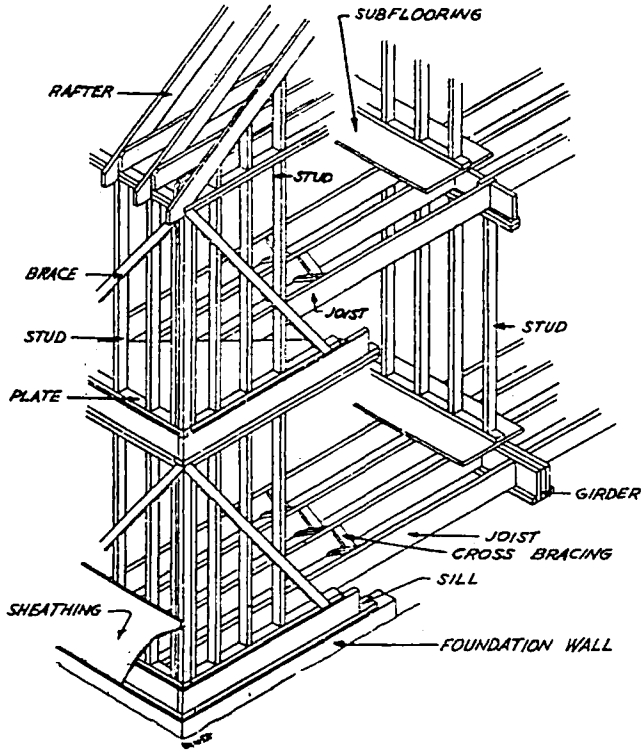
Reserved for future use

COMMERCIAL AND INDUSTRIAL BUILDINGS

Classes 101 to 145
All Base Costs in this Section are as of October 1975
Conversion Factors must be used to Convert to any other Base Year
For Adjustments See Pages II – 90 thru II - 106

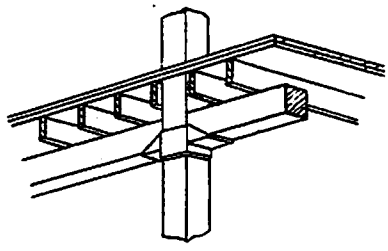
CLASS 101

SHELL TYPE - LIGHT WOOD FRAMING

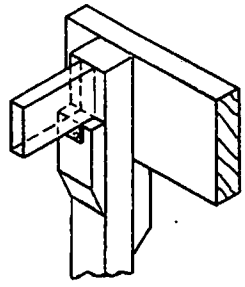


CLASS 102

SHELL TYPE - HEAVY TIMBER

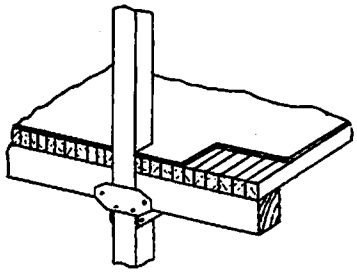


WOOD JOIST

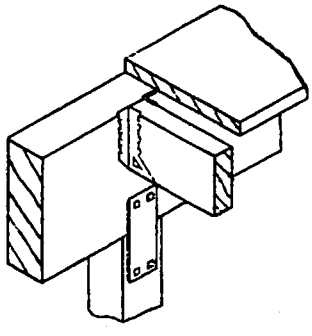


WOOD COLUMN

WITH BEAM SEATS



WOOD JOIST



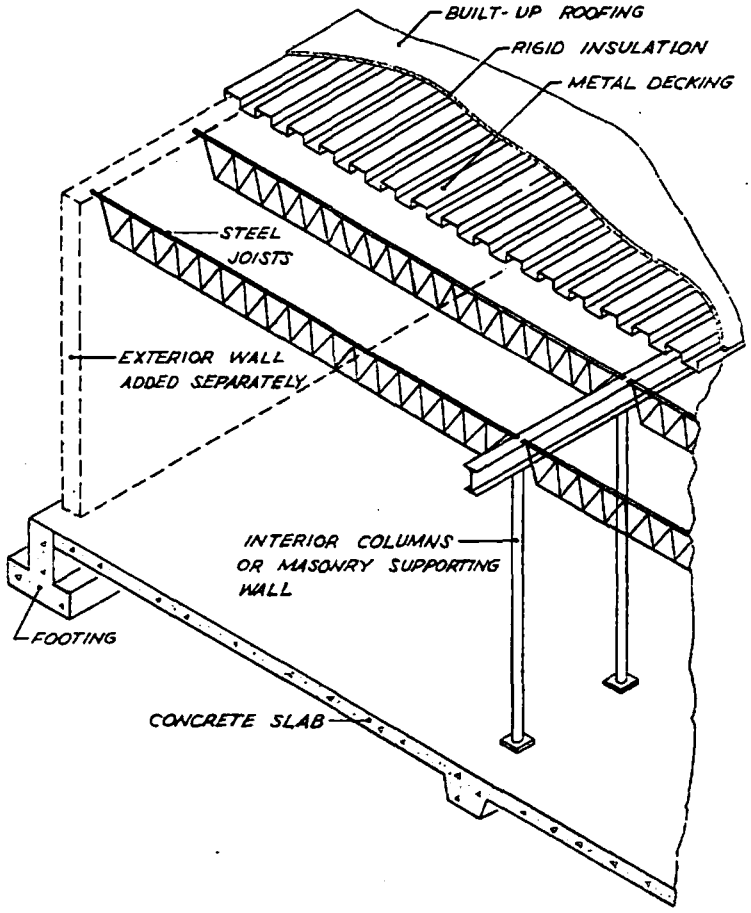
WOOD COLUMN

GIRDER & BEAM

ADDED 4/79

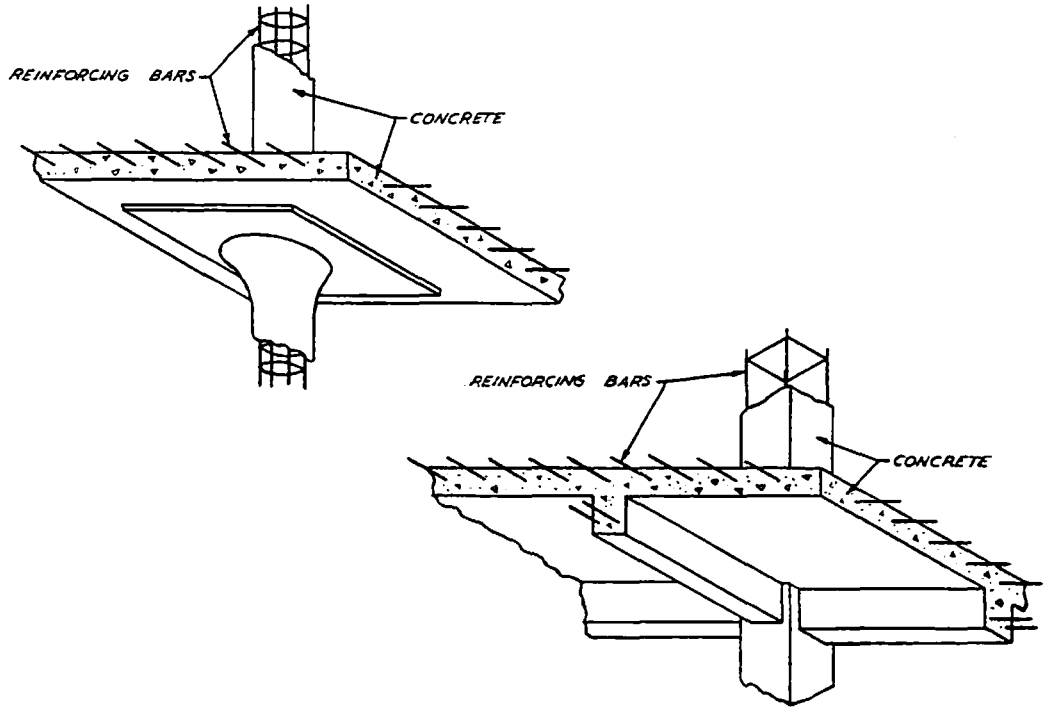
CLASS 103

SHELL TYPE - MASONRY LOAD BEARING



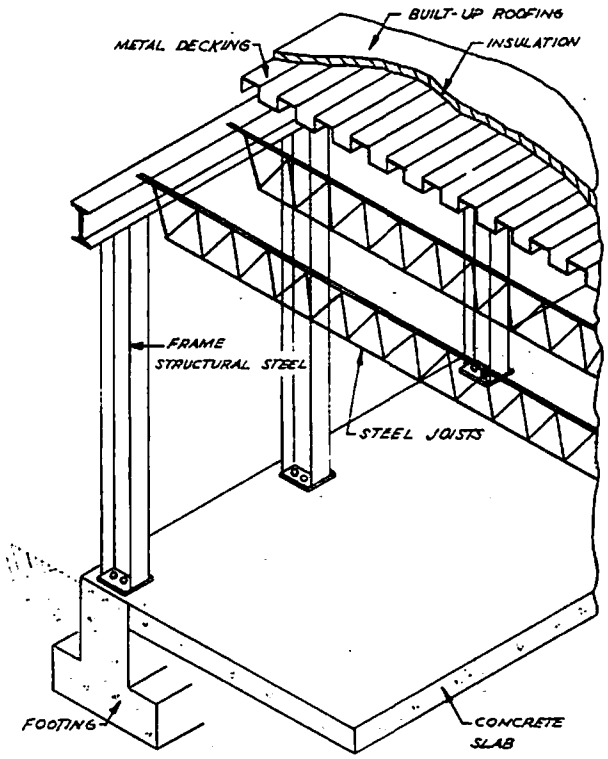
CLASS 104

SHELL TYPE - REINFORCED CONCRETE

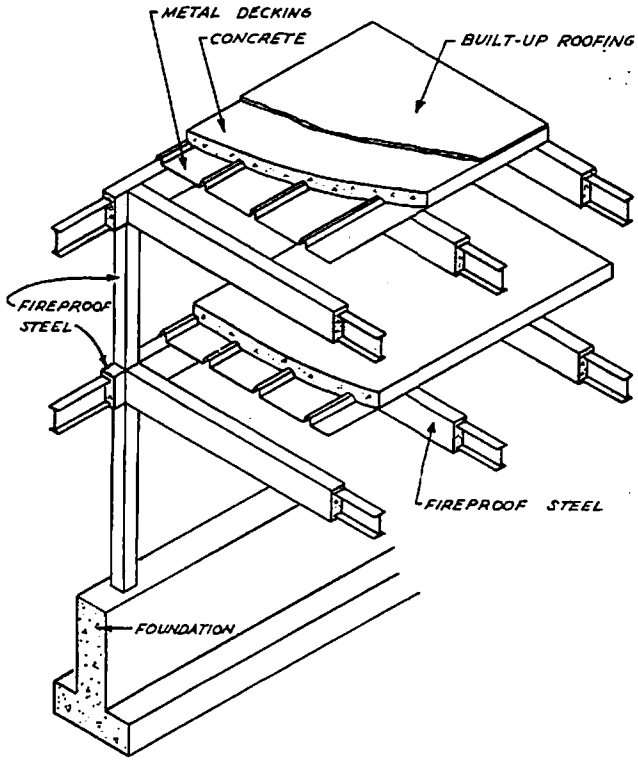


ADDED 4/79

CLASS 105
SHELL TYPE - STEEL

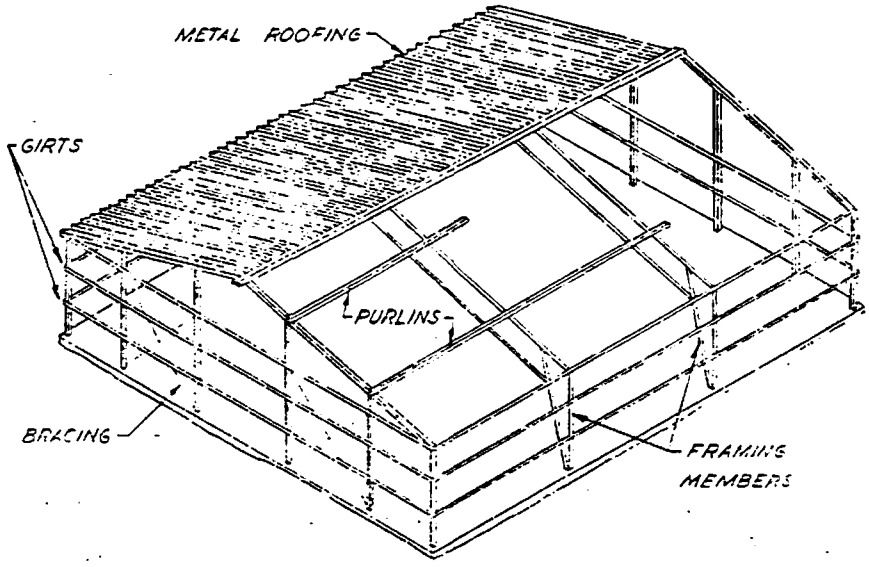


CLASS 106
SHELL TYPE - FIREPROOF STEEL



ADDED 4/79

CLASSES 107, 108 AND 109
PRE-ENGINEERED STEEL FRAME



CLASS 101: LIGHT WOOD

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

Floor: First floor - Concrete slab on grade, Upper floors - None Included.

Frame: Wood joists, studs, plates, rafters, etc., of dimension lumber for walls, floors, and roof.

Roof: Plywood or softwood sheathing with insulation and built-up roofing or shingles.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 101: Light Wood, Page II-72

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 102: HEAVY TIMBER

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

Floor: First Floor - Concerete slab on grade; Upper Floors - None Included.

Frame: Columns, beams, girders, purlins, etc., of heavy timber for walls, floors and roof.

Roof: Plywood or softwood sheathing with insulation and built-up roofing or shingles.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 102: Heavy Timber, Page II-73

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

NOTES: Depreciation Schedules: Class 101 - Table D-IV
Depreciation Schedules: Class 102 - Table D-IV
For Cost Conversion Factors - See Page II -153
Adjustments to base specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 103: MASONRY LOAD BEARING

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry Stub walls and concrete spread footings.

Floor: First Floor - Concrete slab on grade; Upper Floors - None Included.

Frame: Steel beams and columns or interior masonry supporting walls for floors and roof.

Roof: Steel joists and metal decking with insulation and built-up roofing.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 103: Masonry Load Bearing, Page II-74

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 104: REINFORCED CONCRETE

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

Floor: First Floor - Concrete slab on grade; Upper Floors - None Included.

Frame: Columns, beams, etc., of reinforced concrete.

Roof: Reinforced concrete strucure with insulation and built-up roofing.

Buildings (or segments of buildings) with the above structure shell may be priced from the base cost schedules for Class 104: Reinforced Concrete, Page II-75

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

NOTES: Depreciation Schedules: Class 103 - Table D-V
Depreciation Schedules: Class 104 - Table D-VI
For Cost Conversion Factors - See Page II - 153
Adjustments to base specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 105: STEEL

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

Floor: First Floor - Concrete slab on grade
Upper Floors - None Included.

Frame: Structural steel columns, beams, purlins, etc., for walls, floor and roof.

Roof: Steel joists and metal decking with insulation and built-up roofing.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 105: Steel, Page II-76

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 106: FIREPROOF STEEL

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

Floor: First Floor - Concrete slab on-grade;
Upper Floors - None Included.

Frame: Columns, beams, etc., of fireproof steel.

Roof: Fireproof steel structure with insulation and built-up roofing.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 106: Fireproof Steel, Page II-77

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler Sytem
8. Standard Building Accessories
9. Standard Exterior Accessories

NOTES: Depreciation Schedules: Class 105 - Table D- VII
Depreciation Schedules: Class 106 - Table D- VII
For Cost Conversion Factors - See Page II - 153
Adjustments to base specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 107: LIGHTWEIGHT STEEL WITH GALVANIZED STEEL EXTERIOR

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: First Floor Only - Concrete slab on grade.

   Frame: Prefabricated steel beams, columns, and purlins for walls and roof.

   Roof: Galvanized steel roofing.

2. Exterior Wall Finish - Galvanized steel siding.

   Buildngs (or segments of buildings) with the above structural shell and buildng components may be priced from the base cost schedules for Class 107: Lightweight Steel With Galvanized Steel Exterior, Page II-78

NOTE: Other building components should be added separetely in the following order.

3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 108: LIGHTWEIGHT STEEL WITH ENAMELED STEEL OR ALUMINUM EXTERIOR

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: First Floor Only - Concrete slab on grade.

   Frame: Prefabricated steel beams, columns, and purlins for walls and roof.

   Roof: Enameled steel or aluminum roofing.

2. Exterior Wall Finish: Enameled steel or aluminum siding.

   Buildings (or segments of buildings) with the above structural shell and building components may be priced from the base cost schedules for Class 108: Lightweight Steel With Enameled Steel or Aluminum Exterior, Page II-79

NOTE: Other building components should be added separately in the following order.

3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

NOTES:
Depreciation Schedules: Class 107 - Table D-VI
Depreciation Schedules: Class 108 - Table D-VI
For Cost Conversion Factors - See Page II - 153
Adjustments to base specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 109: LIGHTWEIGHT STEEL WITH INSULATED METAL SANDWICH PANEL EXTERIOR

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: First Floor Only - concrete slab on grade.

   Frame: Prefabricated steel beams, columns and purline for walls and roof.

   Roof: Insulated metal sandwich panel roofing.

2. Exterior Wall Finish - Insulated metal sandwich panel siding.

Buildings (or segments of buildings) with the above structural shell and building components may be priced from the base cost schedules for Class 109: Lightweight Steel With Insulated Metal Sandwich Panel Exterior, Page II-80

NOTE: Other building components should be added separately in the following order.

3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 110: ONE STORY BASEMENT WITH CONCRETE FIRST FLOOR

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

   Foundation: Concrete or masonry walls.

   Floor: Concrete slab.

   Frame: Included in foundation.

   Roof: Concrete floor structure for first story.

Buildings (or segments of buildings) with the above structural shell may be priced from the base cost schedules for Class 110: One Story Basement With Concrete First Floor, Page II-81. The base cost schedules have taken into consideration the removal of the concrete slab on grade floor of the shell type or class to which the basement is added.

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

NOTE: Depreciation Schedules: Class 109 - Table D-IV
For Cost Conversion Factors See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 111: ONE STORY BASEMENT WITH WOOD FIRST FLOOR

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Concrete or masonry walls.

Floor: Concrete slab.

Frame: Included in foundation.

Roof: Wood floor structure for first floor.

Buildings (or segments of buildings) with the the above structural shell may be priced from the base costs schedules for Class 111: One Story Basement With Wood First Floor, Page II-82.The base cost schedules have taken into consideration the removal of the concrete slab-on-grade floor of the shell type or class to which the basement is added.

NOTE: Other building components should be added separately in the following order.

2. Exterior Wall Finish
3. Interior Finish
4. Heating/Cooling
5. Plumbing
6. Electrical Installation
7. Sprinkler System
8. Standard Building Accessories
9. Standard Exterior Accessories

CLASS 112: DOCK HIGH FOUNDATION

BASE SPECIFICATIONS OF SHELL TYPE

1. Structural Shell

Foundation: Includes extra concrete stub wall and associated fill material necessary to build up a slab floor from ground level to the height necessary to become a truck dock.

NOTE: This shell type does not contain any other building components. For cost schedule see page II-83

CLASS 123: SERVICE STATION (LOW)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade or equivalent.

   Frame: Wood joists, studs, plates, rafters, etc., of dimension lumber for walls and roof.

   Roof: Plywood or softwood sheathing with insulation and built-up roofing and shingles

2. Exterior Wall Finish - Wood, asphalt, asbestos or equivalent siding and low quality store front.

3. Interior Finish - Includes low quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes low quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - includes appropriate number and quality of overhead vehicle doors for size of building.

9. Standard Exterior Accessories - None included.

CLASS 124: SERVICE STATION (FAIR)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footing.

   Floor: Concrete slab on grade.

   Frame: Interior masonry supporting walls.

   Roof: Plywood or softwood joists and sheathing with insulation and built-up roofing.

2. Exterior Wall Finish -Concrete block, structural clay tile or equivalent and low quality store front.

3. Interior Finish - Includes below average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes below average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - Includes appropriate number and quality of overhead vehicle doors for size of building.

9. Standard Exterior Accessories - None included.

NOTES:
Depreciation Schedules: Class 123 - Table D-III
Class 124 - Table D-IV
Base Cost Schedules: Class 123 - Page II - 84
Class 124 - Page II - 84
For Cost Conversion Factors - See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 125: SERVICE STATION (AVERAGE)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Either light steel beams, columns, purlins, etc., for walls and roof; or interior masonry supporting walls.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Painted steel or enameled steel either on light steel frame or on concrete block or common brick back-up and average quality store front.

3. Interior Finish - Includes average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - Includes appropriate number and quality of overhead vehicle doors for size of building.

9. Standard Exterior Accesories - None included.

CLASS 126: SERVICE STATION (GOOD)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Interior masonry supporting walls.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Face brick or good quality common brick on concrete block or equivalent back-up and average quality store front.

3. Interior Finish- Includes above average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation- Includes above average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - Includes appropriate number and quality of overhead vehicle doors for size of building.

9. Standard Exterior Accessories - None included.

NOTES:
Depreciation Schedules: Class 125 - Table D-V
Class 126 - Table D-IV
Base Cost Schedules: Class 125 - Page II - 84
Class 126 - Page II - 84
For Cost Conversion Factors - See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 127: SERVICE STATION (HIGH)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Light steel beams, columns, purlins, etc., for walls and roof.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Porcelain steel panels or steel panels with baked acrylic finish insulated and high quality store front.

3. Interior Finish - Includes high quality finish and partitioning with porcelanized or acrylic finish.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes high quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - Includes appropriate number and quality of overhead vehicle doors for size of building.

9. Standard Exterior Accessories - None included.

CLASS 133: SPECIALTY BUILDING (LOW)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade or equivalent.

   Frame: Wood joists, studs, plates, rafters, etc., of dimension lumber for walls and roof.

2. Exterior Wall Finish - Wood, asphalt, asbestos, or equivalent siding and low quality store front.

3. Interior Finish - Includes low quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes low quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Exterior Accessories - None included.

9. Standard Exterior Accessories - None included.

NOTES:
Depreciation Schedules: Class 127 - Table D-V
Class 133 - Table D-III
Base Cost Schedules: Class 127 - Page II - 84
Class 133 - Page II - 85
For Cost Conversion Factors - See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 134: SPECIALITY BUILDING (FAIR)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry slab walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Interior masonry supporting walls.

   Roof: Plywood or softwood joists and sheathing with insulation and built-up roofing.

2. Exterior Wall Finish - Concrete block, strutural clay tile or equivalent and low quality store front.

3. Interior Finish - Includes below average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes below average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - None included.

9. Standard Exterior Accessories - None included.

CLASS 135: SPECIALTY BUILDING (AVERAGE)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Either light steel beams, columns, purlins, etc., for walls and roof; or interior masonry supporting walls.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Painted steel or enameled steel either on light steel frame or on concrete block or common brick back-up and average quality store front.

3. Interior Finish - Includes average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - None included.

9. Standard Exterior Accessories - None included.

NOTES:
Depreciation Schedules: Class 134 - Table D-IV
Class 135 - Table D-V
Base Cost Schedules: Class 134 - Page II - 85
Class 135 - Page II - 85
For Cost Conversion Factors - See Page II-153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 136: SPECIALTY BUILDING (GOOD)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: Concrete slab on grade.

   Frame: Interior masonry supporting walls.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Face brick or good quality common brick on concrete block or equivalent back-up and average quality store front.

3. Interior Finish - Includes above average quality finish and partitioning.

4. Heating/Cooling - None included.

5. Plumbing - None included.

6. Electrical Installation - Includes above average quality fixtures and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - None included.

9. Standard Exterior Accessories - None included.

CLASS 137: SPECIALTY BUILDING (HIGH)

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: concrete slab on grade.

   Frame: Light steel beams, columns, purlins, etc., for roof and walls.

   Roof: Steel joists and metal decking with insulation and built-up roofing.

2. Exterior Wall Finish - Porcelain, steel panels or steel panels with baked acrylic finish insulated and high quality store front.

3. Interior Finish - Includes high quality finish and partitioning with porcelainized or acrylic finish.

4. Heating/Cooling - None included.

5. Plumbing - None included

6. Electrical Installation - Includes high quality fixtures and wiring.

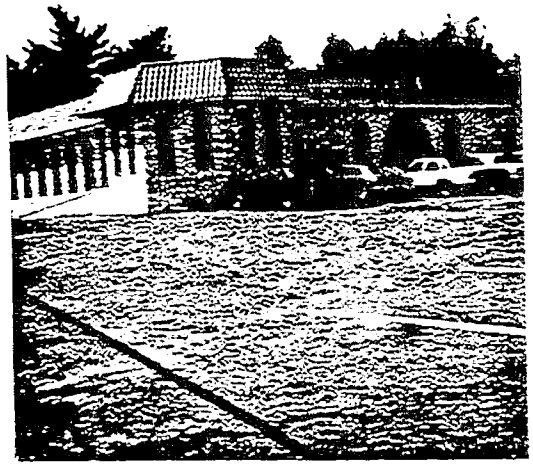
7. Sprinkler System - None included.

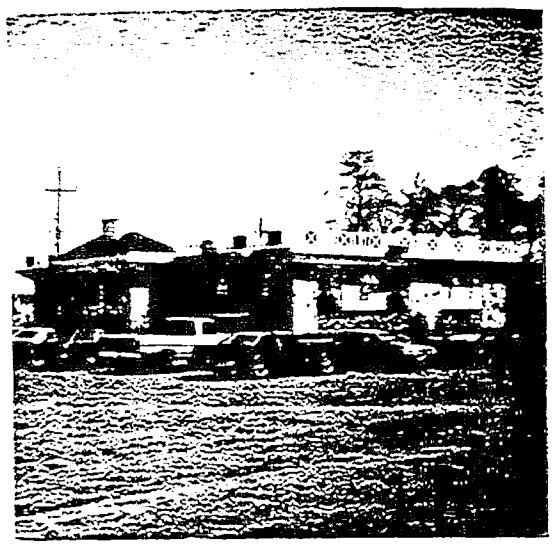
8. Standard Building Accessories - None included.

9. Standard Exterior Accessories - None included.

NOTES:
Depreciation Schedules: Class 136 - Table D-IV
Class 137 - Table D-V
Base Cost Schedules: Class 136 - Page II - 85
Class 137 - Page II - 85
For Cost Conversion Factors - See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

CLASS 138: CUSTOM BUILT DINER-RESTAURANTS





BASE SPECIFICATIONS FOR CLASS

Size: Varies according to customers specifications.

Materials: BELOW AVERAGE GRADE: This class applies to the old style diners commonly referred to as railroad type dining cars.

AVERAGE GRADE: Foundation of reinforced concrete or masonry stub walls and concrete spread footings. Structual steel supporting frame, wood frame walls and roof with asphalt shingles or steel deck. Exterior walls brick and glass, average quality quarry tile or equivalent flooring in kitchen and counter areas, average quality carpeting in dining areas. Combined heating and cooling and average quality fixtures and wiring.

GOOD GRADE: Foundation of reinforced concrete or masonry stub walls and concrete spread footings. Structual steel frame, steel sheet walls and roof. Exterior walls of good quality brick or stone and glass, good quality quarry tile or terrazzo floors in kitchen and counter areas, good quality carpet in dining areas. Combined heating and cooling and good quality fixtures and wiring.

BASE COST PER SQUARE FOOT GROUND AREA

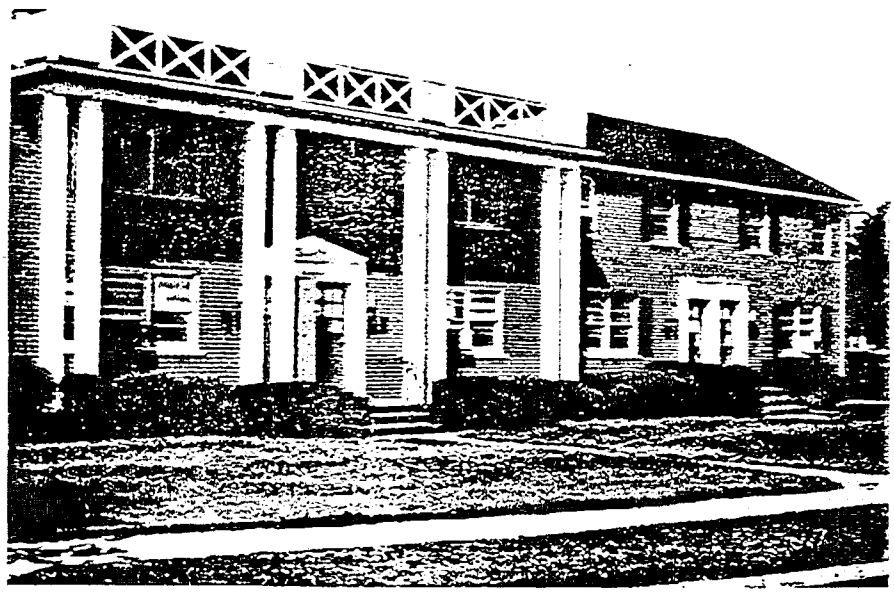
	Below Average	Average	Good
1. Dining room, booth and counter areas.	$30.00	$48.50	$57.00
2. Kitchen, supply and toilet room unit including all built-in equipment and toilet room fixtures.	$30.00	$47.00	$55.50

EFFECTIVE AGE DEPRECIATION DEDUCTION TABLE

Age in Years	Percent	Age in Years	Percent	Age in Years	Percent
1	3	11	32.5	21	54
2	6	12	35	22	56
3	9	13	37.5	23	58
4	12	14	40	24	60
5	15	15	42.5	25	61.5
6	18	16	45	26	63
7	21	17	47	27	64.5
8	24	18	49	28	66
9	27	19	51	29	67.5
10	30	20	52	30	70

Notes: The above costs are only applicable to factory built sectionsof a diner-restaurant. On-site additions to the diner-restaurant should be valued by using appropriate classes and costs found elsewhere in this Manual.
For adding a basement, refer to classes 110 and 111.
Cost Conversion Data: Table C-5, See Page II-153.
Adjustments to Base Specifications, Pages II-90 through II-106
Obsolescence Guides, Page I-109.

Class 145 — Typical Photographs



CLASS 145: GARDEN APARTMENTS

BASE SPECIFICATIONS OF CLASS

1. Structural Shell

   Foundation: Reinforced concrete or masonry stub walls and concrete spread footings.

   Floor: First Floor - Concrete slab on grade; Upper Floors - Plywood or softwood sheathing.

   Frame: Wood joists, studs, plates, rafters, etc., or dimension lumber for walls, floors and roof or interior masonry supporting walls for floor and roof.

   Roof: Plywood or softwood sheathing with insulation and built-up roofing or shingles.

2. Exterior Wall Finish - Wood, asphalt, asbestos or equivalent siding on light wood frame, or concrete block, structural clay tile or equivalent back-up walls.

3. Interior Finish - Includes ceilings, partitions, walls, doors, floor finishes, painting, millwork and cabinets for all finished area.

4. Heating/Cooling - None included.

5. Plumbing - Includes one 3-fixture bath and kitchen sink in each apartment.

6. Electrical Installation - Includes fixtures outlets and wiring.

7. Sprinkler System - None included.

8. Standard Building Accessories - Range/Oven included in each apartment.

9. Standard Exterior Accessories - None included.

NOTES:

Depreciation Schedules	Class 145 - Low Quality - Table D-III
	Class 145 - Average Quality - Table D-IV
	Class 145 - High Quality - Table D-IV
Adjustment Factors:	Brick Factor - 1.15
	Stone Factor - 1.30
Base Cost Schedule:	Class 145 - Page II - 86

For Cost Conversion Factors - See Page II - 153
Adjustments to Base Specifications - Pages II - 90 thru II - 106
Obsolescence Guides - Page I - 109

REPRINTED 3/83

COMMERCIAL BASE COSTS

ADDED 4/79

CLASS 101: BASIC LIGHT-WOOD FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$9.94	$12.58	$15.46	$18.56	$21.89	$25.45	$29.24	$33.25	$37.50	$41.98	$.75
6	9.25	11.66	14.27	17.09	20.11	23.33	26.75	30.37	34.20	38.23	.67
7	8.76	11.00	13.43	16.04	18.83	21.81	24.97	28.31	31.84	35.55	.62
8	8.39	10.51	12.80	15.25	17.88	20.67	23.64	26.77	30.07	33.54	.58
9	8.11	10.13	12.31	14.64	17.14	19.79	22.60	25.57	28.70	31.98	.55
10	7.88	9.82	11.91	14.15	16.54	19.08	21.77	24.61	27.60	30.73	.52
12	7.53	9.36	11.32	13.42	15.65	18.02	20.53	23.17	25.94	28.86	.49
14	7.29	9.03	10.90	12.89	15.02	17.26	19.64	22.14	24.77	27.52	.46
16	7.10	8.78	10.58	12.50	14.54	16.70	18.97	21.37	23.88	26.52	.44
18	6.96	8.59	10.34	12.19	14.17	16.25	18.45	20.77	23.19	25.73	.42
20	6.85	8.44	10.14	11.95	13.87	15.90	18.04	20.29	22.64	25.11	.41
25	6.64	8.16	9.79	11.51	13.34	15.26	17.29	19.42	21.65	23.99	.39
30	6.50	7.98	9.55	11.22	12.98	14.84	16.79	18.85	20.99	23.24	.37
40	6.33	7.75	9.25	10.85	12.53	14.31	16.17	18.12	20.17	22.30	.36
50	6.23	7.61	9.08	10.63	12.27	13.99	15.80	17.69	19.67	21.74	.34
60	6.16	7.52	8.96	10.48	12.09	13.78	15.55	17.40	19.34	21.36	.34

DEPRECIATION SCHEDULE - Table D-IV
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 102: BASIC HEAVY-TIMBER FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$12.62	$16.57	$20.66	$24.90	$29.28	$33.81	$38.49	$43.30	$48.27	$53.38	$.85
6	11.68	15.06	18.57	22.20	25.96	29.84	33.85	37.98	42.24	46.62	.73
7	11.00	13.98	17.07	20.28	23.59	27.01	30.54	34.18	37.93	41.79	.64
8	10.49	13.17	15.95	18.83	21.81	24.88	28.06	31.33	34.70	38.17	.58
9	10.10	12.54	15.08	17.71	20.42	23.23	26.13	29.11	32.19	35.36	.53
10	9.78	12.04	14.38	16.81	19.32	21.91	24.58	27.34	30.18	33.10	.49
12	9.31	11.28	13.34	15.46	17.66	19.93	22.27	24.68	27.17	29.73	.43
14	8.97	10.74	12.59	14.50	16.47	18.51	20.61	22.78	25.01	27.31	.38
16	8.71	10.34	12.03	13.77	15.58	17.45	19.37	21.36	23.40	25.50	.35
18	8.52	10.03	11.59	13.21	14.89	16.62	18.41	20.25	22.14	24.09	.33
20	8.36	9.77	11.24	12.76	14.33	15.96	17.63	19.36	21.14	22.97	.31
25	8.07	9.32	10.61	11.95	13.34	14.77	16.24	17.76	19.33	20.94	.27
30	7.88	9.02	10.20	11.41	12.67	13.97	15.32	16.70	18.12	19.59	.25
40	7.65	8.64	9.67	10.74	11.84	12.98	14.16	15.37	16.62	17.90	.21
50	7.50	8.41	9.36	10.33	11.34	12.39	13.46	14.57	15.71	16.89	.20
60	7.41	8.26	9.15	10.07	11.01	11.99	13.00	14.04	15.11	16.21	.18

DEPRECIATION SCHEDULE - Table D-IV
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 103: BASIC LOAD-BEARING MASONRY FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$9.21	$14.49	$21.32	$29.72	$39.69	$51.22	$64.31	$78.97	$95.20	$112.99	$2.97
6	8.75	13.42	19.44	26.82	35.56	45.65	57.10	69.90	84.05	99.56	2.59
7	8.41	12.65	18.10	24.75	32.61	41.67	51.94	63.41	76.09	89.98	2.31
8	8.16	12.08	17.09	23.20	30.40	38.69	48.07	58.55	70.12	82.78	2.11
9	7.97	11.64	16.31	21.99	28.68	36.37	45.07	54.77	65.48	77.19	1.95
10	7.81	11.28	15.69	21.03	27.30	34.51	42.66	51.74	61.76	72.72	1.83
12	7.58	10.75	14.75	19.58	25.24	31.73	39.05	47.21	56.19	66.00	1.64
14	7.41	10.37	14.08	18.54	23.76	29.74	36.47	43.96	52.21	61.21	1.50
16	7.29	10.08	13.57	17.77	22.66	28.25	34.54	41.53	49.22	57.61	1.40
18	7.19	9.86	13.18	17.16	21.80	27.09	33.04	39.64	46.90	54.82	1.32
20	7.11	9.68	12.87	16.68	21.11	26.16	31.83	38.13	45.04	52.58	1.26
25	6.97	9.36	12.30	15.81	19.87	24.49	29.67	35.41	41.70	48.55	1.14
30	6.88	9.14	11.93	15.23	19.04	23.38	28.23	33.59	39.47	45.87	1.07
40	6.76	8.88	11.46	14.50	18.01	21.99	26.42	31.32	36.69	42.51	.97
50	6.69	8.72	11.18	14.07	17.39	21.15	25.34	29.96	35.01	40.50	.92
60	6.64	8.61	10.99	13.78	16.98	20.59	24.62	29.05	33.90	39.16	.88

DEPRECIATION SCHEDULE - Table D-V
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.85

REVISED 4/79

CLASS 104: BASIC REINFORCED CONCRETE FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$16.00	$25.72	$36.77	$49.14	$62.84	$77.87	$94.23	$111.92	$130.94	$151.28	$3.39
6	14.62	22.95	32.44	43.11	54.94	67.94	82.11	97.44	113.95	131.63	2.95
7	13.63	20.97	29.35	38.80	49.29	60.84	73.45	87.10	101.82	117.58	2.63
8	12.89	19.48	27.04	35.56	45.06	55.52	66.95	79.35	92.72	107.05	2.39
9	12.32	18.33	25.24	33.05	41.76	51.38	61.90	73.32	85.64	98.86	2.20
10	11.86	17.40	23.79	31.04	39.13	48.07	57.85	68.49	79.98	92.31	2.06
12	11.17	16.02	21.63	28.02	35.17	43.10	51.79	61.25	71.48	82.48	1.83
14	10.67	15.02	20.09	25.86	32.35	39.55	47.46	56.08	65.41	75.46	1.67
16	10.30	14.28	18.93	24.25	30.23	36.89	44.21	52.20	60.86	70.19	1.56
18	10.01	13.70	18.03	22.99	28.59	34.82	41.68	49.19	57.32	66.10	1.46
20	9.78	13.24	17.31	21.98	27.27	33.16	39.66	46.77	54.49	62.82	1.39
25	9.37	12.41	16.01	20.17	24.90	30.18	36.03	42.43	49.40	56.92	1.26
30	9.09	11.86	15.15	18.97	23.32	28.19	33.60	39.54	46.00	52.99	1.17
40	8.75	11.16	14.07	17.46	21.34	25.71	30.57	35.92	41.75	48.08	1.06
50	8.54	10.75	13.42	16.55	20.15	24.22	28.75	33.74	39.20	45.13	.99
60	8.40	10.47	12.98	15.95	19.36	23.23	27.54	32.30	37.51	43.16	.94

DEPRECIATION SCHEDULE - Table D-VI
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.85

REVISED 4/79

CLASS 105: BASIC STEEL-FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$14.46	$21.63	$30.98	$42.50	$56.21	$72.10	$90.16	$110.41	$132.84	$157.45	$4.10
6	13.14	19.08	26.99	36.88	48.75	62.59	78.41	96.21	115.98	137.72	3.63
7	12.19	17.25	24.15	32.87	43.42	55.80	69.36	86.06	103.93	123.63	3.28
8	11.48	15.89	22.01	29.86	39.43	50.71	63.72	78.45	94.90	113.06	3.03
9	10.93	14.82	20.35	27.52	36.32	46.75	58.82	72.53	87.87	104.84	2.83
10	10.48	13.97	19.03	25.65	33.83	43.59	54.91	67.79	82.25	98.27	2.67
12	9.82	12.69	17.03	22.84	30.10	38.84	49.03	60.69	73.81	88.40	2.43
14	9.35	11.78	15.61	20.83	27.44	35.44	44.83	55.62	67.79	81.36	2.26
16	8.99	11.10	14.54	19.32	25.44	32.90	41.69	51.81	63.27	76.07	2.13
18	8.71	10.57	13.71	18.15	23.89	30.92	39.24	48.85	59.76	71.96	2.03
20	8.49	10.14	13.05	17.22	22.65	29.33	37.28	46.48	56.95	68.67	1.95
25	8.09	9.38	11.85	15.53	20.41	26.48	33.75	42.22	51.89	62.76	1.81
30	7.83	8.86	11.06	14.41	18.92	24.58	31.40	39.38	48.52	58.81	1.72
40	7.50	8.23	10.06	13.00	17.05	22.21	28.46	35.83	44.30	53.88	1.60
50	7.30	7.84	9.46	12.16	15.93	20.78	26.70	33.62	41.77	50.92	1.53
60	7.16	7.59	9.07	11.60	15.19	19.84	25.53	32.28	40.09	48.95	1.48

DEPRECIATION SCHEDULE - Table D-VII
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.85

REVISED 4/79

CLASS 106: BASIC FIREPROOF-STEEL FRAME BUILDING

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET * 12	24	36	48	60	72	84	96	108	120	+
5	$16.00	$27.16	$39.65	$53.46	$68.60	$85.07	$102.87	$122.00	$142.46	$164.24	$3.63
6	14.62	24.39	35.32	47.43	61.00	75.14	90.75	107.52	125.47	144.59	3.19
7	13.63	22.41	32.23	43.12	55.05	68.04	82.09	97.18	113.34	130.54	2.87
8	12.89	20.92	29.92	39.88	50.82	62.72	75.59	89.43	104.24	120.01	2.63
9	12.32	19.77	28.12	37.37	47.52	58.58	70.54	83.40	97.16	111.82	2.44
10	11.86	18.84	26.67	35.36	44.89	55.27	66.49	78.57	91.50	105.27	2.30
12	11.17	17.46	24.51	32.34	40.93	50.30	60.43	71.33	83.00	95.44	2.07
14	10.67	16.46	22.97	30.18	38.11	46.75	56.10	66.16	76.93	88.42	1.91
16	10.30	15.72	21.81	28.57	35.99	44.09	52.85	62.28	72.38	83.15	1.80
18	10.01	15.14	20.91	27.31	34.35	42.02	50.32	59.27	68.84	79.06	1.70
20	9.78	14.68	20.19	26.30	33.03	40.36	48.30	56.85	66.01	75.78	1.63
25	9.37	13.85	18.89	24.49	30.66	37.38	44.67	52.51	60.92	69.88	1.50
30	9.09	13.30	18.03	23.29	29.08	35.39	42.24	49.62	57.52	65.95	1.41
40	8.75	12.60	16.95	21.78	27.10	32.91	39.21	46.00	53.27	61.04	1.30
50	8.54	12.19	16.30	20.87	25.91	31.42	37.39	43.82	50.72	58.09	1.23
60	8.40	11.91	15.86	20.27	25.12	30.43	36.18	42.38	49.03	56.12	1.18

DEPRECIATION SCHEDULE - Table D-VII
+ ADD TO 120' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT
* INTERPOLATE FOR HEIGHTS NOT SPECIFIED - SEE PAGE I-95

FOR HIGH QUALITY, MULTIPLY BY 1.45
FOR ABOVE AVERAGE QUALITY, MULTIPLY BY 1.20
FOR LOW QUALITY, MULTIPLY BY 0.75

REVISED 4/79

CLASS 107: BASIC LIGHTWEIGHT-STEEL FRAME BUILDING WITH GALVANIZED STEEL EXTERIOR

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET 8	10	12	14	16	18	20	22	24	+
5	$10.12	$11.34	$12.56	$13.78	$15.00	$16.22	$17.44	$18.66	$19.88	$1.22
6	9.31	10.33	11.34	12.36	13.37	14.39	15.41	16.42	17.44	1.02
7	8.73	9.60	10.47	11.34	12.21	13.08	13.96	14.83	15.70	.87
8	8.30	9.06	9.82	10.58	11.34	12.10	12.87	13.63	14.39	.76
9	7.96	8.63	9.31	9.99	10.67	11.34	12.02	12.70	13.37	.67
10	7.69	8.30	8.91	9.51	10.12	10.73	11.34	11.95	12.56	.61
12	7.28	7.79	8.30	8.80	9.31	9.82	10.33	10.84	11.34	.50
14	6.99	7.43	7.86	8.30	8.73	9.17	9.60	10.04	10.47	.43
16	6.77	7.15	7.53	7.91	8.30	8.68	9.06	9.44	9.82	.38
18	6.60	6.94	7.28	7.62	7.96	8.30	8.63	8.97	9.31	.34
20	6.47	6.77	7.08	7.38	7.69	7.99	8.30	8.60	8.91	.31
25	6.22	6.47	6.71	6.95	7.20	7.44	7.69	7.93	8.17	.24
30	6.06	6.26	6.47	6.67	6.87	7.08	7.28	7.48	7.69	.21
40	5.86	6.01	6.16	6.31	6.47	6.62	6.77	6.92	7.09	.16
50	5.74	5.86	5.98	6.10	6.22	6.35	6.47	6.59	6.71	.12
60	5.65	5.76	5.86	5.96	6.06	6.16	6.26	6.37	6.47	.10

DEPRECIATION SCHEDULE - Table D-VI
+ ADD TO 24' WALL HEIGHT FOR EACH ADDITIONAL 2' OF HEIGHT

FOR HIGH QUALITY, MULTIPLY BY 1.15
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 108: BASIC LIGHTWEIGHT-STEEL FRAME BUILDING WITH ENAMELED STEEL OR ALUMINUM EXTERIOR

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET 8	10	12	14	16	18	20	22	24	+
5	$11.22	$12.61	$14.00	$15.39	$16.78	$18.17	$19.55	$20.94	$22.33	$1.39
6	10.30	11.46	12.61	13.77	14.93	16.08	17.24	18.40	19.55	1.15
7	9.64	10.63	11.62	12.61	13.60	14.60	15.59	16.58	17.57	.99
8	9.14	10.01	10.88	11.75	12.61	13.48	14.35	15.22	16.08	.86
9	8.76	9.53	10.30	11.07	11.84	12.61	13.38	14.16	14.93	.77
10	8.45	9.14	9.84	10.53	11.22	11.92	12.61	13.31	14.00	.69
12	7.99	8.56	9.14	9.72	10.30	10.88	11.46	12.03	12.61	.58
14	7.65	8.15	8.65	9.14	9.64	10.13	10.63	11.13	11.62	.49
16	7.41	7.84	8.27	8.71	9.14	9.58	10.01	10.44	10.88	.44
18	7.21	7.60	7.99	8.37	8.76	9.14	9.53	9.91	10.30	.39
20	7.06	7.41	7.75	8.10	8.45	8.80	9.14	9.49	9.84	.35
25	6.78	7.06	7.34	7.62	7.89	8.17	8.45	8.73	9.00	.27
30	6.60	6.83	7.06	7.29	7.52	7.75	7.99	8.22	8.45	.23
40	6.37	6.54	6.71	6.89	7.06	7.23	7.41	7.58	7.75	.17
50	6.23	6.37	6.50	6.64	6.78	6.92	7.06	7.20	7.34	.14
60	6.13	6.25	6.37	6.48	6.60	6.71	6.83	6.94	7.06	.12

DEPRECIATION SCHEDULE - Table D-VI
+ ADD TO 24' WALL HEIGHT COST FOR EACH ADDITIONAL 2' OF HEIGHT

FOR HIGH QUALITY, MULTIPLY BY 1.15
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 109: BASIC LIGHTWEIGHT-STEEL FRAME BUILDING WITH INSULATED SANDWICH PANEL EXTERIOR

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET 8	10	12	14	16	18	20	22	24	+
5	$13.43	$15.15	$16.88	$18.61	$20.33	$22.06	$23.79	$25.51	$27.24	$1.73
6	12.27	13.71	15.15	16.59	18.03	19.47	20.91	22.35	23.79	1.44
7	11.45	12.69	13.92	15.15	16.39	17.62	18.85	20.09	21.32	1.23
8	10.84	11.91	12.99	14.07	15.15	16.23	17.31	18.39	19.47	1.08
9	10.36	11.31	12.27	13.23	14.19	15.15	16.11	17.07	18.03	.96
10	9.97	10.84	11.70	12.56	13.43	14.29	15.15	16.02	16.88	.86
12	9.40	10.12	10.84	11.55	12.27	12.99	13.71	14.43	15.15	.72
14	8.98	9.60	10.22	10.84	11.45	12.07	12.69	13.30	13.92	.62
16	8.68	9.22	9.76	10.30	10.84	11.37	11.91	12.45	12.99	.54
18	8.44	8.92	9.40	9.88	10.36	10.84	11.31	11.79	12.27	.48
20	8.24	8.68	9.11	9.54	9.97	10.40	10.84	11.27	11.70	.43
25	7.90	8.24	8.59	8.94	9.28	9.63	9.97	10.32	10.66	.34
30	7.67	7.96	8.24	8.53	8.82	9.11	9.40	9.68	9.97	.29
40	7.38	7.60	7.81	8.03	8.24	8.46	8.68	8.89	9.11	.22
50	7.21	7.38	7.55	7.73	7.90	8.07	8.24	8.42	8.59	.17
60	7.09	7.24	7.38	7.53	7.67	7.81	7.96	8.10	8.24	.14

DEPRECIATION SCHEDULE - Table D-IV
+ ADD TO 24' WALL HEIGHT COST FOR EACH ADDITIONAL 2' OFF HEIGHT

FOR HIGH QUALITY, MULTIPLY BY 1.15
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 110: BASEMENT WITH CONCRETE FIRST FLOOR

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET 8	10	12	14	16	18	20	22	24
5	$22.34	$26.73	$31.12	$35.51	$39.90	$44.29	$48.68	$53.08	$57.47
6	19.41	23.07	26.73	30.39	34.05	37.71	41.37	45.03	48.68
7	17.32	20.46	23.59	26.73	29.87	33.00	36.14	39.27	42.41
8	15.75	18.50	21.24	23.98	26.73	29.47	32.22	34.96	37.71
9	14.53	16.97	19.41	21.85	24.29	26.73	29.17	31.61	34.05
10	13.56	15.75	17.95	20.14	22.34	24.53	26.73	28.92	31.12
12	12.09	13.92	15.75	17.58	19.41	21.24	23.07	24.90	26.73
14	11.05	12.61	14.18	15.75	17.32	18.89	20.46	22.02	23.59
16	10.26	11.63	13.01	14.38	15.75	17.12	18.50	19.87	21.24
18	9.65	10.87	12.09	13.31	14.53	15.75	16.97	18.19	19.41
20	9.16	10.26	11.36	12.46	13.56	14.65	15.75	16.85	17.95
25	8.29	9.16	10.04	10.92	11.80	12.68	13.56	14.43	15.31
30	7.70	8.43	9.16	9.90	10.63	11.36	12.09	12.82	13.56
40	6.97	7.52	8.07	8.62	9.16	9.71	10.26	10.81	11.36
50	6.53	6.97	7.41	7.85	8.29	8.73	9.16	9.60	10.04
60	6.24	6.60	6.97	7.33	7.70	8.07	8.43	8.80	9.16

DEDUCT $1.60 PER SQUARE FOOT
FOR NO CONCRETE FLOOR

FOR HIGH QUALITY, MULTIPLY BY 1.15
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 111: BASEMENT WITH WOOD FIRST FLOOR

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	WALL HEIGHT IN FEET 8	10	12	14	16	18	20	22	24
5	$20.85	$25.33	$29.82	$34.30	$38.78	$43.26	$47.75	$52.23	$56.71
6	17.86	21.60	25.33	29.07	32.80	36.54	40.28	44.01	47.75
7	15.73	18.93	22.13	25.33	28.54	31.74	34.94	38.14	41.34
8	14.13	16.93	19.73	22.53	25.33	28.14	30.94	33.74	36.54
9	12.88	15.37	17.86	20.35	22.84	25.33	27.82	30.31	32.80
10	11.89	14.13	16.37	18.61	20.85	23.09	25.33	27.58	29.62
12	10.39	12.26	14.13	16.00	17.86	19.73	21.60	23.47	25.33
14	9.33	10.93	12.53	14.13	15.73	17.33	18.93	20.53	22.13
16	8.53	9.93	11.33	12.73	14.13	15.53	16.93	18.33	19.73
18	7.90	9.15	10.39	11.64	12.88	14.13	15.37	16.62	17.86
20	7.41	8.53	9.65	10.77	11.89	13.01	14.13	15.25	16.37
25	6.51	7.41	8.30	9.20	10.09	10.99	11.89	12.78	13.68
30	5.91	6.66	7.41	8.15	8.90	9.65	10.39	11.14	11.89
40	5.16	5.72	6.28	6.85	7.41	7.97	8.53	9.09	9.65
50	4.72	5.16	5.61	6.06	6.51	6.96	7.41	7.85	8.30
60	4.42	4.79	5.16	5.54	5.91	6.28	6.66	7.03	7.41

DEDUCT $1.60 PER SQUARE FOOT
FOR NO CONCRETE FLOOR

FOR HIGH QUALITY, MULTIPLY BY 1.15
FOR LOW QUALITY, MULTIPLY BY 0.85

CLASS 112: DOCK-HIGH FOUNDATION INCLUDING FILL

BASE COST PER SQUARE FOOT GROUND AREA

WALL RATIO	BASE COST
5	$6.40
6	5.60
7	5.03
8	4.60
9	4.27
10	4.00
12	3.60
14	3.32
16	3.10
18	2.94
20	2.80
25	2.56
30	2.40
40	2.20
50	2.08
60	2.00

SERVICE STATIONS:

SQ. FT. AREA	BASE COST PER SQUARE FOOT GROUND AREA				
	CLASS 123	CLASS 124	CLASS 125	CLASS 126	CLASS 127
300	$43.04	$55.66	$70.17	$71.39	$82.05
400	35.72	45.61	58.12	59.32	67.94
500	31.33	39.59	50.89	52.07	59.48
600	28.41	35.57	46.07	47.24	53.83
800	24.75	30.55	40.05	41.21	46.78
1000	22.56	27.54	36.43	37.59	42.55
1200	21.09	25.53	34.02	35.17	39.72
1400	20.05	24.10	32.30	33.45	37.71
1600	19.27	23.02	31.01	32.15	36.20
1800	18.66	22.18	30.01	31.15	35.02
2000	18.17	21.51	29.20	30.34	34.08
2200	17.77	20.97	28.55	29.68	33.31
2400	17.44	20.51	28.00	29.14	32.67

CLASS 123 - DEPRECIATION SCHEDULE - Table D-III
CLASS 124 - DEPRECIATION SCHEDULE - Table D-IV
CLASS 125 - DEPRECIATION SCHEDULE - Table D-V
CLASS 126 - DEPRECIATION SCHEDULE - Table D-IV
CLASS 127 - DEPRECIATION SCHEDULE - Table D-V

SPECIALTY BUILDINGS

SQ. FT. AREA	BASE COST PER SQUARE FOOT GROUND AREA				
	CLASS 133	CLASS 134	CLASS 135	CLASS 136	CLASS 137
1000	$25.95	$31.65	$41.80	$43.90	$49.15
1200	24.25	29.10	37.85	39.75	44.55
1400	23.05	27.65	35.95	37.75	42.30
1600	22.15	26.60	34.60	36.35	40.70
1800	21.45	25.75	33.45	35.10	39.30
2000	20.90	25.10	32.65	34.40	38.40
2200	20.45	24.55	31.90	33.55	37.60
2600	20.10	24.10	31.35	32.90	36.85
3000	19.80	23.75	30.90	32.45	36.35
3500	19.55	23.45	30.50	32.05	35.90
4000	19.40	23.25	30.20	31.70	35.55
4500	19.30	23.15	30.05	31.55	35.30
5000	19.20	23.05	29.95	31.45	35.20

CLASS 133 - DEPRECIATION SCHEDULE - Table D-III
CLASS 134 - DEPRECIATION SCHEDULE - Table D-IV
CLASS 135 - DEPRECIATION SCHEDULE - Table D-V
CLASS 136 - DEPRECIATION SCHEDULE - Table D-IV
CLASS 137 - DEPRECIATION SCHEDULE - Table D-V

Notes Applicable to Apartment Building and Garden Apartments

A. Method of Determining Average Square Feet Per Apartment for Each Building

1. Compute gross area in square feet for each floor occupied by apartments.

2. Add areas of all floors to arrive at total gross area for building.

3. Total gross area per building divided by number of apartments in entire building equals average square feet per apartment.

B. Method of Determining Average Number of Rooms per Apartment in Each Building

1. Total the number of rooms in each building.

2. Divide the total number of rooms in each building by the number of apartment units in each building.

3. If the result exceeds an even number, use the next highest number (2.3 use 3).

C. Room Count to be Determined in Accordance with the Following Schedule

Living Room:	One room
Bedroom:	One room
Kitchen:	One-half room when area is less than 80 square feet, one room if over 80 square feet when full dining room is provided. Combination of kitchen and dinettes will be counted as one room. Pullman kitchenettes located in recess off a room, with or without doors, should not be included in the room count.
Dining Room:	One full room when containing 100 square feet or more.
Foyers:	One-half room if containing 75 square feet or more where used for dining when no dinette is provided in conjunction with the kitchen. One room if 85 square feet or more and dinette or dining room is provided elsewhere.
Bathroom:	Not included in room count.

D. Wall Factor Procedures for Garden Apartments (Class 145)

1. Costs provided for this class are for average quality frame construction.

2. If Brick or Stone construction is found the costs provided must be factored to reflect this variation (Brick 1.15, Stone 1.30).

3. This is done in section 1 of the Property Record Card in the column entitled Apt. Factor.

4. This column is used exclusively for Class 145, permitting the appraiser to make adjustments for brick or stone in a fashion similar to that provided on the Residential Property Record Card.

CLASS 145: GARDEN APARTMENTS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE COST PER SQUARE FOOT GROUND AREA

Two Story

Number of Units	Average Number of Rooms per Apartment in Each Building				
	2	3	4	5	6
4	$47.60	$42.20	$39.30	$37.25	$35.60
6	45.95	40.70	37.90	35.90	34.45
8	44.50	39.40	36.70	34.75	33.40
10	43.65	38.65	36.00	34.10	32.75
12	43.10	38.15	35.55	33.65	32.35
14	42.55	37.65	35.10	33.20	31.95
16	42.15	37.30	34.75	32.90	31.65
18	41.85	37.05	34.50	32.65	31.40
20	41.55	36.80	34.25	32.45	31.20
22	41.30	36.55	34.05	32.35	31.00
24	41.10	36.35	33.90	32.10	30.85
26	40.90	36.15	33.75	31.95	30.70
28	40.75	36.00	33.60	31.80	30.60
30-39	40.55	35.90	33.50	31.70	30.50
40 & over	40.40	35.75	33.30	31.55	30.35

Three Story

Number of Units	Average Number of Rooms per Apartment in Each Building				
	2	3	4	5	6
4	$73.15	$64.85	$60.40	$57.25	$54.70
6	70.30	62.25	58.00	54.90	52.70
8	67.65	59.90	55.80	52.85	50.80
10	65.95	58.40	54.40	51.50	49.45
12	64.55	57.25	53.35	50.50	48.55
14	63.65	56.30	52.50	49.65	47.80
16	62.85	55.60	51.80	49.05	47.20
18	62.20	55.05	51.25	48.50	46.65
20	61.55	54.50	50.70	48.05	46.20
22	60.95	53.95	50.25	47.60	45.75
24	60.45	53.45	49.85	47.20	45.35
26	59.95	53.00	49.45	46.85	45.00
28	59.55	52.60	49.10	46.45	44.70
30-39	59.05	52.25	48.75	46.15	44.40
40 & over	58.40	51.50	48.10	45.60	43.85

One Story Extension with Apartment Finish

Average Number of Rooms per Apartment in Each Building				
2	3	4	5	6
$20.21	$19.18	$18.62	$18.22	$18.00

Depreciation Schedules - For Low Quality - Table D-III, For Average Quality - Table D-IV
For High Quality - Table D-IV

Cost Adjustment Factors: Brick 1.15
Stone 1.30

NOTE: Cost given are for average quality
For High Quality, multiply by quality factor of 1.20.
For Low Quality, multiply by quality factor of 0.85.

NOTES APPLICABLE TO APARTMENT BUILDINGS

COMMERCIAL AND INDUSTRIAL
ADJUSTMENTS TO BASE COSTS

COMMERCIAL AND INDUSTRIAL BUILDINGS

ADJUSTMENTS TO BASE COST

1. STRUCTURAL SHELL - included in base cost. NOTE - For floor and roof adjustments, see Standard Building Accessories.

2. EXTERIOR WALL FINISH - Base cost per square foot wall area.

	Type	Quality Low	Average	High
1	Vertical Grooved Plywood, Galvanized Steel Siding or Equivalent	$ 1.42	$ 1.89	$ 2.36
2	Wood Siding, Asbestos Siding, Structural Clay Tile, Steel sun or Solar Screen or Equivalent	2.13	2.84	3.55
3	Cement Block or Equivalent	2.13	2.84	3.55
4	Tilt-up Concrete Panels, Enameled Steel, Aluminum Siding Over Wood Sheathing, Stucco Over Wood, Marble-crete, Aluminum Solar Screen or equivalent	2.84	3.78	4.73
5	Common Brick (With Back-up Either Common Brick, Cement Block or Structural Clay Tile), Metal Sandwich Panels, Industrial Window Walls, Giant Brick, Ribbed Block, Split Block	3.00	4.00	5.00
6	Face Brick on Wood Sheathing	3.00	4.00	5.00
7	Face Brick (With Back-up of Either Common Brick, Cement Block, Structural Clay Tile), Glazed Cement Block, Solid Reinforced Concrete, Ceramic Tile or Equivalent	3.60	4.80	6.00
8	Common Brick on Reinforced Concrete	4.20	5.60	7.00
9	Face Brick on Reinforced Concrete	4.80	6.40	8.00
10	Precast Concrete Panels with Exposed Aggregate, Glass Panels or Equivalent	6.44	9.61	12.78
11	Metal and Glass Curtain Wall Panels	10.79	16.11	21.43
12	Stone (Rubble, Cobble, Ashlar or Equivalent	4.29	6.40	8.52
13	Limestone, Slate or Equivalent	6.44	9.61	12.78
14	Marble or Equivalent	9.65	14.41	19.16
15	Polished Granite or Equivalent	14.41	19.21	24.01
16	Store Fronts (Low Quality - Wood or Inexpensive Metal) (Average Quality - Extruded Metal) High Quality - Better Quality Metal with Display Space, etc.)	8.95	17.90	26.85

NOTE:

(a) For Classes 107, 108, 109 with special wall types, deduct only for missing walls; 107 - galvanized steel siding; 108 - enameled steel or aluminum siding; 109 - metal sandwich panels.

(b) The above costs assume normal window and door openings. Buildings with minimum openings, multiply above costs by .85.

Commercial-Industrial Adjustments to Base Cost - (Con't)

3. INTERIOR FINISH - Base cost per square foot floor area

	Type	Quality				
		Low	Below Average	Average	Above Average	High
1	Apartments, average size per unit					
	300 sq. ft.	$6.79	$9.05	$11.31	$13.58	$15.84
	400 sq. ft.	5.60	7.47	9.33	11.20	13.07
	500 sq. ft.	4.89	6.52	8.15	9.77	11.40
	600 sq. ft.	4.41	5.88	7.35	8.81	10.30
	700 sq. ft.	4.07	5.43	6.79	8.15	9.50
	800 sq. ft.	3.82	5.09	6.36	7.64	8.91
	900 sq. ft.	3.62	4.83	6.03	7.24	8.45
	1000 sq. ft.	3.46	4.62	5.77	6.92	8.08
2	Apt. Utility Area	2.04	2.72	3.39	4.07	4.75
3	Motel, Hotel or Equivalent	4.07	5.43	6.79	8.15	9.50
4	Small Offices or Equivalent	4.07	5.43	6.79	8.15	9.50
5	Large Open Offices, Banquet Hall or Equivalent	2.55	3.39	4.24	5.09	5.94
6	Professional Offices or Equivalent	5.09	6.79	8.48	10.18	11.88
7	Clinics or Equivalent	6.66	8.25	9.94	11.63	13.22
8	Discount Stores, Bowling Alleys, Theatre, Supermarket or Equivalent	2.49	3.31	4.14	4.97	5.80
9	Retail Stores, Restaurants, Bars or Equivalent	3.48	4.64	5.80	6.96	8.12
10	Bank or Equivalent	6.96	9.28	11.60	13.92	16.24
11	Warehouse	0.50	0.66	0.83	0.99	1.16
12	Light Mfg. Area	2.98	3.98	4.97	5.97	6.96
13	Heavy Mfg. Area	4.97	6.63	8.28	9.94	11.60

Commercial-Industrial Adjustments to Base Cost - (Con't)

4. HEATING AND COOLING - Base cost per square foot floor area.

	Type	Floor Area 5000	10000	25000	50000	100000 & over
1	Apartment					
1	Hot Water	$2.32	$2.17	$2.06	$1.97	$1.92
2	Forced Hot Air	1.88	1.74	1.62	1.54	1.48
3	Unit Heater	1.45	1.30	1.19	1.10	1.05
4	Central Cooling	1.96	1.88	1.83	1.78	1.76
5	Package Cooling	1.59	1.52	1.46	1.42	1.39
6	Central Combined	4.20	3.96	3.77	3.62	3.54
7	Package Combined	3.77	3.53	3.33	3.19	3.10
2	Commercial					
1	Hot Water	1.96	1.84	1.74	1.67	1.62
2	Forced Hot Air	1.59	1.47	1.38	1.30	1.26
3	Unit Heater	1.23	1.11	1.01	0.94	0.50
4	Central Cooling	1.63	1.57	1.52	1.49	1.46
5	Package Cooling	1.34	1.28	1.23	1.20	1.17
6	Central Combined	3.52	3.31	3.15	3.02	2.95
7	Package Combined	3.23	3.02	2.86	2.73	2.66
3	Industrial					
1	Hot Water	1.45	1.35	1.28	1.22	1.18
2	Forced Hot Air	1.16	1.06	0.99	0.93	0.89
3	Unit Heater	0.94	0.85	0.77	0.71	0.68
4	Central Cooling	1.23	1.18	1.15	1.12	1.10
5	Package Cooling	1.01	0.97	0.93	0.90	0.88
6	Central Combined	2.54	2.39	2.28	2.19	2.14
7	Package Combined	2.25	2.10	1.99	1.90	1.85

NOTE - If no boiler in building for Types 1, multiply by 0.85.

For high quality, multiply by 1.25
For low quality, multiply by 0.75

		Cost per Unit					
Minimum Industrial Unit Heater	Small	$435	Medium	$725	Large	$1015
*Individual Wall Sleeve Unit	Small	IW01 300	Medium	IW02 500	Large	IW03 700

* This item is recorded under standard building accessories portion of the commercial property record card.

Commercial-Industrial Adjustments to Base Cost - (Con't)

5. PLUMBING - Base cost per fixtures

	Type	Quality Low	Average	High
1	Apartment Fixture	$300	$ 375	$ 450
2	Commercial Fixture	450	675	900
3	Industrial Fixture (Circular and Semi-Circular wash sinks and multi-stall showers.)	740	1,110	1,480

6. ELECTRICAL - Base cost per square foot floor area

	Type	Light Intensity	Quality Low	Average	High
1	Apartment	Bright	$1.50	$2.25	$3.00
		Adequate	1.00	1.50	2.00
		Minimum	0.70	1.00	1.35
2	Commercial	Bright	2.25	3.40	4.50
		Adequate	1.50	2.25	3.00
		Minimum	1.00	1.50	2.00
3	Industrial	Bright	1.75	2.65	3.50
		Adequate	1.15	1.75	2.30
		Minimum	0.75	1.15	1.55
		Inadequate	0.50	--	--

7. SPRINKLERS - Base Cost per square foot floor area

	Type	Area Served 5000	7000	10000	15000	20000 & over
1	Apartment System	$1.26	$1.14	$1.04	$0.97	$0.86
2	Commercial System	1.19	1.06	0.97	0.89	0.79
3	Industrial System	1.11	0.99	0.89	0.82	0.71

NOTE - For high quality, multiply by 1.10
For low quality, multiply by 0.90

8 STANDARD BUILDING ACCESSORIES -

SPECIAL PURPOSE DOORS -

Pedestrian Type - Base cost per unit

Type	Quality Low	Average	High
SD01 Revolving (per unit)	$5910	$7880	$9850
SD02 Auto Swing (per leaf)	1425	1900	2375
SD03 Auto Slide (per leaf)	2835	3780	4725
SD04 Air Curtain (per leaf)	360	480	600

Vehicle and Industrial Type - Base cost per square foot door area

Type	Quality Low	Average	High
SD05 Wood Sectional	$ 2.84	$ 3.78	$ 4.73
SD06 Steel Sectional	4.03	5.37	6.71
SD07 Steel Roll-up	6.71	8.95	11.19
SD08 Steel Hangar	16.11	21.48	26.85
SD09 Electric Door Operator (per unit)	.00	600.00	750.00

FLOOR ADJUSTMENTS - Base Cost per square foot floor area

Type	Low	Quality Average	Above Avg.	High
FA01 Concrete Slab	$1.36	$1.60	$1.92	$2.32
FA02 Wood Deck	2.41	2.84	3.41	4.12
FA03 Concrete Deck	2.93	3.44	4.13	4.99
FA04 Reinforced Concrete	4.15	4.88	5.86	7.08

BALCONIES AND DECKS - Base Cost per square foot floor area

Type	Quality Low	Average	High
BD01 Wood	$3.40	$4.54	$5.67
BD02 Concrete	3.60	4.80	6.00
BD03 Steel and Concrete	5.10	6.80	8.51

8. STANDARD BUILDING ACCESSORIES - (Con't)

FLOOR GRATING - Base cost per square foot floor grating

Type	Quality Low	Average	High
FG01 Steel	$4.30	$7.16	$10.02
FG02 Aluminum	5.37	8.95	12.53
FG03 Plastic	6.44	10.74	15.04

ROOF ADJUSTMENTS - Base cost per square foot roof area

Type	Quality Low	Average	Above Avg.	High
RA01 Light Wood	$2.17	$2.55	$3.06	$3.70
RA02 Heavy Timber	2.41	2.84	3.41	4.12
RA03 Steel Deck	2.36	2.77	3.32	4.02
RA04 Concrete	3.33	3.92	4.70	5.63
RA05 Galvanized Steel	1.52	1.79	2.15	2.60
RA06 Enameled Steel	1.90	2.24	2.69	3.25
RA07 Insulated Panels	2.66	3.13	3.76	4.54
RA08 Precast Concrete	1.97	2.32	2.78	3.36
RA09 Canopies, etc.	2.84	5.67	8.51	

WIDE SPAN ROOFING - Additional cost per square foot roof area when clear span width is 40' or more

Type	Span Width 40'	60'	80'	100'	120'
WR01 Wood Truss	$1.04	$1.13	$1.23	$1.32	$1.42
WR02 Wood Glulam Beam	1.25	1.36	1.47	1.59	1.70
WR03 Steel Truss	1.28	1.39	1.51	1.63	1.74
WR04 Prestressed Concrete	1.60	2.40	3.20	4.00	4.80

NOTE - For high quality, multiply by 1.15
For low quality, multiply by 0.85

8. STANDARD BUILDING ACCESSORIES - (Con't)

BANK VAULTS AND DOORS-

Bank Vaults - Base cost per square foot floor area

Type	Floor Area 100	150	200	250	300
BV01 Cash Type	$81	$63	$54	$48	$45
BV02 Record Type	36	30	27	25	24

Vault Doors - Base cost per square foot door area

Type	2"	3"	4"	5"	6"	7"	8"	9"	10"
BV03 Cash Type	$788	$913	$1038	$1163	$1289	$1414	$1539	$1665	$1790
BV04 Record Type	89	107	125	143	161	179	197	215	233

BANK ACCESSORIES - Base cost per item

Type	Quality Low	Average	High
BA01 Drive-in Window	$4300	$5375	$6450
BA02 Night Depository	3580	4475	5370
BA03 Pneumatic Tube System (each station)	9000	12000	15000

COLD STORAGE ROOMS - Base cost per square foot floor area (Excluding refrigeration equipment)

Type	Temperature Low	High	Square Foot Floor Area 100	200	300	400	500	600
CS01 Cooler	35	60	$22.09	$14.20	$11.57	$10.26	$ 9.47	$ 8.94
CS02 Chiller	5	35	29.98	18.94	15.25	13.41	12.31	11.57
CS03 Freezer	-15	5	37.87	23.67	18.94	16.57	15.15	14.20
CS04 Quick Freeze	-45	-15	45.76	28.40	22.62	19.72	17.99	16.83

Commercial-Industrial Adjustments to Base Cost - (Con't)

8. STANDARD BUILDING ACCESSORIES - (Con't)

ESCALATORS - Base cost per flight

Type	Height	24"	30"	36"	42"	48"
EF01	10'	$40,750	$47,250	$54,000	$60,500	$67,250
EF02	12'	43,500	50,250	56,750	63,500	70,000
EF03	14'	46,500	53,000	59,750	66,250	73,000
EF04	16'	49,250	55,750	62,500	69,000	75,750
EF05	18'	52,000	58,750	65,250	72,000	78,500
EF06	20'	55,000	61,500	68,250	74,750	81,500

NOTE - For high quality, multiply by 1.20
For low quality, multiply by 0.80

PASSENGER AND FREIGHT ELEVATORS - Base cost per elevator

Type	Description	500 lb. Capacity	1,000 lb. Capacity	1,500 lb. Capacity	2,000 lb. Capacity	2,500 lb. Capacity	3,000 lb. Capacity
EV01	Passenger - Automatic, Electric, Local	$14,000	$20,500	$26,750	$33,250	$39,500	$45,750
EV02	Passenger - Automatic, Electric, Express	--	--	--	64,500	71,000	77,250
EV03	Passenger - Manual, Electric, Local	11,850	17,250	23,000	28,500	34,000	39,500
EV04	Passenger - Manual, Electric,Express	--	--	--	58,500	64,000	69,500
EV05	Passenger - Hydraulic	8,000	12,500	17,250	22,000	26,750	31,500

Type	Description	4,000 lb. Capacity	5,000 lb. Capacity	6,000 lb. Capacity	7,000 lb. Capacity	8,000 lb. Capacity	10,000 lb. Capacity
EV01	Passenger - Automatic, Electric, Local	$58,500	$71,000	$83,750	$96,250	$109,000	$134,250
EV02	Passenger - Automatic Electric, Express	90,000	102,500	115,250	127,750	140,500	165,750
EV03	Passenger - Manual, Electric, Local	50,500	61,500	72,500	83,750	94,750	116,750
EV04	Passenger - Manual, Electric, Express	80,500	91,500	102,500	113,500	124,750	146,750
EV05	Passenger - Hydraulic	41,000	50,500	60,000	69,500	79,000	97,750

Commercial-Industrial Adjustments to Base Cost - (Con't)

8. STANDARD BUILDING ACCESSORIES - (Con't)

Type	Description	1,000 lb. Capacity	2,000 lb. Capacity	4,000 lb. Capacity	6,000 lb. Capacity	8,000 lb. Capacity	10,000 lb. Capacity
EV06	Freight - Electric	$14,250	$20,500	$33,250	$45,750	$58,500	$71,000
EV07	Freight - Hydraulic	11,000	15,750	25,250	34,750	44,250	53,750

EV08 Add $1,900 per stop for all passenger elevators

EV09 Add $3,250 per stop for all freight elevators

The unit costs in these tables are for average quality elevators.
For high quality, multiply by 1.20
For low quality, multiply by .80

OTHER ELEVATORS - Base cost per elevator

Type	Description	
EV10	Sidewalk Elevator (Electric)	$4,750
EV11	Sidewalk Elevator (Hydraulic)	4,000
EV12	Sidewalk Elevator (Manual)	2,250
EV13	Dumbwaiter (Electric)	4,000
EV14	Dumbwaiter (Manual)	2,250
EV15	Personal Lifts (Vertical Belt Type)	8,000
EV16	Personal Lifts - over 2 floors add per floor	3,250

EXTERIOR STAIRS - Base cost per flight

		Quality		
Type	Description	Low	Average	High
ES01	Wood	$570	$760	$950
ES02	Reinforced Concrete	600	800	1000
ES03	Steel and Concrete	720	960	1200
ES04	Steel	945	1260	1575

FIREPLACES - Base cost per unit

Type	Low	Below Average	Average	Above Average	High
FP01	$1000	$1500	$2000	$3000	$5000

Commercial - Industrial Adjustments to Base Cost - (Con't)

9. STANDARD EXTERIOR ACCESSORIES

SERVICE STATION ACCESSORIES - Base cost per item

	Pump Islands (per island)	
SS01	Two-Pump Island (Concrete)	$350
SS02	Three-Pump Island (Concrete)	450
SS03	Four-Pump Island (Concrete)	550

SERVICE STATION TYPE CANOPIES - Base cost per square foot canopy

Type	Low	Below Average	Average	Above Average	High
SS04 Base Cost	$5.37	$8.05	$10.74	$13.42	$16.11

PAVING - Base cost per square foot paved area

Type	Paved Area 1000	2000	5000	10,000	25,000 & over
Concrete					
PV01 Light	$0.56	$0.48	$0.43	$0.40	$0.38
PV02 Average	1.12	0.96	0.86	0.80	0.76
PV03 Heavy	2.24	1.92	1.73	1.60	1.54
Asphalt					
PV04 Light	0.32	0.28	0.26	0.25	0.24
PV05 Average	0.64	0.56	0.51	0.50	0.48
PV06 Heavy	1.28	1.12	1.02	1.00	0.96

PV07 Curbing - $5.25 per lineal foot, Low Quality, multiply by 0.80; High Quality, multiply by 1.20.

SWIMMING POOLS - Base cost per square foot surface area

	Surface Area						
Shape	1000	2000	3000	4000	5000	10000	25000
SP01 Rectangular	$22.41	$18.41	$17.08	$16.41	$16.01	$15.21	$14.73
SP02 Irregular	26.90	22.09	20.49	19.69	19.21	18.25	17.68

NOTE - For low quality, multiply by 0.80
For high quality, multiply by 1.20

Commercial - Industrial Adjustments to Base Cost - (Cont'd)

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

FLOOD LIGHTS - Pole Mounted - Base cost per pole or fixture

Type of Poles	Height in Feet 12' to 20'	21' to 30'	31' and Over
FL01 Wood	$ 95	$190	$285
FL02 Steel	180	360	540
FL03 Aluminum/Concrete	240	480	720

Light Fixtures	Quality Low	Average	High
FL04 Incandescent	$ 45	$ 90	$135
FL05 Flourescent	60	120	180
FL06 Mercury Vapor	105	210	315

MOBILE HOME PARKS AND DRIVE-IN THEATRES - Base cost per vehicle space

Type	Low	Quality Below Average	Average	Above Average	High
MT01 Drive-in Theatre	$ 130	$ 195	$ 260	$ 325	$ 390
MT02 Mobile Home Park	1600	2400	3200	4000	4800
MT03 Theatre Screen - Base cost per square foot	5.67	8.51	11.35	14.18	17.02

UTILITY BUILDINGS - Base cost per square foot floor area (without flooring)

Type	Low	Quality Average	High
UB01 Wood Frame	$3.78	$5.04	$6.30
UB02 Wood Frame/Metal	3.02	4.03	5.04
UB03 Concrete Block	5.26	7.01	8.76
UB04 Shed or Lean-To Add	0.84	1.68	2.52

GREENHOUSES - Base cost per square foot floor area (without flooring)

Type	Floor Area 1000	1500	2000	3000	4000	5000	10000
GH01 Unheated	$ 9.89	$ 8.24	$7.42	$6.59	$6.18	$5.93	$5.44
GH02 Heated	11.87	10.00	9.06	8.13	7.66	7.38	6.82

NOTE - For low quality, multiply by 0.80
For high quality, multiply by 1.20

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

UTILITY BUILDING AND GREENHOUSE FLOORING - Base cost per square foot floor area

Type		Quality		
		Low	Average	High
FR01	Wood	$0.95	$1.89	$2.84
FR02	Concrete	0.56	1.12	1.68

FENCING AND GATES - Base cost per lineal foot of fence

Type		4'	5'	6'	7'	8'	9'	10'
FC01	Wood Fence	$ 4.92	$ 6.05	$ 7.19	$ 8.32	$ 9.45	$10.59	$11.72
FC02	Concrete Block Fence	8.65	10.57	12.49	14.41	16.33	18.25	20.17
FC03	Brick or Stone Fence	13.93	16.97	20.01	23.05	26.10	29.14	32.18
FC04	Chain Link Fence	5.37	6.26	7.16	8.05	8.95	9.84	10.74
FC05	Chain Swing Gate	16.11	18.79	21.48	24.16	26.85	29.53	32.22
FC06	Chain Sliding Gate	21.48	25.06	28.64	32.22	35.80	39.38	42.96
FC07	Wood Swing Gate	19.67	24.20	28.74	33.28	37.82	42.36	46.90

FC08 Add $0.90 per lineal foot for extra rail or barbed wire top bracket

NOTE - For low quality, multiply by 0.80
For high quality, multiply by 1.20

MARINE DOCKS AND MOORAGE ENCLOSURES - Base cost per square foot area

Type		Quality				
		Low	Below Average	Average	Above Average	High
MD01	Small Boat Moorage	$ 5.67	$ 6.58	$ 7.56	$ 9.45	$13.24
MD02	Enclosure Roof	1.42	1.89	2.36	3.31	5.20
MD03	Enclosure Walls	1.77	2.06	2.36	2.67	2.95
MD04	Ship Dock	16.01	24.01	32.02	40.02	48.03

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

MARINE BULKHEADS - Base cost per lineal foot perimeter

Type		Low	Below Average	Quality Average	Above Average	High
MD05	Wood	$ 80	$120	$160	$200	$240
MD06	Steel	90	135	180	225	270
MD07	Concrete	160	240	320	400	480
MD08	Residential	40	50	60	70	80

GRAIN ELEVATORS - Base cost per lineal foot perimeter

Height		16'	20'	24'	28'	32'
GE01	50'	$540	$ 590	$ 640	$ 700	$ 750
GE02	70'	640	700	750	810	860
GE03	90'	750	810	860	910	970
GE04	110'	860	910	970	1020	1070
GE05	130'	970	1020	1070	1130	1180

GE06 Deduct 10% for no upper head house or conveyor gallery

INDUSTRIAL STACKS AND CHIMNEYS - Base cost per lineal foot of height

Diameter	Type Unlined Brick 1C01	Lined Firebrick 1C02	Concrete 1C03
4'	$ 256	$ 359	$ 205
5'	384	538	307
6'	512	717	410
7'	640	897	512
8'	768	1076	615
9'	897	1255	717
10'	1025	1434	820
11'	1153	1614	922
12'	1281	1793	1025

Commercial-Industrial Adjustments to Base Cost - (Cont'd)

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

CRANEWAYS - Base cost per lineal foot craneway

Capacity in Tons	Type: Indoor CW01	Type: Outdoor CW02
5	$ 72	$ 93
10	82	106
20	102	131
30	122	156
40	141	181
50	161	206
75	210	268

TRUCK SCALES - Base cost per ton of capacity

	Tons: 10	20	30	40	50	60	75
TS01	$ 662	$ 439	$ 364	$ 327	$ 304	$ 289	$ 274

LOADING DOCKS, RAMPS AND LEVELERS - Base cost per square foot surface area

Type		Quality: Low	Below Average	Average	Above Average	High
LD01	Dock - Light Wood	$1.70	$ 2.55	$ 3.40	$ 4.25	$ 5.11
LD02	Dock - Mill Timber	2.08	3.12	4.16	5.20	6.24
LD03	Dock - Concrete	2.88	4.32	5.76	7.20	8.65
LD04	Dock Ramp	1.28	1.92	2.56	3.20	3.84
LD05	Floor-to-Floor Ramp	8.00	12.00	16.00	20.00	24.00
LD06	Mechanical Leveler			55.00		
LD07	Hydraulic Leveler			65.00		

RAILROAD SPURS - Base cost per unit

Accessories		Unit Cost
RR01	Bumper Stop	$ 900
RR02	Switch	4,500
RR03	Pair Flasher Signals	17,900

Commercial-Industrial Adjustments to Base Cost - (Cont'd)

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

TRACKAGE-

	Cost per Lineal Foot
RR04 Siding Trackage	$32

GT01 STEEL GRAIN STORAGE TANKS - Base cost per bushel of capacity

Capacity	5000 bu.	7000 bu.	10000 bu.	15000 bu.	20000 bu.	25000 bu.	30000 bu.
Cost	$1.41	$1.35	$1.31	$1.28	$1.25	$1.23	$1.21

Capacity	40000	50000	60000	80000	100000	1500000	200000 & over
Cost	$1.17	$1.14	$1.12	$1.09	$1.08	$1.06	$1.05

ELEVATED STORAGE TANKS-

ST01 Wood Tank & Tower - Base cost per gallon

	Height				
Capacity in Gallons	25'	50'	75'	100'	125'
10,000	$0.94	$1.01	$1.08	$1.15	$1.22
20,000	0.66	0.73	0.80	0.87	0.94
30,000	0.56	0.63	0.70	0.78	0.85
40,000	0.52	0.59	0.66	0.73	0.80

ST02 Steel Tank & Tower - Base cost per gallon

	Height				
Capacity in Gallons	50'	100'	150'	200'	250'
25,000	$1.93	$2.66	$3.28	$3.94	$4.77
50,000	1.22	1.66	2.02	2.43	2.76
100,000	0.62	0.85	1.02	1.22	1.40
200,000	0.42	0.54	0.64	0.77	0.86
300,000	0.35	0.44	0.52	0.62	0.71

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

BULK PETROLEUM STORAGE TANKS - Base cost per barrel

Capacity in Bbls.	Flat or Cone Roof PT01	Floating or Pontoon Roof PT02	Double Deck Roof PT03
2,000	$ 11.10	$ 12.21	$ 13.32
3,000	8.11	8.93	9.74
4,000	6.62	7.29	7.95
6,000	5.13	5.64	6.16
8,000	4.39	4.82	5.26
10,000	3.94	4.33	4.73
15,000	3.34	3.68	4.01
20,000	3.04	3.35	3.65
30,000	2.74	3.02	3.29
50,000	2.51	2.76	3.01
100,000	2.33	2.56	2.79
200,000	2.24	2.46	2.68

UNDERGROUND FUEL STORAGE TANKS - Base cost per gallon

	Type		
Capacity in Gals.	Black Steel FT01	Fibersteel FT02	Fiberglass FT03
500	$ .92	$ 1.24	$ 2.05
1,000	.66	.89	1.35
2,000	.55	.74	.93
4,000	.45	.61	.71
6,000	.41	.55	.64
8,000	.36	.49	.60
12,000	.34	.46	.57
15,000	.34	.46	.55
20,000 & Above	.33	.45	.54

Commercial - Industrial Adjustments to Base Cost - (Cont'd)

9. STANDARD EXTERIOR ACCESSORIES - (Cont'd)

ABOVE GROUND FUEL STORAGE TANKS - Base cost per gallon

Capacity in Gallons	Type: Horizontal FT10	Type: Vertical FT11
2,000	$ .72	$ .64
3,000	.57	.51
4,000	.49	.44
5,000	.45	.40
10,000	.36	.32
20,000	.31	.28

PROPANE PRESSURE STORAGE TANKS (250PSI) - Base cost per gallon

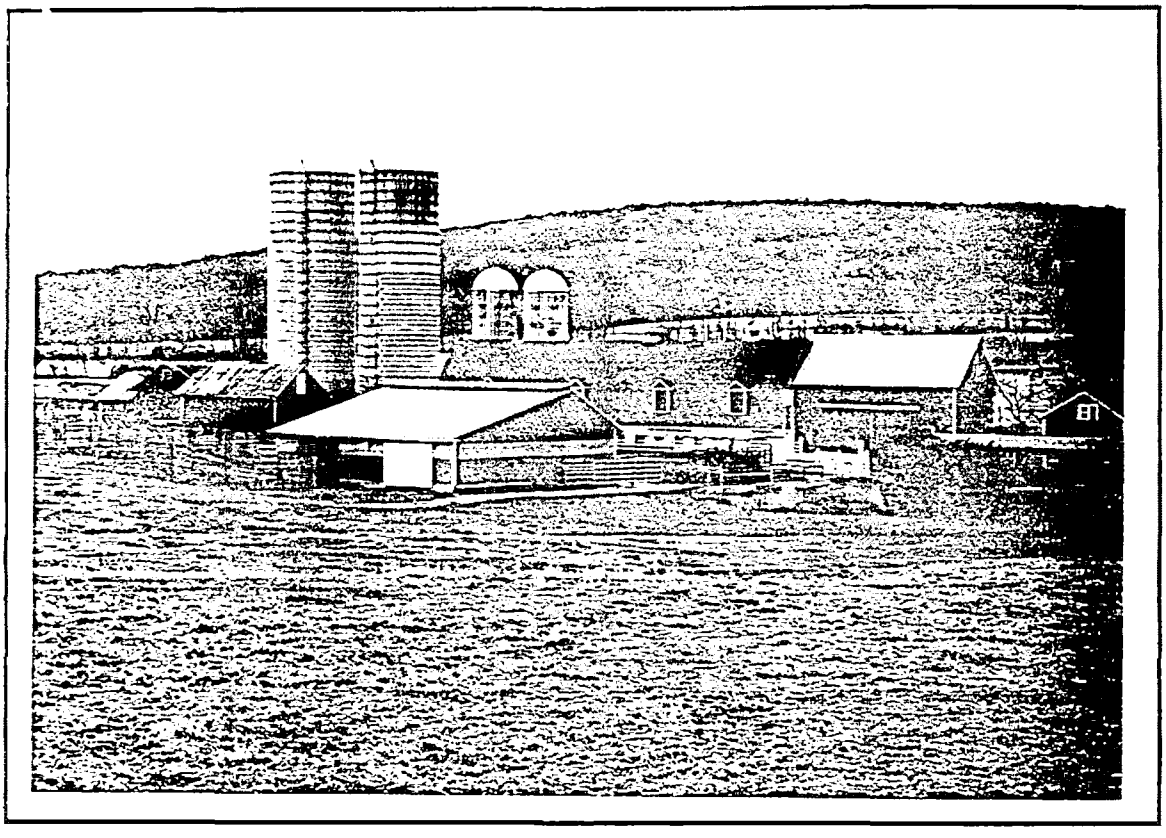
	Capacity in Gallons: 500	1000	2000	3000	5000	10000
PP01	$ 2.33	$ 1.61	$ 1.25	$ 1.13	$ 1.04	$ .97

LARGE PRESSURE STORAGE TANKS (5 to 75 PSI) - Base cost per barrel

Capacity in Bbls.	Pressure in PSI: LT01 5	LT02 10	LT03 25	LT04 30	LT05 50	LT06 75
2,500	$ 12.71	$15.57	$24.16	$27.92	$32.22	$37.59
5,000	9.49	10.92	15.21	19.33	21.48	24.16
10,000	7.88	8.59	10.74	15.04	16.11	17.45
20,000	7.07	7.43	8.50	12.89	13.42	14.10

NOTE - Depreciation Schedule for Storage Tanks - Table D-1

AGRICULTURE



NEW JERSEY REAL PROPERTY APPRAISAL MANUAL
FARM BUILDING SECTION

The following is an updated version of the Agriculture Farm Building Costs. This section of the New Jersey Real Property Appraisal Manual has been revisited to include changes in construction techniques and building materials. In recent years pre-engineered post and frame structures in large have replaced the traditional masonry and frame structures due to their cost effectiveness in construction. This supplement of the Real Property Appraisal Manual for New Jersey Assessors provides the specifications and cost approach to value. Contained in this issue are cost conversion tables, depreciation, depth factors tables plus various illustrations and definitions to assist the assessor in classifying and calculating replacement costs.

Included in this publication are the original traditional building costs to accommodate existing structures throughout the state. The section is contained on the pages II-108 to II-114 and is comprised of class 150 through class 156, no changes have been made to this section. Structures of this type, in most cases, will require functional and economic obsolescence, and if warranted, physical deprecation.

Table of Contents

To aid the Assessor in the valuation of dissimilar structures a demonstration appraisal on page II-115.12 is included for reference. It should be noted that while the base year of 1975 is still the starting point, a separate farm conversion factor (F-1) has been established for these buildings.

In the second part of this handbook, a new section has been added which includes replacement values using current construction material and methods. Post and frame style buildings are the "PF" series which encompass categories 157 through 163 found on pages II-115.1 to II-115.7. Alternative cost tables and adjustment sections are based on local material and labor costs prevailing throughout New Jersey as of October 1998. To efficiently use this section, the assessor must be familiar with all the cost schedules herein and should be proficient with the appraisal procedures outlined in Volume I of the Handbook. Additionally, since this manual is in a format suitable for computerization, accuracy and uniformity in the use of all cost data is absolutely essential.

A new section covering Greenhouses and/or Seed Starting Houses is also included as a handbook revision on page II-115.8 and II-115.9. While historically these structures were addressed in the commercial portion of the Appraisal Manual, updated values are now provided for farm based buildings. Square foot costs are current as of October 1998 and the cost conversion factor of F-2 is to be employed when appraising these building.

In the appraisal of farm buildings, the assessor must be familiar with all the recent legal and statutory rules governing the taxation of farm structures. Of particular concern in this area are the "single use" structures, which are exempt from taxation. 54:4-23.12 defines a single use agricultural or horticultural facility which is exempt from taxation. All other structures, whether used for agricultural or horticultural purposes, residential use or otherwise, must be valued, and taxed by the same standards applicable to all other taxable structures in the taxing district.

The Business Retention Act

P.L. 1992, c24, "The Business Retention Act", amends the description of local taxable property to reaffirm the Legislature's regularly stated position of excluding machinery, apparatus and equipment used or held for use in business from local taxation.

The law amends subsection b. of R.S.54:4-1 to specify that items of machinery, apparatus or equipment used in the conduct of a business are defined as personal property regardless of the class or type of real property to which such items may be affixed. Such items are defined as locally taxable real property only if they constitute a structure, as defined in the law, or are primarily used to enable a structure to support, shelter, contain, enclose or house persons or property. Examples of machinery, apparatus or equipment which enable a structure to house persons or property, and which are therefore locally taxable, include central heating or air conditioning systems, elevators, suspended ceilings, affixed partitions, plumbing and plumbing fixtures connected to a plumbing system, overhead lighting, sprinkler systems, piping and electric wiring up to the point of connection with a manufacturing process within the structure, and a central hot water system or the boiler primarily used to supply it.

54:4-1.15. Definitions - Business Retention Act

"Machinery, apparatus or equipment" means any machine, device, mechanism, instrument, tool, tank or item of tangible personal property used or held for use in business.

"Production process" means the process commencing with the introduction of raw materials or components into a systematic series of manufacturing, assembling, refining or processing operations and ceasing when the product is in the form in which it will be sold to the ultimate consumer.

"Structure" means any assemblage of building or construction materials fixed in place for the primary purpose of supporting, sheltering, containing, enclosing or housing persons or property.

"Used or held for use in business" means any item of machinery, apparatus or equipment used or held for use in a business transaction, activity, or occupation conducted for profit in New Jersey.

54:4-23.12. Valuation, assessment and taxation of structures

◊ All structures, which are located on land in agricultural or horticultural use and the farmhouse and the land on which the farmhouse is located, together with the additional land used in connection therewith, shall be valued, assessed and taxed by the same standards, methods and procedures as other taxable structures and other land in the taxing district, regardless of the fact that the land is being valued, assessed and taxed pursuant to P.L.1964, c. 48 (C. 54:4-23.1 et seq.); provided, however, that the term "structures" shall not include "single-use agricultural or horticultural facilities." As used in this act, "single-use agricultural or horticultural facility" means property employed in farming operations and commonly used for either storage or growing, which is designed or constructed so as to be readily dismantled and is of a type which can be marketed or sold separately from the farmland and buildings and shall include, but not be limited to, temporary de-mountable plastic covered framework made up of portable parts with no permanent under-structures or related apparatus, commonly known as seed starting plastic greenhouses, or other readily dismantled silos, greenhouses, grain bins, manure handling equipment, and impoundment's, but shall not include a structure that encloses a space within its walls used for housing, shelter, or working, office or sales space, whether or not removable.

◊ The Director of the Division of Taxation shall adopt, in consultation with the Secretary of Agriculture and in accordance with the "Administrative Procedure Act," P.L.1968, c. 410 (C. 52:14B-1 et seq.), rules and regulations establishing criteria for the assessment of all farm structures.

◊ In the valuation and assessment of farm structures the assessor shall consider those indications of value which such structures have under the same value applicable to all other real property. Assessors shall take into consideration the following criteria for the establishment of value:

◊ Cost less depreciation: Based on the premise that the cost new of the structure is the highest possible value. Costs may include in addition to materials and labor, architect, engineering and permit fees, surveys and site improvement costs. From the highest possible value are deducted accrued depreciation, physical deterioration and functional and economic obsolescence.

◊ Alteration to existing structures: The cost of alterations or modernization to an existing farm structure does not necessarily add to building value. Where major alterations or modernization definitely increases or adds to the value of the farm structure, the percentage appreciation is determined by estimating the probable increase in sales value or the increase in remaining economic life of the building.

◊ Specialized nature of building use: Farm structures are designed and built for specific production uses. Knowledge of building types, construction quality, useful life and utilization is important in determining value. Comparisons should be made with like structures.

◊ Depreciation: The physical condition of agricultural buildings should be compared to the near perfect condition of similar new buildings, based on inspection of all components. A depreciation schedule for farm structures shall be used in the assessment of the physical condition of a building.

◊ Obsolescence: This is loss of value due to internal or external deficiencies.

* Functional obsolescence is loss in value due to the inability of the structure to perform adequately the function it was intended for. Functional obsolescence would result if a building has limited contribution to a farming operation by being technologically obsolete, such as a dairy barn with 30 stall stanchions when today's standard is larger free stall structures with milking parlors. Or being unusable for the purpose for which it was built.

* Economic obsolescence of a structure with a specialized agriculture use is loss in value as a result of impairment in utility and desirability caused by factors outside the properties boundaries. For example dairy farming has generally been unprofitable for New Jersey Farmers, therefore farm structures design for milk production have limited value even though said structures are physically usable.

* Municipal zoning: Ordinances or codes may limit the use of a farm structure to agricultural purposes. Consideration should be given to the permitted uses of a structure. The proximity of a farm structure to a farm dwelling shall also be considered since the valuation of both buildings may be adversely impacted.

CLASS 150 GENERAL PURPOSE BARNS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Gambrel, Composition Shingle or Equivalent	5) Floors:	Part Concrete, Part Dirt, Hayloft with Wood Flooring
2) Foundation:	Masonry Walls or Equivalent	6) Plumbing:	Minimum Number of Outlets Water
3) Exterior Walls:	Wood Siding on Wood Frame, Concrete Block or equivalent	7) Lighting:	None
4) Interior Finish:	Stall Partitions, Feed Storage and Equipment Rooms	8) Other Items:	None

BASE COST PER CUBIC FOOT

10,000	15,000	20,000	30,000	50,000	75,000	100,000	150,000
$0.45	$0.40	$0.35	$0.35	$0.35	$0.30	$0.30	$0.30

For Low Quality, multiply by .75 For High Quality, multiply by 1.30

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 151 LIVESTOCK BARNS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Gambrel, Wood Shingle or Equivalent	5) Floors:	Concrete Slab or Equivalent
2) Foundation:	Masonry Walls or Equivalent	6) Plumbing:	Adequate Number of Outlets Water
3) Exterior Walls:	Concrete Block, Wood Siding on Wood Frame or Equivalent	7) Lighting:	Conduit Wiring with Minimum Number of Fixtures
4) Interior Finish:	Stanchion and Stalls; Feed Room and Storage Rooms	8) Other Items:	None

BASE COST PER CUBIC FOOT

Without Loft

10,000	15,000	20,000	30,000	50,000	75,000	100,000	150,000
$0.70	$0.65	$0.60	$0.60	$0.55	$0.55	$0.50	$0.50

With Loft

10,000	15,000	20,000	30,000	50,000	75,000	100,000	150,000
$1.10	$1.00	$0.95	$0.90	$0.85	$0.80	$0.80	$0.75

For Low Quality, multiply by .70 For High Quality, multiply by 1.40

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 152 FARM SHED AND OUTBUILDINGS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Shed Type, Composition Shingle or Equivalent	5) Floors:	Concrete Slab or Softwood
2) Foundation:	Masonry Walls or Equivalent	6) Plumbing:	None
3) Exterior Walls:	Wood Siding on Wood Frame, Concrete Block or Equivalent	7) Lighting:	Conduit Wiring with Minimum Number of Fixtures
4) Interior Finish:	None	8) Other Items:	None

BASE COST PER SQUARE FOOT GROUND AREA

100	150	200	400	600	1,000	2,000	3,000
$7.75	$6.75	$6.50	$6.00	$5.55	$5.40	$5.40	$4.70

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 153 POLE BARNS/EQUIPMENT SHEDS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Shed Type, Metal or Aluminum on Wood Frame	5) Floors:	None
2) Foundation:	Creosoted Poles	6) Plumbing:	None
3) Exterior Walls:	Corrugated Metal or Aluminum on Wood Framing	7) Lighting:	Conduit Wiring with Minimum Number of Fixtures
4) Interior Finish:	None	8) Other Items:	None

BASE COST PER SQUARE FOOT GROUND AREA

500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	5,000
$4.65	$4.15	$3.85	$3.75	$3.65	$3.60	$3.55	$3.50	$3.45

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 154 HORSE STABLES

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Shed Type, Average Quality Roofing	5) Floors:	Concrete Slab or Wood in Storage Rooms
2) Foundation:	Masonry Walls or Equivalent	6) Plumbing:	Water Outlets Only
3) Exterior Walls:	Stucco on Wall or Block, Wood Siding on Wood Frame, Concrete Block or Equivalent	7) Lighting:	Conduit Wiring with Minimum Number of Fixtures
4) Interior Finish:	Storage Rooms, Wood or Concrete Block Stall Partitions	8) Other Items:	None

BASE COST PER SQUARE FOOT GROUND AREA

1,000	2,000	3,000	4,000	5,000	7,500	10,000	12,500	15,000
$9.85	$8.75	$8.25	$7.90	$7.75	$7.60	$7.50	$7.20	$7.00

For Low Quality, multiply by .55 For High Quality, multiply by 1.50

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 155 POULTRY HOUSES

AVERAGE QUALITY MATERIALS AND WORKMANSHIP

BASE SPECIFICATIONS

1) Roof:	Gable or Shed Type, Composition Shingle Roofing or Equivalent, Insulated	5) Floors:	First Floor, Concrete Slab; Upper Floor, Wood
2) Foundation:	Masonry Walls or Equivalent	6) Plumbing:	Water Outlets Only
3) Exterior Walls:	Wood Siding on Wood Frame, Concrete Block or Equivalent	7) Lighting:	Conduit Wiring with Minimum Number of Fixtures
4) Interior Finish:	Minimum Partitioning	8) Other Items:	None

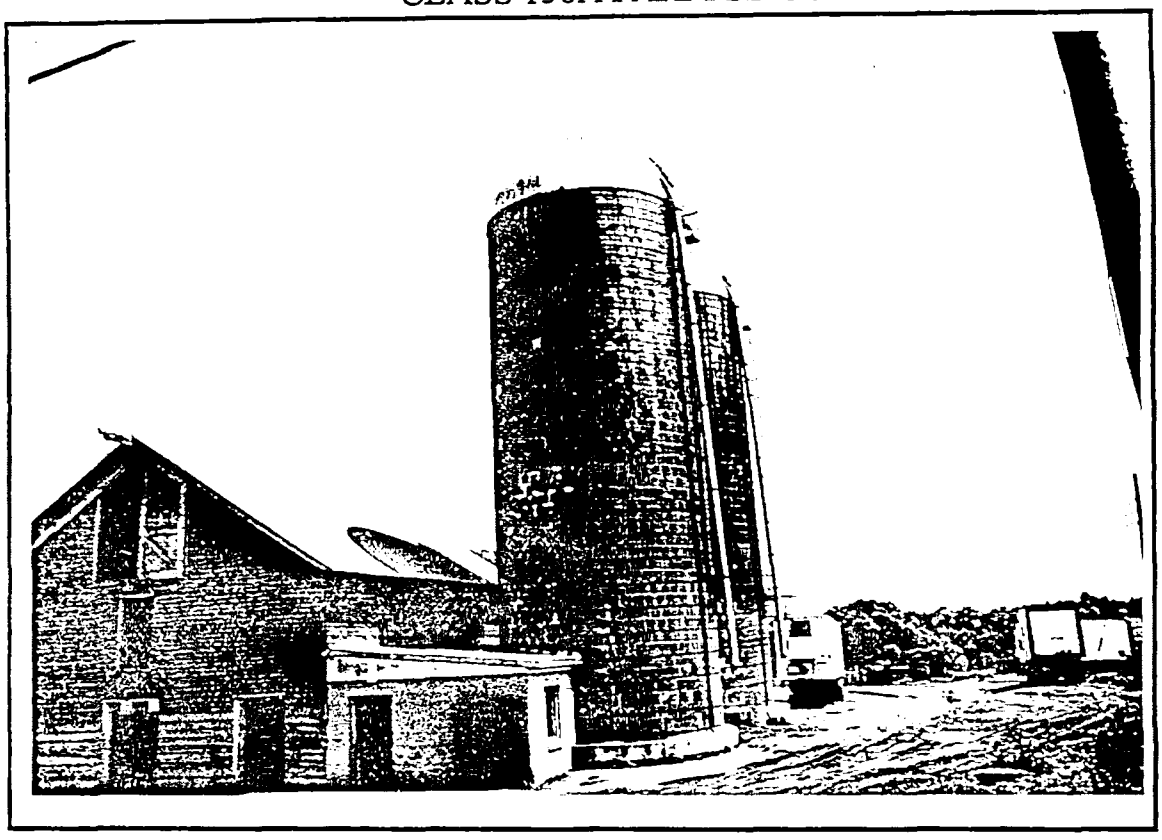
BASE COST PER SQUARE FOOT GROUND AREA

Number of Stories	500	1,000	2,000	3,000	4,000	5,000	10,000	20,000
1	$7.80	$7.25	$6.45	$6.15	$6.00	$5.90	$5.60	$5.50
2	$15.20	$13.65	$12.95	$11.70	$11.40	$11.20	$10.65	$10.45

For Low Quality, multiply by .70 For High Quality, multiply by 1.35

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See Page II - 153
Adjustments To Base Specifications: None

CLASS 156A FARM SILOS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	None	5) Interior Finish:	None
2) Foundation:	Concrete Wall and Footing	6) Plumbing:	None
3) Exterior Walls:	Clay Tile or Poured in Place Concrete	7) Lighting:	None
4) Floors:	Concrete Slab or Equivalent	8) Other Items:	None

BASE COST

Base Height 28 Feet:										
Diameter	10`	12`	14`	16`	18`	20`	22`	26`	30`	36`
Circumference	31`	38`	44`	50`	57`	63`	69`	82`	94`	113`
Wall Type A	$2560	$3085	$3600	$4115	$4635	$5160	$5695	$6765	$7820	$9315
Add or Deduct for each 2` variation in Height:										
Wall Type A	$115	$140	$160	$185	$205	$230	$255	$305	$350	$415
Additions:										
Steel Roof	$455	$550	$640	$730	$825	$920	$1015	$1205	$1390	$1655

Add for Chute,Steel per foot - Height $7.50
Tile per foor - Height- $8.50;
Add for Lining: Per Sq. Ft. $1.20

NOTES:
Depreciation Schedules: For All Wall Types - Table D-II
Cost Conversion Factors: See Page II-153 - Table - F-1
Adjustments To Base Specifications: None

CLASS 156C FARM SILOS

AVERAGE QUALITY MATERIALS AND WORKMANSHIP BASE SPECIFICATIONS

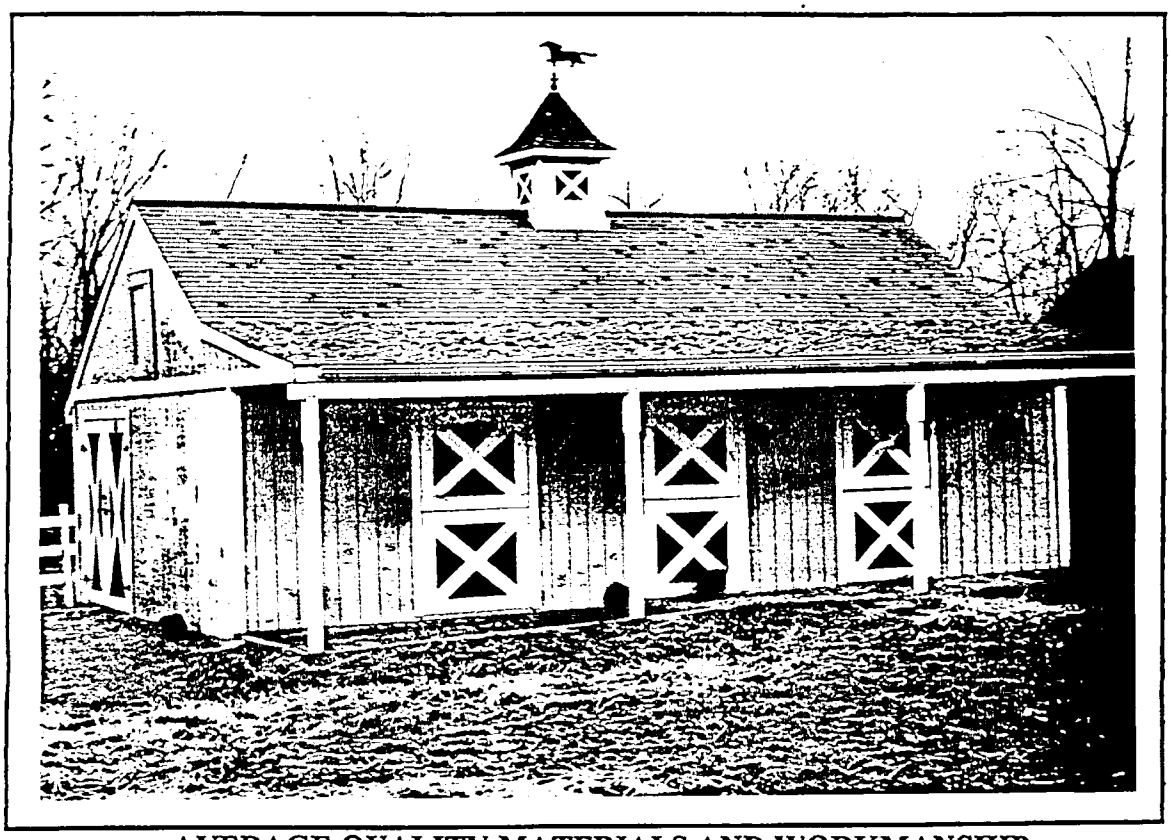
1) Roof:	Steel	5) Interior Finish:	None
2) Foundation:	Concrete Pads or Equivalent	6) Plumbing:	None
3) Exterior Walls:	Steel	7) Lighting:	None
4) Floors:	None	8) Other Items:	None

These structures are not assessable for Real Property Taxation Purposes.

These silos are not permanently affixed, they rest on concrete pads and can be easily removed without damage to the structure or to the real property. Under the guidelines of P.L.1993, c.251 (S-15) these structures are exempted under the single purpose agricultural or horticultural use criteria. As such, they must be a single use; must be for storage or growing of an agricultural or horticultural commodity; designed or constructed so as to be readily dismantled; and can be marketed or sold separately from the farmland buildings.

NOTES

CLASS PF 157 STALL BARNS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable or Gamble, Average Quality Roofing, "Rigid" Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, Two (2) Sliding Doors	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None
9) Height:	9-10 Ft.		

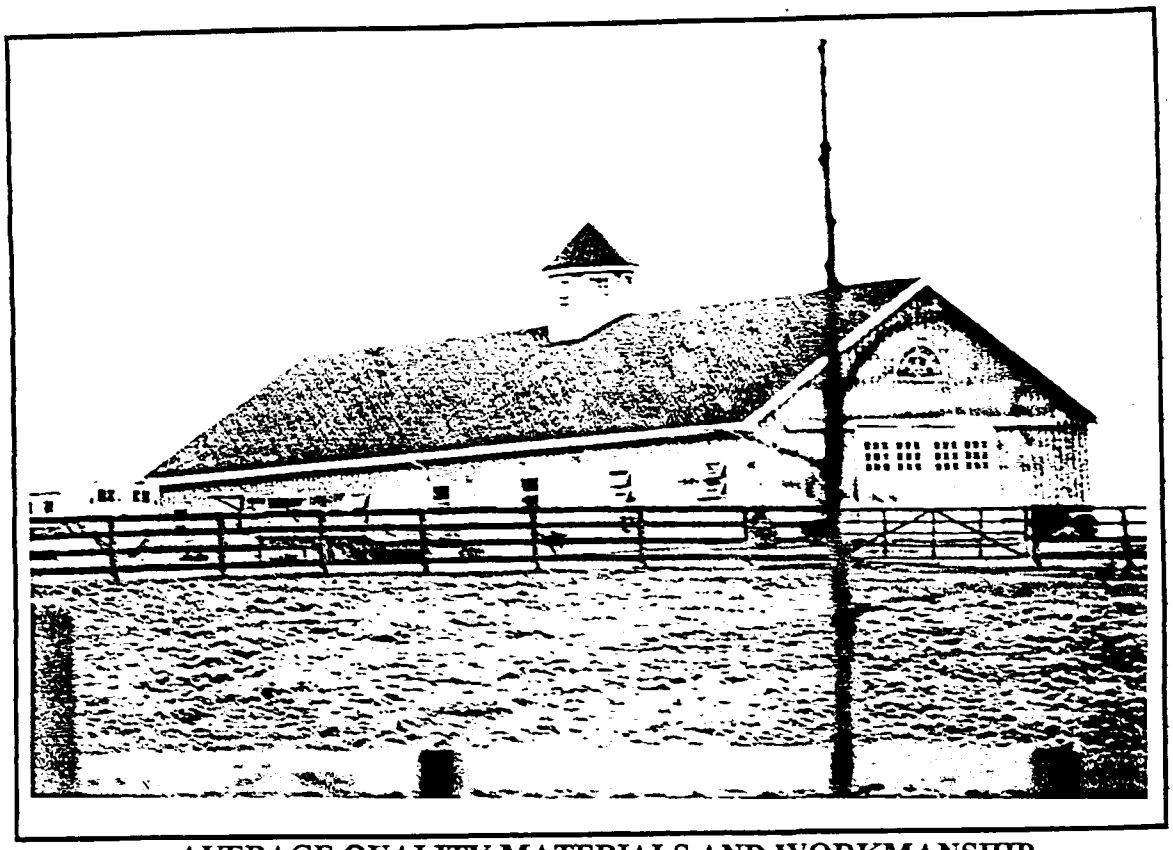
BASE COST PER S/F

1000	2500	5000	7500	10000	15000
11.03	8.06	7.14	6.81	6.42	6.24

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 158 HORSE RIDING ARENAS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable or Gamble, Average Quality Roofing, 1" "Rigid" Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, Two (2) Sliding Doors One (1) Entry Door	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None
9) Height:	15 Ft.		

BASE COST PER S/F

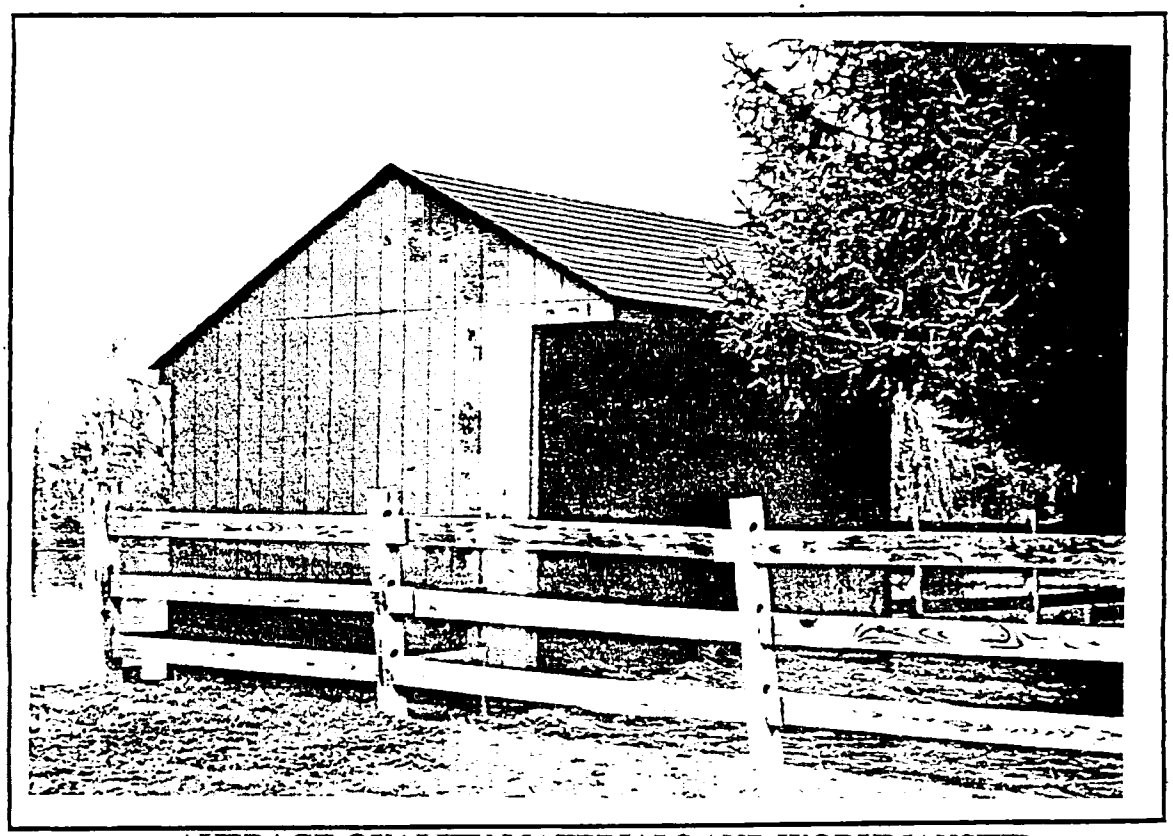
5000	7500	10000	15000	20000
7.52	7.11	7.13	7.23	6.92

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:

Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 159 HORSE TURN OUT SHEDS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable, Average Quality Roofing, No Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Wood, One (1) Side Open	7) Lighting:	None
4) Interior Finish:	Wood Kick Board Liner - 5 Ft High	8) Other Items:	None
9) Height:	9 Ft.		

BASE COST PER S/F

144	288	432	576	720
18.41	14.71	11.07	9.90	8.94

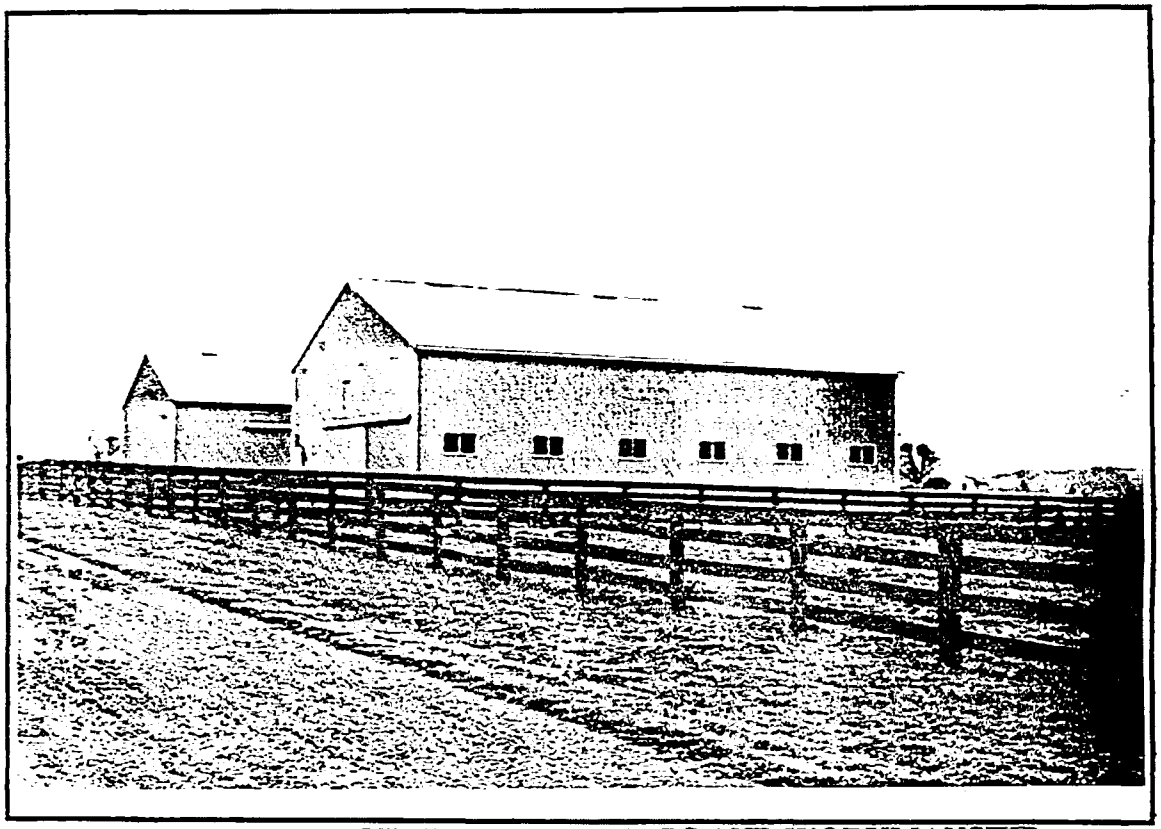
For Low Quality, multiply by .75 For High Quality, multiply by 1.25

For Fully Enclosed Shed Add $0.95/SF Wall Area

NOTES:

Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 160 GENERAL PURPOSE/HAY BARNS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable, Average Quality Roofing, Ridge Vent Vented Overhang No Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, One (1) Sliding Door One (1) Entry Door	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None

BASE COST PER S/F

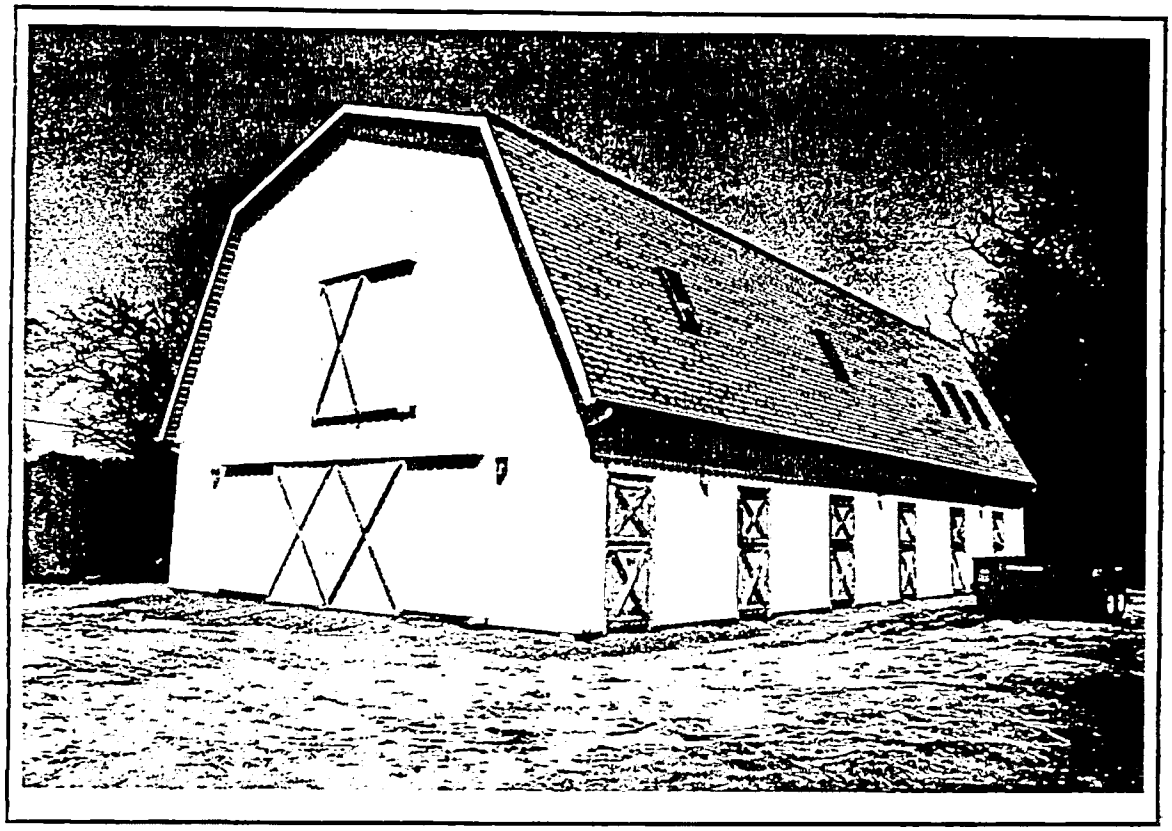
SIDEWALL HT.	5000	7500	10000	15000	20000
16'	6.73	6.52	5.99	6.09	5.80
20'	7.58	7.25	6.65	6.72	6.39

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:

Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 161 LIVESTOCK BARNS WITH STORAGE



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gambrel, Average Quality Roofing, 1' Rigid Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, Two (2) Sliding Doors One (1) Entry Door	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None

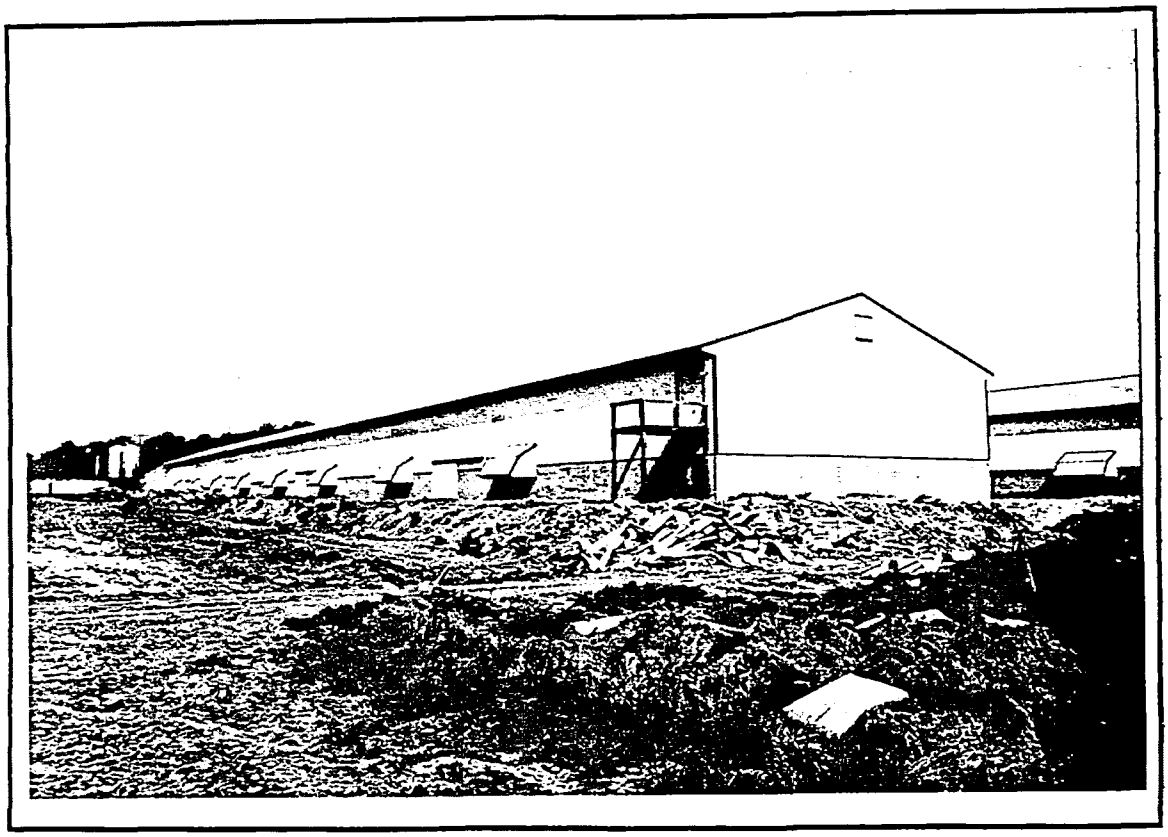
BASE COST PER S/F

SIDEWALL HT.	2500	5000	7500	10000	15000	20000
10'	10.90	10.04	9.47	9.63	9.45	9.17
14'	12.26	11.20	10.59	10.62	10.40	10.08

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 162 POULTRY BARNS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable, Average Quality Roofing, 1' Rigid Insulation	5) Floors:	None
2) Foundation:	Masonry & Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, Two (2) Sliding Doors One (1) Entry Door	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None

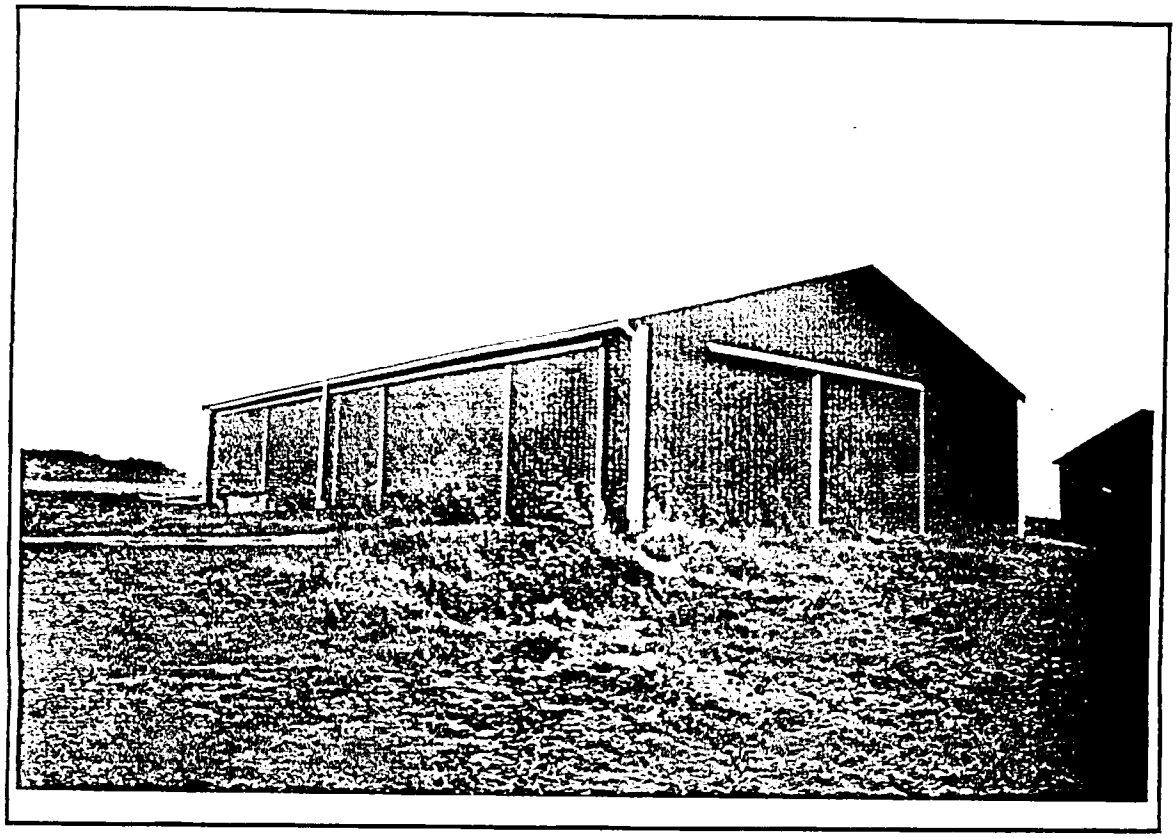
BASE COST PER S/F

SIDEWALL HT.	2500	5000	7500	10000	15000	20000
10'	8.19	7.12	6.94	7.07	7.18	6.91
14'	9.32	8.05	7.68	7.56	7.83	7.51

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS PF 163 POLE BARNS



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Roof:	Gable, Average Quality Roofing, No Insulation	5) Floors:	None
2) Foundation:	Treated Poles	6) Plumbing:	None
3) Exterior Walls:	Steel, One (1) Sliding Doors One (1) Entry Door	7) Lighting:	None
4) Interior Finish:	None	8) Other Items:	None

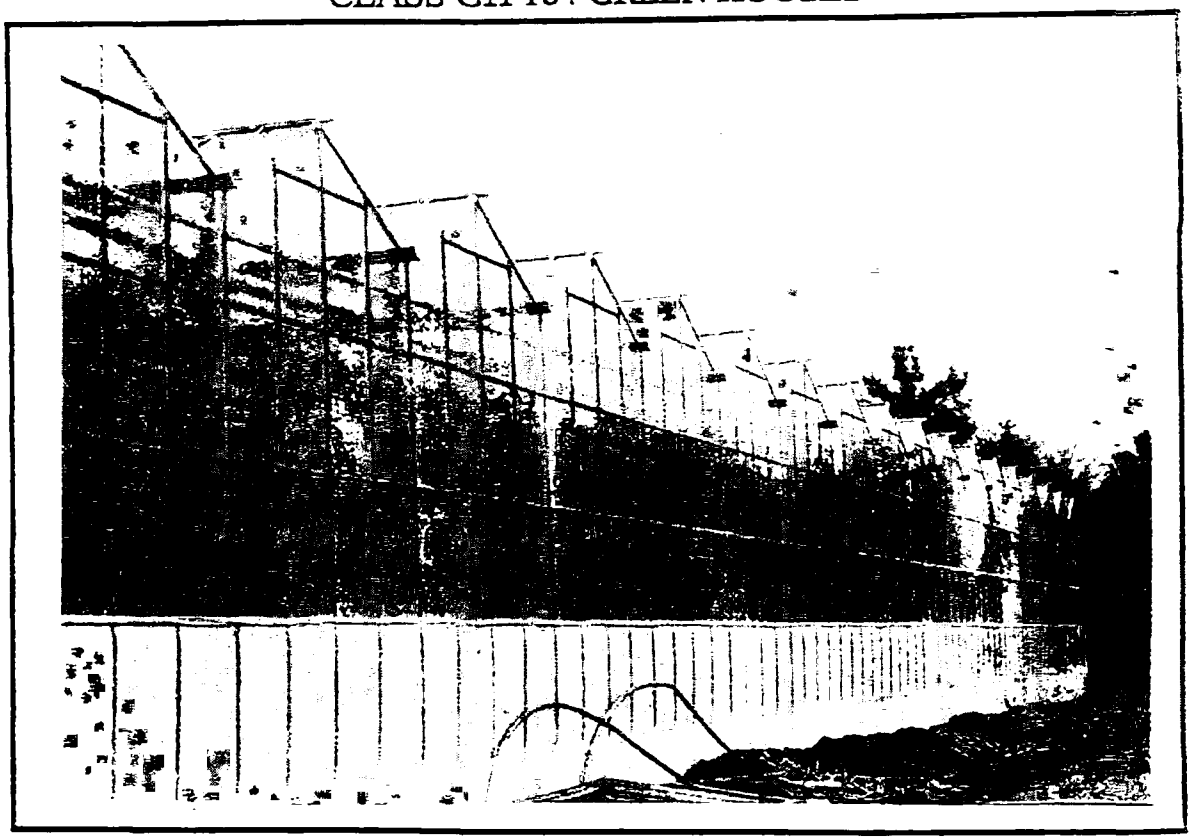
BASE COST PER S/F

SIDEWALL HT.	1000	2500	5000	7500	10000	15000	20000
10'	8.65	6.85	5.88	5.75	5.78	5.91	5.68
14'	10.25	7.81	6.65	6.58	6.36	6.45	6.18

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

NOTES:
Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I
Cost Conversion Factors: See F-2
Adjustments To Base Specifications - See Agriculture Adjustments Section

CLASS GH 164 GREEN HOUSES*



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Frame:	Steel with Glass Walls and Roof Not Readily Dismantled	4) Floors:	None
2) Foundation:	Concrete/Masonry or Equivalent	5) Plumbing:	Minimum Number of Water Outlets
3) Heating:	See GH164-02 Series	6) Lighting:	Minimum Number of Fixtures

BASE COST PER S/F

CLASS	1000	1500	2000	3000	4000	5000	10000
GH164-01 (Unheated)	27.09	22.57	20.33	18.05	16.95	16.24	14.90
GH164-02 (Heated)	35.52	27.40	24.82	22.27	20.98	20.22	18.68

For Low Quality, multiply by .75 For High Quality, multiply by 1.25

ADJUSTMENTS TO BASE PER SQUARE FOOT OF FLOOR AREA

ITEM	LOW	AVERAGE	HIGH
Wood Flooring	2.60	5.07	7.78
Concrete Flooring	1.53	3.07	4.60
Crushed Stone ($0.16/SF at 1 inch deep)	0.16	0.16	0.16

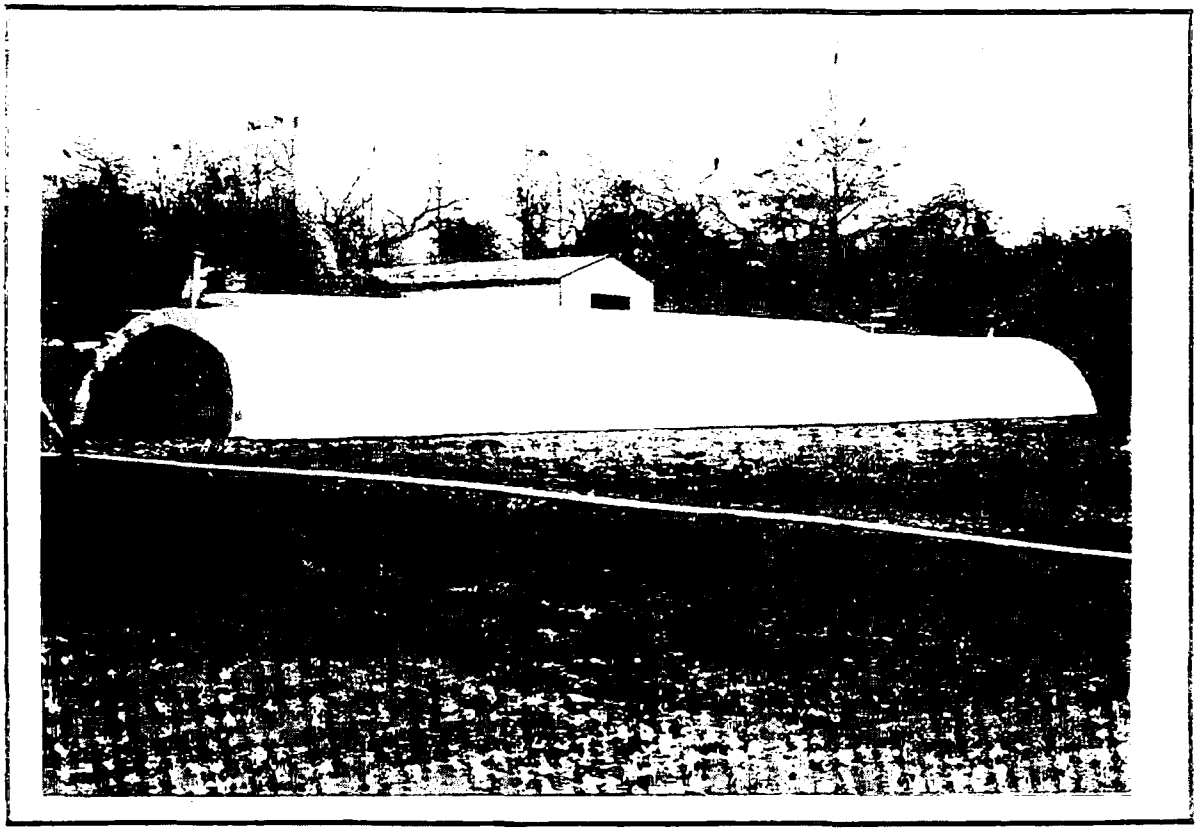
NOTES:

Depreciation: For High Quality - Table D-III, Average Quality - Table D-II, Low Quality Table D-I

Cost Conversion Factors: See F-2

*P.L. 1993, c251 includes a provision that readily dismantled greenhouses may be tax exempt if specific criteria are met.

CLASS GH 0000 TEMPORARY SEED/GREEN HOUSES



AVERAGE QUALITY MATERIALS AND WORKMANSHIP
BASE SPECIFICATIONS

1) Frame:	De-Mountable Temporary Metal or Wood Frame	3) Floors:	None
2) Foundation:	None	4) Cover:	Plastic Covered

These structures are not assessable for Real Property Taxation purposes

Under Chapter 70 Laws of 1979 regarding seed starting plastic greenhouses and Charter 251 Laws of 1993 pertaining to single purpose / use agriculture buildings, these buildings are not assessable locally. These protective coverings are designed or constructed to be readily dismantled. Included are the temporary de-mountable seed starting plastic greenhouses comprised of plastic covered framework of portable parts with no permanent under structures.

AGRICULTURAL ADJUSTMENTS TO BASE

For Low Quality multiply cost by 0.75
For High Quality multiply cost by 1.25

ID CODE	DOORS	AVERAGE
PF1	FULL DUTCH	$569
PF2	HALF DUTCH	$406
PF3	SLIDING	$722
PF4	ENTRY	$396
PF5	VENT	$378
PF6	OVERHEAD	$8.25/SF

ID CODE	FLOORS	AVERAGE
	CONCRETE	
PF7	4 inches REINFORCED	$2.41/SF
PF8	6 inches REINFORCED	$2.88/SF
PF9	STONE (per 1 inch deep)	$0.16/SF

ID CODE	WINDOWS	AVERAGE
PF10	STANDARD	$170
PF11	WITH BAR PROTECTION	$265

ID CODE	EQUESTRIAN EQUIPMENT	AVERAGE
PF12	WASH ROOM	$1,233
PF13	TACK ROOM	$1,492
PF14	FEED ROOM	$1,492

NOTE: Cost based on an average size of 10 x 12

ID CODE	EQUESTRIAN STALL	AVERAGE
PF15	10 x 10	$993
PF16	10 x 12	$1,102
PF17	12 x 12	$1,224
PF18	STIRRUP GUARDS	$12.67/LF
PF19	SIDE WALL CURTAINS	$5.30/SF

ID CODE	LIGHTING	AVERAGE
PF20	TRANSLUCENT PANEL	$1.03/SF
PF21	WALL or CEILING	$5.68/LF

ID CODE	ELECTRICAL	AVERAGE
PF22	Per Outlet	$45
PF23	Service Panel	$300 - $700

ID CODE	PLUMBING	AVERAGE
PF24	COLD WATER TAP	$780
PF25	COLD & HOT WATER TAP	$1,260
PF26	FLOOR DRAIN	$180
PF27	UTILITY TUB	$225

NOTE: Other fixtures costs refer to page II-93 of Real Property Appraisal Manual.

ID CODE	HEATING	
PF28	SPACE HEAT, MINIMUM INDUSTRIAL UNIT HEATERS	$0.50 - $1.25 PER SF

ID CODE	INSULATION	AVERAGE
PF29	RIGID BOARD 1/2 inch	$0.72/SF
PF30	FIBERGLASS	$0.60/SF
PF31	9 inch FIBERGLASS STEEL	
PF32	INTERIOR CEILING	$2.42/SF

ID CODE	MISCELLANEOUS ITEMS	AVERAGE
PF33	STORAGE LOFTS	$3.05/SF
PF34	ROOF SHINGLES	$1.05/SF
PF35	DEDUCT FOR MISSING WALL COST PER SF OF WALL AREA	$0.95/SF

ID CODE	EXTERIOR SIDING (Per SF of Wall Area)	AVERAGE
PF36	T-111 SIDING or EQUIVALENT	$0.90/SF
PF37	CEDAR SIDING or EQUIVALENT	$2.26/SF
PF38	WHITE PINE SIDING or EQUIVALENT	$1.75/SF

ID CODE	INTERIOR OFFICE FINISH	AVERAGE
PF39	AVERAGE QUALITY	$11.99/SF

An introduction to estimating the replacement cost of an existing Livestock Barn, Class 151

The purpose of this demonstration appraisal is to review the cost valuation techniques applicable to the assessment of older type farm buildings that an assessor encounters in reassessment programs. The scope of this report is limited to the cost approach for building replacement value using the original type specifications provided on page II-109 of this handbook.

The steps in the cost approach to the building value are as follows:

- ◊ Estimate the replacement cost new of the improvements using the Class 151 cost specifications.
- ◊ Estimate functional depreciation by comparing the replacement cost of the original building to the cost of the an alternate structure derived through the PF 161 series buildings. The difference between the replacement cost and the substitution cost from the PF series building is the functional depreciation attributable to the dairy barn.
- ◊ Deduct the functional depreciation from the new replacement cost calculated for the Class 151 building.
- ◊ Estimate depreciation from all sources, physical, economic and deduct all accrued depreciation from the improvements to arrive at a present day depreciated cost.

The first step listed above (Estimate Reproduction Cost New of the Improvements) is of major concern in this report. This cost is done in a detailed manner to promote an understanding of the appraisal manual and demonstrate its uniform application throughout New Jersey.

Class 151 includes all farm buildings having a structural frame of wood with exterior wall of wood and/or concrete block or wood on frame or equivalent. Buildings in this class have a masonry foundation or equal with a concrete slab as the floor.

The base specifications for this demonstration of a Class 151 are found in Volume II, page II-109 of the Real Property Appraisal Manual.

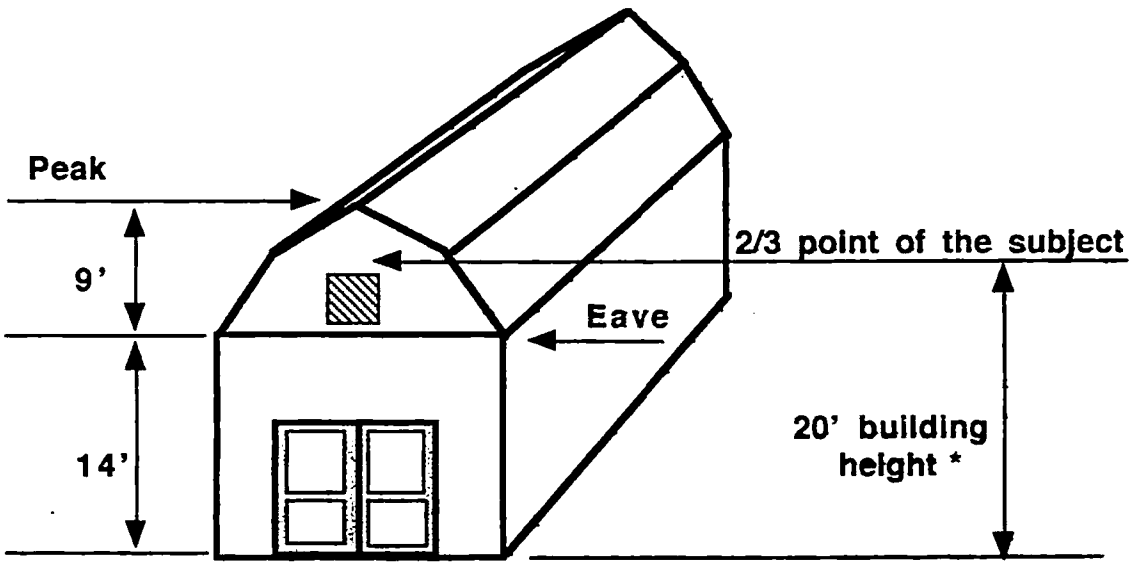
For purposes of this demonstration the cost conversion factor of 2.79 for farm buildings series 150 through 156 is found on the 1997 revised cost conversion table. Guidelines for suggested effective age depreciation tables for the subject building are to be found on page II-137.

Procedure for a Livestock Building Appraisal

The base area replacement cost given for this Class 151 is determined in the following manner:

1) Measure and calculate the square footage of ground area.

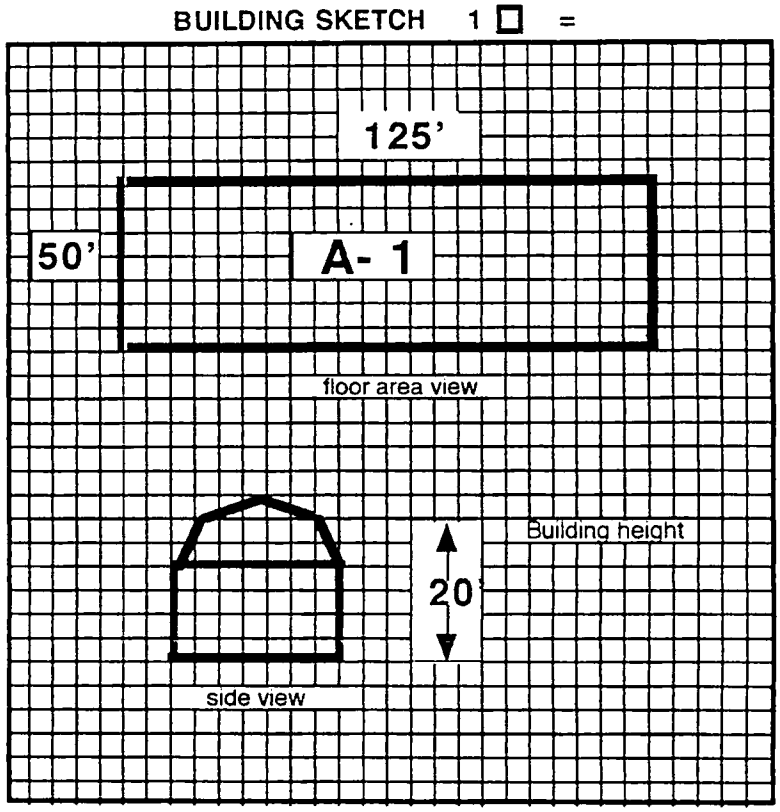
2) Establish the standard height factor to be used. In this type of livestock barn with storage and a gambrel roof, the unit cost are based on cubic foot calculations with or without a loft. The building height is determined through the following procedure. The height component is calculated by adding the side wall elevation with two thirds (2/3) of the roof height from the eves to the roof peak.



Height measurements on a gambrel roof are from the ground level to the point 2/3 the distance from the eaves to the roof peak. *

For the subject building the width of 50 X 125 of length = 6,250 square feet of floor area. Using a height factor of twenty (20) feet (14' (wall) + 6' (roof)) multiplied by the ground area results in a building volume of 125,000 cubic feet. Note: See step #5

3) Sketch the building dimensions using a floor view with a side illustration to display the height profile. Clearly label all the dimensions to ensure accuracy in the area calculations.



4) In the note section of the property record card describe the structure, list the building materials, quality of construction, the year built, the observed physical condition and all relevant information that may affect its value.

NOTES
Wood frame, gambrel roof, wood siding, cement floor,
unfinished storage loft, 5 water outlet, minimum electric,
livestock barn built in 1943, normal condition
STRUCTURE FLAT ADDS
none
ACCESSORY FLAT ADDS
none

For purposes of this demonstration, the selected samples of a property record card were adjusted in size to fit the page dimensions.

5) Under the section of ACCESSORY AND FARM BUILDINGS enter the class identification number, building description, quality grade, width, length and building height.

Card code	Id./Cls.	Description	Quality Grades	Width	Length	Height
28	30 151	Wood frame and concrete block	33 3	35 50	38 125	41 20
	47	livestock barn with loft	50	52	55	58
	64		67	69	72	75
28	30		33	35	38	41
	47		50	52	55	58
	64		67	69	72	75
28	30		33	35	38	41
	47		50	52	55	58
	64		67	69	72	75
28	30		33	35	38	41
	47		50	52	55	58
	64		67	69	72	75
28	30		33	35	38	41
	47		50	52	55	58
	64		67	69	72	75
28	30		33	35	38	41
	47		50	52	55	58
	64		67	69	72	75

* Quality grade 1= Low 3 = Average 5 = High

6. Using the building dimensions derived from the example, calculate the building area and apply the unit costs, quality factors and cost conversion factor to arrive at the RCN (Replacement Cost, New) value of $279,000. In this demonstration physical curable and incurable depreciation is estimated by using the AGE / LIFE method. The structure is 40 years old, in average condition and has a typical economic life of 60 years.

$$\frac{40 \text{ years actual}}{60 \text{ years economic}} = 67\% \text{ physical depreciation}$$

{Replacement Cost New ($279,000) X .67 = $186,930. = physical depreciation

Replacement Cost New	$279,000
Less physical depreciation	$186,930
RCNLD	$92,070

Area	Rate	Quality Factor	Cost	Cost Conv	RCN		Net Cond	RCNLD
125000	.80	1	100,000	2.79	279,000	44	.33	92070
						61		
						78		
						44		
						61		
						78		
			Less functional			44		
			depreciation			61		
			-69% *			78		- 63528
						44		
						61		
			Less economic			78		
			depreciation			44		
			- 15% **			61		- 4281
						78		
						44		
						61		
						78		
			ACCESSORY AND FARM BUILDINGS TOTAL RCNLD					24,261

7. Functional obsolescence in the subject property was extracted by comparing the cost new of a traditional 151 livestock barn to a PF series 161. As defined functional obsolescence is an element of accrued depreciation: a defect caused by a flaw in the structure, material or design of the building. The subject building costs out new at $279,000 in contrast to a PF series of $86,099. This change in design, building techniques and construction materials reflects the 69% adjustment made for functional depreciation. As per the following example a basic PF 161 livestock barn of 50' X 125' was modified with the additions to base specifications to reflect current day replacement structure for the traditional class 151 building.

Class 151 Reproduction cost new $279,000
Class PF 161 Replacement cost new - $86,099
$192,901 / $279,000 = 69% functional obsolescence*

RCNLD $92,070 X .69 = $63,528 = Deduction for functional elements *

	Area	Rate	Quality Factor	Cost	Cost Conv	RCN		Net Cond	RCNLD
							44		
							61		
PF Series 161									
Pole frame	6250	10.59	1	66187	1.00	66187	78	100	66187
50 X 125 X 14 Ht							44		
gambrel roof							61		
built 1997							78		
normal condition							44		
							61		
Additions							78		
							44		
4" reinforced							61		
concrete floor	625	2.41	1	15062	1.00	15062	78	100	15062
5 Plumbing fixtures	5	780	1	3900	1.00	3900	44	100	3900
							61		
Lights & outlets	10	45	1	450	1.00	450	78	100	450
Electric panel	1	500	1	500	1.00	500	44	100	500
							61		
							78		
						ACCESSORY AND FARM BUILDINGS TOTAL RCNLD			86,099

8. In the subject demonstration a 15 % adjustment was made for economic obsolescence.** Economic obsolescence as defined is an element of accrued depreciation; an incurable defect caused by negative influences outside the property itself. When an Assessor can measure and justify an adjustment for loss in value due to external conditions, then a factor for economic obsolescence is warranted. For example the decline in demand for dairy barns due to the general diminution of dairy farms in New Jersey was reflected in the above adjustment of economic obsolescence

NOTES

DEFINITIONS OF APPRAISAL AND BUILDING TERMS
WEIGHTS AND MEASURES
ILLUSTRATIONS- TYPES OF CONSTRUCTION
TABLES
INDEX

Reserved for future use

DEFINITIONS OF APPRAISAL AND BUILDING TERMS

This is a selected list of appraisal and building terms which assessing officials and their staff may encounter in their work. It is not, therefore, a complete list of terms used in appraisal and building construction. Some terms have been omitted because their meanings are common knowledge; others have been omitted because it is believed they will seldom, if ever, be encountered.

Accessory building	A building subordinate to and used in conjunction with a principal or main building. Accessory buildings include barns, cribs, sheds, and private garages.
Anchor Bolt	A bolt embedded in a building foundation for use in fastening the building superstructure to the foundation.
Apron	The wood trim beneath a windowsill; also applied to concrete or blacktop area adjoining a building or loading dock.
Arable Land	Land suitable for cultivation.
Arm's length transaction	A sale of property on the open market, between a willing buyer and a willing seller, and there is no force or compulsion.
Ashlar	Cut stone laid in a definite pattern but seldom in regular courses.
Balloon Framing	Frame construction in which studs are fastened together in such a manner as to form a continuous or single piece from floor to roof rather than using heavy timbers joined by mortises and tenons. Commonly used in barns.
Baluster	A small pillar or column supporting a coping or handrail.
Balustrade	An ornamental railing or parapet made of coping or a handrail and balusters.
Baseboard	A trim board at the floor line of an interior wall.
Batten	A narrow piece of lumber commonly used to cover a seam between two boards.
Bay	A principal division or compartment of a building marked off by columns, pillars, or similar structural parts
Bay Window	A window forming a recess in a room, and projecting beyond the regular exterior walls of a building.
Beam	A principal horizontal load bearing structural member of a building.
Bowstring Truss	A roof or floor support having the form of a bow or arch.
Buttress	A support built into and projecting from a masonry exterior wall to give additional strength to the wall.
BX Wiring	Electrical cable in flexible metal conduit.
Carrara Glass	Heavy exterior structural glass commonly colored black.
Casement	A hinged window frame commonly made so the window will open outward.
Chimney	An upright shaft of a fireproof enclosure for disposing of smoke or waste gas. A chimney may contain one or more flues.
Clapboard	Exterior wall wood siding with one edge thicker than the other. Also called lap siding.
Column	A heavy upright structural member carrying building weight.
Conduit	A pipe or tube enclosing electrical wires, also a pipe or tunnel carrying water or enclosing pipes.

Conversion Factor	A multiplier used to bring costs and valuations into conformity with established standards as of a specified date.
Coping	The top covering of an exterior wall, commonly masonry, to give the wall a finished appearance and to shed water.
Cornice	An ornamental projection at the top of exterior wall of a building.
Course	A continuous horizontal layer of stone, brick, or other building material of uniform thickness in a building.
Curtain Wall	A wall that does not support any of the building weight other than its own weight. A curtain wall may be removed and the building frame would still stand.
Depreciation	The difference between the value of a building (or other improvement) and the cost of replacement at the same date.
Drop Siding	Tongue and groove wood siding forming a weather tight wall used as sheathing and siding.
Drywall	Interior wall constructed of material other than plaster, such as wallboard, fiberboard, plywood, or other similar material.
Easement	A right that may be exercised by the public or individuals on, over or through the lands of others.
Effective Age	Computed or estimated age caused by modernization or alterations, which increase the life expectancy of the building or by adverse conditions which decrease the life expectancy of the building.
Encroachment	A building, part of a building, or obstruction which intrudes upon or invades a highway or side walk or trespasses upon the property of another; any intrusion upon another property.
Enhancement	Increase in value due to improvements.
Exposed Beam Construction	A type of construction in which the roof is supported by heavy structural timbers rather than conventional rafters and in which the roof supports are exposed to the interior. This type of construction gives a rustic appearance.
Firewall	A wall constructed of fire resistant material to prevent the spread of fire within a building or between buildings. Exterior fire walls commonly extend above the roof of the building.
Flashing	Strips (usually metal) used at roof openings to waterproof roof joints.
Flexicore	A hollow-core precast-reinforced concrete plank.
Flue	The lining of a chimney, commonly tile or metal.
Front Foot	A piece of land one foot wide abutting a street or highway and extending back the full depth of the parcel.
Furring	Thin strips of wood, metal, or brick fastened to a wall or beam to level a surface for lathing, plastering, attaching an additional surface, or for making an air space.
Girder	A structural member supported at both ends and designed to carry a load.
Ground Area	Total area of enclosed portion of a building computed from exterior measurements taken at top of foundation.
Gunite	Concrete blown into place by compressed air.
Header	A layer of brick or stone in a building wall with the short face to the front.
Jamb	Upright side of a doorway, window, or fireplace.

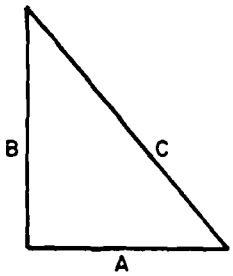
Joist	Timber to which flooring or ceiling laths are fastened.
Kellastone	Stucco exterior wall material with crushed rock finish and magnesite base.
Lap Siding	Exterior wall siding with one edge thicker than the other, also called clapboard.
Lintel	Horizontal piece of timber, stone, or metal over doorway or window supporting the wall above the doorway or window.
Live Load	The weight carried by a floor by use including machinery, equipment, materials and persons.
Load Bearing Wall	A wall, which supports not only its own weight, but also that of the walls and roof above it. A load-bearing wall, in contrast to a curtain wall, cannot be removed without destroying the building.
Louver	A ventilator built of slats slanted so as to admit air but to prevent water, snow, and other foreign objects from entering the opening. The slats may be movable or rigid.
Market value	The highest price which a buyer, willing but not compelled to buy would pay, and the lowest a seller, willing but not compelled to sell, would accept.
Marquee	Covering over the entrance to a theater, hotel, or store. A marquee usually is supported by supports from the building.
Mill Type Construction	Heavy appearing structure with masonry load bearing walls, heavy wood framing, and heavy plank or laminated flooring.
Monitor Roof	A comparatively small roof structure built on the main roof to provide light and ventilation. Monitor roofs are found mostly in barns, sheds, and industrial buildings.
Monolithic Concrete	Poured (solid) concrete.
Mortice	A rectangular hole in one piece of wood cut to receive a projection on another piece, so as to form a joint.
Mud Sill Foundation.	A foundation constructed of heavy timbers laid on the ground.
Mullion	Upright divider between window panes, or a series of joined doors, or panels.
Newel Post	The post at the foot of a stairway, or in a winding stairway, the central post around which the stairway winds.
Obsolescence	Loss in property due to causes other than physical deterioration such as becoming out of date, excess of supply over demand, or loss in desirability and use for the specific type of property.
Over-Improvement	A building having a value in excess of that which the values of the land on which it is built justifies.
Parapet	A low wall at the edge of a roof, balcony, or terrace. May be an extension of the exterior wall above the roof.
Parcel	A single piece of land under one ownership. May be a lot or acreage.
Party Wall	A wall common to or separating two buildings.
Parquet Floor	Flooring consisting of wood blocks laid in adhesive material in systematic (commonly colored) patterns.
Patio	An outside floor area, without roof, constructed of brick, tile, stone, slate, or other similar material, usually adjoining a house and used as an outdoor living area. Same as a terrace.
Pier	Blocks of concrete, stone, or wood used in lieu of a foundation wall to support a building.
Pilaster	An upright column or pillar projecting from an exterior wall to provide added support to the wall particularly at points of load concentration.
Pole Building	A building in which poles are placed upright in the ground and serve as the foundation and as the framework of the building.

Planimeter	A mechanical device for measuring areas of plane surfaces by following property lines with a needle on the instrument. In appraisal and assessment work it is valuable for determining the acreage of the parcels particularly of irregular shaped parcels.
Principal Building	A main building such as a residence, apartment building, motel, commercial or industrial building.
Property Record Card	Card on which description and measurements of each parcel of land and buildings thereon are recorded, and on which the valuation of the property is computed.
Rafter	A beam, usually sloping, supporting a roof.
Ramp	An inclined runway or walkway.
Real property	The land and any objects attached to the land in a permanent manner such as buildings, trees etc.
Riser	Upright part of a stair step.
Romex Wiring	Electrical cable in flexible non-metallic conduit.
Rurban Land	Small tracts of land having both urban and rural characteristics, and located outside of the corporate limits of a town, village, or city and outside of densely populated outlying subdivisions.
Sash	A frame for holding panes of glass in a window or door.
Saw Tooth Roof	A roof whose cross section resembles the teeth of a saw. The vertical side of the roof has windows to provide ventilation and light.
Sheathing	The inner covering placed next to the studding or rafters of the walls or roof of a building.
Shed Roof	A lean-to single slope roof.
Sheetrock	Trade name for drywall sheets with a gypsum base and paper covering.
Siding	Finished exterior wall of a frame building.
Sill	The bottom horizontal member of a window or door.
Sleeper	Strips of lumber fastened to the sub-floor for fastening finished flooring to and for providing a dead air space beneath the flooring.
Span	The horizontal distance between supports, as for an arch or roof.
Spandrel	The triangular space between the curves of an arch and the straight line construction above the curves.
Spandrel Beam	A beam between two columns for carrying the exterior wall of a building.
Split-Level House	A house with living area on two or more floors separated by about one-half standard story of height.
Sprinkler System	A fire protection system consisting of overhead water pipes and nozzles so installed and regulated that water is sprayed automatically over the protected area when the temperature in the area reached a predetermined point.
Stile	Upright piece in the frame of a door or window.
Studding	Upright framework to which walls of a building are attached.
Subfloor	Rough flooring laid on floor joists to form a base for finished flooring.
Substructure	The part of a building below the top of the foundation.

Superstructure	The part of a building above the top of the foundation.
Suspended Ceiling	A ceiling hung below the ceiling joists.
Tax Map	A map showing all lots and tracts of land in their relative size, shape and location. Also known as plat map, or property location map.
Tenon	The end of a piece of wood cut so as to fit into a hole in another piece of wood, and so form a joint.
Terrace	An outside floor area, without roof, constructed of concrete, brick tile, stone, slate, or other similar material, usually adjoining a house and used as an outdoor living area. Same as a patio.
Terra Cotta	A clay and fine sand structural product used mainly for facings and ornamentation.
Terrazzo	A highly polished flooring made of wet cement and marble chips.
Through Lot	A lot abutting two parallel, or approximately parallel, streets.
Tilt-Up Construction	Concrete exterior wall construction in which precast reinforced concrete sections are lifted into position in the wall. This type of construction is sometimes found in commercial and industrial buildings.
Tongue and Groove	Lumber (usually flooring or siding) or other building material in which one edge has a projecting tongue and the opposite edge has a groove that fits over the tongue of matching material to form a locked joint.
Tract	A single piece of land under one ownership. Maybe a lot or acreage. Same as parcel.
Transite	Building material made of asbestos fibers and cement under pressure.
Transom	A low window opening above a door or another window.
Tread	The top, or horizontal, part of a stair step.
Truss	A series of beams, bars and similar structural members assembled into an open web pattern to support a roof or floor, itself supported at both ends.
Under-Improvement	A building having a value less than that which the value of the land on which it is built justifies.
Unit Foot Value	The value of a piece of land one foot wide abutting a street or highway and extending back from the front the standard lot depth.
Unit Front Foot	A piece of land one foot wide abutting a street or highway and extending back from the front the standard lot depth.
Unit Heater	A complete heating unit, without ducts, for heating the area in which it is located, such as a room or other part less than the complete area of a building.
Unit Land Value Map	A map showing the value of land per unit front foot, square foot, or acre in an assessment area.
Wainscot	The lower part of an interior wall (approximately four feet high) when finished different from the remainder of the wall, as with tile.
Wallboard	An interior wall and ceiling fiber material cut into sheets for use in place of plaster.
Wall Ratio	Relationship of the exterior walls (perimeter) of a building to the ground area of the building. The wall ratio is used for determining the base unit cost of commercial and industrial buildings, and is found by dividing the square feet of the building ground area by the perimeter of the exterior walls.

Reserved for future use

AREA AND VOLUME FORMULAS



Rule of Right Triangle

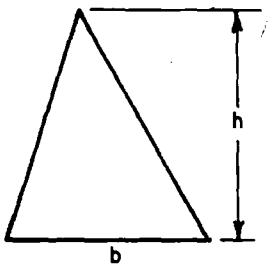
a. Square of hypotenuse of a right triangle is equal to the sum of the squares of other two sides.

b. Square of one side equals square of hypotenuse minus square of other side.

C^2 equals A^2 plus B^2

A^2 equals C^2 minus B^2

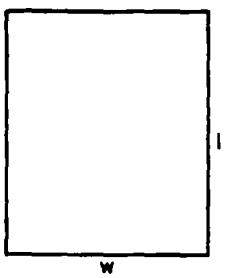
B^2 equals C^2 minus A^2



Triangle

Area equals 1/2 the product of base and altitude

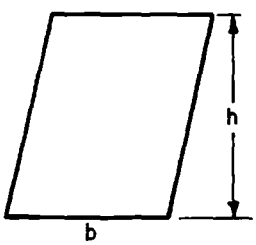
A=1/2 (bh)



Rectangles and Squares

Area equals the product of length and width

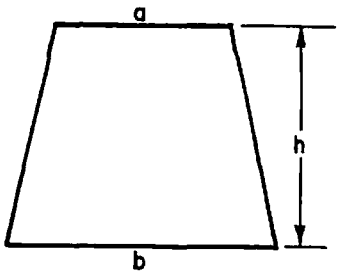
A=lw



Parallelograms

Area equals the product of base and altitude

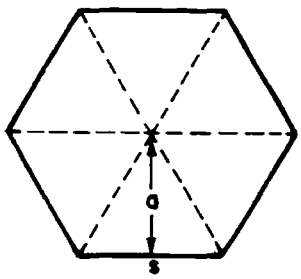
A=bh



Trapezoid

Area equals the product of the height and 1/2 the sum of the bases.

$$A = \frac{a + b}{2} \times h$$

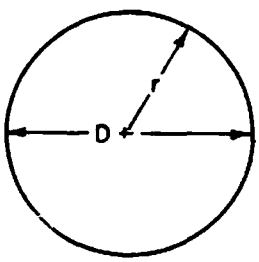


Hexagon

Area equals 3 times the product of apothem and 1 side.

$$A = 3as$$

NOTE: Divide hexagon into triangles.



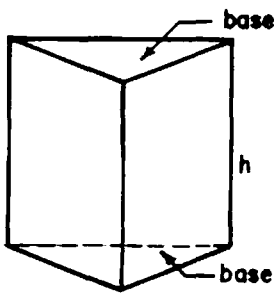
Circle

Area equals the product of π (3.1416) and radius squared.

$$A = \pi r^2 \text{ or } .7854D^2$$

Circumference equals the product of π and diameter.

$$C = \pi D \text{ or } C = 2\pi r$$

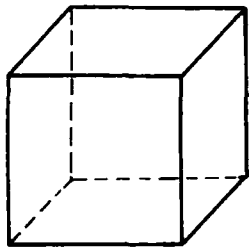


Prism

Lateral area equals the perimeter of the base times the height.

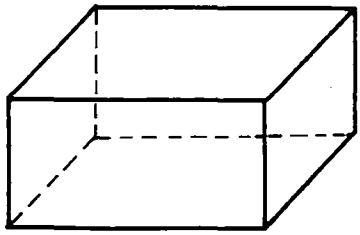
Total area equals the combined area of lateral faces and the bases.

Volume of any prism equals the area of base times altitude.



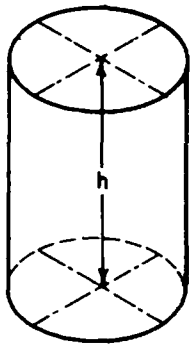
Cube

Total area equals 6 times the square of one edge.
Volume equals area of the base times altitude.



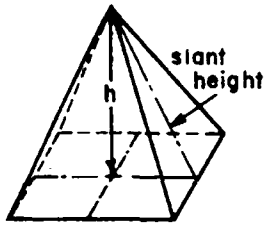
Retangular Solid

Lateral area equals the perimeter of the base times the height.
Total area equals combined area of lateral faces and the bases.
Volume equals area of base times altitude.



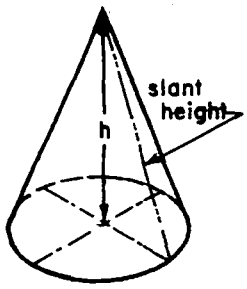
Cylinder

Lateral area equals the circumference of base times height.
Volume equals the area of its base times altitude.



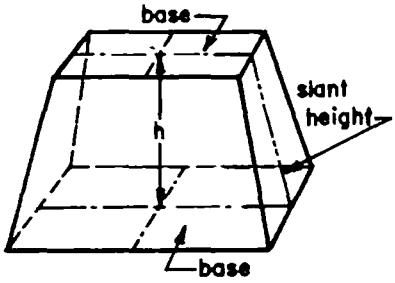
Pyramid

A solid whose base is a polygram and sides are triangles and meet in common point to form the vertex.
Lateral area is equal to the perimeter of base x 1/2 slant height.
Volume is 1/3 the base area x altitude.



Cone

A solid whose base is a circle and whose surface tapers to a point called vertex or top. May be considered a pyramid with an unlimited number of sides.
The lateral area equals the circumference of base x 1/2 slant height.
Volume equals 1/3 of the product of the base area and altitude.



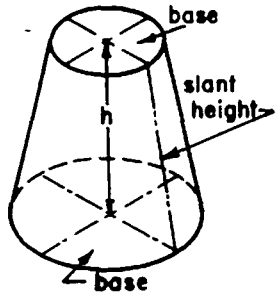
Frustums

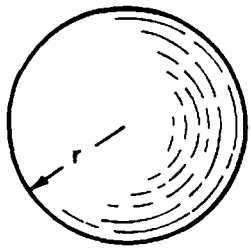
Lateral area of a frustum of a right pyramid equals one half of the sum of the perimeters of two bases times the slant height.

Lateral area of a frustum of a cone is found by multiplying one-half the sum of the circumference of the two bases by the slant height.

Total area of a frustum is the sum of lateral area and the two bases.

For volume of a frustum take sum of the areas of the two bases; to this add the square root of the product of the areas of the two bases, multiply result by 1/3 of the altitude.





Sphere

(A solid bounded by a curved surface, every point equally distant from the center.)
Surface of a sphere equals Π times the square of the diameter.
Volume of a sphere equals the area of the surface times 1/3 of the radius.
Circumference is the same as that of a circle.

WEIGHTS AND MEASURES

Tables of Weights and Measures and Other Information Which May Be Helpful to the Assessor

Linear Measure

1 Foot	=	12 inches
1 Yard	=	3 feet - 36 inches
1 Rod	=	5 1/2 yards - 16 1/2 feet
1 Furlong	=	40 rods - 220 yards - 660 feet
1 Mile	=	8 furlongs - 320 rods - 1,760 yards - 5,280 feet

Surveyor's Linear Measure

1 Link	=	7.92 inches
1 Rod	=	25 links
1 Chain	=	4 rods - 100 links - 66 feet
1 Furlong	=	10 chains
1 Mile	=	8 furlongs - 80 chains

Square Measure

1 Square Foot	=	144 sq. inches
1 Square Yard	=	9 sq. feet - 1,296 sq. inches
1 Square Rod	=	1 pole or perch - 30 1/4 sq. yards - 272 1/4 sq. feet
1 Rood	=	40 sq. rods
1 Acre	=	160 sq. rods - 4,840 sq. yards - 43,560 sq. feet
1 Square Mile	=	640 acres

Surveyor's Square Measure

1 Square Rod	=	526 sq. links
1 Square Chain	=	16 sq. rods
1 Acre	=	10 sq. chains
1 Square Mile	=	640 acres

Cubic Measure

1 Cubic Foot	=	1,728 cu. inches - 7,481 gallons
1 Cubic Yard	=	27 cu. feet
1 Cord Foot	=	16 cu. feet
1 Cord of Wood	=	8 cord feet - 128 cu. feet
1 Perch of Masonry	=	24 3/4 cu. feet
1 Bushel	=	1.2445 cu. feet

Angles and Arcs

1 Minute	=	60 seconds
1 Degree	=	60 minutes
1 Right Angle	=	90 degrees - 1 quadrant
1 Circumference	=	360 degrees - 4 quadrants

Board Measure

1 Board Foot	=	length in feet x width in feet x thickness in inches.

Measurements in General Use:

1 link is 7.92 inches
1 foot is 12 inches
1 yard is 3 feet or 36 inches
1 rod is 16 1/2 feet, 5 1/2 yards or 25 links
1 surveyors chain is 66 feet, or 4 rods, or 100 links
1 furlong is 660 feet, or 40 rods
1 mile is 8 furlongs, 320 rods, 80 chains or 5,280 feet
1 square rod is 272 1/4 square feet or 30 1/4 square yards
1 acre contains 43,560 square feet
1 acre contains 160 square rods

A span is 9 inches
A hand - horse measurement - is 4 inches
A knot - nautical - is 6,080.27 feet
A fathom - nautical - is 6 feet
A stone is 14 pounds

A square acre is approximately 208.7 feet on each side
1 acre is about 8 rods by 20 rods, or any two combinations of rods whose product is 160.

Simple Formula Converting Square Feet to Acres:

Multiply by 23 and point off 6 places
Example: 1500 ft. x 2050 ft. = 3,075,000 sq. ft. x 23 = 70.73 acres
(This method is not exact but is useful for rough calculations)

To Find Capacity of Cylindrical Tanks Standing on End:

To find the capacity of cubic feet of a tapered round tank or other object: See "Volume of Frustrum".

To find the capacity of a cylindrical tank in gallons:
Multiply area of base (πr^2) by height of tank to obtain capacity in cubic feet.
Multiply capacity in cubic feet by 7.481 gallons per cubic foot.

Board Measure:

Multiply thickness in inches by width in inches, divide product by 12 and multiply result by the length in feet. The result is board measure content.

Conversion factors for converting lineal feet of lumber into board feet.
Example:
50 - 2" x 10"s 20' long
50 x 20' = 1000 lineal feet
2" x 10" = 20 sq. inches - 12 = 1.667 board feet x 1000 lineal feet equals 1,667 board feet.

Table for the Conversion of Lineal Feet into Board Feet

2" x 4"	(1 lineal foot)	.667 board feet
3" x 4"	"	1.000 " "
2" x 6"	"	1.000 " "
2" x 8"	"	1.333 " "
2" x 10"	"	1.667 " "
2" x 12"	"	2.000 " "
2" x 14"	"	2.333 " "
2" x 16"	"	2.667 " "
3" x 6"	"	1.500 " "
4" x 6"	"	2.000 " "
4" x 8"	"	2.667 " "
4" x 10"	"	3.333 " "
4" x 12"	"	4.000 " "
6" x 6"	"	3.000 " "
6" x 8"	"	5.000 " "
10" x 12"	"	10.000 " "
12" x 12"	"	12.000 " "

MENSURATION PRINCIPLES

Plane figure - A plane surface bounded by either straight or curved lines and having no thickness.

Solid - A body, such as a barrel, building, etc.

Square measure - Area calculation requiring only two dimensions, length and width.

Cubic measure - Cubic or cubage means volume and gives size in terms of its bulk. Calculation requires 3 dimensions, length x width x depth or height or thickness.

TABLES OF INTERRELATION OF UNITS OF MEASUREMENT

UNITS OF LENGTH INTERNATIONAL MEASURE*

Units		Inches	Feet	Yards
1 inch	=	1	0.083 333 33	0.027 777 78
1 foot	=	12	1	0.033 333 3
1 yard	=	36	3	1
1 mile	=	63 360	5280	1760
1 centimeter	=	0.393 700 78	0.032 808 40	0.010 936 13
1 meter	=	39.370 08	3.280 840	1.093 613

Units		Miles	Centimeters	Meters
1 inch	=	0.000 015 782 83	2.54	0.025 4
1 foot	=	0.000 189 393 9	30.48	0.304 8
1 yard	=	0.000 568 181 8	91.44	0.914 4
1 mile	=	1	160 934.4	1609.344
1 centimeter	=	0.000 006 213 712	1	0.01
1 meter	=	0.000 621 371 2	100	1

UNITS OF LENGTH SURVEY MEASURE*

Units		Links	Feet	Rods	Chains
1 link	=	1	0.66	0.04	0.01
1 foot	=	1.515.152	1	0.060 606 06	0.015 151 52
1 rod	=	25	16.5	1	0.25
1 chain	=	100	66	4	1
1 mile	=	8000	5280	320	80
1 meter	=	4.970 960	3.280 833	0.198 838 4	0.049 709 60

Units		Miles	Meters
1 link	=	0.000 125	0.201 168 4
1 foot	=	0.000 189 393 9	0.304 800 6
1 rod	=	0.003 125	5.029 210
1 chain	=	0.0125	20.116 84
1 mile	=	1	1609.347
1 meter	=	0.000 621 369 9	1

* One survey foot = 1.000.002 internaticnal feet
One survey mile = 1.000.002 international mile

UNITS OF VOLUME

Units		Cubic Inches	Cubic Feet	Cubic Yards
1 cubic inch	=	1	0.000 578 703 7	0.000 021 433 47
1 cubic foot	=	1728	1	0.037 037 04
1 cubic yard	=	46 656	27	1
1 cubic centimeter	=	0.061 023 74	0.000 035 314 67	0.000 001 307 951
1 cubic decimeter	=	61.023 74	0.035 314 67	0.001 307 951
1 cubic meter	=	61 023.74	35.314 67	1.307 951

Units		Cubic Centimeters	Cubic Decimetera	Cubic Meters
1 cubic inch	=	16.387 064	0.016 387 064	0.000 016 387 064
1 cubic foot	=	28 316.846 592	28.316 846 592	0.028 316 846 592
1 cubic yard	=	764 554.857 984	764.554 857 984	0.764 554 857 984
1 cubic centimeter	=	1	0.001	0.000 001
1 cubic decimeter	=	1 000	1	0.001
1 cubic meter	=	1 000 000	1000	1

ALL UNDERLINED FIGURES ARE EXACT.

UNITS OF AREA INTERNATIONAL MEASURE*

Units		Square Inches	Square Feet	Square Yards
1 sq. inch	=	1	0.006 944 444	0.000 771 604 9
1 sq. foot	=	144	1	0.111 111 1
1 sq. yard	=	1296	9	1
1 sq. mile	=	4 014 489 600	27 878 400	3 097 600
1 sq. centimeter	=	0.155 000 3	0.001 076 391	0.000 119 599 0
1 sq. meter	=	1550.003	10.763 91	1.195 990

Units		Square Miles	Sq. Centimeters	Sq. Meters
1 sq. inch	=	0.000 000 000 249 097 7	6.451 6	0.000 645 16
1 sq. foot	=	0.000 000 035 870 06	929.030 4	0.092 903 04
1 sq. yard	=	0.000 000 322 830 6	8361.273 6	0.836 127 36
1 sq. mile	=	1	25 899 881 103.36	2 589 988.110 336
1 sq. centimeter	=	0.000 000 000 038 610 22	1	0.000 1
1 sq. meter	=	0.000 000 386 102 1	10 000	1

UNITS OF AREA SURVEY MEASURE*

Units		Square Feet	Square Rods	Square Chains	Acres
1 sq. foot	=	1	0.003 673 095	0.000 229 568 4	0.000 022 956 84
1 sq. rod	=	272.25	1	0.062 5	0.006 25
1 sq. chain	=	4 356	160	1	0.1
1 acre	=	43 560	160	10	1
1 sq. mile	=	27 878 400	102 400	6400	640
1 sq. meter	=	10.763 87	0.039 536 70	0.002 471 004	0.000 247 104 4
1 hectare	=	107 638.7	395.367 0	24.710 44	2.471 044

UNITS OF AREA SURVEY MEASURE*

Units		Square Miles	Square Meters
1 sq. foot	=	0.000 000 035 870 06	0.092 903 41
1 sq. rod	=	0.000 009 765 625	25.292 95
1 sq. chain	=	0.000 156 25	404.687 3
1 acre	=	0.001 562 5	4 046.873
1 sq. mile	=	1	2 589 998
1 sq. meter	=	0.000 000 386 100 6	1
1 hectare	=	0.003 861 006	10 000

Units		Hectares
1 sq. foot	=	0.000 009 290 341
1 sq. rod	=	0.002 529 295
1 sq. chain	=	0.040 468 73
1 acre	=	0.404 687 3
1 sq. mile	=	258.999 8
1 sq. meter	=	0.000 1
1 hectare	=	1

* One square survey foot = 1.000 004 square international feet
One square survey mile = 1.000 004 square international mile

ALL UNDERLINED FIGURES ARE EXACT.

Group of Building Classes for Construction Cost Conversion

In order to reflect the variations in quantities and costs of building labor and material used in the construction of buildings classified according to type and construction, each specific building class has been classified and listed under the following building cost conversation groups.

Classification of Typical Building Classes Under Cost Conversion Groups

Class of Building	Type of Building					
	Frame	Brick-Stone	Apt.	Hotel-Motel	Office	Comm-Indus
R-12	RR-1	RR-2	-	-	-	-
R-13	RR-1	RR-2	-	-	-	-
R-14	RR-1	RR-2	-	-	-	-
R-15	RR-1	RR-2	-	-	-	-
R-16	RR-1	RR-1	-	-	-	-
R-17	RR-1	RR-2	-	-	-	-
R-18	RR-1	RR-2	-	-	-	-
R-19	RR-1	RR-2	-	-	-	-
R-20	RR-1	RR-2	-	-	-	-
R-21	RR-1	RR-2	-	-	-	-
R-23	RR-1	RR-2	-	-	-	-
R-27	RR-1	RR-2	-	-	-	-
R-28	RR-1	RR-1	-	-	-	-
R-29	RR-1	RR-2	-	-	-	-
R-30	RR-1	RR-2	-	-	-	-
R-33	RR-1	RR-2	-	-	-	-
R-35	RR-1	RR-2	-	-	-	-
R-37	RR-1	RR-2	-	-	-	-
R-39	RR-1	RR-2	-	-	-	-
R-43	RR-1	RR-2	-	-	-	-
R-45	RR-1	RR-1	-	-	-	-
R-47	RR-1	RR-2	-	-	-	-
R-49	RR-1	RR-2	-	-	-	-
R-50	RR-1	-	-	-	-	-
R-51	RR-1	-	-	-	-	-
R-52	RR-1	-	-	-	-	-
R-53	RR-1	-	-	-	-	-
R-54	RR-1	-	-	-	-	-
101	-	-	C-1	C-1	C-1	C-3
102	-	-	C-1	C-1	C-1	C-3
103	-	-	C-1	C-1	C-1	C-4
104	-	-	C-2	C-2	C-2	C-6

Classification of Typical Building Classes Under Cost Conversion Groups (con't)

Class of Building	Type of Building					
	Frame	Brick-Stone	Apt.	Hotel-Motel	Office	Comm-Indus
105	-	-	C-2	C-2	C-2	C-5
106	-	-	C-2	C-2	C-2	C-6
107	-	-	-	-	-	C-5
108	-	-	-	-	-	C-5
109	-	-	-	-	-	C-5
123	-	-	-	-	-	C-3
124	-	-	-	-	-	C-4
125	-	-	-	-	-	C-5
126	-	-	-	-	-	C-4
127	-	-	-	-	-	C-5
133	-	-	-	-	-	C-3
134	-	-	-	-	-	C-4
135	-	-	-	-	-	C-5
136	-	-	-	-	-	C-4
137	-	-	-	-	-	C-5
145	-	-	C-1	-	-	-
150	R-1	R-2	-	-	-	-
151	R-1	R-2	-	-	-	-
152	R-1	R-2	-	-	-	-
153	R-1	R-2	-	-	-	-
154	R-1	R-1	-	-	-	-
155	R-1	R-2	-	-	-	-
156	R-1	R-2	-	-	-	-

DEPRECIATION

TYPICAL MOBILE HOME EFFECTIVE AGE DEPRECIATION TABLES

EFFECTIVE AGE	LOW	FAIR	AVERAGE	GOOD	HIGH
1	5.5%	5.0%	4.5%	4.0%	3.0%
2	9.5%	8.5%	7.5%	6.5%	5.0%
3	14.5%	13.0%	11.5%	9.5%	8.0%
4	20.0%	17.5%	16.0%	12.5%	11.0%
5	25.0%	21.5%	20.0%	16.0%	14.0%
6	27.5%	24.0%	22.0%	17.5%	15.0%
7	34.0%	29.0%	27.0%	22.0%	19.0%
8	38.0%	33.0%	30.0%	24.5%	21.0%
9	43.0%	37.5%	34.0%	28.0%	24.0%
10	47.0%	40.5%	37.5%	30.5%	26.0%
11	51.0%	44.0%	41.0%	34.0%	29.0%
12	55.0%	48.0%	44.0%	36.5%	31.0%
13	59.0%	51.0%	47.0%	39.0%	33.0%
14	62.5%	54.5%	50.0%	41.5%	35.0%
15	65.0%	57.0%	52.0%	43.0%	36.0%
16	67.5%	59.0%	54.0%	45.0%	38.0%
17	70.0%	61.0%	56.0%	46.5%	39.0%
18	72.0%	62.5%	58.0%	48.5%	41.0%
19	74.0%	65.0%	60.0%	50.0%	42.0%
20	75.0%	67.5%	62.0%	51.5%	43.0%
21	-	70.0%	64.0%	53.0%	45.0%
22	-	71.0%	65.0%	54.0%	46.0%
23	-	72.5%	67.0%	55.5%	47.0%
24	-	74.0%	68.5%	57.0%	48.0%
25	-	75.0%	70.0%	58.5%	49.0%
30	-	-	-	63.0%	53.0%
35	-	-	-	70.0%	56.0%
40	-	-	-	-	59.5%
45	-	-	-	-	63.0%
50	-	-	-	-	66.5%

Reserved for future use

EFFECTIVE AGE DEPRECIATION DEDUCTION TABLE

The following tabulation representation suggested guides for effective age percentage depreciation tables for different types of building construction. Each building class specification indicates the tables which are applicable to the class.

EFFECTIVE AGE IN YEARS	TABLE D	TABLE D-I	TABLE D-II	TABLE D-III	TABLE D-IV	TABLE D-V	TABLE D-VI	TABLE D-VII
1	4.0%	2.5%	2.0%	1.5%	1.5%	1.0%	1.0%	0.5%
2	7.0	4.5	3.5	2.5	2.5	2.0	2.0	1.5
3	11.0	7.0	4.5	3.5	3.0	2.5	2.5	2.0
4	16.0	9.0	6.0	4.5	4.0	3.5	3.5	3.0
5	20.0	11.0	7.0	5.5	4.5	4.0	4.0	3.5
6	22.0	13.0	8.5	6.5	5.5	5.0	5.0	4.5
7	27.0	15.5	10.0	8.0	6.5	6.0	5.5	5.0
8	30.0	17.5	11.0	9.0	8.0	7.0	6.5	6.0
9	34.0	20.0	12.5	10.5	9.0	8.0	7.0	7.0
10	37.5	22.0	14.0	11.5	10.0	9.0	8.0	7.5
11	41.0	24.0	15.5	13.0	11.0	10.0	9.0	8.0
12	44.0	25.5	17.0	14.0	12.0	10.5	9.5	9.0
13	47.0	27.5	18.0	15.5	13.0	11.5	10.5	9.5
14	50.0	29.5	19.5	16.5	14.0	12.5	11.0	10.5
15	52.0	31.0	21.0	18.0	15.0	13.5	12.0	10.5
16	54.0	33.0	22.5	19.0	16.0	14.5	13.0	11.0
17	56.0	34.5	24.0	20.5	17.5	15.5	13.5	12.0
18	58.0	36.5	25.5	21.5	18.5	16.5	14.5	12.5
19	60.0	38.0	27.0	23.0	20.0	17.5	15.0	13.5
20	62.0	40.0	28.5	24.0	21.0	18.5	16.0	14.0
21	64.0	41.5	30.0	25.5	22.0	19.5	17.0	14.5
22	65.0	43.0	32.0	27.0	23.0	20.5	17.5	15.0
23	67.0	45.0	33.5	28.0	24.5	21.5	18.5	16.0
24	68.5	46.5	35.0	29.5	25.5	22.5	19.0	16.5
25	70.0	48.0	36.5	31.0	26.5	23.5	20.0	17.0
26	71.5	49.5	38.0	32.5	28.0	24.5	21.0	18.0
27	73.0	51.0	39.5	34.0	29.0	25.5	22.0	19.0
28	74.5	52.0	41.0	35.0	30.5	26.0	23.0	20.0
29	76.0	53.5	42.0	36.5	32.0	27.0	24.0	21.0
30	77.5	55.0	43.5	38.0	33.0	28.0	25.0	22.0
35		61.0	49.0	44.0	38.5	33.5	29.0	26.0
40		65.0	54.0	47.5	43.0	37.0	33.0	30.0
45		68.0	58.0	50.5	44.5	38.5	34.5	31.5
50		70.0	62.5	53.0	45.5	39.5	35.5	32.5
55		72.0	65.0	55.0	47.0	41.0	37.0	34.0
60		74.0	63.0	57.0	48.0	42.0	38.0	35.0
65		76.0	70.0	59.0	49.5	43.5	39.5	36.5
70		78.0	73.5	60.5	50.5	44.5	40.5	37.5
75			75.5	62.0	52.0	46.0	42.0	39.0
80			78.0	63.0	53.0	47.0	43.0	40.0

NOTE: Building marked

Fair Physical Condition increase deduction	5%
Poor Physical Condition increase deduction	10%
Dilapidated Condition increase deduction	20.%
Unusable and Beyond Repair increase deduction to total of	90%

Residential and Apartment Depth Factor Tables

Standard Depth

Depth in Feet	100'	125'	150'	175'	200'	300'	400'
5	.10	.10	.10	.10	.10	.02	.02
10	.18	.16	.16	.14	.14	.05	.04
15	.26	.22	.20	.18	.18	.07	.06
20	.33	.28	.24	.22	.22	.10	.08
25	.40	.34	.28	.26	.25	.12	.10
30	.47	.40	.32	.30	.28	.16	.12
35	.53	.45	.36	.34	.31	.18	.14
40	.59	.50	.40	.38	.34	.21	.16
45	.65	.54	.44	.42	.37	.24	.18
50	.70	.58	.48	.46	.40	.26	.20
55	.75	.62	.52	.49	.43	.29	.22
60	.79	.66	.56	.52	.46	.32	.24
65	.83	.70	.60	.55	.49	.34	.26
70	.87	.74	.64	.58	.52	.37	.28
75	.90	.78	.68	.61	.55	.40	.30
80	.92	.81	.72	.64	.58	.42	.32
85	.94	.84	.75	.67	.61	.44	.34
90	.96	.86	.78	.70	.64	.46	.36
95	.98	.88	.81	.73	.67	.48	.38
100	1.00	.90	.84	.76	.70	.50	.40
105	1.02	.92	.87	.79	.72	.52	.42
110	1.04	.94	.89	.81	.74	.53	.43
115	1.06	.96	.91	.84	.76	.55	.45
120	1.08	.98	.93	.86	.78	.58	.46
125	1.10	1.00	.95	.88	.80	.60	.47
130	1.12	1.02	.96	.90	.82	.61	.49
135	1.14	1.04	.97	.92	.84	.63	.50
140	1.15	1.06	.98	.93	.86	.65	.52
145	1.16	1.08	.99	.94	.88	.67	.53
150	1.17	1.10	1.00	.95	.90	.70	.55
155	1.18	1.12	1.01	.96	.91	.71	.56
160	1.19	1.14	1.02	.97	.92	.72	.58
165	1.20	1.15	1.03	.98	.93	.74	.60
170	1.21	1.16	1.04	.99	.94	.75	.61
175	1.22	1.17	1.05	1.00	.95	.77	.63
180	1.23	1.18	1.06	1.01	.96	.78	.64
185	1.24	1.19	1.07	1.02	.97	.80	.65
190	1.25	1.20	1.08	1.03	.98	.81	.67
195	1.26	1.21	1.09	1.04	.99	.83	.68
200	1.27	1.22	1.10	1.05	1.00	.84	.70
250	1.30	1.25	1.15	1.10	1.06	.93	.80
300	1.32	1.27	1.20	1.14	1.10	1.00	.90
350	1.34	1.29	1.24	1.18	1.13	1.05	.95
400	1.36	1.31	1.26	1.21	1.16	1.08	1.00
450	1.38	1.33	1.28	1.23	1.18	1.10	1.04
500	1.40	1.35	1.30	1.25	1.20	1.11	1.05

Add .02 for each 50 ft. over 500.

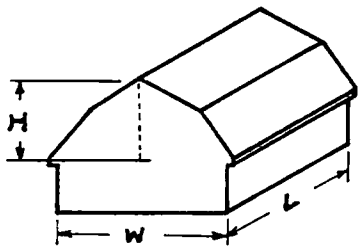
Commercial Depth Factor Tables

Standard Depth

Depth in Feet	100'	125'	150'	200'	250'
5	.15	.12	.10	.10	.10
10	.25	.21	.18	.15	.14
15	.34	.29	.25	.20	.18
20	.42	.36	.31	.25	.22
25	.50	.43	.36	.30	.26
30	.58	.50	.41	.34	.30
35	.63	.55	.46	.38	.34
40	.68	.59	.50	.42	.38
45	.72	.63	.54	.46	.41
50	.75	.66	.58	.50	.44
55	.78	.69	.62	.54	.47
60	.81	.72	.66	.57	.49
65	.84	.75	.69	.60	.51
70	.87	.78	.72	.63	.53
75	.90	.80	.74	.65	.55
80	.92	.82	.76	.67	.57
85	.94	.84	.78	.69	.59
90	.96	.86	.80	.71	.61
95	.98	.88	.82	.73	.63
100	1.00	.90	.84	.75	.65
105	1.02	.92	.86	.77	.67
110	1.04	.94	.88	.79	.69
115	1.06	.96	.90	.81	.71
120	1.08	.98	.92	.83	.73
125	1.10	1.00	.94	.85	.75
130	1.12	1.02	.96	.86	.77
135	1.14	1.04	.97	.87	.79
140	1.16	1.06	.98	.88	.80
145	1.18	1.08	.99	.89	.81
150	1.20	1.10	1.00	.90	.82
155	1.22	1.12	1.01	.91	.83
160	1.24	1.14	1.02	.92	.84
165	1.26	1.16	1.03	.93	.85
170	1.28	1.18	1.04	.94	.86
175	1.30	1.20	1.05	.95	.87
180	1.32	1.21	1.06	.96	.88
185	1.33	1.22	1.07	.97	.89
190	1.34	1.23	1.08	.98	.90
195	1.35	1.24	1.09	.99	.91
200	1.36	1.25	1.10	1.00	.92
250	1.39	1.28	1.15	1.05	1.00
300	1.42	1.31	1.18	1.07	1.02
350	1.44	1.34	1.21	1.09	1.04
400	1.46	1.36	1.24	1.11	1.06
450	1.48	1.38	1.27	1.13	1.08
500	1.50	1.40	1.30	1.15	1.10

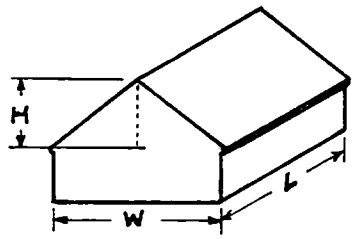
Add .02 for each 50 ft. over 500.

ROOF VOLUME FORMULAS



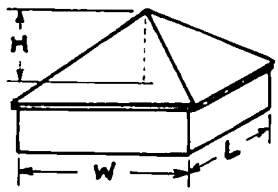
GAMBREL ROOF

$$\frac{W \times L \times H \times 2}{3}$$



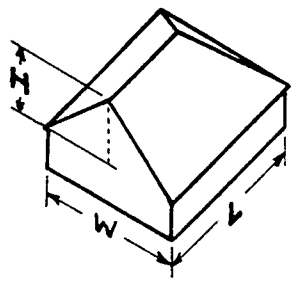
GABLE ROOF

$$\frac{W \times L \times H}{2}$$



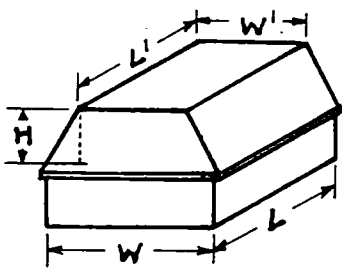
PYRAMID ROOF

$$\frac{W \times L \times H}{3}$$



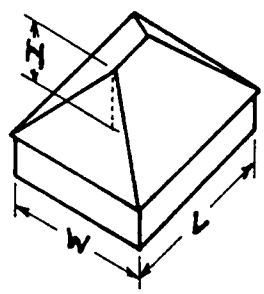
SINGLE HIP ROOF

$$\frac{W \times L \times H}{2} - \frac{W \times L \times H}{6}$$



MANSARD ROOF

$$\left[(W \times L) + (W' \times L')\right] \times \frac{H}{2}$$



DOUBLE HIP ROOF

$$\frac{W \times L \times H}{2} - \frac{W \times L \times H}{3}$$

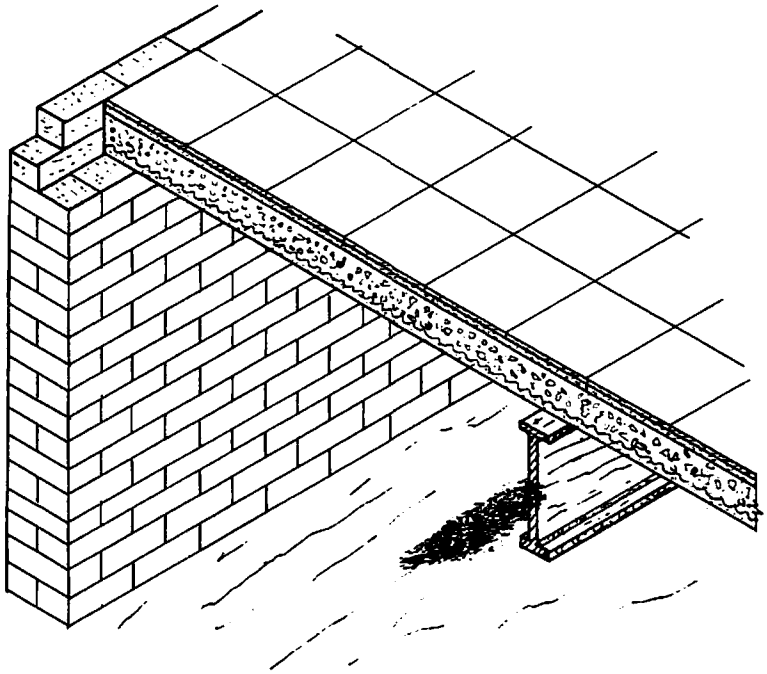
NOTE:

All heights (H) are measured from the upper side of attic floor joist to the peak.

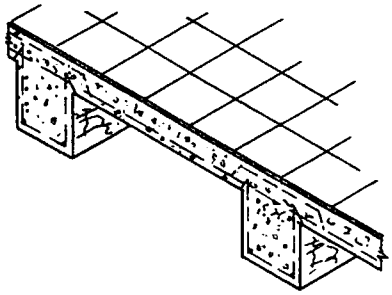
All widths and lengths are outside measurements.

ILLUSTRATIONS

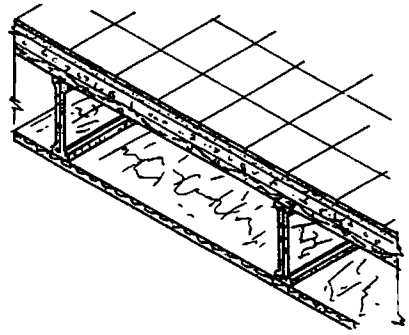
FLOORS



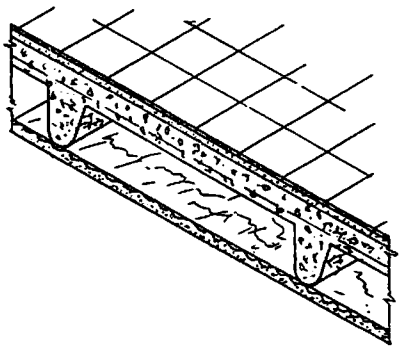
CONCRETE OR GYPSUM PLANK ON STEEL JOIST



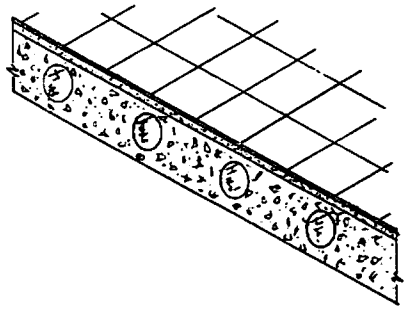
REINFORCED CONCRETE BEAM AND SLAB



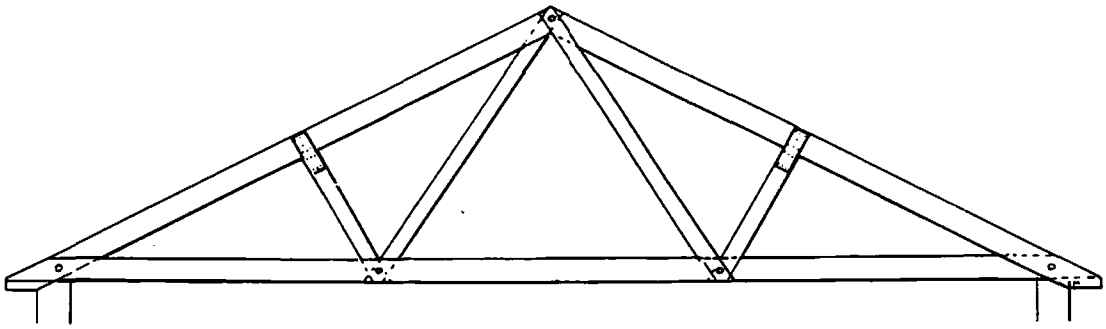
PRECAST REINFORCED CONCRETE I BEAM



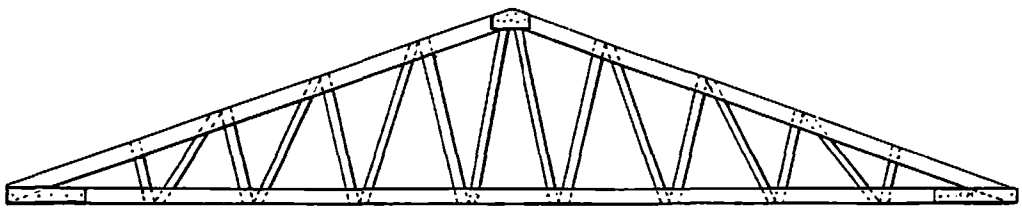
PAN JOIST



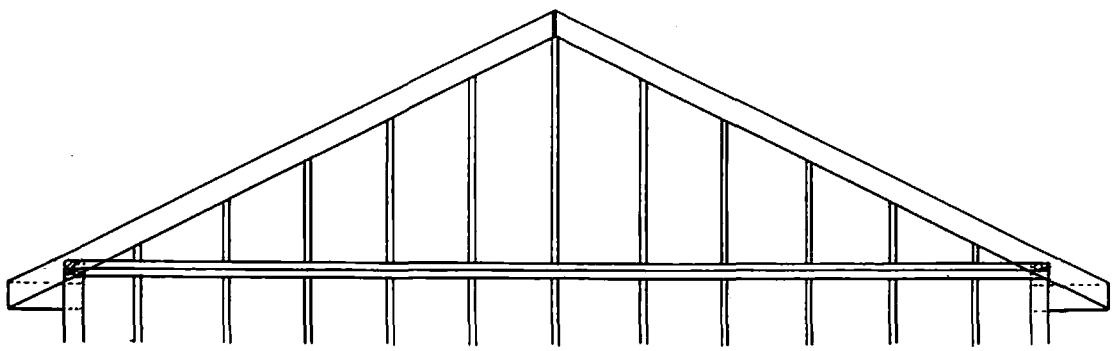
LONG SPAN TUBE FLOOR



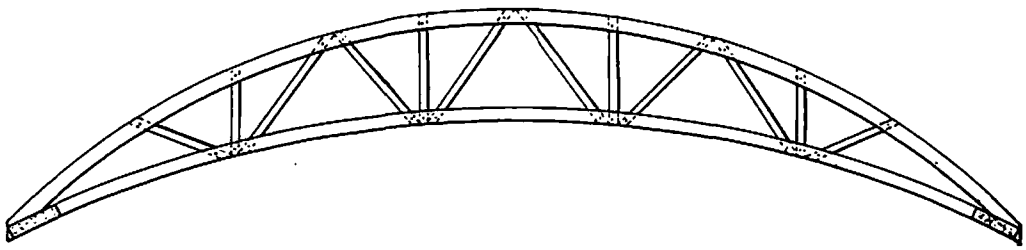
BOLTED ROOF TRUSS



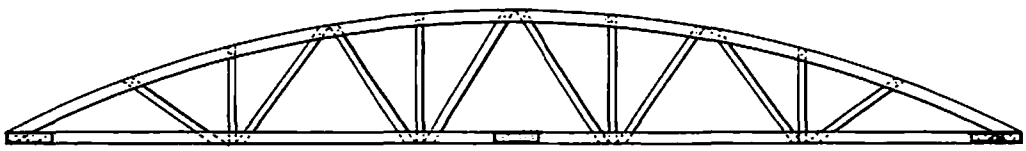
BELGIAN DESIGN ROOF TRUSS



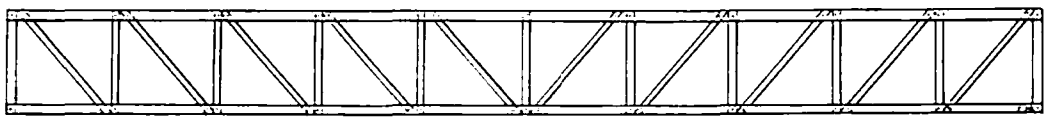
GABLE TYPE ROOF TRUSS



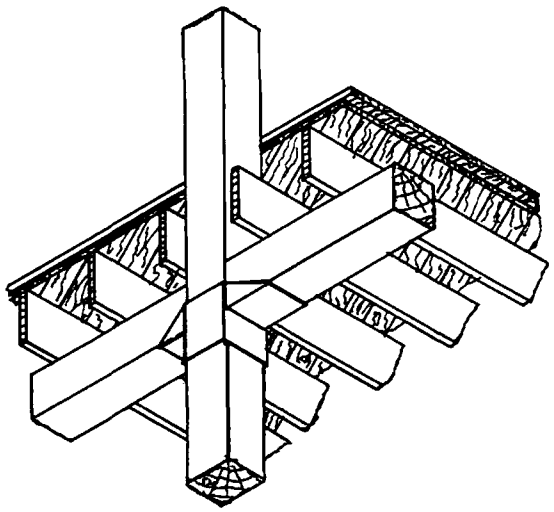
CRESENT DESIGN ROOF TRUSS



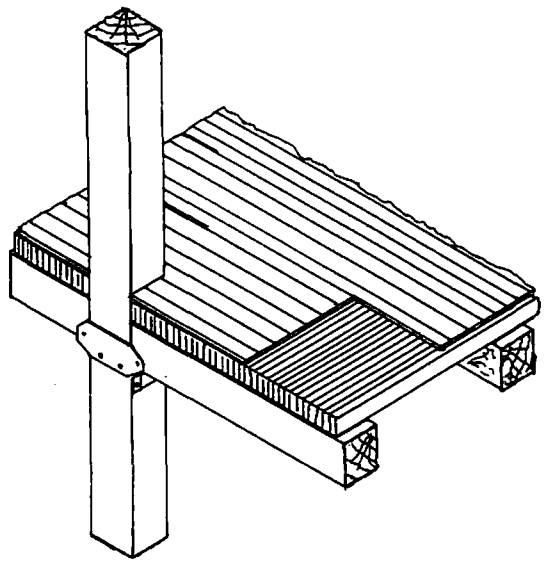
BOWSTRING ROOF TRUSS



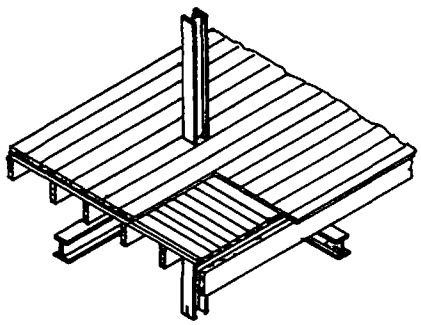
FLAT TOP OR HOWE DESIGN ROOF TRUSS



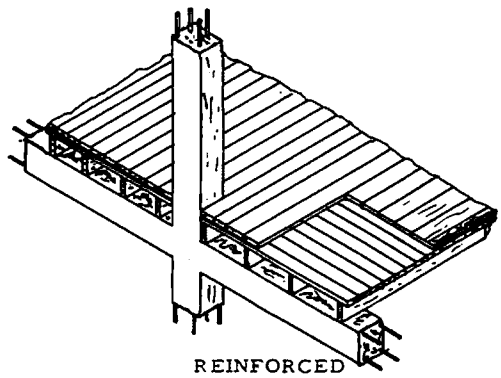
WOOD FRAME



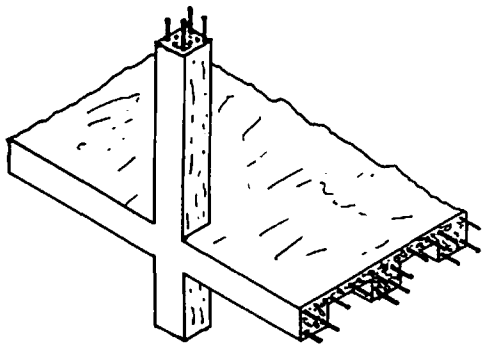
WOOD FRAME
MILL TYPE FLOOR



OPEN SKELETON
STEEL FRAME



REINFORCED
CONCRETE FRAME



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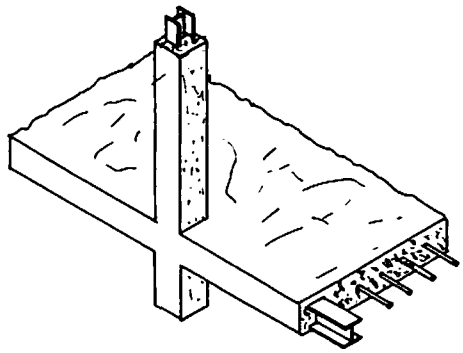
CONCRETE BEAMED



CONCRETE PROTECTED
STEEL FRAME

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4% ANNUAL TABLE 4%

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.040 000	1.000 000	1.000 000	.961 538	.961 538	1.040 000
2	1.081 600	2.040 000	.490 196	.924 556	1.886 095	.530 196
3	1.124 864	3.121 600	.320 349	.888 996	2.775 091	.360 349
4	1.169 859	4.246 464	.235 490	.854 804	3.629 895	.275 490
5	1.216 653	5.416 323	.184 627	.821 927	4.451 822	.224 627
6	1.265 319	6.632 975	.150 762	.790 315	5.242 137	.190 762
7	1.315 932	7.898 294	.126 610	.759 918	6.002 055	.166 610
8	1.368 569	9.214 226	.108 528	.730 690	6.732 745	.148 528
9	1.423 312	10.582 795	.094 493	.702 587	7.435 332	.134 493
10	1.480 244	12.006 107	.083 291	.675 564	8.110 896	.123 291
11	1.539 454	13.486 351	.074 149	.649 581	8.760 477	.114 149
12	1.601 032	15.025 805	.066 552	.624 597	9.385 074	.106 552
13	1.665 074	16.626 838	.060 144	.600 574	9.985 648	.100 144
14	1.731 676	18.291 911	.054 669	.577 475	10.563 123	.094 669
15	1.800 944	20.023 588	.049 941	.555 265	11.118 387	.089 941
16	1.872 981	21.824 531	.045 820	.533 908	11.652 296	.085 820
17	1.947 900	23.697 512	.042 199	.513 373	12.165 669	.082 199
18	2.025 817	25.645 413	.038 993	.493 628	12.659 297	.078 993
19	2.106 849	27.671 229	.036 139	.474 642	13.133 939	.076 139
20	2.191 123	29.778 079	.033 582	.456 387	13.590 326	.073 582
21	2.278 768	31.969 202	.031 280	.438 834	14.029 160	.071 280
22	2.369 919	34.247 970	.029 199	.421 955	14.451 115	.069 199
23	2.464 716	36.617 889	.027 309	.405 726	14.856 842	.067 309
24	2.563 304	39.082 604	.025 587	.390 121	15.246 963	.065 587
25	2.665 836	41.645 908	.024 012	.375 117	15.622 080	.064 012
26	2.772 470	44.311 745	.022 567	.360 689	15.982 769	.062 567
27	2.883 369	47.084 214	.021 239	.346 817	16.329 586	.061 239
28	2.998 703	49.967 583	.020 013	.333 477	16.663 063	.060 013
29	3.118 651	52.966 286	.018 880	.320 651	16.983 715	.058 880
30	3.243 398	56.084 938	.017 830	.308 319	17.292 033	.057 830
31	3.373 133	59.328 335	.016 855	.296 460	17.586 494	.056 855
32	3.508 059	62.701 469	.015 949	.285 058	17.873 551	.055 949
33	3.648 381	66.209 527	.015 104	.274 094	18.147 646	.055 104
34	3.794 316	69.857 909	.014 315	.263 552	18.411 198	.054 315
35	3.946 089	73.652 225	.013 577	.253 415	18.664 613	.053 577
36	4.103 933	77.598 314	.012 887	.243 669	18.908 282	.052 887
37	4.268 090	81.702 246	.012 240	.234 297	19.142 579	.052 240
38	4.438 813	85.970 336	.011 632	.225 285	19.367 864	.051 632
39	4.616 366	90.409 150	.011 061	.216 621	19.584 485	.051 061
40	4.801 021	95.025 516	.010 523	.208 289	19.792 774	.050 523
41	4.993 061	99.826 536	.010 017	.200 278	19.993 052	.050 017
42	5.192 784	104.819 598	.009 540	.192 575	20.185 627	.049 540
43	5.400 495	110.012 382	.009 090	.185 168	20.370 795	.049 090
44	5.616 515	115.412 877	.008 665	.178 046	20.548 841	.048 665
45	5.841 176	121.029 392	.008 262	.171 198	20.720 040	.048 262
46	6.074 823	126.870 568	.007 882	.164 614	20.884 654	.047 882
47	6.317 816	132.945 390	.007 522	.158 283	21.042 936	.047 522
48	6.570 528	139.263 206	.007 181	.152 195	21.195 131	.047 181
49	6.833 349	145.833 734	.006 857	.146 341	21.341 472	.046 857
50	7.106 683	152.667 084	.006 550	.140 713	21.482 185	.046 550
51	7.390 951	159.773 767	.006 259	.135 301	21.617 485	.046 259
52	7.686 589	167.164 718	.005 982	.130 097	21.747 582	.045 982
53	7.994 052	174.851 306	.005 719	.125 093	21.872 675	.045 719
54	8.313 814	182.845 359	.005 469	.120 282	21.992 957	.045 469
55	8.646 367	191.159 173	.005 231	.115 656	22.108 612	.045 231
56	8.992 222	199.805 540	.005 005	.111 207	22.219 819	.045 005
57	9.351 910	208.797 762	.004 789	.106 930	22.326 749	.044 789
58	9.725 987	218.149 672	.004 584	.102 817	22.429 567	.044 584
59	10.115 026	227.875 659	.004 388	.098 863	22.528 430	.044 388
60	10.519 627	237.990 685	.004 202	.095 060	22.623 490	.044 202
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.050 000	1.000 000	1.000 000	.952 381	.952 381	1.050 000
2	1.102 500	2.050 000	.487 805	.907 029	1.859 410	.537 805
3	1.157 625	3.152 500	.317 209	.863 838	2.723 248	.367 209
4	1.215 506	4.310 125	.232 012	.822 702	3.545 951	.282 012
5	1.276 282	5.525 631	.180 975	.783 526	4.329 477	.230 975
6	1.340 096	6.801 913	.147 017	.746 215	5.075 692	.197 017
7	1.407 100	8.142 008	.122 820	.710 681	5.786 373	.172 820
8	1.477 455	9.549 109	.104 722	.676 839	6.463 213	.154 722
9	1.551 328	11.026 564	.090 690	.644 609	7.107 822	.140 690
10	1.628 895	12.577 893	.079 505	.613 913	7.721 735	.129 505
11	1.710 339	14.206 787	.070 389	.584 679	8.306 414	.120 389
12	1.795 856	15.917 127	.062 825	.556 837	8.863 252	.112 825
13	1.885 649	17.712 983	.056 456	.530 321	9.393 573	.106 456
14	1.979 932	19.598 632	.051 024	.505 068	9.898 641	.101 024
15	2.078 928	21.578 564	.046 342	.481 017	10.379 658	.096 342
16	2.182 875	23.657 492	.042 270	.458 112	10.837 770	.092 270
17	2.292 018	25.840 366	.038 699	.436 297	11.274 066	.088 699
18	2.406 619	28.132 385	.035 546	.415 521	11.689 587	.085 546
19	2.526 950	30.539 004	.032 745	.395 734	12.085 321	.082 745
20	2.653 298	33.065 954	.030 243	.376 889	12.462 210	.080 243
21	2.785 963	35.719 252	.027 996	.358 942	12.821 153	.077 996
22	2.925 261	38.505 214	.025 971	.341 850	13.163 003	.075 971
23	3.071 524	41.430 475	.024 137	.325 571	13.488 574	.074 137
24	3.225 100	44.501 999	.022 471	.310 068	13.798 642	.072 471
25	3.386 355	47.727 099	.020 952	.295 303	14.093 945	.070 952
26	3.555 673	51.113 454	.019 564	.281 241	14.375 185	.069 564
27	3.733 456	54.669 126	.018 292	.267 848	14.643 034	.068 292
28	3.920 129	58.402 583	.017 123	.255 094	14.898 127	.067 123
29	4.116 136	62.322 712	.016 046	.242 946	15.141 074	.066 046
30	4.321 942	66.438 848	.015 051	.231 377	15.372 451	.065 051
31	4.538 039	70.760 790	.014 132	.220 359	15.592 811	.064 132
32	4.764 941	75.298 829	.013 280	.209 866	15.802 677	.063 280
33	5.003 189	80.063 771	.012 490	.199 873	16.002 549	.062 490
34	5.253 348	85.066 959	.011 755	.190 355	16.192 904	.061 755
35	5.516 015	90.320 307	.011 072	.181 290	16.374 194	.061 072
36	5.791 816	95.836 323	.010 434	.172 657	16.546 852	.060 434
37	6.081 407	101.628 139	.009 840	.164 436	16.711 287	.059 840
38	6.385 477	107.709 546	.009 284	.156 605	16.867 893	.059 284
39	6.704 751	114.095 023	.008 765	.149 148	17.017 041	.058 765
40	7.039 989	120.799 774	.008 278	.142 046	17.159 086	.058 278
41	7.391 988	127.839 763	.007 822	.135 282	17.294 368	.057 822
42	7.761 588	135.231 751	.007 395	.128 840	17.423 208	.057 395
43	8.149 667	142.993 339	.006 993	.122 704	17.545 912	.056 993
44	8.557 150	151.143 006	.006 616	.116 861	17.662 773	.056 616
45	8.985 008	159.700 156	.006 262	.111 297	17.774 070	.056 262
46	9.434 258	168.685 164	.005 928	.105 997	17.880 066	.055 928
47	9.905 971	178.119 422	.005 614	.100 949	17.981 016	.055 614
48	10.401 270	188.025 393	.005 318	.096 142	18.077 158	.055 318
49	10.921 333	198.426 663	.005 040	.091 564	18.168 722	.055 040
50	11.467 400	209.347 996	.004 777	.087 204	18.255 925	.054 777
51	12.040 770	220.815 396	.004 529	.083 051	18.338 977	.054 529
52	12.642 808	232.856 165	.004 294	.079 096	18.418 073	.054 294
53	13.274 949	245.498 974	.004 073	.075 330	18.493 403	.054 073
54	13.938 696	258.773 922	.003 864	.071 743	18.565 146	.053 864
55	14.635 631	272.712 618	.003 667	.068 326	18.633 472	.053 667
56	15.367 412	287.348 249	.003 480	.065 073	18.698 545	.053 480
57	16.135 783	302.715 662	.003 303	.061 974	18.760 519	.053 303
58	16.942 572	318.851 445	.003 136	.059 023	18.819 542	.053 136
59	17.789 701	335.794 017	.002 978	.056 212	18.875 754	.052 978
60	18.679 186	353.583 718	.002 828	.053 536	18.929 290	.052 828
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.060 000	1.000 000	1.000 000	.943 396	.943 396	1.060 000
2	1.123 600	2.060 000	.485 437	.889 996	1.833 393	.545 437
3	1.191 016	3.183 600	.314 110	.839 619	2.673 012	.374 110
4	1.262 477	4.374 616	.228 591	.792 094	3.465 106	.288 591
5	1.338 226	5.637 093	.177 396	.747 258	4.212 364	.237 396
6	1.418 519	6.975 319	.143 363	.704 961	4.917 324	.203 363
7	1.503 630	8.393 838	.119 135	.665 057	5.582 381	.179 135
8	1.593 848	9.897 468	.101 036	.627 412	6.209 794	.161 036
9	1.689 479	11.491 316	.087 022	.591 898	6.801 692	.147 022
10	1.790 848	13.180 795	.075 868	.558 395	7.360 087	.135 868
11	1.898 299	14.971 643	.066 793	.526 788	7.886 875	.126 793
12	2.012 196	16.869 941	.059 277	.496 969	8.383 844	.119 277
13	2.132 928	18.882 138	.052 960	.468 839	8.852 683	.112 960
14	2.260 904	21.015 066	.047 585	.442 301	9.294 984	.107 585
15	2.396 558	23.275 970	.042 963	.417 265	9.712 249	.102 963
16	2.540 352	25.672 528	.038 952	.393 646	10.105 895	.098 952
17	2.692 773	28.212 880	.035 445	.371 364	10.477 260	.095 445
18	2.854 339	30.905 653	.032 357	.350 344	10.827 603	.092 357
19	3.025 600	33.759 992	.029 621	.330 513	11.158 116	.089 621
20	3.207 135	36.785 591	.027 185	.311 805	11.469 921	.087 185
21	3.399 564	39.992 727	.025 005	.294 155	11.764 077	.085 005
22	3.603 537	43.392 290	.023 046	.277 505	12.041 582	.083 046
23	3.819 750	46.995 828	.021 278	.261 797	12.303 379	.081 278
24	4.048 935	50.815 577	.019 679	.246 979	12.550 358	.079 679
25	4.291 871	54.864 512	.018 227	.232 999	12.783 356	.078 227
26	4.549 383	59.156 383	.016 904	.219 810	13.003 166	.076 904
27	4.822 346	63.705 766	.015 697	.207 368	13.210 534	.075 697
28	5.111 687	68.528 112	.014 593	.195 630	13.406 164	.074 593
29	5.418 388	73.639 798	.013 580	.184 557	13.590 721	.073 580
30	5.743 491	79.058 186	.012 649	.174 110	13.764 831	.072 649
31	6.088 101	84.801 677	.011 792	.164 255	13.929 086	.071 792
32	6.453 387	90.889 778	.011 002	.154 957	14.084 043	.071 002
33	6.840 590	97.343 165	.010 273	.146 186	14.230 230	.070 273
34	7.251 025	104.183 755	.009 598	.137 912	14.368 141	.069 598
35	7.686 087	111.434 780	.008 974	.130 105	14.498 246	.068 974
36	8.147 252	119.120 867	.008 395	.122 741	14.620 987	.068 395
37	8.636 087	127.268 119	.007 857	.115 793	14.736 780	.067 857
38	9.154 252	135.904 206	.007 358	.109 239	14.846 019	.067 358
39	9.703 507	145.058 458	.006 894	.103 056	14.949 075	.066 894
40	10.285 718	154.761 966	.006 462	.097 222	15.046 297	.066 462
41	10.902 861	165.047 684	.006 059	.091 719	15.138 016	.066 059
42	11.557 033	175.950 545	.005 683	.086 527	15.224 543	.065 683
43	12.250 455	187.507 577	.005 333	.081 630	15.306 173	.065 333
44	12.985 482	199.758 032	.005 006	.077 009	15.383 182	.065 006
45	13.764 611	212.743 514	.004 700	.072 650	15.455 832	.064 700
46	14.590 487	226.508 125	.004 415	.068 538	15.524 370	.064 415
47	15.465 917	241.098 612	.004 148	.064 658	15.589 028	.064 148
48	16.393 872	256.564 529	.003 898	.060 998	15.650 027	.063 898
49	17.377 504	272.958 401	.003 664	.057 546	15.707 572	.063 664
50	18.420 154	290.335 905	.003 444	.054 288	15.761 861	.063 444
51	19.525 364	308.756 059	.003 239	.051 215	15.813 076	.063 239
52	20.696 885	328.281 422	.003 046	.048 316	15.861 393	.063 046
53	21.938 698	348.978 308	.002 866	.045 582	15.906 974	.062 866
54	23.255 020	370.917 006	.002 696	.043 001	15.949 976	.062 696
55	24.650 322	394.172 027	.002 537	.040 567	15.990 543	.062 537
56	26.129 341	418.822 348	.002 388	.038 271	16.028 814	.062 388
57	27.697 101	444.951 689	.002 247	.036 105	16.064 919	.062 247
58	29.358 927	472.648 790	.002 116	.034 061	16.098 980	.062 116
59	31.120 463	502.007 718	.001 992	.032 133	16.131 113	.061 992
60	32.987 691	533.128 181	.001 876	.030 314	16.161 428	.061 876
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.070 000	1.000 000	1.000 000	.934 579	.934 579	1.070 000
2	1.144 900	2.070 000	.483 092	.873 439	1.808 018	.553 092
3	1.225 043	3.214 900	.311 052	.816 298	2.624 316	.381 052
4	1.310 796	4.439 943	.225 228	.762 895	3.387 211	.295 228
5	1.402 552	5.750 739	.173 891	.712 986	4.100 197	.243 891
6	1.500 730	7.153 291	.139 796	.666 342	4.766 540	.209 796
7	1.605 781	8.654 021	.115 553	.622 750	5.389 289	.185 553
8	1.718 186	10.259 803	.097 468	.582 009	5.971 299	.167 468
9	1.838 459	11.977 989	.083 486	.543 934	6.515 232	.153 486
10	1.967 151	13.816 448	.072 378	.508 349	7.023 582	.142 378
11	2.104 852	15.783 599	.063 357	.475 093	7.498 674	.133 357
12	2.252 192	17.888 451	.055 902	.444 012	7.942 686	.125 902
13	2.409 845	20.140 643	.049 651	.414 964	8.357 651	.119 651
14	2.578 534	22.550 488	.044 345	.387 817	8.745 468	.114 345
15	2.759 032	25.129 022	.039 795	.362 446	9.107 914	.109 795
16	2.952 164	27.888 054	.035 858	.338 735	9.446 649	.105 858
17	3.158 815	30.840 217	.032 425	.316 574	9.763 223	.102 425
18	3.379 932	33.999 033	.029 413	.295 864	10.059 087	.099 413
19	3.616 528	37.378 965	.026 753	.276 508	10.335 595	.096 753
20	3.869 684	40.995 492	.024 393	.258 419	10.594 014	.094 393
21	4.140 562	44.865 177	.022 289	.241 513	10.835 527	.092 289
22	4.430 402	49.005 739	.020 406	.225 713	11.061 240	.090 406
23	4.740 530	53.436 141	.018 714	.210 947	11.272 187	.088 714
24	5.072 367	58.176 671	.017 189	.197 147	11.469 334	.087 189
25	5.427 433	63.249 038	.015 811	.184 249	11.653 583	.085 811
26	5.807 353	68.676 470	.014 561	.172 195	11.825 779	.084 561
27	6.213 868	74.483 823	.013 426	.160 930	11.986 709	.083 426
28	6.648 838	80.697 691	.012 392	.150 402	12.137 111	.082 392
29	7.114 257	87.346 529	.011 449	.140 563	12.277 674	.081 449
30	7.612 255	94.460 786	.010 586	.131 367	12.409 041	.080 586
31	8.145 113	102.073 041	.009 797	.122 773	12.531 814	.079 797
32	8.715 271	110.218 154	.009 073	.114 741	12.646 555	.079 073
33	9.325 340	118.933 425	.008 408	.107 235	12.753 790	.078 408
34	9.978 114	128.258 765	.007 797	.100 219	12.854 009	.077 797
35	10.676 581	138.236 878	.007 234	.093 663	12.947 672	.077 234
36	11.423 942	148.913 460	.006 715	.087 535	13.035 208	.076 715
37	12.223 618	160.337 402	.006 237	.081 809	13.117 017	.076 237
38	13.079 271	172.561 020	.005 795	.076 457	13.193 473	.075 795
39	13.994 820	185.640 292	.005 387	.071 455	13.264 928	.075 387
40	14.974 458	199.635 112	.005 009	.066 780	13.331 709	.075 009
41	16.022 670	214.609 570	.004 660	.062 412	13.394 120	.074 660
42	17.144 257	230.632 240	.004 336	.058 329	13.452 449	.074 336
43	18.344 355	247.776 496	.004 036	.054 513	13.506 962	.074 036
44	19.628 460	266.120 851	.003 758	.050 946	13.557 908	.073 758
45	21.002 452	285.749 311	.003 500	.047 613	13.605 522	.073 500
46	22.472 623	306.751 763	.003 260	.044 499	13.650 020	.073 260
47	24.045 707	329.224 386	.003 037	.041 587	13.691 608	.073 037
48	25.728 907	353.270 093	.002 831	.038 867	13.730 474	.072 831
49	27.529 930	378.999 000	.002 639	.036 324	13.766 799	.072 639
50	29.457 025	406.528 929	.002 460	.033 948	13.800 746	.072 460
51	31.519 017	435.985 955	.002 294	.031 727	13.832 473	.072 294
52	33.725 348	467.504 971	.002 139	.029 651	13.862 124	.072 139
53	36.086 122	501.230 319	.001 995	.027 711	13.889 836	.071 995
54	38.612 151	537.316 442	.001 861	.025 899	13.915 735	.071 861
55	41.315 001	575.928 593	.001 736	.024 204	13.939 939	.071 736
56	44.207 052	617.243 594	.001 620	.022 621	13.962 560	.071 620
57	47.301 545	661.450 646	.001 512	.021 141	13.983 701	.071 512
58	50.612 653	708.752 191	.001 411	.019 758	14.003 458	.071 411
59	54.155 539	759.364 844	.001 317	.018 465	14.021 924	.071 317
60	57.946 427	813.520 383	.001 229	.017 257	14.039 181	.071 229
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

EFFECTIVE RATE 8% BASE 1.08

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.080 000	1.000 000	1.000 000	.925 926	.925 926	1.080 000
2	1.166 400	2.080 000	.480 769	.857 339	1.783 265	.560 769
3	1.259 712	3.246 400	.308 034	.793 832	2.577 097	.388 034
4	1.360 489	4.506 112	.221 921	.735 030	3.312 127	.301 921
5	1.469 328	5.866 601	.170 456	.680 583	3.992 710	.250 456
6	1.586 874	7.335 929	.136 315	.630 170	4.622 880	.216 315
7	1.713 824	8.922 803	.112 072	.583 490	5.206 370	.192 072
8	1.850 930	10.636 628	.094 015	.540 269	5.746 639	.174 015
9	1.999 005	12.487 558	.080 080	.500 249	6.246 888	.160 080
10	2.158 925	14.486 562	.069 029	.463 193	6.710 081	.149 029
11	2.331 639	16.645 487	.060 076	.428 883	7.138 964	.140 076
12	2.518 170	18.977 126	.052 695	.397 114	7.536 078	.132 695
13	2.719 624	21.495 297	.046 522	.367 698	7.903 776	.126 522
14	2.937 194	24.214 920	.041 297	.340 461	8.244 237	.121 297
15	3.172 169	27.152 114	.036 830	.315 242	8.559 479	.116 830
16	3.425 943	30.324 283	.032 977	.291 890	8.851 369	.112 977
17	3.700 018	33.750 226	.029 629	.270 269	9.121 638	.109 629
18	3.996 019	37.450 244	.026 702	.250 249	9.371 887	.106 702
19	4.315 701	41.446 263	.024 128	.231 712	9.603 599	.104 128
20	4.660 957	45.761 964	.021 852	.214 548	9.818 147	.101 852
21	5.033 834	50.422 921	.019 832	.198 656	10.016 803	.099 832
22	5.436 540	55.456 755	.018 032	.183 941	10.200 744	.098 032
23	5.871 464	60.893 296	.016 422	.170 315	10.371 059	.096 422
24	6.341 181	66.764 759	.014 978	.157 699	10.528 758	.094 978
25	6.848 475	73.105 940	.013 679	.146 018	10.674 776	.093 679
26	7.396 353	79.954 415	.012 507	.135 202	10.809 978	.092 507
27	7.988 061	87.350 768	.011 448	.125 187	10.935 165	.091 448
28	8.627 106	95.338 830	.010 489	.115 914	11.051 078	.090 489
29	9.317 275	103.965 936	.009 619	.107 328	11.158 406	.089 619
30	10.062 657	113.283 211	.008 827	.099 377	11.257 783	.088 827
31	10.867 669	123.345 868	.008 107	.092 016	11.349 799	.088 107
32	11.737 083	134.213 537	.007 451	.085 200	11.434 999	.087 451
33	12.676 050	145.950 620	.006 852	.078 889	11.513 888	.086 852
34	13.690 134	158.626 670	.006 304	.073 045	11.586 934	.086 304
35	14.785 344	172.316 804	.005 803	.067 635	11.654 568	.085 803
36	15.968 172	187.102 148	.005 345	.062 625	11.717 193	.085 345
37	17.245 626	203.070 320	.004 924	.057 986	11.775 179	.084 924
38	18.625 276	220.315 945	.004 539	.053 690	11.828 869	.084 539
39	20.115 298	238.941 221	.004 185	.049 713	11.878 582	.084 185
40	21.724 521	259.056 519	.003 860	.046 031	11.924 613	.083 860
41	23.462 483	280.781 040	.003 561	.042 621	11.967 235	.083 561
42	25.339 482	304.243 523	.003 287	.039 464	12.006 699	.083 287
43	27.366 640	329.583 005	.003 034	.036 541	12.043 240	.083 034
44	29.555 972	356.949 646	.002 802	.033 834	12.077 074	.082 802
45	31.920 449	386.505 617	.002 587	.031 328	12.108 402	.082 587
46	34.474 085	418.426 067	.002 390	.029 007	12.137 409	.082 390
47	37.232 012	452.900 152	.002 208	.026 859	12.164 267	.082 208
48	40.210 573	490.132 164	.002 040	.024 869	12.189 136	.082 040
49	43.427 419	530.342 737	.001 886	.023 027	12.212 163	.081 886
50	46.901 613	573.770 156	.001 743	.021 321	12.233 485	.081 743
51	50.653 742	620.671 769	.001 611	.019 742	12.253 227	.081 611
52	54.706 041	671.325 510	.001 490	.018 280	12.271 506	.081 490
53	59.082 524	726.031 551	.001 377	.016 925	12.288 432	.081 377
54	63.809 126	785.114 075	.001 274	.015 672	12.304 103	.081 274
55	68.913 856	848.923 201	.001 178	.014 511	12.318 614	.081 178
56	74.426 965	917.837 058	.001 090	.013 436	12.332 050	.081 090
57	80.381 122	992.264 022	.001 008	.012 441	12.344 491	.081 008
58	86.811 612	1072.645 144	.000 932	.011 519	12.356 010	.080 932
59	93.756 540	1159.456 755	.000 862	.010 666	12.366 676	.080 862
60	101.257 064	1253.213 296	.000 798	.009 876	12.376 552	.080 798
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.090 000	1.000 000	1.000 000	.917 431	.917 431	1.090 000
2	1.188 100	2.090 000	.478 469	.841 680	1.759 111	.568 469
3	1.295 029	3.278 100	.305 055	.772 183	2.531 295	.395 055
4	1.411 582	4.573 129	.218 669	.708 425	3.239 720	.308 669
5	1.538 624	5.984 711	.167 092	.649 931	3.889 651	.257 092
6	1.677 100	7.523 335	.132 920	.596 267	4.485 919	.222 920
7	1.828 039	9.200 435	.108 691	.547 034	5.032 953	.198 691
8	1.992 563	11.028 474	.090 674	.501 866	5.534 819	.180 674
9	2.171 893	13.021 036	.076 799	.460 428	5.995 247	.166 799
10	2.367 364	15.192 930	.065 820	.422 411	6.417 658	.155 820
11	2.580 426	17.560 293	.056 947	.387 533	6.805 191	.146 947
12	2.812 665	20.140 720	.049 651	.355 535	7.160 725	.139 651
13	3.065 805	22.953 385	.043 567	.326 179	7.486 904	.133 567
14	3.341 727	26.019 189	.038 433	.299 246	7.786 150	.128 433
15	3.642 482	29.360 916	.034 059	.274 538	8.060 688	.124 059
16	3.970 306	33.003 399	.030 300	.251 870	8.312 558	.120 300
17	4.327 633	36.973 705	.027 046	.231 073	8.543 631	.117 046
18	4.717 120	41.301 338	.024 212	.211 994	8.755 625	.114 212
19	5.141 661	46.018 458	.021 730	.194 490	8.950 115	.111 730
20	5.604 411	51.160 120	.019 546	.178 431	9.128 546	.109 546
21	6.108 808	56.764 530	.017 617	.163 698	9.292 244	.107 617
22	6.658 600	62.873 338	.015 905	.150 182	9.442 425	.105 905
23	7.257 874	69.531 939	.014 382	.137 781	9.580 207	.104 382
24	7.911 083	76.789 813	.013 023	.126 405	9.706 612	.103 023
25	8.623 081	84.700 896	.011 806	.115 968	9.822 580	.101 806
26	9.399 158	93.323 977	.010 715	.106 393	9.928 972	.100 715
27	10.245 082	102.723 135	.009 735	.097 608	10.026 580	.099 735
28	11.167 140	112.968 217	.008 852	.089 548	10.116 128	.098 852
29	12.172 182	124.135 356	.008 056	.082 155	10.198 283	.098 056
30	13.267 678	136.307 539	.007 336	.075 371	10.273 654	.097 336
31	14.461 770	149.575 217	.006 686	.069 148	10.342 802	.096 686
32	15.763 329	164.036 987	.006 096	.063 438	10.406 240	.096 096
33	17.182 028	179.800 315	.005 562	.058 200	10.464 441	.095 562
34	18.728 411	196.982 344	.005 077	.053 395	10.517 835	.095 077
35	20.413 968	215.710 755	.004 636	.048 986	10.566 821	.094 636
36	22.251 225	236.124 723	.004 235	.044 941	10.611 763	.094 235
37	24.253 835	258.375 948	.003 870	.041 231	10.652 993	.093 870
38	26.436 680	282.629 783	.003 538	.037 826	10.690 820	.093 538
39	28.815 982	309.066 463	.003 236	.034 703	10.725 523	.093 236
40	31.409 420	337.882 445	.002 960	.031 838	10.757 360	.092 960
41	34.236 268	369.291 865	.002 708	.029 209	10.786 569	.092 708
42	37.317 532	403.528 133	.002 478	.026 797	10.813 366	.092 478
43	40.676 110	440.845 665	.002 268	.024 584	10.837 950	.092 268
44	44.336 960	481.521 775	.002 077	.022 555	10.860 505	.092 077
45	48.327 286	525.858 734	.001 902	.020 692	10.881 197	.091 902
46	52.676 742	574.186 021	.001 742	.018 984	10.900 181	.091 742
47	57.417 649	626.862 762	.001 595	.017 416	10.917 597	.091 595
48	62.585 237	684.280 411	.001 461	.015 978	10.933 575	.091 461
49	68.217 908	746.865 648	.001 339	.014 659	10.948 234	.091 339
50	74.357 520	815.083 556	.001 227	.013 449	10.961 683	.091 227
51	81.049 697	889.441 076	.001 124	.012 338	10.974 021	.091 124
52	88.344 170	970.490 773	.001 030	.011 319	10.985 340	.091 030
53	96.295 145	1058.834 943	.000 944	.010 385	10.995 725	.090 944
54	104.961 708	1155.130 088	.000 866	.009 527	11.005 252	.090 866
55	114.408 262	1260.091 796	.000 794	.008 741	11.013 993	.090 794
56	124.705 005	1374.500 057	.000 728	.008 019	11.022 012	.090 728
57	135.928 456	1499.205 063	.000 667	.007 357	11.029 369	.090 667
58	148.162 017	1635.133 518	.000 612	.006 749	11.036 118	.090 612
59	161.496 598	1781.295 535	.000 561	.006 192	11.042 310	.090 561
60	176.011 292	1944.792 133	.000 514	.005 681	11.047 991	.090 514
	$S^n = (1+i)^n$	$S_{n\rceil} = \frac{S^n - 1}{i}$	$1/S_{n\rceil} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{n\rceil} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{n\rceil}} = \frac{i}{1 - 1/S^n}$

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.100 000	1.000 000	1.000 000	.909 091	.909 091	1.100 000
2	1.210 000	2.100 000	.476 190	.826 446	1.735 537	.576 190
3	1.331 000	3.310 000	.302 115	.751 315	2.486 852	.402 115
4	1.464 100	4.641 000	.215 471	.683 013	3.169 865	.315 471
5	1.610 510	6.105 100	.161 797	.620 921	3.790 787	.263 797
6	1.771 561	7.715 610	.129 607	.564 474	4.355 261	.229 607
7	1.948 717	9.487 171	.105 405	.513 158	4.868 419	.205 405
8	2.143 589	11.435 888	.087 444	.466 507	5.334 926	.187 444
9	2.357 948	13.579 477	.073 641	.424 098	5.759 024	.173 641
10	2.593 742	15.937 425	.062 745	.385 543	6.144 567	.162 745
11	2.853 117	18.531 167	.053 963	.350 494	6.495 061	.153 963
12	3.138 428	21.384 284	.046 763	.318 631	6.813 692	.146 763
13	3.452 271	24.522 712	.040 779	.289 664	7.103 356	.140 779
14	3.797 498	27.974 983	.035 746	.263 331	7.366 687	.135 746
15	4.177 248	31.772 482	.031 474	.239 392	7.606 080	.131 474
16	4.594 973	35.949 730	.027 817	.217 629	7.823 709	.127 817
17	5.054 470	40.544 703	.024 664	.197 845	8.021 553	.124 664
18	5.559 917	45.599 173	.021 930	.179 859	8.201 412	.121 930
19	6.115 909	51.159 090	.019 547	.163 508	8.364 920	.119 547
20	6.727 500	57.274 999	.017 460	.148 644	8.513 564	.117 460
21	7.400 250	64.002 499	.015 624	.135 131	8.648 694	.115 624
22	8.140 275	71.402 749	.014 005	.122 846	8.771 540	.114 005
23	8.954 302	79.543 024	.012 572	.111 678	8.883 218	.112 572
24	9.849 733	88.497 327	.011 300	.101 526	8.984 744	.111 300
25	10.834 706	98.347 059	.010 168	.092 296	9.077 040	.110 168
26	11.918 177	109.181 765	.009 159	.083 905	9.160 945	.109 159
27	13.109 994	121.099 942	.008 258	.076 278	9.237 223	.108 258
28	14.420 994	134.209 936	.007 451	.069 343	9.306 567	.107 451
29	15.863 093	148.630 930	.006 728	.063 039	9.369 606	.106 728
30	17.449 402	164.494 023	.006 079	.057 309	9.426 914	.106 079
31	19.194 342	181.943 425	.005 496	.052 099	9.479 013	.105 496
32	21.113 777	201.137 767	.004 972	.047 362	9.526 376	.104 972
33	23.225 154	222.251 544	.004 499	.043 057	9.569 432	.104 499
34	25.547 670	245.476 699	.004 074	.039 143	9.608 575	.104 074
35	28.102 437	271.024 368	.003 690	.035 584	9.644 159	.103 690
36	30.912 681	299.126 805	.003 343	.032 349	9.676 508	.103 343
37	34.003 949	330.039 486	.003 030	.029 408	9.705 917	.103 030
38	37.404 343	364.043 434	.002 747	.026 735	9.732 651	.102 747
39	41.144 778	401.447 778	.002 491	.024 304	9.756 956	.102 491
40	45.259 256	442.592 556	.002 259	.022 095	9.779 051	.102 259
41	49.785 181	487.851 811	.002 050	.020 086	9.799 137	.102 050
42	54.763 699	537.636 992	.001 860	.018 260	9.817 397	.101 860
43	60.240 069	592.400 692	.001 688	.016 600	9.833 998	.101 688
44	66.264 076	652.640 761	.001 532	.015 091	9.849 089	.101 532
45	72.890 484	718.904 837	.001 391	.013 719	9.862 808	.101 391
46	80.179 532	791.795 321	.001 263	.012 472	9.875 280	.101 263
47	88.197 485	871.974 853	.001 147	.011 338	9.886 618	.101 147
48	97.017 234	960.172 338	.001 041	.010 307	9.896 926	.101 041
49	106.718 957	1057.189 572	.000 946	.009 370	9.906 296	.100 946
50	117.390 853	1163.908 529	.000 859	.008 519	9.914 814	.100 859
51	129.129 938	1281.299 382	.000 780	.007 744	9.922 559	.100 780
52	142.042 932	1410.429 320	.000 709	.007 040	9.929 599	.100 709
53	156.247 225	1552.472 252	.000 644	.006 400	9.935 999	.100 644
54	171.871 948	1708.719 477	.000 585	.005 818	9.941 817	.100 585
55	189.059 142	1880.591 425	.000 532	.005 289	9.947 106	.100 532
56	207.965 057	2069.650 567	.000 483	.004 809	9.951 915	.100 483
57	228.761 562	2277.615 624	.000 439	.004 371	9.956 286	.100 439
58	251.617 719	2506.377 186	.000 399	.003 974	9.960 260	.100 399
59	276.801 490	2758.014 905	.000 363	.003 613	9.963 873	.100 363
60	304.481 640	3034.816 395	.000 330	.003 284	9.967 157	.100 330
	$S^n = (1+i)^n$	$S_{n\rceil} = \frac{S^n - 1}{i}$	$1/S_{n\rceil} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{n\rceil} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{n\rceil}} = \frac{i}{1 - 1/S^n}$

11% ANNUAL TABLE 11%

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.110 000	1.000 000	1.000 000	.900 901	.900 901	1.110 000
2	1.232 100	2.110 000	.473 934	.811 622	1.712 523	.583 934
3	1.367 631	3.342 100	.299 213	.731 191	2.443 715	.409 213
4	1.518 070	4.709 731	.212 326	.658 731	3.102 446	.322 326
5	1.685 058	6.227 801	.160 570	.593 451	3.695 897	.270 570
6	1.870 415	7.912 860	.126 377	.534 641	4.230 538	.236 377
7	2.076 160	9.783 274	.102 215	.481 658	4.712 196	.212 215
8	2.304 538	11.859 434	.084 321	.433 926	5.146 123	.194 321
9	2.558 037	14.163 972	.070 602	.390 925	5.537 048	.180 602
10	2.839 421	16.722 009	.059 801	.352 184	5.889 232	.169 801
11	3.151 757	19.561 430	.051 121	.317 283	6.206 515	.161 121
12	3.498 451	22.713 187	.044 027	.285 841	6.492 356	.154 027
13	3.883 280	26.211 638	.038 151	.257 514	6.749 870	.148 151
14	4.310 441	30.094 918	.033 228	.231 995	6.981 865	.143 228
15	4.784 589	34.405 359	.029 065	.209 004	7.190 870	.139 065
16	5.310 894	39.189 948	.025 517	.188 292	7.379 162	.135 517
17	5.895 093	44.500 843	.022 471	.169 633	7.548 794	.132 471
18	6.543 553	50.395 936	.019 843	.152 822	7.701 617	.129 843
19	7.263 344	56.939 488	.017 563	.137 678	7.839 294	.127 563
20	8.062 312	64.202 832	.015 576	.124 034	7.963 328	.125 576
21	8.949 166	72.265 144	.013 838	.111 742	8.075 070	.123 838
22	9.933 574	81.214 309	.012 313	.100 669	8.175 739	.122 313
23	11.026 267	91.147 884	.010 971	.090 693	8.266 432	.120 971
24	12.239 157	102.174 151	.009 787	.081 705	8.348 137	.119 787
25	13.585 464	114.413 307	.008 740	.073 608	8.421 745	.118 740
26	15.079 865	127.998 771	.007 813	.066 314	8.488 058	.117 813
27	16.738 650	143.078 636	.006 989	.059 742	8.547 800	.116 989
28	18.579 901	159.817 286	.006 257	.053 822	8.601 622	.116 257
29	20.623 691	178.397 187	.005 605	.048 488	8.650 110	.115 605
30	22.892 297	199.020 878	.005 025	.043 683	8.693 793	.115 025
31	25.410 449	221.913 174	.004 506	.039 354	8.733 146	.114 506
32	28.205 599	247.323 624	.004 043	.035 454	8.768 600	.114 043
33	31.308 214	275.529 222	.003 629	.031 940	8.800 541	.113 629
34	34.752 118	306.837 437	.003 259	.028 775	8.829 316	.113 259
35	38.574 851	341.589 555	.002 927	.025 924	8.855 240	.112 927
36	42.818 085	380.164 406	.002 630	.023 355	8.878 594	.112 630
37	47.528 074	422.982 490	.002 364	.021 040	8.899 635	.112 364
38	52.756 162	470.510 564	.002 125	.018 955	8.918 590	.112 125
39	58.559 340	523.266 726	.001 911	.017 077	8.935 666	.111 911
40	65.000 867	581.826 066	.001 719	.015 384	8.951 051	.111 719
41	72.150 963	646.826 934	.001 546	.013 860	8.964 911	.111 546
42	80.087 569	718.977 896	.001 391	.012 486	8.977 397	.111 391
43	88.897 201	799.065 465	.001 251	.011 249	8.988 646	.111 251
44	98.675 893	887.962 666	.001 126	.010 134	8.998 780	.111 126
45	109.530 242	986.638 559	.001 014	.009 130	9.007 910	.111 014
46	121.578 568	1096.168 801	.000 912	.008 225	9.016 135	.110 912
47	134.952 211	1217.747 369	.000 821	.007 410	9.023 545	.110 821
48	149.796 954	1352.699 580	.000 739	.006 676	9.030 221	.110 739
49	166.274 619	1502.496 533	.000 666	.006 014	9.036 235	.110 666
50	184.564 827	1668.771 152	.000 599	.005 418	9.041 653	.110 599
51	204.866 958	1853.335 979	.000 540	.004 881	9.046 534	.110 540
52	227.402 323	2058.202 937	.000 486	.004 397	9.050 932	.110 486
53	252.416 579	2285.605 260	.000 438	.003 962	9.054 894	.110 438
54	280.182 402	2538.021 838	.000 394	.003 569	9.058 463	.110 394
55	311.002 466	2818.204 240	.000 355	.003 215	9.061 678	.110 355
56	345.212 738	3129.206 707	.000 320	.002 897	9.064 575	.110 320
57	383.186 139	3474.419 445	.000 288	.002 610	9.067 185	.110 288
58	425.136 614	3857.605 583	.000 259	.002 351	9.069 536	.110 259
59	472.121 642	4282.942 198	.000 233	.002 118	9.071 654	.110 233
60	524.057 242	4755.065 839	.000 210	.001 908	9.073 562	.110 210
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

12% ANNUAL TABLE 12%

YEARS	1 AMOUNT OF ONE	2 AMOUNT OF ONE PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT WORTH OF ONE	5 PRESENT WORTH ONE PER PERIOD	6 PARTIAL PAYMENT
1	1.120 000	1.000 000	1.000 000	.892 857	.892 857	1.120 000
2	1.254 400	2.120 000	.471 698	.797 194	1.690 051	.591 698
3	1.404 928	3.374 400	.296 349	.711 780	2.401 831	.416 349
4	1.573 519	4.779 328	.209 234	.635 518	3.037 349	.329 234
5	1.762 342	6.352 847	.157 410	.567 427	3.604 776	.277 410
6	1.973 823	8.115 189	.123 226	.506 631	4.111 407	.243 226
7	2.210 681	10.089 012	.099 118	.452 349	4.563 757	.219 118
8	2.475 963	12.299 693	.081 303	.403 883	4.967 640	.201 303
9	2.773 079	14.775 656	.067 679	.360 610	5.328 250	.187 679
10	3.105 848	17.548 735	.056 984	.321 973	5.650 223	.176 984
11	3.478 550	20.654 583	.048 415	.287 476	5.937 699	.168 415
12	3.895 976	24.133 133	.041 437	.256 675	6.194 374	.161 437
13	4.363 493	28.029 109	.035 677	.229 174	6.423 548	.155 677
14	4.887 112	32.392 602	.030 871	.204 620	6.628 168	.150 871
15	5.473 566	37.279 715	.026 824	.182 696	6.810 864	.146 824
16	6.130 394	42.753 280	.023 390	.163 122	6.973 986	.143 390
17	6.866 041	48.883 674	.020 457	.145 644	7.119 630	.140 457
18	7.689 966	55.749 715	.017 937	.130 040	7.249 670	.137 937
19	8.612 762	63.439 681	.015 763	.116 107	7.365 777	.135 763
20	9.646 293	72.052 442	.013 879	.103 667	7.469 444	.133 879
21	10.803 848	81.698 736	.012 240	.092 560	7.562 003	.132 240
22	12.100 310	92.502 584	.010 811	.082 643	7.644 646	.130 811
23	13.552 347	104.602 894	.009 560	.073 788	7.718 434	.129 560
24	15.178 629	118.155 241	.008 463	.065 882	7.784 316	.128 463
25	17.000 064	133.333 870	.007 500	.058 823	7.843 139	.127 500
26	19.040 072	150.333 934	.006 652	.052 521	7.895 660	.126 652
27	21.324 881	169.374 007	.005 904	.046 894	7.942 554	.125 904
28	23.883 866	190.698 887	.005 244	.041 869	7.984 423	.125 244
29	26.749 930	214.582 754	.004 660	.037 383	8.021 806	.124 660
30	29.959 922	241.332 684	.004 144	.033 378	8.055 184	.124 144
31	33.555 113	271.292 606	.003 686	.029 802	8.084 986	.123 686
32	37.581 726	304.847 719	.003 280	.026 609	8.111 594	.123 280
33	42.091 533	342.429 446	.002 920	.023 758	8.135 352	.122 920
34	47.142 517	384.520 979	.002 601	.021 212	8.156 564	.122 601
35	52.799 620	431.663 496	.002 317	.018 940	8.175 504	.122 317
36	59.135 574	484.463 116	.002 064	.016 910	8.192 414	.122 064
37	66.231 843	543.598 690	.001 840	.015 098	8.207 513	.121 840
38	74.179 664	609.830 533	.001 640	.013 481	8.220 993	.121 640
39	83.081 224	684.010 197	.001 462	.012 036	8.233 030	.121 462
40	93.050 970	767.091 420	.001 304	.010 747	8.243 777	.121 304
41	104.217 087	860.142 391	.001 163	.009 595	8.253 372	.121 163
42	116.723 137	964.359 478	.001 037	.008 567	8.261 939	.121 037
43	130.729 914	1081.082 615	.000 925	.007 649	8.269 589	.120 925
44	146.417 503	1211.812 529	.000 825	.006 830	8.276 418	.120 825
45	163.987 604	1358.230 032	.000 736	.006 098	8.282 516	.120 736
46	183.666 116	1522.217 636	.000 657	.005 445	8.287 961	.120 657
47	205.706 050	1705.883 752	.000 586	.004 861	8.292 822	.120 586
48	230.390 776	1911.589 803	.000 523	.004 340	8.297 163	.120 523
49	258.037 669	2141.980 579	.000 467	.003 875	8.301 038	.120 467
50	289.002 190	2400.018 249	.000 417	.003 460	8.304 498	.120 417
51	323.682 453	2689.020 438	.000 372	.003 089	8.307 588	.120 372
52	362.524 347	3012.702 891	.000 332	.002 758	8.310 346	.120 332
53	406.027 269	3375.227 238	.000 296	.002 463	8.312 809	.120 296
54	454.750 541	3781.254 506	.000 264	.002 199	8.315 008	.120 264
55	509.320 606	4236.005 047	.000 236	.001 963	8.316 972	.120 236
56	570.439 078	4745.325 653	.000 211	.001 753	8.318 725	.120 211
57	638.891 768	5315.764 731	.000 188	.001 565	8.320 290	.120 188
58	715.558 780	5954.656 499	.000 168	.001 398	8.321 687	.120 168
59	801.425 833	6670.215 279	.000 150	.001 248	8.322 935	.120 150
60	897.596 933	7471.641 112	.000 134	.001 114	8.324 049	.120 134
	$S^n = (1+i)^n$	$S_{\overline{n}|} = \frac{S^n - 1}{i}$	$1/S_{\overline{n}|} = \frac{i}{S^n - 1}$	$V^n = \frac{1}{S^n}$	$A_{\overline{n}|} = \frac{1 - 1/S^n}{i}$	$\frac{1}{A_{\overline{n}|}} = \frac{i}{1 - 1/S^n}$

BUILDING REPLACEMENT

COST CONVERSION FACTORS

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER 1975

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101, 102, 103, 145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	.99	.98	.99	.98	1.00	.99	.99	.99
Bergen	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02
Burlington	.98	.98	.99	.99	.99	.99	.99	1.00
Camden	.99	1.00	.99	.99	.98	.99	1.00	1.00
Cape May	.97	.96	.99	.99	.98	.99	1.00	1.00
Cumberland	.99	.95	.99	.98	1.01	.99	.97	.99
Essex	1.00	1.01	1.01	1.01	1.01	1.01	1.02	1.03
Gloucester	1.01	.99	1.01	.99	1.01	1.00	.99	1.00
Hudson	1.01	1.01	1.02	1.01	1.02	1.02	1.02	1.02
Hunterdon	1.01	1.00	1.01	1.00	1.01	1.01	1.01	1.01
Mercer	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Middlesex	1.01	1.02	1.02	1.01	1.02	1.02	1.02	1.02
Monmouth	.99	.98	.99	.99	.99	.99	1.00	.99
Morris	1.01	1.01	1.01	1.00	1.00	1.01	1.01	1.01
Ocean	1.00	1.00	1.00	.99	1.01	1.00	.99	.99
Passaic	1.01	1.01	1.02	1.02	1.02	1.02	1.02	1.03
Salem	1.01	1.01	1.00	.99	1.01	1.01	.99	1.00
Somerset	1.00	.98	1.00	1.00	1.00	1.00	1.01	1.01
Sussex	1.02	1.02	1.02	1.00	1.03	1.02	1.01	1.01
Union	1.00	1.01	1.00	1.00	1.01	1.00	1.01	1.01
Warren	.99	.98	1.00	.99	1.00	1.00	1.00	1.00
State Average	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.01

NOTE: Union labor rates are used in computing all of the above conversion factors.

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER 1976

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1976 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102, 103,145	104,105, 106	101,102 123,133	103,124, 126,134, 136	105,107,108, 109,125,127, 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.05	1.05	1.05	1.05	1.06	1.05	1.05	1.05
Bergen	1.07	1.08	1.07	1.08	1.07	1.07	1.08	1.08
Burlington	1.04	1.05	1.05	1.06	1.05	1.05	1.05	1.06
Camden	1.05	1.07	1.05	1.06	1.04	1.05	1.06	1.06
Cape May	1.03	1.03	1.04	1.04	1.04	1.04	1.03	1.04
Cumberland	1.05	1.02	1.05	1.05	1.07	1.05	1.03	1.05
Essex	1.06	1.08	1.07	1.08	1.07	1.07	1.08	1.09
Gloucester	1.07	1.06	1.07	1.06	1.07	1.06	1.05	1.06
Hudson	1.07	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Hunterdon	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Mercer	1.06	1.07	1.06	1.07	1.06	1.06	1.06	1.06
Middlesex	1.07	1.09	1.08	1.08	1.08	1.08	1.08	1.08
Monmouth	1.05	1.05	1.05	1.06	1.05	1.05	1.06	1.05
Morris	1.07	1.08	1.07	1.07	1.06	1.07	1.07	1.07
Ocean	1.06	1.07	1.06	1.06	1.07	1.06	1.05	1.05
Passaic	1.07	1.08	1.08	1.09	1.08	1.08	1.08	1.09
Salem	1.07	1.08	1.06	1.06	1.07	1.07	1.05	1.06
Somerset	1.06	1.05	1.06	1.07	1.06	1.06	1.07	1.07
Sussex	1.08	1.09	1.08	1.07	1.09	1.08	1.07	1.07
Union	1.06	1.08	1.06	1.07	1.07	1.06	1.07	1.07
Warren	1.05	1.05	1.06	1.06	1.06	1.06	1.06	1.06
State Average	1.06	1.07	1.06	1.07	1.07	1.06	1.06	1.07

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1976

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER 1977

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1977 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102, 123,133	103,124, 126,134, 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.11	1.11	1.12	1.11	1.13	1.12	1.10	1.10
Bergen	1.15	1.16	1.17	1.17	1.18	1.18	1.16	1.17
Burlington	1.10	1.11	1.11	1.12	1.11	1.11	1.11	1.11
Camden	1.13	1.14	1.13	1.13	1.13	1.13	1.12	1.12
Cape May	1.12	1.11	1.12	1.13	1.13	1.12	1.11	1.12
Cumberland	1.12	1.10	1.13	1.12	1.15	1.13	1.10	1.11
Essex	1.15	1.16	1.16	1.17	1.17	1.16	1.16	1.16
Gloucester	1.15	1.16	1.16	1.14	1.16	1.15	1.13	1.13
Hudson	1.16	1.17	1.17	1.18	1.17	1.17	1.17	1.17
Hunterdon	1.14	1.14	1.15	1.15	1.16	1.15	1.14	1.14
Mercer	1.14	1.14	1.15	1.14	1.16	1.15	1.13	1.13
Middlesex	1.15	1.15	1.16	1.16	1.17	1.16	1.15	1.15
Monmouth	1.13	1.14	1.15	1.16	1.15	1.15	1.14	1.15
Morris	1.15	1.15	1.15	1.15	1.16	1.16	1.15	1.14
Ocean	1.13	1.14	1.14	1.13	1.15	1.14	1.11	1.12
Passaic	1.15	1.16	1.15	1.16	1.16	1.16	1.16	1.16
Salem	1.14	1.15	1.14	1.14	1.15	1.14	1.13	1.13
Somerset	1.14	1.14	1.15	1.16	1.15	1.15	1.15	1.15
Sussex	1.17	1.17	1.17	1.16	1.18	1.17	1.15	1.15
Union	1.15	1.15	1.15	1.16	1.16	1.15	1.15	1.15
Warren	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.13
State Average	1.14	1.14	1.15	1.15	1.15	1.15	1.14	1.14

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1977

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER 1978

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1978 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.21	1.21	1.20	1.21	1.20	1.20	1.20	1.20
Bergen	1.25	1.26	1.25	1.25	1.25	1.25	1.24	1.24
Burlington	1.19	1.19	1.20	1.21	1.20	1.20	1.19	1.19
Camden	1.22	1.22	1.21	1.21	1.22	1.21	1.20	1.20
Cape May	1.20	1.21	1.20	1.22	1.20	1.20	1.21	1.21
Cumberland	1.20	1.19	1.20	1.21	1.21	1.20	1.19	1.20
Essex	1.24	1.23	1.24	1.24	1.25	1.24	1.23	1.23
Gloucester	1.23	1.23	1.23	1.22	1.23	1.22	1.21	1.21
Hudson	1.25	1.26	1.25	1.26	1.25	1.25	1.25	1.26
Hunterdon	1.24	1.22	1.25	1.25	1.27	1.25	1.23	1.25
Mercer	1.21	1.21	1.22	1.21	1.22	1.22	1.20	1.20
Middlesex	1.22	1.23	1.23	1.23	1.23	1.23	1.22	1.22
Monmouth	1.23	1.22	1.24	1.24	1.24	1.24	1.22	1.22
Morris	1.24	1.24	1.24	1.23	1.25	1.24	1.22	1.22
Ocean	1.21	1.22	1.22	1.21	1.22	1.22	1.20	1.20
Passaic	1.23	1.24	1.24	1.25	1.25	1.24	1.24	1.24
Salem	1.23	1.22	1.22	1.22	1.23	1.22	1.21	1.21
Somerset	1.21	1.21	1.22	1.23	1.22	1.22	1.22	1.22
Sussex	1.24	1.24	1.24	1.24	1.25	1.24	1.23	1.22
Union	1.23	1.23	1.24	1.24	1.25	1.24	1.23	1.23
Warren	1.21	1.20	1.24	1.24	1.24	1.24	1.22	1.22
State Average	1.22	1.22	1.23	1.23	1.23	1.23	1.22	1.22

NOTE: Union labor rates are used in computing all of the above conversion factors.

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1979
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1979 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.30	1.32	1.30	1.32	1.30	1.30	1.32	1.32
Bergen	1.36	1.36	1.36	1.35	1.37	1.36	1.34	1.35
Burlington	1.30	1.31	1.30	1.32	1.30	1.31	1.32	1.32
Camden	1.30	1.31	1.30	1.31	1.30	1.30	1.31	1.30
Cape May	1.31	1.33	1.31	1.32	1.30	1.31	1.32	1.32
Cumberland	1.30	1.31	1.31	1.32	1.31	1.31	1.32	1.33
Essex	1.36	1.36	1.37	1.35	1.38	1.37	1.34	1.35
Gloucester	1.32	1.32	1.32	1.33	1.32	1.32	1.32	1.33
Hudson	1.36	1.37	1.37	1.36	1.37	1.37	1.35	1.36
Hunterdon	1.33	1.34	1.34	1.33	1.35	1.34	1.33	1.34
Mercer	1.34	1.34	1.34	1.33	1.35	1.34	1.32	1.33
Middlesex	1.35	1.35	1.36	1.34	1.38	1.36	1.33	1.35
Monmouth	1.34	1.34	1.35	1.33	1.36	1.35	1.32	1.33
Morris	1.34	1.34	1.35	1.34	1.36	1.35	1.33	1.34
Ocean	1.32	1.32	1.33	1.33	1.34	1.33	1.33	1.33
Passaic	1.35	1.35	1.35	1.34	1.37	1.36	1.33	1.34
Salem	1.33	1.34	1.33	1.33	1.34	1.33	1.33	1.33
Somerset	1.36	1.35	1.37	1.35	1.39	1.37	1.34	1.36
Sussex	1.35	1.37	1.35	1.33	1.36	1.33	1.33	1.33
Union	1.36	1.34	1.36	1.35	1.38	1.37	1.34	1.36
Warren	1.33	1.33	1.34	1.33	1.35	1.33	1.31	1.33
State Average	1.33	1.34	1.34	1.33	1.35	1.34	1.33	1.34

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1979

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1980

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1980 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.38	1.42	1.38	1.42	1.36	1.36	1.43	1.42
Bergen	1.44	1.46	1.43	1.45	1.43	1.43	1.44	1.45
Burlington	1.38	1.41	1.38	1.43	1.36	1.38	1.43	1.43
Camden	1.38	1.41	1.38	1.42	1.36	1.38	1.43	1.43
Cape May	1.39	1.44	1.39	1.43	1.37	1.39	1.44	1.44
Cumberland	1.37	1.41	1.38	1.42	1.37	1.37	1.42	1.42
Essex	1.44	1.46	1.43	1.44	1.44	1.43	1.44	1.45
Gloucester	1.38	1.42	1.39	1.42	1.38	1.38	1.43	1.44
Hudson	1.43	1.46	1.43	1.44	1.43	1.44	1.44	1.45
Hunterdon	1.41	1.43	1.41	1.42	1.41	1.40	1.42	1.42
Mercer	1.43	1.44	1.42	1.42	1.42	1.42	1.42	1.43
Middlesex	1.43	1.45	1.43	1.43	1.44	1.42	1.43	1.44
Monmouth	1.41	1.43	1.42	1.42	1.42	1.42	1.42	1.43
Morris	1.43	1.45	1.43	1.44	1.43	1.43	1.43	1.44
Ocean	1.40	1.42	1.40	1.43	1.40	1.40	1.43	1.43
Passaic	1.44	1.46	1.44	1.44	1.43	1.43	1.44	1.45
Salem	1.40	1.43	1.40	1.43	1.40	1.40	1.43	1.43
Somerset	1.43	1.45	1.43	1.43	1.45	1.44	1.42	1.43
Sussex	1.44	1.46	1.42	1.42	1.42	1.42	1.42	1.42
Union	1.44	1.44	1.43	1.45	1.44	1.44	1.44	1.46
Warren	1.42	1.43	1.41	1.41	1.41	1.40	1.41	1.43
State Average	1.41	1.44	1.41	1.43	1.41	1.41	1.43	1.44

NOTE: Union labor rates are used in computing all of the above conversion factors.

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1981
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1981 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.52	1.55	1.51	1.56	1.48	1.50	1.57	1.55
Bergen	1.55	1.60	1.55	1.57	1.52	1.54	1.58	1.58
Burlington	1.51	1.55	1.51	1.56	1.48	1.50	1.57	1.56
Camden	1.52	1.56	1.52	1.57	1.49	1.51	1.58	1.58
Cape May	1.53	1.57	1.52	1.56	1.49	1.51	1.57	1.56
Cumberland	1.50	1.54	1.51	1.55	1.48	1.50	1.55	1.55
Essex	1.56	1.58	1.55	1.56	1.54	1.55	1.56	1.57
Gloucester	1.52	1.56	1.52	1.56	1.48	1.51	1.57	1.57
Hudson	1.55	1.59	1.55	1.56	1.53	1.54	1.57	1.57
Hunterdon	1.54	1.58	1.54	1.55	1.52	1.53	1.55	1.55
Mercer	1.55	1.59	1.55	1.55	1.53	1.54	1.55	1.55
Middlesex	1.56	1.58	1.55	1.56	1.54	1.54	1.56	1.56
Monmouth	1.55	1.57	1.54	1.56	1.53	1.53	1.55	1.56
Morris	1.56	1.58	1.56	1.56	1.55	1.55	1.55	1.56
Ocean	1.53	1.55	1.53	1.57	1.50	1.52	1.57	1.56
Passaic	1.57	1.59	1.56	1.57	1.55	1.55	1.57	1.58
Salem	1.53	1.57	1.53	1.57	1.50	1.52	1.58	1.57
Somerset	1.56	1.58	1.56	1.56	1.55	1.55	1.55	1.56
Sussex	1.57	1.59	1.55	1.55	1.54	1.55	1.55	1.55
Union	1.55	1.57	1.54	1.56	1.53	1.54	1.55	1.56
Warren	1.56	1.58	1.55	1.54	1.54	1.54	1.54	1.55
State Average	1.54	1.57	1.54	1.56	1.52	1.53	1.56	1.56

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1981

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1982

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1982 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.59	1.64	1.59	1.65	1.55	1.57	1.68	1.65
Bergen	1.62	1.68	1.63	1.67	1.59	1.61	1.69	1.67
Burlington	1.59	1.65	1.60	1.66	1.55	1.58	1.68	1.66
Camden	1.60	1.65	1.60	1.66	1.56	1.59	1.68	1.66
Cape May	1.59	1.66	1.60	1.65	1.55	1.59	1.69	1.67
Cumberland	1.58	1.63	1.60	1.66	1.56	1.58	1.67	1.65
Essex	1.62	1.66	1.62	1.67	1.61	1.61	1.66	1.65
Gloucester	1.61	1.65	1.61	1.66	1.57	1.60	1.68	1.66
Hudson	1.64	1.67	1.64	1.68	1.62	1.63	1.69	1.69
Hunterdon	1.60	1.66	1.62	1.66	1.58	1.60	1.67	1.66
Mercer	1.62	1.67	1.63	1.65	1.60	1.61	1.65	1.65
Middlesex	1.63	1.66	1.63	1.66	1.61	1.62	1.67	1.67
Monmouth	1.62	1.67	1.62	1.66	1.61	1.61	1.66	1.67
Morris	1.63	1.67	1.63	1.66	1.60	1.63	1.66	1.65
Ocean	1.59	1.62	1.60	1.67	1.55	1.60	1.65	1.67
Passaic	1.64	1.70	1.65	1.68	1.61	1.63	1.68	1.68
Salem	1.61	1.66	1.62	1.66	1.58	1.60	1.69	1.68
Somerset	1.63	1.67	1.63	1.67	1.61	1.63	1.66	1.67
Sussex	1.63	1.70	1.64	1.65	1.61	1.63	1.67	1.65
Union	1.62	1.67	1.63	1.66	1.60	1.62	1.66	1.66
Warren	1.61	1.64	1.62	1.63	1.61	1.61	1.63	1.63
State Average	1.61	1.66	1.62	1.66	1.59	1.61	1.67	1.66

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1982

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1983
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1983 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.69	1.75	1.69	1.70	1.66	1.68	1.74	1.70
Bergen	1.73	1.81	1.75	1.76	1.71	1.73	1.76	1.76
Burlington	1.69	1.75	1.70	1.71	1.66	1.68	1.74	1.71
Camden	1.70	1.76	.71	1.71	1.68	1.69	74	1.71
Cape May	1.69	1.78	1.71	1.73	1.67	1.70	1.74	1.73
Cumberland	1.68	1.74	1.69	1.71	1.66	1.67	1.73	1.70
Essex	1.71	1.75	1.72	1.73	1.70	1.71	1.73	1.73
Gloucester	1.69	1.76	1.70	1.72	1.66	1.68	1.73	1.72
Hudson	1.72	1.80	1.74	1.75	1.71	1.72	1.76	1.76
Hunterdon	1.69	1.74	1.71	1.73	1.68	1.70	1.74	1.74
Mercer	1.71	1.77	1.72	1.72	1.69	1.70	1.73	1.72
Middlesex	1.73	1.79	1.74	1.74	1.71	1.72	1.75	1.75
Monmouth	1.71	1.77	1.72	1.73	1.69	1.71	1.73	1.73
Morris	1.72	1.77	1.73	1.73	1.71	1.72	1.73	1.73
Ocean	1.70	1.76	1.71	1.73	1.67	1.70	1.74	1.73
Passaic	1.74	1.79	1.75	1.76	1.72	1.73	1.76	1.77
Salem	1.70	1.76	1.70	1.72	1.67	1.69	1.74	1.73
Somerset	1.71	1.75	1.72	1.73	1.69	1.71	1.73	1.73
Sussex	1.73	1.79	1.74	1.74	1.71	1.72	1.74	1.74
Union	1.71	1.76	1.72	1.74	1.70	1.71	1.74	1.74
Warren	1.69	1.73	1.70	1.71	1.67	1.68	1.74	1.70
State Average	1.71	1.77	1.72	1.73	1.69	1.70	1.74	1.73

NOTE: Union labor rates are used in computing all of the above conversion factors.

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1984
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1984 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
Atlantic	1.78	1.86	1.79	1.82	1.74	1.77	1.84	1.83
Bergen	1.79	1.88	1.81	1.85	1.77	1.79	1.86	1.87
Burlington	1.76	1.83	1.77	1.81	1.73	1.75	1.82	1.82
Camden	1.76	1.83	1.77	1.80	1.74	1.75	1.81	1.81
Cape May	1.77	1.88	1.79	1.83	1.74	1.77	1.84	1.84
Cumberland	1.77	1.83	1.78	1.81	1.75	1.77	1.82	1.81
Essex	1.77	1.82	1.79	1.83	1.76	1.77	1.83	1.84
Gloucester	1.75	1.85	1.77	1.79	1.72	1.74	1.82	1.81
Hudson	1.79	1.88	1.82	1.85	1.77	1.80	1.86	1.86
Hunterdon	1.76	1.83	1.78	1.82	1.74	1.76	1.83	1.83
Mercer	1.77	1.86	1.80	1.82	1.76	1.78	1.83	1.84
Middlesex	1.79	1.87	1.81	1.84	1.77	1.79	1.84	1.85
Monmouth	1.77	1.85	1.80	1.83	1.75	1.78	1.84	1.85
Morris	1.79	1.85	1.82	1.84	1.79	1.80	1.83	1.84
Ocean	1.77	1.84	1.79	1.83	1.75	1.77	1.84	1.83
Passaic	1.80	1.87	1.81	1.85	1.78	1.79	1.86	1.87
Salem	1.76	1.84	1.78	1.80	1.73	1.75	1.82	1.81
Somerset	1.77	1.84	1.79	1.82	1.75	1.77	1.83	1.83
Sussex	1.79	1.87	1.81	1.83	1.77	1.79	1.84	1.85
Union	1.77	1.83	1.78	1.82	1.76	1.77	1.83	1.83
Warren	1.75	1.82	1.76	1.79	1.73	1.74	1.80	1.80
State Average	1.77	1.85	1.79	1.82	1.75	1.77	1.83	1.83

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1984

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1985
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1985 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	1.87	1.96	1.87	1.89	1.83	1.85	1.91	1.89
BERGEN	1.87	1.96	1.91	1.94	1.86	1.88	1.95	1.97
BURLINGTON	1.85	1.93	1.86	1.88	1.82	1.84	1.89	1.89
CAMDEN	1.84	1.92	1.85	1.87	1.81	1.82	1.88	1.87
CAPE MAY	1.85	1.94	1.86	1.90	1.81	1.83	1.91	1.91
CUMBERLAND	1.83	1.90	1.85	1.88	1.81	1.84	1.89	1.88
ESSEX	1.85	1.93	1.89	1.92	1.85	1.86	1.92	1.94
GLOUCESTER	1.83	1.91	1.85	1.85	1.81	1.82	1.89	1.87
HUDSON	1.87	1.95	1.91	1.95	1.87	1.89	1.95	1.97
HUNTERDON	1.85	1.92	1.87	1.92	1.84	1.86	1.93	1.92
MERCER	1.87	1.95	1.89	1.91	1.86	1.87	1.91	1.93
MIDDLESEX	1.86	1.94	1.89	1.92	1.86	1.87	1.92	1.93
MONMOUTH	1.86	1.93	1.88	1.91	1.84	1.86	1.91	1.92
MORRIS	1.88	1.94	1.91	1.93	1.88	1.89	1.93	1.95
OCEAN	1.85	1.93	1.88	1.90	1.84	1.85	1.91	1.90
PASSAIC	1.86	1.94	1.90	1.94	1.86	1.88	1.94	1.97
SALEM	1.84	1.91	1.85	1.87	1.81	1.82	1.89	1.88
SOMERSET	1.84	1.91	1.87	1.91	1.84	1.85	1.91	1.92
SUSSEX	1.86	1.93	1.89	1.92	1.86	1.87	1.91	1.93
UNION	1.86	1.94	1.89	1.92	1.86	1.87	1.92	1.94
WARREN	1.83	1.91	1.86	1.88	1.82	1.83	1.88	1.89
STATE AVERAGE	1.85	1.93	1.88	1.91	1.84	1.85	1.91	1.92

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1985

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1986
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1986 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	1.96	2.05	1.98	1.96	1.94	1.94	1.96	1.98
BERGEN	1.96	2.05	2.00	2.02	1.96	1.97	2.02	2.05
BURLINGTON	1.94	2.02	1.95	1.94	1.92	1.92	1.94	1.96
CAMDEN	1.93	2.01	1.95	1.94	1.92	1.92	1.93	1.96
CAPE MAY	1.94	2.04	1.96	1.95	1.92	1.93	1.95	1.97
CUMBERLAND	1.91	1.99	1.94	1.93	1.91	1.91	1.93	1.95
ESSEX	1.96	2.03	2.00	2.02	1.97	1.97	2.01	2.04
GLOUCESTER	1.92	2.00	1.94	1.93	1.91	1.91	1.93	1.96
HUDSON	1.97	2.06	2.01	2.03	1.97	1.98	2.03	2.06
HUNTERDON	1.94	2.03	1.98	2.00	1.94	1.95	2.00	2.03
MERCER	1.95	2.03	1.98	1.97	1.94	1.95	1.97	1.99
MIDDLESEX	1.94	2.02	1.98	1.99	1.95	1.95	1.99	2.01
MONMOUTH	1.94	2.02	1.97	1.98	1.94	1.95	1.99	2.00
MORRIS	1.96	2.04	2.00	2.00	1.97	1.97	2.00	2.03
OCEAN	1.94	2.02	1.97	1.96	1.93	1.94	1.96	1.98
PASSAIC	1.96	2.04	2.01	2.02	1.97	1.98	2.02	2.05
SALEM	1.92	2.00	1.94	1.93	1.90	1.91	1.93	1.95
SOMERSET	1.93	2.00	1.97	1.98	1.94	1.94	1.98	2.00
SUSSEX	1.94	2.02	1.98	1.99	1.95	1.95	1.98	2.00
UNION	1.96	2.04	2.01	2.02	1.98	1.98	2.01	2.05
WARREN	1.92	2.00	1.96	1.97	1.93	1.93	1.96	1.98
STATE AVERAGE	1.94	2.02	1.98	1.98	1.94	1.95	1.98	2.00

NOTE: Union labor rates are used in computing all of the above conversion factors.

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1987
TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1987 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	2.04	2.14	2.06	2.03	2.02	2.02	2.03	2.06
BERGEN	2.05	2.16	2.10	2.08	2.06	2.06	2.07	2.12
BURLINGTON	2.00	2.10	2.03	2.01	1.99	2.00	2.01	2.03
CAMDEN	2.00	2.09	2.02	2.00	1.99	1.99	1.99	2.02
CAPE MAY	2.02	2.13	2.04	2.01	1.99	2.00	2.02	2.04
CUMBERLAND	2.00	2.09	2.02	2.00	1.98	1.99	2.00	2.02
ESSEX	2.03	2.12	2.07	2.07	2.04	2.04	2.07	2.11
GLOUCESTER	1.99	2.08	2.01	1.99	1.98	1.98	1.99	2.02
HUDSON	2.05	2.15	2.09	2.10	2.06	2.06	2.10	2.14
HUNTERDON	2.02	2.13	2.06	2.06	2.02	2.03	2.06	2.09
MERCER	2.03	2.12	2.05	2.03	2.02	2.03	2.04	2.06
MIDDLESEX	2.02	2.12	2.06	2.05	2.02	2.03	2.05	2.08
MONMOUTH	2.02	2.11	2.05	2.05	2.01	2.02	2.05	2.07
MORRIS	2.03	2.11	2.07	2.06	2.04	2.04	2.05	2.09
OCEAN	2.01	2.11	2.05	2.04	2.01	2.02	2.04	2.06
PASSAIC	2.04	2.14	2.09	2.09	2.05	2.05	2.08	2.12
SALEM	1.99	2.08	2.01	2.00	1.98	1.98	2.00	2.03
SOMERSET	2.02	2.11	2.06	2.05	2.02	2.03	2.04	2.07
SUSSEX	2.02	2.12	2.06	2.05	2.03	2.03	2.05	2.07
UNION	2.03	2.12	2.08	2.08	2.06	2.05	2.07	2.11
WARREN	1.99	2.08	2.03	2.02	1.99	1.99	2.02	2.04
STATE AVERAGE	2.02	2.11	2.05	2.04	2.02	2.02	2.04	2.07

NOTE: Union labor rates are used in computing all of the above conversion factors.

ADDED 1987

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1988

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1988 COSTS

County	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	2.13	2.23	2.15	2.13	2.11	2.12	2.13	2.16
BERGEN	2.15	2.26	2.21	2.20	2.17	2.17	2.18	2.24
BURLINGTON	2.10	2.19	2.13	2.12	2.10	2.10	2.11	2.14
CAMDEN	2.09	2.18	2.13	2.11	2.10	2.09	2.10	2.14
CAPE MAY	2.12	2.23	2.15	2.13	2.11	2.11	2.13	2.16
CUMBERLAND	2.09	2.18	2.13	2.11	2.09	2.09	2.10	2.14
ESSEX	2.12	2.21	2.18	2.19	2.15	2.15	2.18	2.23
GLOUCESTER	2.08	2.17	2.12	2.11	2.09	2.08	2.10	2.13
HUDSON	2.16	2.27	2.22	2.22	2.18	2.18	2.22	2.26
HUNTERDON	2.11	2.22	2.17	2.18	2.13	2.14	2.17	2.21
MERCER	2.12	2.21	2.16	2.14	2.13	2.13	2.14	2.17
MIDDLESEX	2.11	2.21	2.15	2.15	2.12	2.12	2.14	2.18
MONMOUTH	2.11	2.20	2.15	2.15	2.12	2.12	2.14	2.18
MORRIS	2.14	2.22	2.17	2.17	2.15	2.15	2.16	2.21
OCEAN	2.11	2.20	2.15	2.14	2.12	2.12	2.13	2.17
PASSAIC	2.13	2.24	2.19	2.20	2.15	2.16	2.19	2.24
SALEM	2.08	2.17	2.12	2.11	2.09	2.08	2.10	2.14
SOMERSET	2.12	2.20	2.17	2.16	2.14	2.14	2.15	2.18
SUSSEX	2.12	2.21	2.17	2.16	2.12	2.14	2.16	2.19
UNION	2.11	2.21	2.18	2.18	2.15	2.14	2.17	2.22
WARREN	2.08	2.17	2.13	2.12	2.09	2.09	2.11	2.13
STATE AVERAGE	2.11	2.21	2.16	2.15	2.12	2.12	2.14	2.18

NOTE: Union labor rates are used in computing all of the above conversion factors

ADDED 1988

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1989

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1989 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	2.20	2.31	2.24	2.21	2.19	2.20	2.20	2.23
BERGEN	2.23	2.34	2.29	2.27	2.25	2.25	2.25	2.31
BURLINGTON	2.17	2.27	2.22	2.19	2.18	2.18	2.17	2.21
CAMDEN	2.18	2.26	2.22	2.19	2.19	2.18	2.17	2.21
CAPE MAY	2.20	2.31	2.24	2.21	2.19	2.20	2.20	2.23
CUMBERLAND	2.17	2.26	2.21	2.19	2.18	2.17	2.17	2.21
ESSEX	2.21	2.31	2.27	2.26	2.24	2.23	2.23	2.29
GLOUCESTER	2.16	2.25	2.20	2.18	2.17	2.17	2.16	2.20
HUDSON	2.25	2.35	2.30	2.29	2.27	2.27	2.27	2.32
HUNTERDON	2.19	2.31	2.26	2.24	2.22	2.21	2.22	2.27
MERCER	2.21	2.31	2.27	2.24	2.24	2.23	2.21	2.26
MIDDLESEX	2.20	2.29	2.25	2.23	2.22	2.21	2.20	2.25
MONMOUTH	2.19	2.28	2.24	2.21	2.20	2.20	2.19	2.23
MORRIS	2.22	2.30	2.27	2.25	2.25	2.24	2.22	2.27
OCEAN	2.18	2.28	2.23	2.21	2.20	2.20	2.19	2.23
PASSAIC	2.21	2.32	2.27	2.26	2.24	2.23	2.24	2.30
SALEM	2.16	2.25	2.20	2.18	2.17	2.16	2.16	2.20
SOMERSET	2.20	2.29	2.26	2.23	2.23	2.22	2.20	2.25
SUSSEX	2.20	2.30	2.25	2.23	2.22	2.22	2.21	2.25
UNION	2.20	2.30	2.27	2.25	2.24	2.23	2.22	2.28
WARREN	2.17	2.27	2.23	2.19	2.19	2.18	2.15	2.20
STATE AVERAGE	2.20	2.29	2.25	2.22	2.21	2.21	2.20	2.25

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1990

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1990 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	2.27	2.39	2.31	2.28	2.26	2.27	2.27	2.31
BERGEN	2.31	2.42	2.37	2.35	2.34	2.33	2.32	2.38
BURLINGTON	2.25	2.35	2.30	2.26	2.26	2.26	2.24	2.28
CAMDEN	2.25	2.34	2.30	2.26	2.27	2.26	2.23	2.28
CAPE MAY	2.28	2.40	2.32	2.28	2.27	2.28	2.27	2.31
CUMBERLAND	2.25	2.34	2.30	2.26	2.26	2.25	2.24	2.28
ESSEX	2.29	2.39	2.36	2.33	2.32	2.31	2.30	2.37
GLOUCESTER	2.24	2.33	2.28	2.25	2.25	2.24	2.23	2.27
HUDSON	2.33	2.44	2.39	2.37	2.35	2.35	2.34	2.40
HUNTERDON	2.28	2.40	2.34	2.32	2.30	2.30	2.29	2.34
MERCER	2.29	2.39	2.34	2.29	2.31	2.30	2.26	2.31
MIDDLESEX	2.29	2.38	2.34	2.31	2.31	2.30	2.28	2.33
MONMOUTH	2.24	2.35	2.28	2.27	2.23	2.24	2.25	2.29
MORRIS	2.30	2.40	2.36	2.32	2.33	2.32	2.29	2.35
OCEAN	2.27	2.38	2.32	2.29	2.29	2.28	2.27	2.31
PASSAIC	2.29	2.40	2.36	2.34	2.32	2.31	2.31	2.37
SALEM	2.24	2.33	2.28	2.25	2.25	2.24	2.23	2.27
SOMERSET	2.29	2.38	2.34	2.31	2.31	2.30	2.28	2.33
SUSSEX	2.27	2.37	2.33	2.29	2.29	2.28	2.26	2.31
UNION	2.28	2.39	2.35	2.33	2.32	2.31	2.29	2.36
WARREN	2.25	2.35	2.30	2.25	2.26	2.25	2.22	2.27
STATE AVERAGE	2.27	2.38	2.33	2.30	2.29	2.28	2.27	2.32

NOTE: Union labor rates are used in computing all of the above conversion factors

ADDED 1990

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1991

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1991 COSTS

	Residences		Apartments, Hotels Motels and Office Buildings		Commercial - Industrial Buildings			
County	Wood Frame	Brick or Veneer	Masonry & Wood	Steel & Concrete	Wood Frame	Wood & Masonry	Steel & Masonry	Fire Resistant
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	Table R-1	Table R-2	Table C-1	Table C-2	Table C-3	Table C-4	Table C-5	Table C-6
ATLANTIC	2.34	2.46	2.37	2.32	2.32	2.32	2.30	2.35
BERGEN	2.36	2.48	2.43	2.42	2.38	2.38	2.39	2.45
BURLINGTON	2.32	2.43	2.36	2.31	2.31	2.31	2.29	2.33
CAMDEN	2.32	2.42	2.35	2.30	2.31	2.30	2.28	2.32
CAPE MAY	2.34	2.46	2.37	2.32	2.32	2.32	2.30	2.35
CUMBERLAND	2.32	2.43	2.36	2.31	2.31	2.31	2.29	2.33
ESSEX	2.35	2.45	2.41	2.40	2.37	2.36	2.37	2.44
GLOUCESTER	2.31	2.41	2.34	2.30	2.30	2.29	2.28	2.32
HUDSON	2.38	2.50	2.45	2.43	2.40	2.40	2.41	2.47
HUNTERDON	2.33	2.45	2.40	2.39	2.35	2.35	2.36	2.41
MERCER	2.34	2.44	2.39	2.34	2.35	2.34	2.32	2.36
MIDDLESEX	2.34	2.44	2.39	2.37	2.35	2.35	2.35	2.40
MONMOUTH	2.33	2.44	2.38	2.36	2.33	2.33	2.34	2.38
MORRIS	2.36	2.46	2.42	2.39	2.38	2.37	2.36	2.42
OCEAN	2.33	2.44	2.37	2.32	2.32	2.32	2.29	2.34
PASSAIC	2.39	2.52	2.45	2.43	2.39	2.40	2.42	2.47
SALEM	2.31	2.41	2.34	2.30	2.30	2.29	2.28	2.32
SOMERSET	2.34	2.44	2.40	2.38	2.36	2.35	2.35	2.40
SUSSEX	2.33	2.44	2.39	2.37	2.34	2.34	2.34	2.39
UNION	2.34	2.45	2.41	2.40	2.37	2.36	2.37	2.43
WARREN	2.30	2.41	2.35	2.31	2.31	2.29	2.28	2.33
STATE AVERAGE	2.34	2.45	2.39	2.36	2.34	2.34	2.33	2.38

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1992

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1992 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.43	2.54	2.46	2.36	2.42	2.40	2.33	2.39
BERGEN	2.45	2.56	2.51	2.45	2.48	2.46	2.41	2.48
BURLINGTON	2.42	2.51	2.44	2.35	2.42	2.39	2.31	2.37
CAMDEN	2.41	2.50	2.44	2.34	2.41	2.39	2.31	2.37
CAPE MAY	2.43	2.54	2.46	2.36	2.42	2.40	2.33	2.39
CUMBERLAND	2.42	2.51	2.44	2.35	2.41	2.39	2.32	2.38
ESSEX	2.45	2.54	2.50	2.44	2.47	2.45	2.40	2.47
GLOUCESTER	2.40	2.49	2.43	2.34	2.40	2.38	2.30	2.36
HUDSON	2.48	2.58	2.54	2.47	2.51	2.48	2.43	2.51
HUNTERDON	2.43	2.55	2.49	2.42	2.45	2.43	2.38	2.45
MERCER	2.44	2.53	2.48	2.39	2.45	2.43	2.35	2.40
MIDDLESEX	2.44	2.53	2.48	2.41	2.46	2.43	2.37	2.43
MONMOUTH	2.43	2.53	2.47	2.40	2.44	2.42	2.36	2.42
MORRIS	2.46	2.54	2.51	2.43	2.48	2.46	2.39	2.46
OCEAN	2.43	2.53	2.47	2.39	2.43	2.41	2.35	2.41
PASSAIC	2.44	2.54	2.50	2.44	2.47	2.44	2.44	2.49
SALEM	2.40	2.49	2.43	2.34	2.40	2.37	2.30	2.36
SOMERSET	2.44	2.52	2.49	2.41	2.46	2.43	2.37	2.43
SUSSEX	2.43	2.52	2.48	2.40	2.45	2.42	2.36	2.42
UNION	2.44	2.53	2.50	2.44	2.48	2.45	2.39	2.46
WARREN	2.39	2.49	2.44	2.35	2.41	2.37	2.29	2.36
STATE AVERAGE	2.43	2.53	2.47	2.39	2.44	2.42	2.36	2.42

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1993

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1993 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.52	2.63	2.55	2.45	2.52	2.50	2.41	2.48
BERGEN	2.54	2.65	2.61	2.53	2.58	2.55	2.49	2.57
BURLINGTON	2.50	2.60	2.54	2.45	2.51	2.49	2.42	2.48
CAMDEN	2.50	2.59	2.54	2.43	2.51	2.48	2.39	2.46
CAPE MAY	2.52	2.63	2.55	2.45	2.52	2.49	2.41	2.47
CUMBERLAND	2.51	2.61	2.54	2.44	2.51	2.49	2.40	2.47
ESSEX	2.54	2.63	2.60	2.52	2.57	2.54	2.48	2.56
GLOUCESTER	2.49	2.59	2.53	2.43	2.50	2.47	2.39	2.46
HUDSON	2.57	2.67	2.63	2.56	2.60	2.58	2.51	2.59
HUNTERDON	2.52	2.63	2.58	2.50	2.55	2.52	2.46	2.53
MERCER	2.56	2.65	2.58	2.50	2.55	2.53	2.45	2.51
MIDDLESEX	2.53	2.62	2.59	2.51	2.56	2.53	2.47	2.53
MONMOUTH	2.52	2.61	2.56	2.49	2.53	2.51	2.45	2.50
MORRIS	2.55	2.64	2.61	2.52	2.58	2.55	2.47	2.54
OCEAN	2.53	2.63	2.57	2.48	2.54	2.51	2.43	2.49
PASSAIC	2.52	2.62	2.59	2.52	2.55	2.53	2.48	2.55
SALEM	2.48	2.58	2.52	2.42	2.49	2.46	2.38	2.45
SOMERSET	2.54	2.63	2.59	2.51	2.57	2.54	2.46	2.53
SUSSEX	2.53	2.63	2.58	2.50	2.55	2.53	2.46	2.52
UNION	2.53	2.63	2.60	2.52	2.57	2.54	2.48	2.55
WARREN	2.47	2.56	2.52	2.42	2.49	2.45	2.36	2.43
STATE AVERAGE	2.52	2.62	2.57	2.48	2.54	2.52	2.44	2.51

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1994

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1994 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.60	2.70	2.62	2.51	2.60	2.56	2.45	2.53
BERGEN	2.63	2.72	2.69	2.60	2.67	2.63	2.55	2.63
BURLINGTON	2.61	2.70	2.65	2.55	2.63	2.60	2.52	2.58
CAMDEN	2.57	2.65	2.61	2.49	2.60	2.55	2.44	2.51
CAPE MAY	2.60	2.70	2.63	2.52	2.60	2.57	2.48	2.54
CUMBERLAND	2.63	2.70	2.67	2.54	2.66	2.61	2.49	2.56
ESSEX	2.63	2.71	2.68	2.60	2.67	2.63	2.54	2.63
GLOUCESTER	2.58	2.66	2.61	2.50	2.59	2.55	2.45	2.52
HUDSON	2.64	2.73	2.70	2.61	2.68	2.64	2.55	2.64
HUNTERDON	2.60	2.70	2.66	2.56	2.63	2.60	2.51	2.59
MERCER	2.62	2.71	2.66	2.55	2.64	2.60	2.50	2.56
MIDDLESEX	2.61	2.69	2.66	2.56	2.64	2.60	2.51	2.58
MONMOUTH	2.60	2.69	2.65	2.55	2.62	2.59	2.50	2.56
MORRIS	2.60	2.67	2.65	2.55	2.63	2.59	2.50	2.57
OCEAN	2.61	2.70	2.65	2.54	2.63	2.59	2.49	2.56
PASSAIC	2.61	2.70	2.67	2.59	2.65	2.61	2.54	2.62
SALEM	2.58	2.66	2.60	2.49	2.58	2.54	2.45	2.52
SOMERSET	2.62	2.70	2.67	2.58	2.65	2.61	2.52	2.59
SUSSEX	2.61	2.69	2.65	2.55	2.63	2.59	2.50	2.57
UNION	2.63	2.71	2.69	2.60	2.67	2.63	2.54	2.62
WARREN	2.57	2.65	2.62	2.48	2.60	2.55	2.41	2.49
STATE AVERAGE	2.61	2.69	2.65	2.55	2.63	2.59	2.50	2.57

NOTE: Union labor rates are used in computing all of the above conversion factors

ADDED 1994

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1995

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1995 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.70	2.79	2.73	2.60	2.71	2.67	2.56	2.63
BERGEN	2.70	2.79	2.76	2.69	2.74	2.71	2.64	2.72
BURLINGTON	2.67	2.76	2.71	2.62	2.68	2.66	2.57	2.64
CAMDEN	2.64	2.74	2.68	2.58	2.65	2.62	2.53	2.60
CAPE MAY	2.65	2.76	2.68	2.59	2.65	2.63	2.54	2.61
CUMBERLAND	2.65	2.75	2.69	2.59	2.65	2.63	2.54	2.61
ESSEX	2.68	2.77	2.74	2.68	2.71	2.68	2.62	2.70
GLOUCESTER	2.64	2.72	2.67	2.58	2.64	2.61	2.53	2.60
HUDSON	2.72	2.81	2.78	2.71	2.75	2.72	2.66	2.74
HUNTERDON	2.67	2.77	2.73	2.64	2.69	2.66	2.59	2.67
MERCER	2.67	2.78	2.72	2.61	2.68	2.66	2.57	2.63
MIDDLESEX	2.67	2.77	2.73	2.65	2.69	2.67	2.60	2.66
MONMOUTH	2.67	2.76	2.71	2.63	2.68	2.65	2.58	2.64
MORRIS	2.69	2.77	2.74	2.67	2.71	2.68	2.61	2.69
OCEAN	2.66	2.76	2.71	2.62	2.67	2.64	2.56	2.63
PASSAIC	2.70	2.78	2.76	2.68	2.73	2.70	2.62	2.70
SALEM	2.64	2.73	2.68	2.57	2.65	2.62	2.52	2.59
SOMERSET	2.68	2.77	2.74	2.66	2.71	2.68	2.61	2.68
SUSSEX	2.68	2.77	2.73	2.66	2.69	2.67	2.61	2.67
UNION	2.70	2.79	2.75	2.68	2.72	2.69	2.63	2.71
WARREN	2.63	2.72	2.68	2.56	2.65	2.61	2.49	2.57
STATE AVERAGE	2.67	2.76	2.72	2.63	2.69	2.66	2.58	2.65

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1996

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1996 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.75	2.82	2.74	2.56	2.72	2.68	2.52	2.58
BERGEN	2.76	2.81	2.79	2.69	2.76	2.74	2.66	2.71
BURLINGTON	2.74	2.80	2.74	2.62	2.72	2.70	2.60	2.64
CAMDEN	2.71	2.79	2.72	2.60	2.69	2.66	2.56	2.61
CAPE MAY	2.71	2.80	2.72	2.59	2.68	2.66	2.56	2.61
CUMBERLAND	2.72	2.81	2.72	2.59	2.69	2.67	2.56	2.61
ESSEX	2.75	2.80	2.78	2.69	2.75	2.73	2.65	2.71
GLOUCESTER	2.71	2.76	2.71	2.59	2.68	2.65	2.55	2.60
HUDSON	2.78	2.84	2.80	2.71	2.77	2.75	2.67	2.72
HUNTERDON	2.74	2.83	2.76	2.64	2.72	2.70	2.61	2.65
MERCER	2.74	2.79	2.76	2.65	2.73	2.70	2.61	2.66
MIDDLESEX	2.75	2.83	2.78	2.68	2.74	2.72	2.65	2.68
MONMOUTH	2.75	2.83	2.76	2.66	2.72	2.71	2.63	2.66
MORRIS	2.75	2.82	2.76	2.65	2.73	2.71	2.62	2.64
OCEAN	2.73	2.79	2.74	2.62	2.71	2.68	2.58	2.62
PASSAIC	2.74	2.81	2.78	2.69	2.75	2.73	2.65	2.70
SALEM	2.72	2.80	2.73	2.59	2.70	2.67	2.56	2.61
SOMERSET	2.74	2.81	2.76	2.66	2.73	2.71	2.63	2.66
SUSSEX	2.74	2.79	2.75	2.65	2.72	2.70	2.62	2.65
UNION	2.75	2.81	2.78	2.68	2.75	2.72	2.65	2.69
WARREN	2.71	2.80	2.73	2.58	2.70	2.67	2.54	2.59
STATE AVERAGE	2.74	2.81	2.75	2.64	2.72	2.70	2.60	2.65

NOTE: Union labor rates are used in computing all of the above conversion factors

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1997

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1997 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS			
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY & WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT
			101,102 103,145	104,105 106	101,102 123,133	103,124 126,134 136	105,107,108 109,125,127 135,137	104,106
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6
ATLANTIC	2.84	2.89	2.84	2.68	2.82	2.78	2.66	2.70
BERGEN	2.87	2.91	2.90	2.78	2.88	2.84	2.75	2.81
BURLINGTON	2.82	2.87	2.83	2.71	2.81	2.78	2.69	2.73
CAMDEN	2.80	2.87	2.81	2.68	2.79	2.76	2.66	2.70
CAPE MAY	2.81	2.88	2.82	2.68	2.79	2.76	2.66	2.70
CUMBERLAND	2.83	2.89	2.83	2.68	2.81	2.77	2.66	2.70
ESSEX	2.83	2.87	2.86	2.77	2.83	2.81	2.74	2.79
GLOUCESTER	2.81	2.84	2.80	2.68	2.78	2.75	2.65	2.70
HUDSON	2.89	2.94	2.91	2.80	2.89	2.86	2.77	2.82
HUNTERDON	2.84	2.91	2.86	2.72	2.83	2.80	2.70	2.74
MERCER	2.84	2.87	2.85	2.73	2.84	2.80	2.70	2.74
MIDDLESEX	2.84	2.90	2.87	2.76	2.84	2.82	2.73	2.77
MONMOUTH	2.84	2.90	2.85	2.74	2.83	2.80	2.71	2.74
MORRIS	2.86	2.90	2.86	2.73	2.84	2.81	2.71	2.73
OCEAN	2.81	2.84	2.81	2.70	2.79	2.76	2.67	2.71
PASSAIC	2.85	2.90	2.88	2.78	2.86	2.82	2.74	2.79
SALEM	2.79	2.86	2.80	2.66	2.78	2.74	2.64	2.68
SOMERSET	2.84	2.89	2.86	2.75	2.84	2.81	2.72	2.76
SUSSEX	2.84	2.93	2.86	2.74	2.83	2.81	2.73	2.75
UNION	2.88	2.92	2.89	2.78	2.87	2.84	2.75	2.80
WARREN	2.81	2.88	2.83	2.67	2.80	2.76	2.63	2.68
STATE AVERAGE	2.84	2.89	2.85	2.72	2.83	2.79	2.70	2.74

NOTE: Union labor rates are used in computing all of the above conversion factors

ADDED 1997

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1998

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1998 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT	WOOD & MASONRY WOOD FRAME	POST & FRAME*
			101,102 103, 145	104, 105 106	101, 102 123, 133	103, 124 126, 134 136	105, 107, 108 109, 125,127 135, 137	104, 106	150, 151 152, 153 154,156	PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	2.84	2.93	2.72	2.75	2.81	2.80	2.74	2.77	2.81	1.00
BERGEN	2.87	2.94	2.77	2.83	2.87	2.85	2.80	2.85	2.81	1.00
BURLINGTON	2.83	2.91	2.71	2.78	2.80	2.80	2.77	2.79	2.81	1.00
CAMDEN	2.80	2.89	2.69	2.73	2.78	2.77	2.71	2.74	2.81	1.00
CAPE MAY	2.82	2.92	2.70	2.74	2.79	2.78	2.73	2.75	2.81	1.00
CUMBERLAND	2.84	2.93	2.71	2.75	2.81	2.80	2.81	2.76	2.81	1.00
ESSEX	2.85	2.94	2.75	2.84	2.83	2.83	2.71	2.85	2.81	1.00
GLOUCESTER	2.80	2.86	2.68	2.74	2.78	2.76	2.84	2.75	2.81	1.00
HUDSON	2.90	2.98	2.80	2.87	2.89	2.88	2.77	2.90	2.81	1.00
HUNTERDON	2.84	2.95	2.74	2.78	2.82	2.81	2.75	2.79	2.81	1.00
MERCER	2.84	2.91	2.73	2.77	2.82	2.81	2.80	2.78	2.81	1.00
MIDDLESEX	2.86	2.96	2.76	2.81	2.84	2.84	2.79	2.84	2.81	1.00
MONMOUTH	2.86	2.96	2.75	2.80	2.83	2.83	2.79	2.81	2.81	1.00
MORRIS	2.87	2.96	2.75	2.78	2.83	2.83	2.77	2.78	2.81	1.00
OCEAN	2.80	2.85	2.68	2.75	2.78	2.77	2.72	2.75	2.81	1.00
PASSAIC	2.85	2.94	2.76	2.82	2.85	2.83	2.79	2.83	2.81	1.00
SALEM	2.81	2.91	2.70	2.75	2.79	2.78	2.73	2.76	2.81	1.00
SOMERSET	2.86	2.95	2.75	2.80	2.84	2.83	2.78	2.80	2.81	1.00
SUSSEX	2.86	3.00	2.76	2.80	2.83	2.84	2.79	2.81	2.81	1.00
UNION	2.87	2.96	2.77	2.82	2.85	2.85	2.80	2.84	2.81	1.00
WARREN	2.82	2.87	2.70	2.77	2.80	2.79	2.74	2.77	2.81	1.00
STATE AVERAGE	2.84	2.93	2.73	2.78	2.82	2.81	2.77	2.80	2.81	1.00

NOTE: Union labor rates are used in computing all of the above conversion factors
* with the exception of the P.F. Series Farm Buildings *

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 1999

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 1999 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD	STEEL & CONCRETE	WOOD FRAME	WOOD & MASONRY	STEEL & MASONRY	FIRE RESISTANT	WOOD & MASONRY WOOD FRAME	POST & FRAME*
			101,102 103, 145	104, 105 106	101, 102 123, 133	103, 124 126, 134 136	105, 107, 108 109, 125,127 135, 137	104, 106	150, 151 152, 153 154,156	PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	2.98	3.05	2.98	2.79	2.97	2.92	2.75	2.81	2.92	1.02
BERGEN	2.97	3.04	3.00	2.87	2.99	2.95	2.82	2.88	2.95	1.03
BURLINGTON	2.95	3.03	2.97	2.81	2.95	2.91	2.77	2.83	2.91	1.02
CAMDEN	2.93	3.01	2.94	2.78	2.92	2.88	2.73	2.79	2.88	1.02
CAPE MAY	2.95	3.04	2.96	2.78	2.94	2.89	2.74	2.79	2.89	1.02
CUMBERLAND	2.97	3.03	2.96	2.77	2.96	2.90	2.73	2.79	2.90	1.02
ESSEX	2.98	3.05	3.00	2.86	2.98	2.94	2.82	2.88	2.94	1.03
GLOUCESTER	2.93	2.98	2.93	2.77	2.92	2.87	2.72	2.78	2.87	1.02
HUDSON	3.03	3.10	3.06	2.91	3.05	3.00	2.86	2.95	3.00	1.03
HUNTERDON	2.97	3.07	2.99	2.81	2.96	2.92	2.78	2.82	2.92	1.02
MERCER	2.98	3.04	3.00	2.83	2.99	2.94	2.78	2.84	2.94	1.03
MIDDLESEX	3.01	3.10	3.03	2.87	3.01	2.97	2.83	2.82	2.97	1.03
MONMOUTH	3.01	3.10	3.02	2.85	2.99	2.96	2.81	2.85	2.96	1.03
MORRIS	3.00	3.08	3.00	2.82	2.99	2.95	2.78	2.82	2.95	1.03
OCEAN	2.97	3.03	2.98	2.82	2.96	2.92	2.77	2.82	2.92	1.02
PASSAIC	2.98	3.05	3.02	2.88	3.01	2.97	2.82	2.89	2.97	1.03
SALEM	2.94	3.03	2.96	2.78	2.94	2.90	2.74	2.80	2.90	1.02
SOMERSET	3.00	3.08	3.02	2.85	3.00	2.96	2.80	2.85	2.96	1.03
SUSSEX	2.99	3.12	3.01	2.83	2.97	2.95	2.80	2.84	2.95	1.02
UNION	3.00	3.08	3.02	2.86	3.01	2.96	2.81	2.87	2.96	1.03
WARREN	2.95	3.00	2.95	2.76	2.95	2.89	2.73	2.76	2.89	1.02
STATE AVERAGE	2.97	3.05	2.99	2.82	2.97	2.93	2.78	2.83	2.93	1.02

NOTE: Union labor rates are used in computing all of the above conversion factors
* with the exception of the P.F. Series Farm Buildings *

ADDED 1999

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 2000

TO BE APPLIED TO 1975 NEW JERSEY MANUAL COSTS TO CONVERT TO 2000 COSTS

	RESIDENCES		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD 101,102 103, 145	STEEL & CONCRETE 104, 105 106	WOOD FRAME 101, 102 123, 133	WOOD & MASONRY 103, 124 126, 134 136	STEEL & MASONRY 105, 107, 108 109, 125,127 135, 137	FIRE RESISTANT 104, 106	WOOD & MASONRY WOOD FRAME 150, 151 152, 153 154,156	POST & FRAME* PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	2.99	3.09	3.01	2.86	2.97	2.95	2.83	2.88	2.95	1.11
BERGEN	2.99	3.09	3.04	2.96	3.00	2.99	2.92	2.97	2.99	1.12
BURLINGTON	3.08	3.16	3.13	2.96	3.12	3.06	2.90	2.96	3.06	1.11
CAMDEN	2.97	3.07	3.00	2.86	2.97	2.93	2.83	2.88	2.93	1.11
CAPE MAY	2.99	3.09	3.01	2.86	2.97	2.94	2.83	2.87	2.94	1.11
CUMBERLAND	2.99	3.08	3.00	2.85	2.97	2.94	2.82	2.86	2.94	1.11
ESSEX	2.99	3.08	3.02	2.93	2.98	2.96	2.89	2.95	2.96	1.12
GLOUCESTER	2.95	3.03	2.97	2.85	2.93	2.91	2.81	2.86	2.91	1.11
HUDSON	3.06	3.16	3.10	2.99	3.06	3.04	2.96	3.03	3.04	1.12
HUNTERDON	2.99	3.11	3.02	2.88	2.98	2.96	2.85	2.89	2.96	1.11
MERCER	3.00	3.08	3.02	2.89	2.99	2.96	2.85	2.90	2.96	1.12
MIDDLESEX	3.04	3.15	3.08	2.95	3.04	3.02	2.92	2.97	3.02	1.12
MONMOUTH	3.02	3.12	3.04	2.91	2.99	2.97	2.88	2.91	2.97	1.12
MORRIS	3.01	3.11	3.02	2.88	2.98	2.96	2.86	2.88	2.96	1.12
OCEAN	2.99	3.06	3.00	2.87	2.96	2.94	2.83	2.87	2.94	1.11
PASSAIC	2.99	3.08	3.04	2.95	3.01	2.99	2.90	2.96	2.99	1.12
SALEM	2.97	3.08	2.99	2.85	2.95	2.93	2.82	2.87	2.93	1.11
SOMERSET	3.01	3.11	3.04	2.92	3.00	2.98	2.88	2.92	2.98	1.12
SUSSEX	3.06	3.18	3.09	2.92	3.05	3.02	2.90	2.93	3.02	1.11
UNION	3.01	3.10	3.03	2.93	2.99	2.97	2.89	2.94	2.97	1.12
WARREN	2.97	3.02	2.98	2.82	2.95	2.91	2.76	2.82	2.91	1.11
STATE AVERAGE	3.00	3.10	3.03	2.90	2.99	2.97	2.86	2.91	2.97	1.11

NOTE: Union labor rates are used in computing all of the above conversion factors
* with the exception of the P.F. Series Farm Buildings *

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 2001

TO BE APPLIED TO THE REAL PROPERTY APPRAISAL MANUAL FOR NEW JERSEY ASSESSORS

	RESIDENCES 1975 SERIES**		RESIDENCES R-12 - R-54 2001 SERIES **		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD 101,102 103, 145	STEEL & CONCRETE 104, 105 106	WOOD FRAME 101, 102 123, 133	WOOD & MASONRY 103, 124 126, 134 136	STEEL & MASONRY 105, 107, 108 109, 125,127 135, 137	FIRE RESISTANT 104, 106	WOOD & MASONRY WOOD FRAME 150, 151 152, 153 154,156	POST & FRAME* PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE RR-1	TABLE RR-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	3.05	3.17	0.99	0.99	3.08	2.93	3.04	3.01	2.90	2.96	3.01	1.13
BERGEN	3.06	3.17	0.99	0.99	3.12	3.03	3.07	3.05	2.99	3.05	3.05	1.14
BURLINGTON	3.09	3.19	1.00	1.00	3.14	2.99	3.12	3.07	2.95	3.01	3.07	1.12
CAMDEN	3.01	3.14	0.98	0.98	3.05	2.93	3.00	2.98	2.89	2.95	2.98	1.13
CAPE MAY	3.03	3.15	0.98	0.99	3.06	2.92	3.01	2.99	2.89	2.94	2.99	1.13
CUMBERLAND	3.05	3.15	0.99	0.99	3.07	2.92	3.03	3.00	2.89	2.94	3.00	1.13
ESSEX	3.08	3.18	1.00	1.00	3.12	3.03	3.08	3.06	3.00	3.06	3.06	1.14
GLOUCESTER	3.02	3.11	0.98	0.97	3.04	2.92	3.00	2.98	2.88	2.94	2.98	1.13
HUDSON	3.14	3.25	1.02	1.02	3.19	3.08	3.15	3.13	3.05	3.13	3.13	1.14
HUNTERDON	3.07	3.21	1.00	1.01	3.11	2.98	3.06	3.04	2.95	3.00	3.04	1.13
MERCER	3.07	3.17	1.00	0.99	3.10	2.97	3.07	3.04	2.94	2.99	3.04	1.14
MIDDLESEX	3.10	3.23	1.01	1.01	3.14	3.03	3.09	3.08	3.00	3.05	3.08	1.14
MONMOUTH	3.09	3.21	1.00	1.01	3.12	2.99	3.07	3.06	2.97	3.01	3.06	1.14
MORRIS	3.09	3.21	1.00	1.01	3.12	2.98	3.07	3.06	2.96	2.99	3.06	1.14
OCEAN	3.04	3.13	0.99	0.98	3.07	2.95	3.02	3.00	2.91	2.96	3.00	1.14
PASSAIC	3.07	3.18	1.00	1.00	3.14	3.05	3.10	3.08	3.00	3.07	3.08	1.13
SALEM	3.02	3.15	0.98	0.99	3.06	2.92	3.02	2.99	2.89	2.95	2.99	1.14
SOMERSET	3.09	3.21	1.00	1.01	3.13	3.01	3.08	3.07	2.98	3.02	3.07	1.13
SUSSEX	3.13	3.28	1.02	1.03	3.17	3.00	3.13	3.10	2.99	3.03	3.10	1.14
UNION	3.10	3.21	1.01	1.01	3.14	3.03	3.10	3.08	2.99	3.05	3.08	1.12
WARREN	3.03	3.11	0.98	0.97	3.06	2.90	3.03	2.99	2.85	2.91	2.99	1.14
STATE AVERAGE	3.07	3.18	1.00	1.00	3.11	2.98	3.06	3.04	2.95	3.00	3.04	1.13

NOTE: Union labor rates are used in computing all of the above conversion factors with the exception of the P.F. Series Farm Buildings*

Use table R-1 and R-2 when converting from the 1975 base costs, employ tables RR-1 and RR-2 to convert from the 2001 base year**

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 2002

TO BE APPLIED TO THE REAL PROPERTY APPRAISAL MANUAL FOR NEW JERSEY ASSESSORS

	RESIDENCES 1975 SERIES**		RESIDENCES R-12 - R-54 2001 SERIES **		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD 101,102 103, 145	STEEL & CONCRETE 104, 105 106	WOOD FRAME 101, 102 123, 133	WOOD & MASONRY 103, 124 126, 134 136	STEEL & MASONRY 105, 107, 108 109, 125,127 135, 137	FIRE RESISTANT 104, 106	WOOD & MASONRY WOOD FRAME 150, 151 152, 153 154,156	POST & FRAME* PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE RR-1	TABLE RR-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	3.09	3.23	1.02	1.03	3.13	2.99	3.07	3.05	2.96	3.02	3.05	1.15
BERGEN	3.11	3.26	1.03	1.04	3.17	3.09	3.11	3.10	3.05	3.11	3.10	1.16
BURLINGTON	3.09	3.22	1.02	1.03	3.14	3.02	3.08	3.07	2.99	3.03	3.07	1.14
CAMDEN	3.06	3.21	1.02	1.02	3.11	2.99	3.05	3.04	2.95	3.01	3.04	1.15
CAPE MAY	3.07	3.22	1.01	1.03	3.11	2.99	3.04	3.03	2.95	3.00	3.03	1.15
CUMBERLAND	3.09	3.22	1.02	1.03	3.12	2.99	3.07	3.05	2.96	3.01	3.05	1.15
ESSEX	3.12	3.25	1.03	1.04	3.16	3.07	3.10	3.10	3.04	3.10	3.10	1.16
GLOUCESTER	3.06	3.17	1.01	1.01	3.09	2.98	3.04	3.02	2.93	3.00	3.02	1.15
HUDSON	3.18	3.33	1.05	1.07	3.24	3.13	3.18	3.16	3.09	3.18	3.16	1.16
HUNTERDON	3.10	3.27	1.03	1.05	3.15	3.03	3.08	3.08	3.00	3.04	3.08	1.15
MERCER	3.10	3.23	1.03	1.03	3.15	3.03	3.09	3.08	2.99	3.05	3.08	1.16
MIDDLESEX	3.12	3.27	1.04	1.04	3.17	3.06	3.11	3.10	3.02	3.08	3.10	1.16
MONMOUTH	3.11	3.26	1.03	1.05	3.15	3.03	3.09	3.08	2.99	3.04	3.08	1.16
MORRIS	3.13	3.28	1.03	1.05	3.16	3.02	3.10	3.09	2.99	3.03	3.09	1.16
OCEAN	3.09	3.20	1.03	1.03	3.13	3.02	3.07	3.06	2.98	3.03	3.06	1.15
PASSAIC	3.13	3.27	1.04	1.05	3.19	3.10	3.14	3.13	3.05	3.12	3.13	1.16
SALEM	3.07	3.22	1.02	1.03	3.11	2.98	3.05	3.04	2.95	3.01	3.04	1.14
SOMERSET	3.12	3.27	1.03	1.05	3.17	3.04	3.11	3.10	3.01	3.06	3.10	1.16
SUSSEX	3.16	3.32	1.03	1.04	3.20	3.03	3.14	3.12	3.01	3.06	3.12	1.14
UNION	3.13	3.27	1.04	1.05	3.18	3.06	3.12	3.11	3.03	3.09	3.11	1.16
WARREN	3.07	3.16	1.01	1.01	3.10	2.95	3.06	3.02	2.88	2.96	3.02	1.15
STATE AVERAGE	3.10	3.24	1.03	1.04	3.15	3.03	3.09	3.08	2.99	3.05	3.08	1.15

NOTE: Union labor rates are used in computing all of the above conversion factors with the exception of the P.F. Series Farm Buildings*

Use table R-1 and R-2 when converting from the 1975 base costs, employ tables RR-1 and RR-2 to convert from the 2001 base year**

*REVISED 10- 2002

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 2003

TO BE APPLIED TO THE REAL PROPERTY APPRAISAL MANUAL FOR NEW JERSEY ASSESSORS

	RESIDENCES 1975 SERIES**		RESIDENCES R-12 - R-54 2001 SERIES **		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD 101,102 103, 145	STEEL & CONCRETE 104, 105 106	WOOD FRAME 101, 102 123, 133	WOOD & MASONRY 103, 124 126, 134 136	STEEL & MASONRY 105, 107, 108 109, 125,127 135, 137	FIRE RESISTANT 104, 106	WOOD & MASONRY WOOD FRAME 150, 151 152, 153 154,156	POST & FRAME* PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE RR-1	TABLE RR-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	3.18	3.32	1.05	1.06	3.21	3.06	3.15	3.13	3.03	3.10	3.13	1.20
BERGEN	3.19	3.35	1.06	1.07	3.25	3.16	3.18	3.18	3.12	3.20	3.18	1.21
BURLINGTON	3.15	3.30	1.04	1.06	3.20	3.08	3.13	3.12	3.05	3.11	3.12	1.19
CAMDEN	3.14	3.29	1.05	1.05	3.18	3.06	3.12	3.11	3.03	3.10	3.11	1.20
CAPE MAY	3.15	3.31	1.04	1.06	3.19	3.06	3.12	3.11	3.03	3.09	3.11	1.20
CUMBERLAND	3.17	3.31	1.05	1.06	3.20	3.06	3.14	3.12	3.02	3.08	3.12	1.20
ESSEX	3.19	3.33	1.05	1.07	3.23	3.15	3.17	3.17	3.13	3.20	3.17	1.21
GLOUCESTER	3.14	3.26	1.04	1.04	3.17	3.06	3.12	3.10	3.02	3.09	3.10	1.20
HUDSON	3.27	3.43	1.08	1.10	3.33	3.23	3.25	3.25	3.20	3.29	3.25	1.21
HUNTERDON	3.17	3.35	1.05	1.08	3.22	3.08	3.15	3.14	3.06	3.12	3.14	1.20
MERCER	3.18	3.31	1.06	1.06	3.22	3.10	3.16	3.15	3.06	3.13	3.15	1.21
MIDDLESEX	3.19	3.35	1.06	1.07	3.25	3.15	3.18	3.17	3.12	3.18	3.17	1.21
MONMOUTH	3.18	3.33	1.05	1.07	3.22	3.10	3.15	3.14	3.07	3.12	3.14	1.21
MORRIS	3.21	3.36	1.06	1.08	3.23	3.10	3.16	3.16	3.07	3.11	3.16	1.21
OCEAN	3.16	3.28	1.05	1.06	3.20	3.10	3.14	3.13	3.06	3.12	3.13	1.20
PASSAIC	3.21	3.36	1.07	1.08	3.28	3.19	3.21	3.20	3.15	3.23	3.20	1.21
SALEM	3.15	3.31	1.05	1.06	3.20	3.06	3.13	3.12	3.03	3.10	3.12	1.19
SOMERSET	3.19	3.35	1.05	1.08	3.23	3.11	3.17	3.16	3.09	3.14	3.16	1.21
SUSSEX	3.24	3.42	1.06	1.07	3.29	3.13	3.22	3.21	3.12	3.16	3.21	1.19
UNION	3.20	3.35	1.06	1.08	3.25	3.13	3.19	3.18	3.10	3.17	3.18	1.21
WARREN	3.14	3.24	1.03	1.04	3.17	3.02	3.12	3.09	2.96	3.03	3.09	1.20
STATE AVERAGE	3.18	3.33	1.05	1.07	3.22	3.10	3.16	3.15	3.07	3.14	3.15	1.20

NOTE: Union labor rates are used in computing all of the above conversion factors with the exception of the P.F. Series Farm Buildings*

Use table R-1 and R-2 when converting from the 1975 base costs, employ tables RR-1 and RR-2 to convert from the 2001 base year**

*REVISED 10- 2003

BUILDING REPLACEMENT COST CONVERSION FACTORS FOR OCTOBER, 2004

TO BE APPLIED TO THE REAL PROPERTY APPRAISAL MANUAL FOR NEW JERSEY ASSESSORS

	RESIDENCES 1975 SERIES**		RESIDENCES R-12 - R-54 2001 SERIES **		APARTMENTS, HOTELS MOTELS AND OFFICE BUILDINGS		COMMERCIAL - INDUSTRIAL BUILDINGS				FARM BUILDINGS	
COUNTY	WOOD FRAME	BRICK OR VENEER	WOOD FRAME	BRICK OR VENEER	MASONRY &WOOD 101,102 103, 145	STEEL & CONCRETE 104, 105 106	WOOD FRAME 101, 102 123, 133	WOOD & MASONRY 103, 124 126, 134 136	STEEL & MASONRY 105, 107, 108 109, 125,127 135, 137	FIRE RESISTANT 104, 106	WOOD & MASONRY WOOD FRAME 150, 151 152, 153 154,156	POST & FRAME* PF 157 -THRU- 162
	TABLE R-1	TABLE R-2	TABLE RR-1	TABLE RR-2	TABLE C-1	TABLE C-2	TABLE C-3	TABLE C-4	TABLE C-5	TABLE C-6	TABLE F-1	TABLE F-2
ATLANTIC	3.46	3.57	1.14	1.14	3.53	3.35	3.54	3.48	3.25	3.32	3.48	1.30
BERGEN	3.47	3.59	1.15	1.15	3.58	3.45	3.57	3.52	3.34	3.42	3.52	1.31
BURLINGTON	3.44	3.55	1.14	1.14	3.52	3.38	3.52	3.47	3.27	3.34	3.47	1.24
CAMDEN	3.42	3.55	1.14	1.13	3.51	3.35	3.50	3.45	3.25	3.32	3.45	1.30
CAPE MAY	3.43	3.55	1.13	1.14	3.51	3.34	3.50	3.45	3.24	3.31	3.45	1.30
CUMBERLAND	3.45	3.55	1.14	1.14	3.52	3.34	3.53	3.47	3.24	3.31	3.47	1.30
ESSEX	3.49	3.61	1.15	1.16	3.58	3.47	3.58	3.53	3.36	3.43	3.53	1.31
GLOUCESTER	3.42	3.52	1.13	1.12	3.50	3.35	3.50	3.45	3.24	3.31	3.45	1.30
HUDSON	3.55	3.68	1.17	1.18	3.65	3.52	3.65	3.60	3.41	3.50	3.60	1.31
HUNTERDON	3.47	3.61	1.15	1.16	3.56	3.39	3.54	3.50	3.29	3.35	3.50	1.30
MERCER	3.47	3.56	1.16	1.14	3.55	3.39	3.55	3.49	3.28	3.35	3.49	1.31
MIDDLESEX	3.51	3.65	1.17	1.17	3.60	3.45	3.59	3.54	3.35	3.42	3.54	1.31
MONMOUTH	3.50	3.63	1.16	1.17	3.58	3.42	3.57	3.53	3.32	3.38	3.53	1.31
MORRIS	3.52	3.64	1.16	1.17	3.58	3.41	3.57	3.53	3.31	3.36	3.53	1.31
OCEAN	3.45	3.54	1.15	1.14	3.53	3.39	3.54	3.48	3.28	3.34	3.48	1.30
PASSAIC	3.49	3.61	1.16	1.16	3.61	3.49	3.62	3.56	3.36	3.45	3.56	1.31
SALEM	3.44	3.57	1.15	1.14	3.52	3.36	3.52	3.46	3.25	3.32	3.46	1.29
SOMERSET	3.51	3.63	1.16	1.17	3.59	3.44	3.59	3.54	3.33	3.39	3.54	1.31
SUSSEX	3.56	3.71	1.16	1.16	3.64	3.43	3.63	3.58	3.35	3.40	3.58	1.29
UNION	3.52	3.64	1.17	1.17	3.61	3.46	3.60	3.55	3.35	3.42	3.55	1.31
WARREN	3.50	3.60	1.15	1.16	3.56	3.41	3.56	3.51	3.31	3.37	3.51	1.30
STATE AVERAGE	3.48	3.60	1.15	1.15	3.56	3.41	3.56	3.51	3.30	3.37	3.51	1.30

NOTE: Union labor rates are used in computing all of the above conversion factors with the exception of the P.F. Series Farm Buildings*

Use table R-1 and R-2 when converting from the 1975 base costs, employ tables RR-1 and RR-2 to convert from the 2001 base year**

*REVISED 10- 2004

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF TAXATION
PO BOX 251
TRENTON, N.J. 08695-0251

RICHARD J. CODEY
ACTING GOVERNOR

JOHN E. McCORMAC, CPA
STATE TREASURER

February 2005

TO: HOLDERS OF THE REAL PROPERTY APPRAISAL MANUAL FOR NEW JERSEY ASSESSORS

A new **"Assessment of Billboards"** section is being introduced to the "COMMERCIAL SPECIFICATIONS" section. This sub-section consists of pages 71.01 – 71.24 and should be inserted in Volume II of the Real Property Appraisal Manual of New Jersey Assessors.

For municipalities with base year values of 2005 (assessing date October 1, 2004) the cost conversion factor of 1.00 is to be used on the Billboard Valuation Worksheet, page II – 71.24.

CAUTIONARY NOTE: For municipalities with a base year other than 2005, a cost conversion of 1.00 is to be used to arrive at a 2005 value. **This 2005 value must then be adjusted to the base year by the application of the Director's Ratio to the value.**

Sincerely,

Thomas J. Reilly, Chief
Field Assistance Section

Enclosure

REPORTING THE VALUE OF BILLBOARD STRUCTURES

NJ PROPERTY TAX SYSTEM

Beginning with the 2005 Tax Year, billboard structures should be listed as separate line items on the tax list. The line item needs to be referenced to the same block and lot as the land on which the billboard structure is attached.

To facilitate the identification of billboards and record the value of the billboard structures, the NJ Property Tax System has added a qualification code to identify billboard structures. The new qualification code is:

3 characters	**Alpha**	**Numeric**
BNN	**B**	**(NN) 0 through 99** to accommodate more than one billboard structure on a Block and Lot

The three characters are mandatory in the Qualification Code.
For identification purposes, billboards should be identified by the block and lot numbers assigned to the land on which the billboard is located and the qualification code "B" followed by the numeric 01, 02, 03 etc. The Qualification Code for one billboard would be B01. The assessment is reported as an improvement value only.

(The qualification code "BNN" is to be added to each block and lot, in the same fashion as "QFARM" is used to identify qualified farmland).

Reporting billboard structures requires the assessor to:
ESTABLISH A NEW LINE ITEM with the block and lot and the qualification code: "BNN".

Mandatory Fields to Establish a New Line Item for a Billboard Structure:

Field Name	**Field Description**
Property Identification	Block, Lot, and Qualification Code "BNN"
Building Description	Construction Class from the Appraisal Manual
Additional Lot	Name of Billboard Company and Permit Number
Property Class	4A
Owner Mailing Address City, State, Zip Code	The billboard structure should be assessed to the owner of record * of the block and lot upon which it is located. * A billboard on exempt public property may be subject to assessment and treatment as a leasehold.
Property Location	same as mother lot
Land Value	"0" (zero)
Improvement Value	Value of Billboard Structure
Net Taxable Value	Value of Billboard Structure

ASSESSMENT OF BILLBOARDS

BILLBOARDS ARE DEFINED AS REAL PROPERTY

The passing of Chapter 42, Public Laws of 2004 classifies billboards as real property, "An outdoor advertising sign, required to be permitted pursuant to the "Roadside Sign Control and Outdoor Advertising Act" PL 1991 C 413 (C.27:5-5 et seq), its other constituent parts, and the foundation, if any, to which the supporting structure is attached are deemed to be real property."

In accordance with the New Jersey Constitution, billboards, which are now defined as real property, are to be assessed at the "same standard of value" as all real property (constitutional exception of qualified farmland). Billboards may be taxable or exempt in accordance with pre-existing state law.

BILLBOARDS VERSUS ON-PREMISE SIGNS

The key to determining if a billboard is assessable (*under C 42 PL 2004*) is whether the sign is subject to the permit process administered by the NJ Department of Transportation. While billboards are by definition "off-premise outdoor advertising signs" which advertise a business, product, or activity at another site or location, a billboard will occasionally provide advertisement for an on-site business or product. In contrast, an on-site sign is not required to have a permit issued by the NJ Department of Transportation and the sign always advertises a business or activity occurring on the same site or location as the sign. Off-site advertising structures are required to have a permit issued by the New Jersey Department of Transportation. A record of outdoor advertising permits is available from the Outdoor Advertising Section, Department of Transportation.

AN INTRODUCTION TO BILLBOARDS

An outdoor advertising sign in the form of a billboard consists of at least one display panel and supporting framework. Billboards may be freestanding, mounted to buildings, or attached to other structures. Modern billboards conform to engineering standards and are constructed of steel, while older billboard structures are made of wood or angle iron frames. A billboard may be smaller than the permitted size. This allows for the legal addition of a cutout or extension within the square foot envelope of the permitted area. Billboards vary in display position and size, but the industry standard display faces include:

12 feet x 25 feet	14 feet X 48 feet
10.5 feet X 36 feet	16 feet X 60 feet
12 feet X 40 feet	20 feet X 50 feet

Typical arrangements of display faces include: single face, back-to-back or V-build, side-by-side, stacked, and tri-build configurations.

Billboard companies enter into sales contracts for advertising space on their billboards. Advertisements are designed and/or produced by a billboard company or an advertising agency in response to client specifications. Advertising space is often marketed for a group of billboards rather than for a single billboard. Group sales are called "showings." Showings are based on demographic information and are designed to target a market with a specified level of advertising exposure. The advertising client has no interest in the real property.

Billboard sites are typically leased from an unrelated third party who owns the land or structure to which the billboard is affixed. The owner of the site generally has no interest in the billboard structure. A billboard site, the land or structure upon which a billboard is situated, is generally limited to an area large enough to accommodate the billboard structure, foundation and provide for service and maintenance. The "line of sight" is a consideration in viewing a billboard location.

VALUING BILLBOARD STRUCTURES

As with the appraisal of other real property for local property tax purposes, the three accepted approaches to value (income, sales comparison, and replacement cost less depreciation) are applicable to the valuation of billboard structures.

The market or sales comparison approach requires verifiable accurate sales information of individual billboards. Outdoor advertising structures are generally sold in bulk and the transfers include ongoing concern and host agreements. These transfers typically are not recorded on filed deeds; therefore, it may be difficult to obtain information on the sale of billboards. When information becomes available, an allocation of the sales price for billboard structures may be necessary.

The income approach requires net operating income/economic rent to be capitalized into a value for a specific property. While the rental income from a ground lease may be capitalized into a value, the income realized from the sale of advertising space is business income that is subject to other taxes in New Jersey. If the income approach is used, economic rent must be applied. Therefore, careful consideration and accurate income analysis must be made or the income approach will not yield reliable results.

The cost approach provides an efficient methodology to uniformly value billboard structures. The replacement cost less depreciation avoids the complicated allocation process and other issues associated with the income and market approaches. The cost approach may be applied uniformly and it is suitable for computer assisted mass appraisal (CAMA) applications. The data contained in this manual is based on information extracted from material costs, labor, and other integral components of billboard construction. Effective age depreciation tables are provided to assist assessors in estimating loss in value due to age, elements and wear affecting the value of outdoor advertising signs.

LIMITING CONDITIONS WHEN VALUING BILLBOARDS

The total assessed value for an improved property in New Jersey is displayed as two components: a land assessment and an improvement assessment. The legislation that determined that billboards are real property placed a limiting condition on valuation of a billboard site. If the site is already classified as qualified farmland, the value must remain as qualified farmland. In order to have uniform reporting of billboard values, all billboard improvement values will be reported separately from the land (site) value.

Location must be considered in assessing billboard sites. The impact of location on the income that a particular billboard location generates may be considered. This impact results from the "traffic count" or "exposure" that a particular location provides. Although a higher traffic count has little to do with the value of a billboard structure, the location may impact on land value. In assessing billboard property, any value attributable to location must be assigned to the land and not to the billboard improvement.

The billboard permit required by Department of Transportation is an intangible asset that is necessary for the beneficial and productive use of billboard property. However, this use permit is an intangible asset, which is not assessable as real property. Any value attributable to the use permit and sale of advertising should not be included in the assessed value of the billboard property.

DEFINING AND CLASSIFYING BILLBOARD STRUCTURES FOR ASSESSMENT PURPOSES

For assessment purposes, billboards are grouped into five structural categories based on the building materials used and the underlying support system. The five categories include wood, steel frame, multi-mast steel, monopole, and building/roof mount.

At a minimum each billboard includes the following:

CLASS 201 WOOD STRUCTURE

This class of billboards is constructed with wood post or pole supports with dimensional lumber as the secondary support (A frame) with a wood or metal catwalk and a single display panel. Supports may be imbedded in the ground. There may be a foundation of concrete or gravel. Lighting, if present, is either fluorescent or mercury vapor.

CLASS 202 STEEL A-FRAME STRUCTURE

This class of billboards is constructed with angle iron or steel supports with metal framing, catwalk, and a single display panel. Supports may be imbedded in the ground. There may be a foundation of concrete or gravel. Lighting, if present, is either fluorescent or mercury vapor.

CLASS 203 MULTI-MAST STRUCTURE

This class of billboards is constructed with steel pole, I beam or equivalent as primary support, with a catwalk, and a single display panel. Lighting is fluorescent or mercury vapor.

CLASS 204 MONOPOLE

This class of billboards is constructed with tubular steel support (of various circumferences), tubular steel framing, metal catwalk and a single display panel. The foundation is concrete. Lighting is florescent or mercury vapor.

CLASS 205 ROOF / FASCIA MOUNTED

This class of billboards is non-pole mounted. The display panel is mounted with roof and/or fascia mounting brackets. Lighting is fluorescent or mercury vapor.

BILLBOARD DESIGNS AND CONSTRUCTION COSTS

The following pages * contain diagrams of various billboard designs, layouts and construction types along with base costs, photographs, class specifications, adjustments to base costs, cost conversion factors and depreciation schedules. Also included are a sample data collection sheet and a cost calculation work sheet. The cost factors are based on information as of October 1, 2004 for use in the 2005 tax year. Municipalities with base years other then 2005 need to apply the Director's Ratio to adjust values to the date of their last reassessment or revaluation.

*WORKS CITED

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Seelhorst, Glenn R. *Land Use and Leasing Issues*: 2004
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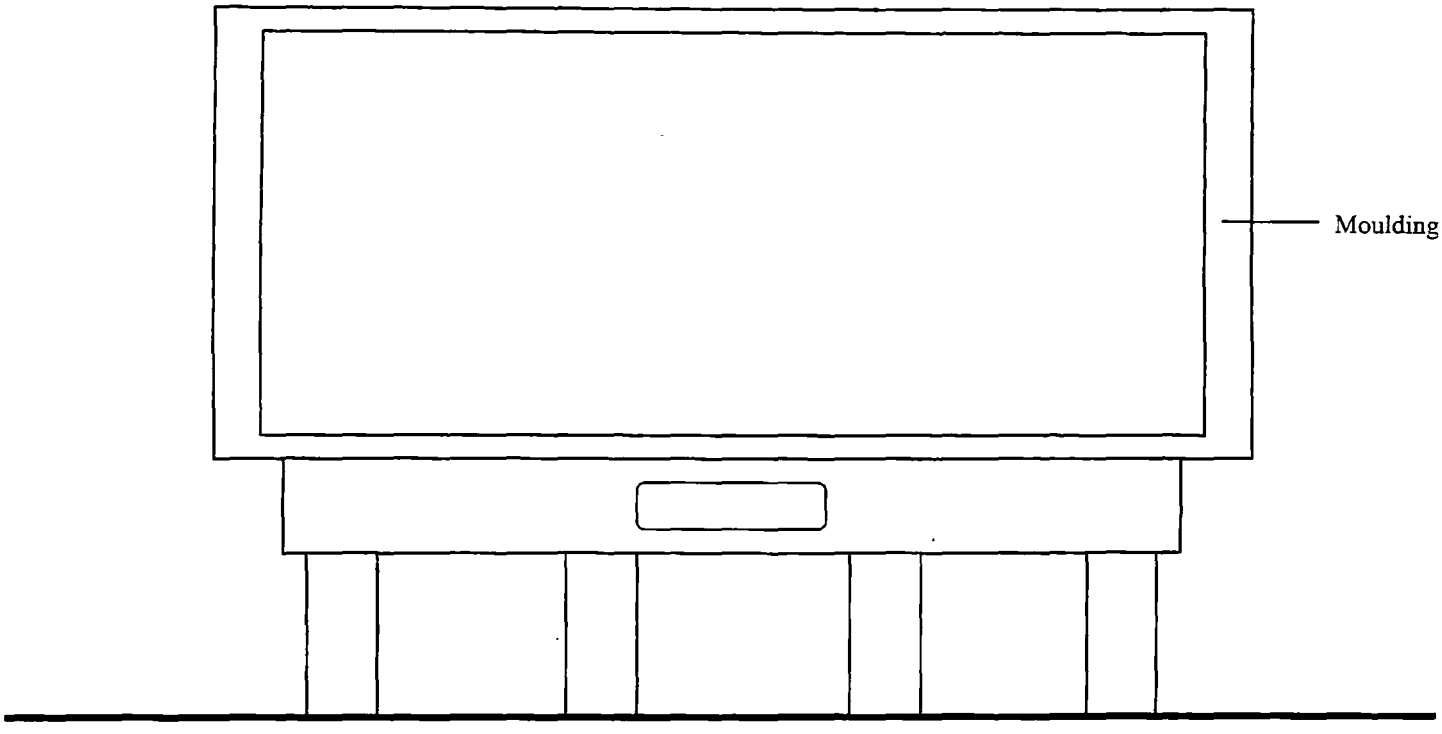
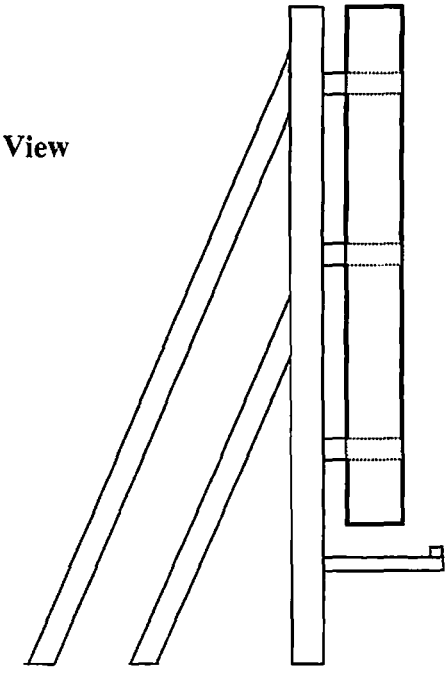
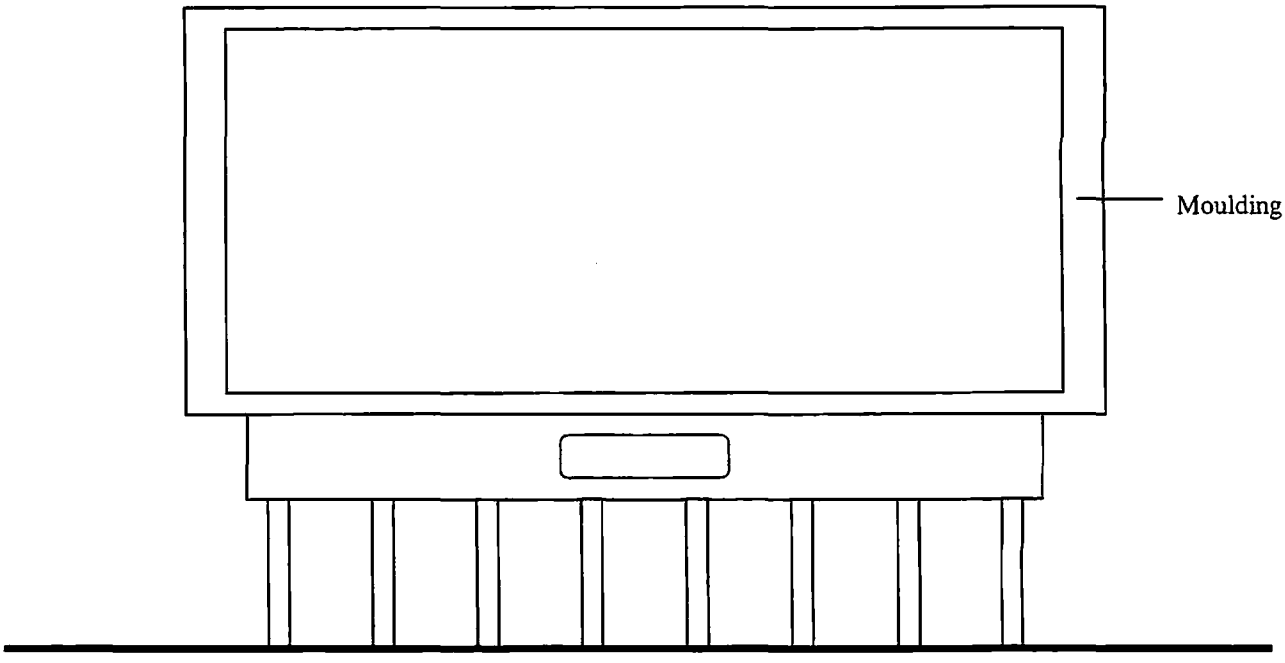
Illustrations of Wooden Billboards



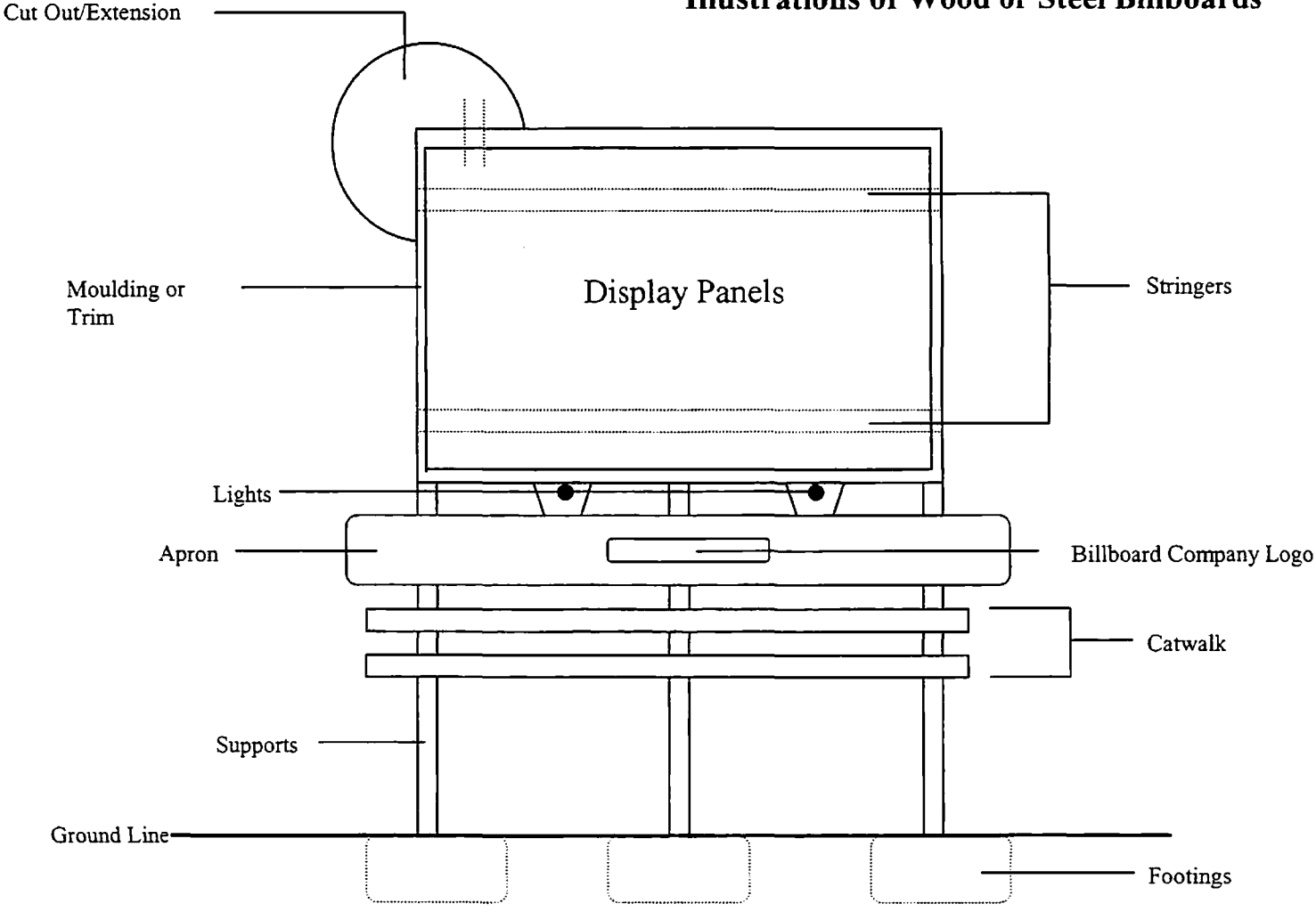
Wooden Billboard Side View



Illustrations of Steel Billboard



Illustrations of Wood or Steel Billboards



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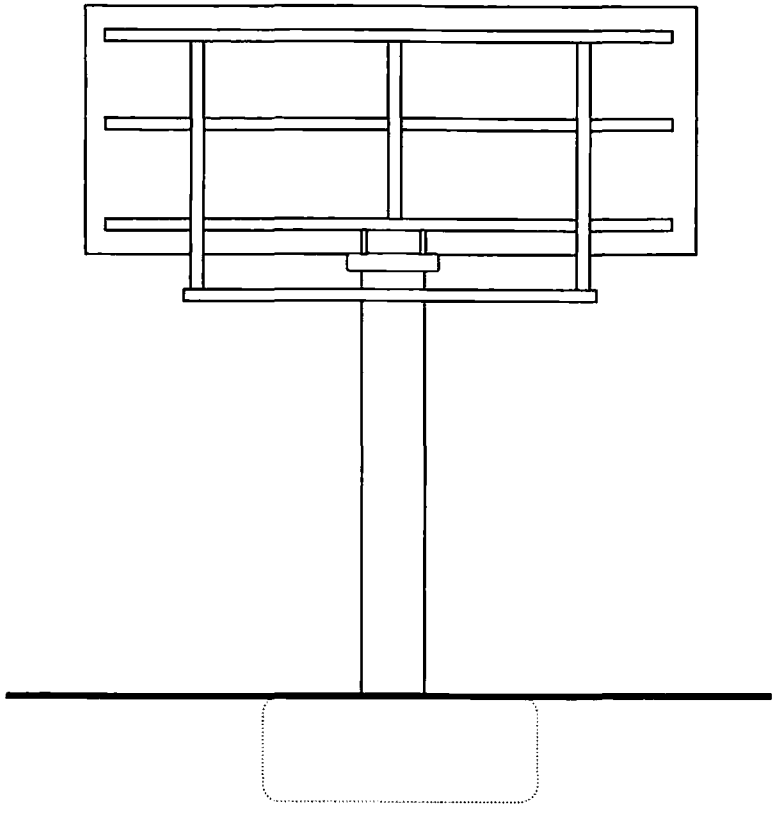
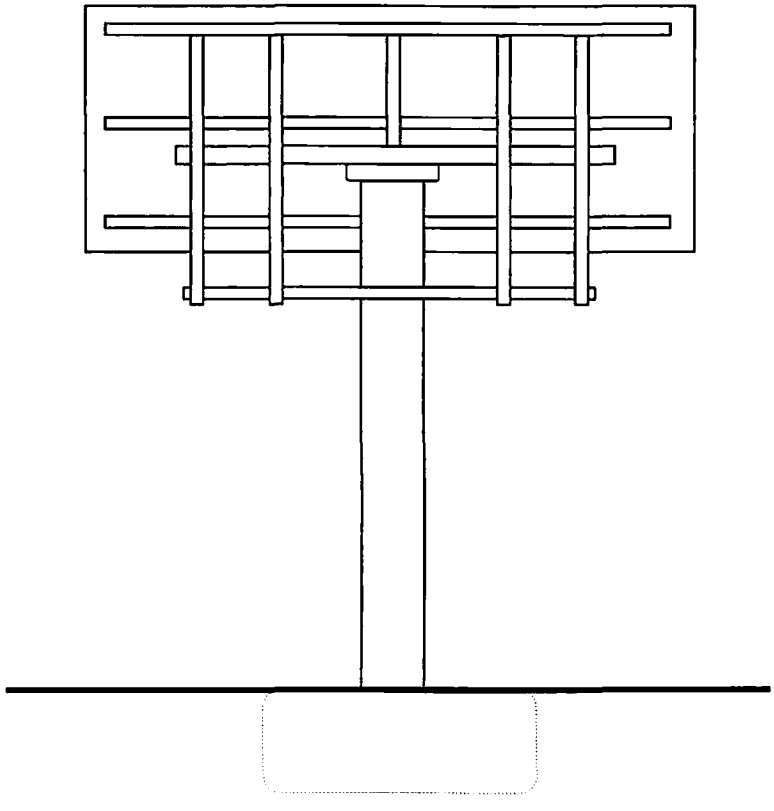
Illustrations of Monopole Billboard Construction

Center Mount

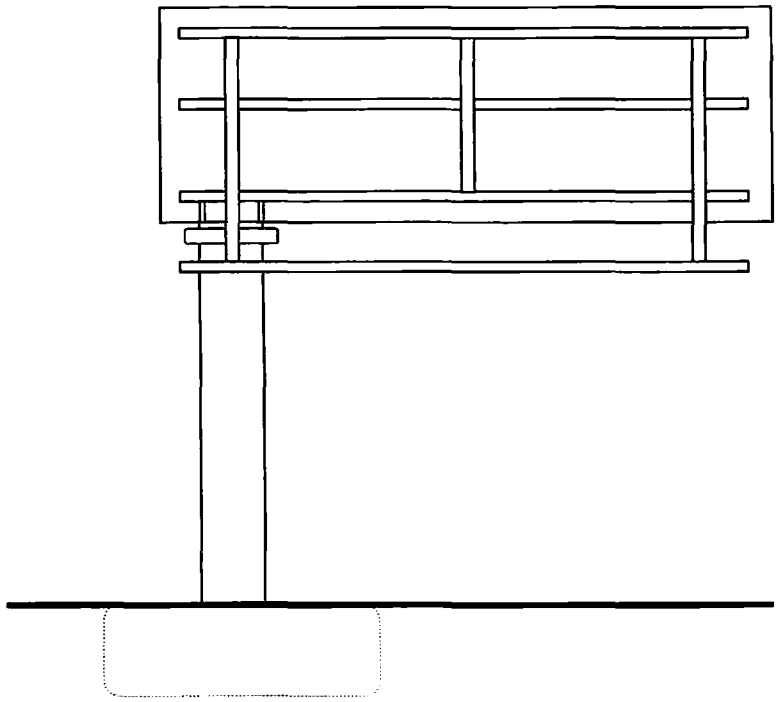


Illustrations of Monopole Billboard Construction
Back View

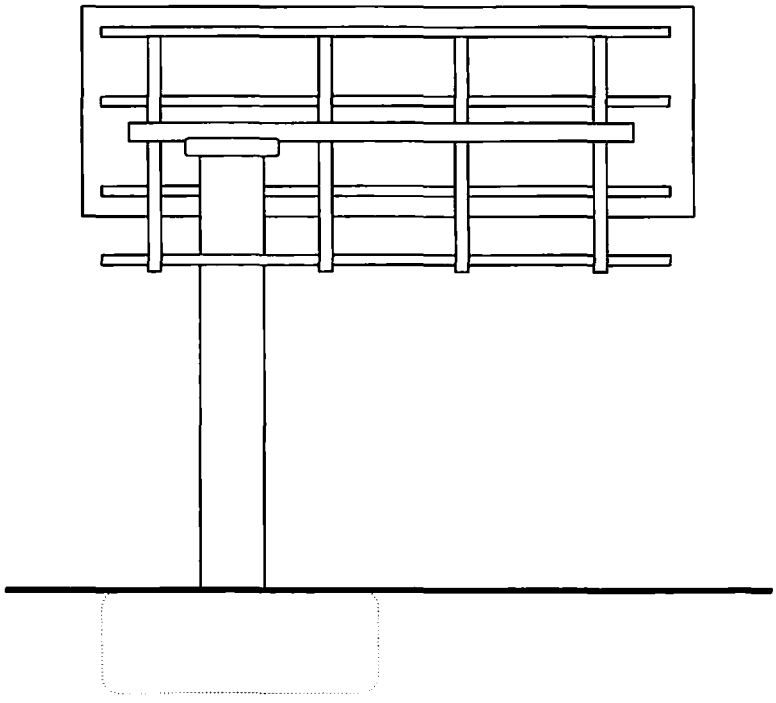
Center Mount



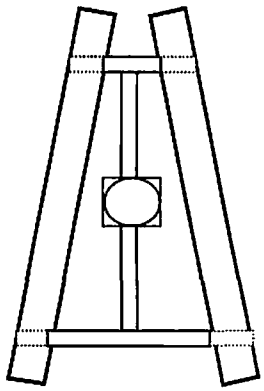
Illustrations of Monopole Billboard Construction



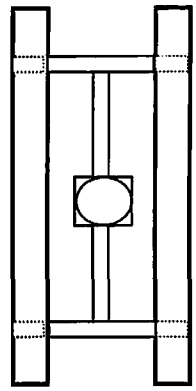
Illustrations of Monopole Billboard Construction
Back View



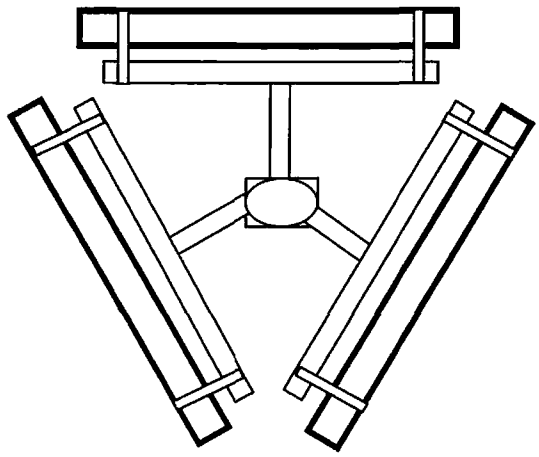
Illustrations of Monopole Billboard Construction
Topview



The V Face



Double Face

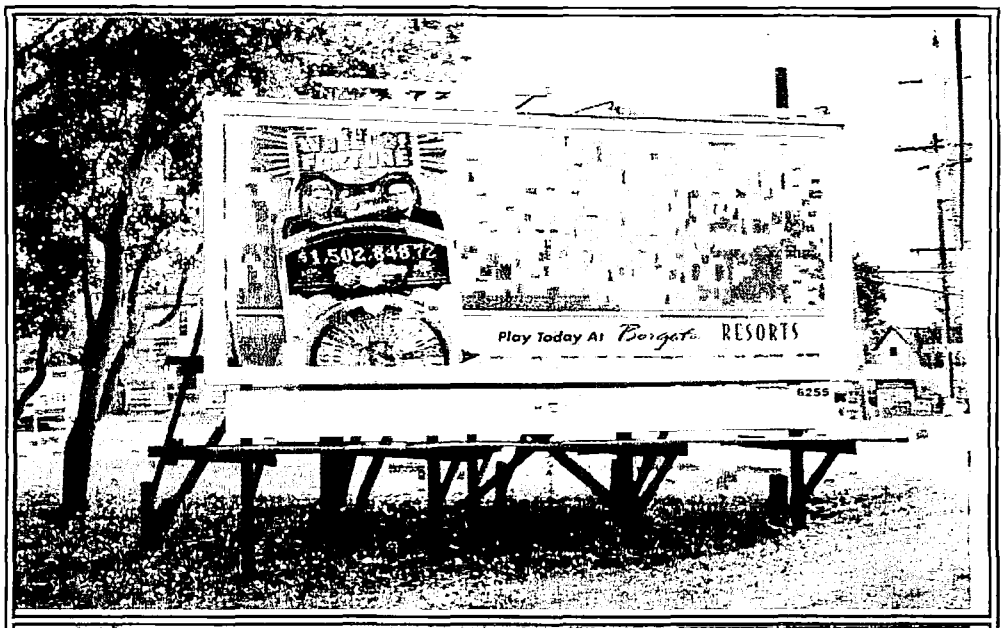


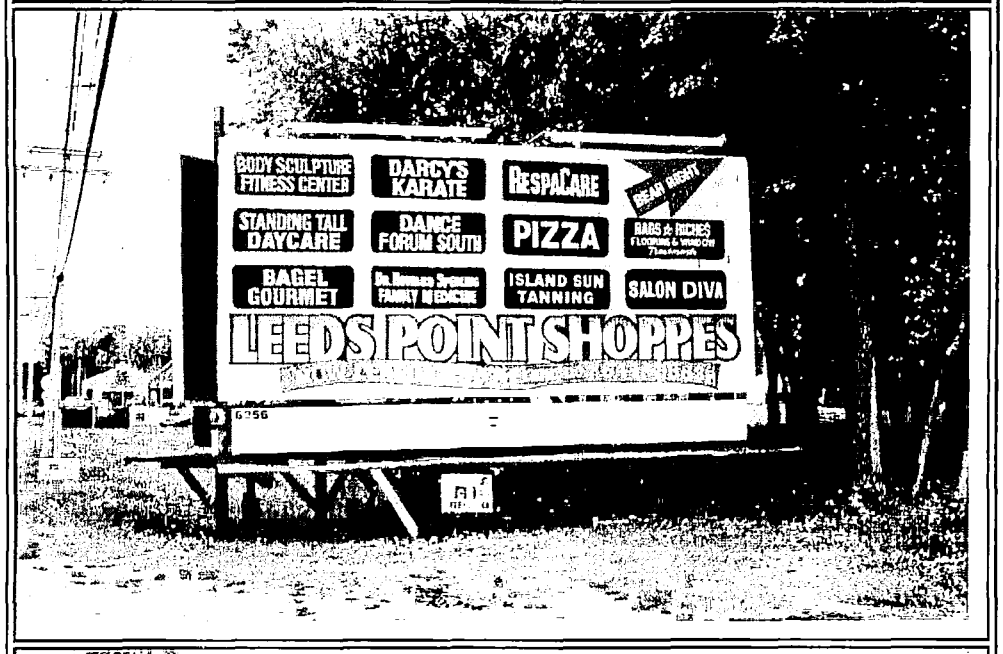
12'x25' Triangle

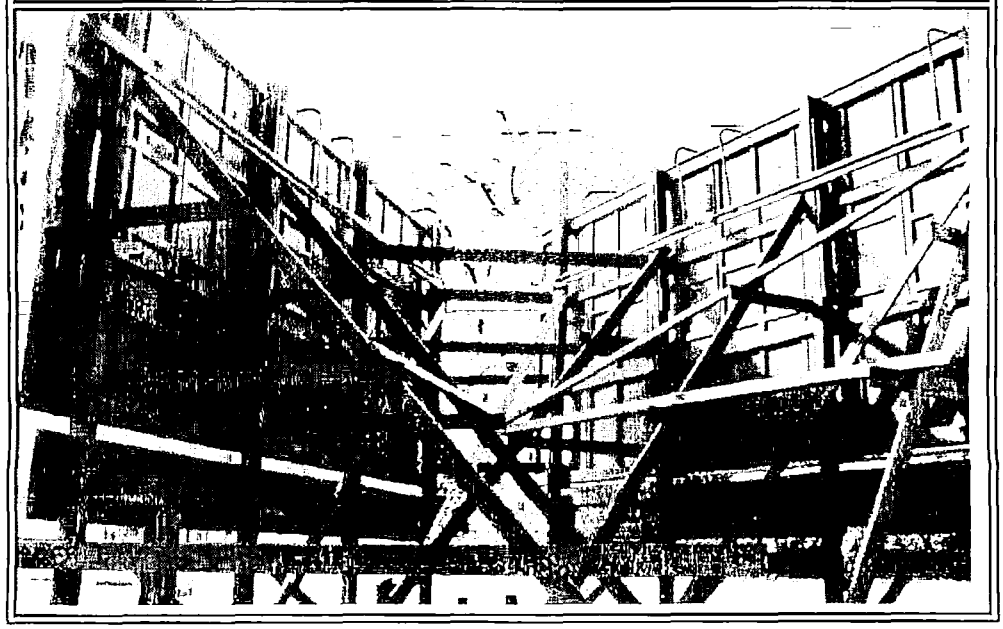
Reserved for future use.

Class 201 Wood Structure Billboards

Class 201 Wood Structure Billboards







CLASS 201 WOOD STRUCTURE BILLBOARDS

BASE SPECIFICATIONS FOR CLASS

1. STRUCTURE - Wood support post or poles.

2. FOUNDATION – embedded in ground or equivilent

3. PLATFORM OR CATWALK - Included in Base

4.PANELS - Included in Base.

5. APRON - Included in Base

6.LIGHTING - Included in Base

7. ADDITIONAL PANELS - None
For additional panels see Adjustments to Base

8. OTHER ITEMS - None

BASE COST PER SQUARE FOOT OF SIGN AREA

Sq. Ft. Area	SINGLE FACE
300	$ 25.50
378	$ 23.80
480	$ 23.43
672	$ 22.76
960	****
1000+	****

ADJUSTMENTS TO BASE COSTS

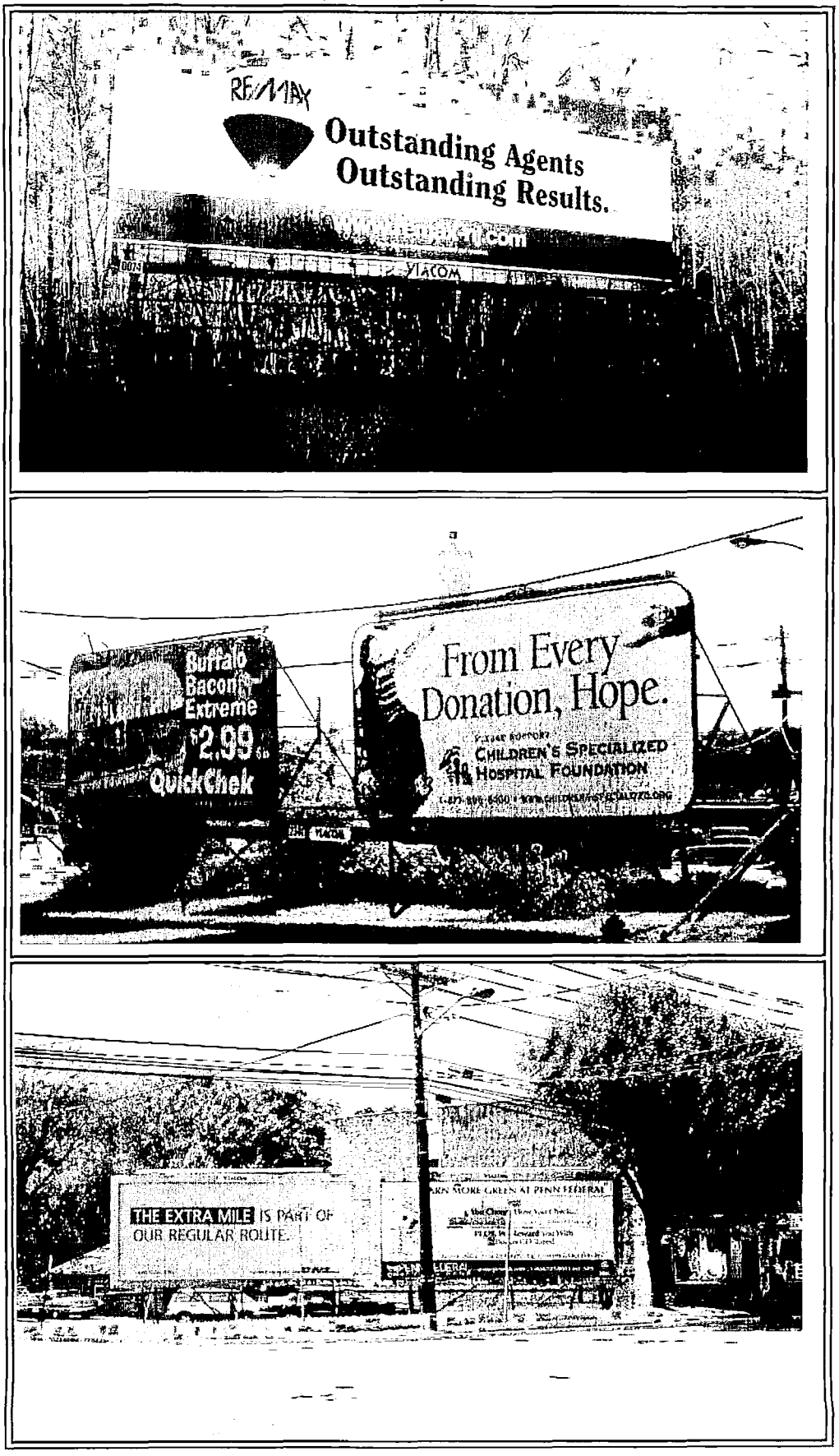
ADDITIONAL DISPLAY PANELS:

Due to structural nature of wood billboards,when valuing side by side, V built, or back to back the cost should be double that of a single face billboard.

LIGHTING: (per fixture)	AVERAGE
	$545.00

NOTE: Depreciation Schedules for Billboards – Page II - 71.20
Obsolescence Guides – Page I – 109

Class 202 Steel (A Frame) Structure Billboards



CLASS 202 STEEL (A FRAME) STRUCTURE BILLBOARDS

BASE SPECIFICATIONS FOR CLASS

1. STRUCTURE - Steel, angle iron or equivalent as primary support.

2. FOUNDATION – embedded in ground or equivilent

3. PLATFORM OR CATWALK - Included in Base

4.PANELS - Included in Base.

5. APRON - Included in Base

6.LIGHTING - Included in Base

7. ADDITIONAL PANELS - None
For additional panels see Adjustments to Base

8. OTHER ITEMS - None

BASE COST PER SQUARE FOOT OF SIGN AREA

Sq. Ft. Area	SINGLE FACE	BACK/BACK	SIDE X SIDE	V - BUILT
300	$ 46.50	$ 63.00	* SEE	* SEE
378	$ 44.04	$ 61.90	COMMENTS	COMMENTS
480	****	****		
672	****	****		
960	****	****		
1000+	****	****		

ADJUSTMENTS TO BASE COSTS

ADDITIONAL DISPLAY PANELS

Due to structural nature of both the Side by Side and V - Built billboards, when valuing the cost should be double that of a single face billboard.

LIGHTING: (per fixture)	AVERAGE
	$545.00

NOTE: Depreciation Schedules for Billboards – Page II - 71.20
Obsolescence Guides – Page I – 109

Class 203 Steel (Multi Mast) Structure Billboards

Class 203 Steel (Multi Mast) Structure Billboards

CLASS 203 STEEL (Multi mast) STRUCTURE BILLBOARDS

BASE SPECIFICATIONS FOR CLASS

1. STRUCTURE - Steel pole, I beam or equivalent as primary support.

2. FOUNDATION – Concrete/Gravel or equivilent

3. PLATFORM OR CATWALK - Included in Base

4.PANELS - Included In Base.

5. APRON - Included in Base

6.LIGHTING - Included in Base

7. ADDITIONAL PANELS - None
For additional panels see Adjustments to Base

8. OTHER ITEMS - None

BASE COST PER SQUARE FOOT OF SIGN AREA

25 FT. HEIGHT

Sq. Ft. Area	SINGLE FACE	BACK/BACK	SIDE X SIDE	V - BUILT
300	$ 46.50	$ 63.00	* SEE	* SEE
378	$ 44.04	$ 61.90	COMMENTS	COMMENTS
480	$ 40.31	****		
672	$ 34.15	****		
960	****	****		
1000+	****	****		

40 FT. HEIGHT

Sq. Ft. Area	SINGLE FACE	BACK/BACK	SIDE X SIDE	V - BUILT
300	$ 51.67	$ 75.00	* SEE	* SEE
378	$ 48.94	$ 71.42	COMMENTS	COMMENTS
480	$ 44.79	$ 63.75		
672	$ 37.95	$ 53.57		
960	****	****		
1000+	****	****		

ADJUSTMENTS TO BASE COSTS

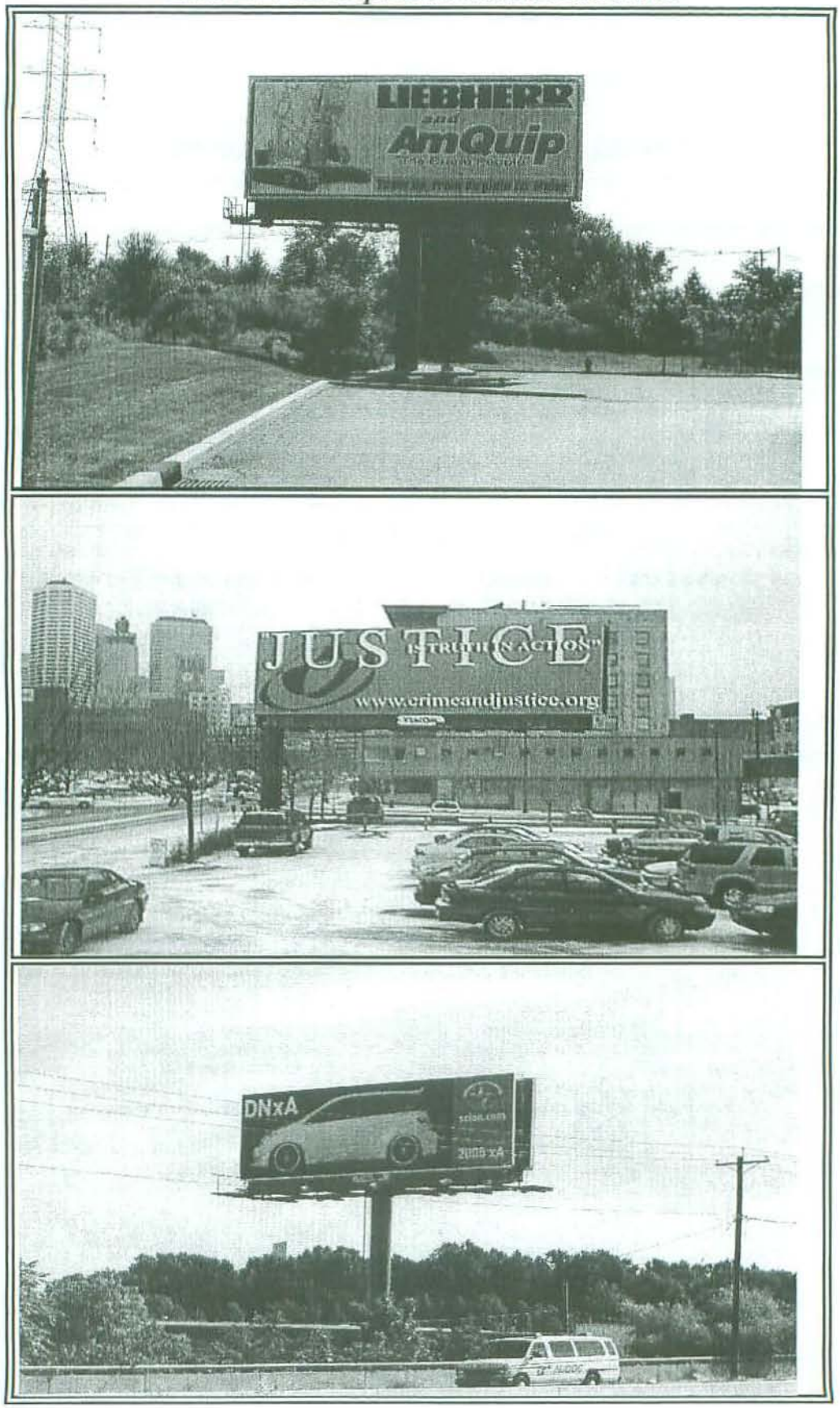
ADDITIONAL DISPLAY PANELS

Due to structural nature of both the Side by Side and V - Built billboard, when valuing the cost should be double that of a single face billboard.

LIGHTING (per fixture)	AVERAGE
	$545.00

NOTE: Depreciation Schedules for Billboards – Page II - 71.20
Obsolescence Guides – Page I – 109

Class 204 Monopole Structure Billboards



CLASS 204 MONOPOLE STRUCTURE BILLBOARDS

BASE SPECIFICATIONS FOR CLASS

1. STRUCTURE - Tubular steel supports.
2. FOUNDATION – Poured concrete.
3. PLATFORM OR CATWALK - Included in Base
4. PANELS - Included in Base.
5. APRON - Included in Base
6. LIGHTING - Included in Base
7. ADDITIONAL PANELS - Included in Base.
8. OTHER ITEMS - None

BASE COST PER SQUARE FOOT OF SIGN AREA (40 ft. HIGH)

Sq. Ft. Area	SINGLE PANEL	V - BUILT & BACK TO BACK	TRI - BUILT
300	$ 60.00	$ 78.00	$ 147.32
378	$ 57.14	$ 67.38	$ 147.32
480	$ 57.19	$ 66.56	$ 147.32
672	$ 79.69	$ 86.12	$ 147.32
960	$ 64.69	$ 69.38	$ 147.32
1000+	$ 67.50	$ 72.00	$ 147.32

ADJUSTMENTS TO BASE COSTS

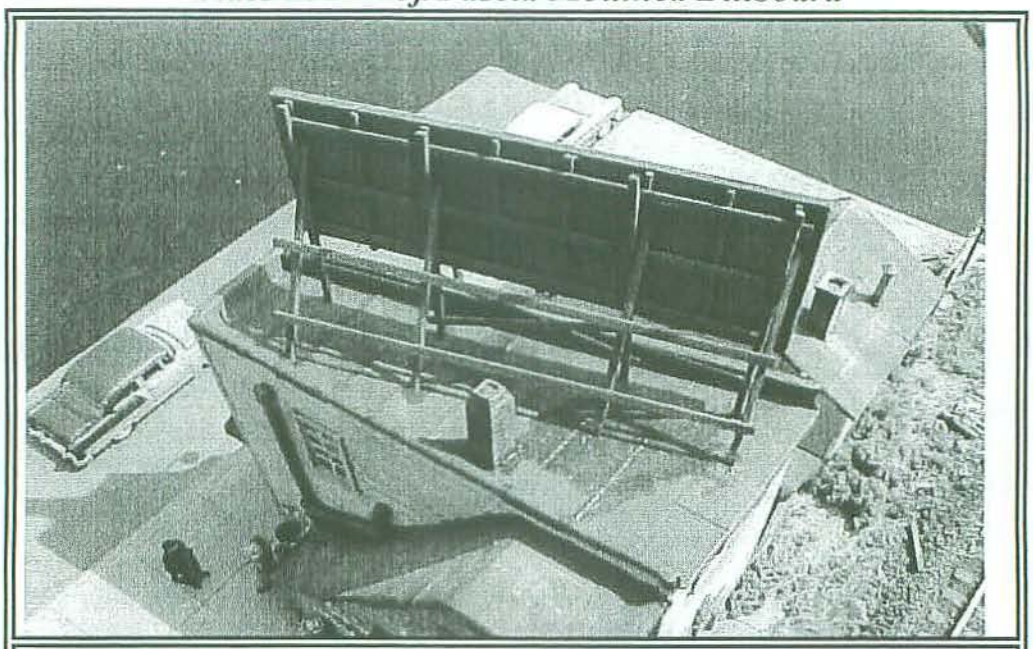
HEIGHT FACTOR:		DESIGN FACTOR	
70'	1.36	Part Flag	1.07
100'	1.6	Full Flag	1.15

LIGHTING: (per fixture)	AVERAGE
	$545.00

NOTE: Depreciation Schedules for Billboards – Page II - 71.20
Obsolescence Guides – Page I – 109

Class 205 Roof/Fascia Mounted Billboard

Class 205 Roof/Fascia Mounted Billboard



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CLASS 205 ROOF / FASCIA MOUNTED BILLBOARD

BASE SPECIFICATIONS FOR CLASS

1. STRUCTURE - Mounted on roof or side of building.

2. FOUNDATION – None

3. PLATFORM OR CATWALK - Included in Base

4.PANELS - Included in Base.

5. APRON - Included in Base

6.LIGHTING - Included in Base

7. ADDITIONAL PANELS - Included in Base.

8. OTHER ITEMS - None

BASE COST OF SIGN

AVERAGE COST INSTALLED: $17,000. PER PANEL

ADJUSTMENTS TO BASE COSTS

LIGHTING: (per fixture)	AVERAGE
	$545.00

NOTE: Depreciation Schedules for Billboards – Page II - 71.20
Obsolescence Guides – Page I – 109

DEPRECIATION SCHDULE

(effective age)

AGE (in years)	20 year life (wood)	40 year life (steel)
1	95 %	97.50 %
2	90 %	95.00 %
3	85 %	92.50 %
4	80 %	90.00 %
5	75 %	87.50 %
6	70 %	85.00 %
7	65 %	82.50 %
8	60 %	80.00 %
9	55 %	77.50 %
10	50 %	75.00 %
11	45 %	72.50 %
12	40 %	70.00 %
13	35 %	67.50 %
14	35 %	65.00 %
15	35 %	62.50 %
16	35 %	60.00 %
17	35 %	57.50 %
18	35 %	55.00 %
19	35 %	52.50 %
20	35 %	50.00 %
21		47.50 %
22		45.00 %
23		42.50 %
24		40.00 %
25		37.50 %
26		35.00 %
27		35.00 %
28		35.00 %
29		35.00 %
30		35.00 %
31		35.00 %
32		35.00 %
33		35.00 %
34		35.00 %
35		35.00 %
36		35.00 %
37		35.00 %
38		35.00 %
39		35.00 %
40		35.00 %

BUILDING REPLACEMENT COST CONVERSION FACTORS

TO BE APPLIED TO 2004 NEW JERSEY MANUAL FOR BILLBOARD STURCTURE COSTS.

	WOOD STRUCTURES	STEEL STRUCTURES	STEEL MONOPOLES
2004 STATE AVERAGE	1.00	1.00	1.00

BILLBOARD DEFINITIONS

Catwalk: Platform located underneath the sign face, either in front or in back, used as a support for the maintenance crew.

Centermount: Monopole structure in which the supporting column is affixed to the center of the display panel.

Display Face (panels): The flat area normally rectangular in shape where the advertisement is displayed.

Double-Sided: A Billboard structure that has two display panels, which are parallel to each other facing in opposite directions.

Extension: When part of the advertisements extends beyond the display face in order to create better impact.

Flag Mount: Monopole structure in which the supporting column is affixed to the left or right of the center of the display panel.

Footings: Concrete used to solidify the structure upright in the ground.

Illumination: Light fixtures that allow the advertisements to be more visible.

Lease Cost: Costs associated in obtaining a lease site.

Molding: Decorative trim covering the perimeter of the display face.

Reflectors: Copy material that reflects light to aid visibility in hours of darkness when illumination is not present on the billboard structure.

Single-Sided: Billboard structure that has a single display panel facing only one direction.

Stackmount: A billboard structure in which multiple display panels are set above one another.

Stringers: Wood or steel braces attached to the back of the sign that support the structure aka: crossmembers.

Triangle: A billboard structure having three display panels arranged in the shape of a triangle with each panel facing in a different direction.

Uprights: Vertical posts, pipes or beams, mounted into the ground keeping the sign erect.

"V"-Shape: A billboard structure having two display panels that are not parallel to each other, facing in opposite directions.

Date Collected:_____ By:_____

Billboard Data Collection Form

County:_____ Municipality:_____

Address:_____ Block / Lot_____

Tax Map Pg:_____ Zoning:_____ Application #_____

Property Owner_____

Date of Sale:_____ Sale Price:_____ Book/Page:_____

*If available

*Grantor:_____ *Grantee:_____

*Lease Date:_____ *Lease Price:_____

*Lessor:_____ *Lessee:_____

*Terms:_____

Billboard Description

Type: Wood Frame Steel Frame Monopole

# of Display Surfaces:_____ Height:_____ S.F. Area:_____

Additional Improvements: Lighted Animated Revolving Aprons Platforms

Road Location: East West South North

Sign View: Northbound Southbound Eastbound Westbound

Age:_____ Road Characteristic:_____

Landmarks:_____

Comments:_____

Billboard Valuation Worksheet

---

(1) Name of Company _____ (2) Date ____ / ____ / ____

(3) Number _____

(4) Location of structure _____

(5) DOT Application Number _____
(Five Digit Number)

(6) Owner of Real Property _____

(7) Original construction date ____ / ____ / ____ (8) Age (in years) _____

(9) Type of construction (Wood, Steel, Monopole) _____ Class _____

(10) Style: Single, Side-By-Side, Back-to-Back, V Build, Tri-Build, Stack

(11) Height: _____

(12) Number of display surfaces _____

(13) Display Panel Size: 1)_____ 2)_____ 3)_____ 4)_____

(14) Illumination: Yes No

Base price per square foot _____ x _____ square feet = _____ (A)

Additional Display Panels _____ x _____ per surface = _____ (B)

Base structure cost = _____ (C)
(add A & B)

Height Factor Adjustment _____ (D)

Design Factor Adjustment _____ (E)

Cost Conversion Factor _____ (F)

Replacement Cost New (RCN) _____ (G)

Less Depreciation _____ (H)

Total Depreciated Billboard Value _____ (I)

Director's Ratio (October 1 Pre-Tax Year) _____ (J)

Adjusted Assessed Value _____ (K)
(I x J = K)