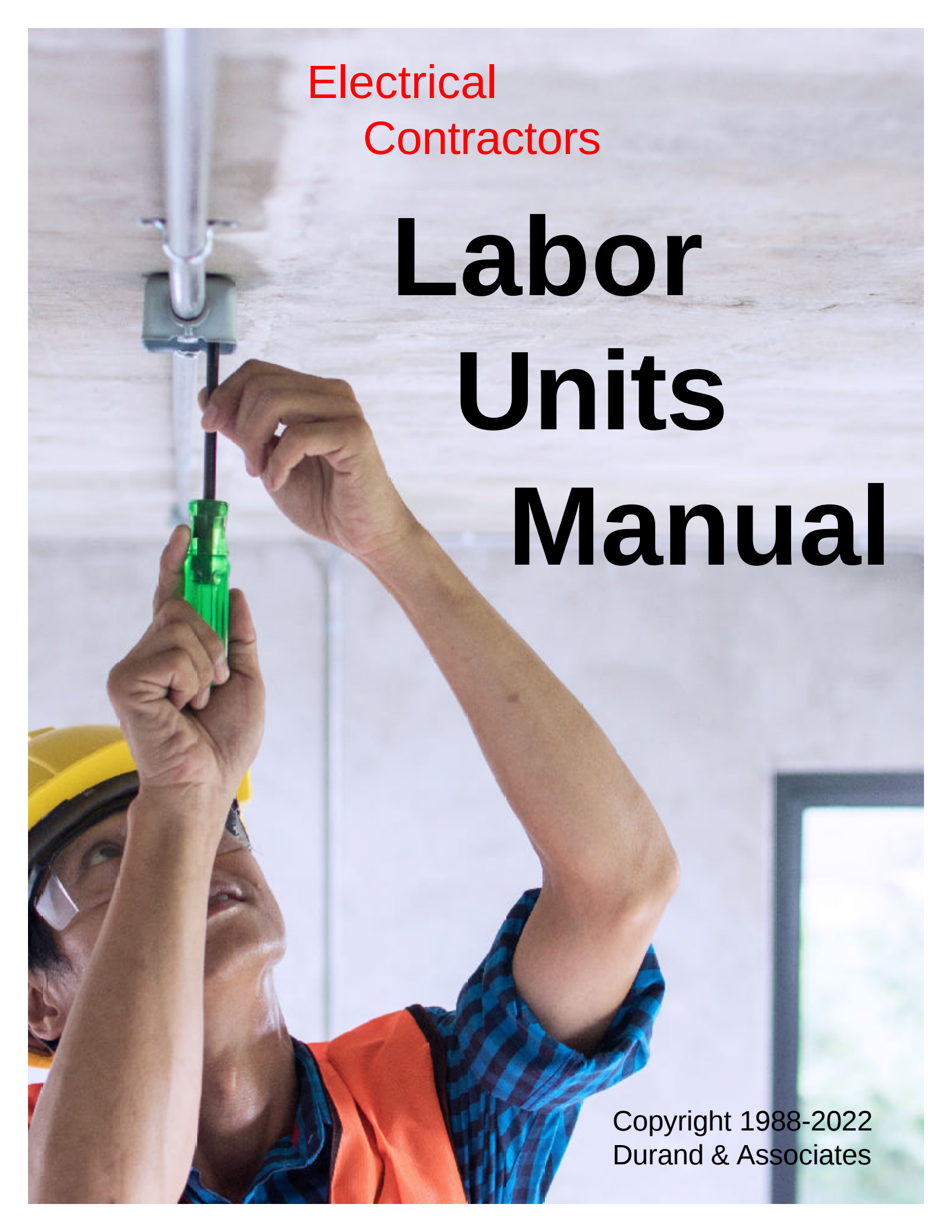


An electrician wearing a yellow hard hat and safety glasses is working on a ceiling. He is using a green-handled screwdriver to adjust a metal bracket that holds a white conduit. The ceiling is made of light-colored concrete or plaster. The background is slightly blurred, showing a window on the right side.

Electrical
Contractors

Labor Units Manual

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Electrical Contractor's

Labor Units Manual

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ESTIMATING ELECTRICAL WORK

This "Labor Unit Manual" is a guide for determining the labor hours required for a given work assignment. Before using this guide, you should understand that there are many variables that may effect the labor required for any given task. The man-hours listed in this manual will be accurate on most work; however, please be mindful that no two electricians will work at the same rate, and no two jobs are identical.

Under certain conditions any given task may require more or less labor than indicated in this manual. It is the responsibility of the Electrical Estimator to identify conditions that may require more or less labor.

The labor units in this manual do not include any non-productive time for supervision. If the crew size is such that non-working supervision is required, the estimator must determine this additional cost as a separate item.

WORKING CONDITIONS

The labor units in this manual assume the following:

- " - Working conditions are good
- " - Material and tools are on the job
- " - Work areas are relatively clean
- " - Working height does not exceed 12 feet
- " - Electricians are working eight (8) hours per day
- " - The weather is favorable.

PERSONNEL

It is also assumed that the electricians are well trained with five (5) or more years experience in the type of work they are performing, and the crew knows the "inn's" and "outs" of your company's procedures (as opposed to just being hired from the hall last week).

This manual also assumes that the project foreman and project manager have successfully completed similar type jobs for your company in the past.

PLANS & SHOP DRAWINGS

Keep your plans simple. The easier the plans are to read the faster the project will move. Many electrical engineers prefer to show the most possible on the fewest possible sheets. Too much information displayed in this fashion can be confusing leading to errors in the field.

APPLICATION OF LABOR UNITS

Before using the labor units, you should understand what a labor unit represents. A labor unit is the decimal equivalent of one hour. Listed below are some examples and work problems.

	<u>Labor Unit</u>		<u>Minutes</u>
Example	1.00	=	60
	0.50	=	30
	0.25	=	15
	0.10	=	6

Formula Labor Unit x 60 Minutes = Actual time in minutes

The three (3) basic ways labor units are measured are each, per hundred, and per thousand. The industry wide abbreviations for these measurements are:

E = Each, C = Per Hundred, M = Per Thousand

Examples

<u>Material Description</u>	<u>Quantity</u>	<u>Labor Unit</u>	<u>Per</u>	<u>Extension</u>
1-Gang Box	5	0.25	E	1.25
1/2" EMT	125	3.50	C	4.37
14/2 Romex	625	6.00	M	3.75

Formula: Quantity x Labor Unit / Measurement = Extension

Working Conditions

This labor units manual also allows for various kinds of working environments. For example: If the work is to be performed at a height of 14', this may be considered difficult. However, if it is a repetitive task performed at ground level this might be considered easy. It is up to the individual estimator to make this call.

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RIGID CONDUIT & ELBOWS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK	PER
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RIGID STEEL CONDUIT



1/2"	3.50	4.00	4.50	5.00	5.50	C
3/4"	4.00	4.50	5.00	5.50	6.00	C
1"	4.50	5.00	5.50	6.00	6.50	C
1 1/4"	6.25	7.00	7.75	8.50	9.00	C
1 1/2"	7.00	8.00	9.00	10.00	11.00	C
2"	9.00	10.00	11.00	12.00	13.00	C
2 1/2"	10.00	12.00	13.00	14.00	15.40	C
3"	12.00	14.00	16.00	17.50	19.00	C
3 1/2"	14.00	16.00	18.00	19.80	22.00	C
4"	15.00	18.00	21.00	23.00	25.00	C
5"	23.00	25.00	27.00	30.00	33.00	C
6"	27.00	30.00	33.00	36.00	39.00	C

RIGID STEEL ELBOWS



1/2"	0.15	0.20	0.25	0.28	0.30	E
3/4"	0.20	0.25	0.30	0.33	0.36	E
1"	0.25	0.30	0.35	0.39	0.42	E
1 1/4"	0.30	0.40	0.50	0.55	0.61	E
1 1/2"	0.40	0.50	0.60	0.66	0.73	E
2"	0.60	0.70	0.80	0.88	0.97	E
2 1/2"	0.90	1.00	1.10	1.21	1.33	E
3"	1.10	1.25	1.40	1.54	1.69	E
3 1/2"	1.40	1.60	1.80	1.98	2.18	E
4"	1.70	2.00	2.30	2.53	2.78	E
5"	2.50	3.00	3.50	3.85	4.24	E
6"	3.60	4.00	4.40	4.84	5.32	E

RIGID STEEL SWEEP ELBOWS



SWEEP

1"	0.30	0.35	0.45	0.50	0.55	E
1 1/4"	0.40	0.45	0.50	0.60	0.70	E
1 1/2"	0.50	0.60	0.70	0.80	0.90	E
2"	0.70	0.85	0.90	1.05	1.20	E
2 1/2"	1.05	1.30	1.55	1.80	2.00	E
3"	1.30	1.60	1.90	2.20	2.50	E
3 1/2"	1.60	2.00	2.40	2.80	3.20	E
4"	1.90	2.50	3.10	3.70	4.30	E
5"	2.80	3.60	4.40	5.20	6.00	E
6"	3.90	4.70	5.50	6.30	7.00	E

RIGID STEEL COUPLINGS *



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.14	0.16	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.18	0.20	0.22	0.24	0.27	E
3"	0.22	0.25	0.28	0.31	0.34	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.35	0.40	0.45	0.50	0.54	E
5"	0.40	0.50	0.60	0.66	0.73	E
6"	0.50	0.60	0.70	0.77	0.85	E

* Labor for couplings not included with conduit.

RIGID COUPLINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
------	------------	------	---------	-----------	---------	--------------

RIGID COUPLINGS SET SCREW TYPE



1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.10	0.12	0.14	0.15	0.17	E
1"	0.13	0.15	0.17	0.19	0.21	E
1 1/4"	0.15	0.17	0.19	0.21	0.23	E
1 1/2"	0.17	0.20	0.23	0.25	0.28	E
2"	0.22	0.25	0.28	0.31	0.34	E
2 1/2"	0.25	0.30	0.35	0.39	0.42	E
3"	0.35	0.40	0.45	0.50	0.54	E
3 1/2"	0.45	0.50	0.55	0.61	0.67	E
4"	0.50	0.60	0.70	0.77	0.85	E

RIGID COUPLINGS COMPRESSION TYPE



1/2"	0.10	0.13	0.16	0.18	0.19	E
3/4"	0.12	0.15	0.18	0.20	0.22	E
1"	0.15	0.19	0.23	0.25	0.28	E
1 1/4"	0.18	0.22	0.26	0.29	0.31	E
1 1/2"	0.20	0.25	0.30	0.33	0.36	E
2"	0.25	0.30	0.35	0.39	0.42	E
2 1/2"	0.30	0.35	0.40	0.44	0.48	E
3"	0.40	0.45	0.50	0.55	0.61	E
3 1/2"	0.47	0.55	0.63	0.69	0.76	E
4"	0.55	0.65	0.75	0.83	0.91	E

SPLIT COUPLING



1/2"	0.15	0.20	0.25	0.28	0.30	E
3/4"	0.15	0.20	0.25	0.28	0.30	E
1"	0.23	0.30	0.37	0.41	0.45	E
1 1/4"	0.23	0.30	0.37	0.41	0.45	E
1 1/2"	0.30	0.40	0.50	0.55	0.61	E
2"	0.40	0.50	0.60	0.66	0.73	E
2 1/2"	0.50	0.60	0.70	0.77	0.85	E
3"	0.65	0.80	0.95	1.05	1.15	E
3 1/2"	0.80	1.00	1.20	1.32	1.45	E
4"	1.00	1.20	1.40	1.54	1.69	E
5"	1.20	1.40	1.60	1.76	1.94	E
6"	1.40	1.60	1.80	1.98	2.18	E

THREE PIECE COUPLINGS



1/2"	0.15	0.20	0.25	0.28	0.30	E
3/4"	0.15	0.20	0.25	0.28	0.30	E
1"	0.23	0.30	0.37	0.41	0.45	E
1 1/4"	0.23	0.30	0.37	0.41	0.45	E
1 1/2"	0.30	0.40	0.50	0.55	0.61	E
2"	0.40	0.50	0.60	0.66	0.73	E
2 1/2"	0.50	0.60	0.70	0.77	0.85	E
3"	0.65	0.80	0.95	1.05	1.15	E
3 1/2"	0.80	1.00	1.20	1.32	1.45	E
4"	1.00	1.20	1.40	1.54	1.69	E
5"	1.20	1.50	1.70	1.87	2.06	E
6"	1.40	1.75	2.00	2.20	2.42	E

RIGID COUPLINGS & CONNECTORS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



EXPANSION COUPLINGS RIGID

1/2"	0.15	0.20	0.25	0.28	0.30	E
3/4"	0.15	0.20	0.25	0.28	0.30	E
1"	0.25	0.30	0.35	0.39	0.42	E
1 1/4"	0.25	0.30	0.35	0.39	0.42	E
1 1/2"	0.32	0.40	0.48	0.53	0.58	E
2"	0.40	0.50	0.60	0.66	0.73	E
2 1/2"	0.50	0.60	0.70	0.77	0.85	E
3"	0.65	0.80	0.95	1.05	1.15	E
3 1/2"	0.80	1.00	1.20	1.32	1.45	E
4"	0.95	1.20	1.45	1.60	1.75	E
5"	1.20	1.50	1.80	1.98	2.18	E
6"	1.40	1.70	2.00	2.20	2.42	E



BONDING JUMPERS

1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.12	0.15	0.18	0.20	0.22	E
1 1/4"	0.12	0.15	0.18	0.20	0.22	E
1 1/2"	0.16	0.20	0.24	0.26	0.29	E
2"	0.16	0.20	0.24	0.26	0.29	E
2 1/2"	0.20	0.25	0.30	0.33	0.36	E
3"	0.20	0.25	0.30	0.33	0.36	E
3 1/2"	0.24	0.30	0.36	0.40	0.44	E
4"	0.24	0.30	0.36	0.40	0.44	E
5"	0.28	0.35	0.42	0.46	0.51	E
6"	0.28	0.35	0.42	0.46	0.51	E



CONNECTORS SET SCREW TYPE

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.10	0.12	0.14	0.15	0.17	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.17	0.20	0.23	0.25	0.28	E
3"	0.19	0.25	0.31	0.34	0.38	E
3 1/2"	0.22	0.30	0.38	0.42	0.46	E
4"	0.30	0.40	0.50	0.55	0.61	E



CONNECTORS COMPRESSION TYPE

1/2"	0.05	0.06	0.07	0.08	0.08	E
3/4"	0.06	0.07	0.08	0.09	0.10	E
1"	0.08	0.09	0.10	0.11	0.12	E
1 1/4"	0.10	0.11	0.12	0.13	0.15	E
1 1/2"	0.11	0.13	0.15	0.17	0.18	E
2"	0.14	0.17	0.20	0.22	0.24	E
2 1/2"	0.19	0.22	0.25	0.28	0.30	E
3"	0.23	0.27	0.31	0.34	0.38	E
3 1/2"	0.26	0.33	0.40	0.44	0.48	E
4"	0.34	0.44	0.54	0.59	0.65	E

RIGID STRAPS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
ONE HOLE STRAPS						
	1/2"	0.04	0.05	0.06	0.07	0.07 E
	3/4"	0.05	0.06	0.07	0.08	0.08 E
	1"	0.07	0.08	0.09	0.10	0.11 E
	1 1/4"	0.09	0.10	0.11	0.12	0.13 E
	1 1/2"	0.10	0.12	0.14	0.15	0.17 E
	2"	0.13	0.15	0.17	0.19	0.21 E
	2 1/2"	0.17	0.20	0.23	0.25	0.28 E
	3"	0.19	0.25	0.31	0.34	0.38 E
	3 1/2"	0.22	0.30	0.38	0.42	0.46 E
	4"	0.30	0.40	0.50	0.55	0.61 E
	5"	0.38	0.50	0.62	0.68	0.75 E
	6"	0.46	0.60	0.74	0.81	0.90 E
TWO HOLE STRAPS						
	1/2"	0.05	0.07	0.09	0.10	0.11 E
	3/4"	0.06	0.08	0.10	0.11	0.12 E
	1"	0.08	0.10	0.12	0.13	0.15 E
	1 1/4"	0.10	0.13	0.16	0.18	0.19 E
	1 1/2"	0.12	0.15	0.18	0.20	0.22 E
	2"	0.14	0.18	0.22	0.24	0.27 E
	2 1/2"	0.18	0.23	0.28	0.31	0.34 E
	3"	0.20	0.27	0.34	0.37	0.41 E
	3 1/2"	0.22	0.32	0.42	0.46	0.51 E
	4"	0.33	0.43	0.53	0.58	0.64 E
	5"	0.41	0.44	0.54	0.59	0.65 E
	6"	0.45	0.55	0.65	0.72	0.79 E
NAIL STRAPS						
	1/2"	0.04	0.05	0.06	0.07	0.07 E
	3/4"	0.05	0.06	0.07	0.08	0.08 E
	1"	0.07	0.08	0.08	0.09	0.10 E
CLAMP BACKS						
	1/2"	0.02	0.03	0.04	0.04	0.04 E
	3/4"	0.03	0.04	0.05	0.05	0.06 E
	1"	0.05	0.06	0.07	0.08	0.09 E
	1 1/4"	0.06	0.08	0.10	0.11	0.12 E
	1 1/2"	0.08	0.10	0.12	0.13	0.15 E
	2"	0.08	0.10	0.12	0.13	0.15 E
	2 1/2"	0.10	0.13	0.16	0.17	0.19 E
	3"	0.13	0.16	0.19	0.21	0.23 E
	3 1/2"	0.16	0.20	0.24	0.26	0.29 E
	4"	0.20	0.25	0.30	0.33	0.36 E
	5"	0.25	0.30	0.35	0.39	0.42 E
	6"	0.30	0.35	0.40	0.44	0.48 E

For Additional Conduit Supports - See Section 7

RIGID PVC COATED CONDUIT

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

PVC COATED RIGID STEEL CONDUIT



1/2"	5.50	6.00	6.50	7.15	7.87	C
3/4"	6.00	6.50	7.00	7.70	8.47	C
1"	6.50	7.00	7.50	8.25	9.08	C
1 1/4"	8.25	9.00	9.75	10.73	11.80	C
1 1/2"	9.00	10.00	11.00	12.10	13.31	C
2"	11.50	12.50	13.50	14.85	16.34	C
2 1/2"	14.00	15.00	16.00	17.60	19.36	C
3"	15.00	17.00	19.00	20.90	22.99	C
3 1/2"	17.00	19.00	21.00	23.10	25.41	C
4"	18.00	21.00	24.00	26.40	29.04	C
5"	27.00	30.00	33.00	36.30	39.93	C
6"	32.00	35.00	38.00	41.80	45.98	C

PVC COATED

PVC COATED RIGID STEEL ELBOWS



1/2"	0.25	0.30	0.35	0.39	0.42	E
3/4"	0.30	0.35	0.40	0.44	0.48	E
1"	0.45	0.50	0.55	0.61	0.67	E
1 1/4"	0.50	0.60	0.70	0.77	0.85	E
1 1/2"	0.60	0.70	0.80	0.88	0.97	E
2"	0.85	1.00	1.15	1.27	1.39	E
2 1/2"	1.15	1.30	1.45	1.60	1.75	E
3"	1.30	1.50	1.70	1.87	2.06	E
3 1/2"	1.70	1.90	2.10	2.31	2.54	E
4"	2.45	2.70	2.95	3.25	3.57	E
5"	3.70	4.00	4.30	4.73	5.20	E
6"	4.60	5.00	5.40	5.94	6.53	E

PVC COATED

SWEEP ELBOWS PVC COATED



2"	0.90	1.05	1.25	1.38	1.51	E
2 1/2"	1.35	1.60	1.90	2.09	2.30	E
3"	1.70	2.00	2.40	2.64	2.90	E
3 1/2"	2.15	2.50	3.00	3.30	3.63	E
4"	2.70	3.15	3.75	4.13	4.54	E
5"	3.85	4.50	5.40	5.94	6.53	E
6"	5.00	5.90	7.10	7.81	8.59	E

SWEEP ELBOW
PVC COATED

PVC COATED RIGID STEEL COUPLINGS *



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.14	0.16	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.18	0.20	0.22	0.24	0.27	E
3"	0.22	0.25	0.28	0.31	0.34	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.35	0.40	0.45	0.50	0.54	E
5"	0.40	0.50	0.60	0.66	0.73	E
6"	0.50	0.60	0.70	0.77	0.85	E

PVC COATED

* Labor for couplings not included with conduit.

For Conduit Supports - See Section 7

INTERMEDIATE METAL CONDUIT (IMC)

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



IMC

INTERMEDIATE METAL CONDUIT

1/2"	3.25	3.75	4.25	4.68	5.14	C
3/4"	3.50	4.00	4.50	4.95	5.45	C
1"	4.00	4.50	5.00	5.50	6.05	C
1 1/4"	5.75	6.50	7.25	7.98	8.77	C
1 1/2"	6.25	7.25	8.25	9.08	9.98	C
2"	8.00	9.00	10.00	11.00	12.10	C
2 1/2"	9.00	11.00	12.00	13.20	14.52	C
3"	11.00	13.00	15.00	16.50	18.15	C
3 1/2"	13.00	15.00	17.00	18.70	20.57	C
4"	14.00	17.00	19.00	20.90	22.99	C

INTERMEDIATE METAL CONDUIT ELBOWS



IMC

1/2"	0.11	0.15	0.19	0.21	0.23	E
3/4"	0.11	0.15	0.19	0.21	0.23	E
1"	0.15	0.20	0.25	0.28	0.30	E
1 1/4"	0.20	0.25	0.30	0.33	0.36	E
1 1/2"	0.25	0.35	0.45	0.50	0.54	E
2"	0.40	0.50	0.60	0.66	0.73	E
2 1/2"	0.65	0.75	0.85	0.94	1.03	E
3"	0.80	0.95	1.10	1.21	1.33	E
3 1/2"	1.05	1.25	1.45	1.60	1.75	E
4"	1.35	1.65	1.95	2.15	2.36	E

IMC SWEEP ELBOWS



IMC
24" RADIUS

2"	0.55	0.70	0.85	0.94	1.03	E
2 1/2"	0.80	1.00	1.20	1.32	1.45	E
3"	1.05	1.30	1.55	1.71	1.88	E
3 1/2"	1.30	1.60	1.90	2.09	2.30	E
4"	1.50	1.90	2.25	2.48	2.72	E

COUPLINGS *



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.14	0.16	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.18	0.20	0.22	0.24	0.27	E
3"	0.22	0.25	0.28	0.31	0.34	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.35	0.40	0.45	0.50	0.54	E

* Labor for couplings not included with conduit.

For Conduit Supports - See Section 7

ALUMINUM CONDUIT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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ALUMINUM CONDUIT



ALUMINUM

1/2"	3.25	3.75	4.25	4.68	5.14	C
3/4"	3.50	4.00	4.50	4.95	5.45	C
1"	4.00	4.50	5.00	5.50	6.05	C
1 1/4"	5.50	6.00	6.50	7.15	7.87	C
1 1/2"	6.25	7.00	7.75	8.53	9.38	C
2"	7.75	8.50	9.25	10.18	11.19	C
2 1/2"	9.00	10.00	11.00	12.10	13.31	C
3"	11.00	12.00	13.00	14.30	15.73	C
3 1/2"	13.00	14.00	15.00	16.50	18.15	C
4"	15.00	16.00	17.00	18.70	20.57	C
5"	18.00	20.00	22.00	24.20	26.62	C
6"	23.00	25.00	28.00	30.80	33.88	C

ALUMINUM ELBOWS



ALUMINUM

1/2"	0.10	0.15	0.20	0.22	0.24	E
3/4"	0.15	0.20	0.25	0.28	0.30	E
1"	0.20	0.25	0.30	0.33	0.36	E
1 1/4"	0.25	0.30	0.35	0.39	0.42	E
1 1/2"	0.30	0.35	0.40	0.44	0.48	E
2"	0.40	0.50	0.60	0.66	0.73	E
2 1/2"	0.70	0.80	0.90	0.99	1.09	E
3"	0.85	0.95	1.05	1.16	1.27	E
3 1/2"	0.90	1.10	1.25	1.38	1.51	E
4"	1.10	1.50	1.90	2.09	2.30	E
5"	1.50	2.00	2.50	2.75	3.03	E
6"	2.25	3.00	3.75	4.13	4.54	E

ALUMINUM SWEEP ELBOWS



36" RADIUS
SWEEP

2"	0.50	0.55	0.60	0.66	0.73	E
2 1/2"	0.80	0.90	1.00	1.10	1.21	E
3"	0.95	1.05	1.15	1.27	1.39	E
3 1/2"	1.10	1.20	1.30	1.43	1.57	E
4"	1.50	1.70	1.85	2.04	2.24	E
5"	2.15	2.40	2.65	2.92	3.21	E
6"	3.10	3.50	3.85	4.24	4.66	E

ALUMINUM COUPLINGS *



ALUMINUM

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.14	0.16	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.18	0.20	0.22	0.24	0.27	E
3"	0.22	0.25	0.28	0.31	0.34	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.35	0.40	0.45	0.50	0.54	E
5"	0.40	0.50	0.60	0.66	0.73	E
6"	0.50	0.60	0.70	0.77	0.85	E

* Labor for couplings not included with conduit.

For Conduit Supports - See Section 7

CONDUIT BENDING

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



FIELD BEND (BY HAND)

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.06	0.07	0.08	0.09	0.10	E
1"	0.09	0.10	0.12	0.13	0.15	E



FIELD BEND (HAND MECHANICAL)

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.06	0.07	0.08	0.09	0.10	E
1"	0.07	0.08	0.10	0.11	0.12	E
1 1/4"	0.10	0.12	0.14	0.16	0.17	E
1 1/2"	0.12	0.14	0.17	0.18	0.20	E
2"	0.17	0.20	0.24	0.26	0.29	E



FIELD BEND (ELECTRO MECHANICAL)

1/2"	0.03	0.04	0.05	0.05	0.06	E
3/4"	0.05	0.06	0.07	0.08	0.09	E
1"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	0.09	0.10	0.12	0.13	0.15	E
1 1/2"	0.10	0.12	0.14	0.16	0.17	E
2"	0.14	0.16	0.19	0.21	0.23	E



FIELD BEND (ELECTRO HYDRAULIC)

2"	0.21	0.25	0.30	0.33	0.36	E
2 1/2"	0.30	0.35	0.42	0.46	0.51	E
3"	0.38	0.45	0.54	0.59	0.65	E
3 1/2"	0.47	0.55	0.66	0.73	0.80	E
4"	0.55	0.65	0.78	0.86	0.94	E
5"	0.68	0.80	0.96	1.06	1.16	E
6"	0.81	0.95	1.14	1.25	1.38	E

PVC CONDUIT

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

PVC SCHEDULE 40



1/2"	2.25	2.50	2.75	3.03	3.33	C
3/4"	2.30	2.60	2.85	3.14	3.45	C
1"	2.50	2.75	3.00	3.30	3.63	C
1 1/4"	2.50	2.80	3.10	3.41	3.75	C
1 1/2"	2.60	2.90	3.20	3.52	3.87	C
2"	2.70	3.00	3.30	3.63	3.99	C
2 1/2"	2.90	3.25	3.60	3.96	4.36	C
3"	3.05	3.40	3.75	4.13	4.54	C
3 1/2"	3.25	3.60	3.95	4.35	4.78	C
4"	3.40	3.80	4.15	4.57	5.02	C
5"	3.80	4.20	4.60	5.06	5.57	C
6"	4.30	4.80	5.30	5.83	6.41	C



90° ELBOW

PVC ELBOWS 90°

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.04	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.08	0.10	0.12	0.13	0.15	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.12	0.15	0.17	0.19	0.21	E
2 1/2"	0.12	0.15	0.17	0.19	0.21	E
3"	0.16	0.20	0.23	0.25	0.28	E
3 1/2"	0.16	0.20	0.23	0.25	0.28	E
4"	0.20	0.25	0.28	0.31	0.34	E
5"	0.30	0.35	0.39	0.43	0.47	E
6"	0.45	0.50	0.55	0.61	0.67	E



30° 45° ELBOW

PVC ELBOWS 30° 45°

1/2"	0.05	0.06	0.07	0.08	0.08	E
3/4"	0.07	0.08	0.09	0.10	0.11	E
1"	0.09	0.10	0.11	0.12	0.13	E
1 1/4"	0.11	0.13	0.14	0.15	0.17	E
1 1/2"	0.11	0.13	0.14	0.15	0.17	E
2"	0.17	0.19	0.21	0.23	0.25	E
2 1/2"	0.17	0.19	0.21	0.23	0.25	E
3"	0.23	0.25	0.28	0.30	0.33	E
3 1/2"	0.23	0.25	0.28	0.30	0.33	E
4"	0.28	0.31	0.34	0.38	0.42	E
5"	0.39	0.44	0.48	0.53	0.58	E
6"	0.56	0.63	0.69	0.76	0.83	E



90° ELBOW
SWEEP

PVC SWEEP ELBOWS

1/2"	0.06	0.08	0.09	0.09	0.10	E
3/4"	0.08	0.09	0.11	0.12	0.14	E
1"	0.11	0.13	0.14	0.15	0.17	E
1 1/4"	0.14	0.16	0.17	0.19	0.21	E
1 1/2"	0.14	0.16	0.17	0.19	0.21	E
2"	0.21	0.23	0.26	0.28	0.31	E
2 1/2"	0.21	0.23	0.26	0.28	0.31	E
3"	0.28	0.31	0.34	0.38	0.42	E
3 1/2"	0.28	0.31	0.34	0.38	0.42	E
4"	0.35	0.39	0.43	0.47	0.52	E
5"	0.49	0.55	0.60	0.66	0.73	E
6"	0.70	0.78	0.86	0.95	1.04	E

PVC FITTINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

PVC COUPLINGS



1/2"	0.02	0.03	0.04	0.04	0.04	E
3/4"	0.03	0.04	0.05	0.05	0.06	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.05	0.06	0.07	0.08	0.09	E
1 1/2"	0.06	0.08	0.10	0.11	0.12	E
2"	0.08	0.10	0.12	0.13	0.15	E
2 1/2"	0.08	0.10	0.12	0.13	0.15	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.12	0.15	0.18	0.20	0.22	E
4"	0.12	0.15	0.18	0.20	0.22	E
5"	0.16	0.20	0.24	0.26	0.29	E
6"	0.20	0.25	0.30	0.33	0.36	E

PVC ADAPTERS (MALE OR FEMALE)



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.08	0.10	0.12	0.13	0.15	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.12	0.15	0.18	0.20	0.22	E
2 1/2"	0.12	0.15	0.18	0.20	0.22	E
3"	0.15	0.20	0.25	0.28	0.30	E
3 1/2"	0.15	0.20	0.25	0.28	0.30	E
4"	0.20	0.25	0.30	0.33	0.36	E
5"	0.25	0.30	0.35	0.39	0.42	E
6"	0.30	0.40	0.50	0.55	0.61	E

BELL ENDS



1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.12	0.15	0.18	0.20	0.22	E
1 1/2"	0.12	0.15	0.18	0.20	0.22	E
2"	0.15	0.20	0.25	0.28	0.30	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.20	0.25	0.30	0.33	0.36	E
3 1/2"	0.20	0.25	0.30	0.33	0.36	E
4"	0.25	0.30	0.35	0.39	0.42	E
5"	0.30	0.35	0.40	0.44	0.48	E
6"	0.35	0.40	0.45	0.50	0.54	E



BASE SPACERS

2" SEPARATION	0.10	0.15	0.20	0.22	0.24	E
3"	0.10	0.15	0.20	0.22	0.24	E
4"	0.10	0.15	0.20	0.22	0.24	E
5"	0.15	0.20	0.25	0.28	0.30	E
6"	0.15	0.20	0.25	0.28	0.30	E



INTERMEDIATE SPACERS

2" SEPARATION	0.06	0.10	0.14	0.15	0.17	E
3"	0.06	0.10	0.14	0.15	0.17	E
4"	0.06	0.10	0.14	0.15	0.17	E
5"	0.10	0.15	0.19	0.21	0.23	E
6"	0.10	0.15	0.19	0.21	0.23	E

PVC FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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SINGLE MOUNT

1/2"		0.04	0.05	0.06	0.06	0.07	E
3/4"		0.05	0.06	0.07	0.08	0.08	E
1"		0.07	0.08	0.09	0.10	0.11	E



DOUBLE MOUNT

1/2"		0.05	0.06	0.07	0.08	0.08	E
3/4"		0.06	0.07	0.08	0.09	0.10	E
1"		0.08	0.09	0.10	0.11	0.13	E



TWO HOLE STRAPS

1/2"		0.06	0.07	0.08	0.09	0.10	E
3/4"		0.07	0.08	0.09	0.10	0.11	E
1"		0.09	0.10	0.12	0.13	0.14	E
1 1/4"		0.11	0.13	0.15	0.16	0.18	E
1 1/2"		0.13	0.15	0.17	0.19	0.21	E
2"		0.15	0.18	0.21	0.23	0.25	E
2 1/2"		0.17	0.20	0.23	0.25	0.27	E
3"		0.19	0.22	0.25	0.27	0.30	E
3 1/2"		0.21	0.24	0.27	0.29	0.32	E
4"		0.23	0.26	0.29	0.32	0.35	E
5"		0.25	0.28	0.31	0.34	0.37	E
6"		0.27	0.30	0.33	0.36	0.40	E



FLEXIBLE COUPLINGS

2"		0.13	0.15	0.17	0.19	0.21	E
3"		0.19	0.23	0.26	0.28	0.31	E
4"		0.19	0.23	0.26	0.28	0.31	E
5"		0.26	0.30	0.35	0.38	0.42	E
6"		0.32	0.38	0.43	0.47	0.52	E



EXPANSION COUPLINGS

1/2"		0.13	0.15	0.17	0.19	0.21	E
3/4"		0.13	0.15	0.17	0.19	0.21	E
1"		0.17	0.20	0.23	0.25	0.28	E
1 1/4"		0.17	0.20	0.23	0.25	0.28	E
1 1/2"		0.21	0.25	0.29	0.32	0.35	E
2"		0.26	0.30	0.35	0.38	0.42	E
2 1/2"		0.30	0.35	0.40	0.44	0.49	E
3"		0.34	0.40	0.46	0.51	0.56	E
3 1/2"		0.38	0.45	0.52	0.57	0.63	E
4"		0.43	0.50	0.58	0.63	0.70	E
5"		0.51	0.60	0.69	0.76	0.83	E
6"		0.60	0.70	0.81	0.89	0.97	E



CONDUIT PLUGS

2"		0.07	0.08	0.09	0.10	0.11	E
3"		0.09	0.11	0.13	0.14	0.15	E
4"		0.09	0.11	0.13	0.14	0.15	E
5"		0.13	0.15	0.17	0.19	0.21	E
6"		0.16	0.19	0.22	0.24	0.26	E

PVC FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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REDUCERS



3/4" - 1/2"	0.04	0.04	0.05	0.05	0.06	E
1" - 1/2"	0.04	0.04	0.05	0.05	0.06	E
1" - 3/4"	0.04	0.04	0.05	0.05	0.06	E
1 1/4" - 3/4"	0.05	0.06	0.06	0.07	0.07	E
1 1/4" - 1"	0.05	0.06	0.06	0.07	0.07	E
1 1/2" - 1"	0.06	0.07	0.07	0.08	0.09	E
1 1/2" - 1 1/4"	0.06	0.07	0.07	0.08	0.09	E
2" - 1 1/4"	0.08	0.09	0.10	0.11	0.12	E
2" - 1 1/2"	0.08	0.09	0.10	0.11	0.12	E
2 1/2" - 2"	0.09	0.10	0.11	0.12	0.13	E
3" - 2"	0.12	0.13	0.15	0.16	0.18	E
3" - 2 1/2"	0.12	0.13	0.15	0.16	0.18	E
4" - 3"	0.12	0.13	0.15	0.16	0.18	E

SERVICE CAPS



3/4"	0.15	0.17	0.18	0.20	0.22	E
1"	0.15	0.17	0.18	0.20	0.22	E
1 1/4"	0.20	0.22	0.24	0.27	0.29	E
1 1/2"	0.20	0.22	0.24	0.27	0.29	E
2"	0.25	0.28	0.30	0.33	0.37	E
2 1/2"	0.30	0.33	0.36	0.40	0.44	E
3"	0.30	0.33	0.36	0.40	0.44	E
3 1/2"	0.34	0.37	0.41	0.45	0.50	E
4"	0.34	0.37	0.41	0.45	0.50	E

METER OFFSET



1 1/4"	0.08	0.09	0.10	0.11	0.12	E
2"	0.12	0.13	0.15	0.16	0.18	E

OFFSET



1/2"	0.04	0.04	0.05	0.05	0.06	E
3/4"	0.05	0.06	0.06	0.07	0.07	E
1"	0.06	0.07	0.07	0.08	0.09	E

END CAPS



1/2"	0.02	0.03	0.03	0.03	0.04	E
3/4"	0.03	0.04	0.04	0.04	0.05	E
1"	0.04	0.04	0.05	0.05	0.06	E
1 1/4"	0.05	0.05	0.06	0.06	0.07	E
1 1/2"	0.06	0.07	0.08	0.09	0.09	E
2"	0.08	0.09	0.10	0.11	0.12	E
2 1/2"	0.08	0.09	0.10	0.11	0.12	E
3"	0.12	0.13	0.15	0.16	0.18	E
3 1/2"	0.12	0.13	0.15	0.16	0.18	E
4"	0.12	0.13	0.15	0.16	0.18	E
5"	0.16	0.18	0.19	0.21	0.23	E
6"	0.20	0.22	0.24	0.27	0.29	E

PVC CONDUIT BODIES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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2 - HUBS



1/2"	0.09	0.11	0.13	0.15	0.16	E
3/4"	0.09	0.11	0.13	0.15	0.16	E
1"	0.13	0.17	0.20	0.22	0.24	E
1 1/4"	0.13	0.17	0.20	0.22	0.24	E
1 1/2"	0.18	0.22	0.26	0.29	0.32	E
2"	0.22	0.28	0.33	0.36	0.40	E
2 1/2"	0.26	0.33	0.40	0.44	0.48	E
3"	0.26	0.33	0.40	0.44	0.48	E
3 1/2"	0.26	0.33	0.40	0.44	0.48	E
4"	0.35	0.44	0.53	0.58	0.64	E
5"	0.53	0.66	0.79	0.87	0.96	E
6"	0.66	0.83	0.99	1.09	1.20	E

3 - HUBS



1/2"	0.11	0.14	0.17	0.18	0.20	E
3/4"	0.11	0.14	0.17	0.18	0.20	E
1"	0.16	0.20	0.23	0.26	0.28	E
1 1/4"	0.16	0.20	0.23	0.26	0.28	E
1 1/2"	0.20	0.25	0.30	0.33	0.36	E
2"	0.24	0.31	0.37	0.40	0.44	E
2 1/2"	0.30	0.38	0.46	0.50	0.55	E
3"	0.30	0.38	0.46	0.50	0.55	E
3 1/2"	0.30	0.38	0.46	0.50	0.55	E
4"	0.39	0.49	0.59	0.65	0.71	E
5"	0.58	0.73	0.88	0.96	1.06	E
6"	0.72	0.90	1.07	1.18	1.30	E

4 - HUBS



1/2"	0.14	0.17	0.20	0.22	0.25	E
3/4"	0.14	0.17	0.20	0.22	0.25	E
1"	0.18	0.23	0.27	0.30	0.33	E
1 1/4"	0.18	0.23	0.27	0.30	0.33	E
1 1/2"	0.22	0.28	0.34	0.37	0.41	E
2"	0.27	0.34	0.40	0.44	0.49	E
2 1/2"	0.34	0.43	0.52	0.57	0.62	E
3"	0.34	0.43	0.52	0.57	0.62	E
3 1/2"	0.34	0.43	0.52	0.57	0.62	E
4"	0.43	0.54	0.65	0.71	0.78	E
5"	0.64	0.80	0.96	1.06	1.16	E
6"	0.77	0.97	1.16	1.27	1.40	E

COVERS



1/2"	0.02	0.02	0.02	0.03	0.03	E
3/4"	0.02	0.03	0.04	0.04	0.04	E
1"	0.03	0.04	0.05	0.05	0.06	E
1 1/4"	0.05	0.06	0.07	0.08	0.09	E
1 1/2"	0.06	0.07	0.08	0.09	0.10	E
2"	0.06	0.08	0.10	0.11	0.12	E
2 1/2"	0.08	0.10	0.12	0.13	0.15	E
3"	0.10	0.12	0.14	0.16	0.17	E
3 1/2"	0.11	0.14	0.17	0.18	0.20	E
4"	0.12	0.15	0.18	0.20	0.22	E
5"	0.16	0.20	0.24	0.26	0.29	E
6"	0.20	0.25	0.30	0.33	0.36	E

SPLIT DUCT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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SPLIT DUCT



2"	4.50	5.00	5.50	6.00	6.60	C
2 1/2"	4.80	5.40	6.00	6.60	7.30	C
3"	5.00	5.60	6.20	6.80	7.50	C
3 1/2"	5.40	6.00	6.50	7.20	8.00	C
4"	5.60	6.30	6.90	7.60	8.40	C
5"	6.30	6.90	7.60	8.40	9.20	C
6"	7.10	7.90	8.70	9.60	10.50	C

SPLIT DUCT SWEEPS



2"	0.40	0.45	0.50	0.55	0.60	C
3"	0.60	0.65	0.75	0.85	0.95	C
4"	0.70	0.75	0.85	0.95	1.05	C

SPLIT COUPLINGS



2"	0.16	0.18	0.19	0.21	0.23	C
2 1/2"	0.16	0.18	0.19	0.21	0.23	C
3"	0.25	0.28	0.30	0.33	0.37	C
3 1/2"	0.25	0.28	0.30	0.33	0.37	C
4"	0.25	0.28	0.30	0.33	0.37	C
5"	0.30	0.33	0.36	0.40	0.44	C
6"	0.35	0.39	0.42	0.47	0.51	C

SPLICE KITS



2"	0.30	0.33	0.36	0.40	0.44	C
2 1/2"	0.30	0.33	0.36	0.40	0.44	C
3"	0.40	0.44	0.48	0.53	0.59	C
3 1/2"	0.40	0.44	0.48	0.53	0.59	C
4"	0.45	0.50	0.54	0.60	0.66	C
5"	0.50	0.55	0.61	0.67	0.73	C
6"	0.50	0.55	0.61	0.67	0.73	C

ENT CONDUIT & FITTINGS

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	ENT CONDUIT							
	IN COILS							
	1/2"		2.25	2.50	2.75	3.03	3.33	C
	3/4"		2.65	3.00	3.35	3.69	4.05	C
	1"		3.10	3.50	3.90	4.29	4.72	C
	ENT COUPLINGS (SNAP-IN TYPE)							
	1/2"		0.02	0.03	0.04	0.04	0.05	E
	3/4"		0.03	0.04	0.05	0.06	0.06	E
	1"		0.04	0.05	0.06	0.07	0.07	E
	ENT CONNECTORS (SNAP-IN TYPE)							
	1/2"		0.04	0.05	0.06	0.07	0.07	E
	3/4"		0.05	0.06	0.07	0.08	0.08	E
	1"		0.07	0.08	0.09	0.10	0.11	E
	REDUCERS							
	3/4" - 1/2"		0.03	0.04	0.05	0.05	0.06	E
	1" - 3/4"		0.04	0.05	0.06	0.07	0.07	E
	COUPLING ENT TO SCHEDULE 40 PVC							
	1/2"		0.03	0.04	0.05	0.05	0.06	E
	3/4"		0.04	0.05	0.06	0.07	0.07	E
	1"		0.05	0.06	0.07	0.08	0.08	E
	COUPLING ENT TO EMT							
	1/2"		0.03	0.04	0.05	0.05	0.06	E
	3/4"		0.04	0.05	0.06	0.07	0.07	E
	1"		0.05	0.06	0.07	0.08	0.08	E
	BOXES							
	1-GANG		0.15	0.17	0.18	0.20	0.22	E
	4" SQUARE		0.15	0.17	0.18	0.20	0.22	E

ENT FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	OCTAGON BOX WITH BRACKET	0.20	0.22	0.24	0.27	0.29	E
	OCTAGON BOX WITH BAR HANGER	0.25	0.28	0.30	0.33	0.37	E
	PLASTER RINGS						
	FLAT	0.04	0.05	0.06	0.07	0.08	E
	1/2" RAISED	0.04	0.05	0.06	0.07	0.08	E
	5/8" RAISED	0.04	0.05	0.06	0.07	0.08	E
	3/4" RAISED	0.04	0.05	0.06	0.07	0.08	E
	1" RAISED	0.04	0.05	0.06	0.07	0.08	E
	MUD BOX WITH COVER	0.35	0.39	0.42	0.47	0.51	E
	BASE RING	0.04	0.04	0.05	0.05	0.06	E
	BASE RING	0.12	0.13	0.15	0.16	0.18	E

EMT CONDUIT & CONNECTORS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

EMT THINWALL CONDUIT



1/2"	2.75	3.25	3.75	4.13	4.54	C
3/4"	3.00	3.50	4.00	4.40	4.84	C
1"	3.50	4.00	4.50	4.95	5.45	C
1 1/4"	4.00	4.50	5.00	5.50	6.05	C
1 1/2"	5.00	5.50	6.00	6.60	7.26	C
2"	6.00	7.00	8.00	8.80	9.68	C
2 1/2"	8.00	9.00	10.00	11.00	12.10	C
3"	9.00	10.00	11.00	12.10	13.31	C
3 1/2"	10.00	11.00	12.00	13.20	14.52	C
4"	11.00	12.00	13.00	14.30	15.73	C

EMT THINWALL CONDUIT ELBOWS



1 1/4"	0.07	0.10	0.13	0.14	0.16	E
1 1/2"	0.07	0.10	0.13	0.14	0.16	E
2"	0.11	0.15	0.19	0.21	0.23	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.17	0.25	0.32	0.35	0.39	E
3 1/2"	0.23	0.30	0.37	0.41	0.45	E
4"	0.27	0.35	0.43	0.47	0.52	E

EMT CONNECTORS SET SCREW TYPE



1/2"	0.03	0.05	0.07	0.08	0.08	E
3/4"	0.04	0.06	0.08	0.09	0.10	E
1"	0.05	0.07	0.09	0.10	0.11	E
1 1/4"	0.07	0.10	0.13	0.14	0.16	E
1 1/2"	0.07	0.10	0.13	0.14	0.16	E
2"	0.10	0.15	0.20	0.22	0.24	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.18	0.25	0.32	0.35	0.39	E
3 1/2"	0.23	0.30	0.37	0.41	0.45	E
4"	0.28	0.35	0.42	0.46	0.51	E

EMT CONNECTORS COMPRESSION TYPE



1/2"	0.04	0.06	0.08	0.09	0.10	E
3/4"	0.05	0.07	0.09	0.10	0.11	E
1"	0.06	0.08	0.10	0.11	0.12	E
1 1/4"	0.09	0.12	0.15	0.17	0.18	E
1 1/2"	0.09	0.12	0.15	0.17	0.18	E
2"	0.13	0.18	0.23	0.25	0.28	E
2 1/2"	0.13	0.18	0.23	0.25	0.28	E
3"	0.24	0.30	0.36	0.40	0.44	E
3 1/2"	0.28	0.35	0.42	0.46	0.51	E
4"	0.33	0.40	0.47	0.52	0.57	E

SNAP TIGHT EMT CONNECTORS



1/2"	0.02	0.06	0.08	0.09	0.10	E
3/4"	0.03	0.07	0.09	0.10	0.11	E

EMT CONNECTORS & COUPLINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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2 - PIECE CONNECTORS



1/2"		0.06	0.06	0.07	0.08	0.09	E
3/4"		0.06	0.07	0.08	0.09	0.10	E

CONNECTORS INDENT



1/2"		0.05	0.06	0.08	0.09	0.10	E
3/4"		0.06	0.07	0.09	0.10	0.11	E

COUPLINGS SET SCREW



1/2"		0.04	0.05	0.06	0.07	0.07	E
3/4"		0.05	0.06	0.07	0.08	0.08	E
1"		0.07	0.08	0.09	0.10	0.11	E
1 1/4"		0.09	0.10	0.11	0.12	0.13	E
1 1/2"		0.11	0.12	0.13	0.14	0.16	E
2"		0.13	0.15	0.17	0.19	0.21	E
2 1/2"		0.18	0.20	0.22	0.24	0.27	E
3"		0.22	0.25	0.28	0.31	0.34	E
3 1/2"		0.25	0.30	0.35	0.39	0.42	E
4"		0.35	0.40	0.45	0.50	0.54	E

COUPLINGS COMPRESSION



1/2"		0.05	0.06	0.07	0.08	0.08	E
3/4"		0.06	0.07	0.08	0.09	0.10	E
1"		0.08	0.10	0.12	0.13	0.15	E
1 1/4"		0.10	0.12	0.14	0.15	0.17	E
1 1/2"		0.12	0.14	0.16	0.18	0.19	E
2"		0.14	0.17	0.20	0.22	0.24	E
2 1/2"		0.20	0.23	0.26	0.29	0.31	E
3"		0.24	0.28	0.32	0.35	0.39	E
3 1/2"		0.30	0.35	0.40	0.44	0.48	E
4"		0.40	0.45	0.50	0.55	0.61	E

COUPLINGS INDENT



1/2"		0.05	0.06	0.07	0.08	0.08	E
3/4"		0.06	0.07	0.08	0.09	0.10	E
1"		0.08	0.10	0.12	0.13	0.15	E
1 1/4"		0.10	0.12	0.14	0.15	0.17	E
1 1/2"		0.12	0.14	0.16	0.18	0.19	E
2"		0.14	0.17	0.20	0.22	0.24	E
2 1/2"		0.20	0.23	0.26	0.29	0.31	E
3"		0.24	0.28	0.32	0.35	0.39	E
3 1/2"		0.30	0.35	0.40	0.44	0.48	E
4"		0.40	0.45	0.50	0.55	0.61	E

EMT TO RIGID COUPLINGS SET SCREW



1/2"		0.04	0.05	0.06	0.07	0.07	E
3/4"		0.05	0.06	0.07	0.08	0.08	E
1"		0.07	0.08	0.09	0.10	0.11	E

EMT CONDUIT FITTINGS & SUPPORTS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

FLEX TO EMT FITTING



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.09	0.10	0.11	0.12	0.13	E
2"	0.13	0.15	0.17	0.19	0.21	E

OFFSET EMT CONNECTORS



1/2"	0.07	0.10	0.13	0.14	0.16	E
3/4"	0.08	0.10	0.13	0.14	0.16	E
1"	0.09	0.15	0.19	0.21	0.23	E

STRAPS 1 - HOLE



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.10	0.12	0.14	0.15	0.17	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.17	0.20	0.23	0.25	0.28	E
3"	0.19	0.25	0.31	0.34	0.38	E
3 1/2"	0.22	0.30	0.38	0.42	0.46	E
4"	0.30	0.40	0.50	0.55	0.61	E

STRAPS 2 - HOLE



1/2"	0.05	0.07	0.09	0.10	0.11	E
3/4"	0.06	0.08	0.10	0.11	0.12	E
1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.10	0.13	0.16	0.18	0.19	E
1 1/2"	0.12	0.15	0.18	0.20	0.22	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.18	0.23	0.28	0.31	0.34	E
3"	0.20	0.27	0.34	0.37	0.41	E
3 1/2"	0.22	0.32	0.42	0.46	0.51	E
4"	0.33	0.43	0.53	0.58	0.64	E

CLAMP BACK



3/4"	0.06	0.08	0.10	0.11	0.12	E
1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.10	0.13	0.16	0.18	0.19	E
1 1/2"	0.12	0.15	0.18	0.20	0.22	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.18	0.23	0.28	0.31	0.34	E
3"	0.20	0.27	0.34	0.37	0.41	E
3 1/2"	0.22	0.32	0.42	0.46	0.51	E
4"	0.33	0.43	0.53	0.58	0.64	E

EMT SUPPORTS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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EMT THINWALL CONDUIT



1/2"	0.04	3.25	3.75	4.13	4.54	E
3/4"	0.05	3.50	4.00	4.40	4.84	E
1"	0.06	4.00	4.50	4.95	5.45	E
1 1/4"	0.08	4.50	5.00	5.50	6.05	E
1 1/2"	0.09	5.50	6.00	6.60	7.26	E
2"	0.11	7.00	8.00	8.80	9.68	E
2 1/2"	0.12	9.00	10.00	11.00	12.10	E
3"	0.14	10.00	11.00	12.10	13.31	E
3 1/2"	0.16	11.00	12.00	13.20	14.52	E
4"	0.18	12.00	13.00	14.30	15.73	E



NAIL STRAPS



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E

POLY NAIL STRAPS - FOR EMT



1/2"	0.03	0.04	0.05	0.06	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E

CONDUIT CLIPS



1/2"	0.02	0.03	0.04	0.04	0.05	E
3/4"	0.03	0.04	0.05	0.06	0.06	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.06	0.07	0.08	0.09	0.10	E

FLEXIBLE CONDUIT & FITTINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



FLEXIBLE CONDUIT

1/2"	2.70	3.00	3.30	3.63	3.99	C
3/4"	2.93	3.25	3.58	3.93	4.33	C
1"	3.15	3.50	3.85	4.24	4.66	C
1 1/4"	3.33	3.70	4.07	4.48	4.92	C
1 1/2"	3.47	3.85	4.24	4.66	5.12	C
2"	3.60	4.00	4.40	4.84	5.32	C
2 1/2"	4.50	5.00	5.50	6.05	6.66	C
3"	5.40	6.00	6.60	7.26	7.99	C
3 1/2"	6.30	7.00	7.70	8.47	9.32	C
4"	7.20	8.00	8.80	9.68	10.65	C



CONNECTOR

1/2"	0.03	0.05	0.07	0.08	0.08	E
3/4"	0.04	0.06	0.08	0.09	0.10	E
1"	0.06	0.08	0.10	0.11	0.12	E
1 1/4"	0.07	0.10	0.13	0.14	0.16	E
1 1/2"	0.07	0.10	0.13	0.14	0.16	E
2"	0.10	0.15	0.20	0.22	0.24	E
2 1/2"	0.10	0.15	0.20	0.22	0.24	E
3"	0.15	0.20	0.25	0.28	0.30	E
3 1/2"	0.15	0.20	0.25	0.28	0.30	E
4"	0.20	0.25	0.30	0.33	0.36	E



90° CONNECTOR

1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.12	0.15	0.18	0.20	0.22	E
1 1/4"	0.12	0.15	0.18	0.20	0.22	E
1 1/2"	0.12	0.15	0.18	0.20	0.22	E
2"	0.15	0.20	0.25	0.28	0.30	E
2 1/2"	0.20	0.25	0.30	0.33	0.36	E
3"	0.20	0.25	0.30	0.33	0.36	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.30	0.35	0.40	0.44	0.48	E



FLEX TO EMT FITTING

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.09	0.10	0.11	0.12	0.13	E
2"	0.13	0.15	0.17	0.19	0.21	E

LIQUID TIGHT FLEXIBLE CONDUIT

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



LIQUID-TIGHT FLEXIBLE CONDUIT

1/2"	3.60	4.00	4.40	4.84	5.32	C
3/4"	4.05	4.50	4.95	5.45	5.99	C
1"	4.50	5.00	5.50	6.05	6.66	C
1 1/4"	5.40	6.00	6.60	7.26	7.99	C
1 1/2"	6.30	7.00	7.70	8.47	9.32	C
2"	8.10	9.00	9.90	10.89	11.98	C
2 1/2"	9.90	11.00	12.10	13.31	14.64	C
3"	13.50	15.00	16.50	18.15	19.97	C
3 1/2"	14.40	16.00	17.60	19.36	21.30	C
4"	15.30	17.00	18.70	20.57	22.63	C

CONNECTOR



1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.12	0.15	0.18	0.20	0.22	E
1 1/4"	0.17	0.20	0.23	0.25	0.28	E
1 1/2"	0.17	0.20	0.23	0.25	0.28	E
2"	0.20	0.25	0.30	0.33	0.36	E
2 1/2"	0.20	0.25	0.30	0.33	0.36	E
3"	0.25	0.30	0.35	0.39	0.42	E
3 1/2"	0.25	0.30	0.35	0.39	0.42	E
4"	0.30	0.35	0.40	0.44	0.48	E

90° CONNECTOR



1/2"	0.12	0.15	0.18	0.20	0.22	E
3/4"	0.12	0.15	0.18	0.20	0.22	E
1"	0.15	0.20	0.25	0.28	0.30	E
1 1/4"	0.20	0.25	0.30	0.33	0.36	E
1 1/2"	0.20	0.25	0.30	0.33	0.36	E
2"	0.25	0.30	0.35	0.39	0.42	E
2 1/2"	0.25	0.30	0.35	0.39	0.42	E
3"	0.35	0.40	0.45	0.50	0.54	E
3 1/2"	0.35	0.40	0.45	0.50	0.54	E
4"	0.40	0.50	0.60	0.66	0.73	E



SEALTITE TO CONDUIT ADAPTER

1/2"	0.05	0.06	0.07	0.08	0.08	E
3/4"	0.06	0.07	0.08	0.09	0.10	E
1"	0.08	0.09	0.10	0.11	0.12	E
1 1/4"	0.10	0.11	0.12	0.13	0.15	E
1 1/2"	0.10	0.11	0.12	0.13	0.15	E
2"	0.14	0.16	0.18	0.20	0.22	E

O-RINGS



1/2"	0.02	0.02	0.03	0.03	0.04	E
3/4"	0.03	0.03	0.04	0.04	0.05	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.06	0.08	0.10	0.11	0.12	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.10	0.12	0.14	0.15	0.17	E
2 1/2"	0.11	0.13	0.15	0.17	0.18	E
3"	0.13	0.15	0.17	0.19	0.21	E
3 1/2"	0.14	0.16	0.18	0.20	0.22	E
4"	0.15	0.18	0.21	0.23	0.25	E

FLEXIBLE NONMETALLIC CONDUIT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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FLEXIBLE CONDUIT

3/8"	1.50	1.60	1.80	2.00	2.20	C
1/2"	1.70	1.90	2.10	2.30	2.50	C
3/4"	2.20	2.40	2.70	2.90	3.20	C
1"	2.60	2.90	3.20	3.50	3.80	C
1 1/4"	2.90	3.20	3.50	3.90	4.20	C
1 1/2"	3.00	3.30	3.60	4.00	4.40	C
2"	3.20	3.50	3.90	4.30	4.70	C



STRAIGHT CONNECTOR

3/8"	0.05	0.06	0.06	0.07	0.07	E
1/2"	0.06	0.07	0.07	0.08	0.09	E
3/4"	0.06	0.07	0.07	0.08	0.09	E
1"	0.07	0.08	0.08	0.09	0.10	E
1 1/4"	0.08	0.09	0.10	0.11	0.12	E
1 1/2"	0.09	0.10	0.11	0.12	0.13	E
2"	0.10	0.11	0.12	0.13	0.15	E



90° CONNECTOR

3/8"	0.07	0.08	0.08	0.09	0.10	E
1/2"	0.08	0.09	0.10	0.11	0.12	E
3/4"	0.08	0.09	0.10	0.11	0.12	E
1"	0.09	0.10	0.11	0.12	0.13	E
1 1/4"	0.10	0.11	0.12	0.13	0.15	E
1 1/2"	0.11	0.12	0.13	0.15	0.16	E
2"	0.12	0.13	0.15	0.16	0.18	E

P&C FLEX

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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P&C FLEXIBLE CONDUIT



1 1/2"	3.00	3.30	3.60	4.00	4.40	C
2"	3.20	3.50	3.90	4.30	4.70	C
2 1/2"	3.40	3.70	4.10	4.50	5.00	C
3"	3.80	4.20	4.60	5.10	5.60	C
4"	4.20	4.60	5.10	5.60	6.20	C



ADAPTERS



1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.12	0.15	0.18	0.20	0.22	E
2 1/2"	0.12	0.15	0.18	0.20	0.22	E
3"	0.15	0.20	0.25	0.28	0.30	E
4"	0.15	0.20	0.25	0.28	0.30	E



COUPLINGS

1 1/2"	0.06	0.08	0.10	0.11	0.12	E
2"	0.08	0.10	0.12	0.13	0.15	E
2 1/2"	0.08	0.10	0.12	0.13	0.15	E
3"	0.12	0.15	0.18	0.20	0.22	E
4"	0.12	0.15	0.18	0.20	0.22	E

NIPPLES & LOCKNUTS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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NIPPLES



1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.14	0.15	0.17	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.17	0.20	0.23	0.25	0.28	E
3"	0.17	0.20	0.23	0.25	0.28	E
3 1/2"	0.20	0.25	0.30	0.33	0.36	E
4"	0.20	0.25	0.30	0.33	0.36	E
5"	0.25	0.30	0.35	0.39	0.42	E
6"	0.25	0.30	0.35	0.39	0.42	E

CHASE NIPPLES



1/2"	0.03	0.04	0.05	0.06	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E
1"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	0.07	0.09	0.11	0.12	0.13	E
1 1/2"	0.08	0.11	0.14	0.15	0.17	E
2"	0.11	0.14	0.17	0.19	0.21	E
2 1/2"	0.15	0.18	0.21	0.23	0.25	E
3"	0.15	0.18	0.21	0.23	0.25	E
3 1/2"	0.18	0.23	0.28	0.31	0.34	E
4"	0.18	0.23	0.28	0.31	0.34	E
5"	0.22	0.26	0.30	0.33	0.36	E
6"	0.22	0.26	0.30	0.33	0.36	E

LOCKNUTS



1/2"	0.02	0.02	0.03	0.03	0.04	E
3/4"	0.03	0.03	0.04	0.04	0.05	E
1"	0.04	0.05	0.08	0.09	0.10	E
1 1/4"	0.05	0.07	0.09	0.10	0.11	E
1 1/2"	0.05	0.07	0.09	0.10	0.11	E
2"	0.06	0.09	0.12	0.13	0.15	E
2 1/2"	0.09	0.12	0.15	0.17	0.18	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.14	0.17	0.20	0.22	0.24	E
4"	0.16	0.19	0.22	0.24	0.27	E
5"	0.18	0.21	0.24	0.26	0.29	E
6"	0.20	0.23	0.26	0.29	0.31	E

LOCKNUTS GROUNDING TYPE



1/2"	0.03	0.03	0.04	0.04	0.05	E
3/4"	0.04	0.04	0.05	0.06	0.06	E
1"	0.05	0.06	0.09	0.10	0.11	E
1 1/4"	0.07	0.08	0.10	0.11	0.12	E
1 1/2"	0.07	0.08	0.10	0.11	0.12	E
2"	0.08	0.10	0.13	0.14	0.16	E
2 1/2"	0.10	0.14	0.16	0.18	0.19	E
3"	0.13	0.17	0.20	0.22	0.24	E
3 1/2"	0.16	0.19	0.22	0.24	0.27	E
4"	0.18	0.21	0.24	0.26	0.29	E
5"	0.20	0.23	0.26	0.29	0.31	E
6"	0.22	0.25	0.28	0.31	0.34	E

LOCKNUTS BUSHINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

SEALING LOCKNUTS



1/2"	0.02	0.02	0.03	0.03	0.04	E
3/4"	0.03	0.03	0.04	0.04	0.05	E
1"	0.04	0.05	0.08	0.09	0.10	E
1 1/4"	0.05	0.07	0.09	0.10	0.11	E
1 1/2"	0.05	0.07	0.09	0.10	0.11	E
2"	0.06	0.09	0.12	0.13	0.15	E
2 1/2"	0.09	0.12	0.15	0.17	0.18	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.14	0.17	0.20	0.22	0.24	E
4"	0.16	0.19	0.22	0.24	0.27	E
5"	0.18	0.21	0.24	0.26	0.29	E
6"	0.20	0.23	0.26	0.29	0.31	E

BUSHINGS



1/2"	0.02	0.03	0.04	0.04	0.05	E
3/4"	0.03	0.04	0.05	0.06	0.06	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.06	0.08	0.10	0.11	0.12	E
1 1/2"	0.06	0.08	0.10	0.11	0.12	E
2"	0.07	0.10	0.13	0.14	0.16	E
2 1/2"	0.09	0.12	0.15	0.17	0.18	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.15	0.19	0.23	0.25	0.28	E
4"	0.20	0.25	0.30	0.33	0.36	E
5"	0.25	0.30	0.35	0.39	0.42	E
6"	0.30	0.35	0.40	0.44	0.48	E

BUSHINGS GROUNDING TYPE



1/2"	0.04	0.06	0.08	0.09	0.10	E
3/4"	0.06	0.08	0.10	0.11	0.12	E
1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.14	0.16	0.18	0.20	0.22	E
1 1/2"	0.14	0.16	0.18	0.20	0.22	E
2"	0.16	0.20	0.24	0.26	0.29	E
2 1/2"	0.20	0.24	0.28	0.31	0.34	E
3"	0.25	0.30	0.35	0.39	0.42	E
3 1/2"	0.35	0.40	0.45	0.50	0.54	E
4"	0.40	0.50	0.60	0.66	0.73	E
5"	0.50	0.60	0.70	0.77	0.85	E
6"	0.60	0.70	0.80	0.88	0.97	E

INSULATING SLEEVES



1/2"	0.04	0.04	0.04	0.05	0.05	E
3/4"	0.05	0.05	0.06	0.06	0.07	E
1"	0.05	0.06	0.07	0.07	0.08	E
1 1/4"	0.06	0.07	0.08	0.08	0.09	E
1 1/2"	0.06	0.07	0.08	0.08	0.09	E
2"	0.07	0.08	0.09	0.10	0.11	E
2 1/2"	0.08	0.09	0.10	0.11	0.12	E
3"	0.09	0.10	0.11	0.12	0.13	E
3 1/2"	0.11	0.12	0.13	0.15	0.16	E
4"	0.11	0.12	0.13	0.15	0.16	E
5"	0.14	0.15	0.17	0.18	0.20	E
6"	0.14	0.15	0.17	0.18	0.20	E

REDUCERS & SEALS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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REDUCING BUSHINGS

3/4"	- 1/2"	0.05	0.07	0.09	0.10	0.11	E
1"	- 1/2"	0.07	0.09	0.11	0.12	0.13	E
1 1/4"	- 1/2"	0.09	0.11	0.13	0.14	0.16	E
1 1/2"	- 1/2"	0.11	0.13	0.15	0.17	0.18	E
2"	- 1/2"	0.13	0.15	0.18	0.20	0.22	E
1"	- 3/4"	0.07	0.09	0.11	0.12	0.13	E
1 1/4"	- 3/4"	0.09	0.11	0.13	0.14	0.16	E
1 1/2"	- 3/4"	0.11	0.13	0.15	0.17	0.18	E
2"	- 3/4"	0.13	0.15	0.18	0.20	0.22	E
1 1/4"	- 1"	0.09	0.11	0.13	0.14	0.16	E
1 1/2"	- 1"	0.11	0.13	0.15	0.17	0.18	E
2"	- 1"	0.13	0.15	0.18	0.20	0.22	E
1 1/2"	- 1 1/4"	0.11	0.13	0.15	0.17	0.18	E
2"	- 1 1/4"	0.13	0.15	0.18	0.20	0.22	E
2"	- 1 1/2"	0.13	0.15	0.18	0.20	0.22	E



REDUCING WASHERS

3/4"	- 1/2"	0.02	0.03	0.04	0.04	0.05	E
1"	- 1/2"	0.03	0.04	0.05	0.06	0.06	E
1 1/4"	- 1/2"	0.04	0.05	0.06	0.07	0.07	E
1 1/2"	- 1/2"	0.05	0.06	0.07	0.08	0.08	E
2"	- 1/2"	0.06	0.07	0.08	0.09	0.10	E
1"	- 3/4"	0.03	0.04	0.05	0.06	0.06	E
1 1/4"	- 3/4"	0.04	0.05	0.06	0.07	0.07	E
1 1/2"	- 3/4"	0.05	0.06	0.07	0.08	0.08	E
2"	- 3/4"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	- 1"	0.04	0.05	0.06	0.07	0.07	E
1 1/2"	- 1"	0.05	0.06	0.07	0.08	0.08	E
2"	- 1"	0.06	0.07	0.08	0.09	0.10	E
1 1/2"	- 1 1/4"	0.05	0.06	0.07	0.08	0.08	E
2"	- 1 1/4"	0.06	0.07	0.08	0.09	0.10	E
2"	- 1 1/2"	0.06	0.07	0.08	0.09	0.10	E



KO SEALS TAB TYPE

1/2"	0.03	0.05	0.07	0.02	0.02	E
3/4"	0.04	0.06	0.08	0.02	0.02	E
1"	0.05	0.07	0.09	0.03	0.03	E
1 1/4"	0.07	0.10	0.13	0.04	0.04	E
1 1/2"	0.07	0.10	0.13	0.04	0.04	E
2"	0.08	0.12	0.16	0.05	0.04	E



KO SEALS SCREW TYPE

2 1/2"	0.09	0.12	0.15	0.05	0.05	E
3"	0.11	0.14	0.17	0.07	0.06	E
3 1/2"	0.13	0.16	0.19	0.08	0.07	E
4"	0.15	0.18	0.21	0.09	0.08	E
5"	0.17	0.20	0.23	0.10	0.09	E
6"	0.21	0.24	0.27	0.13	0.11	E

HUBS, FLANGES, PLUGS & SPACERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

CONDUIT PLUGS



1/2"	0.02	0.02	0.03	0.03	0.04	E
3/4"	0.02	0.03	0.04	0.04	0.05	E
1"	0.03	0.04	0.05	0.06	0.06	E
1 1/4"	0.03	0.04	0.05	0.06	0.06	E
1 1/2"	0.04	0.05	0.06	0.07	0.07	E
2"	0.04	0.05	0.06	0.07	0.07	E
2 1/2"	0.05	0.06	0.07	0.08	0.08	E
3"	0.06	0.07	0.08	0.09	0.10	E
3 1/2"	0.07	0.08	0.09	0.10	0.11	E
4"	0.08	0.10	0.12	0.13	0.15	E
5"	0.08	0.10	0.12	0.13	0.15	E
6"	0.08	0.10	0.12	0.13	0.15	E

CONDUIT HUBS



1/2"	0.05	0.06	0.07	0.08	0.08	E
3/4"	0.06	0.07	0.08	0.09	0.10	E
1"	0.08	0.09	0.10	0.11	0.13	E
1 1/4"	0.09	0.11	0.13	0.14	0.15	E
1 1/2"	0.12	0.14	0.16	0.18	0.19	E
2"	0.14	0.17	0.20	0.22	0.24	E
2 1/2"	0.20	0.23	0.26	0.29	0.32	E
3"	0.26	0.31	0.36	0.39	0.43	E
3 1/2"	0.32	0.38	0.44	0.48	0.53	E
4"	0.43	0.50	0.58	0.63	0.70	E
5"	0.51	0.60	0.69	0.76	0.83	E
6"	0.60	0.70	0.81	0.89	0.97	E

CONDUIT FLANGES



1/2"	0.09	0.10	0.12	0.13	0.14	E
3/4"	0.10	0.12	0.14	0.15	0.17	E
1"	0.13	0.15	0.17	0.19	0.21	E
1 1/4"	0.14	0.17	0.20	0.22	0.24	E
1 1/2"	0.16	0.19	0.22	0.24	0.26	E
2"	0.19	0.22	0.25	0.28	0.31	E
2 1/2"	0.22	0.25	0.28	0.31	0.34	E
3"	0.25	0.28	0.31	0.34	0.38	E
3 1/2"	0.28	0.31	0.34	0.38	0.42	E
4"	0.31	0.34	0.37	0.41	0.45	E
5"	0.34	0.37	0.40	0.44	0.49	E
6"	0.37	0.40	0.43	0.48	0.52	E

SPACERS



1/2"	0.03	0.03	0.03	0.04	0.04	E
3/4"	0.03	0.03	0.03	0.04	0.04	E
1"	0.03	0.04	0.05	0.05	0.06	E
1 1/4"	0.04	0.05	0.06	0.06	0.07	E
1 1/2"	0.05	0.06	0.07	0.08	0.08	E

OFFSET NIPPLES & PULLING ELBOWS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



OFFSET NIPPLES

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.09	E
1"	0.06	0.08	0.10	0.11	0.12	E
1 1/4"	0.08	0.10	0.12	0.13	0.15	E
1 1/2"	0.10	0.12	0.14	0.16	0.17	E
2"	0.12	0.15	0.18	0.20	0.22	E



CONDUIT PLUGS

1/2"	0.02	0.03	0.04	0.04	0.04	E
3/4"	0.03	0.04	0.05	0.05	0.06	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.05	0.06	0.07	0.08	0.09	E
1 1/2"	0.06	0.07	0.08	0.09	0.10	E
2"	0.07	0.09	0.11	0.12	0.13	E
2 1/2"	0.09	0.11	0.13	0.15	0.16	E
3"	0.10	0.13	0.16	0.17	0.19	E
3 1/2"	0.12	0.15	0.18	0.20	0.22	E
4"	0.14	0.17	0.20	0.22	0.25	E
5"	0.16	0.20	0.24	0.26	0.29	E
6"	0.20	0.25	0.30	0.33	0.36	E



PULLING ELBOWS

1/2"	0.12	0.15	0.18	0.20	0.22	E
3/4"	0.16	0.20	0.24	0.26	0.29	E
1"	0.16	0.20	0.24	0.26	0.29	E
1 1/4"	0.20	0.25	0.30	0.33	0.36	E
1 1/2"	0.24	0.30	0.36	0.40	0.44	E
2"	0.28	0.35	0.42	0.46	0.51	E
2 1/2"	0.32	0.40	0.48	0.53	0.58	E
3"	0.40	0.50	0.60	0.66	0.73	E
3 1/2"	0.48	0.60	0.72	0.79	0.87	E
4"	0.64	0.80	0.96	1.06	1.16	E
5"	0.96	1.20	1.44	1.58	1.74	E
6"	1.20	1.50	1.80	1.98	2.18	E



SHORT ELBOWS

1/2"	0.03	0.04	0.05	0.05	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E
1"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	0.07	0.09	0.11	0.12	0.13	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.10	0.12	0.14	0.16	0.17	E



SLB FITTINGS

1/2"	0.13	0.16	0.19	0.21	0.23	E
3/4"	0.18	0.22	0.26	0.29	0.32	E
1"	0.18	0.22	0.26	0.29	0.32	E
1 1/4"	0.22	0.27	0.32	0.36	0.39	E
1 1/2"	0.26	0.32	0.38	0.42	0.46	E
2"	0.32	0.40	0.48	0.53	0.58	E

CONDUIT BODIES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



2 - HUBS

1/2"	0.10	0.15	0.20	0.22	0.24	E
3/4"	0.15	0.20	0.25	0.28	0.30	E
1"	0.15	0.20	0.25	0.28	0.30	E
1 1/4"	0.20	0.25	0.30	0.33	0.36	E
1 1/2"	0.23	0.30	0.37	0.41	0.45	E
2"	0.27	0.35	0.43	0.47	0.52	E
2 1/2"	0.30	0.40	0.50	0.55	0.61	E
3"	0.40	0.50	0.60	0.66	0.73	E
3 1/2"	0.60	0.75	0.90	0.99	1.09	E
4"	0.80	1.00	1.20	1.32	1.45	E



3 - HUBS

1/2"	0.15	0.20	0.25	0.28	0.30	E
3/4"	0.20	0.25	0.30	0.33	0.36	E
1"	0.20	0.25	0.30	0.33	0.36	E
1 1/4"	0.23	0.30	0.37	0.41	0.45	E
1 1/2"	0.27	0.35	0.42	0.46	0.51	E
2"	0.35	0.45	0.55	0.61	0.67	E
2 1/2"	0.40	0.50	0.60	0.66	0.73	E
3"	0.50	0.60	0.70	0.77	0.85	E
3 1/2"	0.70	0.85	1.00	1.10	1.21	E
4"	0.95	1.15	1.35	1.49	1.63	E



4 - HUBS

1/2"	0.20	0.25	0.30	0.33	0.36	E
3/4"	0.25	0.30	0.35	0.39	0.42	E
1"	0.25	0.30	0.35	0.39	0.42	E
1 1/4"	0.30	0.35	0.40	0.44	0.48	E
1 1/2"	0.32	0.40	0.47	0.52	0.57	E
2"	0.45	0.55	0.65	0.72	0.79	E



COVERS & GASKETS

1/2"	0.02	0.03	0.04	0.04	0.04	E
3/4"	0.03	0.04	0.05	0.05	0.06	E
1"	0.04	0.05	0.06	0.07	0.07	E
1 1/4"	0.06	0.07	0.08	0.09	0.10	E
1 1/2"	0.06	0.08	0.10	0.11	0.12	E
2"	0.08	0.10	0.12	0.13	0.15	E
2 1/2"	0.10	0.12	0.14	0.16	0.17	E
3"	0.11	0.14	0.17	0.18	0.20	E
3 1/2"	0.13	0.16	0.19	0.21	0.23	E
4"	0.14	0.18	0.22	0.24	0.26	E

SERVICE ENTRANCE FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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WEATHER HEAD

1/2"	0.20	0.25	0.30	0.33	0.36	E
3/4"	0.20	0.25	0.30	0.33	0.36	E
1"	0.24	0.30	0.36	0.40	0.44	E
1 1/4"	0.24	0.30	0.36	0.40	0.44	E
1 1/2"	0.28	0.35	0.42	0.46	0.51	E
2"	0.28	0.35	0.42	0.46	0.51	E
2 1/2"	0.32	0.40	0.48	0.53	0.58	E
3"	0.32	0.40	0.48	0.53	0.58	E
3 1/2"	0.36	0.45	0.54	0.59	0.65	E
4"	0.36	0.45	0.54	0.59	0.65	E



ROOF FLANGE

1 1/4" - 1 1/2"	0.80	1.00	1.20	1.32	1.45	E
2"	0.96	1.20	1.44	1.58	1.74	E
2 1/2" - 3"	1.04	1.30	1.56	1.72	1.89	E
3 1/2" - 4"	1.20	1.50	1.80	1.98	2.18	E



ADJUSTABLE WIRE HOLDER

WIRE HOLDER	0.20	0.25	0.30	0.33	0.36	E
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WIRE HOLDER LAG TYPE

WIRE HOLDER	0.24	0.30	0.36	0.40	0.44	E
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DEAD-END THIMBLE

DEAD-END THIMBLE	0.06	0.08	0.10	0.11	0.12	E
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DEAD-END CLAMP

DEAD-END CLAMP	0.12	0.15	0.18	0.20	0.22	E
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EXPLOSION-PROOF FITTINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



UNIONS

1/2"	0.20	0.25	0.30	0.33	0.36	E
3/4"	0.20	0.25	0.30	0.33	0.36	E
1"	0.30	0.37	0.44	0.49	0.54	E
1 1/4"	0.30	0.37	0.44	0.49	0.54	E
1 1/2"	0.40	0.50	0.60	0.66	0.73	E
2"	0.48	0.60	0.72	0.79	0.87	E
2 1/2"	0.56	0.70	0.84	0.92	1.02	E
3"	0.76	0.95	1.14	1.25	1.38	E
3 1/2"	0.96	1.20	1.44	1.58	1.74	E
4"	1.12	1.40	1.68	1.85	2.03	E



SEALING HUBS

1/2"	0.18	0.23	0.27	0.30	0.33	E
3/4"	0.18	0.23	0.27	0.30	0.33	E
1"	0.27	0.33	0.40	0.44	0.48	E
1 1/4"	0.27	0.33	0.40	0.44	0.48	E
1 1/2"	0.36	0.45	0.54	0.59	0.65	E
2"	0.43	0.54	0.65	0.71	0.78	E
2 1/2"	0.50	0.63	0.76	0.83	0.91	E
3"	0.68	0.86	1.03	1.13	1.24	E
3 1/2"	0.86	1.08	1.30	1.43	1.57	E
4"	1.01	1.26	1.51	1.66	1.83	E



FLEXIBLE CONDUIT

1/2"	0.32	0.40	0.48	0.53	0.58	E
3/4"	0.40	0.50	0.60	0.66	0.73	E
1"	0.48	0.60	0.72	0.79	0.87	E
1 1/4"	0.56	0.70	0.84	0.92	1.02	E
1 1/2"	0.64	0.80	0.96	1.06	1.16	E
2"	0.80	1.00	1.20	1.32	1.45	E

SHORT ELBOWS



1/2"	0.03	0.04	0.05	0.05	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E
1"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	0.07	0.09	0.11	0.12	0.13	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.10	0.12	0.14	0.16	0.17	E



SEALING FITTINGS

1/2"	0.40	0.50	0.60	0.66	0.73	E
3/4"	0.48	0.60	0.72	0.79	0.87	E
1"	0.56	0.70	0.84	0.92	1.02	E
1 1/4"	0.64	0.80	0.96	1.06	1.16	E
1 1/2"	0.72	0.90	1.08	1.19	1.31	E
2"	0.80	1.00	1.20	1.32	1.45	E
2 1/2"	0.96	1.20	1.44	1.58	1.74	E
3"	1.12	1.40	1.68	1.85	2.03	E
3 1/2"	1.28	1.60	1.92	2.11	2.32	E
4"	1.44	1.80	2.16	2.38	2.61	E

EXPLOSION-PROOF FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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CAPPED ELBOWS



1/2"	0.28	0.35	0.42	0.46	0.51	E
3/4"	0.32	0.40	0.48	0.53	0.58	E
1"	0.40	0.50	0.60	0.66	0.73	E
1 1/4"	0.48	0.60	0.72	0.79	0.87	E
1 1/2"	0.52	0.65	0.78	0.86	0.94	E

ROUND BOX



2-HUB	0.48	0.60	0.72	0.79	0.87	E
3-HUB	0.60	0.75	0.90	0.99	1.09	E
4-HUB	0.72	0.90	1.08	1.19	1.31	E

CONDUIT BODIES



1/2"	0.52	0.65	0.78	0.86	0.94	E
3/4"	0.52	0.65	0.78	0.86	0.94	E
1"	0.60	0.75	0.90	0.99	1.09	E
1 1/4"	0.68	0.85	1.02	1.12	1.23	E
1 1/2"	0.68	0.85	1.02	1.12	1.23	E
2"	0.80	1.00	1.20	1.32	1.45	E
2 1/2"	0.96	1.20	1.44	1.58	1.74	E
3"	1.12	1.40	1.68	1.85	2.03	E
3 1/2"	1.28	1.60	1.92	2.11	2.32	E
4"	1.44	1.80	2.16	2.38	2.61	E

JUNCTION BOXES



8" X 8"	1.12	1.40	1.68	1.85	2.03	E
12" X 12"	1.44	1.80	2.16	2.38	2.61	E
18" X 18"	1.68	2.10	2.52	2.77	3.05	E
24" X 24"	2.00	2.50	3.00	3.30	3.63	E

LIGHTING FIXTURE



FIXTURE	1.00	1.25	1.50	1.65	1.82	E
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EXPLOSION-PROOF MOTOR STARTERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



EXPLOSION PROOF MANUAL MOTOR STARTER

NEMA SIZE 00	0.60	0.65	0.70	0.77	0.85	E
NEMA SIZE 0	0.60	0.65	0.70	0.77	0.85	E
NEMA SIZE 1	0.70	0.75	0.80	0.88	0.97	E



EXPLOSION PROOF MAGNETIC MOTOR STARTER

NEMA SIZE 0	1.50	1.70	2.00	2.20	2.42	E
NEMA SIZE 1	1.75	2.00	2.40	2.64	2.90	E
NEMA SIZE 2	2.00	2.25	2.60	2.86	3.15	E
NEMA SIZE 3	3.00	3.30	3.60	3.96	4.36	E
NEMA SIZE 4	3.50	3.80	4.10	4.51	4.96	E
NEMA SIZE 5	4.00	4.40	4.80	5.28	5.81	E



EXPLOSION PROOF PUSHBUTTON

PUSHBUTTON	0.50	0.55	0.60	0.66	0.73	E
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EXPLOSION PROOF FIRE PULL STATION

PULL STATION	1.00	1.25	1.50	1.65	1.82	E
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GROUNDING FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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GROUND RODS - COPPER



8 FOOT		0.75	1.00	1.25	1.38	1.51	E
10 FOOT		1.00	1.25	1.50	1.65	1.82	E

GROUND CLAMPS



1/2" - 1"		0.20	0.25	0.30	0.33	0.36	E
1 1/4" - 2"		0.25	0.30	0.35	0.39	0.42	E
2 1/2" - 4"		0.30	0.35	0.40	0.44	0.48	E
4" - 6"		0.35	0.40	0.45	0.50	0.54	E

U-BOLT GROUND CLAMP



1/2" - 3/4"		0.20	0.25	0.30	0.33	0.36	E
1"		0.24	0.30	0.36	0.40	0.44	E
1 1/4"		0.24	0.30	0.36	0.40	0.44	E
1 1/2"		0.28	0.35	0.42	0.46	0.51	E
2"		0.28	0.35	0.42	0.46	0.51	E
2 1/2"		0.32	0.40	0.48	0.53	0.58	E
3"		0.32	0.40	0.48	0.53	0.58	E
3 1/2"		0.36	0.45	0.54	0.59	0.65	E
4"		0.36	0.45	0.54	0.59	0.65	E

CONDUIT GROUNDING HUB



1/2"		0.20	0.25	0.30	0.33	0.36	E
3/4"		0.20	0.25	0.30	0.33	0.36	E
1"		0.24	0.30	0.36	0.40	0.44	E

GROUND ROD CLAMP - CAST BRONZE



1/2"		0.13	0.16	0.19	0.21	0.23	E
5/8"		0.14	0.18	0.22	0.24	0.26	E
3/4"		0.16	0.20	0.24	0.26	0.29	E
1"		0.18	0.22	0.26	0.29	0.31	E

REBAR CLAMP



3/8"		0.15	0.18	0.21	0.23	0.25	E
1/2"		0.16	0.20	0.24	0.26	0.29	E
5/8"		0.18	0.22	0.26	0.29	0.31	E

RAISED FLOOR GROUNDING



GROUND CLAP		0.20	0.25	0.30	0.33	0.36	E
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GROUNDING FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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LAY-IN LUG

LAY-IN LUG	0.20	0.25	0.30	0.33	0.36	E
LAY-IN LUG (HEAVY DUTY)	0.30	0.40	0.50	0.55	0.61	E



GROUND WEDGES

1/2"	0.12	0.15	0.18	0.20	0.22	E
3/4"	0.12	0.15	0.18	0.20	0.22	E
1"	0.16	0.20	0.24	0.26	0.29	E
1 1/4"	0.16	0.20	0.24	0.26	0.29	E
1 1/2"	0.20	0.25	0.30	0.33	0.36	E
2"	0.20	0.25	0.30	0.33	0.36	E
2 1/2"	0.24	0.30	0.36	0.40	0.44	E
3"	0.24	0.30	0.36	0.40	0.44	E
3 1/2"	0.28	0.35	0.42	0.46	0.51	E
4"	0.28	0.35	0.42	0.46	0.51	E



LOCKNUTS

1/2"	0.02	0.02	0.03	0.03	0.04	E
3/4"	0.03	0.03	0.04	0.04	0.05	E
1"	0.04	0.05	0.08	0.09	0.10	E
1 1/4"	0.05	0.07	0.09	0.10	0.11	E
1 1/2"	0.05	0.07	0.09	0.10	0.11	E
2"	0.06	0.09	0.12	0.13	0.15	E
2 1/2"	0.09	0.12	0.15	0.17	0.18	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.14	0.17	0.20	0.22	0.24	E
4"	0.16	0.19	0.22	0.24	0.27	E
5"	0.18	0.21	0.24	0.26	0.29	E
6"	0.20	0.23	0.26	0.29	0.31	E



BUSHINGS GROUNDING TYPE

1/2"	0.04	0.06	0.08	0.09	0.10	E
3/4"	0.06	0.08	0.10	0.11	0.12	E
1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.14	0.16	0.18	0.20	0.22	E
1 1/2"	0.14	0.16	0.18	0.20	0.22	E
2"	0.16	0.20	0.24	0.26	0.29	E
2 1/2"	0.20	0.24	0.28	0.31	0.34	E
3"	0.25	0.30	0.35	0.39	0.42	E
3 1/2"	0.35	0.40	0.45	0.50	0.54	E
4"	0.40	0.50	0.60	0.66	0.73	E
5"	0.50	0.60	0.70	0.77	0.85	E
6"	0.60	0.70	0.80	0.88	0.97	E

GROUNDING FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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BRAIDED GROUNDING STRAP

100 AMP		0.70	0.80	0.90	0.99	1.09	E
200 AMP		0.80	0.90	1.00	1.10	1.21	E
300 AMP		0.90	1.00	1.10	1.21	1.33	E
400 AMP		1.00	1.10	1.20	1.32	1.45	E



GROUND STRAP

COPPER		0.15	0.20	0.25	0.28	0.30	E
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GROUNDING INSPECTION WELL

PLASTIC		1.00	1.20	1.40	1.54	1.69	E
CONCRETE		1.75	2.00	2.25	2.48	2.72	E



CADWELD GROUNDING CONNECTOR

1-WIRE		0.30	0.35	0.40	0.44	0.48	E
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2-WIRE		0.50	0.55	0.60	0.66	0.73	E
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3-WIRE		0.70	0.80	0.90	0.99	1.09	E
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3-WIRE		0.90	1.00	1.10	1.21	1.33	E
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GROUNDING FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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CADWELD GROUNDING CONNECTOR

2-WIRE		0.50	0.55	0.60	0.66	0.73 E
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3-WIRE		0.70	0.80	0.90	0.99	1.09 E
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3-WIRE		0.90	1.00	1.10	1.21	1.33 E
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CABLE TO BUSBAR		0.70	0.80	0.90	0.99	1.09 E
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COMPRESSION GROUND CONNECTOR

#6 - #2		0.20	0.25	0.35	0.39	0.42 E
#1 - 2/0		0.30	0.35	0.40	0.44	0.48 E
3/0 - 250		0.40	0.45	0.50	0.55	0.61 E
300 - 500		0.50	0.55	0.60	0.66	0.73 E

CONDUIT HANGERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



RIGHT ANGLE CLAMP

1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.11	0.13	0.15	0.17	0.18	E
1"	0.14	0.16	0.18	0.20	0.22	E
1 1/4"	0.16	0.20	0.24	0.26	0.29	E
1 1/2"	0.19	0.23	0.27	0.30	0.33	E
2"	0.21	0.26	0.31	0.34	0.38	E
2 1/2"	0.25	0.30	0.35	0.39	0.42	E
3"	0.30	0.35	0.40	0.44	0.48	E
3 1/2"	0.35	0.40	0.45	0.50	0.54	E
4"	0.40	0.45	0.50	0.55	0.61	E



PARALLEL CLAMP

1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.11	0.13	0.15	0.17	0.18	E
1"	0.14	0.16	0.18	0.20	0.22	E
1 1/4"	0.16	0.20	0.24	0.26	0.29	E
1 1/2"	0.19	0.23	0.27	0.30	0.33	E
2"	0.21	0.26	0.31	0.34	0.38	E
2 1/2"	0.25	0.30	0.35	0.39	0.42	E
3"	0.30	0.35	0.40	0.44	0.48	E
3 1/2"	0.35	0.40	0.45	0.50	0.54	E
4"	0.40	0.45	0.50	0.55	0.61	E



EDGE CLAMP

1/2"	0.08	0.10	0.12	0.13	0.15	E
3/4"	0.11	0.13	0.15	0.17	0.18	E
1"	0.14	0.16	0.18	0.20	0.22	E
1 1/4"	0.16	0.20	0.24	0.26	0.29	E
1 1/2"	0.19	0.23	0.27	0.30	0.33	E
2"	0.21	0.26	0.31	0.34	0.38	E
2 1/2"	0.25	0.30	0.35	0.39	0.42	E
3"	0.30	0.35	0.40	0.44	0.48	E



J-HANGER

1/2"	0.06	0.08	0.10	0.11	0.12	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.10	0.12	0.14	0.15	0.17	E
1 1/4"	0.12	0.14	0.16	0.18	0.19	E
1 1/2"	0.13	0.16	0.19	0.21	0.23	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.18	0.23	0.28	0.31	0.34	E
3 1/2"	0.20	0.26	0.32	0.35	0.39	E
4"	0.25	0.30	0.35	0.39	0.42	E
5"	0.30	0.35	0.40	0.44	0.48	E
6"	0.35	0.40	0.45	0.50	0.54	E

CONDUIT HANGERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

CONDUIT RISER SUPPORT



1/2"	0.20	0.25	0.30	0.33	0.36	E
3/4"	0.20	0.25	0.30	0.33	0.36	E
1"	0.24	0.30	0.36	0.40	0.44	E
1 1/4"	0.24	0.30	0.36	0.40	0.44	E
1 1/2"	0.28	0.35	0.42	0.46	0.51	E
2"	0.32	0.40	0.48	0.53	0.58	E
2 1/2"	0.36	0.45	0.54	0.59	0.65	E
3"	0.40	0.50	0.60	0.66	0.73	E
3 1/2"	0.40	0.50	0.60	0.66	0.73	E
4"	0.44	0.55	0.66	0.73	0.80	E
5"	0.48	0.60	0.72	0.79	0.87	E
6"	0.52	0.65	0.78	0.86	0.94	E



CLEVIS HANGER

1/2"	0.10	0.13	0.16	0.17	0.19	E
3/4"	0.10	0.13	0.16	0.17	0.19	E
1"	0.13	0.16	0.19	0.21	0.23	E
1 1/4"	0.14	0.18	0.22	0.24	0.26	E
1 1/2"	0.14	0.18	0.22	0.24	0.26	E
2"	0.18	0.22	0.26	0.29	0.32	E
2 1/2"	0.20	0.25	0.30	0.33	0.36	E
3"	0.24	0.30	0.36	0.40	0.44	E
3 1/2"	0.29	0.36	0.43	0.48	0.52	E
4"	0.32	0.40	0.48	0.53	0.58	E
5"	0.37	0.46	0.55	0.61	0.67	E
6"	0.42	0.52	0.62	0.69	0.76	E



CONDUIT HANGER WITH BOLT

1/2"	0.06	0.08	0.10	0.11	0.12	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.10	0.12	0.14	0.15	0.17	E
1 1/4"	0.12	0.14	0.16	0.18	0.19	E
1 1/2"	0.13	0.16	0.19	0.21	0.23	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.18	0.23	0.28	0.31	0.34	E
3 1/2"	0.20	0.26	0.32	0.35	0.39	E
4"	0.25	0.30	0.35	0.39	0.42	E
5"	0.30	0.35	0.40	0.44	0.48	E
6"	0.35	0.40	0.45	0.50	0.54	E

CONDUIT HANGERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



J-CLAMPS

1/2"	0.06	0.08	0.10	0.11	0.12	E
3/4"	0.08	0.10	0.12	0.13	0.15	E
1"	0.10	0.12	0.14	0.15	0.17	E
1 1/4"	0.12	0.14	0.16	0.18	0.19	E
1 1/2"	0.13	0.16	0.19	0.21	0.23	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.15	0.20	0.25	0.28	0.30	E
3"	0.18	0.23	0.28	0.31	0.34	E
3 1/2"	0.20	0.26	0.32	0.35	0.39	E
4"	0.25	0.30	0.35	0.39	0.42	E
5"	0.30	0.35	0.40	0.44	0.48	E
6"	0.35	0.40	0.45	0.50	0.54	E



ONE HOLE STRAPS

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.08	E
1"	0.07	0.08	0.09	0.10	0.11	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.10	0.12	0.14	0.15	0.17	E
2"	0.13	0.15	0.17	0.19	0.21	E
2 1/2"	0.17	0.20	0.23	0.25	0.28	E
3"	0.19	0.25	0.31	0.34	0.38	E
3 1/2"	0.22	0.30	0.38	0.42	0.46	E
4"	0.30	0.40	0.50	0.55	0.61	E
5"	0.38	0.50	0.62	0.68	0.75	E
6"	0.46	0.60	0.74	0.81	0.90	E



CLAMP BACKS

1/2"	0.02	0.03	0.04	0.04	0.04	E
3/4"	0.03	0.04	0.05	0.05	0.06	E
1"	0.05	0.06	0.07	0.08	0.09	E
1 1/4"	0.06	0.08	0.10	0.11	0.12	E
1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2"	0.08	0.10	0.12	0.13	0.15	E
2 1/2"	0.10	0.13	0.16	0.17	0.19	E
3"	0.13	0.16	0.19	0.21	0.23	E
3 1/2"	0.16	0.20	0.24	0.26	0.29	E
4"	0.20	0.25	0.30	0.33	0.36	E
5"	0.25	0.30	0.35	0.39	0.42	E
6"	0.30	0.35	0.40	0.44	0.48	E



TWO HOLE STRAPS

1/2"	0.05	0.07	0.09	0.10	0.11	E
3/4"	0.06	0.08	0.10	0.11	0.12	E
1"	0.08	0.10	0.12	0.13	0.15	E
1 1/4"	0.10	0.13	0.16	0.18	0.19	E
1 1/2"	0.12	0.15	0.18	0.20	0.22	E
2"	0.14	0.18	0.22	0.24	0.27	E
2 1/2"	0.18	0.23	0.28	0.31	0.34	E
3"	0.20	0.27	0.34	0.37	0.41	E
3 1/2"	0.22	0.32	0.42	0.46	0.51	E
4"	0.33	0.43	0.53	0.58	0.64	E
5"	0.41	0.44	0.54	0.59	0.65	E
6"	0.45	0.55	0.65	0.72	0.79	E

CONDUIT HANGERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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NAIL STRAPS

1/2"		0.04	0.05	0.06	0.07	0.07	E
3/4"		0.05	0.06	0.07	0.08	0.08	E
1"		0.07	0.08	0.09	0.10	0.11	E



POLY NAIL STRAPS - FOR EMT

1/2"		0.03	0.04	0.05	0.06	0.06	E
3/4"		0.04	0.05	0.06	0.07	0.07	E



CONDUIT CLIPS

1/2"		0.05	0.06	0.07	0.08	0.09	E
3/4"		0.05	0.06	0.07	0.08	0.09	E
1"		0.06	0.08	0.10	0.11	0.12	E
1 1/4"		0.07	0.09	0.11	0.12	0.13	E
1 1/2"		0.08	0.10	0.12	0.13	0.15	E
2"		0.11	0.14	0.17	0.18	0.20	E



DRIVE-ON CONDUIT HANGERS

1/2"		0.04	0.05	0.06	0.07	0.07	E
3/4"		0.04	0.05	0.06	0.07	0.07	E
1"		0.06	0.07	0.08	0.09	0.10	E
1 1/4"		0.06	0.08	0.10	0.11	0.12	E
1 1/2"		0.07	0.09	0.11	0.12	0.13	E
2"		0.08	0.10	0.12	0.13	0.15	E



BEAM CLAMP & CONDUIT CLIP

1/2"		0.12	0.15	0.18	0.20	0.22	E
3/4"		0.12	0.15	0.18	0.20	0.22	E
1"		0.16	0.20	0.24	0.26	0.29	E



CONDUIT CLIPS

1/2"		0.02	0.03	0.04	0.04	0.05	E
3/4"		0.03	0.04	0.05	0.06	0.06	E
1"		0.04	0.05	0.06	0.07	0.07	E
1 1/4"		0.06	0.07	0.08	0.09	0.10	E

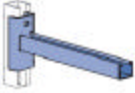
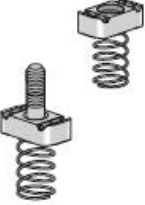
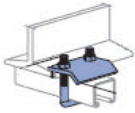
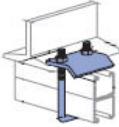
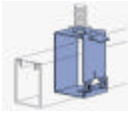
SUPPORT CHANNEL (STRUT)

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	P1000		7.84	9.80	11.76	12.94	14.23	C
	P3000		7.04	8.80	10.56	11.62	12.78	C
	P1001		15.60	19.50	23.40	25.74	28.31	C
	P3001		14.00	17.50	21.00	23.10	25.41	C
	P1100		5.88	7.35	8.82	9.70	10.67	C
	P2000		4.80	6.00	7.20	7.92	8.71	C
	P1101		11.76	14.70	17.64	19.40	21.34	C
	P2001		9.60	12.00	14.40	15.84	17.42	C
	P3300		5.60	7.00	8.40	9.24	10.16	C
	P3301		11.20	14.00	16.80	18.48	20.33	C
	P4000		3.40	4.25	5.10	5.61	6.17	C
	P4001		6.80	8.50	10.20	11.22	12.34	C

SUPPORT CHANNEL HANGERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	RIGHT ANGLE BRACKET						
	RIGHT ANGLE BRACKET	0.28	0.35	0.42	0.46	0.51	E
	SPRING NUTS						
	SPRING NUTS	0.04	0.05	0.06	0.07	0.07	E
	SINGLE CHANNEL SUPPORT						
	SUPPORT	0.20	0.25	0.30	0.33	0.36	E
	DOUBLE CHANNEL SUPPORT						
	SUPPORT	0.22	0.28	0.34	0.37	0.41	E
	CHANNEL HANGER						
	HANGER	0.14	0.18	0.22	0.24	0.27	E
	SLOTTED ANGLE						
	SLOTTED ANGLE	4.80	6.00	7.20	7.92	8.71	C

CHANNEL CONDUIT HANGERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



CONDUIT STRAPS

1/2"	0.04	0.05	0.06	0.07	0.07	E
3/4"	0.05	0.06	0.07	0.08	0.09	E
1"	0.06	0.08	0.10	0.11	0.12	E
1 1/4"	0.08	0.10	0.12	0.13	0.15	E
1 1/2"	0.10	0.12	0.14	0.16	0.17	E
2"	0.10	0.13	0.16	0.17	0.19	E
2 1/2"	0.11	0.14	0.17	0.18	0.20	E
3"	0.12	0.15	0.18	0.20	0.22	E
3 1/2"	0.14	0.17	0.20	0.22	0.25	E
4"	0.15	0.19	0.23	0.25	0.28	E
5"	0.18	0.23	0.28	0.30	0.33	E
6"	0.21	0.26	0.31	0.34	0.38	E



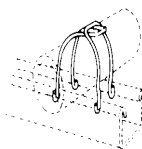
CONDUIT CLAMP

1/2"	0.03	0.04	0.05	0.05	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E
1"	0.06	0.07	0.08	0.09	0.10	E
1 1/4"	0.06	0.08	0.10	0.11	0.12	E
1 1/2"	0.07	0.09	0.11	0.12	0.13	E
2"	0.08	0.10	0.12	0.13	0.15	E



CONDUIT CLIPS

1/2"	0.02	0.03	0.04	0.04	0.04	E
3/4"	0.03	0.04	0.05	0.05	0.06	E
1"	0.05	0.06	0.07	0.08	0.09	E
1 1/4"	0.06	0.07	0.08	0.09	0.10	E
1 1/2"	0.06	0.08	0.10	0.11	0.12	E
2"	0.07	0.09	0.11	0.12	0.13	E



LEVER LATCH

1/2"	0.03	0.04	0.05	0.05	0.06	E
3/4"	0.04	0.05	0.06	0.07	0.07	E
1"	0.06	0.07	0.08	0.09	0.10	E

FASTENERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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TOGGLE BOLTS

1/8"	0.04	0.06	0.08	0.09	0.10	E
3/16"	0.05	0.07	0.09	0.10	0.11	E
1/4"	0.07	0.09	0.11	0.12	0.13	E
5/16"	0.07	0.10	0.13	0.14	0.16	E



CONCRETE STUD ANCHORS

1/4"	0.06	0.08	0.10	0.11	0.12	E
3/8"	0.08	0.10	0.12	0.13	0.15	E
1/2"	0.12	0.14	0.16	0.18	0.19	E



HOLLOW WALL ANCHORS

1/8"	0.04	0.06	0.08	0.09	0.10	E
3/16"	0.05	0.07	0.09	0.10	0.11	E
1/4"	0.06	0.08	0.10	0.11	0.12	E



LEAD ANCHORS

#6	0.05	0.06	0.07	0.08	0.08	E
#8	0.06	0.07	0.08	0.09	0.10	E
#10	0.07	0.08	0.09	0.10	0.11	E
1/4"	0.08	0.10	0.12	0.13	0.15	E
3/8"	0.10	0.12	0.14	0.15	0.17	E
1/2"	0.13	0.15	0.17	0.19	0.21	E



PLASTIC ANCHORS

#8	0.03	0.04	0.05	0.06	0.06	E
#10	0.04	0.05	0.06	0.07	0.07	E
#12	0.05	0.06	0.07	0.08	0.08	E

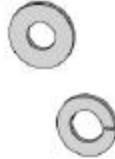


SHEET METAL SCREWS

#8	0.01	0.02	0.03	0.03	0.04	E
#10	0.02	0.03	0.04	0.04	0.05	E
#12	0.02	0.03	0.04	0.04	0.05	E

FASTENERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
MACHINE SCREWS							
	#6	0.01	0.02	0.03	0.03	0.04	E
	#8	0.02	0.03	0.04	0.04	0.05	E
	#10	0.02	0.03	0.04	0.04	0.05	E
	1/4"	0.03	0.04	0.05	0.06	0.06	E
BOLTS							
	5/16"	0.04	0.05	0.06	0.07	0.07	E
	3/8"	0.05	0.06	0.07	0.08	0.08	E
	1/2"	0.07	0.08	0.09	0.10	0.11	E
NUTS							
	5/16"	0.01	0.02	0.03	0.03	0.04	E
	3/8"	0.02	0.03	0.04	0.04	0.05	E
	1/2"	0.02	0.03	0.04	0.04	0.05	E
WASHERS							
	5/16"	0.01	0.02	0.03	0.03	0.04	E
	3/8"	0.02	0.03	0.04	0.04	0.05	E
	1/2"	0.02	0.03	0.04	0.04	0.05	E
THREADED ROD							
	1/4"	4.00	6.00	8.00	8.80	9.68	C
	5/16"	5.00	7.00	9.00	9.90	10.89	C
	3/8"	6.00	8.00	10.00	11.00	12.10	C
	1/2"	7.00	9.00	11.00	12.10	13.31	C
ROD COUPLINGS							
	1/4"	0.03	0.05	0.07	0.08	0.08	E
	5/16"	0.04	0.06	0.08	0.09	0.10	E
	3/8"	0.05	0.07	0.09	0.10	0.11	E
	1/2"	0.06	0.08	0.10	0.11	0.12	E
BEAM CLAMP							
	1/4"	0.20	0.25	0.30	0.33	0.36	E
	3/8"	0.25	0.30	0.35	0.39	0.42	E
	1/2"	0.30	0.35	0.40	0.44	0.48	E

FASTENERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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CLIP-ON ROD HANGERS

1/2"	0.06	0.07	0.08	0.09	0.10	E
3/4"	0.07	0.09	0.11	0.12	0.13	E
1"	0.09	0.11	0.13	0.15	0.16	E



EYE-BOLT

10-24	0.02	0.03	0.04	0.04	0.04	E
1/4"	0.03	0.04	0.05	0.05	0.06	E
3/8"	0.04	0.05	0.06	0.07	0.07	E



EYE-BOLT LAG TYPE

12	0.02	0.03	0.04	0.04	0.04	E
10	0.03	0.04	0.05	0.05	0.06	E
8	0.04	0.05	0.06	0.07	0.07	E
6	0.05	0.06	0.07	0.08	0.09	E
4	0.08	0.10	0.12	0.13	0.15	E
2	0.10	0.12	0.14	0.16	0.17	E



SCREW HOOK LAG TYPE

12	0.02	0.03	0.04	0.04	0.04	E
10	0.03	0.04	0.05	0.05	0.06	E
8	0.04	0.05	0.06	0.07	0.07	E
6	0.05	0.06	0.07	0.08	0.09	E
4	0.08	0.10	0.12	0.13	0.15	E
2	0.10	0.12	0.14	0.16	0.17	E



LAG BOLTS

1/4"	0.04	0.05	0.06	0.07	0.07	E
5/16"	0.06	0.07	0.08	0.09	0.10	E
3/8"	0.07	0.09	0.11	0.12	0.13	E
1/2"	0.10	0.12	0.14	0.16	0.17	E

FASTENERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



POWER ANCHOR (NAIL TYPE)

3/4" - 1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2" - 3"	0.12	0.15	0.18	0.20	0.22	E



POWER ANCHOR (STUD TYPE)

3/4" - 1 1/2"	0.08	0.10	0.12	0.13	0.15	E
2" - 3"	0.12	0.15	0.18	0.20	0.22	E



DRILL HOLE IN METAL

1/4"	0.12	0.15	0.18	0.20	0.22	E
3/8"	0.16	0.20	0.24	0.26	0.29	E
1/2"	0.20	0.25	0.30	0.33	0.36	E
5/8"	0.24	0.30	0.36	0.40	0.44	E
3/4"	0.28	0.35	0.42	0.46	0.51	E



DRILL HOLE IN CONCRETE

1/4"	0.16	0.20	0.24	0.26	0.29	E
3/8"	0.20	0.25	0.30	0.33	0.36	E
1/2"	0.28	0.35	0.42	0.46	0.51	E
5/8"	0.36	0.45	0.54	0.59	0.65	E
3/4"	0.44	0.55	0.66	0.73	0.80	E

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FASTENERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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PLASTIC CABLE CLAMP

0.05	0.06	0.07	0.08	0.08	E
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ADJUSTABLE CLAMP

0.06	0.07	0.08	0.09	0.10	E
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NAIL CLAMP

0.03	0.04	0.05	0.06	0.06	E
------	------	------	------	------	---



STICK ON PAD

0.02	0.03	0.04	0.04	0.04	E
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TIE WARP

0.02	0.03	0.04	0.04	0.04	E
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OCTAGON BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	OCTAGON BOX						
	1/2" KO	0.17	0.20	0.23	0.25	0.28	E
	3/4" KO	0.17	0.20	0.23	0.25	0.28	E
	for Romex	0.17	0.20	0.23	0.25	0.28	E
	OCTAGON BOX W/BRACKET						
	1/2" KO	0.15	0.18	0.21	0.23	0.25	E
	3/4" KO	0.15	0.18	0.21	0.23	0.25	E
	for Romex	0.15	0.18	0.21	0.23	0.25	E
	EXTENSION BOX						
	1/2" KO	0.20	0.25	0.30	0.33	0.36	E
	3/4" KO	0.20	0.25	0.30	0.33	0.36	E
	OCTAGON BOX & HANGER						
	1/2" KO	0.25	0.30	0.35	0.39	0.42	E
	3/4" KO	0.25	0.30	0.35	0.39	0.42	E
	for Romex	0.25	0.30	0.35	0.39	0.42	E
	SHALLOW BOX						
	1/2" KO	0.20	0.25	0.30	0.33	0.36	E
	for Romex	0.20	0.25	0.30	0.33	0.36	E
	PLASTER RINGS						
	1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
	5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
	3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
	1" Raised	0.05	0.07	0.09	0.10	0.11	E

OCTAGON BOX COVERS & RINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
------	------------	------	---------	-----------	---------	--------------

1-GANG PLASTER RING



1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E



COVERS

Blank	0.03	0.05	0.07	0.08	0.08	E
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1/2" KO	0.04	0.06	0.08	0.09	0.10	E
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Duplex	0.04	0.06	0.08	0.09	0.10	E
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Switch	0.04	0.06	0.08	0.09	0.10	E
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OCTAGON BOX FOR CONCRETE

3" Deep	0.20	0.25	0.30	0.33	0.36	E
4" Deep	0.20	0.25	0.30	0.33	0.36	E
5" Deep	0.25	0.30	0.35	0.39	0.42	E
6" Deep	0.25	0.30	0.35	0.39	0.42	E



Flat	0.06	0.08	0.10	0.11	0.12	E
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4" SQUARE BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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4" SQUARE BOX

1 1/2" Deep		0.20	0.25	0.30	0.33	0.36 E
2 1/8" Deep		0.20	0.25	0.30	0.33	0.36 E



1 1/2" Deep - Romex

	0.20	0.25	0.30	0.33	0.36 E
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1 1/2" Deep

	0.19	0.22	0.25	0.28	0.30 E
--	------	------	------	------	--------



1 1/2" Deep - Romex

	0.19	0.22	0.25	0.28	0.30 E
--	------	------	------	------	--------



1 1/2" Deep

	0.19	0.22	0.25	0.28	0.30 E
--	------	------	------	------	--------



EXTENSION BOXES

1 1/2" Deep		0.24	0.28	0.32	0.35	0.39 E
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4" PLASTER RINGS & TILE COVERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



ROUND PLASTER RING

1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E



1-GANG PLASTER RING

1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E



2-GANG PLASTER RING

1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E



1-GANG TILE COVER

1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E
1 1/2" Raised	0.06	0.08	0.10	0.11	0.12	E
2" Raised	0.07	0.09	0.11	0.12	0.13	E



2-GANG TILE COVER

1/2" Raised	0.03	0.05	0.07	0.08	0.08	E
5/8" Raised	0.03	0.05	0.07	0.08	0.08	E
3/4" Raised	0.04	0.06	0.08	0.09	0.10	E
1" Raised	0.05	0.07	0.09	0.10	0.11	E
1 1/2" Raised	0.06	0.08	0.10	0.11	0.12	E
2" Raised	0.07	0.09	0.11	0.12	0.13	E

4" SQUARE COVERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Blank Cover	0.03	0.05	0.07	0.08	0.08	E
	Cover 1/2" KO	0.03	0.05	0.07	0.08	0.08	E
	Cover 1-Switch	0.04	0.07	0.10	0.11	0.12	E
	Cover 2-Switches	0.06	0.09	0.12	0.13	0.15	E
	Cover 1-Duplex	0.04	0.07	0.10	0.11	0.12	E
	Cover 2-Duplex	0.06	0.09	0.12	0.13	0.15	E

4 11/16" SQUARE BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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4 11/16"

1 1/2" Deep		0.20	0.25	0.30	0.33	0.36 E
2 1/8" Deep		0.20	0.25	0.30	0.33	0.36 E



4 11/16"

1 1/2" Deep		0.19	0.22	0.25	0.28	0.30 E
2 1/8" Deep		0.19	0.22	0.25	0.28	0.30 E



4 11/16"

4 11/16" BOX EXTENSION

1 1/2" Deep		0.24	0.28	0.32	0.35	0.39 E
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4 11/16" PLASTER RINGS & TILE COVERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



4 11/16"

ROUND PLASTER RINGS

1/2" Raised	0.04	0.06	0.08	0.09	0.10	E
5/8" Raised	0.04	0.06	0.08	0.09	0.10	E
3/4" Raised	0.05	0.07	0.09	0.10	0.11	E
1" Raised	0.06	0.08	0.10	0.11	0.12	E



4 11/16"

1-GANG PLASTER RINGS

1/2" Raised	0.04	0.06	0.08	0.09	0.10	E
5/8" Raised	0.04	0.06	0.08	0.09	0.10	E
3/4" Raised	0.05	0.07	0.09	0.10	0.11	E
1" Raised	0.06	0.08	0.10	0.11	0.12	E



4 11/16"

2-GANG PLASTER RINGS

1/2" Raised	0.05	0.07	0.09	0.10	0.11	E
5/8" Raised	0.05	0.07	0.09	0.10	0.11	E
3/4" Raised	0.06	0.08	0.10	0.11	0.12	E
1" Raised	0.07	0.09	0.11	0.12	0.13	E



4 11/16"

1-GANG TILE COVERS

1/2" Raised	0.04	0.06	0.08	0.09	0.10	E
5/8" Raised	0.04	0.06	0.08	0.09	0.10	E
3/4" Raised	0.05	0.07	0.09	0.10	0.11	E
1" Raised	0.06	0.08	0.10	0.11	0.12	E
1 1/2" Raised	0.07	0.09	0.11	0.12	0.13	E
2" Raised	0.08	0.10	0.12	0.13	0.15	E



4 11/16"

2-GANG TILE COVERS

1/2" Raised	0.05	0.07	0.09	0.10	0.11	E
5/8" Raised	0.05	0.07	0.09	0.10	0.11	E
3/4" Raised	0.06	0.08	0.10	0.11	0.12	E
1" Raised	0.07	0.09	0.11	0.12	0.13	E
1 1/2" Raised	0.08	0.10	0.12	0.13	0.15	E
2" Raised	0.09	0.11	0.13	0.14	0.16	E

4 11/16" SQUARE COVERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
------	------------	------	---------	-----------	---------	--------------



Blank Cover

0.04

0.06

0.08

0.09

0.10

E

4 11/16"



Cover 1/2" KO

0.04

0.06

0.08

0.09

0.10

E

4 11/16"



Cover 1-Switch

0.05

0.08

0.11

0.12

0.13

E

4 11/16"



Cover 2-Switches

0.07

0.10

0.13

0.14

0.16

E

4 11/16"



Cover 1-Duplex

0.05

0.08

0.11

0.12

0.13

E

4 11/16"



Cover 2-Duplex

0.07

0.10

0.13

0.14

0.16

E

4 11/16"

HANDY BOXES & COVERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Handy Box

0.12 0.15 0.18 0.20 0.22 E



Handy Box With Bracket

0.10 0.13 0.15 0.17 0.18 E



Handy Box With Bracket

0.10 0.13 0.15 0.17 0.18 E



Handy Box Extension

0.15 0.20 0.25 0.28 0.30 E



Handy Box Covers

Blank	0.02	0.03	0.04	0.04	0.05	E
Switch	0.02	0.03	0.04	0.04	0.05	E
Duplex	0.02	0.03	0.04	0.04	0.05	E
Single Receptacle	0.03	0.04	0.05	0.06	0.06	E

SWITCH BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Switch Box Gangable	0.12	0.16	0.22	0.24	0.27	E
	Switch Box With Bracket	0.09	0.13	0.15	0.17	0.18	E
	CUT-IN BOX	0.15	0.17	0.19	0.21	0.23	E
	Switch Box With Bracket	0.09	0.13	0.15	0.17	0.18	E
	Switch Box With Nails	0.09	0.13	0.15	0.17	0.18	E
	Switch Box 2-Gang	0.15	0.20	0.25	0.28	0.30	E

SWITCH BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Switch Box With Bracket 2-C	0.12	0.15	0.18	0.20	0.22	E
	Partition Box	0.24	0.30	0.36	0.40	0.44	E
	Thru-Wall Box	0.18	0.22	0.26	0.29	0.32	E
	Masonry Switch Boxes						
	1-Gang	0.17	0.20	0.23	0.25	0.28	E
	2-Gang	0.19	0.22	0.25	0.28	0.30	E
	3-Gang	0.22	0.25	0.28	0.31	0.34	E
	4-Gang	0.24	0.28	0.32	0.35	0.39	E
	5-Gang	0.28	0.32	0.36	0.40	0.44	E
	6-Gang	0.30	0.35	0.40	0.44	0.48	E
	Thru-Wall Masonry Switch Boxes						
	1-Gang	0.17	0.26	0.23	0.25	0.28	E
	2-Gang	0.19	0.28	0.25	0.28	0.30	E

SWITCH & CAST ALUMINUM BOXES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Multi-Gang Switch Boxes

1-Gang	0.17	0.20	0.23	0.25	0.28	E
2-Gang	0.19	0.22	0.25	0.28	0.30	E
3-Gang	0.22	0.25	0.28	0.31	0.34	E
4-Gang	0.24	0.28	0.32	0.35	0.39	E
5-Gang	0.28	0.32	0.36	0.40	0.44	E
6-Gang	0.30	0.35	0.40	0.44	0.48	E



Multi-Gang Plaster Rings

1-Gang	0.05	0.07	0.09	0.10	0.11	E
2-Gang	0.06	0.08	0.10	0.11	0.12	E
3-Gang	0.08	0.10	0.12	0.13	0.15	E
4-Gang	0.10	0.12	0.14	0.15	0.17	E
5-Gang	0.12	0.14	0.16	0.18	0.19	E
6-Gang	0.14	0.16	0.18	0.20	0.22	E



Cast Aluminum, 1-Gang Boxes

3 - 1/2" HUBS	0.27	0.30	0.33	0.36	0.40	E
4 - 1/2" HUBS	0.32	0.35	0.39	0.43	0.47	E
5 - 1/2" HUBS	0.36	0.40	0.44	0.48	0.53	E
3 - 3/4" HUBS	0.29	0.32	0.35	0.39	0.42	E
4 - 3/4" HUBS	0.34	0.38	0.42	0.46	0.51	E
5 - 3/4" HUBS	0.41	0.45	0.50	0.55	0.61	E



Cast Aluminum, 2-Gang Boxes

3 - 1/2" HUBS	0.32	0.35	0.39	0.42	0.47	E
4 - 1/2" HUBS	0.36	0.40	0.44	0.48	0.53	E
5 - 1/2" HUBS	0.41	0.45	0.50	0.54	0.60	E
6 - 1/2" HUBS	0.45	0.50	0.55	0.61	0.67	E
3 - 3/4" HUBS	0.34	0.38	0.42	0.46	0.51	E
4 - 3/4" HUBS	0.39	0.43	0.47	0.52	0.57	E
5 - 3/4" HUBS	0.43	0.48	0.53	0.58	0.64	E
6 - 3/4" HUBS	0.48	0.53	0.58	0.64	0.71	E



Cast Aluminum, Round Boxes

3" ROUND	0.32	0.35	0.39	0.42	0.47	E
4" ROUND	0.36	0.40	0.44	0.48	0.53	E

ALUMINUM BOX COVERS & FITTINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Cast Aluminum, Round Covers



3" BLANK	0.05	0.05	0.06	0.06	0.07	E
3", 1 - 1/2" HUB	0.06	0.07	0.08	0.08	0.09	E
3", 3 - 1/2" HUB	0.11	0.12	0.13	0.15	0.16	E
4" BLANK	0.05	0.06	0.07	0.07	0.08	E
4", 1 - 1/2" HUB	0.08	0.09	0.10	0.11	0.12	E
4", 3 - 1/2" HUB	0.13	0.14	0.15	0.17	0.19	E



Cast Aluminum Covers

1-Gang Blank	0.05	0.05	0.06	0.06	0.07	E
2-Gang Blank	0.06	0.07	0.08	0.08	0.09	E



Duplex	0.06	0.08	0.10	0.11	0.12	E
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In Use Cover	0.10	0.12	0.14	0.15	0.17	E
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1-Hub Cover	0.08	0.10	0.12	0.13	0.15	E
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3-Hub Cover	0.10	0.12	0.14	0.16	0.17	E
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Lamp Holder	0.20	0.25	0.30	0.33	0.36	E
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FLOOR BOXES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Round Floor Boxes

Adjustable	0.65	0.75	0.85	0.94	1.03	E
Non-Adjustable	0.80	0.90	1.00	1.10	1.21	E



Carpet Ring

0.15	0.20	0.25	0.28	0.30	E
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Single Receptacle Cover

0.16	0.20	0.24	0.26	0.29	E
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Duplex Receptacle Cover

0.12	0.14	0.16	0.18	0.19	E
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Surface Mounted Floor Fitti

Blank Plate	0.20	0.25	0.30	0.33	0.36	E
Duplex Plate	0.04	0.05	0.06	0.07	0.07	E
GFCI Plate	0.03	0.04	0.05	0.06	0.06	E



Round Floor Boxes - Plastic

Non-Adjustable	0.70	0.75	0.80	0.88	0.97	E
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FLOOR BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Square Floor Boxes

1-Gang		0.80	1.00	1.20	1.32	1.45 E
2-Gang		1.00	1.25	1.50	1.65	1.82 E



3-Gang		1.20	1.50	1.80	1.98	2.18 E
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Square Floor Box Flanges

1-Gang		0.20	0.25	0.30	0.33	0.36 E
2-Gang		0.24	0.30	0.36	0.40	0.44 E
3-Gang		0.28	0.35	0.42	0.46	0.51 E



Square Floor Box Covers

1-Gang		0.16	0.20	0.24	0.26	0.29 E
2-Gang		0.18	0.22	0.26	0.29	0.31 E
3-Gang		0.20	0.24	0.28	0.31	0.34 E



Poke-Thru w/Duplex		0.75	1.00	1.25	1.38	1.51 E
Poke-Thru Data		0.75	1.00	1.25	1.38	1.51 E

PLASTIC BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Round Boxes

With Nails	0.12	0.15	0.18	0.20	0.22	E
With Bracket	0.12	0.15	0.18	0.20	0.22	E
With Bar Hanger	0.17	0.20	0.23	0.25	0.28	E



Plaster Rings

Round	0.03	0.05	0.08	0.09	0.10	E
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Square Boxes

With Nails	0.15	0.18	0.21	0.23	0.25	E
With Bracket	0.15	0.18	0.21	0.23	0.25	E
With Bar Hanger	0.20	0.23	0.26	0.29	0.31	E



Square Boxes

1-Gang	0.03	0.05	0.07	0.08	0.08	E
2-Gang	0.03	0.05	0.07	0.08	0.08	E
Round	0.03	0.05	0.07	0.08	0.08	E
Blank	0.03	0.05	0.07	0.08	0.08	E



Fan Box

0.17	0.20	0.23	0.25	0.28	E
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PLASTIC BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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SWITCH BOXES

1-GANG	0.12	0.15	0.18	0.20	0.22	E
2-GANG	0.14	0.17	0.20	0.22	0.24	E
3-Gang	0.20	0.25	0.30	0.33	0.36	E



Adjustable Boxes

1-Gang	0.20	0.25	0.30	0.33	0.36	E
2-Gang	0.25	0.30	0.35	0.38	0.45	E



Cut-In Boxes

1-Gang	0.40	0.50	0.60	0.66	0.73	E
2-Gang	0.50	0.60	0.70	0.77	0.85	E



CABLE ring

1-GANG	0.12	0.15	0.18	0.20	0.22	E
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2-GANG	0.15	0.18	0.21	0.24	0.27	E
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FS & FD BOXES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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1-GANG

1-HUB

0.40

0.50

0.60

0.66

0.73

E



2-HUB

0.60

0.70

0.80

0.88

0.97

E



3-HUB

0.80

0.90

1.00

1.10

1.21

E



4-HUB

1.00

1.10

1.20

1.32

1.45

E



2-GANG

1-HUB

0.40

0.50

0.60

0.66

0.73

E



2-HUB

0.60

0.70

0.80

0.88

0.97

E



1-HUB

0.45

0.55

0.65

0.72

0.79

E

FS & FD BOX COVERS

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Duplex		0.08	0.10	0.12	0.13	0.15	E
	Switch		0.09	0.11	0.13	0.15	0.16	E
	Blank		0.06	0.08	0.10	0.11	0.12	E
	Duplex with Door		0.10	0.12	0.14	0.16	0.17	E
	2-Gang Duplex		0.10	0.12	0.14	0.16	0.17	E
	2-Gang Switch		0.11	0.14	0.17	0.18	0.20	E
	2-Gang Duplex & Switch		0.12	0.15	0.18	0.20	0.22	E
	2-Gang Blank		0.08	0.10	0.12	0.13	0.15	E

PVC BOXES & COVERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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1-GANG

1-HUB		0.20	0.30	0.40	0.44	0.48 E
2-HUB		0.30	0.40	0.50	0.55	0.61 E
3-HUB		0.40	0.50	0.60	0.66	0.73 E
4-HUB		0.50	0.60	0.70	0.77	0.85 E



2-GANG

1-HUB		0.25	0.35	0.45	0.50	0.54 E
2-HUB		0.35	0.45	0.55	0.61	0.67 E



DUPLEX COVER

1-GANG		0.06	0.08	0.10	0.11	0.12 E
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2-GANG

		0.08	0.10	0.12	0.13	0.15 E
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1-GANG

		0.06	0.08	0.10	0.11	0.12 E
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IN USE COVER

		0.10	0.12	0.14	0.15	0.17 E
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1-GANG
2-GANG

		0.06	0.08	0.10	0.11	0.12 E
		0.08	0.10	0.12	0.13	0.15 E



1-GANG
2-GANG

		0.07	0.09	0.11	0.12	0.13 E
		0.09	0.11	0.13	0.14	0.16 E

BOX SUPPORTS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	BOX SUPPORT	0.06	0.07	0.08	0.09	0.10	E
	1-GANG PLATE MOUNTING BRACKET	0.08	0.10	0.12	0.13	0.15	E
	2-GANG PLATE MOUNTING BRACKET	0.10	0.12	0.14	0.15	0.17	E
	SWITCH BOX SUPPORT	0.05	0.06	0.07	0.08	0.08	E
	4" SQUARE BOX SUPPORT	0.05	0.06	0.07	0.08	0.08	E
	UNIVERSAL BOX SUPPORT	0.08	0.09	0.10	0.11	0.12	E
	FAR SIDE BOX SUPPORT	0.05	0.06	0.07	0.08	0.08	E

BOX SUPPORTS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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BOX MOUNTING BRACKET		0.15	0.20	0.25	0.28	0.30 E
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FLOOR MOUNT BOX SUPP		0.10	0.12	0.14	0.15	0.17 E
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BAR HANGER		0.13	0.15	0.17	0.19	0.21 E
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OLD WORK BOX SUPPORT		0.05	0.06	0.07	0.08	0.08 E
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TEE BAR BOX SUPPORT		0.04	0.05	0.06	0.07	0.07 E
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TEE BAR HANGER		0.06	0.07	0.08	0.09	0.10 E
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BOX FITTINGS

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
		FIXTURE STUDS	0.05	0.06	0.07	0.08	0.08	E
		GROUNDING CLIP	0.02	0.02	0.03	0.03	0.04	E
		GROUNDING SCREW	0.02	0.02	0.03	0.03	0.04	E
		GROUNDING SCREW W/WIF	0.02	0.02	0.03	0.03	0.04	E
		FIXTURE HANGER	0.02	0.02	0.03	0.03	0.04	E
		FIXTURE STUD	0.02	0.03	0.04	0.04	0.05	E
		DEVICE EXTENDERS	0.08	0.10	0.12	0.13	0.15	E

BOX SIDING MOUNT ACCESSORIES

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	BRACKET		0.25	0.30	0.35	0.39	0.42	E
	WP BOX FOR SIDING		0.20	0.25	0.30	0.33	0.36	E
	DOORBELL MOUNTING BRACKET		0.15	0.20	0.25	0.28	0.30	E
	WP BOX FOR SIDING		0.20	0.25	0.30	0.33	0.36	E
	Cathedral Ceiling Box		0.35	0.40	0.45	0.50	0.54	E
	Cathedral Ceiling Box		0.35	0.40	0.45	0.50	0.54	E

PULLBOXES - NEMA 1

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

4" DEEP



4' X 4"	0.32	0.40	0.48	0.53	0.58	E
4" X 6"	0.40	0.50	0.60	0.66	0.73	E
6" X 6"	0.44	0.55	0.66	0.73	0.80	E
8" X 6"	0.48	0.60	0.72	0.79	0.87	E
8" X 8"	0.56	0.70	0.84	0.92	1.02	E
10" X 8"	0.60	0.75	0.90	0.99	1.09	E
10" X 10"	0.64	0.80	0.96	1.06	1.16	E
10" X 12"	0.68	0.85	1.02	1.12	1.23	E
12" X 12"	0.72	0.90	1.08	1.19	1.31	E
18" X 12"	1.12	1.40	1.68	1.85	2.03	E
18" X 15"	1.28	1.60	1.92	2.11	2.32	E
18" X 18"	1.44	1.80	2.16	2.38	2.61	E
24' X 12"	1.56	1.95	2.34	2.57	2.83	E
24' X 18"	1.68	2.10	2.52	2.77	3.05	E
24' X 24"	1.80	2.25	2.70	2.97	3.27	E
36" X 24"	2.00	2.50	3.00	3.30	3.63	E

6" DEEP

6" X 6"	0.48	0.60	0.72	0.79	0.87	E
8" X 6"	0.52	0.65	0.78	0.86	0.94	E
8" X 8"	0.60	0.75	0.90	0.99	1.09	E
10" X 8"	0.68	0.85	1.02	1.12	1.23	E
10" X 10"	0.72	0.90	1.08	1.19	1.31	E
12" X 10"	0.76	0.95	1.14	1.25	1.38	E
12" X 12"	0.80	1.00	1.20	1.32	1.45	E
18" X 12"	1.24	1.55	1.86	2.05	2.25	E
18" X 15"	1.40	1.75	2.10	2.31	2.54	E
18" X 18"	1.60	2.00	2.40	2.64	2.90	E
24" X 12"	1.72	2.15	2.58	2.84	3.12	E
24" X 18"	1.84	2.30	2.76	3.04	3.34	E
24' X 24"	2.00	2.50	3.00	3.30	3.63	E
36" X 24"	2.20	2.75	3.30	3.63	3.99	E

8" DEEP

8" X 8"	0.68	0.85	1.02	1.12	1.23	E
12" X 12"	0.88	1.10	1.32	1.45	1.60	E
18" X 12"	1.36	1.70	2.04	2.24	2.47	E
18" X 18"	1.76	2.20	2.64	2.90	3.19	E
24" X 12"	1.92	2.40	2.88	3.17	3.48	E
24" X 18"	2.04	2.55	3.06	3.37	3.70	E
24' X 24"	2.20	2.75	3.30	3.63	3.99	E
36" X 24"	2.40	3.00	3.60	3.96	4.36	E

PULLBOXES - NEMA 3R

LABOR UNITS



SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
4" DEEP						
4' X 4"		0.36	0.45	0.54	0.59	0.65 E
6" X 4"		0.48	0.60	0.72	0.79	0.87 E
6" X 6"		0.52	0.65	0.78	0.86	0.94 E
8" X 6"		0.56	0.70	0.84	0.92	1.02 E
8" X 8"		0.64	0.80	0.96	1.06	1.16 E
10" X 8"		0.68	0.85	1.02	1.12	1.23 E
10" X 10"		0.72	0.90	1.08	1.19	1.31 E
10" X 12"		0.80	1.00	1.20	1.32	1.45 E
12" X 12"		0.84	1.05	1.26	1.39	1.52 E
18" X 12"		1.28	1.60	1.92	2.11	2.32 E
18" X 18"		1.68	2.10	2.52	2.77	3.05 E
6" DEEP						
6" X 6"		0.56	0.70	0.84	0.92	1.02 E
8" X 6"		0.60	0.75	0.90	0.99	1.09 E
8" X 8"		0.72	0.90	1.08	1.19	1.31 E
10" X 8"		0.76	0.95	1.14	1.25	1.38 E
10" X 10"		0.80	1.00	1.20	1.32	1.45 E
10" X 12"		0.88	1.10	1.32	1.45	1.60 E
12" X 12"		0.92	1.15	1.38	1.52	1.67 E
18" X 12"		1.40	1.75	2.10	2.31	2.54 E
18" X 18"		1.84	2.30	2.76	3.04	3.34 E
24" X 24"		2.28	2.85	3.42	3.76	4.14 E
8" DEEP						
12" X 12"		1.00	1.25	1.50	1.65	1.82 E
18" X 12"		1.56	1.95	2.34	2.57	2.83 E
18" X 18"		2.04	2.55	3.06	3.37	3.70 E
24" X 18"		2.32	2.90	3.48	3.83	4.21 E
24" X 24"		2.52	3.15	3.78	4.16	4.57 E
10" DEEP						
18" X 12"		1.72	2.15	2.58	2.84	3.12 E
18" X 18"		2.24	2.80	3.36	3.70	4.07 E
24" X 18"		2.56	3.20	3.84	4.22	4.65 E
24" X 24"		2.80	3.50	4.20	4.62	5.08 E
30" X 30"		3.04	3.80	4.56	5.02	5.52 E
12" DEEP						
24" X 24"		3.08	3.85	4.62	5.08	5.59 E
24" X 36"		3.36	4.20	5.04	5.54	6.10 E
30" X 36"		3.60	4.50	5.40	5.94	6.53 E
36" X 36"		3.84	4.80	5.76	6.34	6.97 E

PULLBOXES - NEMA 12/13

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



4" DEEP

4' X 4"	0.36	0.45	0.54	0.59	0.65	E
6" X 4"	0.48	0.60	0.72	0.79	0.87	E
6" X 6"	0.52	0.65	0.78	0.86	0.94	E
8" X 6"	0.56	0.70	0.84	0.92	1.02	E
8" X 8"	0.64	0.80	0.96	1.06	1.16	E
10" X 8"	0.68	0.85	1.02	1.12	1.23	E
10" X 10"	0.72	0.90	1.08	1.19	1.31	E

6" DEEP

6" X 6"	0.56	0.70	0.84	0.92	1.02	E
8" X 6"	0.60	0.75	0.90	0.99	1.09	E
8" X 8"	0.72	0.90	1.08	1.19	1.31	E
10" X 8"	0.76	0.95	1.14	1.25	1.38	E
10" X 10"	0.80	1.00	1.20	1.32	1.45	E
12" X 10"	0.88	1.10	1.32	1.45	1.60	E
12" X 12"	0.92	1.15	1.38	1.52	1.67	E
14" X 12"	1.08	1.35	1.62	1.78	1.96	E
16" X 14"	1.40	1.75	2.10	2.31	2.54	E



HINGE
CLAMP
COVER

4" DEEP

4' X 4"	0.36	0.45	0.54	0.59	0.65	E
6" X 4"	0.48	0.60	0.72	0.79	0.87	E
6" X 6"	0.52	0.65	0.78	0.86	0.94	E
8" X 6"	0.56	0.70	0.84	0.92	1.02	E
8" X 8"	0.64	0.80	0.96	1.06	1.16	E
10" X 8"	0.68	0.85	1.02	1.12	1.23	E
10" X 10"	0.72	0.90	1.08	1.19	1.31	E
12" X 6"	0.60	0.75	0.90	0.99	1.09	E

6" DEEP

6" X 6"	0.56	0.70	0.84	0.92	1.02	E
8" X 6"	0.60	0.75	0.90	0.99	1.09	E
8" X 8"	0.72	0.90	1.08	1.19	1.31	E
10" X 8"	0.76	0.95	1.14	1.25	1.38	E
10" X 10"	0.80	1.00	1.20	1.32	1.45	E
12" X 10"	0.88	1.10	1.32	1.45	1.60	E
12" X 12"	0.92	1.15	1.38	1.52	1.67	E
14" X 12"	1.08	1.35	1.62	1.78	1.96	E
16" X 10"	1.28	1.60	1.92	2.11	2.32	E
16" X 14"	1.40	1.75	2.10	2.31	2.54	E

PULLBOXES - NEMA 12/13

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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6" DEEP



6" DEEP
SINGLE
DOOR
ENCLOSURE

12" X 24"	1.48	1.85	2.22	2.44	2.69	E
16" X 12"	1.56	1.95	2.34	2.57	2.83	E
16" X 16"	1.64	2.05	2.46	2.71	2.98	E
16" X 20"	1.72	2.15	2.58	2.84	3.12	E
20" X 12"	1.80	2.25	2.70	2.97	3.27	E
20" X 16"	1.88	2.35	2.82	3.10	3.41	E
20" X 20"	1.96	2.45	2.94	3.23	3.56	E
20" X 24"	2.04	2.55	3.06	3.37	3.70	E
24" X 12"	2.12	2.65	3.18	3.50	3.85	E
24" X 16"	2.20	2.75	3.30	3.63	3.99	E
24" X 20"	2.28	2.85	3.42	3.76	4.14	E
24" X 24"	2.36	2.95	3.54	3.89	4.28	E
30" X 16"	2.44	3.05	3.66	4.03	4.43	E
30" X 20"	2.52	3.15	3.78	4.16	4.57	E
30" X 24"	2.60	3.25	3.90	4.29	4.72	E
36" X 24"	2.68	3.35	4.02	4.42	4.86	E
36" X 30"	2.76	3.45	4.14	4.55	5.01	E

8" DEEP



8" DEEP
SINGLE
DOOR
ENCLOSURE

12" X 24"	1.52	1.90	2.28	2.51	2.76	E
16" X 12"	1.60	2.00	2.40	2.64	2.90	E
16" X 16"	1.68	2.10	2.52	2.77	3.05	E
16" X 20"	1.76	2.20	2.64	2.90	3.19	E
20" X 12"	1.84	2.30	2.76	3.04	3.34	E
20" X 16"	1.92	2.40	2.88	3.17	3.48	E
20" X 20"	2.00	2.50	3.00	3.30	3.63	E
20" X 24"	2.08	2.60	3.12	3.43	3.78	E
24" X 12"	2.16	2.70	3.24	3.56	3.92	E
24" X 16"	2.24	2.80	3.36	3.70	4.07	E
24" X 20"	2.32	2.90	3.48	3.83	4.21	E
24" X 24"	2.40	3.00	3.60	3.96	4.36	E
24" X 30"	2.44	3.05	3.66	4.03	4.43	E
30" X 20"	2.56	3.20	3.84	4.22	4.65	E
30" X 24"	2.64	3.30	3.96	4.36	4.79	E
30" X 30"	2.68	3.35	4.02	4.42	4.86	E
36" X 24"	2.72	3.40	4.08	4.49	4.94	E
36" X 30"	2.80	3.50	4.20	4.62	5.08	E
36" X 36"	2.88	3.60	4.32	4.75	5.23	E
42" X 24"	3.00	3.75	4.50	4.95	5.45	E
42" X 30"	3.08	3.85	4.62	5.08	5.59	E
42" X 36"	3.16	3.95	4.74	5.21	5.74	E
48" X 24"	3.28	4.10	4.92	5.41	5.95	E
48" X 30"	3.36	4.20	5.04	5.54	6.10	E
48" X 36"	3.44	4.30	5.16	5.68	6.24	E
60" X 36"	3.60	4.50	5.40	5.94	6.53	E

PULLBOXES - NEMA 12/13

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
10" DEEP							
 10" DEEP SINGLE DOOR ENCLOSURE	16" X 12"		1.84	2.30	2.76	3.04	3.34 E
	20" X 16"		2.20	2.75	3.30	3.63	3.99 E
	20" X 20"		2.32	2.90	3.48	3.83	4.21 E
	24" X 12"		2.48	3.10	3.72	4.09	4.50 E
	24" X 20"		2.68	3.35	4.02	4.42	4.86 E
	24" X 24"		2.76	3.45	4.14	4.55	5.01 E
	30" X 20"		2.96	3.70	4.44	4.88	5.37 E
	30" X 24"		3.04	3.80	4.56	5.02	5.52 E
	36" X 24"		3.12	3.90	4.68	5.15	5.66 E
	36" X 30"		3.24	4.05	4.86	5.35	5.88 E
	42" X 30"		3.52	4.40	5.28	5.81	6.39 E
	42" X 36"		3.64	4.55	5.46	6.01	6.61 E
	48" X 30"		3.88	4.85	5.82	6.40	7.04 E
	48" X 36"		3.96	4.95	5.94	6.53	7.19 E
	60" X 36"		4.16	5.20	6.24	6.86	7.55 E
12" DEEP							
 12" DEEP SINGLE DOOR ENCLOSURE	24" X 20"		3.08	3.85	4.62	5.08	5.59 E
	24" X 24"		3.16	3.95	4.74	5.21	5.74 E
	30" X 24"		3.48	4.35	5.22	5.74	6.32 E
	30" X 30"		3.56	4.45	5.34	5.87	6.46 E
	36" X 24"		3.60	4.50	5.40	5.94	6.53 E
	36" X 30"		3.72	4.65	5.58	6.14	6.75 E
	36" X 36"		3.80	4.75	5.70	6.27	6.90 E
	42" X 30"		4.04	5.05	6.06	6.67	7.33 E
	42" X 36"		4.20	5.25	6.30	6.93	7.62 E
	48" X 36"		4.56	5.70	6.84	7.52	8.28 E
	60" X 36"		4.80	6.00	7.20	7.92	8.71 E
	72" X 36"		5.60	7.00	8.40	9.24	10.16 E
18" DEEP							
	24" X 20"		3.56	4.45	5.34	5.87	6.46 E
	24" X 24"		3.64	4.55	5.46	6.01	6.61 E
	30" X 24"		4.00	5.00	6.00	6.60	7.26 E
	30" X 30"		4.08	5.10	6.12	6.73	7.41 E
	42" X 36"		4.84	6.05	7.26	7.99	8.78 E
	48" X 36"		5.24	6.55	7.86	8.65	9.51 E
	60" X 36"		5.52	6.90	8.28	9.11	10.02 E
20" DEEP							
	30" X 24"		4.60	5.75	6.90	7.59	8.35 E
	36" X 30"		4.92	6.15	7.38	8.12	8.93 E
	48" X 36"		6.04	7.55	9.06	9.97	10.96 E
	60" X 36"		6.36	7.95	9.54	10.49	11.54 E

WIREWAY - NEMA 1

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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NEMA 1

3" X 3"

12" Long	0.36	0.40	0.44	0.48	0.53	E
24" Long	0.54	0.60	0.66	0.73	0.80	E
36" Long	0.63	0.70	0.77	0.85	0.93	E
48" Long	0.81	0.90	0.99	1.09	1.20	E
60" Long	0.99	1.10	1.21	1.33	1.46	E
120" Long	1.26	1.40	1.54	1.69	1.86	E

4" X 4"

12" Long	0.45	0.50	0.55	0.61	0.67	E
24" Long	0.63	0.70	0.77	0.85	0.93	E
36" Long	0.72	0.80	0.88	0.97	1.06	E
48" Long	0.90	1.00	1.10	1.21	1.33	E
60" Long	1.08	1.20	1.32	1.45	1.60	E
120" Long	1.35	1.50	1.65	1.82	2.00	E

6" X 6"

12" Long	0.54	0.60	0.66	0.73	0.80	E
24" Long	0.72	0.80	0.88	0.97	1.06	E
36" Long	0.81	0.90	0.99	1.09	1.20	E
48" Long	0.99	1.10	1.21	1.33	1.46	E
60" Long	1.17	1.30	1.43	1.57	1.73	E
120" Long	1.44	1.60	1.76	1.94	2.13	E

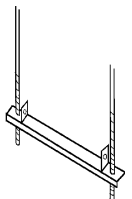
8" X 8"

12" Long	0.63	0.70	0.77	0.85	0.93	E
24" Long	0.81	0.90	0.99	1.09	1.20	E
36" Long	0.90	1.00	1.10	1.21	1.33	E
48" Long	1.08	1.20	1.32	1.45	1.60	E
60" Long	1.26	1.40	1.54	1.69	1.86	E
120" Long	1.53	1.70	1.87	2.06	2.26	E



COUPLINGS

3" X 3"	0.14	0.15	0.17	0.18	0.20	E
4" X 4"	0.18	0.20	0.22	0.24	0.27	E
6" X 6"	0.23	0.25	0.28	0.30	0.33	E
8" X 8"	0.27	0.30	0.33	0.36	0.40	E



HANGERS

6" Wide	0.14	0.15	0.17	0.18	0.20	E
12" Wide	0.18	0.20	0.22	0.24	0.27	E
18" Wide	0.23	0.25	0.28	0.30	0.33	E
24" Wide	0.27	0.30	0.33	0.36	0.40	E

WIREWAY FITTINGS - NEMA 1

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Elbows							
	3" X 3"		0.18	0.20	0.22	0.24	0.27	E
	4" X 4"		0.18	0.20	0.22	0.24	0.27	E
	6" X 6"		0.23	0.25	0.28	0.30	0.33	E
	8" X 8"		0.27	0.30	0.33	0.36	0.40	E
	Elbows 45							
	3" X 3"		0.18	0.20	0.22	0.24	0.27	E
	4" X 4"		0.18	0.20	0.22	0.24	0.27	E
	6" X 6"		0.23	0.25	0.28	0.30	0.33	E
	8" X 8"		0.27	0.30	0.33	0.36	0.40	E
	Tees							
	3" X 3"		0.23	0.25	0.28	0.30	0.33	E
	4" X 4"		0.23	0.25	0.28	0.30	0.33	E
	6" X 6"		0.27	0.30	0.33	0.36	0.40	E
	8" X 8"		0.36	0.40	0.44	0.48	0.53	E
	Cross							
	3" X 3"		0.27	0.30	0.33	0.36	0.40	E
	4" X 4"		0.27	0.30	0.33	0.36	0.40	E
	6" X 6"		0.32	0.35	0.39	0.42	0.47	E
	8" X 8"		0.41	0.45	0.50	0.54	0.60	E
	Flanges							
	3" X 3"		0.18	0.20	0.22	0.24	0.27	E
	4" X 4"		0.18	0.20	0.22	0.24	0.27	E
	6" X 6"		0.23	0.25	0.28	0.30	0.33	E
	8" X 8"		0.27	0.30	0.33	0.36	0.40	E
	End Plates							
	3" X 3"		0.09	0.10	0.11	0.12	0.13	E
	4" X 4"		0.09	0.10	0.11	0.12	0.13	E
	6" X 6"		0.14	0.15	0.17	0.18	0.20	E
	8" X 8"		0.18	0.20	0.22	0.24	0.27	E

WIREWAY - NEMA 3R

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



4" x 4"

12" Long	0.54	0.60	0.66	0.73	0.80	E
18" Long	0.63	0.70	0.77	0.85	0.93	E
24" Long	0.72	0.80	0.88	0.97	1.06	E
36" Long	0.81	0.90	0.99	1.09	1.20	E
48" Long	1.04	1.15	1.27	1.39	1.53	E
60" Long	1.26	1.40	1.54	1.69	1.86	E
72" Long	1.35	1.50	1.65	1.82	2.00	E

4" x 6"

12" Long	0.63	0.70	0.77	0.85	0.93	E
18" Long	0.72	0.80	0.88	0.97	1.06	E
24" Long	0.81	0.90	0.99	1.09	1.20	E
36" Long	0.90	1.00	1.10	1.21	1.33	E
48" Long	1.13	1.25	1.38	1.51	1.66	E
60" Long	1.35	1.50	1.65	1.82	2.00	E
72" Long	1.44	1.60	1.76	1.94	2.13	E

6" x 6"

12" Long	0.72	0.80	0.88	0.97	1.06	E
18" Long	0.81	0.90	0.99	1.09	1.20	E
24" Long	0.90	1.00	1.10	1.21	1.33	E
36" Long	0.99	1.10	1.21	1.33	1.46	E
48" Long	1.22	1.35	1.49	1.63	1.80	E
60" Long	1.44	1.60	1.76	1.94	2.13	E
72" Long	1.53	1.70	1.87	2.06	2.26	E
96" Long	1.80	2.00	2.20	2.42	2.66	E

8" x 8"

12" Long	0.81	0.90	0.99	1.09	1.20	E
18" Long	0.90	1.00	1.10	1.21	1.33	E
24" Long	0.99	1.10	1.21	1.33	1.46	E
36" Long	1.08	1.20	1.32	1.45	1.60	E
48" Long	1.31	1.45	1.60	1.75	1.93	E
60" Long	1.53	1.70	1.87	2.06	2.26	E
72" Long	1.62	1.80	1.98	2.18	2.40	E
96" Long	1.89	2.10	2.31	2.54	2.80	E
120" Long	2.07	2.30	2.53	2.78	3.06	E

10" x 10"

24" Long	1.08	1.20	1.32	1.45	1.60	E
36" Long	1.17	1.30	1.43	1.57	1.73	E
48" Long	1.40	1.55	1.71	1.88	2.06	E
60" Long	1.62	1.80	1.98	2.18	2.40	E
72" Long	1.71	1.90	2.09	2.30	2.53	E
96" Long	1.98	2.20	2.42	2.66	2.93	E

WIREWAY - NEMA 12/13**LABOR UNITS**

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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**4" X 4"**

12" Long	0.59	0.65	0.72	0.79	0.87	E
18" Long	0.68	0.75	0.83	0.91	1.00	E
24" Long	0.77	0.85	0.94	1.03	1.13	E
30" Long	0.81	0.90	0.99	1.09	1.20	E
36" Long	0.90	1.00	1.10	1.21	1.33	E
48" Long	1.13	1.25	1.38	1.51	1.66	E
60" Long	1.35	1.50	1.65	1.82	2.00	E
72" Long	1.49	1.65	1.82	2.00	2.20	E

6" x 6"

12" Long	0.77	0.85	0.94	1.03	1.13	E
18" Long	0.86	0.95	1.05	1.15	1.26	E
24" Long	0.95	1.05	1.16	1.27	1.40	E
30" Long	0.99	1.10	1.21	1.33	1.46	E
36" Long	1.08	1.20	1.32	1.45	1.60	E
48" Long	1.31	1.45	1.60	1.75	1.93	E
60" Long	1.53	1.70	1.87	2.06	2.26	E
72" Long	1.67	1.85	2.04	2.24	2.46	E

8" x 8"

12" Long	0.86	0.95	1.05	1.15	1.26	E
24" Long	1.04	1.15	1.27	1.39	1.53	E
36" Long	1.17	1.30	1.43	1.57	1.73	E
48" Long	1.40	1.55	1.71	1.88	2.06	E
60" Long	1.62	1.80	1.98	2.18	2.40	E

12" x 12"

24" Long	1.22	1.35	1.49	1.63	1.80	E
36" Long	1.35	1.50	1.65	1.82	2.00	E
48" Long	1.58	1.75	1.93	2.12	2.33	E
60" Long	1.80	2.00	2.20	2.42	2.66	E

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Gateway to the Electric Industry

SMALL CABINETS - NEMA 1

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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NEMA 1

4" Deep

6" X 6"	0.47	0.55	0.63	0.70	0.77	E
6" X 8"	0.55	0.65	0.75	0.82	0.90	E
8" X 8"	0.64	0.75	0.86	0.95	1.04	E
8" X 10"	0.68	0.80	0.92	1.01	1.11	E
10" X 12"	0.77	0.90	1.04	1.14	1.25	E
12" X 12"	0.81	0.95	1.09	1.20	1.32	E

6" Deep

6" X 8"	0.55	0.65	0.75	0.82	0.90	E
8" X 10"	0.64	0.75	0.86	0.95	1.04	E
10" X 10"	0.72	0.85	0.98	1.08	1.18	E
10" X 12"	0.77	0.90	1.04	1.14	1.25	E
12" X 12"	0.85	1.00	1.15	1.27	1.39	E
12" X 14"	0.89	1.05	1.21	1.33	1.46	E
12" X 16"	0.94	1.10	1.27	1.39	1.53	E
12" X 20"	1.02	1.20	1.38	1.52	1.67	E

8" Deep

12" X 14"	0.98	1.15	1.32	1.45	1.60	E
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Panels Only

6" X 6"	0.09	0.10	0.12	0.13	0.14	E
6" X 8"	0.10	0.12	0.14	0.15	0.17	E
8" X 8"	0.13	0.15	0.17	0.19	0.21	E
8" X 10"	0.14	0.17	0.20	0.22	0.24	E
10" X 10"	0.17	0.20	0.23	0.25	0.28	E
10" X 12"	0.19	0.22	0.25	0.28	0.31	E
12" X 12"	0.21	0.25	0.29	0.32	0.35	E
12" X 14"	0.23	0.27	0.31	0.34	0.38	E
12" X 16"	0.25	0.29	0.33	0.37	0.40	E
12" X 20"	0.27	0.32	0.37	0.40	0.45	E

LARGE CABINETS - NEMA 1

LABOR UNITS



NEMA 1

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
6 5/8" Deep						
12" X 16"		0.94	1.10	1.27	1.39	1.53 E
16" X 16"		1.19	1.40	1.61	1.77	1.95 E
16" X 20"		1.66	1.95	2.24	2.47	2.71 E
20" X 16"		1.79	2.10	2.42	2.66	2.92 E
20" X 20"		1.91	2.25	2.59	2.85	3.13 E
20" X 24"		1.96	2.30	2.65	2.91	3.20 E
24" X 24"		2.00	2.35	2.70	2.97	3.27 E
20" X 30"		2.13	2.50	2.88	3.16	3.48 E
24" X 36"		2.25	2.65	3.05	3.35	3.69 E
30" X 36"		2.38	2.80	3.22	3.54	3.90 E
8 5/8" Deep						
12" X 16"		1.02	1.20	1.38	1.52	1.67 E
16" X 20"		1.28	1.50	1.73	1.90	2.09 E
20" X 20"		2.00	2.35	2.70	2.97	3.27 E
20" X 24"		2.04	2.40	2.76	3.04	3.34 E
24" X 20"		2.04	2.40	2.76	3.04	3.34 E
24" X 24"		2.08	2.45	2.82	3.10	3.41 E
24" X 30"		2.17	2.55	2.93	3.23	3.55 E
30" X 30"		2.34	2.75	3.16	3.48	3.83 E
24" X 36"		2.34	2.75	3.16	3.48	3.83 E
30" X 36"		2.47	2.90	3.34	3.67	4.04 E
10 5/8" Deep						
20" X 24"		2.17	2.55	2.93	3.23	3.55 E
24" X 30"		2.30	2.70	3.11	3.42	3.76 E
12 5/8" Deep						
24" X 24"		2.30	2.70	3.11	3.42	3.76 E
30" X 36"		2.68	3.15	3.62	3.98	4.38 E

PUSHBUTTON ENCLOSURES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Pushbutton Enclosures - Oil Tight

2 3/4" Deep

PB-6

PB-1		0.30	0.35	0.40	0.44	0.49	E
PB-2		0.34	0.40	0.46	0.51	0.56	E
PB-3		0.38	0.45	0.52	0.57	0.63	E
PB-4		0.43	0.50	0.58	0.63	0.70	E
PB-5		0.47	0.55	0.63	0.70	0.77	E
PB-6VL		0.51	0.60	0.69	0.76	0.83	E



2 3/4" Deep

PB-6	PB-1	0.60	0.69	0.40	0.44	0.49	E
PB-9	PB-1	0.70	0.81	0.46	0.51	0.56	E
PB-12	PB-1	0.85	0.98	0.52	0.57	0.63	E
PB-16	PB-1	1.00	1.15	0.58	0.63	0.70	E
PB-25	PB-2	1.80	2.07	0.63	0.70	0.77	E

PULLBOXES EXPLOSION PROOF

LABOR UNITS



CAST IRON

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
4" Deep							
4" X 4"		0.55	0.65	0.75	0.82	0.90	E
5" X 5"		0.60	0.70	0.81	0.89	0.97	E
6" X 4"		0.60	0.70	0.81	0.89	0.97	E
6" X 6"		0.64	0.75	0.86	0.95	1.04	E
8" X 4"		0.64	0.75	0.86	0.95	1.04	E
8" X 6"		0.68	0.80	0.92	1.01	1.11	E
8" X 8"		0.68	0.80	0.92	1.01	1.11	E
10" X 6"		0.72	0.85	0.98	1.08	1.18	E
10" X 8"		0.72	0.85	0.98	1.08	1.18	E
10" X 10"		0.77	0.90	1.04	1.14	1.25	E
12" X 6"		0.81	0.95	1.09	1.20	1.32	E
12" X 8"		0.81	0.95	1.09	1.20	1.32	E
12" X 12"		0.85	1.00	1.15	1.27	1.39	E
6" Deep							
6" X 6"		0.64	0.75	0.86	0.95	1.04	E
8" X 6"		0.77	0.90	1.04	1.14	1.25	E
8" X 8"		0.77	0.90	1.04	1.14	1.25	E
10" X 6"		0.85	1.00	1.15	1.27	1.39	E
10" X 8"		0.85	1.00	1.15	1.27	1.39	E
10" X 10"		0.89	1.05	1.21	1.33	1.46	E
12" X 6"		0.94	1.10	1.27	1.39	1.53	E
12" X 8"		0.94	1.10	1.27	1.39	1.53	E
12" X 12"		0.98	1.15	1.32	1.45	1.60	E
14" X 8"		1.11	1.30	1.50	1.64	1.81	E
14" X 14"		1.28	1.50	1.73	1.90	2.09	E
18" X 6"		1.70	2.00	2.30	2.53	2.78	E
18" X 8"		1.70	2.00	2.30	2.53	2.78	E
18" X 12"		1.91	2.25	2.59	2.85	3.13	E
18" X 18"		2.13	2.50	2.88	3.16	3.48	E
8" Deep							
8" X 8"		0.89	1.05	1.21	1.33	1.46	E
10" X 8"		0.98	1.15	1.32	1.45	1.60	E
10" X 10"		1.02	1.20	1.38	1.52	1.67	E
12" X 8"		1.08	1.27	1.46	1.61	1.77	E
12" X 12"		1.11	1.30	1.50	1.64	1.81	E
14" X 8"		1.28	1.50	1.73	1.90	2.09	E
14" X 14"		1.49	1.75	2.01	2.21	2.44	E
16" X 12"		1.70	2.00	2.30	2.53	2.78	E
18" X 8"		1.96	2.30	2.65	2.91	3.20	E
18" X 12"		2.21	2.60	2.99	3.29	3.62	E
18" X 18"		2.47	2.90	3.34	3.67	4.04	E
24" X 24"		2.76	3.25	3.74	4.11	4.52	E

UNDERGROUND VAULTS & BOXES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



UNDERGROUND CONCRETE BOXES

10" X 12"	1.00	1.25	1.50	1.65	1.82	E
12" X 16"	1.25	1.50	1.75	1.93	2.12	E
18" X 24"	1.50	1.75	2.00	2.20	2.42	E



UTILITY VAULTS

36" X 36"	2.50	3.00	3.50	3.85	4.24	E
48" X 48"	4.00	4.50	5.00	5.50	6.05	E
48" X 60"	4.50	5.00	5.50	6.05	6.66	E
60" X 60"	5.00	5.75	6.25	6.88	7.56	E

CABLE TRAY

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Cable Tray

6" Wide	7.20	8.00	8.80	9.68	10.65	C
12" Wide	10.80	12.00	13.20	14.52	15.97	C
18" Wide	12.60	14.00	15.40	16.94	18.63	C
24" Wide	16.20	18.00	19.80	21.78	23.96	C



Elbows

6" Wide	0.63	0.70	0.77	0.85	0.93	E
12" Wide	0.81	0.90	0.99	1.09	1.20	E
18" Wide	0.99	1.10	1.21	1.33	1.46	E
24" Wide	1.17	1.30	1.43	1.57	1.73	E



Vertical Elbows

6" Wide	0.73	0.80	0.87	0.96	1.05	E
12" Wide	0.91	1.00	1.09	1.20	1.32	E
18" Wide	1.09	1.20	1.31	1.44	1.59	E
24" Wide	1.27	1.40	1.53	1.68	1.85	E



Tees

6" Wide	0.81	0.90	0.99	1.09	1.20	E
12" Wide	1.08	1.20	1.32	1.45	1.60	E
18" Wide	1.35	1.50	1.65	1.82	2.00	E
24" Wide	1.62	1.80	1.98	2.18	2.40	E



Cross

6" Wide	1.01	1.10	1.19	1.31	1.44	E
12" Wide	1.28	1.40	1.52	1.67	1.84	E
18" Wide	1.55	1.70	1.85	2.04	2.24	E
24" Wide	1.82	2.00	2.18	2.40	2.64	E



Branch

6" Wide	0.81	0.90	0.99	1.09	1.20	E
12" Wide	1.08	1.20	1.32	1.45	1.60	E
18" Wide	1.35	1.50	1.65	1.82	2.00	E
24" Wide	1.62	1.80	1.98	2.18	2.40	E



Reducer

6" Wide	0.29	0.30	0.32	0.35	0.38	E
12" Wide	0.33	0.35	0.37	0.41	0.45	E
18" Wide	0.38	0.40	0.43	0.47	0.51	E
24" Wide	0.42	0.45	0.48	0.53	0.58	E

CABLE TRAY

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Vertical Tees

6" Wide	1.01	1.10	1.19	1.31	1.44	E
12" Wide	1.28	1.40	1.52	1.67	1.84	E
18" Wide	1.55	1.70	1.85	2.04	2.24	E
24" Wide	1.82	2.00	2.18	2.40	2.64	E



Couplings

6" Wide	14.00	0.15	0.17	0.18	0.20	E
12" Wide	0.18	0.20	0.22	0.24	0.27	E
18" Wide	0.23	0.25	0.28	0.30	0.33	E
24" Wide	0.27	0.30	0.33	0.36	0.40	E



Hangers

6" Wide	0.10	0.12	0.14	0.16	0.18	E
12" Wide	0.12	0.14	0.16	0.18	0.20	E
18" Wide	0.14	0.16	0.18	0.20	0.22	E
24" Wide	0.16	0.18	0.20	0.22	0.24	E



Hangers

6" Wide	0.77	0.85	0.94	1.03	1.13	E
12" Wide	0.99	1.10	1.21	1.33	1.46	E
18" Wide	1.17	1.30	1.43	1.57	1.73	E
24" Wide	1.35	1.50	1.65	1.82	2.00	E

WIRE BASKET TRAY

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Cable Tray

6" Wide	4.68	5.20	5.72	6.29	6.92	C
12" Wide	7.02	7.80	8.58	9.44	10.38	C
18" Wide	8.19	9.10	10.01	11.01	12.11	C
24" Wide	10.53	11.70	12.87	14.16	15.57	C



Elbows

6" Wide	0.41	0.46	0.50	0.55	0.61	E
12" Wide	0.53	0.59	0.64	0.71	0.78	E
18" Wide	0.64	0.72	0.79	0.87	0.95	E
24" Wide	0.76	0.85	0.93	1.02	1.12	E



Riser

6" Wide	0.33	0.36	0.39	0.43	0.47	E
12" Wide	0.41	0.45	0.48	0.53	0.58	E
18" Wide	0.48	0.53	0.58	0.63	0.70	E
24" Wide	0.56	0.61	0.67	0.74	0.81	E



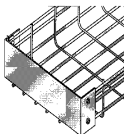
Tees

6" Wide	0.53	0.59	0.64	0.71	0.78	E
12" Wide	0.70	0.78	0.86	0.94	1.04	E
18" Wide	0.88	0.98	1.07	1.18	1.30	E
24" Wide	1.05	1.17	1.29	1.42	1.56	E



Drop Out

6" Wide	0.36	0.41	0.45	0.50	0.55	E
12" Wide	0.48	0.54	0.59	0.65	0.72	E
18" Wide	0.59	0.67	0.74	0.81	0.89	E
24" Wide	0.71	0.80	0.88	0.97	1.06	E



Blind End

6" Wide	0.21	0.26	0.30	0.33	0.36	E
12" Wide	0.33	0.39	0.44	0.49	0.54	E
18" Wide	0.44	0.52	0.59	0.65	0.71	E
24" Wide	0.56	0.65	0.73	0.80	0.88	E

UNDERFLOOR DUCT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Underfloor Duct

4" Wide No Insert	3.15	3.50	3.85	4.24	4.66	E
8" Wide No Insert	4.05	4.50	4.95	5.45	5.99	E
4" Wide with Insert	3.60	4.00	4.40	4.84	5.32	E
8" Wide with Insert	4.50	5.00	5.50	6.05	6.66	E



90° Elbow

4" Wide	0.23	0.25	0.28	0.30	0.33	E
8" Wide	0.32	0.35	0.39	0.42	0.47	E



End Cap

4" Wide	0.14	0.15	0.17	0.18	0.20	E
8" Wide	0.18	0.20	0.22	0.24	0.27	E



Couplings

4" Wide	0.09	0.10	0.11	0.12	0.13	E
8" Wide	0.14	0.15	0.17	0.19	0.20	E



Reducers

4" Wide	0.36	0.40	0.44	0.48	0.53	E
8" Wide	0.45	0.50	0.55	0.61	0.67	E



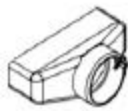
Supports

1-Duct	0.09	0.10	0.11	0.12	0.13	E
2-Duct	0.14	0.15	0.17	0.18	0.20	E
3-Duct	0.18	0.20	0.22	0.24	0.27	E

UNDERFLOOR DUCT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Conduit Fittings

4" Wide		0.09	0.10	0.11	0.12	0.13 C
8" Wide		0.12	0.13	0.14	0.16	0.17 C



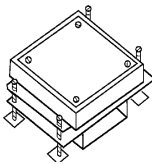
Duplex Fitting

	0.41	0.45	0.50	0.54	0.60 C
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Telephone Fitting

	0.27	0.30	0.33	0.36	0.40 C
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Junction Box

1-Duct	0.68	0.75	0.83	0.91	1.00 C
2-Duct	0.99	1.10	1.21	1.33	1.46 C
3-Duct	1.35	1.50	1.65	1.82	2.00 C

Electric-Find.com

Gateway to the Electric Industry

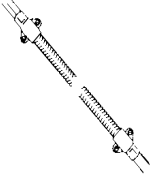
WIREMOLD 400

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold 400BC		2.75	3.00	3.25	3.58	3.93	C
	Wire Clip 400WC		0.02	0.03	0.04	0.04	0.05	E
	Cover Clip 406		0.04	0.05	0.06	0.07	0.07	E
	Blank End Fitting 410B		0.03	0.04	0.05	0.06	0.06	E
	Flat Elbow 411		0.07	0.08	0.09	0.10	0.11	E
	Tee 415		0.08	0.09	0.10	0.11	0.12	E
	Internal Elbow 417		0.08	0.09	0.10	0.11	0.12	E
	External Elbow 418		0.08	0.09	0.10	0.11	0.12	E

WIREMOLD 500 & 700

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	500		3.60	4.00	4.40	4.84	5.32	C
	700		4.05	4.50	4.95	5.45	5.99	C
	Flex							
	5700F		0.09	0.10	0.11	0.12	0.13	E
	Coupling							
	5701		0.05	0.06	0.07	0.07	0.08	E
	Bushing							
	502		0.05	0.05	0.06	0.06	0.07	E
	702		0.06	0.07	0.08	0.08	0.09	E
	Support Clip							
	5703		0.06	0.07	0.08	0.08	0.09	E
	Strap							
	504		0.06	0.07	0.08	0.08	0.09	E
	Connection Cover							
	506		0.05	0.06	0.07	0.07	0.08	E
	706		0.07	0.08	0.09	0.10	0.11	E
	Elbow							
	511		0.09	0.10	0.11	0.12	0.13	E
	711		0.11	0.12	0.13	0.15	0.16	E

WIREMOLD 500 & 700

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Internal Elbow							
	517 Tray		0.11	0.12	0.13	0.15	0.16	E
	717 Tray		0.11	0.12	0.13	0.15	0.16	E
	Round Box							
	5739		0.32	0.35	0.39	0.42	0.47	E
	1-Gang Box							
	5744		0.32	0.35	0.39	0.42	0.47	E
	2-Gang Box							
	5747		0.41	0.45	0.50	0.54	0.60	E
	Box Connector							
	5781		0.05	0.05	0.06	0.06	0.07	E
	Conduit Connector							
	5782		0.05	0.06	0.07	0.07	0.08	E
	Offset Connector							
	5786		0.09	0.10	0.11	0.12	0.13	E

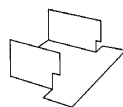
WIREMOLD 800

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	800		3.00	3.25	3.50	3.85	4.24	C
	Wire Clip							
	800WC		0.03	0.04	0.05	0.06	0.06	E
	Cover Clip							
	806		0.04	0.05	0.06	0.07	0.07	E
	Entrance End Fitting							
	810A2		0.05	0.06	0.07	0.08	0.08	E
	Blank End Fitting							
	810B		0.03	0.04	0.05	0.06	0.06	E
	Flat Elbow							
	811		0.08	0.09	0.10	0.11	0.12	E
	Tee							
	815		0.09	0.10	0.11	0.12	0.13	E
	Internal Elbow							
	817		0.09	0.10	0.11	0.12	0.13	E
	External Elbow							
	818		0.09	0.10	0.11	0.12	0.13	E
	Reducing Connector							
	815		0.08	0.09	0.10	0.11	0.12	E

WIREMOLD 1500

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK	PER
	1500 Pancake Raceway							
	1500-10		4.73	5.25	5.78	6.35	6.99	C
	1500-5		4.73	5.25	5.78	6.35	6.99	C
	Reinforcing Member							
	1500R		1.80	2.00	2.20	2.42	2.66	C
	Wire Clip							
	1500WC		0.03	0.03	0.03	0.04	0.04	E
	Fiber Bushing							
	1502		0.07	0.08	0.09	0.10	0.11	E
	Strap							
	1504		0.07	0.08	0.09	0.10	0.11	E
	Flat Elbow							
	1511		0.12	0.13	0.14	0.16	0.17	E
	Internal Elbow							
	1517		0.14	0.15	0.17	0.18	0.20	E
	Adapter Fitting							
	V1517B		0.07	0.08	0.09	0.10	0.11	E
	External Elbow							
	1518		0.14	0.15	0.17	0.19	0.21	E

WIREMOLD 1500

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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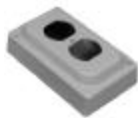
Utility Box

1528		0.32	0.35	0.39	0.43	0.47	E
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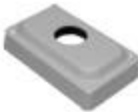
Junction Box

1542D		0.35	0.37	0.41	0.45	0.50	E
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Grounding Duplex & Box

1543GL		0.45	0.50	0.55	0.61	0.67	E
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Telephone Outlet

1546T		0.32	0.35	0.39	0.43	0.47	E
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Combination Connector

1585		0.06	0.07	0.08	0.08	0.09	E
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Other Fittings

1524 Telephone Outlet	0.32	0.35	0.39	0.42	0.47	E
1542D Junction Box	0.32	0.35	0.39	0.42	0.47	E
1546A Single Receptacle B	0.32	0.35	0.39	0.42	0.47	E
1546B Duplex Receptacle B	0.32	0.35	0.39	0.42	0.47	E
1546T Telephone Outlet	0.32	0.35	0.39	0.42	0.47	E

WIREMOLD AL2000 & AL2400

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
Wiremold								
	AL2000		5.50	5.75	6.00	6.60	7.26	C
	AL2400		5.75	6.00	6.25	6.88	7.56	C
Mounting Clip								
	AL2003		0.15	0.17	0.19	0.21	0.23	C
Cover Clip								
	AL2006		0.03	0.03	0.03	0.04	0.04	E
	AL2406		0.03	0.03	0.03	0.04	0.04	E
Flat Elbow								
	AL2011		0.14	0.15	0.16	0.18	0.19	E
	AL2411		0.14	0.15	0.16	0.18	0.19	E
Internal Elbow								
	AL2017		0.14	0.15	0.16	0.18	0.19	E
	AL2417		0.14	0.15	0.16	0.18	0.19	E
External Elbow								
	AL2018		0.14	0.15	0.16	0.18	0.19	E
	AL2418		0.14	0.15	0.16	0.18	0.19	E
Tee								
	AL2015		0.16	0.17	0.18	0.20	0.22	E
	AL2415		0.16	0.17	0.18	0.20	0.22	E
Cross								
	AL2016		0.18	0.19	0.20	0.22	0.24	E
	AL2416		0.18	0.19	0.20	0.22	0.24	E
Coupling								
	AL2001		0.06	0.07	0.08	0.09	0.10	E
	AL2401		0.06	0.07	0.08	0.09	0.10	E
Wire Clip								
	AL2000WC		0.04	0.05	0.06	0.07	0.07	E
	AL2400WC		0.04	0.05	0.06	0.07	0.07	E

WIREMOLD 2300

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	2300BAC		4.00	4.25	4.50	4.95	5.45	C
	2300BACD		4.00	4.25	4.50	4.95	5.45	C
2300								
	Wire Clip							
	2300WC		0.04	0.05	0.06	0.07	0.07	E
	Cover Clip							
	2306		0.04	0.05	0.06	0.07	0.07	E
	End Cap							
	2310B		0.03	0.04	0.05	0.06	0.06	E
	Flat Elbow							
	2311		0.08	0.09	0.10	0.11	0.12	E
	Tee							
	2315		0.09	0.10	0.11	0.12	0.13	E
	Internal Elbow							
	2317		0.09	0.10	0.11	0.12	0.13	E
	External Elbow							
	2318		0.09	0.10	0.11	0.12	0.13	E

WIREMOLD G-3000

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK	PER
	Wiremold G-3000B		6.30	7.00	7.70	8.47	9.32	C
	Cover G-3000C		1.80	2.00	2.20	2.42	2.66	C
	Wire Clip G-3000WC		0.03	0.03	0.03	0.04	0.04	E
	Coupling G-3001		0.09	0.10	0.11	0.12	0.13	E
	Rigid Inside Coupling G-3001A		0.14	0.15	0.17	0.19	0.21	E
	Supporting Clip G-3003		0.07	0.08	0.09	0.10	0.11	E
	Cover Clip G-3006		0.02	0.02	0.02	0.02	0.02	E
	Device Bracket G-3007C		0.09	0.10	0.11	0.12	0.13	E

WIREMOLD G-3000

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK	PER
	C-Hanger							
	G-3008C		0.09	0.10	0.11	0.12	0.13	E
	Entrance End							
	G-3010AE		0.14	0.15	0.17	0.19	0.21	E
	Blank End							
	G-3010B		0.06	0.07	0.08	0.09	0.10	E
	Flat Elbow							
	G-3011E		0.14	0.15	0.17	0.19	0.21	E
	Wall Box Connector							
	G-3014C		0.23	0.25	0.28	0.31	0.34	E
	Conduit Connector							
	G-3082		0.09	0.10	0.11	0.12	0.13	E
Other Fittings								
	G-3008 A Hanger Clip		0.06	0.07	0.08	0.08	0.09	E
	G-3008 TC T-Bar Clip		0.05	0.05	0.06	0.06	0.07	E
	G-3010 C Entrance End Fitting		0.14	0.15	0.17	0.18	0.20	E
	G-3015 E Tee		0.23	0.25	0.28	0.30	0.33	E
	G-3017 C Inverted Corner Coupling		0.14	0.15	0.17	0.18	0.20	E
	G-3018 AE External Corner Coupling		0.14	0.15	0.17	0.18	0.20	E
	G-3026 EE Sign Receptacle Plate		0.03	0.03	0.03	0.04	0.04	E
	G-3027 AE Single Receptacle Plate		0.03	0.03	0.03	0.04	0.04	E
	G-3028 Utility Box		0.23	0.25	0.28	0.30	0.33	E
	G-3033 JE Single Receptacle Plate		0.03	0.03	0.03	0.04	0.04	E
	G-3036 HE Blank cover		0.03	0.03	0.03	0.04	0.04	E
	G-3040 CE 1-Gang Switch Plate		0.03	0.03	0.03	0.04	0.04	E
	G-3040 CE Receptacle & Plate		0.27	0.30	0.33	0.36	0.40	E
	G-3044-2 Extra Deep Box		0.23	0.25	0.28	0.30	0.33	E
	G-3046 A 1-Gang Receptacle Cover		0.03	0.03	0.03	0.04	0.04	E

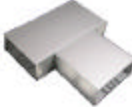
WIREMOLD AL3300

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	AL3300B		5.50	5.75	6.00	6.60	7.26	C
	Wire Clip							
	AL3300WC		0.04	0.05	0.06	0.07	0.07	E
	Base Coupling							
	AL3301		0.06	0.07	0.08	0.09	0.10	E
	Flat Elbow							
	AL3311		0.14	0.15	0.16	0.18	0.19	E
	Internal Elbow							
	AL3317		0.14	0.15	0.16	0.18	0.19	E
	External Elbow							
	AL3318		0.14	0.15	0.16	0.18	0.19	E
	Tee							
	AL3315		0.16	0.17	0.18	0.20	0.22	E
	Cross							
	AL3316		0.18	0.19	0.20	0.22	0.24	E
	Blank End							
	AL3310B		0.08	0.09	0.10	0.11	0.12	E
	End Feed							
	AL3310B1		0.08	0.09	0.10	0.11	0.12	E

WIREMOLD AL4000, AL4400 & AL4800

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold						
	AL4000	5.00	5.25	5.50	6.05	6.66	C
	AL4400	5.50	5.75	6.00	6.60	7.26	C
	AL4800	6.00	6.25	6.50	7.15	7.87	C
	Flat Elbow						
	AL4011	0.10	0.11	0.12	0.13	0.15	E
	AL4411	0.11	0.12	0.13	0.14	0.16	E
	AL4811	0.14	0.15	0.16	0.18	0.19	E
	Internal Elbow						
	AL4017	0.10	0.11	0.12	0.13	0.15	E
	AL4417	0.11	0.12	0.13	0.14	0.16	E
	AL4817	0.14	0.15	0.16	0.18	0.19	E
	External Elbow						
	AL4017	0.10	0.11	0.12	0.13	0.15	E
	AL4417	0.11	0.12	0.13	0.14	0.16	E
	AL4817	0.14	0.15	0.16	0.18	0.19	E
	Tee						
	AL4015	0.08	0.09	0.10	0.11	0.12	E
	AL4415	0.08	0.09	0.10	0.11	0.12	E
	AL4815	0.08	0.09	0.10	0.11	0.12	E
	Blank End						
	AL4010B	0.08	0.09	0.10	0.11	0.12	E
	AL4410B	0.08	0.09	0.10	0.11	0.12	E
	AL4810B	0.08	0.09	0.10	0.11	0.12	E
	End Feed						
	AL4010B2	0.08	0.09	0.10	0.11	0.12	E
	AL4410B2	0.08	0.09	0.10	0.11	0.12	E
	AL4810B2	0.08	0.09	0.10	0.11	0.12	E
	Coupling						
	AL4001	0.08	0.09	0.10	0.11	0.12	E
	AL4401	0.08	0.09	0.10	0.11	0.12	E
	AL4801	0.08	0.09	0.10	0.11	0.12	E

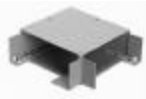
WIREMOLD G-4000

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	G-400B		7.20	8.00	8.80	9.68	10.65	C
	Cover							
	G-4000C		1.80	2.00	2.20	2.42	2.66	C
	Divider							
	G-4000D		1.35	1.50	1.65	1.82	2.00	C
	Wire Clip							
	G-4000WC		0.03	0.03	0.03	0.03	0.04	E
	Coupling							
	G-4001		0.07	0.08	0.09	0.10	0.11	E
	Divider Clip							
	G-4001		0.10	0.11	0.12	0.13	0.15	E
	Blank End Fitting							
	G-4010B		0.07	0.08	0.09	0.10	0.11	E

WIREMOLD G-4000

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
 Device Plates							
1-Gang		0.03	0.03	0.03	0.03	0.04	E
2-Gang		0.03	0.03	0.03	0.03	0.04	E
 Entrance End Fitting							
G-4010D		0.14	0.16	0.18	0.20	0.22	E
 Flat Elbow							
G-4011		0.14	0.16	0.18	0.20	0.22	E
 Wall Box Connector							
G-4014A		0.23	0.25	0.28	0.31	0.34	E
 Tee							
G-4015		0.23	0.25	0.28	0.31	0.34	E
Other Fittings							
G-4012 TX	Internal External Elbow	0.14	0.16	0.18	0.19	0.21	E
G-4015 D	Divided Tee	0.27	0.30	0.33	0.36	0.40	E
G-4017	Internal Elbow	0.14	0.16	0.18	0.19	0.21	E
G-4017 N	Inverted Internal Elbow	0.14	0.16	0.18	0.19	0.21	E
G4018	External Elbow	0.14	0.16	0.18	0.19	0.21	E
G-4046 B	Combination Duplex/Phone	0.32	0.35	0.39	0.42	0.47	E
G-4046 H2	Tap Off Fitting 2-Gang	0.16	0.18	0.20	0.22	0.24	E
G-4086 A	Panel Connector	0.23	0.25	0.28	0.30	0.33	E
G-46 K	1-Pole Cir. Brk. Housing	0.23	0.25	0.28	0.30	0.33	E
G-46 KDR	Circuit Breaker & Duplex	0.45	0.50	0.55	0.61	0.67	E

WIREMOLD 5000

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	BASE							
	5000B		6.00	6.25	6.50	7.15	7.87	C
	COVER							
	5000C		1.30	1.50	1.70	1.87	2.06	C
	QUARTER ROUND TRIM							
	5000T		1.50	1.60	1.70	1.87	2.06	C
	LOW VOLTAGE BLANK PLATE							
	5005		0.04	0.05	0.06	0.07	0.07	E
	DEVICE BRACKET							
	5007C		0.15	0.17	0.19	0.21	0.23	E
	DEVICE PLATE							
	5007C-1A		0.10	0.11	0.12	0.13	0.15	E
	BASE COUPLING							
	5001		0.04	0.05	0.06	0.07	0.07	E
	COVER CLIP							
	5006		0.04	0.04	0.04	0.04	0.05	E
	INTERNAL WIRE GUARD							
	5006A		0.02	0.03	0.04	0.04	0.05	E

WIREMOLD 5000**LABOR UNITS**

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	ENTRANCE END FITTING						
	5010A	0.10	0.11	0.12	0.13	0.15	E
	END CAP						
	5010	0.03	0.04	0.05	0.06	0.06	E
	INTERNAL BASE ELBOW						
	5017B	0.09	0.10	0.11	0.12	0.13	E
	INTERNAL ELBOW WIRE GUARD						
	5017WG	0.04	0.05	0.06	0.07	0.07	E
	EXTERNAL BASE ELBOW						
	5018B	0.09	0.10	0.11	0.12	0.13	E
	EXTERNAL COVER ELBOW						
	5018C	0.09	0.10	0.11	0.12	0.13	E

WIREMOLD 5400 & 5500

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	BASE							
	5400TB		6.75	7.50	8.20	9.02	9.92	C
	5500B		6.75	7.50	8.20	9.02	9.92	C
	COVER							
	5400C		1.80	2.00	2.20	2.42	2.66	C
	5500C		1.80	2.00	2.20	2.42	2.66	C
	TWIN SNAP COVER							
	5400TC		2.00	2.25	2.50	2.75	3.03	C
	DIVIDER							
	5500D		1.35	1.50	1.65	1.82	2.00	C
	TWIN SNAP COVER WIRE CLIP							
	5400TWC		0.03	0.03	0.03	0.03	0.04	E
	5500WC		0.03	0.03	0.03	0.03	0.04	E
	COVER CLIP							
	5406A		0.04	0.04	0.04	0.04	0.05	E
	5506		0.04	0.04	0.04	0.04	0.05	E
	TWIN SNAP COVER CLIP							
	5406T		0.04	0.04	0.04	0.04	0.05	E
	BASE SEAM CLIP							
	5406TB		0.04	0.04	0.04	0.04	0.05	E
	5506B		0.04	0.04	0.04	0.04	0.05	E

WIREMOLD 5400 & 5500

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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DEVICE BRACKET

5407A		0.05	0.05	0.06	0.07	0.07	E
5507A		0.05	0.05	0.06	0.07	0.07	E

DEVICE BRACKET

5407A3		0.05	0.05	0.06	0.07	0.07	E
5507A4		0.05	0.05	0.06	0.07	0.07	E



END CAP

5410		0.04	0.04	0.05	0.06	0.06	E
5510		0.04	0.04	0.05	0.06	0.06	E



ENTRANCE END FITTING

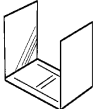
5410DFO		0.10	0.11	0.12	0.13	0.15	E
5510D		0.10	0.11	0.12	0.13	0.15	E

OTHER FITTINGS

5411FO		0.15	0.17	0.18	0.20	0.22	E
5415		0.25	0.28	0.30	0.33	0.37	E
5417FO		0.14	0.15	0.17	0.19	0.20	E
5418		0.14	0.15	0.17	0.19	0.20	E
5418FO		0.20	0.22	0.24	0.27	0.29	E
5474		0.20	0.22	0.24	0.27	0.29	E
5507AD		0.15	0.17	0.18	0.20	0.22	E
5507B		0.15	0.17	0.18	0.20	0.22	E
5507D		0.15	0.17	0.18	0.20	0.22	E

WIREMOLD G-6000

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wiremold							
	G-6000B		8.10	8.00	9.90	10.89	11.98	C
	Cover							
	G-6000C		2.25	2.50	2.75	3.03	3.33	C
	Divider							
	G-6000WC		1.80	2.00	2.20	2.42	2.66	C
	Wire Clip							
	G-6000 WC		0.03	0.03	0.03	0.03	0.04	E
	Coupling							
	G-6001		0.11	0.12	0.13	0.14	0.16	E
	Divider Clip							
	G-6001 D		0.05	0.05	0.06	0.07	0.07	E
	1-Gang Device Plate							
	G-6007 C-1		0.05	0.06	0.07	0.08	0.08	E

WIREMOLD G-6000

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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2-Gang Device Plate

G-6007 C-2		0.05	0.06	0.07	0.08	0.08 E
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C-Hanger

G-6008 A		0.16	0.18	0.20	0.22	0.24 E
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Blank End

G-6010B		0.08	0.09	0.10	0.11	0.12 E
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Flat Elbow

G-6011 TX		0.16	0.18	0.20	0.22	0.24 E
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External Elbow

G-6017 TX		0.16	0.18	0.20	0.22	0.24 E
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Connector Fitting

G-6014 A		0.27	0.30	0.33	0.36	0.40 E
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HUBBELL - Super Base Trak PB2 & PB3

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
 PB2	PB2		2.75	3.00	3.25	3.58	3.93	C
 PB3	PB3		3.00	3.25	3.50	3.85	4.24	C
 CONDUIT ADAPTER	CONDUIT ADAPTER		0.07	0.08	0.09	0.10	0.11	E
 RND CAP	RND CAP		0.03	0.04	0.05	0.06	0.06	E
 REDUCER	REDUCER		0.08	0.09	0.10	0.11	0.12	E
 ELBOWS	ELBOWS		0.09	0.10	0.11	0.12	0.13	E
 TEES	TEES		0.09	0.10	0.11	0.12	0.13	E

HUBBELL - Super Base Trak Fittings

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	SAFTEY STRAP	0.04	0.05	0.06	0.07	0.07	E
	SURFACE PANEL CONNECTOR	0.02	0.02	0.03	0.03	0.04	E
	WIRE CLIP	0.08	0.09	0.10	0.11	0.12	E
	1-GANG BOX	0.07	0.08	0.09	0.10	0.11	E
	2-GANG BOX	0.30	0.35	0.40	0.44	0.48	E
	3-GANG BOX	0.35	0.40	0.45	0.50	0.54	E

HUBBELL - FloorTrak PRO Trak

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	6 Foot		0.25	0.30	0.35	0.40	0.44	E
	3 Foot		0.20	0.25	0.30	0.35	0.39	E
	1 Foot		0.15	0.20	0.25	0.30	0.33	E
	Elbows 45		0.20	0.25	0.30	0.35	0.39	E
	Elbows 90		0.20	0.25	0.30	0.35	0.39	E
	PRO Ends		0.35	0.38	0.40	0.44	0.48	E
	1-Gang Device		0.30	0.33	0.35	0.39	0.42	E
	2-Gang Device		0.35	0.38	0.40	0.44	0.48	E
	3-Gang Device		0.40	0.43	0.45	0.50	0.54	E

Carlton - Surface Wireway

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Raceway - 10 Foot Long



2 X 2	0.50	0.55	0.58	0.60	0.75	E
3 X 3	0.60	0.66	0.69	0.72	0.90	E
4 X 4	0.70	0.77	0.81	0.84	1.05	E
6 X 6	0.80	0.88	0.92	0.96	1.20	E



End Cap

2 X 2	0.04	0.05	0.06	0.07	0.08	E
3 X 3	0.05	0.06	0.07	0.08	0.09	E
4 X 4	0.06	0.07	0.08	0.09	0.10	E
6 X 6	0.07	0.08	0.09	0.10	0.11	E



Coupling

2 X 2	0.08	0.09	0.10	0.11	0.12	E
3 X 3	0.09	0.10	0.11	0.12	0.13	E
4 X 4	0.10	0.11	0.12	0.13	0.14	E
6 X 6	0.12	0.13	0.14	0.15	0.16	E



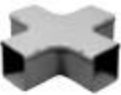
Elbows

2 X 2	0.10	0.11	0.12	0.13	0.14	E
3 X 3	0.12	0.13	0.14	0.15	0.16	E
4 X 4	0.14	0.15	0.16	0.17	0.18	E
6 X 6	0.16	0.17	0.18	0.19	0.20	E



Tee

2 X 2	0.11	0.12	0.13	0.14	0.15	E
3 X 3	0.13	0.14	0.15	0.16	0.17	E
4 X 4	0.15	0.16	0.17	0.18	0.19	E
6 X 6	0.17	0.18	0.19	0.20	0.21	E



Cross

2 X 2	0.13	0.14	0.15	0.16	0.17	E
3 X 3	0.16	0.17	0.18	0.19	0.20	E
4 X 4	0.19	0.20	0.21	0.22	0.23	E
6 X 6	0.22	0.23	0.24	0.25	0.26	E



Adapter

2 X 2	0.05	0.06	0.07	0.08	0.09	E
3 X 3	0.06	0.07	0.08	0.09	0.10	E
4 X 4	0.07	0.08	0.09	0.10	0.11	E
6 X 6	0.08	0.09	0.10	0.11	0.12	E

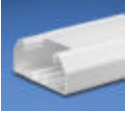
PANDUIT PAN-WAY LD RACEWAY

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Raceway							
	LD3		2.75	3.00	3.25	3.58	3.93	C
	LD5		3.00	3.25	3.50	3.85	4.24	C
	LD10		3.25	3.50	3.75	4.13	4.54	C
	Coupling							
	LD3		0.04	0.05	0.06	0.07	0.07	E
	LD5		0.05	0.06	0.07	0.08	0.08	E
	LD10		0.06	0.07	0.08	0.09	0.10	E
	Elbows							
	LD3		0.07	0.08	0.09	0.10	0.11	E
	LD5		0.07	0.08	0.09	0.10	0.11	E
	LD10		0.08	0.09	0.10	0.11	0.12	E
	End Caps							
	LD3		0.02	0.02	0.03	0.03	0.04	E
	LD5		0.02	0.02	0.03	0.03	0.04	E
	LD10		0.03	0.03	0.04	0.04	0.05	E
	Tees							
	LD3		0.09	0.10	0.11	0.12	0.13	E
	LD5		0.09	0.10	0.11	0.12	0.13	E
	LD10		0.11	0.13	0.15	0.17	0.18	E
	Entrance Fittings							
	LD3		0.10	0.11	0.12	0.13	0.15	E
	LD5		0.10	0.11	0.12	0.13	0.15	E
	LD10		0.12	0.14	0.16	0.18	0.19	E
	Reducer Fitting		0.10	0.20	0.25	0.28	0.30	E

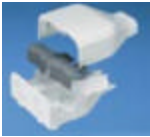
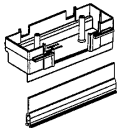
PANDUIT PAN-WAY TG-70 RACEWAY

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Raceway		4.25	4.75	5.25	5.78	6.35	C
	End Cap		0.06	0.07	0.08	0.09	0.10	E
	Coupling		0.09	0.10	0.11	0.12	0.13	E
	Elbows		0.12	0.13	0.14	0.15	0.17	E
	Tee		0.18	0.20	0.22	0.24	0.27	E
	Cover Coupler		0.05	0.05	0.06	0.07	0.07	E
	Wire Clip		0.03	0.03	0.03	0.03	0.04	E

PANDUIT PAN-WAY TG-70 RACEWAY

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Tee Divider Insert	0.10	0.10	0.10	0.11	0.12	E
	Divider	1.25	1.35	1.45	1.60	1.75	C
	Device Bracket	0.10	0.12	0.14	0.15	0.17	E
	Entrance End	0.07	0.08	0.09	0.10	0.11	E
	Transition Fitting	0.20	0.25	0.30	0.33	0.36	E
	3-Sided Hanging Box	0.35	0.40	0.45	0.50	0.54	E

WIRE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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COPPER WIRE

#14	4.50	5.00	5.50	6.05	6.66	M
#12	4.50	5.00	5.50	6.05	6.66	M
#10	5.40	6.00	6.60	7.26	7.99	M
#8	7.20	8.00	8.80	9.68	10.65	M
#6	8.10	9.00	9.90	10.89	11.98	M
#4	9.00	10.00	11.00	12.10	13.31	M
#3	10.80	12.00	13.20	14.52	15.97	M
#2	11.70	13.00	14.30	15.73	17.30	M
#1	12.60	14.00	15.40	16.94	18.63	M
1/0	13.50	15.00	16.50	18.15	19.97	M
2/0	14.40	16.00	17.60	19.36	21.30	M
3/0	15.30	17.00	18.70	20.57	22.63	M
4/0	16.20	18.00	19.80	21.78	23.96	M
250 MCM	18.00	20.00	22.00	24.20	26.62	M
300 MCM	20.70	23.00	25.30	27.83	30.61	M
350 MCM	23.40	26.00	28.60	31.46	34.61	M
400 MCM	26.10	29.00	31.90	35.09	38.60	M
500 MCM	28.80	32.00	35.20	38.72	42.59	M
600 MCM	32.40	36.00	39.60	43.56	47.92	M
750 MCM	36.00	40.00	44.00	48.40	53.24	M
1000 MCM	41.40	46.00	50.60	55.66	61.23	M



ALUMINUM WIRE

#6	7.29	8.10	8.91	9.80	10.78	M
#4	8.10	9.00	9.90	10.89	11.98	M
#2	10.53	11.70	12.87	14.16	15.57	M
#1	11.34	12.60	13.86	15.25	16.77	M
1/0	12.15	13.50	14.85	16.34	17.97	M
2/0	12.96	14.40	15.84	17.42	19.17	M
3/0	13.77	15.30	16.83	18.51	20.36	M
4/0	14.58	16.20	17.82	19.60	21.56	M
250 MCM	16.20	18.00	19.80	21.78	23.96	M
300 MCM	18.63	20.70	22.77	25.05	27.55	M
350 MCM	21.06	23.40	25.74	28.31	31.15	M
400 MCM	23.49	26.10	28.71	31.58	34.74	M
500 MCM	25.92	28.80	31.68	34.85	38.33	M
600 MCM	29.16	32.40	35.64	39.20	43.12	M
750 MCM	32.40	36.00	39.60	43.56	47.92	M
1000 MCM	37.26	41.40	45.54	50.09	55.10	M

DIRECT BURIAL CABLE

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

COPPER DIRECT BURIAL CABLE



#14	4.05	4.50	4.95	5.45	5.99	M
#12	4.28	4.75	5.23	5.75	6.32	M
#10	4.50	5.00	5.50	6.05	6.66	M
#8	5.40	6.00	6.60	7.26	7.99	M
#6	6.30	7.00	7.70	8.47	9.32	M
#4	7.20	8.00	8.80	9.68	10.65	M
#3	8.10	9.00	9.90	10.89	11.98	M
#2	9.00	10.00	11.00	12.10	13.31	M
#1	10.80	12.00	13.20	14.52	15.97	M
1/0	12.60	14.00	15.40	16.94	18.63	M
2/0	13.50	15.00	16.50	18.15	19.97	M
3/0	14.40	16.00	17.60	19.36	21.30	M
4/0	15.30	17.00	18.70	20.57	22.63	M
250 MCM	16.20	18.00	19.80	21.78	23.96	M
300 MCM	18.00	20.00	22.00	24.20	26.62	M
350 MCM	19.80	22.00	24.20	26.62	29.28	M
400 MCM	21.60	24.00	26.40	29.04	31.94	M
500 MCM	23.40	26.00	28.60	31.46	34.61	M
600 MCM	25.20	28.00	30.80	33.88	37.27	M
750 MCM	27.00	30.00	33.00	36.30	39.93	M
1000 MCM	31.50	35.00	38.50	42.35	46.59	M

ALUMINUM DIRECT BURIAL CABLE



#6	5.40	6.00	6.60	7.26	7.99	M
#4	6.30	7.00	7.70	8.47	9.32	M
#2	8.10	9.00	9.90	10.89	11.98	M
#1	9.00	10.00	11.00	12.10	13.31	M
1/0	9.90	11.00	12.10	13.31	14.64	M
2/0	10.80	12.00	13.20	14.52	15.97	M
3/0	11.70	13.00	14.30	15.73	17.30	M
4/0	12.60	14.00	15.40	16.94	18.63	M
250 MCM	13.50	15.00	16.50	18.15	19.97	M
300 MCM	14.40	16.00	17.60	19.36	21.30	M
350 MCM	15.30	17.00	18.70	20.57	22.63	M
400 MCM	16.20	18.00	19.80	21.78	23.96	M
500 MCM	18.00	20.00	22.00	24.20	26.62	M
600 MCM	19.80	22.00	24.20	26.62	29.28	M
750 MCM	21.60	24.00	26.40	29.04	31.94	M
1000 MCM	24.30	27.00	29.70	32.67	35.94	M

SERVICE ENTRANCE CABLE

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Copper Service Entrance Cable



12-3	6.30	7.00	7.70	8.47	9.32	M
10-3	8.10	9.00	9.90	10.89	11.98	M
8-3	9.90	11.00	12.10	13.31	14.64	M
6-2 & 8-1	11.25	12.50	13.75	15.13	16.64	M
6-3	11.70	13.00	14.30	15.73	17.30	M
4-2 & 6-1	13.05	14.50	15.95	17.55	19.30	M
4-3	13.50	15.00	16.50	18.15	19.97	M
3-3	14.40	16.00	17.60	19.36	21.30	M
2-3	15.30	17.00	18.70	20.57	22.63	M
1-3	16.20	18.00	19.80	21.78	23.96	M
1/0-3	18.00	20.00	22.00	24.20	26.62	M
2/0-3	19.80	22.00	24.20	26.62	29.28	M
3/0-3	21.60	24.00	26.40	29.04	31.94	M
4/0-3	23.40	26.00	28.60	31.46	34.61	M

Aluminum Service Entrance Cable



8-3	9.00	10.00	11.00	12.10	13.31	M
6-3	9.90	11.00	12.10	13.31	14.64	M
4-2 & 6-1	10.35	11.50	12.65	13.92	15.31	M
4-3	10.80	12.00	13.20	14.52	15.97	M
2-2 & 4-1	12.15	13.50	14.85	16.34	17.97	M
2-3	12.60	14.00	15.40	16.94	18.63	M
1-2 & 3-1	13.05	14.50	15.95	17.55	19.30	M
1-3	13.50	15.00	16.50	18.15	19.97	M
1/0-2 & 2-1	14.85	16.50	18.15	19.97	21.96	M
1/0-3	15.30	17.00	18.70	20.57	22.63	M
2/0-2 & 1-1	16.65	18.50	20.35	22.39	24.62	M
2/0-3	17.10	19.00	20.90	22.99	25.29	M
3/0-2 & 1/0-1	18.45	20.50	22.55	24.81	27.29	M
3/0-3	18.90	21.00	23.10	25.41	27.95	M
4/0-2 & 2/0-1	20.25	22.50	24.75	27.23	29.95	M
4/0-3	20.70	23.00	25.30	27.83	30.61	M

Cable Connectors



3/4"	0.04	0.05	0.06	0.06	0.07	E
1"	0.06	0.07	0.08	0.08	0.09	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.15	0.16	E
2"	0.14	0.15	0.17	0.18	0.20	E

Straps



3-#8 thru 3-#4	0.05	0.06	0.07	0.08	0.09	E
3-#3 thru 3-#2	0.06	0.07	0.08	0.09	0.10	E
3-#1 thru 3-2/0	0.06	0.08	0.10	0.11	0.12	E
3-3/0 thru 3-4/0	0.07	0.09	0.11	0.12	0.13	E

NON-METALLIC SHEATHED CABLE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Non-Metallic Sheathed Cable (Copper)



14 - 2		5.85	6.50	7.15	7.87	8.65	M
14 - 3		6.30	7.00	7.70	8.47	9.32	M
14 - 4		6.53	7.25	7.98	8.77	9.65	M
12 - 2		6.30	7.00	7.70	8.47	9.32	M
12 - 3		6.75	7.50	8.25	9.08	9.98	M
12 - 4		6.98	7.75	8.53	9.38	10.32	M
10 - 2		6.75	7.50	8.25	9.08	9.98	M
10 - 3		7.20	8.00	8.80	9.68	10.65	M
10 - 4		7.43	8.25	9.08	9.98	10.98	M
8 - 2		9.00	10.00	11.00	12.10	13.31	M
8 - 3		9.90	11.00	12.10	13.31	14.64	M
6 - 2		10.80	12.00	13.20	14.52	15.97	M
6 - 3		11.70	13.00	14.30	15.73	17.30	M
4 - 3		12.60	14.00	15.40	16.94	18.63	M
2 - 3		14.40	16.00	17.60	19.36	21.30	M

Underground Non-Metallic Sheathed Cable (Copper)



14 - 2		4.50	5.00	5.50	6.05	6.66	M
14 - 3		4.73	5.25	5.78	6.35	6.99	M
14 - 4		4.95	5.50	6.05	6.66	7.32	M
12 - 2		4.73	5.25	5.78	6.35	6.99	M
12 - 3		4.95	5.50	6.05	6.66	7.32	M
12 - 4		5.18	5.75	6.33	6.96	7.65	M
10 - 2		5.40	6.00	6.60	7.26	7.99	M
10 - 3		5.63	6.25	6.88	7.56	8.32	M
10 - 4		5.85	6.50	7.15	7.87	8.65	M
8 - 2		6.30	7.00	7.70	8.47	9.32	M
8 - 3		6.53	7.25	7.98	8.77	9.65	M
6 - 2		7.20	8.00	8.80	9.68	10.65	M
6 - 3		7.43	8.25	9.08	9.98	10.98	M

Cable Connectors



1/2"		0.05	0.05	0.06	0.06	0.07	E
3/4"		0.05	0.05	0.06	0.06	0.07	E
1"		0.06	0.07	0.08	0.08	0.09	E
1 1/4"		0.09	0.10	0.11	0.12	0.13	E
1 1/2"		0.11	0.12	0.13	0.15	0.16	E
2"		0.14	0.15	0.17	0.18	0.20	E

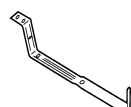


Snap-Tight Cable Connectors

1/2"		0.03	0.03	0.04	0.04	0.05	E
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CABLE FITTINGS

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
	Push-In Connectors						
	1/2"		0.02	0.02	0.03	0.03	0.04 E
	3/4"		0.02	0.02	0.03	0.03	0.04 E
	Connectors (2-Piece)						
	1/2"		0.04	0.05	0.06	0.06	0.07 E
	3/4" - 1"		0.06	0.07	0.08	0.09	0.10 E
	Snap-In Connectors						
	1/2"		0.03	0.03	0.03	0.04	0.04 E
	3/4" - 1"		0.04	0.05	0.06	0.06	0.07 E
	Staples						
	#14 - #12		0.02	0.02	0.02	0.03	0.03 E
	#12 - #10		0.02	0.02	0.02	0.03	0.03 E
	Plastic Tip Staples						
	1/2"		0.02	0.02	0.02	0.03	0.03 E
	3/4" - 1"		0.02	0.02	0.02	0.03	0.03 E
	Safety Plate						
	Safety Plate		0.02	0.02	0.02	0.03	0.03 E
		Support Clip					
			0.05	0.06	0.07	0.08	0.08 E
	Support Bracket						
			0.05	0.06	0.07	0.08	0.08 E

PORTABLE CORD

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Portable Cord



18 - 2	7.20	8.00	8.80	9.68	10.65	M
18 - 3	7.43	8.25	9.08	9.98	10.98	M
18 - 4	7.65	8.50	9.35	10.29	11.31	M
16 - 2	8.10	9.00	9.90	10.89	11.98	M
16 - 3	8.33	9.25	10.18	11.19	12.31	M
16 - 4	8.55	9.50	10.45	11.50	12.64	M
14 - 2	9.00	10.00	11.00	12.10	13.31	M
14 - 3	9.23	10.25	11.28	12.40	13.64	M
14 - 4	9.45	10.50	11.55	12.71	13.98	M
12 - 2	10.80	12.00	13.20	14.52	15.97	M
12 - 3	11.03	12.25	13.48	14.82	16.30	M
12 - 4	11.25	12.50	13.75	15.13	16.64	M
10 - 2	12.60	14.00	15.40	16.94	18.63	M
10 - 3	12.83	14.25	15.68	17.24	18.97	M
10 - 4	13.05	14.50	15.95	17.55	19.30	M
8 - 2	13.50	15.00	16.50	18.15	19.97	M
8 - 3	13.73	15.25	16.78	18.45	20.30	M
8 - 4	13.95	15.50	17.05	18.76	20.63	M
6 - 2	14.40	16.00	17.60	19.36	21.30	M
6 - 3	14.63	16.25	17.88	19.66	21.63	M
6 - 4	14.85	16.50	18.15	19.97	21.96	M

Cable Connectors



1/2"	0.05	0.05	0.06	0.06	0.07	E
3/4"	0.05	0.05	0.06	0.06	0.07	E
1"	0.06	0.07	0.08	0.08	0.09	E
1 1/4"	0.09	0.10	0.11	0.12	0.13	E
1 1/2"	0.11	0.12	0.13	0.15	0.16	E
2"	0.14	0.15	0.17	0.18	0.20	E

Cord Grips



1/2"	0.17	0.20	0.23	0.25	0.28	E
3/4"	0.17	0.20	0.23	0.25	0.28	E
1"	0.21	0.25	0.29	0.32	0.35	E
1 1/4"	0.23	0.27	0.31	0.34	0.38	E
1 1/2"	0.26	0.30	0.35	0.38	0.42	E

LOW VOLTAGE CABLE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Plastic Jacket (Size #22 - #18)

2 - Conductor	4.50	5.00	5.50	6.05	6.66	M
3 - Conductor	4.73	5.25	5.78	6.35	6.99	M
4 - Conductor	4.95	5.50	6.05	6.66	7.32	M
5 - Conductor	5.18	5.75	6.33	6.96	7.65	M
6 - Conductor	5.40	6.00	6.60	7.26	7.99	M
7 - Conductor	5.63	6.25	6.88	7.56	8.32	M
8 - Conductor	5.85	6.50	7.15	7.87	8.65	M
9 - Conductor	6.08	6.75	7.43	8.17	8.98	M
10 - Conductor	6.30	7.00	7.70	8.47	9.32	M
15 - Conductor	8.10	9.00	9.90	10.89	11.98	M
20 - Conductor	9.90	11.00	12.10	13.31	14.64	M
25 - Conductor	11.70	13.00	14.30	15.73	17.30	M



Plastic Jacket Twisted Pair (Size #22 - #18)

2 - Pair	6.08	6.75	7.43	8.17	8.98	M
3 - Pair	6.30	7.00	7.70	8.47	9.32	M
4 - Pair	6.75	7.50	8.25	9.08	9.98	M
5 - Pair	6.98	7.75	8.53	9.38	10.32	M
6 - Pair	7.20	8.00	8.80	9.68	10.65	M
7 - Pair	7.65	8.50	9.35	10.29	11.31	M
8 - Pair	7.88	8.75	9.63	10.59	11.65	M
9 - Pair	8.10	9.00	9.90	10.89	11.98	M
10 - Pair	8.55	9.50	10.45	11.50	12.64	M
15 - Pair	11.03	12.25	13.48	14.82	16.30	M
20 - Pair	13.50	15.00	16.50	18.15	19.97	M
25 - Pair	15.75	17.50	19.25	21.18	23.29	M

Low-Voltage Cable Terminations (Size #22 - #18)

Per Termination	0.04	0.05	0.06	0.07	0.07	E
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Gateway to the Electric Industry

PLENUM CABLE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Plenum Cable (Size #18 - #14)

2 - Conductor	10.80	12.00	13.20	14.52	15.97	M
3 - Conductor	11.25	12.50	13.75	15.13	16.64	M
4 - Conductor	11.48	12.75	14.03	15.43	16.97	M
5 - Conductor	11.70	13.00	14.30	15.73	17.30	M
6 - Conductor	11.93	13.25	14.58	16.03	17.64	M
7 - Conductor	12.15	13.50	14.85	16.34	17.97	M
8 - Conductor	12.38	13.75	15.13	16.64	18.30	M
9 - Conductor	12.60	14.00	15.40	16.94	18.63	M
10 - Conductor	12.83	14.25	15.68	17.24	18.97	M
15 - Conductor	14.40	16.00	17.60	19.36	21.30	M
20 - Conductor	15.30	17.00	18.70	20.57	22.63	M
25 - Conductor	16.20	18.00	19.80	21.78	23.96	M



Plenum Cable Twisted Pair (Size #18 - #14)

2 - Pair	12.60	14.00	15.40	16.94	18.63	M
3 - Pair	12.83	14.25	15.68	17.24	18.97	M
4 - Pair	13.14	14.60	16.06	17.67	19.43	M
5 - Pair	13.50	15.00	16.50	18.15	19.97	M
6 - Pair	13.73	15.25	16.78	18.45	20.30	M
7 - Pair	13.95	15.50	17.05	18.76	20.63	M
8 - Pair	14.18	15.75	17.33	19.06	20.96	M
9 - Pair	14.40	16.00	17.60	19.36	21.30	M
10 - Pair	14.63	16.25	17.88	19.66	21.63	M
15 - Pair	16.65	18.50	20.35	22.39	24.62	M
20 - Pair	18.00	20.00	22.00	24.20	26.62	M
25 - Pair	18.90	21.00	23.10	25.41	27.95	M

Plenum Cable Terminations (Size #18 - #14)

Per Termination	0.06	0.08	0.10	0.11	0.12	E
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COAX CABLE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Coax

RG 11/U	11.48	12.75	14.03	15.43	16.97	M
RG 59/U	11.48	12.75	14.03	15.43	16.97	M
RG 8/U	11.70	13.00	14.30	15.73	17.30	M
RG 58A/U	11.03	12.25	13.48	14.82	16.30	M
RG 58/U	11.03	12.25	13.48	14.82	16.30	M
RG 59/U	10.80	12.00	13.20	14.52	15.97	M
59/U	10.80	12.00	13.20	14.52	15.97	M



Coax Direct Burial

59/U	14.40	16.00	17.60	19.36	21.30	M
6/U	14.40	16.00	17.60	19.36	21.30	M
11/U	15.30	17.00	18.70	20.57	22.63	M



Coax Connectors

Coax Connectors	0.06	0.08	0.10	0.11	0.12	E
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Lan Cables IBM

4716749 (TYPE 1)	11.93	13.25	14.58	16.03	17.64	M
4716748 (TYPE 1)	11.93	13.25	14.58	16.03	17.64	M
4716738 (TYPE 2)	12.83	14.25	15.68	17.24	18.97	M
4716739 (TYPE 2)	12.83	14.25	15.68	17.24	18.97	M
TYPE 3	14.40	16.00	17.60	19.36	21.30	M
TYPE 6	15.30	17.00	18.70	20.57	22.63	M
TYPE 9	17.10	19.00	20.90	22.99	25.29	M



Lan Cables ETHERNET

17-00451-01	8.10	9.00	9.90	10.89	11.98	M
17-00324-01	8.10	9.00	9.90	10.89	11.98	M
17-01248-01	9.00	10.00	11.00	12.10	13.31	M
17-01246-01	9.00	10.00	11.00	12.10	13.31	M

UNDERCARPET CABLE

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Power Cable



12 - 3	3.17	3.52	3.87	4.26	4.69	C
12 - 5	3.38	3.75	4.13	4.54	4.99	C
12 - 5 IG	3.83	4.25	4.68	5.14	5.66	C
10 - 3	3.15	3.50	3.85	4.24	4.66	C
10 - 5	3.60	4.00	4.40	4.84	5.32	C
10 - 5 IG	4.05	4.50	4.95	5.45	5.99	C



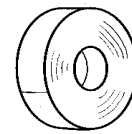
Undercarpet Tap

12 - 3	0.32	0.35	0.39	0.42	0.47	E
12 - 5	0.41	0.45	0.50	0.54	0.60	E
12 - 5 IG	0.50	0.55	0.61	0.67	0.73	E
10 - 3	0.36	0.40	0.44	0.48	0.53	E
10 - 5	0.45	0.50	0.55	0.61	0.67	E
10 - 5 IG	0.54	0.60	0.66	0.73	0.80	E



Undercarpet SHIELD

3 - Conductor	0.90	1.00	1.10	1.21	1.33	C
5 - Conductor	1.13	1.25	1.38	1.51	1.66	C



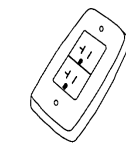
Undercarpet Tape

2"	0.72	0.80	0.88	0.97	1.06	C
5"	0.81	0.90	0.99	1.09	1.20	C
10"	1.13	1.25	1.38	1.51	1.66	C



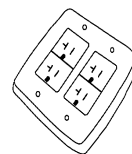
Junction Box

Junction Box	0.45	0.50	0.55	0.61	0.67	E
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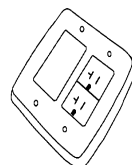
Duplex Outlet

Duplex	0.41	0.45	0.50	0.54	0.60	E
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Double Duplex

Double Duplex	0.59	0.65	0.72	0.79	0.87	E
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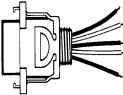
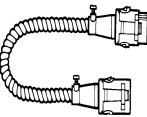
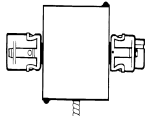
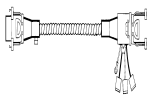
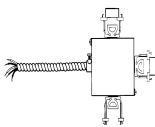
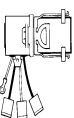


Combination Duplex & Data

Combination	0.50	0.55	0.61	0.67	0.73	E
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FLEXIBLE WIRING SYSTEM

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
							
Distribution Box Connector							
1-Circuit		0.32	0.35	0.39	0.42	0.47	E
2-Circuit		0.36	0.40	0.44	0.48	0.53	E
							
Extender Cable							
9' Long		0.14	0.15	0.17	0.18	0.20	E
11' Long		0.15	0.17	0.19	0.21	0.23	E
13' Long		0.17	0.19	0.21	0.23	0.25	E
							
Connector							
Connector		0.27	0.30	0.33	0.36	0.40	E
							
Power Drop Module							
1-Circuit		0.36	0.40	0.44	0.48	0.53	E
2-Circuit		0.41	0.45	0.50	0.54	0.60	E
							
Lighting Cable							
1-Circuit		0.16	0.18	0.20	0.22	0.24	E
2-Circuit		0.18	0.20	0.22	0.24	0.27	E
							
Switch Cable							
Single Level		0.16	0.18	0.20	0.22	0.24	E
Dual Level		0.18	0.20	0.22	0.24	0.27	E
							
Circuit Terminator							
1-Circuit		0.09	0.10	0.11	0.12	0.13	E
2-Circuit		0.11	0.12	0.13	0.15	0.16	E

MC CABLE

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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MC Cable (2-Conductor With Ground)



2-COND
W/GROUND

#12	2.10	2.30	2.60	2.86	3.15	C
#10	2.40	2.60	3.00	3.30	3.63	C
#8	2.70	3.00	3.25	3.58	3.93	C
#6	3.00	3.25	3.70	4.07	4.48	C
#4	3.50	3.75	4.15	4.57	5.02	C
#3	3.75	4.00	4.60	5.06	5.57	C
#2	4.00	4.50	5.00	5.50	6.05	C
#1	4.50	5.00	5.50	6.05	6.66	C
1/0	5.00	5.50	6.00	6.60	7.26	C
2/0	5.50	6.00	6.50	7.15	7.87	C
3/0	6.00	6.50	7.00	7.70	8.47	C
4/0	6.30	7.00	7.50	8.25	9.08	C

MC Cable (3-Conductor With Ground)



3-COND
W/GROUND

#12	2.40	2.60	3.00	3.30	3.63	C
#10	2.75	3.00	3.50	3.85	4.24	C
#8	3.00	3.50	3.75	4.13	4.54	C
#6	3.50	3.75	4.25	4.68	5.14	C
#4	4.00	4.30	4.75	5.23	5.75	C
#3	4.30	4.60	5.30	5.83	6.41	C
#2	4.60	5.20	5.75	6.33	6.96	C
#1	5.20	5.75	6.30	6.93	7.62	C
1/0	5.75	6.30	6.90	7.59	8.35	C
2/0	6.30	6.90	7.50	8.25	9.08	C
3/0	6.90	7.50	8.00	8.80	9.68	C
4/0	7.25	8.00	8.60	9.46	10.41	C

MC Cable (4-Conductor With Ground)



W/GROUND

#12	2.75	3.00	3.50	3.85	4.24	C
#10	3.20	3.50	4.00	4.40	4.84	C
#8	3.50	4.00	4.30	4.73	5.20	C
#6	4.00	4.30	4.90	5.39	5.93	C
#4	4.60	5.00	5.50	6.05	6.66	C
#3	5.00	5.30	6.10	6.71	7.38	C
#2	5.30	6.00	6.60	7.26	7.99	C
#1	6.00	6.60	7.25	7.98	8.77	C
1/0	6.60	7.25	8.00	8.80	9.68	C
2/0	7.25	8.00	8.60	9.46	10.41	C
3/0	8.00	8.60	9.20	10.12	11.13	C
4/0	8.30	9.20	9.90	10.89	11.98	C



Connectors

1/2"	0.03	0.05	0.07	0.08	0.08	E
3/4"	0.04	0.06	0.08	0.09	0.10	E
1"	0.06	0.08	0.10	0.11	0.12	E
1 1/4"	0.07	0.10	0.13	0.14	0.16	E
1 1/2"	0.07	0.10	0.13	0.14	0.16	E
2"	0.10	0.15	0.20	0.22	0.24	E
2 1/2"	0.10	0.15	0.20	0.22	0.24	E

WIRENUTS, CABLE TIES, & MARKERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



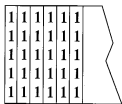
Cable Ties

2"		0.02	0.02	0.02	0.02	0.03	E
3"		0.02	0.02	0.02	0.02	0.03	E
4"		0.02	0.02	0.02	0.02	0.03	E
5"		0.03	0.03	0.03	0.04	0.04	E
6"		0.03	0.03	0.03	0.04	0.04	E
7"		0.04	0.04	0.04	0.05	0.05	E
8"		0.04	0.04	0.04	0.05	0.05	E
9"		0.05	0.05	0.06	0.06	0.07	E



Wirenuts

Yellow		0.02	0.02	0.02	0.02	0.03	E
Red		0.03	0.03	0.03	0.04	0.04	E
Gray		0.04	0.04	0.04	0.05	0.05	E
Blue		0.05	0.05	0.06	0.06	0.07	E



Wire Markers

Markers per Wire		0.01	0.01	0.01	0.01	0.01	E
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LUGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Sta-Kons

#18	0.05	0.05	0.06	0.06	0.07	E
#16	0.05	0.05	0.06	0.06	0.07	E
#14	0.06	0.07	0.08	0.08	0.09	E
#12	0.08	0.09	0.10	0.11	0.12	E
#10	0.09	0.10	0.11	0.12	0.13	E
#8	0.14	0.15	0.17	0.18	0.20	E



Single Lug

#6	0.18	0.20	0.22	0.24	0.27	E
#4 - #1	0.23	0.25	0.28	0.30	0.33	E
1/0 - 4/0	0.32	0.35	0.39	0.42	0.47	E
250 - 350 MCM	0.41	0.45	0.50	0.54	0.60	E
400 - 500 MCM	0.45	0.50	0.55	0.61	0.67	E
600 - 700 MCM	0.50	0.55	0.61	0.67	0.73	E
750 - 1000 MCM	0.54	0.60	0.66	0.73	0.80	E



Double Lug

#6	0.32	0.35	0.39	0.42	0.47	E
#4 - #1	0.41	0.45	0.50	0.54	0.60	E
1/0 - 4/0	0.54	0.60	0.66	0.73	0.80	E
250 - 350 MCM	0.68	0.75	0.83	0.91	1.00	E
400 - 500 MCM	0.77	0.85	0.94	1.03	1.13	E
600 - 700 MCM	0.86	0.95	1.05	1.15	1.26	E
750 - 1000 MCM	0.90	1.00	1.10	1.21	1.33	E



Split Bolts

#6	0.36	0.40	0.44	0.48	0.53	E
#4 - #1	0.45	0.50	0.55	0.61	0.67	E
1/0 - 4/0	0.63	0.70	0.77	0.85	0.93	E
250 - 350 MCM	0.77	0.85	0.94	1.03	1.13	E
400 - 500 MCM	0.90	1.00	1.10	1.21	1.33	E
600 - 700 MCM	0.99	1.10	1.21	1.33	1.46	E
750 - 1000 MCM	1.08	1.20	1.32	1.45	1.60	E



Hi-Press Lugs

#6	0.23	0.25	0.28	0.30	0.33	E
#4 - #1	0.27	0.30	0.33	0.36	0.40	E
1/0 - 4/0	0.36	0.40	0.44	0.48	0.53	E
250 - 350 MCM	0.50	0.55	0.61	0.67	0.73	E
400 - 500 MCM	0.54	0.60	0.66	0.73	0.80	E
600 - 700 MCM	0.59	0.65	0.72	0.79	0.87	E
750 - 1000 MCM	0.63	0.70	0.77	0.85	0.93	E

LUGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
Hi-Press Butt Splice							
	#6	0.32	0.35	0.39	0.42	0.47	E
	#4 - #1	0.36	0.40	0.44	0.48	0.53	E
	1/0 - 4/0	0.45	0.50	0.55	0.61	0.67	E
	250 - 350 MCM	0.59	0.65	0.72	0.79	0.87	E
	400 - 500 MCM	0.63	0.70	0.77	0.85	0.93	E
	600 - 700 MCM	0.77	0.85	0.94	1.03	1.13	E
	750 - 1000 MCM	0.90	1.00	1.10	1.21	1.33	E
Quad Lug							
	#6	0.41	0.45	0.50	0.54	0.60	E
	#4 - #1	0.50	0.55	0.61	0.67	0.73	E
	1/0 - 4/0	0.59	0.65	0.72	0.79	0.87	E
Cable Splicers							
	#2	0.36	0.40	0.44	0.48	0.53	E
	1/0	0.41	0.45	0.50	0.54	0.60	E
	4/0	0.45	0.50	0.55	0.61	0.67	E
	250 MCM	0.54	0.60	0.66	0.73	0.80	E
	350 MCM	0.59	0.65	0.72	0.79	0.87	E
	500 MCM	0.63	0.70	0.77	0.85	0.93	E
Multitap Splicers							
	3/0	0.72	0.80	0.88	0.97	1.06	E
	4/0	0.77	0.85	0.94	1.03	1.13	E
	250 MCM	0.81	0.90	0.99	1.09	1.20	E
	300 MCM	0.86	0.95	1.05	1.15	1.26	E
	350 MCM	0.90	1.00	1.10	1.21	1.33	E
	400 MCM	0.95	1.05	1.16	1.27	1.40	E
	500 MCM	0.99	1.10	1.21	1.33	1.46	E
Ground Clamp							
	#4 - 2/0	0.23	0.25	0.28	0.30	0.33	E
	2/0 - 500 MCM	0.36	0.40	0.44	0.48	0.53	E

NOTE: All lugs include termination labor.

TERMINATIONS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Termination



#18	0.05	0.05	0.06	0.06	0.07	E
#16	0.05	0.05	0.06	0.06	0.07	E
#14	0.05	0.06	0.07	0.07	0.08	E
#12	0.06	0.07	0.08	0.08	0.09	E
#10	0.08	0.09	0.10	0.11	0.12	E
#8	0.10	0.11	0.12	0.13	0.15	E
#6	0.12	0.13	0.14	0.16	0.17	E
#4	0.14	0.15	0.17	0.18	0.20	E
#3	0.15	0.17	0.19	0.21	0.23	E
#2	0.17	0.19	0.21	0.23	0.25	E
#1	0.19	0.21	0.23	0.25	0.28	E
1/0	0.21	0.23	0.25	0.28	0.31	E
2/0	0.23	0.25	0.28	0.30	0.33	E
3/0	0.24	0.27	0.30	0.33	0.36	E
4/0	0.26	0.29	0.32	0.35	0.39	E
250 MCM	0.28	0.31	0.34	0.38	0.41	E
300 MCM	0.30	0.33	0.36	0.40	0.44	E
350 MCM	0.32	0.35	0.39	0.42	0.47	E
400 MCM	0.33	0.37	0.41	0.45	0.49	E
500 MCM	0.35	0.39	0.43	0.47	0.52	E
600 MCM	0.37	0.41	0.45	0.50	0.55	E
700 MCM	0.39	0.43	0.47	0.52	0.57	E
750 MCM	0.39	0.43	0.47	0.52	0.57	E
1000 MCM	0.39	0.43	0.47	0.52	0.57	E

NOTE:

These labor units are to be used for cable terminations on circuit breakers and lugs supplied with equipment.

RECEPTACLES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
 Duplex Receptacles							
15 Amp - Back Wired		0.14	0.15	0.17	0.18	0.20	E
20 Amp - Back Wired		0.15	0.17	0.19	0.21	0.23	E
15 Amp - Side Wired		0.23	0.25	0.28	0.30	0.33	E
20 Amp - Side Wired		0.23	0.25	0.28	0.30	0.33	E
 GFCI Receptacles							
15 Amp		0.25	0.30	0.35	0.39	0.42	E
20 Amp		0.25	0.30	0.35	0.39	0.42	E
 Single Receptacles							
15 Amp		0.23	0.25	0.28	0.31	0.34	E
20 Amp		0.23	0.25	0.28	0.31	0.34	E
 3-Wire Receptacles							
30 Amp		0.30	0.35	0.40	0.44	0.48	E
30 Amp Surface		0.40	0.45	0.50	0.55	0.61	E
50 Amp		0.35	0.40	0.45	0.50	0.54	E
50 Amp Surface		0.45	0.50	0.55	0.61	0.67	E
 4-Wire Receptacles							
30 Amp		0.40	0.45	0.50	0.55	0.61	E
30 Amp Surface		0.50	0.55	0.60	0.66	0.73	E
50 Amp		0.45	0.50	0.55	0.61	0.67	E
50 Amp Surface		0.55	0.60	0.65	0.72	0.79	E
 Locking Receptacles							
15 AMP		0.23	0.25	0.28	0.31	0.34	E
20 AMP		0.23	0.25	0.28	0.31	0.34	E
30 AMP		0.26	0.30	0.34	0.37	0.41	E
50 AMP		0.40	0.45	0.50	0.55	0.61	E
60 AMP		0.45	0.50	0.55	0.61	0.67	E

SWITCHES & COVER PLATES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Snap Switches (15 & 20 Amp)



Single Pole - Back Wired	0.12	0.15	0.18	0.20	0.22	E
Single Pole - Side Wired	0.16	0.20	0.24	0.26	0.29	E
Double Pole - Side Wired	0.24	0.30	0.36	0.40	0.44	E
3-Way - Back Wired	0.16	0.20	0.24	0.26	0.29	E
3-Way - Side Wired	0.20	0.25	0.30	0.33	0.36	E
4-Way - Side Wired	0.24	0.30	0.36	0.40	0.44	E

Switch & Receptacle Combination



15 - Amp	0.16	0.20	0.24	0.26	0.29	E
20 - Amp	0.20	0.25	0.30	0.33	0.36	E

2-Switch Combination



15 - Amp	0.20	0.25	0.30	0.33	0.36	E
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Switch & Pilot Combination



20 - Amp	0.18	0.25	0.22	0.24	0.27	E
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Cover Plates



1-GANG	0.02	0.03	0.04	0.04	0.05	E
2-GANG	0.03	0.04	0.05	0.06	0.06	E
3-GANG	0.04	0.05	0.06	0.07	0.07	E
4-GANG	0.05	0.06	0.07	0.08	0.08	E
5-GANG	0.06	0.08	0.10	0.11	0.12	E
6-GANG	0.08	0.10	0.12	0.13	0.15	E
6-GANG	0.10	0.12	0.14	0.15	0.17	E

Weather-Proof Plates



1-GANG	0.08	0.10	0.12	0.13	0.15	E
2-GANG	0.12	0.15	0.18	0.20	0.22	E

In-Use Weather-Proof Plates



1-GANG	0.12	0.14	0.16	0.18	0.19	E
2-GANG	0.14	0.16	0.18	0.20	0.22	E

DIMMERS & CORD CAPS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Rotary Dimmers

Single Pole - 600W		0.23	0.25	0.28	0.30	0.33 E
3-Way - 600W		0.25	0.28	0.31	0.34	0.37 E



Slide Dimmers

Single Pole - 600W		0.23	0.25	0.28	0.30	0.33 E
3-Way - 600W		0.25	0.28	0.31	0.34	0.37 E



Touch Dimmers

Single Pole - 600W		0.23	0.25	0.28	0.30	0.33 E
3-Way - 600W		0.25	0.28	0.31	0.34	0.37 E
4-Way - 600W		0.32	0.35	0.39	0.42	0.47 E



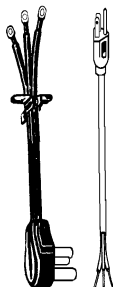
Large Dimmers

800W		0.25	0.28	0.31	0.34	0.37 E
1000W		0.27	0.30	0.33	0.36	0.40 E
1500W		0.32	0.35	0.39	0.42	0.47 E
2000W		0.36	0.40	0.44	0.48	0.53 E



Cord Caps

15 - Amp		0.23	0.25	0.28	0.30	0.33 E
20 - Amp		0.27	0.30	0.33	0.36	0.40 E
30 - Amp		0.32	0.35	0.39	0.42	0.47 E



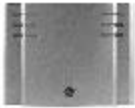
Appliance Cords

15 - Amp		0.18	0.20	0.22	0.24	0.27 E
20 - Amp		0.23	0.25	0.28	0.30	0.33 E
30 - Amp		0.32	0.35	0.39	0.42	0.47 E
50 - Amp		0.41	0.45	0.50	0.54	0.60 E

DOOR CHIMES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Door Chime

Small		0.40	0.50	0.60	0.66	0.73 E
Medium		0.60	0.75	0.90	0.99	1.09 E
Large		0.80	1.00	1.20	1.32	1.45 E



Deluxe Door Chimes

Small		0.80	1.00	1.20	1.32	1.45 E
Medium		1.00	1.25	1.50	1.65	1.82 E
Large		1.20	1.50	1.80	1.98	2.18 E



Bell Transformer

Cover Mounted		0.28	0.35	0.42	0.46	0.51 E
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Door Bell Button

Button		0.20	0.25	0.30	0.33	0.36 E
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Bell Wire

Bell Wire		5.60	7.00	8.40	9.24	10.16 M
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LOADCENTERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



NEMA 1

Loadcenters NEMA 1

100 A - 8 CIR	1.58	1.75	1.93	2.12	2.33	E
100 A - 12 CIR	1.80	2.00	2.20	2.42	2.66	E
125 A - 20 CIR	2.03	2.25	2.48	2.72	2.99	E
125A - 24 CIR	2.25	2.50	2.75	3.03	3.33	E
150A - 16 CIR	2.03	2.25	2.48	2.72	2.99	E
150A - 24 CIR	2.48	2.75	3.03	3.33	3.66	E
150A - 30 CIR	2.70	3.00	3.30	3.63	3.99	E
200A - 16 CIR	2.25	2.50	2.75	3.03	3.33	E
200A - 24 CIR	2.70	3.00	3.30	3.63	3.99	E
200A - 30 CIR	2.93	3.25	3.58	3.93	4.33	E
225A - 42 CIR	3.60	4.00	4.40	4.84	5.32	E
400A - 30 CIR	3.60	4.00	4.40	4.84	5.32	E
400A - 42 CIR	4.05	4.50	4.95	5.45	5.99	E



NEMA 3R

Loadcenters NEMA 3R

100 A - 8 CIR	2.03	2.25	2.48	2.72	2.99	E
100 A - 12 CIR	2.25	2.50	2.75	3.03	3.33	E
125 A - 20 CIR	2.48	2.75	3.03	3.33	3.66	E
125A - 24 CIR	2.70	3.00	3.30	3.63	3.99	E
150A - 16 CIR	2.48	2.75	3.03	3.33	3.66	E
150A - 24 CIR	2.93	3.25	3.58	3.93	4.33	E
150A - 30 CIR	3.15	3.50	3.85	4.24	4.66	E
200A - 16 CIR	2.70	3.00	3.30	3.63	3.99	E
200A - 24 CIR	3.15	3.50	3.85	4.24	4.66	E
200A - 30 CIR	3.38	3.75	4.13	4.54	4.99	E
225A - 42 CIR	4.05	4.50	4.95	5.45	5.99	E
400A - 30 CIR	4.05	4.50	4.95	5.45	5.99	E
400A - 42 CIR	4.50	5.00	5.50	6.05	6.66	E



NEMA 3R

Service Center NEMA 3R

100A - 24 Circuit	2.80	3.50	4.20	4.62	5.08	E
125A - 24 Circuit	2.80	3.50	4.20	4.62	5.08	E
200A - 40 Circuit	3.20	4.00	4.80	5.28	5.81	E
225A - 40 Circuit	3.60	4.50	5.40	5.94	6.53	E



Meter

100A	0.90	1.00	1.10	1.21	1.33	E
125A	1.13	1.25	1.38	1.51	1.66	E
200A	1.35	1.50	1.65	1.82	2.00	E



Ground Bar

Ground Bar	0.06	0.07	0.08	0.09	0.10	E
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Conduit Hub

Conduit Hub	0.17	0.20	0.23	0.25	0.28	E
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PLUG-IN CIRCUIT BREAKERS

LABOR UNITS



1-Pole

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
15 AMP		0.09	0.10	0.11	0.12	0.13 E
20 AMP		0.09	0.10	0.11	0.12	0.13 E
30 AMP		0.14	0.15	0.17	0.18	0.20 E
40 AMP		0.14	0.15	0.17	0.18	0.20 E
50 AMP		0.18	0.20	0.22	0.24	0.27 E
60 AMP		0.18	0.20	0.22	0.24	0.27 E



2-Pole

15 AMP		0.14	0.15	0.17	0.18	0.20 E
20 AMP		0.14	0.15	0.17	0.18	0.20 E
30 AMP		0.18	0.20	0.22	0.24	0.27 E
40 AMP		0.18	0.20	0.22	0.24	0.27 E
50 AMP		0.23	0.25	0.28	0.30	0.33 E
60 AMP		0.23	0.25	0.28	0.30	0.33 E
70 AMP		0.27	0.30	0.33	0.36	0.40 E
80 AMP		0.27	0.30	0.33	0.36	0.40 E
90 AMP		0.27	0.30	0.33	0.36	0.40 E
100 AMP		0.36	0.40	0.44	0.48	0.53 E



3-Pole

15 AMP		0.18	0.20	0.22	0.24	0.27 E
20 AMP		0.18	0.20	0.22	0.24	0.27 E
30 AMP		0.23	0.25	0.28	0.30	0.33 E
40 AMP		0.23	0.25	0.28	0.30	0.33 E
50 AMP		0.27	0.30	0.33	0.36	0.40 E
60 AMP		0.27	0.30	0.33	0.36	0.40 E
70 AMP		0.32	0.35	0.39	0.42	0.47 E
80 AMP		0.32	0.35	0.39	0.42	0.47 E
90 AMP		0.32	0.35	0.39	0.42	0.47 E
100 AMP		0.41	0.45	0.50	0.54	0.60 E



Twin-Pole Multi Breakers

15 & 20 AMP		0.27	0.30	0.33	0.36	0.40 E
15 & 25 AMP		0.32	0.35	0.39	0.42	0.47 E
15 & 30 AMP		0.32	0.35	0.39	0.42	0.47 E
15 & 40 AMP		0.32	0.35	0.39	0.42	0.47 E
15 & 50 AMP		0.36	0.40	0.44	0.48	0.53 E



GFCI or ARC-Fault

15 AMP	1-POLE	0.18	0.20	0.22	0.24	0.27 E
20 AMP	1-POLE	0.18	0.20	0.22	0.24	0.27 E



15 AMP	2-POLE	0.18	0.20	0.22	0.24	0.27 E
20 AMP	2-POLE	0.18	0.20	0.22	0.24	0.27 E



Switched Neutral, 1-Pole

15 AMP		0.27	0.30	0.33	0.36	0.40 E
20 AMP		0.27	0.30	0.33	0.36	0.40 E

PANELBOARD & BOLT-ON BREAKERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Panelboards NEMA 1



NEMA 1

100 A - 8 CIR	1.98	2.20	2.42	2.66	2.93	E
100 A - 12 CIR	2.16	2.40	2.64	2.90	3.19	E
100 A - 16 CIR	2.34	2.60	2.86	3.15	3.46	E
100A - 20 CIR	2.52	2.80	3.08	3.39	3.73	E
225A - 24 CIR	2.70	3.00	3.30	3.63	3.99	E
225A - 32 CIR	2.93	3.25	3.58	3.93	4.33	E
225A - 36 CIR	3.15	3.50	3.85	4.24	4.66	E
225A - 40 CIR	3.38	3.75	4.13	4.54	4.99	E
400A - 32 CIR	3.60	4.00	4.40	4.84	5.32	E
400A - 36 CIR	3.83	4.25	4.68	5.14	5.66	E
400A - 40 CIR	4.05	4.50	4.95	5.45	5.99	E

Panelboard NEMA 3R



NEMA 3R

100 A - 8 CIR	2.52	2.80	3.08	3.39	3.73	E
100 A - 12 CIR	2.70	3.00	3.30	3.63	3.99	E
100 A - 16 CIR	2.88	3.20	3.52	3.87	4.26	E
100A - 20 CIR	3.06	3.40	3.74	4.11	4.53	E
225A - 24 CIR	3.24	3.60	3.96	4.36	4.79	E
225A - 32 CIR	3.47	3.85	4.24	4.66	5.12	E
225A - 36 CIR	3.69	4.10	4.51	4.96	5.46	E
225A - 40 CIR	3.92	4.35	4.79	5.26	5.79	E
400A - 32 CIR	4.14	4.60	5.06	5.57	6.12	E
400A - 36 CIR	4.37	4.85	5.34	5.87	6.46	E
400A - 40 CIR	4.59	5.10	5.61	6.17	6.79	E

1-Pole



15 AMP	0.14	0.15	0.17	0.18	0.20	E
20 AMP	0.14	0.15	0.17	0.18	0.20	E
30 AMP	0.18	0.20	0.22	0.24	0.27	E
40 AMP	0.18	0.20	0.22	0.24	0.27	E
50 AMP	0.23	0.25	0.28	0.30	0.33	E
60 AMP	0.23	0.25	0.28	0.30	0.33	E

GFCI, 1-Pole



15 AMP	0.18	0.20	0.22	0.24	0.27	E
20 AMP	0.18	0.20	0.22	0.24	0.27	E

GFCI, 2-Pole



15 AMP	0.18	0.20	0.22	0.24	0.27	E
20 AMP	0.18	0.20	0.22	0.24	0.27	E
30 AMP	0.22	0.24	0.26	0.29	0.31	E
40 AMP	0.24	0.26	0.28	0.31	0.34	E
50 AMP	0.30	0.33	0.36	0.40	0.44	E

BOLT-ON BREAKERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Switched Neutral, 1-Pole

15 AMP	0.32	0.35	0.39	0.42	0.47	E
20 AMP	0.32	0.35	0.39	0.42	0.47	E



2-Pole

15 AMP	0.18	0.20	0.22	0.24	0.27	E
20 AMP	0.18	0.20	0.22	0.24	0.27	E
30 AMP	0.23	0.25	0.28	0.30	0.33	E
40 AMP	0.23	0.25	0.28	0.30	0.33	E
50 AMP	0.27	0.30	0.33	0.36	0.40	E
60 AMP	0.27	0.30	0.33	0.36	0.40	E
70 AMP	0.32	0.35	0.39	0.42	0.47	E
80 AMP	0.32	0.35	0.39	0.42	0.47	E
90 AMP	0.32	0.35	0.39	0.42	0.47	E
100 AMP	0.41	0.45	0.50	0.54	0.60	E
125 AMP	0.41	0.45	0.50	0.54	0.60	E
150 AMP	0.50	0.55	0.61	0.67	0.73	E
175 AMP	0.50	0.55	0.61	0.67	0.73	E
200 AMP	0.59	0.65	0.72	0.79	0.87	E
225 AMP	0.59	0.65	0.72	0.79	0.87	E
250 AMP	0.72	0.80	0.88	0.97	1.06	E
300 AMP	0.72	0.80	0.88	0.97	1.06	E
350 AMP	0.90	1.00	1.10	1.21	1.33	E
400 AMP	0.90	1.00	1.10	1.21	1.33	E



3-Pole

15 AMP	0.23	0.25	0.28	0.30	0.33	E
20 AMP	0.23	0.25	0.28	0.30	0.33	E
30 AMP	0.32	0.35	0.39	0.42	0.47	E
40 AMP	0.32	0.35	0.39	0.42	0.47	E
50 AMP	0.36	0.40	0.44	0.48	0.53	E
60 AMP	0.36	0.40	0.44	0.48	0.53	E
70 AMP	0.41	0.45	0.50	0.54	0.60	E
80 AMP	0.41	0.45	0.50	0.54	0.60	E
90 AMP	0.41	0.45	0.50	0.54	0.60	E
100 AMP	0.54	0.60	0.66	0.73	0.80	E
125 AMP	0.54	0.60	0.66	0.73	0.80	E
150 AMP	0.68	0.75	0.83	0.91	1.00	E
175 AMP	0.68	0.75	0.83	0.91	1.00	E
200 AMP	0.77	0.85	0.94	1.03	1.13	E
225 AMP	0.77	0.85	0.94	1.03	1.13	E
250 AMP	0.95	1.05	1.16	1.27	1.40	E
300 AMP	0.95	1.05	1.16	1.27	1.40	E
350 AMP	1.17	1.30	1.43	1.57	1.73	E
400 AMP	1.17	1.30	1.43	1.57	1.73	E

SWITCHGEAR

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Underground Landing Section

600A	5.40	6.00	6.60	7.26	7.99	E
800A	6.30	7.00	7.70	8.47	9.32	E
1000A	7.20	8.00	8.80	9.68	10.65	E
1200A	8.10	9.00	9.90	10.89	11.98	E
1600A	9.00	10.00	11.00	12.10	13.31	E
2000A	10.80	12.00	13.20	14.52	15.97	E
2500A	12.60	14.00	15.40	16.94	18.63	E
3000A	14.40	16.00	17.60	19.36	21.30	E
4000A	18.00	20.00	22.00	24.20	26.62	E



Meter Main Section

600A	7.20	8.00	8.80	9.68	10.65	E
800A	9.00	10.00	11.00	12.10	13.31	E
1000A	10.80	12.00	13.20	14.52	15.97	E
1200A	12.60	14.00	15.40	16.94	18.63	E
1600A	14.40	16.00	17.60	19.36	21.30	E
2000A	16.20	18.00	19.80	21.78	23.96	E
2500A	18.00	20.00	22.00	24.20	26.62	E
3000A	21.60	24.00	26.40	29.04	31.94	E
4000A	25.20	28.00	30.80	33.88	37.27	E



Distribution Section

600A	7.20	8.00	8.80	9.68	10.65	E
800A	9.00	10.00	11.00	12.10	13.31	E
1000A	10.80	12.00	13.20	14.52	15.97	E
1200A	13.50	15.00	16.50	18.15	19.97	E
1600A	16.20	18.00	19.80	21.78	23.96	E
2000A	23.40	26.00	28.60	31.46	34.61	E
2500A	27.00	30.00	33.00	36.30	39.93	E
3000A	32.40	36.00	39.60	43.56	47.92	E
4000A	39.60	44.00	48.40	53.24	58.56	E

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Gateway to the Electric Industry

METERS & FUSES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Multi-Meter Section



400A	9.00	10.00	11.00	12.10	13.31	E
600A	10.80	12.00	13.20	14.52	15.97	E
800A	12.60	14.00	15.40	16.94	18.63	E
1000A	14.40	16.00	17.60	19.36	21.30	E
1200A	16.20	18.00	19.80	21.78	23.96	E
1600A	19.80	22.00	24.20	26.62	29.28	E
2000A	25.20	28.00	30.80	33.88	37.27	E

Fused Switch



30A	0.72	0.80	0.88	0.97	1.06	E
60A	0.81	0.90	0.99	1.09	1.20	E
100A	0.90	1.00	1.10	1.21	1.33	E
200A	1.22	1.35	1.49	1.63	1.80	E
400A	1.49	1.65	1.82	2.00	2.20	E
600A	1.80	2.00	2.20	2.42	2.66	E
800A	2.07	2.30	2.53	2.78	3.06	E
1200A	2.34	2.60	2.86	3.15	3.46	E

Circuit Breakers



600A	1.80	2.00	2.20	2.42	2.66	E
800A	2.07	2.30	2.53	2.78	3.06	E
1000A	2.21	2.45	2.70	2.96	3.26	E
1200A	2.34	2.60	2.86	3.15	3.46	E

Fuses



30A	0.09	0.10	0.11	0.12	0.13	E
60A	0.14	0.15	0.17	0.18	0.20	E
100A	0.18	0.20	0.22	0.24	0.27	E
200A	0.23	0.25	0.28	0.30	0.33	E
400A	0.27	0.30	0.33	0.36	0.40	E
600A	0.32	0.35	0.39	0.42	0.47	E
800A	0.32	0.35	0.39	0.42	0.47	E
1200A	0.36	0.40	0.44	0.48	0.53	E
1600A	0.36	0.40	0.44	0.48	0.53	E
2000A	0.45	0.50	0.55	0.61	0.67	E
3000A	0.45	0.50	0.55	0.61	0.67	E
4000A	0.54	0.60	0.66	0.73	0.80	E

SAFETY SWITCHES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



General Duty NEMA 1

30A	0.68	0.75	0.83	0.91	1.00	E
60A	0.90	1.00	1.10	1.21	1.33	E
100A	1.13	1.25	1.38	1.51	1.66	E
200A	1.80	2.00	2.20	2.42	2.66	E
400A	2.70	3.00	3.30	3.63	3.99	E
600A	3.60	4.00	4.40	4.84	5.32	E
800A	5.40	6.00	6.60	7.26	7.99	E



Heavy Duty NEMA 1

30A	0.77	0.85	0.94	1.03	1.13	E
60A	0.99	1.10	1.21	1.33	1.46	E
100A	1.26	1.40	1.54	1.69	1.86	E
200A	1.98	2.20	2.42	2.66	2.93	E
400A	2.97	3.30	3.63	3.99	4.39	E
600A	3.96	4.40	4.84	5.32	5.86	E
800A	5.94	6.60	7.26	7.99	8.78	E



General Duty NEMA 3R

30A	0.81	0.90	0.99	1.09	1.20	E
60A	1.08	1.20	1.32	1.45	1.60	E
100A	1.35	1.50	1.65	1.82	2.00	E
200A	2.16	2.40	2.64	2.90	3.19	E
400A	3.24	3.60	3.96	4.36	4.79	E
600A	4.32	4.80	5.28	5.81	6.39	E
800A	6.48	7.20	7.92	8.71	9.58	E



Heavy Duty NEMA 3R

30A	0.90	1.00	1.10	1.21	1.33	E
60A	1.17	1.30	1.43	1.57	1.73	E
100A	1.53	1.70	1.87	2.06	2.26	E
200A	2.39	2.65	2.92	3.21	3.53	E
400A	3.60	4.00	4.40	4.84	5.32	E
600A	4.77	5.30	5.83	6.41	7.05	E
800A	7.20	8.00	8.80	9.68	10.65	E

MOTOR CONTROL

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Manual Motor Starter - Toggle Type

SIZE 00	0.45	0.50	0.55	0.61	0.67	E
SIZE 0	0.45	0.50	0.55	0.61	0.67	E
SIZE 1	0.59	0.65	0.72	0.79	0.87	E



Manual Motor Starter - Push Button Type

SIZE 00	0.63	0.70	0.77	0.85	0.93	E
SIZE 0	0.63	0.70	0.77	0.85	0.93	E
SIZE 1	0.81	0.90	0.99	1.09	1.20	E

Magnetic Motor Starter



SIZE 00	1.13	1.25	1.38	1.51	1.66	E
SIZE 0	1.35	1.50	1.65	1.82	2.00	E
SIZE 1	1.58	1.75	1.93	2.12	2.33	E
SIZE 2	1.80	2.00	2.20	2.42	2.66	E
SIZE 3	2.25	2.50	2.75	3.03	3.33	E
SIZE 4	2.70	3.00	3.30	3.63	3.99	E
SIZE 5	3.15	3.50	3.85	4.24	4.66	E
SIZE 6	3.60	4.00	4.40	4.84	5.32	E

Combination Motor Starter



SIZE 00	1.58	1.75	1.93	2.12	2.33	E
SIZE 0	1.80	2.00	2.20	2.42	2.66	E
SIZE 1	2.03	2.25	2.48	2.72	2.99	E
SIZE 2	2.48	2.75	3.03	3.33	3.66	E
SIZE 3	2.93	3.25	3.58	3.93	4.33	E
SIZE 4	3.38	3.75	4.13	4.54	4.99	E
SIZE 5	4.05	4.50	4.95	5.45	5.99	E
SIZE 6	4.50	5.00	5.50	6.05	6.66	E

Motor Control Centers



1-SECTION	3.60	4.00	4.40	4.84	5.32	E
2-SECTION	7.20	8.00	8.80	9.68	10.65	E
3-SECTION	10.80	12.00	13.20	14.52	15.97	E
4-SECTION	14.40	16.00	17.60	19.36	21.30	E
5-SECTION	18.00	20.00	22.00	24.20	26.62	E
6-SECTION	21.60	24.00	26.40	29.04	31.94	E
7-SECTION	25.20	28.00	30.80	33.88	37.27	E
8-SECTION	28.80	32.00	35.20	38.72	42.59	E

TRANSFORMERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Wall Mounted Transformers



.5 KVA	0.45	0.50	0.55	0.61	0.67	E
1 KVA	0.45	0.50	0.55	0.61	0.67	E
3 KVA	0.90	1.00	1.10	1.21	1.33	E
5 KVA	1.13	1.25	1.38	1.51	1.66	E
9 KVA	1.80	2.00	2.20	2.42	2.66	E
15 KVA	2.25	2.50	2.75	3.03	3.33	E

Free Standing Dry Transformers



30 KVA	3.60	4.00	4.40	4.84	5.32	E
45 KVA	4.05	4.50	4.95	5.45	5.99	E
50 KVA	4.50	5.00	5.50	6.05	6.66	E
75 KVA	5.40	6.00	6.60	7.26	7.99	E
112 KVA	6.53	7.25	7.98	8.77	9.65	E
150 KVA	7.20	8.00	8.80	9.68	10.65	E
167 KVA	7.43	8.25	9.08	9.98	10.98	E
200 KVA	8.10	9.00	9.90	10.89	11.98	E
250 KVA	9.00	10.00	11.00	12.10	13.31	E
333 KVA	10.80	12.00	13.20	14.52	15.97	E
500 KVA	14.40	16.00	17.60	19.36	21.30	E

Pad Mount Transformers



75 KVA	10.80	12.00	13.20	14.52	15.97	E
100 KVA	12.60	14.00	15.40	16.94	18.63	E
150 KVA	14.40	16.00	17.60	19.36	21.30	E
200 KVA	15.30	17.00	18.70	20.57	22.63	E
250 KVA	16.20	18.00	19.80	21.78	23.96	E
300 KVA	17.10	19.00	20.90	22.99	25.29	E
500 KVA	20.70	23.00	25.30	27.83	30.61	E
750 KVA	25.20	28.00	30.80	33.88	37.27	E
1000 KVA	28.80	32.00	35.20	38.72	42.59	E
1500 KVA	32.40	36.00	39.60	43.56	47.92	E
2000 KVA	36.00	40.00	44.00	48.40	53.24	E
2500 KVA	45.00	50.00	55.00	60.50	66.55	E
3000 KVA	54.00	60.00	66.00	72.60	79.86	E
4000 KVA	63.00	70.00	77.00	84.70	93.17	E

BUS DUCT

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Bus Duct

100A	12.60	14.00	15.40	16.94	18.63	E
225A	15.30	17.00	18.70	20.57	22.63	E
400A	18.00	20.00	22.00	24.20	26.62	E
600A	27.00	30.00	33.00	36.30	39.93	E
800A	31.50	35.00	38.50	42.35	46.59	E
1000A	36.00	40.00	44.00	48.40	53.24	E
1350A	38.25	42.50	46.75	51.43	56.57	E
1600A	40.50	45.00	49.50	54.45	59.90	E
2000A	45.00	50.00	55.00	60.50	66.55	E
2500A	49.50	55.00	60.50	66.55	73.21	E
3000A	54.00	60.00	66.00	72.60	79.86	E
4000A	58.50	65.00	71.50	78.65	86.52	E



Bus Duct Elbow

100A	1.13	1.25	1.38	1.51	1.66	E
225A	1.35	1.50	1.65	1.82	2.00	E
400A	2.03	2.25	2.48	2.72	2.99	E
600A	2.70	3.00	3.30	3.63	3.99	E
800A	3.15	3.50	3.85	4.24	4.66	E
1000A	3.60	4.00	4.40	4.84	5.32	E
1350A	4.05	4.50	4.95	5.45	5.99	E
1600A	4.50	5.00	5.50	6.05	6.66	E
2000A	4.95	5.50	6.05	6.66	7.32	E
2500A	5.40	6.00	6.60	7.26	7.99	E
3000A	6.30	7.00	7.70	8.47	9.32	E
4000A	7.20	8.00	8.80	9.68	10.65	E



Bus Duct End Cover

100A	0.23	0.25	0.28	0.30	0.33	E
225A	0.32	0.35	0.39	0.42	0.47	E
400A	0.36	0.40	0.44	0.48	0.53	E
600A	0.41	0.45	0.50	0.54	0.60	E
800A	0.45	0.50	0.55	0.61	0.67	E
1000A	0.54	0.60	0.66	0.73	0.80	E
1350A	0.63	0.70	0.77	0.85	0.93	E
1600A	0.72	0.80	0.88	0.97	1.06	E
2000A	0.81	0.90	0.99	1.09	1.20	E
2500A	0.90	1.00	1.10	1.21	1.33	E
3000A	0.99	1.10	1.21	1.33	1.46	E
4000A	1.08	1.20	1.32	1.45	1.60	E

BUS DUCT FITTINGS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Bus Duct Hanger

100A	0.59	0.65	0.72	0.79	0.87	E
225A	0.77	0.85	0.94	1.03	1.13	E
400A	0.90	1.00	1.10	1.21	1.33	E
600A	1.08	1.20	1.32	1.45	1.60	E
800A	1.26	1.40	1.54	1.69	1.86	E
1000A	1.35	1.50	1.65	1.82	2.00	E
1350A	1.44	1.60	1.76	1.94	2.13	E
1600A	1.53	1.70	1.87	2.06	2.26	E
2000A	1.62	1.80	1.98	2.18	2.40	E
2500A	1.71	1.90	2.09	2.30	2.53	E
3000A	1.80	2.00	2.20	2.42	2.66	E
4000A	1.80	2.00	2.20	2.42	2.66	E



Bus Plug

30A	1.04	1.15	1.27	1.39	1.53	E
60A	1.35	1.50	1.65	1.82	2.00	E
100A	1.62	1.80	1.98	2.18	2.40	E
200A	2.57	2.85	3.14	3.45	3.79	E
400A	4.14	4.60	5.06	5.57	6.12	E
600A	6.21	6.90	7.59	8.35	9.18	E
800A	8.28	9.20	10.12	11.13	12.25	E
1200A	12.42	13.80	15.18	16.70	18.37	E



Cable Tap Box

100A	1.26	1.40	1.54	1.69	1.86	E
225A	1.62	1.80	1.98	2.18	2.40	E
400A	2.34	2.60	2.86	3.15	3.46	E
600A	3.24	3.60	3.96	4.36	4.79	E
800A	3.60	4.00	4.40	4.84	5.32	E
1000A	4.14	4.60	5.06	5.57	6.12	E
1350A	4.68	5.20	5.72	6.29	6.92	E
1600A	5.40	6.00	6.60	7.26	7.99	E
2000A	5.76	6.40	7.04	7.74	8.52	E
2500A	6.30	7.00	7.70	8.47	9.32	E
3000A	7.20	8.00	8.80	9.68	10.65	E
4000A	8.64	9.60	10.56	11.62	12.78	E

TROLLEY DUCT

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Trolley Duct



20A	7.20	8.00	8.80	9.68	10.65	E
30A	9.00	10.00	11.00	12.10	13.31	E
40A	10.80	12.00	13.20	14.52	15.97	E
50A	12.60	14.00	15.40	16.94	18.63	E
60A	14.40	16.00	17.60	19.36	21.30	E

Trolley Duct Hanger



20A	0.23	0.25	0.28	0.30	0.33	E
30A	0.27	0.30	0.33	0.36	0.40	E
40A	0.32	0.35	0.39	0.42	0.47	E
50A	0.36	0.40	0.44	0.48	0.53	E
60A	0.36	0.40	0.44	0.48	0.53	E

Trolley



20A	0.32	0.35	0.39	0.42	0.47	E
30A	0.36	0.40	0.44	0.48	0.53	E
40A	0.41	0.45	0.50	0.54	0.60	E
50A	0.45	0.50	0.55	0.61	0.67	E
60A	0.50	0.55	0.61	0.67	0.73	E

Trolley Feed Box



20A	0.45	0.50	0.55	0.61	0.67	E
30A	0.50	0.55	0.61	0.67	0.73	E
40A	0.54	0.60	0.66	0.73	0.80	E
50A	0.59	0.65	0.72	0.79	0.87	E
60A	0.63	0.70	0.77	0.85	0.93	E

End Cap



20A	0.25	0.30	0.35	0.39	0.42	E
30A	0.25	0.30	0.35	0.39	0.42	E
40A	0.30	0.35	0.40	0.44	0.48	E
50A	0.35	0.40	0.45	0.50	0.54	E
60A	0.35	0.40	0.45	0.50	0.54	E

INCANDESCENT FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Drum Fixture

1-LAMP	0.43	0.50	0.58	0.63	0.70	E
2-LAMP	0.47	0.55	0.63	0.70	0.77	E
3-LAMP	0.51	0.60	0.69	0.76	0.83	E
4-LAMP	0.55	0.65	0.75	0.82	0.90	E



Bathroom Fixture

1-LAMP	0.34	0.40	0.46	0.51	0.56	E
2-LAMP	0.38	0.45	0.52	0.57	0.63	E
3-LAMP	0.43	0.50	0.58	0.63	0.70	E
4-LAMP	0.47	0.55	0.63	0.70	0.77	E



Light Bar Fixture

3-LAMP	0.38	0.45	0.52	0.57	0.63	E
4-LAMP	0.43	0.50	0.58	0.63	0.70	E
5-LAMP	0.47	0.55	0.63	0.70	0.77	E
6-LAMP	0.51	0.60	0.69	0.76	0.83	E



Adjustable Fixture

1-LAMP	0.51	0.60	0.69	0.76	0.83	E
2-LAMP	0.60	0.70	0.81	0.89	0.97	E



Suspended Drum Fixture

1-LAMP	0.55	0.65	0.75	0.82	0.90	E
2-LAMP	0.60	0.70	0.81	0.89	0.97	E
3-LAMP	0.64	0.75	0.86	0.95	1.04	E
4-LAMP	0.68	0.80	0.92	1.01	1.11	E

INCANDESCENT FIXTURES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Cord Hung Reflector Lamp

1-LAMP 0.55 0.65 0.75 0.82 0.90 E



Cord Hung Globe

1-LAMP 0.60 0.70 0.81 0.89 0.97 E

2-LAMP 0.64 0.75 0.86 0.95 1.04 E



Wall Bracket

1-LAMP 0.34 0.40 0.46 0.51 0.56 E



Wall Bracket

2-LAMP 0.43 0.50 0.58 0.63 0.70 E



Wall Lantern

1-LAMP 0.38 0.45 0.52 0.57 0.63 E



Recessed Wall Fixture

1-LAMP 0.64 0.75 0.86 0.95 1.04 E

INCANDESCENT FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Recessed Ceiling Fixture

1-LAMP (Rough Only)		0.43	0.50	0.58	0.63	0.70 E
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Recessed Trim

1-LAMP		0.21	0.25	0.29	0.32	0.35 E
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Recessed Trim Adjustable

1-LAMP		0.30	0.35	0.40	0.44	0.49 E
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Lighting Track

PER FOOT		0.09	0.10	0.12	0.13	0.14 E
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Lighting Track Fixture

1-LAMP		0.21	0.25	0.29	0.32	0.35 E
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Gateway to the Electric Industry

INCANDESCENT FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Flood Light

1-LAMP		0.51	0.60	0.69	0.76	0.83 E
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Inground Up Light

1-LAMP		0.85	1.00	1.15	1.27	1.39 E
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Landscape Light

1-LAMP		0.60	0.70	0.81	0.89	0.97 E
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Lamppost & Fixture

1-LAMP		1.91	2.25	2.59	2.85	3.13 E
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Exit Fixture

1-LAMP		0.60	0.70	0.81	0.89	0.97 E
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Emergency Fixture

1-LAMP		0.60	0.70	0.81	0.89	0.97 E
2-LAMP		0.77	0.90	1.04	1.14	1.25 E

FLUORESCENT FIXTURES

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Wraparound							
	1-LAMP		0.38	0.45	0.52	0.57	0.63	E
	2-LAMP		0.43	0.50	0.58	0.63	0.70	E
	3-LAMP		0.47	0.55	0.63	0.70	0.77	E
	4-LAMP		0.51	0.60	0.69	0.76	0.83	E
	2' x 2' Surface Mounted							
	2-LAMP		0.51	0.60	0.69	0.76	0.83	E
	2' x 4' Surface Mounted							
	2-LAMP		0.55	0.65	0.75	0.82	0.90	E
	3-LAMP		0.60	0.70	0.81	0.89	0.97	E
	4-LAMP		0.64	0.75	0.86	0.95	1.04	E
	4' x 4' Surface Mounted							
	4-LAMP		0.77	0.90	1.04	1.14	1.25	E
	6-LAMP		0.85	1.00	1.15	1.27	1.39	E
	1' x 4' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.43	0.50	0.58	0.63	0.70	E
	2-LAMP		0.47	0.55	0.63	0.70	0.77	E
	2' x 2' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.47	0.55	0.63	0.70	0.77	E
	2' x 4' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.51	0.60	0.69	0.76	0.83	E
	3-LAMP		0.55	0.65	0.75	0.82	0.90	E
	4-LAMP		0.60	0.70	0.81	0.89	0.97	E

FLUORESCENT FIXTURES

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	1' x 4' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.34	0.40	0.46	0.51	0.56	E
PRE-LAMPED								
	2' x 2' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.34	0.40	0.46	0.51	0.56	E
PRE-LAMPED								
	2' x 4' Recessed Mounted (for T-Bar Type Ceiling)							
	2-LAMP		0.38	0.45	0.52	0.57	0.63	E
	3-LAMP		0.38	0.45	0.52	0.57	0.63	E
	4-LAMP		0.38	0.45	0.52	0.57	0.63	E
PRE-LAMPED								
	1' x 4' Recessed Mounted (for Plaster Type Ceiling)							
	2-LAMP		0.51	0.60	0.69	0.76	0.83	E
WITH TOGGLE SCREWS								
	2' x 2' Recessed Mounted (for Plaster Type Ceiling)							
	2-LAMP		0.55	0.65	0.75	0.82	0.90	E
WITH TOGGLE SCREWS								
	2' x 4' Recessed Mounted (for Plaster Type Ceiling)							
	2-LAMP		0.60	0.70	0.81	0.89	0.97	E
	3-LAMP		0.64	0.75	0.86	0.95	1.04	E
	4-LAMP		0.68	0.80	0.92	1.01	1.11	E
WITH TOGGLE SCREWS								

FLUORESCENT FIXTURES

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
 CHAIN HUNG 4' LONG	Industrial						
	2-LAMP		0.55	0.65	0.75	0.82	0.90 E
	4-LAMP		0.64	0.75	0.86	0.95	1.04 E

 CHAIN HUNG 6' LONG	Industrial						
	2-LAMP		0.77	0.90	1.04	1.14	1.25 E
	4-LAMP		0.85	1.00	1.15	1.27	1.39 E

 CHAIN HUNG 8' LONG	Industrial						
	2-LAMP		0.85	1.00	1.15	1.27	1.39 E
	4-LAMP		0.94	1.10	1.27	1.39	1.53 E

 ONE LAMP	Strip Fixture - One Lamp						
	2' LONG		0.38	0.45	0.52	0.57	0.63 E
	3' LONG		0.43	0.50	0.58	0.63	0.70 E
	4' LONG		0.47	0.55	0.63	0.70	0.77 E
	6' LONG		0.68	0.80	0.92	1.01	1.11 E
	8' LONG		0.77	0.90	1.04	1.14	1.25 E
	16' LONG - TANDEM		1.53	1.80	2.07	2.28	2.50 E

 TWO LAMP	Strip Fixture - Two Lamp						
	2' LONG		0.43	0.50	0.58	0.63	0.70 E
	3' LONG		0.47	0.55	0.63	0.70	0.77 E
	4' LONG		0.51	0.60	0.69	0.76	0.83 E
	6' LONG		0.72	0.85	0.98	1.08	1.18 E
	8' LONG		0.81	0.95	1.09	1.20	1.32 E
	16' LONG - TANDEM		1.62	1.90	2.19	2.40	2.64 E

FLUORESCENT FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Undercounter Fixture

2-LAMP		0.43	0.50	0.58	0.63	0.70	E
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Wall Mounted Fixture

2' LONG		0.43	0.50	0.58	0.63	0.70	E
3' LONG		0.47	0.55	0.63	0.70	0.77	E
4' LONG		0.51	0.60	0.69	0.76	0.83	E



Emergency Power Pack

1-LAMP TYPE		0.64	0.75	0.86	0.95	1.04	E
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Ballast

1-LAMP TYPE		0.38	0.45	0.52	0.57	0.63	E
2-LAMP TYPE		0.47	0.55	0.63	0.70	0.77	E

HID FIXTURES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Bay Light

100W	0.77	0.90	1.04	1.14	1.26	E
150W	0.85	1.00	1.15	1.27	1.39	E
175W	0.94	1.10	1.27	1.40	1.54	E
200W	1.02	1.20	1.38	1.52	1.67	E
250W	1.06	1.25	1.44	1.58	1.74	E
400W	1.49	1.75	2.01	2.21	2.43	E
1000W	1.70	2.00	2.30	2.53	2.78	E



Flood Light

100W	0.94	1.10	1.27	1.39	1.53	E
150W	1.02	1.20	1.38	1.52	1.67	E
175W	1.11	1.30	1.50	1.64	1.81	E
200W	1.19	1.40	1.61	1.77	1.95	E
250W	1.28	1.50	1.73	1.90	2.09	E
400W	1.70	2.00	2.30	2.53	2.78	E
1000W	1.96	2.30	2.65	2.91	3.20	E



Wallpack

100W	0.55	0.65	0.75	0.82	0.90	E
150W	0.60	0.70	0.81	0.89	0.97	E
175W	0.64	0.75	0.86	0.95	1.04	E
200W	0.68	0.80	0.92	1.01	1.11	E
250W	0.72	0.85	0.98	1.08	1.18	E



Street Light

175W	1.15	1.35	1.55	1.71	1.88	E
200W	1.19	1.40	1.61	1.77	1.95	E
250W	1.28	1.50	1.73	1.90	2.09	E
400W	1.45	1.70	1.96	2.15	2.37	E
1000W	1.70	2.00	2.30	2.53	2.78	E



Quartz Flood Light

150W	0.77	0.90	1.04	1.14	1.25	E
200W	0.85	1.00	1.15	1.27	1.39	E
250W	0.94	1.10	1.27	1.39	1.53	E

HID FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Area Light

175W		1.02	1.20	1.38	1.52	1.67 E
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Pole Top Fixture

100W		1.45	1.70	1.96	2.15	2.37 E
150W		1.53	1.80	2.07	2.28	2.50 E
175W		1.62	1.90	2.19	2.40	2.64 E
200W		1.70	2.00	2.30	2.53	2.78 E
250W		1.87	2.20	2.53	2.78	3.06 E
400W		2.13	2.50	2.88	3.16	3.48 E



Pole Mounted Light

1-HEAD		1.28	1.50	1.73	1.90	2.09 E
2-HEAD		1.70	2.00	2.30	2.53	2.78 E
3-HEAD		2.13	2.50	2.88	3.16	3.48 E
4-HEAD		2.55	3.00	3.45	3.80	4.17 E



Lighting Pole

10' -15' POLE		2.13	2.50	2.88	3.16	3.48 E
16' -25' POLE		2.98	3.50	4.03	4.43	4.87 E
26' -35' POLE		3.83	4.50	5.18	5.69	6.26 E
36' -50' POLE		5.10	6.00	6.90	7.59	8.35 E



Pole Base

10' -15' POLE		2.55	3.00	3.45	3.80	4.17 E
16' -25' POLE		2.98	3.50	4.03	4.43	4.87 E
26' -35' POLE		3.40	4.00	4.60	5.06	5.57 E
36' -50' POLE		4.25	5.00	5.75	6.33	6.96 E

EXPLOSION PROOF FIXTURES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Explosion Proof Light Fixtures - Incandescent

100 Watt	0.90	1.00	1.10	1.21	1.33	E
150 Watt	1.13	1.25	1.38	1.51	1.66	E
300 Watt	1.35	1.50	1.65	1.82	2.00	E



Explosion Proof Light Fixtures - HID

100 Watt	0.90	1.00	1.10	1.21	1.33	E
150 Watt	1.13	1.25	1.38	1.51	1.66	E
300 Watt	1.35	1.50	1.65	1.82	2.00	E



Explosion Proof Light Fixtures - LED

150 Watt	1.13	1.25	1.38	1.51	1.66	E
175 Watt	1.35	1.50	1.65	1.82	2.00	E



Explosion Proof Exit Light Fixtures

Exit Light	1.20	1.30	1.43	1.57	1.73	E
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Explosion Proof Emergency Light Fixtures

Emergency Light	1.50	1.75	1.93	2.12	2.33	E
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Explosion Proof Fluorescent Light Fixtures

Emergency Light	1.25	1.30	1.43	1.57	1.73	E
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EXPLOSION PROOF FIXTURES

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Explosion Proof Light Fixtures - Florescent - Chain Hung

24 Inch - 2 Lamp	1.35	1.50	1.65	1.82	2.00	E
48 Inch - 2 Lamp	1.58	1.75	1.93	2.12	2.33	E
72 Inch - 2 Lamp	1.80	2.00	2.20	2.42	2.66	E



Explosion Proof Light Fixtures - Florescent - Surface Mount

24 Inch - 2 Lamp	1.13	1.25	1.38	1.51	1.66	E
48 Inch - 2 Lamp	1.35	1.50	1.65	1.82	2.00	E
72 Inch - 2 Lamp	1.58	1.75	1.93	2.12	2.33	E
96 Inch - 2 Lamp	1.80	2.00	2.20	2.42	2.66	E



Explosion Proof Light Fixtures - LED - Surface Mount

20 Watt - 1 Lamp	0.99	1.10	1.21	1.33	1.46	E
40 Watt - 2 Lamp	1.17	1.30	1.43	1.57	1.73	E



Explosion Proof Light Fixtures - LED Flood Light - Surface Mount

80 Watt	0.99	1.10	1.21	1.33	1.46	E
100 Watt	1.17	1.30	1.43	1.57	1.73	E
150 Watt	1.35	1.50	1.65	1.82	2.00	E
250 Watt	1.58	1.75	1.93	2.12	2.33	E
400 Watt	1.80	2.00	2.20	2.42	2.66	E

LED FIXTURES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Commercial LED Downlight Retrofit for 8" Cans - Recessed Light w/ Reflector Trim

8 Inch	0.63	0.70	0.77	0.85	0.93	E
10 Inch	0.72	0.80	0.88	0.97	1.06	E



LED Downlight Round

23 Watt - 6 Inch	0.54	0.60	0.66	0.73	0.80	E
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LED Downlight Square

23 Watt - 6 Inch	0.54	0.60	0.66	0.73	0.80	E
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LED 2 X 4 Surface Mount Parabolic

48, 60 or 85 Watt.	0.63	0.70	0.77	0.85	0.93	E
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LED High Bay Fixture

Hi Bay	0.81	0.90	0.99	1.09	1.20	E
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UNIVERSAL LIGHTING DUCT

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Lighting Duct 4' Section

20A		3.60	4.00	4.40	4.84	5.32	E
35A		4.63	5.13	5.63	6.19	6.81	E
50A		6.30	7.00	7.70	8.47	9.32	E
60A		7.20	8.00	8.80	9.68	10.65	E

Lighting Duct 10' Section

20A		7.20	8.00	8.80	9.68	10.65	E
35A		9.25	10.25	11.25	12.38	13.61	E
50A		12.60	14.00	15.40	16.94	18.63	E
60A		14.40	16.00	17.60	19.36	21.30	E



Coupling

20A		0.15	0.16	0.18	0.20	0.22	E
35A		0.20	0.21	0.23	0.25	0.28	E
50A		0.23	0.26	0.29	0.31	0.35	E
60A		0.23	0.26	0.29	0.31	0.35	E



Lighting Duct Hanger

20A		0.23	0.25	0.28	0.30	0.33	E
35A		0.30	0.32	0.35	0.39	0.42	E
50A		0.36	0.40	0.44	0.48	0.53	E
60A		0.36	0.40	0.44	0.48	0.53	E



Feed End

20A		0.40	0.45	0.50	0.55	0.61	E
35A		0.45	0.50	0.55	0.61	0.67	E
50A		0.50	0.55	0.60	0.66	0.73	E
60A		0.50	0.55	0.60	0.66	0.73	E



Lighting Fixtures

Hanging Light		1.00	1.15	1.30	1.43	1.57	E
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FANS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Ceiling Fan

0.85 1 1.15 1.27 1.39 E



Ceiling Fan With Light

1.15 1.35 1.55 1.71 1.88 E



Attic Fan

1.28 1.50 1.73 1.90 2.09 E



Wall Mounted Fan

1.02 1.20 1.38 1.52 1.67 E



Roof Mounted Fan

2.13 2.50 2.88 3.16 3.48 E

FANS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Through Wall Fan

1.28	1.50	1.73	1.90	2.09	E
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Fan Light Combo

0.64	0.75	0.86	0.95	1.04	E
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Bath Fan

0.43	0.50	0.58	0.63	0.70	E
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Hood Fan

1.06	1.25	1.44	1.58	1.74	E
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Vertical Discharge Fan

0.68	0.80	0.92	1.01	1.11	E
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HEATERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Baseboard Heaters

500W		0.55	0.65	0.75	0.82	0.90	E
750W		0.64	0.75	0.86	0.95	1.04	E
1000W		0.72	0.85	0.98	1.08	1.18	E
1250W		0.81	0.95	1.09	1.20	1.32	E
1500W		0.85	1.00	1.15	1.27	1.39	E
2000W		1.06	1.25	1.44	1.58	1.74	E
2500W		1.28	1.50	1.73	1.90	2.09	E
3000W		1.49	1.75	2.01	2.21	2.44	E



Thermostat Base Mount

1-Stage		0.64	0.75	0.86	0.95	1.04	E
2-Stage		0.77	0.90	1.04	1.14	1.25	E



Load Transfer switch AC

120V - 20A		0.68	0.80	0.92	1.01	1.11	E
240V - 20A		0.85	1.00	1.15	1.27	1.39	E



Corner Connector

		0.13	0.15	0.17	0.19	0.21	E
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Outside Corner

		0.23	0.28	0.32	0.35	0.39	E
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Wall Mounted Thermostats

1-Stage		0.43	0.50	0.58	0.63	0.70	E
2-Stage		0.55	0.65	0.75	0.82	0.90	E

HEATERS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Infloor Heater



400W	0.85	1.00	1.15	1.27	1.39	E
750W	1.02	1.20	1.38	1.52	1.67	E
1000W	1.19	1.40	1.61	1.77	1.95	E
1500W	1.53	1.80	2.07	2.28	2.50	E

Wall Heater



750W	0.85	1.00	1.15	1.27	1.39	E
1000W	1.02	1.20	1.38	1.52	1.67	E
1250W	1.11	1.30	1.50	1.64	1.81	E
1500W	1.19	1.40	1.61	1.77	1.95	E
2000W	1.28	1.50	1.73	1.90	2.09	E
2500W	1.36	1.60	1.84	2.02	2.23	E

Unit Heaters



2.5 KW	1.70	2.00	2.30	2.53	2.78	E
3.3 KW	1.70	2.00	2.30	2.53	2.78	E
5 KW	2.13	2.50	2.88	3.16	3.48	E
7.5 KW	2.55	3.00	3.45	3.80	4.17	E
10 KW	4.25	5.00	5.75	6.33	6.96	E
15 KW	5.10	6.00	6.90	7.59	8.35	E
20 KW	5.95	7.00	8.05	8.86	9.74	E
25 KW	6.80	8.00	9.20	10.12	11.13	E
30 KW	7.65	9.00	10.35	11.39	12.52	E

Radiant Heaters



1000W	0.64	0.75	0.86	0.95	1.04	E
1800W	0.72	0.85	0.98	1.08	1.18	E
2500W	1.02	1.20	1.38	1.52	1.67	E
3600W	1.53	1.80	2.07	2.28	2.50	E
5000W	1.79	2.10	2.42	2.66	2.92	E
7200W	1.96	2.30	2.65	2.91	3.20	E

Down Flow Heaters



10KW	4.25	5.00	5.75	6.33	6.96	E
15KW	5.10	6.00	6.90	7.59	8.35	E
20KW	5.95	7.00	8.05	8.86	9.74	E
25KW	6.80	8.00	9.20	10.12	11.13	E
30KW	7.65	9.00	10.35	11.39	12.52	E
40KW	8.50	10.00	11.50	12.65	13.92	E
50KW	9.35	11.00	12.65	13.92	15.31	E

HEATERS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Heater/Ex-Fan/Light	0.85	1.00	1.15	1.27	1.39	E
	Heat Light Single	0.43	0.50	0.58	0.63	0.70	E
	Heat Light Double	0.60	0.70	0.81	0.89	0.97	E
	Kick Space Heater	0.72	0.85	0.98	1.08	1.18	E
	Radiant Wall Mounted						
	1,000W	1.02	1.20	1.38	1.52	1.67	E
	1,200W	1.11	1.30	1.50	1.64	1.81	E
	1,500W	1.19	1.40	1.61	1.77	1.95	E

EXHAUST DUCT & FITTINGS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK	PER
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Duct

3" DUCT (Per Foot)		0.13	0.15	0.17	0.19	0.21	E
4" DUCT (Per Foot)		0.17	0.20	0.23	0.25	0.28	E



Duct Elbow

3" DUCT		0.17	0.20	0.23	0.25	0.28	E
4" DUCT		0.21	0.25	0.29	0.32	0.35	E



Wall Cap

3" DUCT		0.34	0.40	0.46	0.51	0.56	E
4" DUCT		0.43	0.50	0.58	0.63	0.70	E



Roof Cap

3" DUCT		0.60	0.70	0.81	0.89	0.97	E
4" DUCT		0.68	0.80	0.92	1.01	1.11	E



Transition Round to Rectangle Duct

3" DUCT		0.21	0.25	0.29	0.32	0.35	E
4" DUCT		0.26	0.30	0.35	0.38	0.42	E

EXHAUST DUCT & FITTINGS

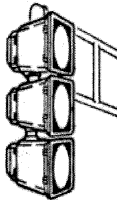
LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Rectangle Duct							
	3 1/4" X 10" (Per Foot)		0.17	0.20	0.23	0.25	0.28	E
	Vertical Elbow							
	3 1/4" X 10"		0.21	0.25	0.29	0.32	0.35	E
	Horizontal Elbow							
	3 1/4" X 10"		0.26	0.30	0.35	0.38	0.42	E
	Eaves Elbow							
	3 1/4" X 10"		0.34	0.40	0.46	0.51	0.56	E
	Wall Cap							
	3 1/4" X 10"		0.43	0.50	0.58	0.63	0.70	E
	Roof Cap							
	3 1/4" X 10"		0.68	0.80	0.92	1.01	1.11	E

TRAFFIC LIGHTS

LABOR UNITS

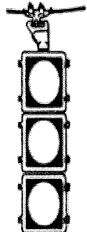
SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Boom Mounted

4.00	4.50	6.00	6.60	7.26	E
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BOOM
MOUNT



Cable Mounted

5.00	5.50	6.00	6.60	7.26	E
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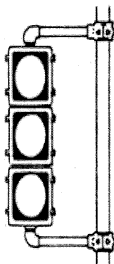
CABLE
MOUNT



Pole Mounted

3.00	3.25	3.75	4.13	4.54	E
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POLE
MOUNT



Bracket Mounted

3.50	3.75	4.00	4.40	4.84	E
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BRACKET
MOUNT



Lighted Street Sign

1.50	1.75	2.00	2.20	2.42	E
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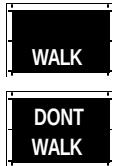
TRAFFIC LIGHTS

LABOR UNITS

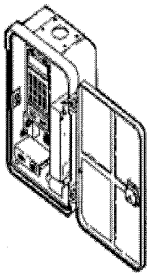
SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Crossing Button		2.00	2.25	2.50	2.75	3.03	E
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Walk/Don't Walk Sign		2.25	2.50	2.75	3.03	3.33	E
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Traffic Controller		8.00	9.00	10.00	11.00	12.10	E
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Loop Detector Wire, Saw Cut & Backfill



2" Deep	17.00	18.00	19.00	20.90	22.99	C
3" Deep	20.00	21.00	22.00	24.20	26.62	C
4" Deep	22.00	23.00	25.00	27.50	30.25	C



Vehicle Detection

Detector	2.50	3.00	3.50	3.85	4.24	E
Controller	8.00	9.00	10.00	11.00	12.10	E

TRAFFIC LIGHTS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

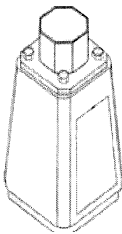


Traffic Light Pole	2.50	3.00	3.50	3.85	4.24	E
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Mast Arm Poles

20 FT	5.00	6.50	7.00	7.70	8.47	E
25 FT	7.00	7.50	8.00	8.80	9.68	E
30 FT	8.00	9.00	10.00	11.00	12.10	E
35 FT	9.00	10.00	11.00	12.10	13.31	E
40 FT	11.00	12.00	13.00	14.30	15.73	E
45 FT	12.00	14.00	16.00	17.60	19.36	E
50 FT	14.00	16.00	18.00	19.80	21.78	E
60 FT	16.00	19.00	22.00	24.20	26.62	E



Pole Pedestal	2.50	3.00	3.50	3.85	4.24	E
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Street Light Poles - Single Arm

12 FT	2.00	2.50	3.00	3.30	3.63	E
15 FT	2.50	3.00	3.50	3.85	4.24	E
18 FT	3.50	4.00	4.50	4.95	5.45	E
20 FT	4.00	5.00	6.00	6.60	7.26	E
25 FT	5.00	6.00	7.00	7.70	8.47	E
30 FT	6.00	7.00	8.00	8.80	9.68	E

TRAFFIC LIGHTS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Street Light Poles - Dual Arms

12 FT		2.50	3.00	3.50	3.85	4.24	E
15 FT		3.00	3.50	4.00	4.40	4.84	E
18 FT		4.00	4.50	5.00	5.50	6.05	E
20 FT		4.50	5.50	6.50	7.15	7.87	E
25 FT		5.50	6.50	7.50	8.25	9.08	E
30 FT		6.50	7.50	8.50	9.35	10.29	E



Street Light

175W	1.15	1.35	1.55	1.71	1.88	E
200W	1.19	1.40	1.61	1.77	1.95	E
250W	1.28	1.50	1.73	1.90	2.09	E
400W	1.45	1.70	1.96	2.15	2.37	E
1000W	1.70	2.00	2.30	2.53	2.78	E

Electric-Find.com

Gateway to the Electric Industry

AIRPORT LIGHTING

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Obstruction Light

1.50	1.75	2.00	2.20	2.42	E
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Taxi or Runway Light

1.25	1.50	1.75	1.93	2.12	E
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Landing Light

2.25	2.50	2.75	3.03	3.33	E
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Rotating Beacon

16.00	18.00	20.00	22.00	24.20	E
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Approach Light

12.00	14.00	16.00	17.60	19.36	E
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AIRPORT LIGHTING

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Holding Position Light

2.00	2.25	2.50	2.75	3.03	E
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Direction Signs

1-Section	2.50	3.00	3.50	3.85	4.24	E
2-Section	4.50	5.00	5.50	6.05	6.66	E
3-Section	6.00	6.50	7.00	7.70	8.47	E
4-Section	7.00	7.50	8.00	8.80	9.68	E



Lighted
Wind Sock

8.00	9.00	10.00	11.00	12.10	E
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TEMPERATURE CONTROL

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Pressure/Electric Switch

Wire Only		0.32	0.35	0.39	0.42	0.47	E
Mount and Wire		0.90	1.00	1.10	1.21	1.33	E



Electric/Pressure Switch

Wire Only		0.45	0.50	0.55	0.61	0.67	E
Mount and Wire		0.90	1.00	1.10	1.21	1.33	E



Differential Pressure Switch

Wire Only		0.32	0.35	0.39	0.42	0.47	E
Mount and Wire		0.90	1.00	1.10	1.21	1.33	E



Air Flow Switch

Wire Only		0.32	0.35	0.39	0.42	0.47	E
Mount and Wire		0.90	1.00	1.10	1.21	1.33	E



Humidity Sensor

Wire Only		0.45	0.50	0.55	0.61	0.67	E
Mount and Wire		1.13	1.25	1.38	1.51	1.66	E

TEMPERATURE CONTROL

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Duct Mounted Smoke Detector

Wire Only	0.90	1.00	1.10	1.21	1.33	E
Mount and Wire	2.25	2.50	2.75	3.03	3.33	E



Fan Control Relay

Wire Only	0.45	0.50	0.55	0.61	0.67	E
Mount and Wire	0.68	0.75	0.83	0.91	1.00	E



Damper Operator

Wire Only	0.45	0.50	0.55	0.61	0.67	E
Mount and Wire	1.35	1.50	1.65	1.82	2.00	E



Freeze Stat

Wire Only	0.45	0.50	0.55	0.61	0.67	E
Mount and Wire	1.08	1.20	1.32	1.45	1.60	E



Remote Temperature Bulb

Wire Only	0.54	0.60	0.66	0.73	0.80	E
Mount and Wire	1.17	1.30	1.43	1.57	1.73	E

TEMPERATURE CONTROL

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Control Transformer

Wire Only		0.32	0.35	0.39	0.42	0.47	E
Mount and Wire		0.68	0.75	0.83	0.91	1.00	E



Line Voltage Thermostat

Mount and Wire		0.54	0.60	0.66	0.73	0.80	E
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Low Voltage Thermostat

Heating Only		0.54	0.60	0.66	0.73	0.80	E
Heating & Cooling		0.77	0.85	0.94	1.03	1.13	E



Control Panel

Wire Only		0.90	1.00	1.10	1.21	1.33	E
Mount and Wire		2.70	3.00	3.30	3.63	3.99	E

Other Devices (Mount & Wire)

Water Flow Switch		1.58	1.75	1.93	2.12	2.33	E
Dew Point Sensor		1.80	2.00	2.20	2.42	2.66	E
Aux Contacts		0.23	0.25	0.28	0.30	0.33	E
Motor Starter Interlock		0.45	0.50	0.55	0.61	0.67	E

ENERGY CONTROLS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Lighting Relay Panel

8 - Circuit	1.80	2.00	2.20	2.42	2.66	E
16 - Circuit	3.60	4.00	4.40	4.84	5.32	E
24 - Circuit	4.50	5.00	5.50	6.05	6.66	E
32 - Circuit	5.40	6.00	6.60	7.26	7.99	E
40 - Circuit	6.30	7.00	7.70	8.47	9.32	E



Electronic EMS Control Panel

Main Panel

8 - Circuit	3.60	4.00	4.40	4.84	5.32	E
16 - Circuit	5.40	6.00	6.60	7.26	7.99	E
24 - Circuit	7.20	8.00	8.80	9.68	10.65	E
32 - Circuit	9.00	10.00	11.00	12.10	13.31	E
40 - Circuit	10.80	12.00	13.20	14.52	15.97	E

Sub Panels

2 - Circuit	1.35	1.50	1.65	1.82	2.00	E
4 - Circuit	2.25	2.50	2.75	3.03	3.33	E
8 - Circuit	2.93	3.25	3.58	3.93	4.33	E
16 - Circuit	4.50	5.00	5.50	6.05	6.66	E
24 - Circuit	5.40	6.00	6.60	7.26	7.99	E
32 - Circuit	7.20	8.00	8.80	9.68	10.65	E
40 - Circuit	8.10	9.00	9.90	10.89	11.98	E



Electronic Switch Control

New Work	0.32	0.35	0.39	0.42	0.47	E
Retrofit	0.45	0.50	0.55	0.61	0.67	E



Low Voltage Relay

Wire Only	0.14	0.15	0.17	0.18	0.20	E
Mount and Wire	0.27	0.30	0.33	0.36	0.40	E

ENERGY CONTROLS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Photo Cell

Wire Only		0.32	0.35	0.39	0.42	0.47 E
Mount and Wire		0.90	1.00	1.10	1.21	1.33 E



Motion Sensor

Mount and Wire		0.63	0.70	0.77	0.85	0.93 E
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Manual Timer

Mount and Wire		0.36	0.40	0.44	0.48	0.53 E
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Time Clock

Wire Only		0.54	0.60	0.66	0.73	0.80 E
Mount and Wire		0.99	1.10	1.21	1.33	1.46 E



7 - Day Time Clock

Wire Only		0.81	0.90	0.99	1.09	1.20 E
Mount and Wire		1.26	1.40	1.54	1.69	1.86 E

FIRE ALARM

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Manual Pullstation

Pullstation		0.45	0.50	0.55	0.61	0.67	E
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Ceiling Mounted Smoke Detector

Smoke Detector		0.68	0.75	0.83	0.91	1.00	E
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Duct Mounted Smoke Detector

Wire Only		0.90	1.00	1.10	1.21	1.33	E
Mount and Wire		2.25	2.50	2.75	3.03	3.33	E



Alarm Horn -Light

Horn		0.45	0.50	0.55	0.61	0.67	E
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High DB Horn/Siren

Horn/Siren		0.68	0.75	0.83	0.91	1.00	E
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FIRE ALARM

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Warning Light	0.90	1.00	1.10	1.21	1.33	E
	Magnetic Door Holder	0.68	0.75	0.83	0.91	1.00	E
	Fireman's Phone Jack	0.45	0.50	0.55	0.61	0.67	E
Other Devices							
	Elevator Relay	1.35	1.50	1.65	1.82	2.00	E
	Elevator Recall Switch	0.90	1.00	1.10	1.21	1.33	E
	Fan Relay	0.90	1.00	1.10	1.21	1.33	E
	Fireman's Phone	1.13	1.25	1.38	1.51	1.66	E
	Heat Detector	0.45	0.50	0.55	0.61	0.67	E
	Speaker	0.45	0.50	0.55	0.61	0.67	E
	Tamper Switch	0.36	0.40	0.44	0.48	0.53	E
	Flow Switch	0.36	0.40	0.44	0.48	0.53	E

FIRE ALARM

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Fire Alarm System Panels



4 - ZONE	10.80	12.00	13.20	14.52	15.97	E
8 - ZONE	14.40	16.00	17.60	19.36	21.30	E
12 - ZONE	18.00	20.00	22.00	24.20	26.62	E
16 - ZONE	21.60	24.00	26.40	29.04	31.94	E
20 - ZONE	25.20	28.00	30.80	33.88	37.27	E
24 - ZONE	28.80	32.00	35.20	38.72	42.59	E
28 - ZONE	32.40	36.00	39.60	43.56	47.92	E
32 - ZONE	36.00	40.00	44.00	48.40	53.24	E
36 - ZONE	39.60	44.00	48.40	53.24	58.56	E
40 - ZONE	43.20	48.00	52.80	58.08	63.89	E
44 - ZONE	46.80	52.00	57.20	62.92	69.21	E
48 - ZONE	50.40	56.00	61.60	67.76	74.54	E
52 - ZONE	54.00	60.00	66.00	72.60	79.86	E
56 - ZONE	57.60	64.00	70.40	77.44	85.18	E
60 - ZONE	61.20	68.00	74.80	82.28	90.51	E
64 - ZONE	64.80	72.00	79.20	87.12	95.83	E
68 - ZONE	68.40	76.00	83.60	91.96	101.16	E
72 - ZONE	72.00	80.00	88.00	96.80	106.48	E
76 - ZONE	75.60	84.00	92.40	101.64	111.80	E
80 - ZONE	79.20	88.00	96.80	106.48	117.13	E
84 - ZONE	82.80	92.00	101.20	111.32	122.45	E
88 - ZONE	86.40	96.00	105.60	116.16	127.78	E
92 - ZONE	90.00	100.00	110.00	121.00	133.10	E
96 - ZONE	93.60	104.00	114.40	125.84	138.42	E
100 - ZONE	97.20	108.00	118.80	130.68	143.75	E

CLOCK SYSTEMS

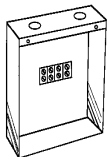
LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Wall Clock

0.45 0.50 0.55 0.61 0.67 E



Back Box

0.68 0.75 0.83 0.91 1.00 E



Hall Clock

0.77 0.85 0.94 1.03 1.13 E



Bell

0.45 0.50 0.55 0.61 0.67 E



Master Clock

3.60 4.00 4.40 4.84 5.32 E

SOUND SYSTEMS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Speaker	0.59	0.65	0.72	0.79	0.87	E
	Speaker Back Box	0.72	0.80	0.88	0.97	1.06	E
	Horn Speaker	0.68	0.75	0.83	0.91	1.00	E
	Microphone Jack	0.36	0.40	0.44	0.48	0.53	E
	Volume Control	0.59	0.65	0.72	0.79	0.87	E
	Call Switch	0.41	0.45	0.50	0.54	0.60	E
	Master Sound System	3.60	4.00	4.40	4.84	5.32	E

INTERCOM SYSTEMS

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Master Station

4-Zone	2.70	3.00	3.30	3.63	3.99	E
6-Zone	2.97	3.30	3.63	3.99	4.39	E
8-Zone	3.24	3.60	3.96	4.36	4.79	E
10-Zone	3.51	3.90	4.29	4.72	5.19	E
12-Zone	3.78	4.20	4.62	5.08	5.59	E
14-Zone	4.05	4.50	4.95	5.45	5.99	E
16-Zone	4.32	4.80	5.28	5.81	6.39	E



Speaker W/Button	0.32	0.35	0.39	0.42	0.47	E
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Ceiling Speaker	0.23	0.25	0.28	0.30	0.33	E
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Outdoor Speaker	0.27	0.30	0.33	0.36	0.40	E
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CCTV & SECURITY

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Camera

1.80	2.00	2.20	2.42	2.66	E
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Monitor

1.13	1.25	1.38	1.51	1.66	E
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Photo Beam

1.35	1.50	1.65	1.82	2.00	E
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Card Reader
& Key Pad

1.35	1.50	1.65	1.82	2.00	E
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Door Contacts

0.45	0.50	0.55	0.61	0.67	E
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Door Latch

1.35	1.50	1.65	1.82	2.00	E
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Watch Tour Station

0.45	0.50	0.55	0.61	0.67	E
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CCTV & SECURITY

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Control Panel

4 - ZONE	10.80	12.00	13.20	14.52	15.97	E
8 - ZONE	14.40	16.00	17.60	19.36	21.30	E
12 - ZONE	18.00	20.00	22.00	24.20	26.62	E
16 - ZONE	21.60	24.00	26.40	29.04	31.94	E
20 - ZONE	25.20	28.00	30.80	33.88	37.27	E
24 - ZONE	28.80	32.00	35.20	38.72	42.59	E
28 - ZONE	32.40	36.00	39.60	43.56	47.92	E
32 - ZONE	36.00	40.00	44.00	48.40	53.24	E
36 - ZONE	39.60	44.00	48.40	53.24	58.56	E
40 - ZONE	43.20	48.00	52.80	58.08	63.89	E
44 - ZONE	46.80	52.00	57.20	62.92	69.21	E
48 - ZONE	50.40	56.00	61.60	67.76	74.54	E
52 - ZONE	54.00	60.00	66.00	72.60	79.86	E
56 - ZONE	57.60	64.00	70.40	77.44	85.18	E
60 - ZONE	61.20	68.00	74.80	82.28	90.51	E
64 - ZONE	64.80	72.00	79.20	87.12	95.83	E
68 - ZONE	68.40	76.00	83.60	91.96	101.16	E
72 - ZONE	72.00	80.00	88.00	96.80	106.48	E
76 - ZONE	75.60	84.00	92.40	101.64	111.80	E
80 - ZONE	79.20	88.00	96.80	106.48	117.13	E
84 - ZONE	82.80	92.00	101.20	111.32	122.45	E
88 - ZONE	86.40	96.00	105.60	116.16	127.78	E
92 - ZONE	90.00	100.00	110.00	121.00	133.10	E
96 - ZONE	93.60	104.00	114.40	125.84	138.42	E
100 - ZONE	97.20	108.00	118.80	130.68	143.75	E

TELEPHONE SYSTEMS

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Round Phone Jack		0.23	0.25	0.28	0.30	0.33	E
	1-Gang Phone Jack		0.27	0.30	0.33	0.36	0.40	E
	Surface Jack		0.23	0.25	0.28	0.30	0.33	E
	Y - Fitting		0.09	0.10	0.11	0.12	0.13	E
	Phone Cords		0.09	0.10	0.11	0.12	0.13	E
	Phone Set		0.45	0.50	0.55	0.61	0.67	E
	Telephone Cabinet							
	1-4 Lines		2.70	3.00	3.30	3.63	3.99	E
	5-10 Lines		3.60	4.00	4.40	4.84	5.32	E
	11-15 Lines		4.50	5.00	5.50	6.05	6.66	E
	16-20 Lines		5.40	6.00	6.60	7.26	7.99	E
	21-25 Lines		6.30	7.00	7.70	8.47	9.32	E

NURSE CALL SYSTEM

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Master Station

10.00	3.60	4.00	4.40	4.84	5.32	E
20.00	5.40	6.00	6.60	7.26	7.99	E
30.00	7.20	8.00	8.80	9.68	10.65	E
40.00	9.00	10.00	11.00	12.10	13.31	E
50.00	10.80	12.00	13.20	14.52	15.97	E
60.00	12.60	14.00	15.40	16.94	18.63	E
80.00	16.20	18.00	19.80	21.78	23.96	E
100.00	19.80	22.00	24.20	26.62	29.28	E



Master Desk Unit

6.00	7.00	8.00	8.80	9.68	E
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Transformers

50 Watt	0.68	0.75	0.83	0.91	1.00	E
100 Watt	0.77	0.85	0.94	1.03	1.13	E
250 Watt	0.90	1.00	1.10	1.21	1.33	E
500 Watt	1.08	1.20	1.32	1.45	1.60	E
1000 Watt	1.26	1.40	1.54	1.69	1.86	E



Call Light

Wall Mounted	0.36	0.40	0.44	0.48	0.53	E
Ceiling Mounted	0.45	0.50	0.55	0.61	0.67	E



Bedside Station With Speaker

Wall Mounted	0.59	0.65	0.72	0.79	0.87	E
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Cord & Button

0.20	0.25	0.30	0.33	0.36	E
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NURSE CALL SYSTEM

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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Wall Unit

0.50	0.55	0.60	0.66	0.73	E
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Speaker

0.59	0.65	0.72	0.79	0.87	E
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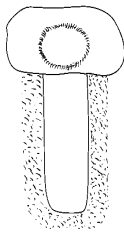
Toilet Pull

0.80	1.00	1.20	1.32	1.45	E
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POST HOLE - HAND EXCAVATED

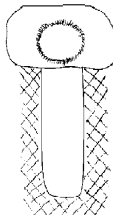
LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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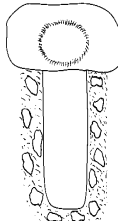
Sandy Soil Conditions

3 Feet Deep	0.80	1.00	1.20	1.32	1.45	E
4 Feet Deep	1.12	1.40	1.68	1.85	2.03	E
5 Feet Deep	1.60	2.00	2.40	2.64	2.90	E
6 Feet Deep	2.20	2.75	3.30	3.63	3.99	E



Clay Soil Conditions

3 Feet Deep	1.32	1.65	1.98	2.18	2.40	E
4 Feet Deep	1.84	2.30	2.76	3.04	3.34	E
5 Feet Deep	2.64	3.30	3.96	4.36	4.79	E
6 Feet Deep	3.64	4.55	5.46	6.01	6.61	E



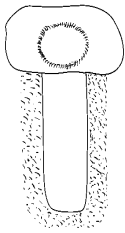
Rocky Soil Conditions

3 Feet Deep	2.64	3.30	3.96	4.36	4.79	E
4 Feet Deep	3.68	4.60	5.52	6.07	6.68	E
5 Feet Deep	5.28	6.60	7.92	8.71	9.58	E
6 Feet Deep	7.28	9.10	10.92	12.01	13.21	E

POST HOLE - MACHINE EXCAVATED

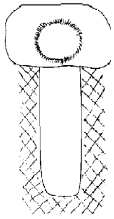
LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



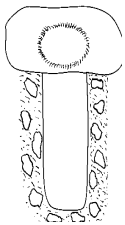
Sandy Soil Conditions

3 Feet Deep	0.28	0.35	0.42	0.46	0.51	E
4 Feet Deep	0.40	0.50	0.60	0.66	0.73	E
5 Feet Deep	0.56	0.70	0.84	0.92	1.02	E
6 Feet Deep	0.72	0.90	1.08	1.19	1.31	E



Clay Soil Conditions

3 Feet Deep	0.44	0.55	0.66	0.73	0.80	E
4 Feet Deep	0.68	0.85	1.02	1.12	1.23	E
5 Feet Deep	0.92	1.15	1.38	1.52	1.67	E
6 Feet Deep	1.20	1.50	1.80	1.98	2.18	E



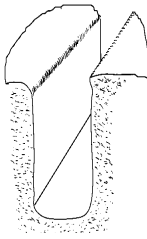
Rocky Soil Conditions

3 Feet Deep	0.92	1.15	1.38	1.52	1.67	E
4 Feet Deep	1.32	1.65	1.98	2.18	2.40	E
5 Feet Deep	1.84	2.30	2.76	3.04	3.34	E
6 Feet Deep	2.40	3.00	3.60	3.96	4.36	E

TRENCHING - HAND EXCAVATED

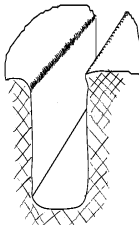
LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Sandy Soil Condition

6" Wide X 6" Deep	1.40	1.75	2.10	2.31	2.54	C
6" Wide X 12" Deep	2.40	3.00	3.60	3.96	4.36	C
6" Wide X 18" Deep	4.00	5.00	6.00	6.60	7.26	C
6" Wide X 24" Deep	5.60	7.00	8.40			
9" Wide X 6" Deep	2.08	2.60	3.12	3.43	3.78	C
9" Wide X 12" Deep	3.60	4.50	5.40	5.94	6.53	C
9" Wide X 18" Deep	6.00	7.50	9.00	9.90	10.89	C
9" Wide X 24" Deep	8.40	10.50	12.60	13.86	15.25	C
12" Wide X 6" Deep	2.80	3.50	4.20	4.62	5.08	C
12" Wide X 12" Deep	4.80	6.00	7.20	7.92	8.71	C
12" Wide X 18" Deep	8.00	10.00	12.00	13.20	14.52	C
12" Wide X 24" Deep	11.20	14.00	16.80	18.48	20.33	C
12" Wide X 30" Deep	14.40	18.00	21.60	23.76	26.14	C



Clay Soil Condition

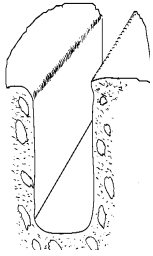
6" Wide X 6" Deep	2.08	2.60	3.12	3.43	3.78	C
6" Wide X 12" Deep	3.60	4.50	5.40	5.94	6.53	C
6" Wide X 18" Deep	6.00	7.50	9.00	9.90	10.89	C
6" Wide X 24" Deep	8.40	10.50	12.60	13.86	15.25	C
9" Wide X 6" Deep	3.12	3.90	4.68	5.15	5.66	C
9" Wide X 12" Deep	5.40	6.75	8.10	8.91	9.80	C
9" Wide X 18" Deep	9.00	11.25	13.50	14.85	16.34	C
9" Wide X 24" Deep	12.60	15.75	18.90	20.79	22.87	C
12" Wide X 6" Deep	4.16	5.20	6.24	6.86	7.55	C
12" Wide X 12" Deep	7.20	9.00	10.80	11.88	13.07	C
12" Wide X 18" Deep	12.00	15.00	18.00	19.80	21.78	C
12" Wide X 24" Deep	16.80	21.00	25.20	27.72	30.49	C
12" Wide X 30" Deep	21.60	27.00	32.40	35.64	39.20	C

TRENCHING - HAND EXCAVATED

LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Rocky Soil



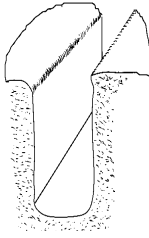
6" Wide X 6" Deep	3.52	4.40	5.28	5.81	6.39	C
6" Wide X 12" Deep	6.00	7.50	9.00	9.90	10.89	C
6" Wide X 18" Deep	10.00	12.50	15.00	16.50	18.15	C
6" Wide X 24" Deep	14.00	17.50	21.00	23.10	25.41	C
9" Wide X 6" Deep	5.28	6.60	7.92	8.71	9.58	C
9" Wide X 12" Deep	9.00	11.25	13.50	14.85	16.34	C
9" Wide X 18" Deep	15.00	18.75	22.50	24.75	27.23	C
9" Wide X 24" Deep	21.00	26.25	31.50	34.65	38.12	C
12" Wide X 6" Deep	7.04	8.80	10.56	11.62	12.78	C
12" Wide X 12" Deep	12.00	15.00	18.00	19.80	21.78	C
12" Wide X 18" Deep	20.00	25.00	30.00	33.00	36.30	C
12" Wide X 24" Deep	28.00	35.00	42.00	46.20	50.82	C
12" Wide X 30" Deep	36.00	45.00	54.00	59.40	65.34	C

TRENCHING - MACHINE EXCAVATED

LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Sandy Soil Condition

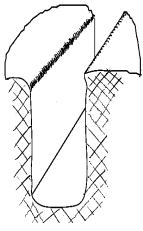


6" Wide X 6" Deep	0.80	1.00	1.20	1.32	1.45	C
6" Wide X 12" Deep	1.20	1.50	1.80	1.98	2.18	C
6" Wide X 18" Deep	1.60	2.00	2.40	2.64	2.90	C
6" Wide X 24" Deep	2.00	2.50	3.00	3.30	3.63	C
9" Wide X 6" Deep	1.20	1.50	1.80	1.98	2.18	C
9" Wide X 12" Deep	1.60	2.00	2.40	2.64	2.90	C
9" Wide X 18" Deep	2.00	2.50	3.00	3.30	3.63	C
9" Wide X 24" Deep	2.40	3.00	3.60	3.96	4.36	C
12" Wide X 6" Deep	1.80	2.25	2.70	2.97	3.27	C
12" Wide X 12" Deep	2.20	2.75	3.30	3.63	3.99	C
12" Wide X 18" Deep	2.60	3.25	3.90	4.29	4.72	C
12" Wide X 24" Deep	3.00	3.75	4.50	4.95	5.45	C
12" Wide X 30" Deep	3.60	4.50	5.40	5.94	6.53	C
12" Wide X 36" Deep	4.20	5.25	6.30	6.93	7.62	C
12" Wide X 48" Deep	4.80	6.00	7.20	7.92	8.71	C
18" Wide X 12" Deep	2.96	3.70	4.44	4.88	5.37	C
18" Wide X 18" Deep	3.52	4.40	5.28	5.81	6.39	C
18" Wide X 24" Deep	4.04	5.05	6.06	6.67	7.33	C
18" Wide X 30" Deep	4.88	6.10	7.32	8.05	8.86	C
18" Wide X 36" Deep	5.68	7.10	8.52	9.37	10.31	C
18" Wide X 48" Deep	6.48	8.10	9.72	10.69	11.76	C
18" Wide X 60" Deep	7.40	9.25	11.10	12.21	13.43	C
24" Wide X 18" Deep	4.80	6.00	7.20	7.92	8.71	C
24" Wide X 24" Deep	5.44	6.80	8.16	8.98	9.87	C
24" Wide X 30" Deep	6.60	8.25	9.90	10.89	11.98	C
24" Wide X 36" Deep	8.00	10.00	12.00	13.20	14.52	C
24" Wide X 48" Deep	8.80	11.00	13.20	14.52	15.97	C
24" Wide X 60" Deep	10.00	12.50	15.00	16.50	18.15	C
24" Wide X 72" Deep	11.40	14.25	17.10	18.81	20.69	C

TRENCHING - MACHINE EXCAVATED

LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Clay Soil Condition

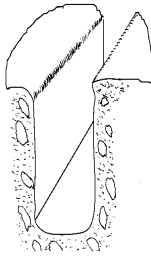
6" Wide X 6" Deep	1.20	1.50	1.80	1.98	2.18	C
6" Wide X 12" Deep	1.80	2.25	2.70	2.97	3.27	C
6" Wide X 18" Deep	2.40	3.00	3.60	3.96	4.36	C
6" Wide X 24" Deep	3.00	3.75	4.50	4.95	5.45	C
9" Wide X 6" Deep	1.80	2.25	2.70	2.97	3.27	C
9" Wide X 12" Deep	2.40	3.00	3.60	3.96	4.36	C
9" Wide X 18" Deep	3.00	3.75	4.50	4.95	5.45	C
9" Wide X 24" Deep	3.60	4.50	5.40	5.94	6.53	C
12" Wide X 6" Deep	2.72	3.40	4.08	4.49	4.94	C
12" Wide X 12" Deep	3.32	4.15	4.98	5.48	6.03	C
12" Wide X 18" Deep	3.92	4.90	5.88	6.47	7.11	C
12" Wide X 24" Deep	4.52	5.65	6.78	7.46	8.20	C
12" Wide X 30" Deep	5.40	6.75	8.10	8.91	9.80	C
12" Wide X 36" Deep	6.32	7.90	9.48	10.43	11.47	C
12" Wide X 48" Deep	7.20	9.00	10.80	11.88	13.07	C
18" Wide X 12" Deep	4.44	5.55	6.66	7.33	8.06	C
18" Wide X 18" Deep	5.28	6.60	7.92	8.71	9.58	C
18" Wide X 24" Deep	6.08	7.60	9.12	10.03	11.04	C
18" Wide X 30" Deep	7.32	9.15	10.98	12.08	13.29	C
18" Wide X 36" Deep	8.52	10.65	12.78	14.06	15.46	C
18" Wide X 48" Deep	9.72	12.15	14.58	16.04	17.64	C
18" Wide X 60" Deep	11.12	13.90	16.68	18.35	20.18	C
24" Wide X 18" Deep	7.20	9.00	10.80	11.88	13.07	C
24" Wide X 24" Deep	8.16	10.20	12.24	13.46	14.81	C
24" Wide X 30" Deep	1.12	1.40	1.68	1.85	2.03	C
24" Wide X 36" Deep	12.00	15.00	18.00	19.80	21.78	C
24" Wide X 48" Deep	13.20	16.50	19.80	21.78	23.96	C
24" Wide X 60" Deep	15.00	18.75	22.50	24.75	27.23	C
24" Wide X 72" Deep	17.08	21.35	25.62	28.18	31.00	C

TRENCHING - MACHINE EXCAVATED

LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER

Rocky Soil Condition

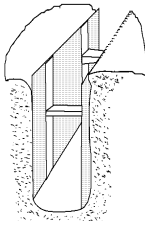


6" Wide X 6" Deep	2.00	2.50	3.00	3.30	3.63	C
6" Wide X 12" Deep	3.00	3.75	4.50	4.95	5.45	C
6" Wide X 18" Deep	4.00	5.00	6.00	6.60	7.26	C
6" Wide X 24" Deep	5.00	6.25	7.50	8.25	9.08	C
9" Wide X 6" Deep	3.00	3.75	4.50	4.95	5.45	C
9" Wide X 12" Deep	4.00	5.00	6.00	6.60	7.26	C
9" Wide X 18" Deep	5.00	6.25	7.50	8.25	9.08	C
9" Wide X 24" Deep	6.00	7.50	9.00	9.90	10.89	C
12" Wide X 6" Deep	4.52	5.65	6.78	7.46	8.20	C
12" Wide X 12" Deep	5.52	6.90	8.28	9.11	10.02	C
12" Wide X 18" Deep	6.52	8.15	9.78	10.76	11.83	C
12" Wide X 24" Deep	7.52	9.40	11.28	12.41	13.65	C
12" Wide X 30" Deep	9.00	11.25	13.50	14.85	16.34	C
12" Wide X 36" Deep	10.52	13.15	15.78	17.36	19.09	C
12" Wide X 48" Deep	12.00	15.00	18.00	19.80	21.78	C
18" Wide X 12" Deep	7.40	9.25	11.10	12.21	13.43	C
18" Wide X 18" Deep	8.80	11.00	13.20	14.52	15.97	C
18" Wide X 24" Deep	10.12	12.65	15.18	16.70	18.37	C
18" Wide X 30" Deep	12.20	15.25	18.30	20.13	22.14	C
18" Wide X 36" Deep	14.20	17.75	21.30	23.43	25.77	C
18" Wide X 48" Deep	16.20	20.25	24.30	26.73	29.40	C
18" Wide X 60" Deep	18.52	23.15	27.78	30.56	33.61	C
24" Wide X 18" Deep	12.00	15.00	18.00	19.80	21.78	C
24" Wide X 24" Deep	13.60	17.00	20.40	22.44	24.68	C
24" Wide X 30" Deep	16.52	20.65	24.78	27.26	29.98	C
24" Wide X 36" Deep	20.00	25.00	30.00	33.00	36.30	C
24" Wide X 48" Deep	22.00	27.50	33.00	36.30	39.93	C
24" Wide X 60" Deep	25.00	31.25	37.50	41.25	45.38	C
24" Wide X 72" Deep	28.52	35.65	42.78	47.06	51.76	C

TRENCHING WORK

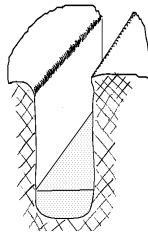
LABOR UNITS

SIZE EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



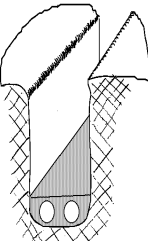
Trench Shoring

24" Deep	12.80	16.00	19.20	21.12	23.23	C
36" Deep	19.20	24.00	28.80	31.68	34.85	C
48" Deep	25.60	32.00	38.40	42.24	46.46	C
60" Deep	32.00	40.00	48.00	52.80	58.08	C
72" Deep	40.00	50.00	60.00	66.00	72.60	C



Install Sand Bottom

6" Wide	1.60	2.00	2.40	2.64	2.90	C
9" Wide	2.00	2.50	3.00	3.30	3.63	C
12" Wide	2.60	3.25	3.90	4.29	4.72	C
18" Wide	3.40	4.25	5.10	5.61	6.17	C
24" Wide	4.40	5.50	6.60	7.26	7.99	C



Install Concrete for Duct Bank

6" Wide	1.20	1.50	1.80	1.98	2.18	C
9" Wide	1.40	1.75	2.10	2.31	2.54	C
12" Wide	1.60	2.00	2.40	2.64	2.90	C
18" Wide	2.20	2.75	3.30	3.63	3.99	C
24" Wide	2.80	3.50	4.20	4.62	5.08	C



Trench Shoring

36" Deep	12.00	14.00	16.80	20.16	24.19	C
48" Deep	15.00	17.00	20.40	24.48	29.38	C
60" Deep	18.00	20.00	24.00	28.80	34.56	C
72" Deep	20.00	22.00	26.40	31.68	38.02	C



Concret Pour for Duct Bank

12" X 12" Deep	1.75	2.00	2.40	2.88	3.46	C
18" X 18" Deep	2.00	2.50	3.00	3.60	4.32	C
24" X 24" Deep	3.00	3.50	4.20	5.04	6.05	C
24" X 36" Deep	4.00	5.00	6.00	7.20	8.64	C
36" X 36" Deep	5.00	6.00	7.20	8.64	10.37	C
36" X 48" Deep	6.00	7.00	8.40	10.08	12.10	C
48" X 48" Deep	7.00	9.00	10.80	12.96	15.55	C

TEMPORARY POWER

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	Distribution Center						
	50A 120/240V	1.25	1.45	1.74	1.91	2.11	E
	Intermediate Cord						
	50A 120/240V	0.80	0.85	1.02	1.12	1.23	E
	Outlet & Cord						
	50 Foot	0.60	0.70	0.84	0.92	1.02	E
	100 Foot	0.80	1.00	1.20	1.32	1.45	E
	Multi Outlet & Cord						
	50 Foot	0.60	0.70	0.84	0.92	1.02	E
	75 Foot	0.70	0.90	1.08	1.19	1.31	E
	100 Foot	0.80	1.00	1.20	1.32	1.45	E
	GFCI Protector						
	20A 120V	0.50	0.70	0.84	0.92	1.02	E
	Lighting Strings						
	25 Foot	0.60	0.80	0.96	1.06	1.16	E
	50 Foot	0.80	1.00	1.20	1.32	1.45	E
	75 Foot	0.90	1.10	1.32	1.45	1.60	E
	100 Foot	1.00	1.20	1.44	1.58	1.74	E

TEMPORARY POWER

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



Fluorescent Lighting Strings

25 Foot	0.80	1.00	1.20	1.32	1.45	E
50 Foot	1.00	1.20	1.44	1.58	1.74	E
75 Foot	1.10	1.30	1.56	1.72	1.89	E
100 Foot	1.20	1.40	1.68	1.85	2.03	E



Power Center 120/240 Volt

100 AMP	3.00	4.00	4.80	5.28	5.81	E
200 AMP	4.00	5.00	6.00	6.60	7.26	E



Power Center W/Transformer 480-120/208 Volt

100 AMP	4.50	5.50	6.60	7.26	7.99	E
200 AMP	5.50	6.50	7.80	8.58	9.44	E



Engine Generators

1.5 KW	0.75	1.00	1.20	1.32	1.45	E
2.5 KW	1.00	1.25	1.50	1.65	1.82	E
3.5 KW	1.00	1.25	1.50	1.65	1.82	E
5 KW	1.25	1.50	1.80	1.98	2.18	E
10 KW	1.50	2.00	2.40	2.64	2.90	E
15 KW	2.50	3.00	3.60	3.96	4.36	E
20 KW	3.50	4.00	4.80	5.28	5.81	E
50 KW	5.00	6.00	7.20	7.92	8.71	E



Construction Crane

30 amp	4.00	6.00	7.20	7.92	8.71	E
60 amp	5.00	7.00	8.40	9.24	10.16	E
100 amp	8.00	10.00	12.00	13.20	14.52	E
150 amp	10.00	12.00	14.40	15.84	17.42	E



Construction Elevator

30 amp	3.00	4.00	4.80	5.28	5.81	E
60 amp	4.00	5.00	6.00	6.60	7.26	E
100 amp	6.00	8.00	9.60	10.56	11.62	E
150 amp	8.00	10.00	12.00	13.20	14.52	E

GENERATOR & TRANSFER SWITCHES

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



5-13 KW (120/240 VOLT)

5-7 KW	6.00	8.00	9.60	10.56	11.62	E
8-10 KW	7.00	9.00	10.80	11.88	13.07	E
10-13 KW	8.00	10.00	12.00	13.20	14.52	E
14-19 KW	10.00	12.00	14.40	15.84	17.42	E



14-30 KW (120/240 VOLT)

14-19 KW	10.00	12.00	14.40	15.84	17.42	E
20-25 KW	12.00	14.00	16.80	18.48	20.33	E
25-30 KW	14.00	16.00	19.20	21.12	23.23	E



31-47 KW (120/240 VOLT)

31-39 KW	16.00	18.00	21.60	23.76	26.14	E
40-47 KW	18.00	20.00	24.00	26.40	29.04	E



AUTOMATIC TRANSFER SWITCH

NEMA 1

50 AMP	2.00	2.50	3.00	3.30	3.63	E
100 AMP	2.50	3.00	3.60	3.96	4.36	E
200 AMP	3.00	4.00	4.80	5.28	5.81	E
300 AMP	5.00	6.00	7.20	7.92	8.71	E
400 AMP	7.00	8.00	9.60	10.56	11.62	E

NEMA 3R

50 AMP	2.50	3.00	3.60	3.96	4.36	E
100 AMP	3.00	3.50	4.20	4.62	5.08	E
200 AMP	3.50	4.50	5.40	5.94	6.53	E
300 AMP	5.50	6.50	7.80	8.58	9.44	E
400 AMP	7.50	8.50	10.20	11.22	12.34	E



MANUAL TRANSFER SWITCH

NEMA 1

30 AMP	3.00	4.00	4.80	5.28	5.81	E
50 AMP	4.00	5.00	6.00	6.60	7.26	E
100 AMP	6.00	7.00	8.40	9.24	10.16	E
200 AMP	8.00	9.00	10.80	11.88	13.07	E
300 AMP	10.00	12.00	14.40	15.84	17.42	E
400 AMP	12.00	14.00	16.80	18.48	20.33	E



MANUAL TRANSFER SWITCH (6-CIRCUIT 20 AMP)

20 AMP	2.00	3.00	3.60	3.96	4.36	E
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USP SYSTEMS

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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UPS 300-700 VA

350 VA		0.50	0.75	0.90	0.99	1.09	E
500-700 VA		0.75	1.00	1.20	1.32	1.45	E



UPS 500-1500 VA

500 VA		0.75	1.00	1.20	1.32	1.45	E
1000 VA		1.00	1.25	1.50	1.65	1.82	E
1500 VA		1.25	1.50	1.80	1.98	2.18	E



DATA CENTER UPS 10-50 KVA

10 KVA		6.00	7.00	8.40	9.24	10.16	E
20 KVA		8.00	9.00	10.80	11.88	13.07	E
30 KVA		10.00	12.00	14.40	15.84	17.42	E
40 KVA		12.00	14.00	16.80	18.48	20.33	E
50 KVA		14.00	16.00	19.20	21.12	23.23	E



INDUSTRIAL UPS 10-50 KVA

60 KVA		18.00	21.00	25.20	27.72	30.49	E
70 KVA		21.00	24.00	28.80	31.68	34.85	E
80 KVA		24.00	27.00	32.40	35.64	39.20	E
90 KVA		27.00	30.00	36.00	39.60	43.56	E
100 KVA		30.00	33.00	39.60	43.56	47.92	E

STRUCTURED CABLING

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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STRUCTURED MEDIA CENTER

14"		4.00	5.00	6.00	6.60	7.26 E
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28"		6.00	7.00	8.40	9.24	10.16 E
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42"		8.00	10.00	12.00	13.20	14.52 E
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STRUCTURED CABLING PANELS



BASIC PHONE & VIDEO 6-WAY VIDEO SPLITTER 4-PHONE LINES 9-PHONE LOCATIONS	1.00	1.25	1.50	1.65	1.82 E
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BASIC HOME NETWORK CAT 5E VOICE/DATA MODULE 6-WAY VIDEO SPLITTER 4-PHONE LINES 9-PHONE LOCATIONS	1.50	2.00	2.40	2.64	2.90 E
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ADVANCE PHONE & VIDEO 2 - CAT 5E VOICE/DATA MODULES 6-WAY VIDEO SPLITTER 4-PHONE LINES 6 - DATA AND/OR PHONE LOCATIONS	1.75	2.25	2.70	2.97	3.27 E
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SMALL OFFICE UNIT 2 - CAT 5E VOICE/DATA MODULES 6-WAY VIDEO SPLITTER 4-PHONE LINES 12 - DATA AND/OR PHONE LOCATIONS	2.25	3.00	3.60	3.96	4.36 E
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18-PORT PANEL 3 - CAT 5E VOICE/DATA MODULES 4 - PHONE LINES 18 - DATA AND/OR PHONE LOCATIONS	2.75	3.75	4.50	4.95	5.45 E
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24-PORT PANEL 4 - CAT 5E VOICE/DATA MODULES 4 - PHONE LINES 24 - DATA AND/OR PHONE LOCATIONS	2.25	3.00	3.60	3.96	4.36 E
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STRUCTURED CABLING

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



**VOICE/DATA MODULE
5-PORT**

0.75 1.00 1.20 1.32 1.45 E



AUDIO/VIDEO MODULE

1.25 1.50 1.80 1.98 2.18 E



VIDEO AMPLIFIER

0.50 0.60 0.72 0.79 0.87 E



**CABLE DISTRIBUTION
MODULE**

0.50 0.60 0.72 0.79 0.87 E



**DESKTOP STEREO
MODULATOR**

0.80 1.00 1.20 1.32 1.45 E



**VIDEO CAMERA
INDOOR**

1.50 1.75 2.10 2.31 2.54 E



**VIDEO CAMERA
OUTDOOR**

1.75 2.00 2.40 2.64 2.90 E

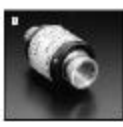


VIDEO SEQUENCER

1.00 1.25 1.50 1.65 1.82 E

STRUCTURED CABLING

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	AC POWER MODULE		0.60	0.80	0.96	1.06	1.16	E
	POWER DISTRIBUTION MODULE		0.75	0.85	1.02	1.12	1.23	E
	4 X 4 BREAKOUT MODULE		0.25	0.30	0.36	0.40	0.44	E
	COAXIAL SUPPRESSOR		0.15	0.17	0.20	0.22	0.25	E
	TWIST-ON CONNECTORS		0.10	0.11	0.13	0.15	0.16	E
	CRIMP-ON CONNECTORS		0.15	0.18	0.22	0.24	0.26	E
	IN-LINE COUPLER		0.08	0.10	0.12	0.13	0.15	E
	DDS COMBINER		0.12	0.15	0.18	0.20	0.22	E
	DDS SIGNAL AMPLIFIER		8.00	1.00	1.20	1.32	1.45	E

STRUCTURED CABLING

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	WIRE DUCT		12.00	13.00	15.60	17.16	18.88	C
	RACK CABLE FRAME		0.25	0.30	0.36	0.40	0.44	E
	SADDLE TIES		0.04	0.05	0.06	0.07	0.07	E
	CABLE TIES		0.03	0.04	0.05	0.05	0.06	E
	CABLE CLIPS MODULATOR		0.03	0.04	0.05	0.05	0.06	E
	FIVE-RING MANAGER		0.50	0.60	0.72	0.79	0.87	E
	TIE WRAP BAR OUTDOOR		0.25	0.30	0.36	0.40	0.44	E
	MULTIMEDIA OUTLET		0.50	0.60	0.72	0.79	0.87	E
	2-PLACE OUTLET		0.30	0.35	0.42	0.46	0.51	E

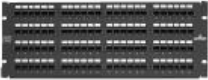
STRUCTURED CABLING

LABOR UNITS

	SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	4-PLACE OUTLET		0.40	0.45	0.54	0.59	0.65	E
	4-PLACE OUTLET		0.50	0.55	0.66	0.73	0.80	E
	12-PLACE OUTLET MODULE		0.75	0.80	0.96	1.06	1.16	E
	1-PLACE OUTLET		0.20	0.25	0.30	0.33	0.36	E
	CABLE CAT 5E OR 6		8.00	10.00	12.00	13.20	14.52	M
	CABLE CAT 5E OR 6 PATCH CABLE		0.06	0.08	0.10	0.11	0.12	M
	COAXIAL CABLE		11.00	12.00	14.40	15.84	17.42	E

STRUCTURED CABLING

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER	
	PATCH PANEL 12 - PORT	0.75	0.85	1.02	1.12	1.23	E
	PATCH PANEL 16 - PORT	0.80	0.90	1.08	1.19	1.31	E
	PATCH PANEL 24 - PORT	0.85	0.95	1.14	1.25	1.38	E
	PATCH PANEL 48 - PORT	1.15	1.25	1.50	1.65	1.82	E
	PATCH PANEL 64 - PORT	1.45	1.55	1.86	2.05	2.25	E
	PATCH PANEL 96 - PORT	0.18	1.85	2.22	2.44	2.69	E
	BLANK PANELS	0.10	0.12	0.14	0.16	0.17	E
	HINGED WALL BRACKET	0.35	0.40	0.48	0.53	0.58	E
	RACK MOUNT SURGE PROTECTION	0.75	0.85	1.02	1.12	1.23	E

STRUCTURED CABLING

LABOR UNITS

SIZE	CONDITIONS	EASY	AVERAGE	DIFFICULT	REMODEL	OLD WORK PER
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EQUIPMENT RACK

		1.50	1.75	2.10	2.31	2.54	E
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CABLE MANAGEMENT CHANNEL

		1.00	1.10	1.32	1.45	1.60	E
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SWING FRAME WALL MOUNT

24"		1.25	1.50	1.80	1.98	2.18	E
36"		1.50	1.75	2.10	2.31	2.54	E
48"		1.75	2.00	2.40	2.64	2.90	E



ROLL-OUT RACK SYSTEM

		2.50	2.75	3.30	3.63	3.99	M
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SOLAR POWER

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



SOLAR MODULES - STADARD FRAME - FRONT HARDWARE

50 Watt	0.20	0.23	0.26	0.30	0.34	E
100 Watt	0.30	0.34	0.39	0.44	0.51	E
240 Watt	0.45	0.51	0.58	0.67	0.76	E
380 Watt	0.50	0.57	0.65	0.74	0.84	E

SOLAR MODULES - STADARD FRAME - REAR HARDWARE

50 Watt	0.30	0.34	0.39	0.44	0.51	E
100 Watt	0.40	0.46	0.52	0.59	0.68	E
240 Watt	0.55	0.63	0.71	0.81	0.93	E
380 Watt	0.70	0.80	0.91	1.04	1.18	E



SOLAR ROOFING SHINGLES

20 Watt	0.75	0.86	0.97	1.11	1.27	E
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QUICK CONNECTOR

MC-3 Connector	0.30	0.34	0.39	0.44	0.51	E
MC-4 Connector	0.35	0.40	0.45	0.52	0.59	E
MC-3 Parallel Connector	0.17	0.19	0.22	0.25	0.29	E



SOLAR INVERTER 208-240 VOLTS AC - SINGLE PHASE

3000 Watts	2.00	2.28	2.60	2.96	3.38	E
7000 Watts	3.25	3.71	4.22	4.82	5.49	E



SOLAR INVERTER 208-480 VOLTS AC - 3 PHASE

30 kw	6.00	6.84	7.80	8.89	10.13	E
45 kw	8.00	9.12	10.40	11.85	13.51	E
50 kw	9.00	10.26	11.70	13.33	15.20	E
75 kw	11.00	12.54	14.30	16.30	18.58	E
100 kw	12.00	13.68	15.60	17.78	20.27	E
150 kw	13.00	14.82	16.89	19.26	21.96	E
225 kw	16.00	18.24	20.79	23.70	27.02	E
250 kw	18.00	20.52	23.39	26.67	30.40	E
375 kw	20.00	22.80	25.99	29.63	33.78	E
500 kw	22.00	25.08	28.59	32.59	37.16	E

SOLAR POWER

LABOR UNITS

SIZE CONDITIONS EASY AVERAGE DIFFICULT REMODEL OLD WORK PER



SOLAR MICRO INVERTER 120-240 VOLTS AC - SINGLE PHASE

190 Watt	0.20	0.23	0.26	0.30	0.34	E
210 Watt	0.22	0.25	0.29	0.33	0.37	E
380 Watt	0.25	0.29	0.32	0.37	0.42	E



SOLAR MICRO INVERTER ACCESSORIES

Cable Extension	0.15	0.17	0.19	0.22	0.25	E
Inter Connect Cable	0.20	0.23	0.26	0.30	0.34	E
Mountin Bracket	0.15	0.17	0.19	0.22	0.25	E
End Caps	0.10	0.11	0.13	0.15	0.17	E

SUNLINKING RACKING



Per Solar Panel	0.35	0.40	0.45	0.52	0.59	E
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SOLAR LIGHT & POLE

Labor Per Pole	2.50	2.85	3.25	3.70	4.22	E
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SOLAR FLOOD LIGHT

Labor Per Fixture	2.50	2.85	3.25	3.70	4.22	E
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ADJUSTMENTS TO LABOR

Adjusting labor to reflect various job conditions is an art, not a science. Many of the factors effecting labor adjustment are not known at bid time. Other factors are beyond the control of the Electrical Contractor and are controlled by others such as the Architect, Electrical Engineer, or General Contractor. Certain job conditions such as weather are beyond the control of mortal man.

There are, however, many conditions that one may anticipate. The past experience of an Electrical Contractor or Estimator can assist them in anticipating certain job conditions effecting overall productivity of the labor force. Bear in mind, however, there is no exact set of rules that will work in all cases.

Listed in this section are some of the many areas to be considered when adjusting labor for any given job.

GENERAL CONDITIONS

If you are bidding a job from a set of plans and specifications, the specification should include a division or section titled “General Conditions”. If the specifications are C.S.I. formatted, Section 1 should be the “General Conditions”.

Project Schedule

The project duration or schedule may be described. A short duration or schedule may increase the crew size, thus increasing your supervision labor. The schedule may be so tight you may have to man the job on overtime.

Phases

The project may be scheduled in phases thus increasing the normal project duration. This additional duration will tie up tools, equipment, and personnel for a greater length of time. This may also reduce the average crew size, thus increasing your labor cost. Example: If you were to normally man the job with one (1) foreman and three (3) journeymen but the phased work required one (1) foreman and one (1) journeymen, your average labor rate has increased.

Overtime Required

The specifications may require some or all of the work to be performed on overtime, thus increasing your labor cost.

Job Site Access

The access to the job site may be restricted and the security requirements may add additional labor cost.

Storage

Often as estimators, we assume storage space at the job site will be available; this is not always the case. Review the general conditions to see if storage space may be restricted. A restriction in storage space may add additional labor cost.

EFFECTS OF MULTI-LEVEL CONSTRUCTION

Multi-Level construction has both positive and negative effects on the productivity of your work force. With proper planning and utilization of various construction methods, many of the so-called negative effects can become positive effects. In either case the following considerations should be factored into your labor estimate.

Vertical vs. Horizontal Work

Not all types of work are effected the same in multi-level construction.

Vertical Work

Vertical work such as power risers, alarm system risers, telephone system risers, and data cabling systems risers, become much more difficult as the number of levels increase. These vertical types of work require workmen to change levels frequently, thus increasing the labor required for a given task.

For vertical work on multi-level construction, multiply the total vertical labor by the corresponding numbers:

<u>Level</u>	<u>Multiplier</u>	<u>Level</u>	<u>Multiplier</u>
2	1.05	21	1.43
3	1.07	22	1.45
4	1.09	23	1.47
5	1.11	24	1.49
6	1.13	25	1.51
7	1.15	26	1.53
8	1.17	27	1.55
9	1.19	28	1.57
10	1.21	29	1.59
11	1.23	30	1.61
12	1.25	31	1.63
13	1.27	32	1.65
14	1.29	33	1.67
15	1.31	34	1.69
16	1.33	35	1.71
17	1.35	36	1.73
18	1.37	37	1.75
19	1.39	38	1.77
20	1.41	39	1.79
		40	1.81

Example: 30-Story Building
1,000 Hrs. x 1.61 = 1,610 Hrs

EFFECTS OF MULTI-LEVEL CONSTRUCTION (continued)

Horizontal Work

Horizontal work, such as branch circuit wiring and other system wiring installed on the same level, requires no additional labor for a given task. The additional labor required on horizontal work of multi-level construction is limited to the transportation of material, tools, and personnel to the various levels. Thus, some allowance must be made for the additional labor required to transport material, tools and personnel between levels. This additional labor should be in the form of a setup allowance for each level.

Horizontal Setup

Horizontal setup includes the transportation of material, tools, and personnel between floors. The exact amount of time required for this activity depends on the availability of manlifts. The taller the building, the greater amount of time spent waiting for manlifts. Some developers and general contractors have addressed this problem by installing multiple manlifts, thus reducing waiting times. Another approach to this problem is to schedule various times during the workday when the manlift is dedicated to a single trade. The best approach seems to be the use of two manlifts, one for personnel and material called upon demand, and the other dedicated to a single trade for certain hours of the workday.

Listed below is a suggested setup time for horizontal work. This setup time is based on one non-dedicated manlift. The total man-hours for a forty (40) story building is 1,248. While this may seem high, keep in mind it works out to only sixteen (16) hours per week over eighteen (18) months.

<u>Level</u>	<u>Hours</u>	<u>Level</u>	<u>Hours</u>
2	32	21	640
3	64	22	672
4	96	23	704
5	128	24	736
6	160	25	768
7	192	26	800
8	224	27	832
9	256	28	864
10	288	29	896
11	320	30	928
12	352	31	960
13	384	32	992
14	416	33	1,024
15	448	34	1,056
16	480	35	1,088
17	512	36	1,120
18	544	37	1,152
19	576	38	1,184
20	608	39	1,216
		40	1,248

EFFECTS OF MULTI-LEVEL CONSTRUCTION (continued)

Core Work

Many buildings of multi-level construction use a common core area on each floor. These core areas are typical from floor to floor, and usually include stairways, elevator lobbies, rest rooms, electrical rooms, and telephone rooms. The core area work is like horizontal work, and some allowance should be made for setup. There is, however, another factor in core work, that being each floor is typical of the previous floor. This repetitive nature of core work reduces the amount of time required to perform a given task.

Thus, one may reduce the labor for core work by the following factors:

<u>Level</u>	<u>Multiplier</u>	<u>Level</u>	<u>Multiplier</u>
2	0.95	21	0.81
3	0.93	22	0.81
4	0.91	23	0.81
5	0.89	24	0.81
6	0.87	25	0.80
7	0.86	26	0.80
8	0.85	27	0.80
9	0.84	28	0.80
10	0.84	29	0.80
11	0.84	30	0.78
12	0.84	31	0.78
13	0.84	32	0.78
14	0.82	33	0.78
15	0.82	34	0.78
16	0.82	35	0.78
17	0.82	36	0.75
18	0.82	37	0.75
19	0.82	38	0.75
20	0.81	39	0.75
		40	0.75

Example: 20-Story Building
1,000 Hrs. x 0.81 = 810 Hrs.

Note: This approach to reducing labor on core work assumes the same crews are used on This work, and they proceed floor to floor performing repetitive tasks.

EFFECTS OF MULTI-LEVEL CONSTRUCTION (continued)

Material Handling

There are several ways to handle material in multi-level construction, which are actually more efficient than conventional (one level) construction. Because the same types (and often quantities) of material are used on various levels, it is relatively easy to pre-stock the floors.

Let us assume you are building a twenty (20) story building. Each level will require a 480 volt panel, two 30 kva transformers, and two 208 volt panels. Additionally, the roof level will require a 600 amp distribution panel along with a motor control center.

With the proper planning all this material can be distributed in 24 man-hours plus the cost of crane time. The first step is to order all transformers with lifting eyes installed. The second step is to have all transformers shipped to the job site on an open bed trailer. The third step is to have all panels on site. The fourth step is to reserve crane time for this lift. Needless to say, this activity must take place prior to the curtain wall enclosure of the building.

The above scenario is a case study of an actual event. All the materials were distributed to the various levels within six (6) hours. The crew consisted of four (4) electricians, one (1) rigger, and one (1) crane operator. The actual lift consisted of forty-two (42) separate picks.

This is only one example of how multi-level construction offers numerous opportunities to the forward thinking estimator or contractor.

Prefabrication

It has long been accepted that prefabrication is a much more efficient use of manpower. Multi-level construction offers even more opportunities to the electrical contractor.

In the above scenario the contractor had separate panels and transformers for each level in the building. A case study of a fifteen (15) story building reveals an even more efficient method of power equipment and its distribution.

Rather than order separate pieces of power equipment, the contractor for the fifteen story building ordered the manufacturer to fabricate thirty (30) enclosures. Each enclosure or power center contained two motor starters, one 480 volt panel, one 30 kva transformer, and one 208 volt panel. This prefabrication saved the contractor the labor of mounting 150 pieces of equipment.

Additionally, this power center required less wall space than the separate pieces would have required. This saving resulted in reduced square footage for the electrical room and added leasable square footage to the building.

EFFECTS OF CREW SIZE

Calculating Crew Size

The crew size may be calculated in a number of ways. The size of the crew will determine the average labor rate and supervision requirements for a project. There are many ways to calculate the crew size. Whichever way you choose to calculate crew size, remember this is just an estimate and the actual crew size may vary under actual working conditions.

Straight Line Method

The straight line method is perhaps the most often used and easiest method of calculating crew size. While not the most accurate, this method works well for crew sizes of less than five (5) men.

- Step 1. Estimate the total man-hours (MH) required for a project. For the purpose of this example let us assume a project requires 3,000 man-hours.
- Step 2. Next, you must determine the number of working days (WD) available within the project schedule. This is calculated by determining the project duration in calendar days (CD) divided by seven (7) and multiplies by the number of working days per week (WDPW). For the purpose of this example let us assume there are 90 calendar days available within the project schedule, and the crew will be working five (5) days per week.

Example: $CD / 7 \times WDPW = WD$
 $90 / 7 \times 5 = 64 \text{ WD}$

- Step 3. Next, divide the total man-hours (MH) by the number of work hours per day (WHPD) divided by the workdays (WD).

Example: $MH / WHPD / WD = \text{AVERAGE CREW SIZE}$
 $3,000 / 8 / 64 = 5.85 \text{ AVERAGE CREW SIZE}$

Using the straight-line method for the above example the average crew size for this project would be six (6) men.

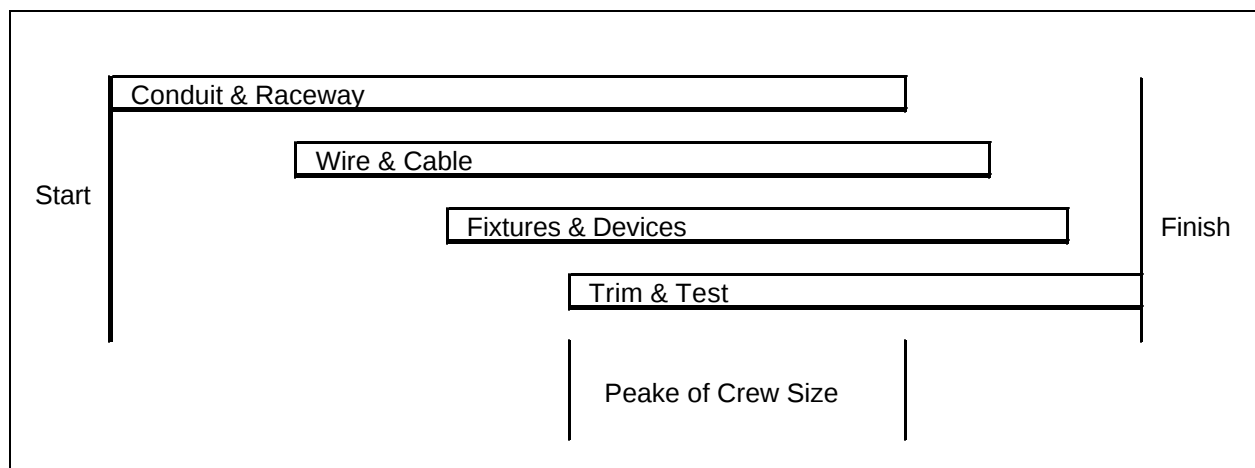
EFFECTS OF CREW SIZE (continued)

Curve Method

The curve method is a more accurate method of determining the peak crew size and non-working supervision cost. In case study after case study it has been determined that only 15% of the total labor is expended during the first 1/3rd of a project schedule.

A typical project can be broken into various activities. These include but are not limited to Conduit & Raceways, Wire & Cable, Fixtures & Devices, and Trim & Test. At the start of a project the installation of conduit & raceways may be the only activity taking place. Then, as the project progresses various activities are taking place at the same time. One crew may be installing conduit while a second crew is pulling wire & cable. As work progresses other activities are added, and the crew sizes expand even further.

Overlap of Activities



Non-Working Supervision

As the crew size becomes larger, supervision costs increase. Once the crew size reaches seven (7) men or larger, the need for additional supervision is unavoidable. Many union contractors have agreements which specify when and how many Non-Working Foremen must be used.

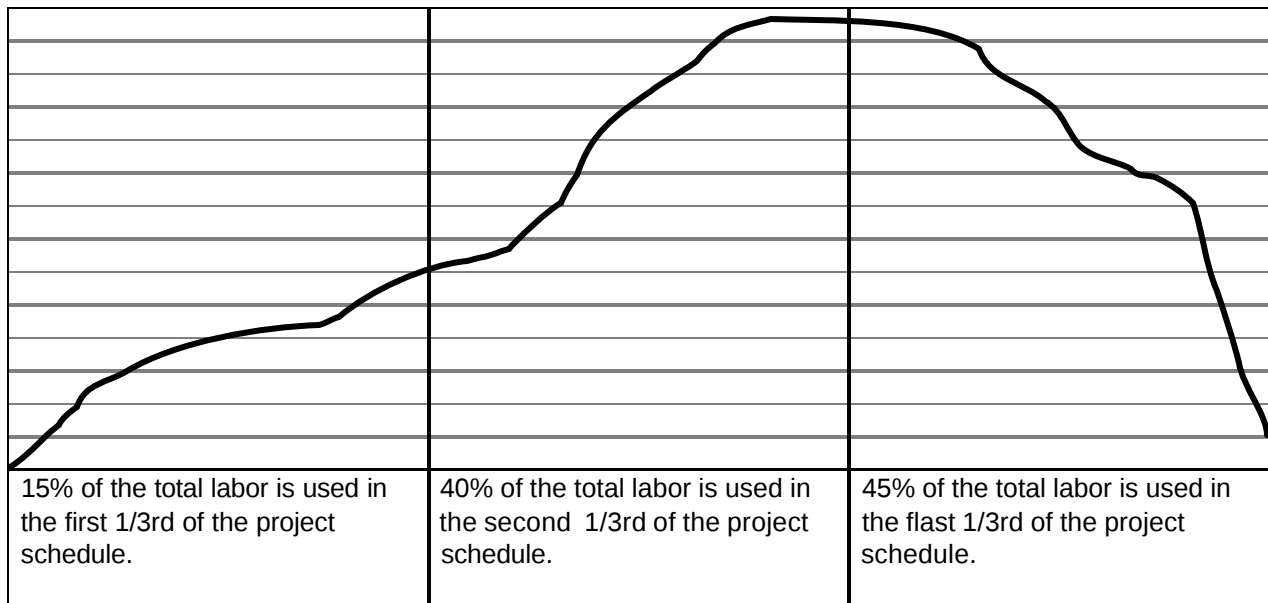
Open shop or nonunion contractors may feel they have an advantage over their union counterparts, because they do not have such rigid requirements for nonworking personnel. This, however, may turn out to be a “can of worms”.

To properly supervise seven (7) or more men, a foreman must put down his tools and concentrate all his efforts on the management task. If proper supervision is not given to the work force, you are asking for cost overruns.

EFFECTS OF CREW SIZE (continued)

As the various work activities begin to overlap the manpower requirements become larger and larger. Only after the project is substantially complete do the manpower requirements taper off.

Manpower Curve



Maximum Crew Size (Curve Method)

To determine the maximum crew size (MCS) based on the curve method, take the average crew size (ACS) from the straight line method and multiply by 1.4.

Example: $ACS \times 1.4 = MCS$
 $8.85 \times 1.4 = 8.19$

Non-Working Supervision

If the maximum crew size is six (6) men or greater, make an allowance for nonworking supervision. The general rule is: for every six (6) working electricians the project will require one (1) nonworking supervisor.

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