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TECHNICAL REPORT NO. 284

THE PRONE PROTECTED POSTURE

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GARY L. HOLLOWAY

AUGUST 1980

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The prone protected posture is defined as a prone man taking cover in, under, or beside some piece of equipment, a man-made feature, or a natural feature. The vulnerability of a prone protected man is less than that of a prone man but greater than that of a man crouching in a foxhole. The prone protected man is described by nine different functions representative of mechanized infantry, artillery, supply, and transportation personnel. Eight of these functions are combined by a weighting scheme based on the Soviet Army organization into one function. The resultant function is used to calculate some representative lethal areas.		

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CONTENTS

	<u>PAGE</u>
1. INTRODUCTION.	5
2. METHODOLOGY	5
3. RESULTS	23
4. CONCLUSIONS	35
5. RECOMMENDATIONS	36
REFERENCES.	37
APPENDIX A: PRESENTED AREAS OF BODY PART AREAS FOR THE PRONE PROTECTED MAN	39
APPENDIX B: COM-GEOM BACKGROUND AND TARGET DESCRIPTIONS.	59
DISTRIBUTION LIST	121

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Distribution/	
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LIST OF FIGURES

<u>Figure</u>		<u>PAGE</u>
1	Prone Man Between the Trails of a Towed Howitzer Top-View.	6
2	Prone Man Between the Trails of a Towed Howitzer Bottom and Side Views	7
3	Prone Man Beside a Berm.	8
4	Prone Man Beside an Armored Vehicle - Side and Front Views.	9
5	Prone Man Beside a Log - Side and End Views. . . .	10
6	Prone Man Under a 2-1/2 Ton Truck - Side and Front View	11
7	Prone Man Beside Two Layers of 55-Gallon Drums Top and End Views.	12
8	Prone Man in a Ditch - End and Top Views	13
9	Prone Man Under a Culvert Half - End View.	14
10	Presented Areas for Prone Protected Personnel. . .	17
11	Presented Area Versus Elevation for the Candidate Weighting Functions.	22
12	Presented Area Versus Elevation No Terrain Shielding.	25
13	Expected Fractional Casualties ($\bar{F}_C$) Versus Number of Volleys for a Towed Artillery Unit in Prepared and Unprepared Positions	34

THE PRONE PROTECTED POSTURE

1. INTRODUCTION

During the last two decades, a small but continuing effort has been directed toward the characterization and quantification of the postures assumed by troops when receiving fire. To date, three postures have been defined and quantified: standing, prone, and crouching in a foxhole. In 1976, AMSAA participated in the Troop Reaction and Posture Sequence (TRAPS) Test (Reference 1) to investigate the time sequence of postures that are assumed by troops under attack by artillery. Analysis of the test results (Reference 2) revealed that

"A significant portion of troops assume a prone protected posture which makes their vulnerability between that of a prone man and a man crouching in a foxhole."

Table 1 presents the generalized posture sequence from Reference 2. It is important to note that, in unprepared positions, most of the men are in the prone protected posture after 2 seconds. One of the recommendations of Reference 2 was that prone protected postures be defined, the presented areas quantified, and a weighted presented area function be developed for use in lethality computations. The purpose of this report is to document the results of a study designed to carry out this recommendation. It should be noted that the data presented in this report is in English units, rather than SI units, because the computer code that would utilize these data are written for English units only.

2. METHODOLOGY

The first step required in this study was to characterize the prone protected posture. Basically, a man in the prone posture differs from a man in the prone protected posture in that a man assuming the prone posture will fall to the ground at random and is shielded only by the natural terrain roughness, while a man assuming the prone protected posture will make a conscious effort to maximize his protection by seeking out equipment or natural terrain features that minimize his exposure. During the TRAPS test, a number of photographs were taken of troops in various prone protected positions. These photographs, along with suggestions from others and some common sense, resulted in nine positions that were felt to be representative of the prone protected posture. These positions were modeled by use of combinatorial geometry techniques and the presented area of the prone protected man as a function of azimuth and elevation angle was calculated. Drawings of these positions are presented in Figures 1 through 9. Note that the man is lying face down with his arms behind his head and his legs together.

¹ Troop Reaction and Posture Sequence; USACDEC Experiment FC032, June 1976, US Army Combat Developments Experimentation Command, FT Ord, CA 93941.

² King, B.F.; Analysis of the Troop Reaction and Posture Sequence (TRAPS) Field Test (U); Technical Report No. 235, June 1978, US Army Materiel Systems Analysis Activity, Aberdeen Proving Ground, MD 21005, CONFIDENTIAL report.

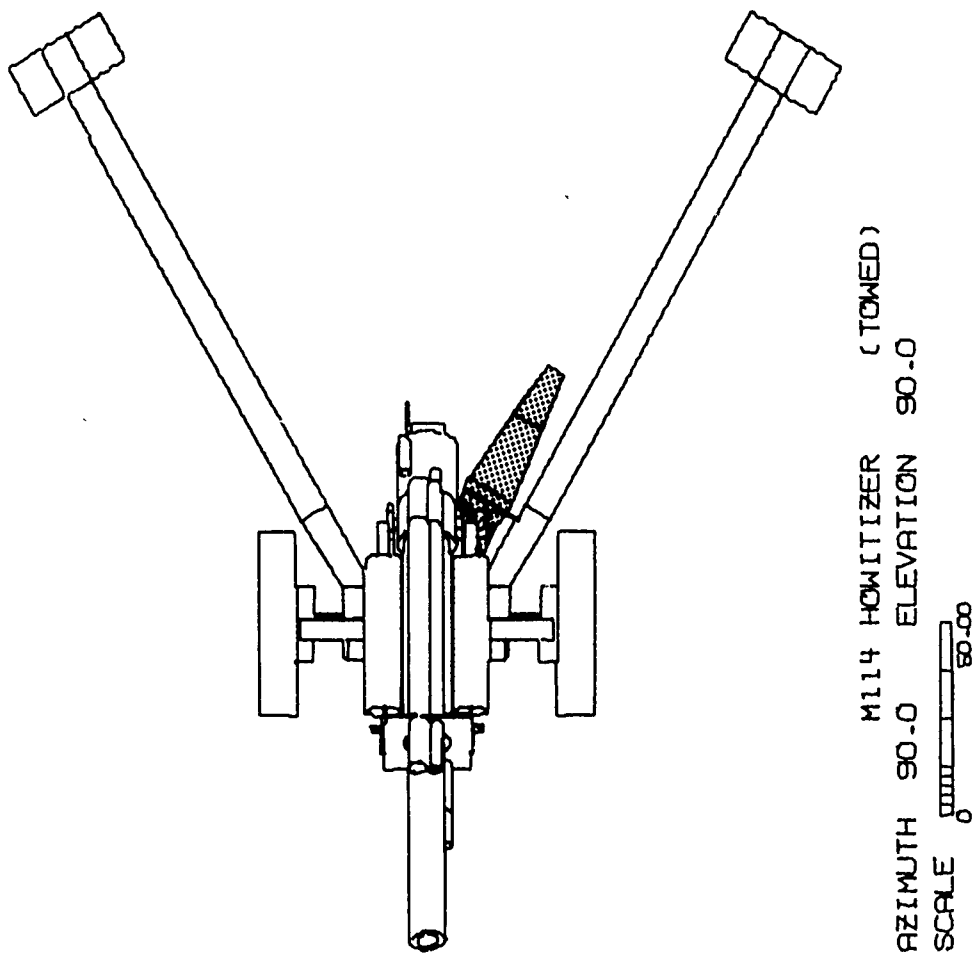
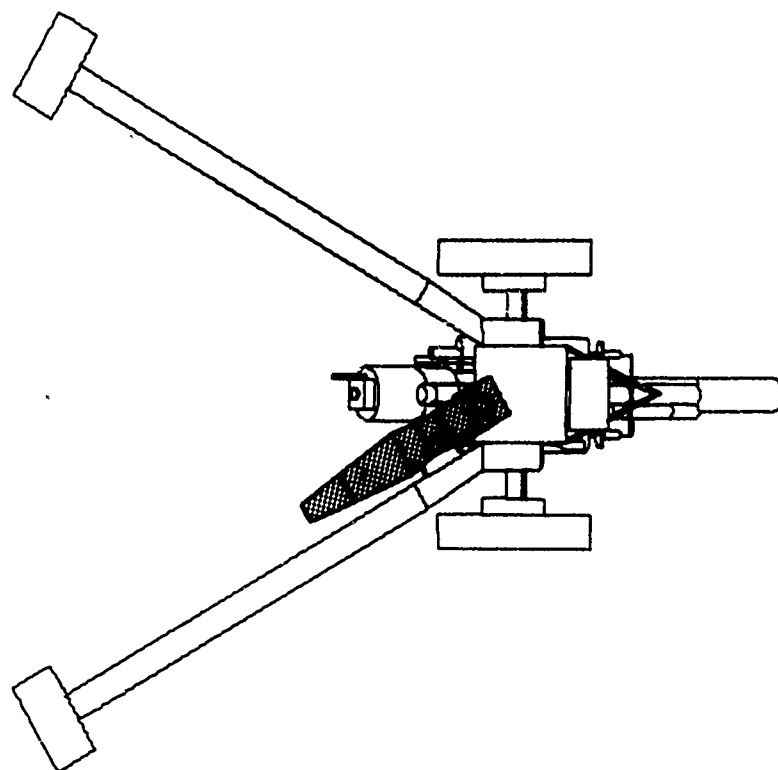
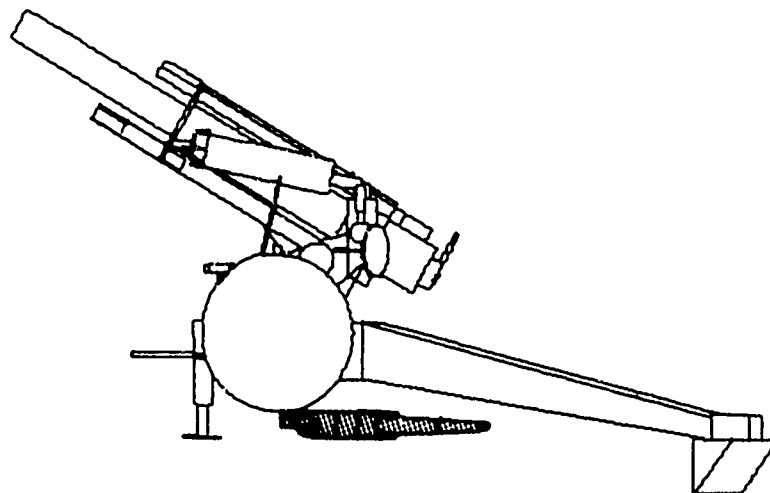


FIGURE 1 PRONE MAN BETWEEN THE TRAILS OF A TOWED VEHICLE - TOP-VIEW



M114 HOWITZER (TOWED)
 AZIMUTH -90.0 ELEVATION -90.0
 SCALE 0 50.00



M114 HOWITZER (TOWED)
 AZIMUTH 90.0 ELEVATION 0.0
 SCALE 0 50.00

FIGURE 2 PRONE MAN BETWEEN THE TRAILS OF A TOWED HOWITZER - BOTTOM AND SIDE VIEWS

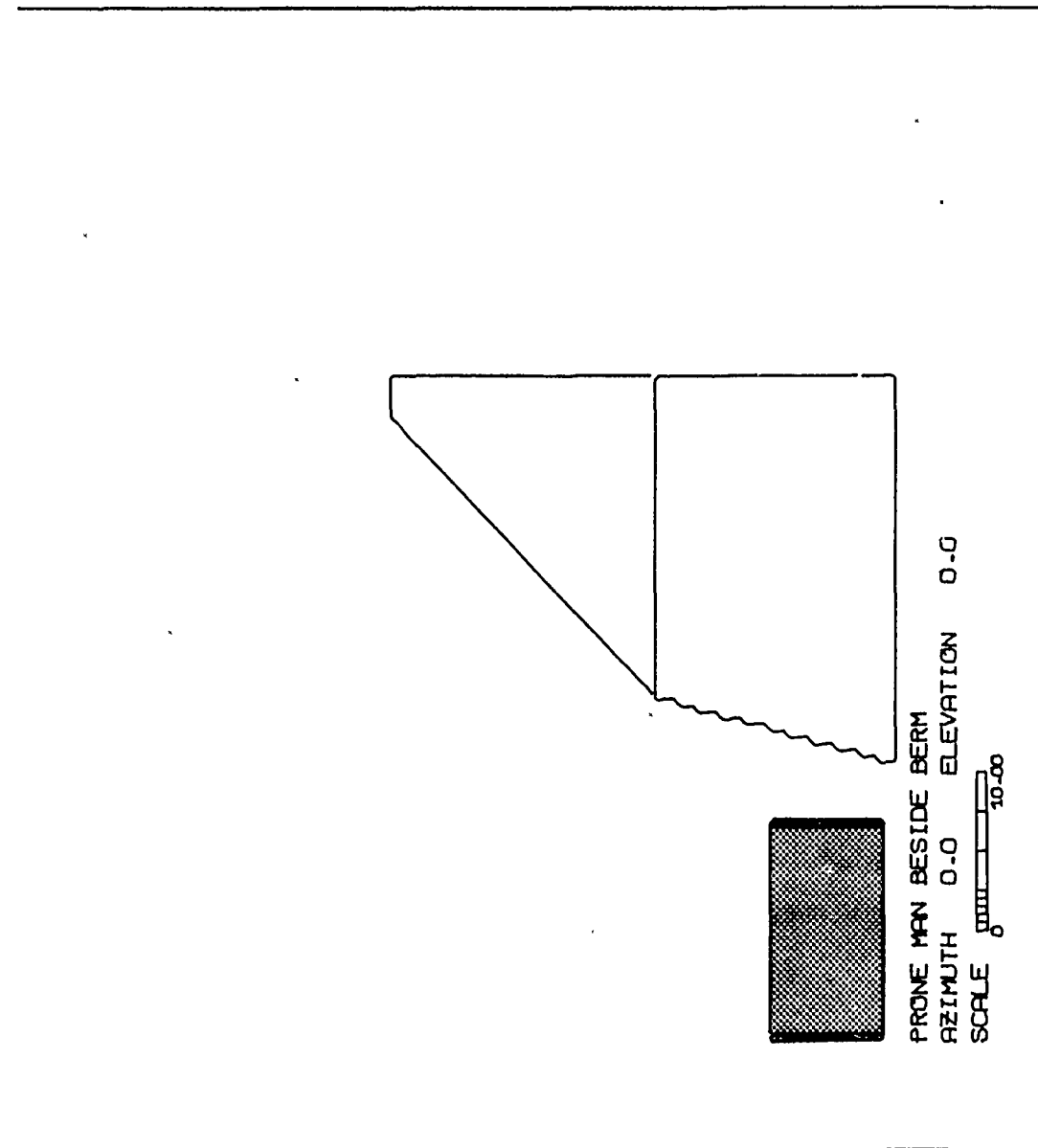


FIGURE 3 PRONE MAN BESIDE A BERM

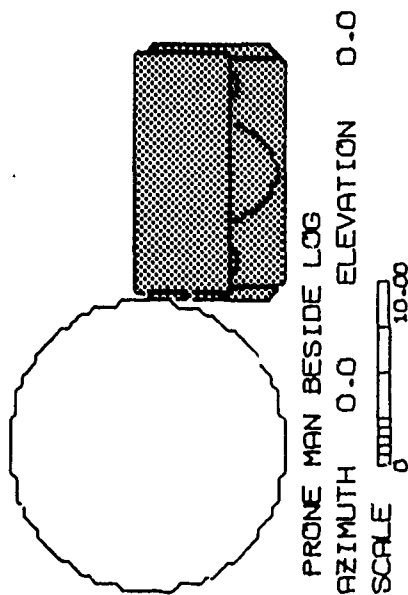
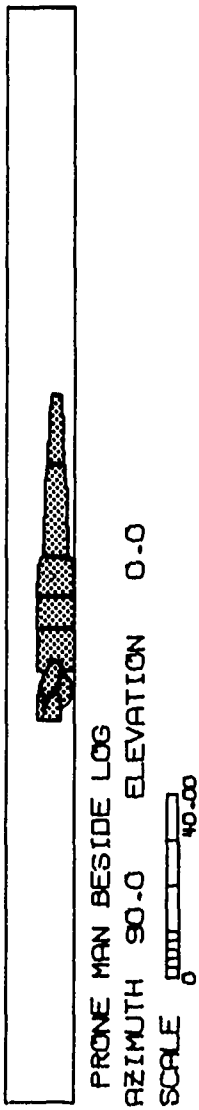
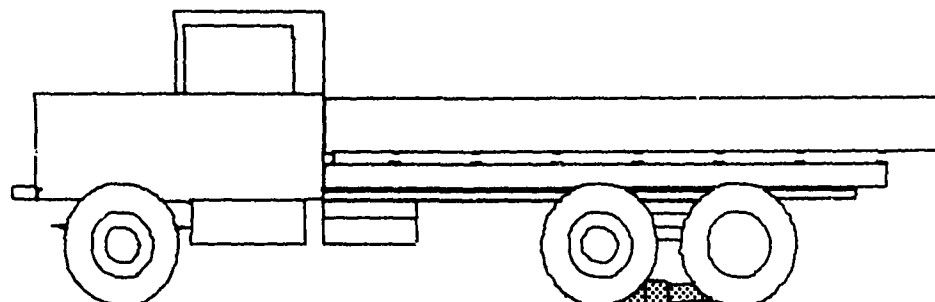
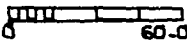


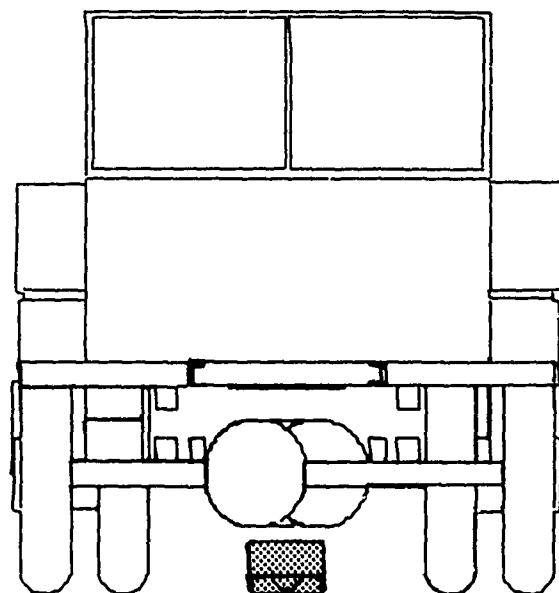
FIGURE 5 PRONE MAN BESIDE A LOG - SIDE AND END VIEWS



PRONE MAN UNDER M36 2-1/2 TON TRUCK

AZIMUTH 90.0 ELEVATION 0.0

SCALE  60.00



PRONE MAN UNDER M36 2-1/2 TON TRUCK

AZIMUTH 0.0 ELEVATION 0.0

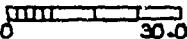
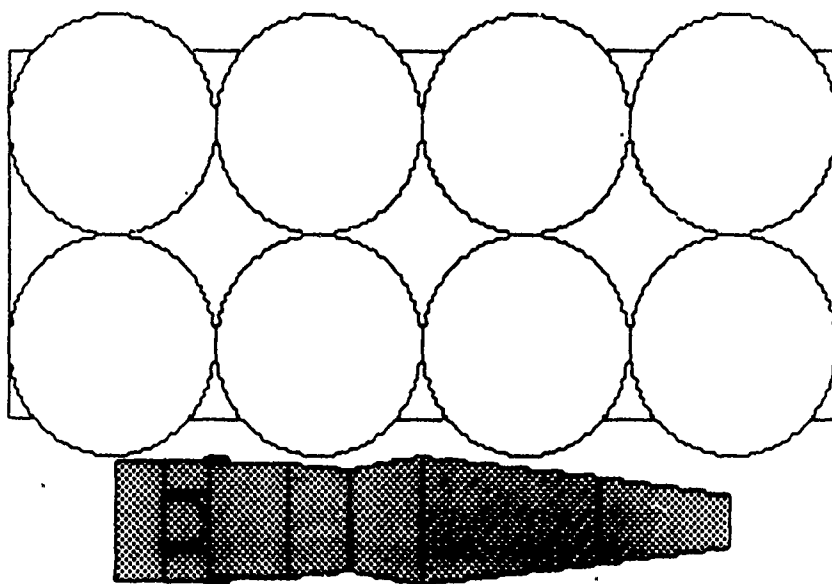
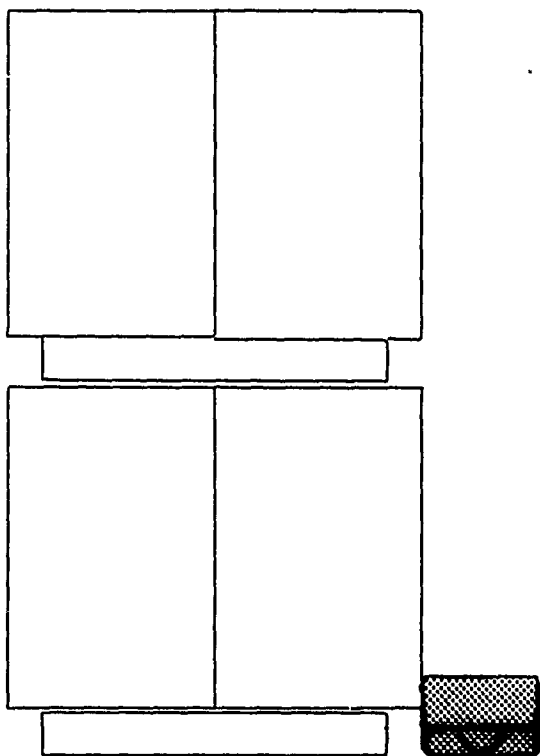
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FIGURE 6 PRONE MAN UNDER A 2 1/2-TON TRUCK - SIDE AND FRONT VIEW

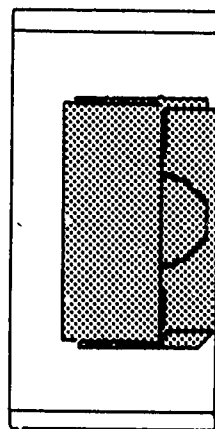


PRONE MAN BESIDE TWO LAYERS OF DRUMS
 AZIMUTH 90.0 ELEVATION 90.0
 SCALE 0 20.00

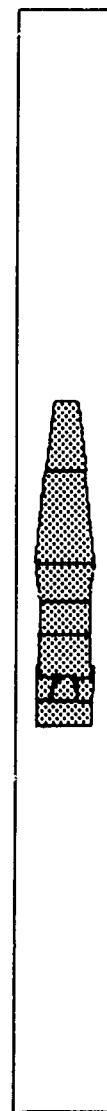


PRONE MAN BESIDE TWO LAYERS OF DRUMS
 AZIMUTH 0.0 ELEVATION 0.0
 SCALE 0 20.00

FIGURE 7 PRONE MAN BESIDE TWO LAYERS OF 55-GALLON DRUMS - TOP AND END VIEWS



PRONE MAN IN DITCH
 AZIMUTH 0.0 ELEVATION 0.0
 SCALE 0 10.00



PRONE MAN IN DITCH
 AZIMUTH 90.0 ELEVATION 90.0
 SCALE 0 40.00

FIGURE 8 PRONE MAN IN A DITCH - END AND TOP VIEWS

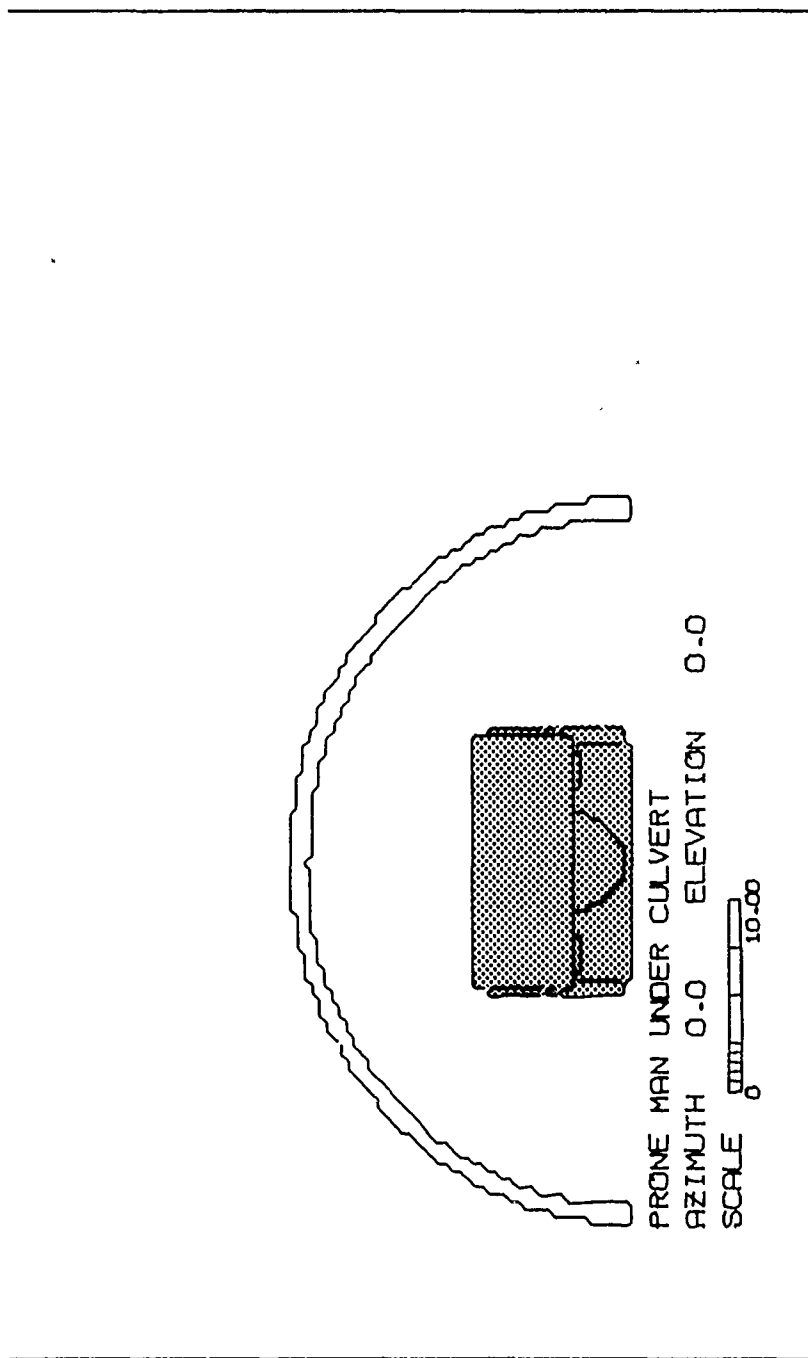


FIGURE 9 PRONE MAN UNDER A CULVERT HALF - END VIEWS

TABLE 1 CONDENSED GENERALIZED POSTURE SEQUENCES (IN PERCENT)

<u>Unprepared Positions</u>				
	<u>Standing</u>	<u>Prone</u>	<u>Prone Protected</u>	
<2 Sec	45	40	15	
2-4 Sec	--	20	80	
>4 Sec	--	5	95	

<u>Prepared Positions</u>				
	<u>Standing</u>	<u>Prone</u>	<u>Prone Protected</u>	<u>Foxhole</u>
<2 Sec	45	25	15	15
2-4 Sec	--	10	35	55
4-10 Sec	--	--	10	90
≥10 Sec	--	--	5	95

The presented areas of the prone man, by body parts, in each of the nine positions were calculated by use of the GIFT combinatorial geometry code (Reference 3). The results of these calculations are presented in Appendix A. Table 2 and Figure 10, for each of these positions, contain the presented areas as a function of elevation summed over body part and averaged over azimuth.

In order for this new posture to be used with the current posture sequencing routines, these nine positions must be combined in some way to produce one Presented-Area-Versus-Elevation curve. Four methods of doing this were considered:

1. A unit-type average.
2. A weighted average based on some TO&E.
3. A weighted averaged based on some acquired-target list.
4. A simple average.

If methods 1 through 3 are to be used, the nine positions must be assigned to different types of units; e.g., a man prone between the trails of a howitzer would be seen only in an artillery unit while a man prone in a ditch would probably be seen in all types of units. Four types of units were selected as representative of

³Bain, L.L. and M.J. Reisinger; GIFT Code User Manual; Volume I, Introduction and Input Requirements; BRL R-1802, July 1975, AD B0060037L, US Army Ballistics Research Laboratory, Aberdeen Proving Ground, MD 21005.

TABLE 2 PRESENTED AREAS OF PRONE PROTECTED POSITIONS IN SQUARE FEET

Elev. Deg	In Open Area	Beside Berm Area	Under Truck Area	Beside Log Area	In Ditch Area	Under Culvert Area	Beside 1 Drum Area	Beside 2 Drums Area	Beside Howitzer Area	Beside ICV Area
0.0	2.22461	0.00000	1.01367	1.21289	0.00000	.50391	1.24414	1.24414	2.14258	1.41992
.1	2.2500	0.00000	1.03711	1.22852	0.00000	.52344	1.26172	1.26172	2.15820	1.44531
.2	2.26172	0.00000	1.02734	1.23828	0.00000	.51367	1.26953	1.26953	2.18164	1.46484
.3	2.23633	0.00000	1.01367	1.21094	0.00000	.50781	1.23828	1.23828	2.12500	1.42383
.4	2.27539	0.00000	1.02148	1.27344	0.00000	.53125	1.29883	1.29883	2.19140	1.47461
.5	2.23633	0.00000	.99609	1.24223	0.00000	.50391	1.26562	1.26562	2.14843	1.43750
.6	2.26562	0.00000	.98047	1.25195	0.00000	.50000	1.27929	1.27929	2.17187	1.43945
.7	2.26367	0.00000	1.01953	1.24023	0.00000	.52344	1.27734	1.27734	2.13672	1.42383
.8	2.25195	0.00000	.97265	1.23047	0.00000	.50976	1.26367	1.26367	2.14844	1.42187
.9	2.25390	0.00000	.98633	1.23633	0.00000	.50976	1.26953	1.26953	2.12695	1.41406
1.0	2.27539	0.00000	.97851	1.23437	0.00000	.50781	1.26172	1.26172	2.15429	1.41797
2.0	2.29687	0.00000	.92969	1.26562	.02734	.52539	1.30078	1.30078	2.11133	1.40234
3.0	2.36328	0.00000	.85742	1.30078	.08984	.53711	1.32812	1.32812	2.11328	1.42969
4.0	2.37890	.05078	.80664	1.30664	.14844	.53125	1.33594	1.33594	2.04883	1.41015
5.0	2.42383	.44922	.76367	1.34375	.21094	.55078	1.38086	1.38086	2.04101	1.42773
6.0	2.47656	.79102	.76758	1.38672	.25195	.59179	1.42383	1.42383	2.01758	1.45312
7.0	2.54687	1.08008	.75781	1.41406	.28516	.60351	1.45703	1.45703	2.00586	1.44726
8.0	2.57226	1.13477	.73047	1.43164	.33398	.59179	1.46679	1.46679	1.96094	1.44140
9.0	2.65820	1.16992	.71484	1.48633	.37500	.60547	1.52734	1.52734	1.96679	1.49023
10.0	2.70312	1.17383	.66601	1.53906	.42969	.61719	1.57812	1.57812	1.93359	1.53711
15.0	3.05859	1.55859	.66016	1.75781	.83984	.60351	1.78906	1.78906	1.90429	1.74414
20.0	3.41406	1.93750	.66211	2.10547	1.30859	.56445	2.02929	2.02929	1.90820	1.99023
25.0	3.78515	2.22461	.67383	2.53711	1.89453	.55273	2.30078	2.30078	1.97851	2.25195
30.0	4.08789	2.60937	.57226	2.94140	2.49609	.50781	2.50391	2.50391	1.94531	2.45703
35.0	4.40039	3.24414	.23047	3.40234	3.11914	.48047	2.70117	2.70117	1.99609	2.64658
40.0	4.62109	3.89453	.07226	3.80078	3.64258	.44531	.283789	2.83789	2.03125	2.78320
45.0	4.93750	4.54687	.03320	4.23828	4.16601	.42773	3.06641	3.06641	2.14062	3.00977
50.0	5.13867	4.91797	.00195	4.57812	4.62891	.36719	3.17969	3.17969	2.18555	3.12500
55.0	5.31250	5.22656	0.00000	4.86719	5.01758	.34961	3.32617	3.29101	2.16211	3.24023
60.0	5.46680	5.41992	0.00000	5.12890	5.33594	.27930	3.56250	3.40820	2.13086	3.36523
65.0	5.56445	5.54687	0.00000	5.31250	5.51758	.23828	3.91797	3.45703	2.24609	3.46484
70.0	5.66406	5.65625	0.00000	5.50195	5.68750	.18555	4.39648	3.55664	2.50391	3.80664
75.0	5.67968	5.67187	0.00000	5.56836	5.65820	.13086	4.86719	3.68554	2.81250	4.27539
80.0	5.70117	5.68945	0.00000	5.67383	5.64844	.09375	5.31641	4.36719	3.12695	4.83008
85.0	5.62890	5.61914	0.00000	5.62500	5.60351	.03320	5.53125	5.19531	3.25195	5.30859
90.0	5.55078	5.54492	0.00000	5.54883	5.56250	0.00000	5.55078	5.55078	3.26953	5.54883

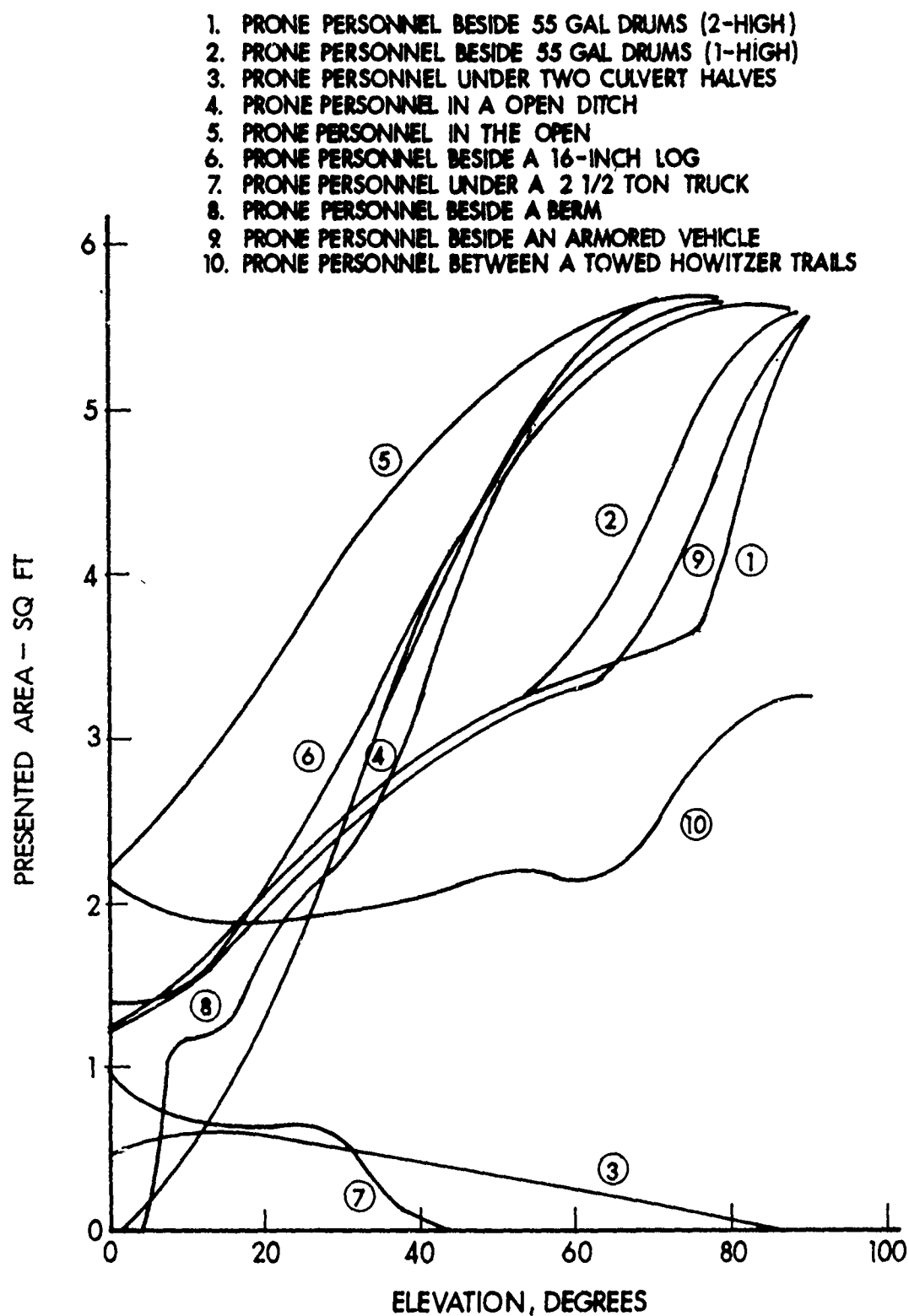


Figure 10. Presented Areas for Prone Protected Personnel.

typical targets utilizing the prone protected posture: supply, mechanized infantry, artillery, and transportation. Assignment of the nine positions to these unit types is presented in Table 3. Also included in this table is an evaluation of whether each position would apply to US or Soviet troops or to both.

In order to determine a weighting function based on a target scenario, an artillery acquired-target list from the SCORES Sequence 2A/86 scenario (Reference 4) was analyzed. The targets abstracted from this list to which the prone protected posture would be appropriate were:

<u>Type</u>	<u>Number</u>	<u>Fraction</u>
Artillery	2949	.57
Mortar	538	.10
Antitank	330	.06
Mech. Infantry	1382	.27
	<u>5199</u>	

Unfortunately, there were no targets that could be allocated to the supply or transportation categories.

The TO&E of the Soviet Army (Reference 5) was analyzed to determine the number of men in the four unit types listed above. Only those units that could be expected to appear as artillery targets were included in the unit type totals. The results of this count are shown in detail in Table 4 and are summarized in the following tabulations:

<u>Type</u>	<u>Number</u>	<u>Fraction</u>
Artillery	1893	.20
Mech. Inf.	4821	.52
Supply	850	.09
Transportation	1746	.19
	<u>9310</u>	

Comparison of the first three methods of combining the various prone protected positions results in the following:

	<u>Supply</u>	<u>Mech Inf</u>	<u>Artillery</u>	<u>Trans</u>
Unit Type Average	.25	.25	.25	.25
Scenario Weighting	0	.43	.57	0
TO&E Weighting	.09	.52	.20	.19

⁴ CACDA Manual War Gaming Report, Corps Defense/Delay (U) Standard Scenario for Combat Developments (U); Europe I, Sequence 2A, ACN 21972, November 1975, US Army Combined Arms Center, FT Leavenworth, KS, SECRET NOFORN report.

⁵ Organization and Equipment of the Soviet Army; HB 550-2, July 1978, Combined Arms Combat Developments Activity, FT Leavenworth, KS.

TABLE 3 ASSIGNMENT OF POSITIONS TO UNIT TYPE

<u>Position</u>	<u>US*</u>	<u>Soviet*</u>	<u>Org Type*</u>
1. 2 Drums	Y	Y	S
2. 1 Drum	Y	Y	S
3. Culvert Half	Y	N	I
4. Open Ditch	Y	Y	A,I,S,T
5. Open	N/A	N/A	N/A
6. Along Log	Y	Y	A,I
7. Under Truck	Y	Y	S,T
8. Along Berm	Y	Y	A,I
9. Beside ICV	Y	Y	I
10. Between Howitzer Trails	Y	Y	A

*S = Supply, I = Mech Inf, A = Artillery, T = Transportation,
Y = Yes, N = No

These three weighting schemes, plus the fourth, were used to calculate weighting factors for the eight Soviet positions shown in Table 3. The fourth scheme was to ignore the unit type assignments in Table 3 and to apply an equal weight to each position. The results are as follows:

Position	Unit Type	T0&E	Weight Scenario	Unit	Avg
Two-Drums	S	.025	0	.071	.125
One-Drum	S	.025	0	.071	.125
Ditch	A,I,S,T	.276	.25	.286	.125
Log	A,I	.199	.25	.143	.125
Truck	S,T	.077	0	.143	.125
Berm	A,I	.199	.25	.143	.125
ICV	I	.144	.11	.071	.125
Howitzer	A	.055	.14	.071	.125

The presented area functions that result from the use of these candidate weighting schemes are shown in Figure 11. It is important to note that most of the contribution to lethal areas comes from that part of the function below 30 degrees and that, in this region, the four functions are close together.

For purposes of the remaining analysis, the T0&E weighting scheme was selected as having the most widespread validity for both surface-to-surface and air-to-surface weapons.

TABLE 4. DISTRIBUTION OF SOVIET PERSONNEL IN SELECTED CATEGORIES BASED ON
TG&E in HB 550-2

	<u>S</u>	<u>I</u>	<u>A</u>	<u>T</u>	
Tank Div					
Motor Transport Bn				217	
Arty Reg			246		
Rkt Lnchr Bn				198	
Tank Reg				162	
Motor Transport					
Supply & Service	36				
Tank Bn					
Supply & Maint	306				
Motor Rifle Reg					
Supply Plt	12				
Motor Transport				54	
Howitzer Bn			270		
Antitank Btry		57			
Motorized Rifle Bn (3)		<u>891</u>			
	<u>354</u>	<u>948</u>	<u>516</u>	<u>631</u>	= 2449 9763 Total
Motorized Rifle Div					
Ind Tank Bn					
Supply & Maint	34				
Tank Reg					
Supply & Service	12				
Motor Transport				54	
Arty Reg			246		
Rkt Lnchr Bn				198	
Antitank Bn		51			
Motor Transport Bn				217	
Motor Rifle Reg					
Supply & Maint (Tk Bn)	306				
Supply & Service	36				
Motor Transport				162	
Howitzer Bn			810		
Antitank Btry		171			
Motor Rifle Bn					
Mortar Btry		432			
Antitank Plt		162			
Supply & Maint	108				
Motor Rifle Co		<u>2673</u>			
	<u>496</u>	<u>3489</u>	<u>1056</u>	<u>631</u>	= 5672 12825 Total

TABLE 4 - continued

	<u>S</u>	<u>I</u>	<u>A</u>	<u>T</u>
Airborne Div				
Howitzer Bn			321	
MRL Bn				267
Transport Bn				217
Airborne Reg				
Mortar Btry		49		
Antitank Btry		50		
Airborne Bn				
Mortar Btry		20		
Antitank Btry		25		
Parachute Co (3)		<u>240</u>		
		384	321	484 = 1189
Grand Totals	850	4821	1893	1746 = 9310
	.09	.52	.20	.19

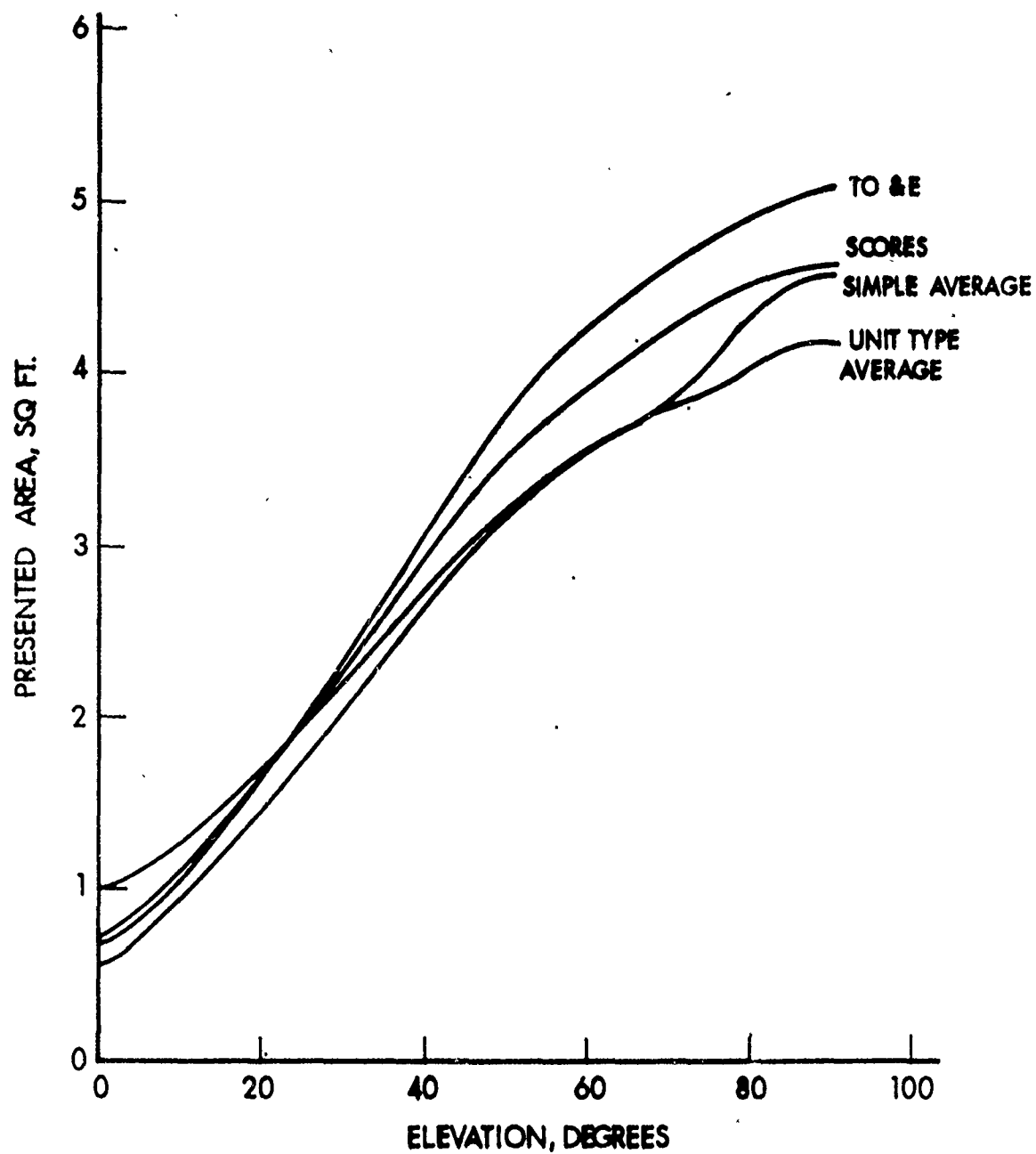


Figure 11. Presented Area vs Elevation for the Candidate Weighting Functions.

3. RESULTS

The data for each prone protected position function was multiplied by the appropriate weighting factor and the whole summed by elevation to produce one composite prone protected posture function. This final function is tabulated in Table 5 and presented graphically in Figure 12. The functions for standing, prone, and crouching in a foxhole are also shown for comparison.

All of the above data were generated with the assumption that this prone man and his protections were placed on a flat plane. Such is not the case in the real world. The terrain of the battlefield contains bumps, holes, and undulations that absorb fragments and result in a reduction in the presented area of target personnel. Reference 6 contains a concise discussion of the methodology used to generate the shielding functions that accomplish this reduction in presented area. The fractional reductions in the presented area for the ranges and heights of burst used in the JMEM computer program for calculating munitions effectiveness against personnel (Reference 7) are presented in Table 6 while the corresponding ranges for these data are shown in Table 7. The presented areas for the prone protected posture for these same ranges and heights of burst are presented in Table 8.

The ultimate test of a function such as this one is whether lethal areas calculated with it are consistent with lethal areas calculated for the other three postures. However, a question can be raised as to (1) whether the weighting factors should be applied to each of the prone protected position functions and a lethal area calculated from the composite function or (2) should lethal areas be calculated for each prone protected position function and then the weighting factors applied to these lethal areas. In order to answer this question and determine the consistency of the resulting lethal areas, a series of lethal area calculations was done for each individual function and for the composite function by use of the program described in Reference 8. The results of these calculations, which are presented in Table 9, show that there is no significant difference between the two methods. It has been suggested that Posture 7, Prone Personnel Under a 2-1/2 Ton Truck (see Figure 10), should not be included in the composite prone protected function since it differs radically from the other postures. Lethal areas were calculated with a composite function that did not include this posture and compared to the recommended function. There was no significant difference between the two sets of lethal areas.

⁶Target Vulnerability (U); FM 101-50-19, 22 November 1976 with changes, Joint Technical Coordinating Group for Munitions Effectiveness, SECRET manual.

⁷JMEM Computer Program for General Full Spray Personnel Mean Area of Effectiveness Computations(U); Volumes 1 & 2, 61 JTCG/ME 70-6-1 and 61 JTCG/ME 70-6-2, 20 December 1976, Joint Technical Coordinating Group for Munitions Effectiveness, CONFIDENTIAL manual.

⁸Schmoke, M.A.; A Combinatorial Geometry Description of the Improved TOW Vehicle, XM901; BRL Technical Report ARBRL-TR-2133, January 1979, US Army Ballistics Research Laboratory, Aberdeen Proving Ground, MD.

TABLE 5 PRESENTED AREA (SQ FT) VERSUS ELEVATION FOR THE PRONE PROTECTED POSTURE

<u>Elevation</u>	<u>Presented Area</u>
0.0	.70130
.1	.71157
.2	.71722
.3	.70022
.4	.72713
.5	.70927
.6	.71264
.7	.70906
.8	.70320
.9	.70341
1.0	.70409
2.0	.71139
3.0	.73536
4.0	.75284
5.0	.85728
6.0	.94954
7.0	1.02074
8.0	1.04355
9.0	1.08175
10.0	1.11166
15.0	1.38204
20.0	1.70237
25.0	2.06159
30.0	2.41308
35.0	2.81480
40.0	3.18256
45.0	3.58912
50.0	3.87929
55.0	4.12610
60.0	4.32874
65.0	4.47087
70.0	4.65428
75.0	4.76146
80.0	4.90802
85.0	4.97345
90.0	4.97598

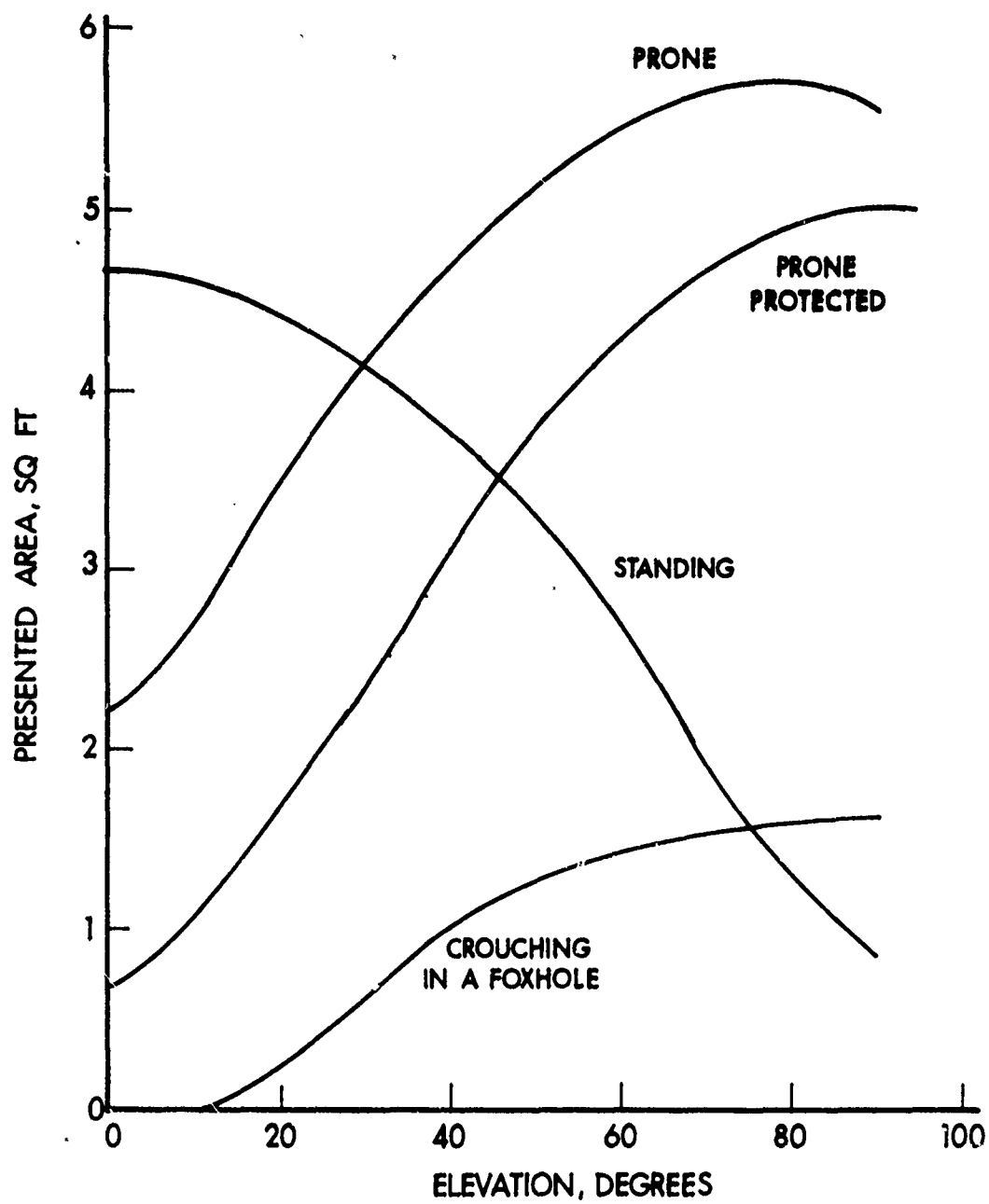


Figure 12. Presented Area vs Elevation (No Terrain Shielding)

TABLE 6 FRACTIONAL REDUCTION IN PRESENTED AREA FOR THE PRONE PROTECTED POSTURE DUE TO TERRAIN SHIELDING AT VARIOUS RANGES* AND HEIGHTS OF BURST
NOTE: SEE TABLE 6 FOR THE APPROPRIATE RANGES.

φ	Height of Burst, Ft																	
	1/48	1/24	1/16	1/8	2.5	5	10	15	20	25	30	40	50	60	70	80	90	100
.187	.116	.071	.053	.005	.009	.008	.009	.004	.004	.004	.002	.002	.002	.002	.002	.002	.002	.002
.187	.118	.071	.053	.002	.013	.013	.012	.006	.007	.009	.002	.002	.002	.002	.002	.002	.002	.002
.369	.263	.183	.121	.068	.000	.005	.013	.011	.012	.014	.002	.002	.004	.004	.004	.004	.004	.002
.502	.389	.298	.212	.159	0.000	0.000	.013	.011	.012	.013	.008	.007	.002	.004	.006	.006	.004	.002
.585	.475	.383	.295	.262	0.000	0.000	.003	.010	.011	.012	.008	.008	.004	.006	.008	.007	.005	.004
.643	.545	.452	.363	.263	0.000	0.000	0.000	.006	.013	.011	.008	.010	.010	.008	.011	.007	.002	.002
.685	.594	.509	.428	.366	0.000	.009	0.000	0.000	.014	.003	.006	.014	.009	.008	.008	0.000	.008	.010
.718	.632	.550	.472	.428	0.000	.011	.003	0.000	0.000	0.000	0.000	0.000	.003	.006	.011	.010	.009	.009
.747	.660	.583	.513	.472	.015	.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.006	.009
.772	.693	.624	.554	.472	.062	.084	.004	.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.003
.793	.727	.657	.591	.530	.150	.173	.045	.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
.896	.855	.818	.781	.759	.228	.259	.099	.060	.002	0.000	0.000	.009	0.000	0.000	0.000	0.000	0.000	0.000
.925	.896	.867	.834	.876	.349	.329	.148	.152	.004	.011	0.000	.033	.002	0.000	.001	0.000	0.000	0.000
.942	.921	.900	.876	.909	.457	.482	.250	.223	.019	.056	.037	.093	.011	.006	.021	.050	.066	.011
.954	.942	.925	.909	.921	.560	.593	.353	.364	.152	.103	.071	.152	.037	.022	.037	.037	.065	.000
.967	.950	.934	.917	.925	.693	.673	.514	.476	.206	.200	.152	.218	.060	.071	.050	.066	.024	.011
.967	.954	.942	.921	.929	.753	.717	.634	.566	.262	.287	.227	.270	.118	.119	.094	.105	.047	.037
.971	.959	.946	.930	.934	.823	.782	.706	.634	.360	.360	.298	.324	.164	.156	.128	.134	.078	.052
.975	.963	.954	.938	.938	.855	.815	.746	.682	.436	.433	.360	.368	.220	.190	.164	.160	.102	.085
.979	.975	.967	.954	.938	.876	.835	.762	.718	.506	.491	.417	.414	.252	.227	.191	.184	.129	.107
.983	.975	.971	.959	.938	.884	.847	.786	.750	.574	.554	.476	.456	.295	.262	.221	.206	.152	.128
.983	.979	.975	.963	.938	.892	.872	.811	.795	.682	.654	.578	.495	.331	.286	.248	.206	.169	.152
.988	.979	.975	.967	.946	.896	.876	.827	.823	.722	.694	.634	1.000	.360	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.896	.884	.843	.856	.767	.735	.654	1.000	.514	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.905	.897	.864	1.000	.803	.771	.694	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.917	.905	.893	1.000	.836	.804	.726	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.930	.926	.926	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938	.938	1.000	.856	.836	.755	1.000	1.000	1.000	1.000	1.000	1.000	1.000
.988	.983	.975	.967	.959	.938	.938												

TABLE 7 RANGE VERSUS HEIGHT OF BURST FOR THE PRONE PROTECTED POSTURE

Rng ft	HOB ft	0.0	1/48	1/24	1/16	1/8	2.5	5	10	15	20	25	30	40	50	60	70	80	90	100
		0.0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000

TABLE 8 PRESENTED AREA VERSUS HEIGHT OF BURST FOR THE PRONE PROTECTED POSTURE AT VARIOUS RANGES*.
PRESENTED AREA IN SQUARE FEET - NOTE: SEE TABLE 6 FOR THE APPROPRIATE RANGES

Height of Burst, Ft																				
0	1/48	1/24	1/16	1/8	2.5	5	10	15	20	25	30	40	50	60	70	80	90	100		
.57	.62	.67	.71	1.02	4.54	4.82	4.91	4.95	4.95	4.95	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96		
.57	.62	.67	.71	.74	3.93	4.52	4.80	4.90	4.92	4.93	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96		
.44	.53	.58	.62	.66	3.17	3.92	4.52	4.71	4.80	4.85	4.92	4.95	4.95	4.95	4.95	4.95	4.95	4.96		
.35	.44	.49	.56	.59	2.57	3.17	4.23	4.53	4.72	4.73	4.82	4.88	4.93	4.94	4.94	4.94	4.95	4.96		
.37	.44	.49	.50	.52	2.17	2.57	3.93	4.33	4.67	4.64	4.72	4.82	4.89	4.90	4.90	4.92	4.95	4.95		
.32	.39	.44	.45	.45	1.89	2.17	3.59	4.15	4.52	4.53	4.64	4.73	4.81	4.87	4.87	4.90	4.94	4.95		
.29	.36	.41	.41	.42	1.53	1.59	2.71	2.95	4.36	3.93	4.15	4.36	4.54	4.64	4.70	4.78	4.81	4.81		
.26	.32	.37	.37	.37	1.33	1.31	2.16	2.17	3.59	2.57	2.95	3.59	3.93	4.15	4.29	4.38	4.46	4.54		
.24	.29	.35	.35	.35	1.08	1.05	1.60	1.74	2.71	2.17	2.49	2.71	3.17	3.59	3.82	4.02	4.15	4.25		
.22	.27	.32	.32	.32	.96	.94	1.32	1.32	2.17	1.89	2.17	2.17	2.57	2.95	3.27	3.59	3.78	3.93		
.19	.24	.29	.29	.29	.71	.69	1.05	1.12	1.83	1.68	1.93	1.83	2.34	2.49	2.81	3.08	3.34	3.59		
.17	.21	.25	.25	.25	.58	.55	.92	1.00	1.60	1.53	1.74	1.37	2.17	1.83	2.06	2.27	2.49	2.71		
.15	.19	.23	.23	.23	.47	.49	.79	.78	1.32	1.31	1.49	1.14	1.60	1.49	1.65	1.83	2.00	2.17		
.13	.16	.20	.20	.20	.39	.37	.56	.61	1.16	1.03	1.14	.94	1.31	1.29	1.25	1.37	1.68	1.83		
.10	.13	.16	.16	.16	.31	.29	.47	.47	.78	.92	.99	.78	1.14	1.16	1.14	1.14	1.48	1.60		
.07	.10	.13	.13	.13	.22	.23	.35	.37	.65	.67	.78	.64	1.03	.99	1.05	1.01	1.23	1.31		
.06	.09	.12	.12	.12	.17	.20	.26	.31	.55	.53	.61	.55	.90	.89	.94	.93	1.17	1.14		
.04	.06	.08	.08	.08	.13	.15	.21	.26	.47	.47	.52	.50	.77	.78	.87	.85	.98	1.04		
.03	.05	.07	.07	.07	.10	.13	.18	.22	.41	.41	.47	.46	.65	.69	.77	.78	.92	.96		
.02	.04	.06	.06	.06	.09	.12	.17	.20	.35	.36	.42	.42	.57	.61	.69	.71	.85	.91		
.02	.03	.05	.05	.05	.08	.11	.15	.18	.30	.32	.37	.39	.53	.55	.62	.65	.78	.85		
.01	.02	.03	.03	.03	.08	.10	.14	.16	.26	.28	.34	.36	.49	.53	.57	.60	.72	.78		
.01	.01	.02	.02	.02	.08	.09	.13	.14	.22	.24	.30	.30	.47	.50	.55	.60	.70	.78		
.01	.01	.02	.02	.02	.07	.09	.12	.13	.20	.22	.26	.26	.35	.38	.42	.47	.55	.62		
.01	.01	.02	.02	.03	.07	.08	.11	.10	.16	.19	.24	.24	.35	.38	.42	.47	.55	.62		
.01	.01	.02	.02	.03	.07	.07	.10	.09	.14	.16	.22	.22	.30	.33	.37	.42	.50	.57		
.01	.01	.02	.02	.03	.06	.07	.08	.08	.12	.14	.19	.19	.26	.29	.33	.38	.46	.53		
.01	.01	.02	.02	.03	.05	.05	.05	.05	.10	.12	.17	.17	.24	.27	.31	.36	.44	.51		
.01	.01	.02	.02	.03	.04	.04	.03	.03	.08	.10	.15	.15	.22	.25	.29	.34	.42	.49		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
.01	.01	.02	.02	.03	.04	.04	.02	.02	.00											

TABLE 9 RELATIVE LETHAL AREAS FOR THE M107 PROJECTILE AND THE M42 SUBMUNITION

<u>Munition</u>	<u>Height of Burst (Feet)</u>	<u>Standing^a</u>	<u>Prone</u>	<u>Prone Protected^b Composite</u>	<u>Individual</u>	<u>Crouching in a Foxhole</u>
M42	.1042	1.00	.515	.227	.192	.016
M107	.7	1.00	.356	.161	.152	.010
M107	15	1.00	.657	.371	.363	.081

^aNormalized such that "Standing" is equal to unity.

^b"Composite" data were calculated with the combined prone protected posture function; "Individual" data were calculated with the individual functions, then combined.

Adoption of the prone protected posture would require that (1) lethal areas be calculated for all projectiles of interest and (2) that all models involving posture sequencing be modified to include a fourth posture. If there is a constant ratio of prone protected lethal area to prone lethal area, the former requirement could be satisfied by a simple computation. Ratios of prone protected to prone lethal areas were calculated from data in Reference 9 and are presented in Table 10. Table 11 presents the average of the ratios for the two environments given in Table 10. Included also is the ratio for the M42 DP-ICM. The ratio for one HE-PD fuze (ground burst) projectile is included to indicate the effect of height of burst on the ratio.

The maximum percentage differences between the average ratios for the data in Table 10 and the individual data points is +6.7 percent and -15.8 percent for the open environment and +13.3 percent for the wooded environment. Use of the averages rather than the specific ratios is appropriate considering the approximations involved in: (1) representing all posture sequences in the TRAPS test by two sequences (+23 percent and -38 percent maximum differences), (2) combining the eight individual presented area functions into one function, and (3) representing all personnel by one "standard" man.

As an indication of the effect the use of the prone protected posture would have on weapons effectiveness studies, the expected fractional casualties were calculated for an artillery battery firing on a towed artillery unit 200 meters in diameter. The target battery was assumed to be in (1) an unprepared position (i.e., in position less than 8 hours) and (2) in a hardened position (i.e., greater than 8 hours). Posture sequences were selected from three sources: the Concepts Analysis Agency's (CAA) 1987 Ammo Rates Study, the SCORES 2A/86 Scenario, and the TRAPS Study. These sequences are presented in Table 12. It should be pointed out that the SCORES scenario does not differentiate between prepared and unprepared positions for towed artillery units. The number of battery volleys (6 rounds each) required to achieve various specified levels of expected fractional casualties are shown in Figure 13 for the three posture sequences.

Percent differences in ammunition requirements for the CAA and SCORES posture sequences with respect to those predicted by the TRAPS sequence for a casualty level of 30 percent are presented in Table 13.

⁹Rapp, J.R., G.G. Kuehl, T. Erline, and F.J. Vanderbeck; BMP-76 Amphibious Armored Infantry Combat Vehicle (Soviet) Computer Description (U); BRL Report No. 1862, March 1976, US Army Ballistics Research Laboratory, Aberdeen Proving Ground, MD, CONFIDENTIAL report.

TABLE 10 RATIOS OF PRONE PROTECTED TO PRONE LETHAL AREAS
(HEIGHT OF BURST = 15 FEET IN OPEN, GROUND BURST-IN WOODS)

Proj	Angle of Fall	5-Min Assault		Serious		Lethal	
		Open	Woods	Open	Woods	Open	Woods
M329A1	48	.606		.607		.620	
	58	.601		.600		.591	
	68	.572		.577		.538	
M1 (TNT)	15	.610	.744	.610	.743	.609	.750
	33	.610	.675	.609	.677	.608	.674
	51	.588	.602	.588	.604	.589	.580
M1 (CB)	15	.598		.598		.597	
	33	.596		.598		.596	
	51	.578		.579		.575	
M1E2 (TNT)	15	.606		.607		.607	
	33	.602		.604		.602	
	51	.585		.585		.586	
M1E2 (CB)	15	.620		.619		.621	
	33	.617		.616		.614	
	51	.607		.607		.606	
M548 (CB) Rkt On	22	.616		.617		.616	
	34	.611		.610		.608	
	68	.590		.589		.590	
M548 (CB) Rkt Off	22	.598		.599		.594	
	34	.592		.592		.592	
	68	.583		.583		.582	
M107E1	22	.578		.580		.579	
	34	.576		.575		.577	
	55	.566		.570		.564	
XM795	22	.585		.585		.638	
	34	.587		.587		.587	
	55	.578		.578		.578	
M549E1	22	.594		.594		.594	
	34	.587		.587		.586	
	68	.561		.562		.561	
M107 CB	22	.578		.577		.577	
	34	.571		.571		.573	
	55	.560		.560		.560	

TABLE 10 RATIOS OF PRONE PROJECTED TO PRONE LETHAL AREAS
(HEIGHT OF BURST = 15 FEET IN OPEN, GROUND BURST-IN WOODS)-CONT'D

Proj	Angle of Fall	5-Min Assault		Serious		Lethal	
		Open	Woods	Open	Woods	Open	Woods
M107 TNT	22	.572	.714	.572	.721	.576	.726
	34	.564	.667	.566	.667	.563	.671
	55	.550	.585	.549	.585	.550	.582
M437A2 CB	13	.549		.549		.550	
	36	.552		.551		.552	
	63	.520		.520		.521	
M106 TNT	17	.560	.729	.559	.731	.559	.734
	34	.552	.662	.552	.666	.552	.669
	54	.526	.574	.525	.575	.526	.579
M106 CB	17	.559		.560		.560	
	34	.551		.552		.551	
	54	.531		.531		.531	
XM650E4 Rkt On	22	.572		.573		.573	
	34	.571		.571		.571	
	68	.560		.560		.561	
XM650E5 Rkt On	22	.570		.570		.569	
	34	.570		.570		.570	
	68	.559		.559		.559	
120mm Mortar	45	.649		.762		.665	
	60	.631		.637		.622	
	75	.577		.584		.557	
122mm MRL	15	.595		.592		.638	
	30	.592		.593		.593	
	60	.577		.577		.578	
122mm Gun	15	.609		.610		.610	
	30	.612		.611		.610	
	60	.592		.592		.592	
130mm Gun	15	.584		.585		.586	
	30	.588		.588		.589	
	60	.568		.568		.568	
152mm Gun	15	.613		.614		.613	
	30	.583		.583		.584	
	60	.558		.559		.556	
FROG-7	45	.485		.484		.536	
Average (Open) = .582							
Average (Woods) = .662							

TABLE 11 RATIOS OF PRONE PROTECTED TO PRONE LETHAL AREAS

	Ratio
HE Projectile/Proximity Fuze/Open Terrain	0.58
HE Projectile/PD Fuze/Temperate Forest	0.66
HE Projectile/PD Fuze/Open Terrain	0.45
DPICM-Open Terrain	0.44

TABLE 12 POSTURE SEQUENCE (IN PERCENT) FOR TOWED ARTILLERY UNITS

Posture	CAA		SCORES		TRAPS	
	Init.	Subs.	Init.	Subs.	Init.	Subs.
<u>Unprepared Position - ICM</u>						
S	10	0	0	0	0	0
P	90	90	25	25	20	5
PP	N/A	N/A	N/A	N/A	80	95
C/F	0	10	75	75	0	0
<u>Unprepared Position - HE</u>						
S	65	0	60	0	0	0
P	35	90	0	25	20	5
PP	N/A	N/A	N/A	N/A	80	95
C/F	0	10	40	75	0	0
<u>Prepared Position - ICM</u>						
S	5	0	0	0	0	0
P	5	0	25	25	0	0
PP	N/A	N/A	N/A	N/A	10	5
C/F	90	100	75	75	90	95
<u>Prepared Position - HE</u>						
S	10	0	60	0	0	0
P	0	0	0	25	10	0
PP	N/A	N/A	N/A	N/A	35	5
C/F	90	100	40	75	55	95

S = Standing

P = Prone

PP = Prone Protected

C/F = Crouching in a Foxhole

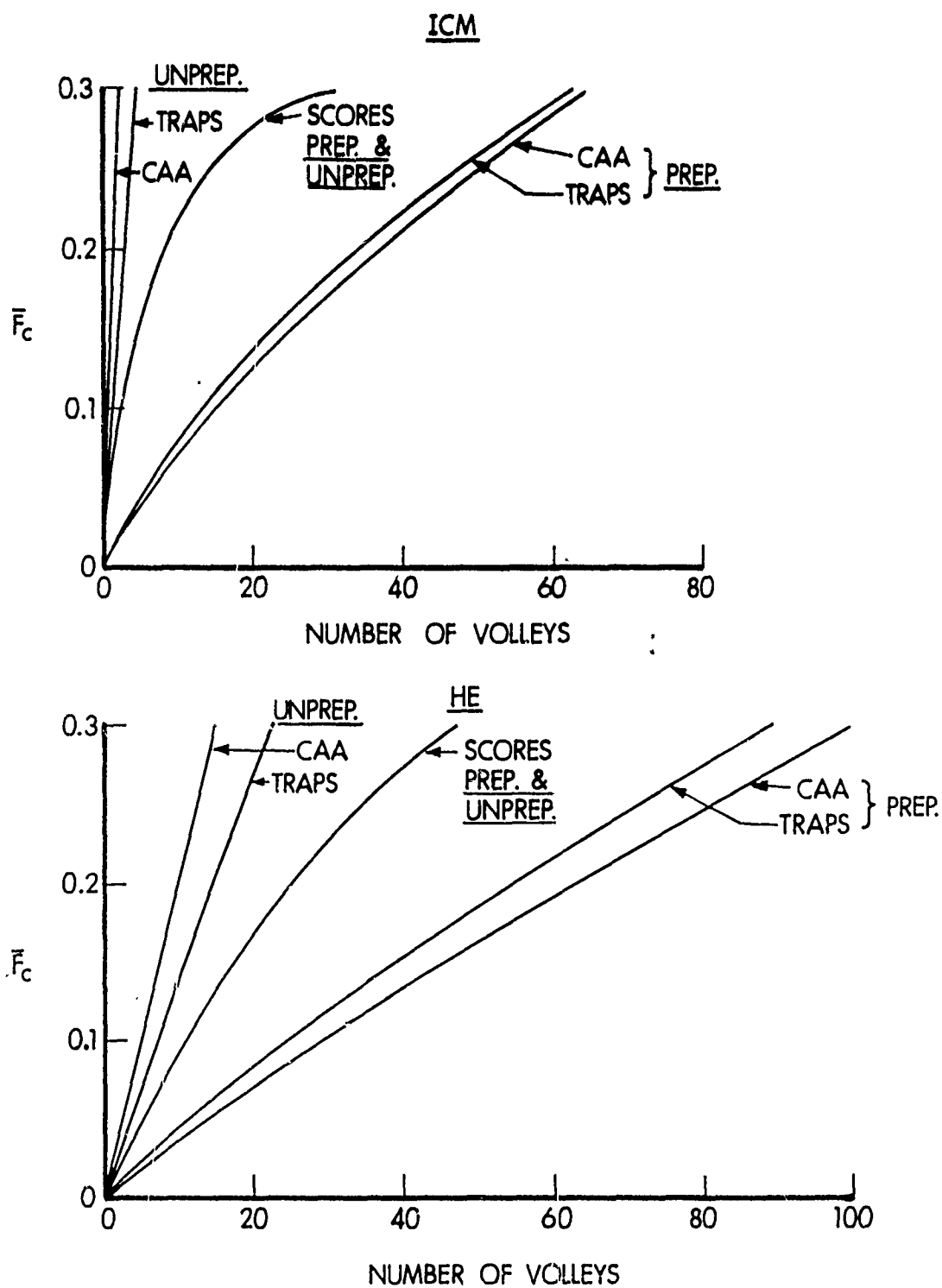


Figure 13. Expected Fractional Casualties ($\bar{F}_C$) vs. Number of Volleys for a Towed Artillery Unit in Prepared and Unprepared Positions.

TABLE 13 PERCENT DIFFERENCES IN AMMUNITION REQUIREMENTS TO
ACHIEVE 30 PERCENT CASUALTY LEVEL
(RELATIVE TO TRAPS REQUIREMENTS)

	ICM		HE	
	<u>CAA</u>	<u>SCORES</u>	<u>CAA</u>	<u>SCORES</u>
Prepared	+3%	-50%	+12%	-46%
Unprepared	-50%	+675%	-32%	+118%

In those situations where unprepared positions are involved, use of the SCORES 2A/86 posture sequence will produce grossly exaggerated ammunition requirements, while use of the CAA sequence will underestimate these requirements compared to the results using the TRAPS postures. In the case of prepared positions, the SCORES sequence underestimates the requirements and the CAA sequence overestimates them slightly. Since the SCORES and CAA posture sequences are not based on experimental data, as are the TRAPS sequences, and do not contain a posture analogous to the prone protected posture, such large differences in estimating ammunition requirements could be expected.

4. CONCLUSIONS

Based on the above analysis, it is concluded that:

- (1) There are significant differences in the presented area functions of the various prone protected postures.
- (2) Although the presented area function of Posture 7, Prone Personnel Under a 2-1/2 Ton Truck is significantly different from the other presented area functions, omission of this posture from the composite function does not change the resultant lethal area significantly due to the weighting schemes used.
- (3) Lethal areas calculated from the composite function do not differ significantly from those obtained by using a weighted average of lethal areas calculated for each posture.
- (4) Use of the prone protected posture in situations involving unprepared positions results in substantial differences in the estimates of the quantity of ammunition required to achieve a specified level of damage to the target.

(5) The use of a constant multiplier to derive estimates of prone protected lethal areas from calculated values of prone lethal area is accurate to within +15 percent of the calculated value using the derived presented area function.

5. RECOMMENDATIONS

(1) Because of the large proportion of troops who assume the prone protected posture when in unprepared positions, it is recommended that the analytical community use the prone protected posture where appropriate. Targets that are expected to have a large portion of troops who will assume this posture when under artillery attack are:

- Dismounted infantry in the assault.
- Towed artillery in newly-occupied positions.
- Temporary command posts.
- Personnel in supply depots.

(2) Because of the high degree of protection against fragmenting munitions offered to personnel who seek cover between the wheels or tracks of cross-country-type vehicles, it is recommended that targets which contain significant numbers of these vehicles be analyzed initially to determine if it would be appropriate to reduce the prone protected lethal area to compensate for the preponderance of personnel in this one low vulnerability posture. If a reduction is appropriate, the following guidelines should be applied to the airburst (proximity fuze) case only.

<u>Percentage of Prone Protected Personnel Under Vehicles</u>	<u>Reduction in Prone Protected Lethal Area</u>
25%	12%
50%	25%
75%	39%
100%	53%

(3) Inspection of Figure 10 reveals that Posture 3, Prone Personnel Under Two Culvert Halves, also has a very low vulnerability to fragmenting munitions. If personnel again employ this technique to enhance survivability, it is recommended that this posture be included in the composite prone protected posture.

(4) Finally, it is recommended that the various Army schools assess the data in this report and instruct their students in the advantages of consciously utilizing the prone protected posture to increase their likelihood of survival.

REFERENCES

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APPENDIX A

PRESENTED AREAS OF BODY PART AREAS
FOR THE PRONE PROTECTED MAN

APPENDIX A

This appendix contains presented area data for the prone protected man by body part. The parts of the body considered are the head (including the neck), the thorax, the abdomen, the pelvis, the legs as one unit, and the arms. This data are of use to analysts doing studies where one part of the body is shielded more than other parts, such as by a helmet or by body armor.

Tables A-1 through A-6 contain the presented area data for each of the body parts for use in the JMEM Lethal Area Computer Program. Tables A-7 through A-17 contain presented areas as a function of elevation for each of the body parts for the nine positions investigated in this work plus a prone man in the open and the final prone protected man.

TABLE A-1 PRESENTED AREAS IN SQUARE FEET FOR THE HEAD OF A PRONE PROTECTED MAN AT VARIOUS RANGES AND HEIGHTS OF BURST

[illegible]

TABLE A-2 PRESENTED AREAS IN SQUARE FEET FOR THE THORAX OF A PRONE PROTECTED MAN AT VARIOUS RANGES AND HEIGHTS OF BURST

Height of Burst, Ft																		
0	1/48	1/24	1/16	1/8	2 1/2	5	10	15	20	25	30	40	50	60	70	80	90	100
.09	.10	.12	.12	.19	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
.09	.10	.12	.12	.13	.62	.70	.69	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
.07	.09	.10	.11	.11	.53	.70	.70	.70	.69	.69	.70	.70	.70	.70	.70	.70	.70	.70
.05	.07	.08	.09	.10	.45	.68	.68	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
.05	.06	.07	.08	.09	.40	.62	.69	.69	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
.04	.05	.06	.07	.07	.35	.60	.66	.66	.70	.70	.71	.70	.70	.70	.69	.70	.70	.70
.03	.05	.06	.07	.05	.29	.46	.50	.50	.69	.62	.66	.69	.70	.71	.70	.71	.70	.70
.03	.04	.05	.06	.04	.25	.39	.40	.40	.60	.45	.50	.60	.62	.66	.69	.64	.66	.68
.03	.04	.05	.06	.03	.20	.19	.33	.33	.46	.40	.44	.46	.53	.60	.61	.60	.61	.62
.03	.04	.04	.05	.03	.18	.18	.25	.25	.34	.35	.40	.40	.45	.50	.55	.52	.56	.60
.02	.03	.04	.05	.02	.12	.12	.19	.21	.34	.31	.36	.34	.42	.44	.48	.52	.56	.60
.01	.02	.02	.03	.02	.10	.10	.18	.18	.30	.29	.33	.26	.40	.34	.38	.41	.44	.46
.01	.01	.02	.02	.01	.08	.14	.14	.14	.25	.25	.28	.21	.30	.28	.31	.34	.37	.40
.01	.01	.01	.01	.01	.07	.06	.10	.11	.22	.19	.21	.18	.25	.24	.24	.26	.32	.34
.01	.01	.01	.01	.01	.05	.05	.08	.08	.14	.18	.18	.14	.21	.21	.21	.21	.28	.30
.00	.01	.01	.01	.01	.04	.04	.06	.06	.11	.11	.14	.11	.19	.18	.19	.19	.23	.25
.00	.01	.01	.01	.01	.03	.03	.04	.05	.10	.09	.11	.10	.17	.17	.17	.17	.20	.21
.00	.00	.01	.01	.01	.02	.02	.03	.04	.08	.08	.09	.09	.14	.14	.16	.16	.18	.19
.00	.00	.01	.01	.01	.02	.02	.03	.04	.07	.07	.08	.08	.11	.12	.14	.14	.17	.18
.00	.00	.00	.01	.01	.01	.02	.03	.03	.06	.06	.07	.07	.10	.11	.12	.12	.16	.17
.00	.00	.00	.00	.01	.01	.02	.02	.03	.05	.05	.06	.07	.09	.10	.11	.11	.14	.15
.00	.00	.00	.00	.01	.01	.02	.02	.03	.04	.05	.06	.06	.09	.09	.10	.00	.12	.14
.00	.00	.00	.00	.01	.01	.02	.02	.02	.04	.04	.05	.00	.08	.00	.00	.00	.80	.00
.00	.00	.00	.00	.01	.01	.02	.02	.02	.03	.04	.04	.00	.06	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.02	.02	.03	.03	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.02	.02	.02	.03	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.00	.02	.02	.03	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.00	.02	.02	.03	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.0																	

TABLE A-3 PRESENTED AREAS IN SQUARE FEET FOR THE ABDOMEN OF A PRONE PROTECTED MAN AT VARIOUS RANGES AND HEIGHTS OF BURST

	Height of Burst, Ft																		
	0	1/48	1/24	1/16	1/8	2 1/2	5	10	15	20	25	30	40	50	60	70	80	90	100
.07	.07	.07	.07	.09	.12	.51	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53
.07	.07	.07	.07	.09	.09	.46	.51	.53	.53	.53	.52	.53	.53	.53	.53	.53	.53	.53	.53
.05	.05	.07	.07	.07	.07	.37	.46	.51	.53	.53	.53	.54	.53	.53	.53	.53	.53	.53	.53
.04	.04	.06	.07	.07	.07	.31	.37	.48	.51	.52	.52	.53	.53	.53	.53	.53	.53	.53	.53
.03	.04	.05	.06	.06	.06	.27	.31	.46	.49	.51	.51	.52	.53	.54	.53	.53	.53	.53	.53
.03	.04	.05	.05	.05	.05	.24	.27	.42	.48	.51	.51	.51	.52	.53	.54	.53	.53	.53	.53
.03	.03	.04	.05	.04	.04	.19	.20	.33	.35	.49	.46	.48	.49	.51	.51	.52	.52	.52	.53
.02	.03	.04	.04	.03	.03	.16	.16	.27	.27	.42	.31	.35	.42	.46	.48	.45	.49	.50	.51
.02	.02	.03	.04	.02	.02	.13	.12	.20	.22	.33	.27	.30	.33	.37	.42	.48	.47	.48	.48
.02	.02	.03	.04	.02	.02	.11	.11	.16	.16	.27	.24	.27	.27	.31	.35	.38	.42	.44	.46
.02	.02	.03	.04	.01	.01	.08	.08	.12	.13	.23	.22	.25	.23	.29	.30	.35	.36	.39	.42
.01	.01	.02	.01	.02	.01	.07	.11	.11	.11	.20	.19	.22	.17	.27	.23	.26	.28	.30	.33
.01	.01	.01	.01	.01	.05	.05	.10	.10	.10	.16	.16	.19	.14	.20	.19	.21	.23	.25	.27
.00	.01	.01	.01	.01	.04	.04	.07	.08	.14	.12	.12	.14	.11	.16	.16	.15	.17	.22	.23
.00	.00	.01	.01	.01	.01	.04	.03	.05	.05	.10	.11	.11	.10	.14	.14	.14	.14	.19	.20
.00	.00	.01	.01	.01	.01	.03	.03	.04	.04	.08	.08	.10	.08	.12	.11	.13	.12	.15	.16
.00	.00	.01	.01	.01	.01	.02	.02	.03	.03	.07	.06	.07	.07	.11	.11	.11	.11	.13	.14
.00	.00	.01	.01	.01	.01	.01	.02	.02	.03	.05	.05	.06	.06	.09	.10	.10	.10	.11	.12
.00	.00	.01	.01	.01	.01	.01	.01	.02	.03	.04	.04	.05	.05	.07	.08	.09	.10	.11	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.04	.04	.04	.05	.07	.07	.08	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.03	.03	.03	.04	.04	.06	.07	.08	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.04	.04	.06	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.06	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.06	.07	.08	.10	.11
.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.03	.03	.03	.04	.05	.				

TABLE A-4 PRESENTED AREAS IN SQUARE FEET FOR THE PELVIS OF A PRONE PROTECTED MAN AT VARIOUS RANGES AND HEIGHTS OF BURST

	Height of Burst, Ft																		
	0	1/48	1/24	1/16	1/8	2 1/2	5	10	15	20	25	30	40	50	60	70	80	90	100
10	11	13	13	13	17	63	64	64	64	64	64	65	65	65	65	65	65	65	65
10	11	13	13	13	13	57	63	64	65	64	64	65	65	65	65	65	65	65	65
08	09	11	11	12	12	48	57	63	63	64	64	65	65	64	64	64	64	65	65
06	08	09	09	10	10	40	48	59	63	63	63	64	65	65	65	64	64	64	65
05	06	08	09	09	09	34	40	57	61	63	64	65	64	65	65	64	64	54	64
04	06	07	08	08	08	30	34	51	58	63	63	63	63	64	64	64	64	55	65
04	05	07	07	06	06	26	27	42	45	61	57	58	61	63	64	63	64	64	64
03	05	06	06	05	05	23	23	34	34	51	40	45	51	57	58	60	61	52	63
03	04	05	06	04	03	18	17	27	29	42	34	39	42	48	51	56	57	58	60
03	04	05	06	03	03	16	16	23	23	34	30	34	34	40	45	49	51	55	57
03	03	04	05	02	02	12	11	17	19	29	28	30	29	37	39	43	46	49	51
01	02	02	03	02	02	10	10	16	17	27	26	29	24	34	29	32	36	39	42
01	01	02	02	02	02	08	09	13	13	23	23	25	19	27	25	28	29	31	34
01	01	01	01	01	01	07	06	10	10	19	17	19	16	23	22	21	24	28	29
01	01	01	01	01	01	05	05	09	09	13	16	16	13	19	19	19	19	25	27
00	01	01	01	01	01	04	04	06	07	11	11	13	11	17	16	17	17	21	23
00	01	01	01	01	01	03	03	04	05	10	10	10	10	15	15	16	15	18	19
00	01	01	01	01	01	02	03	03	04	09	10	10	09	13	13	15	15	16	17
00	00	01	01	01	01	02	02	03	04	07	07	09	09	11	11	13	13	16	16
00	00	01	01	01	01	02	02	03	03	06	06	08	08	10	10	11	12	15	16
00	00	01	01	01	01	01	02	03	03	05	06	07	07	09	10	11	11	13	14
00	00	01	01	01	01	01	02	03	03	04	05	06	06	09	10	10	00	12	13
00	00	00	00	00	01	01	02	02	03	04	04	05	00	09	00	00	00	00	00
00	00	00	00	00	01	01	02	02	02	03	04	04	00	06	00	00	00	00	00
00	00	00	00	00	01	01	01	02	02	03	03	04	00	00	00	00	00	00	00
00	00	00	00	00	00	01	01	02	00	02	03	04	00	00	00	00	00	00	00
00	00	00	00	00	00	01	01	01	00	02	02	03	00	00	00	00	00	00	00
00	00	00	00	00	00	01	01	01	00	02	02	03	00	00	00	00	00	00	00
00	00	00	00	00	00	01	01	01	00	00	02	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
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00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

TABLE A-5 PRESENTED AREAS IN SQUARE FEET FOR THE LEGS OF A PRONE PROTECTED MAN AT VARIOUS RANGES AND HEIGHTS OF BURST

0	Height of Burst, Ft																			
	1/48	1/24	1/16	1/8	2 1/2	5	10	15	20	25	30	40	50	60	70	80	90	100		
.10	.19	.20	.20	.30	1.90	2.12	2.20	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	
.15	.19	.20	.20	.21	1.57	1.89	2.11	2.18	2.21	2.22	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	
.17	.16	.19	.19	.20	1.19	1.56	1.89	2.05	2.11	2.14	2.19	2.22	2.24	2.24	2.24	2.24	2.24	2.24	2.24	
.17	.15	.17	.18	.18	.90	1.19	1.72	1.90	2.06	2.06	2.12	2.16	2.20	2.22	2.23	2.23	2.24	2.24	2.24	
.17	.14	.15	.15	.15	.72	.90	1.39	1.78	2.01	1.98	2.05	2.12	2.17	2.18	2.19	2.21	2.23	2.24	2.24	
.17	.14	.15	.15	.15	.60	.72	1.39	1.68	1.89	1.90	1.98	2.06	2.11	2.15	2.16	2.18	2.21	2.23	2.24	
.17	.13	.13	.13	.13	.46	.48	1.39	1.08	1.79	1.57	1.68	1.79	1.90	1.98	2.03	2.08	2.09	2.11	2.11	
.17	.11	.11	.11	.11	.39	.39	.72	.72	1.39	.90	1.08	1.39	1.57	1.68	1.75	1.80	1.85	1.85	1.90	
.17	.08	.09	.11	.06	.33	.32	.48	.54	.96	.72	.86	.96	1.19	1.39	1.51	1.61	1.68	1.73	1.73	
.17	.07	.08	.10	.05	.29	.28	.39	.39	.72	.60	.72	.72	.90	1.08	1.24	1.39	1.49	1.57	1.57	
.17	.06	.07	.09	.04	.21	.21	.32	.34	.58	.51	.62	.58	.79	.86	1.01	1.15	1.27	1.39	1.39	
.17	.05	.07	.05	.03	.16	.16	.26	.31	.48	.46	.54	.41	.72	.58	.68	.77	.86	.96	.96	
.17	.04	.05	.04	.03	.14	.14	.24	.24	.39	.39	.45	.35	.48	.45	.50	.58	.65	.72	.72	
.17	.02	.02	.03	.02	.12	.11	.16	.18	.35	.32	.34	.28	.39	.39	.38	.41	.51	.58	.58	
.17	.01	.02	.02	.02	.10	.09	.14	.14	.24	.27	.30	.24	.34	.35	.34	.34	.44	.48	.48	
.17	.01	.01	.02	.02	.07	.07	.11	.11	.19	.20	.24	.19	.32	.30	.32	.31	.37	.39	.39	
.17	.01	.01	.02	.02	.05	.05	.06	.09	.16	.15	.18	.15	.27	.27	.29	.28	.33	.34	.34	
.17	.01	.01	.02	.01	.04	.05	.06	.08	.14	.14	.15	.14	.23	.24	.26	.26	.30	.32	.32	
.17	.01	.01	.01	.01	.03	.04	.05	.07	.12	.12	.14	.13	.20	.21	.23	.23	.28	.29	.29	
.17	.01	.01	.01	.01	.03	.04	.05	.06	.11	.11	.13	.13	.16	.18	.21	.22	.26	.27	.27	
.17	.01	.01	.01	.01	.03	.04	.05	.05	.09	.10	.11	.12	.15	.16	.18	.19	.24	.25	.25	
.17	.00	.01	.01	.01	.02	.03	.04	.05	.09	.09	.10	.11	.14	.15	.16	.16	.22	.24	.24	
.17	.00	.01	.01	.01	.02	.03	.04	.04	.07	.08	.09	.00	.14	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.03	.04	.04	.06	.07	.08	.00	.11	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.03	.03	.03	.04	.05	.07	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.02	.00	.03	.04	.06	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.02	.00	.03	.04	.05	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02	.01	.00	.03	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	
.17	.00	.01	.01	.01	.02	.02</														

AND HEIGHTS OF BURST

0	Height of Burst, Ft															100		
	1/48	1/24	1/16	1/8	2 1/2	5	10	15	20	25	30	40	50	60	70		80	90
.12	.13	.14	.15	.21	.68	.70	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
.12	.13	.14	.15	.16	.63	.68	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
.09	.10	.12	.13	.14	.54	.62	.68	.70	.70	.70	.71	.71	.71	.71	.71	.71	.71	.71
.07	.10	.10	.11	.12	.47	.54	.66	.68	.70	.70	.70	.71	.71	.71	.71	.71	.71	.71
.05	.08	.09	.10	.11	.41	.47	.63	.67	.69	.69	.70	.70	.71	.71	.71	.71	.71	.71
.05	.07	.08	.10	.10	.37	.41	.59	.66	.58	.68	.69	.70	.71	.71	.71	.71	.71	.71
.05	.06	.06	.08	.07	.31	.32	.48	.51	.67	.63	.66	.67	.68	.69	.69	.70	.70	.70
.04	.05	.07	.07	.06	.28	.27	.41	.41	.59	.47	.51	.59	.63	.66	.66	.67	.68	.68
.04	.05	.06	.07	.04	.23	.22	.33	.35	.48	.41	.46	.48	.54	.59	.61	.64	.66	.66
.03	.04	.05	.07	.03	.20	.19	.27	.27	.41	.37	.41	.41	.47	.51	.55	.59	.61	.63
.03	.04	.05	.06	.02	.16	.15	.22	.24	.36	.34	.38	.36	.44	.46	.50	.53	.56	.59
.02	.02	.03	.03	.02	.12	.12	.19	.21	.33	.31	.35	.28	.41	.36	.41	.43	.46	.48
.01	.02	.02	.02	.02	.10	.11	.17	.17	.27	.27	.31	.24	.33	.31	.34	.36	.39	.41
.01	.01	.01	.02	.01	.08	.08	.12	.13	.24	.22	.24	.20	.27	.27	.26	.28	.34	.36
.01	.01	.01	.01	.01	.06	.06	.17	.19	.17	.19	.21	.17	.24	.24	.24	.24	.30	.33
.00	.01	.01	.01	.01	.04	.04	.12	.12	.14	.15	.17	.14	.22	.21	.22	.21	.26	.27
.00	.01	.01	.01	.01	.04	.05	.06	.06	.10	.10	.11	.12	.19	.18	.20	.19	.23	.24
.00	.01	.01	.01	.01	.03	.03	.04	.05	.10	.10	.11	.11	.16	.16	.18	.18	.21	.22
.00	.01	.01	.01	.01	.02	.03	.04	.05	.09	.09	.10	.10	.14	.15	.16	.16	.19	.20
.00	.00	.00	.01	.01	.02	.02	.03	.04	.07	.08	.09	.09	.12	.13	.16	.16	.18	.19
.00	.00	.00	.01	.01	.02	.02	.03	.04	.06	.07	.08	.08	.11	.12	.14	.14	.17	.17
.00	.00	.00	.01	.01	.02	.02	.03	.03	.05	.06	.07	.08	.11	.12	.12	.00	.16	.17
.00	.00	.00	.01	.01	.02	.02	.03	.03	.05	.05	.06	.00	.10	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.02	.02	.04	.04	.04	.04	.05	.00	.07	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.02	.02	.03	.03	.03	.03	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.02	.00	.03	.03	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.02	.00	.02	.03	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.01	.01	.01	.00	.02	.02	.04	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE A-7 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN IN THE OPEN

Elevation Deg	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.066	.369	.277	.383	.664	.443
.10	.074	.393	.264	.395	.707	.426
.20	.086	.365	.285	.400	.686	.439
.30	.063	.400	.266	.383	.707	.418
.40	.074	.381	.277	.404	.691	.447
.50	.074	.375	.264	.381	.732	.410
.60	.066	.404	.277	.395	.705	.418
.70	.061	.377	.270	.418	.684	.455
.80	.074	.398	.281	.408	.668	.422
.90	.062	.389	.289	.395	.678	.436
1.00	.074	.406	.285	.383	.713	.432
2.00	.078	.424	.275	.385	.707	.445
3.00	.055	.441	.289	.414	.699	.482
4.00	.063	.441	.330	.391	.689	.465
5.00	.055	.445	.305	.396	.729	.494
6.00	.051	.457	.336	.416	.730	.486
7.00	.053	.498	.336	.426	.746	.488
8.00	.053	.484	.328	.422	.775	.510
9.00	.049	.510	.352	.445	.794	.504
10.00	.043	.520	.361	.443	.813	.523
15.00	.035	.578	.391	.516	.941	.596
20.00	.043	.645	.453	.547	1.094	.633
25.00	.045	.709	.508	.596	1.260	.668
30.00	.055	.738	.523	.652	1.396	.723
35.00	.074	.760	.561	.680	1.549	.777
40.00	.084	.801	.563	.709	1.668	.797
45.00	.105	.865	.602	.715	1.820	.822
50.00	.104	.850	.624	.764	1.951	.836
55.00	.105	.859	.637	.752	2.072	.887
60.00	.129	.902	.621	.785	2.174	.855
65.00	.137	.885	.641	.787	2.250	.865
70.00	.148	.896	.633	.799	2.332	.855
75.00	.156	.857	.625	.771	2.414	.855
80.00	.169	.826	.633	.764	2.441	.877
85.00	.162	.822	.613	.721	2.475	.836
90.00	.162	.801	.553	.732	2.484	.818

TABLE A-8 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN LYING UNDER A CULVERT HALF

Elevation Deg	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.029	.065	0.000	.051	.121	.236
.10	.031	.072	0.000	.043	.146	.230
.20	.037	.059	.004	.047	.141	.227
.30	.021	.074	.002	.047	.139	.225
.40	.033	.064	0.000	.063	.133	.236
.50	.031	.059	0.000	.064	.131	.219
.60	.031	.070	0.000	.057	.127	.215
.70	.027	.057	.004	.066	.125	.244
.80	.027	.070	.002	.055	.127	.229
.90	.031	.066	.002	.057	.131	.223
1.00	.035	.061	.002	.051	.143	.217
2.00	.029	.072	.002	.055	.125	.242
3.00	.024	.076	.004	.057	.133	.238
4.00	.023	.086	.014	.043	.129	.236
5.00	.016	.082	.008	.041	.145	.260
6.00	.020	.090	.027	.047	.160	.248
7.00	.016	.105	.018	.063	.154	.248
8.00	.018	.092	.016	.047	.166	.254
9.00	.016	.092	.020	.064	.176	.238
10.00	.008	.098	.027	.051	.197	.236
15.00	.006	.080	.016	.037	.205	.260
20.00	.002	.082	.023	.006	.184	.268
25.00	.006	.084	0.000	0.000	.188	.275
30.00	.010	.049	0.000	0.000	.166	.283
35.00	.012	.033	0.000	0.000	.150	.285
40.00	.008	.020	0.000	0.000	.141	.277
45.00	.006	.008	0.000	0.000	.137	.277
50.00	.002	0.000	0.000	0.000	.117	.248
55.00	.002	0.000	0.000	0.000	.113	.234
60.00	0.000	0.000	0.000	0.000	.086	.193
65.00	0.000	0.000	0.000	0.000	.074	.164
70.00	0.000	0.000	0.000	0.000	.063	.123
75.00	0.000	0.000	0.000	0.000	.043	.088
80.00	0.000	0.000	0.000	0.000	.025	.068
85.00	0.000	0.000	0.000	0.000	.010	.023
90.00	0.000	0.000	0.000	0.000	0.000	0.000

TABLE A-9 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN BESIDE TWO-HIGH 55-GAL DRUMS

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.035	.143	.144	.213	.371	.223
10	.033	.213	.153	.213	.395	.275
20	.047	.157	.145	.223	.373	.245
30	.035	.213	.155	.213	.365	.277
40	.045	.201	.137	.242	.377	.297
50	.043	.203	.137	.215	.400	.268
60	.039	.215	.143	.229	.389	.266
70	.025	.203	.141	.238	.307	.293
80	.041	.211	.139	.234	.363	.275
90	.039	.213	.145	.223	.369	.241
1.00	.029	.209	.150	.207	.383	.273
2.00	.043	.219	.131	.223	.389	.297
3.00	.025	.227	.170	.234	.381	.307
4.00	.037	.234	.176	.221	.367	.297
5.00	.035	.240	.160	.215	.414	.318
6.00	.035	.242	.191	.230	.412	.314
7.00	.025	.275	.184	.240	.416	.315
8.00	.025	.275	.184	.234	.434	.326
9.00	.025	.247	.170	.250	.455	.336
10.00	.021	.251	.193	.234	.402	.348
15.00	.021	.320	.215	.297	.557	.381
20.00	.025	.357	.268	.303	.662	.414
25.00	.021	.420	.289	.338	.781	.451
30.00	.027	.438	.295	.349	.873	.484
35.00	.145	.445	.330	.464	.957	.520
40.00	.141	.445	.326	.424	1.039	.529
45.00	.141	.445	.354	.434	1.150	.547
50.00	.145	.492	.365	.444	1.219	.559
55.00	.064	.541	.373	.463	1.295	.564
60.00	.060	.555	.367	.464	1.375	.547
65.00	.145	.542	.447	.479	1.407	.550
70.00	.145	.557	.527	.483	1.465	.556
75.00	.145	.565	.435	.474	1.565	.590
80.00	.111	.625	.440	.479	1.667	.602
85.00	.145	.714	.537	.478	2.305	.748
90.00	.145	.701	.555	.732	2.484	.814

TABLE A-10 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN BESIDE ONE-HIGH 55-GAL DRUMS

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.035	.193	.148	.213	.371	.283
10	.033	.213	.133	.213	.395	.275
20	.047	.197	.145	.223	.373	.285
30	.035	.213	.135	.213	.365	.277
40	.045	.201	.137	.242	.377	.297
50	.043	.203	.137	.215	.400	.268
60	.039	.215	.143	.229	.389	.266
70	.035	.203	.141	.238	.367	.293
80	.041	.211	.139	.234	.363	.275
90	.039	.213	.145	.223	.369	.281
1.00	.039	.209	.150	.207	.383	.273
2.00	.043	.219	.131	.223	.389	.297
3.00	.029	.227	.150	.234	.381	.307
4.00	.037	.238	.176	.221	.367	.297
5.00	.033	.240	.160	.215	.414	.318
6.00	.033	.242	.191	.230	.412	.314
7.00	.025	.275	.184	.240	.416	.316
8.00	.029	.275	.164	.238	.434	.326
9.00	.023	.287	.176	.250	.455	.336
10.00	.020	.291	.193	.234	.492	.348
15.00	.021	.320	.213	.297	.557	.381
20.00	.025	.357	.266	.303	.662	.416
25.00	.021	.420	.289	.338	.781	.451
30.00	.027	.436	.295	.389	.873	.484
35.00	.045	.445	.330	.404	.957	.520
40.00	.051	.469	.326	.424	1.039	.529
45.00	.061	.518	.354	.438	1.150	.547
50.00	.066	.506	.385	.449	1.219	.555
55.00	.064	.539	.383	.469	1.303	.568
60.00	.080	.578	.424	.496	1.412	.572
65.00	.088	.611	.473	.549	1.557	.641
70.00	.107	.707	.482	.619	1.795	.686
75.00	.145	.746	.521	.654	2.078	.723
80.00	.160	.783	.557	.719	2.305	.793
85.00	.162	.813	.588	.715	2.447	.807
90.00	.162	.801	.553	.732	2.484	.818

TABLE A-11 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN LYING IN AN OPEN DITCH

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	0.000	0.000	0.000	0.000	0.000	0.000
.10	0.000	0.000	0.000	0.000	0.000	0.000
.20	0.000	0.000	0.000	0.000	0.000	0.000
.30	0.000	0.000	0.000	0.000	0.000	0.000
.40	0.000	0.000	0.000	0.000	0.000	0.000
.50	0.000	0.000	0.000	0.000	0.000	0.000
.60	0.000	0.000	0.000	0.000	0.000	0.000
.70	0.000	0.000	0.000	0.000	0.000	0.000
.80	0.000	0.000	0.000	0.000	0.000	0.000
.90	0.000	0.000	0.000	0.000	0.000	0.000
1.00	0.000	0.000	0.000	0.000	0.000	0.000
2.00	0.000	.010	.002	.010	0.000	.006
3.00	0.000	.014	.004	.035	.010	.027
4.00	0.000	.014	.016	.033	.041	.043
5.00	0.000	.021	.012	.043	.061	.074
6.00	.002	.033	.023	.045	.072	.076
7.00	.004	.057	.012	.049	.082	.102
8.00	.004	.045	.033	.047	.094	.109
9.00	.004	.061	.037	.052	.115	.121
10.00	.010	.070	.045	.160	.102	.211
15.00	.008	.159	.107	.250	.154	.309
20.00	.020	.264	.184	.293	.283	.385
25.00	.041	.361	.246	.391	.568	.461
30.00	.047	.451	.304	.447	.838	.547
35.00	.072	.531	.367	.447	1.154	.617
40.00	.080	.604	.412	.504	1.420	.703
45.00	.092	.660	.457	.582	1.662	.762
50.00	.100	.727	.506	.666	1.867	.811
55.00	.115	.791	.574	.695	2.027	.854
60.00	.123	.852	.604	.732	2.172	.883
65.00	.150	.857	.625	.760	2.242	.869
70.00	.150	.857	.652	.785	2.373	.875
75.00	.164	.863	.629	.740	2.387	.826
80.00	.160	.844	.643	.730	2.439	.855
85.00	.166	.809	.594	.734	2.441	.846
90.00	.164	.802	.566	.717	2.465	

TABLE A-12 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN BESIDE A FALLEN LOG

Elevation Deg	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.035	.193	.146	.213	.371	.252
.10	.033	.213	.143	.213	.393	.244
.20	.047	.197	.145	.223	.369	.258
.30	.035	.213	.135	.213	.363	.252
.40	.045	.201	.137	.242	.375	.273
.50	.043	.203	.137	.215	.398	.244
.60	.039	.215	.143	.229	.387	.240
.70	.035	.203	.141	.238	.365	.258
.80	.041	.211	.139	.234	.359	.246
.90	.039	.213	.145	.223	.365	.252
1.00	.039	.209	.150	.207	.379	.250
2.00	.043	.219	.131	.223	.385	.266
3.00	.029	.227	.150	.234	.377	.283
4.00	.037	.238	.176	.221	.361	.273
5.00	.033	.240	.158	.217	.408	.287
6.00	.031	.242	.191	.230	.406	.285
7.00	.025	.275	.184	.240	.408	.281
8.00	.029	.275	.164	.238	.430	.295
9.00	.023	.287	.176	.250	.447	.303
10.00	.020	.291	.193	.234	.484	.316
15.00	.021	.328	.215	.297	.549	.348
20.00	.025	.400	.287	.322	.660	.410
25.00	.023	.490	.338	.396	.801	.488
30.00	.035	.551	.363	.475	.967	.551
35.00	.064	.590	.432	.525	1.178	.613
40.00	.080	.652	.449	.584	1.373	.662
45.00	.100	.734	.496	.604	1.594	.711
50.00	.109	.738	.551	.654	1.803	.723
55.00	.105	.771	.564	.668	1.967	.791
60.00	.127	.838	.554	.725	2.102	.779
65.00	.135	.830	.602	.729	2.209	.809
70.00	.146	.857	.602	.766	2.313	.818
75.00	.154	.834	.611	.742	2.396	.830
80.00	.140	.822	.631	.752	2.441	.867
85.00	.162	.822	.613	.719	2.475	.834
90.00	.166	.801	.553	.732	2.484	.818

TABLE A-13 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN UNDER A 2 1/2-TON TRUCK

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.031	.162	.072	.174	.305	.270
.10	.035	.172	.074	.162	.318	.275
.20	.047	.156	.084	.176	.305	.260
.30	.025	.180	.066	.168	.318	.256
.40	.039	.156	.074	.180	.305	.268
.50	.037	.156	.061	.170	.318	.254
.60	.033	.164	.074	.170	.297	.242
.70	.033	.148	.076	.188	.297	.277
.80	.033	.160	.068	.168	.293	.250
.90	.035	.162	.074	.166	.293	.256
1.00	.039	.146	.063	.172	.322	.236
2.00	.029	.148	.051	.170	.291	.240
3.00	.029	.145	.033	.174	.270	.207
4.00	.016	.148	.039	.158	.248	.197
5.00	.012	.125	.020	.148	.266	.193
6.00	.010	.137	.031	.146	.258	.186
7.00	.010	.133	.014	.145	.254	.203
8.00	.010	.117	.004	.131	.260	.209
9.00	.014	.119	.008	.143	.250	.182
10.00	.008	.109	.002	.125	.248	.174
15.00	.002	.100	.002	.096	.256	.205
20.00	.002	.107	.002	.088	.262	.201
25.00	.006	.102	.004	.086	.273	.203
30.00	.012	.082	.000	.074	.223	.182
35.00	0.000	.033	.000	.051	.072	.074
40.00	0.000	.004	.000	.045	.023	0.000
45.00	0.000	0.000	.000	.027	.006	0.000
50.00	0.000	0.000	.000	.002	0.000	0.000
55.00	0.000	0.000	.000	0.000	0.000	0.000
60.00	0.000	0.000	.000	0.000	0.000	0.000
65.00	0.000	0.000	.000	0.000	0.000	0.000
70.00	0.000	0.000	.000	0.000	0.000	0.000
75.00	0.000	0.000	.000	0.000	0.000	0.000
80.00	0.000	0.000	.000	0.000	0.000	0.000
85.00	0.000	0.000	.000	0.000	0.000	0.000
90.00	0.000	0.000	.000	0.000	0.000	0.000

TABLE A-15 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN BESIDE A BMP INFANTRY COMBAT VEHICLE

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.039	.204	.184	.246	.463	.279
.10	.043	.232	.172	.238	.490	.270
.20	.049	.223	.188	.252	.471	.283
.30	.039	.238	.178	.242	.459	.268
.40	.055	.221	.178	.266	.459	.297
.50	.047	.221	.168	.242	.492	.268
.60	.043	.240	.182	.246	.467	.262
.70	.035	.219	.182	.258	.457	.273
.80	.049	.229	.182	.254	.441	.268
.90	.041	.236	.184	.242	.443	.268
1.00	.039	.230	.191	.225	.463	.270
2.00	.041	.236	.158	.234	.455	.277
3.00	.029	.240	.170	.254	.445	.291
4.00	.035	.248	.195	.229	.424	.279
5.00	.039	.248	.170	.225	.457	.295
6.00	.031	.252	.195	.236	.447	.291
7.00	.023	.283	.188	.242	.426	.285
8.00	.027	.279	.164	.238	.438	.295
9.00	.021	.287	.176	.250	.451	.305
10.00	.020	.291	.193	.234	.464	.314
15.00	.020	.316	.217	.297	.549	.346
20.00	.025	.359	.264	.303	.660	.379
25.00	.021	.420	.247	.338	.771	.414
30.00	.027	.435	.295	.389	.865	.445
35.00	.045	.445	.326	.404	.949	.477
40.00	.051	.467	.328	.424	1.029	.486
45.00	.061	.518	.354	.438	1.137	.504
50.00	.064	.504	.379	.453	1.211	.514
55.00	.064	.531	.373	.463	1.285	.523
60.00	.074	.555	.367	.479	1.367	.520
65.00	.088	.555	.391	.488	1.398	.545
70.00	.092	.613	.424	.537	1.547	.594
75.00	.107	.650	.475	.576	1.801	.666
80.00	.141	.701	.525	.641	2.090	.732
85.00	.148	.766	.578	.674	2.375	.760
90.00	.160	.801	.553	.732	2.484	.818

TABLE A-16 PRESENTED AREAS IN SQUARE FEET FOR PRONE MAN BETWEEN THE TRAILS OF A TOWED HOWITZER

Elevation Deg.	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.065	.354	.273	.385	.621	.441
10	.066	.345	.260	.387	.639	.422
20	.076	.359	.281	.402	.627	.434
30	.059	.389	.262	.385	.621	.410
40	.070	.361	.275	.404	.631	.419
50	.074	.367	.260	.383	.654	.410
60	.064	.369	.277	.395	.633	.414
70	.055	.354	.262	.418	.602	.447
80	.070	.389	.279	.410	.590	.410
90	.063	.371	.283	.395	.592	.424
1.00	.070	.369	.275	.385	.627	.428
2.00	.074	.377	.258	.373	.604	.426
3.00	.051	.385	.264	.395	.576	.443
4.00	.047	.341	.285	.350	.566	.420
5.00	.049	.371	.246	.350	.604	.422
6.00	.039	.365	.260	.352	.600	.402
7.00	.049	.383	.240	.344	.621	.369
8.00	.041	.352	.215	.334	.641	.379
9.00	.037	.340	.217	.344	.660	.369
10.00	.031	.324	.209	.324	.682	.363
15.00	.016	.305	.207	.338	.709	.330
20.00	.002	.313	.232	.340	.703	.318
25.00	.016	.247	.264	.330	.779	.301
30.00	.012	.241	.262	.305	.797	.289
35.00	.020	.295	.252	.307	.859	.264
40.00	.025	.249	.236	.354	.893	.234
45.00	.039	.324	.293	.352	.943	.189
50.00	.035	.277	.299	.348	.971	.205
55.00	.033	.263	.305	.355	.986	.199
60.00	.027	.301	.256	.320	1.059	.168
65.00	.021	.246	.227	.326	1.316	.109
70.00	.014	.197	.205	.342	1.674	.068
75.00	.004	.156	.209	.383	2.037	.023
80.00	.004	.125	.236	.469	2.291	.002
85.00	.006	.092	.209	.502	2.443	0.000
90.00	0.000	.066	.137	.562	2.484	0.000

TABLE A-17 PRESENTED AREAS IN SQUARE FEET FOR PRONE PROTECTED MAN

Elevation Deg	Head	Thorax	Abdomen	Pelvis	Legs	Arms
0.00	.020	.110	.084	.123	.216	.149
.10	.021	.120	.078	.121	.227	.145
.20	.027	.113	.085	.127	.217	.150
.30	.019	.122	.078	.122	.215	.144
.40	.026	.113	.080	.134	.217	.157
.50	.024	.114	.077	.122	.230	.142
.60	.022	.122	.082	.127	.220	.140
.70	.019	.113	.081	.133	.212	.151
.80	.024	.119	.081	.130	.207	.143
.90	.022	.119	.083	.124	.209	.145
1.00	.022	.116	.085	.118	.220	.143
2.00	.023	.123	.074	.125	.216	.151
3.00	.017	.127	.080	.139	.212	.161
4.00	.014	.132	.098	.131	.212	.162
5.00	.020	.147	.095	.141	.263	.192
6.00	.017	.168	.121	.161	.285	.196
7.00	.018	.196	.119	.174	.304	.209
8.00	.020	.192	.118	.171	.319	.224
9.00	.018	.201	.126	.180	.333	.225
10.00	.016	.205	.133	.183	.340	.236
15.00	.014	.262	.169	.242	.410	.286
20.00	.019	.319	.220	.281	.519	.344
25.00	.027	.380	.261	.318	.680	.395
30.00	.034	.432	.294	.384	.823	.447
35.00	.053	.470	.346	.429	1.014	.498
40.00	.062	.536	.371	.478	1.198	.537
45.00	.079	.599	.417	.515	1.391	.588
50.00	.084	.614	.454	.566	1.540	.617
55.00	.047	.655	.482	.580	1.660	.661
60.00	.100	.701	.485	.609	1.768	.668
65.00	.112	.698	.507	.622	1.846	.686
70.00	.118	.713	.517	.648	1.967	.690
75.00	.127	.706	.521	.635	2.069	.703
80.00	.135	.702	.540	.650	2.167	.714
85.00	.135	.702	.528	.647	2.244	.713
90.00	.134	.696	.489	.661	2.278	.715

APPENDIX B

COM-GEOM BACKGROUND AND TARGET DESCRIPTIONS

APPENDIX B

COM-GEOM BACKGROUND AND TARGET DESCRIPTIONS

The presented area of the prone man in the various protected postures was calculated using the AREA subroutine of the GIFT code.

The GIFT computer code requires a combinatorial geometry (COM-GEOM) target description as input data. The following is a brief introduction to the COM-GEOM technique of target description. Reference 3 gives a detailed account of the COM-GEOM method as required for input to the GIFT computer code.

The COM-GEOM technique utilizes twelve basic geometric solids combined under three set-theory type operations to define the shape and location of each component of a target. A complete COM-GEOM description contains three distinct parts: a solid table, a region table, and a region identification table.

A solid is defined as one of the twelve geometric shapes available for COM-GEOM descriptions. These solids are listed below:

Geometric Solids Used in COM-GEOM Descriptions

<u>Symbol</u>	<u>Solid Name</u>
RPP	Rectangular Parallepiped
BOX	Box
RAW	Right Angle Wedge
ARB	Arbitrary Convex Polyhedron
ARS	Triangular Surfaced Polyhedron
ELL	Ellipsoid of Revolution
SPH	Sphere
RCC	Right Circular Cylinder
REC	Right Elliptical Cylinder
TRC	Truncated Right Circular Cone
TEC	Elliptic Cone
TOR	Torus

The parameters of a solid give its location, size, and orientation within the coordinate system established for the target. Each solid is uniquely numbered and its parameters listed in the solid table.

A region is the space occupied by a single solid or a combination of solids. Solids are combined using the three operations: intersection (+), union (OR), and difference (-). The intersection (+) of two solids is defined as the space in common with both solids. The union (OR) of two solids is defined as the space in either of the solids. The difference (-) of two solids is defined as the space in the first solid but not the second. Figure B-1 is a graphic illustration of these three operations. Any number of solids defined in the solid table may be used to define a region. Each region is uniquely numbered and its defining combination of solids is listed in the region table.

In the region identification table, each region is assigned an identification code number. These code numbers identify each specific region as either a component of the target or as an air space. Space not described as a region is assigned the air space code "01" by the GIFT code. If it is not necessary to describe the inside air of a target, then both inside and outside air will be identified by the "01" space code.

The region identification table, also allows for 40 alpha-numeric characters of descriptive data per region. The solid, region, and region identification tables described above comprise a complete COM-GEOM target description as required for input to the GIFT computer code.

Reference 8 contains a more extensive discussion than that presented above.

Complete COM-GEOM target descriptions of the prone man in all protected postures except the BMP are given in Table B-1 through B-27. The COM-GEOM description of the BMP is given in Reference 9.

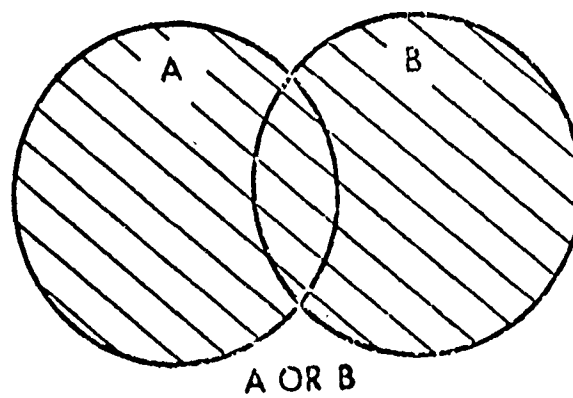
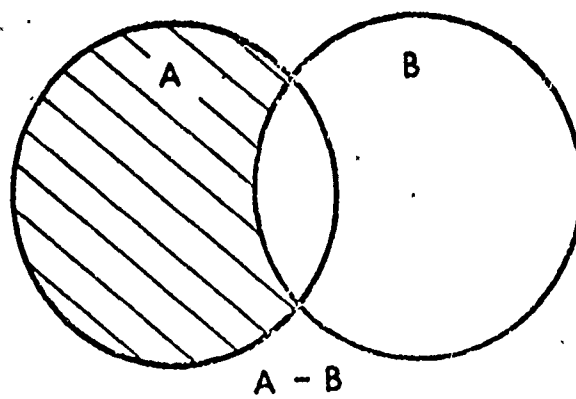
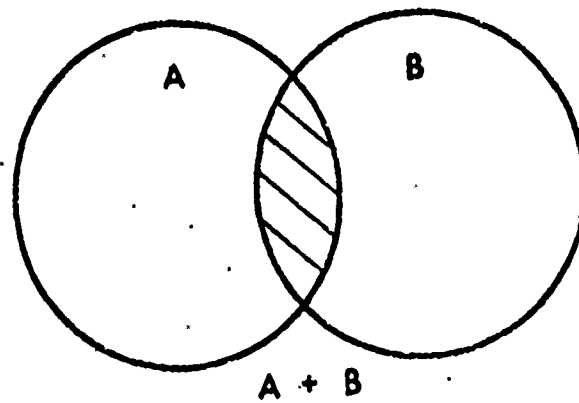


FIGURE B-1 Intersection (+), Difference (-), Union (OR) of Solids

TABLE R-1. SOLID TABLE FOR PRONE MAN IN OPEN

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
1 ELLG	28.9468	0.0000	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
2 RCX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2	0.0000	-12.2440	0.0000	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000
3 ARR8	15.4823	-6.1220	8.8976	15.4823	15.4823	0.0000	0.0000	0.0000	0.0000	8.8976
3	15.4823	6.1220	0.0000	15.4823	-6.1220	0.0000	0.0000	0.0000	0.0000	0.0000
3	8.3170	-5.4921	8.8976	8.3170	5.4921	8.8976	0.0000	0.0000	0.0000	8.8976
3	8.3170	5.4921	0.0000	8.3170	-5.4921	0.0000	0.0000	0.0000	0.0000	0.0000
4 ARR8	8.3170	-5.4921	8.8976	8.3170	5.4921	8.8976	0.0000	0.0000	0.0000	8.8976
4	8.3170	5.4921	0.0000	8.3170	-5.4921	0.0000	0.0000	0.0000	0.0000	0.0000
4	.0807	-6.9488	8.0905	.0807	.0807	6.9488	0.0000	0.0000	0.0000	8.0905
4	.0807	6.9488	.0807	.0807	.0807	.0807	0.0000	0.0000	0.0000	.0807
5 TEC	.0807	0.0000	4.4488	4.4488	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TFC	-20.3445	0.0000	4.4488	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6	1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TRC	22.6949	-4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
7	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8 TRC	22.6949	4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
8	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9 POX	30.0300	6.5552	3.2282	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9	0.0000	-13.1104	0.0000	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE A-2. REGION TABLE FOR PRONE MAN IN OPEN

REGION NUMBER	REGION COMBINATION DATA									
	1	2	3	4	5 OR 6 OR	7	8	9	-10R	-1
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	-7	-8	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5 OR	6	0	0	0	0	0	0	0	0	0
6 OR	-10R	8	-10R	9	-1	0	0	0	0	0

TABLE F-3. IDENTIFICATION TABLE FOR PHONE MAN IN OPEN

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	C	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS

TABLE R-4. SOLID TABLE FOR PRONE MAN IN A SHALLOW DRAINAGE DITCH

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
ELLG	28.9468	0.0000	0.0000	-7.5512	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
ROX	15.4823	6.1220	-12.0000	-12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2	0.0000	-12.2440	0.0000	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000
ARR8	15.4823	-6.1220	-3.1024	-12.0000	15.4823	6.1220	6.1220	6.1220	6.1220	-3.1024
3	15.4823	6.1220	-12.0000	-12.0000	15.4823	-6.1220	-6.1220	-6.1220	-6.1220	-12.0000
3	8.3170	-5.4921	-3.1024	-12.0000	8.3170	5.4921	5.4921	5.4921	5.4921	-3.1024
3	8.3170	5.4921	-12.0000	-12.0000	8.3170	-5.4921	-5.4921	-5.4921	-5.4921	-12.0000
ARE8	8.3170	-5.4921	-3.1024	-12.0000	8.3170	5.4921	5.4921	5.4921	5.4921	-3.1024
4	8.3170	5.4921	-12.0000	-12.0000	8.3170	-5.4921	-5.4921	-5.4921	-5.4921	-12.0000
4	.0807	-6.9488	-3.9095	-3.9095	.0807	6.9488	6.9488	6.9488	6.9488	-3.9095
4	.0807	6.9488	-11.1929	-11.1929	.0807	-6.9488	-6.9488	-6.9488	-6.9488	-11.1929
TEC	.0807	0.0000	-7.5512	-7.5512	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TEC	-20.3445	0.0000	-7.5512	-7.5512	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6	1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TRC	22.6949	-4.8229	-7.5512	-7.5512	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
7	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TRC	22.6949	4.8229	-7.5512	-7.5512	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
8	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
POX	30.0300	6.5552	-8.7718	-8.7718	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9	0.0000	-13.1104	0.0000	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000
RPP	-121.2500	121.2501	-11.5000	-11.5000	11.5000	-12.0000	-12.0000	-12.0000	-12.0000	0.0000
11 RPP	-120.0000	120.0001	-10.5000	-10.5000	10.5000	-12.0000	-12.0000	-12.0000	-12.0000	0.0000

TABLE H-5. REGION TABLE FOR PRONE MAN IN A SHALLOW DRAINAGE DITCH

REGION NUMBER	REGION COMBINATION DATA									
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	-7	-8	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5 OR	6	0	0	0	0	0	0	0	0	0
6 OR	-10R	8	-10R	9	-1	0	0	0	0	0
7	-11	0	0	0	0	0	0	0	0	0

TABLE B-6. IDENTIFICATION TABLE FOR PRONE MAN IN A SHALLOW DRAINAGE DITCH

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	DITCH

TABLE 4-7. SOLID TABLE FOR PRUNE MAN ALONGSIDE A 16-INCH DIAMETER LOG

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
1 FLLG	24.9468	0.0000	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
2 UX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2	0.0000	-12.2440	0.0000	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000
3 ARH	15.4823	-6.1220	0.0000	8.8976	15.4823	6.1220	0.0000	0.0000	0.0000	8.8976
3	15.4823	6.1220	0.0000	0.0000	15.4823	-6.1220	0.0000	0.0000	0.0000	0.0000
3	8.3170	-5.4921	8.8976	8.8976	8.3170	5.4921	8.8976	0.0000	0.0000	8.8976
3	8.3170	5.4921	0.0000	0.0000	8.3170	-5.4921	0.0000	0.0000	0.0000	0.0000
4 ARH	8.3170	-5.4921	8.8976	8.8976	8.3170	5.4921	8.8976	0.0000	0.0000	8.8976
4	8.3170	5.4921	0.0000	0.0000	8.3170	-5.4921	0.0000	0.0000	0.0000	0.0000
4	0.0000	-6.9488	8.0905	8.0905	0.0000	6.9488	8.0905	0.0000	0.0000	8.0905
4	0.0000	6.9488	8.071	8.071	0.0000	-6.9488	8.071	0.0000	0.0000	8.071
5 TEC	0.0000	-6.9488	0.0000	0.0000	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TEC	-20.3445	0.0000	0.0000	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6	1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TRC	22.6949	-4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
7	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8 TRC	22.6949	4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
8	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9 UX	30.0300	6.5552	3.2282	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9	0.0000	-13.1104	0.0000	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000
10 LCC	-120.0000	-14.5488	8.0000	8.0000	240.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	8.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE R-8. REGION TABLE FOR PRONE MAN ALONGSIDE A 16-INCH DIAMETER LOG

REGION NUMBER	REGION COMBINATION DATA									
	1	2	3	4	5 OR 6 OR 7	10	8	-10R	9	0
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	-7	0	-8	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5 OR 6 OR 7	6	0	0	0	0	0	0	0	0	0
	-10R	8	-10R	0	-1	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0

TABLE H-9. IDENTIFICATION TABLE FOR PRONE MAN ALONGSIDE A 16-INCH DIAMETER LOG

REGION NUMBER	ITEM CODE	SPACE CCDF	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	SIXTEEN INCH DIAMETER LOG

TABLE B-10. SOLID TABLE FOR PRONF MAN ALONGSIDE A BERM

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
1 ELLS	28.9468	0.0000	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000
1 ROX	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
2 ROX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2 APP8	0.0000	-12.2440	0.0000	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000
3 APP8	15.4823	-6.1220	0.0000	8.8976	15.4823	0.0000	0.0000	6.1220	8.8976	0.0000
3	15.4823	6.1220	0.0000	0.0000	15.4823	0.0000	0.0000	-6.1220	0.0000	0.0000
3	8.3170	-5.4921	0.0000	8.8976	8.3170	0.0000	0.0000	5.4921	8.8976	0.0000
3	8.3170	5.4921	0.0000	0.0000	8.3170	0.0000	0.0000	-5.4921	0.0000	0.0000
4 APP8	8.3170	-5.4921	0.0000	8.8976	8.3170	0.0000	0.0000	5.4921	8.8976	0.0000
4	8.3170	5.4921	0.0000	0.0000	8.3170	0.0000	0.0000	-5.4921	0.0000	0.0000
4	.0807	-6.9488	0.0000	8.0905	.0807	0.0000	0.0000	6.9488	8.0905	0.0000
4	.0807	6.9488	0.0000	.8071	.0807	0.0000	0.0000	-6.9488	.8071	0.0000
5 TFC	.0807	0.0000	0.0000	4.4488	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TEC	-20.3445	0.0000	0.0000	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6	1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TRC	22.6949	-4.8229	0.0000	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
7	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8 TRC	22.6949	4.8229	0.0000	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	2.7165
8	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9 ROX	30.0300	6.5552	0.0000	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9	0.0000	-13.1104	0.0000	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000
10 TGR	0.0000	-170.6390	-500.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
10	2093.9714	1977.0418	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11 TGR	0.0000	-170.6390	-430.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
11	648.9000	643.0940	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12 RPF	-205.0000	205.0000	-375.0000	-375.0000	35.0000	0.0000	0.0000	0.0000	0.0000	15.8000
13 RPF	-205.0000	205.0000	-375.0000	-375.0000	35.0000	0.0000	0.0000	0.0000	0.0000	33.5000

TABLE H-11. REGION TABLE FOR PRONE MAN ALONGSIDE A BERM

REGION NUMBER	REGION COMBINATION DATA												
1	1	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0
3	3	-7	-4	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0
5	5OR	6	0	0	0	0	0	0	0	0	0	0	0
6	6R	-10H	8	-10R	9	-1	0	0	0	0	0	0	0
7	10	12	0	0	0	0	0	0	0	0	0	0	0
8	11	13	0	0	0	0	0	0	0	0	0	0	0

TABLE P-12. IDENTIFICATION TABLE FOR PRONE MAN ALONGSIDE A BERM

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	BERM
8	8	0	BERM

TABLE 4-12. SOLID TABLE FOR PROFF MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS.
CAT HIGH

SOLID NUM TYPE	SOLID PARAMETERS									
1 FLIC	28.9468	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 HX	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
2 HX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2 ALH	0.0000	-12.2440	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 ALH	15.4823	-6.1220	8.8976	15.4823	0.0000	0.0000	6.1220	0.0000	0.0000	8.8976
3	15.4823	6.1220	0.0000	15.4823	0.0000	0.0000	-6.1220	0.0000	0.0000	0.0000
3	8.3170	-5.4921	8.8976	8.3170	0.0000	0.0000	5.4921	0.0000	0.0000	8.8976
3	8.3170	5.4921	0.0000	8.3170	0.0000	0.0000	-5.4921	0.0000	0.0000	0.0000
4 ALH	8.3170	-5.4921	8.8976	8.3170	0.0000	0.0000	5.4921	0.0000	0.0000	8.8976
4	8.3170	5.4921	0.0000	8.3170	0.0000	0.0000	-5.4921	0.0000	0.0000	0.0000
4	8.3170	5.4921	0.0000	8.3170	0.0000	0.0000	-5.4921	0.0000	0.0000	0.0000
4	0.0807	-6.9488	8.0905	0.0807	0.0000	0.0000	6.9488	0.0000	0.0000	8.0905
4	0.0807	6.9488	8.071	0.0807	0.0000	0.0000	-6.9488	0.0000	0.0000	8.071
5 TFC	0.0000	0.0000	4.4488	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.4570	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TFC	-20.3445	0.0000	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6	1.6709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TFC	22.6949	-4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000	2.7165
7	2.6276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	22.6949	4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000	2.7165
8	2.1276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	30.0300	6.5552	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9	0.0000	-13.1104	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 ALH	-42.0000	42.0000	-5.1000	-11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.0000
11 ALH	-24.0000	-15.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
11	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12 ALH	-24.0000	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
12	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	-12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	-12.0000	-15.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000

TABLE H-13. SOLID TABLE FOR PRONE MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS,
ONE HIGH (CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
	12.0000	-43.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13 PCC	-12.0000	-43.0000	0.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
14	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15 RCC	12.0001	-19.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
15	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16 RCC	12.0001	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
16	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17 RCC	36.0001	-19.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
17	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18 FCC	36.0001	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
18	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE P-15. IDENTIFICATION TABLE FOR PRONE MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS, ONE HIGH

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	PALLET
8	8	0	55-GALLON DRUM
9	9	0	55-GALLON DRUM
10	10	0	55-GALLON DRUM
11	11	0	55-GALLON DRUM
12	12	0	55-GALLON DRUM
13	13	0	55-GALLON DRUM
14	14	0	55-GALLON DRUM
15	15	0	55-GALLON DRUM

TABLE 4-16. SOLID TABLE FOR PROOF MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS.
TVC HIGH

SOLID NUM TYPE		SOLID PARAMETERS									
1	ELLG	28.9468	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1		0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9370
2	POX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.8976
2		0.0000	-12.2440	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	APPR	15.4823	-6.1220	0.0000	15.4823	0.0000	15.4823	6.1220	6.1220	8.8976	8.8976
3		15.4823	6.1220	0.0000	15.4823	0.0000	15.4823	-6.1220	-6.1220	0.0000	0.0000
3		8.3170	-5.4921	8.8976	8.3170	8.8976	8.3170	5.4921	5.4921	8.8976	8.8976
3		8.3170	5.4921	0.0000	8.3170	0.0000	8.3170	-5.4921	-5.4921	0.0000	0.0000
4	APPR	8.3170	-5.4921	8.8976	8.3170	8.8976	8.3170	5.4921	5.4921	8.8976	8.8976
4		8.3170	5.4921	0.0000	8.3170	0.0000	8.3170	-5.4921	-5.4921	0.0000	0.0000
4		.0807	-6.9488	8.0905	.0807	8.0905	.0807	6.9488	6.9488	8.0905	8.0905
4		.0807	6.9488	.8071	.0807	.8071	.0807	-6.9488	-6.9488	.8071	.8071
5	TFC	.0807	0.0000	4.4488	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5		0.0000	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.9528
5		1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	TFC	-20.3445	0.0000	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6		0.0000	-4.7492	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0266
6		1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	TFC	22.6944	-4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000	2.7165
7		2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	TFC	22.6949	4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000	2.7165
8		2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	POX	30.0300	6.5552	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.6694
9		0.0000	-13.1104	0.0000	5.6698	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	POX	-48.0000	48.0000	-51.0000	-11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.0000
11	TFC	-22.0000	-19.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
11		12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	POX	-32.0000	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000
12		12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	TFC	-12.0000	-15.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	36.0000

TABLE H-16. SOLID TABLE FOR PRONG MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS.
TWO HIGH (CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS							
13	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	-12.0000	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	36.0000
14	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	12.0001	-19.0000	5.0000	0.0000	0.0000	0.0000	0.0000	36.0000
15	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	12.0001	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	36.0000
16	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	36.0001	-19.0000	5.0000	0.0000	0.0000	0.0000	0.0000	36.0000
17	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	36.0001	-43.0000	5.0000	0.0000	0.0000	0.0000	0.0000	36.0000
18	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	-48.0000	48.0001	-51.0000	-11.0000	41.0000	46.0000	46.0000	46.0000
20	-36.0000	-19.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
20	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	-36.0000	-43.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
21	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	-12.0000	-19.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
22	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	-12.0000	-43.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
23	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	12.0001	-19.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
24	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	12.0001	-43.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
25	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	36.0001	-19.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
26	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	36.0001	-43.0000	46.0000	0.0000	0.0000	0.0000	0.0000	36.0000
27	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE F-17. REGION TABLE FOR PRONE MAN ALONGSIDE PALLETIZED 55-GALLON DRUMS,
TWO HIGH

REGION NUMBER	REGION COMBINATION DATA										
	1	2	3	4	5	6	7	8	9	10	
1											0
2											0
3											0
4											0
5											0
6											0
7											0
8											0
9											0
10											0
11											0
12											0
13											0
14											0
15											0
16											0
17											0
18											0
19											0
20											0
21											0
22											0
23											0
24											0
25											0
26											0
27											0

TABLE 4-14. IDENTIFICATION TABLE FOR PRONE MAN ALONGSIDE PALLETIZED 55-GALLON
DRUMS, TWO HIGH

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	PALLET
8	8	0	55-GALLON DRUM
9	9	0	55-GALLON DRUM
10	10	0	55-GALLON DRUM
11	11	0	55-GALLON DRUM
12	12	0	55-GALLON DRUM
13	13	0	55-GALLON DRUM
14	14	0	55-GALLON DRUM
15	15	0	55-GALLON DRUM
16	16	0	55-GALLON DRUM
17	17	0	PALLET
18	18	0	55-GALLON DRUM
19	19	0	55-GALLON DRUM
20	20	0	55-GALLON DRUM
21	21	0	55-GALLON DRUM
22	22	0	55-GALLON DRUM
23	23	0	55-GALLON DRUM
24	24	0	55-GALLON DRUM

TABLE R-19. SOLID TABLE FOR PRONE MAN UNDER CULVERT HALF

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
ELLG	28.9468	0.0000	0.0000	4.4488	4.2520	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0000	-2.7953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FOX	15.4823	6.1220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	-12.2440	0.0000	0.0000	9.2126	0.0000	0.0000	0.0000	0.0000	0.0000
APR8	15.4823	-6.1220	0.0000	8.8976	15.4823	0.0000	0.0000	6.1220	0.0000	0.0000
3	15.4823	6.1220	0.0000	0.0000	15.4823	0.0000	0.0000	-6.1220	0.0000	0.0000
3	8.3170	-5.4921	8.8976	8.8976	8.3170	5.4921	5.4921	5.4921	8.8976	0.0000
3	8.3170	5.4921	0.0000	0.0000	8.3170	-5.4921	-5.4921	-5.4921	0.0000	0.0000
APR8	8.3170	-5.4921	8.8976	8.8976	8.3170	5.4921	5.4921	5.4921	8.8976	0.0000
4	8.3170	5.4921	0.0000	0.0000	8.3170	-5.4921	-5.4921	-5.4921	0.0000	0.0000
4	8.3170	-5.4921	8.8976	8.8976	8.3170	5.4921	5.4921	5.4921	8.8976	0.0000
4	.0807	-6.9488	8.0905	8.0905	.0807	6.9488	6.9488	6.9488	8.0905	0.0000
4	.0807	6.9488	.8071	.8071	.0807	-6.9488	-6.9488	-6.9488	.8071	0.0000
TFC	.0807	0.0000	0.0000	4.4488	-20.4252	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	-6.9488	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.4570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TFC	-20.3445	0.0000	0.0000	4.4488	-15.3543	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	-4.7692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.6708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TFC	22.6949	-4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000
7	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TFC	22.6949	4.8229	4.4488	4.4488	11.5039	0.0000	0.0000	0.0000	0.0000	0.0000
8	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	30.0300	6.5552	3.2282	3.2282	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0000	-13.1104	0.0000	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000	0.0000
PCC	-36.0000	0.0000	0.0000	0.0000	72.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	19.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PCC	-36.0000	0.0000	0.0000	0.0000	72.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	18.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	18.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
FPP	-36.0000	36.0000	-20.0000	-20.0000	20.0000	-20.0000	-20.0000	-20.0000	-20.0000	0.0000

TABLE R-20. REGION TABLE FOR PRONE MAN UNDER CULVERT HALF

REGION NUMBER	REGION COMBINATION DATA									
	1	2	3	4	5 OR 6 OR 7	10	11	12	13	14
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	-7	0	-8	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5 OR 6 OR 7	6	-10P	8	-10R	9	-1	0	0	0	0
	-11	-12								

TABLE P-21. IDENTIFICATION TABLE FOR PRONE MAN UNDER CULVERT HALF

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	1	0	HEAD
2	2	0	THORAX
3	3	0	ABDOMEN
4	4	0	PELVIS
5	5	0	UPPER LEG
6	6	0	ARMS
7	7	0	CULVERT

TABLE 4-22. SOLID TABLE FOR PRONE MAN UNDER M36. 2-1/2 TON TRUCK

SOLID NUM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
1 TOR	190.0001	42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2 TOR	190.0001	-42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 TOR	24.0001	42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4 TOR	24.0001	-42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 TOR	24.0001	28.5000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TOR	24.0001	-28.5000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TOR	-24.0000	42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8 TOR	-24.0000	-42.0000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9 TOR	-24.0000	28.5000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 TOR	-24.0000	-28.5000	20.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10 TOR	15.5000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11 RCC	190.0001	47.5000	20.0000	0.0000	-9.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11 RCC	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12 FCC	190.0001	42.0000	20.0000	0.0000	.2500	0.0000	0.0000	0.0000	0.0000	0.0000
12 FCC	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13 RCC	190.0001	-47.5000	20.0000	0.0000	9.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13 RCC	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14 FCC	190.0001	-42.0000	20.0000	0.0000	-.2500	0.0000	0.0000	0.0000	0.0000	0.0000
14 FCC	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15 FCC	24.0001	42.5000	20.0000	0.0000	-14.5000	0.0000	0.0000	0.0000	0.0000	0.0000
15 FCC	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE 4-22. SOLID TABLE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS						
16 FCC	24.0001	42.0000	20.0000	0.0000	0.0000	.2500	0.0000
16	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17 FCC	24.0001	28.5000	20.0000	0.0000	0.0000	.2500	0.0000
17	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18 FCC	24.0001	-42.5000	20.0000	0.0000	0.0000	14.5000	0.0000
18	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19 FCC	24.0001	-42.0000	20.0000	0.0000	0.0000	-.2500	0.0000
19	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20 FCC	24.0001	-28.5000	20.0000	0.0000	0.0000	-.2500	0.0000
20	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21 FCC	-24.0000	42.5000	20.0000	0.0000	0.0000	-14.5000	0.0000
21	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22 FCC	-24.0000	42.0000	20.0000	0.0000	0.0000	.2500	0.0000
22	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23 FCC	-24.0000	28.5000	20.0000	0.0000	0.0000	.2500	0.0000
23	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24 FCC	-24.0000	-42.5000	20.0000	0.0000	0.0000	14.5000	0.0000
24	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25 FCC	-24.0000	-42.0000	20.0000	0.0000	0.0000	-.2500	0.0000
25	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26 FCC	-24.0000	-28.5000	20.0000	0.0000	0.0000	-.2500	0.0000
26	11.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27 FCC	190.0001	38.5000	20.0000	0.0000	0.0000	-77.0000	0.0000
27	2.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28 SPH	190.0001	-5.4000	20.0000	9.0000	0.0000	0.0000	0.0000
29 FCC	24.0001	28.0000	20.0000	0.0000	0.0000	-56.0000	0.0000
29	2.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30 SPH	24.0001	5.4000	20.0000	9.0000	0.0000	0.0000	0.0000
31 FCC	-24.0000	28.0000	20.0000	0.0000	0.0000	-56.0000	0.0000
31	2.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE P-22. SOLID TABLE FOR PROFF MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SLIP NUM TYPE	SOLID PARAMETERS									
	SFF	APPR	0.0000	20.0000	9.0000	0.0000	0.0000	0.0000	0.0000	0.0000
32	-24.0000	197.5001	17.0000	22.0000	182.5001	17.0000	17.0000	17.0000	17.0000	22.0000
33	165.0001	197.5001	17.0000	26.0000	215.0001	17.0000	17.0000	17.0000	17.0000	26.0000
33	197.5001	165.0001	14.5000	22.0000	182.5001	14.5000	14.5000	14.5000	14.5000	22.0000
33	165.0001	197.5001	14.5000	26.0000	215.0001	14.5000	14.5000	14.5000	14.5000	26.0000
34	197.5001	165.0001	-17.0000	22.0000	182.5001	-17.0000	-17.0000	-17.0000	-17.0000	22.0000
34	165.0001	197.5001	-17.0000	26.0000	215.0001	-17.0000	-17.0000	-17.0000	-17.0000	26.0000
34	197.5001	165.0001	-14.5000	22.0000	182.5001	-14.5000	-14.5000	-14.5000	-14.5000	22.0000
34	165.0001	197.5001	-14.5000	26.0000	215.0001	-14.5000	-14.5000	-14.5000	-14.5000	26.0000
35	28.3501	28.3501	19.0000	22.0000	-27.7500	19.0000	19.0000	19.0000	19.0000	22.0000
35	-7.5000	28.3501	19.0000	26.0000	7.5001	19.0000	19.0000	19.0000	19.0000	26.0000
35	28.3501	-7.5000	23.0000	22.0000	-27.7500	23.0000	23.0000	23.0000	23.0000	22.0000
35	-7.5000	28.3501	23.0000	26.0000	7.5001	23.0000	23.0000	23.0000	23.0000	26.0000
36	28.3501	-7.5000	-19.0000	22.0000	-27.7500	-19.0000	-19.0000	-19.0000	-19.0000	22.0000
36	-7.5000	28.3501	-19.0000	26.0000	7.5001	-19.0000	-19.0000	-19.0000	-19.0000	26.0000
36	28.3501	28.3501	-23.0000	22.0000	-27.7500	-23.0000	-23.0000	-23.0000	-23.0000	22.0000
36	-7.5000	28.3501	-23.0000	26.0000	7.5001	-23.0000	-23.0000	-23.0000	-23.0000	26.0000
37	28.3501	-7.5000	19.0000	30.2000	-27.7500	19.0000	19.0000	19.0000	19.0000	30.2000
37	-7.5000	28.3501	19.0000	34.4000	7.5001	19.0000	19.0000	19.0000	19.0000	34.4000
37	28.3501	-7.5000	23.0000	30.2000	-27.7500	23.0000	23.0000	23.0000	23.0000	30.2000
37	-7.5000	28.3501	23.0000	34.4000	7.5001	23.0000	23.0000	23.0000	23.0000	34.4000
38	28.3501	-7.5000	-19.0000	30.2000	-27.7500	-19.0000	-19.0000	-19.0000	-19.0000	30.2000
38	-7.5000	28.3501	-19.0000	34.4000	7.5001	-19.0000	-19.0000	-19.0000	-19.0000	34.4000
38	28.3501	28.3501	-23.0000	30.2000	-27.7500	-23.0000	-23.0000	-23.0000	-23.0000	30.2000
38	-7.5000	28.3501	-23.0000	34.4000	7.5001	-23.0000	-23.0000	-23.0000	-23.0000	34.4000
39	-24.0000	197.5001	22.0000	14.5000	17.0000	22.0000	34.2500	34.2500	34.2500	34.9500
40	165.0001	197.5001	22.0000	15.3000	17.0000	16.3000	34.9500	34.9500	34.9500	37.8000
41	197.5001	165.0001	22.0000	14.5000	17.0000	14.5000	37.8000	37.8000	37.8000	38.5000
42	165.0001	197.5001	22.0000	-17.0000	-14.5000	-14.5000	34.2500	34.2500	34.2500	34.9500
43	197.5001	165.0001	22.0000	-17.0000	-16.3000	-16.3000	34.9500	34.9500	34.9500	37.8000

TABLE 1-22. SOLID TABLE FOR PPOFF MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SOLID ALM TYPE	SOLID PARAMETERS									
	1	2	3	4	5	6	7	8	9	10
44 PPP	-64.0000	228.0001	-17.0000	-14.5000	37.8000	38.5000				
45 PPP	209.5001	212.0001	-14.5000	14.5000	34.2500	34.9500				
46 PPP	209.5001	212.0001	-14.5000	14.5000	34.9500	37.8000				
47 PPP	209.5001	212.0001	-14.5000	14.5000	37.8000	38.5000				
48 PPP	-64.0000	-61.5000	-14.5000	14.5000	34.2500	34.9500				
49 PPP	-64.0000	-61.5000	-14.5000	14.5000	34.9500	37.8000				
50 PPP	-64.0000	-61.5000	-14.5000	14.5000	37.8000	38.5000				
51 PPP	82.0001	84.5001	-14.5000	14.5000	34.2500	34.7500				
52 PPP	82.0001	84.5001	-14.5000	14.5000	34.7500	38.0000				
53 PPP	82.0001	84.5001	-14.5000	14.5000	38.0000	38.5000				
54 PPP	226.0001	228.0001	-17.0000	17.0000	34.2500	38.5000				
55 PPP	226.0001	227.6251	-17.0000	17.0000	34.6250	38.1250				
56 FOX	228.0001	17.0000	34.2500	0.0000	0.0000	4.2500				
57 FOX	-8.0000	29.5000	0.0000	-1.9300	-5.230	0.0000				
58 FOX	227.6381	16.9019	34.2500	0.0000	0.0000	3.8750				
59 FOX	-8.0000	29.5000	0.0000	-1.5680	-4.249	0.0000				
60 PPP	228.0001	-17.0000	34.2500	0.0000	0.0000	4.2500				
61 PPP	-8.0000	-29.5000	0.0000	-1.9300	.5230	0.0000				
62 PPP	227.6381	-16.9019	34.2500	0.0000	0.0000	3.9750				
63 PPP	-8.0000	-29.5000	0.0000	-1.5680	.4249	0.0000				
64 PPP	120.0001	220.5001	-35.0500	35.0500	34.2500	69.0000				
65 PPP	120.0701	220.4301	-34.9800	34.9800	34.2500	68.9500				
66 PPP	120.0001	171.5001	-35.0500	35.0500	69.0000	96.0000				
67 PPP	120.0701	171.4301	-34.9800	34.9800	68.8000	95.9300				
68 PPP	130.5001	148.5001	-34.0000	38.0000	69.0000	91.0000				
69 PPP	145.5001	175.5001	.5000	34.0000	70.0000	95.0000				
70 PPP	145.5001	175.5001	-34.0000	-5.000	70.0000	95.0000				
71 FOX	215.5001	35.0000	34.0000	0.0000	12.0000	0.0000				
72 PPP	-14.0000	0.0000	11.0000	-0.0432	0.0000	-0.0550				
73 PPP	175.5001	201.5001	35.0000	48.0000	48.9300	49.0000				

TABLE 4-22. SOLID TYPE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
69 FCX	176.5001	35.0000	49.0000	-11.0000	0.0000	0.0000	-14.0000			
69	0.0000	12.0000	0.0000	.0550	0.0000	0.0000	-0.0432			
70 RPP	126.0001	165.5501	35.0000	48.0000	20.0000	20.0000	35.0000			
71 RPP	126.0001	165.4801	35.0700	48.0000	20.0700	20.0700	35.0000			
72 FCX	215.5001	-35.0000	38.0000	0.0000	-12.0000	-12.0000	0.0000			
72	-14.0000	0.0000	11.0000	-0.0432	0.0000	0.0000	-0.0550			
73 RPP	176.5001	201.5001	-48.0000	-35.0000	48.9300	48.9300	49.0000			
74 FCX	176.5001	-35.0000	49.0000	-11.0000	0.0000	0.0000	-14.0000			
74	0.0000	-12.0000	0.0000	.0550	0.0000	0.0000	-0.0432			
75 RPP	126.0001	165.5501	-48.0000	-35.0000	20.0000	20.0000	35.0000			
76 RPP	126.0001	165.4801	-48.0000	-35.0700	20.0700	20.0700	35.0000			
77 RPP	203.7001	208.5001	-15.8000	15.8000	36.0000	36.0000	64.0000			
78 RPP	166.5001	198.5001	-13.0000	13.0000	35.0000	35.0000	52.0000			
79 RPP	145.5001	166.5001	-10.0000	10.0000	34.0000	34.0000	44.0000			
80 RPP	-74.5000	119.5001	14.5000	17.0000	38.5000	38.5000	46.5000			
81 RPP	-74.5000	119.5001	-17.0000	-14.5000	38.5000	38.5000	46.5000			
82 RPP	-74.5000	119.5001	14.5000	16.3000	39.2000	39.2000	45.8000			
83 RPP	-74.5000	119.5001	-16.3000	-14.5000	39.2000	39.2000	45.8000			
84 RPP	-74.5000	-71.5000	-46.0000	46.0000	46.5000	46.5000	49.9000			
85 RPP	-46.5000	-43.5000	-46.0000	46.0000	46.5000	46.5000	49.9000			
86 RPP	-18.5000	-15.5000	-46.0000	46.0000	46.5000	46.5000	49.9000			
87 RPP	9.5001	12.5001	-45.0000	46.0000	46.5000	46.5000	49.9000			
88 RPP	37.5001	40.5001	-45.0000	46.0000	46.5000	46.5000	49.9000			
89 RPP	65.5001	68.5001	-45.0000	46.0000	46.5000	46.5000	49.9000			
90 RPP	93.5000	96.5001	-46.0000	46.0000	46.5000	46.5000	49.9000			
91 RPP	115.5001	119.5001	-46.0000	46.0000	46.5000	46.5000	49.9000			
92 RPP	-74.2500	-71.7500	-45.0000	46.0000	46.7500	46.7500	49.6500			
93 RPP	-46.2500	-43.7500	-45.0000	46.0000	46.7500	46.7500	49.6500			
94 RPP	-18.2500	-15.7500	-45.0000	46.0000	46.7500	46.7500	49.6500			
95 RPP	9.7501	12.2501	-45.0000	46.0000	46.7500	46.7500	49.6500			

TABLE K-22. SOLID TABLE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SOLID NUM TYPE		SOLID PARAMETERS					
96	RPP	37.7501	40.2501	-46.0000	46.0000	46.7500	49.6500
97	RPP	65.7500	68.2501	-46.0000	46.0000	46.7500	49.6500
98	RPP	93.7500	96.2500	-46.0000	46.0000	46.7500	49.6500
99	RPP	116.7501	119.2501	-46.0000	46.0000	46.7500	49.6500
100	RPP	-94.5000	119.5001	-47.5000	47.5000	49.9000	50.1000
101	RPP	-94.5000	119.5001	47.4000	47.6000	50.1000	68.1000
102	RPP	-94.5000	119.5001	-47.6000	-47.4000	50.1000	68.1000
103	RPP	119.3001	119.5001	-47.4000	47.4000	50.1000	68.1000
104	RPP	87.5000	119.5001	-46.0000	-25.0000	20.0000	38.0000
105	RPP	87.5300	119.4701	-45.9700	-25.0300	20.0300	37.9700
106	RPP	87.5000	119.5001	-46.0000	-25.0000	20.0000	29.0000
107	RPP	-112.5000	-94.5000	-47.4000	47.4000	49.8000	50.0000
108	FLG	29.9468	0.0000	4.4488	4.2520	0.0000	0.0000
108		0.0000	-2.7953	0.0000	0.0000	0.0000	3.9370
109	POX	15.4823	6.1220	0.0000	0.0000	0.0000	8.8976
109		0.0000	-12.2440	0.0000	9.2126	0.0000	0.0000
110	APHP	15.4823	-6.1220	8.8976	15.4823	6.1220	8.8976
110		15.4823	6.1220	0.0000	15.4823	-6.1220	0.0000
110		8.3170	5.4921	8.8976	8.3170	5.4921	8.8976
110		8.3170	5.4921	0.0000	8.3170	-5.4921	0.0000
111	APHP	8.3170	-5.4921	8.8976	8.3170	5.4921	8.8976
111		8.3170	5.4921	0.0000	8.3170	-5.4921	0.0000
111		0.0000	-6.9488	8.0905	0.0000	6.9488	8.0905
111		0.0000	6.9488	0.0000	0.0000	-6.9488	0.0000
112	TFC	0.0000	0.0000	4.4488	-20.4252	0.0000	0.0000
112		0.0000	-6.9488	0.0000	0.0000	0.0000	2.9528
112		1.4570	0.0000	0.0000	0.0000	0.0000	0.0000
113	TFC	-20.3445	0.0000	4.4488	-15.3543	0.0000	0.0000
113		0.0000	-4.7692	0.0000	0.0000	0.0000	2.0266
113		1.4702	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE A-22. SOLID TABLE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS							
	114	114	115	115	116	116	116	116
TRC	22.6949	-4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	2.7165
TRC	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TRC	22.6949	4.8229	4.4488	11.5039	0.0000	0.0000	0.0000	2.7165
POX	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
POX	30.0300	6.5552	3.2282	0.0000	0.0000	0.0000	0.0000	5.6694
POX	0.0000	-13.1104	0.0000	5.6688	0.0000	0.0000	0.0000	0.0000

TABLE F-23. REGION TABLE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

REGION NUMBER	REGION COMBINATION DATA																			
31	-32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	0	-39	-40	-41	-42	-43	-44	0	0	0	0	0	0	0	0	0	0	0	0	0
54	-55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	-54	-57	-59	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61
56	-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	-59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	-61	-39	-40	-41	-42	-43	-44	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE F-23. REGION TABLE FOR PHONE MAN UNDER M36, 2-1/2 TON TRUCK
(CONTINUED)

REGION NUMBER	REGION COMBINATION DATA									
	0	-63	-64	-65	-66	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0
62	62	-63	-64	-65	-66	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0	0	0
67	67	-68	-60	0	0	0	0	0	0	0
68	68	-69	-60	0	0	0	0	0	0	0
69	69	-70	-60	0	0	0	0	0	0	0
70	70	-71	-60	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0
72	72	-73	-60	0	0	0	0	0	0	0
73	73	-74	-60	0	0	0	0	0	0	0
74	74	-75	-60	0	0	0	0	0	0	0
75	75	-76	-60	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0
77	77	-41	-44	0	0	0	0	0	0	0
78	78	0	0	0	0	0	0	0	0	0
79	79	0	0	0	0	0	0	0	0	0
80	80	-82	0	0	0	0	0	0	0	0
81	81	-83	0	0	0	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0	0	0	0
84	84	-92	0	0	0	0	0	0	0	0
85	85	-93	0	0	0	0	0	0	0	0
86	86	-94	0	0	0	0	0	0	0	0
87	87	-95	0	0	0	0	0	0	0	0
88	88	-96	0	0	0	0	0	0	0	0
89	89	-97	0	0	0	0	0	0	0	0
90	90	-98	0	0	0	0	0	0	0	0

TABLE 4-23. REGION TABLE FOR PHONE MAN UNDER #36, 2-1/2 TON TRUCK
(CONTINUED)

REGION NUMBER	REGION COMBINATION DATA																			
91	91	-99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	104	-105	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	105	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	106	-106	-105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	110	-114	-115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112 CP	1120R	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113 OP	114	-1090P	115	-1080P	116	-108	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE F-24. IDENTIFICATION TABLE FOR PRONE MAN UNDER M36, 2-1/2 TON TRUCK

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	600	0	FRONT TIRE LEFT
2	601	0	FRONT TIRE RIGHT
3	602	0	MID-TIRE LEFT
4	603	0	MID-TIRE RIGHT
5	604	0	MID-TIRE L-IN
6	605	0	MID-TIRE R-IN
7	606	0	REAR TIRE LEFT
8	607	0	REAR TIRE RIGHT
9	608	0	REAR TIRE L-IN
10	609	0	REAR TIRE R-IN
11	610	0	FRONT HUB L
12	611	0	FRONT RIM L
13	612	0	FRONT HUB R
14	613	0	FRONT RIM R
15	614	0	MID-HUB L
16	615	0	MID-RIM L
17	616	0	MID-RIM 2 L
18	617	0	MID-HUB R
19	618	0	MID-RIM 2 R
20	619	0	MID-RIM 2 R
21	620	0	REAR HUB L
22	621	0	REAR RIM L
23	622	0	REAR RIM 2 L
24	623	0	REAR HUB R
25	624	0	REAR RIM R
26	625	0	REAR RIM 2 R
27	626	0	FIRST AXLE
28	627	0	FIRST DIFF
29	628	0	SCND AXLE
30	629	0	SCND DIFF

TABLE 4-24. IDENTIFICATION TABLE FOR PEOPLE MAN UNIFORM 34. 2-1/2 TON TRUCK
(CONTINUED)

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
31	630	0	THIRD AXLE
32	631	0	THIRD DIFF
33	632	0	FRNT SPG L
34	633	0	FRNT SPG R
35	634	0	REAR SPG L
36	635	0	REAR SPG R
37	636	0	PFAR SPG2 L
38	639	0	PFAR SPG2 R
39	900	0	FRAME L
40	901	0	FRAME L
41	902	0	FRAME L
42	903	0	FRAME R
43	904	0	FRAME R
44	905	0	FRAME R
45	906	0	FRAME F
46	907	0	FRAME F
47	908	0	FRAME F
48	909	0	FRAME BACK
49	910	0	FRAME BACK
50	911	0	FRAME BACK
51	912	0	FRAME MID
52	913	0	FRAME MID
53	914	0	FRAME MID
54	915	0	RUMPER CTR U
55	111	0	RUMPER CTR D
56	916	0	RUMPER LFT
57	111	0	INSIDE LFT
58	917	0	RUMPER RIGHT
59	111	0	INSIDE RIGHT
60	918	0	HOOD/CAR

TABLE F-24. IDENTIFICATION TABLE FOR PRONE MAN UNDER M36. 2-1/2 TON TRUCK
(CONTINUED)

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
61	111	0	INSIDE
62	919	0	CAB TOP
63	111	0	INSIDE
64	111	0	GLASS DUM
65	111	0	GLASS DUM
66	111	0	GLASS DUM
67	920	0	FENDER FRT
68	921	0	FENDER TOP L
69	922	0	FENDER
70	923	0	STEP LEFT
71	111	0	DUMMY
72	924	0	FENDER FRT
73	925	0	FENDR TOP R
74	926	0	FENDER REAR LMID
75	927	0	STEP RIGHT
76	111	0	DUMMY
77	700	0	RADIATOR
78	701	0	MOTOR
79	702	0	TRANSMN
80	928	0	RED FRAME L
81	929	0	RED FRAME R
82	111	0	DUMMY
83	111	0	DUMMY
84	930	0	CROSS MBR1
85	931	0	CROSS MBR2
86	932	0	CROSS MBR3
87	933	0	CROSS MBR4
88	934	0	CROSS MBR5
89	935	0	CROSS MBR6
90	936	0	CROSS MBR7

TABLE 4-24. IDENTIFICATION TABLE FOR P-ONE MAN UNDER M36* 2-1/2 TON TRUCK
(CONTINUED.)

SECTION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
91	937	0	CROSS MRR8
92	111	0	DUMMY
93	111	0	DUMMY
94	111	0	DUMMY
95	111	0	DUMMY
96	111	0	DUMMY
97	111	0	DUMMY
98	111	0	DUMMY
99	111	0	DUMMY
100	938	0	RED/BODY
101	939	0	SIDE LT
102	940	0	SIDE RT
103	941	0	SIDE FRNT
104	200	0	FUEL TANK (CRITICAL)
105	201	0	FUEL
106	202	0	FUEL TANK (NONCRITICAL)
107	942	0	TAILGATE
108	108	0	HEAD
109	109	0	THORAX
110	110	0	ABDOMEN
111	111	0	PELVIS
112	112	0	UPPER LEG
113	113	0	ARMS

TABLE 4-25. SOLID TABLE FOR PROJE MAN UNDER M114, 155MM TOWED HOWITZER

SOLID NUM TYPE		SOLID PARAMFTERS					
1	RCC	66.0272	17.6489	96.1366	-45.1826	-26.0862	-30.1216
1		6.5200	0.0000	0.0000	0.0000	0.0000	0.0000
2	RCC	110.7349	43.4609	125.9416	-44.7077	-25.8120	-29.8050
2		4.8320	0.0000	0.0000	0.0000	0.0000	0.0000
3	RCC	110.7349	43.4609	125.9416	-111.9006	-64.6058	-74.6000
3		3.0500	0.0000	0.0000	0.0000	0.0000	0.0000
4	RCC	66.0272	17.6489	96.1366	-54.1428	-31.2594	-36.0950
4		6.3700	0.0000	0.0000	0.0000	0.0000	0.0000
5	RCC	11.8844	-13.6105	60.0416	-13.0501	-7.5345	-8.7000
5		8.0500	0.0000	0.0000	0.0000	0.0000	0.0000
6	RCC	.6309	-27.1785	61.8719	7.2000	4.1569	4.8000
6		1.8000	0.0000	0.0000	0.0000	0.0000	0.0000
7	RCC	.6309	-27.1785	61.8719	7.2000	4.1569	4.8000
7		1.4080	0.0000	0.0000	0.0000	0.0000	0.0000
8	RCC	.6309	-27.1785	61.8719	7.2000	4.1569	4.8000
8		.2700	0.0000	0.0000	0.0000	0.0000	0.0000
9	ROX	3.1394	-24.0013	47.3579	-3.0000	-1.7321	-2.0000
9		-3.9837	-2.3000	7.9674	-4.6263	8.0129	0.0000
10	ROX	.1394	-25.7334	45.3579	.5000	-.8660	0.0000
10		.9000	.5196	.6000	-8.6603	-5.0000	17.3205
11	RCC	-4.0816	-22.8284	49.3977	-.6000	-.3464	-.4000
11		1.7500	0.0000	0.0000	0.0000	0.0000	0.0000
12	ROX	77.1986	10.2423	83.7936	.7500	.4330	.5000
12		-11.8451	-6.8788	23.6902	-12.0000	20.7846	0.0000
13	RCC	11.8844	-13.6105	60.0416	8.9601	5.1731	5.9734
13		8.0500	0.0000	0.0000	0.0000	0.0000	0.0000
14	FCC	35.9479	-2.5071	87.8244	36.8252	21.2610	24.5500
14		2.5000	0.0000	0.0000	0.0000	0.0000	0.0000
15	RCC	72.7731	18.7539	112.3744	-1.9500	-1.1258	-1.3000
15		2.5000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE P-25. SOLID TABLE FOR PRONE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
16 RCC	72.7731	18.7539	112.3744	-55.4253	-31.9998	-36.9500				
16	2.8150	0.0000	0.0000	0.0000	0.0000	0.0000				
17 RCC	17.3478	-13.2459	75.4244	-8.9601	-5.1731	-5.9733				
17	2.8150	0.0000	0.0000	0.0000	0.0000	0.0000				
18 RCC	17.3478	-13.2459	75.4244	18.6001	10.7388	12.4000				
18	2.5000	0.0000	0.0000	0.0000	0.0000	0.0000				
19 RCC	17.3478	-13.2459	75.4244	-8.9601	-5.1731	-5.9733				
19	2.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
20 RCC	8.3877	-18.4190	69.4510	.5625	.3248	0.0000				
20	2.8150	0.0000	0.0000	0.0000	0.0000	0.0000				
21 RCC	15.3421	-8.8244	74.6038	-8.9601	-5.1731	-5.9734				
21	1.0700	0.0000	0.0000	0.0000	0.0000	0.0000				
22 RCC	15.3421	-8.8244	74.6038	-8.9601	-5.1731	-5.9734				
22	.6600	0.0000	0.0000	0.0000	0.0000	0.0000				
23 RCC	15.3421	-8.8244	74.6038	55.4253	31.9998	36.9500				
23	1.8675	0.0000	0.0000	0.0000	0.0000	0.0000				
24 RCC	70.7674	23.1754	111.5538	-1.5000	-.8660	-55.6150				
24	1.8675	0.0000	0.0000	0.0000	0.0000	0.0000				
25 RCC	15.3421	-8.8244	74.6038	55.4253	31.9998	36.9500				
25	1.3675	0.0000	0.0000	0.0000	0.0000	0.0000				
26 RCC	15.3421	-8.8244	74.6038	55.4253	31.9998	36.9500				
26	.6600	0.0000	0.0000	0.0000	0.0000	0.0000				
27 RCC	15.3421	-8.8244	74.6038	-8.9601	-5.1731	-5.9734				
27	1.8675	0.0000	0.0000	0.0000	0.0000	0.0000				
28 RCC	6.3820	-13.9975	68.6305	-2.8500	-1.6455	-1.9000				
28	1.8675	0.0000	0.0000	0.0000	0.0000	0.0000				
29 RCC	3.5320	-15.6430	66.7305	.7516	.4339	.5000				
29	1.8675	0.0000	0.0000	0.0000	0.0000	0.0000				
30 FCC	6.3820	-13.9975	68.6305	-2.8500	-1.6455	-1.9000				
30	.4675	0.0000	0.0000	0.0000	0.0000	0.0000				

TABLE 4-25. SOLID TABLE FOR PROBE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS					
31 FCC	6.3820	-13.9975	68.6305	-2.8500	-1.6455	-1.9000
31	.6600	0.0000	0.0000	0.0000	0.0000	0.0000
32 FCC	89.2985	31.0846	99.1077	-63.7503	-36.8063	-42.5000
32	2.8125	0.0000	0.0000	0.0000	0.0000	0.0000
33 FCC	89.2985	31.0846	99.1077	-1.2000	-.6928	-.8000
33	2.8125	0.0000	0.0000	0.0000	0.0000	0.0000
34 FCC	89.2985	31.0846	99.1077	-63.7503	-36.8063	-42.5000
34	2.4125	0.0000	0.0000	0.0000	0.0000	0.0000
35 FCC	89.2985	31.0846	99.1077	-63.7503	-36.8063	-42.5000
35	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
36 FCC	25.5481	-5.7217	56.6077	-8.9598	-5.1730	-5.9734
36	2.8125	0.0000	0.0000	0.0000	0.0000	0.0000
37 FCC	25.5481	-5.7217	56.6077	-8.9598	-5.1730	-5.9734
37	2.4500	0.0000	0.0000	0.0000	0.0000	0.0000
38 FCC	25.5481	-5.7217	56.6077	-8.9598	-5.1730	-5.9734
38	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39 FCC	16.5880	-10.8948	50.6343	-2.8500	-1.6455	-1.9000
39	2.8125	0.0000	0.0000	0.0000	0.0000	0.0000
40 FCC	13.7380	-12.5403	48.7343	.7500	.4330	.5000
40	2.8125	0.0000	0.0000	0.0000	0.0000	0.0000
41 FCC	16.5880	-10.8948	50.6343	-2.8500	-1.6455	-1.9000
41	1.8125	0.0000	0.0000	0.0000	0.0000	0.0000
42 FCC	16.5880	-10.8948	50.6343	-2.8500	-1.6455	-1.9000
42	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
43 FCC	79.3009	31.0802	94.1077	-16.4063	-9.4722	-10.9375
43	2.1870	0.0000	0.0000	0.0000	0.0000	0.0000
44 FCC	86.7987	35.4143	94.1077	-16.4063	-9.4722	-10.9375
44	1.9790	0.0000	0.0000	0.0000	0.0000	0.0000
45 FCC	86.7987	35.4143	94.1077	-16.4063	-9.4722	-10.9375
45	.3800	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE 4-25. SOLID TABLE FOR PROMF MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
	79.2987	31.0841	94.1077	-.7500	-.4330	-.5000	2.1870	0.0000	0.0000	0.0000
46 RCC	2.1870	0.0000	0.0000	0.0000	0.0000	0.0000	62.8923	21.6119	83.1702	.4330
47 RCC	2.1870	0.0000	0.0000	0.0000	0.0000	0.0000	91.2647	27.6789	99.1077	0.0000
48 RCC	1.1200	0.0000	0.0000	-19.2001	-11.0852	-13.2000	91.2647	27.6789	99.1077	0.0000
49 RCC	.5600	0.0000	0.0000	-22.6407	-13.0716	-15.0938	33.2204	-12.3772	59.4875	24.5265
50 RCC	.9300	0.0000	0.0000	0.0000	0.0000	0.0000	17.6126	25.5800	17.6126	48.9050
51 ARB8	17.6126	-22.8318	56.7900	17.6126	-22.8318	73.3900	25.5800	17.6126	17.6126	73.3900
51	25.5800	-18.2318	73.3900	24.9550	-17.1492	48.9050	16.9876	24.9550	24.9550	48.9050
51	16.9876	-21.7492	56.7900	16.9876	-21.7492	73.3900	24.9550	16.9876	16.9876	73.3900
51	24.9550	-17.1492	73.3900	33.8454	-13.4598	40.7295	25.5800	33.8454	33.8454	40.7295
52 ARP8	25.5800	-18.2318	48.9050	25.5800	-18.2318	59.4875	33.8454	25.5800	25.5800	59.4875
52	33.8454	-13.4598	59.4875	33.8454	-13.4598	73.3900	33.8454	33.8454	33.8454	73.3900
52	24.9550	-17.1492	48.9050	33.2204	-12.3772	63.0150	24.9550	33.2204	33.2204	63.0150
52	33.2204	-12.3772	59.4875	24.9550	-17.1492	40.7295	33.8454	24.9550	24.9550	40.7295
53 ARB8	33.8454	-13.4598	40.7295	55.6250	-.8853	59.4875	55.6250	33.8454	33.8454	59.4875
53	55.6250	-.8853	50.3575	33.8454	-13.4598	40.7295	55.6250	33.8454	33.8454	40.7295
53	33.2204	-12.3772	40.7295	55.0000	.1973	59.4875	55.0000	55.0000	55.0000	59.4875
53	55.0000	.1973	50.3575	33.2204	-12.3772	59.4875	55.0000	33.2204	33.2204	59.4875
54 ARB8	55.6250	-.8853	40.7295	56.7076	-.2603	40.7295	55.6250	56.7076	56.7076	40.7295
54	56.7076	-.2603	50.3575	55.6250	-.8853	50.3575	56.7076	55.6250	55.6250	50.3575
54	44.7750	17.9075	40.7295	45.8576	18.5325	40.7295	44.7750	45.8576	45.8576	40.7295
54	45.8576	18.5325	50.3575	44.7750	17.9075	50.3575	45.8576	44.7750	44.7750	50.3575
55 ARB8	23.4404	4.5622	40.7295	45.2200	17.1367	40.7295	23.4404	45.2200	45.2200	40.7295
55	45.2200	17.1367	50.3575	23.4404	4.5622	59.4875	45.2200	23.4404	23.4404	59.4875
55	22.9954	5.3330	40.7295	44.7750	17.9075	40.7295	22.9954	44.7750	44.7750	40.7295
55	44.7750	17.9075	50.3575	22.9954	5.3330	59.4875	44.7750	22.9954	22.9954	59.4875

TABLE A-25. SOLID TABLE FOR PHONE MAN UNDER M114. 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE		SOLID PARAMETERS					
56	ARR	15.3550	-5.216	48.9050	23.6204	4.2504	40.7295
56		23.6204	4.2504	59.4875	15.3550	-5.216	63.0150
56		14.7300	.5610	48.9050	22.9954	5.3330	40.7295
56		22.9919	5.3310	59.4875	14.7300	.5610	63.0150
57	ARR	7.3876	-5.1216	56.7900	15.3550	-5.216	48.9050
57		15.3550	-5.216	73.3900	7.3876	-5.1216	73.3900
57		6.7626	-4.0390	56.7900	14.7300	.5610	48.9050
57		14.7300	.5610	73.3900	6.7626	-4.0390	73.3900
58	RCC	40.9604	3.1766	40.7295	0.0000	0.0000	-7.000
58		14.4800	0.0000	0.0000	0.0000	0.0000	0.0000
59	RCC	21.7695	-20.4318	63.0150	-1.4000	2.4249	0.0000
59		1.5000	0.0000	0.0000	0.0000	0.0000	0.0000
60	RCC	10.9195	-1.6390	63.0150	1.4000	-2.4249	0.0000
60		1.5000	0.0000	0.0000	0.0000	0.0000	0.0000
61	FOX	19.3446	-21.8318	73.3900	4.2435	2.4500	0.0000
61		-6.250	1.0825	0.0000	0.0000	0.0000	4.0000
62	FOX	8.4946	-3.0390	73.3900	4.2435	2.4500	0.0000
62		.6250	-1.0825	0.0000	0.0000	0.0000	4.0000
63	PCC	22.3445	-21.4277	77.3900	42.5218	24.5500	10.4951
63		1.9300	0.0000	0.0000	0.0000	0.0000	0.0000
64	RCC	30.2253	-16.8777	79.3351	34.6410	20.0000	8.5500
64		4.9800	0.0000	0.0000	0.0000	0.0000	0.0000
65	PCC	43.9648	2.6018	92.7551	3.6373	2.1000	.8978
65		.3750	0.0000	0.0000	0.0000	0.0000	0.0000
66	PCC	64.8663	3.1223	87.8851	3.6373	2.1000	.8978
66		.3750	0.0000	0.0000	0.0000	0.0000	0.0000
67	PCC	65.7678	3.6428	83.0151	3.6373	2.1000	.8978
67		.3750	0.0000	0.0000	0.0000	0.0000	0.0000
68	FCC	68.5037	5.2223	88.7829	.5420	.3129	.1338
68		3.5400	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE F-25. SOLID TABLE FOR PRONE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
	69	PCC	69.0457	5.5352	88.9167	5.2604	3.0371	1.2983		
69	69	PCC	1.0700	0.0000	0.0000	0.0000	0.0000	0.0000		
70	70	PCC	10.3445	-6.431	77.3900	42.5218	24.5500	10.4951		
70	70	PCC	1.9300	0.0000	0.0000	0.0000	0.0000	0.0000		
71	71	PCC	18.2253	3.9069	79.3351	34.6410	20.0000	8.5500		
71	71	PCC	4.9800	0.0000	0.0000	0.0000	0.0000	0.0000		
72	72	PCC	51.9648	23.3864	92.7551	3.6373	2.1000	.8978		
72	72	PCC	.3750	0.0000	0.0000	0.0000	0.0000	0.0000		
73	73	PCC	52.8663	23.9069	87.8851	3.6373	2.1000	.8978		
73	73	PCC	.3750	0.0000	0.0000	0.0000	0.0000	0.0000		
74	74	PCC	53.7678	24.4274	83.0151	3.6373	2.1000	.8978		
74	74	PCC	.3750	0.0000	0.0000	0.0000	0.0000	0.0000		
75	75	PCC	56.5037	26.0069	88.7829	.5420	.3129	.1338		
75	75	PCC	3.9800	0.0000	0.0000	0.0000	0.0000	0.0000		
76	76	PCC	57.0457	26.3198	88.9167	5.2604	3.0371	1.2983		
76	76	PCC	1.0700	0.0000	0.0000	0.0000	0.0000	0.0000		
77	77	PCC	40.1292	-9.8318	47.8150	-10.8500	18.7928	0.0000		
77	77	PCC	1.5000	0.0000	0.0000	0.0000	0.0000	0.0000		
78	78	PCC	35.9542	-2.6005	47.8150	-2.5000	4.3301	0.0000		
78	78	PCC	2.5000	0.0000	0.0000	0.0000	0.0000	0.0000		
79	79	PAW	16.5558	-8.0266	48.1986	6.2354	3.6000	-12.4707		
79	79	PCC	25.4251	14.6792	16.9500	2.5000	-4.3301	0.0000		
80	80	PCC	29.9042	7.8784	47.8150	.7500	-1.2990	0.0000		
80	80	PCC	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000		
81	81	PCC	25.0921	2.2134	43.8150	0.0000	0.0000	13.5000		
81	81	PCC	2.5000	0.0000	0.0000	0.0000	0.0000	0.0000		
82	82	PCC	25.0921	2.2134	57.3150	-21.8000	0.0000	0.0000		
82	82	PCC	.3570	0.0000	0.0000	0.0000	0.0000	0.0000		
83	83	PCC	3.2421	2.2134	57.3150	-5.000	0.0000	0.0000		
83	83	PCC	8.0000	0.0000	0.0000	0.0000	0.0000	0.0000		

TABLE 4-25. SOLID TABLE FOR PRONE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
99 RCC	50.5851	-17.5414	32.4000	4.1525	-7.1923	0.0000	0.0000	0.0000	0.0000	0.0000
99	2.4800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
100 RCC	27.8301	21.8710	32.4000	-4.1525	7.1923	0.0000	0.0000	0.0000	0.0000	0.0000
100	2.4800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
101 RCC	54.2076	-23.8162	34.8800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	24.0000
101	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
102 RCC	24.2076	28.1454	34.8800	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	24.0000
102	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
103 RCC	54.7376	-24.7341	32.4000	7.5350	-13.0510	0.0000	0.0000	0.0000	0.0000	0.0000
103	.8700	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
104 RCC	23.6776	29.0633	32.4000	-7.5350	13.0510	0.0000	0.0000	0.0000	0.0000	0.0000
104	.8700	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
105 RCC	54.7376	-24.7341	32.4000	2.4050	-4.1656	0.0000	0.0000	0.0000	0.0000	0.0000
105	9.6900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
106 RCC	23.6776	29.0633	32.4000	-2.4050	4.1656	0.0000	0.0000	0.0000	0.0000	0.0000
106	9.6900	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
107 RCC	57.1426	-28.8997	32.4000	5.1300	-8.8854	0.0000	0.0000	0.0000	0.0000	0.0000
107	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
108 RCC	21.2726	33.2289	32.4000	-5.1300	8.8854	0.0000	0.0000	0.0000	0.0000	0.0000
108	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
109 RCC	57.1426	-28.8997	32.4000	5.1300	-8.8854	0.0000	0.0000	0.0000	0.0000	0.0000
109	12.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
110 RCC	21.2726	33.2289	32.4000	-5.1300	8.8854	0.0000	0.0000	0.0000	0.0000	0.0000
110	24.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
111 FOX	57.3505	3.7482	35.8395	-7.7000	13.3368	0.0000	0.0000	0.0000	0.0000	0.0000
111	0.0000	0.0000	-10.8000	8.9201	5.1500	0.0000	0.0000	0.0000	0.0000	0.0000
112 RCC	59.8224	14.0666	25.0395	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-14.5000
112	3.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
113 RCC	59.8224	14.0666	10.5395	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-9.7395
113	1.7000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE H-25. SOLID TABLE FOR PHONE MAN UNDER M114. 155MM TOWED HOWITZER
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS									
114 PCX	70.5186	7.5403	.8000	-10.3923	-6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
114 ARR	-11.0000	19.0526	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-8.000
115 ARR	60.7405	-2.1234	25.0295	79.3669	25.3506	25.0295	25.3506	25.0295	25.3506	25.0295
115	79.3669	25.3506	26.0295	60.7405	-2.1234	26.0295	-2.1234	26.0295	26.0295	26.0295
115	60.2405	-1.2574	25.0295	77.5805	24.3192	25.0295	24.3192	25.0295	25.0295	25.0295
115	77.5805	24.3192	26.0295	60.2405	-1.2574	26.0295	-1.2574	26.0295	26.0295	26.0295
116 ARR	46.2605	22.9566	25.0295	79.3669	25.3506	25.0295	25.3506	25.0295	25.3506	25.0295
116	79.3669	25.3506	26.0295	46.2605	22.9566	26.0295	22.9566	26.0295	26.0295	26.0295
116	46.7605	22.0906	25.0295	77.5805	24.3192	25.0295	24.3192	25.0295	25.0295	25.0295
116	77.5805	24.3192	26.0295	46.7605	22.0906	26.0295	22.0906	26.0295	26.0295	26.0295
117 ARR	32.7178	-40.9101	18.4595	42.1015	-22.4398	18.4595	-22.4398	18.4595	18.4595	18.4595
117	42.1015	-22.4398	35.8395	32.7178	-40.9101	35.8395	-40.9101	35.8395	35.8395	35.8395
117	25.5514	-36.7726	18.4595	37.9640	-15.2734	18.4595	-15.2734	18.4595	18.4595	18.4595
117	37.9640	-15.2734	35.8395	25.5514	-36.7726	35.8395	-36.7726	35.8395	35.8395	35.8395
118 ARR	32.4678	-40.4771	18.9595	41.8515	-22.0068	18.9595	-22.0068	18.9595	18.9595	18.9595
118	41.8515	-22.0068	35.3395	32.4678	-40.4771	35.3395	-40.4771	35.3395	35.3395	35.3395
118	25.8014	-37.2056	18.9595	38.2140	-15.7065	18.9595	-15.7065	18.9595	18.9595	18.9595
118	38.2140	-15.7065	35.3395	25.8014	-37.2056	35.3395	-37.2056	35.3395	35.3395	35.3395
119 ARR	-31.1152	-151.4715	0.0000	32.7178	-40.9101	0.0000	-40.9101	0.0000	0.0000	0.0000
119	32.7178	-40.9101	35.8395	-31.1152	-151.4715	35.8395	-151.4715	35.8395	35.8395	35.8395
119	-38.2816	-147.3340	0.0000	25.5514	-36.7726	0.0000	-36.7726	0.0000	0.0000	0.0000
119	25.5514	-36.7726	35.8395	-38.2816	-147.3340	35.8395	-147.3340	35.8395	35.8395	35.8395
120 ARR	-31.3652	-151.0385	.5000	32.4678	-40.4771	.5000	-40.4771	.5000	.5000	.5000
120	32.4678	-40.4771	35.3395	-31.3652	-151.0385	35.3395	-151.0385	35.3395	35.3395	35.3395
120	-38.0316	-147.7670	.5000	25.8014	-37.2056	.5000	-37.2056	.5000	.5000	.5000
120	25.8014	-37.2056	35.3395	-38.0316	-147.7670	35.3395	-147.7670	35.3395	35.3395	35.3395
121 FOX	-31.1152	-151.4715	0.0000	-7.0001	-12.1244	0.0000	-12.1244	0.0000	0.0000	0.0000
121	0.0000	0.0000	7.2000	-7.1664	4.1375	0.0000	4.1375	0.0000	0.0000	0.0000
122 FOX	-31.5483	-151.2215	.5000	-6.7501	-11.6914	.5000	-11.6914	.5000	.5000	.5000
122	0.0000	0.0000	6.2000	-6.3004	3.6375	6.2000	3.6375	6.2000	6.2000	6.2000

TABLE 4-24. SOLID TABLE FOR PRONE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

SOLIC NUM TYPE	SOLID PARAMETERS									
	RAW	-22.1952	-156.6216	0.0000	-7.0001	-12.1244	0.0000	0.0000		
123	RAW	0.0000	0.0000	-16.8000	-25.0604	14.4065	0.0000	0.0000		
123	APP8	-1.3411	18.0816	18.4595	19.3465	16.9730	18.4595	18.4595		
124		19.3465	16.9730	35.8395	-1.3411	18.0816	35.8395	35.8395		
124		-1.3411	9.8066	18.4595	23.4840	9.8066	18.4595	18.4595		
124	APP8	23.4840	9.8066	35.8395	-1.3411	9.8066	35.8395	35.8395		
125		-1.0911	17.6486	18.9595	19.5965	16.5400	18.9595	18.9595		
125		19.5965	16.5400	35.3395	-1.0911	17.6486	35.3395	35.3395		
125		-1.5911	10.2396	18.9595	23.2340	10.2397	18.9595	18.9595		
125		23.2340	10.2396	35.3395	-1.5911	10.2396	35.3395	35.3395		
126	APP8	-129.0066	18.0813	0.0000	-1.3411	18.0816	18.4595	18.4595		
126		-1.3411	18.0816	35.8395	-129.0066	18.0813	7.2000	7.2000		
126		-129.0066	9.8063	0.0000	-1.3411	9.8066	18.4595	18.4595		
126		-1.3411	9.8066	35.8395	-129.0066	9.8063	7.2000	7.2000		
127	APP8	-128.7566	17.6483	.5000	-1.0911	17.6486	18.9595	18.9595		
127		-1.0911	17.6486	35.3395	-128.7566	17.6483	6.7000	6.7000		
127		-129.2566	10.2393	.5000	-1.5911	10.2396	18.9595	18.9595		
127		-1.5911	10.2396	35.3395	-129.2566	10.2393	6.7000	6.7000		
128	POX	-129.0066	18.0813	0.0000	-14.0001	0.0000	0.0000	0.0000		
128		0.0000	0.0000	7.2000	0.0000	-8.2750	0.0000	0.0000		
129	POX	-129.0066	17.5813	.5000	-13.5001	0.0000	0.0000	0.0000		
129		0.0000	0.0000	6.2000	0.0000	-7.2750	0.0000	0.0000		
130	PAW	-129.0067	28.3814	0.0000	-14.0001	0.0000	0.0000	0.0000		
130		0.0000	0.0000	-16.8000	-14.0001	0.0000	0.0000	0.0000		
131	APP8	59.8253	-26.3463	60.1150	-16.8000	-28.9062	0.0000	0.0000		
131		56.0148	-28.5463	80.1150	60.2583	-26.0963	60.1150	60.1150		
131		50.8253	-10.7578	60.1150	55.5817	-28.7963	80.1150	80.1150		
131		47.0148	-12.9578	80.1150	51.2583	-10.5078	60.1150	60.1150		
132	APP8	57.8402	-12.3081	40.7295	46.5817	-13.2078	80.1150	80.1150		
132		53.6833	-14.7081	60.1150	58.2732	-12.0581	40.7295	40.7295		
132					53.2503	-14.9581	60.1150	60.1150		

TABLE H-2c. SOLID: TABLE FOR PHONE MAN UNDER M114. 155MM TOWED HOWITZER.
(CONTINUED)

SOLID NUM TYPE	SOLID PARAMETERS					
142 TFC	22.6949	-4.8229	4.4488	11.5039	0.0000	2.7165
142	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000
143 TFC	22.6949	4.8229	4.4488	11.5039	0.0000	2.7165
143	2.0276	1.7323	0.0000	0.0000	0.0000	0.0000
144 PCX	30.0300	6.5552	3.2282	0.0000	0.0000	5.6694
144	0.0000	-13.1104	0.0000	5.6688	0.0000	0.0000

TABLE B-24. REGION TABLE FOR PRNF MAN UNDER M114, 155MM TOWED HOWITZER

REGION NUMBER	REGION COMBINATION DATA															
	1 OR	2	3	4	5	6	7	8	9 OR	10 OR	11	12 OR	13 OR	14 OR	15 OR	16 OR
1 OR	-1	-30R	4	-2	-3	-13	0	0	0	0	0	0	0	0	0	0
2	-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	-4	-13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-3	-6	-9	-13	-28	-39	0	0	0	0	0	0	0	0	0	0
5	-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 OR	100R	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 OR	160R	16	-14	-18	-170R	17	-19	-16	0	0	0	0	0	0	0	0
10	-200R	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 OR	14	-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 OR	180R	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 OR	240R	23	-25	-270R	27	-21	-23	-28	0	0	0	0	0	0	0	0
14 OR	-30	-270R	28	29	0	0	0	0	0	0	0	0	0	0	0	0
15 OR	-26	-24	-270R	21	-22	-23	-280R	30	0	0	0	0	0	0	0	0
16 OR	-27	-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 OR	-240R	220R	31	-29	0	0	0	0	0	0	0	0	0	0	0	0
18 OR	330P	32	-34	-43	-79	-360R	36	-37	0	0	0	0	0	0	0	0
19 OR	-39	-790R	39	-41	-36	-790R	39	40	0	0	0	0	0	0	0	0
20	-33	-35	-360R	37	-38	-32	-390R	41	0	0	0	0	0	0	0	0
21	-40	-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	-330R	380R	42	-40	0	0	0	0	0	0	0	0	0	0	0	0
23	-3	-17	-27	-36	0	0	0	0	0	0	0	0	0	0	0	0
24	460R	43	-440P	43	47	0	0	0	0	0	0	0	0	0	0	0
25	-46	-45	-47	0	0	0	0	0	0	0	0	0	0	0	0	0
26	-46	-47	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	-320R	400P	50	-68	0	0	0	0	0	0	0	0	0	0	0	0
28	-590P	52	-500P	53	-50	-770R	540R	55	0	0	0	0	0	0	0	0
29	-80	-81	-770P	56	-820R	-60	-135	0	0	0	0	0	0	0	0	0
30	-132	-134	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE F-26. REGION TABLE FOR PHONE MAN (UNDER M114, 155MM TOWED HOWITZER)
(CONTINUED)

REGION NUMBER	REGION COMBINATION DATA														
	61	-63	-51	0	0	0	0	0	0	0	0	0	0	0	0
24	61	-63	-51	0	0	0	0	0	0	0	0	0	0	0	0
25	62	-70	-57	0	0	0	0	0	0	0	0	0	0	0	0
26	630R	640R	650R	660R	670R	680R	69	0	0	0	0	0	0	0	0
27	700R	710R	720R	730R	740R	750R	76	0	0	0	0	0	0	0	0
28	12	-1	-16	-23	-32	-43	-48	-49	-69	0	0	0	0	0	0
	-76	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	59	-13	0	0	0	0	0	0	0	0	0	0	0	0	0
30	60	-13	-135	0	0	0	0	0	0	0	0	0	0	0	0
31	770R	78	0	0	0	0	0	0	0	0	0	0	0	0	0
32	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	79	-78	0	0	0	0	0	0	0	0	0	0	0	0	0
34	80	-77	0	0	0	0	0	0	0	0	0	0	0	0	0
35	81	-82	-80	0	0	0	0	0	0	0	0	0	0	0	0
36	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	83	-82	0	0	0	0	0	0	0	0	0	0	0	0	0
38	86	-57	-135	0	0	0	0	0	0	0	0	0	0	0	0
39	84	-1350R	850R	87	0	0	0	0	0	0	0	0	0	0	0
40	88	-58	-89	-54	0	0	0	0	0	0	0	0	0	0	0
41	89	-90	-58	0	0	0	0	0	0	0	0	0	0	0	0
42	90	-91	-54	-55	0	0	0	0	0	0	0	0	0	0	0
43	91	-92	0	0	0	0	0	0	0	0	0	0	0	0	0
44	92	-93	-56	0	0	0	0	0	0	0	0	0	0	0	0
45	93	-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	94	-93	0	0	0	0	0	0	0	0	0	0	0	0	0
47	95	-58	-96	-97	-98	-116	-117	-124	0	0	0	0	0	0	0
48	96	-97	-98	-111	-115	-117	-117	-124	0	0	0	0	0	0	0
49	97	-99	-117	0	0	0	0	0	0	0	0	0	0	0	0
50	98	-100	-124	0	0	0	0	0	0	0	0	0	0	0	0
51	99	-101	-103	-105	0	0	0	0	0	0	0	0	0	0	0
52	100	-102	-104	-106	0	0	0	0	0	0	0	0	0	0	0

TABLE 4-26. REGION TABLE FOR PRONT MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

REGION NUMBER	REGION COMBINATION DATA													
	103	0	0	0	0	0	0	0	0	0	0	0	0	0
53	104	0	0	0	0	0	0	0	0	0	0	0	0	0
54	105	-103	-107	0	0	0	0	0	0	0	0	0	0	0
55	106	-104	-106	0	0	0	0	0	0	0	0	0	0	0
56	107	-103	0	0	0	0	0	0	0	0	0	0	0	0
57	108	-104	0	0	0	0	0	0	0	0	0	0	0	0
58	109	-107	0	0	0	0	0	0	0	0	0	0	0	0
59	110	-108	0	0	0	0	0	0	0	0	0	0	0	0
60	111	-115	-116	-112	0	0	0	0	0	0	0	0	0	0
61	112	-113	0	0	0	0	0	0	0	0	0	0	0	0
62	113	-114	0	0	0	0	0	0	0	0	0	0	0	0
63	114	0	0	0	0	0	0	0	0	0	0	0	0	0
64	115OR	116	0	0	0	0	0	0	0	0	0	0	0	0
65 OR	117	-118	-120OR	119	-118	-120	-122	-123OR	121	-123OR	121	0	0	0
66 OR	-120	-122	-123	0	0	0	0	0	0	0	0	0	0	0
67 OR	118OR	120OR	122	0	0	0	0	0	0	0	0	0	0	0
68 CF	124	-125	-127OR	126	-125	-127	-129	-130	-129	-129	-128	0	0	0
69 OR	-127	-129	-130	0	0	0	0	0	0	0	0	0	0	0
70	125OR	127OR	129	0	0	0	0	0	0	0	0	0	0	0
71	123	0	0	0	0	0	0	0	0	0	0	0	0	0
72	130	0	0	0	0	0	0	0	0	0	0	0	0	0
73	101	0	0	0	0	0	0	0	0	0	0	0	0	0
74	102	0	0	0	0	0	0	0	0	0	0	0	0	0
75 CF	131OR	132	0	0	0	0	0	0	0	0	0	0	0	0
76	133OR	134	0	0	0	0	0	0	0	0	0	0	0	0
77	136	0	0	0	0	0	0	0	0	0	0	0	0	0
78	137	0	0	0	0	0	0	0	0	0	0	0	0	0
79	138	-142	-143	0	0	0	0	0	0	0	0	0	0	0
80	139	0	0	0	0	0	0	0	0	0	0	0	0	0
81 CF	140OR	141	0	0	0	0	0	0	0	0	0	0	0	0

TARLF H-26. REGION TARLF FOR PRONF MAN UNDER M114. 155MM TOWED HOWITZER
(CONTINUED)

REGION NUMPER	REGION COMBINATION DATA				
	81 CP	142	-1360P	143	-1360P
				144	-136
				0	0
				0	0

TABLE 4-27. IDENTIFICATION TABLE FOR PHONE MAN UNDER M114, 155MM TOWED HOWITZER

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
1	400	0	GUN TUBE
2	0	2	AIR, GUN TUBE
3	401	0	COVER, GUN TUBE
4	402	0	BREECH RING
5	403	0	COUNTERBALANCE, OUTER
6	404	0	COUNTERBALANCE, INNER
7	405	0	COUNTERBALANCE, ROD
8	406	0	REECHBLOCK CARRIER
9	500	0	RECUPERATOR, OUTER
10	501	0	RECUPERATOR, GAS CHAMBER
11	502	0	RECUPERATOR, OIL
12	503	0	COUNTERRECOIL, OUTER
13	504	0	COUNTERRECOIL, OIL
14	505	0	COUNTERRECOIL, ROD
15	506	0	RECOIL, OUTER
16	507	0	RECOIL, OIL
17	508	0	RECOIL, ROD
18	300	0	CRADLE
19	509	0	REPLENISHER, OUTER
20	510	0	REPLENISHER, INNER
21	511	0	REPLENISHER, ROD
22	512	0	VARIABLE RECOIL ASY
23	301	0	TOP CARRIAGE
24	302	0	FWUILLIPRATOR BRACKET, RIGHT
25	303	0	FWUILLIPRATOR BRACKET, LEFT
26	304	0	FWUILLIPRATOR RIGHT
27	305	0	FWUILLIPRATOR LEFT
28	306	0	YUKE
29	307	0	TRUNION, RIGHT
30	308	0	TRUNION, LEFT

TABLE 4-27. IDENTIFICATION TABLE FOR PHONE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
31	309	0	ELEVATING PINION AND SHAFT
32	310	0	TEL MOUNT BRACKET
33	311	0	ELEVATING ARC
34	312	0	ELEVATING WORM WHEEL
35	313	0	ELEVATING WORM GEAR
36	314	0	ELEVATING WHEEL SHAFT
37	315	0	ELEVATING WHEEL
38	316	0	TELESCOPE MOUNT BRACKET
39	317	0	TELESCOPE + PANORAMIC SCOPE
40	318	0	TRAVERSING ARC
41	319	0	TRAVERSING PINION
42	320	0	TRAVERSING WORM WHEEL
43	321	0	TRAVERSING WORM GEAR
44	322	0	TRAVERSING MECH SHAFT
45	323	0	TRAVERSING WHEEL ROD
46	324	0	TRAVERSING WHEEL
47	100	0	BOTTOM CARRIAGE
48	101	0	BOTTOM CARRIAGE
49	102	0	TRAIL HOUSING, RIGHT
50	103	0	TRAIL HOUSING, LEFT
51	104	0	AXLE HOUSING, RIGHT
52	105	0	AXLE HOUSING, LEFT
53	106	0	AXLE, RIGHT
54	107	0	AXLE, LEFT
55	108	0	BRAKE DRUM, RIGHT
56	109	0	BRAKE DRUM, LEFT
57	110	0	WHEEL, RIGHT
58	125	0	WHEEL, LEFT
59	112	0	TIRE, RIGHT
60	113	0	TIRE, LEFT

TABLE 4-27. IDENTIFICATION TABLE FOR PROBE MAN UNDER M114, 155MM TOWED HOWITZER
(CONTINUED)

REGION NUMBER	ITEM CODE	SPACE CODE	DESCRIPTION
61	114	0	FIRING JACK BRACKET
62	115	0	FIRING JACK
63	116	0	FIRING JACK PLUNGER
64	117	0	FIRING JACK FLOAT
65	118	0	TRAVELING LOCK
66	119	0	TRAIL, RIGHT
67	0	4	AIR, TRAIL RIGHT
68	120	0	TRAIL, LEFT
69	0	4	AIR, TRAIL LEFT
70	121	0	SPADE, RIGHT
71	122	0	SPADE, LEFT
72	123	0	HANDBRAKE, RIGHT
73	124	0	HANDBRAKE, LEFT
74	325	0	SHIELD, RIGHT
75	326	0	SHIELD, LEFT
76	76	0	HEAD
77	77	0	THORAX
78	78	0	ABDOMEN
79	79	0	PELVIS
80	80	0	UPPER LEG
81	81	0	ARMS

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