

## **APPENDIX C**

### **SBCT STATIONING DESCRIPTION**



## APPENDIX C

### SBCT STATIONING DESCRIPTION

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## A. STATIONING

### Alternative 1 – No Action

**Appendix Table 2.2.a** Description of Personnel Stationed at USARAK by Subunit under the No Action Alternative.

Major Unit	Unit	Personnel		
		Total	Fort Richardson	Fort Wainwright
172 <sup>nd</sup> BRIGADE	HHC/172 <sup>nd</sup> BRIGADE	304	0	300
172 <sup>nd</sup> BRIGADE	1-501 PIR	570	570	0
172 <sup>nd</sup> BRIGADE	1-17 IN BN	570	0	570
172 <sup>nd</sup> BRIGADE	2-1 IN BN	570	0	570
172 <sup>nd</sup> BRIGADE	562 <sup>nd</sup> EN CO	154	41	113
172 <sup>nd</sup> BRIGADE	172 <sup>nd</sup> SB	559	95	464
172 <sup>nd</sup> BRIGADE	21 <sup>st</sup> SIG CO	186	186	0
172 <sup>nd</sup> BRIGADE	E/1 CAV	101	0	101
172 <sup>nd</sup> BRIGADE	4-11 FA BN	453	114	339
172 <sup>nd</sup> BRIGADE	572 <sup>nd</sup> MI BN	85	0	85
172 <sup>nd</sup> BRIGADE	68 <sup>th</sup> IN DET	51	12	39
<i>BRIGADE Total</i>		<i>3,599</i>	<i>1,018</i>	<i>2,581</i>
Echelons Above Brigade	4-123 AVN	575	0	575
Echelons Above Brigade	68 <sup>th</sup> Med CO	59	0	59
Echelons Above Brigade	HQ, STB	29	29	0
Echelons Above Brigade	98 <sup>th</sup> Maint CO	223	140	83
Echelons Above Brigade	95 <sup>th</sup> CHEM CO	60	60	0
Echelons Above Brigade	C/84 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	C/864 <sup>th</sup> EN CO	140	0	140
Echelons Above Brigade	716 <sup>th</sup> ORD CO	22	22	0
Echelons Above Brigade	9 <sup>th</sup> Army Band	40	0	40
Echelons Above Brigade	20 <sup>th</sup> PA DET	8	8	0
Echelons Above Brigade	203 <sup>rd</sup> PSB	128	50	78
Echelons Above Brigade	267 <sup>th</sup> FB	67	46	21
Echelons Above Brigade	164 <sup>th</sup> MP CO	184	105	79
Echelons Above Brigade	28 <sup>th</sup> MP DET	100	46	54
Echelons Above Brigade	534 <sup>th</sup> QM DET	22	22	0
USAG/Tenants		1,181	498	683
<i>Other USARAK (EAB+USAG/Tenants)</i>		<i>2,978</i>	<i>1,166</i>	<i>1,812</i>
<i>USARAK Total</i>		<i>6,577</i>	<i>2,184</i>	<i>4,393</i>

## Alternative 2 – Transformation With No New Infrastructure

**Appendix Table 2.2.b** Description of Personnel Stationed at USARAK by Subunit under Alternative 2.

Major Unit	Unit	Personnel		
		Total	Fort Richardson	Fort Wainwright
SBCT	HHC/SBCT	121	0	121
SBCT	IN BN (1-501 <sup>st</sup> PIR)	682	682	0
SBCT	IN BN (1-17 IN)	682	0	682
SBCT	IN BN (2-1 IN)	682	0	682
SBCT	EN CO (562 <sup>nd</sup> )	120	0	120
SBCT	BSB	390	0	390
SBCT	21 <sup>st</sup> SIG CO	74	0	74
SBCT	RSTA SQDN	423	0	423
SBCT	4-11 <sup>th</sup> FA BN	290	0	290
SBCT	MI CO	67	0	67
SBCT	AT CO	53	0	53
SBCT	CSSC	234	0	234
<i>SBCT Total</i>		<i>3,818</i>	<i>682</i>	<i>3,136</i>
Echelons Above Brigade	4-123 AVN	575	0	575
Echelons Above Brigade	68 <sup>th</sup> Med CO	59	0	59
Echelons Above Brigade	HQ, STB	29	29	0
Echelons Above Brigade	98 <sup>th</sup> Maint CO	223	223	0
Echelons Above Brigade	95 <sup>th</sup> CHEM CO	60	60	0
Echelons Above Brigade	C/84 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	C/864 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	716 <sup>th</sup> ORD CO	22	22	0
Echelons Above Brigade	9 <sup>th</sup> Army Band	40	0	40
Echelons Above Brigade	20 <sup>th</sup> PA DET	8	8	0
Echelons Above Brigade	203 <sup>rd</sup> PSB	128	50	78
Echelons Above Brigade	267 <sup>th</sup> FB	67	46	21
Echelons Above Brigade	164 <sup>th</sup> MP CO	184	105	79
Echelons Above Brigade	28 <sup>th</sup> MP DET	100	46	54
Echelons Above Brigade	534 <sup>th</sup> QM DET	22	22	0
Echelons Above Brigade	68 <sup>th</sup> IN DET	0	0	0
USAG/Tenants		1,181	498	683
<i>Echelons Above Brigade Total</i>		<i>2,978</i>	<i>1,389</i>	<i>1,589</i>
<i>USARAK Total</i>		<i>6,796</i>	<i>2,071</i>	<i>4,725</i>

### Alternative 3 – Transformation With New Infrastructure

**Appendix Table 2.2.c** Description of Personnel Stationed at USARAK by Subunit under Alternative 3.

Major Unit	Unit	Personnel		
		Total	Fort Richardson	Fort Wainwright
SBCT	HHC/SBCT	121	0	121
SBCT	IN BN (new 4-23)	682	682/0 <sup>1</sup>	0/682 <sup>1</sup>
SBCT	IN BN (1-17 IN)	682	0	682
SBCT	IN BN (2-1 IN)	682	0	682
SBCT	EN CO (562 <sup>nd</sup> )	120	0	120
SBCT	BSB	390	0	390
SBCT	SIG CO (21 <sup>st</sup> SIG CO)	74	0	74
SBCT	RSTA SQDN (4-14 <sup>th</sup> )	423	0	423
SBCT	FA BN (4-11 <sup>th</sup> )	290	0	290
SBCT	MI CO (572 <sup>nd</sup> )	67	0	67
SBCT	AT CO (52 <sup>nd</sup> )	53	0	53
SBCT	CSSC (310 <sup>th</sup> )	234	0	234
<i>SBCT Total</i>		<i>3,818</i>	<i>682/0<sup>1</sup></i>	<i>3,136/3,818<sup>1</sup></i>
Echelons Above Brigade	1-501 <sup>st</sup> (ABN BN)	814	814	0
Echelons Above Brigade	4-123 AVN	575	0	575
Echelons Above Brigade	68 <sup>th</sup> Med CO	59	0	59
Echelons Above Brigade	HQ, STB	29	29	0
Echelons Above Brigade	98 <sup>th</sup> Maint CO	223	223	0
Echelons Above Brigade	95 <sup>th</sup> CHEM CO	60	60	0
Echelons Above Brigade	C/84 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	C/864 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	716 <sup>th</sup> ORD CO	22	22	0
Echelons Above Brigade	9 <sup>th</sup> Army Band	40	0	40
Echelons Above Brigade	20 <sup>th</sup> PA DET	8	8	0
Echelons Above Brigade	203 <sup>rd</sup> PSB	128	50	78
Echelons Above Brigade	267 <sup>th</sup> FB	67	46	21
Echelons Above Brigade	164 <sup>th</sup> MP CO	184	105	79
Echelons Above Brigade	28 <sup>th</sup> MP DET	100	46	54
Echelons Above Brigade	534 <sup>th</sup> QM DET	22	22	0
Echelons Above Brigade	68 <sup>th</sup> IN DET	0	0	0
USAG/Tenants		1,181	498	683
<i>Echelons Above Brigade Total</i>		<i>3,792</i>	<i>2,203</i>	<i>1,589</i>
<i>USARAK Total</i>		<i>7,610</i>	<i>2,885/2,203<sup>1</sup></i>	<i>4,725/5,407<sup>1</sup></i>

<sup>1</sup> Interim/End State

**Alternative 4 – Transformation With New Infrastructure and Airborne Task Force**

**Appendix Table 2.2.d** Description of Personnel Stationed at USARAK by Subunit under Alternative 4.

Major Unit	Unit	Personnel		
		Total	Fort Richardson	Fort Wainwright
SBCT	HHC/SBCT	121	0	121
SBCT	IN BN (new 4-23)	682	682/0 <sup>1</sup>	0/682 <sup>1</sup>
SBCT	IN BN (1-17 IN)	682	0	682
SBCT	IN BN (2-1 IN)	682	0	682
SBCT	EN CO (562 <sup>nd</sup> )	120	0	120
SBCT	BSB	390	0	390
SBCT	SIG CO (21 <sup>st</sup> SIG CO)	74	0	74
SBCT	RSTA SQDN (4-14 <sup>th</sup> )	423	0	423
SBCT	FA BN (4-11 <sup>th</sup> )	290	0	290
SBCT	MI CO (572 <sup>nd</sup> )	67	0	67
SBCT	AT CO (52 <sup>nd</sup> )	53	0	53
SBCT	CSSC (310 <sup>th</sup> )	234	0	234
<i>SBCT Total</i>		<i>3,818</i>	<i>682/0<sup>1</sup></i>	<i>3,136/3,818<sup>1</sup></i>
Echelons Above Brigade	1-501 <sup>st</sup> (ABN BN TF)	1,116	1,116	0
Echelons Above Brigade	4-123 AVN	575	0	575
Echelons Above Brigade	68 <sup>th</sup> Med CO	59	0	59
Echelons Above Brigade	HQ, STB	29	29	0
Echelons Above Brigade	98 <sup>th</sup> Maint CO	223	223	0
Echelons Above Brigade	95 <sup>th</sup> CHEM CO	60	60	0
Echelons Above Brigade	C/84 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	C/864 <sup>th</sup> EN CO	140	140	0
Echelons Above Brigade	716 <sup>th</sup> ORD CO	22	22	0
Echelons Above Brigade	9 <sup>th</sup> Army Band	40	0	40
Echelons Above Brigade	20 <sup>th</sup> PA DET	8	8	0
Echelons Above Brigade	203 <sup>rd</sup> PSB	128	50	78
Echelons Above Brigade	267 <sup>th</sup> FB	67	46	21
Echelons Above Brigade	164 <sup>th</sup> MP CO	184	105	79
Echelons Above Brigade	28 <sup>th</sup> MP DET	100	46	54
Echelons Above Brigade	534 <sup>th</sup> QM DET	22	22	0
Echelons Above Brigade	68 <sup>th</sup> IN DET	0	0	0
USAG/Tenants		1,181	498	683
<i>Echelons Above Brigade Total</i>		<i>4,094</i>	<i>2,505</i>	<i>1,589</i>
<i>USARAK Total</i>		<i>7,912</i>	<i>3,187/2,505<sup>1</sup></i>	<i>4,725/5,407<sup>1</sup></i>

<sup>1</sup> Interim/End State



## **B. TRAINING**

### **Description of Current 172<sup>nd</sup> Infantry Brigade (Separate) [172<sup>nd</sup> SIB] and Other USARAK Units Mission – No Action Alternative**

The mission of U.S. Army Alaska is to train and equip forces to deploy rapidly in support of combat operations and other operations worldwide, as directed; to conduct operations in cold regions and mountainous terrain; to serve as the land force component command for joint operations; and to provide installation support for Alaska.

The mission of the 172<sup>nd</sup> SIB is to deploy worldwide when ordered, secure a lodgment, and conduct military operations in support of U.S. national interests.

Mission essential tasks for the 172<sup>nd</sup> SIB include: ready response force operations, attack, defense, lodgment, combat service support, and protecting the force.

### **Description of Proposed SBCT and Other USARAK Units Mission – Alternatives 2, 3, 4**

The SBCT has been designed as a full spectrum, early entry combat force. The brigade has utility, confirmed through extensive analysis, in all operational environments against all projected future threats, but it is optimized primarily for employment in small scale contingencies in complex and urban terrain, confronting low-end and mid-range threats that may employ both conventional and asymmetric capabilities. Under the command and control of a division fully integrated within the joint contingency force, the SBCT will deploy very rapidly, execute early entry, and conduct effective combat operations immediately on arrival to prevent, contain, stabilize, or resolve a conflict. The SBCT will participate in major theater war as a subordinate maneuver component within a division or corps, in a variety of possible roles. The SBCT will also participate in stability and support operations as an initial entry force and/or as a guarantor force to provide security for stability forces.

Although its organization resembles that of a separate brigade, the SBCT is a divisional brigade that will normally fight as the first-to-deploy brigade under a division HQ. Pre-configured in ready-to-fight combined arms packages, the entire SBCT is intended to deploy within 96 hours of “first aircraft wheels up” and begin operations immediately upon arrival at the aerial port of debarkation (APOD). The Brigade cannot conduct forced entry, but it provides the joint force commander an improved capability to arrive immediately behind forced entry forces and begin operations to shape the battlespace and expedite decision.

The major fighting components of the SBCT are three motorized, combined arms infantry battalions, supported by additional organic combat, combat support, and combat service support organizations, described further below.

The mission of the SBCT infantry battalion is to destroy, capture, or repel enemy assault by fire, close combat, and counterattack. The SBCT infantry battalion will have the ability to impose decisive action through dismounted infantry assault, which is supported by fire from within the battalion or attached units. The infantry battalion will be mobile and have the ability to operate in any situation or type of terrain.

The Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron’s mission is to develop situational awareness of the SBCT’s area of operations. The squadron performs its mission by observing and reporting enemy activities in and along key positions and routes, and

by conducting reconnaissance with the intent of finding an indirect approach to the threat's center of gravity. The RSTA Squadron conducts reconnaissance to obtain information utilizing visual observation and detection by sensors related to the activities and resources of the threat, local populace, factions, transnationals, paramilitary organizations and/or criminal elements in an area of operations.

The mission of the Field Artillery Battalion is to destroy, neutralize, or suppress the enemy by cannon fire. To fulfill its mission, the battalion will provide supporting fires while focusing on the requirement to conduct responsive, proactive, counter-battery fires. The battalion will consist of three firing batteries, a headquarters and headquarters battery with a target acquisition platoon consisting of one Q47, two Q36 radars, and a medical platoon. Meteorological and survey teams are also included in the battalion, but the Brigade Support Battalion provides all other combat service support.

The mission of the SBCT anti-tank company is to (1) provide accurate, long-range anti-armor fire support to enhance lethality survivability and mobility of the brigade, and (2) deliver direct fire against enemy formations and fortifications to accelerate the enemy's defeat. As a key unit in brigade operations, the SBCT anti-tank company will be highly mobile and will have the ability to operate effectively as a unit or separately, in support of infantry battalions.

The mission of the SBCT engineer company is to (1) provide mobility and force protection support in small scale contingencies and (2) provide lines of communication, counter-mobility, survivability, sustainment engineering support during major stability and support operations or major theater wars. The engineer company will be a rapidly deployable unit that will provide tactical mobility and situational awareness to the brigade. In addition, the company will provide intelligence information, integration of obstacles in firing situation, combat service support, command and control, and force protection.

As part of the SBCT's larger intelligence team, the military intelligence company's mission is to provide timely, accurate, relevant, and synchronized intelligence, surveillance, and reconnaissance support to the SBCT. Situational awareness is paramount to providing this support. The military intelligence company provides situational awareness through information gathering operations, analysis, and dissemination of prepared intelligence.

The SBCT brigade signal company's mission is to provide communications, data transfer and relay, and information exchange within the SBCT and to external networks. The brigade signal company deploys, installs, operates, and maintains the communications and computer networks supporting SBCT operations. The company integrates with the division Army Force, Joint Task Force, or theater networks.

The Headquarters and Headquarters Company have two missions. (1) The Headquarters section provides personnel, equipment and staff expertise for command, control, communications and information management. This enables the brigade commander to plan and execute missions decisively. (2) The Headquarters Company provides administrative and logistical support to each headquarters section. Together the Headquarters and Headquarters Company provide command and control to the brigade to fight and win small-scale contingency operations in urban terrain. The various elements within the Headquarters and Headquarters Company can establish several command posts within the SBCT's battle-space, and each element is equipped to be mobile and agile. Aviation, air and missile defense, combat and construction engineers, and military police would be excluded in order to deploy rapidly. If needed, support would be provided by other companies such as the Brigade Support Battalion.

The mission of the Brigade Support Battalion is to provide direct support, logistics, and combat health support to the brigade. This battalion is designed to provide all classes of supply and services to sustain combat operations to include food, water, fuel, maintenance, transportation, medical, and ammunition, combat health support and limited maintenance support.

**Description of Live Fire Training – No Action Alternative**

**Appendix Table 2.2.e** Annual Training Requirements for 172<sup>nd</sup> SIB and Other USARAK Units for Each Range Under the No Action Alternative.

Range Type	Range	Soldier User Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Small Arms Ranges	Zero Range	5,292	8,672	0	0	0	0	13,964
	Qualification Range	14,452	29,389	0	0	0	0	43,841
	Pistol Range	1,239	2,254	0	0	0	0	3,493
	KD Range	156	144	0	0	0	0	300
	Sniper Field Fire Range	184	136	0	0	0	0	320
	Grenade Launcher Range	708	1,452	0	0	0	0	2,160
	MG 10 Meter Range	725	1,440	0	0	0	0	2,165
	MG Transition Range	817	2,217	0	0	0	0	3,034
	Helicopter Door Gunnery Range	72	93	0	0	0	0	165
	Total	23,645	45,797	0	0	0	0	69,442
Major Weapons Range	MK 19 Range	61	443	0	0	0	0	504
	AT4 Range	1,020	2,360	0	0	0	0	3,380
	Indirect Artillery	2,283	9,089	0	0	0	0	11,372
	Mortars	264	528	0	0	0	0	792
	Hand Grenade Range	785	1,610	0	0	0	0	2,395
	Demolition Range (claymore)	36	108	0	0	0	0	144
	Demo Range – other	486	972	0	0	0	0	1,458
	Total	4,935	15,110	0	0	0	0	20,045
Collective Range	ISBC	972	0	1,944	0	0	0	2,916
	IPBC	648	0	1,296	0	0	0	1,944
	MPTR	0	0	144	0	0	0	144
	BAX	0	0	0	0	0	0	0
	CAMTF (UAC)	570	4,560	0	0	0	0	5,130
	CALFEX	0	5,130	0	0	1,944	0	7,074
	Total	2,190	9,690	3,384	0	1,944	0	17,208

**Appendix Table 2.2.e cont.** Annual Training Requirements for 172<sup>nd</sup> SIB and Other USARAK Units for Each Range Under the No Action Alternative.

Range Type	Range	Soldier User Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
<b>Non-Live Fire</b>	Hand Grenade Qualification	1,569	3,220	0	0	0	0	4,789
<b>All Ranges</b>	Total	32,339	73,817	3,384	0	1,944	0	111,484

**Description of Live Fire Training – Alternative 2**

**Appendix Table 2.2.f** Annual Training Requirements for Proposed SBCT (Including 501<sup>st</sup> as one of three SBCT Battalions) and Other USARAK Units Under Alternative 2.

Range Type	Range	Soldier User Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
<b>Small Arms Ranges</b>	Zero Range	6,827	9,366	0	0	0	0	16,192
	Qualification Range	18,643	31,740	0	0	0	0	50,383
	Pistol Range	1,598	2,434	0	0	0	0	4,033
	KD Range	201	156	0	0	0	0	357
	Sniper Field Fire Range	237	147	0	0	0	0	384
	Grenade Launcher Range	913	1,568	0	0	0	0	2,481
	MG 10 Meter Range	935	1,555	0	0	0	0	2,490
	MG Transition Range	1,054	2,394	0	0	0	0	3,448
	Helicopter Door Gunnery Range	93	100	0	0	0	0	193
	Total	30,501	49,460	0	0	0	0	79,961
<b>Major Weapons Systems Ranges</b>	MK 19 Range	79	478	0	0	0	0	557
	AT4 Range	1,316	2,549	0	0	0	0	3,865
	Indirect Artillery	0	5,232	0	0	0	0	5,232
	Mortars	444	888	0	0	0	0	1,332
	Hand Grenade Range	1,013	1,739	0	0	0	0	2,751
	Demolition Range (claymore)	45	117	0	0	0	0	162
	Demo Range – other	0	1,458	0	0	0	0	1,458
	Total	2,897	12,461	0	0	0	0	15,357
<b>Collective Ranges</b>	ISBC	1,166	0	2,430	0	0	0	3,596
	IPBC	778	0	1,620	0	0	0	2,398
	MPTR	183	0	1,089	0	0	0	1,272
	BAX	0	0	0	0	324	0	324
	CAMTF	684	5,700	0	0	0	0	6,384
	CALFEX	0	6,413	0	0	2,333	0	8,746
	Total	2,811	12,113	5,139	0	2,657	0	22,720

**Appendix Table 2.2.f cont.** Annual Training Requirements for Proposed SBCT (Including 501<sup>st</sup> as 1 of 3 SBCT Battalions) and Other USARAK Units Under Alternative 2.

Range Type	Range	Soldier User Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Non-Live Fire Ranges</b>	Hand Grenade Qualification	2,024	3,478	0	0	0	0	5,502
<b>Total</b>		38,233	77,512	5,139	0	2,657	0	123,540

**Description of Live Fire Training – Alternative 3**

**Appendix Table 2.2.g** Annual Training Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> PIR) Under Alternative 3.

Range Type	Range	Soldier User Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Small Arms Ranges</b>	Zero Range	6,212	10,771	0	0	0	0	16,983
	Qualification Range	16,965	36,501	0	0	0	0	53,466
	Pistol Range	1,454	2,799	0	0	0	0	4,253
	KD Range	183	179	0	0	0	0	362
	Sniper Field Fire Range	216	169	0	0	0	0	385
	Grenade Launcher Range	831	1,803	0	0	0	0	2,634
	MG 10 Meter Range	851	1,788	0	0	0	0	2,639
	MG Transition Range	959	2,754	0	0	0	0	3,713
	Helicopter Door Gunnery Range	85	116	0	0	0	0	201
	<b>Total</b>		27,756	56,880	0	0	0	0
<b>Major Weapons System Ranges</b>	MK 19 Range	72	550	0	0	0	0	622
	AT4 Range	1,197	2,931	0	0	0	0	4,128
	Indirect Artillery	0	6,017	0	0	0	0	6,017
	Mortars	404	1,021	0	0	0	0	1,425
	Hand Grenade Range	922	2,000	0	0	0	0	2,922
	Demolition Range (claymore)	45	135	0	0	0	0	180
	Demo Range – other	0	1,677	0	0	0	0	1,677
	<b>Total</b>		2,640	14,331	0	0	0	0

**Appendix Table 2.2.g cont.** Annual Training Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> PIR) Under Alternative 3.

Range Type	Range	Soldier User Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
Collective Ranges	ISBC	1,061	0	2,795	0	0	0	3,856
	IPBC	708	0	1,863	0	0	0	2,571
	MPTR	167	0	1,252	0	0	0	1,419
	BAX	0	0	0	0	373	0	373
	CAMTF	622	6,555	0	0	0	0	7,177
	CALFEX	0	7,375	0	0	2,683	0	10,058
	Total	2,558	13,930	5,910	0	3,056	0	25,454
Non-Live Fire Ranges	Hand Grenade Qualification	1,842	3,999	0	0	0	0	5,841
	Total	34,796	89,140	5,910	0	3,056	0	132,902

**Description of Live Fire Training – Alternative 4**

**Appendix Table 2.2.h** Annual Training Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> Airborne Task Force) Under Alternative 4.

Range Type	Range	Soldier User Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
Small Arms Ranges	Zero Range	12,425	10,771	0	0	0	0	23,195
	Qualification Range	33,930	36,501	0	0	0	0	70,431
	Pistol Range	2,909	2,799	0	0	0	0	5,708
	KD Range	366	179	0	0	0	0	545
	Sniper Field Fire Range	432	169	0	0	0	0	601
	Grenade Launcher Range	1,662	1,803	0	0	0	0	3,465
	MG 10 Meter Range	1,702	1,788	0	0	0	0	3,490
	MG Transition Range	1,918	2,754	0	0	0	0	4,672
	Helicopter Door Gunnery Range	169	116	0	0	0	0	285
	Total	55,513	56,880	0	0	0	0	112,393

**Appendix Table 2.2.h cont.** Annual Training Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> Airborne Task Force) Under Alternative 4.

Range Type	Range	Soldier User Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Major Weapons Systems Ranges</b>	MK 19 Range	143	550	0	0	0	0	693
	AT4 Range	2,395	2,931	0	0	0	0	5,326
	Indirect Artillery	0	6,017	0	0	0	0	6,017
	Mortars	808	1,021			0	0	1,829
	Hand Grenade Range	1,844	2,000	0	0	0	0	3,844
	Demolition Range (claymore)	90	135	0	0	0	0	225
	Demo Range – other	0	1,677	0	0	0	0	1,677
	Total	5,280	14,331	0	0	0	0	19,611
<b>Collective Ranges</b>	ISBC	2,122	0	2,795	0	0	0	4,917
	IPBC	1,416	0	1,863	0	0	0	3,279
	MPTR	334	0	1,252	0	0	0	1,586
	BAX	0	0	0	0	373	0	373
	CAMTF	1,244	6,555	0	0	0	0	7,799
	CALFEX	0	7,375	0	0	2,683	0	1,008
	Total	5,116	13,930	5,910	0	3,056	0	18,962
<b>Non-Live Fire Range</b>	Hand Grenade Qualification	3,684	3,999	0	0	0	0	7,683
	Total	69,593	89,140	5,910	0	3,056	0	158,649

## Description of Maneuver Training

### Maneuver Training Space Requirements

The requirements for maneuver training areas are shown under the heading of throughput requirements for platoon, company, and battalion areas. The area is expressed in terms of square kilometer days (km<sup>2</sup> days). This is calculated by combining the area required for each task, the number of units performing the task, the number of days the task requires, and the number of times each unit performs the task over the course of a year. This data is based on the information in TC 25-1. For example, a light infantry platoon requires 16.5 km<sup>2</sup> to conduct an attack, performs the mission 4 times per year, and requires 2 days to complete the task. In the 172<sup>nd</sup> SIB there are 27 platoons. The throughput requirement is then computed as follows.

$$\begin{array}{ccccccc}
 \frac{\text{Area}}{\text{km}^2} & \times & \frac{\text{Iterations}}{\text{Year}} & \times & \frac{\text{Days}}{\text{Task}} & \times & \frac{\text{Unit Density}}{\text{Platoon}} & \times & \frac{\text{Total Area}}{\text{(km}^2 \text{ Days)}} \\
 16.5 & & 4 & & 2 & & 27 & & 3,564
 \end{array}$$

## Description of Maneuver Training – No Action Alternative

**Appendix Table 2.2.i** Maneuver Training Space Requirements for 172<sup>nd</sup> SIB and Other USARAK Units Under No Action Alternative.

Major Unit	Unit	Km <sup>2</sup> Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
<b>172<sup>nd</sup> SIB</b>	1-501 PIR	13,604	0	0	0	3,852	0	17,456
	1-17 IN BN	0	500	12,104	1000	3,852	0	17,456
	2-1 IN BN	0	500	12,104	1000	3,852	0	17,456
	562 <sup>nd</sup> EN CO	0	200	2,400	200	0	0	2,800
	172 <sup>nd</sup> SB	0	100	280	100	0	0	480
	E/1 CAV	0	200	1,860	100	0	0	2,160
	4-11 FA BN	0	400	2,860	100	0	0	3,360
	572 <sup>nd</sup> MI BN	0	132	0	0	0	0	132
	Total SIB	13,604	2,032	31,608	2,500	11,556	0	61,300
<b>Other USARAK Units</b>	HHC, 4-123 AVN	0	0	0	0	0	0	0
	B CO (UH-60)	0	6	6	0	12	0	24
	C CO (CH-47)	0	6	6	0	12	0	24
	C/123 <sup>rd</sup> AVN	0	0	0	0	0	0	0
	68 <sup>th</sup> Med CO	0	12	6	0	6	0	24
	98 <sup>th</sup> Maint CO	6	6	0	0	12	0	24
	95 <sup>th</sup> CHEM CO	0	6	6	0	12	0	24
	C/84 <sup>th</sup> EN CO	1,000	0	0	0	1,800	0	2,800
	C/864 <sup>th</sup> EN CO	0	200	800	200	1,600	0	2,800
	716 <sup>th</sup> ORD CO	0	6	6	0	12	0	24
	164 <sup>th</sup> MP CO	0	6	6	0	12	0	24
	534 <sup>th</sup> QM DET	0	6	6	0	12	0	24
	Total All Other USARAK	1,006	254	842	200	3,490	0	5,792
<b>All</b>	Total	14,610	2,286	32,450	2,700	15,046	0	67,092



## Description of Maneuver Training – Alternative 2

**Appendix Table 2.2.j** Maneuver Training Space Requirements for SBCT (Including 501<sup>st</sup> PIR) and Other USARAK Units Under Alternative 2.

Major Unit	Unit	Km <sup>2</sup> Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
SBCT	HHC/SBCT	0	288	1,000	0	1,400	0	2,688
	IN BN (1-501 <sup>st</sup> PIR)	11,264	0	0	0	11,000	1,000	23,264
	IN BN (1-17 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	IN BN (2-1 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	EN CO (562 <sup>nd</sup> )	0	500	500	0	1800	0	2,800
	BSB	0	120	120	0	240	0	480
	RSTA SQDN	0	1,000	5,000	1,000	9,508	1,000	17,508
	155 IAV BN (4-11 <sup>th</sup> )	0	500	1,000	360	1,500	0	3,360
	MI CO	0	50	50	0	100	0	200
	AT CO	0	180	180	0	360	0	720
	Total SBCT	11,264	4,638	20,378	3,360	53,908	4,000	97,548
Other USARAK	CSSC	0	12	0	12	24	0	48
	HHC, 4-123 AVN	0	0	0	0	0	0	0
	B CO (UH-60)	0	6	6	0	12	0	24
	C CO (CH-47)	0	6	6	0	12	0	24
	C/123 <sup>rd</sup> AVN	0	0	0	0	0	0	0
	68 <sup>th</sup> Med CO	0	12	6	0	6	0	24
	98 <sup>th</sup> Maint CO	6	6	0	0	12	0	24
	95 <sup>th</sup> CHEM CO	0	6	6	0	12	0	24
	C/84 <sup>th</sup> EN CO	1,000	0	0	0	1,800	0	2,800
	C/864 <sup>th</sup> EN CO	0	200	800	200	1,600	0	2,800
	716 <sup>th</sup> ORD CO	0	6	6	0	12	0	24
	164 <sup>th</sup> MP CO	0	6	6	0	12	0	24
	534 <sup>th</sup> QM DET	0	6	6	0	12	0	24
	Total All Other USARAK	1,006	266	842	212	3,514	0	5,840
<b>All</b>	Total	12,270	4,904	21,220	3572	57,422	4,000	103,388

### Description of Maneuver Training – Alternative 3

**Appendix Table 2.2.k** Maneuver Training Space Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> PIR) Under Alternative 3.

Major Unit	Unit	Km <sup>2</sup> Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
SBCT	HHC/SBCT	0	288	1,000	0	1,400	0	2,688
	IN BN (new)	11,264	0	0	0	11,000	1,000	23,264
	IN BN (1-17 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	IN BN (2-1 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	EN CO (562 <sup>nd</sup> )	0	500	500	0	1800	0	2,800
	BSB	0	120	120	0	240	0	480
	RSTA SQDN	0	1,000	5,000	1,000	9,508	1,000	17,508
	155 IAV BN (4-11 <sup>th</sup> )	0	500	1,000	360	1,500	0	3,360
	MI CO	0	50	50	0	100	0	200
	AT CO	0	180	180	0	360	0	720
	Total SBCT	11,264	4,638	20,378	3,360	53,908	4,000	97,548
Other USARAK	CSSC	0	12	0	12	24	0	48
	1-501 <sup>st</sup> (ABN BN)	13,604	0	0	0	3,852	0	17,456
	HHC, 4-123 AVN	0	0	0	0	0	0	0
	B CO (UH-60)	0	6	6	0	12	0	24
	C CO (CH-47)	0	6	6	0	12	0	24
	C/123 <sup>rd</sup> AVN	0	0	0	0	0	0	0
	68 <sup>th</sup> Med CO	0	12	6	0	6	0	24
	98 <sup>th</sup> Maint CO	6	6	0	0	12	0	24
	95 <sup>th</sup> CHEM CO	0	6	6	0	12	0	24
	C/84 <sup>th</sup> EN CO	1,000	0	0	0	1,800	0	2,800
	C/864 <sup>th</sup> EN CO	0	200	800	200	1,600	0	2,800
	716 <sup>th</sup> ORD CO	0	6	6	0	12	0	24
	164 <sup>th</sup> MP CO	0	6	6	0	12	0	24
	534 <sup>th</sup> QM DET	0	6	6	0	12	0	24
Total All Other USARAK	14,610	266	842	212	7,366	0	23,296	
<b>All</b>	Total	25,874	4,904	21,220	3,572	61,074	4,000	120,844

## Description of Maneuver Training – Alternative 4

**Appendix Table 2.2.1** Maneuver Training Space Requirements for SBCT and Other USARAK Units (Including 501<sup>st</sup> Airborne Task Force) Under Alternative 4.

Major Unit	Unit	Km <sup>2</sup> Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
SBCT	HHC/SBCT	0	288	1,000	0	1,400	0	2,688
	IN BN (new)	11,264	0	0	0	11,000	1,000	23,264
	IN BN (1-17 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	IN BN (2-1 IN)	0	1,000	6,264	1,000	14,000	1,000	23,264
	EN CO (562 <sup>nd</sup> )	0	500	500	0	1800	0	2,800
	BSB	0	120	120	0	240	0	480
	RSTA SQDN	0	1,000	5,000	1,000	9,508	1,000	17,508
	155 IAV BN (4-11 <sup>th</sup> )	0	500	1,000	360	1,500	0	3,360
	MI CO	0	50	50	0	100	0	200
	AT CO	0	180	180	0	360	0	720
	Total All Other USARAK	11,264	4,638	20,378	3,360	53,908	4,000	97,548
Other USARAK	CSSC	0	12	0	12	24	0	48
	1-501 <sup>st</sup> (ABN BN)	27,208	0	0	0	7,704	0	34,912
	HHC, 4-123 AVN	0	0	0	0	0	0	0
	B CO (UH-60)	0	6	6	0	12	0	24
	C CO (CH-47)	0	6	6	0	12	0	24
	C/123 <sup>rd</sup> AVN	0	0	0	0	0	0	0
	68 <sup>th</sup> Med CO	0	12	6	0	6	0	24
	98 <sup>th</sup> Maint CO	6	6	0	0	12	0	24
	95 <sup>th</sup> CHEM CO	0	6	6	0	12	0	24
	C/84 <sup>th</sup> EN CO	1,000	0	0	0	1,800	0	2,800
	C/864 <sup>th</sup> EN CO	0	200	800	200	1,600	0	2,800
	716 <sup>th</sup> ORD CO	0	6	6	0	12	0	24
	164 <sup>th</sup> MP CO	0	6	6	0	12	0	24
	534 <sup>th</sup> QM DET	0	6	6	0	12	0	24
Total All Other USARAK	28,214	266	842	212	11,218	0	40,752	
<b>All</b>	<b>Total</b>	<b>39,478</b>	<b>4,904</b>	<b>21,220</b>	<b>3,572</b>	<b>65,126</b>	<b>4,000</b>	<b>138,300</b>

### Training Load

Training load is used to describe the collective impact of all mission activities that occur on a given parcel of land. Mission activities include individual training events, unit training events, testing activities, and institutional training. A few specific examples of mission activities are an infantry company field training exercise (FTX), combat training center rotation, individual gunnery, basic combat training, and combat vehicle testing. Each may be part of the training load at an Army installation.

ATTACC measures training load for mission activities in terms of maneuver impact miles, or MIMs. One MIM has the equivalent impact on soil erosion as an M1A2 tank driving one mile in an armor battalion FTX.

MIMs are calculated Army-wide for each type of unit and exercises that unit conducts. This process involves identification of military unit type, military training event, types and numbers of vehicles, and the number of miles each vehicle drives in a typical training day for that event.

Vehicle impact factors that are included are the vehicle severity factor (relative impact of a vehicle on land condition as compared to the standard vehicle – an M1A2 tank), vehicle off-road factor (the portion of vehicle mileage typically driven off improved roads), and the vehicle conversion factor (the width of the area impacted by a given vehicle as compared to the width of the area impacted by an M1A2 tank). Vehicle impact factors for each vehicle in the ATTACC database are identified in Table D-1 in the ATTACC handbook. The IAV (Stryker) is not included in that table. Stryker values are vehicle severity – 0.86, vehicle conversion – 0.54, and vehicle off-road – 0.85.

Event severity factors (the relative impact of an event on land condition as compared to the standard event – an armor battalion FTX) are also included in MIM calculations. Event severity factors for each major unit type/event in the ATTACC database are identified in tables D-2 (Heavy Maneuver Units) and D-3 (Light Maneuver Units) in the ATTACC handbook. SBCT event severity factors are the same as those for a mechanized unit (Gordon Weith, personal communication 2002).

Thus, on an Army-wide basis, all standard military training events for each military unit are standardized as how they would compare to one M1A2 tank driving one mile in an armor battalion FTX (1 MIM). For example, a light infantry battalion situational training exercise (STX) would produce 1,362 MIMs each time it is conducted, compared to an armor battalion FTX, which would produce 20,250 MIMs each time it is conducted. The armor battalion FTX would produce almost 15 times the impact on soil erosion as would the light infantry battalion STX.

### Description of Maneuver Training – No Action Alternative

**Appendix Table 2.2.m** Maneuver Impact Miles for 172<sup>nd</sup> SIB and Other USARAK Units Under No Action Alternative.

Major Unit	Unit	MIMs						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
172 <sup>nd</sup> SIB	1-501 PIR	3,100	0	0	0	0	0	3,100
	1-17 IN BN	0	0	3,300	1,000	6,200	0	10,500
	2-1 IN BN	0	0	3,300	1,000	6,200	0	10,500
	562 <sup>nd</sup> EN CO	0	100	300	0	0	0	400
	172 <sup>nd</sup> SB	0	100	0	0	0	0	100
	21 <sup>st</sup> Signal CO	0	50	0	0	0	0	50
	E/1 CAV	0	0	600	300	3,100	0	4,000
	4-11 FA BN	0	0	600	0	600	0	1,200
	572 <sup>nd</sup> MI BN	0	50	0	0	0	0	50
	Total SIB	3,100	300	8,100	2,300	16,100	0	29,900

**Appendix Table 2.2.m cont.** Maneuver Impact Miles for 172<sup>nd</sup> SIB and Other USARAK Units Under No Action Alternative.

Major Unit	Unit	MIMs						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Other USARAK Units	HHC, 4-123 AVN	0	25	25	0	0	0	50
	B CO (UH-60)	0	25	25	0	0	0	50
	C CO (CH-47)	0	25	25	0	0	0	50
	C/123 <sup>rd</sup> AVN	0	25	25	0	0	0	50
	68 <sup>th</sup> Med CO	0	25	25	0	0	0	50
	HQ, STB	0	25	25	0	0	0	50
	98 <sup>th</sup> Maint CO	0	25	25	0	0	0	50
	95 <sup>th</sup> CHEM CO	0	25	25	0	0	0	50
	C/84 <sup>th</sup> EN CO	200	0	0	0	400	0	600
	C/864 <sup>th</sup> EN CO	0	100	200	0	300	0	600
	716 <sup>th</sup> ORD CO	0	25	25	0	0	0	50
	164 <sup>th</sup> MP CO	0	25	25	0	0	0	50
	Total All Other USARAK	200	350	450	0	700	0	1,700
<b>All</b>	<b>Total</b>	<b>3,300</b>	<b>650</b>	<b>8,550</b>	<b>2,300</b>	<b>16,800</b>	<b>0</b>	<b>31,600</b>

**Description of Maneuver Training – Alternative 2**

**Appendix Table 2.2.n** Maneuver Impact Miles for SBCT (Including 501<sup>st</sup> PIR) and Other USARAK Units Under Alternative 2.

Major Unit	Unit	MIMs						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
SBCT	HHC/SBCT	0	1,000	0	0	0	0	1000
	IN BN (1-501 <sup>st</sup> PIR)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (1-17 IN)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (2-1 IN)	0	2,000	8,000	0	15,000	0	25,000
	EN CO (562 <sup>nd</sup> )	0	1,000	4,000	0	5,000	0	10,000
	BSB	0	0	1,000	0	1,000	0	2,000
	SIG CO (21 <sup>st</sup> SIG CO)	0	0	1,000	0	1,000	0	2,000
	RSTA SQDN	0	1,100	10,000	0	20,000	0	31,100
	155 IAV BN (4-11 <sup>th</sup> )	0	2,000	9,000	0	9,000	0	20,000
	MI CO	0	1,000	2,000	0	2,000	0	5,000
	AT CO	0	1,000	2,000	0	2,000	0	5,000
	Total SBCT	0	13,100	53,000	0	85,000	0	151,100

**Appendix Table 2.2.n cont.** Maneuver Impact Miles for SBCT (Including 501<sup>st</sup> PIR) and Other USARAK Units Under Alternative 2.

Major Unit	Unit	MIMs						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Other USARAK	CSSC	0	1,200	0	0	0	0	1200
	HHC, 4-123 AVN	0	50	50	0	0	0	100
	B CO (UH-60)	0	50	50	0	0	0	100
	C CO (CH-47)	0	50	50	0	0	0	100
	C/123 <sup>rd</sup> AVN	0	50	50	0	0	0	100
	68 <sup>th</sup> Med CO	0	50	50	0	0	0	100
	HQ, STB	0	50	50	0	0	0	100
	HHC, CSG	0	50	50	0	0	0	100
	98 <sup>th</sup> Maint CO	0	50	50	0	0	0	100
	95 <sup>th</sup> CHEM CO	0	50	50	0	100	0	200
	C/84 <sup>th</sup> EN CO	200	0	0	0	600	0	800
	C/864 <sup>th</sup> EN CO	200	100	100	0	400	0	800
	716 <sup>th</sup> ORD CO	0	50	50	0	0	0	100
	164 <sup>th</sup> MP CO	0	50	50	0	0	0	100
	Total Other USARAK	400	1,850	650	0	1,100	0	4,000
All	Total	400	14,950	53,650	0	96,000	0	155,100

**Description of Maneuver Training – Alternative 3**

**Appendix Table 2.2.o** Maneuver Impact Miles for SBCT and Other USARAK Units (Including 501<sup>st</sup> PIR) Under Alternative 3.

Major Unit	Unit	Km <sup>2</sup> Days						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
SBCT	HHC/SBCT	0	1,000	0	0	0	0	1000
	IN BN (new)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (1-17 IN)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (2-1 IN)	0	2,000	8,000	0	15,000	0	25,000
	EN CO (562 <sup>nd</sup> )	0	1,000	4,000	0	5,000	0	10,000
	BSB	0	0	1,000	0	1,000	0	2,000
	SIG CO (21 <sup>st</sup> SIG CO)	0	0	1,000	0	1,000	0	2,000
	RSTA SQDN	0	1,100	10,000	0	20,000	0	31,100
	155 IAV BN (4-11 <sup>th</sup> )	0	2,000	9,000	0	9,000	0	20,000
	MI CO	0	1,000	2,000	0	2,000	0	5,000
	AT CO	0	1,000	2,000	0	2,000	0	5,000
	Total SBCT	0	13,100	53,000	0	85,000	0	151,100

**Appendix Table 2.2.o cont.** Maneuver Impact Miles for SBCT and Other USARAK Units (Including 501<sup>st</sup> PIR) Under Alternative 3.

Major Unit	Unit	Km <sup>2</sup> Days						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
Other USARAK	CSSC	0	1,200	0	0	0	0	1200
	1-501 <sup>st</sup> (ABN BN)	3,100	0	0	0	0	0	3100
	HHC, 4-123 AVN	0	50	50	0	0	0	100
	B CO (UH-60)	0	50	50	0	0	0	100
	C CO (CH-47)	0	50	50	0	0	0	100
	C/123d AVN	0	50	50	0	0	0	100
	68 <sup>th</sup> Med CO	0	50	50	0	0	0	100
	HQ, STB	0	50	50	0	0	0	100
	HHC,CSG	0	50	50	0	0	0	100
	98 <sup>th</sup> Maint CO	0	50	50	0	0	0	100
	95 <sup>th</sup> CHEM CO	0	50	50	0	100	0	200
	C/84 <sup>th</sup> EN CO	200	0	0	0	600	0	800
	C/864 <sup>th</sup> EN CO	200	100	100	0	400	0	800
	716 <sup>th</sup> ORD CO	0	50	50	0	0	0	100
	164 <sup>th</sup> MP CO	0	50	50	0	0	0	100
Total Other USARAK	3500	1,850	650	0	1,100	0	7,100	
<b>All</b>	Total	3500	14,950	53,650	0	96,000	0	158,200

**Description of Maneuver Training – Alternative 4**

**Appendix Table 2.2.p** Maneuver Impact Miles for SBCT and Other USARAK Units (Including 501<sup>st</sup> Airborne Task Force) Under Alternative 4.

Major Unit	Unit	MIMs						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
SBCT	HHC/SBCT	0	1,000	0	0	0	0	1000
	IN BN (new)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (1-17 IN)	0	2,000	8,000	0	15,000	0	25,000
	IN BN (2-1 IN)	0	2,000	8,000	0	15,000	0	25,000
	EN CO (562 <sup>nd</sup> )	0	1,000	4,000	0	5,000	0	10,000
	BSB	0	0	1,000	0	1,000	0	2,000
	SIG CO (21 <sup>st</sup> SIG CO)	0	0	1,000	0	1,000	0	2,000
	RSTA SQDN	0	1,100	10,000	0	20,000	0	31,100
	155 IAV BN (4-11 <sup>th</sup> )	0	2,000	9,000	0	9,000	0	20,000
	MI CO	0	1,000	2,000	0	2,000	0	5,000
	AT CO	0	1,000	2,000	0	2,000	0	5,000
	Total SBCT	0	13,100	53,000	0	85,000	0	151,100

**Appendix Table 2.2.p cont.** Maneuver Impact Miles for SBCT and Other USARAK Units  
 (Including 501<sup>st</sup> Airborne Task Force) Under Alternative 4.

Major Unit	Unit	MIMs						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Other USARAK	CSSC	0	1,200	0	0	0	0	1200
	1-501 <sup>st</sup> (ABN BN TF)	6,200	0	0	0	0	0	6200
	HHC, 4-123 AVN	0	50	50	0	0	0	100
	B CO (UH-60)	0	50	50	0	0	0	100
	C CO (CH-47)	0	50	50	0	0	0	100
	C/123 <sup>rd</sup> AVN	0	50	50	0	0	0	100
	68 <sup>th</sup> Med CO	0	50	50	0	0	0	100
	HQ, STB	0	50	50	0	0	0	100
	HHC,CSG	0	50	50	0	0	0	100
	98 <sup>th</sup> Maint CO	0	50	50	0	0	0	100
	95 <sup>th</sup> CHEM CO	0	50	50	0	100	0	200
	C/84 <sup>th</sup> EN CO	200	0	0	0	600	0	800
	C/864 <sup>th</sup> EN CO	200	100	100	0	400	0	800
	716 <sup>th</sup> ORD CO	0	50	50	0	0	0	100
	164 <sup>th</sup> MP CO	0	50	50	0	0	0	100
	Total Other USARAK	6600	1,850	650	0	1,100	0	10,200
<b>All</b>	Total	6600	14,950	53,650	0	96,000	0	161,300



## C. SYSTEMS ACQUISITION

Units will be equipped to the maximum extent from commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) equipment to accelerate development and reduce costs. To meet its demanding deployment threshold, the brigade’s design capitalizes on the widespread use of common vehicular platforms, including highly-mobile, medium-weight interim armored vehicles (IAV), coupled with the deliberate minimization of the personnel and logistical footprint in theater.

### Description of Weapons Systems Acquisition – No Action Alternative

**Appendix Table 2.2.q** Weapons Systems Utilized by 172<sup>nd</sup> SIB and Other USARAK Units Under No Action Alternative.

Weapons Systems		Number						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Small Arms	M9 P98152	61	123					184
	M16 R95035	558	1,117					1,675
	M4 R97234	155	310					465
	M203 L46007	77	153					230
	40MM SINGLE SHOT RIFLE L44595	155	310					465
	M249 M09009	0	0					0
	M249 LMG M39263	87	175					262
	M240B M92841	19	38					57
	M2 L91975	14	28					42
	MK-19 M92362	15	30					45
	M24 R95387	3	6					9
	TWS CREW SERVED Z38366	0	0					0
	TWS RIFLE Z38272	0	0					0
	SHOTGUN 12 GAUGE T39223	1	2					3
	M240 M92420	0	0					0
	Total Small Arms Weapons Systems	1,145	2,292					3,437
Artillery	60MM MORTAR M67939	6	12					18
	81MM MORTAR M02114	4	8					12
	120MM MORTAR M68405	0	0					0
	HOWITZER 155MM K57821	0	0					0
	LAUNCHER ROCKET: 66MM 4-TUBE L45250	0	0					0
	Total Artillery Weapons Systems	10	20					30

**Appendix Table 2.2.q cont.** Weapons Systems Utilized by 172<sup>nd</sup> SIB and Other USARAK Units Under No Action Alternative.

Weapons Systems		Number						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Vehicle	COMMAND VEH Z36523	0	0					0
	MOBILE GUN SYS Z43686	0	0					0
	INF CARRIER Z43601	0	0					0
	MORTAR CARRIER Z44642	0	0					0
	ATGM Z99100	0	0					0
	ENGR SQD VEH Z26403	0	0					0
	FIRE SUPP VEH Z63190	0	0					0
	RECON VEH Z93260	0	0					0
	MEDICAL EVAC VEHICLE Z64438	0	0					0
	Total Vehicle Weapons Systems	0	0					0
<b>Anti-Tank</b>	JAVELIN C607750	0	0					0
<b>Demolition</b>	MICLIC L67342	0	0					0

**Description of Weapons Systems Acquisition – Alternative 2**

**Appendix Table 2.2.r** Weapons Systems Utilized by USARAK and Proposed SBCT (Including 501<sup>st</sup> PIR) Under Alternative 2.

Weapons Systems		Number						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Small Arms	M9 P98152	81	244					325
	M16 R95035	263	788					1,051
	M4 R97234	568	1,704					2,272
	M203 L46007	67	200					267
	40MM SINGLE SHOT RIFLE L44595	16	48					64
	M249 M09009	59	176					235
	M249 LMG M39263	15	44					59
	M240B M92841	33	100					133
	M2 L91975	74	223					297
	MK-19 M92362	29	88					117
	M24 R95387	4	11					15
	TWS CREW SERVED Z38366	135	404					539
	TWS RIFLE Z38272	51	152					203

**Appendix Table 2.2.r cont.** Weapons Systems Utilized by USARAK and Proposed SBCT  
(Including 501<sup>st</sup> PIR) Under Alternative 2.

Weapons Systems		Number						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Small Arms</b>	SHOTGUN 12 GAUGE T39223	20	61					81
	M240 M92420	7	20					27
	Total Small Arms Weapon Systems	1,422	4,263					5,685
<b>Artillery</b>	60MM MORTAR M67939	5	14					19
	81MM MORTAR M02114	3	9					12
	120MM MORTAR M68405	9	27					36
	HOWITZER 155MM K57821	3	9					12
	LAUNCHER ROCKET: 66MM 4-TUBE L45250	2	7					9
	Total Artillery Weapon Systems	22	66					88
<b>Vehicle</b>	COMMAND VEH Z36523	7	20					27
	MOBILE GUN SYS Z43686	7	20					27
	INF CARRIER Z43601	27	81					108
	MORTAR CARRIER Z44642	9	27					36
	ATGM Z99100	2	7					9
	ENGR SQD VEH Z26403	2	7					9
	FIRE SUPP VEH Z63190	3	10					13
	RECON VEH Z93260	12	36					48
	MEDICAL EVAC VEHICLE Z64438	4	12					16
	Total Vehicle Weapon Systems	73	220					293
<b>Anti-Tank</b>	JAVELIN C607750	30	91					121
<b>Demolition</b>	MICLIC L67342	2	5					7

### Description of Weapons Systems Acquisition – Alternative 3

**Appendix Table 2.2.s** Weapons Systems Utilized by USARAK (Including 501<sup>st</sup> PIR) and Proposed SBCT Under Alternative 3.

Weapons Systems		Number						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Small Arms	M9 P98152	143	244					387
	M16 R95035	827	788					1,615
	M4 R97234	725	1,704					2,429
	M203 L46007	144	200					344
	40MM SINGLE SHOT RIFLE L44595	171	48					219
	M249 M09009	59	176					235
	M249 LMG M39263	102	44					146
	M240B M92841	52	100					152
	M2 L91975	88	223					311
	MK-19 M92362	44	88					132
	M24 R95387	7	11					18
	TWS CREW SERVED Z38366	135	404					539
	TWS RIFLE Z38272	51	152					203
	SHOTGUN 12 GAUGE T39223	21	61					82
	M240 M92420	7	20					27
Total Small Arms Weapon Systems	2,576	4,263					6,839	
Artillery	60MM MORTAR M67939	10	14					24
	81MM MORTAR M02114	7	9					16
	120MM MORTAR M68405	9	27					36
	HOWITZER 155MM K57821	3	9					12
	LAUNCHER ROCKET: 66MM 4-TUBE L45250	2	7					9
	Total Artillery Weapon Systems	31	66					97
Vehicle	COMMAND VEH Z36523	7	20					27
	MOBILE GUN SYS Z43686	7	20					27
	INF CARRIER Z43601	27	81					108
	MORTAR CARRIER Z44642	9	27					36
	ATGM Z99100	2	7					9
	ENGR SQD VEH Z26403	2	7					9
	FIRE SUPP VEH Z63190	3	10					13
	RECON VEH Z93260	12	36					48
	MEDICAL EVAC VEHICLE Z64438	4	12					16
Total Vehicle Weapons Systems	73	220					293	

**Appendix Table 2.2.s cont.** Weapons Systems Utilized by USARAK (Including 501<sup>st</sup> PIR) and Proposed SBCT Under Alternative 3.

Weapons Systems		Number						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Anti-Tank</b>	JAVELIN C607750	30	91					121
<b>Demolition</b>	MICLIC L67342	2	5					7

**Description of Weapons Systems Acquisition – Alternative 4**

**Appendix Table 2.2.t** Weapons Systems Utilized by USARAK (Including 501<sup>st</sup> Airborne Task Force) and Proposed SBCT Under Alternative 4.

Weapons Systems		Number						
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Small Arms</b>	M9 P98152	204	244					448
	M16 R95035	1,379	788					2,167
	M4 R97234	878	1,704					2,582
	M203 L46007	220	200					420
	40MM SINGLE SHOT RIFLE L44595	326	48					374
	M249 M09009	59	176					235
	M249 LMG M39263	190	44					234
	M240B M92841	72	100					172
	M2 L91975	102	223					325
	MK-19 M92362	60	88					148
	M24 R95387	10	11					21
	TWS CREW SERVED Z38366	135	404					539
	TWS RIFLE Z38272	51	152					203
	SHOTGUN 12 GAUGE T39223	22	61					83
	M240 M92420	7	20					27
	Total Small Arms Weapon Systems	3,715	4,263					7,978
<b>Artillery</b>	60MM MORTAR M67939	16	14					30
	81MM MORTAR M02114	11	9					20
	120MM MORTAR M68405	9	27					36
	HOWITZER 155MM K57821	3	9					12
	COMMAND VEH Z36523	7	20					27
	LAUNCHER ROCKET: 66MM 4-TUBE L45250	2	7					9
	Total Artillery Weapon Systems	48	86					134
<b>Vehicle</b>	MOBILE GUN SYS Z43686	7	20					27
	INF CARRIER Z43601	27	81					108
	MORTAR CARRIER Z44642	9	27					36

**Appendix Table 2.2.t cont.** Weapons Systems Utilized by USARAK (Including 501<sup>st</sup> Airborne Task Force) and Proposed SBCT Under Alternative 4.

Weapons Systems		Number						Total
		FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
Vehicle	ATGM Z99100	2	7					9
	ENGR SQD VEH Z26403	2	7					9
	FIRE SUPP VEH Z63190	3	10					13
	RECON VEH Z93260	12	36					48
	MEDICAL EVAC VEHICLE Z64438	4	12					16
	Total Vehicle Weapon Systems	66	200					266
<b>Anti-Tank</b>	JAVELIN C607750	30	91					121
<b>Demolition</b>	MICLIC L67342	2	5					7

**Description of Vehicle Acquisition – Alternative 2**

**Appendix Table 2.2.u** USARAK and SBCT (Including 501<sup>st</sup> PIR) Vehicles Utilized Under Alternative 2.

Vehicles	Number						Total
	FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	
<b>Stryker</b>	32	316	0	0	0	0	322
<b>HMMWV</b>	22	408	0	0	0	0	430
<b>MTV</b>	7	33	0	0	0	0	40
<b>UAV</b>	0	4	0	0	0	0	4
<b>HMEE</b>	0	6	0	0	0	0	6
<b>DUECE</b>	0	6	0	0	0	0	6
<b>Other tactical wheeled vehicles (includes MTVs)</b>	0	111	0	0	0	0	111
<b>TOTAL</b>	<b>61</b>	<b>884</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>945</b>

### Description of Vehicle Acquisition – Alternative 3

**Appendix Table 2.2.v** USARAK (Including 501<sup>st</sup> PIR) and SBCT Vehicles Under Alternative 3.

Vehicles	Number						
	FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Stryker</b>	32	316	0	0	0	0	322
<b>HMMWV</b>	22	408	0	0	0	0	430
<b>MTV</b>	7	33	0	0	0	0	40
<b>UAV</b>	0	4	0	0	0	0	4
<b>HMEE</b>	0	6	0	0	0	0	6
<b>DUECE</b>	0	6	0	0	0	0	6
<b>Other tactical wheeled vehicles (includes MTVs)</b>	0	111	0	0	0	0	111
<b>Total</b>	61	884	0	0	0	0	945

### Description of Vehicle Acquisition – Alternative 4

**Appendix Table 2.2.w** USARAK (Including 501<sup>st</sup> Airborne Task Force) and SBCT Vehicles Utilized Under Alternative 4.

Vehicles	Number						
	FRA	FWA Main Post	YTA	TFTA	DTA	Gerstle River	Total
<b>Stryker</b>	32	316	0	0	0	0	322
<b>HMMWV</b>	22	408	0	0	0	0	430
<b>MTV</b>	7	33	0	0	0	0	40
<b>UAV</b>	0	4	0	0	0	0	4
<b>HMEE</b>	0	6	0	0	0	0	6
<b>DUECE</b>	0	6	0	0	0	0	6
<b>Other tactical wheeled vehicles (includes MTVs)</b>	0	111	0	0	0	0	111
<b>Total</b>	61	884	0	0	0	0	945

# STRYKER

## BRIGADE COMBAT TEAM

FAMILY OF VEHICLES **BCT**

### DEPLOYABILITY

Strategic  
C-130, C-5, C-17 Air Transport  
Combat Weight 38,000 lbs

### MOBILITY

Max Speed 62 mph  
Max Range 300 miles  
Max Trench Crossing 6.5 ft  
Acceleration 50m < 8.0 sec  
Forward Slope 60%  
Side Slope 30%  
Step Climbing 23 inches

### LETHALITY

Infantry Carrier Vehicle  
Kongsberg Remote Weapons Station  
(MK 19 40mm or 0.50 CAL or 7.62mm)  
Mobile Gun System  
Low Profile Turret  
M68A1 105mm Cannon  
Anti-tank Guided Missile  
Elevated TOW System, TOW 2B  
Mortar Carrier  
Battalion 120mm & 81mm  
Company 120mm & 60mm  
RSTA Squadron 120mm

### SURVIVABILITY

Protection Levels  
Integral  
• All Around 14.5mm  
Applique  
• RPG-7  
Overhead  
• 152mm HE Airburst  
NBC  
Detection Package  
Individual Crew Respirators  
Reduced Signature  
• Thermal  
• Audible

### INFANTRY CARRIER VEHICLE



### MOBILE GUN SYSTEM



### RECONNAISSANCE VEHICLE



### MORTAR CARRIER



### COMMAND VEHICLE



### FIRE SUPPORT VEHICLE



### ENGINEER SQUAD VEHICLE



### MEDICAL EVACUATION



### ANTI-TANK GUIDED MISSILE



### NBC RECONNAISSANCE



General Motors Defense, 1660 L Street N.W., Suite 401, Washington, D.C., U.S.A. 20036  
Phone: (202) 775-5020/5047 Fax: (202) 775-5046  
General Dynamics Land Systems website: [www.gdls.com](http://www.gdls.com)  
130-579 2M 11/01



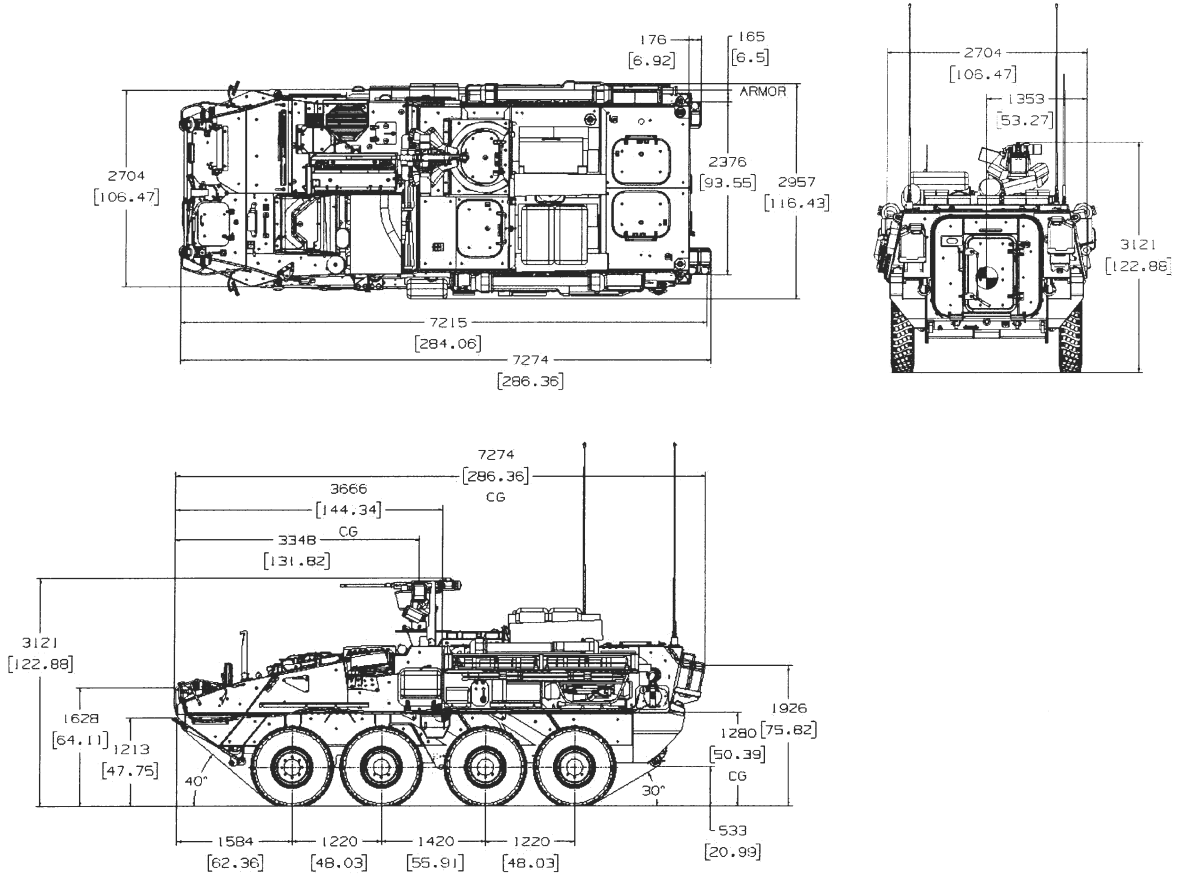
All Rights Reserved. General Motors, the GM Logo and the GM Emblem are trademarks of General Motors Corporation.

Appendix Figure C-1 Variants of the Stryker vehicle.

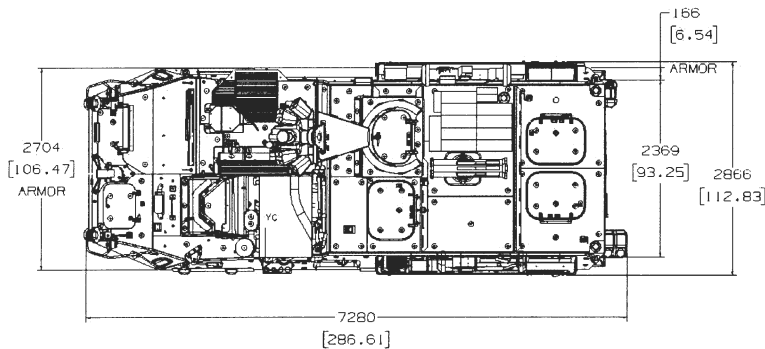


### Transport Configuration for Wheeled Vehicles, Tracked Vehicles, and Skid-mounted Equipment

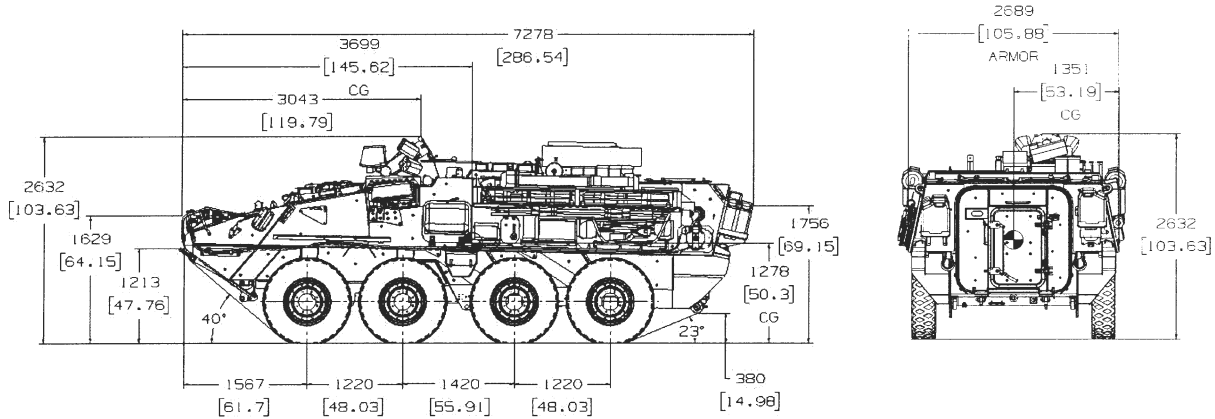
The following drawings indicate top, plan, side, and end views. These drawings illustrate the vehicle in both the operational and shipping configurations and include data showing length, width, height, and center-of-gravity (CG) location on all views.



*ICV Vehicle in fully operational configuration.*



*ICV Vehicle in shipping configuration.*

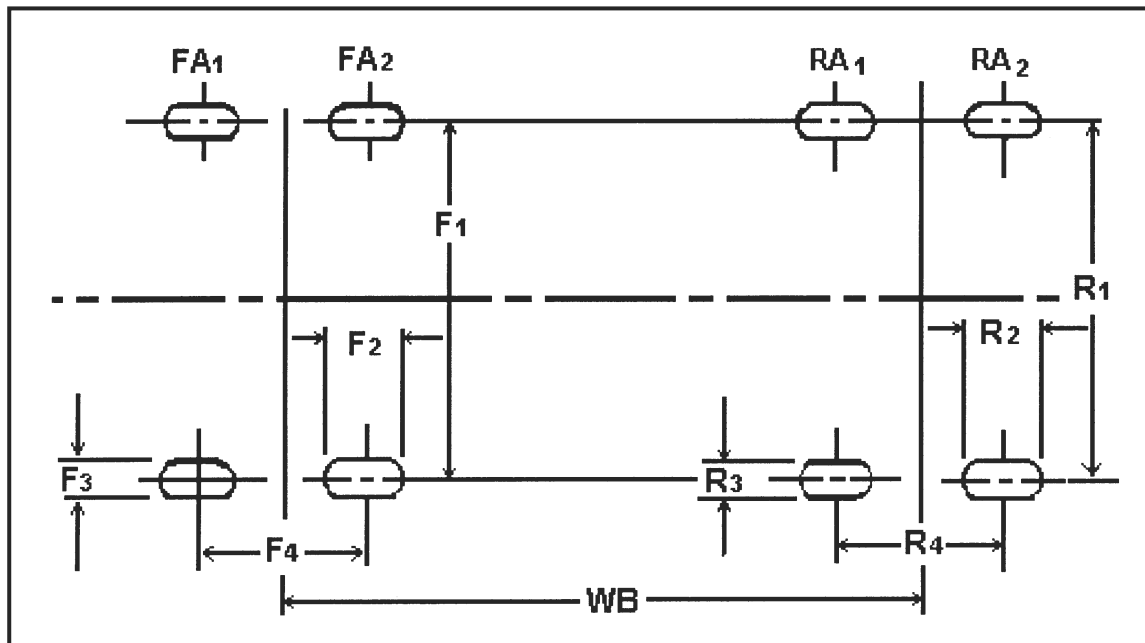


ICV Vehicle in shipping configuration cont.

Additional Information Required for Wheeled Vehicles continued . . .

Tire Footprint Area.

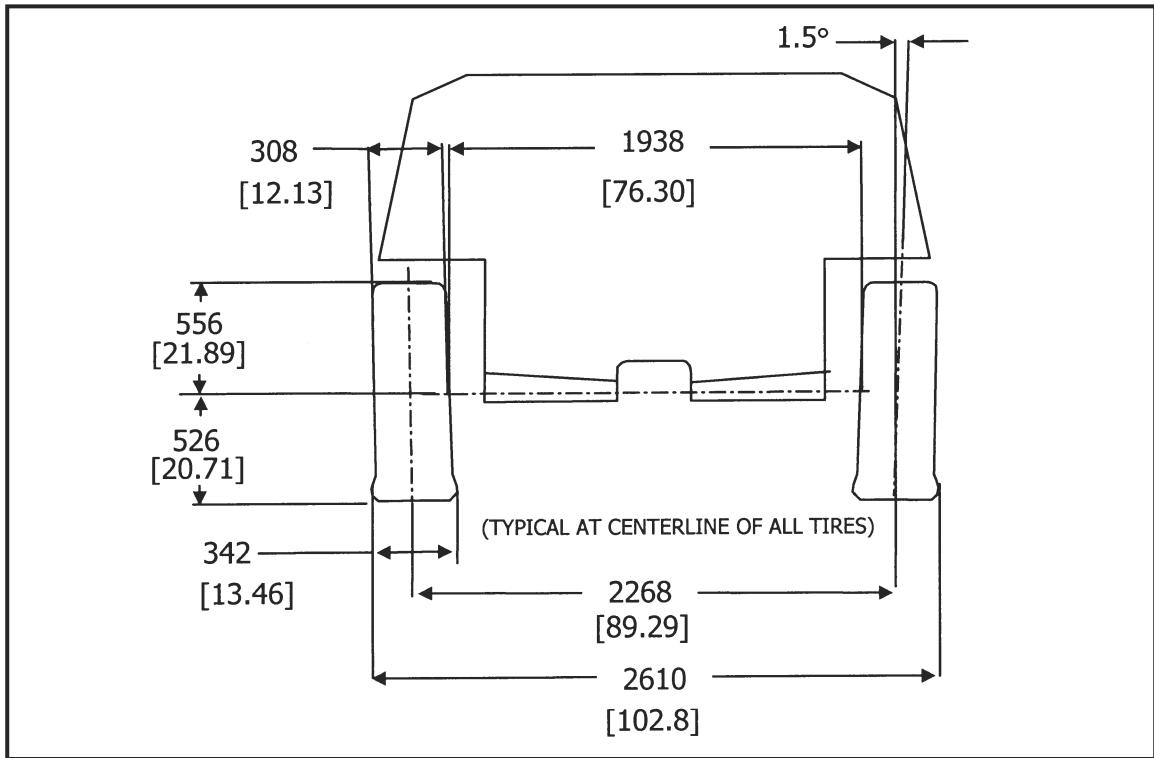
The following are locations and dimensions of all tire footprint areas actually in contact in the fully loaded condition at highway pressure of 70 psi.



<i>F1</i>	2298 mm (90.5")	<i>R1</i>	2268 mm (89.3")
<i>F2</i>	293 mm (11.5")	<i>R2</i>	293 mm (11.5")
<i>F3</i>	339 mm (13.3")	<i>R3</i>	339 mm (13.3")
<i>F4</i>	1220 mm (48")	<i>R4</i>	1220 mm (48")
<i>WB</i>		2640 (104")	

**Axle Tracking Width.**

<i>Axle Number</i>	<i>Empty Vehicle</i>	<i>Loaded Vehicle</i>
1	2608 (102.7)	2610 (102.8)
2	2608 (102.7)	2610 (102.8)
3	2608 (102.7)	2610 (102.8)
4	2608 (102.7)	2610 (102.8)



**Vehicle Turning Diameter.**

Please state the following turning diameters.

<i>Wall-to-wall (ft.)</i>	<u>55.8</u>
<i>Curb-to-curb (ft.)</i>	<u>53.2</u>

**Measured Weight Distribution<sup>1</sup>**

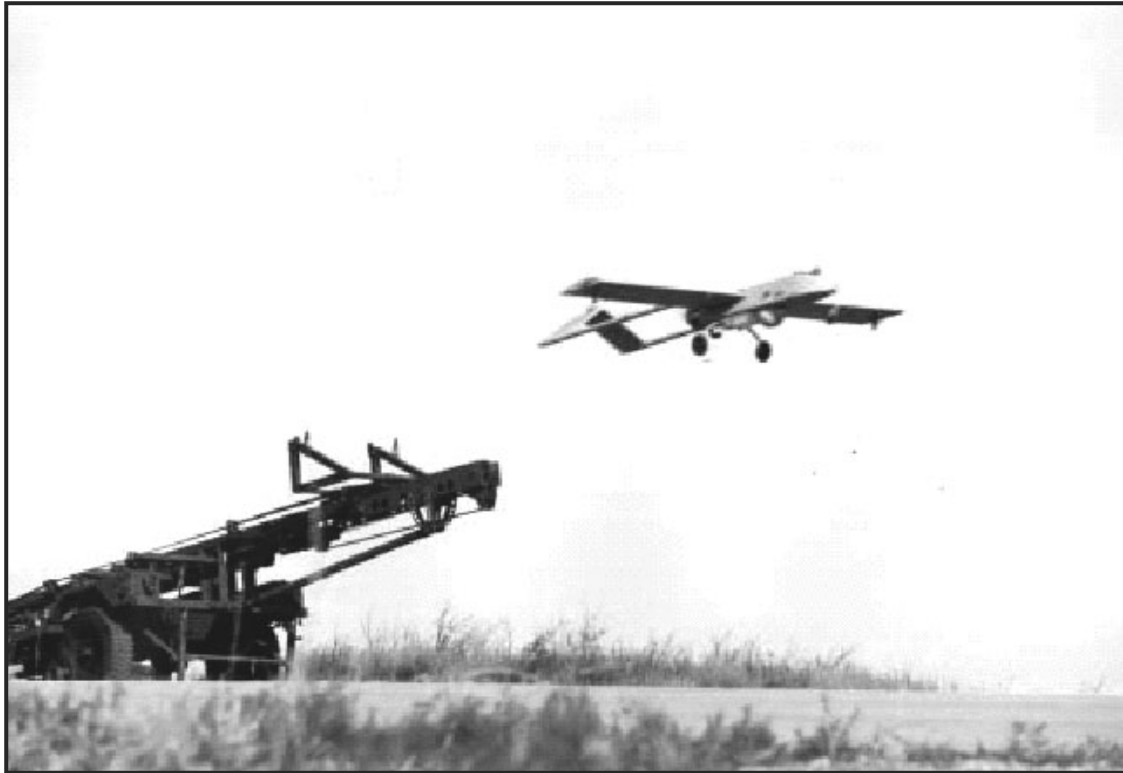
<i>Axel No.*</i>	<i>Pounds</i>
1	9,340
2	9,260
3	10,640
4	10,800

\* Axle measurements equals the sum of right and left axle sides

Total weight with driver = 40,040 pounds

<sup>1</sup> Measurements were made on 09 September 2002

## Unmanned Aerial Vehicle



**Appendix Figure C-2** Launching of the Shadow UAV.

***UAV Mission: To conduct Army tactical-level reconnaissance, surveillance, target acquisition, and battle damage assessment.***

### **Description of Shadow UAV**

<b>Characteristic</b>	<b>Description</b>
Wing Span	13 feet
Weight	330 lbs
Length	11 feet
Engine	Internal combustion
Fuel	MOGAS
Range	125 km (200km obj)
Airspeed	70 kt loiter; 115 kt dash
Altitude	14,000 feet
Endurance	4 hours @ 50km
Payloads (s)	EO/IR (up to 60 lbs)
Launch/Recovery	100m x 50m Area
Takeoff	Catapult
Landing	Rolling via Tactical Automatic Landing System
Wind Limitations	20 kts; Gust 25 kts; no tailwind
Temperatures	No freezing precipitation

### **Capabilities of UAV**

- Automatic Landing and Takeoff
- System and Maintenance Section Transportable on Three C-130 Airplanes
- Early Entry Capability with one C-130 Airplane
- Compatible with ABCS
- EO/IR Sensor

### **UAV Launcher System**

- Vehicle Towed
- Sling Loadable
- Air Deployable via a C-130 Airplane

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## D. DEPLOYMENT

### Deployment Within Alaska – No Action Alternative

**Appendix Table 2.2.x** Deployments within Alaska Under No Action Alternative.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	6	27	4	25	16,200
FWA-DTA	CO	30	12	2	100	72,000
FRA-DTA	CO	58	2	2	300	69,600
FWA-DTA	BN	122	2	1	100	24,400
FRA-DTA	BN	122	1	1	300	36,600
<b>TOTAL</b>						<b>218,800</b>

### Deployment Within Alaska – Alternative 2

**Appendix Table 2.2.y** Interim Deployments within Alaska Under Alternative 2.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	30	4	25	27,000
FWA-DTA	CO	36	16	2	100	115,200
FRA-DTA	CO	36	4	2	300	86,400
FWA-DTA	BN	122	3	1	100	36,600
FRA-DTA	BN	122	1	1	300	36,600
<b>TOTAL</b>						<b>301,800</b>

**Appendix Table 2.2.z** End-State Deployments within Alaska Under Alternative 2.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	30	4	25	27,000
FWA-DTA	CO	39	16	2	100	124,800
FRA-DTA	CO	39	4	2	300	93,600
FWA-DTA	BN	131	3	1	100	39,300
FRA-DTA	BN	131	1	1	300	39,300
<b>TOTAL</b>						<b>324,000</b>

### Deployment Within Alaska – Alternative 3

Appendix Table 2.2.aa Interim Deployments within Alaska Under Alternative 3.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	30	4	25	27,000
FWA-DTA	CO	36	16	2	100	115,200
FRA-DTA	CO	36	8	2	300	172,800
FWA-DTA	BN	122	3	1	100	36,600
FRA-DTA	BN	122	2	1	300	73,200
<b>TOTAL</b>						<b>424,800</b>

Appendix Table 2.2.bb End-State Deployments within Alaska Under Alternative 3.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	36	4	25	32,400
FWA-DTA	CO	39	20	2	100	156,000
FRA-DTA	CO	39	4	2	300	93,600
FWA-DTA	BN	131	4	1	100	52,400
FRA-DTA	BN	122	1	1	300	36,600
<b>TOTAL</b>						<b>371,000</b>

### Deployment Within Alaska – Alternative 4

Appendix Table 2.2.cc Interim Deployments within Alaska Under Alternative 4.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	30	4	25	27,000
FWA-DTA	CO	36	16	2	100	115,200
FRA-DTA	CO	36	12	2	300	259,200
FWA-DTA	BN	122	3	1	100	36,600
FRA-DTA	BN	122	3	1	300	109,800
<b>TOTAL</b>						<b>547,800</b>

Appendix Table 2.2.dd End-State Deployments within Alaska Under Alternative 4.

Route	Level	# Vehicles	# Units	Deployments	Miles (One-Way)	Deployment Miles
FWA-YTA	PL	9	40	4	25	36,000
FWA-DTA	CO	39	20	2	100	156,000
FRA-DTA	CO	39	8	2	300	187,200
FWA-DTA	BN	131	4	1	100	52,400
FRA-DTA	BN	122	2	1	300	73,200
<b>TOTAL</b>						<b>504,800</b>



## **E. INSTITUTIONAL MATTERS**

### **USARAK Environmental Management**

Proposed mitigation under Alternative 4 includes fully implementing range maintenance projects designated in the Range Development Plan, moving targets away from open flowing water sources, placing a buffer of 50 feet around all open water in impact areas and restricting high explosive munitions from being fired into the buffer zone, and cleaning up trash (old targets, range scrap) outside of duded impact areas.

Full implementation of the ITAM Workplan would involve training area redesign projects, which include constructing maneuver corridors, would spread maneuver training out over a larger area, reducing impacts (lowering the rate of impacts on any given piece of land thus increasing LC) and lowering maintenance and repair costs.

An Environmental Management System (EMS) is a tool that can provide the Army with a means for the management of environmental activities and resources. The EMS will require the Army to define its environmental goals and document the processes it uses to achieve those goals. By imposing this discipline, the Army will be able to improve compliance with environmental laws and reduce environmental impacts. USARAK already has mature environmental programs with many elements of an EMS. The next step is to leverage existing capabilities into a systematic approach aligned with mission priorities.

The goal of the USARAK Ecosystem Management Program (EMP) is to maintain ecosystem integrity at a broad landscape scale and continue to train Soldiers to a high-level of military readiness. There are two components to the EMP. First, there is a multi-species management tool that is designed to help in land use and land alteration decisions on Army lands. Second, there is the Army's commitment to an ecoregional approach to land management in Alaska. Both of these components are parts of the overall strategy of the EMP, which is to integrate military training with the management of a suite of species that are important to ecosystem integrity in boreal environments, and to manage Army lands in the context of the broader landscapes surrounding each of the Army posts in Alaska.

Under full implementation of the Integrated Natural Resources Management Plans, soil and water quality monitoring would be fully implemented on Fort Wainwright Main Post, Yukon Training Area, Tanana Flats Training Area, and Fort Richardson to determine if there are any contaminants migrating outside of the impact area. Potential mitigation considered and eliminated was the clean up of UXO in impact areas. Preliminary data from Palazzo et al. (2002) indicates that there is minimal contamination in USARAK's impact areas and no evidence that any contamination is migrating outside the impact areas. Getlein (1999) reported that the very action of clean up (surface and subsurface clearing includes locating and removing UXO to 24 inches below the surface) would destroy the natural resources (including wetlands) that are so vital to the ability of the land to regenerate itself.

The Army is undertaking a new approach to its range management. The Sustainable Range Program (SRP) will improve the integration of all programs that affect or are affected by live training. SRP begins at Headquarters, Department of the Army, and will be integrated at the MACOM and installation level. Through SRP, the Army seeks to ensure that its ranges will be available indefinitely to support training readiness. Army ranges are considered to be a combination of live training infrastructure, installation facilities, and the environment. SRP is

an integration of training, facility, and environmental management. The objective of SRP is to maximize the capability, availability, and accessibility of ranges and training land by maximizing assets to support internal requirements, and by minimizing restrictions brought about by external factors.

*Soil and Water Quality Monitoring:* Groundwater, surface water, and soil monitoring will be conducted to evaluate the presence of contaminants on USARAK lands. Monitoring water quality is important for measuring ecosystem health. Soil and water quality monitoring evaluates water quality coming onto and leaving USARAK lands and identifies any potential contaminants leaving impact areas. Water quality monitoring will take place and will assist in formulating options for managing those species particularly dependent upon high water quality, as required by the Sikes Act and AR 200-3.

*Real Property Management:* To manage its land, facilities, and infrastructure, USARAK has prepared a real property management plan based on assigned mission and guidance contained in a variety of plans and other documents. These references establish trends, strategies, goals, and objectives on which Army planners can base long-range and near-term plans for economical, environmentally responsible, and effective support of Army goals, objectives, missions, and populations. USARAK adheres to five basic concepts in its planning goals and objectives: maximization of facilities utilization; maintaining existing facilities; meeting regulatory and environmental concerns; renewing facilities in an orderly and cost effective manner; and providing new facilities when all other alternatives are exhausted.

*Training Area Recovery Program:* USARAK proposes to implement a Training Area Recovery Plan (TARP) program, a rotational system of rest, rehabilitation, and erosion control as part of the Proposed Action. Each training area on FWA will be taken out of rotation and placed off limits to military and recreational vehicles once every ten years for a period of two years. Maintenance actions for erosion control, LRAM, range maintenance, and roads and grounds maintenance will be scheduled during the first year each training area is scheduled for rest and repair, although emergency actions to repair damage must take place anytime, anyplace.

*Alternate Procedures for Cultural Resources Management:* USARAK proposes to transform Cultural Resources management by implementing the Army's Alternate Procedures as provided for under the NHPA and 36 CFR 800 and approved by the Advisory Council on Historic Preservation. The Army Alternate Procedures (AAP) provides U.S. Army Alaska the ability to streamline the process it will follow to satisfy Section 106 requirements of the National Historic Preservation Act. In lieu of following 36 CFR 800, U.S. Army Alaska will develop an Alternate Procedure to address management of its historic properties as a program specific to the installation's and resource's needs rather than on project-by-project review. This approach will provide a better management of the installation's historic properties through a planning approach to compliance, closer integration with the Army's mission(s), and by encouraging innovative means for stakeholders to become involved in the process.

**USARAK Stewardship of Environmental Resources** – USARAK's commitment to environmental resources management is reflected in the U.S. Army Environmental Strategy. The Army environmental strategy is depicted as a building established on a solid foundation with four pillars supporting the environmental stewardship vision and the Army mission. The four pillars symbolize the Army environmental program and represent the four major areas of activity: compliance, restoration, pollution prevention, and conservation.

**Pollution Prevention** – The number one objective of Pollution Prevention (P2) is source reduction. This includes substituting materials and changing processes to avoid the use of hazardous substances. Pollution prevention is any cost-effective mechanism or practice that eliminates or reduces the sources of pollutant discharges or emissions. Reducing the Army's reliance on products or processes that degrade the environment also reduces operating costs and liability from environmental compliance and cleanup.

**Compliance** – The goal of the compliance program is to meet federal, state, and local environmental requirements. These requirements include laws and regulations on a wide range of activities. The Compliance Program in USARAK consists of eight major program areas: Air Quality, Asbestos, Water Quality, Hazardous Waste and Hazardous Materials, Lead Hazard, Solid Waste, Storage Tanks, and Wastewater.

- **Air Quality Program** – USARAK's Air Quality Management Program was implemented to comply with the substantial requirements of the Clean Air Act (CAA). The program is administered and coordinated through the U.S. Army Center for Health Promotion and Preventative Medicine (USACHPPM), which has a local office located on Fort Richardson. The goals of the Air Quality Program are to (1) identify, inventory, and monitor air pollutant emissions and ambient air quality, (2) reduce pollutants to regulatory levels to protect health and reduce permit costs, (3) procure control equipment that meets regulatory standards, and (4) ensure that design and operation of military equipment are in accordance with regulations.
- **Asbestos Program** – USARAK has developed Asbestos Management Plans in accordance with Army Regulation 200-1 that are designed to reduce exposure to occupants and workers on the posts and to ensure compliance with federal laws. USARAK has also conducted asbestos surveys to identify asbestos containing materials in facilities on the posts.
- **Water Quality Program** – The goals of the program are to ensure that drinking water meets the regulatory requirements, to ensure that safe drinking water is available to all facility personnel, and to conserve and protect drinking water resources, including surface water and groundwater sources. Aspects of the program include: (1) providing adequate supplies of drinking water that meet all applicable standards, (2) developing and maintaining sampling and analysis programs that comply with regulations, (3) maintaining an active cross-connection and backflow prevention control program, (4) developing an appropriate wellhead protection or source water protection program to protect source water areas, (5) ensuring that treatment facility operators obtain required certifications, (6) obtaining permits for new or modified drinking water facilities, and (7) producing and distributing annual Consumer Confidence reports to consumers.
- **Hazardous Waste and Hazardous Materials Management Program** – Hazardous materials are used in nearly every part of the Army mission and include such things as paints, solvents, batteries, fuels, and weapon cleaning materials. USARAK has established installation and unit SOPs to ensure regulatory compliance, trained personnel who work with hazardous waste materials, and regularly inspected all activities generating HW to ensure proper implementation of procedures. In addition, USARAK uses the Hazardous Substance Management System (HSMS) that is designed to allow the installation to control the issue of hazardous materials, helping it to reduce the amount of hazardous wastes generated. HSMS helps the Army track HM/HW, maintain HM/HW inventories, and meet HW reporting and other compliance requirements.

- **Lead Hazard Program** – Lead hazard management is the management of lead-based paint (LBP) and other lead hazards. To comply with current regulations, USARAK has developed a Lead-Based Paint Management Plan and conducted lead paint surveys and risk assessments. USARAK is also tasked with the proper disposal of lead waste and debris (such as paint chips and painted building parts) from the demolition of buildings and other structures on Army installations.
- **Solid Waste Program** – The Army constantly evaluates its solid waste management practices and tries to reduce waste sources. The objectives of the program are: (1) develop a Solid Waste Management Plan, (2) reduce, reuse, and recycle solid waste to the greatest extent possible, (3) privatize solid waste management facilities or contract for waste disposal services, including recycling, (4) cooperate to the extent practicable in recycling programs conducted by the civilian community, (5) continually evaluate and reduce waste sources, and (6) comply with all applicable laws and regulations for generating, treating, storing, disposing, and transporting solid waste.
- **Storage Tank Program** – The Storage Tank Program ensures that all tanks meet specific installation standards and requirements for corrosion protection, spill/overflow prevention and leak detection. USARAK met the December 20, 1998 deadline to upgrade all underground storage tanks (USTs) with leak detection, corrosion, spill, and overflow protection. In addition to USTs, the program also oversees requirements for above ground storage tanks (ASTs). ASTs are regulated under National Fire Protection Association standards (NFPA-30), and Title 40 CFR Part 112, Spill Prevention, Control and Countermeasure Plan (SPCCP) for petroleum, oil, and lubricant tanks.
- **Wastewater Program** – The Wastewater Program strives to restore and maintain the chemical, physical, and biological integrity of the navigable waters surrounding USARAK properties. Adequate treatment of wastewater from sanitary uses, industrial processes, and stormwater runoff maintains the quality of the water receiving the wastes. To achieve compliance with the Clean Water Act, USARAK controls and eliminates sources of pollutant discharge, cooperates with regulatory authorities in forming and implementing water pollution control plans, and controls and eliminates runoff and erosion through land management practices. Specific program actions are to develop and maintain wastewater monitoring programs to ensure compliance with NPDES permits and regulations, and obtain operating permits for treatment facilities.

**Restoration** – USARAK administers an Installation Restoration Program (IRP) to identify, investigate, and clean up contamination from hazardous substances, pollutants, and contaminants. The first priority of the IRP is to identify and clean up the sites that present the highest risk to public health and the environment. One of the main priorities is remediation of contaminants such as chlorinated solvents, which are regulated by the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA). In addition, USARAK also investigates and remediates all types of contaminants such as PCBs and petroleum. These contaminants are not regulated under CERCLA but are regulated by various other federal, state, and Army regulations.

In general, all contaminant source areas fall under the scope of one of several active interagency agreements designed to ensure that IRP objectives are achieved and to ensure that cleanup efforts adequately address stakeholder concerns. The Army, EPA, and State of Alaska signed Federal Facility Agreements for both Forts Richardson and Wainwright that outlined how the CERCLA cleanup process would be administered. In addition, companion Environmental Restoration Agreements, between the State of Alaska and the Army (Two-Party Agreements), were developed to outline cleanup processes at non-CERCLA sites.

**Conservation** – The conservation pillar consists of natural and cultural resources management and well as compliance with the National Environmental Policy Act (NEPA). The conservation pillar focuses on responsibly managing Army lands to ensure long-term natural resource productivity so the Army can achieve its mission. These three components are covered in the following sections.

- USARAK Natural Resources Management – The Natural Resources Program in USARAK is discussed in detail in the Integrated Natural Resources Management Plan. Natural resources management is conducted in accordance with the Sikes Act and AR 200-3.

Integrated natural resources planning is accomplished through preparing and updating the INRMP at least every five years. Integrating the many components of natural resources can be a complex challenge. One of the objectives of ecosystem management in USARAK is to develop a process to objectively identify requirements for all species and users of the environment. In addition, natural and cultural resources projects can only be classified as military use (and therefore valid expenditures of military funds) if there is a direct link back to the accomplishment of the overall military mission.

The INRMP is structured to demonstrate direct support of the overall military mission, which includes stewardship of natural and cultural resources, compliance, quality of life, and military training support. Every single project and task in the INRMP is focused to add to the accomplishment of one or more of these natural resources goals.

- USARAK Cultural Resources Management – The cultural resources program is described in the USARAK Integrated Cultural Resources Management Plan (ICRMP). Cultural resources protection programs in USARAK are conducted in accordance with the National Historic Preservation Act (NHPA) (16 U.S.C. Section 470, as amended), the Archeological Resources Protection Act (16 U.S.C. Section 470aa-47011), the American Indian Religious Freedom Act (42 U.S.C. 1996), the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013), DOD Directive 4710.1 (*Archeological and Historic Resources Management*, 1984), and AR 200-4 (*Cultural Resources Management*, draft). BLM also has responsibility for cultural resources compliance on withdrawal lands.

Section 110, NHPA requires cultural resources surveys. These surveys are required to be conducted on all of Fort Wainwright lands. These surveys have been conducted opportunistically in the past, concentrating on areas where disturbance from the military mission is likely. These surveys are not complete in USARAK.

Another effort that will help prioritize the lands that need to be surveyed is the development of a predictive model for archaeological resources. Northern Land Use, Inc. drafted the first predictive model for Fort Wainwright and USARAK is continuing to update and refine it. The predictive model will eventually be the centerpiece of a programmatic agreement with the State Historic Preservation Office (SHPO) to deal with the potential impacts of military training and natural resources management on cultural resources.

USARAK will review proposed projects by consulting guidelines provided in implementing regulations for the National Historic Preservation Act (36 CFR 800) to determine their effect on cultural resources sites. Any project assessed as having an effect on a cultural resources site on Fort Wainwright will be coordinated with Alaska SHPO.

There are cultural resources in the Fort Wainwright training areas that require protection from military training and natural resources activities. Protection measures are primarily

control of access to these sites, which is accomplished by showing these areas as restricted on the environmental limitations map.

- NEPA – The National Environmental Policy Act (NEPA) was created to disclose environmental concerns created by human activities and resolve them to the extent possible. Army NEPA regulations (AR 200-2, Environmental Effects of Army Actions) require mitigation of significant impacts to the environment. NEPA was not legislated to stop actions. Rather, it was crafted to identify and consider environmental problems and attempt to resolve them using planning at early stages of project development.