

# JUSMAGTHAI FY18 Range and Airfield Information

The range information provided in this Chapter is for familiarization of training areas in Thailand. This is ONLY a reference guide for live-fire ranges, and provides basic safety parameters for ranges. The information **MUST be reconfirmed during site surveys and planning conferences** to ensure parameters have not changed per Thai military rules and regulations. **Before using any range in Thailand, the ranges must be surveyed and certified to meet all DAPAM 385-63/MCO 3570.1C regulations for conduct of live-fire.**

**Please Provide JUSMAGTHAI any updated information  
on all ranges that you survey, help out the next  
Exercise**



UNCLASSIFIED//FOUO

# Thailand Major Operational and Training Sites



## C2 Facilities

- Utapao Red Horse ERC Complex (JTF / Bde HQ capable)
- JUSMAG Thai Compound: JOC-capable (Cobra Gold JESG), Msn Planning / Conf Venue

## APODs

- Utapao: Primary APOD in SE Asia, Avg 700 US A/C, 9000 pax per yr
- Wing 1 Korat: Primary Tac Air Base, Alternate APOD
- Wing 41 Chiang Mai
- Wing 23 Udon Thani
- Wing 46 Phitsanulok
- Wing 2 Lop Buri
- Wing 5 Prachuab
- Wing 6 Don Muang
- Phuket RTN Ramp

## SPODs and Naval Training Venues

- Sattahip
  - RTN primary base
  - Avg 20 ship visits annually
  - Chuk Samet, Laem Tian and Thung Prong Piers
- Laem Chabang: Commercial
- Phuket: RTN primary Andaman Sea base
- Sfc Gunnery Ranges off Sattahip and Phuket



## Comb Arms Live Fire Maneuver Ranges

- Ban Dan Lan Hoi (Bn)
- Ban Chan Khrem (Bn)
- Muang Khom / Chai Badan (Bn)
- Phu Lamyai (Co)

## Aviation Training Areas

- Large Force Exercise Airspace
- Chandy Range (Live)
- Nam Phong Range (Inert)

## Primary SOF Training Areas

- Lop Buri: Spec Warfare Cmd, mult ranges & DZs
- Mae Rim: 5<sup>th</sup> SF Rgt, MOUT, Patrol range
- Hat Yao (RTN Spec Warfare Cmd, MOUT, Sniper, Amphib Landing, DZ)
- CTOC: Bangkok HQ & shoothouse
- Nam Phong: RTAF Spec Ops Rgt Trng Area, DZ, Aflid Seizure, Inert CAS range
- Lotawin: RTMC Recon, Sniper, Patrol, CIED range

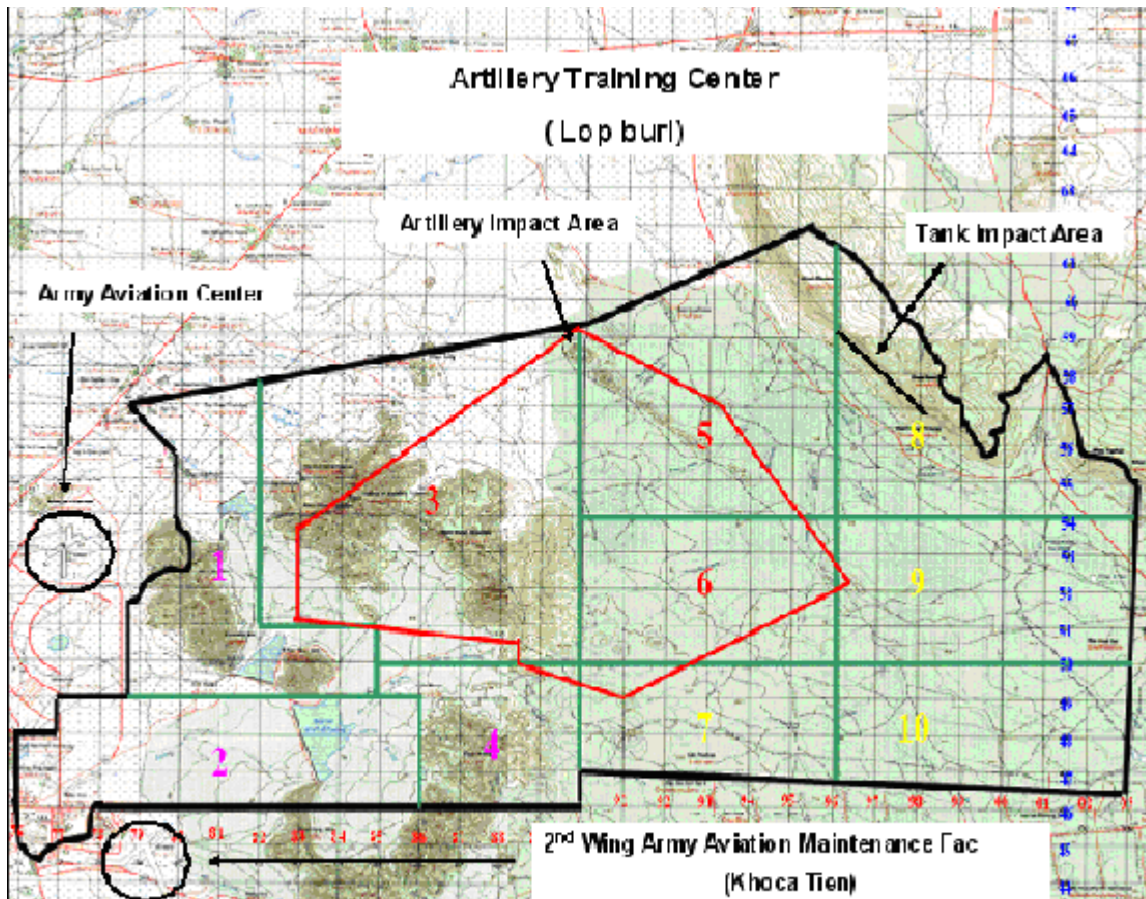
## RTA Branch Training Centers

- Camp Tanarat: Infantry
- Lopburi: Artillery
- Saraburi: Cavalry

# Artillery Training Center Camp Phahonyotin, Lopburi



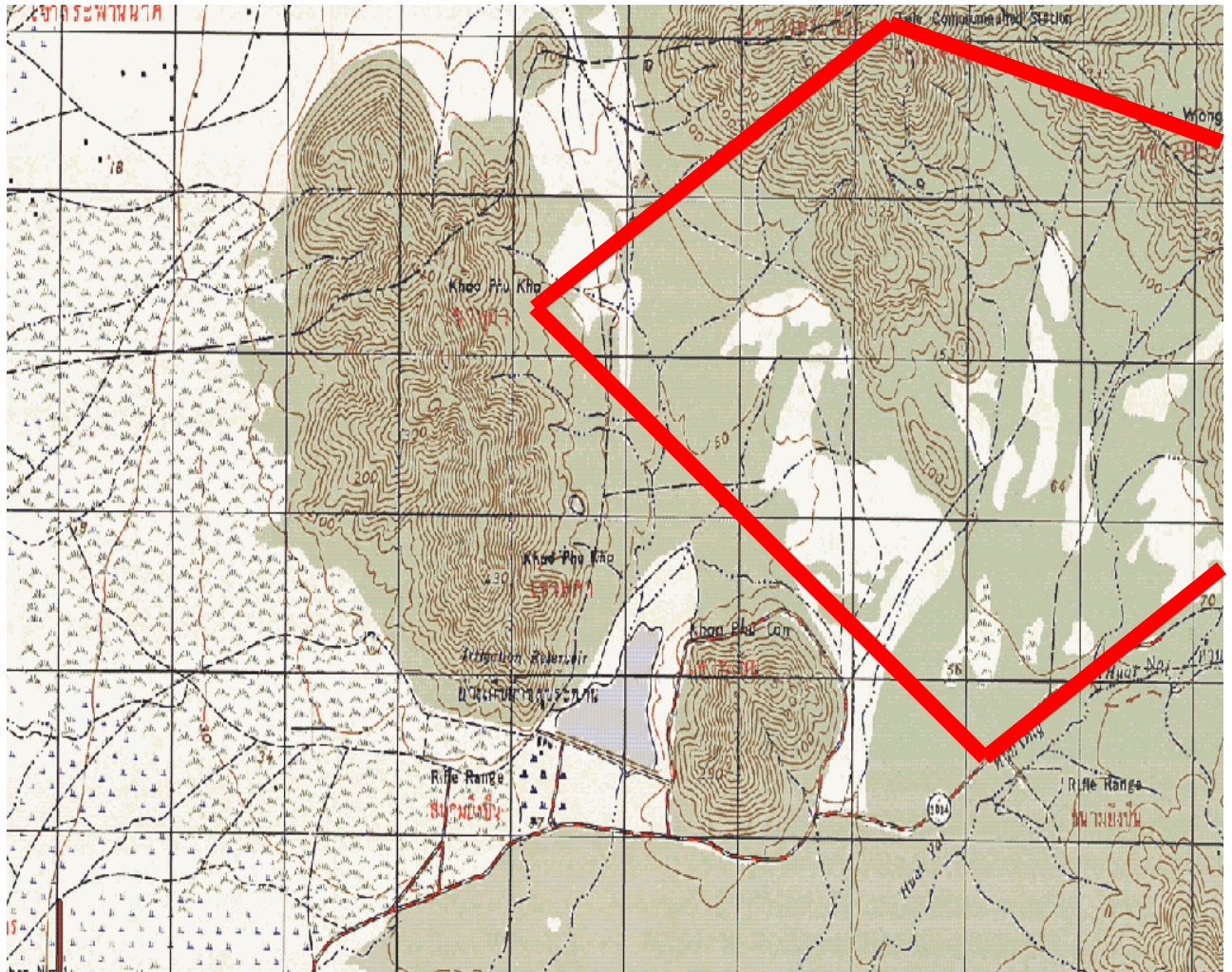
**Description:** The Artillery Training Center (Lopburi) located 153 Km north of Bangkok. The Artillery range commenced operations in 1991. The size of the Training Center is approximately 200 Square kilometers with a mix of mountains and flat farm land. Premier training venue in Royal Thai Region 1, home to the RTA Artillery Center, RTA Aviation Center, Special Warfare Command, and RTA 1<sup>st</sup> Corps.



**Approx: 200 Sqk.**

**Support: 155mm, 120mm Tank gun, 500Lb. delivered ordnace**

**Capability:** The impact areas for artillery are illustrated as areas 3, 4, 5 and the tank impact area is in area 8. Areas 5 through 10 are considered maneuver areas. The impact areas can support up to 155mm artillery, 120 mm tank main gun, and aviation delivered ordnance up to 500lb. The primary impact area is area 3. Aerial delivery of ordnance would have to have restricted headings general from East to West and dive angles to ensure the ordnance is contained within impact area 3. Areas 1, 2, 4, 7, 8, 9, and 10 are providing the opportunity to conduct live fire and maneuver, exercises. The surrounding areas and airfields present the capability for support the long range tactical maneuver, airborne/air assault insertion operations and noncombatant evacuation operations (NEO). **Recommendation:** It is recommended that the Artillery training Center receive further detailed analysis to explore the full potential as a possible location for a NTF due to the local farmers are allowed to cultivate the eastern half of the range and the maneuver through this area would be restricted and seasonal. Typically, November through April is the dry season which may support the maneuver operations.



# Chandy Range

**Important Note: This information may be outdated/invalid; user is responsible for ensuring currency & accuracy.**

## CHANDY RANGE

---

**DESCRIPTION** CHANDY RANGE IS LOCATED ON KRT R-274/68 DME. THE NORTHERN SECTION OF CHANDY RANGE IS THE CONVENTIONAL RANGE FOR PRACTICED ORDNANCE DELIVERY AND THE SOUTHERN SECTION IS THE TACTICAL RANGE FOR LIVE ORDNANCE DELIVERY.

**RANGE ENTRY** PROCEED TO CHANDY RANGE VIA KRT R-274 CONTACT CHANDY ON 127.0 OR 285.4, 25 NM PRIOR TO ENTER THE RANGE .

**RANGE EXIT** EXIT SOUTHEAST OF THE CHANDY RANGE, LEFT TURN TO HEADING 100° TO "LAM-TA-KONG" RESERVOIR (KRT R-265/34 NM) AT OR ABOVE 4000' THEN LEFT TURN TO HEADING 090° CONTACT KORAT ARRIVAL PRIOR TO 35 NM INBOUND.

### RESTRICTION

1. NO RANGE ENTRY WITHOUT CHANDY PERMISSION .
2. NO ORDNANCE WILL BE DELIVERED FROM RADIO INOPERATIVE AIRCRAFT EXCEPT FOR JETTISON .
3. RIGHT CIRCUIT FOR CONVENTIONAL RANGE WITH 200° RUN-IN HEADING AND LEFT CIRCUIT FOR TACTICAL RANGE WITH 230° RUN-IN HEADING .
4. LIVE ORDNANCE WILL BE DELIVERED AT TACTICAL RANGE ONLY.
5. AIRCRAFT WILL NOT OVERFLY OR POINT TOWARD THE RANGE CONTROL TOWER .

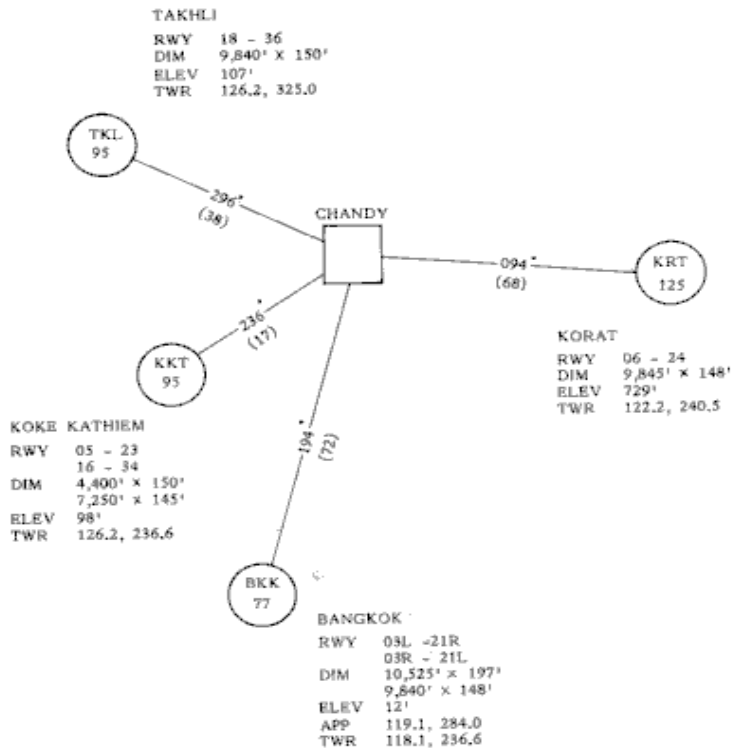
## EMERGENCY PROCEDURES

---

**RADIO INOPERATIVE** AIRCRAFT WITH RADIO INOPERATIVE WILL NOT DELIVER ANY ORDNANCE EXCEPT JETTISON AT TACTICAL RANGE. IF RADIO FAILURE OCCURS IN THE PATTERN, THE AIRCRAFT MAY REMAIN IN THE RANGE AND FLY PASSING IN FRONT OF THE TOWER, ROCK WINGS TO ALERT THE TOWER OF THE SITUATION

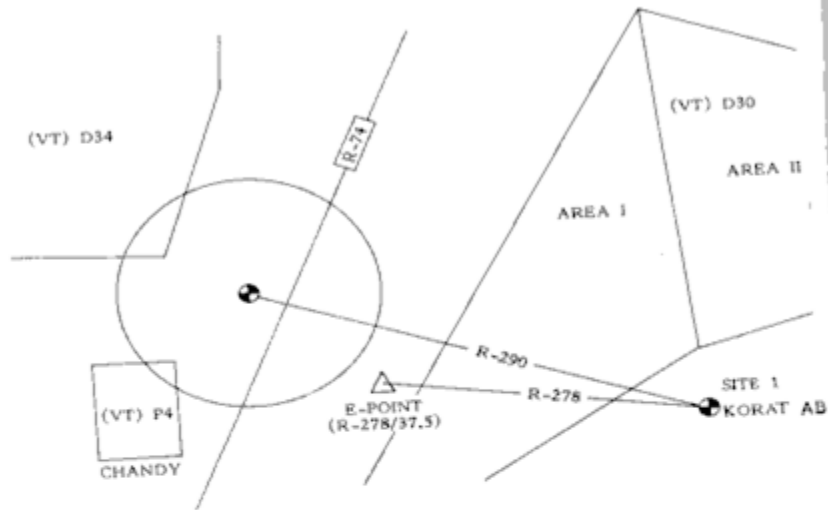
**Important Note: This information may be outdated/invalid; user is responsible for ensuring currency & accuracy.**

**CHANDY RANGE  
DIVERT / EMERGENCY AIRFIELDS**



**Important Note: This information may be outdated/invalid; user is responsible for ensuring currency & accuracy.**

**ACMR**



ACMR IS A CIRCULAR AREA OF 30 NM DIAMETER. THE CENTER IS SITE 3 (REMOTE 1, BUACHUM STATION) KRT R-290/56 DME. ALTITUDE IS DESIGNATED FROM GROUND TO UNLIMITED

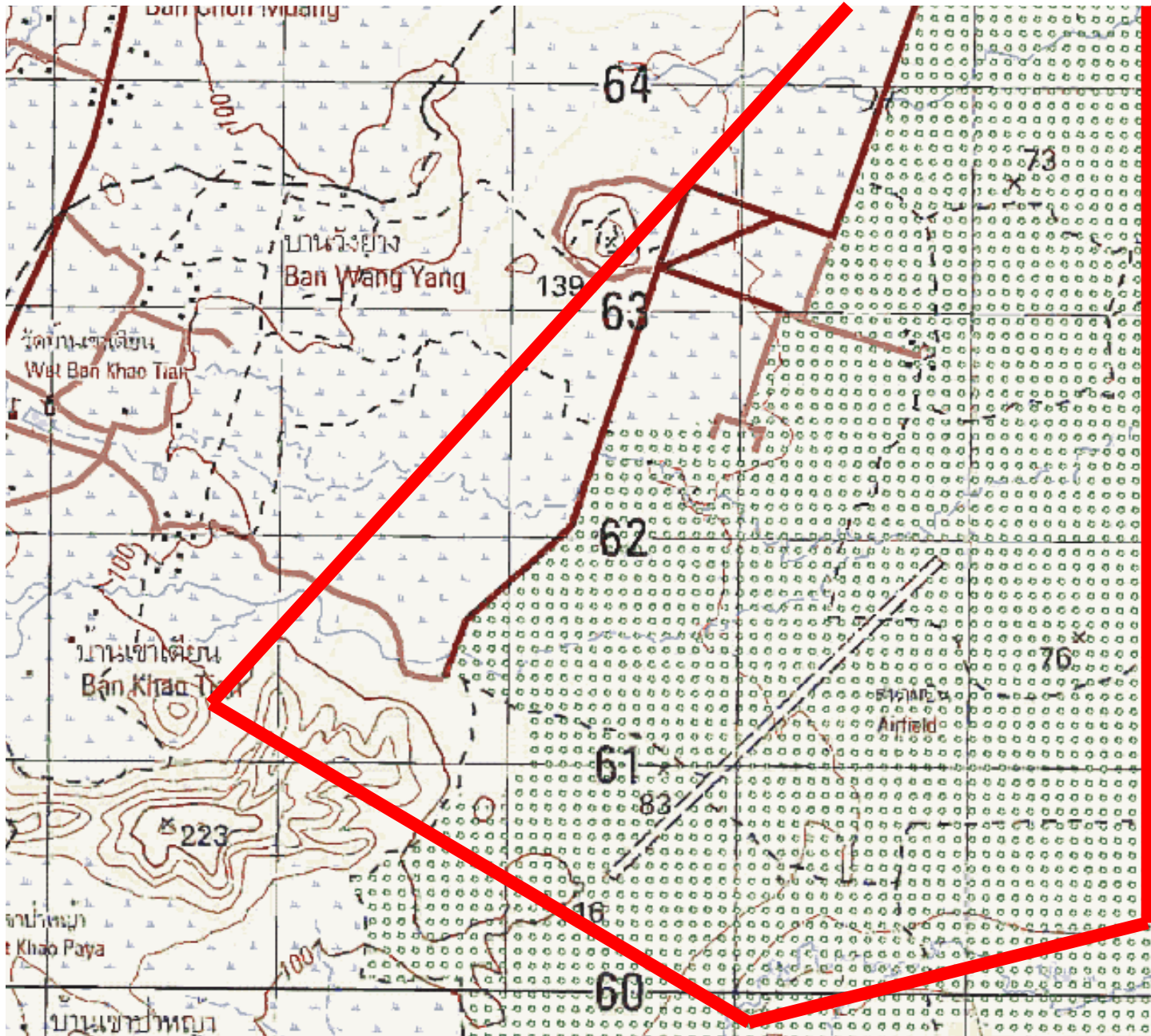
**ACMR ENTRY** TO ENTER ACMR, FLY KRT R-278 TO E-POINT, CROSS E-POINT AT OR ABOVE FL 150. CONTACT "TIGER" ON PREBRIEFED FREQUENCY (227.4, 259.8 OR 306.9) PRIOR TO 15 NM FROM ACMR

**ACMR RECOVERY** EXIT ACMR VIA KRT R-290/40 DME AT OR BELOW FL 140. CONTACT KORAT ARRIVAL PRIOR TO 35 NM INBOUND FOR APPROPRIATE VFR RECOVERY PROCEDURES.

**CAUTION**

1. BE AWARE OF AIRCRAFT OPERATING AT CHANDY RANGE (VT) P-4 SOUTHWEST OF ACMR
2. BE AWARE OF TRAFFIC THROUGH ACMR VIA R-74





- Size delineated next slide.
- Allowed munitions up to 500lb inert.
- Enter/exit routes described in subsequent slides as part of Chandy range regs.
- - Target size is 20' x 20' for F-18 and F-19. Target will be 1,600' from the foul line and must use an 80° attack angle.
- - Target size is 15' x 15' for A-5 Fantan and A-6 Intruder. Target will be 1,200' from the foul line and aircraft must use an 80° attack angle.
- - The machine gun target of AU-23A, NOMAD N22, UH-1H and S-58T must use the bombing target and rocket training area specified in 3.1.3.3
- 3.1.3.3 The bombing training target for 25-pound and 2.75" rockets and bombs (MARK-106) 5 pound, used in special cases must contact the Chaibadan Air Arms Field prior to use. The target is located southeast of Air traffic control tower .The figure looks like 4 circles one behind the other. The radiuses are 30', 75', 150' and 300' in a circle. The center point is pyramid like 8'x8' and 1,732' from the foul line.

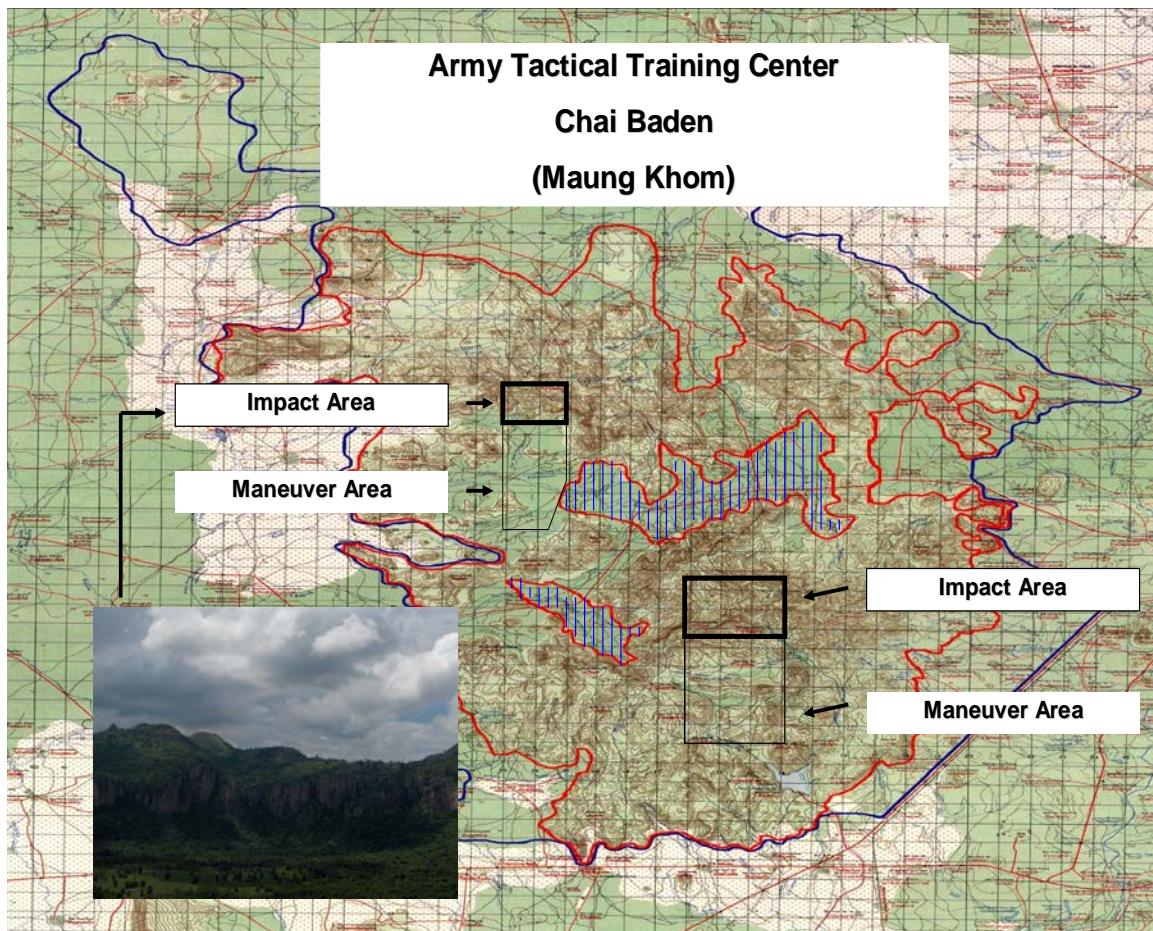
# Army Tactical Training Center Chai Badan/Muang Khom

**Description:** The Army Tactical Training Center is located approximately 250 kilometers from Bangkok. The area was established in 1991 and consists of 447,000 Rai (763 Square kilometers). The terrain is rolling hills with mountains throughout. The vegetation is primarily mature trees with some open maneuver areas. The area has the least amount of encroachment from the areas surveyed.



**Capability:** The Army Tactical Training Center is presently the area that the Thai military uses to conduct combined arms live fire events. The training area consists of two primary impact areas that support up to 155mm artillery, and aviation ordnance up to Mk 84, 2000-lb. bombs. The impact areas are 6-9 square kilometers that are

primarily the side of a mountain as illustrated below. The Army Tactical Training Center appears to offer the most flexibility and training opportunity of the sites visited to meet the objectives of the NTF.



**Limitations/Restrictions:** The Army Tactical Training Center has one significant limitation that the Thai military said they are working to correct. The areas depicted in blue hash marks are civilian towns in the center of the training area. The below photo illustrates the size of the small community and associated farms. The Thai Government is working to relocate the people to the surrounding area outside the installation boundary. No time lines were mentioned; however, if the Thai government is successful in this endeavor the training opportunity will be significantly enhanced.

**Recommendation:** The Army Tactical Training Center presents the best training opportunity of the sites surveyed. It is recommended that the Army Tactical Training center receive a further detailed analysis to explore the full potential as a possible location for a NTF.

# BAHN CHAN KREM RANGE



## Bann Chan Krem (BCK)

- Area name: VTD 70 "BCK" Bann Chan Krem (BCK)
- Coordinate: Lat. N 13 03 35 Long E 102 03 23 SV 812455
- Gun target: 1 O'clock from bullseye, Marking circles 50Ft., 100Ft., and 150Ft.
- Air Delivery munitions: Mk-76 and LGTR Only (Air to Ground)  
Conventional munitions: Up to 105mm ONLY.
- Size of airspace: 20NM X 20NM
- Altitude: Surface to 15,000 feet
- Observation and Field of Fire: Intermixed small trees and meadows with visibility up to 400 meters. Maneuver is to the SE toward OP2 and the area becomes quite clear with visibility up to 5k. Continuing from OP2 on toward the LOA the vegetation becomes light toward the impact area.
- Cover and Concealment: Fixed positions maybe prepared to simulate combat conditions upon approval authority authorization.
- Obstacles: Unimproved road can be quite slick in rainy conditions. Soil is a mixed sandy, clay loam and holds water in low areas; rain could cause some vehicle movement and recovery problems. Vegetation in some locations could be a obstacle for some types of LFX.
- Key Terrain: OP1, offers good over watch from selected locations
- Avenues of Approach: Improved road into training area, unimproved road into training area, unimproved roads and trails in the training area. Generally from east and south east for aircraft.



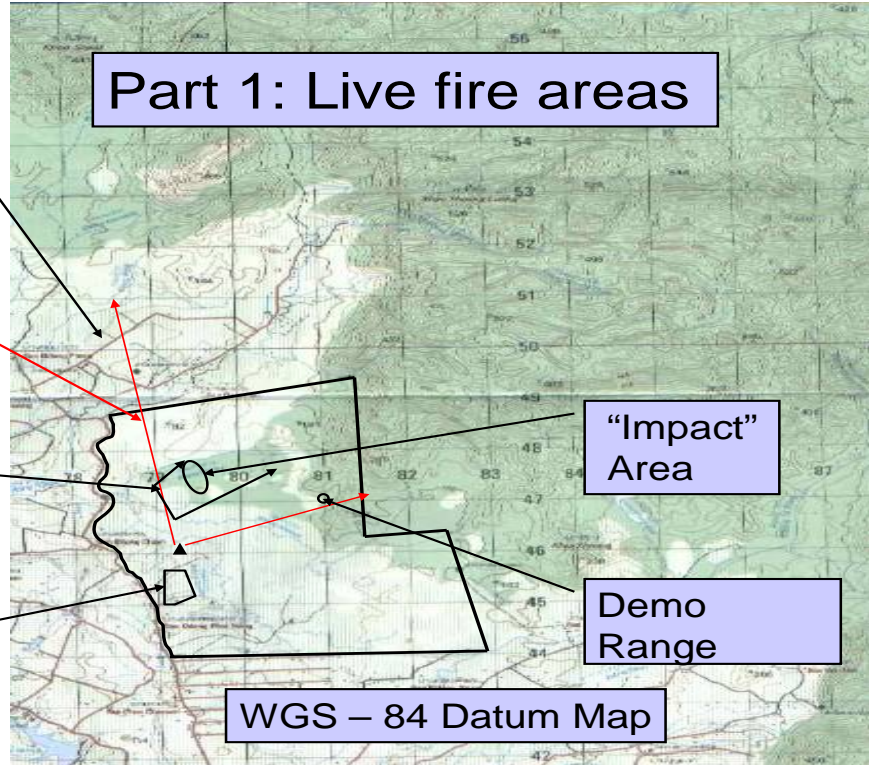
# Part 1: Live fire areas

BCK Training Area

Thai Live Fire "Fan" (345 deg - 65 deg)

CAB "rough" Maneuver Box

BCK Base



"Impact" Area

Demo Range

WGS - 84 Datum Map



Grid 7942744626

Impact area

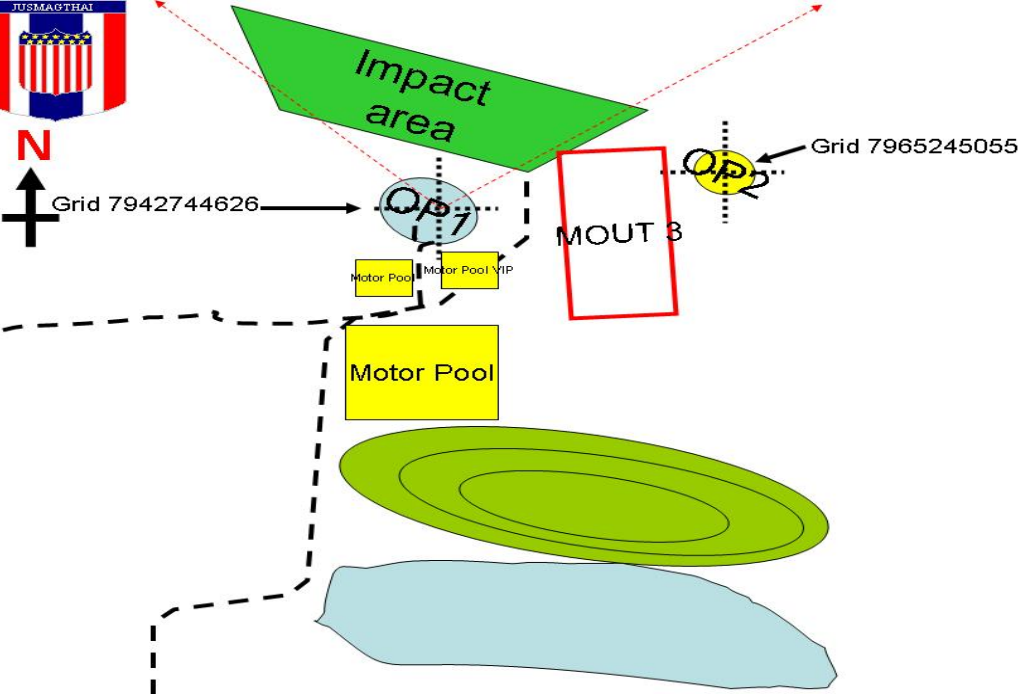
Motor Pool

Motor Pool

MOUT 3

OP 7

Grid 7965245055





# OP1 Impact Area



# Army Cavalry Training Center

## Cavalry Center (Saraburi)

**Description:** The Cavalry Center (Saraburi) is located approximately 120 kilometers north of Bangkok. The training area is home to the Thai Army Armor School which consists of nine ranges and one impact area. The Cavalry Center is a school house environment and the range is primarily used to teach Thai armor students basic firing tables for the 105mm tank cannon.



## Cavalry Center (Saraburi)

**Capability:** The main tank range is 1800 meters long and approximately 300 meters wide. The range is limited to the 105mm tank main gun fired from static firing positions as illustrated below. The other eight ranges are comprised of small arms static firing ranges to include mortars. The Cavalry Center offers limited training opportunity as a NTF; however, it was offered by the Thai Army for use in support of training operations elsewhere in Thailand as a possible logistics base, convoy stop, or FARP.

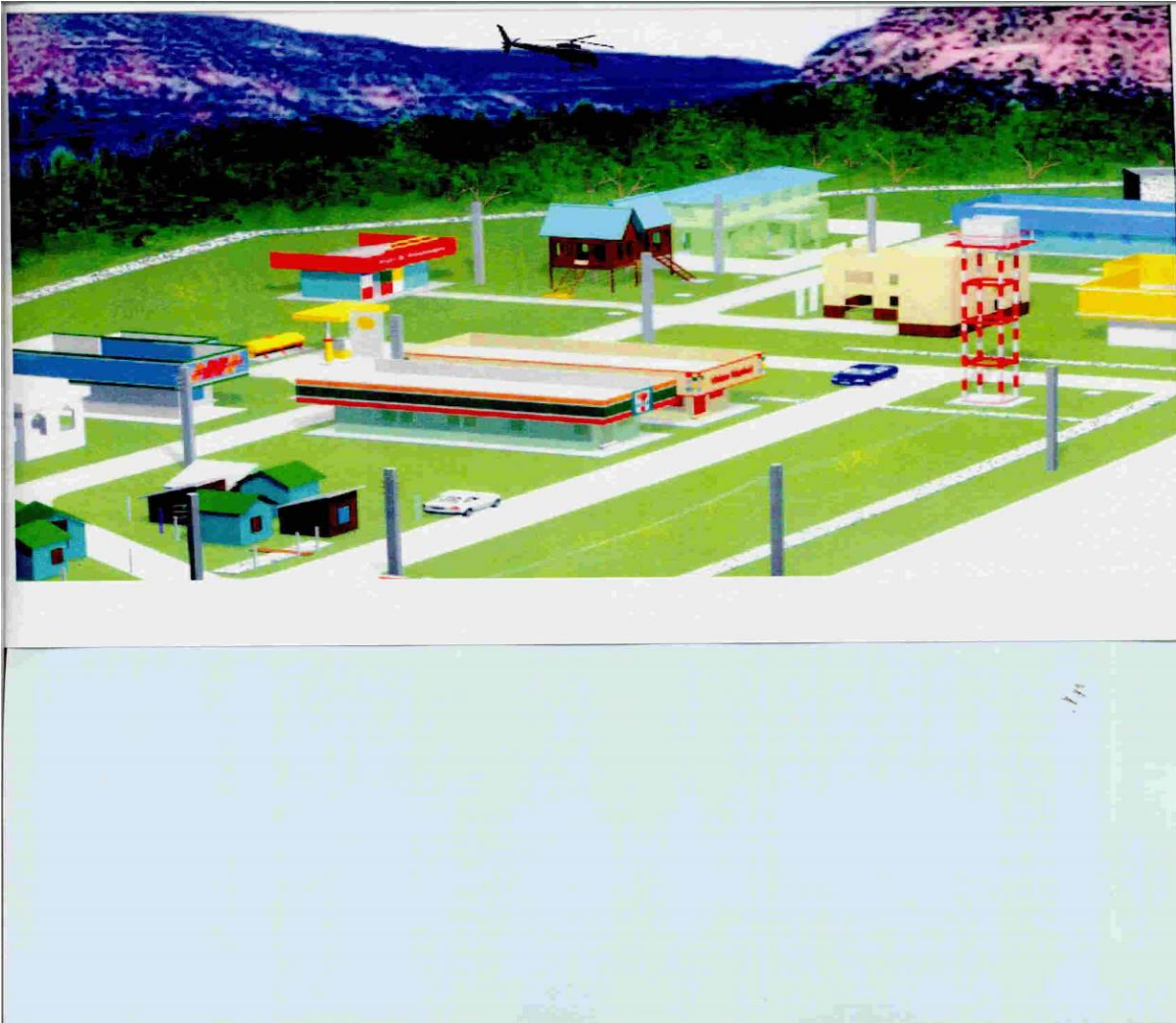


**Limitations/Restrictions:** The limitations of the range prohibit the firing of 120mm tank ammunition, aviation delivered ordnance, or artillery. Encroachment is a significant issue at the Cavalry Center. The town of Saraburi and vicinity have heavily encroached on the Cavalry Center and noise complaints are very common. The town of Saraburi and main thoroughfare are less than 100 meters behind the tank range.

**Recommendation:** Due to the limited size, ordnance restrictions, and severe encroachment issues with the Cavalry Center, it is recommended that it not be considered as a potential NTF.



# Special Warfare Training Center Camp Erawan, Lopburi



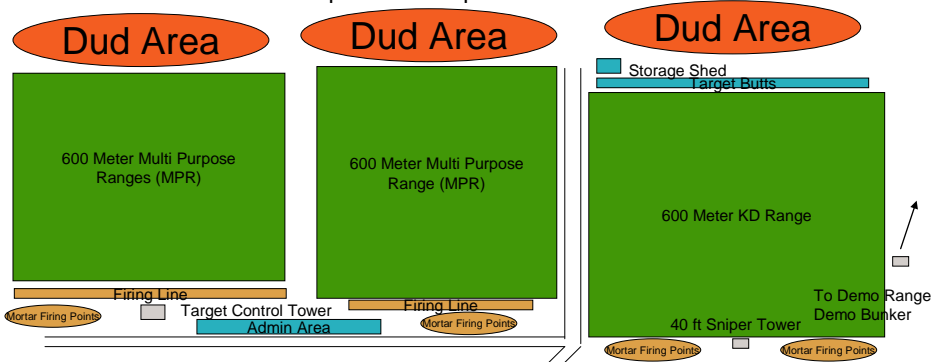
**Description:** Building MOUT Site resembles Thai City Block

1. Maneuver building limited LFX.
2. Ballistic breaching and small lock buster door charge (open all windows for over pressure).
3. Two 25 m ranges in close proximity

**Recommendation:** Ammunitions (SIM rounds and Blank Fire only). The facility suitable to conducting Peace Keeping Operations Training and Platoon Raid

# KD and Multi Purpose Maneuver Ranges

Camp Erewan Lop Buri RTA SWC



Additional Dismounted Movement Area

## Range Capabilities

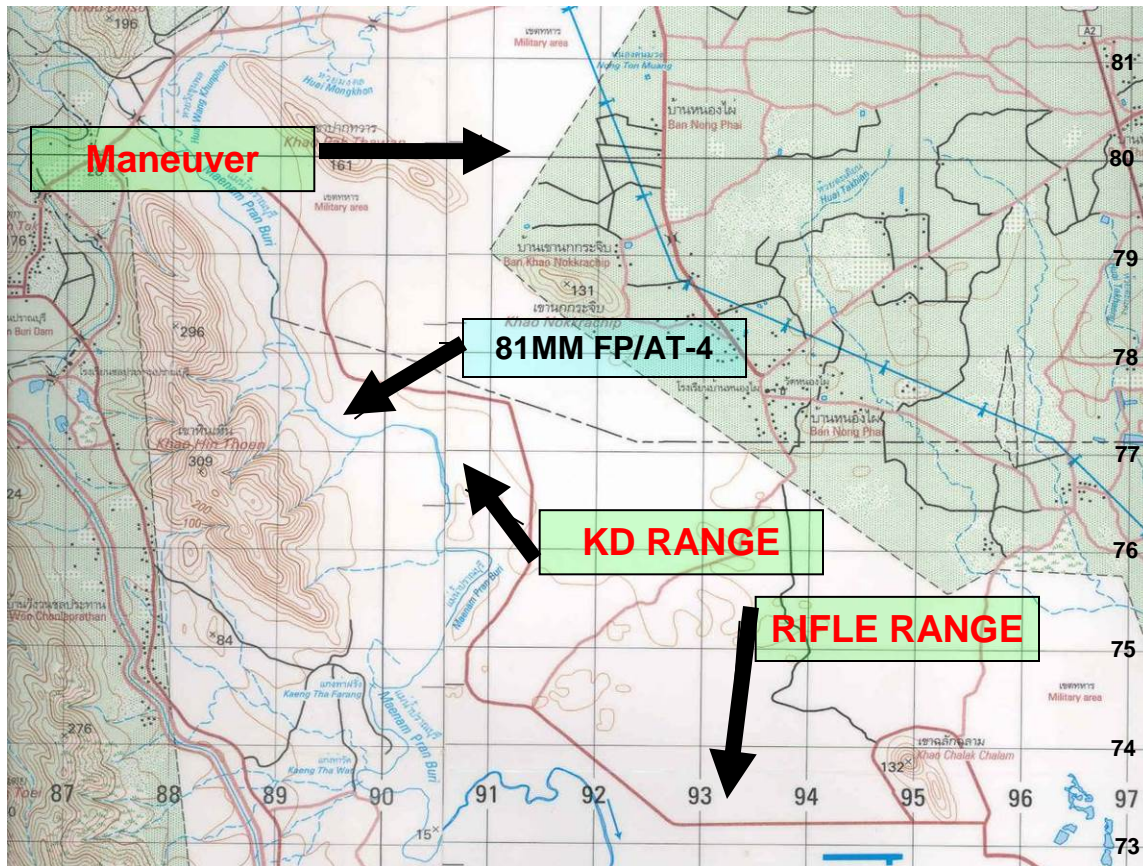
1. Lt/Hvy Weapons up to .50
2. 60 and 81 mm Mortar
3. LAW/AT-4/90mm
4. M203/MK-19
5. Demo Range



# Infantry Training Center Camp Tanarat, Prانبูรี

**Description:** The Infantry Center is located approximately 230 kilometers southwest of Bangkok. The Infantry Center is approximately 400,000 acres in total with sparse villages throughout. The main cantonment area consisting of 25,000 acres is where the majority of the current training takes place on static ranges. The Infantry Center is primarily a school house environment for the infantry at all levels.





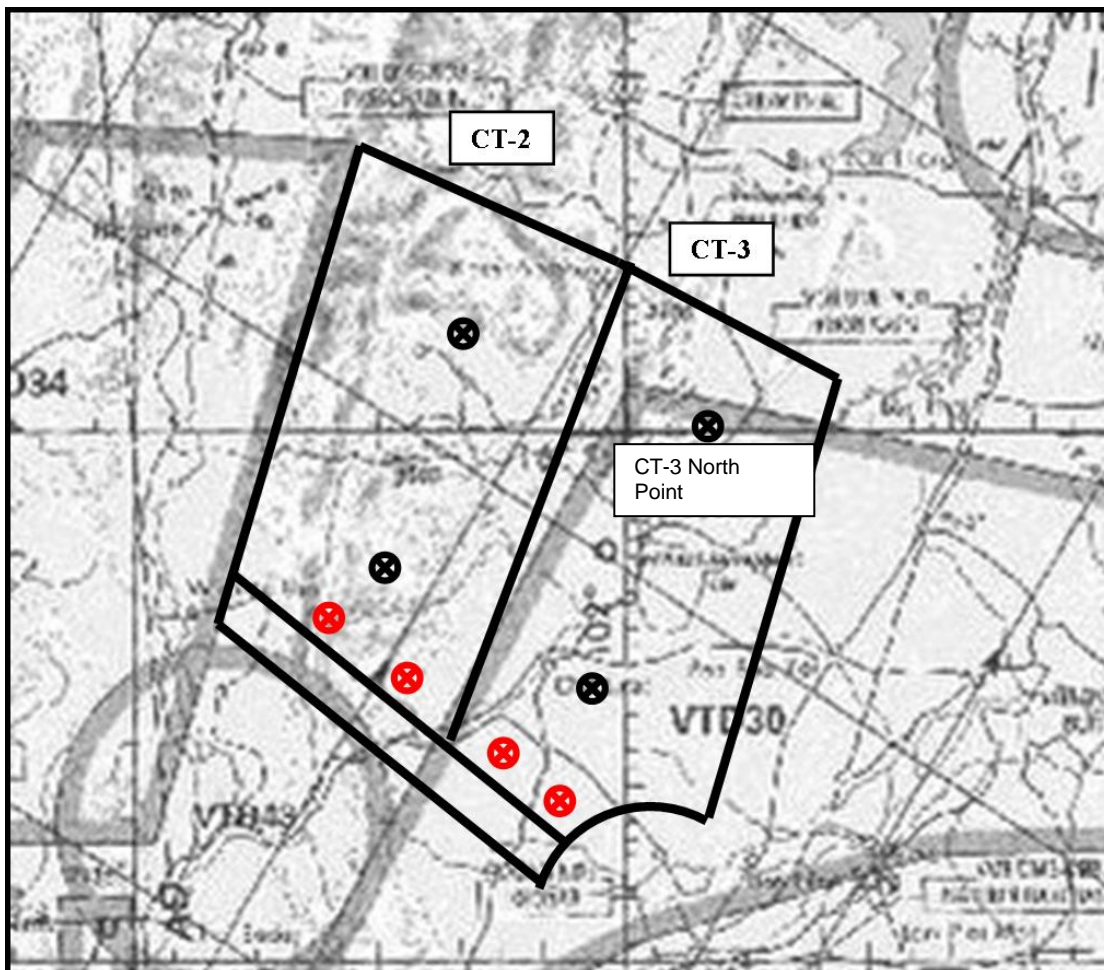
**Capability:** The Infantry Center utilizes its ranges to primarily support the resident schools for the Thai Army. Illustrated below are two of the static firing ranges utilizing the mountain as the backstop. The static small arms range on the right depicts the large number of grazing cattle that were present on all the ranges. The Thai Army fires 105mm artillery on a scheduled, predetermined basis due to the close proximity of the King of Thailand's Summer Palace. The firing of 155mm artillery, and aviation delivered ordnance appeared to be out the question because of noise rest restrictions and restricted airspace associated with the palace to north and the Burmese boarder to the west.

**Limitations/Restrictions:** Ranges are limited to primarily static firing ranges with a limitation on the caliber of ordnance fired.

**Recommendation:** Due to the limitations on firing 155mm artillery and fixed wing aircraft, and the close proximity to Burma and the King's palace. It is recommended that the Infantry Center not be considered as a NTF.

## Nam Phong range (VTR-68)

	P	S
Blue:	261.0	256.5
Red:	283.4	271.5



NAM PHONG Range (VTR-68) procedures: Nam Phong Range Description: A circle 20 NM radius centered on point 1639N10258E

Period of activity: 29 Jan - 9 Feb 2007, between 0700 – 1700 Local Time.

**Vertical limits:** GND to FL150

**Range Entry Procedures:** Any flight directs NPG: Follow NPG Departure (see paragraph 6.8). If NPG not clear: Holding present position

**Range Exit:** Follow NPG recovery procedures.

**CAUTION:** Be aware of other aircraft holding 10 NM on R-360 from NPG. The aircraft will be directed by the Nam Phong Tower for safety.

**RESTRICTIONS:** No Range Entry without Nam Phong Permission. No Ordinance will be delivered from Radio Inoperative aircraft except for jettison. Right circuit for conventional range with 180° degree run-in HDG. No live ordinance will be delivered on the range. Aircraft will not overfly or point toward the range control tower.

**RADIO INOPERATIVE:** Aircraft with radio inoperative will not deliver any ordinance, except to jettison. If radio failure occurs in the pattern, the aircraft may remain in the range pattern and pass in front of the tower, rock wings to alert the tower of the situation. If the emergency aircraft cannot fly back to the airbase, landing at the Nam Phong Airfield is authorized.

**JETTISON:** Aircraft will jettison ordinance on the tactical range only (163845N 1025825 E) using a left hand pattern. If able, notify Nam Phong of your intention prior to jettison.

## Phu Lamyai range, Nakhon Ratchasima (Korat)

**Description:** The Phu Lamyai range is located approximately 240 kilometers southeast of Bangkok. The range is approximately 400,000 acres is where the majority of the current training takes place on live fire maneuvers area.

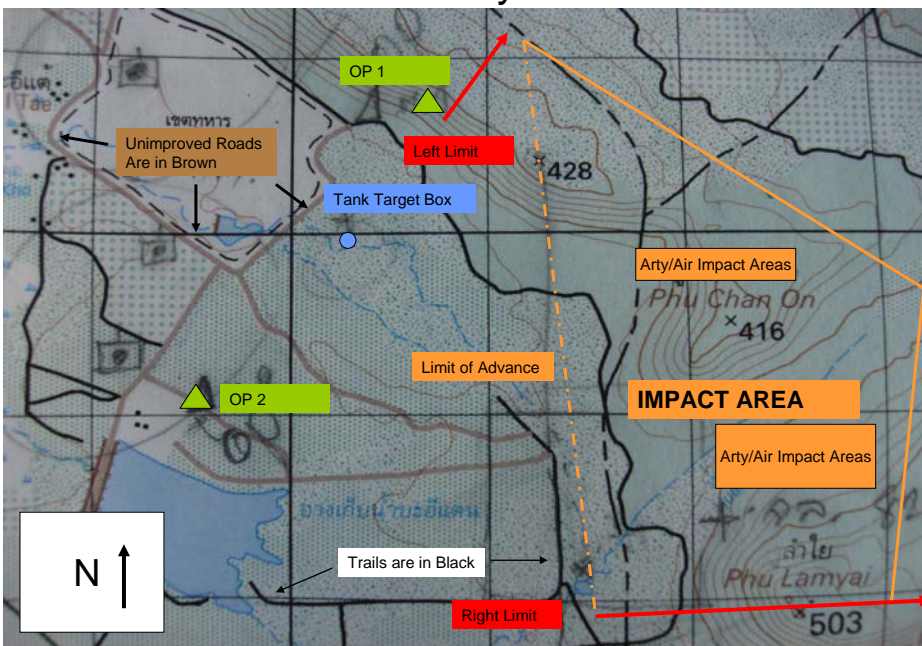


**Capability:** The Phu Lamyai range is primarily support the 23<sup>rd</sup> RTA Infantry Regiment, 2<sup>nd</sup> Armor Division and Field Artillery Division. The range utilizing the mountain as the backstop and depict the large number of grazing cattle that were present on all the ranges. The Thai Army fires 105mm artillery with the proper survey 155mm can be fires on this range. The aviation delivered ordnance is not recommended.

**Limitations/Restrictions:** Ranges are limited to conduct combine Battalion live fire maneuvers with a limitation on the caliber of ordnance fired.

**Recommendation:** Due to the limitations on firing 155mm artillery and fixed wing aircraft, Phu Lamyai is considered as a NTF.

### Over Head Phu Lamyai Live Fire Area





# BAHN DAN LAN HOI (BDLH)

## 3<sup>rd</sup> AAC CALFTX, Bann Dan Lan Hoi, Sukhothai

### Range Information:

OP1 vic. grid N17deg,05',21" E099deg,24',03"

OP2 vic. grid N17deg,06',33.6" E099deg,24',13.3"

### Impact area Information:

Impact area1: N17deg,07',.5" E099deg,21',44.6"/1,000MX1,000M.

Impact area2: N17deg,06',12.7" E099deg,21',10"/1,000MX2,000M.

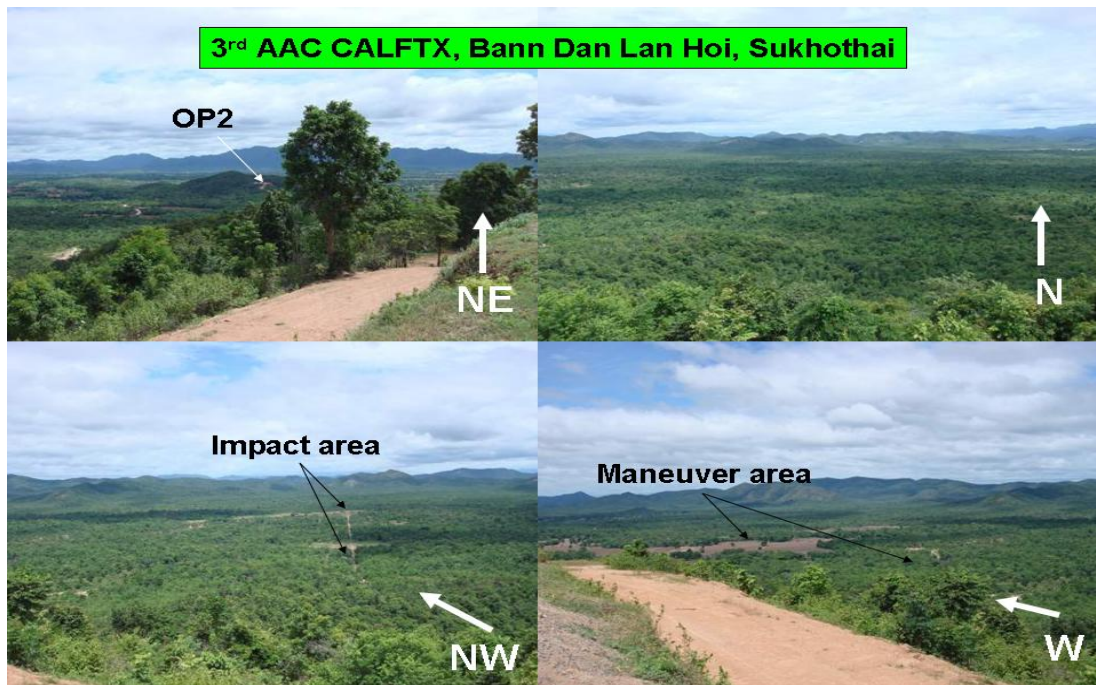
Impact area3: N17deg,05',14.3" E099deg,21',43.1"/1,000MX1,500M.

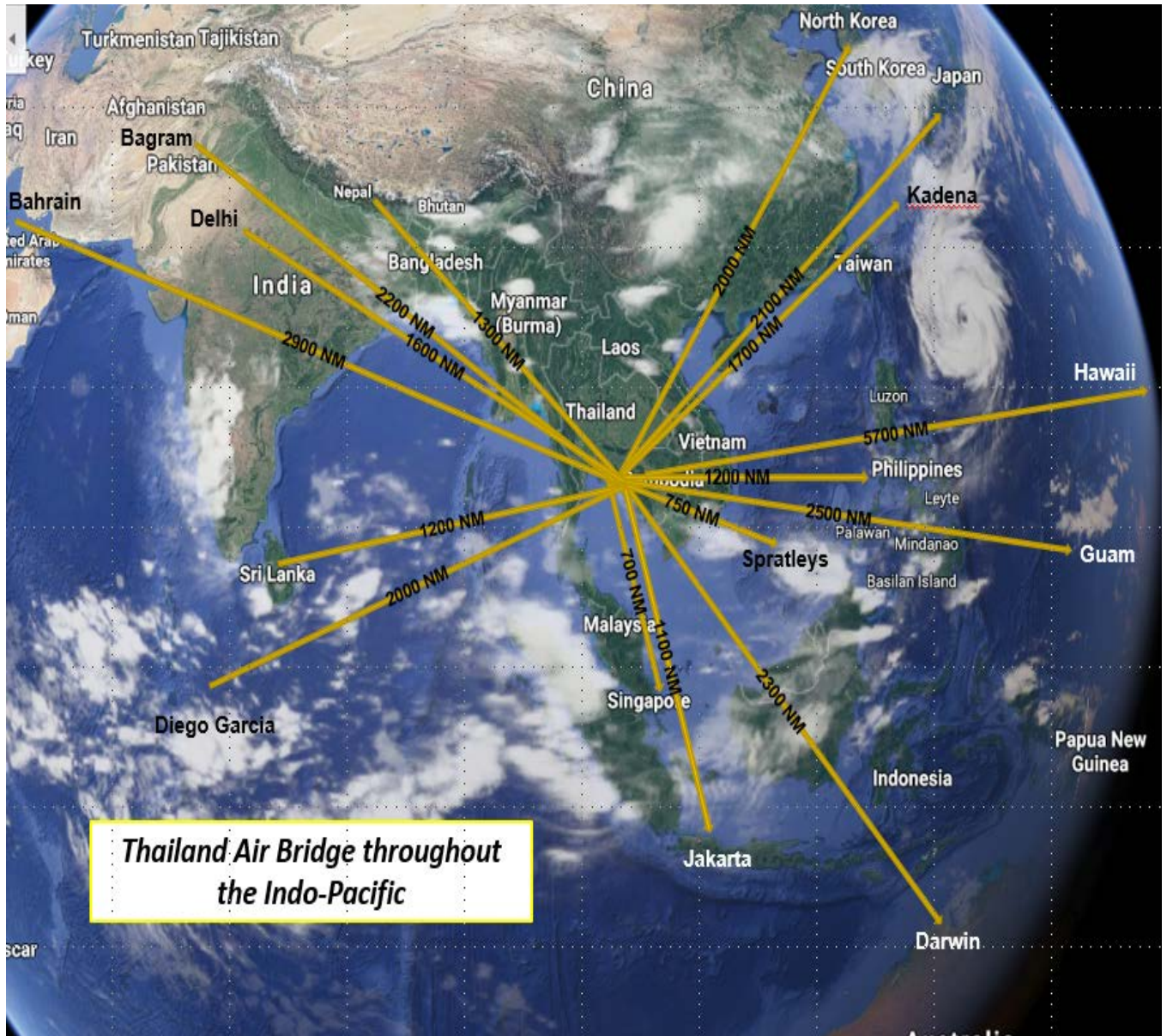
### Range capability:

The 3<sup>rd</sup> AAC CALFTX is approximately 196 Square kilometers with a mix of mountains and flat farm land. Premier training venue in Royal Thai Region 3 and RTAF Aviation delivered ordnance range.

The impact areas for artillery are illustrated as areas 1, 2 and maneuver areas locate on the west of the impact areas. The impact areas can support up to 155mm artillery, 120 mm tank main gun, TOW, and aviation delivered ordnance up to 500lb. The primary impact area is area 1. Aerial delivery of ordnance would have to have restricted headings general from East to West and dive angles to ensure the ordnance is contained within impact area 1. Areas 1, 2, and 3 are providing the opportunity to conduct live fire and maneuver, exercises. The surrounding areas capability for support the short range tactical maneuver, air assault insertion operations and noncombatant evacuation operations (NEO)

**Recommendation:** It is recommended that the 3<sup>rd</sup> AAC range further detailed analysis to explore the full potential as a possible location for a NTF due to the local farmers are allowed to cultivate the eastern half and southern of the range and the maneuver through this area would be restricted and seasonal. Typically, November through April is the dry season which may support the maneuver operations.





### Thailand APOD Overview

	Airport name or Location	ICAO	IATA	Joint Runway (Civil and MIL)	MIL name	GH Capability of FBO	Fuel Support	Dimension of Runway (m)	Runway PCN	Taxiway PCN	Apron PCN	Current CAAT Report date
1	Chiang Mai	VTCC	CNX	Y	Wing 41	AML and MJETS	Y	3100 x 45	59/F/A/X/T	A - 70/R/B/W/T B, C, E, G, P5 AND P6 - 59/F/A/X/T D - 85/F/C/Y/T F, H AND Q - 88/R/D/X/T P - 59/F/A/X/T	NR 1-14 - 78/R/C/X/T NR 15-19 - 62/R/B/X/T NR 20L, 20 AND 20R - 89/R/B/W/T	19-Jul-18
2	Chiang Rai	VTCT	CEI			AML and MJETS	Y	3000 x 45	84/F/D/X/T	84/F/D/X/T	NR 1-4 - 73/R/D/X/T NR 5, MIL AND GA RAMP - 73/R/C/X/T	20-Jul-17
3	Don Mueang (Bangkok)	VTBD	DMK	Y	Wing 6	AML and MJETS	Y	4120 x 260 3720 x 160	126/F/D/W/T	84/R/D/W/T 86/F/D/W/T	82/R/D/W/T	13-Sep-18
4	Hat Yai (Songkhla)	VTSS	HDY	Y	Wing 56	AML and MJETS	Y	3050 x 45	60/F/C/X/T	A, C, G AND H - 60/F/C/X/T B, D, E, F, I AND N - 60/R/C/X/T	60/R/C/X/T	4-Jan-18
5	Hua Hin	VTPH	HHQ			AML and MJETS	Y	2236 x 120	42/F/B/Y/T	42/F/B/Y/T	45/R/B/Y/T	1-Mar-18
6	Khok Kathiam (Lop Buri)	VTBL	KKM		Wing 2			2200 x 45 1340 x 45	16, 34 - 38/F/D/Y/T 05, 23 - 35/R/C/W/T	A - 11/F/D/Y/T B, C, D, E - 35/R/C/W/T	201 - 27/F/A/Y/T 203 - 35/R/C/W/T	29-Mar-18
7	Khon Kaen	VTUK	KKC			AML and MJETS	Y	3050 x 45	65/F/C/X/T	65/F/C/X/T	65/R/C/X/T	1-Mar-18
8	Krabi	VTSG	KBV			AML and MJETS	Y	3000 x 45	72/F/C/X/T	72/F/C/X/T	68/R/C/X/T	9-Nov-17
9	Nakhon Ratchasima (Korat)	VTUN	NAK		Wing 1			3000 x 45	59/R/B/W/T	A, B - 46/R/B/W/T C - 53/R/B/W/T D, E - 47/R/B/W/T J, G - 39/R/B/W/T	50/R/B/W/T	5-Mar-15
10	Phitsanulok	VTPP	PHS	Y	Wing 46	AML and MJETS	Y	3000 x 45	61/F/C/X/T	A, B, C, D, E - 45/F/C/X/T F, I - 61/F/C/X/T	57/R/C/X/T	9-Nov-17
11	Phuket	VTSP	HKT	Y		AML and MJETS	Y	3000 x 45	59/F/A/X/T	A, B, E, F, G, T1-T3 - 78/R/C/X/T C, D, P - 59/F/A/X/T	78/R/C/X/T	24-May-18
12	Prachuap Khiri Khan	VTBP			Wing 5			2000 x 40 1050 x 40	43/F/A/X/T	A - 43/F/A/X/T B - 45/F/B/X/T	45/F/B/X/T	3-Mar-16
13	Surat Thani	VTSB	URT	Y	Wing 7	AML and MJETS	Y	3000 x 45	65/F/C/X/T	A, B - 65/F/C/X/T C, D, E, F, G, H, E AND J - 65/R/C/X/T	65/R/C/X/T	1-Mar-18
14	Suvarnabhumi (Bangkok)	VTBS	BKK			AML and MJETS	Y	4000 x 60 3700 x 60	137/F/D/X/T	137/F/D/X/T	126/R/D/X/T	30-Mar-17
15	Takhli (Nakhon Sawan)	VTPI	TKH		Wing 4			3000 x 45	80/R/D/X/T	80/R/D/X/T	80/R/D/X/T	1-Mar-18
16	Ubon Ratchathani	VTUU	UBP	Y	Wing 21	AML and MJETS	Y	3000 x 45	61/F/C/X/T	61/F/C/X/T	61/R/C/X/T	1-Mar-18
17	Udon Thani	VTUD	UTH	Y	Wing 23	AML and MJETS	Y	3048 x 45	65/F/C/X/T	61/R/C/X/T	61/R/C/X/T	9-Nov-17
18	U-Tapao (Sattathip)	VTBU	UTP	Y		AMC, DG, AML and MJETS	Y	3505 x 60	59/F/B/X/T	A, B, C, D, E, F, G, H - 65/R/B/W/T I - 9/R/B/W/T	38/R/B/W/T	10-Nov-16