

Range Special Instructions

Range: Kilo 2 Combat Town	Lateral Limits: Na	Range Facilities: Shipping Container Buildings; (5) Breaching Doors; AAR Site; AMVOC course.
Location: 671 895	Boundaries: As Depicted in Graphics	Assigned to: CO, MCB
Type: Urban		Date Revised: 4 May, 2009
Phone #: Na	Allowable Munitions: As listed below; SESAMS; Non-Lethal; Breaching (Only When Authorized by RCO)	
Scheduling		
<ol style="list-style-type: none"> 1. Scheduling of this facility must be approved by MCB Camp Pendleton Range Scheduling. 2. The Observation tower is designated as a "Viewing Area" for civilian (Non-DOD employees). Use of this observation does not require a waiver but does require notification of Range Scheduling NLT seven (7) days prior to the event by the using unit. 3. Facility consists of seven sections and the AMVOC Course for scheduling. <ol style="list-style-type: none"> a. The AMVOC is imbedded within Sections 6 & 7 with the Off Camber Course adjacent to Sections 2 & 3. 4. Scheduling of Contractor or BFX Support is done through TSD. <ol style="list-style-type: none"> a. A Contractor is required in order to power-up the buildings and the town for lighting. Unit will need to detail in their RFMSS request the start and end times needed for the contractor. <ol style="list-style-type: none"> i. This is a National Electrical Manufacturers Association (NEMA) Type I facility in that it does not protect against ingress of water (dripping or light splashing). ii. When rain or moisture is present the unit commander shall address mitigation in the ORM matrix for potential electrical hazards. iii. During periods of extreme wetness (i.e. heavy rain) and/or when there is standing water, the Kilo 2 MOUT Landlord will determine if having electrical power to all or parts of the facility constitutes a safety hazard. b. All BFX (Role Players, IEDs, RPGs, etc.) shall be scheduled through TSD c. TSD Phone Numbers – <ol style="list-style-type: none"> i. R223B – 725-4805 ii. Training Support Reference Desk - 725-4444 		
GENERAL INSTRUCTIONS		
<ol style="list-style-type: none"> 1. A safety Brief will be conducted prior to each live fire event to all participants. 2. IOT occupy this range unit must have the following personnel/equipment: <ul style="list-style-type: none"> ➤ RSO ➤ Corpsman & Safety Vehicle ➤ Positive Communication with LONGRIFLE ➤ An ORM reviewed and signed by the Command, RSO and OIC. ➤ If ammunition is present on range - Ammo Guards will be armed 3. IOT go into a hot status on range unit must have the following personnel/equipment: <ul style="list-style-type: none"> ➤ OIC ➤ RSO ➤ NAVMC 11381 filled out by the RSO ➤ Corpsman & Safety Vehicle ➤ Positive Communication with LONGRIFLE 4. RSO will verify the left and right lateral limits utilizing a compass and map. <ul style="list-style-type: none"> ➤ Overall range lateral limits will be identified. ➤ Each firing position lateral limits will be identified. 5. The RSO & OIC will personally observe each live fire event. 6. A non-participating Corpsman will be stationed with safety vehicle. 7. A full rehearsal will be conducted prior to live fire with all safety and training personnel. 8. Unit is required mark/post signs for any lateral limits and/or MSLs listed in this brief if not already marked/posted. 9. At no time will any unit go from live fire to blank or SESAMS force-on-force within a 24 hour period 10. When Range guards are required, they will be posted in pairs with positive communication with the RSO. 11. Ammunition will only be issued per event and accounted for on NAVMC 11381. 12. After each event, unit leaders will conduct a line out. 13. Each RSO/PSO will certify to the OIC that all weapons are in Condition 4 prior to exiting the range and all ammunition is accounted for. 14. Helmets and flak jackets shall be worn for the following live fire training events: <ul style="list-style-type: none"> ➤ Live fire and movement/maneuver ➤ High explosives or grenades ➤ Machineguns ➤ Close Quarters Battle in shoot houses 15. Ensure all weapons are cleared and inspected prior to departing the firing line. 16. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP. 		

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SPECIAL INSTRUCTIONS

1. Kilo Two Combat Town is composed of 221 ISO shipping containers forming 101 simulated buildings divided into several areas. Electricity can be provided to areas (requires contractor scheduling) to support night evolutions.
2. Buildings have openings with shutters and simulated rebar protection bars on the openings that can be opened or closed depending on the situation.
 - a. **Opening shutters are to be in the closed position to protect the inadvertent penetration by pyrotechnics. The floors are wood and will catch on fire.**
3. Railings surround the tops of buildings that have roof access/breaches.
 - a. **These railings are not authorized for rappelling/grappling operations.**
4. An After Action Review instruction room is also available to conduct pre-and-post event briefings.
5. A 20 foot observation tower is also be located at the site allow overview of the entire MOUT.
6. The AMVOC course is embedded within **Section 7** and has the following defined obstacles (which can be used from either direction) **Max speeds: HUMVEE 10 mph, MTRV 5 mph:**
 - a. **Camel Backs** - Two small hills that put the vehicle in a position to prevent the operator from seeing over the hood.
 - b. **Narrow Crossing** - 235 feet of concrete raised to 1 ft. off the ground to simulate driving over narrow bridges or along ditches. The sides have been tapered to 30 degrees so that the vehicle can safely come off the obstacle at max allowable speed, thus preventing roll-over. Failure to follow max speed limits could cause roll-over.
 - c. **Off Camber Turn** - This obstacle is designed to place the vehicle sideways on a hill side to teach the incidental driver how to handle the vehicle on such a turn and provide the vehicle driver with the confidence in the handling capabilities of the vehicle in this type of terrain.
 - d. **Section 7** - This area of the MOUT provides MOUT driving conditions that restrict the driver from observation around corners. Placement of containers provides a challenging course. **Caution: Buildings are not protected and IR tape must be placed for NVG ops.**
 - e. **Incidental obstacles** - with the road surrounding the MOUT and the ability to drive in the various areas of the MOUT, users can create their own course.
7. **Bivouac -**
 - a. **Area located at grid 67000 89500 is a company bivouac site assigned to K-2 Combat Town as a section. This site must be scheduled.**
 - b. **Bivouacking in the buildings is authorized to support training.**
8. **A Police Call will be conducted of the town footprint and all areas used by the unit and inspected prior to any unit departing this facility. If Co-Use was authorized, RSOs from all units involved will be present for the inspection by a Landlord.**
9. All vehicles not involved in training shall be parked in the designated parking lot.
 - a. **Privately owned vehicles (POVs) are prohibited from entering the Town unless prior coordination is made with the Range Control Officer and that the vehicle will play a role in a scenario.**
10. Portable toilets will be used vice field expedient heads.
11. Trenches or fighting holes will not be dug due to buried electrical cables.
12. **Open fires are prohibited (to include squad stoves).**
13. **Pyrotechnics -**
 - a. **No pyrotechnics are allowed inside any building.**
 - b. **All pyrotechnics, flash bangs or any booby trap simulator, must be initiated from within the footprint of the town and all effects must land within the footprint of the town.**
 - c. **Booby trap simulators are to be placed below knee-level.**
 - d. **The RSO must ensure all booby trap devices are removed when training is completed and inform the OIC when accomplished.**
 - e. **Aerial Pyrotechnics are not authorized at any time.**
14. **Artillery Simulators -**
 - a. **All artillery simulators will be supervised by a PSO specifically trained and assigned by the RSO.**
 - b. **Use simulators for their intended purpose only.**
 - c. **Do not use them to simulate hand grenades.**
 - d. **They must not be activated in loose gravel, sticks, flammables (i.e. leaves, etc.) or any other material subject to projection.**
 - e. **Observe safe separation distances from unprotected personnel at all times.**
 - f. **Personnel are considered protected if they are in a armored vehicles, building, dug in emplacement (Any digging must be pre-approved by the RCO), personnel are masked by terrain or device is detonated in designated barricaded pit.**
 - g. **Safe separation distances for unprotected personnel are:**
 - i. **M116A1 - 60 meters**

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ii. M115A2 - 35 meters

15. CS & HC Smoke Operations

a. **CS & HC Smoke is not authorized.**

16. Aviation Operations

a. UAV's

- i. **UAV operations are not authorized** unless prior approval has been granted by the RCO.
- ii. **Submission for UAV operations are no latter than 14 days prior to the exercise.**
- iii. **Unit will submit a ACA overlay to the RSO for approval.**
- iv. If approval is granted, the ACA (Air Coordination Area) showing routes and altitude will issued by the RCO for that event only.
- v. Annual waivers for this requirement shall not be approved.

b. Helicopters are prohibited from landing on rooftops.

17. Rappelling & Grappling Hooks

a. **Rappelling & Grappling Hooks are not authorized.**

18. During Less Lethal & SESAMS Training:

- a. RSO must be a SSgt (E-6).
- b. All effects must be contained within the depicted section boundaries.
- c. **Signs Shall Be Posted at the depicted locations.**
- b. All participating personnel shall wear flak, kevlar, throat/groin protector, contact gloves, utilities, and approved masks.
- d. All personnel will wear the specified gear when inside the maneuver boundaries.
- e. The RSO shall assign a minimum of two NCOs or higher act as PSOs.
- f. For SESAM, the PSOs will ensure that there are no intentional headshots and no engagements closer than 5 feet.
- g. RSO will ensure that all SESAMS magazines will be clearly marked, as will the barrels and that all SESAMS training is conducted IAW SOUM 1-02.

19. During breaching operations

a. **All breaches will be conducted on the (5) established breaching doors**

b. Mechanical Breaching

- i. Building # 16 Section 2
- ii. Building # 101 Section 7
- iii. All mechanical breaching will be conducted utilizing tools from issued breaching kits.

c. Ballistics Breaching

- i. Building # 2 Section 1
- ii. Building # 18 Section 2
- iii. Building # 76 Section 5
- iv. Approved breaching rounds only.
- v. Ammunition will only be issued per event.

d. Explosive Breaching

- i. Building # 2 Section 1
- ii. Building # 18 Section 2
- iii. Building # 76 Section 5
- iv. **Co-Use is Not Authorized**
- v. **Unit shall submit a Breachers Plan to RCO NLT 14 Days from Event.**
- vi. The breach will consist of a field expedient urban breaches (duel primed) at no more than .085 lbs NEW (**Any Requests for annual waivers for this requirement shall not be approved**).
- vii. Max Ord is 144 feet AGL for vertical or fragmentation hazard at .085 lbs NEW.
- viii. A maximum K – Factor of 18 (3.5 PSI) will be utilized and all personnel are to follow the below unshielded safety standoffs.
- ix. **If shielded, RSO may reduce standoff by 50%.**
 - x. Double hearing protection required for all PSIs at or above 1.68.
 - xi. All personnel will be set in position prior to initiating the breach.
 - xii. All exposed building material must be covered/framed IOT prevent any damage to the structure.
 - xiii. A safety Brief will conducted prior to each live fire event to all participants.
 - xiv. The RSO & OIC will personally observe each live fire event.
 - xv. Each breach will be inspected and approved by the RSO.
 - xvi. If time fuse is used, it shall be cut and tested by RSO (**30 Sec. Max. Time**).
 - xvii. Any Electrical Systems will be tested by RSO.

e. There will be additional safety personnel assigned as follows:

- i. A PSO will travel with each breaching team.
- ii. Each PSO will have positive communication with the RSO.

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- f. Range guards and signs will be posted to advise personnel of the training being conducted and to prevent any personnel not involved in the training from entering the Fragmentation Safety Arc
- g. The RSO is responsible for all charges, and ensuring all misfire procedures are in compliance with current directives.

Ballistic or Explosive - Building # 2 Section 1



Mechanical Only – Building # 16 Section 2



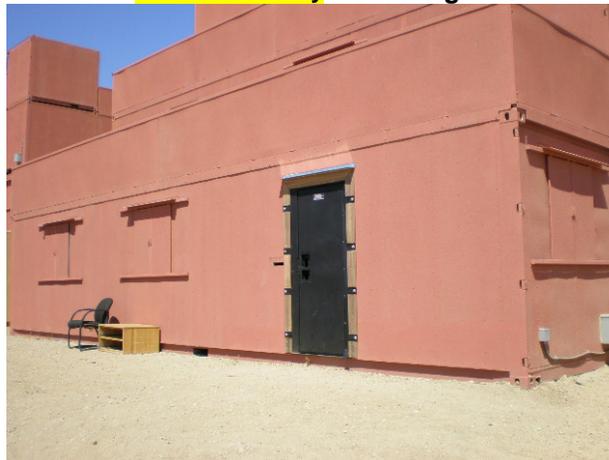
Ballistic or Explosive – Building # 18 Section 2



Ballistic or Explosive - Building # 76 Section 5



Mechanical Only – Building # 101 Section 7



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K FACTOR

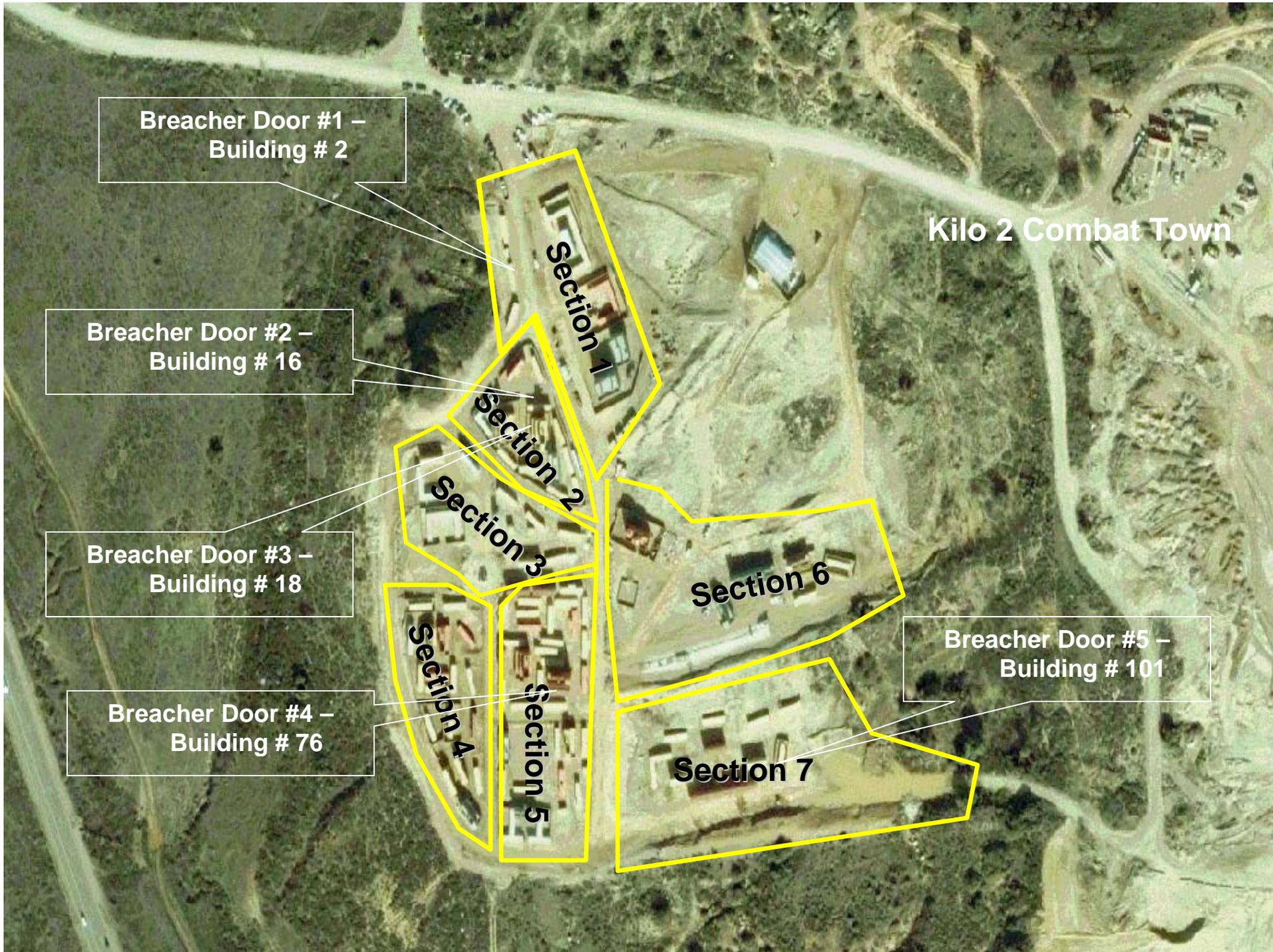
NEW OF CHARGE (TNT EQUIVALENT)	40	30	24	18	11	9	6
	1.2 -.9 PSI	1.7 PSI	2.3 PSI	3.5 PSI	8 PSI	12 PSI	27 PSI
Distance in Feet From Detonation							
0.005	6.839903787	5.12992784	4.103942272	3.077956704	1.880973541	1.538978352	1.025985568
0.01	8.61773876	6.46330407	5.170643256	3.877982442	2.369878159	1.938991221	1.292660814
0.015	9.864848297	7.398636223	5.918908978	4.439181734	2.712833282	2.219590867	1.479727245
0.02	10.85767047	8.14325285	6.51460228	4.88595171	2.985859378	2.442975855	1.62865057
0.025	11.69607095	8.772053215	7.017642572	5.263231929	3.216419512	2.631615964	1.754410643
0.03	12.42893002	9.321697518	7.457358014	5.593018511	3.417955757	2.796509255	1.864339504
0.035	13.08426524	9.813198931	7.850559144	5.887919358	3.598172941	2.943959679	1.962639786
0.04	13.67980757	10.25985568	8.207884544	6.155913408	3.761947083	3.077956704	2.051971136
0.045	14.22757322	10.67067991	8.536543931	6.402407948	3.912582635	3.201203974	2.134135983
0.05	14.73612599	11.0520945	8.841675597	6.631256698	4.052434649	3.315628349	2.210418899
0.055	15.21180984	11.40885738	9.127085906	6.845314429	4.183247707	3.422657215	2.281771476
0.06	15.65947056	11.74460292	9.395682339	7.046761754	4.306354405	3.523380877	2.348920585
0.065	16.08290303	12.06217728	9.649741821	7.237306365	4.422798334	3.618653183	2.412435455
0.07	16.4851412	12.3638559	9.89108472	7.41831354	4.53341383	3.70915677	2.47277118
0.075	16.86865331	12.65148998	10.12119198	7.590893988	4.638879659	3.795446994	2.530297996
0.08	17.23547752	12.92660814	10.34128651	7.755964884	4.739756318	3.877982442	2.585321628
0.085	17.58731869	13.19048902	10.55239121	7.91429341	4.836512639	3.957146705	2.638097803

Authorized Munitions		
Blanks	All DoDICs Allowed	
Demo	Only When Specifically Approved by the RCO.	Breaching Only
AA12	9MM FX RED MARKING CARTRIDGE, SIMMUNITION	SESAMS
AA21	9MM FX BLUE MARKING CARTRIDGE, SIMMUNITION	SESAMS
AA29	12 GAUGE BEANBAG - Less Lethal	Not Authorized Inside Buildings
AA30	12 GAUGE BLANK LAUNCHING - Less Lethal	Not Authorized Inside Buildings
AA31	12 GAUGE FIN STAB RUBBER - Less Lethal	Not Authorized Inside Buildings
BA07	40MM FOAM RUBBER BATON - Less Lethal	Not Authorized Inside Buildings
BA08	40MM RUBBER BALL - Less Lethal	Not Authorized Inside Buildings
BA09	40MM WOOD BATON - Less Lethal	Not Authorized Inside Buildings
CWDC	12 GAUGE INERT	Not Authorized Inside Buildings
DWBS	CHG DIVERSIONARY/FLASHBANG	
GG09	CHG DIVERSIONARY/FLASHBANG	
G811	GRENADE BODY PRACTICE	
G878	GRENADE PRACTICE FUSE	
G895	GRENADE HAND ILLUMINATION	Not Authorized Inside Buildings
G940	GRENADE HAND SMOKE GREEN	Not Authorized Inside Buildings
G945	GRENADE HAND SMOKE YELLOW	Not Authorized Inside Buildings
G950	GRENADE HAND SMOKE RED (EMERGENCY ONLY)	Not Authorized Inside Buildings
GGO4	GRENADE RUBBER BALL - Less Lethal	Not Authorized Inside Buildings

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Authorized Munitions		
L495	TRIP FLARE	Not Authorized Inside Buildings
L596	SIMULATOR ARTILLERY FLASH	Not Authorized Inside Buildings
L598	SIMULATOR BOOBY TRAP FLASH	Not Authorized Inside Buildings
L599	SIMULATOR BOOBY TRAP ILLUMINATION	Not Authorized Inside Buildings
LX21	SIMULATOR (SMAW) NOISE CARTRIDGE	Not Authorized Inside Buildings
Aerial Pyrotechnics are not authorized at any time.		

Medevac Planning Information								
Name	Address	Travel Time		Phone	Helipad		Burn/Trauma	
		Air	Grnd		Yes	No	Yes	No
US Navy Hospital Camp Pendleton –NHCP	Bldg H-100 Camp Pendleton	3	10	760-725-1611	X			X
Tri City Medical Center – TCMC	4002 Vista Way, Oceanside	8	20	760-940-3507	X			X
Mission Medical Center	27700 Medical Center Rd. Mission Viejo	10	30	949-364-1181	X		X	
Scripps, La Jolla	9888 Genesee Avenue	10	40	858-626-6151	X		X	
Palomar Medical Center – PMC	555 E. Valley Parkway	10	40	760-739-3301	X		X	
UCSD Medical Center – UCSD	200 W. Harbor Drive San Diego	20	60	619-543-2154	X		X	



Breach Door #1 –
Building # 2

Kilo 2 Combat Town

Breach Door #2 –
Building # 16

Section 1

Section 2

Breach Door #3 –
Building # 18

Section 3

Section 6

Breach Door #4 –
Building # 76

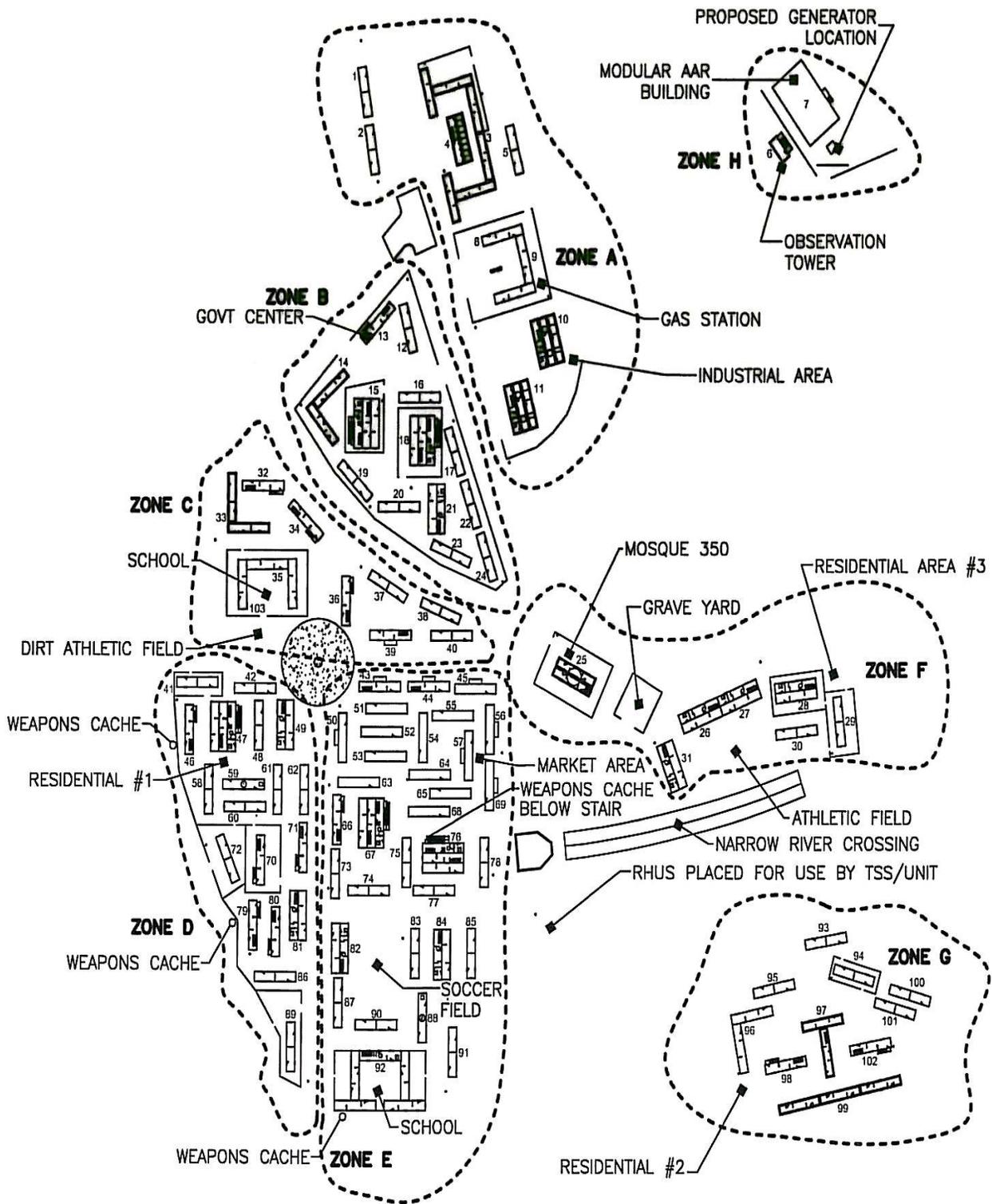
Section 4

Section 5

Breach Door #5 –
Building # 101

Section 7

Kilo Two Combat Town



NOTES:
 10 VEHICLE GATES NOT SHOWN
 13 PERSONNEL GATES NOT SHOWN
 ~3725 LINEAR FEET OF MODULAR COURTYARD WALL SHOWN
 BUILDING NUMBERING TBD BY SITE MANAGER