

Training
CORTRAIN BATTLE SIMULATIONS

SUGGESTED IMPROVEMENTS. *The proponent of this pamphlet is G3/PTM. Users are requested to send comments and suggest improvements to Commander, III Corps and Fort Hood, ATTN: AFZF-GT-BS.*

OVERVIEW

	1
Purpose	This pamphlet <ul style="list-style-type: none">● provides information<ul style="list-style-type: none">● to all III Corps CORTRAIN units, both active and reserve,● on the multiple simulation models that are available from the III Corps Battle Simulations Division (BSD)● shows procedures to be used to schedule their use.
	1a
References	FH Reg 350-1 (Active Component Training) FH Pam 350-6 (III Corps CORTRAIN Program Guidance Procedures) JADAM 207-86 (Catalog of Wargaming and Military Simulations Models) III Corps MOI (Army Training Battle Simulations System (ARTBASS)) III Corps MOI (Brigade Automated Battle Simulation Exercise - Apache (BASE-A)) III Corps MOI (Corps Battle Simulation (JESS)) III Corps MOI (Manual Simulators)
	1b
Applicability	This pamphlet applies to all Active Component (AC) and Reserve Component (RC) units serviced by the Battle Simulation Division. During full mobilization, instructions in this pamphlet are in effect.
	1c
Mission	The BSD <ul style="list-style-type: none">● supports the tactical simulation training requirements for III Corps Headquarters and its assigned CORTRAIN units.● will configure its facilities to serve as the Mobilization and Deployment Control Center in the event of general mobilization.
	1d
Organization	The BSD is organized into five functional branches to support unit training requirements <ul style="list-style-type: none">● Hardware/Software Support Branch● Corps/Division Simulations Branch● Brigade/Battalion Simulations Branch● ARTBASS Simulations Branch● Company Level Simulations Branch.
	1e

***This pamphlet supersedes FH Pam 350-54, 31 March 1987.**

Simulations and BSD Layout For detailed descriptions of specific simulations see appendices A-D. For the physical layout of the BSD see appendix E. 1e

RESPONSIBILITIES 2

G3/PTM The ACoS, G3/PTM

- is the staff proponent for battle simulations and
- designates the BSD as his executive for all related staff actions.

2a

BSD The BSD

- coordinates all battle simulation resources, policy, and support actions with identified points of contact (POC) within
 - FORSCOM
 - TRADOC
 - III Corps CORTRAIN/CAPSTONE major subordinate commands (MSC), and
 - the III Corps/Fort Hood staff.
- maintains and publishes a current quarterly listing updating the POCs.
- supports the following categories of units requesting simulation time
 - Active Component units stationed at Fort Hood
 - CORTRAIN/CAPSTONE Active and Reserve Component units
 - Affiliated/Partnership Reserve Component units
 - All other ARNG/USAR units stationed in Texas.

Normally, all support will be provided in the Corps BSD Complex, but with prior coordination mobile simulation support teams can be arranged.

2b

CORTRAIN/CAPSTONE MSCs Each CORTRAIN/CAPSTONE MSC designates a battle simulation POC for the coordination of battle simulation resources, policy, and support actions. 2c

III Corps and Fort Hood Staff Agencies Each III Corps and Fort Hood staff agency designates a battle simulation POC for the coordination of battle simulation resources, policy and support actions. 2d

USE OF SIMULATIONS TO SUPPORT TRAINING 3

**General
Types of
Simulations**

The BSD offers two general types of simulations

- staff drivers (used to generate a high volume of battle information to be reported by unit standing operating procedure (SOP) to a check point (CP) at a separate location)
- tactical trainers (used for detailed critiques of weapons employment and terrain utilization).

Both are a supplement to field training, not a substitute.

Properly employed as a pre-Army Training and Evaluation Program (ARTEP) experience, simulations can improve the use of training time and increase proficiency.

3a

**Using
Simulations
with ARTEPs**

Using simulations in conjunction with ARTEPs.

ARTEPs provide training objectives (tasks, conditions, and standards), which the command must be able to accomplish

- the objectives can serve as a diagnostic tool during field training exercises (FTX) or command post exercises (CPX), which are driven by simulations.

When combining a simulation with an ARTEP which does not address individual tasks, but specifies collective tasks (such as ARTEPs 100-1 and 101-2 brigade and division command group and staff), the training will emphasize fundamental and frequently performed tasks.

- This will aid in the training and evaluation of staff proficiency, based upon performance, rather than adherence to elaborate procedures.

To train to minimum standards, the commander must ask

- Where should we be? This answer can be found within the ARTEP.
- Where are we now? This answer can be found by comparing the recent performance against the ARTEP training standards.
- How can we best get from where we are to where we should be? Simulations can help answer the this question. To be effective simulations require proper organization, planning, and control.

3b

**ARTEP/
Simulation
Combination**

The ARTEP/Simulation combination will not

- solve all problems. It will assist in analyzing SOPs
 - by analyzing weaknesses revealed by internal evaluation, commanders can design a corrective training program.
- identify tasks for individual staff members (e.g., S1, S2, S3).

(continued on next page)

ARTEP/
Simulation
Combination
(Continued)

- provide completely objective standards. It does not replace experienced professional judgment.

3c

How BSD
Assists
Units

The BSD staff will assist unit training officers in tailoring simulations to the unit's

- training objectives
- time available, and
- personnel assets.

The intent is to help relieve units of unnecessary administrative burdens in setting up a CPX.

Units need to provide a POC who can represent the commander in developing the training parameters.

The BSD is available for

- simulations
- classes, or
- briefings.

3d

COORDINATING INSTRUCTIONS

4

Scheduling
Procedures

Scheduling for all simulations is on a first-come-first-serve basis.

Initial inquiries on the availability of a particular simulation may be done telephonically or in person.

4a

Corps/Division
Simulations
Scheduling
Procedures

Units schedule First Battle (BC) and JESS by sending request

- to Commander, III Corps and Fort Hood, ATTN: AFZF-GT-BS-CD
- 3 months before the desired date of their exercises
- containing
 - POC and telephone number for using unit
 - dates requested
 - daily beginning and ending times
 - type of tactical operation(s) desired
 - training objectives
 - approximate number of personnel to be trained
 - date and time for pre-exercise coordination.

4b

**Brigade/
Battalion
Simulations
Scheduling
Procedures**

Scheduling for BASE-A follows the same procedures and suspenses as with the Corps/Division Simulations Branch, except units address their written requests to Commander, III Corps and Fort Hood, ATTN: AFZF-GT-BS-BB. Further details on BASE-A are contained in the BASE-A MOI.

4c

**ARTBASS
Scheduling
Simulation
Procedures**

Scheduling for ARTBASS follows the same procedures and suspenses as with the Corps/Division Simulations Branch, except that units address their written requests to this headquarters, ATTN: AFZF-GT-BS-ARTBASS. Further details on ARTBASS are contained the ARTBASS MOI.

4d

**Company-
Level
Scheduling
Simulation
Procedures**

Scheduling for these simulations follow the same procedures as with the Corps Division Simulation Branch, except that units sent written requests to Commander, III Corps and Fort Hood, ATTN: AFZF-GT-BS-CL.

Additionally, the written request must

- arrive 7 working days before the desired exercise and
- be authenticated by parent unit S3/SPO for units below battalion level.

4e

Unit Cost

Unit costs accrued while undergoing training at the Fort Hood BSD are the unit's responsibility.

In this regard, Fort Hood will attempt to lower the costs of

- on-post transportation
- messing, and
- billeting wherever possible.

4f

BSD POCs

Contact the appropriate branch for further information on scheduling

BS BRANCH	PHONE NUMBERS	
	COMMERCIAL	AUTOVON
Corps/Division Simulations	(817) 287-0804	737-0804
Brigade/Battalion Simulations	(817) 287-5463	737-5463
ARTBASS Simulations	(817) 287-7372	737-7372
Company Level Simulations	(817) 287-9614	737-9614
Operation/Scheduling	(817) 287-5473	737-5473

4g

FOR THE COMMANDER:



PAUL T. WEYRAUCH
Brigadier General USA
Chief of Staff

OSCAR N. WHITE, JR.
LTC, SC
DOIM

5 Appendices

- A - Corps/Division Simulations
- B - Brigade/Battalion Simulations
- C - ARTBASS Simulations
- D - Company Level Simulations
- E - Battle Simulations Division Layout

DISTRIBUTION:

IAW FH FORM 1853, B

Plus: IM-AO (2)

IM-ARL (1)

IM-Pubs (100)

HQ FORSCOM, CDR, FORSCOM, ATTN: AFOP-TS, Fort McPherson, GA 30330-6000

Cdr, USAONE, ATTN: AFKA-TR-UT, Fort Meade, MD 20775

Cdr, USATWO, ATTN: AFKD-TRU-U, Fort Gillem, GA 30050

Cdr, USAFOUR, ATTN: AFKE-TR-TS, Fort Sheridan, IL 60037

Cdr, USAFIVE, ATTN: AFKB-TR, Fort Sam Houston, TX 78234

Cde, USASIX, ATTN: AFKC-TR, Presido, San Francisco, CA 94129

AR ARNG AG, ATTN: POTO (Training), Camp Robinson, North Little Rock, AR 72118-2200

CO ARNG AG, 300 Logan Street, ATTN: POTO (Training), Denver, CO 80203-4072

LA ARNG AG, ATTN: POTO (Training), HQ Bldg, Jackson Barracks, New Orleans, LA 70146-0330

MS ARNG AG, ATTN: POTO (Training), P.O. Box 5027, Jackson, MS 39216-1027

MO ARNG AG, ATTN: POTO (Training), 1717 Industrial Drive, Jefferson City, MO 65101-1468

NJ ARNG AG, ATTN: POTO (Training), Eggert Crossing Rd., CN 340, Trenton, NJ 08625-0340

ND ARNG AG, ATTN: POTO (Training), Fraine Barracks, P.O. Box 5511, Bismark, ND 58502-5511

OK ARNG AG, ATTN: POTO (Training), 3501 Military Circle, N.E. Oklahoma City, OK 73111-4398

TN ARNG AG, ATTN: POTO (Training), Houston Barracks, P.O. Box 41502, Nashville, TN 37204-1501

TX ARNG AG, ATTN: POTO (Training), Box 5218, Austin, TX 78763-5218

VT ARNG AG, ATTN: POTO (Training), Bldg 1, Camp Johnson, Winooski, VT 05404-1697

Cdr, 1st Inf Div (Mech), ATTN: AFZN-G3, Fort Riley, KS 66442-6224

Cdr, 4th Inf Div (Mech), ATTN: AFZC-G3, Fort Carson, CO 80913-5000

Cdr, 5th Inf Div (Mech), ATTN: AFZX-G3, Fort Polk, LA 71459-5000

Cdr, 49th Armd Div, ATTN: AROH-G3, Austin, TX 78763-5218

Cdr, 50th Armd Div, ATTN: G3, 1060 Hamilton St, Somerset, NJ 08873-3349

Cdr, 45th Inf Bde (LT), ATTN: S3, Edmond, OK 73034-6202

Cdr, III Corps Artillery, ATTN: AFVI-S3, Fort Sill, OK 73503

Cdr, 256th Inf Bde (Mech), ATTN: S3, Lafayette, LA 70508-2016

Cdr, 86th Armd Bde, ATTN: S3, Campbell Armory, RD #4, Montpelier, VT 05602-8904

Cdr, 155th Armd Bde, ATTN: S3, Tupelo, MS 38803-2057

Cde, 3d Armd Cav Regt, ATTN: S3, Fort Bliss, TX 79916

Cdr, 278th Armd Cav Regt, ATTN: S3, Knoxville, TN 37939-0167

Cdr, 45th FA Bde, ATTN: S3, Enid, OK 73701

Cdr, 75th FA Bde, ATTN: S3, Fort Sill, OK 73503
Cdr, 142d FA Bde, ATTN: S3, Fayetteville, AR 72701
Cdr, 169th FA Bde, ATTN: S3, Aurora, CO 80011
Cdr, 212th FA Bde, ATTN: S3, Fort Sill, OK 73503
Cdr, 214th FA Bde, ATTN: S3, Fort Sill OK 73503
Cde, 631st FA Bde, ATTN: S3, Grenada, MS 38901
Cde 420th EN Bde, ATTN: S3, Bryan, TX 77801-1398
Cdr, 135th EN Gp, ATTN: S3, Cape Girardeau, MO 63701
Cdr, 164th EN Gp, ATTN: S3, Bismark, ND 58502-5511
Cdr, 353d EN Gp, ATTN: S3, Oklahoma, OK 73069
Cdr, 493d EN Gp, ATTN: S3, Dallas, TX 75216
Cdr, 937th EN Gp, ATTN: S3, Fort Riley, KS 66442-6224
Cdr, 310th TAACOM, ATTN: SPO, Fort Belvoir, VA 22060
Cdr, 43d Spt GP, ATTN: S3, Fort Carson, CO 80913-5000
Cdr, 172d Spt Gp, ATTN: S3, 6th St., Auite 1, Broken Arrow, OK 74012-2041
Cdr, 363d Spt Gp, ATTN: S3, 632 E. Hopkins, San Marcos, TX 78666
Cdr, 3d Trans Bde, ATTN: S3, P.O. Drawer 3319, Oxford, AL 36203-3319
Cdr, 309th Ord Gp, ATTN: S3, E. Northway Hwy, Dallas, TX 75238
Cdr, 807th Med Bde, ATTN: S3, 701 W. Simonds Rd., Seagoville, TX 75159-3201
Cdr, 75th MAC, ATTN: SPO, 1850 Old Spanish Trail, Houston, TX 77054

APPENDIX A CORPS/DIVISION SIMULATIONS

SECTION II

TITLE JESS (Joint Exercise Support System)

Model Category Automated, interactive

KEYWORDS Two-sided, ground and air combat

PROPONENT Corps/Division Simulations Branch

POINT OR CONTACT Commercial (817) 287-0804; AUTOVON 737-0804

PURPOSE To drive a Corps/Division echelon Command Post Exercise (CPX) or a single echelon Command and Staff exercise.

DESCRIPTION JESS is a computerized battle simulation system. It is designed to drive both two echelon CPX's and single echelon command and staff exercises for a Corps/Division. The heart of the system is an interactive computer model of military field operations. Simulated battle results are sued in real time to provide realistic responses to combat actions for training commanders and staffs. The system replaces the manual battle boards that have been used previously in training exercises. JESS provides realistic combat effects, combined with the operative aspects of logistics, maintenance, and other real world functions, which are coordinated within the model and provided to commanders and staff being exercised. JESS provides controllers with the same information that commanders would receive from subordinate units engaged in actual combat. The controllers pass this information via SOP and communication networks to the command elements being exercised. Efficient exercise control is obtained through the computer simulation and gives the senior controller tighter control over the exercise. Enhanced post exercise analysis can be realized by utilizing the automated system to more effectively gather, consolidate, and manage the large amounts of data involved.

DATA IMPLEMENTED NOV. 87.

LIMITATIONS The current data base is limited to 800 units, which will reduce allied unit modeling.

PLANNED IMPROVEMENTS/MODIFICATIONS There is one major enhancement programmed for the JESS model to occur in 1992.

INPUT Friendly/OPFOR force structures, OPORDs, and initial unit locations.

OUTPUT Combat results, which include unit location, orientation, and personnel/equipment/supply status.

HARDWARE Computer -8650 with numerous Microvax IIs that are used for pre- and post- Peripheral - VT220 terminals, printers, plotters, and video graphic displays.

SOFTWARE PROGRAMMING LANGUAGES ARE C AND SIMSCRIPT
Documentation consists of the following: JESS controllers guide, 15 Jul 86; JESS Users Guide, Dec 88.

CLASSIFICATION Unclassified.

GENERAL DATA Time Requirements: Training time is 3 to 4 days depending upon the echelons exercised. Data base management is a continuous process to support two corps level exercises a year.

COMMENTS JESS can be transported to division sites at the expense of the user.

SECTION III

TITLE FIRST BATTLE (BC)

MODEL CATEGORY Semi-automated.

KEYWORDS Multi-echelon, manual, scenario, and terrain independent.

PROPONENT Manual Simulations Branch.

POINT OF CONTACT Commercial (817) 287-9614; AUTOVON 737-9614

PURPOSE Exercise division through corps command groups in control and coordination of combined arms operations.

DESCRIPTION First Battle (BC) is a low resolution battle simulation system designed to exercise command groups and staffs. It presents commanders and their staffs with realistic, freeplay events requiring time based analysis, evaluations and decisions in a command post environment. This simulation system may be adopted to any scenario, terrain, or organization of forces. This design flexibility allows the exercising unit to accomplish its command staff training objectives unhindered by a mechanical limitation on scenario, unit organization, or terrain. The simulation is designed to train staffs at each level, battalion through corps.

DATE IMPLEMENTED June 1984.

LIMITATIONS Very manpower intensive

PLANNED IMPROVEMENTS/MODIFICATIONS Computerizing tally sheet operation; combining the TacAir/ADA/Atk Helicopter combat resolution into one computer program; changes in equipment and/or their capabilities and doctrine to keep simulation current.

INPUT Friendly and OPFOR force structure and OPORDs.

OUTPUT Losses in equipment (damaged or destroyed) and personnel (WIA, KIA, MIA); expenditure of Class III and V.

HARDWARE Computer - Hewlett-Packard HP-41CX hand held calculator.
IBM compatible micro-computer.

SOFTWARE Programming language for the HP-41CX and the IBM compatible micro-computer is basic. Documentation is as follows: Fort Hood developed documentation for the IBM compatible micro-computer; Calculator User Instructions (Basic Rules) for First Battle (BCD), CATA and USACGSC, Fort Leavenworth, KS.

CLASSIFICATION Unclassified.

GENERAL DATA Time requirements: Training time is 4 to 24 hours depending on the echelons exercised.
Set-up time is 8 hours.

COMMENTS Data flow from ADP devices is, for all practical purposes, instantaneous. First Battle (BC) can also be used for brigade and battalion simulations.

SECTION IV

TITLE COTES (Combat Orders Training and Evaluation System).

MODEL CATEGORY Automated, interactive.

KEYWORDS Multi-echelon, tutorial.

PROPONENT Corps/Division Simulations Branch

POINT OF CONTACT Commercial (817) 287-5463; AUTOVON 737-5463.

PURPOSE Provides automated methods for collecting, analyzing and arranging data for input into orders, appendices, annexes and reports.

DESCRIPTION COTES is an interactive computer assisted instructional system designed by and for the U.S. Army Command and General Staff College. COTES provides automated methods for collecting analyzing, and arranging data for input into orders, appendices, annexes and reports at the corps/division level. COTES is a comprehensive decision aids package that provides computer assisted instructions (CAI) to support learning and mastering the skills required to create these documents while at the same time exposing the student to the capabilities of computers and computer technology.

DATE IMPLEMENTED April 1987.

LIMITATIONS Unknown at this time.

PLANNED IMPROVEMENTS/MODIFICATIONS Direct interface with BASE-A exercise to upload BASE-A data through COTES scenarios.

INPUT Raw OPORD, appendix, annex, or report data.

OUTPUT Completed OPORD appendix, annex, or report.

HARDWARE Computer mainframe located at Fort Huachuca. Peripherals - CDC model 721-31 terminal and printer.

SOFTWARE Programming language is TBD. Documentation is being produced at this time.

CLASSIFICATION Unclassified.

GENERAL DATA Training time - 30 minutes.

COMMENTS Users must provide input information. System does not generate data, it only assists in organizing it.

**APPENDIX B
BRIGADE/BATTALION SIMULATIONS**

SECTION I

TITLE BASE-A (Brigade Automated Simulations Exercise - Apache).

MODEL CATEGORY Automated, interactive.

KEYWORDS Two-sided, training, command and control, Apache aviation specialized.

PROPONENT Brigade/Battalion Simulations Branch.

POINT OF CONTACT Commercial (817) 287-5463; AUTOVON 737-5463.

PURPOSE To exercise maneuver brigade commanders and their command groups, including AH-64 battalions, with normal combat support and combat service support elements in a simulated combat arms combat environment against appropriate enemy forces in command and control and staff coordination.

DESCRIPTION BASE-A is a two-sided training model which is used as a realistic command and staff training simulation for maneuver brigades and attack helicopter battalions. It has the ability to portray OH-58s, AH-64s, and ground laser designators as separate, but interacting elements.

DATE IMPLEMENTED 2d quarter, FY 87.

LIMITATIONS Units played and logistic/administration items tracked are limited to those which already exist within the data base.

PLANNED IMPROVEMENTS/MODIFICATIONS BASE-A is an improvement of the BASE model. A 125 by 140 kilometer area within the following coordinates: NK4372, NJ4344, PK7072, PJ7044, around Fort Hood, TX is being digitized at this time. Improvements to BASE-A will be made when changes in equipment and doctrine warrant it.

INPUT Friendly/OPFOR force structure, OPORDs, and initial unit locations. Digitized terrain is available for the following areas within these coordinates: Fulda Gap, NB0240, NB0210, PB1040, PB1010; Korea, ET9070, FT6070, ES9060, FS6060; Ft Irwin, NK0742, NK6142, NJ0787, NJ6187; Sinai, WU3240, WU2040, VU3215, WU2015; and the AFCENT Region, LG0000, LT0000, WB0000, WN0000. Documentation is being produced at this time.

OUTPUT Computer printouts stating combat results, fuel and ammunition usage, KIA/WIA/ MIA, and meantime to repair/return to combat; detailed post game summary available at end of exercise.

HARDWARE Computer - Vax 8600 or Microvax II.
Peripherals - VT220 terminal, printer, plotter, video graphics display.

SOFTWARE Programming language is FORTRAN.

CLASSIFICATION Unclassified.

GENERAL DATA Time requirements: Data base preparation - 1 week.
Controller training time - 1-2 days
Player training time - 6-8 hours.
Frequency of use is weekly.

COMMENTS BASE-A is an improvement of the BASE model.

SECTION II

TITLE BUILD & DESTROY.

MODEL CATEGORY Manual.

KEYWORDS Manual, high resolution, defensive and offensive.

PROPONENT Brigade/Battalion Simulations Branch.

POINT OF CONTACT Commercial (817) 287-9614; AUTOVON 737-9614.

PURPOSE To exercise the commander and staff of an engineer battalion engaging in offensive or defensive engineer operations.

DISCRIPTION A medium resolution simulation designed to exercise the commander and staff of an engineer battalion supporting a division. It generates play from battalion to engineer platoon units on any selected 1:50,000 map. Engineer platoon units are positioned on the board based on the unit OPORD and simulation play. Play is driven by a unit drafted scenario and master incident list. The battalion directs the movement of their subordinate units according to rules and the changing situation. Simulated OPFOR ground elements are used for rear area operations along with OPFOR air strikes which attempt to hinder, slow down, or destroy engineer work. Damages are assessed on units and engineer work and rear area operations and concepts can be exercised. The duration, time sequence, and complexity of the exercise may be varied based on the unit's training objectives.

DATE IMPLEMENTED February 1986.

LIMITATIONS Requires detailed planning prior to start of exercise and a moderate manpower investment.

PLANNED IMPROVEMENTS/MODIFICATIONS Modification will be developed when changes in equipment and doctrine warrant it.

INPUT Friendly/OPFOR force structure, OPORDs, and initial unit locations.

OUTPUT Losses in engineer equipment (damaged or destroyed) and personnel (WIA, KIA, MIA).

HARDWARE Terrain boards of portions of the following areas: NTC, Northern Germany, and the Fort Hood maneuver area.

SOFTWARE Documentation consists of a locally produced pamphlet.

CLASSIFICATION Unclassified.

GENERAL DATA Time requirements: Set up time is 6 hours. Frequency of use is quarterly.

COMMENTS Is a locally developed simulation for engineer stand alone play.

SECTION IV**TITLE** TURKEY SHOOT.**MODEL CATEGORY** Manual.**KEYWORDS** Medium resolution, real time.**PROPONENT** Brigade/Battalion Simulations Branch.**POINT OF CONTACT** Commercial (817) 287-5463; AUTOVON 737-5463.**PURPOSE** Exercise the commander and staff of an ADA battalion in the offense or defense.

DESCRIPTION TURKEY SHOOT is a medium resolution simulation designed to exercise the commander and staff of an ADA battalion supporting a division. It generates play from battalion to fire unit on any selected 1:50,000 map. Fire units are positioned on the board based on the unit OPORD. Play is driven by a unit drafted scenario and master incident list. The battalion players direct the movement of their subordinate units according to the rules and the changing situation. Simulated OPFOR air strikes attempt to penetrate the air defense envelope exercising the units' acquisition, reporting, and fire control channels. Damages are assessed on aircraft and air defense tactics and concepts can be exercised. The duration, time sequence, and complexity of the exercise may be varied based on the unit's training objectives.

DATE IMPLEMENTED April 1984.**LIMITATIONS** Requires extensive preparation prior to start of exercise. Moderate level of manpower required.**PLANNED IMPROVEMENTS/MODIFICATION** None planned at this time.**INPUT** Friendly/OPFOR force structure, OPORDs, and initial unit locations.**OUTPUT** Combat resolution of the scenario used.**HARDWARE** Terrain boards of portions of the following areas: NTC, Northern Germany, and the Fort Hood maneuver area.**SOFTWARE** Documentation consists of locally developed pamphlets.**CLASSIFICATION** Unclassified.

GENERAL DATA Time requirements: Training time - 4 hours
Set up time - 2 hours
Frequency of use is quarterly.

COMMENTS Is a locally developed simulation.

SECTION V	
TITLE	Fire Command - Plus.
MODEL CATEGORY	Manual.
KEYWORDS	Medium resolution, battalion level combat, real time.
PROPONENT	Brigade/Battalion Simulations Branch.
POINT OF CONTACT	Commercial (817) 287-5463; AUTOVON 737-5463.
PURPOSE	Train battalion command groups in combined arms operations.
DESCRIPTION	Fire Command - Plus is a modification of the Fire Command simulation for use by battalion size units instead of company size. This manual simulation consists of a scaled terrain board using scale miniature models of U.S. and OPFOR vehicles with rules developed at Fort Hood. Play is driven by the battalion OPORD and the changing situation. The battalion directs the movement of subordinate units with company commanders moving their platoon elements against company size OPFOR elements. This simulation can be used for training in battalion size tactics, weapons system identification and capabilities and the proper use of terrain.
DATE IMPLEMENTED	November 1986.
LIMITATIONS	Is not suited for brigade level play.
PLANNED IMPROVEMENTS/MODIFICATIONS	Modifications will be developed when changes in equipment and doctrine warrant it.
INPUT	Friendly/OPFOR force structure, OPORDs, and initial unit locations.
OUTPUT	Combat resolution for scenario used.
HARDWARE	Terrain boards of portions of the following areas: Northern Germany, and the Fort Hood maneuver area.
SOFTWARE	Documentation consists of locally developed pamphlets.
CLASSIFICATION	Unclassified.
GENERAL DATA	Time requirements: Training time - 1+ hours. Frequency of use TBD.
COMMENTS	Is a locally developed simulation.

APPENDIX C ARTBASS SIMULATIONS

<u>TITLE</u>	ARTBASS.
<u>MODEL CATEGORY</u>	Automated interactive.
<u>KEYWORDS</u>	Two-sided, training, command and control, battalion level.
<u>PROPONENT</u>	ARTBASS Simulations Branch.
<u>POINTS OF CONTACT</u>	Commercial (817) 287-7372; AUTOVON 737-7372.
<u>PURPOSE</u>	Train maneuver battalion commanders and their staffs in a simulated combat arms environment against appropriate enemy forces in command and control and staff coordination.
<u>DESCRIPTION</u>	ARTBASS is a simulation system designed to train maneuver battalion commanders and their staffs in the conduct of battlefield operations, focusing on each unit's go-to-war mission requirements. The simulation is conducted based on a scenario structured by the using battalion in coordination with the ARTBASS team chief. ARTBASS is operated by the ARTBASS team using role players from the using battalion and the using battalion's higher headquarters to simulate the battalion's subordinate units, fire support, and higher headquarters. The using battalion headquarters, located in a tactical operation center, plans and executes tactical operations based on orders and reports received from the role players in the control facility.
<u>DATE IMPLEMENTED</u>	February 1986.
<u>LIMITATIONS</u>	Inability of ADA elements to direct fire weapons.
<u>PLANNED IMPROVEMENTS/MODIFICATIONS</u>	Enhanced software packages to support, attach helicopter battalions engineer and logistics play.
<u>INPUT</u>	Friendly/OPFOR force structure, OPORDs and initial unit locations. A 5,000 square kilometer segment is available in: Central Germany, Korea, the Sinai, and Fort Irwin.
<u>OUTPUT</u>	Combat results which include unit location, orientation and personnel/equipment status.
<u>HARDWARE</u>	Concurrent 3200 MPS. Hitachi monitors, MFKB viewpoints.
<u>SOFTWARE</u>	Programming language is FORTRAN.
<u>CLASSIFICATION</u>	Unclassified.
<u>GENERAL DATA</u>	Time requirements: set up/training time - 6 hours. Frequency of use is 4 days for active component units and 3 days for reserve component units.
<u>COMMENTS</u>	Active duty battalions are required to train with ARTBASS twice yearly while Reserve Component units are required to train yearly.

**APPENDIX D
COMPANY-LEVEL SIMULATIONS**

SECTION I

TITLE Battle For Weetzen.

MODEL CATEGORY Manual.

KEYWORDS High resolution, mout.

PROPONENT Company Level Simulations Branch.

POINT OF CONTACT Commercial (817) 287-9614; AUTOVON 737-9614.

PURPOSE To train company commanders and platoon leaders from combat, combat support, and combat service support units to plan and conduct MOUT.

DESCRIPTION This manual simulation teaches company level leaders to plan and execute military operations on urban-ized terrain (MOUT) while using supporting artillery, attack helicopters, close air support, air defense artillery and engineers. It is played on a three dimensional terrain board of a village in Germany.

DATE IMPLEMENTED July 1983.

LIMITATIONS Model cannot be played in real time.

PLANNED IMPROVEMENTS/MODIFICATIONS Will be modified as changes in equipment and doctrine warrant it.

INPUT Friendly and OPFOR force structure and OPORDs.

OUTPUT Combat resolution from company/task force operation.

HARDWARE 1:285 scale model of Weetzen, Germany and 1:285 scale minitures.

SOFTWARE Documentation consists of locally produced pamphlets.

CLASSIFICATION Unclassified.

GENERAL DATA Time requirements: Set up time - 1/2 hr.
 Training time - 1 hr.
 Planning time - 2 hrs.
 Frequency of use is quarterly.

COMMENTS Is a locally produced simulation.

SECTION II**TITLE** Fire Command**MODEL CATEGORY** Manual.**KEYWORDS** High resolution, small unit combat.**PROPONENT** Company Level Simulations Branch.**POINT OF CONTACT** Commercial (817) 287-9614 AUTOVON 737-9614**PURPOSE** Train company/platoon personnel in combined arms operations.

DESCRIPTION Fire Command is based on "WAR GAMES RULES: ARMOR AND INFANTRY," (1590-1975, published in England), and subsequently refined and adapted by the U.S. Army Command and General Staff College. This manual simulation consists of a scaled terrain board with miniature models of U.S. and OPFOR tanks, BMPs, APCs, and other weapons. Play is at platoon, squad, and tank crew level to a high degree of resolution. The miniatures are physically moved and fought by opposing players IAW the rules which are monitored by controllers. It is relatively free play. This simulation can be used for training in small unit tactics, weapon system identification and capabilities, proper employment of weapons, and the relationship of terrain to such weapons.

DATE IMPLEMENTED June 1981.**LIMITATIONS** Cannot play real time and is not suited for battalion level play.**PLANNED IMPROVEMENTS/MODIFICATIONS** Improvements will be made when changes in equipment and doctrine warrant it.**INPUT** Friendly/OPFOR force structures, OPORDs, and initial unit locations.**OUTPUT** Combat resolution for scenario used.**HARDWARE** Terrain boards of portions of the following areas: NTC, Northern Germany, and the Fort Hood maneuver area.**SOFTWARE** Documentation consists of locally produced pamphlets.**CLASSIFICATION** Unclassified.**GENERAL DATA** Time requirements: Training time - 1 hr
Frequency of use is weekly.**COMMENTS** A locally developed simulation which allows four fold combat resolution compared to Dunn-Kempf. It reflects most modern equipment.

SECTION III**TITLE** Turkey Shoot, Jr**MODEL CATEGORY** Manual.**KEYWORDS** High resolution.**PROPONENT** Company Level Simulations Branch.**POINT OF CONTACT** Commercial (817) 287-9614 AUTOVON 737-9614**PURPOSE** Exercise ADA battery and section commanders in ADA tactics, employment and aircraft recognition.

DESCRIPTION Turkey Shoot, Jr. is a high resolution simulation designed to exercise the divisional ADA battery commander, platoon leaders and section leaders on planning an air defense envelope for various situations. Supported unit miniatures are positioned on a terrain board according to the exercising unit's scenario. ADA leaders plan the positioning of their units based on the mission, map, and terrain board reconnaissance. Battery players move their miniatures according to the changing situations. Leadership and command and control problems are generated. OPFOR air strikes are flown to test the unit's acquisition, aircraft recognition, fire control procedures and soundness of the air defense envelope.

DATE IMPLEMENTED May 1984.**LIMITATIONS** Not real time.

PLANNED IMPROVEMENTS/MODIFICATIONS Improvements will be made when changes in equipment and doctrine warrant it.

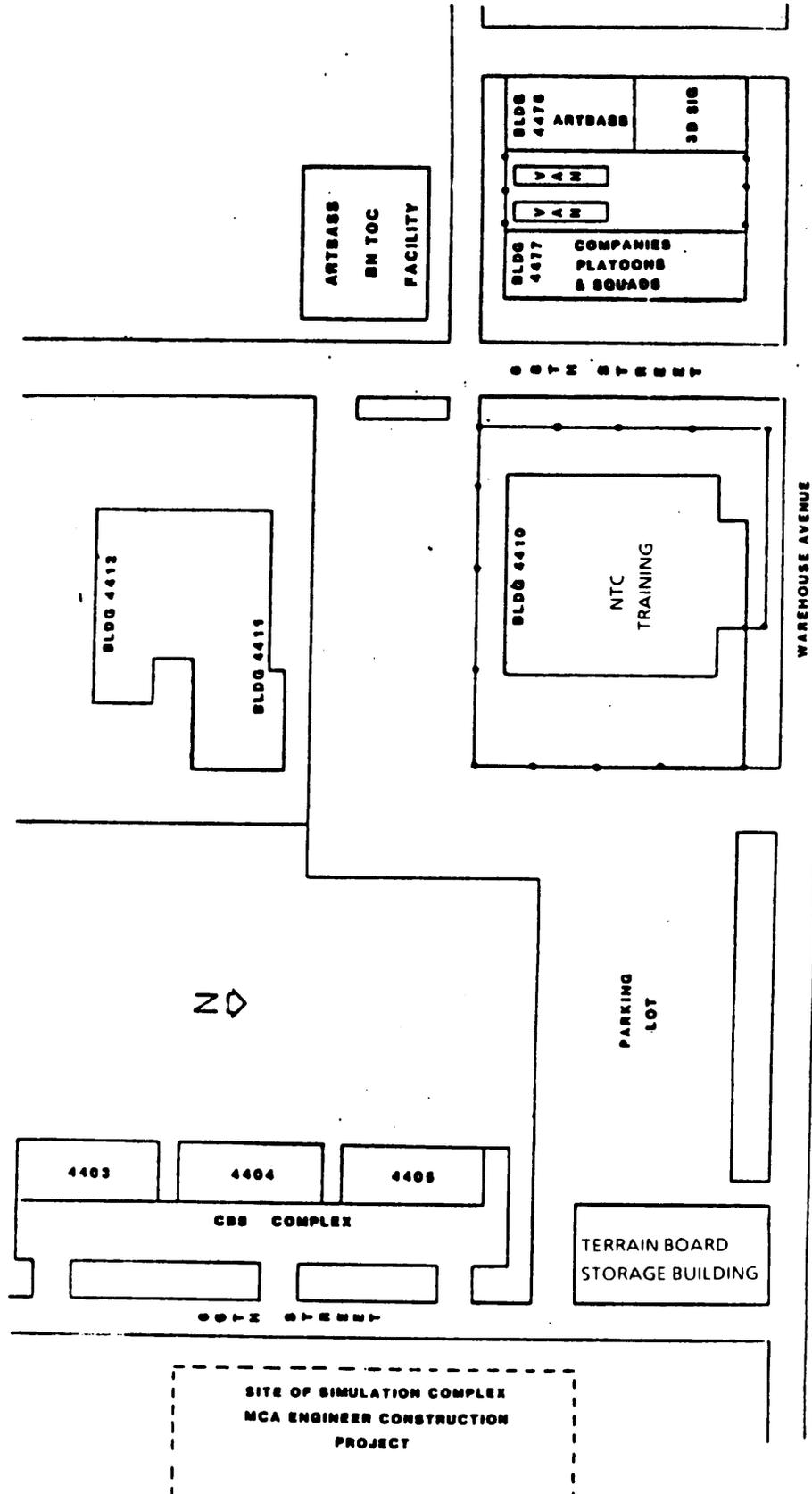
INPUT Friendly/OPFOR force structure, OPORD, and initial unit locations.**OUTPUT** Combat resolution between friendly ADA and OPFOR forces.**HARDWARE** Terrain boards of portions of the following areas: NTC, Northern Germany, West Fort Hood maneuver area.**SOFTWARE** Documentation consists of locally produced pamphlets.**CLASSIFICATION** Unclassified.

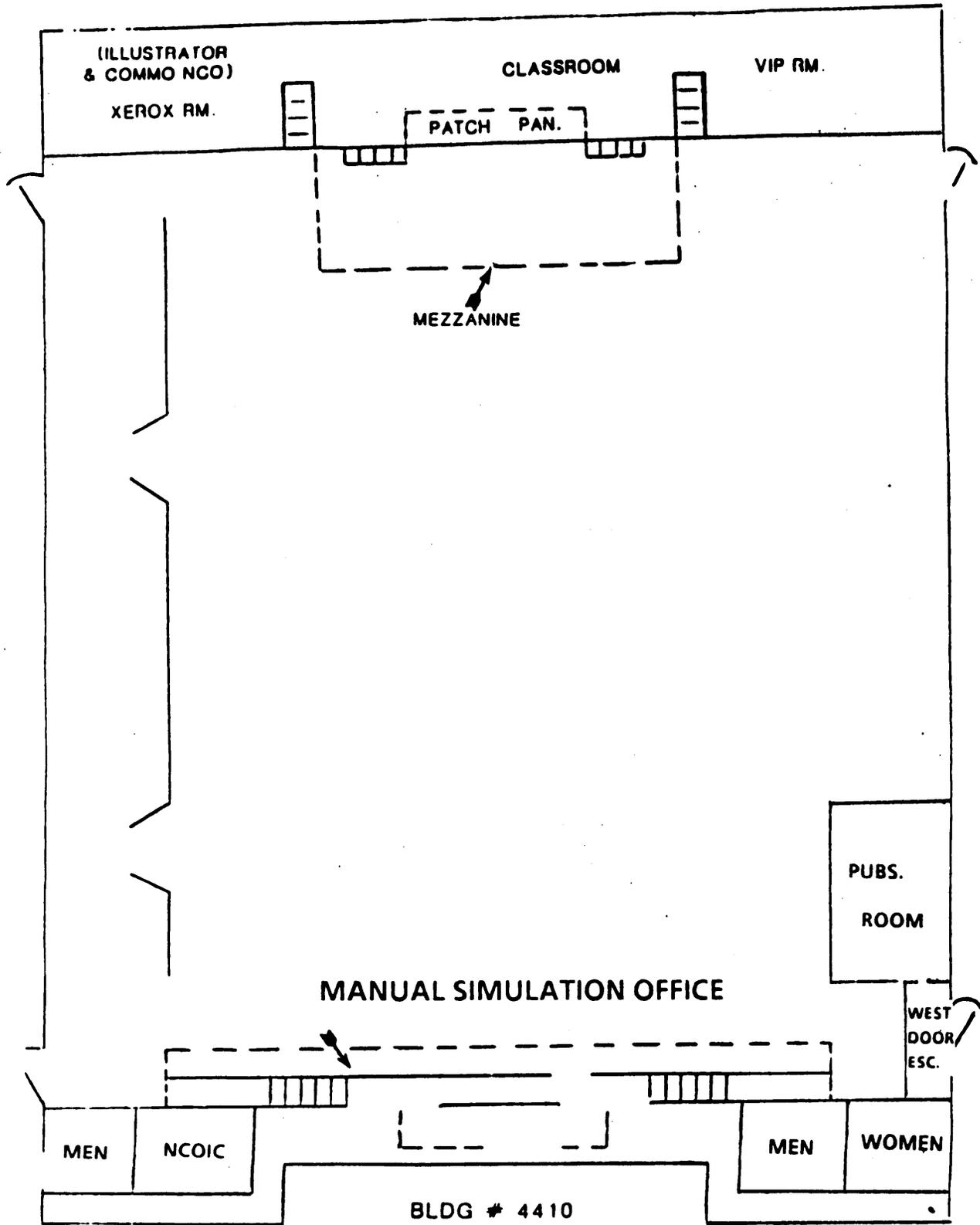
GENERAL DATA Training requirements: Training time - 1 hr.
Set up time - 1 hr.

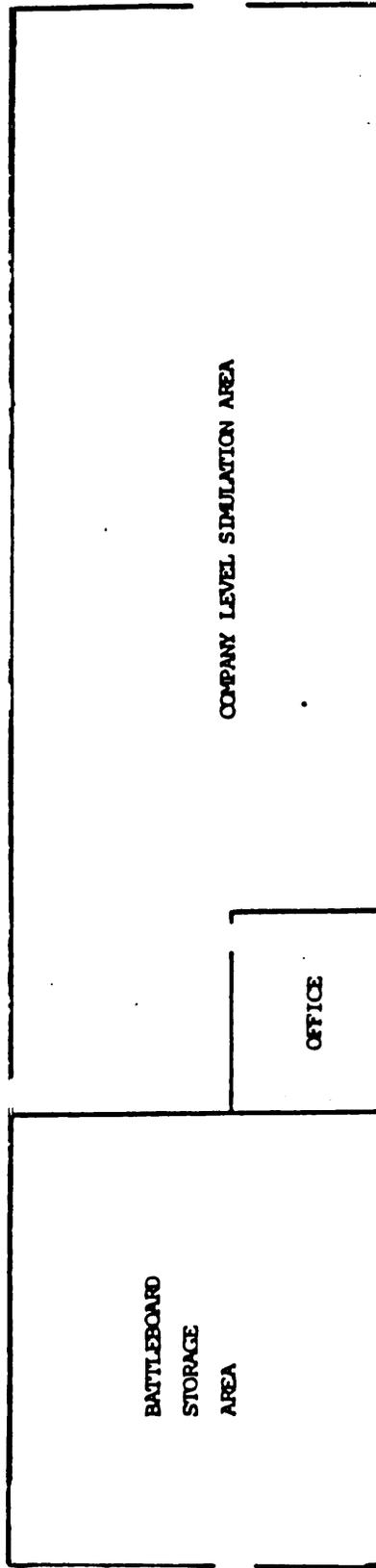
COMMENTS Turkey Shoot, Jr. is the only simulation for use solely by ADA units. It has been developed by and is in use at the ADA center at Fort Bliss, TX.

APPENDIX E

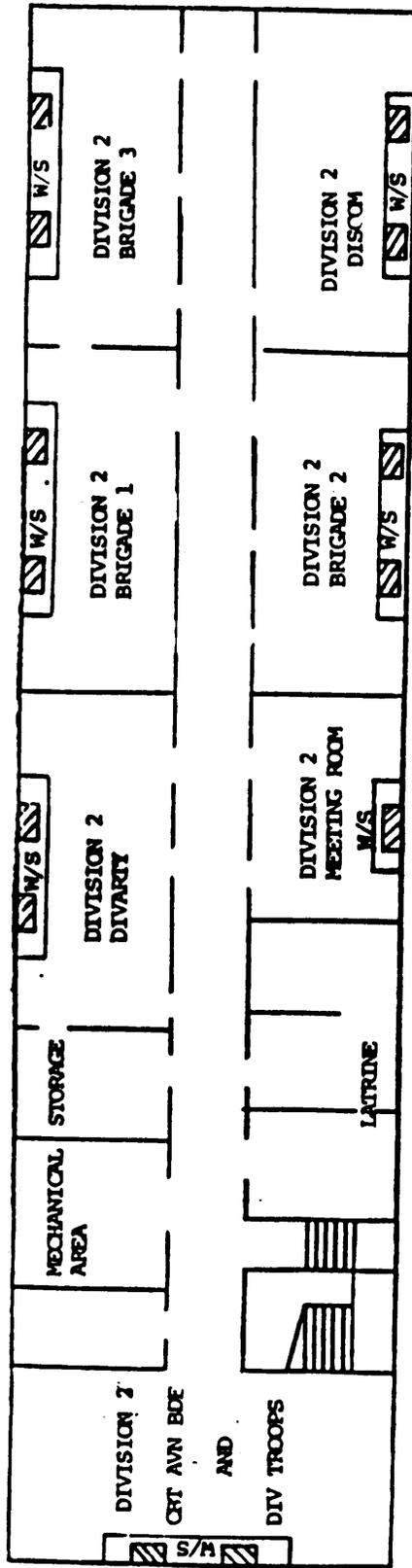
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- Section 2. Building #4410
- Section 3. Building #4477
- Section 4. Building #4403
- Section 5. Building #4404
- Section 6. Building #4405



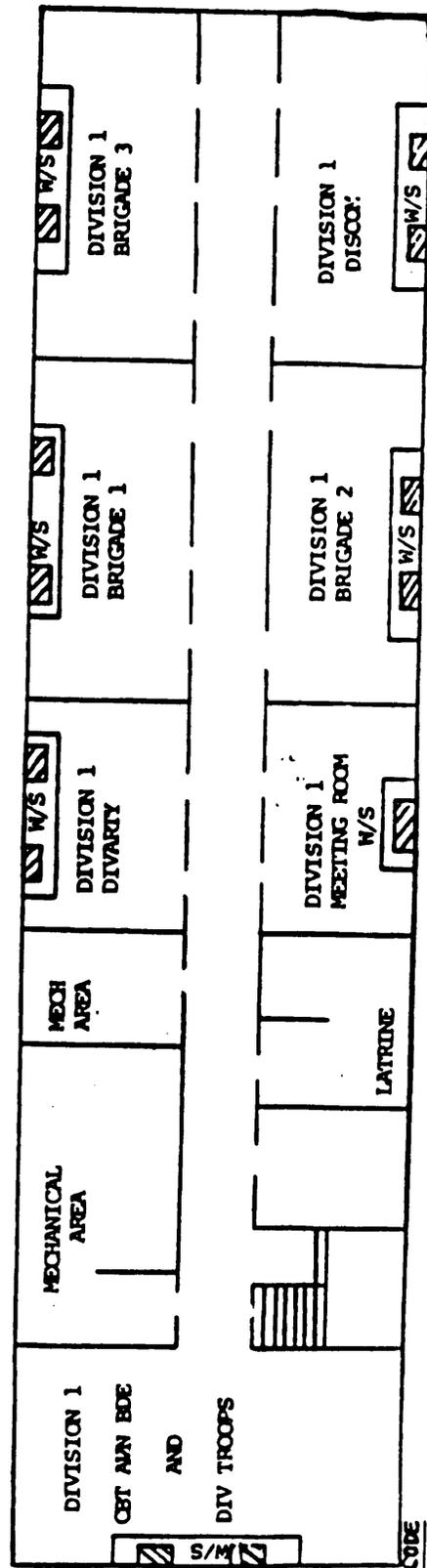




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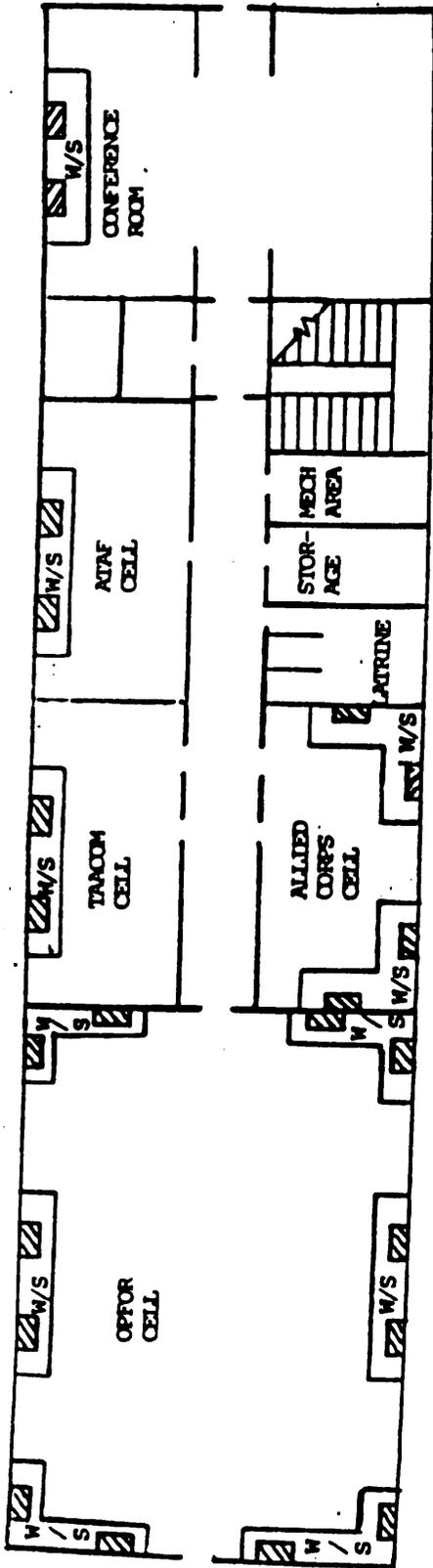


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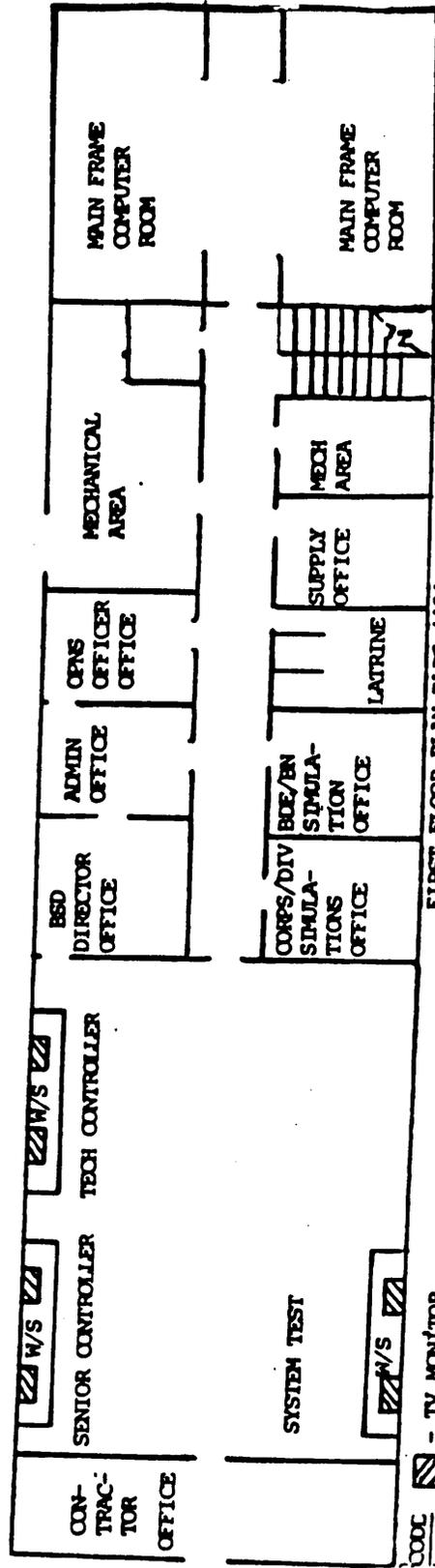


FIRST FLOOR PLAN

- TV MONITOR
 W/S CONSISTS OF 2 TERMINALS, 1 PRINTER, 1 GRAPH OVER, 1 LASER DISC PLAYER, 1 DIGI PAD & PLO

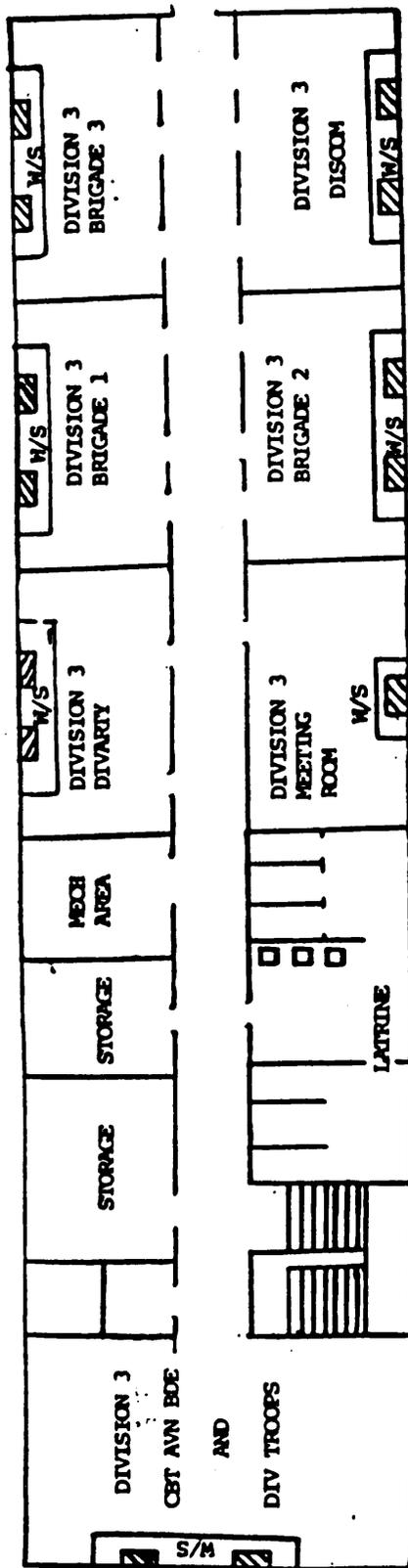


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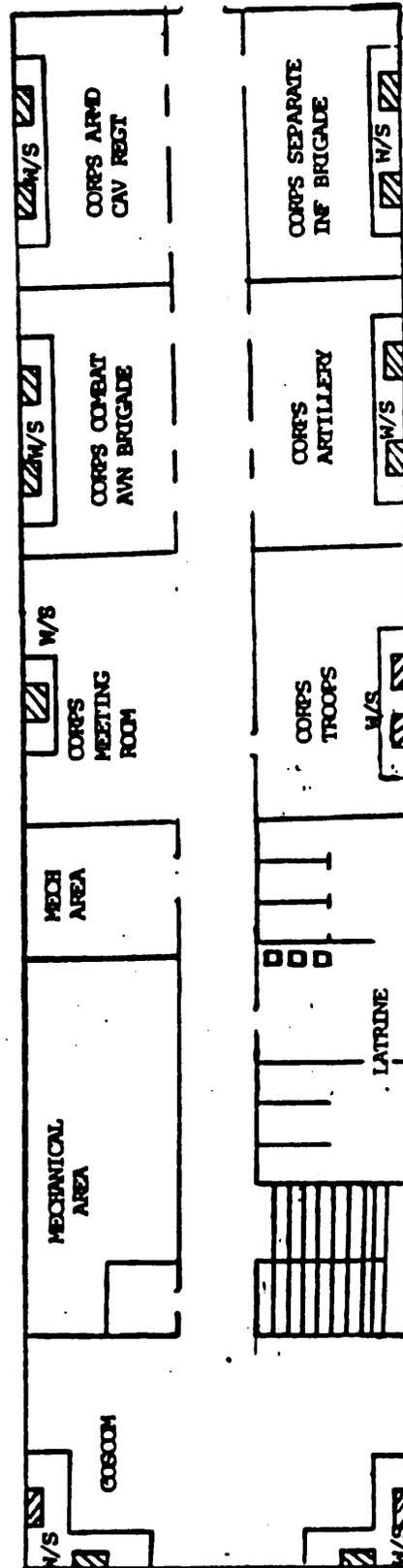


FIRST FLOOR PLAN BLDG 4404

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SECOND FLOOR PLAN BLDG 4405



FIRST FLOOR PLAN BLDG 4405

TV MONITOR

W/S CONSISTS OF 2 TERMINALS, 1 PRINTER, 1 GRAPH OVER, 1 LASER DISC PLAYER, 1 DIGI PAD & PUCK