

FINAL
EXECUTIVE SUMMARY

**BIOLOGICAL ASSESSMENT
FOR PROPOSED
MANEUVER CENTER OF EXCELLENCE ACTIONS
AT
FORT BENNING, GEORGIA**



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Prepared for
Garrison, U.S. Army Infantry Center
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Prepared by
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628

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1 INTRODUCTION

The Fort Benning Military Installation (Installation or Fort Benning), located in Chattahoochee and Muscogee Counties, Georgia (GA) and Russell County, Alabama (AL). In November 2007, the Army announced its decision to implement the Base Realignment and Closure (BRAC) 2005 and Transformation Actions at Fort Benning, GA (Transformation) in a Record of Decision (ROD) which requires Fort Benning to undergo major changes in its organizational structure. The actions proposed in this document include projects that have changed since their evaluation in the 2007 United States (US) Fish and Wildlife Service (USFWS) Transformation Biological Opinion (BO) and additional actions that are necessary to support increased training demands of the Maneuver Center of Excellence (MCOE). The Maneuver Center of Excellence resulted from the consolidation of the US Army Armor Center and School (USAARMC/) and the US Army Infantry Center and School (USAIC/S) at Fort Benning.

The “proposed action” includes construction, operation, maintenance and/ or increased use of facilities and training areas (including assets such as ranges and maneuver areas) to support: projects that were analyzed in the 2007 Transformation Biological Assessment, but have substantially changed in location or size; new projects necessary to support the MCOE; and new projects necessary to support the increased number of military personnel and students which are associated with Grow the Army (GTA) and Global War on Terror (GWOT) missions.

The purpose of the Biological Assessment is to evaluate the potential effects of the proposed action on Federally-listed species within the Action Area (see below) and, if such effects are likely to be adverse, to serve as the basis for initiating formal consultation with the USFWS. These species include relict trillium (*Trillium reliquum*), Michaux's sumac (*Rhus michauxii*), purple bankclimber (*Elliptoideus sloatianus*), shiny-rayed pocketbook (*Lampsilis subangulata*), Gulf moccasinshell (*Medionidus pencillatus*), oval pigtoe (*Pleurobema pyriforme*), wood stork (*Mycteria americana*) and red-cockaded woodpecker (*Picoides borealis*) (RCW). Also, as of 15 November 2007, there is designated Critical Habitat for the shiny-rayed pocketbook on Fort Benning along Uchee Creek in Russell County, AL (50 Code of Federal Regulations (CFR) Part 17). The Fort Benning RCW population is part of the Sandhills Recovery Unit and is designated as 1 of 13 Primary Core Recovery Populations by the USFWS (2003).

2 ACTION AREA/ AFFECTED ENVIRONMENT

The Action Area includes the project area and all the areas surrounding the MCOE actions up to where the effects will no longer be felt by the listed species. The RCW Action Area includes all areas on Fort Benning and areas outside of the Installation, but within the RCW “neighborhood” and/ or within the RCW survey area for the proposed action. This area encompasses the area that would be considered the relict trillium action area.

3 PROPOSED ACTION

The proposed action includes construction, operation, maintenance and/ or increased use of facilities and training areas (including ranges and maneuver areas found throughout the Installation) to support the MCOE action.

3.1 PURPOSE AND NEED

The purpose of the proposed action is to accommodate existing and newly identified realignments due to BRAC and other Transformation initiatives (such as Global Defense Posture Realignment (GDPR), Army Modular Force (AMF) and Army Power Projection Platform (AP3), as well as to support increased training requirements related to the MCOE. In order to implement this action, Fort Benning will: 1) provide sufficient operational facilities, training areas (including ranges and maneuver areas) and infrastructure to accommodate the increased military personnel and students, 2) adjust construction of projects evaluated in the Transformation Biological Assessment and 3) ensure the complete stand-up of the MCOE.

3.2 ALTERNATIVES

Two action alternatives, A and B, were developed and would potentially meet the purpose and need of the proposed action. The Army has identified Alternative A as the preferred alternative because it best meets the purpose and need. Therefore, the proposed action and request for formal consultation is based on Alternative A; Alternative B information is provided in Appendix A for comparison only.

Figure ES 3-1 and Table ES 3-1 provide an overview of the proposed Alternative A MCOE projects that would occur at Fort Benning under the proposed action.

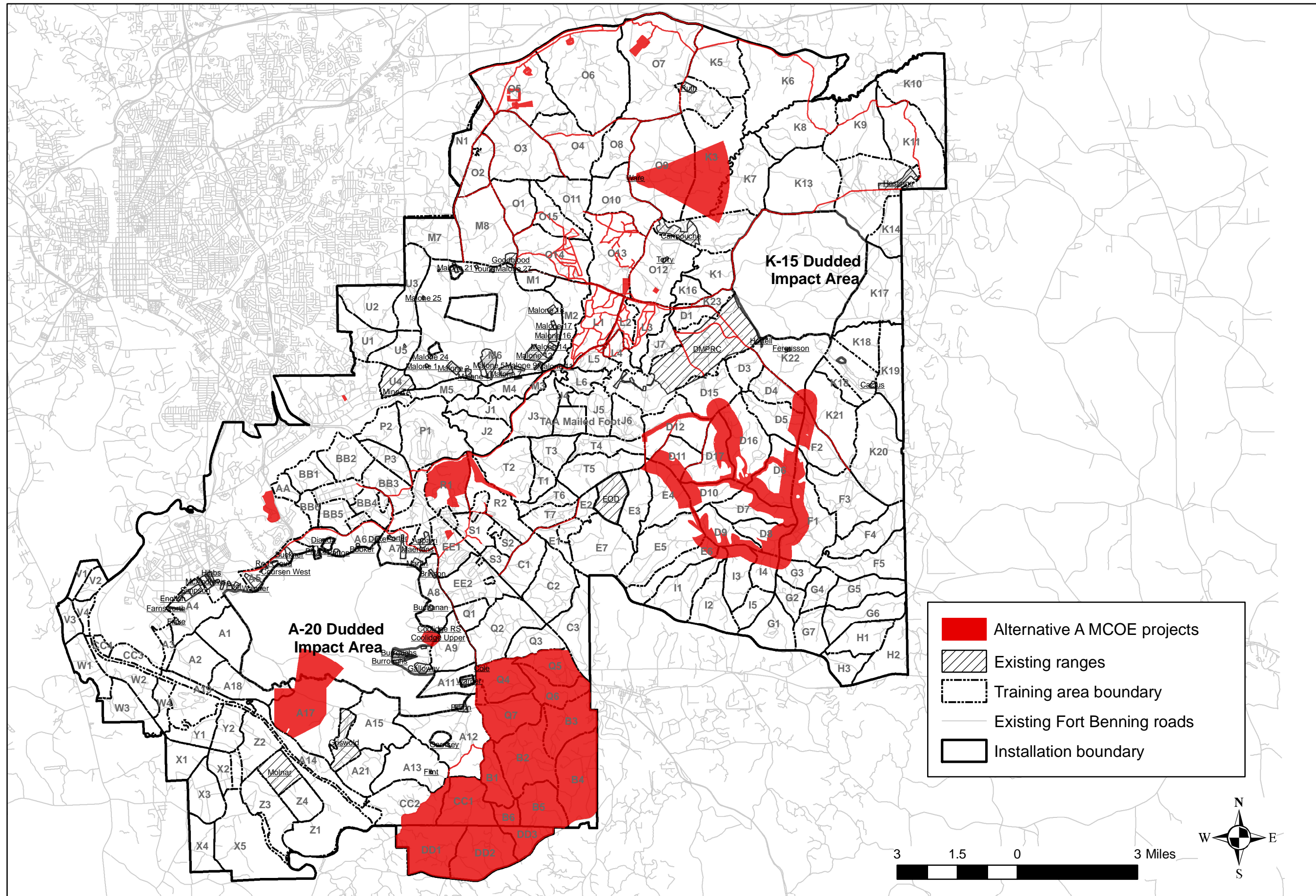


Figure ES 3-1. Location of all the proposed Maneuver Center of Excellence (MCOE), Alternative A (Preferred Alternative) projects and their associated limits of disturbance, Fort Benning, Georgia.

Table ES 3-1. All projects included in the Alternative A (Preferred Alternative), Maneuver Center of Excellence actions at Fort Benning, including reanalyzed Transformation projects.

Project Driver	Project Number	Project Title	Analyzed for Transformation (Y/N)	Fiscal Year- (Start Date)	Fiscal Year- (Date Operational)	Area- Footprint, (Acres)	Area- Limits of Construction (includes range access roads) (Acres)	Area- Ordnance or Maneuver- Impacted Areas (Acres)	Maximum Acres of Pine Impacted	Location
AP3	62953	Rail Loading Facility Expansion	Y	12	----	----	133.71	----	28.05	Harmony Church
BRAC	64797	Tracked Vehicle Drivers Training Course	Y	09	10	----	18.15	----	9.43	Harmony Church
BRAC	65034	Fire and Movement Range 3 (FM3)	Y	10	11	10.34	43.87	35.86	50.47	Oscar Small Arms
BRAC	65035	Basic 10M-25M Firing Range 1 (Z1)	Y	09	11	0.79	23.01	3.40	23.32	Oscar Small Arms
BRAC	65036	Basic 10M-25M Firing Range 2 (Z2)	Y	09	11	0.79	20.90	27.74	28.30	Oscar Small Arms
BRAC	65039	Basic 10M-25M Firing Range 5 (Z5)	Y	09	11	0.79	22.02	0.20	19.12	Oscar Small Arms
BRAC	65070	Multipurpose Machine Gun Range 2 (MPMG2)	Y	11	12	238.19	623.81	550.97	482.73	Southern ranges
BRAC	65246	Recreation Centers	Y	12	----	----	28.28	----	3.01	Harmony Church, Sand Hill
BRAC	65248	Physical Fitness Center, Harmony Church	Y	12	----	----	38.81	----	0.76	Harmony Church
BRAC	65383	Stationary Tank Range (ST2)	Y	09	11	294.93	193.00	1,187.88	562.63	Northern ranges
BRAC	65554	Construct Training Area Roads Paved	Y	09	11	----	889.93	----	580.16	Throughout
BRAC	65557	Repair Existing Training Area Roads, Phase 1	Y	10	----	----	1,193.55	----	720.76	Throughout
BRAC	69358	Range Access Road - Good Hope Maneuver Training Area	(Y)	09	11	----	165.68	----	99.50	Good Hope
BRAC	69668	Good Hope Training Area Infrastructure	*Y	09	11	----	1,676.83	10,019.07	4,661.58	Good Hope
BRAC	69741	19D/K OSUT Training Area Infrastructure	(Y)	09	11	----	871.76	----	623.96	Northern ranges
BRAC	69743	Southern Training Area Infrastructure	*Y	09	11	----	577.22	4,086.40	3,035.86	Northern ranges
BRAC	70235/ 65081/ 67461	Hospital Replacement	*Y	**08	----	----	137.36	----	2.75	Main Post
BRAC	72017	Vehicle Recovery Course (Ground Mobility Division)	*Y	09	11	----	514.37	----	277.26	Harmony Church
BRAC	64551	Multipurpose Training Range (MPTR)	N	09	----	983.93	488.02	1,382.88	875.88	Northern ranges
BRAC	65033	Fire and Movement Range (FM2)	N	09	11	10.34	71.43	32.51	89.07	Oscar Small Arms Complex
BRAC	65043	Modified Record Fire Range (MRF 1)	N	09	11	23.72	46.76	32.73	58.88	Oscar Small Arms
BRAC	65049	Modified Record Fire Range (MRF 7)	N	09	11	23.72	48.68	37.53	79.53	Oscar Small Arms
BRAC	65078	Anti-Armor Tracking & Live Fire Complex (LA-AR1)	N	09	----	22.52	57.31	6.66	42.95	Southern ranges
BRAC	65250	Maneuver Battle Lab	N	10	----	----	26.90	----	0.00	Main Post
BRAC	67457	Infrastructure Support, Incr 2. Includes security fence and direct buried cable	N	09	----	----	86.26	----	56.81	Northern ranges and Harmony Church
GTA	69147	Trainee Complex Upgrade	N	09	----	----	81.36	----	4.13	Sand Hill
GTA	69150	Classrooms & Dual Battalion Dining Facility	N	10	----	----	65.74	----	0.60	Sand Hill
GTA	69151	Dining Facility to Support AST Training	N	10	----	----	10.14	----		Main Post
GDPR	69406	Unit Maintenance Facilities	N	09	----	----	50.54	----	1.89	Main Post
BRAC	69742	Northern Training Area Infrastructure	N	09	11	----	240.23	----	175.04	Northern ranges

BRAC Base Realignment and Closure
 GWOT Global War on Terror
 GTA Grow the Army
 GDPR Global Defense Posture Realignment
 AP3 Army Power Projection Platform

*Y Project analyzed under a different PN or no PN in Transformation Biological Assessment
 (Y) Project combined with other PNs in Transformation Biological Assessment
 ** Project funded in FY08, however, construction will be ≥ FY 09

Table ES 3-1 (cont'd). All projects included in the Alternative A (Preferred Alternative), Maneuver Center of Excellence actions at Fort Benning, including reanalyzed Transformation projects.

Project Driver	Project Number	Project Title	Analyzed for Transformation (Y/N)	Fiscal Year- (Start Date)	Fiscal Year- (Date Operational)	Area- Footprint, (Acres)	Area- Limits of Construction (Acres)	Area- Ordnance or Maneuver- Impacted Areas (Acres)	Maximum Acres of Pine Impacted	Location
GTA	69745/ 72322/ 72324	Training Barracks Complex - Phases 1, 2 and 3	N	10, 11 and 12	----	----	130.80	----	71.19	Sand Hill
GWOT	69999	Warrior in Transition Complex	N	09	----	----	66.93	----	0.00	Main Post
GTA	70026/ 72456	Classrooms with Battalion Dining Facilities -Phases 1 and 2	N	10, 11	----	----	50.19	----	0.00	Sand Hill
GTA	70027/ 72457	Classrooms with Battalion Dining Facilities - Phases 1 and 2	N	10, 11	----	----	72.24	----	4.05	Sand Hill
BRAC	71065	Troop Store - Army and Air Force Exchange Service (AAFES) (Non-appropriated fund activity (NAF))	N	09	----	----	5.64	----	0.00	Harmony Church
BRAC	71473	Water Treatment Plant Upgrade and Expansion	N	10	----	----	46.90	----	0.00	Main Post
BRAC	71620	Dental Clinic Addition	N	10	----	----	9.99	----	0.00	Main Post

BRAC Base Realignment and Closure
 GWOT Global War on Terror
 GTA Grow the Army
 GDPR Global Defense Posture Realignment
 AP3 Army Power Projection Platform

*Y Project analyzed under a different PN or no PN in Transformation Biological Assessment
 (Y) Project combined with other PNs in Transformation Biological Assessment
 ** Project funded in FY08, however, construction will be ≥ FY 09

3.3 TRANSFORMATION PROJECT CHANGES

Sixteen projects (10 BRAC, 1 AMF and 5 “Non-BRAC”) originally identified in the Transformation Biological Assessment have changed locations and/or have expanded and are being reassessed in this document (Table ES 3-1).

3.4 PERSONNEL INCREASES

Personnel increases associated with AMF, GDPR and other restationing actions in the Transformation environmental documents have not changed from the Transformation Biological Assessment. Additional personnel are expected to support Transformation/ MCOE and Grow the Army (GTA) initiatives associated with the Infantry OSUT courses, 2 additional Basic Combat Training Battalions with 5 to 7 Companies each, 1 additional Initial Entry Training Battalion, increases in training loads for advanced Infantry and Armor training, and Officer Candidate and Airborne School training.

3.5 CONSTRUCTION PROJECTS

Carrying out the requirements of the proposed action will involve constructing new facilities and renovating/ upgrading existing facilities and infrastructure to support additional Soldiers and their family members, construction of, and modifications to, ranges and training areas and increasing the use of live-fire training ranges and maneuver areas. Projects located in the general cantonment area were divided in 4 broad analysis areas: Harmony Church, Kelley Hill, Main Post and Sand Hill (Figure ES 3-2). Training areas were grouped into 5 general regions: Oscar Small Arms Complex (Oscar Complex), Northeastern ranges (training areas northeast of Highway (Hwy.) 27-280 and east of Lorraine Road (Rd.), Southern Maneuver Area, Northern ranges (training areas northeast of Hwy. 27-280 and west of Lorraine Rd.), and Southern ranges (all training areas southwest of Hwy. 27-280) (Figures ES 3-2 – 3-7).

Projects below are listed geographically and by reanalysis status relative to the Transformation Biological Assessment (where applicable). See the MCOE Biological Assessment for detailed project descriptions.

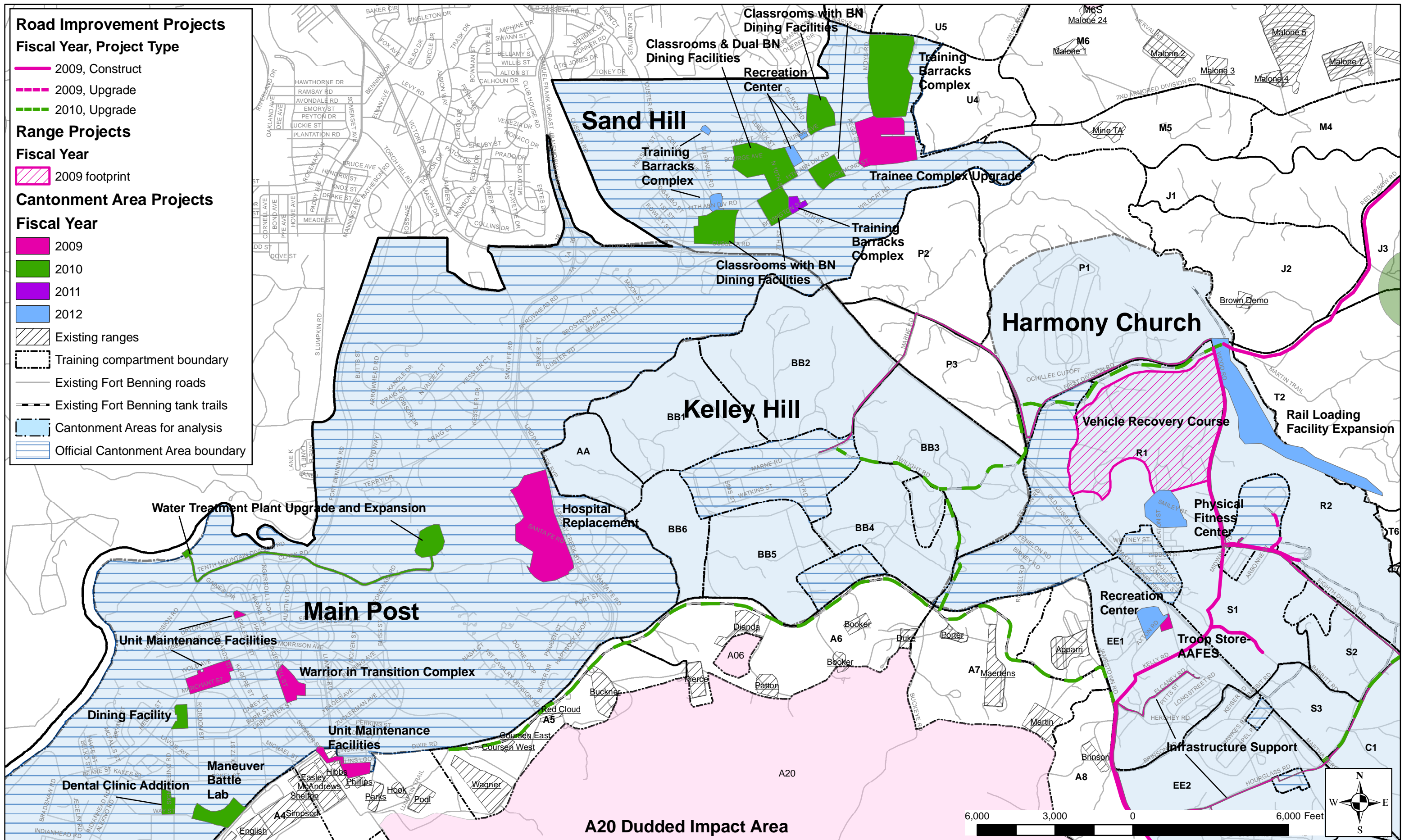


Figure ES 3-2. Fiscal years 2009 through 2012 construction activities and operational impacts for proposed projects located in the Cantonment Area for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

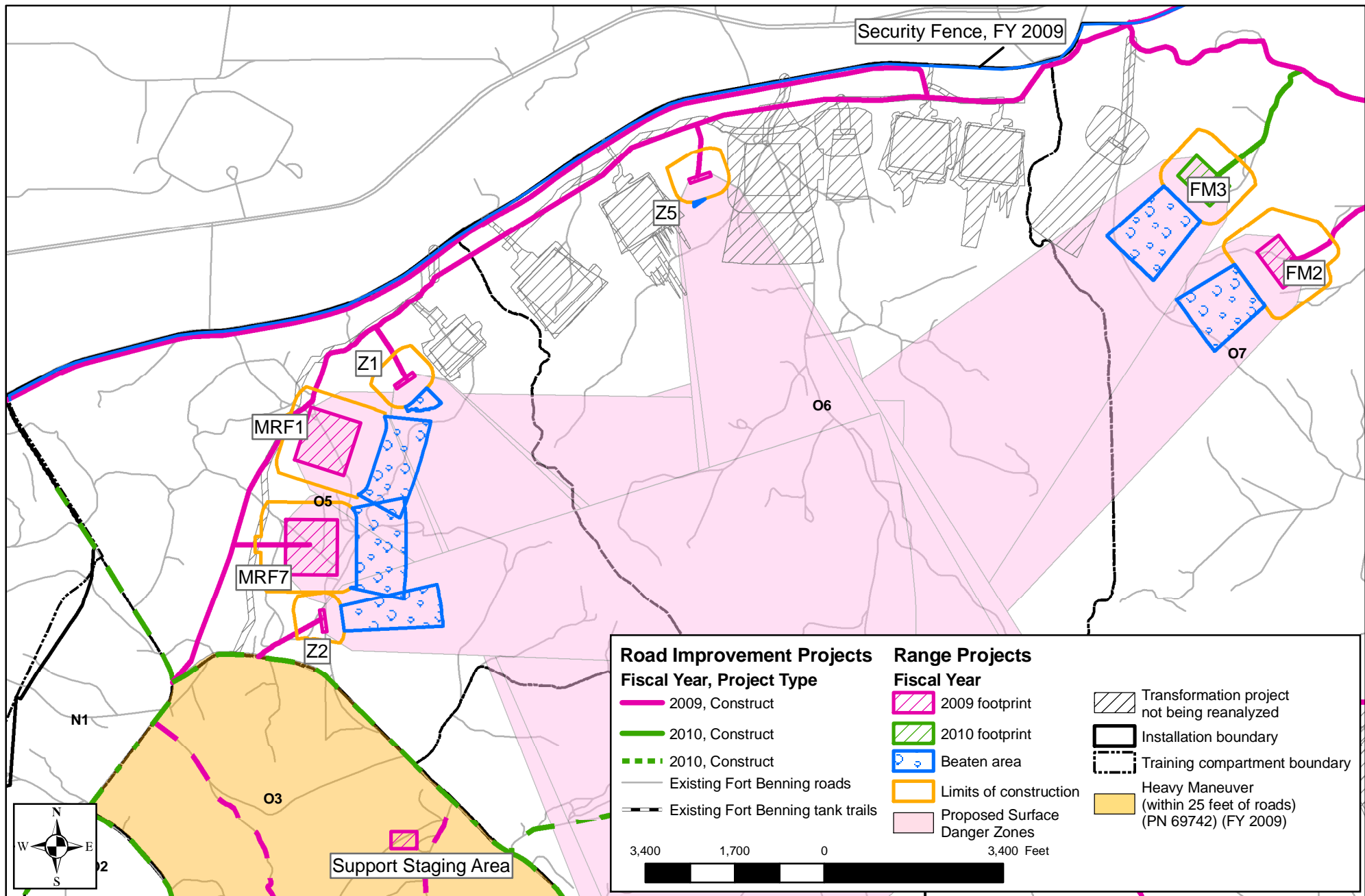


Figure ES 3-3. Fiscal years 2009 through 2010 construction activities and operational impacts for proposed projects located in the Oscar Small Arms Range Complex for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

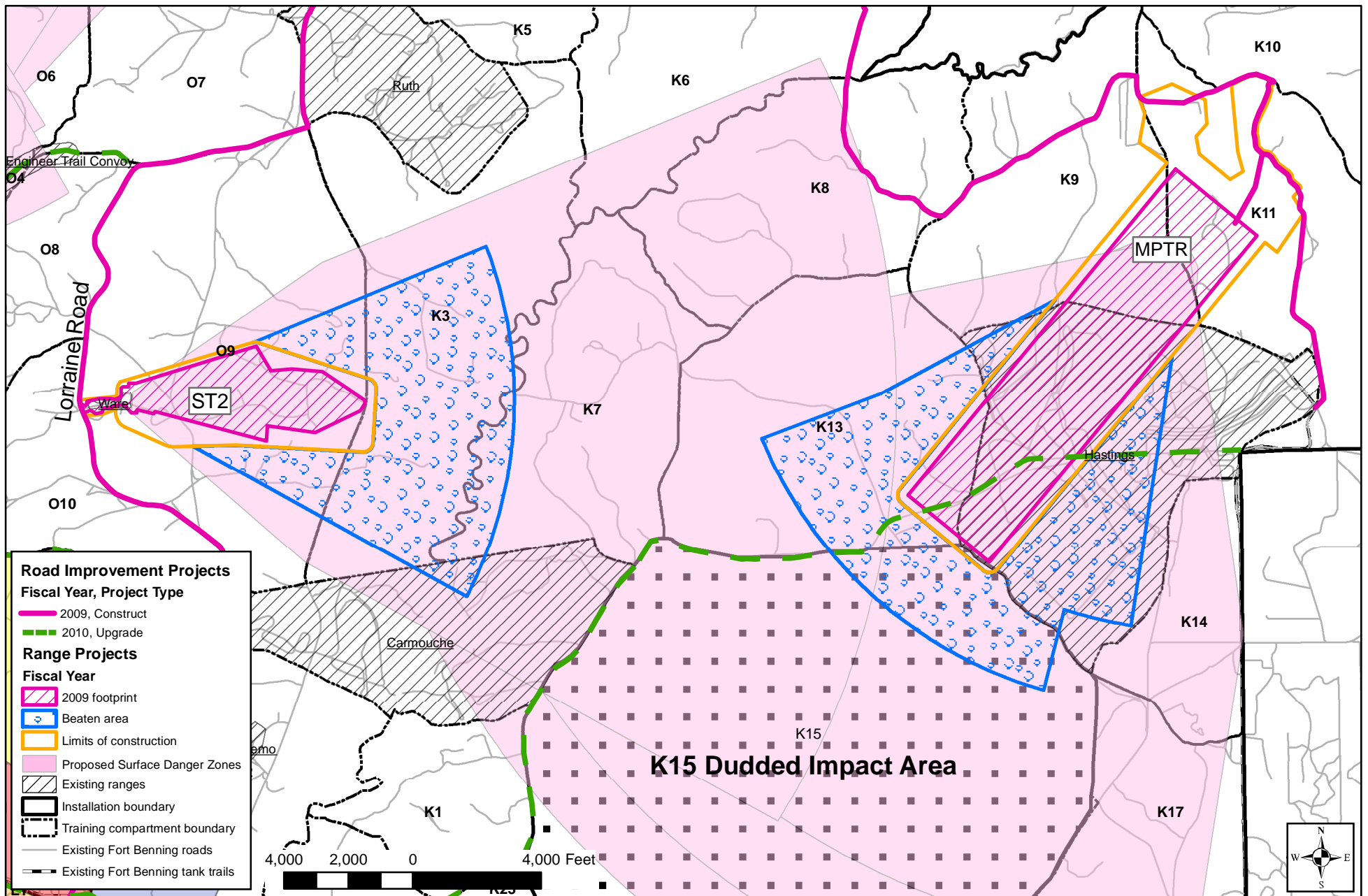


Figure ES 3-4. Fiscal years 2009 through 2010 construction activities and operational impacts for proposed projects located in the Northeastern Ranges for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

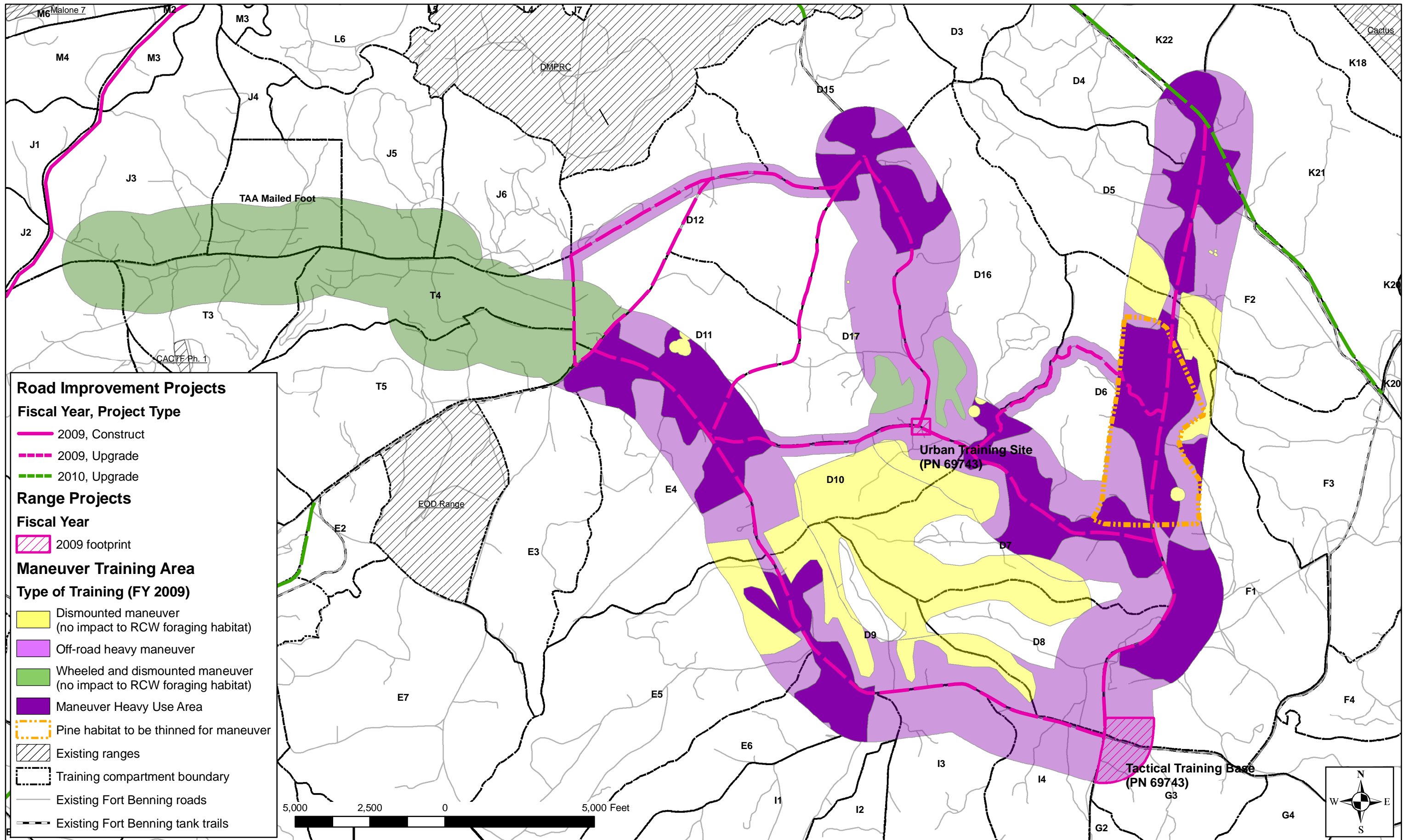


Figure ES 3-5. Fiscal years 2009 through 2010 construction activities and operational impacts for proposed projects located in the Southern Training Area for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

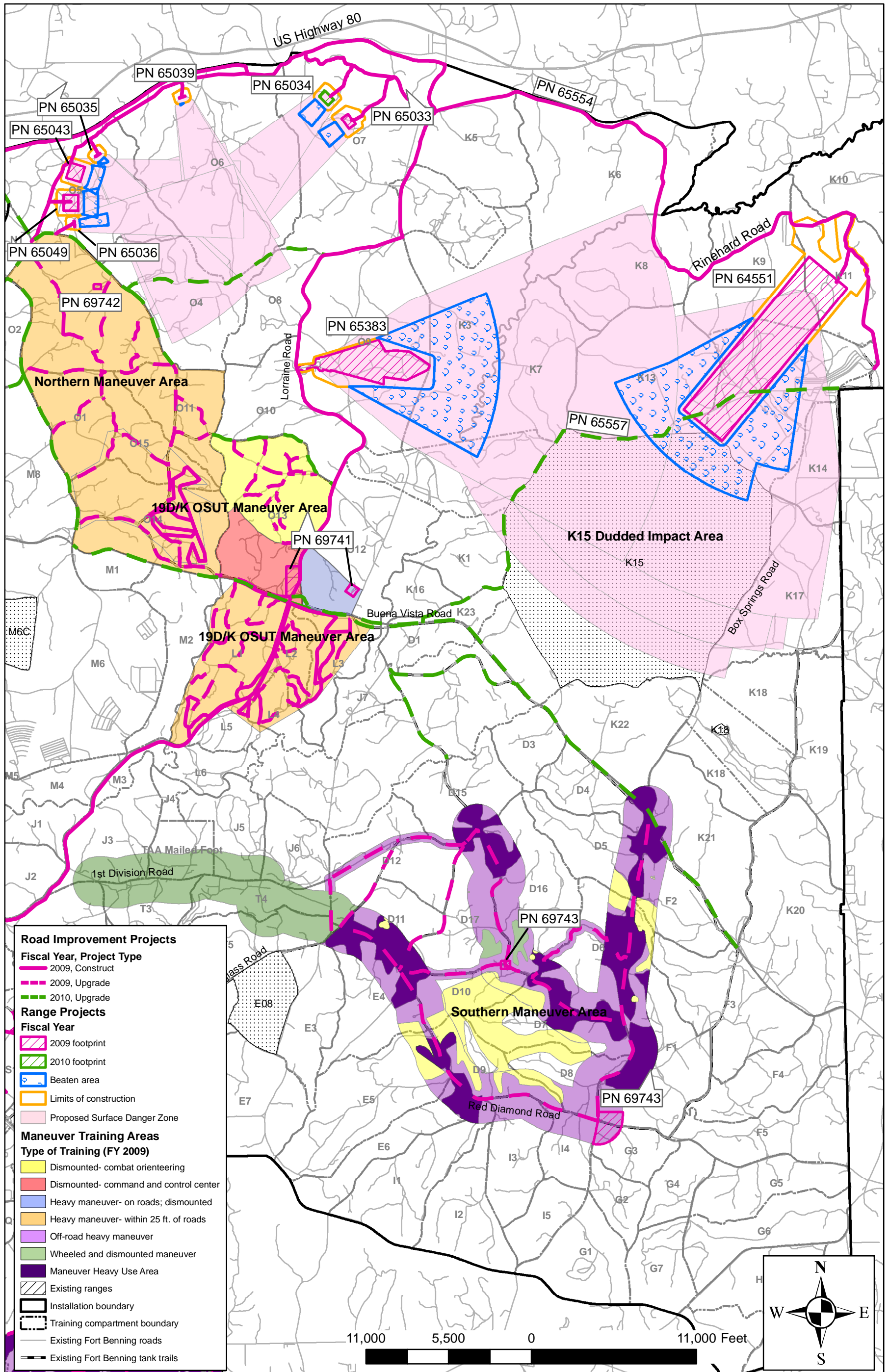


Figure ES 3-6. Fiscal years 2009 through 2010 construction activities and operational impacts for proposed projects located in the Northern Maneuver Area, Oscar Ranges, Northeastern Ranges and Southern Maneuver Area for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

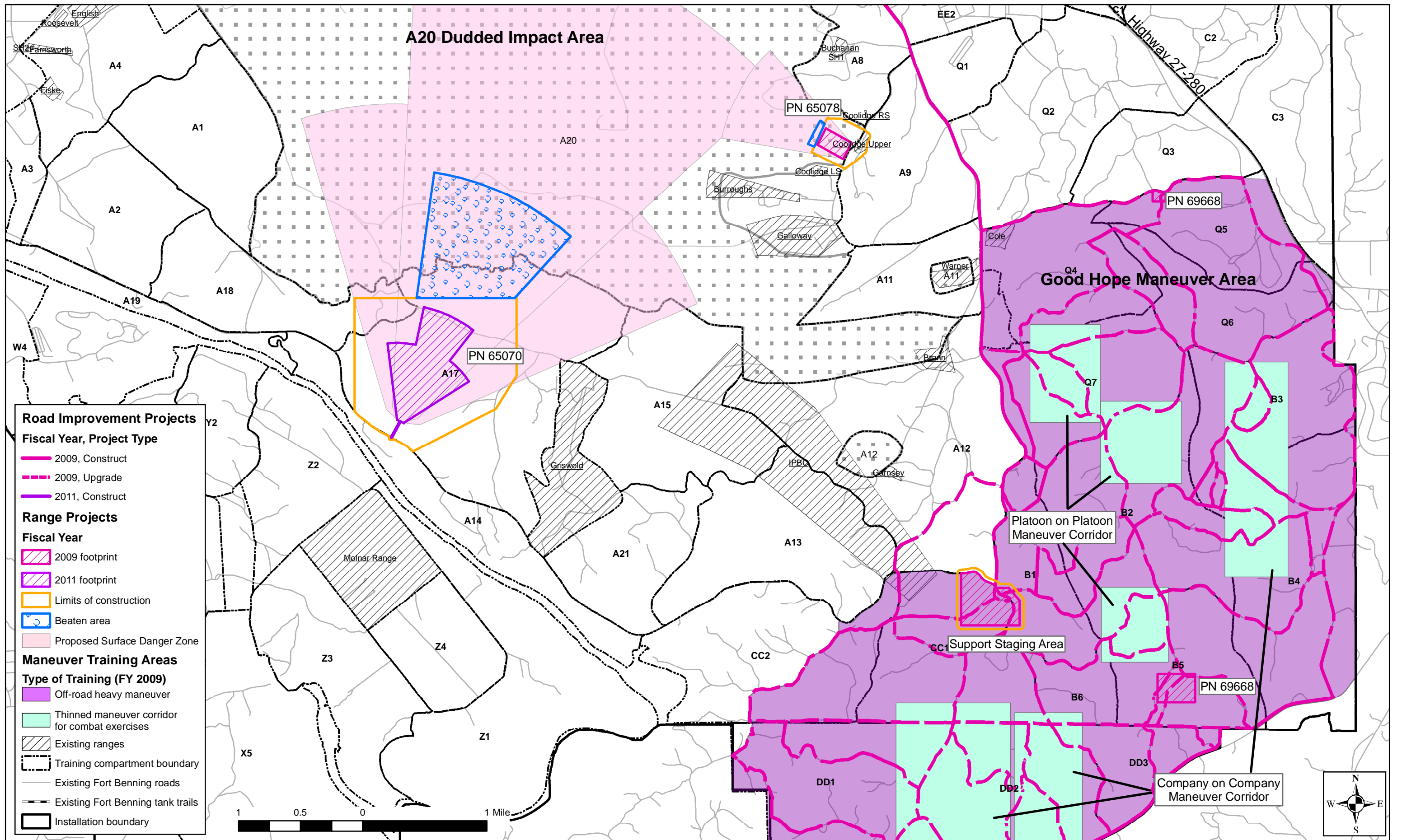


Figure ES 3-7. Fiscal years 2009 through 2011 construction activities and operational impacts for proposed projects located in the Southern Ranges for the Maneuver Center of Excellence, Alternative A (Preferred Alternative), Fort Benning, Georgia.

3.6 REANALYZED TRANSFORMATION PROJECTS

3.6.1 HARMONY CHURCH

Three reanalyzed projects will be located in Harmony Church and include the Vehicle Recovery Course (PN 72017) (FY 2009), a Recreation Center (PN 65246) (FY 2012), a Physical Fitness Center with a swimming pool and athletic fields (PN 65248) (FY 2012) and an Expansion of the Rail Loading Facility (PN 62953) (FY 2012) (Table 3-1 and Figure ES 3-2).

3.6.2 MAIN POST

A hospital (PN 70235 (2008)/ 65081 (2009)/ 67461 (2010) project is proposed on Main Post (Table ES 3-1 and Figure ES 3-2).

3.6.3 OSCAR COMPLEX

A Fire and Movement Range 3 (PN 65034) (FY 2010) and 3 Rifle/ Machine Gun Zero (Z) Ranges, Z1, Z2 and Z5 (PNs 65035, 65036 and 65039) will be located in the Oscar Complex (Table ES 3-1 and Figure ES 3-3).

3.6.4 NORTHEASTERN RANGES

The Stationary Tank Range 2 (ST2) (PN 65383) (FY 2009) will be located in the northeast range area of Fort Benning (Table ES 3-1 and Figure ES 3-4).

3.6.5 SOUTHERN RANGES

A Multi-Purpose Machine Gun Range (MPMG2) (PN 65070) (FY 2011) will be located in Compartment A17, south of the A20 Dudded Impact Area (Table ES 3-1 and Figure ES 3-5).

3.7 NEW MCOE PROJECTS

3.7.1 HARMONY CHURCH

Infrastructure Support projects (Incremental 2) (PN 67457) (FY 2009) consisting of buried communication cables will be located in Harmony Church along with an AAFES Troop Store (PN71065) (FY 2009) (Table ES 3-1 and Figure ES 3-2).

3.7.2 MAIN POST

Many of the proposed projects on Main Post are located in historically developed areas. These projects are not discussed in detail because of the absence of Federally-listed Threatened and Endangered species or potential habitat in these areas (See Table ES 3-1 and Figure ES 3-2).

Additionally, a Warrior in Transition Complex (PN 69999) (FY 2009), Unit Maintenance Facilities (PN 69406) (FY 2009), Water Treatment Plant Upgrade and Expansion (PN 71473) (FY 2010), Maneuver Battle Lab (PN 65250) (FY 2010), Dental Clinic (PN 71620) (FY 2010) and Dining Facility to Support AST Training (PN 69151) (FY 2011) will to be constructed on Main Post (Table ES 3-1 and Figure ES 3-2).

3.7.3 SAND HILL

A Trainee Complex Upgrade (PN 69147) (PN 2009), Classroom and Dual Battalion Dining Facility (PN 69150) (FY 2010), Classrooms with Battalion Dining Facilities, Phases 1 and 2 (PN 70027/ 72457) (FY 2010), Classrooms with Battalion Dining Facilities, Phases 1 and 2 (PN 70026/ 72456) (FY 2010), Training Barracks Complex (PN 72322/ 72324) (FY 2010) and a Training Barracks Complex (PN 69745) (FY 2012) will be located in Sand Hill (Table ES 3-1 and Figure ES 3-2).

3.7.4 OSCAR COMPLEX

Three projects including a Fire and Movement (FM) Range 2 (PN 65033) (FY 2009), Modified Record Firing (MRF) Ranges (MRF1 and MRF7) (PNs 65043 and 65049) (FY 2009) and Infrastructure Support projects (Incremental 2) (PN 67457) (FY 2009) will be built within or near the Oscar Ranges Complex (Table ES 3-1 and Figure ES 3-3).

3.7.5 NORTHEASTERN RANGES

A Multi-Purpose Training Range (MPTR) (PN 64551) (FY 2009) will be constructed in Compartments K9, K11 and K13, to the north of, and overlapping, Hastings range (Table ES 3-1 and Figure ES 3-4).

3.7.6 SOUTHERN RANGES

An Anti-Armor Tracking and Live Fire Complex (LA-AR1) (PN 65078) (FY 2009) will be built adjacent to the existing Coolidge-Upper Range (Table ES 3-1 and Figure ES 3-5).

3.8 TRAINING AREA ROADS

MCOE training roads and trails and upgrades/ repairs of existing roads and trails, include the Good Hope Access Road (PN 69358) (FY 2009), Construction of Training Area Roads (PN 65554) (FY 2009), Repair Existing Training Area Roads (PN 65557) (FY 2010) and a Tracked Vehicle Drivers Course Access Road (PN 64797) (FY 2009) (Table ES 3-1 and Figures ES 3-1 – 3- 6).

3.9 MANEUVER TRAINING

3.9.1 INCREASED MANEUVER LAND USE

Using the programs of instruction (POI) requirements presented in the Range Development Plan (RDP) for the 3rd Brigade (Bde) and the USAARMS, heavy maneuver training requirements on Fort Benning would increase from 70,568 square kilometer (km²) days to 175,993 km² days upon implementation of Transformation actions: a 149% increase. Also, 4,978 km² days are now needed for 1 USAARMS training course, bringing the total heavy maneuver requirement up to 180,971 km², a 156% net increase with Transformation and MCOE.

3.9.2 TRAINING COURSES

More than 70 training courses currently conducted at Fort Knox, ranging in length from 1 to 20 weeks, will be shifted to Fort Benning as part of Transformation and MCOE. Selected training courses anticipated to take place at Fort Benning include 194th Armored Bde's 19D One Station Unit Training (OSUT) Cavalry Scout (19D OSUT) Course, 19K OSUT Armor Crewman (19K OSUT) Course, 19D Basic Noncommissioned Officer Course (BNCOC) Cavalry Scout (19D BNCOC), 19K BNCOC Armor Crewman (19K BNCOC) Course, Scout Leaders Course, Basic Officer Leader Course (BOLC) III and Army Reconnaissance Course (ARC). These courses vary in length, frequency, intensity, vehicles used and location. See the MCOE Biological Assessment for detailed descriptions of the courses.

3.9.3 PROPOSED MANEUVER AREAS AND ASSOCIATED INFRASTRUCTURE

Under the proposed action, the training courses listed above will be conducted in the Northern Maneuver Area (PN 69742) (FY 2009) (Figure ES 3-6), the 19D/K OSUT Maneuver Area (PN 69741) (FY2009) (Figure ES 3-6), Southern Maneuver Area (PN 69743) (FY 2009)

(Figure ES 3-5) and the Good Hope Maneuver Area (PN 69668) (FY 2009) (Figure ES 3-7). The proposed maneuver areas, associated infrastructure and training to be conducted in each area are presented in detail in the MCOE Biological Assessment.

3.9.4 PROJECTS NOT INVOLVING FEDERALLY LISTED SPECIES

Nine projects that are needed to support MCOE have no federally listed species or Critical Habitat present within their limits of disturbance. All of these are cantonment area projects. Initial analysis of these projects indicates they will not result in any direct or indirect effects to any federally listed species or Critical Habitat. Furthermore, implementation of these projects would not foreclose the formation or implementation of any reasonable and prudent measures or alternatives that may be developed during formal consultation. Therefore, further analysis and consultation regarding these projects is not required. A complete list of these projects is presented in the MCOE Biological Assessment.

Four additional projects have multiple locations associated with the same project number. Of these locations, one contains pine habitat within the limits of disturbance while the others have no impact to federally listed species or Critical Habitat. Further analysis and consultation regarding those locations with no impact is not required. However the remaining locations would be subject to formal consultation. A complete list of these projects is presented in the MCOE Biological Assessment.

4 FEDERALLY PROTECTED SPECIES CONSIDERED

The MCOE Biological Assessment evaluates the potential impacts of the proposed MCOE actions on species listed as Threatened or Endangered, or proposed for such listing, by the USFWS pursuant to Section 7 of the ESA, as amended, which occur on Fort Benning or have been recorded in the surrounding region. The subject species are relict trillium, Michaux's sumac, purple bankclimber, shiny-rayed pocketbook, gulf moccasinshell, oval pigtoe, wood stork and the RCW. Also, as of 15 November 2007, there is designated Critical Habitat for the shiny-rayed pocketbook on Fort Benning along Uchee Creek in Russell County, AL (*Federal Register*, 50 CFR Part 17).

4.1 PROTECTED SPECIES SURVEYS

In 2006, Fort Benning contracted United States Forest Service (USFS) personnel to conduct a survey on approximately 60,000 acres for 6 Federally-listed plant and animal species known or expected to occur on Fort Benning. Surveys of areas directly impacted by the proposed action that were not surveyed for Transformation projects are in progress for all Federally-listed species and will be completed for each project prior to any clearing or land disturbance.

The Good Hope Maneuver Area and other additional areas were surveyed for RCWs in late 2006, Michaux's sumac in summer 2007 and relict trillium in spring 2008.

Approximately 2,000 additional acres on Fort Benning were surveyed for relict trillium in April and May 2008. A few trillium individuals were found in the Good Hope area that could not be identified, but are unlikely to be relict trillium because of soil type. Species identification will be determined in spring 2009 (if possible).

Since RCW surveys must be conducted within 1 year of project initiation, many areas surveyed by USFS in 2006 have required a resurvey prior to construction. These surveys have been, and will continue to be, conducted prior to any timber clearing for Transformation or MCOE projects.

USFWS personnel conducted a survey for Federally listed mussel species at existing or future road crossings in May and June 2006. Many of the proposed road crossings have changed in location from those surveyed in 2006 and several have been added, however, based on findings of the 2006 surveys and past inventories of the Installation, the USFWS did not require that additional surveys be conducted for projects analyzed in this MCOE Biological Assessment.

5 EFFECTS DETERMINATIONS

5.1 RELICT TRILLIUM (ENDANGERED)

Five known populations and 2 known isolated individual plants were confirmed on Fort Benning during the USFS surveys (Figure ES 5-1).

The proposed security fence (PN 67457) and new asphalt administrative road (PN 65554) will impact the Randall Creek-North relict trillium population located on the northeastern edge of the Installation (Figure ES 5-2). Affected plants may be relocated to a recipient site on Fort

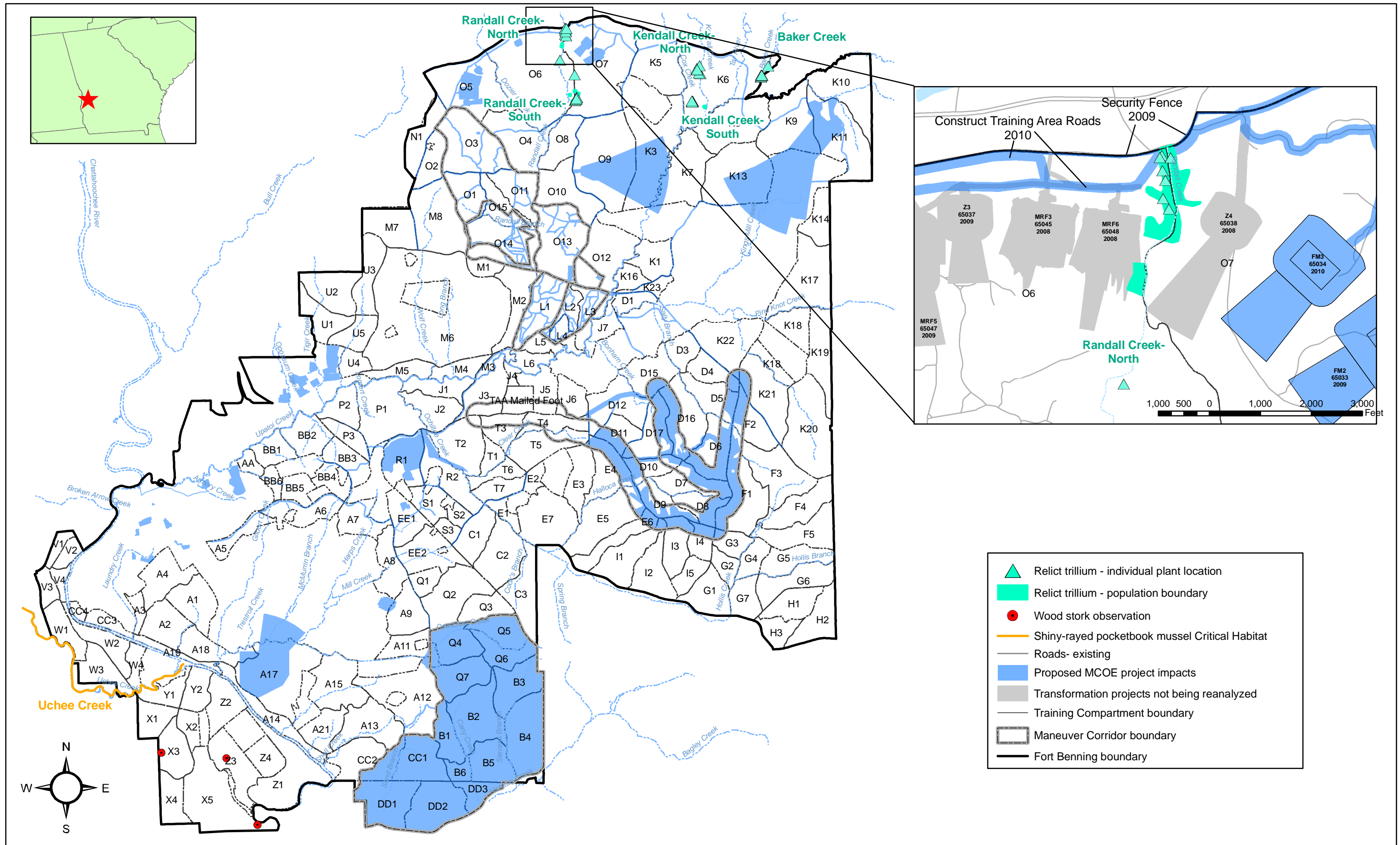


Figure ES 5-1. Known Federally-listed species locations, other than red-cockaded woodpecker, on Fort Benning and potential project impacts caused by the proposed Alternative A (Preferred Alternative) MCOE actions at Fort Benning.

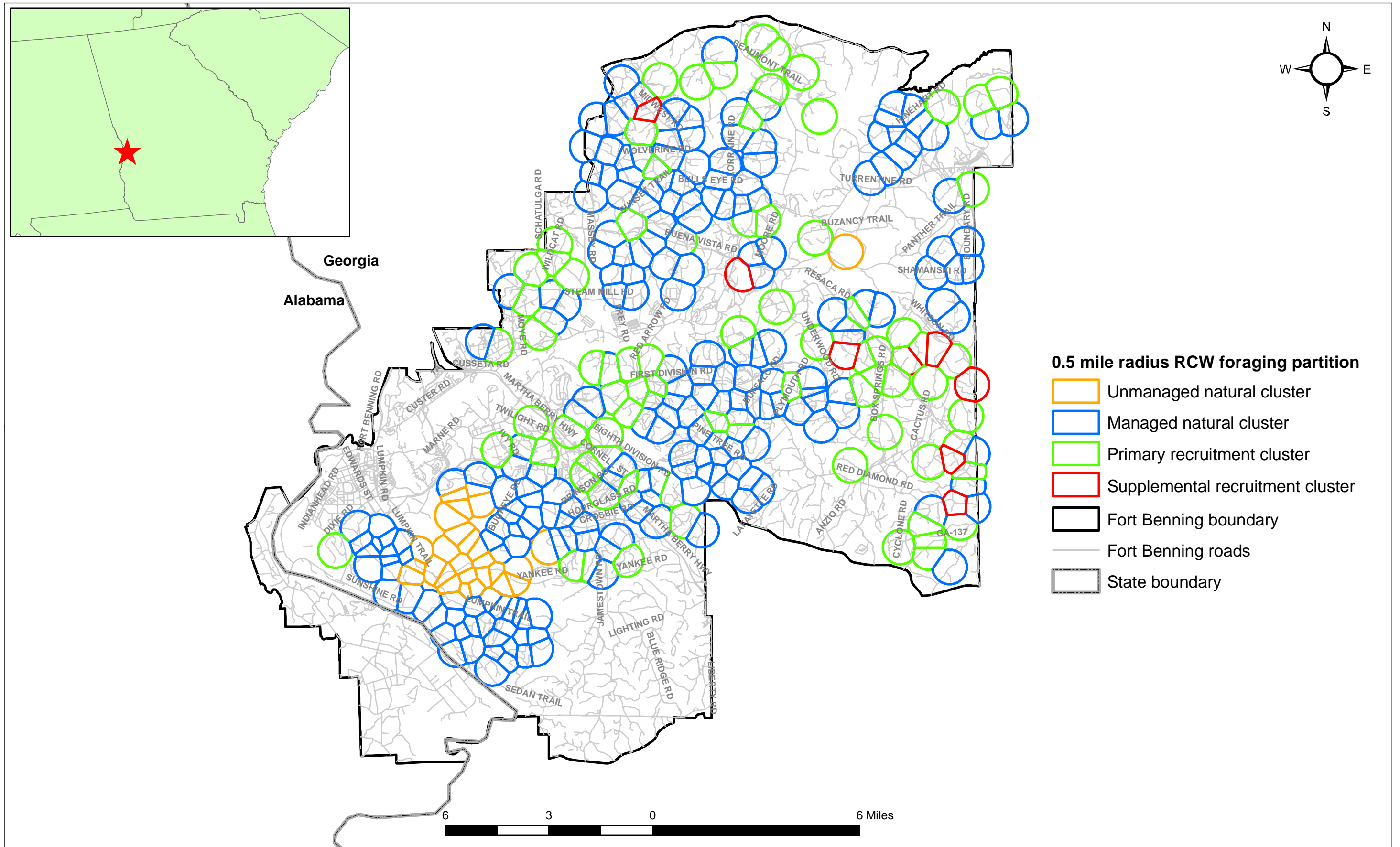


Figure ES 5-2. Distribution of red-cockaded woodpecker (RCW) clusters including unmanaged and managed natural clusters and primary and supplemental recruitment clusters, Fort Benning, Georgia and Alabama.

Benning or to a recipient site on GA Department of Natural Resources (DNR) property in order to establish or enhance off-post relict trillium populations (R. Thornton, FBCB, pers. comm.)

Biological Determination

May Affect, Likely to Adversely Affect

5.2 MICHAUX'S SUMAC (ENDANGERED)

There are no known occurrences on Fort Benning and there is no Installation management plan for this species. This species was not observed during recent surveys.

Biological Determination

No Effect

5.3 MUSSELS

There are no known occurrences of the Federally-listed purple bankclimber (Threatened), shiny-rayed pocketbook (Endangered), Gulf moccasinshell (Endangered) and the oval pig toe (Endangered) on Fort Benning. None were found during recent surveys at 27 pre-determined stream locations. The shiny-rayed pocketbook has designated Critical Habitat along 21.2 miles of Uchee Creek, from its confluence with the Chattahoochee River upstream to Island Creek in Russell County, AL. On Fort Benning, Uchee Creek flows along or through Compartments W1, W3, W4 and Y1. None of the proposed projects are in the vicinity of Uchee Creek.

Biological Determination

No Effect

5.4 WOOD STORK (ENDANGERED)

Wood storks on Fort Benning are dispersing (post-breeding) birds and have a highly variable duration of stay (Figure ES 5-1). The proposed action will not require the removal of any suitable wood stork roosting or nesting habitat and is not expected to significantly alter any dispersing individual's behavior.

Biological Determination

No Effect

5.5 RED-COCKADED WOODPECKER (ENDANGERED)

5.5.1 STATUS ON FORT BENNING

Fort Benning's RCW population occurs over most of the Installation (Figure ES 5-2), although there are no active clusters on the AL portion of the Installation. This population is designated as 1 of 13 Primary Core Recovery Populations by the USFWS (2003). By definition,

the population goal for Primary Core Populations is at least 350 potential breeding groups (PBGs). It has been estimated that 421 active clusters are required to reach Fort Benning's recovery goal of 351 PBGs.

Fort Benning managed 307 RCW clusters during the 2008 nesting season (284 were active clusters), which included all clusters on the Installation with the exception of inaccessible clusters in duded impact areas. Each spring, enough demographic data is collected at each managed cluster to determine the presence or absence of a potential breeding group (PBG). All managed clusters with sufficient foraging habitat and inhabited by a PBG can be counted toward the Installation's RCW recovery population goal (351 PBGs).

5.5.2 POTENTIAL PROJECT IMPACTS

In determining the overall effect to RCWs, the Installation considered direct, indirect and cumulative effects. Potential impacts from projects include loss of cavity trees, loss of foraging habitat and/ or harassment from clearing and project construction, noise and operation and maintenance. In addition, direct effects may include sediment loading, reduction of habitat quality/ population health, live-fire through foraging areas, disturbance and removal of groundcover, elimination of existing or planned RCW recruitment sites and loss of RCW cavity trees due to wildfires. Indirect project impacts may include RCW habitat fragmentation, edge effects, the potential for delayed population growth and recovery, and reduced access for timber management, RCW management, prescribed burning, wildfire control and loss of Fort Benning as a RCW donor population.

Incidental Take of RCWs resulting from the proposed action may be under the definition of harass, harm, kill or wound.

Biological Determination

May Affect, Likely to Adversely Affect

6 ANALYSIS

RCW cavity trees and/ or foraging habitat will be impacted in 121 active and 12 inactive RCW clusters as a result of Alternative A 2009-2012 MCOE projects. In 2008, 119 of these clusters contained PBGs, 1 contained a solitary male and 1 site was captured.

FHAs were completed for 120 active clusters (project impacts to 1 active cluster were in non-contiguous habitat and an FHA was not conducted). Pre- project, 36 of the 120 analyzed active clusters did not meet the SMS and 118 clusters did not meet the RS.

Post-MCOE, 78 of the 120 analyzed active RCW clusters will be “taken” by the proposed action under Alternative A. Fifty-five “takes” are a result of foraging habitat loss, of which 41 clusters will be “taken” by loss of foraging habitat only and 14 clusters will be taken by both loss of foraging habitat and cavity trees. One cluster will be “taken” only as a result of cavity tree removal, 5 clusters will be “taken” due to harassment, 8 clusters will be “taken” as a result of Group Level impacts and 9 clusters will be “taken” as a result of Neighborhood Level impacts. Seventy-five of the 78 “taken” clusters were inhabited by PBGs, therefore the proposed action will reduce the number of PBGs from 271 to 196 PBGs (based on 2008 data).

There were 32 “takes” authorized in the 2007 USFWS Transformation Biological Opinion. Due to project redesigns, impacts to 22 of those clusters “taken” by Transformation projects were reanalyzed in this Biological Assessment. Transformation projects resulting in 10 “takes” were not reanalyzed and those 10 must be added to the total impacts from this MCOE action in order to assess the cumulative effects of both actions on the Fort Benning RCW population. Therefore, the total number of RCW “takes” resulting from the Transformation and the proposed MCOE actions is 88.

None of the 11 clusters where home range follows are being conducted as a minimization effort for the Digital Multi-purpose Range (DMPRC) will be “taken” at any level as a result of Alternative A. Seven of the clusters which are being banded as a minimization effort for the DMPRC in order to document impacts of the range within the RCW “neighborhood” will be “taken” at the cluster level (D11-01, D11-02, D16-01, E04-01, K13-04, L03-01 and O13-01). In addition, Cluster O12-02 will be “taken” at the group level under Alternative A.

Of the 2 recruitment sites established on Fort Benning as part of the Land Exchange, 1 cluster (Cluster O14-03) will be “taken” due to harassment impacts under Alternative A.

Of the 16 clusters currently being monitored solely for Transformation, 7 will be “taken” at the cluster level by the proposed action.

Using the allocation of 150 acres/cluster, Fort Benning will need 63,150 acres of contiguous longleaf pine habitat for recovery. The pine habitat remaining post-project (66,392) could potentially support 421 clusters at 158 acres/ cluster, or 443 clusters at 150 acres/ cluster, which could be sufficient to meet recovery in the future depending on the spatial configuration of the remaining habitat and the distribution of RCWs on the landscape (but not considering habitat and population losses attributed to pine decline, future project removals/impacts or losses due to training impacts). However, if loss (isolation) of habitat in the northeastern corner of the

Installation due to the MPTR is never recovered, the contiguous acreage remaining post-project (63,303 acres) would support 422 clusters with 150 acres each, only slightly above the number of clusters Fort Benning must manage to meet its Recovery Goal.

Two RCW population analysis models are being utilized to assess impacts of the proposed action on the Fort Benning RCW population. Population-level modeling performed by Virginia Polytechnic Institute will help determine whether Fort Benning can meet its recovery goal of 351 PBGs and estimate a timeline for recovery. A military training impacts model run through CERL will evaluate the effects of the proposed action on Fort Benning's population viability, specifically harassment impacts from training exercises. The results of these models will be provided to USFWS during formal consultation.

Measures will be taken wherever applicable in order to minimize impacts to Threatened and Endangered species affected by the MCOE action. These efforts are considered part of the proposed action and include impact avoidance and minimization during project design and siting, continued management of taken clusters that can eventually meet the Recovery Standard, compliance monitoring, berming of 3 small arms ranges, management of additional RCW clusters in the A20 Impact Area and understory removal (see others listed in the MCOE Biological Assessment). Fort Benning is also proposing, as part of the action, minimization by committing to additional efforts to establish RCW clusters and/ or habitat in the region via the ACUB program.

7 CONCLUSIONS

Alternative A is the preferred alternative due to better mission support and less anticipated impacts to Threatened and Endangered species than the other action alternative considered (Alternative B).

Potential direct impacts to relict trillium include damage to or destruction of plants by clearing for a proposed new road and security fence that will result in a **May Affect, Likely to Adversely Affect** determination. There will be **"no effect"** on Michaux's sumac, purple bankclimber, shiny-rayed pocketbook, gulf moccasinshell, oval pigtoe or the wood stork. In addition, there will be no destruction or adverse modification of Critical Habitat for the shiny-rayed pocketbook mussel.

RCW cavity trees and/ or foraging habitat will be impacted in 121 active and 12 inactive RCW clusters as a result of Alternative A 2009-2012 MCOE projects, resulting in a **May Effect**,

Likely to Adversely Affect determination. The MCOE actions are likely to result in Incidental Take of 78 clusters. Ten Incidental Takes resulting from Transformation projects were not reanalyzed in the Biological Assessment, therefore the cumulative effects of both actions on the Fort Benning RCW population will result in the Incidental Take of 88 clusters.

Measures to minimize impacts are considered part of the proposed action. These efforts include impact avoidance and minimization during project design, compliance monitoring, berming of small arms ranges where needed, and management of additional RCW clusters in the A20 Impact Area and protection of off-post property through the ACUB program (see others listed in the MCOE Biological Assessment).