

U.S. Army Engineer School



SAPPERS



MAPPERS



BUILDERS



***Cadet Branch Orientation
ESSAYONS!
We Will Succeed!***

02 February 2024



BRIDGERS



DIVERS



**FIRE
FIGHTERS**



**POWER
PROVIDERS**



Agenda

- **Introductory Remarks**
- **Engineer Talent Demands**
- **What Engineers Do**
- **Where Engineers Serve**
- **Military Schools**
- **Developmental Programs**
- **Professional Credentialing**
- **U.S. Army Corps of Engineers**
- **Educational Opportunities**
- **Questions**
- **Resources**





Engineer Talent Demand Priorities

INTELLIGENCES: Interpersonal, Logical-Mathematical, Spatial

SKILLS: The Engineer Branch is looking for candidates to become tactical and technical warriors that are devoted to providing maneuver commanders and ground forces with freedom of action at every echelon. Engineer officers have unique opportunities to enhance their leadership talents and development through military schools, credentialing/certification programs, and advance civil schools exclusive to the Engineer Regiment. Collectively, these skills make Engineer officers superb project managers and tenacious problem solvers that are capable of operating in ambiguous environments solving the nation's toughest problems. Engineer leaders possess the drive to succeed and master all challenges; and are willing to exploit opportunities for self-development.

KNOWLEDGE: The Engineer branch strongly desires officers with academic backgrounds in the domain-specific disciplines listed below, with emphasis on degrees accredited by a National Accreditation Board. These disciplines provide foundations in scientific, design, and management methods that support mission-related problem solving.

➤ **RELEVANT EDUCATION PRIORITY 1:** Engineering (Architectural, Civil, Mechanical, Electrical, Systems, Environmental, Chemical, Nuclear, Geological, Geotechnical); Architecture (to include Environmental Design); Landscape Architecture; Planning (Urban, City, Regional, Environmental); Construction or Building Management/Science; Engineering or Project Management; Geosciences (include GIS, Geodesign, Geography, Geology, Geospatial Information).

➤ **RELEVANT EDUCATION PRIORITY 2:** STEM degrees and others include Management Science; Leadership Management; Military Science; Communications; Economics; Finance; Law; History; Political Science; National Security; Public Policy; International Relations

➤ **RELEVANT EDUCATION PRIORITY 3:** All other disciplines.

➤ **RELEVANT TRAINING/EXPERIENCE:** Significant Cadet Leadership Roles, Athletic Participation (varsity/club), Certification in management, engineering, or related fields of study, Community Outreach/Engagements, Senior Projects focused on engineering, Cadet Troop Leading Time (CTLT) with Engineer Unit, or Academic Enrichment Program in engineering or related activity. Cadets in accredited engineering programs are encouraged to complete the Fundamentals of Engineering Exam (FEE) prior to graduating (Reimbursable after commissioning).

BEHAVIORS: (In addition to foundational)

- | | | | |
|---------------------------|---------------------------------|------------------------------------|-----------------------------|
| ➤ ADAPTABLE | ➤ DETERMINED / GRITTY | ➤ INTERPERSONAL | ➤ PROACTIVE |
| ➤ CHARISMATIC | ➤ EXPERT | ➤ PERCEPTIVE | ➤ PRUDENT RISK TAKER |
| ➤ CRITICAL THINKER | ➤ INNOVATIVE | ➤ PHYSICALLY FIT | ➤ TEAMWORK |
| ➤ DEPENDABLE | ➤ INTELLECTUALLY CURIOUS | ➤ PLANNING & ORGANIZING | ➤ VERBAL REASONING |

TALENT PRIORITIES:

1. **PROBLEM SOLVER:** Able to choose between best practices and unorthodox approaches to reach a solution. Accomplishes the task.

2. **COMMUNICATOR:** Precise, efficient, and compelling in both written and spoken word.

3. **DOMAIN-SPECIFIC EDUCATION:** Possessing a degree in engineering (ABET-preferred), architecture or environmental design (NAAB-preferred), construction management/science (ACCE-preferred), landscape architecture (LAAB preferred), planning (PAB-preferred), high performers in science, technology, engineering, and math (STEM) disciplines.

4. **PHYSICALLY FIT:** Physically tough, gritty, resilient, and tenacious. Performs well even under extreme physiological duress. Committed to a lifestyle of physical fitness

5. **PROJECT MANAGER:** Able to determine requirements, develop work processes, delegate responsibilities, and lead teams to desired outcomes.

6. **DETAILED FOCUSED:** Thorough, perspective, and precise in all matters. Possesses a keen eye and notices everything.

Approved by EN Branch Commandant. Pending CAC approval and publication



Combat Engineering

Mobility

- Essential to Offensive Operations
- Combined Arms effort to provide freedom of maneuver
- Route Clearance Operations
- Tip of the Spear at the breach
- Enable theater access and force projection

Gap Crossing (Mobility)

- Reduce Wet and Dry gaps
- Enhance and Maintain Lines of Communications
- Surprise and Audacity



Counter Mobility

- Essential to Defensive Operations
- Obstacle construction and emplacement
- Shape and enhance natural terrain
- Engagement Area Development
- Deny enemy freedom of maneuver

Survivability

- Protect critical assets and infrastructure
- Critical to defensive positions
- Extensive planning
- Practical use of engineering





General and Geospatial Engineering

Vertical Construction

- Technical Survey and Drafting
- Base Camp Design
- Carpentry, Masonry, Plumbing, Electrical
- Project Management Experience



Horizontal Construction

- Soil Analysis
- Road & Airfield construction
- Support Combat Engineers in the Offense and the Defense
- Civil Engineering experience
- Water Management



Geospatial Engineering

- Analyze the terrain
- Support all warfighting functions
- Facilitate understanding of the OE
- Essential to Army's modernization strategy
- Engineer development opportunities (GEO-DP)





A Day in the Life of an Engineer LT

- Your Daily/Weekly Battle Rhythm will be nested with your CDR's
- PLs must effectively balance Training with CDR priorities of Personnel/Supply/Maintenance Readiness
- Plan training progressively from individual tasks to collective tasks
- Nest your recommended platoon training with Company training objectives in the future
- Give subordinate leaders (TLs/SLs) time to plan and resource training within your nested platoon training glidepath
- Certify your subordinate leaders with Platoon Sergeant prior to training
- Manage the Routine: Maintenance (Vics/Weapons/Equipment), Counseling, medical appointment, 350-1 requirements, troop schools (ammo handler, resiliency trainer)

Generic Daily Schedule

Time	Activity
0530-0600	Prep for the Day
0600-0620	Commander Morning Updates
0630-0800	Platoon PT
0800-0900	Hygiene
0900-1100	Maintenance/Training/Field Prep/Field Recovery
1100-1200	Dispatching/AAR/PCIs
1200-1300	Working Lunch
1300-1600	Maintenance/Training/Field Prep/Field Recovery
1600-1700	Closeout tasks for the Day
1700-1800	Commander Daily Out brief / Prep for Tomorrow

Generic Weekly schedules for Engineer Platoon Leader

Week Type	Monday	Tuesday	Wednesday	Thursday	Friday
Normal Weeks	Vehicle/Equipment Maintenance	Extended Maintenance Individual Training Tasks	Team/Crew Collective Training	Squad Collective Training	Recovery Closeout
Range Weeks	Vehicle Maintenance Dispatching	Individual Weapons Ranges (M4/M17/M249) *overnight	Crew Served Weapons (M240/M2/Mk19) *overnight	Specialty Training (AT4, Javelin, Claymore certs, Grenades)	Weapon Recovery Record scores Closeout
350-1 Training	Vehicle Maintenance Leader Professional Development	Unit 350-1 training (SHARP/ EO/ Resiliency/ Suicide Prevention/ Safety/ Finance/ Family Advocacy/ etc.) Counseling	Unit 350-1 training (SHARP/ EO/ Resiliency/ Suicide Prevention/ Safety/ Finance/ Family Advocacy/ etc.) Counseling	Leader Time Training (reinforce unit 350-1 training) Counseling	Quarterly Counseling Closeout
Demo Weeks	Vehicle Maintenance Dispatching	Inert Demo Training (Individual and Collective)	Individual Demo Certification	Collective Demo Tasks (Squad/Platoon)	Recovery Closeout
Platoon Certification Training	Vehicle Maintenance Dispatching Rollouts	Squad/Platoon Training *overnight	Platoons Certified by BN CDR *overnight	Retraining / Recertification by BN *overnight	Recovery AAR Closeout



Engineer Basic Officer Leadership Course

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
In-processing	Foundation Training	BRM	Foundation Pre-Deployment Training	FTX 1	Demo	Bridging	Defense	Defense	Offense
Common Core					Combat Engineering				
ACFT	Math	BRM	OPORD 1	Land Nav	DEMO	Bridging	OPORD 2	Defense	

Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Offense	Stability Operations	FTX2	Project Management	Horizontal	Vertical	CAPSTONE	Sapper Stakes	Project Athena Out processing	Graduation
Combat Engineering			General Engineering						
Offense	OPORD 3	Mid Point AAR	Project Management	Horizontal	Vertical	Sapper Stakes	CAPSTONE		

- 13 Classes per year.
- Up to 65 students per class
- 99 day long course (19 weeks and 4 days)
- 1:16 instructor to student ratio achieved with platoon trainers

HPDT
 Writing Program
 IDP
 Military Knowledge test
 12 Mi
 Homework, PEs and quizzes



Engineer Divers

Selection – About 6 per year

- Attend EBOLC Class that overlaps the below selection boards.
- Attend Fall (AUG/SEP) or Spring (MAR) Selection Board (Evaluates Fitness & Aquatic Adaptability)
- Graduate Phase 1 Pre-Screen at Fort Leonard Wood (JAN)
- Graduate Joint Dive Officer Course in Panama City, FL (Feb- Aug)

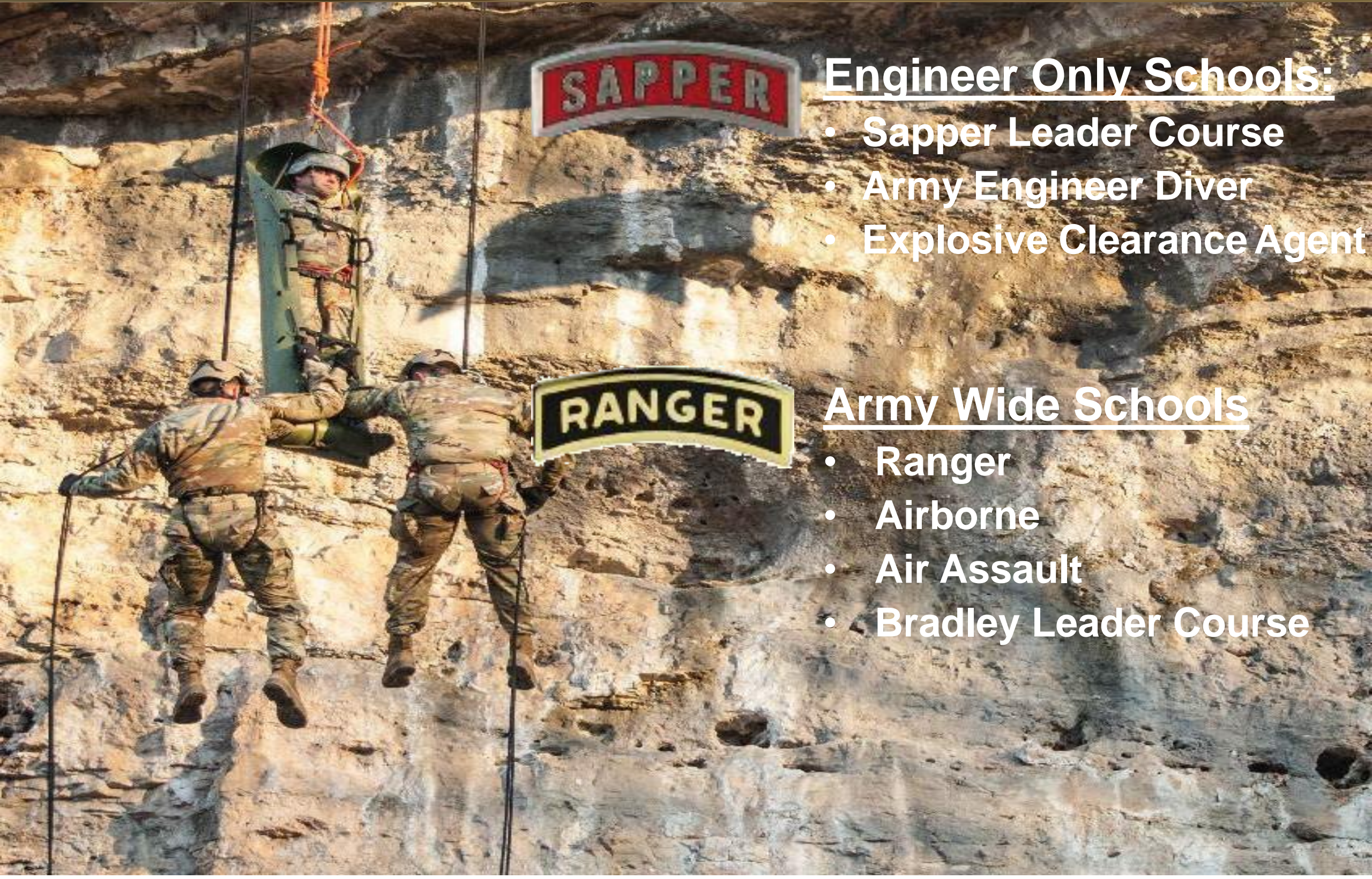
Utilization

- Engineer Dive Detachment PL/XO (VA, HI, FL)
- Deployments to Kuwait Naval Base ISO Army Central Command





Military Schools



Engineer Only Schools:

- Sapper Leader Course
- Army Engineer Diver
- Explosive Clearance Agent

Army Wide Schools

- Ranger
- Airborne
- Air Assault
- Bradley Leader Course



Engineer Developmental Programs



Technical Engineering Program (Sr. LT)

- 18-24 mo; serving within USACE

Engineer Special Operation Forces Development Program (Sr. LT)

- 18-14 mo; serving alongside Special Operations Forces

Geospatial Development Program (Sr. LT)

- 18-24 mo; serving within Army Geospatial Center, USACE, and NGA

Royal School of Military Survey (Sr. CPT)

- Following Company Command
- 15 mo studying military survey in Hermitage, England
- 14 mo utilization at NGA, FLW, USARCENT, USARPAC, USAREUR



Technical Engineer Competency Developmental Program (TEC-DP)

What is TEC-DP?

The Technical Engineer Competency Development Program (TEC-DP) assigns pre-Career Course Engineer Officers to positions in the Corps of Engineers before attending ECCC.

Program Objectives:

- Provide a broadening opportunity for senior Lieutenants opportunities to develop their technical engineering and project management skills prior to ECCC and company command.
- Increase capacity of the Corps of Engineers by gainfully employing pre-ECCC Officers who are degreed engineers to fill positions that are vacant due to the shortages of senior Captains and Majors.
- More effectively employ the human capital of the Engineer Regiment by shifting manpower from where it is in excess (awaiting ECCC in BCTs and Engineer Brigades) to where it is short (USACE).



What are the details?

Who: Select Engineers after successful completion of Platoon Leader assignment with an endorsement from battalion commander via DA 4187.

What: Serve 18 months in project engineer or project manager positions in USACE Districts followed by Captain's Career Course and follow on engineer assignment.

When: After the Officer has completed one year of rated Platoon Leader time and before attending ECCC.

Where: In USACE project manager positions as prioritized by HQ USACE. Locations vary by assignment cycle and USACE needs.

Why: To fill vacancies in Engineer Districts, develop the Officers' technical skills, promote continued self-development, and more effectively employ Engineer company-grade manpower for the long-term benefit of the Officers, the Engineer Regiment, and the Army.



Engineer Special Operations Forces Developmental Program (ENSOF-DP)

What is ENSOF-DP?

The Engineer Special Operations Forces Development Program (ENSOF-DP) assigns pre-Career Course Engineer Officers to positions with Army Special Operations Command and Ranger Regiments.

Program Objectives:

- Provide selected senior Lieutenants opportunities to develop their engineering skills, serve as project engineers/managers, and expose them to special operations prior to ECCC and company command.
- Provide selected Army Special Operations additional Engineer capability in order to support SOF expansion and provide technical expertise while supporting overseas contingency operations.



What are the details?

Who: Selected Engineers after successful completion of Platoon Leader assignment with an endorsement from battalion commander via DA 4187.

What: Serve 15-18 months as Special Forces Assistant Group Engineer or Assistant Ranger Battalion Engineer followed by a confirmed ECCC class seat.

When: After the Officer has completed one year of rated Platoon Leader time and before attending ECCC.

Where: In SF Group or Ranger Battalions as prioritized by USASOC.

Why: To provide additional Engineer capability to SF Groups and Ranger Battalions, further develop the Officers' engineering skills, and more effectively employ Engineer manpower for the long-term benefit of the Officers, the Engineer Regiment, and the Army.



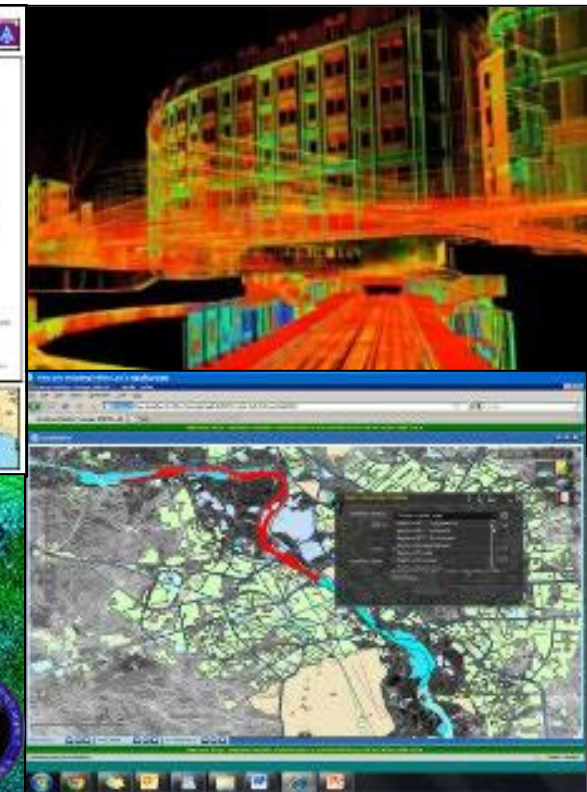
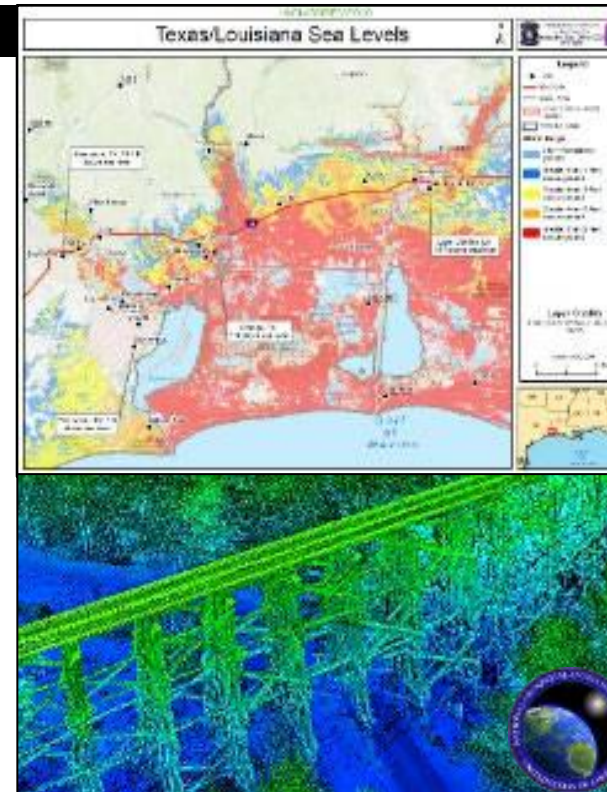
Geospatial Engineer Officer Developmental Program (GEO-DP)

What is GEO-DP?

The Geospatial Engineer Officer Development Program (GEO-DP) assigns pre-Career Course Engineer Officers to various geospatial engineer positions across the regiment prior to attending ECCC.

Program Objectives:

- Provide selected senior Lieutenants opportunities to learn and develop geospatial engineering skills prior to ECCC and company command.
- Increase the overall geospatial skills and experience of Officers within the Engineer Regiment, develop technical capabilities, and improve staff integration and interoperability, and maneuver support.
- Increase the capacity of geospatial positions within COCOMs, NGA, and US Army Engineer School by gainfully employing pre-CCC Officers with geospatial experience.



TPO-Geospatial 5th GPC
60th GPC
64th GPC
132nd GPC

512th GPC
517th GPC
543rd GPC
NGA-East NGA-West

What are the details?

Who: Selected Engineers after successful completion of Platoon Leader assignment who have a geospatial-related educational background or experience in geospatial units, with an endorsement from battalion commander via DA 4187.

What: Serve for 18 months followed by a confirmed ECCC class seat.

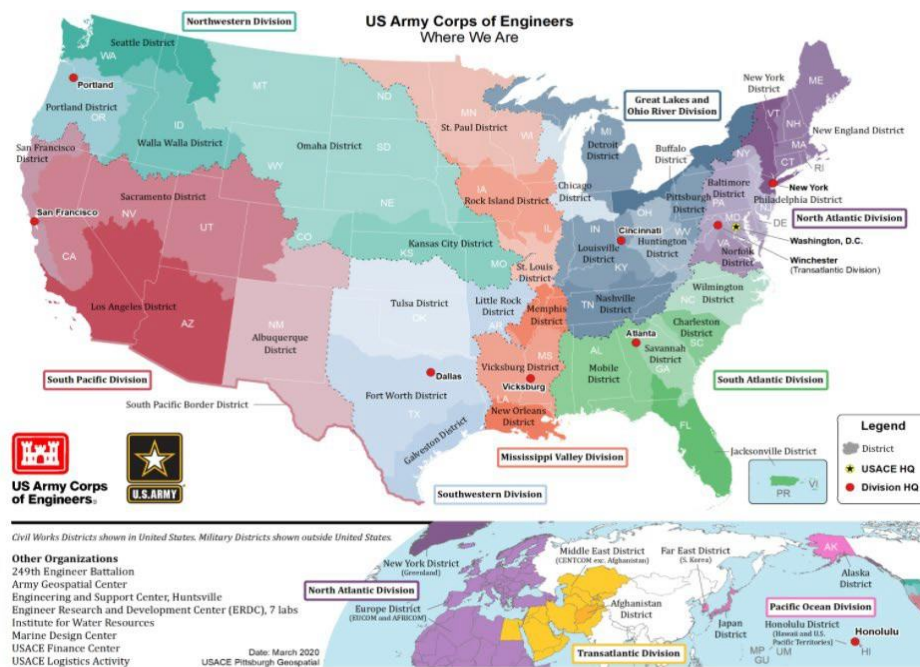
When: After the Officer has completed one year of rated Platoon Leader time and before attending ECCC.

Where: In geospatial positions located within COCOMs, NGA, and US Army Engineer School.

Why: To develop the Officers' geospatial skills, increase the Geospatial competencies within the Engineer Regiment, and allow for continued self-development within the Geospatial Field for the long-term benefit of the Officers, the Engineer Regiment, and the Army.

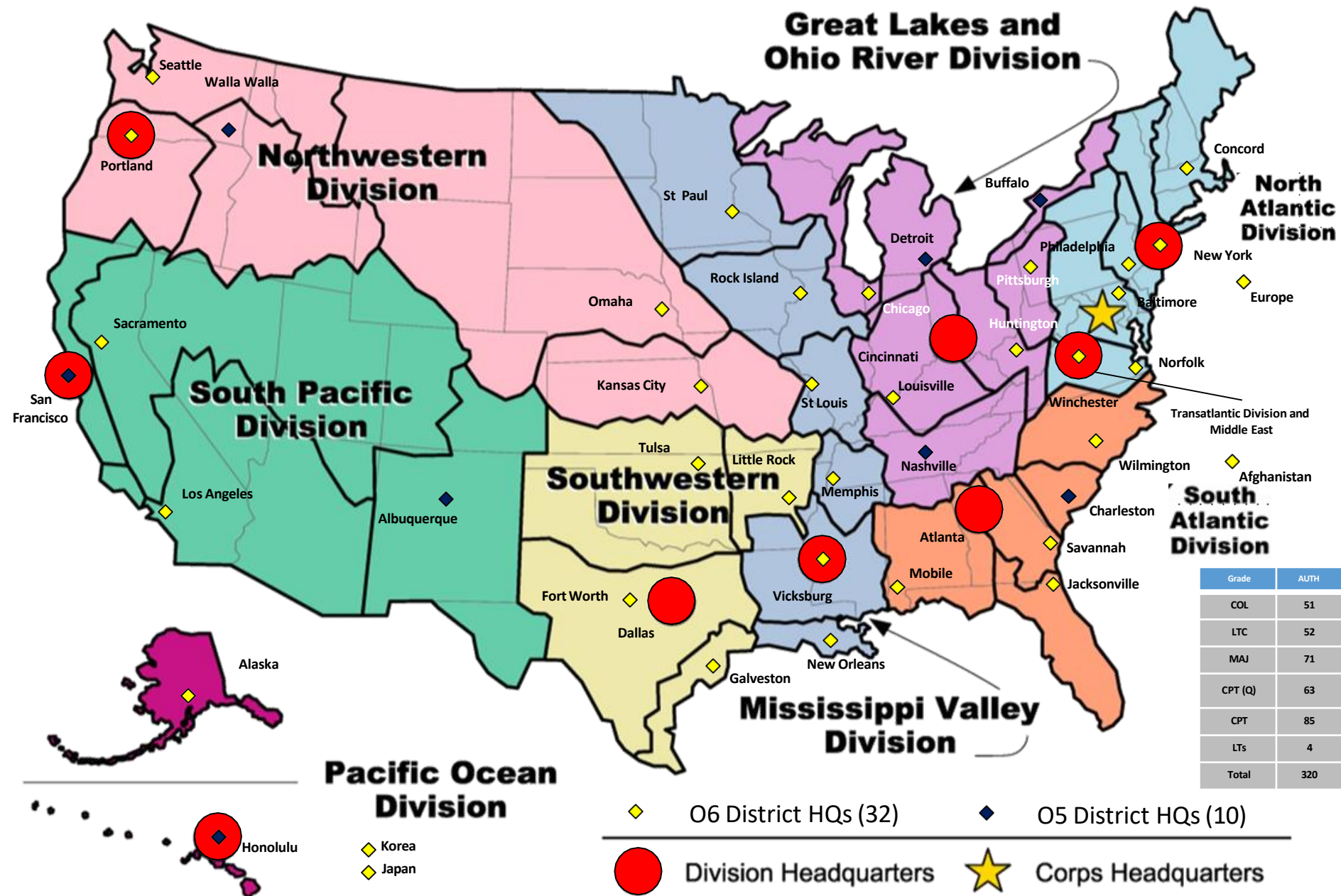
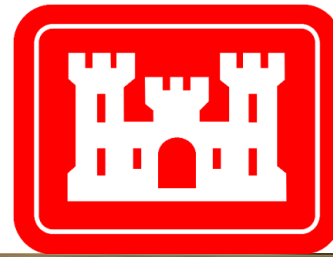


US Army Corps of Engineers





US Army Corps of Engineers





Engineer Credentialing Program



- Professional Engineer (PE)
- Project Management Professional (PMP)
- NGA GEOINT Professional Certification Fundamentals – (GPC) Fundamentals (Level 1)
- Registered Architect (RAIA)
- Registered Landscape Architect (PLA)
- GEOINT Professional Certification (GPC)
- Geographic Info Systems Pro (GISP)
- Professional Geologist (GE)
- Leadership in Environmental Design
- Certified Construction Manager
- Certified Facility Manager
- Certified Equipment Manager



Engineer Educational Opportunities

Missouri Science & Technology (MS&T) Cooperative Degree Program (CDP)

- CDP is only available to ECCC students
- Open to Active & Reserve personnel
 - Active – On campus; Reserve – DL
- 2,500+ Officer graduates since 1994
- Degree Paths
 - Civil Engineering*
 - Environmental Engineering*
 - Engineering Management*
 - Geological Engineering**
- Graduate Certificates
 - Military Construction Management*
 - Military Geological Engineering**

Advanced Civil Schooling (ACS)

- For post Command Captains and KD MAJs
- Open to all branches
- Engineers use ~1/3 of the Army's allocation
- US Universities, and
- UK (Royal School of Military Survey)





Branching Tips

Internal Branching Overview

- **Interview is heavily weighted (2-3 Panel members per cadet)**
 - Know the subject (Research)
 - Dress / Look Professional (Hygiene, Clothing, Background)
 - DO NOT pre script responses / read off notes entirely (it is obvious)
- **Performance Matters: Academic, Military, and Physical GPAs/Scores**
 - We do develop cutoff scores to screen out cadets that don't meet our minimums
- **Extra Curriculars / Leadership / Degree Types / Double Majors**
 - Bonus points and leeway on cutoff score
- **Personal Statement**
 - State specifically where you ranked Engineers if you want EN and other branches to know
- **Reach out to EPDO with issues**

Active-Duty Engineer Units

Echelon Above Brigade EAB

20 EN BDE (FBNC) 19 EN BN (FKKY) 541 CEC-A 42 CEC-I 15 ECC 502 MRBC 887 ESC 550 FF (KCKY)	27 EN (FLNC) 57 SPR(AB) 264 CLR 161 ESC 618 ESC 513 FF	Stand Alone Co's 911 TR (FBVA)
46 EN (FJLA) 573 CLR 687 HORZ 524 FF 642 ESC (FDNY)	92 EN BN (FSGA) 530 CEC-A 497 MRBC 526 ECC 554 ECC 541 CEC-A 514 FF 74;86;511;569 Dive	11 EN (Korea) 643 ESC 630 CLR 55 CEC-A 814 MRBC
36 EN BDE (FHTX) 4 EN (FCCO) 62 CEC-A 576 CEC-A 569 CEC-A 615 ECC	62 EN (FCTX) 74 MRBC 68 ECC 104 ECC 43 MRBC	20 EN (FCTX) 87 CEC-A 510 CEC-A 937 CEC-A 59 CEC-A 557 FF
5 EN (FWMO) 509 CLR 50 MRBC 562 FF 91 K9 Det 41 CEC-A (FRKS) 515 CEC-A (FRKS) 595 CEC-A (FRKS) 175 MRBC (FRKS)	555 EN BDE (JBIM) 864 EN (JBLM) 570 CEC-I 571 CEC-A (FBTX) 610 ESC 557 ECC 537 FF	130 EN BDE (SBHI) 84 EN (SBHI) 95 CEC-I 523 ESC
1 EN BDE (TRG) (FWMO) 31 EN BN 169 EN BN 35 EN BN 554 EN BN	18 MP BDE (GE) 15 EN (GE) 500 ESC 902 ECC 809 MRBC	
USACE (MDW) 249 EN PP (FBVA) A PP (SBHI) B PP (FBNC) C PP (FBVA) D PP *USAR		

(BLUE Font) = Unit location is different from BN HQs

CLR: Clearance
 ECC: Engineer Construction
 ESC: Engineer Support
 FF: Firefighters
 CEC-A: Armored Combat Engineer
 CEC-I: Infantry Combat Engineer
 MRBC: Multi-Role Bridge
 SPR: Sapper
 TR: Tech Rescue
 PP: Prime Power

Brigade Engineer Battalions BEB

ALASKA 70 EN (WAH7AA) 6 EN (WG24AA) 1I 2I 	FCCO 299 EN (WANJAA) 1S 52 EN (WE3KAA) 2S 588 EN (WA03AA) 3A 	FCTX 91 EN (WACAA) 1A 8 EN (WAEUAA) 2A 3 EN (WAP2AA) 3A 3 EN SQ (WJWUAA) 3S 	FLNC 127 EN (WJYKAA) 1I 37 EN (WABGAA) 2I 307 EN (WAGGQAA) 3I
JBLM 23 EN (WAZ7AA) 1S 14 EN (WAZ0AA) 2S 	FBTX 16 EN (WAGQAA) 1A 40 EN (WJYLAA) 2A 2 EN (WAZ8AA) 3A 	FDNY 7 EN (WABFAA) 1I 41 EN (WEPHAA) 2I 	FCKY 326 EN (WACEAA) 1I 39 EN (WAZ6AA) 2I 21 EN (WJQQAA) 3I
SBHI 65 EN (WA99AA) 2I 29 EN (WAMCAA) 3I 	ITALY 54 EN (WACBAA) 173I 	FJLA 317 EN (WAGGAA) 3I 	FSGA 10 EN (WAP7AA) 1A 9 EN (WAMZAA) 2A
GERMANY 2 EN SQ (WBA4AA) 2S 	FRKS 1 EN (WACAA) 1A 82 EN (WABAAA) 2A 		31 BCTs I = IBCT (13) A = ABCT (11) S = SBCT (7)

JBLM: Joint Base Lewis-McCord
 SBHI: Schofield Barracks, HI
 FKRS: Ft. Riley, KS
 FDNY: Ft. Drum, NY
 FCCO: Ft. Carson, CO
 FBTX: Ft. Bliss, TX
 FCTX: Ft. Cavazos, TX
 FSGA: Ft. Stewart, GA
 FJLA: Ft. Johnson, LA
 FCKY: Ft. Campbell, KY
 FLNC: Ft. Liberty, NC
 FMGA: Ft. Moore, GA



Active-Duty Engineer Unit Locations





Resources

Cadet Branching Website

- <https://home.army.mil/wood/index.php/engineer>

EN Personnel Development Office (EPDO)

- usarmy.leonardwood.engineer-schl.mbx.epdo@army.mil
- 573-563-3019 (MAJ Skomp, Director of EPDO)

EN BOLC Website

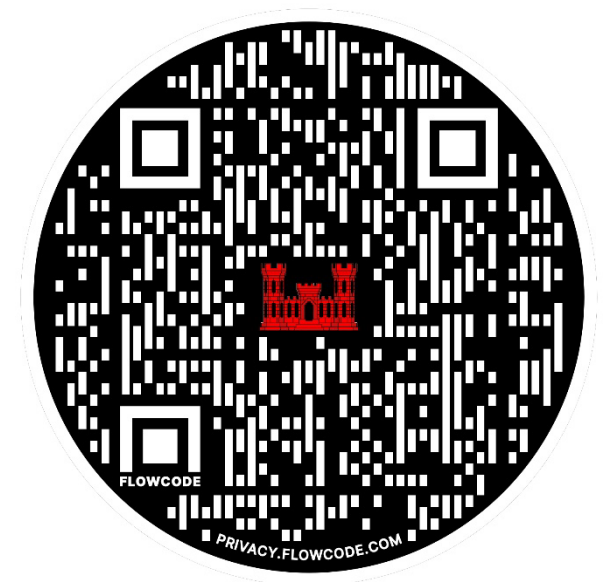
- <https://home.army.mil/wood/index.php/units-tenants/USAES/Orgs/1stENBDE/554thENBN/EBOLC>

EN VBO Website

- <https://vbo.army.mil/>
- Next Live VBO Session: 6-10FEB24. Specific Dates will be posted to VBO site in JAN24.
- Survey: <https://www.surveymonkey.com/r/VBOEngineerCorps>

EN Social Media

- Facebook: @USArmyEngineerRegiment
- Twitter/Instagram: @USAESHQ
- YouTube: @USAES1



Questions?

