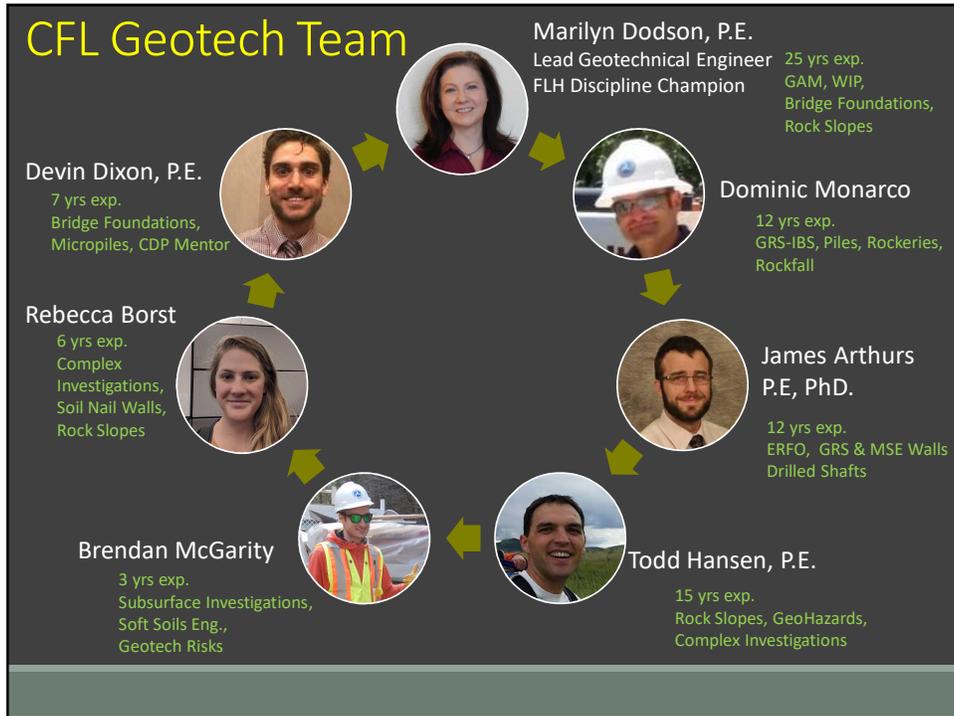




Geotech Topics

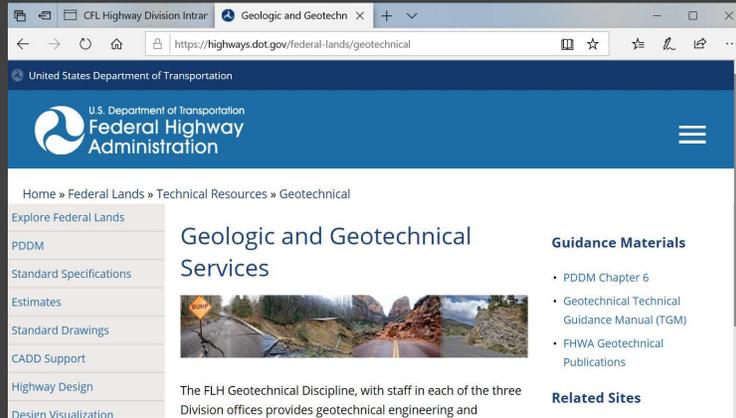
- CFL Geotechs – who we are
- SOW Revisions
- FLH Geotech Website
 - WIP PDDM TGM
 - USMP A-GaME Toolbox
- Specifications & FP-NEW
- Construction



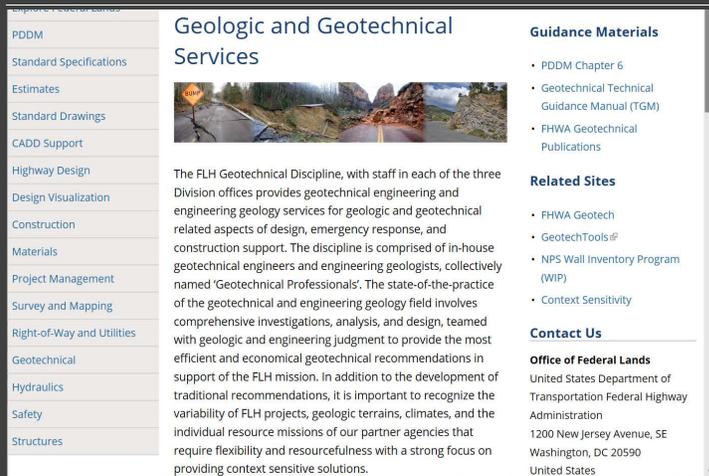
Scope of Work Revisions

- Investigations
 - w/o Bridge – prior to 30%
 - Walls – after layout from design
 - Bridges – immediately after TS&L (around 30%)
- Draft Report
 - 50% target
- Final Report
 - 70% target

FLH Geotech Website



FLH Geotech Website



WIP Report Access

U.S. Department of Transportation
Federal Highway Administration

FEDERAL LANDS HIGHWAY

National Park Service – WIP and GIP Reports

A B C D E F G H I J K L M N O P R S T U V W Y Z

Wall Inventory Program (WIP) Guardrail/Rail Inventory Program (GIP)

- Wall Inventory and condition data was initially collected between 2007 and 2008 in 34 National Parks.
- In 2015, WIP data was integrated into the RIP database structure and program, updated with the latest inventory data, and a reporting process was developed.
- Mile posts and route numbers to corresponding walls will be maintained and updated to match RIP information.
- RIP will be periodically updating information on new walls or existing walls that are re-assessed.
- Reports will be posted and updated as needed on this website.
- If you have questions or would like more information please contact Marilyn Dodson or Jeffrey Beal

Park Alpha	Park Name	State	GIP Report	WIP Report
ACAD	Acadia National Park	ME		
ASIS	Assateague Island National Seashore	MD		
BAWA	Baltimore - Washington Parkway National Capital Parks - East	MD		

WIP Report Access

ArcGIS My Map

Details | Basemap | Print | Measure | Find address or place

Contents

- GWIPRoutes
- Topographic

https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fm15gisweb.fhwa.dot.gov%2Farcgis%2Frest%2F...

FLH Geotech Website

The screenshot displays the FLH Geotech Website's navigation menu on the left, including items like Standard Specifications, Estimates, Standard Drawings, CADD Support, Highway Design, Design Visualization, Construction, Materials, Project Management, Survey and Mapping, Right-of-Way and Utilities, Geotechnical, and Hydraulics. The main content area is titled "Unstable Slope Management Program (USMP)" and includes the phone number 202-366-9494. A list of resources is provided, such as the USMP Website, Android and iOS applications, a field manual for Federal Land Management Agencies, and software technical architecture documents. A "Share" section with social media icons (Facebook, Twitter, Google+, and a plus sign) is also visible. The "USMP Forms" section lists: USMP Rating Form Detailed Descriptions, USMP Slope Rating Form, USMP New Slope Event Form, USMP Maintenance Form, and USMP Conceptual Design and Cost Estimate Form. The "Training Videos" section lists: How to Rate an Unstable Slope - Part 1 and How to Rate an Unstable Slope - Part 2.

PDDM: Geotech Chapter 6

- Draft under review
 - Risk – same philosophy
 - Roles and Responsibilities
 - Added: CSS, GAM, Geohazards, Extreme Weather Events, Resilience, Mitigation Strategy Evaluation
- PDDM=“Why” &“What” we do work
- TGM= “HOW” to do work, primary references

PDDM: Geotech Risk

“The evaluation of potential benefits of a geotechnically-based risk is not solely a Geotechnical Discipline responsibility as it is an interdisciplinary process requiring involvement of the Project Manager and other disciplines that have knowledge of other project aspects and different perspectives on the value of a potential benefit. **The responsibility of the Geotechnical Discipline is to inform and educate the Project Manager, and other team members and stakeholders, as appropriate, of risk based on geotechnical issues and to participate in evaluation of the tolerability of that risk.** Every project has unique risks that need to be tailored, adjusted from prior projects, or extended to new situations.”

Geotech TGM

- Internal memo by section developing
- On hold until FY22 or FY23 (after FP)
- All design should be **LRFD**
- ASD language= outdated (not required)

EDC 5: A-GaME

- **A**dvanced **G**eotechnical **E**xploration **M**ethods
- Mitigate risks and improve reliability by optimizing geotechnical site characterization with proven, effective exploration methods and practices.
- Institutionalized 12/31/2020
 - Assume considerations in standard practice
 - Right tool for each project

EDC 5: A-GaME

Advanced Geotechnical Exploration Methods

Mitigate risks and improve reliability by optimizing geotechnical site characterization with proven, effective exploration methods and practices.

Table 1. Featured geotechnical exploration methods.

Seismic	Seismic Refraction or Seismic Refraction Tomography
	Seismic Reflection
	Full Waveform Inversion
	Spectral Analysis of Surface Waves
	Multi-channel Analysis of Surface Waves
	Refraction Microtremor
	Crosshole Seismic Test
	Downhole Seismic Test
	P-S Logging
Electrical	Electrical Resistivity
	Induced Polarization
	Self-Potential
Televiwers	Optical Televiewer
	Acoustic Televiewer
Cone Penetration Testing (CPT, sCPT, CPTu)	
Measurement While Drilling (MWD)	

Specifications

- SOW time added to work on specs
 - Sub-text (Arial, size 28 font)
- Draft outline at 30%?
- Sooner the better, especially for CFL
Geotech input from our other project input
on complex projects

FP-NEW Geotech

- New Sections
 - Rock Slope Protection
 - Scaling
 - GRS-IBS
 - GRS Walls
 - Soldier Pile Walls
 - Helical Piles

FP-NEW Geotech

- Minor revisions to most FP-14 Geotech
- Major revisions
 - Blasting
 - Horizontal Drains
 - Rockeries
- Coordinating with Standard Drawings
- Pay Items

FP-NEW GEOTECH - Preliminary Planning with Deadlines									
10/27/2020									
WALLS Team	Est. Date	Foundation Team	Est. Date	Engineering Geology Team	Est. Date	Special Team	Est. Date	Special Team	Est. Date
Eric Lim* Sean Hayter		Evan Garich* Sean Hayter		Doug Anderson Nick Famy* Dixon George Ryan Cole		Diann Morehouse* Evan Garich Doug Anderson		Eric Lim Robert Kraig* Diann Morehouse	
CFL James Arthurs		Dominic Monaco (all others) Devin Dixon (micropiles)		Todd Hansen Becca Borst (minor/ ad hoc)		Todd Hansen Lourdes Boulware		James Arthurs Majed Abdelhadi	
EFL Majed Abdelhadi		Jonathan Herrera-Roldan		Gimay Weldgeorgis					
252 Rockeries	Dec-21	351 Driven Piles	May-21	205 Blasting (2 types- FP vs. SCR)	Dec-21	610 Horizontal Drains (complex fan array)	May-21	NEW- GRS-IBS	May-21
253 Gabions	Dec-21	363 Drilled Shafts	May-21	260 Rock Bolts & Dowels	May-21	610 Horizontal Drains (through buttress/ base cut)	May-21		
255 MSE	Sep-21	367 Micropiles	Sep-21	256 Ground Anchors	Dec-21				
257 Contractor Designed Walls	Sep-21	208 Structure Excavation - Major Structures	Dec-21	623 Scaling	Dec-21	700s associated material minor sections		700s associated material minor sections	
258 Reinf. Concrete Walls	Dec-21	209 Structure Excavation	Dec-21	566 - Shotcrete - add fiber reinforcement (involve materials/construction)	Feb-22				
259 SNW	Dec-21	Shoring (weed other discipline support/ collaboration)	Feb-22	204 Rock and embankment excavation rework	Dec-21				
261 RSS	Sep-21			563 - Painting/ Natina & Permeon (structures leading/WFL LOS share)	May-21				
NEW- GRS walls	May-21	700s associated material minor sections		631-Draped Slope Protection	May-21				
NEW- Soldier Pile Walls	May-21			653-Mid Slope Attenuator Fence	May-21				
P-Alt. Retaining walls				654 - Roadside Rockfall Protection	May-21				
714 Geosynthetics	Dec-21			655-Pinned High Tensile Steel Mesh	May-21				
207 Earthwork Geosynthetics (207 connection for filter apps and geogrid stabilization)	Sep-21			656-Temp. Rockfall Protection Plan	May-21				
700s associated material minor sections				700s associated material minor sections					
				725.13 Grout ?? multi-discipline approach (related to anchored systems)	Feb-22				

* = Starting Team Lead - organize meeting and lead discussions/ should rotate with different people leading different sections
 Red Text = May 2021 deadline to deliver 1st Draft (with full Geotech comments) to Jen&Marilyn for other functional disciplines to review
 Blue Text = September 2021 deadline to deliver 1st Draft (with full Geotech comments) to Jen&Marilyn for other functional disciplines to review

Construction

- AE Geotech Engineer of Record should be on post-design task orders
- CFL Geotech assists with questions
 - Clarifies design questions
 - Support timely response
 - Answers from CFL project history/experience
 - Documentation
 - Can offer options/discussion
 - NOT overwriting AE Geotech

