



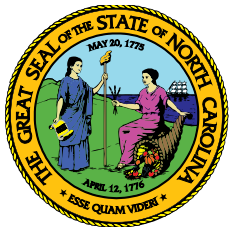
2018 Contracts

June 27, 2018

Embassy Suites

201 Harrison Oak Blvd

Cary, NC 27513





Policies and Procedures

- | | |
|--------------------------------------|--------|
| • Introduction | Cyrus |
| • Report Standards | Gordon |
| • Figure Standards and Cross Section | Dennis |
| • Geophysical Guidelines | Craig |
| • Laboratory Contract | Craig |
| • Closing and Consultant Questions | Cyrus |





Introduction(Cyrus)

- Be courteous to property owners and tenants
- Stand down in a confrontation and call us
- Feel free to answer any questions the property owner may have but refer them to us for copies of the plans or detailed information
- You can ride with us, but we can't ride with you
- Thanks for the offer, but no gifts and you can't buy our lunch



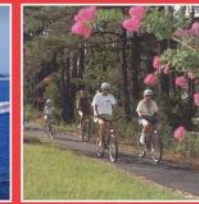
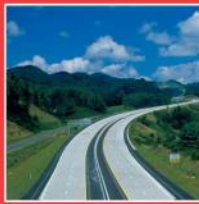


Project Assignment (Cyrus)

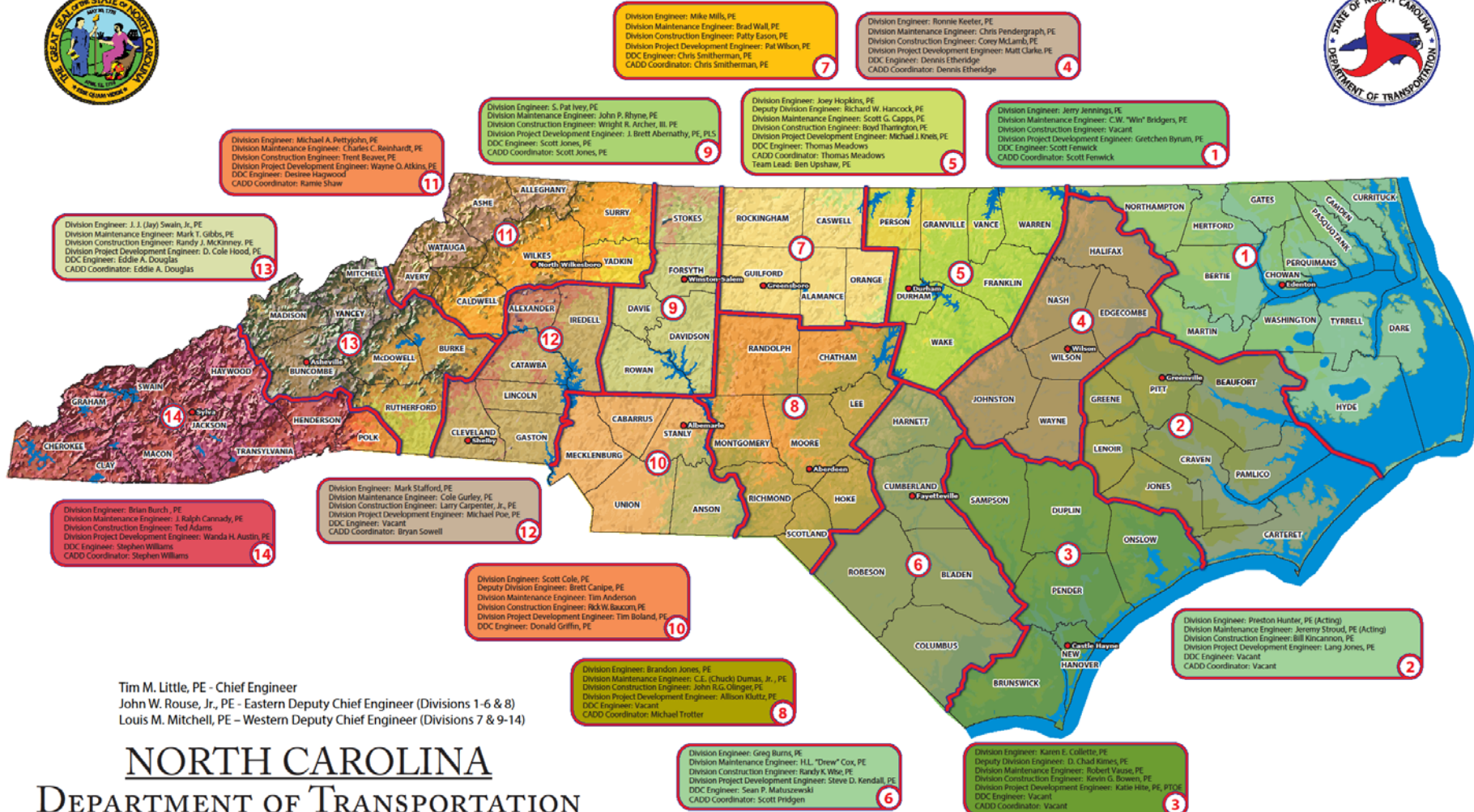
How we decide who gets the work. Project manager selects the consultant based on:

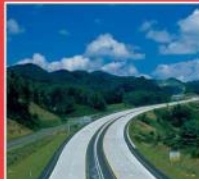
- Project location
- Amount of work given (spread the work load across all firms)
- Previous work (If you performed the PSA you will likely get the UST removal.)
- “Emergency” – Location and who can get there first.





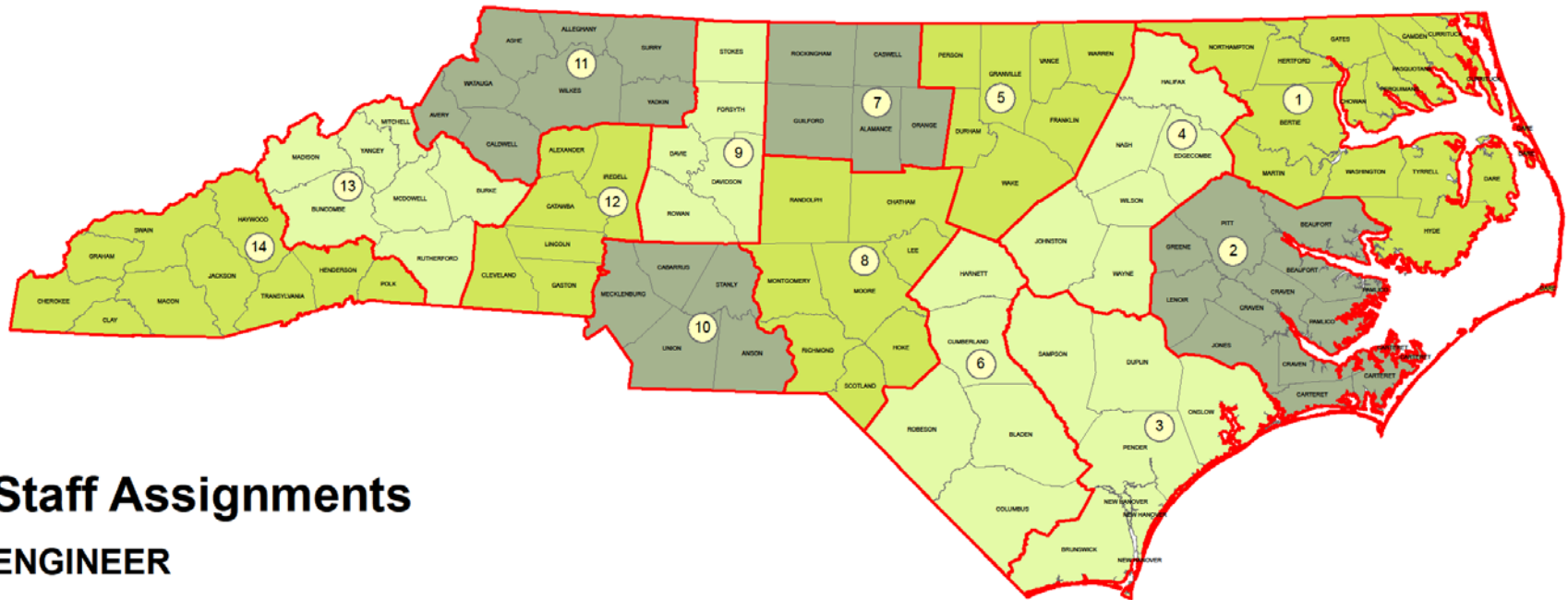
Handout 09








Handout 10

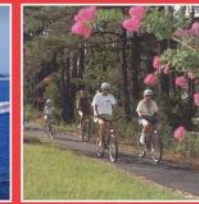
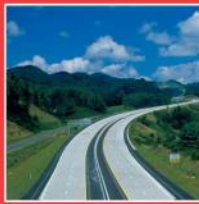
GeoEnvironmental Section



Staff Assignments

ENGINEER

	Craig Haden
	Dennis LI
	Gordon Box



Property Owner Notification (Cyrus)

The Firms will contact the property owners

DOT has the right to enter or to have the Firms enter, but stand down rather than escalate

GS 136-120 Entry for Surveys (refer to Handout 11 **GS 136-120 Entry for Surveys**)





Types of Work (Cyrus)

Preliminary Site Assessments (PSAs)

- Know the proposed design
- Geophysical Investigation – Locate USTs, Landfills, other
- Sampling
 - Primary focus cuts and drainage
 - Primary sampling - Soil TPH – DRO & GRO (site dependent)





Types of Work (Cyrus)

USTs - Removal

- Commercial and non-commercial
 - We need to own the property or have an access agreement.





Types of Work (Cyrus)

Other

- Well Abandonment or Relocation
- Groundwater Sampling
- LSA, CSA, CAP, Remediation
- Soil Excavation and Disposal
- Phase I Site Assessment
- Unexploded Ordinance



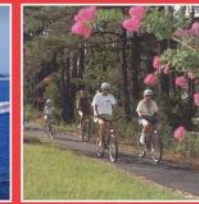
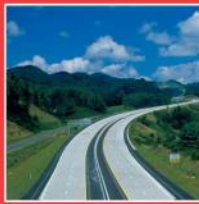


Subcontractor Prequalification (Cyrus)

Prequalified Subcontractors (Do not list on RS-2 Form)

- 3035 Geophysical (No longer 305)
- 3040 Contaminated Material Removal
- 3045 Drilling for GeoEnvironmental
- <https://www.ebs.nc.gov/VendorDirectory/default.html>



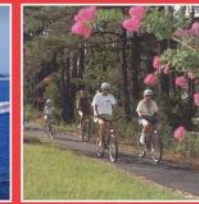
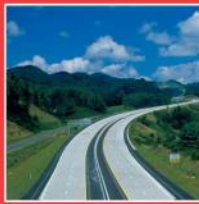


Report Standards (Gordon)

REPORTS:

- NCDOT GeoEnvironmental Phase I
- Preliminary Site Assessment (PSA)
 - (GeoEnvironmental Section Protocol)
- Underground Storage Tank (UST) Reports (IAAR; Closure)
 - (DEQ Guidelines & Report Timing)
- Well Abandonment
- Soil Removal



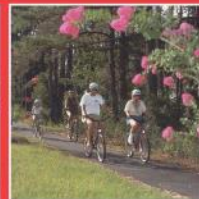
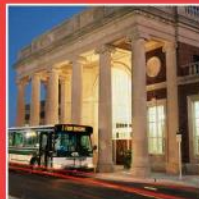
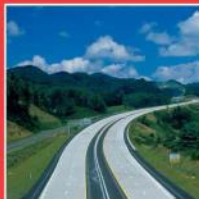


Report Standards (Gordon)

PSA – a COMPREHENSIVE INVESTIGATION used by:
GeoEnvironmental Section,
Right of Way Office, &
NCDEQ

- Research Site History
- Conceptual Site Model
- Review Roadway Design





Report Standards (Gordon)

PSA – continued

- AERIAL EXTENT: from Edge of Pavement to the furthest extent of ROW/Easement
(but if need take remnant, then extend to property line)
- Emphasize sampling areas and depths that require excavation for drainage installation or cut
(sampling above & below cut elevation may be appropriate)

need to Review Cross Section for Areas & Depths of Cut

(refer to Handout 02 FILL-plan vs CUT cross section example)

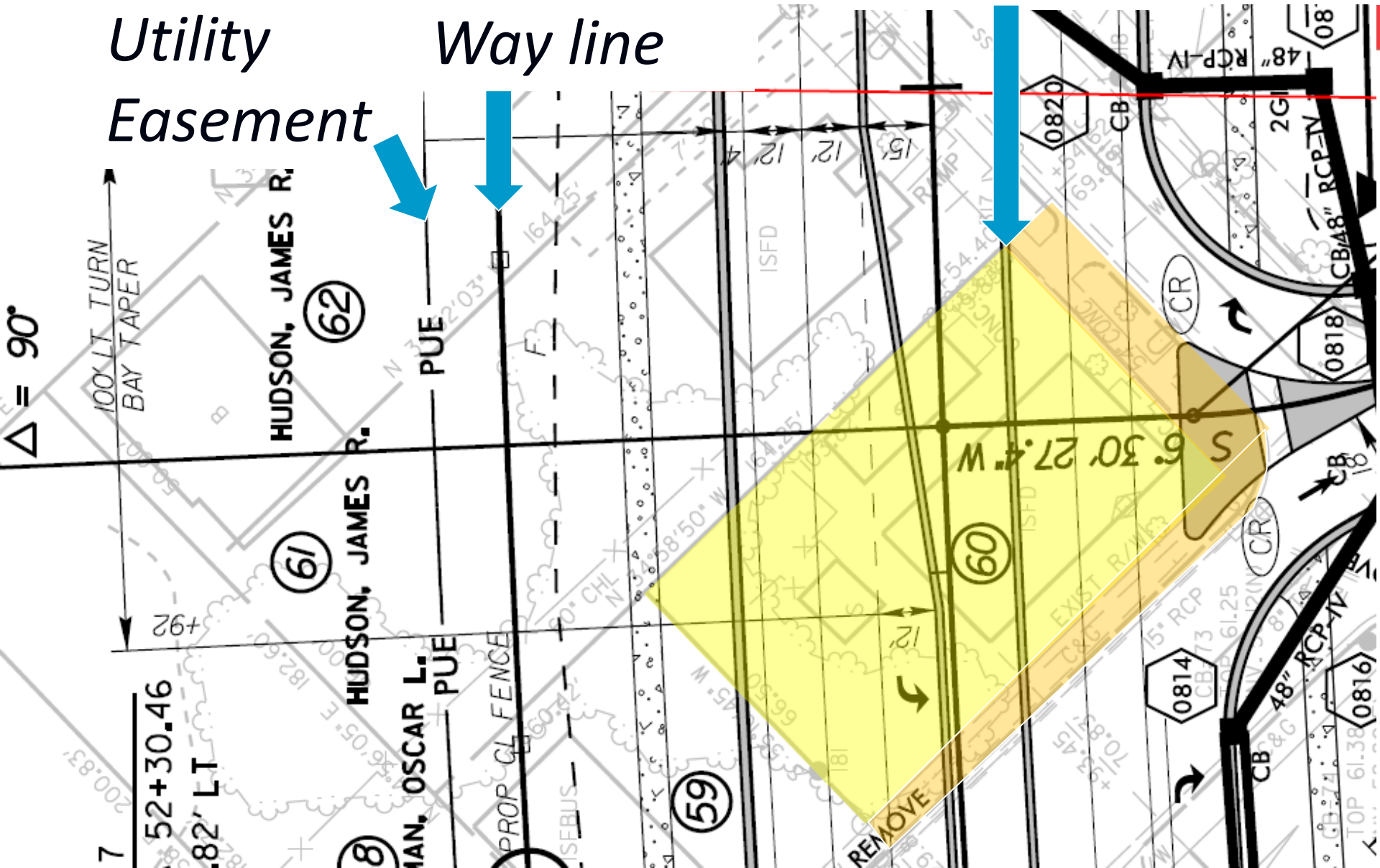




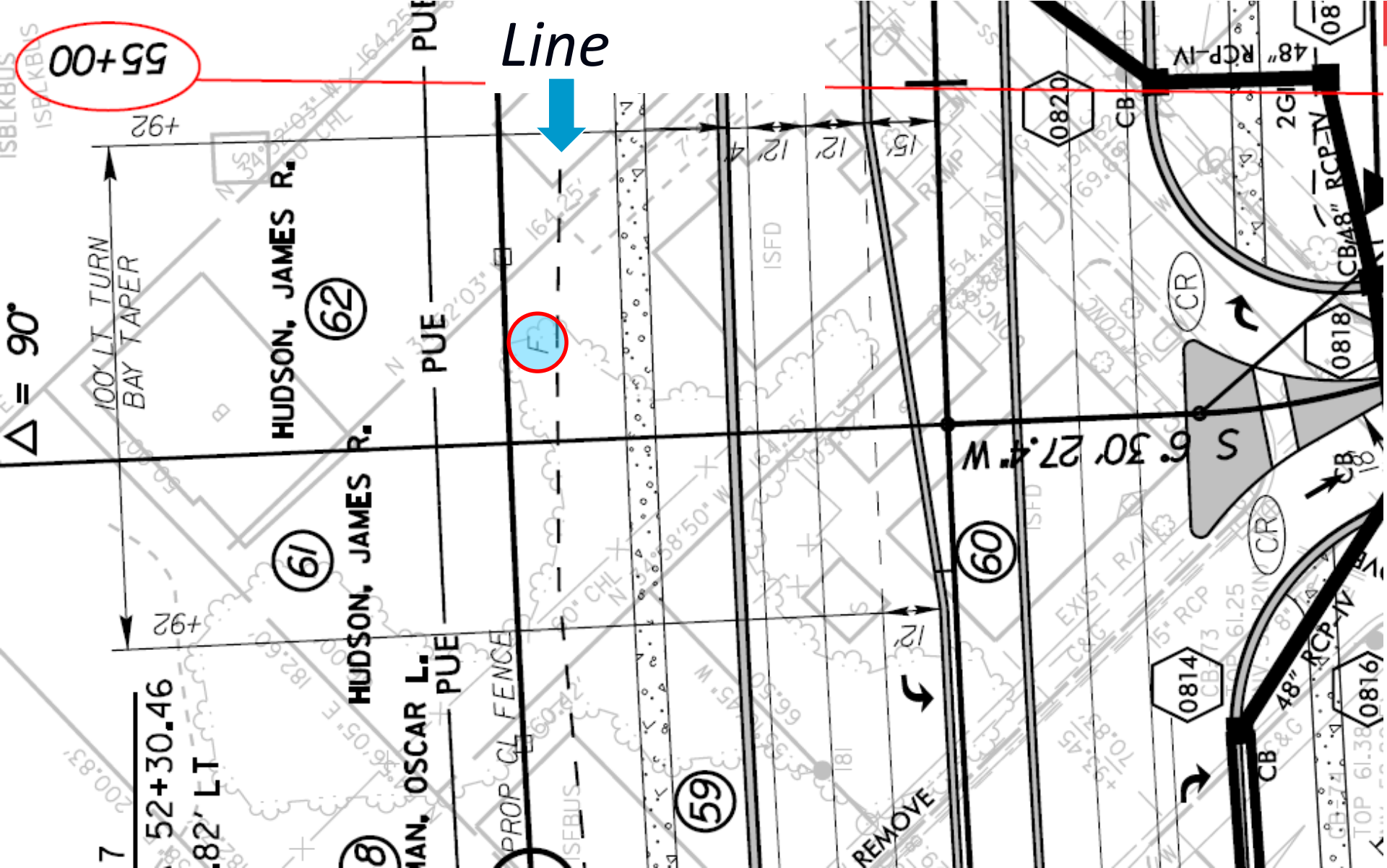
*Proposed
Permanent Utility
Easement*

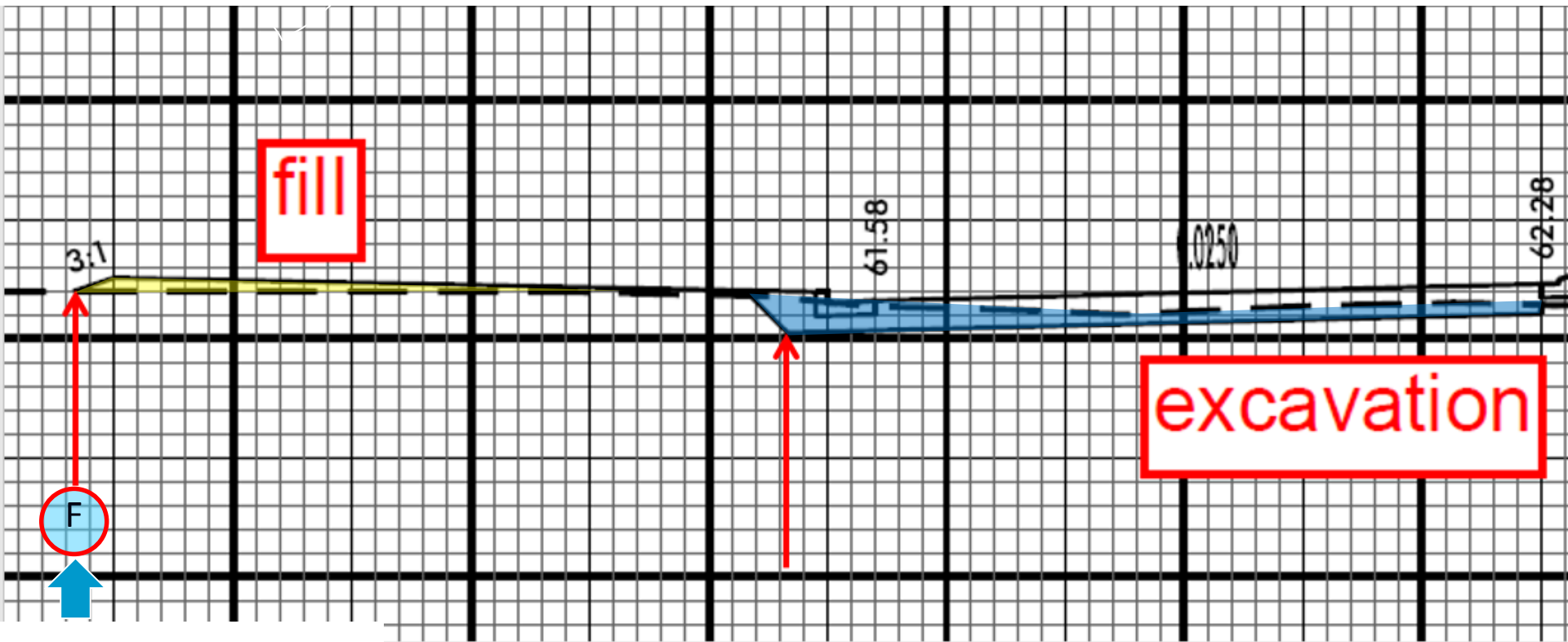
*Proposed
Right of
Way line*




$$\Delta = 90^\circ$$


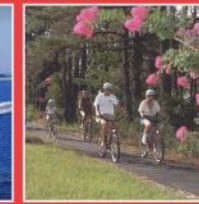
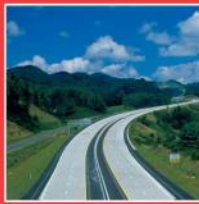
Proposed Slope Stake Line





*Proposed
Slope Stake
Line*



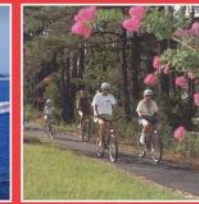
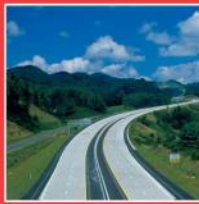


Report Standards (Gordon)

PSA – continued

- Identify through field observation, geophysics, & reason:
*USTs, Hydraulic Lifts, Monitoring Wells,
Oil-Water Separators, Landfills, Munitions*
- Chose appropriate lab protocol based on Site History & Design
(e.g., PID vs. UVF vs. 8015)
 - Consider using one technique for the entire project, or use site specific techniques
 - *Do not run both UVF and 8015 on the same samples.*
- Identify and quantify:
Impacted Soil &/or Water, & Groundwater Depth (if in borings)





Report Standards (Gordon)

PSA – continued

- REPORT COVER
- TITLE PAGE
- TABLE OF CONTENTS
- INTRO
- HISTORY
- SITE OBSERVATIONS
- METHODS
- RESULTS
- CONCLUSIONS
- RECOMMENDATIONS
- TABLES
- FIGURES
- APPENDICES

(refer to Handout 03 GeoEnvironmental Report Standards)



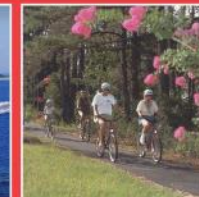
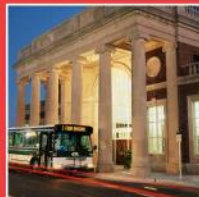
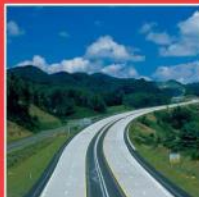


Figure Standards (Dennis)

FIGURES

REQUIRED MICROSTATION Reference Files:

FS	FINAL SURVEY
PRL	PROPERTY LINES
SUE	EXIST SUBSURFACE UTILITIES
HYL	EXIST DRAINAGE
ROW	PROPOSED ROW
DRN	PROPOSED DRAINAGE
SS	SLOPE STAKE
DSN	PROPOSED DESIGN

USE DOT CAD COLOR STANDARDS Color or B/W, Both acceptable

Yellow is not acceptable- use pen table to plot yellow to black

(refer to Handout 04 Standard Figure Policy)



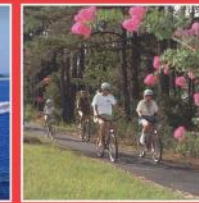
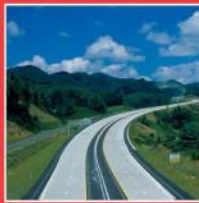


Figure Standards (Dennis)

FIGURES

TITLE

AUTHOR

DATE

SCALE

SITE LOCATION MAP

TIP and/or WBS (if no TIP)

DOT PARCEL NUMBER (Labeled)

Header or Footer with site identifier

OWNER

STATION

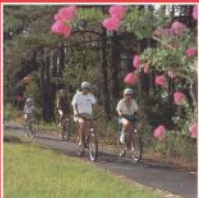
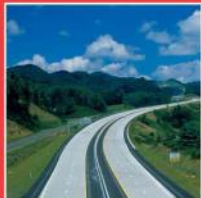
ALIGNMENT

SITE ADDRESS

LEGEND

(refer to Handout 05 & 06 legend conventional
plan sheet symbols...)





04-2015

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	=====
County Line	=====
Township Line	=====
City Line	=====
Reservation Line	=====
Property Line	=====
Existing Iron Pin	⊙
Property Corner	⊙
Property Monument	⊙
Parcel/Sequence Number	⊙
Existing Fence Line	-----
Proposed Woven Wire Fence	-----
Proposed Chain Link Fence	-----
Proposed Barbed Wire Fence	-----
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
Existing Historic Property Boundary	-----
Known Contamination Area: Soil	-----
Potential Contamination Area: Soil	-----
Known Contamination Area: Water	-----
Potential Contamination Area: Water	-----
Contaminated Site: Known or Potential	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	⊙
Sign	⊙
Wall	⊙
Small Mine	⊙
Foundation	⊙
Area Outline	⊙
Cemetery	⊙
Building	⊙
School	⊙
Church	⊙
Dam	⊙

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	-----
Buffer Zone 1	-----
Buffer Zone 2	-----
Flow Arrow	-----
Disappearing Stream	-----
Spring	-----
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	-----
Existing Right of Way Marker	-----
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----
Proposed Control of Access Line with Concrete CA Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guidedail	-----
Proposed Cable Guidedail	-----
Equality Symbol	-----
Pavement Removal	-----

VEGETATION:

Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	-----
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	-----
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

POWER:	-----
Existing Power Pole	-----
Proposed Power Pole	-----
Existing Joint Use Pole	-----
Proposed Joint Use Pole	-----
Power Manhole	-----
Power Line Tower	-----
Power Transformer	-----
UG Power Cable Hand Hole	-----
H-Frame Pole	-----
UG Power Line LOS B (S.U.E.)*	-----
UG Power Line LOS C (S.U.E.)*	-----
UG Power Line LOS D (S.U.E.)*	-----

TELEPHONE:

Existing Telephone Pole	-----
Proposed Telephone Pole	-----
Telephone Manhole	-----
Telephone Pedestal	-----
Telephone Cell Tower	-----
UG Telephone Cable Hand Hole	-----
UG Telephone Cable LOS B (S.U.E.)*	-----
UG Telephone Cable LOS C (S.U.E.)*	-----
UG Telephone Cable LOS D (S.U.E.)*	-----
UG Telephone Conduit LOS B (S.U.E.)*	-----
UG Telephone Conduit LOS C (S.U.E.)*	-----
UG Telephone Conduit LOS D (S.U.E.)*	-----
UG Fiber Optics Cable LOS B (S.U.E.)*	-----
UG Fiber Optics Cable LOS C (S.U.E.)*	-----

WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
UG Water Line LOS B (S.U.E.)*	-----
UG Water Line LOS C (S.U.E.)*	-----
UG Water Line LOS D (S.U.E.)*	-----
Above Ground Water Line	-----

TV:

TV Pedestal	-----
TV Tower	-----
UG TV Cable Hand Hole	-----
UG TV Cable LOS B (S.U.E.)*	-----
UG TV Cable LOS C (S.U.E.)*	-----
UG TV Cable LOS D (S.U.E.)*	-----
UG Fiber Optic Cable LOS B (S.U.E.)*	-----
UG Fiber Optic Cable LOS C (S.U.E.)*	-----
UG Fiber Optic Cable LOS D (S.U.E.)*	-----

GAS:

Gas Valve	-----
Gas Meter	-----
UG Gas Line LOS B (S.U.E.)*	-----
UG Gas Line LOS C (S.U.E.)*	-----
UG Gas Line LOS D (S.U.E.)*	-----
Above Ground Gas Line	-----

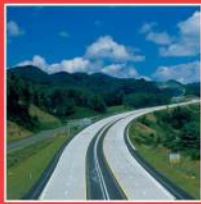
SANITARY SEWER:

Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
UG Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
SS Forced Main Line LOS B (S.U.E.)*	-----
SS Forced Main Line LOS C (S.U.E.)*	-----
SS Forced Main Line LOS D (S.U.E.)*	-----

MISCELLANEOUS:

Utility Pole	-----
Utility Pole with Base	-----
Utility Located Object	-----
Utility Traffic Signal Box	-----
Utility Unknown UG Line LOS B (S.U.E.)*	-----
UG Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
UG Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
UG Test Hole LOS A (S.U.E.)*	-----
Abandoned According to Utility Records	-----





GeoEnvironmental Symbolology

Known Contamination Area: Soil _____ -  — s —  -

Potential Contamination Area: Soil _____ -  — s —  -

Known Contamination Area: Water _____ -  — w —  -

Potential Contamination Area: Water _____ -  — w —  -

Contaminated Site: Known or Potential _____  

U/G Tank; Water, Gas, Oil _____



Underground Storage Tank, Approx. Loc. _____

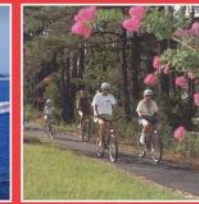
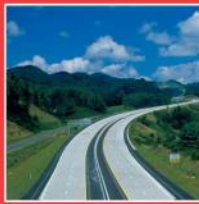


A/G Tank; Water, Gas, Oil _____

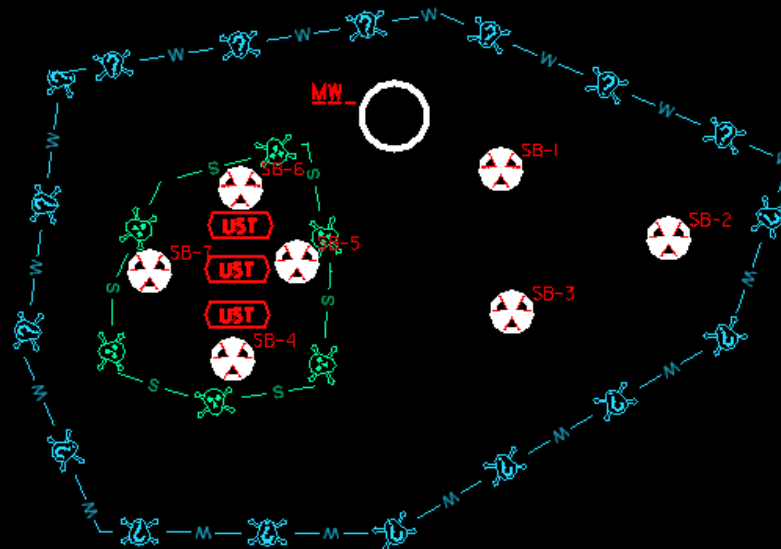


Geoenvironmental Boring _____





MicroStation File TIP_GEO_ENV.DGN





Geophysical Survey Guidelines (Craig)

High Confidence

- Known UST

Intermediate Confidence

- Probable UST

Low Confidence

- Possible UST

No Confidence

Handout 01





State Contracted Labs (Craig)

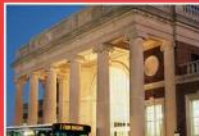
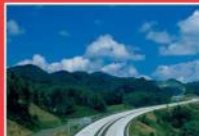
We are no longer using NCDOT contracted Laboratories
Firms can use NC Certified Labs of their choice
(Run cost through firm's contract)

UVF Sampling

ship samples to lab, on site lab services, rental equipment

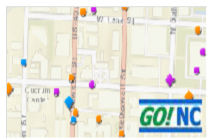
If using UVF for TPH-DRO, GRO don't also run 8015.





NCDOT Historical Aerial Imagery Index

Overview



NCDOT Photogrammetry Unit's Historical Aerial Imagery Thumbnails in resolution layers.

Web Map by Photogrammetry.NCDOT.GOV

Created: May 5, 2015 Updated: May 23, 2017 View Count: 3,941

Description

NCDOT Photogrammetry Unit has 9 inch format aerial imagery from 1955 to 2008. This map covers 1955 through 1992. The aerial film was scanned at 100 dots per inch and then Geo-located so these images may be several hundred feet off from their true position. We call these images geo located thumbnails.

Display of the data was broken down by decade and then by scale.

High resolution is any imagery under a scale of 1" = 460 feet. This is the most detailed imagery, but each frame covers a small area.

Medium resolution is any imagery greater than or equal to 1" = 460 feet to less than or equal to 1" = 1200 feet.

Low resolution is any imagery over 1" = 1200 feet. This is the least detailed imagery but covers large areas.

See this link for more information about the NCDOT Photogrammetry Unit: <https://connect.ncdot.gov/resources/photogrammetry/Pages/default.aspx>

Layers

DIL_1950_Low

DIL_1950_Medium

DIL_1950_High

DIL_1960_Low

Open in Map Viewer

Open in ArcGIS Desktop

Details

Size: 107 KB

★★★★★



Owner



Photogrammetry.NCDOT.GOV

Tags

NCDOT, NCDOT Photogrammetry, NCDOT Photogrammetry Unit, NC, Historic Imagery, aerial imagery, Official NCDOT, North Carolina

Credits (Attribution)

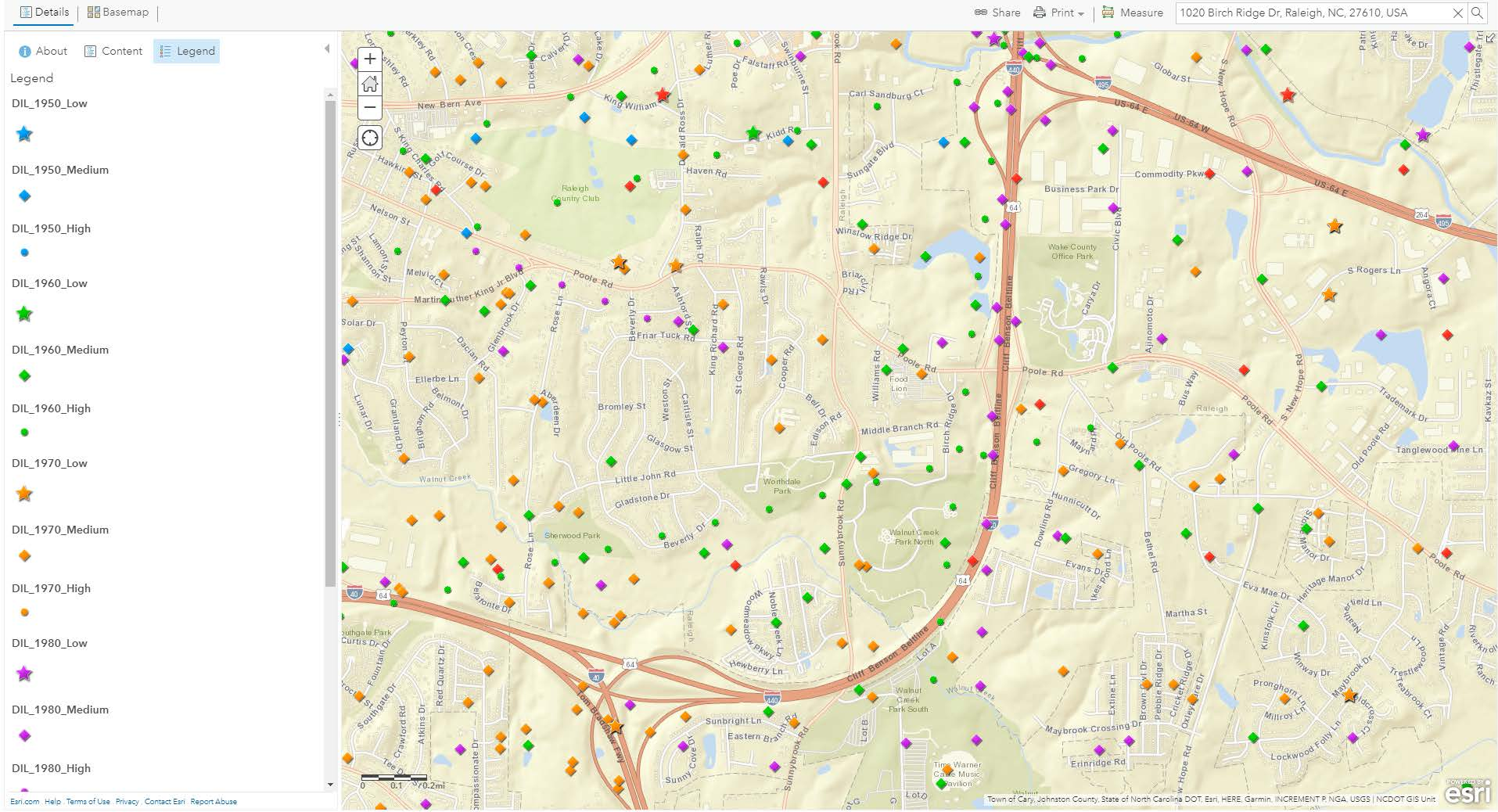
NCDOT Photogrammetry Unit

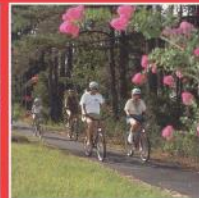
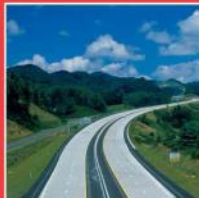




ArcGIS ▾ NCDOT Historical Aerial Imagery Index

Sign In







Search AGOL

In ArcGIS Online website search for “NCDOT Historical Aerials”.

<https://www.arcgis.com/home/index.html>

