



Coordination through Cooperation  
Coordination, Communication, and Commitment

<b>Chair</b>	<b>Vice Chair</b>	<b>Secretary</b>	<b>Treasurer</b>
Tara Miller	Stephen Waidley	A. Mark Atkininstall, PE	Jodi Rano

### Wednesday, November 1, 2023

**9:00 – 9:30am FUCC Officers Meeting** - Tara Miller, Duke Energy, FUCC Chair

Attendees

- -Tara Miller (FUCC Chair)
- Stephen Waidley (FUCC Vice-Chair)
- A. Mark Atkininstall (FUCC Secretary)
- Chris Stermer (FUCC Past Chair)
- Jodi Rano (Stantec/FDOT D5)

Chris McLaughlin (FUCC Historian)

Other Attendees

- Brian Dean (Sunshine 811)
- Rob Brown (Duke)
- Art Gilmore (Duke)
- Tony Williams (Sarasota County Utilities)
- Trish Miller (Echo UES)
- Bill Case (Ayres)
- Shaun Purvis (BPA)
- Fred Valdez (Frontier)
- Warren Gilbreath (Hillsborough County Water Resources Department)

Discussion

Hotels for Summer & Fall 2025

1. The officers discussed hotels in Tampa/St. Pete/Clearwater area and the concern with attendees that are located in the Tampa area may not be able to stay at the hotel and that will affect the room blocks. This will be asked during the afternoon session to obtain input from the FUCC attendees.
2. Destin hotels are too far.
3. The hotel listing that was shared with the officers in September 2023 was discussed.
4. Jodi Rano asked about the concessions for each of the hotels on the list.

**Hotel Consideration for Summer 2025**

5. **Hyatt Regency - Bonita Springs:** Not many restaurants are close to the location, and it is not located on the beach (per Chris Stermer). \$185/night and discounted resort fees.



6. Trade Winds – St. Pete: \$55/night resort fee is included in the room rate but, a \$35,000 food and beverage min. Room rates \$219/night (290 rooms). No Government rates. May need to increase registration or increase sponsorship. [NO GO ON THIS ONE]
7. **Sheraton Sand Key – Clearwater:** No resort fee, self-parking, food, and beverage minimum of \$20,000. Government room rates are available. \$189/night. Buffet dinner \$69/person.
8. Check on breakfast buffet of \$25/person.
9. Rob Brown proposes language change to include a budget for each meeting with consideration of the registration fee.
10. Check on FDOT room rate (Jodi Rano to ask Patrick)

#### **Hotel Consideration for Fall 2025**

11. **Hilton - Daytona Beach:** Buffet \$48/person, \$169/night, overnight parking discount
12. **Hilton University of Florida** – Gainesville
13. Chris Stermer suggested speaking with Amanda to entertain the discussion with Renaissance Hotel for another 3 years without the use of Helms Briscoe.

**End at 9:35 am**

#### **9:30 –10:30am Steering Committee – Stephen Waidley, Frontier, FUCC Vice Chair (Start time: 9:35 am) (Steering Sub-Committee Chairs should be in attendance)**

Power – Art Gilmore, Duke Energy

Telecom – Fred Valdes, Frontier

Gas – Joe Sanchez, FGT (**Absent**)

Water – Warren Gilbreath, Hillsborough County

Sewer –Demar Machuca, Sarasota County Utilities (**Absent**)

Governmental-Utility – Kris Hayes, Lakeland Electric

Governmental Non-Utility – Lee-Ann Snipes, City of Orlando (Absent)

Contractor – Shayne McGlocklin, Badger Daylighting

Design Consultant – Bill Case, Ayres Associates

Coordinator Consultant – Trish Miller, ECHO

Utility Notification Center – Brian Dean, Sunshine 811

Geospatial Consultant – Chris McLaughlin - Clymer Farner Barley

#### ***Other attendees plus the attendees from the officers meeting***

1. We need nomination for a new secretary for next year. Cannot be a consultant or telecom.
2. Has FUCC response letter to NexGen been uploaded to the website? Melonie Schwartz noted that additional discussion will be entertained at the sessions. No UAOs has submitted a formal response to FDOT.
3. Should UAOs file a 1.7 (dispute) through FUCC or submit directly to FDOT? It is to be submitted directly to FDOT and as a courtesy inform the FUCC.
4. Electric companies may submit a dispute via FCG or directly per Rob Brown (Duke). Duke has not seen enough issues on plans to date to file a dispute. Similarly, Chris Hayes has echoed the same with respect to seeing issues with the NexGen plans. However, additional projects are coming out.



5. Is there a way to extend the deadline through FDOT for issues and concerns before the end of December 2024? It is suggested that the request should come from UAOs per Melonie Schwartz.
6. The 11x17 worksheets will include R/W, easements, scale, etc. However, there are no additional callouts being added per the reduced sheet size.
7. UAOs noted that with the removal of details (drainage structures), it has removed their ability to visually identify conflicts. However, the drainage structure information is being included in tabular format.
8. Rob Brown (Duke) noted that while the EOR is responsible for identifying conflicts, it is also the responsibility of the UAO to aid with conflict identification due to the unknowns of means and method.
9. Melonie Schwartz (Inwood) plans to finalize the response letter to FDOT by 11/3/2023 and draft cover letter to FDOT. Working groups will be formed to discuss specific areas of concerns with respect to NexGen plans. Also include ACEC & FES for EOR involvement.
10. Jodi Rano (Stantec/FDOT D5 GEC) suggested including contractors/subs in the NexGen discussion.
11. Brian Dean (Sunshine811) to provide list of contacts.
12. Should the NexGen non-standing committee be converted to a standing committee? That would require changes to the bylaws but, hopefully the concerns will be resolved.
13. LinkedIn has been established and has been updated frequently.
14. Check with your organizations for promoting the FUCC on social media (especially for sponsors).
15. FUCC brochures are available for use.
16. **Registration Fee Increase:** Consideration is being given to increasing to \$200. The last increase was made in 2018. Rob Brown (Duke) discussed the history of meeting total cost over several meetings in support of the increase that was approved in 2018. Rob Brown (Duke) proposes to spearhead the effort (with Jodi Rano – Treasurer as the Steering Committee Lead) to look at the costs and have a budgeting committee established. He will work with Tara Miller (Chair), and Lori McLaughlin (George F Young). Operating in the negative is not the goal of the organization. An ad hoc committee will be formed but requires memberships input. Table it for a discussion in April 2024 (during Thursday morning session with Steering committee approval). This will then make it official for Summer of 2024.
17. Planning committee to increase participation in helping with the planning of the meeting.
18. In comparison to other conferences such as FLUG, a 2-day registration is approximately \$250 and \$500 for the entire session.
19. Send award nominations to Chris Stermer by June 1, 2024
20. There is also discussion regarding raising the sponsorship levels. The Committee also discussed providing additional benefits for sponsors. Sponsorship funds should not be used to offset registration cost.
21. Consider removing the table option for the \$250 sponsorship (Brian Dean – Sunshine811)
22. Motion to adjourn the meeting was made by Kris Hayes and Brian Dean second the motion.

10:30 – 11:30am

**Planning Committee – Legends 2 & 3 (See attachment)**

Chaired by Mariah Mader, KCI Technologies



**Membership & Promotions -Legends 1 (See attachment)**

Chaired by Melonie Schwartz, Inwood Consulting Engineers

**Banquet Planning Committee – Troon (See attachment)**

Chaired by Rebecca Green, Colliers Engineering

**11:30 – 1:00pm LUNCH (on your own)**

## **Afternoon Session**

**1:00 – 1:15pm 2023 Fall Meeting Opening Comments & Introductions**

FUCC Chair Tara Miller, Duke Energy

- I. Meeting was called to order at 1:02 pm by Tara Miller
- II. Introduction of officers:
  - Tara Miller (Duke) – Chair
  - Stephen Waidley (Frontier) – Vice Chair
  - A. Mark Atkininstall (Burgess & Niple) - Secretary
- III. Tara Miller (Chair) thanked the sponsors.
- IV. Please return lanyards after the meeting.
- V. Members are asked to help promoting the event on their social media platforms. WGI was noted as a promoter.
- VI. Attendees were reminded to visit the vendor tables for giveaway opportunities.
- VII. The attendees were asked if the venue for the meetings were hosted in the Tampa area, if they would be able to attend. The vote was that the majority would be able to attend.
- VIII. Melonie Schwartz (Inwood) reminded to attendees about the sign-up for joining the NexGen working groups.
- IX. The Summer banquet theme for this year is “**Dead man’s Party.**” Come dressed as a dead celebrity but **NOT** how they died.

**1:15 – 1:45pm Sunshine 811 Updates (See slides at the end of the meeting minutes)**

Brian Dean, Sunshine 811

- I. Brian Dean welcomed new/first time attendees.
- II. He works the west coast from Lee County to Citrus County
- III. Elliot Patterson previously worked in the call center before accepting his new role.
- IV. Brad Martin is the Liaison for the west region, and John handles the northern region.
- V. Utility members are the largest group of individuals calling in tickets.
- VI. Brian mentioned the Common Ground Alliance (CGA)
- VII. A Damage Prevention Council (DPC) will be formed in January 2024. First meeting will be online and followed by regional meetings.



- VIII. Brian Dean requested that the UAOs provide updated design tickets utility contact persons. **Call 811 and select option 3.** New utility coordinators are encouraged to contact the FDOT District Utilities office for an updated UAO contact list. Design tickets are less than 1% of the ticket volume.
- IX. Chris Stermer mentioned that updated mapping of newly installed facilities is important. Brian Dean noted that maps have been updated daily by some UAOs that have performed major builds.
- X. Contractors performing underground work within Florida must be aware and educated about F.S. Chapter 556.
- XI. Brian Dean noted that non-compliance notices are to be submitted for utilities that are not locating their facilities.
- XII. Proposed legislation
  - i. Increasing from 2-day response time to 3-day response time.
  - ii. 2C response for high priority facilities. The excavator must provide the date and time of the proposed excavation directly to the gas company. There is a citation for not following the notification requirements. (Citable offense).
  - iii. Lower renewal of excessive tickets in areas that work is not being planned in the near term.
- XIII. Exactix will be made available via the mobile app.
- XIV. Brian Dean made note of the "After the storm kit."
- XV. There is a major issue with locates being performed. Reasonable care must be used if no response has been provided after 2 days if a delay has not been agreed to. There are certain procedures/guidelines that must be followed to commence excavation activities. Private utility locators can be used.
- XVI. The number one cause of utility damages is attributed to not calling in a ticket.
- XVII. Subcontractors are allowed to be listed on tickets that are initiated in Exactix. However, it is the responsibility of the individuals submitting the ticket to share copies with their subconsultants.

**1:45 – 2:00pm Break / Network / Meet a Fellow Industry Professional / Visit Sponsors Tables**

**2:00 – 3:00pm NexGen Plans Update**

Melonie Schwartz, Inwood Consulting Engineers & Shaun Purvis, BPA

- I. Melonie Schwartz (Inwood) and co-chair Shaun Purvis (BPA) welcomed the attendees.
- II. A brief overview of the development/timeline of the NexGen plans (large format plans). The information was initially shared at the FUCC at the Fall 2023 meeting by FDOT.
- III. The May 8, 2023 letter from FUCC to FDOT was displayed during the meeting. The letter is available at [www.FUCC.org](http://www.FUCC.org) under the communications tabs.
- IV. The NexGen non-standing subcommittee is currently formulating a response to FDOT's recent responses. Final recommendations and comments will be shared with the steering committee before formally responding to FDOT.
- V. On 10/3/2023, FDOT sent out an email regarding 11x17 worksheets being made available through December 2024. They are being provided for informational purposes only. Annotation callouts will not be modified on the 11x17 sheets. With that said, there may be sheets without labels.
- VI. Five (5) FDOT / FUCC primary working groups will be created (8 – 10 persons per working groups)
  - 1. **Large format paper size**



2. **Drainage structure sheets**
  3. **Utility worksheets / 11x17 Utility Adjustment Sheets**
  4. **Cross sections sheets**
  5. **Permitting requirements with NexGen Plans**
- VII. Brian Lanz (FP&L) has started to see the plans and challenges that were noted. FP&L has remained neutral previous.
- VIII. UAOs are encouraged to have an active voice since the agreement is between FDOT and UAOs.
- IX. Resource links are provided for attendees to visit.
- X. Cynthia Snelling-Perry (FDOT Central Office) – In OSP, there is nothing in the UAM with respect to plan sizes. Only the applicable sheets should be included with the permit package. File size limit for uploads to OSP is 300MB per Snelling-Perry.
- XI. Martin (FP&L) – His design team is not able to fully identify the conflicts due to insufficient information such as drainage structures, X-Sections, etc.
- XII. FP&L stated that several of their departments have not seen the NexGen plans to be able to “pushback” on the format. Rob Brown (Duke) noted that the electric companies need to coordinate with their various design teams to get updates on issues that they are experiencing so that there is ample background before they can take the issue to management and legal.
- XIII. Luke Folkert (AT&T) – What happened to the follow-up with other states that have used NexGen? Can the utilities receive a screen capture of the 3D model at the conflict locations? Has the Department provided a cost saving for switching to NexGen Plans?
- XIV. Utah and Colorado DOTs were contacted but, no response has been received per Melonie Schwartz.
- XV. There are different packages in Bentley as discussed at FLUG.
- XVI. Lydia Santiago (MG Vera) – There has been an instance where a UAO has requested reduced sheets and annotations and the EOR has provided the info. It was noted that this is contingent on the project size because it becomes time consuming for larger jobs.

### **3:00 – 4:00pm FUCC Interest Group and Subcommittee Meetings**

#### **Telecom/Underground Interest Group – Legends 1**

Chaired by Trisha Miller, ECHO & Crystal Iggesten, Crown Castle

#### **Power Interest Group & 3 TTC/MOT Committee**

Chaired by Chris Buonanni, FP&L - Power Interest Group (See PowerPoint attachment)

- I. Fallout from Hurricane’s one year later
  - a) 3200 poles were replaced by FP&L due to hurricane Ian. Pole placements have to be based on current design standards such as max pole span. Pole placements does not necessarily coincide with their original location.
  - b) Duke does not survey their pole locations. Duke will contract with a third-party entity to perform a “sweep” to ensure that poles are tagged.
  - c) FP&L noted that after hurricane Ian, their team inspected the storm hardening poles and they were all intact with the exception of one pole



that was impacted by a home falling on the pole. The switch cabinets and underground facilities were damaged due to storm surges.

- d) Duke is in their third year of a 10-year program for storm protection plan.
- e) Prior to 2019, recovery dollars were only allowable after the completion of the work.

#### Mast Arms

FDOT cannot dictate means and method.

- iv. Standard offset is 20' for equipment during construction. This has nothing to do with final placement.
- v. Consider using a telehandler.

#### Pedestrian Pathways

Chaired by, Robb Brown, Duke Energy – TTC/MOT

### 4:00 – 5:00pm FUCC Subcommittee Meetings – Legends 2 & 3

#### Joint Use (See meeting minutes at the end)

Chaired by Bill Deal, T2 UES

#### Permitting (combined with Joint-Use)

Chaired by Laurie Jackson, TRC

## Thursday, November 2, 2022 Morning Session

### 8:30 – 8:45am 2023 Fall Meeting Opening Comments & Introductions

- i. FUCC Chair Tara Miller, Duke Energy gave the opening remarks.
- ii. The chair advised that the room blocks were open.
- iii. Theme for August 2024 banquet is “Dead man’s Party.”
- iv. The location of the luncheon will be shifted in door due to the weather.
- v. The morning giveaways included Yeti cups that were provided by Sunshine811. Gift cards were also given out.
- vi. General introductions

### 8:45 – 9:45am Design Build Subcommittee Meeting

Chaired by Chris Stermer, WGI

- I. Chris Stermer discussed utility markups and requirements by FDOT and the UAOs.
- II. Utility conflict matrix is to be developed as the plans are being designed.
- III. Rob Brown (Duke) even though means and methods are not known, utilities are looking out for the interest of their organization and rate payers.



- IV. Chris Stermer reiterated that stations and offsets **must** be provided in Utility Work Schedules. Material size, material, and configuration (fiber), and manhole hole sizes are to be included on markups.
- V. Rob Brown (Duke) if UAOs has work that has to be performed outside of the project limits that is needed in support of the Road project, it must be noted to avoid delay claims. Pole holds cannot be left in-place overnight. Additionally, the required advance notice period is needed for de-energization.
- VI. Rob Brown (Duke) reiterated the importance of attending progress meetings.
- VII. Patrick Overton (FDOT) concept plans are required to be 60% for draft RGBs and UWS during the RFP phase. He also noted that Design-Build projects will be reduced in the upcoming years due to the risks.
- VIII. If UAOs are listed as a no-conflict, they are still required to participate in construction meeting because there may be field changes that could change the conditions.
- IX. Melonie Schwartz (Inwood) noted that the issue with survey monkey regarding the NexGen plans working groups has been resolved.

#### **9:45 –10:00am Break**

#### **10:00 – 11:00am Educational Workshop (See slides at the end)**

Underground Interest Group /Educational Discussion Forum

**“Utility Conflict Identification & Constructability Concerns”**

Presented By: Melonie Schwartz, Inwood Consulting Engineers & Josh Kelly, Ozmatic

#### **11:00 - 1:00pm FUCC Sponsored Lunch (included in registration fee)**

### **Afternoon Session**

#### **1:00 – 1:15pm 2023 Fall Meeting Opening Comments & Introductions**

FUCC Chair Tara Miller, Duke Energy

- i. Tomorrow is the business meeting 9:00am – 11:30am
- ii. There were gift card giveaways and sponsor giveaways.
- iii. Only two breakfasts are included in the registration. If extra tickets were given, please return to one of the FUCC Officers.

#### **1:15 - 2:15pm Construction Committee (Best Practices in Construction)**

Chaired by Josh Kelly, Ozmatic

- i. **First steps** – Review UWSs, RGBs, the No Conflict Letters, Utility Certification Letter and reviewing the final plans date.





- a. Plans should be certified based on the PH IV plans. If there are plan changes are made after the fact that would impact utilities, the UWSs and RGBs will need to be updated.
- ii. **Second steps** – Is there any work in the UWSs that we can get started before Construction time starts with Construction Survey? (Drilled shafts, structures, multipath)
- iii. **Third steps** – Can we take advantage of time we grant for issues that are known, before we start? Can we get the utility work done early? Can we be more proactive by locating areas of concern? Are we engaging utilities for the project?

#### **DURING CONSTRUCTION**

- i. Are we making contact via email and phone? Verify that you are using the correct contact.
- ii. Are we contacting everyone listed on UWS?
- iii. Are we getting responses? If you do not receive responses, consider escalating to the next level.
- iv. Are we talking about the issues?
- v. Are we talking about the resolution to issues? Include the CEI and PA in your discussions.
- vi. Are we doing research before we point the finger?
- vii. What is best for the project and FDOT? The CEI and PA will do what is best for the project and if that includes getting the utilities starting work early.
- viii. Constant communication when issues arise.
- ix. Working together to resolve the issues.

#### **BEST PRACTICES THROUGHOUT THE DURATION OF THE PROJECT FROM BEGINNING TO END CONSTRUCTION**

- I. Realize that the utilities have supply issues.
- II. Partnering with utilities
- III. Act swiftly to NOIs – Include information in the NOIs to help to make it clear of the issues.
- IV. Tracking NOIs sufficiently
- V. Mitigating issues to keep the job within Performance Measures
- VI. Mitigating to keep NOIs out of Compensable Time – This can become very expensive very quick.
- VII. Coordination, Coordination, Coordination – Be respectful of others and have cordial discussions. Be mindful of the setting that certain discussions are held in.
- VIII. If work is not listed as prior to work, you are allowed to, and you can still utilize the during time per the executed schedule (Rob Morris and Josh Kelly). This is typically easier on FDOT projects.



**2:15 – 2:30pm Break**

**2:30 – 4:00 pm FDOT Forum (DUE/DUA & FDOT Personnel)**

Patrick Overton, PE, FDOT State Construction/Utilities Engineer

District Utility Administrators/Engineers will be in attendance and are available to discuss District specific issues. Please note to have great dialog specific topics are encouraged to be submitted at least two weeks prior to the summer meeting. Please utilize the following link to submit your questions/topics of interest: [www.fucc.org](http://www.fucc.org)

- I. Build America, Buy America (**BABA**) – Has been published 2CRF 184 (effective 08/23/2023)
- II. APL will be tied to BABA.
- III. On 11/15 or 11/16 there will be a virtual workshop for the FUCC. A Constant Contact invite will be sent out.
- IV. Rob Brown (Duke) – Product number and ID are to be provided to the FDOT. Patrick Overton (FDOT) noted that FDOT personnel will contact the manufacturers to verify if they are BABA compliant.
- V. Brian Lanz (FP&L) questioned the self-certification process.
- VI. Supply chain folks from the electric companies are encouraged to be involved in the BABA workshop.
- VII. Work program budgets have been increased for the next 5 years.
- VIII. FDOT District 2 permitting personnel are present.
- IX. Todd Hunt (FDOT 2 DUA) – May 22<sup>nd</sup> will be the District 2 Utilities Liaison Conference (Jacksonville). Email Todd to be placed on the distribution list.
- X. Pia Comier (FDOT District 7 DUA)
  - a) There are new personnel in the District office. Erin Long is now responsible for PSEE. Winston William & Juan are new to District 7. Sally Prescott won the Halloween costume contest at the District 7 Utilities Liaison conference.
  - b) Pia also made mention of the local utility groups. Spring training was held earlier this year.
  - c) There will be less Design-Build projects but more “POP” projects. There will be less utility coordination associated with “POP” projects.
  - d) There will be a Clearing and Grubbing contract for the district (July 2024).
  - e) The Westshore Interchange is the biggest project (Progress Design-Build project). It was negotiated a few weeks ago and will be getting started soon.
  - f) Larger work program budget. There are rising construction cost. Work estimates by contractor are based on future unit cost whilst FDOT usual based their budgets on historic costs.



- XI. Jeanna Dean presented for District 1's DUA.
  - a. D1 Utilities Liaison Committee was held on October 11, 2023
  - b. Streamline UWS reviews.
  - c. 80 projects
  - d. FY 2025 (68 projects)
  - e. Moving Florida Projects (get list from Jeanna Dean)
  
- XII. Shawn Lewis – PSEE server is being moved.

**Mapping the Future – The Google Maps of the Subsurface (Stephanie Gardner, 4M Analytics)**

- 4M Analytics used military grade technology that was geared at identifying bombs underground without having to put boots on the ground.
- Use technology to locate underground facilities.
- Raised over \$75M and has over 100 employees in Austin, TX
- Risk Mitigation Ecosystem was developed.
- 4M current perform work in 5 States.
- 4M partners with Engineers
- Uses AI to pull data from Vector Data (GIS platforms & GIS Servers), Pixels (Video, Images, News), and Engineering documents (Blueprints, GeoPDF maps).
- Built a nationwide repository of SUE data.
- Attendees were shown a Live Demo of how to create a project in the software.
- SW 10th Street project:
  - a. 24 UAOs were identified within the project corridor.
  - b. The info was provided to FDOT within 10 days.
  - c. GIS files and CADD are provided to clients.
  - d. The database is synchronized to public databases. On average, every 30 days.
  - e. Advance Utility Research goes back in time up to 70 years using aerial imagery. Looks for excavation footprint.
  - f. Attendees questioned the source of their information.

**Sean Lewis (FDOT Central Office)**

- There was a working group developed to discuss the “as-needed” verbiage on UWS. A note in section B of the UWS is allowable and will be discussed at the pre-con meeting.
- Both Sean Lewis and Patrick Overton met and agreed to allow the verbiage in the UWS.
- Email addresses for UAOs are to be included in the plans.
- Ensure that the correct UAOs are invited to the pre-con meeting. The CPAM will be updated to include this information.
- Eric Bustos (Crown Castle) – Is the Department planning to make updates to the UAM for out-of-service facilities that are very deep (+15' deep). Certain FDOT Districts requires removal of the facility while other Districts do not require it. Sean Lewis (FDOT) noted that while the facilities are deep and out-of-service, it is still the UAOs responsibility to mitigate the conflict.

**4:00 - 4:15 pm Break**



#### 4:15 - 5:00 pm NexGen Plans Subcommittee

- a. Tara Miller, Duke Energy, FUCC Chair thanked the sponsors.
  - b. Giveaways
- I. Melonie Schwartz (Inwood) and Shaun Purvis (BPA) provided updates on the NexGen Subcommittee progress. (See slides at the end)
  - II. Combine working groups from 5 to 3 groups (first meeting will be in January 2024)
    - a. Large format paper size and Utility Worksheets / 11"x17" Utility Adjustment Sheets
    - b. Drainage Structure Sheets and Cross Section Sheets
    - c. Permitting requirements for NexGen
    - d. Next meeting will be 12/11/2023 at 9am

Meeting was adjourned at 4:36 pm.

### Friday, November 3, 2023

#### 8:30 am FUCC Networking

#### 9:00 am FUCC Business Meeting

Opening – Tara Miller, Duke Energy, FUCC Chair

- The meeting was called to order by Tara Miller at 9:00 am, and the sponsors were recognized for their contributions.

Invocation & Tribute to Flag - Chris Stermer, WGI

Reading of the Minutes – Mark Atkininstall - Burgess & Niple

- Chris Stermer (WGI) made a motion to waive the reading of the meeting minutes and Jay Helms (George F Young) seconded the motion.

Historian's Report – Chris McLaughlin - Clymer Farner Barley (see attachment from Chris)

- St. Pete Group may have set the standard for the color coding for RGBs.
- Old Business (Mr. Ed Brown – Southern Bell): Combination of meetings to minimize members time out of the office.
- Mr. Richard Simmons.....
- **25 years ago (11/6/1998)**
- GTE, Lee County, Sprint (112 attendees)
- \$4800 balance before the meeting



- FDOT Report – Updating internet forms, UAM workshop, JPA project with Tampa Bay Engineering.
- Guest Speaker (GTE)
- FDOT District reports. Hank Humbert provided the report....

Treasurer's Report – Jodi Rano, Stantec Consulting Inc. (See attachment)

- There are still a couple of sponsorships outstanding.
- 120 attendees on Wednesday 11/2/2023
- Consideration of raising registration and sponsorship levels
- Start looking at the minimum food and beverage amounts.
- Brian Lanz (FP&L) made a recommendation to consider linking the registration fee increases to the consumer index.
- Josh Kelly (Ozmatic) made reference to the FTBA conference and their pricing.
- The budget committee will develop the info prior to the April 2024 meeting and present it to the Steering Committee.
- Chris Stermer (WGI): We showed a profit for this year of \$5104.29. Jodi Rano (Stantec) noted that the amount is less than the threshold. We will also need to find a new CPA.

Business Session

Sunshine 811 Report – Brian Dean

- Will be working on new slides for April 2024 meeting. Aerial facilities will not show up on design tickets if UAOS' facilities are not underground within the ticket limits.
- CALL BEFORE YOU DIG!!!

FDOT Central Office Report - Patrick Overton (FDOT)

- A meeting is scheduled with FHWA on 11/6/2023 to discuss Utility Self-Certification for BABA. This will affect how the workshops are setup.
- Patrick Overton will coordinate with Brian Dean on FCG meeting.

Steering Committee –Stephen Waidley (FUCC Vice-Chair Frontier)

Steering Committee Approved Motions for Membership Vote – (If Any, in accordance with the by-laws, only the following Steering Committee members are allowed to vote)

- There were no items that required a vote.

Power – Art Gilmore, Duke Energy

Telecom – Fred Valdes, Frontier

Gas – Joe Sanchez, FGT

Water – Warren Gilbreath, Hillsborough County

Sewer – Demar Machuca, Sarasota County Utilities

Governmental-Utility – Kris Hayes, Lakeland Electric

Governmental Non-Utility – Lee-Ann Snipes, City of Orlando



Contractor – Shayne McGlocklin, Badger Daylighting  
Design Consultant – Bill Case, Ayres Associates  
Coordinator Consultant – Trish Miller, ECHO  
Utility Notification Center – Brian Dean, Sunshine 811  
Geospatial Consultant – Chris McLaughlin - Clymer Farner Barley

## Business Reports

Awards/Nominations – Chris Stermer, WGI

– Looking for nominations for Secretary for the next year. Ensure that you get approval from your organization. The incoming Secretary cannot be a design consultant, telecom, or power. John Farcas award nominations are needed by June 1, 2024. Only previous award winners can vote on the nominees. HAVE A SAFE RIDE HOME!

Program/Conference Planning – Mariah Mader, KCI Technologies

- Looking for speakers
- No Sales pitches
- Will be working with Tara on next agenda.

Facebook Page – Robb Brown, Duke Energy (Absent)

E- Business/Web Page – Lori McLaughlin, GFY

- Lori M – Old minutes have been uploaded to the website. Sponsors page need to be updated. Co-chairs and chairs
- Ocala Hilton room block is open.
- The NexGen work groups survey is on the webpage.

UAM Review – Bryan Lantz, FP&L

- UAM updates to be tracked and possibly hosted on the webpage.

Bylaws Review – Brian Dean, Sunshine 811 & Chris McLaughlin, Clymer Farner Barley

- Nothing to report.

Membership/Promotions – Melonie Schwartz, Inwood Consulting Engineers

- Talked about increasing sponsorship levels.
- Member spotlight
- LinkedIn posts
- Pictures for all facets of FUCC on the banners.
- Promote event at large events such as DBIA, FTBA, etc. (Table share incentive)
- Banquet team: Dead man's Party.

Telecom Interest Group – Crystal Iggsten, Crown Castle (get notes and sign-in sheet)

- Consistency in UWS between Districts
- Vacated conduit in the R/W
- Grout filling pipes instead of removal.

TTC/Mot – Robb Brown, Duke Energy & Laurie Jackson, TRC



- No additional updates.

#### Joint Use - Bill Deal, T2 UES

- 33 attendees
- Joint bore discussion
- Bill thanked the participants for their input.
- Second topic was recommended by Turnpike Construction regarding pole joint-users that were not previously identified.
- NJUNS can be used to assist with identification of joint users.

#### Design Build – Chris Stermer, WGI

- Re-iterated information from his presentation regarding what is required for markups.

#### Underground Interest Group – Trisha Miller, ECHO & Garth Thompson, MG Vera

- Gart (33 in attendance)
- Melonie Schwartz and Josh Kelly provided educational presentation.
- They discussed locates not being performed in a timely manner.
- Asked for additional topics for future meetings.

#### Power Interest Group - Chris Buonanni, FP&L

- 37 attendees
- Sidewalks and mast arms discussion
- Discussed traffic signal designs and early coordination.
- Pole locations after a storm event maybe different due to pole replacement. The design consultant may require additional surveying to update their plans.
- The Storm Protection Plan group will provide presentation for the Summer meeting.

#### Banquet Planning – Rebecca Green, Colliers Engineering

#### Permitting – Laurie Jackson, TRC

- Joined with joint use.
- NexGen plans permitting.
- Some local municipalities are not willing to provide as-builts due to security risk.

#### New Business/Old Business

- 11:30am – Adjournment  
Motion to conclude the meeting was made by Melonie Schwartz and seconded by Garth Thompson (MG Vera).

**ATTACHMENTS / SUBCOMMITTEE  
MEETING MINUTES**



## **November 3, 2023 FUCC Historian's Report**

### **FUCC Fall Meeting – World Golf Village Renaissance Resort, St. Augustine**

#### **Chris McLaughlin, Historian**

#### **75 years ago:**

November 12, 1948, Lakeland Terrace Hotel, Lakeland, Florida.

Chair VR Parrack of Florida Power Corp presiding, LG Zelenka of AT&T was Vice-Chair, and Arthur M. Brown, Jr. of Florida Telephone Corp. was Secretary.

20 people in attendance, Telephone 8, Power 8, Railroad 1, Railroad & Public Utility Commission 1, 1 City, and 1 from Florida Forest & Park Service. The minutes from the August 13, 1948 meeting in Jacksonville were read and approved.

#### **Topics discussed:**

- To follow up on the topics of the day, the subject of “moving of large objects over the Public Highways” was broached. A report was written that established common carriers were required to apply to the Railroad Commission and the carrier would be responsible for settling all claims for property damage. The carrier was also required to obtain a permit from the State Department of Public Safety when the size/weight/height/length exceeded the law. Discussions ensued about non-carriers (unlicensed folks) exceeding the lawful heights of large objects. A motion was made to direct a letter to the State Road Department to request the Department issue a special permit for moving items of large sizes and that when issued, the appropriate Highway Patrol office cooperate with utilities along the route of the move.
- Secretary Brown, Jr. read a letter from the Chair to the State Road Department and the response (it wasn't clear from the minutes that this subject had already been officially discussed with the State). The items requested were:
  - Road clearances from the bottom of traffic signals & wires serving them: 14 feet, 6 inches
  - Clearances to guy wires, telephone/electric wires: Reference was made to an application calling for 20 feet.
  - Discussion of these letters followed about the Florida requirement of 20 foot clearance over roadways.
- This meeting was the first meeting where the copy of the Manual on Uniform Traffic Control Devices, or MUTCD, was reviewed by the FUCC.
- Mr. Warth gave a report on Southern Bell's commercial mobile telephone service. He reported that Jacksonville went into service in August and only one channel was now operating in Miami with 70 mobile stations and they were experiencing antenna difficulties.
- The next meeting was discussed between Ocala, St Petersburg, and Tallahassee. Ocala was selected for February 11.

#### **50 years ago**

November 2, 1973, International Inn, Tampa, Florida.

Norton Brockman of Southern Bell was Chair, W.J. Hopgood of Florida Power & Light Company was Vice-Chair, and HV Gardner Jr of Orlando Utilities Commission was Secretary. There were 48 people in attendance, of which Power had 12, Telephone had 17, FDOT had 7, Gas had 5, Cities had 4, and Cable TV and consultant had 1 each, which equals 37. Don't ask.

Topics discussed:

- In an interesting twist on how we operate today, the Chairman of the Plant Protection Subcommittee made a presentation of the subcommittee's trip to Hyattsville, Maryland and Syracuse, New York to observe plant protection systems in operation. The subcommittee's recommendations were presented in a booklet and were read to the Committee. After discussion, the recommendations were approved by a vote but unfortunately the details of these recommendations were not preserved in the minutes.
- Mr. Pop Edwards of AT&T requested assistance in putting together a package of cable hazards and protection methods to be used when presenting the recommendations to various groups who may be interested in a one-call system.
- Mr. Bob Corn of Florida Gas Transmission as well as the Chair of the subcommittee in charge of changes to PPM 30-4 asked Mr. Roger Coombs of FDOT to present changes and modifications to PPM 30-4. Mr Coombs states that secondary roads were being removed from PPM 30-4 and reported that the lump sum for reimbursable work was doubling. Mr. Earnest Salley, also of FDOT, cautioned that engineering work done prior to the date of the letter was not reimbursable. Mr Ken Brown of Tampa Electric pointed out the circular situation where engineering work was necessary to prepare an estimate to request reimbursement before the letter of authorization could be issued. Mr Salley further pressed Mr Coombs on rights-of-way. He stated that federally funded projects allow for reimbursement of both the acquisition of private easements and the costs of appraising the lands.
- Mr Coombs reported that the Utility Accommodation Guide should be approved by the FDOT Secretary by January.
- Mr Corn reported on the topics of overhead crossings that a subcommittee should be formed to deal with the type of identification for overhead crossings of limited access highways. The subcommittee would be formed with a representative of power, telephone, "long lines" and gas.
- Mr. B. A. Kempson, Chair of the Utility Accommodations Guide Subcommittee reported on the public hearing which he attended in Tallahassee concerning presentation and adoption of the guide. He stated that the gas interest had presented a substantial case concerning the requirements of the guide as far as their industry is concerned. In the interim no information had been forthcoming from Tallahassee concerning the fate of the guide and the latest information was what Mr. Roger Coombs had presented earlier this meeting.
- Mr. Ken Brown, Chair of Traffic Control Subcommittee reported that it was necessary to identify plant in almost every area, including limited access rights of way and some utilities were doing it in one way or another but wondered if this type of identification was sufficient to meet FDOT's needs. Mr. Brown continued to report that he had received a letter from Visual Products Corp. about demonstrations with internally lighted traffic cones to eliminate Class B barricades due to their bulk and ease of being knocked over.
- Mr. Verne Brown, Chair of the Color Code Subcommittee reported that he had been unable to find any national committee that had a color code they were recommending for national approval. He reminded the group that in 1969 the FUCC had adopted a standard color code it would recommend to all municipalities and utilities for new work. He also said within the past

two months the St. Petersburg Utility Coordinating Committee had adopted a color code for use in their area. Mr. Brown also stated that he had received a letter from the American Public Works Association concerning a meeting they were holding in Denver in which they were requesting all American Right-Of-Way members to attend and to make recommendations concerning the establishment of local utility coordinating committees in their areas. In response to this letter Mr. Brown took the liberty of supplying them with copies of this Committee's by-laws as well as those of several of the local utility coordinating committees in and around Tampa.

- Mr. Verne Brown, also reporting on the Space Allocating Subcommittee, mentioned the American Public Works Association also had a committee, of which he was a member, working on space allocation and that they were working on a report which emphasized the need for coordination in general on all projects. This report would be made as a recommendation to the Federal Highway Administration. It was tentatively scheduled for completion for the end of this year; however, it probably will be extended over to the first or second quarter of next year now. They were particularly concerned over existing city ordinances and how they handled the various problems of new construction. A field study has been completed and is now being compiled for printing. Upon completion, copies were to be sent to all members of the Advisory Committee; however, as of this date, Mr. Brown had not yet received a copy of this report.
- Under old business Mr. Ed Williams (Southern Bell, Miami) brought ^ up the desirability of combining the Florida Utilities Coordinating Committee meeting with the American Right-Of-Way Association meetings to eliminate unnecessary travel and reduce the number of times the various attendees would have to be absent from their jobs. This would also represent some economic benefits in the amount of travel to the various companies being represented. The advantages of a joint meeting appeared obvious and further discussion indicated that there was a good possibility that the August meeting of the Florida Utilities Coordinating Committee may be so scheduled to coincide with the American Right-Of-Way Association and that they should be contacted in order to establish scheduling of the two meetings. Chairman Brockman stated he would contact the Chairman of the American Right-Of-Way Association in an effort to combine the August Florida Utilities Coordinating Committee meeting with the American Right-Of-Way Association.
- At this time the meeting was turned over to the guest speaker, Mr. Richard Simmons of Power-Tel-Utility Sales. Mr. Simmons presented an extremely interesting talk in conjunction with slides on a recently developed technique for subsurface profiling of buried plant. Given the time period, he may have been the fitness guru!

### **25 years ago:**

November 6, 1998, Clearwater Beach, Florida

John Jernigan of GTE Florida was Chair, William Hetherington of Lee County Electric Co-op was Vice-Chair, Charles Easterling of somewhere he earned a check was Secretary, and Tom Duggar of Sprint was Historian.

112 people in attendance, no sign-in sheets were retained so a breakdown of members per utility type is not possible. Buddy Bowyer and Ron Worley were recognized and wished happy retirements.

### **Topics discussed:**

- Treasurer's Report gave a balance of \$4881.13 before the Summer meeting.

- Chair Jernigan recognized the Florida Power Corp Tom Kennedy for being the co-recipient of the “Liaison Person of the Year” award.
- FDOT Report:
  - State Utility Engineer Ken Weldon reported that FDOT was updating its internet forms.
  - There would be a UAM workshop that Friday before its final rule change in early December.
  - Discussion on the JPA agreement research project with Tampa Bay Engineering with results expected in 1999.
- Guest Speaker was Margo Hammar from GTE, Sr VP of Government Affairs for Florida and Georgia. She spoke of managing rights-of-way and state regulatory authority.
- FDOT District Reports:
  - District 1 had 75 people attend their meeting in Palmetto.
  - District 2 had 95 people in their meeting in Lake City.
  - District 7 had 110 people in their meeting in Crystal River, Hank Humbert provided the report.
  - Turnpike reported that the entire Suncoast Parkway was advertised or under construction.
- Interest Groups had Art Gilmore report that 32 members were in attendance in the Power Interest Group. Telecom Interest Group had 34 members and reported that CSX would allow directional bores beneath its tracks. Underground had 19 members.



# JOINT USERS SIGN-IN SHEET

**PROJECT:** FUCC **MEETING DATE:** 11/1/2023

**FACILITATOR:** Bill Deal **LOCATION:** St. Augustine

NAME	COMPANY	PHONE	EMAIL
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Betsey Becker	WFO	407-468-5735	<a href="mailto:ebecker@fiberop.com">ebecker@fiberop.com</a>



# FUCC

FLORIDA UTILITIES  
COORDINATING COMMITTEE

Since 1932

Your Eyes and Ears for Highway/Utility Matters

**Joint-Use Subcommittee  
St Augustine, Florida  
November 1, 2023  
Agenda**

1. Opening Remarks
  - a) Bill Deal, T2UE (Joint Use) Laurie Jackson, TRC, Permitting
2. Self-Introductions
3. Old items
  - a) Joint Bore at Sand Lake Rd and Turnpike
    - a. (7) different telecoms
    - b. AT&T took the lead, (8) conduits crossing existing FGT line 10' deep. New FGT @ 50' deet. Each UAO needed an encroachment agreement and separate permits.
4. New items of interest
  - a) Identifying attached utility owners
    - i. Who is responsible? - Attaches
    - ii. Who keeps records? Audits (Internal to power co) every 5-7 years
    - iii. Does the UAM address this
      1. UAOs have their own joint-use departments, pole load calculation may require poles to be replaced. Aerial utilities will not show up on design tickets (?) new fiber companies in an area might attach w/o notifying the pole owner. Power copy is not obligated to cut a pole.
    - iv. Permitting
      1. NexGen impacts permitting + OSP.
      2. Construction prints vs permitting prints should be the same.
      3. Some agencies will use "war" as delays in getting underground information and maybe getting push back.



## Florida Utilities Coordinating Committee, Inc

## Profit &amp; Loss

January 1 through October 23, 2023

	<u>Jan 1 - Oct 23, 23</u>
<b>Ordinary Income/Expense</b>	
<b>Income</b>	
Meeting Registrations	62,400.00
Other Types of Income	
BOA Credit Card Cash Rewards	252.27
<b>Total Other Types of Income</b>	<u>252.27</u>
<b>Program Income</b>	
Booth Rental	1,000.00
<b>Total Program Income</b>	<u>1,000.00</u>
Sponsorships	21,000.00
<b>Total Income</b>	<u>84,652.27</u>
<b>Gross Profit</b>	84,652.27
<b>Expense</b>	
<b>Bank Service Charges</b>	
PayPal Fees	2,851.05
Square Fee	59.34
<b>Total Bank Service Charges</b>	<u>2,910.39</u>
<b>Business Expenses</b>	
Business Registration Fees	61.25
<b>Total Business Expenses</b>	<u>61.25</u>
<b>Contract Services</b>	
Accounting Fees	700.00
<b>Total Contract Services</b>	<u>700.00</u>
<b>Operations</b>	
Advertising and Marketing	3,606.87
Books, Subscriptions, Reference	401.49
Website	33.48
<b>Total Operations</b>	<u>4,041.84</u>
<b>Other Types of Expenses</b>	
Flowers and Gifts	105.53
Insurance - Liability, D and O	549.65
Other Costs	0.00
<b>Total Other Types of Expenses</b>	<u>655.18</u>
<b>Travel and Meetings</b>	
Annual Dinner	1,305.42
Awards	1,456.58
Door Prizes	409.06
Hospitality	27.11
Hotel Fees	59,071.90
Meeting Brochures / Booklets	887.25
Planning Services	7,786.13
Supplies	235.87
<b>Total Travel and Meetings</b>	<u>71,179.32</u>
<b>Total Expense</b>	<u>79,547.98</u>
<b>Net Ordinary Income</b>	<u>5,104.29</u>
<b>Net Income</b>	<u><u>5,104.29</u></u>





# Utility Conflict Identification and Constructability Concerns

PRESENTERS

MELONIE SCHWARTZ  
INWOOD CONSULTING ENGINEERS

JOSHUA KELLY  
OZ-MATIC

NOVEMBER 2, 2023  
FALL 2023 FLORIDA UTILITIES  
COORDINATING COMMITTEE

## Agenda

- Meet the presenters
- Breakout questions
- What is a Utility Conflict?  
Direct vs In-Direct Conflicts
- Design Element Impacts to Utilities
- Utility Relocation Constraints
- Constructability, Best Practices, &  
Lessons Learned in Construction
- Key Takeaways
- Thank You





**Melonie Schwartz**

Melonie is a Senior Utility Coordination Manager for Inwood Consulting Engineers, a business that does Transportation Engineering, Utility Design, PD&E, Ecological, Traffic, Drainage, Public Involvement and Structures Design. Melonie has over 16 years experience coordinating projects throughout the State of Florida.



## Joshua Kelly

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Josh is a Senior Utility Construction Coordinator for Ozmatic Inc, a business that provides construction oversight for road, bridge and highway infrastructure. Josh has over 20+ years of experience providing Utility Construction oversight and works directly with FDOT on construction projects.

## Breakout Questions


Who knows that the utility level symbology means?

Who knows what a utility conflict is?

Who knows the difference between a direct and an indirect conflict?

Give me an example of a critical utility





*Coming together is a beginning, staying together is progress, and working together is success.*

Henry Ford





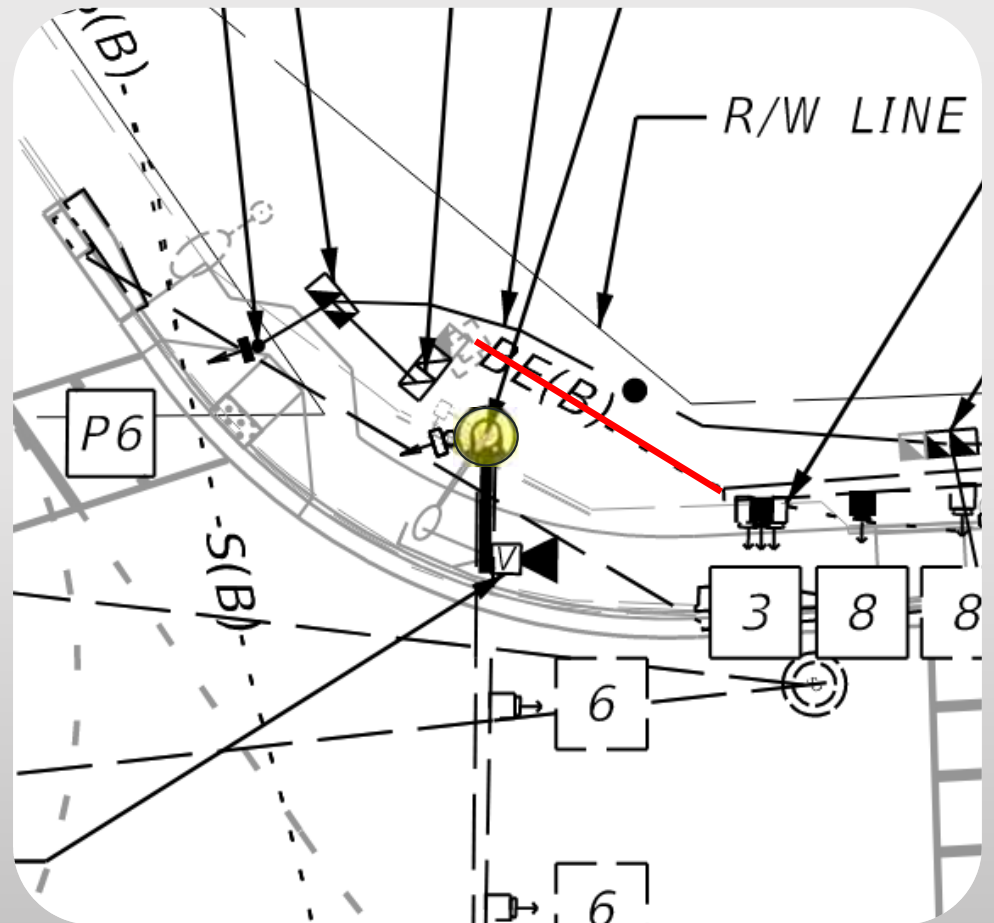
What is a Utility Conflict?  
Direct vs In-Direct Conflicts

## Is this a conflict?

Is the Buried Electric (BE) shown in the picture below in conflict?

**No, it is not a conflict.** The buried electric is over 4 feet from the outside edge of the mast arm foundation diameter and 3 feet from the auger drilling hole.

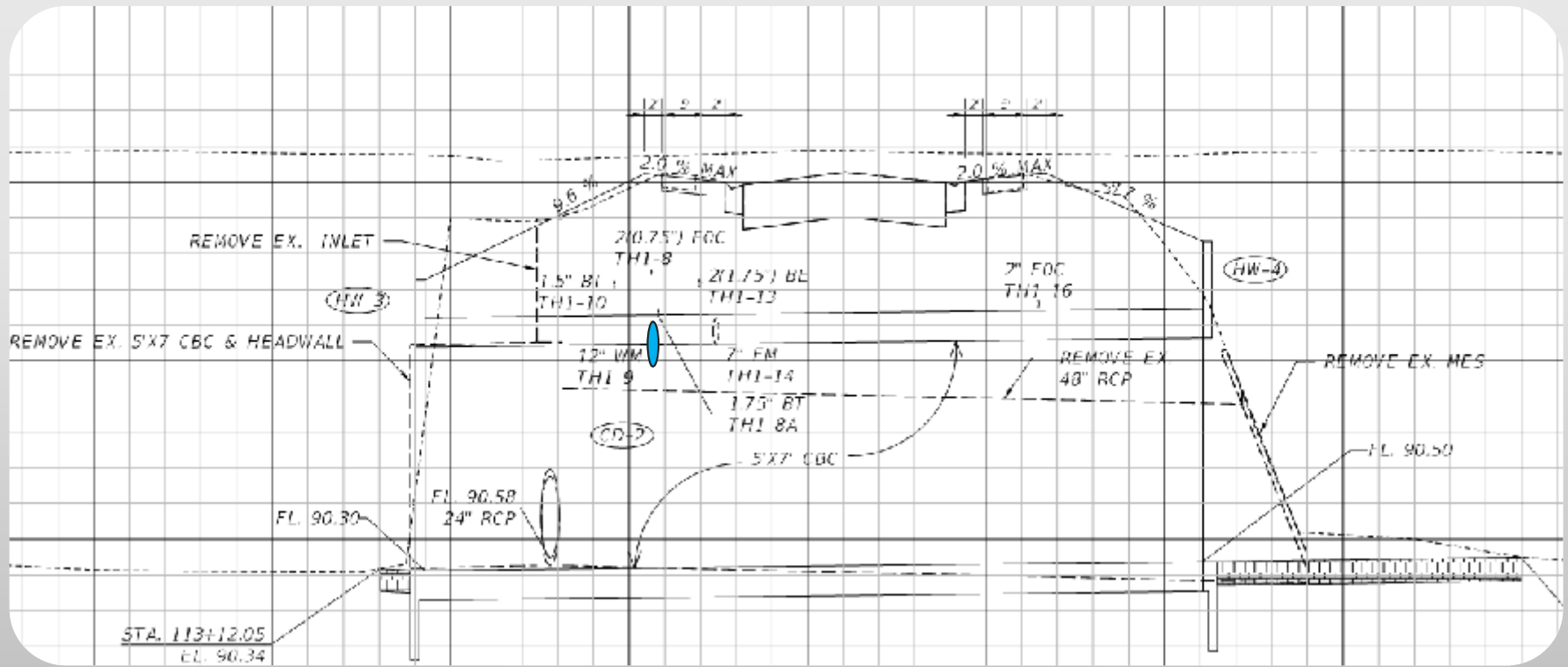
It is noted that the Utility Agency Owner may elect to have time within a Utility Work Schedule to locate and protect during the mast arm installation.



# Is this a conflict?

Is the water main in conflict with the box culvert?

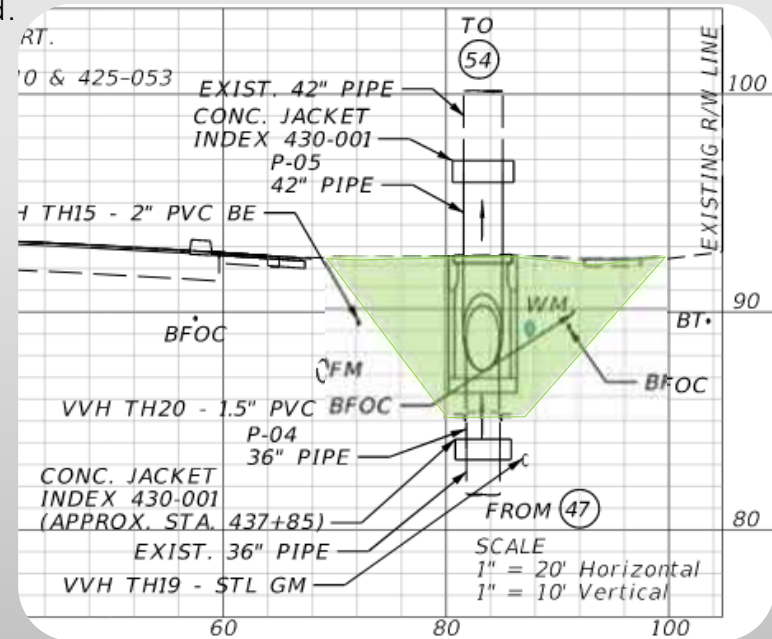
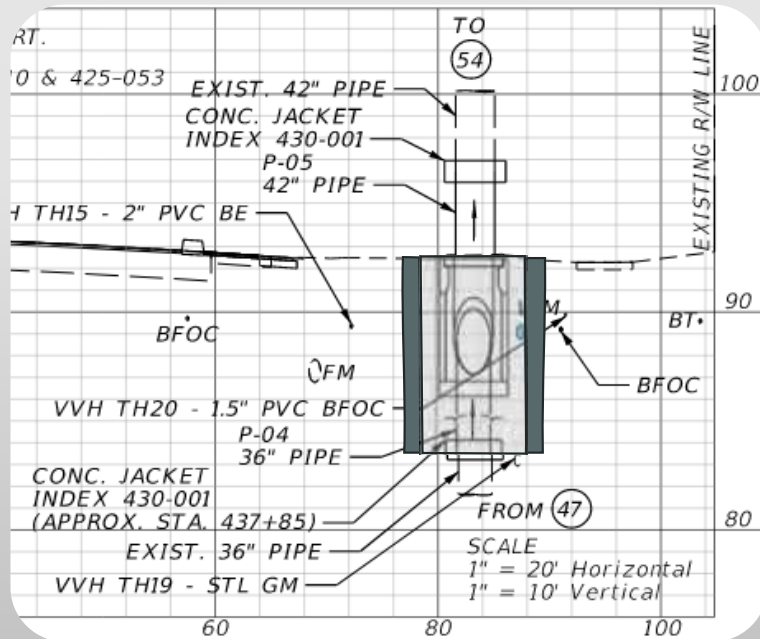
Yes, it is a conflict.



## Is this a conflict?

Is the drainage structure in conflict with the water main?

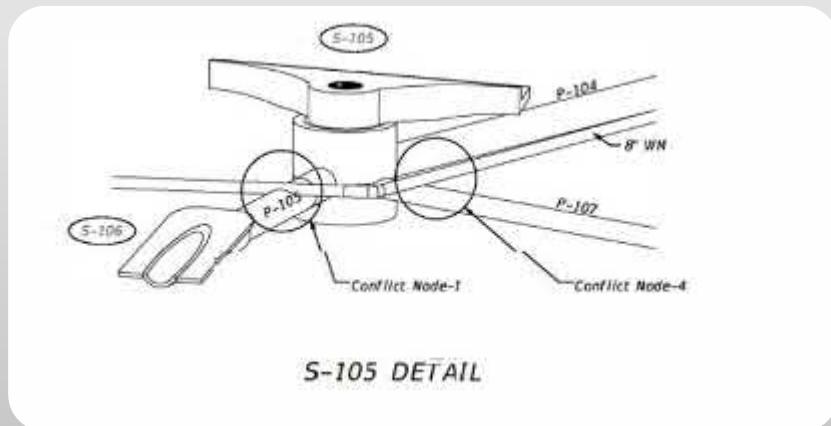
**Yes, it is in conflict due to constructability.** If the contractor uses a trench box, the water main will be impacted by the trench box. If the contractor uses an open cut then the water main will be exposed and would need to be supported and possibly restrained.



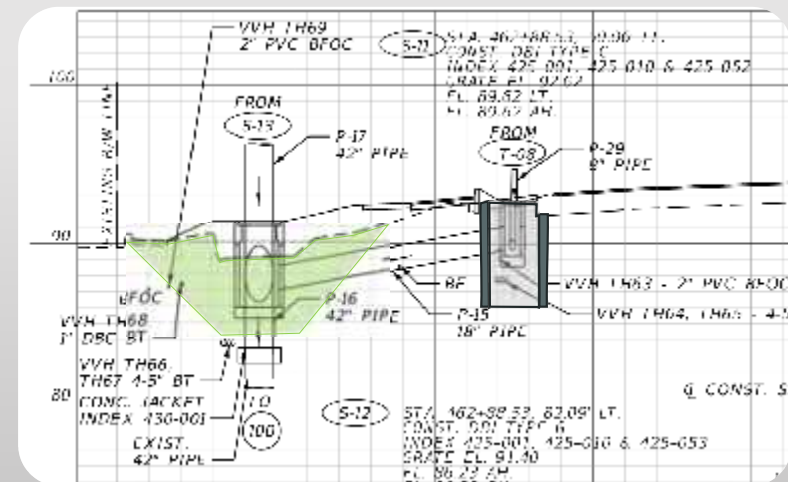
## Direct versus In-Direct Utility Conflicts

A direct utility conflict is where two (or more) elements are crossing each other.

Example: Storm pipe between drainage structures is at is going through a utility.

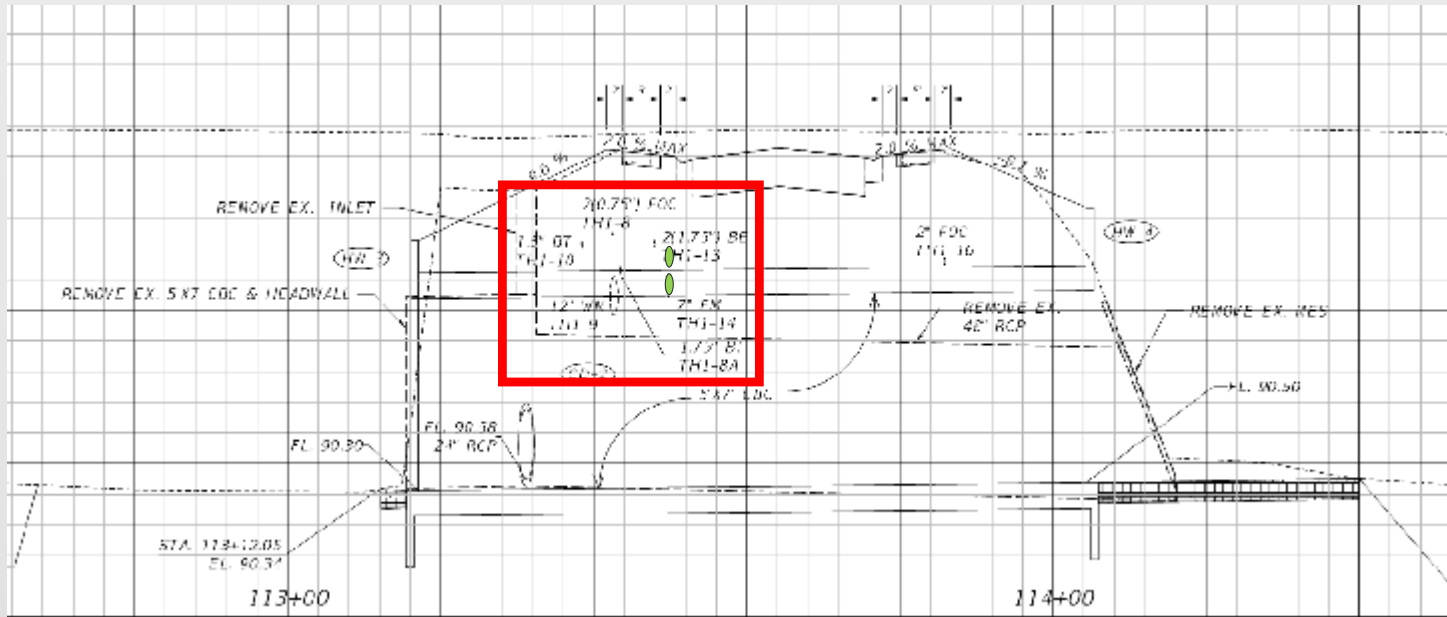


An in-direct utility conflict (or a proximity / constructability utility conflict) is where the design element does not have a direct clash with the utility; however, the construction of that facility is such that the utility is impacted.



SUE verifies the vertical and horizontal location of subsurface utilities

Allows the design team, utility coordinators, and Utility Agency/Owners to identify or clear conflicts



V.#	UTILITY DESCRIPTION (Owner, Type)	SIZE	MATERIALS	E and/or C			EXISTING GROUND ELEVATION	TOP ELEVATION
				STATION	OFFSET	LT/RT		
1-1	AWA	1.75"	HW	101+49.74	9.41'	LT	99.16	96.67
1-2	UNKNOWN	(2)1.75"	PE	102+36.09	12.09'	LT	99.29	96.24
1-3	ORANGE COUNTY UTILITIES	9.00"	DI	102+63.55	3.47'	LT	99.15	95.55
1-4	AT&T	1.75"	DBC	103+22.42	10.80'	LT	99.22	96.07
1-5	UNKNOWN	(2)1.75"	PE	104+26.75	12.94'	LT	99.17	95.67
1-6	UNKNOWN	UNK	UNK	113+17.09	12.66'	LT	99.23	N/A
1-7	DUKE	2.25"	DBC	113+37.81	22.08'	LT	99.00	95.40
1-8	UNKNOWN	(2)1.75"	DBC	113+42.49	30.53'	LT	99.07	97.02
1-9A	AT&T	1.75"	DBC	113+12.29	30.16'	LT	99.09	96.14
1-9	TEL	1.50"	SLL	114+42.57	28.94'	LT	99.97	95.77
1-10	AWA	1.75"	HW	114+48.07	15.77'	LT	98.56	96.78
1-11	TEL	2.25"	SLL	113+29.18	34.98'	LT	100.72	98.09
1-12	DUKE	2.00"	HDPE	113+34.59	52.76'	LT	99.82	96.07
1-13	DUKE	(2)1.75"	DBC	113+47.85	28.53'	LT	99.13	96.81
1-14	ORANGE COUNTY UTILITIES	7.00"	STI	111+49.74	11.21'	LT	99.60	87.95



### Survey Designates

Quality Level "D"

- Existing Records, Marked Plans, GIS Maps, etc.

Quality Level "C"

- Surface Visible Feature Survey
- Delineator, Valve Boxes, Hydrants

Quality Level "B"

- Designating technologies (scanning, toning, etc.)
- Locator locates the lines and surveyor picks them up

Quality Level "A"

- Locating – Physically expose facility at a location for measurement and data

# What SUE Level Do You Need?

Subsurface utility engineering is divided into four quality levels. Our professionals will help you decide the correct accuracy for data collection to build your project safely.

## A

### Locating

- Highest level of accuracy
- Full use of SUE services
- Nondestructive exposure of utilities
- Provides specific type, size, condition, and material of existing underground utilities
- Precise plan and profile mapping

## B

### Designating

- Most common
- Provides close approximate locations of existing utilities
- Correlated with existing records
- Electromagnetic locating/ground penetrating radar
- Surveyed to project control

## C

### Visual Confirmation

- Visual survey of utilities (manholes, valve boxes)
- Data compared to existing utility records

## D

### Records Research

- Reviewing existing utility records and as-built plans
- Limited accuracy

## Need to know...

Quality Level = Reliability Level

When inputting RGBs / Marked Plans from UAOs you are entering them as LEVEL D, as they are based on the UAO's record information



# Importance of a Detailed Utility Conflict Matrix

It is very important to have a detailed Utility Conflict Matrix that captures all your conflicts for all design elements: Roadway, Structures (bridges, walls), ITS, Lighting, Signals, Signs, Landscape, Demucking, etc.)

It needs to be maintained through the project lifecycle

Update associated Test Hole Numbers when available and finalize the disposition, when work to be performed, dependent utility (as applicable) and comments based on the outcome of the utility coordination efforts

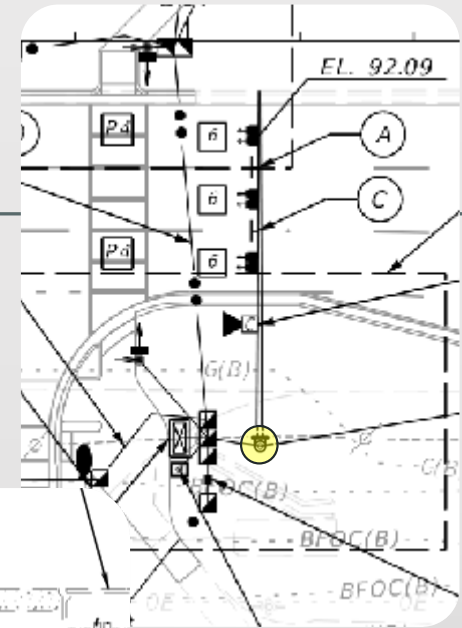
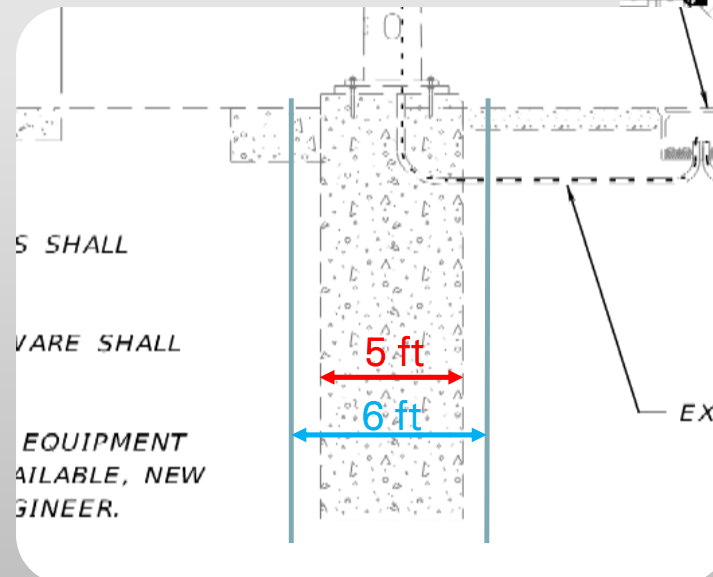
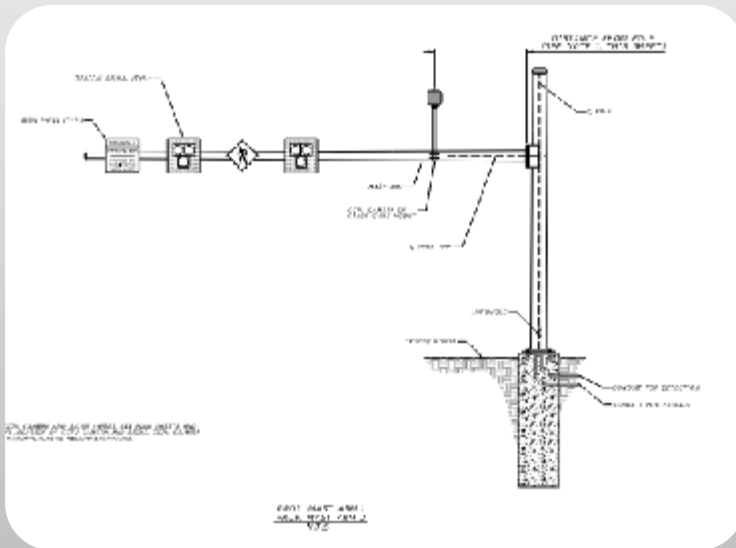
UTILITY CONFLICT MATRIX														<small>Revised Utility Conflict Matrix must be submitted at the following intervals:</small> <small>- Place in Road Review</small> <small>- Full Plans Review</small> <small>- Final Plans Review with all conflicts addressed</small> <small>- Utility Certification</small>			
FPID		445303-1-52-01						Phase		UTILITY CERTIFICATION							
Description		SR 436 from N. of Old Cheney Highway to N. of University Park Drive						Proj Mgr.		Beata Stys-Palasz, PE FDOT							
Date of Report		1/20/2023						Utility Coord.		Melonie Schwartz Inwood							
Conflict #	Owner	Utility Facility (type, size, material)	From Sta	To Sta	Offset	Side	Alignment Chain	Point (P) or Long. (L)	Design Element in Conflict With	Plan Sheet #	VVH Req'd	VVH Test Hole Location	Disposition	When Will Work Be Performed	Dependent Utility	Comments	
1	Duke Energy SL	Light Pole and Pull Boxes	502+95.47	503+05.69	73.69	RT	CL Const. SR 436	P	Light pole and pull boxes in center of new sidewalk	43 (pvs 33)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
2	Duke Energy SL	Pull Box for BE to signal	503+95.52		92.71	RT	CL Const. SR 436	P	Pull box in proposed sidewalk	43 (pvs 33)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
3	Duke Energy SL	Light Pole	502+01.85		61.27	LT	CL Const. SR 436	P	In proposed bike lane	42 (pvs 32)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
4	Duke Energy SL	Pull Box for light pole	502+34.46		80.27	LT	CL Const. SR 436	P	In proposed bike lane	42 (pvs 32)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
5	Duke Energy SL	2" PVC BE (SL)	507+64.39		76.47	RT	CL Const. SR 436	P	Proximity to drainage structure S-17 (pvs S-14) & S-16 (pvs S-13), on exist. 36" pipe	43 (pvs 33)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
6	Duke Energy SL	Pull Box for light pole	515+83.04		74.99	RT	CL Const. SR 436	P	Pull box in asphalt pavement to be removed	45 (pvs 35)	NO		To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	
7	Duke Energy SL	2" PVC BE (SL)	517+13.78		98.84	RT	CL Const. SR 436	P	Proximity to Mast Arm MA-2	T-12	YES	TH-108	To Be Relocated	During Construction by Utility		Lighting relocations will be performed via RISA Agreement	



## Design Element Impacts to Utilities

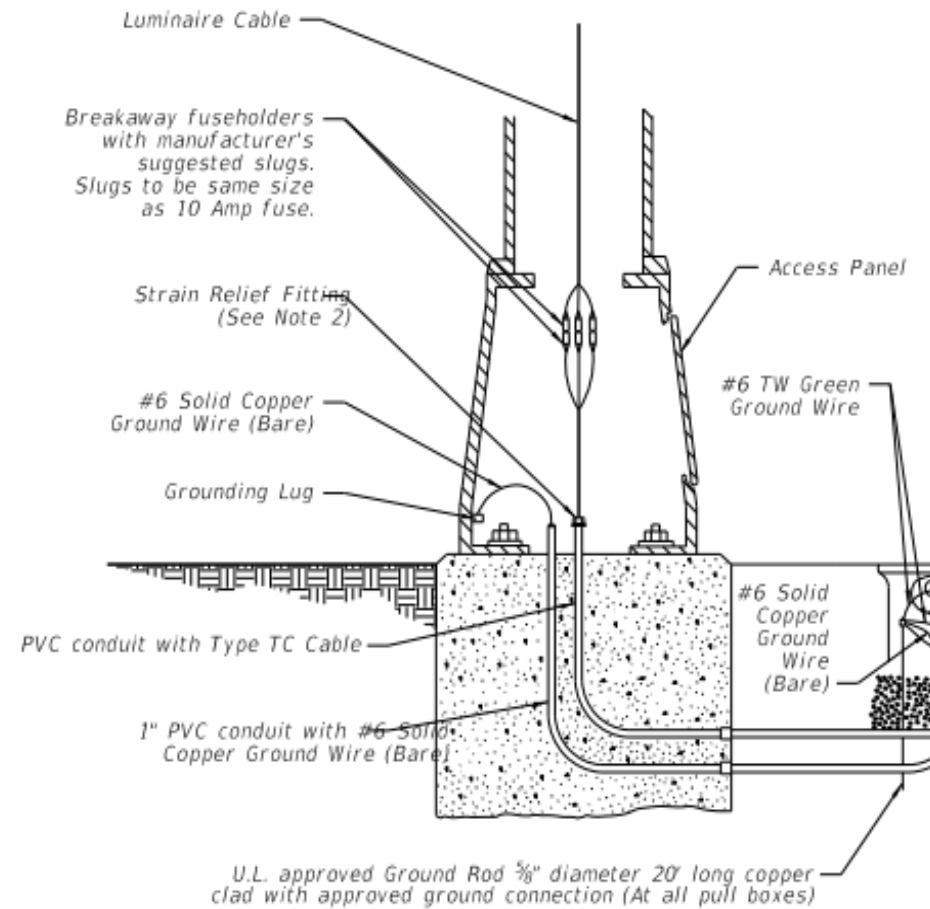
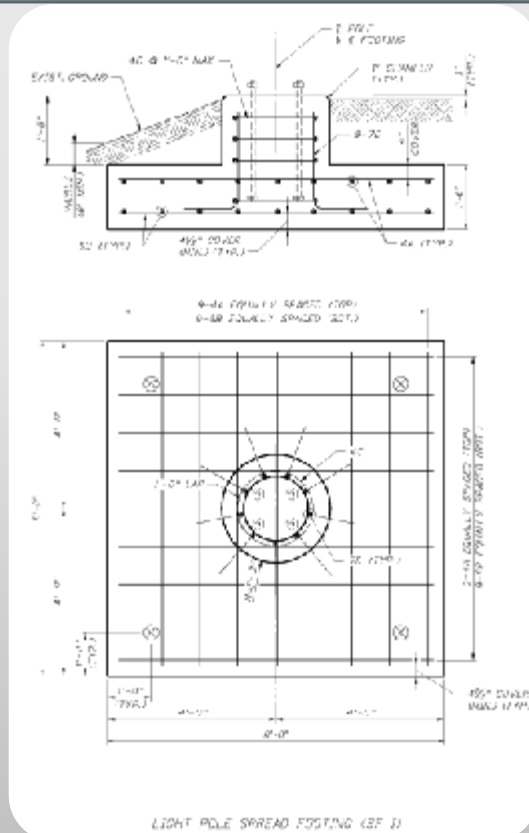
## Mast Arms, Signs and Strain Poles

- ❑ Mast Arms, Sign Foundations, and Strain Poles
- ❑ Auger diameter is larger than the foundation diameter
- ❑ Some utilities may be sensitive to vibration and could be affected by installation



## Lighting and ITS

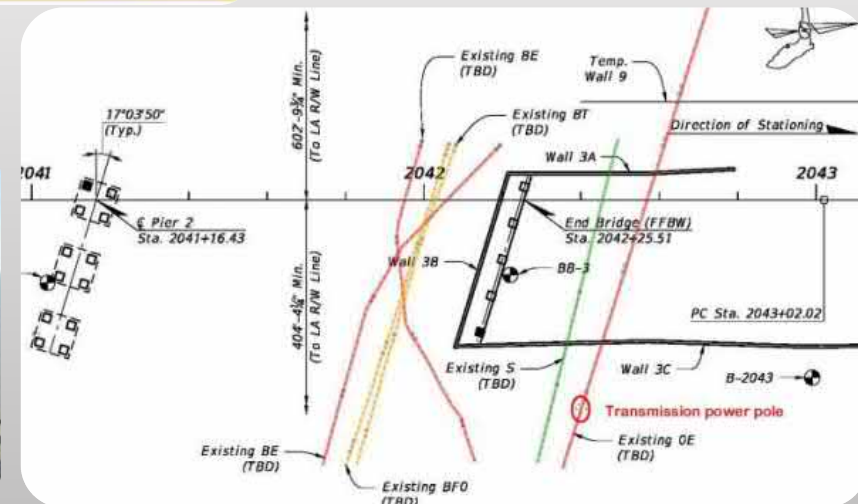
- ❑ Lighting foundations and ITS Camera poles and foundations
- ❑ Can spread footers be used to avoid utility conflicts?



## Bridges and Temporary Critical Walls

- ❑ Bridge Foundations and Construction Restraints
- ❑ Piles
- ❑ Beware of Utilities sensitive to Vibration
- ❑ Overhead Clearance
- ❑ Check OE Voltage and verify OSHA Clearances
- ❑ Joint Pole Users

<b>CAUTION</b>		
<b>REQUIRED CLEARANCES FROM OVERHEAD HIGH VOLTAGE LINES</b>		
VOLTAGE (PHASE TO PHASE)		MINIMUM
	600 - 50,000	10 FT.
OVER	50,000 - 75,000	11 FT.
OVER	75,000 - 125,000	13 FT.
OVER	125,000 - 175,000	15 FT.
OVER	175,000 - 250,000	17 FT.
OVER	250,000 - 370,000	21 FT.
OVER	370,000 - 550,000	27 FT.
OVER	550,000 - 1,000,000	42 FT.



# Wall Zone Pipe and Gravity Walls

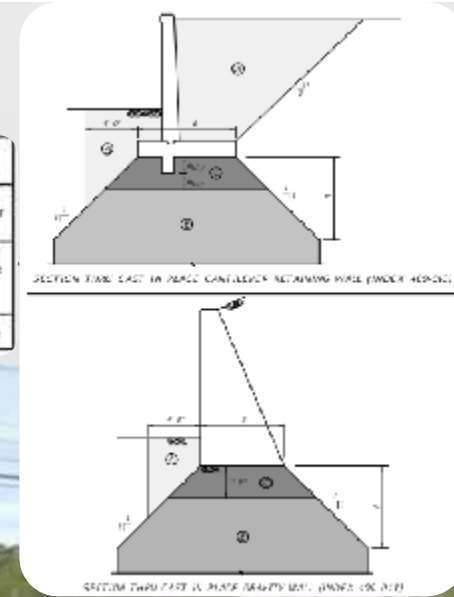
Wall Zones are not just related to MSE Walls, but apply to gravity / retaining walls as well

Utilities located next to the gravity wall may not be able to adjust or tie into their ducts

With the power poles to the right, the power company (and their joint users) will have to back up their trucks to the handrail to access and maintain the poles

Just a note: For all gravity walls, the contractor will need to perform densities 2 feet below bottom of the wall and, if not compliant, they will need to compact and re-test. This can be difficult

Wall Zone	Requirements	Comments
A	Wall Zone Pipe (see <b>Drainage Manual</b> , Table 6-1)	Not likely to leak and used when probable first indicator of leak is topsoil settlement or soil loss
B	Wall Zone Pipe. No longitudinal conveyances <sup>2</sup> allowed. Transverse conveyances must meet AASHTO LRFD criteria <sup>3</sup>	First indicator of leak is wall damage; pipe must endure unique loading with no chance of leakage
C	No pipes allowed	First indicator of leak is bridge/wall damage

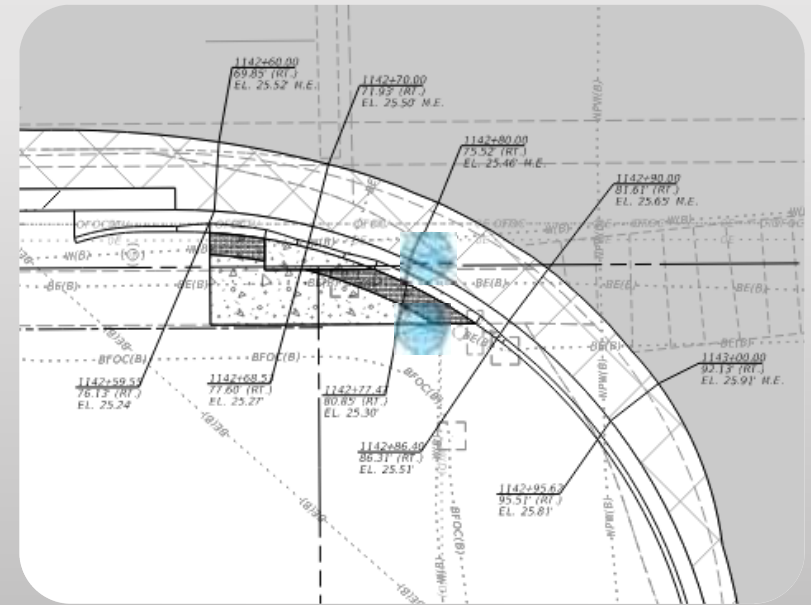
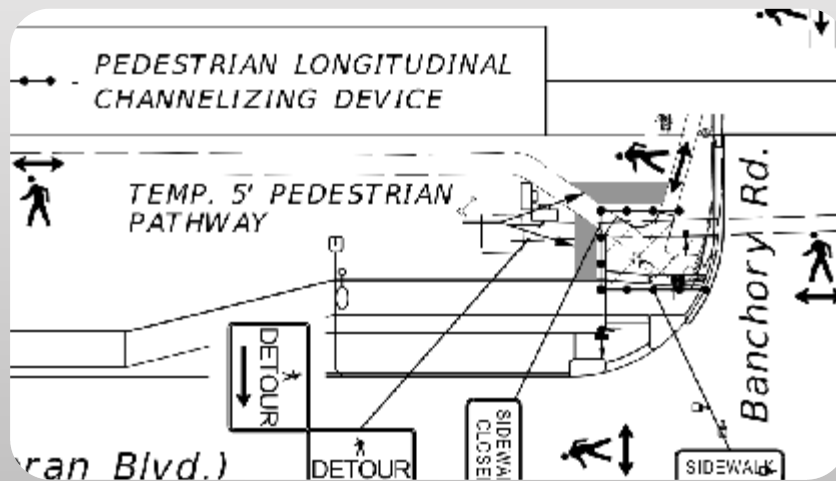


## Curb Ramps, Sidewalks and Temporary Pedestrian MOT

Curb ramps need to be reviewed for above ground appurtenances like valves , manholes, pull boxes, vaults, pedestals, meters, hydrants, guy wires

Ensure these items are not in the curb and that they are adjusted to be flush for final grade

Temporary Pedestrian MOT can present additional conflict with pedestals, guy wires, pull boxes and must meet ADA as well

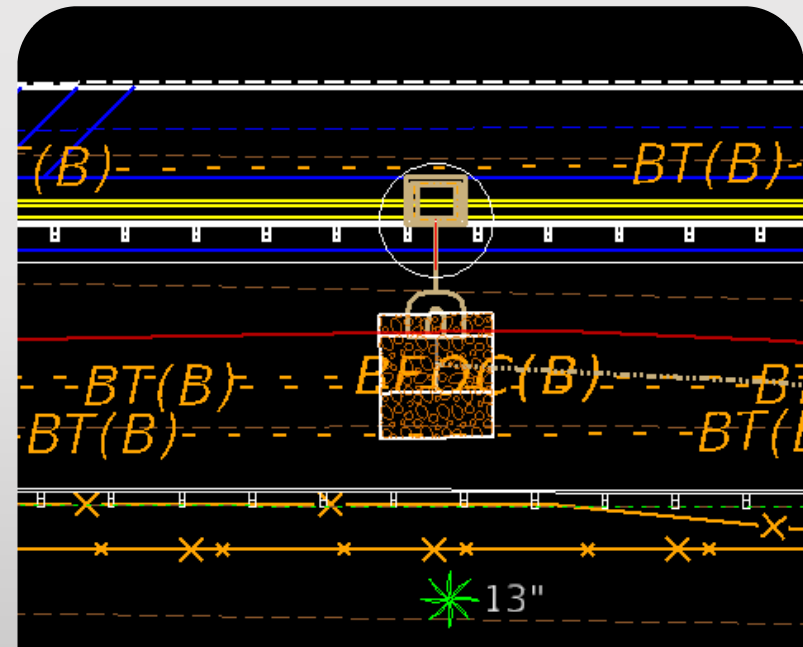
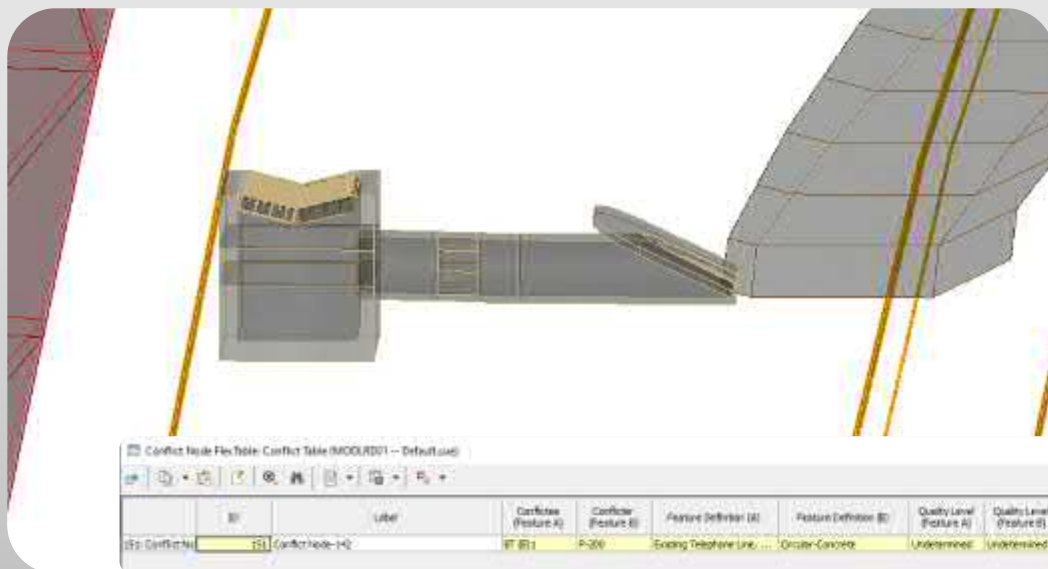


# Drainage Structures and Pipes

Drainage Structures should be VVH for utility conflicts

Constructability needs to be reviewed

NexGen Clash Detection / Utility Conflicts





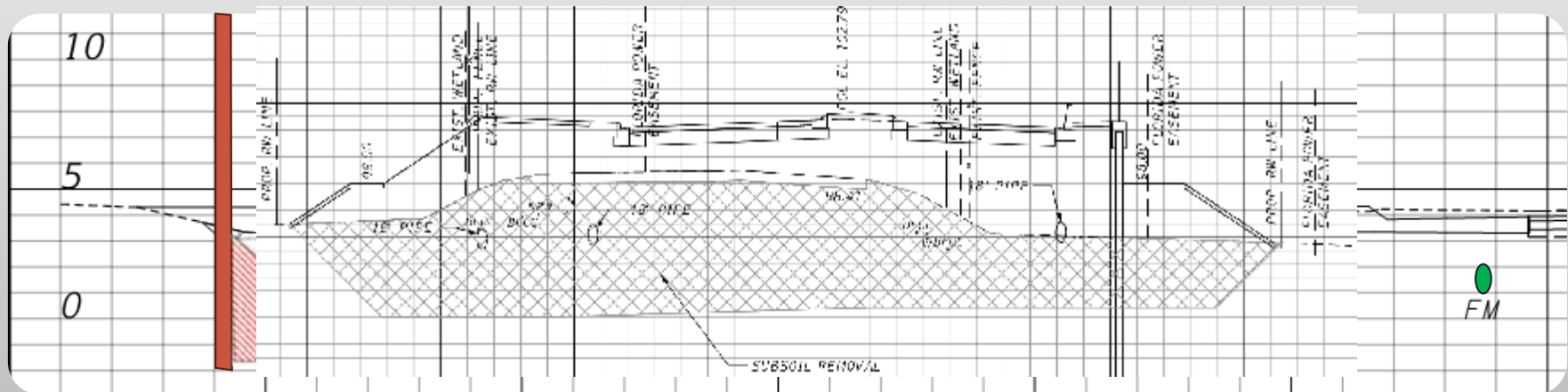
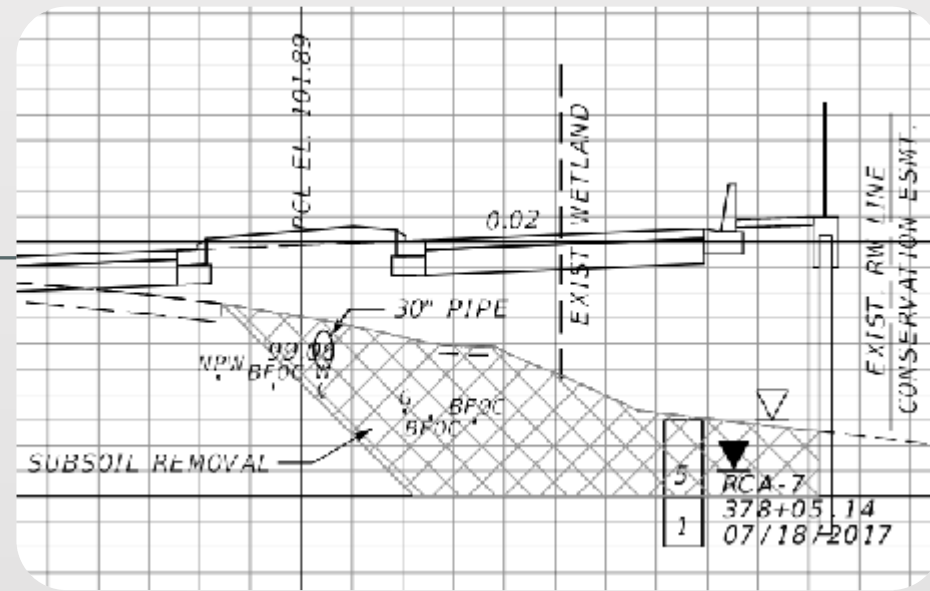
# Subsoil Removal

Need to evaluate areas of subsoil for utility impacts

Will the removal expose utilities or poles?

Need to evaluate if you are removing muck (typically deeper) versus a clay envelope (typically shallower) and how much excavation may be needed to get under neath of the muck – might need over excavation

Need to leave room for the UAOs within the r/w



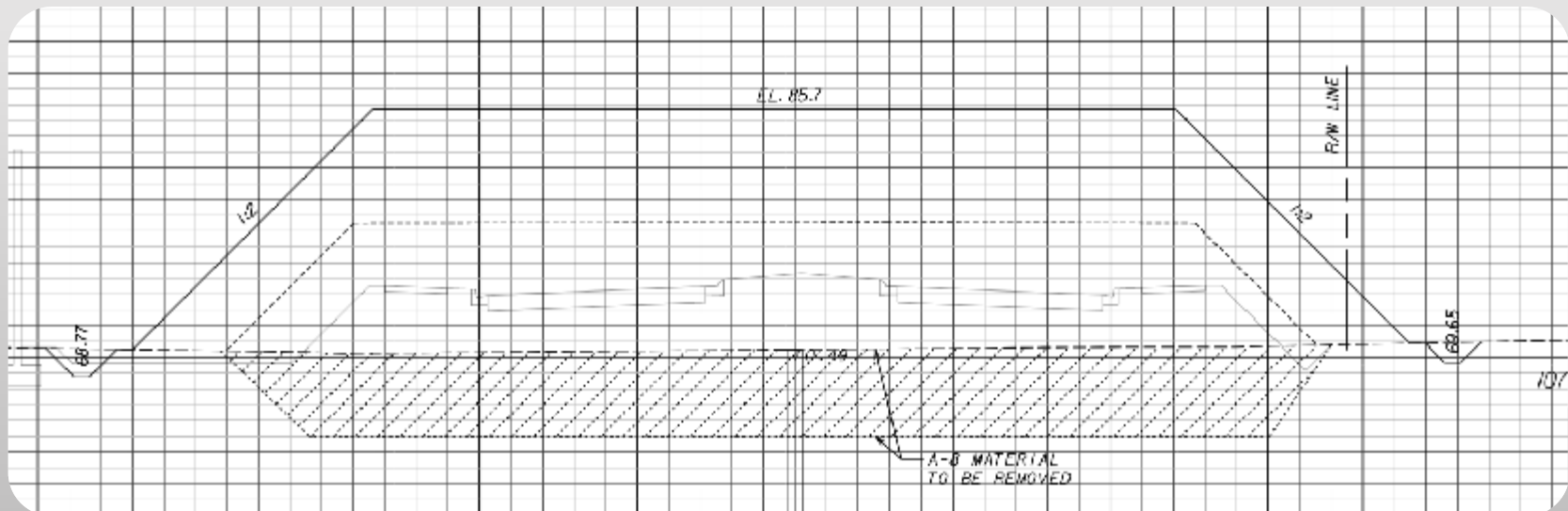
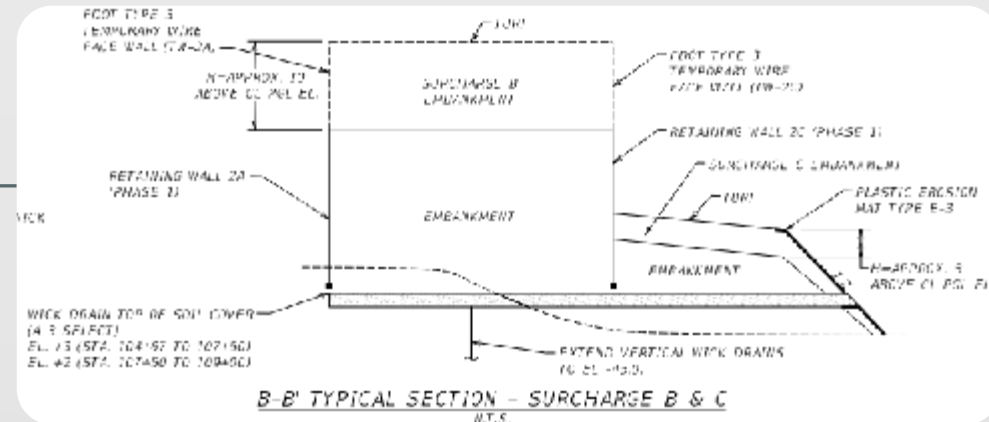
# Surcharge

Need to review surcharge limits for utility conflicts

Pressurized mains need to be reviewed for impacts from differential settlement

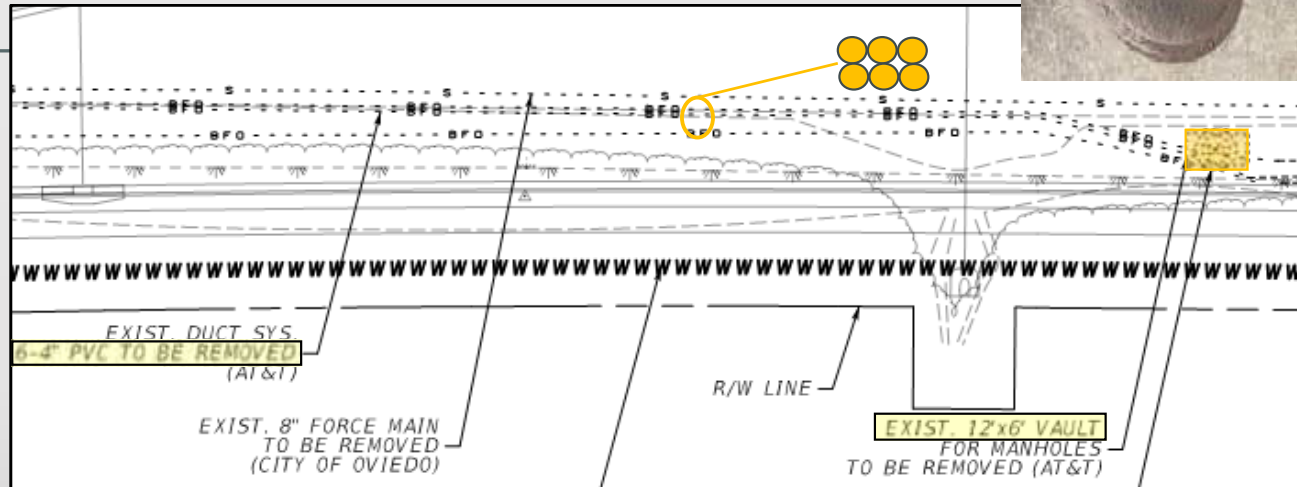
You can have both subsoil removal and surcharge

Goal is to eliminate the organics and stabilize the earth.



# Manhole and Duct Systems

- ❑ What you see on survey and above ground is not indicative of what is below ground
- ❑ Manhole / Vault Sizes
- ❑ Large conduit runs (i.e. 9-way duct bank)
- ❑ Concrete Encasement



# Critical Utilities

## Major utilities

- ❑ Natural Gas Lines
  - FGT: 90 days with 90% Plans
  - FGT: 25 ft working space
- ❑ Transmission Electric Lines
  - Typically requires 25-50 ft of offset from poles and guy wires
- ❑ Duct Banks
- ❑ Gravity Sewers (Vitrified Clay Pipe – VCP)
- ❑ Asbestos Cement
  - Water Main, Gravity Sewer, Duct Bank Encasement, Etc.

## Standard Depths of Cover

- ❑ 3 feet for Water, Reclaimed Water, Sewer Force Main, and Gas





# Utility Relocation Constraints

## Right of Way Constraints

There are locations where the UAOs have limited areas where they can relocate their facilities.

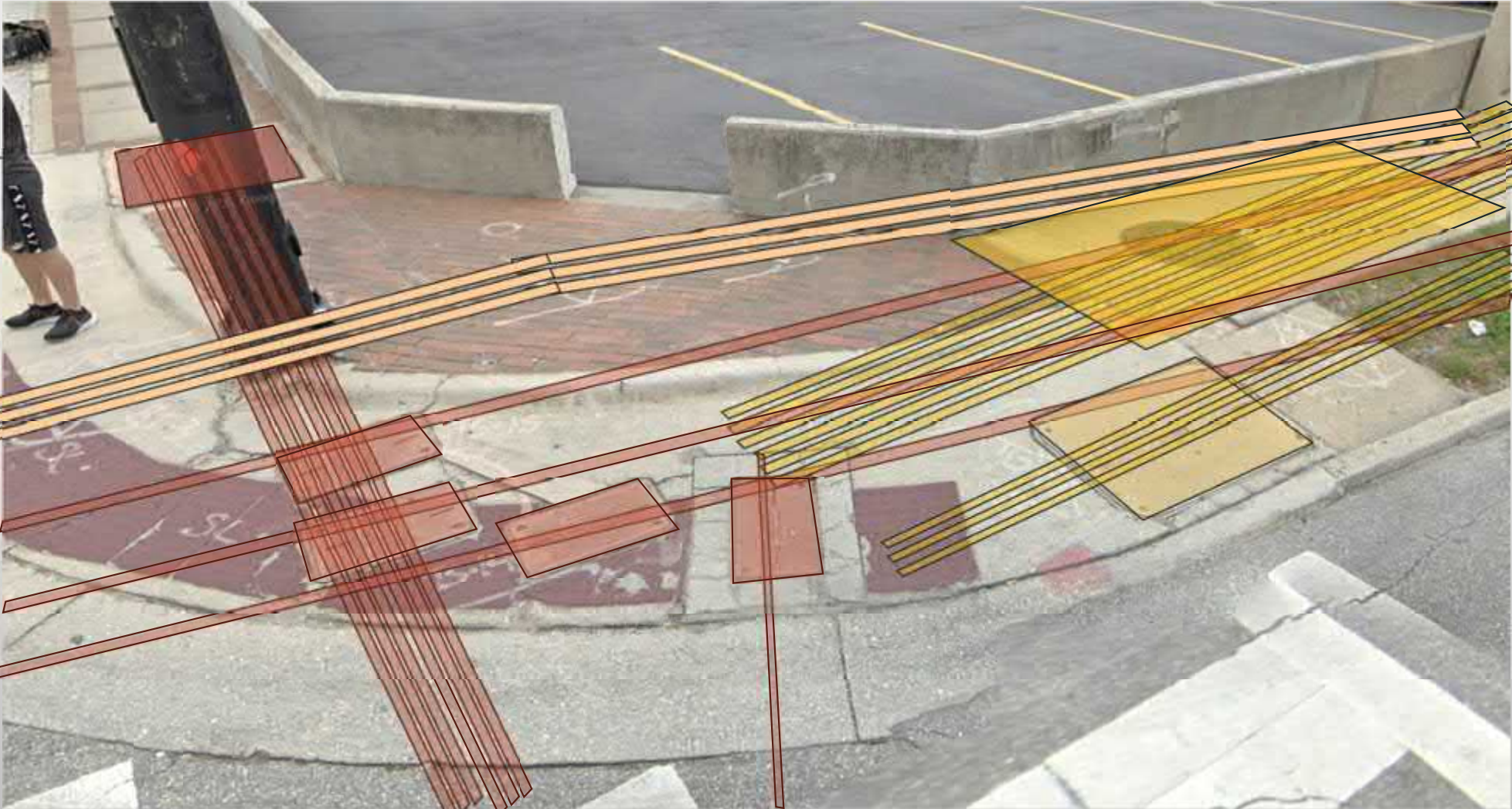
Urban Corridors present challenges for relocations due to limited space outside roadway, as well as limited space in the road as well.

New Mast Arms present challenges for the UAOs to find a clear path to relocate

New curb ramps and temporary pedestrian TCP will impact the pull boxes, pull boxes and valve covers – need to look at curb lines, transitions and landings

Shared Use Paths within tight right-of-way corridors need to leave room for utilities to remain





## Right of Way Constraints

There are locations where the UAOs have limited areas where they can relocate their facilities.

Tight right of way for overhead pole conflicts with clear zone

3R criteria vs New Construction Criteria – crash history effects when poles have to relocate when not meeting clear zone vs projects where new construction criteria

Keyhole additions at turn lanes present problems if poles at back of right-of-way already







# ADA Criteria

The FDOT has criteria on how sidewalks, crosswalks, pedestrian button locations, curb ramps and detectable warning surfaces must be constructed.

To the right is an excerpt from the 2022 ADA Pocket Field Guide

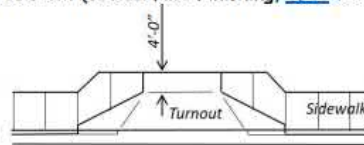
The US Access Board released new criteria on 9/7/2023.

Look for constraints to a utility like manholes and valves that can not break over

### Sidewalks

Standard sidewalk width varies, with the minimum width for new construction of 5'-0" in C1 & C2 context classification. For RRR projects, unaltered sidewalk width  $\geq$  4'-0" may be retained within any context classification. (See FDM Table 222.2.1)

Walkarounds at driveways must be  $\geq$  4'-0" wide (Index 522-003). In all cases, walking surface cross slope cannot exceed 2.0%. Sidewalk surfaces must be firm, stable, & slip-resistant (see surface Finishing, Spec 522-7).

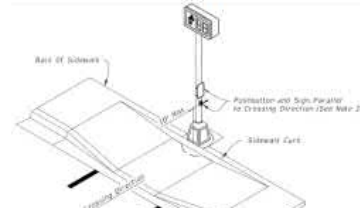


### Street Crossings

Curb ramps must be wholly contained within crosswalk markings. Crossings must meet the same grade and cross slope criteria as sidewalks (FDM 222.2.2). Consider providing a 2'-long level space at the counterslope if change in slope from a curb ramp to the street surface exceeds 11.3% (see below)

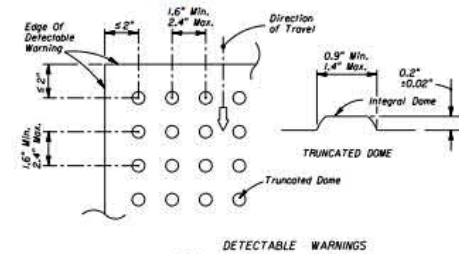
### Pedestrian Pushbuttons

Accessibility of ped buttons is determined by (1) button height and horizontal side reach; (2) level maneuvering clear space; and, (3) button & sign orientation. The ped button must be no more than 42" above the walking surface with a horizontal reach distance  $\leq$  10" from the edge of the clear area (Index 665-001). A level, clear area (with long dimension centered on the ped button) must have footprint dimensions  $\geq$  30"x48" with surface slopes  $\leq$  2.0% in all directions (FDM 222.2.2). Button orientation shall be as shown in the Figure below and as described in Note 2. For Note 3, pushbutton and sign placement must not reduce the clear space of the landing.



### Curb Ramps & Detectable Warnings

Curb ramp running slope must not exceed 1:12 (8.3%) and cross slope must not exceed 2.0% (Index 522-002). A level landing must be located at the top that is at least 4' deep and at least as wide as the curb ramp. Curb ramps are to be the same width as the sidewalk, where practicable (FDM 222.2.2). All sidewalk curb ramps must have detectable warnings, of contrasting color (e.g., red, black, or yellow per Spec 527), that are placed within 5' of back of curb and extend the full width of the walking surface (Index 522-002). "Truncated domes" are the only acceptable detectable warning pattern, as shown below (see FDOT's APL).



# Constructability, Best Practices, & Lessons Learned in Construction

NOVEMBER 2, 2023

FLORIDA UTILITIES COORDINATING COMMITTEE

33





### Constructability

- Is what on the Plans Constructable
- Is what on the RGB's Constructable
- Is what on the UWS's Constructable
- Is what on the TCP's Constructable

# UWS Language

Green Excerpt from the right:

This utility work schedule is based on FDOT plans dated in the project information box below.

Any deviation by FDOT or its contractor from these plans, may void this utility work schedule.

Upon notification by FDOT of a change to these plans, the UAO may negotiate a new utility work schedule.

FLORIDA DEPARTMENT OF TRANSPORTATION  
**UTILITY WORK SCHEDULE**

December 14, 2019

Pursuant to Section 337.403 F.S., the UAO and FDOT agree to the UAO's need for relocation or adjustment to its utilities and FDOT's need for a schedule for the UAO to effect the relocation or adjustment. This utility work schedule is based on FDOT plans dated in the project information box below. Any deviation by FDOT or its contractor from these plans, may void this utility work schedule. Upon notification by FDOT of a change to these plans, the UAO may negotiate a new utility work schedule. The UAO agrees to notify FDOT and the contractor in writing prior to starting, stopping, resuming, and completing work in accordance with this utility work schedule. The UAO shall obtain a utility permit and comply with requirements of the 2017 Utility Access/Restoration Manual (UARM) for all work done under this utility work schedule. The UAO is not responsible for events beyond the control of the UAO that could not be reasonably anticipated by the UAO and which could not be avoided by the UAO with exercise of due diligence at the time of the occurrence.

**FDOT PROJECT INFORMATION**

Financial Project ID:	Federal Project ID:
State Road Number:	County:
FDOT Plans Detail:	District Document No.:

**UTILITY AGENCY/OWNER (UAO)**

Utility Company:		
UAO Project Rep:	Phone:	E-mail:
UAO Field Rep:	Phone:	Fax:

**UTILITY SIGNATURE**

I have reviewed the FDOT plans referenced above and submit this utility work schedule in compliance with UARM Section 5 and agree to be bound by the terms of this utility work schedule.

UAO Rep. \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_  
 Name \_\_\_\_\_  
 Title \_\_\_\_\_

**ENGINEER OF RECORD SIGNATURE**

I certify this utility work schedule is compatible with the FDOT plans referenced above.

EOR, \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_  
 Name \_\_\_\_\_  
 Title \_\_\_\_\_

**APPROVAL BY DISTRICT UTILITIES**

This utility work schedule is complete and acceptable to FDOT.

FDOT Rep. \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_  
 Name \_\_\_\_\_  
 Title \_\_\_\_\_

**SECTION A: SUMMARY OF UTILITY WORK**

The below days are the total numbers of days shown for all activities in Section C of this utility work schedule. The breakdown of how these days are to be incorporated into the FDOT project and the dependence of these days upon the completion of other activities by the UAO or others is shown in Section C.

Days prior to FDOT project construction: \_\_\_\_\_ Days during FDOT project construction: \_\_\_\_\_

## How MOT Phasing Effects Constructability

Can you perform the work in the proper TCP Phasing

The majority of work on most projects falls under Phase 1

Can the work actually be pinpointed to separate phasing

Does it matter what phasing your work is in

## Things to Ponder on

- Make sure the Plans make sense
- Do the RGB's address the issues
- The UWS should address all the issues
- Is work proposed constructible with the TCP's
- Can the work be completed in different phases
- The benefits of using multiple TCP Phasing



**First Steps:**

---

Reviewing the UWS's

Reviewing the RGB's

Reviewing the Conflict Matrix

Reviewing the No Conflict Letters

Reviewing the Certification Letter

Reviewing the final plans Date





### Second Steps:

---

Is there any work in the UWS's that we can get started, before Construction time starts with Construction Survey

- Drilled Shafts
- Structures
- Multipath



**Third Steps:**

---

Can we take advantage of time we grant for issues that are known, before we start

- Can we get the Utility work done early
- Can we be more proactive by locating areas of concern
- Are we engaging Utilities for the Project



**First Steps:** \_\_\_\_\_

Are we making contact not just by email

Are we contacting everyone listed on the UWS

Are we getting responses



**Second Steps:** \_\_\_\_\_

Are we talking about the issues

Are we talking about the resolution to issues

Are we doing research before we point the  
finger



**Third Steps:**

---

What is best for the project and FDOT

Constant communication when issues arise

Working together to resolve the issues

## Best Practices Throughout the Duration of the Project from Beginning to End

Realize that the Utilities have supply issues like the FDOT has  
Partnering with the Utilities.  
Acting swiftly to NOI's  
Tracking NOI's sufficiently  
Mitigating issues to keep the job within Performance Measures  
Mitigating to keep NOI's out of Compensable Time  
Coordination, Coordination, Coordination

## Key Takeaways

Not everything is a conflict - need to do your due diligence with SUE

Review your project for proximity, temporary and constructability conflicts

Update your conflict matrix through the project lifecycle

Practice Design Avoidance - Be a good Design Partner

When in the field LOOK Up as well as down

Be responsive and act swiftly to questions/RFIs during construction

Follow the 4 c's: Communication, Coordination, Cooperation and Commitment





## Thank you

Melonie Schwartz | 407-242-4981 | [mschwartz@inwoodinc.com](mailto:mschwartz@inwoodinc.com)

Joshua Kelly | 352-584-2660 | [joshua.kelly@oz-matic.com](mailto:joshua.kelly@oz-matic.com)





# Mapping the Future

Florida Utilities Coordinating Committee

The Google Maps of the Subsurface

November 2, 2023

Presenter:

Stephanie Gardner, 4M Analytics



Project Overview

Project Name: [Redacted] - Add

Created by: [Redacted] - 3 weeks ago

Get Data

Analytics Layers

**Utility Owners**  
Based on available data on the project area. Data might be partial.

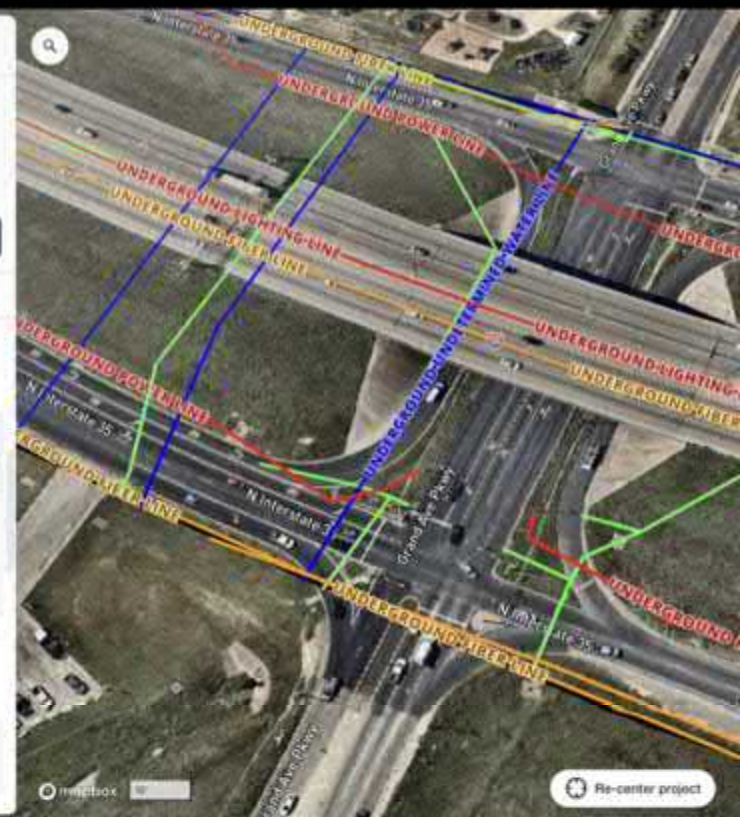
Total Utility Owners  
**34 Utility Owners**

No. of Utility Owners / Sector

Electricity	4	Communication	20
Energy	2	Water	6
Sewage	1	Undetermined	1

**Analytics**  
Location of utilities may vary in project boundaries.

Total Intersection Count  
**247 utility intersections**



# From Explosives












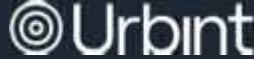




to...



# Risk Mitigation Ecosystem

Any construction project involves significant efforts of designating & locating activities that are paid for many times, which are:

Planning	Design		Construction	Maintenance
	ASCE 38-22 (SUE)		Damage Prevention	
Pursuits, Bidding & Scoping <b>\$2B</b>	SUE & Engineering <b>\$2B</b>	Private Locating <b>\$1.5B</b>	Public Locating <b>\$3.5-4B</b>	Screening & Ticketing <b>\$1.5B</b>
	  	  	  	   

# The Challenge

See the unseen

1. There is no single source for utility data
2. Huge variety of unstructured datasets
3. Underground utility detection is an extremely challenging computer vision task
4. Scalable, Repeatable and Cost Effective



who uses utility data and why is it important?

The **future** of the **utility network** is being **held back**.

The decisions made to fit the **infrastructure, databases** and **technologies** of the **1980s** —

Have become **limitations** on **innovation, competitiveness** and **market potential** for the facility owners of the **2020s**.



There is a better way.

# The Voice of our Customers





## Vision

Single source of truth for above and below infrastructure

## Mission

To build the first search engine of utility & infrastructure data



■ Pre-mapped states

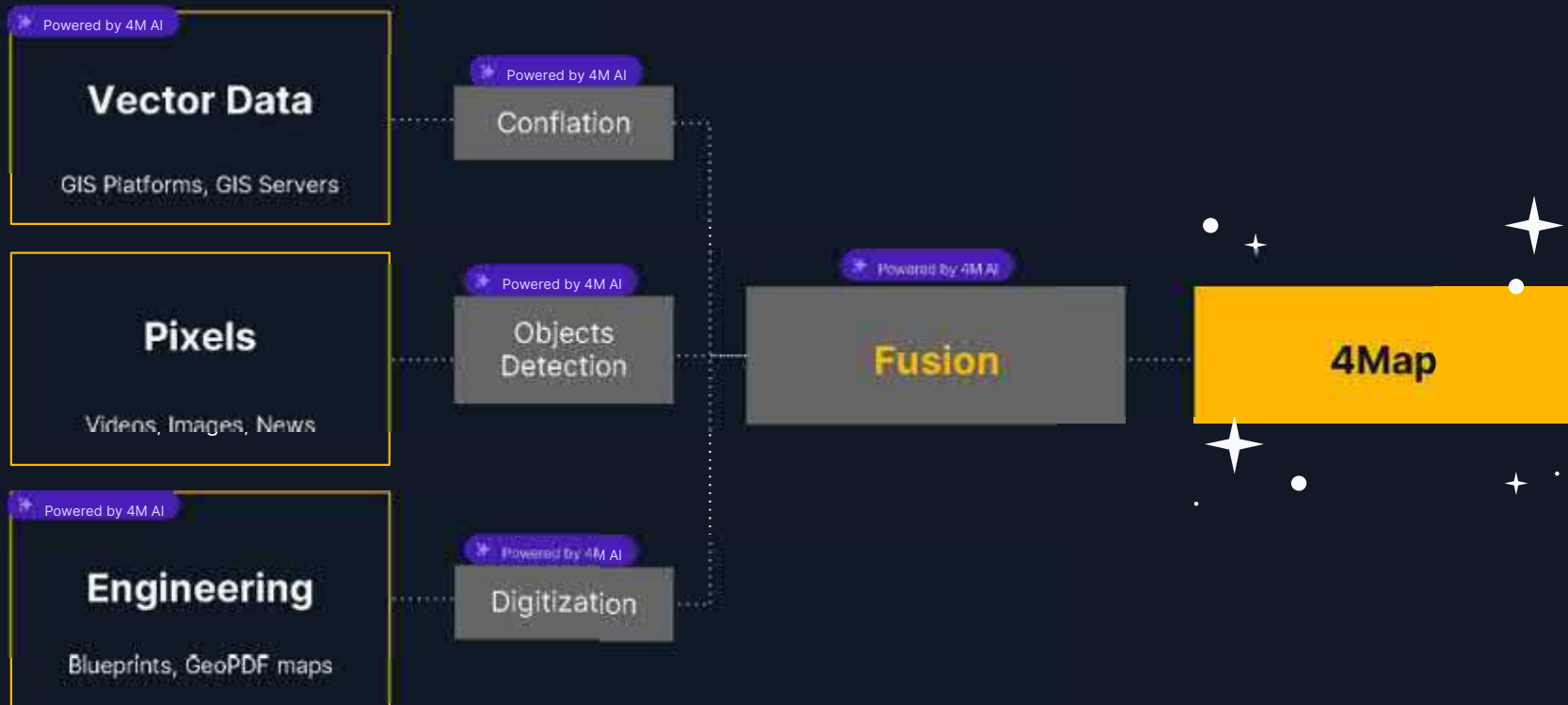
● 4M Pre-mapped by the end of 23

■ Mapping provided on-demand



# How We Do It

Data Collection To Product



# AI-Conflation Engine

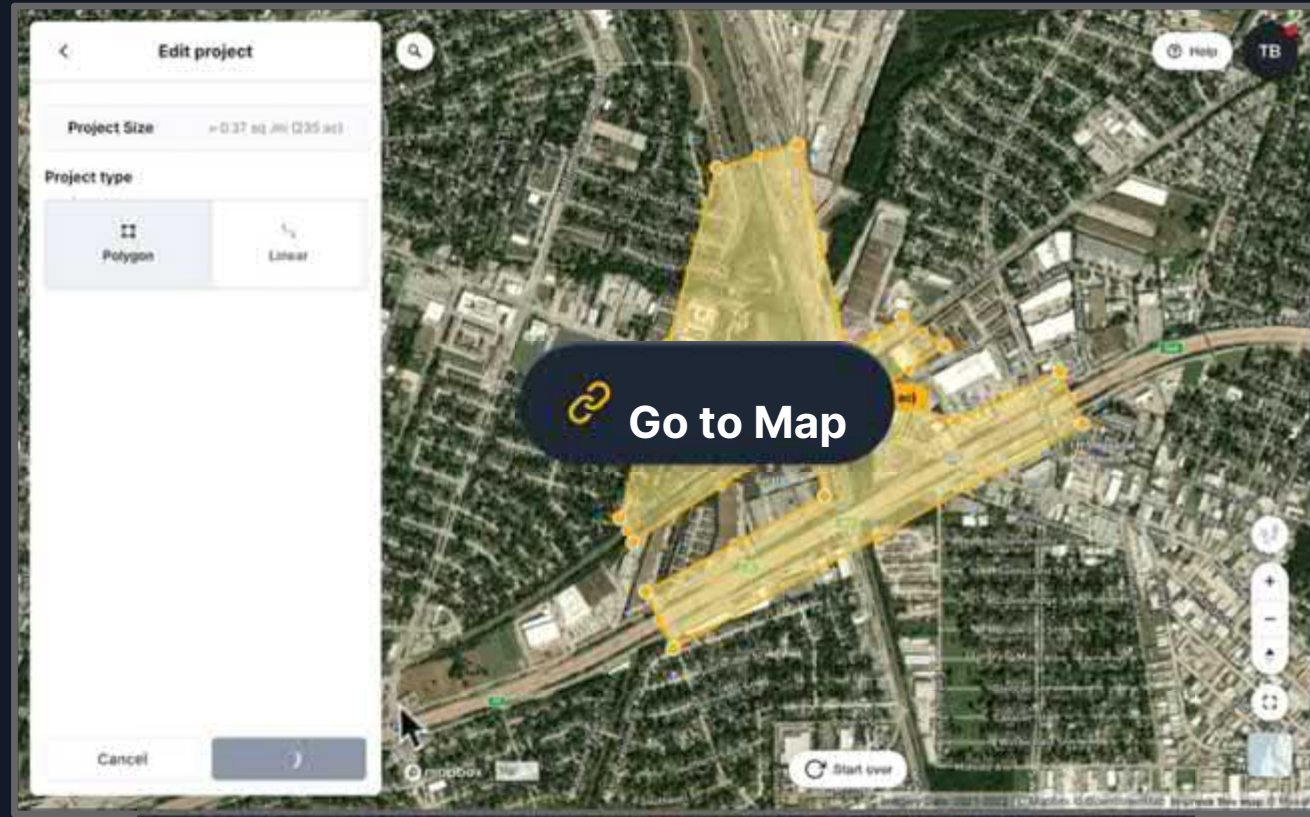
Seamlessly Assembling Multiple  
Layers to Complete the Picture

Multiple Lines with very similar trajectory,  
geometry, attributes, topology

1. Remove Duplication
2. Adjunct location
3. Extract attributes
4. Data verification & correction



# Product Demo



[Link to project](#)

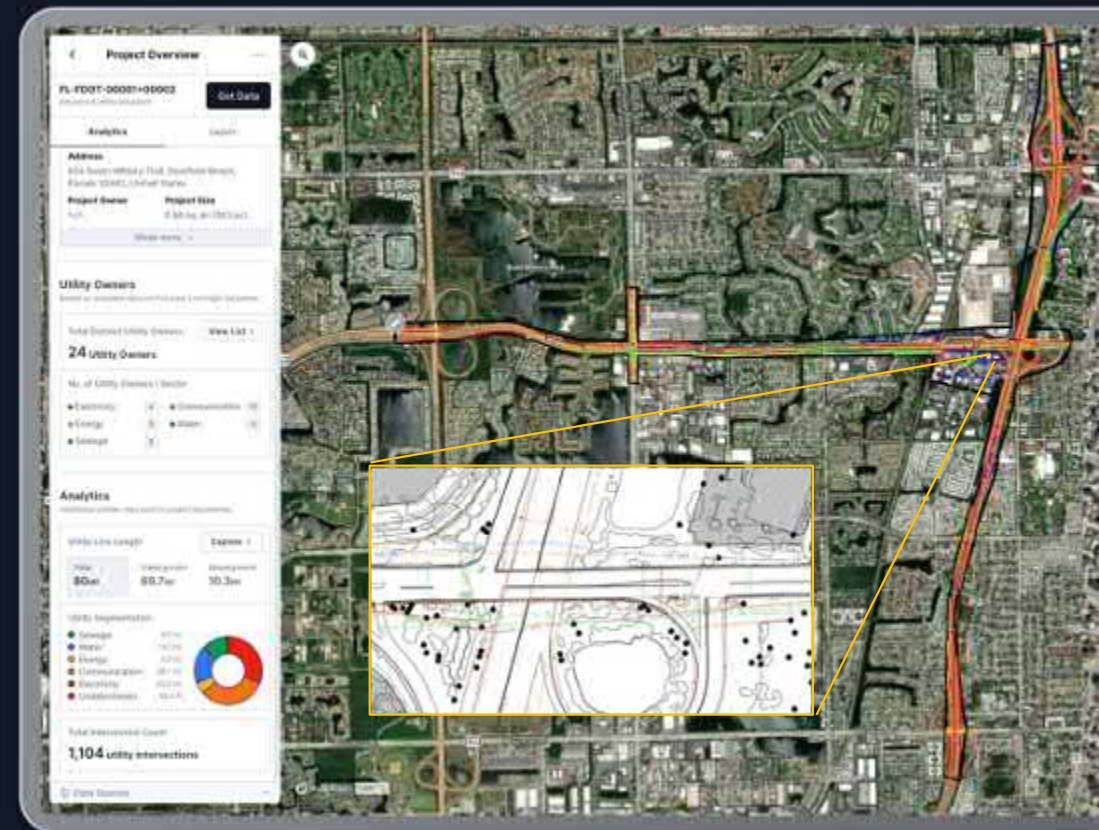
# FDOT Case Study

Utility Type	Utility ft.
Sewage + Stormwater	51,216
Water	74,448
Energy	22,176
Communication	140,976
Electricity	133,056
Undetermined	82
<b>Total</b>	<b>421,954</b>

**Project size:** 7.5 miles

**Turnaround:** Standard – 3 day / Advanced – 10 days

**Formats:** SHP, KMZ, DXF, DGN, DWG, 4MAP

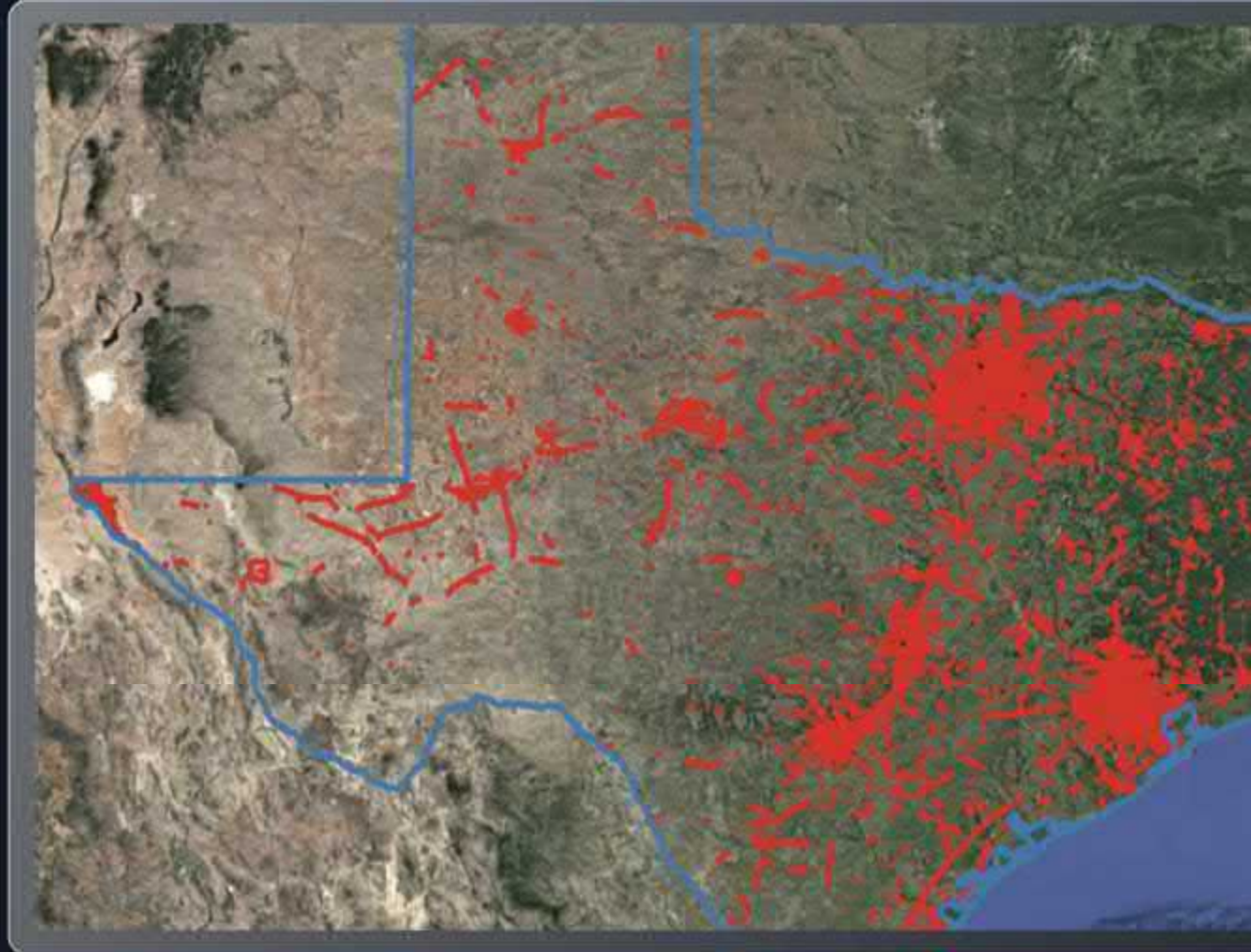


Powered by 4M AI

# Geo Tagging

Location extraction to create engineering records repository

Geotagging

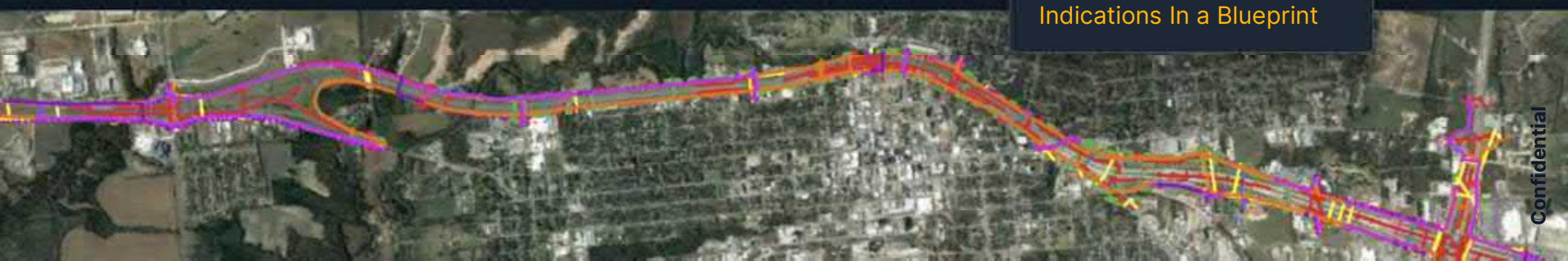


# Blueprints Digitization

AI based digitization engine transforms CAD/PDF/Image based engineering file to an accurate, geo aligned vectorial layer



Examples for Utilities Indications In a Blueprint



# Blueprints Digitization

AI based digitization engine transforms CAD/PDF/Image based engineering file to an accurate, geo aligned vectorial layer

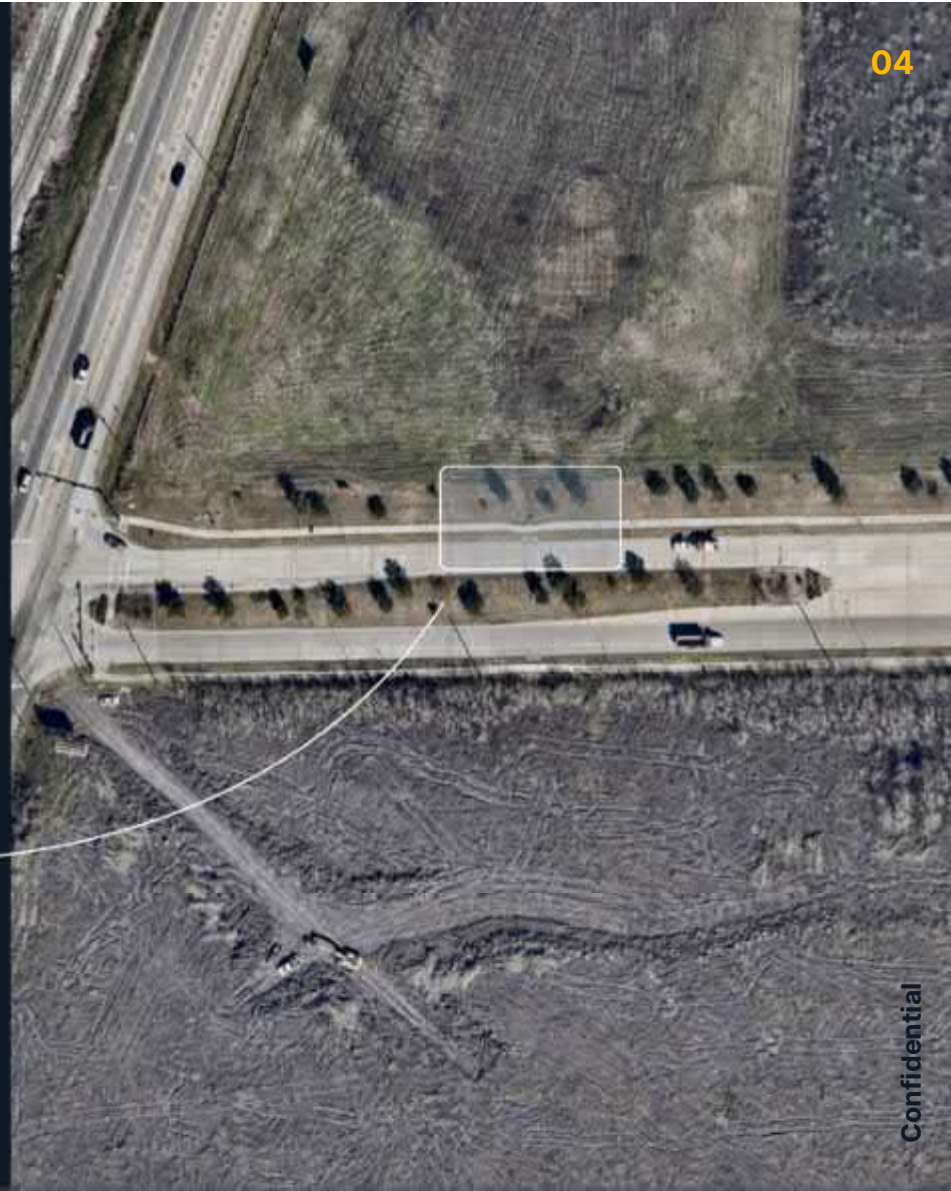
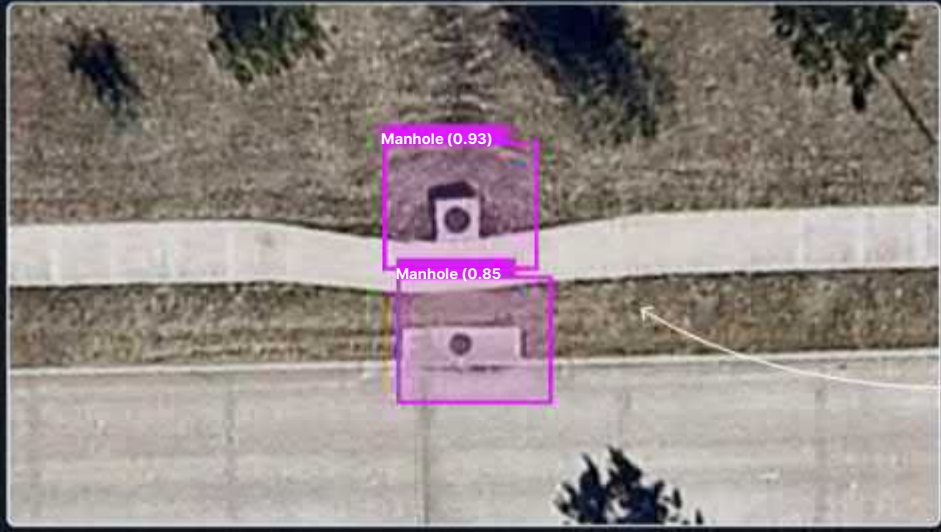




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# Object & Change Detection

Object detection algorithms scan current & historical satellite and aerial imagery, highlighting **visual evidence** that indicate the existence of buried utilities, increasing data quality, coverage and confidence.



Powered by 4M AI

# Horizontal Object Detection

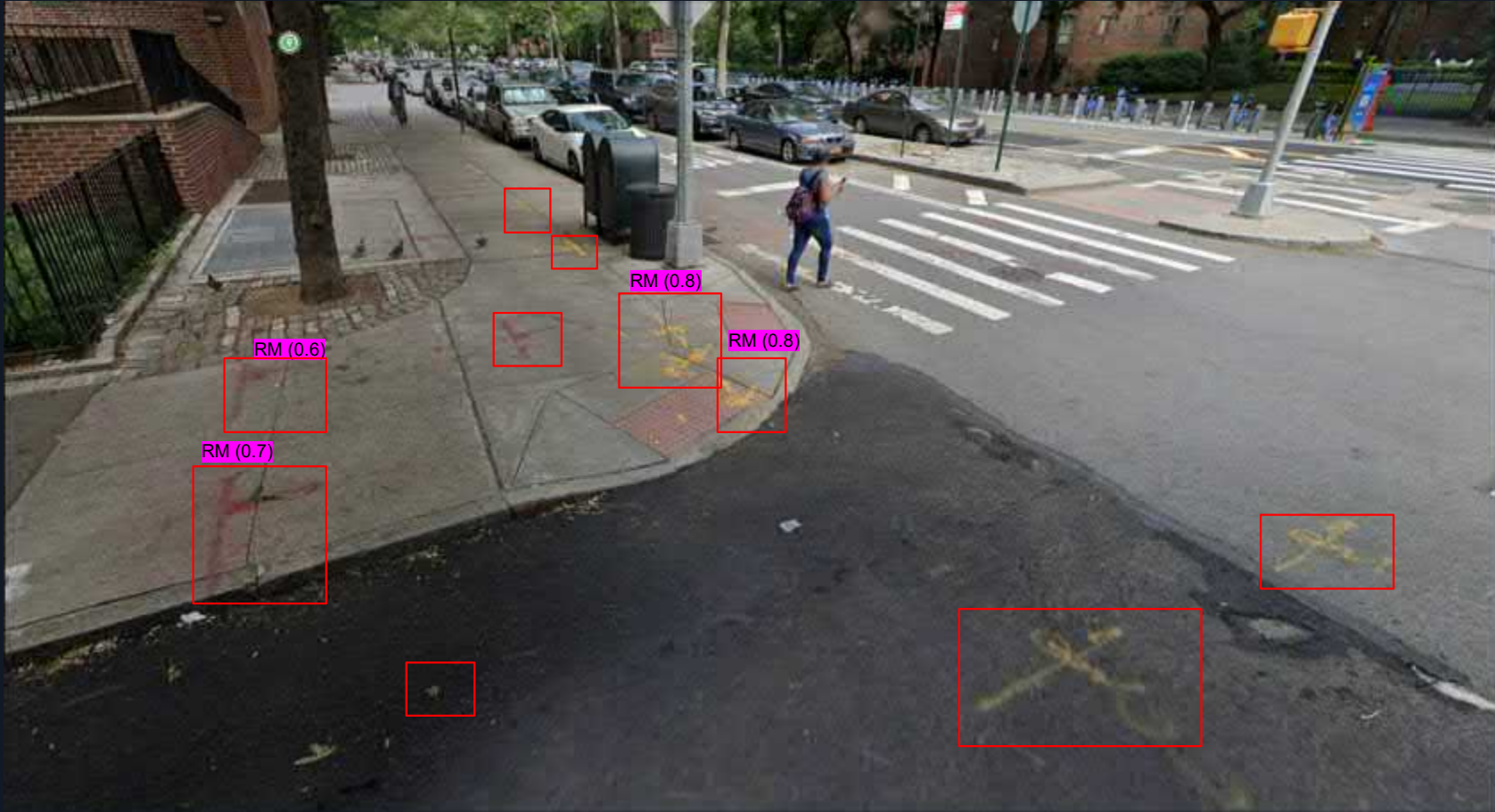


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# Horizontal Object Detection



# Roadmarks detection algorithm



Back to Menu

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# Object Detection

Historical imagery analysis



Confidential

Imagery Date: 8

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# Object & Change Detection

Object detection algorithms scan current & historical satellite and aerial imagery, highlighting **visual evidence** that indicate the existence of buried utilities, increasing data quality, coverage and confidence.



Powered by 4M AI

# Object & Change Detection

Object detection algorithms scan current & historical satellite and aerial imagery, highlighting **visual evidence** that indicate the existence of buried utilities , increasing data quality, coverage and confidence.



Powered by 4M AI

# Fusion Engine

The fusion engine integrates all our data streams. It further enriches this data with domain-specific knowledge encoded into our algorithms. The final output is a comprehensive map

4M



Confidential



Powered by 4M AI

# Fusion Engine

Telecom line in the records

4M

Confidential

Powered by 4M AI

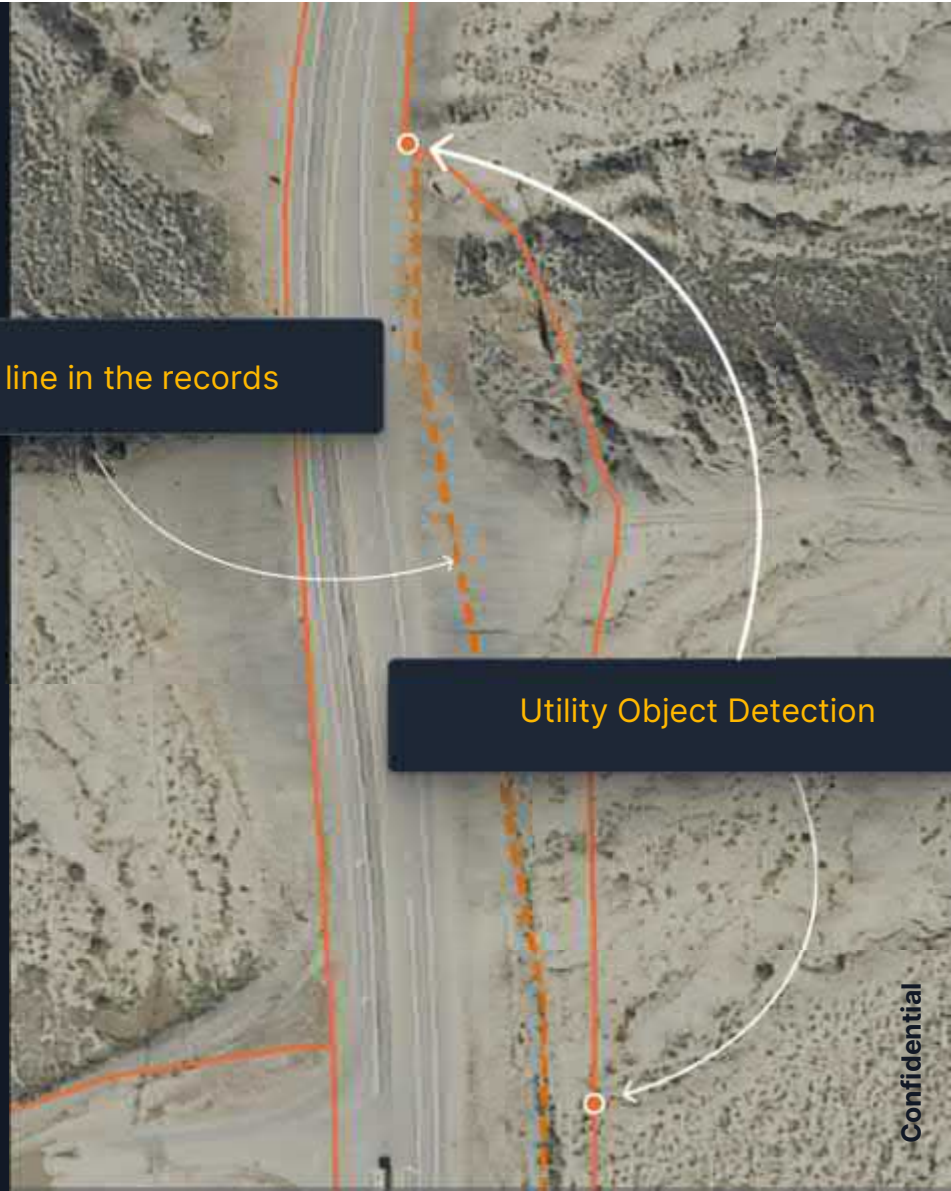
# Fusion Engine

Telecom line in the records

Utility Object Detection

4M

Confidential



Powered by 4M AI

# Fusion Engine



Unworkable slope

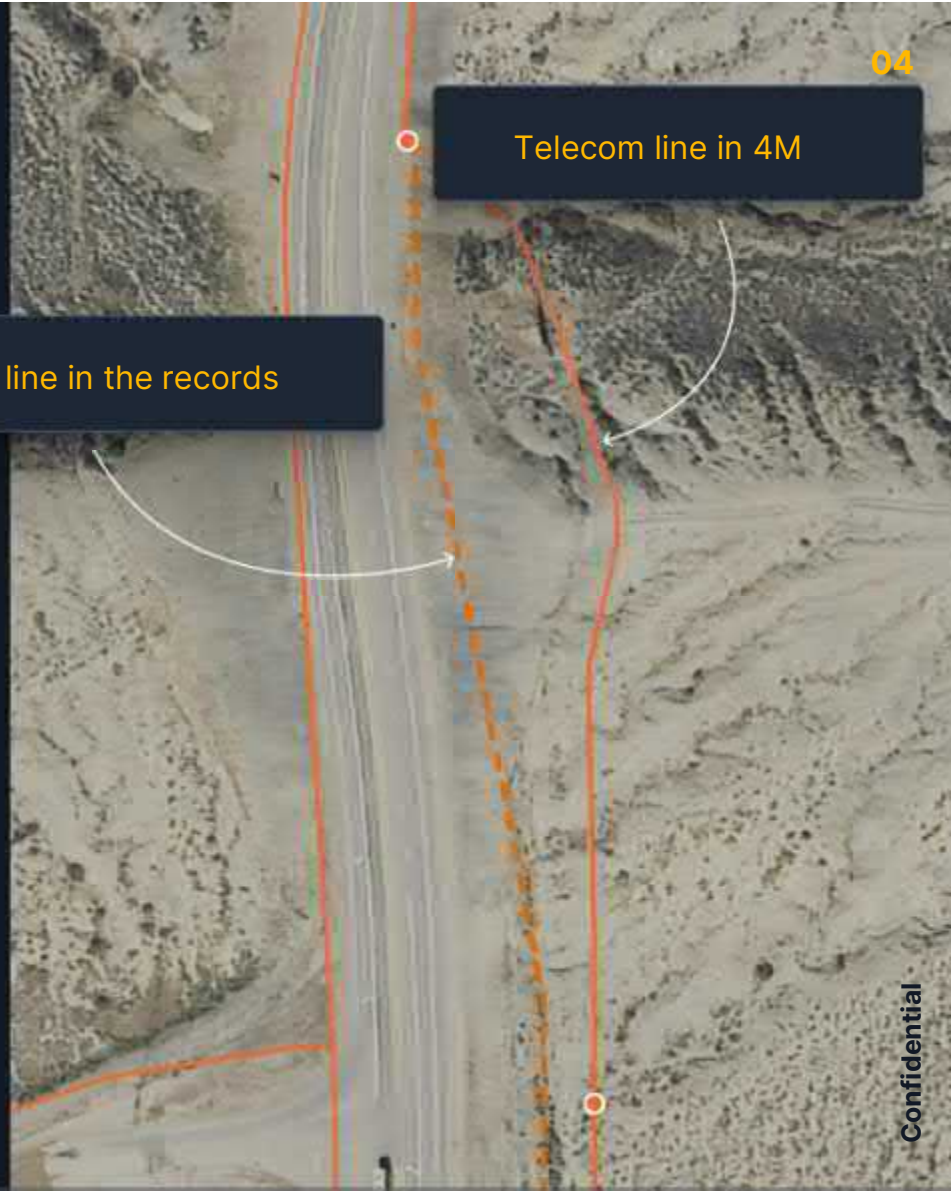
Telecom line in the records



Back to Menu

Powered by 4M AI

# Fusion Engine



Telecom line in the records

Telecom line in 4M

# Communication: FDOT

Identified an excavation for a communication line using aerial imagery from 2020.



© Nearmap 2022-2023

\*Based on 4m company collected data



Confidential

# Communication: FDOT 0001

Communication lines from public records identified solely using data and unable to confirm with visual evidence.



LINE TYPE FORMAT	
— D"UO-MATERIAL —	D" - Diameter (Inches) U - Utility Type (See Legend) O - Utility Owner Number (See table)
<div style="border: 2px solid black; padding: 5px; display: inline-block;"> <p>Unvalidated</p> <p>— — U — —</p> </div>	Visually Validated
— U — Abandoned	— U — Proposed

Powered by 4M AI

# Fusion Engine

Water line in the records

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# Fusion Engine

Water line in the records

Water line utility objects





Powered by 4M AI

# Fusion Engine

Water line in 4M data

Water line utility objects

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Powered by 4M AI

# Fusion Engine



Supporting record drawings

Water line in 4M data

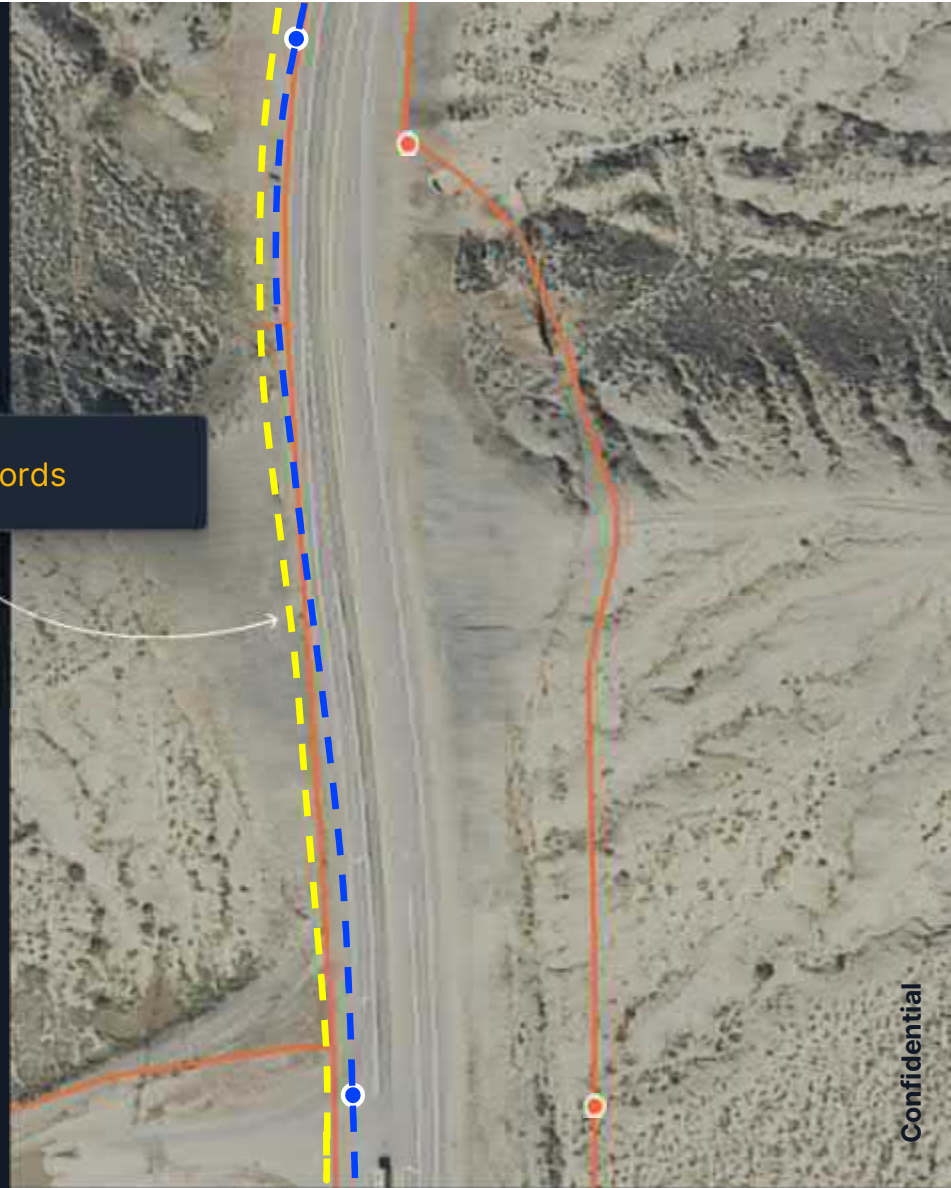
Water line utility objects



Powered by 4M AI

# Fusion Engine

Gas line in the records



Powered by 4M AI

# Fusion Engine



Supporting excavation evidence

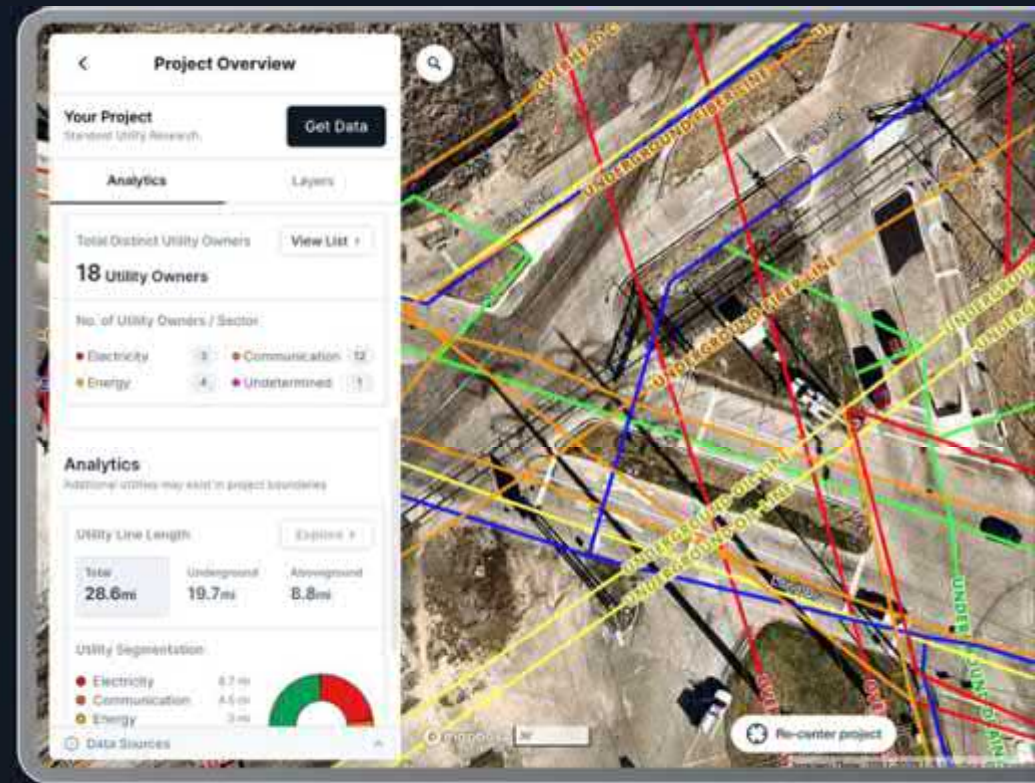
Gas line in the records





# Use of AI for Utility Mapping – ROI

- Based on **recent 111 projects** in 2023, **4M finds 56% additional utility lines** unavailable through public databases per project. \*
- During 2023, we've mapped **286 miles of abandoned pipelines** that do not appear in records.
- Using 4M reduces construction delays and cost overruns and allows utility owners to **free up to 37.1% of the project's contingency budget** \*\*



\* Publicly available sources includes geographic servers that are open to the public, as well as utility data that is owned by private utility owners but will be provided to the project owners upon request by submitting a data request

\*\* 2022 study by [Dr. Douglas Gransberg](#)

# Return On Investment

*Based on a study conducted with Caltrans*

1 mile

500 miles

10,000 miles



Status Quo	
Labor Hours	Labor Dollars
80	\$12,500
3-4 Weeks	
4M	
13	\$3,000
1-2 Business Days	

Status Quo	
Labor Hours	Labor Dollars
40,000	\$6M
Year	
4M	
6,667	\$1.5M
1-2 Months	

Status Quo	
Labor Hours	Labor Dollars
800,000	\$120M
Years	
4M	
130,000	\$30M
~6 Months	



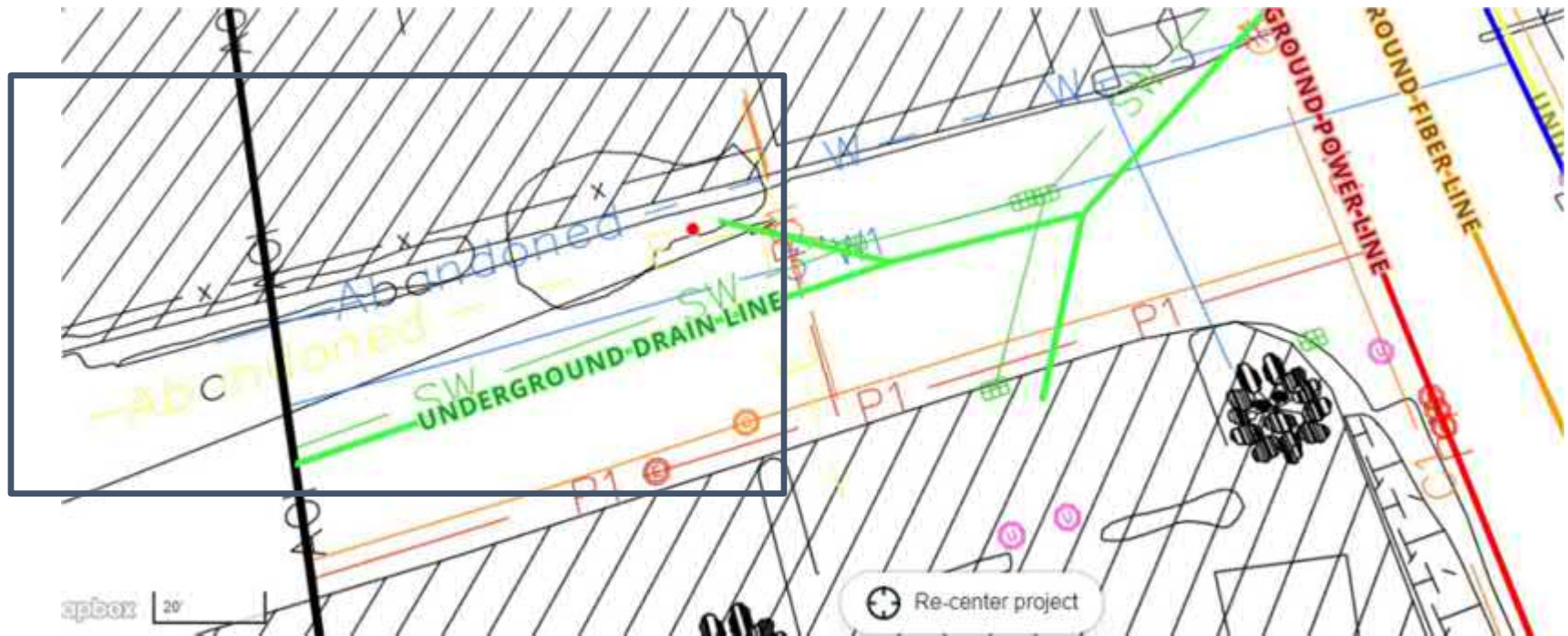
4M  
**Thanks**





# Energy and Water: \_CT\_Highway\_9\_Felton

Identified and verified an abandoned gas line and abandoned water line using conflated data from the 1980s.



\*Based on 4m company collected data

4M

Confidential



# FUCC NexGen Subcommittee – NexGen Update

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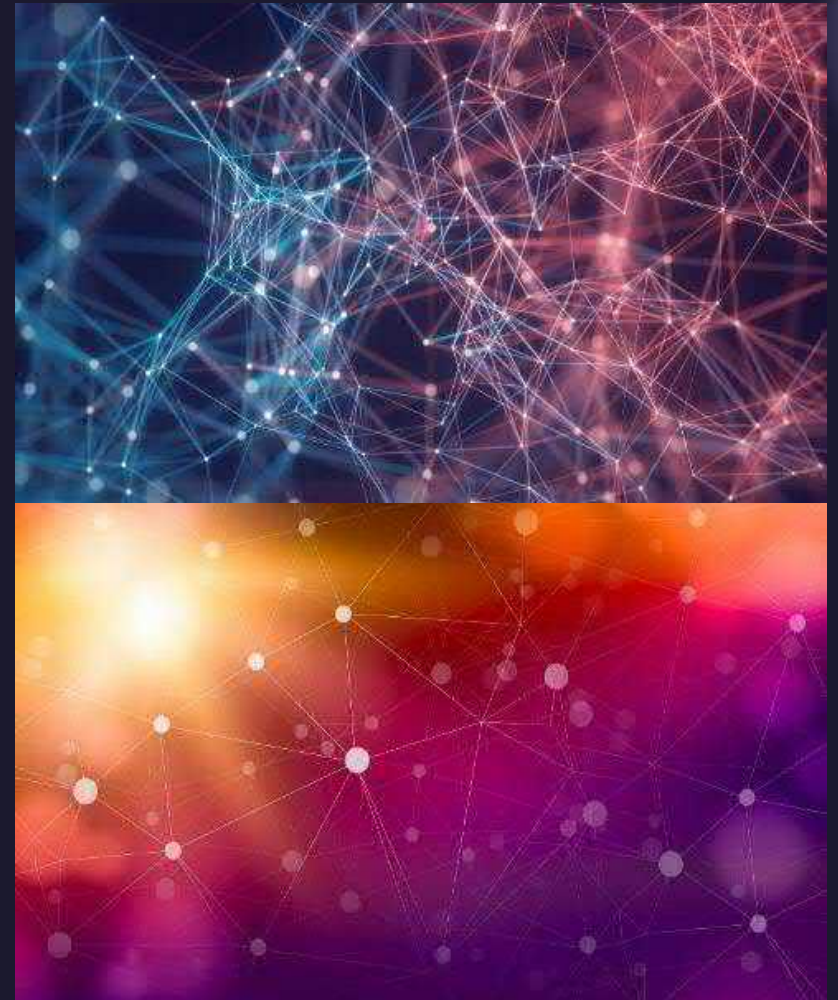
## Co-Chairs

Shaun Purvis, Brindley Pieters & Associates (BPA)

Email: [SPurvis@bpa-engineers.com](mailto:SPurvis@bpa-engineers.com)

Melonie Schwartz, Inwood Consulting Engineers

Email: [mschwartz@inwoodinc.com](mailto:mschwartz@inwoodinc.com)



# Florida Utilities Coordinating Committee NexGen Subcommittee

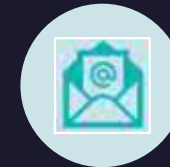
## Agenda



Overview of the FUCC  
NexGen Subcommittee



Review of the FDOT  
Response Letter dated  
7/21/2023



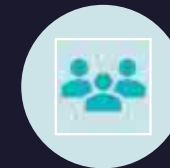
October 3, 2023 Email  
from FDOT regarding  
11"x17" Worksheets



FDOT / FUCC Working  
Groups Meetings



2<sup>nd</sup> In-Person Session –  
Thursday, November 2<sup>nd</sup>  
at 4:15 pm



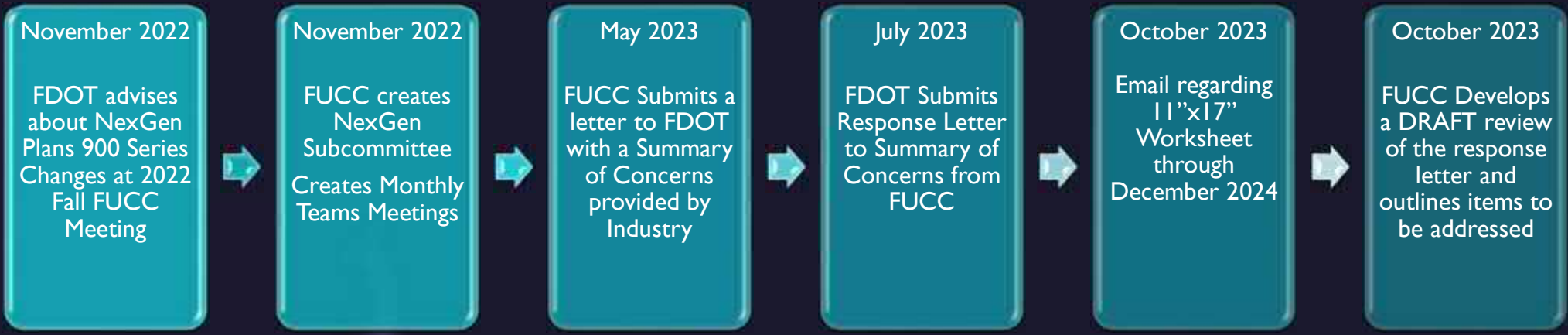
Next Monthly Meeting -  
December 11, 2023 at  
9 am via TEAMS

### Notice:

We have a diverse grouping of individuals attending from many facets within the industry. It is important to note that the opinions expressed in this meeting are that of the individual. Consultants participating in the discussion are not speaking on the behalf of or representing the FDOT or any other agencies during the discussion.

# Florida Utilities Coordinating Committee NexGen Subcommittee

## Overview of the FUCC NexGen Subcommittee



# May 8, 2023 Letter from FUCC to FDOT



5/8/2023

To: Public Utility, P.E., PCDM  
Florida Department of Transportation  
State Utility Engineer  
605 Sovereign Blvd, MS 79  
Tallahassee, Florida 32399  
public\_utility@fdot.state.fl.us

From: Florida Utility Coordinating Committee  
Steering Committee  
PO Box 2504  
Orlando, FL 32771  
Chair: jlyb@fucc.org

Dear Mr. Overton:

On behalf of the Florida Utilities Coordinating Committee (FUCC), this letter has been drafted to share with the Florida Department of Transportation (FDOT) a writing of concerns about the NextGen plans that have been brought forth by the FUCC membership.

Collectively, we would like to address these concerns and find resolution that will be mutually beneficial and agreeable. The FUCC officers, Steering Committee, NextGen Sub-committee, and general membership would like to work in partnership with the FDOT to reach a mutually agreeable resolution to the listed concerns as they arise, that may involve revising the NextGen plan. We have attached below the Summary of Concerns with the supporting meeting minutes that have been compiled to date through the three sub-committee meetings when our concern focus was used to gather the concerns of all participants. These minutes, upon contact the FUCC Steering Committee via [jlyb@fucc.org](mailto:jlyb@fucc.org) to coordinate the next steps in reaching a mutually agreeable resolution. We are hoping that the FUCC meetings can provide a forum to work hand in hand at our regularly scheduled meetings or workshops or discussions to resolve the concerns presented by our membership.

April 14, 2023



We at the FUCC look forward to being able to partner with FDOT to make this a smooth & a success for all parties involved in the process.

From: Florida Utility Coordinating Committee  
Steering Committee  
[jlyb@fucc.org](mailto:jlyb@fucc.org)  
Chair: jlyb@fucc.org  
Tara Miller

Tara Miller, DCE Energy, Steering Committee Chair and FUCC Vice Chair

Respectfully Submitted,  
Chris Sherry, [chris@sherry.com](mailto:chris@sherry.com)  
Chair

Chris Sherry, AIA Inc., FUCC Chair

Re: FUCC NextGen Sub-Committee Meeting Summary of Concerns, dated January 11, 2023  
FUCC NextGen Sub-Committee Meeting Summary, dated February 1, 2023  
FUCC NextGen Sub-Committee Meeting Summary, dated March 8, 2023

April 14, 2023

## Florida Utilities Coordinating Committee (FUCC) NextGen Plans Non-Steering Sub-committee Summary of Concerns

- Utilities that use CAD software mostly use AutoCAD (DWG) or a software other than MicroStation (\*)
- Large % of use of the NextGen Plans
- Concerns with being not on schedule to DIT (\*)

## Florida Utilities Coordinating Committee (FUCC) NextGen Plans Non-Steering Sub-committee Summary of Concerns

- Insufficient notification to UADs (\*)
- UADs not reviewed in change (\*)
- No opportunity to review, for change and providing (\*)
- No time provided for transition for UADs (\*)

## Florida Utilities Coordinating Committee (FUCC) NextGen Plans Non-Steering Sub-committee Summary of Concerns

### Summary of Concerns from the NextGen Plans Non-Steering Sub-committee Meeting Minutes at 11/11/2023, 2/1/2023 and 3/8/2023 Meetings

The following list contains the concerns that have been expressed by the current 256 participants in the list above. It does not include the dates referenced above. Please refer to the individual meeting summaries for additional information on these concerns.

Each concern has been assigned to evaluate a "C" or "H" to indicate what will need to be the meeting summary that the concern originated from. If the concern was brought up in the group or multiple meetings, the concern will reflect multiple locations. The legend for the concerns are as follows:

- (\*) January 11, 2023 (1/11/2023) Meeting
- (\*) February 1, 2023 (2/1/2023) Meeting
- (\*) March 8, 2023 (3/8/2023) Meeting

### UAD Concerns:

- Not aware NextGen projects exist
  - Some UADs have had limited experience with the NextGen Plans to properly evaluate them and their concerns (\*)
  - Worried there will be more concerns before resolution (\*)
  - As to a real world example of NextGen Plans - physical print (\*)
- Large Format Paper Size - 36 by 48, 24 by 36
  - Change in size is a major concern with many customers (\*)
  - The small of this size where the input challenge comes into play as the utility (customer) can't get their equipment what is needed today before the transition of large format (\*)
  - Concerns that they may create more delay (some of the UADs are not able to make up jobs, contracts. This will cause more time and money to be spent. Need accessible 11x17 plots (\*)
  - Concerns in regard to marking up downloadable plots on large format plots in PDFs (\*)
  - PDFs not plot sized bigger and field concerns to cut in the field (\*)
  - Plot printing does not help (\*)
  - No easy way to scale them (\*)
  - Large format PDFs not useful (\*)
- Cost associated with purchasing software to support NextGen
  - Cost prohibitive for UADs to maintain to utilize a license (\*)
  - Costs associated with the software (MIS) personnel to have latest equipment (\*)
  - Costs associated with technology every generation (\*)
  - UADs do not have plotter (\*)
  - Cost prohibitive to send to printing company, for UADs (\*)
  - UADs are backward with these additional costs (\*)
- FDOT has not provided documentation, manuals or State Gazette
  - No documentation has been provided regarding the UAD to mark up large format (\*)
  - No documentation has been provided with format change (\*)

# July 21, 2023 Response Letter from FDOT



Florida Department of Transportation

405 Southeast Street  
Tallahassee, FL 32399-6430

JARED M. FORD, P.E.  
SECRETARY

July 21<sup>st</sup>, 2023

HON. DESAUN  
GOVERNOR

Mr. Chris Stamer, Chair  
Ms. Tara Miller, Vice Chair  
Florida Utility Coordinating Committee (FUCC)  
PO Box 2561  
DeLand, FL 32721

**Subject: Utility Coordination using NexGen Plans**

Mr. Stamer and Ms. Miller:

We have received your letter dated May 8, 2023, and wish to thank you for sharing your concerns. Utility coordination is critical to the success of delivering the Department's work program and FDOT will work diligently with your committee and other interested stakeholders to resolve any issues that are a barrier to completing the necessary process. We support your recommendation to hold an in-person workshop to discuss and explore mutually agreed upon solutions that address the needs of the Utility Agency Owners (UAO).

Below are our initial responses to the "Summary of Concerns". We look forward to further discussions on these topics.

1. Concern: Not many NexGen projects to date.

The use of FDM 900 series (Model-centric) for plans production has been required for projects developed using Bentley's Open Roads Designer (ORD) CADD platform for more than four years. What is called "NexGen Plans" have been making their way to construction on increasing numbers over the last year. Examples of these plans will be provided.

2. Concern: Large Format Sheets (24"x36", 36"x48", or 36"x72").

FDM Table 900.3.1 provides a summary of allowable sheet sizes for each sheet used in the Contract Plans. When multiple sizes are allowed, the designer is to select the size that will most efficiently display the information. The information is complete and to the same scale regardless of sheet size selected.

When the large format size is selected for the Contract Plans, and the UAO has expressed the need for 11"x17" paper prints, the Department can provide Work Sheets. These Work Sheets have the same content and accuracy as the contract plan sheet.

[www.fdot.gov](http://www.fdot.gov)

Mr. Chris Stamer and Ms. Tara Miller  
June 20, 2023  
Page 2

3. Concern: Costs associated with purchasing technology to support NexGen.

Plans have been delivered to UAO as PDFs for more than 15 years. UAO staff should be familiar opening and viewing these files on a computer (desktop or laptop) using a free PDF Reader. PDF Readers also provide the ability to measure, markup, provide comments, and zoom in to get a better view of areas of concern.

It is acknowledged that some UAOs that are not as advanced with technology and require paper plans for field work. As stated above, 11"x17" Work Sheets can be provided for large format contracts plan sheets.

For a project requiring utility coordination, it is expected that a plan set would have no more than three large format sheets. The approximate cost to plot a black & white large format sheet at a reprographics company (Staples, Kinko, Blueprint Printing) is as follows:

• 24"x36"	\$2 - \$3
• 36"x48"	\$4 - \$8
• 36"x72"	\$8 - \$10

4. Concern: FDOT has not provided documentation, mandate, or State Statute.

The transition from legacy plan sets (FDM 300 series) to model-centric plan sets (FDM 900 series) began in the fall of 2018. This transition was caused by a change in the CADD application used to produce the plan sheets. As part of the transition, large format plans were introduced to support the Department's digital initiatives, increase plans production efficiencies, and adapt to the new workflows required by the new CADD platform.

It is acknowledged that the UAM 5.1.2 states that "project drawings are provided to the UAO for markup in an agreeable format". Additional discussions are needed to jointly determine what is needed for UAOs to complete their work.

5. Concern: Utility Work Sheets

The information provided in the Work Sheets is mirror copy, and at the same scale as the large format contract plan sheet. Currently, it is not the intent to add call outs to the level required of a contract plan set. There may be Work Sheets that do not have certain call outs. If the user is unsure what the line is representing, they will need to look at a previous sheet that has the call out, or the contract plan sheet for clarification, and then note it on the sheet that does not have the call out.

The Department's staff hour forms are being modified to compensate consultants for the development and delivery of Work Sheets.

[www.fdot.gov](http://www.fdot.gov)

Mr. Chris Stamer and Ms. Tara Miller  
June 20, 2023  
Page 3

6. Concern: New Drainage Structure Sheet

The Drainage Structure Sheet contains plan view and profile views that show vertical and horizontal relationship between existing utilities and drainage structures. The table data provides flow line and structure bottom elevations. The Department also provides a Utility Conflict Matrix to further identify locations of concern.

The major change is the production of profile views in lieu of drainage cross sections. A profile view of the drainage system is shown from the highest structure elevation to the outfall, illustrating pipe, structures, utilities, and existing and proposed ground.

7. Concern: Cross Sections Sheets

Cross section sheets are required to be generated and delivered separately (outside the plans set) for each design phase submittal. The Department's staff hour forms continue to have a line item to produce cross section sheets.

These sheets are batch plotted and most often are large format sheets. These sheets are considered informational and not a contract document.

8. Concern with electronic format

The Department provides all required documents in PDF format. The use of a CADD application is not needed.

9. Large File size of the NexGen Plans

One large format sheet can display up to 2 miles of the project corridor. That same 2 miles would require 15 11"x17" sheets. The large format sheet is significantly smaller in file size than the equivalent 11"x17" sheets. It is when aerial images are used in a plan set that the file size can be big.

10. Permitting Requirements per UAM

Profile views of the drainage structure system is provided in the plans. Drainage structure cross sections are no longer produced. Cross section sheets are provided as a separate PDF. Further discussion is needed to understand the issues with permitting.

We look forward to partnering with FUCC to assure continued success with the utility coordination process.

Digitized by  
Patrick Overton

Patrick Overton, P.E.  
FDOT State Utility Engineer

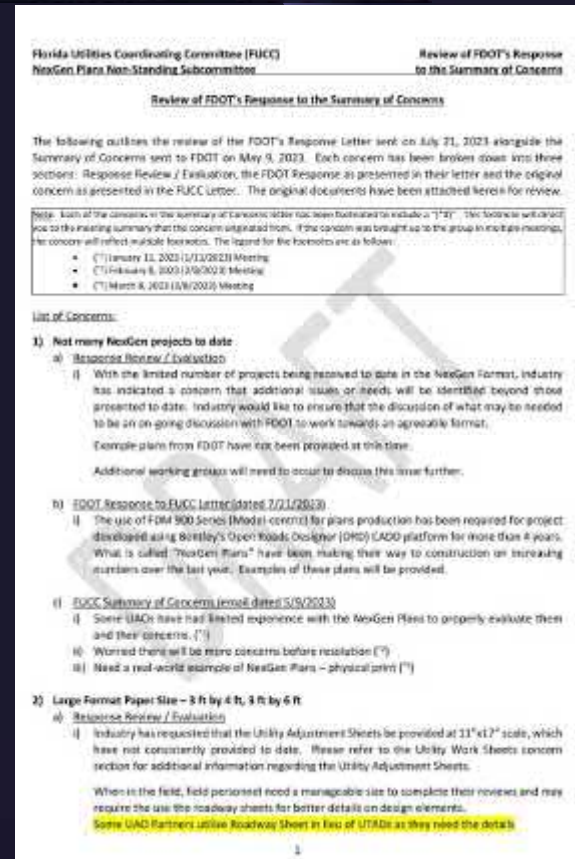
[www.fdot.gov](http://www.fdot.gov)

# Florida Utilities Coordinating Committee NexGen Subcommittee



## Review of FDOT's Response Letter

- A review was completed of the FDOT's response letter, and a draft review summary has been developed that compiles:
  - Review / Evaluation of the response
  - Excerpt from FDOT Response Letter
  - Excerpt from FUCC Summary of Concerns
- DRAFT Review has been sent to NexGen Subcommittee members to review and comment
- Comments will be gathered through the Wed, 11/1/2023 Subcommittee Meeting at the Fall FUCC Conference and a recommendation with the review will be submitted to the FUCC Steering Committee for their consideration





# Florida Utilities Coordinating Committee NexGen Subcommittee



## 10/3/23 FDOT Email on 11"x17" Worksheets

- Email indicates that 11"x17" worksheets will be provided
- No modifications or edits will be done, like additional labeling, match lines, callouts, etc.
- They are being provided for informational purposes and will not be signed and sealed
- Only will be provided through December 2024 to allow construction and utility industries more time to transition to large format

**From:** Hiers, Paul <Paul.Hiers@dot.state.fl.us>  
**Sent:** Tuesday, October 03, 2023 1:11 PM  
**To:** FDOT-DDE <FDOT-DDE@dot.state.fl.us>; FDOT-DCPME <FDOT-DCPME@dot.state.fl.us>  
**Cc:** Shepard, Michael <Michael.Shepard@dot.state.fl.us>; Lattner, Tim <Tim.Lattner@dot.state.fl.us>; Danforth, Vern <vern.danforth@dot.state.fl.us>  
**Subject:** Creating 11x17 Worksheets

DDEs and DCPMEs,

In recent meetings with industry it was agreed that Worksheets for large format contract plan sheets will be included in the CADD.zip or BIM.zip in the **3DDeliverables** folder. Further, it was agreed to place the final batch plotted cross sections in this folder as well. This practice should be implemented as soon as practical and continue through Dember 2024 to allow the construction and utility industry more time to transition to digital usage of large format sheets.

Work Sheets are 11x17 PDFs created using the same master design files that created the large format plan sheet. It is not expected that the work sheets will be modified or edited in any way (no additional labeling, match lines, callouts, etc.). These PDFs are for information only (not signed and sealed).

Instruction for creating Worksheets can be found here: [Creating Worksheets for Large Format Plan Sheets - YouTube](#)

The time it takes to create these worksheets is minimal and should not require a supplemental agreement for consultant produced plans.

Please forward this email to project managers, district production staff, and your consultants

Thanks,

Paul Hiers, P.E.  
Manager, Production Support Office  
Central Office, Tallahassee  
Office (850) 434-4324  
Cell (850) 688-0341



# Florida Utilities Coordinating Committee NexGen Subcommittee



## FDOT / FUCC Working Groups Meetings

- Looking at 5 primary working groups
  - Large Format Paper Size
  - Drainage Structure Sheets
  - Utility Worksheets / 11x17 Utility Adjustment Sheets
  - Cross Section Sheets
  - Permitting Requirements with NexGenPlans
- Looking for representatives from all segments within Industry
- Complete the survey!
  - <https://www.surveymonkey.com/r/RY2XRWV>



# Florida Utilities Coordinating Committee NexGen Subcommittee

## Links

- FDOT Model-Centric Plans

- <https://www.gotostage.com/channel/5f598fa79fb84067b1a7bd573efabcf1/recording/ca7c98cabafd438390bcf915c249900c/watch?source=CHANNEL>

- FDOT Connect – Creating Utility Worksheets

- YouTube Video : <https://youtu.be/JPU5hXFO2Yg>
- Presentation: [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/cadd/downloads/webinars/files/microstation-connect/fdotutilityworksheets.pdf?sfvrsn=8e517c41\\_2](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/cadd/downloads/webinars/files/microstation-connect/fdotutilityworksheets.pdf?sfvrsn=8e517c41_2)

- FDOT Design Manual – Refer to 2023

- <https://www.fdot.gov/roadway/fdm/default.shtm>

- FDOT UAM

- [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/programmanagement/utilities/docs/uam/uam2017.pdf?sfvrsn=d97fd3dd\\_0](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/programmanagement/utilities/docs/uam/uam2017.pdf?sfvrsn=d97fd3dd_0)

### Notice:

We have a diverse grouping of individuals attending from many facets within the industry. It is important to note that the opinions expressed in this meeting are that of the individual. Consultants participating in the discussion are not speaking on the behalf of or representing the FDOT or any other agencies during the discussion.

# Florida Utilities Coordinating Committee NexGen Subcommittee

Did you know we are having a second session at this FUCC Conference!

Come join us tomorrow,  
Thursday, November 2<sup>nd</sup> at  
4:15 pm



## Notice:

We have a diverse grouping of individuals attending from many facets within the industry. It is important to note that the opinions expressed in this meeting are that of the individual. Consultants participating in the discussion are not speaking on the behalf of or representing the FDOT or any other agencies during the discussion.

Thank You!  
We Appreciate Your  
Time in Helping to  
Find Solutions!

---

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Co-Chairs


Shaun Purvis, Brindley Pieters & Associates (BPA)  
Email: [SPurvis@bpa-engineers.com](mailto:SPurvis@bpa-engineers.com)

Melonie Schwartz, Inwood Consulting Engineers  
Email: [mschwartz@inwoodinc.com](mailto:mschwartz@inwoodinc.com)

Join us on our next  
In-Person Session

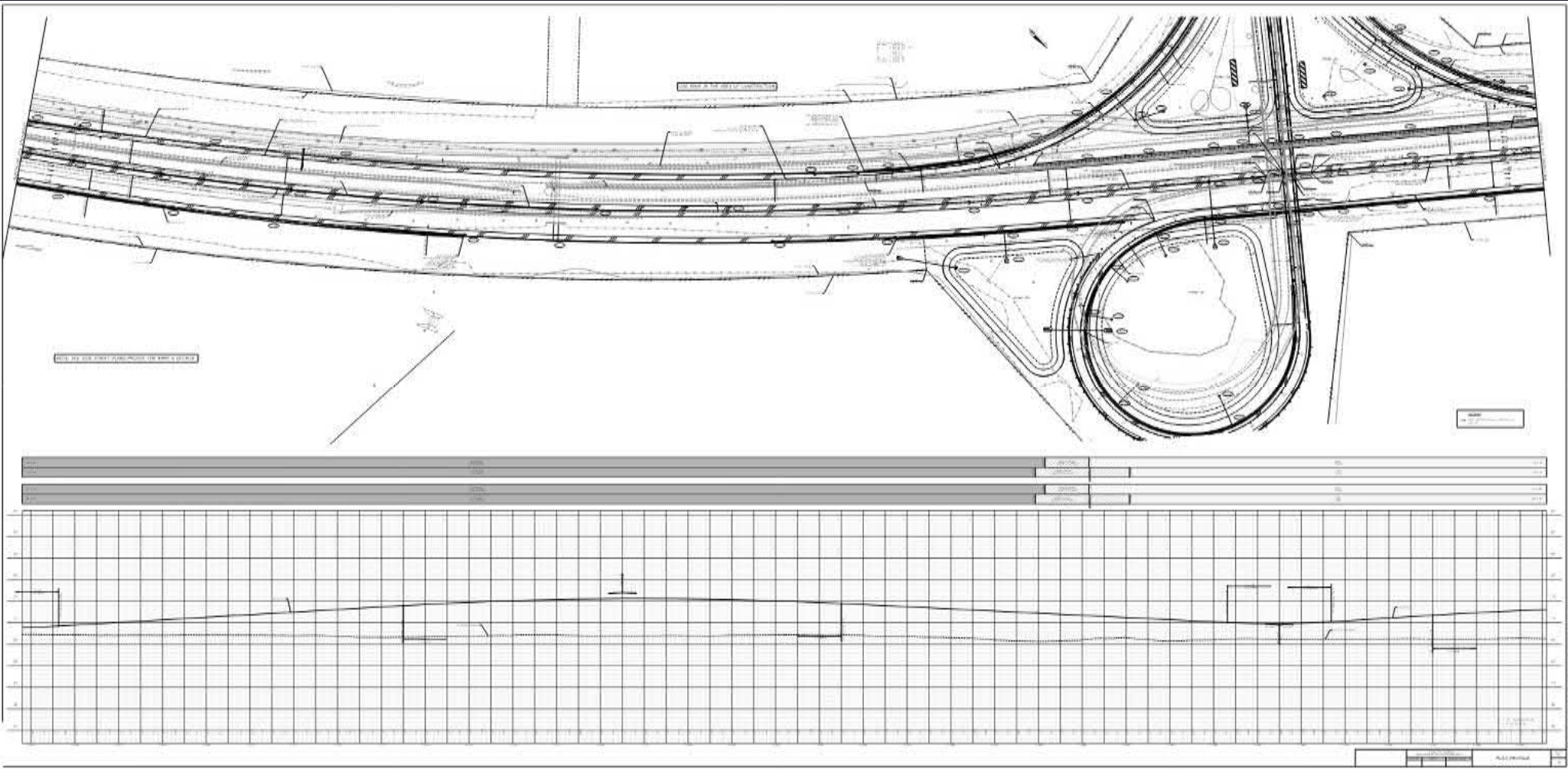
**Thursday,  
November 2, 2023  
at 4:15 pm**

FUCC / FDOT Working  
Groups Sign-Up

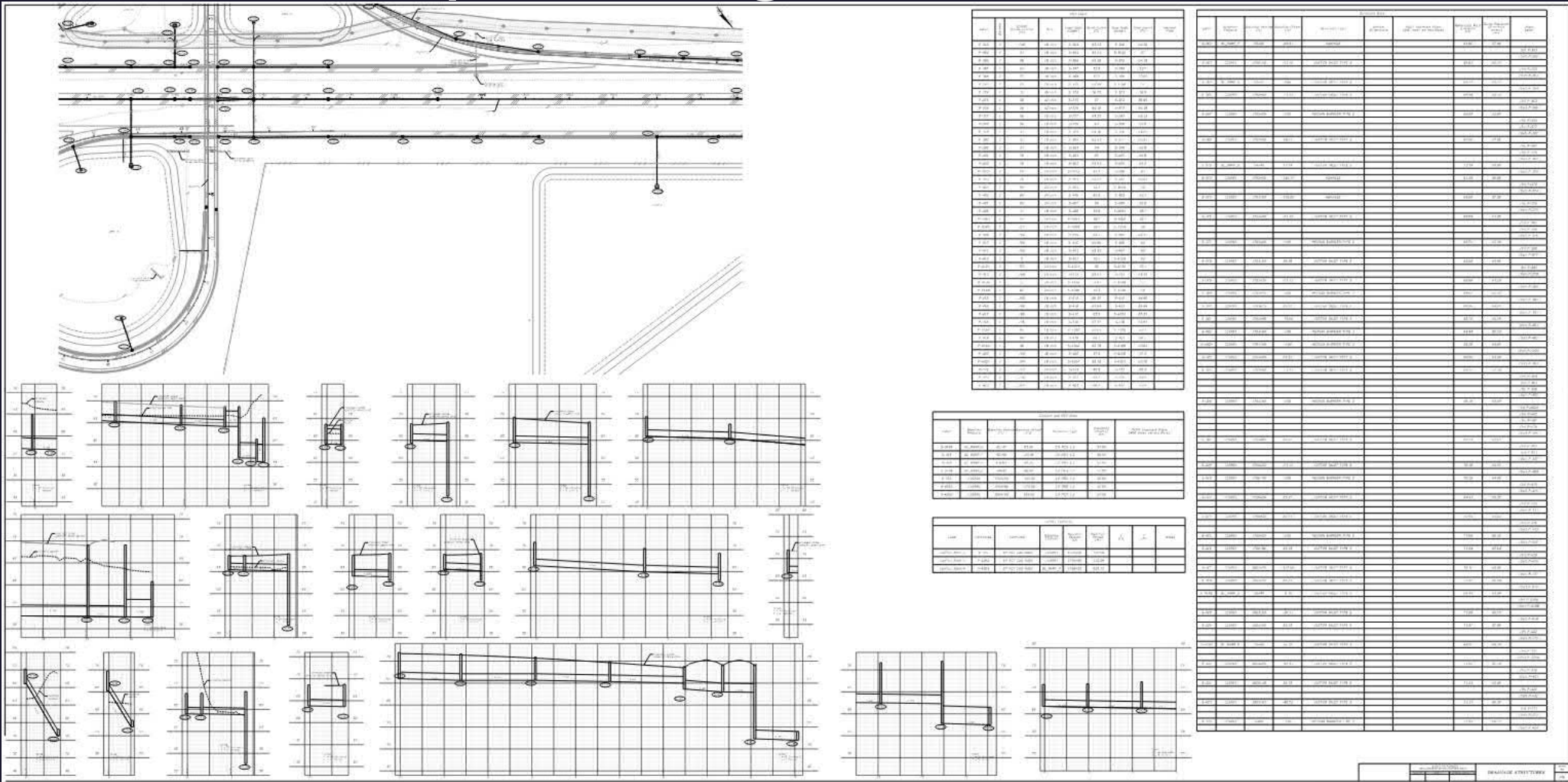


SCAN ME

# Example Roadway Sheet



# Example Drainage Structure Sheet









# BEST PRACTICES IN CONSTRUCTION

FUCC Construction Committee – Fall 2023



# BEST PRACTICES PRIOR TO CONSTRUCTION

## First Steps:

- Reviewing the UWS's
- Reviewing the RGB's
- Reviewing the No Conflict Letters.
- Reviewing the Certification Letter.
- Reviewing the final plans Date.

# BEST PRACTICES PRIOR TO CONSTRUCTION

## Second Steps:

- Is there any work in the UWS's that we can get started, before Construction time starts with Construction Survey.
  - Drilled Shafts
  - Structures
  - Multipath

## Third Steps:

- Can we take advantage of time we grant for issues that are known, before we start.
  - Can we get the Utility work done early.
  - Can we be more proactive by locating areas of concern.
  - Are we engaging Utilities for the Project.



# BEST PRACTICES DURING CONSTRUCTION

## First Steps:

- Are we making contact not just by email.
- Are we contacting everyone listed on the UWS.
- Are we getting responses.

## Second Steps:

- Are we talking about the issues.
- Are we talking about the resolution to issues.
- Are we doing research before we point the finger.



# BEST PRACTICES DURING CONSTRUCTION

Third Steps:

- What is best for the project and FDOT.
- Constant communication when issues arise.
- Working together to resolve the issues.



# BEST PRACTICES THROUGHOUT THE DURATION OF THE PROJECT FROM BEGINNING TO END

- Realize that the Utilities have supply issues that FDOT has.
- Partnering with the Utilities.
- Acting swiftly to NOI's.
- Tracking NOI's sufficiently.
- Mitigating issues to keep the job within Performance Measures.
- Mitigating to keep NOI's out of Compensable Time.
- Coordination, Coordination, Coordination

# QUESTIONS?

Presenter: Josh Kelly









# **FDOT UTILITY MARKUPS**

# INTRODUCTIONS

- Chris Stermer – WGI Inc.

Senior Utility Coordination Manager, 24 years utility coordination and utility engineering & design experience. (*Natural Gas background*)

- **Reference - Utility Accommodation Manual (2017)**

- **5 PROJECT COORDINATION** - Project coordination is a cooperative effort between FDOT and the UAOs.

- 5.1 FDOT Coordination**

**FDOT shall make arrangements to ensure all of the following is done:**

1. Advance planning of highway projects is coordinated with affected UAOs no later than the project being placed in the FDOT Five-Year Work Program.
2. Project drawings are provided to the UAO for markup in an agreeable format.
- 3. Conflicts with the UAO's utilities are identified to the UAO. This may be provided in a conflict matrix format when available.**
4. Reasonable lead-time is provided for the UAO to relocate or adjust their utilities.
- 5. Reasonable lead-time is provided for the UAO to physically expose their utilities when the UAO elects to do this work.**

- **Reference - Utility Accommodation Manual (2017)**

- **5.2 UAO Coordination**

**The UAO shall do all the following:**

1. Provide project work schedules to resolve all conflicts between the FDOT project and the UAO's utilities.
2. Obtain permits for utility work in compliance with all applicable laws and the UAM.
3. **Identify to the designer utilities and utility service connections the UAO has determined to be in conflict that were not previously identified.**
4. **Provide existing and proposed utility locations and elevations on the project drawings or project CADD files with ties to the project's survey points, as can reasonably be obtained by a review of existing records, topographic surveys and detection devices without physically exposing the utility. The UAO shall use the following color code:**

**Red: Existing utilities that are: (a) To be removed or relocated horizontally or (b) To be placed out-of-service (deactivated) but left in place.**

**Green: Existing utilities to remain in place with no adjustment.**

**Brown: Utilities that are: (a) existing utilities to be adjusted vertically but to remain in the same horizontal alignment, or (b) completely new utilities to be installed.**

# • Reference - Utility Accommodation Manual (2017)

## • 5.2 UAO Coordination (continued)

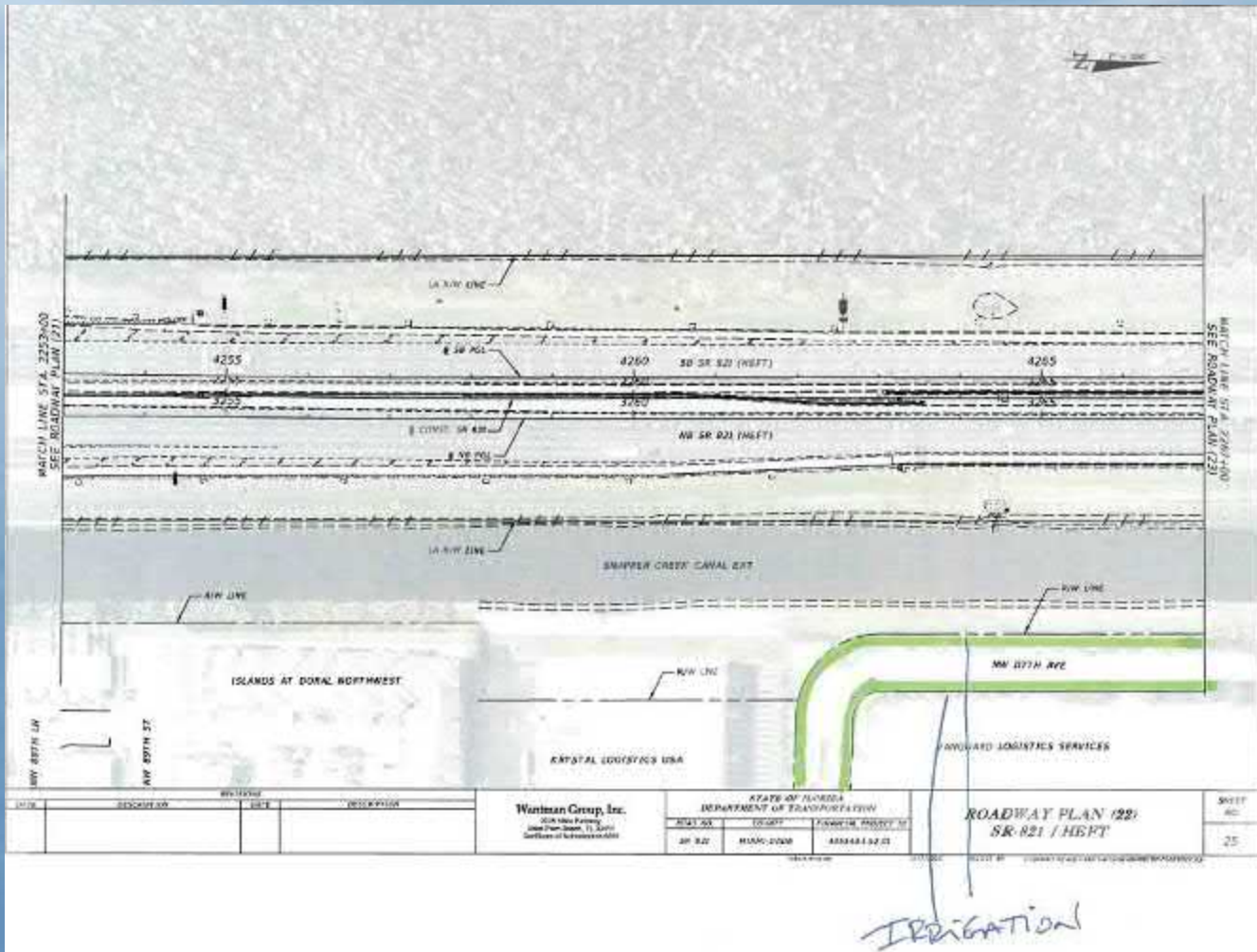
5. Complete the utility work schedule provided in UAM Section 8 for all needed utility work activities when requested by FDOT. The UAO shall include in the utility work schedule all of the following:

Conflict with FDOT construction activities or schedules.

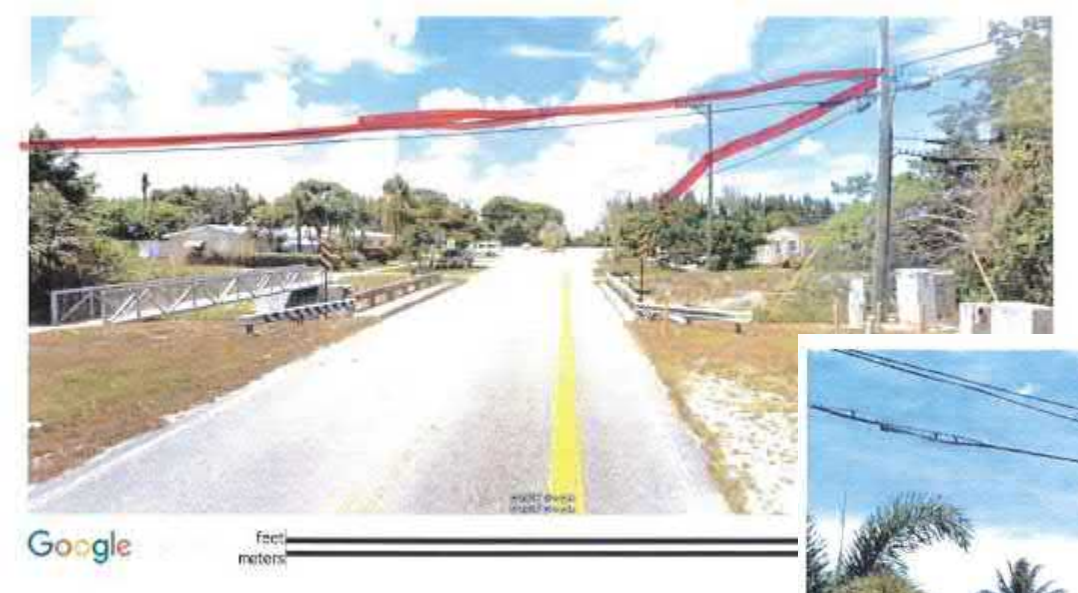
- a. **In Section B, all special conditions and constraints needed to perform the UAO's work activities and/or other important information.**
- b. **In Section C, the type, size, material, status and offset to the centerline of construction, or other FDOT approved baseline, from station to station of the UAO's utilities.**
- c. In Section C, all UAO work activities to facilitate the needed relocations or adjustments, indicating an activity number, the TCP phase, the number of **consecutive calendar days** needed to complete the utility work activity by showing the breakdown of days prior to FDOT project construction and during FDOT project construction. In addition to UAO's work activities within the project limits, other offsite utility work activities such as procurement of material or property shall be included when these activities affect the time needed to complete the UAO's work activity.
- d. In the Dependent Activities column in Section C, identify all activities that need to be completed, by the UAO or others, before the listed UAO's work activity can start. The UAO shall provide any additional locates required by FDOT to facilitate construction. Through ongoing coordination, the UAO shall provide FDOT the most current information.
- e. In Section A, show the sum of the **calendar days** prior to FDOT project construction and during FDOT project construction from the breakdown provided in Section C.



# UTILITY MARK UPS – UAO'S PROVIDE

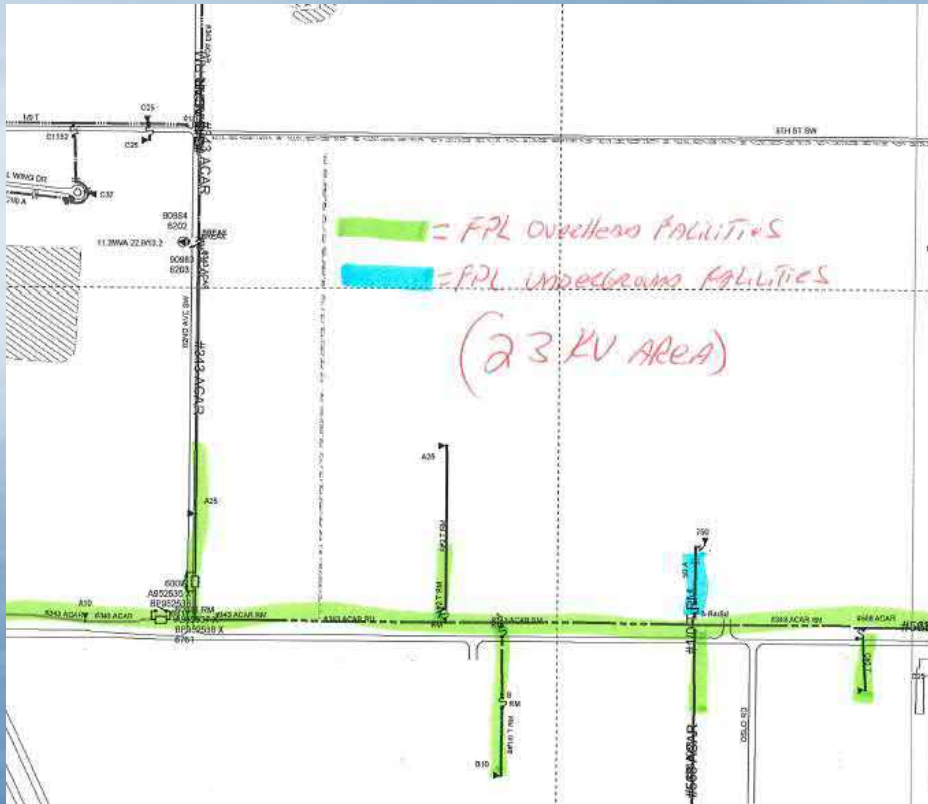


# UTILITY MARK UPS – UAO'S PROVIDED

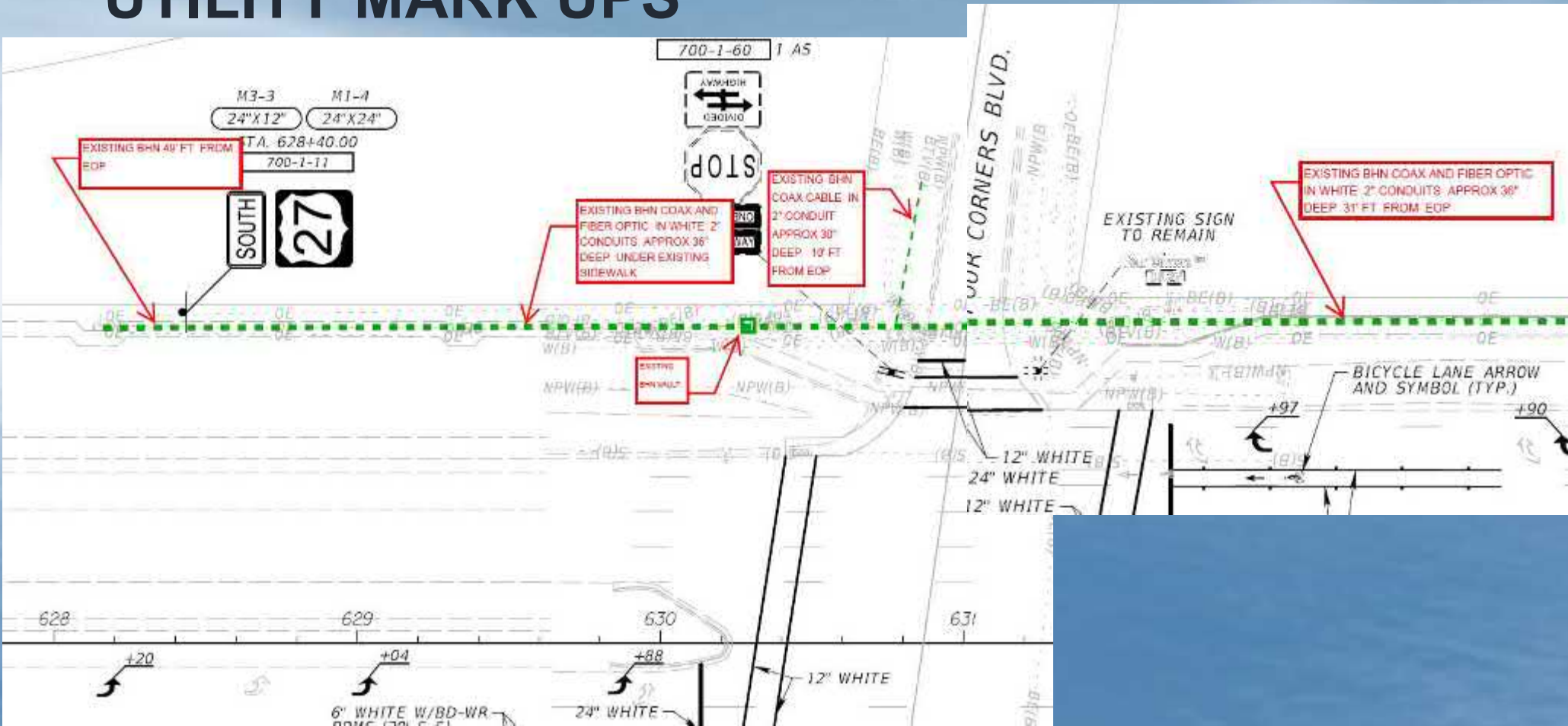




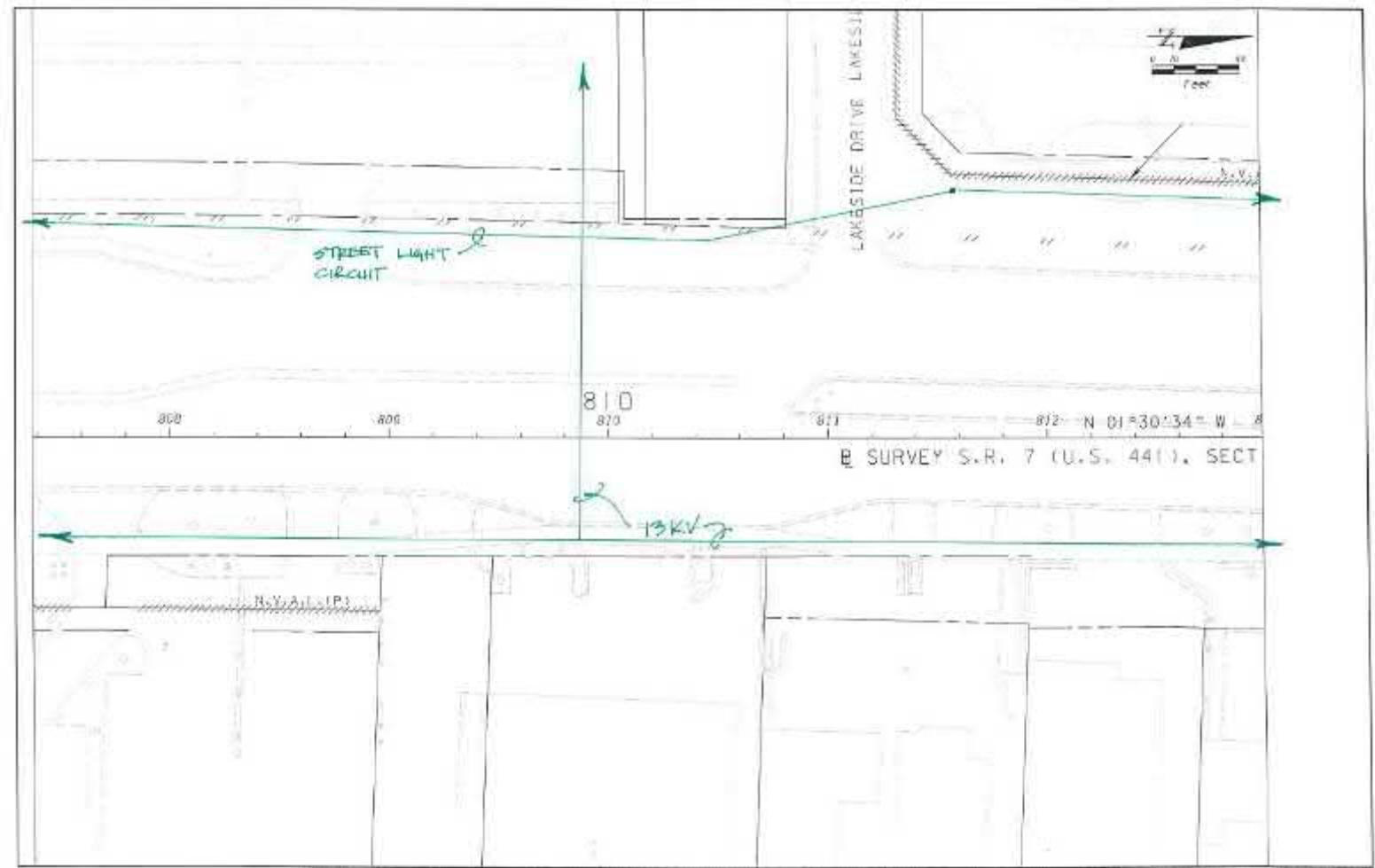
# UTILITY MARK UPS – UAO'S PROVIDED



# UTILITY MARK UPS



# UTILITY MARK UPS

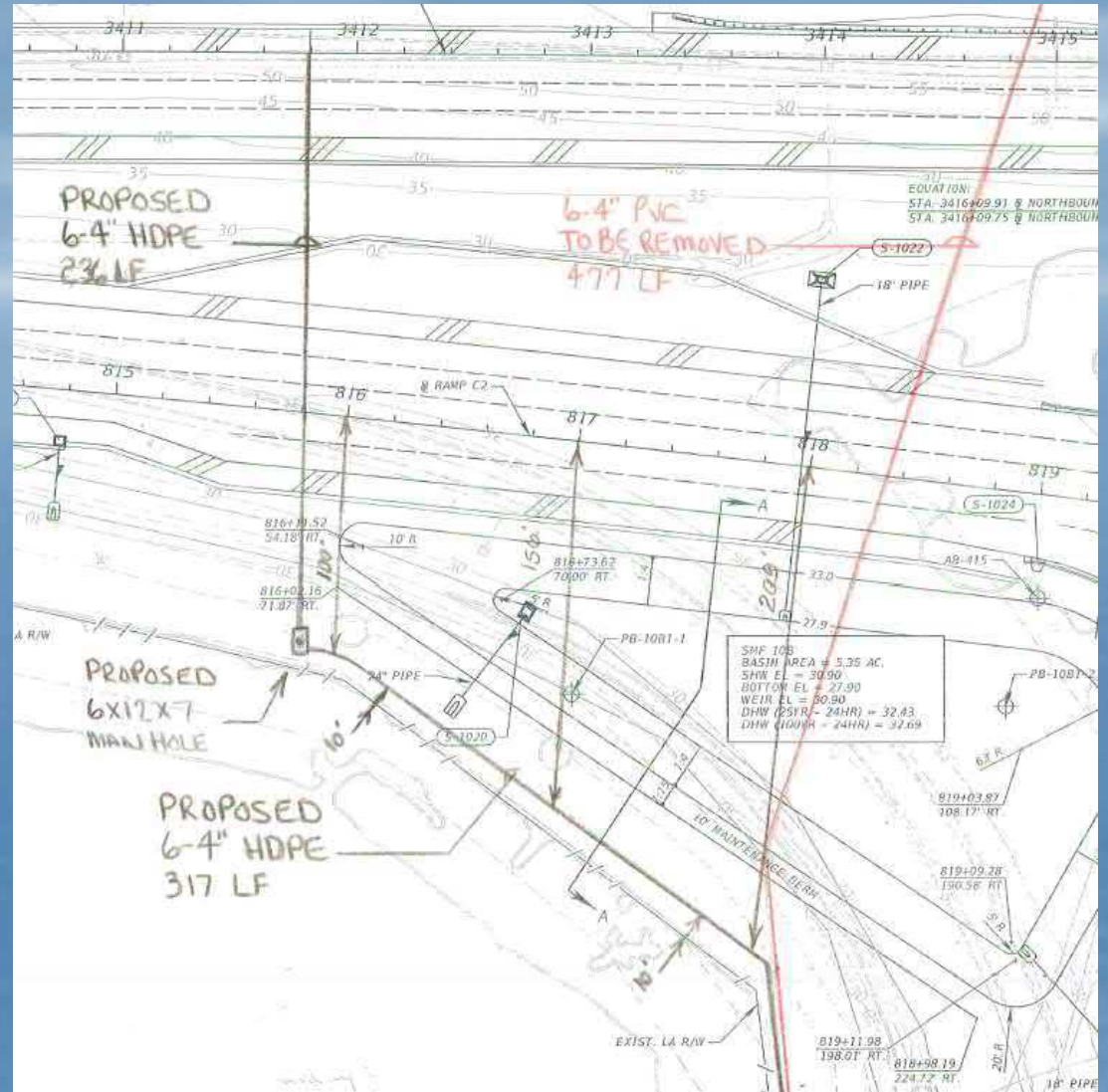
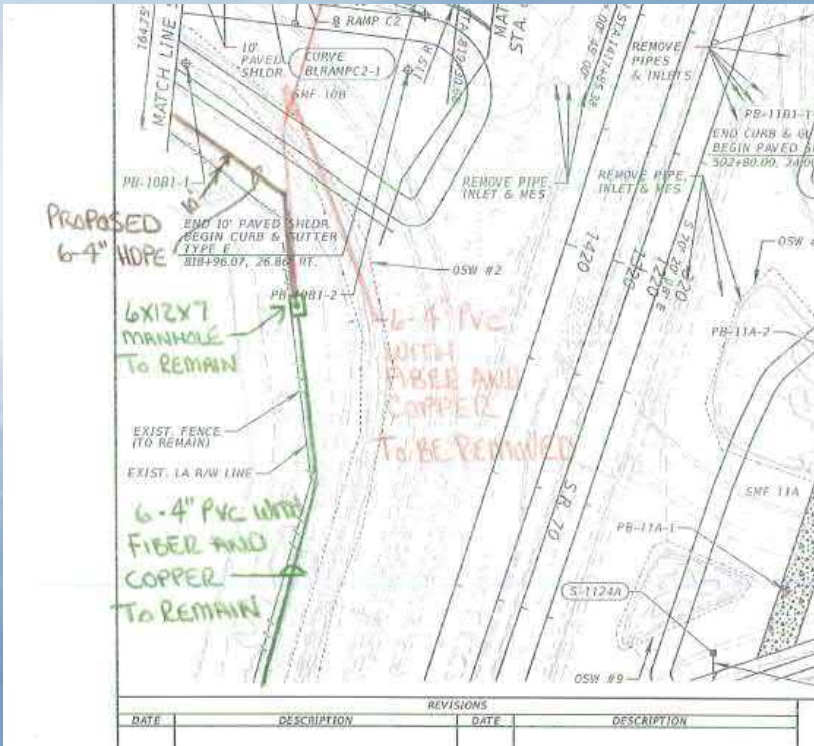








# UTILITY MARK UPS



Questions?

Answers?

Further Discussion?







POWER  
INTEREST GROUP

Chris Buonanni  
David Fuchs

# Overview

Power Interest is about keeping open lines of communication with FDOT, Local Municipalities and design firms to encourage cooperation in our coordination efforts.

Fallout from  
Hurricane's one  
year later

Design contact  
timeline for  
mast-arms  
projects

Pedestrian  
Pathways

# After effects of 2022 Storm Season

## SUPRISE THAT'S A NEW POLE

- Area Impacted will not have accurate surveys from prior to 2022
- FPL alone replaced over 3200 poles

## LIMITED NJUNS RESPONSE

- Out of State workers
- Off normal work conditions cause issues with established systems

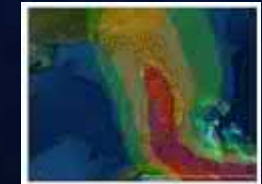
# FPL HURRICANE RESPONSE

	Hurricane Charley 2004	Hurricane Wilma 2005	Hurricane Irma 2017	Hurricane Ian 2022	Hurricane Nicole 2022
Saffir-Simpson Scale	Category 4	Category 3	Category 4	Category 4	Category 1
Fla. landfall max sustained winds	150 mph	120 mph	130 mph	150 mph	75 mph
Cyclone Damage Potential Index	1.9	2.8	4.3	6	0.7
FPL Counties Impacted	28	21	35	32	30
Customers affected	9 million (21%)	3.2 million (75%)	4.4 million (~90%)	2.2 million (~38%)	0.5 million (~9%)
Distribution Poles damaged	6,900	12,400	4,700	-3,200	-24
Transmission Structures failed	75	100	5	0	0
Transmission Line Segments Impacted	44	345	215	70	15
Substations Flooded	0	0	2	6	0
Substations De-energized	14	241	92	27	2
Substations restored	2 days	5 days	1 day	1 day*	0 days
50% of customers restored	3 days	5 days	1 day	1 day	1 day **
75% of customers restored	5 days	8 days	3 day	2 days	1 day **
95% of customers restored	10 days	15 days	7 days	6 days	1 day **
100% of customers restored	13 days	18 days	10 day	8 days	1 day
Average customer outage	3.5 days	5.4 days	2.1 days	1.5 days	0.2 day

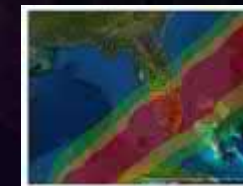
Hurricane Ian 2022



Hurricane Irma 2017



Hurricane Wilma 2005



Hurricane Charley 2004



- Excluded flooded substations (4 days if included) however customers were enabled to be restored via other substation feeder ties
- Within just 12 hours of the last remnant of Hurricane Nicole exiting the state, FPL had already restored service to more than 95% of customers impacted.

# Mast Arms

FDOT cannot dictate means and method, this does not mean that the designs can't be done to avoid unnecessary conflicts that can cause construction delays.

Standard offset is 20' for equipment during construction. This has nothing to do with your final structure offsets.

Designers should reach out to find a win – win. 100% plans are not a good time to make first contact with a UAO

Conflict construction methods should be talked about and encouraged throughout the industry.

# Coordination during construction

Telehandler –  
De-energization not  
needed



Shifted mast arm and  
used 2 cranes

De-energization not  
needed



# Pedestrian Pathways

Municipalities requesting relocation to edge of ROW when pathways exist.

## 3.4 Pedestrian Pathway Clearances

For new above ground installations within pedestrian pathways, the UAO shall provide minimum clear pathway widths of thirty-six (36) inches where practical. However, the thirty-six (36) inch pathways may be reduced to no less than thirty-two (32) inches wide for no more than two (2) feet in length when there is no practical alternative available to avoid an obstruction. For guy wires traversing across a pedestrian pathway, the UAO shall maintain a minimum vertical clearance of seven (7) feet over the pathway.





Thank you

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Questions?