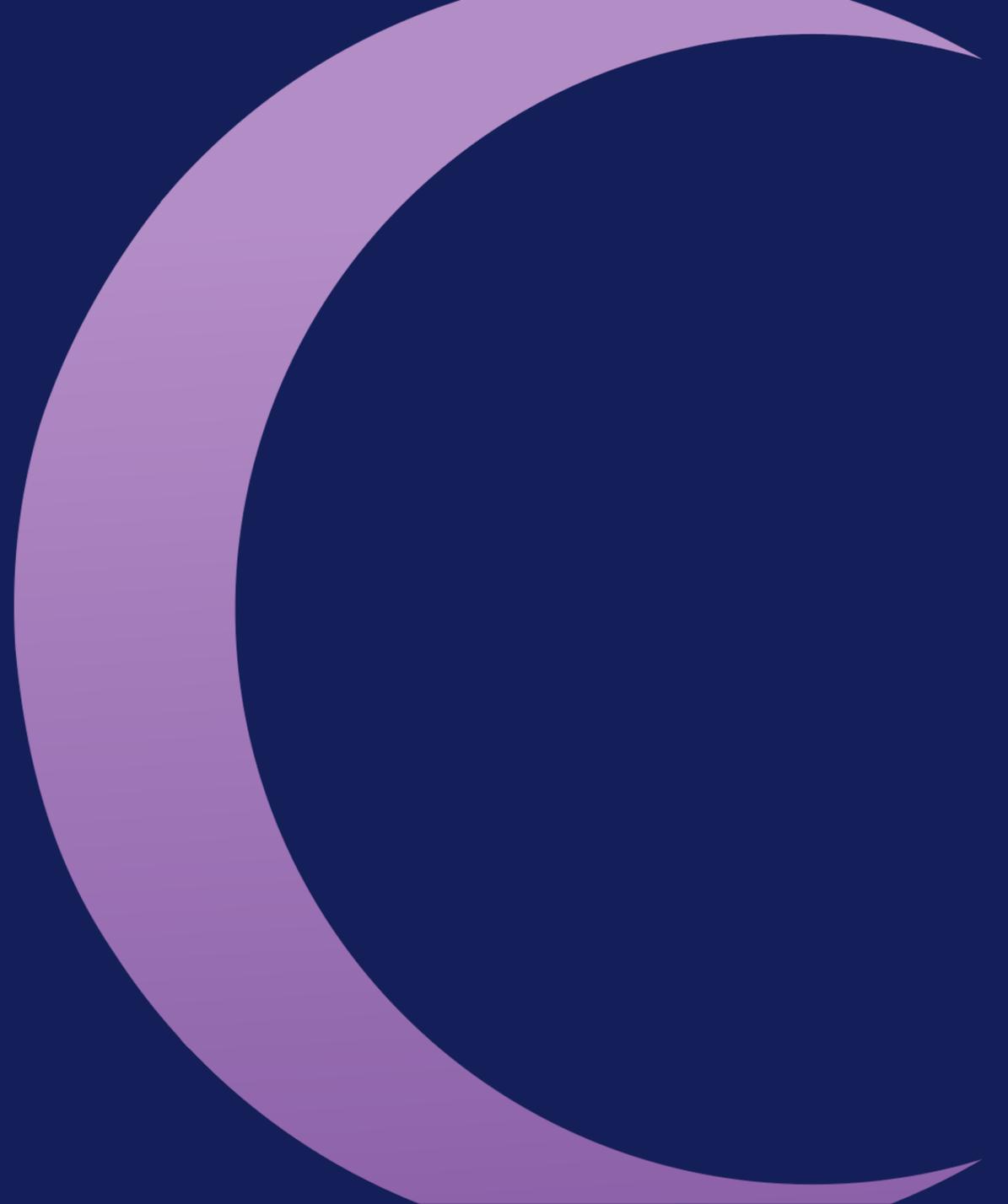


# ENGINEERING ETHICS IN THE VIRTUAL AGE

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2020 TACERA Virtual Ethics Session



# AGENDA

- Introduction
- Remote Work Issues
- Social Media Ethics
- Scope Creep in the Virtual Age
- Discussion Scenarios

# REMOTE WORK ISSUES

- PDH Fraud
- Seal Fraud
- Working at Home



# PDH FRAUD

- Pretending to attend webinars and virtual meetings
- Sleeping during virtual meetings
- Multitasking
- Muting webinars



# SEAL FRAUD AND BEST PRACTICES

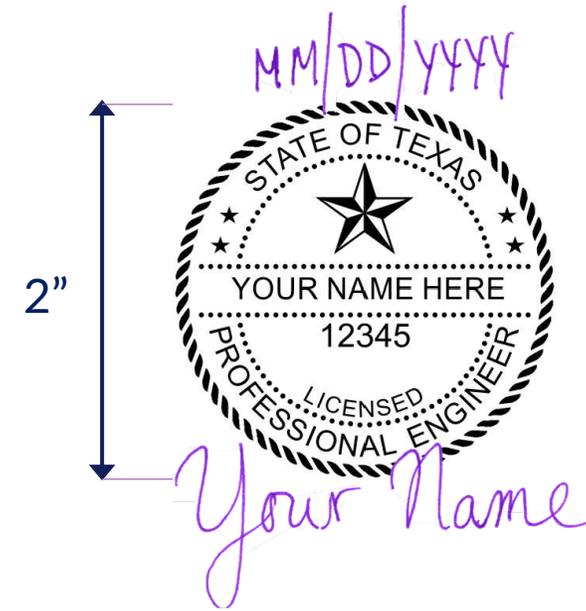
- Electronic Seal Requirements
- Sealing Work
- Recognizing Seal Fraud
- Protecting Your Seal



# SEAL REQUIREMENTS

## TBPE Requirements (see Rules)

- Diameter  $\leq$  2-in.
- Signature and date must not interfere with Engineer's name and P.E. number
- Requirements are generally the same for physical and electronic seals

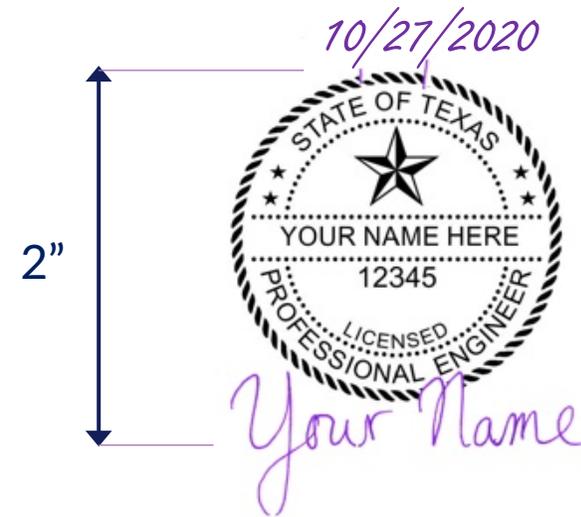


# SEALING WORK REMINDERS

- Sealing preliminary documents
  - Must include disclaimer
- Revised documents
  - Perform Due Diligence before re-sealing
- Dual or Multiple Seals
  - Include statement of what each engineer is sealing
- Revising another P.E.'s work
  - Notify previous engineer in writing
  - Correcting/editing engineer is now responsible for changes
- Do NOT seal work outside your practice area
- Always do due diligence

# RECOGNIZING SEAL FRAUD

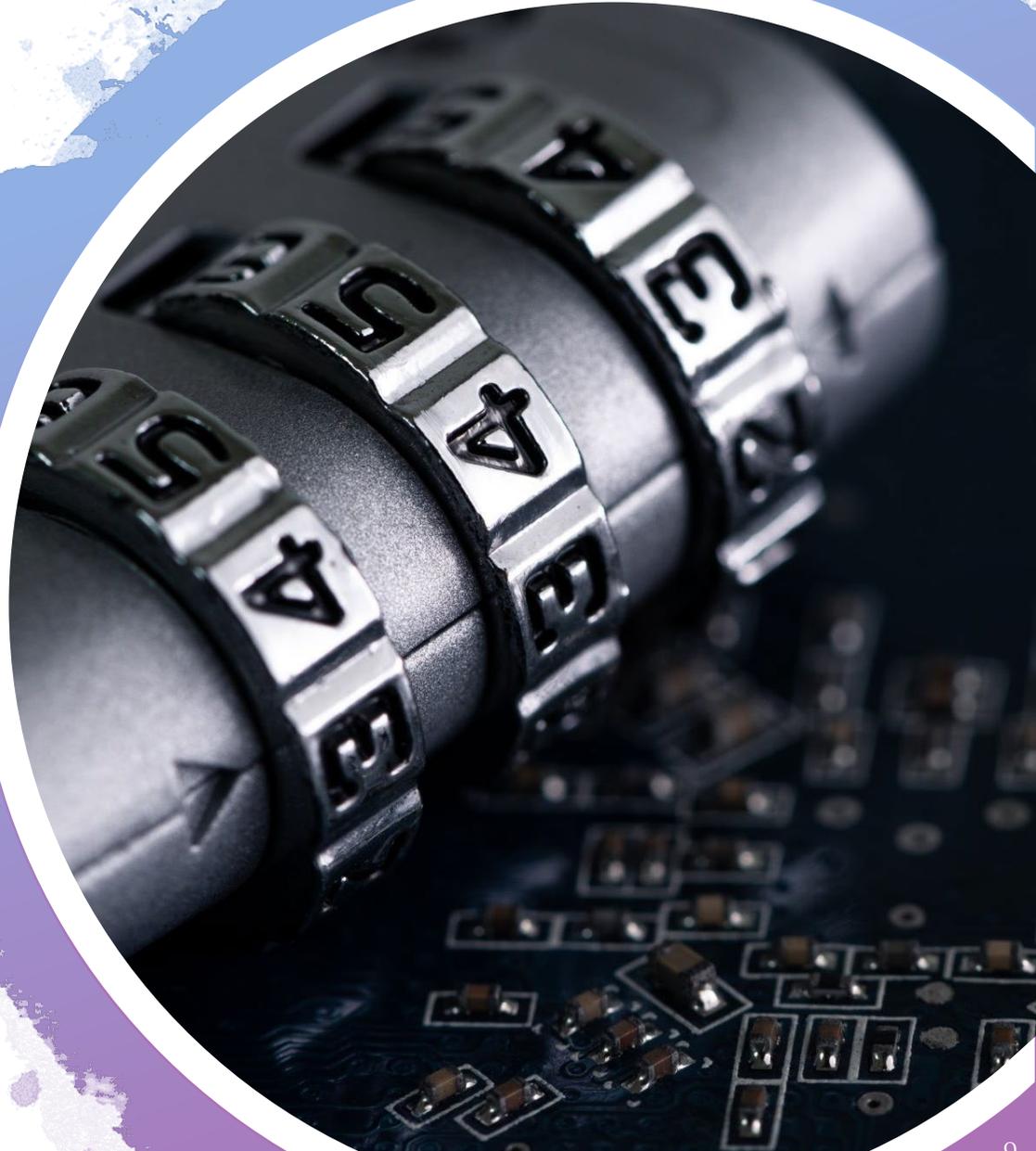
- Incorrect size
- Monochrome signature that is usually color
- Mismatched handwriting
- Font date vs written date
- Electronic seal and signature are one photo
- Edited screen capture



# PROTECTING YOUR SEAL

## Electronic Seal Best Practices

1. Only include Electronic *Signature* in PDF
2. Do Not Use Font/Text Box for Date
3. Encrypt Documents
4. Overlap Seal with Signature and Date



# PROTECTING OTHERS' SEALS

## Regulators:

- Encrypt PDFs accessible to the public
- Require handwritten dates for electronic submittals

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# WORKING AT HOME

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- Time Theft
- Productivity Lapses
- Moonlighting

# TIME THEFT



- At Home Distractions
  - Spouse
  - Children
  - Pets
  - Chores
  - TV
  - Social Media

A person is seated at a table, eating a meal from a blue bowl while working on a laptop. The person is wearing a red and white plaid shirt. The table is set with a white plate, a white mug, and a white napkin. The background is a plain, light-colored wall with a framed document hanging on it. The scene is overlaid with a semi-transparent white circle containing text and a list of productivity lapses.

## PRODUCTIVITY LAPSES

- Multitasking
- Not getting dressed in the morning
- Not having a dedicated workspace
- Complacency
- Distractions

# UNETHICAL MOONLIGHTING

- Moonlighting is against employer policy
- Employer isn't informed, but moonlighting is allowed
- Using primary employer assets
- Working your other job during primary employment hours
- Conflicts of interest



# ETHICAL MOONLIGHTING

1. Primary employer's policy allows moonlighting
2. Primary employer has been informed
3. Employer's assets will not be used
4. Proper employment status at side job
5. Work can be performed completely during off hours
6. No conflicts of interest

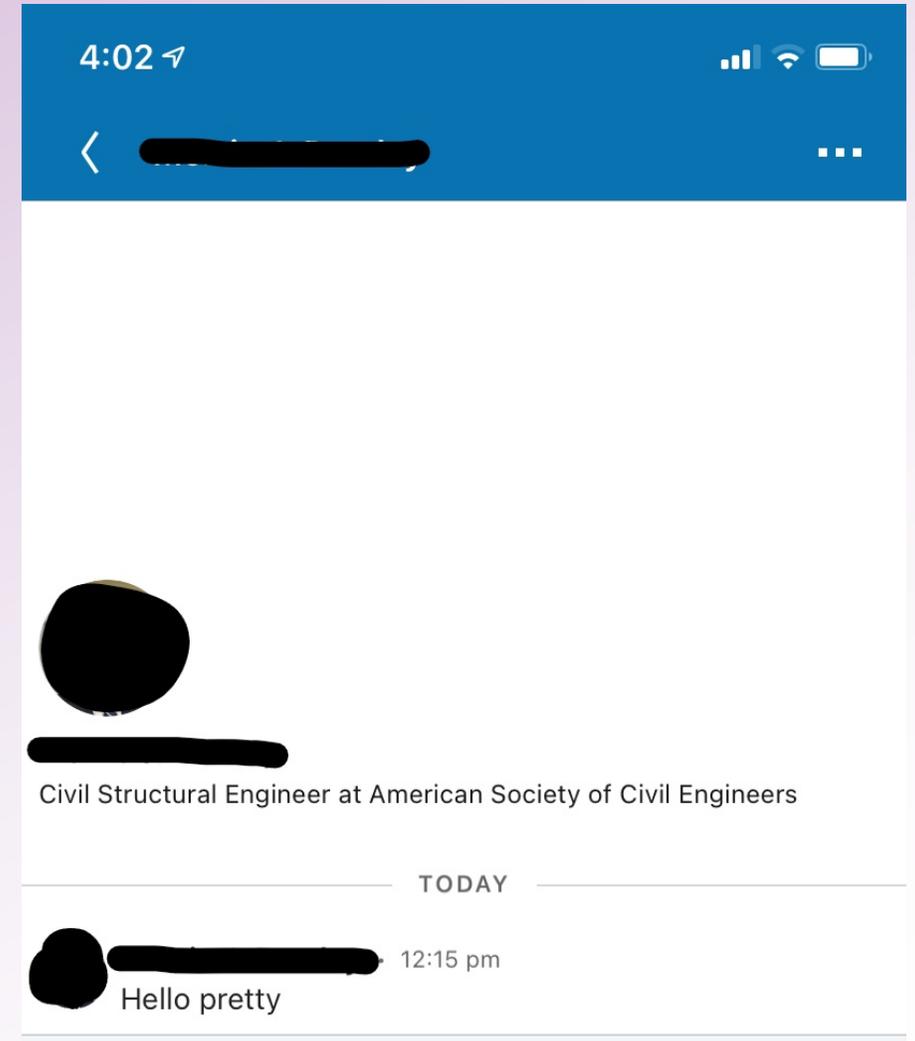




# SOCIAL MEDIA ETHICS

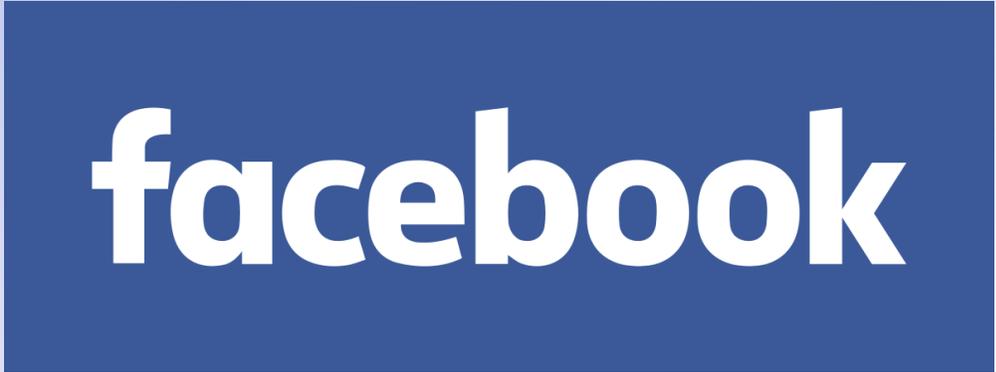
# LINKEDIN – THE “PROFESSIONAL” SOCIAL SITE

- Proper Uses of LinkedIn
  - Networking
  - Job seeking
  - Company promotion
  - Sharing career successes and projects
- Improper Uses of LinkedIn
  - Sharing personal content
  - Romance
  - Disparaging other members or companies



# FACEBOOK AND TWITTER: THE TRICKY ONES

- Designed for Personal Sharing
- Public Posts are just that: PUBLIC
- Keep your Personal things Personal
- Be careful of who your friends/followers are
- Always be aware of who can see what on your profile
- Use the “View As...” tool when in doubt

The Facebook logo, consisting of the word "facebook" in a white, lowercase, sans-serif font, centered within a dark blue rectangular background.

# INSTAGRAM AND SNAPCHAT

- Photo Based Social Media
- Same principles apply to Instagram & Snapchat as Facebook & Twitter
- Always, always, always check your audience
- Don't share inappropriate photos
- You can't control what people send you on Snapchat



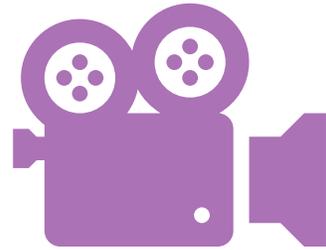


# SCOPE CREEP IN THE VIRTUAL AGE

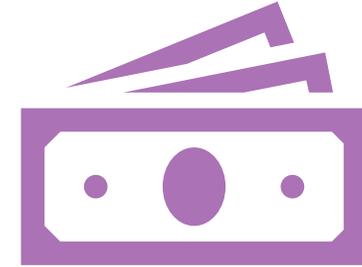
# SCOPE CREEP IN THE VIRTUAL AGE



Limited to no in-person project meetings

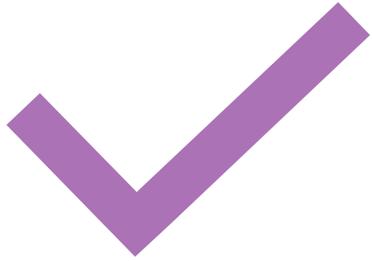


Video meetings can't truly replace meeting in person



Budgets limited more than normal due to pandemic

# SCOPE CREEP IN THE VIRTUAL AGE



Entire desired scope isn't presented upfront



Little things (or big things) happen during design and construction



Contract language is extremely important

Architectural blueprints are shown on the left side of the slide, featuring various technical drawings with dimensions and annotations. The drawings are partially unrolled, showing a complex layout of lines and numbers. The background is a light, textured surface.

# EXAMPLES OF SCOPE CREEP

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- Extras:
  - Meetings
  - Alternatives
  - Public involvement for consultant/contractor
  - Additional length for linear projects
- Significant design changes
  - Unforeseen utility conflicts
  - Unforeseen permitting issues
  - Property acquisitions

# SCOPE CREEP RESPONSIBILITIES

## Client

- Have clearly defined scope in RFQ/Bid Documents
- If scope is TBD by consultant, make this apparent
- Don't leave things out with the intention to add them in later
- Work with your consultant/contractor on modifications
- Communicate clearly

## Consultant/Contractor

- Due your due diligence when writing SOQs for undefined scopes
- Notify clients of out of scope items ASAP
- Don't do work for free – you are stealing from your company
- Work with your client on modifications
- Communicate clearly

# DISCUSSION SCENARIOS

Attendee participation encouraged! Please raise your hand.

# PDH FRAUD

John has a week before license renewals are due and has 8 hours left for his PDH requirement. He signs up for some live webinars to meet the requirement. During one of these live webinars, he receives an important phone call.

Should he:

- A. Take the call, mute the webinar, and take credit for the PDH
- B. Take the call, mute the webinar, and don't credit for the PDH
- C. Take the call, mute the webinar, and watch later, taking credit for the PDH
- D. B or C

# MOONLIGHTING

Liz moves to a new part of the country and is forced to find a new job. She starts a new position at a global consulting firm. Several months later, her former boss reaches out and asks if she can complete a report that she worked on previously in her off hours. The new company's policy states that moonlighting must not take away business or potential business from the main company and must not aid competitors.

# MOONLIGHTING - CONTINUED

What should Liz do?

- A. Complete the report in her own time and on her own machine
- B. Inform her boss of the request and wait for their decision
- C. Inform her boss and do it anyway

Which part of the policy applies?

- A. Not taking away business or potential business
- B. Not aiding competitors

# SOCIAL MEDIA

An engineer has a personal Facebook page where he regularly shares funny memes and videos. The engineer's sense of humor ranges from innocent to slightly scandalous and topics vary from family and home to hot-button social and political issues, with which not everyone agrees, but they never cross the line. In the months since COVID-19, engineer's "humor" has been increasingly targeted at those of Chinese decent, repeating negative stereotypes and implying that all people of Chinese ethnicity are carriers. Despite the personal nature of the engineer's Facebook page, it contains links to his professional life: His position at a large engineering firm, his leadership role in a national engineering organization, etc. The posts are only visible to friends; however "friends" includes coworkers, colleagues, clients, etc.

# SOCIAL MEDIA

Are the engineer's racially divisive posts on his personal Facebook page ethical in the context of his professional life?

This scenario was paraphrased from a case on the ASCE website. Credit to ASCE. The full case can be viewed here: <https://news.asce.org/how-ascers-code-of-ethics-may-apply-to-personal-conduct-during-the-pandemic/>

# SCOPE CREEP

A city and a consulting firm come to an agreement on a scope for a drainage study for the city's old downtown area. The premise is for the consultant to develop a subregional detention solution using a nearby undeveloped parcel. After the contract was executed, but prior to Notice to Proceed, a developer acquired the tract that was slated for the regional detention facility. The scope was not adjusted for this change and the project proceeded. What should have happened prior to Notice to Proceed?

Discuss...

# TIME THEFT

Alex is an employee at a large consulting firm with two small children. Everyone is now home due to COVID-19. Alex is in the middle of some complex design calculations when the children get into an argument and both end up crying. Alex takes a 20-minute time out to sort things out and gets back to work. Several of these short breaks throughout the day add up to an hour and a half of actual lost time, not including the lost productivity from redoing steps in the calculation process.

How should employees bill time in this scenario?

Discuss...

QUESTIONS?



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