

# PREPARING TO DIG - PLANNING AND SAFETY TIPS FOR CONSTRUCTION EXCAVATION IN AN URBAN ENVIRONMENT



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# PREPARING TO DIG – PLANNING AND SAFETY TIPS FOR CONSTRUCTION EXCAVATION IN AN URBAN ENVIRONMENT

Presented by:

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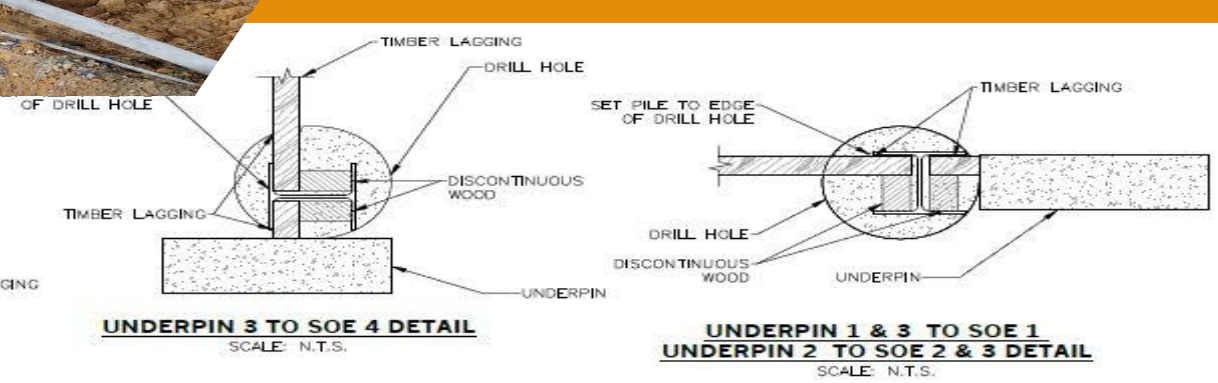
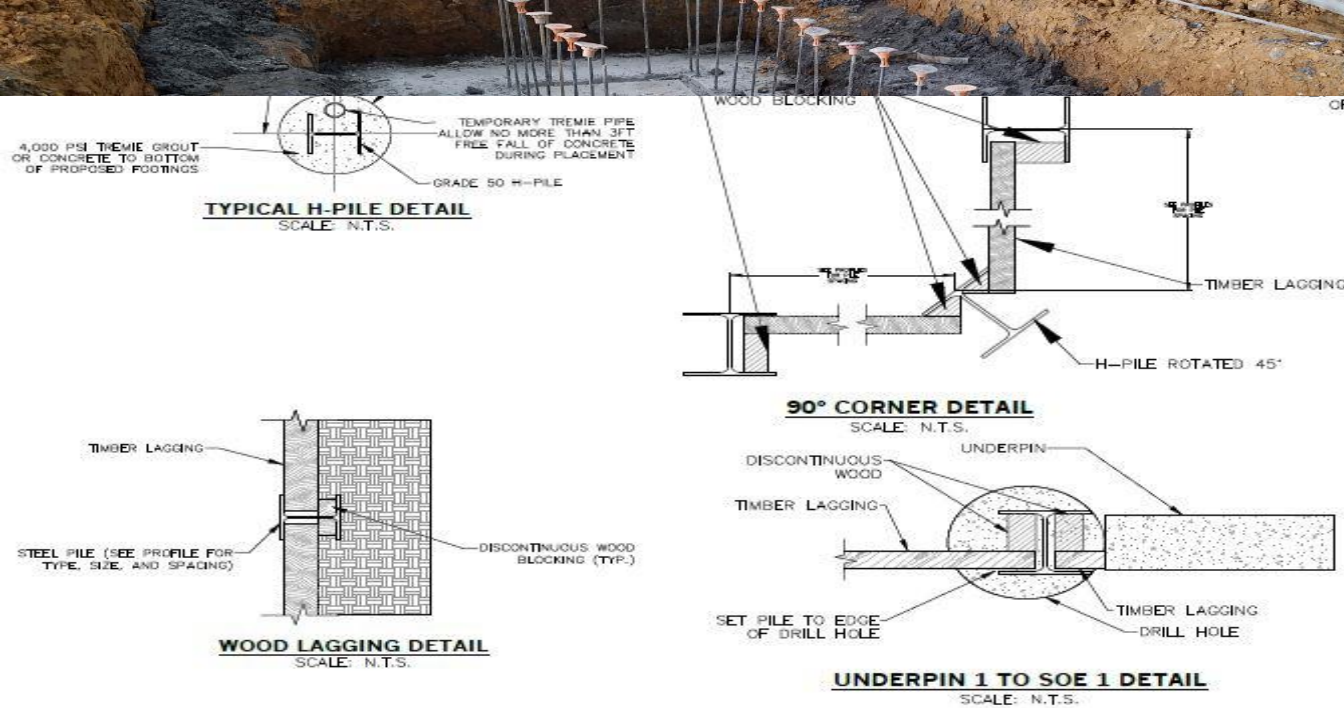
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# PREPARING TO DIG – PLANNING AND SAFETY TIPS FOR CONSTRUCTION EXCAVATION IN AN URBAN ENVIRONMENT

## Agenda

- Best Practices for the Design Phase
- Best Practices for Pre-Construction
- Best Practices in the Field





## BEST PRACTICES FOR THE DESIGN PHASE

- Concept Design
- Geotechnical Investigation
- Preliminary Shoring & Underpinning
- Final Design







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# BEST PRACTICES FOR THE DESIGN PHASE

## Concept Design

- This educational webinar for builders/developers, general contractors, and design professionals will identify best practices for safely planning and preparing for excavation in and near existing structures. Attendees will learn what they need to do and when they need to do it – BEFORE it's time to break ground.
- Digging with a lack of knowledge, proper planning, or experience may lead to costly problems and delays, and in some cases, the loss of life and property, as has been unfortunately demonstrated in recent years in Philadelphia. As a result, the Department of Licenses and Inspections wants greater oversight of excavation by the construction industry, and greater accountability.



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# BEST PRACTICES FOR THE DESIGN PHASE

## Concept Design

- Evaluation of your Site
- Assemble your project team
- Investigations



Clean and Narrow excavations for underpinning or Investigations are critical to retaining stable adjacent structures

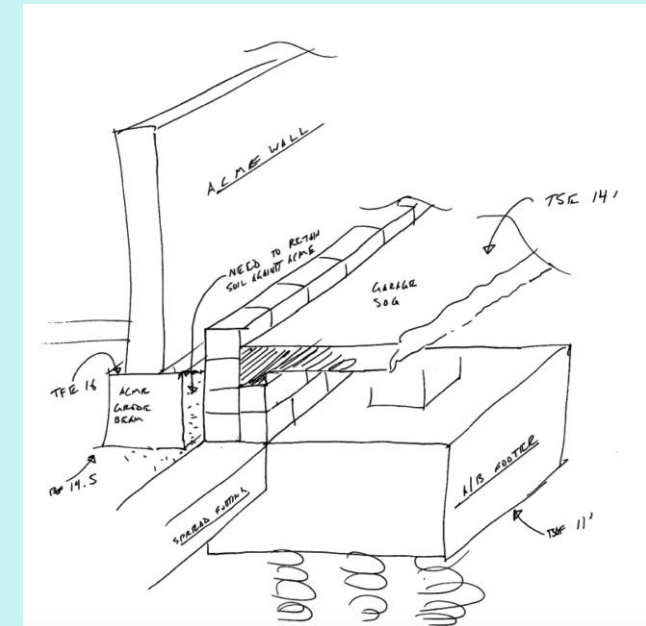


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# BEST PRACTICES FOR THE DESIGN PHASE

## Concept Design

- Architecture, Civil and Structural evaluation
- Read the geotechnical report
- Architecture, Civil and Structural evaluation
- Read the geotechnical report
- Architecture, Civil and Structural evaluation
- Condition of the adjacent structures



Avoiding unforeseen below grade conditions and undermining foundations of an adjacent structure by performing more investigation up front.





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# BEST PRACTICES FOR THE DESIGN PHASE

## Concept Design

- Budget Considerations
- Zoning plan impact
- Overview of key aspects to be considered

DO fence around site  
tightly and excavate in a  
supervised rational fashion



DON'T leave unprotected  
excavation areas

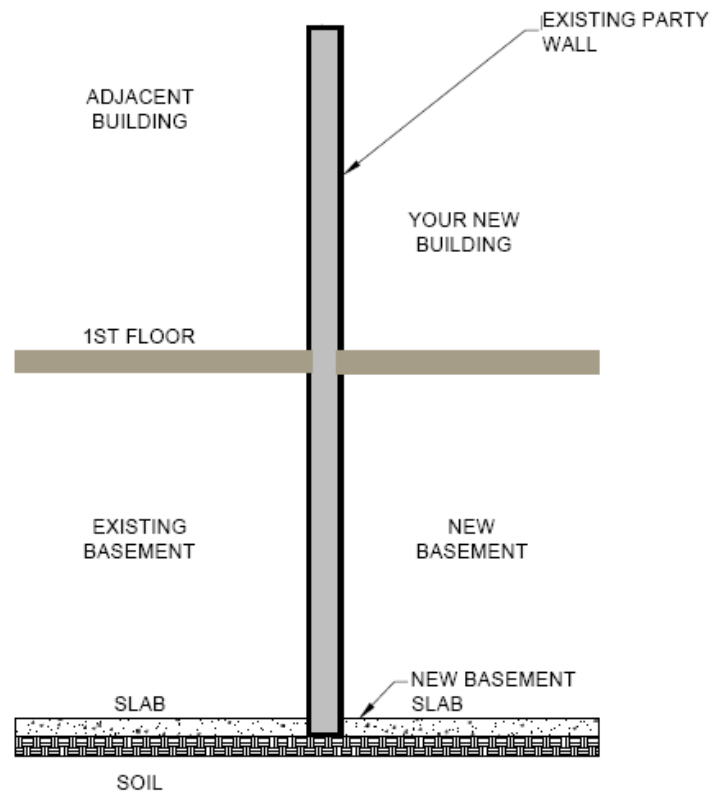


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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

### SCENARIO 1: MATCH ADJACENT





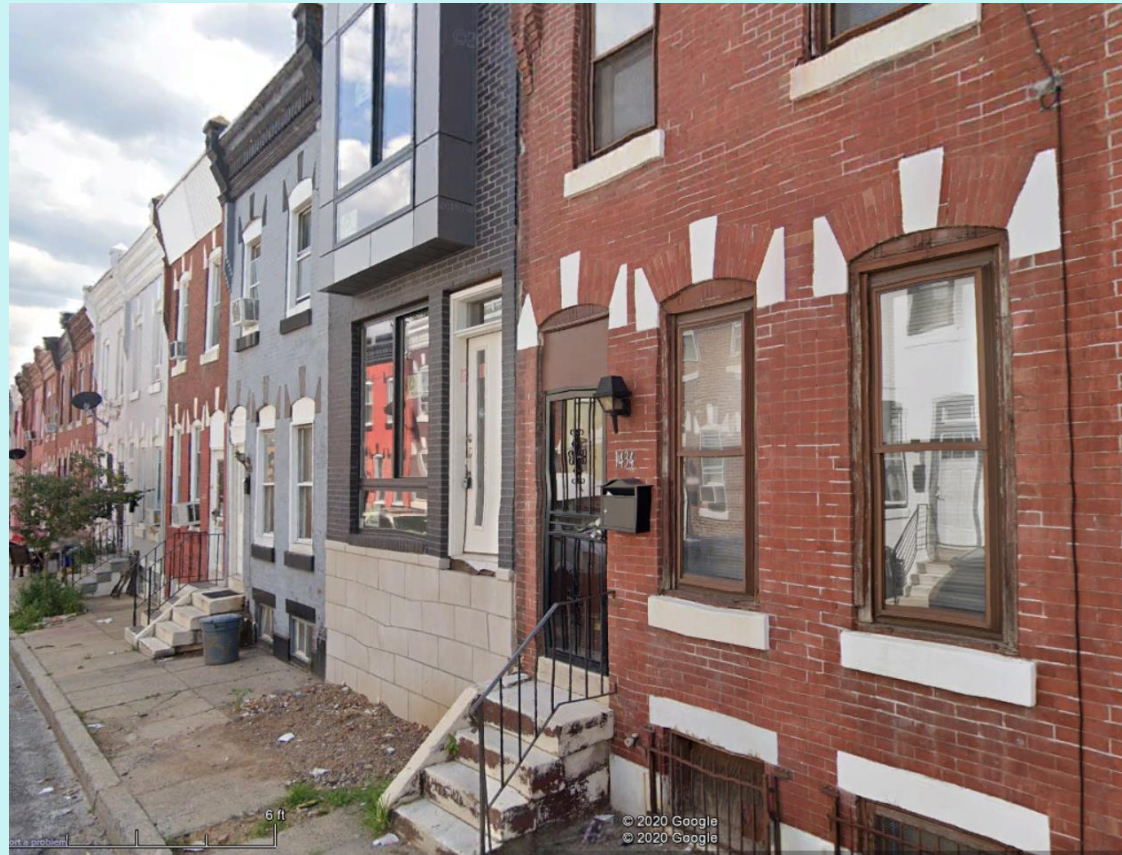
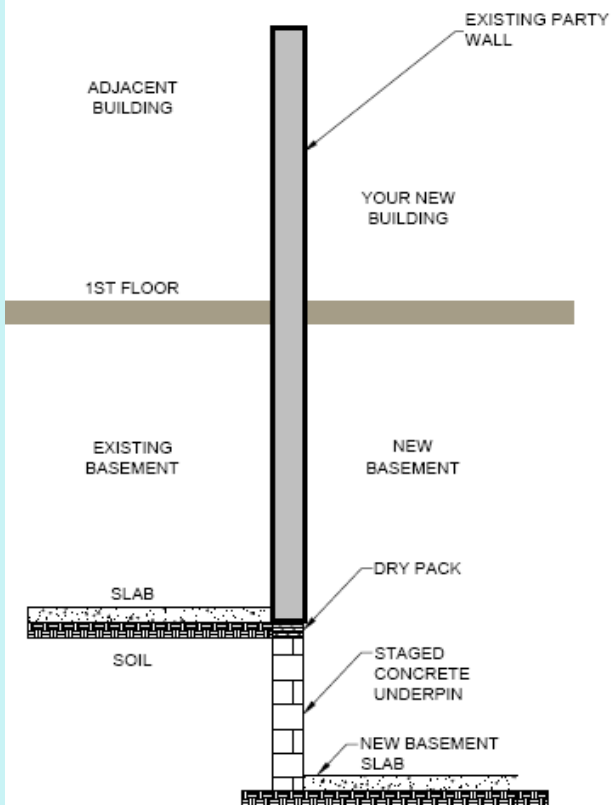


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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

### SCENARIO 2: UNDERPIN





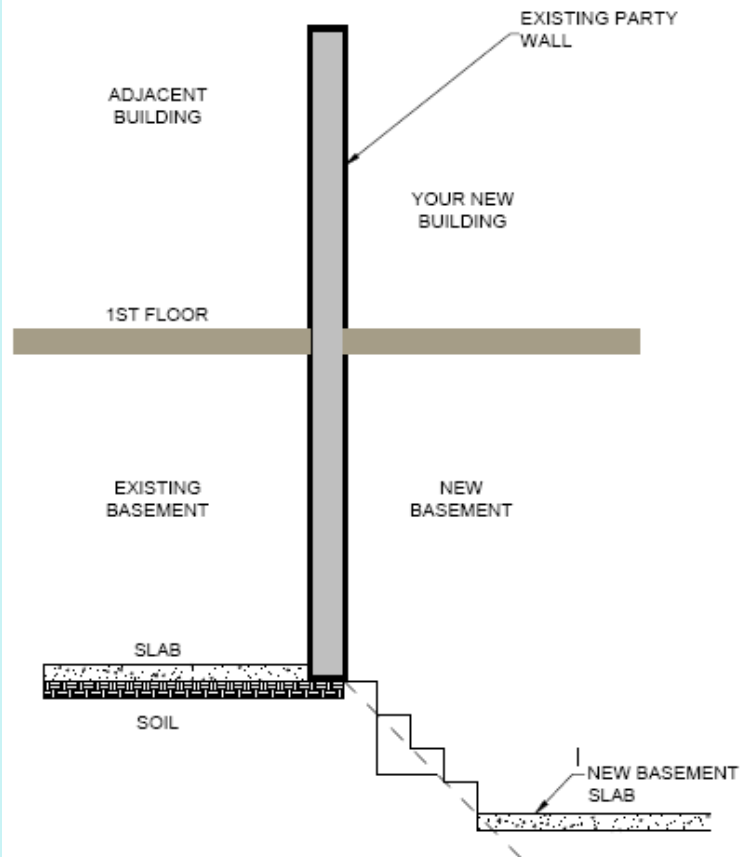


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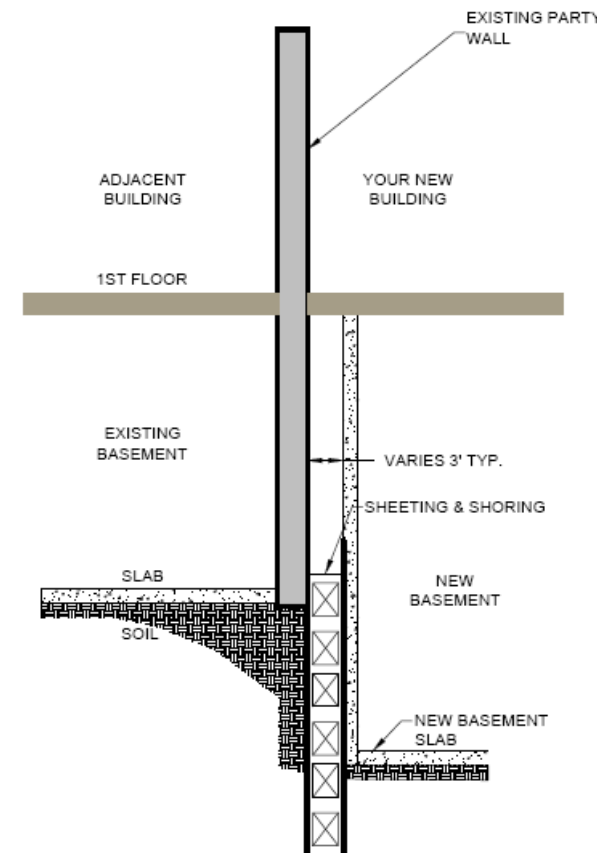
# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

### SCENARIO 3: STEPPED



### SCENARIO 4: SHEET & SHORE



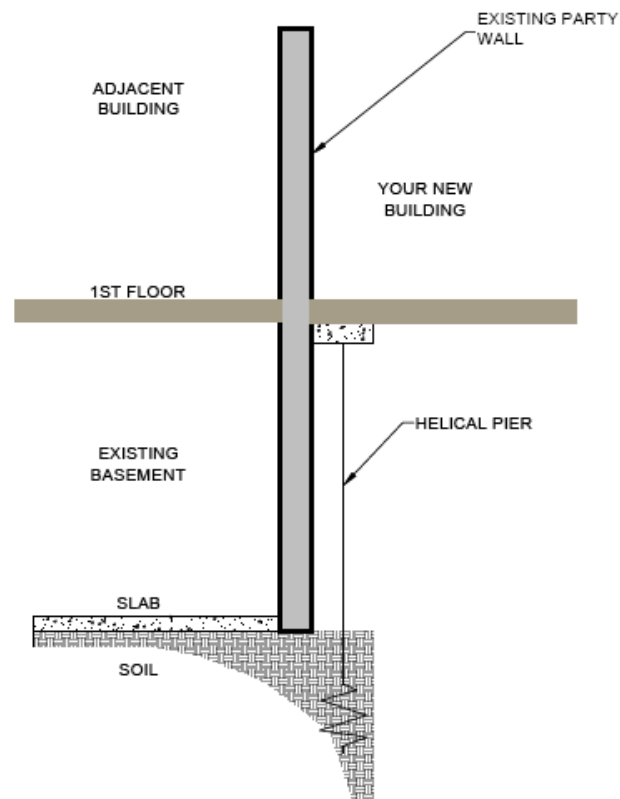


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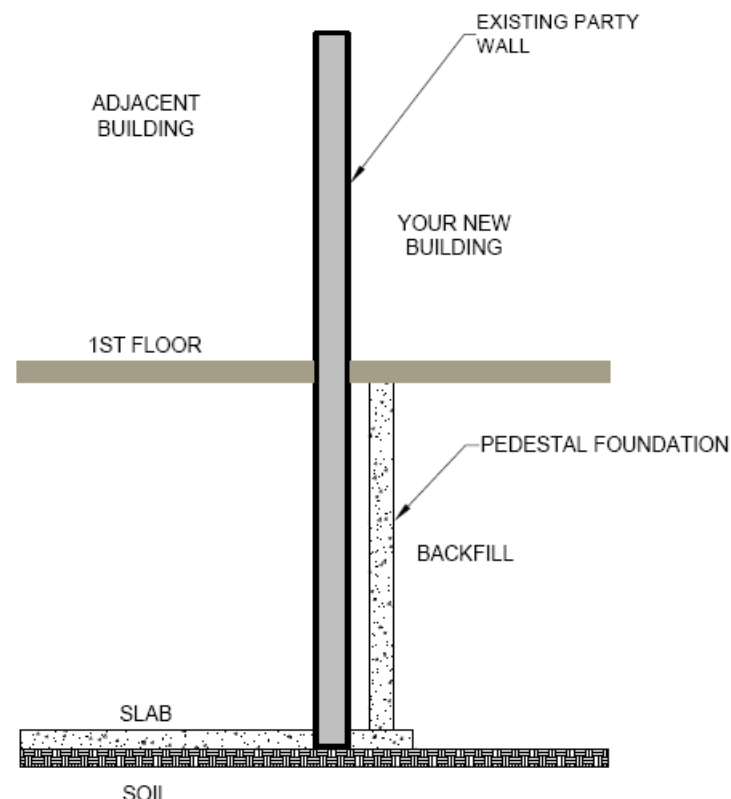
# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

### SCENARIO 5: NO NEW BASEMENT



### SCENARIO 6: DROP FOUNDATIONS





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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

- Define Subsurface Conditions
- Geologic Conditions
- Site Development History
- Building Type, Footprint, Height, Below Grade Spaces
- Adjacent Structure Information





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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation





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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation







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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation







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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

**ENGINEERS FIELD BORING LOG**

PROJECT NAME <u>SR0100 SEC 02L</u> COUNTY <u>Chester</u>	BORING NO. <u>B-1</u>
STATE RT. NO. <u>SR 100</u> SECT. _____ SEGMENT _____ OFFSET _____	SHEET <u>1</u> OF <u>2</u>
STATION <u>342+00</u> OFFSET FROM CENTERLINE <u>160' RT</u>	DATE: START <u>2/16/15</u>
INSPECTOR (SIGNED) <u>J.Pasco</u> DRILLERS NAME/COMPANY <u>M.Shephard/Unitech</u>	O.G. END <u>2/16/15</u>
EQUIPMENT USED <u>B-75 Truck Rig</u>	ELEV. <u>413.0</u>
DRILLING METHODS <u>Hollow Stem Auger, Split Spoon Sample</u>	
CASING: SIZE: <u>3.25"</u> ; DEPTH: <u>23.9'</u> ; WATER: DEPTH: <u>9.0'</u> TIME: <u>0</u> DATE: <u>2/16/2015</u>	
CHECKED BY: <u>J.McKelvey</u> ; DATE: <u>3/3/2015</u> DEPTH: _____ TIME: _____ DATE: _____	

NOT ENCOUNTERED ☐

DEPTH (FT)	SAMPLE NO./ TYPE/CORE RUN	BLOWS/0.5 FT. ON SAMPLER	RECOVERY (FT)	RECOVERY(%) ROD (%)	POCKET PENT/ TORVANE (TSF)	USCS	AASHTO	H <sub>2</sub> O CONTENT	DESCRIPTION	REMARKS
4.0									Unsampled to 4.0ft - Cuttings: Gravel (Placed leveling pad for drilling) and Silty Sand with Gravel	
4.0									4.0	
5.5	S-1	3	0.7'						5.5	
6.0		5								
6.5	S-2	4	1.1'						6.5	
7.0		5								
7.0		5								
7.0	S-3	11	0.3'						7.0	
8.5		6								
8.5		6								
8.5	S-4	7	1.3'						8.5	
10.0		10								
10.0		10								
10.0		4							10.0	
10.0		4								

**SPT "N" Value = 10**

Soil Sample Moist to Dry,  
Water on outside of split  
spoon



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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation







# Geotechnical Investigation







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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation







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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation





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# BEST PRACTICES FOR THE DESIGN PHASE

## Geotechnical Investigation

- The Geotechnical Engineer is usually engaged at 35-40% into concept design. At this point the Structural Engineer may have a general understanding of loads but haven't started design.
- Number of borings and required depth
- Is excavation needed even without a basement to create a suitable base for the structure?
- Are deep foundations needed?
- The geotechnical report identifies areas that will need shoring or underpinning.
- Too early to design shoring and underpinning at this stage of project.



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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Findings of the Geotechnical Report
- Typical Shoring and Underpinning Solutions
- Conceptual Design Meeting
- Costs
- Pre-Development Support





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- **Findings of the Geotechnical Report**
- Is debris present and if so, how much?
- Depth to groundwater
- Depth to bedrock
- Adjacent foundations







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Findings of the Geotechnical Report
- **Typical Shoring and Underpinning Solutions**
- Conceptual Design Meeting
- Costs
- Pre-Development Support





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Safe excavations require horizontal space







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning



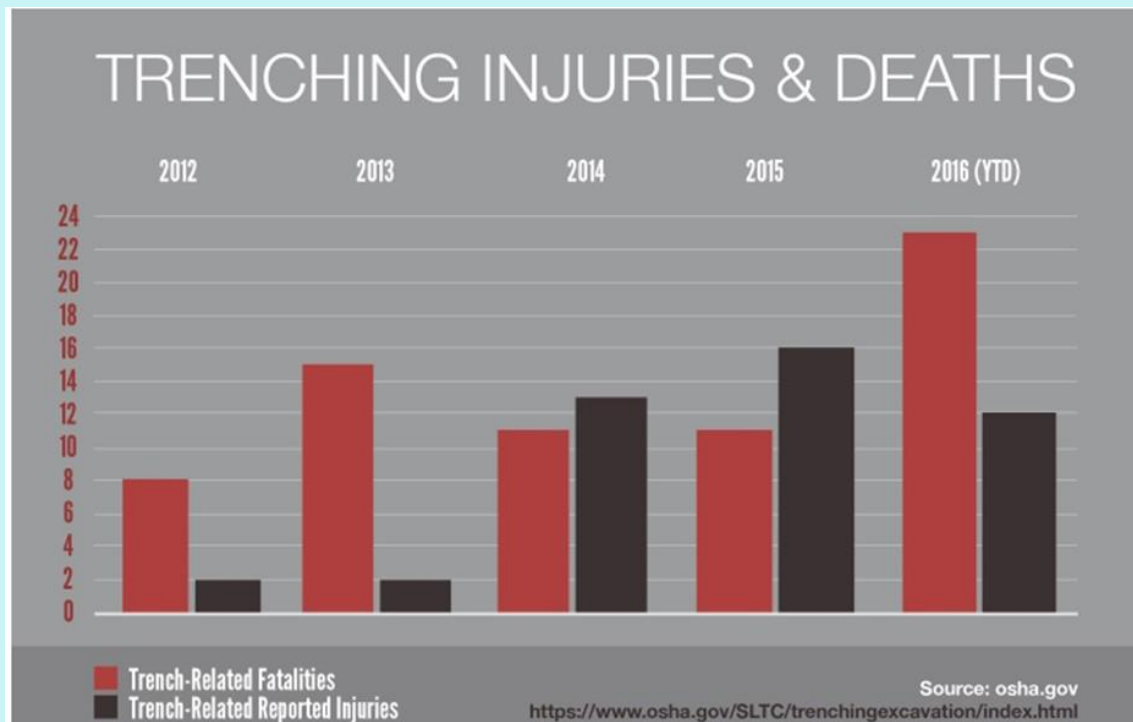


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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- According to OSHA, “...excavation and trenching are among the most hazardous construction operations.”, and that “two workers are killed every month in trench collapses.







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning







H-Pile and lagging shoring is frequently used in urban environments due to the system's flexibility and ability to work around obstacles.





Can cantilever (no additional support) effectively up to 20 feet, however after 15 feet, steel sizes get large.





Embedment is often 1.5 to 2 times the exposed height... may need to socket into bedrock.





Tie-backs are required for deeper excavations, often will require easements from adjacent property owners.





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning







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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Findings of the Geotechnical Report
- Typical Shoring and Underpinning Solutions
- **Conceptual Design Meeting**
- Costs
- Pre-Development Support





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- **Conceptual Design Meeting**
- A meeting between the developer, Architect and the Engineers should be held after the geotechnical report is prepared.
- Identify items that may require agreements with adjacent property owners and utilities.
- Discuss required geometry associated with shoring and underpinning.



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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Findings of the Geotechnical Report
- Typical Shoring and Underpinning Solutions
- Conceptual Design Meeting
- **Costs**
- Pre-Development Support





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning



### Costs





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- **Costs**
  - Developer assumptions are mostly under-estimated.
  - Generally unprepared for the cost, including design and inspections (professional engineers on site).
  - Projects often die when developers find out how much the below grade structural provisions cost.
  - If the costs associated with shoring and underpinning are not considered before financing is secured, the owner/developer could become under duress.





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- **Options to reduce costs**
  - Are the below grade features worth the cost?
  - Partial basements.
  - Abandon below grade features... Deep foundations required?



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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- Findings of the Geotechnical Report
- Typical Shoring and Underpinning Solutions
- Conceptual Design Meeting
- Costs
- **Pre-Development Support**





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# BEST PRACTICES FOR THE DESIGN PHASE

## Preliminary Shoring & Underpinning

- **Pre-Development Support**
  - General contractors.
  - Shoring and underpinning contractors.
  - Engineers who prepare shoring and underpinning design.
  - Discuss with structural engineer alternatives to reduce costs.



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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design

- Geotechnical Report as a Guide
  - Soil Characteristics, Water, Adjacent Structures
  - Shallow/Deep Foundations
- Property Lines and Easements
- Existing Documentation





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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design

- What is the structural engineer's role?
- Surcharge
- Undermining



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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design

- Surcharge Loads
  - Exerts extra pressure on the lower foundation or wall when another foundation is above it and nearby.

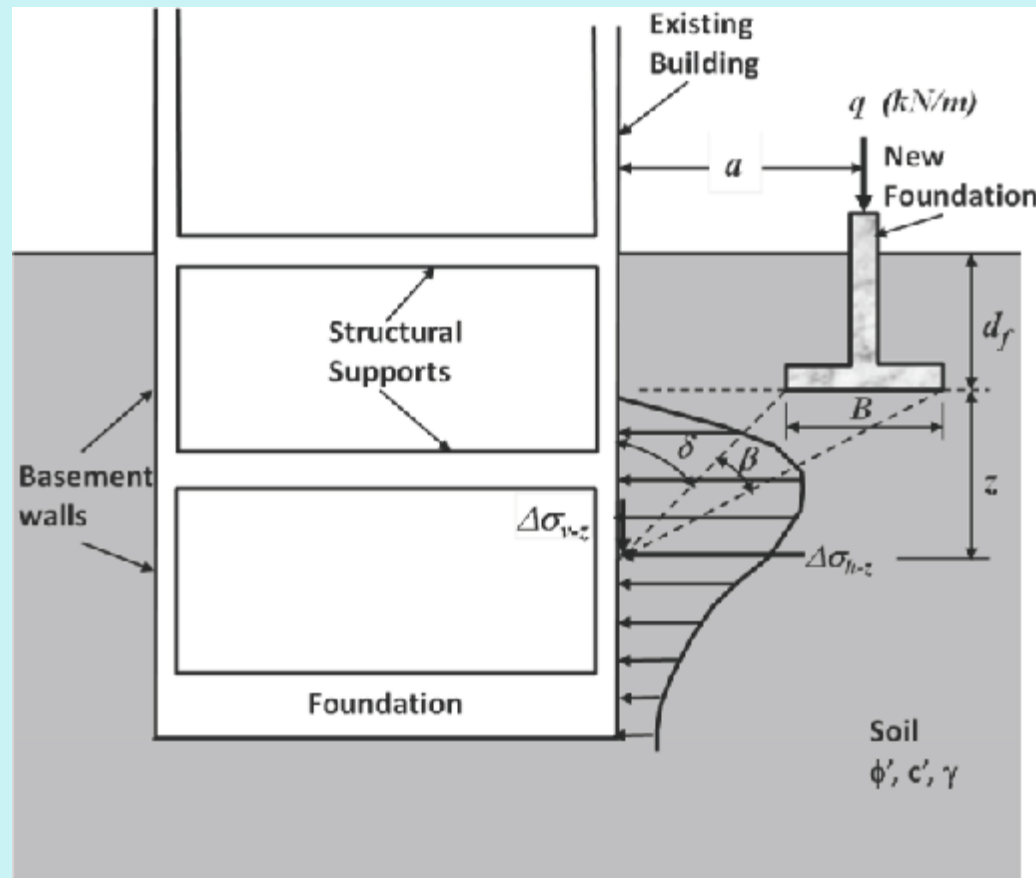




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## Final Design

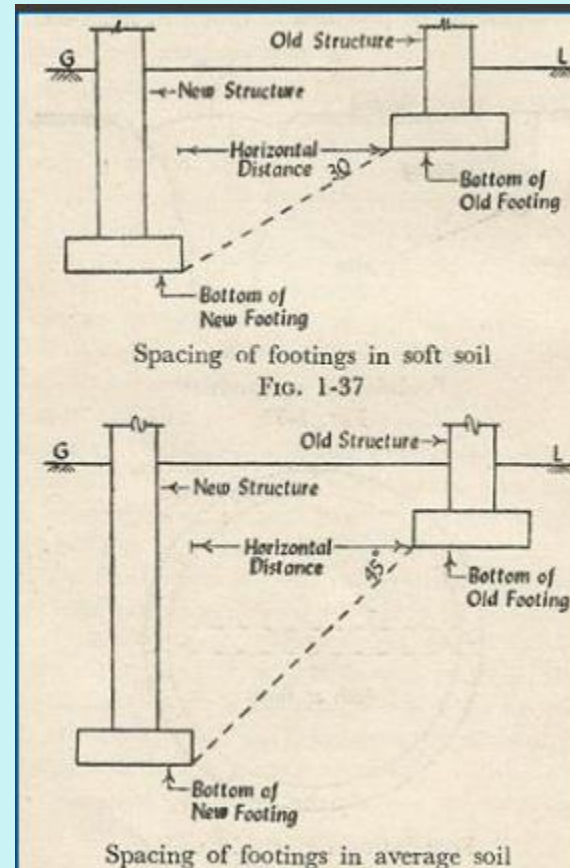




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## Final Design



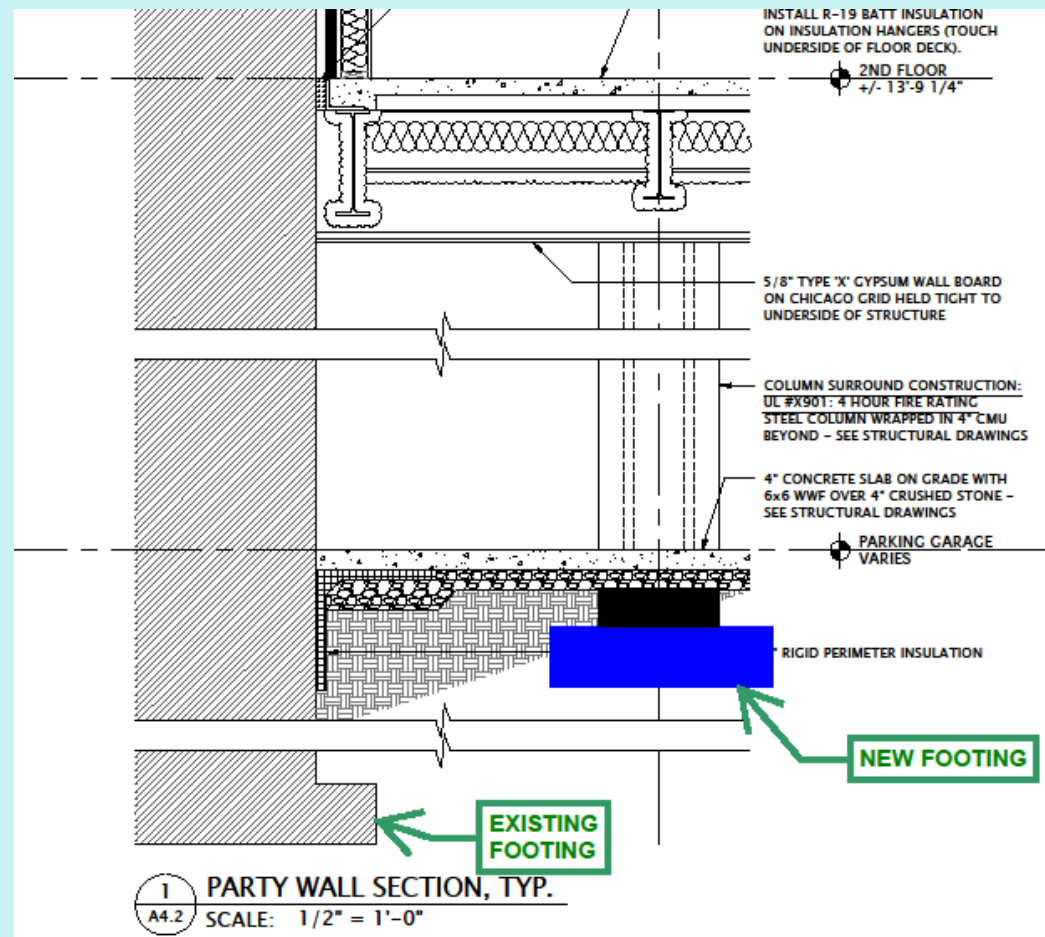




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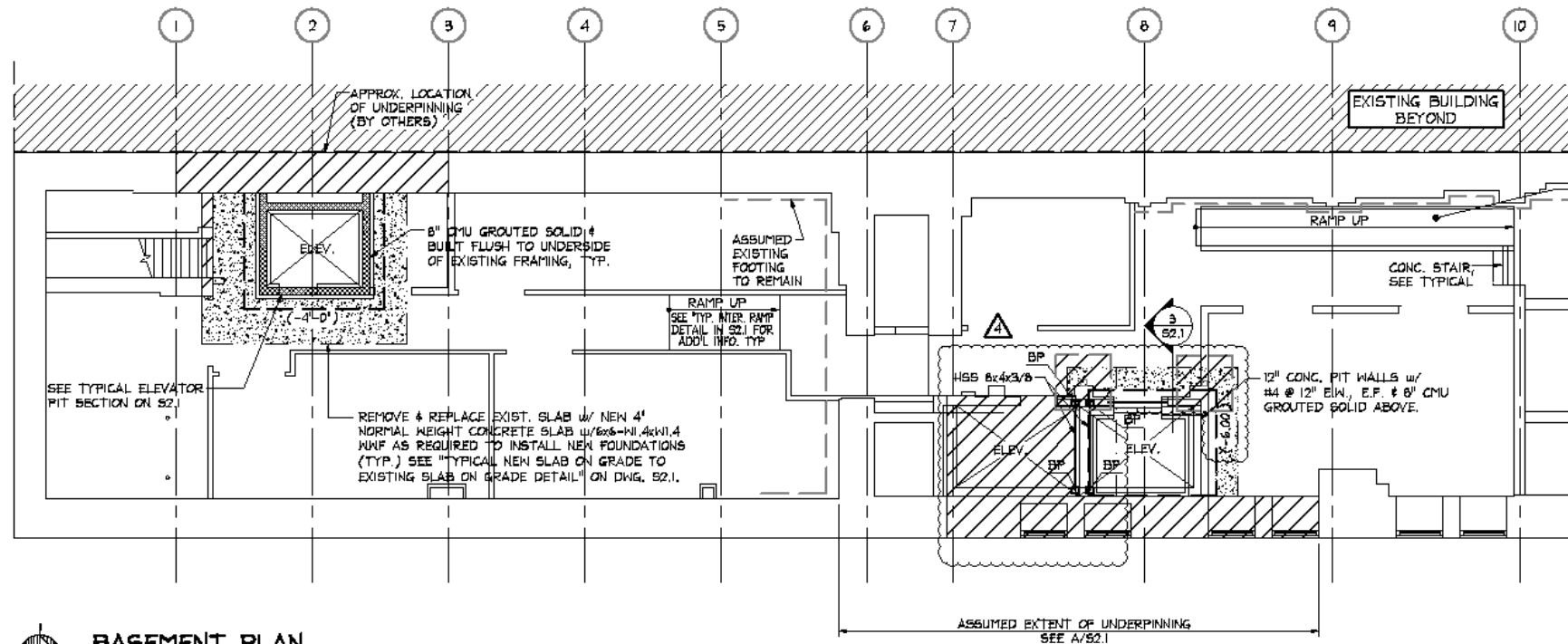




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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design



### **BASEMENT PLAN**

SCALE: 1/8" = 1'-0"

#### **NOTES**

- 1) INDICATES APPROXIMATE EXTENT OF UNDERPINNING. (SEE DETAIL IN DWG. S2.1 FOR ADDITIONAL INFO.)
- 2) '4' INDICATES BOTTOM OF FOOTING ELEVATION TO MATCH BOTTOM OF EXISTING FOOTING ELEVATION, VERIFY IN FIELD.
- 3) '( )' INDICATES TOP OF FOOTING ELEVATION FROM TOP OF EXISTING BASEMENT SLAB ELEVATION.

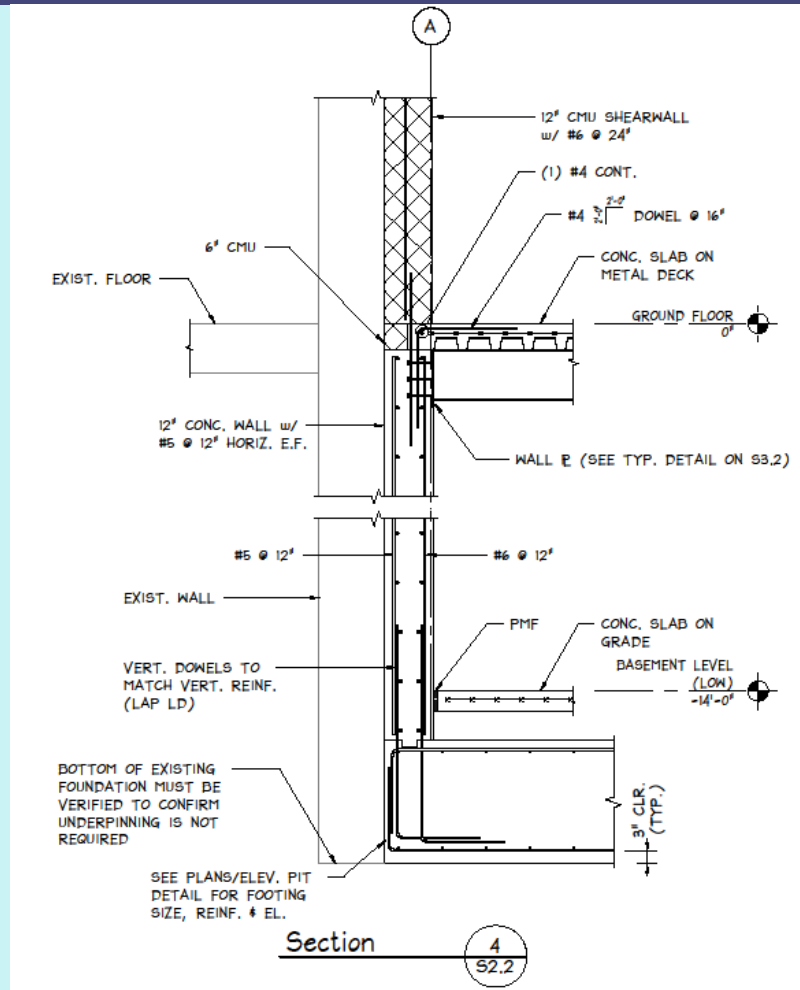




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## Final Design

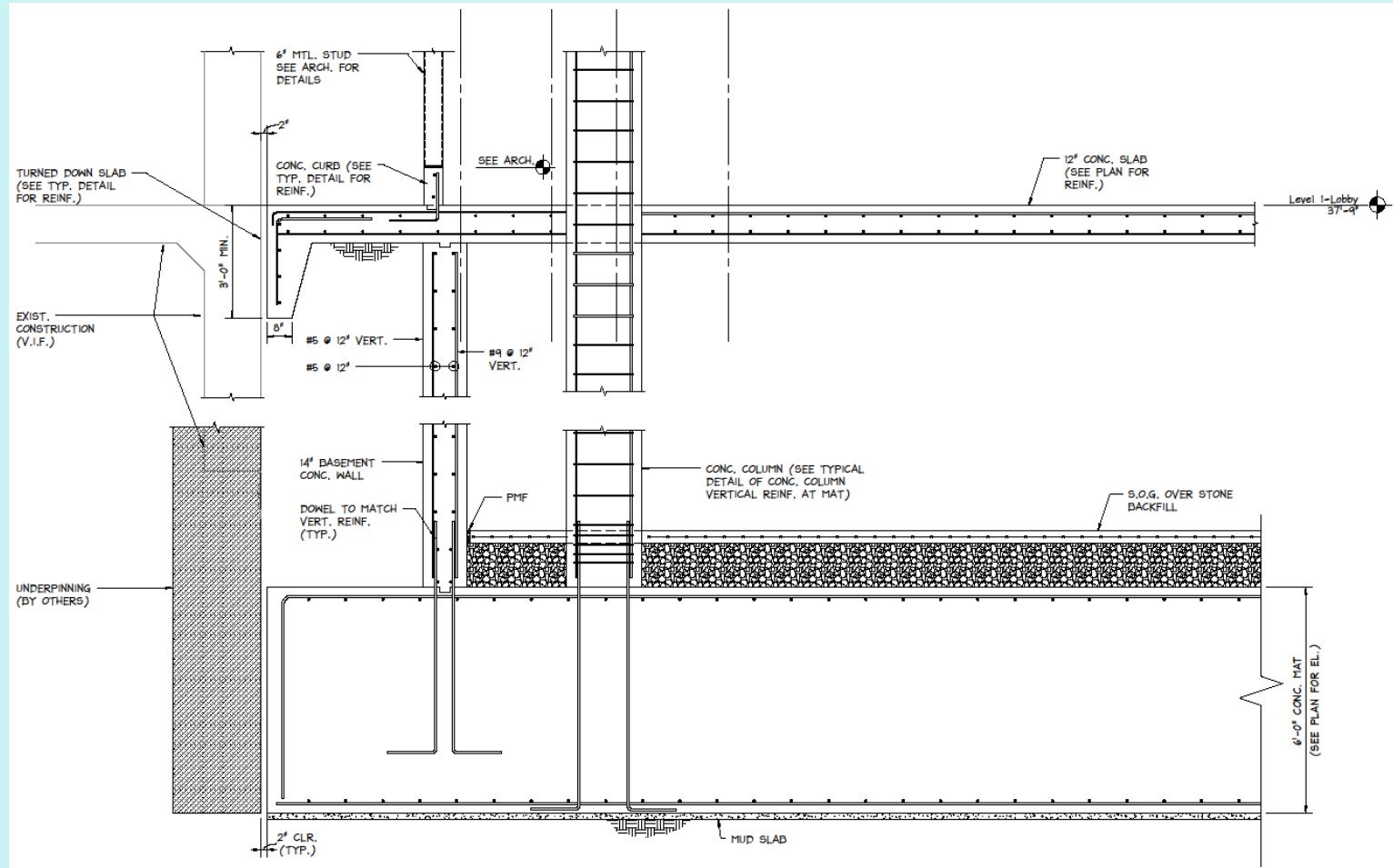




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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design







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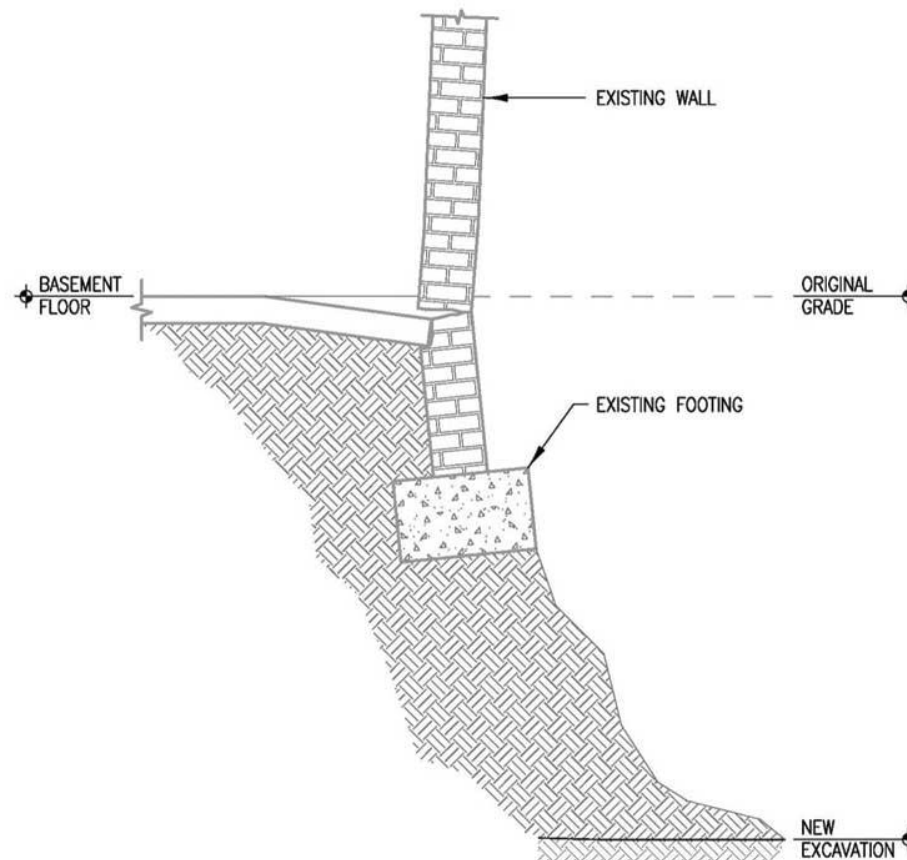
- Undermining
  - Digging out soils underneath of an existing foundation so that it loses its base.
  - This happens when cutting a deep trench alongside an existing footing – soil sloughs off and into the trench and footing loses support
  - Demolition phase



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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design



Effect of Undermining a Footing

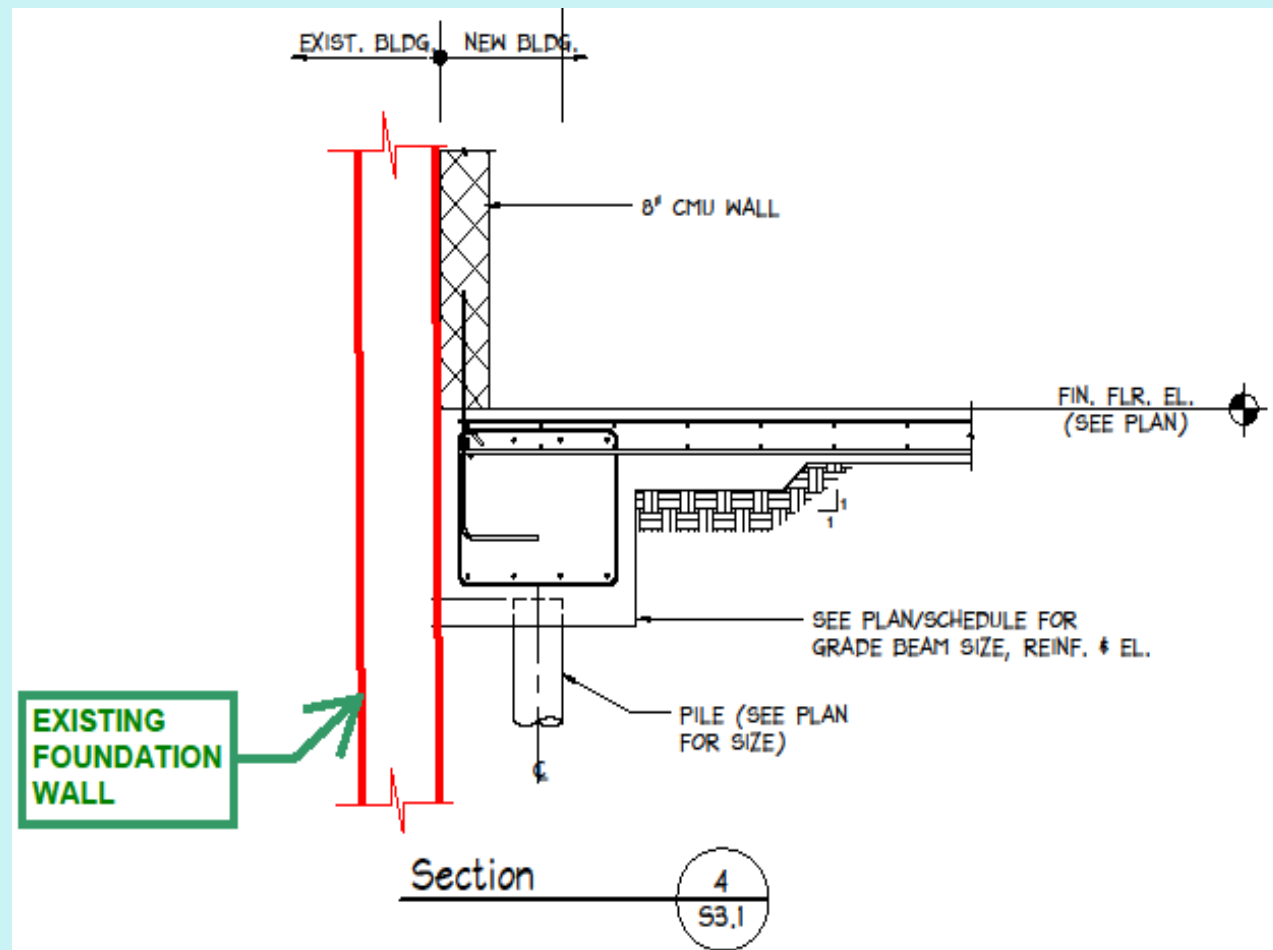




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## Final Design

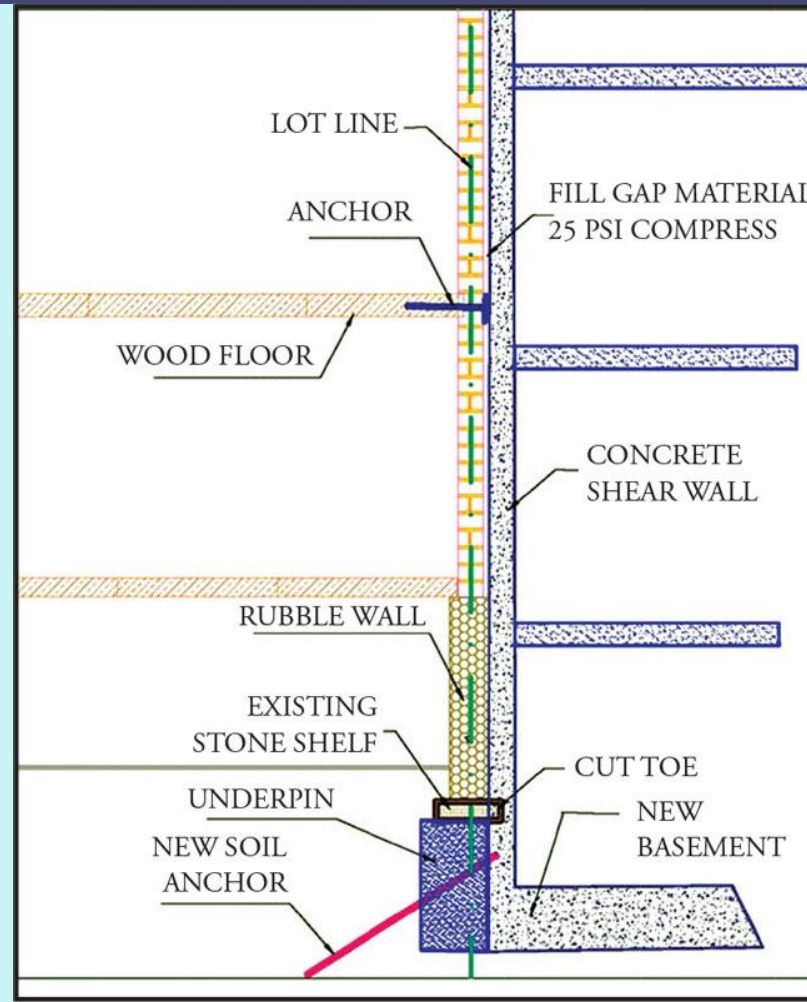




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## Final Design







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## Final Design





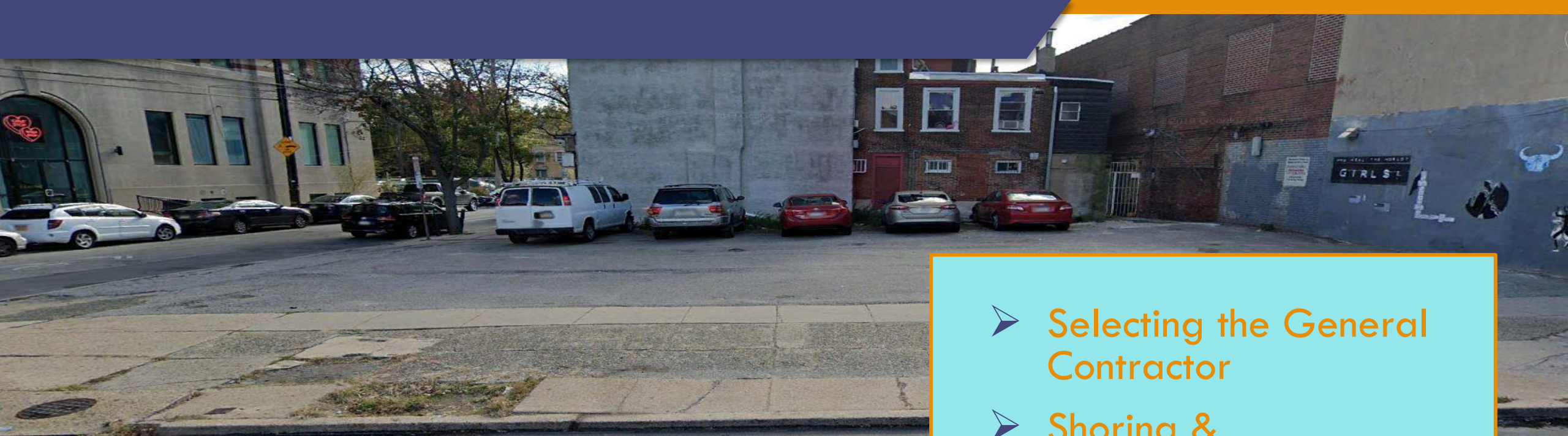
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# BEST PRACTICES FOR THE DESIGN PHASE

## Final Design

- More unknowns leads to:
  - Redesign time
  - Modified foundations likely increase cost
  - Schedule Impact
  - Life Safety, Use Licensed Professionals





## BEST PRACTICES FOR PRE-CONSTRUCTION

- Selecting the General Contractor
- Shoring & Underpinning Design
- Licenses & Permits
- Pre-Excavation Checklist
- Safety





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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Pre-Excavation Checklist

- Selecting the General Contractor
  - Best price may not be the best contractor.
  - Experience in similar projects.
  - Exhibits thorough understanding of project.
  - Acceptable safety record.
  - Has proper safety equipment.
- Shoring and Underpinning Subcontractor





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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Shoring and Underpinning Design

- Best time to complete shoring and underpinning plans is after the General Contractor is selected.

“Where excavations of twelve (12) feet or less below the adjacent grade are proposed, the soils investigation report prepared by a licensed professional engineer as required by the Building Code shall provide information to the contractor where sheeting and shoring for immediately adjacent rights-of-way, alleys and yards of adjacent properties is necessary given the depth of the excavations and the soil conditions present. All excavations in excess of five (5) feet in depth require support in accordance with OSHA regulations.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)

“Engineer designed sheeting and shoring plans shall be submitted when the proposed excavation is deeper than twelve (12) feet below the adjacent grade and is horizontally closer to the edge of the adjoining property, including the footway or other public right-of-way, than a distance of  $1.25 \times$  the depth of the excavation.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)

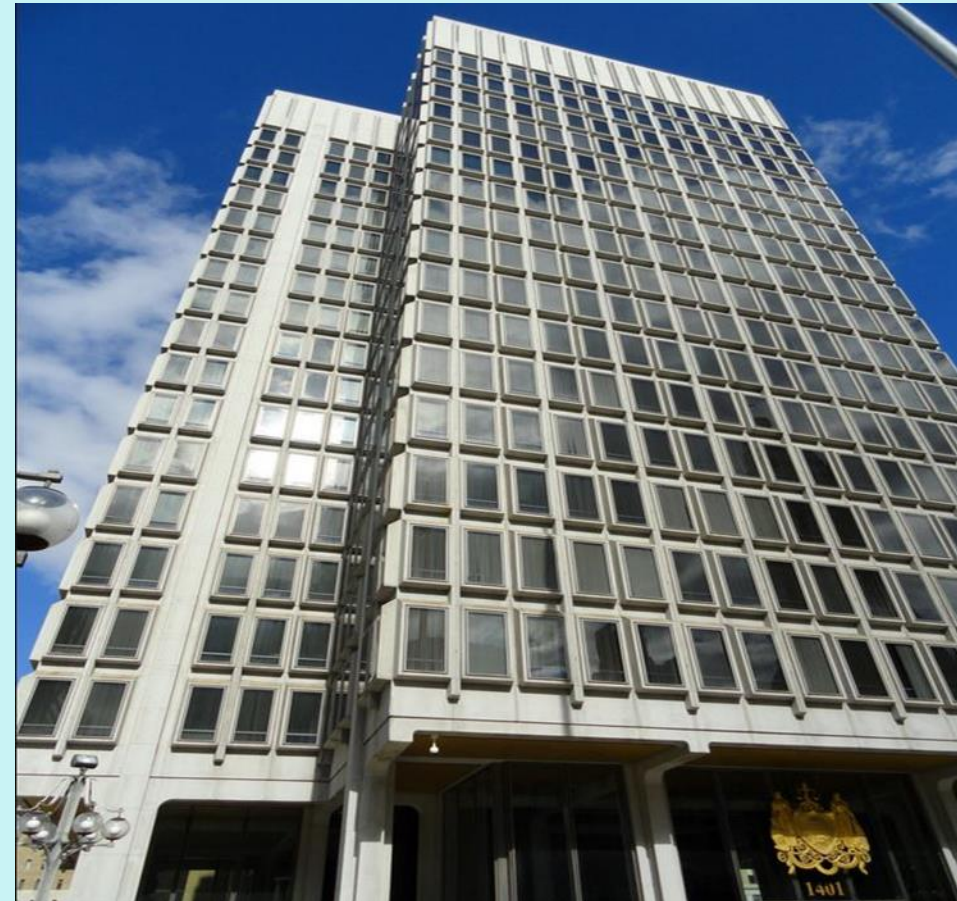


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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Licenses and Permits

- Submit Shoring and Underpinning Plans
- Special Inspection Forms
- Building Permit
- Licensure – City of Philadelphia Commercial Activity and Contractors License.








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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Licenses and Permits

### ➤ Special Inspections

“A Building Permit shall not be issued unless the required Special Inspection Forms(s) are submitted in accordance with Departmental procedures.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)



INTERNAL USE ONLY  
Application # \_\_\_\_\_

### Special Inspections Duties and Responsibilities Agreement

Project Address: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

**BEFORE A PERMIT CAN BE ISSUED**, two (2) copies of this Agreement, including the Statement of Special Inspections Schedule with the required acknowledgements, shall be completed and submitted along with the application by the owner, or registered design professional in responsible charge of special inspections, acting as the owner's agent.

**OWNER RESPONSIBILITIES**

The project owner is responsible for funding the Special Inspections Program and contracting with a design professional registered with the Commonwealth of Pennsylvania to administer the Special Inspections Program.

**DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF SPECIAL INSPECTIONS (DPRC-SI) RESPONSIBILITIES**

The DPRC-SI shall be a Pennsylvania registered architect or licensed engineer with knowledge of all aspects of the project design.

The DPRC-SI has many duties and responsibilities related to special inspections, including but not limited to the following:

- After consulting with the appropriate design professionals, identifies construction activities that require special inspections in accordance with Chapter 17 of the 2018 IBC.
- Completes the Statement of Special Inspections for submittal with the building permit application and other related construction documents.
- Along with the owner, evaluates and selects the individual special inspection agencies and/or inspectors in accordance with Chapter 17 of the International Building Code. A list of applicable agencies and/or inspectors is required to be submitted for approval to the plans examiner prior to the start of the specific special inspection construction activity.




INTERNAL USE ONLY  
Date Received: \_\_\_\_\_  
Application Number: \_\_\_\_\_

### Statement of Special Inspections Schedule (International Building Code)

In accordance with the provisions of Chapter 17 of the 2018 International Building Code, this form is to list the Special Inspections as required for the proposed construction located at the property address indicated below.

<b>Property Address</b> Identify the property address where the construction will occur.	<b>1</b>	Address: _____																
<b>Property Owner</b> Identify the deeded property owner.	<b>2</b>	Name: _____ Address: _____ Email: _____ Phone: _____																
<b>Design Professional in Responsible Charge of Special Inspections (DPRC-SI)</b> By affixing a professional seal, the DPRC-SI confirms that he/she has consulted with the appropriate design professional(s) of record to determine the construction activities covered by the subject permit that require special inspections in accordance with 2018 IBC Chapter 17.  (For other DPRC-SI duties and responsibilities, refer to the Duties and Responsibilities Agreement.)	<b>3</b>	Check one: <input type="checkbox"/> Professional Engineer <input type="checkbox"/> Registered Architect Name: _____ Address: _____ Email: _____ Phone: _____ <div>Affix Seal</div>																
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INTERNAL USE ONLY  
Date Received: \_\_\_\_\_  
Application Number: \_\_\_\_\_

### Special Inspections Program Final Compliance Form

In accordance with the provisions of Section 1704 of the 2018 International Building Code, this form is used to list the Final Compliance of Special Inspections as required for the construction located at the property address indicated below.

<b>Property Address</b> Identify the property address where the construction is located.	<b>1</b>	Address: _____
<b>Application Number</b> Provide the number listed on the permit.	<b>2</b>	Number: _____
<b>Property Owner</b> Identify the deeded property owner.	<b>3</b>	Name: _____ Address: _____ Email: _____ Phone: _____ Fax: _____
<b>Design Professional in Responsible Charge of Special Inspections (DPRC-SI)</b> Identify the DPRC-SI for this project.	<b>4</b>	Check one: <input type="checkbox"/> Professional Engineer <input type="checkbox"/> Registered Architect Name: _____ Address: _____ Email: _____ Phone: _____ Fax: _____ <div>Affix Seal</div>

**EARTH ENGINEERING INCORPORATED**  
Geotechnical Engineers & Geologists



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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Licenses and Permits

### ➤ Special Inspections

“When underpinning or structural support is specified or required, Special Inspections by a licensed professional engineer shall be performed.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)

“Where excavations in excess of twelve (12) feet in depth require engineer-designed sheeting and shoring, Special Inspections by a professional engineer shall be performed.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)

“Where an excavation is three (3) feet or less from an existing building, Special Inspections shall be performed by a licensed professional engineer to ensure that conditions and protections conform to the approved permit drawings.” Not required for excavations three feet or less below adjacent grade. (City of Philadelphia Code Bulletin B-0503-R2, August 2019)





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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Pre-Excavation Checklist

### ➤ Contact/notification to neighbors and the City.

“The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings advising them that the excavation is to be made and that the adjoining buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)

“Where the protection of footways and other public rights-of-way includes protections other than sheeting and shoring (such as tie-backs, soil nailing, etc.) or includes encroachments into the right-of-way, the method and plans shall be approved by the Streets Department.” (City of Philadelphia Code Bulletin B-0503-R2, August 2019)



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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Pre-Excavation Checklist

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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Pre-Excavation Checklist

- PA One Call and private utility locator services
  - Overhead and buried utilities
  - Temporary support or relocation of utilities needed?
- Road and footway closures
- Notifications for 3rd party reviews by appropriate engineers **and L&I** prior to major events.
- Confirm proper licensure is in place – City of Philadelphia Commercial Activity and Contractors License.



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# BEST PRACTICES FOR PRE-CONSTRUCTION

## Safety

- Consult with safety experts to develop safety plan and prepare Site Safety Manager.
- Identify safety areas- fencing, postings, emergency contacts, etc.
- Confirm property safety certifications are in place.

OSHA 3015 for excavations- 10 hour for all

Excavation supervisors... L&I will soon require OSHA 3015 30-hour training and other continuing education for excavation foremen and field supervisors.





## BEST PRACTICES IN THE FIELD

- Up-Front Meetings
- Safety & Training
- Construction Planning
- Documentation
- Special Inspections





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# BEST PRACTICES FOR THE FIELD

## Up-Front Meetings

- Meet with L&I to review plans, means and methods and sequencing. Invite engineers to attend.
- Pre-Construction Meeting
  - Meet with the General Contractor, earthworks and shoring subcontractors and engineers.
  - Discuss plans, means and methods and sequencing.
  - Identify any outstanding Pre-Excavation Checklist items.
  - Confirm all permits have been acquired.





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# BEST PRACTICES FOR THE FIELD

## Safety & Training

- All work needs to comply with 29 CFR Part 1926 (Safety and Health Regulations for Construction)
- Confirm that the General Contractor and subcontractors understand the safety issues on the Project and that appropriate safety training has been obtained.
- Confirm that appropriate safety equipment (i.e., trench boxes, shoring, etc.) is in place.
- Have morning tail gate meetings identifying safety issues of the day.



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# BEST PRACTICES FOR THE FIELD

## Safety & Training

- Have the General Contractor provide weekly updates pertaining to safety, identifying safety issues for the following week.
- Seek advice from engineers and/or safety professionals if uncertainty exists.
- Meet with new subcontractors throughout the project to confirm safety measures are understood.
- If an incident should occur, have meetings to identify how the incident occurred and what corrective actions need to be developed.





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# BEST PRACTICES FOR THE FIELD

## Construction Planning

- Identify lead time items and schedule accordingly.
- If necessary, contact utility owners early in the project to coordinate the necessary effort to address utility conflicts.
- Confirm adequate time and resources are planned for excavation, shoring and underpinning activities.
- Resist short cuts to make up lost time.



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# BEST PRACTICES FOR THE FIELD

## Documentation

- Keep up with well organized project files.
- Weekly summaries from the General Contractor.
- Well documented Incident Reports.
- Can't have enough photographs!





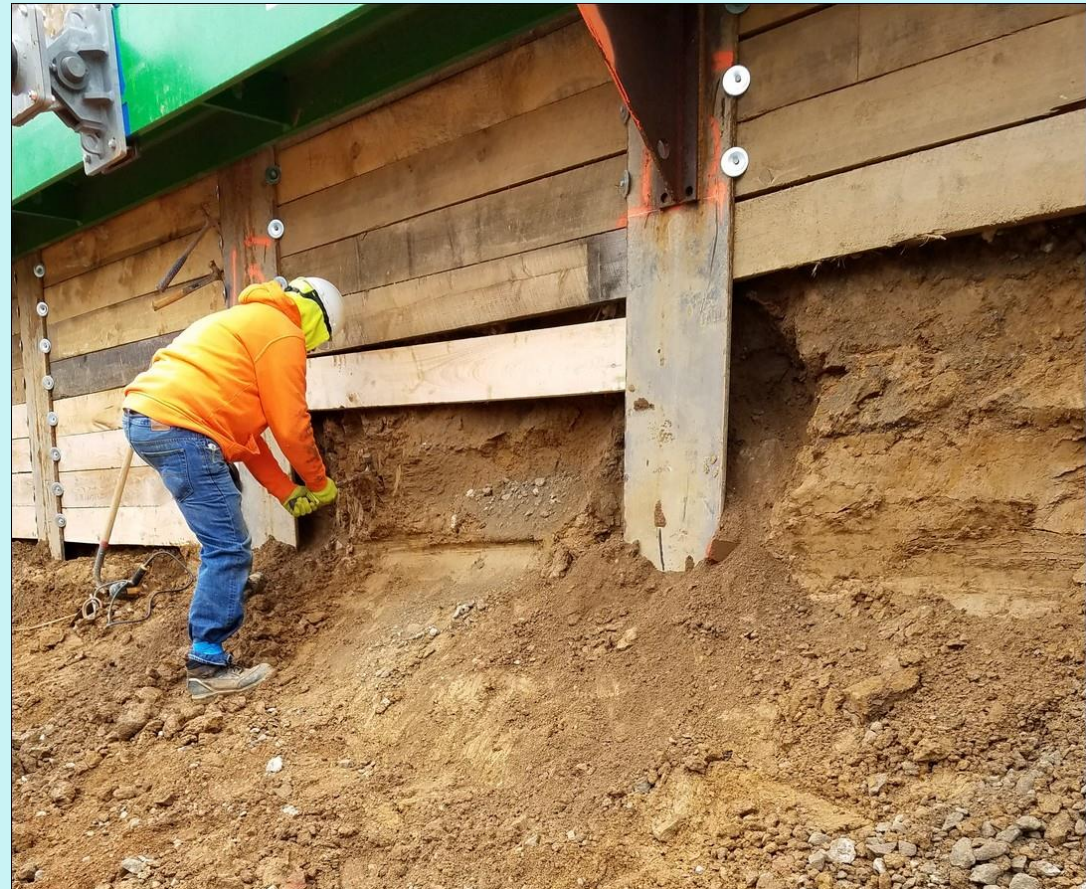


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# BEST PRACTICES FOR THE FIELD

## Special Inspections

- Plan in advance, particularly if a professional engineer is required.
- Make sure construction is ready for inspection.






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# BEST PRACTICES FOR THE FIELD

## Special Inspections



Department of  
**Licenses and Inspections**  
CITY OF PHILADELPHIA

INTERNAL USE ONLY  
Application # \_\_\_\_\_

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Special Inspections  
Duties and Responsibilities Agreement

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Project Address: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

**BEFORE A PERMIT CAN BE ISSUED**, two (2) copies of this Agreement, including the Statement of Special Inspections Schedule with the required acknowledgements, shall be completed and submitted along with the application by the owner, or registered design professional in responsible charge of special inspections, acting as the owner's agent.

**OWNER RESPONSIBILITIES**

The project owner is responsible for funding the Special Inspections Program and contracting with a design professional registered with the Commonwealth of Pennsylvania to administer the Special Inspections Program.

**DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF SPECIAL INSPECTIONS (DPRC-SI) RESPONSIBILITIES**

The DPRC-SI shall be a Pennsylvania registered architect or licensed engineer with knowledge of all aspects of the project design.

The DPRC-SI has many duties and responsibilities related to special inspections, including but not limited to the following:

1. After consulting with the appropriate design professionals, identifies construction activities that require special inspections in accordance with Chapter 17 of the 2018 IBC.
2. Completes the Statement of Special Inspections for submittal with the building permit application and other related construction documents.
3. Along with the owner, evaluates and selects the individual special inspection agencies and/or inspectors in accordance with Chapter 17 of the International Building Code. A list of applicable agencies and/or inspectors is required to be submitted for approval to the plans examiner prior to the start of the specific special inspection construction activity.



Department of  
**Licenses and Inspections**  
CITY OF PHILADELPHIA

INTERNAL USE ONLY  
Date Received \_\_\_\_\_  
Application Number \_\_\_\_\_

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Statement of Special Inspections Schedule  
(International Building Code)

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In accordance with the provisions of Chapter 17 of the 2018 International Building Code, this form is to list the Special Inspections as required for the proposed construction located at the property address indicated below.

**Property Address**  
Identify the property address where the construction will occur.

**1** Address \_\_\_\_\_

**Property Owner**  
Identify the deeded property owner.


**2** Name \_\_\_\_\_  
Address \_\_\_\_\_  
Email \_\_\_\_\_ Phone \_\_\_\_\_

**Design Professional in Responsible Charge of Special Inspections (DPRC-SI)**  
By affixing a professional seal, the DPRC-SI confirms that he/she has consulted with the appropriate design professional(s) of record to determine the construction activities covered by the subject permit that require special inspections in accordance with 2018 IBC Chapter 17.  
(For other DPRC-SI duties and responsibilities, refer to the Duties and Responsibilities Agreement.)

**3** Check one: ☐ Professional Engineer ☐ Registered Architect  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Email \_\_\_\_\_  
Phone \_\_\_\_\_  
Affix Seal

**Special Inspections Details**  
The DPRC-SI (named above) shall indicate by a checkmark which of the special inspections are required for the above-mentioned construction site, as well as the name of the agency performing the inspections.

Verification and Inspection Item	Continuous	Periodic	Agency Name
Fabrication of structural load bearing members and assemblies. (1704.2.5)			
Fabrication of Pre-Cast Concrete. (1704.2.5)			
Wood Deck and Diaphragm. (1705.5.1)			



Department of  
**Licenses and Inspections**  
CITY OF PHILADELPHIA

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Special Inspections Program  
Final Compliance Form

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Provide the number listed on the permit.

**2** Number \_\_\_\_\_

**Property Owner**  
Identify the deeded property owner.

**3** Name \_\_\_\_\_  
Address \_\_\_\_\_  
Email \_\_\_\_\_ Phone \_\_\_\_\_  
Fax \_\_\_\_\_

**Design Professional in Responsible Charge of Special Inspections (DPRC-SI)**  
Identify the DPRC-SI for this project.

**4** Check one: ☐ Professional Engineer ☐ Registered Architect  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Email \_\_\_\_\_ Phone \_\_\_\_\_  
Fax \_\_\_\_\_  
Affix Seal



# QUESTIONS?



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