


# PRESS KIT



## POST-TENSIONING INSTITUTE

 [www.post-tensioning.org](http://www.post-tensioning.org)

 [info@post-tensioning.org](mailto:info@post-tensioning.org)

 38800 Country Club Dr.  
Farmington Hills, MI 48331

## ABOUT PTI

PTI is recognized as the world-wide authority on post-tensioning and is dedicated to expanding post-tensioning applications through marketing, education, research, teamwork, and code development.



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**“ This code change will benefit stakeholders across the residential design and construction spectrum by improving the quality of materials and workmanship for post-tensioned slab-on-ground floors. ”**

Tim Christle, Executive Vice President for PTI



# Stronger Standards, Exceptional Structures



## SIGNIFICANT UPDATE TO POST-TENSIONED SLAB-ON-GROUND DESIGN AND CONSTRUCTION

*Coming to the new 2024 International Residential Code (IRC)*

LAS VEGAS – January 23, 2024 – Today, the [Post-Tensioning Institute \(PTI\)](#) announced the launch of its [Stronger Standards, Exceptional Structures](#) campaign, in preparation for the release of the new [2024 International Residential Code \(IRC\)](#).

The [International Code Council \(ICC\)](#) is set to release the new IRC, which includes a significant update related to post-tensioned slab-on-ground design and construction. The newly added Section R506.2 - Post-tensioned slab-on-ground floors—requires that post-tensioned concrete slab-on-ground floors, on expansive or stable soils, be designed in accordance with [PTI DC10.5](#).

“This code change will benefit stakeholders across the residential design and construction spectrum by improving the quality of materials and workmanship for post-tensioned slab-on-ground floors,” said Tim Christle, Executive Vice President for PTI.

The [Stronger Standards, Exceptional Structures](#) campaign showcases the IRC code change and how it will improve quality, for both materials and labor, of post-tensioned concrete, slab-on-ground floors. Post-tensioning (PT) materials used in this construction will need to be supplied by [Post-Tensioning Institute \(PTI\)](#)-certified (or equal) plants, and the installation and stressing of these materials will need to be performed by [PTI-certified field personnel](#). This campaign promotes the positive benefits of the code change, including the quality improvement gained through the superior materials used, and better trained and educated personnel involved in the construction process.

The goal of this campaign is to educate a wide range of individuals from licensed design professionals and building inspectors to homebuilders, contractors, and homeowners on the importance of this code change and how it will affect (and benefit) them.

## SIGNIFICANT UPDATE TO POST-TENSIONED SLAB-ON-GROUND DESIGN AND CONSTRUCTION - CONTINUED

*Coming to the new 2024 International Residential Code (IRC)*

“In addition to elevating construction quality and durability,” said Christle. “Other benefits of the revised code requirements include streamlining the construction process and achieving potential cost savings.”

Additional benefits include:

- Higher quality post-tensioning (PT) system materials manufactured by certified plants.
- Higher quality installation and stressing of PT materials by PTI-certified field personnel.
- Improved safety during stressing of PT tendons due to training and education received by certified field personnel.
- Schedule savings from more efficient PT operations and fewer issues coordinating PT with other trades on the project.
- Fewer troubleshooting incidences (for the contractor and licensed design professional) that are more commonly encountered when using non-certified personnel.
- Improved structural durability and lower life-cycle costs due to higher-quality materials and workmanship.
- Fewer homebuilder warranty issues and greater risk mitigation.

Elevate your knowledge with [PTI Academy](#)! Don't miss out on PTI's upcoming and on-demand webinars where you will learn from industry leaders and renowned experts as they share invaluable insights to propel your success. Explore [PTI Academy](#) and seize the opportunity for continuous learning and growth.

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### About Post-Tensioning Institute

The Post-Tensioning Institute is recognized as the worldwide authority on post-tensioning and is dedicated to expanding post-tensioning applications through marketing, education, research, teamwork, and code development. For more information, visit <https://www.post-tensioning.org>.



## QR Code

Unlock exclusive content to world of stronger standards and exceptional structures by scanning the QR Code.





## Frequently Asked Questions

### Q: What is post-tensioning (PT)?

Post-tensioning (PT) is a method of reinforcing (strengthening) concrete or other materials with high-strength steel strands or bars, typically referred to as tendons. Stretching the tendons to a specific length creates a compressive force throughout the concrete cross section that improves its strength, durability and performance. PT can be used for various structures, such as buildings, bridges, parking structures and stadiums. As the world-wide authority on PT, the Post-Tensioning Institute (PTI) is dedicated to expanding PT applications through marketing, education, research, teamwork and code development. [Learn more about PTI.](#)

### Q: What are the benefits of post-tensioning (PT)?

Advantages of post-tensioning (PT) for your next slab-on-ground (SOG) projects include:

- **Stronger and more efficient:** Less concrete and steel are needed for the same structural capacity and slab stiffness, resulting in greater resistance to bending caused by differential soil movements.
- **Minimizes and controls cracking:** PT reduces cracking and keeps any cracks that might form tight, preventing entry of insects and reducing possible water penetration, which can damage flooring and cause mold problems.
- **Controls deflections:** The strength and added stiffness of a PT foundation reduces the amount the slab will bend under load.
- **Faster installation:** With fewer pieces to handle and less concrete to place, a PT concrete slab can often be installed more quickly than a comparable rebar- or wire mesh-reinforced slab.
- **More reliable:** An engineered solution, PT is designed with exacting standards and code requirements, has an excellent performance record and offers increased reliability.
- **Economical:** Monetary benefits are achieved by a reduction in the quantity of concrete, steel and excavation needed, which in turn reduces labor costs. PT beams are smaller and PT slab thickness is less, making savings in excavation and site preparation possible.

**Q: What is the “Stronger Standards, Exceptional Structures” campaign?**

The [IRC 2024](#) edition will improve the quality of post-tensioned concrete, slab-on-ground floors. Quality improvement will be achieved through stronger code requirements for both materials and labor. Post-tensioning (PT) materials used in this construction will need to be supplied by [Post-Tensioning Institute \(PTI\)](#)-certified (or equal) plants, and the installation and stressing of these materials will need to be performed by [PTI-certified field personnel](#). This campaign promotes the positive benefits of the code change, including the quality improvement gained through the superior materials used, and better trained and educated personnel involved in the construction process.

**Q: What are the goals of this campaign?**

The goal of this campaign is to educate:

- [Licensed design professionals \(LDP\), architects and designers/builders](#) on the importance of this code change and how they can incorporate it into their contract documents for post-tension slab-on-ground (PT-SOG) projects.
- [Municipalities and building inspectors](#) on the importance of this code change and how they can enforce it in their permitting and inspecting processes.
- [Homebuilders, contractors, subcontractors and suppliers](#) on the positive impacts this code change will have on project quality, schedule, safety, efficiency and warranties, as well as how to acquire post-tensioning (PT) materials from certified plants and how to engage with certified field personnel.
- [Home sellers, real estate agents and homeowners](#) on the value and durability associated with a higher-quality, PT concrete, SOG floor foundation, allowing them to leverage these advantages in comparison to other residential construction alternatives.

**Q: What are the changes in the IRC 2024 code?**

In 2024, the [International Code Council \(ICC\)](#) will modify the International Residential Code (IRC). [IRC 2021](#) (and preceding) has a Section R506 “Concrete Floors (On Ground),” as well as a Section R506.1 “General” that has only referred to R506 and [ACI 332](#) for design and construction of concrete slab-on-ground floors. The IRC code change adds a new Section R506.2 “Post-Tensioned Slab-on-Ground Floors,” which will be in IRC 2024. This adds the IRC code requirement that “post-tensioned concrete slabs-on-ground floors placed on expansive or stable soils shall be designed in accordance with [PTI DC10.5](#).” [DC10.5-19](#) will be added to the IRC code as a reference. These forthcoming modifications in the code will directly influence the construction of post-tensioned slab-on-ground (PT-SOG) structures.

**Q: What are the benefits of this IRC code change?**

In addition to elevating construction quality, adhering to the revised code will streamline the construction process and lead to potential cost savings. Additional benefits include:

- Higher-quality post-tensioning (PT) system materials manufactured by certified plants.
- Higher-quality installation and stressing of PT materials by Post-Tensioning Institute (PTI)-certified field personnel.
- Improved safety during stressing of PT tendons due to training and education received by certified field personnel.
- Schedule savings from more efficient PT operations and fewer issues coordinating PT with other trades on the project.
- Fewer troubleshooting incidents (for the contractor and licensed design professional) that are more commonly encountered when using non-certified personnel.
- Improved structural durability and lower life-cycle costs due to higher-quality materials and workmanship.
- Fewer homebuilder warranty issues and greater risk mitigation.

**Q: What does the code change mean to me?**

The code change is designed to benefit stakeholders across the construction spectrum by improving overall quality, safety and efficiency, ultimately leading to positive outcomes for construction projects and the industry as a whole. For further details, refer to questions: [What are the goals of this campaign?](#) and [What are the benefits of this IRC code change?](#)

**Q: When does it go into effect?**

The 2024 [International Residential Code \(IRC\)](#) is scheduled to be released in the first quarter of 2024. The effective date of implementation, however, will vary depending on your location, as it is determined by your authority having jurisdiction (AHJ) state or local government.

**Q: What is the process?**

The process for interested parties (engineers; city municipalities/code officials/inspectors; licensed design professionals; home builders; architects; inspection and insurance companies; and others) to follow when there is an [International Residential Code \(IRC\)](#) change depends on the authority having jurisdiction (AHJ) where they operate. Different AHJ's may adopt different editions of the IRC or amend the IRC to suit their local needs and preferences. You should check with your local building officials to determine which edition of the IRC applies to your projects, and what amendments or modifications are in effect.

**Q: What is the process (continued)?**

It's important to note that adding these same post-tensioning (PT) requirements into your contract documents can be accomplished even if your project's AHJ is still governed by IRC 2018 or 2021.

**Q: Why should I adhere to the code?**

Once your authority having jurisdiction (AHJ) adopts IRC 2024, this new code requirement for post-tensioning slab-on-ground (PT-SOG) will go into effect. In addition, even if this code requirement is not yet in effect in your AHJ, adding this to your current contract documents provides numerous benefits. The short- and long-term residual effects of this code change should include savings in both cost and schedule. It won't cost you more money, but will result in a better foundation, improved efficiencies, reduced liability and fewer problems.

Similar code requirements for certified plants and certified field personnel already exist for elevated, multistory post-tensioned (PT) structures, and they have for some time now. That segment of the concrete construction industry adapted well to those changes many years ago and they have realized many benefits.

Essentially, PT-SOG is catching up with elevated post-tensioning structures, elevating them to a similar level of quality of materials and workmanship.

**Q: Will adhering to the revised code cost me more?**

The cost will remain the same. There's no increase in pricing, only in the quality standard. Investing in doing it right doesn't incur extra expenses—it's the mistakes that prove costly when you have to rectify them.

The short- and long-term residual effects of this code change should include savings in both cost and schedule. Cost benefits are achieved by reductions in quantities of concrete, steel and excavation, which in turn reduce labor costs. Beams are smaller and slab thickness is less, therefore savings in excavation and site preparation are possible. Schedule savings occur due to more efficient post-tensioning (PT) operations and fewer issues coordinating PT with other trades on the project.



**Q: Tell me about the Post-Tensioning Institute (PTI) certification program:**

PTI is recognized as the worldwide authority on post-tensioning (PT) and is dedicated to expanding PT applications through marketing, education, research, teamwork and code development. PTI offers both field personnel and plant certifications plus a PT systems qualification program. Please see “Become PTI Certified” to learn more.

**Q: Where can I get more information?**

Explore our Resource page for pertinent Post-Tensioning Institute (PTI) and International Code Council (ICC) documents. If you can't find what you're seeking, reach out to PTI Staff via email at [technical.inquiries@post-tensioning.org](mailto:technical.inquiries@post-tensioning.org).

**Q: I have a technical question not addressed here. Where do I go for technical support?**

The Post-Tensioning Institute (PTI) has engineering staff available to assist you with any post-tensioning related technical questions you might have. All technical inquiries can be submitted [here](#).

“ Benefits of the revised code requirements include streamlining the construction process and achieving potential cost savings. ”

Tim Christle, Executive Vice President for PTI

## Logos

There are three main configurations of the Post-Tensioning Institute (PTI) Stronger Standards, Exceptional Structures campaign logo:





# POST-TENSIONING MANUAL



**POST-TENSIONING INSTITUTE**  
*Strength in Concrete*

## **POST-TENSIONING INSTITUTE UNVEILS THE 7<sup>TH</sup> EDITION OF THE POST-TENSIONING MANUAL**

*New Edition Represents Significant Overhaul from Its Predecessor*

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Farmington Hills, MI (January 11, 2024) – [The Post-Tensioning Institute \(PTI\)](#), a leading authority on post-tensioning (PT), announces the release of the 7<sup>th</sup> Edition of the [Post-Tensioning Manual](#). This publication, first introduced in 1972, has been a cornerstone in the industry, offering comprehensive insights into the design and construction of post-tensioned structures.

The PT manual has played a pivotal role in shaping the understanding of post-tensioning technology. Over the years, it has evolved to keep pace with industry advancements and emerging practices. The latest edition represents a significant overhaul from its predecessor, the 6<sup>th</sup> Edition.

Key highlights of the 7<sup>th</sup> Edition include updates aligned with current codes and the integration of innovative practices. In addition, four new chapters and one new appendix have been introduced to broaden the scope and relevance of the manual. These include:

- Chapter 22: Repair, Rehabilitation and Strengthening of Structures
- Chapter 23: Building Information Modeling
- Chapter 24: Anchorage Zone Design
- Chapter 25: Sustainability
- Appendix C: PTI Barrier Cable Tests

PTI Past President, Jack Graves Jr. stated, “This manual highlights the inherent benefits of post-tensioning for an array of construction applications and will be an invaluable resource for a diverse audience of students, educators, contractors, inspectors, building officials, owners, engineers and architects.”

The [Post-Tensioning Manual](#) is now available, providing essential guidance and principles for various post-tensioning applications. To acquire a copy or for more information, please visit the [PTI Store](#) or contact PTI Bookstore at [PTI.Bookstore@post-tensioning.org](mailto:PTI.Bookstore@post-tensioning.org).

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The [Post-Tensioning Institute](#) is recognized as the worldwide authority on post-tensioning and is dedicated to expanding post-tensioning applications through marketing, education, research, teamwork, and code development.

# Post-Tensioning Manual, 7<sup>th</sup> Edition...**NOW AVAILABLE!**



PTI published the first *Post-Tensioning Manual* in 1972. **The Manual**, which was initiated by the PCI Post-Tensioning Division prior to organization of PTI, **provided the basics** of design and construction and provided an overview of post-tensioning technology.

The **7<sup>th</sup> Edition** has been **significantly reworked** from the 6<sup>th</sup> Edition. In addition to updates to align with current codes and new practices, four new chapters and one new appendix have been added, including:

- Chapter 22, Repair, Rehabilitation and Strengthening of Structures
- Chapter 23, Building Information Modeling
- Chapter 24, Anchorage Zone Design
- Chapter 25, Sustainability
- Appendix C, PTI Barrier Cable Tests

The *Post-Tensioning Manual* provides basic guidance and the essential principles for various uses of post-tensioning applications for students, educators, contractors, inspectors, building officials, owners, end users, practicing engineers, and architects. **The *Post-Tensioning Manual* continues to serve its readers as a “point of entry” to a broad spectrum of information on the post-tensioning industry.**



POST-TENSIONING INSTITUTE  
*Strength in Concrete*

[www.post-tensioning.org](http://www.post-tensioning.org)



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To obtain the latest PT Manual in either print or digital format, just scan the QR Code below.



## PTI ACADEMY

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## Logos

There are two main configurations of the **Post-Tensioning Institute (PTI)** logo:  
Horizontal logo with tagline in PTI gold and staked logo with tagline in PTI gold.



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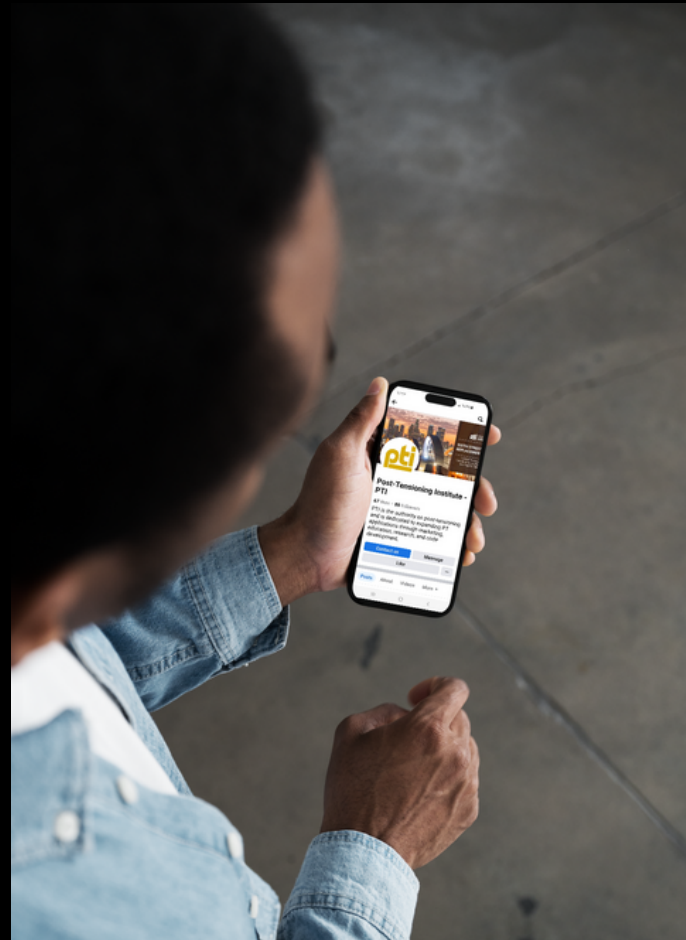


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For further questions, contact PTI at:



info@post-tensioning.org



“ An array of invaluable resources for students, educators, contractors, inspectors, building officials, owners, engineers and architects. ”

Jack Graves Jr., PTI Past President