



# **PERMITTING WORKSHOP 2021 IEBC - INTERNATIONAL EXISTING BUILDING CODE**

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# WELCOME TO THE HOUSTON PERMITTING CENTER

1002 Washington Avenue  
Houston, TX 77002



# **INTERNATIONAL EXISTING BUILDING CODE (IEBC) AND HOUSTON AMENDMENTS**

- Originally took effect in April 2022 with the adoption of the 2015 IEBC
- 2021 IEBC effective on January 1, 2024

## **ADDITIONAL HOUSTON BUILDING CODES**

- 2021 International Building Code (IBC) and Houston Amendments
- 2021 Uniform Mechanical Code (UMC) and Houston Amendments
- 2021 Uniform Plumbing Code (UPC) and Houston Amendments
- 2023 National Electrical Code (NEC) and Houston Amendments
- 2021 International Energy Conservation Code (IECC) and Houston Amendments
- 2021 International Swimming Pool and Spa Code (ISPSC) and Houston Amendments

**All effective January 1, 2024**  
**NEC effective September 1, 2023**

# **IEBC CHAPTER 1 AND 2 SCOPE, ADMINISTRATION AND DEFINITIONS**

2021

International Existing Building Code (IEBC)

# 2021 IEBC – EFFECTIVE USE

## Code Section

101.2  
and  
101.3

- **Scope:** Provides requirements for extensive repairs and alternative approaches for alterations, change of occupancy, additions, and relocations of existing buildings.
- **Intent:** Provides flexibility to permit alternative approaches to comply with minimum requirements to safeguard public health, safety, and welfare. It allows options for controlled departure from full compliance with the International Codes dealing with new construction while maintaining basic levels for fire safety, structural, and life safety features of the rehabilitated building.
- **Exception:** Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plans in height, shall comply with this code or the *International Residential Code (IRC)*.

# KEY DEFINITION



- **Existing Building:** A building erected before the date of the appropriate code or one for which a legal building permit has been issued.
- **Addition:** An extension or increase in the floor area, number of stories, or height of a building or structure.
- **Alteration:** Any construction or renovation to an existing building other than a repair or addition.
  - **Level 1:** Includes replacement or covering of existing materials, elements, equipment, or fixtures using new materials for the same purpose.
  - **Level 2:** Altering existing building spaces or structural systems involving space reconfiguration that could be up to and including 50 percent of the area of the building. In contrast, Level 1 does not include space reconfiguration. Depending on the nature of the alteration work, its location within the building, and whether it encompasses one or more tenants, improvements and upgrades could be required for the open floor penetrations, sprinkler system, or the installation of additional means of egress such as stairs or fire escapes.
  - **Level 3:** Alterations that cover 50 percent of the aggregate area of the building. In contrast, Level 1 alterations do not involve space reconfiguration, and Level 2 alterations involve extensive space reconfiguration that does not exceed 50 percent of the building area. Depending on the nature of the alteration work, its location within the building, and whether it encompasses one or more tenants, improvements and upgrades could be required for the open floor penetrations, sprinkler system, or the installation of additional means of egress such as stairs or fire escapes.

# KEY DEFINITION



- **Change of Occupancy:** Change in the use of a building within the same occupancy classification and a change of occupancy classification. Any of the following shall be considered as a change of occupancy requiring a greater degree of safety, accessibility, structural strength, fire protection, life safety feature, means of egress, ventilation, or sanitation:
  - Change of occupancy classification of building or structure defined in Section 301 of the *International Building Code (IBC)*.
  - Change in the purpose of, or change in the level of activity within a building or structure
  - Change of use.
- **Change of Use:** A change in the use of a building or portion of a building within the same group classification for which there is a change in the application of the code requirements.
- **Historic Building:** A building that has been essentially accredited as being of historic significance by the state or local authority after a careful review of its historical value.
- **Relocatable Building:** A wholly or partially assembled building constructed and designed to be reused multiple times and transported to different building sites.

# KEY DEFINITION



- **Repairs:** Reconstruction, replacement, or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.
- **Substantial Structural Damage:** A condition where any of the following apply:
  - The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its pre-damage condition.
  - The capacity of any vertical component carrying gravity load, or any group of such components, that has a tributary area more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its pre-damage condition. The remaining capacity of such affected elements, concerning all dead and live loads, is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose, and location.
  - The capacity of any structural component carrying snow load, or any group of such components, that supports more than 30 percent of the roof area of similar construction has been reduced by more than 20 percent from its pre-damage condition, and the remaining capacity concerning dead, live and snow loads is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose, and location

# KEY DEFINITION



- **Work Area:** The portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. The work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is required explicitly by code.

# **IEBC CHAPTER 3 PROVISIONS FOR ALL COMPLIANCE METHODS**

2021

International Existing Building Code (IEBC)

# ALTERATION, CHANGE OF OCCUPANCY AND ADDITION

## Code Section

301

- This code provides three(3) main options for a designer when modifying existing buildings, laid out in Section 301 (these options shall not be applied in combination with each other).
  - **Method 1:** Work for alteration, change of occupancy, or addition of all existing buildings shall be done in accordance with the “Prescriptive Compliance Method” given in Chapter 5.
  - **Method 2:** Work to alter, change occupancy, or add to all existing buildings shall be done in accordance with the “Work Area Compliance Method ” given in Chapters 6 through 12.
  - **Method 3:** Work for alteration, change of occupancy, or addition of all existing buildings shall be done in accordance with the “Performance Compliance Method” given in Chapter 13.

# ALTERATION, CHANGE OF OCCUPANCY AND ADDITION

## Code Section

301

- Under limited circumstances, subject to the approval of the building official, a building alteration can be made to comply with the laws under which the building was originally built as long as:
  - Accessibility requirements are met.
  - “No” substantial structural damage has occurred.
  - There will be limited structural alteration. New structural members added to the alteration shall comply with the *International Building Code*.
- Flood hazard provisions shall be addressed where there is a substantial improvement.

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

302

- **General Provisions (Section 302)**
  - **Dangerous Conditions:** The code official shall have the authority to require elimination of conditions deemed dangerous.
  - **Additional Codes:** Any alterations, repairs, additions, changes of occupancy and relocation shall comply with the respective sections of IEBC, IBC, IFC, IMC, UPC, IRC, ISPSC, NEC, and IECC, adopted and amended by the City of Houston, Texas. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

302

In Group I-2 occupancies, Ambulatory Health Care Facilities, Outpatient Clinics and Hyperbaric Facilities, shall also comply with NFPA 99-Health Care Facilities requirements.

- **Existing Materials:** The materials compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless they were determined to be unsafe by the building official.
- **New and Replacement Materials:** Materials permitted by applicable codes shall be used in new construction. Like materials shall be permitted for repairs and alterations, provided that unsafe conditions are not created. New structural members and connections shall be in compliance with IBC.

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

303, 304,  
305 and  
306

- **Storm Shelters (Section 303):** Such structures shall be constructed in accordance with this code and ICC 500. In group E occupancies with exception of day care facilities, accessories to religious worship, and additions to shelter design in ICC 500, additions in storm shelters shall comply with ICC 500 if: (1) Wind Speed for tornados is 250 mph, (2) Occupant load in addition is 50 or more.
- **Structural Design Loads (Section 304)**
  - Live Loads (IBC Section 1607)
  - Snow Loads on adjacent buildings (Section 7.12 of ASCE 7)
  - Seismic evaluation and design (IBC Chapter 16, Table 12.2-1 of ASCE, and ASCE 41)

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

303, 304,  
305 and  
306

- **In-Situ Loads (Section 305):** Where used shall be tested in accordance with IBC Section 1708.
- **Accessibility (Section 306):** The City of Houston does not include, and did not adopt this section. For compliance, please refer to the Texas Accessibility Standards.

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

307, 308  
and 309

- **Smoke Alarms (Section 307):** In Groups **R** and **I-1** occupancy; alterations, additions, changes of occupancy or relocations, shall be provided with smoke alarms in accordance with IFC or IRC Section R314.

**Exception:** Level 1 Alterations

- **CO Detection (Section 308):** In Groups **I-1**, **I-2** and **R** occupancy, and **classrooms** in Group **E** occupancy; alterations, additions, changes of occupancy or relocations, shall be provided with carbon monoxide detection in accordance with IFC and IRC Section R315.

**Exception:**

- (1) Level 1 Alterations,
- (2) Mechanical and Plumbing work other than fuel-burning appliance.
- (3) Exterior work; roofing, siding, windows or doors, additions of porches and decks.

# NUMBER OF REQUIREMENTS WHICH APPLY TO ALL METHODS (PRESCRIPTIVE, WORK AREA OR PERFORMANCE)

## Code Section

307, 308  
and 309

- **Exterior Wall Covering and Envelops (Section 309):** Alterations, repairs, additions, relocations and changes of occupancy shall comply with the requirements of new construction in accordance with IBC Chapters 14 and 26, if the exterior wall envelope on any side of the building:
  - (1) Involves two or more consecutive stories,
  - (2) Comprises more than 15 percent of total wall area.

# **IEBC CHAPTER 4 REPAIRS**

2021

International Existing Building Code (IEBC)

# REPAIRS

## Code Section

### Chapter 4

- Repair shall not make the building less complying than it was before the repair was undertaken.
- Repair of the building includes:
  - **Building Elements and Materials-** Replacement glazing shall comply with IBC and IRC requirements.
  - **Fire Protection-** Level of fire protection shall be maintained.
  - **Means of Egress-** Level of protection shall be maintained.
  - **Structural-** Structural repairs shall comply with Section 405 and 401.2.

# REPAIRS

## Code Section

### Chapter 4

- **Electrical-** Replacement of receptacles, nongrounding-type receptacles and plug fuses shall comply with respective sections in NEC (NFPA 70). In Group **I-2**, ambulatory care facilities and outpatient clinics, the electrical upgrade shall also comply with NFPA 99 requirements.
- **Mechanical** –Mechanical draft system is permitted with conditions in accordance with Section 407.
- **Plumbing-** Low flow toilets required and compliance with UPC for materials and supplies.

# **IEBC CHAPTER 5 PRESCRIPTIVE COMPLIANCE METHODS**

2021

International Existing Building Code (IEBC)

# PRESCRIPTIVE METHOD

## Code Section

### Chapter 5

- It applies to alteration, addition, and change of occupancy including historic building.
- It shall not result in less compliance with the provisions of this code than the existing building or structure prior to the change.
- If an automatic fire sprinkler system has been added throughout the existing building, the fire-resistance rating of building elements and materials shall be permitted to comply with current code requirements.

# PRESCRIPTIVE METHOD

## Code Section

### Chapter 5

- In Group **I-2** occupancy, ambulatory care and outpatient clinics, the altered or added portion shall comply with NFPA 99 requirements.
- Additions shall comply with Section 502. It includes requirements for disproportionate earthquake damage, flood hazard areas, existing structural elements carrying gravity and lateral loads and Group **E** occupancy classroom acoustics.
- Alterations shall comply with Section 503. It includes requirements for flood hazard areas, existing structural elements carrying gravity and lateral loads, bracing of unreinforced masonry parapets on reroofing, bracing of unreinforced masonry parapets and partitions in major alterations, anchorage of reinforced concrete and unreinforced masonry walls, refuge areas, Group **I-2** smoke compartments, locking arrangements in Group **E**, **B** and **I-4**, two-way communication systems and Group **E** occupancy classroom acoustics.

# PRESCRIPTIVE METHOD

## Code Section

### Chapter 5

- Fire Escapes shall comply with Section 504. It includes requirements for construction, dimensions and opening protective. It is only permitted:
  - **New Buildings-** Shall not constitute any part of the required means of egress
  - **Existing-** Shall continue to be accepted as a component in the means of egress.
  - **New-** Shall only be permitted where exterior stairways cannot be utilized because of limitations posed by the lot lines limiting the stairway size, sidewalks or roads at the grade level. Ladders and access by windows shall not be incorporated.
  - **Limitation-** Shall not constitute more than 50 percent of the required number of exits, nor required capacity.

# PRESCRIPTIVE METHOD

## Code Section

### Chapter 5

- Windows and Emergency Escape Openings shall comply with Section 505. It includes requirements for control devices, windows utilized for emergency escape and rescue openings, bars, grilles, covers or screens installed on emergency escape and rescue openings.
- Change of Occupancy shall comply with Section 506. It includes requirements for stairways, emergency escape and rescue openings, structural and classroom acoustics in Group E occupancy.
- Historic Buildings shall comply with Section 507. It includes requirements for flood hazard areas and structural.

# **IEBC CHAPTER 6 CLASSIFICATION OF WORK**

2021

International Existing Building Code (IEBC)

# CLASSIFICATION OF WORK (WORK AREA METHOD)

## Code Section

### Chapter 6

- It applies to alteration, addition, and change occupancy including the historic and moved structures.
- The work area shall be identified in the construction documents.
- Work performed shall be classified in accordance with this chapter which includes:
  - Alteration- Level 1
  - Alteration- Level 2
  - Alteration- Level 3
  - Change of Occupancy
  - Addition
  - Historic Building

# **IEBC CHAPTER 7 ALTERATIONS LEVEL 1**

2021

International Existing Building Code (IEBC)

# ALTERATIONS- LEVEL 1

## Code Section

### Chapter 7

- Involves only removal and replacement of building components with new components and does not involve space reconfiguration.
- Includes replacement or covering existing materials, elements, equipment or fixtures using materials for the same purpose.
- In flood hazard areas, alterations that constitute substantial improvement shall comply with Chapter 19 of the City Code.

# ALTERATIONS- LEVEL 1

## Code Section

### Chapter 7

- Alteration- Level 1 includes:
  - **Building Elements and Materials-** Newly installed interior walls shall comply with IBC Chapter 8. In Group **R-2** or **R-3** containing dwelling units and one- and two-family dwelling and townhouse by IRC; window replacement shall comply with Section 702.4 of this code, and window for emergency escape and rescue openings shall comply with Section 705.5. Materials and methods shall comply with Section 702.7.
  - Bars, grills, covers and screens or similar devices are permitted to be placed over emergency escape and rescue openings in accordance with Section 702.6.
  - **Fire Protection-** The level of fire protection shall be maintained.

# ALTERATIONS- LEVEL 1

## Code Section

### Chapter 7

Alteration- Level 1 includes (continued):

- **Means of Egress-** The level of protection shall be maintained. In Group **I-2, Condition 1** occupancy, when the corridor is at least 96 in. width the projection to the corridor width is permitted in accordance with IBC Section 407.4.3. In Group **E, B** (educational) and **I-4** occupancy, the locking arrangement shall comply with IBC Section 1010.2.8.
- **Reroofing-** Includes recovering and replacement of roof covering down to the roof deck. Shall comply with IBC Chapter 15.
- **Structural-** Includes replacement of equipment supported by building or reroofing which requires permit.
- **Electrical -** In Group **I-2**, ambulatory care facilities and Outpatient Clinics, altered portion, shall comply with NFPA 99.
- **Energy Conservation** – Only altered portion shall confirm to IECC or IRC as they are related to new construction.

# **IEBC CHAPTER 8 ALTERATIONS LEVEL**

2021

International Existing Building Code (IEBC)

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- Includes addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment, and the “Work Area” is equal to or less than 50 percent of building area.

**Exception:** Movement and addition of nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches in height.

- Requirements of “Work Area” are not applicable if the alteration is limited to one or more of the following:
  - Mechanical, electrical, fire protection systems.
  - Abatement of hazardous materials.
  - Windows, hardware, operating controls, electrical outlets and signs.
  - Primary purpose is to increase the accessibility of a facility.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- Not all Level 2 alterations have a “Work Area”.
- It shall comply with Chapter 7, Level 1 alterations, as well as Chapter 8 requirements.
- New construction elements, components, systems and spaces shall comply with IBC, and Section 801.4 of this code.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- It includes the requirements for:
  - **Vertical Openings** – Interior vertical openings connecting two or more floors shall be enclosed with a minimum of 1-hour fire resistance rating assemblies, other than exceptions outlined in 802.2. Where the work area on any floor exceeds 50 percent of that floor area, the vertical openings other than stairways and stairways serving the means of egress shall comply with the requirements in Sections 802.2.2 and 802.2.3, respectively.
  - **Smoke Compartments** – It shall comply with the requirements in Section 802.3 and IBC 407.2 for Group **I-2** where the work area on a story used for sleeping rooms more than 30 care recipients.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- **Interior Finish** – It shall comply with the requirements of IBC, otherwise permitted to be treated with an approved fire-retardant coating in accordance with Section 802.4. When the work area on any floor exceeds 50 percent of the floor area, the interior finish and trim in exits and corridors shall comply with the requirements of Section 802.4.
- **Guards** – The replacement guards shall be in accordance with Section 802.5.1 of this code and IBC.
- **Fire-Resistance Ratings** – If the building is sprinklered throughout, fire-resistance rating of building elements and materials shall be permitted to meet the current building code subject to review and approval of the building official. It shall comply with Section 802.6 of this code.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- It includes the requirements for (continued):
  - **Corridor Ratings** – Where an automatic fire sprinkler system is installed throughout the story, the corridor fire-resistance rating shall be permitted to be reduced in accordance with IBC. Fire sprinkler system shall provide coverage for the stairway landings serving the floor and intermediate landings immediately below.
  - **Automatic Sprinkler Systems** - The requirements for high-rise buildings, windowless stories and different occupancy groups are outlined in Sections 803.2.1 through 803.2.4. The fire sprinkler system shall be supervised in accordance with Section 803.2.6. In the buildings and spaces listed in IBC Table 903.2.11.6 where exits and corridors are shared by more than one tenant, or exits and corridors serving more than 30 persons, an automatic fire sprinkler system shall be provided in accordance with Section 803.2.5.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- **Standpipes** - It shall be provided and comply with requirements in Section 803.3 and IBC where exits and corridors shared by more than one tenant and is located more than 50 ft. above or below the lowest level of fire department access.
- **Fire Alarm and Detection** - It shall be provided and comply with Section 803.4 for different occupancy groups requirements. Where an automatic sprinkler system is provided and is connected to the building fire alarm system, heat automatic detection shall not be required. Where the work area on any floor exceeds 50 percent of that floor area, it shall comply with 803.4.1.

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- It includes the requirements for (continued):
  - **Means of Egress** – It shall comply with Section 804. It includes the requirements for number of exits, egress doorways, openings in corridor walls, dead-end corridors, means-of-egress lighting, exit signs, handrails, refuge areas, and guards. In Group **I-2**, the corridors and ramps used for movement of care recipients in beds shall not be less than 48 in. Dead-end Corridors shall comply with Section 804.7 of IEBC amended by the City of Houston. Stair Construction shall comply with Section 804.13 of IEBC amended by the City of Houston.
  - **Structural** – It shall comply with the requirements in Section 805. It includes the requirements for existing structural elements carrying gravity and resisting lateral loads, and voluntary lateral force-resisting system alterations.
  - **Electrical** – It shall comply with Section 806. It includes the requirements for new installations, existing installations, health care facilities (Group **I-2**), residential occupancies (Group **R-2**, **R-3** and **R-4**)

# ALTERATIONS – LEVELS 2

## Code Section

### Chapter 8

- **Mechanical** – It shall comply with requirements in Section 807. It includes the requirements for reconfigured or converted spaces, altered existing systems and local exhaust systems.
- **Plumbing** – It includes the requirements for Group I-2 occupancy for any added portion of any existing medical gas system. It also shall comply with NFPA 99 requirements.
- **Energy Conservation** – It shall comply with requirements in Section 809. It shall not require to make the entire building or structure to comply with IECC or IRC other than the work area.

# **IEBC CHAPTER 9 ALTERATIONS LEVEL 3**

2021

International Existing Building Code (IEBC)

# ALTERATIONS – LEVELS 3

## Code Section

### Chapter 9

- It applies when the work area exceeds 50 percent of the building area.
- It shall comply with Chapter 7 (Level 1), Chapter 8 (Level 2) alteration respectively, as well as Chapter 9.
- It includes the requirements for:
  - **High-Rise Buildings** – It requires to comply with requirements in Section 902.1 for any building having occupied floors more than 75 ft. above the lowest level of fire department vehicle access.

# ALTERATIONS – LEVELS 3

## Code Section

### Chapter 9

- **Boiler and Furnace Equipment Rooms** – It shall comply with the requirements in Section 902.2. The boiler and furnace equipment rooms adjacent to or within Group **I-1, I-2, I-4, R-1** and **R-4** shall be enclosed by 1-hour fire-resistance-rated construction unless otherwise for followings; steam boiler with operating pressure less than 15 psig, hot water boilers operating at pressure less than 170 psig, furnace and boiler with heating input less than 400,000 btu or if the furnace room is protected by an automatic sprinkler system.
- **Existing Shafts and Vertical Openings** – It shall comply with Section 903.1. Existing stairways as part of the means of egress shall be enclosed from the highest work area floor to and including the level of exit discharge and all floors below in accordance with Section 802.2.1 of this code.

# ALTERATIONS – LEVELS 3

## Code Section

### Chapter 9

- It includes the requirements for (continued):
  - **Fire Partitions in Group R-3** – It shall comply with Section 903.2.1. In Group **R-3** or any multiple single-family dwelling (townhouse), the wall separating the dwelling units from the foundation to the underside of the roof sheathing shall be provided with fire separation in accordance with this section.
  - **Interior Finish** – It shall comply Section 903.3. The interior finish in the exits in the work area between the highest floor of work area to the floor of exit discharge shall comply with Section 802.4 of this code.

# ALTERATIONS – LEVELS 3

## Code Section

### Chapter 9

- **Enhanced Classroom Acoustics in Group E** – It shall comply with Section 903.4 for all classrooms with a volume of 200,000 cu. ft. or less.
- **Automatic Sprinkler Systems** – It shall comply with the requirements in Section 904. It includes the requirements for high-rise buildings, rubbish and linen chutes, Group **F-1**, **M** and **S-2** containing upholstered furniture or mattresses, different occupancy groups, and windowless stories. In the buildings and areas listed in IBC Table 903.2.11.6, the work area shall be provided with an automatic fire sprinkler system in accordance with 904.1.7. The automatic sprinkler system shall be provided under the following conditions: **1. In accordance with Building Code,** **2. The building site has sufficient municipal water supply for the design and installation of an automatic sprinkler system.**

# ALTERATIONS – LEVELS 3

## Code Section

### Chapter 9

- It includes the requirements for (continued):
  - **Fire Alarm and Detection Systems** – It shall comply with the requirements in Section 907 of IBC for new construction. It includes the requirements for manual fire alarm system and automatic detection in Sections 904.2.1 and 904.2.2 respectively.
  - **Means of Egress** – It shall comply with the requirements in Section 804. Means-of-egress lighting shall comply with Section 905.2. Exit signs shall comply with Section 905.3. Two-way communications systems shall comply with Section 905.4.
  - **Structural** – It shall comply with requirements in Section 906. It includes the requirements for existing structural elements resisting lateral loads, seismic design, anchorage for concrete and masonry buildings, anchorage for unreinforced masonry units, bracing for unreinforced masonry parapets, anchorage, and anchorage of unreinforced masonry partitions.
  - **Energy Conservation** – It shall comply with the requirements in Section 907. It shall not require to make the entire building or structure to comply with IECC or IRC other than the work area.

# **IEBC CHAPTER 10 CHANGE OF OCCUPANCY**

2021

International Existing Building Code (IEBC)

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- Includes change of occupancy, change of occupancy classification and change in the use within the same occupancy classification.
- Occupancy classifications and special occupancy requirements defined in Chapter 3 and 4 of IBC.
- Change of Use shall comply with Chapter 6 and Sections 1002 through 1010.
- Change of Occupancy Classification Group shall comply with Section 1002 through 1011. Where portion of occupancy classification or group has changed, Section 1011 shall be applied.

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- Change to Special Use or Occupancy shall comply with the IBC Chapter 4.
- Change of Occupancy to Incidental Use shall comply with the IBC Section 509.
- Change of Occupancy in Health Care in Group I-1 or I-2 shall comply with the IBC.

**Exception:** Group I-2, Condition 2 to Group I-2, Condition 1

Group I-2 to Ambulatory Health Care

Group I-2 to Group I-2

Group I-1, Condition 2 to Group I-1, Condition 1

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- Change of Occupancy to Storage in Group I-2 occupancy when the room is protected by an automatic sprinkler system and room is less than 250 sq. ft., it shall be separated from the remainder of the building in accordance with Section 509.4.2 of IBC.

Change of Occupancy Includes:

- **Building Elements and Materials** – It shall comply with the requirements in Section 1011.
- **Fire Protection** – It shall comply with the requirements in Section 1011.2 and when there is a different threshold fire protection system requirements in accordance with IBC Chapter 9.

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- **Means of Egress** – It shall comply with the requirements in Section 1011.5.
- **Structural** – It includes the requirements for structural elements carrying the live loads in compliance with IBC Section 1607, wind and snow loads to comply with Sections 1608 and 1609 of IBC when the change of occupancy results in a higher risk category, and seismic loads to comply with IBC Section 1613 when the change of occupancy results in a higher risk category or change is from Group **S** or **U** to any occupancy other than Group **S** and **U**.
- **Mechanical** – When the new occupancy is subject to different kitchen exhaust requirements or increased mechanical ventilation, the new occupancy shall comply with the respective requirements of the IMC.

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

Change of Occupancy Includes (continued):

- **Electrical** – The electrical wiring and equipment in the proposed occupancy shall comply with NEC requirements when the occupancy is changed to any of the special occupancies; hazardous location, commercial garages, repair or storage, aircraft hangars, gasoline dispensing and service stations, bulk storage plants, spray application, dipping and coating processes, Group **I-2** occupancy-health care facilities (it also shall comply with NFPA 99), places of assembly, theaters, audience areas of motion picture and television studios, and similar locations, motion picture and television studios and similar locations, motion picture projectors, and agricultural buildings.

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- **Plumbing** – When the new occupancy is subject to increased or different plumbing fixtures requirements or to increase water supply requirements, the new occupancy shall comply with the respective requirements in the IPC. If the occupant load of the story increased by 20 percent, number of plumbing fixtures of the story shall comply with IPC requirements. In the new proposed food-handling occupancies, the sanitary waste lines above the food or drinking preparation or storage shall comply with the IPC. If the new occupancy produces grease or oil-laden waste, it shall be provided with interceptor in accordance with the IPC. The chemical waster shall comply with 1009.4. In Group I-2, the plumbing system and medical gas system shall comply with applicable requirements in the IPC.
- **Light and Ventilation** – It shall comply with the IBC for the new occupancy

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- This section applies when change of occupancy requires a is different fire protection system threshold in accordance with IBC Chapter 9.
- It includes the requirements for:
  - **Fire Sprinkler System** - When an automatic fire sprinkler system based on the new occupancy is required, the system shall be installed in the area of change of occupancy and areas not separated horizontally and vertically from the change of occupancy by one of the following; nonrated permanent partition and horizontal assemblies, fire partition, smoke partition, smoke barrier, fire barrier, fire wall.

#### **Exception:**

One- or two-family dwelling, townhouse constructed in accordance with IRC, and townhouse separated from adjoining units in accordance with IRC Section R302.2.

# CHANGE OF OCCUPANCY

## Code Section

### Chapter 10

- **Fire Alarm and Detection System** - It shall be provided throughout the change of occupancy. Existing alarm notification appliances shall be automatically activated throughout the building. When the existing building is not equipped with a fire alarm system, the new notification appliances shall be installed in accordance with the IBC Section 907.

# CHANGE OF OCCUPANCY CLASSIFICATION

## Code Section

### Chapter 10

- It includes the requirements for (continued):
  - **Interior Finish** - It shall comply with the requirements for new occupancy in accordance with the IBC. Includes requirements for classroom acoustics in Group E, with volume of 20,000 cu. ft. or less.
  - **Means of Egress** - The hazard category/level shall be classified based on the occupancy classification in Table 1011.5. The means of egress for a change to a higher hazard category shall comply with Section 1011.5.1 and the IBC Chapter 10. The means of egress for change of use to an equal or lower hazard category shall comply with Section 1011.5.2 and the IBC Chapter 10. Egress capacity shall meet or exceed the occupant load as per the IBC for the new occupancy. The handrails for the existing stairway and guards in the area of change of occupancy shall comply with Sections 804.10 and 804.12 respectively. Existing emergency escapes and rescue openings shall comply with Section 1011.5.6.

# CHANGE OF OCCUPANCY CLASSIFICATION

## Code Section

### Chapter 10

- **Heights and Areas** - The hazard category/level shall be classified based on the occupancy classification in Table 1011.6. The required height and area for a change to a higher hazard category shall comply with Section 1011.6.1 and the IBC Chapter 5. The means of egress for a change of use to an equal or lower hazard category shall comply with Section 1011.6.2 and the IBC Chapter 5. Fire barriers in a higher-hazard category shall comply with the IBC requirements.

# CHANGE OF OCCUPANCY CLASSIFICATION

## Code Section

1011

- It includes the requirements for (continued):
  - **Exterior Wall Fire-Resistance Rating** - The hazard category/level shall be classified based on the occupancy classification in Table 1011.7. The required height and area for a change to a higher hazard category shall comply with Section 1011.7.1 and the IBC. The means of egress for change of use to an equal or lower hazard category shall comply with Section 1011.7.2 and the IBC. The exterior walls opening shall be protected in accordance with the IBC. The sum of such openings shall not exceed 50 percent of the total area of the wall in each story.
  - **Enclosure of Vertical Shafts** – Vertical shafts shall comply with requirements for atriums in the IBC. When change of occupancy has resulted in a higher-hazard category in accordance with Table 1011.5, the interior stairways shall comply with Section 1011.8.2, and other vertical shafts including but not limited to elevator hoistways, and service and utility shafts shall comply with Section 1011.8.3. The openings into the shafts enclosures shall be in compliance with Section 1011.8.4.

# **IEBC CHAPTER 11 ADDITIONS**

2021

International Existing Building Code (IEBC)

# ADDITIONS

## Code Section

### Chapter 11

- It shall not create or extend any nonconformity in the existing building in regard to accessibility, structural strength, fire safety, means of egress or capacity of mechanical, plumbing or electrical systems.
- Addition shall comply with the requirements for the new construction without requiring the existing building or structure to comply with new codes except for requirements set forth in Chapter 11.

Addition includes the requirements for:

- **Heights and Areas-** It includes the requirements to comply with the height and area limitations in accordance with Chapter 5, and fire protection systems in accordance with Chapter 9 of the IBC.
- **Structural-** It includes the requirements for additional gravity loads, lateral force resisting systems and flood hazard areas.
- **Energy Conservation-** It shall comply with the requirements in the IECC or IRC.

# **IEBC CHAPTER 12 HISTORICAL BUILDINGS**

2021

International Existing Building Code (IEBC)

# HISTORICAL BUILDINGS

## Code Section

### Chapter 12

- Subject building must be essentially accredited as being historic significance by the state or local authority.
- It shall comply with provisions of this chapter related to repair, alteration, relocation and change of occupancy.
- A report prepared by a registered design professional and in compliance with Chapter 1 of this code shall be prepared for the building official, if the alteration and change of occupancy in a historical building intended to meet the requirements of this chapter and deemed to be necessary by the building official.

# HISTORICAL BUILDINGS

## Code Section

### Chapter 12

- Group **R-3** which is used for Group **A**, **B**, or **M** purposes; such as museum tours, exhibits and other public assembly activities, or for museums less than 3,000 sq. ft., and all life safety conditions are in compliance with Section 1201.2, building official is authorized to determine the occupancy is Group B.
- The flood hazard area requirements shall meet the requirements in Section 1201.4.
- It includes the requirements for:
  - **Repairs** - Hazardous materials such as asbestos and lead-based paint shall not be used. Replacement glazing in hazardous locations shall be in compliance with the requirements in the IBC Chapter 24.

# HISTORICAL BUILDINGS

## Code Section

### Chapter 12

It includes the requirements for (continued):

- **Fire Safety** – It includes alterations, change of occupancy and moved buildings. If the building does not meet the construction requirements in this chapter for occupancy and use, it shall be provided with an automatic fire-extinguishing system. The automatic fire-extinguishing system shall not substitute for, or act as alternative to the required number of exits. It contains requirements for means of egress, transoms, interior finishes, stairway enclosure, 1-hour fire resistance assemblies, glazing in fire-resistance systems, stairway railings, guards, exit signs and automatic fire-extinguishing systems.
- **Change of Occupancy** – It shall comply with provisions of Chapter 10, except as permitted in this chapter. It includes the requirements for building area, location on property, occupancy separation, roof covering, means of egress, door swing, transoms, interior finishes, 1-hour fire-resistant assemblies, stairway and guards, exit signs, exit stair live load and natural light.

# HISTORICAL BUILDINGS

## Code Section

### Chapter 12

- **Structural** – It shall comply with requirements in Chapter 4 or 5. Repair of the substantial damage is not required to comply with Section 405.2.3 and 405.2.4. Substantial structural damage shall comply with Section 405.2.1. Dangerous condition shall be remedied by the determination of building official and shall not be required beyond the remedied area.
- **Relocated Building** – The foundation shall comply with the IBC requirements. The building shall be sited, so the exterior wall and opening requirements comply with the IBC or the compliance alternatives of this code.

# **IEBC CHAPTER 13 PERFORMANCE COMPLIANCE METHODS**

2021

International Existing Building Code (IEBC)

# PERFORMANCE COMPLIANCE METHOD

## Code Section

### Chapter 13

\*\*\* **NOTE:** THIS CHAPTER HAS NOT BEEN ADOPTED/AMENDED BY THE CITY OF HOUSTON AND REMAINS AS SET FORTH IN THE 2021 IEBC

- It shall apply to alteration, addition, and change of occupancy including the historic buildings.
- It is intended to increase the current degree of public safety, health and general welfare without requiring full compliance with Chapter 6 through 12, except compliance with the prescriptive or work area method is specifically required in this chapter.

# **IEBC CHAPTER 14 RELOCATED OR MOVED BUILDINGS**

2021

International Existing Building Code (IEBC)

# RELOCATED OR MOVED BUILDINGS

## Code Section

### Chapter 14

- It requires compliance with the IFC and IPMC.
- Any repair, alteration or change of occupancy undertaken within the moved building shall be in compliance with the respective sections of this code.
- Field-fabricated elements shall comply with the IBC code.

# RELOCATED OR MOVED BUILDINGS

## Code Section

### Chapter 14

- It includes the requirements for:
  - **Location on the lot** – It shall comply with the requirements in the IBC or IRC (as applicable).
  - **Foundation** - It shall comply with the requirements in the IBC or IRC (as applicable).
  - **Wind Loads** - It shall comply with the requirements in the IBC or IRC (as applicable).
  - **Seismic Loads** - It shall comply with the requirements in the IBC or IRC (as applicable).
  - **Flood Hazard Area** - It shall comply with the requirements in the IBC Section 1612 or IRC Section R322 (as applicable).
  - **Required Inspection and Repairs** – It is subject to building official inspection and required repair.

# **IEBC CHAPTER 15**

# **CONSTRUCTION SAFEGUARDS**

2021

International Existing Building Code (IEBC)

# CONSTRUCTION SAFEGUARDS

## Code Section

### Chapter 15

**\*\*\* NOTE:** THIS CHAPTER HAS NOT BEEN ADOPTED/AMENDED BY THE CITY OF HOUSTON AND REMAINS AS SET FORTH IN THE 2021 IEBC

- It includes the requirements during the construction process including the demolition and protecting adjacent public and private properties during construction. This chapter is consistent with Chapter 33 in both the IBC and IFC.
- It includes provisions for:
  - Alterations, Repairs and Additions (Section 1501.3)
  - Manner of Removal (Section 1501.4)
  - Fire Safety During Construction (Section 1501.5)
  - Protection of Pedestrians (Section 1501.6)
  - Required Facilities (Section 1501.7)

# IEBC APPENDIXES

2021

International Existing Building Code (IEBC)

# APPENDIXES

## Code Section

### APPENDIX A, B & C

- **Appendix A** - Guidelines for the Seismic Retrofit of Existing Buildings.
- **Appendix B** - Supplementary Accessibility Requirements for Existing Buildings and Facilities.
- **Appendix C** - Guidelines for the Wind Retrofit of Existing Buildings.

# APPENDIXES

## Code Section

### APPENDIX D

- **Appendix D – Life-Safety Requirements for Existing Buildings (Amended by the City of Houston)** - The purpose of appendix D is to provide the Occupancy Inspections department regulations to ensure a reasonable degree of life safety to persons occupying existing buildings and to provide requirements for alterations to such existing buildings that do not conform with the minimum requirements of this code. This appendix shall apply to and the term “existing building” shall be construed to mean any building existing within the corporate limits of the jurisdiction on January 1, 1986, and any building annexed into the corporate limits after that date.

# QUESTION & ANSWER

We are here to help !!!



# NAVIGATING THE WEBSITE



**HOUSTON PERMITTING CENTER**

ABOUT - PERMITS A TO Z RESOURCES - CONTACT

## UPDATE

Learn More

# 2021 Construction Codes Adoption Effective January 1, 2024

### Welcome to the Houston Permitting Center

The Houston Permitting Center combines the majority of the City of Houston's permitting and licensing into one convenient location. We opened in June 2011 with a mission to help customers achieve their goals while complying with the City's regulations. Providing excellent service, streamlining business processes, implementing innovative technologies, and proactively engaging customers are all cornerstones of our mission.

#### Office of the City Engineer

The Office of the City Engineer (OCE) implements and administers the provisions in the City's Code of Ordinances state and federal regulations relating to floodplain management, street cuts, and storm water quality.

#### Building Code Enforcement

Building Code Enforcement manages Building Code Services and administers the provisions in the City's Code of Ordinances and state/federal regulations relating to private building construction, and sign administration.

#### Infrastructure & Development Services

The Infrastructure & Development Services agency is part of the Houston Water service line.

# NAVIGATING THE WEBSITE



HOUSTON PERMITTING CENTER

REGISTER | LOG IN | ACCESSIBILITY | LANGUAGE

ABOUT - PERMITS A TO Z RESOURCES - **CONTACT -** ESERVICES -

## Commercial Plan Review

- APPOINTMENTS
- CONTACT US
- LIVE CHAT
- PLAN REVIEW CONTACT LIST**
- REPORT AN IT ISSUE

About Us / Houston Public Works / Building Code Enforcement / Commercial Plan Review

Commercial plan review is required if you are in the corporate city limits of Houston and are planning to erect a commercial building or structure, or are adding to existing commercial building or structures.

**CONTACT**

GENERAL INFORMATION

COMCHECK WORKSHOP

CONTACT

- 1002 Washington Ave., 3rd floor  
Houston, TX 77002
- 832.394.8810
- commercial.planreview@houstontx.gov
- 8 am to 3 pm
- Live Chat

# NAVIGATING THE WEBSITE



**HOUSTON PERMITTING CENTER** ABOUT - PERMITS A TO Z RESOURCES - CONTACT

## Building Code Enforcement

About Us / Houston Public Works / Building Code Enforcement

Building Code Enforcement manages Building Code Services and administers the provisions in the City's Code of Ordinances and state/federal regulations relating to private building construction, and sign administration.

Building Code Enforcement has over 400 employees and is divided into the following services:

- [Permits and Customer Assistance](#)
- Plan Review
- Inspections
- [Code Development](#)

**CONTACT**

PLAN REVIEW

INSPECTIONS

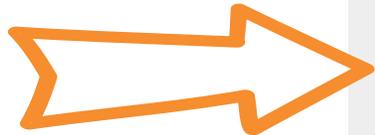
CONTACT

1002 Washington Ave.  
Houston, TX 77002

832.394.9494

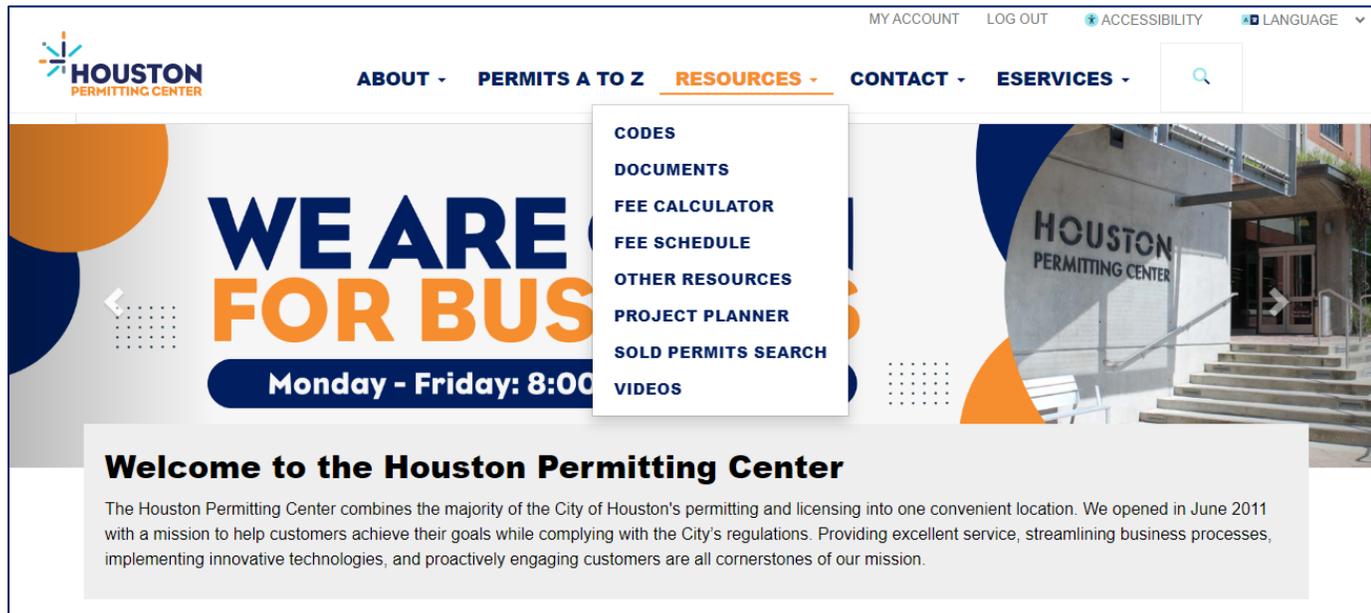
8 am to 4:30 pm

Live Chat



# ONLINE TOOLS

HPC Webpage - [www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)



## RESOURCES

### Codes

(2021 Code Amendments)

### Documents

(Guides, Forms, and Other Documents)

### Fee Calculator

(Online tool that allows customers to estimate their building permit fees.)

### Fee Schedule

(View or download printable versions of Building Code Enforcement's 2024 fee schedules)

### Project Planner

(Answer questions about your business or construction project, and the Project Planner will identify the permits you'll need from the City of Houston)

### Sold Permits Search

(To obtain information about basic permit history, you can use this search option)

# ONLINE TOOLS

HPC Webpage - [www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)



## CONTACT

### Appointments

(Customers can conveniently schedule and check-in for appointments and obtain a digital QFlow eTicket for walk-in services for certain groups)

### Live Chat

Available  
Monday - Friday: 9:00 AM - 2:30 PM

### Plan Review Contact List

(This list is updated monthly)

### Report An IT Issue

(Use this form to report only IT issues you are having with iPermits or ProjectDox)

# ONLINE TOOLS

HPC Webpage - [www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)



## ESERVICES

### iPermits

(Register & Apply for a Permit)

### ProjectDox

(Upload & Submit Plan)

### How-To-Guides

(Residential and Commercial Electronic Permitting Guides)

### Inspection Notifications System

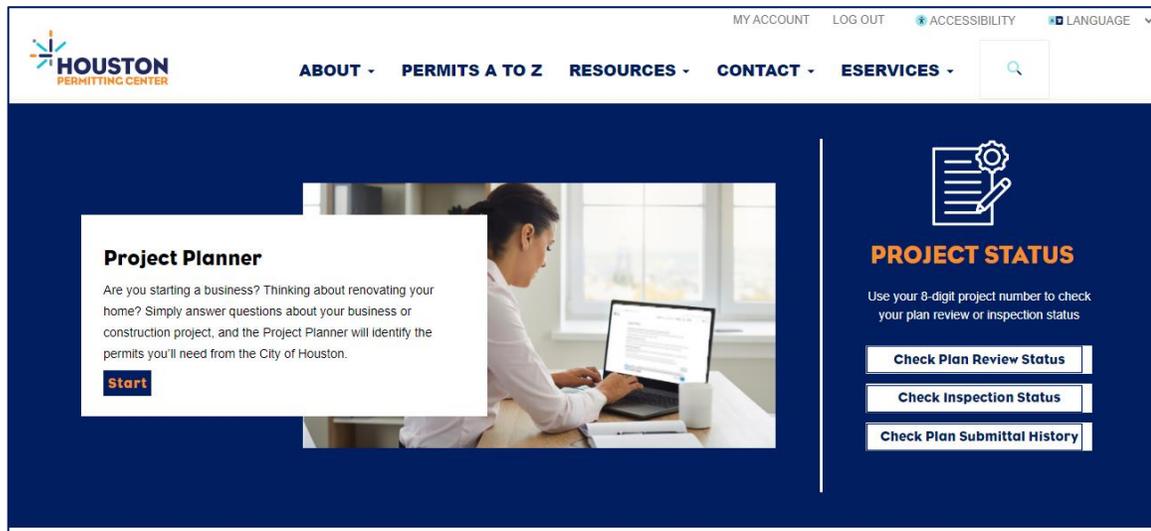
(Receive text notifications informing you about upcoming site inspections by inspectors.)

### Water Meters

(Taps and Meters Permits )

# ONLINE TOOLS

HPC Webpage - [www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)



## Check Plan Review Status

(Customers can check the status of their plan review and view any correction comments)

## Check Inspection Status

(Customers can schedule inspections and then review the results and comments from those inspections)

## Check Plan Submittal History

(Customers can review the submission history of a project's plans)

# ONLINE TOOLS

HPC Webpage - [www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)

The screenshot shows the Houston Permitting Center website's Performance Dashboard. At the top, there is a navigation bar with links for 'ABOUT', 'PERMITS A TO Z', 'RESOURCES', 'CONTACT', and 'ESERVICES'. Below the navigation bar, the dashboard is divided into several sections. The top section, titled 'Daily Inspections' and 'Daily Numbers', is highlighted with a dashed orange border. It contains two main metrics: 'Total Construction Inspections' with a value of 2251 and 'Total Plans in System for Review' with a value of 2439. A 'VIEW DASHBOARD' button is located between these two metrics. Below this section is an 'Appointments' section with links for 'OCE Water/Wastewater & Facilities', 'Stormwater Drainage Plan Review', 'Structural Commercial Plan Review', and 'MEP Commercial Plan Review'. At the bottom of the page, there is a footer with four icons: 'Report IT Issue', 'Live Chat', 'Customer Satisfaction', and 'Performance Dashboard'. The 'Performance Dashboard' icon is highlighted with a dashed orange border.

## Performance Dashboard

Interactive dashboard provides an at-a-glance view of our daily performance, including the total plans in the system for review and the number of business days of the oldest plan.

# WEB RESOURCES



- Houston Permitting Center Page: <https://www.houstonpermittingcenter.org>
- Documents and Forms: <https://www.houstonpermittingcenter.org/resources>
- EPR User Guide: <https://www.houstonpermittingcenter.org/media/2291/download>
- EPR User Guide (Spanish):  
<https://www.houstonpermittingcenter.org/media/6526/download>
- ASCE 7 Windspeed: <https://asce7hazardtool.online/>
- Building Permit Fee Calculator: <https://www.houstonpermittingcenter.org/fee-calculator>

Additional resources can be found at the end of the presentation.

# RESOURCES & OTHER INFORMATION



- **Building Code Enforcement Permit Fees:**

<https://www.houstonpermittingcenter.org/help/fee-schedules>

- **City Fee Schedule:**

[https://cohweb.houstontx.gov/FIN\\_FeeSchedule/default.aspx](https://cohweb.houstontx.gov/FIN_FeeSchedule/default.aspx)

- **Water & Sewer Rates:**

<https://www.houstonpermittingcenter.org/infrastructure-development-services/impact-fee-administration#agency-links-1976>

# RESOURCES & OTHER INFORMATION



- **Tax Increment Redevelopment Zone (TIRZ):** TIRZs are special districts created by City Council to attract new investments to an area. TIRZs help finance the cost of redeveloping or encouraging infill development in an area that would otherwise not attract sufficient market development in a timely manner. Taxes attributable to new improvements (tax increment) are set-aside in a fund to finance public improvements in the zone.
- **Historic Designation:** As a designated City of Houston historic building, your property will be exempt from compliance with Energy Code requirements in the Building Code. You are eligible for a 50% discount on building permit fees if the Houston Archeological and Historical Commission (HAHC) issued a Certificate Of Appropriateness (COA) for the approved work. Historical Preservation Ordinance regulates exterior alteration, new construction, relocation or demolition of any historic structure, object or site.



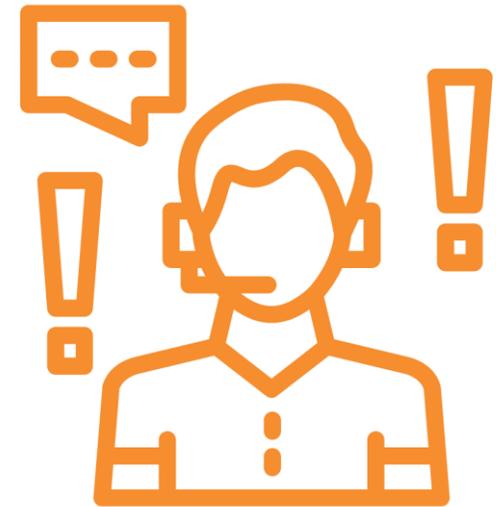
# RESOURCES & OTHER INFORMATION

- **Open Records:** The Open Records Section provides permit records and residential plans beginning in 1988 to the present. Register and submit your request at [https://houstontx.govqa.us/WEBAPP/\\_rs/\(S\(x14z2kpr2bi4qf1133vkwa4v\)\)/SupportHome.aspx](https://houstontx.govqa.us/WEBAPP/_rs/(S(x14z2kpr2bi4qf1133vkwa4v))/SupportHome.aspx)

- **Reporting Unpermitted Work:** An anonymous complaint can be submitted to the City of Houston 311 Help & Information Section for work without a permit. A tracking number will be assigned and can be used to follow up with their office regarding the concern.

An investigator will conduct a site visit and inform the responsible party of the required actions and time frame.

The complaint can be submitted via phone by contacting the City of Houston 311 Help & Information Section at 713.837.0311 or online at <http://hfdapp.houstontx.gov/311/index.php>





# SURVEY OF TRAINING NEEDS PERMITTING WORKSHOP 2024

[BIT.LY/3XMXBCC](https://bit.ly/3XMXBCC)



# CONTACT US

## Houston Permitting Center



Facebook  
@COHPermits



X  
@COHPermits



Instagram  
@COHPermits



YouTube  
@COHPermits



**Houston Permitting Center**  
1002 Washington Ave.  
Houston, TX 77002



832.394.9000



[www.houstonpermittingcenter.org](http://www.houstonpermittingcenter.org)



[cacd@houstontx.gov](mailto:cacd@houstontx.gov)

# Thank you!



[HoustonPublicWorks.org](https://HoustonPublicWorks.org)



[@HouPublicWorks](https://www.instagram.com/HouPublicWorks)