



CITY OF HOUSTON
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The 2026 edition of the City of Houston Infrastructure Design Manual will be effective March 2, 2026. The manual has been updated and revised to reflect changes to the City of Houston's general requirements; graphic requirements; utility location requirements; storm water design and water quality requirements; and pedestrian, bicycle, and transit design requirements. The 2026 edition will supersede the 2023 edition of the City's Infrastructure Design Manual.

Please keep in mind that the purpose of this manual is to establish the basic criteria from which engineers can design infrastructure in a manner acceptable to the Department and is not intended to address all design conditions or specialized situations.

For more detailed information concerning the updates to the Infrastructure Design Manual, Standard Drawings and the Standard Construction Specifications see the attached Executive Summary.

Respectfully,

A blue ink signature of Randall V. Macchi, J.D., written over a horizontal line.

Randall V. Macchi, J.D.
Director, Houston Public Works

A blue ink signature of Oluwole A. McFoy, P.E., written over a horizontal line.

Oluwole A. McFoy, P.E.
City Engineer, Houston Public Works

Attachment: Executive Summary

cc: Christon K. Butler, MCD, Chief Operating Officer
Andrew Molly, P.E., Chief Water Officer
Kevin Berry, Chief Technology Officer
Brian Mason, Executive Director
Vonn Tran, Director

EXECUTIVE SUMMARY

2023-2026 Review Cycle

The following executive summary highlights the implementation and some of the major updates to the City of Houston's (City) Infrastructure Design Manual (IDM), General Requirements, Standard Construction Specifications, and Standard Drawings from the 2023-2026 review cycle.

GENERAL CHANGES

The 2026 Infrastructure Design Manual, General Requirements, and Standard Construction Specifications show change bars on the left side of the page to indicate a major revision has taken place. For specific details on what changes took place, redlines will be posted on the Design and Construction Standards website for reference.

Numerous formatting changes and references to standards have been updated throughout the IDM, standard specifications and standard details.

INFRASTRUCTURE DESIGN MANUAL (IDM)

Chapter 1 General Requirements

This chapter was not officially part of the 2023-2026 review cycle. The criteria for expiration of projects was revised to prevent unintended consequences of the current procedure. Previously some submittals that lacked technical improvements were submitted solely to secure project activation near the expiration date which allowed applicants to avoid review fees and avoid compliance with the latest IDM requirements. The revised procedure is implemented to ensure review fees are captured and ensure compliance with the latest IDM requirements which are updated annually.

Chapter 3 Graphic Requirements

This chapter was not officially part of the 2023-2026 review cycle. A new article was added to the General Sheet Content section to list the major utilities and overall scope of work on the cover sheet of drawings to increase the speed of routing projects to the responsible departments. Also, the web link for the electronic plan review process was updated.

Chapter 6 Utility Locations

This chapter was not officially part of the 2023-2026 review cycle. Subsurface Utility Exploration (SUE) updates that were approved through a supplement effective June 21, 2024 were added to the IDM. Also, Private Utility Lines section was updated to include an article to avoid frequent damage to wastewater utilities in side lot and back lot easements from other underground structures (e.g. foundations, footings, piers, posts, poles, etc.).

Chapter 9 Stormwater Design Requirements

The chapter was restructured to improve readability and to emphasize areas of greater priority. The definitions and references sections were updated. Numerous figures were added or updated for clarity. Updates related to detention criteria that were approved through IDM supplement IDMS-2025-01

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Chapter 9 Stormwater Design Requirements (Cont.)

effective May 16, 2025 were added to the IDM along with updates to provide clarifications to these criteria. Various updates and improvements have been made to this chapter, they are as follows:

1. Sheet Flow exception for single family residential projects that meet certain criteria was included.
2. Several parts of the stormwater design requirements section were modified to improve clarity.
3. Clarified that the receiving jurisdiction's design criteria governs for detention facilities and outfalls for projects located within the City limits that directly discharge into other jurisdictions.
4. Expanded the allowable software used for design of drainage facilities.
5. Tailwater elevation selection for HGL analysis was clarified to avoid misinterpretations.
6. Plan and profile submittal requirements were removed for outfalls for single family residential developments that are less than 15,000 SF.
7. Improved thermoplastic pipe design requirements.
 - a. Minimum cover requirements were added.
 - b. Corrugated polypropylene pipes for storm application will be allowed under all roadway classifications and no longer be restricted to local streets.
 - c. Thermoplastic pipes can be stored in direct sunlight as long as allowed by manufacturer.
 - d. A standard backfill detail for thermoplastic pipes in dry stable trench was created providing cement stabilized sand as standard backfill. In construction specifications flowable fill is no longer required as backfill for this material, cement stabilized sand will be required as backfill.
 - e. Structural engineering calculations will only be required to be submitted upon request.
8. Summary tables of acceptable storm conduit materials and sizes of storm sewer conduits were added.
9. A paragraph was added to consider options to address maintenance issues in short roadside ditches.
10. Long Run Culvert was defined and a maximum run length was specified.
11. A grated inlet, junction box or manhole will be required at certain distances along the length of the long run culvert to avoid maintenance issues.
12. Expanded acceptable construction measures at ends of culverts (e.g. headwall, sloped paving, etc.).

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Chapter 9 Stormwater Design Requirements (Cont.)

13. Revised detention design criteria:
 - a. Expanded exceptions to detention criteria for: certain maintenance activities; developments increasing impervious area within the right-of-way; developments within the Lake Houston watershed; and underground utilities which do not create surface impervious area.
 - b. It was clarified that detention requirements will be determined for projects dealing with natural disasters on a case-by-case basis.
 - c. A paragraph was added to address issued memos by the City that provided a detention exemption for projects within approved locations within Central Business District, Medical Center and Lower Buffalo Bayou. Map figures were added to identify the area of these detention exemptions.
 - d. Added an article for considering safety in detention basin designs.
 - e. Site, hydraulic, structural, and maintenance requirements for underground detention systems were provided.
 - f. Clarified and updated private detention facility requirements related to pump volumes for HCFCD projects, 48-hour drainage of detention facilities, and detention basin setbacks.
14. Clarified that all storm sewers within a Type 2 Permanent Access Easement must follow chapter 9 requirements.
15. Stormwater Water Quality (SWQ) design section was revised to facilitate use of Low Impact Development (LID) techniques. Various updates and improvements have been made, they are as follows:
 - a. Defined the term Water Quality Volume and clarified the Best Management Practices (BMPs) design goals to ensure consistency in design.
 - b. Added criteria for individual SWQ BMP's related to bacteria removal.
 - c. Table for minimum design criteria for conventional SWQ techniques was added.
 - d. LID techniques were cross referenced to the associated design requirements within the chapter and listed in a table for quick reference.
 - e. A reference to the City's newly published green infrastructure guide "[A Guide to Developing and Maintaining Low Impact Development Techniques in Houston](#)" was added.
 - f. LID incentives section was created to promote use of LID techniques. Incentives include a credit for reduction of detention rate and reference City's policy on tax abatement.
 - g. Submittals section was reorganized to provide better communication of submittal requirements and were updated to provide more context for SWQ submittals for private and public projects.

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Chapter 17 Pedestrian, Bicycle, and Transit Design Requirements

This chapter was not officially part of the 2023-2026 review cycle. A reference to table 15.7 was added to the safety buffer section for the cases where the safety buffer should not be paved.

IDM Supplements

The City creates supplements for the IDM when there is a need to revise a current IDM chapter that is outside of its normal review cycle period. At the time when a new IDM is released, any active supplements are incorporated into the new IDM and those supplements subsequently deactivated.

Prior to the completion of the 2023-2026 review cycle, there were three active IDM supplements. Supplement to IDM Chapter 9 (effective May 30, 2024) which was updated and implemented as a part of the Chapter 9. Supplement to IDM Chapter 6 (effective June 21, 2024) which was added to Chapter 6 without further updates. Supplement to IDM Chapter 9 (IDMS-2025-01 effective May 16, 2025) which was added to Chapter 9 with additional updates and clarifications due to proposals received during this review cycle.

Infrastructure Design Manual Implementation

- The 2026 Infrastructure Design Manual is effective March 2nd, 2026.
- *Capital Improvement Projects*
A 90-day design grace period will be given for Houston Public Works Capital Improvement Projects. Phase II final designs that have not been submitted for a required review (60% submittal) prior to June 1st, 2026, will be required to completely comply with the new Infrastructure Design Manual.
- *Private Sector*
A 90-day design grace period will be given for projects in the public/private sector. Substantially complete plans submitted for initial review after June 1st, 2026, will be required to comply with the new Infrastructure Design Manual.

CONSTRUCTION SPECIFICATIONS

Revised Specifications

Various specifications, that are associated with the IDM chapters reviewed during the 2023-2026 review cycle, were reviewed and updated. A total of twenty-five (25) specifications included technical changes, no new specifications were created, and none of the specifications were retired. Specifications related to this review cycle were restructured to conform with CSI formatting. A list of all specifications that contained technical changes is provided at the end of this executive summary.

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Specification Implementation

- *Capital Improvement Projects*
The 2026 construction specifications are effective March 2nd, 2026. Per Document 00700 General Condition, section 1.2.4:

“Reference to standard specifications, manuals, or codes of a technical society, organization, or association, or to laws or regulations of a governmental authority, whether specific or implied, mean the latest edition in effect as of date of receipts of bids, except as may be otherwise specifically stated in the Contract.”
- *Private Sector*
All projects in the public/private sector submitted on or after March 2nd, 2026, shall comply with the latest version of the City’s Construction Specifications.

STANDARD DETAIL REVISIONS

Revised Standard Details

Various standard details associated with IDM Chapters were up for review during the 2023-2026 review cycle. A total of twenty-two (22) standard details included technical changes, thirteen (13) new standard details were created, and nine (9) standard details were retired. Title blocks were updated for all drawings associated with this year’s review cycle and multiple details that were previously provided on one 22” x 34” sheet were separated onto individual sheets. Numerous drawings were renumbered and/or retitled to follow their associated standard specification. The AutoCAD format of drawings were standardized and will be available for public use. A list of all standard details that contained technical changes, details added, or retired is provided at the end of this executive summary.

Revised Standard Detail Implementation

- The 2026 standard details are effective March 2nd, 2026.
- For Houston Public Works capital improvement projects, Phase II final designs that have already been submitted for a required review prior to March 2nd, 2026, it is recommended that all designers make an effort to incorporate the new changes into their current design to the extent that it does not increase cost or delay a project.

END OF EXECUTIVE SUMMARY

(See Next Page for List of New Revisions)

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2023-2026 Review Cycle

NEW IN THE 2026 REVISION

Infrastructure Design Manual (IDM), Standard Construction Specifications and Standard Details for Houston Public Works Design & Construction — 2026 Revision

Infrastructure Design Manual (IDM) Chapters Updated*:

- Ch. 1 – General Requirements
- Ch. 3 – Graphic Requirements
- Ch. 6 – Utility Locations
- Ch. 9 – Stormwater Design Requirements
- Ch. 17 – Pedestrian, Bicycle, and Transit Design Requirements

New Standard Specifications:

- None

Standard Specifications Updated*:

- 01570 – Storm Water Pollution Prevention Control
- 01740 – Site Restoration
- 02081 – Cast-in-place Concrete Manholes
- 02082 – Precast Concrete Manholes
- 02091 – Non Metallic Frames, Grates, Rings, and Covers
- 02221 – Removing Existing Pavements, Structures, Wood, and Demolition Debris
- 02317 – Excavation and Backfill for Utilities
- 02321 – Cement Stabilized Sand
- 02322 – Flowable Fill
- 02400 – Tunnel Shafts
- 02445 – Jack and Bore/ Jack and Mine/ Pilot Tube Guided Boring Tunnels
- 02501 – Ductile Iron Pipe and Fittings
- 02504 – Fiberglass Reinforced Pipe
- 02505 – High Density Polyethylene (HDPE) Solid and Profile Wall Pipe
- 02506 – Polyvinyl Chloride Pipe
- 02507 – Prestressed Concrete Cylinder Pipe
- 02508 – Extra Strength Clay Pipe
- 02509 – Fiberglass Reinforced Pipe for Pressure Mains
- 02510 – Polypropylene (PP) Corrugated Wall Pipe
- 02533 – Acceptance Testing for Sanitary Sewers
- 02611 – Reinforced Concrete Pipe

- 02612 – Precast Reinforced Concrete Box Sewers
- 02631 – Storm Sewers
- 02633 – Precast Concrete Inlets, Headwalls, and Wingwalls
- 03315 – Concrete for Utility Construction

Standard Specifications Retired/Deleted:

- None

New Standard Details:

- 02082-14 – Precast Concrete Top Slab Lid
- 02090-03 – 32" Storm Sewer Manhole Frame and Grate
- 02090-11 – 48" Storm Sewer Manhole Frame and Cover
- 02090-13 – 30" Storm Sewer Manhole Frame and Hinged Cover
- 02090-14 – Storm Sewer Frame and Grate for Type "B-B" Inlet Double Assembly with Camlock
- 02091-02 – Storm Sewer Non-Metallic Manhole Frame and Cover
- 02317-10G – Storm Sewer Bedding and Backfill for Thermoplastic Pipe in Dry Stable Trench
- 02633-01 – Precast Concrete Storm Sewer Inlet Type "A"
- 02633-02 – Precast Concrete Storm Sewer Inlet Type "B-B", "B-B(1)" and "B-B(2)"
- 02633-03 – Precast Concrete Storm Sewer Inlet Type "C", "C-1" And "C-2"
- 02633-04 – Precast Concrete Storm Sewer Inlet Type "D"
- 02771-03 – Curb and Gutter Transition For Precast Inlet Type "B-B", "B-B(1)" and "B-B(2)"
- 02771-04 – Curb and Gutter Transition For Precast Inlet Type "C", "C-1", and "C-2"

Standard Details Updated*:

- 01570-01 (prev. 01571-01) - Stormwater Pollution Prevention Plan Details
- 02082-13 - Storm Sewer Precast Box Inlet/Manhole

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Standard Details Updated* (cont'd):

- 02082-15 (prev. 02081-04) - Storm Sewer Manhole Type 'C' For Proposed Concrete Box Sewer
- 02082-16 (prev. 02081-08) - Proposed Manhole on Existing Box Storm Sewer
- 02082-17 (prev. 02081-05) – Storm Sewer Manhole for Existing Monolithic Reinforced Concrete 48" Dia and Greater
- 02090-02 (prev. 02084-02) - Storm Sewer Manhole Frame and Cover
- 02090-04 (prev. 02084-04) - Storm Sewer Type "B-B" Inlet Double Assembly
- 02090-05 (prev. 02084-05) - Storm Sewer Frame and Grate for Type "B-B" Inlet Double Assembly
- 02090-06 (prev. 02084-06) - Storm Sewer Type "D" Inlet Grate and Frame
- 02090-07 (prev. 02084-08) - Storm Sewer Type "A" Inlet Grate and Frame
- 02090-08 (prev. 02084-09) - Storm Sewer Type "C", "C-1" and "C-2" Inlet Frame and Cover
- 02090-09 (prev. 02084-10) - 32" Inverted Manhole Frame
- 02090-10 (prev. 02084-11) Storm Sewer Ring Grate for Open End of 18" to 72" RCP Stubs to Ditch
- 02317-02 - Sanitary or Storm Sewer Crushed Stone Foundation for Wet Stable Trench
- 02317-03 – Sanitary or Storm Sewer Bedding and Backfill for Dry Stable Trench
- 02317-05 – Precast Concrete Box Storm Sewer Bedding and Backfill for Dry Stable Trench
- 02317-06 - Precast Concrete Box Storm Sewer Bedding and Backfill for Wet Stable Trench
- 02317-07 - Precast Concrete Box Storm Sewer Bedding and Backfill with Seal Slab
- 02632-04 – Storm Sewer Type "B-B" Inlet for Maintenance Only
- 02632-09 - Storm Sewer Type "E" Inlet
- 02632-10 - Storm Sewer Type "E" Inlet on Exist Monolithic Conc Sewers of 48" Dia & Greater
- 02631-GD01 (prev. 02632-11) - Side Street Ditch Reception
- 02754-02 – Driveways With Culverts on Open Ditch Type Streets

Standard Details Retired/Deleted:

- 02081-07 - Lateral Connection to Existing Monolithic Reinforced Concrete Storm Sewer
- 02084-03 - Storm Sewer Type "B" Inlet Assembly
- 02084-07 - Storm Sewer Type "D-1" Inlet Grate and Frame
- 02632-01 - Storm Sewer Type "A" Grate Inlet
- 02632-03 - Storm Sewer Type "B" Inlet Relocation
- 02632-05 - Storm Sewer Type "B" Inlet Relocation
- 02632-06 - Storm Sewer Type "C-1", "C-2" and "C-2A" Inlet
- 02632-07 - Storm Sewer Type "D" Inlet
- 02632-08 - Storm Sewer Type "D-1" Inlet

*Only IDM chapters, specifications and standard details with technical changes have been included in the list.