

Document Preparation Guidance for TxDOT Review of Developers' Outfalls to TxDOT ROW

Connections to TxDOT drainage facilities must be approved by TxDOT. A hydrologic and hydraulic (H&H) study and design must be prepared by the Developer and submitted to TxDOT for review and approval before construction begins. The study must demonstrate compliance with the two following requirements:

- 1) Proposed peak flows entering the TxDOT system must be the same or less than existing conditions peak flows. Any variance to this should be justified and approved by the District Hydraulics Engineer (DHE).
- 2) The hydraulic efficiency, performance, and integrity of TxDOT drainage systems must not be negatively affected by the proposed project and its structural elements such as outfalls, driveways, etc.

Compliance with these two requirements must be achieved for the flows corresponding to the 1%, 2%, 4%, 10%, 20%, and 50% annual exceedance probabilities (AEP). The developer's H&H study should be submitted as a report with pertinent figures, tables, and attachments; however, if compliance is clearly explained and demonstrated within the sheets of a plan set, the plan set will be accepted. Please note that we are unable to review incomplete submittals and that clarity and completeness helps to reduce the overall process time.

The following list of recommendations is offered to help prepare the material for the submittal:

- Use the [TxDOT Hydraulic Design Manual](#) for policy, design criteria, standards, and technical guidance in the preparation of submittal documents, including the H&H report.
- Show the project location and identify the TxDOT drainage system that serves the area of the project.
- Show and describe the topography, and hydrologic parameters for existing conditions. Draw flow patterns, drainage areas, land use, etc.
- Show and describe changes due to grading and addition of impervious cover for proposed conditions. Show updated topography, hydrologic parameters, flow patterns, drainage areas, land use, etc.
- Provide hydrologic and hydraulic comparisons of existing versus proposed conditions at the appropriate points of interest (POI). The POIs are usually located at the proposed outfalls, or at the proposed connection to the TxDOT drainage system.
 - Peak flows, their corresponding velocities, and water surface elevations must be compared.
 - Other parameters could also be included in the comparison.
- Discuss mitigation measures proposed and design criteria used for analysis; show calculations and pertinent drawings.
- Discuss FEMA conditions at the project location, and use the 2018, NOAA Atlas 14 for the latest rainfall parameters.
- Reviewers and developers, please use the [TxDOT "Developer's Outfall" checklist](#) for further guidance.