Construction Dewatering & Pools From a LADBS Perspective

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Outline

LADBS PROCESS

CONSTRUCTION DEWATERING

- When construction dewatering is required?
  - Dewatering During Construction
  - Ground Water Control After Construction

DESIGN AND CONSTRUCTION OF SWIMMING POOLS – General Requirements

- Building Codes
- LADBS Information Bulletins (www.ladbs.org)

LADBS Process

LABC, LARC, Information Bulletins www.ladbs.org

- Soils Report or Geology and Soils Report may be required
  - Based on LABC Sections 7006.2 (e.g., GPI) and 1803
  - (P/BC 2017-113 Contents of Reports for Submittal to LADBS Grading Division)
- Permit Application and Plan Check
- Construction Inspection
- Final Permits
- Certificate of Occupancy for Buildings (C of O)

Ground Water Table Determination

LABC 1803.5.4 Ground-water table.

A subsurface soil investigation shall be performed to determine whether the existing ground-water table is above or within 5 feet below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation.

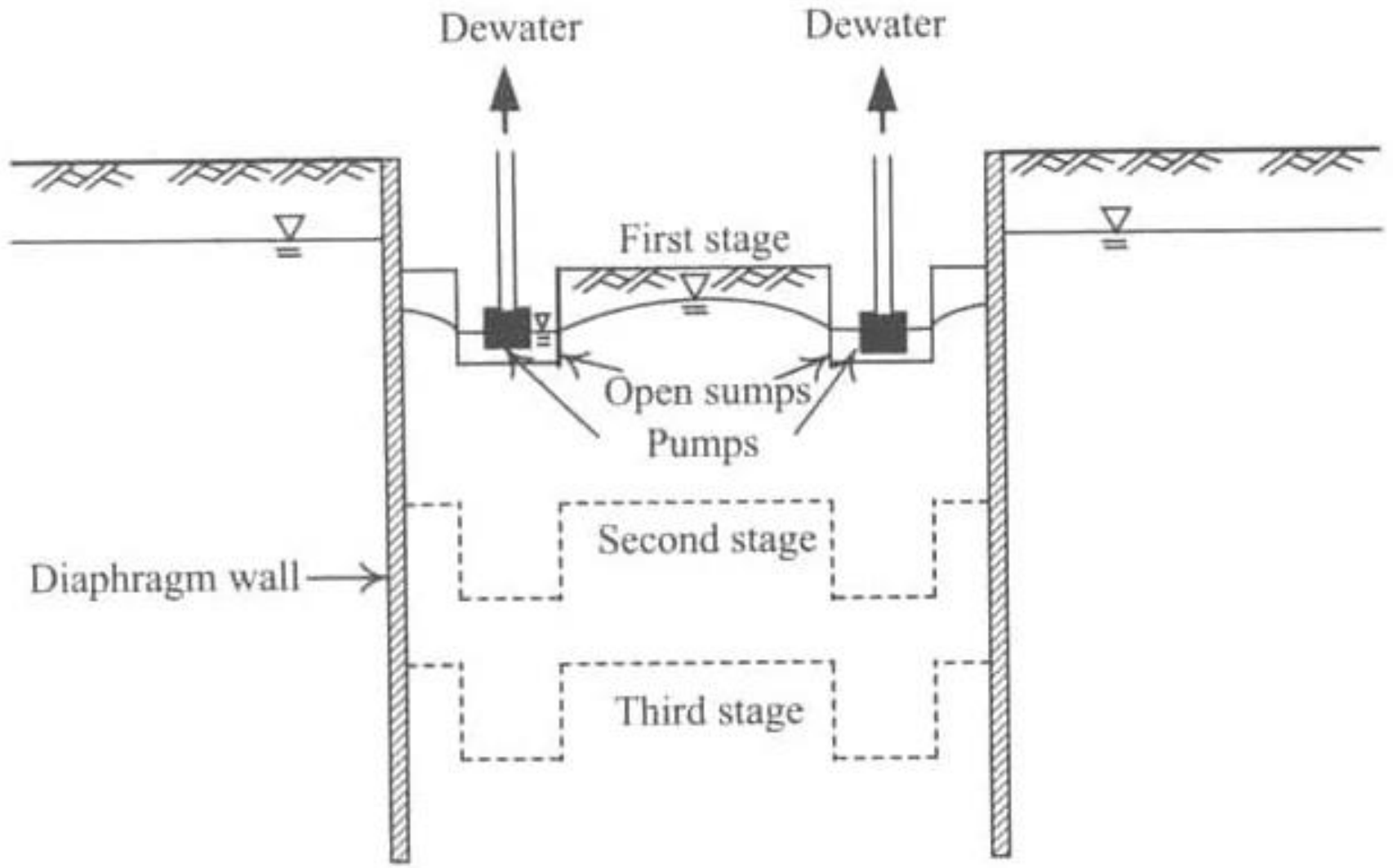
CONSTRUCTION DEWATERING

- When construction dewatering is required?

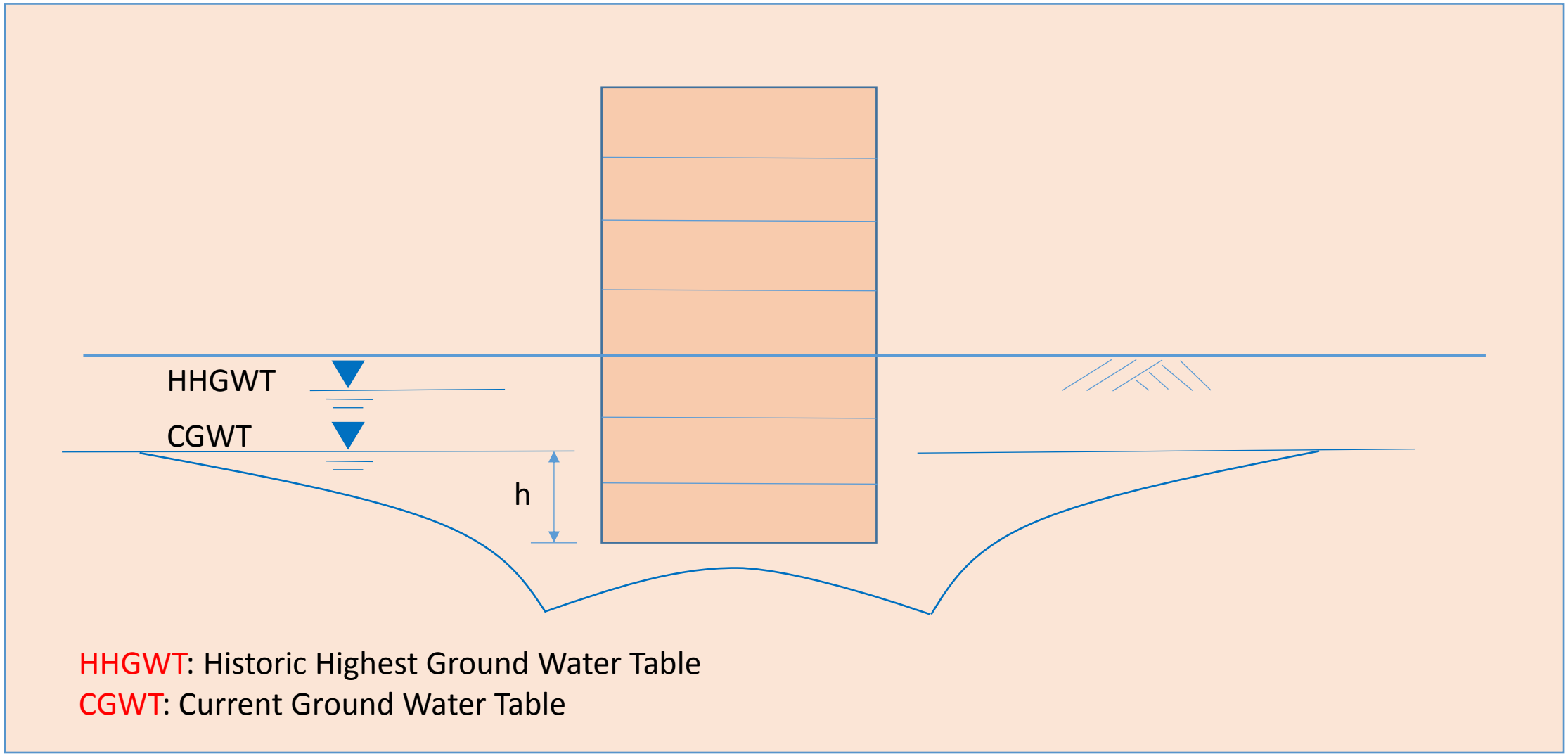
  The Department requires that in the event the proposed depth below grade of the lowest building finish floor level will be near or below the historically highest ground water level (HHGT) or the current ground water level (CGWT), temporary and permanent ground water control recommendations shall be provided.

Wellpoint Method

Open Sump Pumping Method

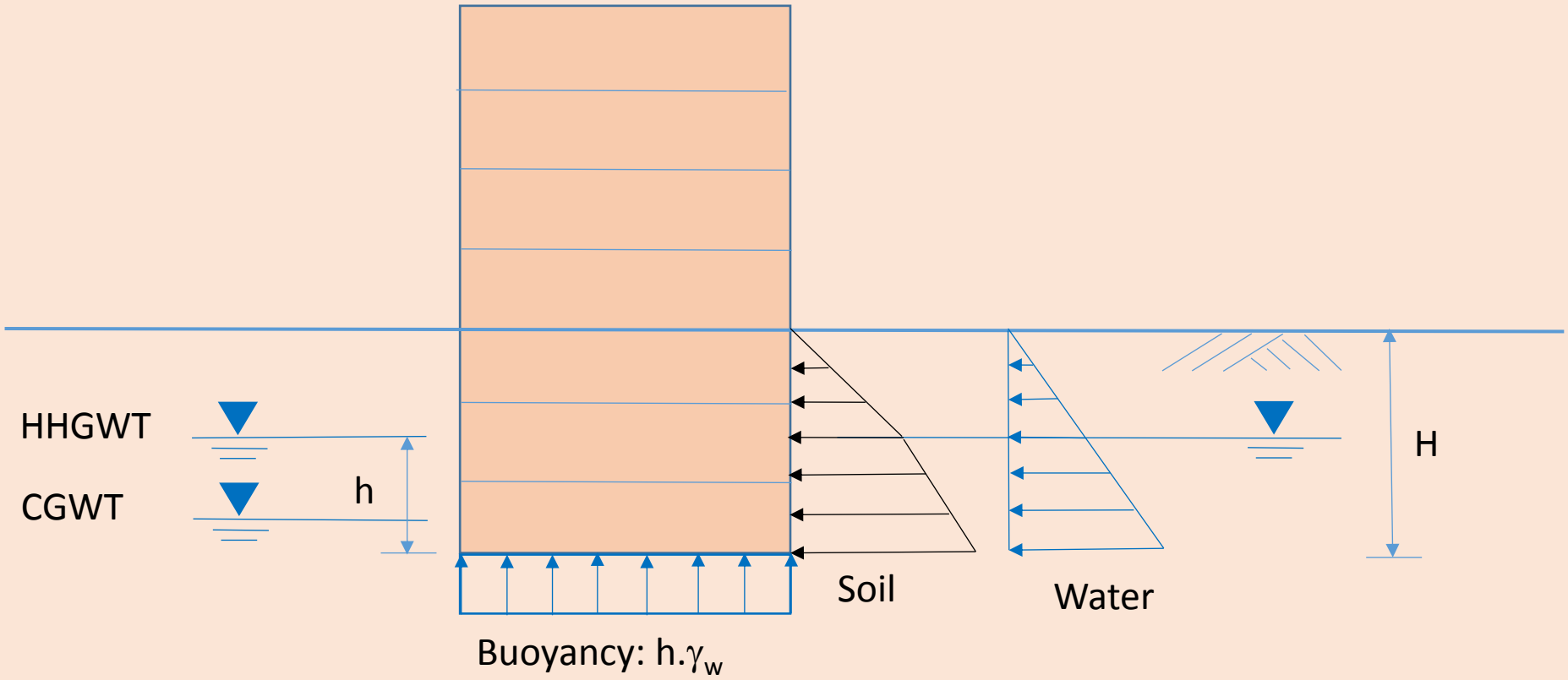


Dewatering During Construction
HHGWT and CGWT above bottom basement



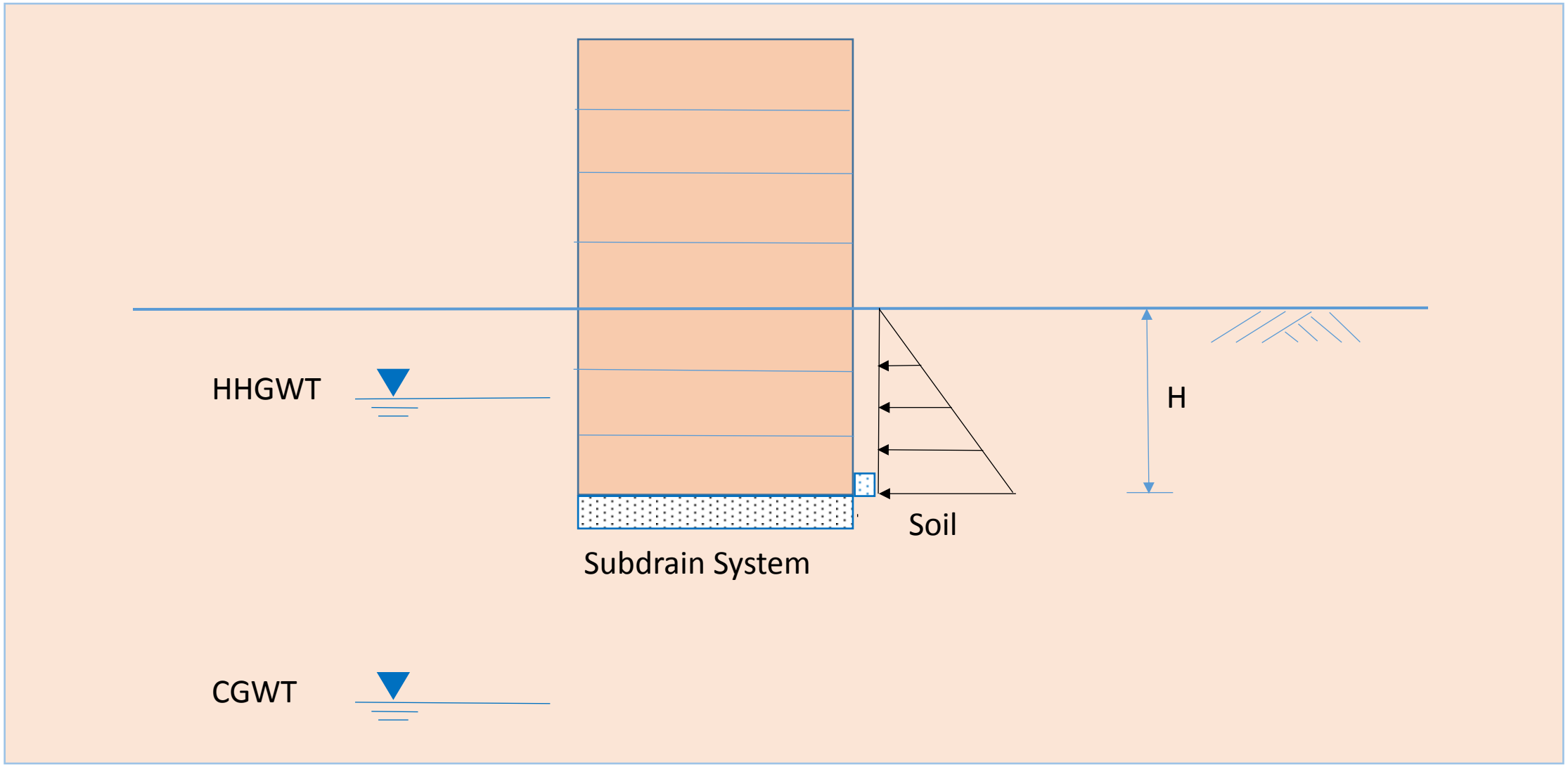
HHGWT: Historic Highest Ground Water Table
CGWT: Current Ground Water Table

After Construction – Hydrostatic Design
HHGWT and CGWT above bottom basement



HHGWT: Historic Highest Ground Water Table
CGWT: Current Ground Water Table

After Construction - “Permanent Dewatering”
Deep CGWT



DESIGN AND CONSTRUCTION OF SWIMMING POOLS – General Requirements

- Building Codes
  - 2016 CBC Chapter 31B
  - 2017 LABC Sections 3109, 6109, and 8118
- LADBS Information Bulletins (www.ladbs.org)
  - P/BC 2017-001 Footing/Building Setback from Slopes
  - P/BC 2017-014 Design and Construction of Swimming Pools
  - P/BC 2014-111 Backfill of Swimming Pools

Pool setbacks (P/BC 2017-001)

Footing setback from Descending slope

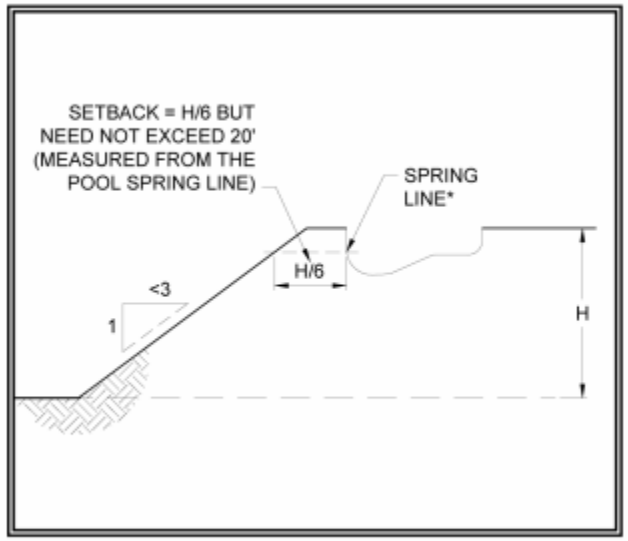


Figure 9 (Section 1808.7.3)

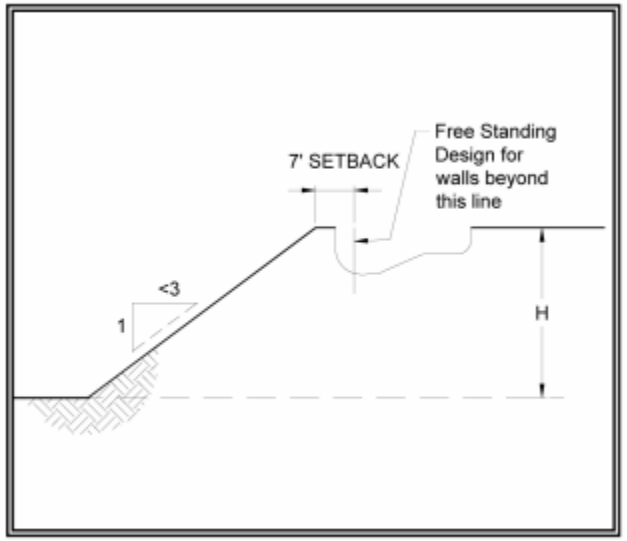


Figure 10 (Section 1808.7.3)

Pool setback from Ascending slope

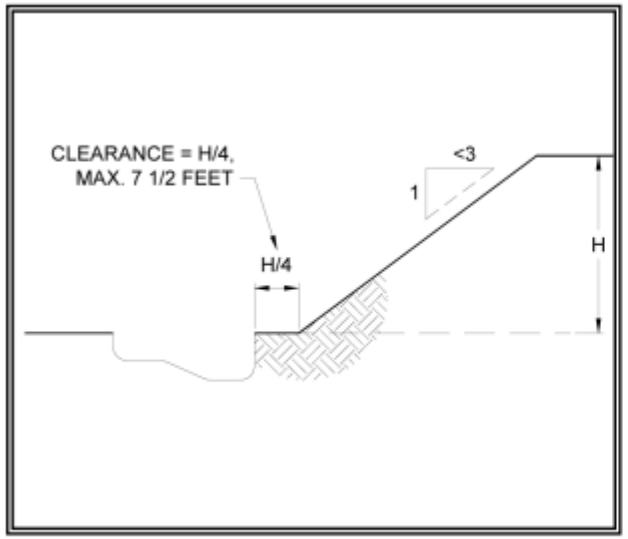


Figure 11 (Section 1808.7.3)

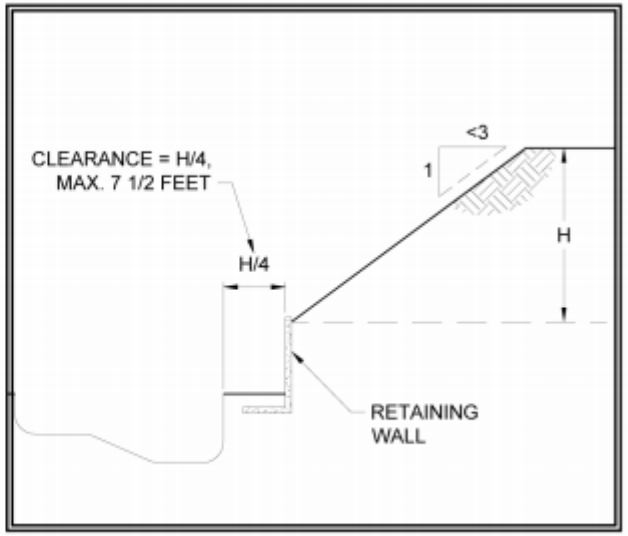


Figure 12 (Section 1808.7.3)

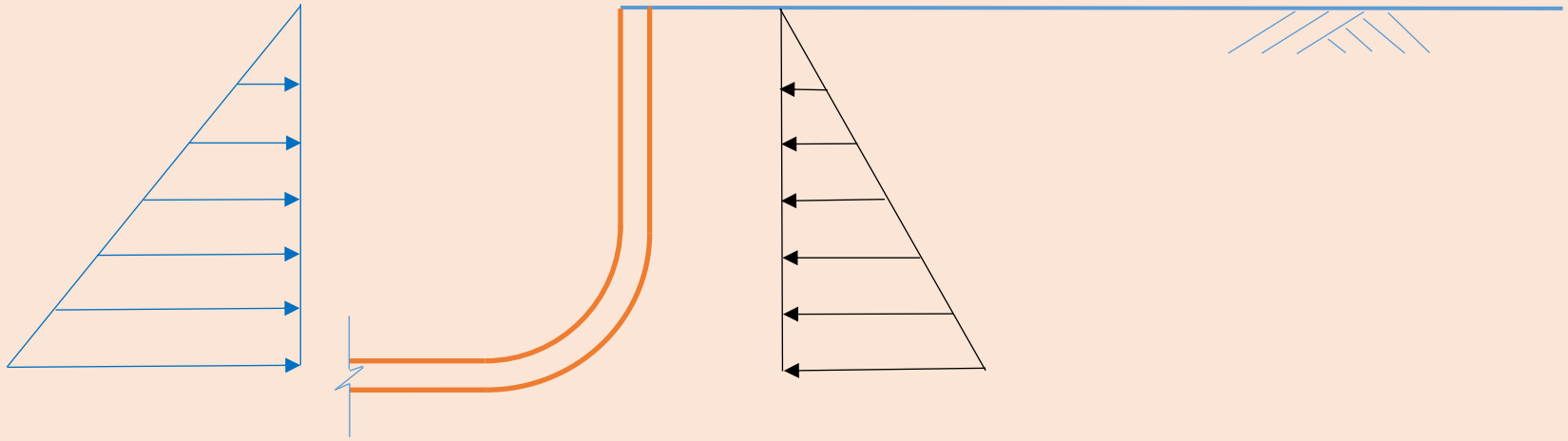
Pool Wall Design Pressures

Design on Wet side

Hydrostatic Pressure minus Soil Pressure
or No Soil (freestanding design)

Design on Dry side

Soil Pressure (empty pool) plus
hydrostatic Pressure, if applicable



Water

Soil or
No Soil (freestanding design)

Pool in Uncertified Fill Soils (Floating Pools)

- Favorable recommendation from soils engineer regarding the fill material
- Pool walls design assuming no support from surrounding soil
- Covenant and Agreement acknowledging that settlement and cracking may occur

Pre-Approved Standard Plans

www.ladbs.org

Forms and Publications

Pre-Approved Standard Plans

See list of Standard Plans available from private vendors

Questions?