ACI 562 – General Requirements:

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Overview of Chapters 1 and 4

ACI 562 - Concrete specific code for existing buildings.

ACI 562 - works within the framework of IEBC or Stands alone.

General Questions to Answer:

1. When is ACI 562 applicable?
2. When are updates to current building code required? Clarifications in New ACI 562
3. Why the original building code need not exceed the current code.

When is ACI 562 Applicable?
Existing Concrete Members, Buildings with a certificate of occupancy, structures permitted for use

ACI 562 is the Standard of Care for Evaluation, Repairs, & Rehabilitations – public reviewed

LDP may view ACI 562 as appending ACI 318 for existing buildings

When is ACI 562 Applicable?

ACI 562 is the current Standard of Care applicable to Existing Concrete Buildings and Members.

The LDP is obligated to use ACI 562 for Evaluation, Repairs, & Rehabilitations

When are updates to current building code required?

Only a few requirements to update to current building code provisions:

1. Using ACI 562 (stand alone) if the building or elements are UNSAFE
2. Using IEBC (or ACI 562 alone) if the building has Substantial structural damage
    A. Vertical elements of Lateral Systems
    B. Vertical elements of Gravity Systems

When are updates to current building code required?

Only a few requirements to update to current building code provisions:

3. Using IEBC alternations or additions being considered require rehabilitation using current building code

New code – will clearly define when to use current code with ACI 562

2013 & New ACI 562:

Repair Level I: a structure or individual member that has a significant risk of collapse under current service loads.

Nominal Capacity (R_n) is significantly less than Nominal (service) Load Demand, D_{SL}).

Demand - Capacity ratio:

$D_{SL} / R_n > 1.0 +$.

Repair to comply with current code requirements with ACI 562

New ACI 562:

- **Repair Level II:** a structure or individual member that has design strength less than strength demand.
- Design Capacity ($\emptyset R_n$) is less than Strength Demand (U).
- Demand (U) – Design Capacity ratio:
- $U/ \emptyset R_n > 1.0$.
- Repair to comply with original code requirements with ACI 562 excluding Chapter 5.

New ACI 562:

- **Repair Level III:** a structure or individual member that has design strength greater than strength demand.

Design Capacity ($\emptyset R_n$) is greater than Strength Demand (U).

Demand (U) – Design Capacity ratio:

$U/ \emptyset R_n < 1.0$.

Repair to comply with ACI 562,

excluding Chapter 5.

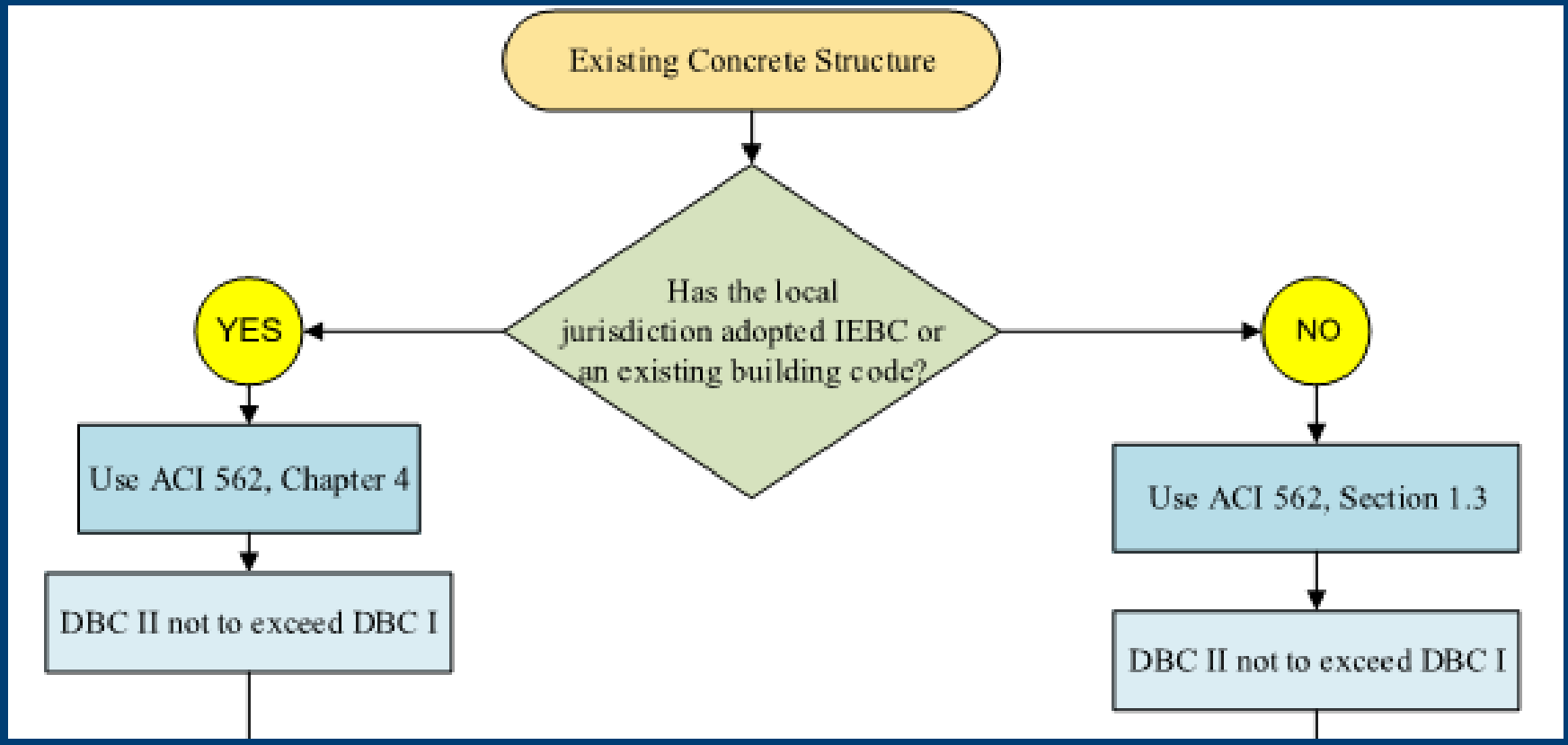
2013 & New ACI 562:

“Design Bases Code I”: current building code with ACI 562

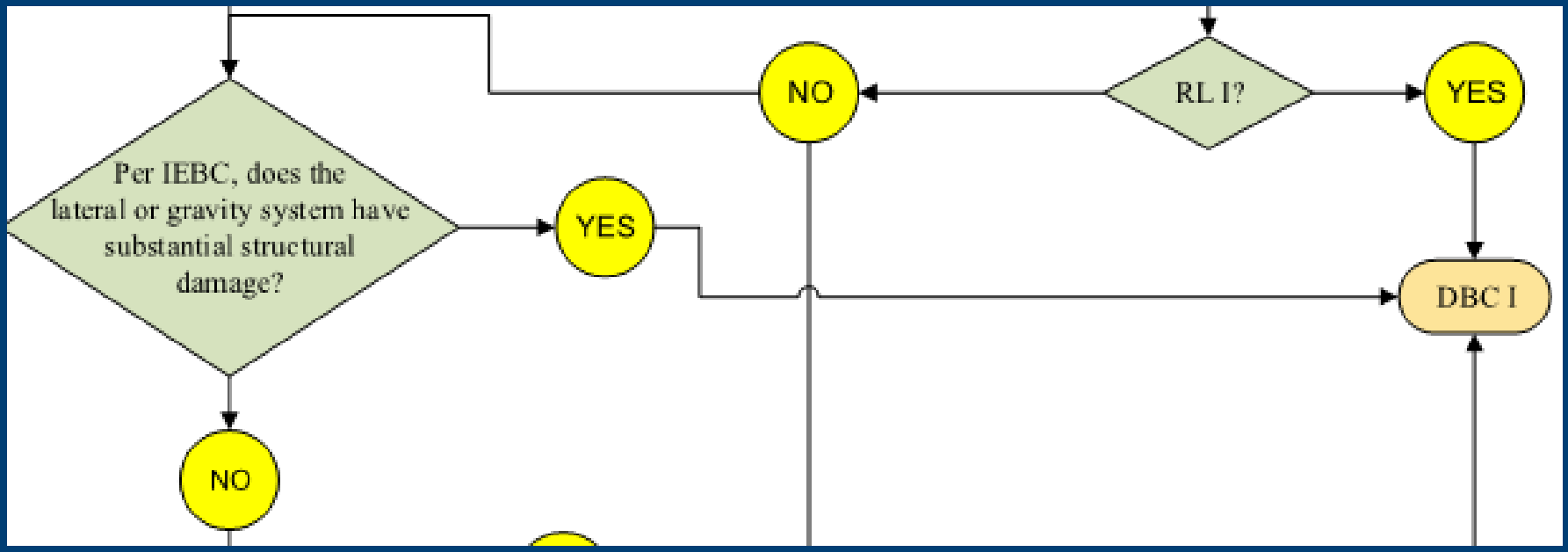
“Design Bases Code II”: original building code with ACI 562 excluding Chapter 5

“Design Bases Code III”: ACI 562 excluding Chapter 5

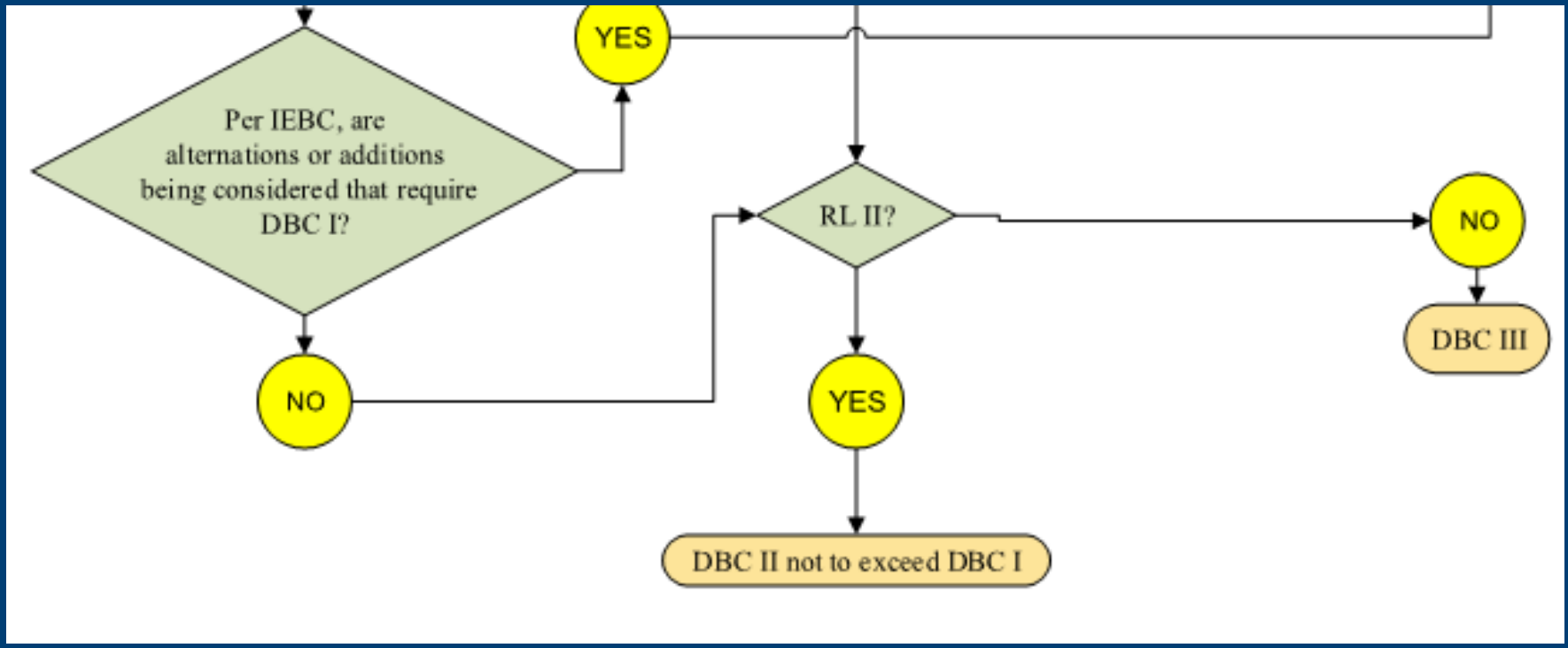
How is the design basis code determined? Decision Tree 1-A



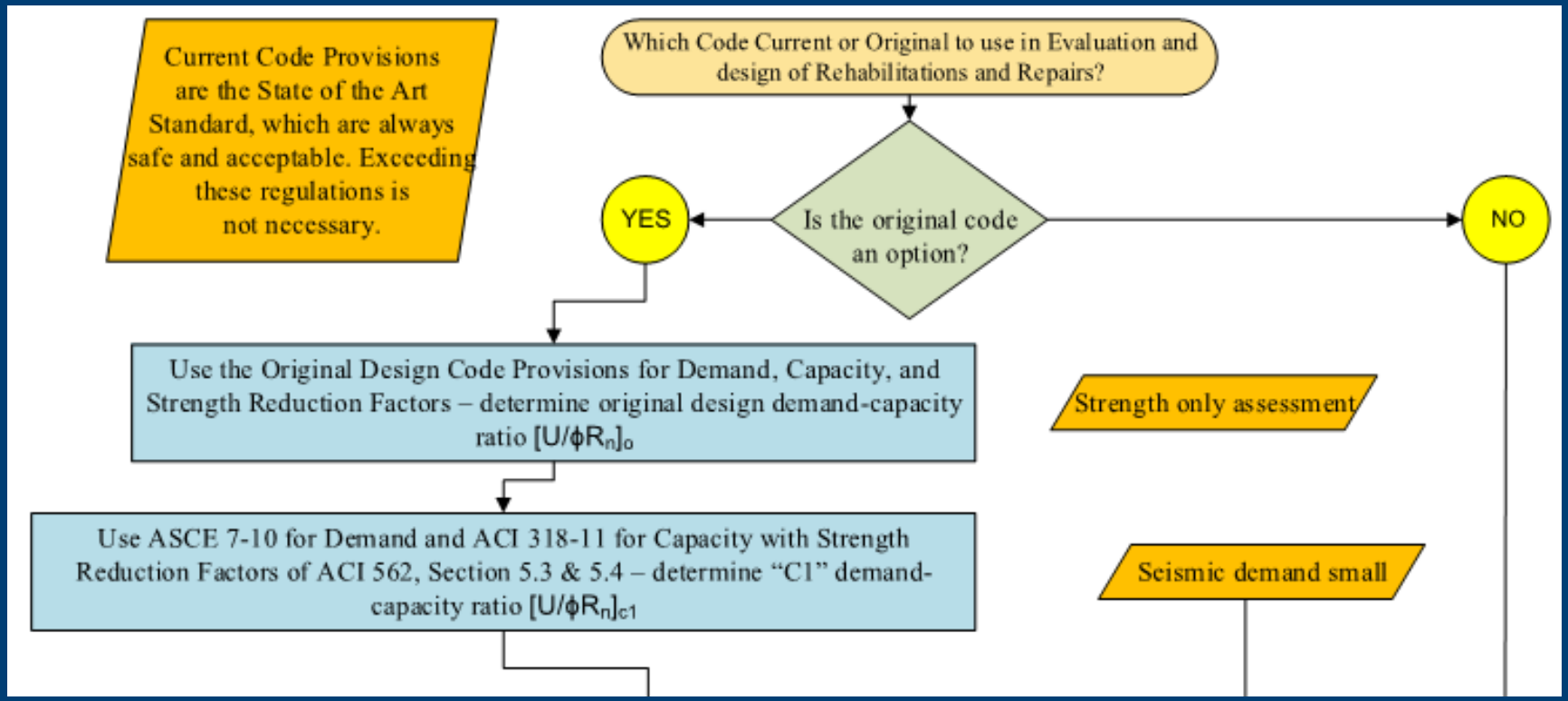
How is the design basis code determined? Decision Tree 1-B



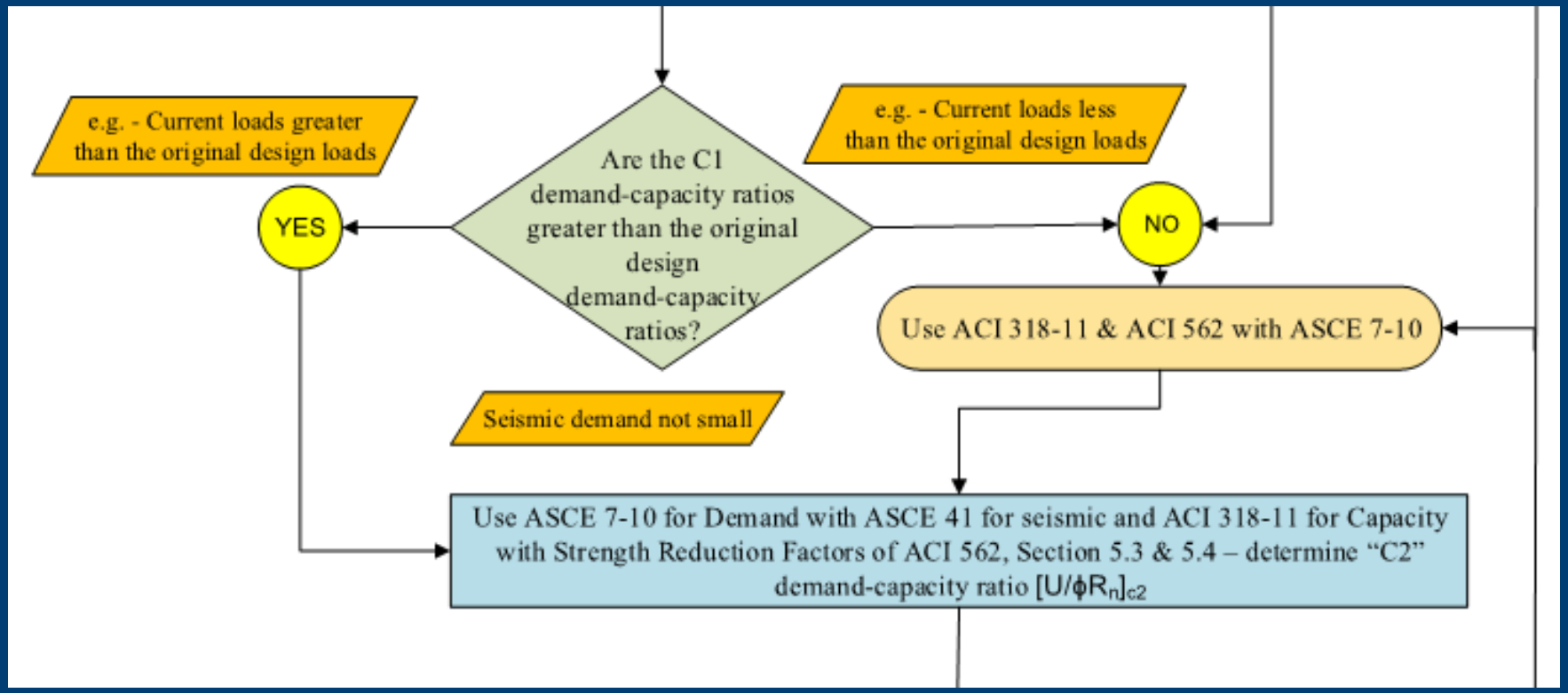
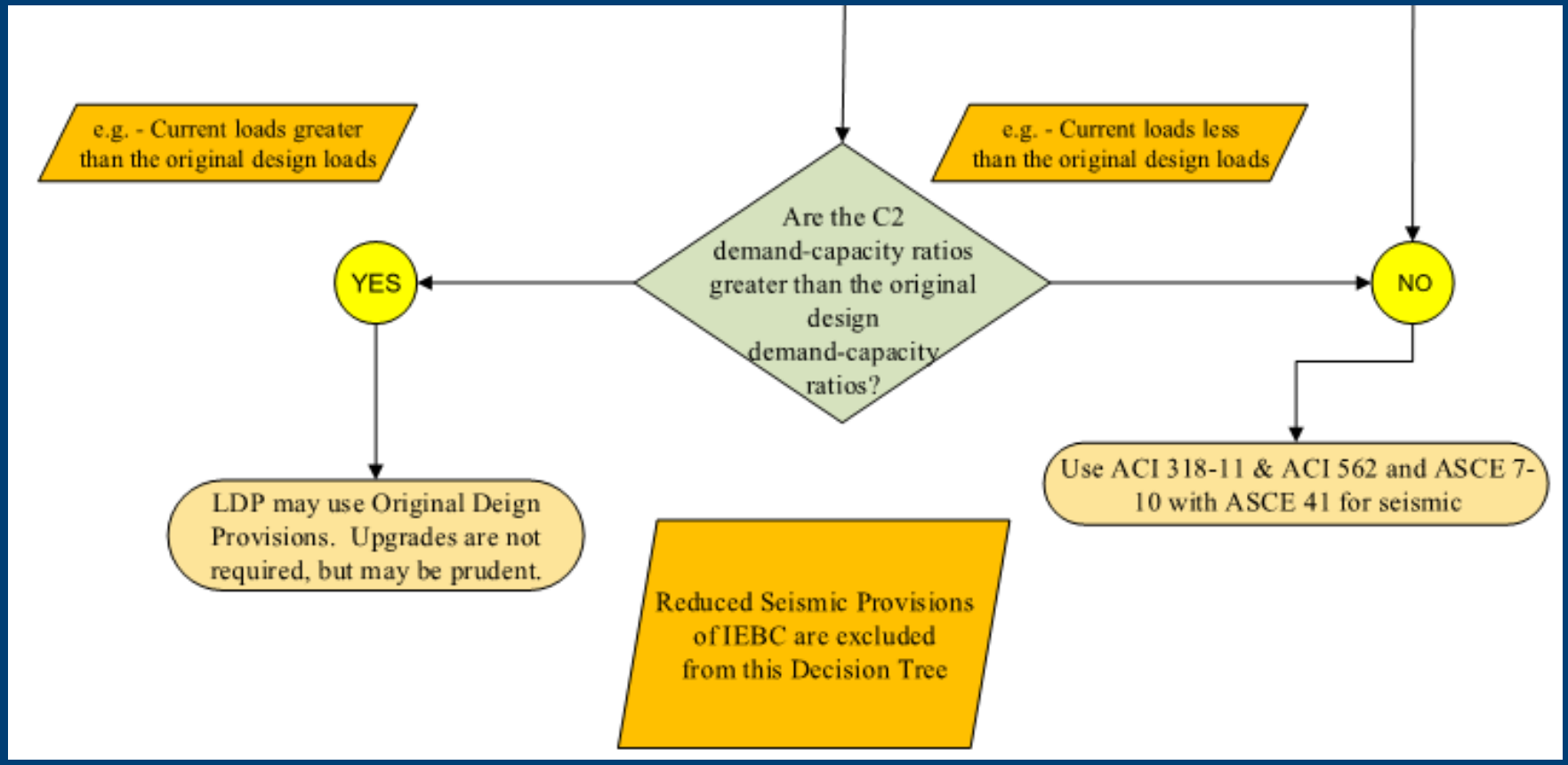
How is the design basis code determined? Decision Tree 1-C



Why the design basis code determined need not exceed the current code - Decision Tree 2-A, Calculation Assessment



Decision Tree 2-B, Calculation Assessment



Decision Tree 2-C, Calculation Assessment