

Practice Problem – Section E

PROBLEM STATEMENT:

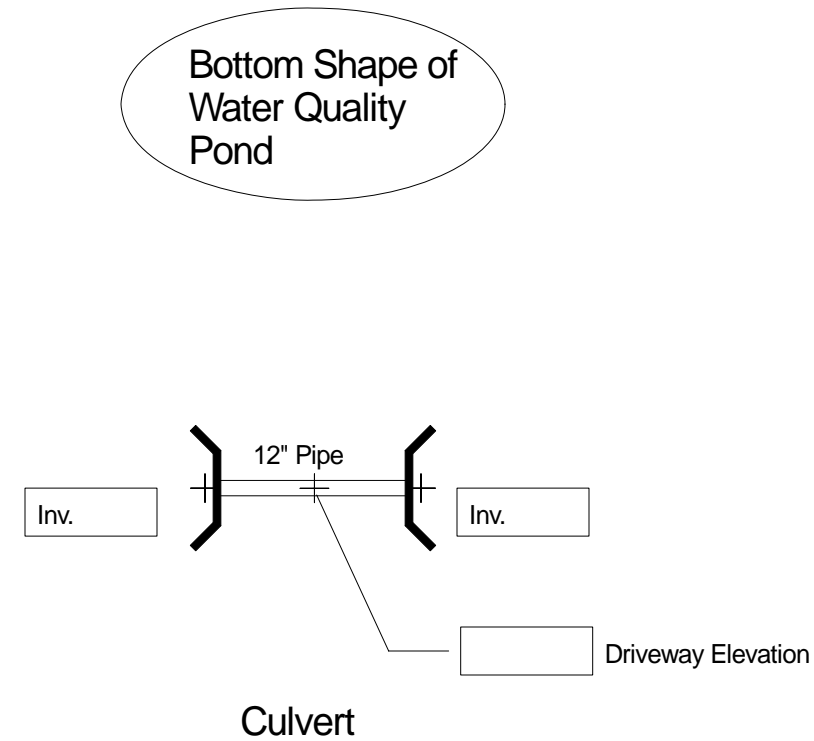
Prepare a grading plan for a proposed horse barn so that none of the storm water from the barn or the pasture drains directly into the existing stream.

REQUIRED:

- Locate and grade a water quality pond with the given bottom shape to intercept all runoff from the barn and pasture using the graphic provided. The bottom of the water quality basin shall be flat.
- If necessary, provide a 12" culvert as shown. Indicate the inverts on the 12" outfall pipe so that it maintains a minimum of 12" of cover over the culvert pipe. The minimum slope of the culvert pipe shall be 1% and a maximum of 10%.
- Indicate a spot elevation at the bottom of the pond and a spot elevation at the top of the embankment on the downhill side of the water quality pond to retain a minimum of 3' of water.
- Indicate the floor elevations of the proposed barn to the nearest 1/10th of a foot in the boxes provided. Spot elevations at the barn foundation shall be 6" below the finish floor elevation (FFE).
- Gradients on all paved surfaces shall be 2% minimum and 5% maximum.
- Gradients on unpaved surfaces shall be 2% minimum and 3:1 (33%) maximum.
- Runoff from unpaved surfaces shall not flow onto paved surfaces.
- Save the existing trees. Do not grade within the dripline of the trees.
- No additional retaining walls or drainage structures are permitted.

PROJECT ELEMENTS

Scale: 1" = 40'



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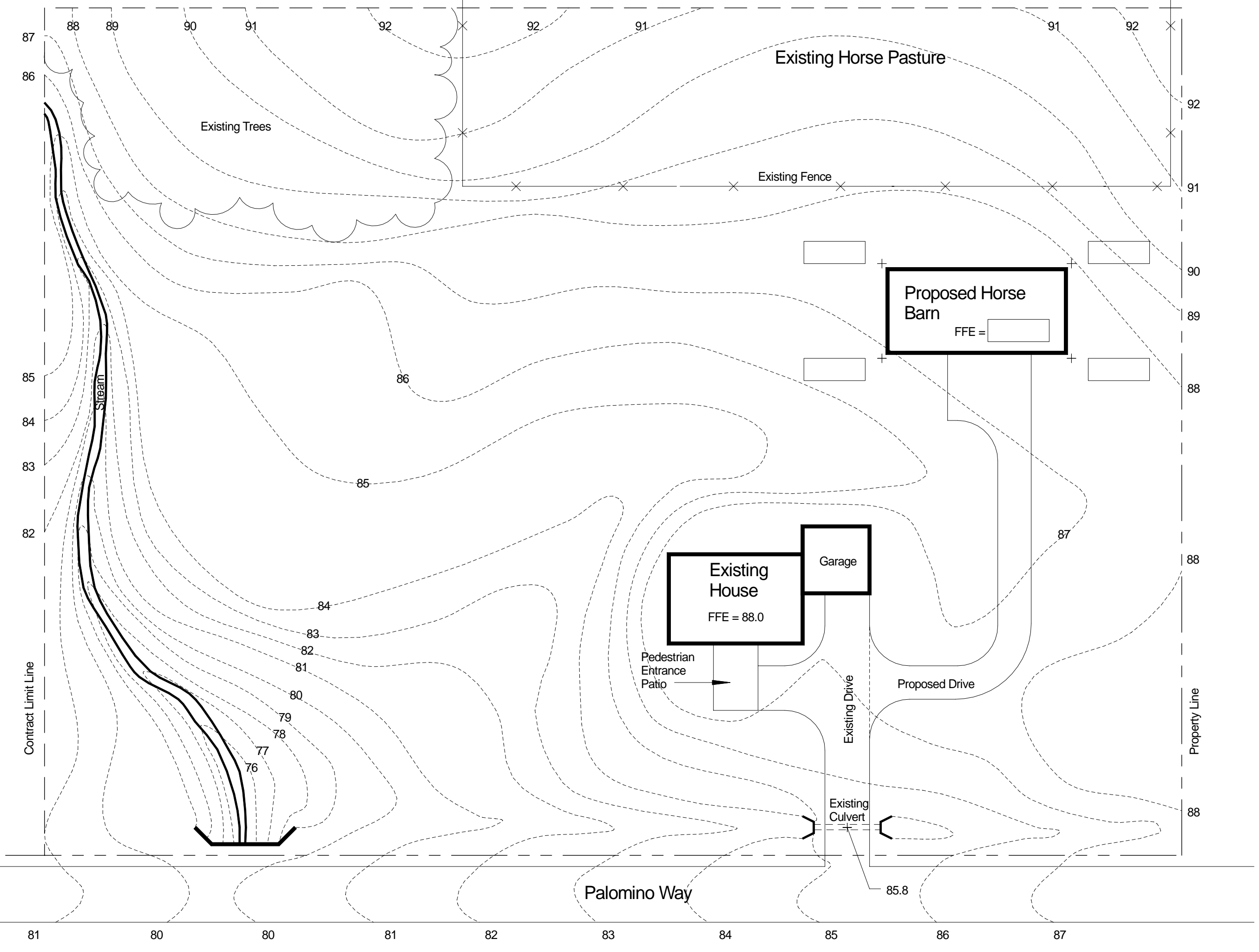
March 2010

Candidate I.D.

Landscape Architect Registration Examination

Grading, Drainage and Stormwater Management

Council of Landscape Architectural Registration Boards



E-4

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