West Road

East Road

103.6
103.0
102.4
101.8

103.6 103.0 102.4 102.4 103.0 103.6 104.2 104.8 105.4 106.0 106.6 107.2 107.8 107.2 106.6 106.0 105.4 104.8 104.2

101.2 100.6 100 98.4 97.8 97.2 97.2 97.8 98.4 100 100 101.2

343 - PROBLEM 3 - NEW ROAD
KELLY

NORTH

Scale: 1:500

VERSION 5-07
Contour Interval 0.6m

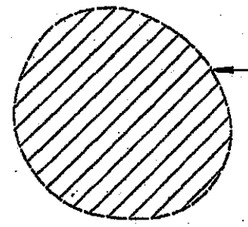
PROBLEM STATEMENT:

Provide a road connection between the existing West Road and East Road and locate a retention pond to accommodate surface runoff. Provide preliminary grading for the proposed elements.

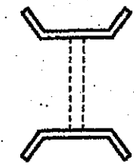
REQUIRED:

1. Locate a 7.5m wide road connecting West Road and East Road. Located the road to minimize cut and fill.
2. The minimum horizontal centerline curve radius for the road shall be 60 m.
3. Locate a dam to create a retention pond that has an average depth of at least 0.6m over a surface area of 0.20 ha.
4. Culverts may be used to maintain existing drainage patterns.
5. Culvert pipe is 0.3m diameter RCP; minimum pipe slope is .5% and minimum required cover is 0.6m.
6. Show and label all proposed 0.6m contours including the proposed road and meet existing contours within the page limits.
7. Using proposed contours, conceptually indicate a crown and six-inch curbs on the proposed road. Road surface shall be asphalt.
8. Gradients on the proposed road shall be 1% minimum and 8% maximum, except at vertical curve high points and low points wher the grade will be zero percent.
8. Gradients on unpaved surfaces shall be 2% minimum and 4:1 (25%) maximum.
10. Runoff from unpaved surfaces may not flow onto paved surfaces.
11. Runoff from the proposed road and unpaved surfaces may flow onto existing roads.
12. Minimize the environmental impact and costs of development.

GRAPHIC CONVENTIONS (for this problem).



Graphic Convention for Delineating Retention Pond (Not to Scale)



Graphic Convention for Delineating Culvert (Not to Scale)

Glossary Additions to be defined:

- Cut & Fill
- horizontal curve
- dam
- retention pond
- culvert
- rcp
- road crown
- vertical curve
- culvert headwall
- topographic features

343 - PROBLEM 3 - NEW ROADS
REVISED