



January 23, 2018

Ande Flower
Principal Planner-City of Lake Forest Park
17425 Ballinger Way NE
Lake Forest Park, Washington 98155-5556

**Subject: Bell Cottages-2017-CU-003
PACE Project No. 18235.40.02**

Dear Ms. Flower:

Thank you for the opportunity to complete a review of the proposed cluster housing development Bell Cottages.

We have completed the review of the plans for the above project and below are the comments for the applicant.

Access and Parking

1. While there is currently no guidance for the type/design of the driveway/driveway entrance it is our professional opinion that the development most closely resembles a commercial/multifamily development such as a condo building or a townhome development. As such we would suggest a driveway entrance with a minimum width of 25'. If there were to be no curb and gutter and sidewalk proposed on the project's frontage the driveway approach should meet King County Roadway Standard Figure 3-003 (although there is no ditch in this project). The additional 7' of width vs a joint access tract would be welcomed especially if there are no sidewalk connections from the ROW onto the site.
2. The proposed parking stalls do appear to meet the design requirements found in 18.58.050, however it appears as if the 23' of aisle width between the east and west facing stalls is short by 1' per 18.58.050 as the traffic will be at a 90-degree angle to the traffic.

Drainage Report/Plans

3. The TIR does not address Core Requirement #9-Flow Control BMP as required by the 2016 King County Stormwater Design Manual (KCSWDM).
4. The frontage improvements (parking area, driveway apron) are not accounted for in the developed area summary and hydrology modeling.
5. The referenced "Existing Basin Map" is not included in the report as stated. In addition it would be very helpful if a "Proposed Conditions Basin Map" was provided.
6. Information on the vault control structure needs to be provided on the plans to ensure compliance and consistency with the report.

7. The connection to the existing catch basin appears to have major pipe cover concerns. The area is located beneath a proposed parking area and therefore will be subject to traffic loads. Additional/revised design information is required.

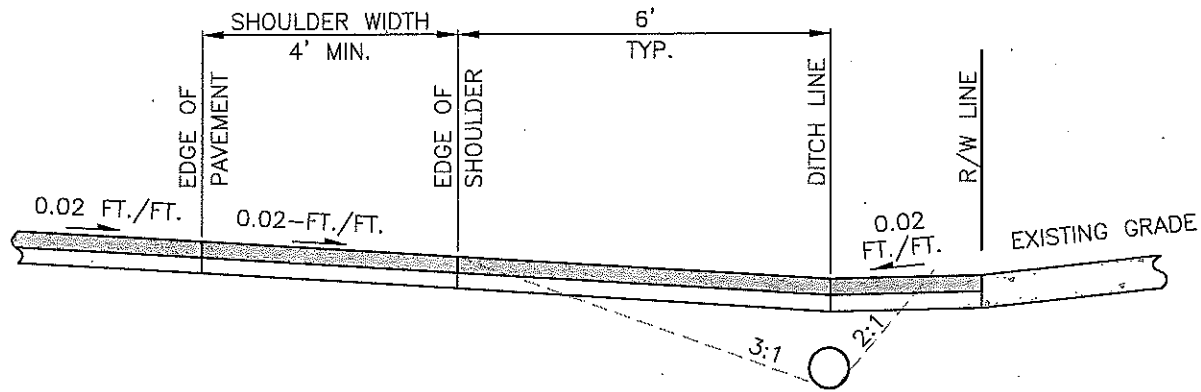
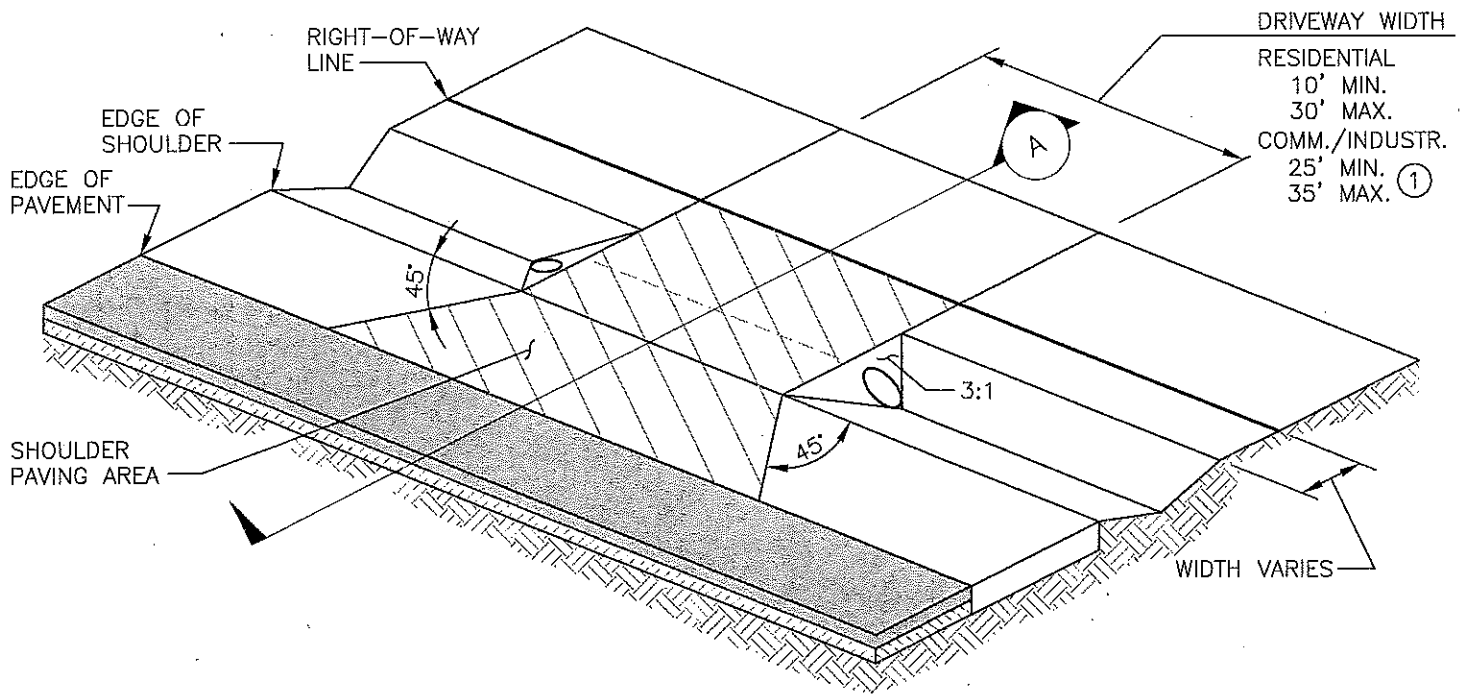
If you have any questions, please feel free to email me at Johnf@paceengrs.com or call me at (425) 827-2014

Sincerely,

PACE Engineers, Inc.

A handwritten signature in blue ink, appearing to read "John Forba P.E.", is written over the typed name.

John Forba, P.E.
City Engineering Consultant



SECTION A

NOTES:

- ① WITHIN THE RIGHT-OF-WAY DRIVEWAYS SHALL BE PAVED FROM THE RIGHT-OF-WAY LINE TO THE EDGE OF PAVEMENT WITH HOT MIX ASPHALT. NO CONCRETE IS ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS AS SPECIFIED IN SEC.4.02.
2. COMMERCIAL/INDUSTRIAL DRIVEWAYS WIDER THAN 35 FT. MAY BE APPROVED BY THE COUNTY ROAD ENGINEER CONSIDERING BOTH TRAFFIC SAFETY AND THE ACTIVITY BEING SERVED.
ALL COMMERCIAL/INDUSTRIAL DRIVEWAYS SHALL HAVE AN EXPANSION JOINT LOCATED MID-WIDTH. (SEE SEC. 3.04.)
3. PIPE SHALL BE:
 - A. SIZED TO CONVEY COMPUTED STORM WATER RUNOFF, AND
 - B. MIN. 12" DIAM., AND
 - C. EQUAL TO OR LARGER THAN EXISTING PIPES WITHIN 500 FT. UPSTREAM.
4. EXPOSED PIPE ENDS SHALL BE BEVELED TO MATCH THE SLOPE FACE AND PROJECT NO MORE THAN 2" BEYOND SLOPE SURFACE. PROJECTING HEADWALLS ARE NOT ACCEPTABLE.
5. ALL TYPES OF PIPE SHALL HAVE MIN. 12" COVER TO FINISH GRADE.
6. PIPE SHALL BE INSTALLED IN A STRAIGHT UNIFORM ALIGNMENT AT A MIN. 0.5% SLOPE (0.5 FT. PER 100 FT.) WITH THE DOWNSTREAM END LOWER THAN THE UPSTREAM END.
7. PIPE MAY BE OMITTED IF ROADSIDE DITCH DOES NOT EXIST AND DRIVEWAY DOES NOT BLOCK NATURAL FLOW.
8. DRIVEWAY SLOPE SHALL MATCH TO BACK EDGE OF SHOULDER, BUT SHOULDER SLOPE AND EDGE OF SHOULDER SHALL NOT BE ALTERED AS A RESULT OF DRIVEWAY CONSTRUCTION.
9. SEE SEC. 3.01 AND 4.01 FOR DRIVEWAY AND SURFACING STANDARDS.
10. PIPING OF DITCHES SHALL BE ALLOWED ONLY WHERE DRIVEWAY ACCESS IS NECESSARY.

