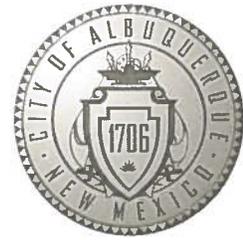


# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



September 5, 2014

Diane Hoelzer, P.E.  
**Mark Goodwin & Associates, P.A.**  
P.O. Box 90606  
Albuquerque, NM 87199

Richard J. Berry, Mayor

**RE: Anderson Height Unit 4  
Drainage Report, Grading & Drainage Plan  
Engineer's Stamp Date 6-27-2014 (File: N08D006F)**

Dear Ms. Hoelzer:

Based upon the information provided in your submittal received 8-4-14, the above referenced plan cannot be approved for Grading and Paving Permit until the following comments are addressed:

1. Hydrology would like exclusive drainage easements or provide a trench prism on Tract T and U.
2. Tract LL should be at least 30' wide based on formula in DPM pg. 22-172 assuming a depth of 10'.
3. Address how the first flush is to be managed on the site plan and Grading and Drainage plan.
4. If the subdivision is to be phased, provide a Grading and Drainage plan for each phase showing how drainage is to be managed in the interim stages and the order of phasing. The plan for each phase should show how each phase will tie into the existing contours, and the size and location of the temporary ponds. Temporary ponds should show the WSEL, emergency overflow, and volume.
5. Per our conversation, I understand that the second retaining wall along the east property line which was installed for the interim conditions is to be removed in its entirety. However, there are concerns about the original retaining wall built with the Arrowwood subdivision, especially since a wall failure occurred sometime in the past. From my research, I found the following:
  - a. The Arrowhead Hills G&D Plans for the development to the east, by Wilson and Company (enr's stamp date 10-12-05 and certified 9-19-06, Drainage file N9D008A) has a note: RETAINING WALL BY OTHERS COA 753981. It is unknown if the retaining wall was designed to retain the grades from the Anderson Heights Grading and Drainage Plan by Greg Krenik dated 4-14-05(Sht 6 & 7) and 4-27-05(Sht 9 ) or the existing grades. The existing grades were at or below the Arrowwood subdivision grades.
  - b. We do not have in our records calculations showing that the original retaining wall was checked for additional pressures from the second retaining wall (as requested in a letter by Brad Bingham dated 12-4-2008), and may be overloaded at the present. It is our opinion that a structural engineer needs to evaluate the integrity

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- of the original wall built with the Arrowwood Subdivision. If further information on the original wall is not obtained, a second wall will need to be designed and constructed parallel to the original wall. The footing will need to be deep enough (or further from the original wall) such that additional pressures are not placed on the original wall.
- c. The TW Elevation needs to be clarified. If typically the TW Elevation is the top of the structurally designed retaining wall, then the TW Elevation should average about 50' according to the as-built plans. The proposed plans show the average TW to be about 60'. The 10' difference leads me to believe that about 3.5' is a datum correction and the other 6.5' is a screen wall (or garden wall) built above the retaining wall. From my field visit, there is no visible joint (or change in block size) in the masonry where a surveyor would be able to determine the elevation of the top of the retaining wall.
  6. Indicate that there are two walls along the east property line. Indicate that the existing second wall is to be removed.
  7. BW Elevations do not match up with the As-built BW elevations from the Arrowhead Hills G&D Plans nor the Anderson Heights Unit 9 G&D plan, stamped 9-10-07 in some areas. There is a 3.5' difference at one point. The existing contours along the wall do not match the TW elevations from Anderson Heights Unit 9 G&D plan stamped 9-10-07. For example, at 500' from the south property line the contour shows 57' along the wall, but the older plan says the TW is 53.55. As we have already discussed, the datum needs to be corrected. I am assuming the proposed contours are in the '88 datum. Are the existing contours in the '88 or the '29 datum? They should be the same datum. Further evidence that there are 2 different datums being used is at the west property line where some spot elevations do not match major existing contours.
  8. Provide more elevation labels of the existing grade contours.
  9. A retaining wall is needed on west side of Lot 23-P1, along Emerald Peak Street.
  10. What is the meaning of the hatching used between lots (ie. Between lots 58-P1 and 59-P1)? It is not on the legend. It seems to be a retaining wall in some cases (lots along Tract TT) but it is also used where a retaining wall would not be necessary (ie. Lots 1-P1 and 2-P1). Clearly indicate what walls are retaining and what walls are screen walls/ garden walls.
  11. What do solid lines on either side of Tract U indicate? retaining walls?
  12. Water block should be raised at Barrow Road access from 118<sup>th</sup> Street.
  13. Show proposed contours at the memorial park (Tract UU), the private park (Tract VV) and Tracts Z, A, and B.
  14. The side yard detail on Sheet 2 has a High Pad and a High Pad 2. Where does this apply? What is the meaning of the "10' Interim Condition" note? It seems to be a detail carried from an older plan. Does it still apply?
  15. On Subbasin Boundary Exhibit, remove the Zone Boundary line running N-S along Ironwood Hill St. as it makes it difficult to determine the basin boundaries.
  16. Provide calculations of inlet capacities to support Table 2, Summary of Street Capacity Calculations ?
  17. Table 2, Summary of Street Capacity Calculations indicate that inlets in Crag Peak are not picking up runoff from Tract UU (Memorial Park). Where is runoff from Memorial Park captured? If inadvertently left out, will EG in Pine Town Road pass the 0.87' at edge of ROW?

# CITY OF ALBUQUERQUE



18. Double Retaining wall needed on Tract Y, between Lots 1-4 and Lots 5-8
19. Provide street slopes more often or where needed.
20. It is much too time consuming to review the storm drain pipes by trying to analyze the program output, trying to match the program output to the stationing, finding where and how much Q's are input, and the invert elevations (especially since the datum needs to be corrected). Please provide a graphical representation that will easily allow me to review the output, the pipe capacity, where and how much Q is being added, the invert elevations, and the HGL.
21. When reviewing the Summary of Street Capacity Calculations , it would be helpful if you indicated where each added Q is coming from, ie. What basins? What % of a basin is contributing?
22. Include in Table 2 inlets in Dundee St. near MH#8A. Sump Condition? SD Layout plan says 11.44 cfs but Street Capacity exhibit says 27.07cfs (or 13.53 cfs to each inlet). I agree with the 27.07 cfs , but 6.37cfs from Basin 31 may need to be included. If so the inlets in sump conditions should have a 16.72 cfs capacity . Provide inlet capacity calculations. Inlets in the sump condition should have double the capacity.
23. Include in Table 2, the inlets at intersection of Bord Peak Road and Banner Peak Road. Show Inlet Type and number.
24. Table 2, Summary of Street Capacity Calculations indicates that Colobel Avenue has a total of 4 Single-A inlets, without capturing the total flow (3.46 cfs not captured). Plans show 3 inlets. It appears that at least another inlet is needed along the South side of Corobel Road, near Gaunt. Also show how/where the bypass flow is being captured.
25. In Table 1, Summary of Street Capacity Calculations, is the second line item "Bord Peak" supposed to be "Deer Field" to correspond to the HEC-2 run?
26. Labels of Basin 31 and 33 are incorrectly labeled on the Basin Boundary Map, as noted from the corresponding calculations.
27. Volumes of the Temporary Ponds need to be shown on the Infrastructure List as well as Agreements and Covenants listed with the Pond.
28. Where is the property line along the tie slopes used in Unit 4F (between the rear yards). Verify that he property line is at the high end of the tie slope.
29. In the interest of time, I reviewed the grades in Units 4A and 4B thoroughly, and more generally for the remaining Units. I will review the grades in the remaining units in more detail in the next submittal.

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If you have any questions, you can contact me at 924-3695.

Sincerely,

Rita Harmon, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file  
c.pdf Addressee via Email

