

December 4, 2012

voice: 505.823.1000  
facsimile: 505.798.7988  
toll free: 800.877.5332

Greg Olsen, P.E.  
Senior Engineer, Hydrology  
City of Albuquerque  
PO Box 1293  
Albuquerque, NM 87103

Re: Response to comments on the updated North Andalucia Drainage Master Plan (E12-D15)

Dear Mr. Olsen:

Thank you for completing your review of the above submittal and offering your written comments dated Friday November 30, 2012. In response to your comments we have revised various aspects of the plan. Responses to your comments are listed below along with explanations of the items which have been revised with this re-submittal. The responses below are numbered to match the numbers of your comments. Your expeditious review of this re-submittal would be greatly appreciated as time is of the essence for some of the projects which are dependent on this master drainage plan.

1. We have taken note of the drainage file number and have indicated the updated reference in the subject line of this letter and on the attached drainage information sheet.
2. We have revised the Drainage Master Plan (DMP) to allow for discharge of fully developed flows from Basin B-2. The land treatment percentages have been set to match the zoning of the parcel which is SU-1 PRD at a maximum of 10 DU per acre.
3. We have incorporated a requirement to retain the first 0.33" of precipitation onsite for Basins A-1, A-5 and B-2. As you indicated in your letter, the updated EPA MS4 permit requires onsite retention of the first 0.44" of precipitation. Since this overall drainage master plan area is retaining all of the 100 year – 10 day storm volume, the EPA requirement is satisfied. However, because onsite water harvesting is becoming a widely accepted practice, this master drainage plan is incorporating a requirement to retain the first 0.33" of precipitation onsite for Basins A-1, A-5 and B-2 in order to reduce the required retention volume in Ponds A & B.
4. The basins listed below were not subjected to the requirement for onsite retention for the reasons given:
  - a. Basin A-2. This basin includes Pond A, and is therefore already meeting the requirement for onsite retention, it is not logical to require this basin to retain additional runoff separate from Pond A.

**Engineering ▲**

**Spatial Data ▲**

**Advanced Technologies ▲**

- b. Basin A-3. This is the multi-family site. This parcel has an approved site plan for building permits and construction plans for the project have been completed, submitted for building permit and approved by most of the city review departments.
  - c. Basin A-4. This is the Credit Union Site and it is already under construction.
  - d. Basin B-1. This basin has been partially developed (La Luz) for several decades and the remaining portion of the basin is open space.
  - e. Basins B-3, C-1 and C-2. These basins are property owned by Bosque School and are already developed.
5. We have coordinated this Drainage Master Plan with Tierra West, the engineer for the potential Wal-Mart project. Ron Bohannon is in concurrence with the updated plan and has indicated the same in a recent email, a copy of which has been provided to you.
6. The topographical surveys which have been relied on for the preparation of the DMP are enclosed for your review.
7. The minimum finished floor elevation of 75.5, shown on the 2006 DMP was based on NGVD 29. The equivalent minimum finished floor elevation in the new datum (NAVD 88) is 78.2. This update to the DMP provides for the same required minimum finished floor elevation as the original approved DMP.
8. The Pond A limits and volumes will be confirmed and certified after the proposed modifications to Pond A are completed. Submitted with this plan is a detailed grading plan for the modifications to Pond A.
9. A permanent drainage easement for Pond A was recorded on 11/30/2006 as document number 2006180369. That easement allows for the proposed work to be completed – specifically the language allows modifications to the pond. Following is a direct quote from the easement language:

*"Grantor grants to the City and it's assigns an exclusive, permanent easement . . . for the construction, installation, maintenance, repair, modification, replacement and operation of a public drainage pond"*

The modifications proposed for Pond A are entirely within the limits of the area defined by the legal description attached to the recorded easement.

With regard to the berm to be constructed along the west edge of Pond A, the crest of the berm is proposed to be at an elevation of 78.0. However, the maximum water surface elevation in the pond is 77.2, and the minimum finished



floor elevation for Tracts 2A and 2B is 78.2, thus maintaining 1' of separation. In addition the enclosed detailed grading plan for Pond A illustrates that the Pond A water will not be able to flow around the south end of the berm. Finally, Tracts 2A and 2B will be able to drain into Pond A by tying new onsite private storm drain directly into the pond or by tying into one of the public storm drain pipes that currently drain to the pond.

Furthermore, it should be noted that the parcel owned by ABCWUA, like all of the tracts in the DMP drainage area, will not be developable until an updated DMP is approved.

10. Detailed grading plans for Pond A and the spillway from Pond A to Pond B are included with this re-submittal. The groundwater elevation observed within the pond, and survey in the topographic survey prepared by Precision Surveys has been clearly labeled in Section E-E. I have also enclosed other groundwater level documentation from a geotechnical report and USGS. Both of these other sources suggest a lower groundwater elevation than the level observed at the bottom of the existing pond. Accordingly, we are using the most conservative elevation – based on the observed and surveyed water surface.
11. The spillway concerns have been addressed as follows:
  - a. Horizontal Control information has been provided on the detailed grading plan.
  - b. Build notes, cross sections and details have been provided.
  - c. Section B has been clarified to show the existing modular building.
12. No modifications to Pond B are proposed – other than at the location where stormwater would overflow from Pond A to Pond B. The volume calculations given in the DMP are based on a 1' contour interval topographic survey prepared by Precisions Surveys, and attached herewith. The minimum ditch bank elevation was clearly labeled on the plan, but it occurs in more than one location, so we have added another label to clearly show both locations.
13. The area labeled as “possible future addition” along the north side of Pond B has been excluded from the pond volume calculations and will be excluded from the limits of the Pond B easement. A small portion of Pond B also serves as an existing decorative pond for the school. The water surface elevation of that pond has been utilized as the bottom of pond elevation for the applicable portion of Pond B. Other than the decorative pond, there is no standing water or evidence of groundwater within the Pond B area.
14. Land treatment percentages for basins B-1 and C-1 have been recalculated based on recent aerial orthophotography. Minor adjustments to the resulting land treatment percentages have been incorporated into the enclosed DMP update.

15. In accordance with your suggestions, we have made the following revisions to expedite the review and approval of the revised DMP.

- a. A vicinity map and flood hazard map have been added to the first sheet.
- b. A benchmark has been referenced on the plan.
- c. The scale of the basin map has been revised so that all of Basin B-1 shows on the sheet.
- d. The data for each individual basin has been shown on the basin data table and subtotals are given based on which pond the basins drain into.
- e. The detailed grading plans for the modifications to Pond A and the spillway are provided on separate sheets from the DMP. The enlarged grading plan shown on sheet C001 of the DMP is provided to clearly depict the weir cross sections in order confirm and document the calculated weir capacity.

Please feel free to call me with any questions.

Sincerely,



Bruce J. Stidworthy, P.E.  
Senior Vice President  
Bohannon Huston Inc.

BJS/tms  
Enclosures