

CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

May 16, 2018

Mark H. Burak, P.E.
1512 Sagebrush Trail SE
Albuquerque, NM, 87123

RE: 211 Maple St. NE
Grading and Drainage Plan
Engineer's Stamp Date: 02/28/18
Hydrology File: K15D090

Dear Mr. Burak:

PO Box 1293 Based upon the information provided in your submittal received 05/08/18, the Grading and
Drainage Plan is approved for Building Permit.

Albuquerque Please attach a copy of this approved plan in the construction sets for Building Permit
processing. Prior to Certificate of Occupancy release, Engineer Certification per the DPM
checklist will be required.

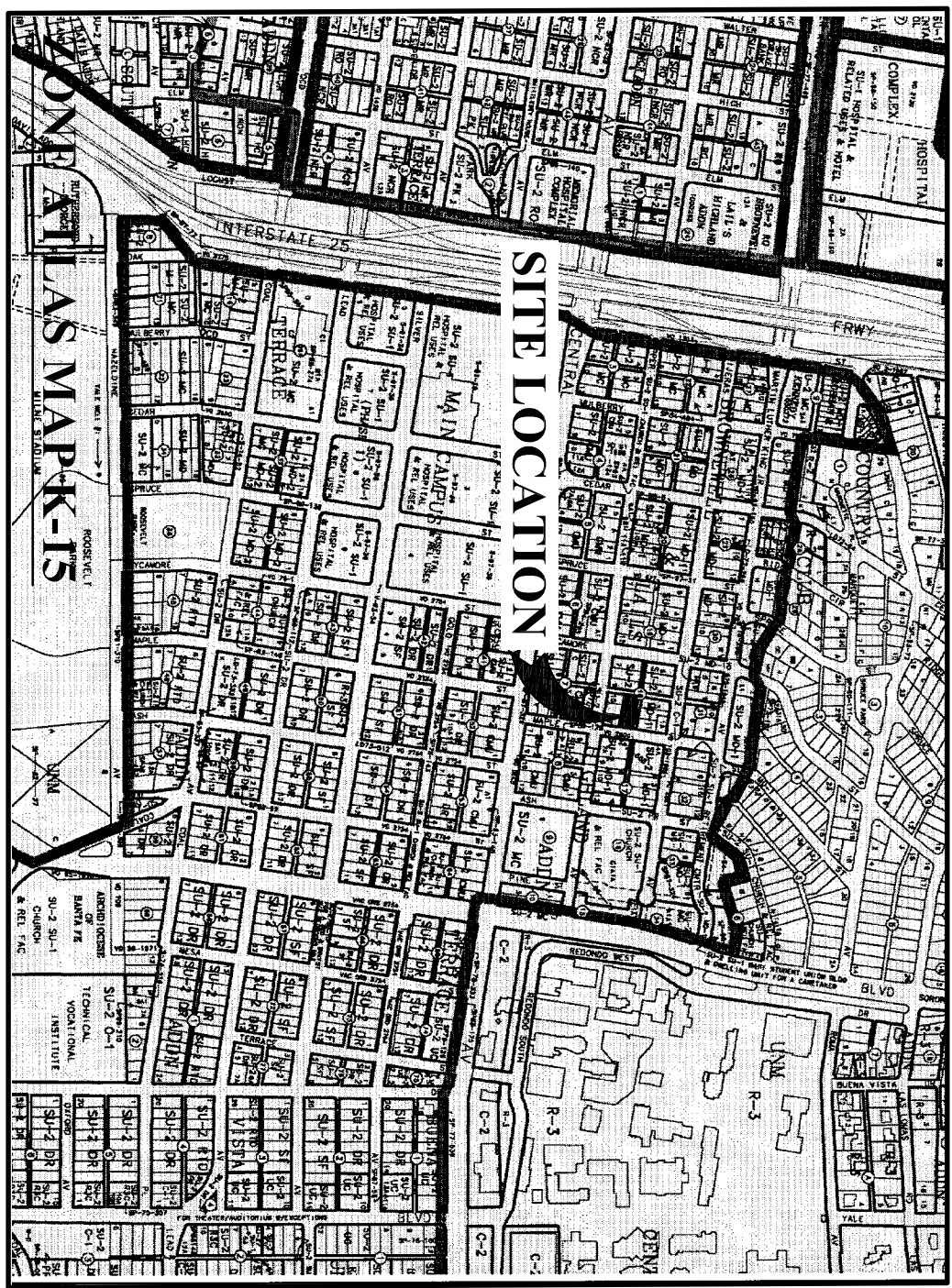
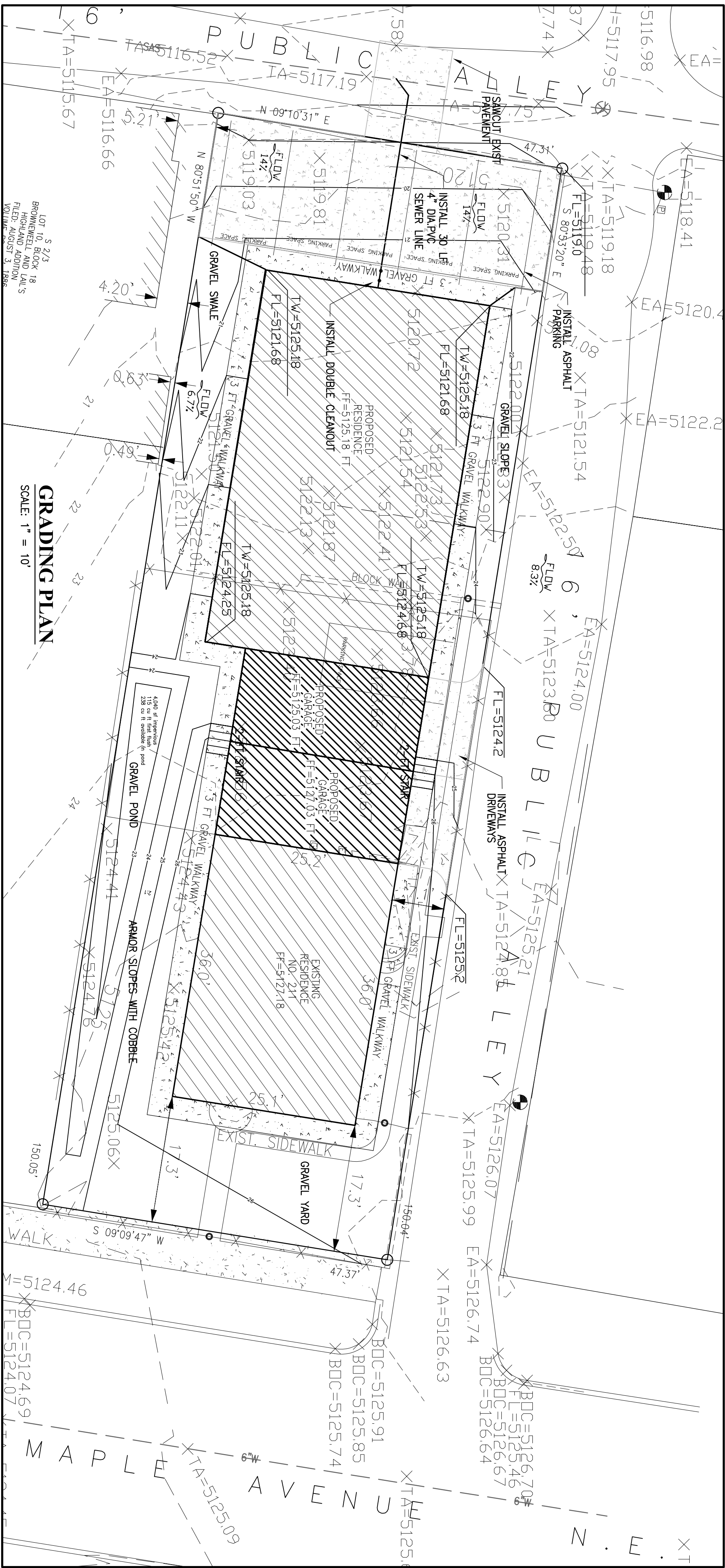
NM 87103 Please provide a Private Facility Drainage Covenant per Chapter 17 of the DPM for first
flush pond prior to Certificate of Occupancy. Please submit this on the 4th floor of Plaza de
Sol. A \$25 fee will be required.

www.cabq.gov If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



Site Location - As shown by the Vicinity Map (Zone Atlas Map K-15), the proposed residential project site is located on a single lot parcel at 211 Maple Street north of Copper Ave. At present, the eastern portion of the site is developed with an existing residence and drains roughly from east to west into the existing inverted crown alleyway. The purpose of this project is to construct a 2,230 square foot addition with garages, pavement, and parking facilities.

Legal Description - Lots 10-A and 10-B Brownell Latis Highland Addition, City of Albuquerque, New Mexico.

Benchmark - Basis of elevation is from City of Albuquerque bench mark "4-K15" with elevation stamped 5,047.763 feet.

Flood Zone - As shown by Panel 334G of 825 of the National Flood Insurance Program Flood Insurance Rate Maps (FIRM) for the City of Albuquerque, New Mexico, dated September 26, 2008, this site does not lie within a designated flood hazard zone.

Existing Conditions - Currently, the project site drains from east to west across the partially undeveloped 7,105 square foot lot to the existing 16 foot alleyway adjacent to the westerly property boundary. The western half of the lot is unimproved and used for parking. The only off-site runoff impacting the site is generated on or near the existing alleyway that runs along the northern property boundary. All other off-site runoff is contained within the extents of Maple Street and is diverted south to Copper Avenue. The runoff generated on site is carried west in the inverted crown paved alleyway to Sycamore Street where it then turns south to Copper Boulevard.

Proposed Grading - The Grading and Drainage Plan shows 1) existing and proposed grades indicated by spot elevations and contours; 2) the limit of existing and proposed improvements. A 3.5-foot stem wall is proposed along the sides of the proposed building to minimize on-site grading. The finish floor is set to allow adequate drainage around the proposed structure. A three foot wide gravel path will be installed around the entire building. This will moderate roof drainage and provide a buffer to the graded areas between the building and property limits. A retention pond is shown on the south side of the existing structure to control the first flush requirements. A swale along the southern edge of the structure will ensure positive drainage to the west from the southern portion of the property and will eliminate cross-lot drainage.

A four inch schedule 40 PVC sewer service is to be installed and connected to the existing line in the alley as shown on the Plan.

First Flush Management - The first flush has been mitigated based on 4,040 square feet of the project site to be impervious. This equates to an area of 4,440*0.34/12 or 115 cubic feet. This storage has been provided on the plan by depressing the south side yard area one foot. The maximum volume of the proposed pond is 238 cubic feet.

Hydrologic Methods - The drainage basin map shows seven separate subbasins A-G to assess peak flow rates at various points around the project site culminating at either the existing alleyway intersection or Copper Ave. The calculations which appear herein analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The process outlined in the DPM, Section 22.2 was used to quantify the peak flow rates and volumes. As shown by these calculations, the fully developed improvements will result in a negligible increase in runoff generated by the site. Downstream capacity is sufficient to carry the entire peak runoff of 1.11-cfs generated by the design storm.

The proposed improvements will slightly increase the existing peak runoff by less than one cubic foot per second as shown on the calculations. A spreadsheet for Precipitation Zone 2 is included on this plan. This spreadsheet outlines the peak runoff and volume generated for each subbasin for existing and proposed fully developed and paved conditions. Percentage of each land treatment is shown to illustrate the addition of impervious area related to the proposed construction.

Hydrologic Calculations - COAD PM 22									
February 2016									
Subbasin	Area (Ac)	Length (ft)	Width (ft)	Depth (ft)	Volume (cu ft)	Area (Ac)	Length (ft)	Width (ft)	Depth (ft)
Subbasin A	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin B	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin C	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin D	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin E	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin F	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin G	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin H	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin I	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin J	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin K	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin L	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin M	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin N	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin O	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin P	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin Q	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin R	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin S	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin T	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin U	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin V	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin W	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin X	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin Y	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin Z	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin AA	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin AB	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin AC	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin AV	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin AW	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin BA	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BB	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BC	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BD	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BE	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BF	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BG	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BH	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BI	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BJ	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin BL	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin BN	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BO	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BP	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin BR	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BS	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BT	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BU	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BV	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin BW	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin BZ	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin CA	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
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Subbasin DW	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin DX	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin DY	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin DZ	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin EA	0.03	0.78	1.19	2.12	4.7	0.03	0.78	1.19	2.12
Subbasin EB	0.03	0.78	1.19	2.12	4.7	0.03			