

**Transmittal**

A-11/DC05

**Date:** Feb. 24, 11

**To:** Curtis Cherne  
Plaza Del Sol  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102  
924-3695

**From:** Maryam Giahi, PE  
2600 American Rd., SE Suite 100  
Rio Rancho, NM 87124

<b>File No:</b>	08-100-200-00		
<b>Phase:</b>	30	<b>Task:</b>	8614
<b>Dept:</b>	8600		
<b>Project:</b>	Unser Blvd. North		
<b>Telephone:</b>			
Sent via: <input checked="" type="checkbox"/> Ground <input type="checkbox"/> 2 <sup>nd</sup> Day <input type="checkbox"/> Overnight <input type="checkbox"/> US Mail			

**We Transmit:**

- ☒ Attached  
☐ Under separate cover via  
☐ In accordance with your request

**For Your:**

- ☒ Approval  
☒ Review and Comment  
☐ Use  
☐ Distribution to parties  
☐ Record  
☐ Information

**The Following:**

- ☐ Drawings  
☐ Prints  
☐ Specifications  
☐ Change Order  
☐ Shop Drawing Prints  
☐ Other

Copies	Date	No.	Description
1	2-24-11	1	Unser Blvd. North, Drainage report and Basin Map

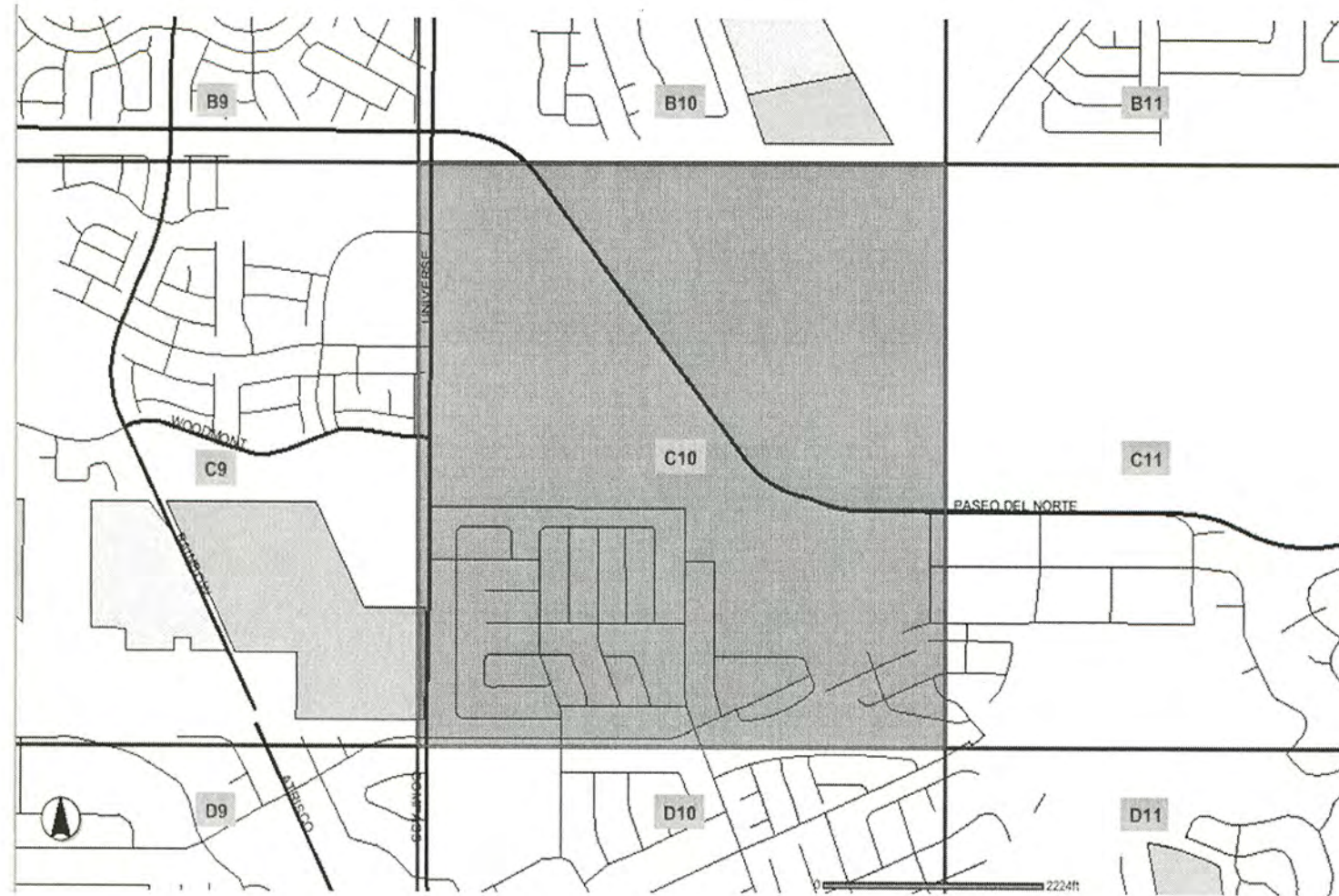
**Comments:****Copies To: File**

FEB 24 2011

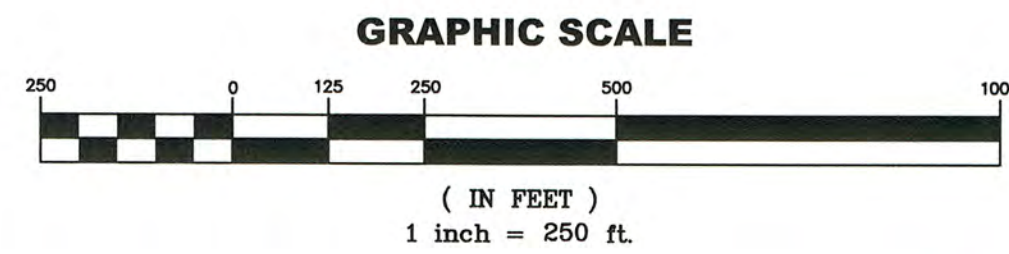
Signature







LOCATION  
ZONE ATLAS C10



### LEGEND

- MAJOR CONTOUR
- MINOR CONTOUR
- 101** BASIN ID
- BASIN BOUNDARY
- ROADWAY
- FLOW ARROW
- PROPOSED CULVERT

SITE LOCATION: THE PROPOSED EXTENSION OF UNSER BOULEVARD IS BOUNDED BY PASEO DEL NORTE TO THE SOUTH AND PARADISE BLVD. TO THE NORTH. ITS HORIZONTAL ALIGNMENT IS BASED ON THE VOLCANO HEIGHTS SECTOR PLAN AND SAD 228 PLAN.

METHODOLOGY: SECTION 22.2 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) WAS USED IN THE HYDROLOGY ANALYSIS OF THE SITE. A PRINCIPAL DESIGN STORM OF THE 100-YEAR, 6-HOUR STORM EVENT WAS USED TO DETERMINE THE PEAK FLOW RATE AND THE 100-YEAR, 24-HOUR STORM EVENT WAS USED TO DETERMINE THE PEAK RUNOFF VOLUME. THE PRECIPITATION VALUES USED ARE TAKEN FROM THE NOAA ATLAS 14. ARID-LANDS HYDROLOGIC MODEL 97 (AHYMO-97) WAS USED TO CALCULATE FLOW RATE AND RUNOFF VALUES. BENTLY CULVERTMASTER v3.2 WAS USED TO DETERMINE CULVERT SIZES.

### EXISTING CONDITIONS:

THE EXISTING CONDITIONS CONSISTS OF UNDEVELOPED LAND USE WITH NATIVE VEGETATION AND MINIMAL DISTURBANCE TO GRADING, GROUNDCOVER, AND INFILTRATION CAPACITY. PASEO DEL NORTE CURRENTLY RUNS THROUGH EXISTING BASINS 101, 102, AND 103. UNSER BLVD. CURRENTLY ENDS AT PASEO DEL NORTE. THE EXISTING TERRAIN IN THE AREA GENERALLY VARIES FROM ABOUT ONE TO FIVE PERCENT. FLOWS IN BASIN 101 MOVE IN A NORTH EAST DIRECTION TO THE BIG SAGE SUBDIVISION. BASINS 102, 103, AND 104 FLOW WEST TO THE PROPOSED UNSER BLVD.

BASIN FLOW RATES, RUNOFF VOLUMES, AREAS, AND LAND TREATMENTS ARE GIVEN BELOW.

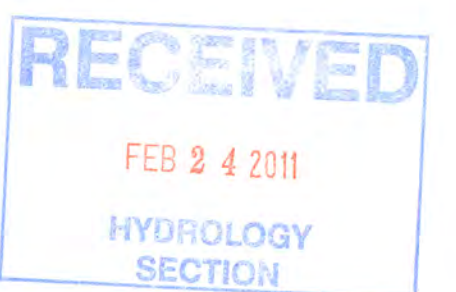
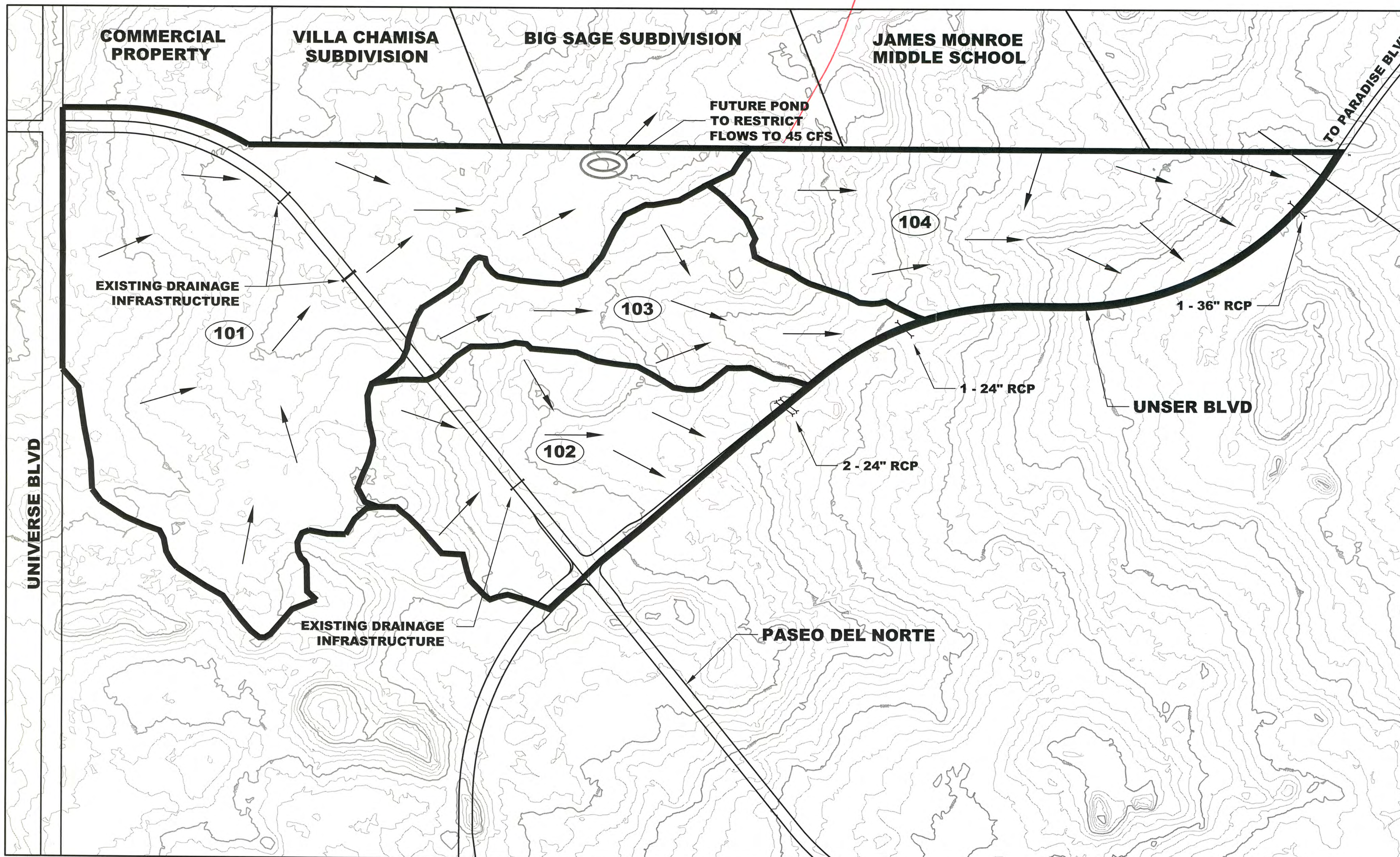
### INTERIM CONDITIONS:

UNSER BLVD. WILL BE EXTENDED FROM PASEO DEL NORTE TO PARADISE BLVD AS TWO 14 FT PAVED LANES WITH A CROWN. STORM WATER ORIGINATING WEST OF THE EXTENSION OF UNSER BLVD. WILL BE TRANSPORTED UNDERNEATH THE NEW ALIGNMENT THROUGH A SERIES OF CULVERTS. THE SITE SHALL BE GRADED SO THAT NO PONDING WILL OCCUR IN THE VICINITY OF THE CULVERTS AND TO ENSURE THAT ALL OF THE STORM WATER IS DIRECTED TO THE CULVERTS. ALL STORM DRAINS ARE ASSUMED TO HAVE A MAXIMUM LENGTH OF 80 FT AND A MINIMUM SLOPE OF 1%. LAND USE FOR THE THIS PROJECT CONSISTS OF IMPERVIOUS ASPHALT PAVED LAND TREATMENT AND UNDEVELOPED LAND USE UNTIL THE PERMANENT STORM DRAIN IS INSTALLED IN THE FUTURE. BENTLEY'S CULVERT MASTER V 3.2 WAS USED IN ANALYZING THE INTERIM CONDITIONS CULVERTS. ALLOWABLE HEAD WATER WAS ASSUMED TO BE AT THE EDGE OF THE DRIVING LANES.

BASIN FLOW RATES, RUNOFF VOLUMES, AREAS, AND LAND TREATMENTS ARE GIVEN BELOW.

Basin	Q <sub>100-6 HR</sub>	V <sub>100-24HR</sub>	Area	Land Treatment			
	(cfs)	(ac-ft)		% A	% B	% C	% D
101	89.34	2.634	69.26	97	0	0	3
102	35.63	1.091	27.56	96	0	0	4
103	25.23	0.728	20.86	99	0	0	1
104	37.86	1.069	32.06	100	0	0	0
Total	188.06	5.522	149.74				

Basin	Q <sub>100-6 HR</sub>	V <sub>100-24HR</sub>	Area	Land Treatment			
	(cfs)	(ac-ft)		% A	% B	% C	% D
101	89.34	2.634	69.26	97	0	0	3
102	38.72	1.264	27.56	91	0	0	8
103	26.40	0.794	20.86	97	0	0	3
104	39.66	1.169	32.06	96	0	0	2
Total	194.12	5.861	149.74				



**WILSON & COMPANY**  
4900 LANG AVE. NE  
ALBUQUERQUE, NM  
87109  
(505) 348-4000

CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT  
ENGINEERING DIVISION

UNSER BOULEVARD NORTH  
PASEO DEL NORTE TO PARADISE BLVD  
DRAINAGE REPORT AND BASIN MAP  
COA PROJECT NO. 705005