PRELIMINARY
DRAINAGE STATEMENT

MERCADO DEL LAGO
8300 N HAYDEN RD
SCOTTSDALE, ARIZONA 85258

Prepared by:

EPSILON ENGINEERING & MATERIAL, LLC
13765 W. Auto Drive; Suite 119
Goodyear, Arizona 85338

Prepared for:

APMI
8300 North Hayden Road, Suite A-209
Scottsdale, Arizona 85258

EEM PROJECT NO.: 16-EEM-2354G

20-DR-2016

AUGUST 22, 2016

EPSILON ENGINEERING & MATERIAL, LLC
Civil Design, Geotechnical, Environmental and Material Testing

August 22, 2016

City of Scottsdale
Planning & Development Services Division
7447 E Indian School Rd, Ste 105
Scottsdale, Arizona, 85251

Attention: Mohammad Rahman, P.E.

Re: Preliminary Drainage Statement
Mercado Del Lago
8300 N Hayden Rd
Scottsdale, Arizona, 85258
EEM Project: 16-EEM-2354CIV

Dear Mr. Rahman,

The purpose of this statement is to address the drainage design and flood control for the subject site. The overall site is a parcel of land totaling 5.16 acres in size located on the west side of Haydon Rd just north of Via De Ventura. The site consists of six office/commercial buildings with associated parking and landscape areas.

The planned improvements for the site include demolition of a 9,100 s.f. building centrally located on the site. In place of the demolished building new asphalt parking area will be constructed.

Following demolition of existing parking area at the southeast portion of the site a new 9,000 s.f. office building will be constructed. The total area of disturbance is approximately 35,844 s.f. See Exhibit A attached herewith.

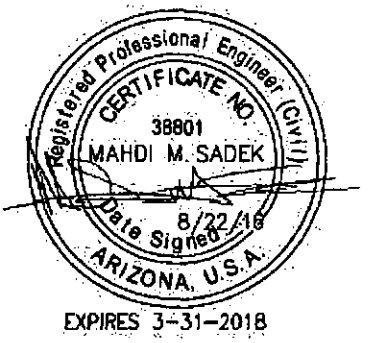
The impervious (hardscape) surfaces and landscape areas of the site will remain relatively the same. The existing hardscape to be converted to landscape = 7,453 s.f. The existing landscape to be converted to hardscape = 3,621. See Exhibit B attached herewith. So the net increase of landscape area = 3,832 s.f.

Additional storm water flows generated from the improvements is not anticipated. Existing drainage patterns of the site will remain relatively unchanged. The site ultimately drains to the existing lake along the northern portion of the site were retention for the site is provided.

Please see the Preliminary Drainage Plan attached herewith for the proposed paving, building and grading improvements.

Sincerely,

Epsilon Engineering & Materials, LLC



Mahdi Sadek, P.E.
Civil Engineer

EPSILON ENGINEERING & MATERIAL, LLC
Civil Design, Geotechnical, Environmental and Material Testing

August 22, 2016

City of Scottsdale
Planning & Development Services Division
7447 E Indian School Rd, Ste 105
Scottsdale, Arizona, 85251

Attention: Mohammad Rahman, P.E.

Re: Stormwater Review Responses
Mercado Del Lago
8300 N Hayden Rd
Scottsdale, Arizona, 85258
EEM Project: 16-EEM-2354CIV
20-DR-2016

Dear Mr. Rahman,

In regard to design review comments (20-DR-2016) dated May 6, 2016 following are our responses.

1. Due to the small size of this project and that the disturbed area is 35,844 (less than 1 acre) a drainage report is not provided. A map showing the disturbed areas is included in the drainage statement. Two copies of the Preliminary Drainage Plan and Drainage Statement are included herewith and also contained on a CD.
2. As demonstrated in the drainage statement the impervious (hardscape) surfaces and landscape areas of the site will remain relatively the same.
3. A land use map delineating the existing and proposed hardscape and landscape areas is included in the drainage statement.
4. See response 3
5. Since the impervious (hardscape) surfaces and landscape areas of the site will remain relatively the same additional storm water flows generated from the improvements is not anticipated.
6. See response 5. Additional stormwater storage will not be required.
7. See response 5. Additional stormwater storage will not be required.

13765 West Auto Drive, Suite 119, Goodyear, Arizona 85338 • Phone: 623.882.9928 • Fax: 623.882.9930

Sincerely,

Epsilon Engineering & Materials, LLC

Mahdi Sadek, P.E.
Civil Engineer

Comments on Grading and Drainage
Mercado Del Lago
(City of Scottsdale Case Number: 20-DR-2016)

The Case Drainage Report should be prepared by following the City of Scottsdale (COS) Design Standards & Policies Manual (DS&PM) and in accordance with the City Stormwater Ordinance Chapter 37.

Please address any comments appear in the Case Drainage Report. In addition to that, please address the following drainage comments:

1. Please submit the Case Drainage Report in two (2) copies. Please submit a CD with the Case Drainage Report containing a PDF file of the complete sealed and signed drainage report. [*Reference: COS DS&PM: Section 4-1.800*]

2. As can be seen in the attached 11"X17" color printout from the COS Land Information System (LIS), a noticeable (if not significant) existing landscape area is being proposed to be converted into impervious area by means of a proposed building and additional parking lots. This is not allowed unless an equivalent landscape area is provided onsite or onsite stormwater storage basins are provided to store the increased runoff volume from the 100-year, 2-hour storm event. [*Reference: COS DS&PM: Section 4-1.402 & Section 4-1.800; COS Stormwater Ordinance: Section 37-32(c) & 37-43(b)*]

3. The attached 11"X17" color LIS printout is marked up with red hatch-lines for the Engineer's reference to show the noticeable (if not significant) existing landscape area which is being proposed to be converted into impervious areas. The Engineer must provide an 11"X17" color Pre-development Land Use Map in the drainage report on which all existing landscape areas must be delineated and be quantified (in square feet) on an aerial map. A Runoff Coefficient ('C') value of 0.45 should be used to compute the 'Stormwater Storage Volume' requirement using the V = CRA equation. [*Reference: COS DS&PM: Section 4-1.402 & Section 4-1.900*]

4. The Engineer must provide an 11"X17" Post-development Land Use Map in the drainage report on which all proposed landscape areas must be delineated and be quantified (in square feet) on the Conceptual Site Plan. [*Reference: COS DS&PM: Section 4-1.900 & Section 4-1B*]

5. If it turns out that the landscape areas provided on the Post-development Land Use Map is less than that on the Pre-development Land Use Map as has been discussed in Comment #2 & Comment #3 above, then the differential 'Stormwater Storage Volume' requirement must be calculated in the drainage report using the V = ΔCRA equation, where a 'C' value of 0.95 should be used for the proposed paved areas (building and parking lots). [*Reference: COS DS&PM: Section 4-1.402 & Section 4-1.800*]

6. Onsite 'Stormwater Storage Volume' must be provided for the 100-year, 2-hour storm event by means of surface and/or subsurface retention/detention basins for the differential 'Stormwater Storage Volume' requirement (V = ΔCRA). Alternatively, the Engineer may request 'Stormwater Storage Waiver' by filling out a 'Stormwater Storage Waiver' form as long as the development meets one of the waiver criteria (if, historically runoff went to the existing lake located in the north or to the nearby street gutter system). The appropriate 'In-lieu' fee must be calculated in the 'Stormwater Storage Waiver' form. Depending on the runoff volume being waived, the City's Floodplain Administrator or his designee may choose to charge the 'In-lieu' fee or may waive it at his discretion. [*Reference: COS DS&PM: Section 4-1.402 & Section 4-1.800*]

7. In case, the Engineer chooses to provide onsite retention/detention basins for the differential 'Stormwater Storage Volume', then the basins must be drained out within 36 hours by means of 'bleed off pipes', natural percolation or drywells as a part of the construction of the improvements and such should be stated out in the drainage report. [*Reference: COS DS&PM: Section 4-1.402 & Section 4-1.800*]

8. Also, in the event, the Engineer chooses to provide onsite retention/detention basins for the differential 'Stormwater Storage Volume', Drainage Easements (D.E.) must be provided around the onsite retention/detention basins and approximate D.E. limits must be shown and be called out on the 11"X17" as well as on the 24"X36" Conceptual Site Plans. [*Reference: COS DS&PM: Section 4-1.700 & Section 4-1.900*]

Please briefly respond to each of the above comments (or check them with markers) and include the responses in the re-submittals.

Stormwater Review By:
Mohammad Rahman, PE, PH, CFM
Phone 480-312-2563 Fax 480-312-7781
e-mail: mrahman@ScottsdaleAZ.gov
Review Cycle #1 Date 5/31/16

20-DR-2016

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Mercado del Lago

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preliminary drainage statement

20-DR-2016
8/25/2016

20-DR-2016
5/6/2016

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Mercado Del Lago
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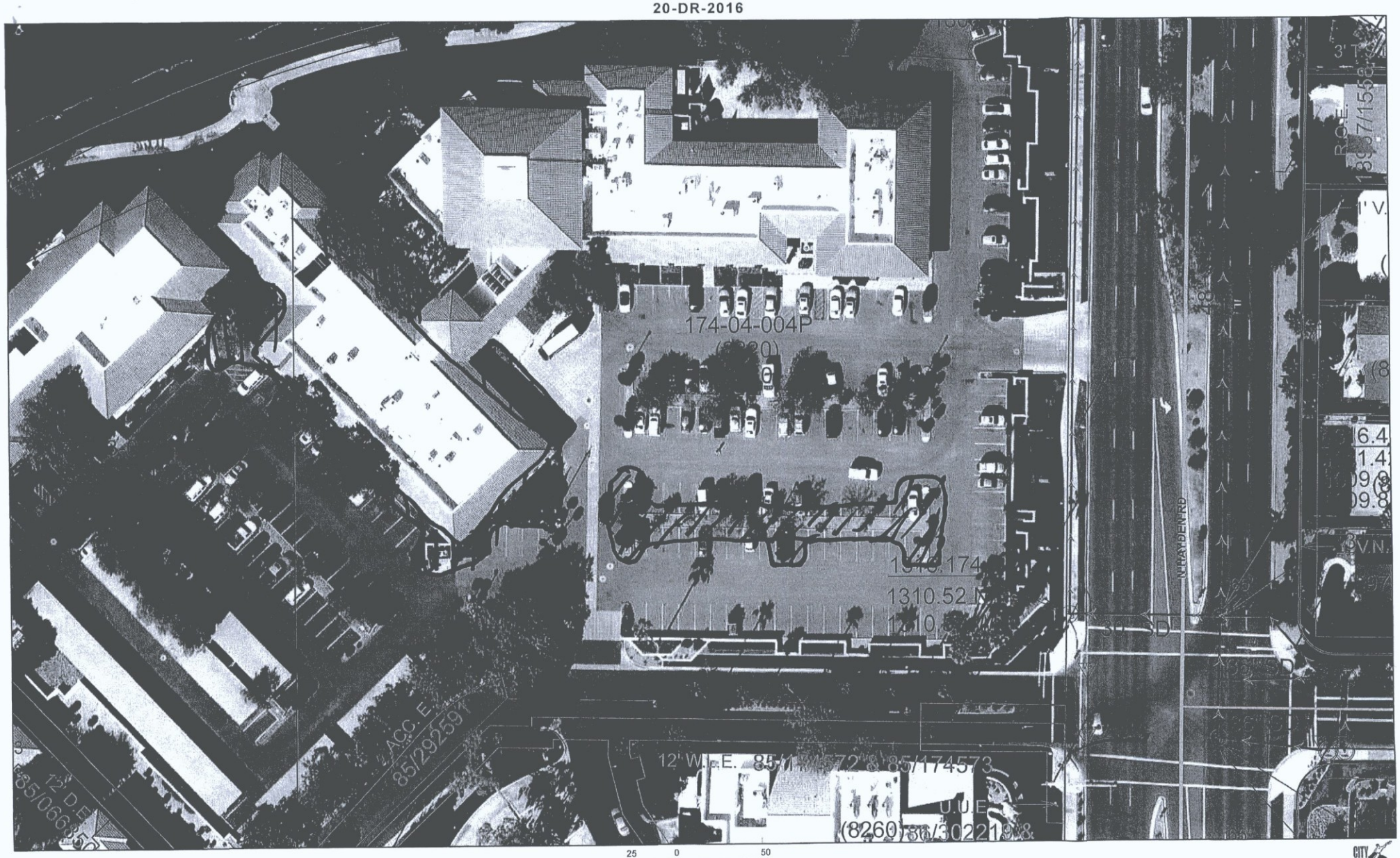
Review Cycle #1 Date 5/31/16

20-DR-2016



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