No Documents in
This Category

Case Research

Exterior Building Color & Material Samples

Color Drawdowns

Archaeological Resources

Airport Vicinity Development Checklist

Parking Study

Trip Generation Comparison

Parking Master Plan

AFFIDAVIT OF POSTING
OFFICE OF THE CITY CLERK

STATE OF ARIZONA)
) ss
COUNTY OF MARICOPA)

I, Steve Perone, being first duly sworn, depose and say:

That on August 24, 2011 I posted notification poster(s) for the properties indicated below.

Site(s) must be posted on or before: August 24, 2011

Case No.	Description and Location of Project	No. of Signs	Date Posted
32-DR-2011	MidFirst Bank,10725 N Scottsdale Rd	1	8-24-11
36-DR-2011	Airpark Motor Market amendment to F.L.W. Blvd. design guidelines, Frank Lloyd Wright Boulevard	1	8-24-11
10-ZN-2011	Zocallo Residential, 15440 N. Greenway-Hayden Loop	1	8-24-11
2-PP-2011	Findlay 40, SEC Scottsdale & Juan Tabo	1	8-23-11

Date of Development Review Board Public Meeting: September 1, 2011, AT 1:00 P.M. IN THE CITY HALL KIVA, SCOTTSDALE, ARIZONA.

S Perone
(Signature)

Acknowledged this 24th day of AUGUST 2011.

OFFICIAL SEAL
KAREN P. FITZPATRICK
NOTARY PUBLIC - State of Arizona
MARICOPA COUNTY
My Comm. Expires Jan. 14, 2014

Karen P Fitzpatrick
(Notary Public)

My commission expires JANUARY 14, 2014


ORION
INVESTMENT REAL ESTATE SOLUTIONS
Ari Spir
480.634.8
Sean Stutzman
480.634.8194
www.BarcelonaScottsdale.com
PUBLIC HEARING NOTICE
REQUEST: Approval to rezone from Highway Commercial District (C-3) zoning to Planned Unit Development (PUD) zoning
CASE#: 10-ZN-2011
DATE: September 1, 2011
HEARING DATE SUBJECT TO CHANGE
PLEASE CHECK OUR WEBSITE FOR LATEST INFORMATION
UNLESS OTHERWISE NOTIFIED, ALL PUBLIC HEARINGS ARE HELD AT:
SCOTTSDALE CITY HALL
3939 N. DRINKWATER BLVD.
YOUR COMMENTS ABOUT THIS REQUEST CAN BE MADE PRIOR TO OR AT THE ABOVE PUBLIC HEARING
480-312-7000
1:00 P.M.
POSTING DATE:
8-24-2011
www.ScottsdaleAz.gov/projects

Barcelona1 Common Impacts

printer-friendly

Report Contents

Analysis Description

Minor GP Amendment from AMU to AMU-R

Report Summary

Report Date/Time: Wednesday, August 17, 2011 4:52 PM

Scenarios in this Report

What is a scenario?

Base Scenario

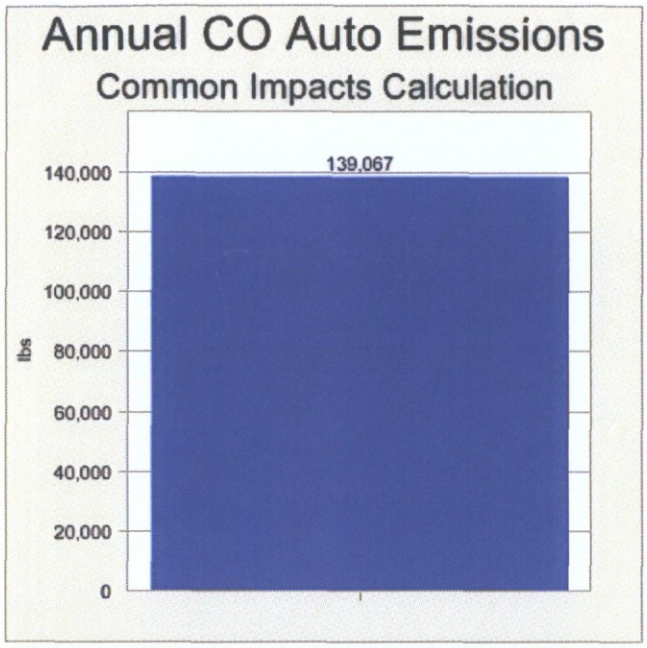
Common Impacts Parameters

What is a common impacts parameter?

Standard Parameters	
Buildings Layer	Buildings
Dwelling Units per Building	(Attribute: Buildings) Dwelling Units
Commercial Floor Area per Building	(Attribute: Buildings) Floor Area
Commercial Floor Area Units	square feet

Indicator Charts

What is an indicator?


Annual CO Auto Emissions
Common Impacts Calculation
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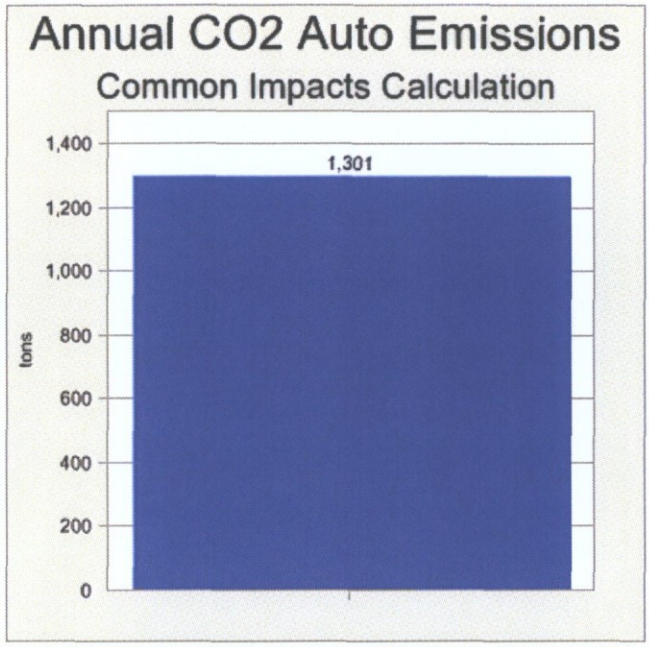
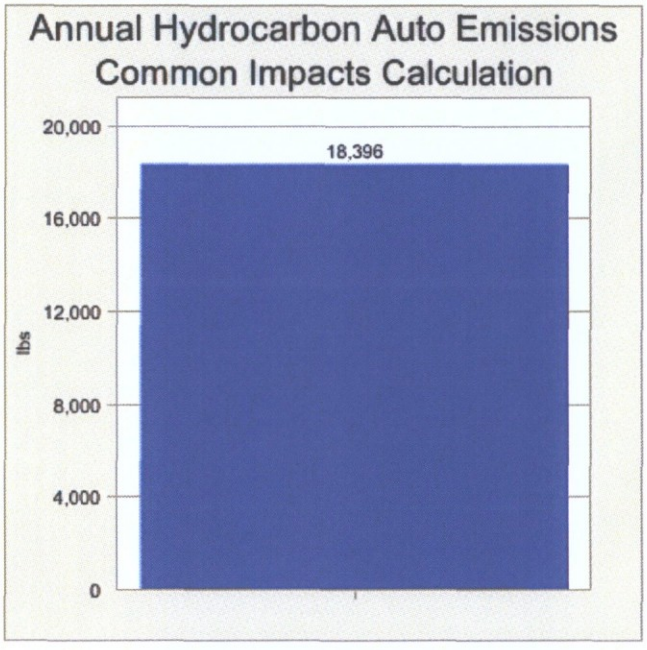
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
lbs


Annual CO2 Auto Emissions
Common Impacts Calculation
1,301
1,400
1,200
1,000
800
600
400
200
0
tons


Annual Hydrocarbon Auto Emissions
Common Impacts Calculation
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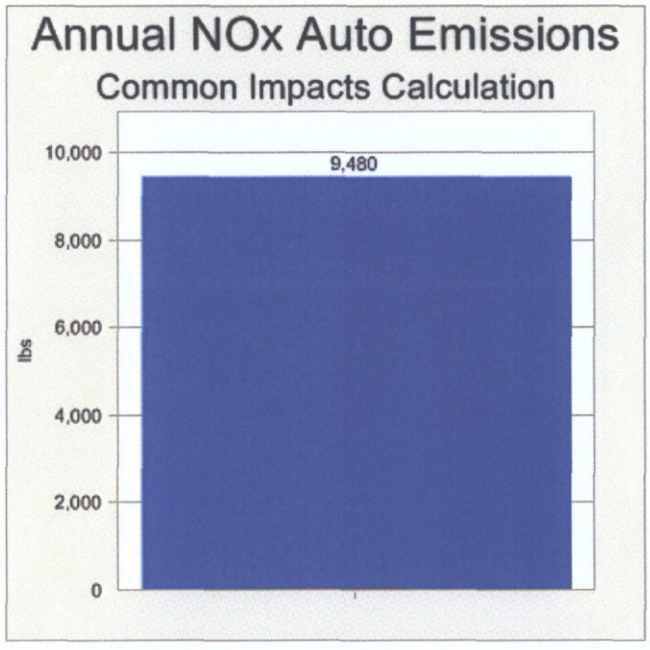
20,000
16,000
12,000
8,000
4,000
0
lbs


Annual NOx Auto Emissions
Common Impacts Calculation
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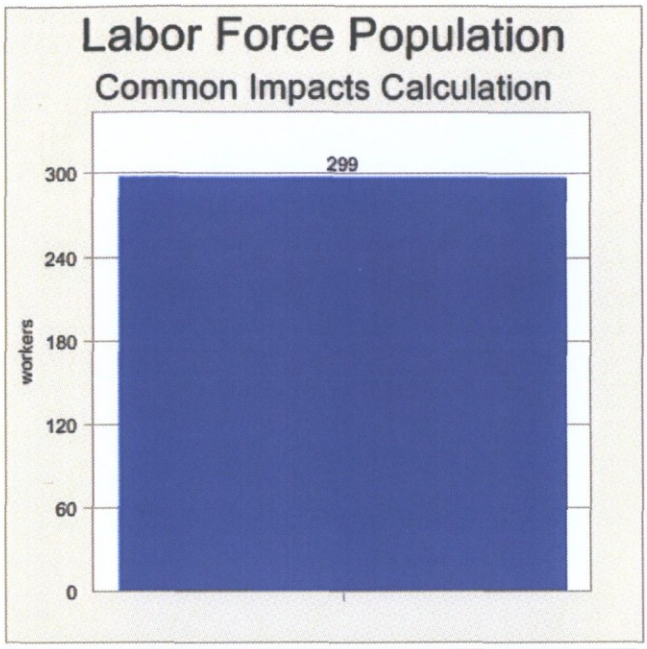
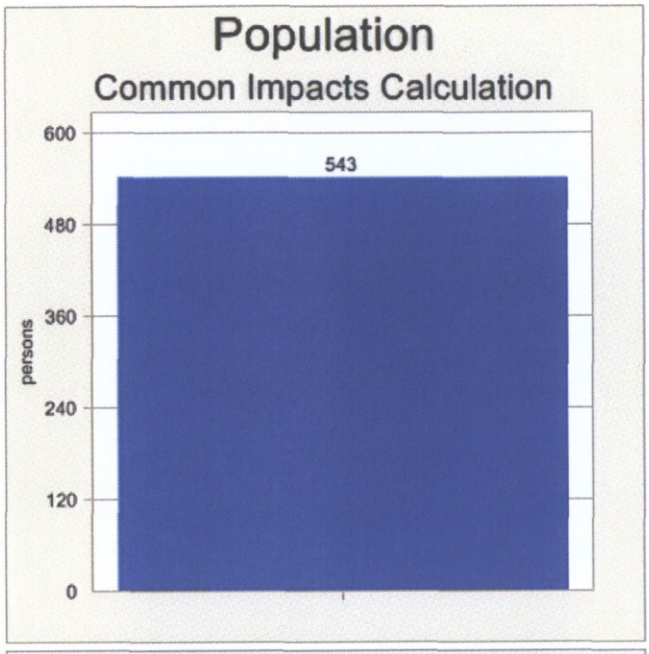
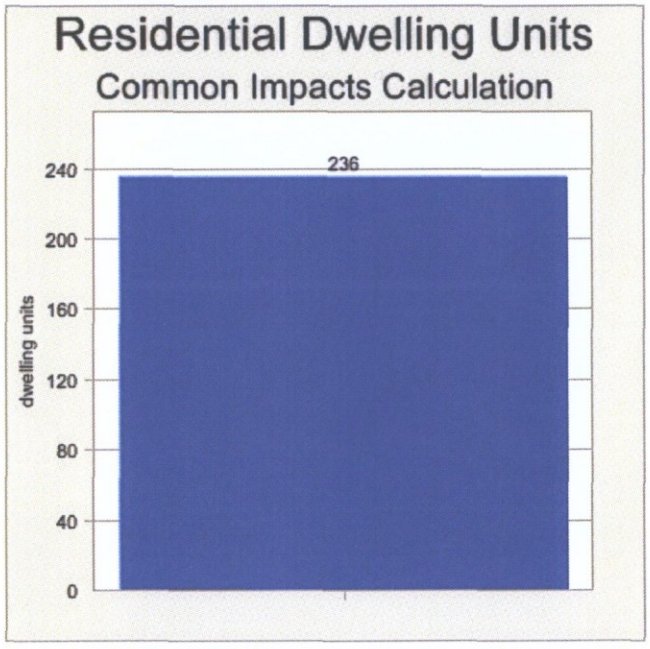
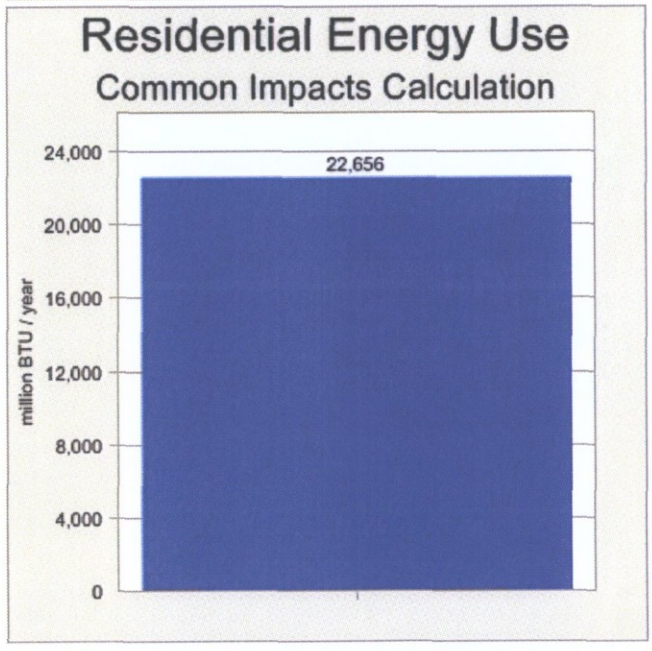
10,000
8,000
6,000
4,000
2,000
0
lbs


Labor Force Population
Common Impacts Calculation
299
300
240
180
120
60
0
workers


Population
Common Impacts Calculation
543
600
480
360
240
120
0
persons


Residential Dwelling Units
Common Impacts Calculation
236
240
200
160
120
80
40
0
dwelling units


Residential Energy Use
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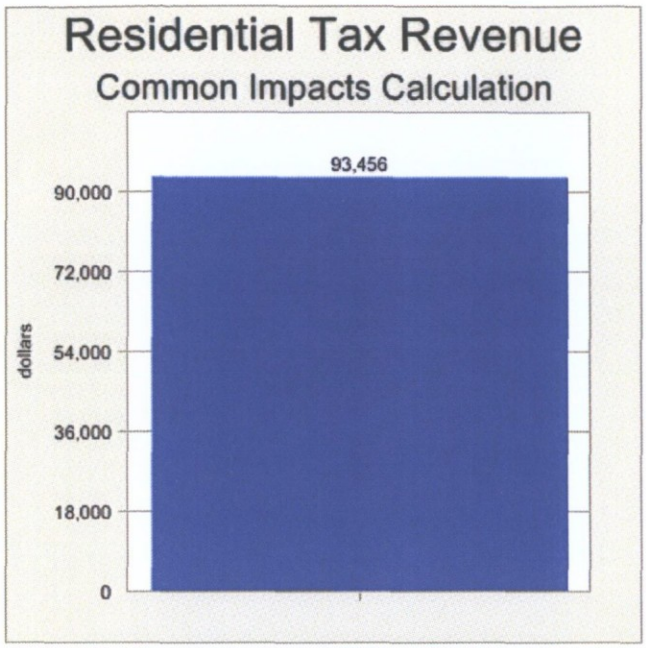
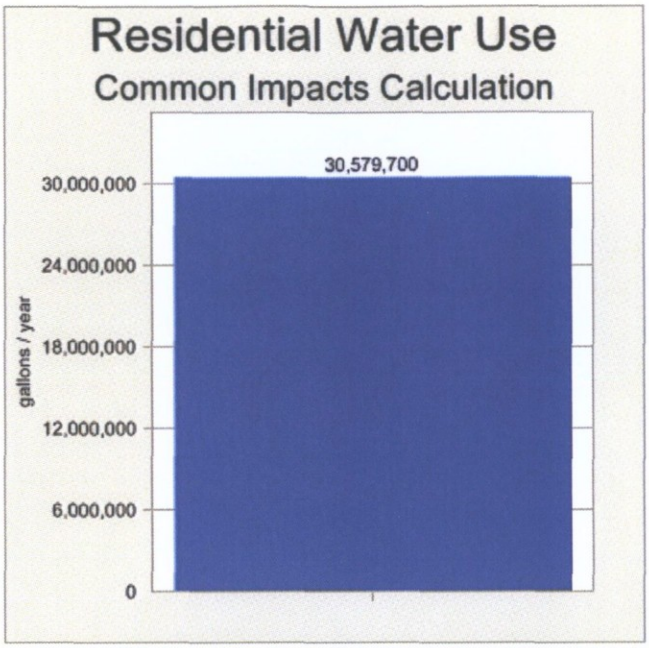
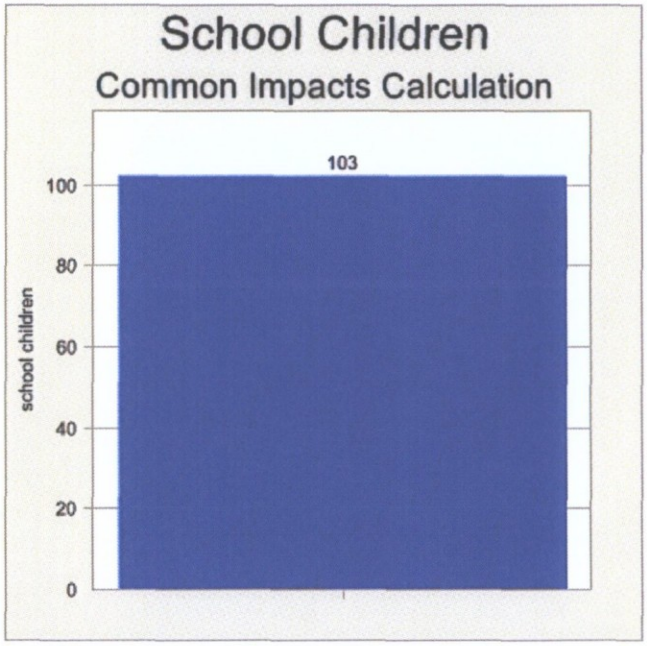
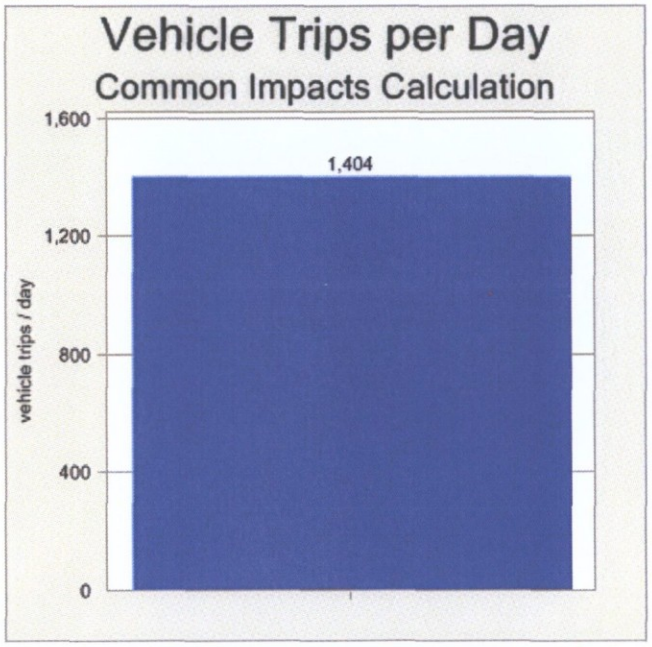
20,000
16,000
12,000
8,000
4,000
0
million BTU / year









Indicators

What is an indicator?

Indicators

Indicator	Base Scenario	Units
Common Impacts - Annual CO Auto Emissions	139,067	lbs
Common Impacts - Annual CO2 Auto Emissions	1,301	tons
Common Impacts - Annual Hydrocarbon Auto Emissions	18,396	lbs
Common Impacts - Annual NOx Auto Emissions	9,480	lbs
Common Impacts - Labor Force	299	workers

Common Impacts - Population	543	persons
Common Impacts - Residential Dwelling Units	236	dwelling units
Common Impacts - Residential Energy Use	22,656	million BTU / year
Common Impacts - Residential Tax Revenue	93,456	dollars
Common Impacts - Residential Water Use	30,579,700	gallons / year
Common Impacts - School Children	103	school children
Common Impacts - Vehicle Trips per Day	1,404	vehicle trips / day

Details

Indicator	Details
Common Impacts - Annual CO Auto Emissions	Units: lbs Formula: *If([Assumption:CI Assumption - Passenger Car Fuel Efficiency] = 0, Then (0), Else (((([Assumption:CI Assumption - Average Vehicle Trip Length] / [Assumption:CI Assumption - Passenger Car Fuel Efficiency]) * [Assumption:CI Assumption - Auto Emissions - CO]) / 453.6) * 365 * [Indicator:Common Impacts - Vehicle Trips per Day]))* ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Annual CO2 Auto Emissions	Units: tons Formula: If([Assumption:CI Assumption - Passenger Car Fuel Efficiency] = 0, Then (0), Else (((([Assumption:CI Assumption - Average Vehicle Trip Length] / [Assumption:CI Assumption - Passenger Car Fuel Efficiency]) * [Assumption:CI Assumption - Auto Emissions - CO2]) / 2000) * 365 * [Indicator:Common Impacts - Vehicle Trips per Day])) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Annual Hydrocarbon Auto Emissions	Units: lbs Formula: If([Assumption:CI Assumption - Passenger Car Fuel Efficiency] = 0, Then (0), Else (((([Assumption:CI Assumption - Average Vehicle Trip Length] / [Assumption:CI Assumption - Passenger Car Fuel Efficiency]) * [Assumption:CI Assumption - Auto Emissions - Hydrocarbons]) / 453.6) * 365 * [Indicator:Common Impacts - Vehicle Trips per Day])) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Annual NOx Auto Emissions	Units: lbs Formula: If([Assumption:CI Assumption - Passenger Car Fuel Efficiency] = 0, Then (0), Else (((([Assumption:CI Assumption - Average Vehicle Trip Length] / [Assumption:CI Assumption - Passenger Car Fuel Efficiency]) * [Assumption:CI Assumption - Auto Emissions - NOx]) / 453.6) * 365 * [Indicator:Common Impacts - Vehicle Trips per Day])) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Labor Force	Units: workers Formula: ([Assumption:CI Assumption - Percent Employed] * [Indicator:Common Impacts - Population]) / 100 ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Population	Units: persons Formula: [Assumption:CI Assumption - Persons per Household] * Sum([Attribute:Buildings:Dwelling Units])

	' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Residential Dwelling Units	Units: dwelling units Formula: Sum([Attribute:Buildings:Dwelling Units]) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Residential Energy Use	Units: million BTU / year Formula: [Assumption:CI Assumption - Annual Household Energy Use] * Sum ([Attribute:Buildings:Dwelling Units]) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Residential Tax Revenue	Units: dollars Formula: Sum([Attribute:Buildings:Residential Millage Tax]) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Residential Water Use	Units: gallons / year Formula: [Assumption:CI Assumption - Daily Household Water Use] * 365 * Sum ([Attribute:Buildings:Dwelling Units]) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - School Children	Units: school children Formula: ([Assumption:CI Assumption - Percent School Children] * [Indicator:Common Impacts - Population]) / 100 ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.
Common Impacts - Vehicle Trips per Day	Units: vehicle trips / day Formula: [Assumption:CI Assumption - Household Vehicle Trips per Day] * Sum ([Attribute:Buildings:Dwelling Units]) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.

Indicator Descriptions

Indicator	Description
Common Impacts - Annual CO Auto Emissions	Total carbon monoxide emissions generated by vehicles associated with residential buildings in the Common Impacts buildings layer. See Help for details and disclaimer.
Common Impacts - Annual CO2 Auto Emissions	Total carbon dioxide emissions generated by vehicles associated with residential buildings in the Common Impacts buildings layer. See Help for details and disclaimer.
Common Impacts - Annual Hydrocarbon Auto Emissions	Total hydrocarbon emissions generated by vehicles associated with residential buildings in the Common Impacts buildings layer. See Help for details and disclaimer.
Common Impacts - Annual NOx Auto Emissions	Total emissions of oxides of nitrogen generated by vehicles associated with residential buildings in the Common Impacts buildings layer. See Help for details and disclaimer.
Common Impacts - Labor Force	Total number of jobholders living in the dwelling units in the Common Impacts building layer. See Help for details and disclaimer.
Common Impacts - Population	Total number of people living in the dwelling units in the Common Impacts building layer. See Help for details and disclaimer.
Common Impacts - Residential Dwelling Units	Total number of residential dwelling units in the Common Impacts building layer.

Common Impacts - Residential Energy Use	Total annual energy used by residential buildings for all applications, including electricity and heating. See Help for details and disclaimer.
Common Impacts - Residential Tax Revenue	Annual tax revenue from residential taxes in the Common Impacts buildings layer. See Help for details and disclaimer.
Common Impacts - Residential Water Use	Total annual water use by dwelling units in the Common Impacts building layer for all indoor and outdoor applications. See Help for details and disclaimer.
Common Impacts - School Children	Total number of school children living in the dwelling units in the buildings layer. See Help for details and disclaimer.
Common Impacts - Vehicle Trips per Day	Total number of motorized trips taken each day, on average, by residential households (dwelling units) in the Common Impacts buildings layer. See Help for details and disclaimer.

Dynamic Attributes

What is a dynamic attribute?

Attributes

Attribute	Details
Buildings	
Residential Millage Tax	Type: Double Formula: If ((([Attribute:Buildings:Dwelling Units] >= 0.5) Or ([Attribute:Buildings:Floor Area] > 0)), Then (([Assumption:CI Assumption - Residential Millage Rate] * [Assumption:CI Assumption - Mean Residential Property Value] * [Attribute:Buildings:Dwelling Units]) / 1000), Else (0)) ' This formula was automatically created by the Common Impacts Wizard to describe impacts associated with the layer 'Buildings'.

Attribute Descriptions

Attribute	Description
Buildings	
Residential Millage Tax	Residential taxes for this building feature based on millage rate. (Annual taxes are implied.)

Assumptions

What is an assumption?

Assumptions

Assumption	Default	Base Scenario	Units
CI Assumption - Annual Household Energy Use	101	96	million BTU / household / year
CI Assumption - Auto Emissions - CO	476.76	438.46	grams / gallon
CI Assumption - Auto Emissions - CO2	19.70	18.08	lbs / gallon
CI Assumption - Auto Emissions - Hydrocarbons	60.22	58.00	grams / gallon
CI Assumption - Auto Emissions - NOx	29.89	29.89	grams / gallon
CI Assumption - Average Vehicle Trip Length	9.78	8.00	miles
CI Assumption - Daily Household Water Use	391	355	gallons / household / day
CI Assumption - Household Vehicle Trips per Day	5.95	5.95	household vehicle trips / day
CI Assumption - Mean Residential Property Value	240000	240,000	dollars

CI Assumption - Passenger Car Fuel Efficiency	24	28.5	miles / gallon
CI Assumption - Percent Employed	40.89	55.00	percent of population
CI Assumption - Percent School Children	18.9	18.9	percent of population
CI Assumption - Persons per Household	2.56	2.30	persons / household
CI Assumption - Residential Millage Rate	1.65	1.65	mills

Assumption Descriptions

Assumption	Description
CI Assumption - Annual Household Energy Use	Average annual energy used by each residential building for all applications, including electricity and heating. Default value is from "Residential Energy Consumption Survey (1997)," Energy Information Administration.
CI Assumption - Auto Emissions - CO	Carbon monoxide emissions generated by vehicles associated with each dwellilng unit. Default value is from "Figures for average annual emissions and fuel consumption for passenger cars and light trucks (July, 2000)," US Environmental Protection Agency.
CI Assumption - Auto Emissions - CO2	Carbon dioxide emissions generated by vehicles associated with each dwelling unit. Default value is from "Figures for average annual emissions and fuel consumption for passenger cars and light trucks (July, 2000)," US Environmental Protection Agency.
CI Assumption - Auto Emissions - Hydrocarbons	Hydrocarbon emissions generated by vehicles associated with each dwelling unit. Default value is from "Figures for average annual emissions and fuel consumption for passenger cars and light trucks (July, 2000)," US Environmental Protection Agency.
CI Assumption - Auto Emissions - NOx	Emissions of oxides of nitrogen generated by vehicles associated with each dwelling unit. Default value is from "Figures for average annual emissions and fuel consumption for passenger cars and light trucks (July, 2000)," US Environmental Protection Agency.
CI Assumption - Average Vehicle Trip Length	Average length of trip for vehicles associated with the dwelling units. Default value is from the US Bureau of Transportation Statistics (2001).
CI Assumption - Daily Household Water Use	Average daily water use by each dwelling unit for all indoor and outdoor applications. Default value is from "Estimated Use of Water in the United States in 2000," USGS Circular 1268, United States Geological Survey.
CI Assumption - Household Vehicle Trips per Day	Number of motorized trips taken by residential households each day, on average. Default value is from Transportation Energy Data Book (2001), chapter 8, edition 24, US Department of Energy, Energy Efficiency and Renewable Energy.
CI Assumption - Mean Residential Property Value	Average value of each residential dwelling unit.
CI Assumption - Passenger Car Fuel Efficiency	Average fuel efficiency of cars used by residents. Default value is from the US Bureau of Transportation Statistics (2004).
CI Assumption - Percent Employed	Number of jobholders living in the dwelling units in the buildings layer, represented as a percent of total population. Default value is from "Private nonfarm employment (2001)," U.S. Census Bureau, 2000 Census of Population, State and County Quick Facts.
CI Assumption - Percent School Children	Number of school children living in the dwelling units in the buildings layer, represented as a percent of total population. Default value is from "USA Population by Age (2000)," U.S. Census Bureau, 2000 Census of Population, Profiles of General Demographic Characteristics.
CI Assumption - Persons per Household	Number of people living the dwelling units of the building layer. Default value is from "Households, Persons Per Household, and Households with Individuals Under 18 Years (2000)," U.S. Bureau of the Census, 2000 Census of Population, Profiles of General Demographic Characteristics.
CI Assumption - Residential Millage Rate	Tax rate for residences based on tax per thousand units of value.

Potentially Useful References

What is a common impacts reference?

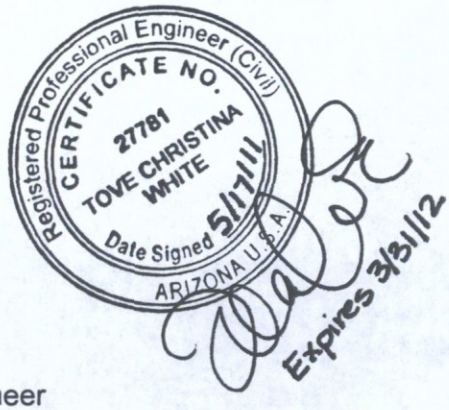
Assumption	Source
CI Assumption - Annual Household Energy Use	*Residential Energy Consumption Survey (1997)*, Energy Information Administration.
CI Assumption - Average Vehicle Trip Length	*Bureau of Transportation Statistics (2001)*
CI Assumption - Daily Household Water Use	*Estimated Use of Water in the United States in 2000*USGS Circular 1268, United States Geological Survey. *Denver Water Consumption Table (1994 and 2001)*, (good for arid climates), Denver Water, Denver, CO.
CI Assumption - Household Vehicle Trips per Day	*Transportation Energy Data Book (2001), chapter 8*, edition 24, US Department of Energy, Energy Efficiency and Renewable Energy.
CI Assumption - Passenger Car Fuel Efficiency	*Bureau of Transportation Statistics (2004)*
CI Assumption - Percent Employed	*Private nonfarm employment (2001)*, U.S. Census Bureau, 2000 Census of Population, State and County Quick Facts.
CI Assumption - Percent School Children	*USA Population by Age (2000)* U.S. Census Bureau, 2000 Census of Population, Profiles of General Demographic Characteristics (updated every 10 years).
CI Assumption - Persons per Household	*Households, Persons Per Household, and Households with Individuals Under 18 Years (2000)*, U.S. Bureau of the Census, 2000 Census of Population, Profiles of General Demographic Characteristics (updated every 10 years).
Auto Emissions	*Figures for average annual emissions and fuel consumption for passenger cars and light trucks (July, 2000)*, US Environmental Protection Agency.

Expand All Return to Top Collapse All

How do I turn on active content for this report?

Analysis powered by communityviz®

Kimley-Horn
and Associates, Inc.



Suite 300
7878 N. 16th Street
Phoenix, Arizona
85020

Technical Memorandum

To: Phil Kercher, P.E., Principal Traffic Engineer
City of Scottsdale

From: Tové Christina White, P.E.

Date: August 17, 2011

Subject: The Residences at Zocallo Plaza
Traffic Impact and Mitigation Analysis (TIMA)

INTRODUCTION

Kimley-Horn and Associates, Inc. (KHA) has prepared this memorandum to discuss the anticipated traffic impacts of approving a minor general plan amendment (GPA) and a rezoning request for 6.42 acres located along the north side of Greenway-Hayden Loop, approximately 550 feet east of Scottsdale Road. The property under consideration is identified in **Exhibit A**. The City's approval of this request would, as indicated in **Table 1**, below allow redevelopment of a site which has historically been occupied by a 19,000 square foot restaurant/nightclub and 25,000 square feet of office space, into a 240-unit luxury apartment community.

Table 1 - Entitlement Comparison

Entitlement	Development Condition	
	As Previously Approved And Formerly Occupied	As Currently Proposed
General Plan Designation	AMU	AMU-R
Zoning Designation	C-3	PUD
Land Use Mix	25,000 sf Office 19,000 sf Restaurant/Nightclub	240 Apartments

Existing site conditions are illustrated in **Exhibit B**. Proposed site conditions are illustrated in **Exhibit C**. The opinions expressed herein were reached through completion of a traffic impact and mitigation analysis (TIMA) of the proposed development. This memo is intended to fulfill the required TIMA component of the rezoning application submittal. A TIMA scope and documentation format that support this rezoning request were pre-approved by City of Scottsdale's traffic engineers based on the fact that proposed multi-family residential use has lower daily and peak hour trip generation potentials than did the former mix of restaurant/nightclub and office uses.

EXISTING CONDITIONS

Land Use

The site of the proposed redevelopment is comprised of Lot 2A and Lot 3 of a 20-acre mixed-use, master planned and already fully developed tract of land, formally identified as "Zocallo Plaza". The existing and prior uses of the Zocallo Plaza property were established through the City's approval of the Zocallo Plaza Mixed-Use master plan. The specific portion of the Zocallo Plaza property currently proposed for redevelopment is commonly known as "the Barcelona site". Barcelona was the name of a once wildly popular restaurant and nightclub that occupied the 19,000 square foot, single story building that now stands vacant on Lot 2A. A 25,000 square foot, two-story office is located on Zocallo Plaza Lot 3. This partially occupied office building is expected to be vacated by the end of the year. Zocallo Plaza Lot 2B, located immediately east of Lot 2A, is occupied by a two-story, nearly fully leased building known as Barcelona Business Center (or "BBC"). BBC is under separate ownership and will remain in place.

Other existing development in the immediately surrounding area includes over 600,000 square feet (comprising the first two (of three total) phases) of the Scottsdale Quarter mixed use commercial center to the south, the 330,000 square foot master-planned Kierland Commons mixed use commercial center to the southwest, over 70,000 square feet of master-planned Zocallo Plaza retail shops to the west, and a mix of employment and retail uses on smaller parcels to the north and east.

Site Access

Regional access to the subject property is provided by Scottsdale Road and Greenway-Hayden Loop, both of which are arterial roadways providing direct links to the regionally significant Loop 101/Pima Freeway to the north/northeast. Scottsdale Road additionally provides a direct link to central/downtown Scottsdale to the south, and Greenway-Hayden Loop additional provides direct access to the Scottsdale Airpark area to the east, and to the City of Phoenix to the west.

The subject property is (and will continue to be) directly accessible from the east-west aligned Zocallo Plaza "Main Entrance" driveway, which provides vehicular and pedestrian path connections to Scottsdale Road, and from the north south aligned Zocallo Plaza "Circulation" driveway, which provides vehicular and pedestrian path connections to Greenway-Hayden Loop to the south, and Tierra Buena Lane to the north. Both the main entrance driveway and the circulation driveway are privately owned and maintained by the Zocallo Plaza Owners' Association. An additional route of vehicular access to the subject property is provided by an east-west aligned (also private) vehicular connection between the circulation driveway and 73rd Street. This vehicular connection, which crosses and benefits both the Zocallo Plaza and BBC properties, is located within access easements located approximately 230 feet north (centerline to centerline) of Greenway Hayden Loop.

Traffic Conditions

Four existing public street intersections were considered by City traffic engineers and KHA to be appropriate for consideration in this analysis. The agreed upon study area intersections include the signalized intersection of Scottsdale Road and Greenway-Hayden Loop, the signalized intersection of 73rd Street and Greenway-Hayden Loop, the

unsignalized intersection of Scottsdale Road and the Zocallo Plaza main driveway, and the unsignalized intersection of Greenway-Hayden Loop and the Zocallo Plaza circulation driveway.

In order to establish pre-existing traffic conditions at the four intersections under consideration, KHA used AM and PM peak hour traffic count data collected in December 2010 and July 2011. Resultant count data is presented in **Exhibit D**. The December (i.e. "peak season") count data was only available for the Scottsdale Road/Greenway-Hayden Loop intersection, and for only the PM peak hour. Nonetheless, it was deemed appropriate to use for this analysis, based on the recognition that the PM peak hour is generally the highest volume peak hour along the study segments of Scottsdale Road and Greenway-Hayden Loop, and the opinion that analysis of the highest peak hour during the highest peak season would yield the most conservative reflection of traffic demand, level of service, and driver delay. Using traffic data that was not collected concurrently did, however, result in unbalanced volumes between intersections (i.e. the traffic shown leaving an upstream intersection increases or decreases in volume before reaching the adjacent/downstream intersection). Based on the determination that "balancing" the existing volumes would yield discrepancies between data that was actually recorded (attached for reference) and the data that was subsequently documented, no existing volume balancing was done.

Existing traffic volumes were analyzed using standard intersection capacity and "Level of Service" (LOS) analysis methodology and City of Scottsdale-approved traffic modeling and analysis software. Results of the existing conditions analysis process indicate all of the study area intersections are operating at overall acceptable levels of service (LOS of C or better) during peak hours. Specific left- and right-turn movements at some of the evaluated intersections, specifically all of the left turn movements at the Scottsdale Road/Greenway-Hayden Loop intersection, and the northbound right turns at the 73rd Street/Greenway-Hayden Loop intersection, operate at slightly lower than acceptable conditions (LOS E) during peak hours, with average driver delays in the range of 50-60 seconds per vehicle. Detailed traffic modeling and analysis output has been attached to for reference.

PROPOSED DEVELOPMENT

Land Use and External Access

The specific request under consideration in this memorandum proposes a change in the General Plan designation for the property from Airpark Mixed Used (AMU) to Airpark Mixed Use–Residential (AMU-R) and a change in the zoning designation from Highway Commercial (C-3) to Planned Unit Development (PUD). The applicant's intent in requesting this zoning change is to use the resultant entitlements to redevelop the site into a 240-unit multi-family residential community featuring four multi-story buildings over underground parking, complemented by additional surface parking, and recreational amenities typical of a luxury apartment complex.

Access between the proposed redevelopment site and the surrounding public roadway network will remain almost unchanged. Aforementioned vehicular and pedestrian connections by way of existing Zocallo Plaza and Barcelona Business Center accessways will remain in place. As for direct access, the current site plan proposes two direct access driveways along Zocallo Plaza's circulation driveway with the main/front entry access driveway located in direct alignment with Zocallo Plaza's main entrance

driveway. Two direct access driveways are proposed along the existing east-west vehicular access driveway connecting the circulation driveway to 73rd Street. Card-controlled gates will restrict community access at the main/front entry driveway and at the driveway that will extend north from the east-west access driveway; however the east-west access way connecting the circulation driveway to 73rd Street will remain ungated and open to unrestricted use by both Zocallo Plaza and Barcelona Business Center traffic.

The only public street access change being proposed is to replace the existing full movement driveway currently provides access on 73rd Street to Zocallo Plaza Lot 3 (approximately 655 feet north of Greenway-Hayden Loop) with a new full movement driveway on 73rd Street that will be located approximately 465 feet north of Greenway-Hayden Loop (along the lot-line shared by Lots 2B and 3). The proposed replacement driveway will provide a second point of direct access to Barcelona Business Center, and will not continue west to the gated controlled area of the proposed development.

Internal Circulation

KHA has been working with the applicant and the applicant's site architect to develop site access and internal circulation system curb geometry that is considerate of the variety of vehicles that will need to be able to enter, exit, and travel through the proposed development, including the development's below ground parking garages. This effort, which included modeling the movements of various design vehicles through multiple iterations of an evolving site plan using AutoTurn® vehicle-tracking graphics software lead to several curb line and parking space adjustments reflected in the current site plan.

TRAFFIC IMPACT ANALYSIS

Trip Generation

The Institute of Transportation Engineer's (ITE) *Trip Generation, 8th Edition* was used to estimate the weekday trip generation rates for both previously approved and currently proposed used of the site. Results of these calculations are summarized in **Table 2** and **Table 3.** Vehicular trip generation conclusions, reflect consideration that the subject property is be located within reasonable (most of the year) walking distance of over a million square feet of existing shopping, dining, entertainment, and employment opportunities. The proximity and variety of these opportunities suggests that a significant portion of the trips made to and from the proposed development – we have conservatively estimated it to be at least ten 10% – will be made on foot. To a lesser extent, the same would likely be true – we have estimated - 5% - if the subject property were redeveloped into the same land uses that have historically occupied the site.

Table 2 - Trip Generation Potential, as Currently Proposed

Land Use	ITE Land Use Code	Quantity	Trips Generated						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
Apartments	220	240 du	1,596	24	98	122	97	52	149
Total Trip Generation - All Modes			**1,596**	**24**	**98**	**122**	**97**	**52**	**149**
10% Non-Vehicular Trip Discount			-160	-2	-10	-12	-10	-5	-15
Total Vehicular Trip Generation			**1,436**	**22**	**88**	**110**	**87**	**47**	**134**

Table 3 - Trip Generation Potential as Previously Approved/Occupied

Land Use	ITE Land Use Code	Quantity	Trips Generated						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
General Office	710	25,000 sf	275	34	5	39	6	31	67
Quality Restaurant	932	11,400 sf	1,025	8	1	9	57	28	85
Nightclub	925*	7,600 sf	684	5	1	6	80	38	118
Total Trip Generation - All Modes			**1,984**	**47**	**7**	**54**	**143**	**97**	**240**
5% Non-Vehicular Trip Discount			-99	-2	-1	-3	-7	-5	-12
Total Vehicular Trip Generation			**1,885**	**45**	**6**	**51**	**136**	**92**	**228**

**ITE provides neither Daily nor AM Peak Hour trip generation rates for nightclubs (LUC 925), so ITE's quality restaurant (LUC 932) trip rates were used for these time period estimates of the nightclub component trip generation.*

Approval of the proposed land use entitlements and proceeding with redevelopment in accordance with the current site plan is expected to collectively result in a development that generates approximately 1,436 vehicular trips per day, 110 of which will occur during the am peak hour and 134 of which will occur during the pm peak hour. As **Table 4** indicates, when compared to the type of development for which the subject property was previously approved and used, this level of trip generation constitutes a reduction in daily and PM peak hour trip generation potential and an increase in AM peak hour trip generation.

Table 4 - Vehicular Trip Generation Comparison

Land Use	ITE Land Use Code	Quantity	Trips Generated						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
As Previously Approved/Occupied			**1,885**	**45**	**6**	**51**	**136**	**92**	**228**
As Currently Proposed			**1,436**	**22**	**88**	**110**	**87**	**47**	**134**
Volume Increase or Reduction			**- 449**			**+59**			**-94**
Percentage Increase or Reduction			**-24%**			**+115%**			**-41%**

Trip Distribution and Assignment

Site traffic, in the "as currently proposed" quantities indicated in Table's 2 and 3, was assigned to the study area roadway network as the first step in estimating future peak hour traffic demands under the "with proposed development" scenario. Results of the site traffic assignment process are presented in **Exhibit E**. The directional distribution assumptions (also indicated in **Exhibit E**) are based primarily on the directional distribution of employment opportunities within an assumed average 12-mile commuting distance, and upon familiarity with the relative convenience of the various travel routes to and from major employment areas and regionally significant roadways.

Background Traffic Projections

Developing future background traffic volume projections was the second step in estimating future peak hour traffic demands. A horizon year of 2015 was selected for this analysis, to be consistent with the horizon year used for the City-approved *Kierland*

Commons-Scottsdale Quarter Pedestrian Crossing and Access Study completed for the City of Scottsdale and City of Phoenix by KHA, earlier this year. To establish 2015 background traffic volumes, KHA first adjusted the previously discussed 2011/existing traffic volumes shown in Exhibit D to create a balance of traffic between intersections along Scottsdale Road and Greenway-Hayden Loop. The adjusted existing background volumes were then "grown", using an annual growth rate assumption of 2%, to establish base future background volumes. Additional traffic was then added to account for the anticipated increased usage of 73rd Street, south of Greenway-Hayden Loop, by Scottsdale Quarter, as its third phase of development evolves. The City-approved *Camberlango TIMA*, prepared by Parsons Brinckerhoff in 2004, was used as a source for the additional traffic assigned to the 73rd Street and Greenway-Hayden Loop intersection, and then carried through the study area roadway network. The resulting 2015 (combined) background traffic volumes are presented in **Exhibit F.**

Post-Development Traffic Conditions

Once site traffic and horizon year background traffic had both been quantified, the quantities were added together to create the 2015 total traffic volumes presented in **Exhibit G**. Post-redevelopment conditions at all of the study area intersections were then reanalyzed using the same methodologies and techniques used to analyze existing conditions, as discussed earlier in this memo. Results of the analysis indicate that all study area intersections will continue to operate at overall acceptable levels of service (LOS of D or better) during peak hours with the left turns at Scottsdale Road/Greenway-Hayden Loop and northbound right turns at the 73rd Street/Greenway-Hayden Loop, continuing to operate at slightly lower than acceptable conditions (LOS E) during peak hours. These LOS' and delays are not anticipated be characterized by any spillback of left turn traffic into adjacent through lanes or any other unsafe condition. Detailed intersection analysis output is attached for reference.

The traffic signal at the intersection of 73rd Street and Greenway-Hayden Loop currently provides two phases; it provides a single east/west "all movements permitted/left turns not protected" phase and a single north/south "all movements permitted/left turns not protected" phase. This rather simplistic phasing scheme generally results in the highest level of service for vehicles making the heaviest volume (i.e. east- and westbound through) movements, and lower levels of service (i.e. longer delays) for the lesser volume (i.e. left turn) movements. Adding protected left turn phases can benefit left turn traffic, but generally only at the cost of level of service to through traffic; hence, protected left turn phasing is generally avoided until there is a large and frequent volume of left turn traffic, a significant amount of delay being experienced by more than just a few left turn drivers, or a traffic safety condition that such phasing could appropriately mitigate. Traffic volumes at the 73rd Street/Greenway-Hayden Loop intersection are not yet high enough to satisfy generally accepted standard warranting criteria for protected left turn phasing (i.e. adding left turn arrows). Standard warranting guidelines provide minimum threshold values to which particular combinations of opposing traffic volumes can be compared to determine whether or not protected left turn phasing is warranted. These threshold volumes do not currently exist during typical weekday peak hours, nor are they likely to be reached solely by the redevelopment currently being proposed. They are likely, however, to be reached before the adjacent Scottsdale Quarter Phase 3 site is fully developed and other underutilized property along 73rd Street and Greenway-Hayden Loop returns to full and stable occupancy. Therefore is recommended that the

intersection be monitored by the City of Scottsdale, on at least an annual basis, to determine when traffic volumes are approaching protected left turn phasing conditions.

Right turn deceleration lanes already exist at two of the three arterial street intersections that will provide the most direct route to the property: the Scottsdale Road/Zocallo Boulevard intersection and the 73rd Street/Greenway-Hayden Loop intersection. The westbound right turn lane that is provided at the 73rd Street/Greenway-Hayden Loop intersection, continues through the intersection to Scottsdale Road as a shared through/right turn lane. Due to the relatively low westbound through volume at the Scottsdale Road/Greenway-Hayden Loop intersection and the fact that the third/northernmost westbound lane ends only 0.25 mile west of Scottsdale Road (at 70th Street), this shared lane tends to be used primarily by right turn traffic, and the speed of traffic in this lane tends to be considerably slower than the speed of traffic in the adjacent through lane. Taking these conditions into consideration, along with the relatively low volume of westbound right turn traffic expected to exist at this intersection under the proposed redevelopment scenario, it is unlikely that any measurable traffic operational benefit will result from the construction of a new westbound right turn lane at the intersection of Greenway-Hayden Loop and the Zocallo Plaza circulation drive. Furthermore, such a right turn lane would significantly impact needed stormwater retention area and mature landscaping along the north side of Greenway-Hayden Road, and may additionally require costly modifications to existing underground utility lines.

CONCLUSIONS AND RECOMMENDATIONS

The requested general plan and zoning designation changes are anticipated to have a positive impact on the daily and pm peak hour trip generation potential of the subject property, as both will be less than what formerly occupied and is currently permitted on the property. The anticipated increase in the property's am peak hour trip generation caused by the requested approvals can be accommodated, without significantly impacting pre-existing levels of service, by the roadway network and traffic controls that are already in place.

The proximity of the proposed redevelopment site to this multitude of complementary land uses, in combination with the existence of master-planned pedestrian connections to each of them, helps make the subject property, at least from a walkability perspective, a rather ideal site for a residential use.

Redeveloping the subject property as currently proposed will not, by itself, generate the need for any modifications to the existing roadways or traffic controls. This is largely due to the fact that the already existing improvements were designed for, and have effectively accommodated, more traffic intense uses of the property. The only transportation system improvement this analysis has identified as worthy of consideration to accommodate the collective development and redevelopment of property in the general vicinity of the subject property, is the addition of protected left turn phasing at the intersection of 73rd Street and Greenway-Hayden Loop.

Attachments: Exhibits A through G
Intersection LOS Analysis Output

Kimley-Horn and Associates, Inc.

LEGEND

- Site of Proposed Redevelopment
- Existing Traffic Signal

August 2011

Vicinity Map

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit A

Kimley-Horn and Associates, Inc.

LEGEND

- Site of Proposed Redevelopment
- Zocallo Plaza Master Planned Area (includes redevelopment site)
- Existing Traffic Control

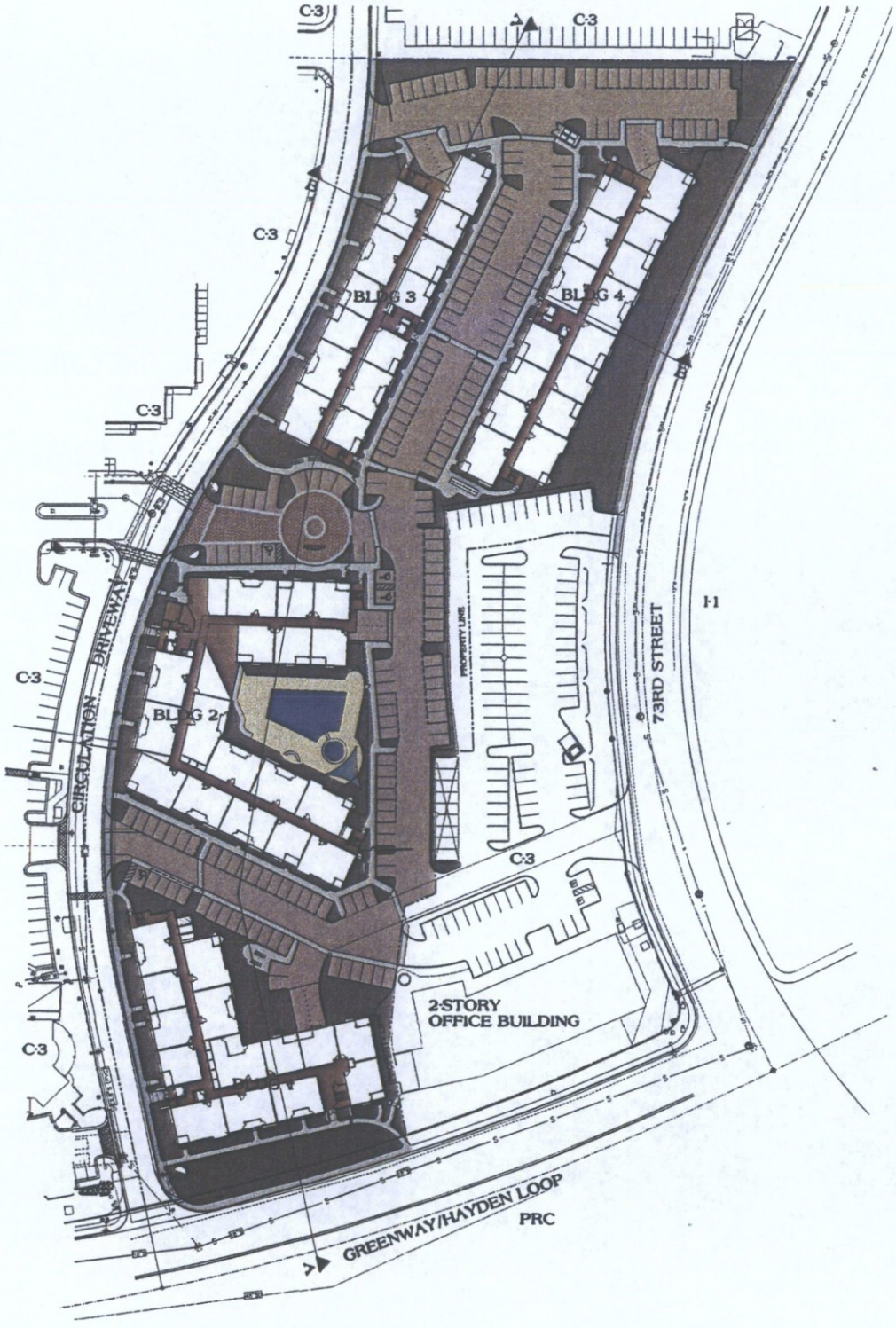
August 2011

Existing Site Conditions

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit B

Kimley-Horn
and Associates, Inc.



Site plan used with permission from L. R. Niemiec Architects/Planners, Inc.

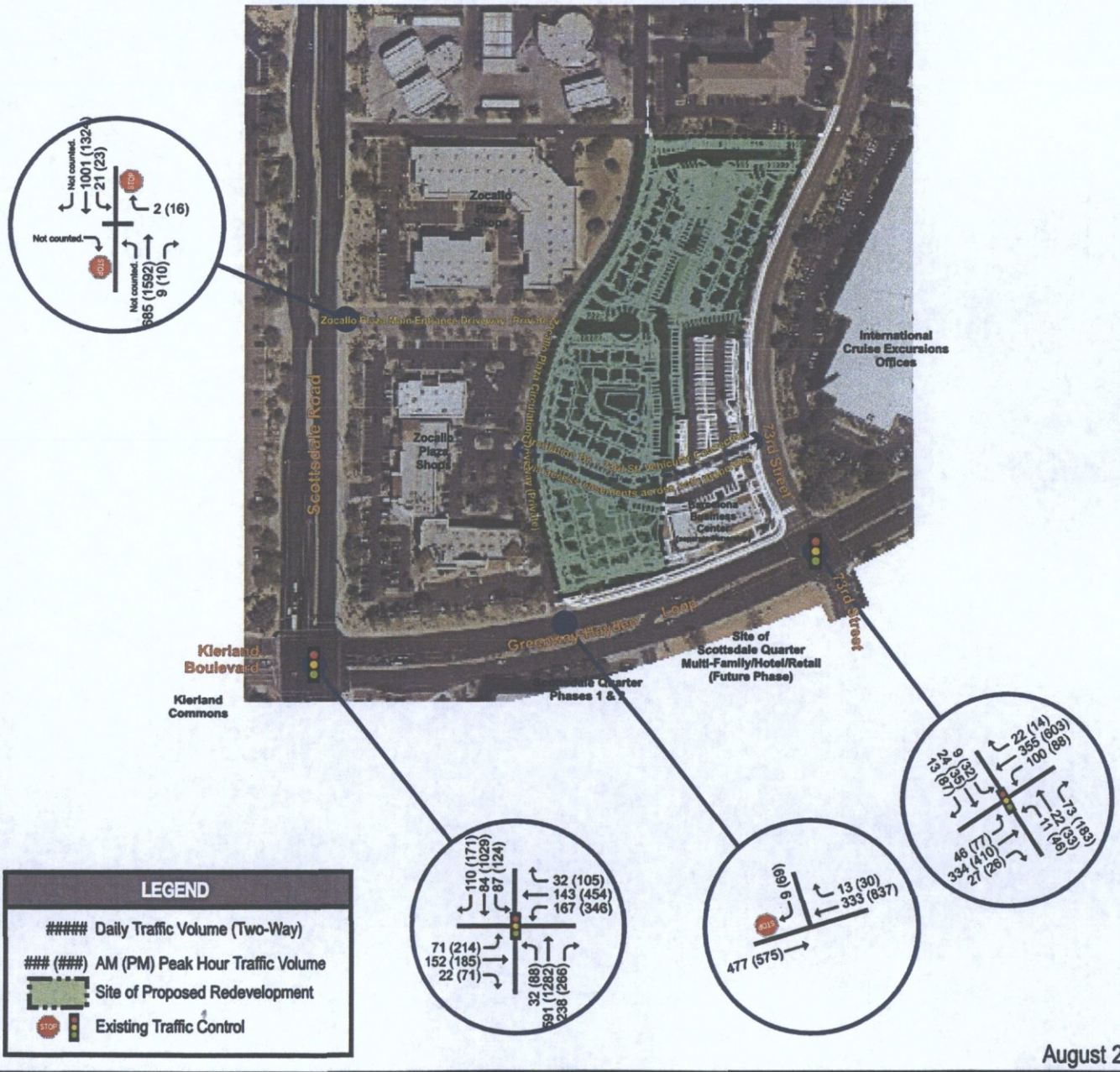
August 2011

Site Plan

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit C

Kimley-Horn and Associates, Inc.



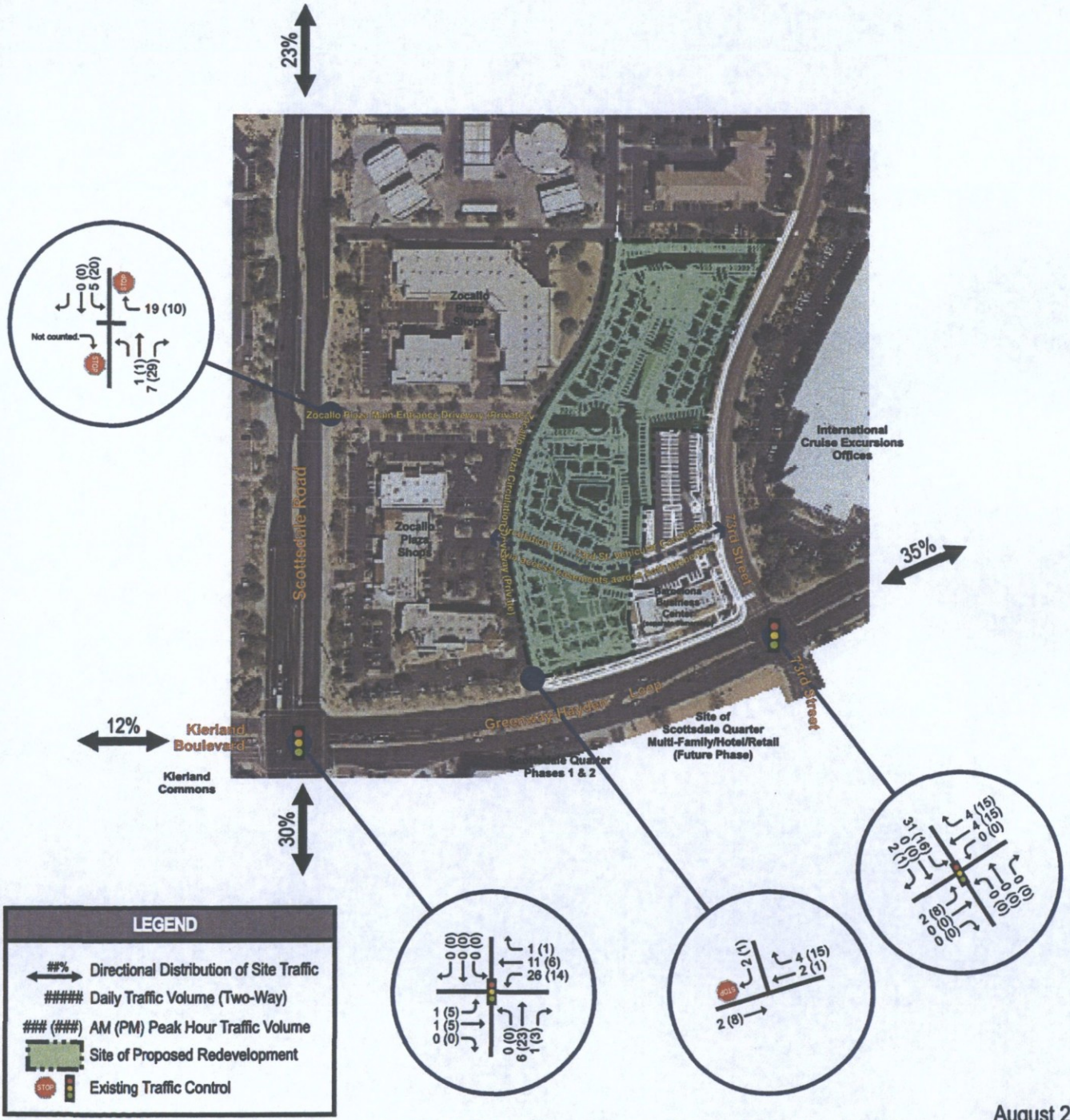
August 2011

Existing Traffic Volumes

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit D

Kimley-Horn and Associates, Inc.



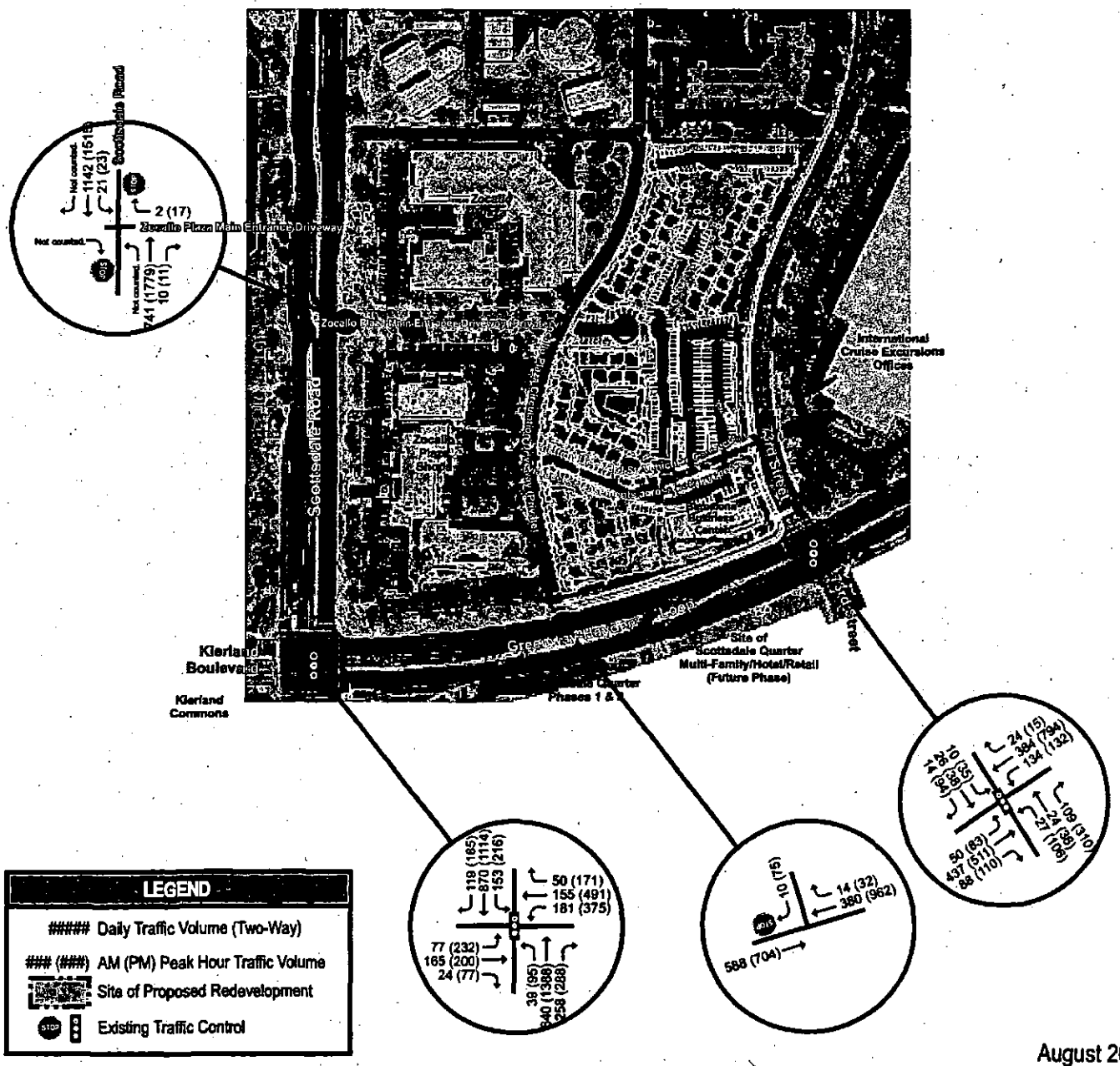
August 2011

Site Traffic Distribution & Assignment

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit E

Kimley-Horn and Associates, Inc.



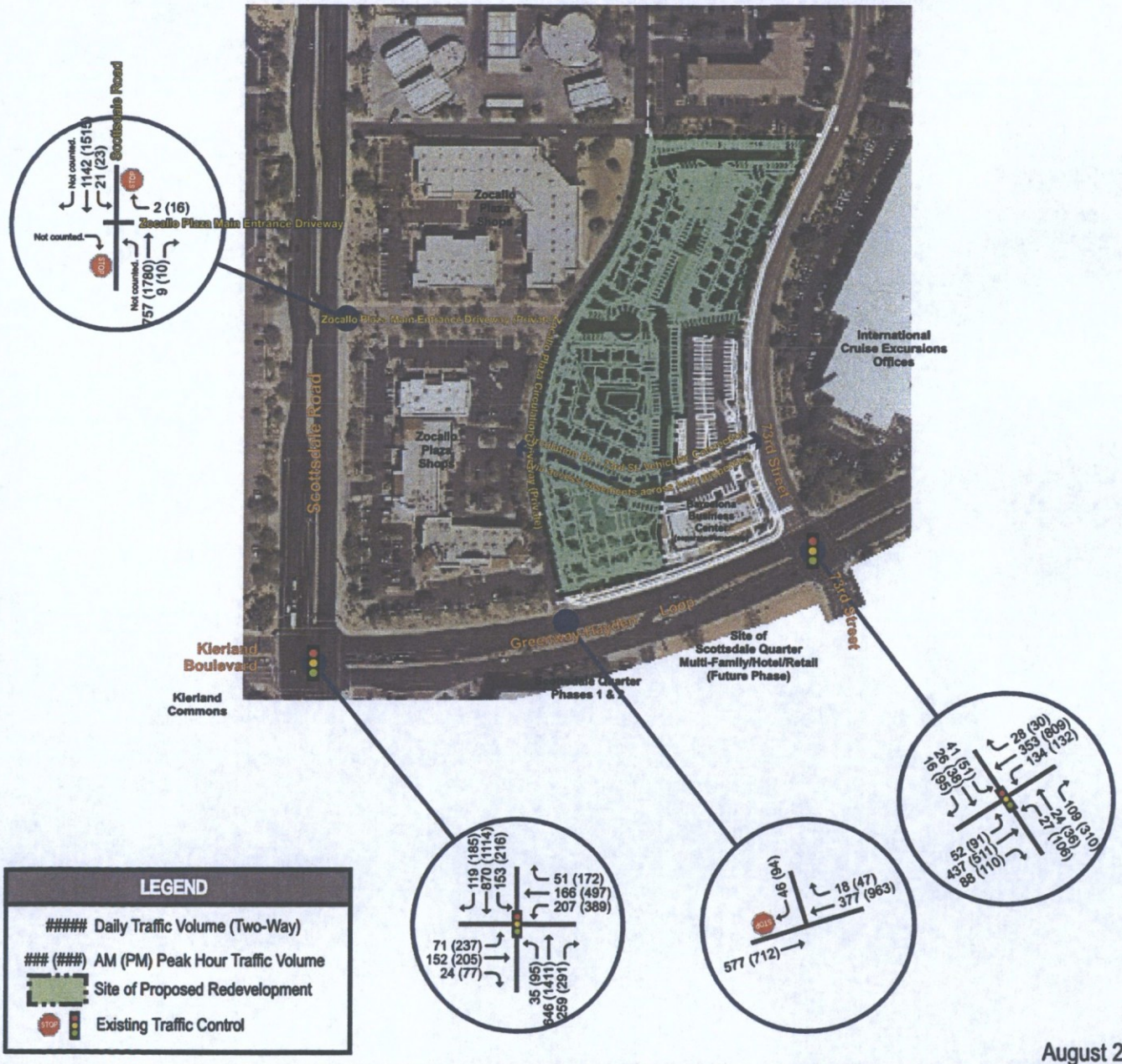
August 2011

2015 Background Traffic Volumes

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit F

Kimley-Horn and Associates, Inc.



August 2011

2015 Total (Site + Background) Traffic Volumes

The Residences at Zocallo Plaza Traffic Impact and Mitigation Analysis

Exhibit G

Intersection LOS Analysis Output

Residences at Zocallo Plaza Traffic Impact & Mitigation Analysis
Kimley-Horn & Associates, Inc.
August 2011

Scenario Report

Scenario:	Existing AM
Command:	Existing AM
Volume:	Existing AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	AM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec):	120	Critical Vol./Cap.(X):	0.271
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.4
Optimal Cycle:	132	Level Of Service:	C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	10
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	32	591	238	87	804	110	71	152	22	167	143	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	591	238	87	804	110	71	152	22	167	143	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	591	238	87	804	110	71	152	22	167	143	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	591	238	87	804	110	71	152	22	167	143	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	591	238	87	804	110	71	152	22	167	143	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.89	0.89	0.92	0.89	0.89
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.62	0.38	2.00	2.45	0.55
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	4445	643	3502	4124	923
Capacity Analysis Module:												
Vol/Sat:	0.01	0.11	0.15	0.02	0.16	0.07	0.02	0.03	0.03	0.05	0.03	0.03
Crit Moves:	****				****			****		****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.10	0.23	0.30	0.27	0.32	0.14	0.19	0.21	0.21	0.29	0.15	0.15
Uniform Del:	55.0	19.8	20.5	55.9	20.7	18.8	53.8	47.5	47.5	48.1	40.8	40.8
IncremntDel:	0.1	0.0	0.2	0.5	0.1	0.1	0.3	0.1	0.1	0.3	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	55.2	19.8	20.8	56.4	20.8	18.9	54.1	47.6	47.6	48.4	40.9	40.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.2	19.8	20.8	56.4	20.8	18.9	54.1	47.6	47.6	48.4	40.9	40.9
LOS by Move:	E	B	C	E	C	B	D	D	D	D	D	D
HCM2kAvgQ:	1	5	6	2	7	2	1	2	2	3	2	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec): 120 Critical Vol./Cap.(X): 0.158
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 11.7
Optimal Cycle: 132 Level Of Service: B

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	11	22	73	9	24	13	46	334	27	100	355	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	22	73	9	24	13	46	334	27	100	355	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	22	73	9	24	13	46	334	27	100	355	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	22	73	9	24	13	46	334	27	100	355	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	22	73	9	24	13	46	334	27	100	355	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	1.00	0.85	0.75	1.00	0.85	0.53	0.90	0.90	0.54	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.78	0.22	1.00	2.00	1.00
Final Sat.:	1423	1900	1615	1425	1900	1615	1009	4746	384	1017	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.05	0.01	0.01	0.01	0.05	0.07	0.07	0.10	0.10	0.01
Crit Moves:			****								****	
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.04	0.06	0.22	0.03	0.06	0.04	0.06	0.10	0.10	0.14	0.14	0.02
Uniform Del:	42.1	42.3	43.7	42.0	42.3	42.1	6.0	6.2	6.2	6.4	6.4	5.8
IncremntDel:	0.1	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.1	42.3	44.1	42.1	42.4	42.1	6.1	6.2	6.2	6.5	6.4	5.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.1	42.3	44.1	42.1	42.4	42.1	6.1	6.2	6.2	6.5	6.4	5.8
LOS by Move:	D	D	D	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	0	1	3	0	1	0	1	2	2	1	2	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.0]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	0 0	1	0 0	3 0	0	0 0	2 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	9	0	477	0	0	333	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	9	0	477	0	0	333	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	9	0	477	0	0	333	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	9	0	477	0	0	333	13
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	118	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	919	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	919	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.6]

Street Name:	Scottsdale Rd						Zocallo Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 3 0 1			1 0 3 0 1			0 0 0 0 1			0 0 0 0 1		
Volume Module:												
Base Vol:	0	685	9	21	1001	0	0	0	0	0	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	685	9	21	1001	0	0	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	685	9	21	1001	0	0	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	685	9	21	1001	0	0	0	0	0	0	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	694	xxxx	xxxxx	xxxx	xxxx	334	xxxx	xxxx	228
Potent Cap.:	xxxx	xxxx	xxxxx	911	xxxx	xxxxx	xxxx	xxxx	668	xxxx	xxxx	781
Move Cap.:	xxxx	xxxx	xxxxx	911	xxxx	xxxxx	xxxx	xxxx	668	xxxx	xxxx	781
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.6
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.6		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario:	Existing PM
Command:	Existing PM
Volume:	Existing PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	PM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec):	120	Critical Vol./Cap.(X):	0.476
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	32.7
Optimal Cycle:	132	Level Of Service:	C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	10
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	88	1282	266	124	1029	171	214	185	71	346	454	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	1282	266	124	1029	171	214	185	71	346	454	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	88	1282	266	124	1029	171	214	185	71	346	454	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	1282	266	124	1029	171	214	185	71	346	454	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	1282	266	124	1029	171	214	185	71	346	454	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.87	0.87	0.92	0.88	0.88
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.17	0.83	2.00	2.44	0.56
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	3591	1378	3502	4095	947
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.16	0.04	0.20	0.11	0.06	0.05	0.05	0.10	0.11	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.28	0.51	0.34	0.39	0.41	0.22	0.58	0.31	0.31	0.59	0.49	0.49
Uniform Del:	56.0	23.3	21.0	56.5	21.8	19.6	56.2	48.3	48.3	50.9	44.3	44.3
IncremntDel:	0.5	0.2	0.3	0.8	0.1	0.1	2.2	0.2	0.2	1.6	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	56.4	23.4	21.2	57.3	22.0	19.7	58.4	48.5	48.5	52.5	44.7	44.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.4	23.4	21.2	57.3	22.0	19.7	58.4	48.5	48.5	52.5	44.7	44.7
LOS by Move:	E	C	C	E	C	B	E	D	D	D	D	D
HCM2kAvgQ:	2	13	7	3	10	4	5	3	3	7	7	7

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec):	120	Critical Vol./Cap.(X):	0.308
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	16.7
Optimal Cycle:	132	Level Of Service:	B

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1	0 1	1 0	1	0 1	1 0	2	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	46	33	183	32	35	87	77	410	26	88	603	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	33	183	32	35	87	77	410	26	88	603	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	33	183	32	35	87	77	410	26	88	603	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	33	183	32	35	87	77	410	26	88	603	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	33	183	32	35	87	77	410	26	88	603	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.85	0.74	1.00	0.85	0.40	0.90	0.90	0.50	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.82	0.18	1.00	2.00	1.00
Final Sat.:	1404	1900	1615	1408	1900	1615	751	4834	307	942	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.11	0.02	0.02	0.05	0.10	0.08	0.08	0.09	0.17	0.01
Crit Moves:			****								****	
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.16	0.08	0.55	0.11	0.09	0.26	0.15	0.12	0.12	0.13	0.24	0.01
Uniform Del:	43.2	42.5	47.1	42.7	42.5	44.1	6.4	6.3	6.3	6.4	6.9	5.8
IncremntDel:	0.3	0.1	2.1	0.2	0.1	0.4	0.1	0.0	0.0	0.1	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.4	42.6	49.2	42.9	42.6	44.6	6.5	6.3	6.3	6.4	7.0	5.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.4	42.6	49.2	42.9	42.6	44.6	6.5	6.3	6.3	6.4	7.0	5.8
LOS by Move:	D	D	D	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	2	1	7	1	1	3	1	2	2	1	4	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.6]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	0	0 1	0 0	3	0 0	0 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	69	0	575	0	0	837	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	69	0	575	0	0	837	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	69	0	575	0	0	837	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	69	0	575	0	0	837	30
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	294	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	708	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	708	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.6			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[14.2]

Street Name:	Scottsdale Rd						Zocallo Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 3 0 1			1 0 3 0 1			0 0 0 0 1			0 0 0 0 1		
Volume Module:												
Base Vol:	0	1592	10	23	1324	0	0	0	0	0	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1592	10	23	1324	0	0	0	0	0	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1592	10	23	1324	0	0	0	0	0	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	1592	10	23	1324	0	0	0	0	0	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1602	xxxx	xxxxx	xxxx	xxxx	441	xxxx	xxxx	531
Potent Cap.:	xxxx	xxxx	xxxxx	414	xxxx	xxxxx	xxxx	xxxx	569	xxxx	xxxx	498
Move Cap.:	xxxx	xxxx	xxxxx	414	xxxx	xxxxx	xxxx	xxxx	569	xxxx	xxxx	498
Volume/Cap:	xxxx	xxxx	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.03
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	xxxxx	xxxx	xxxxx	14.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.5
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	B
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			12.5		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

BG AM

Scenario Report

Scenario:	Buildout AM
Command:	Buildout AM
Volume:	Buildout AM
Geometry:	Buildout
Impact Fee:	Default Impact Fee
Trip Generation:	AM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec):	120	Critical Vol./Cap.(X):	0.321
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	29.4
Optimal Cycle:	132	Level Of Service:	C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	30
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	32	591	238	87	804	110	71	152	22	167	143	32
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	35	640	258	94	870	119	77	165	24	181	155	35
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	0	0	0	59	0	0	0	0	0	0	0	15
Initial Fut:	35	640	258	153	870	119	77	165	24	181	155	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	640	258	153	870	119	77	165	24	181	155	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	640	258	153	870	119	77	165	24	181	155	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	35	640	258	153	870	119	77	165	24	181	155	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.89	0.89	0.92	0.88	0.88
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.62	0.38	2.00	2.27	0.73
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	4445	643	3502	3786	1214
Capacity Analysis Module:												
Vol/Sat:	0.01	0.12	0.16	0.04	0.17	0.07	0.02	0.04	0.04	0.05	0.04	0.04
Crit Moves:			****	****				****		****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.11	0.25	0.33	0.48	0.35	0.15	0.21	0.22	0.22	0.31	0.18	0.18
Uniform Del:	55.1	20.0	20.8	57.0	21.0	18.9	53.9	47.6	47.6	48.3	41.1	41.1
IncremntDel:	0.2	0.1	0.2	1.1	0.1	0.1	0.3	0.1	0.1	0.3	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	55.2	20.0	21.1	58.2	21.1	19.0	54.2	47.7	47.7	48.6	41.2	41.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.2	20.0	21.1	58.2	21.1	19.0	54.2	47.7	47.7	48.6	41.2	41.2
LOS by Move:	E	C	C	E	C	B	D	D	D	D	D	D
HCM2kAvgQ:	1	5	6	4	8	3	2	2	2	3	2	2

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Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec):	120	Critical Vol./Cap.(X):	0.246
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	12.6
Optimal Cycle:	132	Level Of Service:	B

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	11	22	73	9	24	13	46	404	27	100	322	22
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	12	24	79	10	26	14	50	437	29	108	349	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	15	0	30	0	0	0	0	0	59	26	0	0
Initial Fut:	27	24	109	10	26	14	50	437	88	134	349	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	24	109	10	26	14	50	437	88	134	349	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	24	109	10	26	14	50	437	88	134	349	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	24	109	10	26	14	50	437	88	134	349	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	1.00	0.85	0.75	1.00	0.85	0.53	0.89	0.89	0.45	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.50	0.50	1.00	2.00	1.00
Final Sat.:	1419	1900	1615	1423	1900	1615	1013	4208	849	861	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.01	0.07	0.01	0.01	0.01	0.05	0.10	0.10	0.16	0.10	0.01
Crit Moves:			****							****		
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.09	0.06	0.33	0.03	0.07	0.04	0.07	0.15	0.15	0.22	0.14	0.02
Uniform Del:	42.6	42.3	44.8	42.0	42.3	42.1	6.1	6.4	6.4	6.8	6.4	5.8
IncremntDel:	0.1	0.1	0.6	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	42.4	45.4	42.1	42.4	42.2	6.1	6.4	6.4	7.0	6.4	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	42.4	45.4	42.1	42.4	42.2	6.1	6.4	6.4	7.0	6.4	5.9
LOS by Move:	D	D	D	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	1	1	4	0	1	0	1	3	3	2	2	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.0]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 3 0 0			0 0 2 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	9	0	477	0	0	333	13
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	0	0	0	0	10	0	516	0	0	360	14
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	0	0	0	0	0	0	0	59	0	0	15	0
Initial Fut:	0	0	0	0	0	10	0	575	0	0	375	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	10	0	575	0	0	375	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	10	0	575	0	0	375	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	132	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	899	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	899	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.8]

Street Name:	Scottsdale Rd						Zocallo Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 3 0 1			1 0 3 0 1			0 0 0 0 1			0 0 0 0 1		
Volume Module:												
Base Vol:	0	685	9	21	1001	0	0	0	0	0	0	2
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	741	10	23	1083	0	0	0	0	0	0	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	0	15	0	0	59	0	0	0	0	0	0	0
Initial Fut:	0	756	10	23	1142	0	0	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	756	10	23	1142	0	0	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	756	10	23	1142	0	0	0	0	0	0	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	766	xxxx	xxxxx	xxxx	xxxx	381	xxxx	xxxx	252
Potent Cap.:	xxxx	xxxx	xxxxx	856	xxxx	xxxxx	xxxx	xxxx	623	xxxx	xxxx	754
Move Cap.:	xxxx	xxxx	xxxxx	856	xxxx	xxxxx	xxxx	xxxx	623	xxxx	xxxx	754
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.8
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.8		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

BG 1

Scenario Report

Scenario:	Buildout PM
Command:	Buildout PM
Volume:	Buildout PM
Geometry:	Buildout
Impact Fee:	Default Impact Fee
Trip Generation:	PM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec):	120	Critical Vol./Cap.(X):	0.541
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	34.3
Optimal Cycle:	132	Level Of Service:	C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	30
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	88	1282	266	124	1029	171	214	185	71	346	454	106
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	95	1388	288	134	1114	185	232	200	77	375	491	115
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	0	0	0	82	0	0	0	0	0	0	0	56
Initial Fut:	95	1388	288	216	1114	185	232	200	77	375	491	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	1388	288	216	1114	185	232	200	77	375	491	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	1388	288	216	1114	185	232	200	77	375	491	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	1388	288	216	1114	185	232	200	77	375	491	171
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.87	0.87	0.92	0.87	0.87
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.17	0.83	2.00	2.23	0.77
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	3591	1378	3502	3699	1285
Capacity Analysis Module:												
Vol/Sat:	0.03	0.27	0.18	0.06	0.21	0.11	0.07	0.06	0.06	0.11	0.13	0.13
Crit Moves:		****		****					****	****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.30	0.55	0.37	0.68	0.44	0.24	0.62	0.33	0.33	0.64	0.58	0.58
Uniform Del:	56.1	23.9	21.3	58.1	22.3	19.8	56.5	48.5	48.5	51.3	45.4	45.4
IncremntDel:	0.5	0.3	0.3	5.8	0.1	0.2	3.3	0.2	0.2	2.4	0.8	0.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	56.6	24.2	21.6	64.0	22.4	19.9	59.8	48.8	48.8	53.8	46.2	46.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.6	24.2	21.6	64.0	22.4	19.9	59.8	48.8	48.8	53.8	46.2	46.2
LOS by Move:	E	C	C	E	C	B	E	D	D	D	D	D
HCM2kAvgQ:	2	14	7	6	11	4	6	4	4	7	9	9

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Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec):	120	Critical Vol./Cap.(X):	0.453
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.9
Optimal Cycle:	132	Level Of Service:	C

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	46	33	183	32	35	87	77	472	26	88	734	14
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	50	36	198	35	38	94	83	511	28	95	794	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	56	0	112	0	0	0	0	0	82	37	0	0
Initial Fut:	106	36	310	35	38	94	83	511	110	132	794	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	36	310	35	38	94	83	511	110	132	794	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	36	310	35	38	94	83	511	110	132	794	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	36	310	35	38	94	83	511	110	132	794	15
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.85	0.74	1.00	0.85	0.31	0.89	0.89	0.41	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.47	0.53	1.00	2.00	1.00
Final Sat.:	1400	1900	1615	1404	1900	1615	593	4152	895	781	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.02	0.19	0.02	0.02	0.06	0.14	0.12	0.12	0.17	0.22	0.01
Crit Moves:			****								****	
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.37	0.09	0.94	0.12	0.10	0.29	0.20	0.17	0.17	0.24	0.31	0.01
Uniform Del:	45.2	42.6	51.7	42.8	42.6	44.3	6.7	6.6	6.6	6.9	7.4	5.8
IncremntDel:	0.8	0.1	33.8	0.2	0.1	0.5	0.2	0.0	0.0	0.2	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.0	42.7	85.5	43.0	42.7	44.8	6.9	6.6	6.6	7.2	7.5	5.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.0	42.7	85.5	43.0	42.7	44.8	6.9	6.6	6.6	7.2	7.5	5.8
LOS by Move:	D	D	F	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	4	1	16	1	1	3	1	3	3	2	6	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[11.1]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 3 0 0			0 0 2 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	69	0	575	0	0	837	30
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	0	0	0	0	75	0	622	0	0	906	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
SQ Vol:	0	0	0	0	0	0	0	82	0	0	56	0
Initial Fut:	0	0	0	0	0	75	0	704	0	0	962	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	75	0	704	0	0	962	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	75	0	704	0	0	962	32
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	337	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	665	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	665	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C[16.1]

Street Name:	Scottsdale Rd									Zocallo Blvd								
Approach:	North Bound				South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	3	0	1	1	0	3	0	1	0	0	0	0	1	0	0	0	0	1
Volume Module:																				
Base Vol:	0	1592		10		23	1324		0		0		0		0	0		0		16
Growth Adj:	1.08	1.08		1.08		1.08	1.08		1.08		1.08		1.08		1.08	1.08		1.08		1.08
Initial Bse:	0	1723		11		25	1433		0		0		0		0	0		0		17
Added Vol:	0	0		0		0	0		0		0		0		0	0		0		0
SQ Vol:	0	56		0		0	82		0		0		0		0	0		0		0
Initial Fut:	0	1779		11		25	1515		0		0		0		0	0		0		17
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0	1779		11		25	1515		0		0		0		0	0		0		17
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	1779		11		25	1515		0		0		0		0	0		0		17
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		6.9	xxxxx		xxxx		6.9
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		3.3	xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		1790	xxxx		xxxxx		xxxx		xxxx		505	xxxx		xxxx		593
Potent Cap.:	xxxx	xxxx		xxxxx		350	xxxx		xxxxx		xxxx		xxxx		518	xxxx		xxxx		454
Move Cap.:	xxxx	xxxx		xxxxx		350	xxxx		xxxxx		xxxx		xxxx		518	xxxx		xxxx		454
Volume/Cap:	xxxx	xxxx		xxxx		0.07	xxxx		xxxx		xxxx		xxxx		0.00	xxxx		xxxx		0.04
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.2	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		0.1
Control Del:	xxxxx	xxxx		xxxxx		16.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		13.2
LOS by Move:	*	*		*		C	*		*		*		*		*	*		*		B
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	*	*		*		*	*		*		*	*		*		*	*		*	
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					13.2				
ApproachLOS:	*					*					*					B				

Note: Queue reported is the number of cars per lane.

Tot AM

Scenario Report

Scenario:	Buildout AM
Command:	Buildout AM
Volume:	Buildout AM
Geometry:	Buildout
Impact Fee:	Default Impact Fee
Trip Generation:	AM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Trip Generation Report

Forecast for AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Proposed Lan	1.00	Apartment (220	22.00	88.00	22	88	110	100.0
	Zone 1 Subtotal					22	88	110	100.0
TOTAL						22	88	110	100.0

Trip Distribution Report

Percent Of Trips Trip Distribution

Zone	To Gates 1	2	3	4
1	35.0	12.0	23.0	30.0

Turning Movement Report
AM

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#1 Scottsdale Rd & Greenway-Hayden Loop													
Base	35	640	258	94	870	119	77	165	24	181	155	35	2651
Added	0	6	1	0	0	0	1	1	0	26	11	1	47
SQ Vol	0	0	0	59	0	0	0	0	0	0	0	15	74
Total	35	646	259	153	870	119	78	166	24	207	166	51	2772
#2 Greenway-Hayden Loop & 73rd St													
Base	12	24	79	10	26	14	50	437	29	108	349	24	1161
Added	0	0	0	31	0	2	2	0	0	0	4	4	43
SQ Vol	15	0	30	0	0	0	0	0	59	26	0	0	130
Total	27	24	109	41	26	16	52	437	88	134	353	28	1334
#3 Greenway-Hayden Loop & 72nd Pl													
Base	0	0	0	0	0	10	0	516	0	0	360	14	901
Added	0	0	0	0	0	36	0	2	0	0	2	4	44
SQ Vol	0	0	0	0	0	0	0	59	0	0	15	0	74
Total	0	0	0	0	0	46	0	577	0	0	377	18	1019
#4 Driveway 3 & 72nd Place													
Base	0	14	0	0	10	0	0	0	0	0	0	0	24
Added	0	3	0	2	24	0	0	0	0	12	0	4	45
Total	0	17	0	2	34	0	0	0	0	12	0	4	69
#5 Driveway 2/Zocallo Blvd & 72nd Place													
Base	0	14	0	0	10	0	0	0	0	0	0	0	24
Added	4	1	2	0	6	3	2	8	2	18	12	0	58
Total	4	15	2	0	16	3	2	8	2	18	12	0	82
#6 Driveway 1 & 72nd Place													
Base	0	14	0	0	10	0	0	0	0	0	0	0	24
Added	0	0	3	0	0	0	0	0	0	9	0	0	12
Total	0	14	3	0	10	0	0	0	0	9	0	0	36
#8 Driveway 5 & 73rd Street													
Base	0	97	0	0	50	0	0	0	0	0	0	0	147
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	97	0	0	50	0	0	0	0	0	0	0	147
#9 Driveway 4 & 73rd Street													
Base	0	97	0	0	50	0	0	0	0	0	0	0	147
Added	6	0	0	0	0	0	0	0	33	0	0	0	39
Total	6	97	0	0	50	0	0	0	33	0	0	0	186
#10 Scottsdale Rd & Zocallo Blvd													
Base	0	741	10	23	1083	0	0	0	0	0	0	2	1860
Added	0	1	7	5	0	0	0	0	0	0	0	19	32
SQ Vol	0	15	0	0	59	0	0	0	0	0	0	0	74
Total	0	757	17	28	1142	0	0	0	0	0	0	21	1966

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#23 Old Driveway & 73rd Street													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec): 120 Critical Vol./Cap.(X): 0.330
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 29.7
Optimal Cycle: 132 Level Of Service: C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	30
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	32	591	238	87	804	110	71	152	22	167	143	32
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	35	640	258	94	870	119	77	165	24	181	155	35
Added Vol:	0	6	1	0	0	0	1	1	0	26	11	1
SQ Vol:	0	0	0	59	0	0	0	0	0	0	0	15
Initial Fut:	35	646	259	153	870	119	78	166	24	207	166	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	646	259	153	870	119	78	166	24	207	166	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	646	259	153	870	119	78	166	24	207	166	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	35	646	259	153	870	119	78	166	24	207	166	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.89	0.89	0.92	0.88	0.88
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.62	0.38	2.00	2.30	0.70
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	4448	640	3502	3834	1171
Capacity Analysis Module:												
Vol/Sat:	0.01	0.12	0.16	0.04	0.17	0.07	0.02	0.04	0.04	0.06	0.04	0.04
Crit Moves:			****	****				****		****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.11	0.26	0.33	0.48	0.35	0.15	0.21	0.22	0.22	0.35	0.19	0.19
Uniform Del:	55.1	20.0	20.9	57.0	21.0	18.9	53.9	47.6	47.6	48.7	41.2	41.2
IncremntDel:	0.2	0.1	0.2	1.1	0.1	0.1	0.3	0.1	0.1	0.4	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	55.2	20.1	21.1	58.2	21.1	19.0	54.2	47.7	47.7	49.1	41.3	41.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.2	20.1	21.1	58.2	21.1	19.0	54.2	47.7	47.7	49.1	41.3	41.3
LOS by Move:	E	C	C	E	C	B	D	D	D	D	D	D
HCM2kAvgQ:	1	5	6	4	8	3	2	2	2	4	2	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec):	120	Critical Vol./Cap.(X):	0.246
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.3
Optimal Cycle:	132	Level Of Service:	B

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	11	22	73	9	24	13	46	404	27	100	322	22
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	12	24	79	10	26	14	50	437	29	108	349	24
Added Vol:	0	0	0	31	0	2	2	0	0	0	4	4
SQ Vol:	15	0	30	0	0	0	0	0	59	26	0	0
Initial Fut:	27	24	109	41	26	16	52	437	88	134	353	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	24	109	41	26	16	52	437	88	134	353	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	24	109	41	26	16	52	437	88	134	353	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	24	109	41	26	16	52	437	88	134	353	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	1.00	0.85	0.75	1.00	0.85	0.53	0.89	0.89	0.45	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.50	0.50	1.00	2.00	1.00
Final Sat.:	1419	1900	1615	1423	1900	1615	1009	4208	849	861	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.01	0.07	0.03	0.01	0.01	0.05	0.10	0.10	0.16	0.10	0.02
Crit Moves:			****							****		
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.09	0.06	0.33	0.14	0.07	0.05	0.07	0.15	0.15	0.22	0.14	0.02
Uniform Del:	42.6	42.3	44.8	43.0	42.3	42.2	6.1	6.4	6.4	6.8	6.4	5.9
IncremntDel:	0.1	0.1	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.7	42.4	45.4	43.2	42.4	42.2	6.1	6.4	6.4	7.0	6.4	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	42.4	45.4	43.2	42.4	42.2	6.1	6.4	6.4	7.0	6.4	5.9
LOS by Move:	D	D	D	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	1	1	4	1	1	1	1	3	3	2	2	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[9.2]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	0 0 0	0 1		0 0 3	0 0		0 0 2	1 0	
Volume Module:												
Base Vol:	0	0	0	0	0	9	0	477	0	0	333	13
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	0	0	0	0	10	0	516	0	0	360	14
Added Vol:	0	0	0	0	0	36	0	2	0	0	2	4
SQ Vol:	0	0	0	0	0	0	0	59	0	0	15	0
Initial Fut:	0	0	0	0	0	46	0	577	0	0	377	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	46	0	577	0	0	377	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	46	0	577	0	0	377	18
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	135	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	896	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	896	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[9.9]

Street Name:	Scottsdale Rd						Zocallo Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 3	0	1	1 0 3	0	1	0 0 0	0	1	0 0 0	0	1
Volume Module:												
Base Vol:	0	685	9	21	1001	0	0	0	0	0	0	2
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	741	10	23	1083	0	0	0	0	0	0	2
Added Vol:	0	1	7	5	0	0	0	0	0	0	0	19
SQ Vol:	0	15	0	0	59	0	0	0	0	0	0	0
Initial Fut:	0	757	17	28	1142	0	0	0	0	0	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	757	17	28	1142	0	0	0	0	0	0	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	757	17	28	1142	0	0	0	0	0	0	21
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	774	xxxx	xxxxx	xxxx	xxxx	381	xxxx	xxxx	252
Potent Cap.:	xxxx	xxxx	xxxxx	850	xxxx	xxxxx	xxxx	xxxx	623	xxxx	xxxx	753
Move Cap.:	xxxx	xxxx	xxxxx	850	xxxx	xxxxx	xxxx	xxxx	623	xxxx	xxxx	753
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.03
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.9
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Tot
PM

Scenario Report

Scenario:	Buildout PM
Command:	Buildout PM
Volume:	Buildout PM
Geometry:	Buildout
Impact Fee:	Default Impact Fee
Trip Generation:	PM
Trip Distribution:	Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Trip Generation Report

Forecast for PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Proposed Lan	1.00	Apartment (220	87.00	47.00	87	47	134	100.0
	Zone 1 Subtotal					87	47	134	100.0
TOTAL						87	47	134	100.0

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Trip Distribution Report

Percent Of Trips Trip Distribution

Zone	To Gates 1	2	3	4
1	35.0	12.0	23.0	30.0

Turning Movement Report
PM

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#1 Scottsdale Rd & Greenway-Hayden Loop													
Base	95	1388	288	134	1114	185	232	200	77	375	491	115	4693
Added	0	23	3	0	0	0	5	5	0	14	6	1	57
SQ Vol	0	0	0	82	0	0	0	0	0	0	0	56	138
Total	95	1411	291	216	1114	185	237	205	77	389	497	172	4888
#2 Greenway-Hayden Loop & 73rd St													
Base	50	36	198	35	38	94	83	511	28	95	794	15	1978
Added	0	0	0	16	0	1	8	0	0	0	15	15	55
SQ Vol	56	0	112	0	0	0	0	0	82	37	0	0	287
Total	106	36	310	51	38	95	91	511	110	132	809	30	2320
#3 Greenway-Hayden Loop & 72nd Pl													
Base	0	0	0	0	0	75	0	622	0	0	906	32	1636
Added	0	0	0	0	0	19	0	8	0	0	1	15	43
SQ Vol	0	0	0	0	0	0	0	82	0	0	56	0	138
Total	0	0	0	0	0	94	0	712	0	0	963	47	1817
#4 Driveway 3 & 72nd Place													
Base	0	32	0	0	75	0	0	0	0	0	0	0	107
Added	0	14	2	9	13	0	0	0	0	6	0	2	46
Total	0	46	2	9	88	0	0	0	0	6	0	2	153
#5 Driveway 2/Zocallo Blvd & 72nd Place													
Base	0	32	0	0	75	0	0	0	0	0	0	0	107
Added	2	5	9	0	3	2	7	33	9	10	6	0	86
Total	2	37	9	0	78	2	7	33	9	10	6	0	193
#6 Driveway 1 & 72nd Place													
Base	0	32	0	0	75	0	0	0	0	0	0	0	107
Added	0	0	11	0	0	0	0	0	0	5	0	0	16
Total	0	32	11	0	75	0	0	0	0	5	0	0	123
#8 Driveway 5 & 73rd Street													
Base	0	134	0	0	167	0	0	0	0	0	0	0	301
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	134	0	0	167	0	0	0	0	0	0	0	301
#9 Driveway 4 & 73rd Street													
Base	0	134	0	0	167	0	0	0	0	0	0	0	301
Added	23	0	0	0	0	0	0	0	17	0	0	0	40
Total	23	134	0	0	167	0	0	0	17	0	0	0	341
#10 Scottsdale Rd & Zocallo Blvd													
Base	0	1723	11	25	1433	0	0	0	0	0	0	17	3209
Added	0	1	29	20	0	0	0	0	0	0	0	10	60
SQ Vol	0	56	0	0	82	0	0	0	0	0	0	0	138
Total	0	1780	40	45	1515	0	0	0	0	0	0	27	3407

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#23 Old Driveway & 73rd Street													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Scottsdale Rd & Greenway-Hayden Loop

Cycle (sec): 120 Critical Vol./Cap.(X): 0.551
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 34.5
Optimal Cycle: 132 Level Of Service: C

Street Name:	Scottsdale Rd						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	12	64	64	12	64	64	14	22	22	22	30	30
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	88	1282	266	124	1029	171	214	185	71	346	454	106
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	95	1388	288	134	1114	185	232	200	77	375	491	115
Added Vol:	0	23	3	0	0	0	5	5	0	14	6	1
SQ Vol:	0	0	0	82	0	0	0	0	0	0	0	56
Initial Fut:	95	1411	291	216	1114	185	237	205	77	389	497	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	1411	291	216	1114	185	237	205	77	389	497	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	1411	291	216	1114	185	237	205	77	389	497	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	1411	291	216	1114	185	237	205	77	389	497	172
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.87	0.87	0.92	0.87	0.87
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.18	0.82	2.00	2.23	0.77
Final Sat.:	3502	5187	1615	3502	5187	1615	3502	3619	1355	3502	3705	1279
Capacity Analysis Module:												
Vol/Sat:	0.03	0.27	0.18	0.06	0.21	0.11	0.07	0.06	0.06	0.11	0.13	0.13
Crit Moves:		****		****					****	****		
Green/Cycle:	0.09	0.48	0.48	0.09	0.48	0.48	0.11	0.17	0.17	0.17	0.23	0.23
Volume/Cap:	0.30	0.56	0.37	0.68	0.44	0.24	0.64	0.34	0.34	0.67	0.59	0.59
Uniform Del:	56.1	24.1	21.4	58.1	22.3	19.8	56.6	48.6	48.6	51.6	45.5	45.5
IncremntDel:	0.5	0.3	0.3	5.8	0.1	0.2	3.7	0.2	0.2	2.9	0.8	0.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	56.6	24.3	21.7	64.0	22.4	19.9	60.2	48.8	48.8	54.5	46.4	46.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.6	24.3	21.7	64.0	22.4	19.9	60.2	48.8	48.8	54.5	46.4	46.4
LOS by Move:	E	C	C	E	C	B	E	D	D	D	D	D
HCM2kAvgQ:	2	15	7	6	11	4	6	4	4	8	9	9

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Greenway-Hayden Loop & 73rd St

Cycle (sec):	120	Critical Vol./Cap.(X):	0.458
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.8
Optimal Cycle:	132	Level Of Service:	C

Street Name:	73rd Street						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	27	27	27	27	27	27	93	93	93	93	93	93
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2	1 0	2 0		1
Volume Module:												
Base Vol:	46	33	183	32	35	87	77	472	26	88	734	14
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	50	36	198	35	38	94	83	511	28	95	794	15
Added Vol:	0	0	0	16	0	1	8	0	0	0	15	15
SQ Vol:	56	0	112	0	0	0	0	0	82	37	0	0
Initial Fut:	106	36	310	51	38	95	91	511	110	132	809	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	36	310	51	38	95	91	511	110	132	809	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	36	310	51	38	95	91	511	110	132	809	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	36	310	51	38	95	91	511	110	132	809	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.85	0.74	1.00	0.85	0.31	0.89	0.89	0.41	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.47	0.53	1.00	2.00	1.00
Final Sat.:	1400	1900	1615	1404	1900	1615	583	4152	895	781	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.02	0.19	0.04	0.02	0.06	0.16	0.12	0.12	0.17	0.22	0.02
Crit Moves:			****								****	
Green/Cycle:	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.37	0.09	0.94	0.18	0.10	0.29	0.22	0.17	0.17	0.24	0.32	0.03
Uniform Del:	45.2	42.6	51.7	43.3	42.6	44.4	6.8	6.6	6.6	6.9	7.4	5.9
IncremntDel:	0.8	0.1	33.8	0.3	0.1	0.5	0.3	0.0	0.0	0.2	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.0	42.7	85.5	43.6	42.7	44.9	7.1	6.6	6.6	7.2	7.5	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.0	42.7	85.5	43.6	42.7	44.9	7.1	6.6	6.6	7.2	7.5	5.9
LOS by Move:	D	D	F	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	4	1	16	2	1	3	1	3	3	2	6	0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Greenway-Hayden Loop & 72nd Pl

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.4]

Street Name:	72nd Place						Greenway-Hayden Loop					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		0 0 0	0 1		0 0 3	0 0		0 0 2	1 0	
Volume Module:												
Base Vol:	0	0	0	0	0	69	0	575	0	0	837	30
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	0	0	0	0	75	0	622	0	0	906	32
Added Vol:	0	0	0	0	0	19	0	8	0	0	1	15
SQ Vol:	0	0	0	0	0	0	0	82	0	0	56	0
Initial Fut:	0	0	0	0	0	94	0	712	0	0	963	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	94	0	712	0	0	963	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	94	0	712	0	0	963	47
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	345	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	657	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	657	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.14	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.4			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Scottsdale Rd & Zocallo Blvd

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: C[17.1]

Street Name:	Scottsdale Rd						Zocallo Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 3 0 1			1 0 3 0 1			0 0 0 0 1			0 0 0 0 1		
Volume Module:												
Base Vol:	0	1592	10	23	1324	0	0	0	0	0	0	16
Growth Adj:	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Initial Bse:	0	1723	11	25	1433	0	0	0	0	0	0	17
Added Vol:	0	1	29	20	0	0	0	0	0	0	0	10
SQ Vol:	0	56	0	0	82	0	0	0	0	0	0	0
Initial Fut:	0	1780	40	45	1515	0	0	0	0	0	0	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1780	40	45	1515	0	0	0	0	0	0	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	1780	40	45	1515	0	0	0	0	0	0	27
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1820	xxxx	xxxxx	xxxx	xxxx	505	xxxx	xxxx	593
Potent Cap.:	xxxx	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	518	xxxx	xxxx	454
Move Cap.:	xxxx	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	518	xxxx	xxxx	454
Volume/Cap:	xxxx	xxxx	xxxx	0.13	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.06
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.2
Control Del:	xxxxx	xxxx	xxxxx	17.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.4
LOS by Move:	*	*	*	C	*	*	*	*	*	*	*	B
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.4		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

Scottsdale Place, LLC
Scottsdale, AZ

SCOTTSDALE PLACE

SCOTTSDALE AIRPARK
GREENWAY-HAYDEN LOOP ROAD CORRIDOR

Prepared By:
Stantec Consulting Services Inc.
8211 South 48th Street
Phoenix, Arizona 85044

stantec.com

Stantec

Prepared for:
Scottsdale Place, LLC

September 2011
Job Number 181400118

NOISE REPORT
September 2011

Table of Contents

APPENDICES

Registered Professional Engineer (Civil) CERTIFICATE NO. 22520 MARK F. KOESTER Date Signed 9/12/2012 ARIZONA U.S.A.

Exp. 6/30/2012

EXHIBITS

1.0 INTRODUCTION

Stantec Consulting Services Inc.(Stantec), founded in 1954, provides professional consulting services in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics for infrastructure and facilities projects. Continually striving to balance economic, environmental, and social responsibilities, we are recognized as a world-class leader and innovator in the delivery of sustainable solutions. We support public and private sector clients in a diverse range of markets, at every stage, from initial concept and financial feasibility to project completion and beyond.

For more than 50 years, Stantec has provided airport engineering and planning services at civilian and military aviation facilities throughout North America, performing a wide range of tasks; including runway, taxiway, and apron design, lighting and navigational aids, fuel management, land acquisition, master planning, and environmental services. We are the engineer-of-record for more than 60 airports throughout the United States, and are considered among the top full service airport engineering, planning, and construction firms in the country.

As part of our Aviation experience, we have developed relationships with the Federal Aviation Administration and the City of Scottsdale. Through these relationships we believe we can address any concern these entities may have with the development of this project.

1.1 PROJECT DESCRIPTION

This report is to evaluate the impacts to the Scottsdale Airport of rezoning a parcel of land located within the Scottsdale Airport Influence Area. The proposed development for the rezoned parcel would be a luxury apartment complex named Scottsdale Place which will consist of approximately 240 units, 48' in height and encompass approximately 6.2 acres. The property is located at 15440 North Greenway Hayden Loop, north of the Scottsdale Quarter and East of the Zacallo Shopping Complex in the Scottsdale Airpark (Exhibit B-2). The current zoning on the property is C-3 and is identified in the Character Area Plan to be nonresidential. The Character Area Plan was accepted by Scottsdale City Council November 2010 and is in the process of being adopted into the General Plan Update for the City of Scottsdale. The General Plan Update is scheduled to be voted on by voters in 2013.

1.2 SCOPE OF REPORT

This report evaluates existing airport noise and airspace data as it relates to the subject property and its proximity to the airport. The report focuses on the developers' intent to adhere and comply with the City of Scottsdale criteria for providing a residential development within the Airport Influence Area. In some cases, the measures to be

taken to mitigate any potential noise impacts to the residents will exceed current published requirements. Stantec has also provided impact information through on site noise monitoring, research of existing operations data, and evaluation of existing airspace.

2.0 DATA ANALYSIS

2.1 PART 77 AIRSPACE

The proposed site is located approximately two thirds a mile from the centerline of Runway 3/21 (Exhibit A). This is a greater distance than other existing residential properties within the Airport Influence Area including existing residential properties that are closer to the runway ends.

As part of the evaluation, Stantec reviewed **Title 14 of the Code of Federal Regulations (CFR) Part 77 – Safe, Efficient Use and Preservation of the Navigable Airspace** - and determined that based on the height of the proposed development, the airports navigable airspace will not be impacted. Exhibit A depicts the requirements for navigable airspace and how these imaginary surfaces relate to the project site. The Developer will file a Form 7460-1 with the Department of Transportation, Federal Aviation Administration (FAA) as part of the development process.

2.2 NOISE CONTOURS

In 2005, the City of Scottsdale performed a noise study in accordance with **Title 14 CFR Part 150**. The Part 150 noise study provided a noise contour map that depicts noise levels (measured in decibels) created by aircraft operations on the airport. Exhibit B-1 illustrates the site in relationship to the current airport noise contours. Exhibit B-2 illustrates the site specific and how the 55 decibel noise level (DNL) does not infringe on the parcel. Exhibit B-3 depicts the Airport Influence Area and Noise Overlay Zone as contained in the City of Scottsdale Development Guidelines. Stantec has commissioned additional noise monitoring to demonstrate the measured noise levels on this specific site and the primary contributors to that noise. Appendix A, "Noise Report", reflects the specific findings for the site. The measured findings indicate the majority of the noise at the site is attributable to existing vehicular traffic along Greenway-Hayden Loop and other surrounding roadways. The impact of aircraft to the noise readings was minimal and on average would have very little impact on the proposed residential tenants. The noise monitoring was performed for a 24 hour period beginning Friday, August 26th, 2011 at 12:00p.m., through 12:00p.m. on Saturday, August 27, 2011. This time was selected to identify noise levels in the area during primary times that potential tenants may be home.

2.3 FLIGHT PATTERNS

Exhibit B2 represents helicopter traffic patterns in relation to the site. The Scottsdale Airport is unique with its approach patterns. The primary operation source in the Airpark for helicopter operations is Vertical Aviation in the WestCor facility. The exhibit represents anticipated departure routes. The airport has an operations agreement with the helicopter user groups and has also published those check points for operations transitioning to and from the Airport. This exhibit also identifies existing residential properties that are far closer to these published operation corridors than the proposed apartment complex. The helicopter users group indicates that they depart directly North, East or West thereby not traversing over the proposed development.

2.4 ADDITIONAL NOISE MITIGATION TO CITY OF SCOTTSDALE REQUIREMENTS

In accordance with FAA and the City of Scottsdale's Airport Vicinity and Airpark Development Guidelines and Checklist (short form), there are two parts to comply with. **FAA Form 7460 Part 1 - Notice of Proposed Construction or Alteration** - the developer will be required to submit the FAA. Upon zoning approval, the 7460 will be filed. **Part 2** - requires review of the noise and airspace in accordance with the "Airport Overlay Zone Matrix" (Exhibit B-3). The property resides in the AC-1 category - **Residential, Multi Family** according to the Matrix. The proposed project is an allowed land use for this category with stipulations consisting of fair disclosure and an avigation easement. The developer has indicated they will provide additional noise mitigation measures to the project by adding sound attenuation to the proposed buildings as part of the approval process, when not required in the AC-1 category. The intent is to maximize the noise attenuation by developing the site to be proactive with regards to noise.

3.0 ASSUMPTION

3.1 SITE PLAN

This study was developed utilizing the site plan as presented within this report. The proposed site has a maximum height of 48 feet that would not penetrate or impact the Airport's airspace, and is oriented in a manner that maximizes its tenant friendly noise attenuation.

Submission of the FAA Form 7460-1 - This is a 45 day process for receipt of the determination. However, due to the orientation, height and location of the site, Stantec does not anticipate any adverse determinations.

Survey/Boundary/Topography

We assume the site is one property and doesn't require a lot tie be completed prior to development. The site topography will not change drastically and therefore will **NOT** affect the anticipated height as shown in Exhibit A.

4.0 CONCLUSIONS

This report has defined the requirements for the Developer to meet in order to develop an apartment complex within the Scottsdale Airport Influence Area. The site has been evaluated for its impact on the Scottsdale Airport and its compatibility for rental residential development. We have provided on-site noise monitoring to determine measured decibel levels from vehicular and aircraft traffic. The site is proposed to be a rental based property to service the area of largely commercial uses. The building orientation has been designed to minimize noise levels within the complex.

The concern over additional noise complaints by the City is a valid concern and can never be completely alleviated. However, upon review of the City's noise compliant data, the noise complaints are typically generated from individuals living in single-family homes located within the approach and departure corridors having higher levels of aircraft noise. This site is situated such that concerns are minimized with departure activities, shown in Exhibit B-2, lowering levels of over flight activity and the fact that the proposed development is located two thirds of a mile perpendicular to the Northwest of the midfield point of the Airport.

The potential for noise complaints is always a concern for Airports; however the developer is making provisions, in excess of the requirements listed in the airport overlay matrix, during construction and its disclosure to tenants in an attempt to alleviate impacts to the Airport with regards to complaints. Upon review and evaluation of the data collected, there are no substantial findings to expect any adverse effects caused by noise in the development of an apartment complex at this site.

Appendix A:
Noise Monitoring Report

Sound Solutions
Acoustical Consulting

P.O. Box 65962
Tucson, AZ 85728

Phone: 520-979-2213
Fax: 888-886-1770
Email: info@ssacoustical.com
Website: www.ssacoustial.com

September 9, 2011

Prepared for:

Greg Mead, Project Manager
Stantec
(602) 707-4772
gmead@stantec.com

Prepared by:

Bill Holliday

Bill Holliday, P.E.
Senior Acoustical Consultant

RE: The Residences at Zocallo Plaza (15440 N Greenway-Hayden Loop) Noise Measurements (SS 11033)

1.0 Summary

At your request, Sound Solutions conducted 24-hour noise measurements to determine if the site at 15440 N Greenway-Hayden Loop, Scottsdale, Arizona is appropriate for a residential development.

The HUD regulation considers properties acceptable where the day-night average sound level (DNL) does not exceed 65 dBA, normally unacceptable where the DNL is above 65 dBA and not exceeding 75 dBA, and unacceptable where the DNL is above 75 dBA.

Noise measurements for a 24-hour period at two locations resulted in a DNL of 57 and 58 dBA. The primary noise sources were: traffic on N 73rd street & Circulation Driveway, parking lot activity, activities at nearby businesses, insects, with aircraft noise associated with the Scottsdale Airport being less significant.

Based on our measurements, the noise levels at the site are considered acceptable by the HUD regulation.

For the benefit of the reader, an Acoustic Terminology section is provided in Section 5.0.

2.0 HUD Regulations

The U.S. Department of Housing and Urban Development (HUD) uses the day-night average sound level, abbreviated DNL, to evaluate external noise environments at a site. The DNL descriptor is a 24-hour descriptor computed by averaging (on an energy basis) the hourly equivalent sound level (L_{eq}) measured in each hour during a 24-hour period after 10 dB is added to the levels measured between 10 PM and 7 AM.

As stated in Title 24, Code of Federal Regulations 51.103(c), the degree of acceptability of the noise environment is determined by the sound levels at a location two meters (6.5 feet) from the building housing noise sensitive activities in the direction of the predominant noise source. The site acceptability standards are shown in Table 1.

Table 1
HUD Site Acceptable Standards

Acceptability	DNL (dBA)	Special approvals and requirements
Acceptable	Not exceeding 65[1]	None
Normally Unacceptable	Above 65 but not exceeding 75	Special approvals, environmental review, attenuation[2]
Unacceptable	Above 75	Special approvals, environmental review, attenuation[3]

Note 1 Acceptable threshold may be shifted to 70 dBA in special circumstances.
Note 2 5 dB additional attenuation required for sites above 65 dBA but not exceeding 70 dBA and 10 dBA additional attenuation required for sites above 70 dBA but not exceeding 75 dBA.
Note 3 Attenuation measures to be submitted to the Assistant Secretary for Community Planning and Development for approval on a case-by-case basis.
Source: 24 CFR 51.103

3.0 Description of Site

The site is located at 15440 N Greenway-Hayden Loop, Scottsdale, Arizona. At the south end of this site there is a vacant night club (Barcelona) and an active salon (La Lue). At the north end of the site is an office building (Danny's Family Corp).

As shown in Figure 1, the site is bounded on the south by Greenway Hayden Loop, on the east by N 73rd Street, on the west by Circulation Driveway, and on the north by a hotel. Approximately 500 feet north of the north end of the site is an amusement park (Crackerjack). The Scottsdale Airport runway is located approximately 4,000 feet southeast of the site. The site is located well outside of the DNL 55 dBA contour of the Scottsdale Airport. The Scottsdale Airport noise contours can be extrapolated to approximately DNL 47 dBA at the site.

The future site development is shown in Figure 1.

4.0 Noise Measurements

4.1 Measurement Procedure

Noise levels were measured at two locations using two Larson Davis Model 820 sound level meters that meet the American National Standard Institute (ANSI) requirements for Type 1 sound level meters. The meters detectors were set at "slow" response. The microphones were located approximately five feet above the ground. The meters have a built-in microprocessor and memory capability that allow calculations and storage of a variety of statistical data. The sound level meters were field-calibrated prior to, and checked immediately after, the noise measurements.

Noise measurements were started at noon on Friday, August 26, 2011 and completed at noon on Saturday, August 27, 2011. Observations were made during the entire 24 hour period.

4.2 Measurement Locations

Noise levels were measured at two locations shown in Figures 1 and 2 and are described below.

Location 1 - at the northeast part of the site, near the middle of the proposed northeastern apartments.

Location 2 – at the middle-west part of the site, near the middle of the western middle apartments.

4.3 Measurement Results

The hourly measured results are shown in Table 2. The computed DNL at Locations 1 and 2 were 57 and 58 dBA, respectively. These are below the HUD site acceptability standard of 65 dBA.

4.4 Measurement Observations

The primary noise sources in the vicinity of the site are: vehicle traffic on 73rd street & Circulation Driveway, activities in the parking lot, activities at nearby businesses (Crackerjacks), and to a lesser degree aircraft noise associated with the Scottsdale Airport.

Mid-Day (noon – 4 PM)

The primary noise source during mid-day hours was traffic on N 73rd Street & Circulation Driveway and parking lot activity. Circulation Driveway generally had more traffic than N 73rd Street. Traffic was fairly steady producing levels generally between 46 and 54 dBA. Vehicular traffic would occasionally produce levels of 60 to 65 dBA when they passed the site. Vehicles would regularly cut through the parking lot increasing noise levels for brief periods of time. There were some car alarms, leaf blowers, and sirens during this period.

5.0 Acoustic Terminology

Sound Pressure Level

Sound, or noise, is the term given to variations in air pressure that are capable of being detected by the human ear. Small fluctuations in atmospheric pressure (sound pressure) constitute the physical property measured with a sound pressure level meter. Because the human ear can detect variations in atmospheric pressure over such a large range of magnitudes, sound pressure is expressed on a logarithmic scale in units called decibels (dB). Noise is defined as "unwanted" sound.

Technically, sound pressure level (SPL) is defined as:

$$SPL = 20 \log (P/P_{ref}) \text{ dB}$$

where P is the sound pressure fluctuation (above or below atmospheric pressure) and P_{ref} is the reference pressure, 20 μPa, which is approximately the lowest sound pressure that can be detected by the human ear.

The sound pressure level that results from a combination of noise sources is not the arithmetic sum of the individual sound sources, but rather the logarithmic sum. For example, two sound levels of 50 dB produce a combined sound level of 53 dB, not 100 dB. Two sound levels of 40 and 50 dB produce a combined level of 50.4 dB.

Human sensitivity to changes in sound pressure level is highly individualized. Sensitivity to sound depends on frequency content, background noise, time of occurrence, duration, and psychological factors such as emotions and expectations. However, in general, a change of 1 or 2 dB in the level of sound is difficult for most people to detect. A 3 dB change is commonly taken as the smallest perceptible change and a 6 dB change corresponds to a noticeable change in loudness. A 10 dB increase or decrease in sound level corresponds to an approximate doubling or halving of loudness, respectively.

A-Weighted Sound Level

Studies have shown conclusively that at equal sound pressure levels, people are generally more sensitive to certain higher frequency sounds (such as made by speech, horns, and whistles) than most lower frequency sounds (such as made by motors and engines)[1] at the same level. To address this preferential response to frequency, the A-weighted scale was developed. The A-weighted scale adjusts the sound level in each frequency band in much the same manner that the human auditory system does. Thus the A-weighted sound level (read as "dBA") becomes a single number that defines the level of a sound and has some correlation with the sensitivity of the human ear to that sound. Different sounds with the same A-weighted sound level are

1 D.W. Robinson and R.S. Dadson, "A Re-Determination of the Equal-Loudness Relations for Pure Tones," *British Journal of Applied Physics*, vol. 7, pp. 166 - 181, 1956. (Adopted by the International Standards Organization as Recommendation R-226).

perceived as being equally loud. The A-weighted noise level is commonly used today in environmental noise analysis and in noise regulations. Typical values of the A-weighted sound level of various noise sources are shown in Table 3.

Equivalent Sound Level

The Equivalent Sound Level (L_{eq}) is a type of average which represents the steady level that, integrated over a time period, would produce the same energy as the actual signal. The actual *instantaneous* noise levels typically fluctuate above and below the measured L_{eq} during the measurement period. The A-weighted L_{eq} is a common index for measuring environmental noise.

Day-Night Average Sound Level

The day-night average sound level (DNL) descriptor is a 24-hour descriptor computed by averaging (on an energy basis) the hourly equivalent sound level (L_{eq}) measured in each hour during a 24-hour period after 10 dB is added to the levels measured between 10 PM and 7 AM.

Sincerely,

Bill Holliday

Bill Holliday, P.E.
Acoustical Consultant

Table 3
Common Sound Levels in dBA

Common Outdoor Sounds	Sound Pressure Level (dBA)	Common Indoor Sounds	Subjective Evaluation
Auto horn at 10'	**100**	Printing plant	Deafening
Jackhammer at 50'			
Gas lawn mower at 4'	**90**	Auditorium during applause	Very Loud
Pneumatic drill at 50'		Food blender at 3'	
Concrete mixer at 50'	**80**	Telephone ringing at 8'	
Jet flyover at 5000'		Vacuum cleaner at 5'	
Large dog barking at 50'	**70**	Electric shaver at 1'	Loud
Large transformer at 50'			
Automobile at 55 mph at 150'	**60**	Normal conversation at 3'	
Urban residential			
	50	Office noise	
Small town residence			Moderate
	40	Soft stereo music in residence	
		Library	
	30	Average bedroom at night	Faint
Rustling leaves		Soft whisper at 3'	
Quiet rural nighttime	**20**	Broadcast and recording studio	
	10	Human breathing	Very Faint
	0	Threshold of hearing (audibility)	

Scottsdale Airport Vicinity Development Guidelines and Checklist and Declaration (Short Form)

Name of Development:	The Residences @ Zocallo Plaza
Development Pre-Application Number:	401-PA-2011
Site Address/APN:	15440 N. Greenway-Hayden Loop
Maximum Elevation Height of Building + Appurtenances:	48' (PUD zoning)
Latitude and Longitude of Highest Elevation Point:	33° 37' 34" / 111° 55' 22"
Contact Name and Phone Number:	Michele Hammond

PROJECT REVIEW ANALYSIS DESCRIPTION (short form)

This information pertains to object height, land use compatibility, avigation easements, aircraft noise and overflight disclosure and is in addition to other City Codes (building, fire, zoning). **Please review and complete EACH SECTION of this Short Form Declaration and submit it along with your development application.**

Part I. Height Analysis

Applicants must conduct an analysis for all projects within 20,000 feet of Scottsdale Airport to determine if a 100:1 slope is penetrated by proposed structures, appurtenances, or construction equipment and/or cranes. If structures, appurtenances, or construction equipment penetrate the 100:1 slope area from the airport, then the project applicant must complete an Federal Aviation Administration (FAA) form 7460-1 and submit it to FAA unless exemptions apply. Please allow approximately 30 days for FAA to review your project. An analysis and submission of form 7460-1 can be completed at the following website https://oeaaa.faa.gov/oeaaa/external/portal.jsp and click on the "Notice Criteria Tool" on the left side. Accurate coordinates and site elevation will be needed to complete this analysis. Applicants are required to to file their 7460-1 electronically at the above referenced website.

Check ONLY one declaration below:

	1. Based on the height analysis of my proposed development, I declare structures or construction crane(s) DO NOT penetrate the airspace above the 100:1 slope from Scottsdale Airport's Runway. I attached a copy of the analysis to this form.
X	2. Based on the height analysis of my proposed development structures or construction crane(s) DO penetrate the airspace above the 100:1 slope from Scottsdale Airport's Runway. I completed the required FAA form 7460-1 and submitted it to the FAA with latitude and longitudes points of the highest point of each proposed structure, including appurtenances. I attached a copy of the completed FAA documents to this form. I will also provide a copy of FAA's response and determination to the Aviation Director **prior to final plan approval.**

awaiting FAA response

Part II. Aircraft Noise and Overflight Disclosure

I have reviewed the traffic pattern airspace map and executive summaries for the adopted Scottsdale Airport Master Plan and 14 C.F.R. Part 150 Noise Compatibility Study, as part of the due diligence to determine any future impacts on my development by proposed airport growth or operational changes. These documents are available on http://www.scottsdaleaz.gov/airport/Part150 or by calling the airport at 480-312-2321. In accordance with the Airport Influenace Area and Noise Overlay Zone and the Airport Overlay Zone Matrix for Scottsdale Airport (see attached), I understand the following may be true for my development and will provide the City of Scottsdale all appropriate documentation as applicable below:

X	Incorporate the Airport Disclosure For Development Around Scottsdale Airport language into the CC & R's or other procedural documents for my development.
X	An Avigation Easement to the City of Scottsdale for recording. Download this document at http://www.scottsdaleaz.gov/bldgresources/forms/dedications.asp and must be completed **prior to final plan approval.**

The information provided for this project is certified to be true and correct. Staff will review the proposed development and all attached documents required by this form. All information shall be submitted and complete prior to approval by the City.

Michelle Hammond — Signature of Applicant

8/17/2011 — Date

Questions pertaining to this form or content required for airport review of proposed projects should be directed to Scottsdale Airport staff at (480) 312-2321.

10-ZN-2011
1st: 8/17/2011

Attachments:
1. Scottsdale Airport Vicinity Map FAA Notice
2. Airport Influence Area and Noise Overlay Zones
3. Airport Overlay Zone Matrix
4. Scottsdale Airport Traffic Pattern Airspace
5. Sample Airport Disclosure Notice
6. Avigation Easement

Project Data Sheet
Residential/Commercial

_____ - PA - _____ Coordinator: _____

Project Address: 15490 N. GREENWAY - HAYDEN LOOP Date: _____

Proposed Use: _____ Zoning District: _____

TO BE COMPLETED BY APPLICANT COMMERCIAL	TO BE COMPLETED BY APPLICANT RESIDENTIAL	CALCULATIONS	TO BE COMPLETED BY CITY
	5.83	Net Lot Area	
	6.42	Gross Lot Area	
		Gross Floor Area Allowed	
		Gross Floor Area Provided	
		Building Volume Allowed	
		Building Volume Provided	
	240	Number Of Units Or Lots	
	N/A	Density Allowed	
	37.38	Density Provided	
	0.5 ACRE	Minimum Lot Size Allowed	
	6.42 ACRES	Minimum Lot Size Provided	
	48'	Building Height Allowed	
	48'	Building Height Provided	
	241,334	Net Floor Area	
	360	Parking Spaces Required	
	411	Parking Provided On-Site	
	0	Parking Provided Off-Site	
	411	Total Parking Provided	
	10%	Open Space Required	
	39.5%	Open Space Provided	
	169.00	Front Open Space Required	
	18,063	Front Open Space Provided	
	15%	Parking Lot Landscaping Required	
	22%	Parking Lot Landscaping Provided	

SET BACKS & PARKING REQUIREMENTS

REQUIRED	PROVIDED	CALCULATIONS	N, S, E, OR W	REQUIRED	PROVIDED
		Front			
		Rear			
		Left Side			
		Right Side			
		Parking			

10-ZN-2011
1st: 8/17/2011

Planning, Neighborhood & Transportation Division

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088

Airport Overlay Zone Matrix Scottsdale Airport	Uses Allowed Within Each Zone			
	City of Scottsdale			City of Phoenix
	AC-1	AC-2	AC-3	AC-P
RESIDENTIAL				
Single-family, duplex, multi-family, manufactured housing	Y[1,3]	Y[1,3,4]	N	Y[1]
Recreational vehicle parks	Y[1,3]	Y[1,3]	N	Y[1]
Other residential	Y[1,3]	Y[1,3,4]	N	Y[1]
PUBLIC FACILITIES				
Education facilities	Y[1,3]	Y[1,3,4]	N	Y[1]
Religious facilities, libraries, museums, galleries, clubs and lodges	Y[1,2,3]	Y[1,3,4]	N	Y[1,2]
Outdoor sport events, entertainment and public assembly except amphitheaters	Y[1,2]	Y[1,3]	N	Y[1,2]
Indoor recreation, amusements, athletic clubs, gyms and spectator events	Y[1,2]	Y[1,3]	[1,3]	Y[1,2]
Neighborhood parks	Y[1,2]	Y[1,3]	Y[1,3]	Y[1,2]
Community and regional parks	Y[1,2]	Y[1,3]	Y[1,3]	Y[1,2]
Outdoor recreation: tennis, golf courses, riding trails, etc.	Y[1,2]	Y[1,3]	Y[1,3]	Y[1,2]
Cemeteries	Y[1]	Y[1,3]	Y[1,3]	Y[1]
COMMERCIAL				
Hotels/motels	Y[1,2]	Y[1,2,3,4]	Y[1,2,3,4]	Y[1,2]
Hospitals and other health care services	Y[1,2]	Y[1,2,3,4]	N	Y[1,2]
Services: finance, real estate, insurance, professional and government offices	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
Retail sales: building materials, farm equipment, automotive, marine, mobile homes, recreational vehicles and accessories	Y[1]	Y[1,3]	Y[1,3]	Y[1]
Restaurants, eating and drinking establishments	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
Retail sales: general merchandise, ood, drugs, apparel, etc.	Y[1]	Y[1,3]	Y[1,3]	Y[1]
Personal services: barber and beauty shops, laundry and dry cleaning, etc.	Y[1]	Y[1,3]	Y[1,3]	Y[1]
Automobile service stations	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
Repair services	Y[1]	Y[1,3]	Y[1,3]	Y[1]
INDUSTRIAL				
Processing of food, wood and paper products; printing and publishing; warehouses, wholesale and storage activities	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
Refining, manufacturing and storage of chemicals, petroleum and related products, manufacturing and assembly of electronic components, etc.	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
Manufacturing of stone, clay, glass, leather, gravel and metal products; construction and salvage yards; natural resource extraction and processing, agricultural, mills and gins	Y[1,2]	Y[1,2,3]	Y[1,2,3]	Y[1,2]
AGRICULTURE				
Animal husbandry, livestock farming, breeding and feeding; plant nurseries (excluding retail sales)	Y[1]	Y[1]	Y[1]	Y[1]
Farming (except livestock)	Y[1]	Y[1,3]	Y[1,3]	Y[1]
MISCELLANEOUS				
Transportation terminals, utility and communication facilities	Y[1]	Y[1,2,3]	Y[1,2,3]	Y[1]
Vehicle parking	Y[1]	Y[1]	Y[1]	Y[1]
Signs	Y[1]	Y[1]	Y[1]	Y[1]

Legend

Y Approved land use
N Prohibited land use
1 Fair disclosure statement required as a condition of development approval or building permit issuance.
2 Use is permitted as long as it complies with the requirements of the zoning code for height restrictions.
3 Avigation easement required as a condition of development approval or building permit issuance.
4 Sound insulation required to reduce interior to exterior noise levels by at least 25dB.

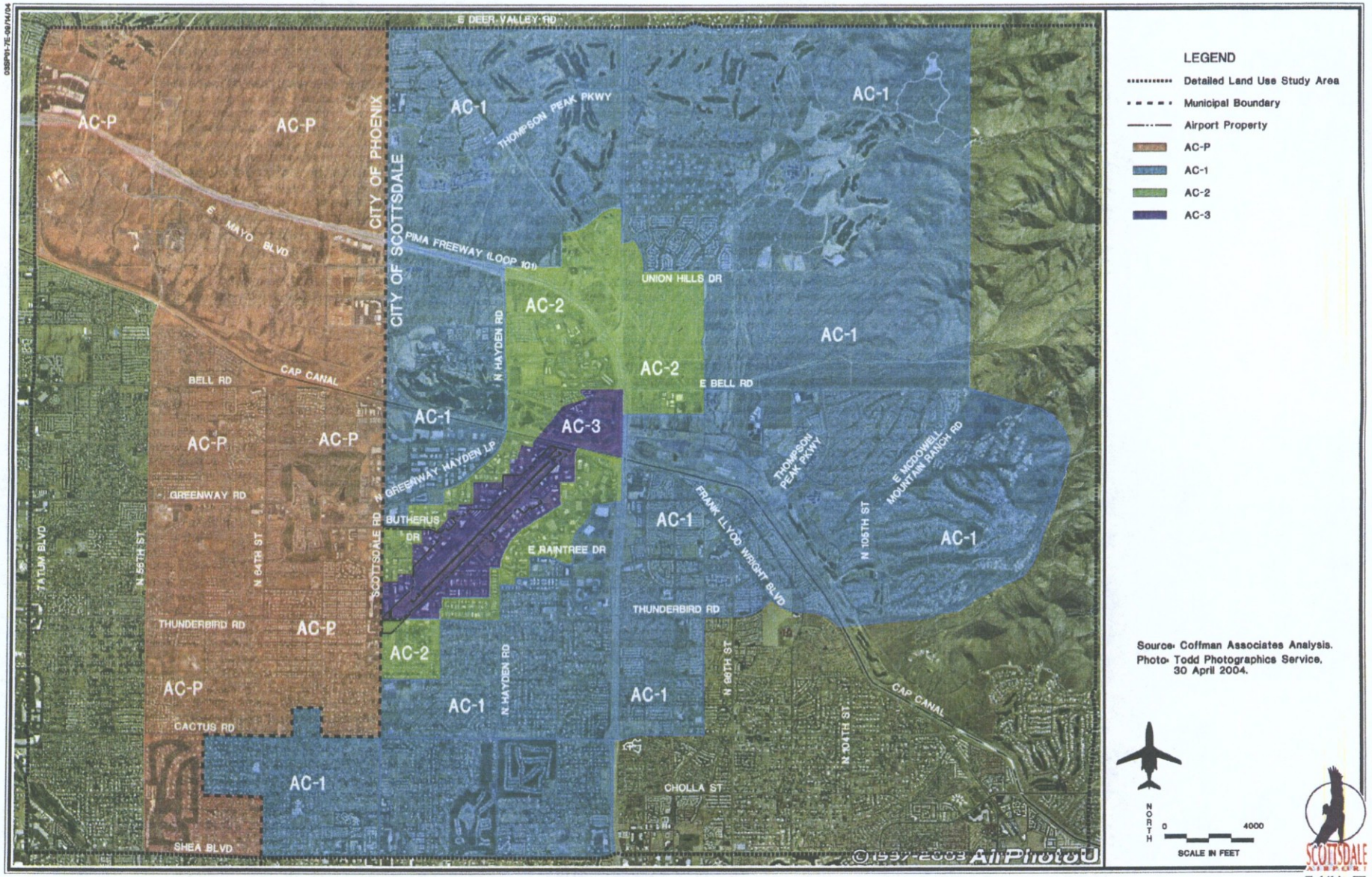


EXHIBIT B3

Exhibit 7E
AIRPORT INFLUENCE
AREA AND NOISE OVERLAY ZONES

Exhibit B-3:
Airport Influence Area and Noise Matrix

V:\52814\active\181400118-Scottsdale Place\drawings\Figure 3 - Exhibit B2.dwg
2011/09/12 10:17 AM By: Hetland, Bill

ORIGINAL SHEET - ANSI B

September, 2011
181400118

Stantec Consulting Services Inc.
8211 South 48th Street
Phoenix, AZ U.S.A.
85044-5355
Tel. 602.438.2200
Fax. 602.431.9562
www.stantec.com

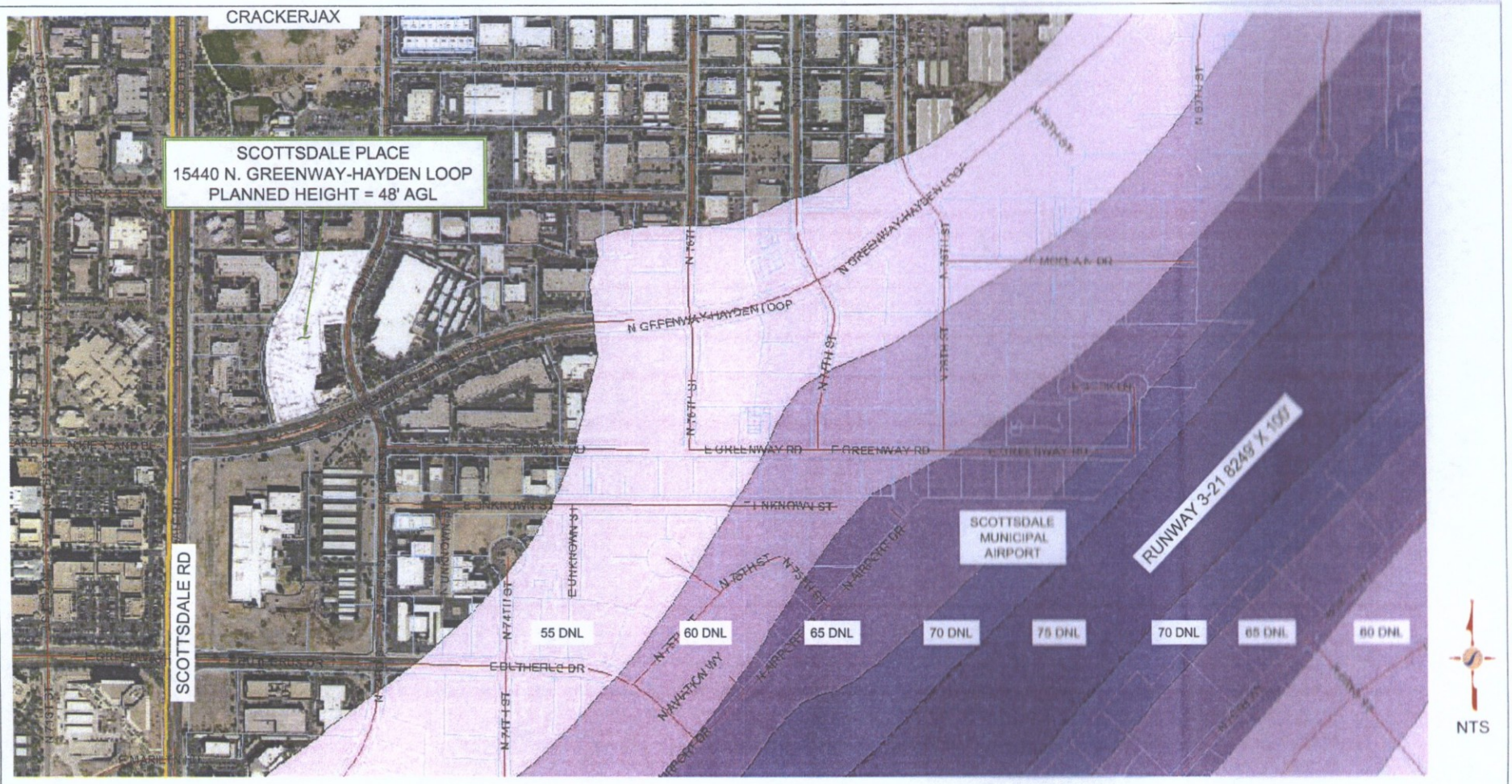
0 300' 450' 600'
SCALE 1" = 300'

Client/Project
SCOTTSDALE PLACE
NOISE REPORT

Figure No.
3.0

Title
EXHIBIT B2
HELICOPTER REPORTING POINTS

Exhibit B-2:
Site Specific 55 DNL



AIRPORT NOISE CONTOURS
2009

ORIGINAL SHEET – ANSI B

September, 2011
181400118

V:\52814\active\181400118-Scottsdale Place\drawings\Figure 2 - Exhibit B1.dwg
2011/09/12 10:14 AM By: Hetland, Bill

Stantec Consulting Services Inc.
8211 South 48th Street
Phoenix, AZ U.S.A.
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www.stantec.com

Client/Project
SCOTTSDALE PLACE
NOISE REPORT

Figure No
2.0

Title
EXHIBIT B1
NOISE CONTOUR
SCOTTSDALE AIRPORT
PART 150 NOISE STUDY

Exhibit B-1:
Scottsdale Noise Contours

STATE OF ARIZONA)
) ss.
County of Maricopa)

This document was acknowledged before me this ___ day of _____, 20___, by _____ for and on behalf of_____.

_____
NOTARY PUBLIC

My commission expires:

_____

STATE OF ARIZONA)
) ss.
County of Maricopa)

This document was acknowledged before me this ___ day of _____, 20___, by ___ _____ for and on behalf of _____.

_____
NOTARY PUBLIC

My commission expires:

_____

_____

for _____

seasonal, time-of-day or other practices, laws, rules, policies, circumstances, customs, protocols or procedures related thereto.

3.3. Any and all temporary and permanent changes and variations in flight paths, flight frequency, flight timing, airport operations, climbing and descending, altitudes, takeoff and landing, air traffic control and any permanent, temporary, seasonal, time-of-day or other practices, laws, rules, policies, circumstances, customs, protocols or procedures related thereto.

3.4. Changes in Grantor's or others' personal perceptions of Aircraft Effects or sensitivity to Aircraft Effects.

4. Grantor shall not cause or allow the Property to be used in a way that causes a discharge of fumes, smoke, dust, electronic emissions, light emissions, or other land use of any description that obstructs visibility or adversely affects or interferes with the operation of aircraft or any navigational facilities used for aircraft operation. No building, mast or other thing upon the Property shall exceed _____ feet in height.

5. Grantor has been advised and is of the opinion that:

5.1. All or a portion of the Property is located in a noise-influence area.

5.2. Aircraft Effects might be annoying to users of the Property and might interfere with the unrestricted use and enjoyment of the Property.

5.3. Aircraft Effects will likely increase over time.

6. Grantor waives, remises and releases any right, cause of action, or other claim that Grantor has now or may have in the future against, and covenants not to sue, Grantee regarding Aircraft Effects. Grantor makes all of such covenants waivers, remises, and releases on behalf of itself and its successors and assigns in favor of Grantee and its past, present, or future officers, officials, directors, employees, agents, lessees, sublessees, permittees, invitees, successors and assigns.

Grantor hereby warrants and covenants to Grantee and its successors and assigns that Grantor is lawfully seized and possessed of the Property; that Grantor has a good and lawful right to make the conveyance described herein; and that Grantee shall have title and quiet possession against the claims of all persons.

The person executing this document on behalf of a corporation, trust or other organization warrants his or her authority to do so and that all persons necessary to bind Grantor have joined in this document. This document runs with the land in favor of Grantee's successors and assigns.

DATED this ___ day of _____, 20___.

GRANTOR: _____

for _____

WHEN RECORDED, RETURN TO:
CITY OF SCOTTSDALE
ONE STOP SHOP/RECORDS
(_____)
7447 E. Indian School Road, Suite 100
Scottsdale, AZ 85251

Exempt from Affidavit of Value
under A.R.S. § 11-1134(A)(2, 3)

CITY OF SCOTTSDALE
AVIGATION EASEMENT

Project No. _____

Q.S. _____

FOR ONE DOLLAR ($1.00) and other good and valuable consideration received _____ (collectively "Grantor") does hereby grant to the City of Scottsdale, an Arizona municipal corporation ("Grantee"), a perpetual, non-exclusive easement upon, over, under and across the parcel of land (the "Property") described on the legal description and the sketch attached hereto as Exhibits "A" and "B". The purpose of the easement is for a right of flight for the passage of aircraft in the airspace above the surface of the Property as follows:

1. "Aircraft" means any manned or unmanned contrivance or device now known or hereafter invented, used or designed to navigate or fly in the air.

2. Without limitation, the right of flight shall include the right to operate aircraft over and near the Property and to cause within or without said airspace any noise, vibration, fumes, light, exhaust, odors, fuel vapor particles, electronic interference, dust, annoyances, nuisances, emissions, or other effects of any description relating to the operation, use or function of any aircraft in or near the said airspace (collectively the "Aircraft Effects").

3. All Aircraft Effects are included within the scope of the easement, including without limitation those that reach or affect the surface of the Property or improvements to the Property, those that interfere with other uses of the Property, those that annoy users of the Property, and those that are caused or made worse by any of the following:

   3.1. Any and all temporary and permanent increases and other changes and variations in the size, number, method of propulsion, weight, noisiness, design, fuel, category, type or other characteristics of aircraft and any permanent, temporary, seasonal, time-of-day or other practices, laws, rules, policies, circumstances, customs, protocols or procedures related thereto.

   3.2. Any and all temporary and permanent changes and variations in airport size, orientation, configuration, layout, location, runway length, boundaries, improvements or other characteristics and any permanent, temporary,

SAMPLE AIRPORT DISCLOSURE FOR NEW RESIDENTIAL DEVELOPMENT AROUND SCOTTSDALE AIRPORT

NOTICE OF PROSPECTIVE PURCHASERS

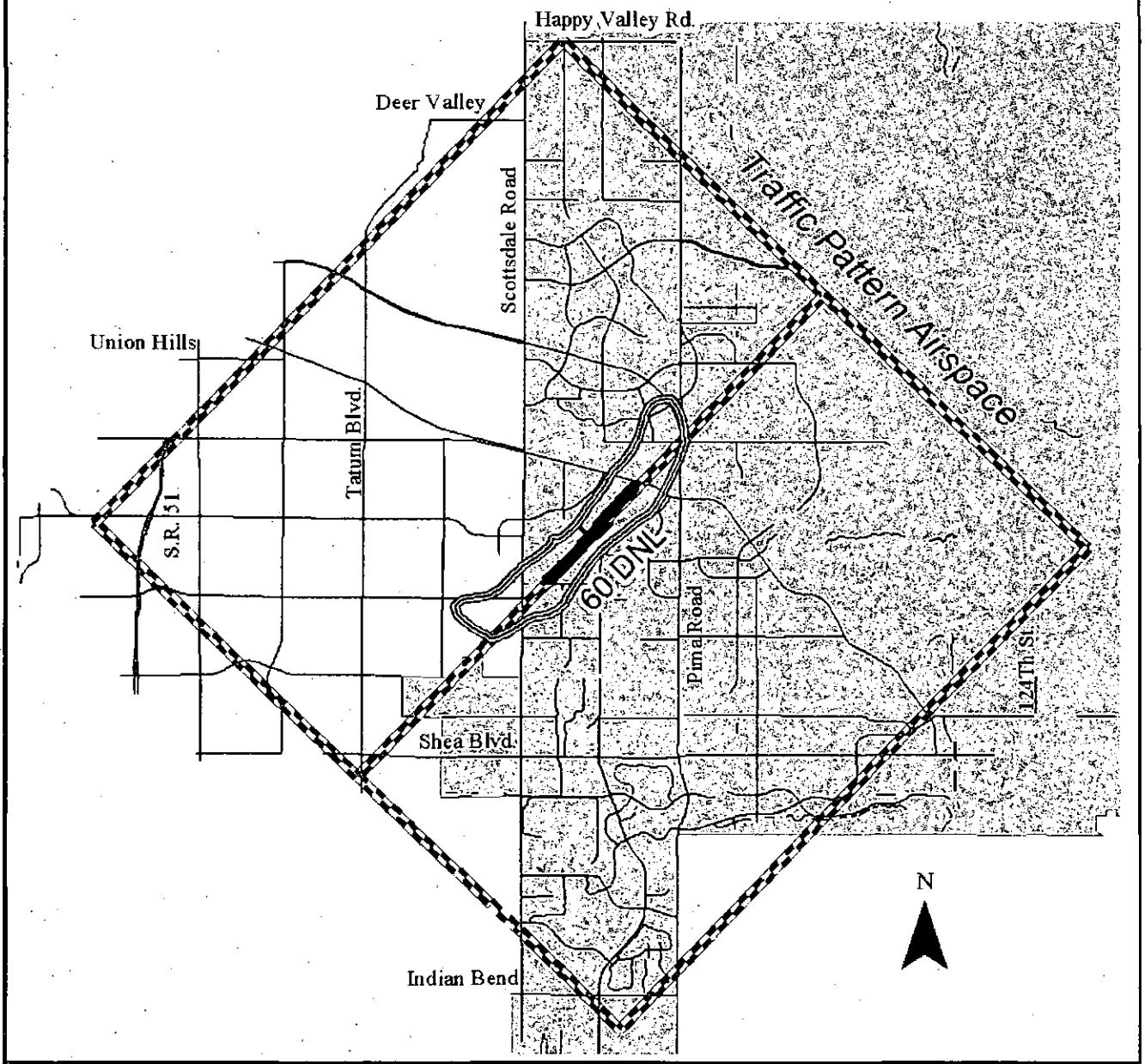
OF PROXIMITY TO THE SCOTTSDALE AIRPORT

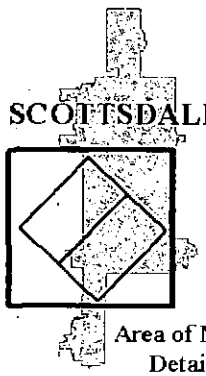
For inclusion into CC&R's or for disclosure notice:

Proximity to Airport. Each Owner, by accepting a deed to a Lot or Parcel, or by otherwise acquiring title to a Lot or Parcel, acknowledges (for such Owner and such Owner's family members, other Occupants, successors and assigns) that: **(a)** the Project is in close proximity to the Scottsdale Airport (the "Airport"), which is currently located generally between Frank Lloyd Wright Boulevard on the north, Pima Road on the east, Thunderbird Road on the south and Scottsdale Road on the west; **(b)** as of the date hereof, the airport is operated as a general aviation reliever/commercial service airport for Scottsdale and North Phoenix, used generally for single engine and twin engine airplanes, corporate jets, helicopters and scheduled service turbo prop and jet aircraft; **(c)** aircraft taking off from and landing at the Airport may fly over the Project and adjacent properties at altitudes which will vary with meteorological conditions, aircraft type, aircraft performance and pilot proficiency; **(d)** at the date hereof, the majority of aircraft takeoffs and landings occur daily between 6:00 a.m. and 11:00 p.m., but the Airport is open twenty-four (24) hours each day, so takeoffs and landings may occur at any hour of the day or night; **(e)** at the date hereof, the number of takeoffs and landings at the Airport average approximately 850 each day, but that number will vary and may increase with time if the number of its operations increases; **(f)** flights over the Project or adjacent properties by aircraft taking off from or landing at the Airport may generate noise, the volume, pitch, amount and frequency of occurrence of which will vary depending on a number of factors, including without limitation the altitudes at which the aircraft fly, wind direction and other meteorological conditions and aircraft number and type, and may be affected by future changes in Airport activity; **(g)** as of the date hereof, management of the Airport has policies in place intended to help reduce or minimize aircraft noise and its influence on owners and occupants of properties in the vicinity of the Airport, but those policies may change over time and in addition other aspects of such policies (including, without limitation, those intended to promote safety) may be given preference over policies relating to limiting noise; and **(h)** such Owner (for such Owner and such Owner's family members, other Occupants, successors and assigns) hereby accepts and assumes any and all risks, burdens and inconvenience caused by or associated with the Airport and its operations (including, without limitation, noise caused by or associated with aircraft flying over the Project and adjacent properties), and agrees not to assert or make and claim against the City of Scottsdale, its officers, directors, commissioners, representatives, agents, servants and employees, the Declarant, and Declarant Affiliate, or the Association, or any director, officer, employee, agent, representative or contractor of any of them, related thereto.

Any questions regarding the operation of the Airport can be directed to the Airport Administration office at 480-312-2321.

Scottsdale Airport
Traffic Pattern Airspace

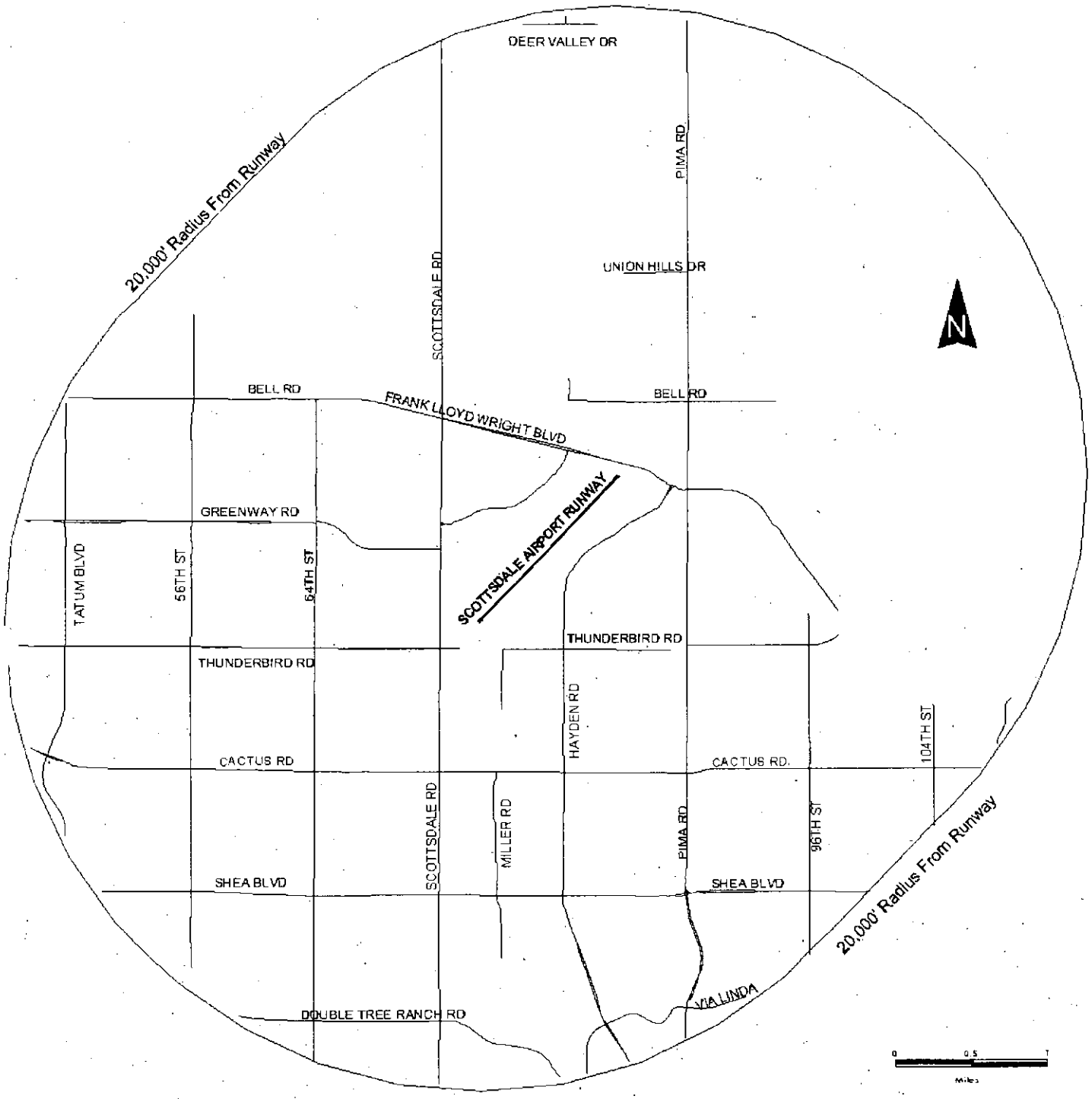




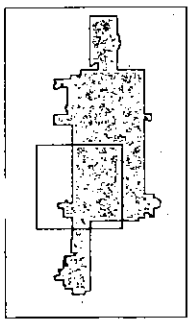
1 0.5 0 1 2 3 Miles

Map Date: October 18, 2001

Scottdale Airport Vicinity, FAA Notice of Proposed Construction



Area Of Detail



INSTRUCTIONS: Proposed temporary cranes or structures which exceed a height of 100:1 slope (100 ft horizontally for 1 foot vertically) from the nearest point of the runway must provide notice to the FAA via a 7460-1 form.

Scottsdale Airport Vicinity Development Guidelines and Checklist and Declaration (Short Form)

Name of Development:
Development Pre-Application Number:
Site Address/APN:
Maximum Elevation Height of Building + Appurtenances:
Latitude and Longitude of Highest Elevation Point:
Contact Name and Phone Number:

PROJECT REVIEW ANALYSIS DESCRIPTION (short form)

This information pertains to object height, land use compatibility, avigation easements, aircraft noise and overflight disclosure and is in addition to other City Codes (building, fire, zoning). **Please review and complete EACH SECTION of this Short Form Declaration and submit it along with your development application.**

Part I. Height Analysis

Applicants must conduct an analysis for all projects within 20,000 feet of Scottsdale Airport to determine if a 100:1 slope is penetrated by proposed structures, appurtenances, or construction equipment and/or cranes. If structures, appurtenances, or construction equipment penetrate the 100:1 slope area from the airport, then the project applicant must complete an Federal Aviation Administration (FAA) form 7460-1 and submit it to FAA unless exemptions apply. Please allow approximately 30 days for FAA to review your project. An analysis and submission of form 7460-1 can be completed at the following website https://oeaaa.faa.gov/oeaaa/external/portal.jsp and click on the "Notice Criteria Tool" on the left side. Accurate coordinates and site elevation will be needed to complete this analysis. Applicants are required to to file their 7460-1 electronically at the above referenced website.

Check ONLY one declaration below:

	1. Based on the height analysis of my proposed development, I declare structures or construction crane(s) DO NOT penetrate the airspace above the 100:1 slope from Scottsdale Airport's Runway. I attached a copy of the analysis to this form.
	2. Based on the height analysis of my proposed development structures or construction crane(s) DO penetrate the airspace above the 100:1 slope from Scottsdale Airport's Runway. I completed the required FAA form 7460-1 and submitted it to the FAA with latitude and longitudes points of the highest point of each proposed structure, including appurtenances. I attached a copy of the completed FAA documents to this form. I will also provide a copy of FAA's response and determination to the Aviation Director **prior to final plan approval.**

Part II. Aircraft Noise and Overflight Disclosure

I have reviewed the traffic pattern airspace map and executive summaries for the adopted Scottsdale Airport Master Plan and 14 C.F.R. Part 150 Noise Compatibility Study, as part of the due diligence to determine any future impacts on my development by proposed airport growth or operational changes. These documents are available on http://www.scottsdaleaz.gov/airport/Part150 or by calling the airport at 480-312-2321. In accordance with the Airport Influenace Area and Noise Overlay Zone and the Airport Overlay Zone Matrix for Scottsdale Airport (see attached), I understand the following may be true for my development and will provide the City of Scottsdale all appropriate documentation as applicable below:

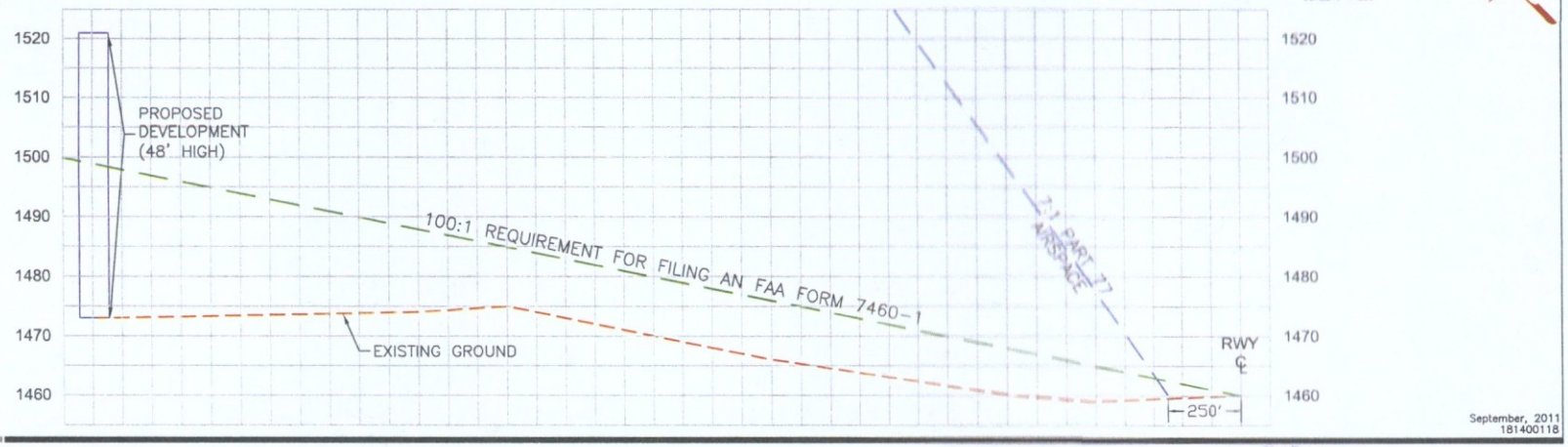
	Incorporate the Airport Disclosure For Development Around Scottsdale Airport language into the CC & R's or other procedural documents for my development.
	An Avigation Easement to the City of Scottsdale for recording. Download this document at http://www.scottsdaleaz.gov/bldgresources/forms/dedications.asp and must be completed **prior to final plan approval.**

The information provided for this project is certified to be true and correct. Staff will review the proposed development and all attached documents required by this form. All information shall be submitted and complete prior to approval by the City.

Signature of Applicant Date

Questions pertaining to this form or content required for airport review of proposed projects should be directed to Scottsdale Airport staff at (480) 312-2321.

Attachments:
1. Scottsdale Airport Vicinity Map FAA Notice
2. Airport Influence Area and Noise Overlay Zones
3. Airport Overlay Zone Matrix
4. Scottsdale Airport Traffic Pattern Airspace
5. Sample Airport Disclosure Notice
6. Avigation Easement



SCALE 1" = 200'

ORIGINAL SHEET – ANSI B

September, 2011
181400118

V:\52814\active\181400118-Scottsdale Place\drawings\Figure 1 - Exhibit A.dwg
2011/09/12 10:08 AM By: Hetland, Bill

Stantec Consulting Services Inc.
8211 South 48th Street
Phoenix, AZ U.S.A.
85044-5355
Tel. 602.438.2200
Fax. 602.431.9562
www.stantec.com

Client/Project
SCOTTSDALE PLACE
NOISE REPORT

Figure No.
1.0

Title
EXHIBIT A

DRAINAGE REPORTS

ABBREVEATED WATER & SEWER NEED REPORTS

WATER STUDY

WASTERWATER STUDY

STORMWATER WAIVER APPLICATION

hilgartwilson
ENGINEERS·PLANNERS·SURVEYORS

PRELIMINARY DRAINAGE REPORT

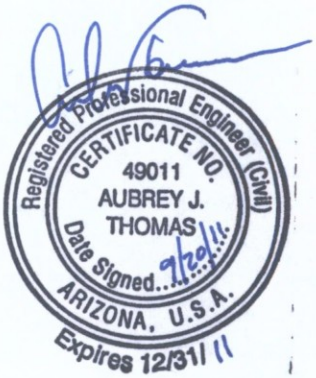
FOR

THE RESIDENCES AT ZOCALLO PLAZA

NWC OF GREENWAY/HAYDEN LOOP AND 73RD STREET
SCOTTSDALE, ARIZONA

Prepared For:
BROADMOOR ENTERPRISES
4020 N. Scottsdale Road
Scottsdale, AZ 85251

Prepared By:
HILGARTWILSON
1661 East Camelback Road, Suite 275
Phoenix, AZ 85016
Phone: (602) 490-0535
Fax: (602) 325-0161



Stormwater Review By:
Richard Anderson
Phone 480-312-2729
FAX 480-312-9202
E-MAIL rianderson@ScottsdaleAZ.gov
Review Cycle _____ Date 9/30/11

Approved

September 2011
HilgartWilson Project No. 1155

9-21-11 LS

Case Drainage

3555-11 2nd


Registered Professional Engineer (Civil)
CERTIFICATE NO.
46011
AUBREY L.
THOMAS
Date Signed
ARIZONA, U.S.A.
Expires 12/31/11

HILGARTWILSON REVIEW COMMENT TRACKING

DOCUMENT TYPE	PROJECT	LOCATION	DATE
MASTER REPORT ( ) CONCEPTUAL ( ) FINAL PLANS & SPECS (x) PRELIMINARY	**The Residences at Zocallo Plaza** **Preliminary Drainage Report & Grading and Drainage Plan**	**NEC of Greenway-Hayden Loop & 73rd Street**	9/20/11

REVIEWER						ACTION TAKEN ON COMMENT		
( ) HW (*internal*) ( ) CLIENT (x) CITY or COUNTY ( ) OTHER	NAME: Richard Anderson, P.E., CFM Senior Civil Engineer ORG.: City of Scottsdale	( ) ARCHITECT ( ) LAND ARCHITECT (x) CIVIL ( ) SANITARY	( ) MECHANICAL ( ) ELECTRICAL ( ) STRUCTURAL ( ) OTHER	REVIEW CONFERENCE (A = accepted) (W = withdrawn) (If not accepted explain)	DESIGN OFFICE (C = Correction made. List drawing or paragraph number where correction made) (If not corrected, explain)	BACK CHECK BY (Initials)		

ITEM NO.	LOCATION (drawing, report, etc.)	COMMENTS	REVIEW CONFERENCE	DESIGN OFFICE	BACK CHECK BY
1.	**Drainage Report**	The project proposes the use of mostly underground detention to satisfy the storage requirement for the project and the storage requirement for the existing office building located southeast of the project. In general, the underground detention systems will need to be designed, constructed, and operate in conformance with the City's policy for underground stormwater storage as contained in the section 4-1.403 of the City's Design Standards and Policies Manual (DSPM).	A	Agreed. Language has been added to Section 3.0 of the drainage report which states that final design, operation and maintenance of the underground detention basins will need to be in conformance with Section 4-1.403 of the DSPM.	
2.	**Drainage Report**	While the existing development on the project site and the existing office building located southeast of the project both currently have underground detention systems that drain by pumps, the City strongly discourages the use of pumps as a means to drain underground detention systems. For the proposed underground detention system draining to the southwest corner of the project site, an evaluation of the feasibility of the use of a shallower underground detention system should be made in an effort to design a system that drains by gravity. The City would like to meet with the applicant relative upon completion of the feasibility evaluation to discuss this issue and to make a determination of the whether the underground detention system may be allowed as proposed.	A	The requested analysis has been completed, and the proposed detention system that outfalls at the southern boundary of the Project has now been designed as a gravity-fed system.	
3.	**General**	Based on the preliminary grading and drainage plan contained in the drainage report, the stormwater storage system for the project site and the existing office building located southeast of the project is a combined system located within and serving both developments. AS such, the City will require an agreement between the owners of the project parcel(s) and the parcel for the existing office building parcel to relative to this issue. The agreement needs to clearly describe and disclose the shared nature of the system and define responsibility for the ongoing maintenance and potential repair of the system in the future. The agreement will need to be recorded against both	A	Language has been added to Section 3.0 of the drainage report that describes the requirement of this agreement.	

HILGARTWILSON REVIEW COMMENT TRACKING

DOCUMENT TYPE	PROJECT	LOCATION	DATE
MASTER REPORT ( ) CONCEPTUAL ( ) FINAL PLANS & SPECS (x) PRELIMINARY	**The Residences at Zocallo Plaza** **Preliminary Drainage Report & Grading and Drainage Plan**	**NEC of Greenway-Hayden Loop & 73rd Street**	9/20/11

REVIEWER						ACTION TAKEN ON COMMENT		
( ) HW (internal) ( ) CLIENT (x) CITY or COUNTY ( ) OTHER	NAME Richard Anderson, P.E., CFM Senior Civil Engineer ORG. City of Scottsdale	( ) ARCHITECT ( ) LAND ARCHITECT (x) CIVIL ( ) SANITARY	( ) MECHANICAL ( ) ELECTRICAL ( ) STRUCTURAL ( ) OTHER	REVIEW CONFERENCE (A = accepted) (W = withdrawn) (If not accepted explain)	DESIGN OFFICE (C = Correction made. List drawing or paragraph number where correction made) (If not corrected, explain)	BACK CHECK BY (Initials)

ITEM NO.	LOCATION (drawing, report, etc.)	COMMENTS	REVIEW CONFERENCE	DESIGN OFFICE	BACK CHECK BY
		properties so that it is made public and would be found as part of a title search by prospective buyers of the parcels. The agreement will be a requirement of the approval of final plans for the project.			
4.	**Drainage Report**	The preliminary grading and drainage plan shows two major on-site stormwater storage systems proposed for the project site and the existing office building located southeast of the project. Drain time calculations for the tow on-site stormwater storage systems should be included in the report illustrating each system drains within 12 to 24 hours as required by the DSPM. The calculations should provide the average outflow rate for pump proposed for each system.	A	Average outflow rate calculations for both systems have been added to the Detention and Dewatering Table in Appendix B.	
5.	**Drainage Report**	Figure 3 of the drainage report should show the delineation of each of the on-site basins as contained in the detention calculation table in the report. Additionally, this exhibit should show the two large basins corresponding to the two on-site stormwater storage systems.	A	The two large basins, within which the sub-basins share a common outfall, are now more clearly delineated on Figure 3.	
6.	**Drainage Report**	The detention calculation table in the report should be broken down by the two on-site stormwater storage systems and provide a total storage requirement for each.	A	The volume requirements for all sub-basins drainage to each individual detention facility have been combined in the Detention and Dewatering table. As shown in the table, each of these facilities provides enough stand-alone storage volume for their respective drainage areas. The provided detention volumes for the two main systems have also been totaled to assist with the dewatering calculations.	
7.	**Drainage Report**	The high water elevation of the above ground detention basins located along 73rd Street is higher than existing and proposed finished grade above the underground detention basin located just downstream. As a	A	The ultimate outfall for the surface basin during an event exceeding the 100-year, 2-hour design storm is 73rd	

HILGARTWILSON REVIEW COMMENT TRACKING

DOCUMENT TYPE						PROJECT	LOCATION	DATE
	MASTER REPORT		CONCEPTUAL		FINAL	**The Residences at Zocallo Plaza** **Preliminary Drainage Report &** **Grading and Drainage Plan**	**NEC of Greenway-Hayden Loop & 73rd Street**	9/20/11
	PLANS & SPECS	x	PRELIMINARY					

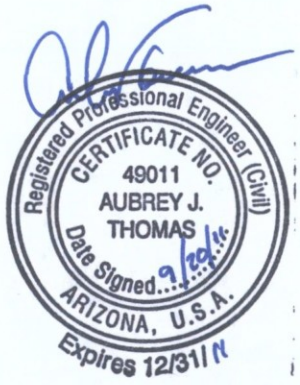
REVIEWER							ACTION TAKEN ON COMMENT		
	HW (internal)	NAME	Richard Anderson, P.E., CFM Senior Civil Engineer		ARCHITECT	MECHANICAL	REVIEW CONFERENCE (A = accepted) (W = withdrawn)	DESIGN OFFICE (C = Correction made. List drawing or paragraph number where correction made)	BACK CHECK BY
	CLIENT				LAND ARCHITECT	ELECTRICAL			
x	CITY or COUNTY	ORG.	City of Scottsdale	x	CIVIL	STRUCTURAL			
	OTHER				SANITARY	OTHER			

ITEM NO.	LOCATION (drawing, report, etc.)	COMMENTS	(If not accepted explain)	(If not corrected, explain)	(Initials)
		result of the storm drain connections between the two basins, if all basins were full during a rainfall event, the head from the above ground basins would cause the underground detention basin to be under pressure. The report should clarify how these basins will work together. Basins designed in series will need to be taken into account in drain time calculations.		Street. During regular dewatering of the surface basin, flows will be metered through an orifice plate prior to entering the bleed-off pipe that feeds toward the lower underground retention vault. This orifice will be sized such that the outflow from the surface basin will not exceed the discharge rate of the pump that will be dewatering the underground vault. As such, the underground vault is not expected to be placed under pressure as a result of outflows from the surface basin.	
8.	**Drainage Report**	City GIS information shows a number of existing drainage easements within the project parcels in conflict with proposed buildings and the development in general. The easements will need to be abandoned by the City prior to approval of construction plans for the project.	A	Agreed.	
9.	**Drainage Report**	The drainage report submitted was a case level drainage report. There will likely be additional comments that result from the more detailed review of final drainage report as part of construction documents for the project.	A	Noted.	

PRELIMINARY DRAINAGE REPORT
FOR
THE RESIDENCES AT ZOCALLO PLAZA

TABLE OF CONTENTS

APPENDICES



1.0 INTRODUCTION

HilgartWilson has been contracted to complete a drainage analysis for the proposed site improvements for the Residences at Zocallo Plaza (the Project). The Project is located on the northwest corner of Greenway/Hayden Loop (G-H Loop) and 73rd Street in Scottsdale, Arizona. The project site is bound by an existing hotel development to the north, Dial Boulevard (73rd Street) and an office complex to the east, G-H Loop and an office building to the south and a private drive (circulation driveway) and commercial development to the west. The area surrounding the site generally drains to the south at an approximate slope of 1%. The Project lies within Section 2, Township 3 north, Range 4 east of the Gila and Salt River Baseline and Meridian. The Vicinity Map (**Figure 1, Appendix A**) presents an overview of the site location and surrounding areas. The proposed improvements for the Project include construction of four multi-story apartment buildings, surface and underground parking areas, sidewalks, driveways, and landscaped areas.

The 7.4 acre Project site is currently occupied by a restaurant/nightclub (Barcelona), an office building and their respective surface parking areas.

1.1 Site Location Relative to Known FEMA Flood Hazard Zones

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) coverage for the Project is provided on FIRM panel 04013C1245H (FEMA, September 30, 2005). According to this FIRM the Project resides entirely within a flood hazard Zone X. FEMA defines this flood hazard zone as follows:

> Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

The FEMA FIRM panel and the Project boundary are shown on the FEMA Map (**Figure 2, Appendix A**).

2.0 EXISTING DRAINAGE PATTERNS

2.1 Onsite

As mentioned in Section 1.0, the Project site is currently an office building, restaurant/nightclub and parking areas. Stormwater runoff produced onsite is routed via surface drainage and a system of storm drain pipes to a series of surface detention basins and underground stormwater detention vaults. According to the grading and drainage plans prepared for these improvements (CMX, 2002- excerpts included in **Appendix D**) the existing onsite detention facilities were designed to provide enough volume to detain the 100-year, 2-hour stormwater runoff. The detention facilities were also designed to dewater via two bleed-off pipes that were connected to existing storm drains located in 73rd Street and G-H Loop. Both bleed-off pipe systems rely upon pumps to remove stormwater from underground detention.

2.2 Offsite

73rd Street, G-H Loop are fully improved, including curb, gutter and sidewalk. Both roadways also have a system of storm drains to collect the runoff produced within the respective right-of-ways. As such, no offsite drainage impacts are expected from the south or east. The existing hotel development located north of the Project appears to be developed such that stormwater is managed/detained onsite. The hotel is also separated from the Project site by an existing masonry block wall. No offsite drainage impacts are expected from this direction (north). Runoff from the private drive that fronts the western boundary of the Project enters the site via a series of existing scuppers. A portion of the existing office complex and parking area that is located at the southeast corner of the site also currently drains into the Project limits.

3.0 PROPOSED DRAINAGE CONDITIONS

The proposed grading improvements will allow runoff generated in the interior of the Project to be discharged to a series of detention facilities. Surface drainage, roof drains and underground storm drain pipes will be used to convey onsite flows to a system of surface detention areas and 96-inch underground detention vaults. An overview of the proposed drainage improvements and patterns is shown on the Preliminary Drainage Plans (**Figures 3 & 4, Appendix A**).

The onsite detention facilities have all been sized to accommodate the 100-year, 2-hour runoff volume produced by the tributary drainage area in accordance with City of Scottsdale design standards. Detention calculations are included in **Appendix B**. Volume has been provided in the onsite detention facilities to continue to accommodate runoff from the half-street frontage of the private drive that fronts the west boundary of the Project, as well as the portion of the existing office building parking lot (located at the southeast corner of the site) that drains toward the Project. All of the existing underground retention vaults will be removed from the site with the exception of the dual vaults that stretch between the Project and the office building parking lot (see **Figures 3 & 4**). This vault, which will only be partially removed, will continue to receive runoff from the tributary portion of both projects. An agreement will need to be prepared and recorded between the Project and the office building owner which describes the shared nature of this detention facility and ongoing repair/maintenance responsibilities of both parties. Additionally drainage/access easements will need to be dedicated over the rest of the Project's underground detention facilities. The Project's final design will establish an operation and maintenance policy to ensure the proper functioning of the detention and bleed off system in accordance with Section 4-1.403 of the City's Design Standards and Policies Manual.

The underground detention system and the surface basins will continue to bleed-off into the existing storm drain systems located in 73rd Street and G-H Loop. The proposed surface detention basin and the existing detention vaults that will remain (Detention Basins 1 and 2 on **Figures 3 & 4**, respectively) will rely upon the existing pump station and bleed-off pipe located along 73rd Street for dewatering. The average discharge rate required for dewatering this system from full within 12 to 24 hours of a storm event is 0.2 cfs (dewatering calculations are included in **Appendix B**). At the time of construction the condition of the existing pump station and bleed-off pipe should be verified to ensure their capability to discharge at the required rate. An orifice plate will be constructed at the outlet of the surface detention basin (Basin 1) to meter the outflow in such a manner that it will not overwhelm

Basin 2 to which it will drain (which is set at a lower elevation). Specifically, the bleed-off rate for Basin 1 will be held below the discharge rate of the pump station that will serve to ultimately dewater Basins 1 and 2. During a storm event that produces a runoff volume in excess of Basin 1's capacity, any overflow will break over easterly into 73rd Street and will not impact the Project's other detention facilities.

Underground detention Basins 3, 4 and 5 will be connected by stormdrain, and will all dewater to the existing G-H Loop stormdrain via gravity flow. The inverts of each of these detention vaults, as well as that of the proposed connection to the G-H stormdrain are shown on **Figures 3** & **4**. The average discharge rate required for dewatering this system from full within 12 to 24 hours of a storm event is 0.5 cfs

Detailed design of onsite drainage facilities will be prepared with the improvement plans for the Project. The final drainage report will include design calculations for the proposed drainage inlets, storm drain, bleed-off pipes, swales, erosion revetment, detention facilities and all other applicable drainage appurtenances.

3.1 UNDERGROUND DETENTION FAILURE ANALYSIS

HilgartWilson has quantified the total 10-year and 100-year peak flows that would be produced by the areas within the site that drain to the underground detention vaults. These portions of the site were combined into a single 5.4 acre drainage area. If the underground detention system were to fail such that no runoff was able to enter the vaults, there would still be significant storage on the pavement surface around the detention inlets. These sump areas would fill before eventually breaking-over to downstream areas. This surface storage-discharge relationship would provide significant slowing and attenuation to overall discharge from the Project. In lieu of a detailed hydrologic analysis, and in order to remain conservative, peak flowrates were determined without considering this attenuation and without including any initial time of concentration. Rational Method calculations, included in **Appendix C** yielded a 10-year peak flow of 13 cfs, and a 100-year peak of 29 cfs. If a total failure of the underground detention system occurred during a 100-year event, a small portion of the runoff would exit the northern portion of the site into the Circulation Drive. The majority of the stormwater from the Project would collect and proceed southerly in the drive aisle located along the Project's east side. These flows would outfall to the open space tract located between Building 1 and the existing building located along the Project's southern boundary. This tract will be improved to provide positive drainage away from the adjacent buildings, under sidewalks and out of the site. 100-year flow depths within this tract, and at other break-over points within the site, are expected to be approximately 6 inches deep. The resulting 100-year high water elevation occurring at the tract during such an event would reach approximately 1478.5. This allows more than 1 foot of freeboard to be maintained to the proposed finished floor elevations (1484.00) and the finished floor elevation of the existing building located at the southeast corner of the Project (1480.0).

The flows leaving the site would eventually discharge to G-H Loop. In order to analyze the potential impact that runoff from the Project would have on the public right-of-way during such an event, HilgartWilson prepared a street capacity analysis for G-H Loop. This analysis conservatively assumed that the stormdrain system that services G-H Loop (48-inch pipe along the Project frontage) would not have any excess capacity. The surface capacity of G-H Loop was quantified in accordance with the

requirements listed in Figure 4.1-2 Hydraulic Design Criteria of the City's 2010 Standards and Policies Manual. The 10-year and 100-year half-street capacities for G-H Loop were determined to be 15 cfs and 32 cfs, respectively. These calculations demonstrate that G-H Loop has adequate capacity to receive the un-attenuated, emergency flows from the Project in the unlikely event that the entire onsite detention system fails.

The proposed onsite grading has been designed such that flows are directed away from the underground parking garage entrances. Break-over points in the adjacent driveway and parking areas have been set at least 6 inches below the high point of the respective parking garage ramps. Since the depth of flow at these break-over points would not be expected to exceed 6 inches during a 100-year storm event, no flows are expected to enter the underground garage areas during a detention system failure.

4.0 CONCLUSIONS

The improvements included in the Preliminary Grading and Drainage Plan have been designed in accordance with all applicable City of Scottsdale drainage design guidelines and the drainage patterns outlined for adjacent developments. No adverse impacts to offsite properties are anticipated as a result of these improvements. Existing drainage patterns will be maintained through and around the Project.

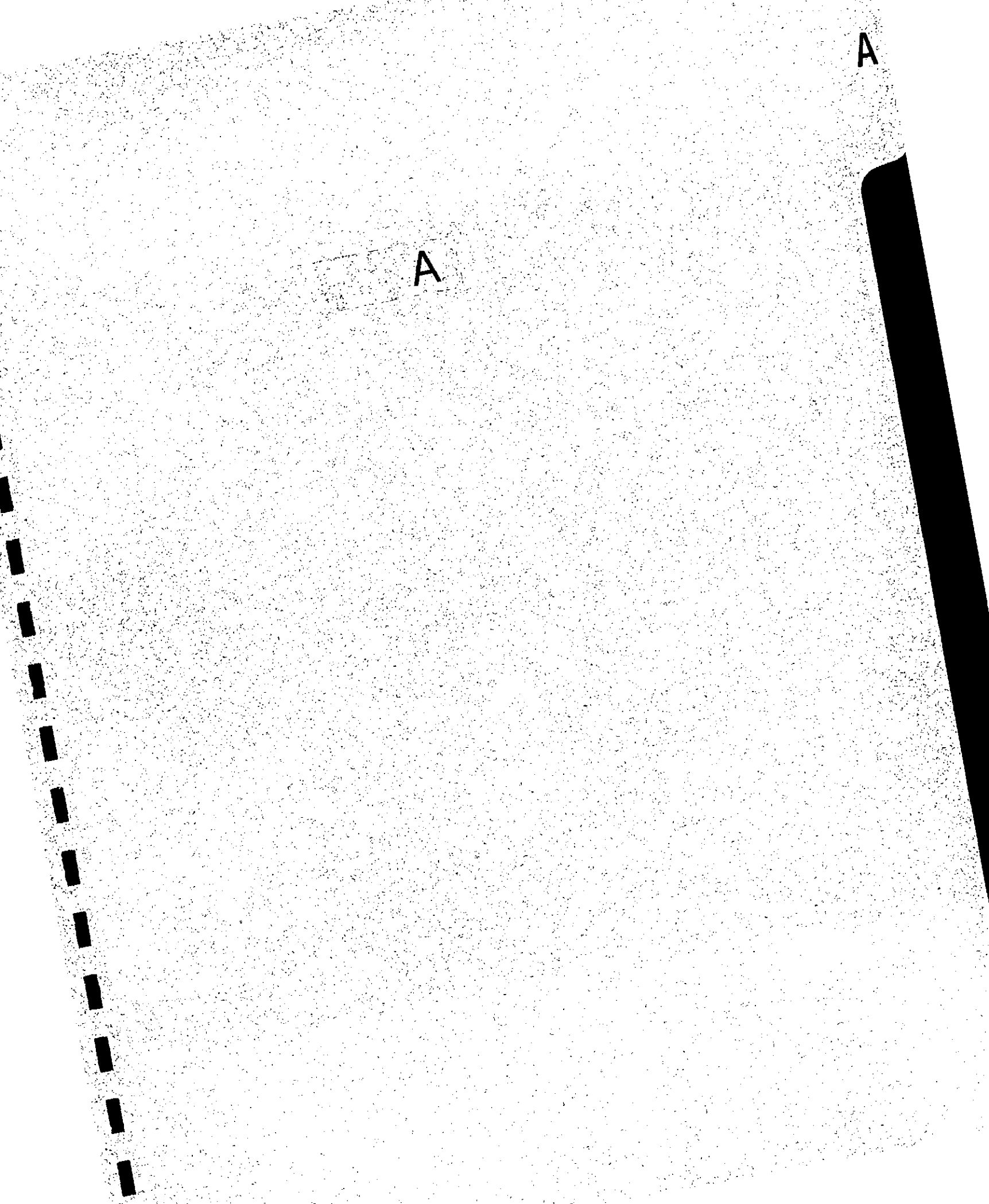
5.0 REFERENCES

City of Scottsdale. (January, 2010). *Design Standards & Policies Manual.* City of Scottsdale, Arizona.

Federal Emergency Management Agency, FEMA (September 2005). *Flood Insurance Rate Maps 04013C1245H.*

Flood Control District of Maricopa County (November 2009). *Maricopa County Drainage Manual Volume I, Hydrology*

Flood Control District of Maricopa County (January 1996). *Maricopa County Drainage Manual Volume II, Hydrology*


A
A

APPENDIX A

FIGURES

LEGEND

PROJECT LOCATION

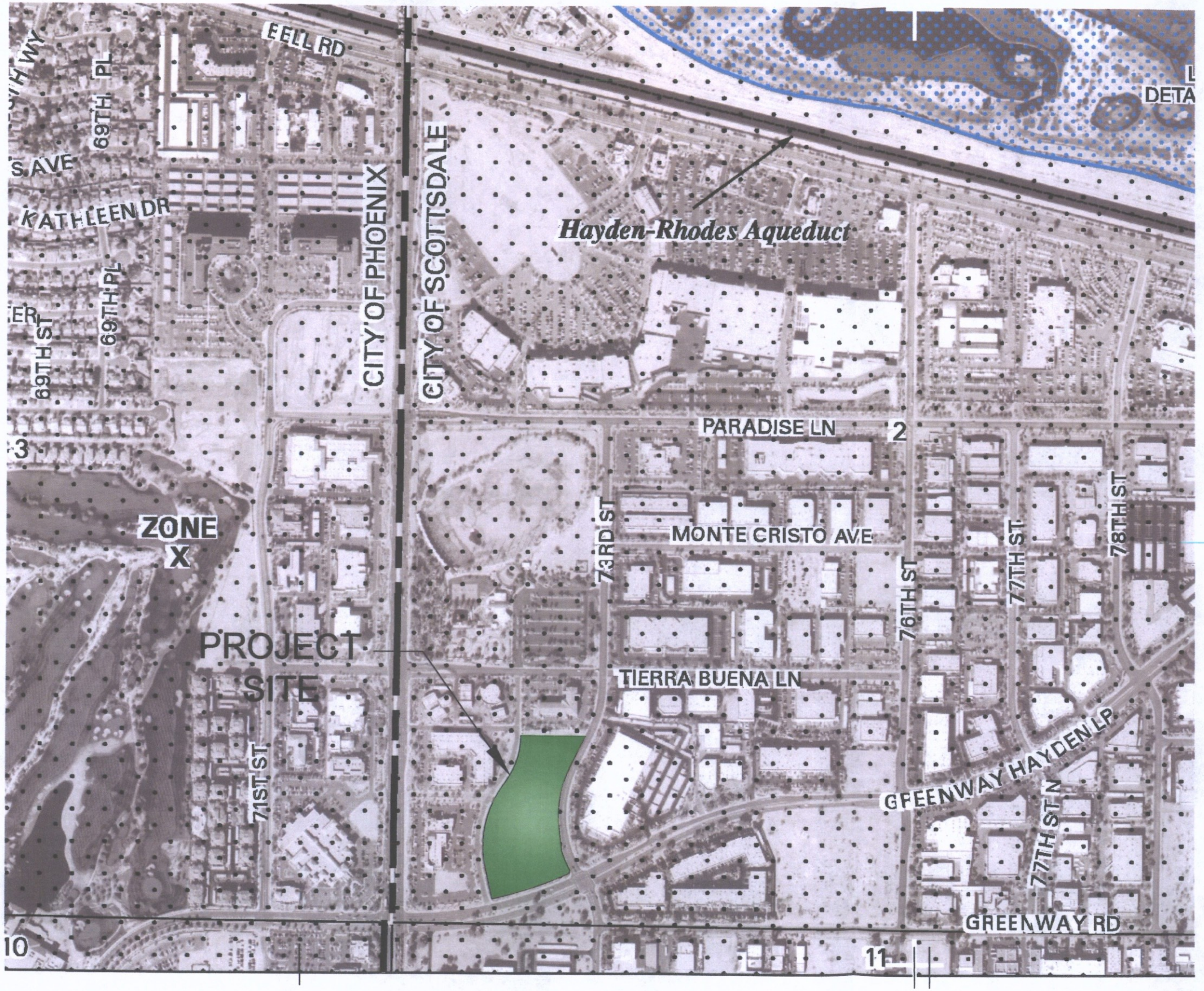
PROJ.#:	1155
DATE:	SEPT 2011
SCALE:	1"=1000'
DRAWN BY:	JDL
CHECKED BY:	AT

THE RESIDENCES AT ZOCALLO PLAZA
NWC OF GREENWAY HAYDEN LOOP & DIAL BLVD.
SCOTTSDALE, ARIZONA

FIG 1: VICINITY MAP

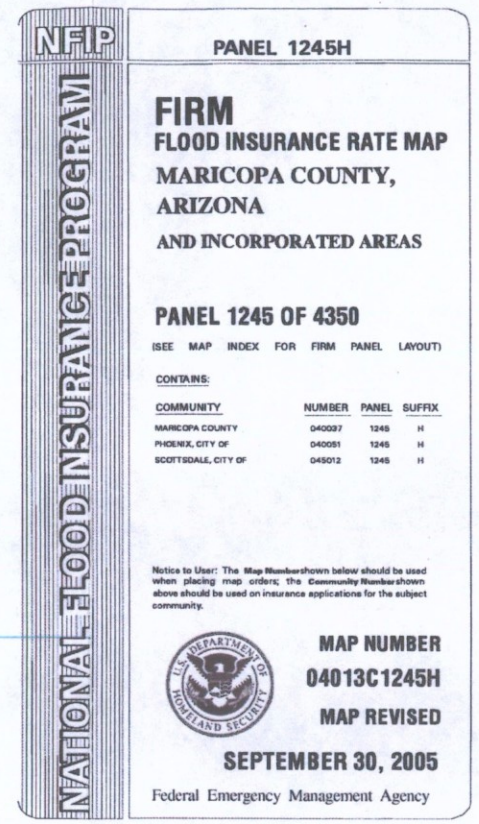
hilgartwilson
ENGINEERS • PLANNERS • SURVEYORS
1661 E. CAMELBACK RD., STE. 275
PHOENIX, AZ 85016
PH 602.490.0535 FAX 602.325.0161

U:\1100\1155\REPORTS\DRAINAGE\Exhibits\1155 FIG 1 – VIC MAP.dwg 9/20/2011 4:33 PM



LEGEND

PROJECT LOCATION



NFIP

PANEL 1245H

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1245 OF 4350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	1245	H
PHOENIX, CITY OF	040051	1245	H
SCOTTSDALE, CITY OF	045012	1245	H

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
04013C1245H
MAP REVISED
SEPTEMBER 30, 2005
Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

N

600 300 0 600 1200
SCALE FEET

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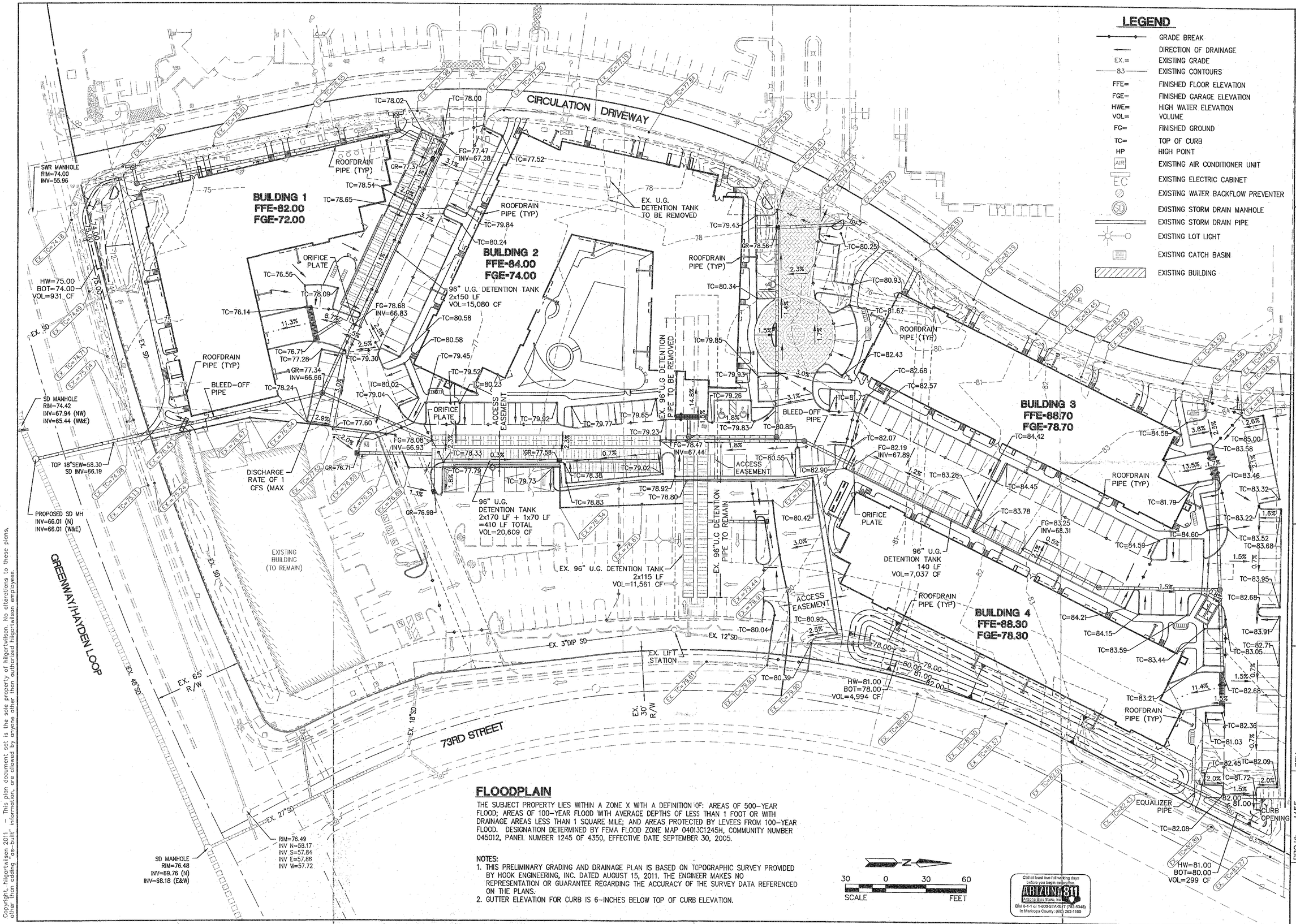
PHOENIX, AZ 85016
PH 602.490.0535 FAX 602.325.0161

THE RESIDENCES AT ZOCALLO PLAZA
NWC OF GREENWAY-HAYDEN LOOP & DIAL BLVD.
SCOTTSDALE, ARIZONA

FIG 2. FEMA MAP

PROJ.#	1155
DATE:	SEPT 2011
SCALE:	1"=600'
DRAWN BY:	JDL
CHECKED BY:	AT

U:\1100\1155\REPORTS\DRAINAGE\Exhibits\1155 FIG 2 – FEMA MAP.dwg 9/20/2011 12:46 PM



LEGEND

- GRADE BREAK
- DIRECTION OF DRAINAGE
- EX.= EXISTING GRADE
- 83 EXISTING CONTOURS
- FFE= FINISHED FLOOR ELEVATION
- FGE= FINISHED GARAGE ELEVATION
- HWE= HIGH WATER ELEVATION
- VOL= VOLUME
- FG= FINISHED GROUND
- TC= TOP OF CURB
- HP HIGH POINT
- AIR EXISTING AIR CONDITIONER UNIT
- EC EXISTING ELECTRIC CABINET
- EXISTING WATER BACKFLOW PREVENTER
- SD EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN PIPE
- EXISTING LOT LIGHT
- EXISTING CATCH BASIN
- EXISTING BUILDING

FLOODPLAIN

THE SUBJECT PROPERTY LIES WITHIN A ZONE X WITH A DEFINITION OF: AREAS OF 500-YEAR FLOOD; AREAS OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD. DESIGNATION DETERMINED BY FEMA FLOOD ZONE MAP 04013C1245H, COMMUNITY NUMBER 045012, PANEL NUMBER 1245 OF 4350, EFFECTIVE DATE SEPTEMBER 30, 2005.

NOTES:
1. THIS PRELIMINARY GRADING AND DRAINAGE PLAN IS BASED ON TOPOGRAPHIC SURVEY PROVIDED BY HOOK ENGINEERING, INC. DATED AUGUST 15, 2011. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING THE ACCURACY OF THE SURVEY DATA REFERENCED ON THE PLANS.
2. GUTTER ELEVATION FOR CURB IS 6-INCHES BELOW TOP OF CURB ELEVATION.

30 0 30 60
SCALE FEET

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

hilgartwilson
ENGINEERS • PLANNERS • SURVEYORS
1661 E. CAMELBACK RD., STE. 275 / PHOENIX, AZ 85016
PH 602.490.0535 / FAX 602.325.0161
www.hilgartwilson.com

THE RESIDENCES AT ZOCALLO PLAZA

15440 NORTH GREENWAY-HAYDEN LOOP
SCOTTSDALE, ARIZONA

FIG 4: PRELIMINARY GRADING AND DRAINAGE PLAN

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
49011
AUBREY J. THOMAS
Date Signed 9/20/11
ARIZONA U.S.A.
Expires 12/31/2011

REV.:	
PROJ#:	1155
DATE:	SEPT. 2011
SCALE:	1"=30'
DRAWN:	HW
DESIGNED:	HW
APPROVED:	RH

DWG. NO. 1
SHT. 1 OF 1

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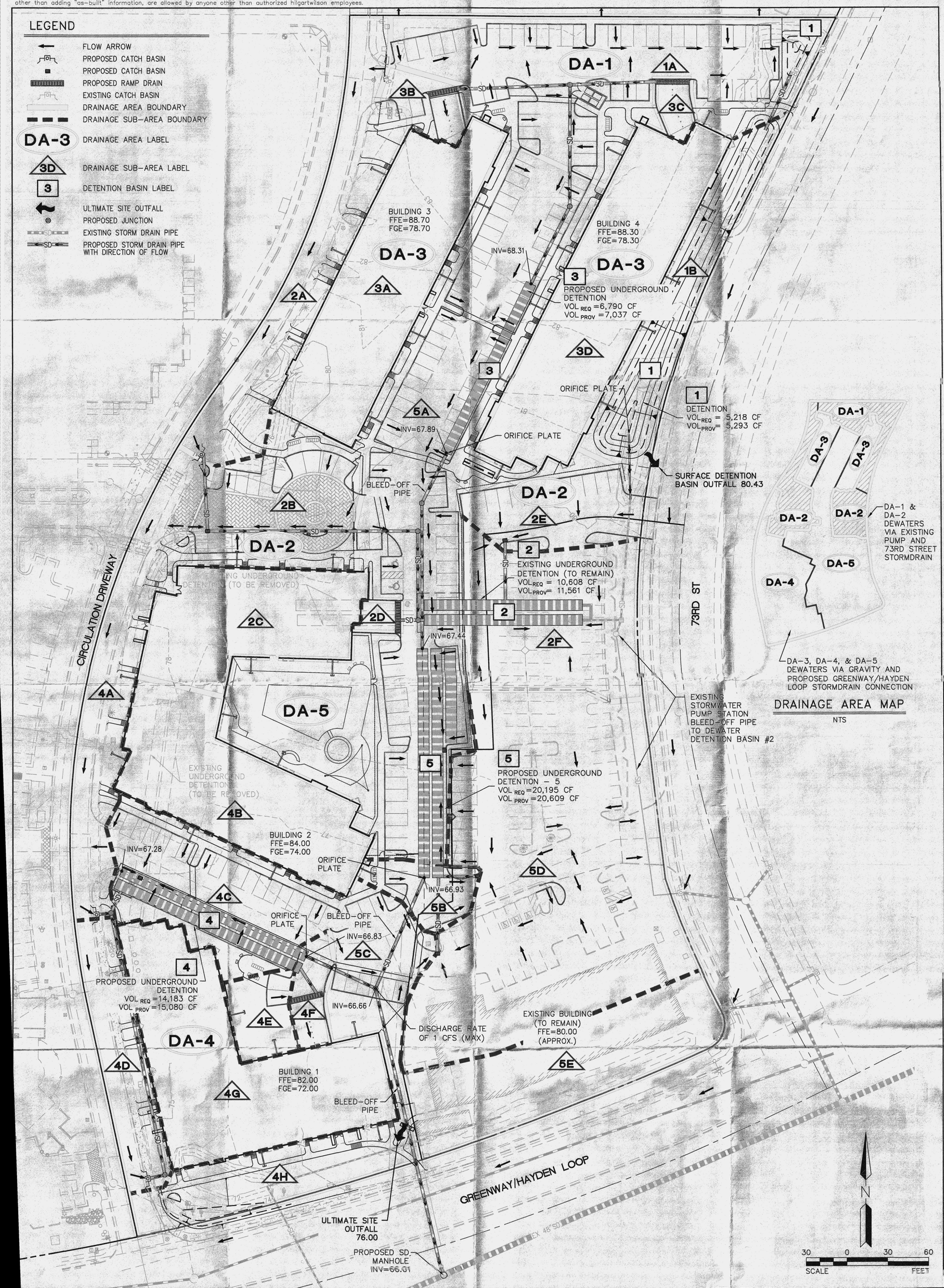

DWG. NO. 1	PROJ#: 1155	REV.:
SHT. 1 OF 1	DATE: SEPT. 2011	
	SCALE: 1"=30'	
	DRAWN: JDL	
	DESIGNED: JW	
	APPROVED: AT	

THE RESIDENCES AT ZOCALLO PLAZA

NWC OF GREENWAY-HAYDEN LOOP & DIAL BLVD.
SCOTTSDALE, ARIZONA

FIG 3: PRELIMINARY DRAINAGE PLAN

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B

B

APPENDIX B

DETENTION & DEWATERING CALCULATIONS

DETENTION & DEWATERING CALCULATION TABLE

Project: Zocallo
Prepared by: HW
Date: September, 2011

hilgartwilson
ENGINEERS • PLANNERS • SURVEYORS

Volume Required = C * (P/ 12) * A

C = 0.94 -Weighted runoff coefficient per Figure 4.1-4 of the City of Scottsdale Design Standards & Policies Manual (2010)

P = 2.30 in -Precipitation depth associated with the 100-year, 2-hour storm event (NOAA 14)

A = Plan-view area of an individual drainage area.

Drainage Area/ Detention Basin ID	Area [ft^3]	Weighted C	Detention Volume Required [ft^3]	Detention Volume Required (total)	Surface Detention Provided [ft^3]	Underground Detention Vault Diameter [ft]	Length of Underground Detention Vault Provided [LF]	TOTAL Detention Volume Provided [ft^3]	Combined Detention Volumes for Dewatering [ft^3]	Minimum Average Discharge Rate for 24-Hour Dewatering [cfs]
1A	24,414	0.94	4,399	5,218	5,293	-	-	5,293	16,854	0.2
1B	9,505	0.45	820							
2A	13,572	0.94	2,445	10,608	0	8	230	11,561		
2B	10,982	0.94	1,979							
2C	11,518	0.94	2,075							
2D	738	0.94	133							
2E	7,965	0.94	1,435							
2F	14,103	0.94	2,541							
3A	16,253	0.94	2,928	6,790	0	8	140	7,037	42,726	0.5
3B	2,316	0.94	417							
3C	1,069	0.94	193							
3D	18,049	0.94	3,252							
4A	12,320	0.94	2,220	14,183	0	8	300	15,080		
4B	14,293	0.94	2,575							
4C	13,078	0.94	2,356							
4D	6,921	0.94	1,247							
4E	2,883	0.94	519							
4F	2,070	0.94	373							
4G	18,610	0.94	3,353							
4H	8,549	0.94	1,540							
5A	48,956	0.94	8,820	20,195	0	8	410	20,609		
5B	2,977	0.94	536							
5B	7,101	0.94	1,279							
5D	39,476	0.94	7,112							
5E	13,581	0.94	2,447							
TOTAL	321,299			56,995	5,293		1,080	59,580		0.7

C

APPENDIX C

UNDERGROUND DETENTION FAILURE HYDROLOGIC & HYDRAULIC ANALYSIS

RATIONAL METHOD CALCULATIONS

DRAINAGE SUBAREA SUMMARY TABLE

Project: The Residences at Zocallo

Prepared by: A. Thomas

Date: September, 2011

hilgartwilson
ENGINEERS • PLANNERS • SURVEYORS

Drainage Subarea ID(s)	Concentration Point	Land Use Category[1]	Total Area	Total Area	Length of Longest Flowpath	Length of Longest Flowpath	Top Elevation	Bottom Elevation	Change in Elevation	Slope	Slope
		Apartments & Condominiums									
		[ft^2]	[ft^2]	[ac]	[ft]	[mi]	[ft]	[ft]	[ft]	[ft/ft]	[ft/mi]
2A-5B	Greenway-Hayden Loop	234,175	234,175	5.38	1080	0.205	1484.00	1474.00	10.00	0.0093	49

[1]-Weighted runoff coefficient per Figure 4.1-4 of the City of Scottsdale Design Standards & Policies Manual (2010)

WEIGHTED RUNOFF COEFFICIENT CALCULATIONS

Project: The Residences at Zocallo

Prepared by: A. Thomas

Date: September, 2011

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ENGINEERS • PLANNERS • SURVEYORS

Landuse[1]	10-Year C Coefficient	100-Year C Coefficient
Apartments & Condominiums	0.76	0.94

[1]-Weighted runoff coefficient per Figure 4.1-4 of the City of Scottsdale Design Standards & Policies Manual (2010)

Drainage Subarea ID(s)	Concentration Point	Subarea Surface Types & Areas			
		Apartments & Condominiums	Total	Weighted Coefficient	Weighted Coefficient
		[ft^2]	[ft^2]	C_w	C_w
2A-5B	Greenway-Hayden Loop	234,175	234,175	0.76	0.94

TIME OF CONCENTRATION CALCULATIONS

Project: The Residences at Zocalo

Prepared by: A. Thomas

Date: September, 2011

hilgartwilson
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Drainage Subarea ID(s)	Concentration Point	Length of Longest Flowpath [mi]	Area [ac]	Slope [ft/mi]	Adjusted Slope [ft/mi]	$m_{weighted}$	$b_{weighted}$	K_b	$11.4 \times L^{0.5} \times K_b^{0.52} \times S^{-0.31}$	10-Year Storm Analysis			100-Year Storm Analysis		
										Assumed T_c [min]	I_{10} [in/hr]	T_c [min]	Assumed T_c [min]	I_{100} [in/hr]	T_c [min]
2A-5B	Greenway-Hayden Loop	0.205	5.38	49	49	-0.01375	0.08000	0.0700	0.387	14.9	3.21	14.9	12.0	5.68	12.0

From Equation 3.2 of the Flood Control District of Maricopa County (FCDMC) *Drainage Design Manual for Maricopa County, Arizona, Hydrology*, November, 2009

$T_c = 11.4 * L^{0.5} * K_b^{0.52} * S^{-0.31} * I^{-0.38}$

Where

T_c = The time of concentration in hours

L = The length of the longest flow path in miles

K_b = The watershed resitance coefficient (Kb = m * log(A) + b)

S = The watercourse slope in ft/ mi

I = The rainfall intensity in in/ hr

m & b = Equation parameter from Table 3.1 of FCDMC

A = Drainage area in acres

PEAK FLOW RATE CALCULATIONS

Project: The Residences at Zocallo

Prepared by: A. Thomas

Date: September, 2011

hilgartwilson
ENGINEERS · PLANNERS · SURVEYORS

Drainage Subarea ID(s)	Concentration Point	Average Slope [ft/ft]	Total Area [ac]	10-Year Storm Event			100-Year Storm Event		
				Weighted C	Rainfall Intensity [in/hr]	Flow Rate [1] [cfs]	Weighted C	Rainfall Intensity [in/hr]	Flow Rate [1] [cfs]
2A-5B	Greenway-Hayden Loop	0.0093	5.38	0.76	3.2	13.1	0.94	5.7	28.7

NOTES:

(1) The flow rate values shown were calculated using the following process:

From Equation 3.1 of the Flood Control District of Maricopa County (FCDMC) *Drainage Design Manual for Maricopa County, Arizona, Hydrology*, January, 2009

Q = CiA

Where

Q = The the peak discharge (cfs) from a given area.

C = A coefficient relating the runoff to rainfall.

i= The average rainfall intensity (inches/ hour), lasting for a T_c

T_c = The time of concentration (hours)

A= The drainage area (acres)

In order to solve for the flow rate (Q), the Rational Method equation shown above was used to calculate the peak discharge at each concentration point .

STREET CAPACITY CALCULATIONS

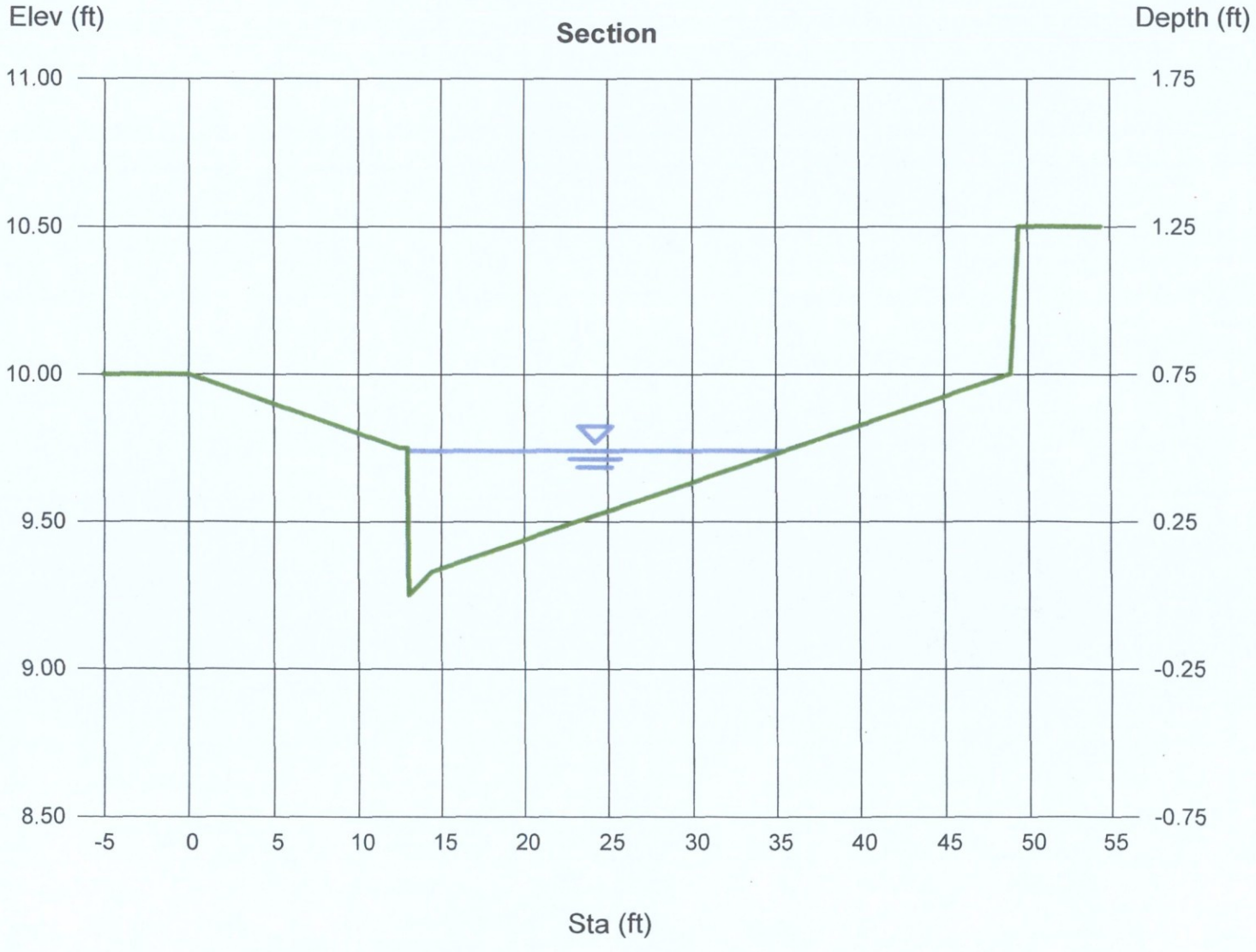
Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2012 by Autodesk, Inc. Wednesday, Sep 7 2011

Greenway-Hayden Loop - 10-Year Street Capacity

User-defined		Highlighted	
Invert Elev (ft)	= 9.25	Depth (ft)	= 0.49
Slope (%)	= 0.60	Q (cfs)	= 13.10
N-Value	= 0.015	Area (sqft)	= 4.99
		Velocity (ft/s)	= 2.63
Calculations		Wetted Perim (ft)	= 23.03
Compute by:	Known Q	Crit Depth, Yc (ft)	= 0.49
Known Q (cfs)	= 13.10	Top Width (ft)	= 22.61
		EGL (ft)	= 0.60

(Sta, El, n)-(Sta, El, n)... (-5.00, 10.00, 0.015)-(12.50, 9.75, 0.015)-(13.00, 9.75, 0.015)-(13.08, 9.25, 0.015)-(14.50, 9.33, 0.015)-(49.00, 10.00, 0.015)-(49.50, 10.50, 0.015)



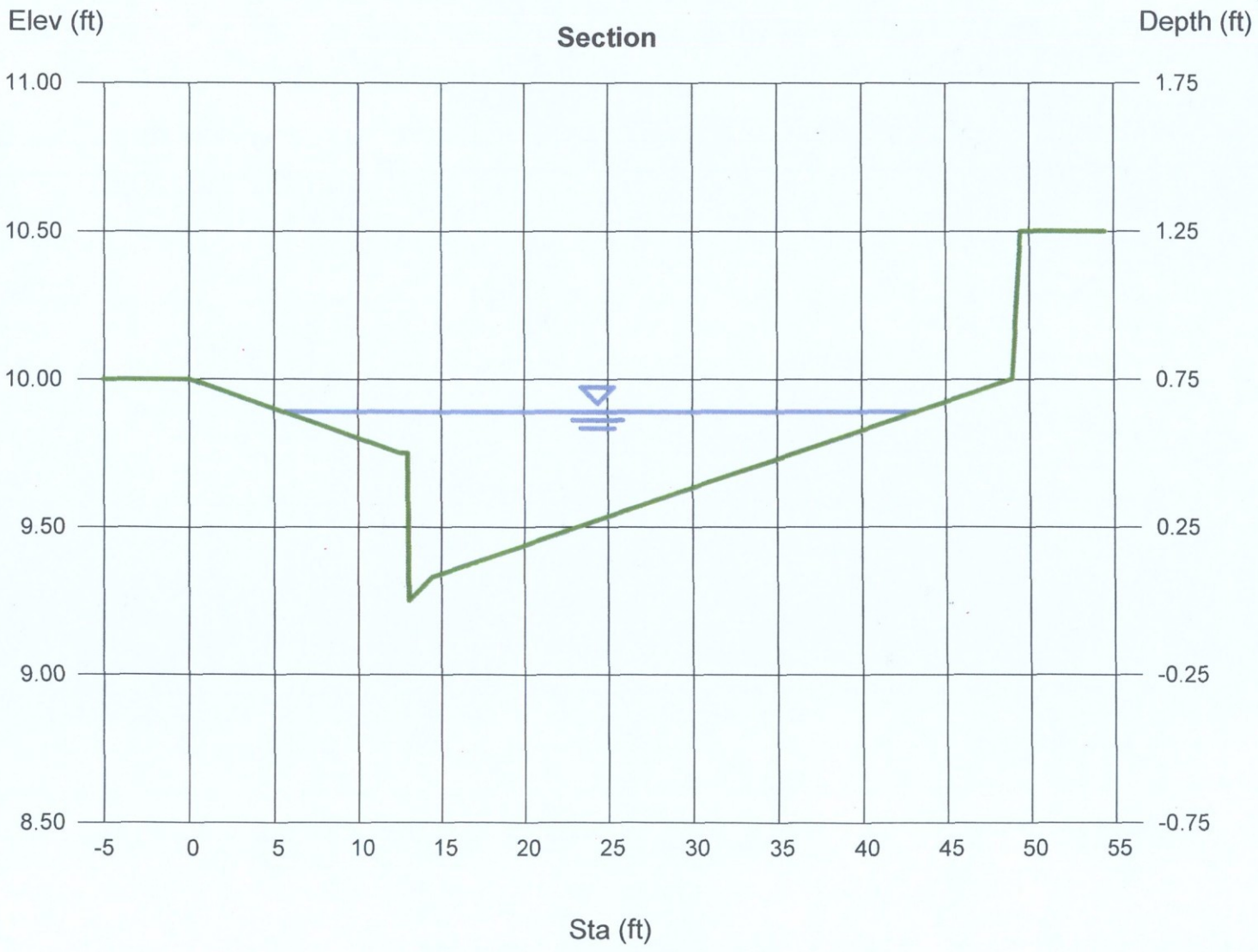
Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2012 by Autodesk, Inc. Wednesday, Sep 7 2011

Greenway-Hayden Loop - 100-Year Street Capacity

User-defined		Highlighted	
Invert Elev (ft)	= 9.25	Depth (ft)	= 0.64
Slope (%)	= 0.60	Q (cfs)	= 28.70
N-Value	= 0.015	Area (sqft)	= 9.52
		Velocity (ft/s)	= 3.02
Calculations		Wetted Perim (ft)	= 38.27
Compute by:	Known Q	Crit Depth, Yc (ft)	= 0.66
Known Q (cfs)	= 28.70	Top Width (ft)	= 37.84
		EGL (ft)	= 0.78

(Sta, El, n)-(Sta, El, n)... (49.00, 10.00, 0.015)-(49.50, 10.50, 0.015)



D

APPENDIX D

PREVIOUS GRADING AND DRAINAGE EXCERPTS (CMX)

ZOCALLO BARCELONA RESTAURANT

GREENWAY – HAYDEN LOOP
SCOTTSDALE, ARIZONA

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER
OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST,
GILA & SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION
045012	1245 9/30/95	F	9/30/95	X	LESS THAN ONE (1) FOOT

ENGINEER'S CERTIFICATION: THE FINISH FLOOR ELEVATION(S) AND/OR FLOOD–PROOFING ELEVATION(S) ON THIS PLAN, ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE–HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE, "FLOODWAYS & FLOODPLAIN" ORDINANCE (CHAPTER 37, S.R.C.)

UTILITY COMPANIES

UTILITY	REPRESENTATIVE CONTACTED	DATE
AZ. PUBLIC SERVICE	JADE GOULD	---
U.S. WEST COMMUNICATIONS	DAVE SERVISS	---
SOUTHWEST GAS	DOMINIQUE MITCHELL	---
COX COMMUNICATIONS	CARL McKAY	---
SRP IRRIGATION	ROBERT MAUER	---
WATER	CITY OF SCOTTSDALE	---
SANITARY SEWER	CITY OF SCOTTSDALE	---

ESTIMATED QUANTITIES:

EARTHWORKS

GROSS CUT = 3,339 C.Y.
GROSS FILL = 1,075 C.Y.

NOTES:

ENGINEERS ESTIMATED EARTHWORK QUANTITIES ARE NOT FOR BIDDING PURPOSES. CONTRACTORS SHALL BASE THEIR BID ON THEIR OWN QUANTITY TAKEOFFS

WATER

CONNECT TO EXISTING 8" WATERLINE	EA.
8" D.I.P. (CLASS 350)	L.F.
6" D.I.P. (CLASS 350)	L.F.
6" GATE VALVE, BOX & COVER (MAG 391–1C)	EA.
METER & SERVICE (SIZE PER PLUMBING PLANS)	EA.
FIRE HYDRANT	EA.
6" FIRE DEPARTMENT CONNECTION	EA.
2" METER & 2 1/2" SERVICE LINE	EA.
1 1/2" METER & 2" SERVICE LINE	EA.
1" LANDSCAPE METER & BFP	EA.
8" GATE VALVE BOX AND COVER (MAG 391–1C)	EA.

SEWER (PRIVATE)

CONNECT TO EXIST. SEWER LINE	EA.
4" PVC (SDR 35) SEWER LINE	L.F.

STORM DRAIN/DRAINAGE

36" STORM DRAIN	L.F.
18" STORM DRAIN	L.F.
15" STORM DRAIN	L.F.
12" STORM DRAIN	L.F.
10" STORM DRAIN	L.F.
10" SWING CHECK VALVE	EA.
CATCH BASIN (MAG 534, TYPE "E")	EA.
SCUPPER	EA.
HEADWALL (MAG 501)	EA.
NATIVE STONE RIPRAP	S.Y.
ONSITE CATCH BASIN PER DETAIL SHEET C3	EA.
CLEAN OUT	EA.
6" STORM DRAIN	L.F.

CITY OF SCOTTSDALE

GENERAL CONSTRUCTION NOTES
FOR PUBLIC WORKS CONSTRUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHT–OF–WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORK CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE (COS) SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE LATTER SHALL GOVERN.
2. THE ENGINEERING DESIGNS ON THESE PLANS ARE ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS SHALL BE RESUBMITTED TO THE CITY FOR RE–APPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE RIGHT–OF–WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO STARTING OF CONSTRUCTION (TELEPHONE 391–5750)
5. WHENEVER EXCAVATION IS TO BE DONE, CALL THE "BLUE STAKE CENTER", 263–1100, TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
6. ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS–OF–WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE CITY UPON RECEIPT OF PAYMENT OF A BASE FEE PLUS A FEE FOR INSPECTION SERVICES TO BE PROVIDED BY THE CITY. COPIES OF ALL PERMITS SHALL BE RETAINED ON–SITE AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING WHICH IS NOT IN THE PUBLIC RIGHTS–OF WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST COMFORM TO CHAPTER 70, EXCAVATION AND GRADING, OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE PREPARED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.
8. SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
9. ALL GRADING AND EARTHWORK SHALL BE CONSTRUCTED AND EXECUTED IN STRICT CONFORMANCE WITH THE GEOTECHNICAL REPORT FOR THIS SITE PREPARED BY "GEOENVIRONMENTAL & MATERIALS, INC." (GEM), GEM PROJECT NO. 961340G, DATED DEC. 26, 1996 AND OCT. 8, 1996. THE CONTRACTOR SHALL CONTACT OWNER AND GEM PRIOR TO CONSTRUCTION TO VERIFY RECEIPT OF ANY UPDATES WHICH MAY HAVE BEEN MADE TO THE REPORT.
10. RIPRAP SHALL BE NATIVE STONE PLACED SO THAT A DENSE, UNIFORM MASS OF DURABLE, ANGULAR STONES WITH NO APPARENT VOIDS OR POCKETS IS CONFIGURED.
11. ALL DRAINAGE STRUCTURES AND FACILITIES ARE PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
12. ONSITE SEWER AND WATER SYSTEM IS PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
13. ALL WATER VALVES, SEWER MANHOLES AND CLEANOUTS SHALL BE ADJUSTED TO FINISH GRADE PER MAG STD. DTLS.391–1C, 422 & 441

LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTERLINE INTERSECTION OF GREENWAY ARTERIAL, NOW KNOWN AS GREENWAY–HAYDEN LOOP AND 73RD STREET AS SHOWN ON THE MAP OF DEDICATION, SCOTTSDALE RESEARCH PARK, ACCORDING TO BOOK 259 OF MAPS, PAGE 38, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE NORTH 26 DEGREES 59 MINUTES 02 SECONDS WEST ALONG THE CENTERLINE OF SAID 73RD STREET, A DISTANCE OF 86.00 FEET;

THENCE LEAVING SAID CENTERLINE SOUTH 63 DEGREES 00 MINUTES 58 SECONDS WEST, A DISTANCE OF 42.00 FEET TO A POINT ON A NON–TANGENT CURVE HAVING A RADIUS OF 20.00 FEET, THE CENTER BEARS SOUTH 63 DEGREES 00 MINUTES 58 SECONDS WEST, SAID POINT BEING THE **POINT OF BEGINNING;**

THENCE SOUTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 91 DEGREES 51 MINUTES 23 SECONDS, AN ARC LENGTH OF 32.06 FEET TO GREENWAY–HAYDEN LOOP AND A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 1935.00 FEET;

THENCE WESTERLY ALONG SAID GREENWAY–HAYDEN LOOP THROUGH A CENTRAL ANGLE OF 12 DEGREES 59 MINUTES 49 SECONDS, AN ARC LENGTH OF 438.93 FEET;

THENCE LEAVING SAID GREENWAY–HAYDEN LOOP NORTH 12 DEGREES 09 MINUTES 11 SECONDS WEST, A DISTANCE OF 174.81 FEET TO THE BEGINNING OF A CURVE CONCAVE EASTERLY HAVING A RADIUS OF 579.45 FEET;

THENCE NORTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 23 DEGREES 44 MINUTES 54 SECONDS, AN ARC LENGTH OF 240.18 FEET;

THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS EAST A DISTANCE OF 404.76 FEET TO 73RD STREET AND A POINT ON A NON–TANGENT CURVE, CONCAVE EASTERLY, HAVING A RADIUS OF 629.46 FEET, THE CENTER BEARS NORTH 85 DEGREES 12 MINUTES 17 SECONDS EAST;

THENCE SOUTHERLY ALONG SAID 73RD STREET THROUGH A CENTRAL ANGLE OF 03 DEGREES 27 MINUTES 22 SECONDS, AN ARC LENGTH OF 37.97 FEET;

THENCE CONTINUING ALONG 73RD STREET, NON–TANGENT TO SAID CURVE SOUTH 06 DEGREES 35 MINUTES 10 SECONDS EAST, A DISTANCE OF 106.55 FEET TO A NON–TANGENT CURVE, CONCAVE EASTERLY HAVING A RADIUS OF 641.46 FEET, THE CENTER BEARS NORTH 72 DEGREES 11 MINUTES 28 SECONDS EAST;

THENCE SOUTHEASTERLY CONTINUING ALONG 73RD STREET AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 09 DEGREES 10 MINUTES 30 SECONDS, AN ARC LENGTH OF 102.72 FEET;

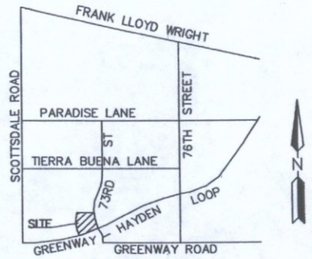
THENCE CONTINUING ALONG 73RD STREET, SOUTH 26 DEGREES 59 MINUTES 02 SECONDS EAST, A DISTANCE OF 4.29 FEET TO THE **POINT OF BEGINNING.**

LEGEND

- PALO VERDE
- MESQUITE
- PALM
- CATCLAW
- POWERPOLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- SEWER CLEANOUT
- SEWER MANHOLE
- CATV VAULT
- LIGHT POLE
- TELEPHONE RISER
- ELECTRIC VAULT
- STORM DRAIN MANHOLE
- TRAFFIC SIGNAL
- ELECTRIC CONTROL PANEL
- TELEPHONE CABINET
- TELEPHONE PEDESTAL
- ELECTRICAL EQUIPMENT CONDUIT
- MONUMENT
- TRANSFORMER
- EXISTING CONTOUR
- TOP OF CURB/PAVEMENT ELEVATION
- CONCRETE ELEVATION
- FF FINISH FLOOR ELEVATION
- FP FINISH PAD ELEVATION
- DRAINAGE PATH (PAVED AREAS)
- DRAINAGE PATH (FINISH GROUND)
- GRADE BREAK
- HIGH WATER LINE
- STORM DRAIN PIPE
- EXISTING TOP OF CURB/ GUTTER ELEVATION
- GROUND ELEVATION

RETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE RETENTION BASINS SHOWN ON THIS PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF RETENTION. THE CONTRACTOR SHALL OVER–EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.



VICINITY MAP
NOT TO SCALE

BENCH MARK:

TOP OF BRASS CAP IN HANDHOLE AT THE INTERSECTION OF SCOTTSDALE ROAD AND GREENWAY/HAYDEN LOOP.
ELEVATION = 1,468.08 (C.O.S. 1929 DATUM)
ELEVATION EQUATION FOR THESE PLANS FOR THE 1988 DATUM= ELEV. PER PLAN+4.759'

BASIS OF BEARING

BASIS OF BEARING IS N00°49'25"E ALONG THE MONUMENTED CENTERLINE OF SCOTTSDALE ROAD ALSO BEING THE WEST LINE OF SECTION 2, TOWNSHIP 3, NORTH RANGE 4 EAST, MARICOPA COUNTY, ARIZONA.

ZONING C–3

CERTIFICATION

THE WATER SYSTEM SHOWN HEREIN, HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE PROTECTION REQUIREMENTS.

NATIVE PLANT PERMIT

ENGINEER:
CMX GROUP INC.
1515 E. MISSOURI #115
PHOENIX, ARIZONA 85014
PHONE: (602)279–8436

PROJECT ENGINEER: STEPHANIE K. KINSEY
AZ. REG. NO. 31694

ARCHITECT:
NAGAKI DESIGN ASSOCIATES
5125 N. 16TH ST. #A111
PHOENIX, AZ 85016
CONTACT: LARRY NAGAKI
(602)604–8965

DEVELOPER:
BARCELONA RESTAURANTS, LLC
204 N. SAWTELLE AVE
TUCSON, AZ 85716
CONTACT: RICK STERTZ
(520)906–0430

123-DR-96#6 G.D.P.L.

SHEET INDEX:

SHEET	PLAN TYPE
C1	COVER SHEET
D2	DETAILS & NOTES
D3	DETAILS & NOTES
GD4	GRADING & DRAINAGE PLAN
U5	SITE UTILITY PLAN
HC6	HORIZONTAL CONTROL PLAN

CITY OF SCOTTSDALE
REVIEW & RECOMMENDED APPROVAL BY:

FIRE DEPT		GRADING & DRAINAGE	
PLANNING		WATER & SEWER	
TRAFFIC		PAVING	

APPROVED BY:

ENGINEERING PROJECT COORDINATOR — DATE

PRELIMINARY
NOT FOR CONSTRUCTION

Two working days before you dig CALL FOR THE BLUE STAKES 263–1100 Blue Stake Center CALL COLLECT

The existing onsite topographic information shown on these plans was not prepared by CMX Group. The information was prepared by a land surveyor registered in the state of Arizona and provided to CMX Group by the client. CMX hereby assumes no responsibility for the accuracy of existing onsite topographic and boundary information.

X:\6400\6402\plans\6402cvr.dwg, 11/21/00 04:46:31 PM, ERLITZ

COVER SHEET

ZOCALLO BARCELONA RESTAURANT
GREENWAY – HAYDEN LOOP
SCOTTSDALE, ARIZONA

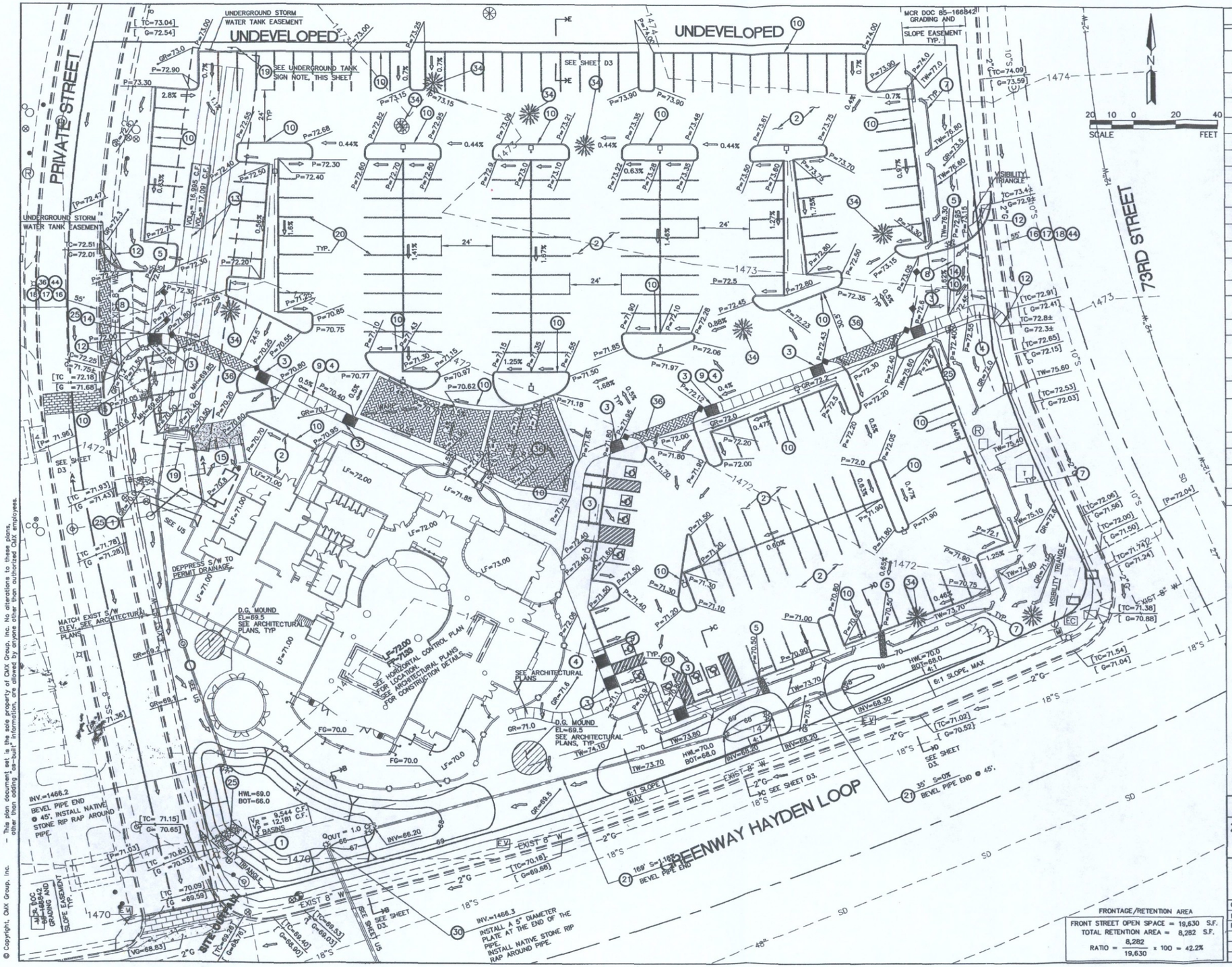
CMX GROUP INC.
ENGINEERING
PROJECT ADMINISTRATION
CONSTRUCTION ANALYSIS
1515 E. MISSOURI
PHOENIX, AZ 85014
PH (602)279–8436
FAX (602)265–1191

CMX JOB NO. 6402.01	DATE: NOVEMBER 2000	SCALE: AS NOTED
DESIGNED: FAF	DRAWN: ER	APPROVED: SK

REV.

DWG. NO. C1

1 OF 6



CONSTRUCTION NOTES

①	FILL UP EXISTING RETENTION BASIN TO MATCH PROPOSED ELEVATION.	46, C.Y.
②	CONSTRUCT ASPHALT PAVEMENT. SEE DETAIL SHEET D3.	8389,S.Y.
③	CONSTRUCT SIDEWALK RAMP. SEE ARCHITECTURAL PLANS FOR DETAILS. RAMPS TO COMPLY WITH ADA REQUIREMENTS.	12, EA.
④	CONSTRUCT CONCRETE SIDEWALK. SEE ARCHITECTURAL PLANS FOR DETAILS.	535, L.F.
⑤	CONSTRUCT CURB OPENING AND EROSION PROTECTION PER DETAIL ON SHEET D3.	3, EA
⑦	CONSTRUCT WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.	15, EA
⑧	CONSTRUCT 3' WIDE VALLEY GUTTER PER MAG STD. DTL. 240.	171, S.F.
⑨	CONSTRUCT CAST IN PLACE CONCRETE CURB INTEGRAL WITH SIDEWALK PER DETAIL SHEET D3.	SEE ④
⑩	CONSTRUCT CAST IN PLACE CONCRETE RIBBON CURB PER MAG STD. DTL. 220, TYPE "B" OR CURB AND GUTTER PER MAG STD DET 220, TYPE "A".	3100,L.F.
⑫	INSTALL SIDEWALK RAMP PER MAG STD DET 232, TYPE B.	4, EA
⑬	CONSTRUCT 8' DIAMETER UNDERGROUND DETENTION PIPES PER DETAILS, SHEET D2.	341, L.F.
⑭	CONSTRUCT 4' CONCRETE SCUPPER PER MAG STD DET 206.	2, EA
⑮	CONSTRUCT REFUSE ENCLOSURE PER C.O.S. STD DET 2146-2.	2, EA
⑯	SAWCUT AND REMOVE EXISTING CURB AND GUTTER.	110, L.F.
⑰	SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT, (2' MIN.) TO A NEAT EDGE PER C.O.S. DTL. 2200.	59, S.Y.
⑱	SAWCUT AND REMOVE EXISTING SIDEWALK.	110, L.F.
⑲	INSTALL SIGN "NOTICE UNDERGROUND STORM WATER STORAGE TANK". PER DETAIL SHEET D3.	2, EA.
⑳	STRIPE PARKING SPACES & HANDICAPED SYMBOL PER MAG SPEC 530 & 790. NUMBER OF SPACES AS SHOWN. STALLS @ 9'-0" SEE HOR. CONTROL MAP SHEET 6.	---
㉑	INSTALL 12" STORM DRAIN RGRCP CLASS III, MIN.	204, L.F.
㉕	INSTALL RIPRAP (ASPEN 4"-8" AVAILABLE ONLY THROUGH MDI LANDSCAPE SUPPLIES. NO SUBSTITUTIONS.) D_{50} =4", 12" THICK ON FILTER FABRIC (TRIVERA SPUNBOUND 1120 OR EQUAL).	40, S.Y.
㉚	CONSTRUCT 5" ORIFICE PLATE ON PIPE END.	1, EA.
㊴	REMOVE EXISTING TREE. SEE LANDSCAPE PLANS FOR DETAILS.	8, EA.
㊻	CONSTRUCT DECORATIVE PAVEMENT, HOLLAND STONE, HERRINGBONE PATTERN, PURPLE COLOR. SEE ARCHITECTURAL SPECIFICATIONS.	428, S.Y.
㊹	INSTALL TWO WAY DRIVEWAY, TYPE CH-1, PER C.O.S. STD DET. 2257, MODIFIED AS SHOWN.	2, EA.

LIGHT POLES NOTE

LOCATION OF LIGHT POLES AS SUPPLIED BY ARCHITECT. CONTRACTOR IS TO VERIFY WITH THE ELECTRICAL PLANS.

NOTE: SEE SHEET U5 FOR ADDITIONAL STORM DRAIN CONSTRUCTION NOTES.

RETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE RETENTION BASINS SHOWN ON THIS PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF RETENTION. THE CONTRACTOR SHALL OVER-EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.

UNDERGROUND TANK SIGN NOTE

AT THE CITY INSPECTOR'S OPTION, CONTRACTOR MAY COMPLEMENT THE UNDERGROUND TANK SIGN WITH PAVEMENT MARKERS INDICATING THE EXACT LOCATION OF THE 8' TANKS UNDER THE PAVEMENT.

602-263-1100

STEPHANIE S. KINNEY — CERTIFICATE 39594 — REGISTERED PROFESSIONAL ENGINEER — ARIZONA, U.S.A.

GRADING & DRAINAGE PLAN

ZOCALLO BARCELONA RESTAURANT
GREENWAY – HAYDEN LOOP
SCOTTSDALE, ARIZONA

FRONTAGE/RETENTION AREA
FRONT STREET OPEN SPACE = 19,630 S.F.
TOTAL RETENTION AREA = 8,282 S.F.
RATIO = 8,282 / 19,630 x 100 = 42.2%

CMX GROUP INC.
ENGINEERING
PROJECT ADMINISTRATION
CONSTRUCTION ANALYSIS
1515 E. MISSOURI
PHOENIX, AZ 85014
PH (602)279-8436
FAX (602)265-1191

CMX JOB NO. 6402.01	DATE: MAY 2001	SCALE: 1" = 20'
DESIGNED: FAF	DRAWN: ER	APPROVED: SK
REV.		DWG. NO. GD4
		SHT. 4 OF 6

123-DR-96#6 4989-00A G,D,P,W,S,F,L

ZOCALLO CORPORATE OFFICE AND BARCELONA PARKING

SCOTTSDALE, ARIZONA

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST, GILA & SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

CITY OF SCOTTSDALE

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION
045012	1245 7/19/2001	G	7/19/2001	X	LESS THAN ONE (1) FOOT

ENGINEER'S CERTIFICATION: THE FINISH FLOOR ELEVATION(S) AND/OR FLOOD-PROOFING ELEVATION(S) ON THIS PLAN, ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE, "FLOODWAYS & FLOODPLAIN" ORDINANCE (CHAPTER 37, S.R.C.)

NO CONFLICT SIGNATURE BOX

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE SIGNED
WATER	CITY OF SCOTTSDALE			---
SANITARY SEWER	CITY OF SCOTTSDALE			---
IRRIGATION	SRP IRRIGATION	ROBERT MAUER	602-236-2962	6/20/02
ELECTRIC	AZ. PUBLIC SERVICE	DAVID RAUSCH	602-493-4403	6/21/02
TELEPHONE	QWEST COMMUNICATIONS	IAN HOLMES	602-630-0492	7/30/02
NATURAL GAS	SOUTHWEST GAS	ALEX SOTO	602-431-2175	6/25/02
CABLE TV	COX COMMUNICATIONS	SUZANNE HOLZER	623-322-7248	7/16/02

ENGINEER'S CERTIFICATION

I, D. TROY PETERSON, BEING THE PERSON RESPONSIBLE FOR DESIGNING THE FACILITIES NECESSARY TO SERVE THIS DEVELOPMENT, HEREBY CERTIFY THAT ALL OF THE UTILITY COMPANIES LISTED ABOVE, HAVE REVIEWED THIS PROJECT PROPOSAL AND ALL CONFLICTS HAVE BEEN RESOLVED AT THIS POINT. 'NO CONFLICT' FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL. I ALSO CERTIFY THAT ALL ONSITE TRANSFORMERS, CABLE BOXES AND ANY OTHER PUBLIC/PRIVATE UTILITY APPURTENANCES ARE PLACED SUCH THAT THEY DO NOT NEGATIVELY IMPACT THE USE OR INTENDED USE OF ANY DEDICATED EASEMENTS OR FACILITIES DEVELOPED WITH THIS PROJECT INCLUDING BUT NOT LIMITED TO STORMWATER STORAGE BASINS, SIGHT DISTANCE EASEMENTS AND NAOS OR OTHER OPEN SPACE EASEMENTS.

SIGNATURE _____ DATE _____

BASIN	VOLUME PROVIDED (CF)	DRAINAGE AREA
		ACCOMMODATED
A	7,196	A
B	1,474	B
C	6,297	C
D	2,196	Portion of D
Tanks	20,963**	Remainder of D + excess from Area B
TOTAL	38,106	

ESTIMATED QUANTITIES:

EARTHWORKS

GROSS CUT = 1,838 C.Y.
GROSS FILL = 1,488 C.Y.

NOTES:

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STORM DRAIN/DRAINAGE (ALL PRIVATE)

3" D.I.P. STORM DRAIN, C.L. 50 MIN.	233	L.F.
12" STORM DRAIN, HDPE-ADS-N12	514	L.F.
5" DIAMETER PLATE	2	EA.
8' UNDERGROUND STORAGE TANK	417	L.F.
OIL SEPARATOR	1	EA.
PUMP ASSEMBLY	1	EA.
24" X 12" REDUCER	1	EA.

WATER/SEWER (ALL PRIVATE)

SEWER CLEANOUT	1	EA.
6" PVC SEWER LINE	92	LF.
ENCASE WATER PER MAG 404	1	LS

TRIBUTARY* AREA	Area (SF)	DETENTION REQUIRED (CF)	DETENTION PROVIDED (CF)	ACCOMMODATING BASIN	COMMENTS
A	34,023	6,316	7,196	A	OK
B	22,395	4,158	1,474	B	Underground Tanks will accommodate remaining 2,684 cf
C	29,794	5,531	6,297	C	OK
D	86,221	16,007	23,139	D	OK
TOTAL	172,433	32,012	38,106		

*SEE SHEET D3 FOR TRIBUTARY AREA LOCATIONS.

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5. WHENEVER EXCAVATION IS TO BE DONE, CALL THE "BLUE STAKE CENTER", 263-1100, TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
6. ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE CITY UPON RECEIPT OF PAYMENT OF A BASE FEE PLUS A FEE FOR INSPECTION SERVICES TO BE PROVIDED BY THE CITY. COPIES OF ALL PERMITS SHALL BE RETAINED ON-SITE AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING WHICH IS NOT IN THE PUBLIC RIGHTS-OF WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST COMFORM TO CHAPTER 70, EXCAVATION AND GRADING, OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE PREPARED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.
8. SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
9. ALL GRADING AND EARTHWORK SHALL BE CONSTRUCTED AND EXECUTED IN STRICT CONFORMANCE WITH THE GEOTECHNICAL REPORT FOR THIS SITE PREPARED BY "GEOENVIRONMENTAL & MATERIALS, INC." (GEM), GEM PROJECT NO. 961340G, DATED DEC. 26, 1996 AND OCT. 8, 1996. THE CONTRACTOR SHALL CONTACT OWNER AND GEM PRIOR TO CONSTRUCTION TO VERIFY RECEIPT OF ANY UPDATES WHICH MAY HAVE BEEN MADE TO THE REPORT.
10. RIPRAP SHALL BE NATIVE STONE PLACED SO THAT A DENSE, UNIFORM MASS OF DURABLE, ANGULAR STONES WITH NO APPARENT VOIDS OR POCKETS IS CONFIGURED.
11. ALL DRAINAGE STRUCTURES AND FACILITIES ARE PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
12. ONSITE SEWER AND WATER SYSTEM IS PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
13. ALL WATER VALVES, SEWER MANHOLES AND CLEANOUTS SHALL BE ADJUSTED TO FINISH GRADE PER MAG STD. DTLS.391-1C, 422 & 441
14. UNDERGROUND STORMWATER STORAGE FACILITY IS PRIVATE AND IT'S MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER IN PERPETUITY. OWNER/DEVELOPER IS RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS FROM GOVERNING AGENCIES WITH JURISDICTION OVER UNDERGROUND STORMWATER STORAGE FACILITIES.

LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTERLINE INTERSECTION OF GREENWAY ARTERIAL, NOW KNOWN AS GREENWAY-HAYDEN LOOP AND 73RD STREET AS SHOWN ON THE MAP OF DEDICATION, SCOTTSDALE RESEARCH PARK, ACCORDING TO BOOK 259 OF MAPS, PAGE 38, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE NORTH 26 DEGREES 59 MINUTES 02 SECONDS WEST, ALONG THE CENTERLINE OF SAID 73RD STREET, A DISTANCE OF 90.30 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 599.48 FEET;

THENCE NORTHERLY ALONG SAID CURVE AND SAID CENTERLINE THROUGH A CENTRAL ANGLE OF 21 DEGREES 56 MINUTES 53 SECONDS AN ARC LENGTH OF 229.63 FEET; THENCE LEAVING SAID CENTERLINE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST A DISTANCE OF 30.11 FEET TO THE WEST RIGHT OF WAY LINE OF SAID 73RD STREET AND THE POINT OF BEGINNING;

THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST A DISTANCE OF 404.76 FEET TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 579.45 FEET, THE CENTER OF WHICH BEARS SOUTH 78 DEGREES 24 MINUTES 41 SECONDS EAST;

THENCE NORTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 24 DEGREES 26 MINUTES 41 SECONDS AN ARC LENGTH OF 247.22 FEET TO A POINT OF TANGENCY;

THENCE NORTH 36 DEGREES 02 MINUTES 00 SECONDS EAST A DISTANCE OF 20.95 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 439.93 FEET;

THENCE NORTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 35 DEGREES 39 MINUTES 37 SECONDS AN ARC LENGTH OF 273.81 FEET;

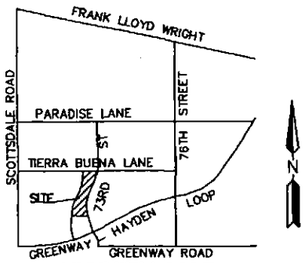
THENCE SOUTH 89 DEGREES 38 MINUTES 29 SECONDS EAST A DISTANCE OF 353.03 FEET TO A POINT ON SAID WEST RIGHT OF WAY LINE OF 73RD STREET, SAID POINT BEING ON A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 569.15 FEET, THE CENTER OF WHICH BEARS NORTH 64 DEGREES 04 MINUTES 56 SECONDS WEST;

THENCE SOUTHWESTERLY ALONG SAID CURVE AND SAID RIGHT OF WAY LINE THROUGH A CENTRAL ANGLE OF 00 DEGREES 23 MINUTES 00 SECONDS AN ARC LENGTH OF 3.81 FEET TO A POINT OF TANGENCY;

THENCE SOUTH 26 DEGREES 18 MINUTES 04 SECONDS WEST, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 178.68 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 629.46 FEET;

THENCE SOUTHERLY ALONG SAID CURVE AND SAID RIGHT OF WAY LINE THROUGH A CENTRAL ANGLE OF 31 DEGREES 05 MINUTES 47 SECONDS AN ARC LENGTH OF 341.63 FEET TO THE POINT OF BEGINNING.

REAPPROVAL
REVIEW AND RECOMMENDED APPROVAL BY:
PLAN REVIEWER DATE
APPROVED BY:
PROJECT REVIEW MANAGER DATE



VICINITY MAP
NOT TO SCALE

LEGEND

- POWERPOLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- SEWER CLEANOUT
- SEWER MANHOLE
- CATV VAULT
- LIGHT POLE
- TELEPHONE RISER
- ELECTRIC VAULT
- STORM DRAIN MANHOLE
- TRAFFIC SIGNAL
- ELECTRIC CONTROL PANEL
- TELEPHONE CABINET
- TELEPHONE PEDESTAL
- ELECTRICAL EQUIPMENT CONDUIT
- MONUMENT
- TRANSFORMER
- EXISTING CONTOUR
- TOC TOP OF CURB/PAVEMENT ELEVATION
- CONCRETE ELEVATION
- FF FINISH FLOOR ELEVATION
- FP FINISH PAD ELEVATION
- DRAINAGE PATH (PAVED AREAS)
- GRADE BREAK
- HIGH WATER LINE
- STORM DRAIN PIPE
- TOC EXISTING TOP OF CURB/ GUTTER ELEVATION
- GR GROUND ELEVATION

RETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE RETENTION BASINS SHOWN ON THIS PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF RETENTION.
THE CONTRACTOR SHALL OVER-EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE.
THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.

BENCH MARK:

TOP OF BRASS CAP IN HAND HOLE AT THE INTERSECTION OF GREENWAY ROAD AND 76TH STREET.
ELEVATION = 1475.534 CITY OF SCOTTSDALE DATUM (NAVD "88")

SITE BENCH MARK:

TOP OF BRASS CAP IN HAND HOLE AT THE INTERSECTION OF GREENWAY-HAYDEN LOOP AND SCOTTSDALE ROAD.
ASSUMED ELEVATION = 1468.08
ELEVATION BASED UPON NAVD "88"
DATUM=1472.839
CONVERSION EQUATION = -4.76

BASIS OF BEARING

BASIS OF BEARING IS N00°49'25"E ALONG THE MONUMENTED CENTERLINE OF SCOTTSDALE ROAD ALSO BEING THE WEST LINE OF SECTION 2, TOWNSHIP 3, NORTH RANGE 4 EAST, MARICOPA COUNTY, ARIZONA.

ZONING

C-3

CERTIFICATION

THE WATER SYSTEM SHOWN HEREIN, HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE PROTECTION REQUIREMENTS.

ENGINEER:

CMX GROUP INC. 1515 E. MISSOURI #115 PHOENIX, ARIZONA 85014 PHONE: (602)279-8436

PROJECT ENGINEER: STEPHANIE KINSEY
CONTACT: JIM BRENT

ARCHITECT:

DEUTSCH ASSOCIATES
2929 N. 44TH STREET
PHOENIX, AZ 85018
CONTACT: ARMAND MILAZZO
(602)840-2929

DEVELOPER:

BARCELONA RESTAURANTS, LLC
204 N. SAWTELLE AVE
TUCSON, AZ 85718
CONTACT: RICK STERTZ (520)908-0430

SHEET INDEX:

CITY OF SCOTTSDALE
REVIEW & RECOMMENDED APPROVAL BY:

FIRE DEPT		GRADING & DRAINAGE	
PLANNING		WATER & SEWER	
TRAFFIC		PAVING	

APPROVED BY:
ENGINEERING COORDINATION MANAGER (OR DESIGNEE) DATE

Arizona law requires that before you dig CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center CALL COLLECT

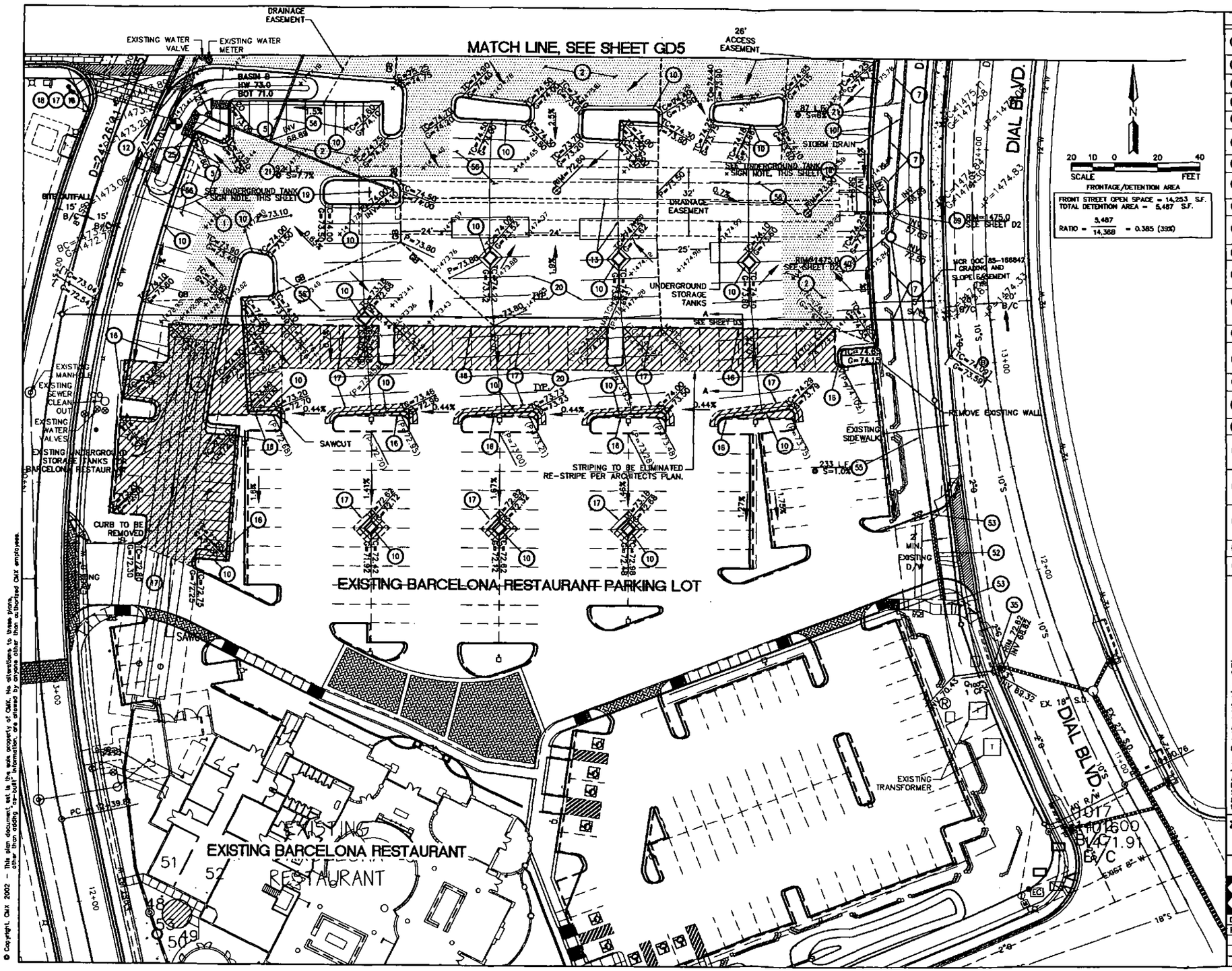
ZOCALLO CORPORATE OFFICE & ADDITIONAL BARCELONA PARKING
SCOTTSDALE, ARIZONA
COVER SHEET

CMX

CMX PROJ.	5603.01
DATE:	AUGUST 13, 2002
SCALE:	AS NOTED
DESIGNED: JB	DRAWN: MD
APPROVED: SK	
REV. 1 9-11-02 REVISION PER CITY	
SHTS. D3, GD5, UT6, HC7	
DWG. NO.	C1
SHT. 1 OF 7	

G,D,P,W,S,F,L

4989-00-14 123-DR-1996#6



CONSTRUCTION NOTES

1	BACKFILL EXISTING RETENTION BASIN TO MATCH PROPOSED ELEVATION AND RECOMPACT PER GEOTECH RECOMMENDATION.
2	CONSTRUCT 3" AC ON 6" ABC ASPHALT PAVEMENT PER DETAIL SHEET D2.
4	CONSTRUCT CONCRETE SIDEWALK. SEE ARCH. PLANS (SHEET A1-2) FOR DETAILS.
5	CONSTRUCT CURB OPENING AND EROSION PROTECTION PER DETAIL ON SHEET D3.
7	CONSTRUCT WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.
10	CONSTRUCT CURB AND GUTTER PER MAG STD. DTL. 220, TYPE "A". INVERT LIP AS REQUIRED FOR DRAINAGE.
12	INSTALL SIDEWALK RAMP PER MAG STD DET 232, TYPE B.
13	INSTALL 8' DIAMETER UNDERGROUND DETENTION TANKS AND CONNECTOR PIPES PER DETAILS, SHEET D2.
16	SAWCUT TO A NEAT EDGE AND REMOVE EXISTING CURB AND GUTTER.
17	SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT, (2' MIN.) TO A NEAT EDGE PER C.O.S. DTL. 2200.
18	SAWCUT AND REMOVE EXISTING SIDEWALK.
19	INSTALL SIGN "NOTICE UNDERGROUND STORM WATER STORAGE TANK". PER DETAIL SHEET D3.
20	STRIPE PARKING SPACES & HANDICAPED SYMBOL PER MAG SPEC 530 & 790. NUMBER OF SPACES PER ARCHITECTS SITE PLAN, STALLS @ 9'-0".
21	INSTALL 12" HDPE ADS - N12 STORM DRAIN PIPE.
25	INSTALL LOOSE NATIVE STONE D_{50}=8", 12" THICK OVER GEOTEXTILE FABRIS (TREVIRA SPUNBOUND 1120 OR EQUIVALENT).
35	BREAK INTO EXISTING CATCH BASIN AND CONNECT NEW 3" STORM DRAIN.
39	INSTALL OIL SEPARATOR, McGUCKIN MAXWELL IV OR APPROVED EQUAL. SEE DETAIL SHEET D2.
40	INSTALL PUMP ASSEMBLY PER DETAIL SHEET D2.
52	SAWCUT, REMOVE & REPLACE EXISTING A.C. PAVEMENT IN KIND. RE-CONSTRUCT TRAFFIC DIRECTIONAL PARK CHOP TO EXISTING CONDITIONS.
53	SAWCUT AND REMOVE CURB, GUTTER & SIDEWALK ON SOUTH SIDE. RE-CONSTRUCT TO EXISTING CONDITIONS. TUNNEL UNDER CURB & GUTTER ON NORTH SIDE.
54	INSPECT EXISTING VALVE AND AS REQUIRED, CONVERT BOX TO TRAFFIC BEARING AND ADJUST TO GRADE PAR M.A.G. STD. DTL. 391-1 & 391-2.
55	INSTALL 3" D.I.P. CLASS 50 MIN.
56	CONSTRUCT 2 1/2" AC ON 4" ABC ASPHALT PAVEMENT PER DETAIL SHEET D2.

602-263-1100

LIGHT POLES NOTE

LOCATION OF LIGHT POLES AS SUPPLIED BY ARCHITECT. CONTRACTOR IS TO VERIFY WITH THE ELECTRICAL PLANS.

DETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE DETENTION BASINS SHOWN ON THIS PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF DETENTION. THE CONTRACTOR SHALL OVER-EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.

UNDERGROUND TANK SIGN NOTE

AT THE CITY INSPECTOR'S OPTION, CONTRACTOR MAY COMPLEMENT THE UNDERGROUND TANK SIGN WITH PAVEMENT MARKERS INDICATING THE EXACT LOCATION OF THE 8' TANKS UNDER THE PAVEMENT.

ZOCALLO CORPORATE OFFICE & BARCELONA PARKING

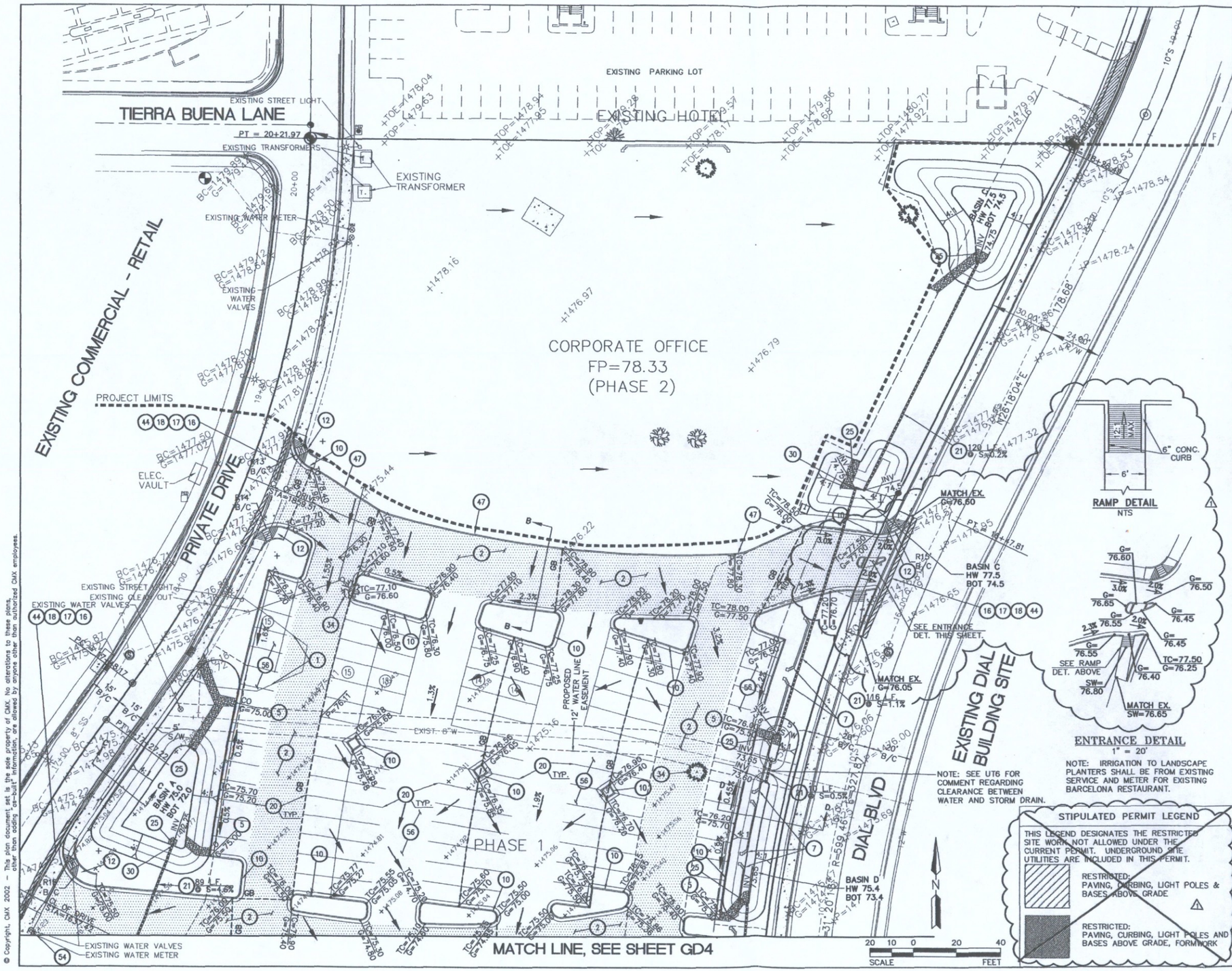
SCOTTSDALE, ARIZONA

GRADING & DRAINAGE PLAN

CMX	CMX PROJ. 6803.01
	DATE: AUGUST 13, 2002
	SCALE: 1"=20'
DESIGNED: CMX	DRAWN: MD
APPROVED: SK	
REV.	DWG. NO. GD4
	SHT. 4 OF 7

G,D,P,W,S,F,L

4989-00-14 123-DR-1996#6



CONSTRUCTION NOTES

1	BACKFILL EXISTING RETENTION BASIN TO MATCH PROPOSED ELEVATION AND RECOMPACT PER GEOTECH RECOMMENDATION.
2	CONSTRUCT 3" AC ON 6" ABC ASPHALT PAVEMENT PER DETAIL SHEET D2.
5	CONSTRUCT CURB OPENING AND EROSION PROTECTION PER DETAIL ON SHEET D3.
7	CONSTRUCT WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.
10	CONSTRUCT CURB AND GUTTER PER MAG STD. DTL. 220, TYPE "A". INVERT UP AS REQUIRED FOR DRAINAGE.
12	INSTALL SIDEWALK RAMP PER MAG STD DET 232, TYPE B.
16	SAWCUT TO A NEAT EDGE AND REMOVE EXISTING CURB AND GUTTER.
17	SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT, (2' MIN.) TO A NEAT EDGE PER C.O.S. DTL. 2200.
18	SAWCUT AND REMOVE EXISTING SIDEWALK.
20	STRIPE PARKING SPACES & HANDICAPED SYMBOL PER MAG SPEC 530 & 790. NUMBER OF SPACES PER ARCHITECTS SITE PLAN, STALLS @ 9'-0".
21	INSTALL 12" HDPE ADS – N12 STORM DRAIN PIPE.
25	INSTALL LOOSE NATIVE STONE D_{50}=6", 12" THICK OVER GEOTEXTILE FABRIS (TREVIRA SPUNBOUND 1120 OR EQUIVALENT).
30	CONSTRUCT 5" ORIFICE PLATE ON PIPE END. SEE DETAIL SHEET D2.
34	REMOVE EXISTING TREE. SEE LANDSCAPE PLANS FOR DETAILS.
44	INSTALL TWO WAY DRIVEWAY, TYPE CH-1, PER C.O.S. STD DET. 2257, MODIFIED AS SHOWN.
47	CONSTRUCT EXTRUDED CURB PER DETAIL SHEET D2.
54	INSPECT EXISTING VALVE AND AS REQUIRED, CONVERT BOX TO TRAFFIC BEARING AND ADJUST TO GRADE PAR M.A.G. STD. DTL. 391-1 & 391-2.
55	INSTALL 3" D.I.P. CLASS 50 MIN.
56	CONSTRUCT 2 1/2" AC ON 4" ABC ASPHALT PAVEMENT PER DETAIL SHEET D2.

LIGHT POLES NOTE

LOCATION OF LIGHT POLES AS SUPPLIED BY ARCHITECT. CONTRACTOR IS TO VERIFY WITH THE ELECTRICAL PLANS.

DETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE DETENTION BASINS SHOWN ON THESE PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF DETENTION. THE CONTRACTOR SHALL OVER-EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.

UNDERGROUND TANK SIGN NOTE

AT THE CITY INSPECTOR'S OPTION, CONTRACTOR MAY COMPLEMENT THE UNDERGROUND TANK SIGN WITH PAVEMENT MARKERS INDICATING THE EXACT LOCATION OF THE 8' TANKS UNDER THE PAVEMENT.

STIPULATED PERMIT LEGEND

THIS LEGEND DESIGNATES THE RESTRICTED SITE WORK NOT ALLOWED UNDER THE CURRENT PERMIT. UNDERGROUND SITE UTILITIES ARE INCLUDED IN THIS PERMIT.

RESTRICTED: PAVING, CURBING, LIGHT POLES & BASES ABOVE GRADE

RESTRICTED: PAVING, CURBING, LIGHT POLES AND BASES ABOVE GRADE, FORMWORK

Registered Professional Engineer — CERTIFICATE — 34578 MARK A. GOLINAR — ARIZONA U.S.A.

602-263-1100

ZOCALLO CORPORATE OFFICE & ADDITIONAL BARCELONA PARKING

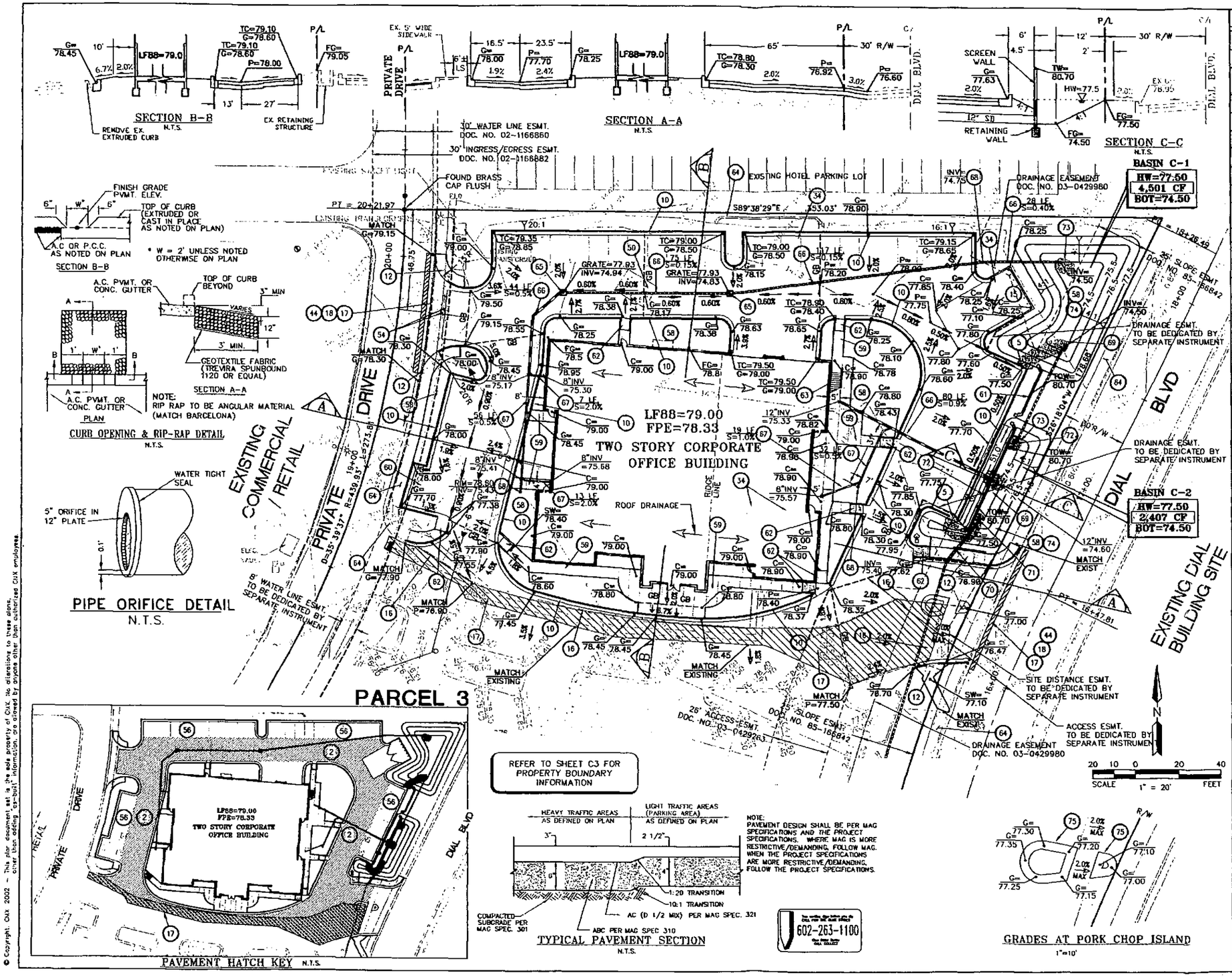
SCOTTSDALE, ARIZONA

GRADING AND DRAINAGE PLAN

CMX

CMX PROJ.	6603.01
DATE:	AUGUST 13, 2002
SCALE:	1"=20'
DESIGNED: CMX	DRAWN: MD
APPROVED: SK	
REV. 1 9-11-02 REVISION PER CITY	DWG. NO. GD5
	SHT. 5 OF 7

4989-00-14 123-DR-1996#6 G,D,P,W,S,F,L



CONSTRUCTION NOTES

2	CONSTRUCT 3" AC ON 6" ABC ASPHALT PAVEMENT PER DETAIL THIS SHEET.
5	CONSTRUCT CURB OPENING AND EROSION PROTECTION PER DETAIL THIS SHEET.
10	CONSTRUCT CURB AND GUTTER PER MAG STD. DTL. 220, TYPE "A". INVERT UP AS REQUIRED FOR DRAINAGE.
12	INSTALL SIDEWALK RAMP PER MAG STD DET 232, TYPE B.
15	CONSTRUCT REFUSE ENCLOSURE PER C.O.S. STD DET 2147-1.
16	REMOVE EXISTING EXTRUDED CURB.
17	SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT (2' MIN.).
18	SAWCUT AND REMOVE EXISTING SIDEWALK, CURB & GUTTER.
24	REMOVE EXISTING TREE. SEE LANDSCAPE PLANS FOR DETAILS.
44	INSTALL 6" WIDE VALLEY GUTTER PER CITY OF SCOTTSDALE STD. DET. 2240.
50	REMOVE EXISTING CONCRETE SLAB.
54	INSPECT EXISTING VALVE AND AS REQUIRED, CONVERT BOX TO TRAFFIC BEARING AND ADJUST TO GRADE PER M.A.G. STD. DTL. 391-1 & 391-2.
56	CONSTRUCT 2 1/2" AC ON 4" ABC ASPHALT PAVEMENT PER DETAIL THIS SHEET.
58	REFER TO ARCHITECT'S PLANS FOR LANDSCAPING.
59	CONSTRUCT HARDSCAPE PER ARCHITECTS PLAN.
60	INSTALL PRECAST SAFETY CURB PER MAG STD. DTL. 150. (TYP)
61	SCREEN WALL - REFER TO ARCHITECTS PLAN FOR DETAILS.
62	HANDICAP RAMP - REFER TO ARCHITECTS PLAN FOR DETAILS.
63	STAIRCASE - REFER TO ARCHITECTS PLAN FOR DETAILS.
64	EXISTING IMPROVEMENTS TO REMAIN UNDISTURBED.
65	INSTALL CATCH BASIN PER MAG. STD. DET 535 "TYPE F".
66	INSTALL 12" HDPE STORM DRAIN. LENGTH & SLOPE AS SHOWN.
67	INSTALL 8" HDPE STORM DRAIN. LENGTH & SLOPE AS SHOWN.
68	INSTALL STORM DRAIN CLEANOUT.
69	REMOVE EXIST. 12" HDPE STORM DRAIN.
70	EXTEND EXIST. 12" HDPE STORM DRAIN.
71	INSTALL ORIFICE PLATE PER DET. THIS SHEET.
72	RETAINING / SCREEN WALL - SEE ARCHITECTS PLANS FOR DETAILS.
73	RIP-RAP PER DETAIL THIS SHEET.
74	REGRADE EXISTING BASIN.
75	CONSTRUCT ROLL CURB TYPE "C" PER MAG STD. DET. 220 (PAINT YELLOW / TRAFFIC RATED PAINT)

LIGHT POLES NOTE
LOCATION OF LIGHT POLES AS SUPPLIED BY ELECTRICAL CONTRACTOR. CONTRACTOR IS TO VERIFY WITH THE ELECTRICAL PLANS.

ZOCALLO CORPORATE OFFICE PHASE 2

SCOTTSDALE, ARIZONA

GRADING AND DRAINAGE PLAN

CMX

CMX PROJ.	6603.02
DATE:	6-26-03
SCALE:	1"=20'
DESIGNED: MG	DRAWN: DB
APPROVED: SK	
REV.	DWG. NO. C2
	SHT. 2 OF 3

41-DR-2002

4785-02-1

ZOCALLO CORPORATE OFFICE
PHASE 2
SCOTTSDALE, ARIZONA

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST, GILA & SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION
045012	1245 9/30/95	G	7/19/01	X	LESS THAN ONE (1) FOOT

ENGINEER'S CERTIFICATION: THE FINISH FLOOR ELEVATION(S) AND/OR FLOOD-PROOFING ELEVATION(S) ON THIS PLAN, ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A ONE-HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE, "FLOODWAYS & FLOODPLAIN" ORDINANCE (CHAPTER 37, S.R.C.)

NO CONFLICT SIGNATURE BOX

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE SIGNED
WATER	CITY OF SCOTTSDALE			--
SANITARY SEWER	CITY OF SCOTTSDALE			--
IRRIGATION	SRP IRRIGATION	ROBERT MAUER	602-236-2962	6/20/02
ELECTRIC	AZ. PUBLIC SERVICE	DAVID RAUSCH	602-493-4403	6/21/02
TELEPHONE	QWEST COMMUNICATIONS	IAN HOLMES	602-630-0492	7/30/02
NATURAL GAS	SOUTHWEST GAS	ALEX SOTO	602-431-2175	6/25/02
CABLE TV	COX COMMUNICATIONS	SUZANNE HOLZER	623-322-7248	7/16/02

ENGINEER'S CERTIFICATION

I, MARK GOLINAR, BEING THE PERSON RESPONSIBLE FOR DESIGNING THE FACILITIES NECESSARY TO SERVE THIS DEVELOPMENT, HEREBY CERTIFY THAT ALL OF THE UTILITY COMPANIES LISTED ABOVE, HAVE REVIEWED THIS PROJECT PROPOSAL AND ALL CONFLICTS HAVE BEEN RESOLVED AT THIS POINT. 'NO CONFLICT' FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL. I ALSO CERTIFY THAT ALL ONSITE TRANSFORMERS, CABLE BOXES AND ANY OTHER PUBLIC/PRIVATE UTILITY APPURTENANCES ARE PLACED SUCH THAT THEY DO NOT NEGATIVELY IMPACT THE USE OR INTENDED USE OF ANY DEDICATED EASEMENTS OR FACILITIES DEVELOPED WITH THIS PROJECT INCLUDING BUT NOT LIMITED TO STORMWATER STORAGE BASINS, SIGHT DISTANCE EASEMENTS AND NAOS OR OTHER OPEN SPACE EASEMENTS.

SIGNATURE — DATE 6-26-03

THE ENGINEER OF RECORD ON THESE PLANS HAS RECEIVED A COPY OF THE APPROVED STIPULATIONS FOR THIS PROJECT AND HAS DESIGNED THESE PLANS IN CONFORMANCE WITH THE APPROVED STIPULATIONS.

ESTIMATED QUANTITIES:

EARTHWORK

GROSS CUT = 4 C.Y.
GROSS FILL = 1,218 C.Y.

NOTES:

ENGINEERS ESTIMATED EARTHWORK QUANTITIES ARE NOT FOR BIDDING PURPOSES. CONTRACTORS SHALL BASE THEIR BID ON THEIR OWN QUANTITY TAKEOFFS

WATER

6" D.I.P. (CLASS 350)	198 LF.
WATER METER	1 EA.
2" BACK FLOW PREVENTER	1 EA.
FIRE DEPT SIAMESE CONNECTION	1 EA.
6"X8" TAPPING SLEEVE & VALVE	1 EA.
2" COPPER TYPE "K"	10 LF.
3" COPPER TYPE "K"	272 LF.
2" X 3" INCREASER	1 EA.
4" DIP	187 LF.

SEWER

CLEANOUT	1 EA.
6" PVC (SDR 35)	80 LF.

STORM DRAIN

CATCH BASIN TYPE "F"	2 EA.
12" HDPE STORM DRAIN	341 LF.
8" HDPE STORM DRAIN	124 LF.
CLEANOUT	3 EA.
EXTEND EX. 12" HDPE STORM DRAIN	25 LF.
REMOVE EX. 12" HDPE STORM DRAIN	72 LF.
ORIFICE PLATE	1 EA.

The existing onsite topographic information shown on these plans was not prepared by CMX Group. The information was prepared by a land surveyor registered in the state of Arizona and provided to CMX Group by the client. CMX hereby assumes no responsibility for the accuracy of existing onsite topographic and boundary information

CITY OF SCOTTSDALE

GENERAL CONSTRUCTION NOTES FOR PUBLIC WORKS CONSTRUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORK CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE (COS) SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE LATTER SHALL GOVERN.
2. THE ENGINEERING DESIGNS ON THESE PLANS ARE ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS SHALL BE RESUBMITTED TO THE CITY FOR RE-APPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE RIGHT-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO STARTING OF CONSTRUCTION (TELEPHONE 480 312-5750)
5. WHENEVER EXCAVATION IS TO BE DONE, CALL THE "BLUE STAKE CENTER", 602 263-1100, TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT. CALL "COLLECT" IF NECESSARY.
6. ENCROACHMENT PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. AN ENCROACHMENT PERMIT WILL BE ISSUED BY THE CITY UPON RECEIPT OF PAYMENT OF A BASE FEE PLUS A FEE FOR INSPECTION SERVICES TO BE PROVIDED BY THE CITY. COPIES OF ALL PERMITS SHALL BE RETAINED ON-SITE AND SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE WORK STOPPAGE UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING WHICH IS NOT IN THE PUBLIC RIGHTS-OF WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO CHAPTER 70, EXCAVATION AND GRADING, OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE PREPARED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE UNIFORM BUILDING CODE.
8. SIGNS REQUIRE SEPARATE APPROVALS AND PERMITS.
9. ALL GRADING AND EARTHWORK SHALL BE CONSTRUCTED AND EXECUTED IN STRICT CONFORMANCE WITH THE GEOTECHNICAL REPORT FOR THIS SITE PREPARED BY "GEOENVIRONMENTAL & MATERIALS, INC." (GEM), GEM PROJECT NO. 961340G, DATED DEC. 26, 1996 AND OCT. 8, 1996. THE CONTRACTOR SHALL CONTACT OWNER AND GEM PRIOR TO CONSTRUCTION TO VERIFY RECEIPT OF ANY UPDATES WHICH MAY HAVE BEEN MADE TO THE REPORT.
10. RIPRAP SHALL BE NATIVE STONE PLACED SO THAT A DENSE, UNIFORM MASS OF DURABLE, ANGULAR STONES WITH NO APPARENT VOIDS OR POCKETS IS CONFIGURED.
11. ALL DRAINAGE STRUCTURES AND FACILITIES ARE PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
12. ONSITE SEWER AND WATER SYSTEM IS PRIVATE AND MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER.
13. ALL WATER VALVES, SEWER MANHOLES AND CLEANOUTS SHALL BE ADJUSTED TO FINISH GRADE PER MAG STD. DTLS.391-1C, 422 & 441
14. UNDERGROUND STORMWATER STORAGE FACILITY IS PRIVATE AND IT'S *MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER IN PERPETUITY.* OWNER/DEVELOPER IS RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS FROM GOVERNING AGENCIES WITH JURISDICTION OVER UNDERGROUND STORMWATER STORAGE FACILITIES.

CITY OF SCOTTSDALE
REVIEW & RECOMMENDED APPROVAL BY:

FIRE DEPT		GRADING & DRAINAGE	
PLANNING		WATER & SEWER	
TRAFFIC		PAVING	

APPROVED BY:

ENGINEERING COORDINATION MANAGER (OR DESIGNEE) — DATE

LEGAL DESCRIPTION

PARCEL NO. 3

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS CAP IN HAND HOLE ACCEPTED AS THE SOUTHWEST CORNER OF SAID SECTION 2, ALSO BEING THE CENTERLINE INTERSECTION OF GREENWAY ARTERIAL (NOW KNOWN AS GREENWAY-HAYDEN LOOP) AND SCOTTSDALE ROAD AS SHOWN ON THE MAP OF DEDICATION, SCOTTSDALE RESEARCH PARK, ACCORDING TO BOOK 259 OF MAPS, PAGE 38, RECORDS OF MARICOPA COUNTY, ARIZONA, FROM WHICH A BRASS CAP IN HAND HOLE ACCEPTED AS THE WEST QUARTER CORNER OF SAID SECTION 2 BEARS NORTH 00 DEGREES 49 MINUTES 25 SECONDS EAST A DISTANCE OF 2641.35 FEET;

THENCE SOUTH 89 DEGREES 37 MINUTES 11 SECONDS EAST, ALONG SAID CENTERLINE OF GREENWAY-HAYDEN LOOP, A DISTANCE OF 64.92 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 2000.00 FEET;

THENCE NORTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 27 DEGREES 23 MINUTES 29 SECONDS AN ARC LENGTH OF 956.14 FEET TO THE CENTERLINE OF 73RD STREET AS SHOWN ON SAID MAP OF DEDICATION;

THENCE NORTH 26 DEGREES 59 MINUTES 02 SECONDS WEST, ALONG THE CENTERLINE OF SAID 73RD STREET, A DISTANCE OF 90.30 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 599.46 FEET;

THENCE NORTHEASTERLY ALONG SAID CURVE AND CENTERLINE THROUGH A CENTRAL ANGLE OF 33 DEGREES 19 MINUTES 44 SECONDS AN ARC LENGTH OF 348.71 FEET;

THENCE NORTH 83 DEGREES 07 MINUTES 48 SECONDS WEST A DISTANCE OF 30.00 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF SAID 73RD STREET AND THE POINT OF BEGINNING;

THENCE NORTH 83 DEGREES 07 MINUTES 48 SECONDS WEST A DISTANCE OF 15.11 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTH HAVING A RADIUS OF 100.00 FEET;

THENCE NORTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 20 DEGREES 19 MINUTES 05 SECONDS AN ARC LENGTH OF 35.46 FEET TO THE BEGINNING OF A TANGENT REVERSE CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 441.50 FEET;

THENCE NORTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 28 DEGREES 32 MINUTES 04 SECONDS AN ARC LENGTH OF 219.88 FEET TO THE BEGINNING OF A TANGENT REVERSE CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 429.96 FEET;

THENCE NORTHWESTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 12 DEGREES 16 MINUTES 20 SECONDS AN ARC LENGTH OF 92.09 FEET TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 579.45 FEET, THE CENTER OF WHICH BEARS SOUTH 63 DEGREES 46 MINUTES 33 SECONDS EAST;

THENCE NORTHEASTERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 09 DEGREES 48 MINUTES 33 SECONDS AN ARC LENGTH OF 99.20 FEET TO A POINT OF TANGENCY;

THENCE NORTH 36 DEGREES 02 MINUTES 00 SECONDS EAST A DISTANCE OF 20.95 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 439.93 FEET;

THENCE NORTHERLY ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 35 DEGREES 39 MINUTES 37 SECONDS AN ARC LENGTH OF 273.81 FEET;

THENCE SOUTH 89 DEGREES 38 MINUTES 29 SECONDS EAST A DISTANCE OF 353.03 FEET TO A POINT ON WESTERLY RIGHT OF WAY LINE OF 73RD STREET BEING A POINT ON A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 569.15 FEET, THE CENTER OF WHICH BEARS NORTH 64 DEGREES 04 MINUTES 56 SECONDS WEST;

THENCE SOUTHEASTERLY ALONG SAID CURVE AND SAID RIGHT OF WAY LINE THROUGH A CENTRAL ANGLE OF 00 DEGREES 23 MINUTES 00 SECONDS AN ARC LENGTH OF 3.81 FEET TO A POINT OF TANGENCY;

THENCE SOUTH 26 DEGREES 18 MINUTES 04 SECONDS WEST, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 178.68 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 629.46 FEET;

THENCE SOUTHWESTERLY ALONG SAID CURVE AND SAID RIGHT OF WAY LINE THROUGH A CENTRAL ANGLE OF 19 DEGREES 55 MINUTES 52 SECONDS AN ARC LENGTH OF 218.97 FEET TO THE POINT OF BEGINNING.

LEGEND

- PALO VERDE
- MESQUITE
- PALM
- CATCLAW
- POWERPOLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- SEWER CLEANOUT
- SEWER MANHOLE
- CATV VAULT
- LIGHT POLE
- TELEPHONE RISER
- ELECTRIC VAULT
- STORM DRAIN MANHOLE
- TRAFFIC SIGNAL
- EC — ELECTRIC CONTROL PANEL
- TELEPHONE CABINET
- TELEPHONE PEDESTAL
- ELECTRICAL EQUIPMENT CONDUIT
- MONUMENT
- T — TRANSFORMER
- EXISTING CONTOUR
- GROUND ELEVATION
- TC= — TOP OF CURB/PAVEMENT ELEV.
- C= — CONCRETE ELEVATION
- FG= — FINISH GROUND ELEVATION
- G= — GUTTER ELEVATION
- GRATE= — GRATE ELEVATION
- INV= — INVERT ELEVATION
- TOW= — TOP OF WALL ELEVATION
- LFE — LOWEST FLOOR ELEVATION
- FPE — FINISH PAD ELEVATION
- 2.0% — PAVEMENT SHEET FLOW
- 0.60% — PAVEMENT SWALE
- GB — GRADE BREAK
- HIGH WATER LINE
- STORM DRAIN PIPE

LOT SPLIT REFERENCE

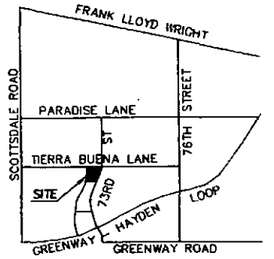
177-PA-2003

RETENTION BASINS NOTE

THE ELEVATIONS AND DIMENSIONS OF THE RETENTION BASINS SHOWN ON THIS PLANS HAVE BEEN ENGINEERED TO PROVIDE THE NECESSARY STORM RUNOFF RETENTION.
THE CONTRACTOR SHALL OVER-EXCAVATE AS NEEDED TO ACCOMMODATE THE LANDSCAPE FEATURES WITHOUT AFFECTING THE FINAL VOLUME THE BASINS ARE TO PROVIDE.
THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE LANDSCAPE PLANS.

SHEET INDEX:

CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center CALL COLLECT



VICINITY MAP
NOT TO SCALE

BENCH MARK:

TOP OF BRASS CAP IN HAND HOLE AT THE INTERSECTION OF GREENWAY ROAD AND 76TH STREET.
ELEVATION = 1475.53 CITY OF SCOTTSDALE DATUM (NAVD '88')

SITE BENCH MARK:

TOP OF BRASS CAP IN HAND HOLE AT THE INTERSECTION OF GREENWAY-HAYDEN LOOP AND SCOTTSDALE ROAD.
ASSUMED ELEVATION = 1468.08
ELEVATION BASED UPON NAVD '88'
DATUM=1472.98
CONVERSION EQUATION = -4.90

BASIS OF BEARING

BASIS OF BEARING IS N00°49'25"E ALONG THE MONUMENTED CENTERLINE OF SCOTTSDALE ROAD ALSO BEING THE WEST LINE OF SECTION 2, TOWNSHIP 3, NORTH RANGE 4 EAST, MARICOPA COUNTY, ARIZONA.

ZONING C-3

CERTIFICATION

THE WATER SYSTEM SHOWN HEREIN, HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE PROTECTION REQUIREMENTS.

DEVELOPER:

DANNY'S OFFICE LLC.
7373 E. SHEA
SCOTTSDALE, AZ. 85260
PHONE: (520) 906-0430
CONTACT: RICK STERTZ

ARCHITECT:

DEUTSCH ASSOCIATES
2929 N. 44TH STREET ,SUITE #320
PHOENIX, AZ 85018
PHONE: (602)840-2929
CONTACT: ARMAND MILAZZO

ENGINEER:

CMX, L.L.C.
1515 E. MISSOURI SUITE #115
PHOENIX, ARIZONA 85014
PHONE: (602) 279-8436

PROJECT MANAGER: STEPHANIE KINSEY, P.E.
CONTACT: MARK GOLINAR, P.E.

ZOCALLO CORPORATE OFFICE PHASE2

SCOTTSDALE, ARIZONA

COVER SHEET

CMX	CMX PROJ.	6603.02
	DATE:	06-26-03
	SCALE:	AS NOTED
DESIGNED: MG	DRAWN: DB	APPROVED: SK
REV.		DWG. NO. C1
		SHT. 1 OF 3

4785-02-1 41-DR-2002