Exterior Building Color & Material Samples
Color Drawdowns
Drainage Reports
TIMA
Abbreveated Water & Sewer Need Report
Archaeological Resources
Airport Vicinity Development Checklist
Parking Study
Trip Generation Comparison
Parking Master Plan
Water Study
Wastewater Study
Stormwater Waiver Application

RICK
ENGINEERING COMPANY
Traffic Division

November 11, 2015

Ms. Jackie Reed, Office Manager
Pivotal Group
3200 E. Camelback Road, Suite 295
Phoenix, AZ 85018

SUBJECT: RANCHO PARAISO (NAJAFI RANCH) TRAFFIC IMPACT LETTER
(RICK ENGINEERING COMPANY JOB NUMBER 15981-L)

Dear Jackie:

The following Traffic Impact Letter has been prepared to quantify the expected traffic generation for the proposed Rancho Paraiso – Najafi Ranch located on the east side of N. 68th Place between Paradise Drive and Cactus Road within the City of Scottsdale, Arizona. The site proposes to take access via two driveways along 68th Place and one exit only driveway along Cactus Road. The 6.25 acre-site proposes to have on-site horse training and horse therapy facilities, which includes the following:

Najafi Ranch :

- Ranch House
- Horse Barns
- Tack Barn
- Hay Barn
- Covered Arena
- Outdoor Arena
- Aqua Tread
- Euroxciser
- Turnout Pens

The proposed site plan is contained in **Attachment A.**

PROJECT TRAFFIC GENERATION

Rick Engineering Company calculated the anticipated traffic generation for the site based on conversations/information provided by comparable sites that operate similarly. In general practice, trip generation rates listed in the *Institute of Transportation Engineers (ITE) Trip Generation publication,* are used to estimate traffic generation for a proposed development for the associated land uses. However, due to the unique uses for the proposed project, the listed available ITE rates (Single Family Detached) would not accurately represent the site's typical traffic generation. For this assessment, the ranch house component is assumed to utilize the single family ITE trip rate, while the other on-site uses were estimated based on similar site operations in Arizona and Texas.

Business operations are anticipated to be 6 days a week generally from 7am to 5pm. It is proposed to have 1 ranch manager, 1 horse trainer, 1 rehab manager and 5 workers on-site on a daily basis. The ranch manager is proposed to reside on-site. The horse trainer is anticipated to

4-UP-2013
11/12/15

have 2 to 7 lessons per day. In addition, there would also be trips associated with the maintenance of the facility (manure, shavings, hay, veterinarian visit, farmer, etc). These site maintenance trips would typically occur on a once a week and/or once a month basis, but for the purposes of this assessment, it was conservatively accounted for in the trip generation calculations. Based on these proposed site operations and comparable site information (See **Attachment B**), the project is estimated to generate 46 weekday ADT (23 trips inbound/23 trips outbound on a daily basis) with 14 trips during the AM peak hour (11 inbound/3 outbound) and 14 trips during the PM peak hour (4 inbound/10 outbound). **Table 1** summarizes the site trip generation.

Table 1
Najafi Ranch Trip Generation

LAND USE	SIZE	RATE (TRIP/unit)	ADT	AM PEAK HOUR VOLUME		PM PEAK HOUR VOLUME	
				IN	OUT	IN	OUT
Najafi Ranch							
- Ranch House(on-site ranch manager)	1 unit	9.52	10[1]	0[1]	1[1]	1[2]	0[2]
- Horse Trainer	1 person	-	2	1	0	0	1
- Horse Rehab Manager	1 person		2	1	0	0	1
- Workers	5 persons	-	10	5	0	0	5
- Maintenance (vet visit, shavings, manure)	3	-	6	1	1	1	1
- Therapy Clients	1	-	2	1	0	0	0
- Visitors/Students/Riders	7	-	14	2	1	2	2
TOTAL		-	46	11	3	4	10

[1] ADT and AM peak hour volumes calculated from average rates per ITE's Trip Generation Publication, 9th Edition

For comparison purposes, the same 6.25 acre site can develop up to 7 single family dwelling units, which equates to 67 ADT, 6 AM peak hour trips and 7 PM peak hour trips. **Table 2** shows the trip generation comparison of the proposed ranch site versus the 7 single family dwelling unit site. This table shows that the proposed project is estimated to generate 21 less daily trips, 8 more AM peak hour trips and 7 more PM peak hour trips as compared to a 7 single family dwelling units on the same site

Table 2
Site Trip Generation Comparison

LAND USE	SIZE	RATE (TRIP/unit)	ADT	AM PEAK HOUR VOLUME		PM PEAK HOUR VOLUME	
				IN	OUT	IN	OUT
Single Family Detached Housing	7 unit	9.52	67[1]	2[1]	4[1]	5[2]	2[2]
Najafi Ranch	-	-	46	11	3	4	10
TRIP DIFFERENCE		-	**-21**	+9	-1	-1	+8

[1] ADT and AM peak hour volumes calculated from average rates per ITE's Trip Generation Publication, 9th Edition

SITE ACCESS/CIRCULATION

As previously mentioned, the site proposes to take access via two full access driveways along N. 68th Place and on exit only driveway along Cactus Road. The two driveways along 68th Place will serve as primary site access, while driveway along Cactus Road will serve as exit only for maintenance vehicles. Both the easterly driveway along 68th Place and the Cactus Road project driveway are about 200' away from the Cactus Road/68th Place intersection.

Cactus Road within the immediate project area is classified as Suburban Major Collector per the City's Mobility Element. It currently provides two vehicle lanes in each direction with a center two-way left turn lane. The posted speed limit is 45 mph and on-street parking is prohibited. Based on most recent available traffic count data (2012), Cactus Road currently carries 27,000 within the project vicinity.

CONCLUSIONS/RECOMMENDATIONS

Based on the anticipated Ranch Paraiso – Najafi Ranch traffic generation, the proposed project is anticipated to not significantly impact any of the adjacent roadways and intersections. As noted earlier, this proposed project is estimated to generate less trips on a daily basis than if seven single family dwelling units were built on the same 6.25 acre site. The two project driveways along 68th Place will serve as primary access while the Cactus Road driveway will be an exit only driveway for maintenance vehicles. The proposed project driveway locations along 68th Place and Cactus Road shall meet the minimum requirements as outlined in the City's Design Standards and Policies Manual.

Should you have any questions, please contact me at (619)291-0707.

Sincerely,

RICK ENGINEERING COMPANY

Mark Jugar, P.E., T.E., PTOE

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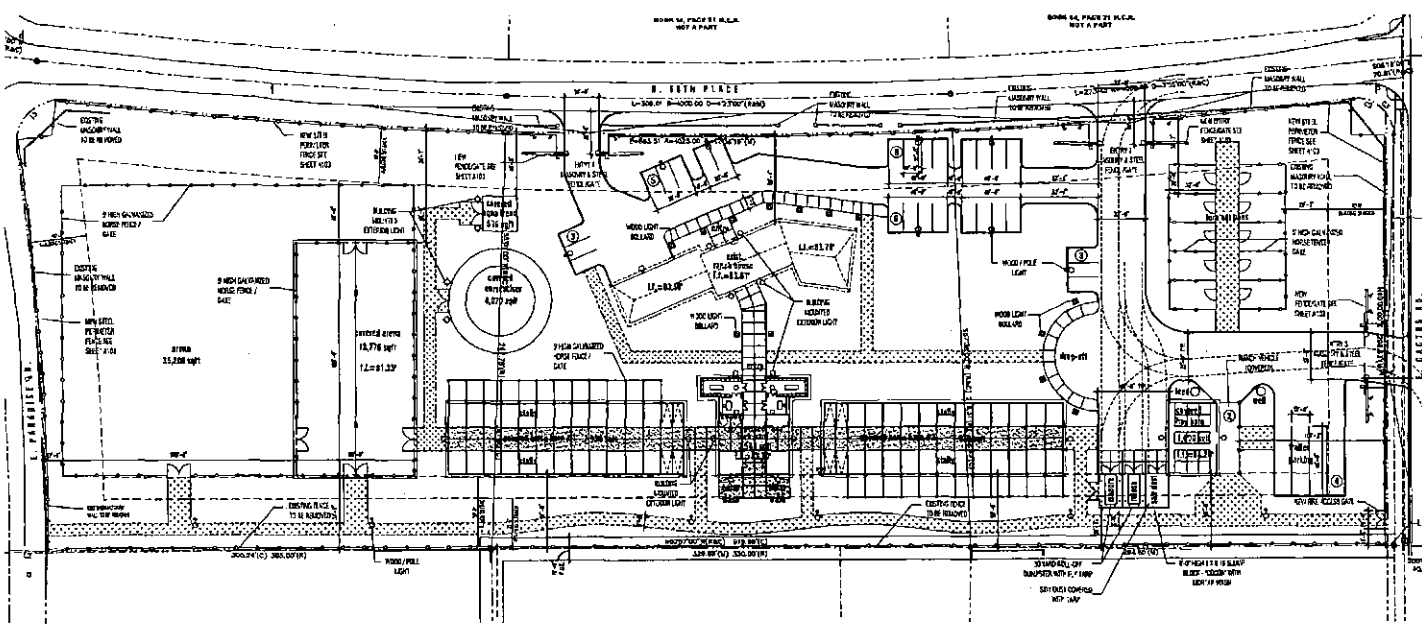
Attachments

ATTACHMENT A

SITE PLAN

NAJAFI RANCH HOME

Douglas Fredrikson
Architects



F

Douglas Fredrikson Architects

13100

issue date

revisions

a 101

site plan

scale: 1" = 30'-0"

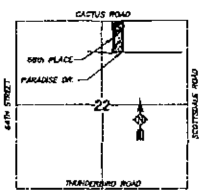
Project Data

Assessors Parcel Number:	175-20-05, 175-20-06, 175-20-07	Parking Required:	
Site Area:	272,478 S.F. (± 6.255 acres)	• 1 Parking Space / 2 Stalls	35 Parking Spaces
		• Accessible	Not Required per R1-35 Zoning
Existing Zoning:	R1-35 Residential	• Bicycle	Not Required per R1-35 Zoning
Proposed Zoning:	R1-35 / Conditional Use Permit - Ranch		
		Proposed Parking:	
Proposed Buildings (Roofed)		• Parking Spaces Vehicular only (10 x 20)	37 Parking Spaces
• Existing Ranch House	Existing	• Parking Spaces Truck / Trailer (12 x 40)	4 Parking Spaces
• New Horse / Tack Barn	19,440 SF	• Ranch Vehicle Parking (Covered)	2 Parking Spaces
• New Hay Barn	1,600 SF		
Proposed Accessory Structures (Roofed)			
• New Covered Arena	13,776 SF		
• New Eurosizer	4,070 SF		
• New Aqua Tread	576 SF		
Proposed Accessory Structures			
• (1) Manure Storage W/ Enclosure Wall	389 SF		
• (1) Sawdust Storage W/ Enclosure Wall	389 SF		
• (1) Shavings Storage W/ Enclosure Wall	389 SF		
Proposed Equestrian Fenced Areas (Not Roofed)			
• Pasture	35,200 SF		
• (10) 20 X 32 Turnout Pens	6,400 SF		

General Notes

- At time of [illegible] the owner shall submit verification that the existing wells located within the right of way have been removed
- An additional hydrant will be required to protect the property
- The horse barn will require a separate fire line service for the sprinkler system
- An FDC will be required near E. 68th St.
- Fire access system (knox box / switch) will be required for gates
- Renovations / additions to existing residence exceeding 25% value of existing home will require installation of fire sprinkler system
- The covered arena must comply as an open equestrian arena for riding only to be exempted from fire sprinklers
- The existing on-site well shall comply with ADWR and MCESD
- Additional water development fees will be due based on the size of the new lot
- Pole mounted lights are not to exceed 16'-0" in height

ATTACHMENT A



vicinity map

scale: n.t.s.

ATTACHMENT B
COMPARABLE SITES

Comparable Site	Site Name	Location	City/State	Size	Facility Type	Facilities	Horses on-site	Trainers/staff	Estimated Weekday Traffic	Notes
1	Equine Salt Water Therapy	10344 Friendship Road	Pilot Point, Texas	12 acres	Therapy/Boarding	Residence, Therapy Barn, Horse Barn, Pool Barn, Indoor Arena	25	3	20 ADT	10-25 treatments per day, 1 ranch manager
2	Sherry Templin Training Stable	12303 N. 93rd St	Scottsdale, Arizona	20 acres	Training/Riding/Boarding	Jumping Arena, Covered Arena, covered Round pen, barn, racetrack	140	5	50 - 60 ADT	1 trainer may have 1-2 lessons per day
3	Bellisima Ranch	29211 N 53rd	Cave Creek, Arizona	24 acres	Training/Riding/Boarding	Hay Barn, Round Pen, Turnout, 2 covered arenas, Jumping Arenas, Track, Storage Barn, 3 barns,double wide mobile homes	40	8	40 50 ADT	~15 cars on site in the AM, ~4 cars on-site in the PM

NOTE: The proposed project is anticipated to operate similar to SItes 1 and 2, but on a smaller scale.

VANN ENGINEERING INC

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL CONSULTING • CONSTRUCTION TESTING & OBSERVATION

November 19, 2015 Project 24065

Ms. Jackie Reed, Office Manager
Rancho Paraiso, LLC
3200 East Camelback Road, Suite 295
Phoenix, Arizona 85018

RE: GEOTECHNICAL INVESTIGATION REPORT
FORENSIC EVALUATION OF EXISTING PAVEMENT SECTION AND OFF-SITE PAVEMENT THICKNESS DESIGN RECOMMENDATIONS FOR 68TH PLACE, BETWEEN CACTUS ROAD AND PARADISE DRIVE AND FOR A PORTION OF PARADISE DRIVE FROM 68TH PLACE AND CONTINUING 340 FEET EAST
SCOTTSDALE, ARIZONA

Ms. Reed:

This submittal has been prepared in order to provide recommendations for off-site (City of Scottsdale) pavement thickness design for local residential streets. In addition, this submittal includes information gathered and reported in the forensic Geotechnical Investigation report, prepared by this firm and dated October 30, 2015.

Vann Engineering, Inc. understands that the City of Scottsdale has requested pavement thickness design recommendations for off-site local residential streets. In addition, as part of our October 30, 2015 report, the existing driveway depicted in the aerial photograph below has been displaying signs of distress and cracking. The purpose of our initial investigation was to determine the cause of said distress, and provide recommendations for remedial action.

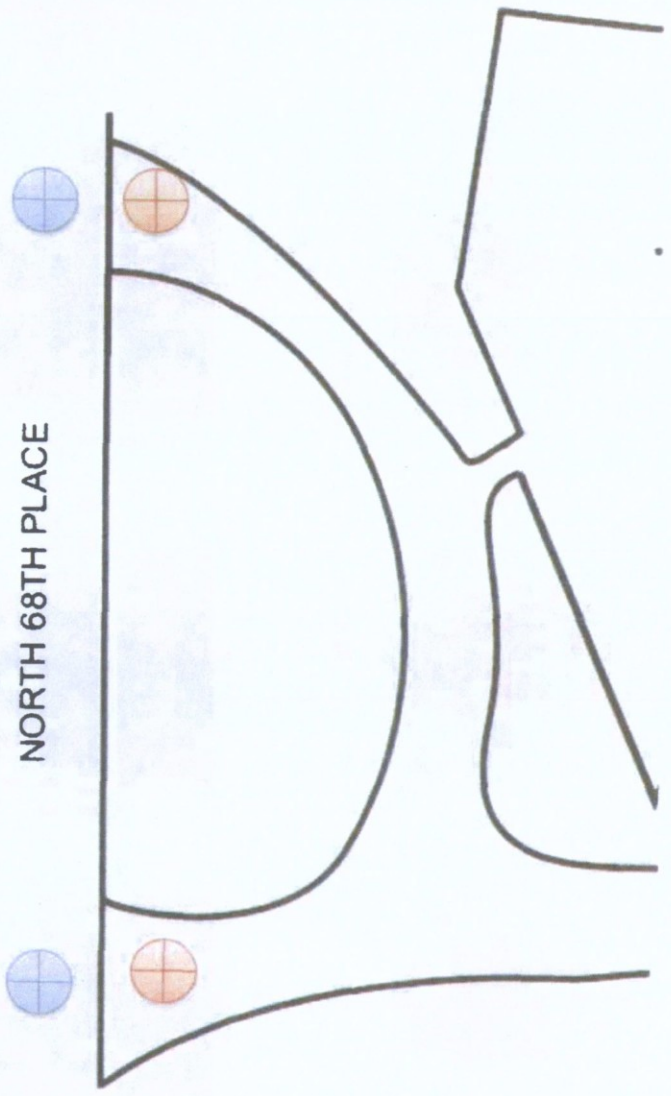
9013 NORTH 24TH AVENUE, SUITE 7, PHOENIX, ARIZONA 85021
PHONE: 602.943.6997 • VANNENGINEERINGINC.COM

This most recent effort is to provide pavement thickness design recommendations of off-site local residential streets (City of Scottsdale). The aerial photograph below depicts the site, and its immediate vicinity.

On November 17, 2015 our site investigation included one site visit (mobilization and demobilization) and one (1) exploratory test boring to a depth of 3.0 feet along Paradise Drive.

On October 27, 2015 our site investigation included one site visit (mobilization and demobilization), and four (4) cores / test borings in the area of the two driveway entrances and drive approaches, with hand samples advanced to depths of 3.0 feet. The plan below depicts both the test locations for the initial effort.

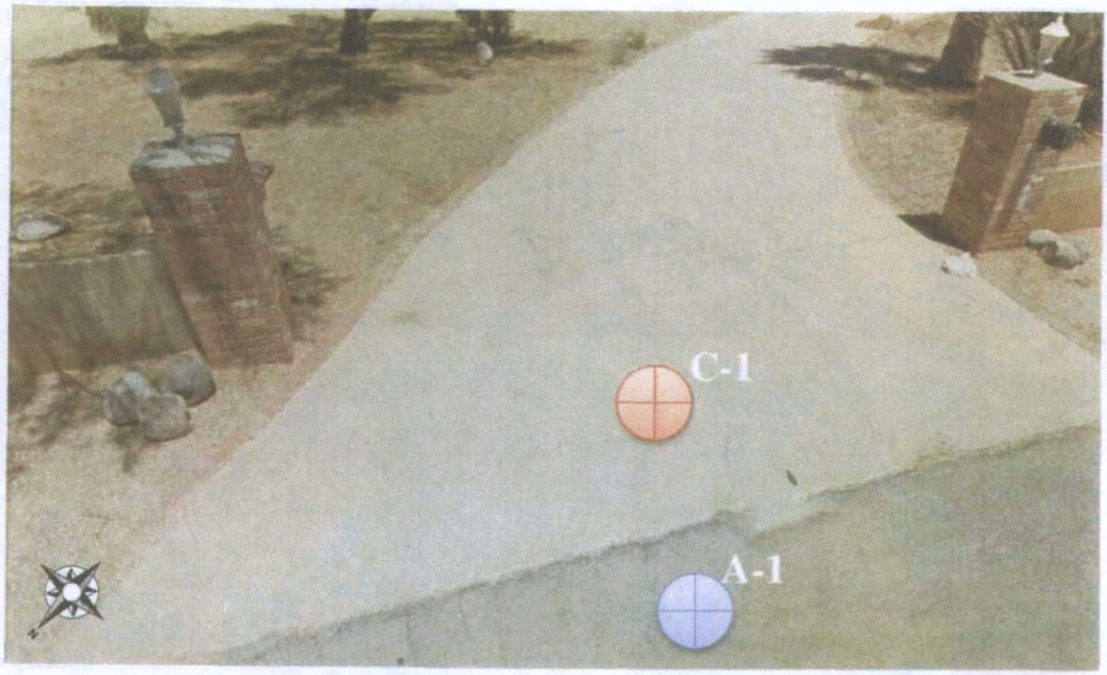
Logs of the test borings / cores for both field efforts are attached to this submittal. The final test locations are also shown on the attached Site Plan.

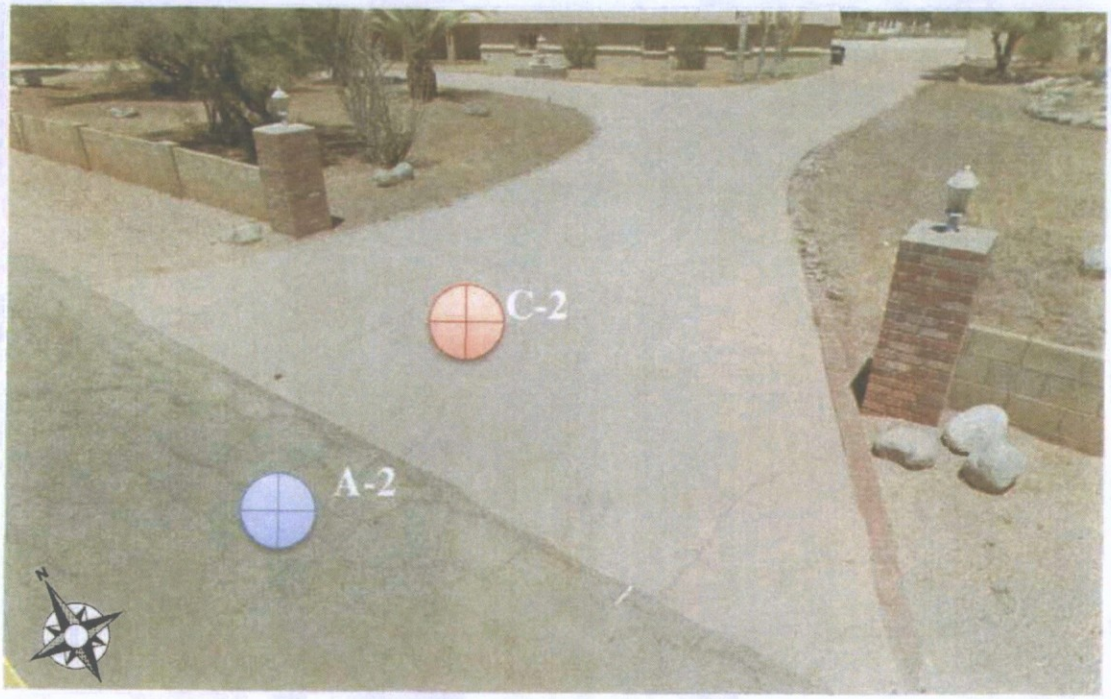


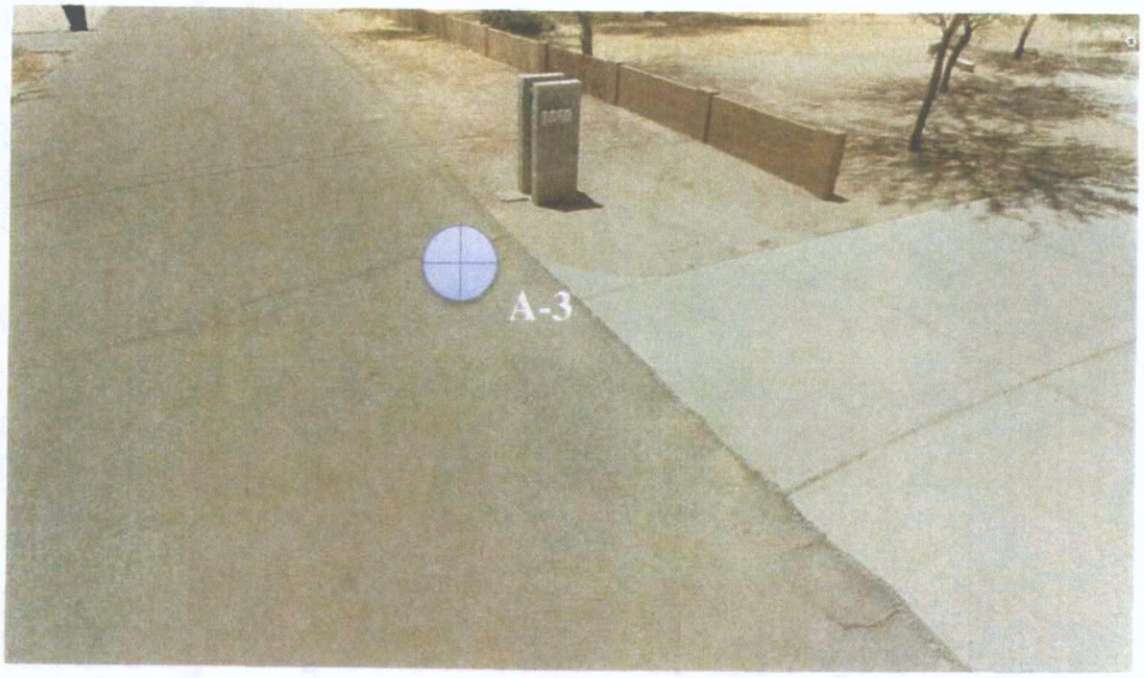
Asphalt Boring Location

Concrete Core Location

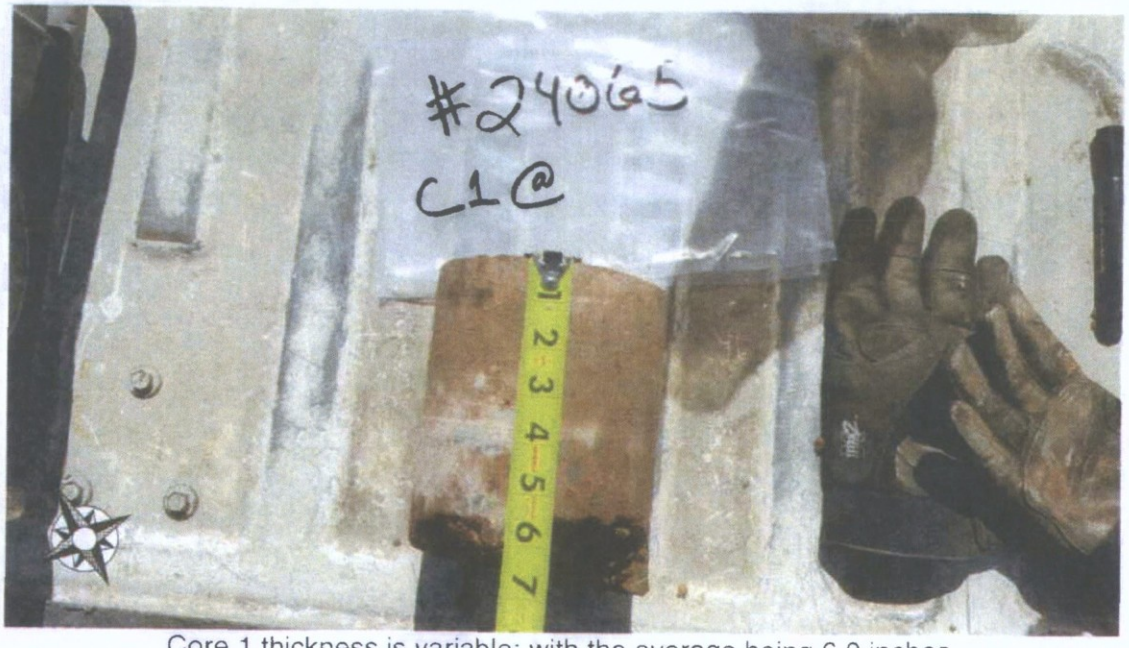
The site photos via Google Earth below depict the existing areas of distress, as well as the asphalt borings and concrete core locations for both field efforts:


C-1
A-1
N


C-2
A-2
N



Additional site photographs were taken during the field effort and are supplied below:



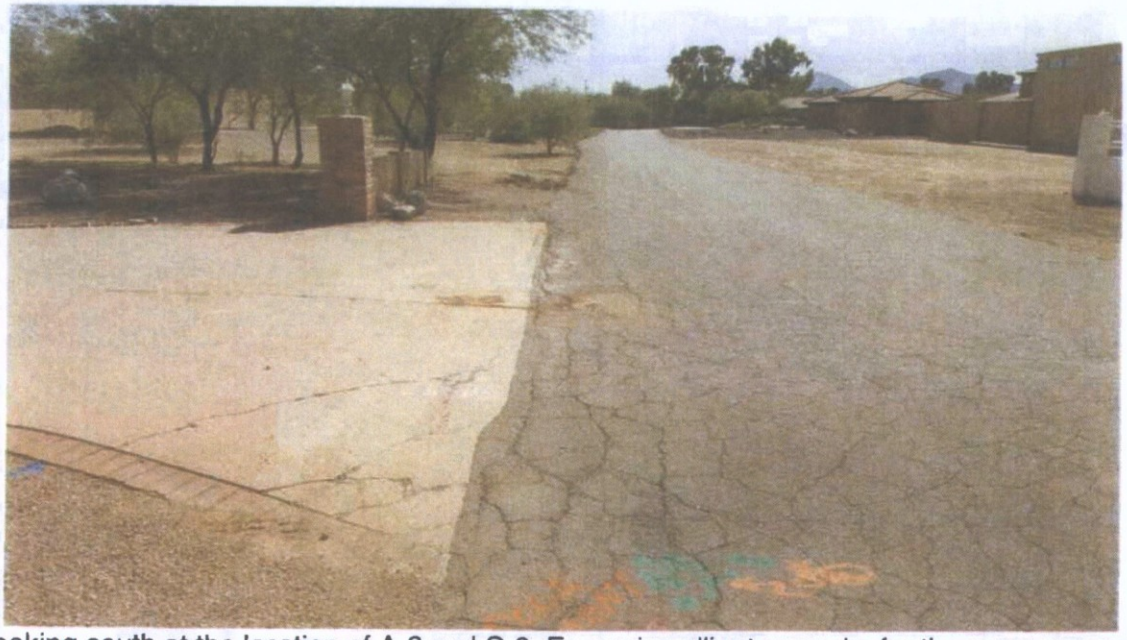
Core 1 thickness is variable; with the average being 6.0 inches.

Core 1 thickness in this image is an average of 6.0 inches. One edge extends to 7.0 inches, but that is not the typical thickness.

Looking west at the locations of A-1 and C-1. Note the presence of longitudinal and transverse cracks in the concrete, typically indicating either soil expansion or the lack of control joints.

Looking south at the locations of A1 and C-1. Note the excessive alligator cracking, which typically suggests a lack in subgrade support, water infiltration, inadequate asphalt cement content in the asphalt mixture, or inadequate thickness design for the soil conditions.

Looking north at the location of A-1 and C-1. Note the lip at the junction between the asphalt and concrete.



Looking south at the location of A-2 and C-2. Excessive alligator cracks for the same reasons mentioned before. Note also the over-stressing of the corner of the concrete slab perhaps also accompanied by lack of subgrade support.

Looking south at the location of A-2 and C-2. Separated locations of alligator cracking.

Coring operation at C-2. Stress cracking at the entrance corner on the concrete. Excessive alligator cracking in the asphalt as it abuts the concrete.

Core 2 thickness in this image ranges from 5.75 inches.

The soils encountered were examined, visually classified and sampled as intended. The sample locations are noted graphically on the exploratory test core/boring logs. Representative samples obtained during the field investigation were subjected to the following laboratory analyses:

Test	Sample(s)	Purpose
Sieve Analysis	Native sub-grade soils (5)	Soil classification
Atterberg Limits	Native sub-grade soils (5)	Soil classification

Items to be included in the final report shall be:

- Description of the subject site
- Description of the major soil layers
- Results of laboratory testing
- Site Plan indicating the locations of all points of exploration
- Patching of all test holes
- Recommendations for on-site and off-site (local residential) pavement thickness design

In general, the rigid and flexible pavement sections evaluated exhibited moderate to extreme fatigue. The fatigue has manifested itself in the form of visible surface distress such as:

- Cracking
    - Alligator Cracking
    - Block Cracking
    - Longitudinal Cracking
    - Transverse Cracking

Refer to the previously introduced site photographs that support the above listed types of cracking.

The following table summarizes the pavement thickness, ABC thickness and subgrade characteristics at each test core/boring location.

Test Boring	Compacted Subgrade Characteristics	ABC (Inches)	Asphaltic Concrete Pavement Thickness (Inches)	Concrete Pavement Thickness (Inches)
A-1	Native soil comprised of damp, sandy clay, PI of 17, 78% passing the #200 sieve, 12.6% moisture, (CL)	4.0	3.0	-
C-1	Native soil comprised of slightly damp, sandy clay, PI of 21, 84% passing the #200 sieve, 8.1% moisture, (CL)	0.0	-	6.0
A-2	Native soil comprised of damp, sandy clay, PI of 18, 75% passing the #200 sieve, 7.4% moisture, (CL)	4.0	3.0	-

Test Boring	Compacted Subgrade Characteristics	ABC (Inches)	Asphaltic Concrete Pavement Thickness (Inches)	Concrete Pavement Thickness (Inches)
C-2	Native soil comprised of damp, sandy clay, PI of 19, 82% passing the #200 sieve, 6.9% moisture, (CL)	0.0	-	5.75
A-3	Native soil comprised of slightly damp, sandy clay, PI of 26, 55% passing the #200 sieve, 4.3% moisture, (CL)	4.0	3.0	-

Based on the native subgrade soil characteristics, this firm recommends the following pavement section for off-site pavement (City of Scottsdale - local residential streets):

Site grading within pavement areas should provide requisite subgrade support for flexible pavements. A compacted subgrade of on-site soils or soils with comparable properties is assumed. Pavement materials and placement requirements should be in accordance with the Maricopa Association of Government Standard Specifications, or equivalent.

The stability of compacted pavement subgrade soils is reduced under conditions of increased soil moisture. Therefore, base course or pavement materials should not be placed when the surface is in a wet condition. Adequate surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade. Asphaltic concrete surfacing should be MAG type 19 mm placed in a single lift.

The following presents minimum recommended pavement sections for anticipated traffic conditions. Please refer to the following table for the recommended sections for 68th Street and Paradise Drive.

Off-Site Local Residential Street Pavements:

68TH Street and Paradise Drive

Local Residential Streets

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)
A[a]	8.0	8.0	3.0

[a] - 20 year design life, with typical maintenance

Based on the native subgrade soil characteristics, this firm would have recommended the following pavement sections for on-site pavement conditions:

On-Site Pavements:

Light Vehicle Areas (Tire Pressures between 0 and 45 PSI)

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8.0	8.0	2.0	
B[a]	8.0	5.0	3.0	
C[a]	8.0		5.0	
D[b]	8.0			6.0

Heavy Vehicle Areas (Tire Pressures between 45 and 90 PSI)

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8.0	8.0	3.0	
B[a]	8.0	5.0	4.0	
C[a]	8.0		6.0	
D[b]	8.0			7.0

Very Heavy Vehicle Areas (Tire Pressures between 90 and 135 PSI)

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8.0	8.0	4.0	
B[a]	8.0	5.0	5.0	
C[a]	8.0		7.0	
D[b]	8.0			9.0

[a] - 10 to 15 year design life, with typical maintenance
[b] - 20-year design life, with typical maintenance

Compaction of asphalt should be accomplished to the following density criteria:

Material	Percent Compaction 75-blow method
Asphalt Surfacing	95 minimum

The asphaltic concrete material shall conform to all requirements as established in MAG Sections 710 and 711. ABC must conform to MAG Specifications.

In general, the asphalt pavement section (measured and found to be 3.0 inches) was designed and constructed to the Current City of Scottsdale design standards for local residential streets. However, Current City of Scottsdale design standards for local residential streets would have required 8.0 inches of ABC (measured and found to be 4.0 inches), which probably would have given the existing pavement a little more life.

Regardless, through time the asphalt surfacing has weathered, cracked and allowed moisture to infiltrate into the clay subgrade. Clay subgrades are exceptionally moisture sensitive, and soften with repeated wetting and drying cycles. As the clay subgrade has taken on and lost moisture in cyclic fashion, there has been a continual decrease in subgrade support. As the subgrade loses its strength, more slight deflections and other pavement deterioration occur. As such, circumstances have resulted in the pavement's significant loss in design life. In our opinion, the asphaltic concrete pavement has lost appreciable life to the point that complete reconstruction in accordance with the design alternates above is recommended. Based on the extent of alligator cracking, no rehabilitation effort will prove effective. Once exposed through saw cutting and asphalt and ABC removal, the subgrade soils should be reconditioned with moisture in the range of optimum -3 to optimum +1 percent. Compaction of the subgrade and all other pavement elements should be to a minimum of 95%.

Relative to the concrete sections that comprised the circular drive, the section constructed was most likely designed on the basis of light vehicular traffic, i.e. 6.0 inches. However, it is obvious that much heavier vehicles have traversed across at least the entrance portions of the concrete sections, resulting in overloading the apron areas where they meet the asphalt pavement for the roadway. Coupled with a very probable loss of subgrade support, the concrete section was prone to deflection and cracking. Add to that the absence of sufficient control joints in the concrete. Altogether, the factors have promoted the exhibited concrete distress. We recommend that most of the concrete sections, east of the fence line, remain in-place. Those portions of the concrete aprons west of the fence line and otherwise configured in a basic triangular shape (where they meet the roadway) should be saw cut, removed and replaced with a heavier section, e.g. based on heavy traffic or 7.0 inches. The saw cut can serve as the location for a construction or control joint. The subgrade soils should be reconditioned with moisture in the range of optimum -3 to optimum +1 percent. Compaction of the subgrade should be to a minimum of 95%.

The above recommendations are limited to removal and replacement in the affected areas as the existing distress cannot be effectively remediated with any measure short of replacement. The replaced roadway and concrete elements, if constructed as recommended herein will yield the approximate design life as stated above.

We appreciate the opportunity to provide services in connection with this project. Should any questions arise concerning the content of this report, please feel free to contact this office directly.

Respectfully submitted,

VANN ENGINEERING, INC.

Expires 9/30/16

Mark E. Smelser, B.S.
Project Geologist

Jeffry D. Vann, P.E.
Principal Engineer

Copies: Addressee (2), and via email jreed@pivotalgroup.com

LEGEND:

- ASPHALT TEST BORING/CORE LOCATIONS
- CONCRETE CORE LOCATIONS

N

SITE PLAN

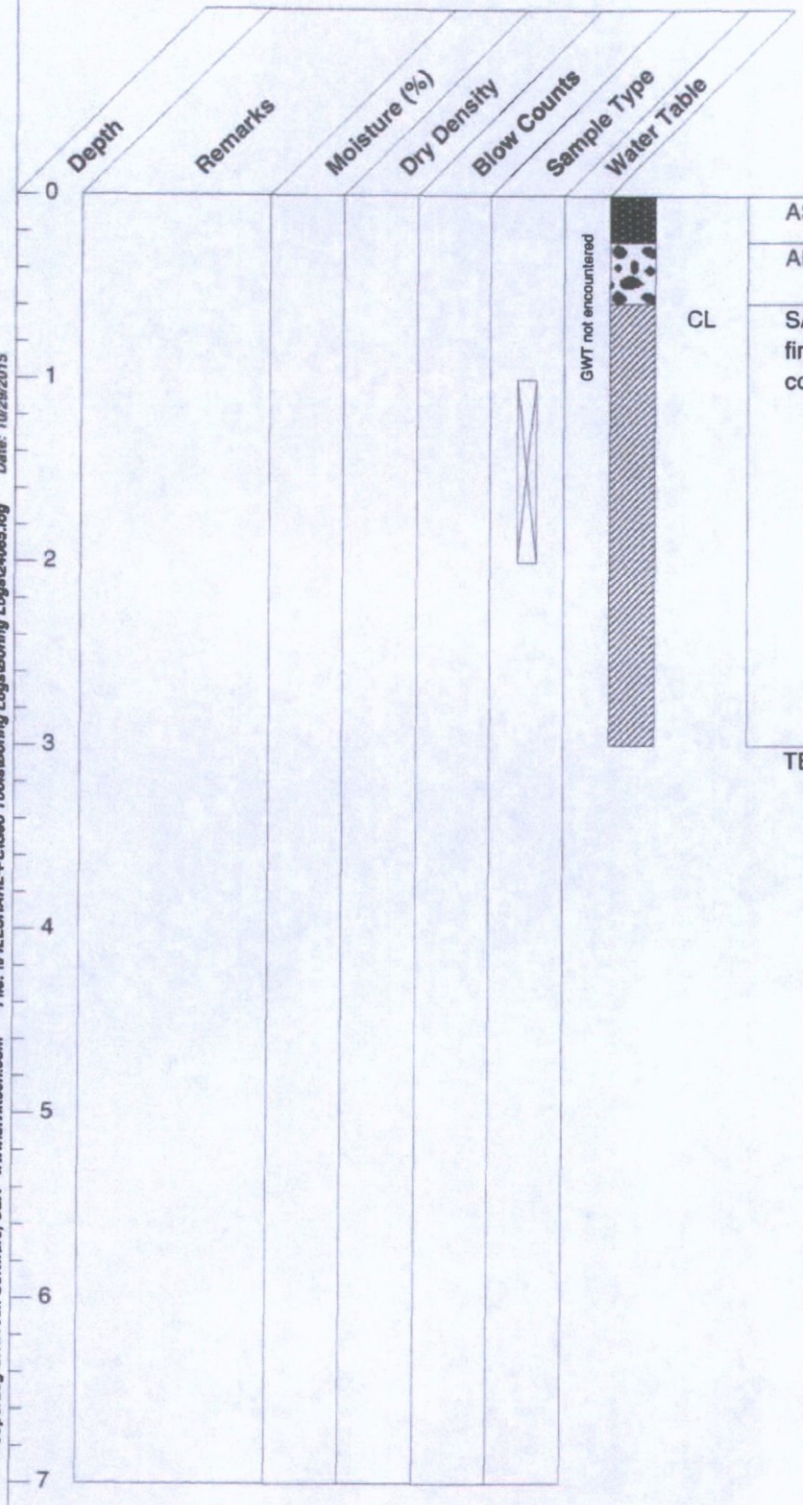
SCALE: N.T.S.		PREPARED BY: CV
DATE: 11/18/15		

FORENSIC EVALUATION OF EXISTING PAVEMENT STRUCTURE AND OFF-SITE PAVEMENT DESIGN RECOMMENDATIONS FOR 68TH PLACE, BETWEEN CACTUS ROAD & PARADISE DRIVE AND FOR A PORTION OF PARADISE DRIVE FROM 68TH PLACE AND CONTINUING 340 FEET EAST SCOTTSDALE, ARIZONA

PROJECT 24065

VANN ENGINEERING INC

A-1



Surface Elevation: See Site Plan
Boring Date: 10/27/15
Operator: M. Mewhinney
Drilling Method: CME-55

ASPHALT (3")

ABC (4")

CL — SANDY CLAY, light-brown, slightly damp, 20% sand, 80% fines, poorly graded, subangular to subrounded coarse-grained particles, firm, PI of 17, weak cementation

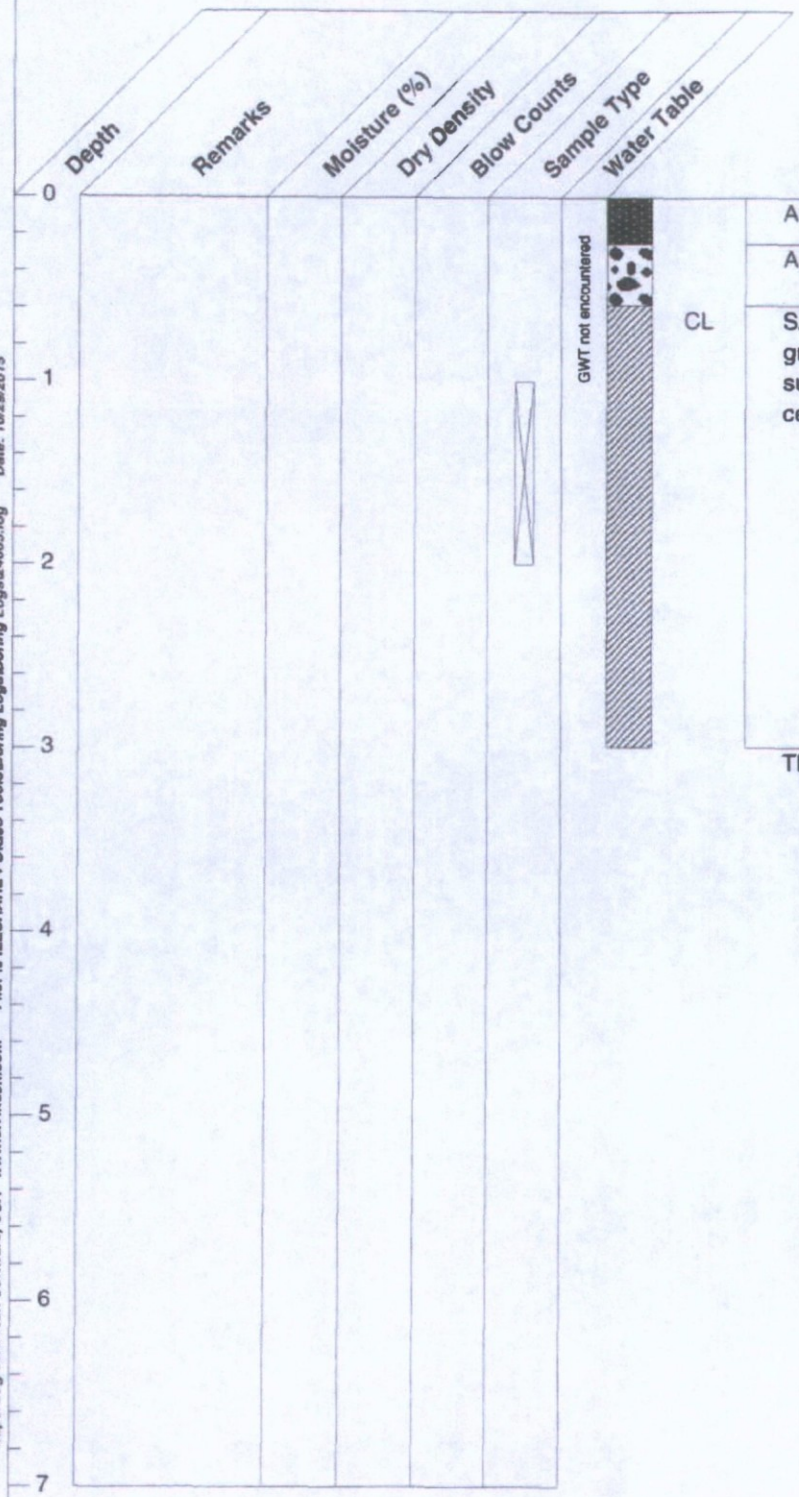
TEST BORING DISCONTINUED AT 3.0 FEET

SuperLog CivilTech Software, USA www.civiltech.com File: \\FILESHARE-PC\Geo Tools\Boring Logs\Boring Logs\24065.log Date: 10/29/2015

VANN ENGINEERING, INC.

Roadway & Driveway Entrances
Project No. 24065

A-2



Surface Elevation: See Site Plan
Boring Date: 10/27/15
Operator: M. Mewhinney
Drilling Method: CME-55

ASPHALT (3")

ABC (4")

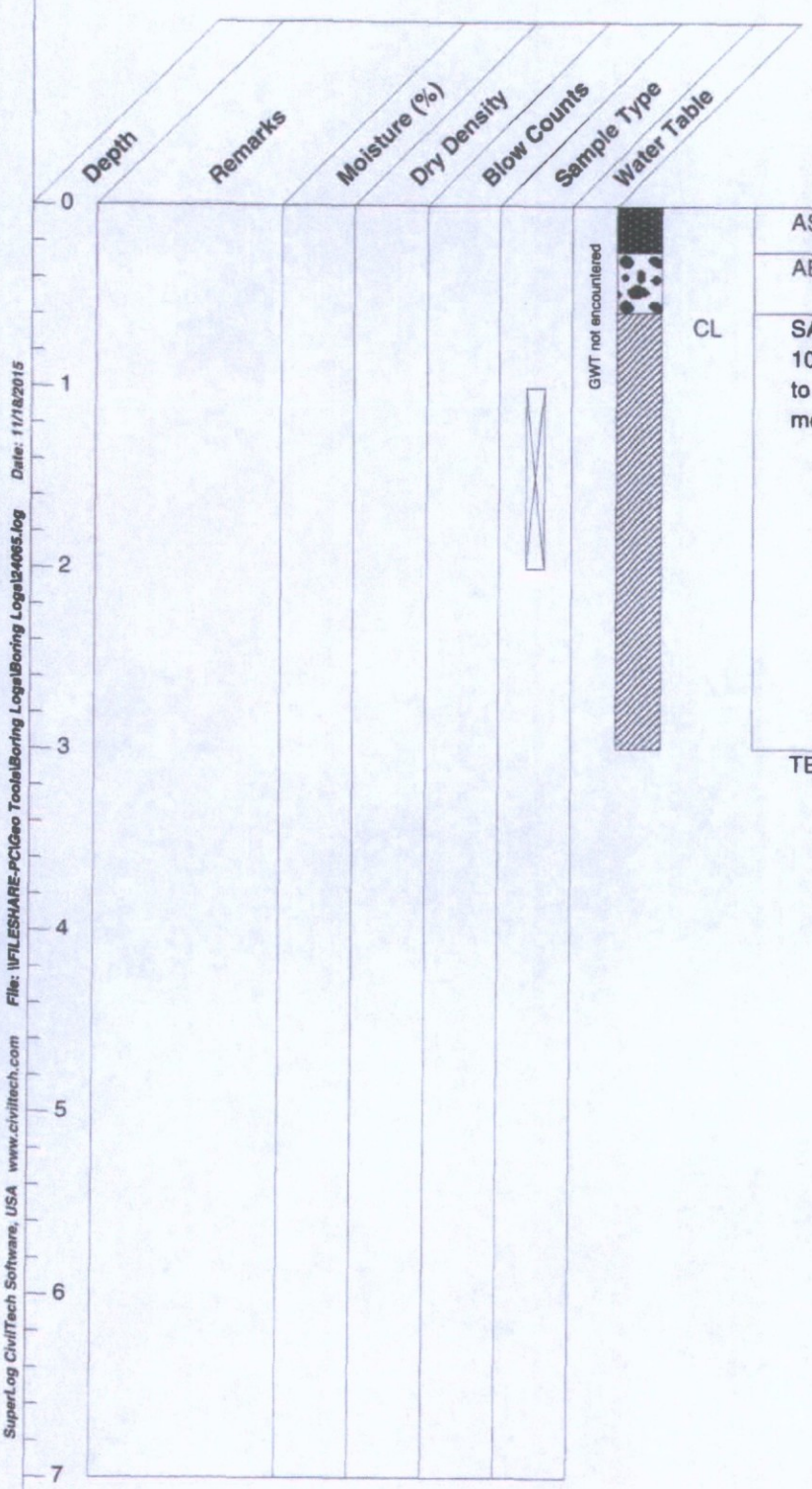
CL — SANDY CLAY, trace gravel, light-brown, slightly damp, 5% gravel, 20% sand, 75% fines, poorly graded, subangular to subrounded coarse-grained particles, firm, PI of 18, weak cementation

TEST BORING DISCONTINUED AT 3.0 FEET

VANN ENGINEERING, INC.

Roadway & Driveway Entrances
Project No. 24065

A-3



Surface Elevation: See Site Plan
Boring Date: 11/17/15
Operator: M. Mewhinney
Drilling Method: CME-55

ASPHALT (3")

ABC (4")

CL — SANDY CLAY, some gravel, tan-light-brown, slightly damp, 10% gravel, 35% sand, 55% fines, poorly graded, subangular to subrounded coarse-grained particles, stiff, PI of 26, medium cementation

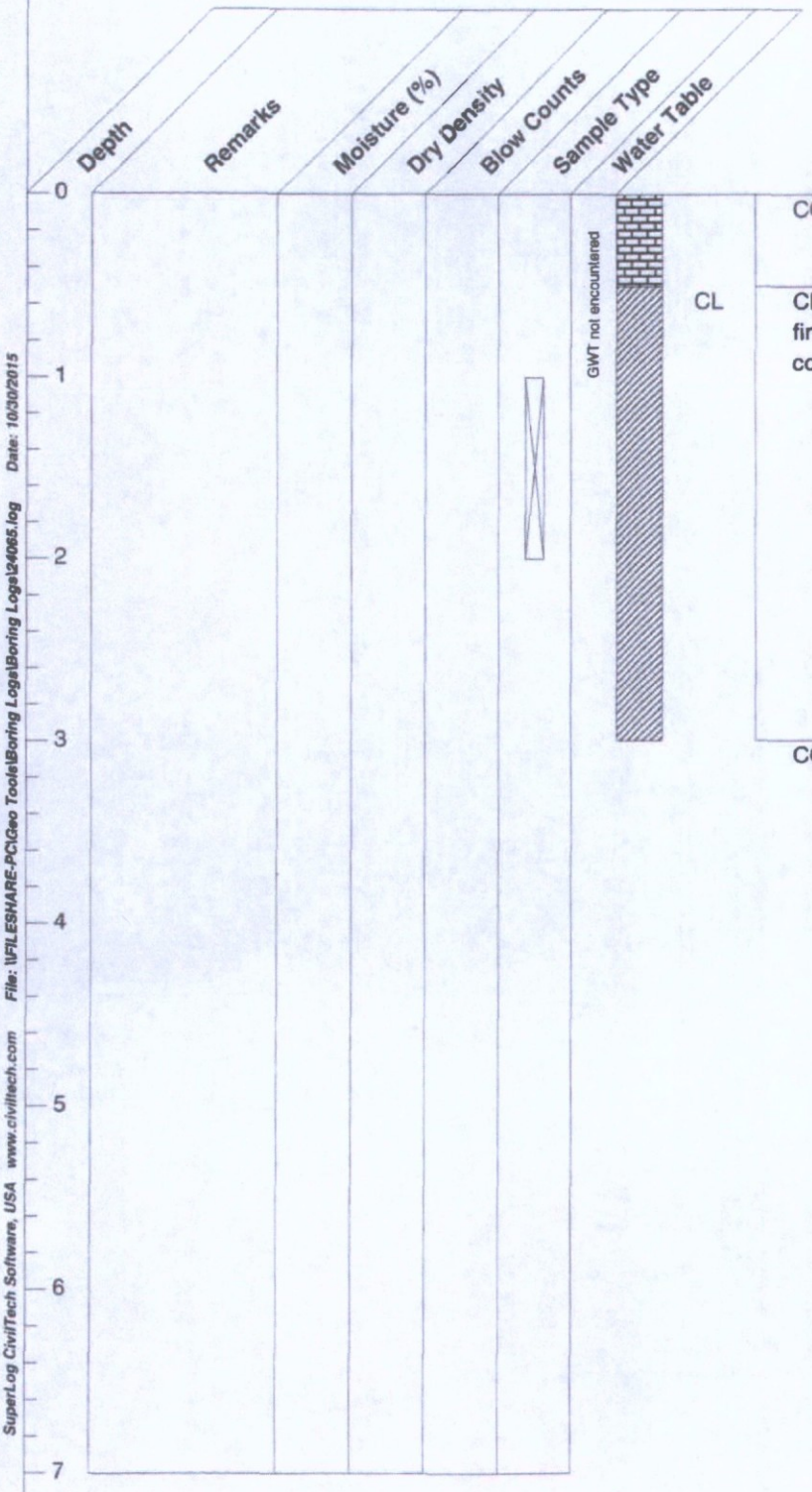
TEST BORING DISCONTINUED AT 3.0 FEET

SuperLog CivilTech Software, USA www.civiltech.com File: \\FILESHARE-PC\Geo Tools\Boring Logs\Boring Logs\24065.log Date: 11/18/2015

VANN ENGINEERING, INC.

Roadway & Driveway Entrances
Project No. 24065

C-1



Surface Elevation: See Site Plan
Boring Date: 10/27/15
Operator: M. Mewhinney
Drilling Method: CME-55

CONCRETE (6")

CL — CLAY, with sand, light-brown, slightly damp, 15% sand, 85% fines, poorly graded, subangular to subrounded coarse-grained particles, firm, PI of 21, weak cementation

CORE DISCONTINUED AT 3.0 FEET

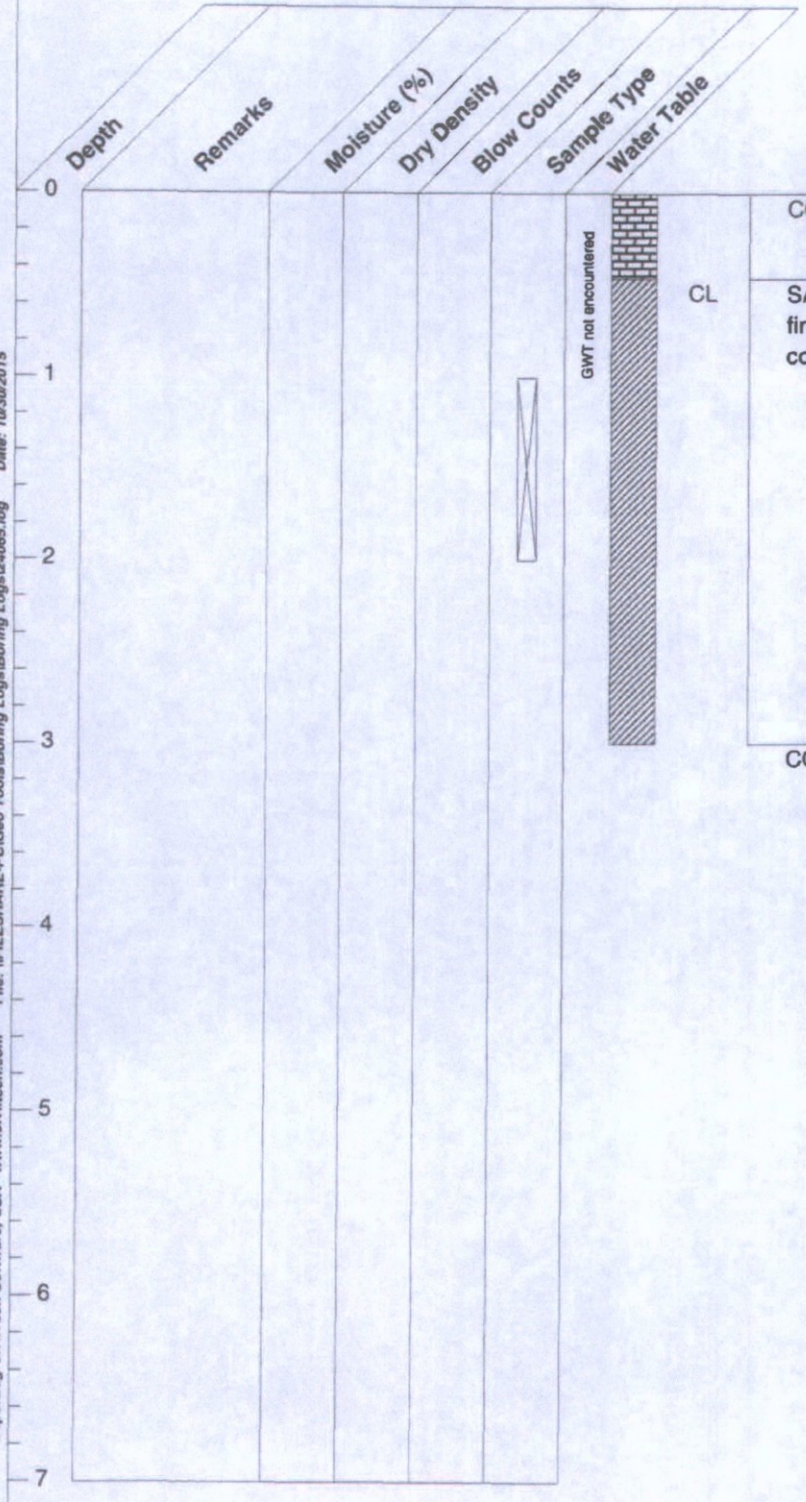
SuperLog CivilTech Software, USA www.civiltech.com File: \\FILESHARE-PC\Geo Tools\Boring Logs\Boring Logs\24065.log Date: 10/30/2015

VANN ENGINEERING, INC.

Roadway & Driveway Entrances
Project No. 24065

C-2

Surface Elevation: See Site Plan
Boring Date: 10/27/15
Operator: M. Mewhinney
Drilling Method: CME-55



CONCRETE (5.75")

CL — SANDY CLAY, light-brown, slightly damp, 20% sand, 80% fines, poorly graded, subangular to subrounded coarse-grained particles, firm, PI of 19, weak cementation

CORE DISCONTINUED AT 3.0 FEET

VANN ENGINEERING, INC.

Roadway & Driveway Entrances
Project No. 24065

CLASSIFICATION TEST DATA

OFF-SITE PAVEMENT DESIGN RECOMMENDATIONS
FOR 68TH PLACE, BETWEEN CACTUS ROAD & PARADISE DRIVE
AND FOR A PORTION OF PARADISE DRIVE
FROM 68TH PLACE AND CONTINUING 340 FEET EAST
SCOTTSDALE, ARIZONA

Sample Location	*Sieve Analysis (% Passing Sieve Size)*								*Atterberg Limits*			*Moisture Content*
	6"	*3"*	*1"*	*#4*	*#10*	*#40*	*#100*	*#200*	*LL*	*PI*	*USCS*	*%*
C-1 (1.0'-2.0')	-	-	-	99	98	94	-	84	39	21	CL	8.1
C-2 (1.0'-2.0')	-	-	-	99	97	93	-	82	37	19	CL	6.9
A-1 (1.0'-2.0')	-	-	-	100	97	91	-	78	35	17	CL	12.6
A-2 (1.0'-2.0')	-	-	-	97	91	85	-	75	36	18	CL	7.4
A-3 (1.0'-3.0')	-	-	100	89	74	63	-	57	41	26	CL	4.3

1st Submittal Resubmittal (circle one)

Development Application: PC/CC, CC and DRB

Coordinator: Meredith Date of application submittal: _____ Preapp/case #: 4-UP-2013

Date Plans Were Routed: _____ Staff that Routed Plans: _____

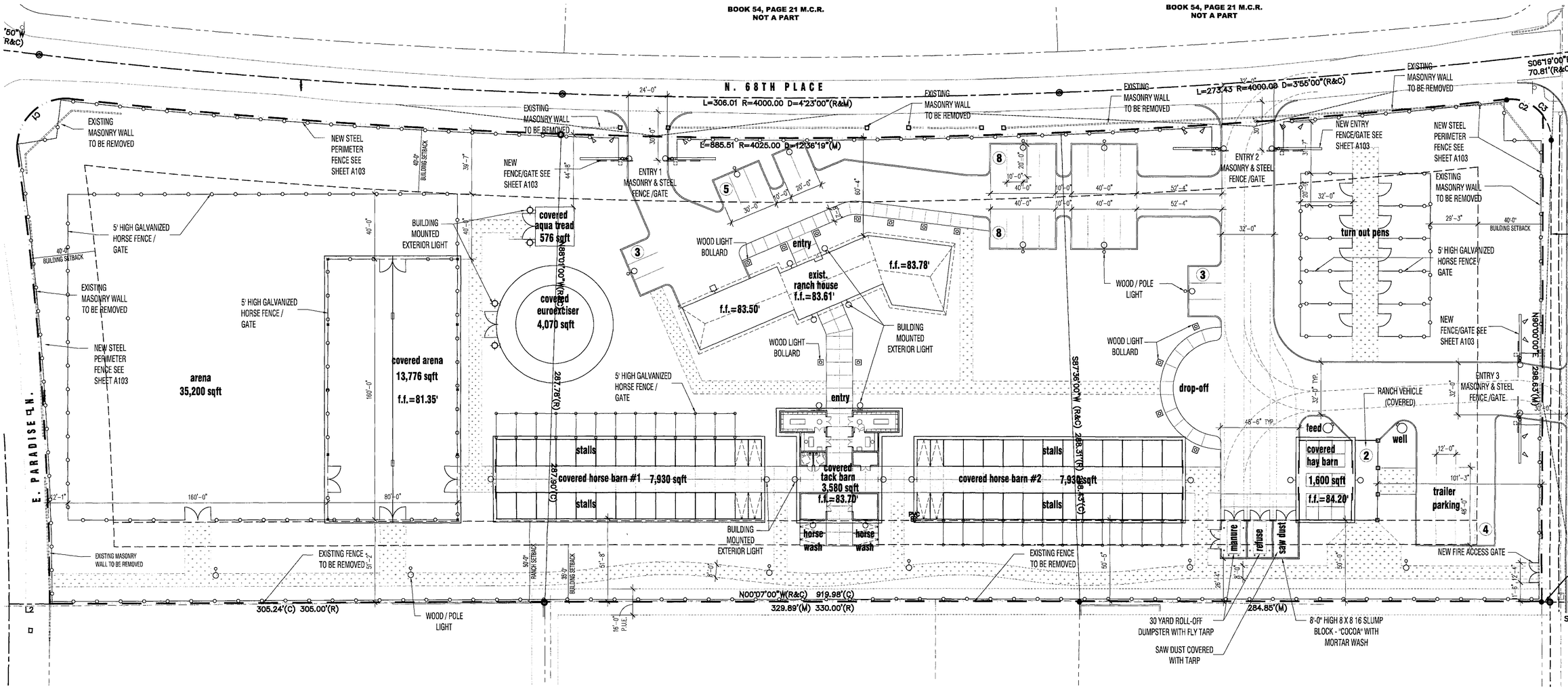
Please check the appropriate box of the Type(s) of Application(s)		
Planning Commission and City Council	**Development Review**	**Other**
☐ General Plan Amendment (GP)	☐ Development Review (Major) (DR)	☐ Annexation/De-annexation (AN)
☐ Text Amendment (TA)	☐ Subdivisions (Major) (PP)	☐ In-Lieu Parking (IP) (More than 5 spaces)
☐ Rezoning (ZN)	☐ Historic Property (HP)	☐ Hardship Exemption (HE)
☑ Conditional Use Permit (UP)	**Board of Adjustment**	Other Application Type Not Listed
☐ In-fill Incentive (II)	☐ Variance (BA)	☐
☐ Abandonment (AB)	☐ Zoning or DS&PM Appeal	☐

Coordinator, please complete the following:

1. Is this a resubmittal: Yes or No *(circle one)*
   Yes, this is a resubmittal. Indicate the Review Track that the application was *resubmitted* on: _____
2. Review Team. Please indicate below, what should be routed to whom.

Review Team	Memo	Narrative	Site Plan	G & D Plan	Drainage Report	Trip gen, Traffic Study, TIMA	Water and/or Wastewater Basis of Design	Archaeological Report	Others	Add other item(s) below
Steve Venker (Design Review)	☐	☐	☐	☐					☐	
Jeri Pulkinen (Engineering)	☐	☐	☐	☐					☐	
Phil Kercher (Traffic Engineering & Planning)	☐	☐ qty 2	☐ qty 2	☐		☐			☐	
Greg Davies (Trails and Paths)	☐	☐	☐	☐					☐	
Doug Mann (Water and Wasterwater)	☐	☐	☐	☐			☐		☐	
Fire Group	☐	☐	☐ qty 2	☐					☐	
Stormwater Group	☐	☐	☐	☐	☐				☐	
Tanya Hazlehurst (Street Names) (PP Cases)	☐	☐	☐	☐					☐	
Sarah Ferrara (within 20,000 ft. of a runway)	☐	☐	☐	☐					☐	SHORT FORM
Greg Williams (Maps) (PP Cases)	☐	☐	☐	☐					☐	
Steve Venker (Historic Property or Archaeological)	☐	☐	☐	☐					☐	
General Plan	☐	☐	☐	☐					☐	
Other:	☐	☐	☐	☐					☐	

Fire Plan Review By: Scott Stanek (480) 312-7061 email: sstanek@scottsdaleaz.gov



Project Data

Assessors Parcel Number:	175-20-05, 175-20-06, 175-20-07
Site Area:	272,479 S.F. (±6.255 acres)
Existing Zoning:	R1-35 Residential
Proposed Zoning:	R1-35 / Conditional Use Permit - Ranch
Proposed Buildings (Roofed)	
• Existing Ranch House	Existing
• New Horse / Tack Barn	19,440 SF
• New Hay Barn	1,600 SF
Proposed Accessory Structures (Roofed)	
• New Covered Arena	13,776 SF
• New Euroxciser	4,070 SF
• New Aqua Tread	576 SF
Proposed Accessory Structures	
• (1) Manure Storage 8ft Enclosure Wall	389 SF
• (1) Sawdust Storage 8ft Enclosure Wall	389 SF
• (1) Refuse Storage 8ft Enclosure Wall	389 SF
Proposed Equestrian Fenced Areas (Not Roofed)	
• Pasture	35,200 SF
• (10) 20 X 32 Turnout Pens	6,400 SF

Parking Required:

• 1 Parking Space / 2 Stalls	26 Parking Spaces
• Accessible	Not Required per R1-35 Zoning
• Bicycle	Not Required per R1-35 Zoning
Proposed Parking:	
• Parking Spaces Vehicular only (10 x 20)	27 Parking Spaces
• Parking Spaces Truck / Trailer (12 x 48)	4 Parking Spaces
• Ranch Vehicle Parking (Covered)	2 Parking Spaces

General Notes

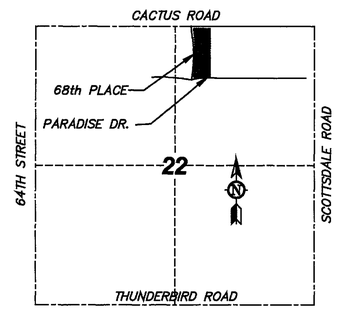
- At time of final plans the owner shall submit verification that the existing walls located within the right of way have been removed
- An additional hydrant will be required to protect the property
- The horse barn will require a separate fire line service for the sprinkler system
- An FDC will be required near N. 68th St.
- Fire access system (knox box / switch) will be required for gates
- Renovations/additions to existing residence exceeding 25% value of existing home will require installation of fire sprinkler system
- The covered arena must comply as an open equestrian arana for riding only to be exempted from fire sprinklers
- The existing on-site well shall comply with ADWR and MCESD
- Additional water development fees will be due based on the area of the north lot
- Pole mounted lights are not to exceed 16'-0" in height

site plan

scale: 1" = 30'-0"

N

0 15 30 60



vicinity map

scale: n.t.s.

N

F

NAJAFI RANCH

525 BOYNTON CANYON ROAD

REGISTERED ARCHITECT CERTIFICATE NO. 13979 DOUGLAS FREDRIKSON Signed 11.16.2015 ARIZONA, U.S.A. Expires 12.31.2017

Douglas Fredrikson Architects
727 east bethany home road, d-123
phoenix, arizona 85014
602.277.1625

13100

site plan

issue date

10.25.2015

revisions

a 101

4-UP-2013
11/12/15

OTHER PLANS AND REPORT REQUIREMENTS

INDEX

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1. CASE 12-BA-95

2. PRELIMINARY DRAINAGE REPORT (2 copies)

3. SECTION 404 CERTIFICATION (2 copies)

4. CONCEPTUAL GRADING & DRAINAGE PLAN
   - 2 copies 24x36
   - 2 copies 11x17
   - 2 copies 8-1/2 x 11

5. CONCEPTUAL UTILITY PLAN
   - 1 copy 24x36
   - 1 copy 11x17
   - 1 copy 8-1/2 x 11

PRELIMINARY DRAINAGE REPORT

(2 copies)

See Separate Binder

1370-13

Erickson & Meeks Engineering, L.L.C.

13444 North 32nd Street, Suite 6, Phoenix, Arizona 85032
Ph: 602-569-6593 Fax: 602-569-6493

Site Civil Specialists in Commercial,
Industrial, Retail and Residential

EME

Plan #
Case # 4-UP-2013
Q-S #
☒ Accepted
☐ Corrections
Reviewed By 3-22-13 Date

Preliminary Drainage Report

for

Najafi Ranch Home

Northeast corner of 68th Place and Paradise Drive

Scottsdale, Arizona

Prepared for

DFN Community, LLC
3200 E. Camelback Road, Suite 295
Phoenix, Arizona 85018

Registered Professional Engineer (Civil)
CERTIFICATE NO.
23980
JEFFREY S.
ERICKSON
Date Signed 3-12-13
ARIZONA, U.S.A.
Expires 09/30/2014

March 12, 2013

Table of Contents

1.0 INTRODUCTION

The Najafi Ranch Home project is a proposed 6-acre ± residential development with associated equestrian facilities located northeast of the intersection of 68th Place and Paradise Lane in Scottsdale, Arizona. The development will consist of and existing residential home, a new horse barn, a new covered hunter/jumper arena, a new dressage arena, a new hay barn, new horse pens, and a new euroxciser. For additional detail the site plan has been included at the back of this report in Appendix B. This report documents the offsite and onsite drainage concerns of the 6-acre development.

The site is further described as a portion of the NE1/4 of Section 22, Township 3 North, Range 4 East of the Gila and Salt River Base and Meridian. Refer to the Vicinity Map on the following page.

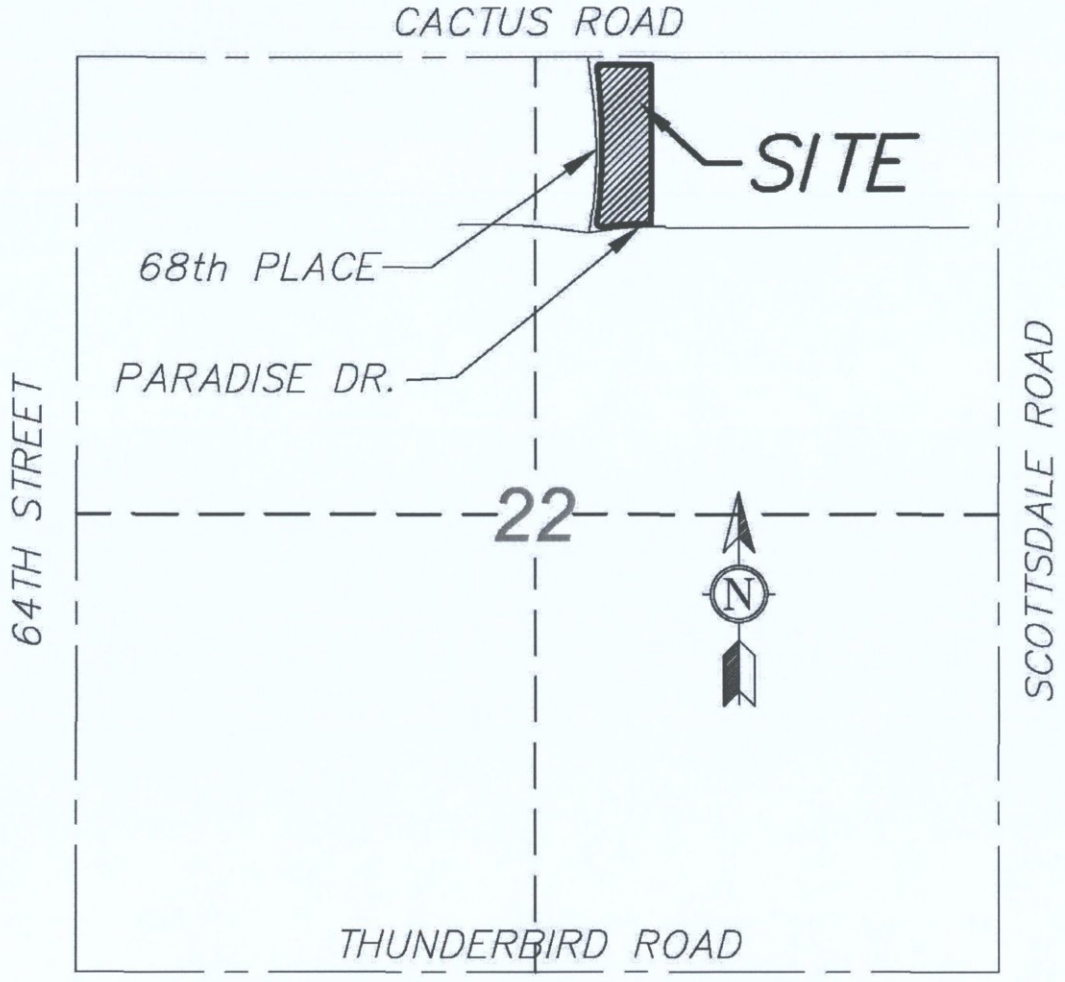
The site is bounded by Cactus Road on the north, existing residential homes to the east, and 68th Place to the west, and Paradise Drive on the south. This Drainage Report will document onsite retention and drainage requirements, offsite drainage, and anticipated improvements required for the development of this project.

This site is located within a shaded Zone "X" designation as identified on Flood Insurance Rate Map (FIRM) panel number 1685 of 4350, Maricopa County, dated September, 2005. This area is defined as, "Areas of the 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." Refer to Appendix C for a copy of the FIRM map for this area.

The proposed development will be designed to meet City of Scottsdale drainage requirements set forth in the Design Standards & Policies Manual. Retention basins will incorporate natural percolation that will dewater the retention volumes within 36 hours and will have maximum side slopes of 6:1 and a maximum ponding depth of 1-foot. Drainage onsite will continue in its natural flow path through a series of small retention basins. The post-construction runoff from this site will not be greater than the pre-construction run-off.

The finished floor elevation of the existing building is at an elevation of 1383.78. The proposed finish floor of the horse barn will be 1383.70. The proposed finish floor of the hay barn will be 1381.35. The low outfall of the site 1379.60 located at the south end of the site at Paradise Drive. The low outfall of the site is 1.75 feet below the finished floor.

Currently, the site is comprised of three separate residential lots. The average slope across the three lots is 0.7% from north to south.



VICINITY MAP

TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

2.0 OFFSITE DRAINAGE AND EXISTING IMPROVEMENTS AND CONDITIONS

Offsite Drainage

No offsite flows impact the site. On the north side of the site, Cactus Road intercepts flows from the north in an existing storm drain system. Flows to the west of the site are contained in 68th Place and travel along the east edge of the existing pavement in a swale. The existing swale in 68th Place conveys flows to Paradise Drive where they are intercepted by an existing drainage swale and conveyed to the west and south. The site is bounded to the east by existing residential lots which convey flows away from the building to existing adjacent streets.

Existing Improvements and Conditions

The existing site currently conveys runoff in its natural flow path from north to south in a sheet flow manner. Existing swales are minimal; however much of the existing condition is natural desert landscape and sheets to the south. Refer to the Pre-Construction Drainage Exhibit at the back of this report in Appendix D.

3.0 PROPOSED DRAINAGE AND INFRASTRUCTURE IMPROVEMENTS

3.1 – Pre vs. Post Construction Drainage

Pre-construction drainage has been examined using existing land value characteristics. Much of the site as it exists is of natural desert land features, with two residential homes and associated hardscape. The two c-values used to determine storm water runoff were 0.95 for roofed structures and impervious land features such as hardscape. A c-value of 0.45 was used for unimproved land features and natural desert landscaping as determined from the City of Scottsdale Drainage Design Manual. A weighed c-value was calculated to determine total storm water runoff. These are shown on the Pre-Construction Drainage Exhibit located at the back of this report in Appendix D.

Post-construction drainage has been examined using the proposed site plan land value characteristics for the fully developed site as shown on the site plan at the back of this report in Appendix B. There are three c-values used to determine storm water runoff: 0.95 for roofed structures and impervious land features such as hardscape, c-value of 0.45 was use for landscaped and natrual desert areas, and a c-value of 0.30 is used for grassed areas and pasture. A weighted c-value was calculated to determine the total storm water runoff. These are shown on the Pre- and Post-Construction Drainage Exhibits located at the back of this report in Appendix E.

Pre- and Post- project storm water runoff will be depicted within the final drainage report for the 2-year, 10-year, and 100-year storm events. The site land value characteristics will change with the fully developed site, however runoff will be reduced onsite through the use of storm water storage basins to route runoff through the site from north to south.

Full hydrology calculations and models will be completed at the time of construction document submittals. A revised drainage report including this data will be submitted to the City of Scottsdale for

approval.

3.2 – Onsite Retention Basins

Drainage improvements associated with this project are anticipated to consist of small retention basins and swales that will convey the onsite runoff as required by the City of Scottsdale. Onsite flows will be routed through site into small retention basins with less than 1-foot of depth. Each retention basin will be designed to have a break-over to convey the flows southward to the site low outfall. The small retention basins will not only convey flows, but will also reduce peak flows to a point whereas not to increase the pre-construction site runoff.

The onsite retention basins will utilize natural percolation, and will be dewatered in 36-hours or less.

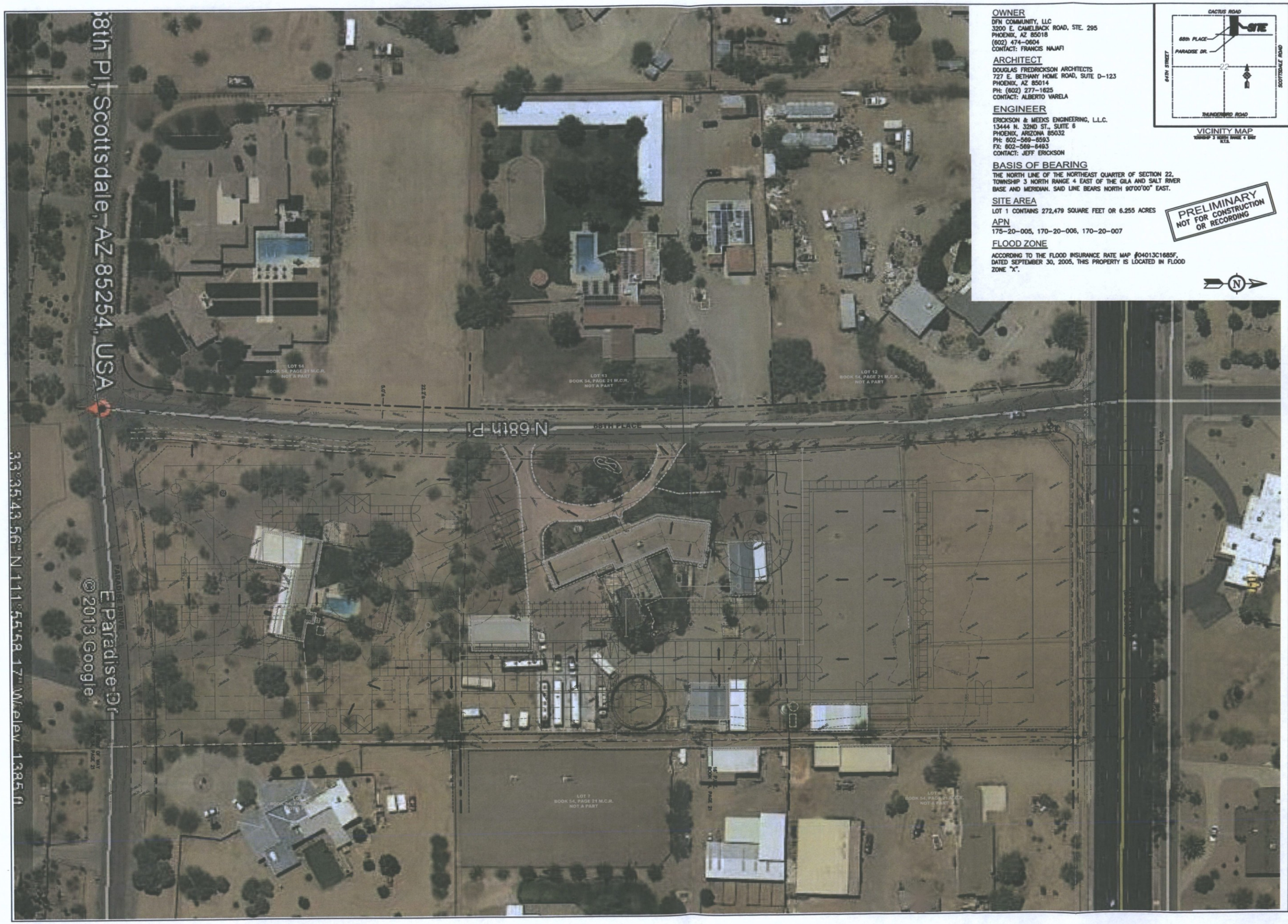
Retention basin maximum side slopes will be a minimum 6:1 with a maximum ponding depth of 1 foot.

Refer to the Post-Construction Drainage Exhibit located at the back of this report in Appendix E for basin locations. Refer to the Conceptual Grading & Drainage Plan located at the back of this report in Appendix F for site grading.

4.0 CONCLUSIONS

The proposed Najafi Ranch Home project will adhere to City of Scottsdale drainage criteria. Offsite flows do not affect this site and a pre vs. post storm water run-off methodology will be used to show the fully developed site will not increase the pre constructions run-off amounts. Existing and proposed finish floors will be protected against the 100-year storm event with the site low outfall being a minimum of 1-foot below all finish floors. Onsite retention basins will be used to store, reduce and convey onsite flows through the site.

Appendix A
COLOR AERIAL EXHIBIT



OWNER

DFN COMMUNITY, LLC
3200 E. CAMELBACK ROAD, STE. 295
PHOENIX, AZ 85018
(602) 474-0604
CONTACT: FRANCIS NAJAFI

ARCHITECT

DOUGLAS FREDRICKSON ARCHITECTS
727 E. BETHANY HOME ROAD, SUITE D-123
PHOENIX, AZ 85014
PH: (602) 277-1625
CONTACT: ALBERTO VARELA

ENGINEER

ERICKSON & MEEKS ENGINEERING, L.L.C.
13444 N. 32ND ST., SUITE 6
PHOENIX, ARIZONA 85032
PH: 602-569-6593
FX: 602-569-6493
CONTACT: JEFF ERICKSON

BASIS OF BEARING

THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN. SAID LINE BEARS NORTH 90°00'00" EAST.

SITE AREA

LOT 1 CONTAINS 272,479 SQUARE FEET OR 6.255 ACRES

APN

175-20-005, 170-20-006, 170-20-007

FLOOD ZONE

ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C1685F, DATED SEPTEMBER 30, 2005, THIS PROPERTY IS LOCATED IN FLOOD ZONE "X".

VICINITY MAP
TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION
OR RECORDING

EME
Erickson & Meeks Engineering, L.L.C.
13444 N. 32nd Street
Suite 6
Phoenix, Arizona 85032
Phone: (602) 569-6593
Fax: (602) 569-6493

23980
JEFFREY S. ERICKSON
Date Signed
ARIZONA, U.S.A.
Expires 06/30/14

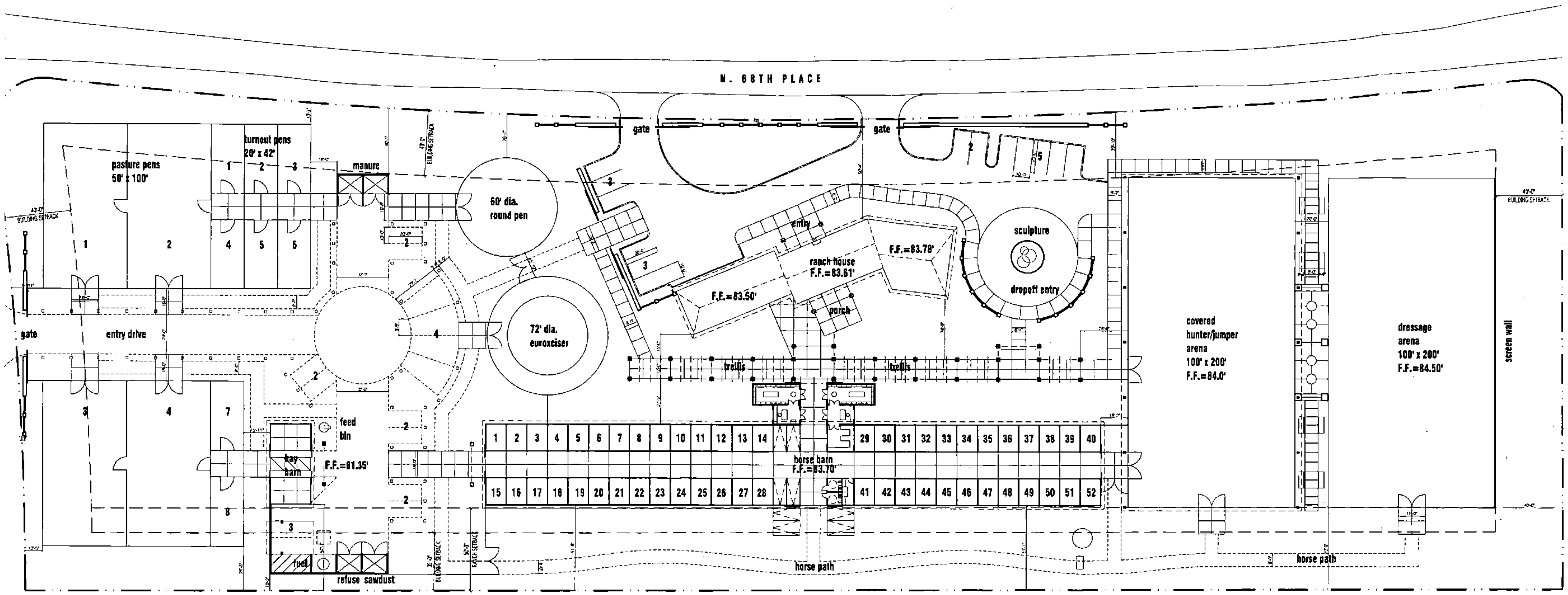
NAJAFI RANCH HOME
COLOR AERIAL EXHIBIT
SCOTTSDALE, ARIZONA

REVISIONS

DATE:	03/08/13
PROJ. NO:	213-005
DESIGN:	JE
DRAWN:	JG
CHECK:	JE
SCALE:	N.T.S.
CAD FILE:	1305aerial

AER
1 of 1

Appendix B
SITE PLAN



project data

Assessors Parcel Number	175 - 20 -05, 175 - 20 - 06, 175 - 20 - 07
Site Area	272,479 SF / 6.255 Acres
Existing Zoning	RI 35 Residential
Proposed Zoning	RI 35 Residential / Cond. Use Permit - Ranch

Proposed Buildings (Roofed / Trellis)

• Existing Ranch House	Existing
• New Horse Barn w / Trellis	
Horse Barn	18,528 SF
Trellis	3,552 SF
• New Hay barn	1,152 SF
• New Hunter Jumper Arena 100 x 200	20,000 SF

Proposed Accessory Structures (Roofed)

• (1) Covered Parking Canopy (2 spaces)	200 SF

Proposed Accessory Structures

• (1) Manure Storage 8 ft Enclosure Wall	512 SF
• (1) Sawdust Storage 8 ft Enclosure Wall	512 SF
• (1) Refuse Storage 8 ft Enclosure Wall	512 SF
• (1) Service area 8 ft Enclosure Wall	NA

Proposed Equestrian Fenced Areas (Un-Roofed)

• Dressage Arena 100	20,000 SF
• (4) Pastures 50 x 100	20,000 SF
• (8) Turnout Pens 20 x 42	6,720 SF
• (1) Round Pen 60ft diameter	2,827 SF
• (1) Euroxciser Pen 72 Ft Diameter	4,071 SF

Parking Required

• 1 parking space / 2 Stalls (52 stalls)	26 Parking Spaces
• Accessible	NA / RI 35 Zoning does not require.
• Bicycle	NA / RI 35 Zoning does not require.
Total	26 Parking Spaces

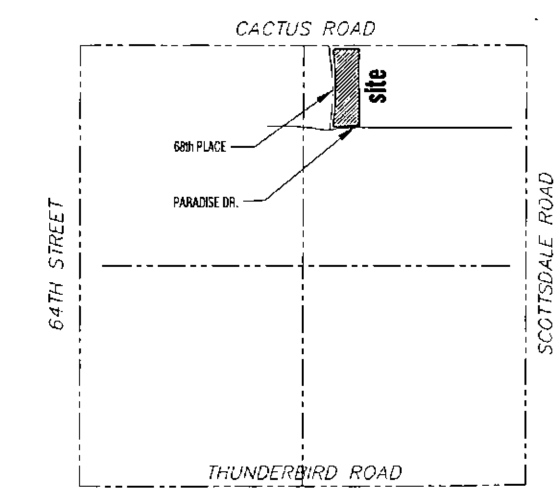
Proposed Parking

• Parking Spaces Vehicular only (10 x 20)	21 Parking Spaces
• Parking Spaces Truck / Trailer (10 x 30)	4 Parking Spaces
• Parking spaces Ranch Vehicles (10 x 20) (2covered)	3 Parking Space
Total	28 Parking Spaces

1 site plan

1" = 30'

0 15 30 60



vicinity map

n.t.s.

F

NAJAFI RANCH HOME

SCOTTSDALE, ARIZONA

PRELIMINARY NOT FOR CONSTRUCTION

Douglas Fredrikson Architects
727 east bethany home road, d-123
phoenix, arizona 85014
602.277.1625

13100

site plan

issue date

03.14.13

revisions

a 101

Appendix C
FEMA FIRM MAP

MAP SCALE 1" = 1000'

0 1000 2000 FEET

0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1685F

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA

AND INCORPORATED AREAS

PANEL 1685 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	1685	F
PARADISE VALLEY, TOWN OF	040049	1685	F
PHOENIX, CITY OF	040051	1685	F
SCOTTSDALE, CITY OF	045012	1685	F

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

04013C1685F

MAP REVISED

SEPTEMBER 30, 2005

Federal Emergency Management Agency

Appendix D
PRE-CONSTRUCTION DRAINAGE EXHIBIT

PRE-CONSTRUCTION RETENTION CALCULATIONS

DRAINAGE AREA ID	TOTAL DA AREA (SF)	AREA C=0.95 (SF)	AREA C=0.45 (SF)	WEIGHTED C VALUE
1	63,089	79	63,010	0.45
2	5,427	0	5,427	0.45
3	23,916	6,115	17,801	0.58
4	30,299	6,162	24,137	0.55
5	17,984	4,034	13,950	0.56
6	14,895	3,708	11,187	0.57
7	18,129	9,930	8,199	0.72
8	53,516	7,113	46,403	0.52
9	43,107	4,584	38,523	0.50
TOTAL	270,362	41,725	228,637	

LEGEND

IMPERVIOUS AREA C=0.95

NATURAL DESERT AREA C=0.45

OWNER
DFN COMMUNITY, LLC
3200 E. CAMELBACK ROAD, STE. 295
PHOENIX, AZ 85018
(602) 474-0604
CONTACT: FRANCIS NAJAFI

ARCHITECT
DOUGLAS FREDRICKSON ARCHITECTS
727 E. BETHANY HOME ROAD, SUITE D-123
PHOENIX, AZ 85014
PH: (602) 277-1625
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13444 N. 32ND ST., SUITE 6
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PH: 602-569-6593
FX: 602-569-6493
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LOT 1 CONTAINS 272,479 SQUARE FEET OR 6.255 ACRES

APN
175-20-005, 170-20-006, 170-20-007

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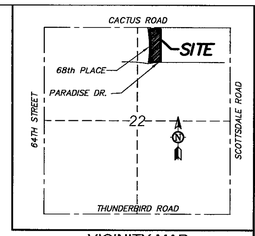
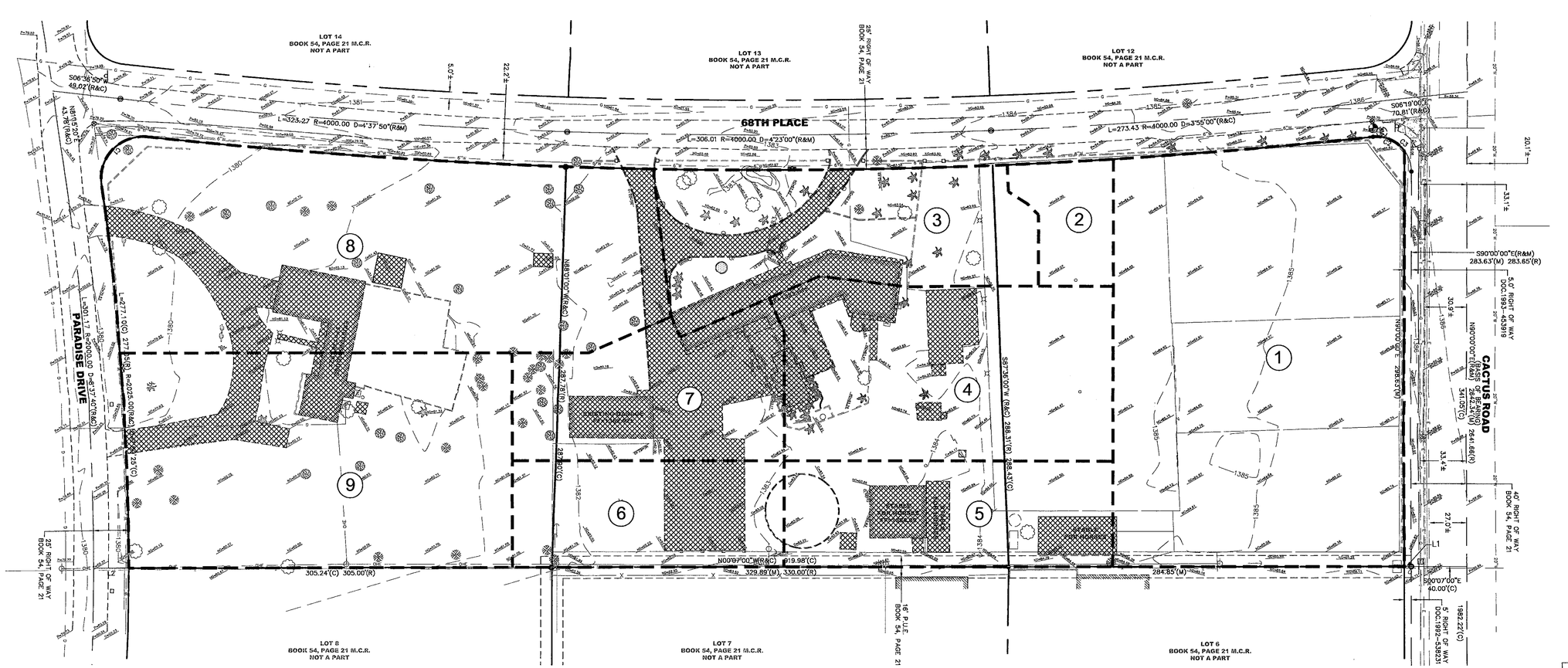


VICINITY MAP
TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



SCALE: 1"= 40'
0 20' 40' 80' 120'

EME
Erickson & Meeks Engineering, L.L.C.
13444 N. 32nd Street
Suite 6
Phoenix, Arizona 85032
Phone: (602) 569-6593
Fax: (602) 569-6493

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23980
JEFFREY S.
ERICKSON
Date Signed
ARIZONA, U.S.A.
Expires 09/30/14

NAJAFI RANCH HOME
PRE-CONSTRUCTION DRAINAGE EXHIBIT
SCOTTSDALE, ARIZONA

REVISIONS

DATE:	03/13/13
PROJ. NO:	213-005
DESIGN:	JE
DRAWN:	JG
CHECK:	JE
SCALE:	1"=40'
CAD FILE:	1305cg

PRE
1 of 1

Appendix E
POST-CONSTRUCTION DRAINAGE EXHIBIT

POST-CONSTRUCTION RETENTION CALCULATIONS

DRAINAGE AREA ID	TOTAL DA AREA (SF)	IMPERVIOUS AREA C=0.95 (SF)	NATURAL DESERT AREA C=0.45 (SF)	GRASS/PASTURE AREA C=0.30 (SF)	WEIGHTED C VALUE
1	63,089	14,056	49,033	0	0.62
2	5,427	3,236	2,191	0	0.75
3	23,916	16,843	5,099	1,974	0.79
4	30,299	19,169	6,254	4,876	0.74
5	17,984	6,434	11,550	0	0.63
6	14,895	5,444	9,451	0	0.63
7	18,129	10,946	5,323	1,860	0.74
8	53,516	14,089	24,387	15,040	0.54
9	43,107	15,438	15,989	11,680	0.59
TOTAL	270,362	105,655	129,277	35,430	

LEGEND

IMPERVIOUS AREA C=0.95

NATURAL DESERT AREA C=0.45

GRASS/PASTURE AREA C=0.30

OWNER
DFN COMMUNITY, LLC
3200 E. CAMELBACK ROAD, STE. 295
PHOENIX, AZ 85018
(602) 474-0804
CONTACT: FRANCIS NAJAFI

ARCHITECT
DOUGLAS FREDRICKSON ARCHITECTS
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CONTACT: ALBERTO VARELA

ENGINEER
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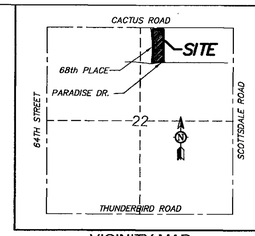
PHOENIX, ARIZONA 85032
PH: 602-569-6593
FX: 602-569-6493
CONTACT: JEFF ERICKSON

BASIS OF BEARING
THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN. SAID LINE BEARS NORTH 90°00'00" EAST.

SITE AREA
LOT 1 CONTAINS 272,479 SQUARE FEET OR 6.255 ACRES

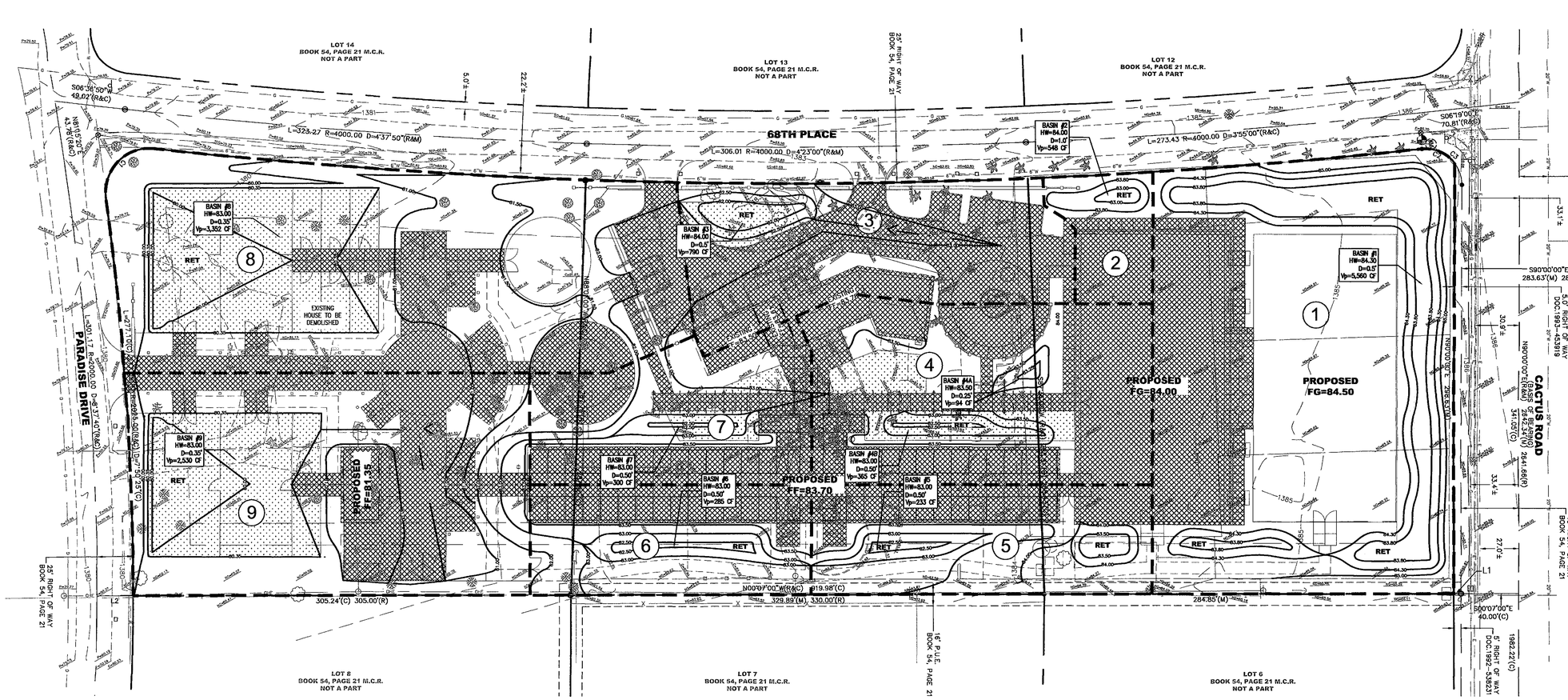
APN
175-20-005, 170-20-006, 170-20-007

FLOOD ZONE
ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C1685F, DATED SEPTEMBER 30, 2005, THIS PROPERTY IS LOCATED IN FLOOD ZONE "X".



VICINITY MAP
TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING



SCALE: 1"= 40'
0 20' 40' 80' 120'

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13444 N. 32nd Street
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Phoenix, Arizona 85032
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REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23980 JEFFREY S. ERICKSON Date Signed ARIZONA, U.S.A. Expires 09/30/14

NAJAFI RANCH HOME
POST-CONSTRUCTION DRAINAGE EXHIBIT
SCOTTSDALE, ARIZONA

REVISIONS

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POST
1 of 1

Appendix F
CONCEPT GRADING & DRAINAGE PLAN

SECTION 404 CERTIFICATION

(2 copies)

Section 404 Certification

Before the City issues development permits for a project, the developer's Engineer or the property owner must certify that it complies with, or is exempt from, Section 404 of the Clean Water Act of the United States. Section 404, administered by the U.S. Army Corps of Engineers (COE), regulates the discharge of dredged or fill material into a wetland, lake, (including dry lakes), river, stream (including intermittent streams, ephemeral washes, and arroyos), or other waters of the United States.

Prior to submittal of improvement plans to Project Review the form below must be completed (and submitted with the improvement plans) as evidence of compliance

Certification of Section 404 Permit Status

Owner's Name: Mr. Francis Najafi Phone No. 602-956-7200

Project Name/Description: Najafi Ranch Home Case No. 16-PA-2013

Project Location/Address: _____

A registered Engineer or the property Owner must check the applicable condition and certify by signing below that:

1. **Section 404 <u>does</u> apply to the project because there will be a discharge of dredged or fill material to waters of the U.S., and:**

   ☐ A Section 404 Permit has already been obtained for this project.

   -or-

   ☐ This project qualifies for a "Nationwide Permit," and this project will meet all terms and conditions of the applicable nationwide permit.

2. **Section 404 <u>does not</u> apply to the project because:**

   ☒ No watercourses or other waters of the U.S. exist on the property.

   ☐ No jurisdictional waters of the U.S. exist on the property. Attached is a copy of the CO… Jurisdictional Determination.

   ☐ Watercourses or other waters of the U.S. do exist on the property, but the project w… discharge of dredged or fill material into any of these waters.

I certify that the above statement is true.

Jeffrey D. Erickson, P.E. 3-8-13

Engineer's Signature and Seal, or Owner's Signature Date

President Erickson + Meeks Engineering, LLC

Title Company

Planning & Development Services Department

7447 E Indian School Road, Suite 100, Scottsdale, AZ 85251 • Phone: 480-312-2500 • Fax: 480-312-7088

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Registered Professional Engineer CERTIFICATE NO. 23980 JEFFREY ERICKSON Date Signed 3.8.13 ARIZONA, U.S.A.

I certify that the above statement is true.

Jeffrey Erickson, P.E. 3-8-13

Engineer's Signature and Seal, or Owner's Signature Date

President Ericksen + Meeks Engineering, LLC

Title Company

Planning & Development Services Department

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CONCEPTUAL GRADING & DRAINAGE PLAN

- 2 copies 24x36
- 2 copies 11x17
- 2 copies 8-1/2 x 11

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DFN COMMUNITY, LLC
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CONTACT: FRANCIS NAJAFI

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APN
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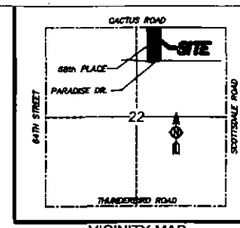

VICINITY MAP

PRELIMINARY
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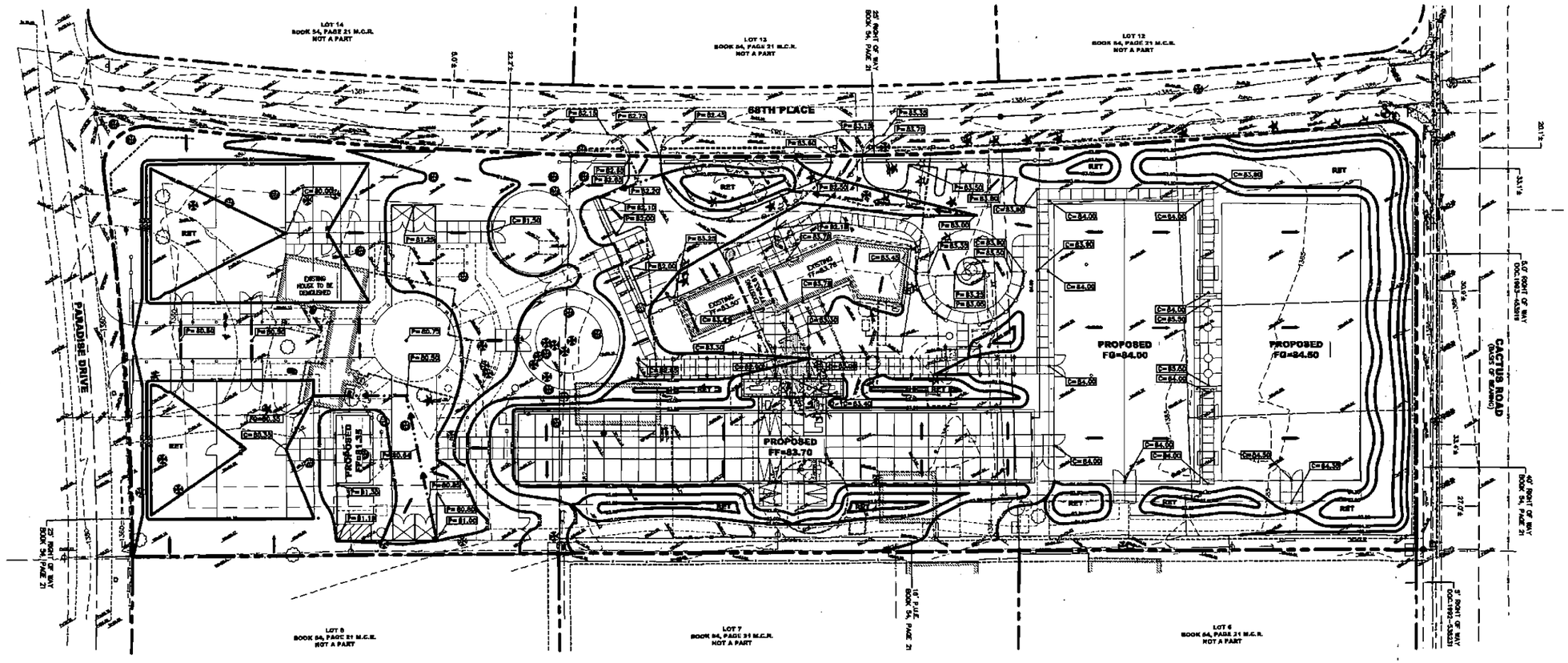

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NAJAFI RANCH HOME
CONCEPTUAL GRADING & DRAINAGE PLAN
SCOTTSDALE, ARIZONA

REVISIONS

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SCALE:	1"=40'
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CG1
1 of 1

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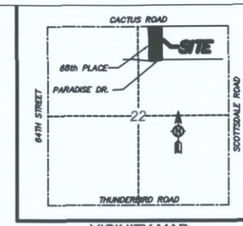

VICINITY MAP
TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

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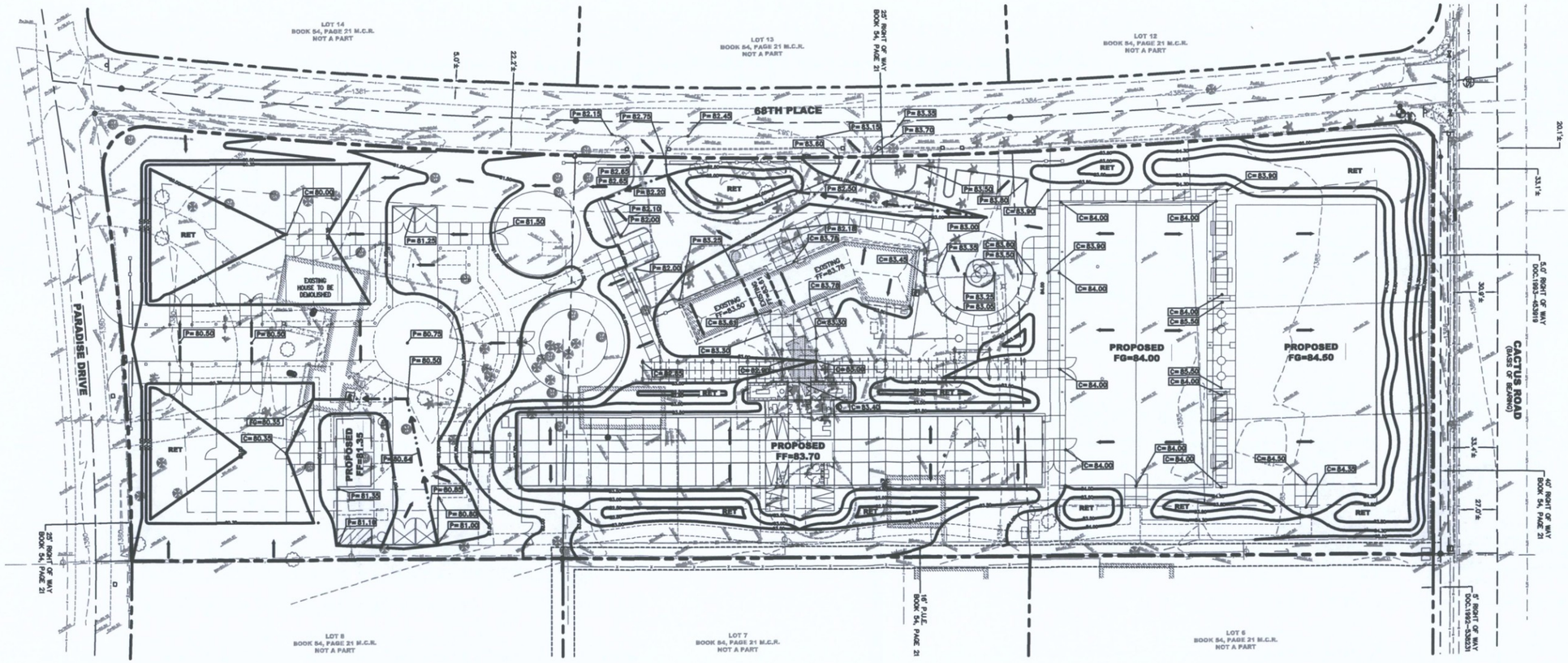

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CERTIFICATE NO. 22950
JEFFREY B. ERICKSON
3-8-13
ARIZONA, U.S.A.

NAJAFI RANCH HOME
CONCEPTUAL GRADING & DRAINAGE PLAN
SCOTTSDALE, ARIZONA

REVISIONS

DATE:	03/08/13
PROJ. NO:	213-005
DESIGN:	JE
DRAWN:	JG
CHECK:	JE
SCALE:	1"=40'
CAD FILE:	1305cg

CG1
1 of 1

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PH: 602-569-8583
FX: 602-569-8483
CONTACT: JEFF ERICKSON

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VICINITY MAP
NOT TO SCALE

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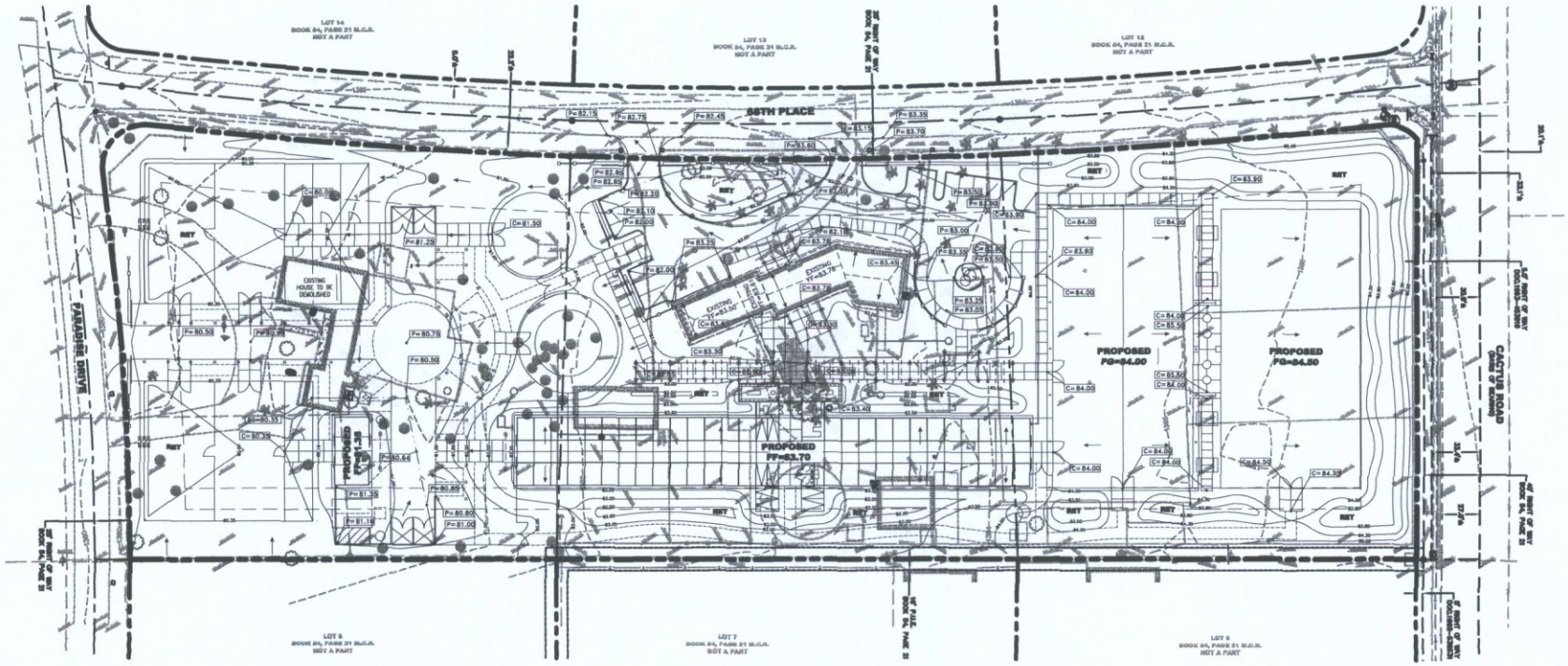

SCALE: 1"= 40'

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NAJAFI RANCH HOME
CONCEPTUAL GRADING & DRAINAGE PLAN
SCOTTSDALE, ARIZONA

REVISIONS

DATE:	03/06/13
PROJ. NO:	212-006
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SCALE:	1"=40'
CAD FILE:	1305sg

CG1
1 of 1

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BFN COMMUNITY, LLC
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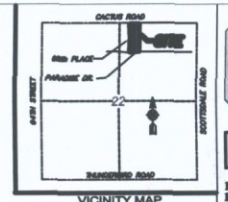

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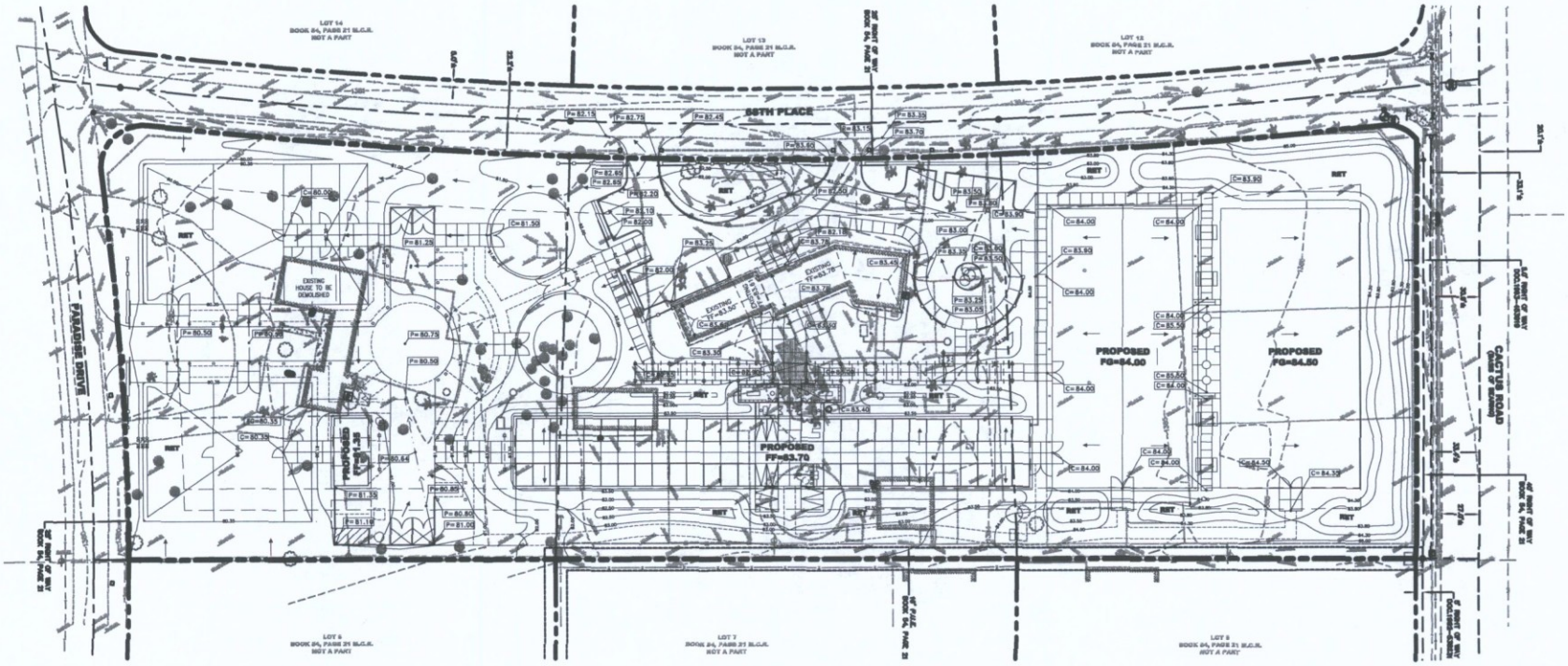

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CG1
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CONCEPTUAL UTILITY PLAN

- 1 copy 24x36
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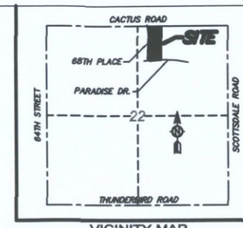

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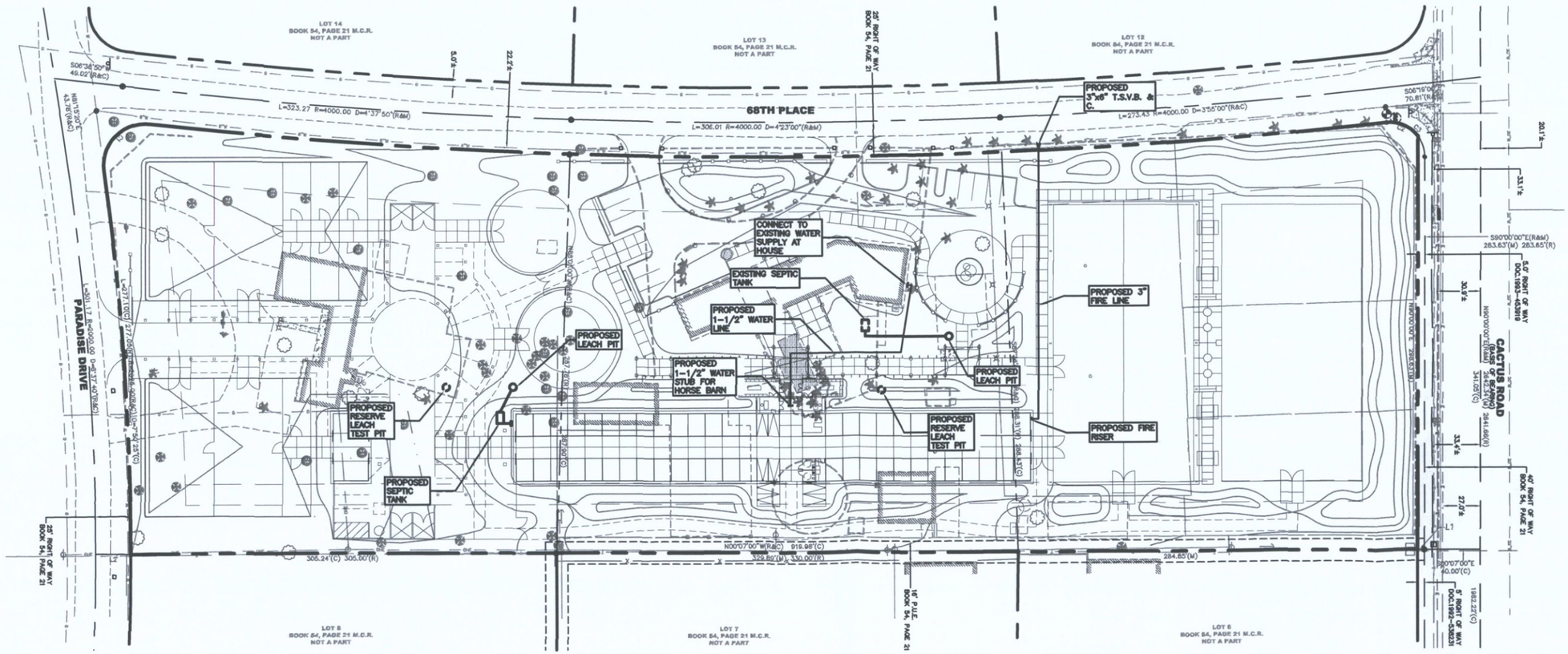

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BASIS OF BEARING
THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 3 NORTH RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN. SAID LINE BEARS NORTH 90°00'00" EAST.

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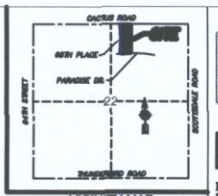

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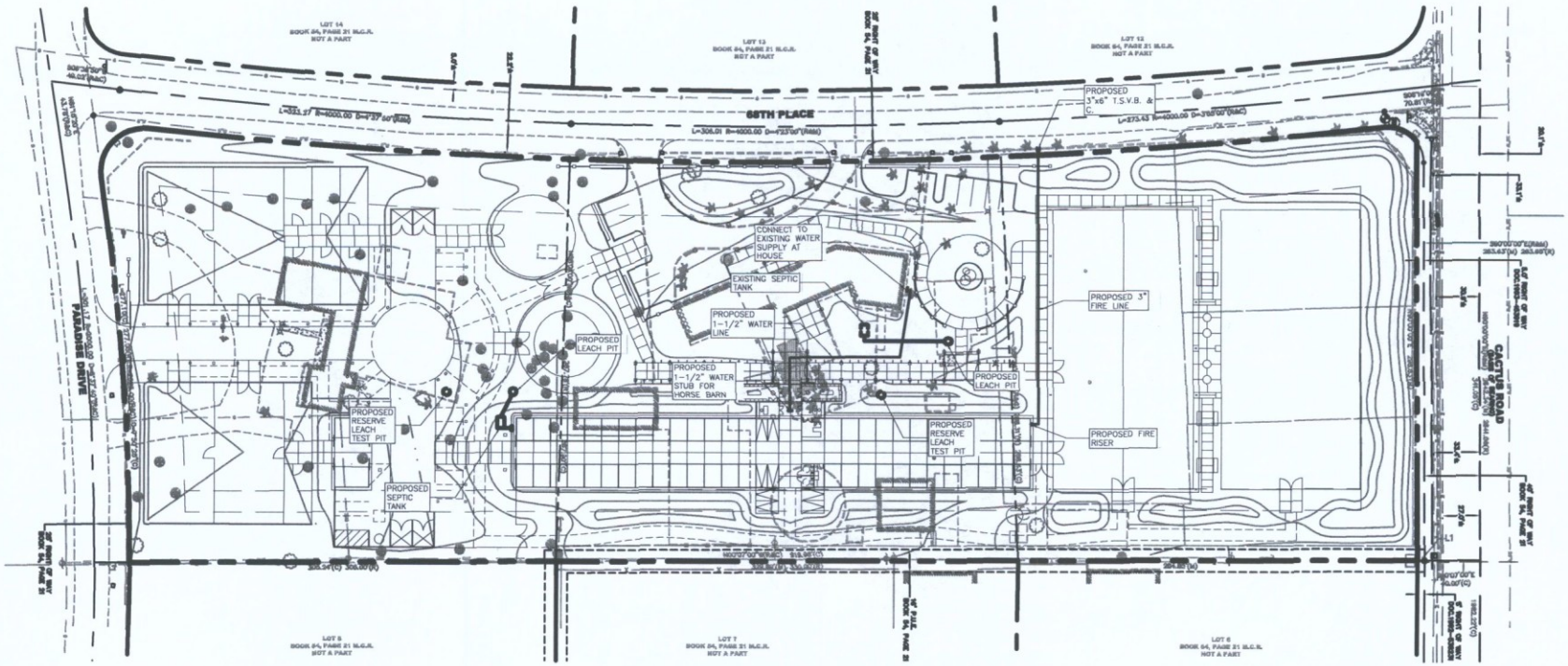

SCALE: 1"= 40'

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JEFFREY S. ERICKSON 22907 3-31-13 ARIZONA U.S.A.

NAJAFI RANCH HOME
CONCEPTUAL UTILITY PLAN
SCOTTSDALE, ARIZONA

REVISIONS

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CU1
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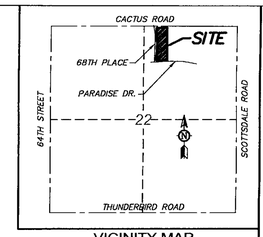
CONTACT: JEFF ERICKSON

BASIS OF BEARING
THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN. SAID LINE BEARS NORTH 90°00'00" EAST.

SITE AREA
LOT 1 CONTAINS 272,479 SQUARE FEET OR 6.255 ACRES

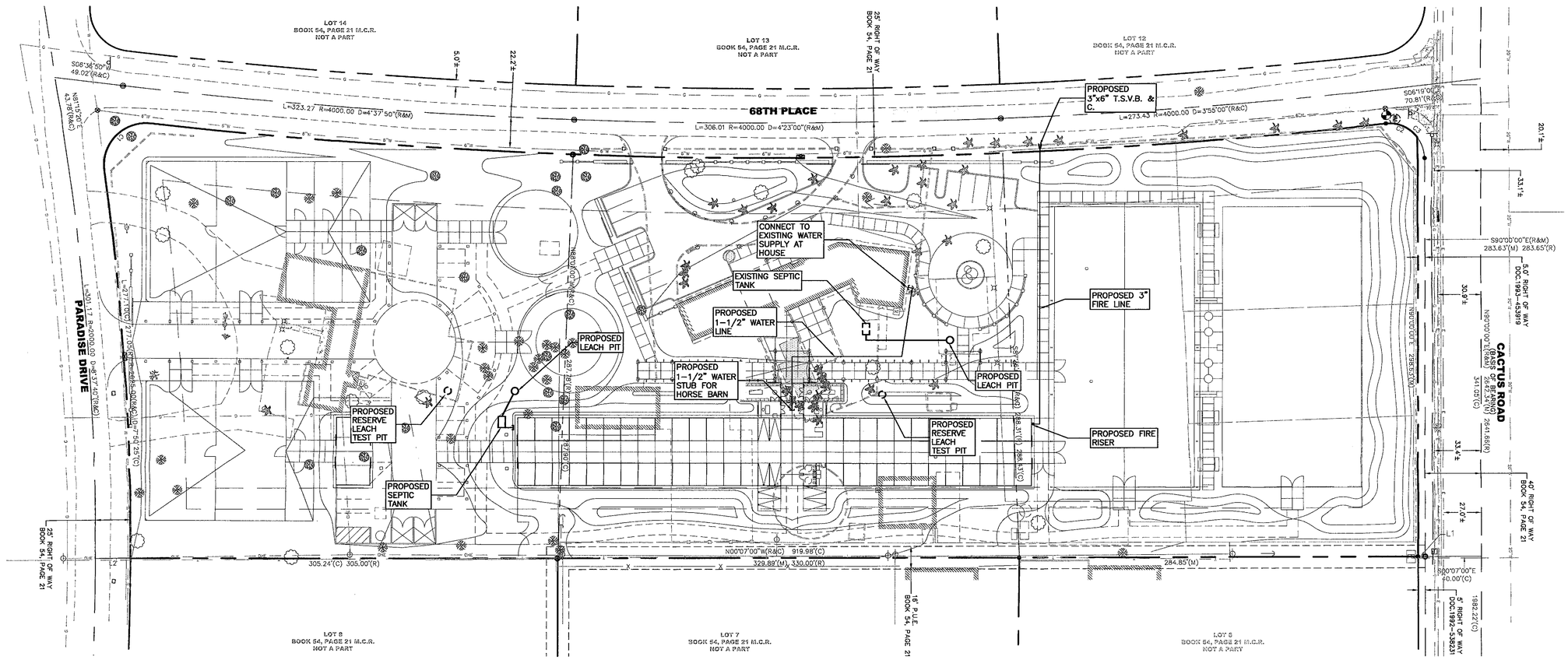
APN
175-20-005, 170-20-006, 170-20-007

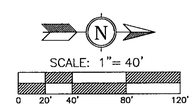
FLOOD ZONE
ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C1685F, DATED SEPTEMBER 30, 2005, THIS PROPERTY IS LOCATED IN FLOOD ZONE "X".



VICINITY MAP
TOWNSHIP 3 NORTH RANGE 4 EAST
N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING





EME
Erickson & Meeks Engineering, L.L.C.
13444 N. 32nd Street
Suite 6
Phoenix, Arizona 85032
Phone: (602) 569-6593
Fax: (602) 569-6493

Registered Professional Engineer (Civil)
CERTIFICATE NO.
23960
JEFFREY S. ERICKSON
Date Signed 3-8-13
ARIZONA, U.S.A.
Expires 09/30/2014

NAJAFI RANCH HOME
CONCEPTUAL UTILITY PLAN
SCOTTSDALE, ARIZONA

REVISIONS

DATE:	03/08/13
PROJ. NO:	213-005
DESIGN:	JE
DRAWN:	JG
CHECK:	JE
SCALE:	1"=40'
CAD FILE:	1305cu

CU1
1 of 1