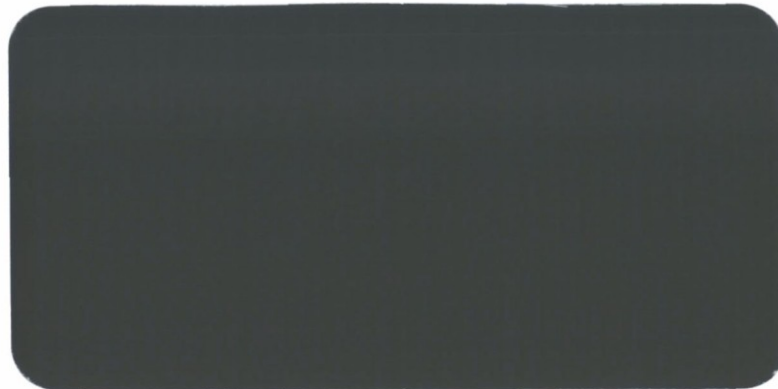




FILE COPY



Accepted w/ Comment
SLC plate 2

City of Scottsdale
Water Resources Administration
9379 E. San Salvador
Scottsdale, AZ 85258

Doug Mann 4.1.15

Note: this report does not
reflect current concepts

Doug Mann 12.11.15

3-PP-2015
6/22/2015

WOOD/PATEL
MISSION: CLIENT SERVICE™

Preliminary
WASTEWATER BASIS OF DESIGN REPORT
FOR
SCOTTSDALE NATIONAL GOLF CLUB

Revised June 16, 2015
Revised February 17, 2015
February 13, 2015
WP# 144147

Prepared for:

YAM Management
15475 North 84th Street
Scottsdale, Arizona 85260
Phone: (480) 398-2525
Contact: Steve Gabbay

Submitted To:

City of Scottsdale
Water Resources Department
9388 East San Salvador Drive
Scottsdale, Arizona 85258
Phone: (480) 312-5636
Contact: Douglas L. Mann, P.E.

Prepared By:

Wood, Patel & Associates, Inc.
2220 South Country Club
Suite 101
Mesa, Arizona 85210
Phone: (480) 834-3300
Fax: (602) 335-8580
Website: www.woodpatel.com
Contact: Daniel W. Matthews, P.E.



WOOD/PATEL
MISSION: CLIENT SERVICE™

WASTEWATER BASIS OF DESIGN REPORT
FOR
SCOTTSDALE NATIONAL GOLF CLUB

Revised February 19, 2015
February 13, 2015
WP# 144147

Accepted w/Comment
SEE PLATE 2

City of Scottsdale
Water Resources Administration
9379 E. San Salvador
Scottsdale, AZ 85258

Doug Mann 4.1.15

11-UP-2014
3/12/15

WOOD/PATEL
MISSION: CLIENT SERVICE™

TABLE OF CONTENTS

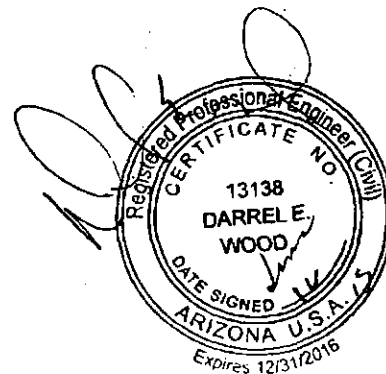
1.0	INTRODUCTION.....	1
1.1	General Background and Project Location	1
1.2	Scope of Wastewater Basis of Design Report.....	1
1.3	Full Build-Out Condition	1
2.0	DESIGN DOCUMENTATION.....	2
2.1	Design Criteria	2
2.2	Wastewater Design Flows.....	2
3.0	EXISTING CONDITIONS.....	4
3.1	Topographic Conditions.....	4
3.2	Existing Offsite Wastewater Infrastructure.....	4
3.3	Existing Onsite Wastewater Infrastructure.....	4
4.0	PROPOSED WASTEWATER COLLECTION SYSTEM.....	5
4.1	Sewer Pipe Sizing	5
4.2	Sewer Layout	5
4.3	Basis of Design Reports for Individual Phases of Development	5
5.0	CONCLUSIONS.....	6
6.0	REFERENCES.....	7

TABLES

TABLE 1	Wastewater Collection System Design Criteria
TABLE 2	Offsite Wastewater Flows
TABLE 3	Onsite Wastewater Design Flows
TABLE 4	Wastewater Model, Full Build-Out Condition
TABLE 5	Calculated Pipe Capacities, Full Build-Out Condition

EXHIBITS

EXHIBIT 1	Vicinity Map
EXHIBIT 2	Wastewater Exhibit – Full Build-Out



1.0 INTRODUCTION

1.1 General Background and Project Location

Scottsdale National Golf Club is a proposed 367.6-acre resort/golf course development in the City of Scottsdale, located between Rio Verde Drive (Dynamite Road) on the south and Dixileta Road on the north, west of 122nd Street, and east of 116th Street (refer to Exhibit 1- *Vicinity Map*). The property will be an extension of the previously-developed Scottsdale National Golf Club, and is located within Section 26 and 27, Township 5 North, Range 5 East, of the Gila and Salt River Meridian. In total with the existing golf course, the property will include 658.5 acres.

The Site is planned to include an 18-hole golf course, 9-hole golf course, clubhouse, comfort stations, maintenance building, cottages, and a private residence. This Wastewater Basis of Design (BOD) Report for the Site utilizes a site plan prepared concurrently by Wood, Patel & Associates, Inc. (Wood/Patel).

This Wastewater BOD Report has been prepared in accordance with Wood/Patel's understanding of the City of Scottsdale's technical requirements for wastewater collection systems, as applicable for the Site.

1.2 Scope of Wastewater Basis of Design Report

The purpose of this Wastewater BOD Report is to determine wastewater design flows, pipe sizes, and sewer line locations, as required to provide wastewater service to the proposed development. The required infrastructure identified includes wastewater collection system mains, outfall locations, and a future lift station designed by others. Future Sewer Lift Station #47 will be required for and constructed by Scottsdale National Golf Club and a Conceptual Design Report will be provided at a future time.

1.3 Full Build-Out Condition

The design criteria utilized to calculate wastewater design flows and determine required pipe sizes for the Site are based on projected full build-out conditions. The entitlements to the approved rezoning case are being retained and any future increases in density/use will need to be re-evaluated.

2.0 DESIGN DOCUMENTATION

2.1 Design Criteria

For the purpose of this Wastewater BOD report, wastewater design flows and pipe-sizing criteria utilized are based on Wood/Patel's understanding of the following:

- Applicable wastewater system design criteria listed in the *City of Scottsdale Design Standards & Policies Manual* dated January 2010; and
- Title 18, Chapter 9 of the *Arizona Administrative Code*;

Refer to Table 1 – *Wastewater Collection System Design Criteria* for detailed information regarding design criteria.

2.2 Wastewater Design Flows

Wastewater design flows for the Scottsdale National Golf Course (SNGC) were estimated using design criteria listed in Section 2.1 – *Design Criteria*. The proposed comfort stations and potential residence will have individual septic systems. The proposed clubhouse and cottages will flow to future Lift Station #47, located at approximately 122nd Street and Rio Verde Drive. The proposed maintenance facility will gravity sewer to a proposed 8-inch gravity sewer in Rio Verde Drive which will be conveyed east to the future Lift Station #47. A payback agreement will be pursued with City of Scottsdale pertaining to the cost of proposed 8-inch gravity sewer main installation in Rio Verde Drive from 118th Street to proposed sewer Lift Station #47. The existing maintenance facility and existing clubhouse, presently on septic will be connected to the future Lift Station #47. Wastewater design flows generated by the offsite and onsite areas are summarized as follows:

ANTICIPATED SNGC OFFSITE WASTEWATER FLOWS TO LIFT STATION			
Type	Adjacent Node	Average Daily Flow (gpd)	Peak Flow (gpd)
Existing SNGC Clubhouse	C1	8,250	37,125
Existing SNGC Maintenance	C2	3,750	16,875
TOTAL		12,000	54,000

ANTICIPATED OTHER OFFSITE WASTEWATER FLOWS TO LIFT STATION			
Type	Adjacent Node	Average Daily Flow (gpd)	Peak Flow (gpd)
OFF7 (R1-190)	E4	4,356	17,424
OFF8 (R1-130)	D1	3,267	13,068
TOTAL		7,623	30,492

ANTICIPATED SNGC ONSITE WASTEWATER FLOWS TO LIFT STATION			
Type	Adjacent Nodes	Average Daily Flow (gpd)	Peak Flow (gpd)
Proposed Clubhouse	A1	27,500	123,750
Proposed Cottages	B1-C9	27,360	109,440
Proposed Maintenance	E2	3,750	16,875
Private Residence	B1	1,500	6,000
TOTAL		60,110	256,065

TOTAL SNGC WASTEWATER FLOWS TO LIFT STATION			
Type	Adjacent Nodes	Average Daily Flow (gpd)	Peak Flow (gpd)
SNGC Offsite	-	12,000	54,000
SNGC Onsite	-	60,110	256,065
TOTAL		72,110	310,065

TOTAL WASTEWATER FLOWS TO LIFT STATION			
Type	Adjacent Nodes	Average Daily Flow (gpd)	Peak Flow (gpd)
SNGC (Offsite and Onsite)	-	72,110	310,065
Offsite	-	7,623	30,492
TOTAL		79,733	340,557

Detailed design flow calculations are provided in Table 2 – *Offsite Wastewater Flows*, Table 3 – *Onsite Wastewater Design Flows*, and Table 4 – *Wastewater Model, Full Build-Out Condition*. Refer to Table 5 – *Calculated Pipe Capacities, Full Build-Out Condition* for pipe capacities. For the layout of the proposed wastewater collection system, refer to Exhibit 2 – *Wastewater Exhibit - Full Build-Out*.

3.0 EXISTING CONDITIONS

3.1 Topographic Conditions

The proposed project lies in the northern planning section of the City of Scottsdale. The Site generally slopes from the northwest to the southeast, at approximately 2 percent. Elevations range from 2,800 feet above mean sea level (MSL) in the north, to 2,645 feet MSL in the southeast. A portion of the Site that is located east of 118th Street has previously been mass graded, while the remainder of the Site is covered with typical Sonoran Desert vegetation including mesquite trees, saguaro cactus, creosote, etc.

3.2 Existing Offsite Wastewater Infrastructure

Relevant public wastewater collection systems near the Site include the following:

- An existing 8-inch gravity sewer located along Dynamite Boulevard/Rio Verde Drive, between 114th Street and Alma School Road.
- Water Campus Water Reclamation Plant located near the intersection of the AZ Loop 101 and Pima Road.

Additionally, a private wastewater system exists for the existing clubhouse. The system consists of an 8-inch gravity line and dual 2-inch force mains. The line extends from the existing clubhouse, along Via Dona Road, to the 122nd Street alignment. Currently, this private sewer utilizes an onsite septic system and is a dry sewer line; however, it is anticipated that with the construction of Lift Station #47, this line will be used to service the existing clubhouse and existing maintenance building.

According to the *2012 Water Reuse Masterplan Update*, wastewater generated on the Site will be treated at the Water Campus Water Reclamation Plant (WCWRP) located near Pima Road and AZ Loop 101. The WCWRP is the primary treatment facility for wastewater generated in the northern portions of the City of Scottsdale.

3.3 Existing Onsite Wastewater Infrastructure

A portion of the Site is mass graded, with native desert located along the western, northern, and southern boundaries of the Site. It is Wood/Patel's understanding there is no existing onsite wastewater infrastructure, except in accordance with The Reserve 51-Lot improvement plans, where the 8-inch gravity sewer lines from Lift Station #47 to 121st Street, then northerly to the western boundary of the existing Scottsdale National Golf Club, were installed. These lines are believed to be dry lines.

4.0 PROPOSED WASTEWATER COLLECTION SYSTEM

4.1 Sewer Pipe Sizing

Pipes for the Site were sized to accommodate peak wet-weather flow conditions at full build-out for the Site. Using the design criteria previously mentioned, the resulting sewer system consists of gravity-fed, 8-inch sewer pipes. Refer to Exhibit 2 – *Wastewater Exhibit - Full Build-out* for the proposed wastewater collection system configuration.

4.2 Sewer Layout

The sewer layout generally follows the natural topography of the Site, sloping in a southeasterly direction. The proposed wastewater collection system meets the minimum depth of cover requirements established by the City of Scottsdale (Ref. 1). The proposed wastewater collection system will outfall to the proposed Lift Station #47. From the lift station, wastewater is conveyed west along Dynamite Boulevard/Rio Verde Drive, through a proposed force main sewer currently under design, and outfalls east of 116th Street to a proposed 8-inch gravity sewer line currently under design, which then ties in to an existing 8-inch gravity sewer line between the intersection of Alma School Road and 114th Street, on Rio Verde Drive (approximately 140-ft east of N. 111th Place). Lift Station #47 will be designed by others in accordance with standards set forth by the City of Scottsdale and Title 18, Chapter 9 of the Arizona Administrative Code.

4.3 Basis of Design Reports for Individual Phases of Development

As development progresses within the Site, basis-of-design (BOD) reports may be necessary for site design to identify significant variations in land use, wastewater design flows, and the wastewater infrastructure needed to serve each site. Additionally, a wastewater BOD report will be required for the lift station design.

5.0 CONCLUSIONS

This Wastewater Basis of Design Report, as presented, meets City of Scottsdale standards and requirements, and serves as a guide for construction documents associated with the proposed wastewater collection system. The following items highlight critical conclusions:

1. Wastewater design flows and proposed wastewater collection system for full build-out was analyzed.
2. Average Day design flows for full build-out are 84,483 GPD, with 78,233 GPD flowing to the proposed lift station and 6,250 GPD flowing to individual septic systems.
3. Wood/Patel's model of the proposed wastewater collection system provides system conveyance and capacity in conformance to City of Scottsdale's standards and Title 18, Chapter 9 of the *Arizona Administrative Code*.
4. Onsite wastewater flows will outfall to the proposed Lift Station #47, and will be conveyed west, via force main first and proposed 8-inch sewer line second, to an existing 8-inch sewer line in Rio Verde Drive approximately 140-ft east of N. 111th Place.
5. It is Wood/Patel's understanding that the proposed wastewater collection system conforms to the City of Scottsdale's adopted *Integrated Master Wastewater Plan*, dated March 2008.
6. A payback agreement will be pursued with City of Scottsdale pertaining to the cost of proposed 8-inch gravity sewer main installation in Rio Verde Drive from 118th Street to proposed sewer Lift Station #47.
7. Future Sewer Lift Station #47 will be required for and constructed by Scottsdale National Golf Club and a Conceptual Design Report will be provided at a future time.

6.0 REFERENCES

1. *Design Standards & Policies Manual*, City of Scottsdale, January 2010.
2. *Arizona Administrative Code, Title 18, Chapter 9*, Arizona Department of Environmental Quality, 2005.
3. *2008 Integrated Wastewater Master Plan*, City of Scottsdale, March 2008.

TABLE 1

**WASTEWATER COLLECTION SYSTEM
DESIGN CRITERIA**

Project: Scottsdale National Golf Course
Location: Scottsdale, AZ
Date: November 12, 2014
References: 2010 City of Scottsdale Design Standards & Policies Manual

Proj. Number: 144147
Proj. Engineer: Ethan Boyle, P.E.

UNIT DAILY RESIDENTIAL WASTEWATER FLOWS

Description	Value	Units	Note(s)
General			
Minimum Full-Flow Velocity	2.5	ft/sec	1
Maximum Peak Flow Velocity	10	ft/sec	1
Minimum Cover on Sanitary Sewer Pipe	4	feet	1
Maximum Peak Flow Depth-to-Diameter Ratio (d/D) for Sewer Pipes 12 inches in Diameter or Less	0.65	-	1
Maximum Peak Flow Depth-to-Diameter Ratio (d/D) for Sewer Pipes Greater than 12 inches in Diameter	0.7	-	1
Minimum Pipe Diameter	8	in	1
Manning's "n" value	0.013	-	1
Peaking Factor (Single Family Residential)	4.0	-	1
Peaking Factor (Resort Hotel)	4.5	-	1
Residential			
Average Day Wastewater Flow per Person (Pipes with 8 to 12 inch diameters)	100	GPD/person	1
Population Density	2.5	persons/du	1
Average Day Wastewater Flow per Dwelling Unit (Pipes with 8 to 12 inch diameters)	250	GPD/du	1
Average Day Wastewater Design Flows, Non-Residential			
Cottages	380	GPD/room	1
Comfort Stations	950	GPD/Comfort Station	2
Country Club Amenities (Resident Member)	100	GPD/Resident Member	3
Country Club Amenities (Nonresident Member)	10	GPD/Nonresident Member	3
Office (Used to model the existing Maintenance building)	0.5	GPD/SQ FT	1

Notes:

1. Per City of Scottsdale Design Standards & Policies Manual
2. Previous Comfort Stations planned within the Scottsdale National Golf Course accounted for a wastewater demand design flow of 950 GPD. This wastewater demand was calculated from the following assumptions: 3 Toilets*(200 GPD/Toilet) + 2 Urinals*(100 GPD/Urinal) + 4 Sinks*(25 GPD/Sink) + 1 Ice Machine*(25 GPD/Ice Machine) + 1 Janitor Utility Sink*(25 GPD/Janitor Utility Sink)= 950 GPD.
3. Per Table 1- Unit Design Flows from the Arizona Administrative Code, Title 18, Chapter 9

TABLE 2

OFFSITE WASTEWATER FLOWS

WOOD/PATEL

TABLE 2 -Offsite Wastewater Flows

Project: Scottsdale National Golf Course
Location: Scottsdale, Arizona

Proj. Number: 144147
Proj. Engineer: Ethan Boyle, P.E.

PRELIMINARY LAND USE AND DWELLING UNIT BREAKDOWN

Type	Non-Residential Acres	Population Density (persons/DU or Acre, patrons/day)		Commercial/Industrial/Retail S.F.	GPD/1000 SF	Land Use	Unit Daily Wastewater Demand (GPD/DU, AC, or S.F.)		Avg Day (GPD)	Total Avg Day (GPD)
Existing SNGC Clubhouse/Maintenance	0.60	150	Patrons/Day	26,284	-	Clubhouse	⁽¹⁾ 100 (Res.) 10 (Nonres.)	GPD/Person	8,250	12,000
	0.17	-	-	7,500	3.8	Maintenance Building	0.5	GPD/SQ FT	3,750	
OFF7	-	76	Acres	-	-	R1-190	250	GPD/DU	4,356	7,623
OFF8	-	39	Acres	-	-	R1-130	250	GPD/DU	3,267	
Offsite Totals	0.77			33,784						19,623

Notes:

1. Assumed 50% members are Resident and 50% members are Nonresident.

TABLE 3

ONSITE WASTEWATER DESIGN FLOWS

Project: Scottsdale National Golf Course
 Location: Scottsdale, Arizona

Proj. Number: 144147
 Proj. Engineer: Ethan Boyle, P.E.

PRELIMINARY LAND USE AND DWELLING UNIT BREAKDOWN

Type	No. of DUs/Casitas/Comfort Stations	Residential Acres	Non-Residential Acres	Population Density (persons/DU or Acre, patrons/day, person/DU)		Commercial/Industrial/Retail S.F.	GPD/1000 SF	Land Use	Unit Daily Water Demand (GPD/DU, AC, or S.F.)		Avg Day (GPD)	Total Avg Day (GPD)
Comfort Stations ⁽¹⁾	5	-	0.14	-		-	-	Comfort Station	950	GPD/Comfort Station	4,750	4,750
Future Clubhouse	-	-	2.87	500	Patrons/Day	34,200	-	Clubhouse	⁽³⁾ 100 (Res.) 10 (Nonres.)	GPD/Person	27,500	27,500
Future Maintenance Building ⁽¹⁾	-	-	0.17	-	-	7,500	3.8	Maintenance Building	0.5	GPD/SQ FT	3,750	3,750
Cottages	72	6.4	-	-	-	277,344	-	Resort with Amenities	380	GPD/Room	27,360	27,360
Future North Residence ⁽²⁾	-	-	-	-	-	-	-	Residential	1,500	GPD/DU	1,500	1,500

Onsite Wastewater Flow to Septic Systems	0.14											6,250
--	------	--	--	--	--	--	--	--	--	--	--	-------

Onsite Wastewater Flow to Lift Station	6.4	3.04				319,044						58,610
--	-----	------	--	--	--	---------	--	--	--	--	--	--------

Total Onsite Wastewater Flow to Rio Verde Gravity Sewer	-	0.17				7,500						3,750
---	---	------	--	--	--	-------	--	--	--	--	--	-------

Total Onsite Wastewater Flow	6.4	3.18				319,044						64,860
------------------------------	-----	------	--	--	--	---------	--	--	--	--	--	--------

Notes: 1) Each comfort station and the maintenance building will have an individual septic system, therefore the wastewater flow will not be accounted for within the gravity sewer design portion of this report.

2) The estimated wastewater flow will be dependant on the final design of the future residence. This residence will also have an individual septic system, therefore the wastewater flow will not be accounted for within the gravity sewer design portion of this report.

3) Assumed 50% members will be Resident and 50% members will be Nonresident.

TABLE 4

**WASTEWATER MODEL -
FULL BUILD-OUT CONDITION**

Project: Scottsdale National Golf Club
 Location: Scottsdale, AZ
 References: Arizona Administrative Code, Title 18, Chapter 9
 City of Scottsdale 2009 Design Standards & Policies Manual, Chapter 7 Wastewater

Proj. Number: 144147
 Proj. Engineer: Ethan Boyle, P.E.

FROM NODE	TO NODE	SEWER AREA(S) SERVED	AREA SERVED (ACRES)	PARCEL ADF (GPD)	SEWER NODE ADF (GPD)	TOTAL ADF (GPD)	PEAKING FACTOR	PEAK WET WEATHER FLOW (GPD)
OFFSITE WASTEWATER FLOWS								
C1	C2	Ex. Clubhouse/ Maintenance	-	12,000	12,000	12,000	4.5	54,000
C2	C3	2" DUAL FORCE MAIN				12,000	4.5	54,000
C3	C4	-	-	-	-	12,000	4.5	54,000
E4	E5	OFF7	-	4,356	4,356	8,106	4.0	34,299
D1	A4	OFF8	-	3,267	3,267	3,267	4.0	13,068

Total Offsite Flows	-	19,623	19,623					84,492
----------------------------	---	--------	--------	--	--	--	--	--------

FULL BUILD OUT ONSITE WASTEWATER FLOWS								
A1	A2	Clubhouse	-	27,500	27,500	27,500	4.5	123,750
B1	B2	12 Cottages	-	4,560	4,560	4,560	4.0	18,240
B2	B3	20 Cottages	-	7,600	7,600	12,160	4.0	48,640
B3	B4	4 Cottages	-	1,520	1,520	13,680	4.0	54,720
B4	B5	16 Cottages	-	6,080	6,080	19,760	4.0	79,040
B5	C9	20 Cottages	-	7,600	7,600	27,360	4.0	109,440
C9	C8	-	-	-	-	27,360	-	109,440
C8	C4	-	-	-	-	27,360	-	109,440
C4	C5	-	-	-	-	39,360	-	163,440
C5	C6	-	-	-	-	39,360	-	163,440
C6	C7	-	-	-	-	39,360	-	163,440
C7	A2	-	-	-	-	39,360	-	163,440
A2	A3	-	-	-	-	66,860	-	287,190
A3	A4	-	-	-	-	66,860	-	287,190
E1	E2	-	-	-	-	0	-	0
E2	E3	Maintenance Building	-	3,750	3,750	3,750	4.5	16,875
E3	E4	-	-	-	-	3,750	-	16,875
E4	E5	-	-	-	-	8,106	-	34,299
E5	E6	-	-	-	-	8,106	-	34,299
E6	A4	-	-	-	-	8,106	-	34,299

Total Onsite Flow to Future Lift Station	58,610	58,610	250,065
---	--------	--------	---------

Total Offsite Flow to Future Lift Station	19,623	19,623	84,492
--	--------	--------	--------

Total Onsite and Offsite Flow to Rio Verde Gravity Sewer (Conveyed east to Lift Station)	11,373	11,373	47,367
---	--------	--------	--------

Total Onsite and Offsite Flow to Future Lift Station	78,233	78,233	334,557
---	--------	--------	---------

TABLE 5

**CALCULATED PIPE CAPACITIES –
FULL BUILD-OUT CONDITION**

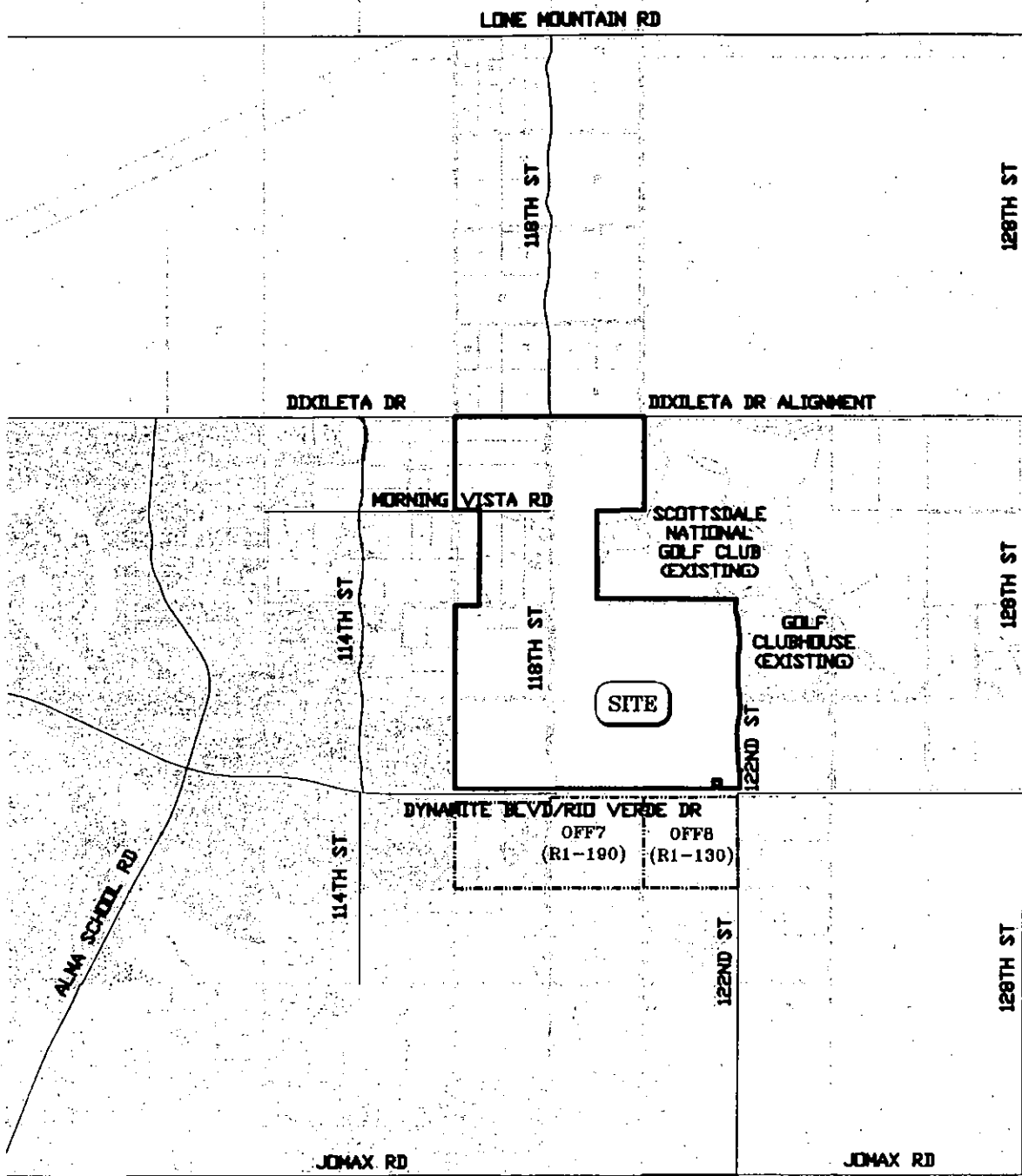
Project: Scottsdale National Golf Club
 Location: Scottsdale, Arizona
 References: Title 18, Chapter 9 of the Arizona Administrative Code
 City of Scottsdale 2009 Design Standards & Policies Manual, Chapter 7 Wastewater

Proj. Number: 144147
 Proj. Engineer: Ethan Boyle, P.E.

FROM NODE	TO NODE	NOTES	PIPE DIA. (INCHES)	MODELED PIPE SLOPE (FT / FT)	PIPE CAPACITY		PEAK WET WEATHER FLOW (GPD)	PEAK WET WEATHER FLOW (GPM)	PEAK FLOW RESULTS			
					GPD	GPM			d/D (WET WEATHER)	FLOW VELOCITY (FT/S)	SURPLUS CAPACITY (WET WEATHER) (GPD)	PERCENT OF CAPACITY (WET WEATHER)
										AT d/D=0.65		
Offsite Pipe Sizes												
C1	C2	Existing	8	0.0188	1,082,936	752	54,000	38	0.15	5.3	1,028,936	5.0%
C2	C3	Existing					2" DUAL FORCE MAIN					
C3	C4	Existing	8	0.0324	1,398,793	971	54,000	38	0.13	6.8	1,344,793	3.9%
E4	E5	Proposed	8	0.0331	1,421,354	987	34,299	24	0.11	6.9	1,387,055	2.4%
D1	A4	Existing	8	0.0110	812,202	564	13,068	9	0.09	4.0	799,134	1.6%
Full Build Out Onsite Pipe Sizes												
A1	A2	Proposed	8	0.0084	721,958	501	123,750	86	0.28	3.5	598,208	17.1%
B1	B2	Proposed	8	0.0251	1,240,865	862	18,240	13	0.09	6.0	1,222,625	1.5%
B2	B3	Proposed	8	0.0166	1,015,253	705	48,640	34	0.15	4.9	966,613	4.8%
B3	B4	Proposed	8	0.0750	2,143,312	1488	54,720	38	0.11	10.4	2,088,592	2.6%
B4	B5	Proposed	8	0.0070	654,274	454	79,040	55	0.24	3.2	575,234	12.1%
B5	C9	Proposed	8	0.0075	676,835	470	109,440	76	0.27	3.3	567,395	16.2%
C9	C8	Existing	8	0.0048	541,468	376	109,440	76	0.30	2.6	432,028	20.2%
C8	C4	Existing	8	0.0094	767,080	533	109,440	76	0.26	3.7	657,640	14.3%
C4	C5	Existing	8	0.0488	1,737,211	1206	163,440	114	0.21	8.5	1,573,771	9.4%
C5	C6	Existing	8	0.0063	631,713	439	163,440	114	0.35	3.1	468,273	25.9%
C6	C7	Existing	8	0.0086	721,958	501	163,440	114	0.32	3.5	558,518	22.6%
C7	A2	Existing	8	0.0069	654,274	454	163,440	114	0.34	3.2	490,834	25.0%
A2	A3	Existing	8	0.0091	744,519	517	287,190	199	0.43	3.6	457,329	38.6%
A3	A4	Existing	8	0.0091	744,519	517	287,190	199	0.43	3.6	457,329	38.6%
E1	E2	Proposed	8	0.0269	1,285,987	893	0	0	#DIV/0!	6.3	1,285,987	0.0%
E2	E3	Proposed	8	0.0176	1,037,814	721	16,875	12	0.09	5.0	1,020,939	1.6%
E3	E4	Proposed	8	0.0183	1,060,375	736	16,875	12	0.09	5.0	1,043,500	1.6%
E4	E5	Proposed	8	0.0331	1,421,354	987	34,299	24	0.11	5.2	1,387,055	2.4%
E5	E6	Proposed	8	0.0062	609,152	423	34,299	24	0.16	6.9	574,853	5.6%
E6	A4	Proposed	8	0.0304	1,353,671	940	34,299	24	0.11	3.0	1,319,372	2.5%

EXHIBIT 1

VICINITY MAP



N.T.S.

----- Property Boundary

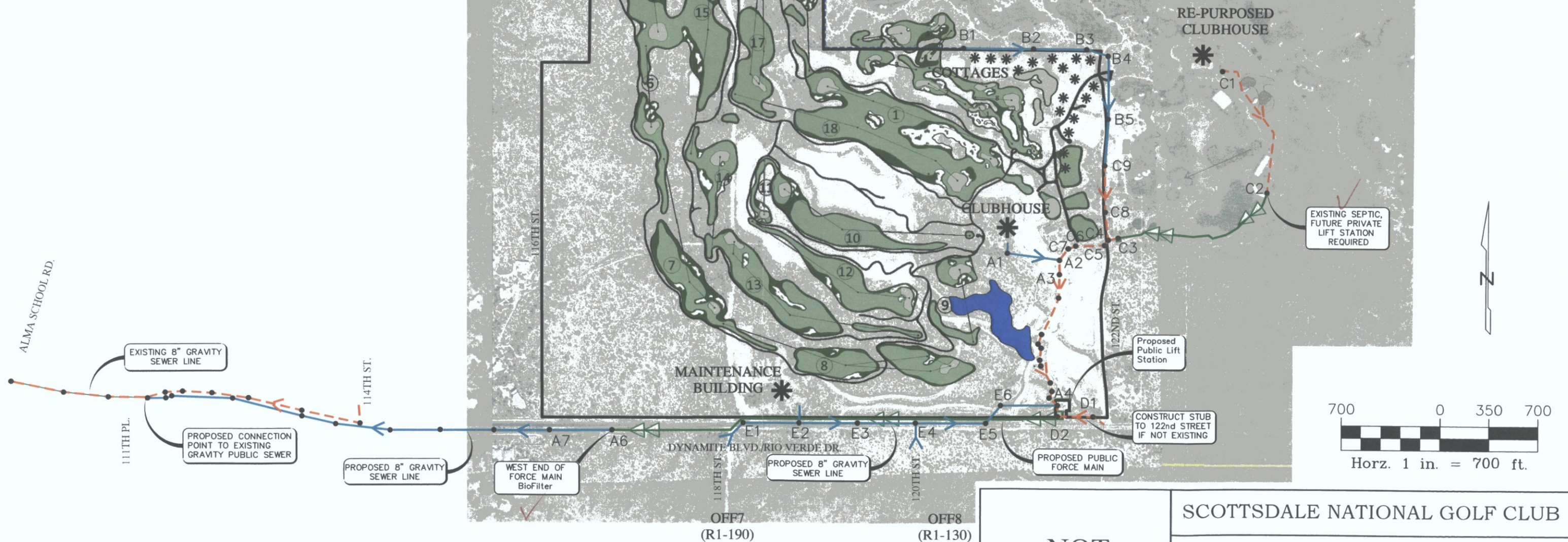
SCOTTSDALE NATIONAL GOLF CLUB	
PLATE 1 VICINITY MAP	
WOOD/PATEL 2051 W. Northern Ave. Phoenix, AZ 85021 (602) 335-8300 www.woodpatel.com PROJECT: 144147	
JOB NO. 144147	

EXHIBIT 2

WASTEWATER EXHIBIT – FULL BUILD-OUT

LEGEND

- FORCE MAIN
- 8" EXISTING SEWER
- 8" PLANNED SEWER
- PRIVATE FORCE MAIN OPTION



Comments Addressed from 8.1.15
on this submittal 12.9.15 clm

NOT

FOR
CONSTRUCTION
OR RECORDING

SCOTTSDALE NATIONAL GOLF CLUB

PLATE 2-WASTEWATER EXHIBIT
FULL BUILDOUT

DATE 06-13-15	SCALE 1"=700'	SHEET 1 OF 1
JOB NO. 144147	DESIGN DWM DRAWN SCM	CHECK DWM