Sewer Basis of Design Report

PRELIMINARY Basis of Design Report

- ☐ ACCEPTED
- ☑ ACCEPTED AS NOTED
- ☐ REVISE AND RESUBMIT

CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.
For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY Levi Dillon **DATE** 8/27/2024

Address comments below and herein within the DR case BOD submittal and stipulated as part of the zoning case specifically noted below:

1) **STIPULATION**
One 60-inch diameter manhole required on a sewer line 15" and larger. DS&PM 7-1405, B. Manhole shall be polymer concrete manhole (base/cylinder/cone/chimney shall be polymer concrete from Olson precast or Armorock. Manhole to pipe connection boots shall be cast in-place. If a cast base is required for installation (i.e. for doghouse style installation or other) it shall be coated with City approved polymer coating and manhole to pipe connection boots would be expansion ring insert style.

2) **STIPULATION**
For the 8" sewer service connection utilize a 8" service line connection with a MAG external drop connection (MAG Standard Detail No. 426, modified as follows: For drops up to and including 5 feet, use Type “A” drop connections, and for drops greater than 5 feet, use Type “B” drop connections.) DS&PM 7-1.405, F

3) Sewer service line profile: Confirm all crossing existing utility line depths and describe in report how they were confirmed. City does not provide water line depths and as-builts could not be found for water. Suggest measuring to top of valve operating nuts in filed.

4)Address comments on the utility plan

The Clayton on Earll

3-ZN-2024

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
35476
BRIAN T.
BERNARD
Date Signed 7-31-24
ARIZONA, U.S.A.

Clayton Companies
7340 E. Main Street, Suite 200
Scottsdale, Arizona 85251
480 951 2260

prepared by:

CIVIL DESIGN SOLUTIONS, L.L.C.
Civil Engineering Land Development
Water Resources

925 W. Glenrosa Ave, Goodyear, AZ 85395

August 1, 2024

TABLE OF CONTENTS

1.0 INTRODUCTION

This Sewer Basis of Design Report has been prepared for the Clayton on Earll (2.93 acre) Mixed-Use Redevelopment, which is being developed by Clayton Companies, an Arizona Corporation. This analysis will present the design requirements for the collection system for the entire project.

1.1 Project Location

The project is located in a portion of the Southwest 1/4 of Section 26, Township 2 North, Range 4 East of the Gila and Salt River Baseline and Meridian, Maricopa County, Arizona. It is on the northwest corner of the intersection of Earll Drive and Civic Center Plaza. The address being 7300 E. Earll Drive, Scottsdale. *See Figure 1, Vicinity Map.*

1.2 Property Description

The project is located within the City of Scottsdale, Arizona. The project is approximately 2.93 gross acres with several parcels that will be combined. The project is a proposed Mixed-Use Redevelopment project with a total of 89 dwelling units and 6,300 square feet of commercial space. The project is currently zoned as C-3, DO. The project Land use is maximum 50 Dwelling units per acre. The project has several existing buildings that will be demolished and removed. The property currently is flat with less than 2 feet of fall across the site.

1.3 Purpose

This Report has been prepared to satisfy the City of Scottsdale requirements for the Rezoning process for the property. This report provides design calculations to determine the amount of sewage this project is expected to use to produce. This property is located within Quarter Section map 15-45 as C.O.S. project number "3-ZN-2024 The Clayton on Earll".

2.0 COLLECTION SYSTEM DESCRIPTION

2.1 Existing Collection System

The Clayton on Earll Sereno development will connect to the City of Scottsdale existing sewer system. Approximately 89 dwelling units and 6,300 square feet of office space will convey their sewer flows to the existing 21" sewer pipe within Earll Drive.

Sewer service line profile: Confirm all crossing existing utility line depths and describe in report how they were confirmed. City does not provide water line depths and as-builts could not be found for water. Suggest measuring to top of valve operating nuts in filed.

2.2 Proposed Collection System

The proposed collection system will convey the wastewater demand flows within a gravity pipe system. All of the flows will use a new sewer service of 8" minimum for the commercial and the residential property. Per the city's quarter section information, the service will pass below the existing 8" water line and the existing 8" sewer line in Earll Drive. See Figure 2 for sewer profile of the proposed 8" sewer line. Connecting to the existing 21" sewer will require installing a 5 ft diameter polymer concrete manhole* with a 50" manhole frame and cover. Unused existing services shall be removed back to the property line then capped. *See Figure 2: Sewer Distribution Map*.

30"

yes

3.0 BASIS OF DESIGN

3.1 Design Flow Rates

As per the City of Scottsdale this Basis of Sewer Design Report was prepared according to Design Standards & Policies Manual, dated 2018. The following is a summary of the design criteria upon which this study is based.

Basis of Sewer Design

- The total number of dwelling units = 89
- Per the City of Scottsdale design standards section 7-1.403 residential design flow will be 100 gallons per capita per day at 1.7 persons per dwelling unit.
- Office demand flows will be 0.4 gpd per square foot of office space.
- Total Office Space = 6,300 square feet.
- A peaking factor of 4.5 will be used for residential dwellings.
- A peaking factor of 3 will be used for the office space.
- Pool backwash of 100 gpm peak, no spa to be installed

Sewer flow was calculated as follows:

Total residential units = 89

Total Office = 6,300 square feet

Total average day flow for residential = 100 gpcd x 89 units x 1.7 persons = 15,130 gpd

Total average day flows for office= 6,300 sf x 0.4 gpd = 2,520 gpd

Total Project average day flows = 17,650 gpd

should be 47.30

Residential Peak Day Flow = 10.51 gpm x 4.5 = 42.30 gpm = 0.0942 cfs

Office Peak Day Flows = 1.75 gpm x 3 = 5.25 gpm = 0.0117 cfs

Pool backwash = 100 gpm

should be 153gpm

Total Project Peak Day Flows = 147.55 gpm = 0.3287 cfs

The collection system design criterion is based on the City of Scottsdale DSPM. The following represents the design criteria for the collection system:

- Mean full flow velocity = 2.5 feet per second
- Peak Flow velocity = 10.0 feet per second maximum.
- The Manning's roughness coefficient, n=0.013 for all pipe materials.
- Maximum sewer capacity: d/D=65% at peak flow conditions.
- Manhole spacing shall not exceed 500 feet for sewer lines less than 18 inches in diameter.
- The minimum drop in elevation from the invert to the outlet of a manhole shall be 0.1 feet.
- The minimum manhole diameter shall be 60 inches for connection to the existing 21: sewer line within Earll Drive.
- MAG Standard 601 and 615 and any subsequent MAG specification and details, shall be followed for trench bedding.
- Line separation shall be designed per the DSPM under section 7-1.407.

correct, incorrectly called out at 50" on plan

use comma, 17,650 gpd

3.2 Sewer Capacity

The Clayton on Earll development will accumulate 17.650 gallons per day average day flow at buildout. At Peak Day Flows the development will accumulate 68,098 gallons per day at buildout. The total projects Peak Day Flows is 147.55 gpm or 0.3287 cfs.

should be 153gpm

4.0 On-site Improvements

The collection system for the project is to be a gravity sewer system. The sewer system for the building will be shown on the plumbing plans. The building will collect the sewage and convey

to a minimum proposed 8" service line that will connect to the existing 21" sewer pipe within Earll Drive. See Figure 2 for proposed 8" sewer lateral profile for utility crossing. A flow study was prepared by RDH Environmental Services to determine the sewer flows within the existing 21" sewer pipe. The flow meter was installed into a manhole located within Earll Drive on 3-14-24. It was installed for a duration of 10 day and 2 weekend and ended on 3-25-24. See Appendix **B** for flow analysis report. During the monitoring period, the following table shows the maximum flow, depth and velocity within the manhole.

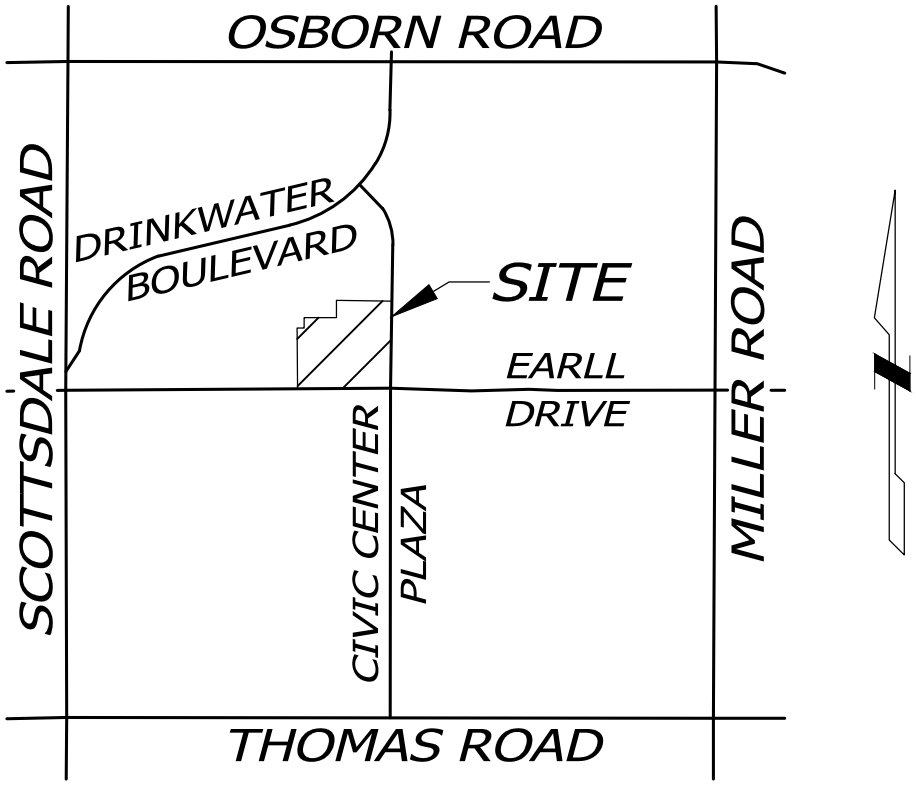
Maximum Flow (gpm)	Maximum depth (in)	Maximum Velocity (fps)
1131.97	9.21	2.51

The peak flows from the project will add 147.29 gpm to the 21" pipe. Per the city quarter section maps 15-45, the monitoring manhole has an invert elevation of 1218.29. The downstream manhole invert elevation is 1216.37. The distance between the manholes is 440 feet at a slope approximate 0.00436 ft/ft. Utilizing the analysis values from the above table, the following calculated values were determined by added the project peak flows. The existing peak flow of 1131.97 gpm was used to determine the depth in the 21-inch pipe. The depth in the pipe is calculated at 7.1 inches, with a velocity of 3.53 fps. The new peak flow of **1279.26 gpm** was used to determine the new depth and velocity of the 21-inch sewer pipe. These additional peak flows will have a depth of the flow of 7.44-inch in the pipe, with a velocity of 3.70 fps.

See Appendix **A** for calculations and a summary of the proposed system design and capacity. The appendix shows the proposed sewer slope, projected peak flows rates, and pipe flow capacities meeting minimum design standards.

It's safer to assume a min slope in the entire length of the 21" interceptor is something around 0.002 ft/ft (3fps at d/D=1). (Note: Absolute City min slope for 21" is 0.0015 ft/ft i.e. 2.5fps at d/D=1.0) Based on this more conservative slope/capacity assumption the depth would be 9-inches at velocity of 2.76fps. This is still acceptable. OK.

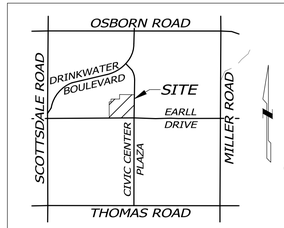
Figure 1: Vicinity Map



VICINITY MAP

NOT TO SCALE

Figure 2: Sewer Distribution Map



VICINITY MAP

NOT TO SCALE

2002-1233203 M.C.R.

A.P.N. 130-21-001F
3295 DRINKWATER LLC
2002-1233204 M.C.R.

COMMON ELEMENT
INSPIRE ON EARLL CONDOMINIUMS
BK. 1239, PG. 41, M.C.R.
A.P.N. 130-21-153

EXISTING WATER METER TO BE REMOVED TO MAIN

EXISTING WATER FIRE LINE TO BE REMOVED TO MAIN

EXISTING FH

EXISTING O.H.E. LINES TO BE RELOCATED UNDERGROUND

Civic Center Plaza

PROPOSED 3" WATER METER AND 3" BACKFLOW PREVENTOR

PROPOSED 6 FIRE LINE

EXISTING LANDSCAPE WATER METER TO REMAIN

EXISTING ARV

EXISTING ARV TO BE RELOCATED OUTSIDE OF DRIVEWAY

20' CATCH BASIN TO BE RELOCATED

INSTALL 8" DIP W

19' CATCH BASIN

EXISTING ARV

EXISTING WATER METER TO BE REMOVED TO MAIN

EXISTING 4" FIRE LINE TO BE REMOVED TO MAIN

PROPOSED 8"SS CONNECT TO BUILDING SS PLUMBING

13' CATCH BASIN

EXISTING 8"SS

PROPOSED 8"SS SEE PROFILE THIS SHEET

EXISTING 21"SS

PROPOSED 60" SSMH INV=1223.33 CONNECT TO EXISTING 21"SS

with 30" frame and cover

60"

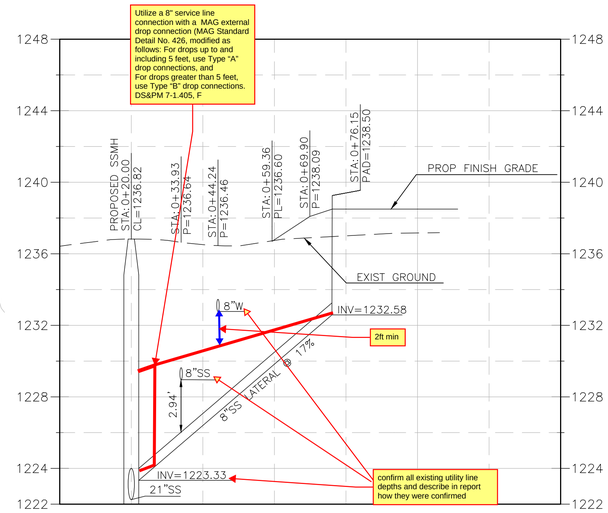
60-inch diameter manhole required on line 15" and larger. DS&PM 7-1405, B.

Install a polymer concrete manhole (base/cylinder/cone/chimney shall be polymer concrete from Olson precast or Armorock. Manhole to pipe connection boots shall be cast in-place. If a cast base is required for installaton (i.e. for doghouse style installation or other) it shall be coated with City approved polymer coating and manhole to pipe connection boots would be expansion ring insert style.

Earll Drive

LEGEND

- BOUNDARY LINE
- CENTER LINE OR MONUMENT LINE
- CONCRETE SURFACE
- 24 INCH VERTICAL CURB & GUTTER
- 24 INCH ROLLED CURB
- 6 INCH CONCRETE CURB
- ACCESS — INDICATES DRIVEWAY (MEANS OF ACCESS)
- WALL
- FENCE
- O.H.E. — OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND STORM SEWER LINE
- UNDERGROUND TELECOMMUNICATIONS LINE
- UNDERGROUND TELEVISION LINE
- UNDERGROUND WATER LINE



8" SEWER LATERAL

HORIZ: 1"=20'
VERT: 1"=4'

HORIZONTAL SCALE

20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

CIVIL DESIGN SOLUTIONS, LLC
15925 w. Glenrosa Avenue
Goodyear, Arizona 85395
602.214.4854

NO.	DATE	INT.	REVISIONS

THE CLAYTON ON EARLL

SEWER AND WATER DISTRIBUTION MAP

FIGURE 2

DESIGN/DRAWN/CHECK: BTB / BTB / WEG

DATE: 4/2024

PROJ. NO. P1144-24

DWG NO.

SHEET 1 OF 1

Appendix A: 21" Sewer Pipe Capacity

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Aug 1 2024

21 inch pipe proposed flow hydaulics

Circular

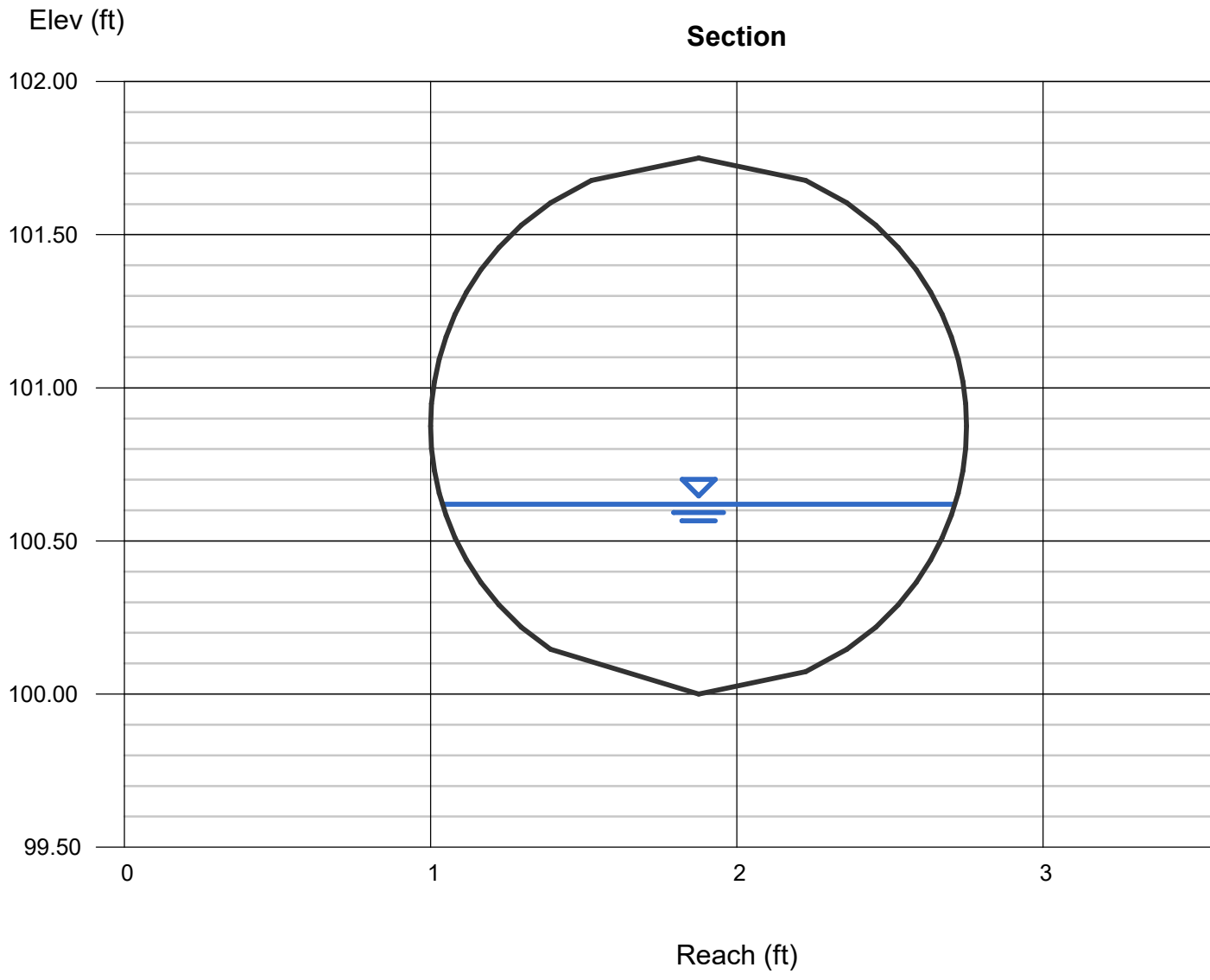
Diameter (ft)	= 1.75
Invert Elev (ft)	= 100.00
Slope (%)	= 0.44
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 2.85

Highlighted

Depth (ft)	= 0.62
Q (cfs)	= 2.850
Area (sqft)	= 0.77
Velocity (ft/s)	= 3.70
Wetted Perim (ft)	= 2.24
Crit Depth, Yc (ft)	= 0.62
Top Width (ft)	= 1.68
EGL (ft)	= 0.83



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Aug 1 2024

Proposed 8 inch sewer lateral

Circular

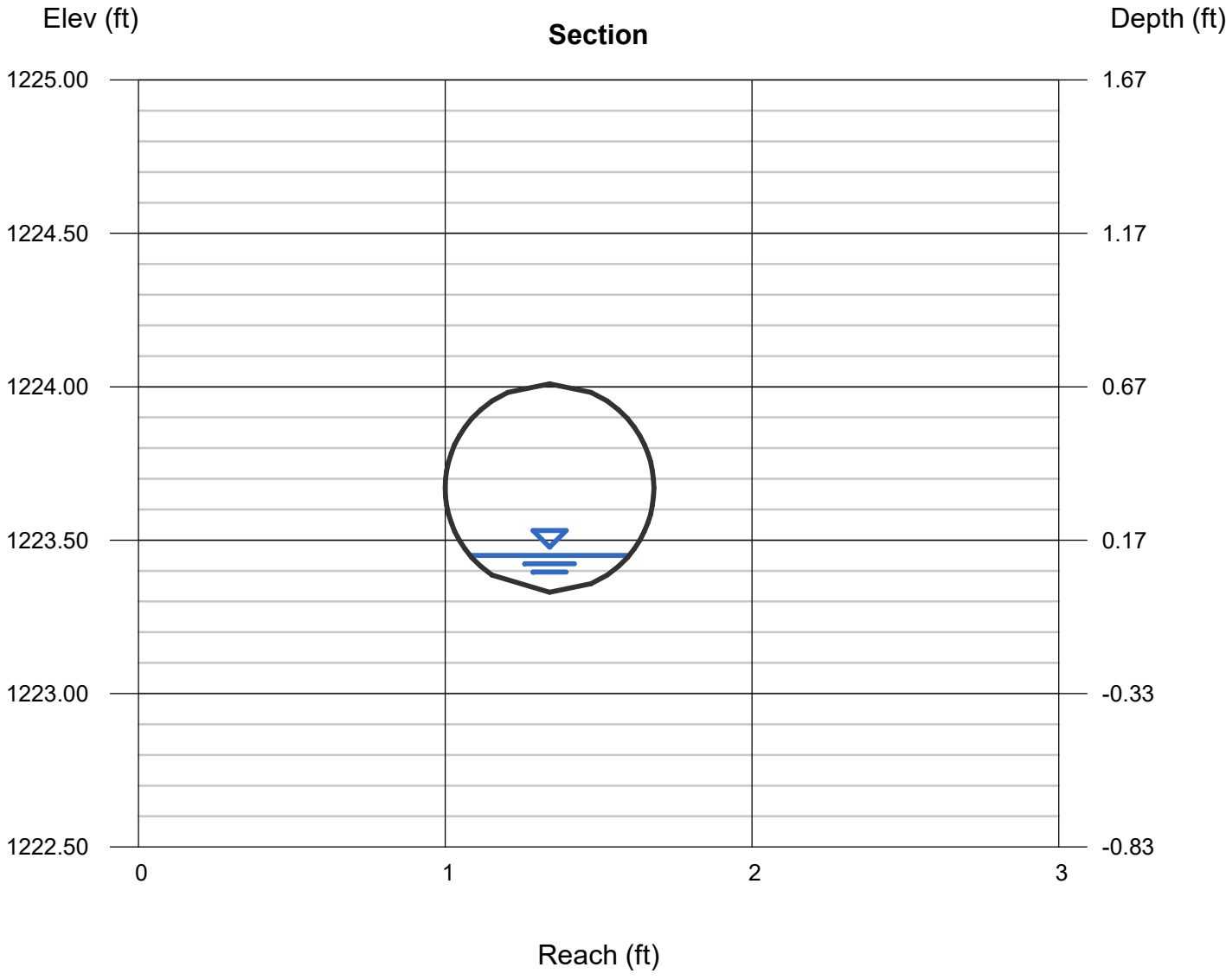
Diameter (ft)	= 0.68
Invert Elev (ft)	= 1223.33
Slope (%)	= 17.00
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.33

Highlighted

Depth (ft)	= 0.12
Q (cfs)	= 0.330
Area (sqft)	= 0.04
Velocity (ft/s)	= 7.57
Wetted Perim (ft)	= 0.59
Crit Depth, Yc (ft)	= 0.27
Top Width (ft)	= 0.52
EGL (ft)	= 1.01



16-45

15-44

15-46

14-45

28-JUL-24

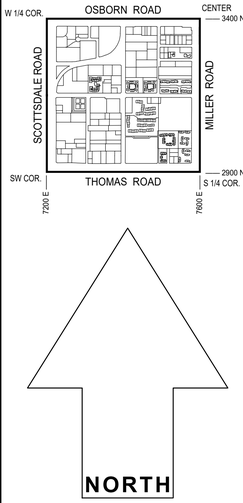
GENERAL NOTES:

- THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
- THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS 'CALCULATED' ON THE MAP.

LEGEND:

- Cleanout
- Lift Station (LS)
- Manhole
- Non-GPS Point
- Plug
- Sewer Service Point
- Sewer Tap Point
- Sewer Valve
- Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force (Force)
- Sewer Main - Private

VICINITY MAP



The map scale of 1" = 100' is based on a full size print of 30" x 36"

SEWER

QUARTER SECTION MAP

15-45

SW 1/4 SEC. 26 T2N R4E

CITY OF SCOTTSDALE

SCOTTSDALE GEOGRAPHIC INFORMATION SYSTEMS

3629 North Drinkwater Boulevard
Scottsdale, Arizona 85251

Appendix B: Existing 21" flow analysis

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Saturday, Apr 6 2024

21 inch pipe existing flow hydaulics

Circular

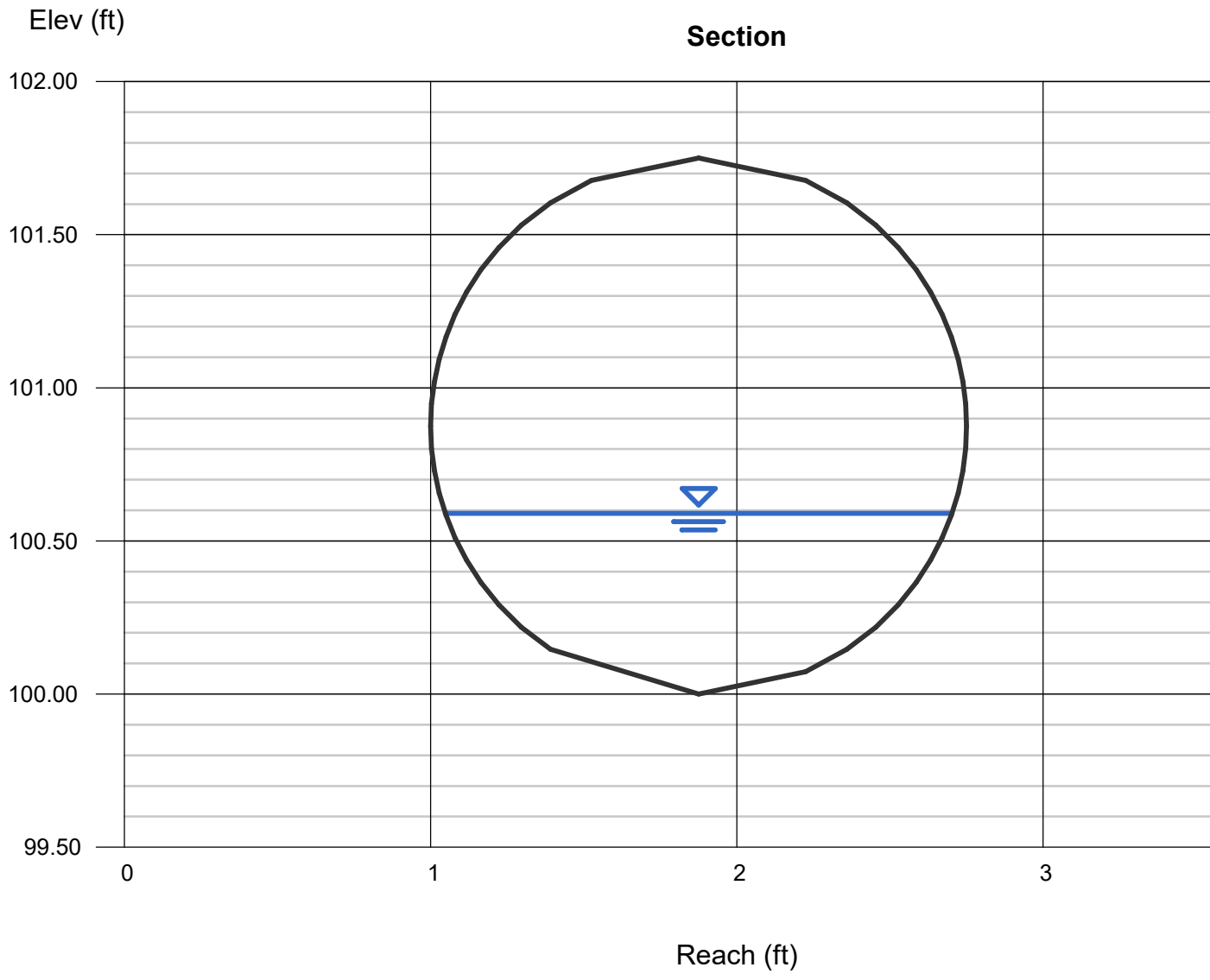
Diameter (ft)	= 1.75
Invert Elev (ft)	= 100.00
Slope (%)	= 0.44
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 2.52

Highlighted

Depth (ft)	= 0.59
Q (cfs)	= 2.520
Area (sqft)	= 0.71
Velocity (ft/s)	= 3.53
Wetted Perim (ft)	= 2.17
Crit Depth, Yc (ft)	= 0.58
Top Width (ft)	= 1.66
EGL (ft)	= 0.78



SL1649 RDH Flow Study for K and I Homes

kristjan Sigurdsson
K and I Homes
6125 E. Indian School Rd., Scottsdale, AZ 85251

SL1649 RDH Flow Study, 1 site total in Scottsdale, AZ from Thursday 03-14-24 to Monday 03-25-24.

Equipment for Site: Hach 901 Logger with Flo-Dar Sensor (Area Velocity)**.**
The equipment was installed on Thursday, 03/14/24 with confined space entry, pipe size confirmed, sensor calibrated, and level depth confirmed to the flow level.

Duration of monitoring: 10-days including 2 weekends
Monitor: Flow (gpm), Level (in), and Velocity (fps)
Data logging: 5-minute intervals (No averaged intervals)

Calibration Performed: Calibration method using 10.00-inch target.
Target Measure: 10.00 in Meter Read: 10.03 in 03/14/2024 9:00 am

Meter Validation: PASSED

MH1 located on E. Earll Dr. East of N 75th St.
90” Diameter, Rim to Invert: 160.00 inches
21” Concrete pipe, flowing East
No lateral(s).
The pipe condition is intact and reasonably clean.
Scum line of 9.00 inches
Flo-Dar installed pointing upstream in the 21” pipe channel.

Flow Data is valid having no missing, erroneous, or anomalies with data.

Attached is a MS Excel summary showing level, velocity, and flow logged at 5-minute intervals during the monitoring period.

RDH Environmental Services
Jeff Schulte
Operations Manager
servicemanager@rdh-env.com

SL1649 RDH Flow Study for K and I Homes

Pictures:

RDH ENVIRONMENTAL SERVICES, L.L.C.
3802 E. University Dr., Suite #4 ● Phoenix, AZ 85034 ● (602) 381-1960
Licenses: 122278 A

SL1649 RDH Flow Study for K and I Homes

Period Summaries:

K&I MH1 Period Summary: Flow				
Measures	**Value**	**Unit**	**Date**	**Time**
Max.	1131.97	gpm	Saturday, March 16, 2024	11:15 AM
Min.	201.67	gpm	Thursday, March 21, 2024	5:10 AM
Avg.	657.07	gpm		
Total	10,322,635.28	gal		

K&I MH1 Period Summary: Level				
Measures	**Value**	**Unit**	**Date**	**Time**
Max.	3.68	in	Saturday, January 20, 2024	2:45 PM
Min.	1.02	in	Monday, January 29, 2024	2:40 AM
Avg.	2.09	in		

K&I MH1 Period Summary: Velocity				
Measures	**Value**	**Unit**	**Date**	**Time**
Max.	2.60	fps	Friday, March 22, 2024	9:40 PM
Min.	1.11	fps	Monday, March 25, 2024	6:45 AM
Avg.	1.95	fps		

*Data begins at 09:15 am on March 14th and ends at 7:05 am on March 25th.

SL1649 RDH Flow Study for K and I Homes

Site Map:

RDH ENVIRONMENTAL SERVICES, L.L.C.
3802 E. University Dr., Suite #4 ● Phoenix, AZ 85034 ● (602) 381-1960
Licenses: 122278 A

CONFINED SPACE ENTRY PERMIT

ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED

LOCATION/DESCRIPTION OF CONFINED SPACE: K to I MH1
DATE: 3-14-24
PURPOSE OF ENTRY: Flow Study Install
TIME: 8:30
EXPECTED HAZARDOUS: Gases
EXPIRATION: 3-14-24
COMMUNICATIONS: Hand & Verbal
ENTRY SUPERVISOR: Nick Albertson

SPECIAL REQUIREMENTS BEFORE ENTRY:	YES	NO		YES	NO
Lockout De-energize - Test and Verify		N	Escape Harness Required	Y	
Lines Broken - Capped or Blanked		Y	Tripod Emergency Escape Unit	Y	
Purge - Flush and Vent		N	Lifelines		N
Ventilation		N	Fire Extinguishers		N
Secure Area (Post and Flag)	N		Lighting (Explosion proof)	Y	
Breathing Apparatus		N	Protective Clothing	Y	
Resucitator - Inhalator		N	Respirator		N

TEST INTERVAL: 15 Min

TEST(S) TO BE TAKEN / ACCEPTABLE ENTRY CONDITIONS
DO NOT ENTER IF PERMISSIBLE ENTRY LEVELS ARE EXCEEDED

	Permissible Entry Level			DATE											
				3-14	3-14	3-14									
				TESTER											
				NS	NA	NA									
				TIME											
				8:45	9:00	9:05									
				AM/PM											
				M	M	M	M	M	M	M	M	M	M	M	M
% of Oxygen	19.5% to 23.5%			20.9	20.9	20.9									
^ of L.F.L.* (Gas/Vapor/Mist)	Less than 10%			0	0	0									
Carbon Monoxide	35 ppm (8 hr.)			0	0	0									
Aromatic Hydrocarbon	1 ppm (8 hr.)			0	0	0									
Hydrogen Sulfide	10 ppm (8 hr.)			0	0	0									
Sulfur Dioxide	2 ppm (8 hr.)			0	0	0									
Ammonia	25 ppm (8 hr.)			0	0	0									

NAME OF GAS TERSTER(S)

NOTE: Continuous/periodic tests shall be established before beginning the job.
Any questions pertaining to test requirements should be directed to

TESTING INSTRUMENTS USED	NAME	TYPE	IDENTIFICATION NUMBER
Honeywell	BW Tech	GasAlertMax XT II	XT-XWHM-Y-NA MA215-026608

AUTHORIZED ENTRANTS
Zac Schulte

AUTHORIZED ATTENDANTS
Nick Albertson
Luis Lopez
Jordan Ashinkoshi

PERMIT AUTHORIZATION

I certify that all actions and conditions necessary for safe entry have been performed

Nick Albertson	Nick Albertson
NAME (Print)	Signature
3-14-24	9:10
DATE	TIME

IN CASE OF AN EMERGENCY CALL 911

CONFINED SPACE ENTRY PERMIT

ALL COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED

LOCATION/DESCRIPTION OF CONFINED SPACE: K & I Scottsdale

DATE: 3-25-24

PURPOSE OF ENTRY: Flow Study Removal

TIME: 7:00

EXPECTED HAZARDOUS: Gases

EXPIRATION: 8:00 3-25-24

COMMUNICATIONS: Hand & Verbal

ENTRY SUPERVISOR: Nick Albertson

SPECIAL REQUIREMENTS BEFORE ENTRY:	YES	NO		YES	NO
Lockout De-energize - Test and Verify		✓	Escape Harness Required	✓	
Lines Broken - Capped or Blanked		✓	Tripod Emergency Escape Unit	✓	
Purge - Flush and Vent		✓	Lifelines		✓
Ventilation		✓	Fire Extinguishers		✓
Secure Area (Post and Flag)	✓		Lighting (Explosion proof)	✓	
Breathing Apparatus		✓	Protective Clothing	✓	
Resucitator - Inhalator		✓	Respirator		✓

TEST INTERVAL: 15 Min

TEST(S) TO BE TAKEN / ACCEPTABLE ENTRY CONDITIONS
DO NOT ENTER IF PERMISSIBLE ENTRY LEVELS ARE EXCEEDED

	Permissible Entry Level			DATE	3-25	3-25									
				TESTER	NH	NH									
				TIME	7:05	7:12									
				AM/PM	M	M	M	M	M	M	M	M	M	M	M
% of Oxygen	19.5% to 23.5%				20.9	20.9									
^ of L.F.L.* (Gas/Vapor/Mist)	Less than 10%				0	0									
Carbon Monoxide	35 ppm (8 hr.)				0	0									
Aromatic Hydrocarbon	1 ppm (8 hr.)				0	0									
Hydrogen Sulfide	10 ppm (8 hr.)				0	0									
Sulfur Dioxide	2 ppm (8 hr.)				0	0									
Ammonia	25 ppm (8 hr.)				0	0									

NAME OF GAS TERSTER(S)

NOTE: Continuous/periodic tests shall be established before beginning the job.
Any questions pertaining to test requirements should be directed to

TESTING INSTRUMENTS USED	NAME	TYPE	IDENTIFICATION NUMBER
Honeywell	BW Tech	GasAlertMax XT II	XT-XWHM-Y-NA MA215-026608

AUTHORIZED ENTRANTS

~~Zac Schultz~~

Jordan Ostrumbaski

AUTHORIZED ATTENDANTS

Nick Albertson

Eric Gentile

Luis Lopez

PERMIT AUTHORIZATION

I certify that all actions and conditions necessary for safe entry have been performed

Nick Albertson	NA
NAME (Print)	Signature
3-25-24	7:20
DATE	TIME

IN CASE OF AN EMERGENCY CALL 911