



Water and Wastewater Study  
Combined



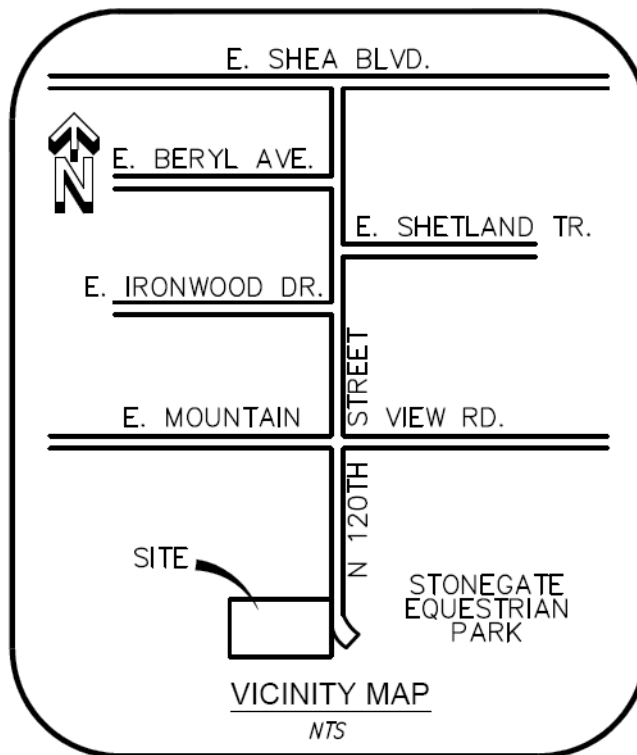
## 1.0 PROJECT LOCATION & DESCRIPTION

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This report has been prepared to identify the anticipated sewer flow upon completion of this development.

Development consists of a single family residence (2,304sf) and barn (11,940sf) along with typical site improvements. Purpose of this report is to verify that the existing water system has capacity for this development.

Project location is shown below.



## 2.0 EXISTING WATER SYSTEM & PRESSURE

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No sewer improvements near this site.



### **3.0 DESIGN FLOW & PROPOSED SYSTEM**

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Design flows for the project will include the residence and two restrooms within the barn. Both of these areas will be connected to an onsite septic system near the SWC of the residence.

### **4.0 CONCLUSIONS**

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We anticipate that the depicted design will be sufficient. Final system will be designed upon approval of this special use permit application and prior to the formal construction permit documents.



# Network Water Analysis Report

for

## Flynn Residence

**Site Location:**

9588 N 120th Street  
Scottsdale, Arizona 85259

**Prepared For:**

Kevin Flynn  
9634 N 120th Street  
Scottsdale, AZ 85259

**FINAL Basis of Design  
Report**

- APPROVED
- APPROVED AS NOTED
- REVISE AND RESUBMIT



Disclaimer: If approved; the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the water or sewer design that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance. For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY rsacks

DATE 10/8/2020



**Prepared By:**



**FETTER ENGINEERING GROUP**

5345 E. McLellan Road, #100

Mesa, Arizona 85205

P: 480.220.5379 • F: 480.558.0779

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### **List of Exhibits/Tables**

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### **List of Attachments** 5

a) WATER PLANS



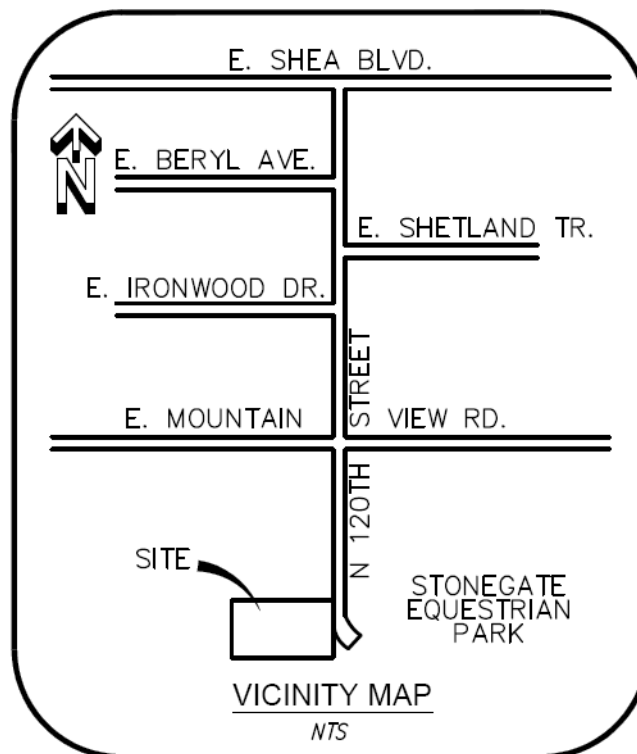
## 1.0 PROJECT LOCATION & DESCRIPTION

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This report has been prepared to identify the anticipated Peak Hour Domestic flow and the Fire Hydrant Flows servicing this project.

Development consists of a single family residence (2,304sf) and barn (11,940sf) along with typical site improvements. Purpose of this report is to verify that the existing water system has capacity for this development.

Project location is shown below.



## 2.0 EXISTING WATER SYSTEM & PRESSURE

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One main will serve this project, an existing 6" water main within 120th Street with an existing fire hydrant shown on the civil plans near the SEC of the site. This fire hydrant is private and cannot be used for this development. Water atlas and fire hydrant testing results are shown below:





**EXHIBIT 2**

**Arizona Flow Testing LLC**

**HYDRANT FLOW TEST REPORT**

Project Name:	Flynn Residence
Project Address:	9588 North 120th Street, Scottsdale, Arizona 85259
Client Project No.:	Not Provided
Arizona Flow Testing Project No.:	20356
Flow Test Permit No.:	C63086
Date and time flow test conducted:	September 14, 2020 at 7:00 AM
Data is current and reliable until:	March 14, 2021
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Jared Berry – City of Scottsdale-Inspector (602-541-4942)

**Raw Test Data**

Static Pressure: **79.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **66.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **25.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 2.5-inch Pollard Diffuser  
(Measured in inches)

Coefficient of Diffuser: .7875

Flowing GPM: **839 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **1,899 GPM**

**Data with 10 % Safety Factor**

Static Pressure: **71.1 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **58.1 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 1,900 Feet

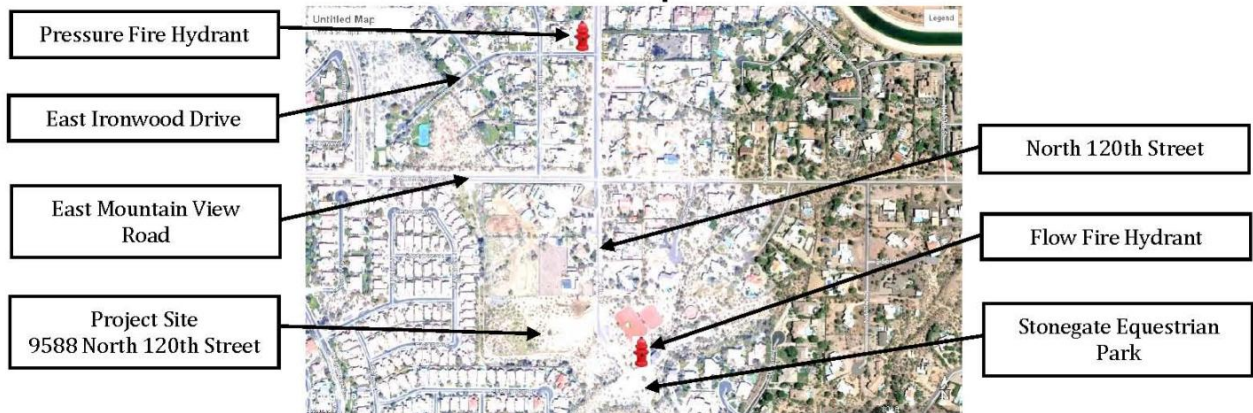
Main size: Not Provided

Flowing GPM: **839 GPM**

GPM @ 20 PSI: **1,758 GPM**

**Flow Test Location**

North ↑



Arizona Flow Testing LLC 480-250-8154 [www.azflowtest.com](http://www.azflowtest.com) [floyd@azflowtest.com](mailto:floyd@azflowtest.com)



### 3.0 PROPOSED WATER SYSTEM & PRESSURE

A 6" connection to the existing 6" main within 120th Street will be constructed for fire hydrant and fire sprinkler requirements. This 6" service lateral will enter the site, feed a new fire hydrant, and continue to the barn to feed the fire sprinkler system.

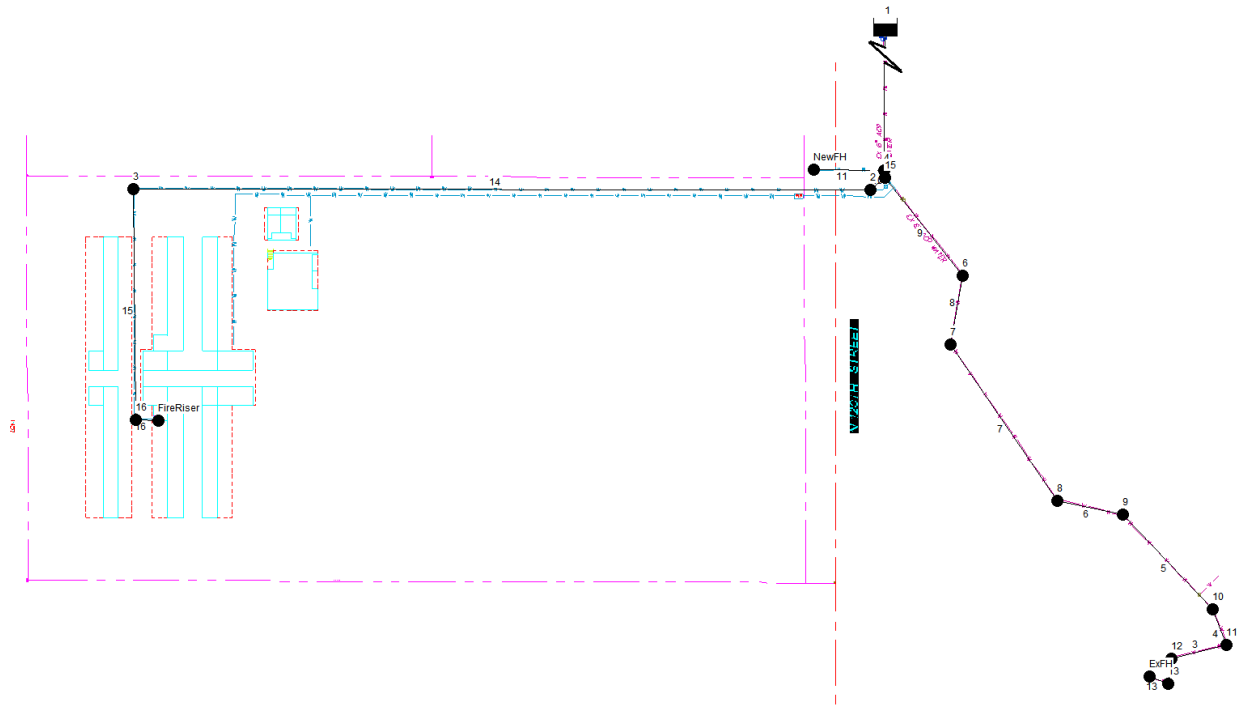
A 2" domestic service lateral with meter will be connected to the existing 6" main within 120th Street as well.

The area of these existing main connections(2) will require a new 10 foot section of ductile iron pipe per city staff requirements.

### 4.0 WATER NETWORK MODEL

EPANET was used for this water system analysis. Existing water main pressure was utilized from the fire hydrant test for existing pressures and flow rates. Overall model layout is as follows:

#### EXHIBIT 3



Water main, main elevation, and fitting losses were implemented into the model. Losses implemented are as follows. A water main coefficient of 130 was implemented for the ductile iron pipe that is being installed.



**TABLE 1****Roughness Coefficients for New Pipe**

<i>Material</i>	<i>Hazen-Williams C (unitless)</i>	<i>Darcy-Weisbach <math>\epsilon</math> (feet <math>\times 10^{-3}</math>)</i>	<i>Manning's n (unitless)</i>
Cast Iron	130 – 140	0.85	0.012 - 0.015
Concrete or Concrete Lined	120 – 140	1.0 - 10	0.012 - 0.017
Galvanized Iron	120	0.5	0.015 - 0.017
Plastic	140 – 150	0.005	0.011 - 0.015
Steel	140 – 150	0.15	0.015 - 0.017
Vitrified Clay	110		0.013 - 0.015

**Minor Loss Coefficients for Selected Fittings**

<i>FITTING</i>	<i>LOSS COEFFICIENT</i>
Globe valve, fully open	10.0
Angle valve, fully open	5.0
Swing check valve, fully open	2.5
Gate valve, fully open	0.2
Short-radius elbow	0.9
Medium-radius elbow	0.8
Long-radius elbow	0.6
45 degree elbow	0.4
Closed return bend	2.2
Standard tee - flow through run	0.6
Standard tee - flow through branch	1.8
Square entrance	0.5
Exit	1.0



**TABLE 2 - MODEL RESULTS**

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```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                 *
*                               Version 2.0                               *
*****
```

Input File: 19-021 Flynn.net

|

Link - Node Table:

Link ID	Start Node	End Node	Length ft	Diameter in
2	13	12	20.97	6
3	11	12	46.20	6
4	10	11	31.21	6
5	9	10	106.29	6
6	8	9	54.22	6
7	7	8	154.02	6
8	6	7	57.21	6
9	15	6	101.54	6
10	4	15	6.30	6
11	NewFH	4	57.34	6
13	ExFH	13	16.28	6
1	15	2	14.99	6
14	2	3	600.74	6
15	3	16	188.17	6
16	16	FireRiser	18.46	6
12	1	4	1392.93	8

Node Results:

Node ID	Demand GPM	Head ft	Pressure psi	Quality
4	0.00	89.20	38.65	0.00
NewFH	1400.00	81.27	35.21	0.00
6	0.00	88.32	38.27	0.00
7	0.00	88.32	38.27	0.00
8	0.00	88.32	38.27	0.00
9	0.00	88.32	38.27	0.00
10	0.00	88.32	38.27	0.00
11	0.00	88.32	38.27	0.00
12	0.00	88.32	38.27	0.00
13	0.00	88.32	38.27	0.00
ExFH	0.00	88.32	38.27	0.00
15	0.00	88.32	38.27	0.00
2	0.00	87.76	38.03	0.00
3	0.00	75.17	32.57	0.00
16	0.00	71.05	30.79	0.00



Node ID	Demand GPM	Head ft	Pressure psi	Quality
FireRiser	500.00	70.42	30.51	0.00
1	-1900.00	183.00	0.00	0.00 Reservoir

Link Results:

Link ID	Flow GPM	Velocity fps	Unit Headloss ft/Kft	Status
2	0.00	0.00	0.00	Open
3	0.00	0.00	0.00	Open
4	0.00	0.00	0.00	Open
5	0.00	0.00	0.00	Open
6	0.00	0.00	0.00	Open
7	0.00	0.00	0.00	Open
8	0.00	0.00	0.00	Open
9	0.00	0.00	0.00	Open
10	500.00	5.67	139.54	Open
11	-1400.00	15.89	138.31	Open
13	0.00	0.00	0.00	Open
1	500.00	5.67	37.22	Open
14	500.00	5.67	20.96	Open
15	500.00	5.67	21.87	Open
16	500.00	5.67	34.08	Open
12	1900.00	12.13	67.34	Open

## 5.0 CONCLUSIONS

\* The proposed fire hydrant under fire demand load will provide 1,400gpm @ 35.21psi with 500gpm @ 30.51psi at the fire riser room for the new barn.

\* In summary it can be concluded that with these water improvements the minimum required fire flow will be provided.



# ATTACHMENTS



**UNDERGROUND UTILITY NOTE**

THE UNDERGROUND UTILITY LOCATIONS WITHIN THIS SITE ARE SOMEWHAT UNKNOWN. VERY LITTLE AS-BUILT INFORMATION IS AVAILABLE SO IT IS THEREFORE IMPERATIVE THAT THE CONTRACTOR TAKES GREAT CARE AND INTENSE UTILITY COMPANY COORDINATION DURING CONSTRUCTION AS TO AVOID ANY CONFLICTS.

**DRAINAGE NOTE**

POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM ALL EXTERIOR WALLS AND FOOTINGS WITH A MINIMUM SLOPE OF 5% FOR A MINIMUM OF 10 FEET.

# PRELIMINARY CIVIL IMPROVEMENTS PLAN

FOR  
**9588 N 120TH STREET**  
SCOTTSDALE, AZ 85259

**ENGINEER:**

COURT FETTER  
FETTER ENGINEERING GROUP  
5345 E. MCLELLAN ROAD, #100  
MESA, AZ 85205  
P: 480-220-5379

**SURVEYOR:**

DANIEL ARMUJO  
AW LAND SURVEYING  
CHANDLER, AZ 85244  
P: 480-244-7630

**ARCHITECT:**

NED SAWYER  
16420 N. 92ND STREET, 100  
SCOTTSDALE, AZ 85260  
P: 480-791-4315

**SHEET INDEX**

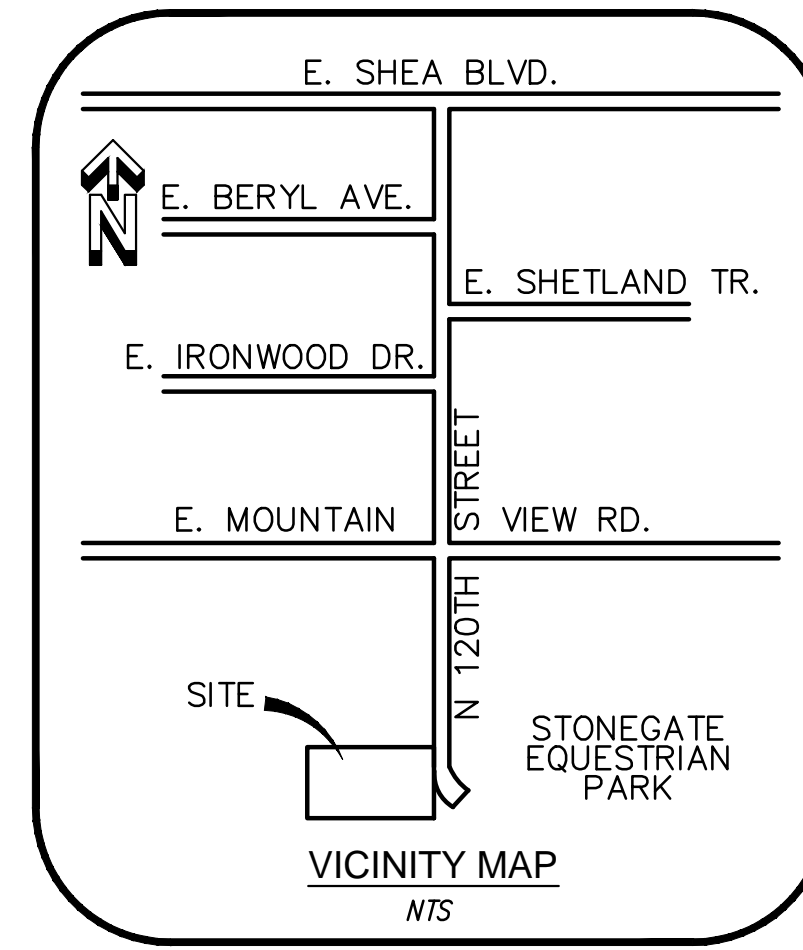
COVER SHEET	1
GRADING & DRAINAGE PLAN	2
WATER & SEWER PLAN	3

**GENERAL NOTES FOR PUBLIC WORKS CONSTRUCTION**

- ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
- THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL OF ENGINEERING DESIGNS; THEREFORE IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
- THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF ASSOCIATED PERMIT HAS NOT BEEN ISSUED WITHIN THIS TIME FRAME, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR RE-APPROVAL.
- A CITY INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE. NOTIFY INSPECTION SERVICES 72 HOURS BEFORE BEGINNING WORK.
- WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS.
- PERMISSION TO WORK IN THE RIGHT-OF-WAY (PWR) PERMITS ARE REQUIRED FOR ALL WORKS WITHIN THE RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.

**DECLARATION OF RESPONSIBLE CHARGE**

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION R4-30-301 OF THE RULES OF THE ARIZONA STATE BOARD OF TECHNICAL REGISTRATION, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE REVIEW OF THE PROJECT DRAWINGS AND SPECIFICATIONS BY MARICOPA COUNTY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.



**SITE DATA**

OWNER: KEVIN FLYNN / AJ SCHLATTER  
9634 N 120TH STREET  
SCOTTSDALE, AZ 85259

SITE ADDRESS: 9588 N 120TH STREET  
SCOTTSDALE, AZ 85259

PARCEL NUMBER: 217-33-038A

ZONING: R1-43

S, T, R: S27, T3N, R5E

LOT AREA: 209,602 SF / 4.81 ACRES

Utility	Utility Company	Name of Company Representative	Telephone Number	Date Submitted	Date Signed
Electric	APS	ALFREDO RAMIREZ	602-493-4144	TBD	
Telephone	CENTURYLINK	ESTHER MEDINA	480-493-4144	TBD	
Natural Gas	SOUTHWEST GAS	ANDREW SAKS	480-730-3857	TBD	
Cable TV	COX COMMUNICATIONS	MICHAEL SCHUSTER	623-328-3840	TBD	
Other					
Other					

Engineer's Certification

I COURT FETTER, as the Engineer of Record for this development, hereby certify that all utility companies listed above have been provided final improvement plans for review, and that all conflicts identified by the utilities have been resolved. In addition, "No Conflict" forms have been obtained from each utility company and are included in this submittal.

*[Signature]* \_\_\_\_\_ Date: 5-7-2020

**WATER QUANTITIES**

QUANTITY	DESCRIPTION
75.0 LF	6" DIP WATER LINE
756.9 LF	4" DIP WATER LINE
699.2 LF	2" PVC WATER LINE
1 EA	2" WATER METER
1 EA	6" x 6" x 6" TEE
1 EA	6" x 4" x 6" TEE
1 EA	6" x 2" x 6" TEE
1 EA	FIRE HYDRANT ASSEMBLY
2 EA	4" 90° ELBOW
1 EA	4" 45° ELBOW
1 EA	2" 90° ELBOW
1 EA	2" 45° ELBOW
1 EA	2" X 2" X 2" TEE
1 EA	6" GATE VALVE

**AS-BUILT CERTIFICATION:**

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

\_\_\_\_\_  
REGISTERED ENGINEER DATE

REVIEW & RECOMMENDED APPROVAL BY:	
PAVING:	TRAFFIC
G & D	PLANNING
W & S	FIRE
RET. WALLS	

ENGINEERING COORDINATION MANAGER (OR DESIGNEE) \_\_\_\_\_ DATE \_\_\_\_\_

Two working days before you dig  
CALL FOR THE BLUE STAKES  
602-263-1100  
1-800-STAKE-IT  
OUTSIDE MARICOPA COUNTY

**FETTER ENGINEERING GROUP**  
5345 E. McLellan Road, #100  
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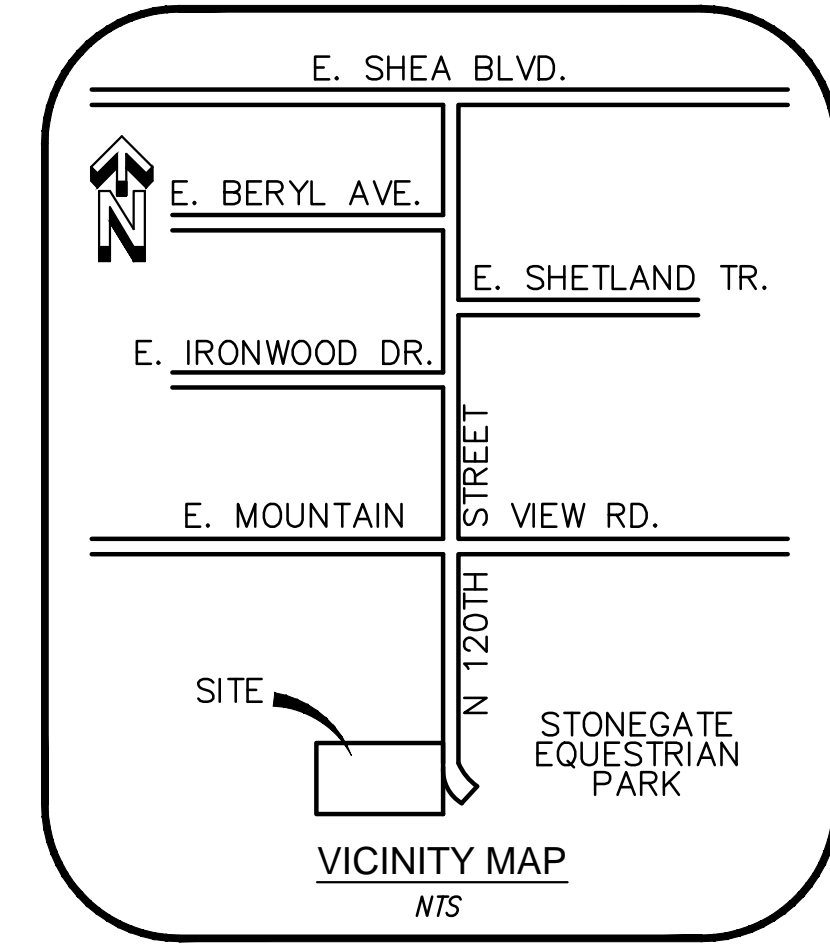
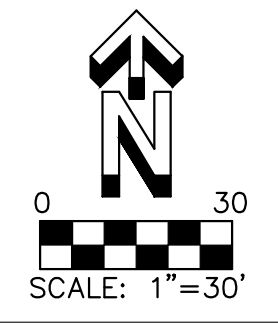
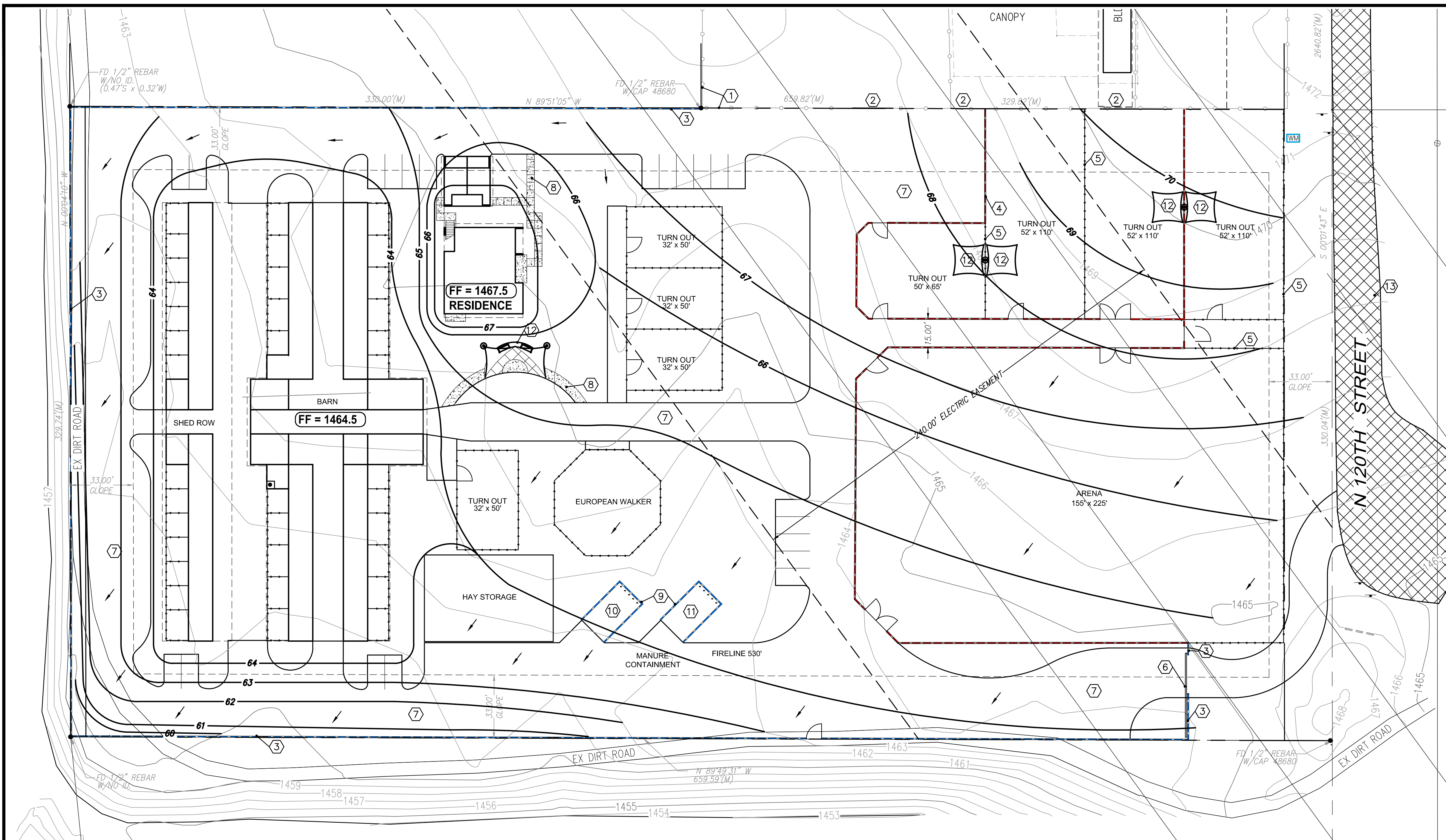
**COVER SHEET**  
CELEBRITY EQUINE CENTER  
9588 N 120TH STREET SCOTTSDALE, ARIZONA 85259

DATE: 9-16-2020  
DRAWN BY: CMF  
DESIGNED BY: CMF  
PROJECT #: 19-021  
FILENAME: 19-021.DWG

**4-UP-2020**

REGISTERED PROFESSIONAL ENGINEER  
COURT M. FETTER  
EXPIRES 3-31-2023

SHEET: 1  
OF: 3



**SITE DATA**

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 9634 N 120TH STREET  
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SITE ADDRESS: 9588 N 120TH STREET  
 SCOTTSDALE, AZ 85259

PARCEL NUMBER: 217-33-038A  
 ZONING: R1-43  
 S, T, R: S27, T3N, R5E  
 LOT AREA: 209,602 SF / 4.81 ACRES

**DRAINAGE NOTE**  
 POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM ALL EXTERIOR WALLS AND FOOTINGS WITH A MINIMUM SLOPE OF 5% FOR A MINIMUM OF 5 FEET.

**FLOODZONE**

COMMUNITY NUMBER	PANEL #	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE USE DEPTH)
045012	17B0L	11-4-2015	X	N/A

**BENCHMARK**

A BRASS CAP IN HANDHOLE LOCATED AT THE INTERSECTION OF E MOUNTAIN VIEW ROAD AND N 120TH STREET, BEING THE EAST QUARTER OF SECTION 27, T3N, R5E.  
 ELEVATION = 1475.56 (NAVD 88 DATUM)

**FINISHED FLOOR CERTIFICATION**

THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD-PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A 100-YEAR STORM, AND ARE IN ACCORDANCE WITH SCOTTSDALE REVISED CODE, CHAPTER 37 - FLOODPLAIN AND STORMWATER REGULATION.

**CUT / FILL QUANTITY ESTIMATE**

CUT: 184 CY  
 FILL: 248 CY  
 \* THESE ARE RAW VALUE ESTIMATES AND ARE TO BE VERIFIED BY THE CONTRACTOR.

**DECLARATION OF RESPONSIBLE CHARGE**

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION R4-30-301 OF THE RULES OF THE ARIZONA STATE BOARD OF TECHNICAL REGISTRATION, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE REVIEW OF THE PROJECT DRAWINGS AND SPECIFICATIONS BY MARICOPA COUNTY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.

**ENGINEER'S CERTIFICATE**

THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD-PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOOD CAUSED BY A ONE HUNDRED YEAR STORM, AND ARE IN ACCORDANCE WITH CITY OF SCOTTSDALE REVISED CODE, CHAPTER 37 FLOODWAYS & FLOODPLANS ORDINANCE.

**GENERAL NOTES**

- A FINISH FLOOR ELEVATION CERTIFICATE SHALL BE PROVIDED BY THE REGISTRANT, TO THE FIELD INSPECTOR, PRIOR TO ROUGH FRAME INSPECTION.
- THE MINIMUM FINISH FLOOR ELEVATION SHOWN IS SAFE FROM A 100-YEAR FLOOD OF THE MINIMUM SPECIFIED IN THE CITY OF SCOTTSDALE STORM WATER POLICES AND STANDARDS MANUAL.
- A SEPARATE PERMIT IS REQUIRED FOR ANY WORK IN THE CITY OF SCOTTSDALE RIGHT OF WAY.

**LEGEND:**

- 41 — EXISTING MAJOR CONTOUR LINE
- 41 — EXISTING MINOR CONTOUR LINE
- 41 — PROPOSED CONTOUR
- — — — — PROPERTY LINE
- — — — — BUILDING ENVELOPE / SETBACK
- — — — — PUBLIC UTILITY EASEMENT
- — — — — BUILDING SETBACK
- — — — — PROPOSED CONCRETE
- — — — — FLOWLINE
- — — — — GRADE BREAK
- — — — — EXISTING CURB
- — — — — EXISTING CONCRETE
- — — — — EXISTING BLOCKWALL
- — — — — PROPOSED BLOCKWALL
- C (XX.XX) EXISTING GRADES
- C XX.XX PROPOSED FINISHED GRADE
- X.XX% PROPOSED FINISHED GRADE SLOPE
- (X.XX%) EXISTING GRADE SLOPE
- GLOPE GENERAL LAND OFFICE PATENT EASEMENT

**GRADING NOTES:**

- ① EX FENCE
- ② EX GATE
- ③ NEW 6" TALL, 4" CMU BLOCKWALL (DOOLEY WALL), PER CITY OF SCOTTSDALE STANDARD DETAIL.
- ④ NEW CMU WALL WITH STEEL RAILING, SEE ARCHITECTURAL PLAN FOR DETAIL
- ⑤ STEEL RAIL FENCE, SEE ARCHITECTURAL PLAN FOR DETAIL
- ⑥ 20' STEEL ROLLING GATE, SEE ARCHITECTURAL PLAN FOR DETAIL
- ⑦ NEW GRANITE DRIVEWAY TO SUPPORT 83,000 LBS
- ⑧ NEW CONCRETE SIDEWALK
- ⑨ NEW 6" X 4" CMU BLOCKWALL
- ⑩ MANURE COLLECTION
- ⑪ REFUSE COLLECTION
- ⑫ SHADE STRUCTURE
- ⑬ EX ASPHALT

Two working days before you dig  
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 1-800-STAKE-IT  
 OUTSIDE MARICOPA COUNTY

**FETTER ENGINEERING GROUP**  
 5345 E. McLellan Road, #100  
 Mesa, Arizona 85205  
 P 480-220-5379  
 F 480-558-0779

NO.	REVISION	BY	DATE

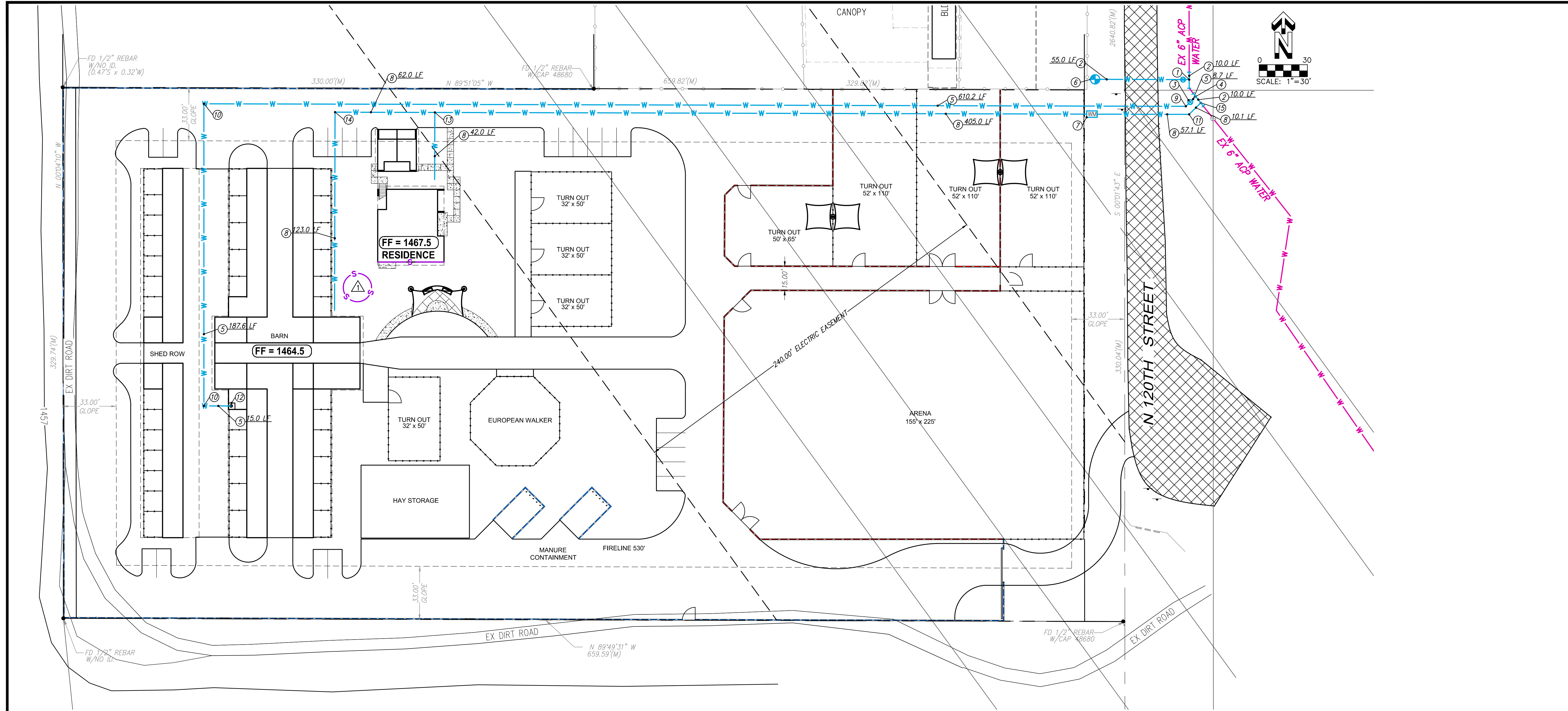
**PRELIMINARY GRADING & DRAINAGE PLAN**  
 CELEBRITY EQUINE CENTER  
 9588 N 120TH STREET  
 SCOTTSDALE, ARIZONA 85259

**4-UP-2020**

DATE: 9-16-2020  
 DRAWN BY: CMF  
 DESIGNED BY: CMF  
 PROJECT #: 19-021  
 FILENAME: 19-021.DWG

SHEET: **2**  
 OF: **3**

EXPIRES 3-31-2023



**UTILITY LEGEND**

- EXISTING SEWER MANHOLE
- NEW SEWER MANHOLE
- NEW SEWER CLEAN OUT
- EXISTING SEWER CLEAN OUT
- EXISTING SEWER LINE
- EXISTING SEWER LINE TO BE REMOVED
- NEW SEWER LINE
- EXISTING WATER LINE
- EXISTING WATER LINE TO BE REMOVED
- NEW WATER LINE
- NEW WATER SERVICE WITH METER
- NEW FDC / FIRE DEPARTMENT CONNECTION
- NEW SEWER SERVICE
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- EXISTING WATER VALVE
- NEW WATER VALVE

**WATER NOTES:**

- ① CUT IN NEW 6"x6"x6" TEE AND CONNECT TO EXISTING WATER MAIN
- ② NEW 6" DIP WATER LINE
- ③ NEW 6" GATE VALVE
- ④ NEW 6"x4"x6" TEE
- ⑤ NEW 4" DIP, CLASS 150 FIRE LINE
- ⑥ NEW FIRE HYDRANT ASSEMBLY WITH VALVE
- ⑦ NEW 2" WATER METER
- ⑧ NEW 2" PVC WATER
- ⑨ NEW 4" 45° ELBOW
- ⑩ NEW 4" 90° ELBOW
- ⑪ NEW 2" 45° ELBOW
- ⑫ NEW FIRE RISER ROOM
- ⑬ NEW 2" TEE
- ⑭ NEW 2" 90° ELBOW
- ⑮ NEW 6"x2"x6" TEE

**SEWER NOTES:**

- NEW SEPTIC SYSTEM, DESIGN BY OTHERS

Two working days before you dig  
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P 480-220-5379  
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**PRELIMINARY WATER & SEWER PLAN**  
CELEBRITY EQUINE CENTER  
9588 N 120TH STREET SCOTTSDALE, ARIZONA 85259

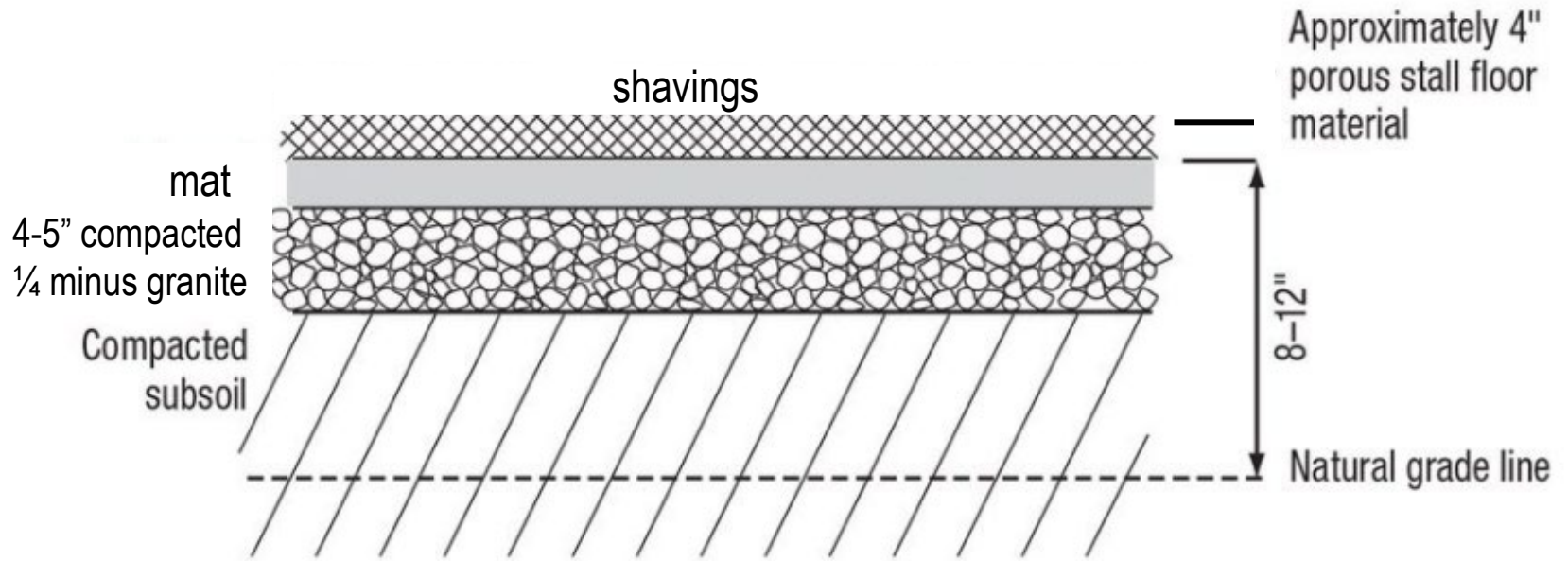
DATE	DRAWN BY	DESIGNED BY	PROJECT #	FILENAME
9-16-2020	CMF	CMF	19-021	19-021.DWG

**4-UP-2020**  
Professional Engineer  
37543  
COURTNEY M. FETTER  
EXPIRES 3-31-2023

SHEET: **3**  
OF: **3**

# Celebrity Equine Center – Flooring Detail/Urine Management

## Porous Flooring Materials



*Figure: Porous cross section (includes subsoil, granite, grid mats, and shavings)*

Note: Site conditions will dictate the layering of flooring materials. There may be a distinction between the barn and mare motel flooring but in any case, urine will be absorbed into the subsoil to minimize run-off and potential odor.