

Please add a wastewater commitment letter so we may be able to reconcile the proposed wastewater flow with the available capacity.

**Wastewater Treatment Report  
U-Haul at Falcon  
Falcon U-Haul Filing 1  
El Paso County, Colorado**

Prepared for:  
Amerco Real Estate Company  
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Phoenix, AZ 85004

Prepared by:

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Kiowa Project No. 21061

August 26,2022

## **I. INTRODUCTION**

The wastewater system design for the proposed development has been prepared in accordance with the Falcon Highlands Metro District (FHMD) requirements and the El Paso County Land Development Code. The District follows the Woodmen Hills Water and Wastewater System Standard Specifications. Supporting design calculations are included in Appendix A of this report

## **II. GENERAL LOCATION AND DESCRIPTION**

The Falcon U-Haul Filing No. 1 property will be developed as a commercial development including two main buildings on the site for self storage, U-Box warehouse, showroom, vehicle sharing and retail area. The subject property is located along the south side of Rolling Thunder Way, west of Meridian Road and north of Tamlin Road in Falcon, Colorado. The site is located in the east half of Section 12, Township 13 South, Range 65 West of the 6th Principal Meridian, in El Paso County, Colorado. The site is bounded to the west by Falcon Highlands Filing No. 2, future Falcon Highlands Filing No. 3, to the south by Tamlin Road, east by Meridian Road and north by Rolling Thunder Way. The property covers approximately 11.50 acres and is currently undeveloped. The property is planned to be developed in two phases. The northern portion which is described in this drainage report and the southern portion will be developed in the future. The southern portion is planned to be developed as mini self storage and RV storage. A vicinity map of the site is shown on Figure 1 included in the Appendix.

For the proposed development there will be two buildings with minimal water fixtures and one sanitary service each. Building A will be mainly a self storage facility with a small retail and showroom area. The building will include bathrooms on the first and third floor along with mop sinks on each floor. Building B will be a warehouse to store U-Boxes and not be accessible to the public. A single bathroom will be included in the building. The future phase does not plan to include a sanitary service.

## **III. WASTEWATER FLOWS AND SYSTEM**

In the existing condition, there is not a sanitary sewer main or service stubbed into the property. A 10-inch PVC sanitary sewer main is located in Rolling Thunder Way. This sanitary sewer system is owned and maintained by Falcon Highlands Metro District. In the proposed condition, the plan is to extend an 8-inch PVC sanitary sewer main from the existing sanitary manhole in Rolling Thunder into the site. One of the reasons to install a main instead of services is because the existing/proposed site slopes down and away from Rolling Thunder. Installing a sanitary sewer main will allow for a flatter pipe slope to be used and meet minimum cover over the sanitary services at the building with a gravity system. The wastewater flows from the two buildings is minimal. An 8-inch PVC sanitary sewer main and 4-inch PVC sanitary services will be sufficient to handle the flows. Refer to the Appendix for the wastewater flows. The Utility Plan (included in the Appendix) shows the locations of existing and proposed sanitary sewer lines and manholes.

A commitment letter from FHMD will be acquired at the same time as the water service commitment letter which the Developer is in the process of completing the necessary steps. Appendix B will include the wastewater commitment from the District once it is received.

## **IV. WASTEWATER COLLECTION AND TREATMENT**

The proposed sanitary sewer system will be constructed in accordance with Woodmen Hills Metro District Standards and Specifications. Flows from the site will drain to the Woodmen Hills regional wastewater treatment plant which has sufficient capacity to handle the flows from this development.

## **APPENDIX TABLE OF CONTENTS**

### **APPENDIX A**

Figure 1: Vicinity Map  
Wastewater Flow Calculations

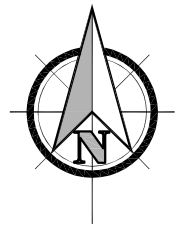
### **APPENDIX B**

Falcon Highlands Metro District Commitment Letter (To Be Added when Received)

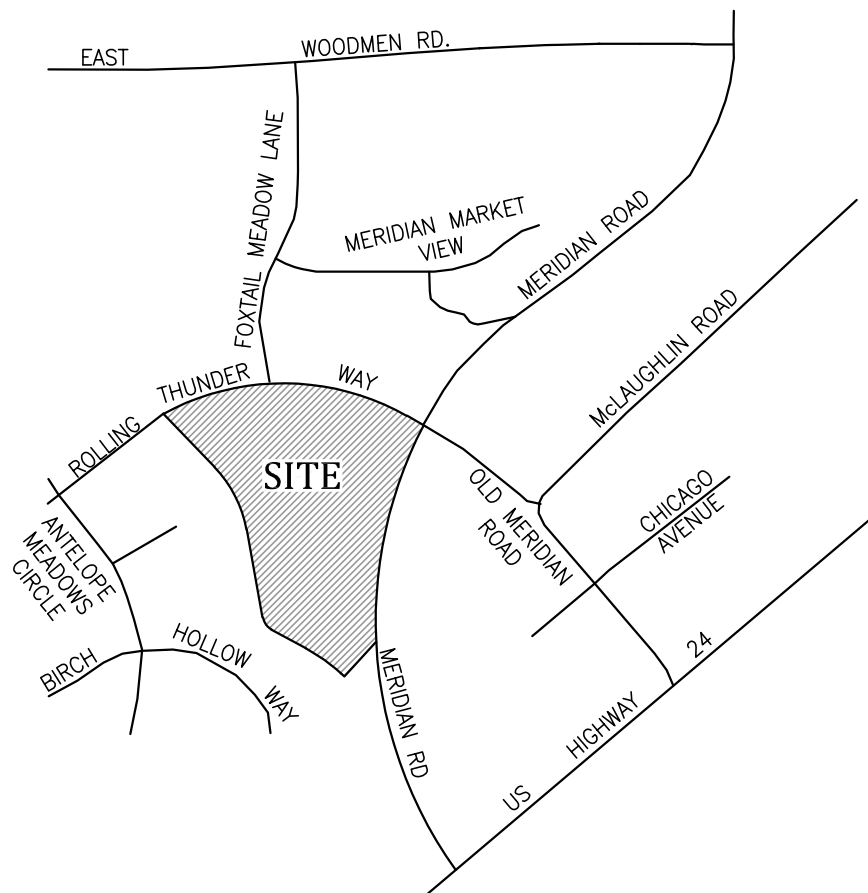
### **APPENDIX C**

Utility Plans

**APPENDIX A**  
**Figure 1: Vicinity Map**  
**Wastewater Flow Calculations**



SCALE: NTS



**FIGURE 1**  
VICINITY MAP  
U-HAUL FALCON

## U-Haul at Falcon Wastewater Calculations

### Wastewater

Lot or Building	Land Use	Commercial		Average Day	PF/Peak Flow		Inflow/ Infiltration	Design Flow			
		Area	Flow Factor								
Building A	Gen. Commercial	4,430 sf	0.10gpd/sf	443 gpd	4.0	1,772 gpd	44 gpd	1,816 gpd	0.00 MGD	1.26 gpm	0.00 cfs
Building B	Gen. Commercial	150 sf	0.10gpd/sf	15 gpd	4.0	60 gpd	2 gpd	62 gpd	0.00 MGD	0.04 gpm	0.00 cfs
Total		4,580 sf	0.10gpd/sf	458 gpd	4.0	1,832 gpd	46 gpd	1,878 gpd	0.00 MGD	1.30 gpm	0.00 cfs

Land Use	Flow Factor	Description
General Commercial	0.10gpd/sf	Commercial: Retail/Offices

**APPENDIX B**  
**Falcon Highlands Metro District Commitment Letter (To Be Added when  
Received)**

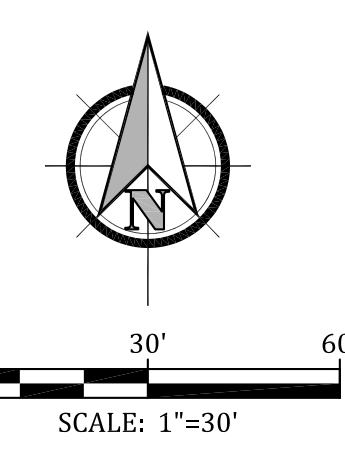
**APPENDIX C**  
**Utility Plans**



**BUILDING FIRE FLOW INFORMATION**

**BUILDING A:**  
 BLDG CONSTRUCTION TYPE: II-B  
 NFPA FIRE SPRINKLER SYSTEM: Yes  
 BUILDING FIRE AREA: 111,930sf (3 Floors) (Footprint: 37,728sf)  
 FIRE FLOW REQUIRED: 3,500gpm @ 20psi Residual  
 (Assumes 50% Reduction for Fire Sprinkler)  
 MIN # OF HYDRANTS: 4  
 MAXIMUM HOSE LAY LENGTH: 210ft

**BUILDING B:**  
 BLDG CONSTRUCTION TYPE: II-B  
 NFPA FIRE SPRINKLER SYSTEM: Yes  
 BUILDING FIRE AREA: 17,012sf (1 Floor)  
 FIRE FLOW REQUIRED: 1,500gpm @ 20psi Residual  
 (Assumes 50% Reduction for Fire Sprinkler)  
 MIN # OF HYDRANTS: 1  
 MAXIMUM HOSE LAY LENGTH: 250ft



**LEGEND**

[Symbol]	PROPOSED BUILDING
[Symbol]	PROPERTY OR ROW LINE
[Symbol]	EXISTING EASEMENT
[Symbol]	PROPOSED EASEMENT
[Symbol]	CURB & GUTTER
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING SANITARY SEWER
[Symbol]	EXISTING STORM SEWER
[Symbol]	EXISTING UNDERGROUND ELECTRIC LINE
[Symbol]	EXISTING UNDERGROUND TELEPHONE LINE
[Symbol]	EXISTING GAS LINE
[Symbol]	EXISTING 100 YEAR FLOODPLAIN
[Symbol]	EXISTING STREET LIGHT
[Symbol]	APPROXIMATE LIMIT OF DISTURBANCE
[Symbol]	PROPOSED SANITARY SERVICE AND CLEAN OUT
[Symbol]	PROPOSED WATER LINE OR SERVICE AND VALVE
[Symbol]	PROPOSED WATER LINE, THRUST BLOCK & MJ RSTNTS
[Symbol]	PROPOSED FIRE HYDRANT
[Symbol]	PROPOSED WATER METER
[Symbol]	PROPOSED STORM SEWER PIPE AND MANHOLE
[Symbol]	PROPOSED STORM SEWER PIPE AND MANHOLE
[Symbol]	PROPOSED SINGLE STORM GRATED INLET
[Symbol]	PROPOSED TYPE C GRATED INLET
[Symbol]	PROPOSED STORM CURB INLET
[Symbol]	PROPOSED STORM SEWER FLARED END SECTION

MATCHLINE - SEE SHT C402

MATCHLINE - SEE SHT C402

**GENERAL NOTES:**

**REVISIONS:**

NO.	DATE	INITIALS	NOTES
1			
2			
3			
4			
5			
6			
7			
8			

**PROFESSIONAL SEAL:**

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SITE ADDRESS:  
 U-HAUL at Falcon  
 Rolling Thunder Way  
 Falcon, CO 80831

SHEET CONTENTS:  
 UTILITY PLAN

866077

DRAWN: JRD  
 CHECKED: MWE  
 DATE: 8/26/22

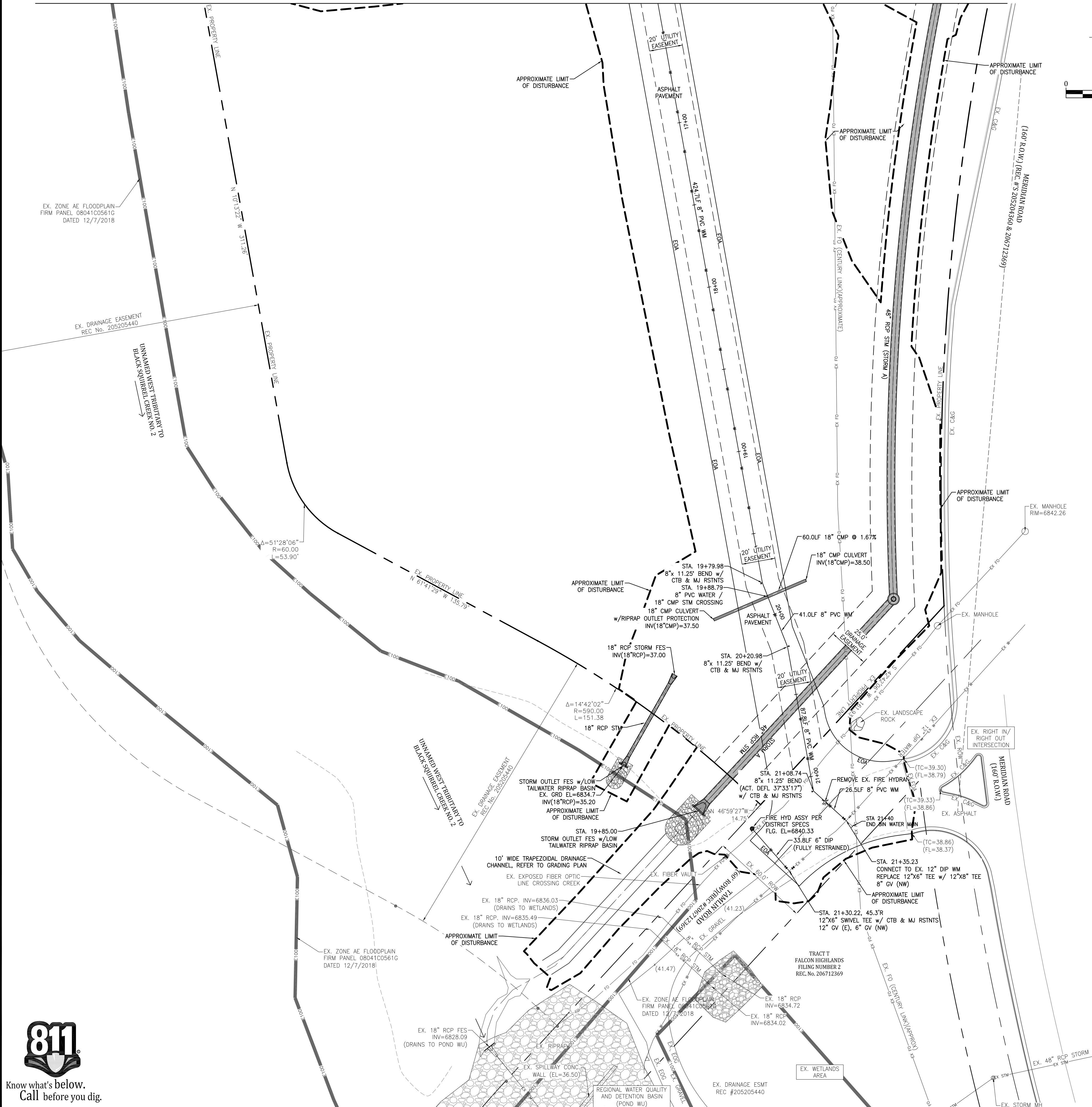
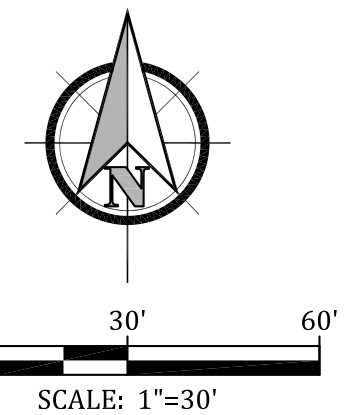
C401

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