

CODE REVIEW

DATE: January 29, 2019
PROJECT: City of Gillette -- UV Disinfection Building Remodel
ADDRESS / GPS COORDINATES:
Lat: 44.2671°N Long: 105.4459° W
GOVERNING CODES:
2018 International Building Code (IBC)
2018 International Plumbing Code (IPC)
2018 International Mechanical Code (IMC)
2018 International Fire Code (IFC)
2017 National Electrical Code (NEC)

Summary:
Construction Type: IIB
Occupancy / Use: UTILITY 19 max occupants
Sprinkler: NONE
No. of Stories: 1 Building Ht. 17'-4"
Area: (EX)1st: 5,100 SF (ADD) 1st: 1,318 SF TOTAL : 6,418 SF

General Information:
New addition to existing masonry block structure. New building will house hvac & electrical equipment to monitor water quality.

Chapter 3 -- Use and Occupancy Classification
Occupancy / Use: Group - U - Utility (non. inhabited building)

Chapter 4 -- Special Detailing Requirements Based on Use and Occupancy
No requirements this section

Chapter 5 -- General Building Heights and Areas
Section 504 -- Building Height and Number of Stories

Table 504.3 – Allowable Build Height in Feet Above Grade Plane			
Occupancy	Foot Notes	Construction type	Building Height
U	B	IIB	55 FT

Section 504 -- Building Height and Number of Stories

Table 504.4 – Allowable Number of Stores Above Grade Plane			
Occupancy	Foot Notes	Construction type	No. of Stories
U	N/A	IIB	2

Section 506 -- Building Area

Table 506.2 – Allowable Area			
Occupancy	Foot Notes	Construction type	Allowable Floor Area
U	N/A	IIB	8,500 SF

Section 509 - Incidental Uses
Furnace room where any piece of equipment is over 400,000 Btu per hour input. Provide 1hour fire barrier separation in accordance with section 707.

Chapter 6 -- Types of Construction
Section 601 -- General

Table 601 – Fire-Resistance Rating Requirements for Building Elements		
Building Elements	Construction type	Rating (Hr)
All Elements	IIB	0 Hr

Section 602 -- Construction Classification

Table 602 – Fire-Resistance Rating Requirements for Exterior Walls Base on Separation Dist.		
Separation Dist.	Construction type	Rating (Hr)
X ≥ 30'	IIB	0 Hr

Chapter 7 -- Fire and Smoke Protection Features

Section 707.1 - General
Fire barriers installed as required shall comply with this section.

Section 707.7 - Penetrations.
Penetrations of fire barriers shall comply with section 714

Section 707.8 - Joints.
Joints made in or between fire barriers, and joints made at the intersection of fire barriers with underside of a fire-resistance rated floor or roof sheathing, slab or deck above, and the exterior vertical wall intersection shall comply with section 715

Section 707.10 - Ducts and air transfer openings.
Penetrations in a fire barrier by ducts and air transfer openings shall comply with section 717

Section 714.4.1.2 - Through-penetration firestop system.
through penetrations shall be protected by an approved penetration firestop system installed as tested in accordance with ASTM E814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water and shall have an F rating of not less than the required fire-resistance rating of the wall penetrated.

Section 715.1 - General
Joints in or between fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system designed to resist the passage of fire for a time period not less than the required fire-resistance rating of the wall, floor or roof in or between which the system is installed. Fire resistant joint systems shall be tested in accordance with section 715.3

Table 716.1(2) - Opening fire protection assemblies, ratings and markings
Fire barriers having a required fire-resistance rating of 1 hour shall have a minimum fire door assembly rating of 1 hour.

Chapter 8 -- Interior Finishes
No restrictions required this section

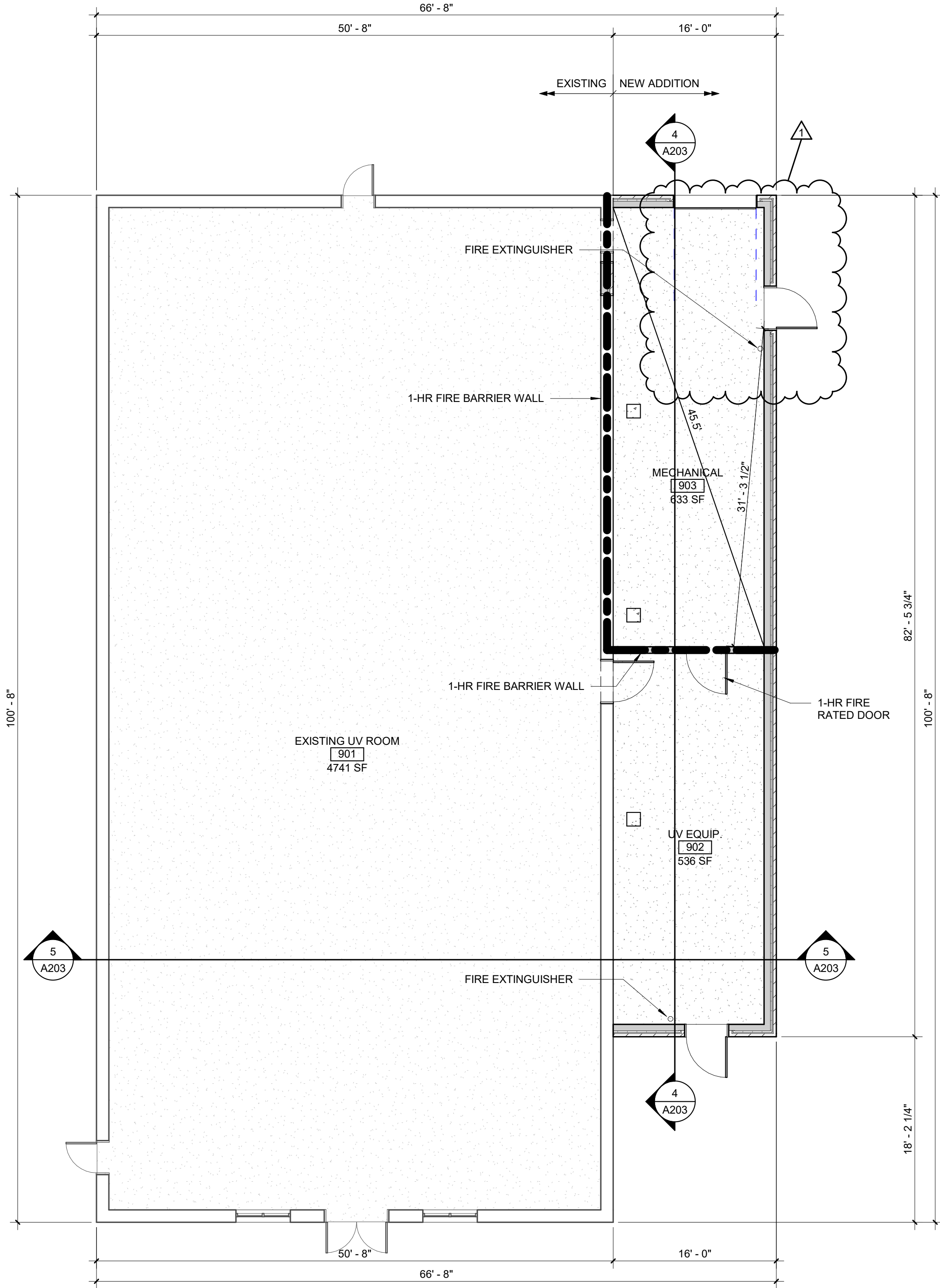
Chapter 9 -- Fire Protection Systems
No requirements this section

Chapter 10 -- Means of Egress
Life Safety egress must conform to this Chapter.

Section 1006.2.2.1 - Boiler, incinerator and furnace rooms.
Two exit access doorways are required in boiler, incinerator and furnace rooms where the area is over 500 square feet and any fuel-fired equipment exceeds 400,000 Btu input capacity.Exit access doorways shall be separated by a horizontal distance equal to one-half the length of the maximum overall diagonal dimension of the room.

Chapter 11 - Accessibility
Building must meet applicable portions of this Chapter for Handicapped Accessibility.

Chapter 29 -- Plumbing Systems
Non inhabited building so no plumbing facilities are required.



1 CODE PLAN - FIRST FLOOR
6002 SCALE: 1/8" = 1'-0"

NOTE:
PROVIDE SEALED OPENINGS WITH FIRE SAFING/STOPPING
IN ALL PENETRATIONS AT VERTICAL & HORIZONTAL ASSEMBLIES
AT FIRE RATED WALLS.



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CITY OF GILLETTE -
UV DISINFECTION BUILDING
ADDITION
3101 S GARNER LAKE RD

Date 30 JAN 2019
Issue CON. DOC
Project Number 2018-32

Revisions		
1	ADD1	2019-02-15

CODE PLAN

G002