

USE GROUPS LEGEND

NOTE 1	A-3L	A-3U	I-3
A-3F	A-3N	B	S-2

NOTES:
1. AREA NOT INCLUDED IN BUILDING OCCUPANCY CALCULATIONS
2. IN ASSEMBLY ROOMS MAXIMUM OCCUPANCY SIGNS SHALL BE POSTED FOR MAXIMUM LOAD.
3. FIRE EXTINGUISHERS SHALL BE PROVIDED IN THE FOLLOWING AREAS: ELEVATOR MACHINE ROOMS MECHANICAL ROOMS LOW VOLTAGE DATA/COM ROOMS.

SYMBOL LEGEND

Calculating...	TRAVEL DISTANCE, PATH OF TRAVEL
EXIT PATH	EXIT PATH
2 HR RATED BARRIER WALL	2 HR RATED BARRIER WALL
1 HR RATED BARRIER WALL	1 HR RATED BARRIER WALL
0HR SMOKE TIGHT PARTITION	0HR SMOKE TIGHT PARTITION
DIRECTION OF TRAVEL	DIRECTION OF TRAVEL
OCCUPANCY LOAD AT PRIMARY PATH OF EGRESS	OCCUPANCY LOAD AT PRIMARY PATH OF EGRESS
MAXIMUM DOOR EXIT CAPACITY (ACTUAL/CAPACITY)	MAXIMUM DOOR EXIT CAPACITY (ACTUAL/CAPACITY)
FIRE EXTINGUISHER CABINET	FIRE EXTINGUISHER CABINET

Chapter 29 - Plumbing Systems

2902 Minimum Plumbing Facilities
Table 2902.1 Minimum Number of Required Plumbing Fixtures

Occupancy	WC-M & WC-F	Lav-M & Lav-F	DF	SS
B Based on 201+260+162= 623 occupants:	1/25 for first 50 then 1/50	1/40 for first 80 then 1/80	1/100	1
WC 14 LAV 9 DF 1 SS 1				
OCCUPANCY I-3 Based on 37+12= 49 occupants:	WC-M & WC-F 1/125 & 1/65	Lav-M & Lav-F 1/15	DF 1/100	SS 1
WC 4 LAV 4 DF 1 SS 1				
OCCUPANCY A-3 Based on 496= 496 occupants:	WC-M & WC-F 1/125 & 1/65	Lav-M & Lav-F 1/200	DF 1/500	SS 1
WC 3M + 4F LAV 3 DF 2 SS 1				
OCCUPANCY S-2 Based on 22+8+1= 31 occupants:	WC-M & WC-F 1/100	Lav-M & Lav-F 1/100	DF 1/1000	SS 1
WC 1 LAV 1 DF 1 SS 1				
Total Required: WC 26 Total Provided: WC 43	Lav 17 Lav 39	DF 115S 4 DF 12 SS 5		

Section 1019.4 Dead End Corridor

Required: 50 feet max.
PROVIDED: 12

SECTION 1021 NUMBER OF EXITS

TABLE 1021.1 MIN. NUMBER OF EXITS (PER STORY)
1000 OCCUPANTS: 3 REQUIRED, 3 PROVIDED

Section 1027.1 Protected path of travel

For Stair #1 egress one applies requiring the floor and structure below the public lobby to be one hour rated.

ACCESSIBILITY ROUTE: MIN. 1 REQUIRED - 1 PROVIDED
ACCESSIBILITY ENTRANCE: MIN. 1 REQUIRED - 1 PROVIDED
ACCESSIBILITY FACILITY: YES

FIRE ALARM SYSTEM: MANUAL TYPE

HVAC SYSTEM: FORCED AIR, CONSTANT VOLUME

GENERAL INFORMATION

PROJECT NAME: NEW COURTHOUSE
BUILDING LOCATION: 2 CHURCH STREET, LEESBURG, VA 20178
OCCUPANCY: SEPARATED MIXED USE
CONSTRUCTION: VR 2017

APPLICABLE CODES & CRITERIA

VIRGINIA CONSTRUCTION CODE (USBC)	2012
INTERNATIONAL BUILDING CODE	2012
INTERNATIONAL MECHANICAL CODE	2012
INTERNATIONAL PLUMBING CODE	2012
INTERNATIONAL ELECTRICAL CODE	2012
INTERNATIONAL ENERGY CONSERVATION CODE	2012
INTERNATIONAL FUEL GAS CODE	2012
ICC A117.1 ACCESSIBILITY	2010
ASHRAE 90.1	2007

BUILDING DESCRIPTION: COURTHOUSE MIXED USE

OCCUPANCY - ASSEMBLY, BUSINESS, INSTITUTIONAL, STORAGE, CONSTRUCTION, MASONRY WALLS, CURTAIN WALLS, STEEL COLUMNS, COMPOSITE METAL DECKING

CODE SUMMARY

Chapter 3 - Use and Occupancy Classification

Separated Mixed Use (Section 508.4)

Primary Use and Occupancy Group:
Business Group B Office, Professional Services, Storage of Records (Section 304)
Other Use and Occupancy Groups:
Assembly Group A-3 Courtroom non-seating (Section 303)
Institutional Group I-3 Detention Center (Section 308)
(Use Condition 5)
Storage Group S-2 Low-Hazard Storage, Storage of Non-combustible Materials, Parking Garage (Section 311)

Chapter 5 - General Building Heights and Areas

Allowable Height and Building Areas [Table 503]
Type IIB Construction w/automatic sprinkler system:

ALLOWED FLOOR AREA:

B=23,000 + 46,000 = 69,000
Largest Floor Area First Floor 24,726-69,000 Complies
A=3*5,500+19,000= 28,500
Largest Floor Area Second Floor 7,123-28,500 Complies
I-3=10,000+20,000=30,000
Largest Floor Area Ground Floor 4,375-30,000 Complies
S-2=25,000+52,000=77,000
Largest Floor Area Ground Floor 6,503-72,000 Complies

ALLOWABLE BUILDING HEIGHT AND STORIES:

Allowable Building Height All Occupancies: 55'-0" + 2'-0" = 57'-0"
Proposed Building Height: 46'-0" + 2'-0" = 48'-0"

Proposed Building Has 3 Stories
B=3 Stories+1 Story+2 Stories Complies
A=3+2 Stories+1 Story+3 Stories Complies
I-3=1 Story+1 Story+2 Stories (See letter and Memo on Sheet 77777)
S=2+3 Stories+1 Story+4 Stories Complies

Table 508.4 Required Separation of Occupancies

Ground Floor
I-3 to B
B to S-2
First Floor
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Second Floor
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I-3 to A
S-2 to I-3
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