

BOS Work Session Presentation



Introduction

- a. Over the last three years, we've engaged the stakeholders within the Fire Rescue System to take a comprehensive look at our current services and capabilities, look at anticipated growth in the community and identify needs for the next 10 years
 - i. Preliminary Consensus was the following:
 - 1. Need to develop with policy makers (BOS) a service expectation for the community.
 - 2. In support of that service expectation have a unified and comprehensive plan to assure the capabilities to meet the service delivery needs. Specifically:
 - a. Staffing
 - b. Apparatus
 - c. Facilities
 - d. Funding
 - 3. Develop annual Operational and Capital Improvement budget requests that support the Service expectation and service delivery needs.

Current Overview

a. Service requests

i. Definitions

1. An “incident” is a specific event.
2. An “incident” may call upon multiple units and stations due to size and complexity of the event and generate multiple “incident responses” or “runs”.

ii. By Fiscal Year

- i. In FY 2020 10,802
- ii. In FY 2021 11,798
- iii. In FY 2022 13,219
- iv. In FY 2023 13,413
- v. In FY 2024 13,342

iii. By Calendar Year

- i. In Calendar Year 2021 – there were 12,717 Fire and EMS incidents, a 17.4% increase from 2020.
- ii. In Calendar Year 2022 – there were 13,357 Fire and EMS incidents, a 5% increase from 2021.
- iii. In Calendar Year 2023 – there were 13,330 Fire and EMS incidents, essentially static with 2022.
- iv. In Calendar Year 2024 – there were 13,882 Fire and EMS incidents, a 4% increase from 2023.

**Frederick County Fire and Rescue Department
Incident Summary Statistics 2024**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Incidents in Image Trend Reporting System	1,210	1,017	1,187	1,223	1,197	1,109	1,232	1,257	1,181	1,215	1,160	1,240	14,228
C.A.D. Generated Incidents Not Dispatched	16	18	28	23	24	30	28	33	57	32	27	30	346
Total Incidents Dispatched and Responded To	1,194	999	1,159	1,200	1,173	1,079	1,204	1,224	1,124	1,183	1,133	1,210	13,882
Average Incidents Per Day	38.5	34.4	37.4	40.0	37.8	36.0	38.8	39.4	37.5	38.2	37.6	39.0	38
 Total E.M.S. Incidents	 955	 809	 861	 936	 950	 876	 923	 935	 934	 944	 883	 980	 10,986
B.L.S. Transports	394	321	352	362	403	356	317	343	330	335	342	376	4,231
A.L.S. Transports	323	273	276	314	275	298	326	309	347	288	286	357	3,672
Patient Refusals	87	106	116	115	138	115	139	132	115	130	125	117	1,435
No Patients / Other	151	109	117	145	134	107	141	151	142	191	130	130	1,648
 Total Motor Vehicle Crashes	 40	 36	 36	 56	 46	 41	 43	 52	 42	 61	 46	 42	 541
Other Fire Related Type Incidents	195	149	257	203	177	159	236	233	148	172	204	186	2,319
 Total Structure Fires (That Required Extinguishment)	 4	 5	 5	 5	 0	 3	 2	 4	 0	 6	 6	 2	 42
Property Loss	168,400	95,000	258,900	180,099	0	250,000	0	45,300	0	0	16,000	10,000	1,023,699
*Not accurate as some reports did not include this information!													
 Frederick County Fire and Rescue A.L.S. #10	 24	 28	 28	 22	 21	 20	 23	 22	 27	 25	 20	 34	 294
Stephens City Volunteer Fire and Rescue Co., Inc.	317	261	286	294	292	260	315	304	283	288	271	300	3,471
Middletown Volunteer Fire and Rescue Co., Inc.	104	76	114	92	106	83	119	108	73	107	87	87	1,156
Clear Brook Volunteer Fire and Rescue Co., Inc.	148	124	145	164	163	176	167	180	140	175	146	169	1,897
Gore Volunteer Fire and Rescue Co., Inc.	46	28	45	50	37	35	44	61	46	27	47	44	510
Round Hill Community Vol. Fire and Rescue Co., Inc.	185	155	192	188	183	157	203	207	188	190	199	185	2,232
Gainesboro Volunteer Fire and Rescue Co., Inc.	75	69	67	84	82	75	88	80	85	67	86	64	922
- Frederick County Fire and Rescue A.L.S. #1	44	31	41	36	33	45	40	49	34	37	40	42	472
Star Tannery Volunteer Fire and Rescue Co., Inc.	21	18	40	22	14	20	20	30	23	22	24	26	280
Greenwood Volunteer Fire and Rescue Co., Inc.	278	251	258	279	265	224	250	244	258	276	267	308	3,158
North Mountain Volunteer Fire and Rescue Co., Inc.	59	47	54	65	50	52	54	59	52	50	62	53	657
Reynolds Store Volunteer Fire and Rescue Co., Inc.	49	32	45	42	33	38	33	42	25	39	49	45	472
Millwood Station Volunteer Fire and Rescue Co., Inc.	183	149	161	185	191	160	180	185	169	185	166	198	2,112
 Incident Reports Less Than 85% Complete	 7	 4	 10	 12	 10	 10	 12	 17	 6	 8	 13	 10	 119

**Frederick County Fire and Rescue Department
Incident Summary Statistics 2023**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Incidents in Image Trend Reporting System	1,093	1,012	1,202	1,177	1,150	1,101	1,116	1,155	1,098	1,125	1,159	1,230	13,618
C.A.D. Generated Incidents Not Dispatched	28	24	39	17	17	21	20	17	23	14	37	21	278
Total Incidents Dispatched and Responded To	1,065	988	1,163	1,160	1,123	1,080	1,096	1,138	1,075	1,111	1,122	1,209	13,330
Average Incidents Per Day	34.4	35.3	37.5	38.7	36.2	36.0	35.4	36.7	35.8	35.8	37.4	39.0	37
Total E.M.S. Incidents	873	758	903	904	883	846	880	892	822	903	875	1,006	10,545
B.L.S. Transports	344	319	375	375	362	307	360	357	374	367	355	432	4,327
A.L.S. Transports	273	230	271	289	235	298	290	300	239	304	282	322	3,333
Patient Refusals	124	79	108	109	115	110	121	127	103	93	95	112	1,296
No Patients / Other	132	130	149	131	171	131	109	108	106	139	143	140	1,589
Total Motor Vehicle Crashes	38	35	52	44	44	59	48	55	65	44	43	46	573
Other Fire Related Type Incidents	148	185	202	207	195	171	164	189	187	163	201	157	2,169
Total Structure Fires (That Required Extinguishment)	6	10	6	5	1	4	4	2	1	1	3	5	48
Property Loss	275,000	102,500	120,000	310,000	0	16,000	75,000	2,000	150,000	30,000	0	240,000	1,320,500
*Not accurate as some reports did not include this information!													
Frederick County Fire and Rescue A.L.S. #10	22	20	22	16	16	13	17	13	13	24	32	33	241
Stephens City Volunteer Fire and Rescue Co., Inc.	241	222	289	284	294	296	296	269	266	259	253	288	3,257
Middletown Volunteer Fire and Rescue Co., Inc.	94	76	103	89	85	94	84	93	90	95	80	83	1,066
Clear Brook Volunteer Fire and Rescue Co., Inc.	145	133	174	157	157	143	141	162	147	161	143	173	1,836
Gore Volunteer Fire and Rescue Co., Inc.	48	44	43	46	41	48	23	51	43	39	34	54	514
Round Hill Community Vol. Fire and Rescue Co., Inc.	167	168	184	198	167	151	168	180	192	176	168	219	2,138
Gainesboro Volunteer Fire and Rescue Co., Inc.	86	83	77	101	83	77	75	83	79	77	76	85	982
- Frederick County Fire and Rescue A.L.S. #1	56	39	45	71	36	44	39	44	34	46	66	52	572
Star Tannery Volunteer Fire and Rescue Co., Inc.	14	19	20	26	31	26	15	20	33	24	19	25	272
Greenwood Volunteer Fire and Rescue Co., Inc.	277	273	264	267	253	252	251	283	235	274	293	282	3,204
North Mountain Volunteer Fire and Rescue Co., Inc.	50	51	57	69	54	57	44	69	58	55	48	52	664
Reynolds Store Volunteer Fire and Rescue Co., Inc.	44	40	44	54	36	42	48	55	37	37	42	39	518
Millwood Station Volunteer Fire and Rescue Co., Inc.	158	159	204	193	177	180	191	169	170	164	184	196	2,145
Incident Reports Less Than 85% Complete	9	4	7	7	19	7	6	10	6	9	10	5	99

**Frederick County Fire and Rescue Department
Incident Summary Statistics 2022**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Incidents in Image Trend Reporting System	1,186	912	1,114	1,081	1,155	1,202	1,179	1,109	1,177	1,088	1,049	1,402	13,654
C.A.D. Generated Incidents Not Dispatched	21	16	23	18	23	26	24	29	35	33	27	22	297
Total Incidents Dispatched and Responded To	1,165	896	1,091	1,063	1,132	1,176	1,155	1,080	1,142	1,055	1,022	1,380	13,357
Average Incidents Per Day	37.6	32.0	35.2	35.4	36.5	39.2	37.3	34.8	38.1	34.0	34.1	44.5	37
Total E.M.S. Incidents	915	696	836	828	896	895	886	849	917	826	810	991	10,345
B.L.S. Transports	383	295	351	327	327	355	373	337	391	340	336	410	4,225
A.L.S. Transports	270	190	254	230	277	263	256	260	249	238	255	295	3,037
Patient Refusals	120	98	104	110	105	108	109	114	117	117	78	107	1,287
No Patients / Other	142	113	127	161	187	169	148	138	160	131	141	179	1,796
Total Motor Vehicle Crashes	21	33	51	37	47	56	41	41	54	53	47	52	533
Other Fire Related Type Incidents	229	160	197	187	190	217	225	184	169	170	158	328	2,414
Total Structure Fires (That Required Extinguishment)	11	7	7	11	3	8	3	6	2	6	7	9	80
Property Loss	136,500	80,500	167,250	259,835	100,500	451,500	0	137,200	0	70,500	701,000	137,900	2,242,685
*Not accurate as some reports did not include this information!													
Frederick County Fire and Rescue A.L.S. #10	0	0	0	0	0	0	29	26	31	17	20	32	155
Stephens City Volunteer Fire and Rescue Co., Inc.	301	217	293	225	281	291	256	269	293	248	235	325	3,234
Middletown Volunteer Fire and Rescue Co., Inc.	88	71	99	82	98	97	81	96	103	90	92	119	1,116
Clear Brook Volunteer Fire and Rescue Co., Inc.	174	142	169	168	129	160	179	173	126	140	155	187	1,902
Gore Volunteer Fire and Rescue Co., Inc.	33	51	46	53	34	53	52	30	44	48	51	64	559
Round Hill Community Vol. Fire and Rescue Co., Inc.	203	153	188	226	197	202	194	173	201	189	153	225	2,304
Gainesboro Volunteer Fire and Rescue Co., Inc.	80	73	70	74	72	111	84	64	63	69	94	111	965
- Frederick County Fire and Rescue A.L.S. #1	57	43	60	67	51	54	57	36	43	44	57	61	630
Star Tannery Volunteer Fire and Rescue Co., Inc.	21	24	20	25	23	12	38	23	19	22	20	42	289
Greenwood Volunteer Fire and Rescue Co., Inc.	313	189	259	269	297	284	278	271	272	273	236	306	3,247
North Mountain Volunteer Fire and Rescue Co., Inc.	47	52	63	57	55	47	64	47	51	41	55	87	666
Reynolds Store Volunteer Fire and Rescue Co., Inc.	46	30	39	47	31	66	51	34	28	29	47	66	514
Millwood Station Volunteer Fire and Rescue Co., Inc.	200	154	195	177	208	199	177	213	203	180	161	244	2,311
Incident Reports Less Than 85% Complete	4	14	7	4	17	20	27	7	6	9	10	10	135

**Frederick County Fire and Rescue Department
Incident Summary Statistics 2021**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Incidents in Image Trend Reporting System	1,013	940	1,059	1,025	1,018	1,072	1,049	1,143	1,098	1,151	1,137	1,246	12,951
C.A.D. Generated Incidents Not Dispatched	10	16	22	26	19	17	19	15	24	17	25	24	234
Total Incidents Dispatched and Responded To	1,003	924	1,037	999	999	1,055	1,030	1,128	1,074	1,134	1,112	1,222	12,717
Average Incidents Per Day	32.4	33.0	33.4	33.3	32.2	34.0	33.2	36.4	35.8	36.6	37.1	39.4	35
Total E.M.S. Incidents	807	703	766	749	776	844	818	905	873	897	875	960	9,973
B.L.S. Transports	364	296	273	288	286	340	294	391	365	392	358	405	4,052
A.L.S. Transports	253	206	266	258	293	272	295	268	283	233	270	286	3,183
Patient Refusals	82	85	95	96	97	89	95	110	117	108	96	125	1,195
No Patients / Other	108	116	132	107	100	143	134	136	108	164	151	144	1,543
Total Motor Vehicle Crashes	38	37	36	28	45	51	48	41	50	50	51	58	533
Other Fire Related Type Incidents	151	176	224	215	174	151	158	177	148	178	179	193	2,124
Total Structure Fires (That Required Extinguishment)	7	8	11	7	4	9	6	5	3	9	7	11	87
Property Loss	25,500	265,600	370,000	1,500	100,000	155,000	205,000	153,000	250,000	179,000	120,000	289,950	2,114,550
*Not accurate as some reports did not include this information!													
Stephens City Volunteer Fire and Rescue Co., Inc.	229	257	243	244	227	268	238	276	281	290	289	294	3,136
Middletown Volunteer Fire and Rescue Co., Inc.	80	85	85	77	101	100	92	93	80	106	87	106	1,092
Clear Brook Volunteer Fire and Rescue Co., Inc.	134	124	137	146	131	145	162	163	141	151	160	198	1,792
Gore Volunteer Fire and Rescue Co., Inc.	32	31	47	45	28	37	34	54	47	35	66	63	519
Round Hill Community Vol. Fire and Rescue Co., Inc.	171	152	168	165	180	158	183	189	179	180	194	199	2,118
Gainesboro Volunteer Fire and Rescue Co., Inc.	68	60	89	72	66	57	69	74	79	63	78	87	862
Star Tannery Volunteer Fire and Rescue Co., Inc.	27	14	21	23	26	21	14	24	9	24	22	37	262
Greenwood Volunteer Fire and Rescue Co., Inc.	255	206	264	206	247	239	243	237	244	294	269	311	3,015
North Mountain Volunteer Fire and Rescue Co., Inc.	46	41	48	57	42	47	49	60	51	55	53	58	607
Reynolds Store Volunteer Fire and Rescue Co., Inc.	29	24	45	46	29	38	46	45	42	35	41	48	468
Millwood Station Volunteer Fire and Rescue Co., Inc.	173	166	161	198	188	171	183	193	182	210	199	235	2,259
Incident Reports Less Than 85% Complete	10	3	12	7	5	11	5	14	4	4	10	14	99

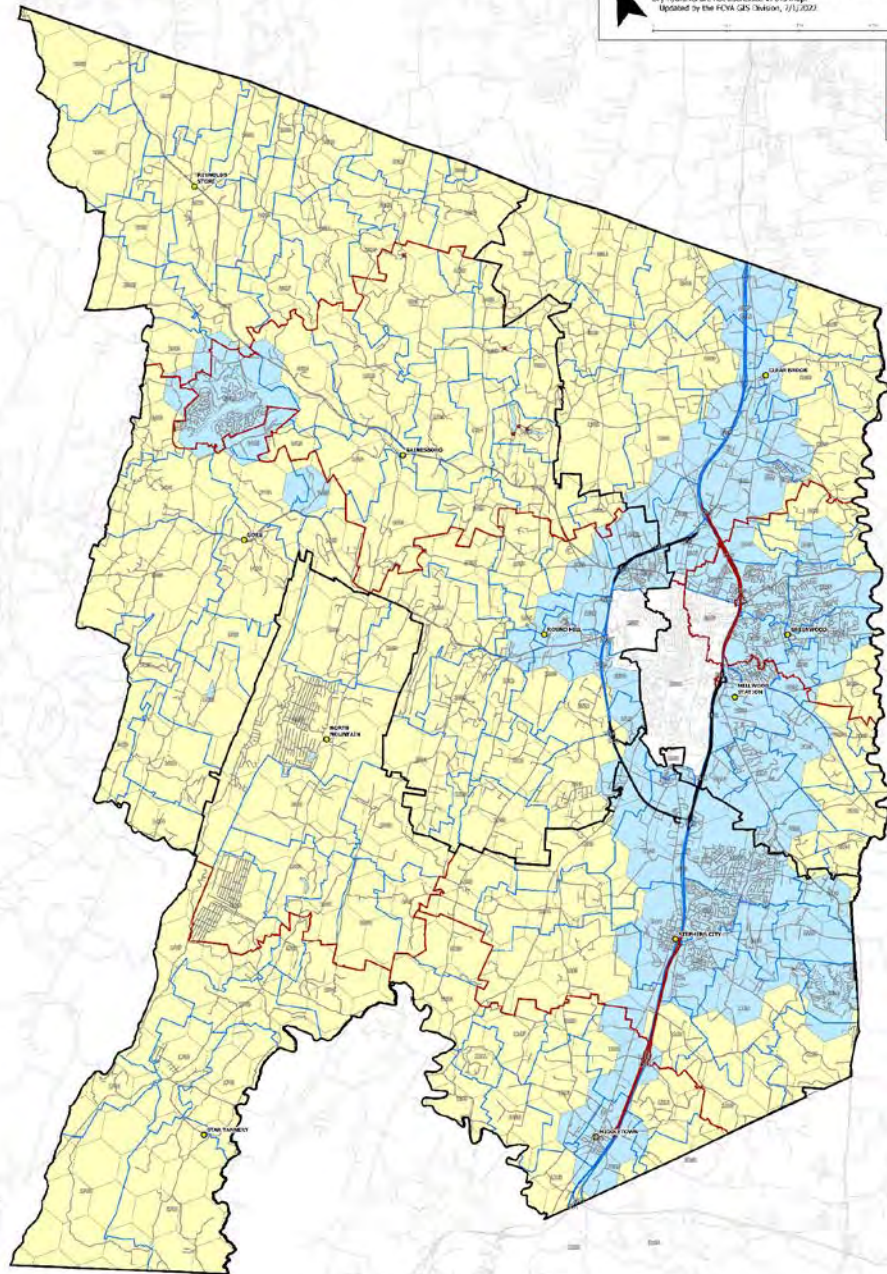
**Frederick County Fire and Rescue Department
Incident Summary Statistics 2020**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Incidents in Image Trend Reporting System	925	846	884	750	821	920	1,004	992	913	917	1,063	1,001	11,036
C.A.D. Generated Incidents Not Dispatched	19	15	21	9	18	17	16	13	14	16	23	22	203
Total Incidents Dispatched and Responded To	906	831	863	741	803	903	988	979	899	901	1,040	979	10,833
Average Incidents Per Day	29.2	28.6	27.8	24.7	25.9	30.1	31.9	31.6	29.9	29.1	34.7	31.6	29
Total E.M.S. Incidents	729	620	657	547	626	722	760	777	708	698	755	786	8,385
B.L.S. Transports	304	275	291	227	273	307	309	321	291	276	270	347	3,491
A.L.S. Transports	261	207	209	149	185	218	251	264	236	243	270	243	2,736
Patient Refusals	72	65	85	87	90	86	100	87	93	71	96	91	1,023
No Patients / Other	92	73	72	84	78	111	100	105	88	108	119	105	1,135
Total Motor Vehicle Crashes	34	24	31	26	30	43	43	38	32	46	46	40	433
Other Fire Related Type Incidents	136	178	168	162	141	133	181	160	154	156	229	148	1,946
Total Structure Fires (That Required Extinguishment)	7	9	7	6	6	5	4	4	5	1	10	5	69
Property Loss	1,000	141,000	221,050	40,000	2,000	9,000	95,000	20,000	0	5,000	70,250	10,000	614,300
*Not accurate as some reports did not include this information!													
Stephens City Volunteer Fire and Rescue Co., Inc.	214	224	225	178	204	229	229	237	216	232	248	273	2,709
Middletown Volunteer Fire and Rescue Co., Inc.	83	86	70	69	67	70	94	92	63	89	105	82	970
Clear Brook Volunteer Fire and Rescue Co., Inc.	104	116	105	104	122	137	160	123	111	114	168	141	1,505
Gore Volunteer Fire and Rescue Co., Inc.	38	32	34	26	28	26	32	41	33	34	49	34	407
Round Hill Community Vol. Fire and Rescue Co., Inc.	176	123	144	109	136	128	144	172	136	147	183	138	1,736
Gainesboro Volunteer Fire and Rescue Co., Inc.	59	52	55	58	58	49	80	49	61	49	96	52	718
Star Tannery Volunteer Fire and Rescue Co., Inc.	24	18	24	24	17	16	23	18	13	13	26	29	245
Greenwood Volunteer Fire and Rescue Co., Inc.	192	200	199	151	171	233	242	241	223	193	215	215	2,475
North Mountain Volunteer Fire and Rescue Co., Inc.	40	39	45	48	35	41	41	52	35	33	60	38	507
Reynolds Store Volunteer Fire and Rescue Co., Inc.	39	20	33	26	34	27	31	32	25	19	46	38	370
Millwood Station Volunteer Fire and Rescue Co., Inc.	137	138	124	104	132	160	182	143	162	160	171	165	1,778
Incident Reports Less Than 85% Complete	5	1	9	7	11	5	13	2	0	7	12	10	82

FCVA Fire Hydrant Distribution

Map reflects the distribution of fire hydrants throughout Frederick County in each of the fire First-Due areas. Each hexagon represents 1 square mile of area. Hexagons in which a wet hydrant is present are blue; hexagons in which no wet hydrants are present are yellow. Dry hydrants are not addressed in this map.
Updated by the FCVA GIS Division, 7/1/2022

- Map Features**
- Fire Stations
 - Emergency Access Gates
 - Low Water / Low Tonnage Bridges
 - FCVA Roads
 - Lakes
 - Battalions
 - First-Due Areas
 - Fire District Grids (Updated 5/2022)
 - Wet Hydrants Present
 - No Hydrants Present



FCVA Fire Hydrant Distribution

Map reflects the distribution of fire hydrants throughout Frederick County in each of the fire First-Due areas. Each hexagon represents 1 square mile of area. Hexagons in which a wet hydrant is present are blue; hexagons in which no wet hydrants are present are yellow. Dry hydrants are not addressed in this map.
Updated by the FCVA GIS Division, 7/1/2022

Map Features

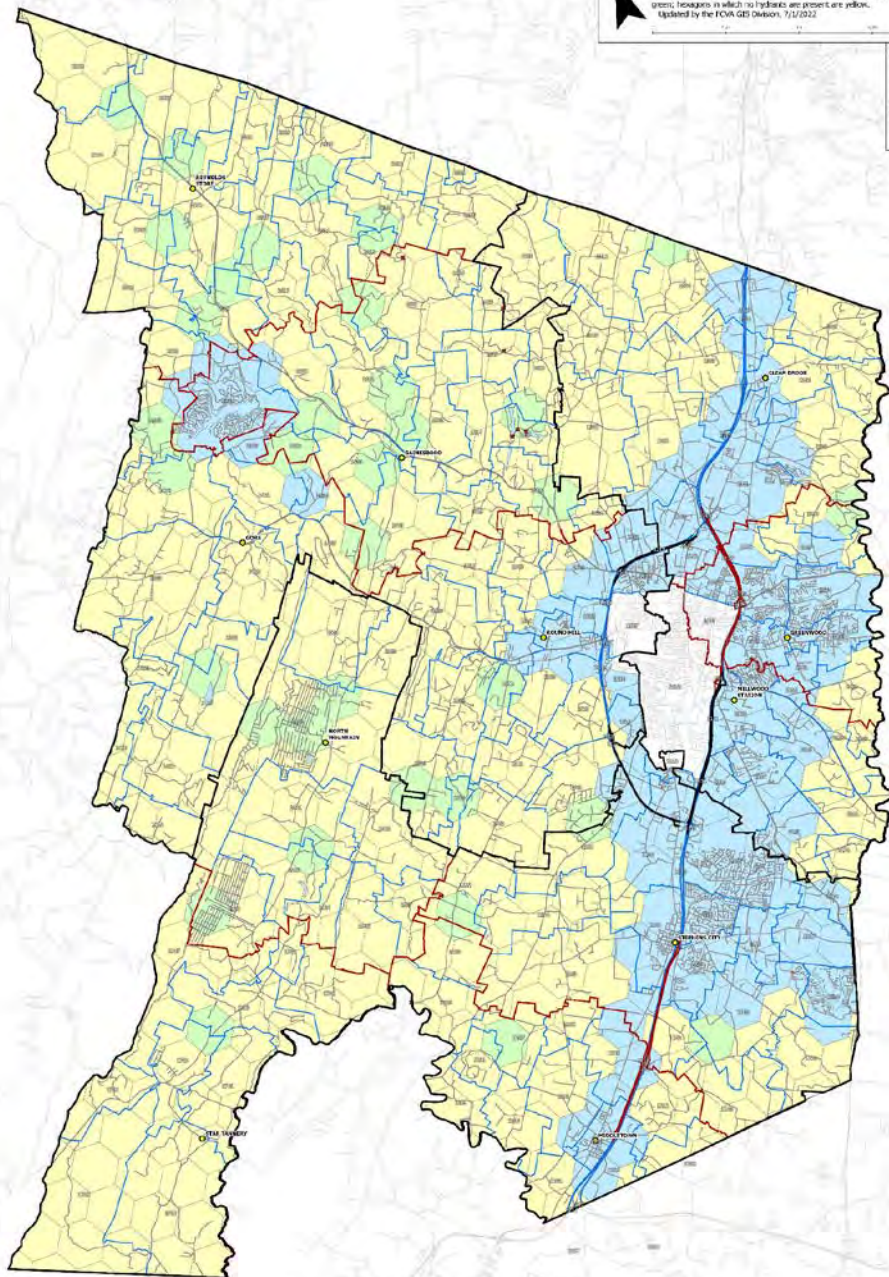
- Fire Stations
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- FCVA Roads
- Lakes
- Battalions
- First-Due Areas
- Fire District Grids (Updated 5/2022)
- Wet Hydrants Present
- No Hydrants Present

FCVA Fire Hydrant Distribution

Map reflects the distribution of wet (blue) and dry (green) hydrants throughout Frederick County in each of the fire First-Due areas. Each hexagon represents 1 square mile of area. Hexagons in which a wet hydrant is present, regardless of the presence of dry hydrants, are blue; hexagons in which no wet hydrants are present, but dry hydrants are present, are green; hexagons in which no hydrants are present are yellow.

Updated by the FCVA GIS Division, 7/1/2022

- Map Features**
- Fire Stations
 - Emergency Access Gates
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FCVA Fire Hydrant Distribution

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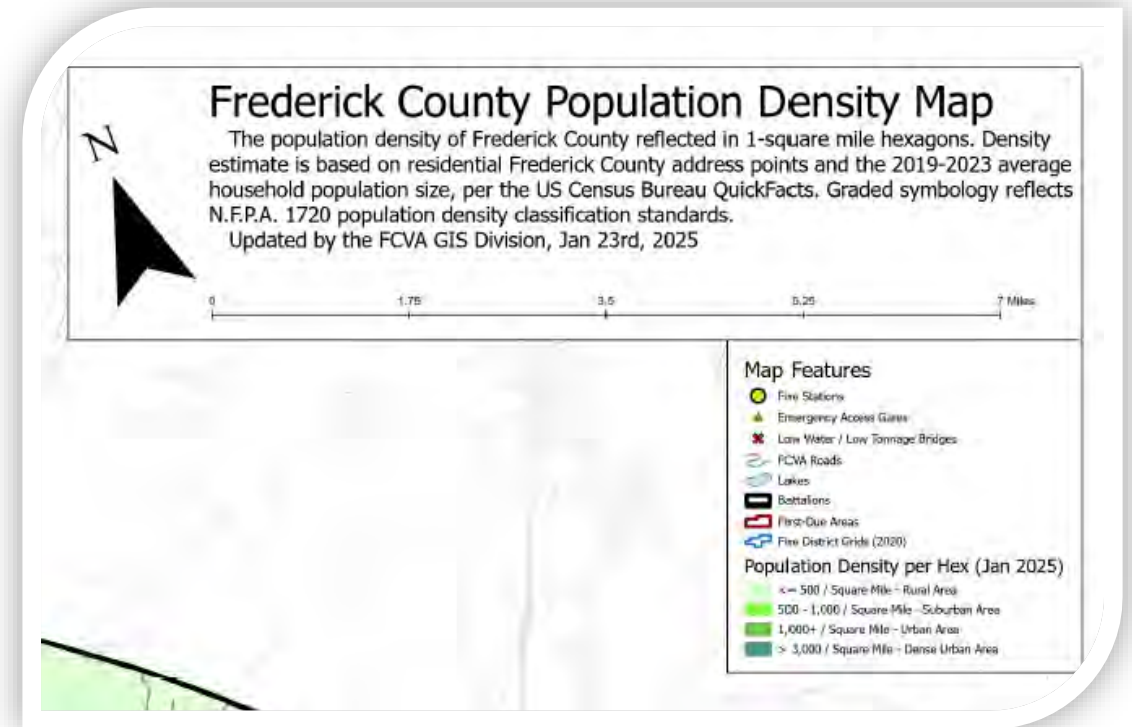
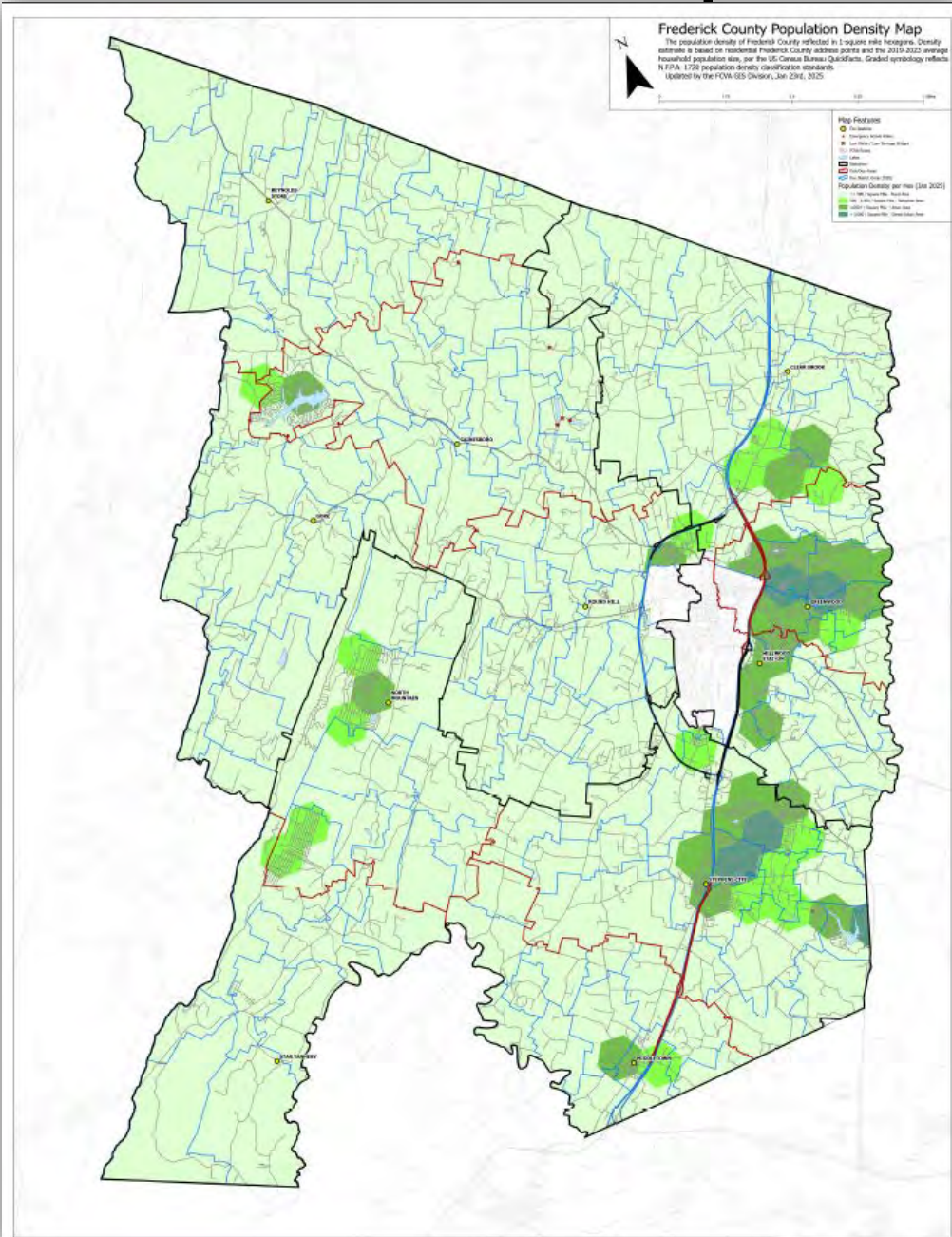
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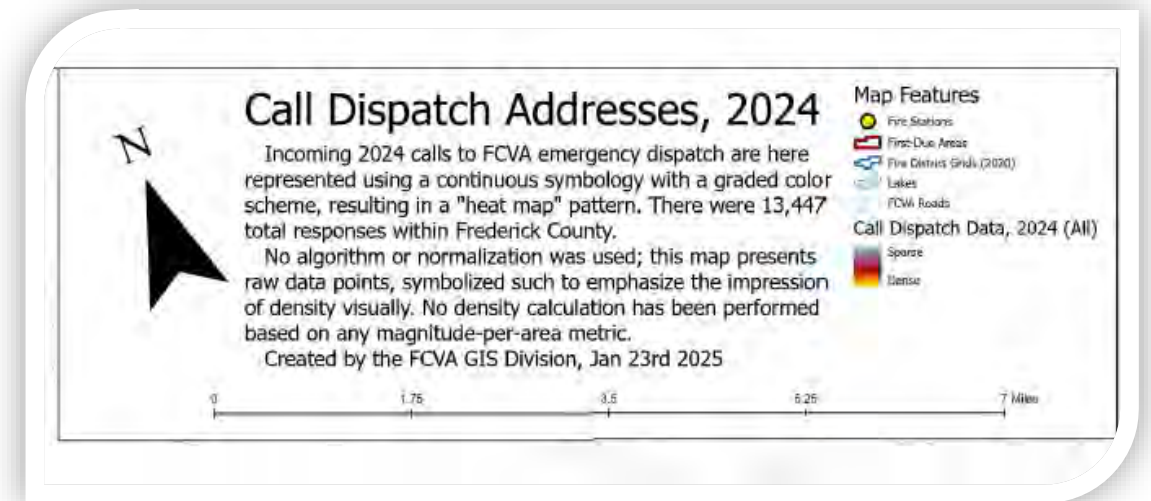
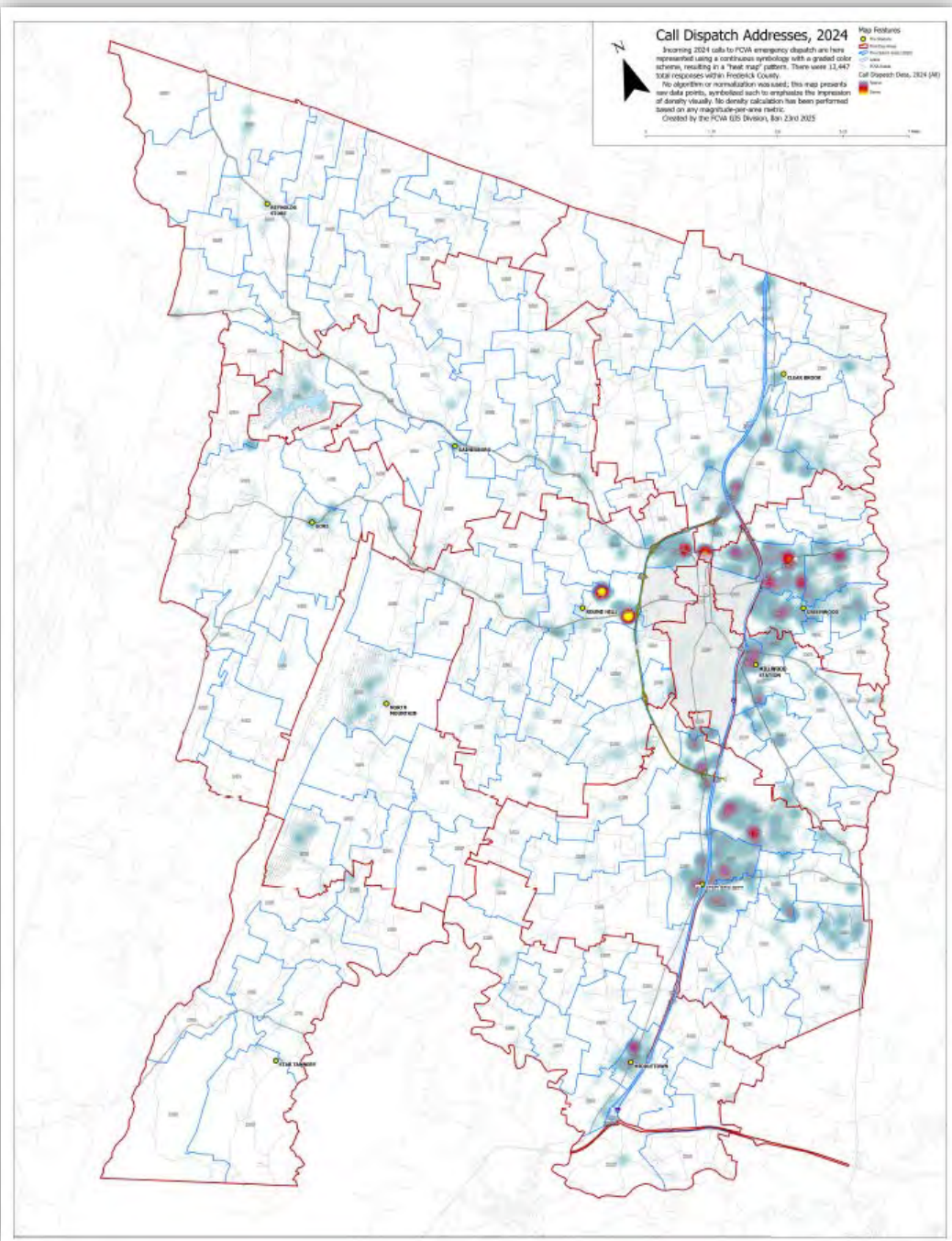
0 1.75 3.5 5.25 7 Miles

Map Features

- Fire Stations
- Emergency Access Gates
- Low Water / Low Tonnage Bridges
- FCVA Roads
- Lakes
- Battalions
- First-Due Areas
- Fire District Grids (Updated 5/2022)
- Wet Hydrants Present
- Dry Hydrants Only Present
- No Hydrants Present

Current Population Density and Growth





What is the community Service Level expectation?

a. Factors to Consider

i. Response time

1. Distance (Road travel time)
2. Availability of resources (call concurrency)

ii. Effective Response Force

1. Appropriate number of resources
2. Appropriate type of resources
3. Appropriately trained resources
4. Appropriately equipped resources
5. Example – Single Family Residential Home

Initial Alarm Deployment of Firefighting Personnel

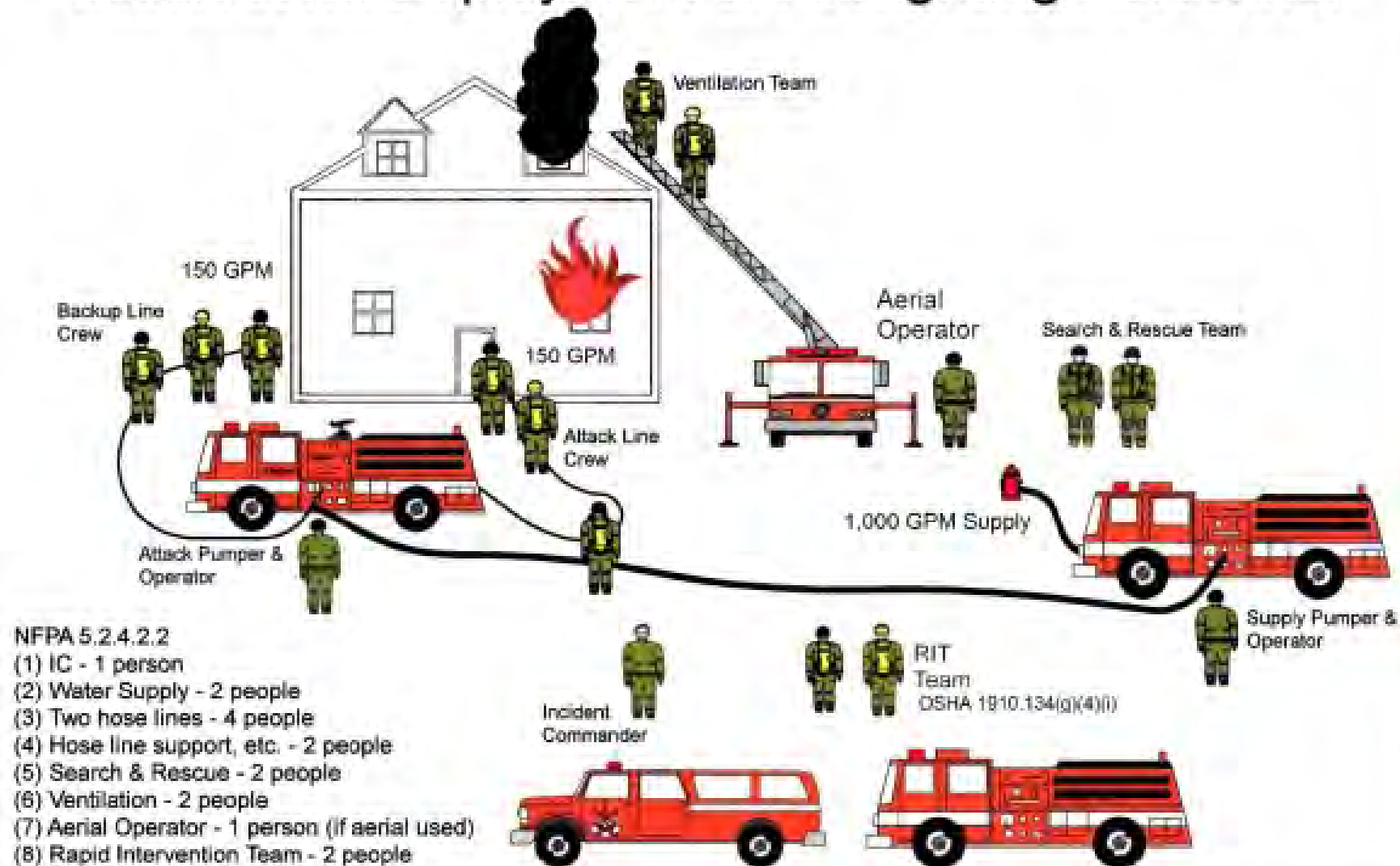


Figure 3 – Initial Alarm Deployment of Firefighting Personnel

Standards

- i. NFPA 1710 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments



KEY REQUIREMENTS FOR EMERGENCY SERVICES IN NFPA 1710

The minimum requirements for provision of emergency services by career fire departments can be found in NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*.

NFPA 1710 addresses the structure and operation of organizations providing such services, which include fire suppression and other assigned emergency response responsibilities such as EMS and special operations.

The requirements intend to provide effective, efficient, and safe protective services to help prevent fires, reduce risk to lives and property, deal with incidents that occur, and help prepare for anticipated incidents.

The requirements are listed in NFPA 1710 for fire department service deployment based on the type of occupancy, along with the appropriate response staffing levels for each. The minimum staffing level for each occupancy is listed below. For the full breakdown of staffing requirements by position, refer to the subsections specific to each occupancy in 5.2.4.

KEY REQUIREMENTS



Occupancy Type: Single-Family Dwelling
Deployment: Minimum of 16 members or 17 if aerial device is used

The initial full alarm assignment to a structure fire in a typical 2000 ft² (186 m²), two-story, single-family dwelling without a basement and with no exposures must provide for a minimum of 16 members (17 if an aerial device is used).



Occupancy Type: Open-Air Strip Mall
Deployment: Minimum of 27 members or 28 if aerial device is used

The initial full alarm assignment to a structure fire in a typical open-air strip shopping center ranging from 13,000 ft² to 196,000 ft² (1203 m² to 18,209 m²) in size must provide for a minimum of 27 members (28 if an aerial device is used).



Occupancy Type: Garden-Style Apartment
Deployment: Minimum of 27 members or 28 if aerial device is used

The initial full alarm assignment to a structure fire in a typical 1200 ft² (111 m²) apartment within a three-story, garden-style apartment building must provide for a minimum of 27 members (28 if an aerial device is used).



Occupancy Type: High-Rise
Deployment: Minimum of 42 members or 43 if building is equipped with fire pump

The initial full alarm assignment to a fire in a building with the highest floor greater than 75 ft (23 m) above the lowest level of fire department vehicle access must provide for a minimum of 42 members (43 if the building is equipped with a fire pump).



KEY REQUIREMENTS FOR EMERGENCY SERVICES IN NFPA 1710 CONTINUED

ADDITIONAL REQUIREMENTS

Fire departments that respond to fires in occupancies that present hazards greater than those found in 5.2.4 must deploy additional resources on the initial alarm as described in 5.2.4.6.

Even though fireground staffing levels have changed, NFPA 1710 continues to require that engine companies be staffed with a minimum of four on-duty members, as stated in 5.2.3. In addition, 5.2.2.2.1 requires that the fire department identify minimum company staffing levels as necessary to meet the deployment criteria required in 5.2.4 to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.

Additional changes to the 2020 edition of the standard include an update to the definition for *career fire department* and a clarification of how to determine if the department would fall under either NFPA 1710 or NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*.

Several new definitions relating to geographic areas based on population density have been added and the number of responders needed based on the type of incident and tasks to accomplish has been included. New requirements have been added for mobile water supply tankers/tenders and deployment and training of incident safety officers. Also, material on wildland fire suppression has been expanded.

RESPONSE OBJECTIVES

Documenting the benchmarks and response objectives that make up NFPA 1710 is crucial to capturing and tracking data that would be helpful in ensuring the necessary allocation of resources.

Benchmarks	Response Objectives
Alarm answer	15 sec 95% of the time or 40 sec 99% of the time
Alarm processing	64 sec 95% of the time or 106 sec 99% of the time
Turnout - Fire	80 sec
Turnout - EMS	60 sec
First-due engine	240 sec (4 min) 90% of the time
Second-due engine	360 sec (6 min) 90% of the time
Initial full alarm - Low/ medium hazard	480 sec (8 min) 90% of the time
Initial full alarm - High hazard	610 sec (10 min 10 sec) 90% of the time

Learn More

- ▶ Visit nfpa.org/1710 for free digital access to the standard.
- ▶ Sign up on nfpa.org/NFPA-Membership to:
 - Get one-on-one help with your technical questions at nfpa.org/tqs
 - Access exclusive content
 - Search content and connect with your peers to share information and answer questions on NFPA's online community at nfpa.org/xchange

Turnout - EMS	60 sec
First-due engine	240 sec (4 min) 90% of the time
Second-due engine	360 sec (6 min) 90% of the time

NFPA 1720 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments.



2020

NFPA 1720

Standard for the Organization and Deployment of
Fire Suppression Operations, Emergency Medical
Operations, and Special Operations to the Public
by Volunteer Fire Departments

Pin Header

Table 4.3.2 Staffing and Response Time

×

Demand Zone ^a	Demographics	Minimum Staff to Respond ^b	Response Time (minutes) ^c	Meets Objective (%)
Urban area	>1000 people/mi ² (2.6 km ²)	15	9	90
Suburban area	500–1000 people/mi ² (2.6 km ²)	10	10	80
Rural area	<500 people/mi ² (2.6 km ²)	6	14	80
Remote area	Travel distance ≥ 8 mi (12.87 km)	4	Directly dependent on travel distance	90
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

^aA jurisdiction can have more than one demand zone.

^bMinimum staffing includes members responding from the AHJ's department and automatic aid

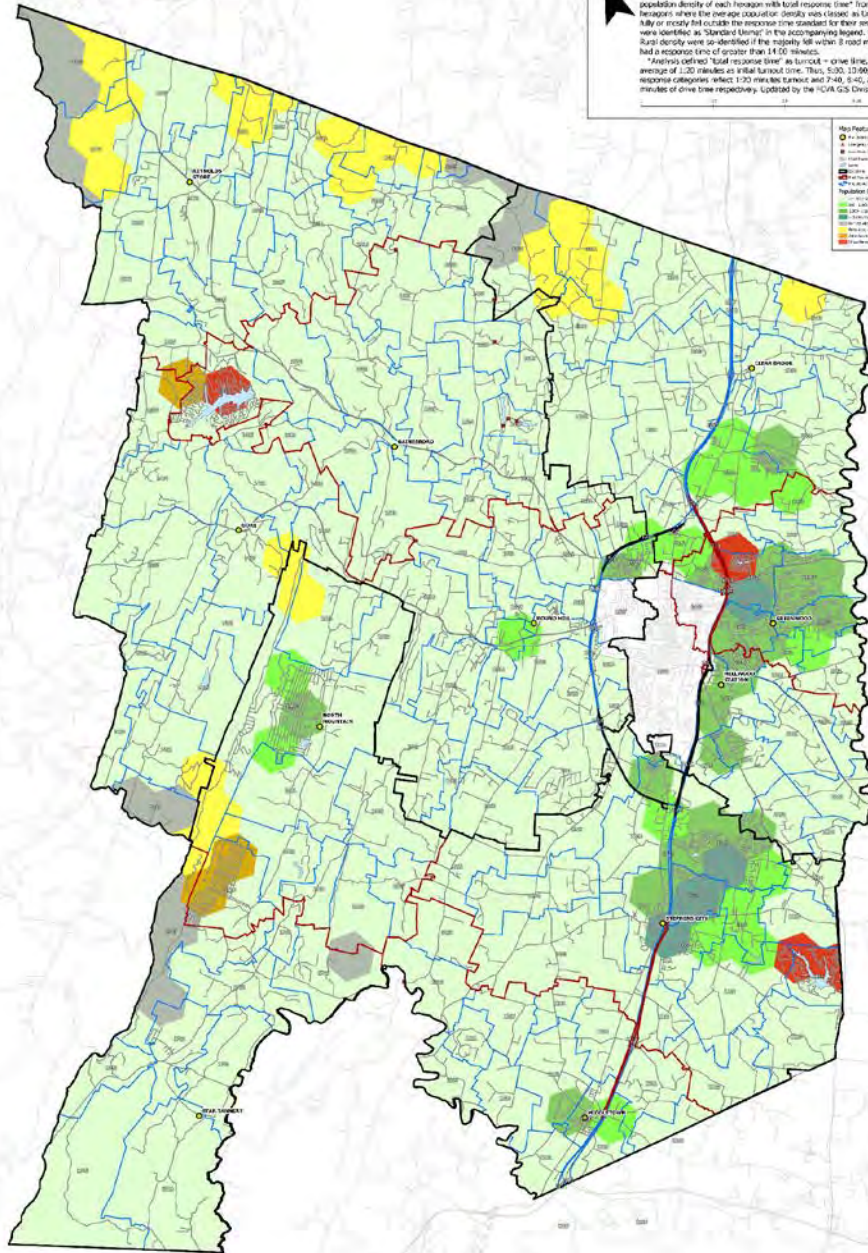
^cResponse time begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Frederick County Population Density Map

The population density of Frederick County reflected in 1-square mile hexagons. Density estimate is based on existing Frederick County address points and the 2019 average household population size, per the US Census Bureau QuickFacts. Graded symbology reflects N.F.P.A. 1720 population density classification standards. Analysis compared average population density of each hexagon with total response time* from each FCVA fire station; hexagons where the average population density was classed as Urban or Suburban, which fully or mostly fell outside the response time standard for their respective classification, were identified as 'Standard Unmet' in the accompanying legend. Hexagons classed as Rural density were so-identified if the majority fell within 8 road miles of a fire station, but had a response time of greater than 14:00 minutes.

*Analysis defined "total response time" as turnout + drive time, and used an industry average of 1:20 minutes as initial turnout time. Thus, 9:00, 10:00, and 14:00 minute response categories reflect 1:20 minutes turnout and 7:40, 8:40, and 12:40 or more minutes of drive time respectively. Updated by the FCVA GIS Division, 5/24/2022.

- Map Features**
- Fire Stations
 - Emergency Access Gates
 - Low Water / Low Tonnage Bridges
 - PCVA Roads
 - Lakes
 - Barricades
 - First-Due Areas
 - Fire District Grids (Updated 5/2022)
- Population Density / Response Time Standard**
- <= 500 / Square Mile - Rural Area, <= 14 Minute Response
 - 500 - 1,000 / Square Mile - Suburban Area, <= 10 Minute Response
 - 1,000+ / Square Mile - Urban Area, <= 9 Minute Response
 - > 3,000 / Square Mile - Dense Urban Area, <= 9 Minute Response
 - Remote Area, Areas > 8 Road Miles from All Stations
 - Rural Area, < 8 Miles / 14+ Minute Response (Standard Unmet)
 - Suburban Area, 10+ Minute Response (Standard Unmet)
 - Urban/Dense Urban Area, 9+ Minute Response (Standard Unmet)



Frederick County Population Density Map

The population density of Frederick County reflected in 1-square mile hexagons. Density estimate is based on existing Frederick County address points and the 2019 average household population size, per the US Census Bureau QuickFacts. Graded symbology reflects N.F.P.A. 1720 population density classification standards. Analysis compared average population density of each hexagon with total response time* from each FCVA fire station; hexagons where the average population density was classed as Urban or Suburban, which fully or mostly fell outside the response time standard for their respective classification, were identified as 'Standard Unmet' in the accompanying legend. Hexagons classed as Rural density were so-identified if the majority fell within 8 road miles of a fire station, but had a response time of greater than 14:00 minutes.

*Analysis defined "total response time" as turnout + drive time, and used an industry average of 1:20 minutes as initial turnout time. Thus, 9:00, 10:00, and 14:00 minute response categories reflect 1:20 minutes turnout and 7:40, 8:40, and 12:40 or more minutes of drive time respectively. Updated by the FCVA GIS Division, 5/24/2022

0 1.75 3.5 5.25 7 Miles

Map Features

- Fire Stations
- Emergency Access Gates
- Low Water / Low Tonnage Bridges
- PCVA Roads
- Lakes
- Barricades
- First-Due Areas
- Fire District Grids (Updated 5/2022)

Population Density / Response Time Standard

- <= 500 / Square Mile - Rural Area, <= 14 Minute Response
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- > 3,000 / Square Mile - Dense Urban Area, <= 9 Minute Response
- Remote Area, Areas > 8 Road Miles from All Stations
- Rural Area, < 8 Miles / 14+ Minute Response (Standard Unmet)
- Suburban Area, 10+ Minute Response (Standard Unmet)
- Urban/Dense Urban Area, 9+ Minute Response (Standard Unmet)

Implications of adopting plan consistent with NFPA 1720

- i. Can you reach population densities by time/distance?
 - 1. Station location and additional station need.
 - a. Areas of concern
 - 2. Concurrency (availability of resources)
 - 3. Ability to assemble timely Effective Response Force in Western part of county and its impact on service delivery throughout the county.

Pro-forma staffing for NFPA 1720 – 10 year

- i. Locations needing review

- 1. Highest

- a. 522/Lake Frederick – Stephens City
 - b. 37 North/81 North/ Snowden Bridge
 - c. 37 South/Kernstown/Middle Road
 - d. Lake Holiday
 - e. Mountain Falls

- ii. Complete 1st Station in first 10-year window, plan for 2nd and set benchmarks for new station or other adjustments

- iii. For a new station target initial minimum four (4) person staffing.

Additional Staffing Considerations

- a. Set minimum staffing of four (4) for all stations to reflect true cross-staffing of Fire and EMS.
 - i. Provides rural and suburban areas with true initial response for fires, fire and EMS initial response to combined incidents such as MVC, hedge against concurrency and reduces need to pull from additional stations to meet Effective Response Force.
- b. Increase minimum staffing at high-volume stations to have dedicated EMS unit of two (2) personnel and four (4) personnel to cross staff fire and 2nd EMS unit.
 - i. Provides coverage against depleting EMS units in event of a fire event and provides resources to cover predictable concurrent calls.

Constraints

- Practical ability to attract, hire, train and effectively integrate into staffing model.
 - Historically 12 -15 hires in a hiring cycle annually.
 - Typical attrition in a year running 4-8 positions.
 - Typically takes 18 months from the time the position is authorized, to recruitment, hiring, training and field experience for a new position to be counted as effective minimum staffing.
 - Set general target of eight (8) new hires a year with assumption that four (4) – eight (8) replacement positions will also be needed for annual attrition.

Recommendation

- Approximately 80 additional staff over next 10 years (average eight per year).
- At current estimates each position costs with salary, benefits, uniforms, equipment, etc. approximately \$100,000 per position for full first year funding.
- Assumes continued level of volunteer participation to continue supplemental staffing, particularly provide surge capacity for large scale incidents and long duration incidents.

Apparatus

- a. Historical Approach

- i. Each company has provided its own apparatus and accounted for their own reserve needs.

Replacement schedule dictated by availability of self -funding. Reliance on assistance from state EMS grants for ambulance purchase and varied approaches to financing from all cash payments from saved reserves, partial cash and partial financed transactions, to full finance transactions. Companies sometimes carry payment on operating account, liquidate savings account to make payment or combination.

New approach

- i. Three years ago the County approved funding for the first dedicated County-wide reserve apparatus. Currently:
 - 1. One (1) reserve Engine and one (1) additional reserve engine available from training division.
 - 2. One (1) Reserve rescue engine.
 - 3. One bariatric equipped unit/reserve ambulance.
- ii. Committee inventory existing fleet, creating new minimum standards for each apparatus type, reviewing deployment model and preparing recommendations for replacement schedule for annual Capital Improvements Plan (CIP).
 - 1. Committee adopting NFPA 1901 model.
 - a. Chart 17- 19 – NFPA 1901 Standard for Automotive Fire Apparatus
 - b. Chart 20 - 26 – Fleet Inventory

NFPA[®]
1901

Standard for
Automotive Fire Apparatus

2016



Annex C. Weights and Dimensions for Common Equipment

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 The Fire Apparatus Manufacturers Association (FAMA) provides a worksheet for use by purchasers to calculate the portable equipment load anticipated to be carried on an apparatus. To ensure that the apparatus chassis is capable of carrying the installed equipment (pump, tank, aerial device, etc.) plus the specified portable equipment load with an appropriate margin of safety, the purchaser should use this worksheet to provide apparatus vendors with the weight of the equipment they anticipate carrying when the apparatus is placed in service.

C.1.1 The approximate measurements and weights of equipment that are commonly available and used during fire department operations are listed on the worksheet. The purchaser should fill in the number of units of each piece of anticipated equipment in the column titled "Quantity" and multiply that by the weight per unit to get the total weight. The dimensions of each piece of equipment are given to assist in planning compartment size or the location on the fire apparatus. Where the purchaser wants to carry specific equipment in a specific compartment, that compartment designation should be shown in the column titled "Compartment Location."

The worksheet can be downloaded as an Excel spreadsheet from the FAMA website, www.fama.org, and customized to the equipment a department expects to carry. There are columns on the spreadsheet to assist the fire department in maintaining records of the equipment it carries.

Guidelines for First-Line and Reserve Fire Apparatus

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

To maximize fire fighter capabilities and minimize risk, it is important that fire apparatus be equipped with the latest safety features and operating capabilities. To 15 years, much progress has been made in increasing the operational capabilities and improving the safety of fire apparatus. Apparatus more than 15 years old may not have all of the safety upgrades required by the current editions of the NFPA fire department apparatus standards. Because the changes, upgrades, and fire apparatus standards since 1901 have been truly significant, especially in the area of safety, fire departments should seriously consider the value (or risk) to fire fighters of keeping fire apparatus more than 15 years old in first-line service.

It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard (see Section D.3). This will ensure that, while the apparatus might not totally comply with the current editions of the automotive fire apparatus standards, many of the improvements and upgrades required by the current editions of the standards are available to the fire fighters who use the apparatus.

Apparatus that were not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced.

D.2 Evaluating Fire Apparatus. It is a generally accepted fact that fire apparatus, like all types of mechanical devices, have a finite life. The length of that life depends on many factors, including vehicle mileage and engine hours, a preventative maintenance program, quality of the repair program, whether the fire apparatus was used on design parameters, whether the apparatus was built on a custom or commercial chassis, quality of work by the original manufacturer, quality of the component availability of replacement parts, to name a few.

In the fire service, there are fire apparatus with 20 years of service that are simply worn out. There are also apparatus that were manufactured with quality components, had excellent maintenance, and that have responded to a minimum number of incidents that are still in serviceable condition after 20 years. Most would agree that the care of fire apparatus while being used and the quality and timeliness of maintenance are perhaps the most significant factors in determining how well a fire apparatus ages.

Critical enhancements in design, safety, and technology should also play a key role in the evaluation of an apparatus' life cycle. Previous editions of the fire department apparatus standards featured many requirements advancing the level of automotive fire apparatus safety and user friendliness. Contained within the 2009 edition were requirements for roll-over stability; tire pressure indicators; seat belt warning systems requiring all occupants be properly seated and belted; extended seat belt length requirements resulting from an in-depth anthropometric study evaluating the average size of today's fully dressed firefighter; roadability, including minimum accelerations and top speed limitations; enhanced step and work surface lighting; cab integrity testing; increased use of retroreflective striping in the rear of apparatus, providing a consistent identifiable set of markings for all automotive fire apparatus; and enhanced aerial control technologies, enabling short jacking and envelope controls.

D.3 Upgrading Fire Apparatus. Any apparatus, whether in first-line or reserve service, should be upgraded in accordance with NFPA 1912, as necessary, to ensure that the following features are included as a minimum:

- (1) Seat belts with seat belt warning systems are available for every seat and are new or in serviceable condition.
- (2) Warning lights meet or exceed the current standard.
- (3) Reflective striping meets or exceeds the current standard.
- (4) Slip resistance of walking surfaces and handrails meets the current standard.
- (5) A low-voltage electrical system load manager is installed if the total connected load exceeds the alternator output.
- (6) The alternator output is capable of meeting the total continuous load on the low voltage electrical system.
- (7) Where the gross vehicle weight rating (GVWR) is 26,000 lb (10,000 kg) or more, an auxiliary braking system is installed and operating correctly.
- (8) Ground and step lighting meets or exceeds the current standard.

Apparatus that were not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced.

more than 15 years old in first-line service.

It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard (see Section D.3). This will ensure that, while the apparatus might not totally comply with the current editions of the automotive fire apparatus standards, many of the improvements and upgrades required by the current editions of the standards are available to the fire fighters who use the apparatus.

- (9) Noise levels in the driving and crew compartment(s) meet the current standard, or appropriate hearing protection is provided.
- (10) All horns and sirens are relocated to a position as low and as far forward as possible.
- (11) Signs are present stating that no riding is allowed on open areas.
- (12) A pump shift indicator system is present and working properly for vehicles equipped with an automatic chassis transmission.
- (13) For vehicles equipped with electronic or electric engine throttle controls, an interlock system is present and working properly to prevent engine speed advancement at the operator's panel, unless either the chassis transmission is in neutral with the parking brake engaged, or the parking brake is engaged, the fire pump is engaged, and the chassis transmission is in pumping gear.
- (14) All loose equipment in the driving and crew areas is securely mounted in accordance with the current standard.

D.4 Proper Maintenance of Fire Apparatus. In addition to needed upgrades to older fire apparatus, it is imperative that all fire apparatus be checked and maintained regularly to ensure that they will be reliable and safe to use. The manufacturer's instructions should always be followed when maintaining the fire apparatus. Special attention should be paid to ensure that the following conditions, which are particularly critical to maintaining a reliable unit, exist:

- (1) Engine belts, fuel lines, and filters have been replaced in accordance with the manufacturers' maintenance schedule(s).
- (2) Brakes, brake lines, and wheel seals have been replaced or serviced in accordance with the manufacturers' maintenance schedule.
- (3) Tires and suspension are in serviceable condition, and tires are not more than 7 years old.
- (4) The radiator has been serviced in accordance with the manufacturer's maintenance schedule, and all cooling system hoses are new or in serviceable condition.
- (5) The alternator output meets its rating.
- (6) A complete weight analysis shows the fire apparatus is not over individual axle rating or total GVWR.
- (7) The fire pump meets or exceeds its original pump rating.
- (8) The water tank and baffles are not corroded or distorted.
- (9) If the apparatus is equipped with an aerial device, a complete test to original specifications has been conducted and certified by a certified testing laboratory.
- (10) If so equipped, the generator and line voltage accessories have been tested and meet the current standard.

D.5 Refurbishing or Replacing Fire Apparatus. Fire department administrators and fire chiefs should exercise special care when evaluating the cost of refurbishing or updating an apparatus versus the cost of a new fire apparatus. Apparatus that are refurbished should comply with the requirements of NFPA 1912. A thorough cost-benefit analysis of the value of upgrading or refurbishing a fire apparatus should be conducted. In many instances, it will be found that refurbishing costs will greatly exceed the current value of similar apparatus.

Some factors to consider and evaluate when determining whether to refurbish or replace a fire apparatus include the following:

- (1) What is the true condition of the existing apparatus? Has it been in a major accident, or has something else happened to it that would make spending significant money on it ill advised?
- (2) What advancements in design, safety, and technology have improved the efficiency and safety of personnel?
- (3) Does the current apparatus meet the program needs of the area it is serving? Is it designed for the way the fire department operates today and is expected to operate in the foreseeable future, or is the apparatus functionally obsolete? Can it carry everything that is needed to do the job without being overloaded?
- (4) If the apparatus is refurbished, will it provide the level of safety and operational capability of a new fire apparatus? It should be kept in mind that in many cases, refurbishing does not mean increasing the GVWR, so it is not possible to add a larger water tank or additional foam agent tanks or to carry massive amounts of additional equipment. Enclosing personnel riding areas might add enough weight to the chassis that existing equipment loads need to be reduced to avoid overloading the chassis.
- (5) What is the anticipated cost per year to operate the apparatus if it were refurbished? What would the cost per year be for a new apparatus? Insurance costs, downtime costs, maintenance costs, depreciation, reliability, and the safety of the users and the public all have to be considered. At what rate are those costs rising each year? Are parts still readily available for all the components on the apparatus? A refurbished 15-year-old apparatus still has 15-year-old parts in it. How long could the fire department operate without the apparatus if it suddenly needed major repairs?
- (6) Is there a current trade-in value that will be gone tomorrow? Most apparatus over 12 years old have little trade-in value. Are there creative financing plans or leasing options that can provide a new fire apparatus for little more than the cost of refurbishing or maintaining an older apparatus?

D.6 Conclusion. A fire apparatus is an emergency vehicle that must be relied on to transport fire fighters safely to and from an incident and to operate reliably and properly to support the mission of the fire department. A piece of fire apparatus that breaks down at any time during an emergency operation not only compromises the success of the operation but might jeopardize the safety of the fire fighters relying on that apparatus to support their role in the operation. An old, worn-out, or poorly maintained fire apparatus has no role in providing emergency services to a community.

Annex E History of NFPA 1901

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

E.1 History of Specification. A report of the NFPA Committee on Fire Engines adopted at the 1906 NFPA Annual Meeting included many of the provisions and test procedures since followed in standards for fire department pumping apparatus.

In 1911, at the convention of the International Association of Fire Engineers, the Committee of Exhibits conducted

Fiscal Year	Apparatus	Vehicle Year	Cost	
25-26	Engine 21	2007	1,200,000	
	Tanker 16	1989	700,000	
	Tanker 19	1995	700,000	
	Tanker 14	1997	700,000	
	Engine 13	2004	1,200,000	
	Ambulance 16-2	2008	500,000	
			5,000,000	
26-27	Tower 16	1982	2,300,000	
	Rescue Squad 21	1999	1,500,000	
	Ambulance 20-2	2010	525,000	
	Attack 19	1986	735,000	
	Ambulance 19-1	2008	525,000	
	Ambulance 13-2	2012	525,000	
			6,110,000	
27-28	Rescue Engine 20	2003	1,500,000	
	Tanker 13	2007	770,000	
	Engine 15	2008	1,325,000	
	Brush 11	1985	225,000	
	Brush 16	1970	225,000	
	Ambulance 21-2	2016	550,000	
	Engine/Tanker 12	2013	1,650,000	
			6,245,000	
28-29	Tanker 20	2010	805,000	
	Attack 16	1979	808,500	
	Ambulance 18-2	2018	575,000	
	Brush 20	1992	236,250	
	Attack 14	1999	800,000	
	Brush 19	1985	236,250	
	Ambulance 16-1	2016	575,000	
	Ambulance 17-1	2017	575,000	
			4,611,000	

29-30	Ambulance 14-1	2019	603,750	
	Ambulance 15-1	2019	603,750	
	Tanker 17	2015	845,250	
	Ambulance 11-2	2019	603,750	
	Ambulance 10-1	2019	603,750	
			3,260,250	
30-31	Ambulance 12-1	2021	633,937	
	Attack 12	2006	889,350	
	Brush 13	2003	260,465	
	Brush 14	2006	260,465	
	Brush 18	1986	260,465	
			2,304,682	
31-32	Ambulance 18-3	2022	660,000	
	Ambulance 13-1	2022	660,000	
	Attack 17		929,775	
	Engine 11	2017	1,560,000	
			3,809,775	
32-33	Quint 18	2018	2,800,000	
			2,800,000	
33-34	Ambulance 11-1	2025	726,000	
	Ambulance 22-1	2024	726,000	
	Ambulance 22-2	2024	726,000	
			2,178,000	
34-35	Brush 15	2015	312,558	
	Ambulance 12-2	2025	762,300	
	Ambulance 21-1	2025	762,300	
			1,837,158	
			38,155,865	

Existing Stations

- i. Nine (9) of eleven (11) existing stations are owned by volunteer companies and were not initially constructed for 24/7 crew assignment.
 - 1. Two (2) are county owned buildings and volunteer companies pay for second structure on each property used as ‘event centers” for fund raising operations.
 - 2. Two (2) volunteer stations have undergone renovations to living areas over last 36 months for approximately \$1.7 million.
 - a. Renovations were principally to living areas and not overall station or bays.
 - b. Committee has been developing criteria to set minimum standards for each of the stations and reviewing needs. Objective is to incorporate into annual CIP planning process.
 - 3. Funding has been a significant issue in addressing existing facility needs. Clear Brook was able to leverage existing proffer dollars available to finance over \$500,000 renovation and Greenwood has been utilizing a line of credit for financing approximately \$1.2 million project.

Station	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
FS11		1,215,500						122,250		
FS12	1,810,000						143,800			
FS13									258,000	
FS14				945,000						
FS15						65,500				
FS16			1,500,000	2,833,333	2,833,333	2,833,333				
FS17		1,500,000					2,420,000	2,420,000	2,420,000	
FS18							503,500			
FS19			1,700,500				158,000			
FS20					1,000,500					142,000
FS21								293,100		
FS22	2,500,000	2,500,000	2,500,000							
FS23		1,500,000								3,250,000
Totals	4,310,000	6,715,500	5,700,500	3,778,333	3,833,833	2,898,833	3,225,300	2,835,350	2,678,000	3,392,000

FY26 (7/1/2025 – 6/30/2026)

- FS12: Demolition of original buildings, construction of a new addition, roof replacement, kitchen upgrades \$1,810,000
- FS22: Construction begins on the new fire station \$2,500,000
- Total: \$4,310,000

FS27 (7/1/2026 – 6/30/2027)

- FS11: Construction of a living quarters addition, roof & window replacement, exterior waterproofing \$1,215,000
- FS17: Land search & acquisition, engineering & design costs for site assessments \$1,500,000
- FS22: Construction continues on the new fire station \$2,500,000
- FS23: Land search & acquisition costs (to capitalize on I-81 interchange redesign opportunities) \$1,500,000
- Total: \$6,715,500

FY28 (7/1/2027 – 6/30/2028)

- FS16: Land search & acquisition, engineering & design costs for site assessments \$1,500,000
- FS19: Construction of living quarters & apparatus bay additions \$1,700,500
- FS22: Construction ends on the new fire station \$2,500,000
- Total: \$5,700,500

FY29 (7/1/2028 – 6/30/2029)

- FS14: Construction of a living quarters addition and parking lot repairs \$945,000
- FS16: Construction begins on a new fire station \$2,833,333
- Total: \$3,778,333

FY30 (7/1/2029 – 6/30/2030)

- FS16: Construction continues on the new fire station \$2,833,333
- FS20: Construction of a living quarters addition, new roofing system on existing station \$1,000,500
- Total: \$3,833,833

FY31 (7/1/2030 – 6/30/2031)

- FS15: Building and grounds rehabilitation \$65,500
- FS16: Construction ends on the new fire station \$2,833,333
- Total: \$2,898,833

FY32 (7/1/2031 – 6/30/2032)

- FS12: Parking lot and grounds rehabilitation \$143,800
- FS17: Construction begins on a new fire station \$2,420,000
- FS18: Building and grounds rehabilitation \$503,500
- FS19: Parking lot, building, and grounds rehabilitation \$158,000
- Total: \$3,225,300

FY33 (7/1/2032 – 6/30/2033)

- FS11: Parking lot, building, and grounds rehabilitation \$122,250
- FS17: Construction continues on the new fire station \$2,420,000
- FS21: Parking lot, building, and grounds rehabilitation \$293,100
- Total: \$2,835,350

FY34 (7/1/2033 – 6/30/2034)

- FS13: Parking lot, building, and grounds rehabilitation \$258,000
- FS17: Construction ends on the new fire station \$2,420,000
- Total: \$2,678,000

FY35 (7/1/2034 – 6/30/2035)

- FS20: Parking lot, building, and grounds rehabilitation \$142,000
- FS23: Construction begins on a new fire station \$3,250,000
- Total: \$3,392,000