



INCIDENT MANAGEMENT TECHNOLOGY
FIRE RESPONSE SOFTWARE

PRISM REPORT 2 OF 3 • STANDARDS OF COVER — NFPA 1750

A Standards of Cover for the Fairview Fire & EMS Service Area

The formal, adoptable statement of the response performance this community's fire and EMS system commits to deliver — objectives sized to the risk classes established in Report 1, measured quarterly in Report 3.

DEMO COMMUNITY • EVERY FIGURE SYNTHETIC

PREPARED FOR

FAIRVIEW FIRE & EMS
(FICTIONAL)

STANDARD DATE

2026-08-04

VERSION

V1.1 • TEMPLATE DEMO

POWERED BY

IMT • PRISM

How to read this Standards of Cover

A Standards of Cover (SOC) is not a report about the fire department — it is a **commitment by the community**, adopted by its governing body, stating what response its risk requires and what performance it will hold the system to. This demo carries the complete production template: the same structure, standards basis (NFPA 1750 with the CFAI/CPSE Standards of Cover model), and adoption machinery, populated entirely with **synthetic demonstration data** consistent with [Report 1 \(CRA v2\)](#), the [Report 2 demo portal](#) and the [Report 3 scorecard demo](#).

IF YOU WANT...	GO TO
The one-page promise — what response the community gets	§03 (the adopted standard)
Why the time objectives are what they are	§01 (the physics) · §04 (the staffing math)
What the risk is that this standard must cover	§02 — imported from Report 1
Whether today's system can deliver it	§07 (achievability)
How compliance will be measured and reported	§08 · Report 3 scorecard
The adoption instrument for the governing body	§09
Definitions, standards cited, common questions	Appendices A–C

▶ THE THREE-REPORT CHAIN

Report 1 established what the risk is, zone by zone. **Report 2 (this document)** adopts response standards sized to those risk classes. **Report 3** measures actual performance against these standards, quarterly. All three cite the same hashed data artifact.

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01 Why response time matters	07 Achievability & benchmark context
02 Community risk summary	08 Measurement & accountability
03 The adopted standard	09 Adoption & resolution
04 Critical task analysis	A Standards & references
05 Alarm handling — NFPA 1225	B Glossary
06 Current deployment profile	C Questions governing bodies ask

The physics don't negotiate

Every standard in this document exists to protect a segment of the same short chain of minutes.

1.1 — Fire: the flashover clock

A modern furnished room reaches **flashover in 4–8 minutes** from open flame (UL FSRI / NIST fire-growth research — synthetic furnishings burn roughly five times faster than the legacy materials older standards were written around). Flashover is the moment the entire room ignites at once: survival inside ends, and the fire transitions from a one-room event to a structure event. Every minute of response time is spent against that clock — and 58% of Fairview's housing predates 1980, including balloon-frame rowhome blocks where flashover in one unit threatens the row.

1.2 — Medical: the survival clock

Cardiac-arrest survival falls roughly **7–10% for every minute** without CPR and defibrillation (AHA Chain of Survival). At 60% of demand, EMS is Fairview's majority service line; the same short-minutes logic sets the AED first-response objective (4:00 travel) and the 6-person cardiac-arrest force in §04.

1.3 — The cascade of events: who controls which minutes

SEGMENT	OBJECTIVE	CONTROLLED BY	WHAT IS HAPPENING
Detection & call	variable	Community	Fire grows / patient deteriorates until someone calls 911 — why smoke alarms and public-access AEDs are response-time programs
Alarm handling	1:04	Dispatch center (county PSAP)	Call answered, located, units dispatched (NFPA 1225)
Turnout	1:20 fire · 1:00 EMS	Fire companies	Crew to apparatus, en route — the segment the firehouse owns
Travel — first unit	4:00	Deployment (station locations)	First engine / first EMS unit driving
Travel — full force	8:00 / 10:10	Deployment + staffing	Assembling the effective response force (Low-Moderate / High)
Setup & intervention	~2:00	Training	Line stretched, water on fire / compressions started



THE TAKEAWAY

Against a 4–8 minute flashover window, the department-controlled segments total **6:24 at objective** (1:04 + 1:20 + 4:00). There is no slack in this chain — which is why each segment is measured separately, at the 90th percentile, in Report 3.

What this standard must cover

Full analysis in [Report 1 — Community Risk Assessment](#). The classifications below are the direct inputs to the objectives adopted in §03–§04.

COMPOSITE RISK R 7.5 Moderate · 1 High zone (Z-06)	DEMAND ZONES 4 · 4 · 2 urban · suburban · rural	POPULATION 34,800 19.2% over 65 · 38,900 daytime	ANNUAL DEMAND 2,410 60% EMS · +2.8%/yr	CONCURRENCY 23% calls beginning while committed
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PLANNING ZONE	RISK CLASS	R (1-25)	DEMAND ZONE	MODELED MEDIAN FIRST-DUE TRAVEL	STRUCTURES LACKING HYDRANT	POPULATION
Z-01 North Valley	LOW	4.6	RURAL	7:50	700	1,900
Z-02 West Ridge	MODERATE	6.9	SUBURBAN	5:40	320	3,600
Z-03 Old Mill / Downtown	MODERATE	8.2	URBAN	3:30	0	5,400
Z-04 Fairview Commons	MODERATE	7.6	URBAN	3:40	0	4,700
Z-05 Maple Glen	MODERATE	6.2	SUBURBAN	5:30	0	3,100
Z-06 Riverbend	HIGH	11.4	URBAN	3:45	0	4,900
Z-07 Stony Run	MODERATE	7.1	SUBURBAN	5:50	0	3,000
Z-08 Fox Hollow	LOW	5.2	SUBURBAN	6:10	290	900
Z-09 Academy Heights	MODERATE	7.8	URBAN	3:35	0	4,800
Z-10 Timber Gap	LOW	5.4	RURAL	7:30	930	2,500

- ▶ DATA STATE — COMPLETE
- This demo runs data-complete: risk classes rest on the full four-indicator probability axis including five years of incident history. Where a deployment begins with incident data pending (the production intake state), the imported classes carry a provisional flag and this section says so — the adopted standards attach to risk *classes*, not incident counts, so the standard survives the data refresh.

What we promise, zone by zone

Two framings, both adopted: station-based element objectives (each segment of the cascade, everywhere) and demand-zone totals (the end-to-end promise, scaled to density per NFPA 1750 Table 7.4.2). A response is compliant when it meets the objectives of its own zone, risk class and service line.

3.1 — Station-based element objectives (governing)

All zones · measured at the percentile shown

ELEMENT	OBJECTIVE	STANDARD	PERSONNEL
Alarm handling (call answer → dispatch)	1:04	90%	—
Turnout — fire	1:20	90%	—
Turnout — EMS	1:00	90%	—
Travel — first engine	4:00	90%	4
Travel — EMS first response (AED)	4:00	90%	2
Travel — ALS arrival	8:00	90%	2
Travel — ERF, Low / Moderate hazard	8:00	90%	20 / 28
Travel — ERF, High hazard	10:10	90%	42

3.2 — Demand-zone totals (NFPA 1750 Table 7.4.2)

DEMAND_ZONE	DENSITY	TOTAL_RESPONSE (CALL → 1ST UNIT)	STANDARD	MIN_STAFF	FAIRVIEW_ZONES
URBAN	>1,000/mi²	9:00	90%	15	Z-03 · Z-04 · Z-06 · Z-09
SUBURBAN	500–1,000/mi²	10:00	80%	10	Z-02 · Z-05 · Z-07 · Z-08
RURAL	<500/mi²	14:00	80%	6	Z-01 · Z-10

3.3 — EMS response objectives (integrated service line)

EMS is a co-equal service line, not an add-on — 60% of Fairview demand

EMS_OBJECTIVE	TOTAL_TIME	STANDARD	NOTES
First responder with AED on scene	6:04	90%	alarm 1:04 + turnout 1:00 + travel 4:00
ALS provider on scene	10:04	90%	MEDIC units — Stations 1, 3, 5
Cardiac-arrest response force (6)	10:24	90%	critical tasks in §4.4
Demand-zone totals	9:00 / 10:00 / 14:00	90 / 80 / 80%	same zone promise as fire

3.4 — Effective response force by hazard class

HAZARD_CLASS	TYPICAL_OCCUPANCY	CLASSIFIED_BUILDINGS (R1 §19)	ERF_PERSONNEL	ASSEMBLY_OBJECTIVE (TOTAL)
LOW	Detached single-family, outbuildings	10,090	20	10:24
MODERATE	Rowhomes, garden apartments, small commercial	2,326	28	10:24
HIGH	Industrial park · senior living · mall · schools	34	42	12:34

HAZARD CLASS	TYPICAL OCCUPANCY	CLASSIFIED BUILDINGS (R1 §19)	ERF PERSONNEL	ASSEMBLY OBJECTIVE (TOTAL)
Cardiac (EMS)	Out-of-hospital cardiac arrest	—	6	10:24

3.5 — Water-supply standard

ZONE TYPE	ADOPTED WATER-SUPPLY STANDARD
Hydranted areas (82% of structures)	Creditable hydrant within 1,000 ft (ISO); first-due engine establishes supply from the municipal system; target residential fire flow ≈1,000 gpm @ 20 psi
Non-hydranted areas (Z-01 · Z-10 · fringes)	NFPA 1142 rural water operations — tanker shuttle from Stations 4–5 with portable dump tanks, dry hydrants (Ridge Rd, Timber Gap Rd) and lake/creek draft points; sustained flow beyond ~750 gpm requires automatic-aid tankers on the initial alarm
High-hazard exception	Riverbend Industrial Park dead-end main is credited at 1,800 gpm against a 3,500 gpm High-hazard target — aid tankers on the first alarm and a second-main capital request (CRR watch item) until corrected

3.6 — Derived totals & measurement discipline

- DERIVED PLANNING TOTALS — CALL RECEIVED → ON SCENE
First engine **6:24** · ERF Low/Moderate **10:24** · ERF High **12:34**. Observed 90th percentiles are computed from incident-level totals, never by summing component percentiles (the segments' slow tails are different incidents).

Where the ERF numbers come from

ERF counts are not opinions — each is the sum of tasks that must happen simultaneously to stop the event. Totals below reconcile exactly to the adopted ERFs in §3.4.

4.1 — Low hazard • ERF 20

FIREGROUND TASK	FIREFIGHTERS	WHY IT CANNOT BE SKIPPED
Incident command	1	One officer runs the incident — tracks every crew, makes the strategy calls.
Command aide / accountability	1	Keeps a live roster of who is inside the building and where.
Pump operator / water supply	1	Runs the engine's pump — no pump operator, no water pressure.
Hydrant / supply-line support	1	Connects the engine to the hydrant so the attack does not run out of water.
Attack line (interior fire attack)	2	The hose team that actually puts water on the fire. Minimum two, never alone.
Backup line	2	A second charged line protecting the attack crew's escape route.
Line support (door control, hose advance)	2	Feeds hose around corners and controls doors — an attack line stalls without it.
Primary search and rescue	2	Searches for trapped occupants while the attack crew works — cannot be the same people.
Ventilation	2	Opens the building to release heat and smoke so crews can see and occupants can breathe.
Rapid intervention crew (RIC)	4	A standby rescue team for the firefighters themselves — required by federal rule (OSHA two-in/two-out).
Initial medical care / rehab	2	Treats occupants and rotates exhausted crews before they become casualties.
Effective response force	20	+1 aerial operator when an aerial apparatus is used (21).

4.2 — Moderate hazard • ERF 28

FIREGROUND TASK	FIREFIGHTERS	WHY IT CANNOT BE SKIPPED
Incident command	1	Single point of strategy and control.
Command aide / accountability	1	Live tracking of more crews across a bigger building.
Pump operators (two engines)	2	Two supply/attack engines pumping simultaneously.
Water supply / hydrant support	1	Sustained big-flow water from the hydrant system.
Attack lines (three lines)	6	Multiple hose teams — fire in larger buildings spreads on more than one front.
Line support	3	Hose advance and door control for three working lines.
Primary search and rescue	4	More occupants, more floor area — two search teams.
Ventilation	4	Coordinated roof/horizontal ventilation on a larger structure.
Rapid intervention crew (RIC)	4	Standby firefighter-rescue team (OSHA two-in/two-out).
EMS / rehab	2	Occupant care and crew rotation.
Effective response force	28	+1 aerial operator when an aerial apparatus is used (29).

4.3 — High hazard • ERF 42

FIREGROUND TASK	FIREFIGHTERS	WHY IT CANNOT BE SKIPPED
Incident command + operations chief	2	Command splits: one officer on strategy, one running the fire floor.

FIREGROUND TASK	FIREFIGHTERS	WHY IT CANNOT BE SKIPPED
Accountability / lobby control	2	Staging and tracking of many crews entering a complex building.
Pump / aerial operators	3	Multiple engines and an aerial working at once.
Water supply	2	Large-diameter supply lines and standpipe/sprinkler support.
Attack lines (four lines)	8	High-hazard occupancies demand simultaneous attack on multiple fronts.
Backup / line support	4	Protection and hose movement for four working lines.
Search and evacuation teams	8	Occupants who cannot self-evacuate (patients, students, residents) must be moved by crews.
Ventilation / building-systems support	4	Ventilation plus control of HVAC, elevators, and fire-protection systems.
Rapid intervention crews (two)	6	Bigger building, more crews inside — two standby rescue teams.
EMS / rehab / firefighter medical	3	Mass-care capability and mandatory crew rotation.
Effective response force	42	+1 fire-pump operator where a building fire pump must be monitored (43).

4.4 — Cardiac arrest (high-performance CPR) · ERF 6

EMS TASK	PROVIDERS	WHY IT CANNOT BE SKIPPED
Chest compressions (two, rotating)	2	Continuous high-quality compressions are the #1 survival driver; compressors must swap every ~2 minutes.
Airway & ventilation	1	Bag-valve-mask then advanced airway — oxygen has to keep moving while compressions continue.
Defibrillation / monitor	1	Runs the AED/monitor and delivers shocks; the second survival driver after compressions.
IV/IO access & medications	1	Establishes a line and pushes resuscitation drugs on the ACLS clock.
Team leader / code commander	1	Runs the resuscitation, tracks the algorithm and timing, and decides transport — a hands-off role.
Effective response force	6	4 is the functional minimum; 6 enables uninterrupted high-performance CPR.

4.5 — ALS emergency (non-arrest) · ERF 4

EMS TASK	PROVIDERS	WHY IT CANNOT BE SKIPPED
Lead paramedic (assessment + ALS)	1	Performs the advanced assessment and interventions (12-lead, airway, drugs) that define ALS care.
Second provider (meds, packaging)	1	Prepares medications, obtains vitals, and packages the patient so the paramedic stays on care.
Airway / monitoring support	1	Maintains airway and monitoring during movement — the highest-risk phase for deterioration.
Driver / transport	1	Operates the ambulance; on a transporting system this seat leaves the district for the duration.
Effective response force	4	First-response crew + transport crew.

4.6 — BLS / routine medical · ERF 2

EMS TASK	PROVIDERS	WHY IT CANNOT BE SKIPPED
EMT lead (assessment + care)	1	Assesses and treats at the BLS scope and owns patient care through transport.
EMT / driver	1	Assists with care and lifting, then drives — a transporting crew cannot run on one person.
Effective response force	2	Standard two-person transporting crew.

► WHY EMS CRITICAL TASKING IS IN A FIRE SOC

The same dual-role personnel deliver both service lines — the crew on the ambulance is the crew that is not on the engine. A cardiac arrest commits 6 people for 45–80 minutes; a transport commits an ambulance ~55 minutes median. That is why EMS critical tasking, and the concurrency it creates (§07), belongs in the Standards of Cover rather than a separate document.

The dispatch center's segment

Fairview is dispatched by the county PSAP. The alarm-handling segment is owned by the communications center, adopted here so the end-to-end promise has no unmeasured gap.

ALARM-HANDLING ELEMENT	OBJECTIVE	STANDARD	OWNER
Call answering	15 s	95%	County PSAP
Alarm processing (answer → dispatch)	64 s (1:04)	90%	County PSAP
Emergency medical dispatch (pre-arrival instructions)	concurrent with dispatch	100% of cardiac/CPR calls	County PSAP
Dispatch → station alerting	immediate (simultaneous)	–	County PSAP + station alerting system



WHAT THE DEPARTMENT CONTROLS – AND DOESN'T

The fire department cannot shorten this segment; it can only measure it and hold the PSAP to the NFPA 1225 intervals through the county service agreement. Report 3 reports alarm handling separately so a dispatch delay is never mistaken for a turnout or deployment problem.

What the system fields today

The deployment this standard will be measured against — five stations, a dual-role career/volunteer workforce, and two automatic-aid partners.

STATION	ADDRESS (DEMO)	STAFFING MODEL	APPARATUS	FIRST-DUE ZONES
Station 1 — HQ	101 Main Street, Fairview	Career (4 on duty/shift)	ENG 1 · ENG 1-2 · LAD 1 · RES 1 · AMB 1 · MEDIC 1	Z-03, Z-09 (urban core)
Station 2	420 Commons Boulevard, Fairview	Career (3 on duty/shift)	ENG 2 · TWR 2 · AMB 2	Z-04 (urban), Z-05 (suburban)
Station 3	88 Riverbend Road, Fairview	Combination (2 career weekdays + volunteer)	ENG 3 · ENG 3-2 · RES 3 · AMB 3 · MEDIC 3	Z-06 (urban — High), Z-07, Z-08
Station 4	1240 West Ridge Pike, Fairview	Volunteer	ENG 4 · BRUSH 4 · TANKER 4 · AMB 4	Z-02 (suburban), Z-10 (rural WUI)
Station 5	35 North Valley Road, Fairview	Volunteer	ENG 5 · TANKER 5 · AMB 5 · MEDIC 5	Z-01 (rural)

Automatic aid

AUTOMATIC-AID PARTNER	UNITS ON FAIRVIEW ASSIGNMENTS	ROLE
Millbrook Township Fire Department	AID ENG 21 · AID LAD 22	Runs on all structure assignments in Z-06/Z-07; second ladder for High-hazard ERF
Twin Pines Fire-Rescue	AID ENG 34 · AID MEDIC 91	Runs on structure assignments in Z-01/Z-02; ALS backfill when MEDIC units committed

Deployment elements

DEPLOYMENT ELEMENT	STATUS
Engine companies	6 engines across 5 stations (ENG 1, 1-2, 2, 3, 3-2, 4, 5 — 7 incl. reserves)
Aerial capability	LAD 1 (Station 1) · TWR 2 (Station 2)
Rescue / special operations	RES 1 · RES 3 · BRUSH 4
Tanker water (rural)	TANKER 4 · TANKER 5 + aid tankers on initial rural alarms
EMS transport	AMB 1-5 (all stations transport-capable)
ALS capability	MEDIC 1 · MEDIC 3 · MEDIC 5
On-duty career strength	7 (Station 1: 4 · Station 2: 3; Station 3: 2 career weekdays)
Volunteer operational roster	82 members
Daytime assemble-able force (modeled)	~21 — below the Moderate ERF of 28
Overnight assemble-able force (modeled)	~34 — volunteer availability roughly doubles
ISO PPC	Class 4 (hydranted) / 9 (unhydranted areas)

Can this deployment deliver this standard?

A standards document, not a press release: the gaps are stated here and measured quarterly in Report 3.

Modeled first-due travel vs. the objective

NFPA 1750 TRAVEL OBJECTIVE	TARGET (90%)	MODELED COVERAGE (R1 §08)	READ
First engine 4:00	90% of responses	47% of population within the band	Achievable in the urban core only; suburban/rural zones rely on their demand-zone totals
ERF Low/Moderate travel 8:00	90%	88% of population within 8:00 of any engine	Geometrically reachable — staffing, not geography, is the constraint
Demand-zone totals 9:00/10:00/14:00	90/80/80%	All zones within their total at modeled 90th travel except Z-01/Z-10 (marginal)	The density-scaled promise the zones are entitled to

ERF capability — requirement vs. assemble-able force

HAZARD CLASS	REQUIRED ERF	ASSEMBLE-ABLE (DAY / NIGHT, MODELED)	GAP (DAY)	AID RELIANCE
LOW 20	20	~21 / ~34	±0	None routine
MODERATE 28	28	~21 / ~34	-7	1 aid company on daytime alarms by design
HIGH 42	42	~21 / ~34	-21	Both aid partners + full recall — every High-hazard alarm
Cardiac 6	6	6 (2 units)	±0	Aid MEDIC 91 when MEDICs committed



THE HONEST GAP

Fairview's on-duty career strength is 7. Every ERF above Low requires volunteer turnout and/or automatic aid **by design**. The daytime assemble-able force (~21) sits below the Moderate ERF of 28 — and Report 3 measured only **24% of ERF-qualifying incidents assembling the required force in time**. Closing this is CRR priority 1 (Report 1 §20); until then the standard states the requirement and the scorecard reports the distance to it.

How these targets compare — national benchmark context

ADOPTED OBJECTIVE	NATIONAL REFERENCE POINT
First-engine travel 4:00 / 90%	Consistent with the ISO FSRS expectation of an engine company within 1.5 road miles, and the NFPA 1750 station-based (career) branch
Demand-zone totals 9:00 / 10:00 / 14:00	The NFPA 1750 Table 7.4.2 density intervals (volunteer/combination lineage) — urban 90%, suburban/rural 80%
ERF 20 / 28 / 42 by hazard class	Equivalent to the initial-alarm structure assignment (3–4 engines, truck, command) of a comparable combination system
Alarm handling 64 s / 90%	The NFPA 1225 national dispatch-performance interval, unchanged
Creditable hydrant within 1,000 ft	The ISO FSRS creditable-hydrant radius — the measure behind Fairview's PPC 4/9 split
90th-percentile measurement	The CFAI/CPSE accreditation model's required statistic for response-performance reporting

Concurrent-call & unit availability — the shared-pool constraint

WHAT THE SHARED POOL MEANS	CONSEQUENCE FOR THE STANDARD
One dual-role workforce fields both service lines	Every EMS commitment subtracts from fire capability — and vice versa

WHAT THE SHARED POOL MEANS	CONSEQUENCE FOR THE STANDARD
23% of 2025 calls began while the department was committed (peak: 4 simultaneous)	Overlapped calls carry a measurable 90th-percentile penalty (Report 3 §05) — concurrency is a performance metric, not a footnote
A cardiac arrest commits 6 people for 45–80 min; a transport commits an ambulance ~55 min median	EMS demand growth (+2.8%/yr, 60% share) converts directly into fire-protection degradation
Demand peaks 09:00–19:00, when volunteer availability is weakest	The daytime ERF gap and the concurrency exposure compound — the binding constraint on this standard

How this standard gets audited

Adopting a standard means adopting its measurement rules. These are the rules.

RULE	SPECIFICATION
Statistic	90th percentile, never averages; fire and EMS reported separately
Compliance judgment	Per response, against that response's own zone, risk class and service-line objective — then aggregated
Clock points	Alarm = call answer → dispatch · Turnout = dispatch → en route · Travel = en route → first arrival · ERF = event create → arrival of the unit completing the force
Totals	Total-response 90ths computed from incident-level totals — never by summing segment percentiles
Segmentation	By planning zone, demand zone, station, service line and time-of-day, per quarter
Limited data (LTD)	Fewer than 50 qualifying responses in a cell → median reported and flagged; no 90th on thin data
Source	CAD incident records (county dispatch export), reconciled against NFIRS incident counts
Exclusions	Mutual aid given outside the service area; non-emergency transfers; records with missing timestamps (count disclosed)
Publication	PRISM Service Delivery Scorecard (Report 3) — quarterly dashboard + annual printed compliance report to the Township Board, CPSE-format annual baseline table

The instrument

A Standards of Cover binds when the governing body adopts it. This is the template adoption instrument, completed here with demo parties.

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RESOLUTION (DEMO TEMPLATE)

WHEREAS the Fairview Township Board has received the PRISM Community Risk Assessment (Report 1) establishing the community's risk classes; and **WHEREAS** NFPA 1750 directs the adoption of response-time objectives and effective-response-force standards sized to those classes; **NOW THEREFORE BE IT RESOLVED** that the Board adopts this Standards of Cover as the performance standard for Fairview Fire & EMS, directs quarterly measurement against it (Report 3), and directs annual review per NFPA 1750 §10.3.2.1.

Adopted: _____ (date) · Board chair: _____ · Fire Chief: _____ · Attest: _____

Re-ratification triggers

#	RE-RATIFICATION TRIGGER
1	Any planning zone changes NFPA 1750 risk category in a PRISM CRA refresh
2	A new station, staffing model, or automatic-aid agreement materially changes first-due coverage or ERF assembly
3	Two consecutive quarters of missed High-hazard ERF (the Report 1 §20 performance trigger)
4	Annual review by the governing body (due 2027-08-03), informed by the Report 3 scorecard; full re-adoption with the 3-year re-score (due 2029-08-03)

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STATUS

Demo instrument — in production this section renders the artifact `prism.soc_standards/1` with status *draft_pending_adoption* until the governing body acts, then records the resolution date and signatories.

Standards & references

Every standard this document cites, what it governs, and where it is used.

REFERENCE	WHAT IT GOVERNS	WHERE THIS DOCUMENT USES IT
NFPA 1750 (2026) Standard for the Organization and Deployment of Fire Suppression Operations, EMS, and Special Operations	The governing deployment standard — response-time objectives, ERF sizes, demand zones, risk categories	§03–§04 (all objectives and ERFs); §02 risk categories (§10.3.6); Table 7.4.2 demand zones
NFPA 1300 Standard on Community Risk Assessment and CRR Plan Development	How the companion CRA is built	Governs Report 1, whose conclusions §02 imports
NFPA 1225 (2022) Standard for Emergency Services Communications	Alarm answering and processing performance	§05 — answering 15 s / 95%, processing 64 s / 90%
NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting	Rural water planning without hydrants	§3.5 — tanker shuttle standard for Z-01 / Z-10
NFPA 291 Recommended Practice for Water Flow Testing and Marking of Hydrants	Hydrant flow testing and classification	The creditable-hydrant and flow-compliance analysis imported from Report 1 §09
NFPA 450 Guide for Emergency Medical Services and Systems	How a community organizes an EMS system	Framing of the integrated EMS service line (§3.3, §4.4–4.6)
ISO FSR5 / PPC Insurance Services Office — Fire Suppression Rating Schedule / Public Protection Classification	Insurer grading of community fire protection	1,000-ft creditable-hydrant radius; engine-distribution context; Fairview PPC 4/9
OSHA 29 CFR 1910.134(g)(4) Respiratory protection — interior structural firefighting (two-in/two-out)	Standby rescue crew required before interior entry	Why every fire critical-task table carries a rapid intervention crew
CFAI / CPSE (10th Ed.) Commission on Fire Accreditation International — CRA/SOC model	The accreditation model defining the SOC document type and benchmark-vs-baseline discipline	This document's structure; §07–§08 measurement discipline
UL FSRI / NIST Fire-growth research	Modern rooms reach flashover in as little as 4–8 minutes	§1.1 — the basis of the first-engine objective
AHA Chain of Survival American Heart Association resuscitation science	Survival falls 7–10%/minute without CPR/defibrillation	§1.2 and the cardiac ERF (§4.4)
CAAS Commission on Accreditation of Ambulance Services	EMS-side accreditation benchmark	Benchmark context for the EMS service line

Glossary

TERM	MEANING
Standards of Cover (SOC)	A formal, adopted statement of the service level a community's fire and EMS system commits to deliver.
Community Risk Assessment (CRA)	The companion analysis (Report 1) inventorying what is at risk: people, buildings, hazards, coverage.
Effective Response Force (ERF)	The full crew that must assemble to perform every critical task at once — not just the first engine.
First due	The first-arriving unit for a location; a station's first-due area is the territory it is expected to reach first.
Alarm handling	Time from the 911 call being answered to units being dispatched.
Turnout time	Time from dispatch to wheels rolling — crews donning gear and boarding.
Travel time	Time from wheels rolling to arrival. The segment station locations control.
Total response time	Call answer → intervention: alarm handling + turnout + travel (+ setup).
90th percentile	The value 9 of 10 incidents beat. Used instead of averages, which hide the slow tail.
Hazard class (Low/Moderate/High)	NFPA 1750 grouping of buildings by the response a working fire there demands.
Planning zone	The geographic analysis units — here, Fairview's ten zones (Z-01...Z-10).
Demand zone	NFPA 1750's density classification (urban/suburban/rural) that scales the total-response promise.
Flashover	The moment an entire room ignites at once; survival inside ends.
Rapid intervention crew (RIC)	A standby team whose only job is rescuing firefighters — federally required before interior entry.
Automatic / mutual aid	Pre-arranged neighboring-department help; automatic aid is dispatched on the initial alarm.
Creditable hydrant	A hydrant within 1,000 ft of a property (ISO FSRs).
ALS / BLS	Advanced (paramedic) / Basic (EMT) Life Support.
Service line	A distinct service one agency delivers — here fire and EMS, each measured against its own objectives.
High-performance CPR	Choreographed multi-provider resuscitation: continuous compressions, minimal pauses, rotating compressors.
Concurrent-call depletion	A committed crew is unavailable for the next call — in a dual-role system, EMS commitments deplete fire capability.
Unit-hour utilization (UHU)	The fraction of a crew's on-duty hours committed to calls.
Transport	Carrying the patient to hospital — Fairview's ambulances transport, tying crews up ~55 min median.
CAD	Computer-Aided Dispatch — the 911 incident records that measure actual performance.
Benchmark vs. baseline	Benchmark = the adopted goal (this document). Baseline = measured performance (Report 3).

Questions governing bodies ask

The eight questions every board asks about a Standards of Cover, answered with this community's numbers.

1. What does adopting this document commit the township to?

A performance standard and its measurement — not a budget. Adoption commits the Board to stating the objectives (§03), receiving quarterly measurement against them (Report 3), and reviewing annually. Resource decisions remain the Board's, made against honest numbers.

2. Does adopting a standard we don't fully meet today create legal exposure?

The accreditation model says the opposite: a community that documents its risk, adopts objectives sized to it, states its gaps (§07), and measures publicly is in a stronger position than one with no standard at all. The gap statement — daytime ERF ~21 vs 28 — is in the document on purpose.

3. What happens when performance misses the standard?

The miss is reported (Report 3, quarterly), diagnosed by segment (alarm / turnout / travel / assembly), and feeds the CRR priorities in Report 1 §20. Two consecutive quarters of missed High-hazard ERF is a re-ratification trigger (§09).

4. Why measure at the 90th percentile instead of the average?

Averages hide the slow tail — the responses where the standard matters most. The 90th percentile is the CFAI/CPSE-required statistic: the promise 9 of 10 callers actually receive.

5. What would it take to close the modeled first-engine gap?

The 4:00 engine covers 47% of population from today's five stations; geometry caps it — the practical lever is the daytime staffing gap, not new stations. CRR priority 1 (duty-crew program at Stations 3–5) attacks the ERF miss directly; a sixth station is a capital question the Board would take up only if Report 3 shows the demand-zone totals failing.

6. Who produces the measurements, and what do they cost?

Report 3 computes automatically from the county CAD export against this document's objectives — no manual tabulation. The marginal cost of accountability is near zero once the standard is adopted.

7. What about the homes without hydrants?

2,020 homes (17.2%, \$0.50B assessed) are beyond creditable hydrant distance. Their standard is §3.5: NFPA 1142 tanker operations with aid tankers on the initial alarm — a different water supply, the same response-time promise for their demand zone (14:00 @ 80% rural).

8. Why are fire and EMS in one document instead of two?

Because one workforce delivers both. EMS is 60% of demand, commits the same people (a cardiac arrest holds 6 for 45–80 minutes), and drives the concurrency that degrades fire response (23% of calls begin while committed). Splitting the documents would split accountability for a single shared capacity.

PROVENANCE (DEMO)

Artifact: prism.soc_standards/1 · soc-standards_fairview-demo · derived from cra-run_fairview-demo · Formula v1.3 · Rendered 2026-08-04. Reports 1 and 3 cite the same artifact chain.

