

Fiscal Note for Amendment to 13 NCAC 15 .0103

Rule Citation: 13 NCAC 15 .0103

Rule Topic: Definitions

DOL Division: Elevator and Amusement Device Bureau

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Impact:

State:	Yes
Local:	Yes
Substantial:	Yes
Private:	Yes

Authority: G.S. 95-110.3; 95-110.5; 95-111.3; 95-111.4; 95-117; 95-120

1. Purpose of the Proposed Rule

The purpose of the proposed amendments is to clarify and update definitions applicable to the Elevator and Amusement Device Bureau, with particular emphasis on revising the definition of “alteration.” The amendments align the State’s regulatory framework with nationally recognized safety standards, including ASME A17.1, by limiting the scope of work that requires alteration permits and inspections. The proposed rule is intended to improve regulatory efficiency, reduce unnecessary permitting and inspection requirements, and provide greater clarity to regulated entities.

2. Background

Under the current rule, a broad range of activities are classified as “alterations,” requiring permits and inspections regardless of whether such work necessitates testing under nationally recognized safety standards. As a result, inspections are conducted for activities that are considered routine or low risk under industry standards.

The proposed amendments revise the definition of “alteration” to exclude certain activities that do not require testing under applicable codes. These activities include software changes, fire panel changes, suspension means replacements, car gate and hoistway door replacements, car operating panel replacements, and travel cable replacements. By excluding these activities, the rule aligns North Carolina’s requirements with national standards and industry practices.

3. Description of Affected Parties

The proposed rule affects elevator contractors and mechanics, building owners and operators, property managers, and other businesses and institutions that own or operate regulated devices. These entities are currently responsible for obtaining alteration permits and coordinating inspections under existing rules.

4. Baseline and Post-Implementation Comparison

Under current conditions, the Department conducted 1,980 alteration inspections during State Fiscal Year 2024–2025, including 185 reinspections. This fiscal year is assumed to represent a typical year. Many of these inspections are associated with activities that do not require testing under national safety standards. Regulated entities are required to obtain permits and schedule inspections for such activities.

Following implementation of the proposed rule, the number of alteration permits and inspections is expected to decrease by approximately 50 percent. Certain routine or lower-risk activities will no longer require alteration permits or inspections, and regulatory requirements will more closely align with national standards. This change represents a reduction in regulatory burden and administrative requirements for affected entities.

5. Cost Analysis

The proposed rule is expected to reduce inspection workload for the Department, reduce compliance costs for regulated entities, and reduce state inspection fee revenue, the extent of which may be partially offset by other fee-generating activities and a reduced need to pay overtime in the form of compensatory time to elevator inspectors.

Based on current data, approximately 990 inspections annually would no longer be required. Inspections associated with the affected activities typically require between 30 minutes and two hours to complete. Using this range, the estimated reduction in staff time is between 495 hours (at 30 minutes per inspection) and 1,980 hours (at two hours per inspection) annually.

In addition to the operational efficiencies gained by the State, the Department estimates that the proposed rule will eliminate approximately 1,000 hours of overtime work annually. Overtime is compensated through the accrual of compensatory time at a rate of 1.5 hours for each overtime hour worked. Based on inspector salaries ranging from \$72,100 to \$93,038 per year (approximately \$113,591 to \$144,228 including benefits), the fully loaded hourly compensation rate is estimated at \$54 to \$69. Accordingly, avoiding 1,000 hours of overtime and the associated accrual of 1,500 hours of compensatory time is valued at approximately \$81,000 to \$103,500 annually.

The Department anticipates needing less overtime work and using any freed-up time for other inspections and regulatory activities, including higher-risk alterations and other fee-generating inspections.

With respect to fee revenue, the reduction in alteration permits will reduce revenue associated with those permits. To the extent that inspectors reallocate time to other fee-generating inspections, some of that revenue loss may be offset. The primary focus of the additional inspector time will be on compliance inspections. The fee for compliance or routine inspection is \$200. A compliance inspection takes approximately 30 minutes. However, because the magnitude of such offsetting revenue is uncertain and cannot be reasonably estimated, the analysis does not assume a net revenue-neutral effect in the base-case fiscal scenario.

For the private sector, the proposed rule results in direct and ongoing cost savings. Under G.S. 95-110.5A, alteration permit fees are the greater of \$200 or one percent of the contract price. For purposes of this analysis, it is assumed that the affected activities represent smaller alterations subject to the \$200 minimum fee, although some permit fees for larger alterations could exceed that amount.

Based on an estimated reduction of 990 alteration permits annually, private-sector savings from avoided permit fees are estimated as follows:

- 990 permits $\times$ \$200 = \$198,000 annually

Over a five-year period, estimated savings are approximately \$990,000.

The estimated \$990,000 in private-sector savings over five years assumes that all affected alteration permits are subject to the \$200 minimum fee. To the extent any of the excluded activities qualify as larger alterations where the fee equals 1% of the contract price, actual savings could be higher.

In addition to avoided permit fees, regulated entities will experience unquantified cost savings associated with reduced administrative time, decreased scheduling delays, and reduced operational downtime. These additional savings are expected to increase the total economic impact beyond the quantified estimate.

Roughly 9.4% of elevators are owned by local governments. As a result, approximately \$93,000 of the savings would be to local governments.

6. Benefits of the Proposed Rule

The proposed amendments provide several significant benefits. By eliminating permitting and inspection requirements for low-risk activities, the rule improves regulatory efficiency and reduces unnecessary administrative burden on regulated entities. Aligning State requirements with nationally recognized safety standards simplifies compliance, particularly for contractors

and businesses operating across multiple jurisdictions, and reduces confusion regarding regulatory expectations.

The reduction in lower-risk inspections allows the Department to reallocate approximately 990 staff hours annually to higher-risk inspections and enforcement activities. This more targeted use of inspection resources is expected to enhance overall public safety by focusing attention on alterations that require comprehensive testing and present greater risk. Inspectors will use any savings in time to conduct compliance inspections. These inspections confirm elevators with safety violations that do not rise to the level of a shutdown order have corrected said violations. Time spent on compliance inspection should reduce the incidence of elevator failure.

Additionally, the rule promotes a more economical use of State resources by reducing time spent on inspections that do not materially impact safety outcomes, while improving the effectiveness of the regulatory program as a whole.

7. Net Present Value

The proposed rule is expected to generate approximately \$198,000 in annual private-sector savings and an equivalent annual reduction in state inspection fee revenue. Discounted over five years at 7 percent, the present value of these annual impacts is approximately \$811,839 on each side. Accordingly, the quantified NPV effect is neutral when private-sector savings and state revenue losses are treated as offsetting impacts from a budgetary perspective. Although the Department may redeploy inspection staff to other fee-generating activities and will incur overtime savings, that potential offset is uncertain and is not included in the NPV calculation.

In addition, the Department estimates annual savings of approximately \$81,000 to \$103,500 from reduced accrual of compensatory time resulting from fewer overtime hours worked. These estimates reflect the value of compensatory time that would no longer be earned, rather than reductions in employee wages. Discounted over five years at 7 percent, the present value of these savings is approximately \$330,000 to \$425,000. These savings represent a fiscal benefit to the State and are separate from the revenue effects associated with alteration permits.

8. Alternatives Considered

One alternative considered was to maintain the current rule without modification. Under this approach, the existing definition of “alteration” would remain in place, and permits and inspections would continue to be required for activities that do not necessitate testing under national safety standards. The Department has evaluated these activities and does not expect an increase in safety risk under the proposed rule, as the excluded work is consistent with nationally recognized safety standards and is generally considered low-risk. This alternative was not selected because it would continue to impose unnecessary regulatory burden, increase costs for

regulated entities, and fail to align State requirements with industry standards, without providing a compensating safety benefit.

A second alternative considered was to partially revise the definition of “alteration” by excluding only certain activities, such as software changes and fire panel changes, while continuing to require permits and inspections for other activities, including suspension means replacements and door replacements. The Department has determined that the excluded activities are low-risk and consistent with nationally recognized safety standards, so maintaining inspections for only a subset of these activities would not provide a meaningful safety benefit. This alternative was not selected because it would create inconsistency in regulatory application, reduce clarity for regulated entities, and only partially align with national standards. The proposed rule provides a more comprehensive, consistent, and safety-aligned approach.

9. Determination of Substantial Economic Impact

The proposed rule results in estimated private-sector cost savings of approximately \$990,000 over a five-year period based on avoided permit fees, with a corresponding net present value of approximately \$811,839 when discounted at 7 percent. The rule will also generate estimated state fiscal savings of approximately \$81,000 to \$103,500 annually from reduced accrual of compensatory time associated with fewer overtime hours worked, with a discounted present value of approximately \$330,000 to \$425,000 over five years. These savings are separate from, and in addition to, the quantified private-sector savings.

At the same time, the rule will reduce state inspection fee revenue by an amount approximately equivalent to the annual permit fee savings. Although some of that revenue loss may be offset by redeployment of inspection staff to other fee-generating activities, the extent of that offset is uncertain and is not reflected in the quantified analysis.

When both the quantified costs and benefits – including private-sector savings, state fiscal savings from reduced compensatory time accrual, and the remaining unquantified impacts – such as reduced administrative burden, operational efficiencies, and potential changes in state fee revenue -- are considered together, the rule’s total economic impact is expected to meet or exceed the statutory threshold of one million dollars (\$1,000,000). Accordingly, the rule is expected to have a substantial economic impact as defined in G.S. 150B-21.4.

10. Conclusion

The proposed amendments to 13 NCAC 15 .0103 clarify regulatory requirements, align State rules with national standards, and reduce unnecessary permitting and inspection requirements. The rule improves regulatory efficiency, reduces costs for the regulated community, and allows

the Department to focus resources on higher-risk activities, thereby enhancing the effectiveness and safety outcomes of the State's regulatory program.

13 NCAC 15 .0103 DEFINITIONS

(a) The definitions found in G.S. 95-110.3, 95-111.3 and 95-117 ~~shall apply to the rules in this Chapter. are applicable throughout this Chapter unless a different meaning is plainly required by the context.~~

(b) The following definitions also apply throughout this Chapter.

- (1) ~~The term "alteration"~~ "Alteration" means any change made to an existing device or piece of equipment other than ~~the repair or replacement of damaged, worn or other parts necessary for operation.~~ general maintenance, repairs, or replacements which are not required to be tested in accordance with Part 8 of A17.1 - American National Standard Safety Code for Elevators and Escalators. This standard is hereby incorporated by reference, including subsequent amendments and editions. Copies are available for public inspection in the office of the Bureau, and may be obtained from the American Society of Mechanical Engineers (ASME), via U.S. Mail at Two Park Avenue, New York, New York 10016-5990, via telephone at (800) 843-2763, or via the internet at www.asme.org. The cost is four-hundred and twenty-five dollars (\$425.00) per copy.
- (2) ~~The term "division"~~ "Bureau" means the Elevator and Amusement Device ~~Division~~ Bureau of the North Carolina Department of Labor.
- (3) "Device" or "Equipment" means elevators, lifts, amusement devises, and all other items regulated by the Bureau pursuant to Chapter 95 of the General Statutes.
- (4) "Elevator Safety Code" means the standards set forth in the American National Standard Safety Code for Elevators and Escalators A17.1, A18.1, A17.8, A10.4, A90.1, and E1.42.
- ~~(3)~~ (5) ~~The term "existing"~~ "Existing installation" means any device or equipment, the application for the installation of which was filed with the department or the installation of which was completed before the effective date of the rules ~~and regulations which are~~ currently in effect.
- ~~(4)~~ (6) ~~The term "new"~~ "New installation" means any device or equipment, the application for the installation or relocation of which is filed with the department on or after the effective date of these rules and regulations.

*History Note: Authority G.S. 95-110.3; 95-110.5; 95-111.3; 95-111.4; 95-117; 95-120;
Eff. August 1, 1987;
Amended Eff. December 1, 2004;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016.*

Fiscal Note for Proposed Rule 13 NCAC 15 .0209 – Orchestra Lifts

I. Agency Information

- Agency: North Carolina Department of Labor
 - Rule Citation: 13 NCAC 15 .0209
 - Title of Rule: Orchestra Lifts
 - Rulemaking Coordinator: Ashley Snyder, ashley.snyder@labor.nc.gov
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II. Impact Summary

State government: Yes
Local government: No
Private sector: No
Substantial Impact: No

III. Summary of Proposed Rule

The proposed rule incorporates by reference the nationally recognized ANSI E1.42 standard (Entertainment Technology – Design, Installation, and Use of Orchestra Pit Lifts), which establishes technical and operational requirements specific to orchestra pit lifts. This incorporation will replace the Department’s current practice of inspecting orchestra lifts under the more general elevator safety rule, which provides the umbrella framework for elevator-related devices but contains no inspection, maintenance, or repair criteria specific to orchestra lifts. Because there are no requirements in rule specific to these types of devices, inspectors have relied on each individual manufacturer’s instructions rather than a standardized set of requirements. By moving from the general framework to an industry-specific standard, the rule creates uniform requirements for the design, installation, inspection, and operation of orchestra lifts across all venues. The rule also provides that existing rules in 13 NCAC 15 control in the event of a conflict, ensuring consistency within the broader regulatory framework.

IV. Background and Current Practice

- There are approximately 31 orchestra lifts statewide, of which 28 are active and subject to inspection. Some are located in publicly-owned facilities (e.g., schools, universities, or municipal theaters); others are privately owned and operated in private performance venues.

- Each inspection requires approximately 3 hours.
 - Inspections of existing lifts occur annually, at a fee per lift of \$100. The permit fee for a new construction or altered orchestra lift is \$200 or 1% of the total contract price, whichever is greater.¹
 - The Department does not anticipate that adoption of the proposed rule will require any existing orchestra lifts to be retrofitted because these devices have already been regularly inspected under the general elevator safety framework, and no mechanical hazards or safety issues have been identified to date.
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V. Impact on State Government

Because the Department already conducts inspections of orchestra lifts under the general elevator safety framework, the proposed rule is not expected to create any meaningful change in workload or generate new inspection fees. The inspections themselves will continue to occur on the same schedule and in largely the same manner, with the primary difference being that inspectors will now apply a standardized, lift-specific set of criteria rather than relying on manufacturer instructions. Inspectors may save a very small amount of time by relying on a single, consistent set of standards instead of navigating multiple manufacturer-specific requirements. Overall, the on-the-ground impact of this rule is expected to be minimal.

VI. Impact on Local Government

Because local government entities with orchestra lifts are already subject to annual inspections under existing practices, the proposed rule is not expected to create any additional impact compared to the status quo. Any minimal effects associated with applying the ANSI standard can be accommodated within current operations without requiring new costs or changes in practice.

VII. Impact on Private Sector

Private owners and operators of orchestra lifts should experience no additional impact compared to current practice. These lifts are already inspected annually under the existing framework, and the proposed rule does not require retrofitting or other changes for existing devices. Any minimal adjustments associated with applying the ANSI standard are expected to fall within normal operating practices and should not result in new costs or disruptions for private entities.

¹ [G.S. 95-110.5A](#)

VIII. Benefits

Incorporating ANSI E1.42 into the State's rules provides several incremental benefits compared to continuing to inspect orchestra lifts solely under the more general elevator safety requirements. Under the status quo, inspections rely on broad elevator standards that defer to each manufacturer's instructions, resulting in varied practices across venues and potential inconsistencies in how safety issues are identified and addressed. By contrast, ANSI E1.42 establishes a uniform, nationally recognized set of technical and operational criteria specific to orchestra lifts. Adopting this standard ensures that inspections are grounded in guidance tailored to the unique design, movement patterns, load characteristics, and operational risks associated with these devices. This alignment promotes greater consistency in installation and maintenance, reduces ambiguity for both inspectors and owners, and enhances overall safety by ensuring that all lifts are evaluated against the same benchmark rather than a patchwork of manufacturer-specific requirements.

Stating that the existing rules control in the event of a conflict ensures regulatory clarity and prevents inconsistent application of standards by confirming that the Department's broader, established safety framework continues to govern any issue not fully addressed by ANSI E1.42. Given the limited changes from current practice, these benefits are expected to be incremental in nature.

It is possible that a particular manufacturer's standards may exceed the ANSI requirements in certain areas, such as added safety features, performance enhancements, or design optimizations beyond those specified in ANSI E1.42. However, no meaningful differences in overall safety are expected, as ANSI E1.42 is widely recognized in the industry and is already commonly referenced in contracts and safety reviews.

IX. Summary

Because the Department already conducts inspections of orchestra lifts under the general elevator safety framework, the shift to using ANSI E1.42 is not expected to create meaningful operational changes for owners or operators. The inspections themselves will continue to occur on the same schedule and in largely the same manner, with the primary difference being that inspectors will now apply a standardized, lift-specific set of criteria rather than relying on manufacturer instructions. As a result, the on-the-ground impact of this rule is expected to be minimal. Incorporating ANSI E1.42 also provides the added benefit of creating clearer, more uniform inspection standards tailored to these devices, improving consistency without altering current practices in any significant way.

13 NCAC 15 .0209 ORCHESTRA LIFTS

(a) The design, construction, installation, alteration, repair, replacement, inspection, maintenance, and operation of orchestra lifts shall conform to the rules in this Section and ANSI E1.42, Entertainment Technology – Design, Installation, and Use of Orchestra Pit Lifts. ANSI E1.42 is hereby incorporated by reference, including subsequent amendment and editions. Copies of ANSI are available for inspection at the offices of the Bureau and at webstore.ansi.org for two hundred dollars (\$200.00).

(b) The rules of this Chapter shall control if any conflict exists between the Rules and ANSI E1.42.

History Note: Authority G.S. 95-110.5.

Fiscal Note for Proposed Amendments to 13 NCAC 15 .0426 – Fire Prevention and Protection

I. Agency Information

- **Agency:** North Carolina Department of Labor
 - **Rule Citation:** 13 NCAC 15 .0426
 - **Title of Rule:** Fire Prevention and Protection
 - **Rulemaking Coordinator:** Ashley Snyder, ashley.snyder@labor.nc.gov
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II. Summary of Proposed Amendments

The proposed amendments update fire safety requirements for amusement devices¹ by:

- Incorporating nationally recognized standards (NFPA 701 for fabrics and NFPA 30 for flammable and combustible liquids)
- Removing prescriptive in-rule testing requirements and replacing them with industry standards
- Clarifying requirements for handling flammable waste
- Expanding provisions to include NFPA standard for storage of flammable liquids
- Requiring a 10-pound ABC fire extinguisher at gas-powered amusement devices or generators

These amendments modernize the rule, align State requirements with widely accepted safety practices, and are expected to enhance fire prevention and response capabilities, thereby reducing the risk of fire-related injuries, property damage, and operational disruptions.

III. Fiscal Impact Summary

Category	FY1	FY2	FY3	FY4	FY5
State Expenditures	None	None	None	None	None
State Revenues	None	None	None	None	None

¹ “Amusement Device” is defined in G.S. 95-111.3(1).

Category	FY1	FY2	FY3	FY4	FY5
Local Government Impact	None	None	None	None	None
Private Sector Impact	\$21,200	Minimal	Minimal	Minimal	Minimal

IV. Assumptions and Methodology

- The Department conducted approximately 5,682 amusement device inspections in SFY 2024–2025. The number of amusement devices in the State is unknown but is less than 5,682. Each device is inspected upon set up and before operation, meaning amusement devices that are portable, such as those used at county fairs, are inspected multiple times per year. Many of these devices are transported to different states for various fairs and events so there is no set number of devices in the State. For this reason, calculations for purposes of this fiscal note are based upon number of inspections and not number of amusement devices.
- Approximately 99% of amusement devices utilize fabric components.
- New amusement devices are already manufactured in compliance with NFPA 701.
- Amusement devices storing flammable or combustible liquids are already operating in accordance with NFPA 30.

Fire Extinguisher Requirement:

- Cost per 10-pound ABC fire extinguisher: approximately \$100
- Estimated number of affected amusement devices:
 - Gas-powered amusement devices are very few, estimated at fewer than 12 statewide
 - Generators vary by site; however, they are typically already equipped with fire extinguishers because of current language in the rule. The Department does not have data on the types of fire extinguishers currently owned by each amusement device operator. Based on experience, the Department estimates roughly 200 fire extinguishers may need to be upgraded to conform with the new requirement to provide a 10-pound ABC fire extinguisher. The actual number may be somewhat higher or lower, but this estimate should be viewed as a reasonable expectation rather than an exact count.

Estimated One-Time Cost:

- Up to 12 gas-powered devices × \$100 = up to \$1,200 statewide

- An estimated 200 fire extinguishers for generators may need replacing × \$100 = approximately \$20,000 statewide.

Other amendments (NFPA incorporation and clarifications) are not expected to generate incremental costs. NFPA 701 is intended to modernize and standardize the fire-resistance requirement rather than create an entirely new safety concept. Both NFPA 701 and the existing rule are flame and measurement tests to determine how long and how easily fabrics burn. Likewise, NFPA 30 is intended to modernize and standardize requirements for storage of flammable and combustible liquids, not create an entirely new substantive requirement.

V. Impact on State Government

The Department of Labor will implement and enforce the amended rule within existing inspection programs.

- No additional inspections required
- No additional staffing, equipment, or administrative costs

Accordingly, no measurable increase in State expenditures is anticipated.

VI. Impact on Local Governments

The Department is not aware of local governments owning or operating amusement devices subject to this rule.

Accordingly, no fiscal impact on local governments is anticipated.

VII. Impact on Private Sector / Regulated Community

Private operators of amusement devices may incur:

- One-time cost of approximately \$100 per gas-powered amusement device or generator requiring an upgraded fire extinguisher. Estimated total statewide private-sector cost: Approximately \$21,200 statewide (one-time).

Other amendments:

- Adoption of NFPA 701 and NFPA 30 reflects existing industry practices
- No retrofit requirements for compliant equipment
- Clarifications do not impose additional costs

VIII. Benefits

The proposed amendments are expected to improve fire safety by aligning the rule with current national standards and clarifying existing fire protection requirements. Incorporating NFPA 701 and NFPA 30 would replace prescriptive in-rule testing procedures with recognized standards for fire-resistant fabrics and the storage of flammable and combustible liquids, improving consistency in compliance and enforcement. Incorporating standards with subsequent amendments and editions ensures safety standards remain updated in the future as well without the need for additional rulemaking. The amendments also clarify requirements for flammable waste, and they specify a 10-pound ABC fire extinguisher at gas-powered amusement devices or generators, replacing the current general extinguisher language with a more defined standard. Overall, the amendments are expected to reduce the likelihood and severity of fire incidents and protect workers, operators, and the public.

13 NCAC 15 .0426 FIRE PREVENTION AND PROTECTION

- (a) Fire Resistance of Fabrics. Fabrics constituting part of an amusement device shall be fire-resistant in accordance with NFPA 701 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films. This standard is hereby incorporated by reference, including subsequent amendments and editions, and is available at www.nfpa.org for one-hundred and fifty-seven dollars (\$157.00). ~~to meet the following standard: Two strips or test sections either of the fabric used or of other fabric identical therewith shall be tested. Each strip shall be not less than six inches wide and 12 inches long. Each strip shall be thoroughly dry and shall then be subjected to an open flame applied to the lower edge while the strip is held vertically for 12 seconds. Neither strip shall flame for more than two seconds after the test flame is removed from contact nor shall the average length of char exceed 2 1/2 inches. Such a test is not required by this Section if other evidence of the required degree of fire resistance is accepted by the Commissioner as sufficient.~~
- (b) Fire Extinguishers. ~~Approved fire extinguishers shall be provided where necessary to secure reasonable and adequate protection from fire hazards. At least a 10 pound A.B.C. fire extinguisher shall be provided at gas-powered amusement devices or generators.~~
- (c) Flammable Waste. Flammable waste such as oily rags and other flammable materials shall be placed in a covered metal container which shall be kept ~~in easily accessible locations.~~ in a location accessible to the ride operator. Such containers shall not be kept at or near exits.
- (d) Flammable Liquids, Liquids and Gases. ~~Liquids and Gases.~~ Flammable and combustible liquids shall be stored in accordance with NFPA 30, Flammable and Combustible Liquids Code. NFPA 30 is hereby incorporated by reference, including subsequent amendments and editions, and is available at nfpa.org for one hundred and fifty-seven dollars (\$157.00). ~~Gasoline and other volatile liquids and flammable gases when stored shall be kept in reasonably cool and ventilated places. Such liquids shall be in approved safety cans. They shall not be stored on or near a device while it is in operation. Smoking and the carrying of lighted cigar, cigarettes or pipes is prohibited in any area where such liquids or gases are stored or are transferred from one container to another.~~

History Note: Authority G.S. 95-111.4;

Fiscal Note for Proposed Amendments to 13 NCAC 15 .0429 – Go Karts

I. Agency Information

- Agency: North Carolina Department of Labor
 - Rule Citation: 13 NCAC 15 .0429
 - Title of Rule: Go Karts
 - Rulemaking Coordinator: Ashley Snyder, ashley.snyder@labor.nc.gov
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II. Summary of Proposed Amendments

The proposed amendments update safety standards for go karts and go kart tracks by:

- Incorporating ASTM F2007 (Standard Practice for Design, Manufacture, and Operation of Concession Go-Karts and Facilities)
- Updating and clarifying existing design, operation, and inspection requirements
- Requiring spark arresters and deflectors on gas-powered go karts
- Revising fire safety requirements to require 10-pound ABC fire extinguishers (instead of 5-pound extinguishers) in accordance with NFPA 10
- Making organizational and technical edits for clarity and consistency

These amendments align State requirements with nationally recognized safety standards and are expected to enhance operational safety, fire prevention, and consistency in enforcement.

III. Fiscal Impact Summary

Category	FY1	FY2	FY3	FY4	FY5
State Expenditures	None	None	None	None	None
State Revenues	None	None	None	None	None
Local Government Impact	None	None	None	None	None
Private Sector Impact	\$39,775-\$88,212	None	None	None	\$5,895-\$14,737

IV. Assumptions and Methodology

- The Department inspects go karts and go kart tracks annually. The Department inspected 44 go kart tracks and approximately 907 go karts (including 786 gas-powered) in SFY 2024–2025. It is possible the current number of go karts subject to inspection now differs slightly in the event new go karts were purchased or decommissioned.

- Inspections typically involve 2–4 inspectors over 2–6 hours, depending on facility size and complexity.
 - The amendments do not increase inspection time or frequency
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Spark Arrester Requirement

- The rule requires spark arresters and deflectors on gas-powered go karts
- Approximately 786 gas-powered go karts were inspected
- Cost per spark arrester/deflector: \$10–\$30 per unit
- Estimated cost of installation: \$5–\$7.50 per arrester/deflector. This is an estimated 15-minute install at \$20–\$30 per hour.
- Applies to existing fleets and newly-built go karts

Because data is not available on current compliance rates, the Department assumes a conservative upper-bound scenario in which all gas-powered go karts require installation.

Estimated One-Time Cost (Upper Bound):

- Cost of spark arresters/deflectors: $786 \times \$10\text{--}\$30 = \$7,860$ to $\$23,580$
- Cost of installation: $786 \times \$5\text{--}\$7.50 = \$3,930$ to $\$5,895$
- Total: $\$11,790$ - $\$29,475$

However, the Department expects that some portion of go karts already have spark arresters and deflectors installed, and therefore actual costs are likely lower than this estimate.

To account for replacement costs over the next five years, the Department assumes 50% of the spark arresters/deflectors may need replacement. These parts are typically only replaced if the part fails. This is a rough estimate base, including the cost of the arrester/deflector and labor costs.

- 50% of previous total: $\$5,895\text{--}\$14,737$
 - Total over 5 years, including replacement costs, for spark arresters/deflectors: $\$17,775$ - $\$44,212$
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Fire Extinguisher Requirement

- The rule increases minimum extinguisher size from 5 pounds to 10 pounds
- Larger ABC extinguishers provide more extinguishing agent and longer discharge time, which improves response capability for fuel, engine, or electrical fires at the track.
- Cost per extinguisher: \$100
- Estimated 5–10 extinguishers per track
- It is possible some tracks already have 10 pound fire extinguishers.

Replacement costs for 10-pound extinguishers are excluded, as their approximate 10-year replacement cycle extends beyond the analysis period. The incremental cost relative to a 5-pound unit is estimated at \$25-\$75 per extinguisher and would not be incurred until replacement.

Upper Bound Estimated One-Time Cost for fire extinguisher replacement:

- 44 tracks $\times$ (5–10 extinguishers) $\times$ \$100
 - \$22,000 - \$44,000
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ASTM Incorporation

- ASTM F2007 covers design, manufacture, operation, protective covers for moving or heated components, occupant protection, and other operational safeguards.
 - Incorporating it into the rule will standardize safety expectations around known go kart hazards.
 - The intent of this incorporation is to establish a nationally recognized standard as a baseline, though the North Carolina specific requirements already established in rule generally meet or exceed this national baseline standard.
 - Go kart tracks and devices are already largely compliant with ASTM F2007 because the North Carolina specific requirements in the rule meet or exceed ASTM requirements. To the extent there is any discrepancy, differences are anticipated to be minor with the only increased cost being minimal time spent documenting compliance with the ASTM standard.
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Total Estimated 5-Year Cost

- Spark arresters (upper bound): \$17,775 - \$44,212
- Fire extinguishers (upper bound): \$22,000 - \$44,000

Total statewide cost (upper bound):

- \$39,775 to \$88,212

Actual costs are expected to be lower due to partial existing compliance.

Other Amendments

- Clarifications and organizational changes do not impose additional costs
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V. Impact on State Government

The Department of Labor will continue to inspect go kart tracks and devices under existing programs.

- No increase in inspection time or workload
- No additional staff, equipment, or administrative costs

Accordingly, no measurable increase in State expenditures is anticipated.

VI. Impact on Local Governments

The Department is not aware of local governments owning or operating go kart tracks subject to this rule.

Accordingly, no fiscal impact on local governments is anticipated.

VII. Impact on Private Sector / Regulated Community

Private operators of go kart tracks may incur:

- One-time costs for initial installation of spark arresters and deflectors plus ongoing replacement of damaged components as needed.
- One-time costs for upgrading fire extinguishers plus periodic replacement (on approximately a 10-year cycle).

Estimated total statewide cost (upper bound):

- \$39,775 to \$88,212 (one-time)

These estimates represent an upper-bound scenario assuming all gas-powered go karts require initial installation of spark arresters and deflectors and that 50% of these components require replacement by Year 5. Actual costs per go kart will vary based on equipment unit costs, installation labor costs, and the number of fire extinguishers required per track. Total statewide costs are expected to be lower to the extent that operators are already in partial compliance with these requirements.

Other amendments:

- Incorporation of ASTM F2007 reflects existing industry practices
- Clarifications do not impose new costs

Benefits:

Requiring spark arresters and deflectors on gas-powered go karts is expected to reduce the risk of fire by preventing hot exhaust particles or embers from escaping into areas containing combustible materials. Increasing the minimum portable extinguisher size to 10 pounds is expected to improve fire suppression capacity and discharge duration, improving the chance that staff can control small fires before they spread. Incorporation of ASTM F2007 will standardize safety expectations for go kart design and operation and improve consistency in compliance and enforcement. Incorporating standards with subsequent amendments and editions ensures safety standards remain updated in the future without the need for additional rulemaking. Overall, these amendments should reduce the likelihood and severity of fire-related incidents and enhance protection for operators, employees, and the public.

13 NCAC 15 .0429 GO KARTS

(a) Go Karts shall comply with ASTM F2007, Standard Practice for Design, Manufacture, and Operation of Concession Go-Karts and Facilities. ATSM F2007-18 is hereby incorporate by reference, including subsequent amendments and editions, and is available at www.astm.org for eighty-six dollars (\$86.00).

~~(a)~~ (b) Go Kart Design. All go karts shall comply with the following standards.

- (1) Numbering of Go Karts. Each shall be provided an identifying number that can be easily seen by the operator. A corresponding number shall be stamped or attached to the frame of the go kart.
- (2) Speed. Go kart speed shall not exceed the maximum speed for which the track is designed. The speed of adult go karts shall be set not to exceed 28 miles per hour, ~~hour unless approved by the Department.~~ Kiddie go karts shall not exceed 10 miles per hour. When a go kart is designed to permit the readjustment of its maximum speed, the means of adjustment shall not be accessible to the driver of the go kart.
- (3) Seats, Seat Belts and Shoulder Straps. All go karts shall meet one of the following requirements:
 - (A) The seat, back rest, and leg area shall be designed to retain the driver/occupants inside the go kart in the event of a rollover or a collision at the front, rear, or side of the go kart; or
 - (B) The go kart shall be equipped with seat belts and shoulder straps mounted in a manner that will restrain the occupant(s) in the vehicle in case of a collision or rollover. ~~Properly mounted~~ Mounted safety harnesses as effective as seat belts and shoulder straps may be substituted for seat belts and shoulder straps.
- (4) Occupancy. Go karts shall be occupied by only one person at a time unless the go kart is designed and equipped with a seat and safety belt system that is intended for and is suitable for two persons.
- (5) Guarding of Parts. Rotating, moving, hot ~~engine engine,~~ or muffler parts shall be guarded to prevent contact or entanglement of the occupant's hair, clothing, or other body parts.
- (6) Brakes. Go karts shall have a braking system designed and adjusted to permit them to be brought to a complete stop within 40 feet from maximum speed with their maximum weight on board.
- (7) Brake and Throttle Controls. Go karts shall have brake and throttle controls that are readily recognizable as to their function. The operator shall also instruct each driver on the operation of the brake and throttle controls before each operation. The controls shall return automatically to their non-operational position when released.
- (8) Padding of Exposed Protruding Components. Go karts shall have their steering wheel hub and all other protruding exposed parts within the driving compartment padded to minimize the risk of injury to an occupant in the event of a collision or overturn.
- (9) Roll Bars and Head Rests. All adult go karts must be provided with a roll bar of sufficient height and strength to provide the occupant with protection in the event of a roll over. Seats of all go karts must be provided with a padded head rest. The head rest may substitute as a roll bar if it is of sufficient height and strength.
- (10) Bumpers. Go karts shall be provided with bumpers or energy absorption body parts.
- (11) Wheel Guards. The wheels of every go kart shall be enclosed or guarded in such a manner that the wheels of another go kart cannot interlock with or ride over them.
- (12) Fuel Tanks. Go kart fuel tanks shall be designed and mounted so that the tank cannot be ruptured in the event of a collision or a roll over.
- (13) Noise Level. Go karts shall be provided with muffler systems capable of limiting sound from the engine to 75 dBA when measured at a distance of 50 feet from the outer edge of the go kart track.
- (14) Spark Arrester. All gas powered go karts shall have a spark arrester and deflector on the exhaust.

~~(b)~~ (c) Track Design. Plans for proposed construction of go kart tracks in the State of North Carolina shall be submitted to the North Carolina Department of Labor, Elevator and Amusement Device Bureau Division, 1101 Mail Service Center, Raleigh, North Carolina 27699, before construction begins. Buildings on the track site ~~must~~ shall be submitted to the local building inspection agency for approval. The design of the track shall be consistent with go kart manufacturer's recommendations for the speed of the go kart and be approved by the ~~department.~~ Department. ~~The following requirements for track layout, track surface and track materials contained in Paragraphs~~ The Department shall issue a certificate of operation if the track design meets the manufacturer's recommendations and the track meets the requirements of (e), (d) and (e), of this Rule. ~~Rule, shall be complied with before certificates of operation will be issued.~~

~~(e)~~ (d) Track Layout. Go kart tracks may be oval shaped or of road course configurations. They ~~may~~ shall not be constructed in the shape of a figure eight or have any cross connected points. Straight portions of the track shall be flat except that 2 degrees of banking may be provided for drainage. The width of all tracks shall be a minimum of 16

feet wide. Road courses may continue the same width for their entire length. Oval tracks shall have turns at least five feet wider than the straight portions and the minimum radius of the turns shall be 15 feet. Turns of oval tracks may be banked to a maximum of one inch for each one foot of track width. Any variation from the minimum track width shall be approved in advance, in accordance with 13 NCAC 15 .0107.

~~(d)~~ (e) Track Surface. A go kart track shall have a hard smooth surface. It shall provide sufficient road grip to be driven throughout the course at maximum speed. It shall be free of obstacles such as holes or bumps, or water or oil.

~~(e)~~ (f) Track Materials. Materials used in the surfacing of go kart tracks shall be asphalt, concrete, or other solid and binding materials. Proposals to use dirt track surfaces shall be submitted for special consideration and evaluation, in accordance with 13 NCAC 15 .0107.

~~(f)~~ (g) Track Safety and Guarding.

- (1) Barriers. Every go kart track shall provide ~~properly~~ constructed barriers along the entire course on both inside and outside of the track. Barriers shall be so constructed that a go kart colliding with a barrier at maximum speed will come to a safe stop or be guided back to the track. Earthen berms may be used as a barrier provided they will stop a go kart safely. Bales of hay, straw, or other materials capable of being ignited may not be used as a barrier.
- (2) Track Lanes. White or yellow lines, at least four inches wide, shall mark all inside and outside edges of the track.
- (3) Fencing. The outside perimeter of a go kart track shall be protected by a fence at least 48 inches in height. The fence shall be set back at least 36 inches from the inside face of the track barrier. Gates shall be located for easy supervision by track attendants when the facility is open and they shall be kept locked when it is closed. The fence may be omitted where natural barriers provide the same degree of protection as the fence. Where two separate tracks are operated inside a single perimeter fence all go karts on both tracks shall start and stop at the same time.
- (4) Fire Extinguishers. Every go kart track shall be equipped with ABC Dry Chemical Fire Extinguishers. The extinguishers shall have a minimum capacity of ~~five~~ ten pounds, in accordance with NFPA 10 – Standard for Portable Fire Extinguishers. At least one extinguisher shall be located in the following locations:
 - (A) Within seventy feet of every track section;
 - (B) In each pit area;
 - (C) In each refueling stop;
 - (D) In each go kart storage area; and
 - (E) In the maintenance shop.

Each fire extinguisher location shall be prominently marked and the extinguisher shall be easily accessible.

- (5) Refueling Area. Refueling of go karts shall be carried out at a designated area remote from any area accessible to the public. Refueling areas shall comply with the requirements of the NFPA 70 - National Electrical Code, Sections 510, 511, and 514.
- (6) Track Lighting. Go kart tracks equipped for night operation shall have sufficient illumination at all sections of the track for drivers to be able to negotiate the entire course safely. It shall also be sufficient for operators to monitor the go karts on each section of the course. Lighting shall comply with the NFPA 70 - National Electrical Code and all other state and local requirements.
- (7) Pits or Pit Areas. Where provided, pits must be fenced or provided with a sufficient barrier to prohibit the entry of spectators. Pits shall have separate entrance and exit lanes.
- (8) Spectator Areas. Spectator areas shall be separated from the track and pit areas by a fence or barrier sufficient to withstand the impact of a go kart traveling at full speed. It shall be approximately level and free of holes or debris.

~~(g)~~ (h) Track Operation. The following standards of operation shall apply to electric or fuel powered go karts, dune buggies, auto racers, and all terrain vehicles.

- (1) All go karts must start and stop operation at the same time or a separate pit area shall be provided for loading and unloading purposes.
- (2) Drivers of adult go karts must be at least 48 inches (4 feet) tall and have a leg length sufficient to reach the brake and throttle controls when seated.
- (3) Drivers of kiddie go karts shall not exceed 54 inches (4 feet 6 inches) tall and must have a leg length sufficient to reach the brake and throttle controls when seated.

- (4) Adult go karts and kiddie go karts shall not be operated simultaneously on the same track.
 - (5) No go kart may be operated when weather conditions are such that it may affect the safe operation of the go kart or when visibility on the track is less than 150 feet.
 - (6) Each section of a go kart track shall be monitored during the time that any go kart is in operation. Monitoring shall be by direct visual contact by the operator or track attendants or by electronic visual surveillance.
 - (7) A go kart that is losing oil or fuel shall be immediately removed from the track.
 - (8) When the noise level of any go kart exceeds the requirements of Subparagraph (a)(13) of this Rule, it shall be immediately removed from the track until it has been repaired.
 - (9) Safety equipment such as helmets (when used) and seat restraints shall be utilized in accordance with the manufacturer's recommendations for the type of use or operation and be of correct size for the person using it.
 - (10) Persons with hair longer than shoulder length or wearing loose clothing that could obstruct the vision of the driver or become entangled in any moving part shall not be permitted to drive or ride a go kart. Hair that is longer than shoulder length may be tied up to reduce its length.
 - (11) Persons whose behavior appears to be impaired by such as the use of drugs or alcohol shall not be permitted to drive a go kart.
 - (12) Smoking shall not be permitted within 30 feet of a go kart.
 - (13) Track regulations shall not permit persons to leave their go karts while any go kart is in operation on the track.
 - (14) Signs containing the following information and other track regulations shall be posted at the track entrance or ticket window and conspicuously in the pit area.
 - (A) To drive or ride an adult go kart you must be at least 48 inches tall.
 - (B) To drive a kiddie go kart you may not be taller than 54 inches.
 - (C) Keep both hands on the wheel at all times.
 - (D) Keep both feet inside the go kart.
 - (E) Hair longer than shoulder length must be tied up.
 - (F) All loose clothing must be tucked in.
 - (G) No smoking within 30 feet of a go kart.
 - (H) Do not leave the go kart while on the track.
 - (15) Signs that indicate the direction of travel for go karts shall be posted intermittently around the track perimeter.
- ~~(g)~~ (i) Inspections and Maintenance. Tracks and go karts shall be inspected and maintained for a safe operation at all times. The following inspections shall be made:
- (1) The track shall be inspected daily for potholes, bumps or loose material. Any defects discovered during the inspection ~~Necessary~~ repairs shall be made before opening the track.
 - (2) Daily inspections shall be made on each go kart prior to operation. The inspection shall include:
 - (A) Wheel and tires;
 - (B) Steering mechanism;
 - (C) Frame welds;
 - (D) Axles and spindles;
 - (E) Safety belts, roll bars, and seat padding;
 - (F) Gasoline tank, lines and valves;
 - (G) Brake and throttle operation; and
 - (H) Exhaust systems.
 - (3) Go kart maintenance shall be performed as recommended by the go kart manufacturer.
- ~~(h)~~ (j) Incorporations. For purposes of this Rule:
- (1) The NFPA 10 is hereby incorporated by reference, including subsequent amendments and editions, and is available at <https://www.nfpa.org/codes-and-standards/nfpa-10-standard-development/10> for one-hundred and fifty-seven dollars (\$157.00).
 - (2) The National Electrical Code, NFPA 70 is hereby incorporated by reference, including subsequent amendments and editions, and is available at <https://www.nfpa.org/codes-and-standards/nfpa-70-standard-development/70> for one-hundred and sixty-one dollars (\$161.00).

*History Note: Authority G.S. 95-111.4;
Eff. May 1, 1992;*

Amended Eff. February 1, 2005;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016.