

**Norman Martin**  
**Statement of Schindler Elevator Corporation, Inc.**  
**in SUPPORT of H.B. 2356,**  
**an Act related to Elevators, Escalators and other**  
**Building Transportation Equipment Standards**  
**February 3, 2016**

Mr. Chairman and Members of the Committee:

My name is Norman Martin. I am employed by Schindler Elevator Corporation, working in the area of Codes and Standards. In this position, I interface with the various elevator inspection jurisdictional authorities across the USA and Canada and Puerto, Rico. Prior to my employment with Schindler Elevator, I served as the Chief Elevator Inspector for the State of Ohio, a position from which I retired after 30 years of service. I administered a program with 35,000 regulated devices and 55 field inspectors.

As part of my duties for Schindler Elevator, I track over 85 elevator inspection programs to ensure that our company is fully aware of the regulations in each location that we do business. As you can imagine, regulatory programs vary throughout the country. These variations are due to the size of the program and the resources available to administer the safety program.

I am here today to speak in favor of H.B.2356, a bill to establish an elevator program in the state of Kansas,



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## **Typical State Elevator Programs**

Traditionally, state elevator programs consist of a chief elevator inspector to provide technical support for the program and to manage and support a number of field inspectors employed by the state or jurisdiction who conduct the actual inspections of the equipment. There are many jurisdictions in which there is a chief elevator inspector and the inspections are carried out by private industry inspectors who then report their inspection findings to the chief. Since there is no direct employment relationship, there is normally some form of monitoring of those private inspectors to ensure compliance with the goals of the inspection program. Most all inspectors are required to maintain a national Qualified Elevator Inspector (QEI) certification, which demonstrates a minimal standard of knowledge in this area.

States that have a traditional approach include the Nebraska, Iowa, Ohio, Idaho and Indiana. Other states are using some private inspectors and state inspectors such as in the states of Arkansas, Oklahoma, Missouri and Colorado.

Elevator inspector programs are normally administered from within agencies that also regulate building codes or other licensed activities such as the state's labor department or Fire Marshall's office. Many programs also administer the licensing of elevator technicians who perform work on elevator equipment (program structures similar to the licensing requirements for plumbers and electricians). In addition, many elevator inspection programs provide for an elevator board to add input and provide the oversight of the licensing program, adoption of technical codes and standards and to hear variance requests from the enforcement program.

Fees for permits, inspections and other functions are set forth and should be based on actual costs. Budgets for these programs are normally treated as an "enterprise fund" and monies are collected from regulated building owners as "user fees" to support the program. Fees, however are calculated in wide variety of methods depending on the jurisdiction.

## **The Ohio Example**

Ohio's inspection program is part of the Ohio Department of Commerce. The department of commerce included the elevator inspection section under the division of industrial compliance. The industrial compliance division includes building inspectors, electrical and plumbing inspectors, plans examiners, bedding and boiler inspectors. The fees generated from each program were intended to result in revenues exceeding expenditures. In the case of the Ohio elevator section, the revenue well exceeded the elevator section's expenditures, and the excess funds were used to support other programs within the division.



The largest single item of expenditures for the Ohio inspection program is the cost of inspection personnel. In addition to wages and benefits, there were expenditures for inspection tools and equipment, inspection code books, automobiles and training.

Inspectors worked from their homes and were electronically connected to the office throughout their work day. The 55 inspectors were supervised by five senior inspectors. There was a support staff of just four persons to process nearly 60,000 inspection reports and for the filing of equipment test reports and compliance letters from elevator service companies and owners. Keep in mind, the Ohio program was based on 35,000 number of elevators, escalators and other building transportation equipment – a much greater number than I expect is here in Kansas.

The method of calculating the annual revenue needed by the section to operate the program and the associated fees to generate that revenue included the following inputs:

- a. Number of inspectors necessary to complete inspections on a twice per year basis;
- b. multiplied by their total wages and benefits (include estimated overtime)
- c. The number of inspectors multiplied by the estimated amount of equipment, training and vehicle costs;
- d. Estimated administrative overhead charge-backs.

This has resulted in the following certificate of operation fees (see appendix for complete fees for Ohio - A “certificate of operation” includes the fees for the twice per year inspections):

2 story building:	\$244
10 story building:	\$340
Accessibility Lift or churches:	\$ 75

**Examples from other nearby jurisdictions (general annual permit/inspection fees):**

State	Department	Fees
Oklahoma	Labor	\$75/\$100/\$125 based upon rise
Missouri	State Fire Marshal	\$125 + \$25
Iowa	Labor	Hydraulic -\$100 Traction \$150
Colorado	Labor	\$30 test filing fee + private inspector fee
Nebraska	Labor	\$150 + \$5 for every floor above 5
Arkansas	Labor	\$100 + \$50



## **A Few Key Points**

### **The Number of Inspections that an Inspector can do in an Average per week.**

In my experience, the number of inspections conducted by an inspector is dependent upon a number of factors, but generally falls in a range of 18-30 per week. There can be a wide difference due to the variable of the different types of inspections being conducted. The variables include the type of equipment (traction verses hydraulic), the height of the building, the ease of gaining entrance to the building, the distance between inspection sites (“windshield time” in rural areas), employee leave time for sickness, vacation, holidays). Ohio is currently running about 60 inspectors for 36,000 units which are inspected twice per year (average 1200 inspections per inspector per year – inspectors are geographically spread across Ohio to reduce drive times – some are on four 10 hour days to add efficiency in rural areas). Based upon Ohio’s experience and demography, about 1.66 inspectors per 1000 units is necessary.

### **Running the Program “in the Black”**

Inspection programs can run with revenues exceeding expenditures, if the fee structure is instituted based upon the costs of doing business. It is critical to ensure that a fair fee structure is in place (i.e. higher buildings need to pay more for an inspection and certificate than a simple two story building) and be aggressive in collecting fees so that no elevator operates without a certificate of operation. Depending on the local laws, the certificate can be issued independent of the inspection process. Charge locations that need inspections on overtime the proper amount to cover costs (include full costs of wages and benefits and overhead, not simply wages). Provide a separate fee structure for construction projects that reflects the inspection department’s costs of doing business. Fees for construction projects will likely be much higher than annual inspections due to the time involved in the inspection process and follow-up.

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## **The General “starting” Salary for Inspectors**

A starting salary for a QEI certified inspector is about \$44K - \$60K per year depending upon the wages of the elevator labor market which you are competing against for trained elevator employees.

## **Staffing and the Costs of Inspector Training**

Inspectors should be required to hold and maintain a QEI certification. The fastest method of developing a program is by recruiting existing QEI certified inspectors to be employed directly or to allow for the use of private inspectors by building owners. If QEI certified inspectors are not readily available, they can be developed internally. In order for a perspective employee to obtain a QEI certificate, that applicant would need at least five years of elevator industry experience to qualify to sit for the QEI certification exam. There is QEI code training available. The typical classroom time is usually one week with an exam at the end of the week in order to obtain the QEI certification. The class runs about \$1500 and the materials add about another \$700 plus the associated travel costs to attend. The balance of the training would be “over the shoulder” in the field with an experienced inspector. Usually about 3 to 6 months.

## **Administering the Program for Licenses and Permitting**

A state program does not have to be very complicated. An accounting-based system would be used to issue invoices and process payments. A simple database with descriptive elements of the equipment would be the basis for tracking the inspection and testing results of each piece of equipment.

- assign a unique identification number to each elevator
- add the location address
- add owner/billing address
- add description of the elevator (travel, capacity, speed, owner ID, etc.)
- add tracking of annual safety test information
- add tracking of monies
- add production of a certificate or license of operation

The database framework could be borrowed from another internal agency that tracks licenses. There are a number of vendors that provide databases that would allow for the



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data to be manipulated and merged with a scheduling system, and/or an electronic device interface..

### **Leadership Support for the Program**

The program needs someone experienced in administering a similar program for the accounting and tracking portions. There needs to be an experienced elevator chief or assistant chief that can handle the permit/plans review and technical questions of the day-to-day operation and the supervision and accountability of the field inspectors. If the state does not have such a person, an elevator board is an important program component to provide technical expertise.

### **Source of Initial Monies During the First Year**

Operating monies for establishing a program are usually provided from a general fund in the state budget. However, a portion of the funding could be established by putting into place the invoicing and issuing of the annual required elevator certificate of operation. The certificate would be valid for 12 months, and the inspection of the elevator could occur at any time during that 12 month period. As inspectors are added, the backlogs would be reduced. NOTE: In my experience, it is worth considering the separation of the inspection process from the issuance of the annual certificate of operation permit. The annual permit can be invoiced the same day each year (like license plates for a car). The inspection can occur anytime within the 12 month period since the last inspection.

### **Summary**

Inspection programs can be structured to be self sustaining. The costs of doing business will need to be the foundation of establishing the fee structure for an elevator inspection program. The program needs to have QEI certified inspectors (internal or private) and quality leadership to ensure that fair, consistent, effective and efficient inspections are conducted. T

Thank you for your consideration of these comments in support of HB 2356. Schindler Elevator Corporation and I both encourage the State of Kansas to establish an elevator program as an effective means of ensuring the safety its citizens.

**Schindler Elevator Corporation**

Main Partner of  
**SOLARIMPULSE**



**Schindler**

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I am available, with the support of Schindler Elevator Corporation, to provide additional information as you move forward with this important legislation and development of your program. Please contact me through Amy Blankenbiller, the Government Affairs Director for the National Elevator Industry Inc., (NEII) who can be reached at [ajblankenbiller@neii.org](mailto:ajblankenbiller@neii.org) or by phone at 785-286-7599. She runs our industry's government affairs program and will be coordinating our input moving forward.



## Appendix

### Examples of Fees from Elevator Inspection Programs:

State	Note:	Fees
Iowa	Inspection once per year	<p>875—71.16(89A) Fees. Except as noted in this rule, all fees are nonrefundable and due in advance.</p> <p>71.16(1) <i>Operating permits.</i> The annual operating permit fee shall be \$75 per conveyance.</p> <p>71.16(2) <i>Periodic inspections.</i> Fees shall be remitted to the division of labor services within 30 days of the date of inspection. The fees for periodic inspections shall be as follows:</p> <ul style="list-style-type: none"> <li>a. Construction elevator: \$200.</li> <li>b. Wind tower lift: \$225.</li> <li>c. Hand-powered elevator: \$90.</li> <li>d. Television tower elevator: \$500.</li> <li>e. Handicapped restricted use elevator: \$100.</li> <li>f. Other hydraulic elevator: \$100.</li> <li>g. Other traction elevator: \$150.</li> <li>h. Escalator: \$150.</li> <li>i. Dumbwaiter: \$90.</li> <li>j. Wheelchair lift: \$90.</li> <li>k. CPH.</li> <li>(1) Annual: \$500.</li> <li>(2) Quarterly: \$200.</li> <li>l. Moving walk: \$150.</li> </ul> <p>71.16(3) <i>Installation permits.</i> The fees in this subrule cover the initial print review, installation permit, initial inspection and first-year operating permit. Each print revision submitted to the division shall be subject to an additional fee of \$100. The fees for new installations shall be as follows:</p> <ul style="list-style-type: none"> <li>a. Wind tower lift: \$500.</li> <li>b. Hydraulic elevator: \$750.</li> <li>c. Traction elevator: \$1000.</li> <li>d. Escalator: \$1000.</li> <li>e. Dumbwaiter: \$500.</li> <li>f. Wheelchair lift: \$500.</li> <li>g. CPH: \$500.</li> <li>h. Moving walk: \$500.</li> </ul>
Ohio	Inspection twice per year for elevators and escalators	<p>Ohio Revised Code 4105:</p> <p>"...(C) The fee for issuing or renewing a certificate of operation under section <u>4105.15</u> of the Revised Code for an elevator that is inspected every six months in accordance with division (A) of section <u>4105.10</u> of the Revised Code is two hundred twenty dollars plus twelve dollars for each floor where the elevator stops, except where the elevator has been inspected by a special inspector in accordance with section <u>4105.07</u> of the Revised Code.</p> <p>(D) The fee for issuing or renewing a certificate of operation under</p>





		<p>section <u>4105.05</u> of the Revised Code for an elevator that is inspected every twelve months in accordance with division (A) of section <u>4105.10</u> of the Revised Code is fifty-five dollars plus ten dollars for each floor where the elevator stops, except where the elevator has been inspected by a special inspector in accordance with section <u>4105.07</u> of the Revised Code.</p> <p>(E) The fee for issuing or renewing a certificate of operation under section <u>4105.15</u> of the Revised Code for an escalator or moving walk is three hundred dollars, except where the escalator or moving walk has been inspected by a special inspector in accordance section <u>4105.07</u> of the Revised Code.”</p>																																								
Oregon	Escalators and moving walks inspected annually and passenger elevator every two years	<table border="1"> <tr> <td>Dumbwaiter</td> <td>\$134.40</td> <td>Chairlift</td> <td>\$134.40</td> </tr> <tr> <td>Sidewalk Elevator</td> <td>\$134.40</td> <td>Sidewalk Matl lift</td> <td>\$134.40</td> </tr> <tr> <td>Freight Elevator 2-4 floors</td> <td>\$197.12</td> <td>LULA</td> <td>\$197.12</td> </tr> <tr> <td>Passenger Elevator 2-4 floors</td> <td>\$197.12</td> <td>Rack &amp; Pinion</td> <td>\$197.12</td> </tr> <tr> <td>Stagelift</td> <td>\$197.12</td> <td>Special Purpose</td> <td>\$197.12</td> </tr> <tr> <td>Vert Reciprocating Conveyor</td> <td>\$197.12</td> <td>Wheelchair Lift</td> <td>\$197.12</td> </tr> <tr> <td>Material lift</td> <td>\$197.12</td> <td>Elevator 5-9 floors</td> <td>\$241.92</td> </tr> <tr> <td>Escalator</td> <td>\$219.52</td> <td>Inclined Elevator</td> <td>\$219.52</td> </tr> <tr> <td>Belt Manlift</td> <td>\$219.52</td> <td>Moving Walk</td> <td>\$219.52</td> </tr> <tr> <td>Elevator 10-19 floors</td> <td>\$300.16</td> <td>Elevator 20+ floors</td> <td>\$351.68</td> </tr> </table>	Dumbwaiter	\$134.40	Chairlift	\$134.40	Sidewalk Elevator	\$134.40	Sidewalk Matl lift	\$134.40	Freight Elevator 2-4 floors	\$197.12	LULA	\$197.12	Passenger Elevator 2-4 floors	\$197.12	Rack & Pinion	\$197.12	Stagelift	\$197.12	Special Purpose	\$197.12	Vert Reciprocating Conveyor	\$197.12	Wheelchair Lift	\$197.12	Material lift	\$197.12	Elevator 5-9 floors	\$241.92	Escalator	\$219.52	Inclined Elevator	\$219.52	Belt Manlift	\$219.52	Moving Walk	\$219.52	Elevator 10-19 floors	\$300.16	Elevator 20+ floors	\$351.68
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Indiana	Once per year inspection	\$120 per unit																																								
Nebraska		<p>Nebraska's Elevator Law, Sections 48-2501 through 48-2533 requires that all conveyances including freight and passenger elevators, escalators, moving walks, and material lifts in the state be inspected at least once every 12 months and have annual mechanical testing. The inspector issues a Certificate of Operation or notifies the owner or user in writing of any equipment found to be unsafe or unfit for operation. These notices indicate to the owner whether or not the equipment may be used without making the repair. The inspector may permit the owner reasonable time to make any repairs. Certificates of Operation must be posted inside the conveyance or adjacent to the escalator or moving walk.</p> <p>The annual inspection fee may vary depending on the number of floors served by the conveyance. There is a flat fee for 1-5 floors served and an additional per floor fee after that. Please refer to Section 48-418.09 of the statute for a list of fees.</p>																																								



## Elevator; inspections; fees; special inspection.

### Section 48-418.09

*Elevator; inspections; fees; special inspection.*

(1) The Commissioner of Labor may charge a reasonable fee for each elevator inspection. The commissioner shall establish the fees at a level necessary to meet the costs of the elevator inspection program as approved by the Legislature and to provide a sufficient balance in the Elevator Inspection Fund.

(2) An annual inspection fee of not more than one hundred fifty dollars per unit up to five floors plus five dollars for each floor over five shall be paid for each elevator inspected. For new installations, a preliminary inspection fee of not more than one hundred fifty dollars per unit up to five floors plus an additional five dollars for each floor over five shall be paid for each elevator inspected. For an initial inspection, a fee of not more than two hundred dollars per unit up to five floors plus five dollars for each floor over five shall be paid. If an elevator does not pass an initial inspection and a reinspection is required, an additional initial inspection fee shall be charged for each additional reinspection of such elevator. Such fees shall be paid by the owner or user for each elevator inspected by the state elevator inspector before the inspection certificate is issued.

(3) For the class of elevators which includes escalators, moving sidewalks, conveyors, and dumbwaiters, the preliminary inspection fee shall be not more than one hundred fifty dollars per unit up to five floors plus an additional five dollars for each floor over five. The initial inspection fee shall be not more than one hundred fifty dollars per unit up to five floors plus an additional five dollars for each floor over five. The annual inspection fee shall be not more than one hundred fifty dollars per unit for up to five floors with an additional charge of five dollars for each floor over five. If such escalator, moving sidewalk, conveyor, or dumbwaiter does not pass an initial inspection and a reinspection is required, an additional initial inspection fee shall be charged for each additional reinspection of such elevator. Such fees shall be paid by the owner or user for each escalator, moving sidewalk,



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		<p>conveyor, or dumbwaiter inspected by the state elevator inspector before the inspection certificate is issued.</p> <p>(4) If at any time the owner or user desires a special inspection of an elevator, it shall be made by the elevator inspector after due request therefor and the inspector making the inspection shall collect his or her expenses in connection therewith and a fee of not more than two hundred dollars for each elevator inspected with an additional charge of five dollars for each floor over five.</p>
Colorado		Private inspection. \$30 test filing fee on an annual basis. Owner pay for inspection independent of the State of Colorado.
Oklahoma		<p>Existing elevator – certification of operation \$25.00</p> <p>12. New elevator – inspection and certification \$150.00</p> <p>13. Elevator temporary certification \$25.00</p> <p>14. Elevator temporary mechanic license for 30 days \$10.00</p> <p>15. Labor for chief elevator inspector or deputy elevator inspector to perform inspection for issuance of certificate of operation:</p> <p>a. any escalator or moving walkway \$125.00</p> <p>b. elevator, two-four floors \$75.00</p> <p>c. elevator, five-ten floors \$100.00</p> <p>d. elevator, eleven floors and over \$125.00</p> <p>e. wheelchair lift \$25.00</p>
Arkansas		<p>The fee for the operating permit is established by Rule 010.05-015(F).</p> <p>The owner or lessee of every power passenger elevator and escalator shall have it inspected periodically every sixth (6th) calendar month...</p> <p>For each inspection and report made at the direction of the department, the owner, lessee, or insurance company responsible for the report of inspection shall pay to the department a fee of one hundred dollars (\$100.00). The fee shall be paid directly to the department and shall be the only fee or charges for which such owner, lessee, or insurance company shall be liable for the inspection required by Ark.</p>



		<p>Code Ann. § 20-24-112(a).</p> <p>2. For witnessing the performance of all safety tests required by Ark. Code Ann. § 20-24-101 <i>et seq.</i> or these regulations, the owner, lessee, or insurance company responsible for the test shall pay to the department a fee of seventy-five dollars (\$75.00).</p> <p><b>Fees</b></p> <p>1. The annual fee to be charged for an operating permit is established by Ark. Code Ann. § 20-24-116, which provides:</p> <p>a. Dumbwaiters. . . . . \$30.00 annual</p> <p>b. Elevators and wheelchair lifts. . . . \$50.00 annual</p> <p>c. Escalators and moving walks. . . . \$85.00 annual</p>
Missouri		<p>Fee Schedule for inspections conducted by a State employed inspector with the Division of Fire Safety is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Annual Inspection:</b> \$125 per unit, PLUS expenses</li> <li>• <b>State Operating Certificate fee:</b> \$25 per unit</li> </ul> <p>Use of private inspectors as well.</p>
Other states with private inspection	Varies	<p>Fees will vary from state to state in locations in which private inspectors conduct inspections. Many times the jurisdictional authority may charge a license fee and the private inspector will charge a separate inspection fee.</p>
		<p><i>Note: All fees are separate from the fees associated with the maintenance and annual testing of the elevator equipment by the building's elevator maintenance company.</i></p>

**Calculating Fees: Example**

a. Number of inspectors necessary to complete inspections on a twice per year basis (excluding certain devices) multiplied by their total wages and benefits (include estimated overtime) (inspectors can complete about 1000-1400 inspection per year depending upon how far their inspection headquarters were from their assigned territory and density of the inspection territory and the complexity of the equipment – i.e. the taller the building, the more time it takes to inspect. A simple hydraulic elevator in a two story building will take less time than a high rise building or building were there is complications to gaining entry or difficult inspection environment such as a steel mill);



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- b. The number of inspectors multiplied by the estimated equipment, training and vehicle costs;
- c. Estimated administrative overhead charge-backs.

This has resulted in the following certificate of operation fees (see appendix for complete fees for Ohio - A "certificate of operation" includes the fees for the twice per year inspections):

2 story building:	\$244
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END

Schindler Elevator Corporation