The fall protection industry’s standard of excellence is Flexible Lifeline Systems. What our business means for your business is access to the best products and the leading experts when it comes to the specific fall risks faced by rooftop workers. As the leader in design and installation of rooftop fall protection in North America, FLS has constructed literally hundreds of miles of these systems – each tailored to a different industry, company and site.

Regardless of the task, height or roof slope, Flexible Lifeline Rooftop Fall Protection Systems are designed to be user-friendly and non-intrusive while providing continuous, complete and uncompromising safety. When you partner with FLS, the ultimate result is a system your workers will use without hesitation, because it keeps them safe without interfering with their jobs. Our fixed installations are without rival and constructed to weather the test of time. Portable, temporary solutions of equal quality are also available in multiple configurations to meet your every requirement.
"The overall operation is a pleasure to work with and Flexible Lifeline Systems continues to meet our needs."

Dennis Ryan - General Dynamics
From our first meeting to your system certification, one project manager will have total responsibility and accountability for your project, guiding it every step of the way.

Consultation and Site Assessments
FLS fall protection specialists are uniquely qualified to identify fall hazards at your site and are always available for consultation.

Engineering Site Visit
Upon award of the project, Flexible Lifeline Systems will perform an engineering site visit to obtain site-specific measurements in order to form the basis of the design of the system and for preparation of plans and drawings.

System Design
Our professional engineers will work hand-in-hand with your staff to design systems in accordance with stringent specifications and in compliance with all local and federal regulations.

Fabrication
Our in-house fabrication facility and quality assurance programs ensure strict adherence to procedures, specifications and full material traceability. A Flexible Lifeline System is a quality product.
Installation
FLS offers a full range of installation options – no one-size-fits-all approach for our clients. Again, our engineers consider every aspect of your facility’s size and configuration. The rigorously trained FLS installation team implementing your design will leave you with a system custom-made for your individual needs.

Certification
Your FLS system is certified and comes complete with a *Use, Care and Maintenance Manual*. This comprehensive document contains the design basis, calculations, drawings and technical specifications for your system.

Training
FLS instructors are available to train your staff at your site or at our fully equipped facility in Houston, Texas. From a four-hour Basic Fall Protection Course to our 40-hour Qualified Person Course, FLS will tailor a training program for you.

Service & Cost
FLS provides a full menu of inspection and service options ranging from emergency call-out service to five-year maintenance contracts. Piecemeal competitors can’t compare with FLS’ turnkey costs and services. With a quality system and more productive workers, your bottom line will quickly show that *FLS Works!*™
“Flexible Lifeline Systems completed a very professional installation in a very timely manner. Communication was the focus point in completing this project and the new system gives our workers a reassurance in safety.”

John Stone - CSC/NASA
**Constant Force Posts** can be deployed across virtually all major roof types including relatively delicate roof structures without costly penetrations and closures.

Constant Force technology allows the load generated during a fall to be absorbed throughout the entire system. The patented Constant Force Post has an integral energy absorbing coil that, in the event of a fall, deploys in a controlled manner to evenly absorb the force generated. In doing so it ensures that the load exerted from a fall on the point of attachment will not exceed 10 kN. Controlling the load in this manner allows the post to be fixed to more fragile roof-top structures without using structural steel or purlins.

- During a fall, posts deploy to absorb the energy and leave the roof panel intact.
- Integral energy absorber limits loads to 10 kN.
- Quick and easy to install.
- Posts can be used in fall arrest and restraint systems.
- Compatible with all major roofing systems.
- Can be utilized on virtually all roof types.
- Does not need to attach to structural steel or purlins.
- Small unobtrusive post design allows system to blend with building and maintain architectural integrity.
The Freestanding Constant Force Post provides worker safety at heights where there is an occasional or temporary requirement to access flat roofs or structures.

At the heart of the system is Constant Force technology. The patented Constant Force Post is contained within an anchor device consisting of a galvanized steel frame and galvanized steel weights bolted in a circular formation onto rubber coated base weights. In the event of a fall, the Constant Force Post deploys to limit the load on the system while the weights simultaneously create a friction anchor between the unit and the roof surface.

Applications
The Freestanding Constant Force Post is used on nominally flat roofs up to a maximum pitch of 5° where it is impractical to install traditional Constant Force posts or rigid anchor posts to the roof or supporting structure. The post has been tested and approved for use on concrete, single ply membrane, bitumen membrane, asphalt-sanded, asphalt-stone chipped and steel roof profiles.

Patented. The unique Constant Force Post utilizes an energy absorbing coil to control the force generated on its anchor during a fall.

- Can be used on a wide range of roof surfaces including concrete, single-ply membrane, bituminous membrane, sanded and stone chipping asphalt, and steel.
- Each anchor device protects a single user.
- Attaches without puncturing the roof membrane.
- Suitable for flat roofs (maximum 5° pitch).
- Applicable for use as a temporary or permanent anchor.
- Special swiveling anchor rotates through 360° for maximum user flexibility.
**Flexguard** is a free-standing railing system that does not penetrate the roof membrane.

Its modular design takes the complexity and high cost out of roof edge protection. Flexguard can also be used for walkways, stairwells and open shaft fall protection.

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**Safety**

- The Flexguard system not only meets but exceeds current safety requirements for guard rails.
- Flexguard assemblies use fittings that are TÜV tested and approved.
- Integral toe board fixing holes to allow full compliance with OSHA.
- Assemblies that come in contact with the roof membrane are fitted with an anti-slip rubber pad.
- Works on the well-proven counterweight principle.

**Simplicity**

- The Flexguard modular design takes the complexity and high cost out of roof edge protection for good.
- Minimum components for ease of fitting.
- Adjustable uprights allow up to 11 degree raking from vertical movement.
- No drilling, special anchoring or penetration of roof membrane required.
- No welding, bending or threading required on site.
- No special tools needed to complete a reliable and safe rooftop railing installation.
Versatility

- The Flexguard pre-fabricated design, utilizing the lightweight modular counterweights, allows maximum versatility on site.
- Sections can be taken down, added to and re-erected on site.
- Can be used for walkway demarcation, open shaft and stairwells, fall protection around roof top equipment and other safety applications.
- Adaptable to almost all variations of flat roofs, whether they are circular, square, rectangular or multilevel.

Durability

- Maintenance free and truly reliable, you can depend on Flexguard roof edge protection.
- Corrosion resistant - fittings galvanized to ASTM A153 finish and pipe galvanized to ASTM A53 on all assemblies.
- Featuring case-hardened steel grub screws with additional protection providing outstanding corrosion resistance.
- Fittings, manufactured to the requirements of ASTM A47-77-32510, provide strong, rigid, maintenance free connections.

“Communication with Flexible Lifeline Systems was very good and the staff was very responsive. We will order again from your company.”

Elizabeth Biddle - Shell
The Flexridge Rooftop Fall Protection System is the most reliable rooftop rigid rail system in use today. Designed with a low movement to weight ratio and to eliminate dust and debris buildup, Flexridge is also the very safest choice in rooftop protection.

**Unlimited Length**
Flexridge Rooftop Fall Protection Systems can be designed in unlimited lengths and are easy to extend when required.

**Future Expansion**
The modular style of the Flexridge Fall Protection System makes it easy to add sections. We take into account your expansion plans when designing your system to further reduce costs when the time comes to expand, and to ensure there are no surprises as your safety system grows to meet your future requirements.

**Reliability**
With systems installed all over the world, FLS provides you with the peace of mind you deserve, knowing that you’re providing employees with the best rooftop fall protection system available.

**Affordability**
As with our Flexible Lifeline Systems, the Flexridge Fall Protection System is attached to the roofing system without the need for expensive penetrations or structural reinforcements.
“Thanks for the quick response for getting this put in at short notice. The Installer was excellent, very professional and safe while at our job site. The quality of the equipment was very nice. I was really surprised how quick the system went in. I would also like to thank the Project Manager for everything he did interfacing with me! Thanks a lot.”

Joe Casey - Praxair
**FlexWalk**

FlexWalk is a fall protection solution consisting of walkway and handrail systems which install quickly and easily on a wide variety of roofs eliminating the fall hazard.

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**Optional Features**

All FlexWalk rooftop fall protections systems can be equipped with the following:

- Equipment platforms
- Pitch corrected walkways
- Toe board
- Painted handrails

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**FlexWalk**

Constructed with Galvalume® steel, FlexWalk protects rooftops from dishing or puncturing due to foot traffic and provides a non-skid surface to enable sure footing in all weather conditions. Designed not to require penetration of standing seam roof panels, FlexWalk is engineered from 12” wide interlocking planks allowing maximum configuration flexibility.

**Safety Handrail**

Built from 1 5/8” OD pipe with corrosion resistant fittings, Safety Handrail can be installed on one or both sides of FlexWalk and installation requires no roof penetrations.

Safety Handrail is 42” high with mid-rail support, and meets OSHA specifications.
“Flexible Lifeline Systems’ Project Management and Lead Installer were professional and efficient.”

Kelly Green – Shell
A fall through an unguarded skylight usually results in death or serious injury. FLS engineers OSHA compliant guardrail and screen-style fall protection systems.

**Guardrail**
The standard guardrail is electro-galvanized pipe. Stainless and aluminum pipe are also available if specific corrosive applications require their use.

**Screen-style**
The standard skylight screen is made from 304 SS wire mesh with stainless steel hardware. Hot dipped galvanized mesh is also available.

The guardrail and screen-style fall protection systems do not penetrate the roof or skylight curb membranes, thereby maintaining the integrity of the roof warranty.
**FLS Safety Tieback Anchors** are a safe and practical permanent anchorage solution. Cost effective and proven, Tieback Anchors are used for a wide range of suspended access applications including window cleaning and exterior building maintenance.

**Advantages**
Using the FLS Safety Tieback Anchor for rooftop and building maintenance includes the following advantages:

- Proven design - over 2,000 installations worldwide
- Cost effective - without sacrificing safety, FLS safety tiebacks are an economical choice compared to many alternative solutions
- Simple to use - increasing productivity
- Single and double sling models available

**Effectiveness**
The Tieback Anchor System provides an ideal safety solution when any of the following are needed:

- Lifeline anchorage for workers operating on powered suspended platforms
- Fall protection anchorage where leading edge hazards exist
- Safety tieback anchorage for temporary rigging equipment
- Rope descent system anchorage where specific use and height restrictions apply
“Flexible Lifeline Systems’ work exceeded expectations. They are efficient, effective and thorough and the project manager was excellent.”

Elizabeth Brightly, Spreckels Sugar
“Flexible Lifeline Systems
did a great job!”
Cesar Pulido - Motorola
Every building facade maintenance and fall arrest system application is unique and has its own characteristics. Flexible Lifeline Systems offers a complete line of services for the design, engineering and production of your facade maintenance equipment.

FLS will work with you to help define the most suitable façade maintenance system and fall hazard abatement solutions for your needs. Our comprehensive range of solutions can meet the requirements of the most challenging environments. We also ensure the building facade maintenance equipment meets all local, state and federal codes.

Our custom design service can address the demands imposed by unusual structures or extreme conditions and assures that worker safety at height is protected in any situation.

Our awareness of fabrication, construction techniques and materials, in addition to our specialized knowledge of fall arrest systems, ideally positions us to contribute ideas from the earliest design and planning stages. One of our experienced project engineers will oversee every aspect of the project to guarantee the system meets all the technical and safety criteria and is delivered on schedule ready for installation by our experienced crews. By providing multiple related service lines, we offer clients an easier way of doing business that saves time and money.
Flexible Lifeline System’s powered suspended work platforms are designed and engineered for dedicated use by building maintenance personnel. Our platforms contain industry-leading traction hoists and wire winders combining safety and versatility.

**Advantages**
Flexible Lifeline Systems’ powered suspended platform offers several advantages including:

- Platform components are made of the highest quality high strength aluminum alloy and/or hot-dipped galvanized steel
- Two Line (T type) systems with independent fall arrest or Four Line (F type) systems available
- All platforms meet or exceed OSHA, ASME, ANSI, IWCA safety standards
- Industry leading design, UL listed, traction hoists power the platform
- Available in both flexible modular designs and fixed length designs - purpose built for customer applications

**Features**
Flexible Lifeline Systems’ powered platforms come standard with the following:

- Independent controls for both hoists with “hold-to-run” up and down switches
- “NO POWER” emergency controlled descent safety system
- Electromechanical overload system prevents platform overload
Electrical safety limit switches interrupt power in the “UP” direction at pre-determined points on the suspended wire rope and in the “DOWN” direction when the platform descends to a flat surface or onto an unseen obstruction below.

Platform self-leveling system keeps the platform level during operation.

Emergency STOP buttons at both hoist locations

3-Phase Power minimizes unsafe operation and maximizes performance

Non-marking wall rollers

Portable fire extinguisher and cable bins

Optional Features
Available on request:

Our fly decks allow safe access in hard-to-reach building areas

Custom-designed and manufactured wall-rollters prevent damage to sophisticated curtain wall systems

“The system is excellent and Flexible Lifeline Systems were very professional in their project execution.”

Wilhelm Jimenez - Lilly
Flexible Lifeline Systems ensures your building is compliant with ANSI/IWCA I-14.1, OSHA 1910.66 and ASME A120.1 standards by designing, installing, certifying and re-certifying all your rooftop safety tiebacks, sockets, davits, platforms, and all fall arrest and fall restraint systems. FLS also trains your maintenance personnel in the proper use of all safety systems.

Flexible Lifeline Systems is the TURNKEY provider for your rooftop and building facade maintenance system. When selecting which building maintenance system is ideally suited for your building, we consider the following factors:

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<th>Building Architecture</th>
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<td>■ Design Complexity and Facade Characteristics</td>
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<td>■ Building Structure</td>
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FLS Sockets and Davits provide the option of roof-rigged or ground-rigged (code permitting) powered platforms with safe access and egress on the roof. Davit and Socket Systems are implemented worldwide, easy to operate, economical, and readily customized.

**FLS Davit Systems**
Davits are a practical permanent suspension system when used with a self-powered platform (a work platform mounted with traction or drum hoists). Constructed of high-strength aluminum alloy, our Davit Systems boast a patented, lightweight, and strong extrusion.

**Standard Sockets**
Sockets are galvanized steel embeds fixed to a building’s structure for safe convenient rigging locations for our Davits. Socket systems are generally exposed, but can be recessed below the roof surface where a public space requires an aesthetic solution.

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**Effectiveness**
Sockets and Davit systems are most effective in the following conditions:

- Maximum outreach required for facade access does not exceed 102 inches.
- Platform lengths can exceed 20 feet.
- The building design has multiple levels (terraces, roof levels, etc.)
- Building elevation is less than 490 feet.
“It was a tough installation and Flexible Lifeline Systems did a great job accommodating our schedule. We were in constant communication and the systems are currently being used with great success.”

George McDonald, III - M.A. Mortenson
Standard Embeds
The Standard Socket Pedestal Embeds consist of a vertical formed socket, bottom plate and middle support bar. These components are fabricated from ASTM A36 steel with a fully galvanized finish per ASTM A123. FLS Embed systems set the industry standard and conform to all OSHA regulations.

Effective conditions:
- The building structure accommodates attachment to a horizontal plane or safe work surface.
- The number of davit socket locations is moderate.

Mobile Sockets
Mobile Davit Sockets consist of a vertical formed socket, bottom plate, middle support bar, transport handle and roller wheel assembly. Fabricated to the same high caliber as FLS Standard Embeds, Mobile Sockets are OSHA compliant. The mobile socket attaches to a mobile pedestal embedded in the rooftop.

Effective conditions:
- The building structure accommodates attachment to a horizontal plane or safe work surface.
- There are a large number of embed pedestal locations.

Flush Mounted Sockets
Flush Mounted Mobile Davit Sockets use the same components as mobile sockets and are fabricated to the same standard as FLS Standard Embeds making them OSHA compliant. Flush mounted mobile sockets attach to a matching pedestal anchored to the building structure.

Effective conditions:
- The building structure accommodates attachment to a horizontal plane or safe work surface.
- Aesthetic consideration of the rooftop or work surface requires hidden embedded locations.

* New York State Department of Labor Standards do not allow the use of mobile sockets.
WHY CHOOSE FLS?

Because **Flexible Lifeline Systems** sets the global standard for fall arrest solutions.

### UNRIVALLED EXPERIENCE

**Focus**

Our sole focus is innovative fall protection systems. We design and engineer fall protection. Period.

**Experience**

FLS has designed and installed more fall protection systems in more applications and industries than any other fall protection system contractor.

### INDUSTRY BEST EXPERTISE

**Professional Engineers**

FLS’ Registered Professional Engineers are highly experienced in the loading characteristics of fall protection and building facade maintenance systems.

**Multiple Solutions**

FLS provides multiple proven solutions for each application.

### INNOVATIVE SOLUTIONS

**Turnkey Service**

FLS has built its reputation through the self-performance of all phases of fall protection installation including engineering, fabrication, installation, certification and training.
Knowledgeable Systems Specialists

FLS’ Systems Specialists are the most highly trained and knowledgeable sales force in the fall protection industry. Think of your Systems Specialist as your own personal fall protection consultant.

Quality Assurance

Our uncompromising QA Team guarantees FLS Works™ exactly as planned on every installation. We utilize ISO 9001:2000, API Q1, 7th Edition, and ISO/TS 29001:2003 systems which are designed to the highest standards of ongoing quality assurance. Our QA policy is simple; always meet or exceed our customer’s requirements and the highest recognized industry standards. No exceptions.

Satisfied Customers

Our clientele includes a wide range of industrial companies, military organizations, architects, building owners, property managers, engineers and contractors who come to us, not only for product knowledge, but for design and technical assistance. We pride ourselves on excellence - supplying proven solutions, technical services, and extensive industry experience. FLS Works™