

## Stairways, Landings, Ladders and Conveyor Crossovers

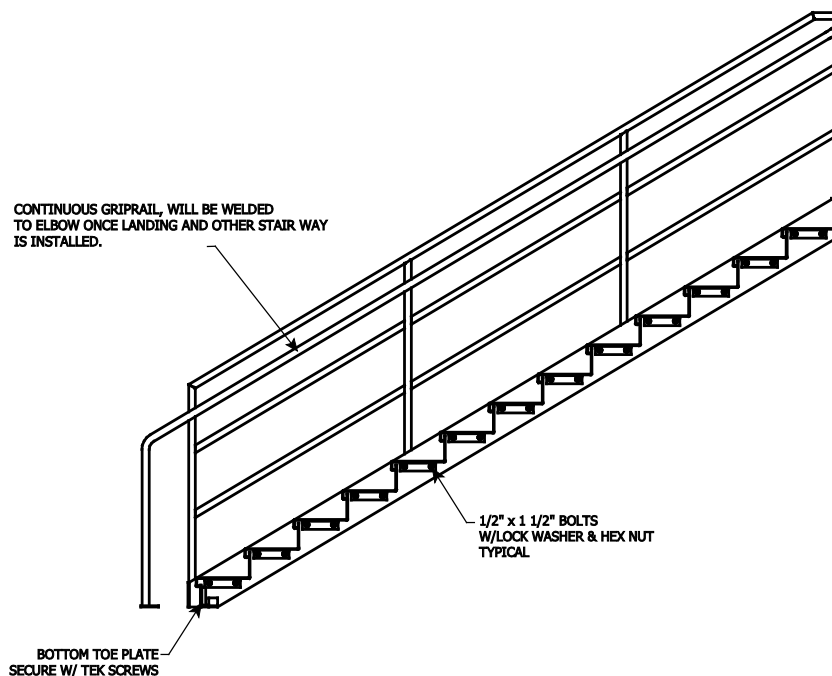
Bluff Manufacturing is uniquely qualified to provide you with targeted solutions to your stairway, landing, ladder and conveyor crossover needs. Whether your application challenge is mezzanine access for maintenance/daily operations, or moving personnel across your conveyor line, Bluff has the experienced personnel and product manufacturing expertise to develop and deliver a solutions-based product which is specific to your individual design requirements. Our stairway, landing, ladder and conveyor crossover systems will afford you enhanced operational efficiency in a safe and cost effective manner.

### STAIRWAYS

Because your elevation transition needs are quite specific to your worksite and operation systems, Bluff starts its product planning with an assessment of your current application as well as an inventory of your needs. Professional design engineers then develop a plan which can either be integrated into your existing installation or can be a new, freestanding installation. All of our stairway systems are in strict compliance with existing IBC, UBC and OSHA requirements. Manufactured with structural steel, our stairways are a bolt together design which ensures maximum strength and rigidity.

### STAIRWAY SPECIFICATIONS

- Standard width of 36" with customization available
- Tread options of bar grate or diamond plate tread
- Closed risers
- Custom sizes and configurations (straight, L-Shaped and U-shaped runs with intermediate landings)
- Stair tower systems are designed to meet your exact height and space requirements
- Standard Stairway consists of 3 parts: 2 stringers with welded handrail and gripail; treads bolted between stringers



### IBC STAIRWAY CODE

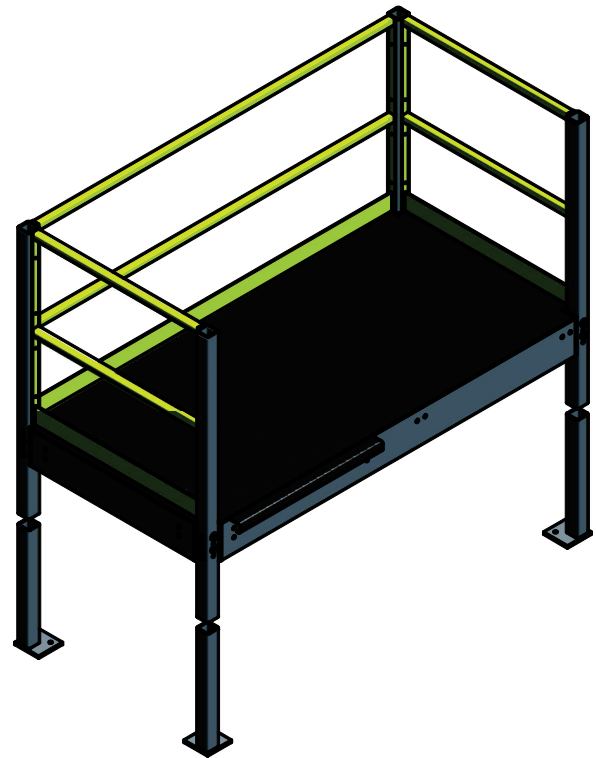
Height	# of Treads Required
36"-42"	5
43'-49"	6
50"-56"	7
57"-63"	8
64"-70"	9
71"-77"	10
78"-84"	11
85"-91"	12

Height	# of Treads Required
92"-98"	13
99"-105"	14
106"-112"	15
113"-119"	16
120"-126"	17
127"-133"	18
134"-140"	19
141"-144"	20

### LANDINGS

While a single flight of stairs is certainly suitable for deck heights of less than twelve feet, applicable code requires that any vertical rise exceeding twelve feet must have an intermediate landing. While the configuration of your particular stair and landing system is limited by code requirements, it is also driven by the constraints of your work space. We actively work with you to design the most functional and efficient stair system within your unique space constraints using a variety of layout formats. Landings can be provided with stairs or sold separately for integration into existing stairway systems. Landing specifications include:

- Fixed handrail in compliance with applicable code
- Gate options for platform landing
- Custom sizes and configurations (straight, L-Shaped and U-shaped runs)
- Top landings are available for specific ingress/egress requirements
- Choice of decking material



Turnback Landing 48" x 96"

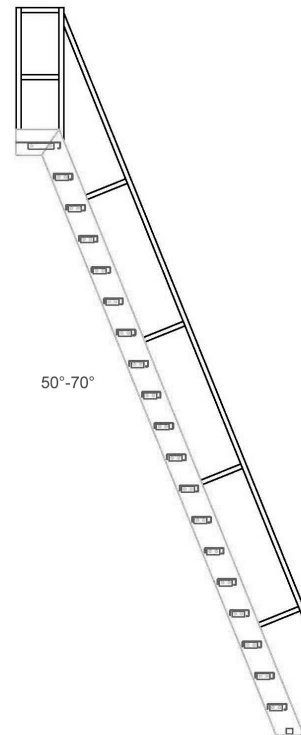
## LADDERS

Often the need for raised elevation personnel accessibility is intermittent and infrequent and may be adequately served through the use of a fixed ladder. Ladders may never be the sole means of access to a mezzanine. Dependent on the usage of the ladder, design applications include fixed ladders, caged and uncaged ladders as well as ships ladders. All Bluff ladders are designed and constructed in compliance with OSHA and ANSI Standards.

STRAIGHT LADDERS	SHIPS LADDERS
All welded steel	All bolted steel
Require caging when heights exceed 20 feet	No caging requirements
Intermediate landing required when over 30 feet	Intermediate landing required when over 12 feet
Rungs $\frac{3}{4}$ " serrated round rebar	Tread depth of 6", width up to 36"
Handrail extends 42" above top rung	Ladder with 36" grip rail, and handrail at 42" above top tread
	3 piece construction consisting of 2 stringers with welded grip rail and bolted treads



Caged Ladder



Ships Ladder

## CONVEYOR CROSSOVERS

Routes of travel within job functions and conveyor operations, and duties such as maintenance or service, often require movement across conveyors, assembly lines, small machines, piping or other obstructions. Our goal is to provide you with crossover solutions which allow your personnel to safely cross over active conveyors at designated and approved locations. Provision of this safe crossing significantly reduces the potential for worker injury and dramatically enhances the efficiency of workflow.

Used in industrial applications, crossovers are the economical choice compared to adding a gate into an existing system. The welded steel construction of our crossovers allows for longer life cycles and for lower maintenance costs than gates. Because a Bluff crossover is designed specific to your needs, the customization includes capacities and configurations, specific widths and vertical clearances. These clearances range from conveyor height to an elevation which clears both the conveying surface and the highest item expected to be conveyed. Alternate configurations include U-shaped, Z-shaped and L-shaped with intermediate landings where necessary, based on your crossover footprint restrictions.



**Conveyor Crossover**  
 Integrated into Existing Conveyor Operations

