should meet the requirements of existing state laws for ladders except that an enclosing cage should not be provided since the ladder should be accessible from either side throughout its entire run

Inspections

Every manlift should be tested and inspected at least every 30 days On discovery of a defect, the manlift should be put out of operation *immediately* and not used until repaired Each periodic inspection should cover, but not necessarily be limited to, the following items

Steps	Lubrication
Step fastenings	Warning signs and lights
Rail supports and fastenings	Signal equipment
Rollers and slides	Drive pulley
Belt and belt tension	Bottom (boot) pulley and clearance
Handholds and fastenings	Pulley supports
Floor landings	Motor
Guardrails	Driving mechanism
Electric switches	Brake

The safety mechanism of a manlift should be inspected daily for free operation and for accumulations of dirt and grease A manlift should be completely dismantled once every three years and defective or excessively worn parts should be replaced

General precautions

The maximum speed of a manlift belt should not exceed 80 fpm and should be uniform on all manlifts throughout the plant If the lift carries a great deal of traffic, a maximum speed of 60 fpm is recommended

Floors should be numbered in large figures in full view of both ascending and descending riders A constantly illuminated sign, reading in block letters at least 2 in high "Top Floor—Get Off," should be conspicuously placed not more than 2 ft above the top landing, in full view of an ascending passenger If such a sign is not used, at least a 40-watt red light should be so located immediately below the top landing as to shine in an ascending rider's face

Signs carrying instructions for use of the manlift should be displayed prominently at each landing. Only employees should be permitted to ride manlifts, and signs so stating also should be displayed at each landing.

The entire manlift should be illuminated at all times while it is in operation, with at least 1 foot-candle at all points and at least 3 foot-candles at landings

Nothing that cannot be placed entirely inside a pocket or in a sling or pouch should be carried by a rider on a manlift Tools may be carried in a leather-bottom canvas bag not larger than 11 by 13 in and provided with carrying loops or handles While riding the manlift, the passenger should hold the bag in his hand

Employees, particularly new ones, should be carefully instructed in safe use of the manlift and should be cautioned to report immediately any defects or irregularity in operation of the manlift or the safety devices

Plant Railways

Clearances and warning methods

Insofar as possible, plant railway hazards should be eliminated in the design of a new plant Horizontal and vertical track clearances are primary considerations

It is recommended that in this and all other phases of *track construction*, AREA standards* be adopted, provided municipal, state or federal regulations do not conflict Fig 19-13 shows AREA recommended clearance standards

Where platforms, building entrances, or structures are located along curved track, additional clearance must be allowed on both sides of the curve for lateral movement of cars and loaded flatcars at center and at ends

Additional track clearance must be allowed also when awning or jalousie windows are installed in adjacent buildings

Close clearance warning signs should be placed at points where buildings or other obstructions are so close to a track that they will not clear a man riding on the side of a car Side or overhead telltales sometimes are installed to give positive warning of approach to structures with close clearance

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*Association of American Railroads, Engineering Division (American Railway Engineering Association), 59 East Van Buren St, Chicago, Ill *Manual of Recommended Practice*