

- A. When scaffolding is suspended 1092 mm (43") or more below the surface to be painted, two guardrails shall be placed on all sides of the scaffolding. One guardrail shall be placed at 1067 mm (42") above the scaffolding and the other at 508 mm (20") above the scaffolding.
- B. When the scaffolding is suspended at least 533 mm (21"), but less than 1092 mm (43") below the surface to be painted, a guardrail shall be placed on all sides of the scaffolding at 508 mm (20") above the scaffolding.
- C. Two guardrails shall be placed on all sides of scaffolding not previously mentioned. The guardrails shall be placed at 1067 mm (42") and 508 mm (20") above scaffolding, as previously mentioned.
- D. All scaffolding must be at least 610 mm (24") wide when guardrail is used and 711 mm (28") wide when the scaffolding is suspended less than 533 mm (21") below the surface to be painted and guardrail is not used. If 2 or more scaffolding are laid parallel to achieve the proper width, they must be rigidly attached to each other to preclude any differential movement.
- E. All guardrail shall be constructed as a substantial barrier which is securely fastened in place and is free from protruding objects such as nails, screws and bolts. There shall be an opening in the guardrail, properly located, to allow the Inspector access onto the scaffolding.
- F. The rails and uprights shall be either metal or wood. If pipe railing is used, the railing shall have a nominal diameter of no less than 38 mm (1.5"). If structural steel railing is use, the rails shall be 50x50x9 mm (2x2x3/8") steel angles or other metal shapes of equal or greater strength. If wood railing is used, the railing shall be 50x100 mm (2x4") (nominal) stock. All uprights shall be spaced at no more than 2.4 m (8 feet) on center. If wood uprights are used, the uprights shall be 50x100 mm (2x4") (nominal) stock.
- G. When the surface to be inspected is more than 4.57 m (15 feet) above the ground or water, and the scaffolding is supported from the structure being painted, the Contractor shall provide the Inspector with a safety harness (not a safety belt) and lifeline. The lifeline shall not allow a fall greater than 1.8 m (6 feet). The Contractor shall provide a method of attaching the lifeline to the structure independent of the scaffolding cables, or brackets supporting the scaffolding.
- H. When scaffolding is more than 762 mm (2.5 feet) above the ground, the Contractor shall provide a ladder for access onto the scaffolding. The ladder and any equipment used to attach the ladder to the structure shall be capable of supporting 113 kg. (250 pounds) with a safety factor of at least 4 . All rungs, steps, cleats, or treads shall have uniform spacing and shall not exceed 305 mm (12") on center. At least one side rail shall extend at least 914 mm (36") above the landing near the top of the ladder.
- I. An additional landing shall be required when the distance from the ladder to the point where the scaffolding may be accessed exceeds 305 mm (12"). The landing shall be a minimum of at least 610 mm (24") wide and 610 mm

(24") long. It shall also be of adequate size and shape so that the distance from the landing to the point where the scaffolding is accessed does not exceed 305 mm (12"). The landing shall be rigid and firmly attached to the ladder; however, it shall not be supported by the ladder. The scaffolding shall be capable of supporting a minimum of 454 kg (1,000 pound).

- J. In addition to the aforementioned requirements, the Contractor shall be responsible to observe and comply with all Federal, State and local laws, ordinances, regulations, orders and decrees.
- K. The Contractor shall furnish all necessary traffic control to permit inspection during and after all phases of the project.

#### **816.11 PROTECTION OF PEOPLE AND PROPERTY**

The Contractor shall collect, remove and dispose of all buckets, rags or other discarded materials and shall leave the job site in a clean condition.

The Contractor shall protect all portions of the structure which are not to be painted, against damage or disfigurement by splashes, spatters, and smirches of paint. deck bottoms and backwalls are exempt from this requirement.

When or where any direct or indirect damage or injury is done to public or private property, the Contractor shall restore, at his own expense, such property, to a condition similarly or equal to that existing before such damage or injury was done.

#### **816.12 POLLUTION CONTROL**

The contractor shall take all necessary precautions to comply with pollution control laws, rules or regulations of Federal, State, or local agencies, and as required in this specification.

#### **816.13 WORK LIMITATIONS**

Field painting shall be done between **April 15 and October 31**. Further work limitations shall be as designated in the plans.

#### **816.14 METHOD OF MEASUREMENT**

Field cleaning and painting of shop primed new structural steel may be based on a square meter (square foot), Kilogram (pound), or lump sum pay item. All field painting will include 2 coats of paint; intermediate coat, and finish coat on top of a shop applied prime coat.

If measurement is by a square meter (square foot) item on steel beam and girder bridges, then surface area is based on a nominal measurement of the beams; ie. 2 times the beam depth plus 3 times the flange width. In addition to this nominal measurement, a percentage is added to account for incidentals such as cross frames, bearing assemblies, stiffeners, expansion joints, scuppers, etc. Thus, it is not necessary for the Inspector to field measure every detail of the bridge to verify quantities. In the case of a quantity dispute, exact field measurements of all painted surfaces or calculations or both will govern.