

Author:	Div. 4	Revision #:	2
Approved by:	Darryl Bass	Date Issued:	December 2020

SAFE OPERATING PROCEDURES

Guardrail Installation/Maintenance

SOP 11B-41

Hazard Review		
Moving Traffic	Overcrowding of Workers	Slip, Trip and Fall
Moving Equipment	Heavy Materials	Lifting
Animals	Poisonous Plants/Snakes/Insects	Crushing
	Cutting/Welding Galvanized Materials	
Required Personal Protective Equipment (PPE) (Based on job specific hazard review)		
Safety Vest	Safety Shoes	Safety Glasses
Gloves	Hard Hat	

1. Review Safe Operating Procedures for applicable equipment and perform pre-operational checks.
2. Determine the traffic control needs from the NCDOT Specifications, MUTCD and the Work Zone Safety Handbook. All shoulder closures and lane closures shall be entered into DriveNC (TIMS) and shall be updated as the traffic control is installed, changed, or removed. Only work on one side/direction of roadway at a time.
3. Park in areas that: provide safe entrance and exit of the work area; do not create potential conflicts with other vehicles and equipment operating in the work area; and provide maximum protection for workers getting in and out of the vehicles.
4. Employees on foot must use extreme caution to stay clear of operating equipment. Always establish eye contact with operator before approaching equipment.
5. Be aware of escape routes in case of emergency. It is a good practice to face oncoming traffic while on foot.
6. Have fire extinguishers available when welding/cutting.
7. Do not use a welder or torch on guardrail without a proper respirator since galvanized steel will release zinc oxide fumes which is hazardous to the respiratory system and may cause metal fume fever.
8. Be alert to sharp or jagged edges, burns and splinters when handling guardrail and posts, especially that which has been damaged.
9. Be aware of loose material, excavation drop-offs, tripping hazards, uneven ground and other obstructions.
10. Allow ample space for each employee to work safely.
11. Be aware of poisonous plants, insects, snakes, animals, and animal waste products and carcasses. It is a good practice to wear long sleeve shirts, gloves and high-top boots when hazards cannot be avoided.
12. Proper lifting techniques shall be used. Get help or use equipment if necessary.
13. Be aware of crushing hazards and pinch points when fastening or handling guardrail. Use a pry bar to align holes.
14. Work from back side of guardrail when removing rail from posts.

Related SOP's	
General SOP's.....Chapter 10	Welding, Oxy-Acetylene Cutting11A-40
Welding, Arc.....11A-39	Post Driver12A-15
Truck, Crew Cab and Flatbed12A-29	Hand Tools (Power and Manual)12B-13
Tractor Attachments 12B-29	