Junction Boxes

- 8-20.3(6)
- 9-29.2 junction boxes
- 9-29.2(3) structure mounted JBs
- 9-29.2(4) cover markings

Type 1 Junction Box

Type 2 Junction Box

Base Plate and JB

Type 3,7,or 8

Type 7 JBs

12-inch Deep 18-inch Deep

Type 8 Junction Box

Type 4 Junction Box

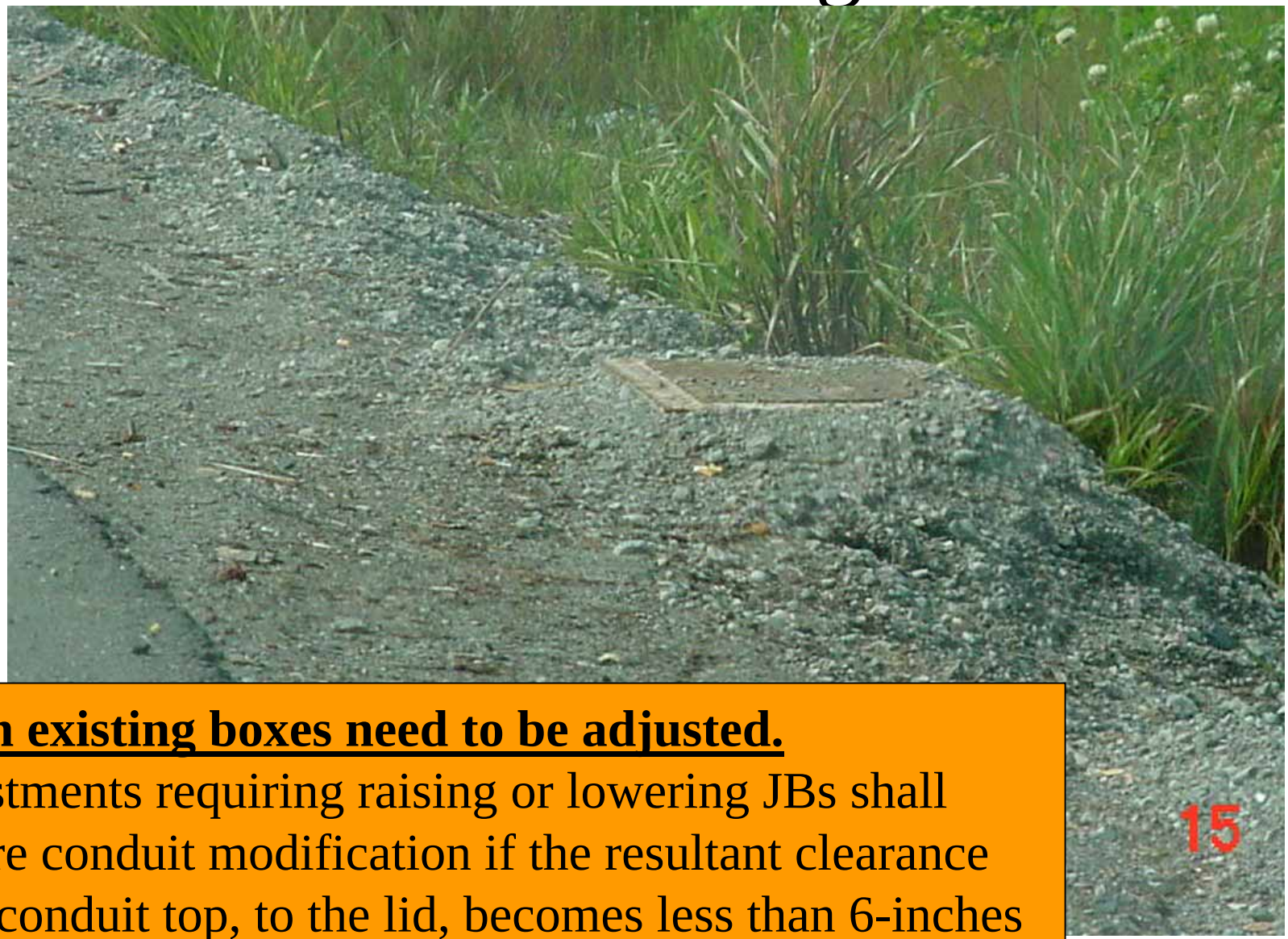
Type 4 JB

Type 6 Junction Box

Traffic Temporarily Placed Over Traffic Bearing Boxes

Pull Box With Section Out

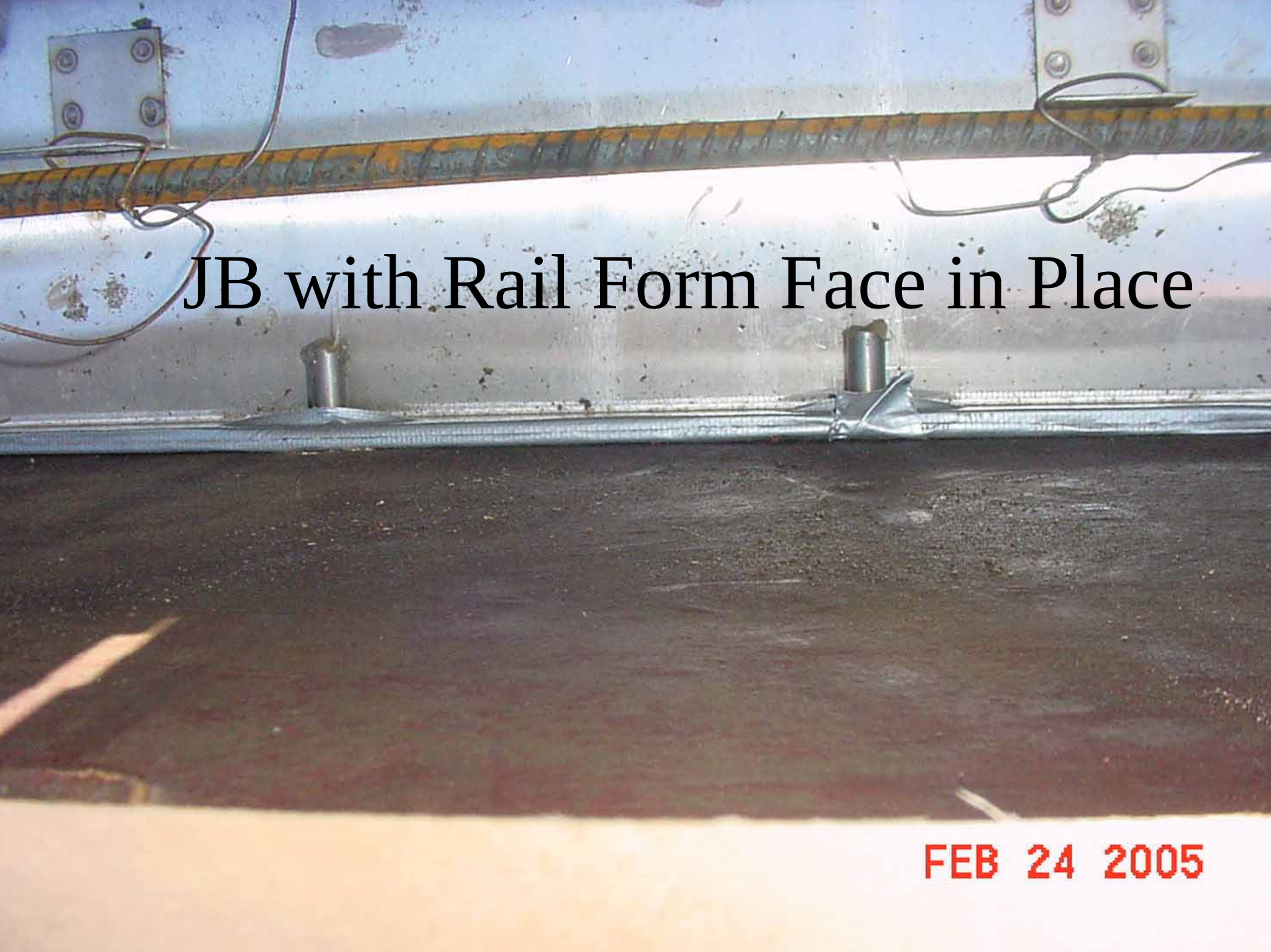
JB Too High



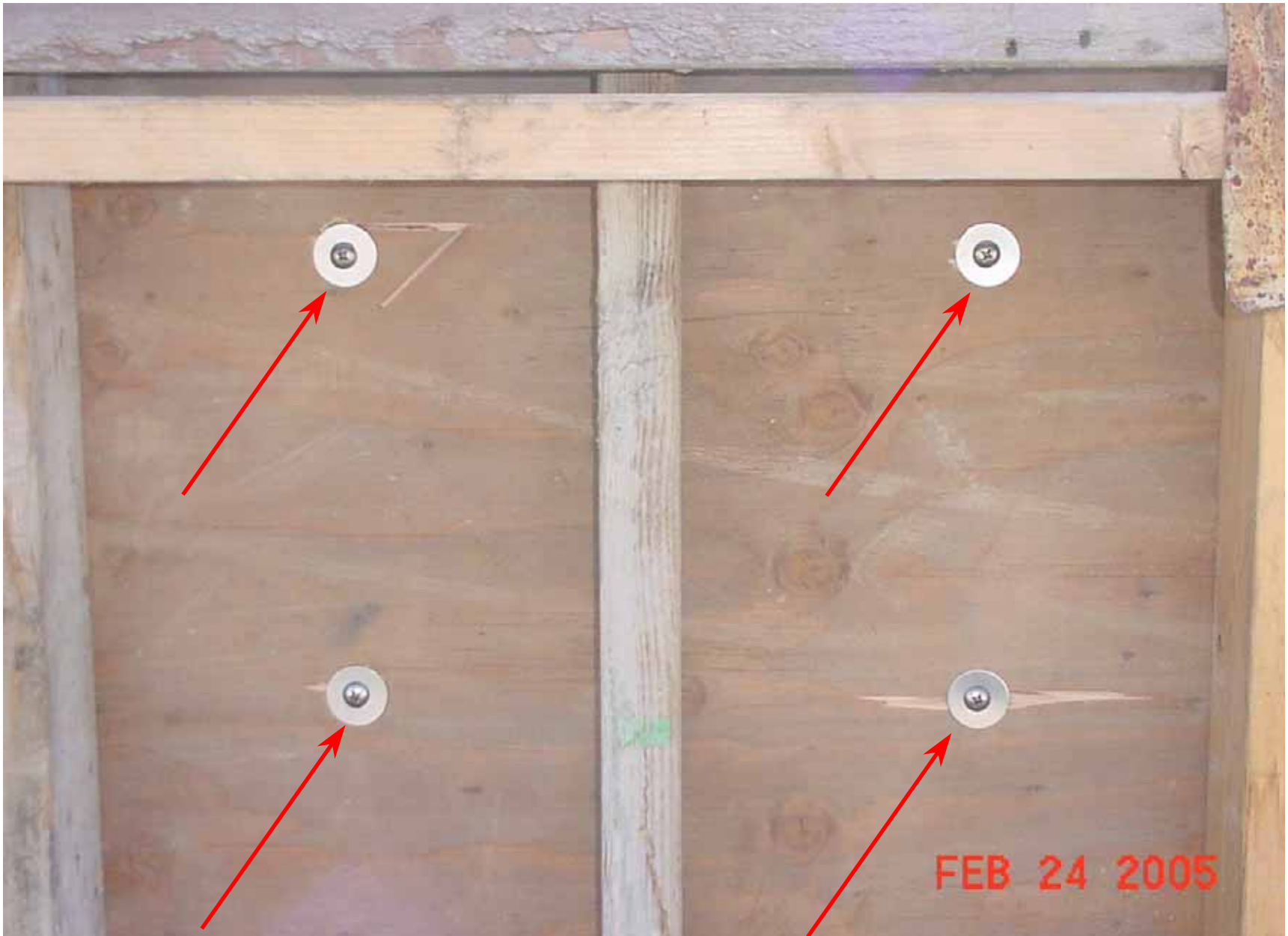
When existing boxes need to be adjusted.

Adjustments requiring raising or lowering JBs shall require conduit modification if the resultant clearance from conduit top, to the lid, becomes less than 6-inches or more than **10-inches**. Special Provisions 8-20.3(6)

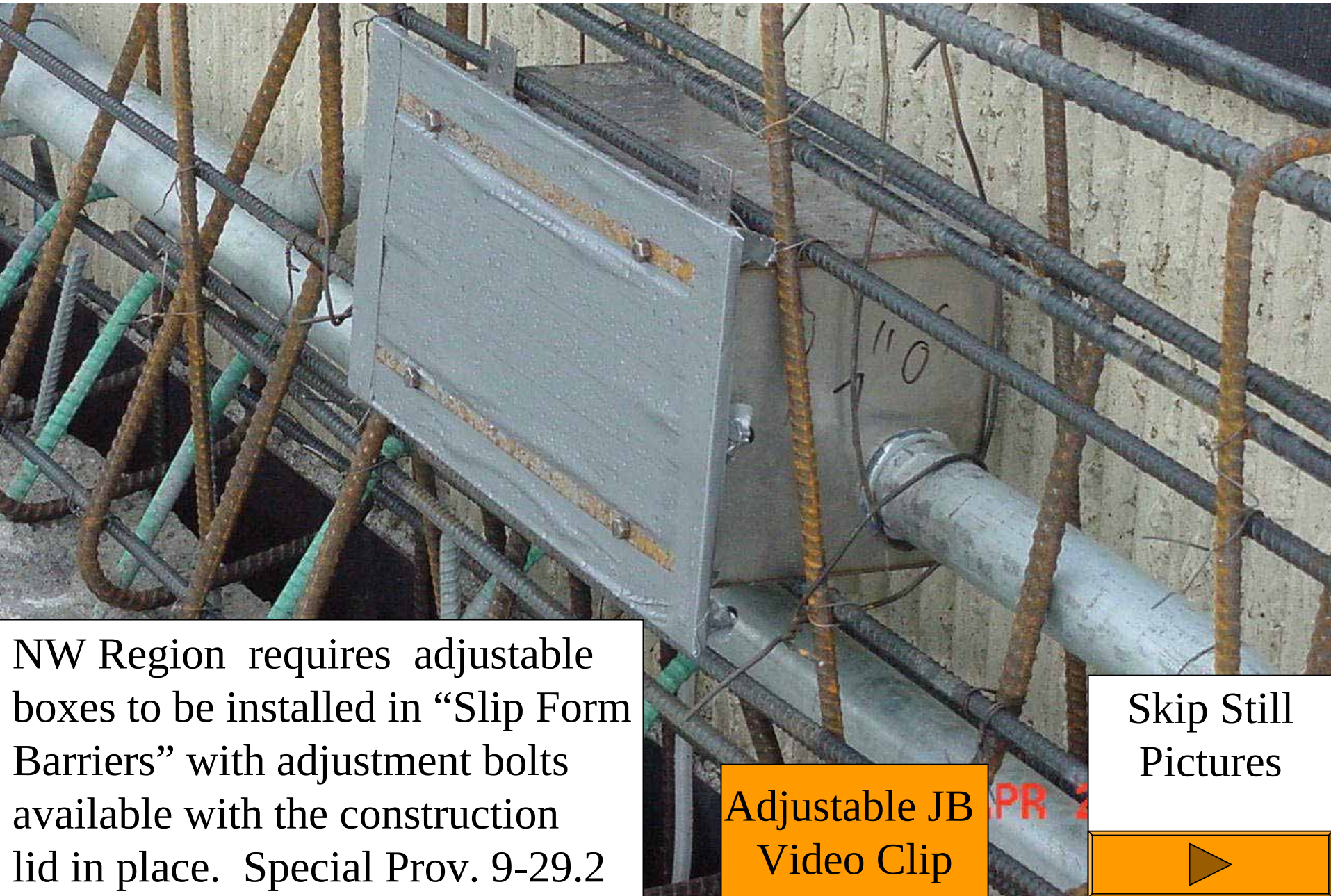
Secure the Boxes


JB with Rail Form Face in Place
FEB 24 2005

JB Secured to Form Face



Adjustable JB With About 1.5-Inch of Adjustment NEMA 3X

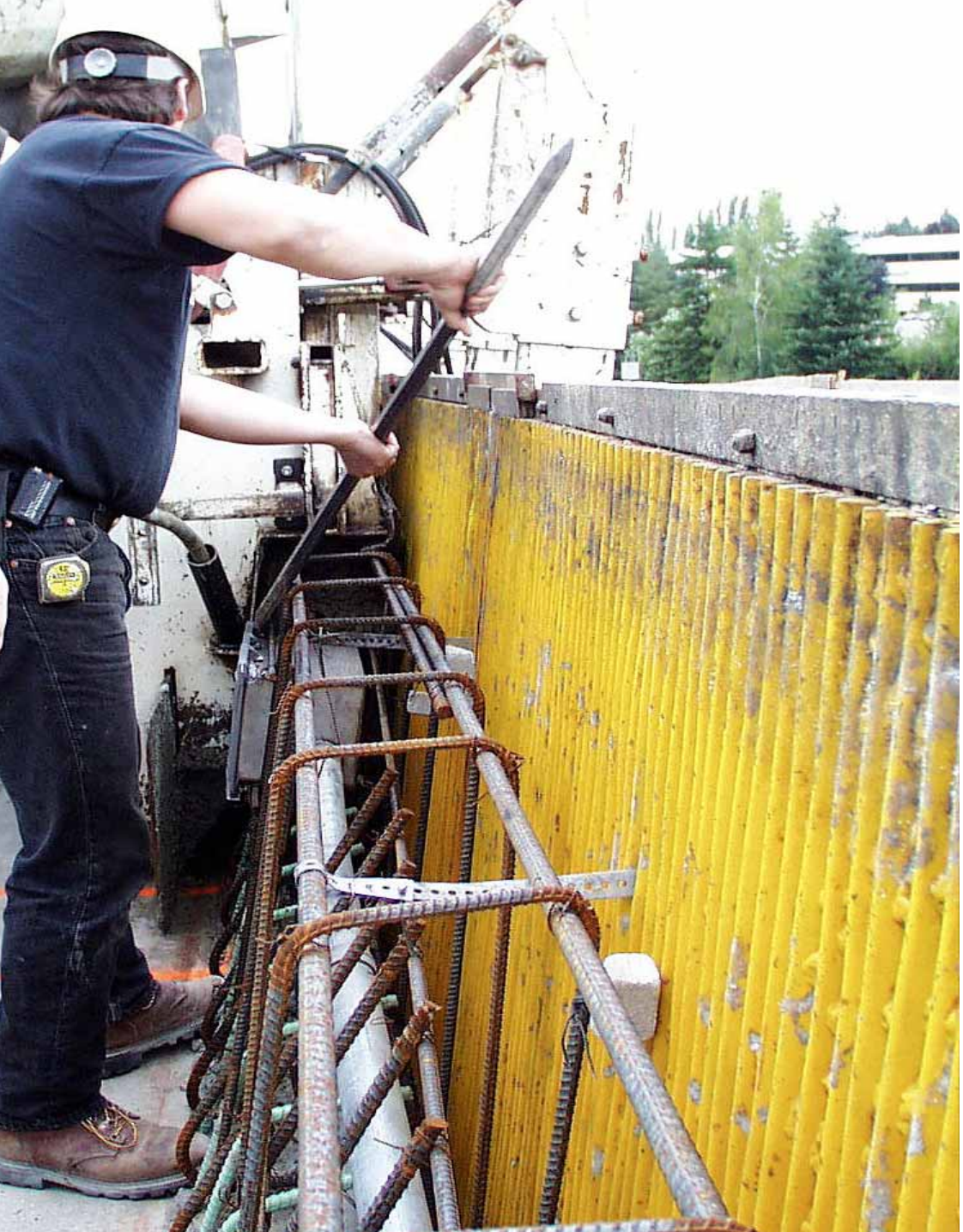


NW Region requires adjustable boxes to be installed in “Slip Form Barriers” with adjustment bolts available with the construction lid in place. Special Prov. 9-29.2

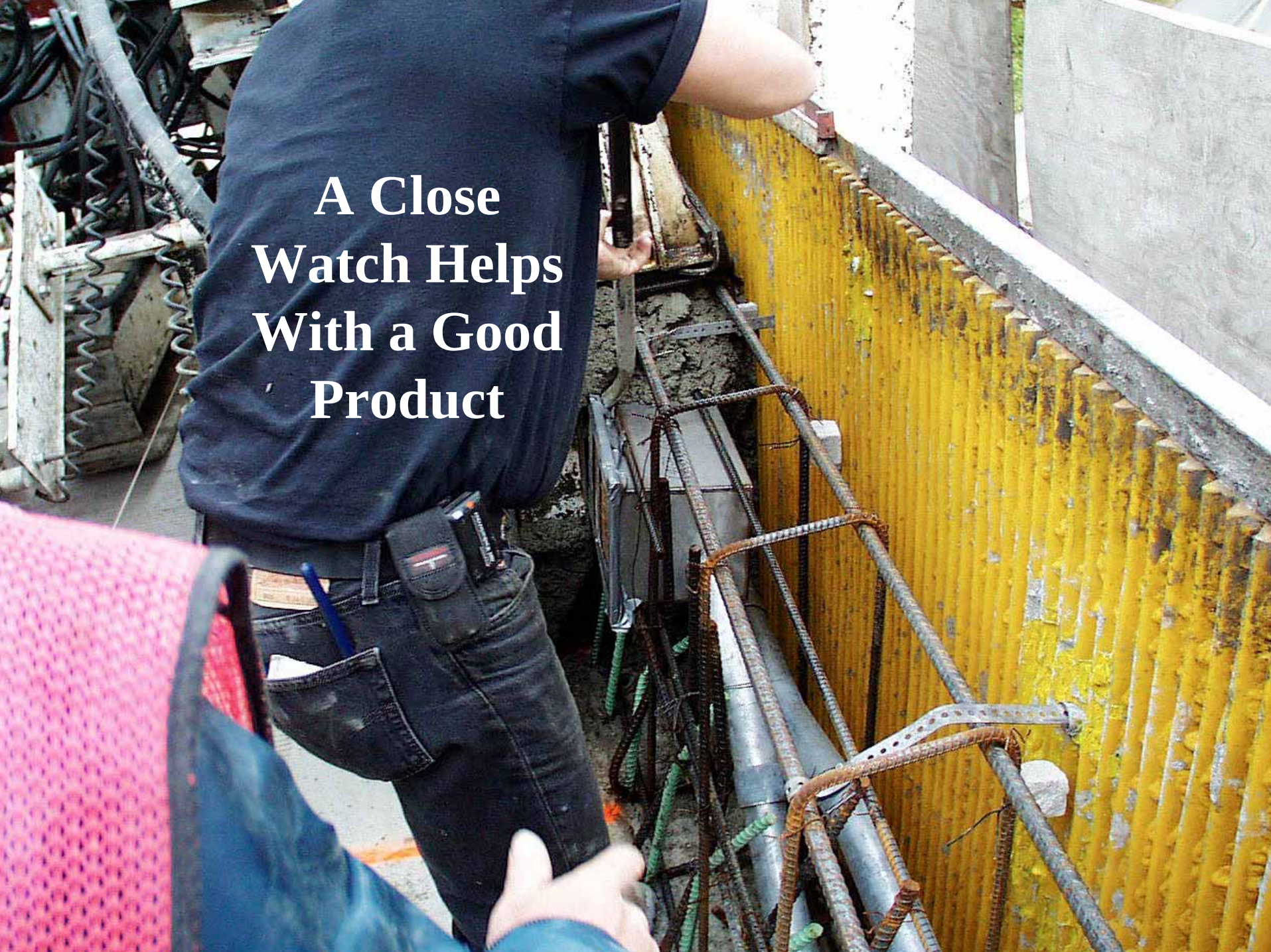
Adjustable JB Video Clip

Skip Still Pictures

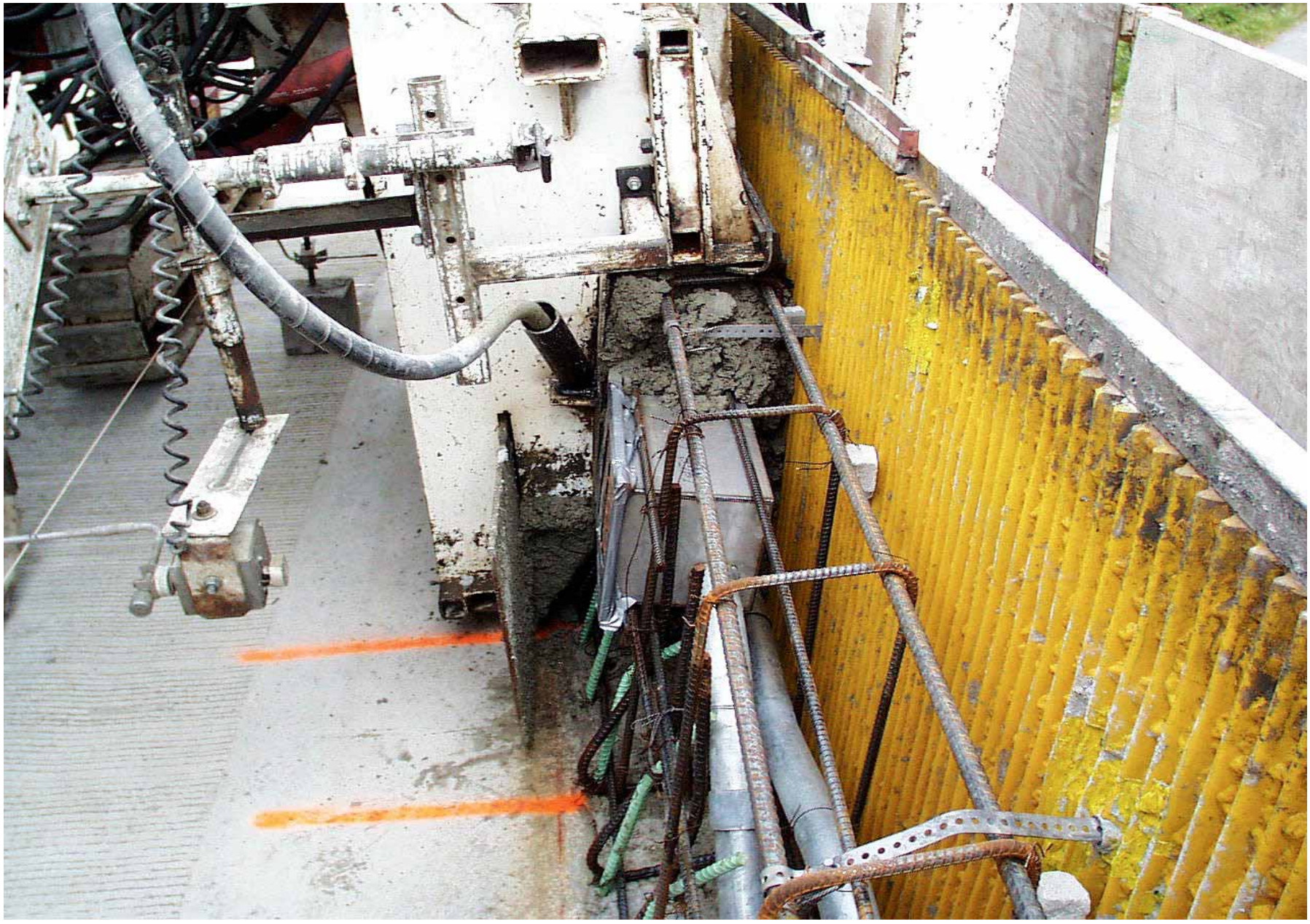
Hold the Box Back to Let the Machine Start Over It



Holding the JB to Keep It Out Flush

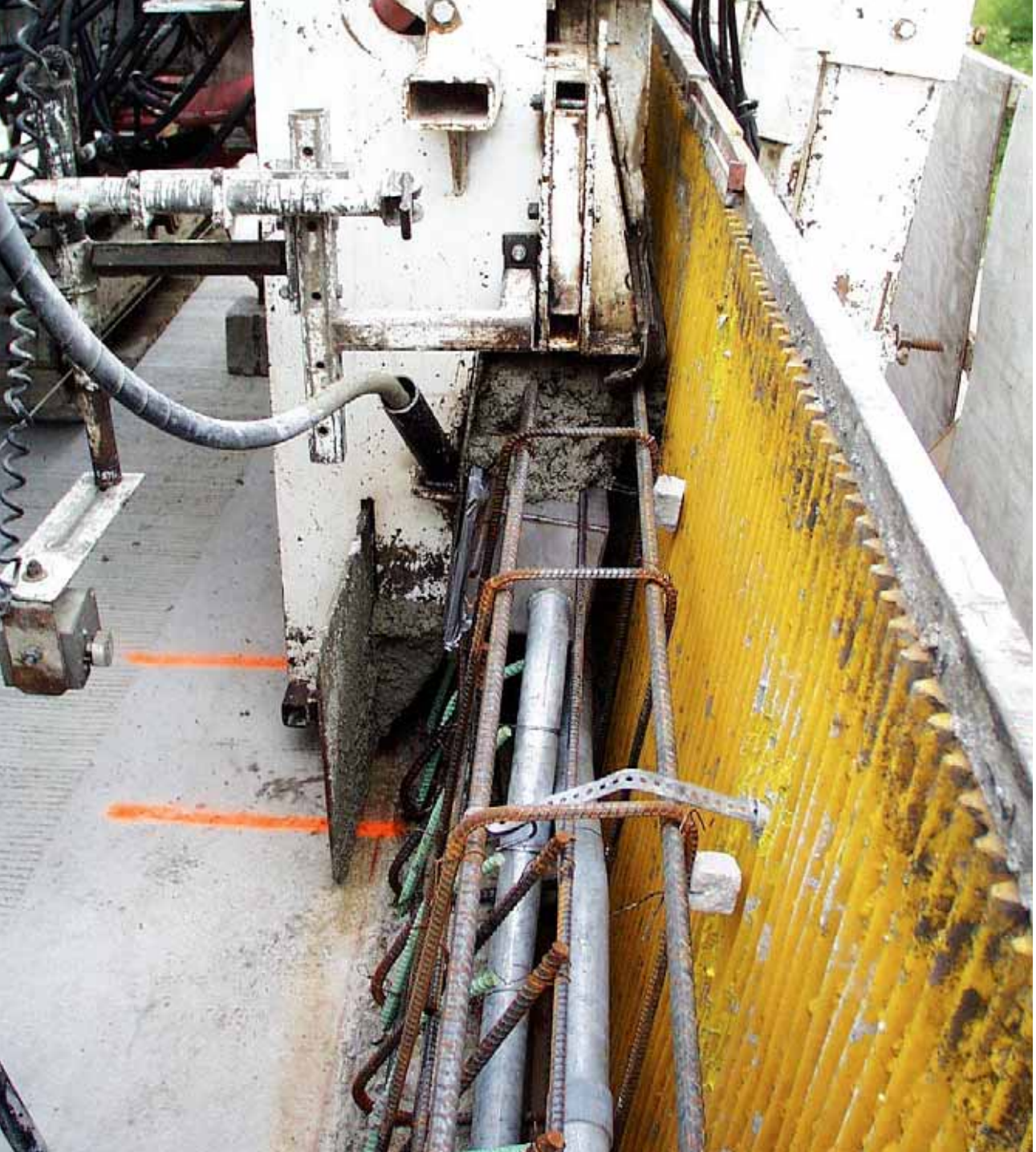

A Close
Watch Helps
With a Good
Product

Looking Good



Box Looks Good

Pride in His Work



There It Goes

Last Minute Adjustment

After the Machine Extrudes It

I Know There Is a Box Here Someplace

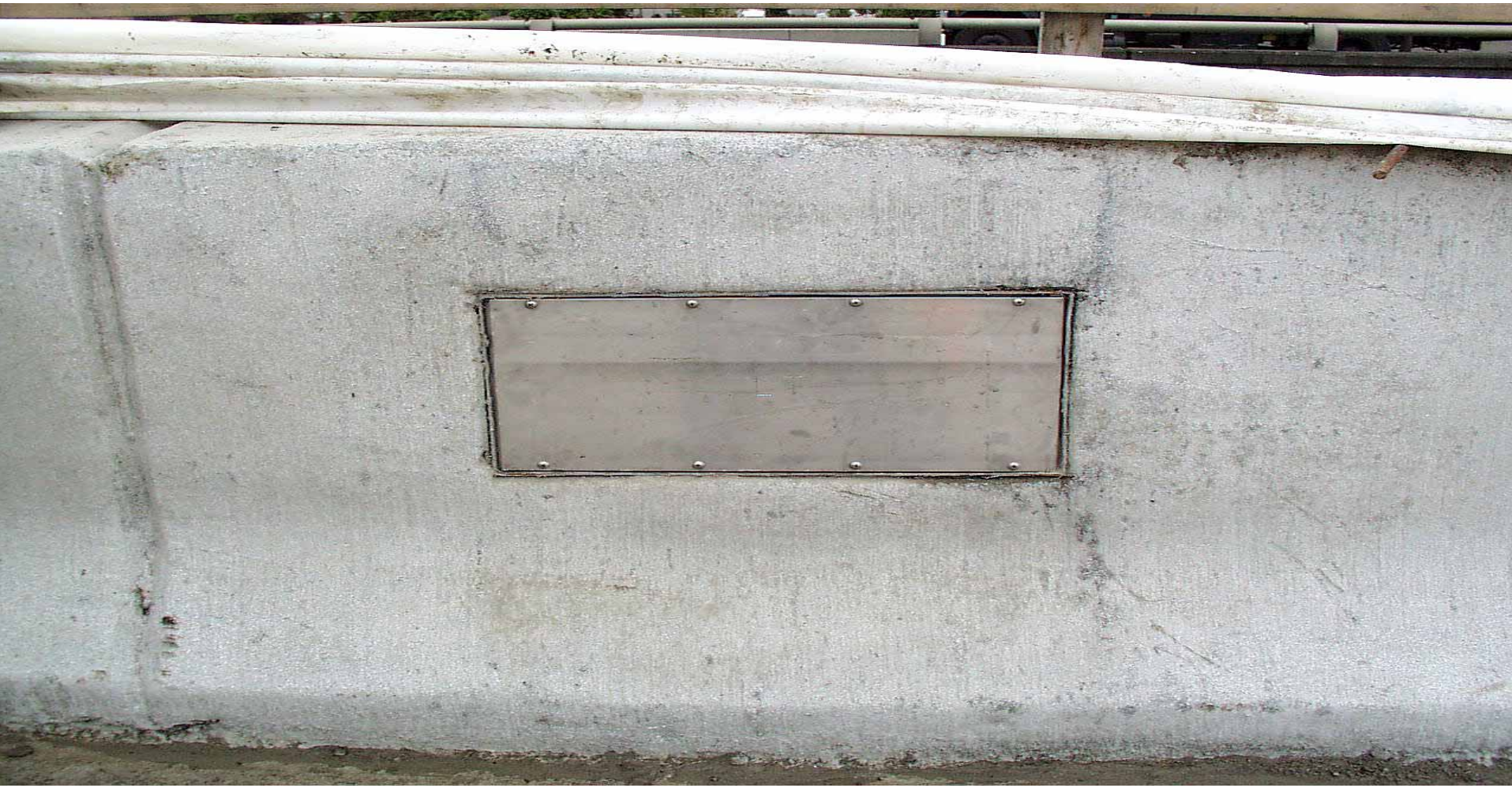
Just a Little Too Deep

Pull It Out Just a
Little More

Ok Stuff It
Full of Mud

Now That
Looks Great

After the Pour



Inside the Box

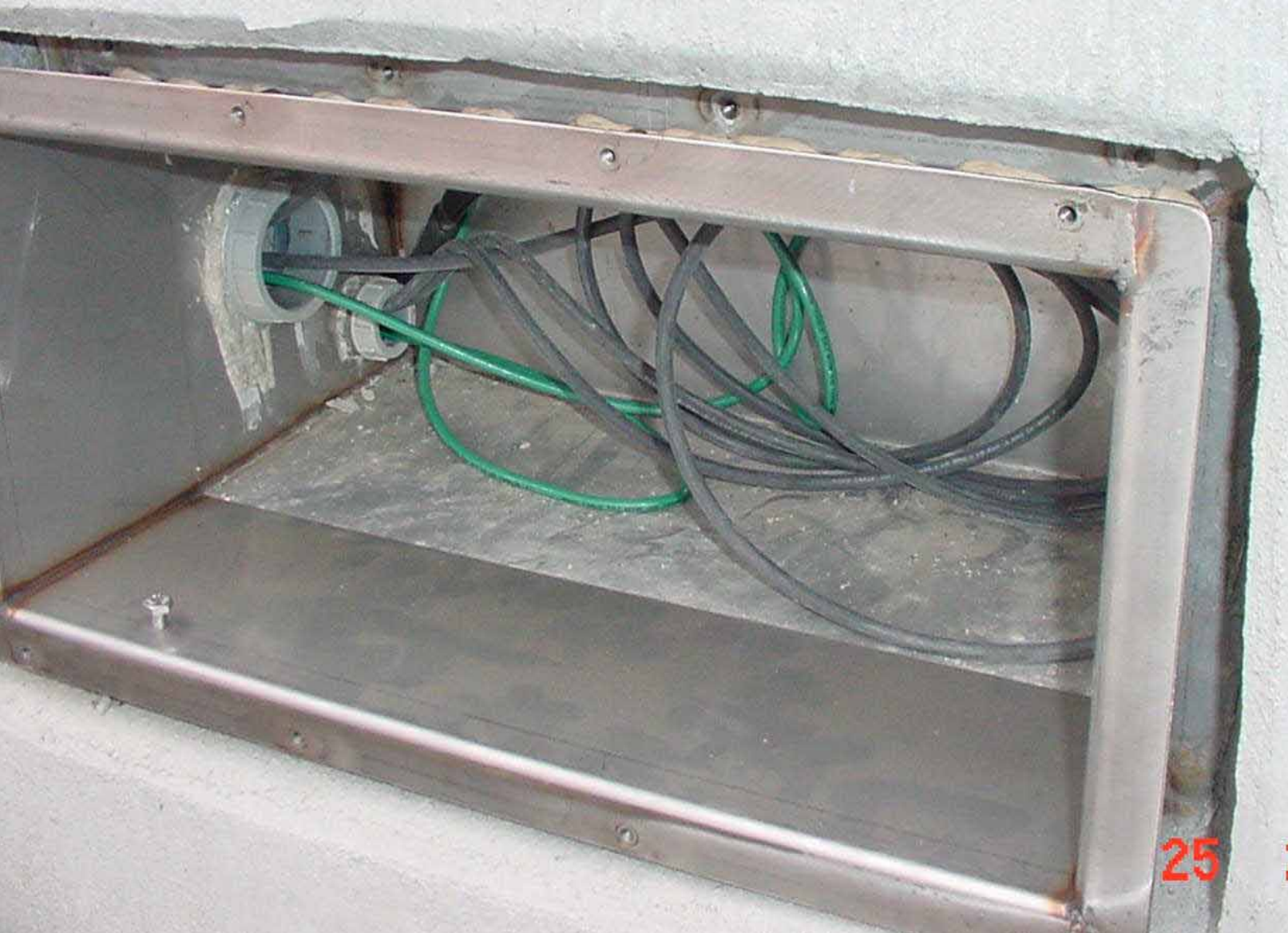
Ground Lug Inside the Box
Drain Hole Got Missed
Box Has Been Hit

Lid After It Takes a Direct Hit

Barrier Box With Extension Added

Deep JB in the rail. The extention ring has been installed with epoxy. A bolt has been installed to bond the extention ring

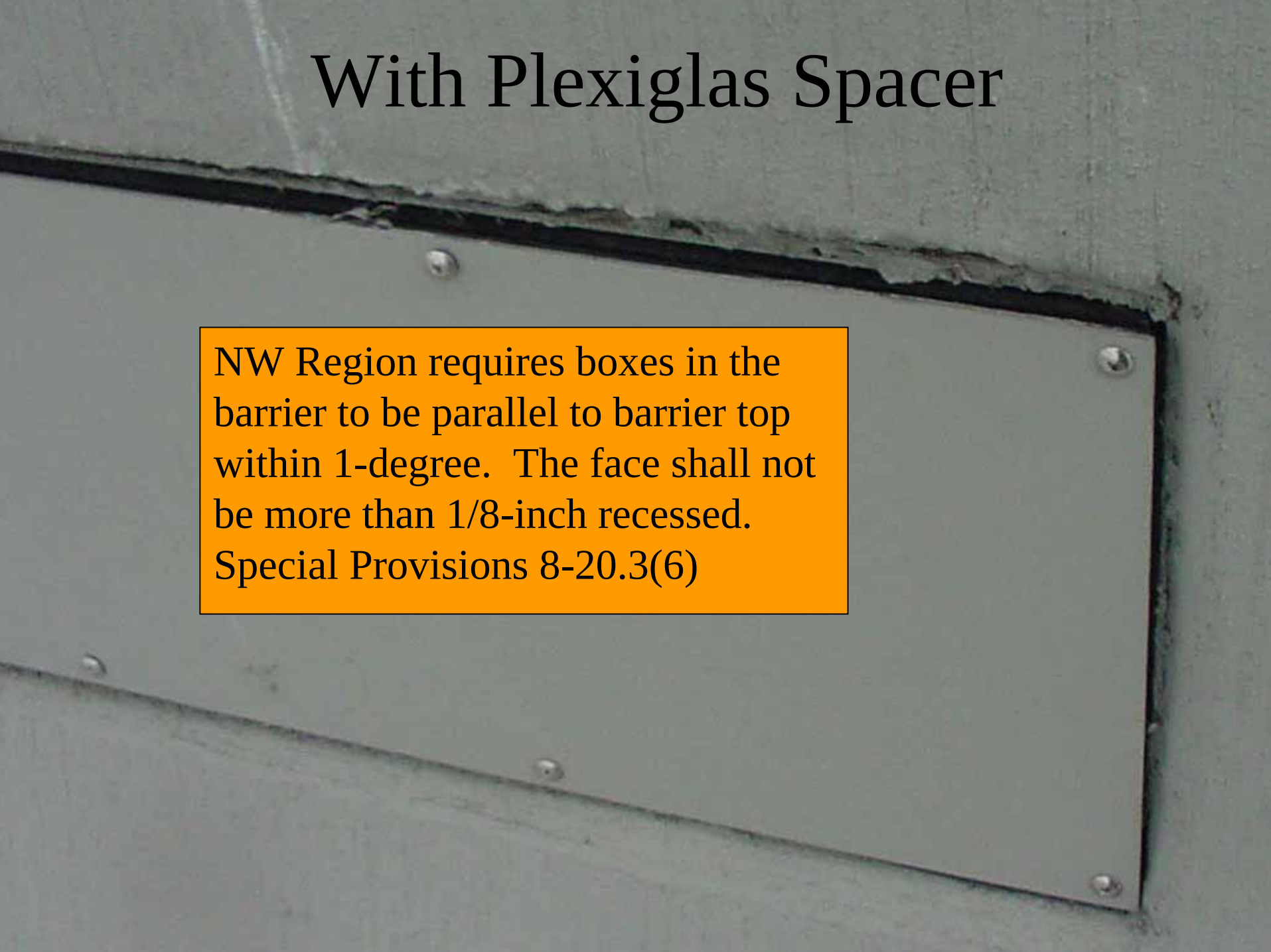
Extension Installed With Epoxy



Plexiglas spacer and SS lid
removed
2 12:19PM

Plexiglas spacer with SS lid removed
2 12:18PM

With Plexiglas Spacer



NW Region requires boxes in the barrier to be parallel to barrier top within 1-degree. The face shall not be more than 1/8-inch recessed. Special Provisions 8-20.3(6)

Concrete Made to Fit

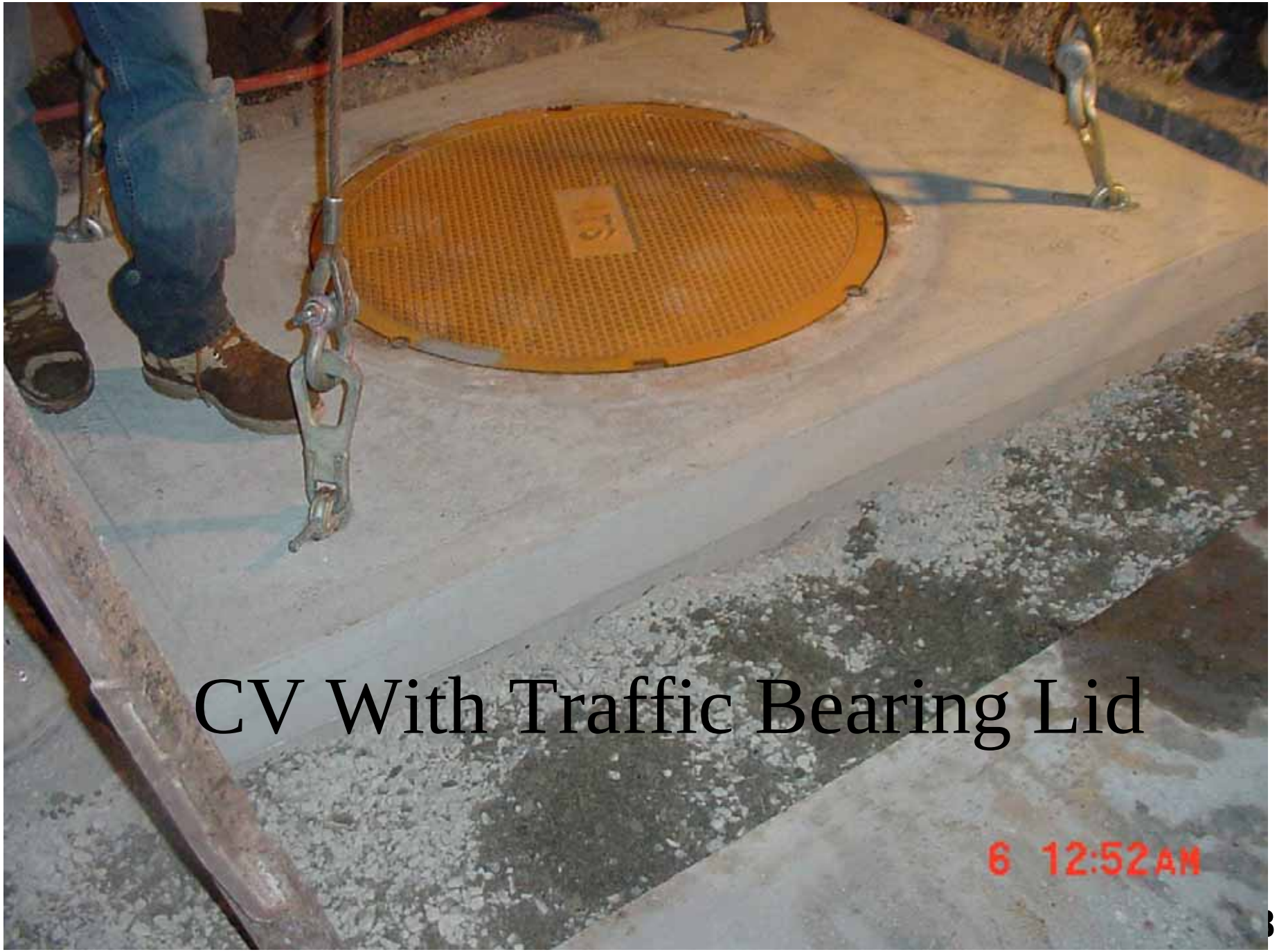
Surface JB Hinge Lid

Surface Mount
SS JB
30 3:37 AM

Cable Vault Too High to Put on
Traffic Bearing Lid
5 11:06PM

CV With Top 6 Inches Cut Off
6 12:18AM

Setting Traffic Bearing Lid
6 12:43AM


CV With Traffic Bearing Lid
6 12:52AM

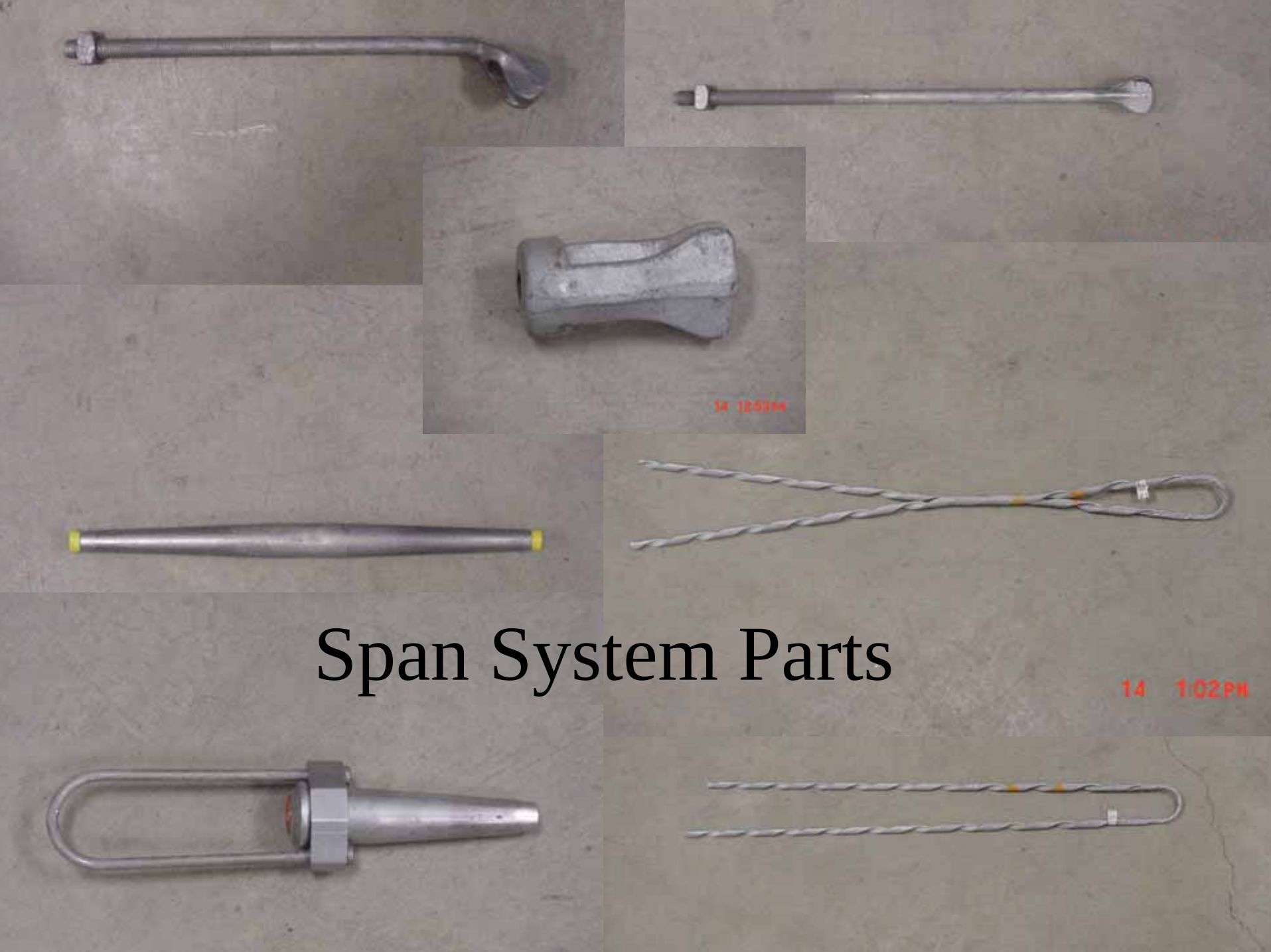
Set Pull Box

Junction Box Inspection Checklist

Copy in your books

Messenger Cable Fittings

- 8-20.3(7)
- 9-29.4 messenger cable fittings
- 9.29.5 pole line hardware



Span System Parts

Johnny Ball Insulator With Guy Wraps Installed

Johnny Ball Insulator

Aerial Terminal Box
16 2:41 PM

Wiring

- 8-20.3(8)
- 9-29.3 conductors, cable
- 9-29.7 luminaire fusing and connections at light standards
- 9-29.12 electrical splice materials
- 9-29.12(1) illumination circuit splices

Mandrels

Pulling Wire

8-20.3(5) Conduit

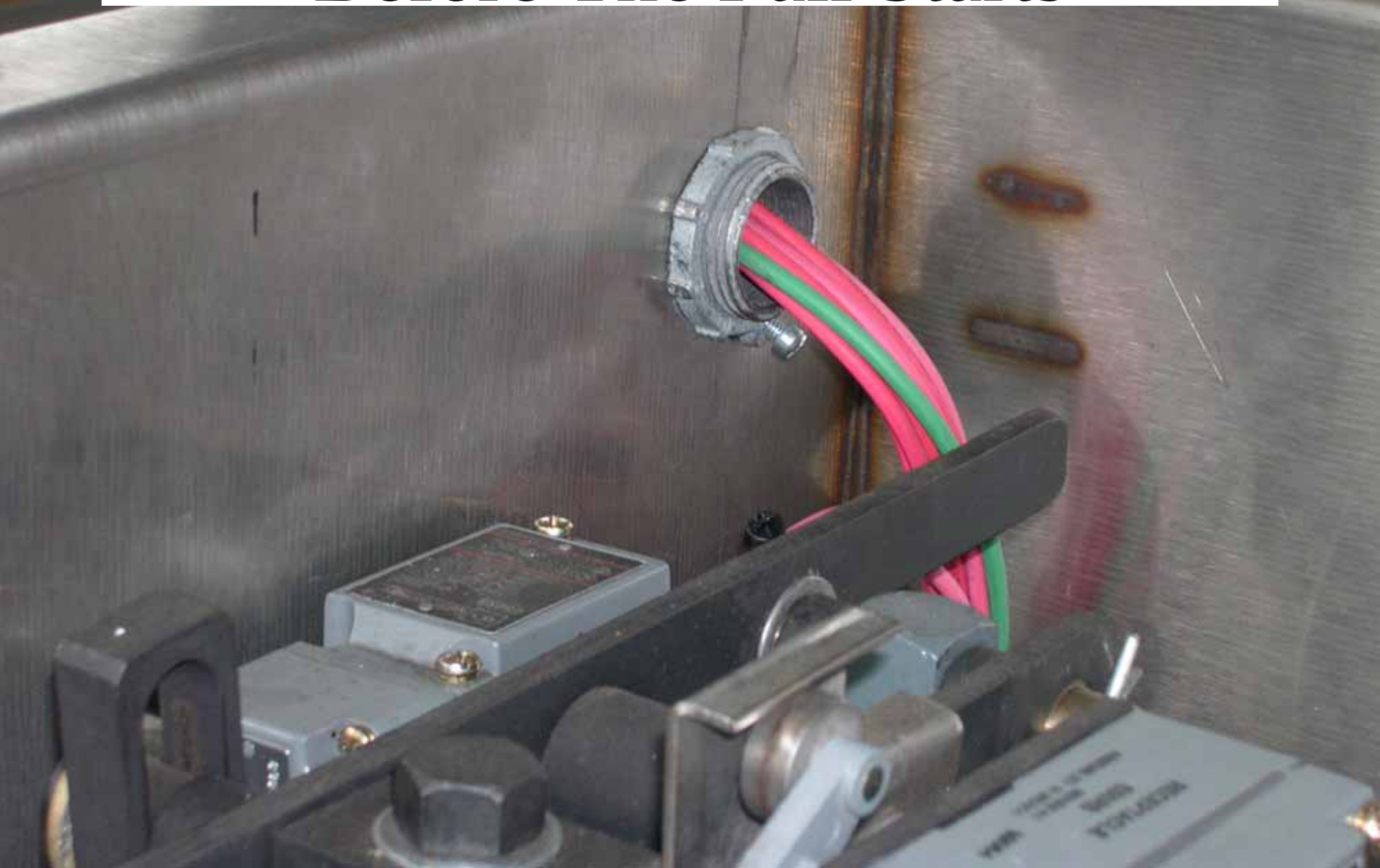
NW Region

In conduit less than 2-inch pull ropes for wire installation shall be not less than ¼-inch. In conduits 2-inch diameter or larger, pull ropes shall be not less than ½-inch.

Install Duct
Seal

NW Region Requires Mechanical Conduit Plugs in All Cabinets

Make Sure They Are Ready Before The Pull Starts

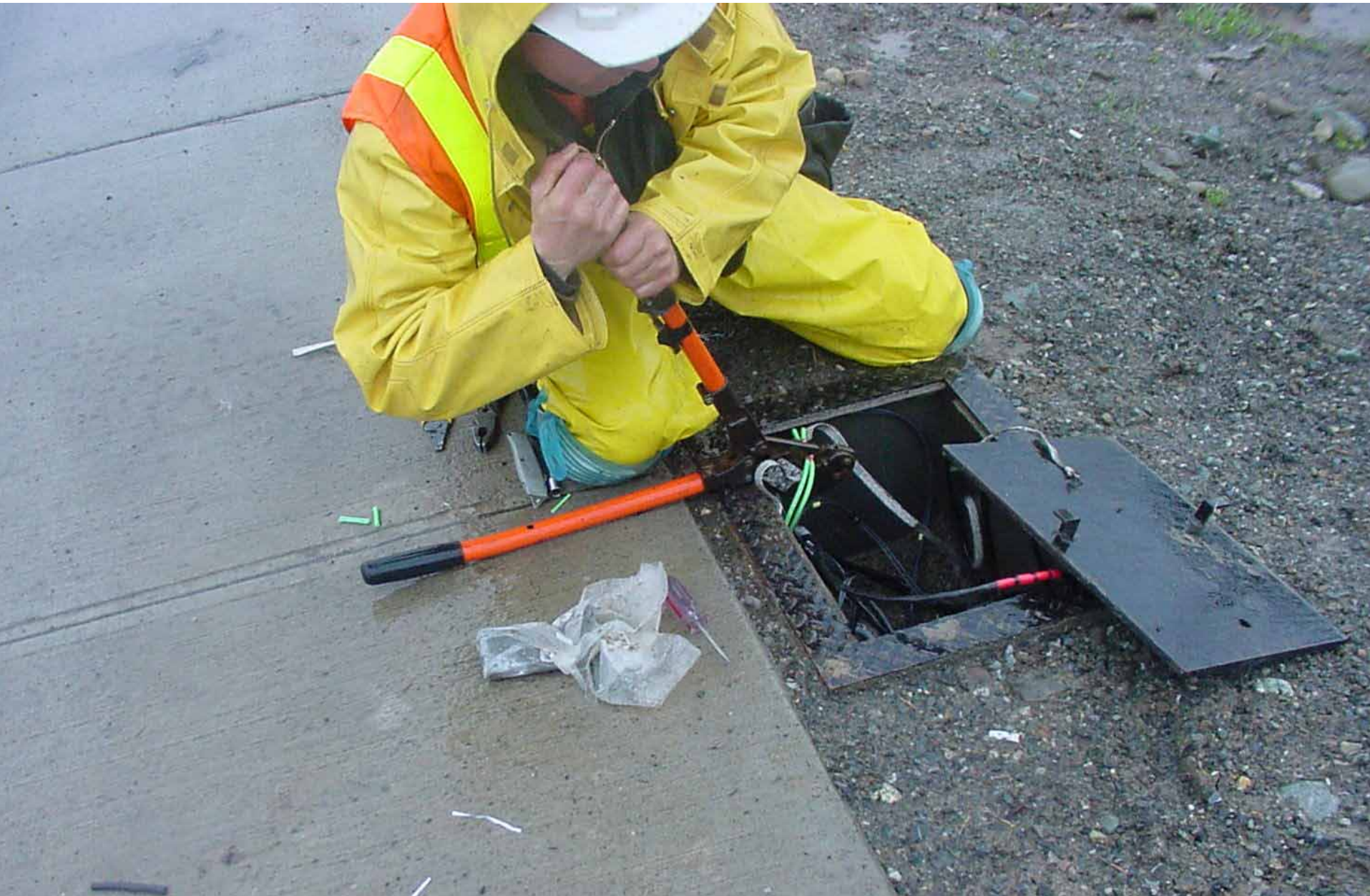


Wire Connectors and Grounding Clamps

Burndy Crimp and Crimper

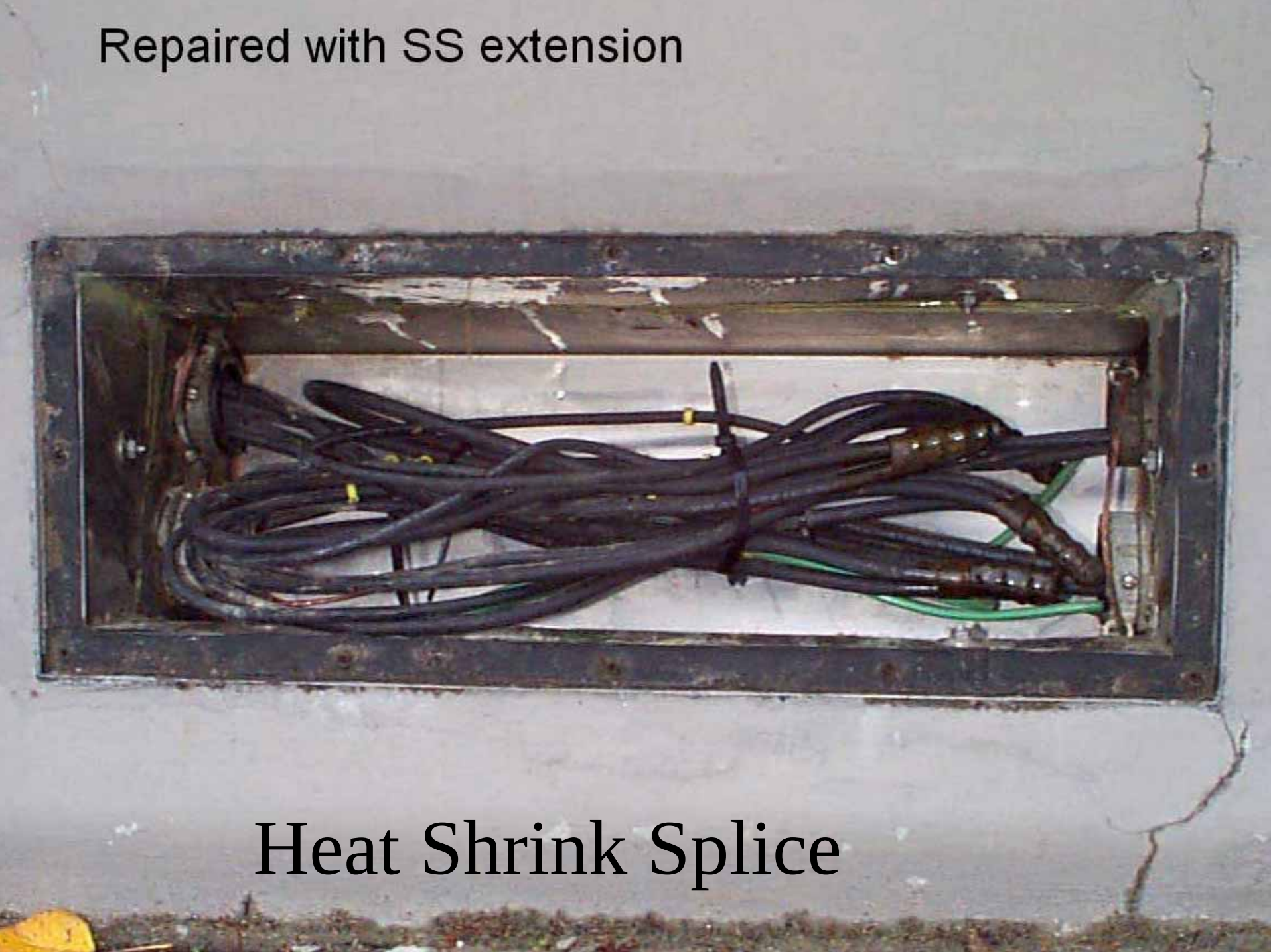
T & B Crimper

Crimping the Ground Wire



Epoxy Splice Kit

Heat Shrink


Repaired with SS extension
Heat Shrink Splice

Heat Shrink Splices

Camera Cable Termination

Properly done

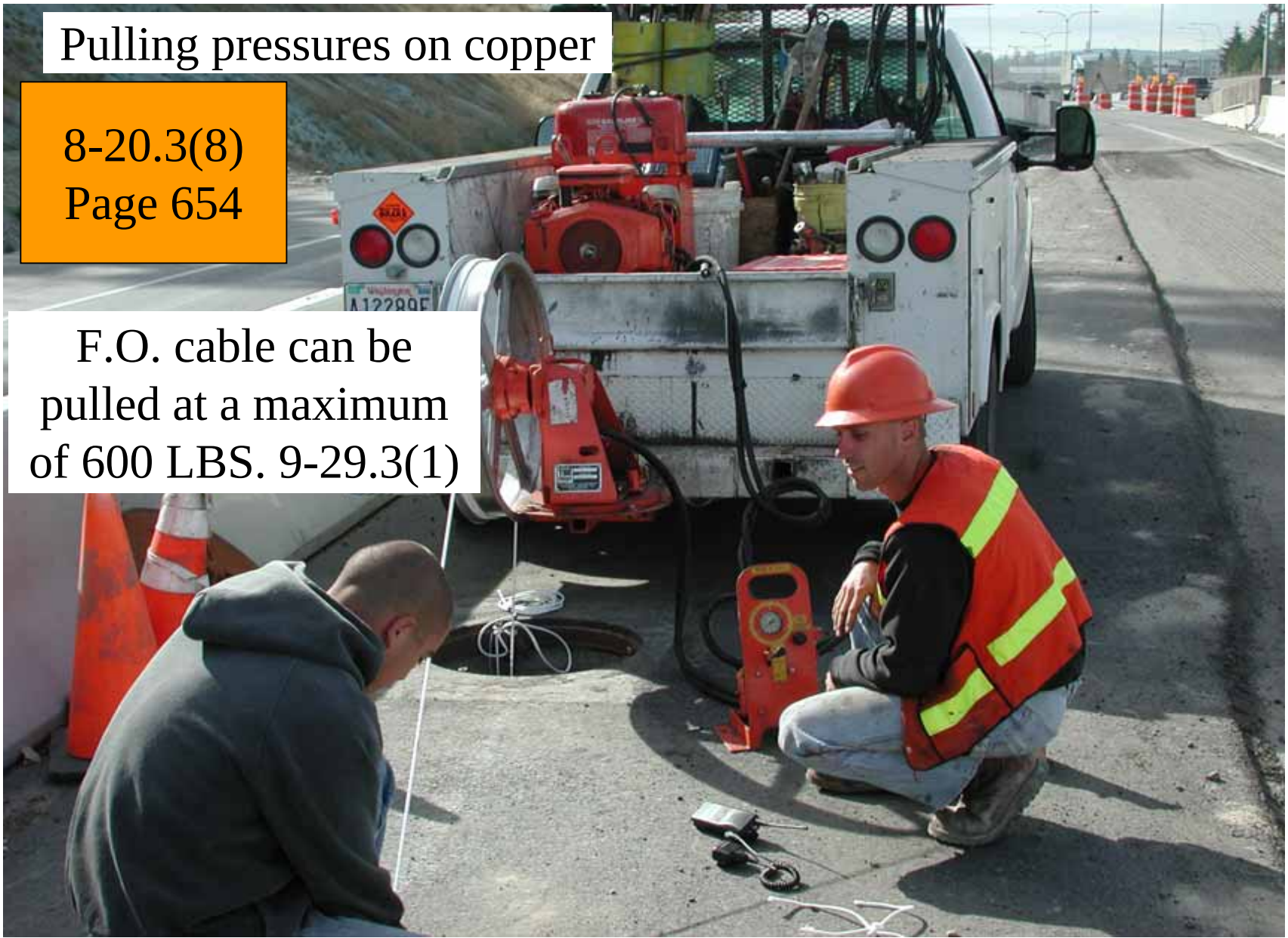
Corrosion Results

Poorly Done

Use Caution Where You Drive

Fiber Optic Tugger

Dynamometer on Control Unit



Setting Up

Pulling Cable With Ease

Cable Is Out and Pulling Around the Puller Wheel

Racking Fiber Optic Cable

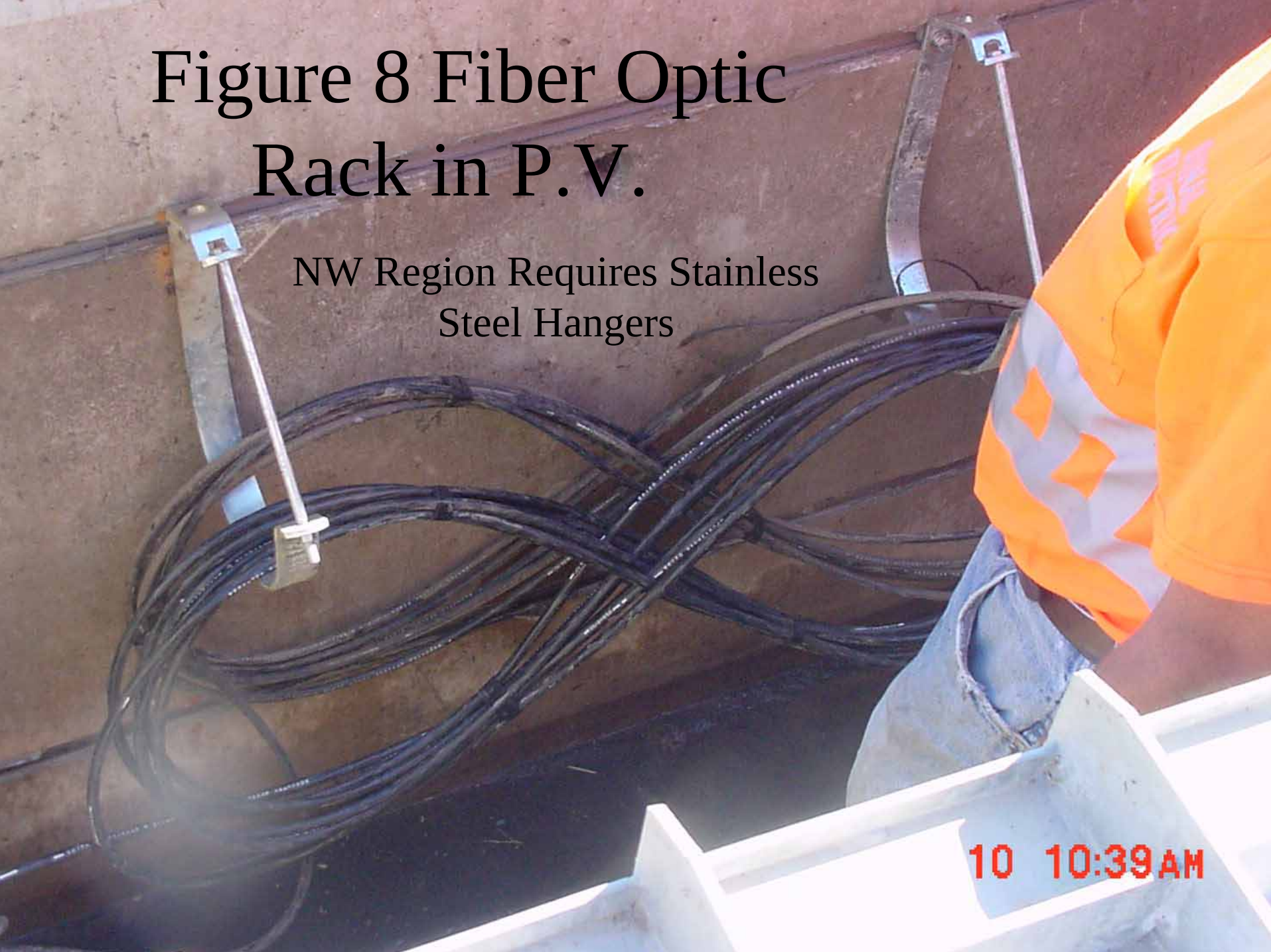


Figure 8 Fiber Optic Rack in P.V.

NW Region Requires Stainless Steel Hangers