

WEATHERING STEEL BRIDGES

KYTC Uses of Weathering Steel

Weathering Steel Design

- ▣ Nearly all KYTC steel bridges are designed using weathering steel unless specified otherwise
- ▣ Grade 50 is most common; however, grades 70 and 100 are also used



Weathering Steel Advantages

- ▣ Reduce maintenance costs
 - Painting steel bridges is very costly
- ▣ Comparable pricing to non-weathering steel
 - The cost of weathering steel is about 2-3¢ per pound more than non-weathering
- ▣ Aesthetics
 - Provides a more natural look



Weathering Steel Disadvantages

- ▣ Aesthetics
 - Rusted appearance causes concern
- ▣ Staining
 - Rust stains appear on decks, barriers, piers, etc.
 - Beams must be painted to avoid staining concrete



Weathering Steel Bridges of KY Calhoun



Weathering Steel Bridges of KY Over Natcher Parkway



Weathering Steel Bridges of KY Somerset



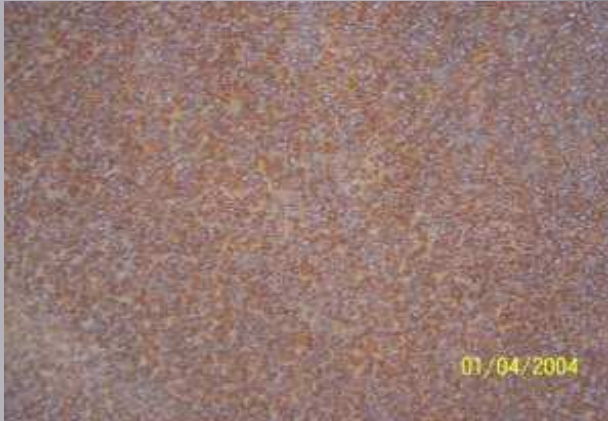
Weathering Steel Bridges of KY Elliott County



Weathering Steel Bridges of KY McKinneysburg



Weathering Steel Pictures



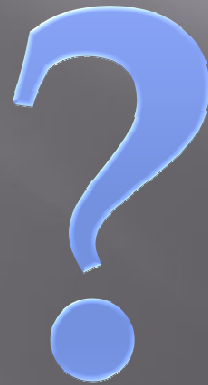
Weathering Steel

- ▣ The designer, his new bride, and his bridge (Calhoun)



Weathering Steel

QUESTIONS

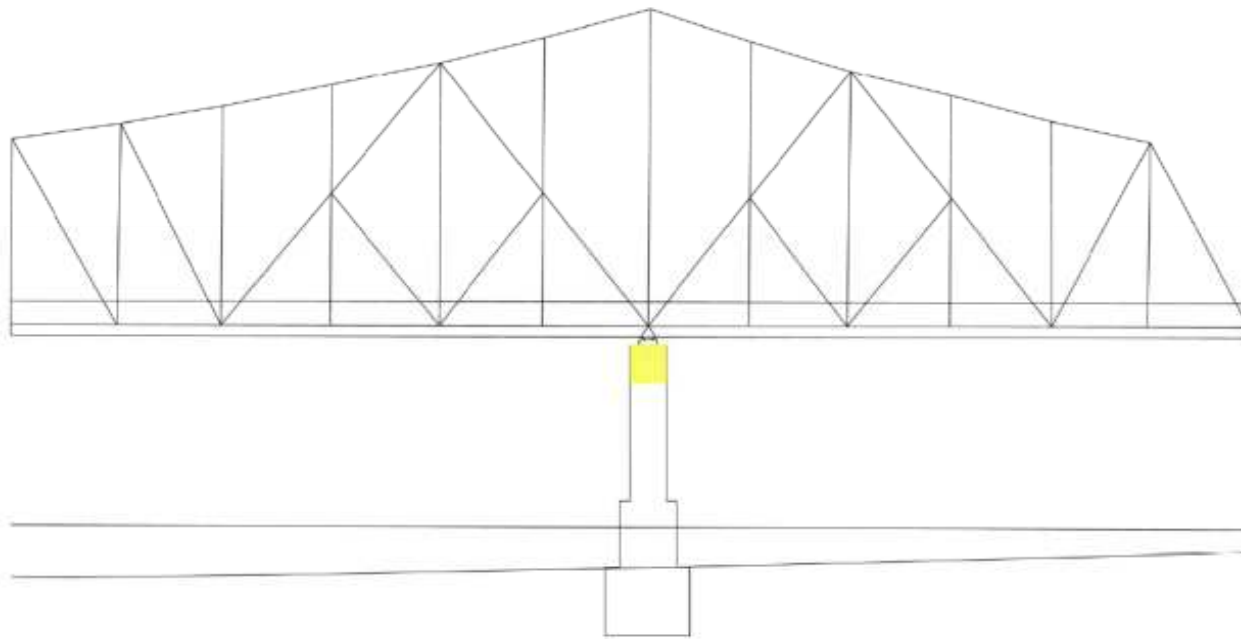


PREVENTIVE MAINTENANCE

KYTC Preventive Maintenance on Steel
Bridges

Preventive Maintenance

Washing Bearings, Grease Application, Seals, Members



Preventive Maintenance

- ▣ Cleaning Lower Chord and Truss Member
 - Removes debris build up
 - Removes salts from snow and ice activities
- ▣ Cleaning Bearing Devices and Lubrication
 - Removes salt and debris buildup
 - Corrosion resistance
 - ▣ Exxon Moly Centaur, Shell Rhodina, Bostik Never-Seez, Certified Labs Premalube, Rhomar Bridgemate
 - Lubricates to assist movement in 'locked' bearings

Preventive Maintenance

- ▣ Bearings prior to cleaning



Preventive Maintenance

- ▣ Bearings prior to cleaning



Preventive Maintenance

- ▣ Bearings during and after cleaning



Preventive Maintenance

- ▣ Bearings during and after cleaning



Preventive Maintenance

- ▣ Cleaning Pile / Pier Caps, Abutments
 - Removes salt and debris buildup
 - Seals to prevent future salt intrusion
- ▣ Spot Painting / Patching
 - Halts corrosion at current state
 - Prevents future exposure

Preventive Maintenance

▣ Products



Premalube™
Multi-Purpose, Heavy Load, Extreme Pressure,
High Temperature Grease
NLGI # 2, 1, 0, 00

Heavy duty aluminum complex grease specifically formulated for construction and heavy industrial equipment.

Provides superior protection for equipment against *acids, leech, dirt, dust, water, and heat*.

PRODUCT OF CHOICE FOR ALMOST EVERY HEAVY DUTY APPLICATION

Provides Superior Equipment Protection for:

| | |
|-------------------------------------|-------------------------------------|
| • Industrial Manufacturing | • Construction, Mining, Agriculture |
| • Food Processing | • Extrusion & Swindlers |
| • Steel Mills & Foundries | • Utility Construction |
| • Paper Mills, Printing & Packaging | • Concrete & Asphalt Paving |
| • Railroad, Street & Local Agencies | |

- 1. Stays in Place to Prevent Wear Under Heavy-Load Conditions
- 2. Exceptional Heat Reversion Properties
- 3. Contains Molybdenum Disulfide to Minimize Abrasive Wear Caused by Dirt and Dust
- 4. Superior Water Resistance
- 5. Prevents Rust and Corrosion
- 6. Reduces Grease Inventory to Save Money
- 7. Excellent High Temperature Performance - NLGI #0 remains effective 275°F continuous and 400°F intermittent with occasional shocks.
- 8. Also Available in a Red Formula NLGI #2, 1, 0, 00

Premalube Meets or Exceeds these Performance Requirements:

- L35 Steel Wire Corded Rope Lubrication
- Ball & Race Greases, Spec. 190, 140
- Extreme Pressure Greases, Spec. 100, 100
- Valve Duty EP Greases, Spec. 100, 100
- Lubricants - Grease, Spec. No. 240, 270 & 370
- Ball and Roller Bearings, Spec. No. 171
- Ball Bearings Greases, Spec. No. 215
- Military Spec. MIL-G-21494C
- Grease 275°F EP #2 275 Study Contract
- Lubricants MPTM
- Naval M10000

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Consult the label for complete directions and product performance data.



Preventive Maintenance

- ▣ Before and after pier cap cleaning



Preventive Maintenance

QUESTIONS

