

Contract Preservation (Washing/Sealing)

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Kentucky Transportation Cabinet



Washing/Sealing

- We let two or three contracts a year
- Funds come out of our bridge maintenance budget
- Concentrate on bridges that have a steel superstructure
- Some of our District bridge crews (state forces) are doing similar actions.

Work Specified in Contract

- Furnish all labor, materials, tools, and equipment
- Remove and bag large debris
- Power wash all structural steel members, drainage systems, joints, bearing devices, end bents/abutments, and pier caps as specified in the notes and detailed drawings
- Coating rusted steel members
- Remove stratified rust and apply lubricant
- Apply concrete sealant to end bents/abutments and pier caps as specified in notes and detailed drawings

All debris collected shall be disposed of in a suitable off-site location



Power Washing

- Water pressure of 1,000psi (+/- 200psi)
- Minimum flow rate of 3.5 gal/minute
- Pressure washing wands must be equipped with a gauge to accurately measure pressure
- Wash all exposed steel within 10ft of any joint
- Wash all lower chord members, end posts, verticals, and diagonal members up to 10ft above the lower chord in through truss spans
- See detailed drawings for locations of specified work for each structure

Note in Proposal

(D) Groundwater and Surface water Protection

The contractor shall prepare and implement a groundwater and surface water protection plan in accordance with **401 KAR 5:037 (Ground Water)**, **KRS 224.70-110** and **401 KAR 10:031 (Surface water)** with the exception that hazardous waste or hazardous materials container volume is not limited to greater than 55 gallons or weight to 100 pounds.









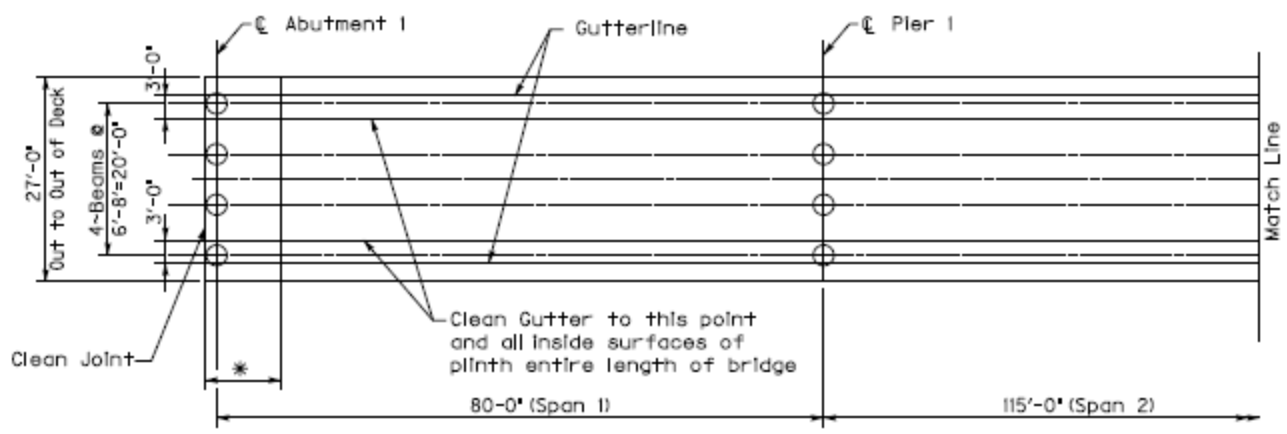
INTECH

Contractors, Inc.

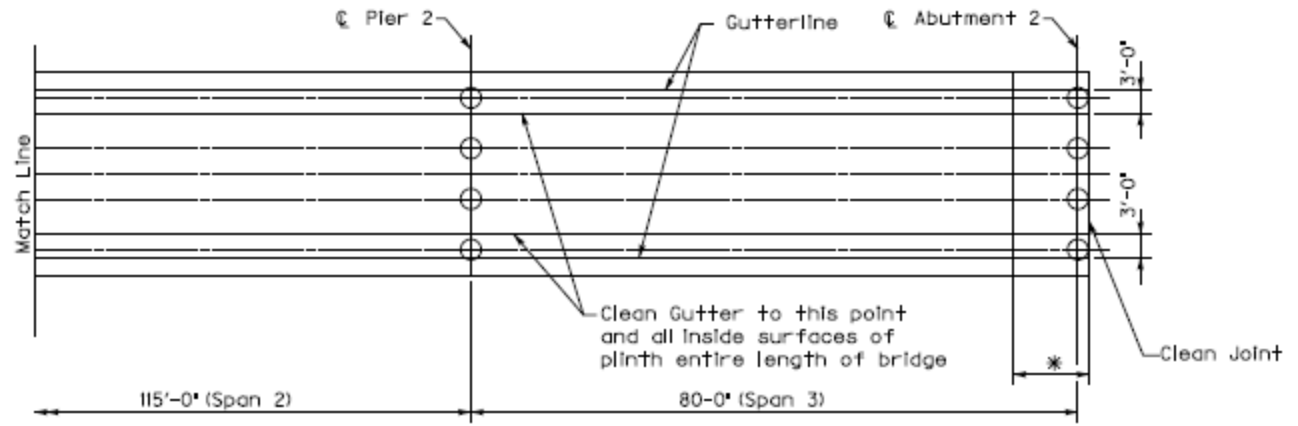
859-792-4075
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SNAPPER

STOP



BRIDGE PLAN



BRIDGE PLAN

* 4'-0"-Remove all stratified and pack rust and coat rusted steel members in this limit.
 10'-0"-Presserwash all structural steel in this limit.
 ○ Indicates bearings to be greased, 16 total.
 Remove Debrls, Pressure Wash and apply concrete sealant at all substructure units.
 See Seclal Note for Bridge Cleaning and Preventive Maintenance.

FE02 100 1003 B00055N
 Commonwealth of Kentucky
 DEPARTMENT OF HIGHWAYS
 PULASKI
 LAYOUT SHEET
 Division of Maintenance
 Bridge Preservation Branch

Stratified and/or Pack Rust Removal

- All stratified rust is removed within 4 feet longitudinally of a joint
- Rust shall be removed using wire brushes, scrapers, and impact devices (hand held hammers, power chisels)
- Steel members shall be cleaned to an SSPC SP-2 level





Applying Lubricant to Bearing Devices

- After power washing the bearing devices
- Allow bearing devices to dry before applying lubricant
- Lubricant must be applied within 48 hours of completing the washing.

Before



After



06/29/2011

Do Not Touch!





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

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- Federal, State & Local Agencies
- Construction, Mining, Agriculture
- Excavation & Demolition
- Utility Construction
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- ④ Stays in Place to Prevent Wear Under Heavy-Load Conditions
- ④ Exceptional Heat Reversion Properties
- ④ Contains Molybdenum Disulfide to Minimize Abrasive Wear Caused by Dirt and Dust
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- ④ Excellent High Temperature Performance - NLGI #2 remains effective 275°F continuous and 400°F intermittent with monitored lubrication.
- ④ Also Available in a Red Formula NLGI #2, 1, 0, 00

Premalube Meets or Exceeds these Performance Requirements:

- US Steel Mill Grease Specifications:
 - Roll Neck Grease, Req. No. 340
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- Extreme-Temp. Req. No. 355, 370 & 372
- Ball and Roller Bearing, Req. No. 371
- Mill Utility Grease Req. No. 375
- Military Spec. MIL-G-23540C
- Case 251H EP-M 3% Moly Content
- Caterpillar MPGM
- Ford W1693A

USDA HD

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Coating Rusted Steel Members

- After removing debris, rust, and power washing
- Apply protective coating to the rusted areas of the structural steel within 4 ft of a joint.
- Coating used is Rhomar's Black-Max or equivalent



Beam ends and abutment after
cleaning and application of black-max
and grease (Never-Seez)



Pic of the black-max and grease application

Concrete Sealing

- Use compressed air to remove any loose debris after power washing
- All abutments/end bent caps, pedestals, back walls, and pier caps shall be sealed
- Allow surfaces 24 hours minimum to dry before applying sealant
- Apply sealer to abutment/end bent caps, pier caps, and horizontal surfaces including pedestals and vertical surfaces 3 ft below the top of cap or ground line whichever is the least
- Sealant must be applied within 72 hours of pressure washing
- Sealant to be used shall be Belzona's 5122 Clear Cladding



Example application of Clear Cladding
concrete sealer

Questions

