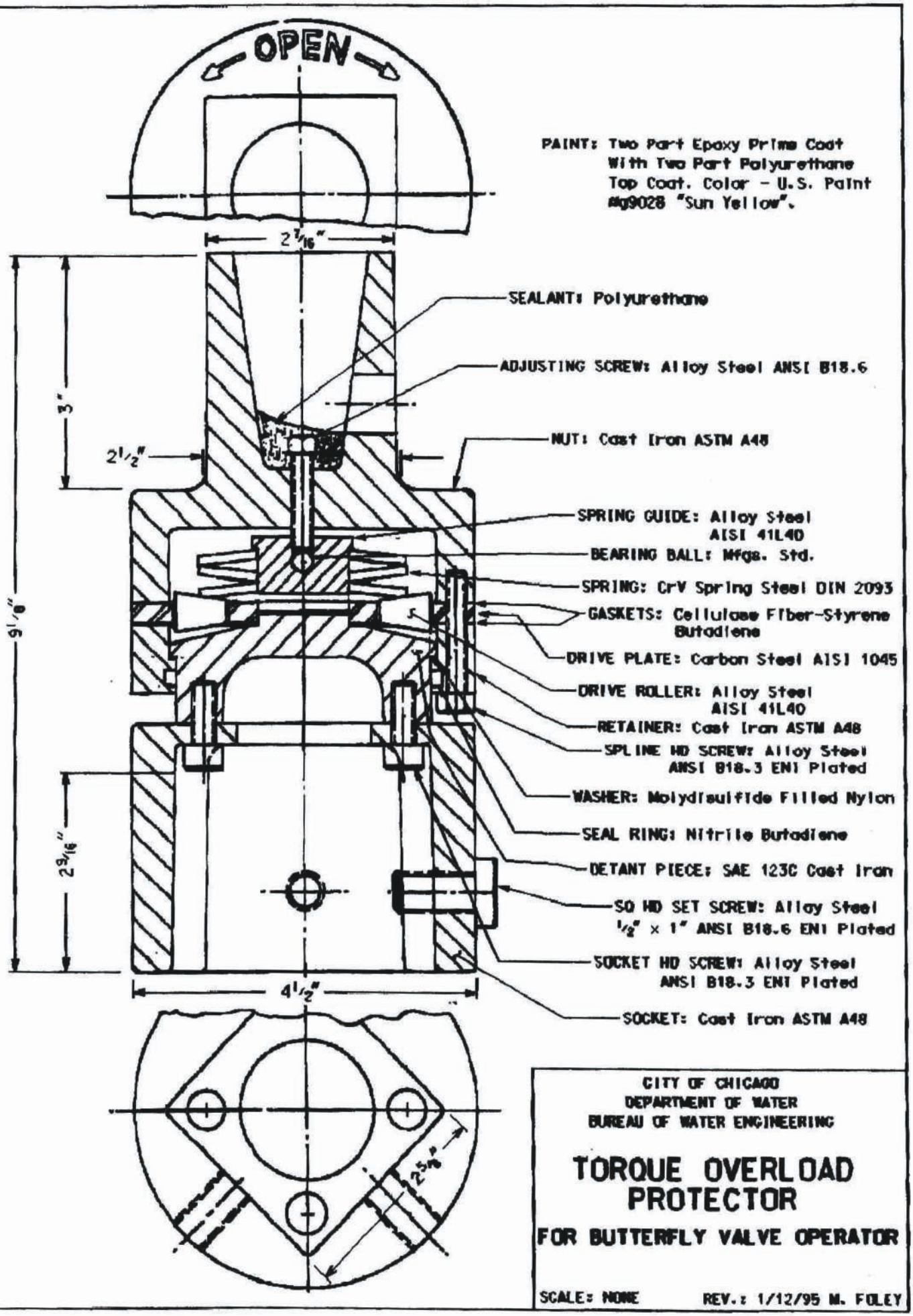

CITY OF CHICAGO
DEPARTMENT OF WATER
BUREAU OF WATER ENGINEERING

TORQUE OVERLOAD PROTECTOR

FOR BUTTERFLY VALVE OPERATOR

SCALE: NONE REV.: 1/12/95 M. FOLEY

DETAILED SPECIFICATIONS

Scope: The contractor shall furnish and deliver F.O.B., City of Chicago, Department of Water, Bureau of Water Distribution, Pipe Yard "B", 3150 S. Sacramento Avenue, Chicago, Illinois, Valve Torque Overload Protectors in accordance with the General and Special Conditions and as described in these Detailed Specifications and attached drawing.

Purpose: The overtorque protector shall prevent butterfly valve/operator damage from excessive operating torque.

Operation: The device shall transmit applied torque in either direction only up to a preset amount and automatically disengage if greater torque is applied. It shall automatically reset if the applied torque is below the preset amount.

Description: The device shall be of overall rugged and durable construction suitable for long-term reliable operation while buried and submerged in dirty water.

The upper end shall have an integral 2 1/2-inch "City of Chicago" operating nut and the lower end shall have a matching socket. The socket shall have one 1/2-inch square head set screw in each of two adjacent faces.

The operating mechanism shall employ spring-loaded tapered rollers engaged in matching tapered detents. A ball bearing type design will not be accepted.

The manufacturer's identification shall be cast in 3/8-inch or larger letters on an upper surface.

Overall dimensions and materials used shall be as shown on attached drawing.

Corrosion Protection and Lubrication: The entire housing shall be coated inside and outside with two-part epoxy. The outside shall have a top coat of two-part polyurethane. Color: U.S. Paint #G9028 "Sun Yellow".

The operating mechanism shall be permanently lubricated and sealed to withstand fifty feet of water head.

There shall be no water-retaining external cavities.

Service Life: The device shall have a minimum life of 1000 trips from rated capacity.

Trip Torque Set Point: The device shall be factory set to trip at 200 lb. ft. applied torque. $\pm$ 5%

Trip Torque Adjustment: Trip torque shall be adjustable between 10 and 100 percent of rated capacity without disassembling the unit. The adjustment means shall be sealed and concealed to prevent tampering.

Test Model: If requested by the City, the bidder shall provide a cut-away or disassembled model of the torque overload protector he proposes to furnish showing all internal components. He shall also furnish one (1) actual working model to the City for testing and evaluation prior to award of contract.