

GENERAL NOTES FOR INSTALLING PIPELINES ON BRIDGES

THIS DETAIL ONLY APPLIES TO PIPES 12" IN DIAMETER AND BELOW. THE PREFERRED PIPELINE DESIGN FOR CROSSING A BRIDGE CONSISTS OF A STRAIGHT ALIGNMENT USING RESTRAINED MECHANICAL JOINT DUCTILE IRON PIPE ON A ROLLER ASSEMBLY WITH A PIPE EXPANSION JOINT. THIS DESIGN SHOULD EFFECTIVELY SEPARATE THE PIPELINE FROM THE BRIDGE STRUCTURE ALLOWING EACH TO ACT INDEPENDENTLY. ANY DEVIATIONS FROM THIS DETAIL MUST BE SUBMITTED FOR PRE APPROVAL.

EXISTING CONCRETE BRIDGE – PIPELINE INSTALLATION

FOR INSTALLING A PIPELINE FOR EXISTING DECKING OR SIDE OF CONCRETE BRIDGE USE (HIT-HY 200 ADHESIVE ANCHORING SYSTEM) 2.4.11 HILTI HIT-HY 200 ADHESIVE AND HILTI HIT-Z-R THREADED ANCHOR RODS TYPE 316 STAINLESS STEEL WITH A MINIMUM DESIGN STRENGTH OF 4000 PSI. THE MINIMUM ANCHOR HOLE DIAMETER AND DEPTH ARE DEPENDANT ON BRIDGE CHARACTERISTICS AND MANUFACTURE'S INSTALLATION RECOMMENDATIONS. PARAMETERS FOR ANCHOR AND ROLLER ASSEMBLY SHALL SUPPORT THE WEIGHT OF THE PIPELINE FULL WITH ALL APPURTENANCES; PLUS A FACTOR OF SAFETY OF 4.0 WHILE CONSIDERING BRIDGE DECK CONCRETE PROPERTIES. (SEE FIG. BELOW)

NEW CONCRETE POUR FOR BRIDGE – PIPELINE INSTALLATION

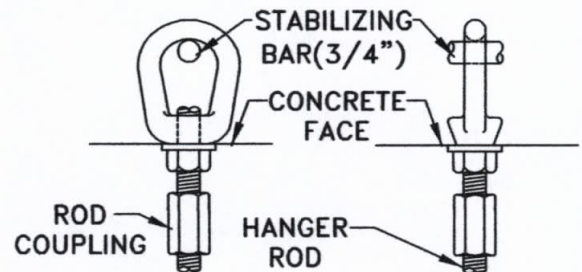
FOR INSTALLING A PIPELINE FOR PROPOSED DECKING OR SIDE OF CONCRETE BRIDGE POURS USE MINIMUM TYPE 304 STAINLESS STEEL 3/4" WELDLESS EYE NUT AND ROD ATTACHED TO BRIDGE REINFORCED RODS WITH A MINIMUM DESIGN STRENGTH OF 3200 PSI. THE EYE NUT SHALL BE PLACED SO THE THREADED CONNECTION HOLE IS FLUSH WITH THE CONCRETE FACE. PARAMETERS FOR EYE NUT AND ROLLER ASSEMBLY SHALL SUPPORT THE WEIGHT OF THE PIPELINE FULL WITH ALL APPURTENANCES; PLUS A FACTOR OF SAFETY OF 4.0 WHILE CONSIDERING BRIDGE DECK CONCRETE PROPERTIES. (SEE FIG. BELOW)

INSULATION:

INSULATION SHALL BE 2" THICK POLYURETHANE WITH ALUMINUM JACKET WITH INSULATION PROTECTION SHIELDS TO BE INSTALLED AT EACH ROLLER.

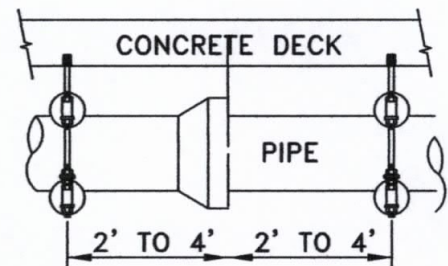
PORED IN PLACE WELDLESS EYE NUT

FOR INSTALLING PORED IN PLACE PIPELINE ROLLER ASSEMBLIES USE WELDLESS EYE NUT WITH 3/4" RIGHT-HAND THREADED HANGER ROD AND ROD COUPLING. THE 3/4" STABILIZING BAR SHALL BE ATTACHED TO BRIDGE REINFORCEMENT BARS WITH ROD LENGTH ADJUSTED AT SITE AS NEEDED. (OR APPROVED EQUAL)



ROLLER ASSEMBLY:

THE ROLLER ASSEMBLIES TO BE INSTALLED 2' TO 4' EITHER SIDE OF BELL FACE WITH AN MAXIMUM SPAN NOT TO EXCEED 8' BETWEEN ASSEMBLIES.



NOTES:

IF CONCRETE COMPRESSIVE STRENGTH TEST IS LESS THAN 4,000 PSI, ROLLER ASSEMBLIES SHALL BE INSTALLED WITH MAXIMUM SPAN NOT TO EXCEED 6' BETWEEN ASSEMBLIES.

ALL COMPONENTS FOR HANGING A PIPELINE ON A BRIDGE SHALL BE MINIMUM TYPE 304 STAINLESS STEEL.

ALTERNATE COMPONENTS MAY BE SUBSTITUTED WITH WRITTEN PRE APPROVAL FROM METRO WATER SERVICES.

REFERENCE SHEET FOR DETAILS
WDET028, WDET028A, WDET028B

METRO WATER SERVICES

GENERAL INFORMATION FOR
INSTALLING PIPELINE ON BRIDGE
STRUCTURES

NOT TO SCALE | DATE: 06/26/14

DWG. NO. WDET028C



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