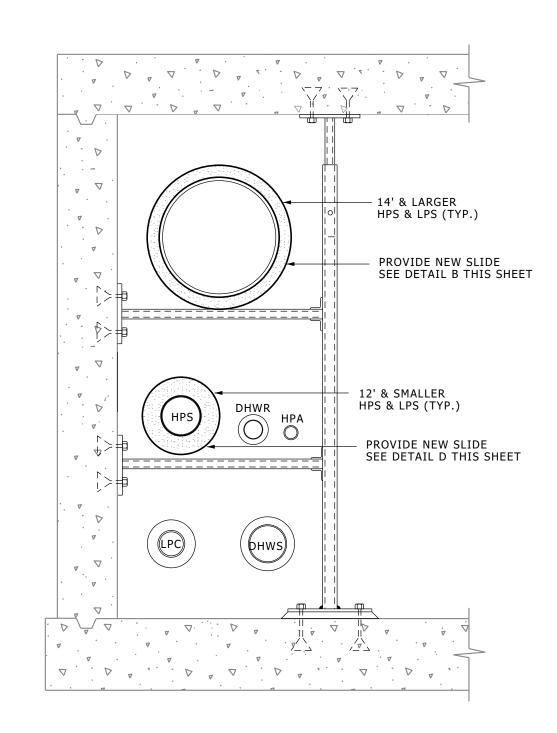
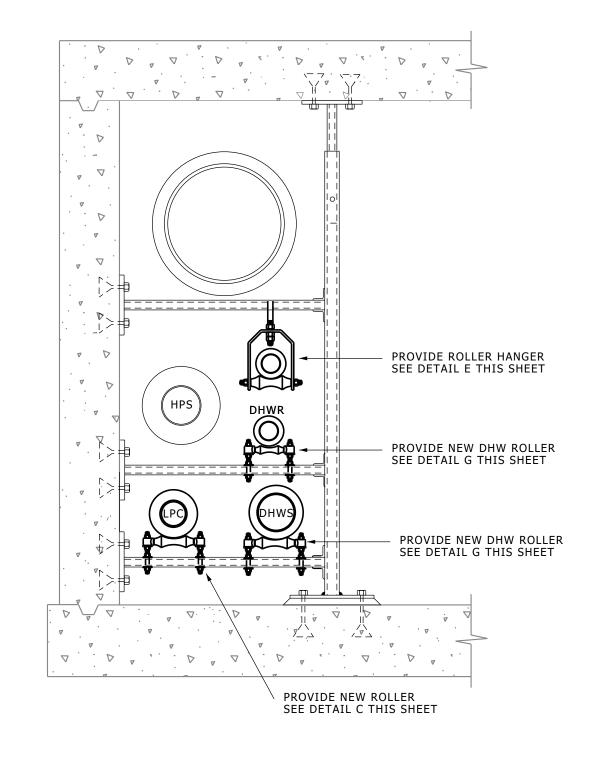
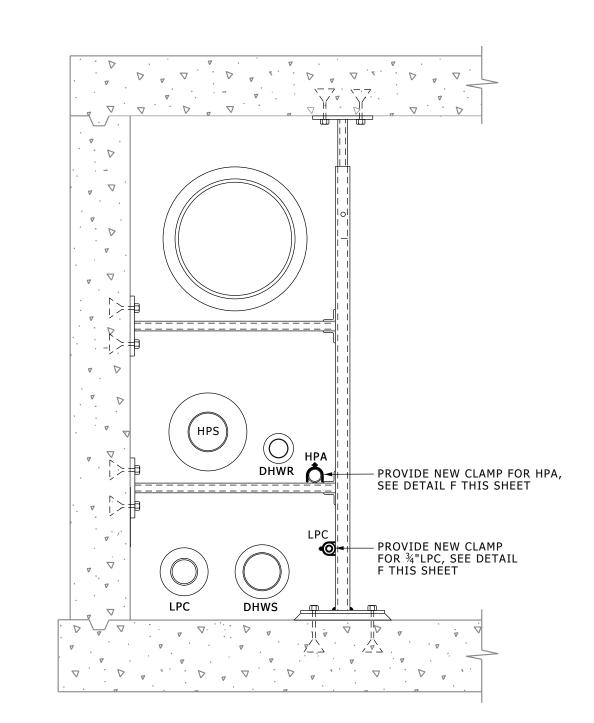


LPS & HPS
TYPICAL ROLLER SECTION







TRAP & HPA PIPING

TYPICAL CLAMP SECTION

# Design Professionals Use if Deemed Applicable and Adequate for Project **Not For Construction**

UNIVERSITY OF MICHIGAN ARCHITECTURE, ENGINEERING AND CONSTRUCTION

**TUNNEL TOOL-KIT** 

REFERENCE DETAILS,

For

**SUPPORTS & SECTIONS** 

ARCHITECTURE & ENGINEERING 326 East Hoover, Mail Stop B Ann Arbor, MI 48109-1002 Phone: 734-764-3414

Fax: 734-936-3334

### UM TUNNEL TOOL KIT REFERENC DETAILS, SUPPORTS & SECTIONS FOR DESIGN PROFESSIONAL USE IF DEEMED APPLICABLE & ADEQUATE AEC - Architecture & Engineering REPRESENTING

#### Posted to Web • 10/20/23 New Master • 06/20/2 ◆ Draft Master for Review ◆ 05/08/23

#### **Tunnels**

Tool Kit

University Of Michigan Ann Arbor , MI

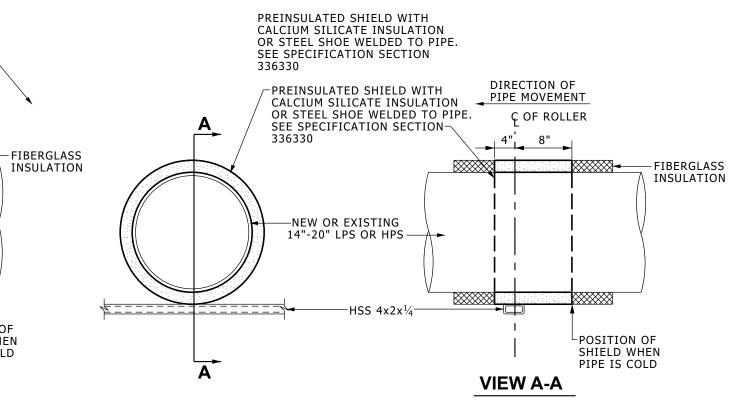
UNIVERSITY OF MICHIGAN ARCHITECTURE, ENGINEERING AND CONSTRUCTION 326 East Hoover, Mail Stop B Ann Arbor, MI 48109-1002 Phone: 734-763-3020 Fax: 734-763-3238

PØØØXXXX U OF M PROJECT NO.

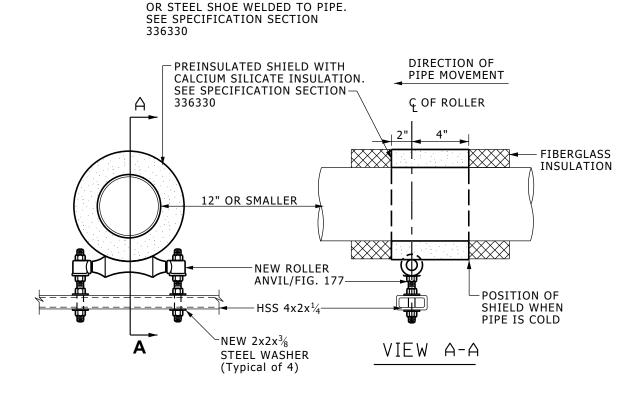
Mechanical

|| Rollers, Slides & Clamps - Typical Sections & Details **New Construction** 

#### LPS & HPS TYPICAL SLIDE SECTION



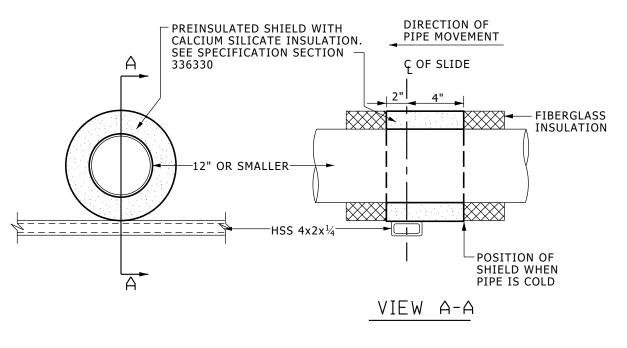
\_PS/HPS\_SLIDE\_DETAIL



PREINSULATED SHIELD WITH CALCIUM SILICATE INSULATION

12" OR SMALLER PIPING

TYPICAL ROLLER SECTION



PREINSULATED SHIELD WITH CALCIUM SILICATE INSULATION

SEE SPECIFICATION SECTION

OR STEEL SHOE WELDED TO PIPE.

2" OR SMALLER ROLLER DETAIL





- PREINSULATED SHIELD WITH CALCIUM SILICATE INSULATION.

SEE SPECIFICATION SECTION—

2½" THRU 8"

STEAM OR DHW PIPING

PREINSULATED SHIELD WITH

SEE SPECIFICATION SECTION-

-NEW OR EXISTING

STEEL WASHER

(Typical of 4)

FOR CONTINUATION
SEE TUNNEL ATTACHMENT

DETAIL SHEET TK-6—

NEW STEEL ROD SIZE AS REQUIRED –

DOUBLE NUT -

FIG. 181)—

CLEVIS ROLLER HANGER (ANVIL OR STEEL SHOE WELDED TO PIPE.

-NEW ROLLER

ANVIL/FIG. 177

CALCIUM SILICATE INSULATION PIPE MOVEMENT

Ç OF ROLLER

**VIEW A-A** 

POSITION OF SHIELD WHEN PIPE IS COLD

DIRECTION OF

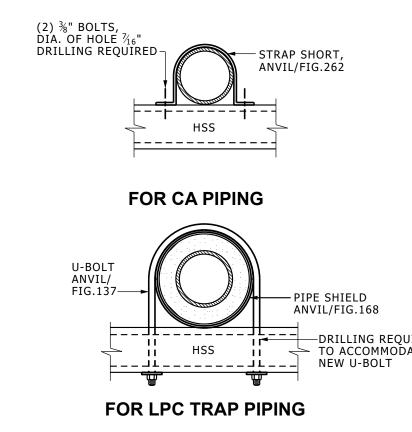
Ç OF ROLLER

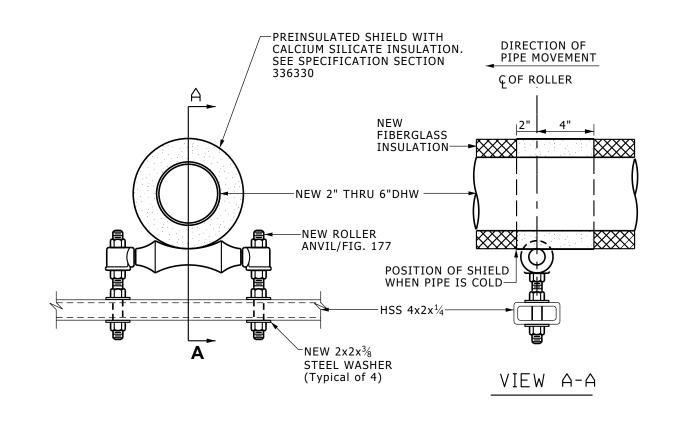
PIPE MOVEMENT

— FIBERGLASS INSULATION

- POSITION OF SHIELD

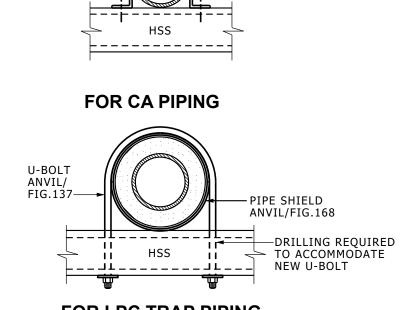
WHEN PIPE IS COLD





G DHW ROLLER DETAIL

## ROLLER HANGER DETAIL



CLAMP DETAILS

#### Note to Designers:

(1) PREFERRED STEEL SUPPORT DETAILS FOR EXISTING AND **NEW TUNNELS ARE SHOWN IN THIS SHEET.** (2) DETAILS NOT INTENDED AS FINALIZED DESIGN. INTENT IS TO SHOW PREFERENCES IN CONSTRUCTION AND REQUIRED LEVEL/DEPTH OF DETAILS TO BE PROVIDED IN BID DOCUMENTS. DESIGN ENGINEER SHALL DETERMINE APPROPRIATE APPLICATION AND ADEQUACY.

THICKNESS OF ALL CALCIUM SILICATE INSULATION SHALL MATCH ADJACENT PIPING INSULATION.

ALL OF THE DETAILS SHOWN IN THIS SHEET WILL WORK FOR NEW TUNNELS WITH PROPER CROSSMEMBER PLACEMENT.