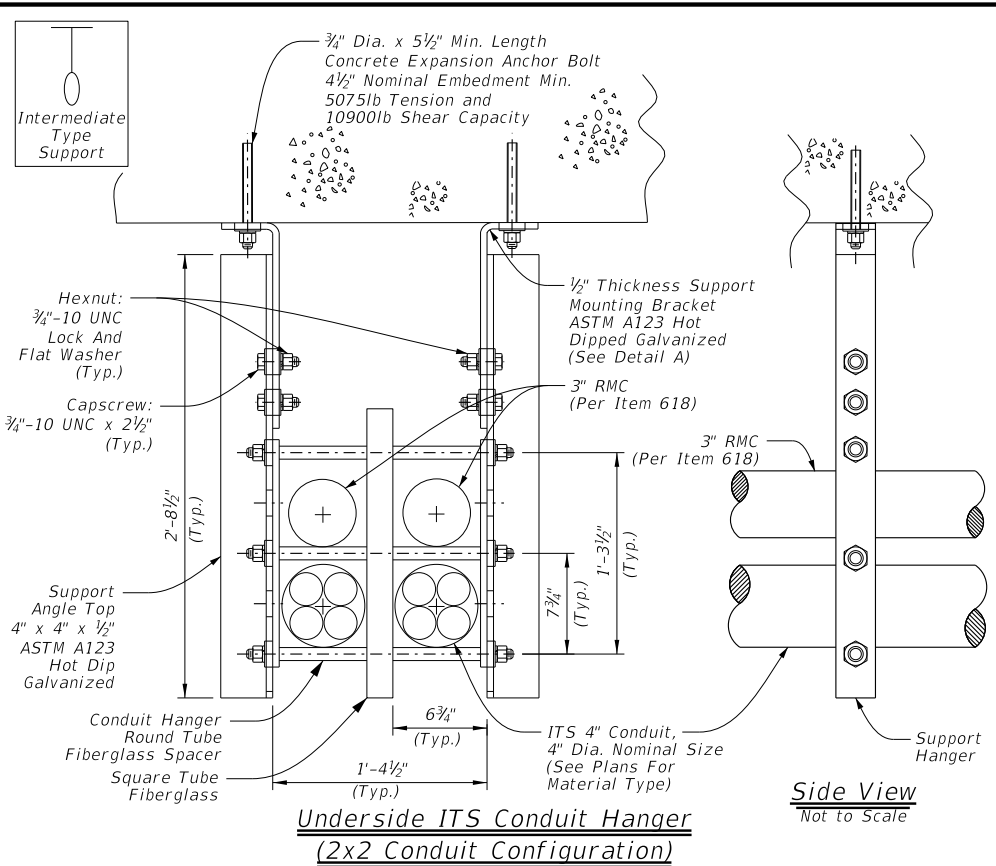
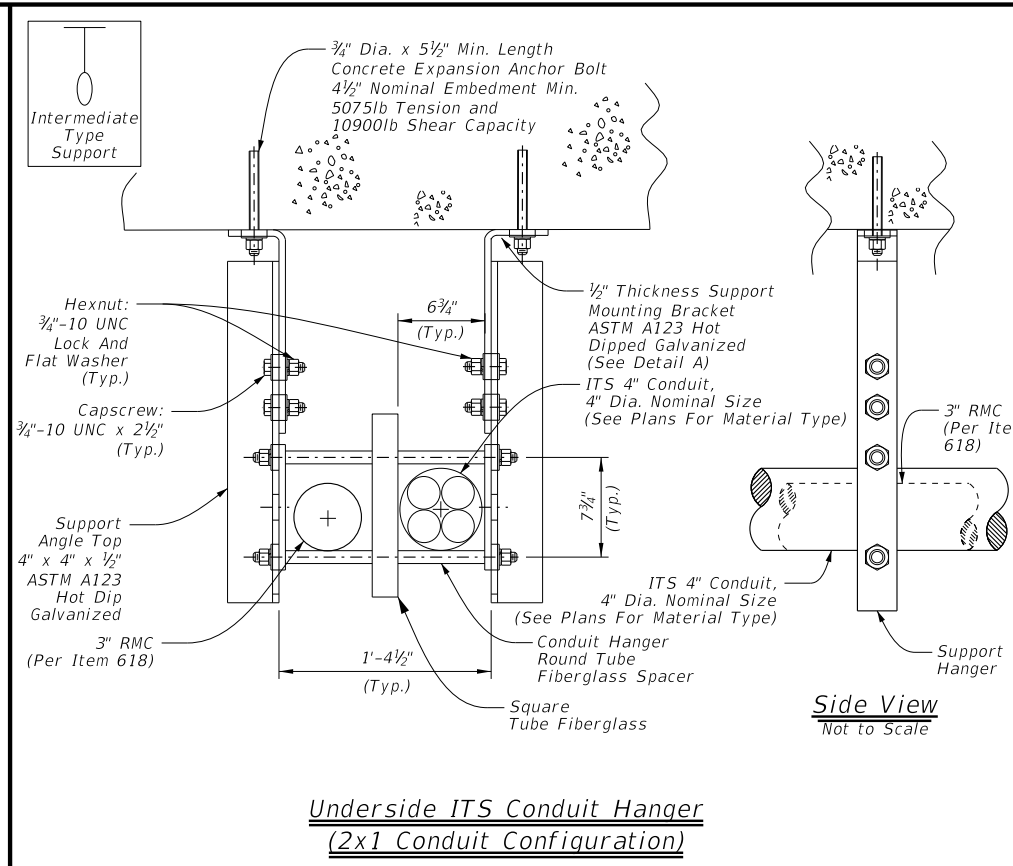


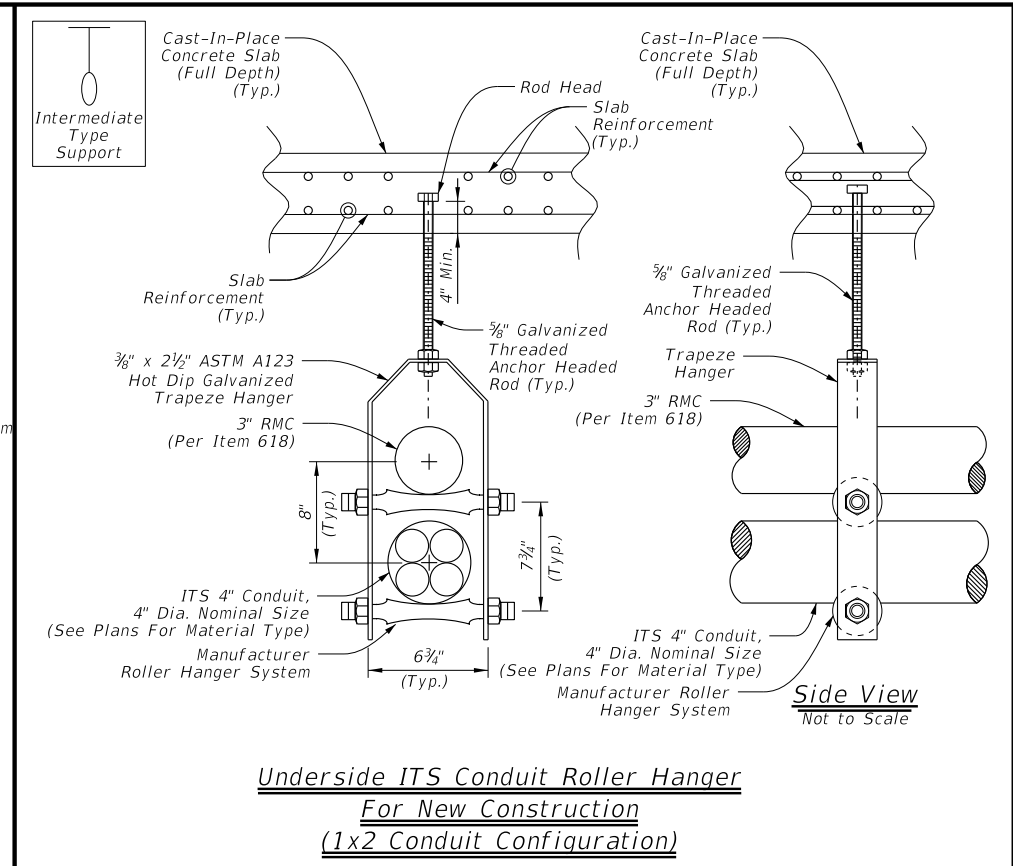
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



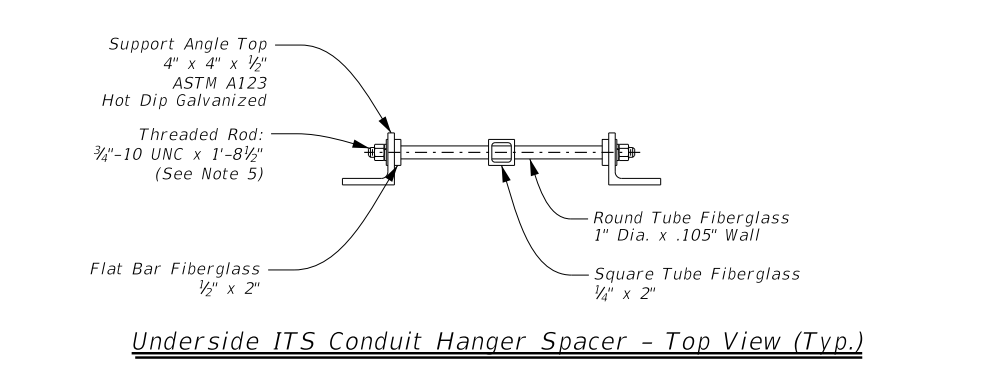
Underside ITS Conduit Hanger (2x2 Conduit Configuration)
Side View Not to Scale



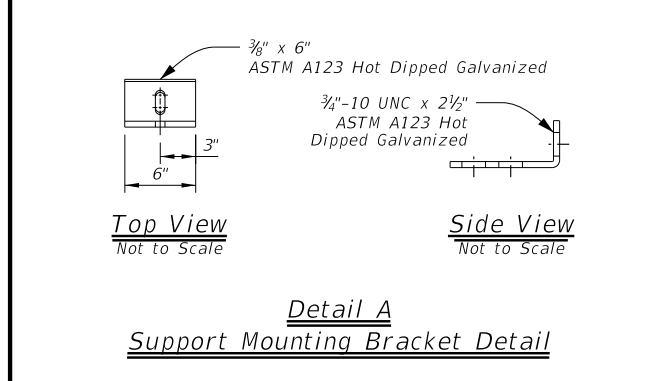
Underside ITS Conduit Hanger (2x1 Conduit Configuration)
Side View Not to Scale



Underside ITS Conduit Roller Hanger For New Construction (1x2 Conduit Configuration)
Side View Not to Scale

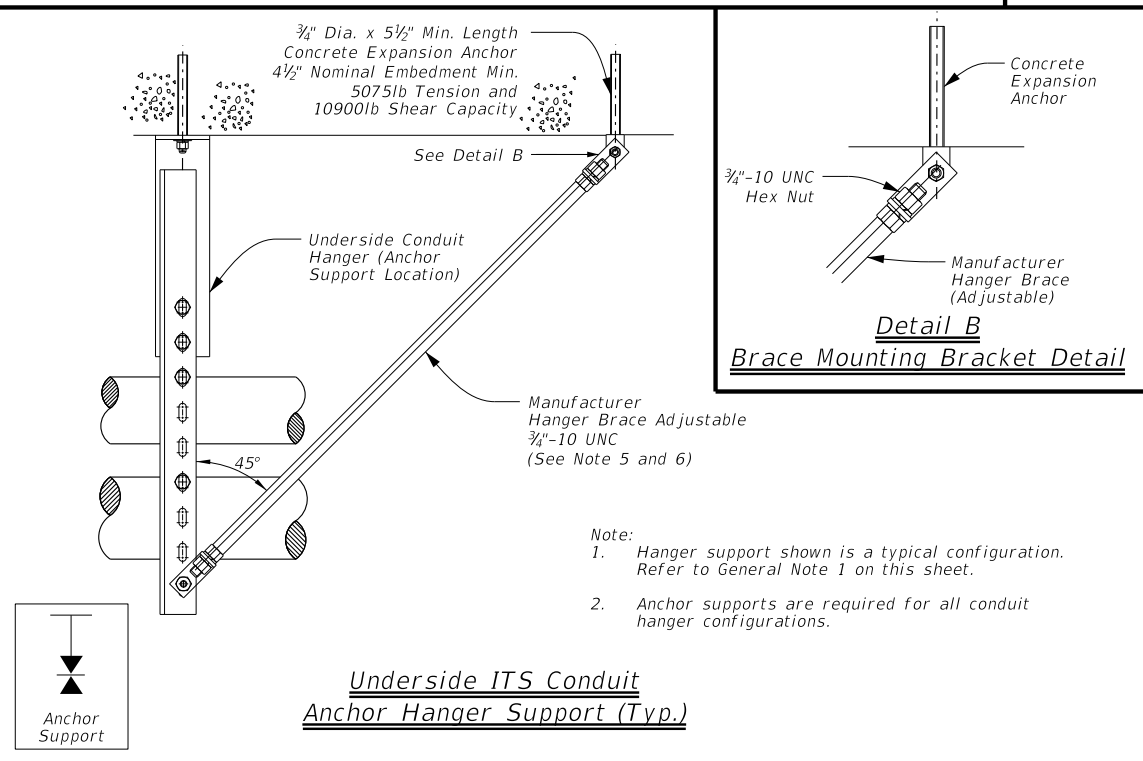


Underside ITS Conduit Hanger Spacer - Top View (Typ.)

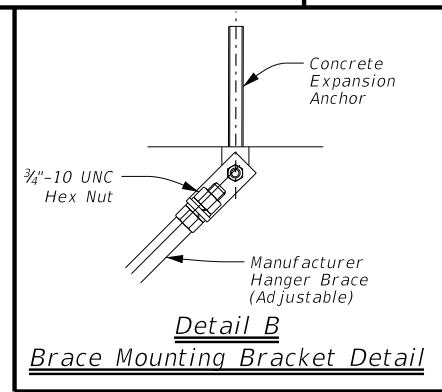


Detail A Support Mounting Bracket Detail
Top View Not to Scale, Side View Not to Scale

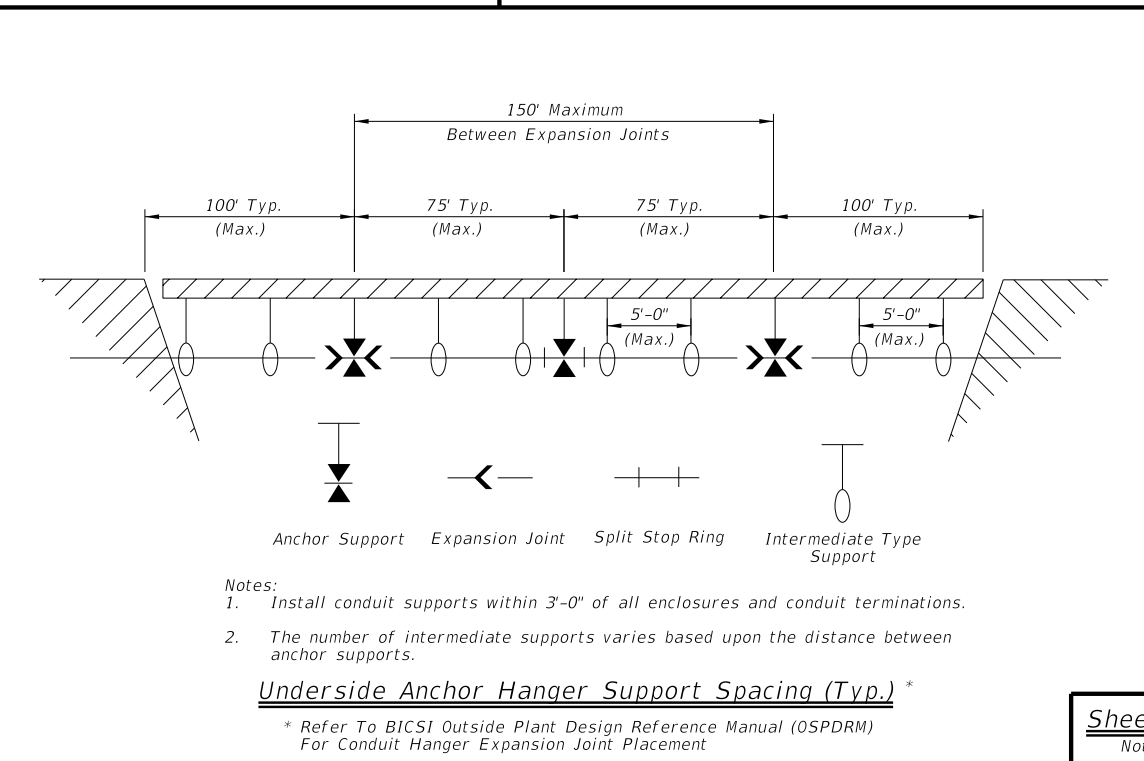
- General Notes:**
- Use commercially designed multiple conduit support hangers as an alternative to the hanger details on this sheet. Submit hanger details and specifications to the Engineer for approval prior to using on project.
 - Refer to the contract plans for conduit design and hanger configuration requirements. For two (2) conduit configurations, use the typical underside hanger or roller hanger system.
 - Maximum spacing of intermediate conduit hangers is 5'-0" C-C.
 - Hangers vary in length, but do not allow conduit to hang below bridge beams. Refer to ITS(30) for minimum clearance requirement below bridge deck.
 - Ensure all conduit hanger steel shapes conform to ASTM A36 and expansion anchors conform to ASTM A307 and are supplied with minimum of one nut and washer per bolt. Galvanize all steel plate, shapes, and hardware per Item 445, "Galvanizing".
 - Use angle bracing on both sides of conduit support for conduit anchor point hangers.
 - Refer to ITS(32) for expansion-deflection joint details.
 - Provide a minimum of two (2) expansion joints at all bridges. Ensure expansion joint spacing does not exceed manufacturer recommendations.
 - Select conduit lengths so that couplings do not coincide with conduit hanger locations.
 - Allowable types of outer duct material for above ground ITS conduit include rigid metallic conduit (RMC) and fiberglass.
 - Ground all galvanized rigid metallic conduit (RMC) hangers per manufacturer recommendations when electrical conductors present.
 - Refer to ITS(30) for anchor details through pre-stressed concrete panels.
 - Bond all external structure mounted conduit throughout entire length of run and ground the run at ground box locations according to ITS(37) and ITS(39).



Underside ITS Conduit Anchor Hanger Support (Typ.)



Detail B Brace Mounting Bracket Detail



- Notes:**
- Install conduit supports within 3'-0" of all enclosures and conduit terminations.
 - The number of intermediate supports varies based upon the distance between anchor supports.

Underside Anchor Hanger Support Spacing (Typ.) *
* Refer To BICSI Outside Plant Design Reference Manual (OSPDRM) For Conduit Hanger Expansion Joint Placement

Sheet Details
Not to Scale

Texas Department of Transportation Traffic Operations Division Standard

ITS CONDUIT HANGER DETAILS

ITS(29)-16

| | | | | |
|-----------------------|-----------|-----------|-----------|-----------|
| FILE: its(29)-16.dgn | DN: TxDOT | CK: TxDOT | DW: TxDOT | CK: TxDOT |
| © TxDOT FEBRUARY 2016 | CONT | SECT | JOB | HIGHWAY |
| REVISIONS | | | | |
| DIST | COUNTY | | | SHEET NO. |