The document contains detailed engineering plans for a prestressed concrete beam structure. It includes a variety of diagrams and drawings illustrating the structure's components and installation details. The parts transverse section shows the arrangement of diaphragms and connectors. The dimension table provides specifications for different beam typologies, detailing the channel size, beam face, and diaphragm face dimensions. The structural engineer's notes highlight the use of threaded inserts for diaphragms and the rotational capacity test for bolts. The document also specifies the mechanical tensile strength of bolts and the suitability of thin precast concrete elements. All bolts used for steel-to-steel connections shall be tightened in accordance with Section 407 of the Specifications. All diaphragm materials including bolts, nuts, and washers shall be galvanized. The notes emphasize the importance of maintaining a snug tight condition for all structural steel elements. The sheet includes a plan, drawing, and checking information for the Commonwealth of Virginia Department of Transportation. The date of the sheet is August 8, 2018.
NOTES TO DESIGNER:

Standard is to be used as an insertable sheet for steel intermediate diaphragms with the Bulb-T standards for depths of 29” through 53” (standards PCBT-29, -37, -45 and -53).

The steel quantity is included in price bid for prestressed concrete beams and should be so noted under the GENERAL NOTES on the front sheet of plans.

When utility lines are located between two lines of beams and clearance problems arise with the use of steel diaphragms, cast-in-place concrete intermediate diaphragms may be used. Place appropriate detail from the cell library in the plan set and do not include this sheet.

A ½” bent plate may be used in lieu of the 6” x 6” x ½” angle connector plate shown for skew angles less than or equal to 20°. The ½” plate shall be shop bent to conform with the line of diaphragms.

ADD THE FOLLOWING NOTES, DIMENSIONS, DETAILS, ETC. TO STANDARD:

None