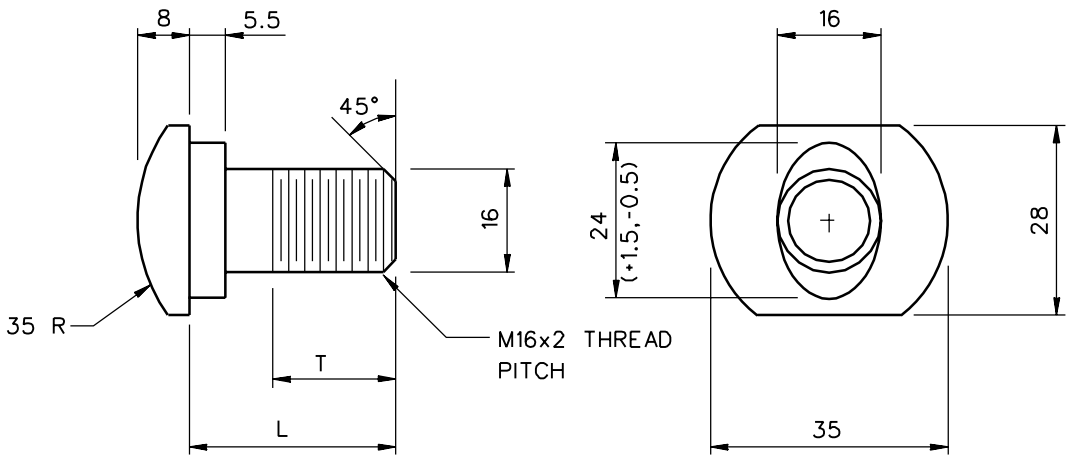
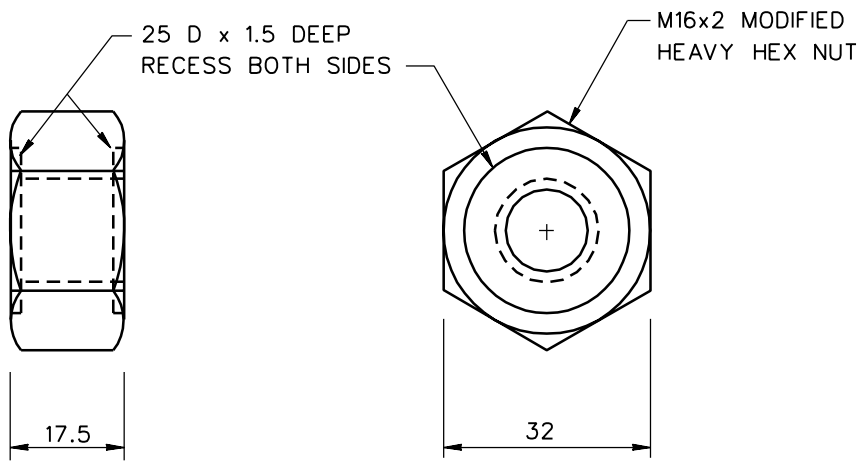
NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 2
2. IF THE BOLT EXTENDS MORE THAN 6 FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



DESIGNATOR	L	T (MIN)
FBB01	35	30
FBB02	50	45
FBB03	255	100
FBB04	460	100
FBB05	640	100



1976

GUARDRAIL BOLT AND RECESSED NUT

FBB01-05

SHEET NO.	REF. NO.
1 of 2	

SPECIFICATIONS

The geometry and material specifications for this bolt and nut are found in AASHTO M180. The bolt shall have M16x2 threads as defined in ANSI B1.13M for Class 6g tolerances. Bolt material shall conform to ASTM F568 for Class 4.6 (400 MPa tensile strength and 240 MPa yield strength). Material for corrosion resistant bolts shall conform to ASTM F568 for class 8.8.3 bolts (830 MPa tensile strength and 660 MPa yield strength). ASTM F568 Class 8.8.3 bolts and nuts have corrosion resistance comparable to ASTM A588 steels. Zinc-coated bolt heads shall be marked with the symbol "4.6" as defined in ASTM F568 section 9.

Nuts shall have ANSI B1.13M M16x2 Class 6H threads. The geometry of the nuts, with the exception of the recess shown in the drawing, shall conform to ANSI B18.2.4.1M Style 1 for zinc-coated hex nuts (shown on drawing) and ANSI B18.2.4.6M heavy hex corrosion resistance nuts (not shown on drawing). Material for zinc-coated nuts shall conform to the requirements of ASTM A563M for Class 5 and material for corrosion resistant nuts shall conform to the requirements of ASTM A563M for Class 8S3.

When zinc-coated bolts and nuts are required, the zinc coating shall conform to either AASHTO M232 (ASTM A153) for Class C or AASHTO M298 (ASTM B695) for Class 50. Zinc-coated nuts shall be tapped over-size as specified in AASHTO M291M (ASTM A563M) except that a diametrical allowance of 510 mm shall be used instead of 420 mm.

Designator	Stress Area of Threaded Bolt Shank (mm^2)	Minimum Bolt Bolt Strength (kN)
FBB01-5	157.0	62.8

Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance and accepted manufacturing practices.

INTENDED USE

These bolts and nuts are used in numerous guardrail and median barrier designs including the SGR02, SGM02, SGR04a-b, SGM04a-b, SGR09a-c, and SGM09a-c. They are also used in guardrail terminal designs SEW01 through SEW10, the guardrail-to-bridge rail transition designs STB01 through STB06, and a variety of other guardrail and bridge rail designs.

GUARDRAIL BOLT AND RECESSED NUT

FBB01-05

SHEET NO.	DATE
2 of 2	03-23-00