

STRAIGHT ANCHOR STUD AND NUTS

I. SPECIFICATIONS

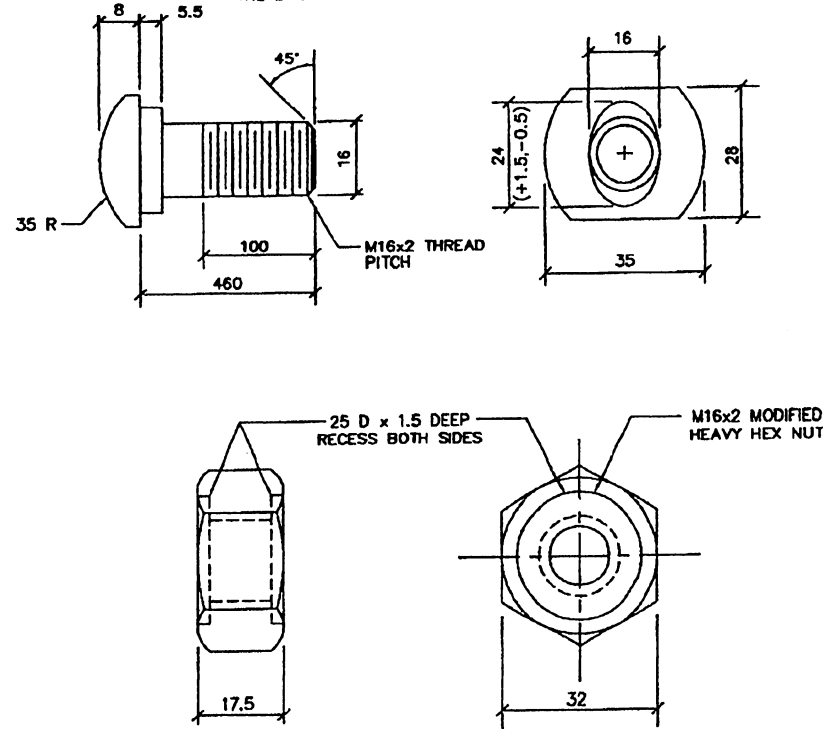
- A. ANCHOR STUDS SHALL CONFORM TO AASHTO M314 EXCEPT THAT THREADS AND NOMINAL DIAMETERS SHALL CONFORM TO ANSI B1.13M FOR CLASS 6g THREADS. ANCHOR STUDS SHALL CONFORM TO :
AASHTO M314 GRADE 55 (517 MPa MINIMUM TENSILE STRENGTH)
- B. HEAVY HEX NUTS SHALL CONFORM TO AASHTO M291M (ASTM A563M) FOR CLASS 10S NUTS AND SHALL CONFORM TO GEOMETRY DEFINED IN ANSI B18.2.4.6M. ALL NUTS SHALL HAVE ANSI B1.13M CLASS 6H THREADS.
- C. ZINC-COATED ANCHOR STUDS SHALL BE FINISHED ACCORDING TO EITHER AASHTO M232 (ASTM A153) CLASS C OR AASHTO M298 (ASTM B695) FOR CLASS 50. HEX NUTS SHALL BE ZINC-COATED ACCORDING TO EITHER AASHTO M232 (ASTM A153) CLASS C OR AASHTO M298 (ASTM B695) FOR CLASS 50.
- D. 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.

II. INTENDED USE

- A. ANCHOR STUDS ARE USED TO CONNECT BRIDGE RAILING POSTS TO BRIDGE DECKS AND OTHER CONCRETE SLABS.

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.



SPLICE BOLT AND NUT

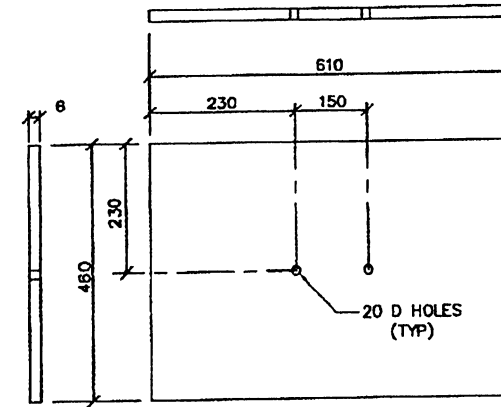
I. SPECIFICATIONS

- A. 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 THREADS. BOLT MATERIAL SHALL CONFORM TO ASTM F568 FOR CLASS 4.6 (400 MPa TENSILE STRENGTH AND 240 MPa YIELD STRENGTH). ZINC-COATED BOLT HEADS SHALL BE MARKED WITH THE SYMBOL "4.6" AS DEFINED IN ASTM F568 SECTION 9.
- B. 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 DRAWINGS). MATERIAL FOR ZINC-COATED NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563M FOR CLASS 5.
- C. 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.
- D. 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.

STRESS AREA OF THREADED BOLT SHANK (mm ²)	MINIMUM BOLT BOLT STRENGTH (kN)
157.0	62.8

II. INTENDED USE

- A. THESE BOLTS AND NUTS ARE USED IN GUARD RAIL AND MEDIAN BARRIER DESIGNS. THEY ARE ALSO USED IN GUARD RAIL TERMINAL DESIGNS AND GUARD RAIL TRANSITION.



SOIL PLATE

I. SPECIFICATIONS

- A. THE SOIL PLATE SHALL BE MANUFACTURED USING AASHTO M270M (ASTM A709M) GRADE 250 STEEL. AFTER ALL PUNCHING, DRILLING, STAMPING AND WELDING IS COMPLETE, THE SECTION SHALL BE ZINC-COATED ACCORDING TO AASHTO M111 (ASTM A123).
- B. 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.

II. INTENDED USE

- A. ONE SOIL PLATE IS BOLTED TO THE POST USING 2 ZINC-COATED 200 mm LONG BOLTS AND NUTS AND 2 ZINC-COATED WASHERS.

EFFECTIVE DATE: MAY 1998

COMMONWEALTH OF PUERTO RICO DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS HIGHWAY AND TRANSPORTATION AUTHORITY		
METAL BARRIER W-BEAM STRONG POST HARDWARE		RECOMMENDED BY: DESIGN AREA DIRECTOR DATE: _____ APPROVED BY: EXECUTIVE DIRECTOR DATE: 20-V-98 APPROVED BY: DIV. ADM. FHWA-PR DIVISION DATE: 5-15-98
DATE	REVISION	BY
01-01-1997	GENERAL REVISION	L.V.
05-12-1998	MELT DELETED	L.V.
STD. DWG.	MB 5 OF 28	