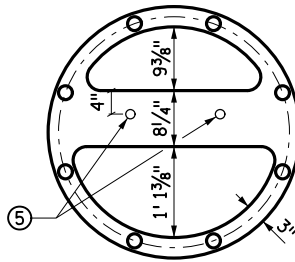
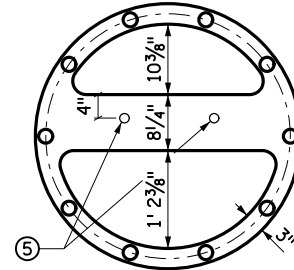


T-100
(8 BOLT, 30" BOLT CIRCLE)

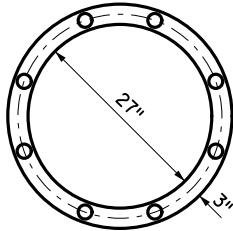


T-120
(8 BOLT, 34" BOLT CIRCLE)

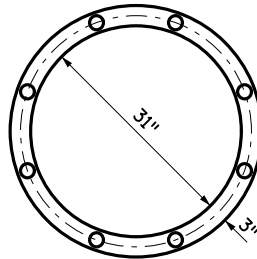


T-140
(10 BOLT, 36" BOLT CIRCLE)

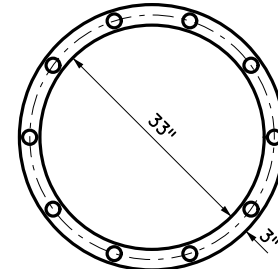
UPPER ANCHOR ROD TEMPLATE



T-100
(8 BOLT, 30" BOLT CIRCLE)

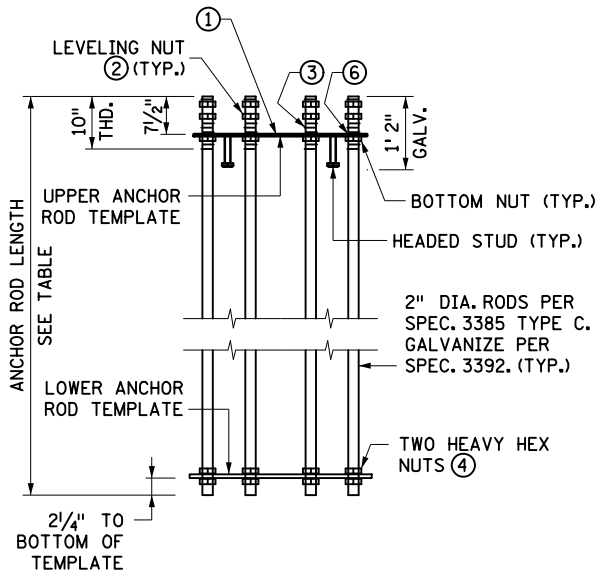


T-120
(8 BOLT, 34" BOLT CIRCLE)



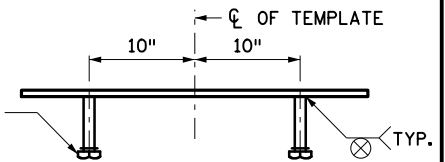
T-140
(10 BOLT, 36" BOLT CIRCLE)

LOWER ANCHOR ROD TEMPLATE



ANCHOR ROD ASSEMBLY
ELEVATION VIEW

1/2" DIA. X 3" HEADED
STUD IN ACCORDANCE
WITH SPEC. 3391.2.D
(TYP. 2 PER TEMPLATE)



DETAIL "A"
ELEVATION VIEW

UPPER ANCHOR ROD TEMPLATE
(T-100 SHOWN, OTHERS SIMILAR)

NOTES:

FURNISH AND INSTALL 1/2" THICK ANCHOR ROD METAL TEMPLATES IN ACCORDANCE WITH SPEC. 3306 WITH 2 1/16" DIA. HOLES MATCHING THE ANCHOR ROD PATTERN OF THE TOWER BASE PLATE. GALVANIZE TEMPLATES IN ACCORDANCE WITH SPEC. 3394.

ANCHOR RODS DESIGNED FOR IMPORTANCE CATEGORY I FATIGUE DESIGN.

FOR EACH ANCHOR ROD, FURNISH AND INSTALL FIVE HEX NUTS PER ASTM A194 GRADE 2H OR GRADE 7 WITH TWO HARDENED FLAT WASHERS PER ASTM F436, ALL GALVANIZED IN ACCORDANCE WITH SPEC. 3392.

USE AS FOLLOWS (PER ANCHOR ROD):

- TWO HEAVY HEX NUTS AND HARDENED FLAT WASHERS FOR THE DOUBLE NUT CONNECTION AT THE TOP OF THE ANCHOR ROD.
- ONE HEAVY HEX NUT ON THE UNDERSIDE OF THE UPPER ANCHOR ROD TEMPLATE (BOTTOM NUT).
- TWO HEAVY HEX NUTS TO SECURE THE LOWER ANCHOR ROD TEMPLATE.

- ① POSITION THE UPPER ANCHOR ROD TEMPLATE 7 1/2" FROM THE TOP OF THE ANCHOR RODS AND EMBED THE TOP OF THE TEMPLATE FLUSH WITH THE TOP OF THE PEDESTAL CONCRETE.
- ② TEMPORARILY SECURE THE TOP OF THE UPPER TEMPLATE WITH THE LEVELING NUT BEFORE CONCRETE PLACEMENT. DO NOT LOOSEN LEVELING NUTS UNTIL AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
- ③ WRAP THREADED PORTION OF ANCHOR RODS PROJECTING ABOVE THE CONCRETE PEDESTAL WITH THREE LAYERS OF VINYL ELECTRICAL TAPE BEFORE PLACING CONCRETE TO AVOID THREAD CONTAMINATION (TYP.).
- ④ TIGHTEN NUTS TO A "SNUG TIGHT" CONDITION IN ACCORDANCE WITH SPEC. 2402.3.F.
- ⑤ HEADED STUD, SEE DETAIL "A".
- ⑥ REMOVE SURFACE CONTAMINANTS AND SUPPLY SILICONE JOINT SEALER TO THE UPPER TEMPLATE AROUND THE ANCHOR RODS AND ANCHOR ROD HOLES, AND THE INNER AND OUTER EDGES WHERE THE PLATE MEETS THE CONCRETE. USE AN APPROVED SILICONE JOINT SEALER FOUND ON MnDOT'S APPROVED/QUALIFIED PRODUCTS LIST UNDER BRIDGE PRODUCTS.

ANCHOR ROD FOR MAT OR PILE FOUNDATIONS (SEE PLANS FOR TYPE)	ANCHOR ROD LENGTH
MAT FOUNDATION FOR T-100	6' 4"
MAT FOUNDATION FOR T-120	6' 4"
MAT FOUNDATION FOR T-140	6' 10"
PILE FOUNDATION FOR T-100	6' 4"
PILE FOUNDATION FOR T-120	7' 4"
PILE FOUNDATION FOR T-140	7' 4"

APPROVED NOVEMBER 5, 2019

Peter A. Harff
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
**ANCHOR ROD ASSEMBLY FOR
LIGHT TOWER FOUNDATION**

SPECIFICATION
REFERENCE

STANDARD
PLATE
NO.

8135A