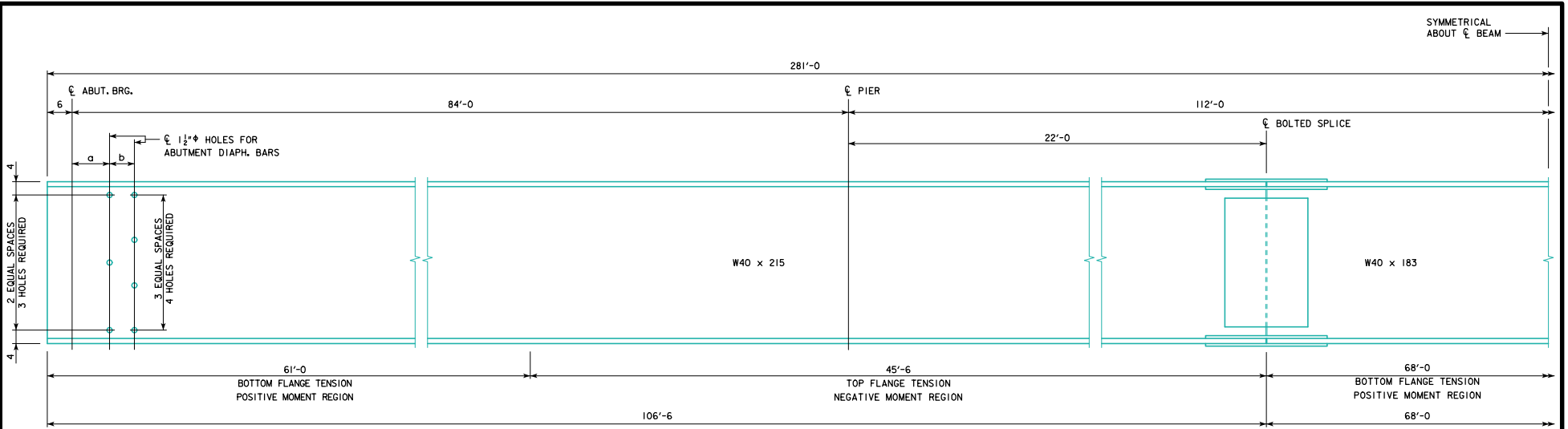
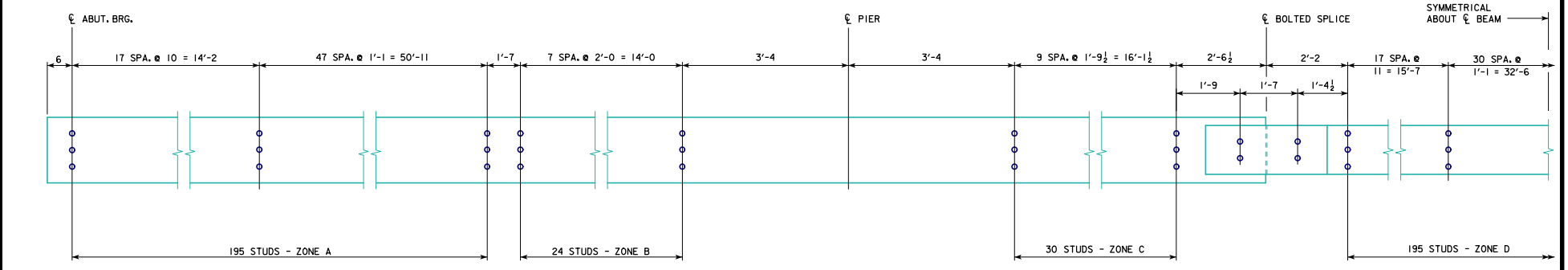


REVISED 02-2017 - ADDED 4 SHEAR STUDS AT "CENTERLINE OF BOLTED SPLICE" LOCATION BETWEEN "ZONE C & D". ADDED "SHEAR STUD ON SPLICE PLATE DETAILS" SHOWING 2 STUDS PER ROW. CHANGED NOTE STATING "MISCELLANEOUS DETAILS 280'-0 BRIDGE" WAS "160'-0 IN ERROR".



**BEAM ELEVATION**



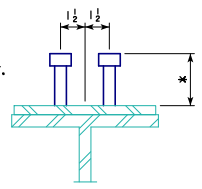
**SHEAR STUD SPACING**

\* NOTE: STUD HEIGHTS (3 1/2", 4" OR 5") FOR THE LOCATIONS SHOWN SHALL BE DETERMINED BY THE DESIGNER. ON "MISCELLANEOUS DETAILS 280'-0 BRIDGE" SHEET, STUD HEIGHTS CAN BE IDENTIFIED BY THE DESIGNER IN A TABLE CORRESPONDING TO THE ZONES LISTED ON THIS SHEET.

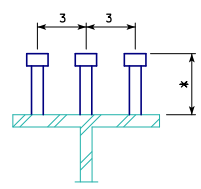
Δ WEIGHT OF SHEAR STUDS ARE NOT INCLUDED, SEE MISC. DETAILS - STANDARDS 5252 TO 5261.

STRUCTURAL STEEL	
Δ BEAM WEIGHT	58,239 LBS.

NOTE: STRUCTURAL STEEL WEIGHT IS INCLUDED ON THE SUMMARY QUANTITIES SHEET.



**SHEAR STUD ON SPLICE PLATE DETAILS**  
NOTE: ALL STUDS TO BE 3/4" Δ



**SHEAR STUD DETAILS**  
NOTE: ALL STUDS TO BE 3/4" Δ

SKEW	a (IN)	b (IN)
0°	9	6
10°	9 1/2	6 1/2
20°	9 3/4	6 3/4
30°	10 1/2	6 1/2
45°	12 3/4	8 1/2

02-2017  
LATEST REVISION DATE  
*Norman E. Mc Donald*  
APPROVED BY BRIDGE ENGINEER

**IOWADOT** Highway Division  
STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES  
**ROLLED STEEL BEAM BRIDGES**  
OCTOBER, 2014

**BEAM PLAN AND ELEVATION**  
280'-0 BRIDGE

**RS40-077-14**