

DIAPHRAGM NOTES:

SEE THE CONTRACT PLANS FOR THE NUMBER AND LOCATION OF INTERMEDIATE DIAPHRAGMS REQUIRED.

COST OF ALL MATERIALS AND LABOR NECESSARY FOR INSTALLING INTERMEDIATE DIAPHRAGMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

BOLTS SHALL BE TENSIONED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS UNLESS NOTED OTHERWISE.

ALL STRUCTURAL STEEL DIAPHRAGM MATERIALS INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 (AASHTO M11).

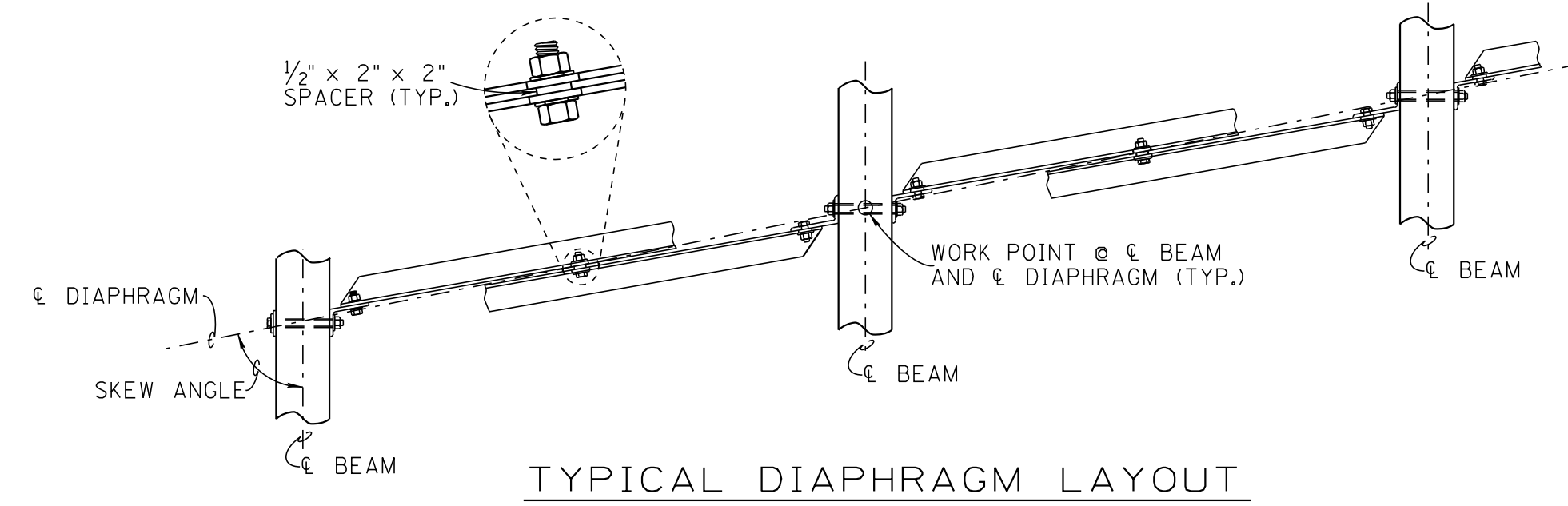
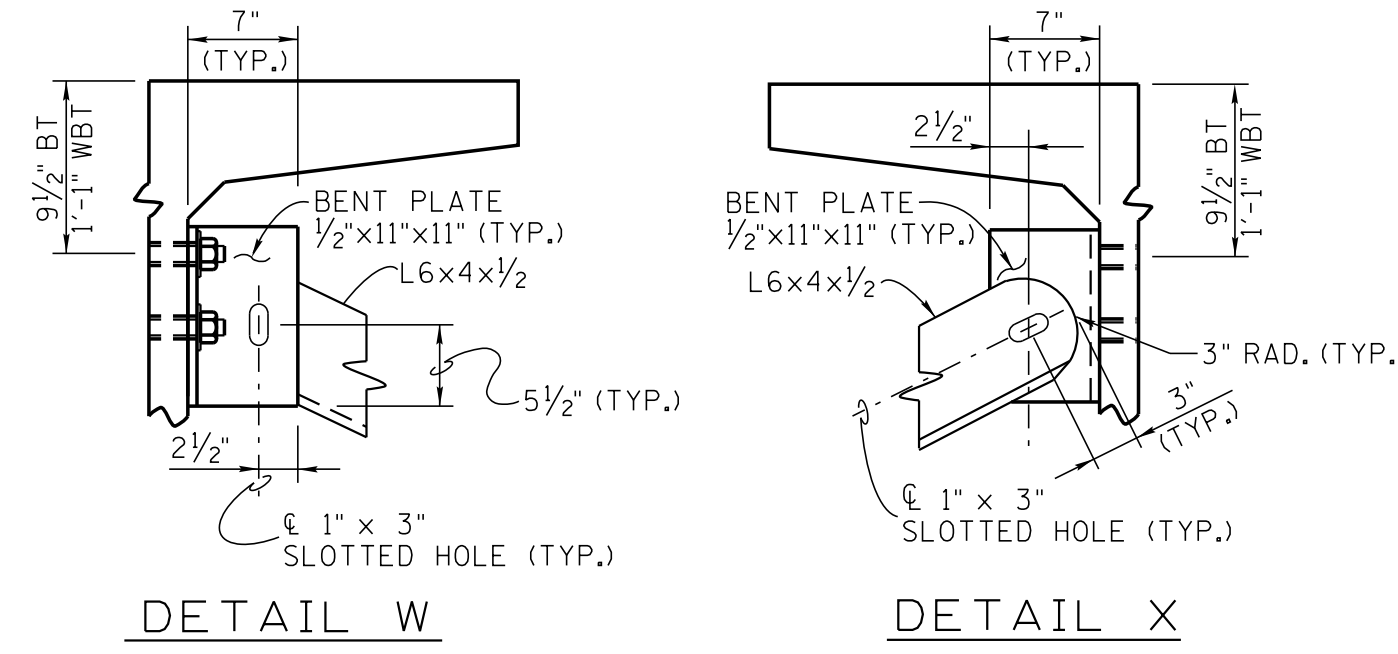
FABRICATED STRUCTURAL STEEL SHALL BE A709 GRADE 50 UNLESS NOTED OTHERWISE.

SHOP DRAWINGS WILL NOT BE REQUIRED FOR INTERMEDIATE DIAPHRAGMS AND ANGLE CONNECTIONS. HOWEVER, BEAM SHOP DRAWINGS SHALL INDICATE THE LOCATION OF INSERTS AND HOLES. ALTERNATE DETAILS MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

ALL BOLTS SHALL BE $\frac{3}{8}$ " ϕ ASTM F3125 GRADE A325 WITH HEX NUTS, TWO $2\frac{1}{2}$ " MINIMUM O.D. WASHERS AND TWO HARDENED WASHERS UNLESS NOTED OTHERWISE.

THE FABRICATION OF THE DIAPHRAGMS AS DETAILED ON THIS DRAWING DOES NOT REQUIRE AISC QUALITY MANAGEMENT SYSTEMS CERTIFICATION.

SEE STD-14-2 FOR DIAPHRAGM DETAILS FOR WBT-42 BEAMS.



PROJECT NO.	YEAR	SHEET NO.
	2020	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	6-05-23	ALP	GENERAL REVISIONS

BEAM NOTES:

THE TOP OF ALL BEAMS SHALL BE ROUGH-FLOATED AT APPROXIMATELY THE TIME OF INITIAL SET. THE TOP OF THE BEAMS SHALL CLEAN, FREE OF LAITANCE, AND INTENTIONALLY ROUGHENED IN THE TRANSVERSE DIRECTION TO AN AMPLITUDE OF $\frac{1}{8}$ ". WHERE PRECAST PANELS ARE TO BE USED AND SET ON BITUMINOUS FIBERBOARD, THE OUTER FIVE INCHES OF THE TOP FLANGE MAY BE TROWELED.

ALL PRESTRESSING STRANDS SHALL BE ASTM A416 GRADE 270, 7-WIRE UNCOATED LOW RELAXATION PRESTRESSING STRANDS.

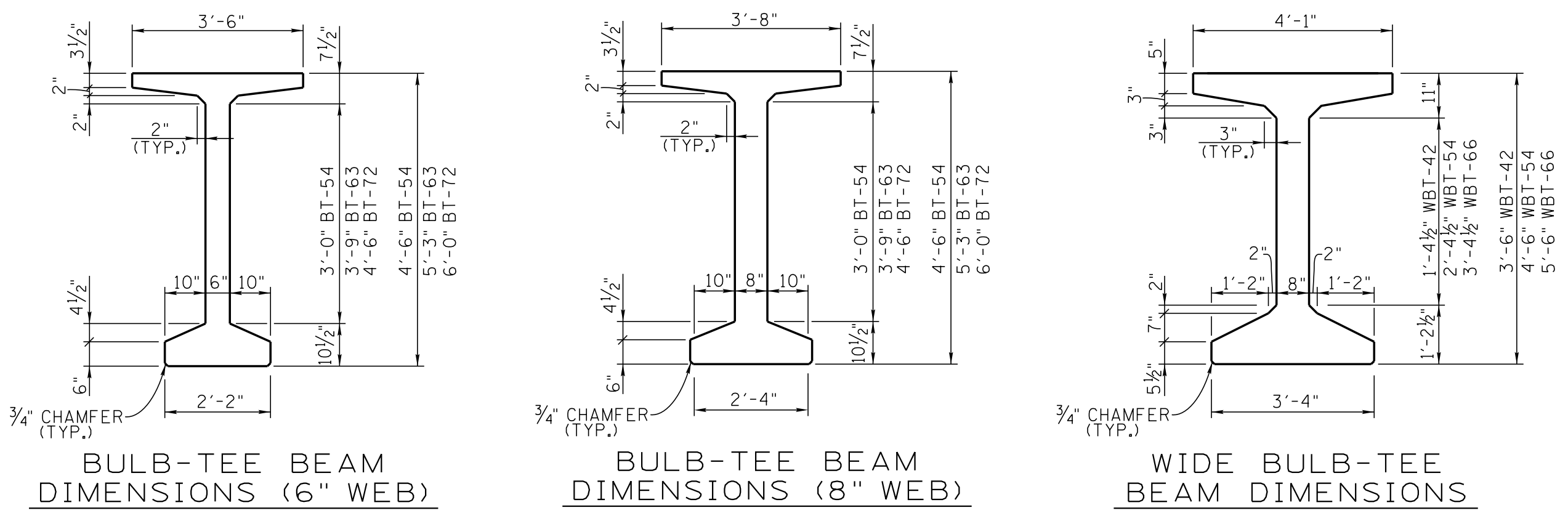
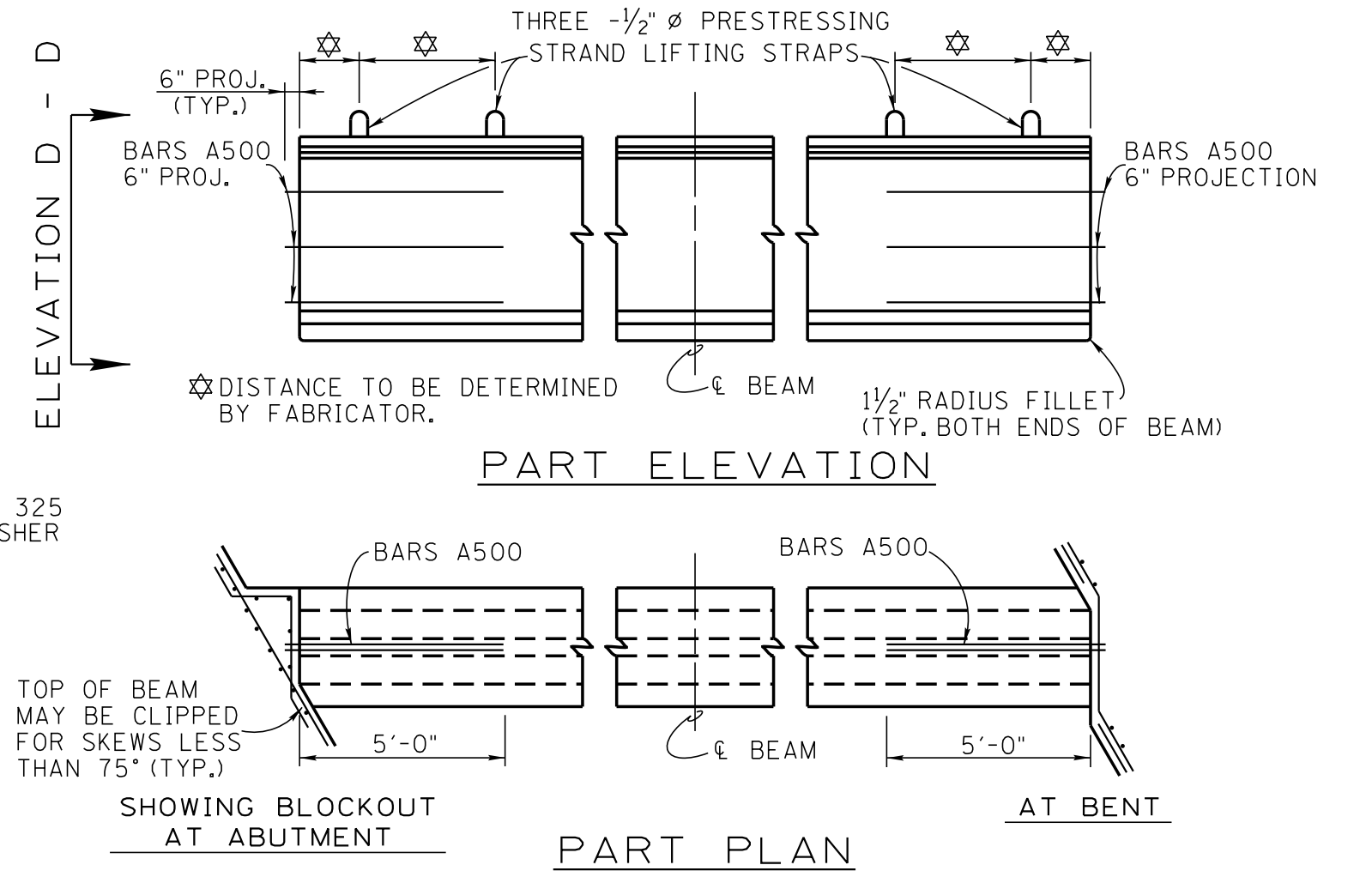
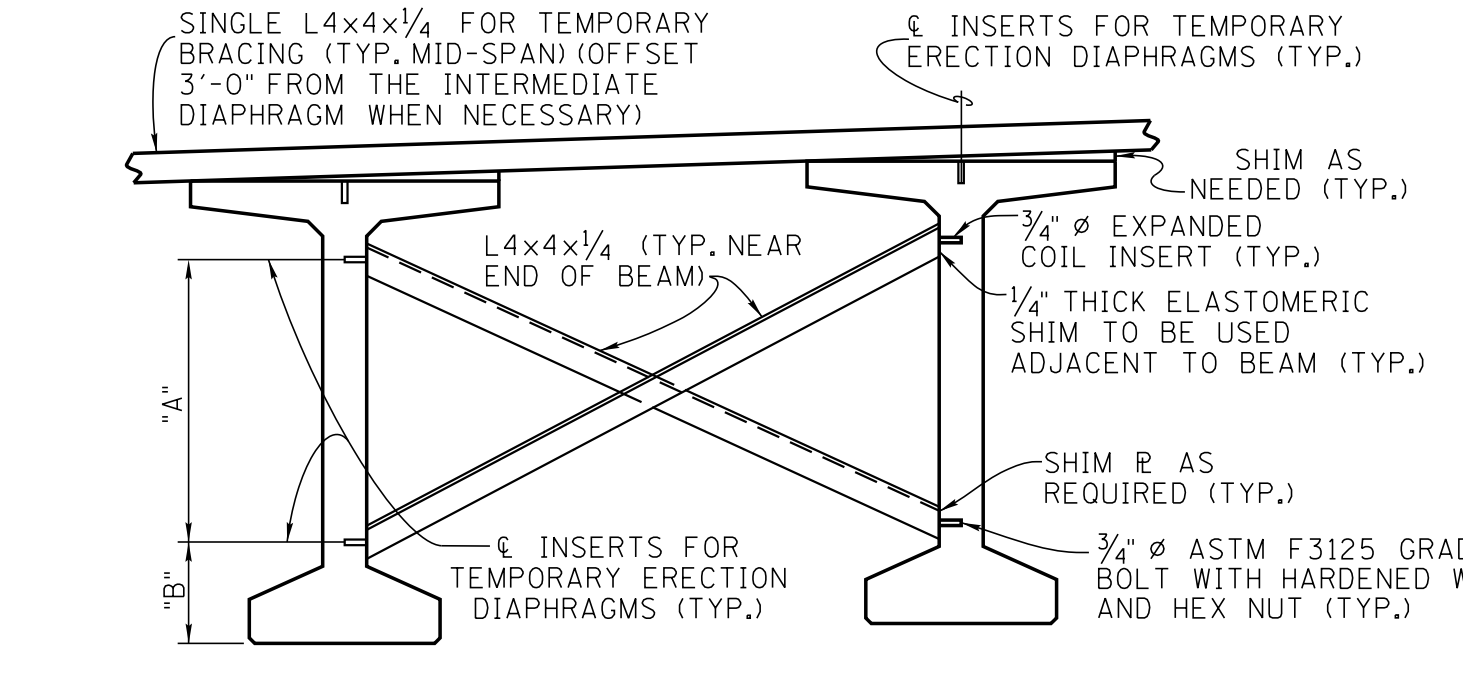
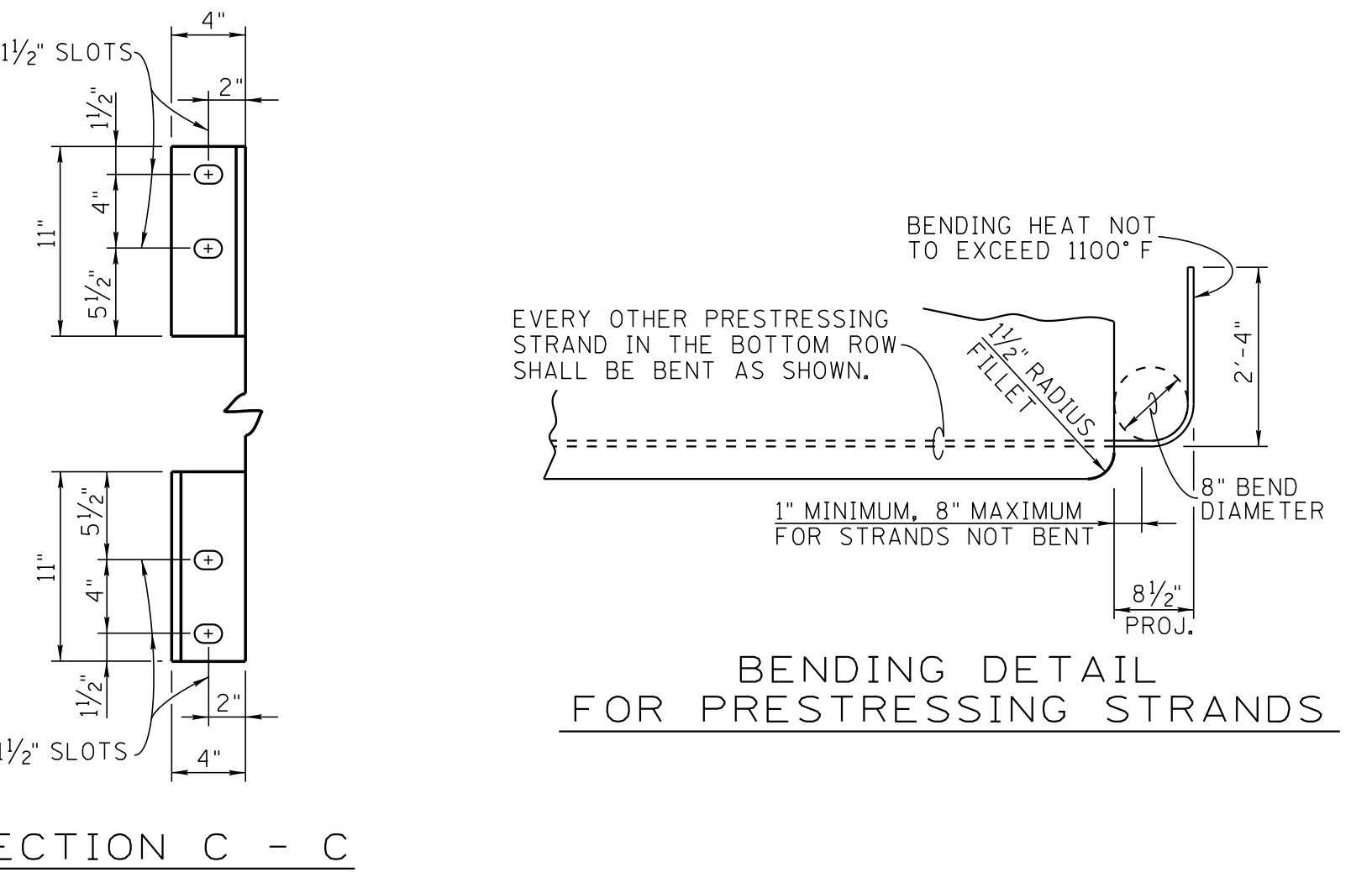
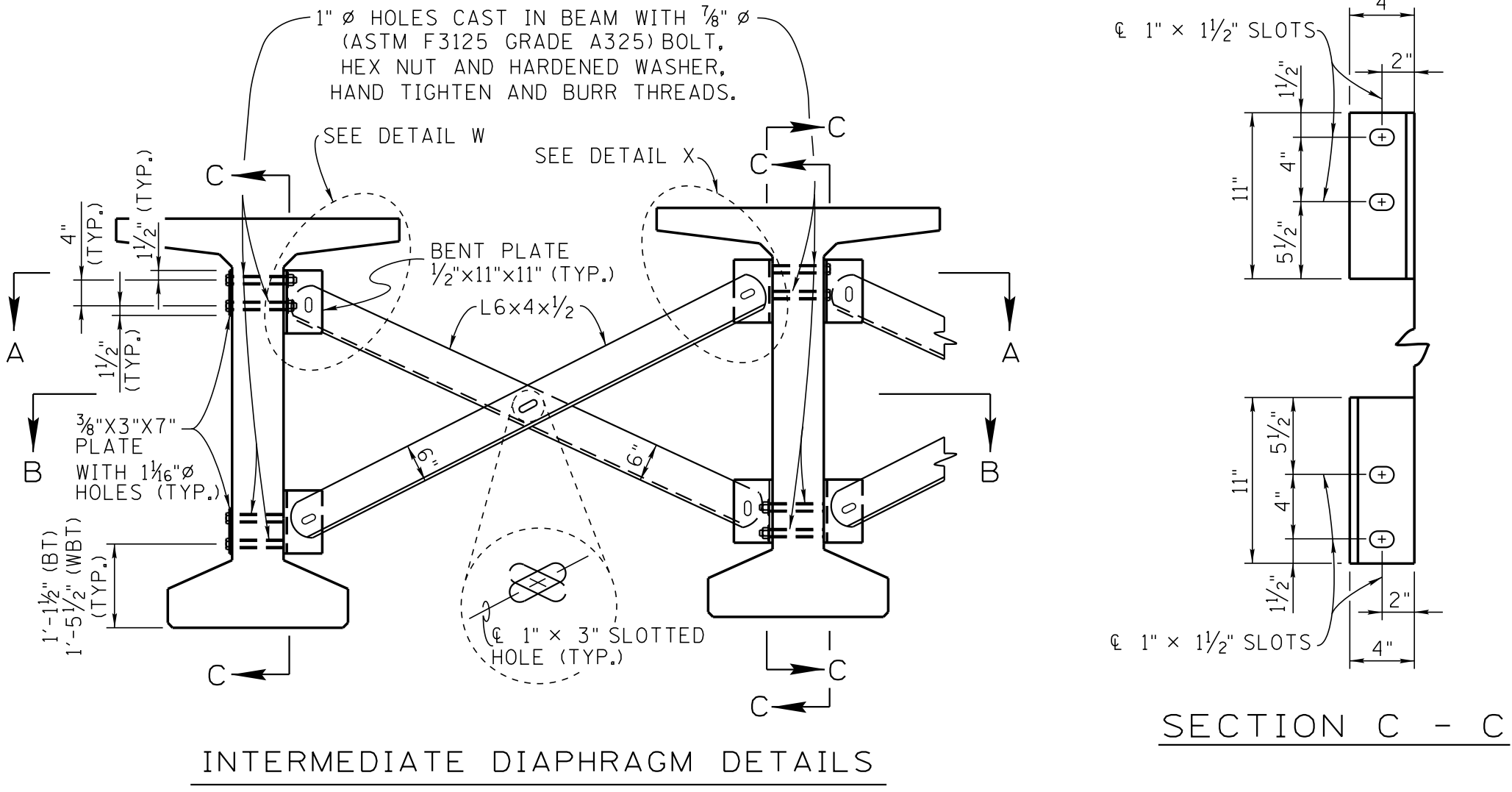
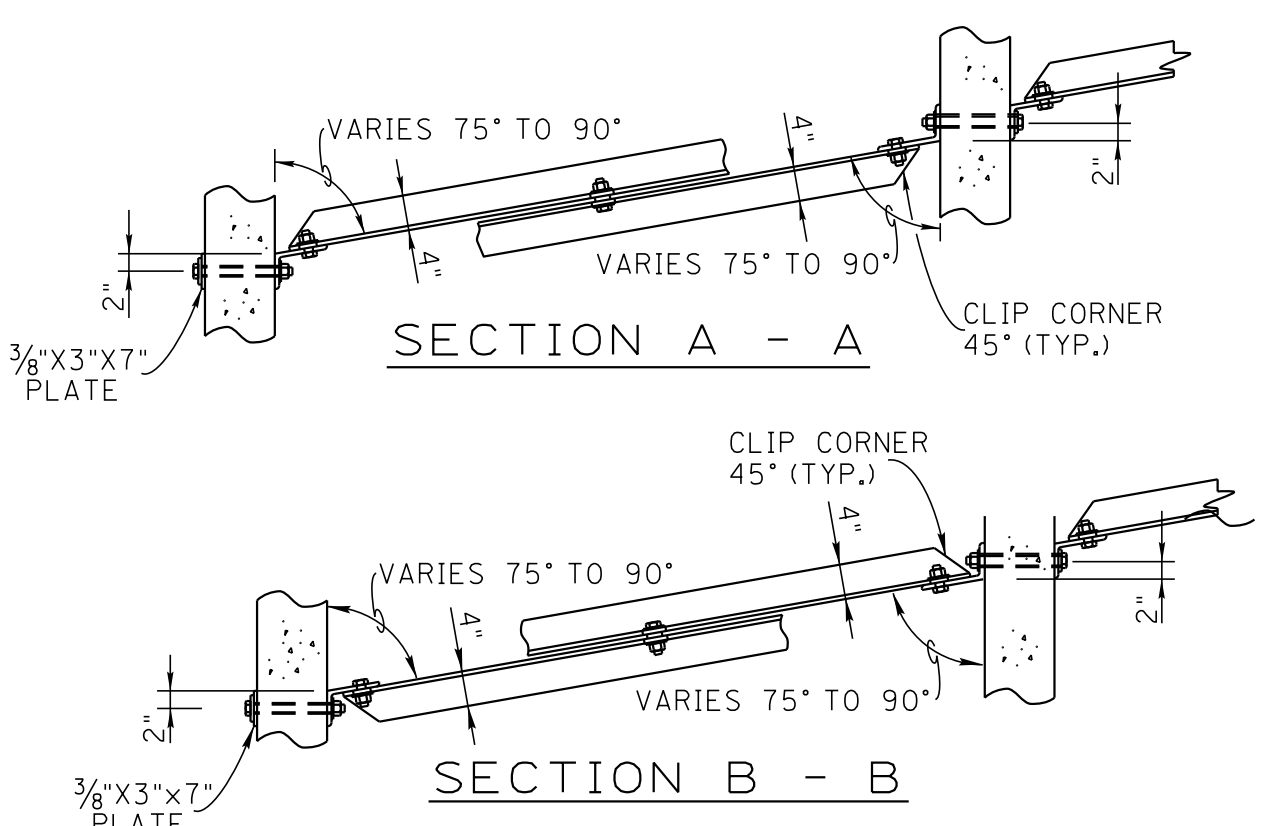
AN INITIAL FORCE AS SPECIFIED IN THE CONTRACT PLANS SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

AFTER THE BEAM IS REMOVED FROM PRESTRESSING BED, BARS PROJECTING FROM THE ENDS OF THE BEAM SHALL BE COLD BENT (DO NOT HEAT). THE MINIMUM DIAMETER OF THE BEND SHALL BE IN ACCORDANCE WITH STANDARD CRSI HOOK DETAILS.

THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING AS SHOWN IN THE BENDING DETAIL FROM THE ENDS OF THE BEAMS. THE STRANDS SHALL BE CUT WITHOUT HEATING ADJACENT STRANDS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAM OR ON THE PROJECTING STRANDS.

COST OF ELASTOMERIC BEARING PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.

THE SEQUENCE FOR TRANSFER OF STRESS OR CUTTING OF STRANDS SHALL BE IN ACCORDANCE WITH ARTICLE 615.14 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND SHALL BE SHOWN ON THE APPROVED SHOP DRAWINGS. AT NO TIME SHALL MORE THAN 1/6TH OF THE TOTAL PRESTRESSING FORCE BE ECCENTRIC ABOUT CENTERLINE OF THE BEAM.

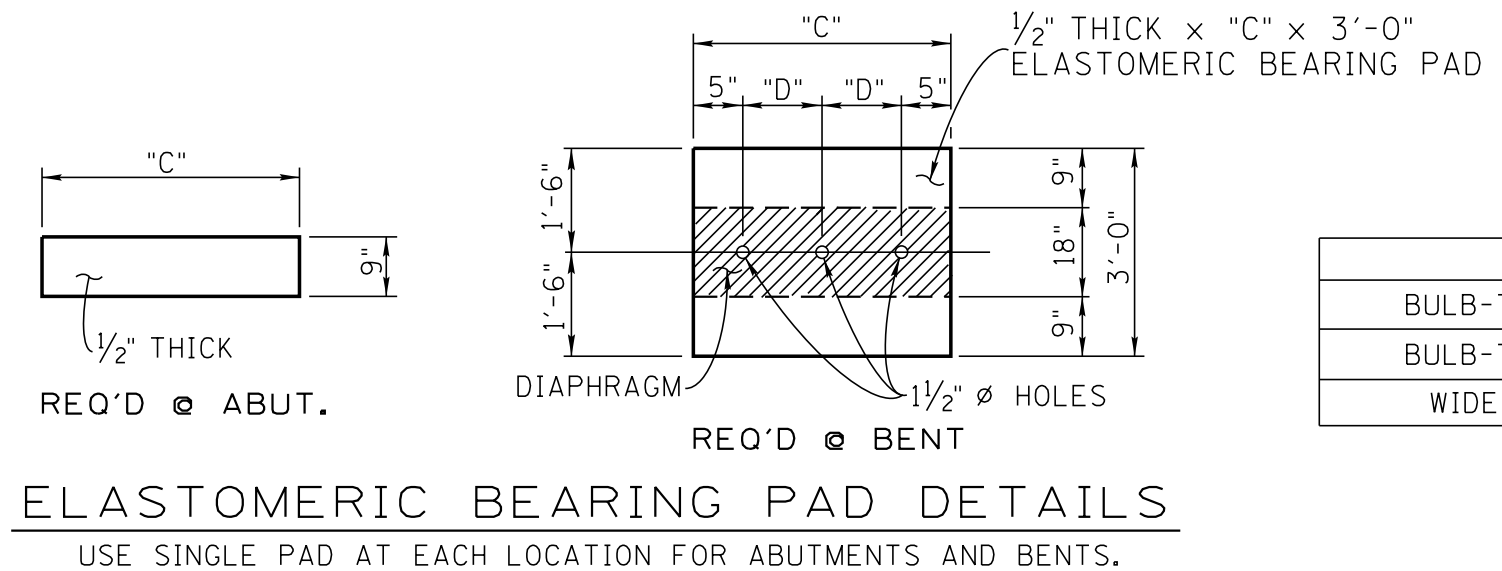


TEMPORARY ERECTION DIAPHRAGMS ARE REQUIRED AT THE ENDS OF PRESTRESSED BULB-TEE AND WIDE BULB-TEE BEAMS AND SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER BEAMS ARE ERECTED. COST OF ALL MATERIALS AND LABOR FOR INSTALLING TEMPORARY ERECTION DIAPHRAGMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

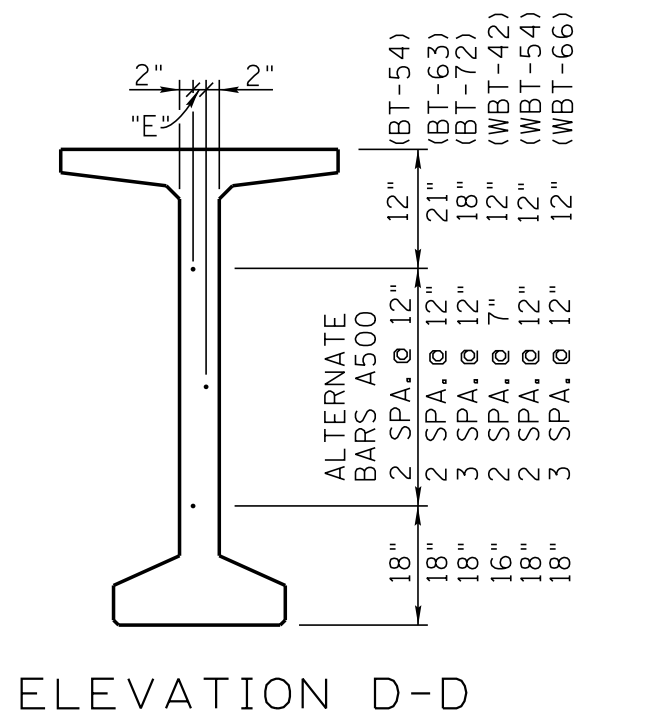
DETAILS OF THE TEMPORARY ERECTION DIAPHRAGMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

AFTER THE PERMANENT INTERMEDIATE DIAPHRAGMS ARE COMPLETELY INSTALLED IN ALL BAYS, THE SINGLE ANGLE MAY BE REMOVED.

BEAM	"A"	"B"
BT-54 (6" OR 8" WEB)	2'-6"	1'-1 1/2"
BT-63 (6" OR 8" WEB)	3'-3"	1'-1 1/2"
BT-72 (6" OR 8" WEB)	4'-0"	1'-1 1/2"
WBT-54	1'-10 1/2"	1'-5 1/2"
WBT-66	2'-10 1/2"	1'-5 1/2"



BEAM	"C"	"D"	"E"
BULB-TEE (6" WEB)	2'-2"	8"	2"
BULB-TEE (8" WEB)	2'-4"	9"	4"
WIDE BULB-TEE	3'-4"	1'-3"	4"



DESIGNED BY TDD STRUCTURES DATE _____
 DRAWN BY G.D.Y. & G.W.R. DATE _____
 SUPERVISED BY TED KNAZEWCZ DATE _____
 CHECKED BY TDD STRUCTURES DATE _____

CORRECT *Ted A. Knazewicz*
 ENGINEER OF STRUCTURE

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR BULB-TEE AND WIDE BULB-TEE BEAMS 2020