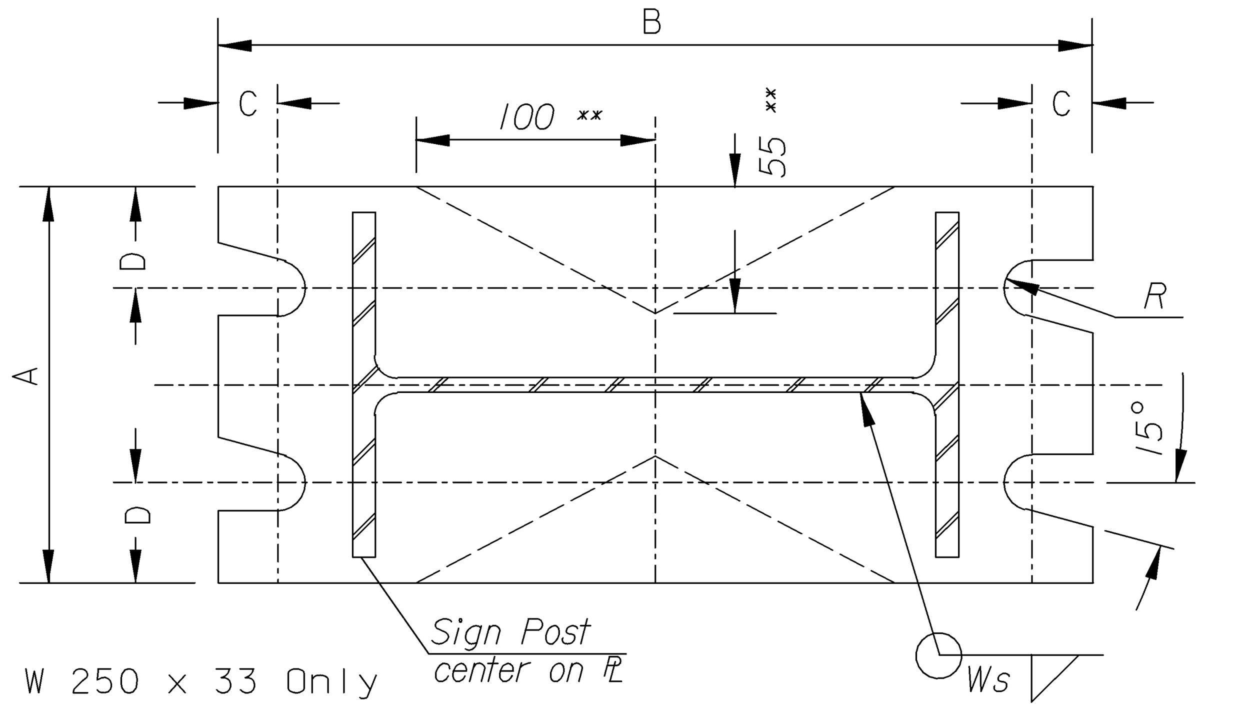
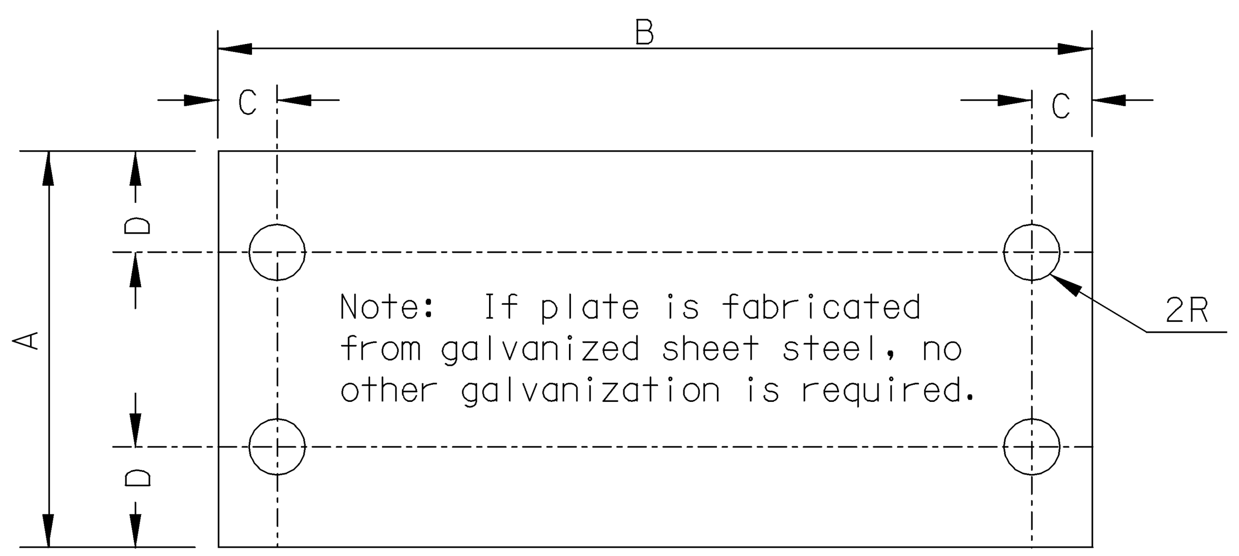
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54-87 K-8258-01	2007	420	556

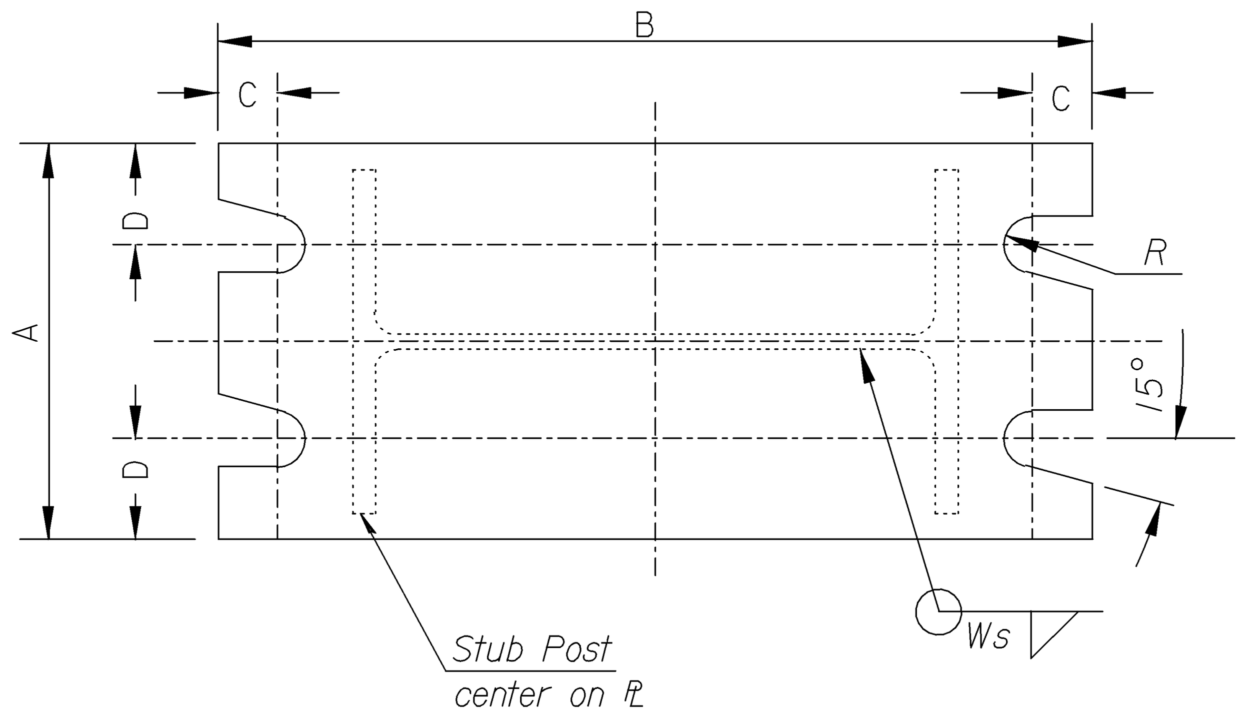


** - W 250 x 33 Only

SECTION A-A



BOLT RETAINER PLATE DETAIL
0.40 mm sheet steel



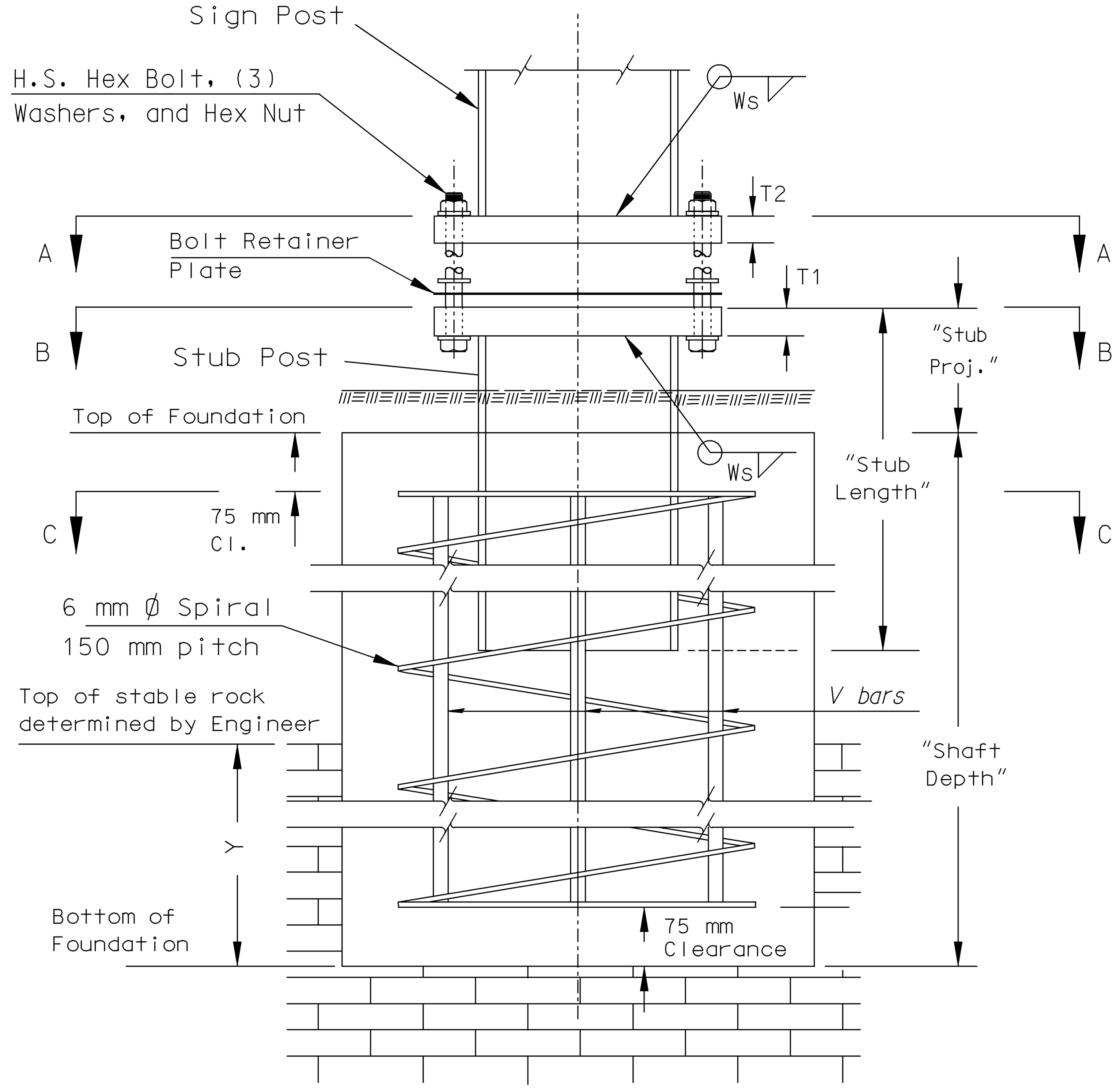
SECTION B-B

POST SIZE	BOLT SIZE	TORQUE (N*m)	Ws	T1	T2	A	B	C	D	R
S 75 x 8.5 ⊕	M13 x 2 x 70	15.8	6	19	16	76	165	20	19	7
W 150 x 13	M16 x 2 x 76	39.0	6	22	16	117	245	20	27	9
W 250 x 18	M16 x 2 x 83	39.0	6	25	19	117	346	20	27	9
W 250 x 33	M22 x 2.5 x 102	72.3	10	35	25	168	372	22	42	12

BASE CONNECTION DATA TABLE

⊕ S 75 x 11 steel post may be substituted for the S 75 x 8.5 steel post

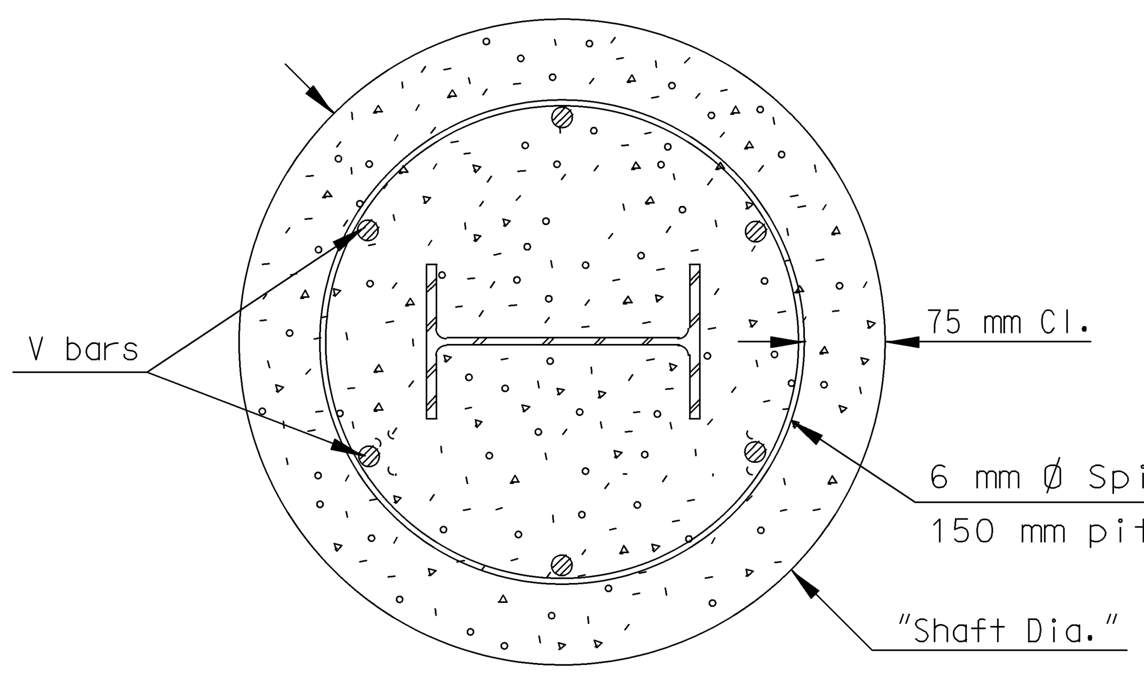
NOTE:
The sections shown are for right shoulder or gore installations. The plate slot bevels are to be reversed for left shoulder installations.



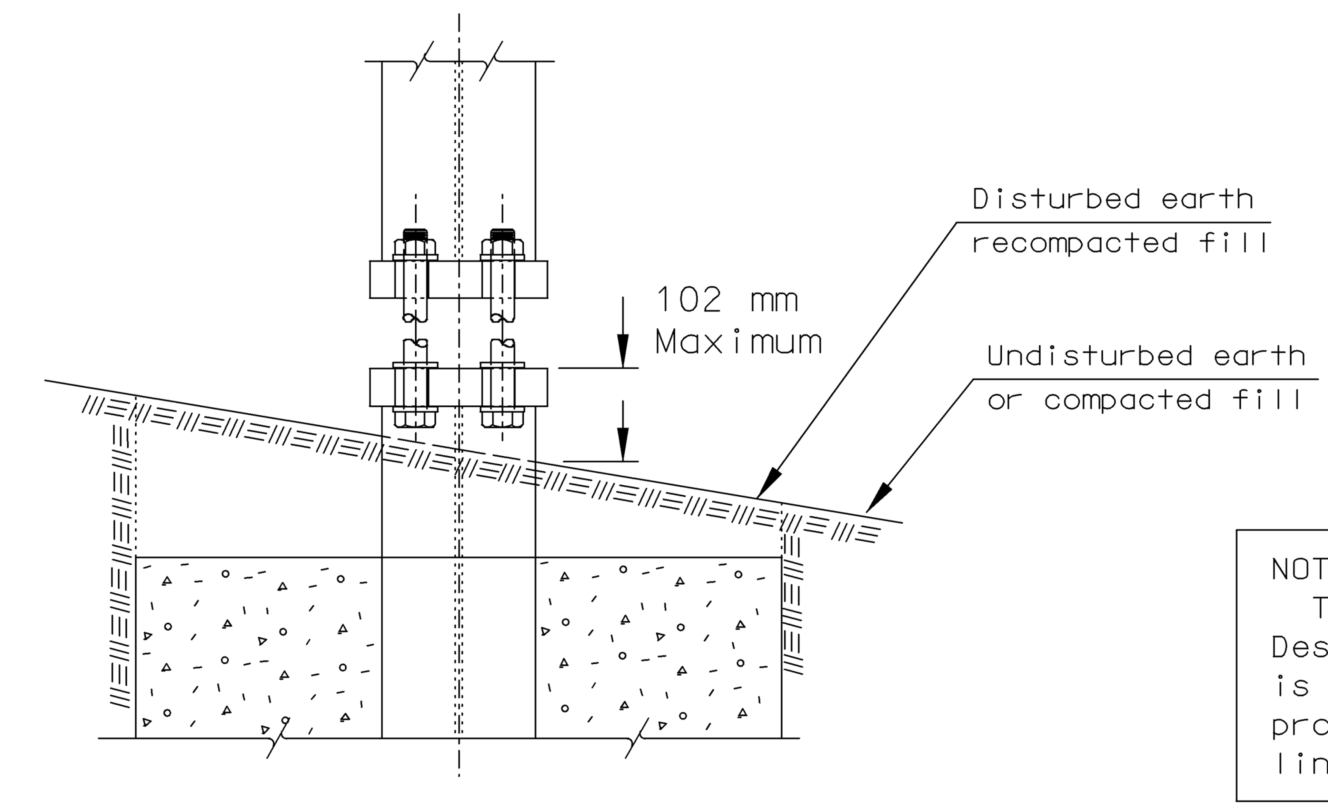
SIDE ELEVATION

	FOUNDATION DATA TABLE							
	STUB	STUB	SHAFT	SHAFT DEPTH			V BAR	
POST SIZE	LENGTH	PROJ.	DIA.	A572M ALT.	A36M	Y ┼	NO.	SIZE
S 75 x 8.5	533	152	610	1 829	1 829	762	5	15M
W 150 x 13	762	159	610	1 829	1 829	1 067	6	15M
W 250 x 18	838	159	610	2 438	2 438	1 219	5	20M
W 250 x 33	991	178	762	3 658	3 353	1 676	13	20M

┼ When rock is encountered, while drilling the shaft for the concrete foundation, extend the shaft into the rock the distance "Y". The total shaft depth shall not exceed that given for the corresponding post size and steel type.



SECTION C-C



FRONT ELEVATION

NOTE TO THE ENGINEER:
The intent of the "Roadside Design Guide" and these plans is to have a 102 mm or less projection above the ground line after impact.

GENERAL NOTES

Design conforms with AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 2002". Breakaway base and hinge design conforms with "Breakaway Roadside Sign Support Structures", Texas Transportation Institute, Texas A&M University, July 1967. Foundation design conforms with "Design Procedure Compared to Full-Scale Tests of Drilled Shaft Footings", Texas Transportation Institute, Feb. 1970.

All structural steel shall conform to ASTM A36/A36M or A572/A572M Grade 345. Alternates using ASTM A588/A588M or A242/A242M Grade 345 or other approved steels may be substituted for ASTM 572/A572M steel. All structural steel shall be galvanized in accordance with ASTM A123 after fabrication.

All high strength bolts, nuts, and washers shall conform to ASTM A325M and shall be coated in accordance with the coating specifications.

PROCEDURE FOR ASSEMBLY of BASE CONNECTION:

1. Assemble post to stub with bolts; with bolt retainer plate and one flat washer (on each bolt) between base plates.
2. Plumb post by varying thickness of washers between base plates.
3. Tighten all bolts the maximum possible with a 300 to 380 mm wrench to bed washers and shim and to clean bolt threads. Then loosen each bolt in turn and retighten in a systematic order to the prescribed torque (see table). DO NOT OVER TIGHTEN.
4. Burr threads at junction with nut using a center punch to prevent nut loosening.

NOTE: Commercial Grade concrete may be substituted for Gr. 25 concrete for sign support footings.

All dimensions are in millimeters, unless otherwise noted.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

DETAILS FOR
STEEL BEAM BREAKAWAY POSTS
(SHEET 1 of 2)

TE463si 07-01-03

FHWA APPROVAL 07-22-2003 | APP'D Steven A. Buckley
DESIGNED DDG | DETAILED AAB | QUANTITIES | TRACED
DESIGN CK. SAB | DETAIL CK. DDG | QUAN. CK. | TRACE CK.