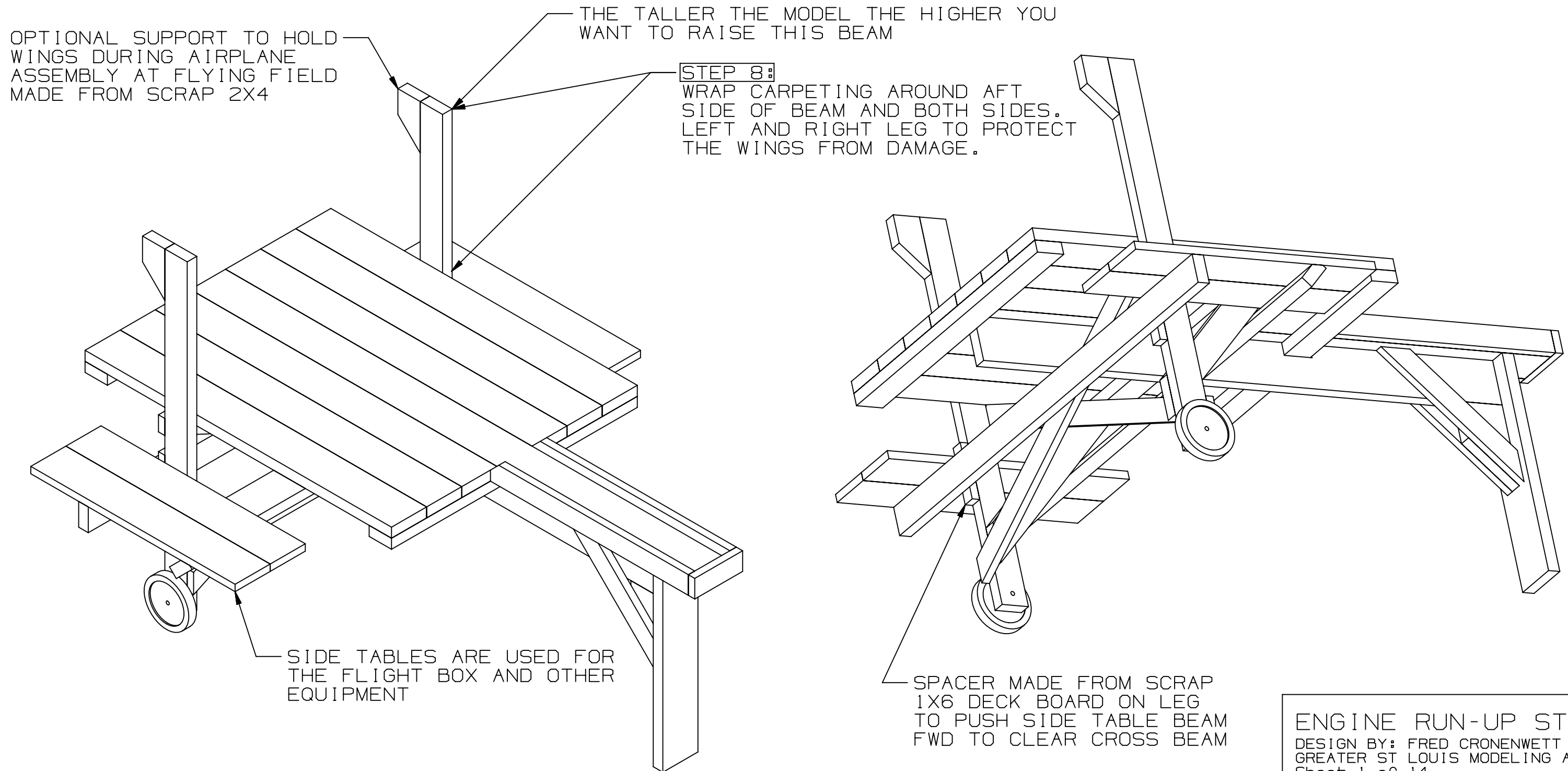


Assembly Process

- 1) ASSEMBLE TOP SURFACE
- 2) ADD FRONT LEG ASSEMBLY WITH WHEELS ATTACHED, THIS INCLUDES THE ANGLED LEG SUPPORTS
- 3) ADD FRONT LEG CROSS BEAMS
- 4) ADD BACK LEG AND ANGLED SUPPORTS
- 5) ADD TAIL BUMPERS ON AFT SECTION OF TOP SURFACE
- 6) ADD BEAMS TO SUPPORT SIDE TABLES
- 7) ADD DECK BOARDS FOR SIDE TABLES
- 8) ADD CARPETING AROUND POST ABOVE TOP SURFACE

MATERIAL LIST TO BUILD TWO DIFFERENT STANDS

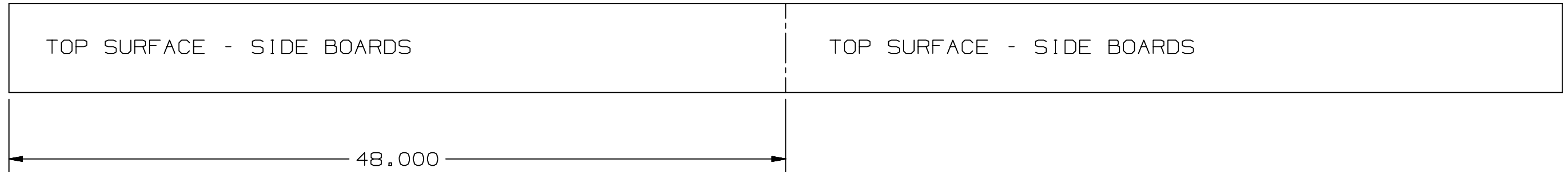
	1X6	2X4	2X6
27.5" WIDE STAND	3X	4X	4X
38.5" WIDE STAND	3X	5X	5X
7" WHEELS WITH ATTACH BOLTS			
CARPETING			
EXTERIOR DECK SCREWS			



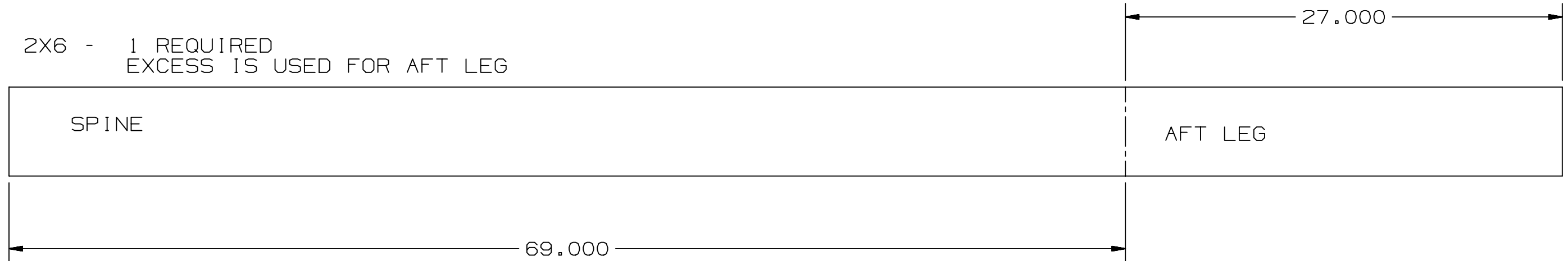
ENGINE RUN-UP STAND
 DESIGN BY: FRED CRONENWETT
 GREATER ST LOUIS MODELING ASSOC
 Sheet 1 of 14

MATERIAL LIST FOR 38.5" WIDE STAND
 2X6 BOARDS - EXTERIOR GRADE

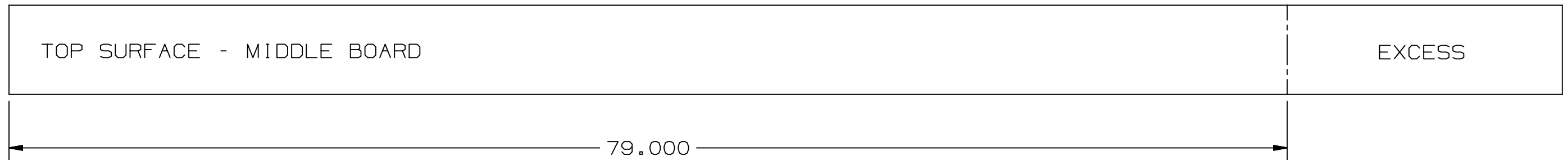
2X6 - 3 BOARDS REQUIRED
 MAKES 6 PARTS



2X6 - 1 REQUIRED
 EXCESS IS USED FOR AFT LEG



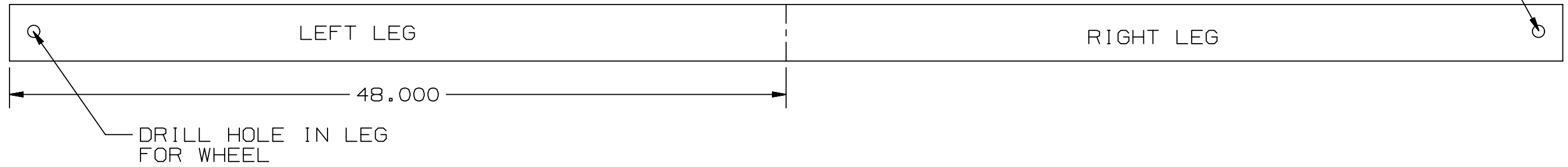
2X6 - 1 REQUIRED
 EXCESS IS USED FOR AFT LEG GUSSET



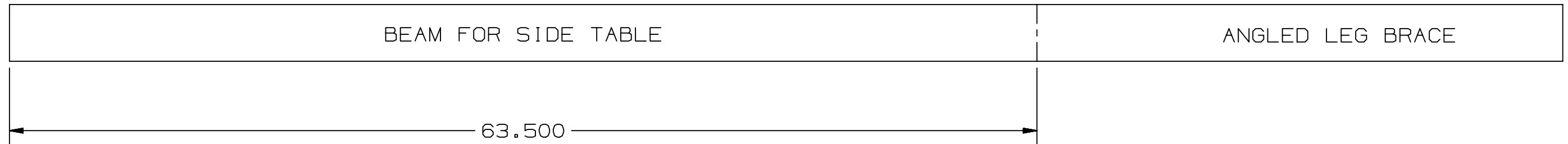
MATERIAL BILL OF MATERIALS - 38.5" WIDE STAND
 2X4 BOARDS - EXTERIOR GRADE (PRESSURE TREATED)

DRILL HOLE IN LEG
 FOR WHEEL

2X4 - 1 REQUIRED



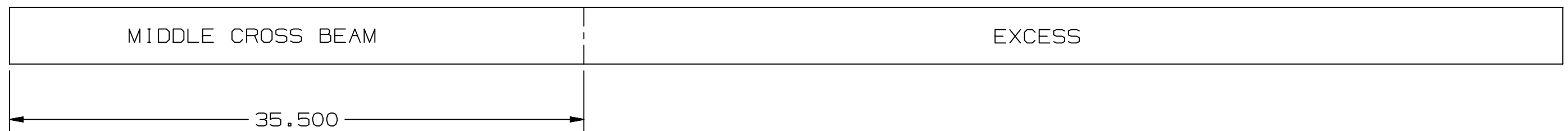
2X4 - 2 REQUIRED
 MAKES 2 BEAMS
 MAKES 2 BRACES



2X4 - 1 REQUIRED
 WHEN BUILDING THE 27.5" STAND THIS PART CAN MAKE ALL THREE OF THE CROSS BEAMS

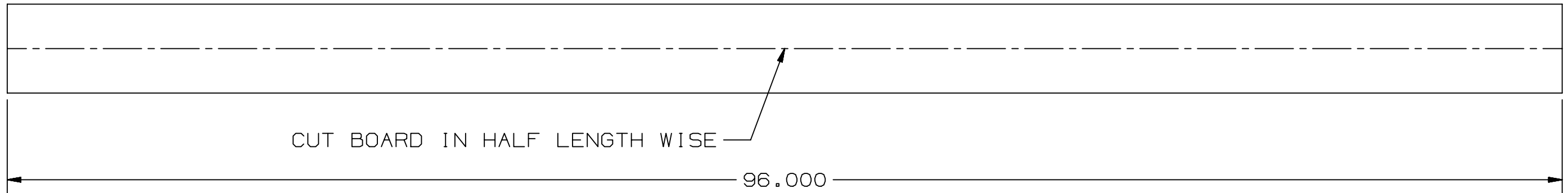


2X4 - 1 REQUIRED

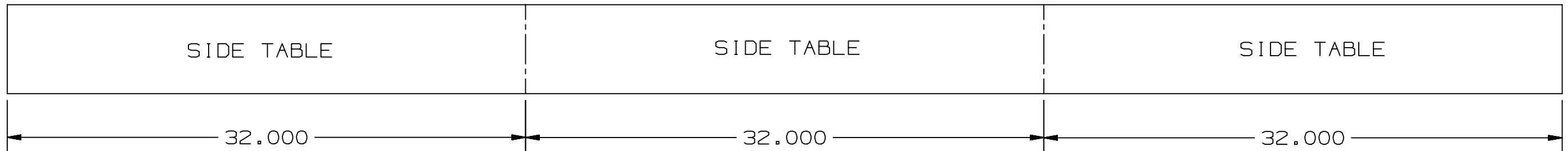


MATERIAL BILL OF MATERIALS - 38.5" WIDE STAND
1X6 BOARDS - EXTERIOR GRADE (PRESSURE TREATED)

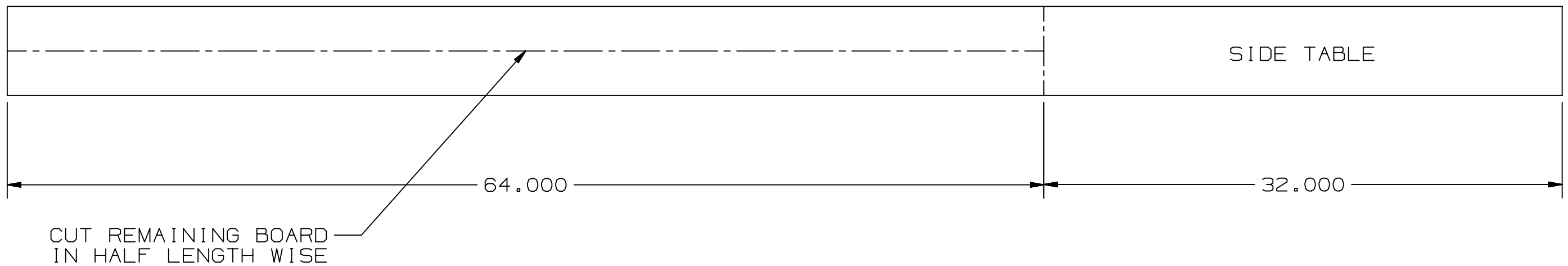
1X6 - 1 BOARDS REQUIRED
CUT BOARD IN HALF LENGTH WISE AND CUT TO LENGTH



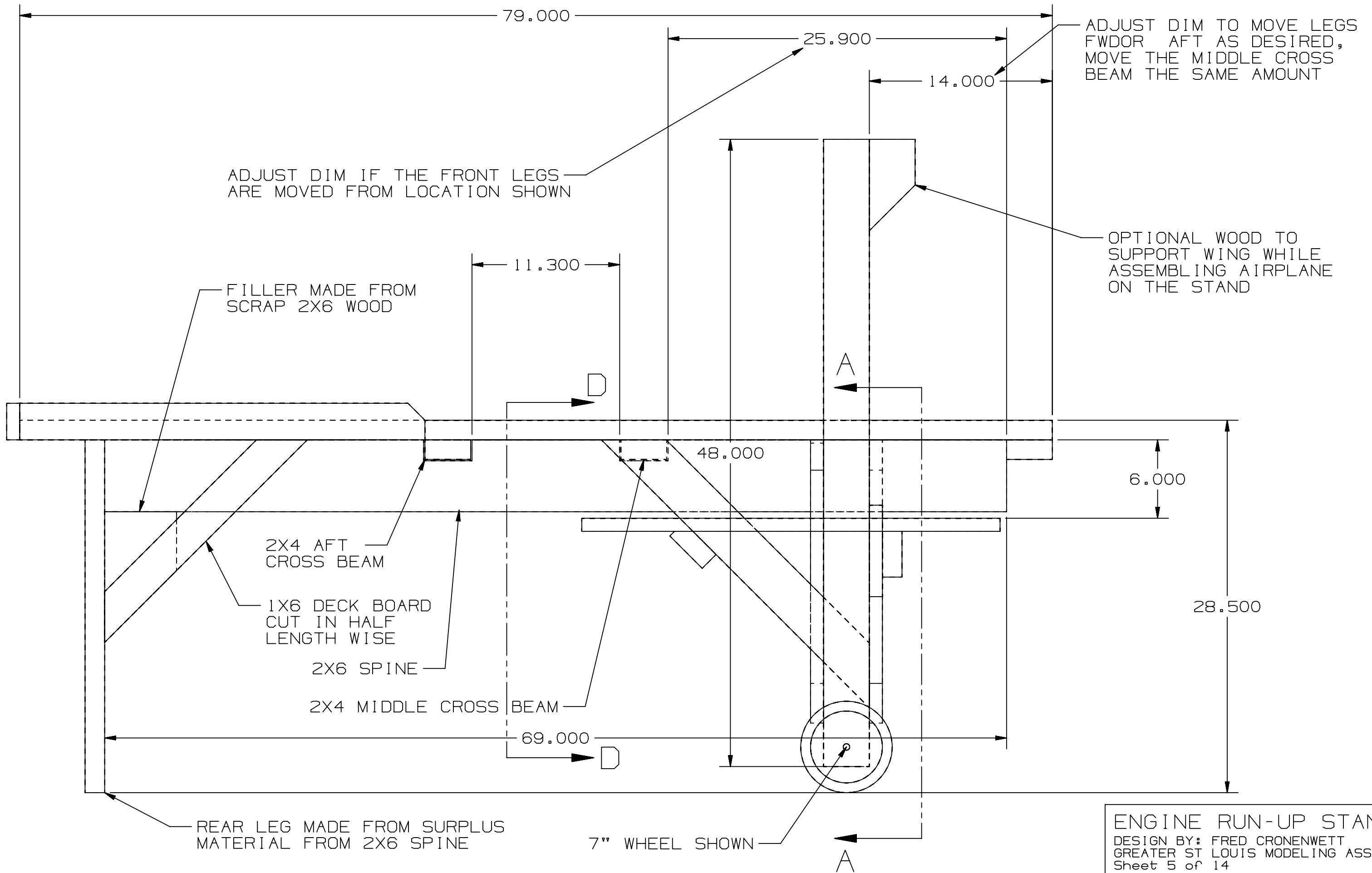
1X6 - 1 BOARD REQUIRED
CUT INTO THREE 32" LONG PIECES FOR THE SIDE TABLES



1X6 - 1 BOARD REQUIRED
CUT 32" LONG PIECE OFF FOR THE SIDE TABLE THEN CUT IN
HALF LENGTH WISE, THEN CUT MATERIAL AS REQUIRED

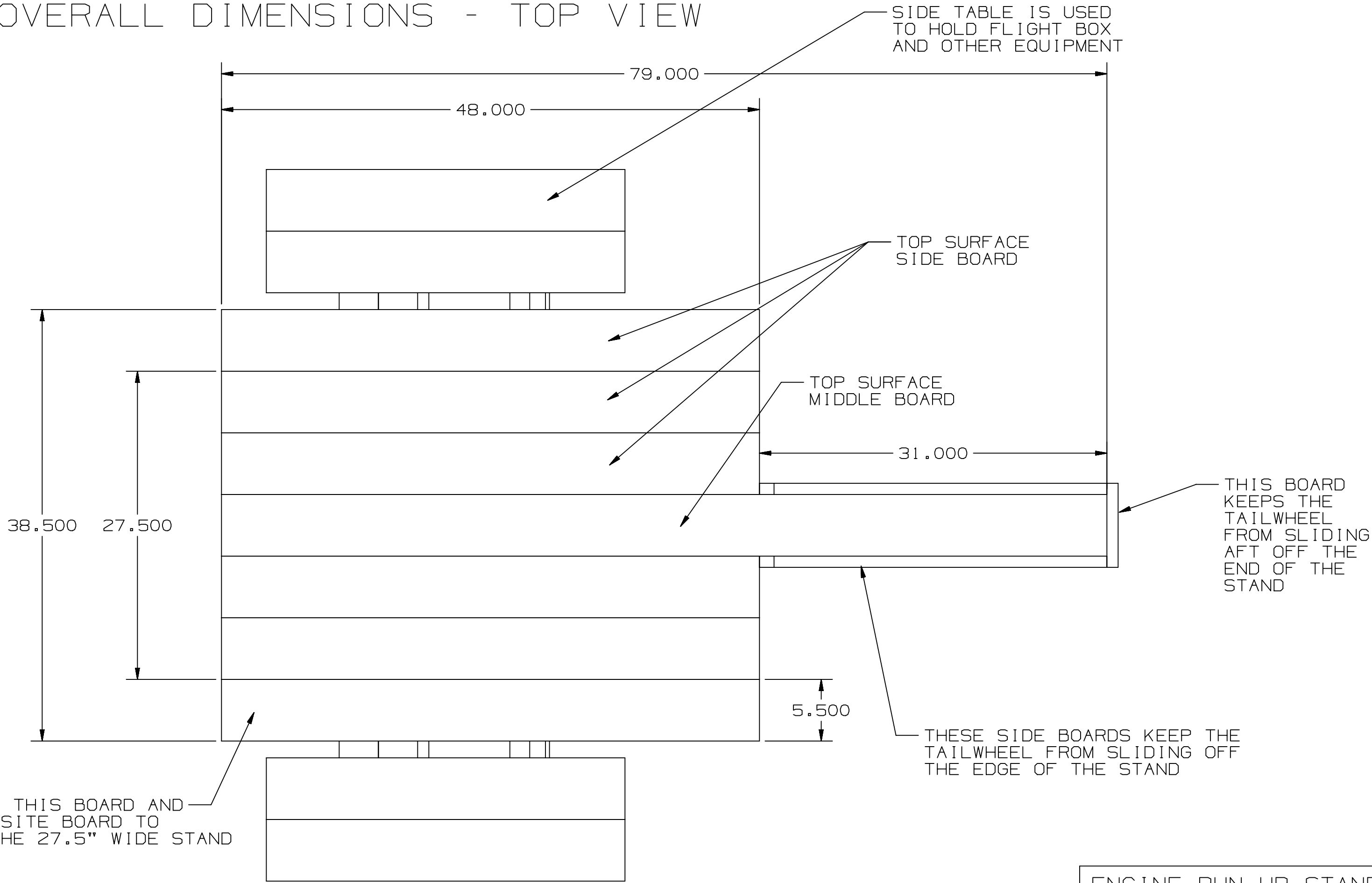


OVERALL DIMENSIONS - SIDE VIEW



ENGINE RUN-UP STAND
 DESIGN BY: FRED CRONENWETT
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 Sheet 5 of 14

OVERALL DIMENSIONS - TOP VIEW



SIDE TABLE IS USED TO HOLD FLIGHT BOX AND OTHER EQUIPMENT

TOP SURFACE SIDE BOARD

TOP SURFACE MIDDLE BOARD

THIS BOARD KEEPS THE TAILWHEEL FROM SLIDING AFT OFF THE END OF THE STAND

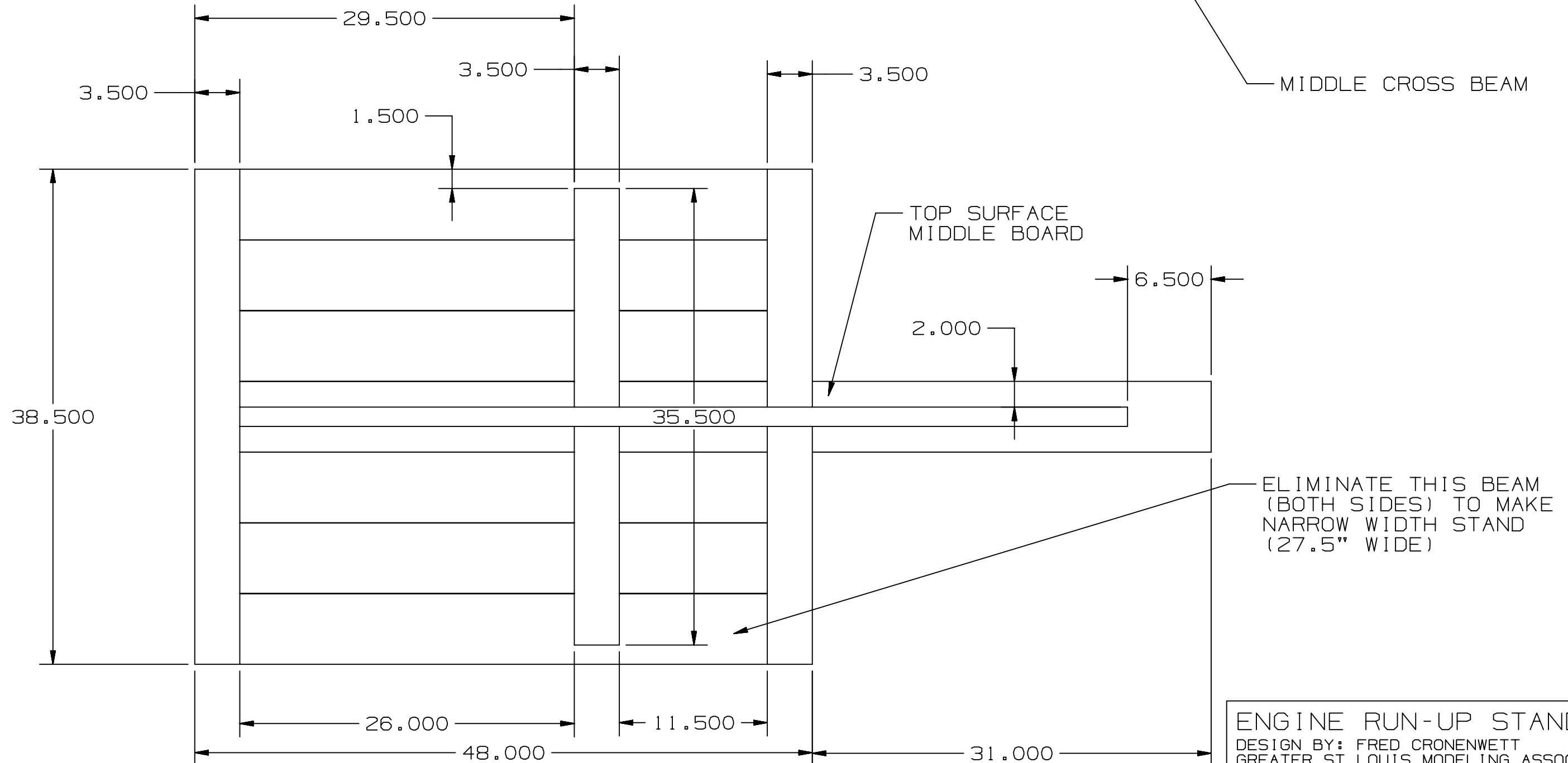
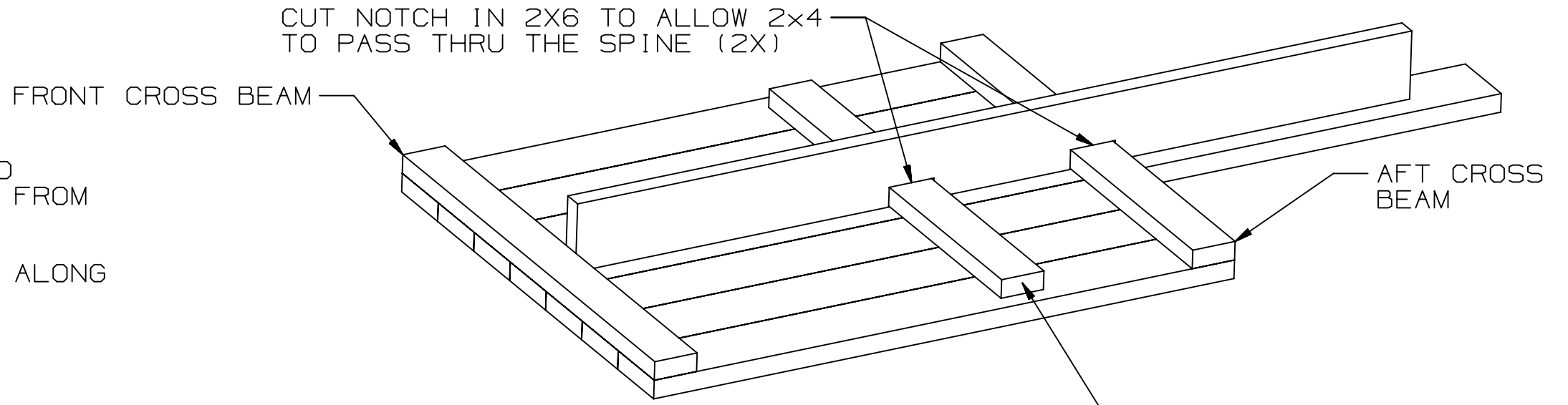
THESE SIDE BOARDS KEEP THE TAILWHEEL FROM SLIDING OFF THE EDGE OF THE STAND

ELMINATE THIS BOARD AND THE OPPOSITE BOARD TO CREATE THE 27.5" WIDE STAND

STEP #1

BUILD TOP SURFACE

- A) WITH THE PARTS UPSIDE DOWN BUILD FLOOR UNIT. SCREWS ARE DRIVEN FROM BOTH BOTTOM AND TOP SURFACE
- B) TURN UNIT OVER AND DRIVE SCREWS ALONG MIDDLE BOARD INTO THE SPINE

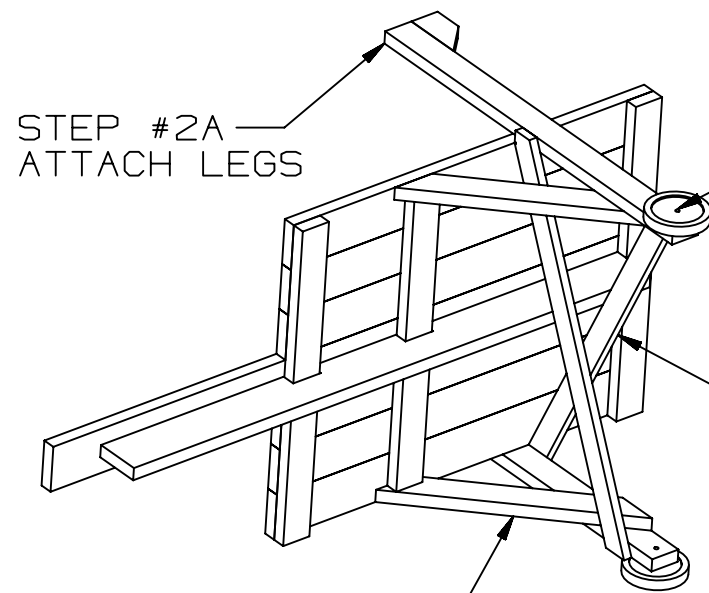
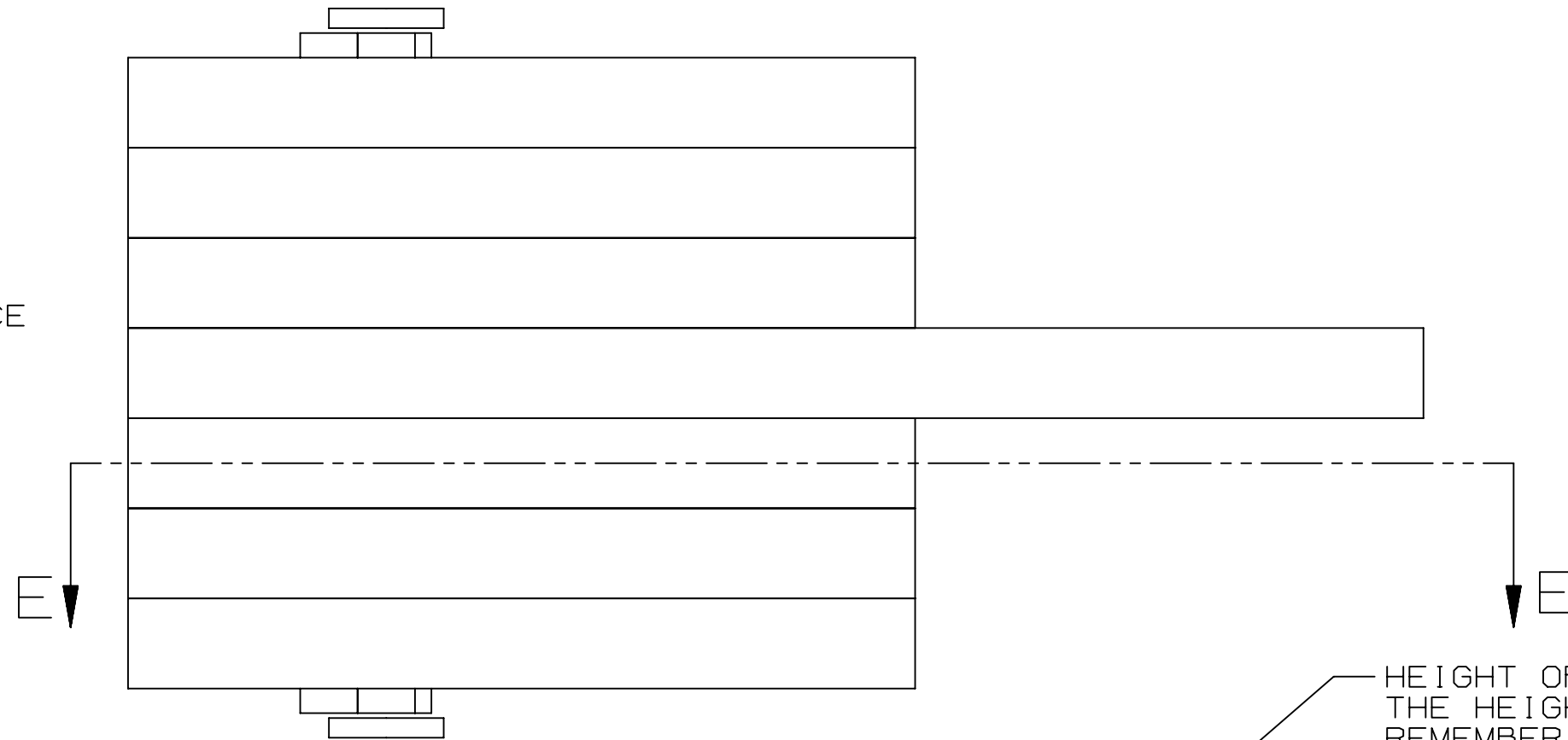


STEP #2

ATTACH LEGS TO TOP SURFACE
 MAINTAIN HEIGHT FROM THE
 GROUND LEVEL. MARK LEG WITH
 TAPE TO REFLECT DIM FROM
 THE GROUND

2A - ATTACH LEGS TO TOP SURFACE

2B - ATTACH ANGLED SUPPORTS



STEP #2A
 ATTACH LEGS

DIMENSIONS ASSUME A 7" DIA WHEEL

STEP #3
 ATTACH CROSS
 BEAMS TO LEGS

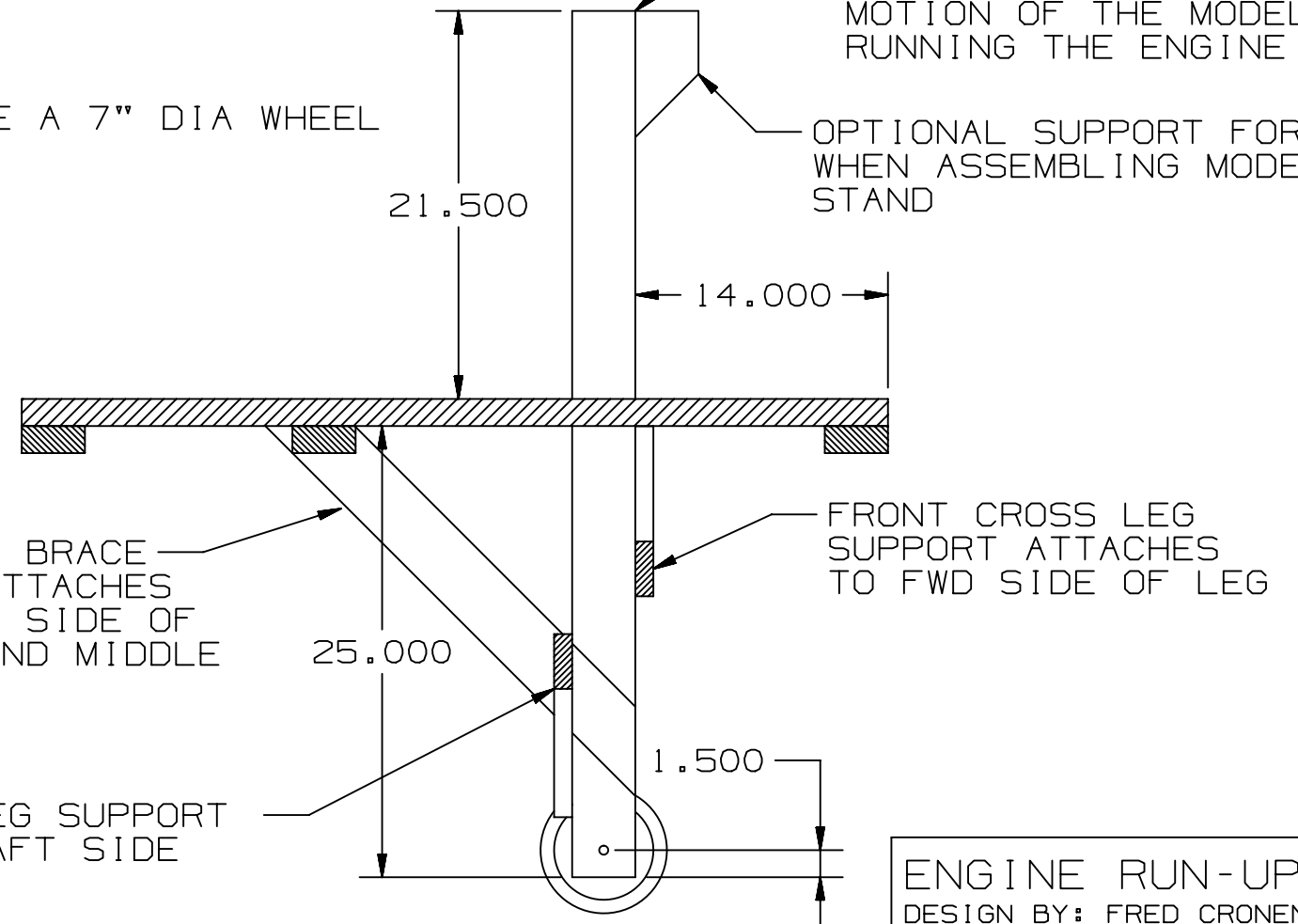
STEP #2B
 ATTACH ANGLED SUPPORTS

ANGLED LEG BRACE
 TO FLOOR ATTACHES
 TO INBOARD SIDE OF
 LEG ASSY AND MIDDLE
 CROSS BEAM

AFT CROSS LEG SUPPORT
 ATTACHES TO AFT SIDE
 OF LEG

HEIGHT OF BEAM DEPENDS ON
 THE HEIGHT OF THE MODEL
 REMEMBER THIS IS THE PART
 THAT STOPS THE FORWARD
 MOTION OF THE MODEL WHEN
 RUNNING THE ENGINE

OPTIONAL SUPPORT FOR WINGS
 WHEN ASSEMBLING MODELS ON
 STAND

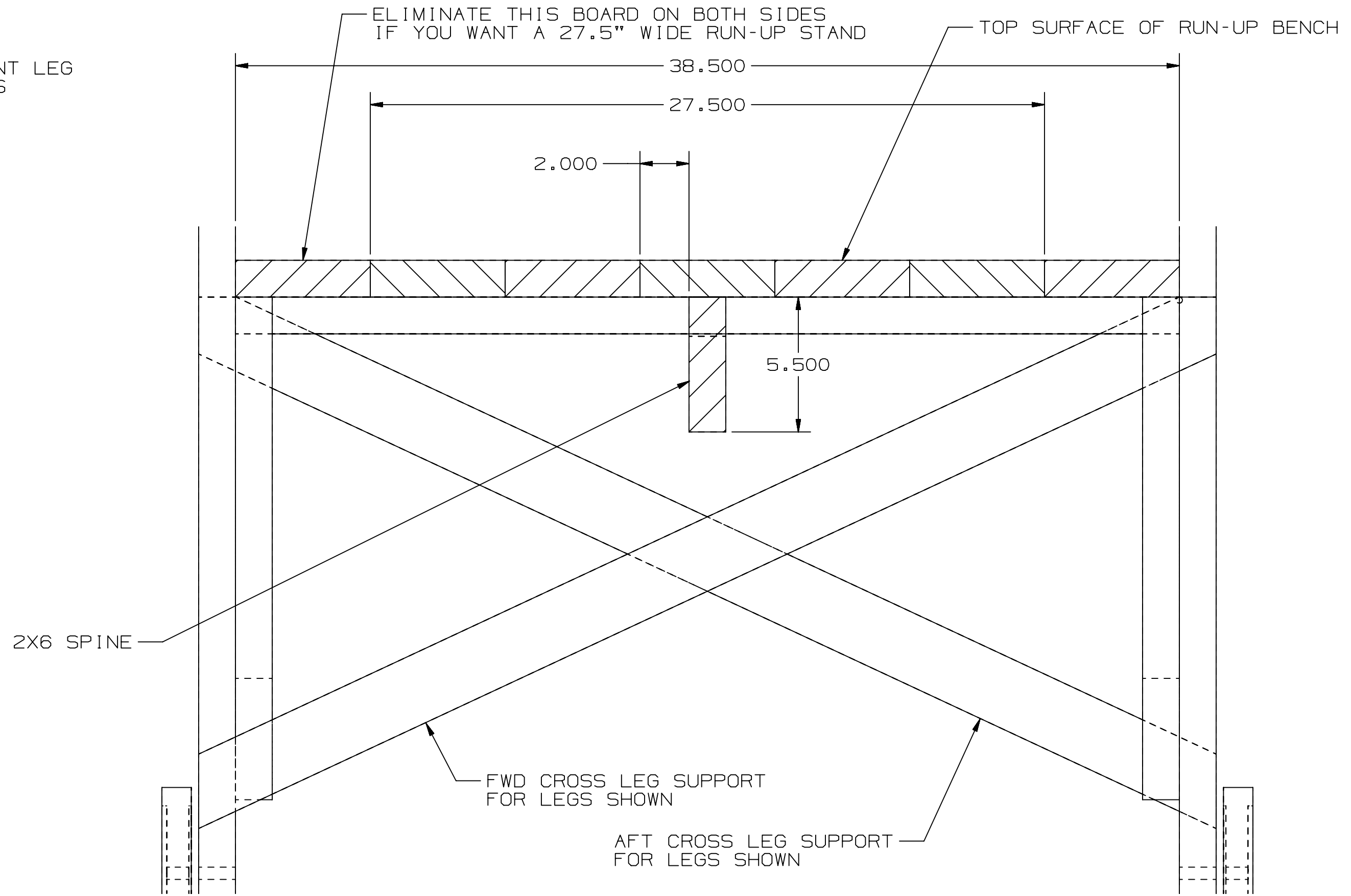


SECTION E - E

ENGINE RUN-UP STAND
 DESIGN BY: FRED CRONENWETT
 GREATER ST LOUIS MODELING ASSOC
 Sheet 8 of 14

STEP #3

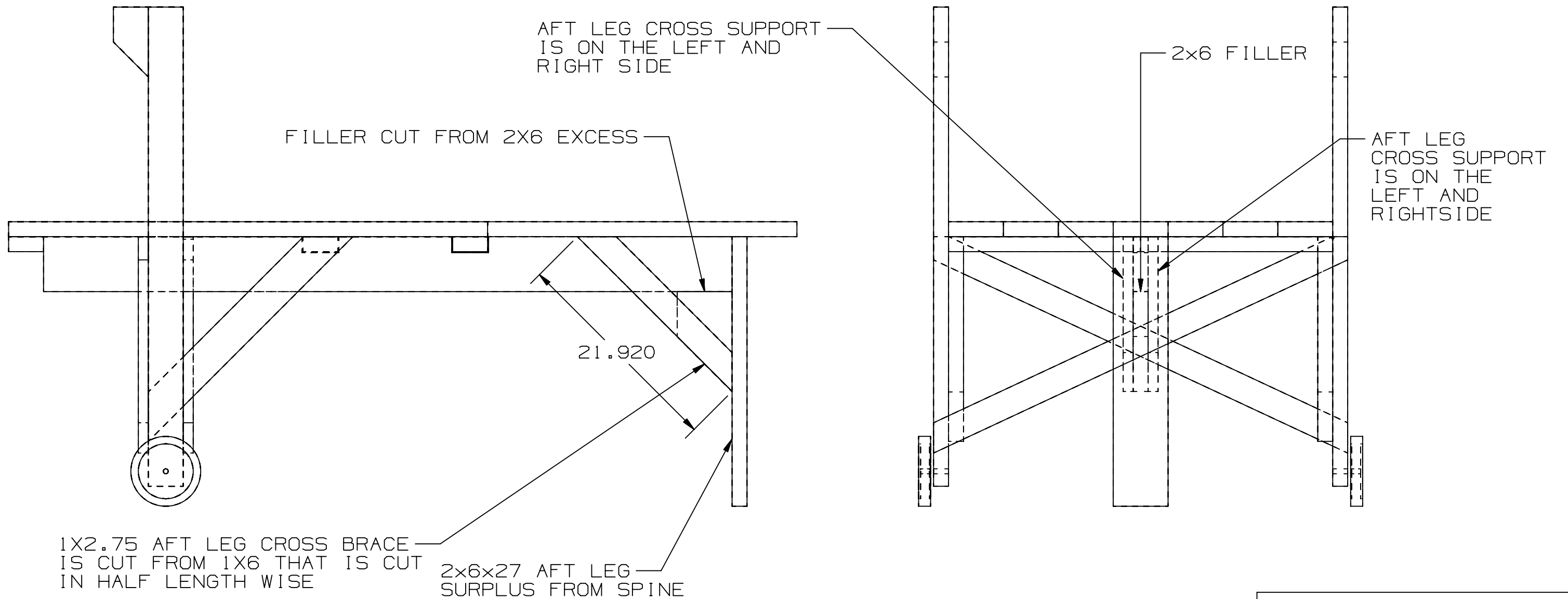
ATTACH FRONT LEG
CROSS BEAMS



SECTION D - D
VIEW LOOKING AFT

STEP #4

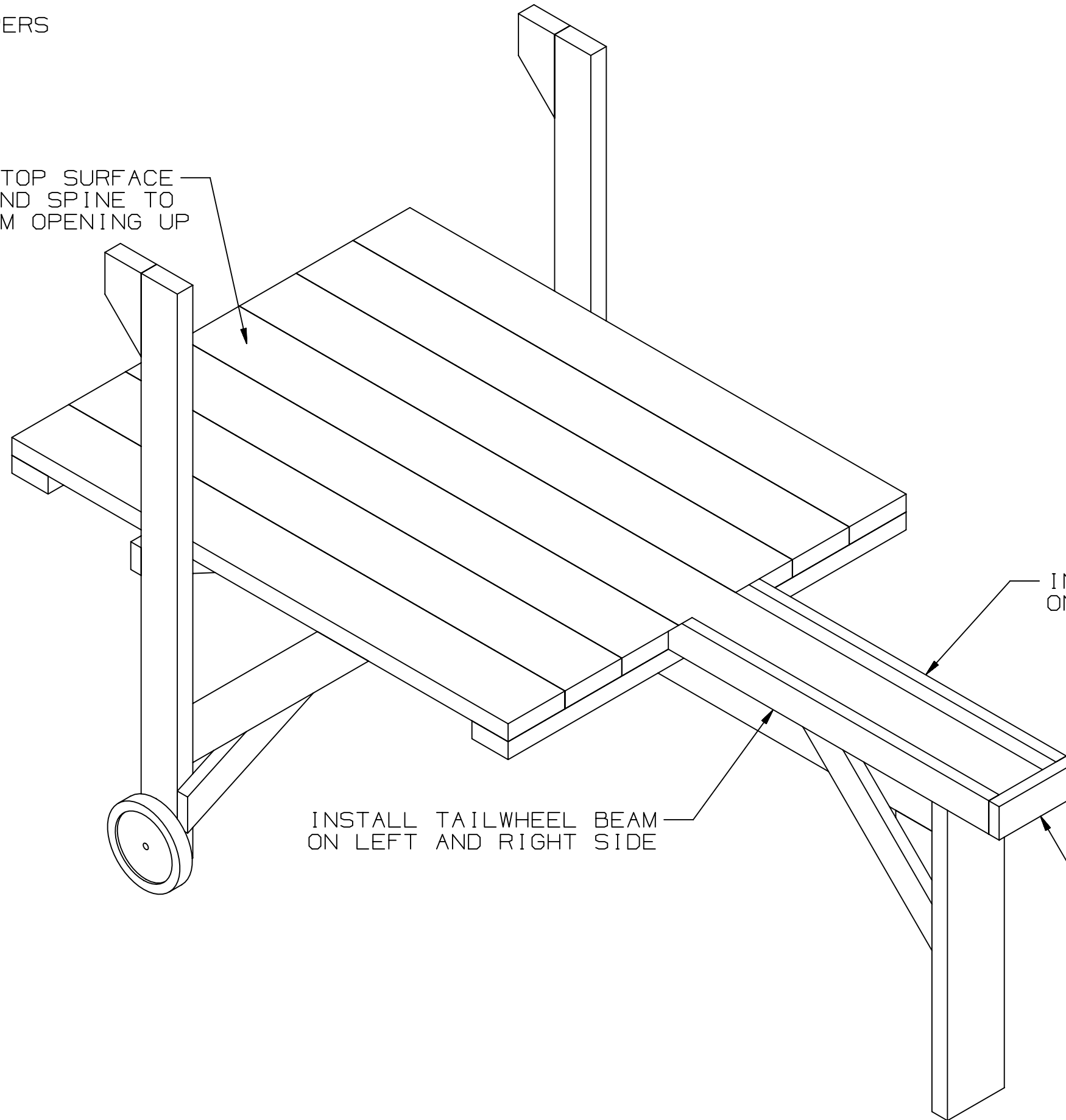
ATTACH AFT LEG



STEP #5

ATTACH TAILWHEEL BUMPERS

DRIVE SCREWS FROM TOP SURFACE
INTO CROSS BEAMS AND SPINE TO
PREVENT JOINTS FROM OPENING UP



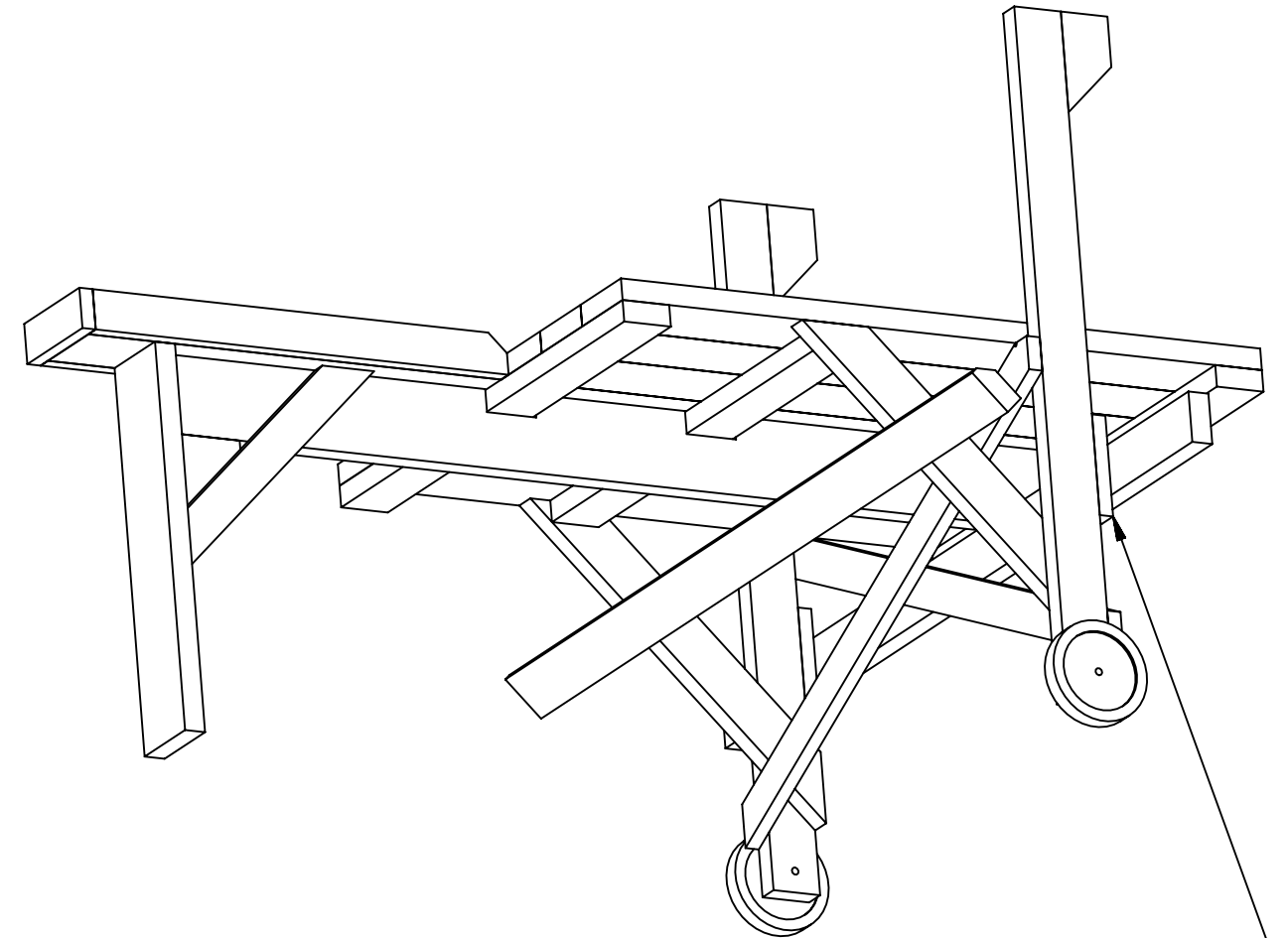
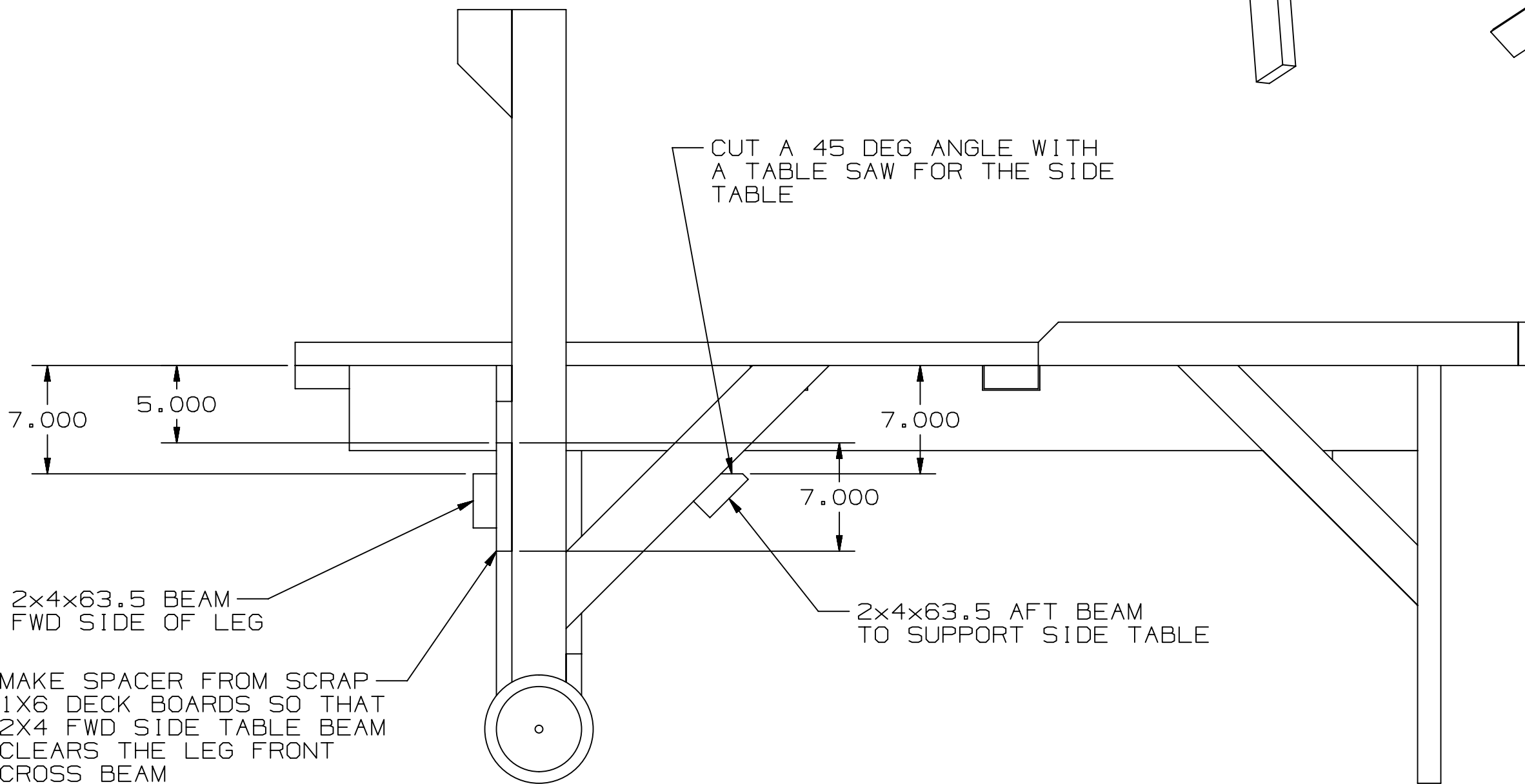
INSTALL TAILWHEEL BEAM
ON LEFT AND RIGHT SIDE

INSTALL TAILWHEEL BEAM
ON LEFT AND RIGHT SIDE

THIS TAILWHEEL STOP KEEPS
THE MODEL FROM ROLLING
BACKWARDS OFF THE STAND

STEP #6

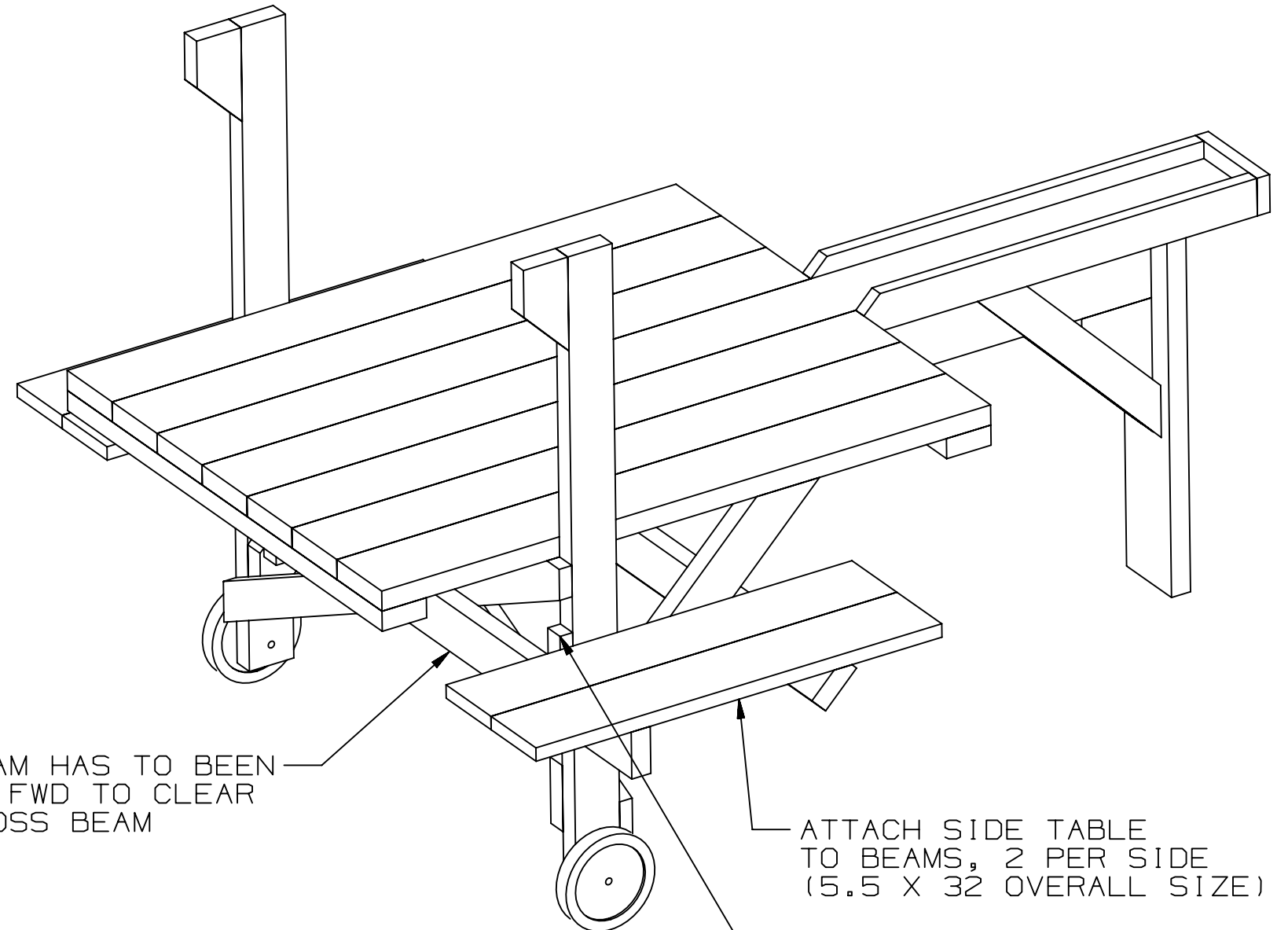
ATTACH SIDE TABLE BEAMS



MAKE SPACER FROM SCRAP 1X6 SIDE TABLE TO ALLOW 2X4 SIDE TABLE BEAM CLEAR LEG CROSS SUPPORT

STEP #7

ATTACH SIDE TABLES



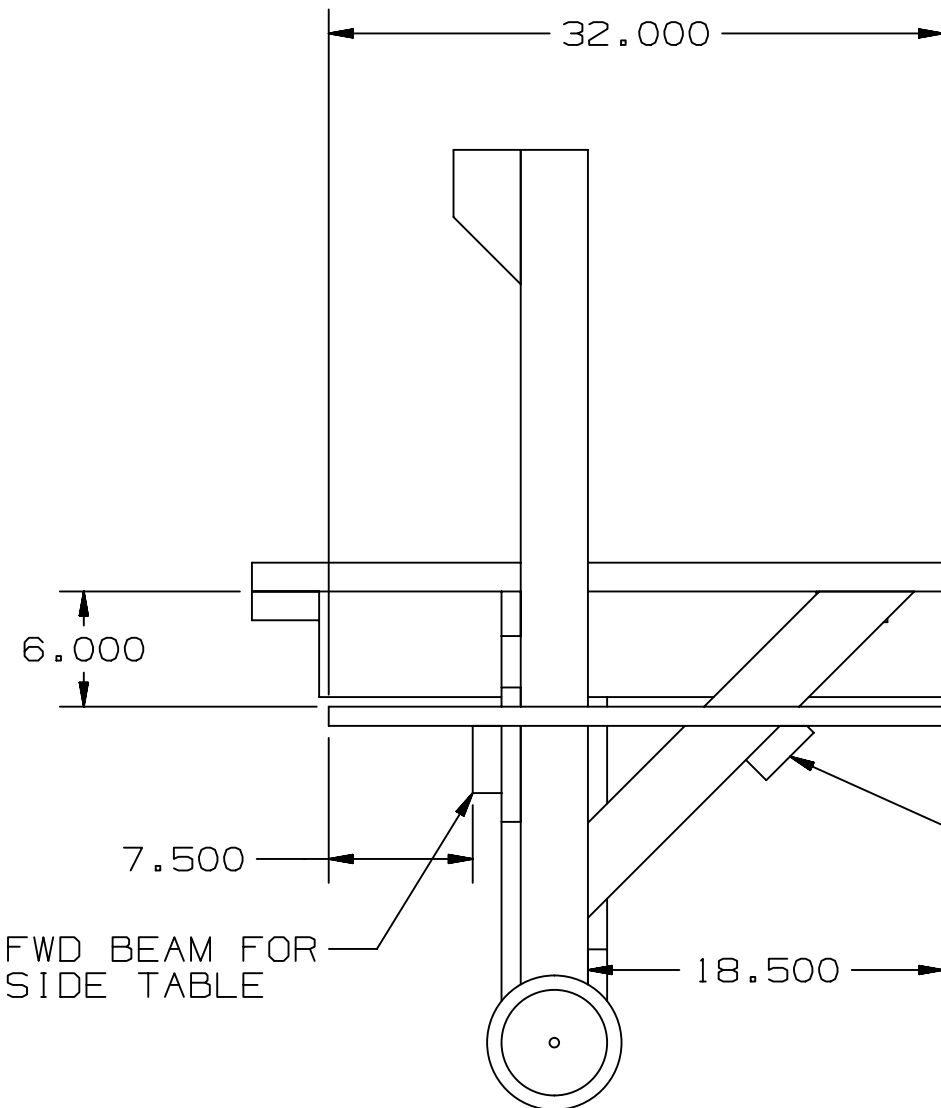
2X4 BEAM HAS TO BEEN
PUSHED FWD TO CLEAR
LEG CROSS BEAM

ATTACH SIDE TABLE
TO BEAMS, 2 PER SIDE
(5.5 X 32 OVERALL SIZE)

SPACER MADE FROM SCRAP
1X6 SIDE TABLE BOARDS

AFT BEAM FOR
SIDE TABLE

FWD BEAM FOR
SIDE TABLE



BACKGROUND INFORMATION AND NOTES:

- 1) THE DESIGN HERE IS A VARIATION OF THE ENGINE RUN-UP STANDS THAT WERE AT BUDER PARK IN ST LOUIS, MO IN 2018
- 2) THE SIDE TABLES WERE ADDED TO THE EXISTING RUN-UP STANDS AT BUDER PARK AND THE DESIGN PRESENTED HERE
- 3) FOR THE ENGINEERS WHO ARE READING THIS, THERE WAS NO STRUCTURAL ANALYSIS DONE
- 4) AN AVERAGE SIZE PERSON SAT ON SEVERAL RUN-UP STANDS TO VERIFY THE STRUCTURAL INTEGRITY OF THE DESIGN
- 5) THIS DESIGN ASSUMES THE RUN-UP STANDS WILL BE EXPOSED TO SNOW, RAIN, SUN, HEAT AND COLD.
- 6) USE OF WOOD THAT CAN HANDLE RAIN AND SNOW IS HIGHLY ENCOURAGED
- 7) THE CARPETING THAT PROTECTS THE WINGS FROM DAMAGE WILL HAVE TO BE REPLACED AFTER TWO OR MORE SEASONS,
DO NOT GET FANCY CARPETING FOR THIS. WE PICKED UP OLD INTERIOR GRADE CARPETING AND FULLY EXPECT IT TO BE
DESTROYED AFTER SEVERAL SEASONS OF SNOW AND RAIN
- 8) WE MADE NO EFFORT TO SEAL THE WOOD
- 9) EXTERIOR GRADE DECK SCREWS WERE USED TO ASSEMBLE THESE UNITS
- 10) WHEN IN DOUBT PUT SCREWS IN FROM BOTH SIDES OF THE JOINT, WE HAD MULTIPLE RUN-UP STANDS THAT NEEDED TO
BE SCREWED BACK TOGETHER AGAIN, THE WOOD WAS GENERALLY OK AND ONLY A FEW WOOD PARTS HAD TO BE
REPLACED WHEN WE FIXED THESE UNITS
- 11) GOOD LUCK, THESE RUN-UP STANDS WILL ALLOW PEOPLE TO SAFELY RUN THEIR ENGINES WITHOUT THE ASSISTANCE OF
ANOTHER PERSON
- 12) USE WHAT EVER METHOD YOU FEEL WORKS THE BEST TO ATTACH THE WHEELS TO THE LEGS