Test Project Joinery
3D Module

TP25_40CA_actual_3D_EN

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CONTENTS

This Test Project proposal consists of the following documentation/files:

A – A1, Orthographic Projection, Scale 1:4
B – A1, Joint Details, Scale 1:4
C – A1, Section A – A, Scale 1:2

INTRODUCTION

This test project represents a 3D shape. It is a set of stairs that is made using common joints used in joinery.

This set of steps is usable and saleable and may be used as library steps, cupboard steps or as a front hall stand for putting on your shoes and hanging your coat.

The project has a maple leaf, that is cut through the top tread, to represent the Canadian location of the 2009 competition.

DESCRIPTION OF PROJECT AND TASKS

This project is designed to evaluate common skills used in Joinery. These skills include a set-out, layout, machining, assembly and sanding skills. The project is to be built to conform to the drawing and marking scheme.

INSTRUCTIONS TO THE COMPETITOR

A- This project must be completed in 11 hours.

B- Material supplied to each competitor can only be exchanged in the half hour before the competition begins. Any exchange or request for additional material will incur a loss of points as set out in the Marking Scale.

C- You may use both hand and/or power tools to make any aspects of the project. All tools must conform to the Technical Description.

D- Project specific templates and devices are not permitted to be used.

E- Competitors must keep track of time and allow the Experts sufficient time for the marking of internal joints during the competition.

F- Extensions of time can only be granted for sickness and accident delays. This is at the discretion of the Chief Expert.

G- No extra time is given for gluing assemblies.

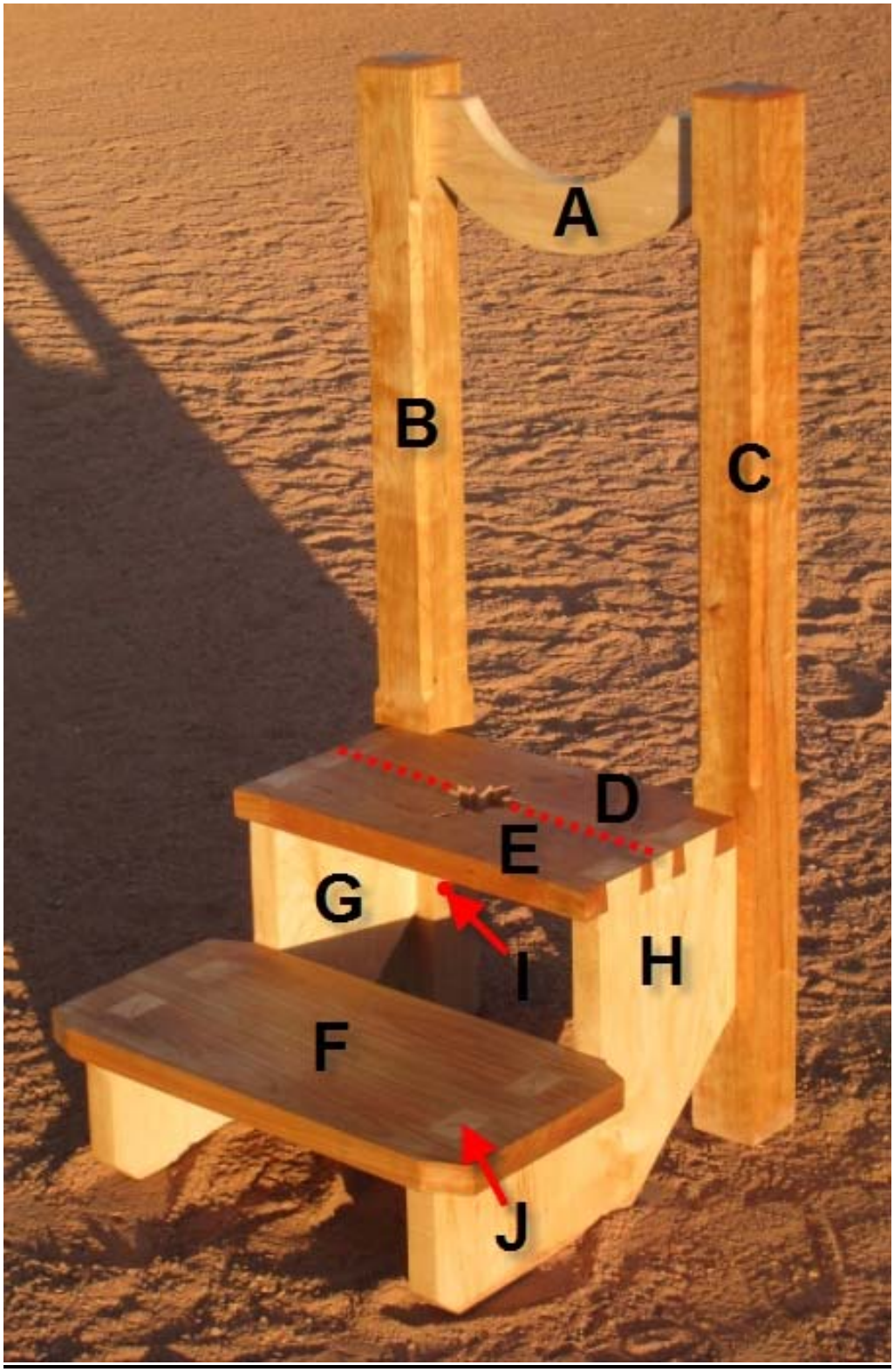
H- At the end of this 11 hour project, all clamps and/or bracing must be immediately removed

I- To receive marks, all internal joints must be handed in for evaluation prior to assembling with glue.

J- A template is provided to trace the profile of the maple leaf in the top tread. The top tread consists of two pieces of timber. Each half of the maple leaf is cut into them prior to gluing the pieces together.

K- Joints “I” and “J” (mortise and tennon with pegs) do not require the pegs to be completed for the marking of internal joints.

MATERIALS PICTURE



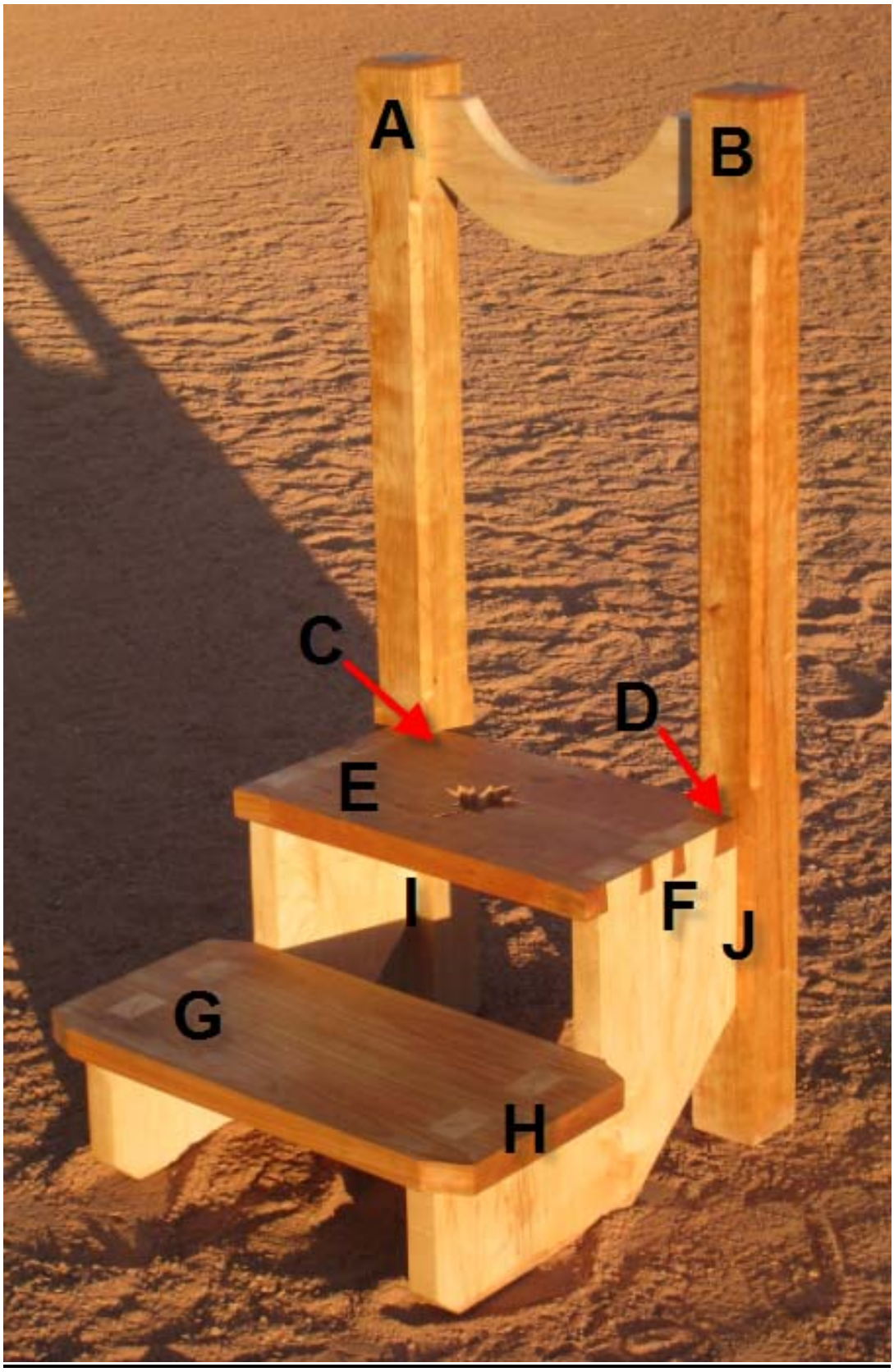
LIST OF MATERIALS

ITEM	TYPE	DESCRIPTION	SECTION	LENGTH	QUANTITY
A	**MAPLE**	CURVED RAIL	180X35	585	1
B	**CHERRY**	POST	85X85	1200	1
C	**CHERRY**	POST	85X85	1200	1
D	**CHERRY**	UPPER TREAD	165 X35	525	1
E	**CHERRY**	UPPER TREAD	165 X35	525	1
F	**CHERRY**	LOWER TREAD	300 X 35	630	1
G	**MAPLE**	STRINGER	600 X 38	425	1
H	**MAPLE**	STRINGER	600 X 38	425	1
I	**MAPLE**	DOWEL	6 diam.	400	1
J	**CHERRY**	WEDGE	75X6	200	1
	MDF	FOR LAYOUT	12 X 650	1220	1

MARKING SCHEME

Section	Criterion	Marks		
		Subjective	**Objective**	**Total**
A	Non Applicable			
B	Internal joints	11.5		11.5
C	External joints		14.6	14.6
D	Finish and appearance	10.0		10.0
E	Conformity		2.5	2.5
F	Measurement		8.9	8.9
G	Material		2.5	2.5
	Total	**21.5**	**28.5**	**50**

JOINTS FOR MARKING



B - INTERNAL JOINTS

SUBJECTIVE – 11.5 MARKS (SEE PAGE 7 FOR CORRESPONDING DRAWING)

JOINT	CRITERION	MARK
A	M&T - CURVED RAIL TO POST	0.5
B	M&T - CURVED RAIL TO POST	0.5
C	DADO - TOP TREAD TO POST	0.5
D	DADO - TOP TREAD TO POST	0.5
E	DOVE TAIL	1.5
F	DOVE TAIL	1.5
G	TROUGH DOUBLE M&T WITH WEDGE	1.5
H	TROUGH DOUBLE M&T WITH WEDGE	1.5
I	M&T - WITH 2 PEGS	1.75
J	M&T - WITH 2 PEGS	1.75

/11.5

C - EXTERNAL JOINTS

OBJECTIVE – 14.6 MARKS (SEE PAGE 7 FOR CORRESPONDING DRAWING)

ITEM	CRITERION	MARK
A	M&T - CURVED RAIL TO POST	1
B	M&T - CURVED RAIL TO POST	1
C	DADO - TOP TREAD TO POST	1
D	DADO - TOP TREAD TO POST	1
E	DOVE TAIL	2
F	DOVE TAIL	2
G	TROUGH DOUBLE M&T WITH WEDGE	1.6
H	TROUGH DOUBLE M&T WITH WEDGE	1.6
I	M&T - WITH 2 PEGS	1.7
J	M&T - WITH 2 PEGS	1.7

/14.6

NOTE:

TOLERANCE	POINTS
LESS THAN 0.1 MM	100%
UP TO 0.2 MM	50%
OVER 0.2 MM	0%

D - FINISH AND APPEARANCE

SUBJECTIVE - 10 MARKS

ITEM	CRITERION	MARK
1	TWIST - STAIRS SIT FLAT	2
2	SURFACE FINISH	2
3	EDGE FINISH	1
4	SQUARENESS	2
5	QUALITY OF MAPLE LEAF	1
6	SMOOTHNESS OF CURVED RAIL	2

/10

E - CONFORMITY

OBJECTIVE MARKS – 2.5 MARKS

ITEM	CRITERION	MARK
1	MISSING COMPONENT	
2	NOT BUILT ACCORDING TO DRAWINGS	
3	REPAIR WITH ADDITIONAL PIECE OF WOOD	
4	WOOD FILLER	

/2.5

NOTE: 1 MARK IS REMOVED FOR EACH INFRACTION

F - MEASUREMENTS

PRIMARY DIMENSIONS - OBJECTIVE – 4.5 MARKS

ITEM	CRITERION	MARK
1	1119 - TOTAL HEIGHT	0.5
2	610 - TOTAL LENGTH	0.5
3	552 - TOTAL WIDTH	0.5
4	R230 - UPPER RAIL	0.5
5	R165 - UPPER RAIL	0.5
6	200 - RISE OF LOWER TREAD	1
7	200 - RISE OF UPPER TREAD	1

/4.5

NOTE:

PRIMARY DIMENSIONS
PLUS OR MINUS .9MM 100%
PLUS OR MINUS 1 TO 1.9 MM 50%
OVER 2 MM 0%

SECONDARY DIMENSIONS - OBJECTIVE – 4.4 MARKS

ITEM	CRITERION	MARK
1	275 - DEPTH OF UPPER TREAD TO POST	0.5
2	30 - SET DOWN CURVED RAIL	0.25
3	25 - UPPER NOSING PROJECTION	0.25
4	25 - LOWER NOSING PROJECTION	0.25
5	60/38/60 - DOVETAILS	1.5
6	60/60 - LOWER TREAD TENNONS	1.4
7	24 - INSET OF STRINGER FROM OUTSIDE OF POST	0.125
8	101/238 - M&T DOWEL PEG ELEVATIONS	0.125

/4.4

NOTE:

SECONDARY DIMENSIONS
PLUS OR MINUS .9 MM 100%
OVER 1 MM 0%

G - MATERIALS

OBJECTIVE - 2.5 MARKS

ITEM	CRITERION	MARK
1	REPLACEMENT OF FIRST PIECE - 2 MARKS DEDUCTED	
2	REPLACEMENT OF SUBSEQUENT PIECES DEDUCTED	
	1 MARK DEDUCTED	

/2.5

FINAL SCORE = TOTAL OUT OF 100 POINTS DIVIDED BY TWO