Performance Assessment Worksheet
CNC Milling

INSTRUCTIONS: Rate the candidate's performance for the CNC Milling job according to the criteria below. The checklist below represents only a listing of criteria to be evaluated. It is not a sequence of process steps or a process plan for making the part. For each item, check the box under Pass or Fail accordingly.

Remember, NIMS requires that all specifications must be met within the allowable tolerance limits. If the part does not meet all specifications, the candidate/trainee must correct or redo the project.

_____
Candidate Name   Evaluation Date

Performance Project – CNC Milling

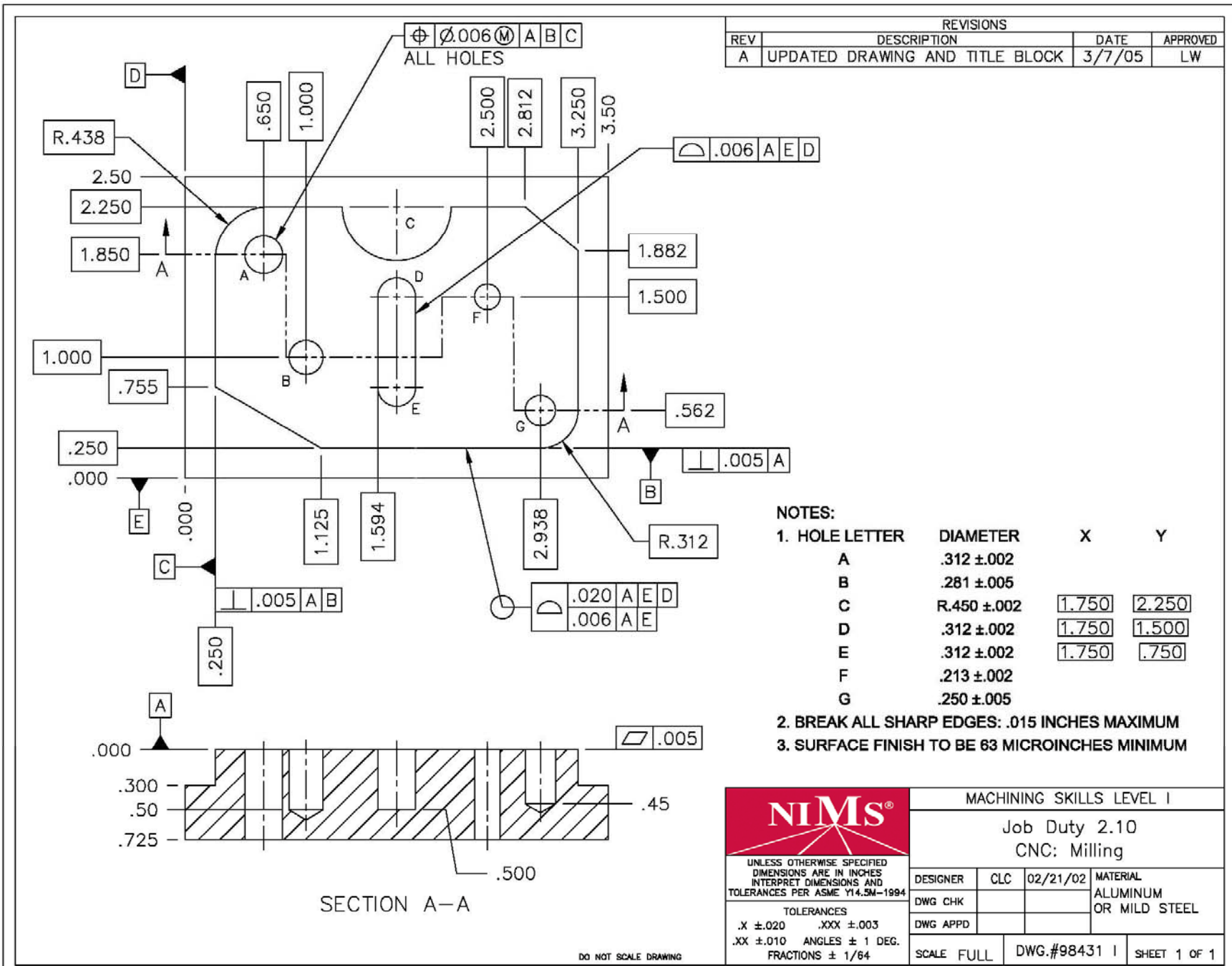| Evaluation Criteria		Pass	Fail
1. Overall Dimensions Length 3.50 ± .010 Width 2.50 ± .010 Thickness .725 ± .003	Pass = within tolerance Fail = out of tolerance	☐ ☐ ☐	☐ ☐ ☐
2. Profile tolerance within limits Position ± .006 Depth .300 ± .003	Pass = within tolerance Fail = out of tolerance	☐ ☐	☐ ☐
3. Hole A Position ± .006 Diameter ± .002	Pass = within tolerance Fail = out of tolerance	☐ ☐	☐ ☐
4. Hole B Position ± .006 Diameter .281 ± .005 Depth .500 ± .010	Pass = within tolerance Fail = out of tolerance	☐ ☐ ☐	☐ ☐ ☐
5. Hole F Position ± .006 Diameter ± .002	Pass = within tolerance Fail = out of tolerance	☐ ☐	☐ ☐
6. Hole G Position ± .006 Diameter ± .005 Depth .45 ± .010	Pass = within tolerance Fail = out of tolerance	☐ ☐ ☐	☐ ☐ ☐
7. Slot D-E Position ± .006 Width .312 ± .002 Depth .500 ± .003	Pass = within tolerance Fail = out of tolerance	☐ ☐ ☐	☐ ☐ ☐

Performance Project – CNC Milling

Evaluation Criteria		Pass	Fail
8. Break all sharp edges .015 max.	Pass = within tolerance Fail = out of tolerance	☐	☐
9. Surface finish 63 Ra microinches min.	Pass = within tolerance Fail = out of tolerance	☐	☐

END OF CNC MILLING EVALUATION

It is important to note that the part must be 100% within the tolerances listed on the print. The criteria listed here are a guide for instructors and supervisors. Not every dimension is included in this guide. Nonetheless, the completed part must be 100% within the specifications of the print. The print takes precedence over this guide when the parts are inspected by the MET-TEC committee. The part print and the Performance Affidavit should be sent along with the part to the MET-TEC for evaluation. Send to NIMS only the completed Performance Affidavit, signed by the MET-TEC members. A copy of the Performance Affidavit should be retained in the candidate's file documenting completed performance for this credential.

⌖ ⌀.006 Ⓜ A B C
ALL HOLES

D

R.438

2.50
2.250
1.850
A

.650
1.000

2.500
2.812
3.250
3.50

⌒ .006 A E D

A

1.882

C

1.500

1.000
.755

D

F

.562

A

B

.250
.000

G

E

.000

⟂ .005 A

B

1.125
1.594

2.938

R.312

.250

⟂ .005 A B

⌒ .020 A E D
.006 A E

A

.000

▱ .005

.300
.50
.725

.45

.500

SECTION A—A

NOTES:

1. HOLE LETTER

HOLE LETTER	DIAMETER	X	Y
A	.312 ±.002		
B	.281 ±.005		
C	R.450 ±.002	1.750	2.250
D	.312 ±.002	1.750	1.500
E	.312 ±.002	1.750	.750
F	.213 ±.002		
G	.250 ±.005		

2. BREAK ALL SHARP EDGES: .015 INCHES MAXIMUM

3. SURFACE FINISH TO BE 63 MICROINCHES MINIMUM

NIMS PROCEDURAL REQUIREMENTS

1. PROGRAM MUST BE WRITTEN IN LONG HAND – NO CAM
2. COORDINATE CALCULATIONS CAN BE FOUND WITH GEOMETRY OR TRIG
3. SUBMIT THE CALCULATIONS WITH THE PROGRAM

4. SUBMIT THIS PRINT, COPY OF PROGRAM CODE (LONGHAND), AND WORKPIECE ALONG WITH THE PERFORMANCE AFFIDAVIT FOR EVALUATION