

NOTES CONTINUED:

- 5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXX-VY, S/N 001. VIBRATORY TOOL MAY BE USED.
- 6. APPROXIMATE WEIGHT = X.XXX LB.
- 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
- 8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
- 9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4

- 10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL, AFTER DELIVERY OF FINISHED PARTS, USE NITRONIC 60 THREADED INSERTS.
- 11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.
- 12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
- 13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.
- 14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.
- 15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

REV.	DATE	DCN #	DRAWING TREE #
-	-	-	-
-	-	-	-
-	-	-	-

Redline of D1001701-v2
Appert 2019.01.23

many notes not relevant


list of changes which affect part geometry:
[A] omit rectangular cutout

material: 18 gage CRS (.048)

[A]

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

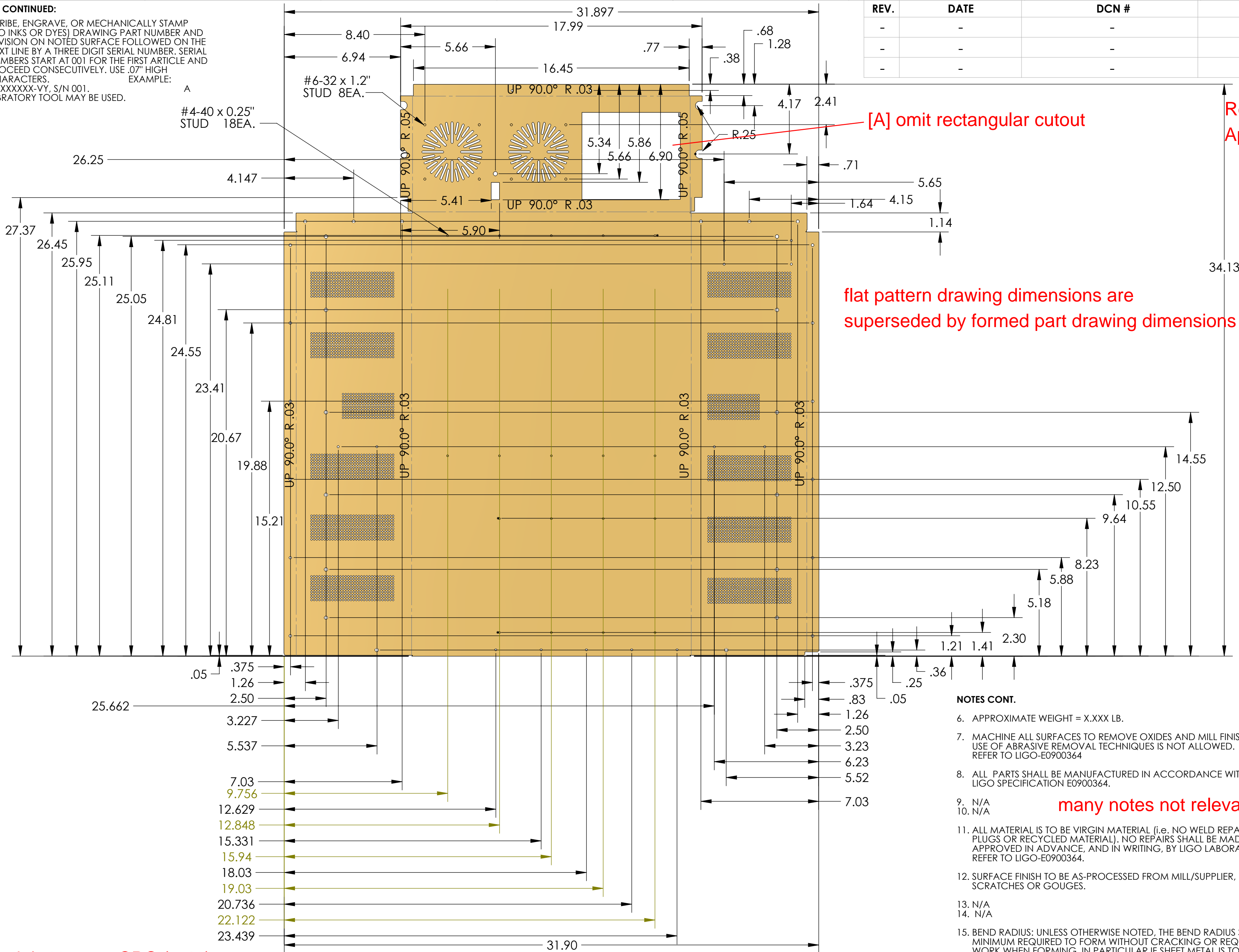
DIMENSIONS ARE IN	1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, .005-.015, FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS. 3. DO NOT SCALE FROM DRAWING. 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.
TOLERANCES: .XX ± .XXX ±	
ANGULAR ± °	
MATERIAL	Material <not specified>
FINISH	μinch

 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME	
SYSTEM	SUB-SYSTEM	I/O EXPANSION CHASSIS	
	DAQ	DESIGNER	
		DRAFTER	E.BROWN
		CHECKER	
		APPROVAL	
NEXT ASSY		SIZE	c

SIZE	DWG. NO.	REV.
c	D1001701_v2	
SCALE: 1:1	PROJECTION:	SHEET 1 OF 1

NOTES CONTINUED:
 ⑤ SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXX-VY, S/N 001. VIBRATORY TOOL MAY BE USED.

REV.	DATE	DCN #	DRAWING TREE #
-	-	-	-
-	-	-	-
-	-	-	-



[A] omit rectangular cutout

Redline of v2
Appert 2019.01.23

flat pattern drawing dimensions are superseded by formed part drawing dimensions

material: 18 gage CRS (.048)

NOTES CONT.

- 6. APPROXIMATE WEIGHT = X.XXX LB.
- 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
- 8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
- 9. N/A
- 10. N/A
- 11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.
- 12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
- 13. N/A
- 14. N/A
- 15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

many notes not relevant

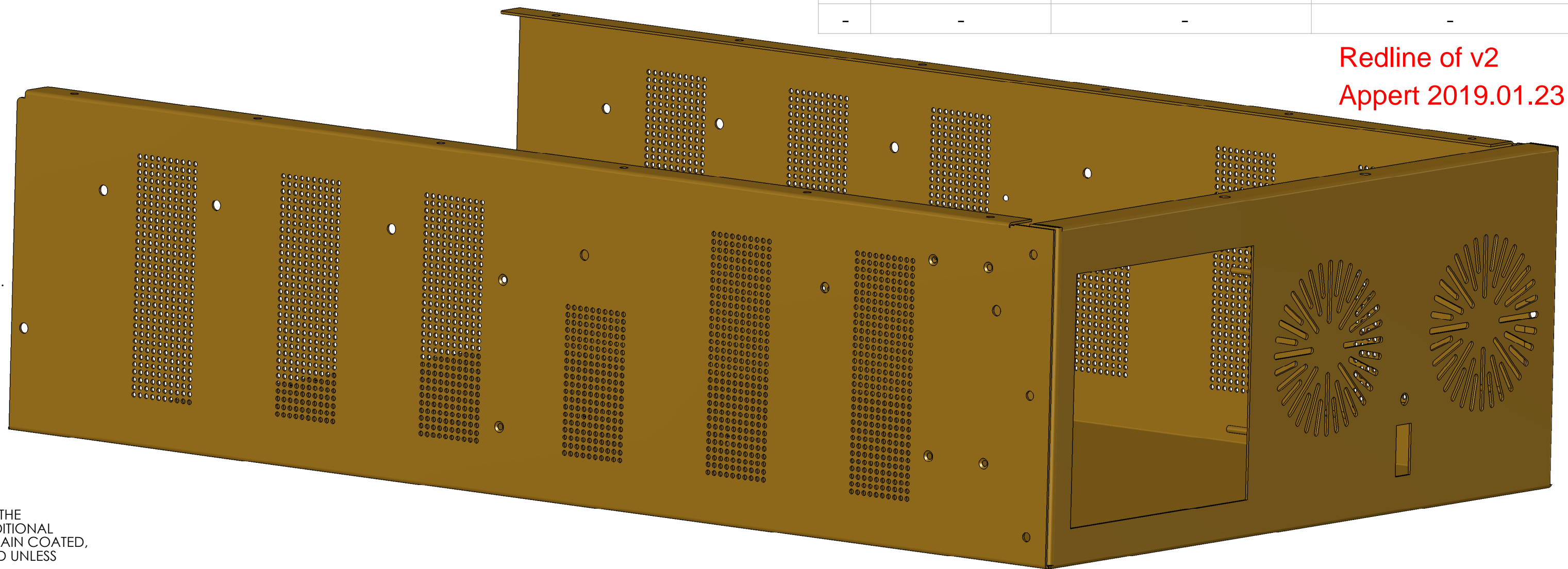
DIMENSIONS ARE IN TOLERANCES: .XX ± .XXX ± ANGULAR ± °		NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED) 1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS. 3. DO NOT SCALE FROM DRAWING. 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME I/O EXPANSION CHASSIS											
		MATERIAL Material <not specified>		FINISH pinch		SYSTEM DAQ		SUB-SYSTEM DAQ		DESIGNER E.BROWN		SIZE c		DWG. NO. D1001701_v2		REV.	
				NEXT ASSY						APPROVAL		SCALE: 1:1		PROJECTION:		SHEET 1 OF 1	

NOTES CONTINUED:

5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXX-VY, S/N 001. VIBRATORY TOOL MAY BE USED.

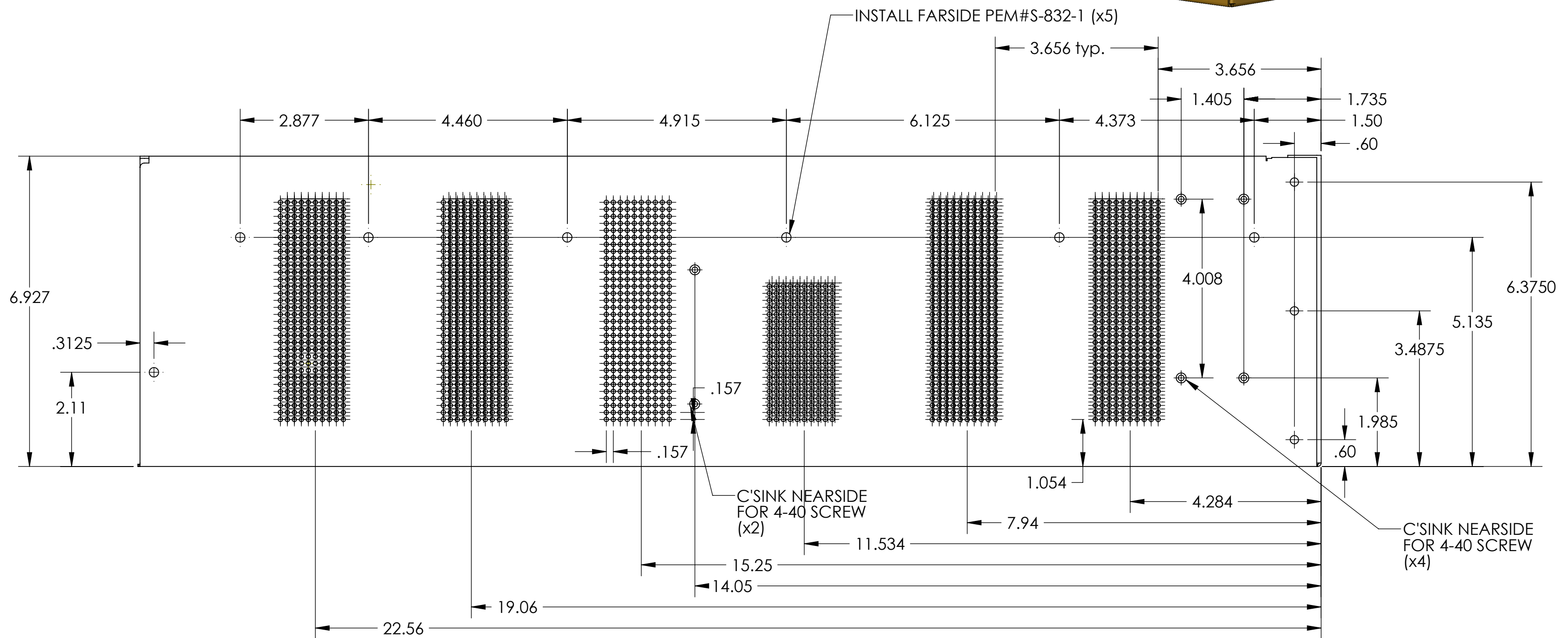
many notes not relevant

- 6. APPROXIMATE WEIGHT = X.XXX LB.
- 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364.
- 8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
- 9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4
- 10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL. AFTER DELIVERY OF FINISHED PARTS, USE NITRONIC 60 THREADED INSERTS.
- 11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.
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- 13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.
- 14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.
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Redline of v2
Appert 2019.01.23

REV.	DATE	DCN #	DRAWING TREE #
-	-	-	-
-	-	-	-
-	-	-	-



material: 18 gage CRS (.048)

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

- 1. INTERPRET DRAWING PER ASME Y14.5-1994.
- 2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.
- 3. DO NOT SCALE FROM DRAWING.
- 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

MATERIAL: 18 Gage CRS (.048) FINISH: millch

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: SUB-SYSTEM: DAQ

NEXT ASSY:

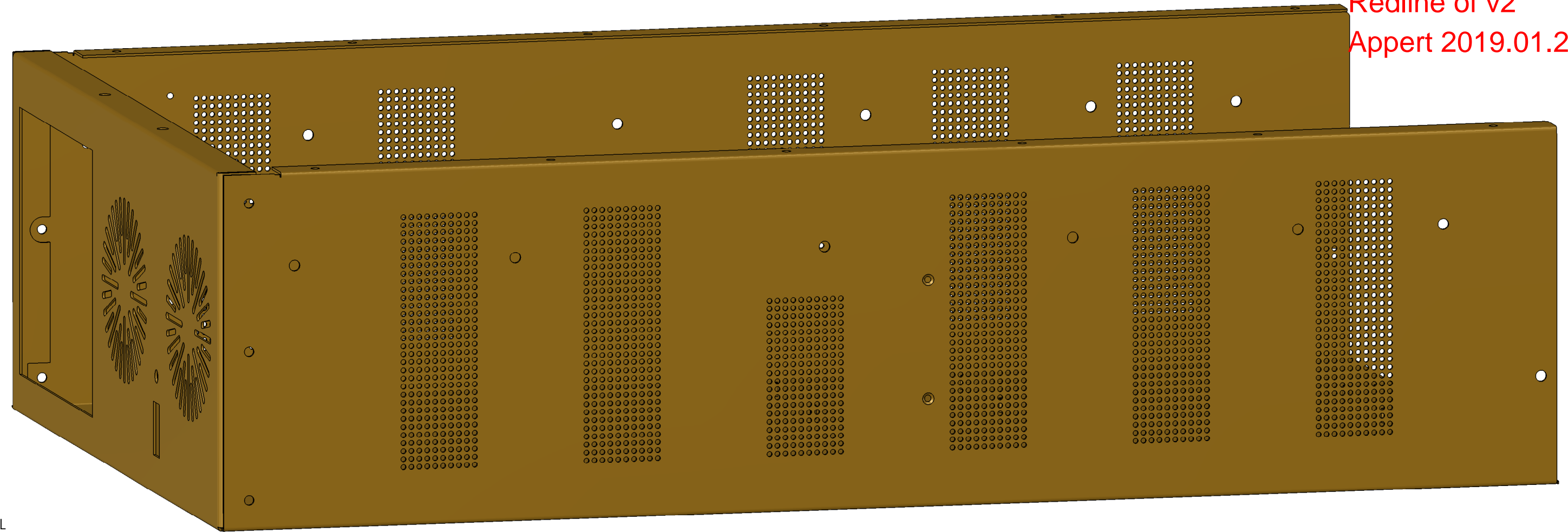
PART NAME		I/O EXPANSION CHASSIS		
DESIGNER		SIZE	DWG. NO.	REV.
DRAFTER	E.BROWN	c	D1001701_v2	
CHECKER		SCALE: 1:1	PROJECTION:	SHEET 1 OF 1
APPROVAL				

NOTES CONTINUED:

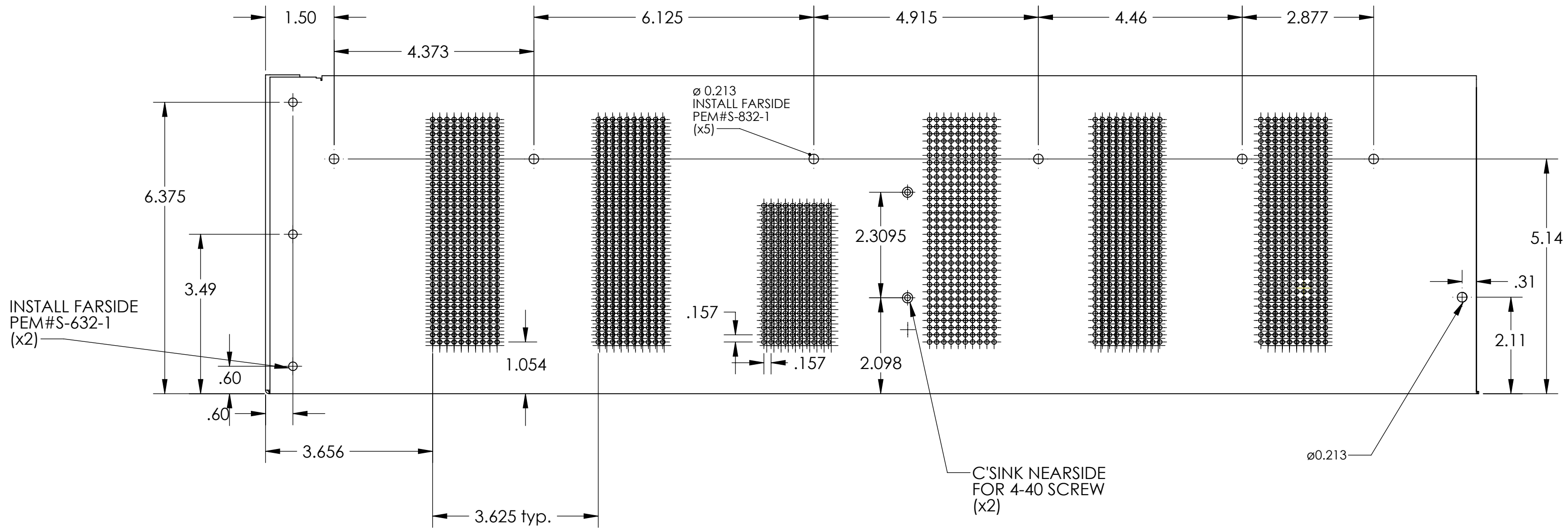
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many notes not relevant

- 6. APPROXIMATE WEIGHT = X.XXX LB.
- 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
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- 12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
- 13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.
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Redline of v2
Appert 2019.01.23



material: 18 gage CRS (.048)

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

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MATERIAL	FINISH	NEXT ASSY
Material <not specified>	μinch	

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM	SUB-SYSTEM
	DAQ

PART NAME
 I/O EXPANSION CHASSIS

DESIGNER	SIZE	DWG. NO.	REV.
DRAFTER	E.BROWN	JUL/13/2012	c
CHECKER	D1001701_v2		
APPROVAL	SCALE: 1:1	PROJECTION:	SHEET 1 OF 1

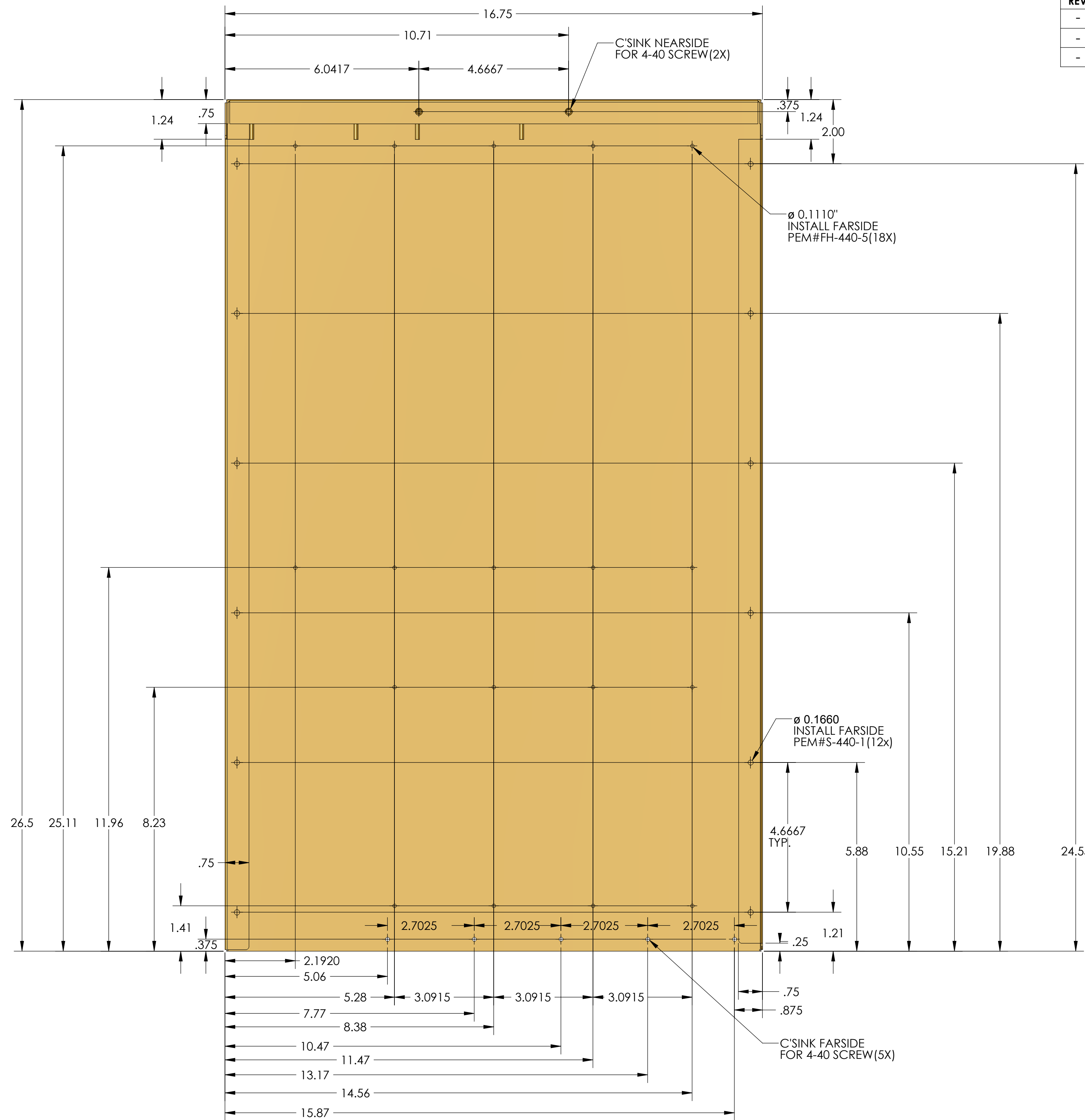
NOTES CONTINUED:
 5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR TYPE IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: DXXXXXX-VY, TYPE-XX, S/N XXXX

many notes not relevant

- 6. APPROXIMATE WEIGHT = X.XXX LB.
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REV.	DATE	DCN #	DRAWING TREE #
-	-	-	-
-	-	-	-
-	-	-	-

Redline of v2
 Appert 2019.01.23



material: 18 gage CRS (.048)

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)		LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME	
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DIMENSIONS ARE IN TOLERANCES: .XX ± .XXX ± ANGULAR ± °		DAQ		DESIGNER E. BROWN	
MATERIAL Material <not specified>		FINISH μinch		CHECKER JUL/13/2012	
NEXT ASSY		SUB-SYSTEM DAQ		SIZE DWG. NO. D D1001701_v2	
APPROVAL		SCALE: 1:1		PROJECTION:	
SHEET 1 OF 1		SHEET 1 OF 1		SHEET 1 OF 1	

D1001701_v2_PAGE 5_SMP5_LO_chassis 1875 CHASSIS BASE 4, PART PDM REV. DRAWING PDM REV: X000