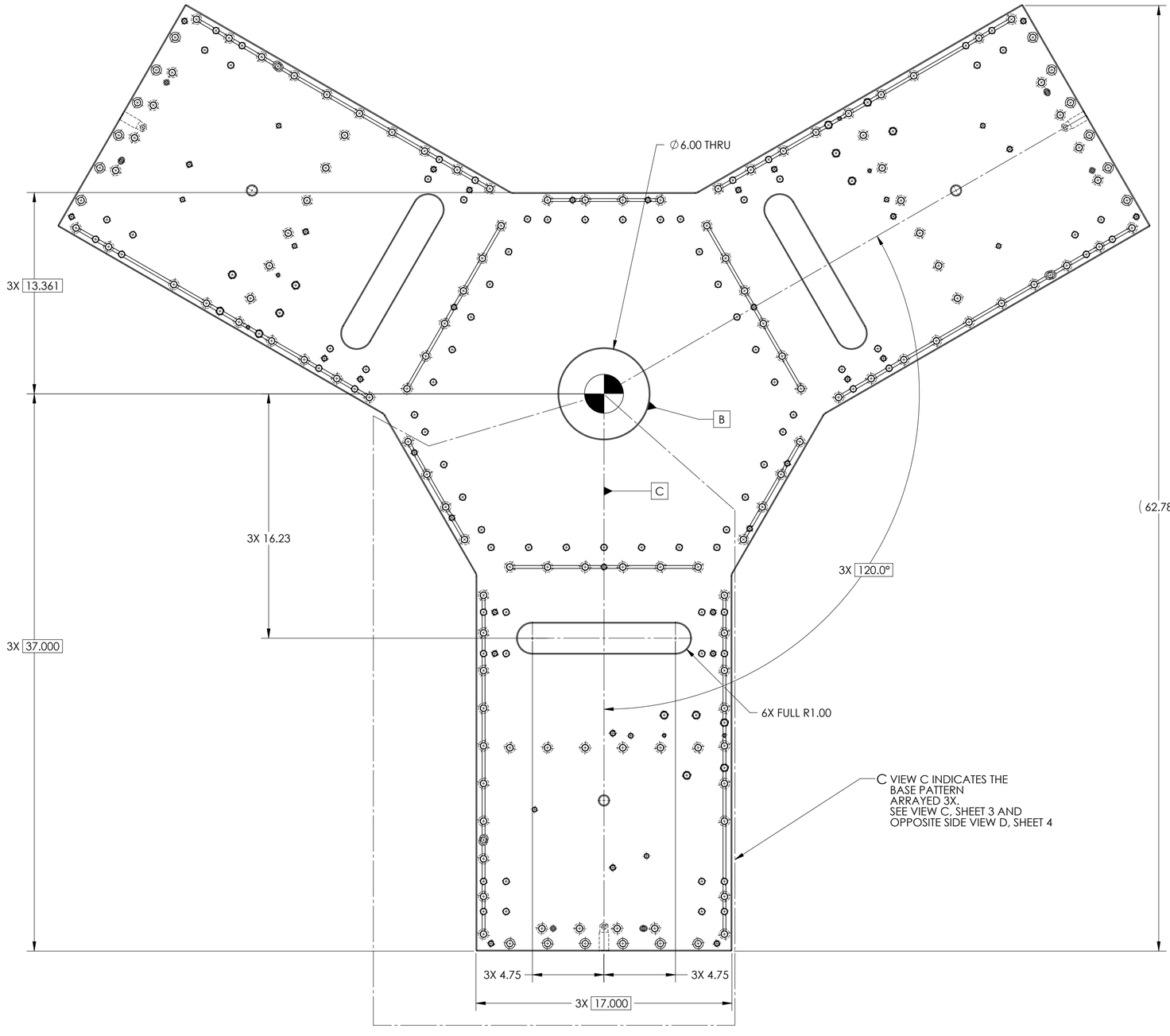
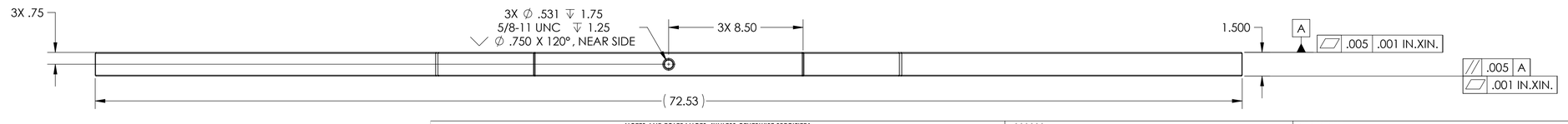
**NOTES CONTINUED:**

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: DXXXXXXX-VY, S/N 001. A VIBRATORY TOOL MAY BE USED.
6. THIS PART IS TO BE PRODUCED USING THE CAD MODEL. IF THERE ARE DISCREPANCIES BETWEEN THIS DRAWING AND THE CAD MODEL, THE MODEL WILL TAKE PRECEDENCE UNLESS OTHERWISE SPECIFIED.
7. SURFACES WITH PROFILE CONTROL ARE LOCATED BASIC WITH RESPECT TO REFERENCED DATUMS. A SURFACE PROFILE TOLERANCE OF .025 SHALL APPLY TO THE ENTIRE PART UNLESS SPECIFICALLY TOLERANCED ELSEWHERE ON THE DRAWING.
8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E048225.
9. APPROXIMATE WEIGHT = 245 LBS.
10. A TRUE POSITION TOLERANCE OF ∅.010 IS ~ THE SAME AS A CONVENTIONAL TOLERENCE OF ±.005.
11. MACHINE SURFACES TO REMOVE OXIDES AND MILL FINISH. ABRASIVE REMOVAL TECHNIQUES ARE NOT ACCEPTABLE.
12. ALL THREADED INSERTS TO BE INSTALLED BY LIGO PERSONNEL, AFTER DELIVERY OF FINISHED PARTS.

| REV. | DATE | DCN # | DRAWING TREE # |
|---|---|---|---|
| v1 | 28 Dec. 2009 | E0900496 | T0900600 |
| | | | |
| | | | |




| NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED) | | | | | |
|---|---|---|---|---|---|
| DIMENSIONS ARE IN INCHES<br>TOLERANCES:<br>.XX ± .015<br>.XXX ± .005<br>ANGULAR ± .5° | 1. INTERPRET DRAWING PER ASME Y14.5-1994.<br>2. BREAK ALL EDGES AND CORNERS .03 X 45°.<br>3. DO NOT SCALE FROM DRAWING.<br>4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE. | MATERIAL: 6061-T6 Al | FINISH: 63 µinch | LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY<br>SYSTEM: ADVANCED LIGO<br>SUB-SYSTEM: SEI<br>NEXT ASSY: D0901181 | PART NAME: Mid-Plate, aLIGO BSC ISI |

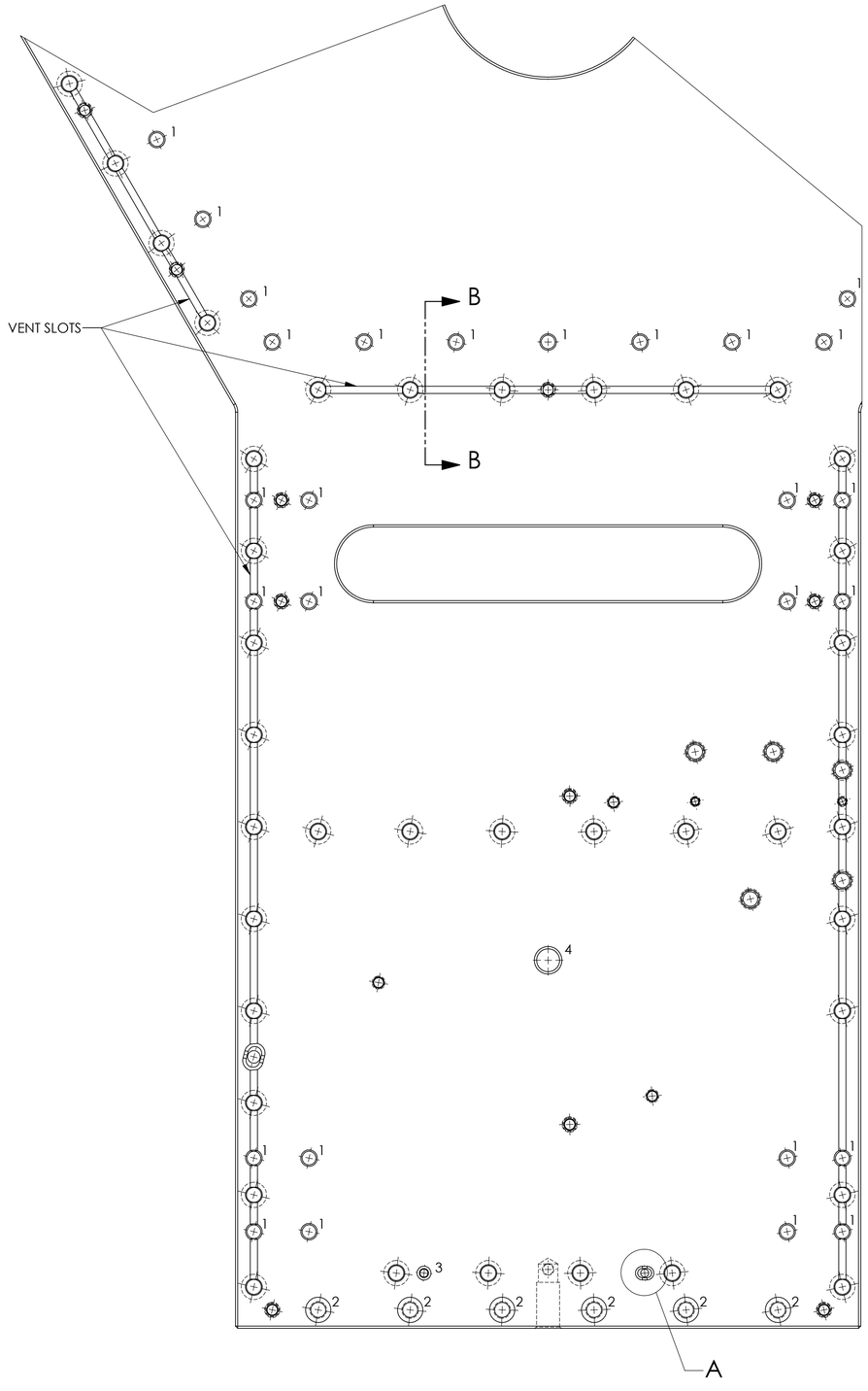
| | | | | | |
|---|---|---|---|---|---|
| DESIGNER | A.STEIN | 28 Dec. 2009 | SIZE: D | DWG. NO.: D0901520 | REV.: v1 |
| DRAFTER | M.HILLARD | 28 Dec. 2009 | | | |
| CHECKER | F.MATICHARD | 28 Dec. 2009 | | | |
| APPROVAL | K.MASON | 28 Dec. 2009 | SCALE: 1:4 | PROJECTION: | SHEET 1 OF 3 |

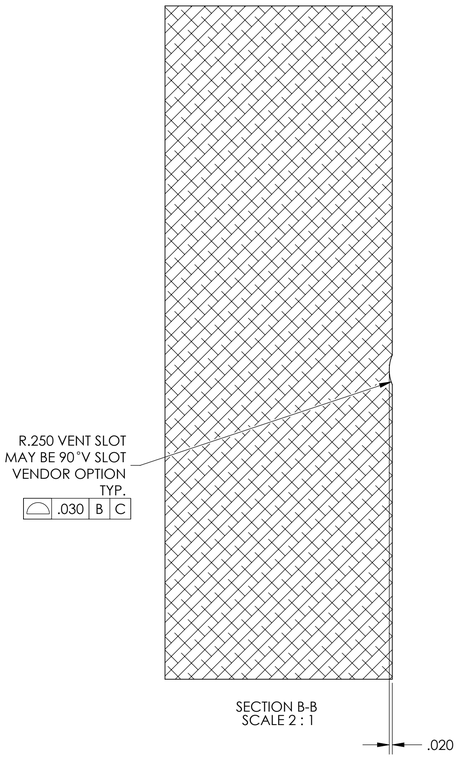
D0901520_Mid-Plate-BSC_ISI, PART PDM REV: X-035, DRAWING PDM REV: X-007

| TAG | SIZE | QUANTITY | GD&T |
|---|---|---|---|
| 1 | ∅ .31 THRU ALL<br>3/8-16 UNC THRU ALL<br>⌵ ∅ .45 X 120°, NEAR SIDE<br>⌵ ∅ .45 X 120°, FAR SIDE | 27 | ⌖ ∅ .010 A B C<br>A THREAD PITCH DIAMETER LIMIT OF H11 APPLIES |
| 2 | ∅ .406 THRU ALL<br>⌴ ∅ .688 ↧ .95<br>⌵ ∅ .46 X 90°, FAR SIDE | 6 | ⌖ ∅ .010 A B C |
| 3 | ∅ $.2507^{+.0008}_{-.0000}$ ↧ .50<br>⌵ ∅ .38 X 90°, NEAR SIDE<br>∅ .22 THRU | 1 | ⌖ ∅ .002 Ⓜ A B C |
| 4 | ∅ .53 THRU ALL<br>5/8-11 UNC THRU ALL<br>⌵ ∅ .75 X 120°, NEAR SIDE<br>⌵ ∅ .75 X 120°, FAR SIDE | 1 | ⌖ ∅ .030 A B C |

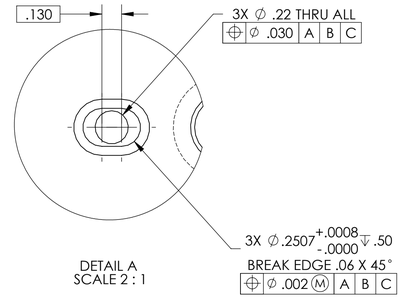
HOLE PATTERN ARRAYED 3X

VIEW C
VIEW SHOWN INDICES THE BASE
PATTERN ARRAYED 3X



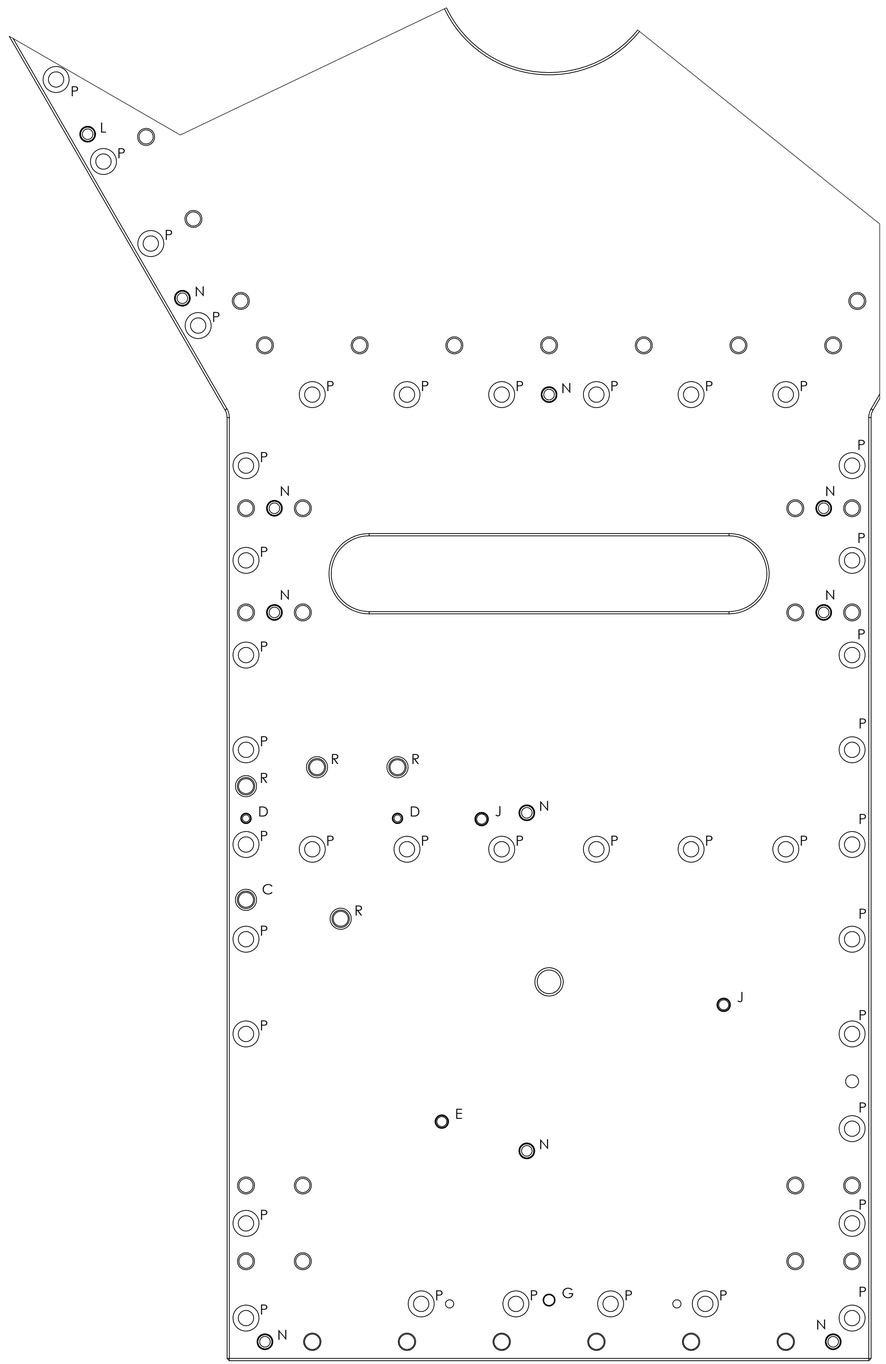

SECTION B-B
SCALE 2 : 1




DETAIL A
SCALE 2 : 1

| LIGO | CALIFORNIA INSTITUTE OF TECHNOLOGY<br>MASSACHUSETTS INSTITUTE OF TECHNOLOGY | |
|---|---|---|
| SIZE<br>D | DWG. NO.<br>D0901520 | REV.<br>V1 |
| SCALE: 1:2 | PROJECTION: | SHEET 2 OF 3 |

VIEW D
VIEW SHOWN INDICES THE BASE
PATTERN ARRAYED 3X




| TAG | SIZE | QUANTITY | GD&T |
|---|---|---|---|
| C | ∅ .397 THRU ALL<br>⌵ ∅ .56 X 120°, NEAR SIDE<br>TAP FOR 3/8-16 HELICOIL INSERT = 2.0 * DIA.<br>⌵ ∅ .50 X 90°, FAR SIDE | 1 | ⌖ ∅ .010 A B C |
| D | ∅ $.2500^{+.0000}_{-.0004}$ ↧ .38<br>⌴ ∅ $.251^{+.001}_{-.000}$ ↧ .10<br>⌵ ∅ .28 X 90°, NEAR SIDE | 2 | ⌖ ∅ .002 Ⓜ A B C |
| E | ∅ .266 THRU ALL<br>⌵ ∅ .36 X 120°, NEAR SIDE<br>TAP FOR 1/4-20 HELICOIL INSERT = 2.0 * DIA.<br>⌵ ∅ .30 X 90°, FAR SIDE | 1 | ⌖ ∅ .010 A B C |
| G | ∅ .28 ↧ .75<br>⌵ ∅ .32 X 90°, NEAR SIDE | 1 | ⌖ ∅ .030 A B C |
| J | ∅ .266 THRU ALL<br>⌵ ∅ .36 X 120°, NEAR SIDE<br>TAP FOR 1/4-20 HELICOIL INSERT = 2.0 * DIA.<br>⌵ ∅ .300 X 90°, FAR SIDE | 2 | ⌖ ∅ .010 A B C |
| L | ∅ $.3750^{+.0000}_{-.0004}$ ↧ .60<br>⌴ ∅ $.377^{+.001}_{-.000}$ ↧ .13<br>⌵ ∅ .42 X 90°, NEAR SIDE | 1 | ⌖ ∅ .002 Ⓜ A B C |
| N | ∅ $.3750^{+.0000}_{-.0004}$ ↧ .60<br>⌴ ∅ $.377^{+.001}_{-.000}$ ↧ .13<br>⌵ ∅ .42 X 90°, NEAR SIDE | 10 | ⌖ ∅ .002 Ⓜ A B C |
| P | ∅ .406 THRU ALL<br>⌴ ∅ .688 ↧ 1.00<br>⌵ ∅ .46 X 90°, FAR SIDE | 39 | ⌖ ∅ .010 Ⓜ A B C |
| R | ∅ .397 THRU ALL<br>⌵ ∅ .56 X 120°, NEAR SIDE<br>TAP FOR 3/8-16 HELICOIL INSERT = 2.0 * DIA.<br>⌵ ∅ .50 X 90°, FAR SIDE | 4 | ⌖ ∅ .010 A B C |

HOLE PATTERN ARRAYED 3X
HOLES LABELED "E"="J"
HOLES LABELED "L"="N"

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

| SIZE | DWG. NO. | REV. |
|---|---|---|
| D | D0901520 | v1 |
| SCALE: 1:2 | PROJECTION: | SHEET 3 OF 3 |

D0901520_A4-Plate-BSC_ISI_PART PDM REV= X-X35_DRAWING PDM REV= X-X07