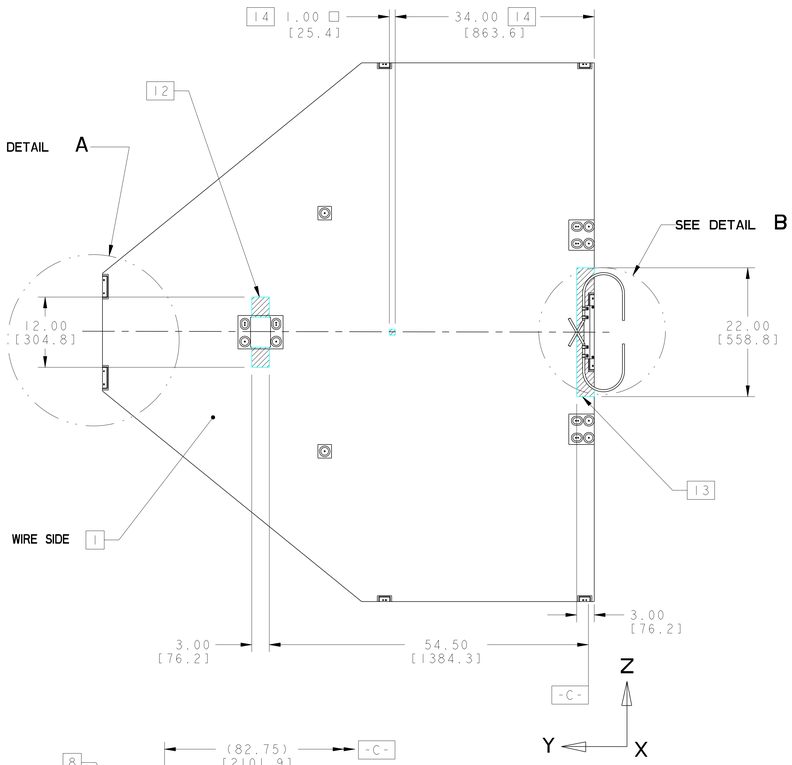
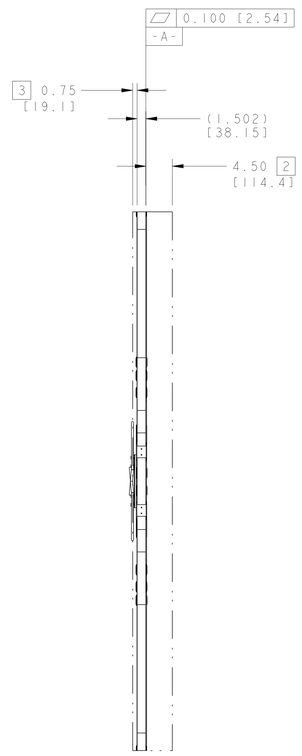
REVISION				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A	-	INCORPORATE CHANGES PER EO-0001	8/17/05	J. HAIR

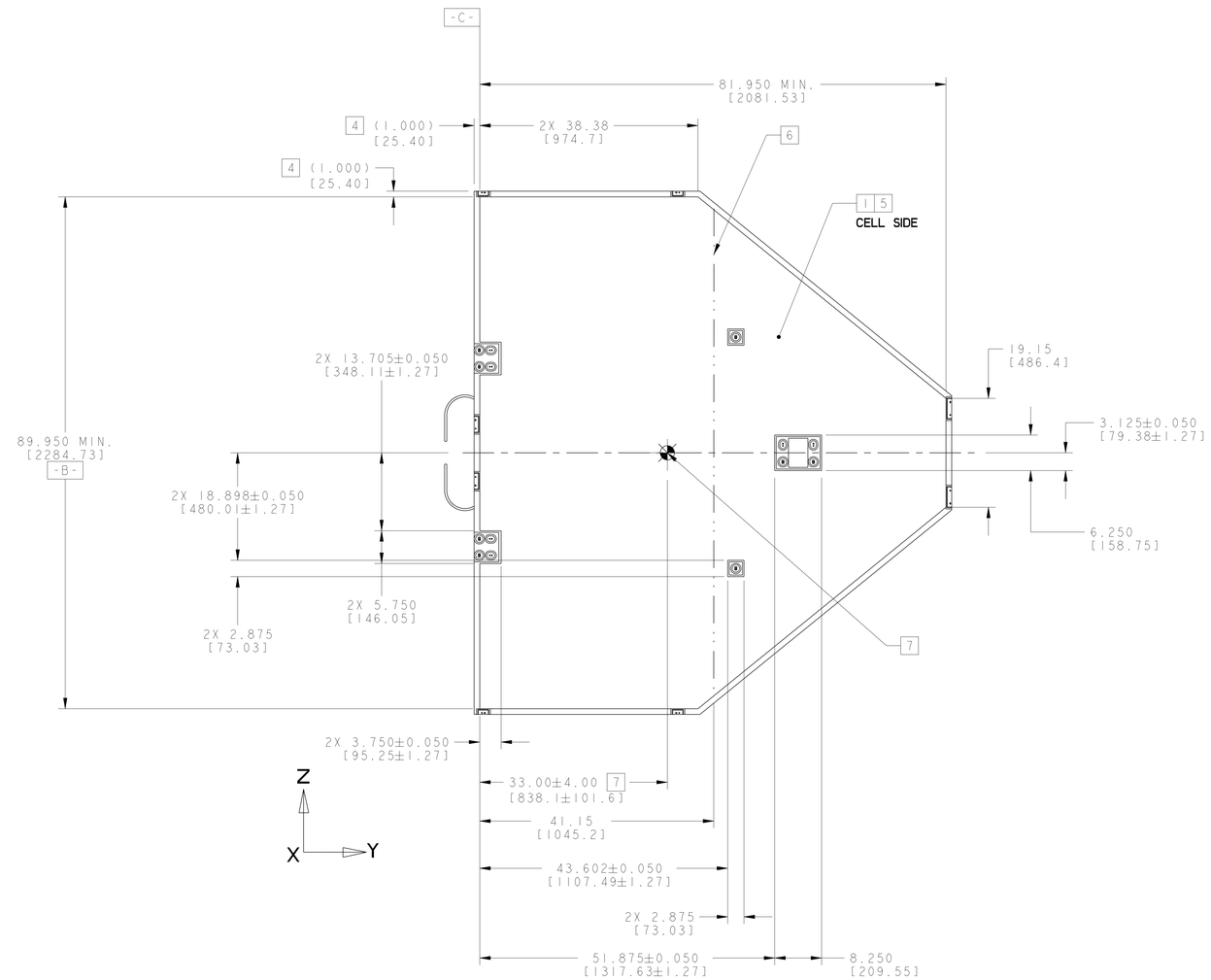
Released
MASTER DRAWING
REVISION BY
EO ONLY
GSFC FILE COPY
17-Aug-05
L. KEARNEY

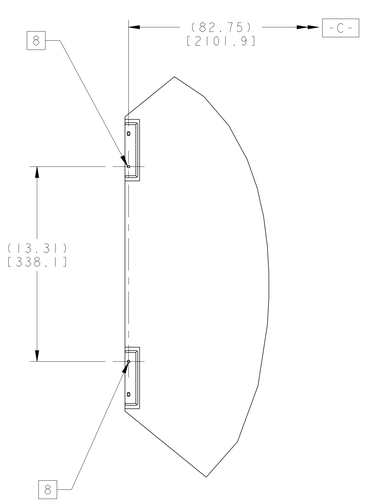
NOTES: UNLESS OTHERWISE SPECIFIED

1. SPECIFIED AREA IS STAY-IN ZONE FOR CELLS, ELECTRICAL WIRES, ELECTRICAL EQUIPMENT, AND WIRE PASS-THROUGH HOLES. SAME DIMENSIONS FOR STAY-IN ZONE APPLY TO CELL SIDE AND WIRE SIDE. HOLES FOR WIRE PASS-THROUGH SHALL NOT EXCEED A TOTAL AREA OF 6.5 IN^2 WITH A MAXIMUM OF 0.1 IN^2 PER 1.0 IN^2 AND 0.2 IN^2 PER 8.0 IN^2. GODDARD SPACE FLIGHT CENTER TO DRILL ALL HOLES. VENDOR TO SUPPLY GODDARD SPACE FLIGHT CENTER WITH HOLE LOCATIONS.
2. SOLAR CELL STACK STAY-IN ZONE THICKNESS.
3. WIRING AND ELECTRICAL EQUIPMENT STAY-IN ZONE THICKNESS.
4. PANEL SIZE IS GREATER THAN CELL AREA BY APPROXIMATELY 1.00" IN ALL DIRECTIONS AROUND THE CELL AREA PERIMETER AS SHOWN.
5. ENTIRE CELL AREA SURFACE, EXCLUDING HOLES, SHALL BE COVERED WITH 0.002 THK KAPTON HN. SURFACE SHALL HAVE A SURFACE RESISTANCE > 100E6 OHMS AT 100V AT 20±1°C WHEN MEASURED WITH A 4 cm^2 WET PROBE.
6. ORIENTATION AND LOCATION OF KAPTON SEAM.
7. MASS OF COMPONENTS TO BE PROVIDED BY SOLAR CELL VENDOR FOR SOLAR CELLS, WIRING, AND OTHER HARDWARE SHALL BE PLACED WITH A CG LOCATION AT THE CENTER OF THE PANEL ALONG THE Z-AXIS ± 4.00" AND OFFSET FROM THE Z-AXIS IN THE Y DIRECTION 33.00 ± 4.00" AS SHOWN.
8. COARSE SUN SENSOR HARNESS SHALL BE ROUTED TO ATTACH POINT AND CLAMPED TO PANEL WITH VENDOR SUPPLIED P-CLAMP USING CUSTOMER SUPPLIED BOLT AT LOCATION INDICATED. PIGTAIL OF HARNESS TO EXTEND 24 INCHES BEYOND ATTACH POINT.
9. COARSE SUN SENSOR, CIC, AND PRT HARNESS SHALL BE ROUTED TO ATTACH POINT AND CLAMPED TO PANEL WITH VENDOR SUPPLIED P-CLAMPS USING CUSTOMER SUPPLIED BOLTS AT LOCATIONS INDICATED. LENGTH OF HARNESS FOR COARSE SUN SENSOR AND PRT TO EXTEND 60 INCHES (TBD) FROM FINAL ATTACH POINT TO END OF CONNECTOR.
10. SOLAR CELL POWER HARNESS SHALL BE ROUTED TO ATTACH POINT AND CLAMPED TO PANEL WITH VENDOR SUPPLIED P-CLAMPS USING CUSTOMER SUPPLIED BOLTS AT LOCATIONS INDICATED. LENGTH OF HARNESS FOR SOLAR CELL POWER TO EXTEND 60 INCHES (TBD) FROM FINAL ATTACH POINT TO END OF CONNECTOR.
11. HARNESS BUNDLES SHALL BE ROUTED THRU P-CLAMPS AS SHOWN. BUNDLE ROUTING TO P-CLAMPS SHALL MINIMIZE HARNESS BENDING BY LIMITING BUNDLE BEND RADIUS TO 3 INCHES MINIMUM FROM FINAL BOND POINT ON PANEL TO P-CLAMPS.
12. SOLAR CELL, WIRE, AND ELECTRICAL EQUIPMENT STAY-OUT ZONE. WIRE SIDE ONLY.
13. SOLAR CELL, WIRE, AND ELECTRICAL EQUIPMENT STAY-OUT ZONE. WIRE SIDE ONLY. HARNESS BUNDLE MAY PASS THROUGH THIS ZONE.
14. PLATINUM RESISTANCE THERMOMETER TO BE LOCATED AT THE CENTER OF THE PANEL ALONG THE Z-AXIS ± 6.00" AND OFFSET FROM THE Z-AXIS IN THE Y-DIRECTION 34.00 ± 6.00" AS SHOWN.
15. IF HARNESS IS WRAPPED WITH CONDUCTIVE MATERIAL, VENDOR SHALL WRAP HARNESS UP TO FIRST P-CLAMP ONLY. THE VENDOR SHALL NOT WRAP HARNESS BEYOND THIS POINT.
16. WIRE SIDE OF ARRAY SHALL BE BARE COMPOSITE FACE SHEET.
17. SUBSTRATE CTE SHALL BE LESS THAN 3 PPM/K WITH A FLATNESS AS SPECIFIED FOR ASSEMBLY AND OPERATION. PANEL CURVATURE IN LAUNCH CONFIGURATION SPECIFIED IN NOTE 18.
18. SOLAR CELLS, WIRING, AND OTHER HARDWARE PROVIDED BY CELL VENDOR SHALL SURVIVE, WITHOUT PERFORMANCE DEGREDATION, 90 G ACCELERATION AND A MINIMUM PANEL CURVATURE RADIUS OF 450 IN.
19. ALL COORDINATE SYSTEM AXES SHOWN AND REFERENCED ARE SPACECRAFT COORDINATES WITH THE SOLAR ARRAYS IN THE DEPLOYED CONFIGURATION.

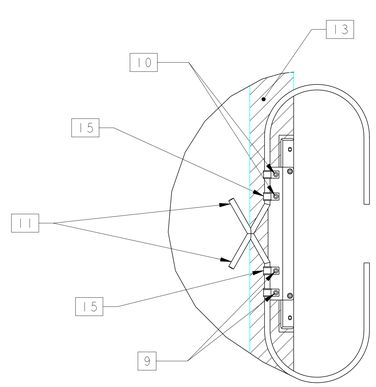








DETAIL A
SCALE 1/4



DETAIL B
SCALE 1/4

Approved by: T. Bowser on 3/23/05 and D. Ward on 03/22/05

THIS DRAWING WAS PRODUCED USING	
SOFTWARE: Pro/ENGINEER VERSION: 2001	
FILE NAME: 2062592	
MODEL NAME: 2062550_CELL_ICD	
2062590	SDO
NEXT ASSEMBLY	USED ON

INTERFACE CONTROL DRAWING

ITEM NO.	REQD	REQD	PART NO.	DESCRIPTION	MATERIAL	MATERIAL SPEC & NO.
—	—	—	-	-	-	-

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED-DIMENSIONS ARE IN INCHES
TOLERANCES: .XX .XXX ∠ FRACTIONS ±0.03 ±0.010 ±0.5 ± 1/16
REMOVE ALL BURRS AND SHARP EDGES R.010 OR CHAMFER MAX.

☒ FLIGHT HARDWARE ☐ NON-FLIGHT
☐ HARDNESS TEST NOT REQUIRED
☐ TEST HARDNESS PER ASTM E-18, LOCATION OPTIONAL
☐ TEST HARDNESS PER ASTM E-18 WHERE INDICATED ON FIELD OF DRAWING THUS ⊗
☒ NO NON-DESTRUCTIVE EXAMINATION (NDE) REQ'D
☐ NDE REQUIRED PER S-313-029 CODE ____

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION — Goddard Space Flight Center — Greenbelt, Maryland

	NAME	INIT.	DATE
DESIGNER	C. JOHNSON	CJ	03/22/05
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APPROVED	S. NGO	SN	03/22/05
APPROVED	D. STEINFELD	DS	03/22/05
APPROVED	E. GADDY	EG	03/22/05
APPROVED-STRESS	P. MULE	PM	03/22/05
APPROVED-ENGINEER	J. HAIR	JH	03/22/05

DRAWING INTERPRETED PER GSFC-X673-64-1

CELLS,
SUBSTRATE INTERFACE
SOLAR ARRAY

GE 2062592 A

CODE: 543 SCALE: 1/10 WEIGHT: SHEET: 1 OF 1

GE 2062592 A