

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-147  
Revised April 3, 2017

## Recycling Facility Only

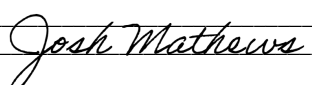
**Type of action:** ☐ Permit ☒ Registration ☐ Modification ☐ Closure ☐ Other (explain) \_\_\_\_\_

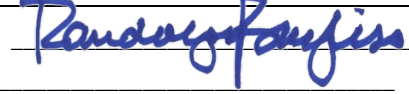
Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: : Tap Rock Resources, LLC, OGRID #: \_\_372043\_\_  
Address: \_\_602 Park Point Drive, Suite 200, Golden, CO 80401\_\_  
Facility or well name (include API# if associated with a well): \_\_Estelle/Cosmo Containment\_\_  
OCD Permit Number: **1RF-440** (For new facilities the permit number will be assigned by the district office)  
U/L or Qtr/Qtr \_\_ Section \_\_15-16\_\_ Township \_\_24S\_\_ Range \_\_33E\_\_ County: \_\_Lea\_\_  
Surface Owner: 0 Federal 0 State 1 Private 0 Tribal Trust or Indian Allotment

2.  
☒ **Recycling Facility:**  
Location of (if applicable): Latitude \_\_32.17474\_\_ Longitude -103.36422\_\_ NAD83 Proposed Use: ☐ Drilling\* ☐ Completion\* ☐  
Production\* ☐ Plugging \*  
*\*The re-use of produced water may NOT be used until fresh water zones are cased and cemented*  
☐ Other, *requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.*  
☒ Fluid Storage  
☒ Above ground tanks ☐ Activity permitted under 19.15.17 NMAC explain type \_\_\_\_\_  
☐ Activity permitted under 19.15.36 NMAC explain type: \_\_\_\_\_ ☐ Other explain \_\_\_\_\_  
☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date: \_\_\_\_\_

3.  
**Variances:**  
Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.  
**Check the below box only if a variance is requested:**  
☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.  
**If a Variance is requested, it must be approved prior to implementation.**

4.  
**Operator Application Certification:**  
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.  
Name (Print): \_\_Josh Mathews\_\_ Title: \_\_Operations Engineer\_\_  
Signature:  Date: \_\_11/27/2018\_\_  
e-mail address \_\_jmathews@taprk.com\_\_ Telephone: \_\_720-460-3318\_\_

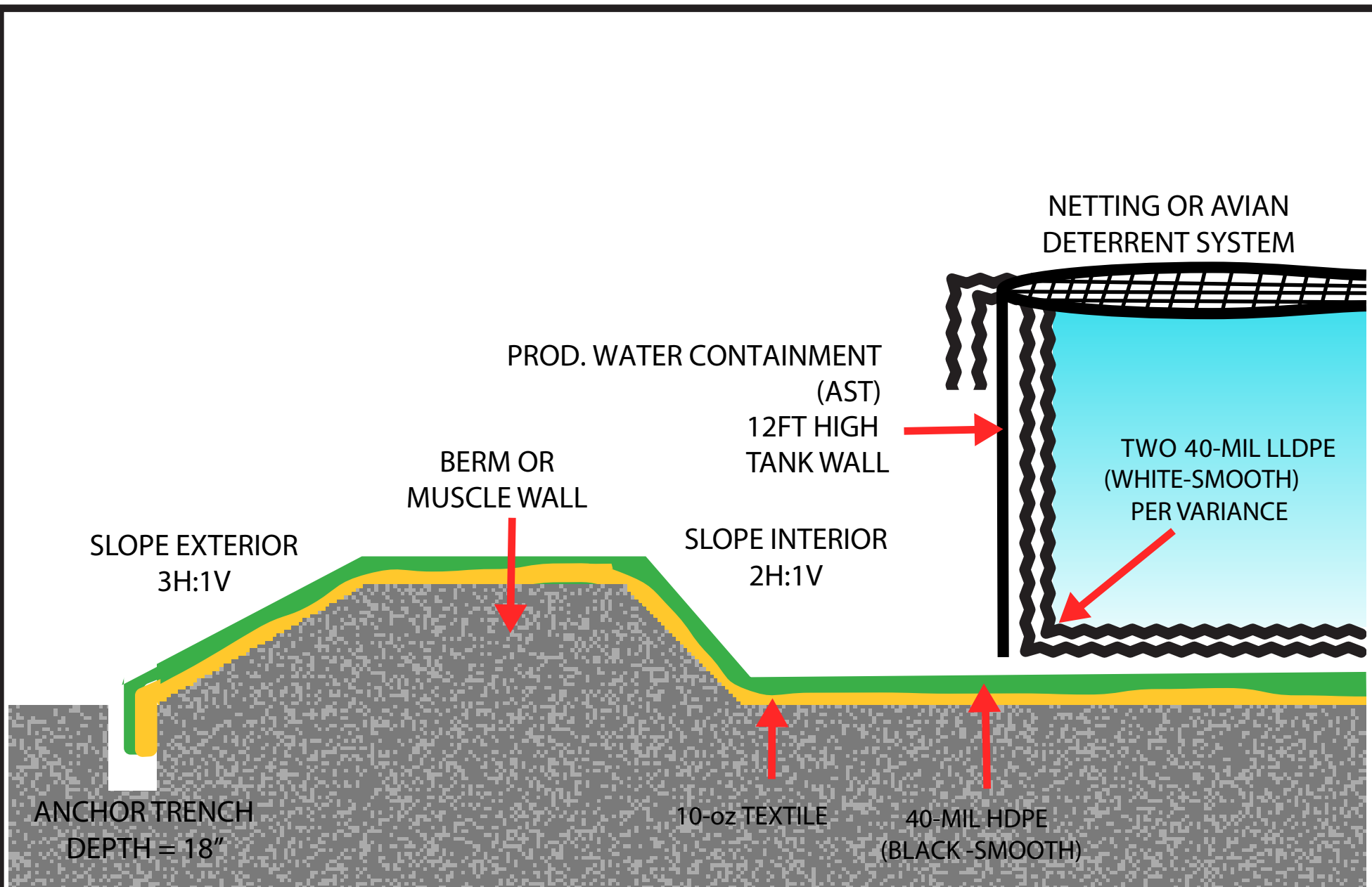
5.  
OCD Representative Signature:  Approval/Registration Date: \_\_28Nov18\_\_  
Title: \_\_Hydrologist\_\_ OCD Permit Number: **1RF-440**  
☐ OCD Conditions \_\_\_\_\_  
☐ Additional OCD Conditions on Attachment

Treated produced water will flow to nearby Tap Rock wells for hydraulic stimulation. This produced water recycling program will take place over the next 4-12 months. Produced water is stored in the adjacent Estelle Containment, which was registered on 10/24/18. The 40,000 bbl AST is employed for buffering and to facilitate the treatment and stimulation process. The AST is not used for long-term storage.

The Cosmo-Estelle AST is located on the prepared pad that also serves the recycling facility for the Estelle Containment. As shown in the drawing and in the attached materials, the AST employs

- Two (2) 40-mil LLDPE liners in the steel walls of the tank
- A third 40-mil HDPE liner lies under the tank and covers surrounding berms that create secondary containment.

For the AST, Tap Rock will conduct the same monitoring that is conducted for the adjacent containment. Additionally, the bird hazing system employed for the adjacent Estelle Containment will serve for the AST.



Not to Scale

R.T. HICKS CONSULTANTS, LTD.

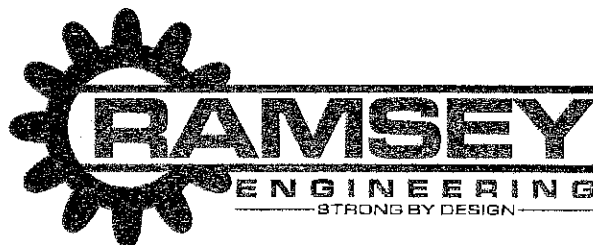
901 Rio Grande Blvd NW Suite F142 Albuquerque, NM 87104  
Office Phone: 505.266.5004

AST Schematic

Tap Rock Resources: Estelle/Cosmo AST

November 2018

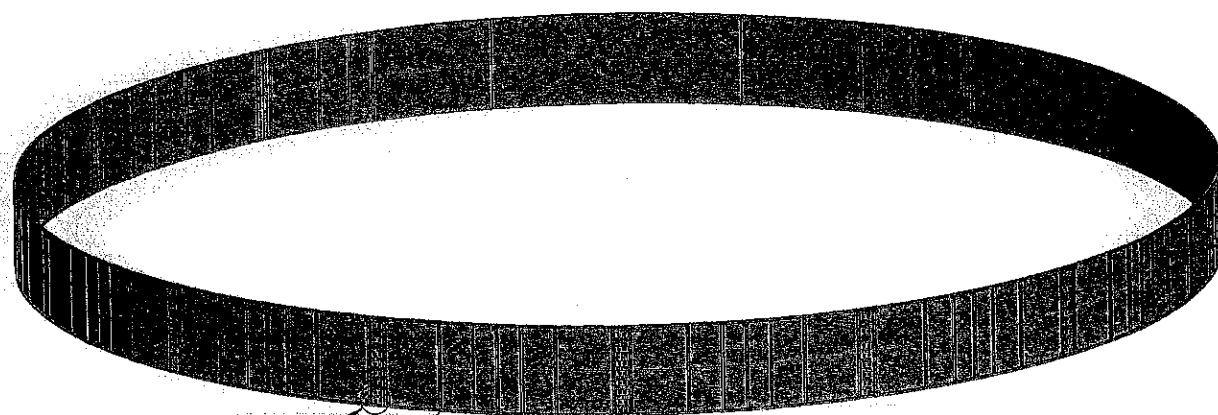
# Three Amigos Tank Design



40K Assembly Prints

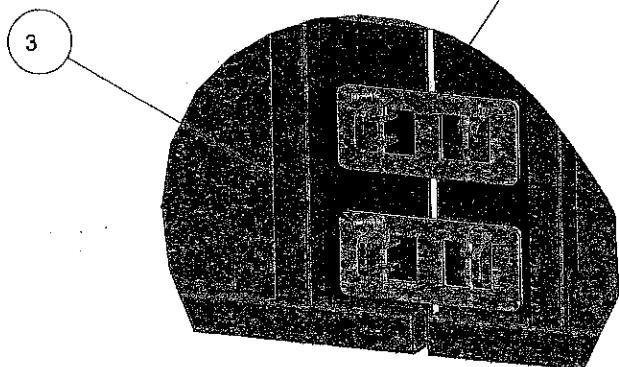
ITEM	PART NUMBER	QTY
1	40K-300	15
2	LC-001	120
3	LC-002	240

- 1) MAXIMUM FILL HEIGHT = 11'-6"  
2) VOLUME AT MAX FILL HEIGHT = 39,700 BBL.  
3) INCREMENTAL VOLUME = 3448 BBL PER FOOT

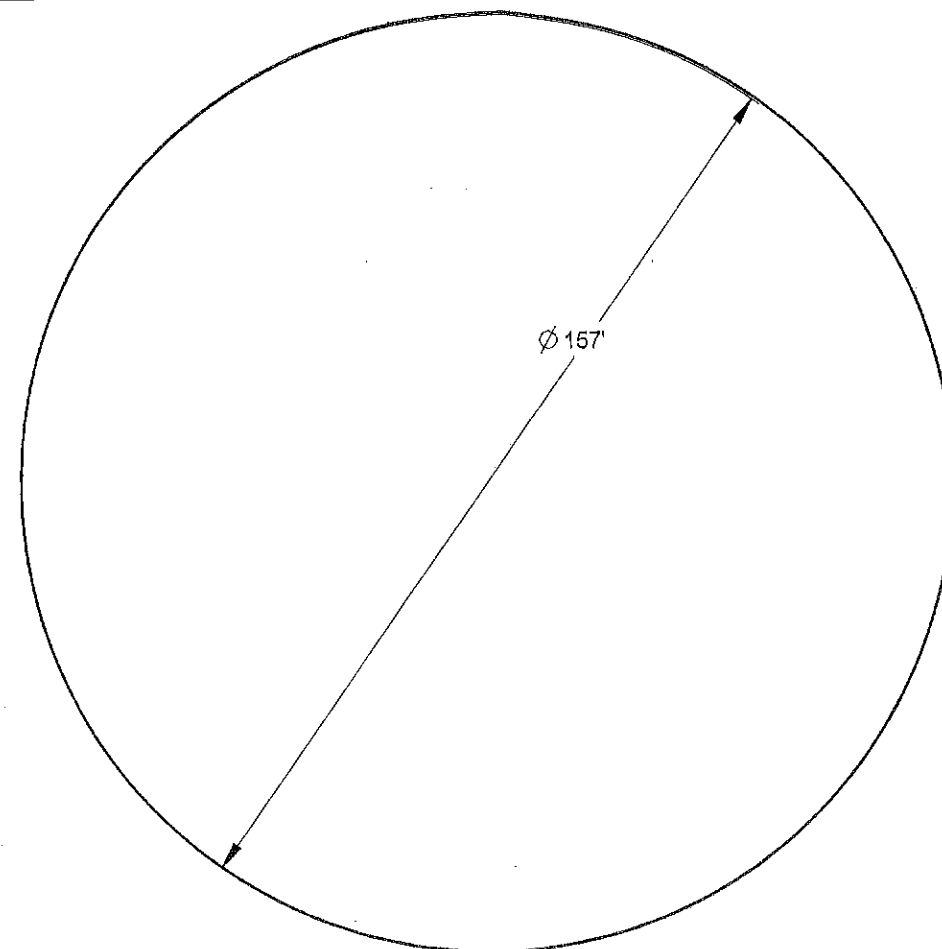


SEE DETAIL B

SCALE 0.005



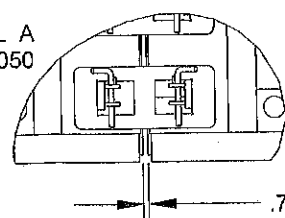
DETAIL B  
SCALE 0.070



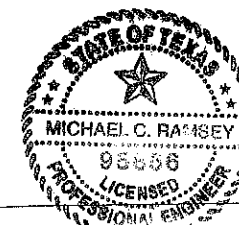
12' 2"

SEE DETAIL A

DETAIL A  
SCALE 0.050



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**RAMSEY  
ENGINEERING**

TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.XD±0.05  
X.XXD±0.01  
X.XXXL±0.005

SEE BOM

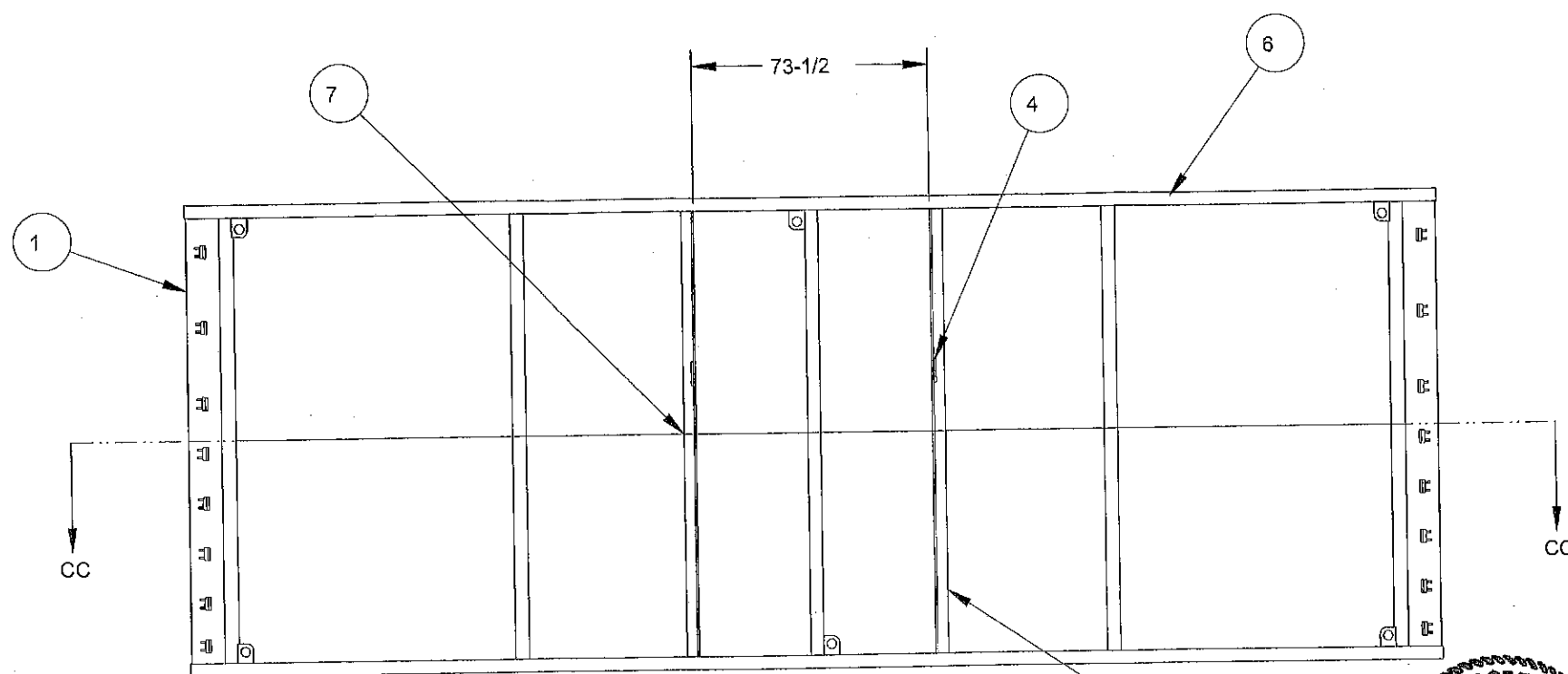
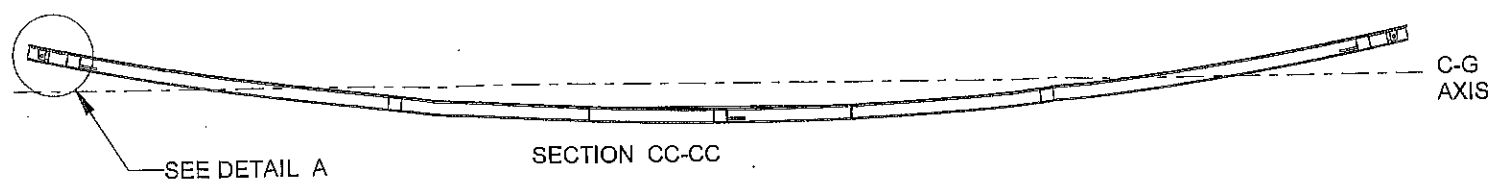
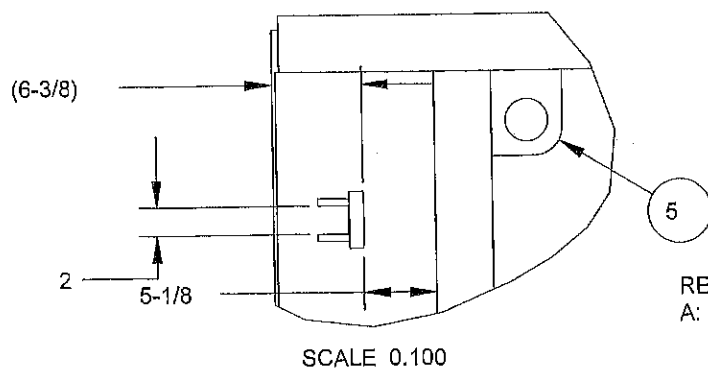
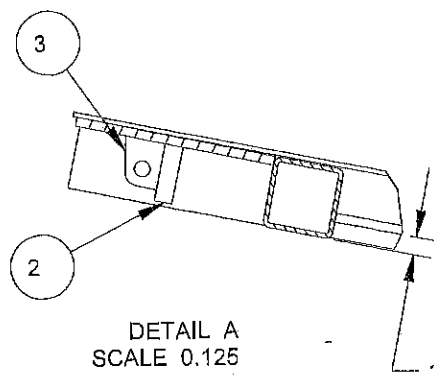
SHEET 1 OF 1

40K ASSEMBLY

MCR 3/15/2013

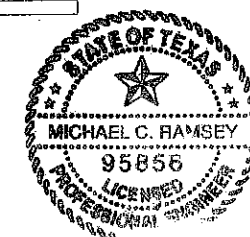
40K-ASSEMBLY

ITEM	PART NUMBER	QTY
1	40K-004	2
2	40K-005	16
3	40K-006	32
4	40K-008	2
5	40K-009	6
6	40K-200	1
7	40K-007(L)	1
8	40K-007(R)	1



REVISION NOTES:  
A: CHANGED HEIGHT TO MATCH PRODUCT. ADDED LIFTING LUGS.

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TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.X0±0.05  
X.XX0±0.01  
X.XXXL±0.005

RAMSEY  
ENGINEERING

SEE BOM

REV A

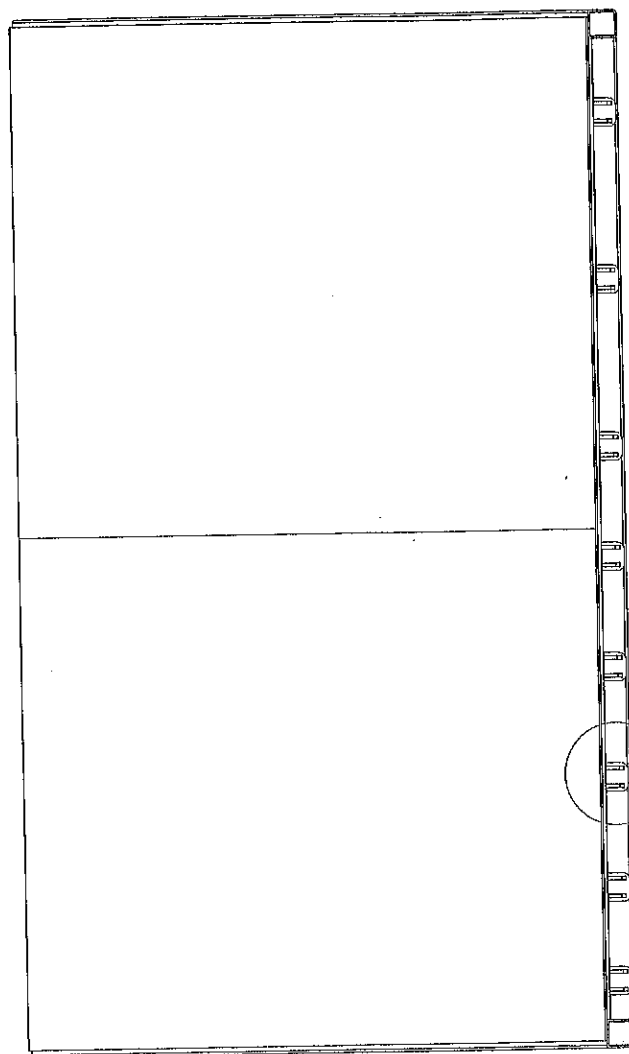
SHEET 1 OF 2

40K-300

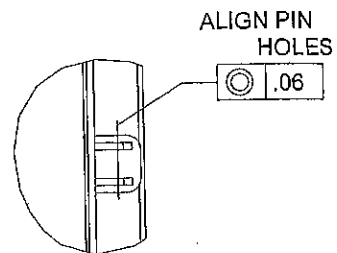
MCR 10/31/12

40K-300

NOTES:  
1) ALIGN TABS WITHING 1/16 OF PLANE ESTABLISHED BY THE AVERAGE OF 3 NEAREST TABS.



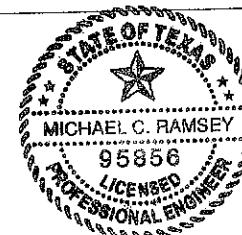
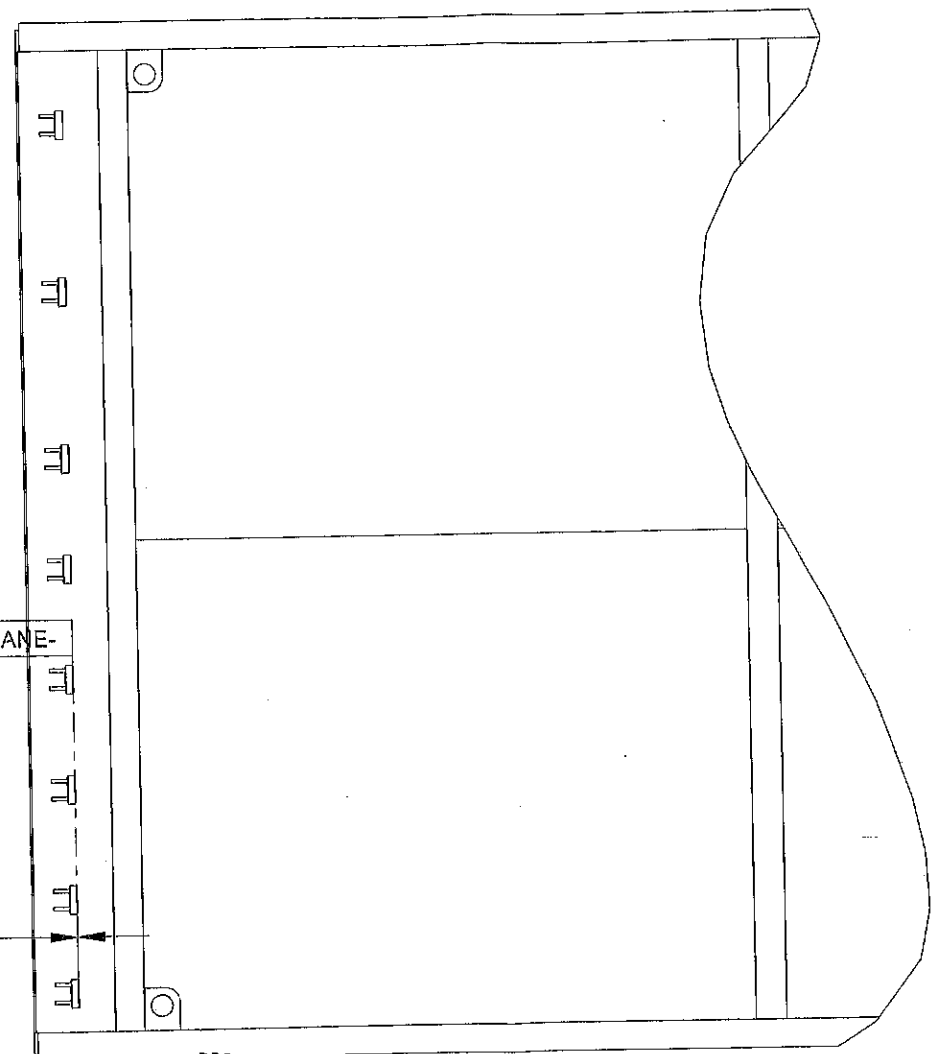
DETAIL B  
SCALE 0.100



-TAB\_PLANE-

SEE DETAIL B

.00 SEE NOTE 1		
$\phi$	.06	TAB_PLANE
//	.06	TAB_PLANE



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TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.X0±0.05  
X.XX±0.01  
X.XXX±0.005

RAMSEY  
ENGINEERING

REV A

SHEET 2 OF 2

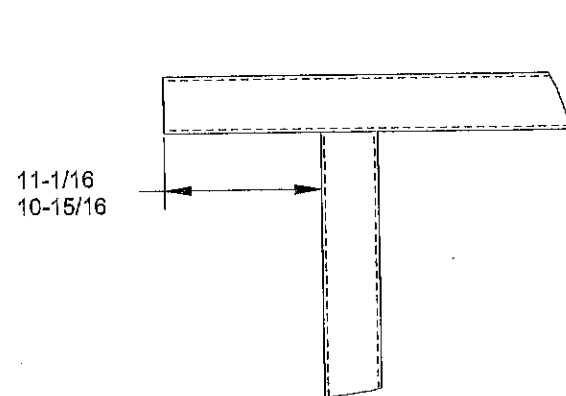
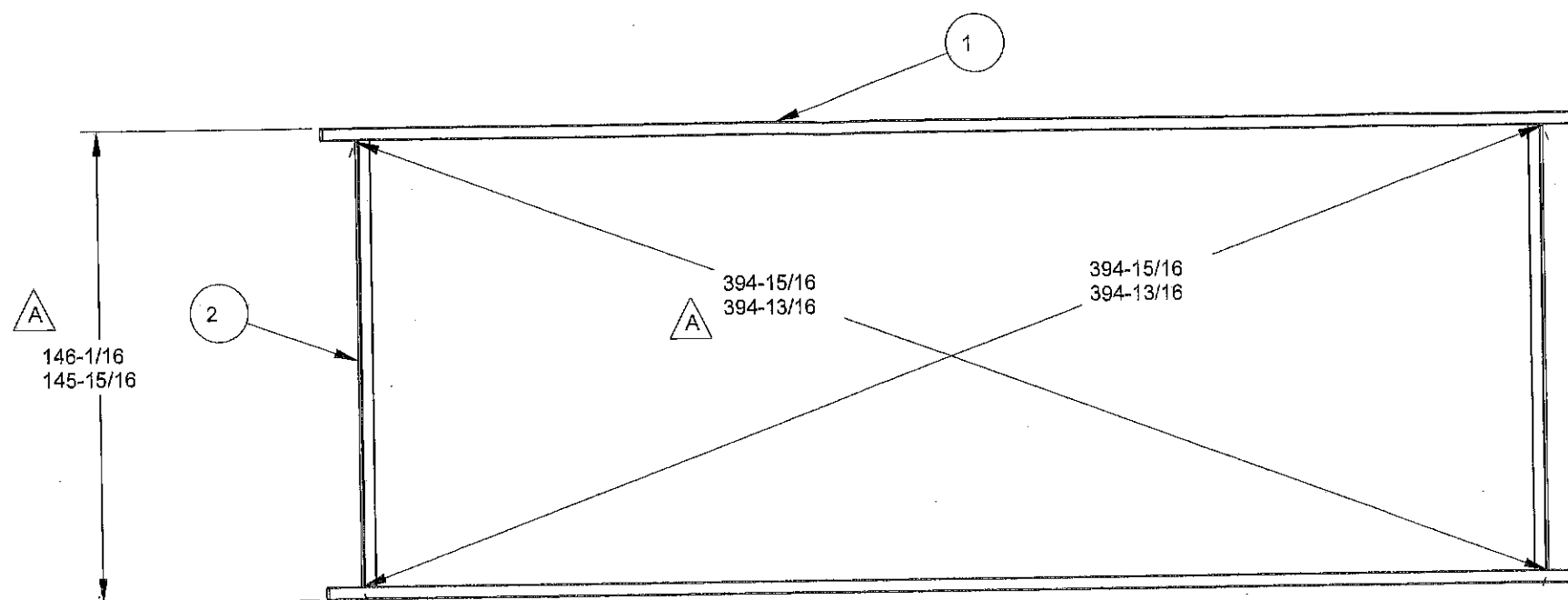
40K-300

MCR 10/31/12

40K-300



ITEM	PART NUMBER	QTY
1	40K-001	2
2	40K-002	2



SCALE 0.100

REVISION NOTES:  
A: CHANGED HEIGHT TO MATCH PRODUCT.

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OTHERWISE  
X.XD±0.05  
X.XX±0.01  
X.XXX±0.005

**RAMSEY  
ENGINEERING**

SEE BOM

REV A

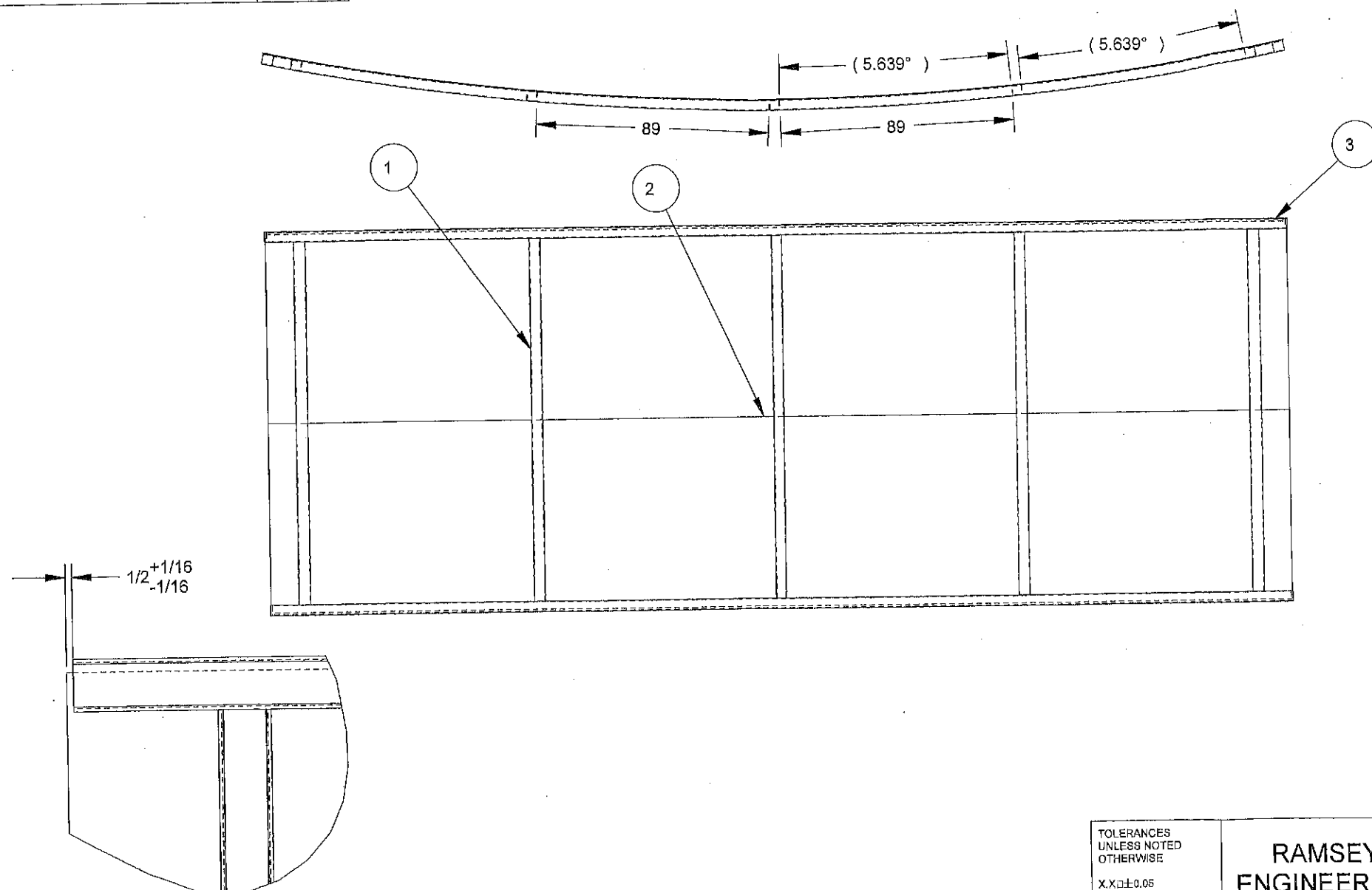
SHEET 1 OF 1

40K-100

MCR 10/31/12

40K-100

ITEM	PART NUMBER	QTY
1	40K-002	3
2	40K-003	2
3	40K-100	1



SCALE 0.125

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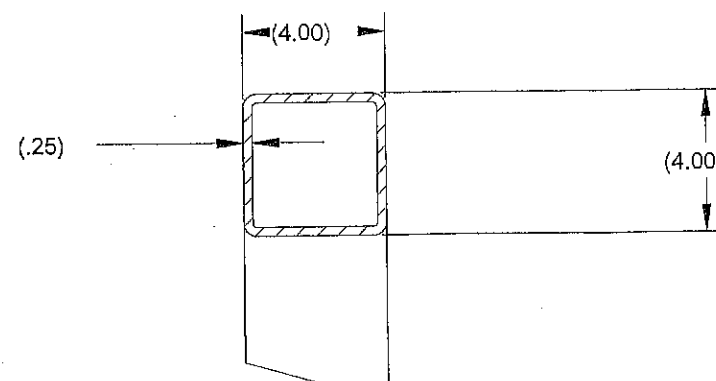
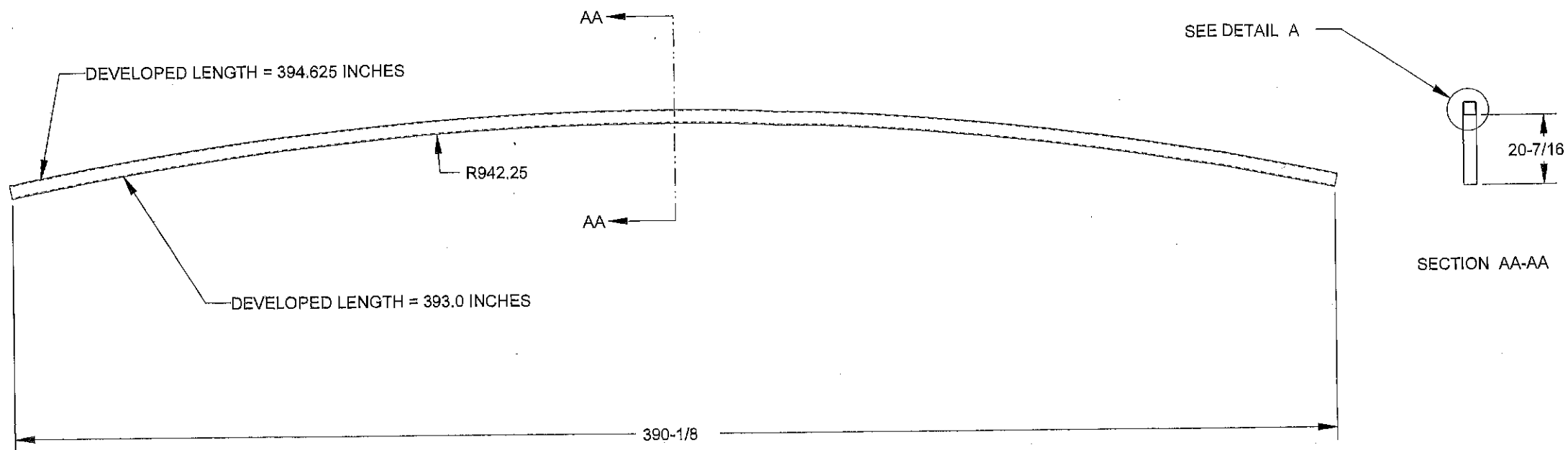
TOLERANCES  
UNLESS NOTED  
OTHERWISE  
  
X.XX±0.05  
X.XXX±0.01  
X.XXX±0.005  
  
SEE BOM

**RAMSEY  
ENGINEERING**

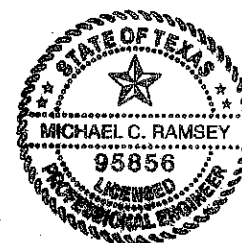
SHEET 1 OF 1	
40K-200	
MCR 10/31/12	
40K-200	

40K Components

40K Components



DETAIL A  
SCALE 0.250



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TOLERANCES  
UNLESS NOTED  
OTHERWISE

X.X0±0.05  
X.XX0±0.01  
X.XXX±0.005

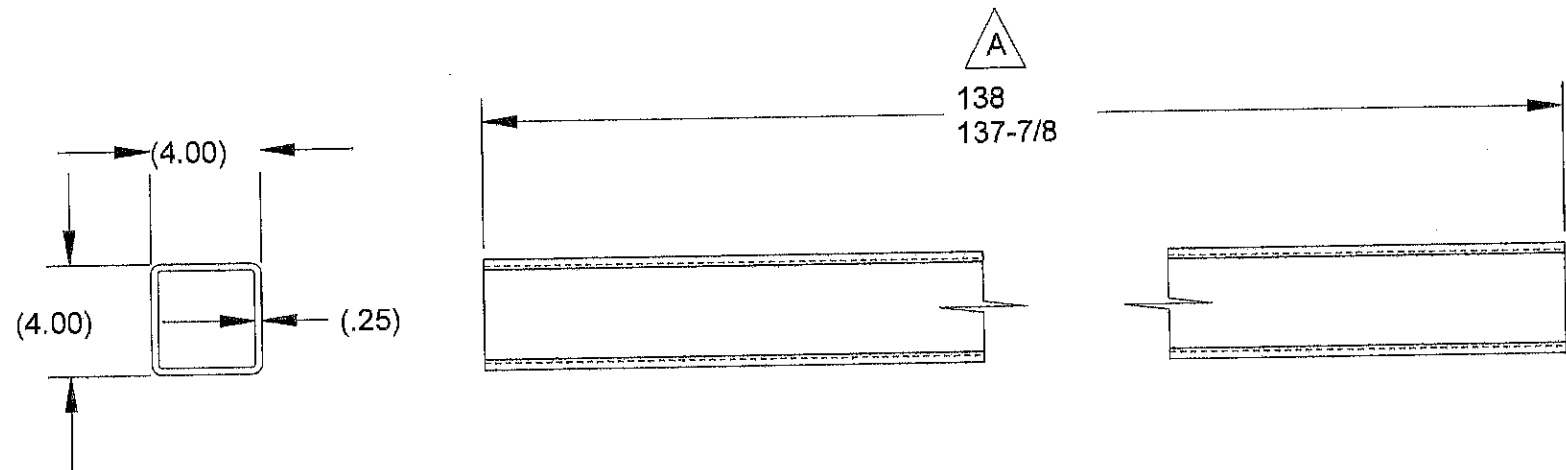
**RAMSEY  
ENGINEERING**

ASTM A500 GR B

SHEET 1 OF 1

TUBING, BENT

40K-001



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TOLERANCES  
UNLESS NOTED  
OTHERWISE

X.X□±0.05  
X.XX□±0.01  
X.XXX□±0.005

RAMSEY  
ENGINEERING

ASTM A500 GR B

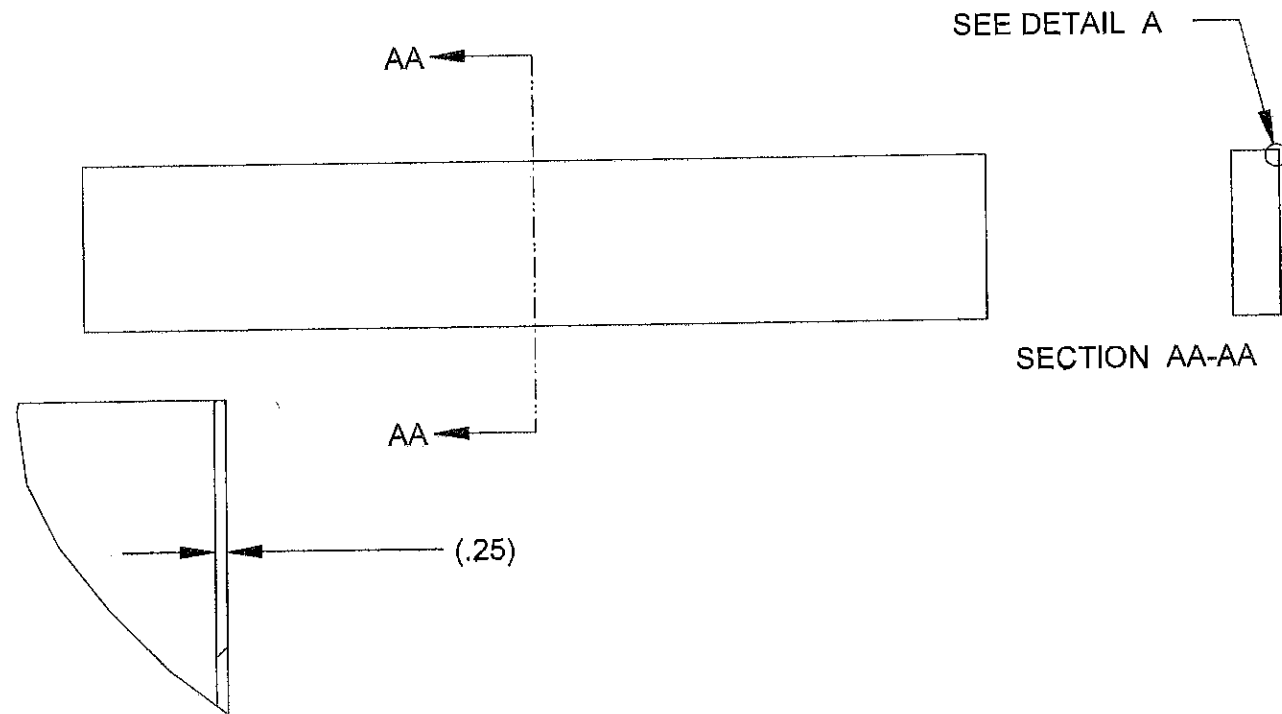
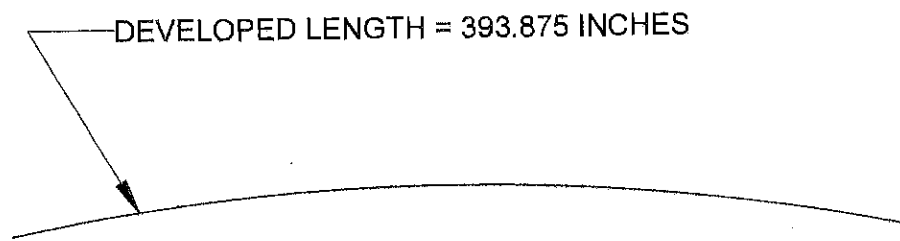
REV A

SHEET 1 OF 1

40K-002

MCR 10/30/2012

40K-002



DETAIL A  
SCALE 0.250

SEE DETAIL A

SECTION AA-AA



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TOLERANCES  
UNLESS NOTED  
OTHERWISE

X.X□±0.05  
X.XX□±0.01  
X.XXX□±0.005

RAMSEY  
ENGINEERING

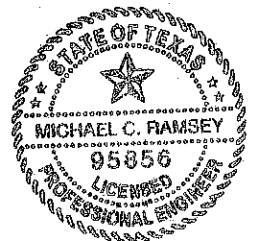
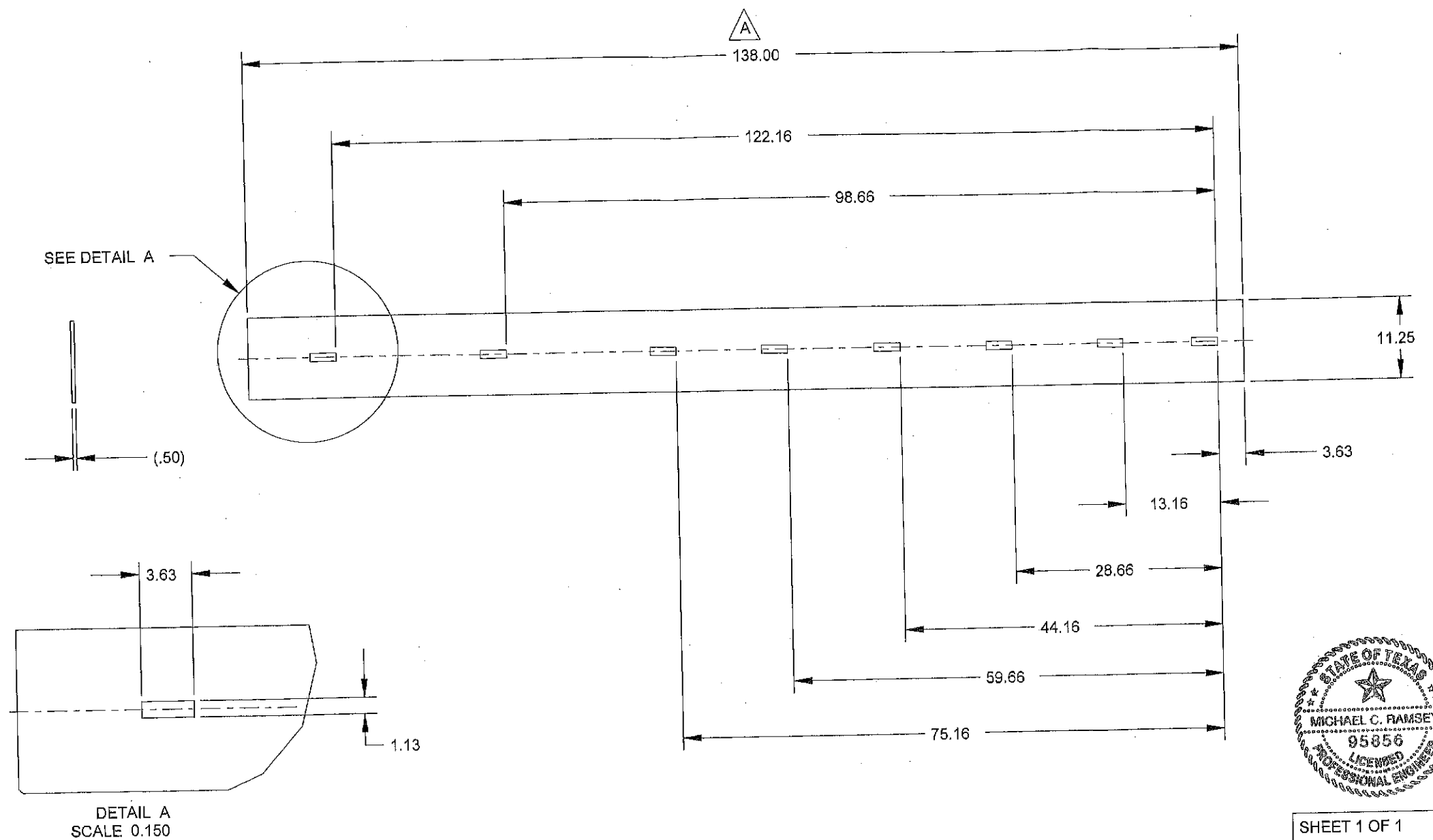
ASTM A36 OR EQV

SHEET 1 OF 1

40K-003

MCR 10/31/12

40K-003



REVISION NOTES:  
A: CHANGED LENGTH TO MATCH PRODUCT.

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TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.XCH±0.05  
X.XXD±0.01  
X.XXXL±0.005

**RAMSEY  
ENGINEERING**

ASTM A36 OR EQV

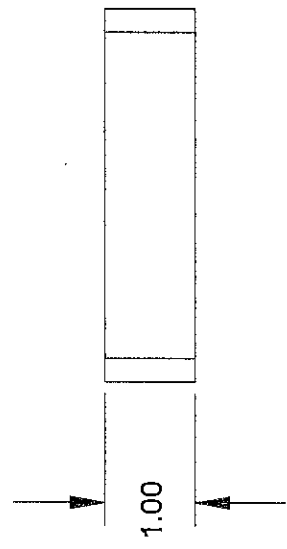
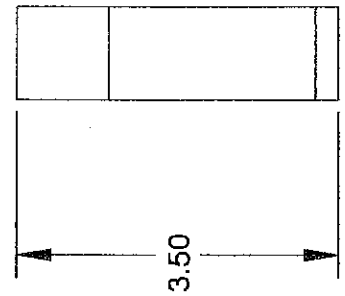
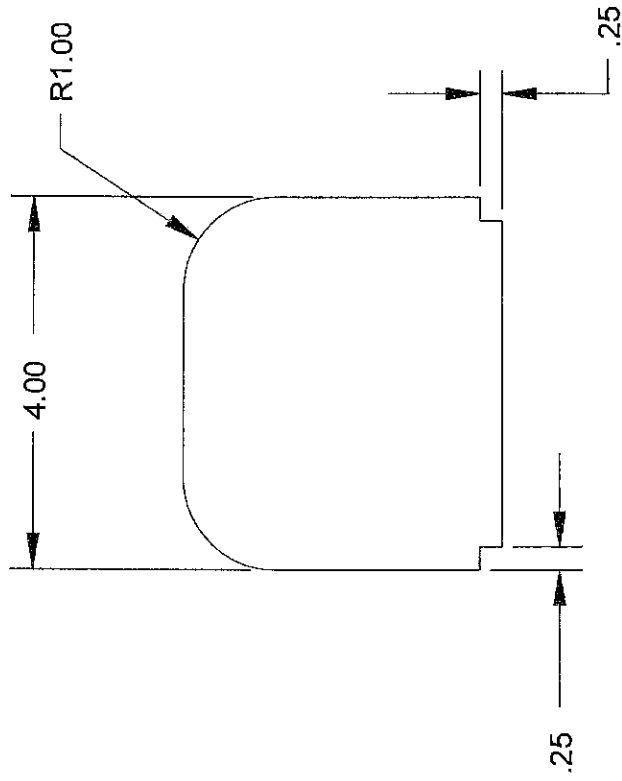
REV A

SHEET 1 OF 1

40K-004

MCR 10/30/12

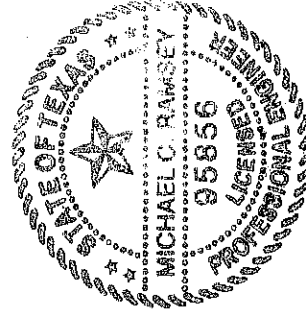
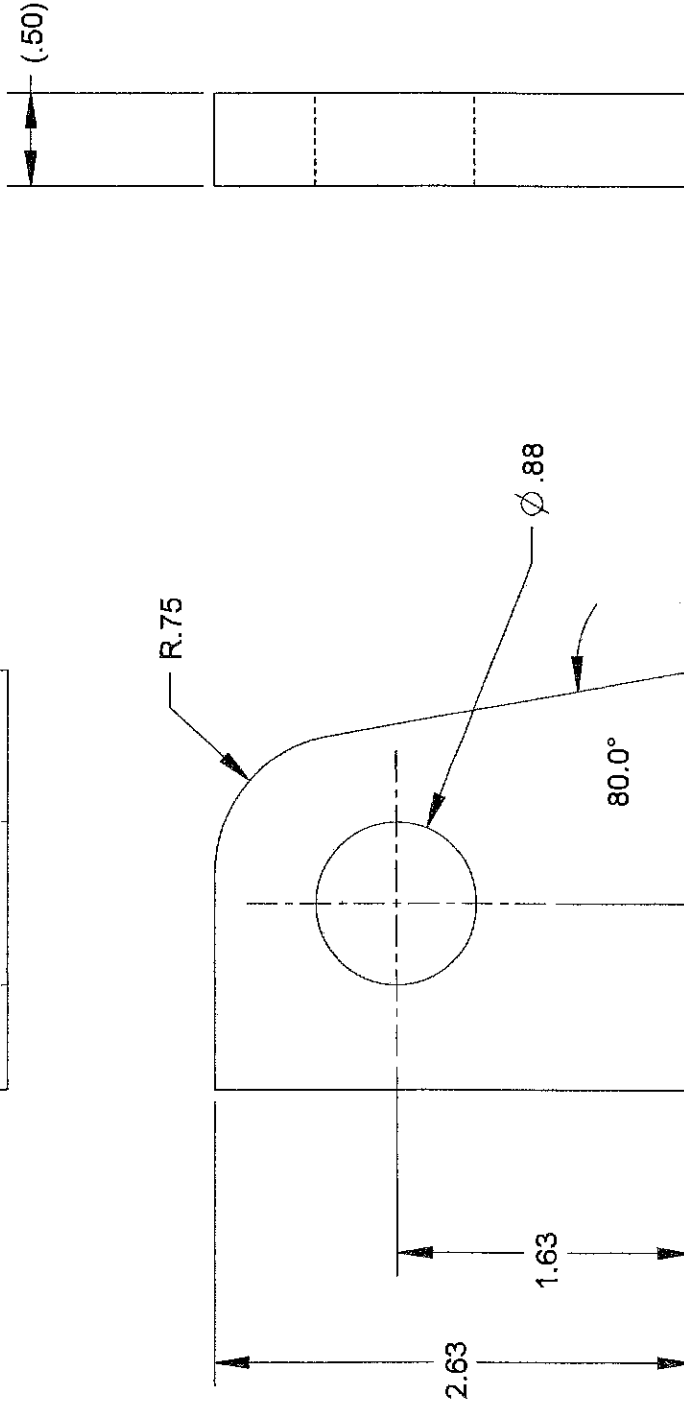
40K-004



SHEET 1 OF 1		RAMSEY ENGINEERING	
TOLERANCES UNLESS NOTED OTHERWISE		40K-005	
XX□□±0.05			
XX□□±0.01			
XX□□±0.005			
ASTM A36 OR EQV		40K-005	

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TOLERANCES  
UNLESS NOTED  
OTHERWISE

X.XX ± 0.05  
X.XX ± 0.01  
X.XX ± 0.005

ASTM A36 OR EQV

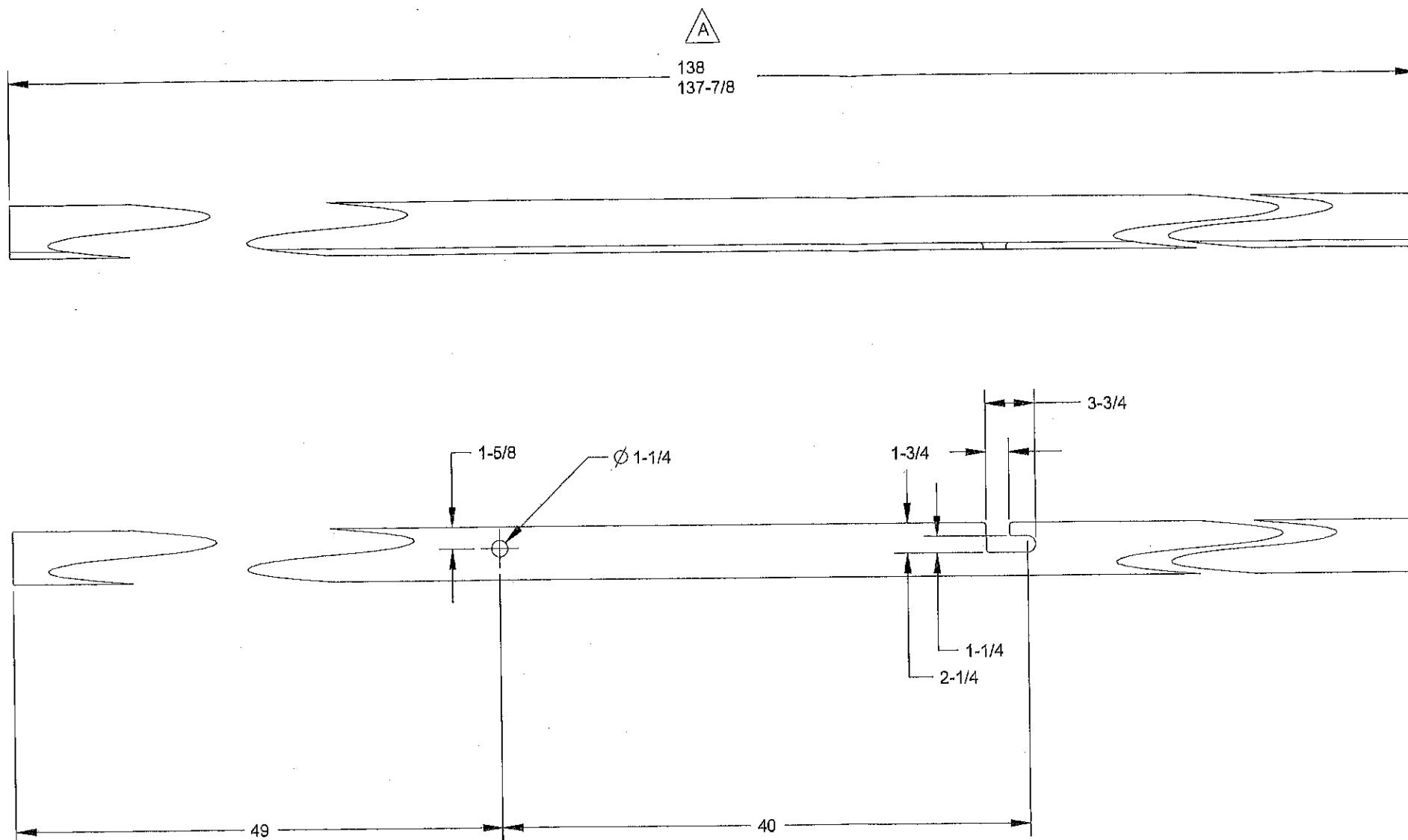
RAMSEY  
ENGINEERING

SHEET 1 OF 1

40K-006

40K-006

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TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.XX $\pm$ 0.05  
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X.XXXL $\pm$ 0.005

RAMSEY  
ENGINEERING

ASTM A36 OR EQV

REV A

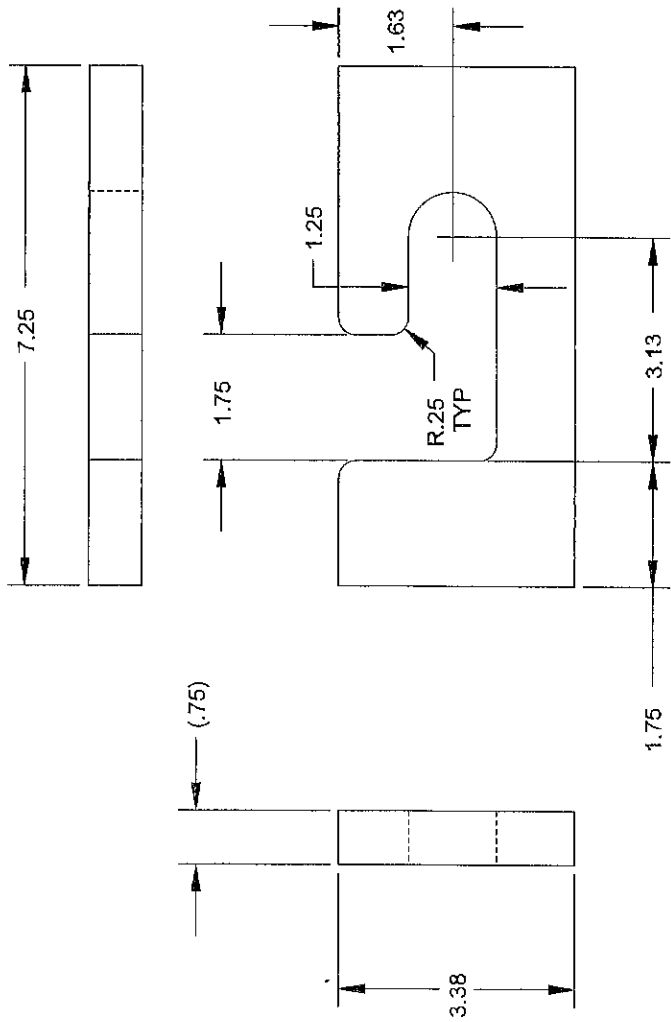


SHEET 1 OF 1

40K-007

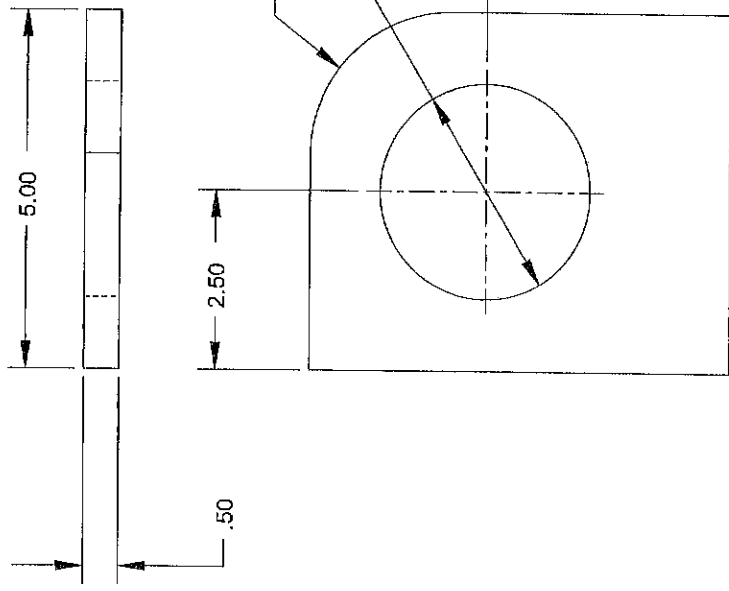
MCR 10/30/12

40K-007



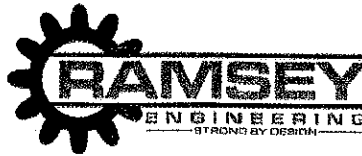
SHEET 1 OF 1	
40K-008	
RAMSEY ENGINEERING	
TOLERANCES UNLESS NOTED OTHERWISE	
X.XX ± 0.05	
X.XX ± 0.01	
X.XX ± 0.005	
ASTM A36 OR EQV.	40K-008

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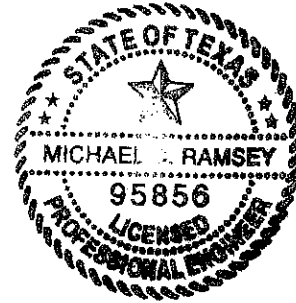
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SHEET 1 OF 1	
LUG, LIFTING	
MCR 10/31/12	
40K-009	
RAMSEY ENGINEERING	
TOLERANCES UNLESS NOTED OTHERWISE	ASTM A36 OR EQV.
X.XX $\pm$ 0.05	
X.XX $\pm$ 0.01	
X.XXX $\pm$ 0.005	



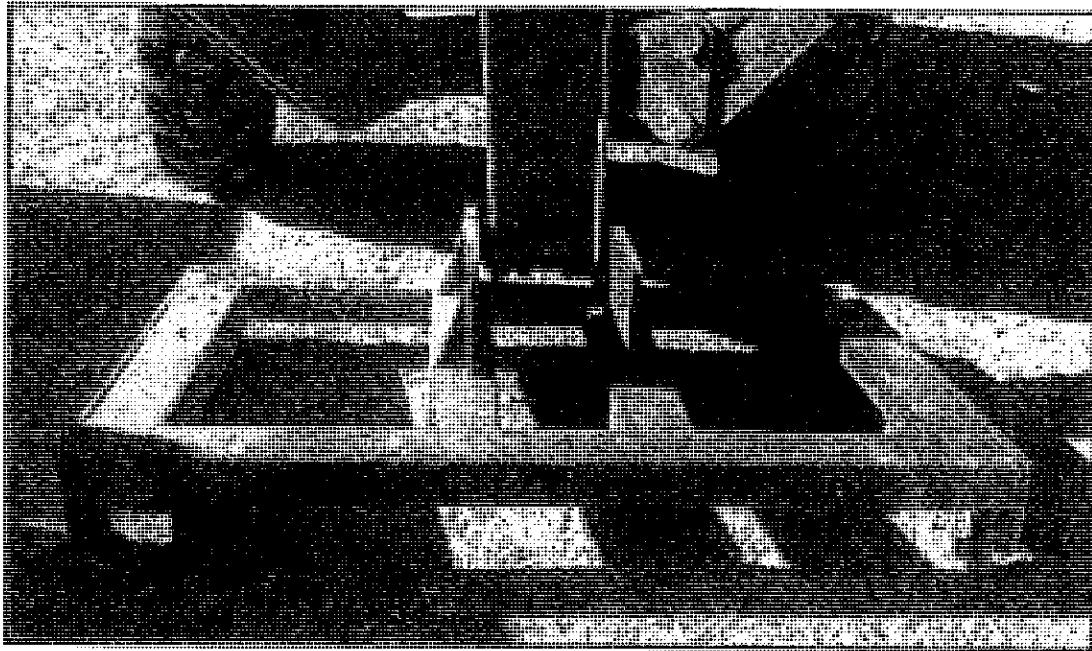
## Fork-Lift Attachment for Lifting Tank Panels

**Date:** 6/20/2013  
**To:** Danny Owens, Three Amigos Rentals  
**Cc:** File (3 pages)  
**From:** Mike Ramsey, P.E.  
**RE:** Sky-Trac Attachment



### Background

Three Amigos Rentals operates a fork-lift attachment used to lift Tank Panels and set them in place. This design has been analyzed according to ASME BTH-1 to determine the safe working load:



### Description of Loads

The loads on the lifter attachment are due to the weight of the panels, as well as the dynamic loads induced by movement of the fork-lift over rough terrain, as well as wind loads. Due to the nature of the environmental conditions, the lifter is described as a "Design Category B" device per ASME BTH-1.

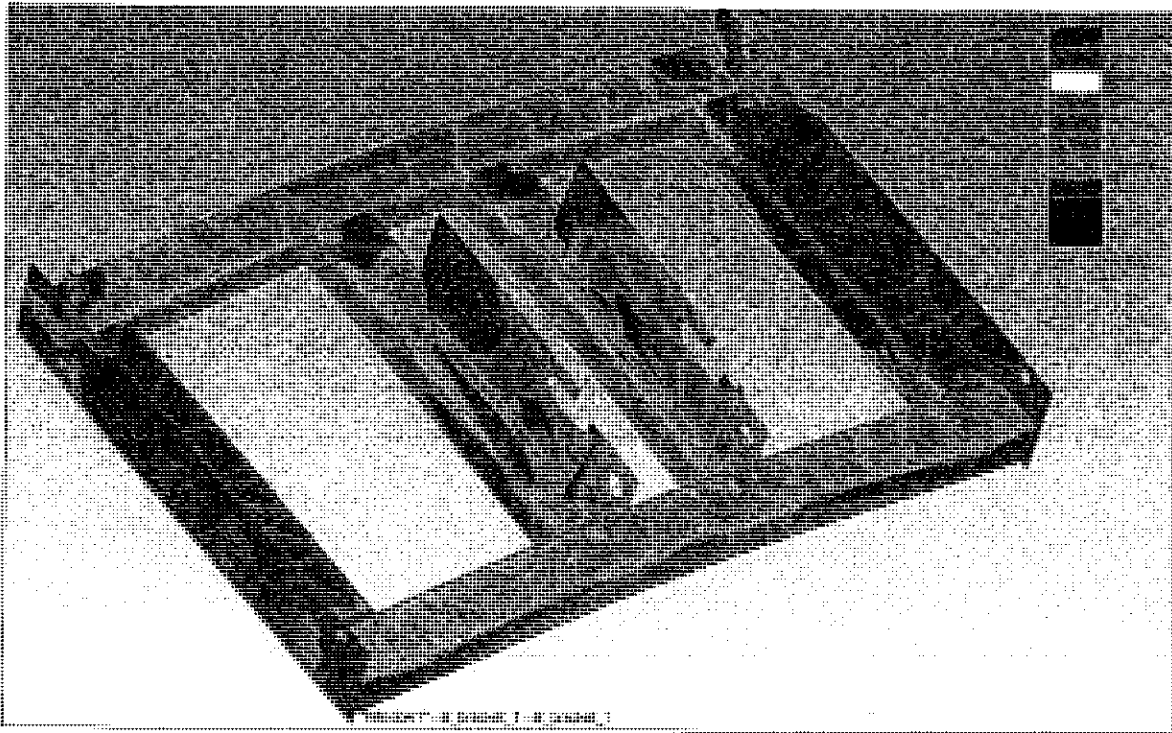
### Design Factor

A design category "B" device requires a design factor of 3:1 against the material yield stress.

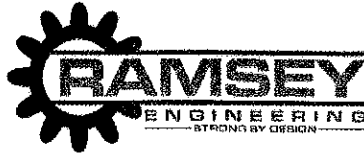


### Analysis Method

The lifter structure is analyzed using a combination of direct analysis, Finite Element Analysis (FEA), and hand calculations.

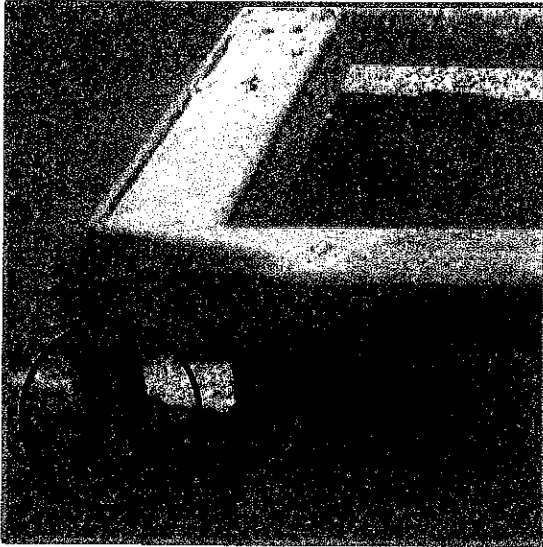


The above stress plot shows the Von Mises stress due to the weight of the panels.



### Analysis Results

The lifting structure is well designed and capable of sustaining the loads imposed by the panels. The limiting factor is the design of the connecting pins:



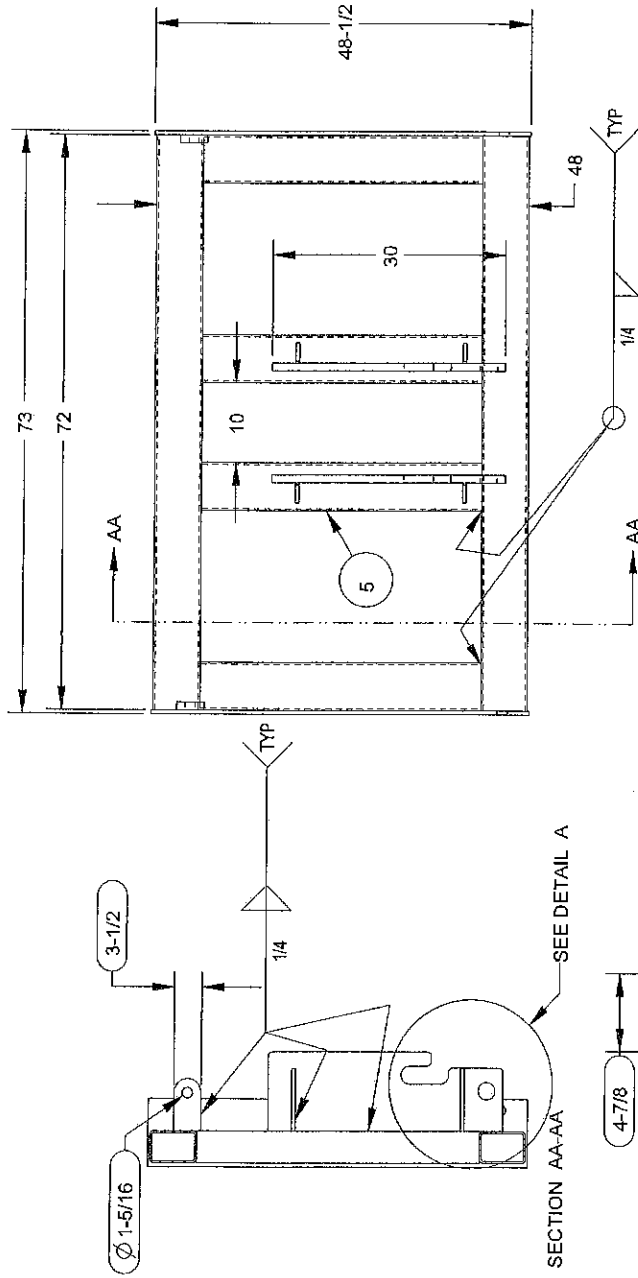
The pins should be made from a material with minimum yield strength of 70 KSI, and a diameter of 1.125 inches.

### Conclusion

The design, as described by drawing "ST-BRACKET", is well suited for the purpose and should be marked according to ASME B30.20 with a maximum load of 7000 lbs, Design Category "B", Service Class "1". The connecting pins should be inspected regularly, as they are the limiting factor in the design.

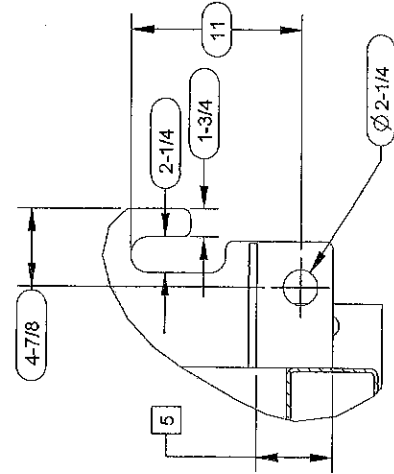
MAXIMUM SAFE WORKING LOAD: 7,000 LBS  
 DESIGNED FOR LIFTING THREE AMIGOS TANK PANELS ONLY.  
 USE 1-1/8" PINS (4 EACH), MIN YIELD 70 KSI.

ITEM	DESCRIPTION	QTY
1	ASTM A36 2-1/2 X 1/2	4
2	ASTM A36 3-1/2 X 1	2
3	ASTM A36 8-1/2 X 1/2	2
4	ASTM A36 9-7/8 X 1	2
5	ASTM A500 GR B 4X6X1/4	6

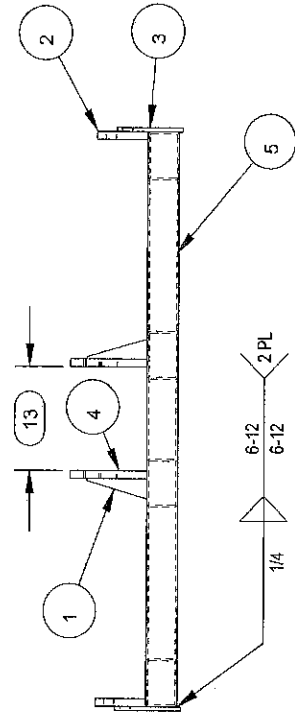


SECTION AA-AA

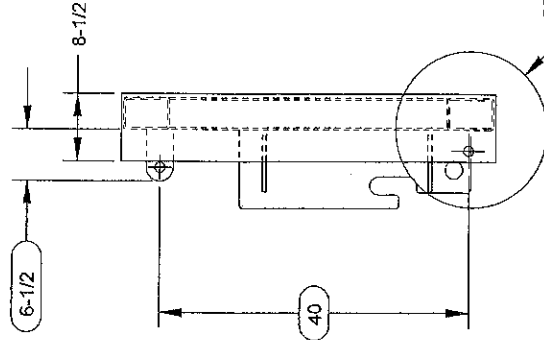
SEE DETAIL A



DETAIL A  
 SCALE 0.132



DETAIL B  
 SCALE 0.132



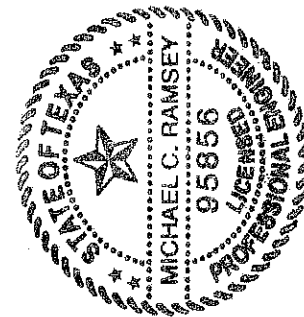
SEE DETAIL B

TOLERANCES UNLESS NOTED OTHERWISE XX ±0.05 XXX ±0.01 XXX ±0.005	SHEET 1 OF 1	
	BRACKET, SKY-TRAC	
	mcr 6/18/2013	
WELD PER AWS D1.1		ST-BRACKET

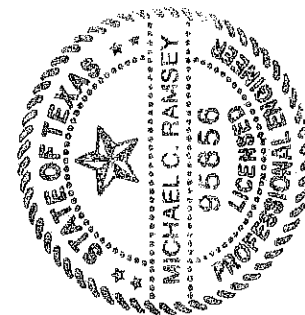
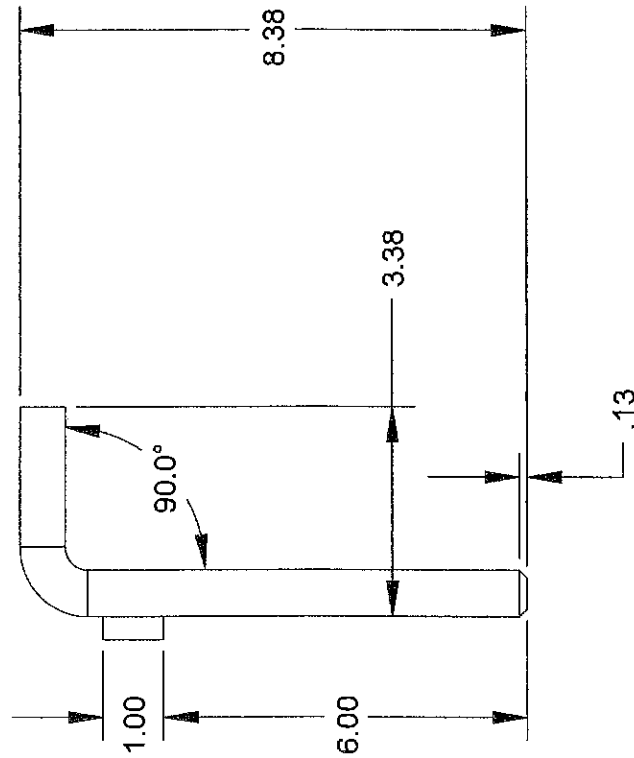
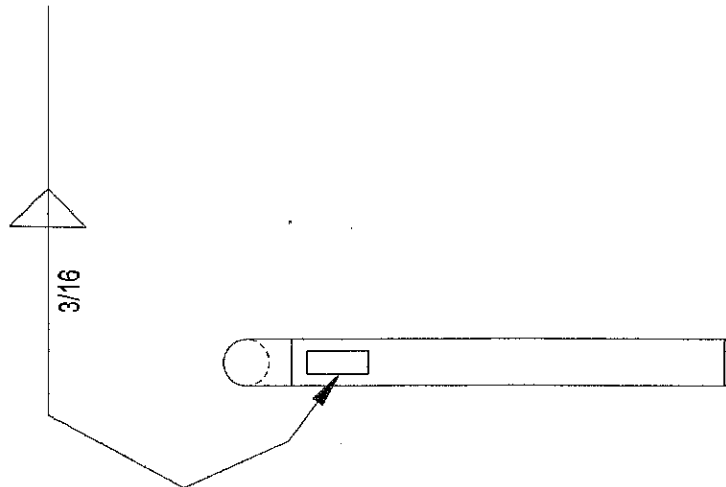
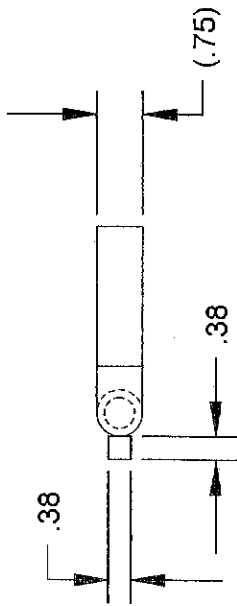
RAMSEY  
 ENGINEERING

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LC-001



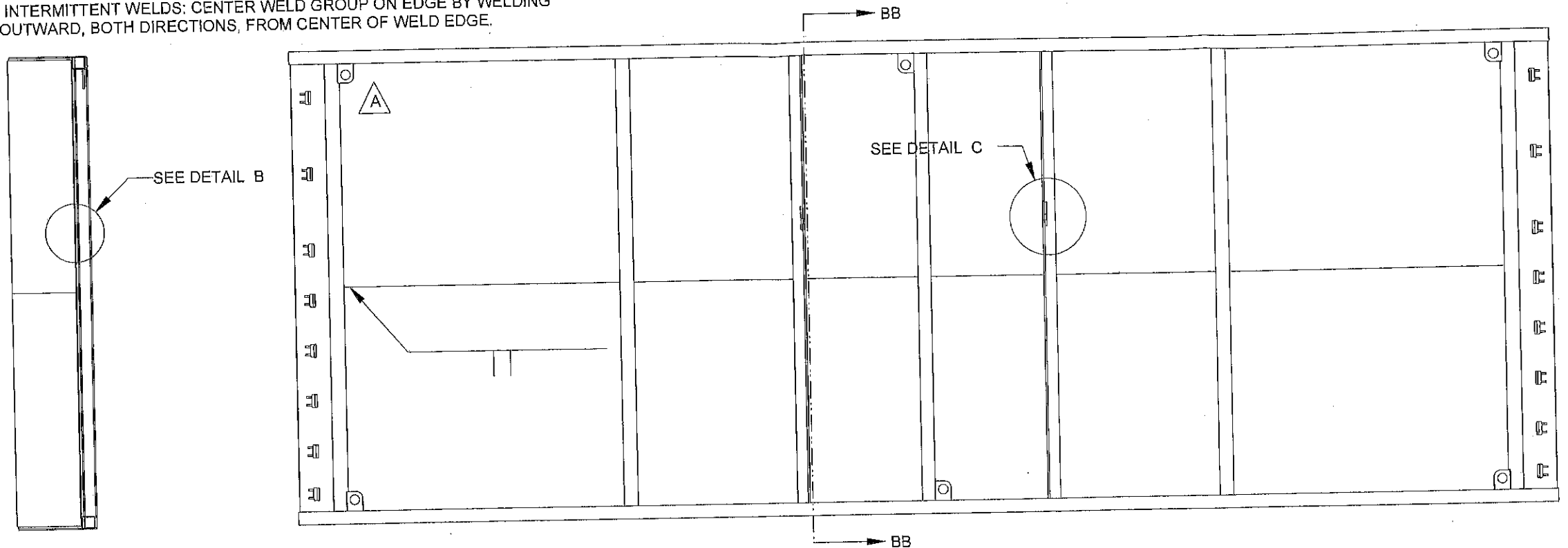
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FOR ANY REASON OTHER THAN THAT EXPLICITLY AUTHORIZED BY MICHAEL C RAMSEY.

SHEET 1 OF 1	
PIN, LOCKING	
MCR 3/31/2013	
LC-002	
TOLERANCES UNLESS NOTED OTHERWISE	RAMSEY ENGINEERING
XX ± 0.05 XX ± 0.01 XXX ± 0.005	ASTM 1040 CR

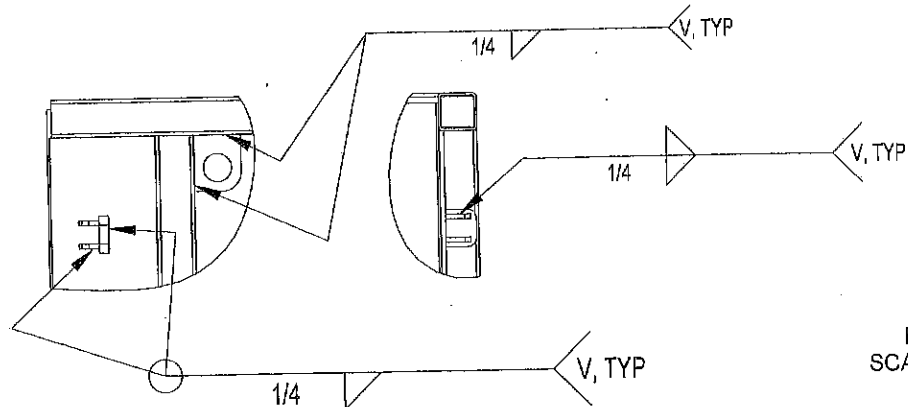
## Welding Instructions

**WELD NOTES:**

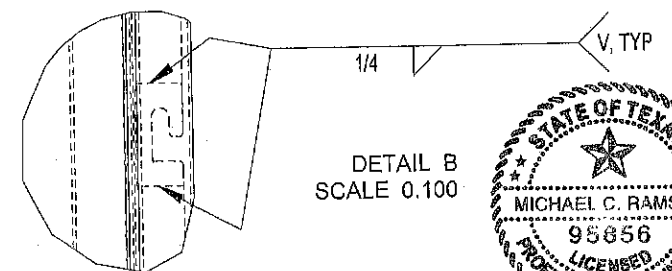
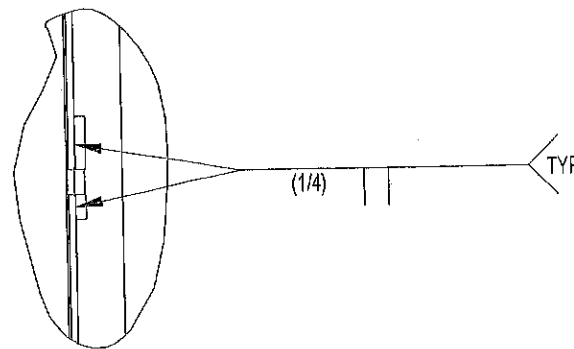
- 1) WELD PER AWS D1.1
- 2) "V" INSPECTION NOTES: CRITICAL WELD. VISUAL INSPECTION REQUIRED BY CWI.
- 3) INSPECT NON-CRITICAL WELDS BY SHOP QUALIFIED INSPECTOR.
- 4) INTERMITTENT WELDS: CENTER WELD GROUP ON EDGE BY WELDING OUTWARD, BOTH DIRECTIONS, FROM CENTER OF WELD EDGE.



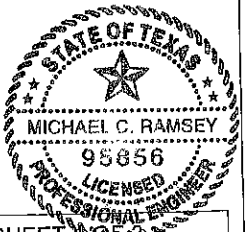
SECTION BB-BB



DETAIL C  
SCALE 0.100



DETAIL B  
SCALE 0.100

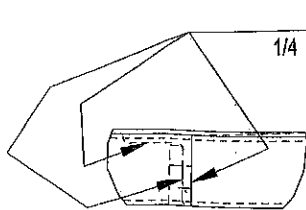
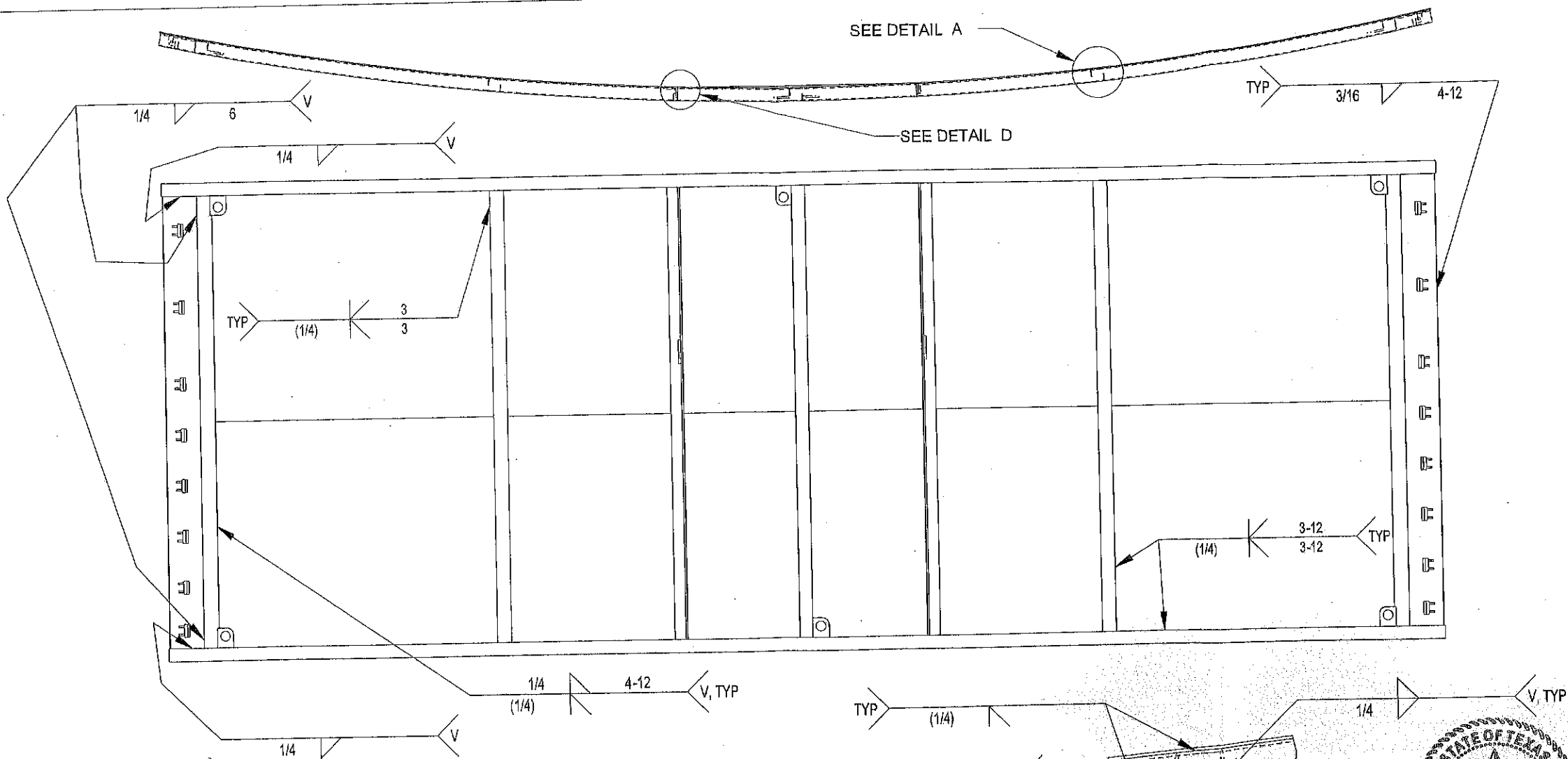


TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.XX±0.05  
X.XXX±0.01  
X.XXXL±0.005

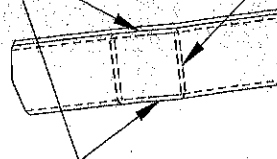
**RAMSEY  
ENGINEERING**

SHEET 1 OF 3	
40K WELD MAP	
MCR 10/31/12	
WELD_MAP_2	

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DETAIL D  
SCALE 0.125



DETAIL A  
SCALE 0.125

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TOLERANCES UNLESS NOTED OTHERWISE
X.X□±0.05
X.XX□±0.01
X.XXX□±0.005

**RAMSEY  
ENGINEERING**



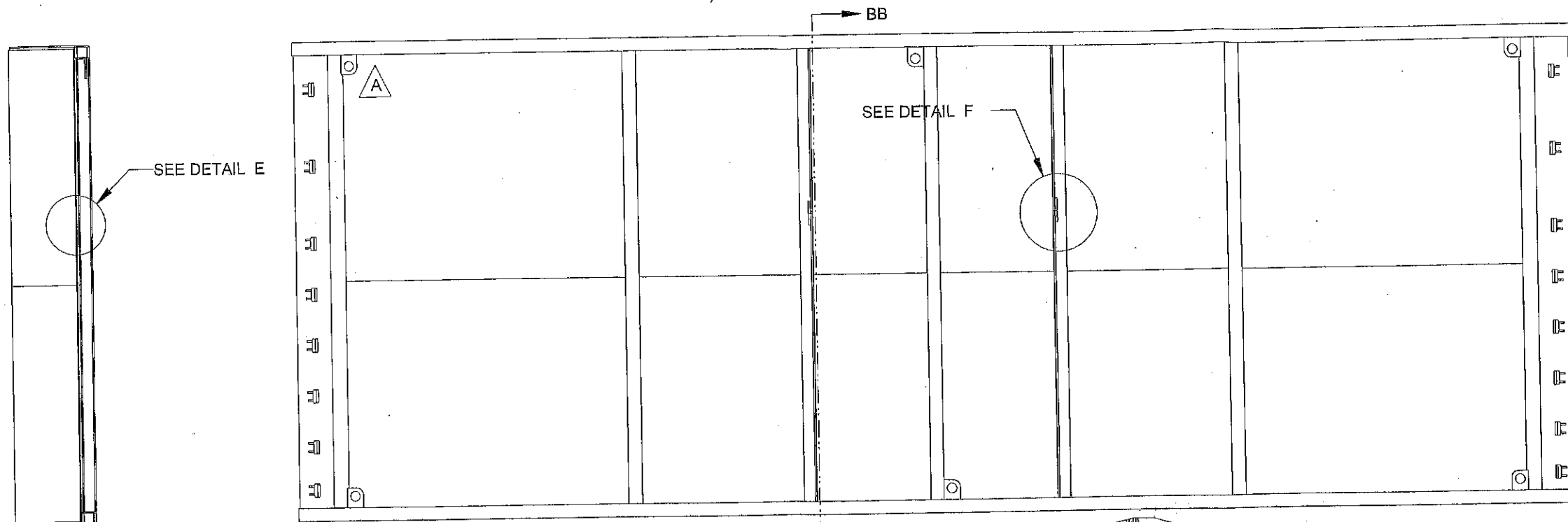
SHEET 2 OF 3
40K WELD MAP
MCR 10/31/2012
WELD_MAP_2

**PRE-USE INSPECTION NOTES:**

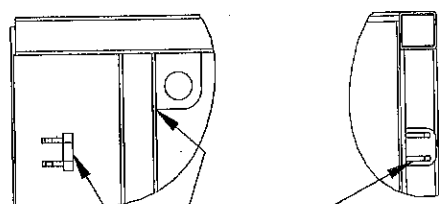
- 1) INTERVAL: AFTER EACH TEAR-DOWN.
- 2) CHECK TANK FOR DEFORMATION AND DAMAGE.
- 3) VISUALLY INSPECT ALL WELDS FOR BREAKS.
- 4) INSPECT INNER SURFACE FOR NICKS, FOREIGN OBJECTS, AND SHARP EDGES.

**ANNUAL INSPECTION NOTES:**

- 1) INTERVAL: ONCE ANNUALLY.
- 2) CHECK TANK FOR DEFORMATION AND DAMAGE.
- 3) VISUALLY INSPECT ALL WELDS FOR BREAKS.
- 4) INSPECT INNER SURFACE FOR NICKS, FOREIGN OBJECTS, AND SHARP EDGES.
- 5) INSPECT MARKED AREAS USING MAG PARTICLE INSPECTION.

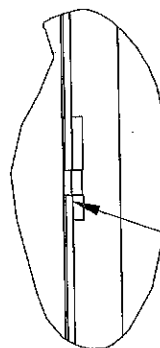


SECTION BB-BB

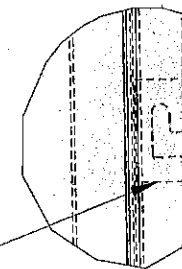


INSPECT LUG WELDS  
USING MAG PARTICLE.

DETAIL F  
SCALE 0.100



INSPECT FORK-LIFT ATTACHMENT  
WELDS USING MAG PARTICLE.

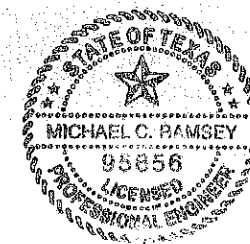


DETAIL E  
SCALE 0.100

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TOLERANCES  
UNLESS NOTED  
OTHERWISE  
X.XD±0.05  
X.XXD±0.01  
X.XXXL±0.005

**RAMSEY  
ENGINEERING**



SHEET 3 OF 3

40K WELD MAP

MCR 10/31/12

WELD\_MAP\_2



# SOLMAX

## LIST OF GEOMEMBRANE ROLLS

Solmax, 2801 Boul. Marie-Victorin, Varennes, Qc, Canada, J3X 1P7  
Tél.: 1-450-929-1234 • Fax.: 1-450-929-2547 • www.solmax.com

Project Name : **PO 3292-2 - Odessa, TX**

Reference Number : **111550**

Project Number : **3292-2**

Packing Slip Number : **224726**



Roll Number	Product Code	Resin Lot Number	Manufactured Date	Resin Melt Index 190/2.16 g/10 min D1238	Resin Density g/cc D1505	OIT Spec Result min D3895	HPOIT Spec Result min D5885	ESCR SP-NCTL Spec Roll Tested hours D5397
<b>LLDPE 40 mils White Reflective Smooth</b>								
5-35524	1008348-56350-1	CJB810750	23-mars-18	0.32	0.919	100 > 120		N/A
5-35539	1008348-56350-1	CJB810750	24-mars-18	0.32	0.919	100 > 120		N/A
5-35540	1008348-56350-1	CJB810750	24-mars-18	0.32	0.919	100 > 120		N/A
5-35542	1008348-56350-1	CJB810500	24-mars-18	0.36	0.919	100 > 120		N/A
5-35543	1008348-56350-1	CJB810500	24-mars-18	0.36	0.919	100 > 120		N/A
5-35550	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35551	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35552	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35553	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35554	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35556	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A
5-35557	1008348-56350-1	CJB810500	25-mars-18	0.36	0.919	100 > 120		N/A

Quantity (rolls) : **12**

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Project Name **PO 3292-2 - Odessa, TX**

Reference Number : **111550**

Project Number : **3292-2**

Packing Slip Number : **224726**

Product **1008348-56350-1**

LLDPE 40 mils White Reflective Smooth

CE Certificate = LL-40-SS-WB

Properties	Thickness ave / min.	Geo- membrane Density	Carbon Black Content	Carbon Black Dispersion	Tensile				Tear Resist.	Puncture Resist.	Dimension. Stability	Asperity Height in / out
Unit	mils	g/cc	%	Cat. 1 and 2	Yield Strength	Elong.	Break Strength	Elong.	lbs	lbs	%	mils
Test Method	D5199	D1505/D792	D4218 / D1603	D5596	D6693				D1004	D4833	D1204	
Frequency	Each roll		1/2 ro	1/10 ro	1/2 ro				1/5 ro	1/5 ro	Certied	N/A
Specification	40.0 / 36.0	≤ 0.939	2.0 - 3.0	Cat. 1 - Cat. 2			168	800	22	62	± 2	
5-35524 MD XD	40.6 / 39	0.937	2.68	10/10 Views			211 214	873 980	25.7 27.1	92.9		/
5-35539 MD XD	40.1 / 39	0.937	2.25	10/10 Views			211 197	864 915	25.6 26.9	90.4		/
5-35540 MD XD	40.4 / 39	0.937	2.25	10/10 Views			211 197	864 915	25.1 27.3	88.9		/
5-35542 MD XD	40.6 / 39	0.937	2.39	10/10 Views			210 206	860 939	25.1 27.3	88.9		/
5-35543 MD XD	40.6 / 39	0.937	2.23	10/10 Views			213 209	866 942	25.1 27.3	88.9		/
5-35550 MD XD	41.4 / 40	0.936	2.59	10/10 Views			221 217	913 1011	25.9 27.7	88.6		/
5-35551 MD XD	40.7 / 39	0.936	2.68	10/10 Views			215 222	878 1031	25.9 27.7	88.6		/
5-35552 MD XD	40.9 / 39	0.936	2.68	10/10 Views			215 222	878 1031	25.9 27.7	88.6		/
5-35553 MD XD	40.8 / 39	0.937	2.83	10/10 Views			218 220	894 1028	25.0 27.2	90.9		/
5-35554 MD XD	40.9 / 40	0.937	2.83	10/10 Views			218 220	894 1028	25.0 27.2	90.9		/
5-35556 MD XD	40.6 / 39	0.937	2.59	10/10 Views			210 216	855 1021	25.0 27.2	90.9		/
5-35557 MD XD	40.8 / 40	0.937	2.51	10/10 Views			225 216	926 1001	25.0 27.2	90.9		/

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## Certificate of Analysis

Shipped To: SOLMAX  
2801 BOUL MARIE-VICTORIN  
VARENNES QC J3X 1P7  
CANADA

Recipient: Marcotte  
Fax:

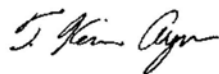
Delivery #: 89611704  
PO #: 116755-0  
Weight: 188300.000 LB  
Ship Date: 02/13/2018  
Package: BULK  
Mode: Hopper Car  
Car #: CPCX815050  
Seal No: 110664

Product:  
MARLEX 7104 POLYETHYLENE in Bulk  
Additive levels have been tested and meet minimum the specification for this lot.  
As a result, Standard OIT (by ASTM D 3895) is greater than 120 minutes (nominal value, not tested on every lot).

Lot Number: CJB810500

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.919	g/cm3

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPCChem).  
**However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.**



KEVIN AYRES  
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Melissa Alexander at +-832-813-4244

## Certificate of Analysis

Shipped To: SOLMAX  
2801 BOUL MARIE-VICTORIN  
VARENNES QC J3X 1P7  
CANADA

Recipient: Marcotte  
Fax:

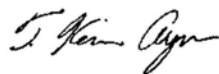
Delivery #: 89612650  
PO #: 116787-0  
Weight: 196150.000 LB  
Ship Date: 02/14/2018  
Package: BULK  
Mode: Hopper Car  
Car #: NAHX620433  
Seal No: 122023

Product:  
MARLEX 7104 POLYETHYLENE in Bulk  
Additive levels have been tested and meet minimum the specification for this lot.  
As a result, Standard OIT (by ASTM D 3895) is greater than 120 minutes (nominal value, not tested on every lot).

Lot Number: CJB810750

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.32	g/10min
Density	D1505	0.919	g/cm3

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KEVIN AYRES  
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