

MILLER CONSTRUCTION, INC.

P.O. BOX 86 ASCUTNEY BLVD WINDSOR, VERMONT 05089-0086
 TELEPHONE (802) 674-5525 / FAX (802) 674-5245

TRANSMITTAL

| | | |
|---|----------|----------------------------|
| TO: Jennifer Fitch, PE Project Manager Vermont Agency of Transportation | DATE | PROJECT NO. |
| | 6/5/2014 | Brookfield BRF FLBR (2) |
| | | |

XX

WE ENCLOSE THE FOLLOWING:

UNDER SEPARATE COVER WE ARE SENDING THE FOLLOWING

| COPIES | NUMBER | DESCRIPTION | CODE |
|--------|--------|---------------------------------------|------|
| 1 | | FRP Component Fabrication Drawings | H |
| 1 | | FRP Assembly Procedure Drawings | H |
| 1 | | FRP Web Plate and S.S. Shelf Drawings | H |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

CODE:

A FOR INITIAL APPROVAL

B FOR FINAL APPROVAL

C APPROVED AS NOTED-RESUBMISSION REQUIRED

D APPROVED AS NOTED-RESUBMISSION NOT REQUIRED

E DISAPPROVED-RESUBMIT

F QUOTATION REQUESTED

G APPROVED

H FOR APPROVAL

I AS REQUESTED OR REQUIRED

J FOR USE IN ERECTION

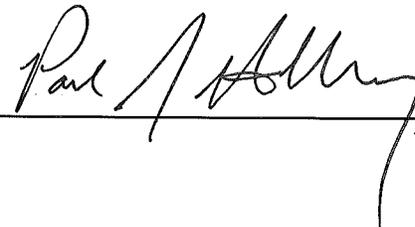
K LETTER FOLLOWS

L FOR FIELD CHECK

M FOR YOUR USE

PLEASE SEPARATE THE STAINLESS STEEL SHELF INTO ITS OWN FABRICATION SUBMITTAL (SEPRATE PAY ITEM)

BY:



STATE OF VERMONT

BROOKFIELD FLOATING BRIDGE

BRIDGE REPLACEMENT PROJECT

PROJECT NAME: BROOKFIELD

PROJECT NUMBER: BRF FLBR (2)

JUNE 4, 2014

FIBER REINFORCED POLYMER (FRP) PONTOON COMPONENT FABRICATION

Vermont Agency of Transportation
RECEIVED

CK'D BY _____ OK'D BY Jennifer Fitch

June 5, 2014

RESUBMIT Yes Rejected
BY Jennifer Fitch DATE 06/24/2014

T.Y. LIN INTERNATIONAL

THE STAMPED DOCUMENTS ARE HEREBY:

APPROVED
 APPROVED AS NOTED
 REVISE AND RESUBMIT

SEE TRANSMITTAL FOR ADDITIONAL INFORMATION AS APPLICABLE.

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REVIEWER

DATE

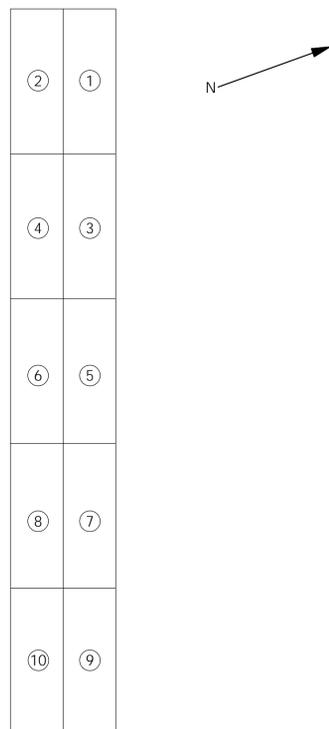
JOSH OLUND
REVIEWER

06/20/2014
DATE

SHEET INDEX:

- 00 COVER SHEET
- 01 GENERAL NOTES
- 02 HULL 3 TO 8 DIMENSIONS
- 03 HULL 3 TO 8 MATERIAL LAYUP SCHEDULE
- 04 END HULL DIMENSIONS
- 05 END HULL MATERIAL LAYUP SCHEDULE
- 06 HULL INFUSION LAYOUT AND DETAILS
- 07 BULKHEAD DIMENSIONS
- 08 END BULKHEADS LAYUP SCHEDULE
- 09 TRANSVERSE ROD BULKHEAD LAYUP SCHEDULE
- 10 MIDDLE LONGITUDAL BULKHEAD LAYUP SCHEDULE
- 11 END LONGITUDAL BULKHEAD LAYUP SCHEDULE
- 12 BULKHEAD INFUSION LAYOUT AND DETAILS
- 13 HALF TOP PLATE DIMENSIONS
- 14 END HALF TOP PLATE DIMENSIONS
- 15 HALF TOP PLATE LAYUP SCHEDULE
- 16 HALF TOP PLATE INFUSION LAYOUT AND DETAILS

ASSEMBLY OF THE PONTOONS USING THE COMPONENTS FABRICATED FROM THIS DRAWING IS DESCRIBED IN DWG: 8420-8.



PONTOON NUMBERING

FABRICATION NOTES

FABRIC:
VECTORPLY E-BXM 4008 ±45
TEAM 54OZ 0/90 E-GLASS
PPG C-VEIL E-GLASS

FLOTATION FOAM:
PFPI 23-008(2) URETHANE FOAM

RESIN:
INTERPLASTICS CORVE 8100-50 VINYL ESTER

ADDITIVES:
BASF TINUVIN 328 ULTRAVIOLET LIGHT ABSORBER
ADVANCED COATINGS A-8-14265 GRAY PIGMENT

CATALYST:
SYRGIS NOROX MEKP 925

PROMOTERS:
DURA CHEMICALS DUROCT COBALT
PURITAN PRODUCTS DIMETHYLANILINE (DMA)

TOLERANCES:
LENGTH: +/- 1/2"
ADJACENT UNIT LENGTHS: +/- 1/2"
DEPTH & WIDTH: +/- 1/4"
WALL THICKNESS: + 1/16, - 0
SURFACE FLATNESS: +/- 1/16 PER 48"
SWEEP: +/- 1/8"
CAMBER: + 1/2", - 1/4"
DEVIATION FROM DIAGONALS: +/- 3/4"
DEVIATION FROM END SQUARENESS: +/- 1/4"
INSERT OR HOLE LOCATIONS: +/- 1/8"
VERTICAL DIFFERENTIAL BETWEEN PONTON SURFACES: +/- 1/8"
FLOATING SPAN OVERALL LENGTH: +/- 1 1/2"

REPAIRS:
REPAIRS ARE NOT TO EXCEED DEFECTS IDENTIFIED BY ASTM D 2563 (MORE THAN 2 DEFECTS WITHIN A 1 FT RADIUS). TO BE REPAIRED PER KENWAY QA/QC PLAN.

CURING:
PARTS ARE TO BE LEFT IN THE MOLD FOR A PERIOD OF NO LESS THAN 6 HOURS AFTER ALL HOSES HAVE BEEN CLAMPED. PARTS MUST BE UNDER FULL VACUUM PRESSURE FOR A PERIOD OF NO LESS THAN 6 HOURS. BARCOL HARDNESS READINGS OF NO LESS THAN 40 WILL BE ACCEPTABLE.

SURFACE PREP: ← NOTE ROUGHENED SURFACE PREPARATION TOO
CLEAN SURFACE OF CONTAMINENTS INCLUDING MOLD RELEASE AGENT, RESIN RIDGES AND/OR DRIPS.

LABELING:
EACH PONTOON IS TO BE LABELED WITH KENWAY NAME PLATES ON THE UPSTATION END WALL. IT SHALL INCLUDE AT A MINIMUM THE FABRICATOR NAME, DATE OF MANUFACTURE, AND MARK NUMBER

WITNESS PANELS:
PANELS HAVING A MINIMUM LENGTH AND WIDTH OF 2 FT SHALL BE FABRICATED AT THE SAME TIME AS THE HULL TO BE USED FOR RANDOM TESTING. THE LAYUP SHALL CONSIST OF THE FOLLOWING:
(1) 1708
(3) 54
(1) 1708

LAYUP REQUIREMENTS:
MINIMUM LAP SPLICES TO BE 2 INCHES FOR ALL VECTORPLY E-BXM 4008. ~~TEAM 54 OZ MATERIAL MAY BE BUTTED TOGETHER.~~
NO MORE THAN 2 SPLICES IN THE SAME LOCATION. LAP SPLICES TO BE PER KENWAY FABRICATION DRAWINGS.

2" LAPS ALL DIRECTIONS, ALL PLIES

FINISHING:
GENERALLY, NO CUTTING OF FINISHED PARTS WILL BE ALLOWED EXCEPT FOR BOLT HOLES AND COPEDED CORNER IN BULKHEADS AS SHOWN IN DRAWINGS
WILL CUT AND DRILLED EDGES BE SEALED WITH HAND-APPLIED RESIN?

LIFTING:
LIFTING OF FINISHED MOLDED PART SHALL ONLY BE BY THE ATTACHED LIFTING LUGS OR BASKET SLING. LIFTING BY ANY OTHER METHOD IS PROHIBITED UNLESS APPROVED BY THE ENGINEER.

HANDLING/STORAGE:
ALL FINISHED PARTS MUST BE HANDLED WITH CARE IN ORDER TO PREVENT DAMAGE. FINISHED PARTS MUST BE PROTECTED FROM UV LIGHT AND SUPPORTED BELOW BULKHEADS. STACKING OF PONTOONS WILL BE ACCEPTABLE.

INSPECTION:
ALL PONTOONS MUST BE INSPECTED BY KENWAY PROJECT ENGINEER & VERMONT DOT AGENCY REPRESENTATIVE PRIOR TO SHIPMENT.

INFUSION NOTES

PERFORATED RELEASE FILM SHALL BE APPLIED OVER THE ENTIRE PART

SHADE CLOTH SHALL BE APPLIED OVER THE PART BUT WILL STOP 3" FROM THE EDGE OF THE PART UNLESS OTHERWISE NOTED

FEED LINES SHALL START AT THE CENTER OF THE PART AND BE SPACED NOMINALLY 16" APART UNLESS OTHERWISE NOTED - FEED TUBE INPUT LOCATIONS SHALL GENERALLY BE AT THE CENTER OF THE FEED LINE

VAC LINES SHALL BE LAID OUT IN SEPARATE ZONES AS NOTED IN THE DRAWING TO ALLOW FOR CLAMPING INDIVIDUAL ZONES IF REQUIRED AND SHALL PROVIDE AT LEAST 6" BETWEEN THE PART AND THE TUBE

RESIN BUCKETS SHALL BE PLACED SUCH THAT THE HEIGHT OF THE RESIN IS EVEN WITH OR UP TO 12" BELOW THE LOWEST POINT ON THE PART

PARTS SHALL BE FED STARTING FROM THE CENTER FEED LINE - ADJACENT LINES SHALL BE OPENED ONCE THE RESIN FLOW FRONT IS APPROXIMATELY 3-4" PAST THE NEXT FEED LINE

A MINIMUM AMOUNT OF RESIN SHALL BE KEPT IN THE BUCKET TO AVOID PULLING AIR INTO THE LINE - LINES WILL ONLY BE CLAMPED ONCE THE RESIN IN THE BUCKET HAS GELLED

FLOODED VAC LINES MAY BE CLAMPED IF NEEDED - HOWEVER, AT LEAST ONE VAC LINE MUST REMAIN OPEN FOR 6 HOURS AFTER THE PART IS FILLED

PLEASE PROVIDE THE ANTICIPATED CURE TEMPERATURE

Vermont Agency of Transportation
RECEIVED
CK'D BY _____ OK'D BY Jennifer Fitch
June 5, 2014
RESUBMIT Yes Rejected
BY Jennifer Fitch DATE 06/24/2014

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JOSH OLUND 06/20/2014
REVIEWER DATE

| | | | | | |
|------------------|--|-------------------------|------|--------|--|
| DATE | | | | | |
| DESCRIPTION | | | | | |
| REV | | | | | |
| DRAWN BY | | ML | DATE | 6/4/14 | |
| CHKD BY | | JM | DATE | 6/4/14 | |
| PROJECT | | BROOKFIELD FRP PONTOONS | | | |
| CUSTOMER | | MILLER CONST. / VTRANS | | | |
| SHEET | | GENERAL NOTES | | | |
| WEIGHT: | | N/A | | | |
| DESCRIPTION: | | FABRICATION | | | |
| SCALE | | 1 : 64 | | | |
| WO NO. | | 8420 | | | |
| CONTRACT NO. | | 9185 | | | |
| DWG NO. | | 8420-6 | | | |
| SHEET | | 1 OF 16 | | | |
| PONTOON PART NO. | | N/A N/A | | | |



DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL: +
ANGULAR: MACH +
TWO PLACE DECIMAL +
THREE PLACE DECIMAL +

SEAL



DATE

REV

DESCRIPTION

SEAL

DIMENSIONS ARE IN INCHES

TOLERANCES: +0, -1/16"

FRACTIONAL ANGULAR: MACH

TWO PLACE DECIMAL

THREE PLACE DECIMAL

BEND

DATE

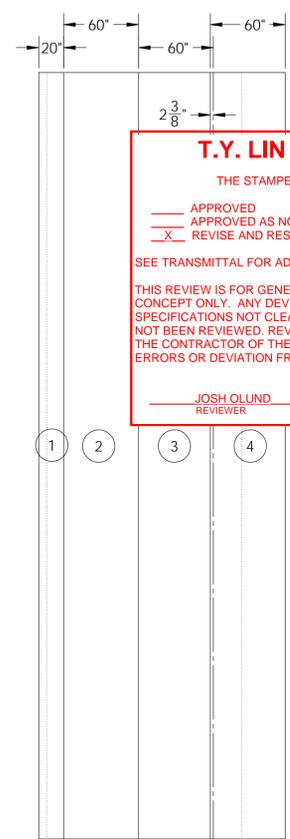
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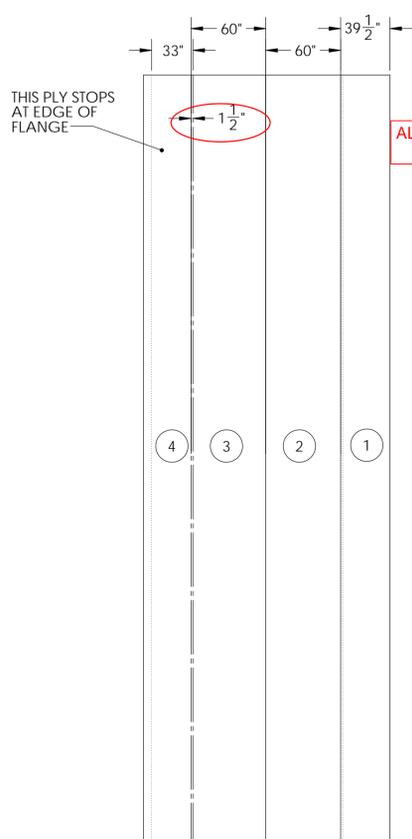
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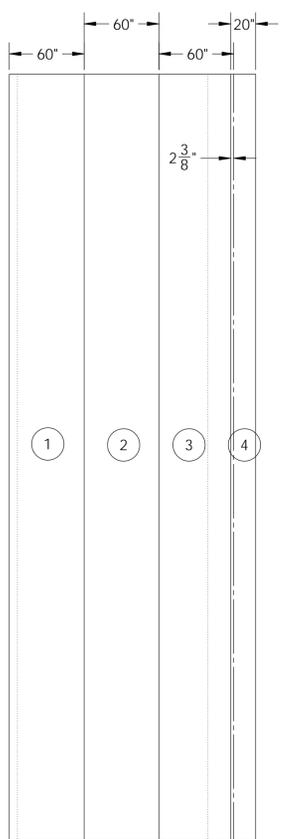
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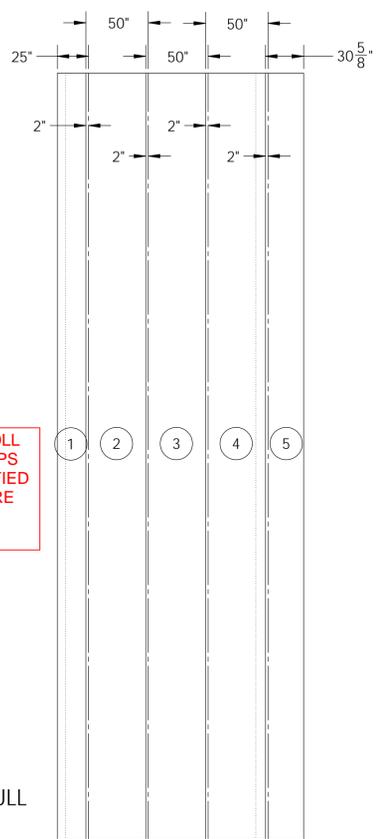
PLY # 5 - 54 oz



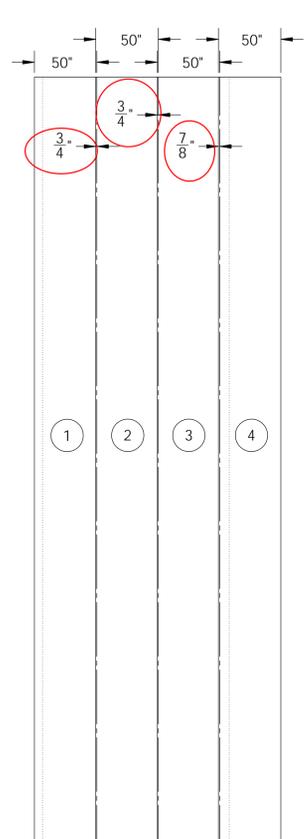
PLY # 4 - 54 oz



PLY # 3 - 54 oz



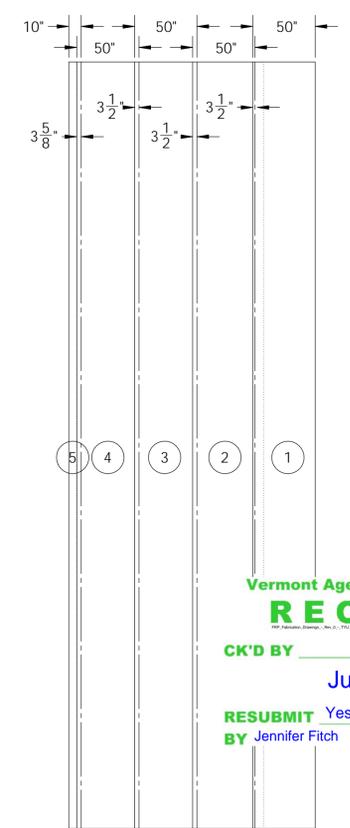
PLY # 2 - 4008



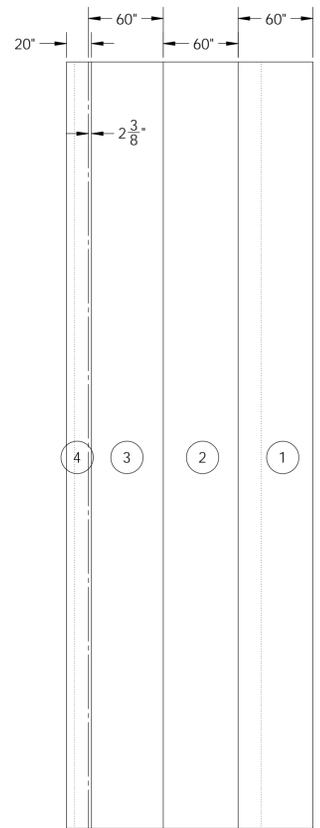
PLY # 1 - C-VEIL

ANY LAPS IN THE ROLL DIRECTION? ALL LAPS NEED TO BE IDENTIFIED TO ENSURE LAPS ARE APPROPRIATELY STAGGERED.

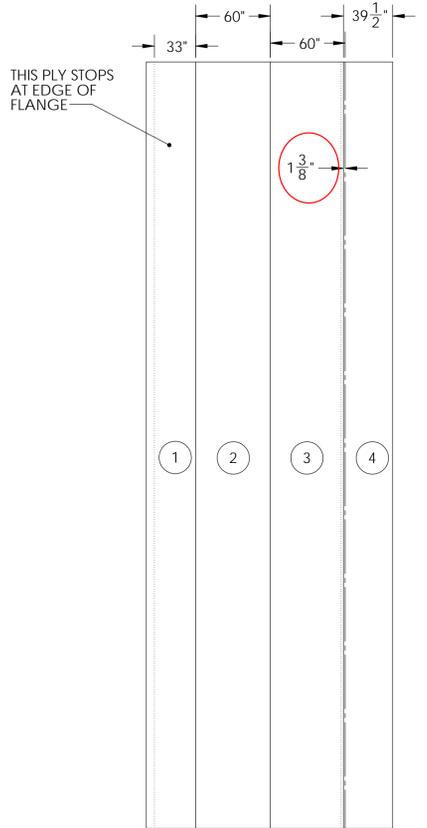
PLAN VIEW OF "UNFOLDED" HULL



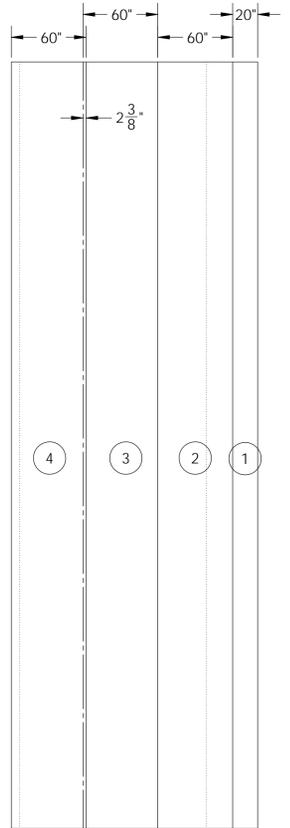
PLY # 10 - 4008



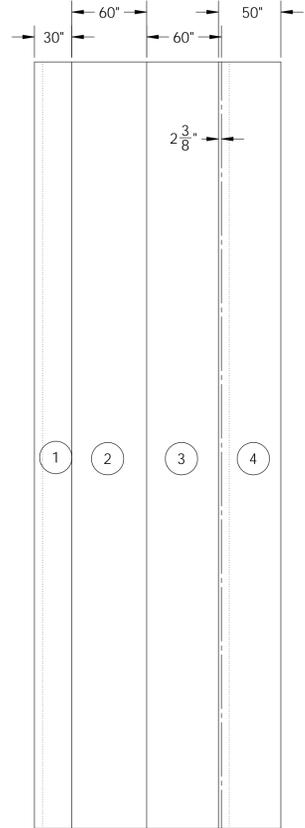
PLY # 9 - 54 oz



PLY # 8 - 54 oz



PLY # 7 - 54 oz



PLY # 6 - 54 oz

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 June 5, 2014
 RESUBMIT Yes Rejected
 BY Jennifer Fitch DATE 06/24/2014

DRAWN BY

DATE

CHKD BY

DATE

PROJECT

BROOKFIELD FRP PONTOONS

CUSTOMER

MILLER CONST. / VTRANS

SHEET

HULLS 3-8 LAY UP SCHEDULE

WEIGHT: 8,409 lb

DESCRIPTION: FABRICATION

SCALE 1 : 72

WO NO. 8420

CONTRACT NO. 9185

DWG NO. 8420-6

SHEET 3 OF 16

PONTOON PART NO. 3-8

PART NO. 1



| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |

SEAL

DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL: MACH + BEND ±
ANGULAR: MACH + TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS

CUSTOMER: MILLER CONST. / VTRANS

SHEET: END HULL DIMENSIONS

WEIGHT: 8,409 lb

DESCRIPTION: FABRICATION

SCALE: 1 : 48

WO NO.: 8420

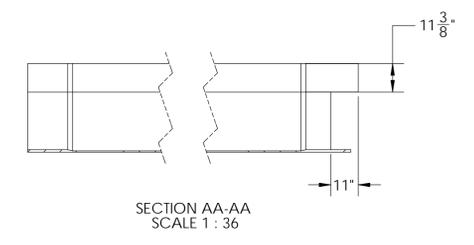
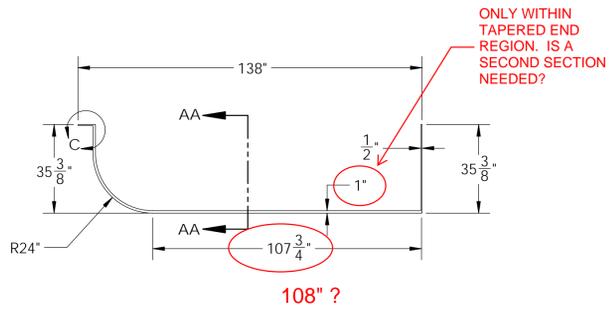
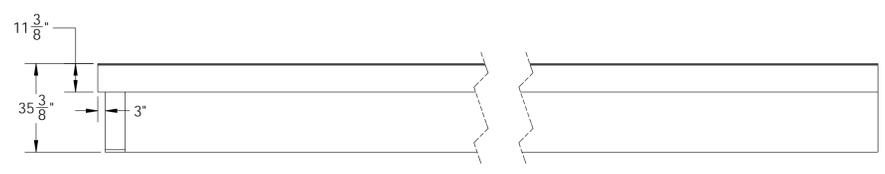
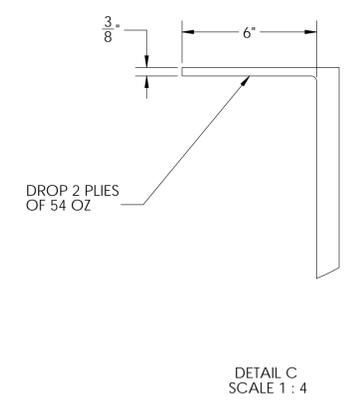
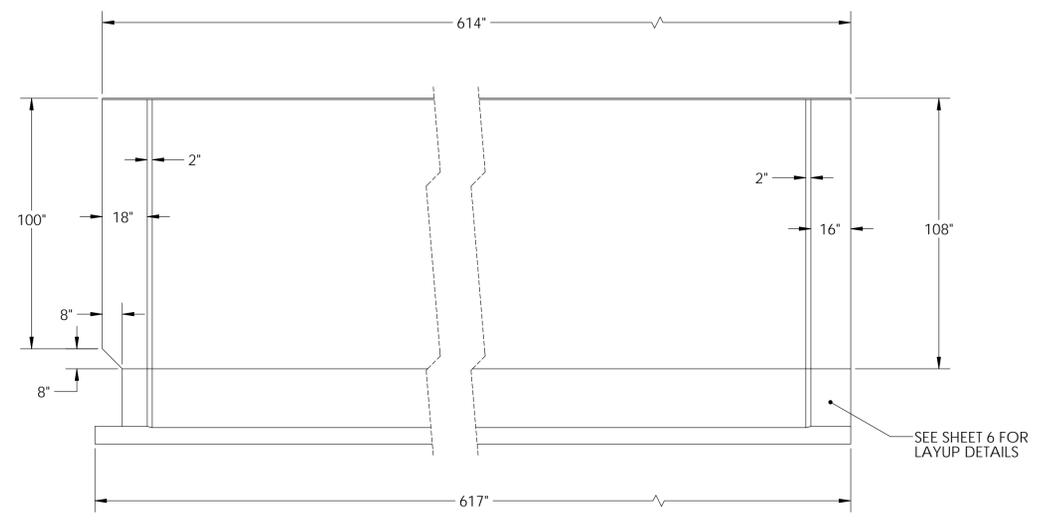
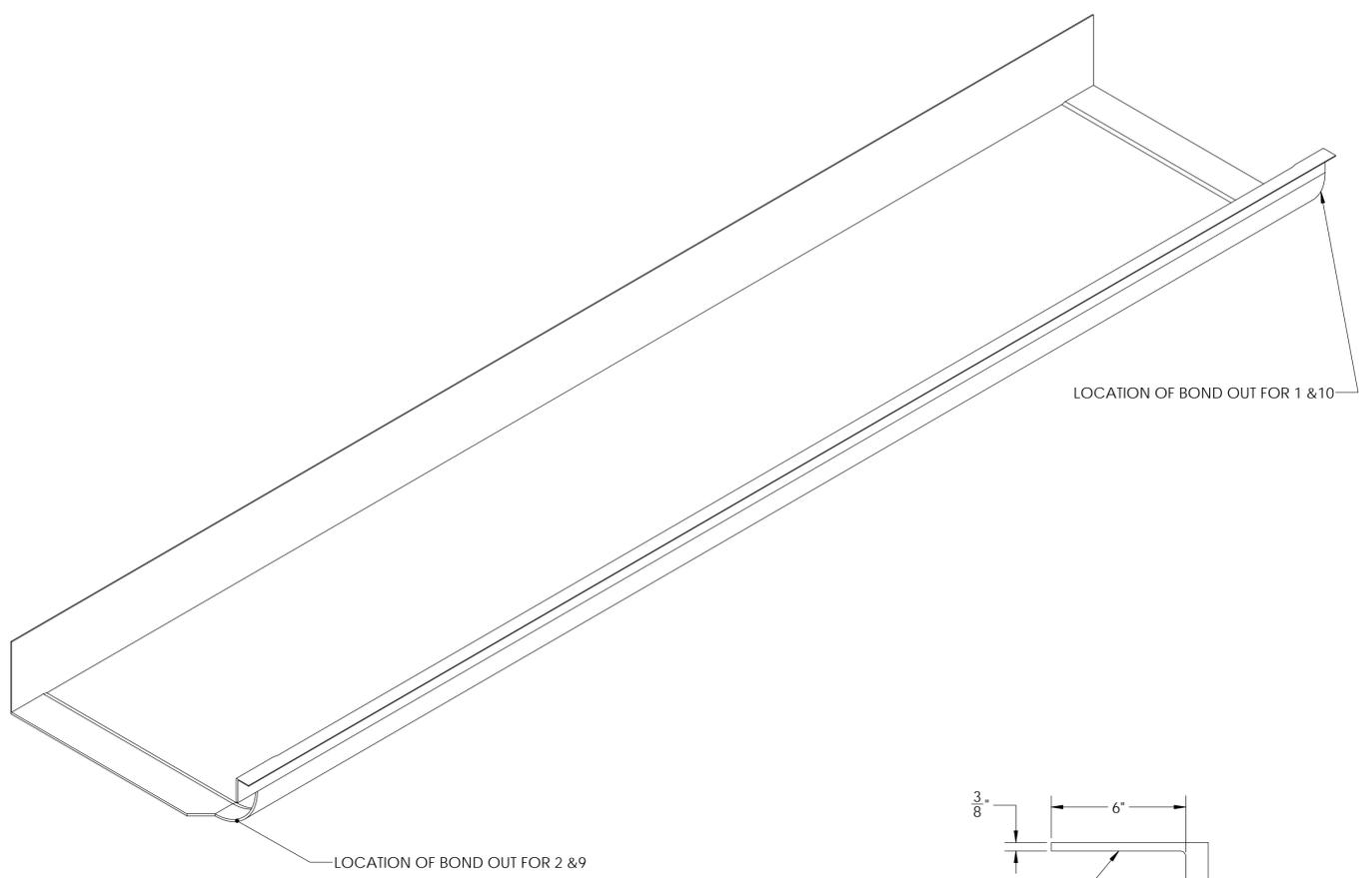
CONTRACT NO.: 9185

DWG NO.: 8420-6

SHEET: 4 OF 16

PONTOON PART NO.: 1,2,9,10

PART NO.: 1



NOTE:
PONTOON HULLS 2 & 9 SHOWN - SWAP MOLD INSERT END FOR END TO PROPERLY ORIENTATE CONFIGURATION FOR HULLS 1&10

Vermont Agency of Transportation
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CK'D BY _____ OK'D BY Jennifer Fitch
June 5, 2014
RESUBMIT Yes Rejected
BY Jennifer Fitch DATE 06/24/2014

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____ JOSH OLUND 06/20/2014
REVIEWER DATE



DATE

REV

DESCRIPTION

SEAL

DIMENSIONS ARE IN INCHES

TOLERANCES: +0, -1/16"

FRACTIONAL ANGULAR: MACH

TWO PLACE DECIMAL

BEND THREE PLACE DECIMAL

DRAWN BY

DATE

CHKD BY

DATE

PROJECT

BROOKFIELD FRP PONTOONS

CUSTOMER

MILLER CONST. / VTRANS

SHEET

END HULL LAY UP SCHEDULE

WEIGHT: 8,409 lb

DESCRIPTION: FABRICATION

SCALE 1 : 72

WO NO. 8420

CONTRACT NO. 9185

DWG NO. 8420-6

SHEET 5 OF 16

PONTOON PART NO. 1,2,9,10

1

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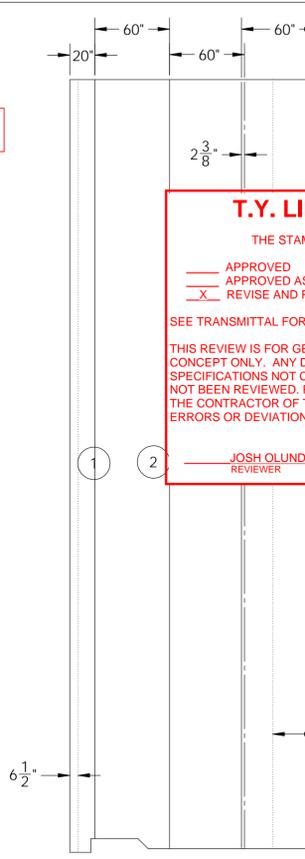
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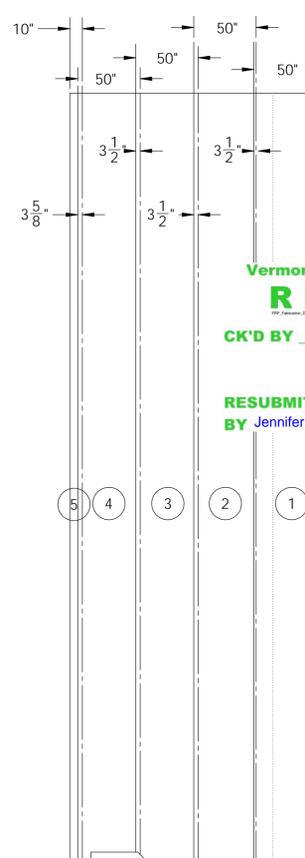
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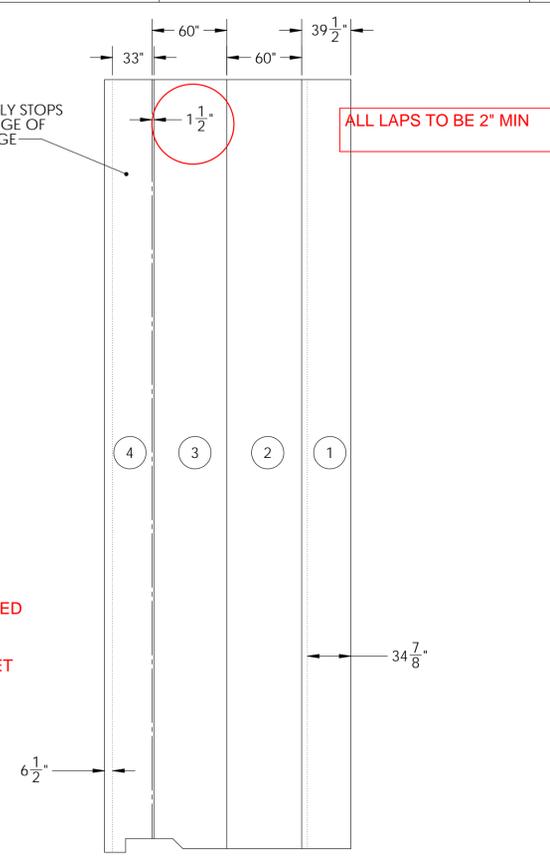
NOTE: PONTOONS 2 AND 9 SHOWN - 1 AND 10 WILL BE CUT OPPOSITE END



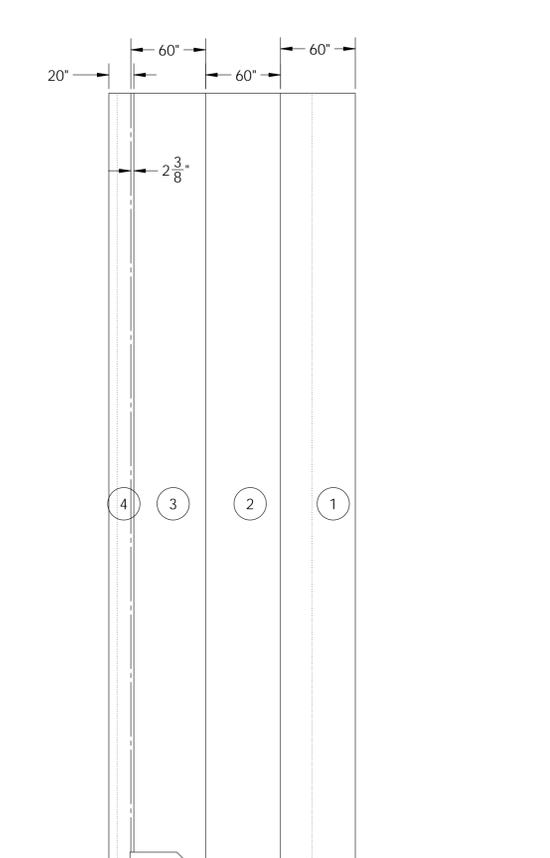
PLY # 5 - 54 oz



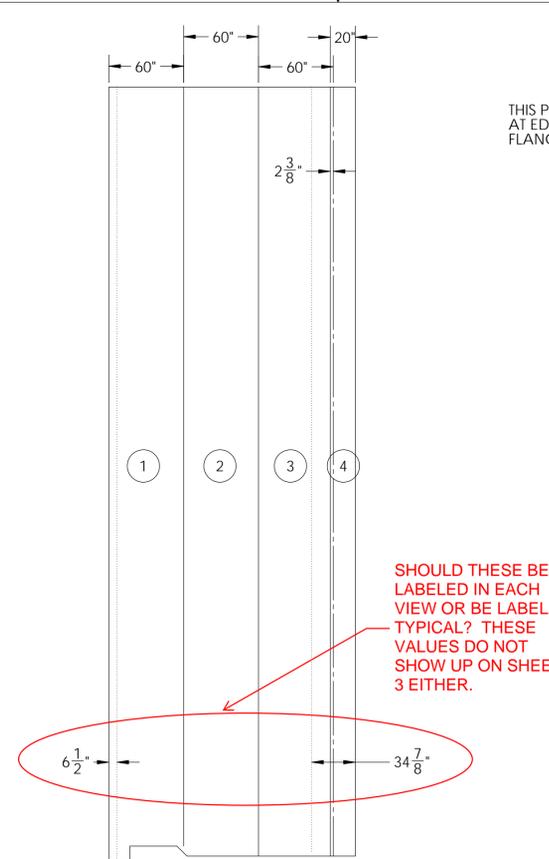
PLY # 10 - 4008



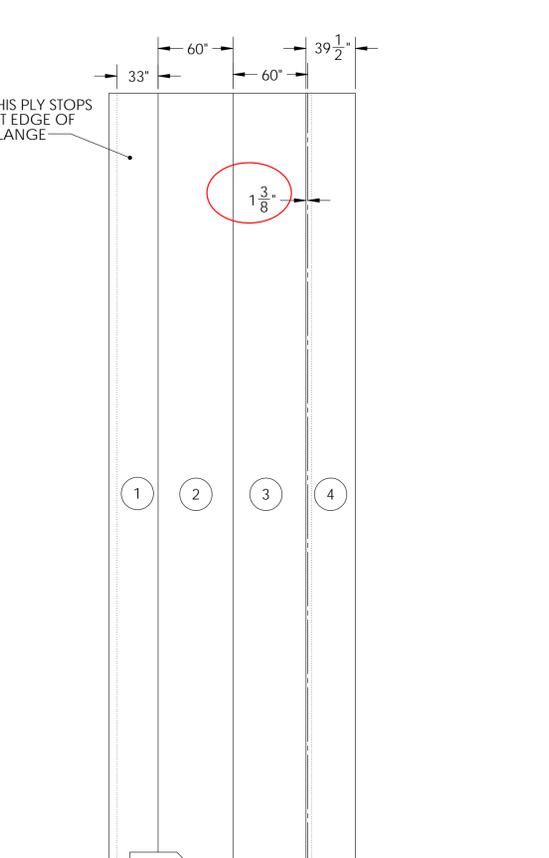
PLY # 4 - 54 oz



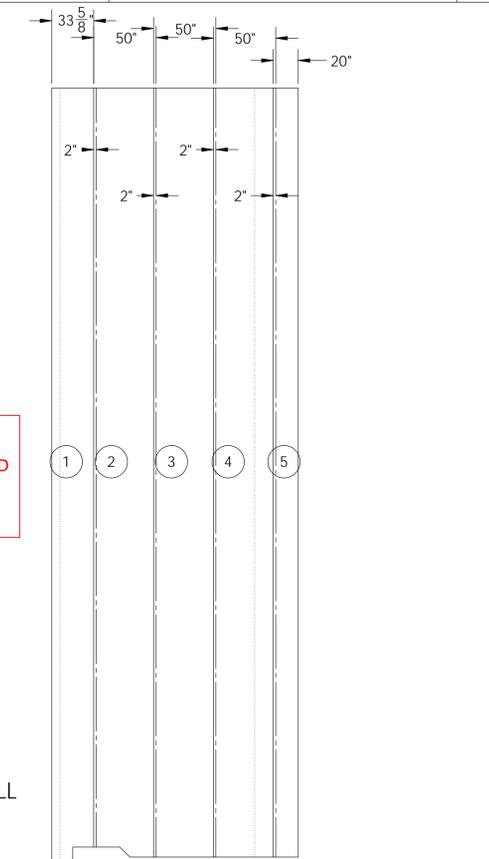
PLY # 9 - 54 oz



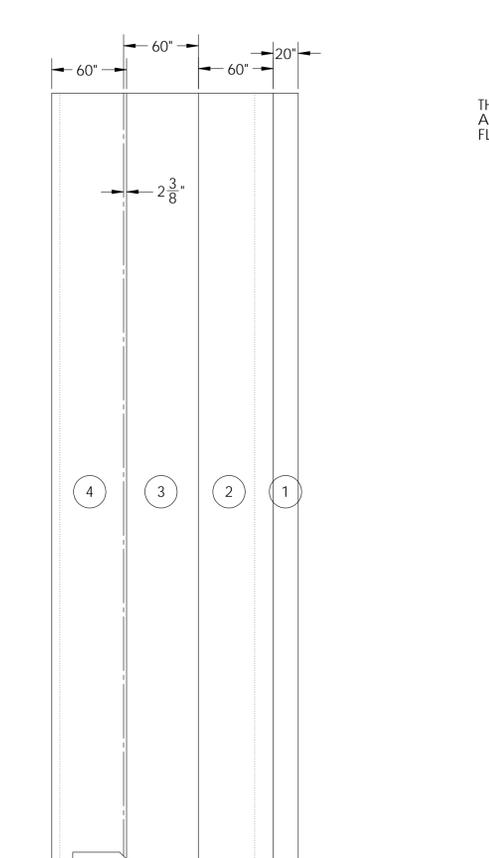
PLY # 3 - 54 oz



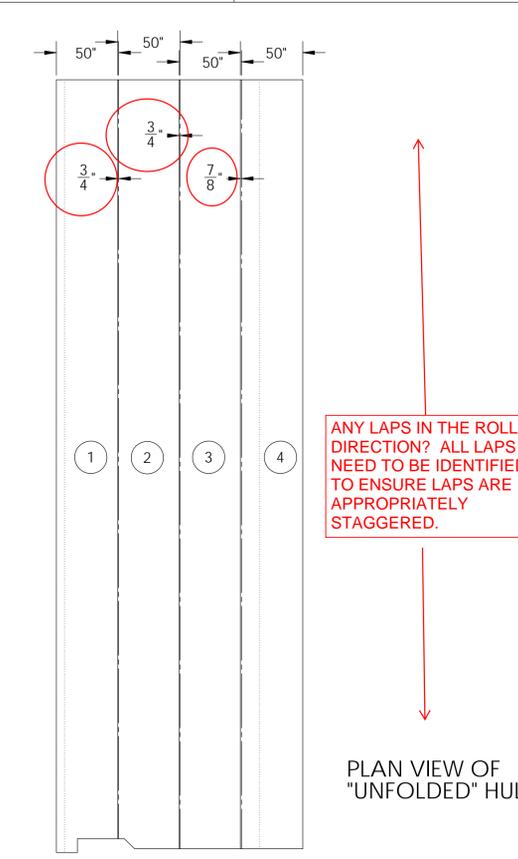
PLY # 8 - 54 oz



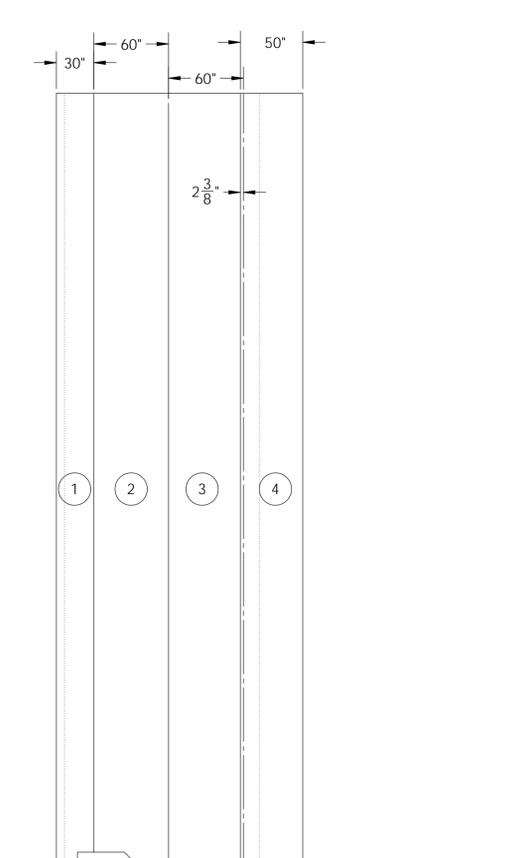
PLY # 2 - 4008



PLY # 7 - 54 oz



PLY # 1 - C-VEIL



PLY # 6 - 54 oz

ANY LAPS IN THE ROLL DIRECTION? ALL LAPS NEED TO BE IDENTIFIED TO ENSURE LAPS ARE APPROPRIATELY STAGGERED.

PLAN VIEW OF "UNFOLDED" HULL

SHOULD THESE BE LABELED IN EACH VIEW OR BE LABELED TYPICAL? THESE VALUES DO NOT SHOW UP ON SHEET 3 EITHER.

ALL LAPS TO BE 2" MIN

THIS PLY STOPS AT EDGE OF FLANGE

THIS PLY STOPS AT EDGE OF FLANGE



| DATE | REV | DESCRIPTION |
|------|-----|-------------|
| | | |
| | | |
| | | |

SEAL

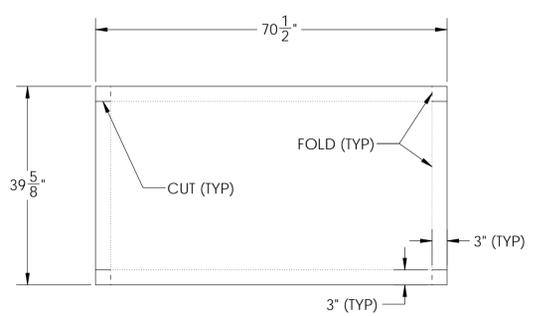
DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL: +, - BEND +
ANGULAR: MACH. +, -
TWO PLACE DECIMAL +, -
THREE PLACE DECIMAL +, -

| DRAWN BY | DATE |
|----------|--------|
| ML | 6/4/14 |

| CHKD BY | DATE |
|---------|--------|
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS
CUSTOMER: MILLER CONST. / VTRANS
SHEET: END BULKHEADS LAYOUT SCHEDULE

| | |
|------------------|-------------|
| WEIGHT: | N/A |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 18 |
| WO NO. | 8420 |
| CONTRACT NO. | 9185 |
| DWG NO. | 8420-6 |
| SHEET | 8 OF 16 |
| PONTOON PART NO. | 1-10 |
| PART NO. | 6-8 |



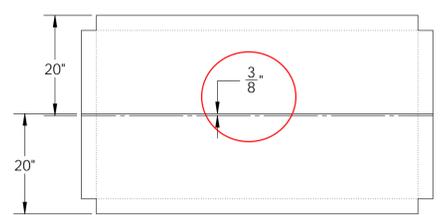
PLY # 1 - C-VEIL



PLY # 2 - 4008



PLY # 3 - 54 oz

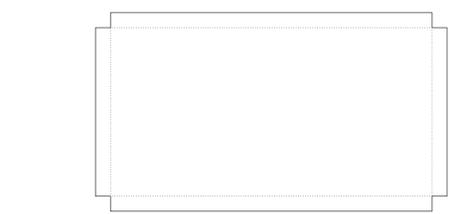


PLY # 4 - 54 oz

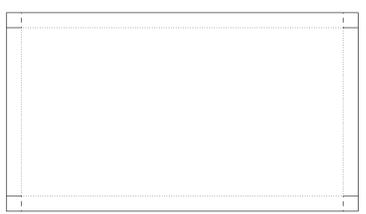


PLY # 5 - 54 oz

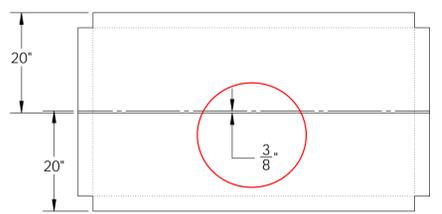
2" MINIMUM LAPS, ALL DIRECTIONS



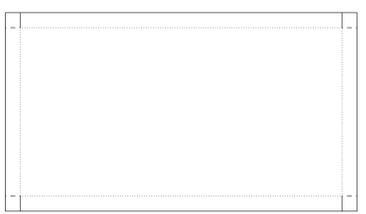
PLY # 6 - 54 oz



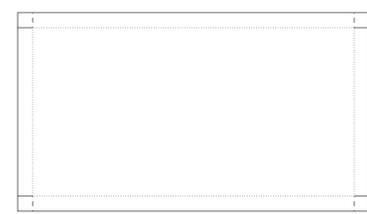
PLY # 7 - 54 oz



PLY # 8 - 54 oz



PLY # 9 - 54 oz

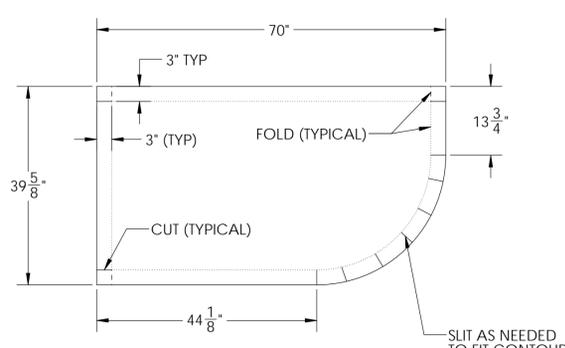


PLY # 10 - 4008

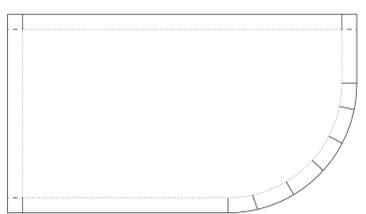
ANY LAPS ANTICIPATED IN OPPOSITE (ROLL) DIRECTION? THESE NEED TO BE IDENTIFIED TO ENSURE PROPER SPLICE STAGGERING

T.Y. LIN INTERNATIONAL
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____ JOSH OLUND REVIEWER
____ 06/20/2014 DATE

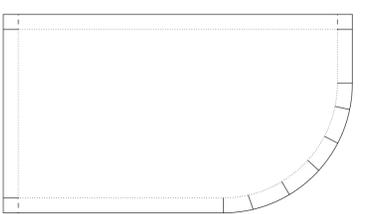
Vermont Agency of Transportation
RECEIVED
CK'D BY _____ OK'D BY Jennifer Fitch
June 5, 2014
RESUBMIT Yes Rejected
BY Jennifer Fitch DATE 06/24/2014



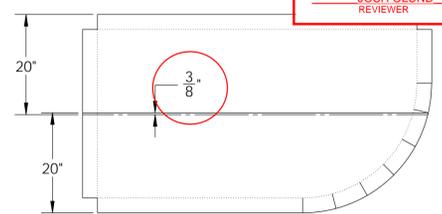
PLY # 1 - C-VEIL



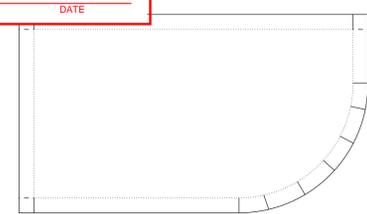
PLY # 2 - 4008



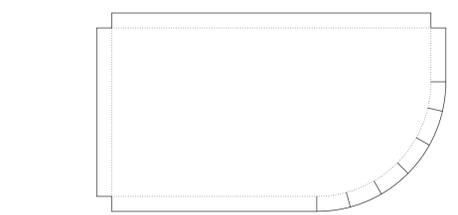
PLY # 3 - 54 oz



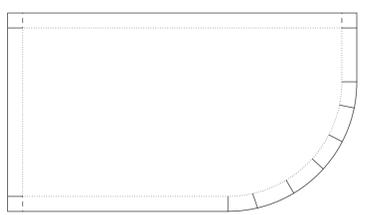
PLY # 4 - 54 oz



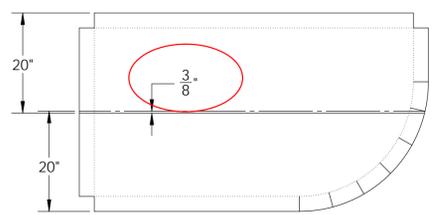
PLY # 5 - 54 oz



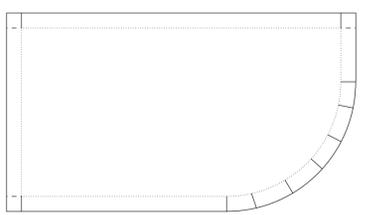
PLY # 6 - 54 oz



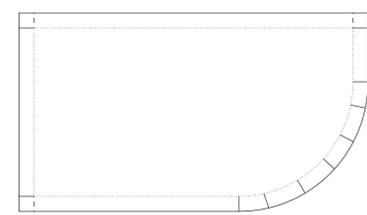
PLY # 7 - 54 oz



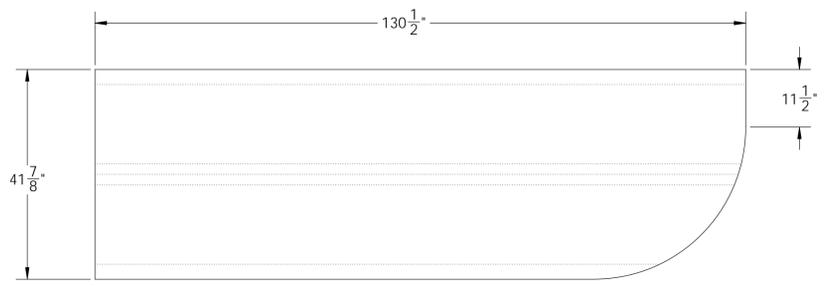
PLY # 8 - 54 oz



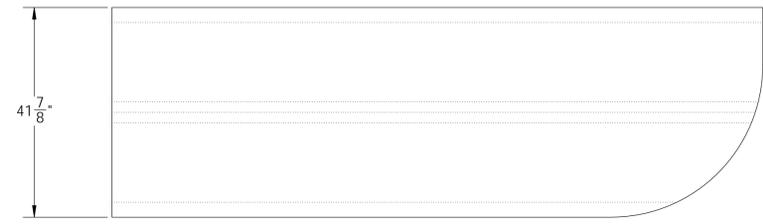
PLY # 9 - 54 oz



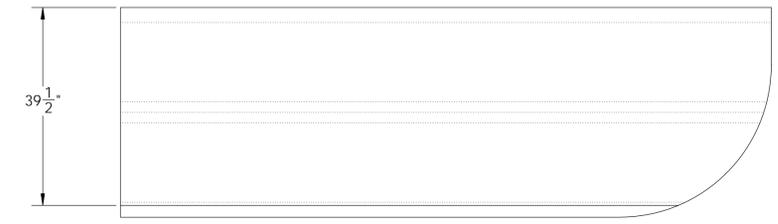
PLY # 10 - 4008



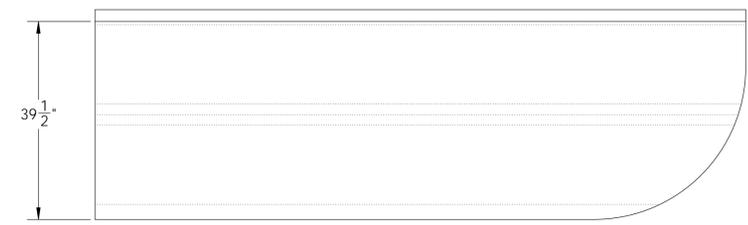
PLY # 1 - C-VEIL



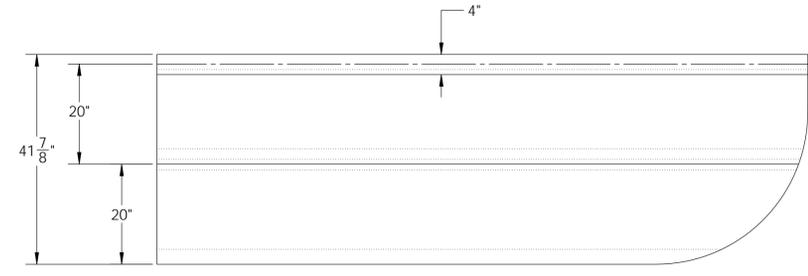
PLY # 2 - 4008



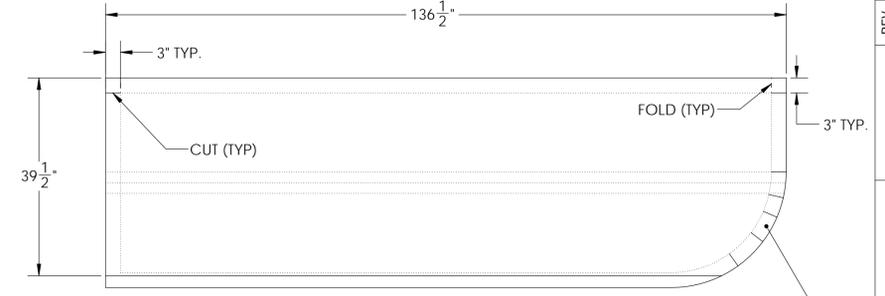
PLY # 3 - 54 oz



PLY # 4 - 54 oz



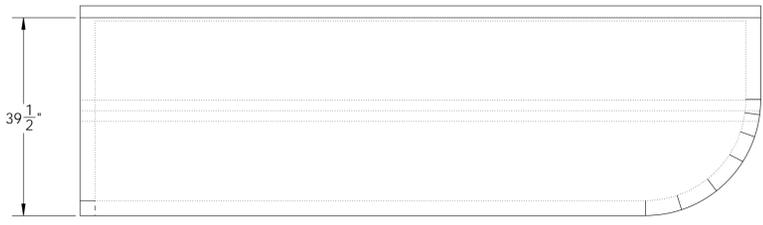
PLY # 5 - 54 oz



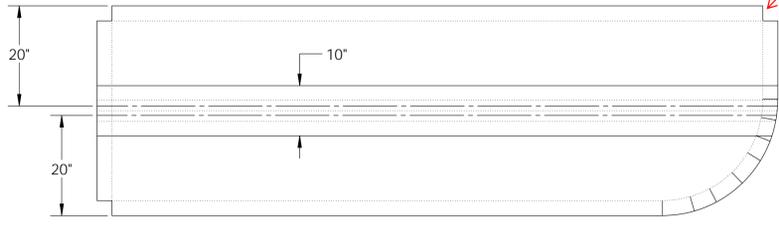
PLY # 6 - 54 oz

IDENTIFY ALL LAPS (2" MIN)

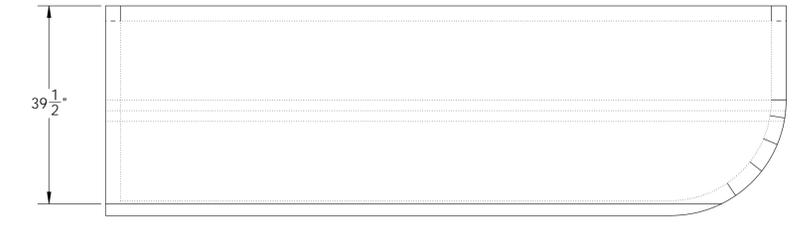
ARE ALL CORNERS INTENDED TO BE CUT COMPLETELY OFF OR ARE 2 CUTS BEING MADE AND ADJACENT PIECES OVERLAPPED IN THE CORNERS?



PLY # 7 - 54 oz

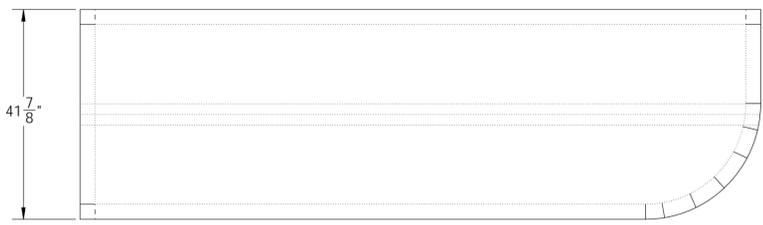


PLY # 8 - 54 oz



PLY # 9 - 54 oz

NOTE: PLY #1-5 BUTT INTO SIDE FLANGES



PLY # 10 - 4008

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |

DIMENSIONS ARE IN INCHES
 TOLERANCES: +0, -1/16"
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

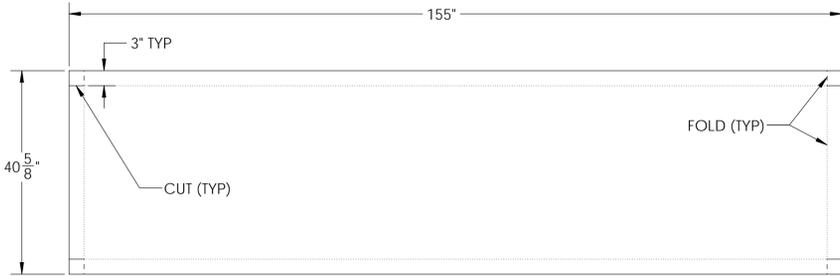
| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS
 CUSTOMER: MILLER CONST. / VTRANS
 SHEET: TRANSVERSE ROD BULKHEAD LAYOUT SCHEDULE

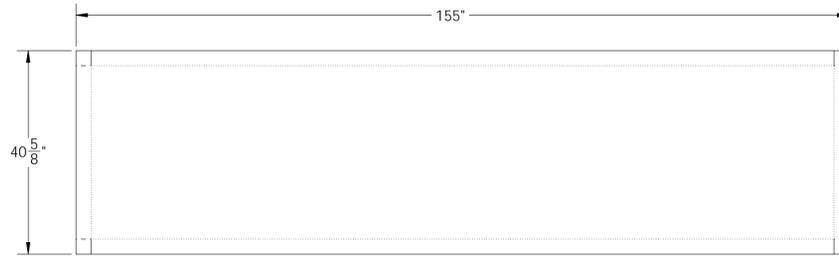
| | |
|------------------|-------------|
| WEIGHT: | 1,167 LB |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 18 |
| WO NO. | 8420 |
| CONTRACT NO. | 9185 |
| DWG NO. | 8420-6 |
| SHEET | 9 OF 16 |
| PONTOON PART NO. | 1-10 2 |

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 BY Jennifer Fitch DATE 06/24/2014

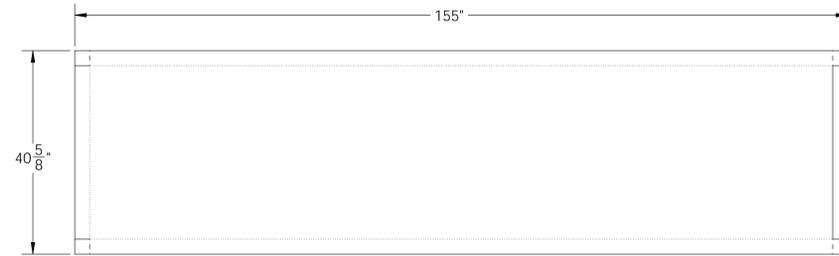
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 _____ JOSH OLUND 06/20/2014
 REVIEWER DATE



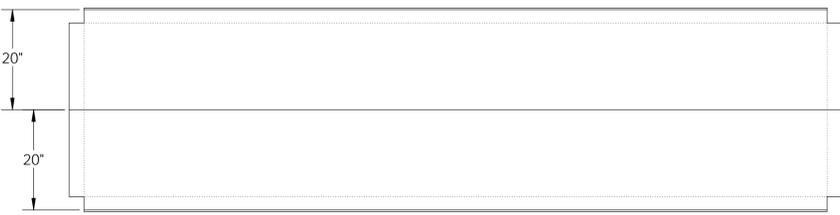
PLY # 1 - C-VEIL



PLY # 2 - 4008

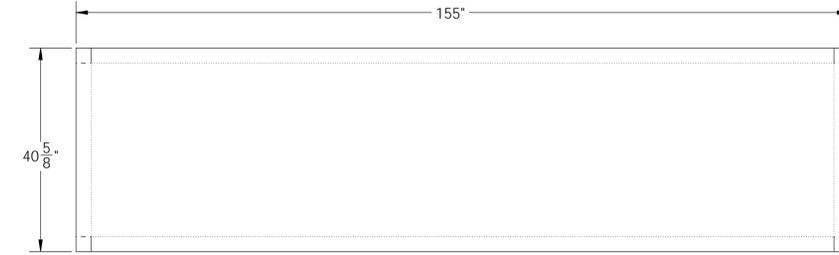


PLY # 3 - 54 oz



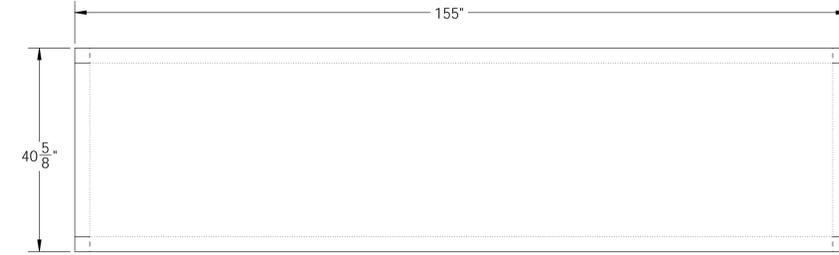
PLY # 4 - 54 oz

ARE ALL CORNERS INTENDED TO BE CUT COMPLETELY OFF OR ARE 2 CUTS BEING MADE AND ADJACENT PIECES OVERLAPPED IN THE CORNERS?

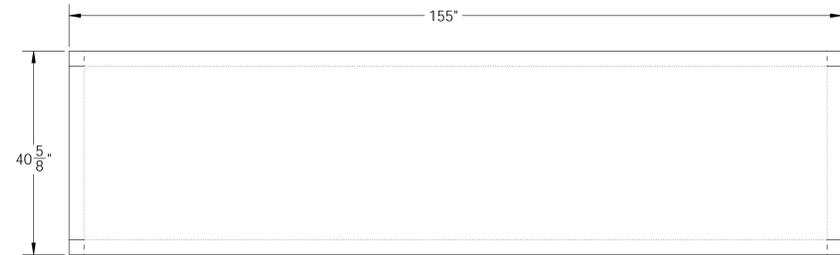


PLY # 5 - 54 oz

ALL LAPS TO BE SHOWN (2" MIN)



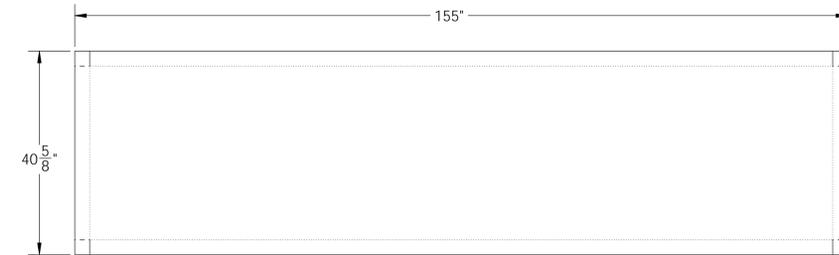
PLY # 6 - 54 oz



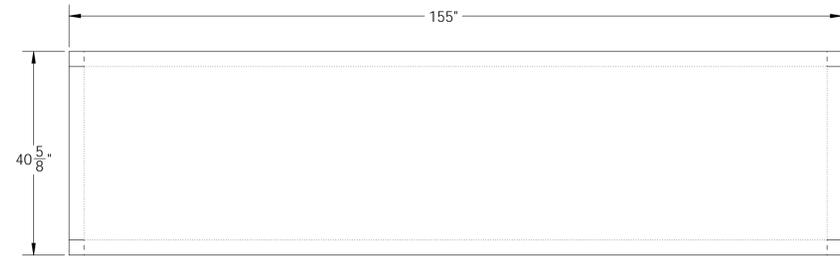
PLY # 7 - 54 oz



PLY # 8 - 54 oz



PLY # 9 - 54 oz



PLY # 10 - 4008

| REV | DESCRIPTION |
|-----|-------------|
| | |
| | |
| | |
| | |
| | |

SEAL

DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL: MACH + BEND ±
ANGULAR: MACH + BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS

SHEET: MIDDLE LONGITUDINAL BULKHEAD LAYUP SCHEDULE

CUSTOMER: MILLER CONST. / VTRANS

| | |
|-------------------|-------------|
| WEIGHT: | 813 LB |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 18 |
| WO NO.: | 8420 |
| CONTRACT NO.: | 9185 |
| DWG NO.: | 8420-6 |
| SHEET: | 10 OF 16 |
| PONTOON PART NO.: | 1-10 3 |

Vermont Agency of Transportation
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June 5, 2014
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BY Jennifer Fitch DATE 06/24/2014

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THE STAMPED DOCUMENTS ARE HEREBY:
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____ JOSH OLLUND 06/20/2014
REVIEWER DATE



| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |

SEAL

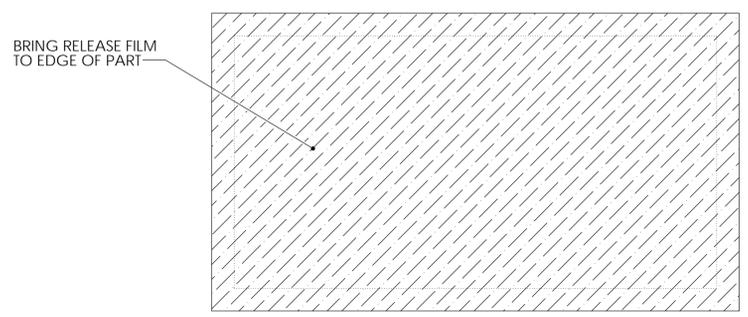
DIMENSIONS ARE IN INCHES
 TOLERANCES: +0, -1/16"
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ± ±
 THREE PLACE DECIMAL ± ±

| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

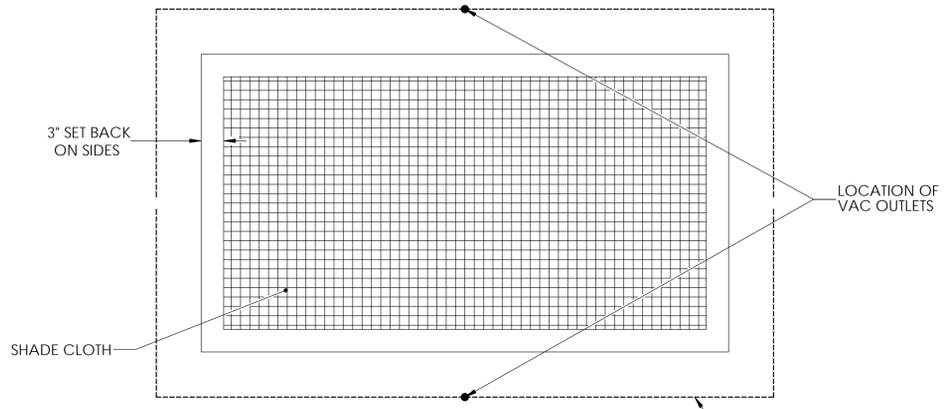
PROJECT: BROOKFIELD FRP PONTOONS
 SHEET: BULKHEAD INFUSION LAYOUT AND DETAILS

CUSTOMER: MILLER CONST. / VTRANS

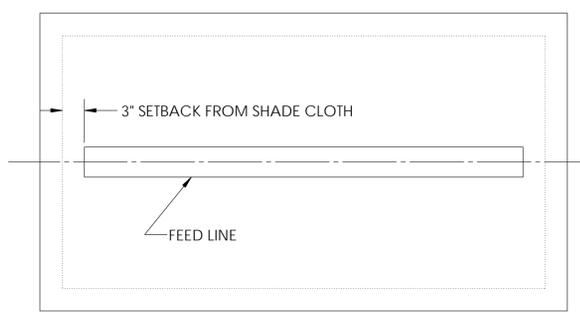
| | |
|-------------------|--------------|
| WEIGHT: | N/A |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 12 |
| WO NO.: | 8420 |
| CONTRACT NO.: | 9185 |
| DWG NO.: | 8420-6 |
| SHEET: | 12 OF 16 |
| PONTOON PART NO.: | 1-10 2-4,6-8 |



RELEASE FILM

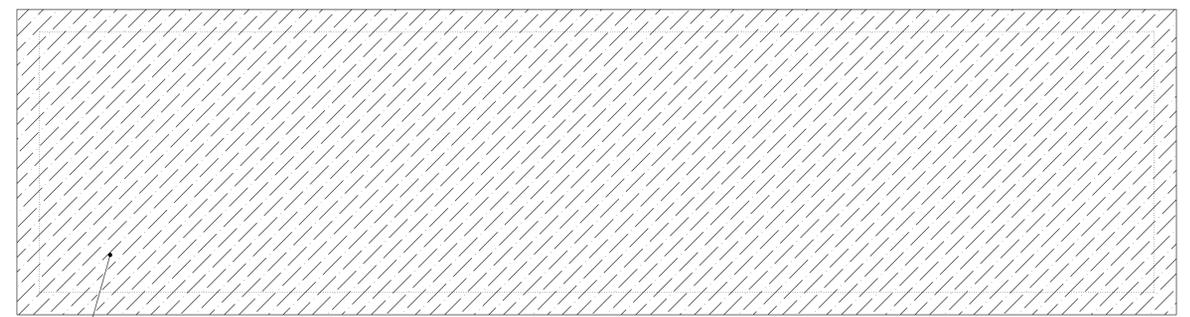


SHADE CLOTH & VAC LINES

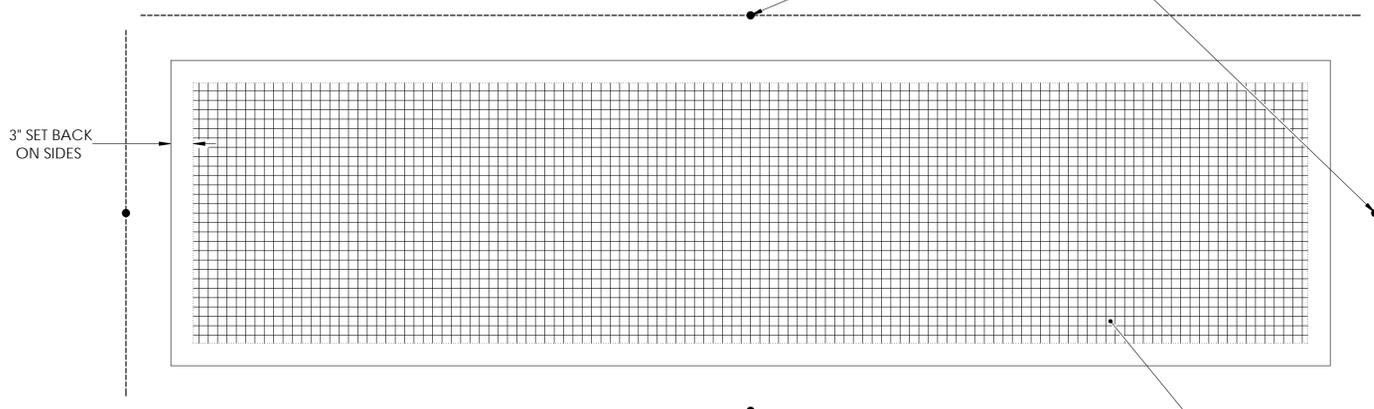


FEED LINE

END BULKHEAD INFUSION DETAILS



RELEASE FILM



SHADE CLOTH & VAC LINES



FEED LINE

LONG BULKHEAD INFUSION DETAILS

Vermont Agency of Transportation
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 June 5, 2014
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 BY Jennifer Fitch DATE 06/24/2014

T.Y. LIN INTERNATIONAL
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 _____ JOSH OLUND 06/20/2014
 REVIEWER DATE



| DATE | DESCRIPTION | REV |
|------|-------------|-----|
| | | |
| | | |
| | | |

SEAL

DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL + BEND ±
ANGULAR: MACH ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

| DRAWN BY | DATE |
|----------|--------|
| ML | 6/4/14 |

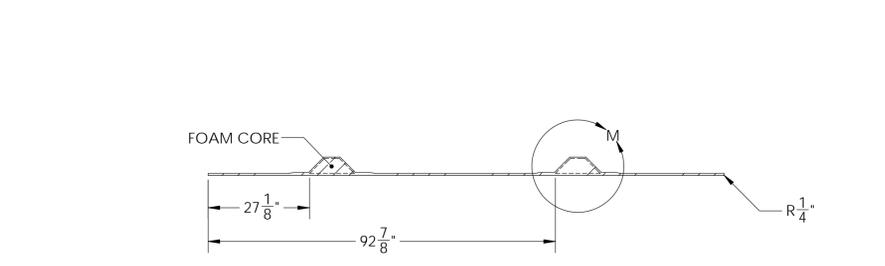
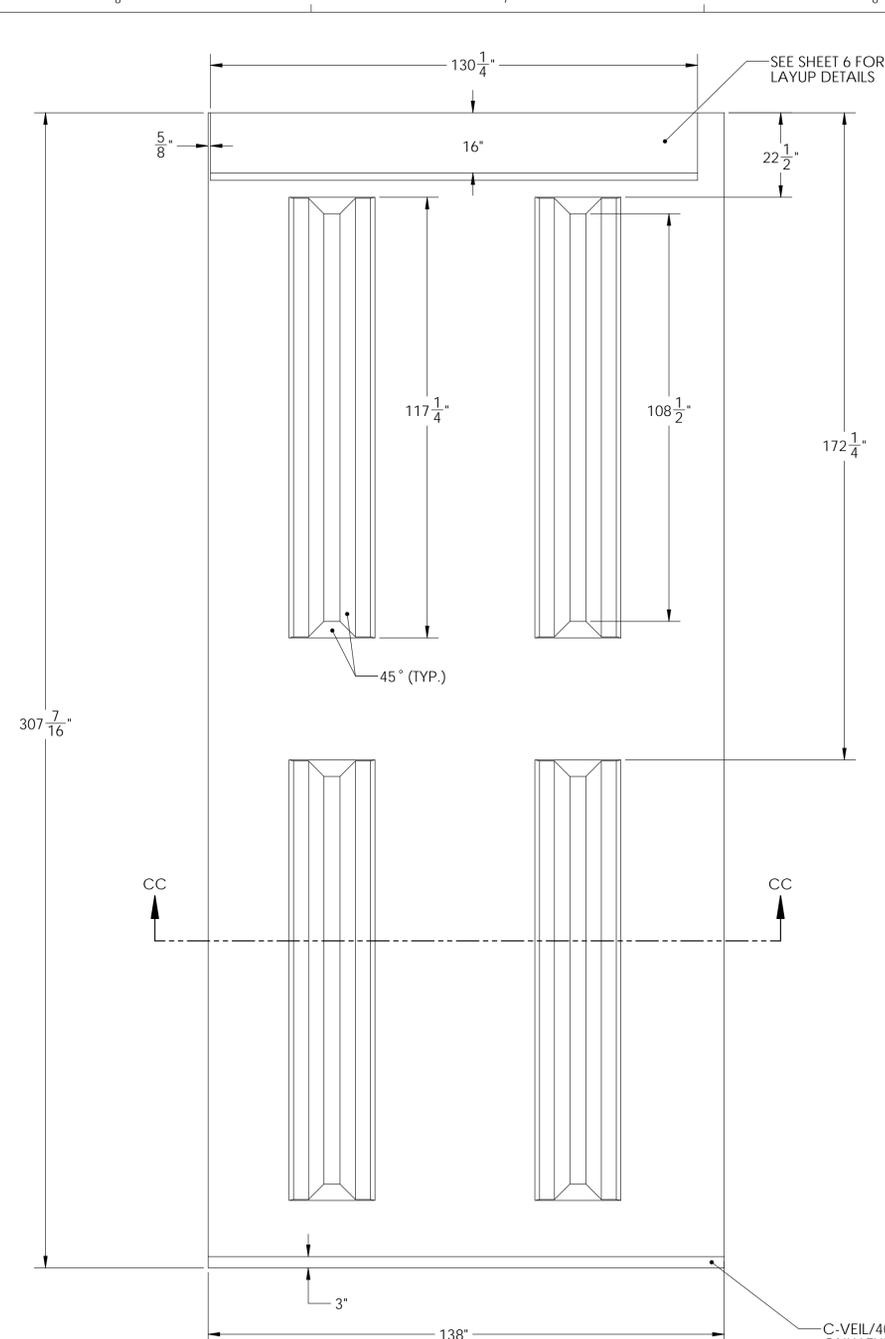
| CHKD BY | DATE |
|---------|--------|
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS

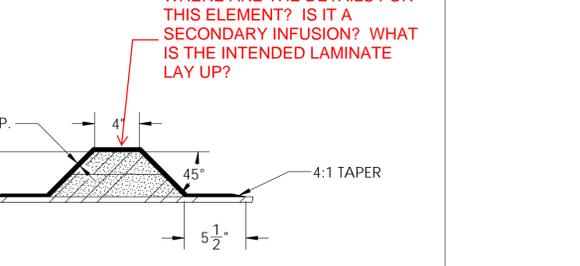
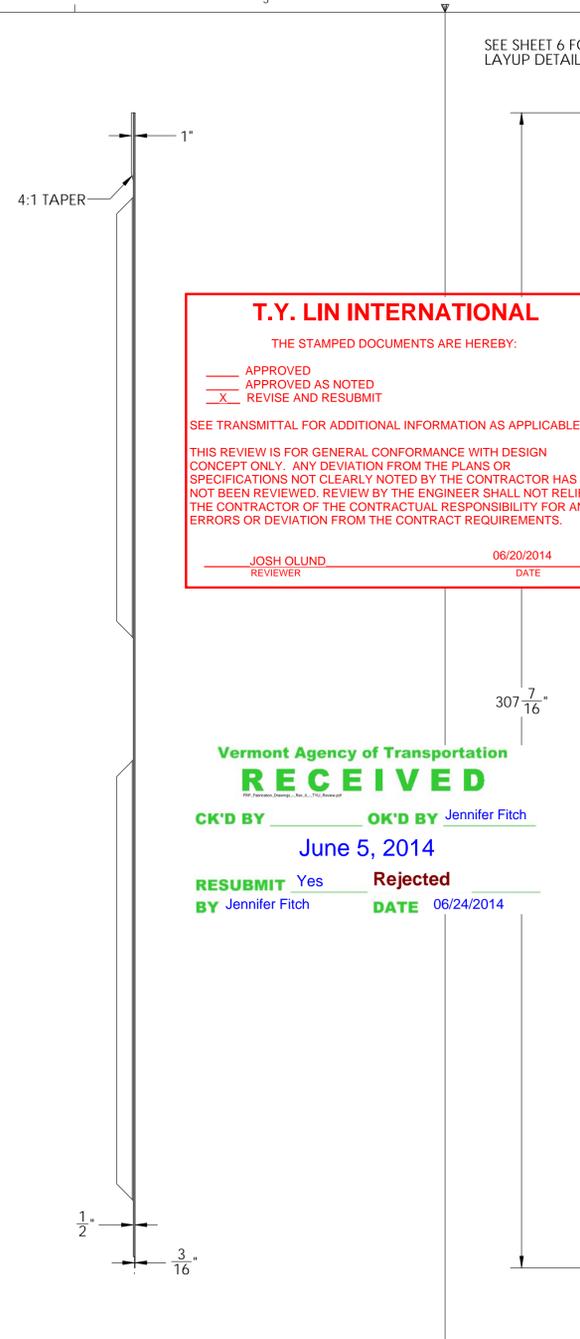
CUSTOMER: MILLER CONST. / VTRANS

SHEET: HALF TOP PLATE DIMENSIONS

| | |
|--------------|--------------|
| WEIGHT: | 2,980 lb |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 24 |
| WO NO. | 8420 |
| CONTRACT NO. | 9185 |
| DWG NO. | 8420-6 |
| SHEET | 13 OF 16 |
| PONTOON | PART NO. 3-8 |
| | 9 |



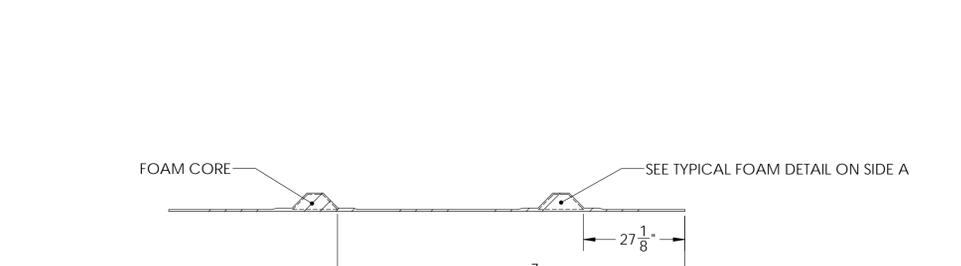
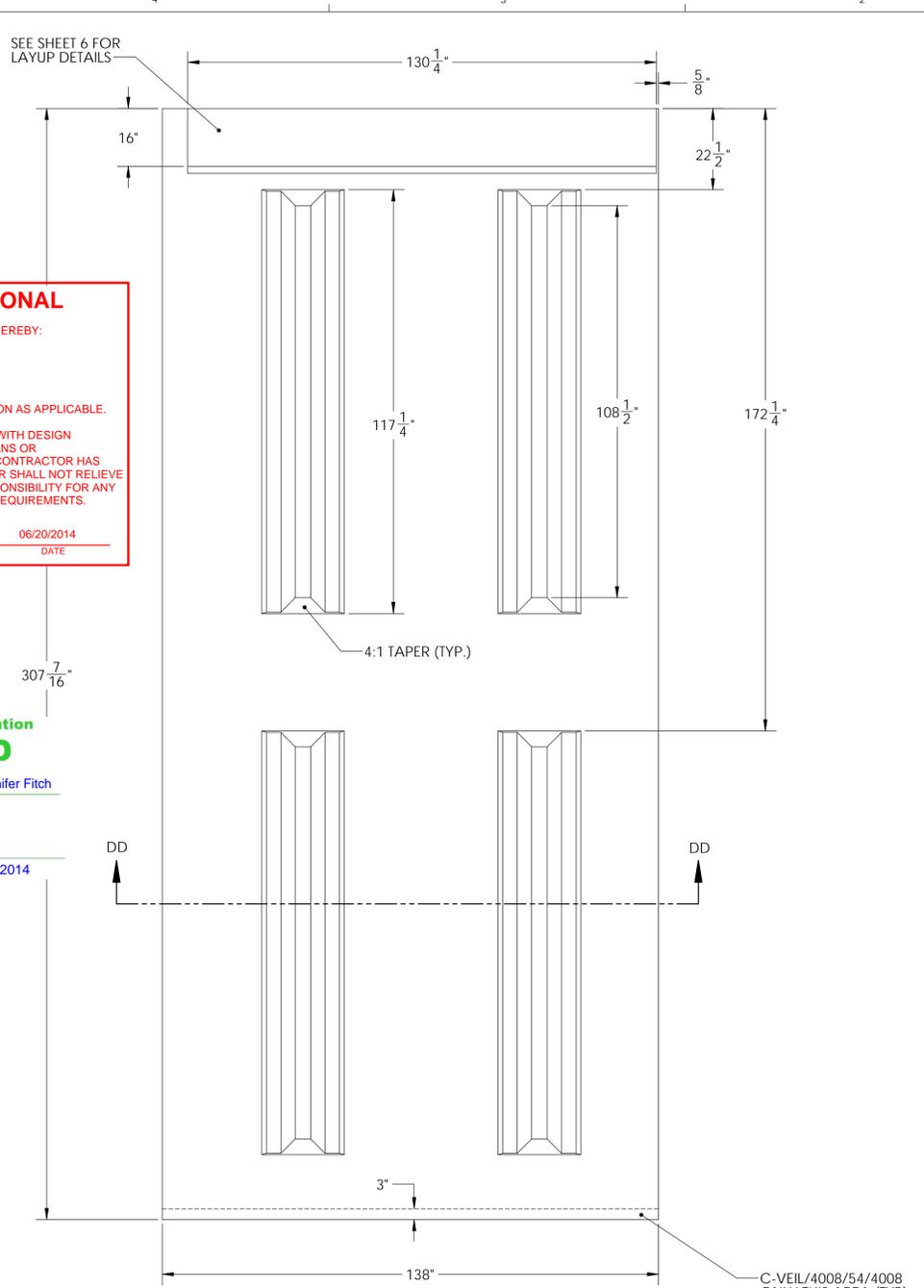
TOP PLATE SIDE A



NOTE:
2 PCS OF 2" FOAM CORE TO BE BONDED TOGETHER AND SHAPED PRIOR TO DRILLING PERFORATIONS. PERFORATIONS ARE TO BE 1/8" O.D. AND AT INTERVALS NO GREATER THAN 1 1/2" O.C.

T.Y. LIN INTERNATIONAL
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 June 5, 2014
 RESUBMIT Yes Rejected
 BY Jennifer Fitch DATE 06/24/2014



TOP PLATE SIDE B

CLARIFY THE INTENT OF THIS STATEMENT. WHERE ARE DRILLING/PERFORATING OPERATIONS BEING CARRIED OUT AND FOR WHAT PURPOSE?

| DATE | DESCRIPTION | REV |
|------|-------------|-----|
| | | |
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| DATE | DESCRIPTION |
|------|-------------|
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SEAL

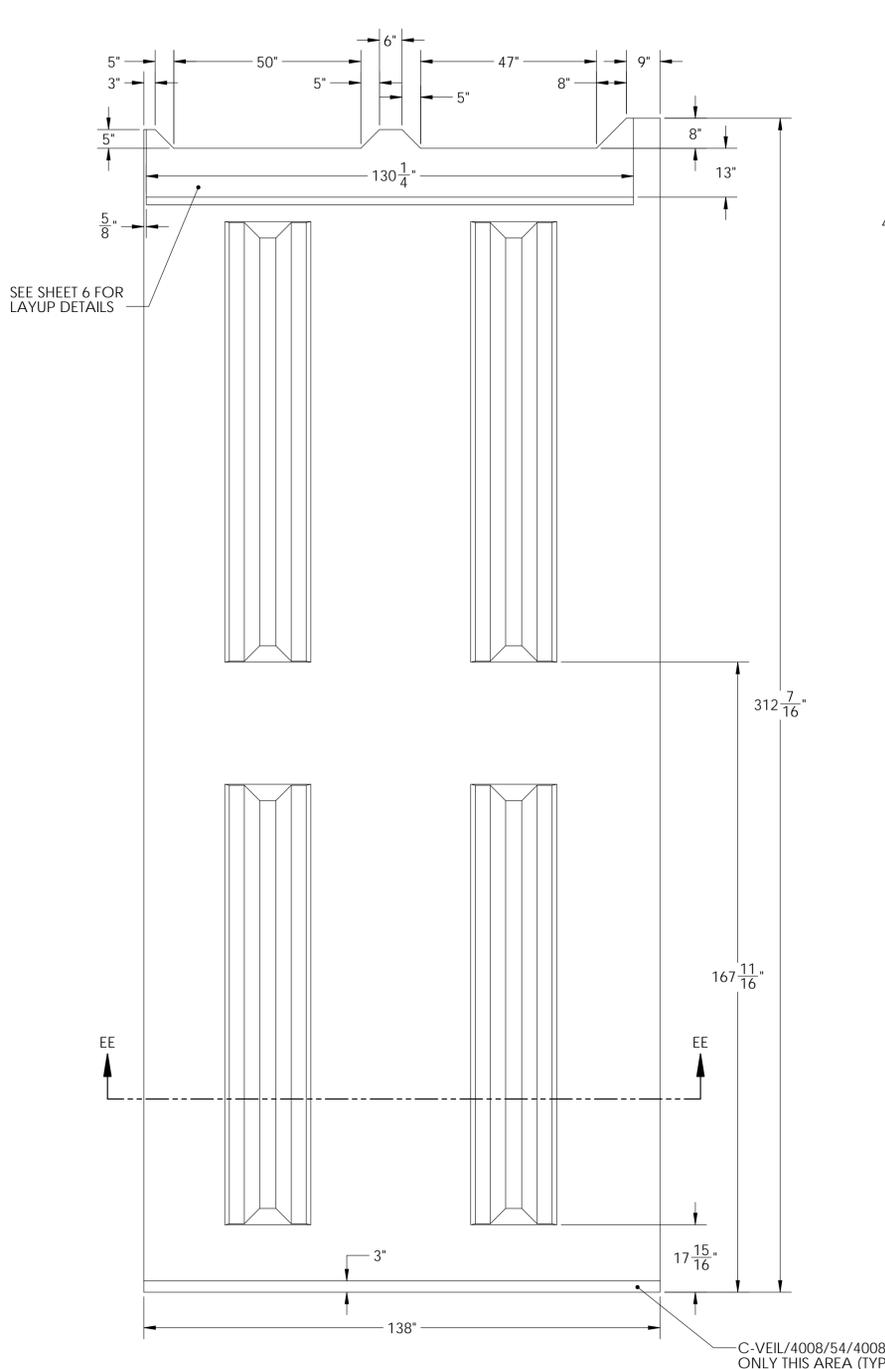
DIMENSIONS ARE IN INCHES
TOLERANCES: +0, -1/16"
FRACTIONAL: MACH. ± BEND ±
ANGULAR: MACH. ±
TWO PLACE DECIMAL ± ±
THREE PLACE DECIMAL ± ±

| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

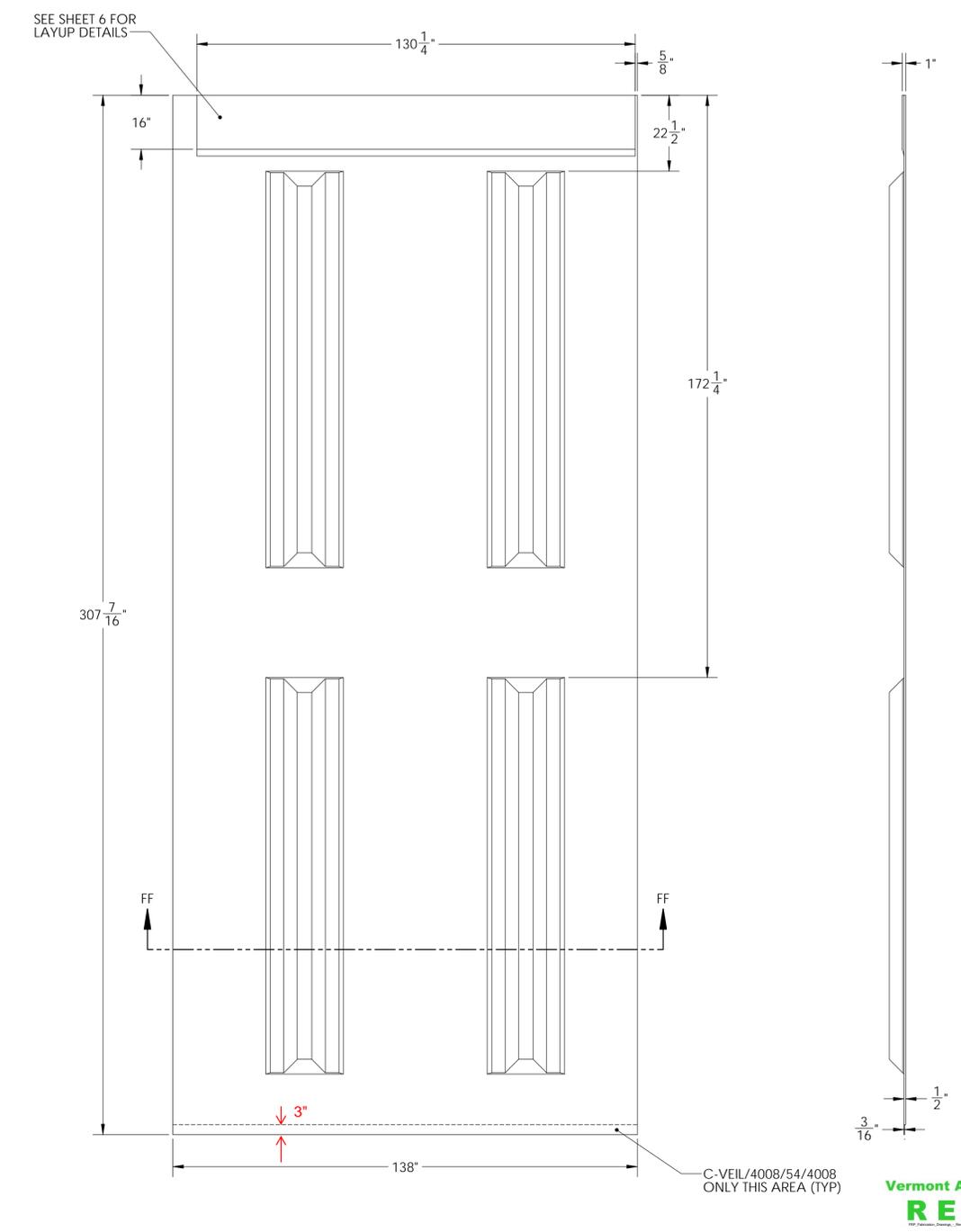
PROJECT
BROOKFIELD FRP PONTOONS

CUSTOMER
MILLER CONST. / VTRANS
SHEET
END HALF TOP PLATE DIMENSIONS

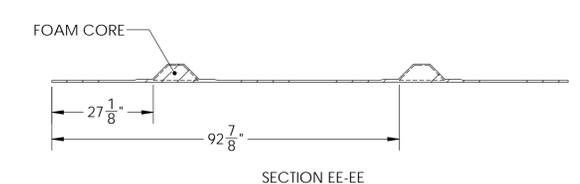
| | |
|--------------|-------------|
| WEIGHT: | 2,980 lb |
| DESCRIPTION: | FABRICATION |
| SCALE | 1 : 24 |
| WO NO. | 8420 |
| CONTRACT NO. | 9185 |
| DWG NO. | 8420-6 |
| SHEET | 14 OF 16 |
| PONTOON | PART NO. |
| 1,2,9,10 | 9 |



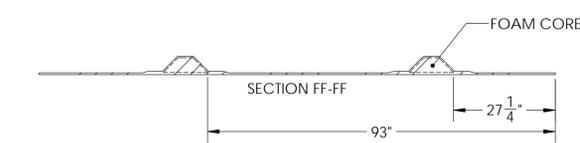
TOP PLATE SIDE A



TOP PLATE SIDE B



SECTION EE-EE



SECTION FF-FF

TOP SIDE A SHOWN FOR PONTOONS 2 & 9 - MIRROR ABOUT LONGITUDINAL AXIS FOR PONTOONS 1 & 10

TOP SIDE A SHOWN FOR PONTOONS 2 & 9 - MIRROR ABOUT LONGITUDINAL AXIS FOR PONTOONS 1 & 10

NOTE:
2 PCS OF 2" FOAM CORE TO BE BONDED TOGETHER AND SHAPED PRIOR TO DRILLING PERFORATIONS. PERFORATIONS ARE TO BE 1/8" O.D. AND AT INTERVALS NO GREATER THAN 1 1/2" O.C. - SEE DETAIL M ON SHT 13

CLARIFY THE INTENT OF THIS STATEMENT. WHERE ARE DRILLING/PERFORATING OPERATIONS BEING CARRIED OUT AND FOR WHAT PURPOSE?

Vermont Agency of Transportation
RECEIVED
CK'D BY _____ OK'D BY Jennifer Fitch
June 5, 2014
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REVIEWER DATE



| DATE | DESCRIPTION | REV |
|------|-------------|-----|
| | | |
| | | |
| | | |

SEAL

DIMENSIONS ARE IN INCHES
 TOLERANCES: +0, -1/16"
 FRACTIONAL: MACH.
 ANGULAR: MACH.
 TWO PLACE DECIMAL
 THREE PLACE DECIMAL

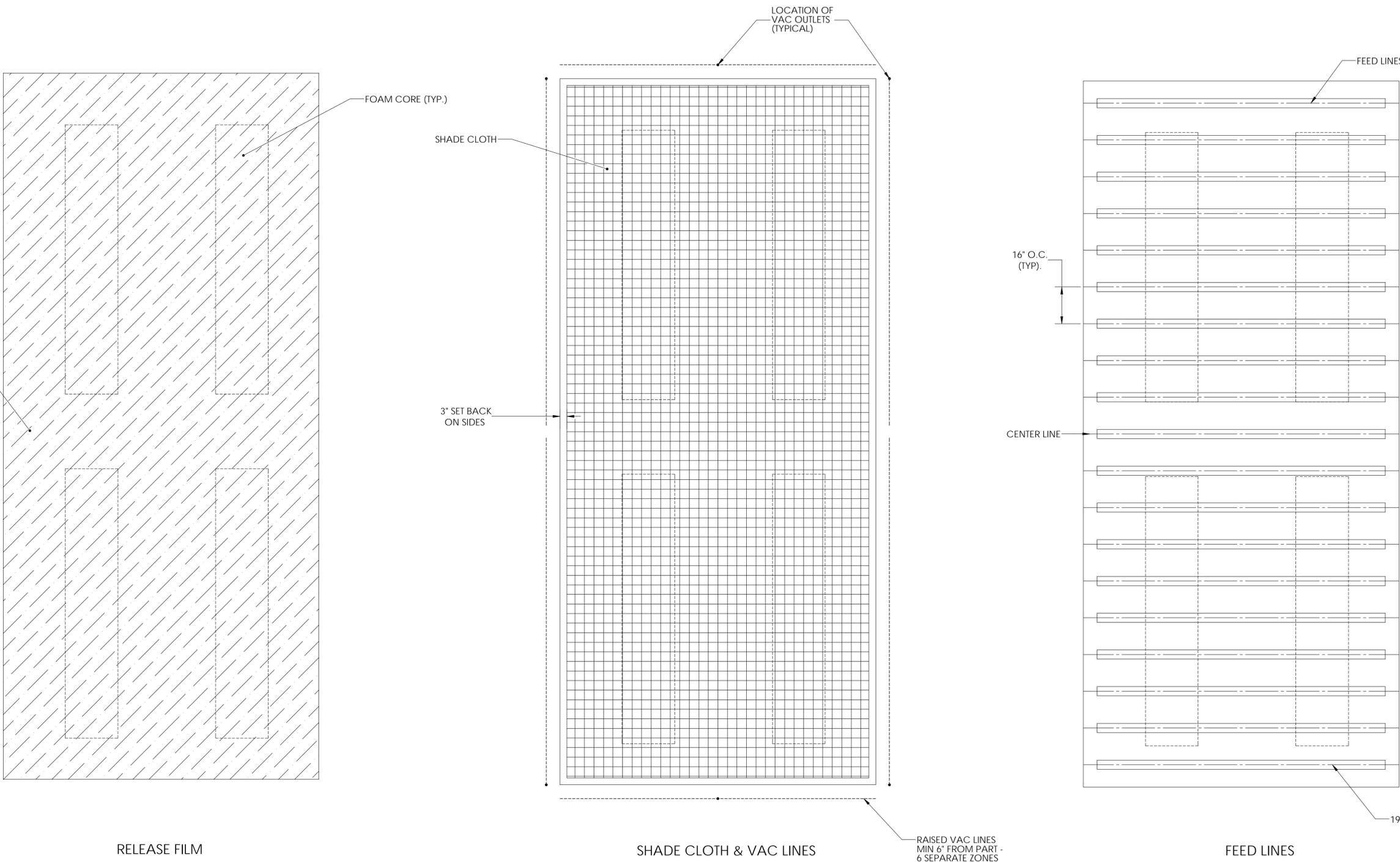
| | |
|----------|--------|
| DRAWN BY | DATE |
| ML | 6/4/14 |
| CHKD BY | DATE |
| JM | 6/4/14 |

PROJECT: BROOKFIELD FRP PONTOONS

CUSTOMER: MILLER CONST. / VTRANS

SHEET: HALF TOP PLATE INFUSION LAYOUT AND DETAILS

| | |
|-------------------|-------------|
| WEIGHT: | N/A |
| DESCRIPTION: | FABRICATION |
| SCALE: | 1 : 24 |
| WO NO.: | 8420 |
| CONTRACT NO.: | 9185 |
| DWG NO.: | 8420-6 |
| SHEET: | 16 OF 16 |
| PONTOON PART NO.: | N/A |



RELEASE FILM

SHADE CLOTH & VAC LINES

FEED LINES

INFUSION SET-UP DETAILS

Vermont Agency of Transportation
Received
 CK'D BY _____ OK'D BY Jennifer Fitch
 June 5, 2014
 RESUBMIT Yes Rejected
 BY Jennifer Fitch DATE 06/24/2014

T.Y. LIN INTERNATIONAL
 THE STAMPED DOCUMENTS ARE HEREBY:
 _____ APPROVED
 _____ APPROVED AS NOTED
 _____ REVISE AND RESUBMIT

SEE TRANSMITTAL FOR ADDITIONAL INFORMATION AS APPLICABLE.

THIS REVIEW IS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. ANY DEVIATION FROM THE PLANS OR SPECIFICATIONS NOT CLEARLY NOTED BY THE CONTRACTOR HAS NOT BEEN REVIEWED. REVIEW BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF THE CONTRACTUAL RESPONSIBILITY FOR ANY ERRORS OR DEVIATION FROM THE CONTRACT REQUIREMENTS.

 JOSH OLUND
 REVIEWER

 06/20/2014
 DATE

STATE OF VERMONT
BROOKFIELD FLOATING BRIDGE

BRIDGE REPLACEMENT PROJECT

PROJECT NAME: BROOKFIELD

PROJECT NUMBER: BRF FLBR (2)

JUNE 4, 2014

FIBER REINFORCED POLYMER (FRP) PONTOON COMPONENT ASSEMBLY

Vermont Agency of Transportation
RECEIVED

OK'D BY _____ OK'D BY Jennifer Fitch

June 5, 2014

RESUBMIT Yes Rejected
BY Jennifer Fitch DATE 06/24/2014

T.Y. LIN INTERNATIONAL

THE STAMPED DOCUMENTS ARE HEREBY:

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- REVISE AND RESUBMIT

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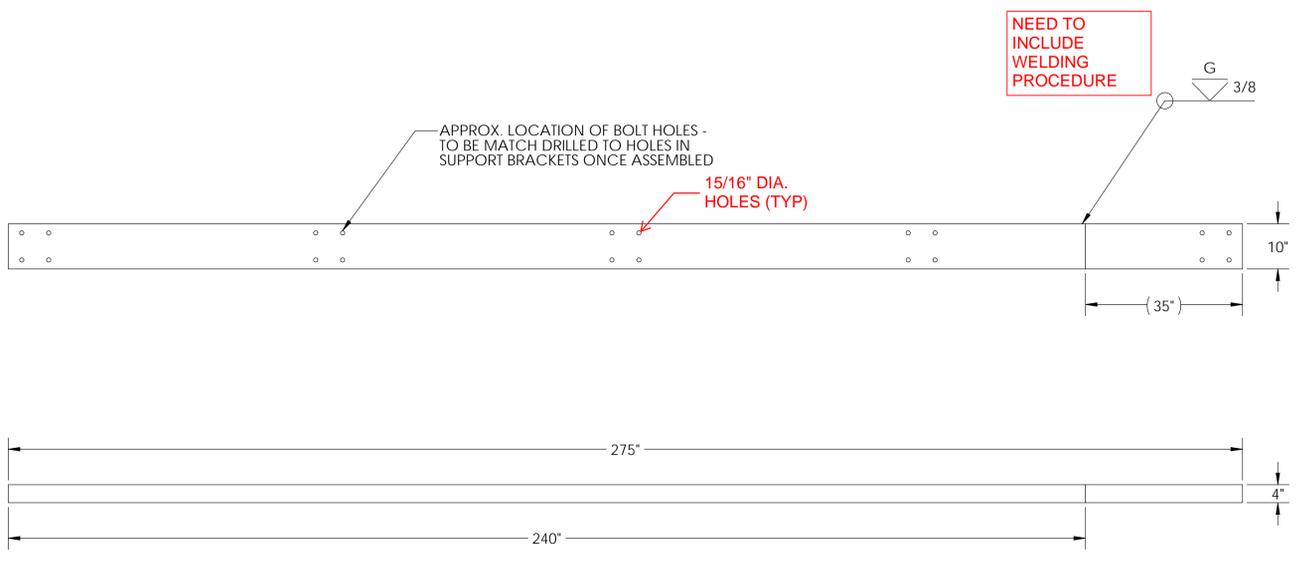
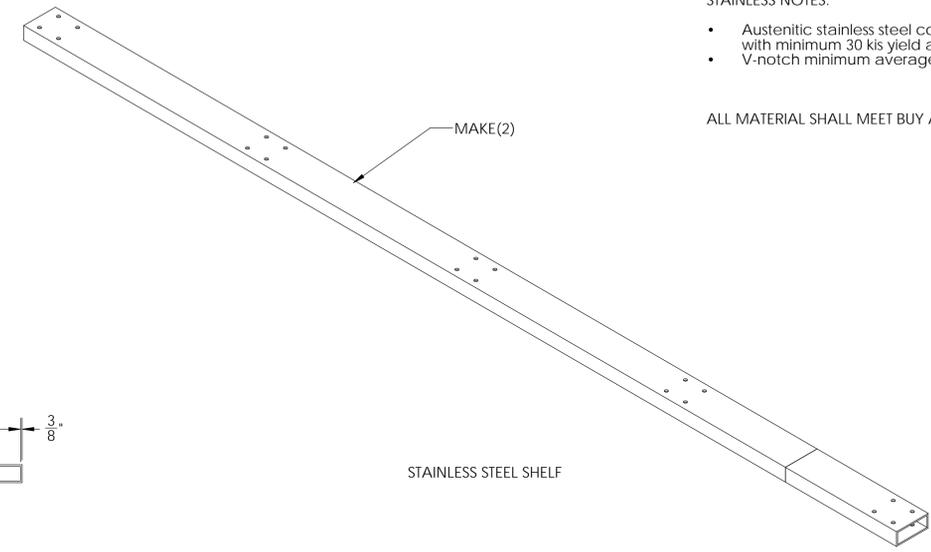
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JOSH OLUND 06/20/2014
REVIEWER DATE



- STAINLESS NOTES:
- Austenitic stainless steel conforming to ASTM A240A hot finished with minimum 30 ksi yield and 70 ksi tensile.
 - V-notch minimum average energy of 23 ft-lb at 40F.

ALL MATERIAL SHALL MEET BUY AMERICAN PROVISIONS



| DATE | DESCRIPTION | REV |
|------|-------------|-----|
| | | |
| | | |
| | | |

SEAL

DIMENSIONS ARE IN INCHES
 TOLERANCES: +0, -1/16"
 FRACTIONAL: +, -1/16"
 ANGULAR: MACH +, BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

| | |
|----------|---------|
| DRAWN BY | DATE |
| JM | 5/29/14 |
| CHKD BY | DATE |
| XX | X/X/XX |

| | |
|----------|-----------------------------------|
| PROJECT | BROOKFIELD FRP PONTOONS |
| CUSTOMER | MILLER CONST. / VTRANS |
| SHEET | STAINLESS STEEL SHELF FABRICATION |

Vermont Agency of Transportation
RECEIVED

CK'D BY _____ OK'D BY Jennifer Fitch
 June 5, 2014
 RESUBMIT Yes Rejected
 BY Jennifer Fitch DATE 06/24/2014

T.Y. LIN INTERNATIONAL

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____ APPROVED
 ____ APPROVED AS NOTED
 X ____ REVISE AND RESUBMIT

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____ JOSH OLUND 06/20/2014
 REVIEWER DATE

| | |
|--------------|-------------|
| WEIGHT: | 12,644 lb |
| DESCRIPTION: | FABRICATION |
| SCALE | 1 : 2 |
| WO NO. | 8420 |
| CONTRACT NO. | 9185 |
| DWG NO. | 8420-7 |
| SHEET | 2 OF 2 |
| PONTOON | N/A |
| PART NO. | N/A |