

**NewsNote # 19**

**October, 2015**



***Fire Prevention “Tree Game”***

**National Association of State Foresters**

*in Cooperation with*

**Michigan’s Forest Fire Experiment Station**

**REC NewsNote No. 19**

***Fire Prevention "Tree Game"***

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# Disclaimer

This report has been developed for the guidance of member States, Provinces, Federal Agencies and their cooperators. The National Association of State Foresters and the State of Michigan assume no responsibility for the interpretation or use of this information.

The use of trade, firm or corporation names is for the information and convenience of the user. Such use does not constitute an official evaluation, conclusion, recommendation, endorsement or approval of any product or service to the exclusion of others, which may be suitable.

# Introduction



##### REC staff in conjunction with the Michigan Department of Natural Resources (MIDNR) have worked together to create an interactive carnival type game to help communicate the message of fire prevention.

##### The "Tree Game" explained below gives agencies a tool to be able to better explain causes of forest fire to children and give them a chance to learn how forest fires are extinguished by having them actively participate in putting out a mock fire on the Tree Game.

##### States across the country have invested much time and resources in developing various programs to help educate the public regarding preventable forest fires. The Smokey Bear program is a good example of this type of educational initiative.

# Design

MIDNR approached REC with the intent of developing an apparatus that was easily transportable, setup and operated at indoor or outdoor functions. The apparatus would need to be able to help MIDNR staff interactivley engage children and their parents to communicate the message of fire prevention and to teach them in general terms how forest fire is classically fought.

REC created the Tree Game to fulfill this need.

The Tree Game is shaped like a conifer tree and consists of 2 seperate panels that when assembled is self standing and presents more of a 3D representation. One of the panels has cutouts of various sizes to house the artificial "flames". The flames are installed such that they will stand upright and are hinged to be able to be knocked over or "extinguished" by a child with either a low pressure water spraying device or a small sandbag (for indoor functions).

\*\* Several drawings used for re-creating the game need to be printed full-scale and will be used as a pattern for fabrication.

###### *Appendix A ...............Photograph of the Tree Game being used*

###### *Appendix B ..............Construction Drawings*

# Appendix A



**APPENDIX B**

***STD. TOL. FRACTIONAL:***

***0 TO 6 IN + - 1/32***

***6 IN AND UP + - 1/16***

***ANGULAR:***

***+ - 1 DEG. N0. BY DATE REVISION***

***DECIMAL: FOREST FIRE EXPERIMENT STATION***

***1 PLACE + - 0.05***

***2 PLACE + - 0.01***

***3 PLACE + - 0.005***

***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653***

***DRAWN:***

DGP ***DESIGNED:*** DGP ***APPROVED:***

***DATE:***

02-Jan-2014

***SCALE:***

***FOREST, MINERAL AND***

FULL

***DW NO.***

***D***

***FIRE MANAGEMENT***

***PROJECT NO.:***

13-0

*I*

***TITLE:*** TREE, FRONT

***G.*** 42-0001

***SIZE:***

/

POSITION INDICATORS FOR PANEL GUIDE MOUNTING HOLES

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\*\*\* MAKE FROM PLYWOOD, 1/2" THICK MINIMUM

\*\*\* APPROXIMATE SIZE OF FINISHED PART IS 36" X 60"

\*\*\* FINISH: EXTERIOR GRADE GREEN PAINT

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EXTERIOR GRADE CLEAR TOPCOAT RECOMMENDED POST PAINT

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2-7/8

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- 4-3/4

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1-7/8

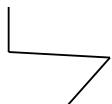
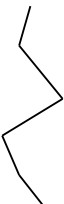
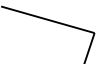
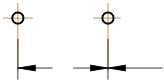
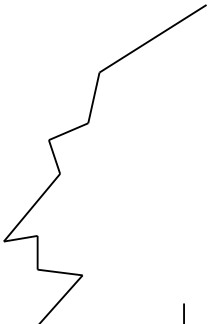
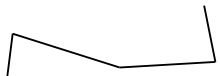
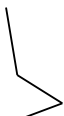
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***STD. TOL. FRACTIONAL:***

***0 TO 6 IN + - 1/32***

***6 IN AND UP + - 1/16***

***ANGULAR:***

***+ - 1 DEG. N0. BY DATE REVISION***

***DECIMAL: FOREST FIRE EXPERIMENT STATION***

***1 PLACE + - 0.05***

***DRAWN:***

DGP ***DESIGNED:*** DGP ***APPROVED:***

***DATE:***

03-Dec-2013 ***FOREST, MINERAL AND***

***SCALE:***

***2 PLACE + - 0.01***

***3 PLACE + - 0.005***

*I* ***PROJECT NO.:***

13-0

***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653***

***TITLE:***

TREE, SIDE

FULL

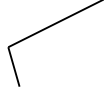
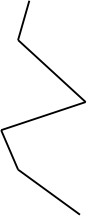
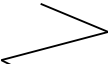
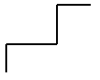
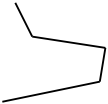
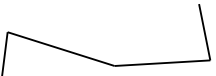
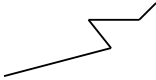
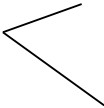
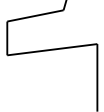
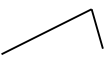
***FIRE MANAGEMENT***

***SIZE:***

***DWG.***

***NO.*** 42-0002

***D***



\*\*\* MAKE FROM PLYWOOD, 1/2" THICK MINIMUM

\*\*\* APPROXIMATE SIZE OF FINISHED PART IS 36" X 60"

\*\*\* FINISH: EXTERIOR GRADE GREEN PAINT

EXTERIOR GRADE CLEAR TOPCOAT RECOMMENDED POST PAINT

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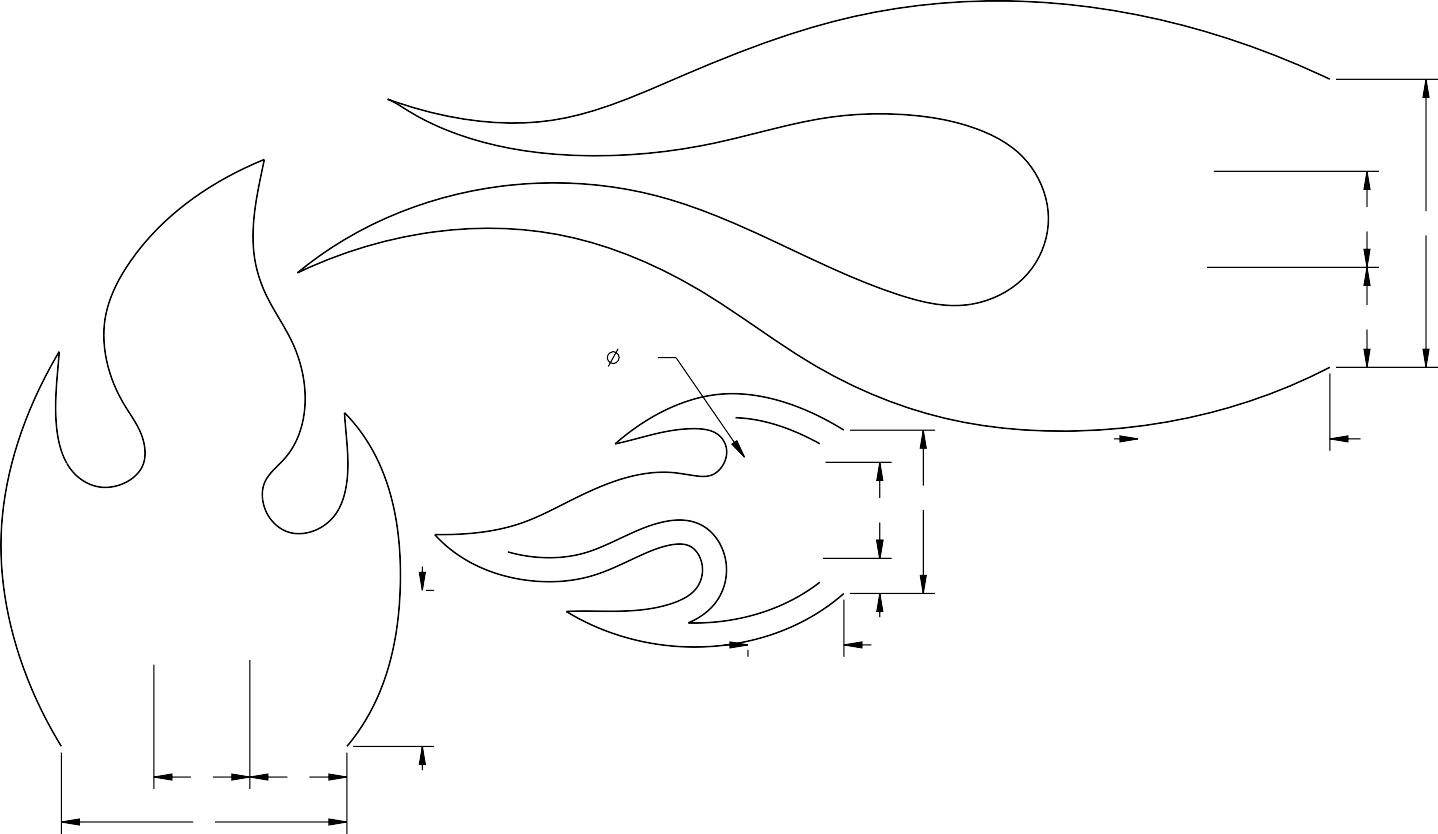
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| 5 REQ'D. |  | 1-5/8 | 1/8 | 2 REQ'D.  1 3  1  2  1-3/4  1  3 REQ'D.  \*\* FINISH WITH EXTERIOR GRADE PAINT  3/8  MAKE FROM 1/16 AL.  1 | | | | | | | |
|  |  |  | ***STD. TOL.*** | |  |  |  |  | ***DRAWN:*** |  | |
|  |  |  | DGP |  | |
| ***FRACTIONAL:***  ***0 TO 6 IN + - 1/32***  ***6 IN AND UP + - 1/16*** | |  |  |  |  |
| ***DESIGNED:***  DGP |
|  |  |  |  |
|  |  |  | ***ANGULAR:*** | |  |  |  |  | ***APPROVED:*** |  | |
| ***N0.*** | ***BY*** | ***DATE*** | ***REVISION*** |
| 1  3 | 1 |  | ***+ - 1 DEG.*** | |  | ***FOREST, MINERAL AND FIRE MANAGEMENT*** | |
| ***DECIMAL:***  ***1 PLACE + - 0.05***  ***2 PLACE + - 0.01***  ***3 PLACE + - 0.005*** | | ***FOREST FIRE EXPERIMENT STATION***  ***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*** | | | | ***DATE:***  22-Oct-2013 |
| ***SCALE:***  FULL |
|  |  |  | ***PROJECT NO.:***  13-0 | | ***TITLE:*** FLAME (S-M-L) | | | | | ***DWG.***  ***NO.*** 42-0004 | ***SIZE:***  ***B*** |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 1-1/2  1/4 1  5/16  2 PLCS  1/8  1-1/2  PART NO: 42-0005  MAT'L: McMaster Carr Item#: 1581A281 EST WT: 0.65 LBS | | | | | | | |
| ***STD. TOL.*** |  |  |  |  | ***DRAWN:***  dgp | ***FOREST, MINERAL AND FIRE MANAGEMENT*** | |
| ***FRACTIONAL***  ***0 TO 6 IN + - 1/32***  ***6 IN AND UP + - 1/16*** |  |  |  |  |
| ***DESIGNED:***  DGP |
|  |  |  |  |
| ***ANGULAR:***  ***+ - 1 DEG.*** |  |  |  |  | ***APPROVED:*** |
| ***N0.*** | ***BY*** | ***DATE*** | ***REVISION*** |
| ***DECIMAL:***  ***1 PLACE + - 0.05***  ***2 PLACE + - 0.01***  ***3 PLACE + - 0.005*** | ***FOREST FIRE EXPERIMENT STATION***  ***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*** | | | | ***DATE:***  13-Nov-2014 |
| ***SCALE:*** |
| ***PROJECT NO.:*** | ***TITLE:*** AL. HINGE, 1 1/2 X 1 1/2 | | | | | ***DWG.***  ***NO.*** 42-0005 | ***SIZE:***  ***A*** |



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1-1/2  7/32 1/8  2 PLCS  3/8  1  1  PART NO: 42-0006  MAT'L: AL. ANGLE, 1 X 1 X 1/8 K02600  FFES SPEC NO: AK-20606AG EST WT: 0.13 LBS | | | | | | | |
| ***STD. TOL.*** |  |  |  |  | ***DRAWN:***  DGP | ***FOREST, MINERAL AND FIRE MANAGEMENT*** | |
| ***FRACTIONAL***  ***0 TO 6 IN + - 1/32***  ***6 IN AND UP + - 1/16*** |  |  |  |  |
| ***DESIGNED:***  DGP |
|  |  |  |  |
| ***ANGULAR:***  ***+ - 1 DEG.*** |  |  |  |  | ***APPROVED:*** |
| ***N0.*** | ***BY*** | ***DATE*** | ***REVISION*** |
| ***DECIMAL:***  ***1 PLACE + - 0.05***  ***2 PLACE + - 0.01***  ***3 PLACE + - 0.005*** | ***FOREST FIRE EXPERIMENT STATION***  ***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*** | | | | ***DATE:***  22-Oct-2015 |
| ***SCALE:***  FULL |
| ***PROJECT NO.:*** | ***TITLE:*** ANGLE, GUIDE | | | | | ***DWG.***  ***NO.*** 42-0006 | ***SIZE:***  ***A*** |



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| --- | --- | --- | --- | --- | --- |
| ITEM | PART NO. | DWG |  | DESCRIPTION | QTY |
| 1 | 42-0001 |  | TREE, FRONT |  | 1 |
| 2 | 42-0002 |  | TREE, SIDE |  | 1 |
| 3 | 42-0004 | B | FLAME (S-M-L) |  | 3 |
| 4 | 42-0005 | A | AL. HINGE, 1 1/2 X 1 1/2 |  | 3 |
| 5 | 42-0006 | A | ANGLE, GUIDE |  | 4 |

\*\*(1) OF EACH SIZE OF FLAME SHOWN FOR CLARITY

***STD. TOL. FRACTIONAL:***

***0 TO 6 IN + - 1/32***

***6 IN AND UP + - 1/16***

***ANGULAR:***

For Assembly:

\*Use #4 x 7/16" Panhead screws to attach hinges to the tree panel (Mcmaster Carr P/N: 90190A109)

\* Use #10 x 1/2" Panhead screws to attach angle guides to the tree panel (Mcmaster Carr P/N: 90190A242

\*Use Aluminum 1/8" blind rivets .126"-.187" grip range to attach flames to the hinges

(Mcmaster Carr P/N: 97447A020)

***DRAWN:***

DCM

***DESIGNED:***

***APPROVED:***

***+ - 1 DEG. N0. BY DATE REVISION***

***DECIMAL: FOREST FIRE EXPERIMENT STATION***

***1 PLACE + - 0.05***

DCM

***DATE:***

22-Oct-2015

***SCALE:***

***FOREST, MINERAL AND***

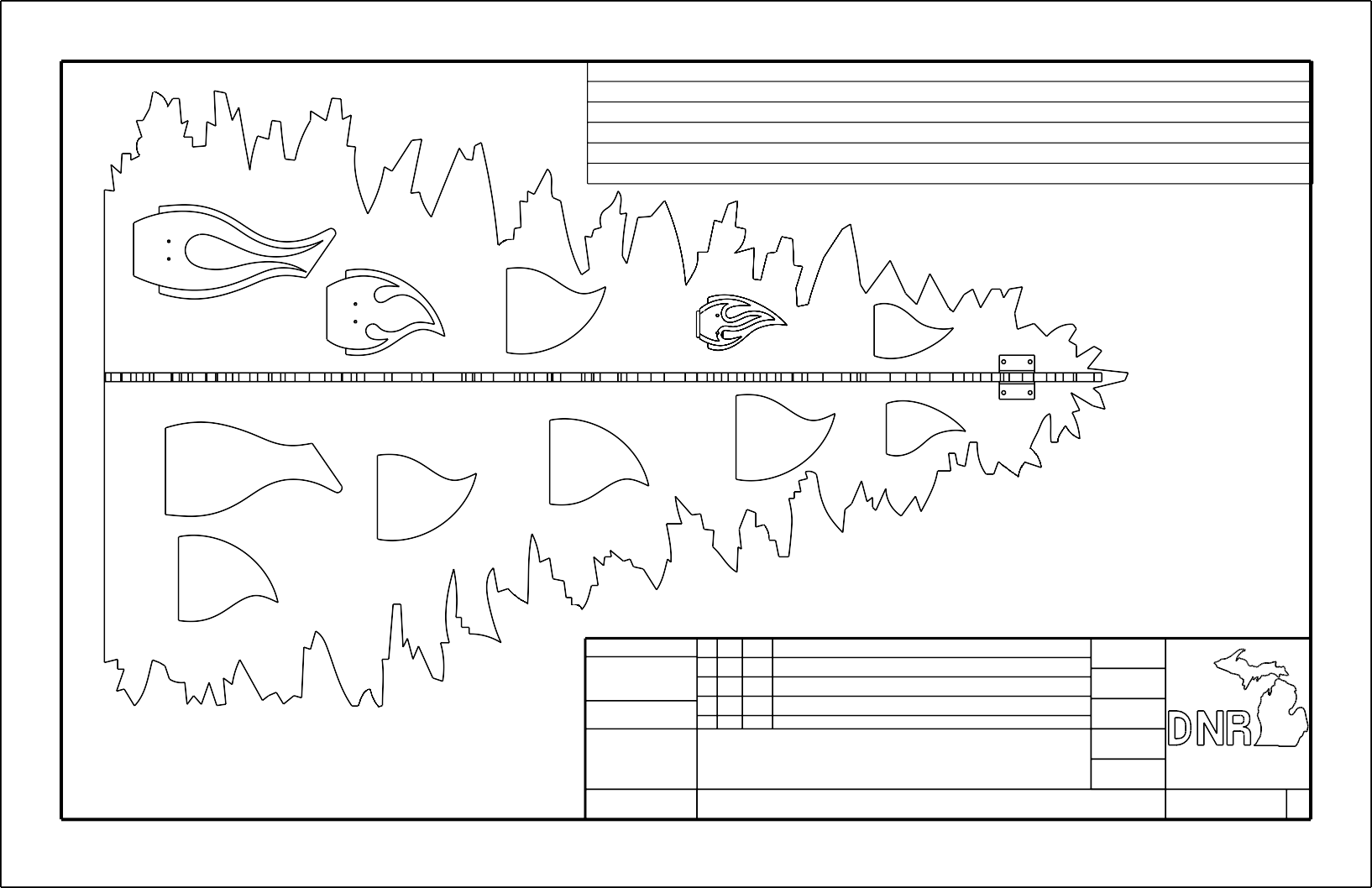
SCALE 7/32

***2 PLACE + - 0.01***

***3 PLACE + - 0.005***

#### *P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*

***FIRE MANAGEMENT***

***PROJECT NO.:***

***TITLE:***

FIRE TREE ISOMETRIC

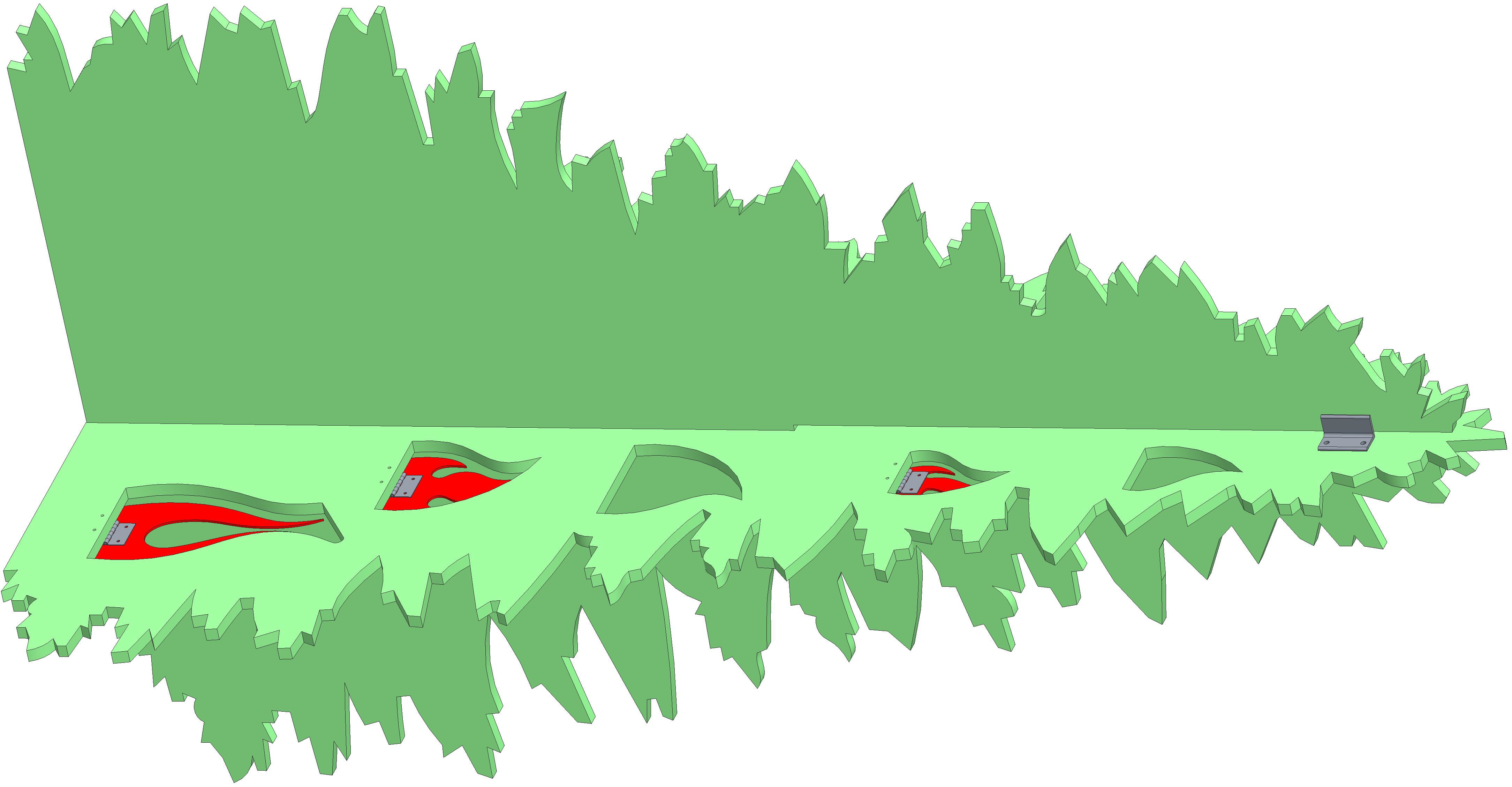
***DWG. NO.***

***SIZE:***

***B***

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|  | | | | | | | | |
| SCALE 1/4 | ***STD. TOL.*** |  |  |  |  | ***DRAWN:*** | ***FOREST, MINERAL AND FIRE MANAGEMENT*** | |
| ***FRACTIONAL:***  ***0 TO 6 IN + - 1/32***  ***6 IN AND UP + - 1/16*** |  |  |  |  |
| ***DESIGNED:*** |
|  |  |  |  |
| ***ANGULAR:***  ***+ - 1 DEG.*** |  |  |  |  | ***APPROVED:*** |
| ***N0.*** | ***BY*** | ***DATE*** | ***REVISION*** |
| ***DECIMAL:***  ***1 PLACE + - 0.05***  ***2 PLACE + - 0.01***  ***3 PLACE + - 0.005*** | ***FOREST FIRE EXPERIMENT STATION***  ***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*** | | | | ***DATE:***  22-Oct-2015 |
| ***SCALE:*** |
| ***PROJECT NO.:*** | ***TITLE:*** FIRE TREE ISOMETRIC | | | | | ***DWG. NO.*** | ***SIZE:***  ***B*** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | |
| SCALE 1/4 | ***STD. TOL.*** |  |  |  |  | ***DRAWN:*** | ***FOREST, MINERAL AND FIRE MANAGEMENT*** | |
| ***FRACTIONAL:***  ***0 TO 6 IN + - 1/32***  ***6 IN AND UP + - 1/16*** |  |  |  |  |
| ***DESIGNED:*** |
|  |  |  |  |
| ***ANGULAR:***  ***+ - 1 DEG.*** |  |  |  |  | ***APPROVED:*** |
| ***N0.*** | ***BY*** | ***DATE*** | ***REVISION*** |
| ***DECIMAL:***  ***1 PLACE + - 0.05***  ***2 PLACE + - 0.01***  ***3 PLACE + - 0.005*** | ***FOREST FIRE EXPERIMENT STATION***  ***P.O. BOX 68 ROSCOMMON, MICHIGAN 48653*** | | | | ***DATE:***  22-Oct-2015 |
| ***SCALE:*** |
| ***PROJECT NO.:*** | ***TITLE:*** FIRE TREE ISOMETRIC | | | | | ***DWG. NO.*** | ***SIZE:***  ***B*** |



**Further Information**

**For further information regarding this or any other REC product , please contact the REC Program Administrator at:**

Roscommon Equipment Center c/o Forest Fire Experiment Station 1337 East Robinson Lake Road

P.O. Box 68 Roscommon, Michigan 48653 Telephone: (989) 275-5211 Fax: (989) 275-8249

Email: [info@RoscommonEquipmentCenter.org](mailto:info@RoscommonEquipmentCenter.org) Web Site: [www.RoscommonEquipmentCenter.org](http://www.RoscommonEquipmentCenter.org/)

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