



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

1200 New Jersey Ave., SE  
Washington, D.C. 20590

April 23, 2013

In Reply Refer To:  
HSST/B-34H

Mr. Marc Christensen  
OTW Safety  
P.O. Box 1461  
Salt Lake City Utah 84110

Dear Mr. Christensen:

This letter is in response to your request for the Federal Highway Administration (FHWA) to review a roadside safety system for eligibility for reimbursement under the Federal-aid highway program.

Name of system:	MB-350 Barrier
Type of system:	Water Filled Barrier
Test Level:	NCHRP Report 350 Test Level 3
Testing conducted by:	N/A
Date of request:	December 5, 2011 and February 13, 2013
Date initially acknowledged:	December 6, 2011
Date of completed package:	February 26, 2013

**Decision:**

The following device is eligible, with details provided in the form (Attachment 1) and a narrative description (Attachment 2) which are included as integral parts of this letter:

- Off The Wall MB-350 Water Filled Barrier with hitch pin connection and steel strap under the units.

Based on a review of prior crash test results and documentation on proposed modifications submitted by the manufacturer certifying the device described herein meets the crash test and evaluation criteria of the National Cooperative Highway Research Program (NCHRP) Report 350, the device is eligible for reimbursement under the Federal-aid highway program. Eligibility for reimbursement under the Federal-aid highway program does not establish approval or endorsement by the FHWA for any particular purpose or use.

The FHWA, the Department of Transportation, and the United States Government do not endorse products or services and the issuance of a reimbursement eligibility letter is not an endorsement of any product or service.

Only

### **Requirements**

Roadside safety devices should meet the guidelines contained in the National Cooperative Highway Research Program (NCHRP) Report 350 or the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH).

### **Description**

On February 26, 2013, you provided the attached description of the evolution of the MB350 barrier. In addition, on September 21, 2007, you provided information indicating the strength of the hitch pin was a 100,000 psi yield strength which exceeded the 85,000 psi yield of the Grade 5 bolt that was used in the original crash testing.

### **Findings**

Therefore, the system described and detailed in the attached form is eligible for reimbursement and may be installed under the range of conditions under which the original device was tested.

Please note the following standard provisions that apply to FHWA eligibility letters:

- This finding of eligibility is limited to crash characteristics and does not cover the structural features of the systems, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may influence the crash characteristics of the system will require a new reimbursement eligibility letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals safety problems, or that the system is significantly different from the version that was crash tested, we reserve the right to modify or revoke this letter.
- You will be expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.
- You will be expected to certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the crash test requirements of the NCHRP Report 350.
- To prevent misunderstanding by others, this letter of eligibility is designated as number B-34H and shall not be reproduced except in full. This letter and the test documentation upon which it is based are public information. All such letters and documentation may be reviewed at our office upon request.
- This letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented system for which the applicant is not the patent holder. The FHWA is neither prepared nor required to become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.

- Off The Wall water-filled barriers are patented products and considered proprietary. If proprietary systems are specified by a highway agency for use on Federal-aid projects: (a) they must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with the existing highway facilities or that no equally suitable alternative exists; or (c) they must be used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes. Our regulations concerning proprietary products are contained in Title 23, Code of Federal Regulations, Section 635.411.
- Because some water ballasted barriers and channelizers are similar in appearance, the FHWA recommends labeling each unit or module to indicate limitations on use. When used as a barrier all hardware, both internal and external that was used in the crash testing, shall be installed per the manufacturer's instructions. Recommended guidance for such labels may be found on the web site of the AASHTO/AGC/ARTBA Task Force 13 at <http://www.aashtotf13.org>.

Sincerely yours,



Michael S. Griffith  
Director, Office of Safety Technologies  
Office of Safety

Enclosures

Research  
and  
Historical  
Purposes  
Only

## Request for Federal Aid Reimbursement Eligibility Of Highway Safety Hardware

<b>Submitter</b>	Date of Request:	02/12/2013	<input type="radio"/> New	<input checked="" type="radio"/> Resubmission
	Name:	Marc Christensen		
	Company:	Off the Wall Products LLC dba OTW Safety		
	Address:	10 W Broadway, Suite 900, Salt Lake City UT 84101		
	Country:	USA		
	To:	Michael S. Griffith, Director FHWA, Office of Safety Technologies		

I request the following devices be considered eligible for reimbursement under the Federal-aid highway program.

[Help](#)

System Type	Submission Type	Device Name / Variant	Testing Criterion	Test Level
'B': Barriers (Roadside, Media	<input checked="" type="radio"/> Physical Crash Testing <input type="radio"/> FEA & V&V Analysis	MB350 Longitudinal Barrier	NCHRP Report 350	TL3

By submitting this request for review and evaluation by the Federal Highway Administration, I certify that the product(s) was (were) tested in conformity with the NCHRP Report 350 (Report 350) and that the evaluation results meet the appropriate evaluation criteria in the Report 350.

Identification of the individual or organization responsible for the product:

Contact Name:	Marc Christensen	Same as Submitter <input checked="" type="checkbox"/>
Company Name:	Off the Wall Products LLC dba OTW Safety	Same as Submitter <input checked="" type="checkbox"/>
Address:	10 W Broadway, Suite 900, Salt Lake City UT 84101	Same as Submitter <input checked="" type="checkbox"/>
Country:	USA	Same as Submitter <input checked="" type="checkbox"/>

### PRODUCT DESCRIPTION

Modification to Existing Hardware Non-Significant - Effect is positive or Inconsequential
Redesigned water cell to allow for blow molding. No change to filled weight or capacity. Changed crash cash to allow quick installation and removal using hitch pins. No change to materials.

### CRASH TESTING

A brief description of each crash test and its result:

Required Test Number	Narrative Description	Evaluation Results
3-10 (820C)	TTI Test No. 270687-YEW8	PASS
S3-10 (700C)		
3-11 (2000P)	TTI Test No. 270687-YEW7	PASS
3-20 (820C)		
S3-20 (700C)		



Required Test Number	Narrative Description	Evaluation Results
3-21 (2000P)		

Full Scale Crash Testing was done in compliance with MASH by the following accredited crash test laboratory (cite the laboratory's accreditation status as noted in the crash test reports.):

Laboratory Name:	Texas Transportation Institute	
Laboratory Contact:	Dean C. Alberson	Same as Submitter <input type="checkbox"/>
Address:	The Texas A&M University System	Same as Submitter <input type="checkbox"/>
Country:	College Station TX 77843 USA	Same as Submitter <input type="checkbox"/>
Accreditation Certificate Number and Date:	Project 270687 (YEW 7 & 8) December 1995	

### ATTACHMENTS

Attach to this form:

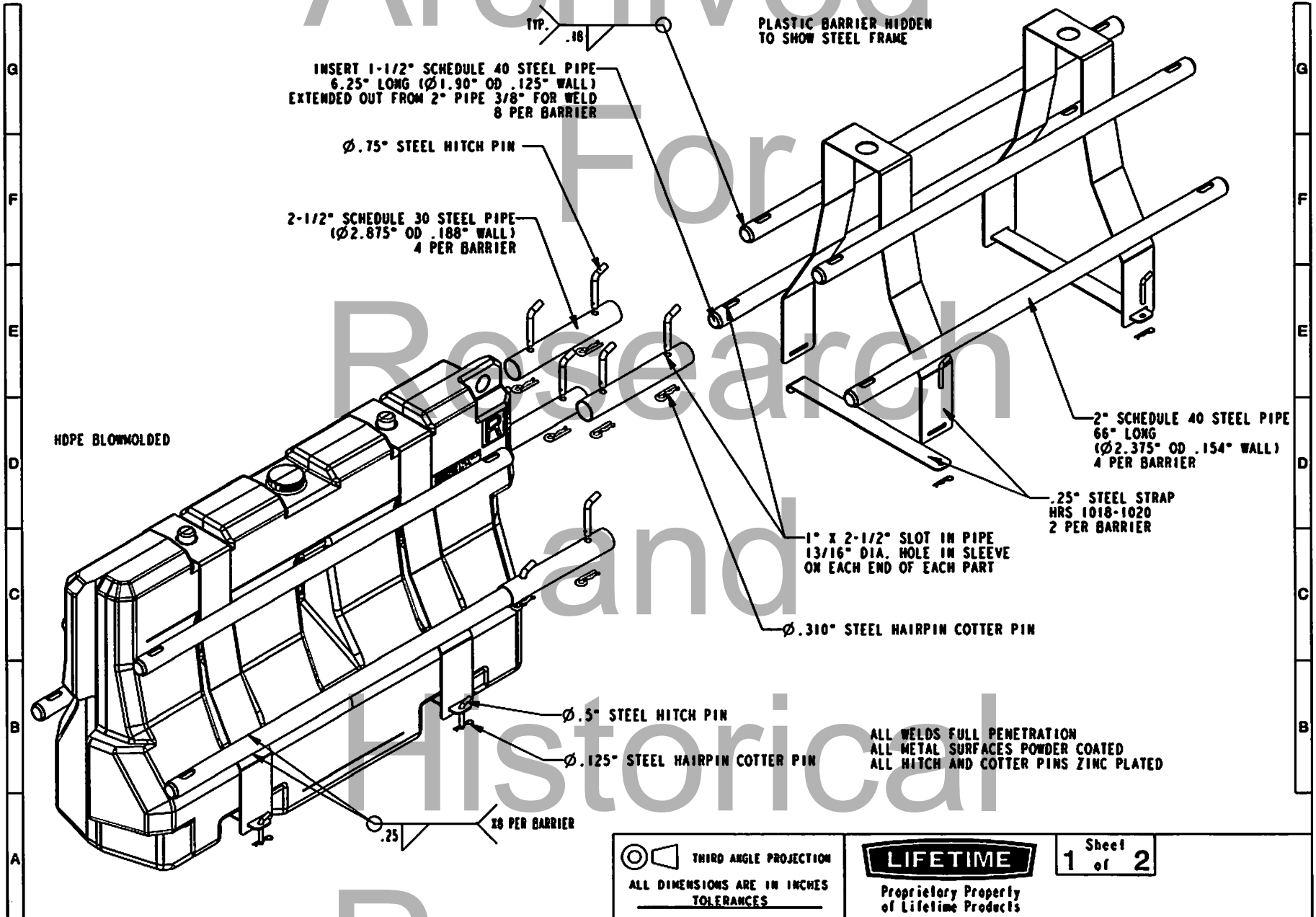
- 1) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
- 2) A drawing or drawings of the device(s) that conform to the Task Force-13 Drawing Specifications [[Hardware Guide Drawing Standards](#)]. For proprietary products, a single isometric line drawing is usually acceptable to illustrate the product, with detailed specifications, intended use, and contact information provided on the reverse. Additional drawings (not in TF-13 format) showing details that are key to understanding the performance of the device should also be submitted to facilitate our review.

FHWA Official Business Only:

Eligibility Letter		AASHTO TF13	
Number	Date	Designator	Key Words
B-34H			water filled barrier, highway kit, off the wall, mb350

Historical  
Purposes  
Only

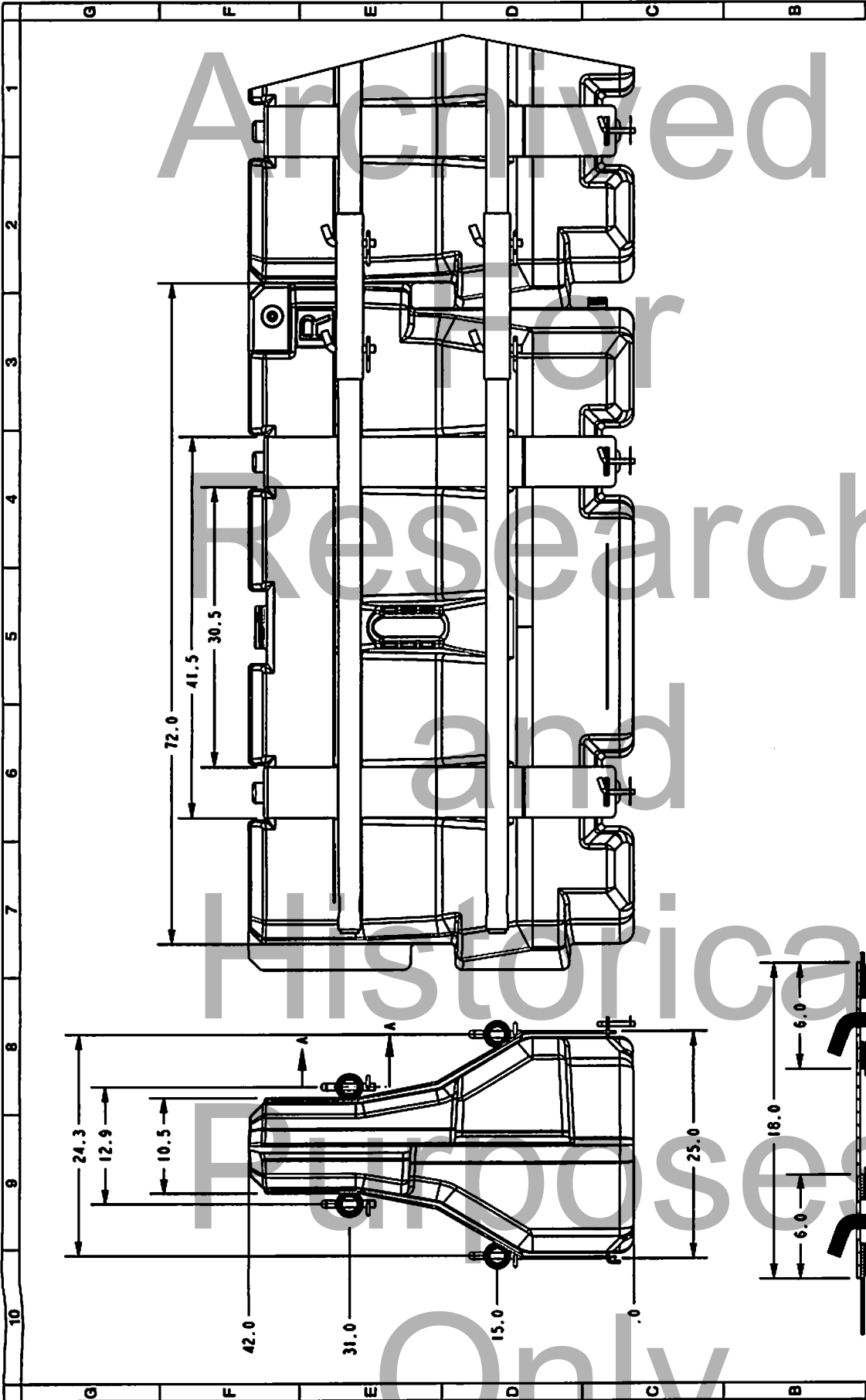
Archived



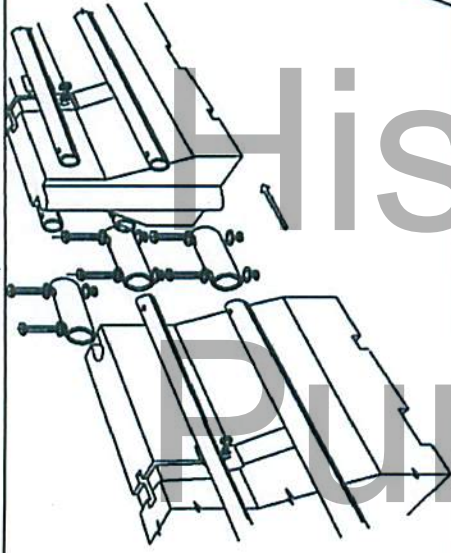
3D Model: ASM_BARRICADE	Drawing: ASM_BARRICADE
State: In Work Ver: A.1	State: In Work Ver: A.1
Modified By: Lynn VanDyke	Modified By: Lynn VanDyke
Modified On: 16-Dec-10 02:22:24 PM	Modified On: 16-Dec-10 02:22:24 PM

THIRD ANGLE PROJECTION ALL DIMENSIONS ARE IN INCHES TOLERANCES	
LINEAR DIM .XXX = ±.010 .XX = ±.031 .X = ±.063 FRACTION = 1/16	ANGULAR DIM XX.XX = ±.5° XX.X = ±1.0° XX = ±2.0°

 Proprietary Property of Lifetime Products	Sheet <b>1</b> of <b>2</b>
	<b>BARRIER GUARD SYSTEM</b> CREATED ON: 16-Dec-10 12:26:47 PM Created By: Jacob Kearl MATERIAL: By Part. SCALE: 0.060

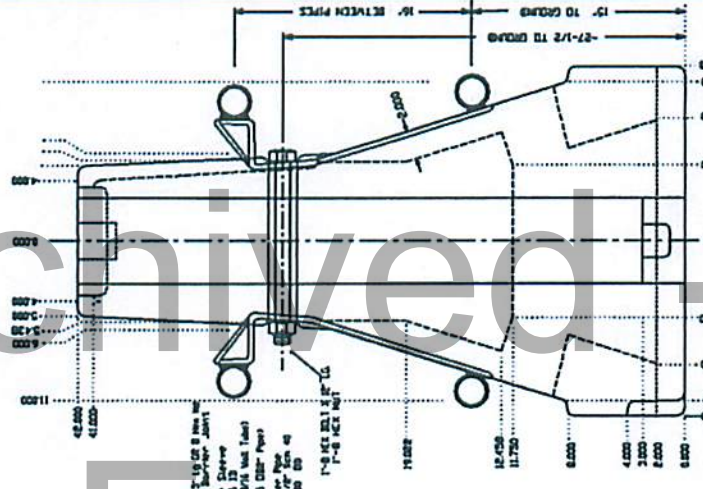
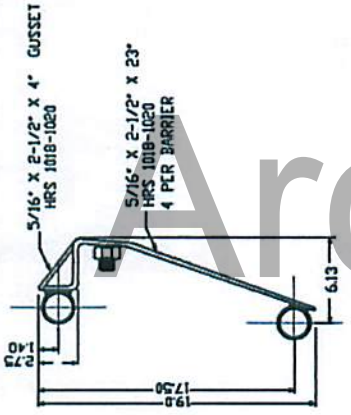
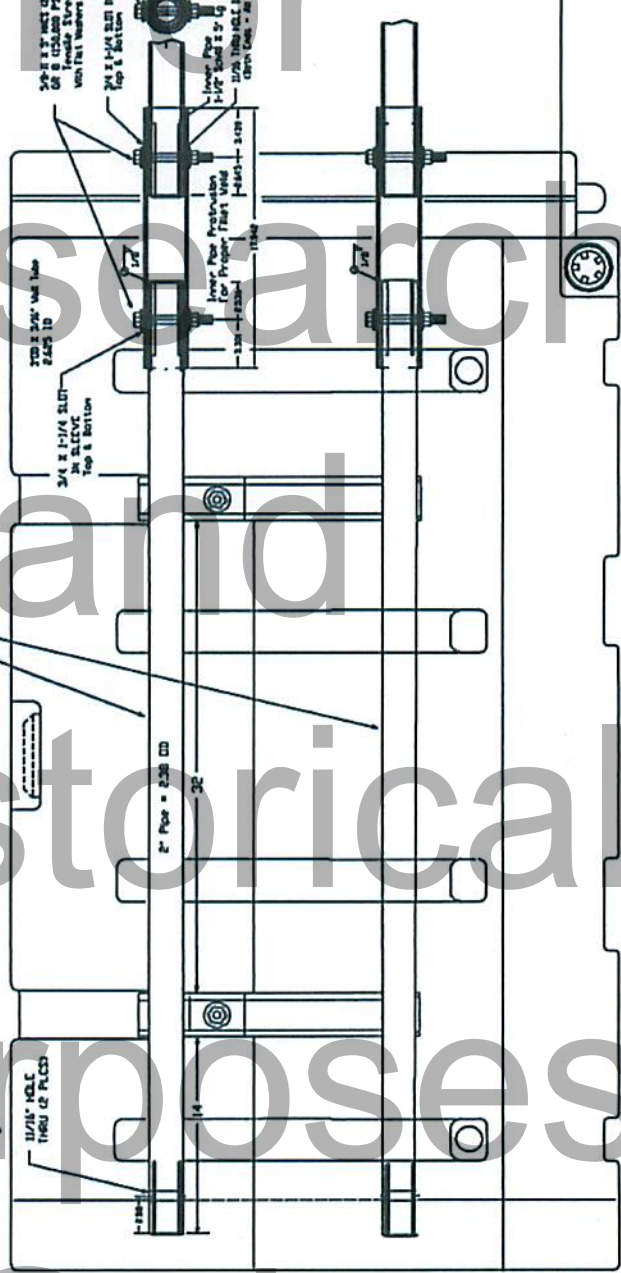


<b>LIFETIME</b> Proprietary Property of Lifetime Products		Sheet <b>2 of 2</b>	Part Number:
<b>BARRIER GUARD SYSTEM</b>			
CREATED ON: 16-Dec-10 12:28:47 PM   Created By: Jacob Kearl MATERIAL: By Part.			
THIRD ANGLE PROJECTION ALL DIMENSIONS ARE IN INCHES TOLERANCES	LINEAR DIM .XXX = ±.010 .XX = ±.031 .X = ±.063 FRACTION: 1/16	ANGULAR DIM XX.XX = ±.5° XX.X = ±1.0° XX = ±2.0°	
3D Model: ASM_BARRICADE State: In Work Modified By: Lynn VanDyke Modified On: 16-Dec-10 02:22:24 PM	Drawing: ASM_BARRICADE State: In Work Modified By: Lynn VanDyke Modified On: 16-Dec-10 02:22:24 PM	Ver: A.1 Ver: A.1	
SECTION A-A SCALE 0.125			



LOW DENSITY POLYETHYLENE, ROTATIONALLY MOLDDED WITH 8 MM THICKNESS, 125% EMPTY VT. FILLED VT. APPROX 1550#

2" Schedule 40 ASTM A106 WELDED 2 - 66" LENGTHS (4 PER BARRIER)



TRAFFIC SAFETY DEVICES INCORPORATED

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
PROJECT NO.	

TRAFFIC SAFETY DEVICES INCORPORATED  
 1111 N. 10TH ST., SUITE 100  
 MILWAUKEE, WI 53233  
 PHONE: 414-381-1111  
 FAX: 414-381-1112  
 WWW: WWW.TSDI.COM

**ROADGUARD™**  
**SAFETY ASSEMBLY I**  
 PLOT SCALE: 1" = 2'-0"  
 TSD090503-0.DWG

**TRAFFIC SAFETY DEVICES INCORPORATED**

NOTES: 1. All welds to be full penetration, typically 1/8" fillet.  
 2. All welds to be performed by certified welder.  
 3. Surfaces will be properly prepared and prime painted.

REV	DATE	REVISION