

AUG 16 2012

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**QUEST[®] SYSTEM (Temporary)
S102-4112**

1. The energy absorbing system represented on these Qualified Products List (QPL) drawings is a proprietary design by Energy Absorption Systems, of Trinity Industries, Inc., and marketed under the name QUEST[®] System .
2. The QUEST[®] is a non-gating, redirective crash cushion which is well suited for use shielding hazards. The QUEST is used for temporary installations. The beginning length of need shall be at the point of intersection between the face of the crash cushion and the departure line.
3. The QUEST[®] is an NCHRP-350 crash cushion suitable for Test Level 2 and Test Level 3 crash cushion applications.
4. The QUEST[®] shall be assembled and installed in accordance with the manufacturer's detailed drawings, procedures, specifications and installation guide. Information and copies of the above manual are available on the Qualified Products List (QPL).
5. The QUEST[®] is available in A 24" nominal width. The system width will be as called out in the plans, permit or other contract document for each location.
6. Metallic components shall meet the galvanizing requirements for guardrail, section 967 of the FDOT specifications.
7. A yellow Type 1 Object Marker shall be centered 3' in front of the nose of the QUEST[®]. Mounting hardware shall be in conformance with index no. 11860. The cost of the Object Marker shall be included in the cost of the QUEST. As an option, the contractor may install reflective sheeting on the nose of the crash cushion. The sheeting to be used must be solid yellow, Type III or better and must be a product listed on the Department's Qualified Products List (QPL). The sheeting to be applied to the nose of the crash cushion shall be a minimum of 360 square inches with a minimum height of 15 inches.
8. Quantity for payment is based on each independent location as called for in the plans or as directed by the Engineer. The cost of foundations, subgrade preparation and other appurtenant construction will be included in the cost of the QUEST[®].
9. In compliance with AASHTO 2011 Roadside Design Guide, remove all curbs and islands to ensure proper impact performance.
10. Supply adequate transition from the QUEST system to the object being shielded for bidirectional traffic.
11. Units of measure are in English units.

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Florida #70359 Rocklin, CA 95765



REFERENCES

Revisions	Date	Rev.	By	Ckd.	App.

DRAWN: S. Trageser	DATE: 3/23/2012
DESIGNED:	DATE:
CHECKED: K. Mortensen	DATE: 3/27/2012
APPROVED: K. Looney	DATE: 3/27/2012
CAD FILE: 62-01-47 Cover.dwg	
NEXT ASSEMBLY:	

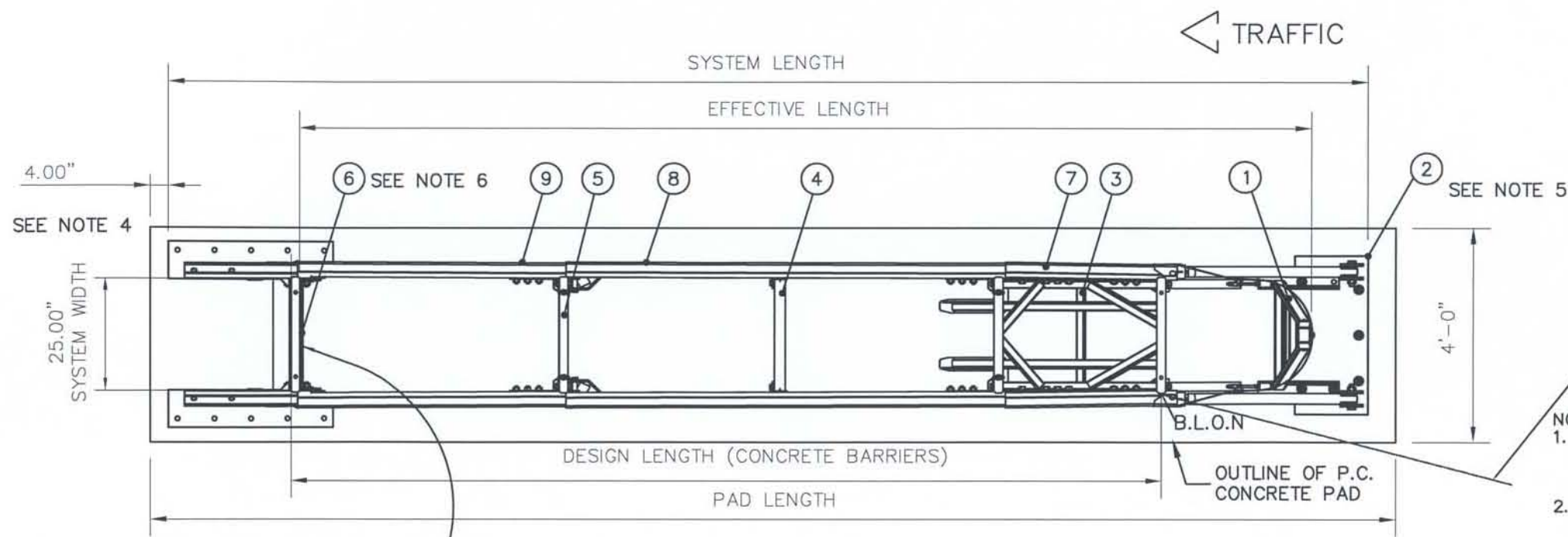
 **ENERGY ABSORPTION SYSTEMS**
ENGINEERING AND RESEARCH DEPARTMENT

**QUEST[®] SYSTEM (TEMPORARY)
DRAWING SET
FOR QPL S102-4112**

SCALE	DWG.	SHEET	REV
	62-01-47	1 OF 13	



Frank J. Powell, PE
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 Rocklin, CA 95765



DEPARTURE LINE
 1:16 FOR SPEEDS ≤ 45 mph
 1:13 FOR SPEEDS ≥ 50 mph

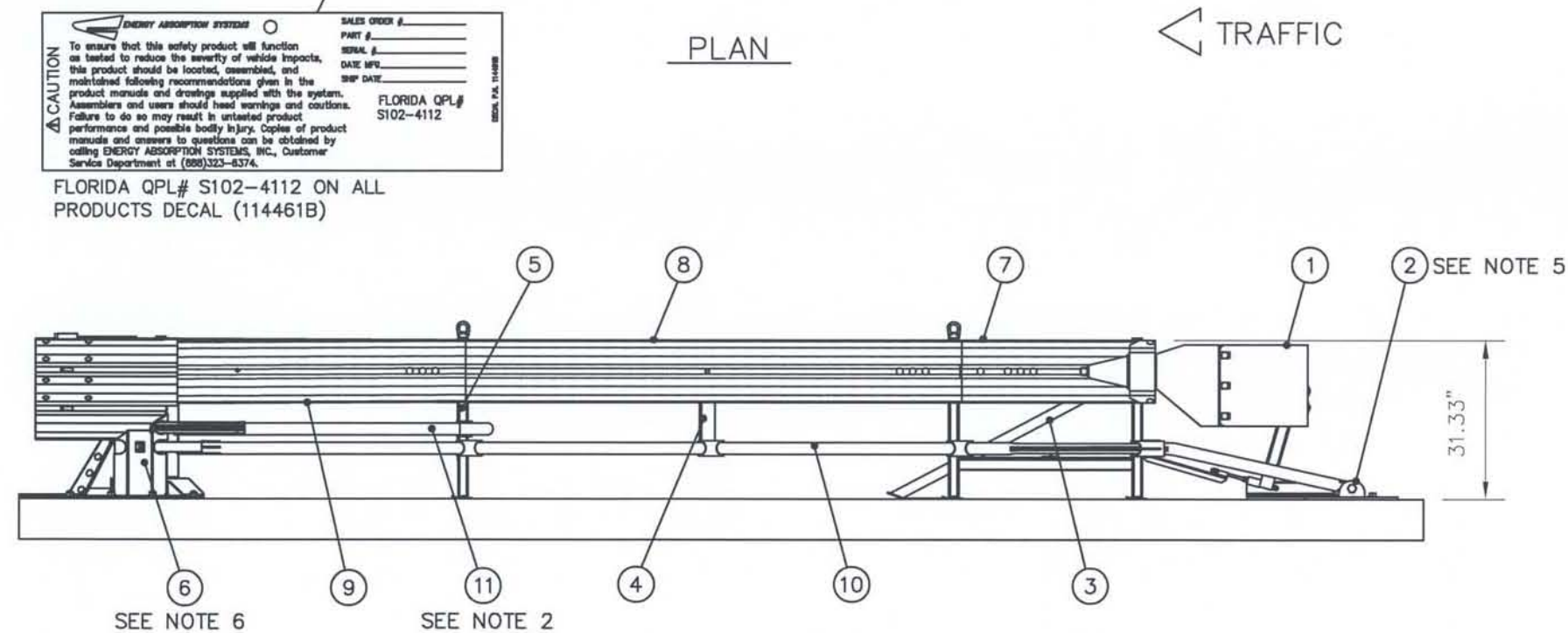
- NOTES:
- IN COMPLIANCE WITH THE AASHTO 2011 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
 - PROVISION SHALL BE MADE FOR REAR RAILS TO SLIDE REARWARD UPON IMPACT 5' 0" MIN.
 - SEE THE QUEST[®] SYSTEM PRODUCT MANUAL FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE ON THE QPL SITE.
 - WHERE NECESSARY, SUPPLY AN ADEQUATE TRANSITION FROM THE QUEST SYSTEM TO THE OBJECT BEING SHIELDED.
 - TRANSITION ASSEMBLIES AND ANCHOR BOLTS NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY. TRANSITION ASSEMBLIES ARE ACCESSORY ITEMS.
 - STEEL BACKUP AND CONCRETE PAD SPECIFICALLY DESIGNED TO NEST AROUND 24" WIDE HAZARDS, PLACE SYSTEM ACCORDINGLY TO ENSURE PROPER IMPACT PERFORMANCE. ZERO CLEARANCE BETWEEN BACKUP AND BARRIER WALL RECOMMENDED.
 - CAUTION: THE QUEST SYSTEM MUST BE CORRECTLY ANCHORED FOR PROPER IMPACT PERFORMANCE. ATTACH SYSTEM USING ONE OF THE FOLLOWING:
 (QTY. 15) 7" STUDS MAY BE USED TO ATTACH SYSTEM TO 4000 PSI MIN P.C. CONCRETE PER THE FOLLOWING MINIMUMS.**
 A) 8.00" REINFORCED PAD PER SHEET 10.
 B) 8.00" NON-REINFORCED ROADWAY, MEASURING AT LEAST 12'-0" WIDE BY 50'-0" LONG, SEE SHEET 11.
 C) 7.00" REINFORCED DECK STRUCTURE, SEE SHEET 11.
 (QTY 15) 18" THREADED RODS MAY BE USED TO INSTALL SYSTEM ON ASPHALT.**
 ** REFER TO THE QUEST SYSTEM ASSEMBLY INSTRUCTIONS FOR FOUNDATION SPECIFICATIONS.
 - CAUTION: Q OF QUEST SYSTEM SHALL BE ALIGNED WITH Q OF HAZARD ±1'.
 - FHWA ACKNOWLEDGES THAT HIGHWAY SAFETY HARDWARE TESTED TO NCHRP REPORT 350 TL-3 AT 62.1 mph IS ELIGIBLE FOR FHWA MATCHING FUNDS WHEN INSTALLED ON HIGHWAYS WITH POSTED SPEEDS GREATER THAN 62.1 mph.

CAUTION
 To ensure that this safety product will function as tested to reduce the severity of vehicle impacts, this product should be located, assembled, and maintained following recommendations given in the product manuals and drawings supplied with the system. Assemblers and users should heed warnings and cautions. Failure to do so may result in untested product performance and possible bodily injury. Copies of product manuals and answers to questions can be obtained by calling ENERGY ABSORPTION SYSTEMS, INC., Customer Service Department at (888)323-8374.

SALES ORDER # _____
 PART # _____
 SERIAL # _____
 DATE MFG. _____
 SHIP DATE _____

FLORIDA QPL# S102-4112

FLORIDA QPL# S102-4112 ON ALL PRODUCTS DECAL (114461B)



ELEVATION
 LEFT SIDE

BAYS	24" WIDTH MODEL#	SYSTEM LENGTH	EFFECTIVE LENGTH	PAD LENGTH	DESIGN LENGTH	WORKZONE SPEED	TESTED TO
3	613490b	22'-2"	18'-8"	23'-0"	16'-0"	60 mph*	TL-3

* THE QUEST CAN BE USED FOR ALL WORKZONE SPEEDS SEE NOTE 9

ASSEMBLY NO. 613490B

KEY	1 NOSE	2 FRONT ANCHOR	3 BAY 1	4 BRIDGE	5 DIAPHRAGM	6 BACKUP	7 BAY 1 PANEL	8 BAY 2 PANEL	9 BAY 3 PANEL	10 SHAPER RAIL	11 REAR RAIL
Revisions	Date	Rev.	By	Ckd.	App.						

REFERENCES

SERIAL# _____	QUEST SYSTEM ASSY.	SHEET 3 & 4
SALES ORDER# _____	BACKUP ASSY.	SHEET 5
EH PROJECT# EH 8956	SUPPORT FRAME BAY 1	SHEET 6
WORKZONE SPEED _____	DIAPHRAGM ASSY.	SHEET 7
NOSE COLOR _____	BRIDGE ASSY.	SHEET 8
NUMBER OF UNITS _____	TRIGGER ASSY.	SHEET 9
LIFTING KIT (OPTIONAL) SHEET 12	CONCRETE PAD	SHEET 10
TRANSITION ASSY. SHEET 13	ANCHOR ASSY.	SHEET 11

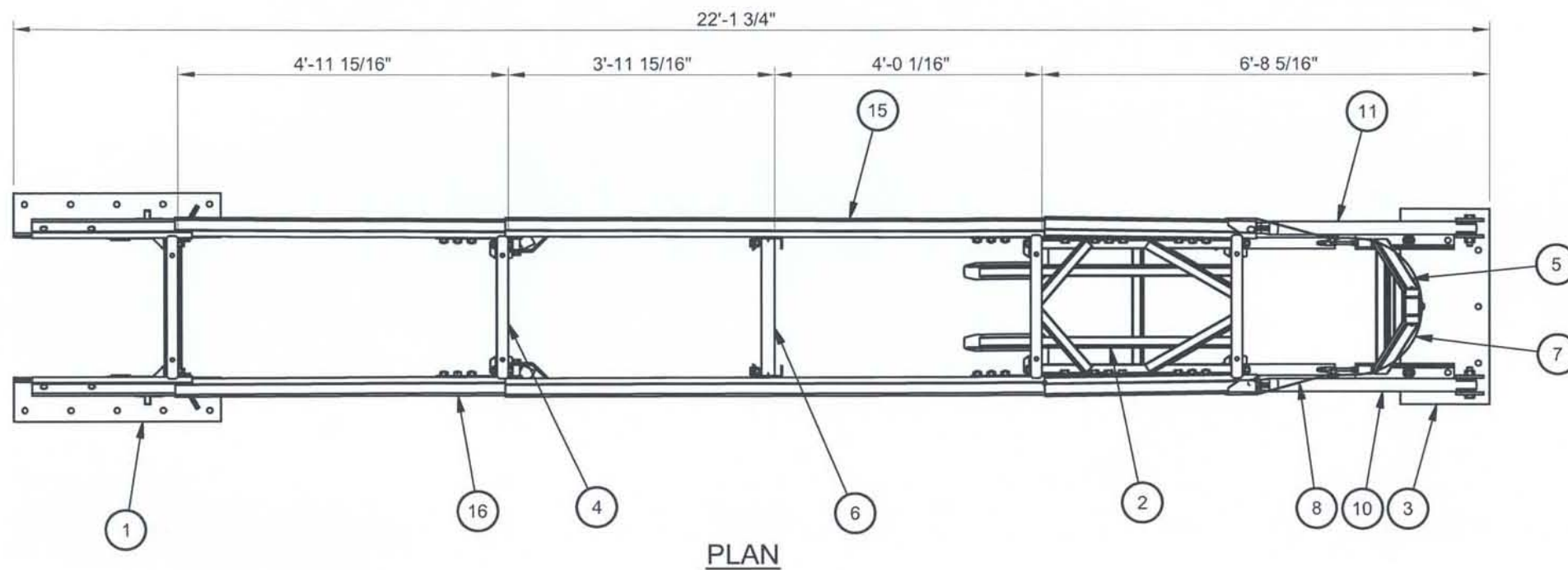
DRAWN: S. Trageser	DATE: 3/22/2012
DESIGNED:	DATE:
CHECKED: K. Mortensen	DATE: 3/27/2012
APPROVED: K. Looney	DATE: 3/27/2012
CAD FILE: 62-01-47.dwg	

ENERGY ABSORPTION SYSTEMS.
 ENGINEERING AND RESEARCH DEPARTMENT

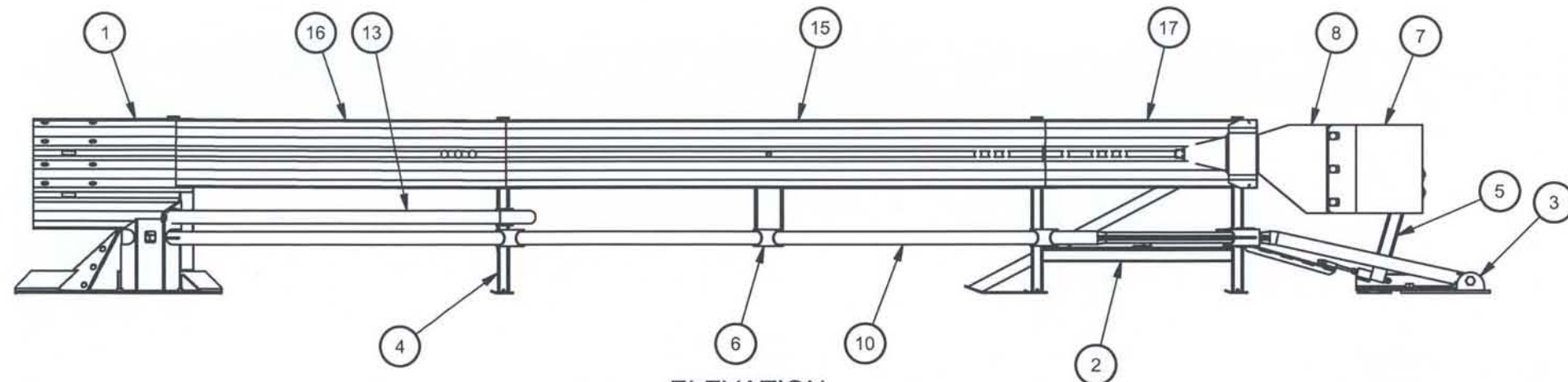
QUEST[®] SYSTEM (TEMPORARY)
 FOR 24" WIDE HAZARDS
 QPL S102-4112

FLORIDA

SCALE: Do Not Scale	DWG: 62-01-47	SHEET: 2 of 13	REV: -
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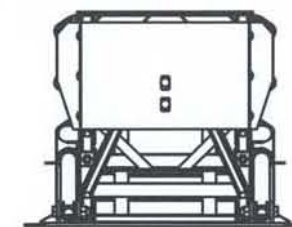


PLAN



ELEVATION
LEFT SIDE

PARTS LIST			
ITEM	STOCK NO.	DESCRIPTION	QTY.
1	604486B	BACKUP ASSEMBLY,24,QUEST	1
2	615461B	SUPPORT FRAME ASSY,BAY 1,24,QUEST	1
3	617605G	ANCHOR,FRONT,QUEST,24,G	1
4	606804B	DIAPHRAGM ASSEMBLY,24,BAY 3,QUEST	1
5	616211B	TRIGGER ASSEMBLY,QUEST	1
6	605656B	BRIDGE,24,BAY 2,QUEST	1
7	611678W	NOSE,QUEST,G,PT	1
8	611641W	NOSE TRANSITION,L,QUEST,G,PT	1
9	611642W	NOSE TRANSITION,R,QUEST,G,PT	1
10	614028G	SHAPER RAIL,L,QUEST,G	1
11	614034G	SHAPER RAIL,R,QUEST,G	1
12	605529G	BRACKET,PANEL,DIAPHRAGM,G	2
13	613661G	REAR RAIL,QUEST,G	2
14	616230G	TRIGGER STRAP,QUEST,G	2
15	611794G	PANEL,BAY 2,QUEST,G	2
16	611795G	PANEL,BAY 3,QUEST,G	2
17	611791G	PANEL,BAY 1,QUEST,G	2
18	113558G	BOLT,HX,3/4X3 1/2,G5,G	16
19	113538G	BOLT,HX,1X5,G8,G	2
20	003360G	BOLT,RAIL,5/8X1 1/4,G	38
21	113547G	BOLT,HX,3/4X1 1/2,G5,G	4
22	003340G	NUT,HX,5/8,G,RAIL	38
23	115953G	NUT,HX,3/4,G	20
24	115931G	NUT,HX,1,G	2
25	617010G	WASHER,BAR,2X2X1/4,G	2
26	617005G	WASHER,BAR,1/8X1 1/4X2,ROUNDED,G	8
27	115311B	INSTALL INSTRUCTIONS,QUEST	1
28	115674G	MATERIAL SAFETY INFO NOTICE	1
29	118026G	WASHER,FLAT,3/4 X 1 1/2,G	16
30	113530G	BOLT,HX,1X3 1/2,G5,G	2
31	614533B	SPACER,RAIL TENSION,QUEST	2
32	115954G	NUT,HX,3/4",GR DH	2
33	118027G	WASHER,FLAT,3/4X2,HVY,G	2



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Florida #70359 Rocklin, CA 95765

ASSEMBLY NO. 613490B



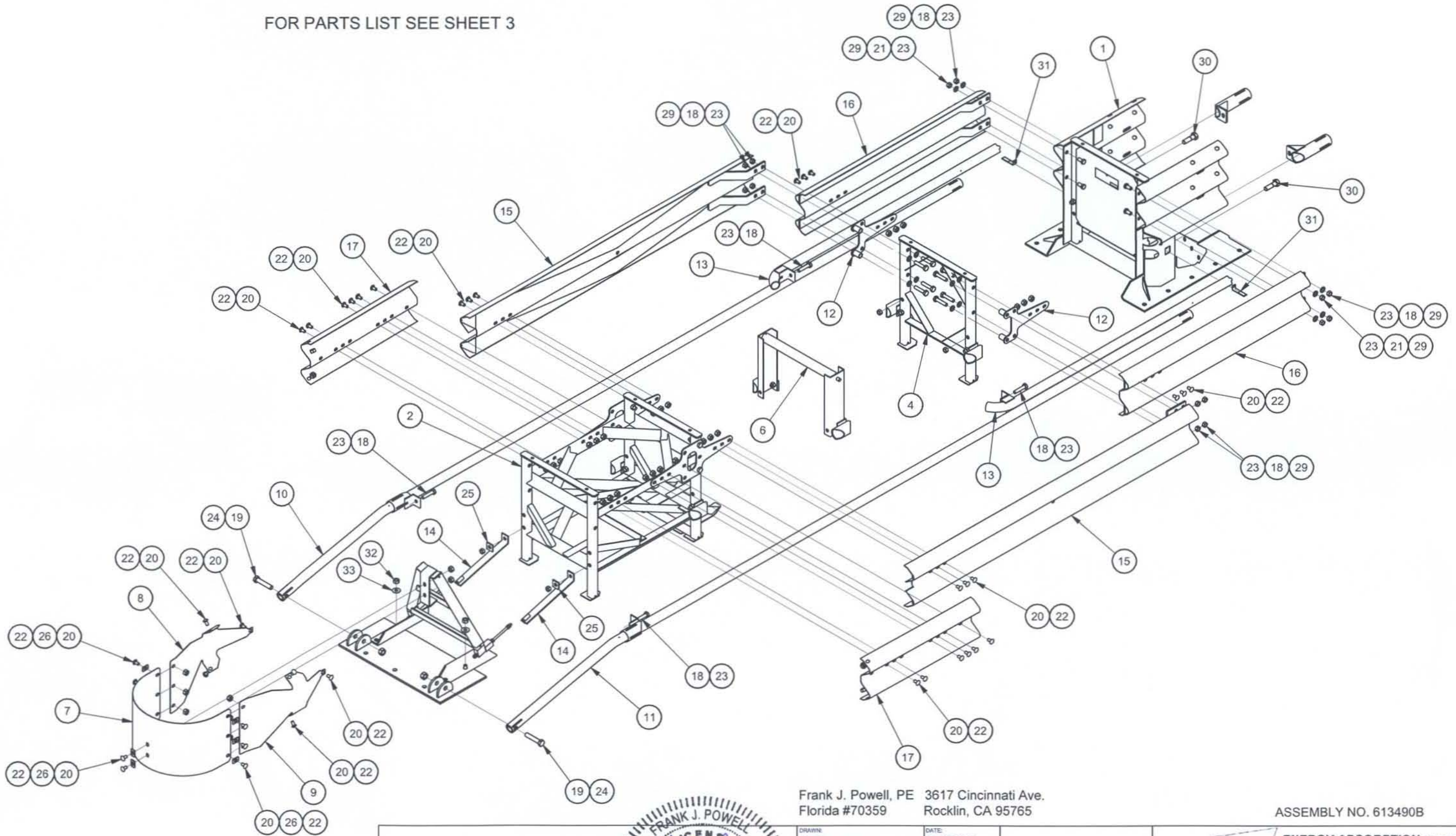
DRAWN:	S. TRAGESSER	DATE:	3/22/2012
DESIGNED:	D. Wilkinson	DATE:	1/2/2005
CHECKED:	K. Mortensen	DATE:	3/27/2012
APPROVED:	K. Looney	DATE:	3/27/2012
FILE:	62-01-47 SH 03		
NEXT ASSEMBLY:			



QUEST® SYSTEM (TEMPORARY)
FOR 24" WIDE HAZARDS
QPL # S102-4112

SCALE:	DRAWING:	SHEET:	REV
1=30	32-01-47	3 of 13	

FOR PARTS LIST SEE SHEET 3



Frank J. Powell, PE 3617 Cincinnati Ave.
 Florida #70359 Rocklin, CA 95765

ASSEMBLY NO. 613490B



DRAWN: S. Tragesser	DATE: 3/22/2012
DESIGNED: D. Wilkinson	DATE: 1/2/2005
CHECKED: K. Mortensen	DATE: 3/27/2012
APPROVED: K. Looney	DATE: 3/27/2012
FILE: 62-01-47 SH 04.dwg	
NEXT ASSEMBLY:	



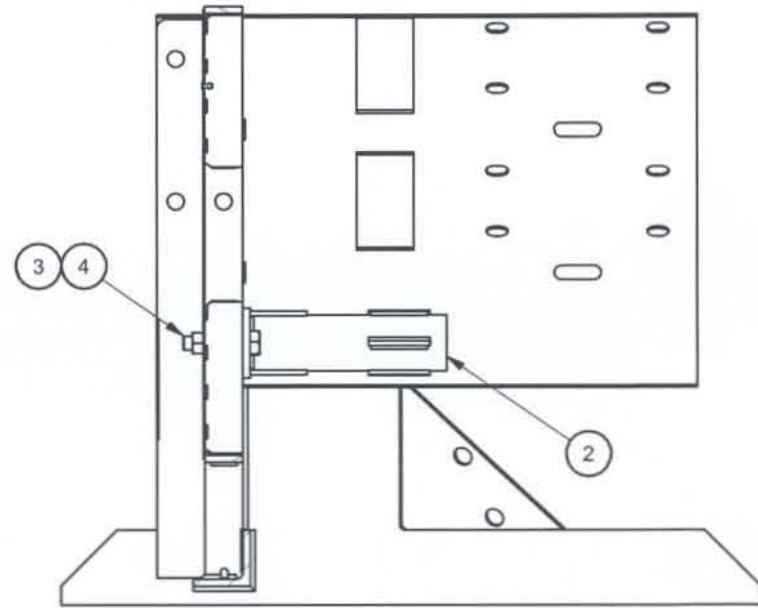
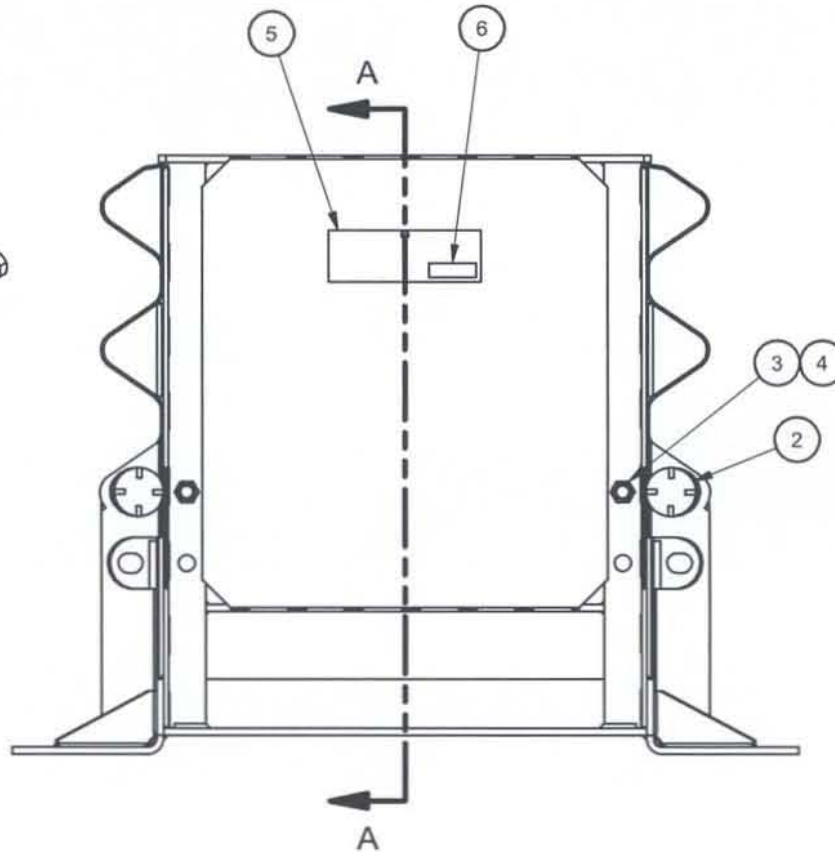
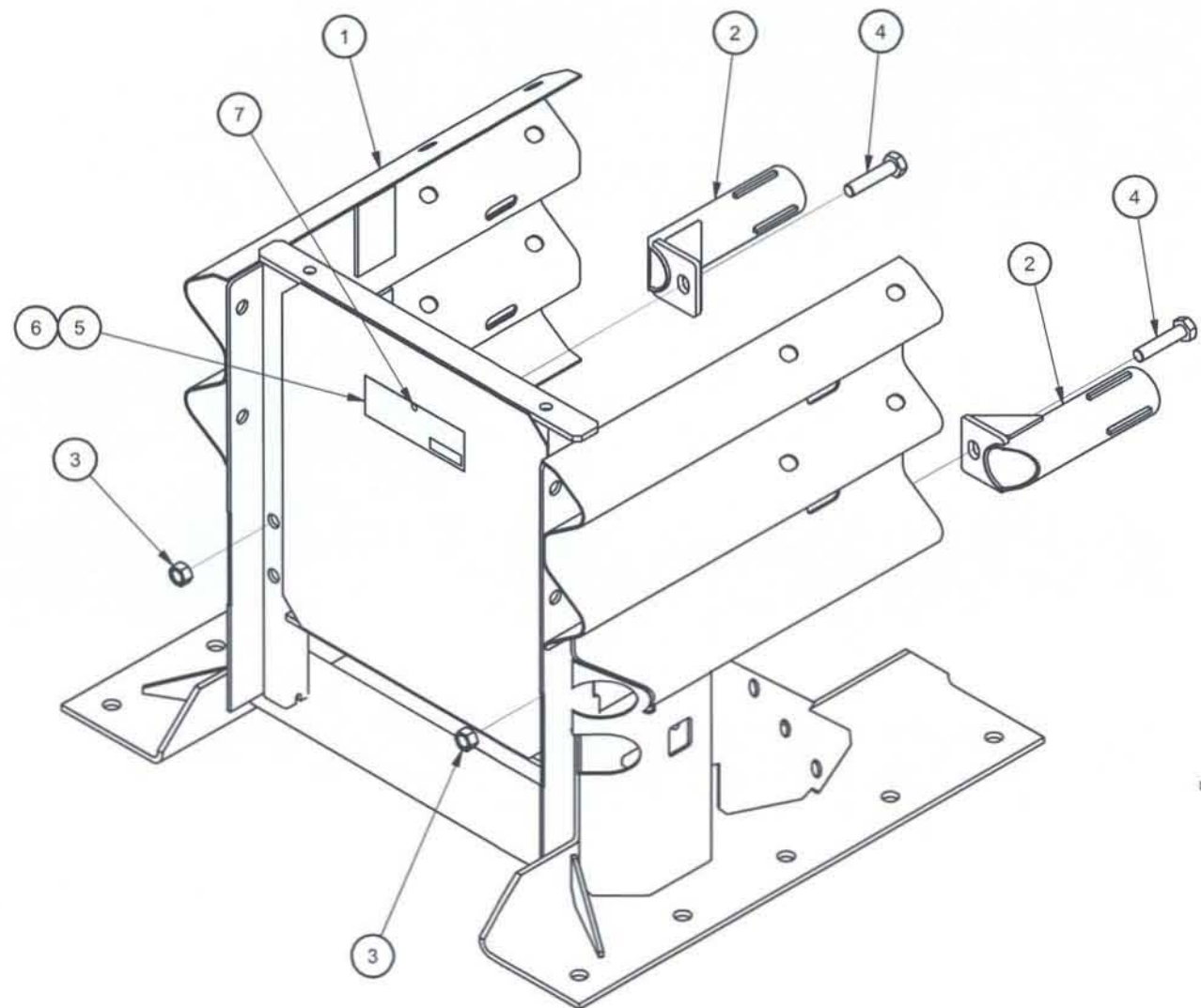
QUEST® SYSTEM (CLASSIC)
 FOR 24" WIDE HAZARDS
 QPL # S102-4112

SCALE: 1=30	DRAWING: 62-01-47	SHEET: 4 of 13	REV
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MATERIAL: SEE PARTS LIST
 DO NOT SCALE DRAWING

TOL ANGULAR: $\pm 1'$
 TOL FRACTIONAL: $\pm 1/16$
 TOL DECIMAL: .XX $\pm .01$
 TOL DECIMAL: .XXX $\pm .005$
 UNLESS OTHERWISE SPECIFIED

PARTS LIST			
ITEM	STOCK NO.	DESCRIPTION	QTY.
1	604647G	BACKUP_24,QUEST,G	1
2	614042G	SHAPER,BACKUP,QUEST,G	2
3	115953G	NUT,HX,3/4,G	2
4	113558G	BOLT,HX,3/4X3 1/2,G5,G	2
5	114461B	DECAL,CAUTION,ALL PRODUCTS	1
6	114591B	DECAL,PRODUCT,QUEST	1
7	116758G	RIVET,ST,SD68BS,3/16X1/2,DH	1



SECTION A-A



QPL # S102-4112

Frank J. Powell, PE 3617 Cincinnati Ave.
 Florida #70359 Rocklin, CA 95765

DRAWN: S. Trageser DESIGNED: D. Wilkinson CHECKED: APPROVED:	DATE: 3/22/2012 DATE: 1/2/2005 DATE: DATE:	PART NO. 604486B 301.52 lbmass ENERGY ABSORPTION SYSTEMS ENGINEERING AND RESEARCH DEPARTMENT
BACKUP ASSEMBLY, 24.QUEST FOR 24" WIDE HAZARDS		
<small>UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.</small>		DRAWING: 62-01-47 SHEET: 5 of 13 REV:

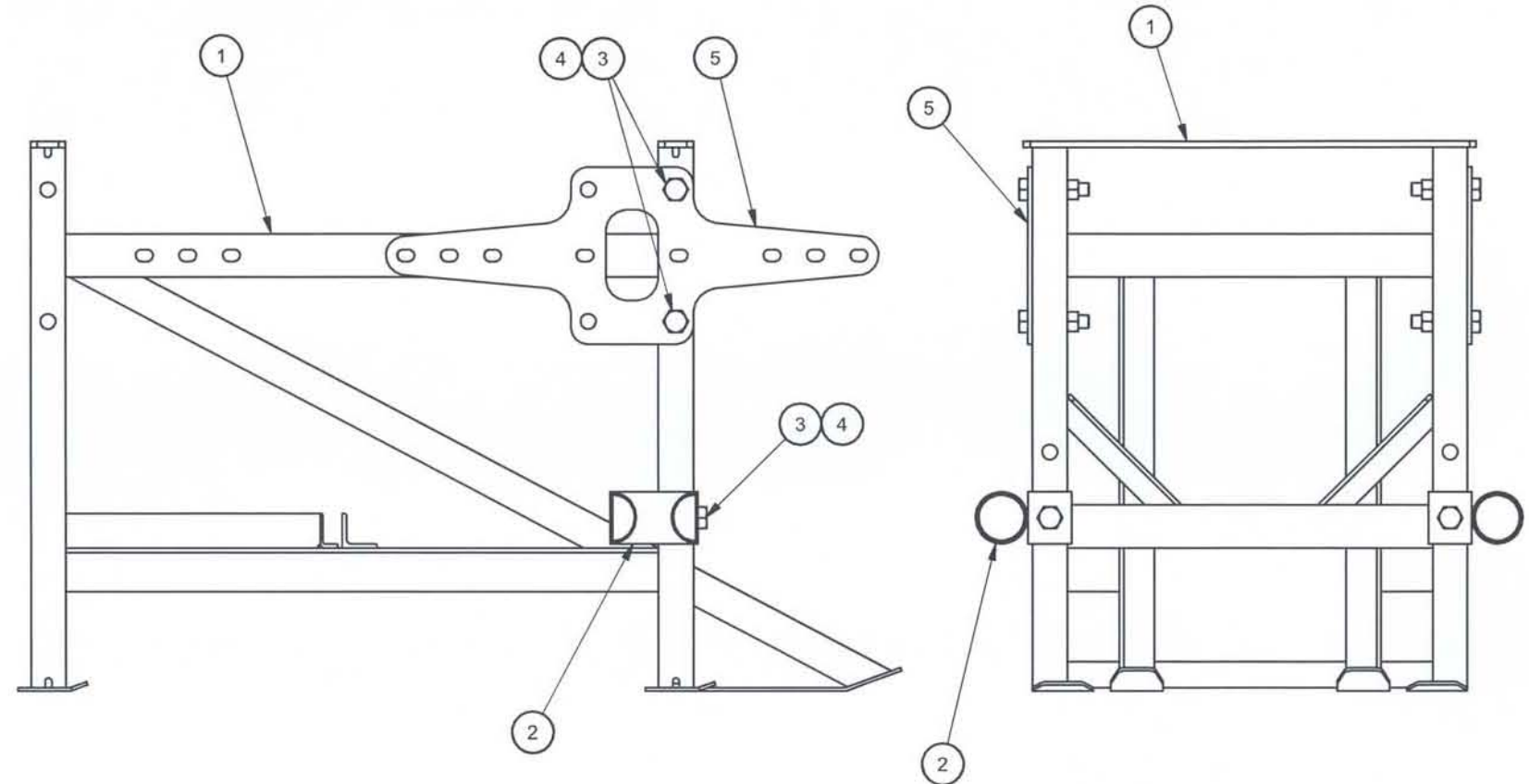
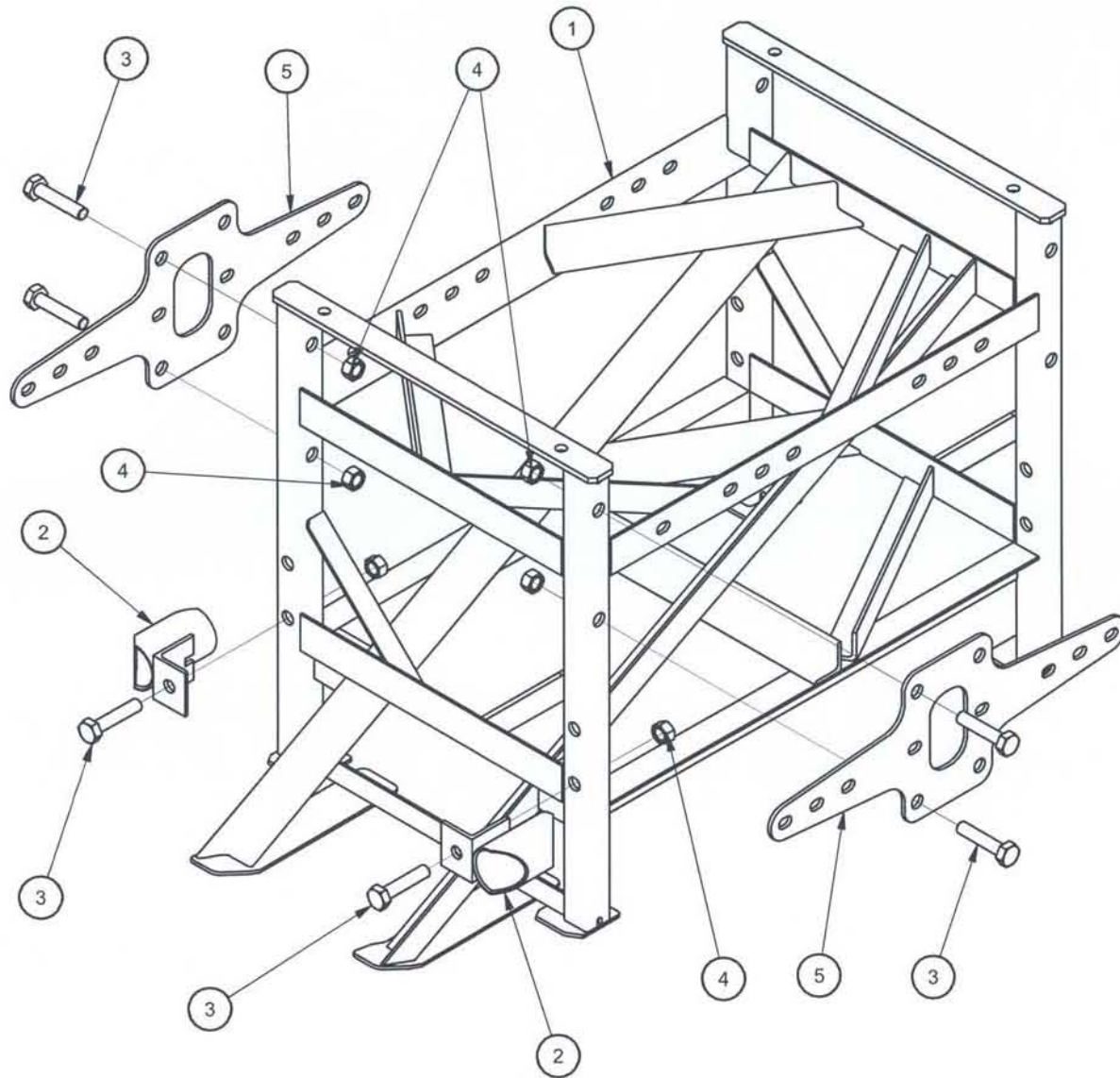
NEXT ASSEMBLY:

MATERIAL:
SEE PARTS LIST

TOL ANGULAR: ± 1'
TOL LINEAR: ± 1/16"
UNLESS OTHERWISE SPECIFIED

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	QTY.
1	615540G	SUPPORT FRAME,BAY 1,24,QUEST,G	1
2	613505G	RAIL GUIDE,DIAPHRAGM,QUEST,G	2
3	113558G	BOLT,HX,3/4X3 1/2,G5,G	6
4	115953G	NUT,HX,3/4,G	6
5	605526G	BRACKET,PANEL,BAY 1 FRAME,QUEST,G	2



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QPL # S102-4112

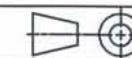
PART NO. 615461G
PART NO. 615461B 243.99 lbmass

DRAWN:	S. Trageser	DATE:	3/22/2012
DESIGNED:	D. Wilkinson	DATE:	1/2/2005
CHECKED:		DATE:	
APPROVED:		DATE:	

ENERGY ABSORPTION SYSTEMS
ENGINEERING AND RESEARCH DEPARTMENT

SUPPORT FRAME ASSY,BAY 1, ,QUEST

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES.
DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.



DRAWING: 62-01-47

SHEET: 6 of 13

REV

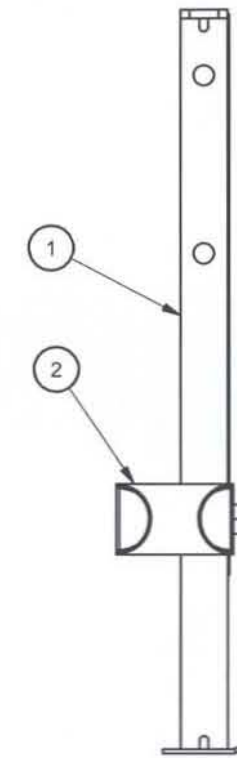
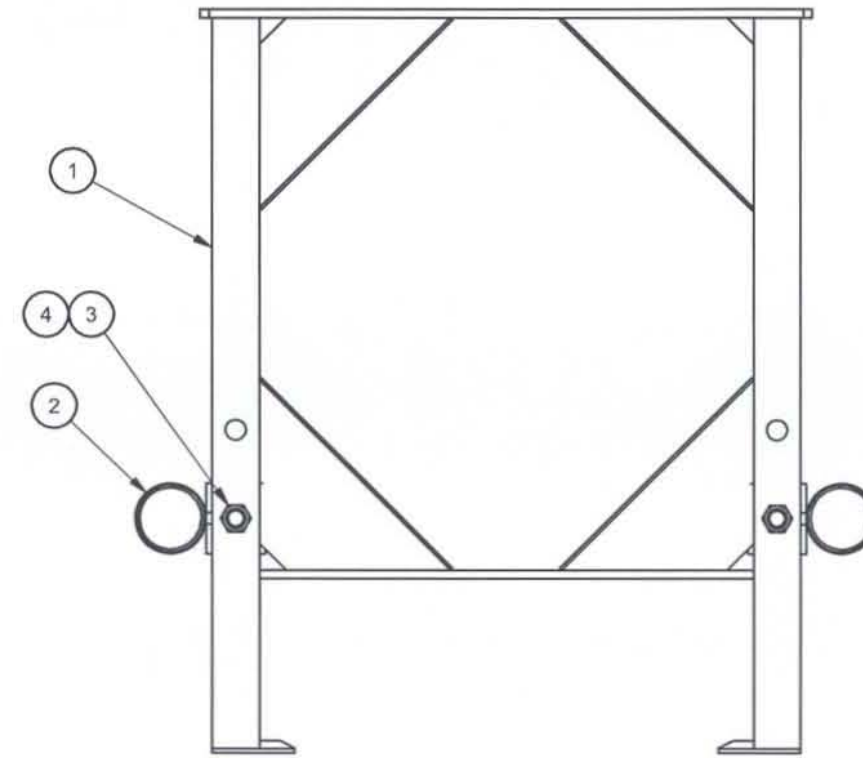
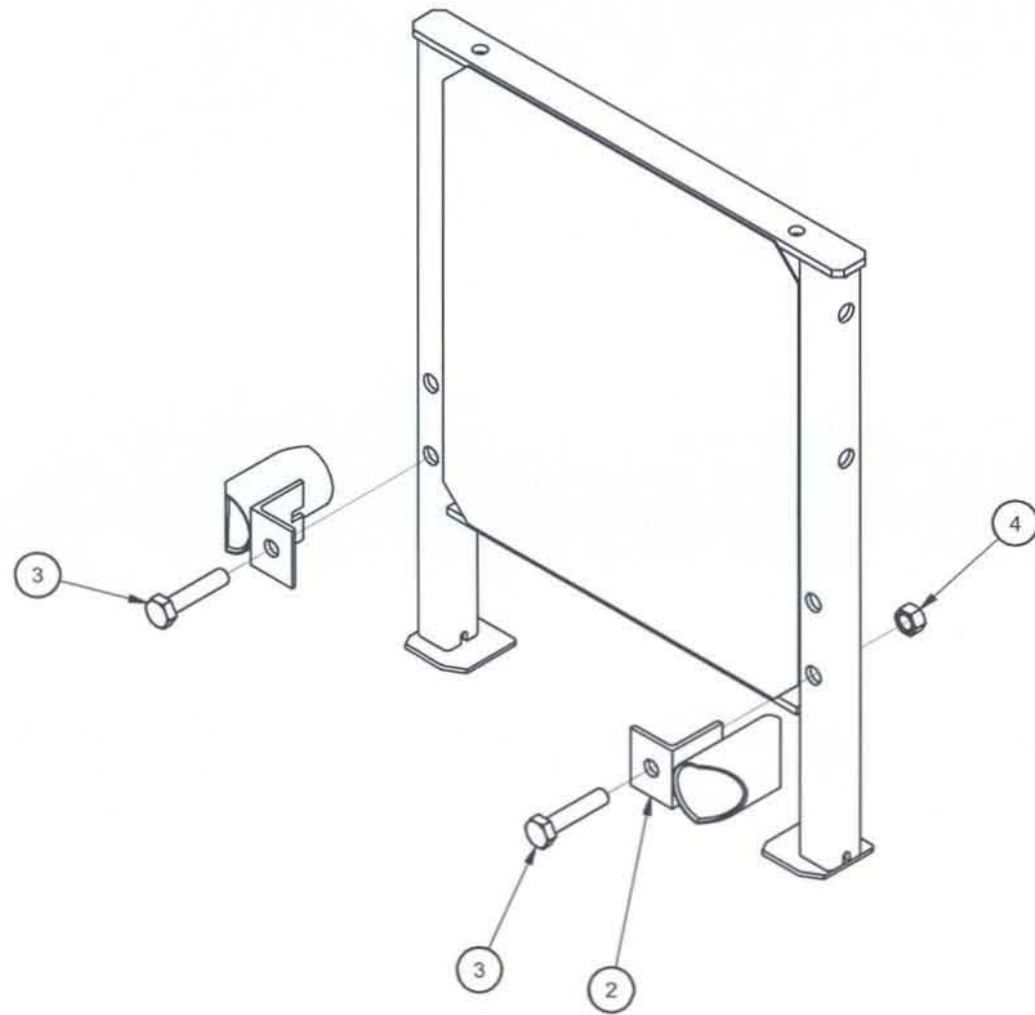
NEXT ASSEMBLY:

MATERIAL:
SEE PARTS LIST

TOL ANGULAR: ± 1°
TOL LINEAR: ± 1/16"
UNLESS OTHERWISE SPECIFIED

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	QTY.
1	2762018-0000	DIAPHRAGM,24,BAY 3,QUEST,G	1
2	2762003-0000	RAIL GUIDE,DIAPHRAGM,QUEST,G	2
3	2699251-0000	BOLT,HX,3/4X3 1/2,G5,G	2
4	2704091-0000	NUT,HX,3/4,G	2



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 Florida #70359 Rocklin, CA 95765

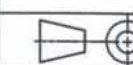
PART NO. 606804B 61.61 lbmass

DESIGNED:	S. Trageser	DATE:	3/22/2012
CHECKED:	D. Wilkinson	DATE:	1/2/2005
APPROVED:		DATE:	

ENERGY ABSORPTION SYSTEMS
 ENGINEERING AND RESEARCH DEPARTMENT

DIAPHRAGM ASSEMBLY, BAY 3,QUEST

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES.
 DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.



DRAWING: 62-01-47

SHEET: 7 of 13

FILE:

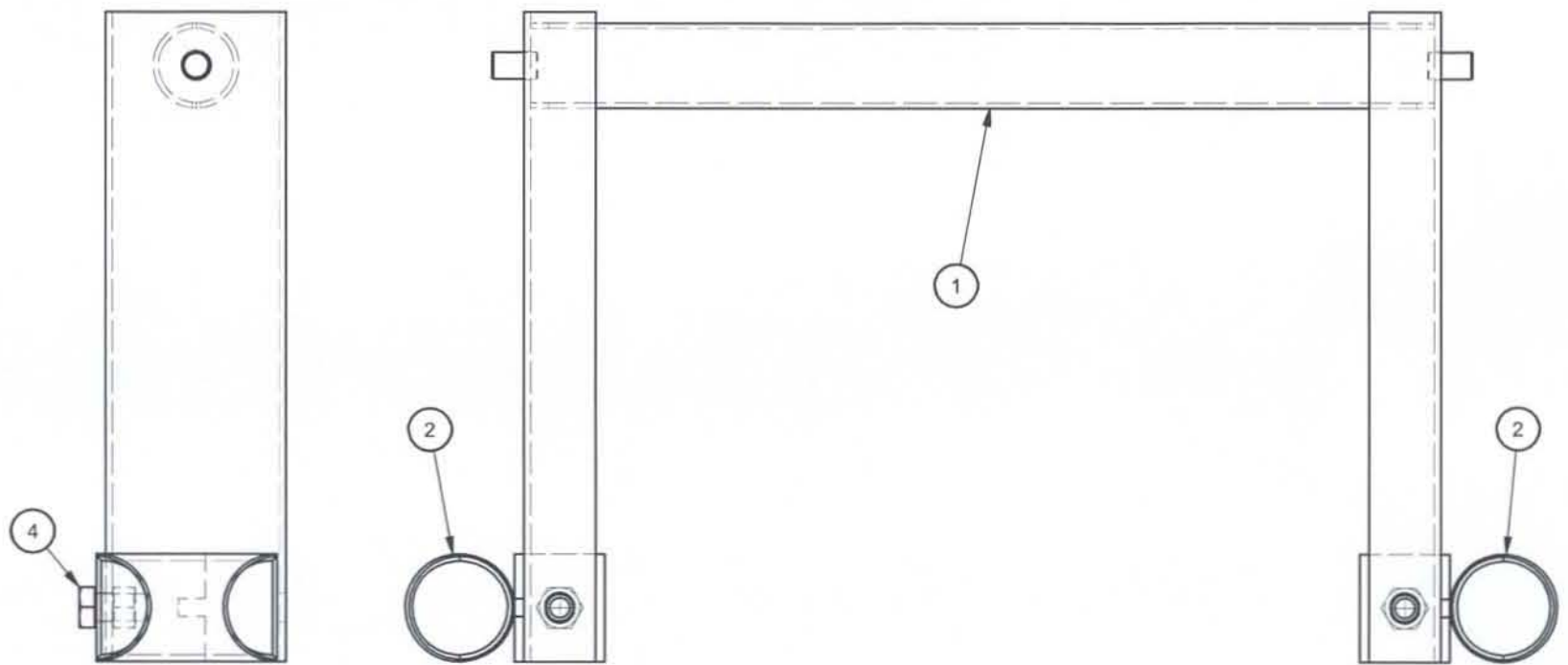
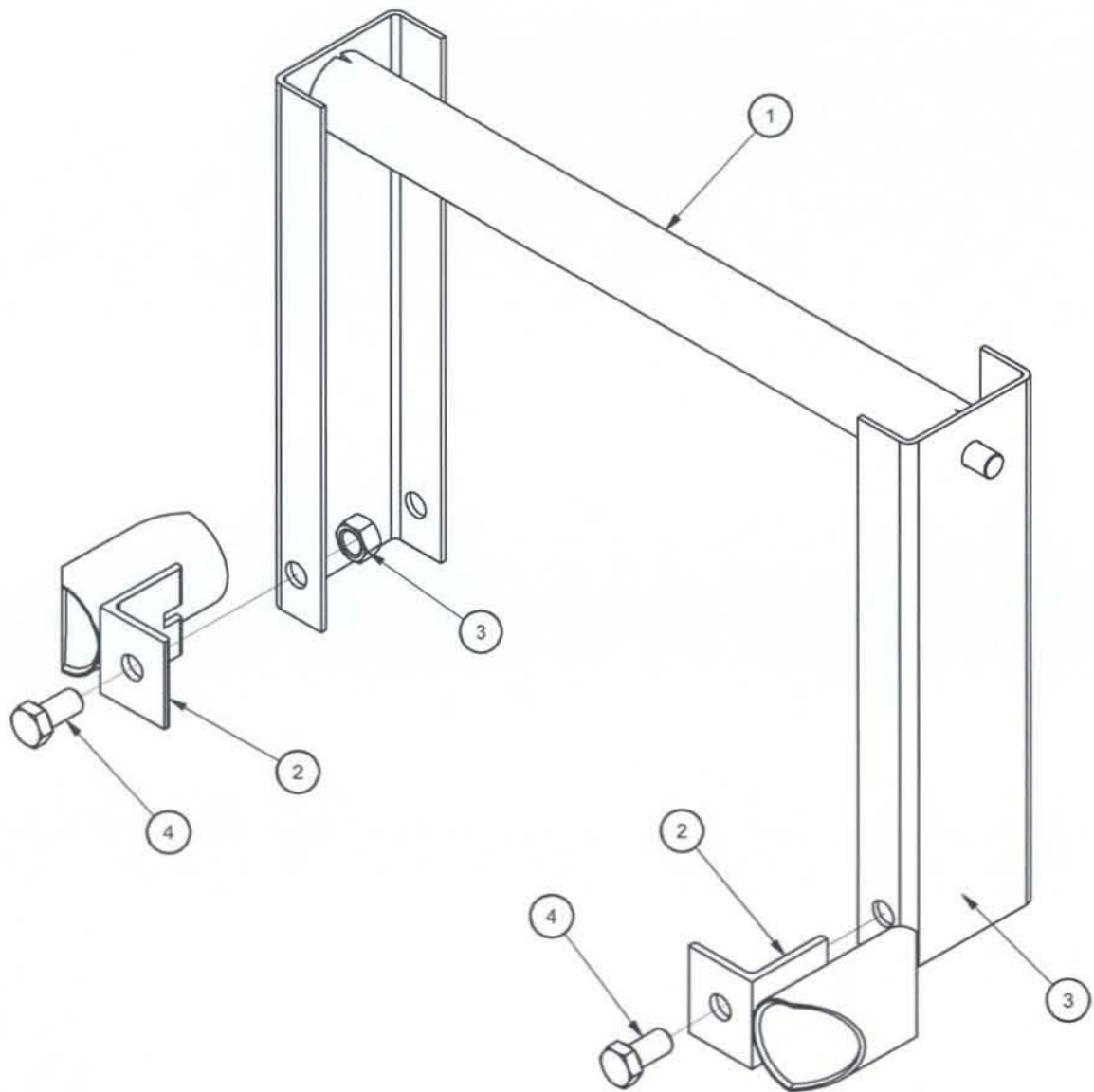
NEXT ASSEMBLY:

MATERIAL:
SEE PARTS LIST



TOL ANGULAR: ± 1°
TOL LINEAR: ± 1/16"
UNLESS OTHERWISE SPECIFIED

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	QTY.
1	605657G	BRIDGE,24,QUEST,G	1
2	613505G	RAIL GUIDE,DIAPHRAGM,QUEST,G	2
3	115953G	NUT,HX,3/4,G	2
4	113547G	BOLT,HX,3/4X1 1/2,G5,G	2



Frank J. Powell, PE 3617 Cincinnati Ave.
 Florida #70359 Rocklin, CA 95765 QPL # S102-4112

DRAWN: S. Trageser	DATE: 2/22/2012	 ENERGY ABSORPTION SYSTEMS ENGINEERING AND RESEARCH DEPARTMENT	PART NO. 605656B	30.49 lbmass
DESIGNED: D. Wilkinson	DATE: 1/2/2005		BRIDGE, BAY 2, QUEST	
CHECKED:	DATE:	 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.		
APPROVED:	DATE:			

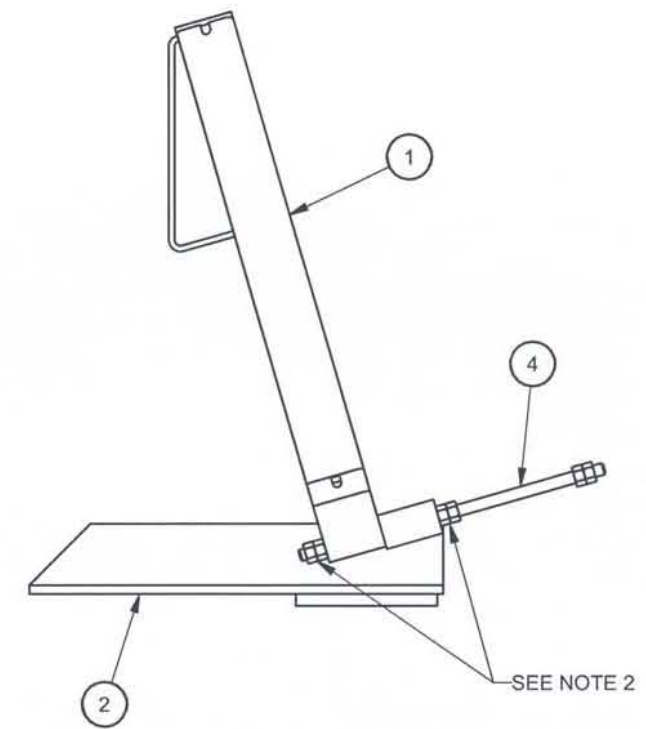
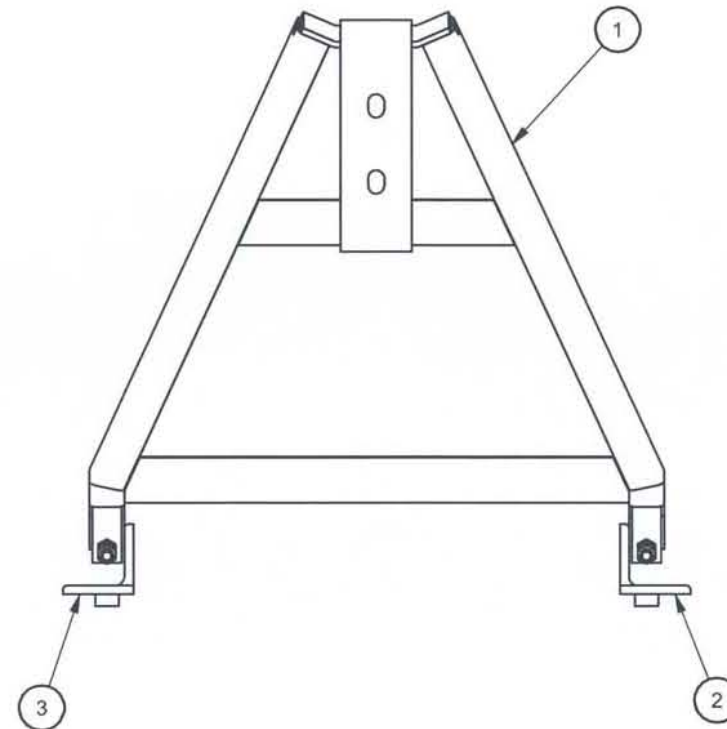
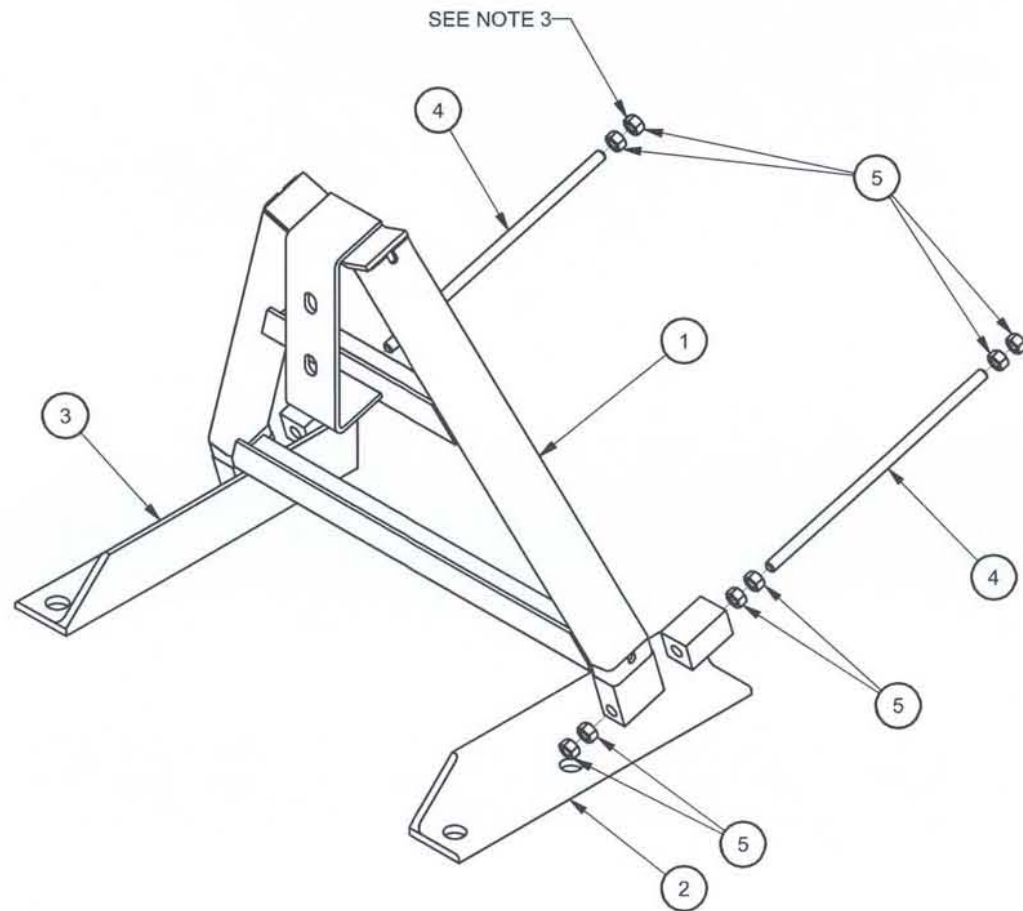
MATERIAL:
SEE PARTS LIST

TOL ANGULAR: ± 1'
TOL FRACTIONAL: ± 1/16
TOL DECIMAL: .XX ± .01
TOL DECIMAL: .XXX ± .005
UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	QTY.
1	616221G	TRIGGER FRAME,QUEST,G	1
2	603697B	ANCHOR,TRIGGER,R,QUEST	1
3	603694B	ANCHOR,TRIGGER,L,QUEST	1
4	116779G	ROD,THREADED,1/2X13 1/2,B7,G	2
5	115940G	NUT,HX,1/2,G5,G	12



- NOTES:
1. ASSEMBLE ITEMS AS SHOWN.
 2. THREADED ROD INSTALLATION:
 - A. INSERT THREADED ROD THROUGH ANCHOR AND TRIGGER FRAME. INSTALL 2 NUTS AT LOWER END AND JAM.
 - B. INSTALL ONE NUT ON UPPER SIDE AND TORQUE AGAINST ANCHOR PLATE TO 35 FT. LBS. INSTALL A SECOND NUT ON THE UPPER SIDE AND JAM.
 3. NUTS SHOWN AT REAR OF THREADED ROD ARE TO BE LEFT OFF UNTIL TRIGGER STRAPS ARE ATTACHED.



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Florida #70359 Rocklin, CA 95765 QPL # S102-4112

PART NO. 616211B 61.06 lbmass


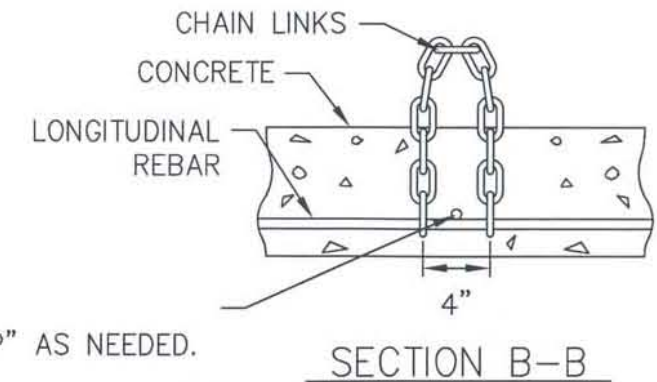
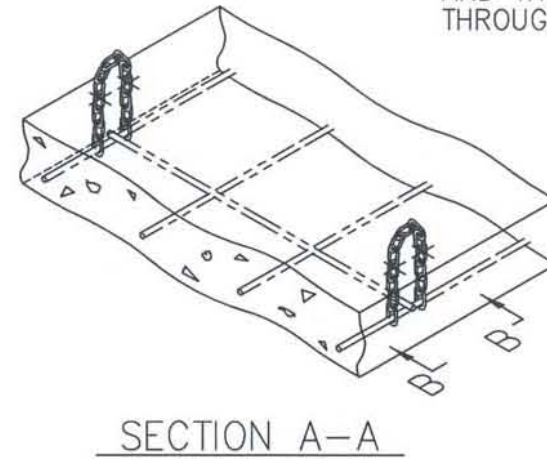
DRAWN: S. Trageser	DATE: 3/22/2012	 ENERGY ABSORPTION SYSTEMS ENGINEERING AND RESEARCH DEPARTMENT
DESIGNED: D. Wilkinson	DATE: 1/2/2005	
CHECKED:	DATE:	TRIGGER ASSEMBLY.QUEST
APPROVED:	DATE:	
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.		DRAWING: 62-01-47 SHEET: 9 of 13 REV:

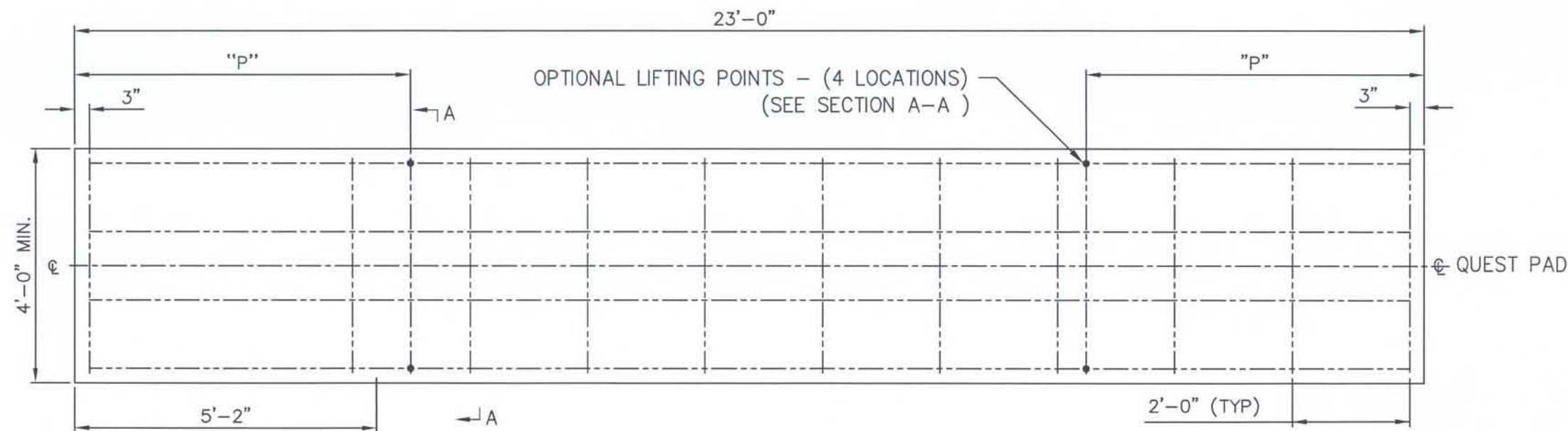
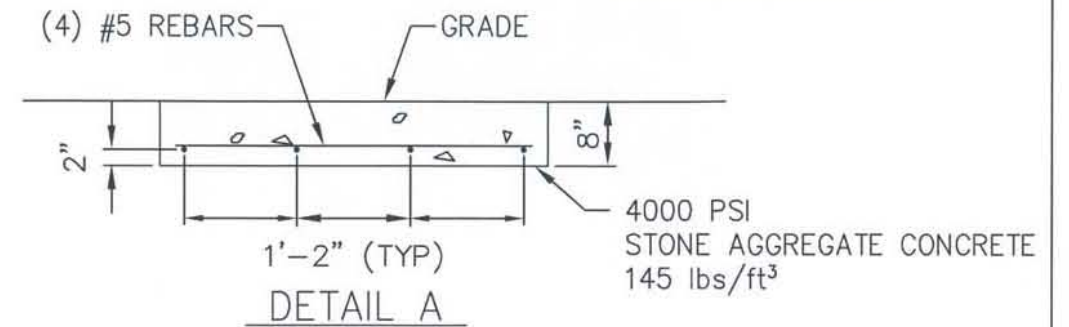
TABLE		YARDS ³ OF CONCRETE IN PAD
"P"	#5 REBAR REQ.	
5' - 9"	144'	2.3

P is the distance from the end of the concrete pad to the optional lifting points. See Section A-A.

OPTIONAL LIFTING POINTS: USE 1/2" PROOF COIL CHAIN. THE CHAIN MUST MEET THE REQUIREMENTS OF ASTM A-413 GRADE 28. THE MINIMUM LENGTH CHAIN IS 15 LINKS AND THE REBAR WILL BE INSERTED THROUGH BOTH ENDS AS SHOWN.



ADD (1) #5 REBAR @ "P" AS NEEDED.



NOTE:

- CROSS SLOPE OF PAD SHALL NOT EXCEED 1:10, AND NOT VARY MORE THAN 2% FROM FRONT TO BACK.
- TO PREVENT SLIDING DURING AN IMPACT, PAD MUST BE INSTALLED AGAINST OR TIED TO AN EXISTING STRUCTURE. OTHERWISE ADDITIONAL BELOW GRADE SUPPORTS MUST BE ADDED AS DETERMINED NECESSARY BY THE PROJECT ENGINEER.
- UNITS OF MEASUREMENT ARE INCHES UNLESS OTHERWISE NOTED.

REFERENCES

DRAWN: S. Trageser	DATE: 2/24/2012
DESIGNED:	DATE:
CHECKED: KRM	DATE: 2/28/12
APPROVED: K. Looney	DATE: 2/28/12
CAD FILE: 62-01-47 SH10.dwg	
NEXT ASSEMBLY:	

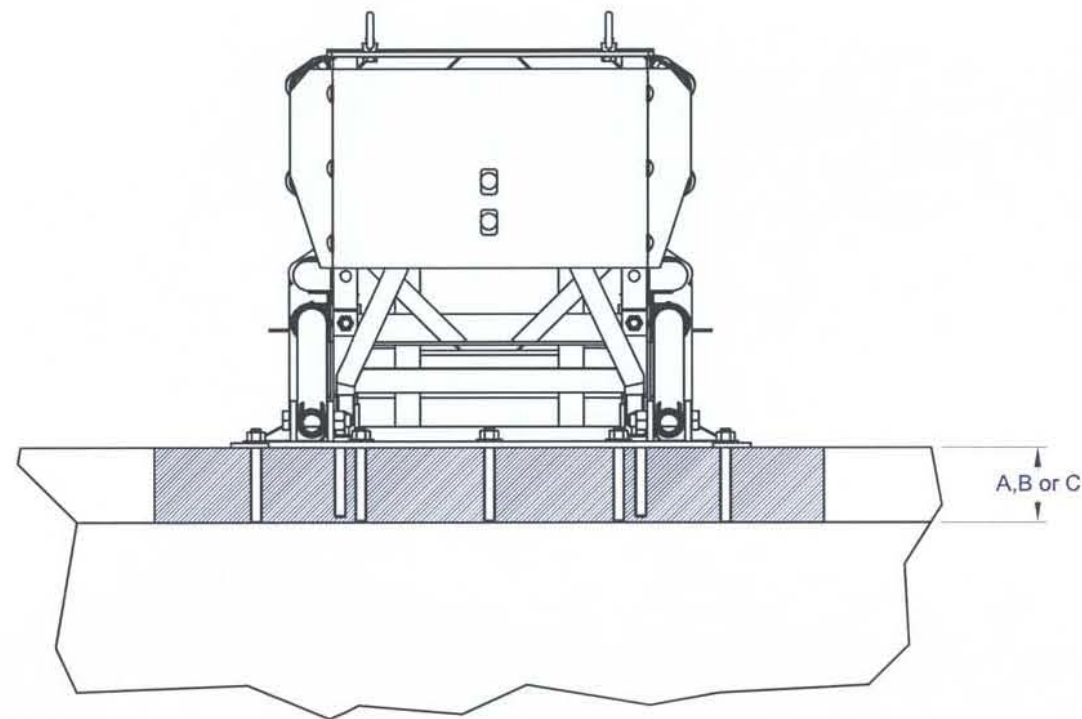


Frank J. Powell, PE 3617 Cincinnati Ave.
Florida #70359 Rocklin, CA 95765

ENERGY ABSORPTION SYSTEMS
ENGINEERING AND RESEARCH DEPARTMENT

QUEST® TEMPORARY SYSTEM
QPL S102-4112
CONCRETE PAD

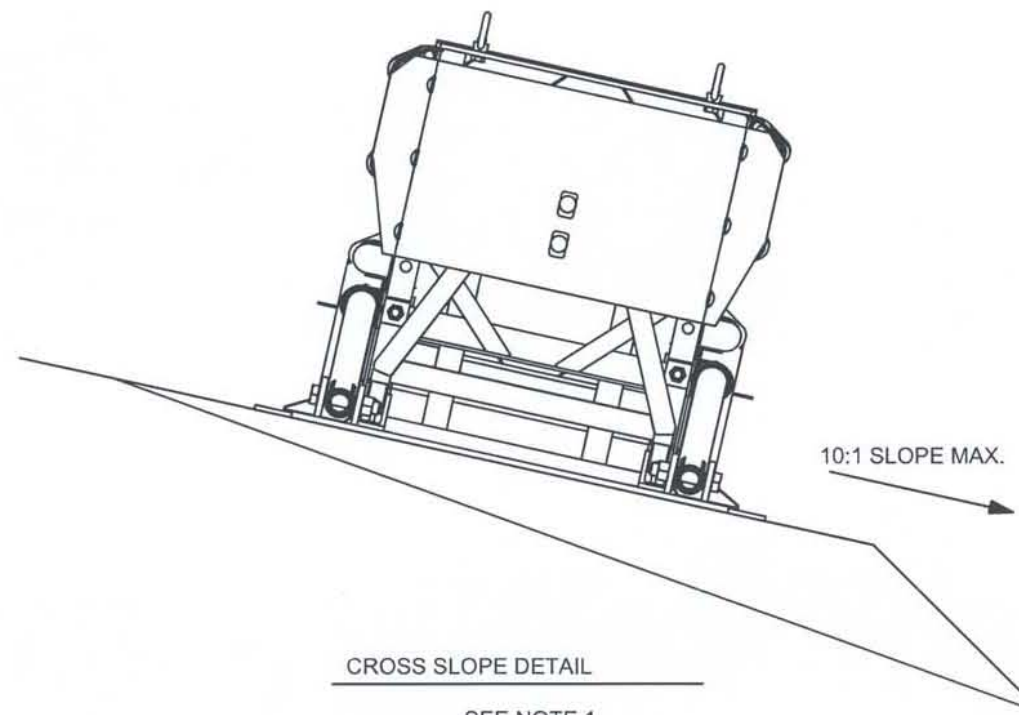
Revisions	Date	Rev.	By	Ckd.	App.



QUEST SECTION VIEW

REFER TO THE QUEST INSTALLATION AND SAFETY INSTRUCTIONS FOR FURTHER INFORMATION.
7" REQUIRED STUD LENGTH

- MATERIALS: CONCRETE ANCHOR ASSY.: 3562009-0000
- A - 6.00" REINFORCED PAD PER SHEET 10.
 - B - 8.00" NON-REINFORCED ROADWAY, MEASURING AT LEAST 12'-0" WIDE BY 50'-0" LONG, NOT SHOWN.
 - C - 7.00" REINFORCED DECK STRUCTURE, NOT SHOWN.



CROSS SLOPE DETAIL

SEE NOTE 1

ANCHOR SYSTEM:

1. CROSS SLOPE OF FOUNDATION SHALL NOT EXCEED 10:1 AND NOT VARY MORE THAN 2% FROM FRONT TO BACK.
2. USE THE ANCHOR PLATES AND BACKUP AS A TEMPLATE FOR DRILLING HOLES.
3. USE MP-3 POLYESTER ANCHOR SYSTEM, SUPPLIED BY ENERGY ABSORPTION SYSTEMS, OR APPROVED EQUAL. QUEST SYSTEMS INSTALLED ON CONCRETE MUST BE INSPECTED TO ENSURE THE ANCHORS ARE STILL PROPERLY SET FOLLOWING EACH IMPACT. RE-ANCHOR AS NECESSARY.
4. EVERY ANCHOR HOLE IN THE BACKUP AND ANCHOR PLATE LOCATIONS MUST HAVE AN MP-3 STUD ANCHORING IT.

Frank J. Powell, PE 3617 Cincinnati Ave.
Florida #70359 Rocklin, CA 95765



DRAWN:	S. Tragesere	DATE:	3/22/2012
DESIGNED:		DATE:	
CHECKED:	K. Mortensen	DATE:	3/27/2012
APPROVED:	K. Looney	DATE:	3/27/2012
FILE:	62-01-47 SH11.dwg		



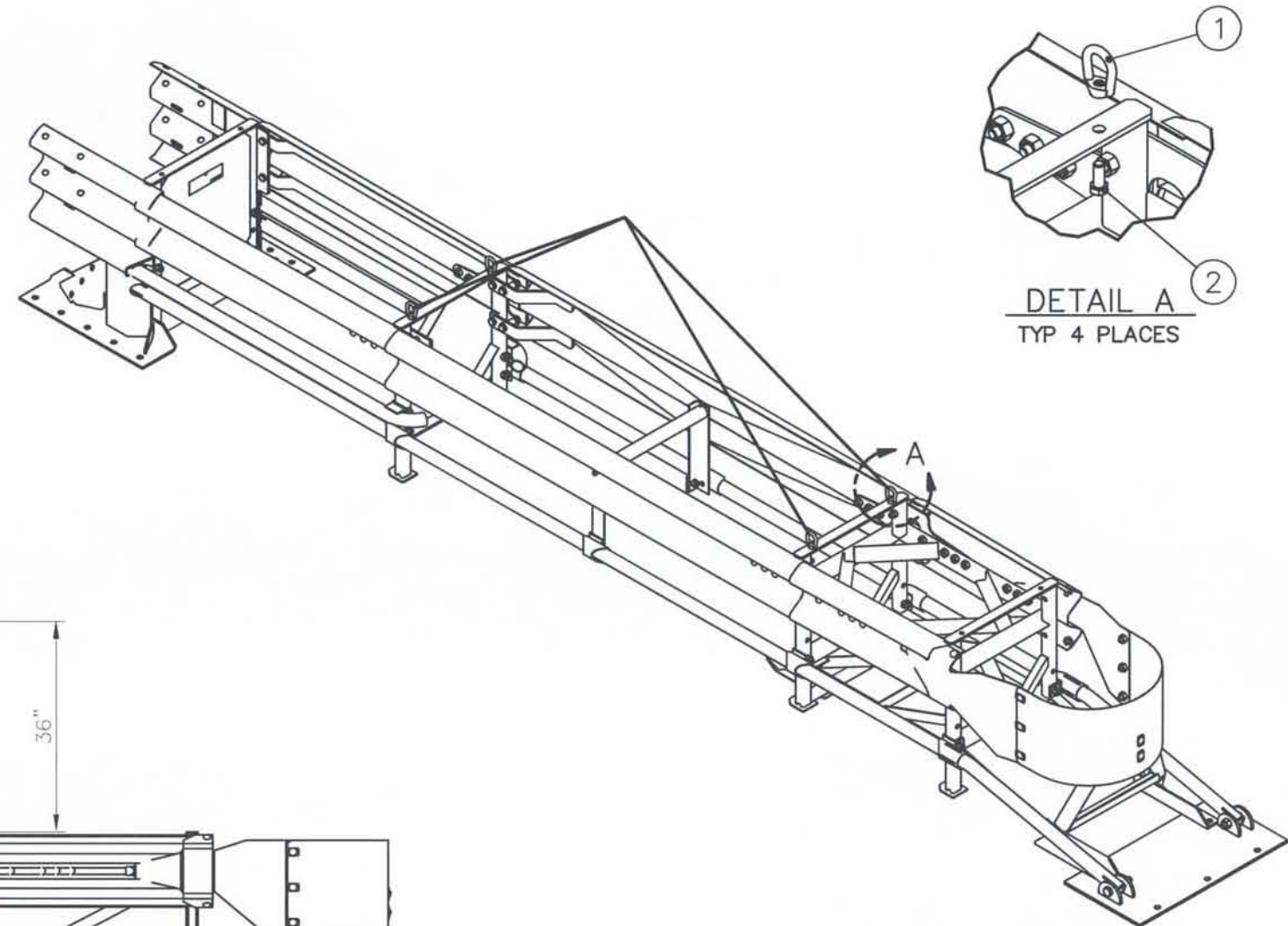
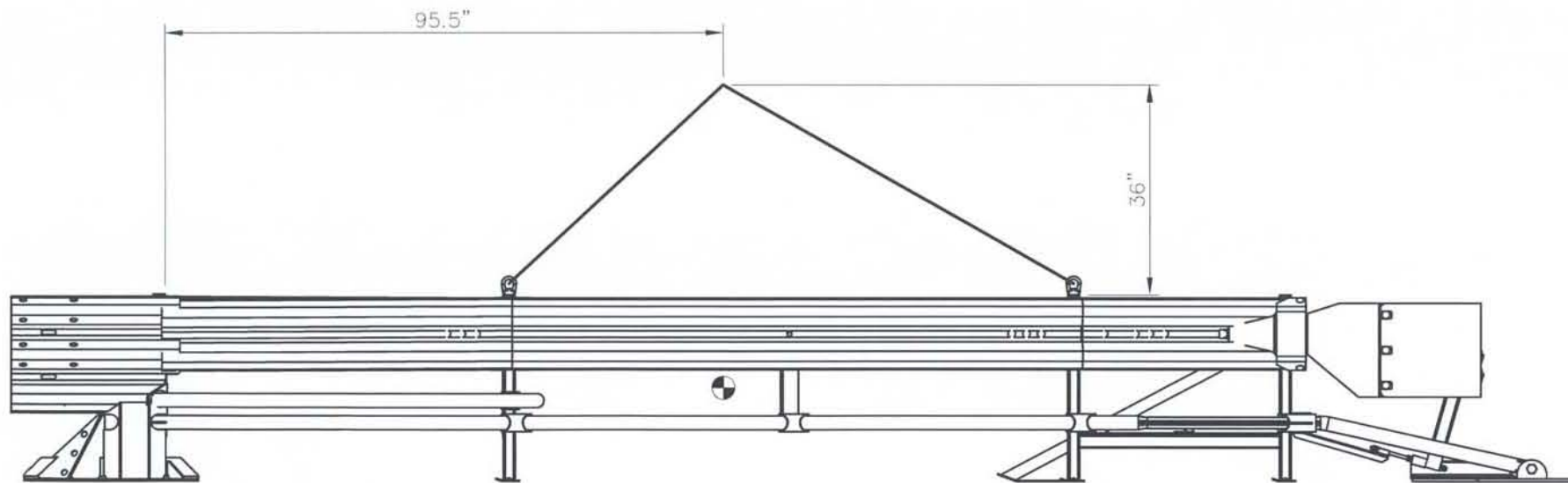
**QUEST[®] SYSTEM FOUNDATION
(CONCRETE)
QPL S102-4112**

SCALE:	1=16	DRAWING:	62-01-47	SHEET:	11 of 13	REV	
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LIFTING THE QUEST SYSTEM: *

1. SYSTEM SHOULD NOT BE LIFTED BY THE ENERGY ABSORBING SHAPER RAILS. DAMAGING (BENDING, KINKING) THE SHAPER RAILS WILL SEVERLY COMPROMISE SYSTEM PERFORMANCE.
 2. A) SLINGS OR CHAINS CAN BE WRAPPED AROUND BOTH FENDER PANELS OF BAY 1 & BAY 3.
OR
B) ATTACH LIFTING KIT TO THE BAY 1 SUPPORT FRAME AND THE DIAPHRAGM AS SHOWN IN DETAIL A.
 3. ATTACH FIXED-LENGTH SLINGS WITH A 3000 lb. MINIMUM CAPACITY TO THE LIFTING POINTS. FIXED SLINGS WILL PREVENT THE SYSTEM FROM TIPPING. DO NOT LIFT OVERHEAD.
 4. LIFT SYSTEM INTO PLACE NESTING THE BACKUP AROUND THE HAZARD TO BE PROTECTED (EXCEPT GUARDRAIL APPLICATIONS).
 5. ANCHOR SYSTEM ACCORDING TO THE QUEST SYSTEM INSTALLATION MANUAL (#2750031-0000).
- * DO NOT LIFT PAD WITH SYSTEM USING THIS METHOD!! SEE SHEET 10.

PARTS LIST			
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	2704171-0000	NUT,EYE,5/8,G	4
2	2699081-0500	BOLT,HX,5/8X1 1/2,G5,G	4
3	3562020-INST	INSTRUCTIONS,QUEST LIFTING KIT	1
33	2700541-0000	BOLT,HX,1X3 1/2,G5,G	2



Frank J. Powell, PE 3617 Cincinnati Ave.
Florida #70359 Rocklin, CA 95765

ASSEMBLY NO. 3562020-0000

REFERENCE



DRAWN:	S. Trageser	DATE:	3/22/2012
DESIGNED:	D. Wilkinson	DATE:	3/25/2005
CHECKED:	K. Mortensen	DATE:	3/27/2012
APPROVED:	K. Looney	DATE:	3/27/1012
CAD FILE:	62-01-47 SH12.dwg		
NEXT ASSEMBLY:			



ENERGY ABSORPTION SYSTEMS
ENGINEERING AND RESEARCH DEPARTMENT

LIFTING KIT,QUEST®
QPL S102-4112

INSTRUCTION NO. 3562020-INST

SCALE	DWG.	SHEET	REV
Do Not Scale	62-01-47	12 of 13	

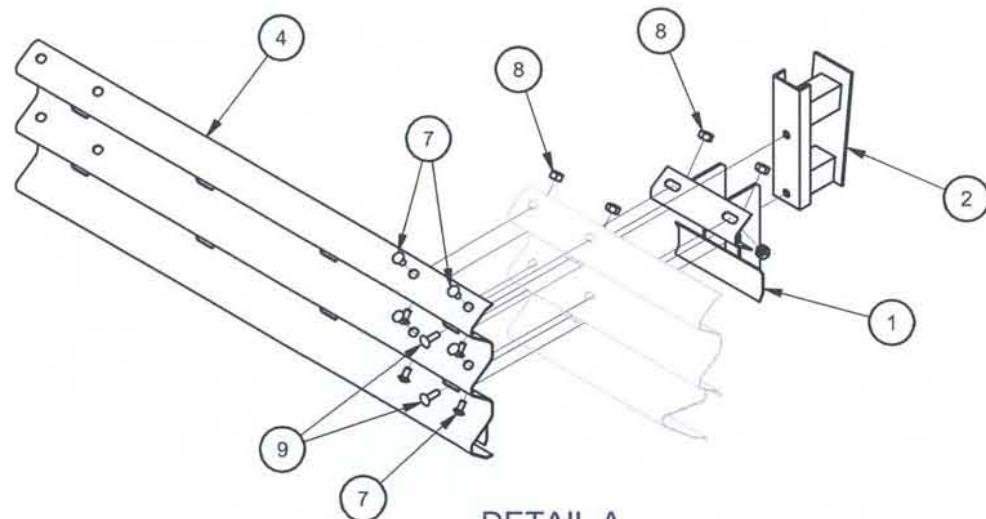
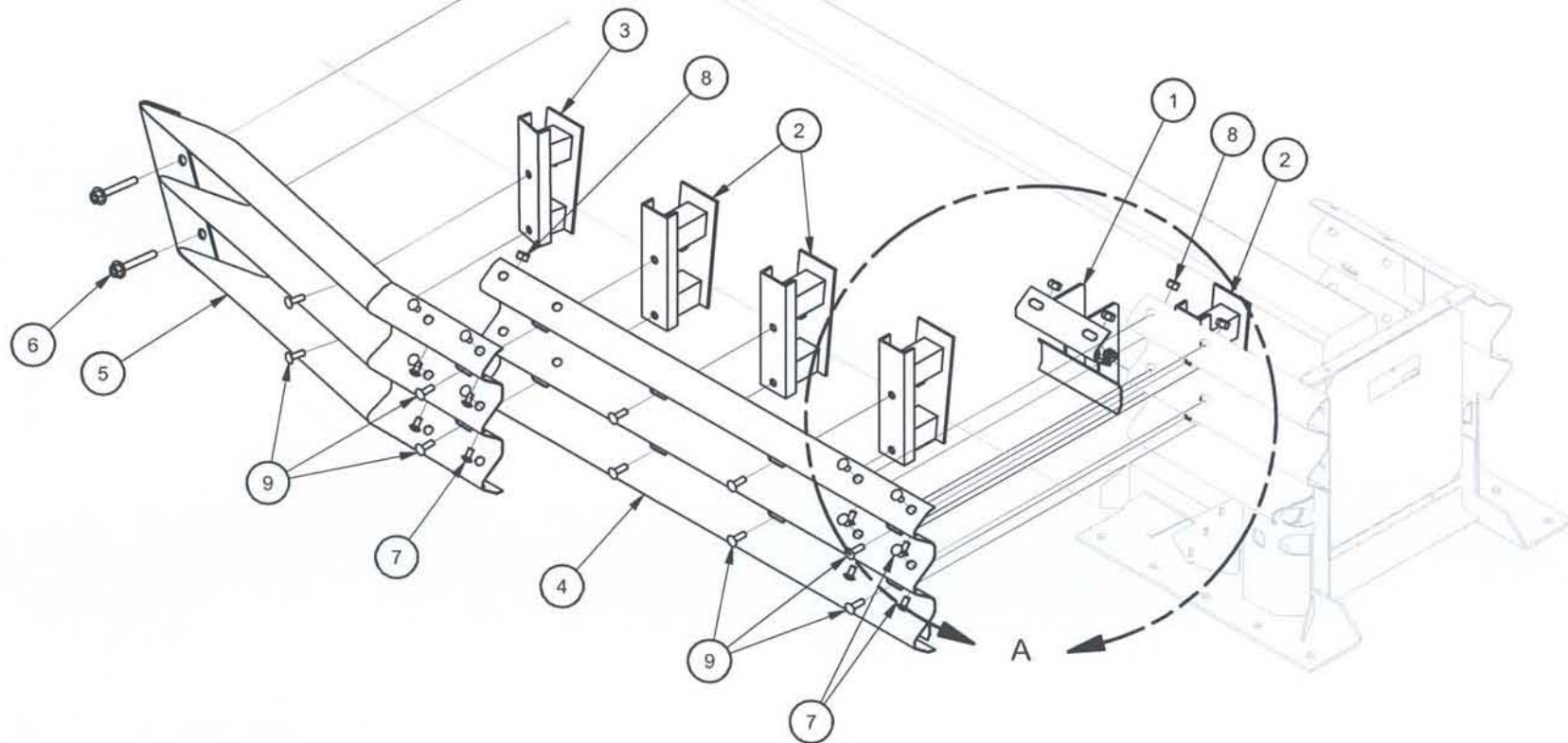
MATERIAL:
SEE PARTS LIST

TOL ANGULAR: $\pm 1'$
TOL FRACTIONAL: $\pm 1/16$
TOL DECIMAL: .XX $\pm .01$
TOL DECIMAL: .XXX $\pm .005$
UNLESS OTHERWISE SPECIFIED

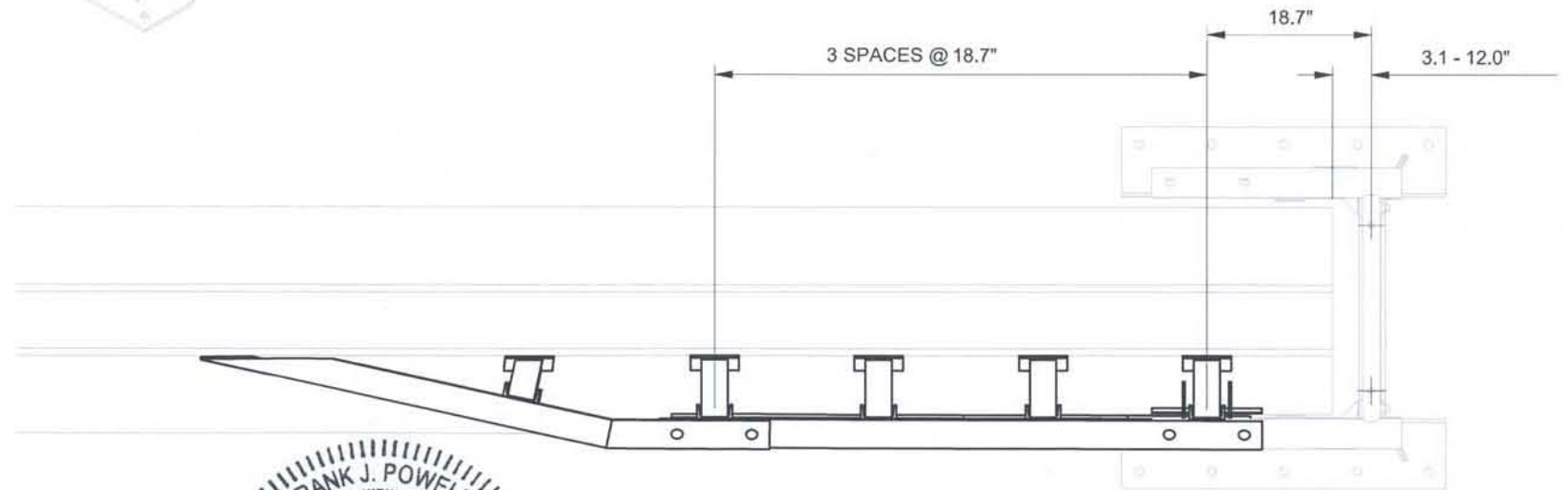
DO NOT SCALE DRAWING

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	QTY.
1	605339G	BRACE,EXTENSION,TRANS,QUEST,G	1
2	605611G	BRACKET,TRANS SUPPORT,7,QUEST,G	4
3	605607G	BRACKET,TRANS SUP,7,ANG,L,QUEST,G	1
4	611828G	PANEL,EXTENSION,68 11/16,QUEST,G	1
5	611970G	PANEL,TRANSITION,7,L,QUEST,G	1
6	603670B	ANCHOR,MP-3,PT KIT,3/4X6 1/2 HOR	1
7	003360G	BOLT,RAIL,5/8X1 1/4,G	16
8	003340G	NUT,HX,5/8,G,RAIL	26
9	003400G	BOLT,RAIL,5/8X2,G	10



DETAIL A
TRANSITION BRACE (ITEM 1), PANEL (ITEM 4)
& BACKUP CONNECTION DETAIL.



Frank J. Powell, PE 3617 Cincinnati Ave.
Florida #70359 Rocklin, CA 95765 QPL # S102-4112

DRAWN:	S. Trageser	DATE:	3/22/2012
DESIGNED:		DATE:	
CHECKED:		DATE:	
APPROVED:		DATE:	

ENERGY ABSORPTION SYSTEMS
ENGINEERING AND RESEARCH DEPARTMENT

TRANSITION ASSY,7 OFFSET,L,QUEST®

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES. DIMENSIONS ACCORDING TO ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED.	DRAWING:	62-01-47	SHEET:	13 of 13	REV
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PART NO. 616063B 267.19 lbmass