



* G = GREY or Y = YELLOW

BAYS	#14 [24"] WIDTH		#12 [30"] WIDTH		#14 [36"] WIDTH		SYSTEM LENGTH		EFFECTIVE LENGTH		PAD LENGTH		MAX DESIGN SPEED km/h [MPH]	# OF CARTRIDGES	
	MODEL #	MODEL #	MODEL #	MODEL #	m	ft-in	m	ft-in	m	ft-in	m	ft-in		TYPE I	TYPE II
1	QS2401*	QS3001*	QS3601*	2.16 [7'-1"]	1.73 [5'-8"]	2.74 [9'-0"]	40 [37]	2	0						
2	QS2402*	QS3002*	QS3602*	3.08 [10'-1"]	2.64 [8'-8"]	2.74 [9'-0"]	60 [57]	2	1						
3	QS2403*	QS3003*	QS3603*	4.00 [13'-1"]	3.56 [11'-8"]	3.66 [12'-0"]	70 [67]	3	1						
4	QS2404*	QS3004*	QS3604*	4.81 [16'-1"]	4.47 [14'-8"]	4.57 [15'-0"]	80 [77]	3	2						
5	QS2405*	QS3005*	QS3605*	5.83 [19'-1"]	5.38 [17'-8"]	5.49 [18'-0"]	90 [87]	4	2						
6	QS2406*	QS3006*	QS3606*	6.74 [22'-1"]	6.30 [20'-8"]	6.40 [21'-0"]	100 [97]	4	3						
7	QS2407*	QS3007*	QS3607*	7.65 [25'-1"]	7.21 [23'-8"]	7.32 [24'-0"]	110 [107]	4	4						
8	QS2408*	QS3008*	QS3608*	8.57 [28'-1"]	8.13 [26'-8"]	8.23 [27'-0"]	120 [117]	4	5						
9	QS2409*	QS3009*	QS3609*	9.49 [31'-1"]	9.04 [29'-8"]	9.14 [30'-0"]	130 [127]	4	6						
10	QS2410*	QS3010*	QS3610*	10.40 [34'-1"]	9.96 [32'-8"]	10.06 [33'-0"]	140 [137]	5	6						
11	QS2411*	QS3011*	QS3611*	11.32 [37'-1"]	10.87 [35'-8"]	10.97 [36'-0"]	150 [147]	5	7						
12	QS2412*	QS3012*	QS3612*	12.23 [40'-1"]	11.79 [38'-8"]	11.89 [39'-0"]	160 [157]	5	8						

- NOTES:
- IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
 - PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 [30.00] MIN.
 - 160-[6.00] MIN.-REINFORCED 28-MPa [4000-PSI] R.C. CONCRETE PAD OR 200 [8.00] MIN. NON-REINFORCED 28-MPa [4000-PSI] P.C. CONCRETE ROADWAY, MEASURING AT LEAST 3.66 m [12'-0"] WIDE BY 15.24 m [50'-0"] LONG.
 - SEE THE "QUADGUARD 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 BY CALLING CUSTOMER SERVICE DEPARTMENT AT (888) 323-6374.
 - WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY AN ADEQUATE TRANSITION FROM THE QUADGUARD SYSTEM TO THE OBJECT BEING SHIELDED.
 - UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES], UNLESS OTHERWISE NOTED.
 - BACKUP AND NOSE ASSEMBLIES NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.
 - THE NUMBER OF BAYS INDICATED IN THE TABLE IS BASED ON CALCULATED VALUES TO ENSURE ADEQUATE SYSTEM CAPACITY TO DISSIPATE THE LONGITUDINAL IMPACT ENERGY OF A 2000 kg VEHICLE TRAVELING AT THE SPEED INDICATED.
 - THE SIX BAY SYSTEM HAS BEEN FULLY TESTED AT 100 km/h UNDER THE FULL 8 TEST MATRIX OF NCHRP 350 TL-3. SYSTEMS LONGER THAN SIX BAYS SHALL ALSO BE CAPABLE OF MEETING THE OCCUPANT RISK CRITERIA AS RECOMMENDED IN NCHRP 350 FOR VEHICLES WEIGHING 2000 kg IMPACTING HEAD ON AT THE SPEED INDICATED IN THE TABLE.

KEY	① QUADGUARD CARTRIDGE	④ MONORAIL			
	② DIAPHRAGM	⑤ NOSE ASSEMBLY			
	③ FENDER PANEL	⑥ BACKUP			
Revisions					
ASHTO WAS 1996	12/01/03	I	SDC	SIT	ACF
CHANGED NOTES 4,5 & 7	12/15/04	J	RGC	SIT	ACF
REVISED NOTE 3	9/25/01	H	DDW	SIT	SPT

REFERENCES	
SERIAL#	DIAPHRAGM ASSY. 35-40-07
SALES ORDER#	NOSE ASSY. 35-40-05
EH PROJECT#	FENDER PANEL ASSY. 35-40-04
DESIGN SPEED	BACKUP ASSY. 35-40-03
NOSE COLOR	MONORAIL ASSY. 35-40-06
NUMBER OF UNITS	CONCRETE PAD 35-40-11
	TRANSITION ASSY. N/A
	WHEEL DEFLECTOR ASSY. N/A

DATE:	S. LEWIS	DATE:	03/21/96
DESIGNED:	JMV/MHO	DATE:	03/21/96
APPROVED:	S. TRAGESER	DATE:	6/07/96
DATE:	J. MACHADO	DATE:	6/07/96
CAD FILE:	QSTSCVR-U.dwg		

UNIDIRECTIONAL

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

QUADGUARD® SYSTEM
W/ TENSION STRUT BACKUP

SCALE: 1=40

QSTSCVR-U

1 OF 1

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INSTALL MODEL # QS2404Y

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