



~ NOTES ~

- ① NOSE ASSEMBLY (OBJECT MARKER TYPE 1 AS REQUIRED)
- ② 6" CONCRETE PAD PER MANUFACTURER SPECIFICATIONS.
- ③ MEDIUM WIDTH = 70 1/2", APPROX. 2.8 CU. YD. CONC. AND 265 LBS. OF STEEL FOR MED. BACKUP.  
WIDE WIDTH = 91 1/2", APPROX. 3.8 CU. YD. CONC. AND 299 LBS. OF STEEL FOR WIDE BACKUP.

- 4. THE CONTRACT UNIT PRICE SHALL BE CRASH CUSHION TYPE VII, CLASS  $\blacklozenge$ ,  $\hexagon$ ,  $\triangle$ .  
 $\blacklozenge$  CLASS B OR C, AS REQUIRED  
 $\hexagon$  TEST LEVEL 2 (TL2) OR TEST LEVEL 3 (TL3), AS REQUIRED.  
 $\triangle$  EITHER M MEDIUM, OR W WIDE, OR S SPECIAL WIDE UNITS
- 5. THE CONCRETE PAD, PAD EXCAVATION AND STEEL REINFORCEMENT, INSTALLED IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CRASH CUSHION TYPE VI. DIMENSION AND REINFORCEMENT SPECIFICATIONS FOR CONCRETE PADS ARE TO BE PROVIDED BY THE MANUFACTURER. THE PAD WILL NOT BE REQUIRED WHEN THE UNIT IS CONSTRUCTED ON RIGID PAVEMENT.
- 6. THE CROSS SLOPE ON THE PAD OR PAVEMENT SHALL BE PER MANUFACTURER SPECIFICATIONS.
- 7. WHEN INSTALLED ON A STRUCTURE, DETAILS FOR ANCHORAGE SHALL BE DEVELOPED AND SHOWN ELSEWHERE ON THE PLANS.
- 8. SPECIAL WIDTH UNITS ARE AVAILABLE FROM THE MANUFACTURERS. WHEN SPECIAL WIDE UNITS ARE REQUIRED DETAILS OF THE UNIT SHALL BE DEVELOPED AND SHOWN ELSEWHERE ON THE PLANS.
- 9. CRASH CUSHIONS ARE TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS, INCLUDING THE CONCRETE PAD. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
- 10. CONCRETE PAD AND BELOW GRADE ANCHOR SHALL BE PLACED MONOLITHICALLY.
- 11. PERMISSIBLE ALTERNATES FOR CRASH CUSHION TYPE VII ARE PATENTED ITEMS: QUADGUARD MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC. OF CHICAGO, ILL., TRACC MFG. BY TRINITY INDUSTRIES, INC. OF DALLAS, TX., OR SCI PRODUCTS, INC. OF ST. CHARLES, IL.
- ⑫ END SHOE MAY BE ELIMINATED WITH ONE WAY TRAFFIC.
- 13. THE CRASH CUSHION TYPE VII MAY ALSO BE UTILIZED FOR TEMPORARY USE AND CONSTRUCTION ZONES (CLASS BT).
- 14. A CRASH CUSHION TYPE VII CLASS B IS TO BE USED IN AREAS WHERE CRASH HISTORY IS NOT KNOWN TO BE SEVERE.
- 15. A CRASH CUSHION TYPE VII CLASS C IS CONSIDERED A SEVERE USE CRASH CUSHION.
- 16. NCHRP-350-COMPLIANT CRASH CUSHIONS WILL BE ACCEPTED IN INSTANCES WHERE MASH-COMPLIANT DEVICES ARE NOT YET AVAILABLE.

ADDITIONAL BID ITEMS AND UNIT TO BID  
OBJECT MARKER TYPE 1 (AS REQUIRED) EACH

| CLASS | SPEED (MPH) | ATTENUATOR |                     |        | SUGGESTED ADT* RANGE (P.C.P.L.)** |
|-------|-------------|------------|---------------------|--------|-----------------------------------|
|       |             | MODEL      | PRODUCT NAME        | LENGTH |                                   |
| B     | 45 & LESS   | TL2        | SHORTRACC           | 14'-0" | UP TO 12,000                      |
|       |             |            | 3-BAY QUADGUARD MIO | 12'-0" |                                   |
|       | OVER 45     | TL3        | TRACC               | 21'-0" |                                   |
|       |             |            | 5-BAY QUADGUARD MIO | 18'-0" |                                   |
| C     | OVER 45     | TL3        | SCI100GM            | 23'-0" | 8,000 AND OVER                    |
|       |             |            | QUADGUARD ELITE MIO | 26'-7" |                                   |

\* AVERAGE DAILY TRAFFIC  
\*\* PASSENGER CARS PER LANE

KENTUCKY  
DEPARTMENT OF HIGHWAYS

CRASH CUSHION  
TYPE VII  
CLASS B AND C  
(ONE & TWO DIRECTION)

SUBMITTED  1-02-19  
ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN DATE

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