



~ NOTES ~

- ① NOSE ASSEMBLY (OBJECT MARKER TYPE 1 AS REQUIRED)
- ② 6" CONCRETE PAD
- 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 \bullet , \circ , \triangle .
 \bullet CLASS B OR C, AS REQUIRED
 \circ 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 CONC. PAD SHALL BE REQUIRED ONLY WHEN THE UNIT IS CONSTRUCTED ON NON-RIGID PAVEMENT AND SHALL BE MEASURED AND PAID FOR PER CUBIC YARD OF CLASS "AA" CONC., WHICH SHALL INCLUDE ALL NECESSARY EXCAVATION AND REINFORCING STEEL. THE PAD SHALL BE CURED AND FINISHED AS EITHER SIDEWALK OR PAVEMENT. REAR FOOTINGS AND REAR BACK-UP WALL, EXCEPT ON STRUCTURES, SHALL BE REQUIRED AT ALL INSTALLATIONS, WHICH SHALL BE MEASURED AND PAID FOR AS CLASS "AA" CONCRETE AND SHALL INCLUDE ALL NECESSARY EXCAVATION AND REINFORCING STEEL.
6. THE CROSS SLOPE ON THE PAD OR PAVEMENT SHALL NOT EXCEED 5 PERCENT.
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. 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.

ADDITIONAL BID ITEMS AND UNIT TO BID
 CONCRETE-CLASS AA
 OBJECT MARKER TYPE 1 (AS REQUIRED)

CUYD
 EACH

| CLASS | SPEED (MPH) | ATTENUATOR | | | APPROX. CU. YD. CONC. FOR PAD | SUGGESTED ADT* RANGE (P.C.P.L.)** |
|-------|-------------|------------|-----------------|--------|-------------------------------|-----------------------------------|
| | | MODEL | PRODUCT NAME | LENGTH | | |
| B | 45 & LESS | TL2 | SHORTTRACC | 14'-0" | 1.12 | UP TO 12,000 |
| | | | 3-BAY QUADGUARD | 12'-0" | 0.87 | |
| | OVER 45 | TL3 | TRACC | 21'-0" | 1.63 | |
| | | | 6-BAY QUADGUARD | 21'-0" | 1.53 | |
| C | OVER 45 | TL3 | SCIIOGM | 23'-0" | 1.7 | 8,000 AND OVER |
| | | | QUADGUARD ELITE | 26'-7" | 1.98 | |

* AVERAGE DAILY TRAFFIC
 ** PASSENGER CARS PER LANE

**KENTUCKY
 DEPARTMENT OF HIGHWAYS**

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

STANDARD DRAWING NO. RBE-040-10

SUBMITTED *William P. Galbraith* DATE 12-01-15
DIRECTOR, DIVISION OF DESIGN

APPROVED *[Signature]* DATE 12-01-15
STATE HIGHWAY ENGINEER