REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 24242 WILLIE E. McCONNELL, JR.

SIGNATURE 7/27/15 DATE

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SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 605
COLUMBIA, SC 29201

STANDARD DRAWING

FLAGGING OPERATIONS TWO-LANE TWO-WAY PRIMARY & SECONDARY ROUTES

610-005-00

EFFECTIVE LETTING DATE: JAN 2016

THIS DRAWING IS NOT TO SCALE

FLAGGING OPERATIONS
GENERAL NOTES

(ALL NOTES, SPECIFICATIONS AND REQUIREMENTS ON THIS STANDARD DRAWING APPLY TO ALL SUBSEQUENT STANDARD DRAWINGS REGARDING FLAGGING OPERATIONS UNLESS OTHERWISE NOTED)

FLAGGING OPERATIONS -

1. KEY FEATURES RELEVANT TO FLAGGING OPERATIONS:

APPROACH TAPER - THIS IS A ONE-LANE TWO-WAY TAPER PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE. THIS TAPER PRECEDES THE BUFFER SPACE AND THE WORK ACTIVITY AREA. THE LENGTH OF THIS TAPER MAY VARY FROM 250 FEET TO 350 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES EQUALLY SPACED AT 50' TO DELINEATE AS NECESSARY. SEE TABLE A.

DOWNSTREAM TAPER - THIS TAPER, PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE, FOLLOWS THE WORK ACTIVITY AREA AND SIGNALS AN END TO TERMINATION AREA FOR THE CLOSURE OF THE TRAVEL LANE. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES IN THIS TAPER.

FLAGGER STATION - THIS IS THE SPECIFIC LOCATION OF THE FLAGGER.

CLOSED LANE FLAGGER - THIS FLAGGER IS STATIONED ADJACENT TO THE FIRST TRAFFIC CONTROL DEVICE IN THE APPROACH TAPER WHO CONTROLS THE TRAFFIC OPERATIONS IN THE TRAVEL LANE BEGINNING UPON ITS TAPERING.

OPEN LANE FLAGGER - THIS FLAGGER IS STATIONED 500 FEET BEYOND THE LAST TRAFFIC CONTROL DEVICE IN THE DOWNSTREAM TAPER WHO CONTROLS THE TRAFFIC OPERATIONS IN THE TRAVEL LANE BEGINNING UPON ITS TAPERING.

BUFFER SPACE - THIS AREA IS LOCATED BETWEEN THE DOWNSTREAM END OF THE APPROACH TAPER AND THE NEAREST LIMITS OF THE WORK ACTIVITY AREA AND MAY PROVIDE SOME RECEIVING SPACE FOR AN ERRANT VEHICLE. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE BUFFER SPACE IS PROHIBITED. HOWEVER, WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE BUFFER SPACE ARE UNAVAILABLE, A TRUCK MOUNTED ATTENUATOR MAY TEMPORARILY ENCROACH UPON THE BUFFER SPACE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE SECTION BELOW ENTITLED, "BUFFER SPACE", WHEN APPROVED BY THE ENGINEER.

WORK ACTIVITY AREA - PERSONNEL, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. ARE PRESENT WITHIN THIS AREA TO CONDUCT THE WORK.

LIMITS of the WORK ACTIVITY AREA - THIS IS THE BOUNDARY OF THE WORK ACTIVITY AREA FIRST ENCOUNTERED, FROM EITHER DIRECTION, BY VEHICLES ENTERING THE WORK ACTIVITY AREA IN THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC AND CONTROLLED BY THE FLAGGER(S).

APPROACH LANE - TRAFFIC APPROACHING AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.

DEPARTURE LANE - TRAFFIC DEPARTS FROM AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.

ROADWAY APPROACH - THIS IS AN APPROACH TO THE WORK ACTIVITY AREA ON THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.

SIDE ROADS - THESE ROADS INTERSECT THE ROADWAY ON WHICH THE WORK ACTIVITY AREA IS LOCATED.

LIMITS of the INTERSECTION - THE LIMITS OF ON THE PHYSICAL AREA WHERE INTERSECTING ROADWAYS ARE DEFINED BY THE LOCATION OF STOP BARS WHEN PRESENT; WHEN STOP BARS ARE ABSENT, THE LIMITS OF ON THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION POINTS WHERE THE CURBED SIDE BETWEEN ADJACENT ROADWAY APPROACHES TIE TO THE EDGE OF PAVEMENT ON THE EDGE OF TRAVEL LANE ADJACENT TO THE EDGE OF PAVEMENT OF EACH ROADWAY.

2. INSTALL, CONDUCT AND MAINTAIN FLAGGING OPERATIONS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, THE STANDARD DRAWINGS, THE MUTCD AND THE "SOUTH CAROLINA FLAGGER'S HANDBOOK" UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. INSTALL ALL SIGNS RELEVANT TO A FLAGGING OPERATION PRIOR TO INITIATION OF THE OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION. EQUIP EACH FLAGGER WITH A 24" x 24" SIDE-FOLDING PADDLE MOUNTED ON A WOOD HANDLE WITH A MINIMUM LENGTH OF 3 FEET. THE DEPARTMENT PROHIBITS THE USE OF FLAGS EXCEPT DURING EMERGENCY SITUATIONS.

3. LANE CLOSURES FOR FLAGGING OPERATIONS ARE RESTRICTED TO A MAXIMUM DISTANCE OF 2 MILES UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WORK SITE WILL NOT BE CONSIDERED AND SHALL REQUIRE THE ENGINEER'S APPROVAL PRIOR TO BEGINNING THE WORK.

4. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS FOR EACH "ROADWAY APPROACH" WHEN A FLAGGING OPERATION IS IN PLACE AND WHEN THE WORK ACTIVITY AREA IS LOCATED ON THE ROADWAY. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS AT THE LOCATIONS INDICATED IN AN ARRAY OF ADVANCE WARNING SIGNS AS THE LOCATIONS RELATIVE TO THE SIDE ROAD "FLAGGER STATION" ARE BEYOND THE ADVANCE WARNING SIGNS IMMEDIATELY UPON COMPLETION OF THE RELOCATION OF THE FLAGGER TO THE SIDE ROAD "FLAGGER STATION".

5. INSTALL ALL ADVANCE WARNING SIGNS IMMEDIATELY PRIOR TO INITIATING A FLAGGING OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION.

6. MAINTAIN TWO-WAY RADIO COMMUNICATIONS BETWEEN ALL FLAGGERS.

NIGHTTIME FLAGGING OPERATIONS -

1. EACH FLAGGER SHALL WEAR SAFETY APPAREL IN COMPLIANCE WITH THE REQUIREMENTS OF ANSI/ ISEA 107 STANDARD PERFORMANCE FOR CLASS 3 RISK CHARACTERISTICS, LATEST REVISION, WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.

2. ILLUMINATE EACH "FLAGGER STATION" WITH ANY COMBINATION OF PORTABLE LIGHTS, STANDARD ELECTRIC LIGHTS, EXISTING STREET LIGHTS, ETC. THAT WILL PROVIDE A MINIMUM ILLUMINATION LEVEL OF 108 Lx OR 10 fc WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.

3. SUPPLEMENT EACH ARRAY OF ADVANCE WARNING SIGNS ON EACH "ROADWAY APPROACH" WITH A SMALLER SCREENED CHANGEABLE MESSAGE SIGN. THESE CHANGEABLE MESSAGE SIGNS ARE NOT REQUIRED ON THE "SIDE ROADS" INTERSECTING THE ROADWAY WHERE THE "WORK ACTIVITY AREA" IS LOCATED. INSTALL THE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE ADVANCE WARNING SIGN ARRAYS. INSTALL THE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE ADVANCE WARNING SIGN ARRAYS. THE MESSAGES DISPLAYED ON THESE CHANGEABLE MESSAGE SIGNS SHALL BE LIMITED TO "ROAD WORK AHEAD", "FLAGGER AHEAD", "PREPARE TO STOP", "FLAGGER AHEAD". A TRUCK MOUNTED CHANGEABLE MESSAGE SIGN IS NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS.

4. UTILIZE PORTABLE FLASHING BEACONS OR 42" OVERSIZED TRAFFIC CONES IN PLACE OF 36" STANDARD TRAFFIC CONES DURING NIGHTTIME FLAGGING OPERATIONS.

BUFFER SPACE -

1. THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE BASED UPON THE LEGAL POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BECOMING THE WORK.

SPEED LIMIT	DISTANCES
LOW SPEED ≤ 35 MPH	200 FEET
INTERMEDIATE SPEED 40 - 50 MPH	325 FEET
HIGH SPEED 55 MPH	450 FEET

2. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE "BUFFER SPACE" IS PROHIBITED. A TRUCK MOUNTED ATTENUATOR IS THE ONLY WORK VEHICLE THAT MAY TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN THE FOLLOWING NOTE WHEN APPROVED BY THE ENGINEER. SEE NOTE NO.3.

3. WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS, IT MAY BE NECESSARY FOR A TRUCK MOUNTED ATTENUATOR TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED ATTENUATOR IS THE ONLY VEHICLE PERMITTED TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" AND THIS ENCROACHMENT IS ONLY PERMITTED WHEN THE WORK ACTIVITY AREA IS LOCATED IN THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC. THE "BUFFER SPACE" IS APPROVED BY THE ENGINEER. MINIMIZE THE TIME DURATION OF THE ENCROACHMENT BY MOVING OF THE TRUCK MOUNTED ATTENUATOR FROM THE "BUFFER SPACE" AT THE FIRST OPPORTUNITY THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" BECOME AVAILABLE.

SIGNS AND TRAFFIC CONTROL DEVICES -

1. MEASURE THE ADVANCE WARNING SIGN LOCATIONS FOR EACH APPROACH FROM THE "FLAGGER STATION" LOCATED ON THAT APPROACH.

2. INSTALL THE ADVANCE WARNING SIGNS AS SPACING INTERVALS BASED UPON THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BECOMING ANY WORK. THE ADVANCE WARNING SIGN SPACING INTERVALS INDICATED ARE FOR NORMAL CONDITIONS. MODIFICATIONS TO THESE DISTANCES MAY BE NECESSARY DUE TO EXISTING SIGNS, INTERSECTING ROADWAYS, HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS. SEE TABLE A.

3. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH CURB OR SHOULDERS AND NO LESS THAN 8 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.

4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM BOTTOM HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED W-FRAMES, OR SIMILAR STEEL TYPE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MEASURE THE MOUNTING HEIGHT ON LEVEL AND NON-SUPERELEVATED ROADWAYS AND THE NEAR EDGE OF THE ROADWAY.

5. NON-LEGIBLE OR DAMAGED ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WHEN A FLUORESCENT ORANGE COLORED SIGN IS SPECIFIED SHALL BE REPLACED IMMEDIATELY. ALL FLUORESCENT ORANGE SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A MATTE OR DULL FINISH SHALL BE REPLACED WHEN THE MEASURED VALUE FALLS BELOW THAT SPECIFIED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES, DEVICES IN "WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THE LAST DATE AS INDICATED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org .

6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF NCHRP REPORT 350 OR THE ANALYSIS CRITERIA FOR ASSESSING SAFETY PERFORMANCE PROVIDED IN THE LATEST AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE. ALL DEVICES NOT MEETING THESE REQUIREMENTS SHALL BE REMOVED FROM THE WORK ZONE.

7. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. AT THE EVENT A DAYTIME FLAGGING OPERATION EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH EITHER PORTABLE FLASHING BEACONS OR 42" OVERSIZED TRAFFIC CONES. SUBSTITUTIONS ALL PORTABLE FLASHING BEACONS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE B OR GREATER FLEXIBLE MICROPRISMATIC SHEETING MATERIAL SHALL BE PROHIBITED UNLESS SPECIFICALLY DIRECTED BY THE DEPARTMENT.

8. DELINEATE THE TANGENT AREA OF THE LANE CLOSURE WITH THE NECESSARY TRAFFIC CONTROL DEVICES TO REDIRECT ENCROACHMENT BY MOTORISTS INTO THE CLOSED TRAVEL LANE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 35 MPH OR LESS, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 25 FEET. ON ROADWAYS WITH POSTED REGULATORY SPEED LIMITS OF 40 MPH OR GREATER, INSTALL THE TRAFFIC CONTROL DEVICES AT SPACING INTERVALS OF 50 FEET. SEE TABLE B.

ADVANCE WARNING ARROW PANEL -

1. DURING FLAGGING OPERATIONS, AN ADVANCE WARNING ARROW PANEL SHALL OPERATE IN THE "FLASH" OR "SEQUENCE" FLASHER MODE WHEN LOCATED WITHIN 15 MINUTES OF TRAVEL TIME FROM THE ADVANCE WARNING SIGN ARRAYS SPACING OF A FLAGGING OPERATION. OPERATE THE ARROW PANEL IN AN ARROW, CHEVRON OR ANY OTHER TYPE OF CAUTION MODE NEVER THAN THE "STOP, CONFESS" CAUTION MODE WHEN LOCATED WITHIN OR IN BETWEEN THE LIMITS OF THE ADVANCE WARNING SIGN ARRAYS AS SPECIFIED HEREINBEFORE IS PROHIBITED.

2. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. THE SPECIFIC LOCATION OF AN ADVANCE WARNING ARROW PANEL MAY BECOME ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS.

TRUCK MOUNTED ATTENUATOR -

1. A TRUCK MOUNTED ATTENUATOR IS OPTIONAL. UTILIZATION OF A TRUCK MOUNTED ATTENUATOR SHOULD BE CONSIDERED WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS. HOWEVER, A TRUCK MOUNTED ARROW BOARD OR ARROW PANEL MAY BE UTILIZED IN PLACE OF A TRUCK MOUNTED ATTENUATOR DURING TRAFFIC CONTROL SETUPS FOR MOBILE ACTIVITIES SUCH AS ASPHALT PATCHING OR PLACEMENT OPERATIONS WHEN APPROVED BY THE ENGINEER.

2. WHEN UTILIZING A TRUCK MOUNTED ATTENUATOR, ENSURE THE TRUCK AND THE CONNECT GROSS VEHICULAR WEIGHT (GVW) REMAIN FOR THE TYPE OF TRUCK SPECIFIED FOR THE ATTENUATOR. ENSURE THE TRUCK MOUNTED ATTENUATOR IS MOUNTED AND ATTACHED TO THE TRUCK IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DO NOT OPERATE THE TRUCK MOUNTED ATTENUATOR AT A SPEED IN EXCESS OF 5 MPH ABOVE THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. A TRAILER MOUNTED ATTENUATOR SHALL HAVE A MINIMUM GVW OF 12,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 22,000 POUNDS EMPTAL. ENSURE THE TRUCK HAS A MINIMUM GVW OF 10,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 15,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 17,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 19,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 22,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 25,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 30,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 35,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 40,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 45,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 50,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 55,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 60,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 65,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 70,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 75,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 80,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 85,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 90,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 95,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 100,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 105,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 110,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 115,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 120,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 125,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 130,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 135,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 140,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 145,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 150,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 155,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 160,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 165,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 170,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 175,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 180,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 185,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 190,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 195,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 200,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 205,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 210,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 215,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 220,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 225,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 230,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 235,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 240,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 245,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 250,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 255,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 260,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 265,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 270,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 275,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 280,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 285,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 290,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 295,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 300,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 305,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 310,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 315,000 POUNDS EMPTAL. 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ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 380,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 385,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 390,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 395,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 400,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 405,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 410,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 415,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 420,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 425,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 430,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 435,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 440,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 445,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 450,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 455,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 460,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 465,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 470,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 475,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 480,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 485,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 490,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 495,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 500,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 505,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 510,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 515,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 520,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 525,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 530,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 535,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 540,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 545,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 550,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 555,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 560,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 565,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 570,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 575,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 580,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 585,000 POUNDS EMPTAL. ENSURE THE TRUCK MOUNTED ATTENUATOR HAS A MINIMUM GVW OF 590,000 POUNDS EMPTAL. ENSURE THE TRUCK