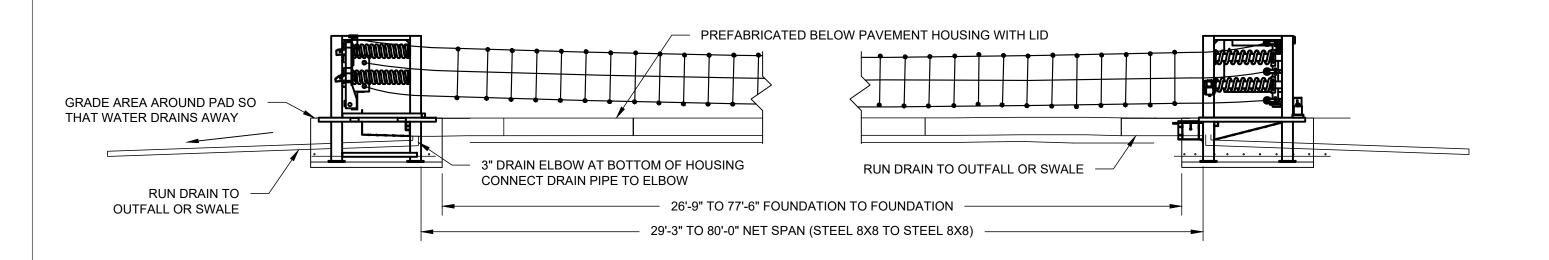
### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

CRASH TESTED TO ASTM F2656-07 - M50/P2 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

## VEHICLE ARRESTOR ELEVATION VIEW



#### LID CLOSES IMMEDIATELY -3/4" THICK STEEL PLATE LID CONNECTION MECHANISM AFTER CABLE NET DEPLOYS Ø<sub>2</sub><sup>1</sup>"x8" NELSON STUDS <sup>3</sup>/<sub>4</sub>" THICK STEEL PLATE PIVOTING HINGE -@ 12"-24" O/C 1'-8" CABLE NET DEPLOYING SECTION AT TRAP **SUBGRADE** RUBBER BUMPER LID IS OPENED BY HYDRAULICALLY 4000 PSI CONCRETE TO DAMPEN SOUND **ACTIVATED ARM**

**SUBGRADE** 

1-1/2" PVC CONDUITS

**BELOW PAVEMENT HOUSING** 

NOTE:

BELOW PAVEMENT HOUSING IS HEATED AND CONTROLLED WITH A THERMOSTAT.



## **BARRIER1 SYSTEMS, LLC**

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4000 PSI CONCRETE

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VEHICLE ARRESTOR ELEVATION
VIEW AND DETAIL
(1 OF 3)

4000 PSI CONCRETE FOR HOUSING

FOUNDATION CAN BE POURED MONOLITHICALLY

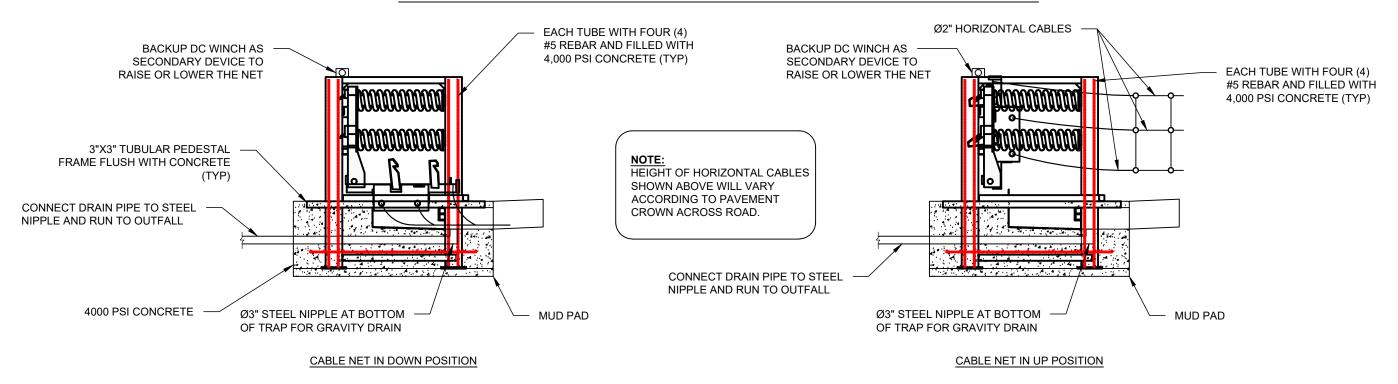
VA-NET-300 WEBSITE DRAWING SHEET: 1 OF 14

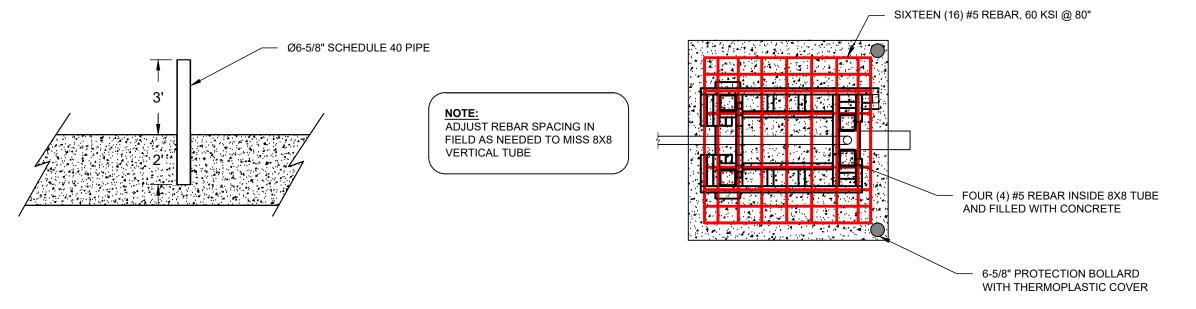
20241218-10-W

### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# TYPICAL END SUPPORT SECTIONS - CONTROL SIDE







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**VEHICLE ARRESTOR ELEVATION** VIEW AND DETAIL (2 OF 3)

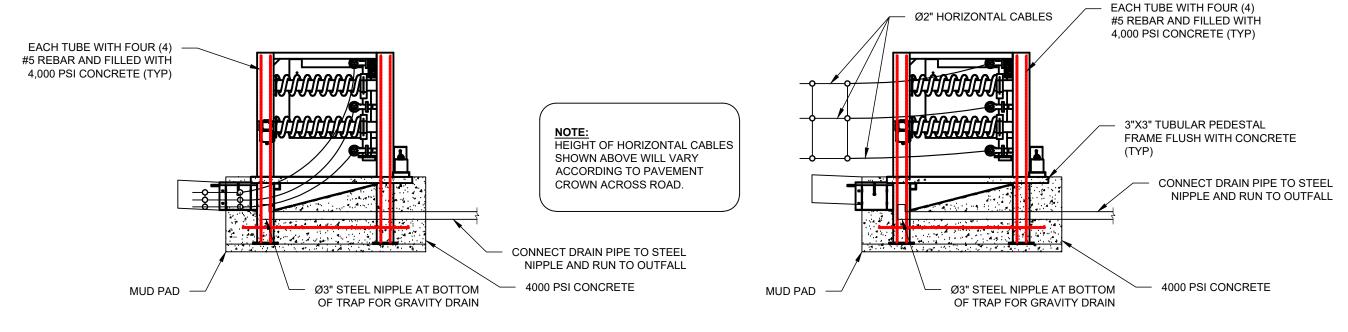
VA-NET-300 WEBSITE DRAWING

SHEET: 2 OF 14 20241218-10-W

### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

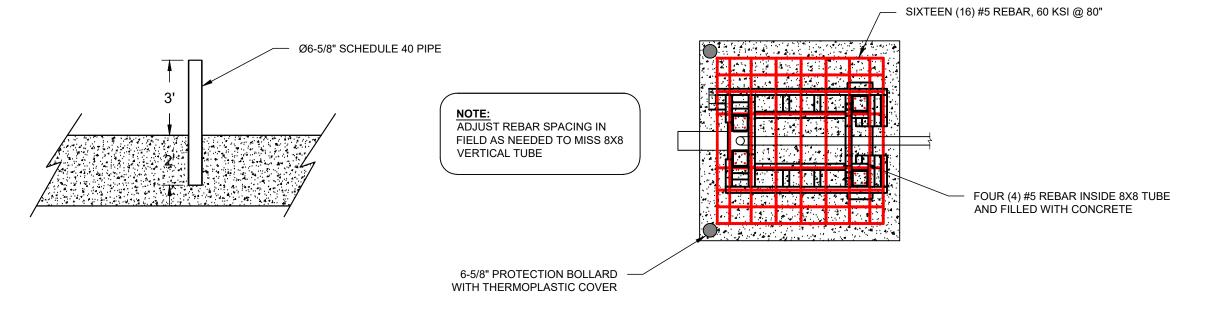
CRASH TESTED TO ASTM F2656-07 - M50/P2 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

# TYPICAL END SUPPORT SECTIONS - STATIC SIDE



CABLE NET IN DOWN POSITION

CABLE NET IN UP POSITION





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VEHICLE ARRESTOR ELEVATION VIEW AND DETAIL (3 OF 3)

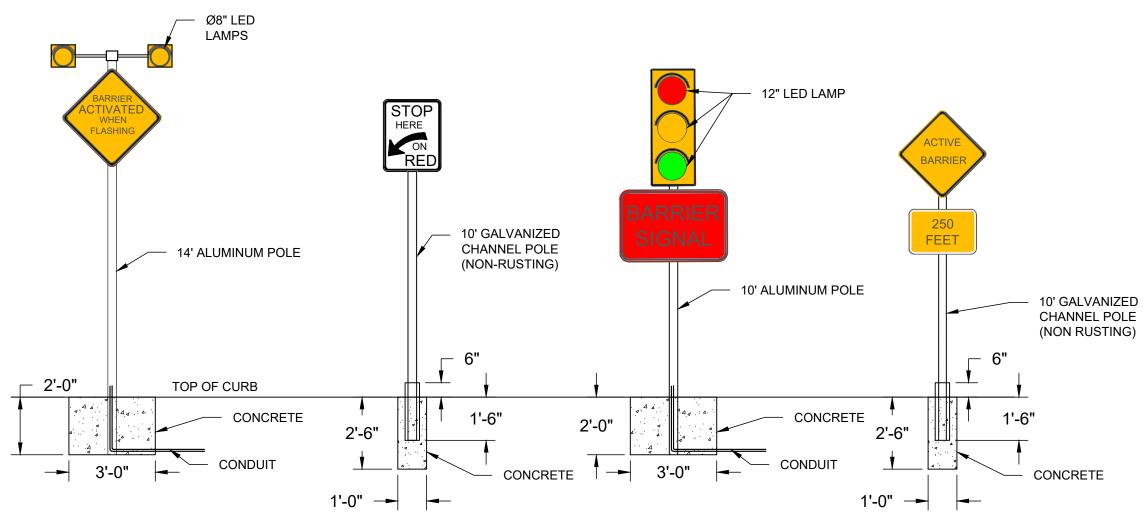
VA-NET-300 WEBSITE DRAWING SHEET: 3 OF 14

20241218-10-W

### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

CRASH TESTED TO ASTM F2656-07 - M50/P2 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

# TRAFFIC SIGNALS, WARNING LIGHTS, AND SIGNS



#### NOTE:

- 1. ON BOARD UPS BATTERY BACKUP POWER PROVIDED FOR ACTUATORS, LIGHTS, SIGNALS, CONTROL PANELS, DEVICES, ETC. IF POWER OUTAGE OCCURS. (10+ CYCLES OVER 2 HOURS)
- 2. TRAFFIC SIGNAL AND "BARRIER SIGNAL" SIGN INSTALLED ON POLE AND/OR MAST ARM.
- 3. SIGNS ARE DIAMOND GRADE AND RETRO REFLECTIVE.
- 4. ALL LIGHTS ARE 24VDC LED LIGHTS.
- BARRIER 1 ONLY TO SUPPLY SIGNS SHOWN ON THIS PAGE.



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SIGNS AND SIGNAL ELEVATIONS

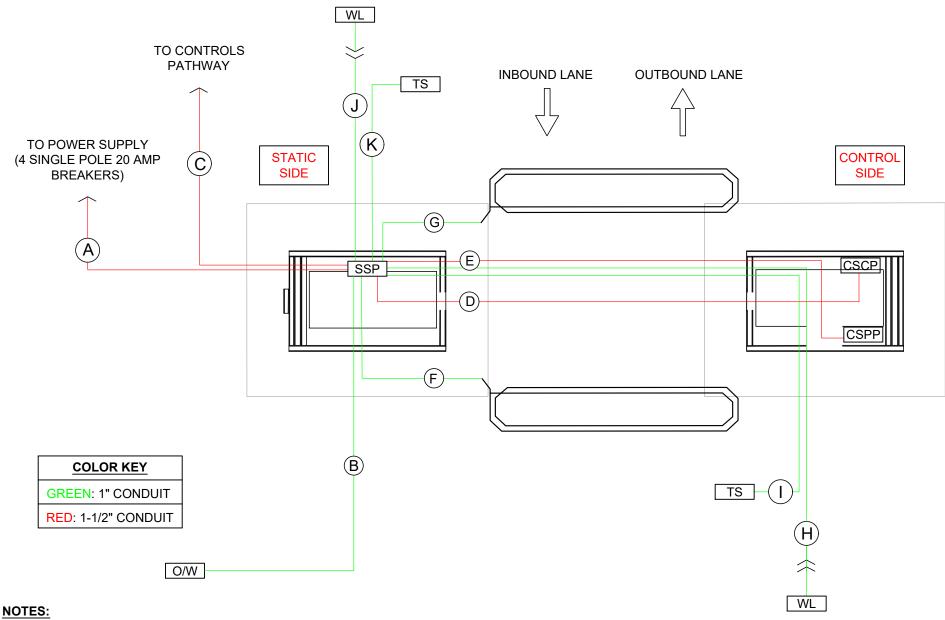
VA-NET-300 WEBSITE DRAWING SHEET: 4 OF 14

20241218-10-W

### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# CONDUITS AND ENCLOSURES SCHEMATIC



CONDUIT SCHEDULE								
CONDUIT LABEL	CONDUIT DIAMETER	WIRE						
A	1 1/2"	FOUR (4) 120VAC/20A CIRCUITS						
B	1 1/2"	CAT-6 NETWORK CABLE						
C	1 1/2"	6 STRAND MULTI-MODE FIBER						
D	1 1/2"	18 GAUGE, 25 CONDUCTOR						
E	1 1/2"	TWO (2) 120VAC/20A CIRCUITS						
F	1"	14 GAUGE, XHHW,						
G	1"	14 GAUGE, XHHW,						
$\bigcirc$	1"	18 GAUGE, 3 CONDUCTOR						
<u> </u>	1"	18 GAUGE, 4 CONDUCTOR						
J	1"	18 GAUGE, 3 CONDUCTOR						
K	1"	18 GAUGE, 4 CONDUCTOR						

SYMBOLS	SYMBOL KEY
WL	WARNING LIGHTS
O/W	OVERWATCH PANEL
SSP	CONTROLS PANEL, IN STATIC SIDE END SUPPORT
CSPP	POWER PANEL, IN CONTROLS SIDE END SUPPORT
CSCP	CONTROLS PANEL, IN CONTROLS SIDE END SUPPORT
TS	TRAFFIC SIGNAL

- 1. STUB CONDUITS OUTSIDE OF CONCRETE LIMITS AND CAP OFF ENDS BEFORE POURING.
- 2. INSTALL ALL CONDUITS AND PULL WIRE PER SCHEDULE.
- 3. ELECTRICAL WORK TO COMPLY WITH LOCAL CODES AND REQUIREMENTS.
- 4. THIS SCHEMATIC SHOWS GENERAL ROUTING. EXACT LOCATIONS OF CONDUIT, TERMINATIONS, SUBPANEL, CONNECTIONS, PULL BOXES, ETC. T.B.D. BY ELECTRICIAN.



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CONDUIT LAYOUT

VA-NET-300 WEBSITE DRAWING SHEET: 5 OF 14 20241218-10-W

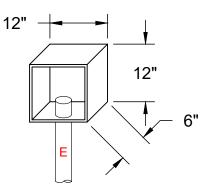
### **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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## CONDUITS AND ENCLOSURE DIAGRAM

TYPICAL BARRIER ENCLOSURES AND CONDUITS							
CONDUIT LABEL	CONDUIT SCHEDULE SIZE & DESCRIPTION	FROM	то				
Α	FOUR (4) 120VAC/20A CIRCUITS	POWER SUPPLY	SSP				
В	1 1/2" CAT-6 NETWORK CABLE	SSP	OVERWATCH (O/W)				
С	1 1/2" 6 STRAND MULTI-MODE FIBER	SSP	GUARDHOUSE				
D	1 1/2" 18 GUAGE, 25 CONDUCTOR	SSP	CSCP				
E	TWO (2) 120VAC/20A CIRCUITS	SSP	CSPP				
F	1" 14 GAUGE, XHHW	SSP	SAFETY LOOP				
G	1" 14 GAUGE, XHHW	SSP	SAFETY LOOP				
Н	1" 18 GAUGE, 3 CONDUCTOR	SSP	WARNING LIGHT (WL)				
I	1" 18 GAUGE, 4 CONDUCTOR	SSP	TRAFFIC SIGNAL (TS)				
J	1" 18 GAUGE, 3 CONDUCTOR	SSP	WARNING LIGHT (WL)				
K	1" 18 GAUGE, 4 CONDUCTOR	SSP	TRAFFIC SIGNAL (TS)				

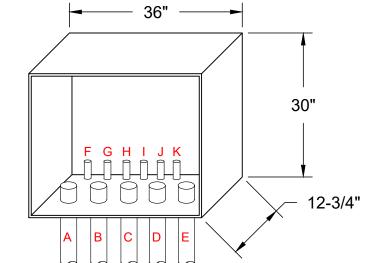
CONTROL SIDE - POWER ENCLOSURE (CSPP) LOCATED INSIDE POWER SIDE END SUPPORT



STATIC SIDE - CONTROLS ENCLOSURE (SSP) LOCATED INSIDE STATIC SIDE END SUPPORT

LOCATED INSIDE POWER SIDE END SUPPORT

CONTROL SIDE - CONTROLS ENCLOSURE (CSCP)



#### NOTES:

- 1. PVC CONDUITS ARE PRE-INSTALLED BY BARRIER1 SYSTEMS. PVC CONDUITS ARE PREINSTALLED TO 6" BELOW TOP OF CONCRETE INSIDE EACH END SUPPORT. ELECTRICAL CONTRACTOR TO CONNECT AND RUN OUTSIDE FOUNDATION PRIOR TO POURING CONCRETE.
- 2. ALL RISER CONDUITS SHALL BE PVC CONDUIT. PVC CONDUIT MAY BE USED FOR UNDERGROUND INSTALLATION.
- BARRIER1 TO COMPLY WITH CODES AND SITE REQUIREMENTS REGARDING CONDUIT TYPES, MATERIALS, CONNECTIONS, DEPTHS AND OTHER REQUIREMENTS.

# BARRIER

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CONDUIT AND **ENCLOSURE DIAGRAM** 

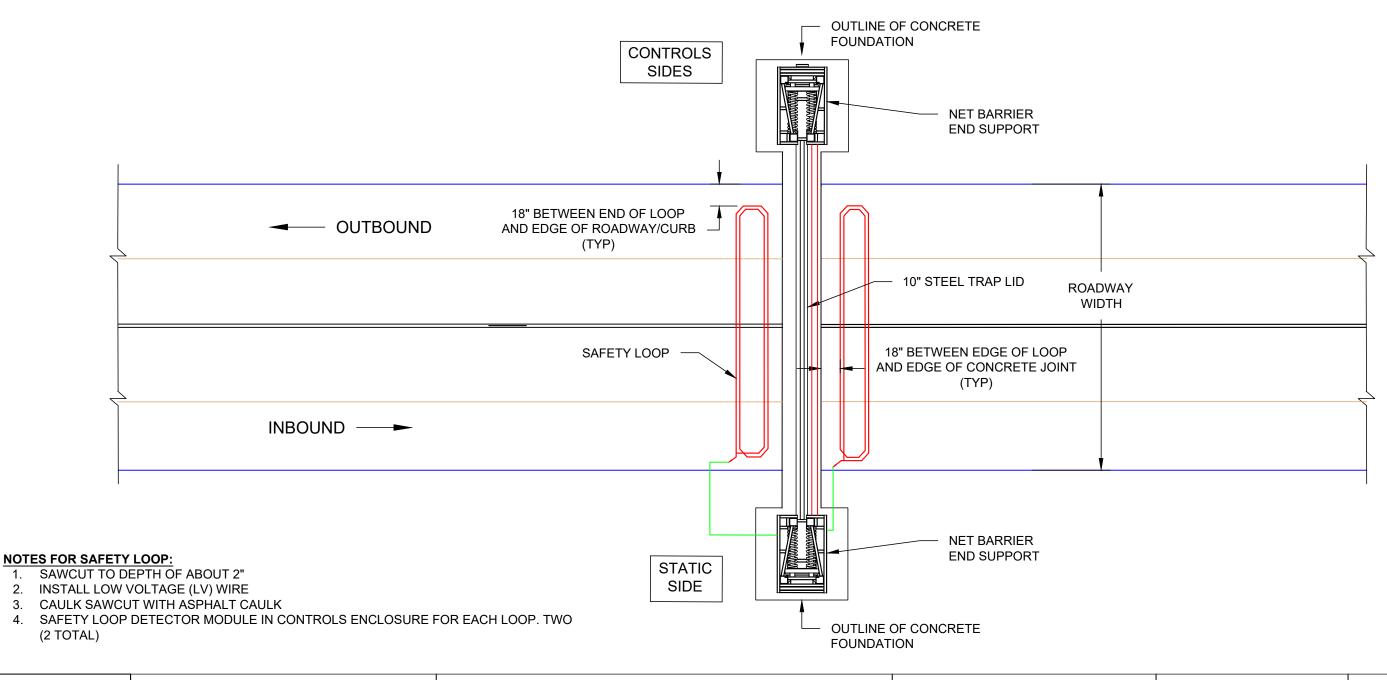
VA-NET-300 WEBSITE DRAWING SHEET: 6 OF 14

20241218-10-W

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

CRASH TESTED TO ASTM F2656-07 - M50/P2 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

# SAFETY LOOP DETAILS - PLAN VIEW





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SAFETY LOOP DETAIL

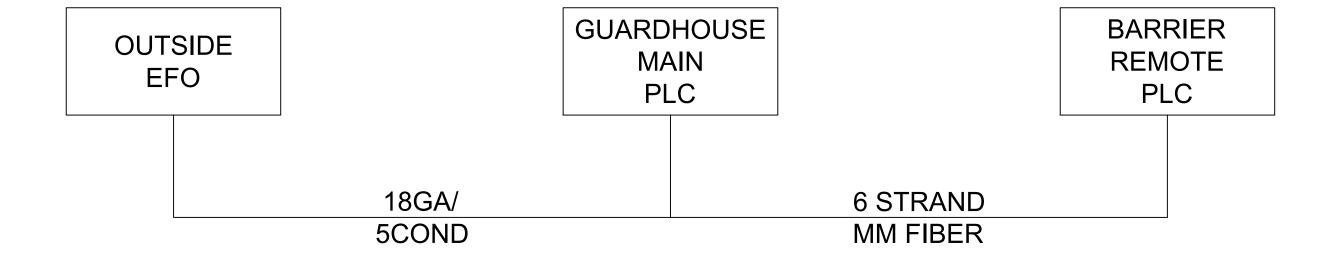
VA-NET-300 WEBSITE DRAWING SHEET: 7 OF 14

20241218-10-W

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# CONTROLS COMMUNICATION CABLING





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NET BARRIER SITE COMMUNICATION CABLING

VA-NET-300 WEBSITE DRAWING SHEET: 8 OF 14

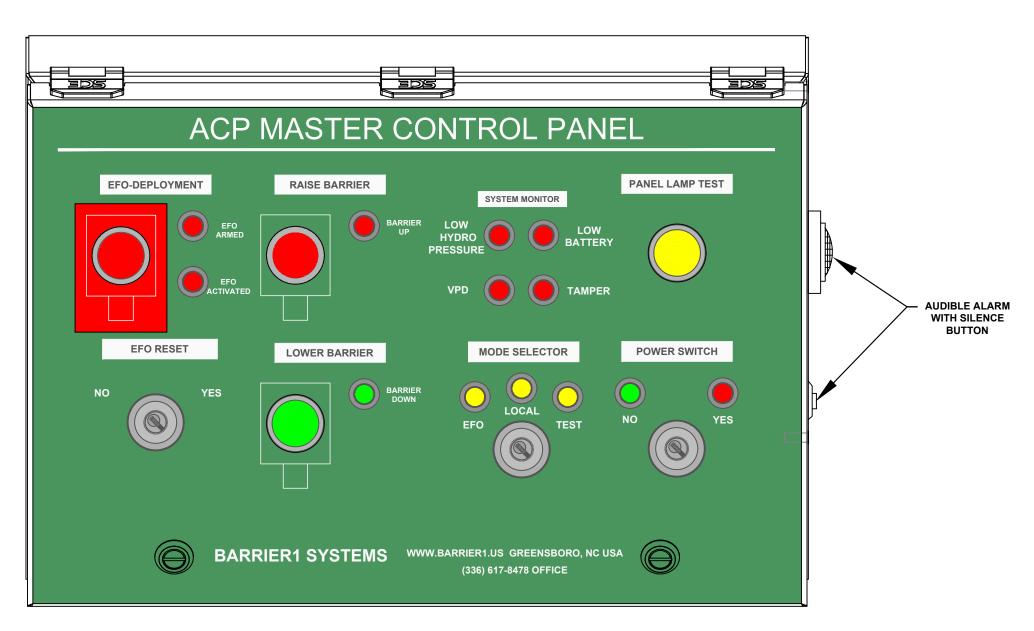
20241218-10-W

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# NET BARRIER MASTER CONTROL PANEL

(LOCATED INSIDE EXISTING GUARDHOUSE)



#### NOTE:

- 1. WHEN DOING MAINTENANCE, PLACE IN "LOCAL MODE" SO BARRIER DEPLOYMENT IS LOCKED OUT AT GUARD HOUSE. IT CAN BE DEPLOYED LOCALLY, AT BARRIER.
- TAMPER SWITCH IS ON ALL END SUPPORT ENCLOSURE DOORS.
- 3. IF VEHICLE SITS ON SAFETY LOOP FOR 10 SECONDS, VPD INDICATOR LIGHT & AUDIBLE ALARM ACTIVATE. THIS ACTIVATION TIME CAN BE ADJUSTED.
- 4. EFO ACTIVATED LIGHT PROGRAMMED TO ILLUMINATE ONCE ANY EFO SIGNAL HAS BEEN RECEIVED.

# BARRIER

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NET BARRIER
MASTER CONTROL PANEL

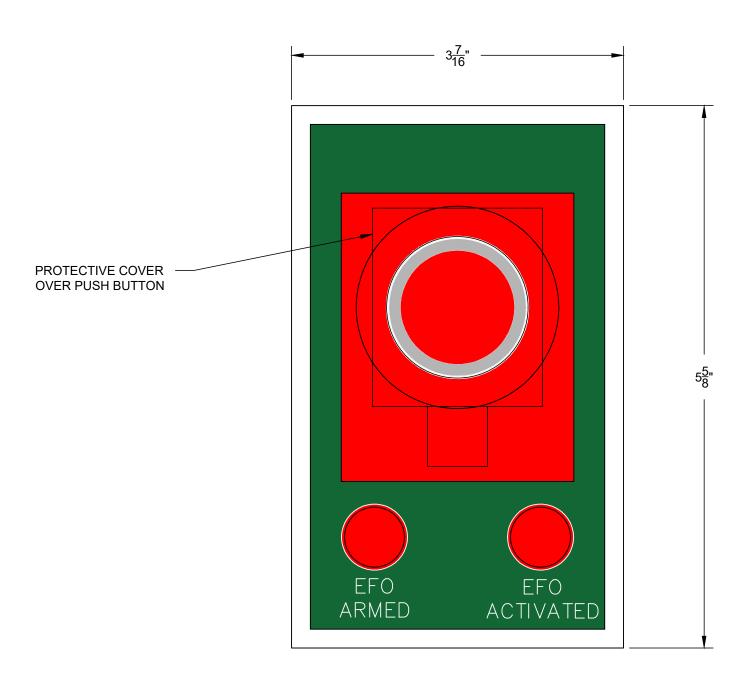
VA-NET-300 WEBSITE DRAWING SHEET: 9 OF 14

20241218-10-W

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

CRASH TESTED TO ASTM F2656-07 - M50/P2 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

# NET BARRIER EFO BUTTON ENCLOSURE



#### NOTE:

 EFO ACTIVATED LIGHT PROGRAMMED TO ILLUMINATE ONCE ANY EFO SIGNAL HAS BEEN RECEIVED.



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NET BARRIER EFO ENCLOSURE VA-NET-300 WEBSITE DRAWING SHEET: 10 OF 14

20241218-10-W

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# LOCAL BARRIER CONROLLERS

### HAND HELD MAINTENANCE CONTROLLER



## LOCAL CONTROLLER



LAMP INDICATES THAT LOCAL CONTROLLER HAS BEEN ENABLED AT MASTER CONTROL PANEL.

#### NOTE:

- MAINTENANCE CONTROLLER ALLOWS INDIVIDUAL FUNCTIONS TO BE PERFORMED.
- MAINTENANCE CONTROLLER IS LOCKED INSIDE OF END SUPPORT ENCLOSURE.
- YELLOW RESET BUTTON ON LOCAL CONTROLLER WILL RESET A HYDRAULIC MOTOR TIMEOUT, INDICATED ON MASTER CONTROL PANEL.



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LOCAL NET BARRIER CONTROLS

VA-NET-300 WEBSITE DRAWING SHEET: 11 OF 14

20241218-10-W

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# SEQUENCING OF TRAFFIC SIGNALS, WARNING LIGHTS, AND ALARMS UPON FINAL DENIAL ACTIVATION

OPERATIONAL SEQUENCE PER SECOND (MIN. FOR SAFETY - 40 KPH (25MPH) DESIGN SPEED												
TRAFFIC CONTROLS AND SAFETY AT ACTIVE BARRIER	ELAPSED TIME	0	1	2	3	4	5	6	7	8	9	10
	TRAFFIC CONTROLS	NORMAL OPERATION		GUARD PERCEPTION AND REACTION TIME TO THREAT (EFO BUTTON) - 3 SECONDS  YELLOW CLEARANCE - GET ACROSS BARRIER 3 SECONDS (MUTCD MINIMUM)			ALL RED	DEPLOYING BARRIER		THREAT CONTAINED		
SIGN AND SIGNAL WARNING SYSTEM	WARNING SIGNS AND LIGHT WITH BEACONS	OFF	OFF	OFF	OFF	FLASHING YELLOW	FLASHING YELLOW	FLASHING YELLOW	FLASHING YELLOW	FLASHING YELLOW	FLASHING YELLOW	FLASHING YELLOW
	TRAFFIC SIGNAL	GREEN	GREEN	GREEN	GREEN	YELLOW	YELLOW	YELLOW	RED	RED	RED	RED
	AUDIBLE SIREN ALARM	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON
	SAFETY LOOP DETECTORS	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
	ACTIVE BARRIER POSITION	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	DOWN	ACTIVATED	ACTIVATED	DEPLOYED

#### NOTES:

- 1. SEQUENCING AND TIMING OF SIGNALS, ALARMS AND LIGHTS CAN BE FIELD ADJUSTED USING PLC.
- 2. SAFETY LOOP DETECTORS PREVENT DEPLOYMENT OF BARRIER IF A VEHICLE IS ABOVE LOOP. BARRIER DEPLOYS AFTER VEHICLE PASSES OVER THE SAFETY LOOPS.



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#### NET BARRIER TIME SEQUENCING DIAGRAM

VA-NET-300 WEBSITE DRAWING SHEET: 12 OF 14 20241218-10-W

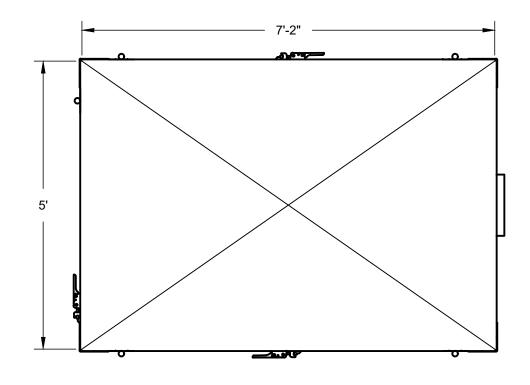
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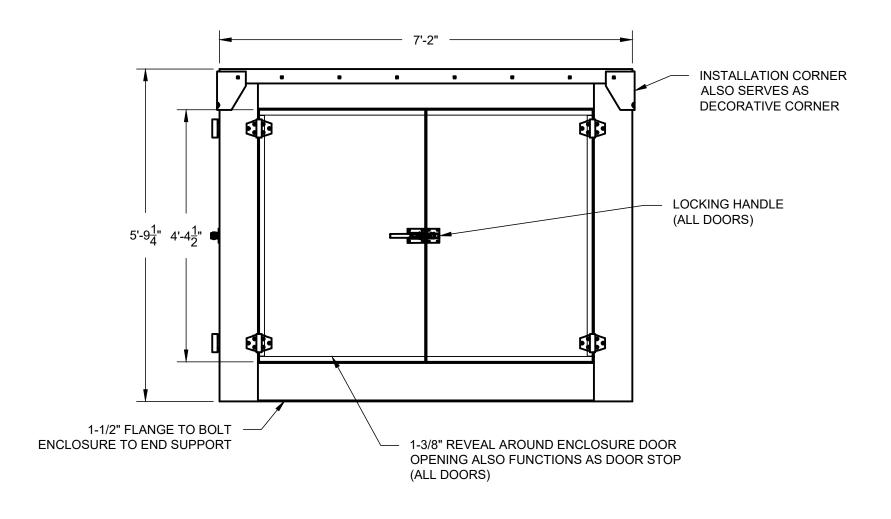
2211

## **NET BASED VEHICLE ARRESTOR - MODEL VA-NET-300**

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# END SUPPORT ENCLOSURES AND LOCKING ACCESS DOORS





#### NOTES:

- ENCLOSURE MATERIALS ARE 3/16" ALUMINUM WITH STANDARD PAINTED GRAY FINISH.
- 2. ENCLOSURES HAVE DOUBLE DOORS ON BOTH SIDES, AND A SINGLE DOOR IN REAR.



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#### NET BARRIER ENCLOSURE DETAIL (1 OF 2)

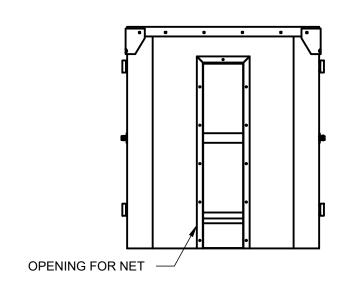
VA-NET-300 WEBSITE DRAWING

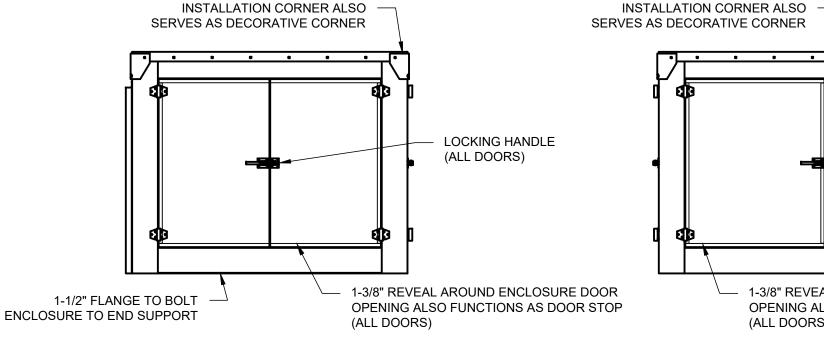
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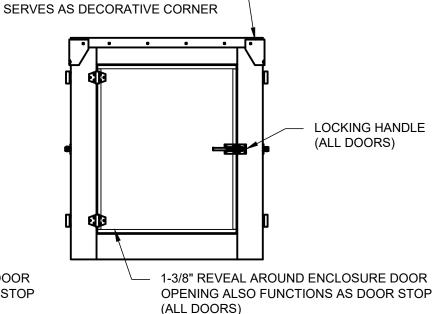
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# CONTROL AND STATIC SIDE END SUPPORT ENCLOSURES









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NET BARRIER **ENCLOSURE DETAIL** (2 OF 2)

VA-NET-300 WEBSITE DRAWING SHEET: 14 OF 14

20241218-10-W